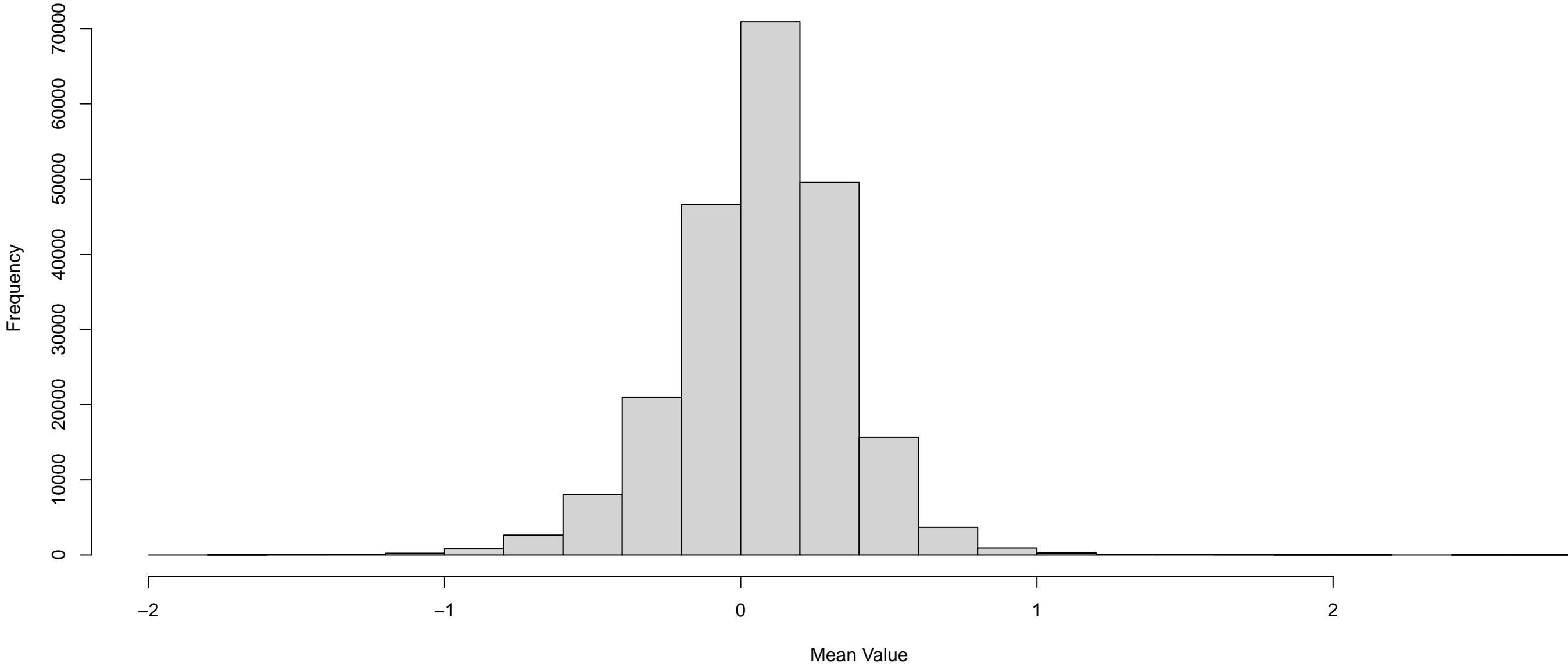
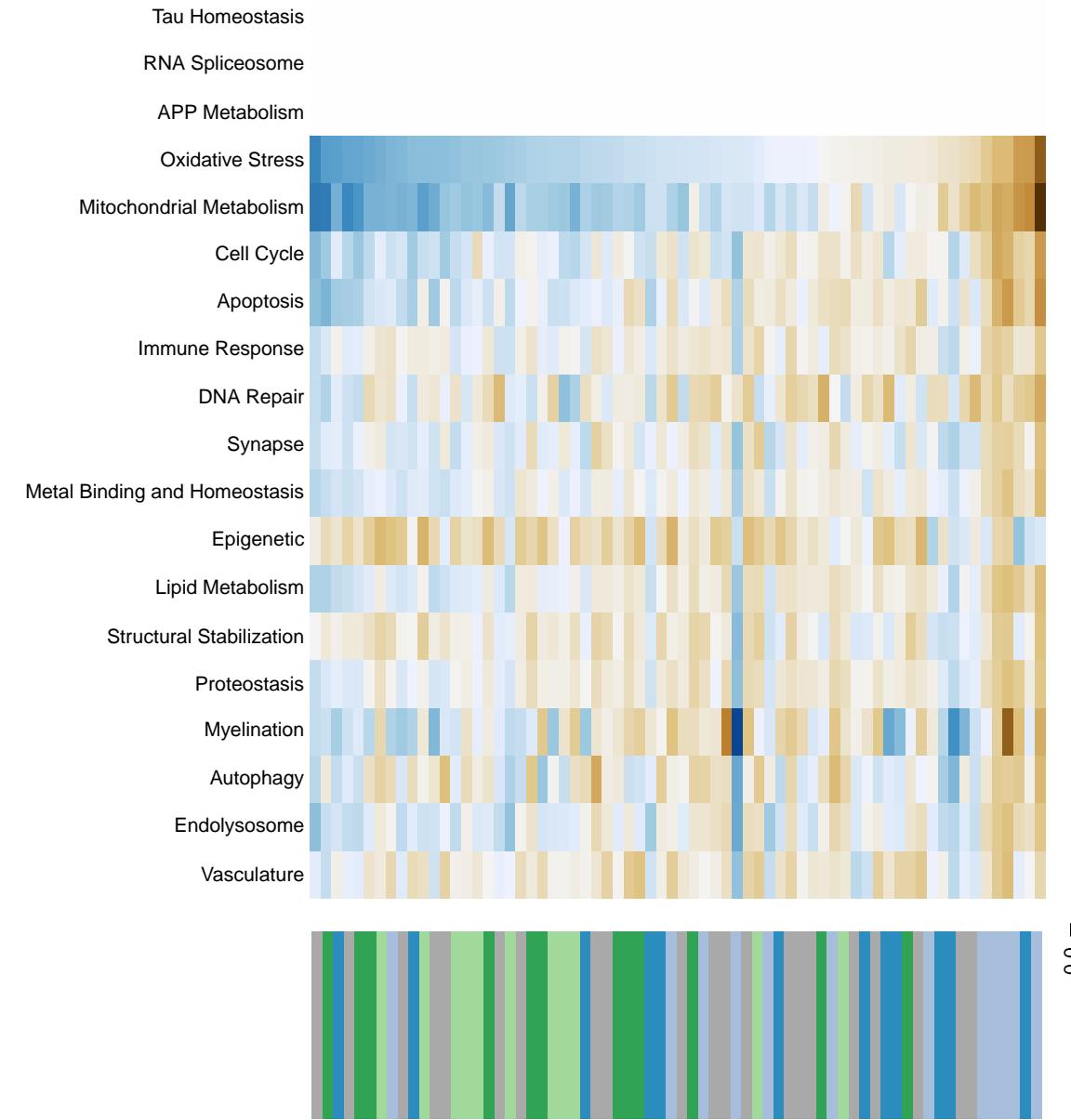


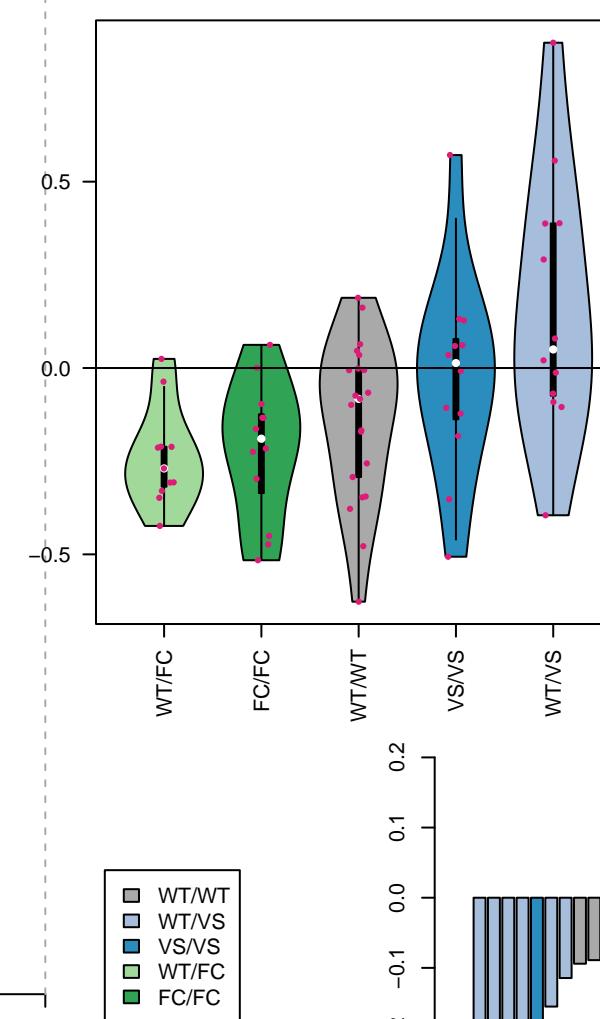
Mean Biodomain–Kegg Intersection Expression



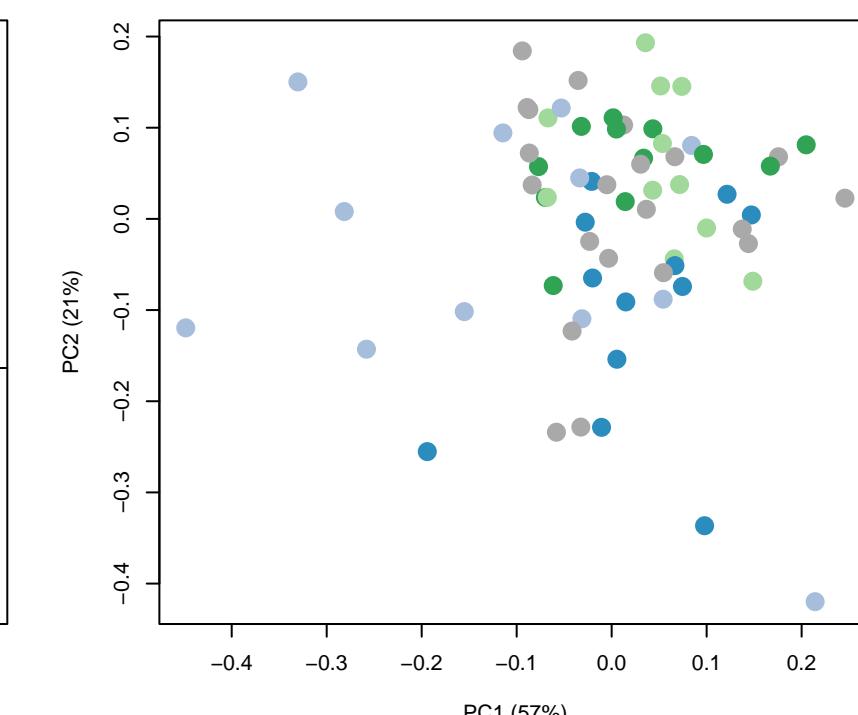
Metabolic pathways



Oxidative Stress

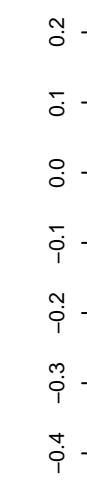


Decomposition

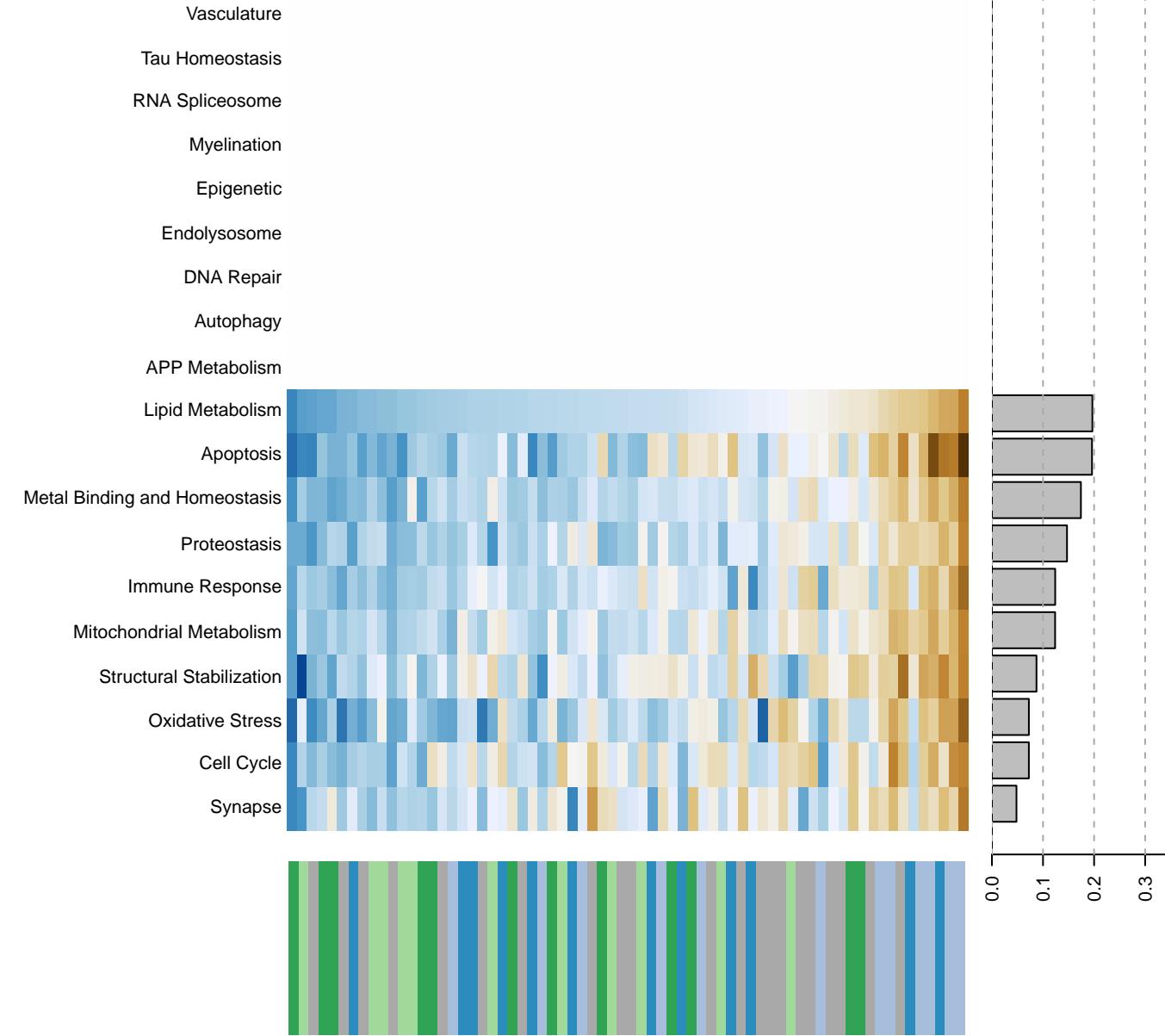


PC1 by genotype

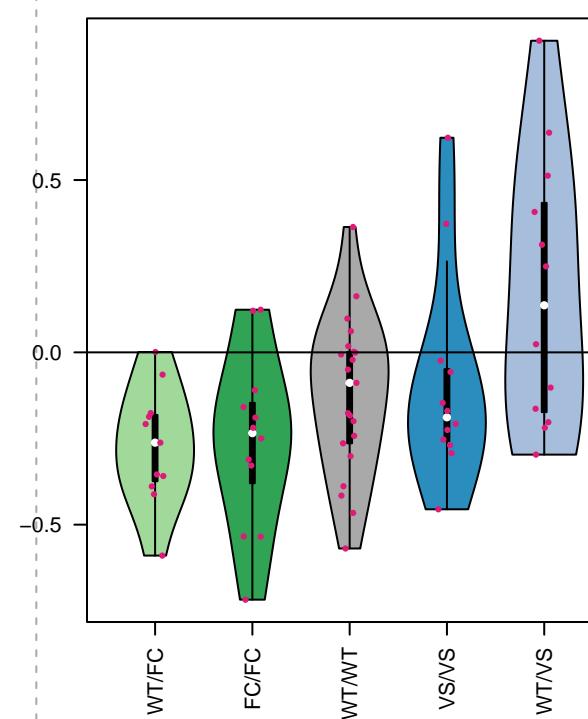
$R^2 = 0.062$



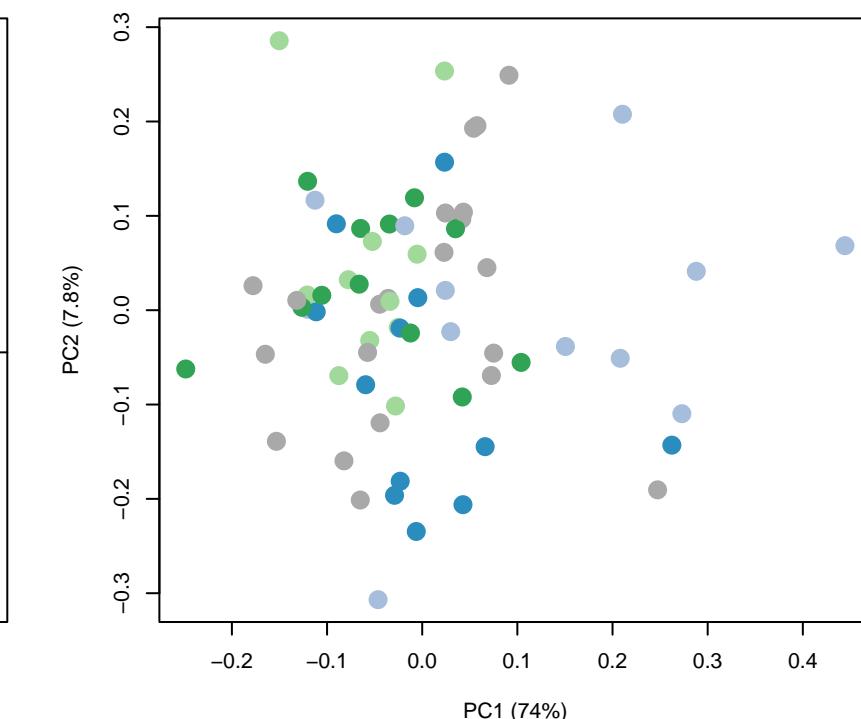
Biosynthesis of cofactors



Lipid Metabolism



Decomposition



PC1 by genotype

4

3

2

1

0

-1

-2

-3

-4

-5

-6

-7

-8

-9

-10

-11

-12

-13

-14

-15

-16

-17

-18

-19

-20

-21

-22

-23

-24

-25

-26

-27

-28

-29

-30

-31

-32

-33

-34

-35

-36

-37

-38

-39

-40

-41

-42

-43

-44

-45

-46

-47

-48

-49

-50

-51

-52

-53

-54

-55

-56

-57

-58

-59

-60

-61

-62

-63

-64

-65

-66

-67

-68

-69

-70

-71

-72

-73

-74

-75

-76

-77

-78

-79

-80

-81

-82

-83

-84

-85

-86

-87

-88

-89

-90

-91

-92

-93

-94

-95

-96

-97

-98

-99

-100

-101

-102

-103

-104

-105

-106

-107

-108

-109

-110

-111

-112

-113

-114

-115

-116

-117

-118

-119

-120

-121

-122

-123

-124

-125

-126

-127

-128

-129

-130

-131

-132

-133

-134

-135

-136

-137

-138

-139

-140

-141

-142

-143

-144

-145

-146

-147

-148

-149

-150

-151

-152

-153

-154

-155

-156

-157

-158

-159

-160

-161

-162

-163

-164

-165

-166

-167

-168

-169

-170

-171

-172

-173

-174

-175

-176

-177

-178

-179

-180

-181

-182

-183

-184

-185

-186

-187

-188

-189

-190

-191

-192

-193

-194

-195

-196

-197

-198

-199

-200

-201

-202

-203

-204

-205

-206

-207

-208

-209

-210

-211

-212

-213

-214

-215

-216

-217

-218

-219

-220

-221

-222

-223

-224

-225

-226

-227

-228

-229

-230

-231

-232

-233

-234

-235

-236

-237

-238

-239

-240

-241

-242

-243

-244

-245

-246

-247

-248

-249

-250

-251

-252

-253

-254

-255

-256

-257

-258

-259

-260

-261

-262

-263

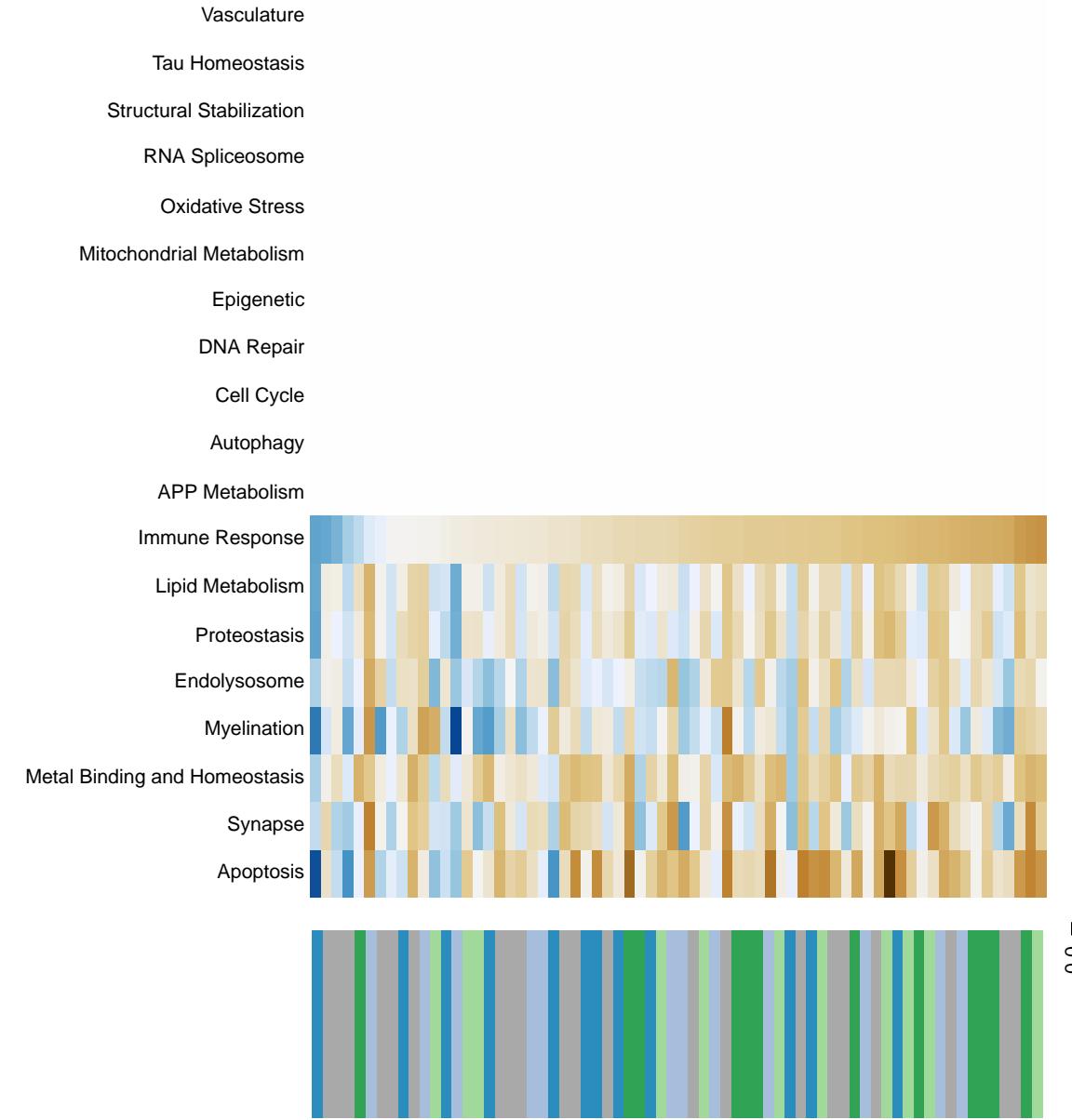
-264

-265

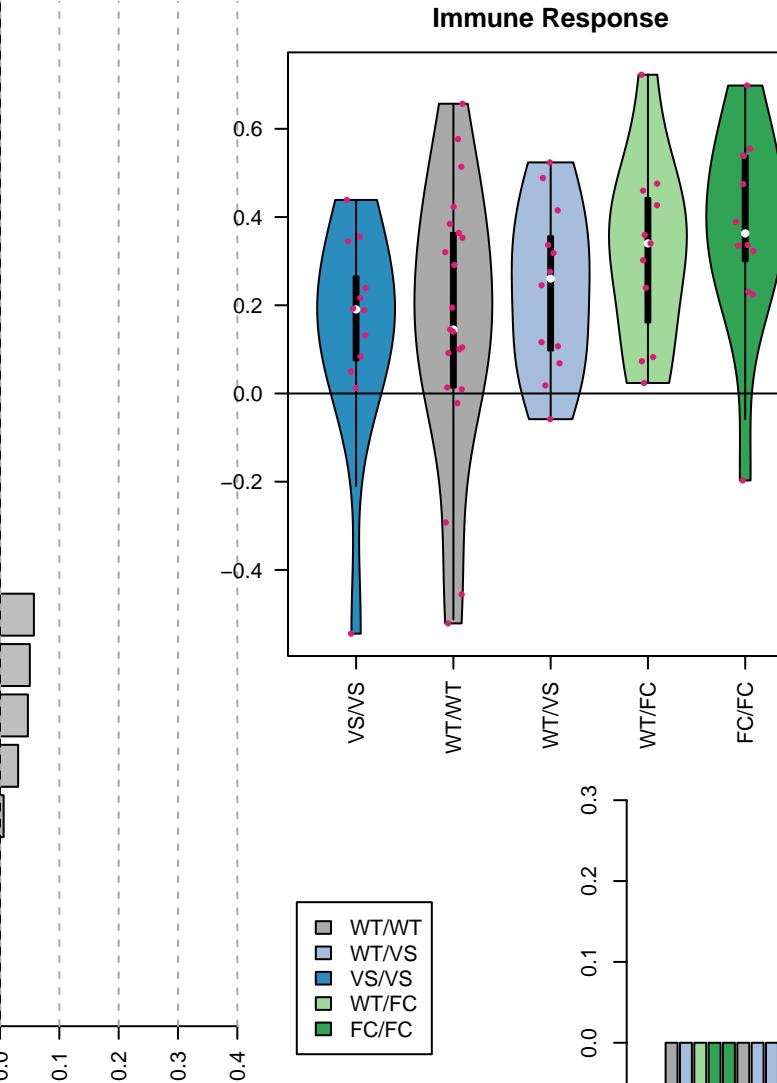
-266

-267

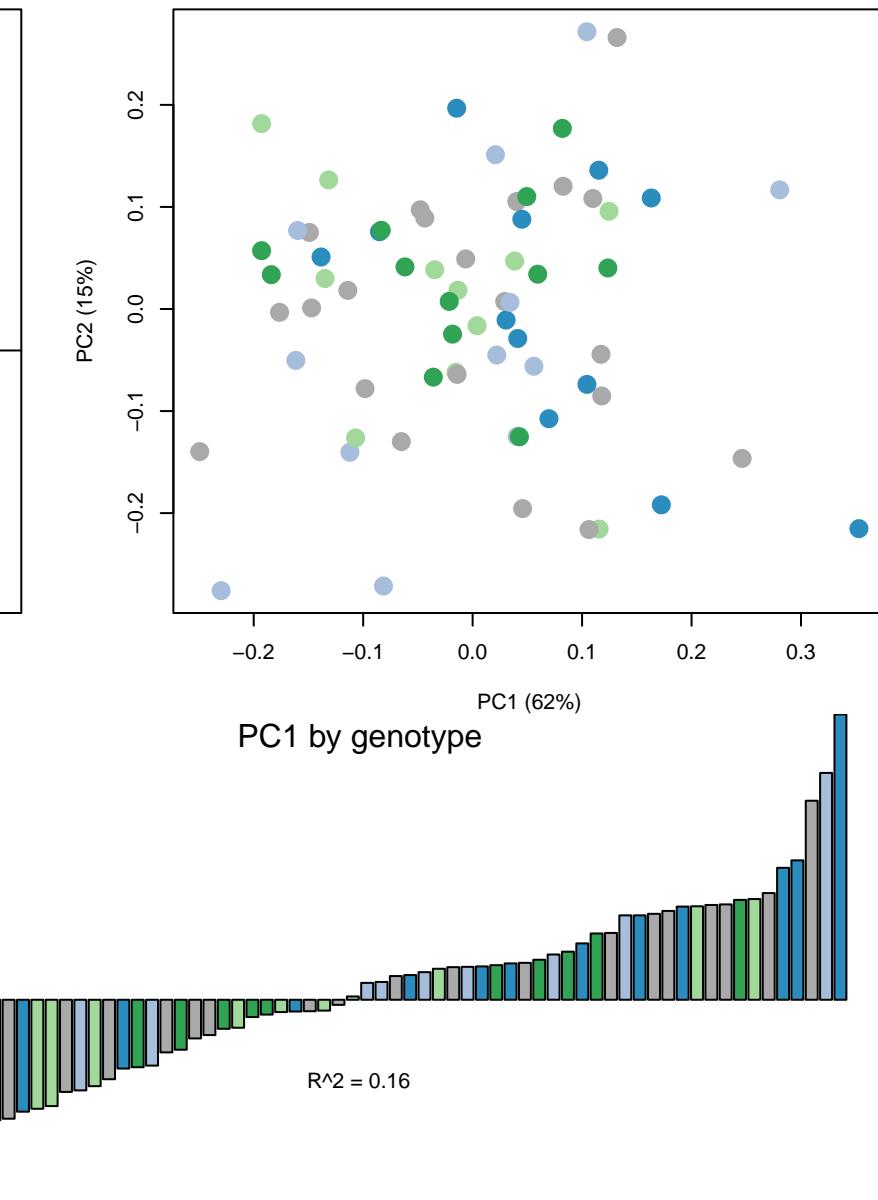
Sphingolipid metabolism



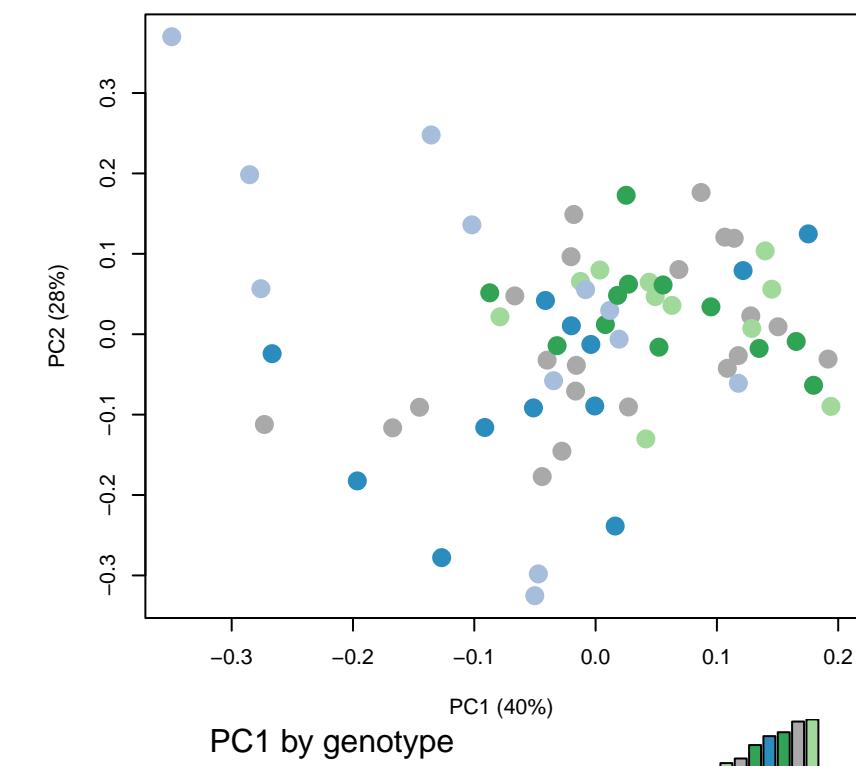
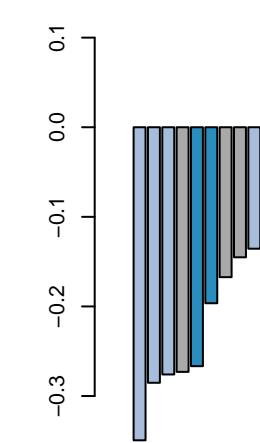
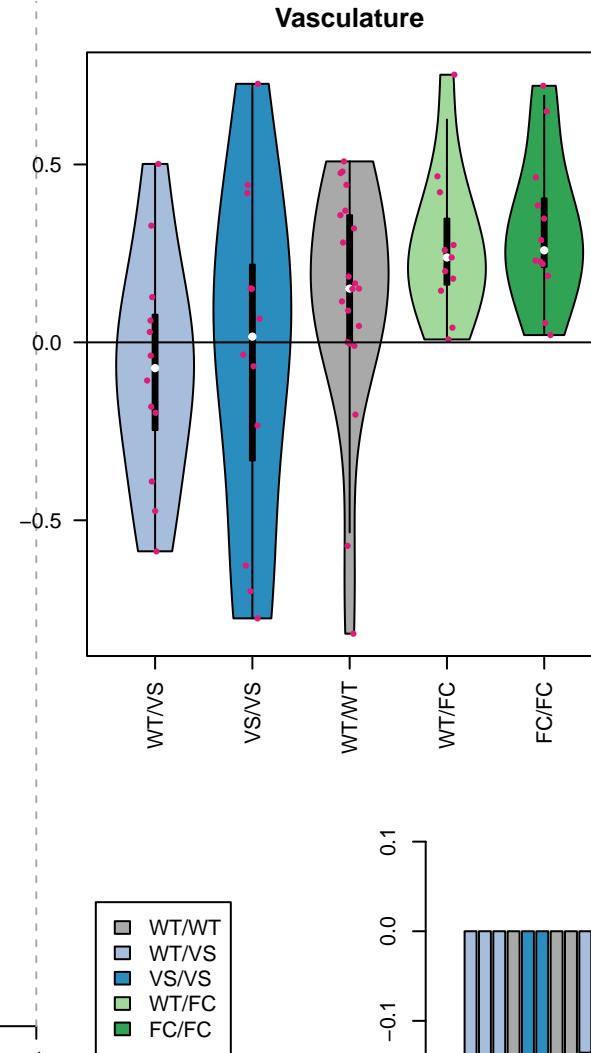
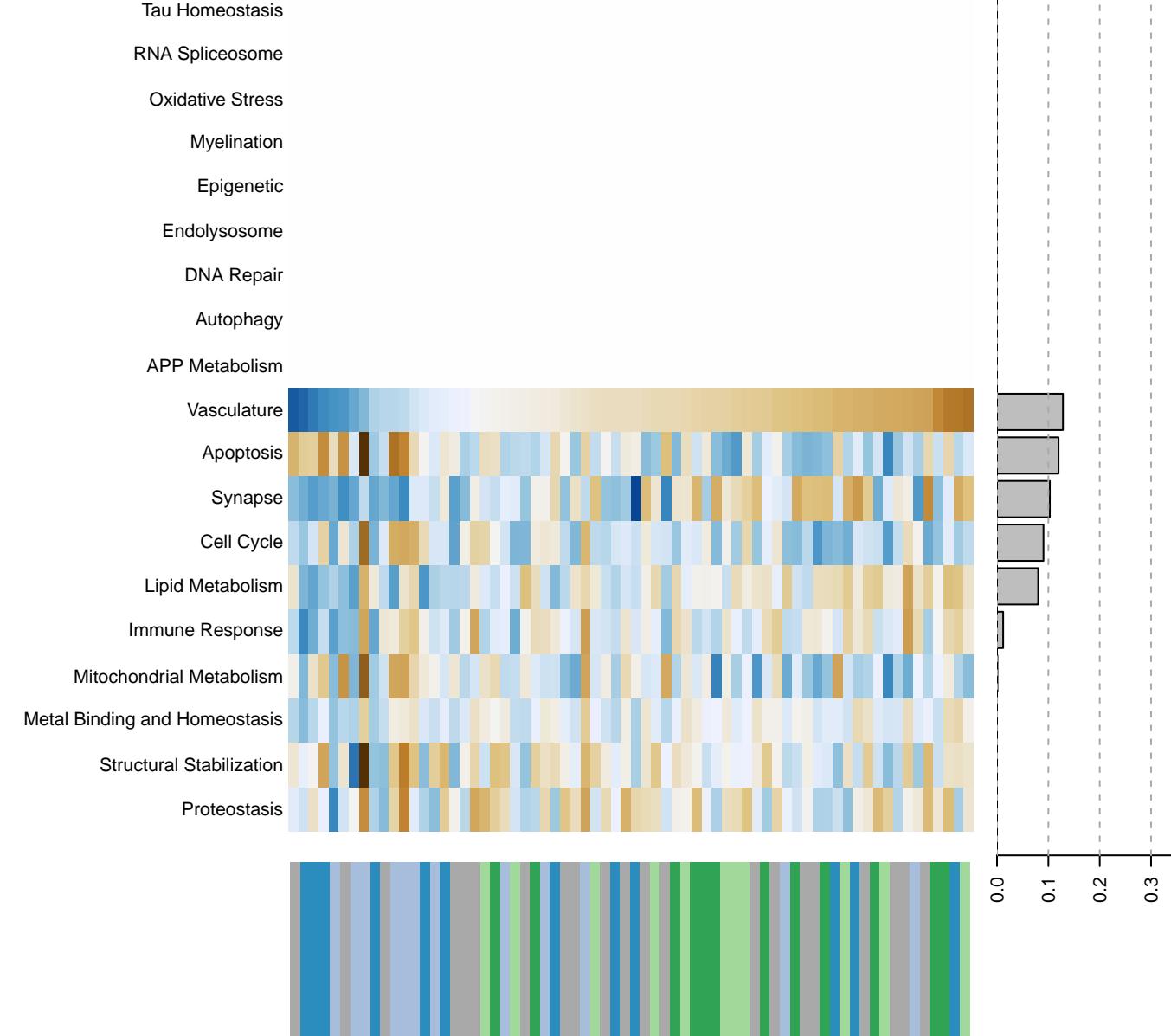
Immune Response



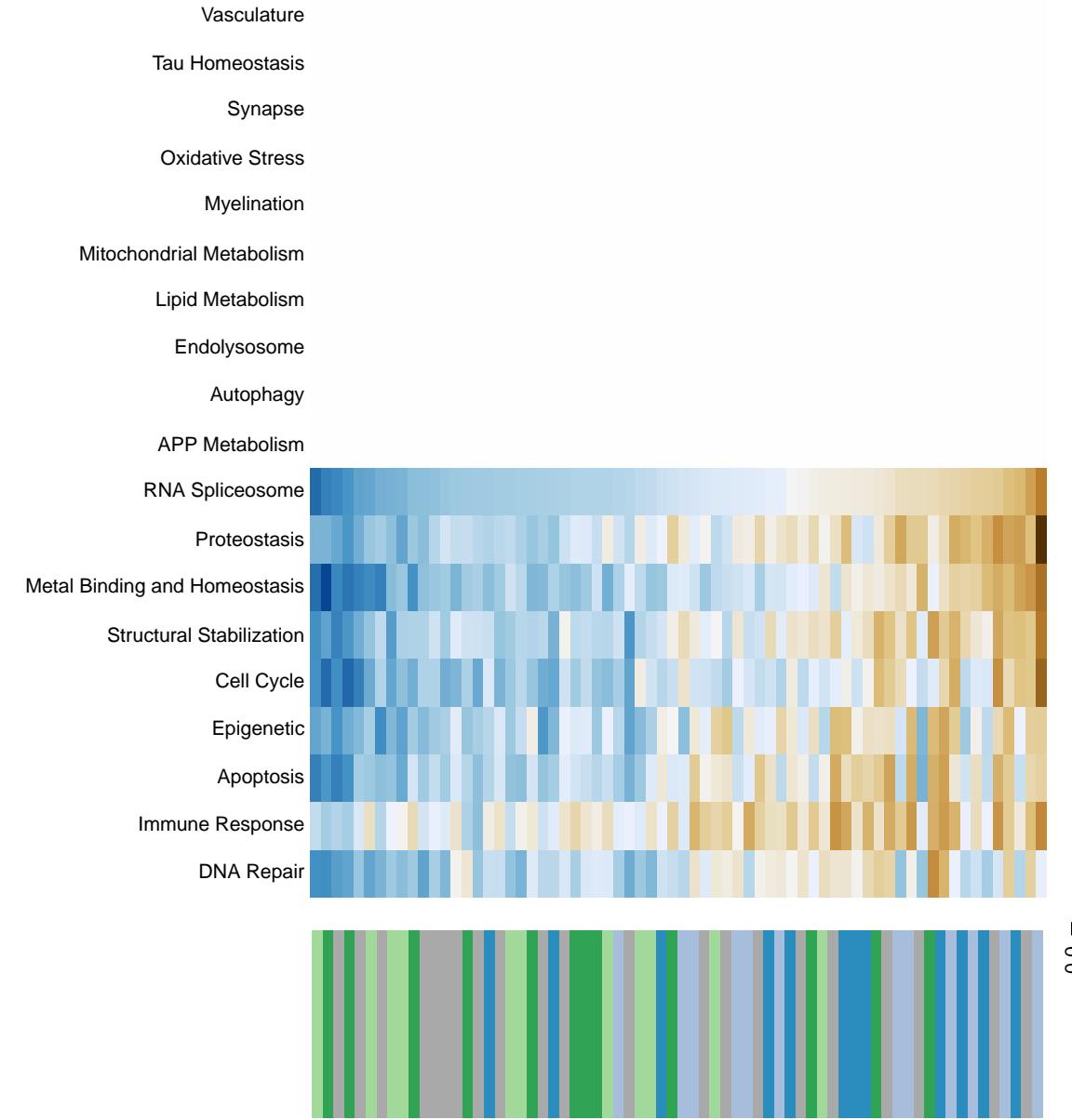
Decomposition



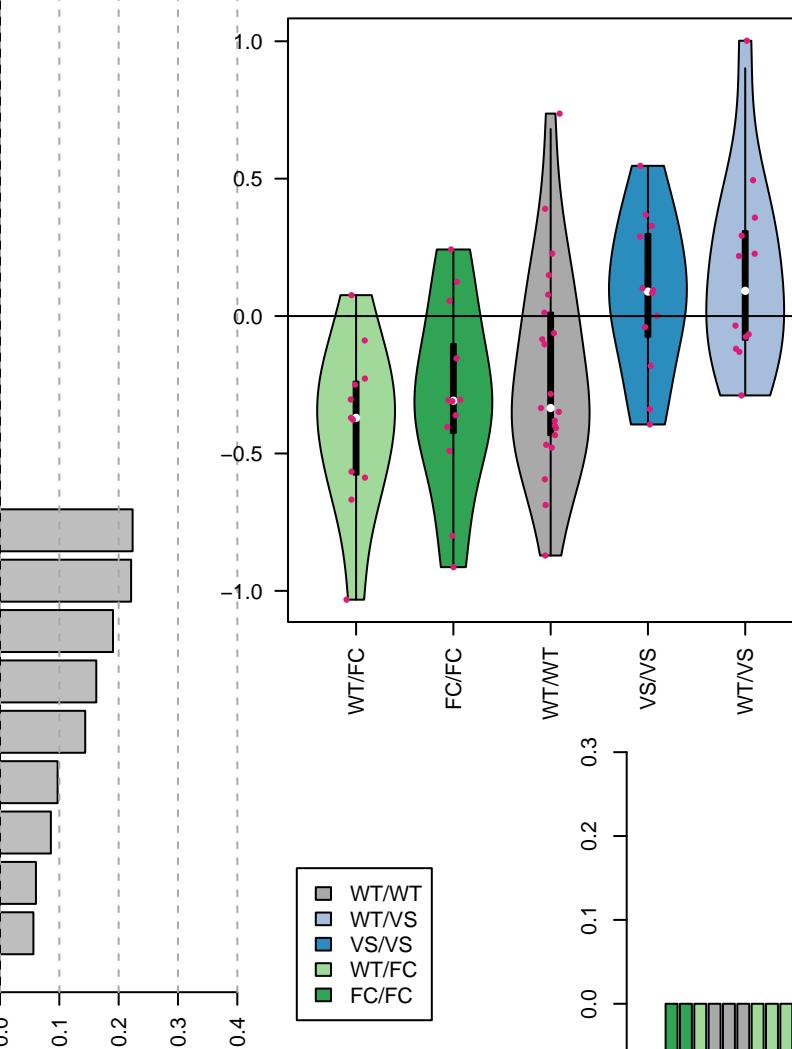
Purine metabolism



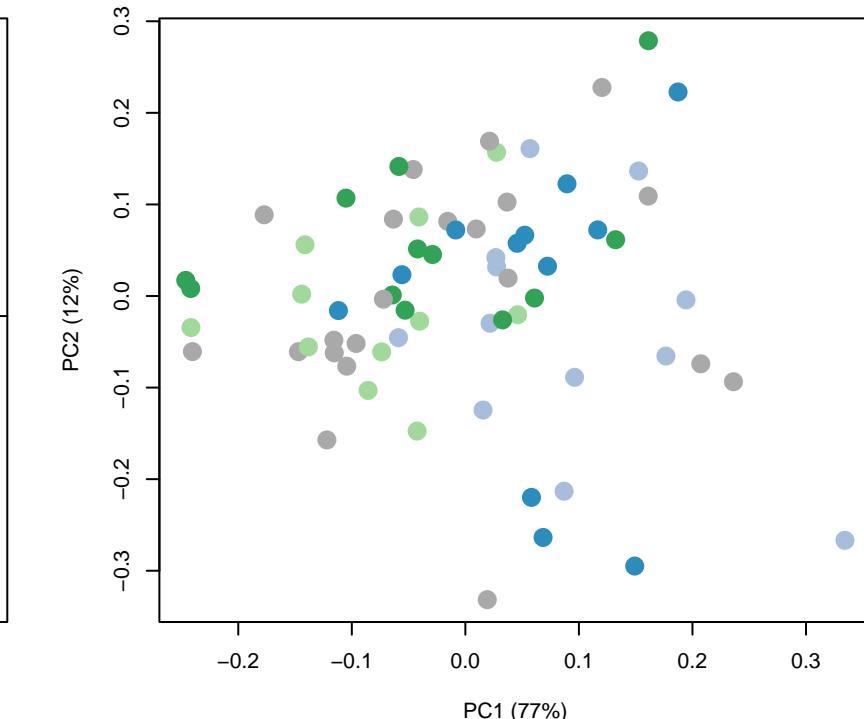
Spliceosome



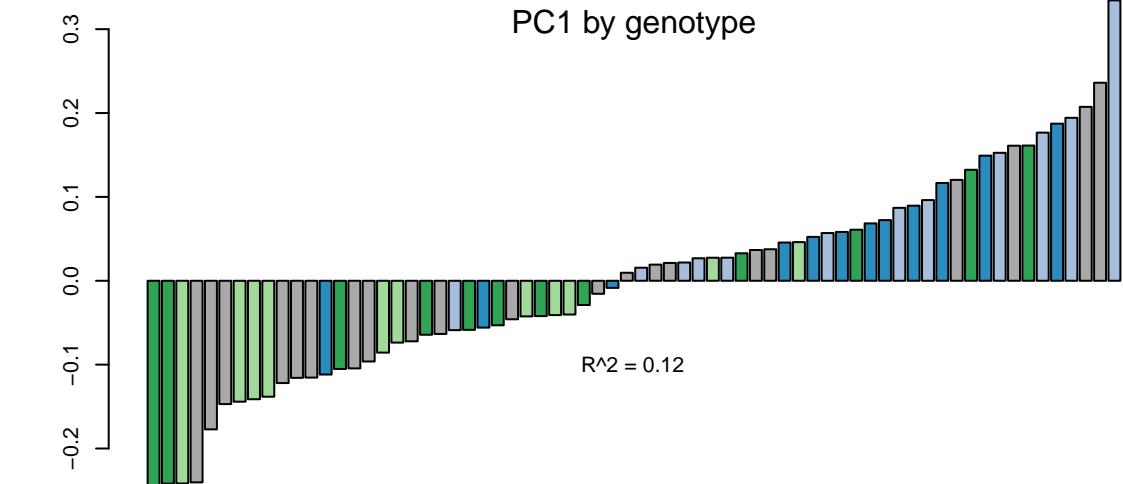
RNA Spliceosome



Decomposition

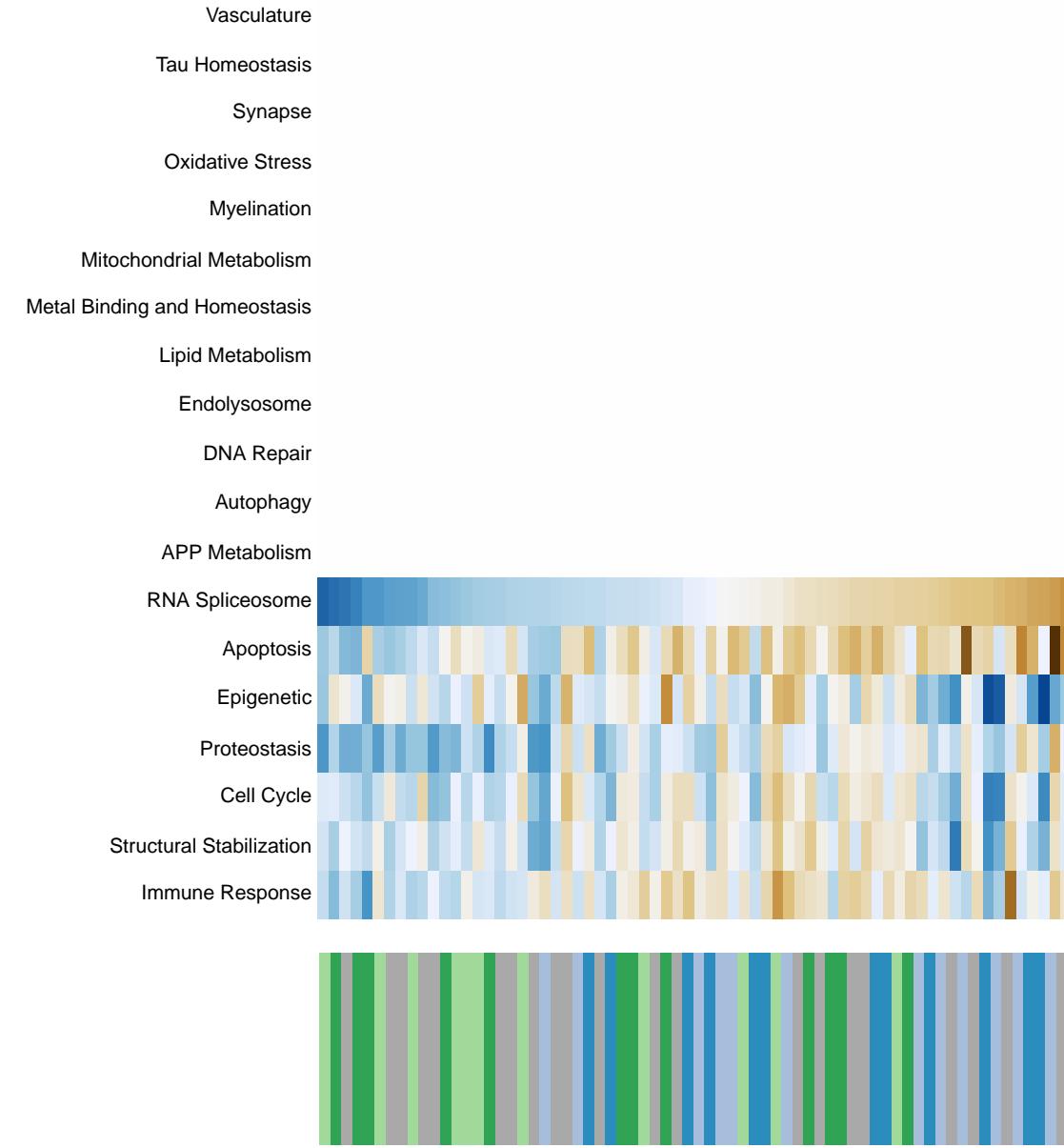


PC1 by genotype

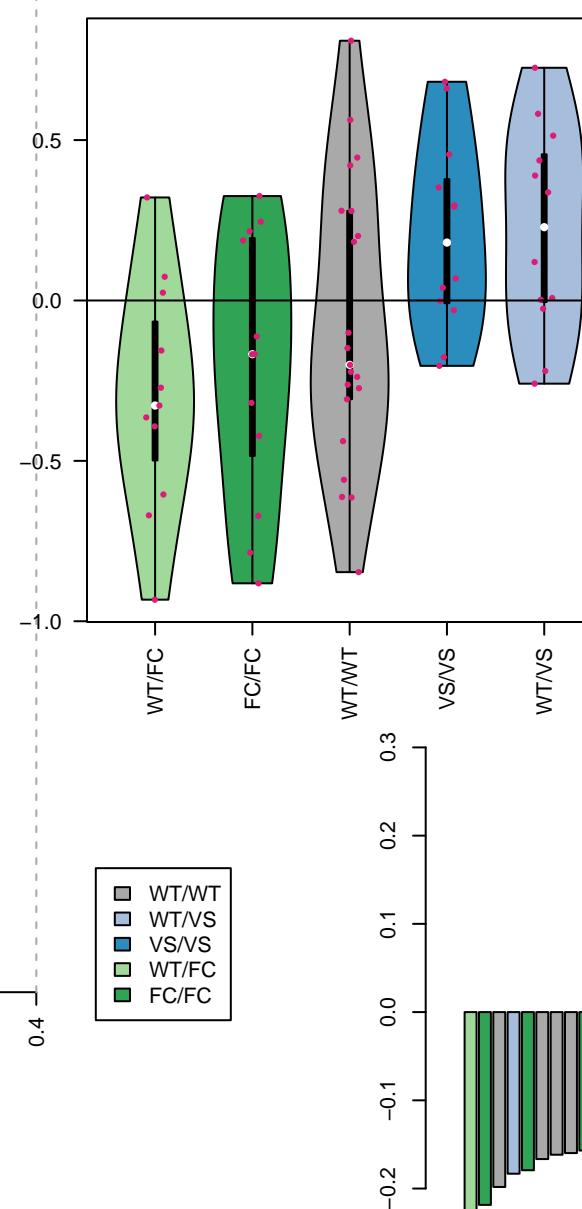


$R^2 = 0.12$

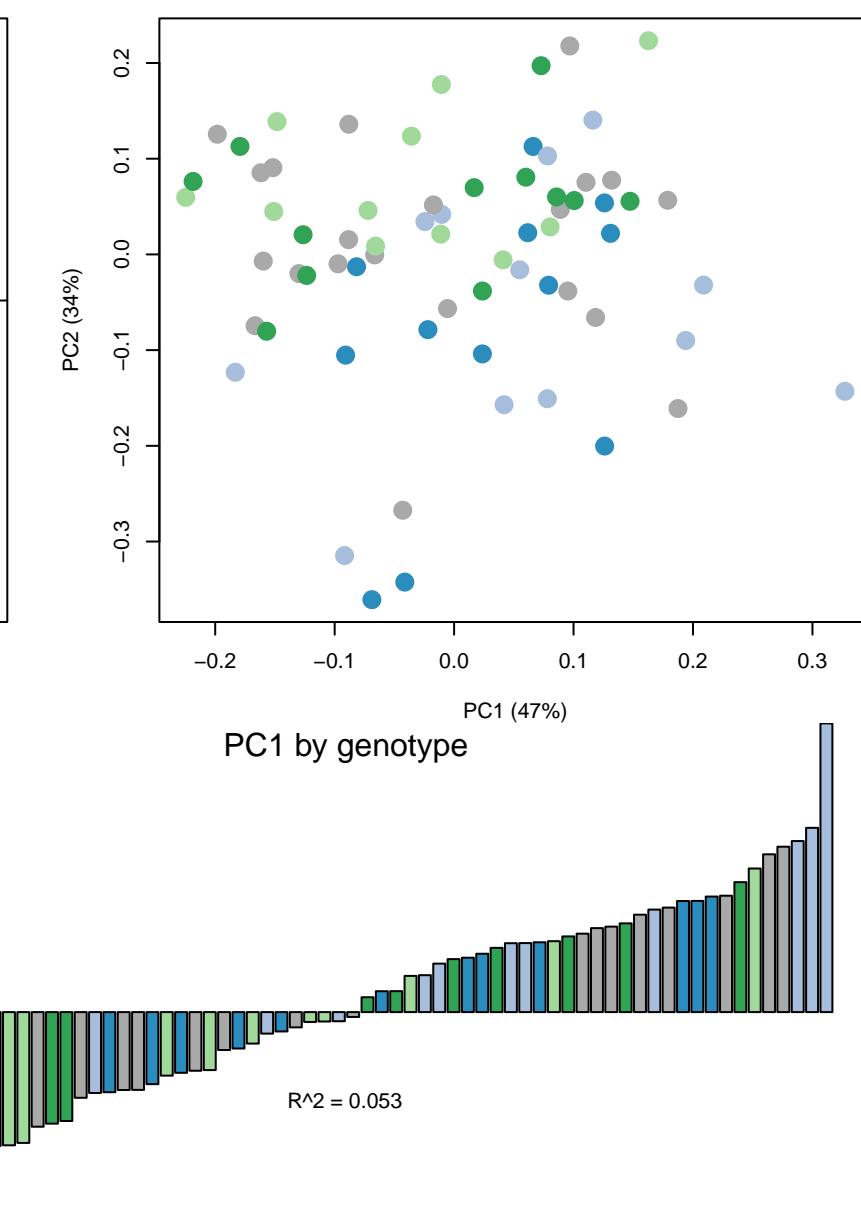
Nucleocytoplastic transport



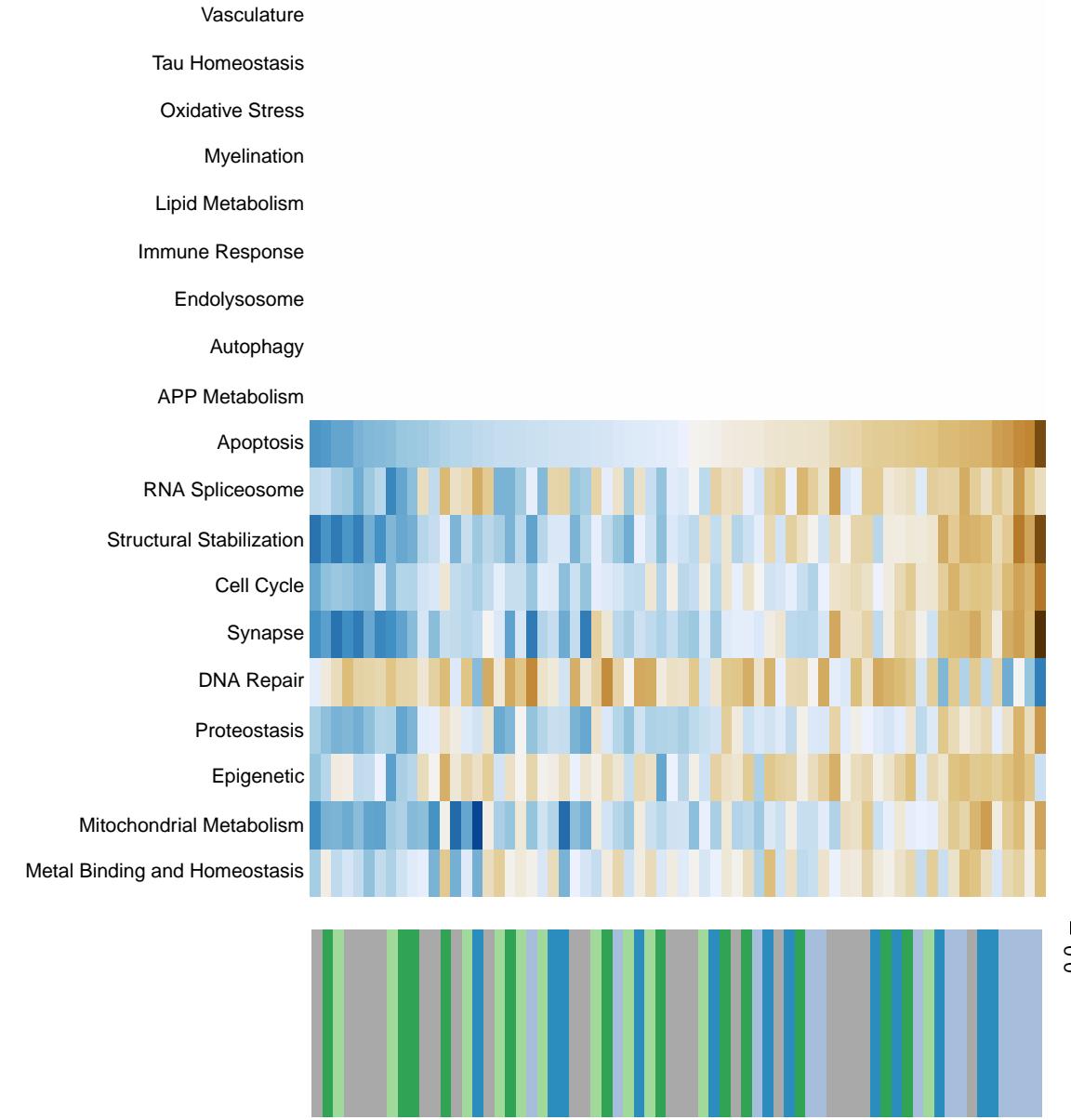
RNA Spliceosome



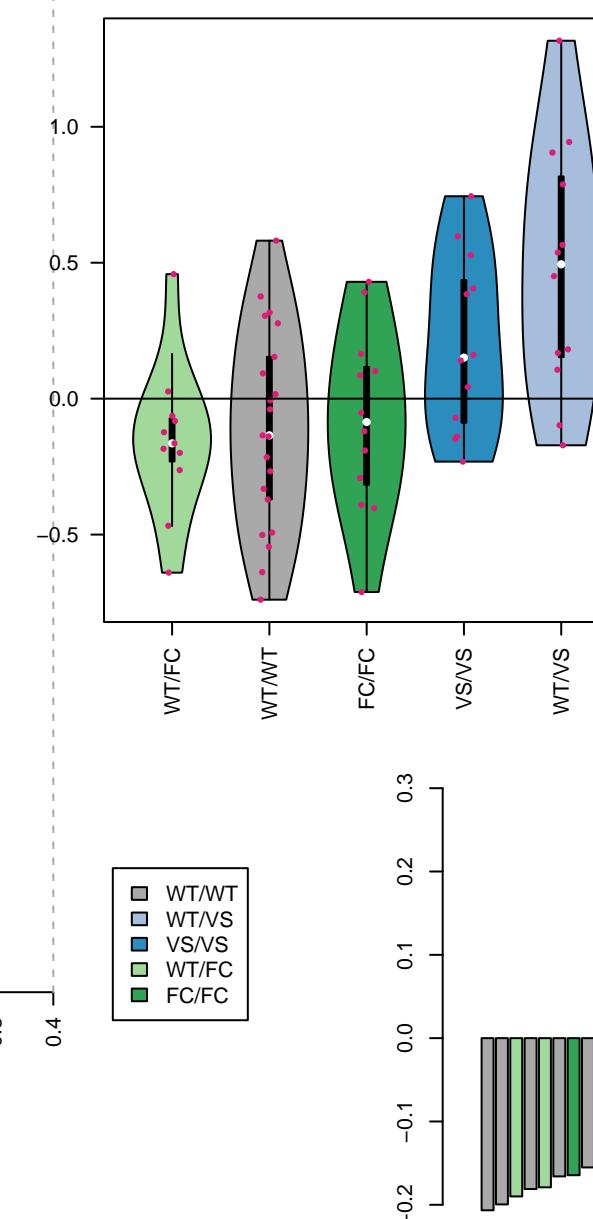
Decomposition



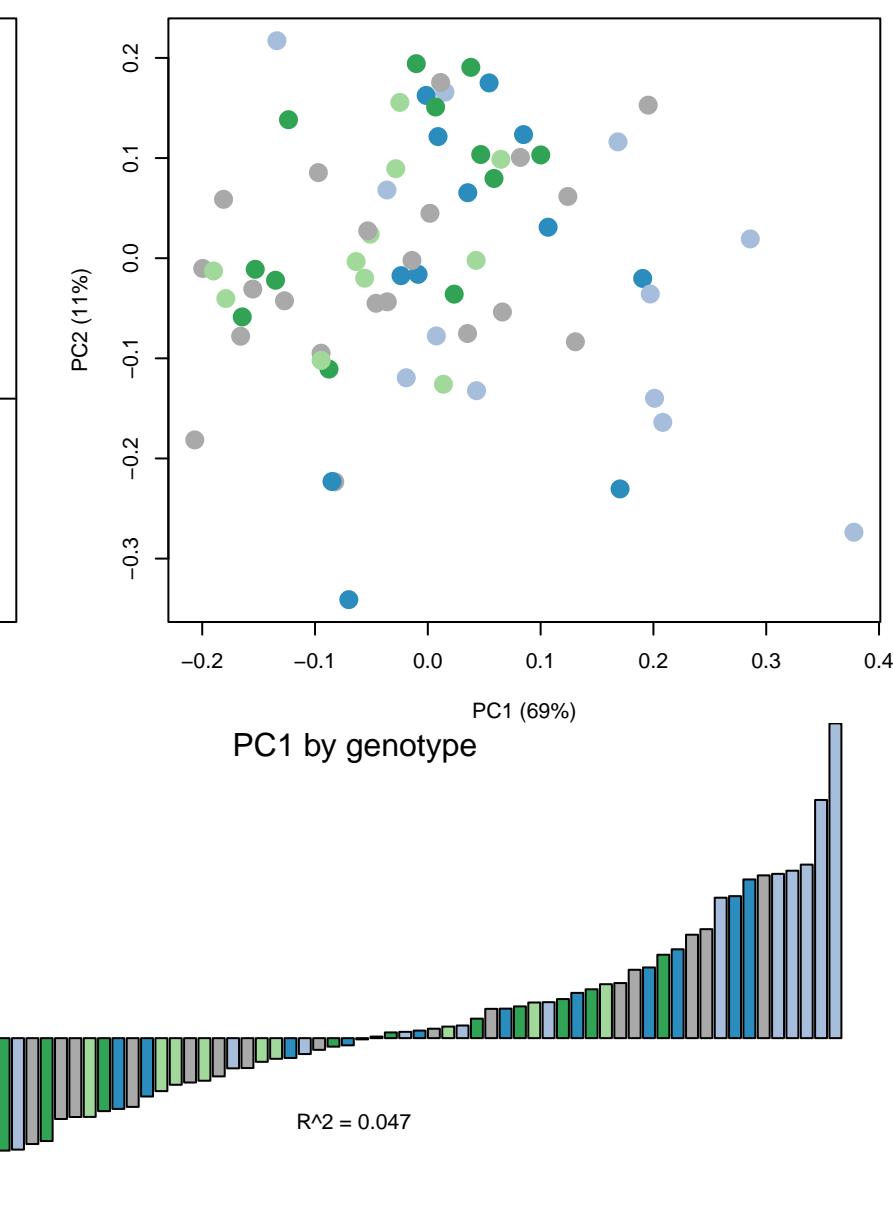
mRNA surveillance pathway



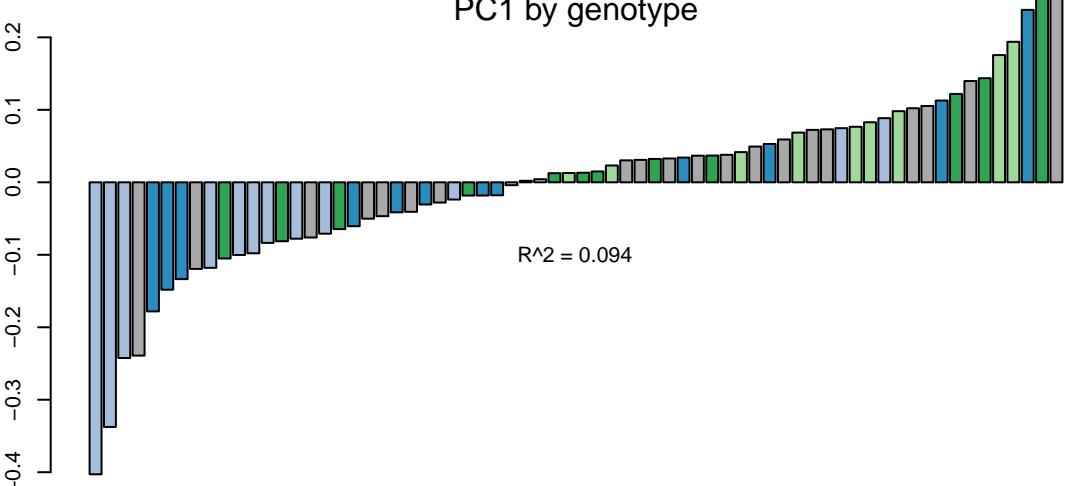
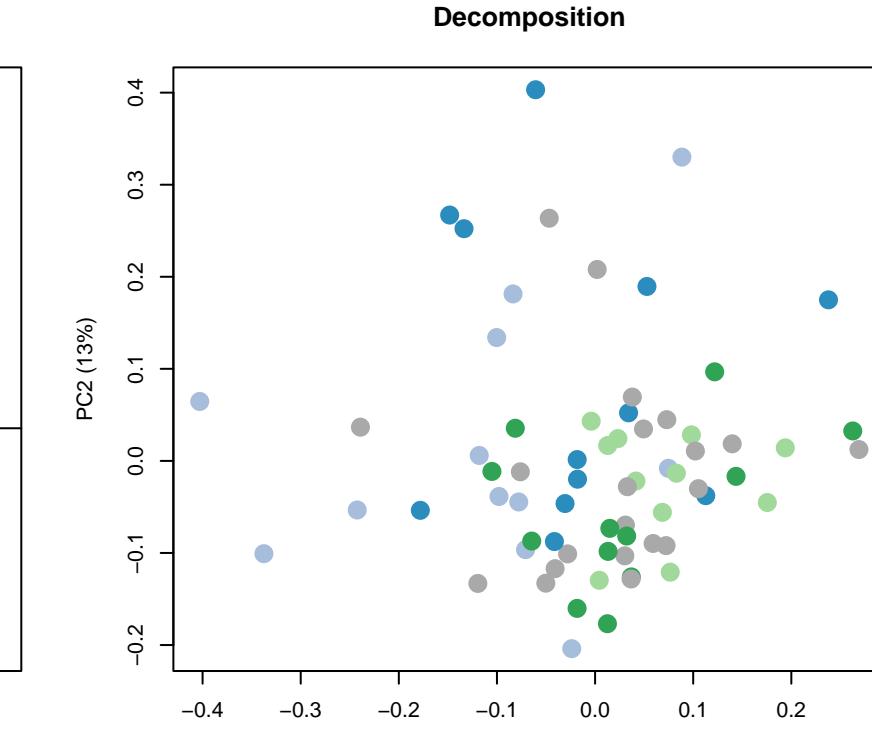
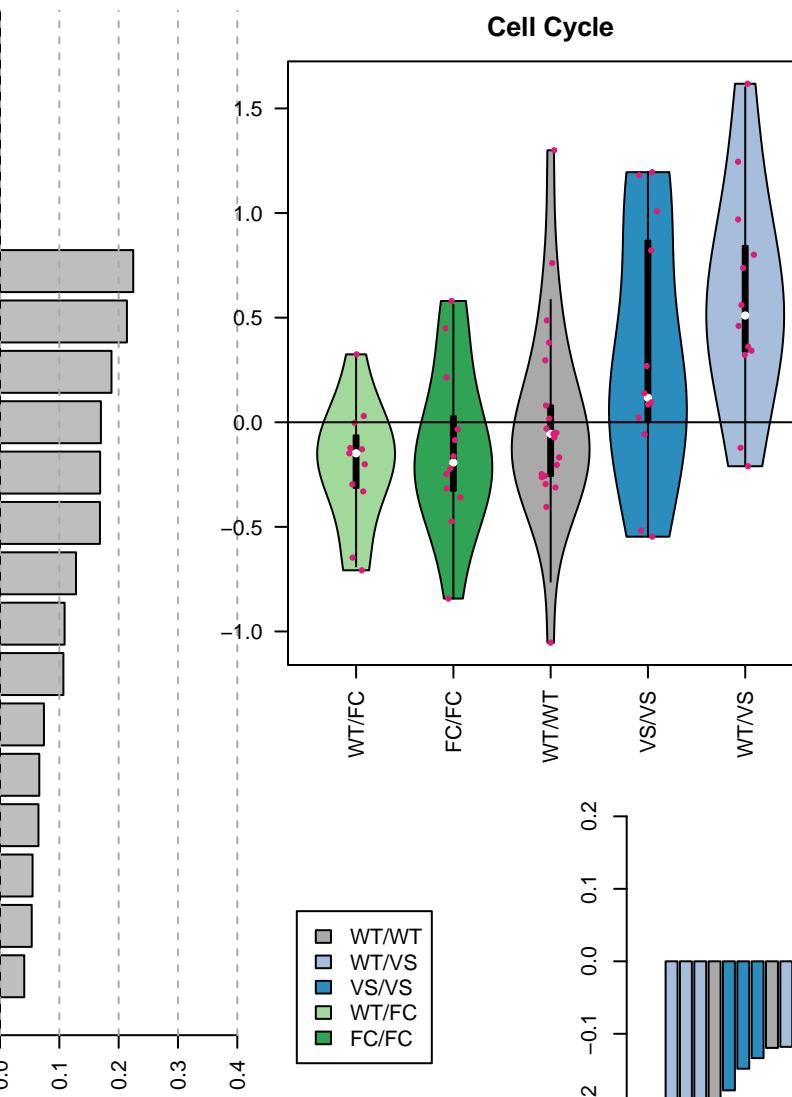
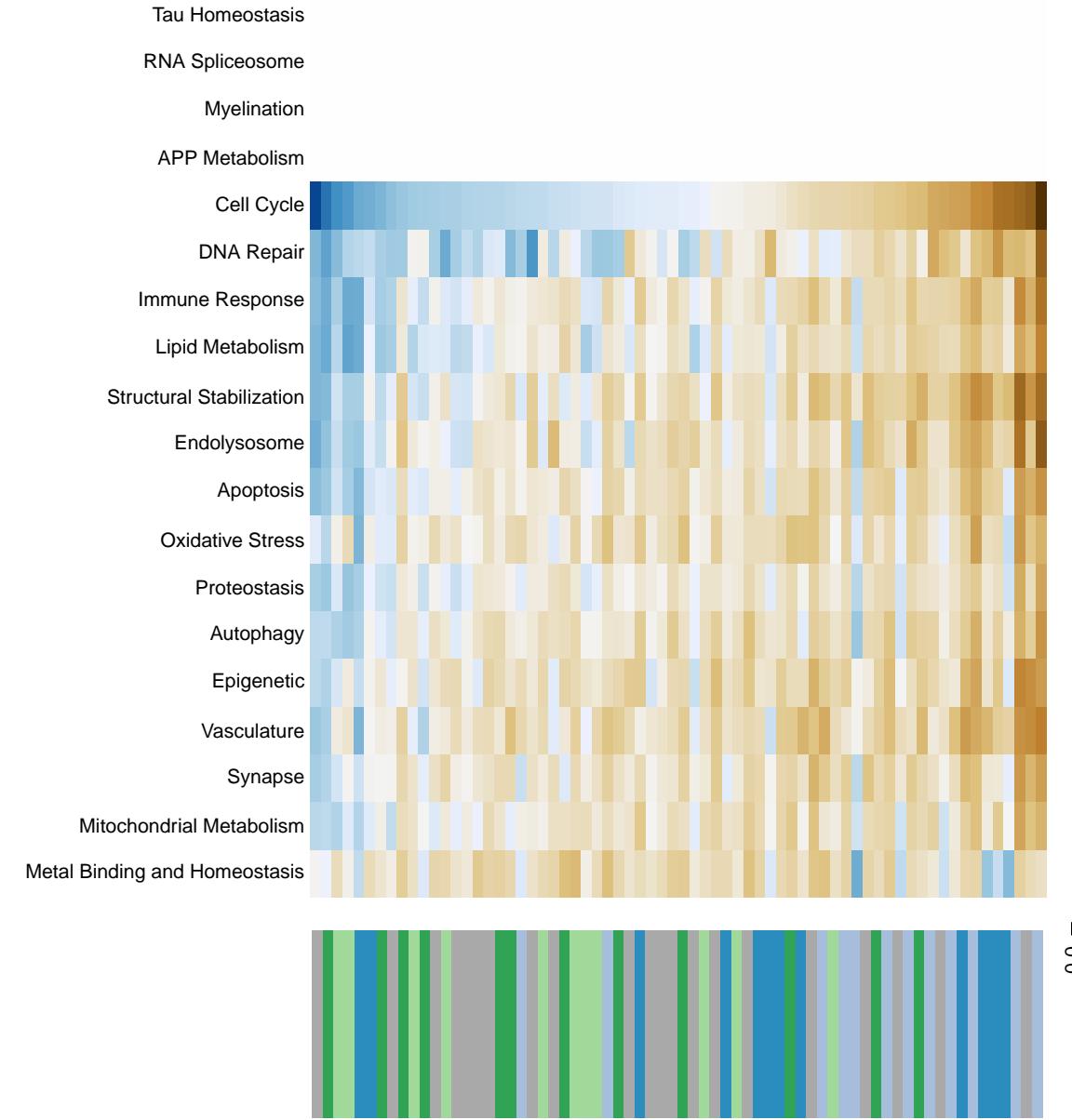
Apoptosis



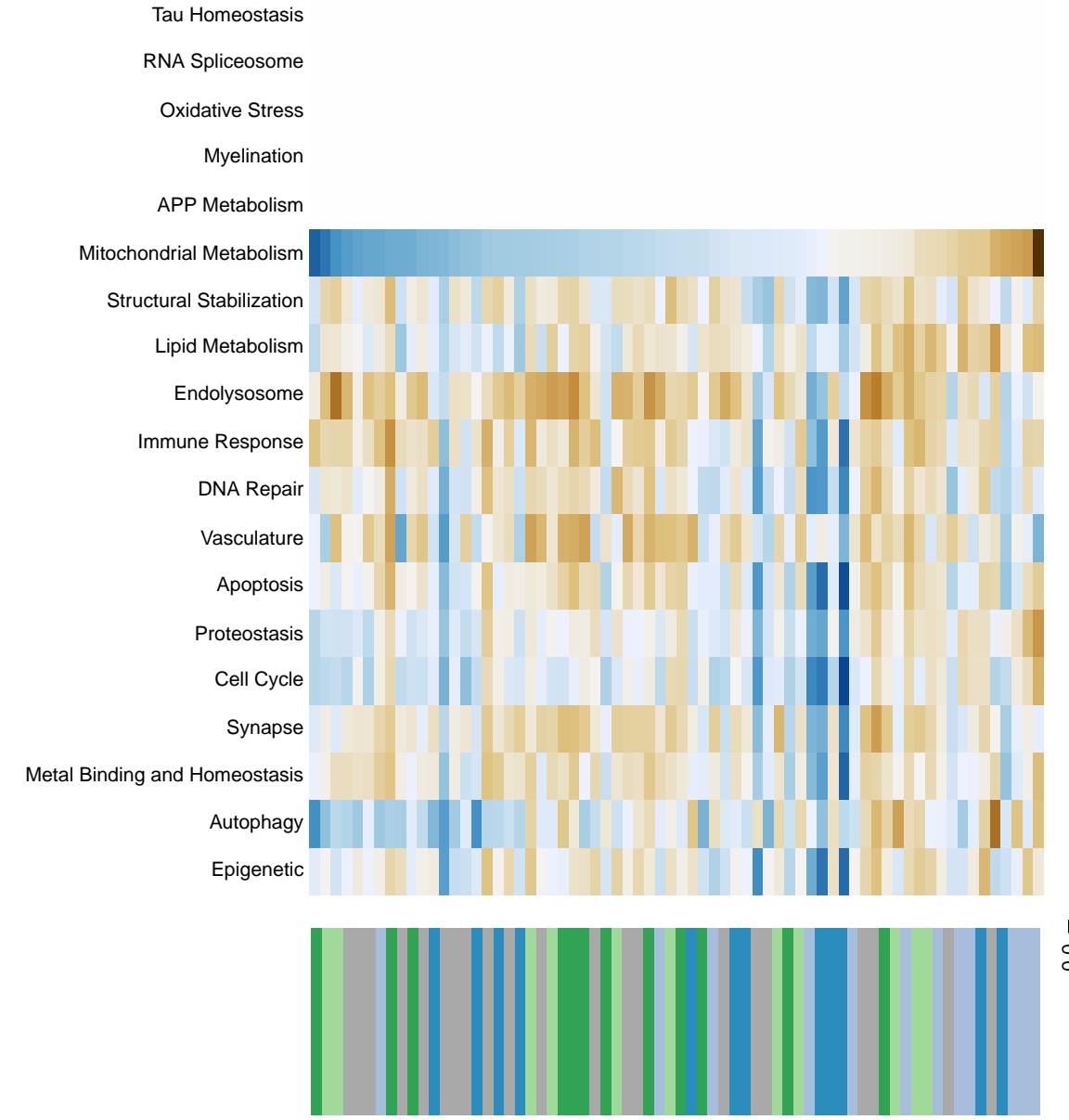
Decomposition



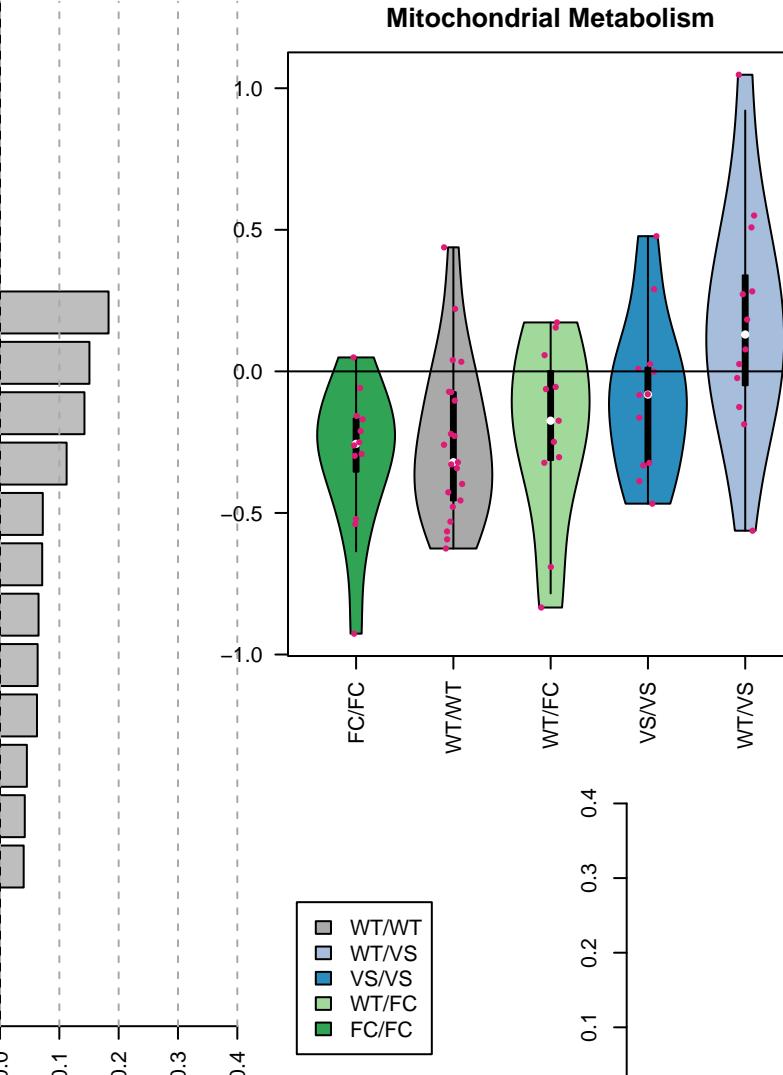
Protein processing in endoplasmic reticulum



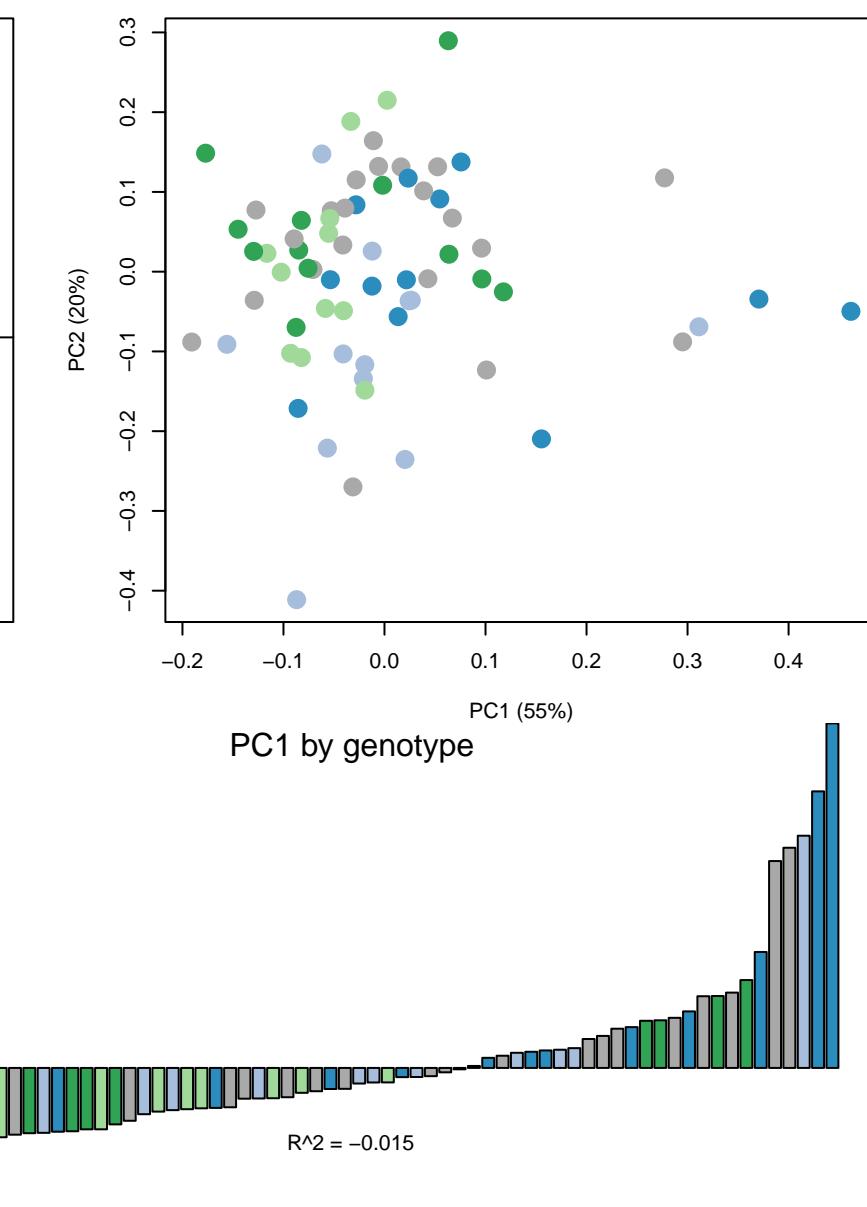
Ubiquitin mediated proteolysis



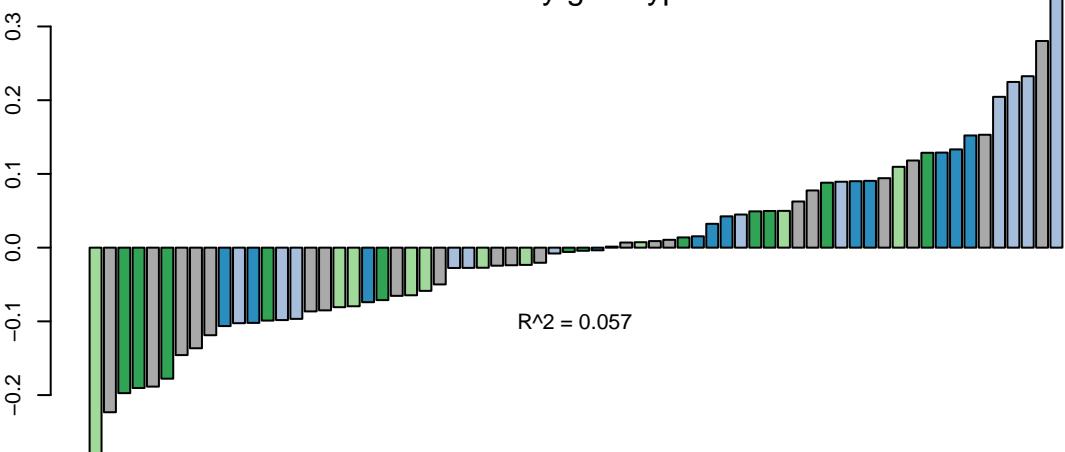
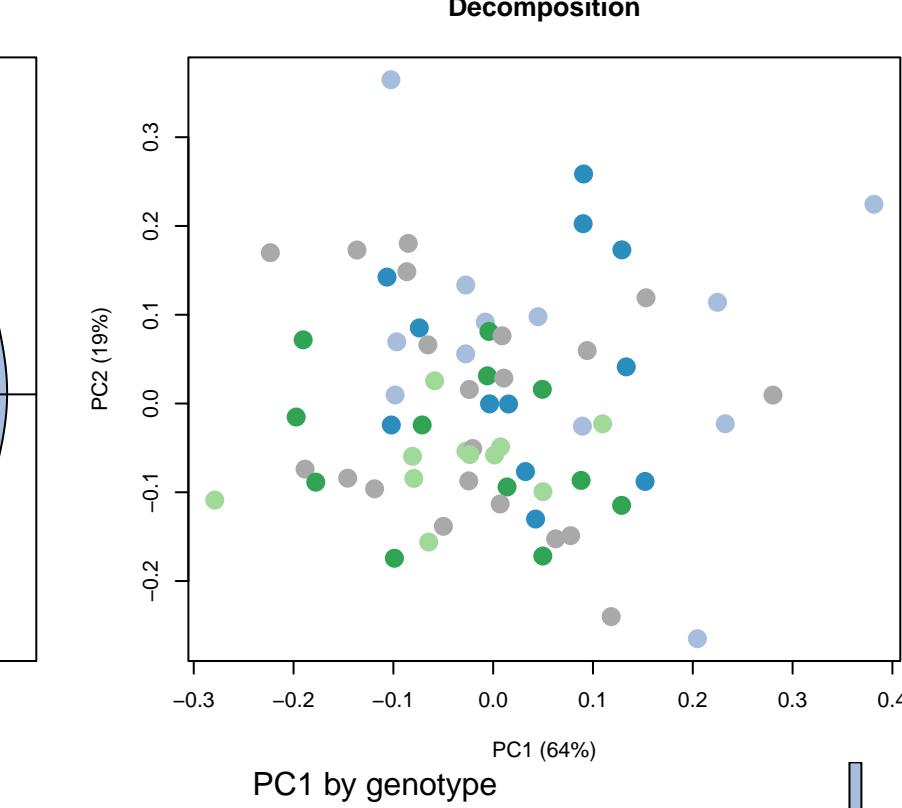
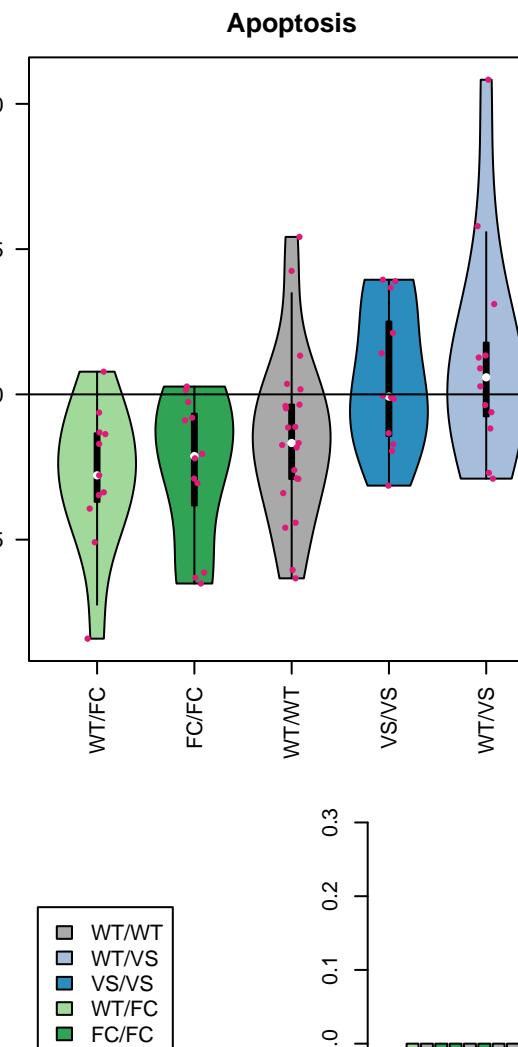
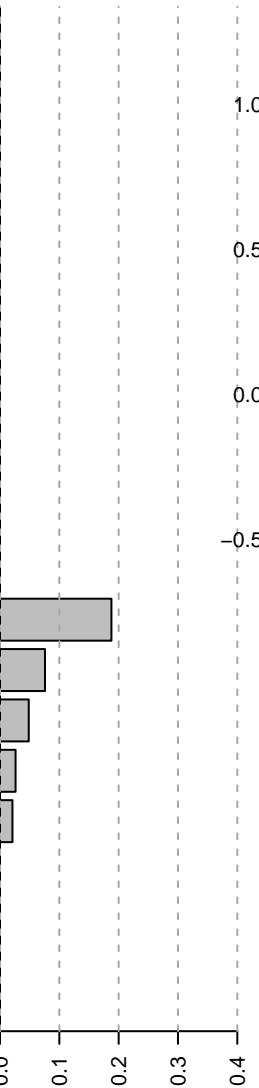
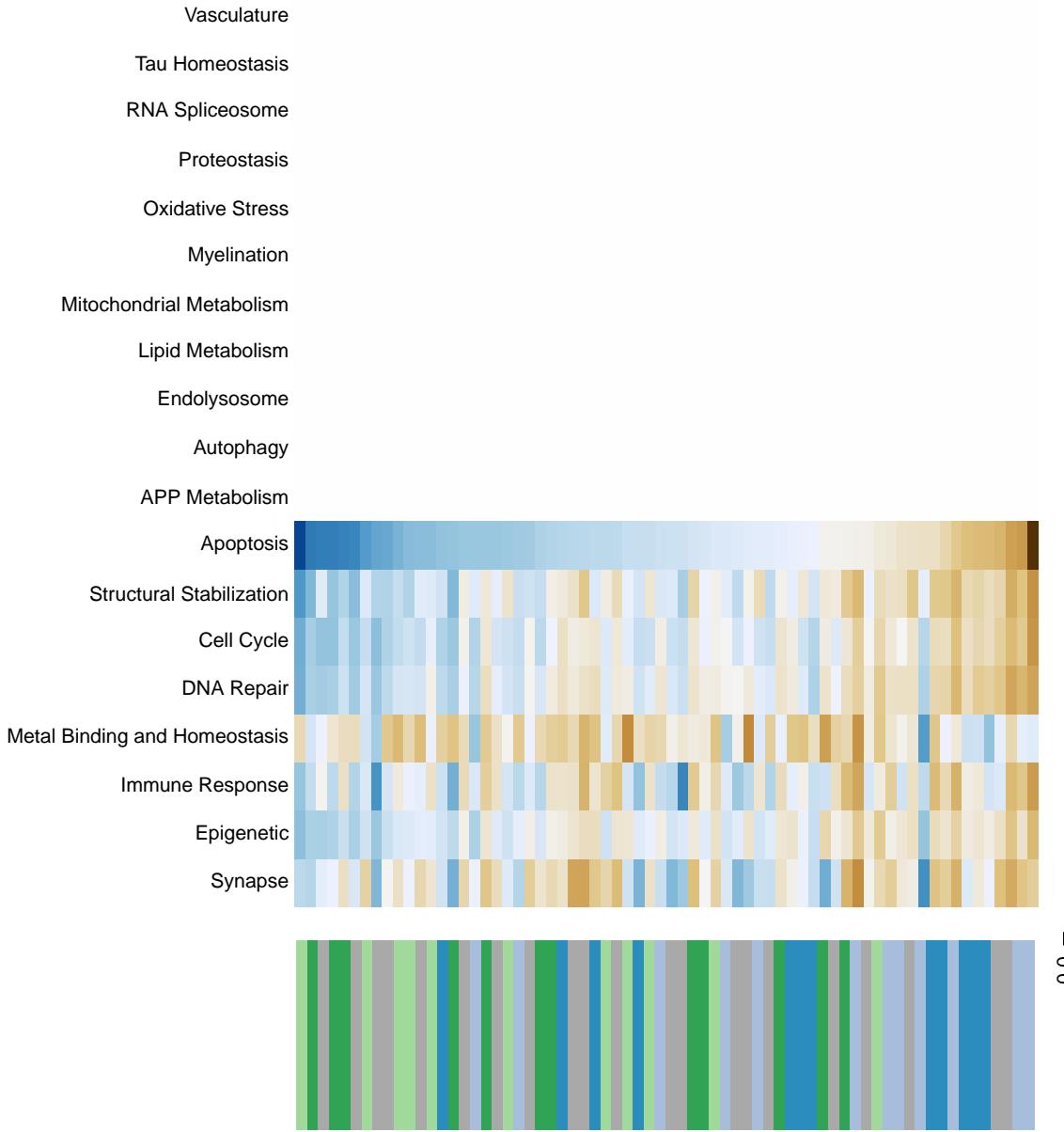
Mitochondrial Metabolism



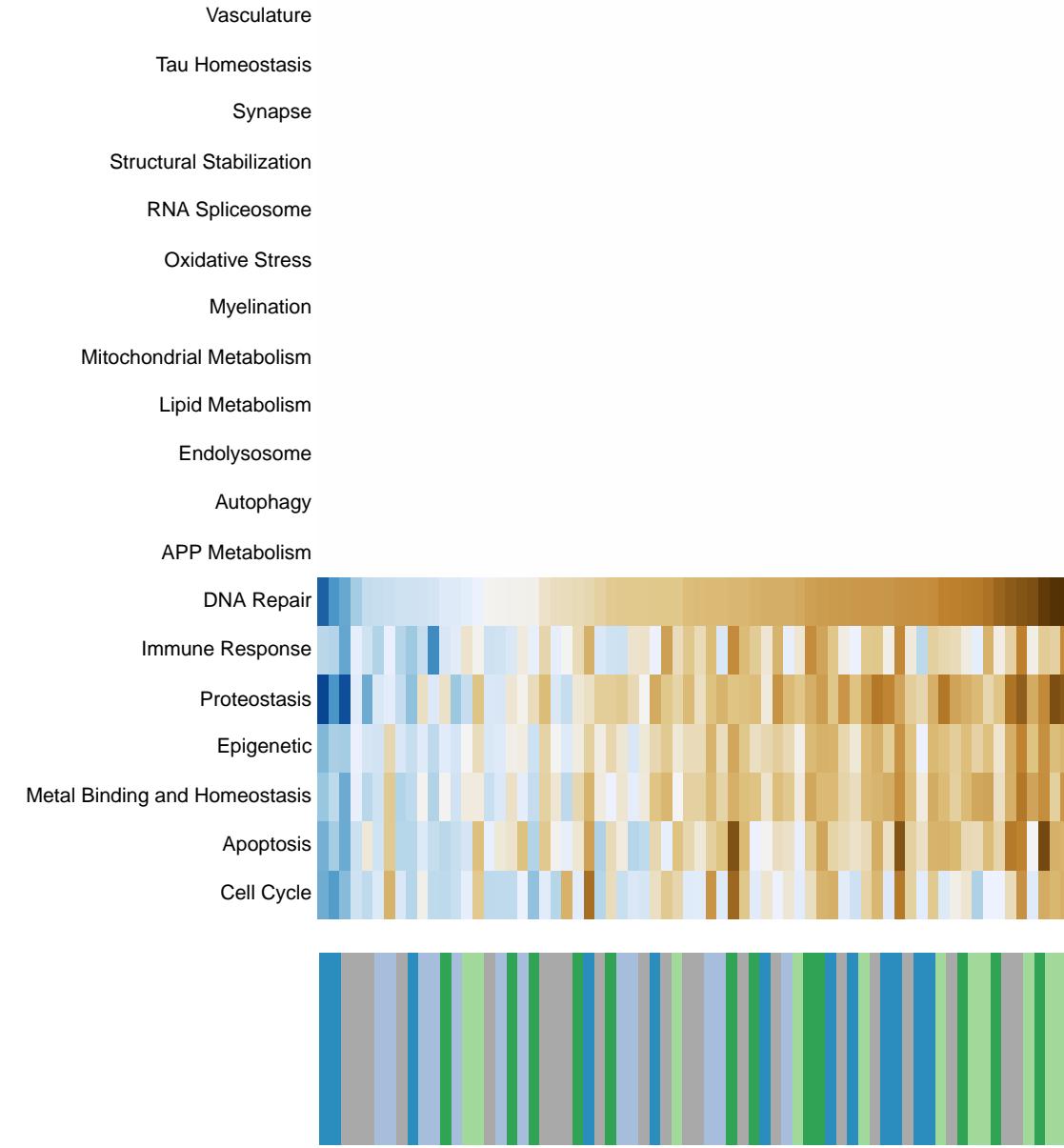
Decomposition



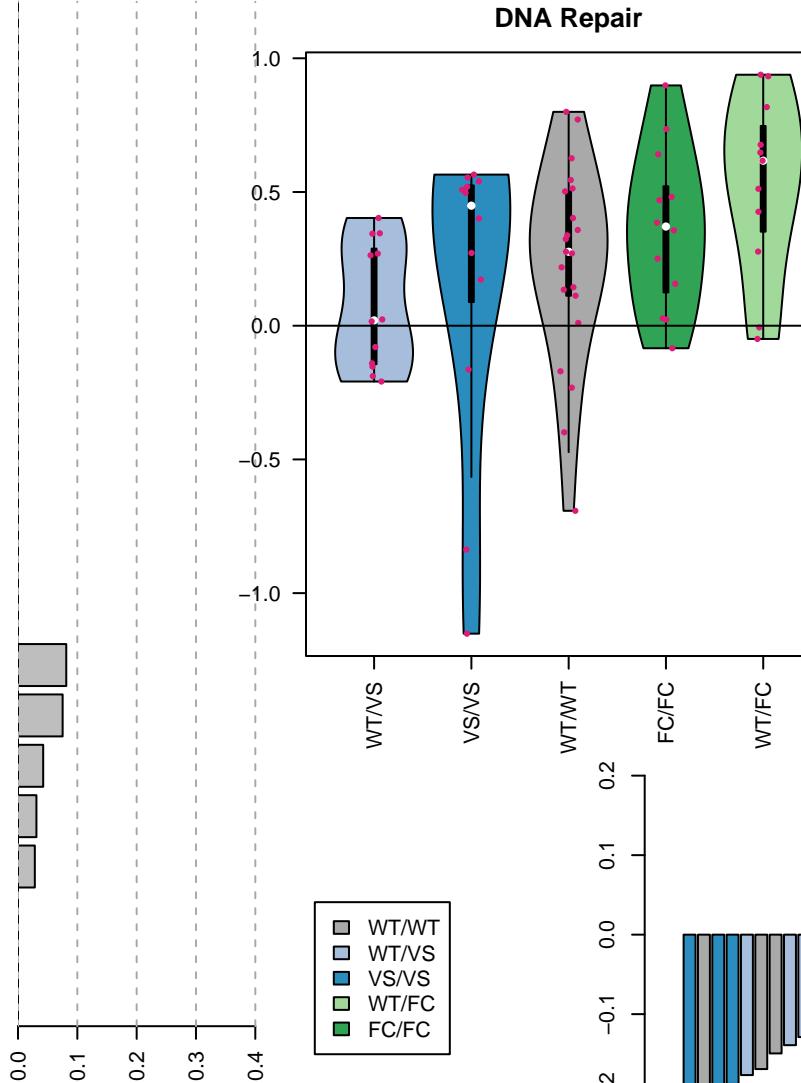
ATP-dependent chromatin remodeling



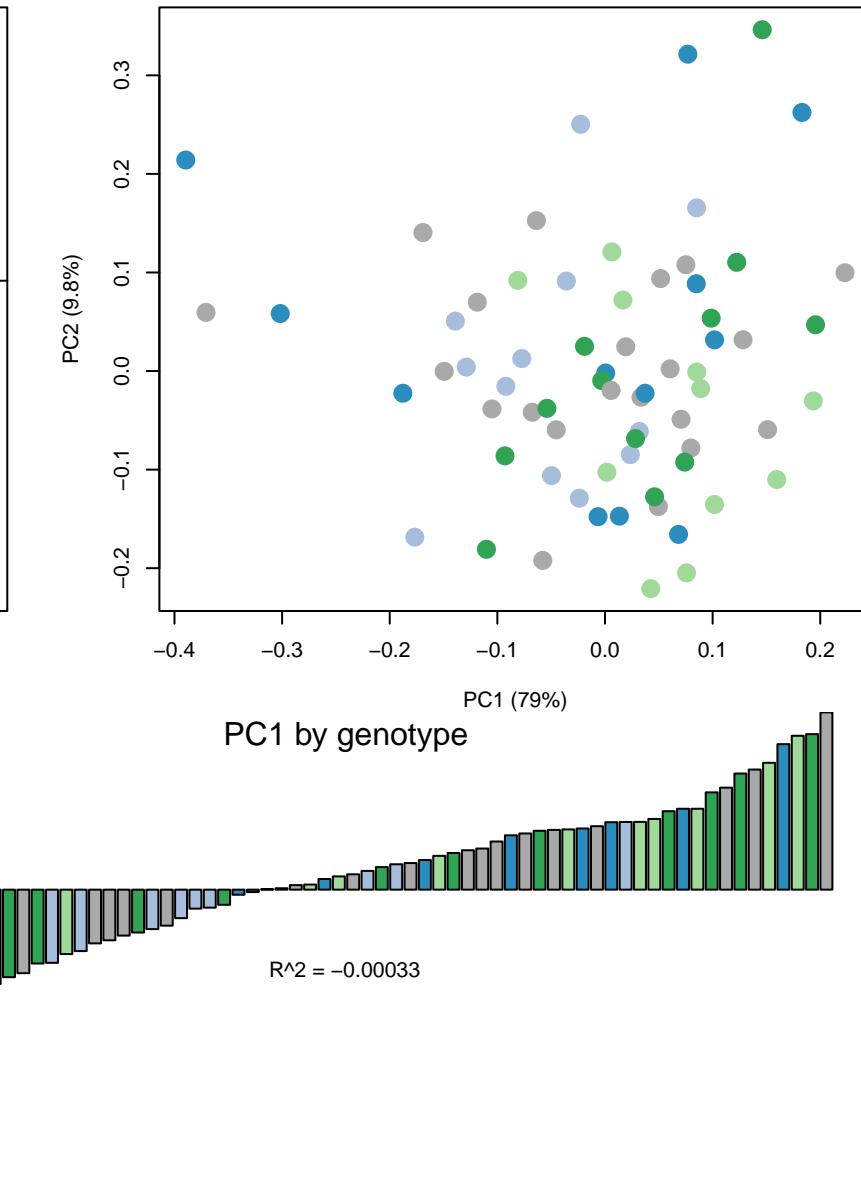
Polycomb repressive complex



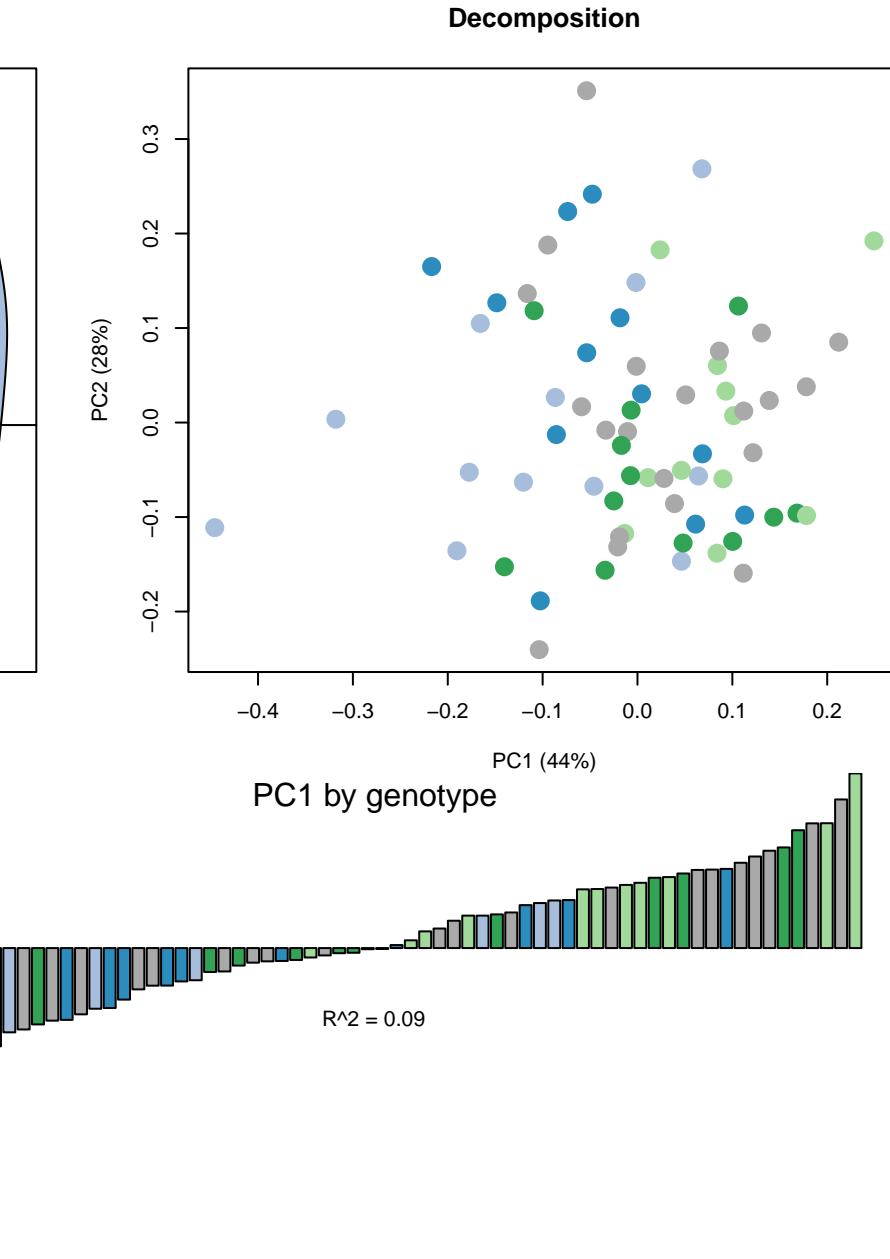
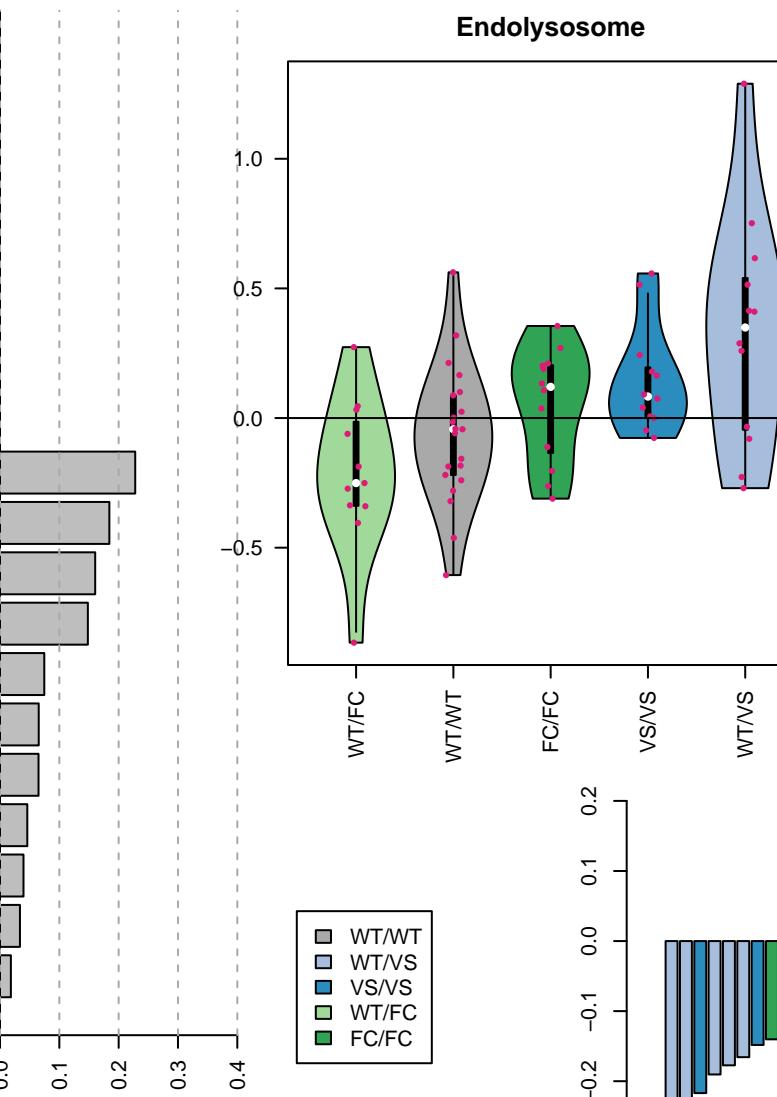
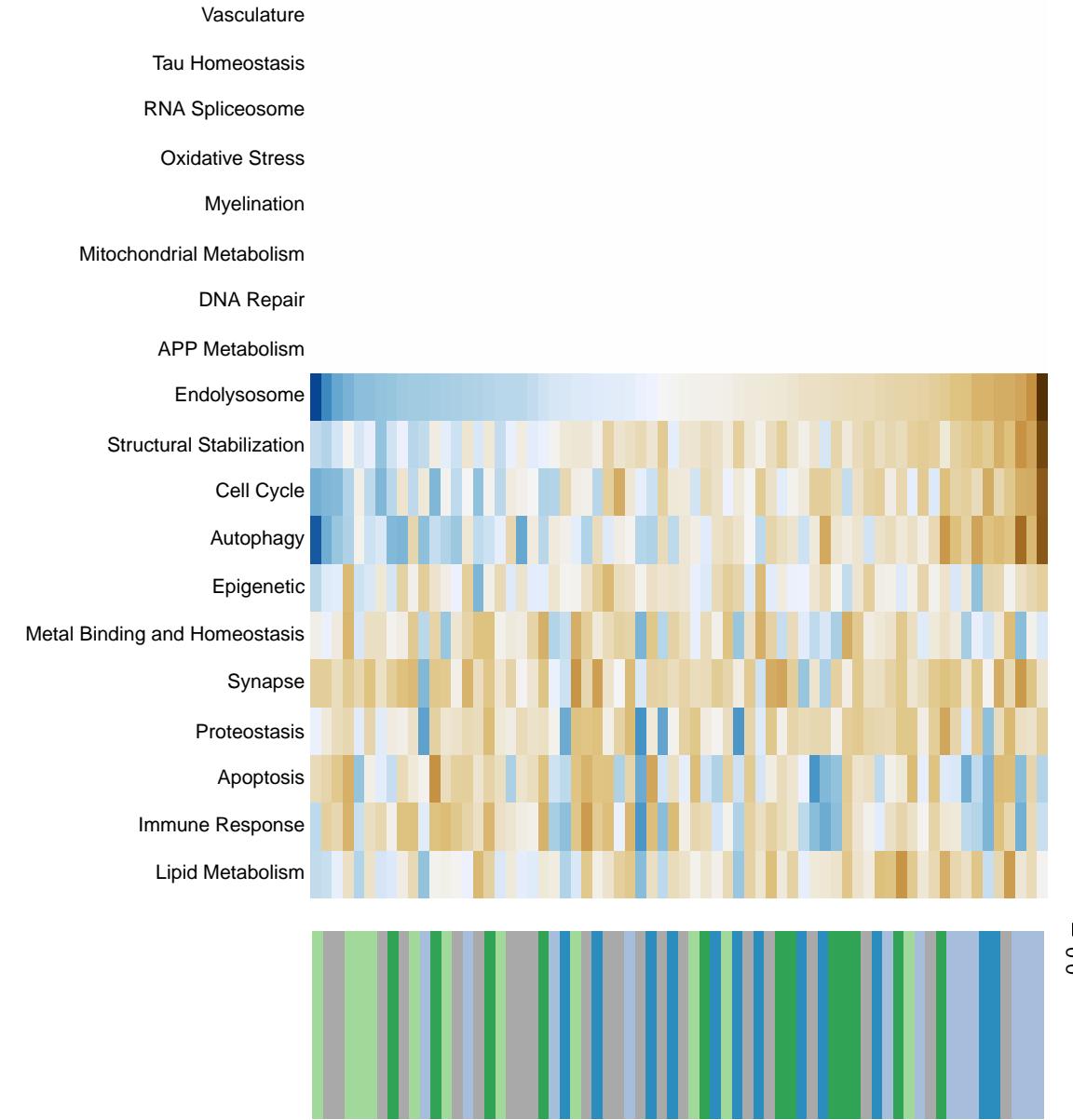
DNA Repair



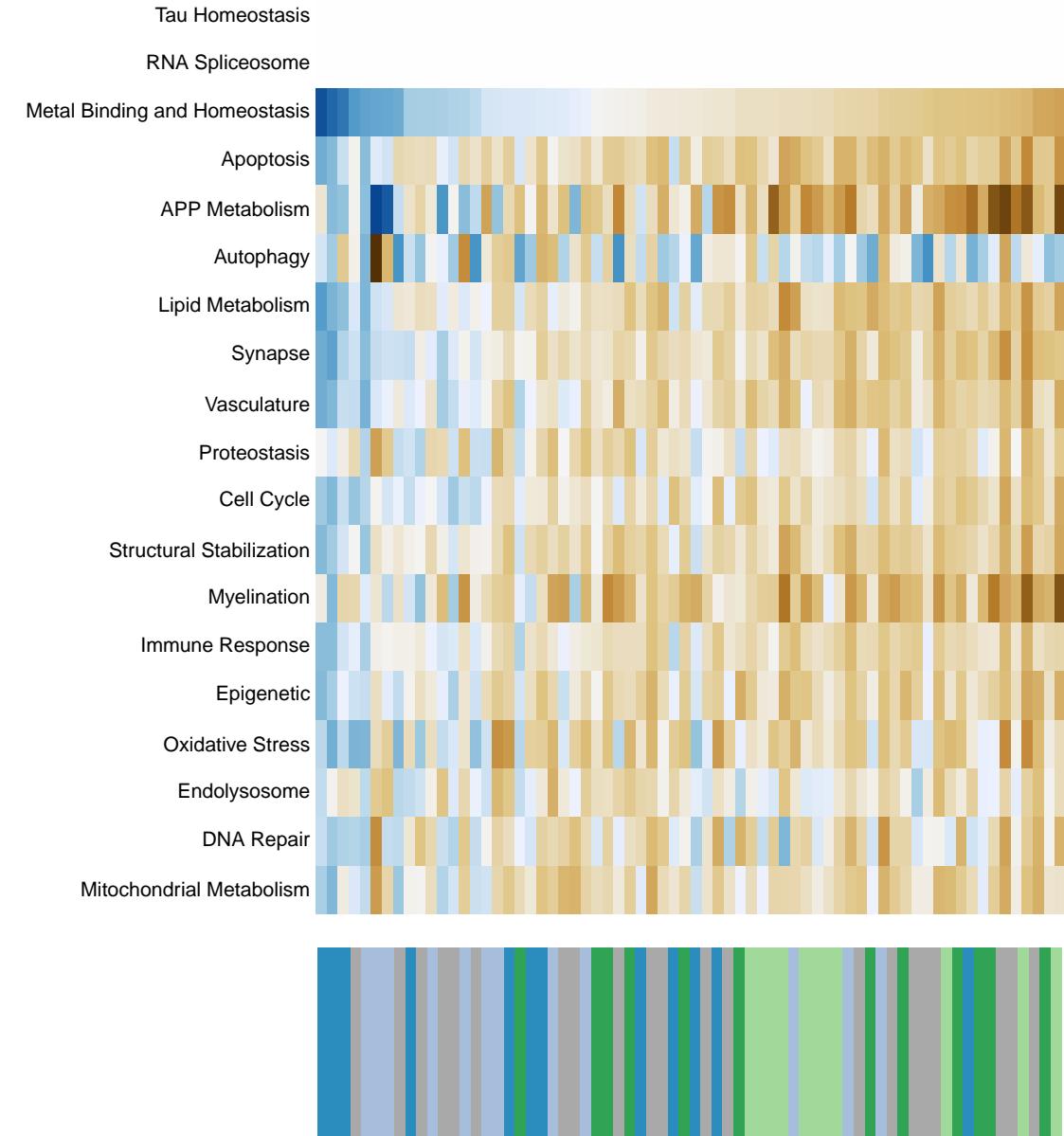
Decomposition



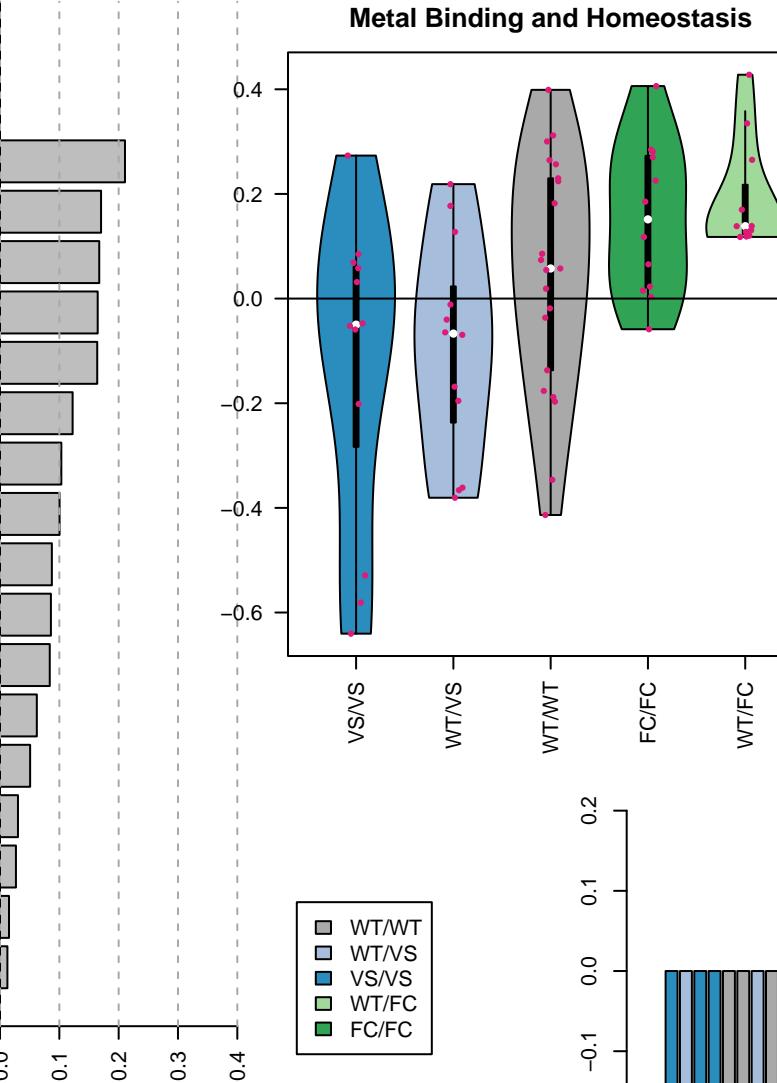
Viral life cycle – HIV-1



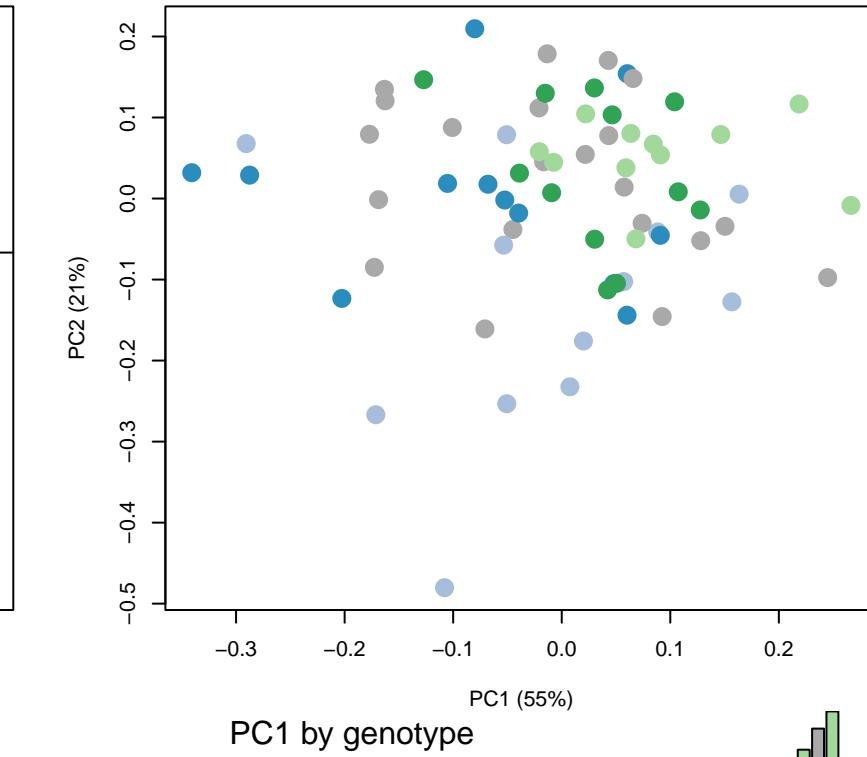
MAPK signaling pathway



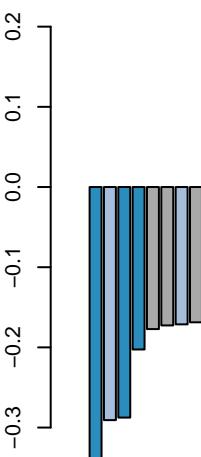
Metal Binding and Homeostasis



Decomposition

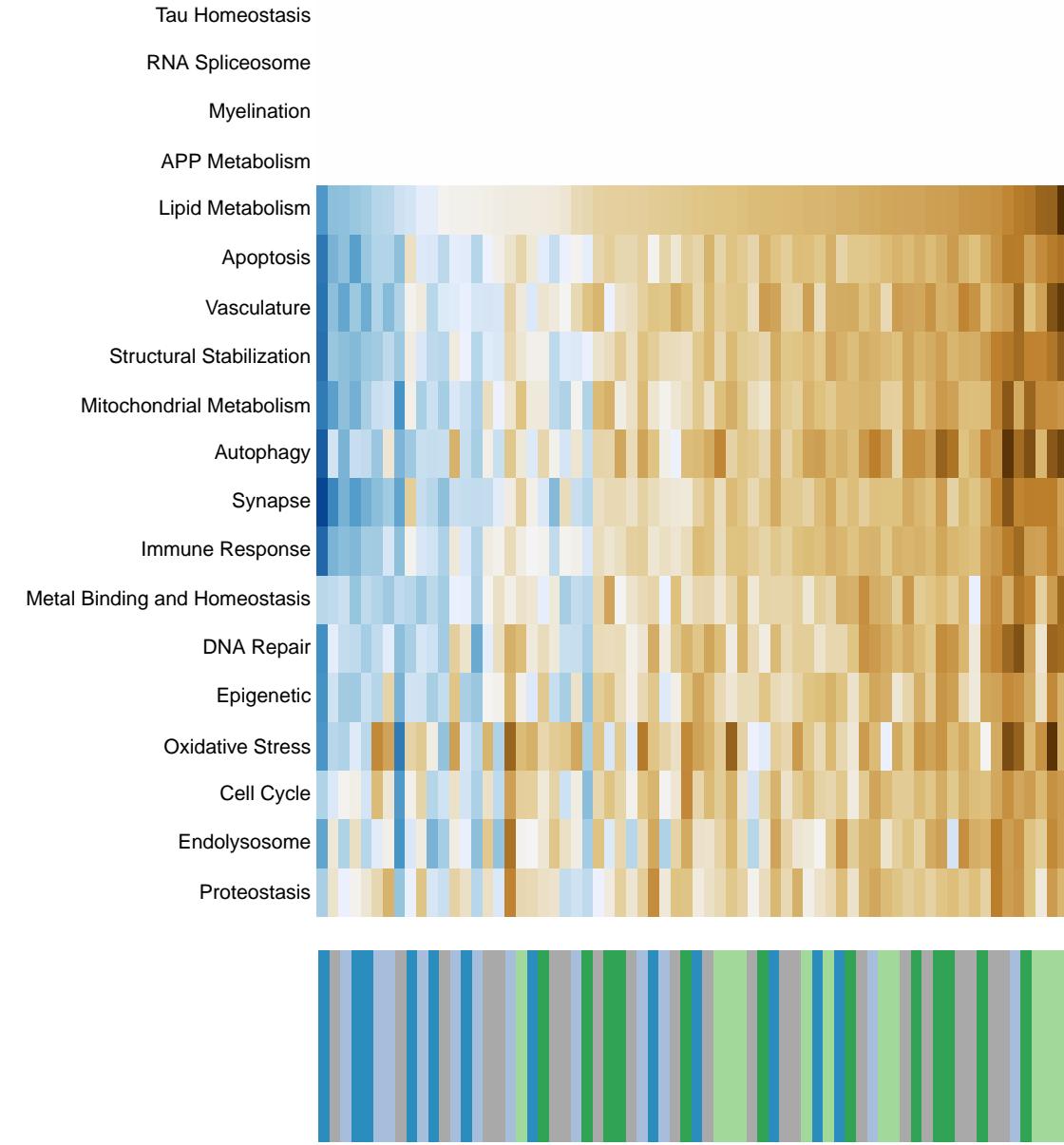


PC1 by genotype

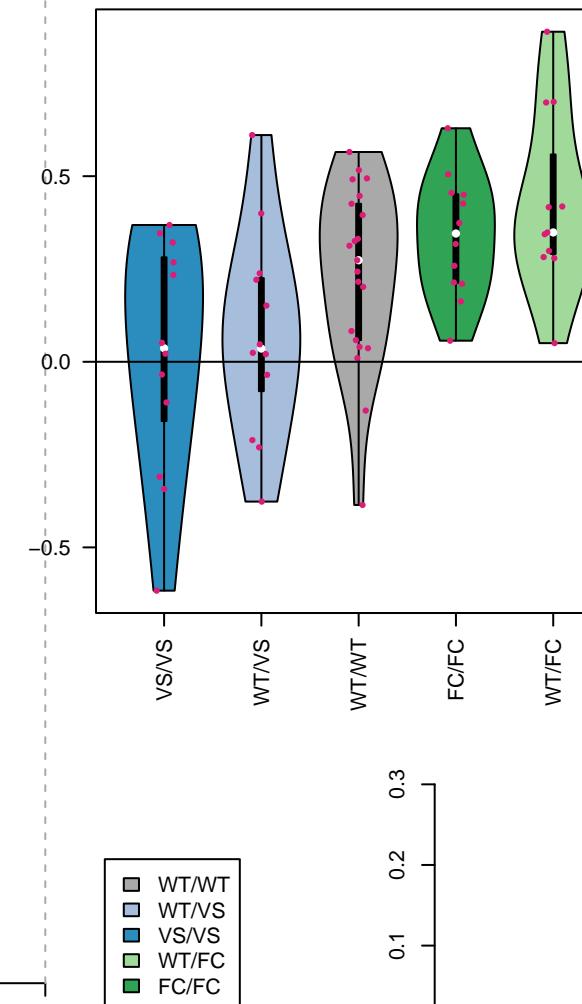


$R^2 = 0.018$

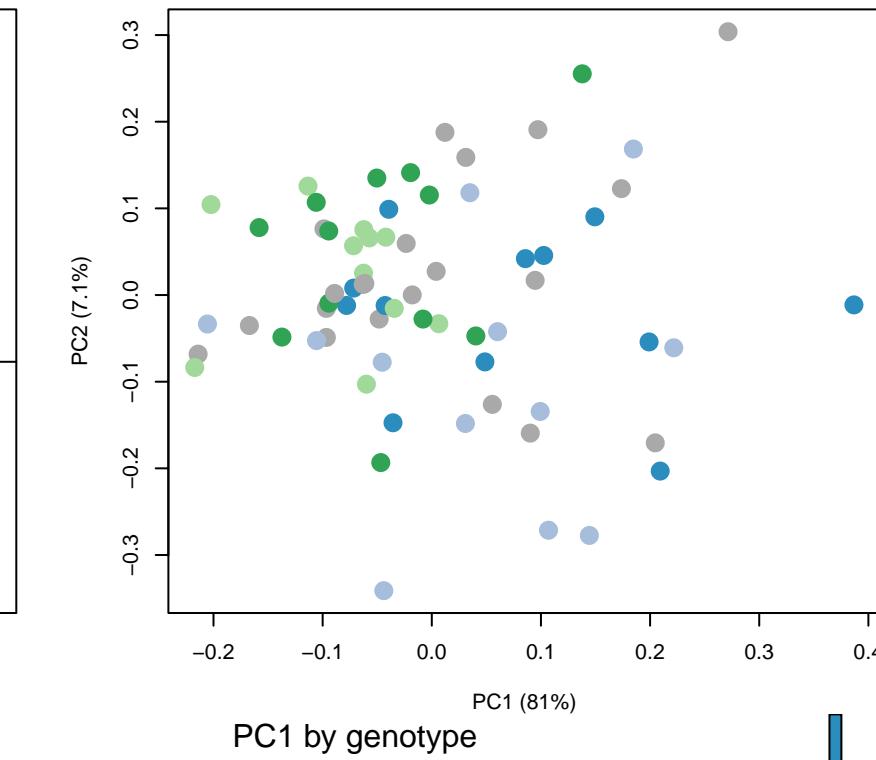
ErbB signaling pathway



Lipid Metabolism

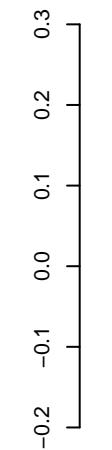


Decomposition

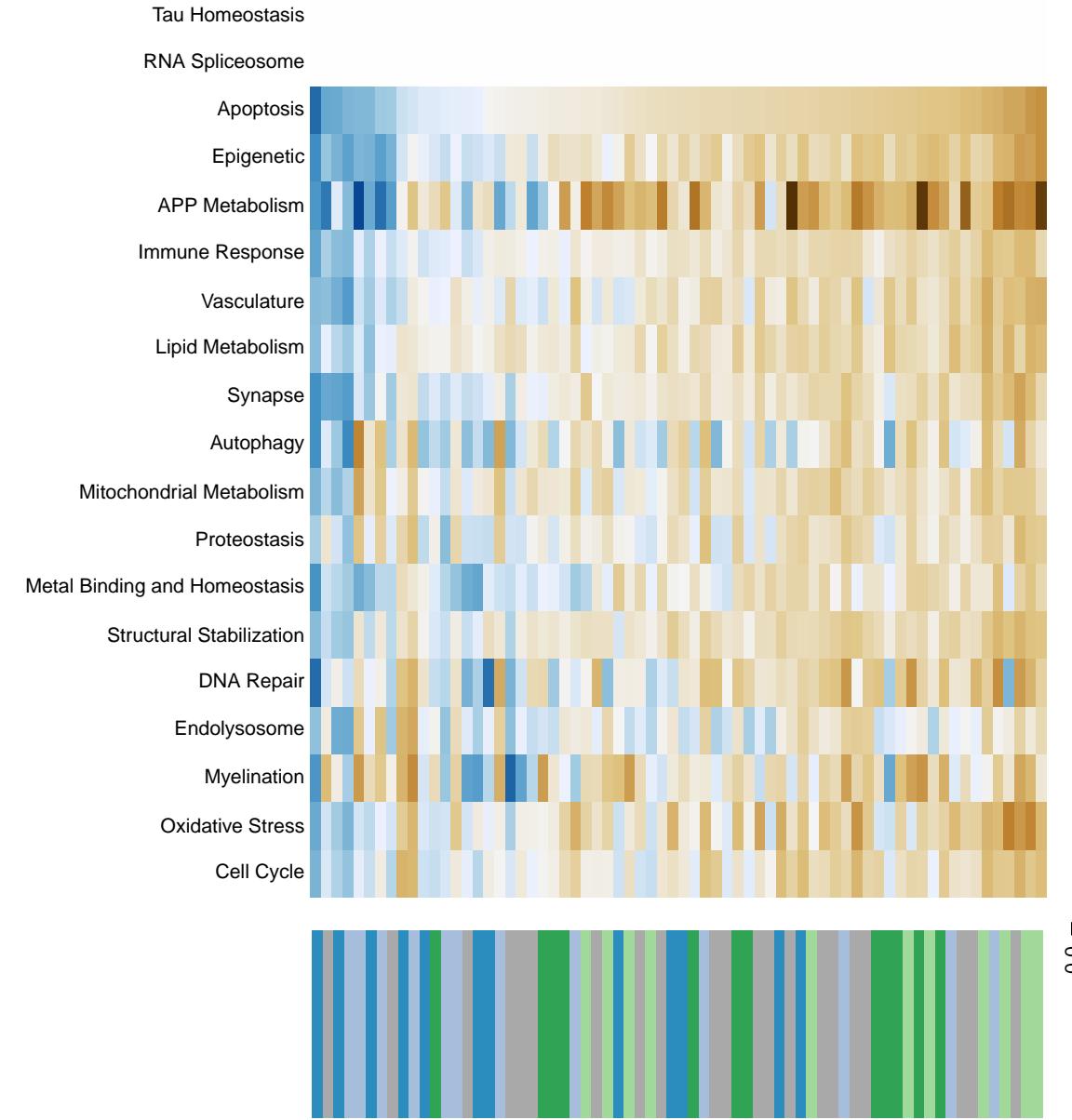


PC1 by genotype

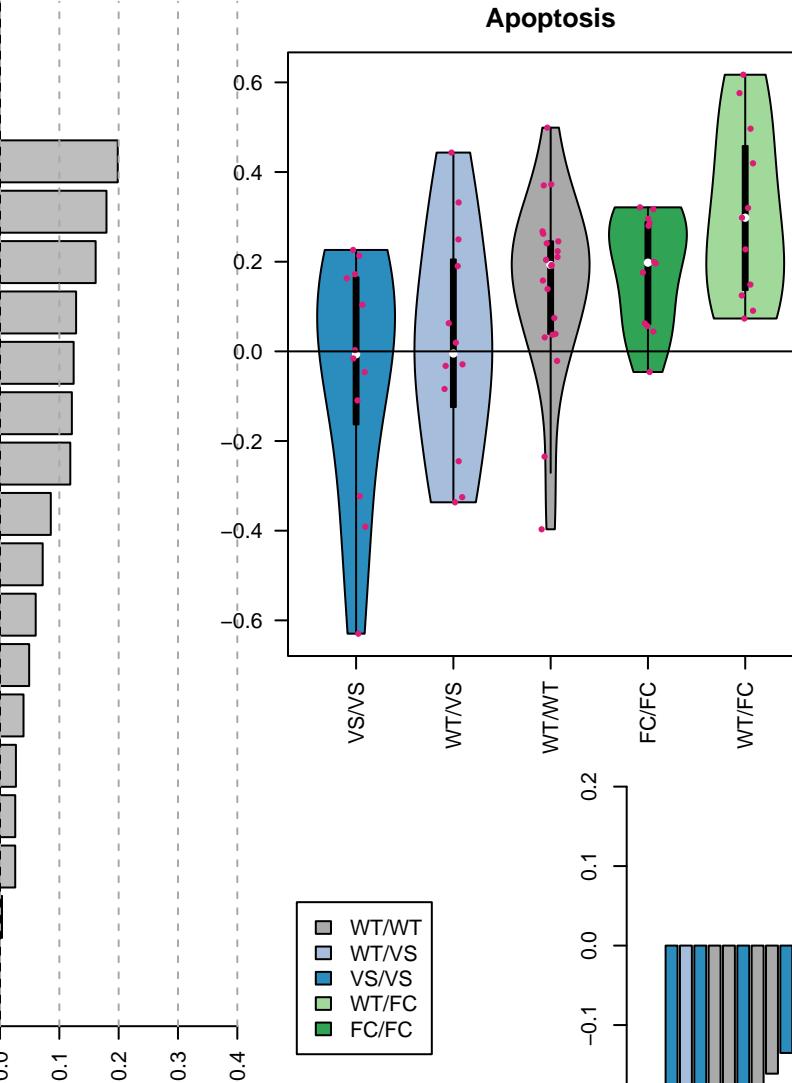
$R^2 = 0.023$



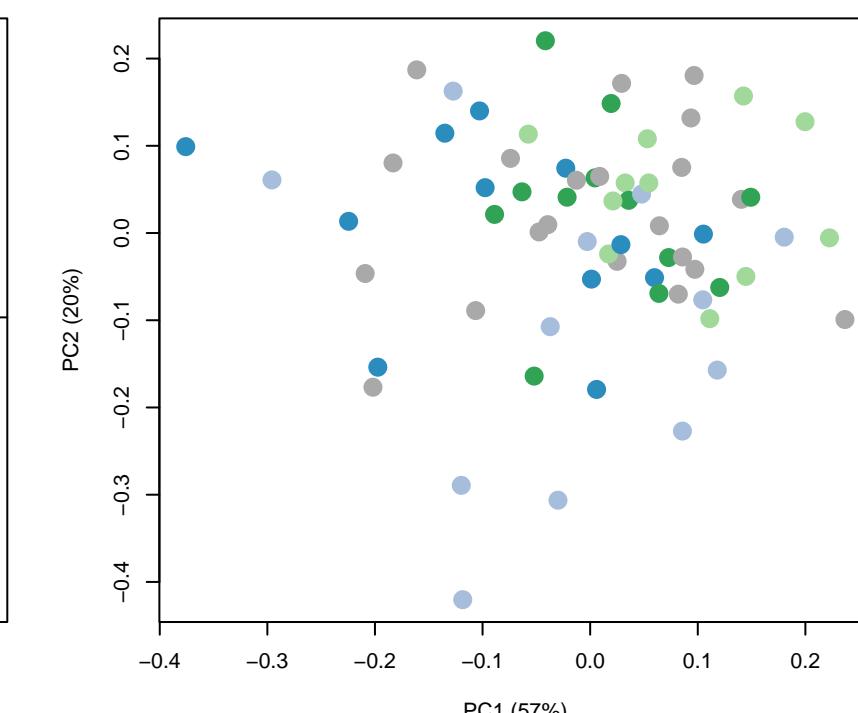
Ras signaling pathway



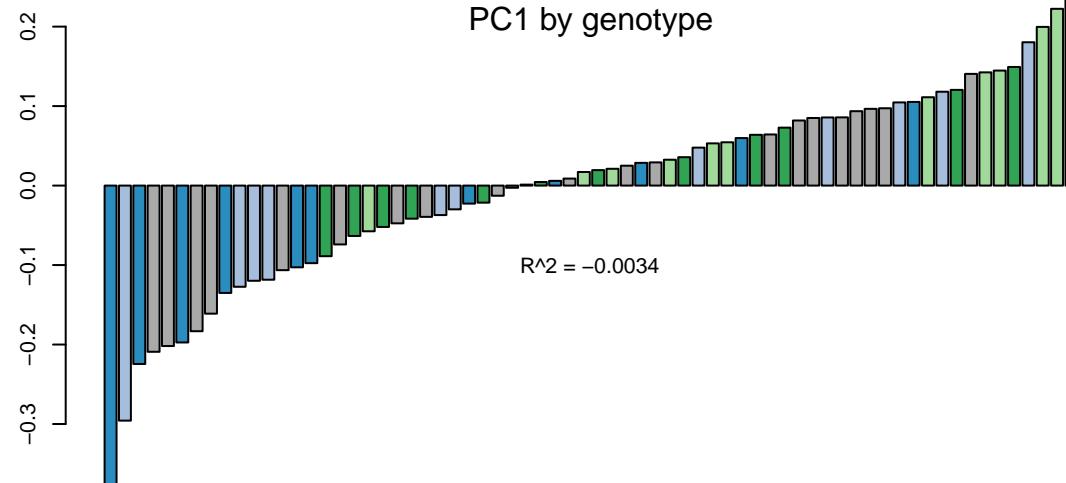
Apoptosis



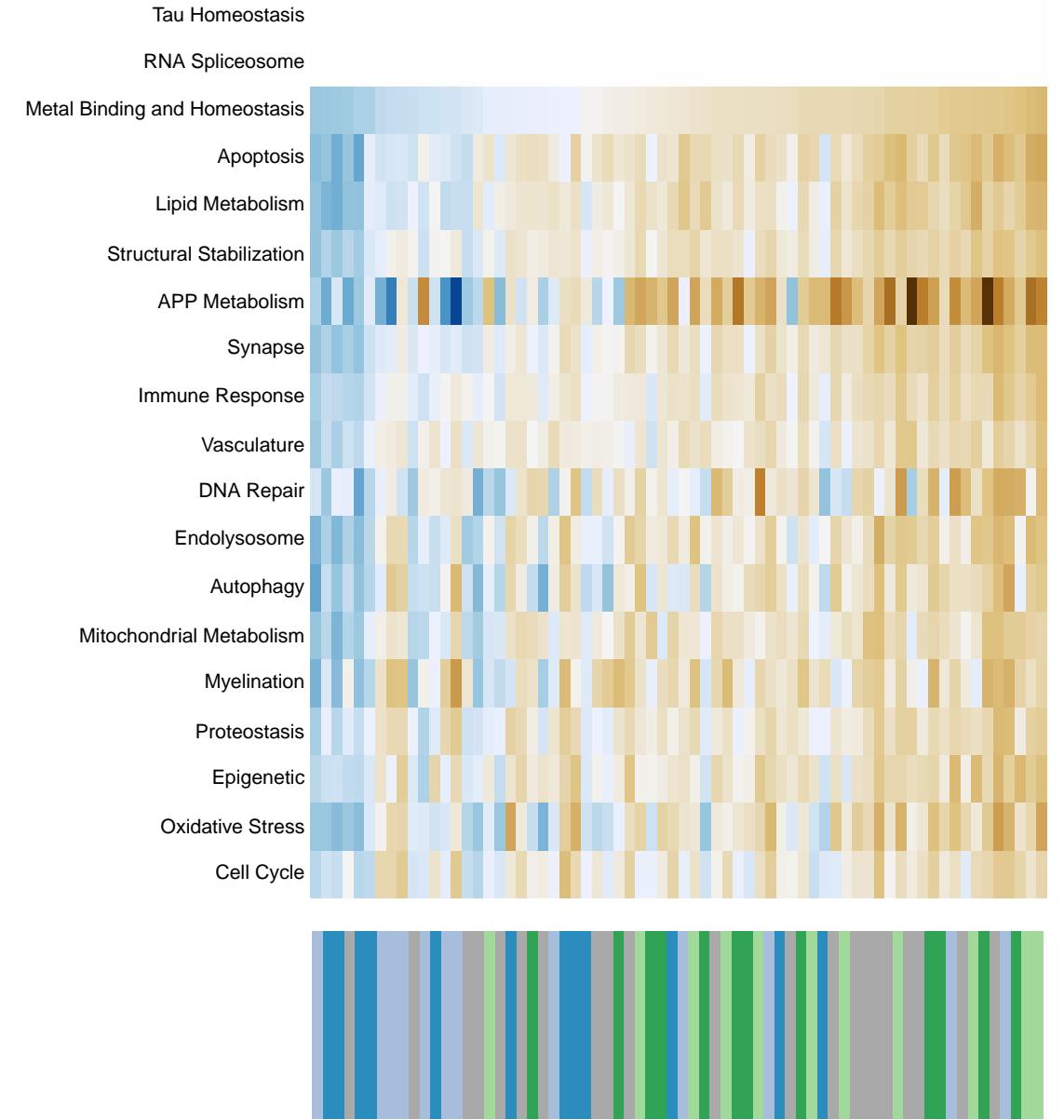
Decomposition



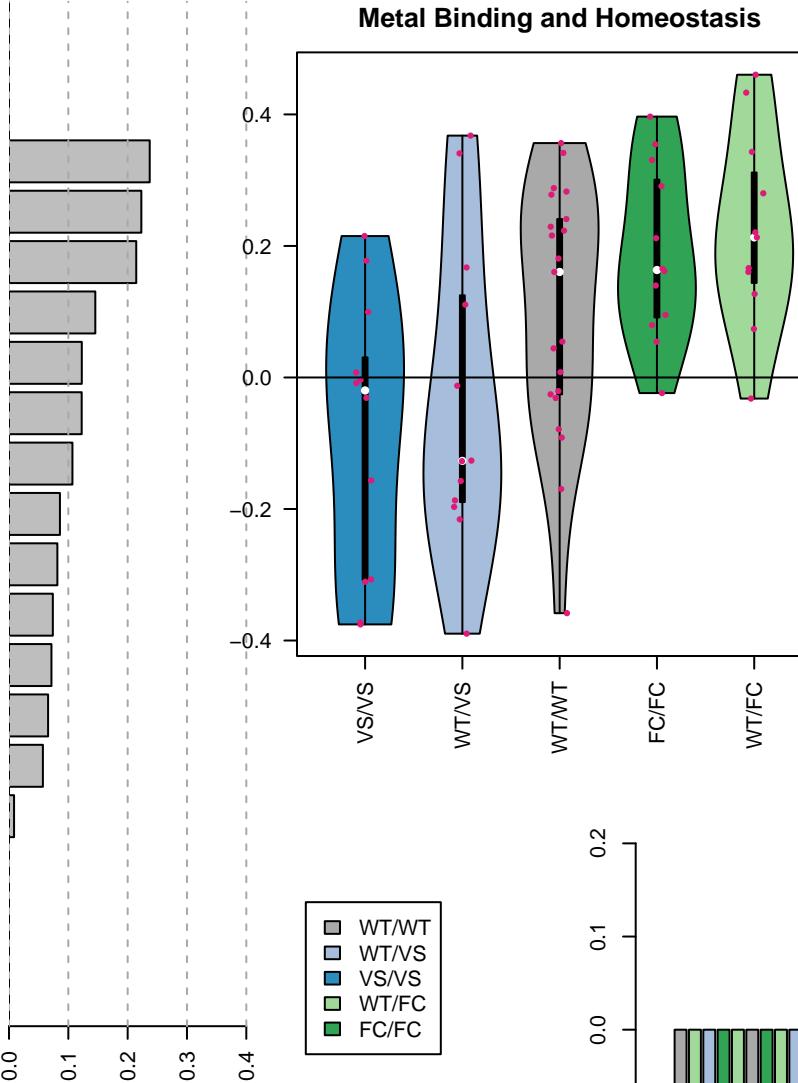
PC1 by genotype



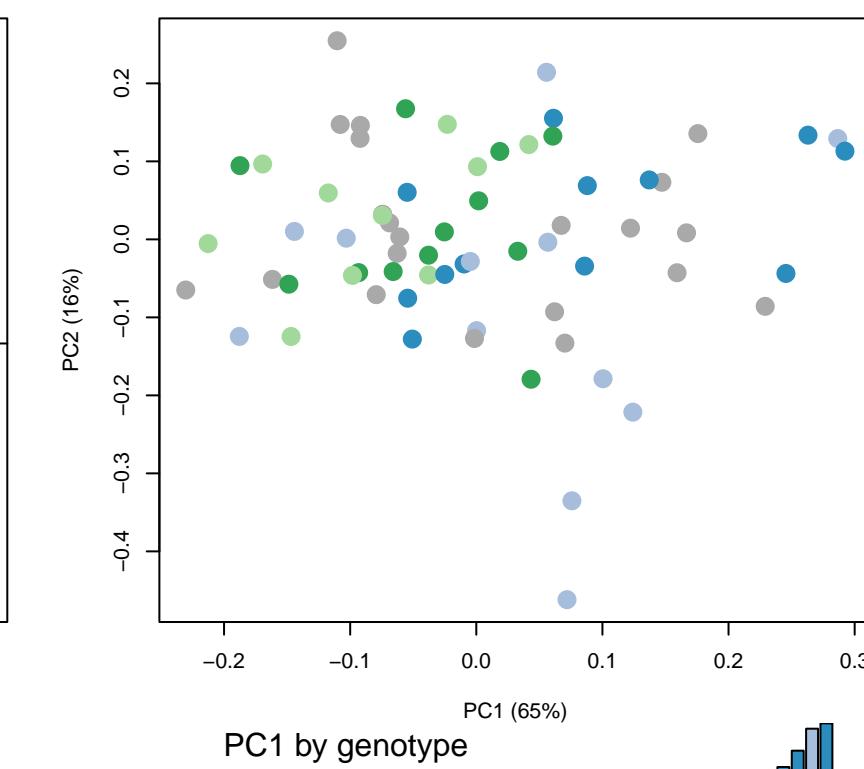
Rap1 signaling pathway



Metal Binding and Homeostasis



Decomposition

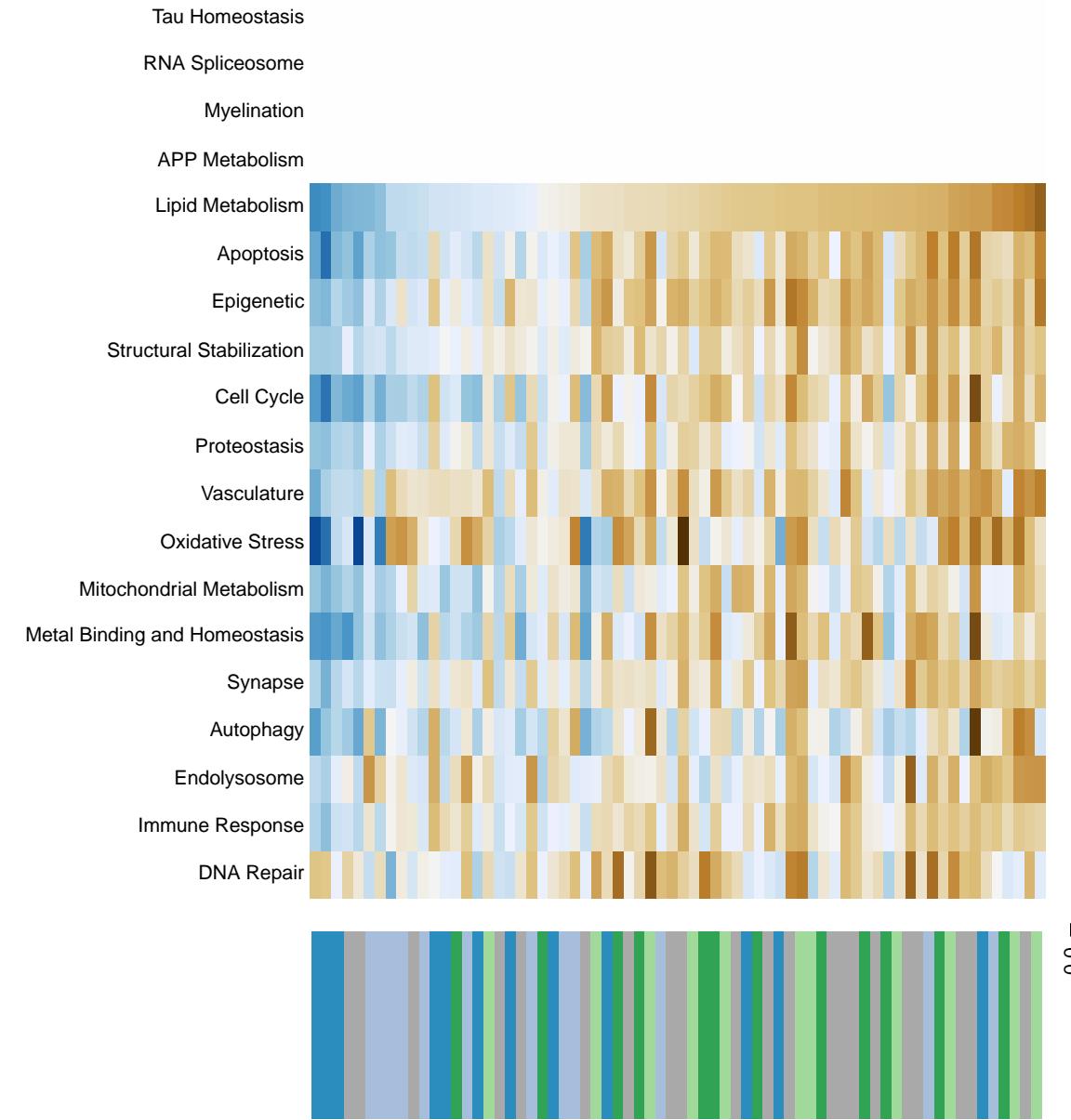


PC1 by genotype

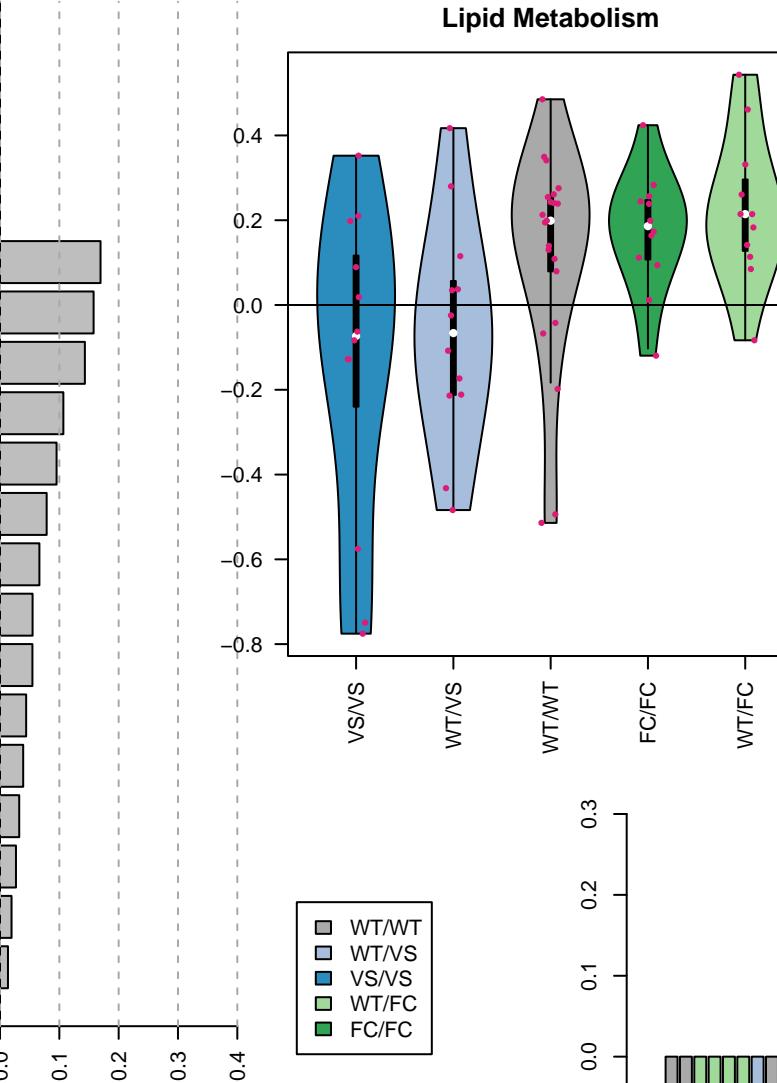
$R^2 = 0.019$

$R^2 = 0.019$

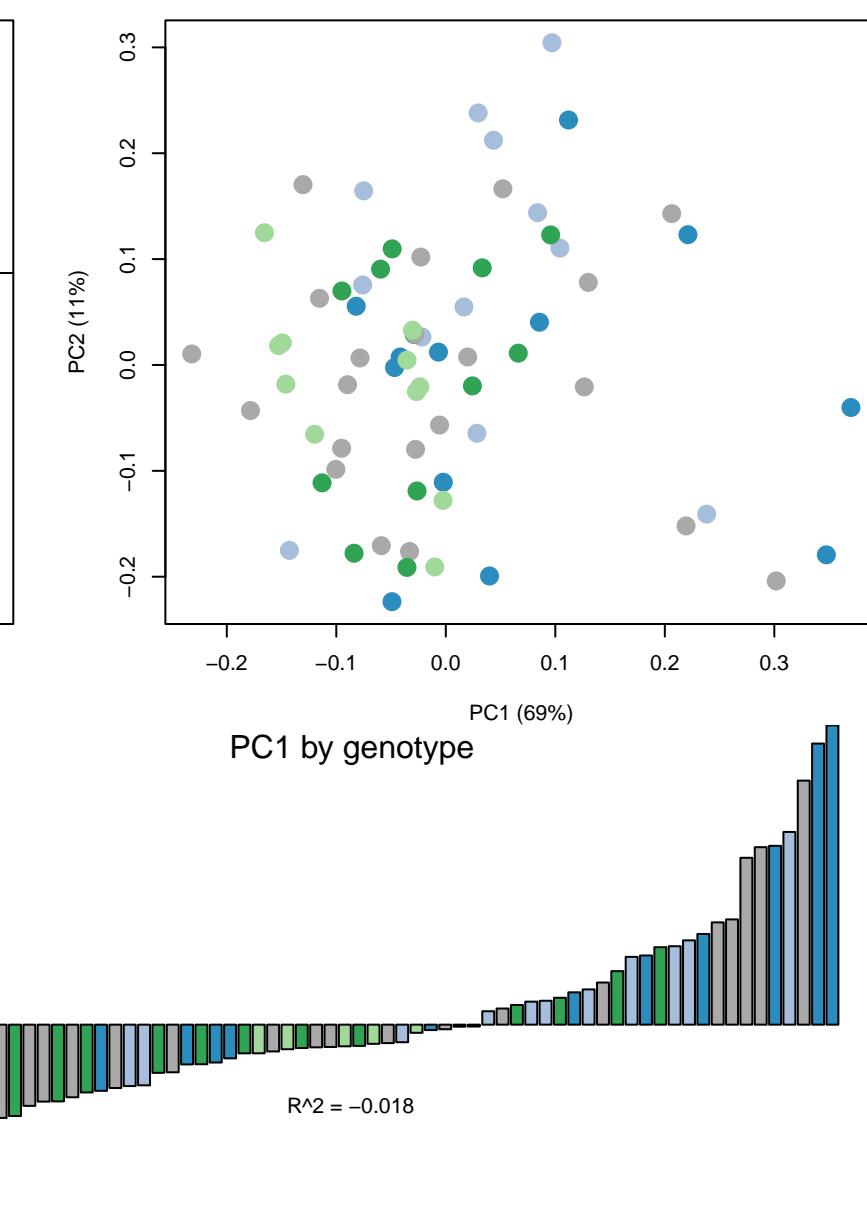
Wnt signaling pathway



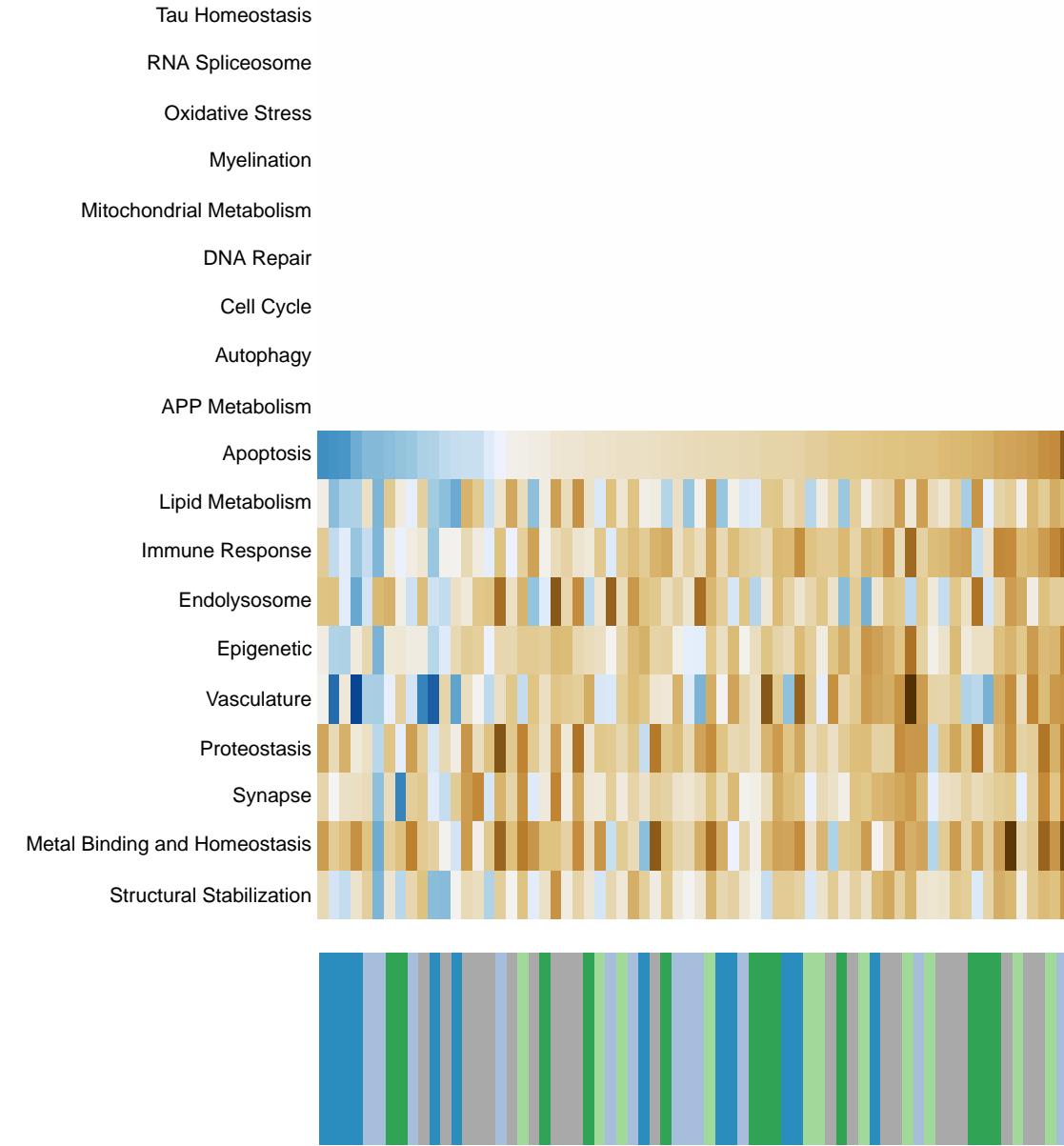
Lipid Metabolism



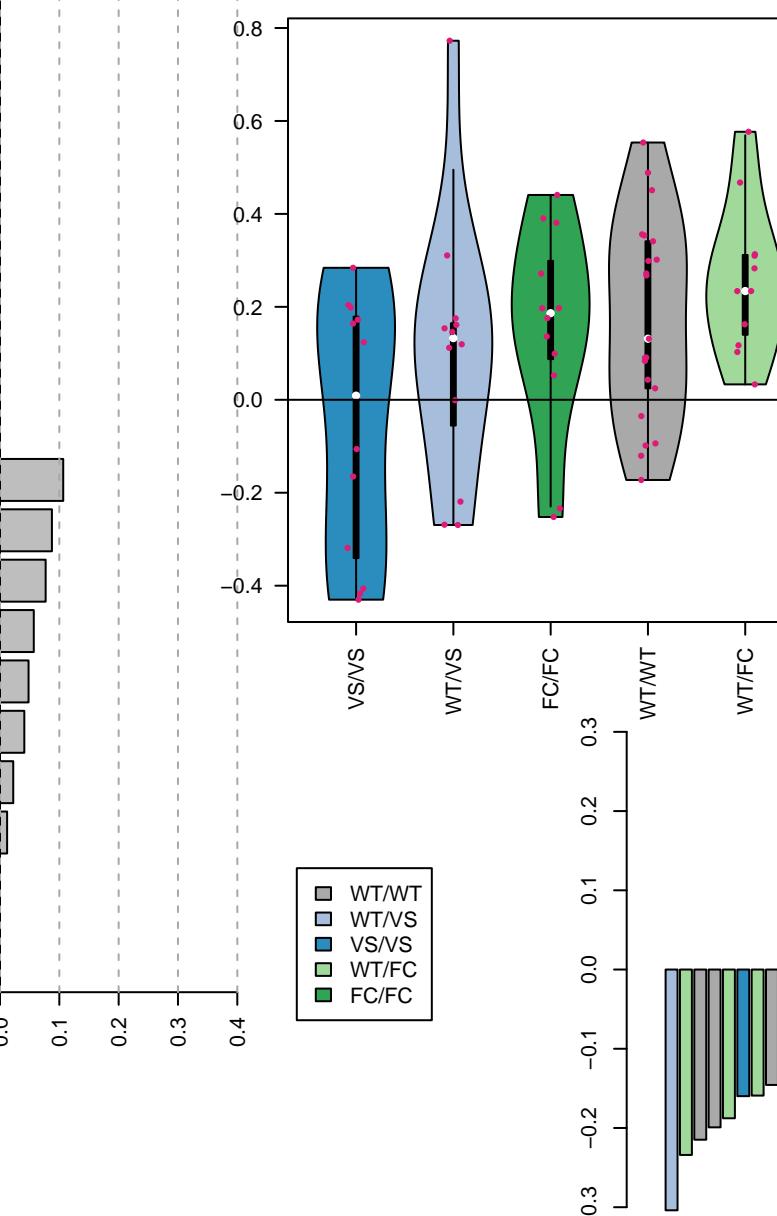
Decomposition



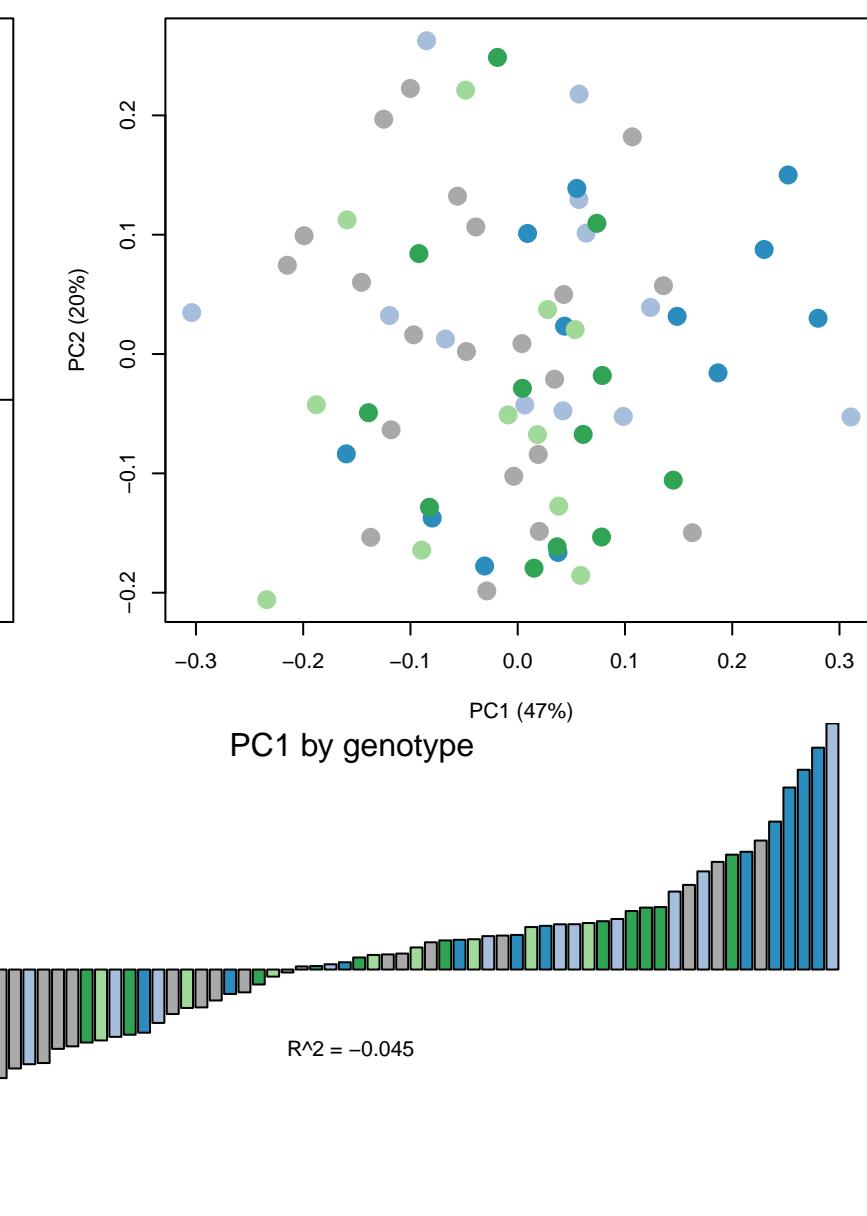
Notch signaling pathway



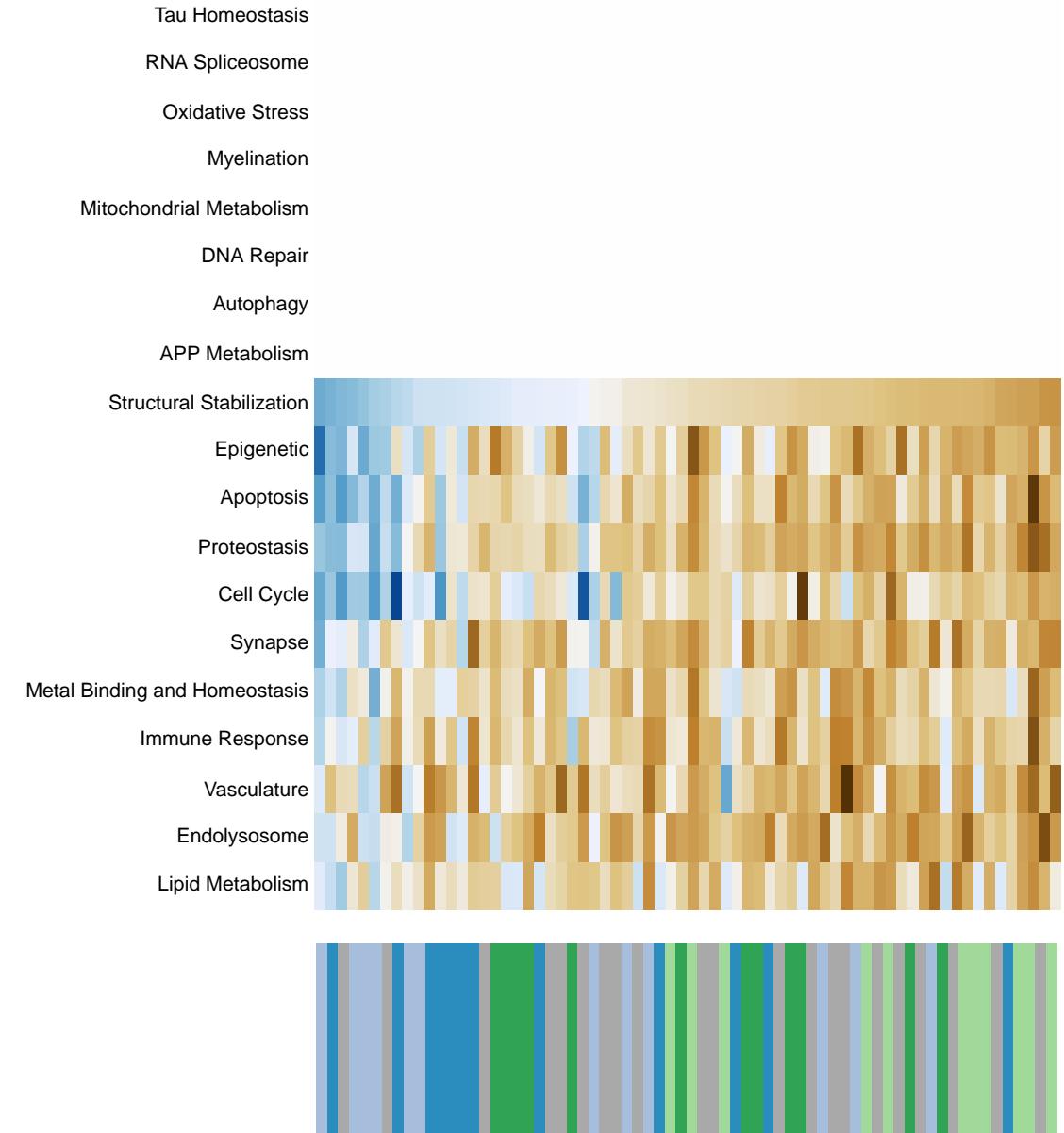
Apoptosis



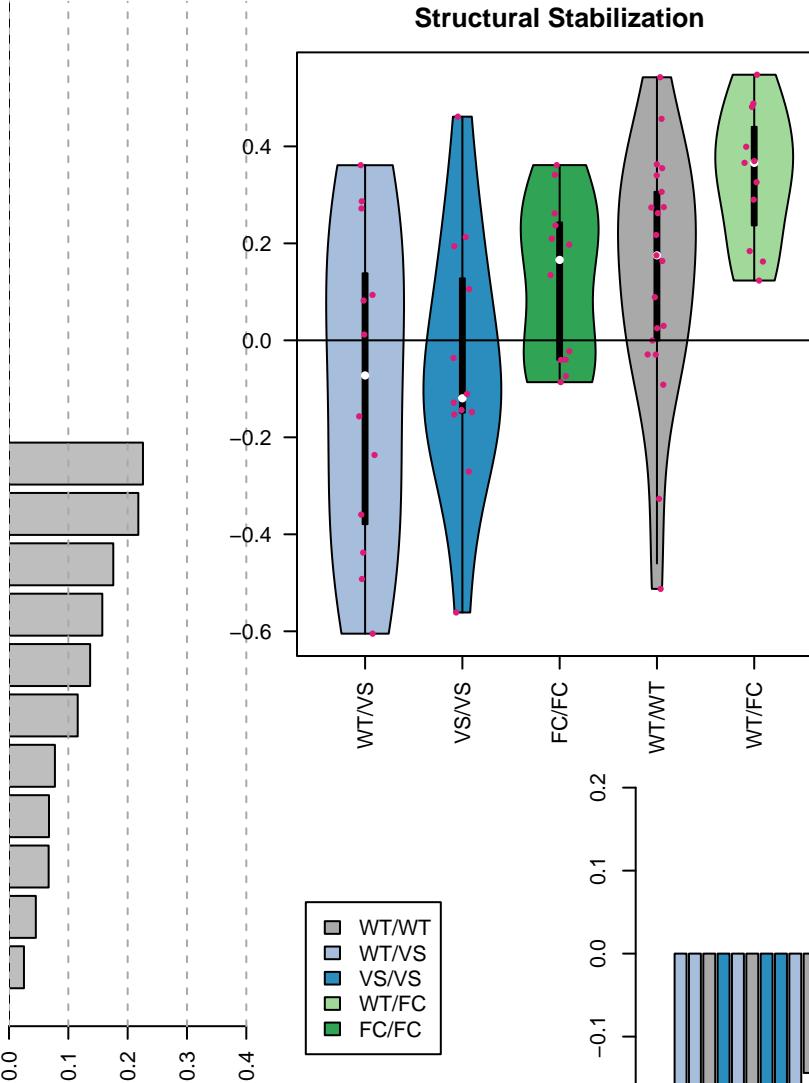
Decomposition



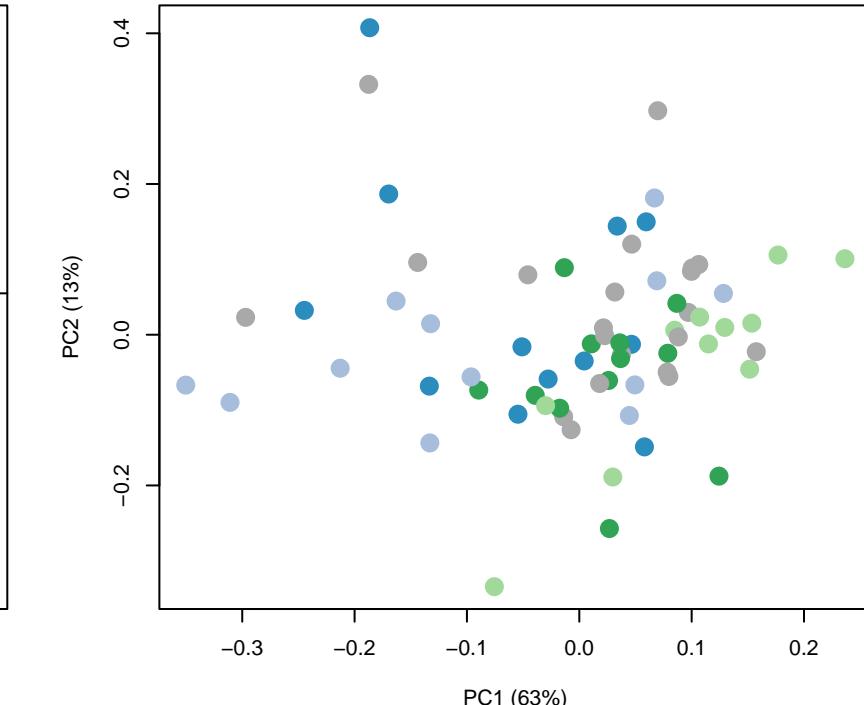
Hedgehog signaling pathway



Structural Stabilization



Decomposition

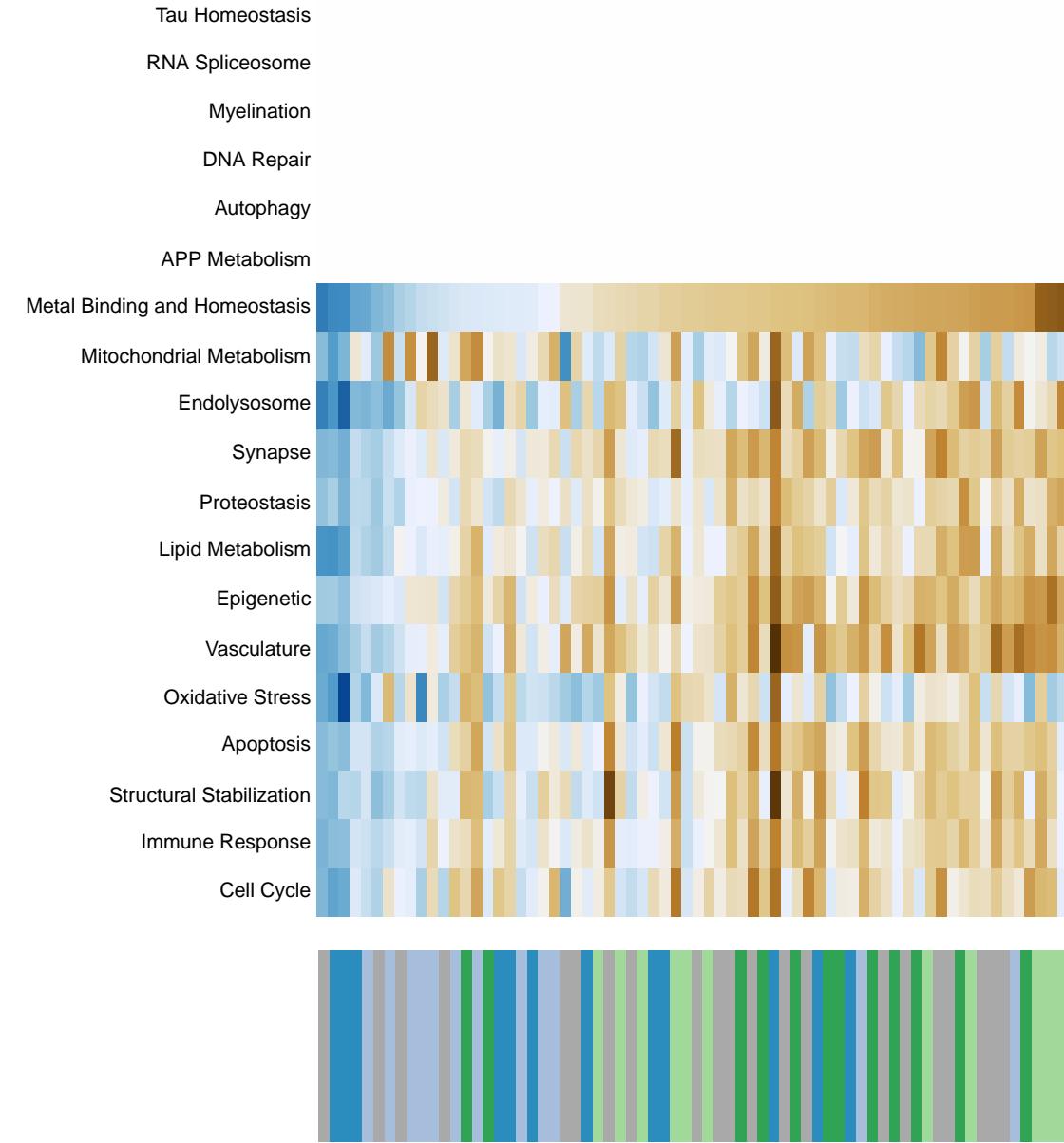


PC1 by genotype

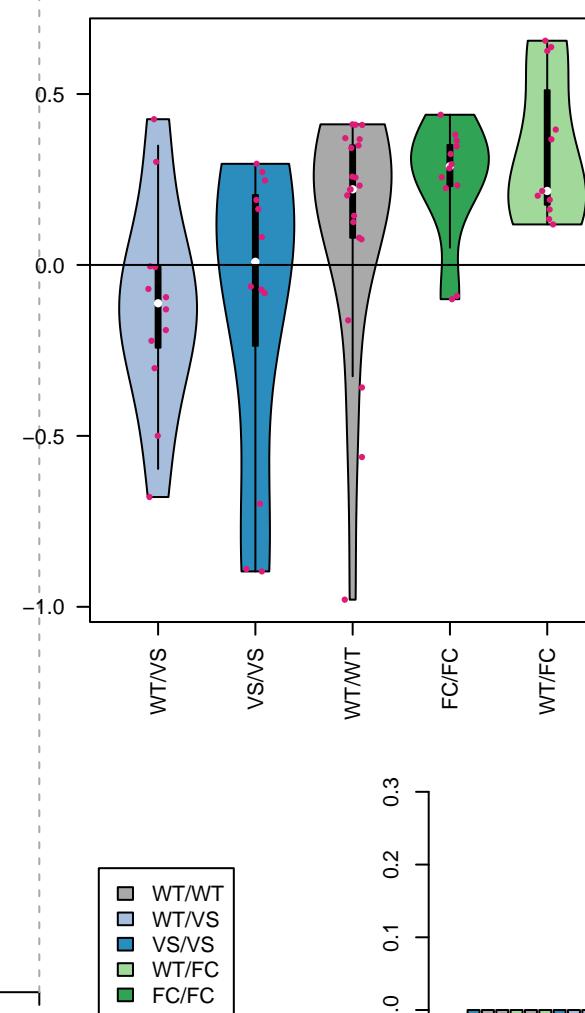


$R^2 = 0.1$

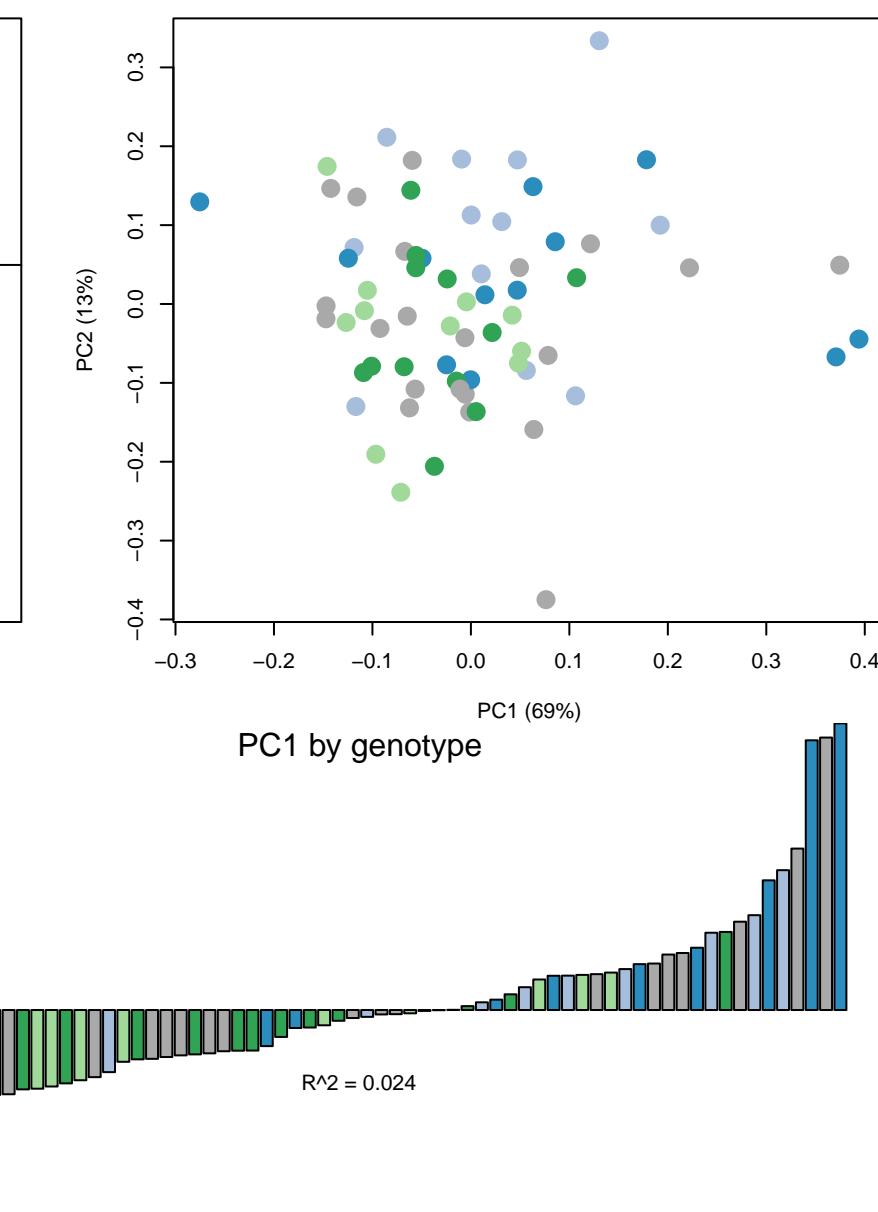
TGF-beta signaling pathway



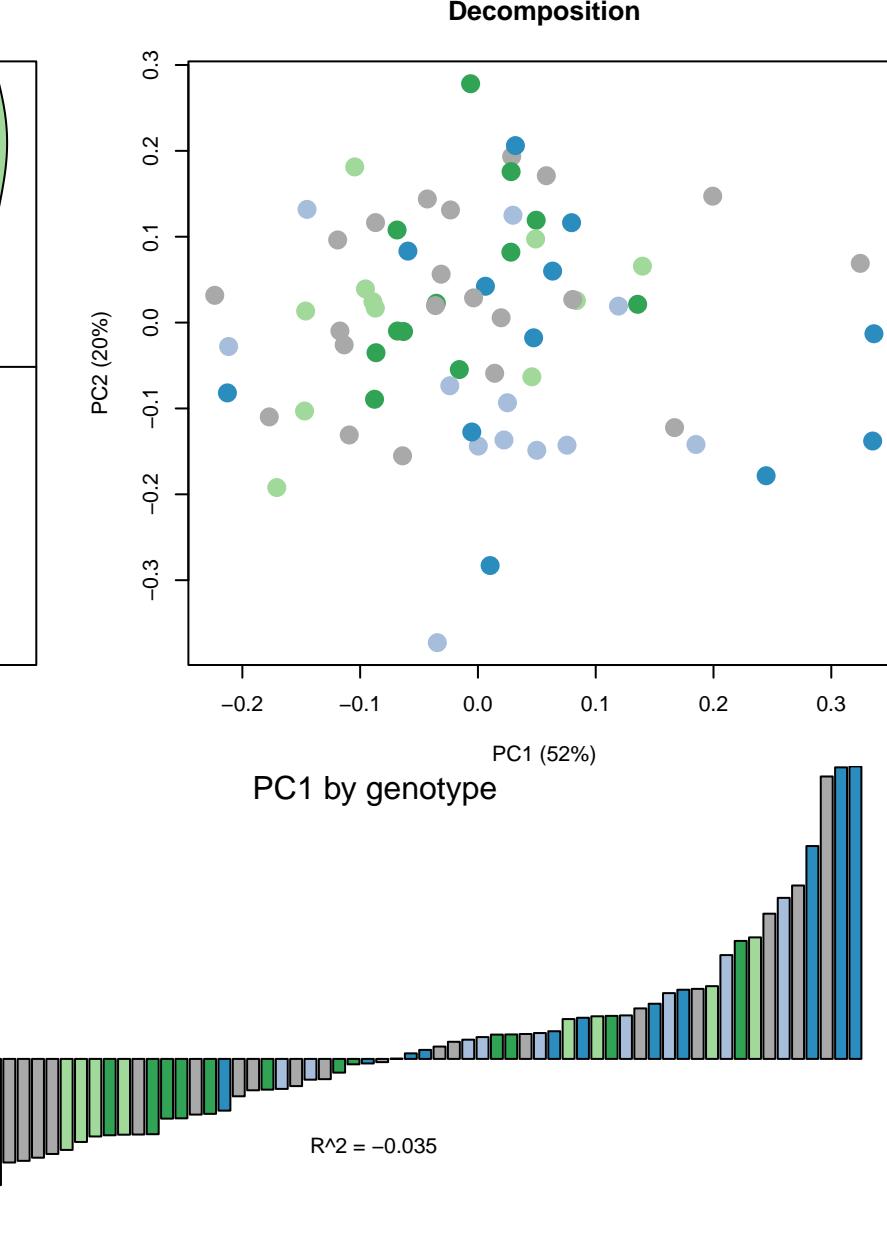
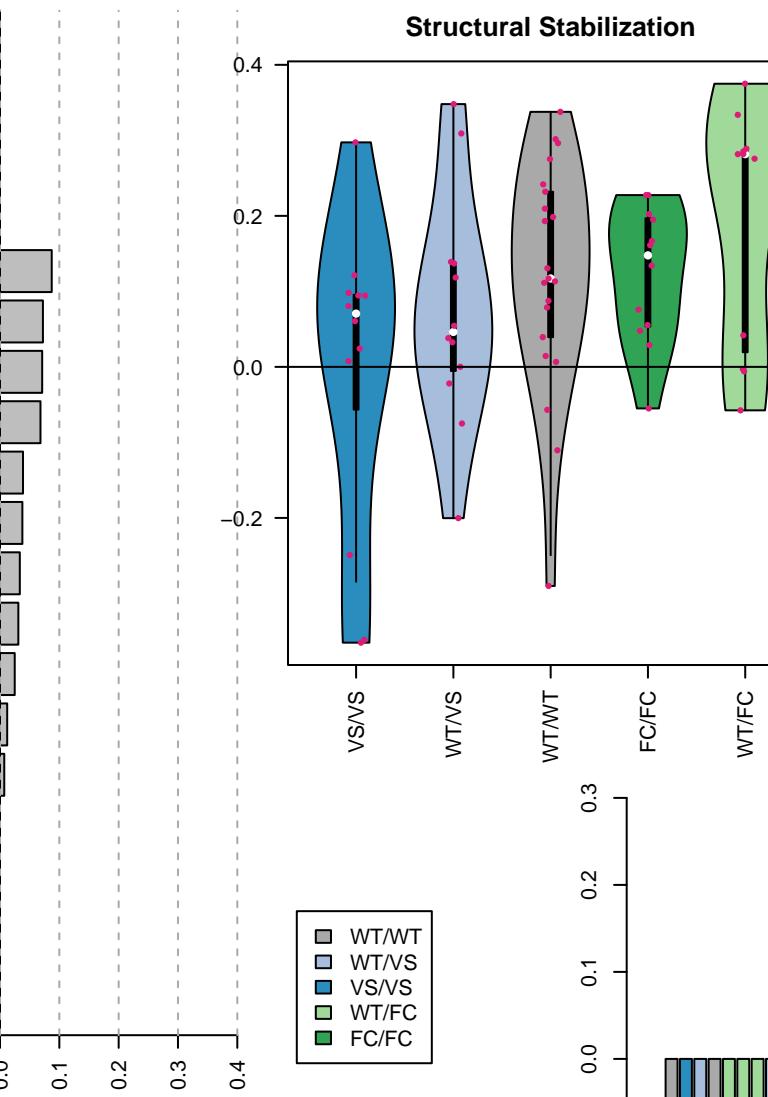
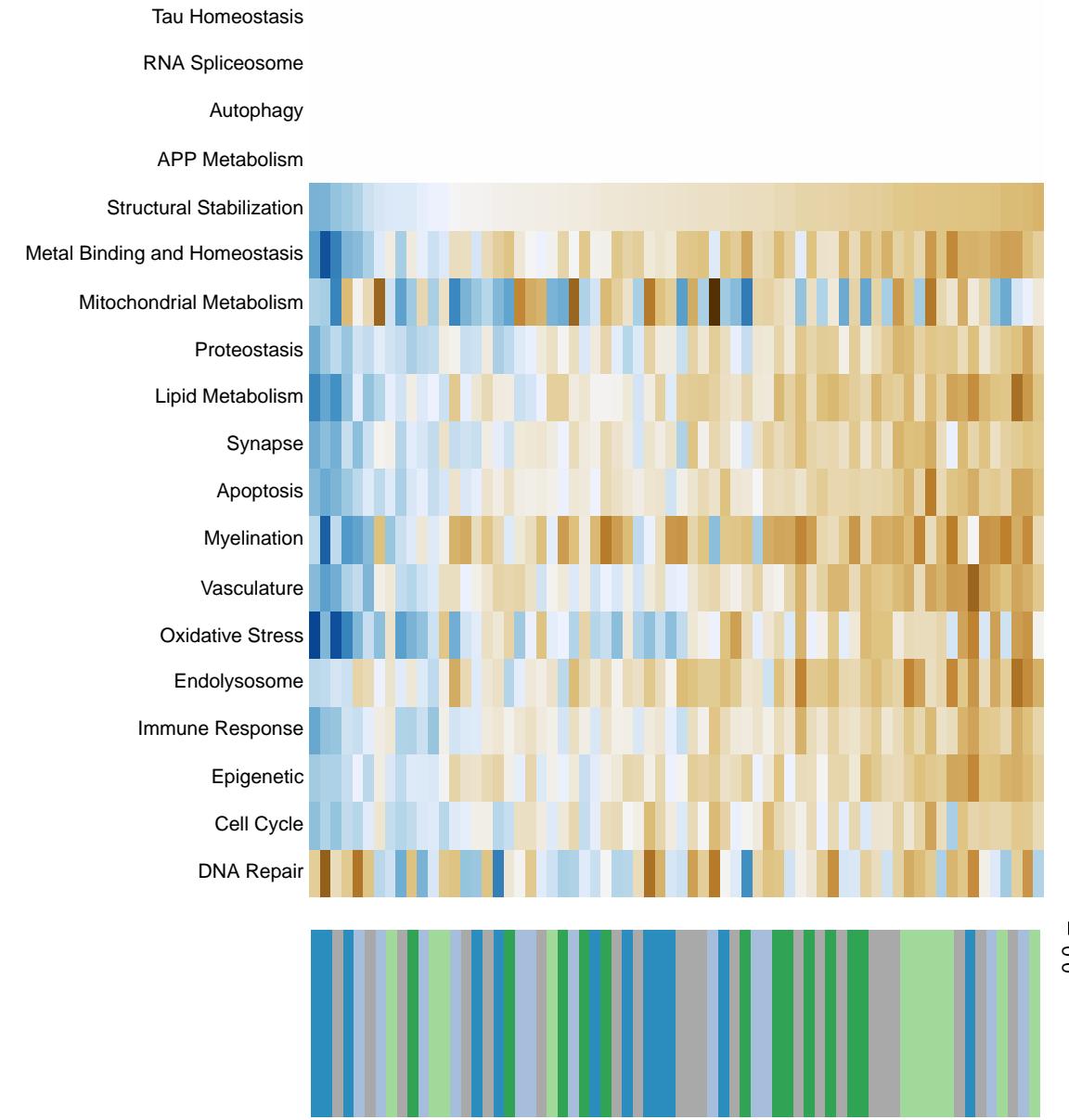
Metal Binding and Homeostasis



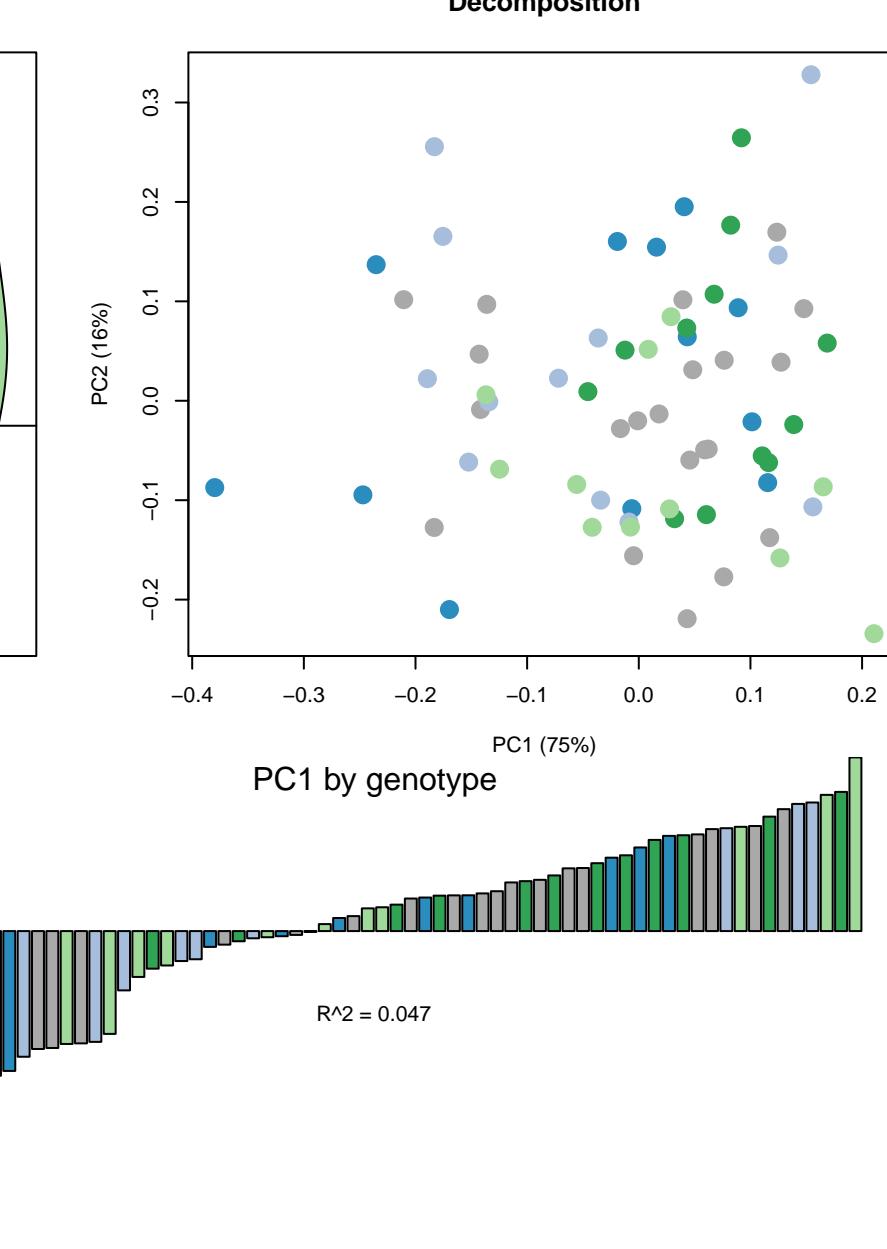
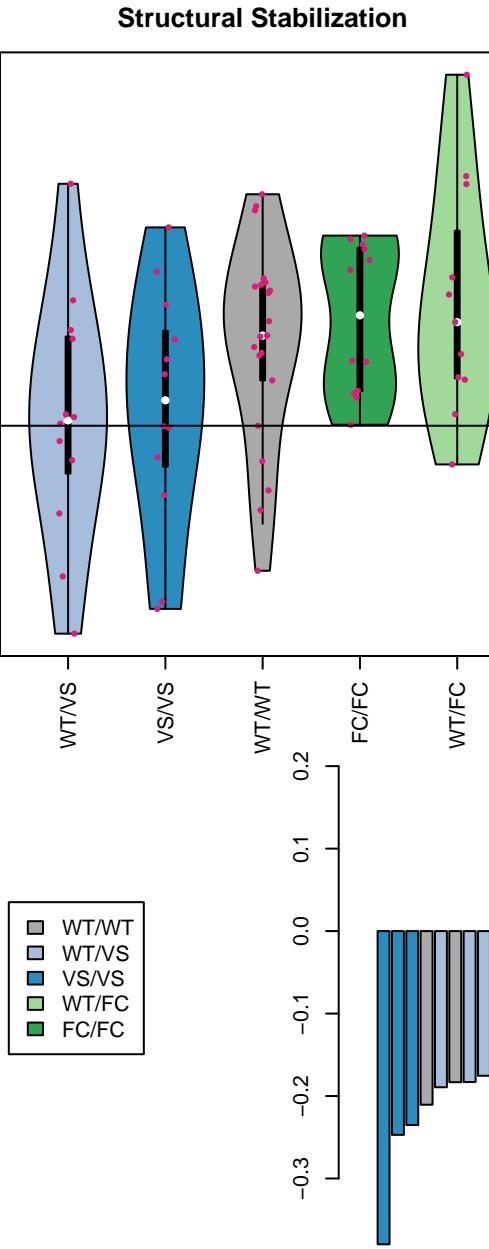
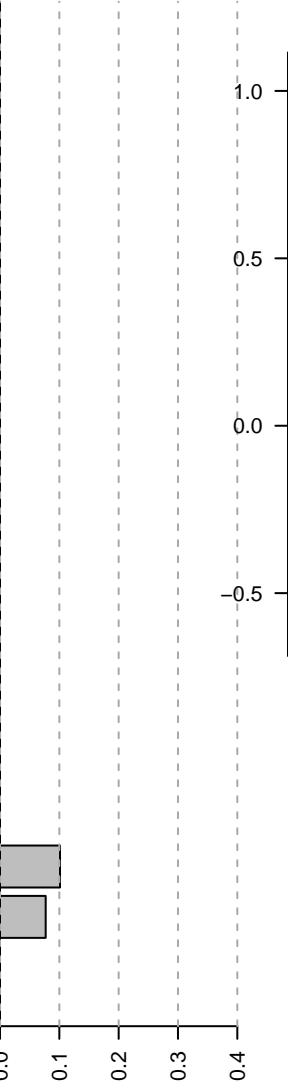
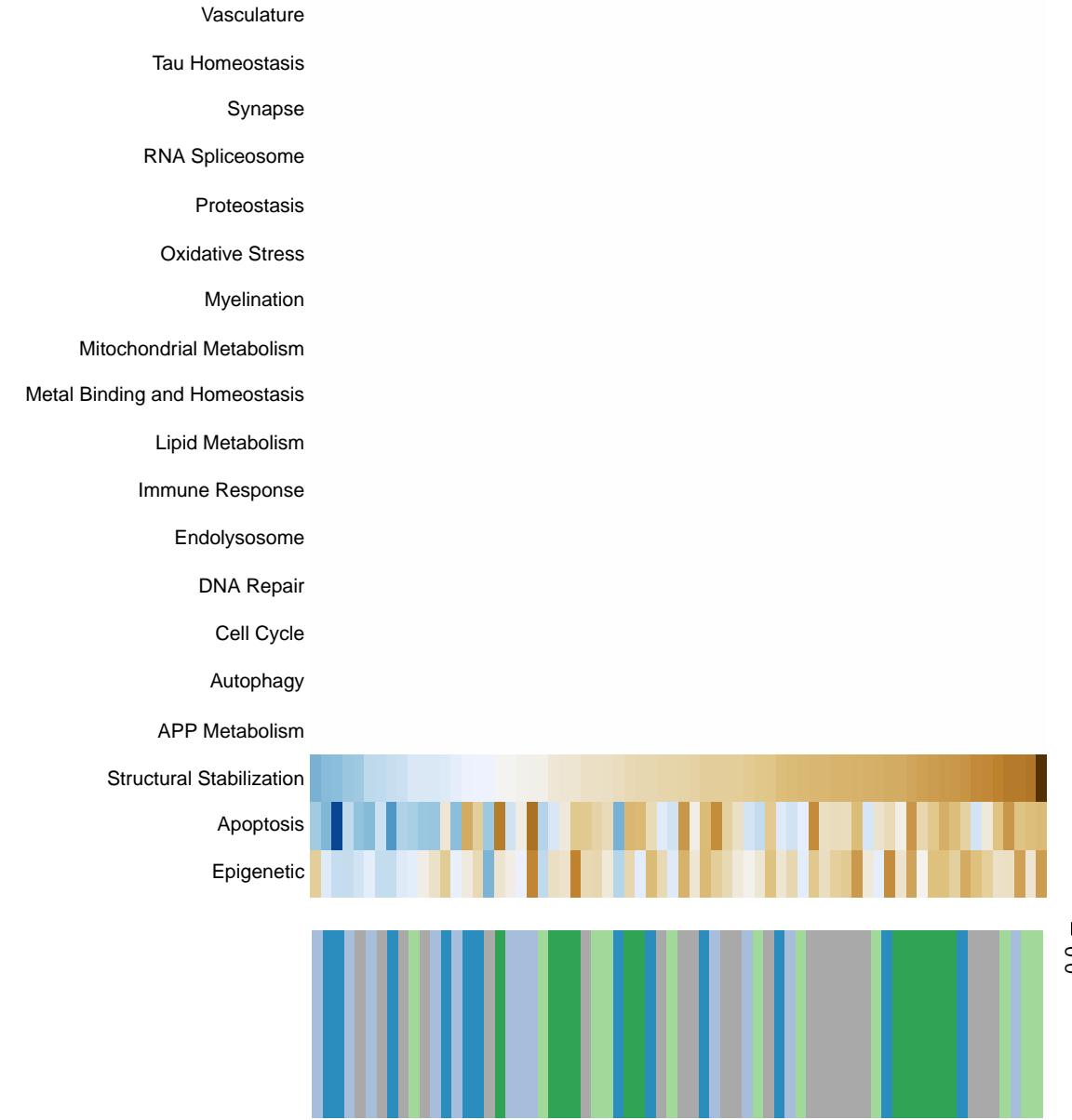
Decomposition



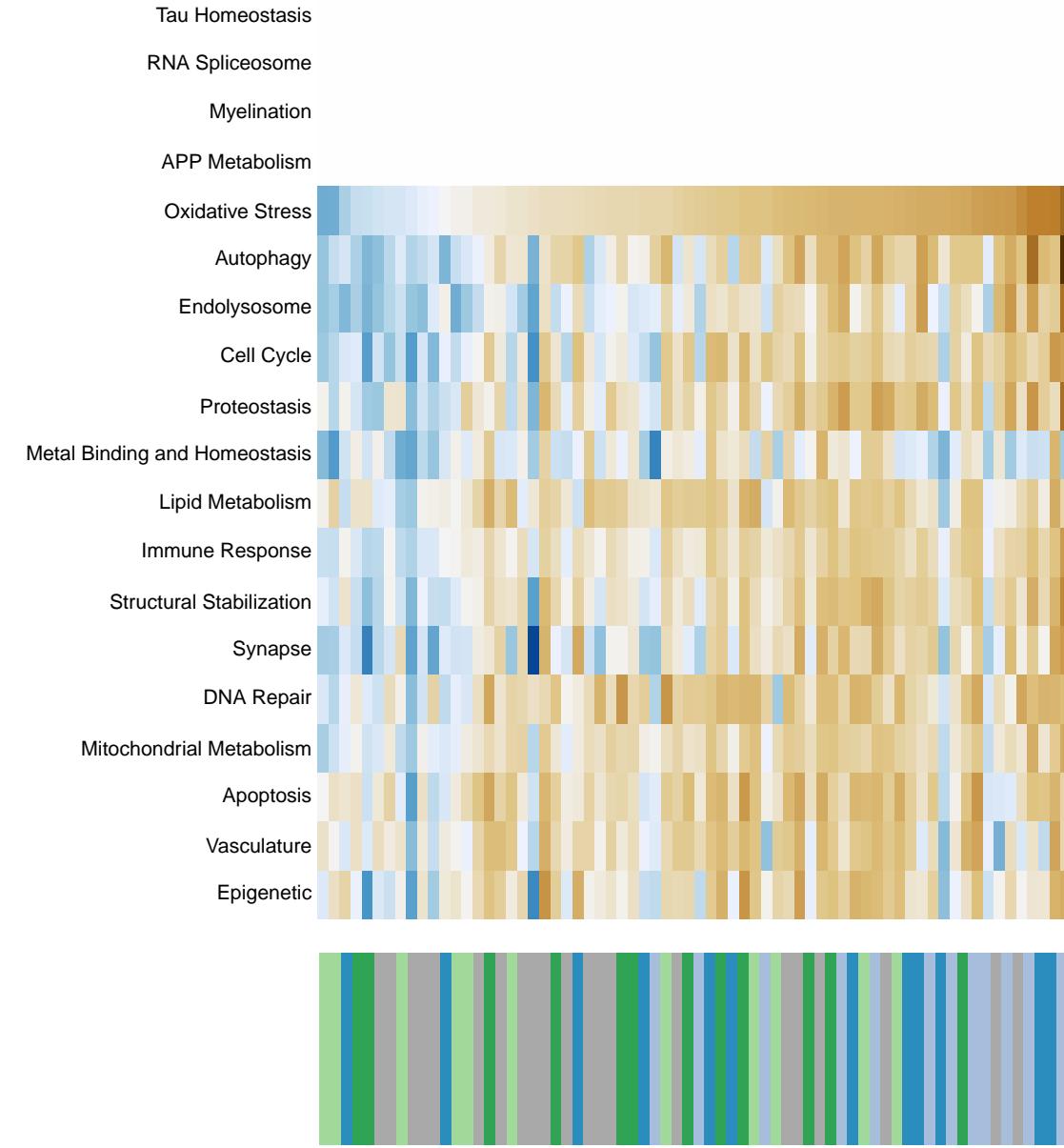
Hippo signaling pathway



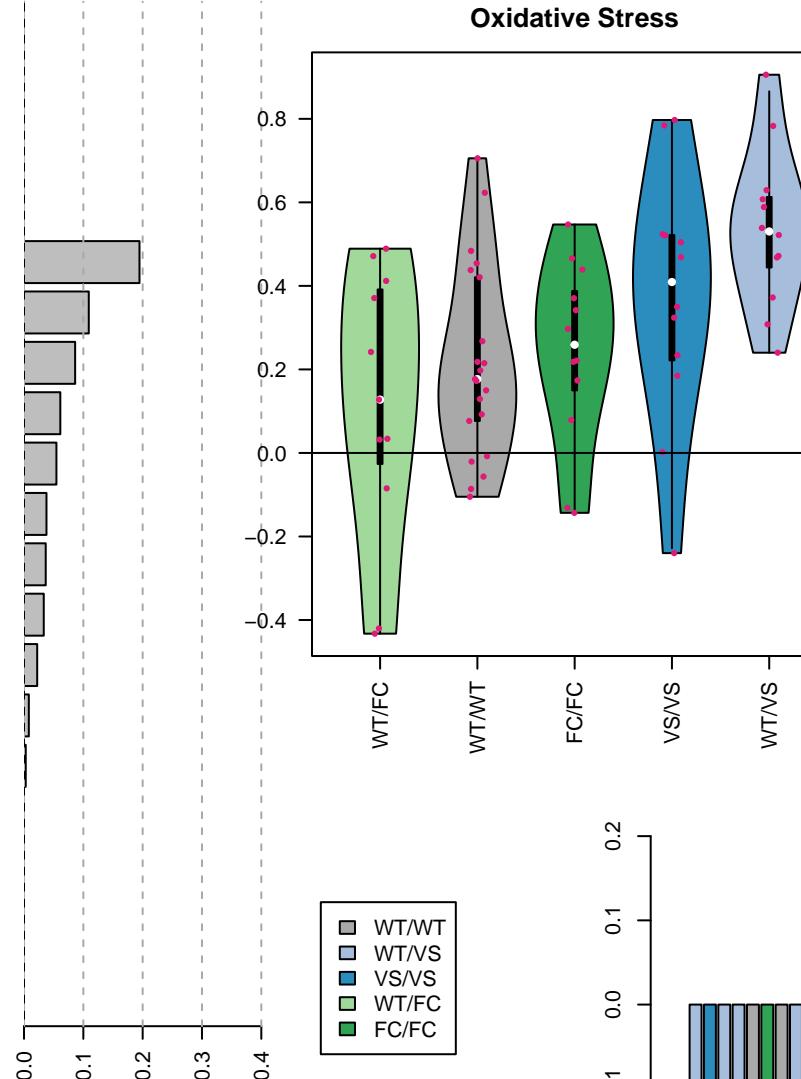
Hippo signaling pathway – multiple species



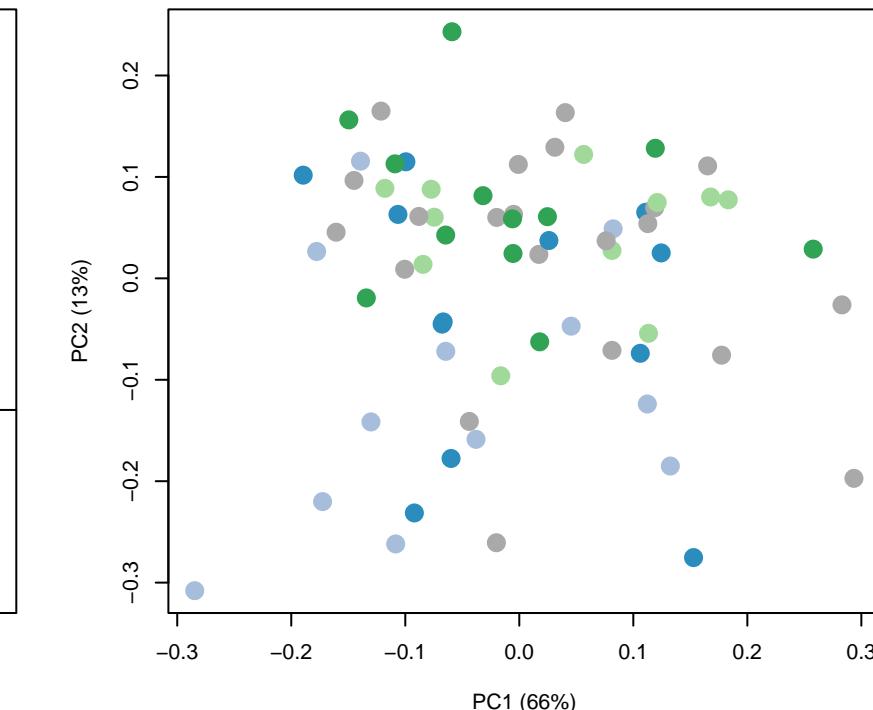
VEGF signaling pathway



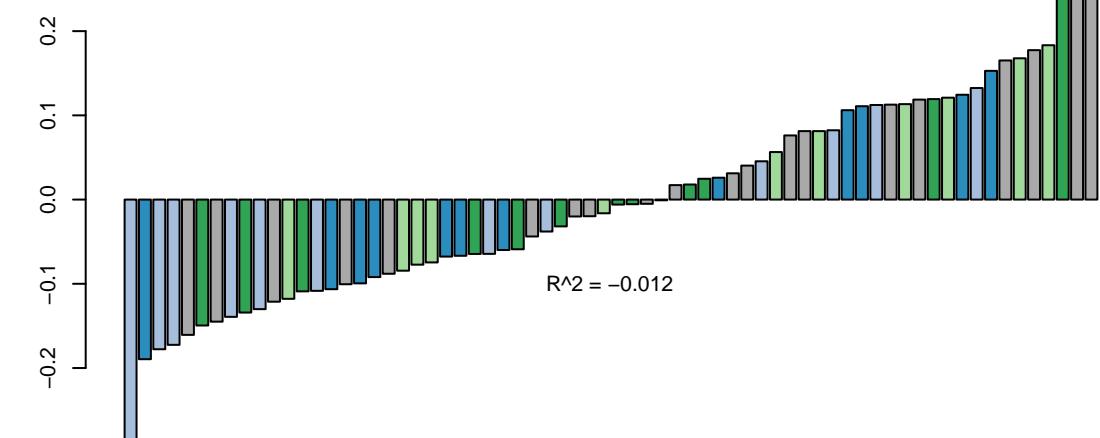
Oxidative Stress



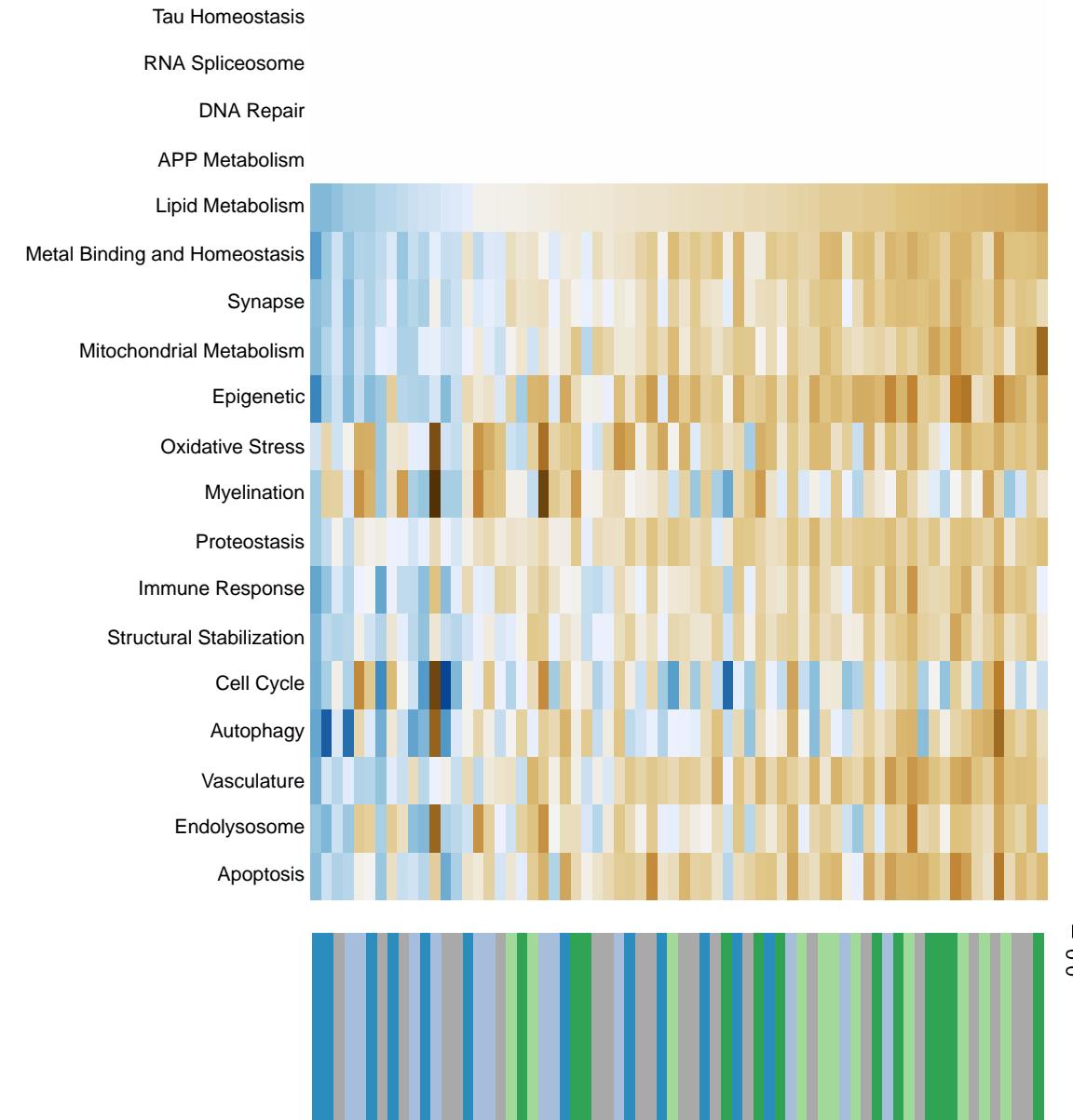
Decomposition



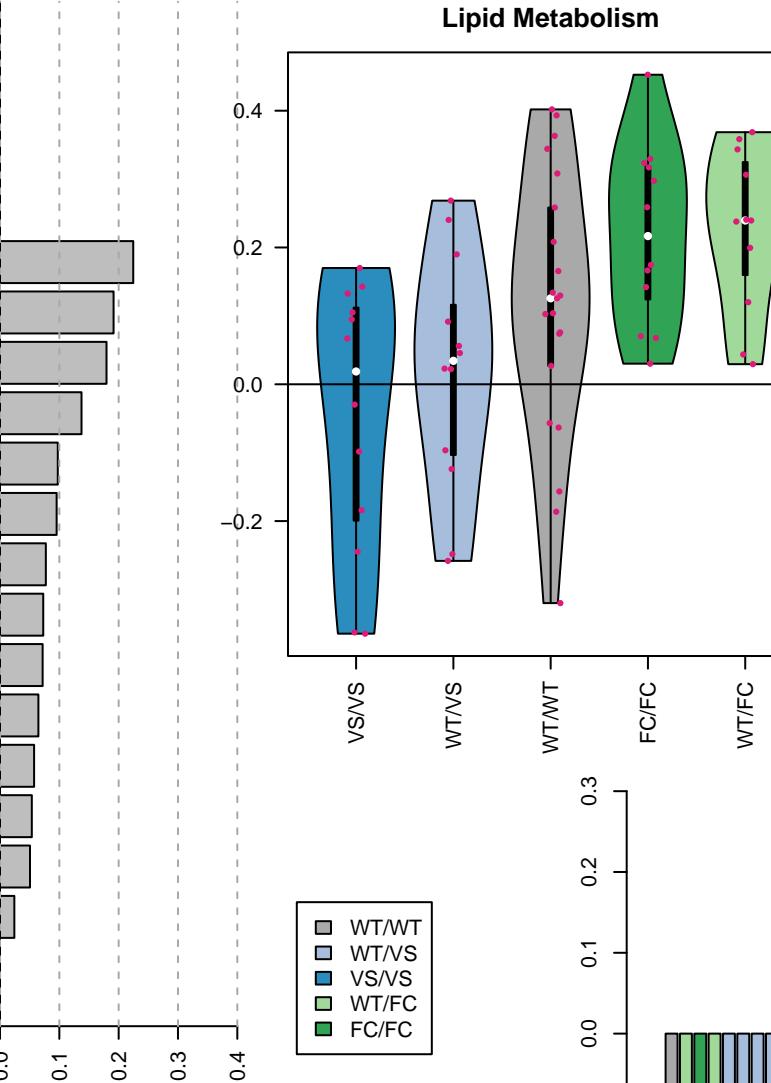
PC1 by genotype



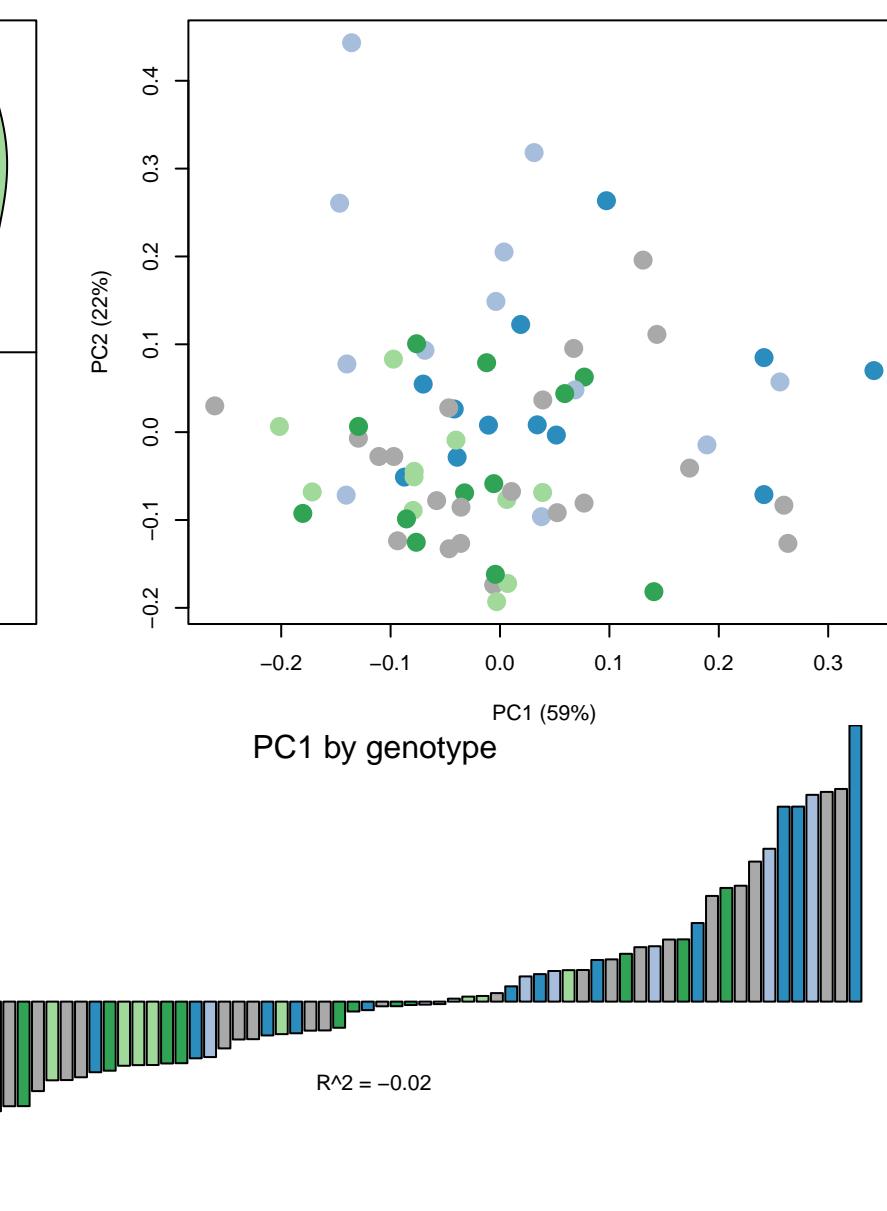
Apelin signaling pathway



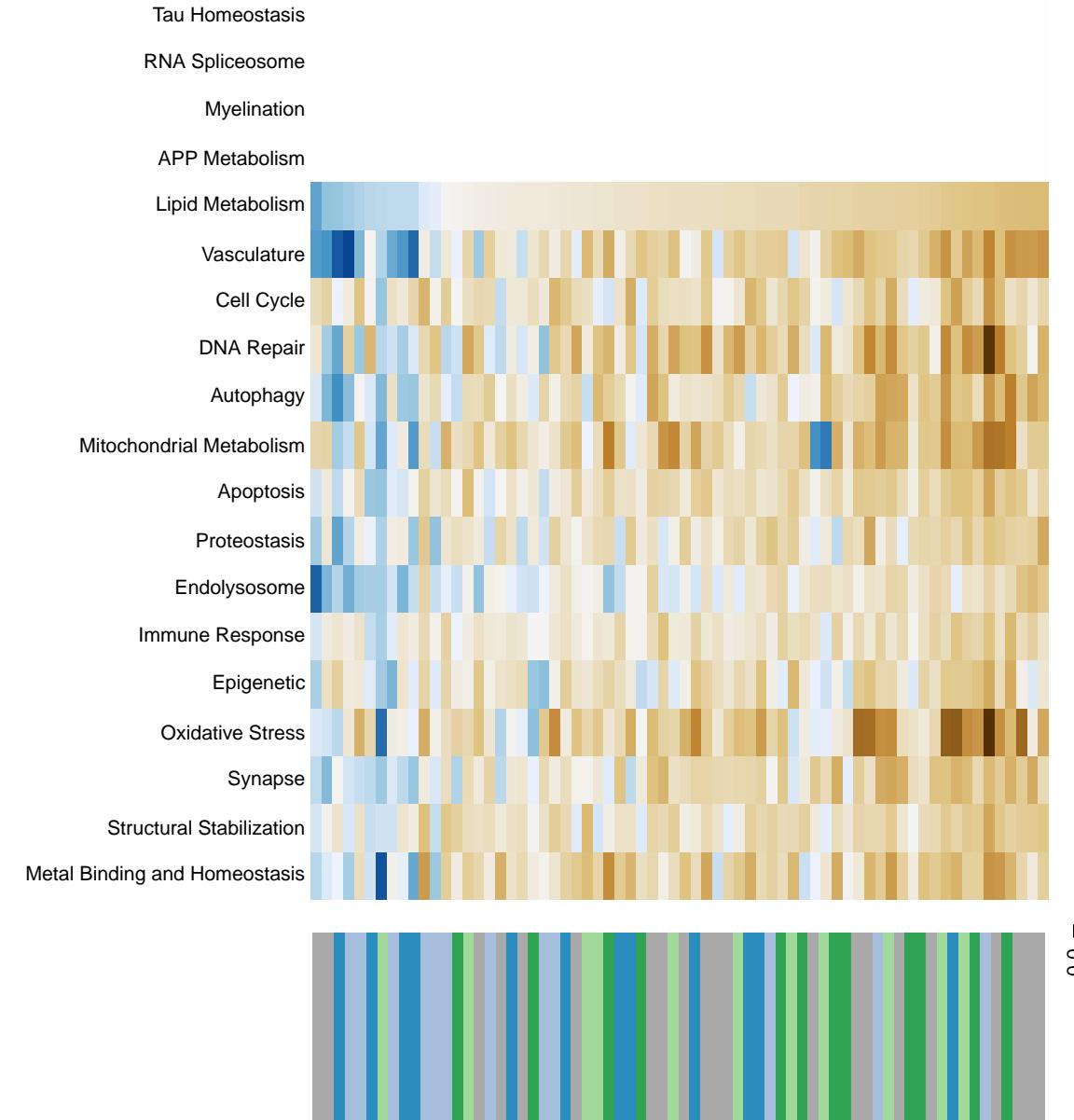
Lipid Metabolism



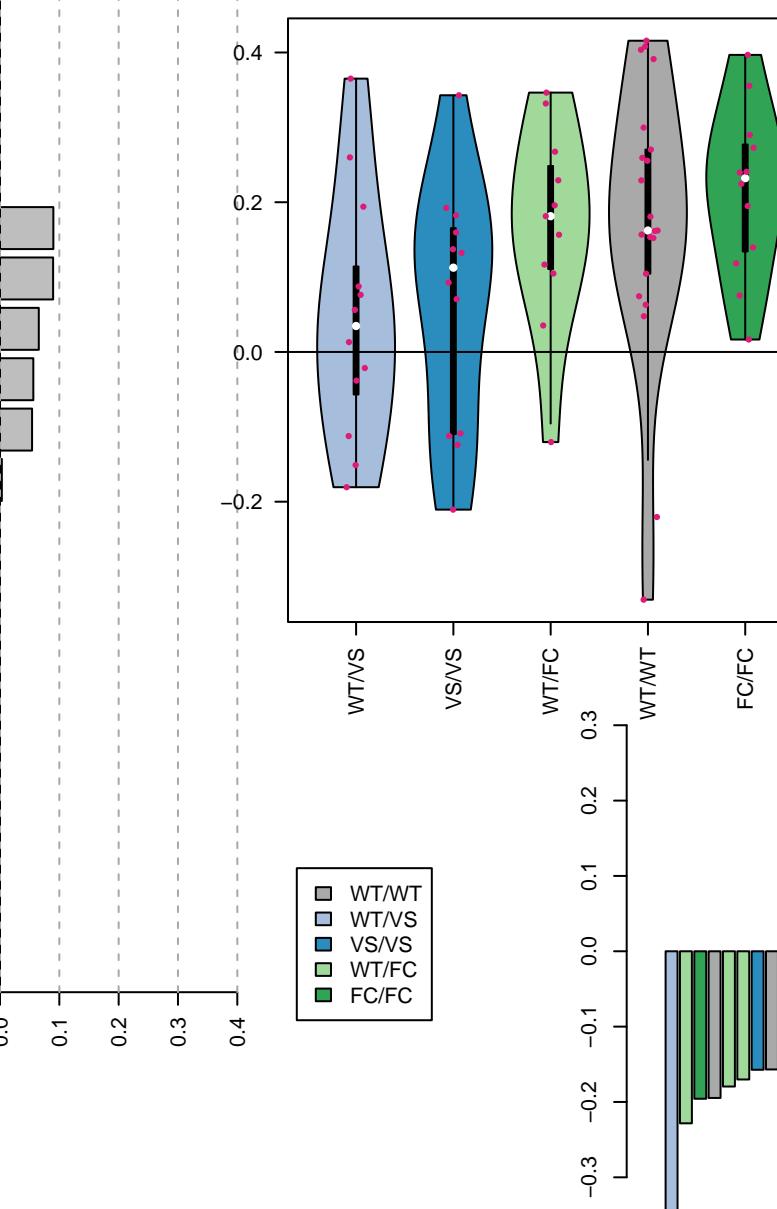
Decomposition



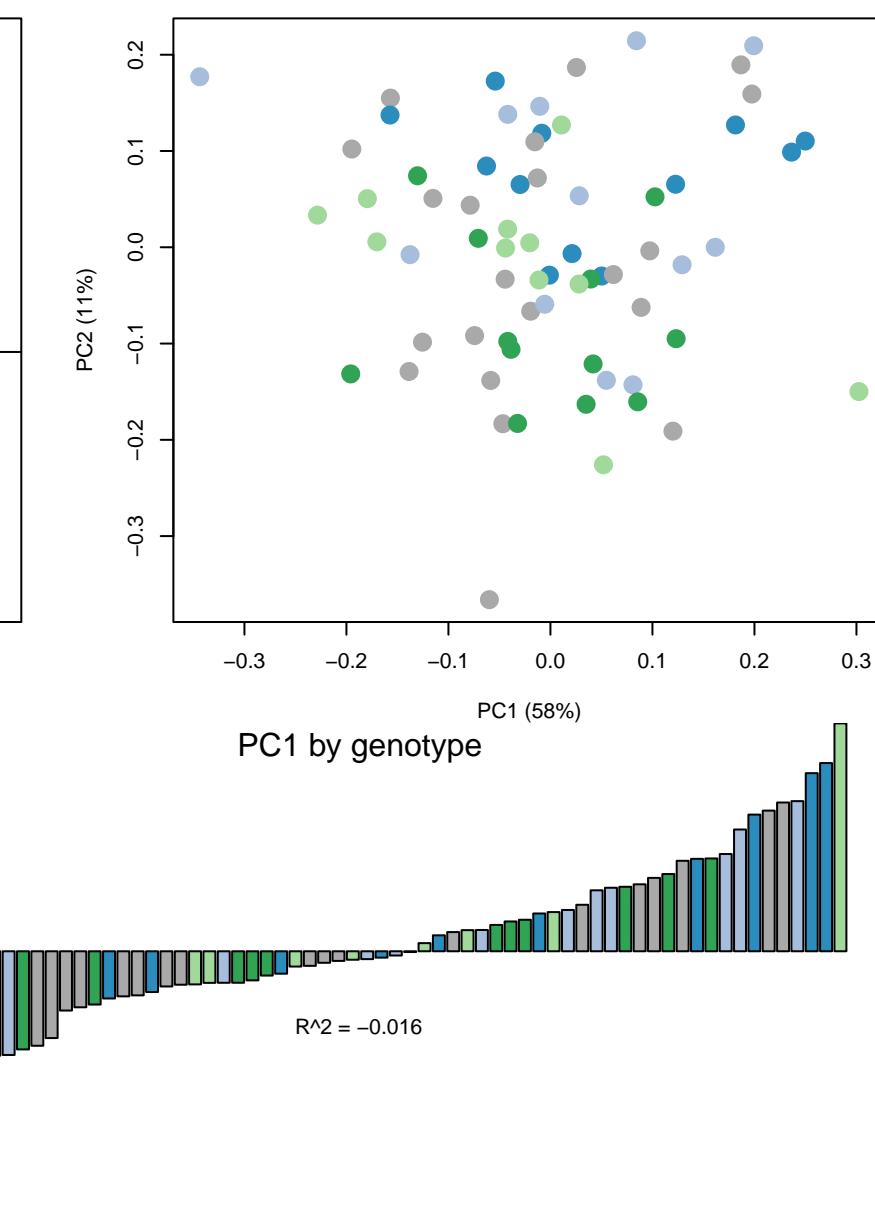
JAK–STAT signaling pathway



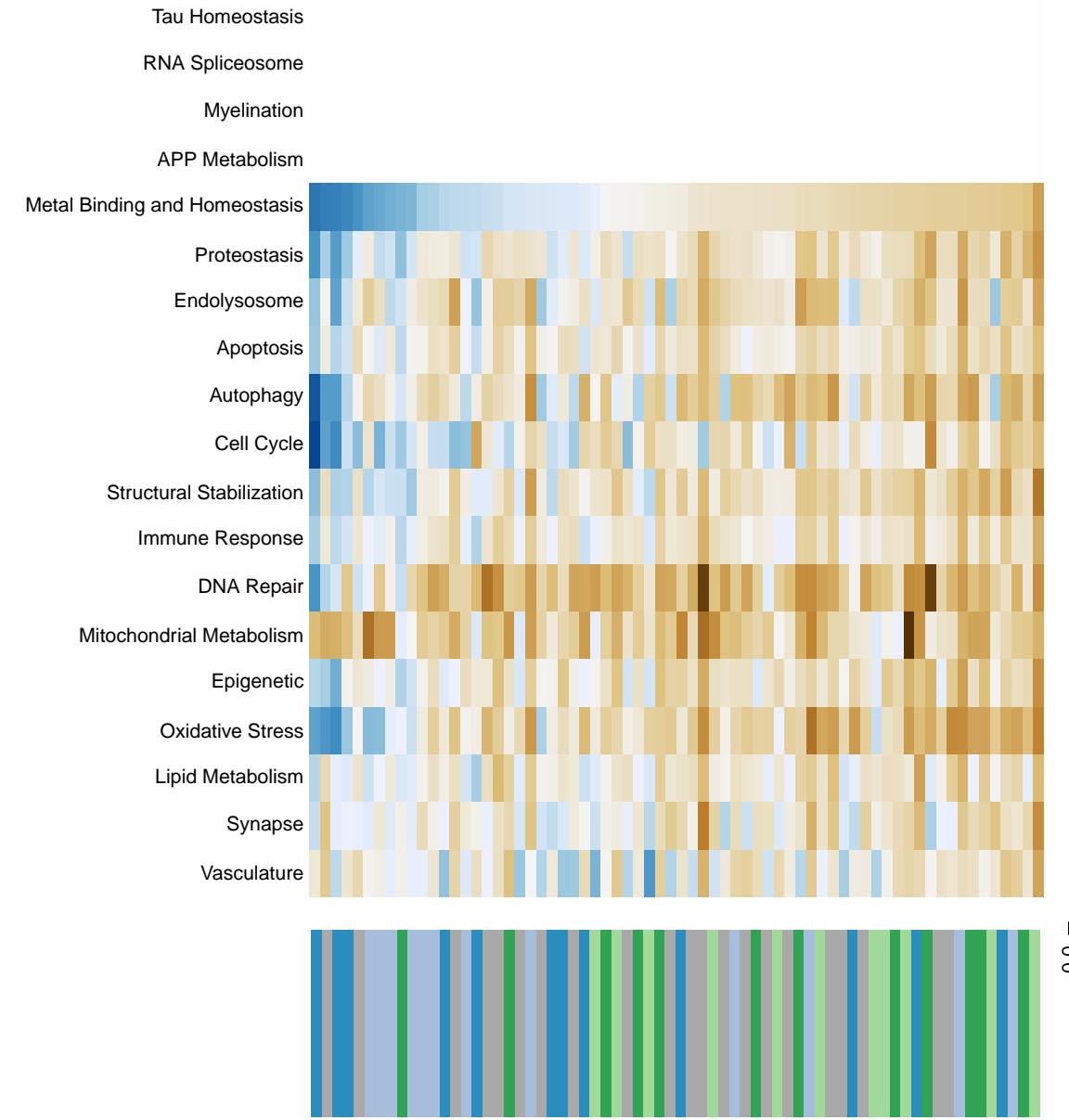
Lipid Metabolism



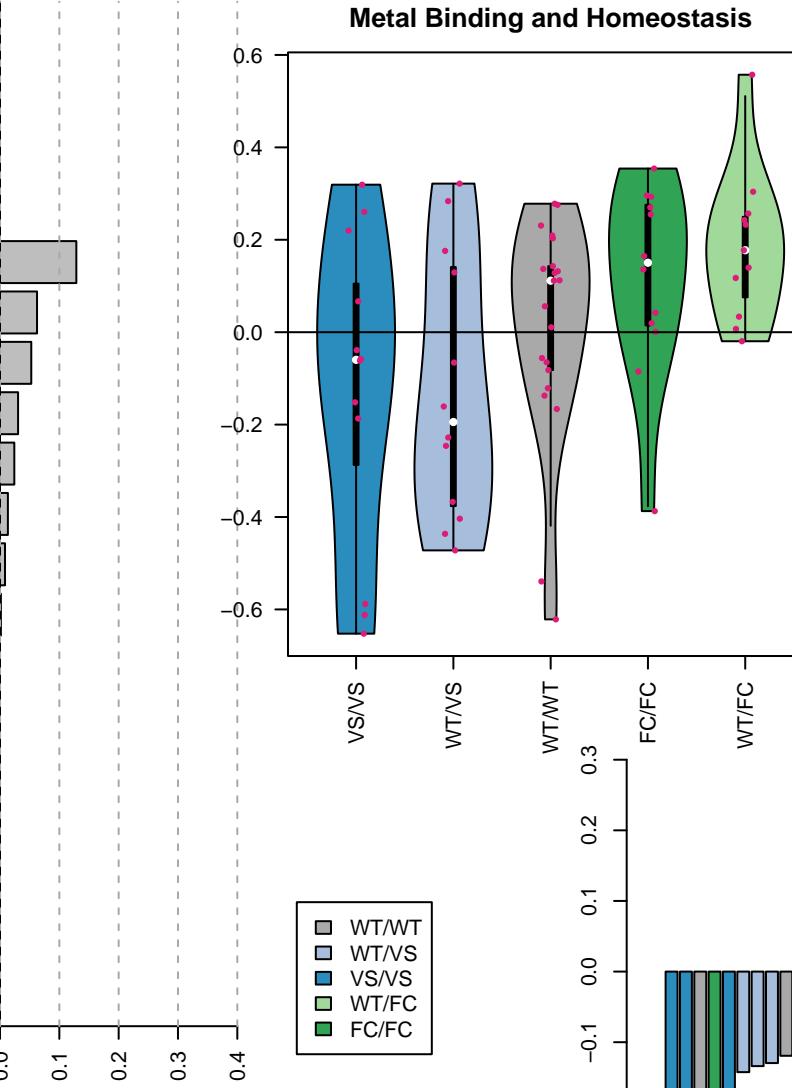
Decomposition



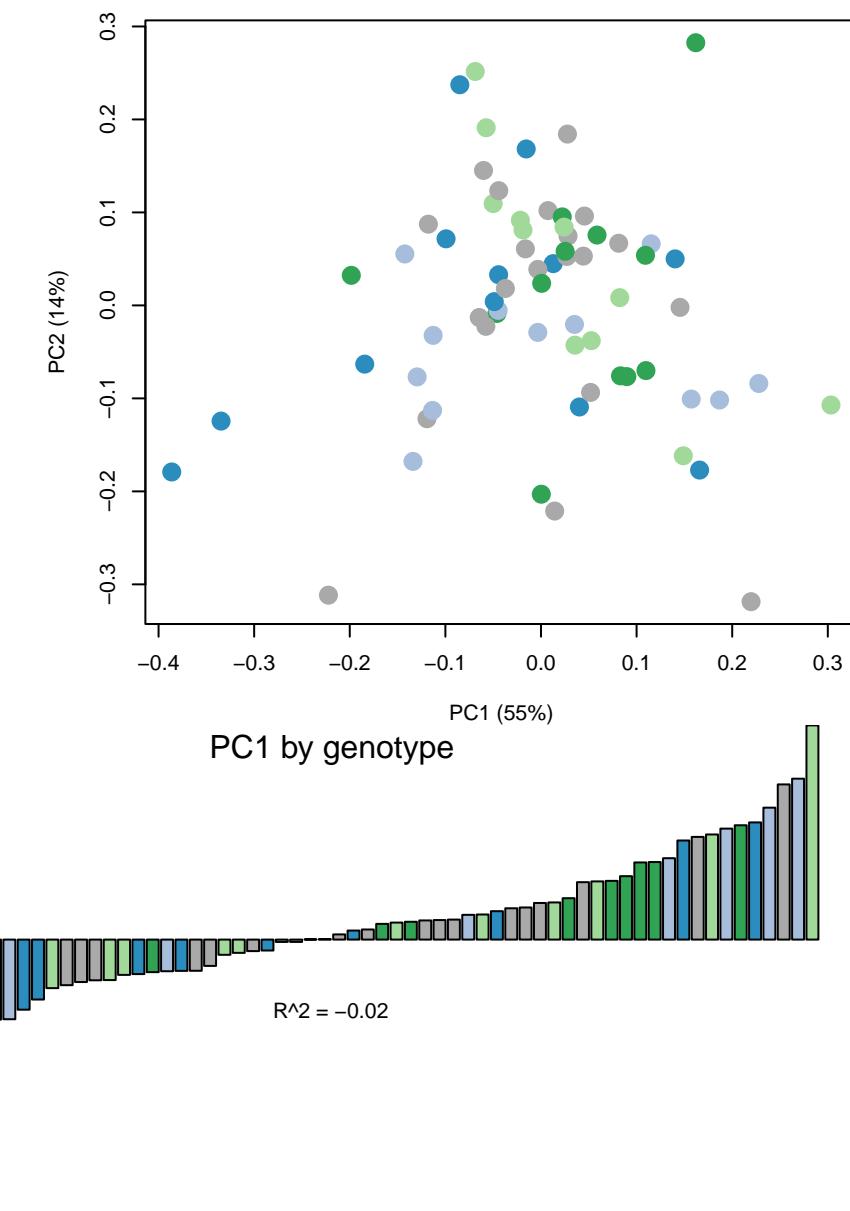
NF- κ B signaling pathway



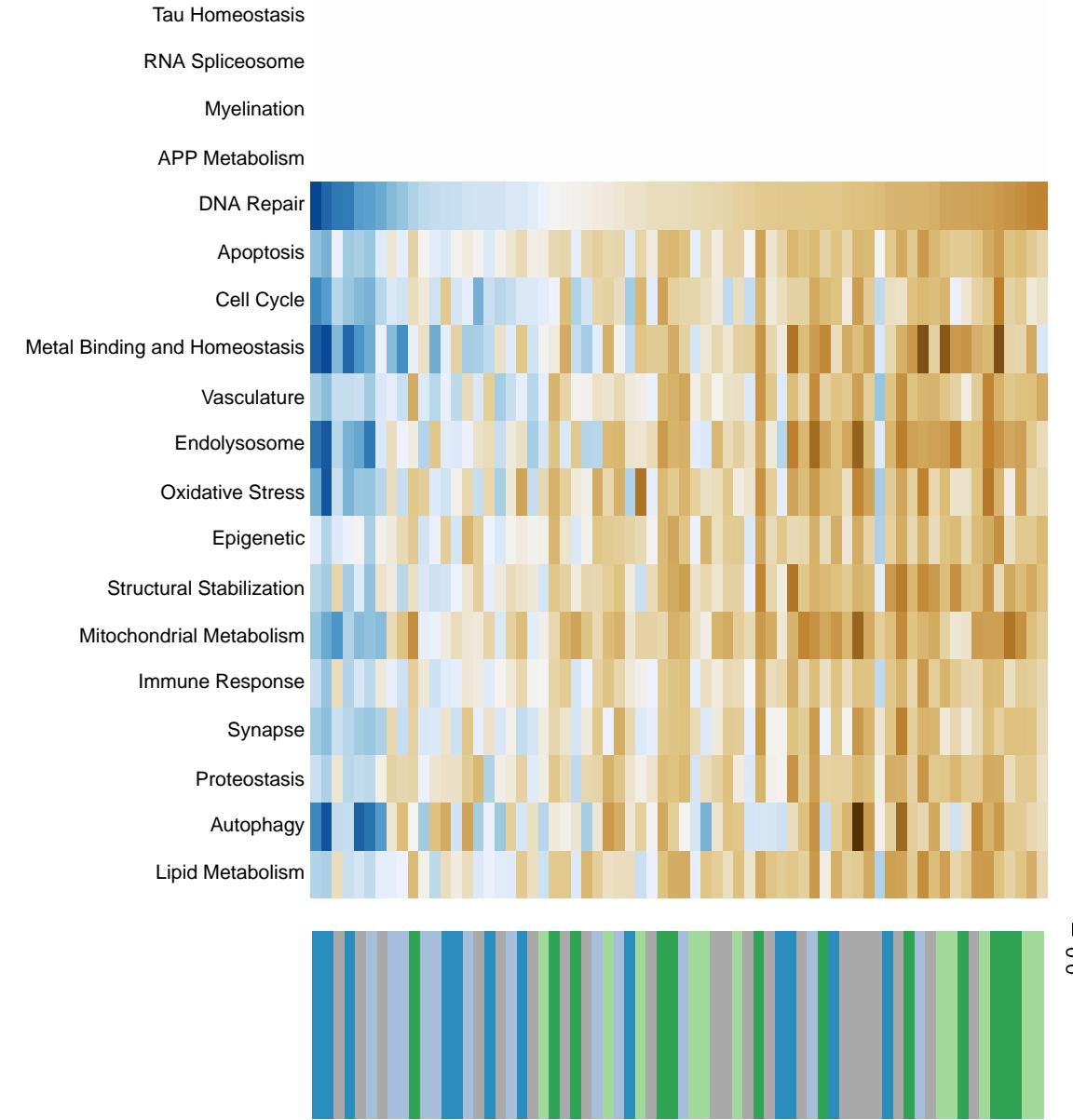
Metal Binding and Homeostasis



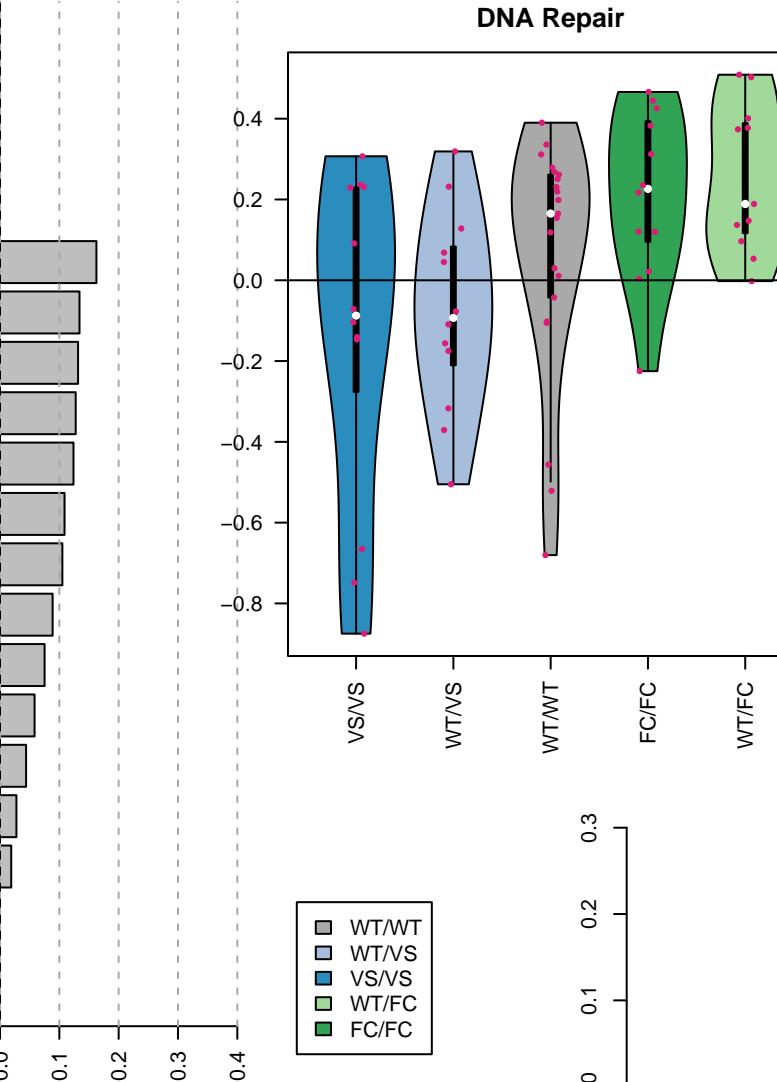
Decomposition



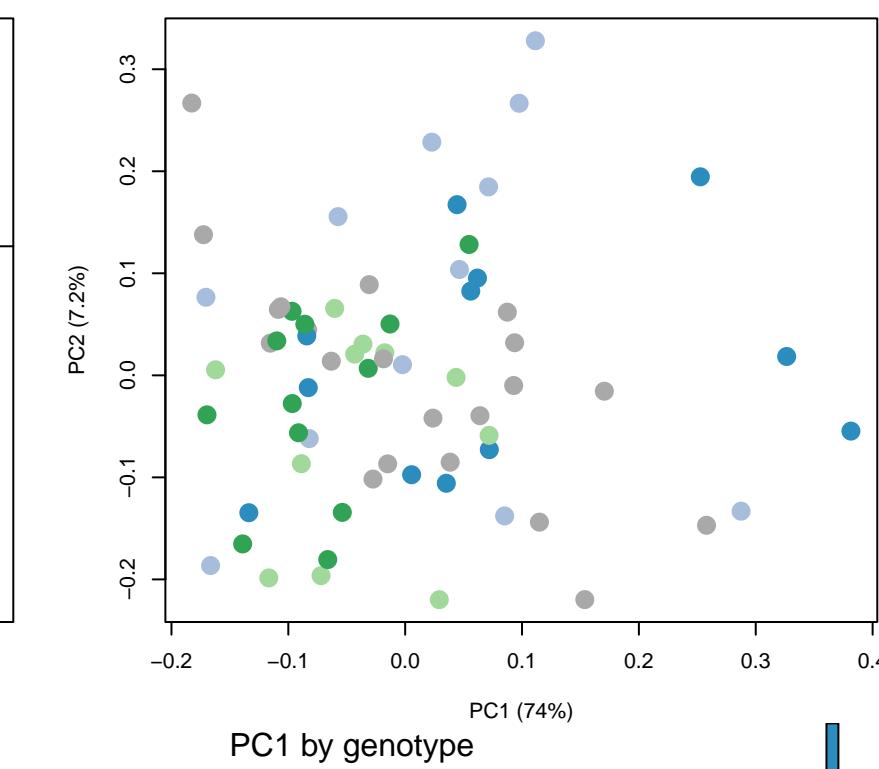
TNF signaling pathway



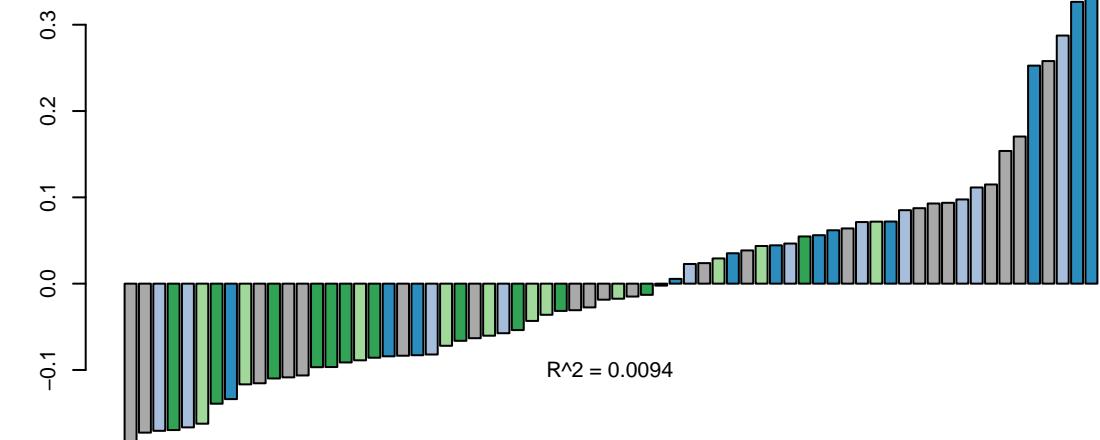
DNA Repair



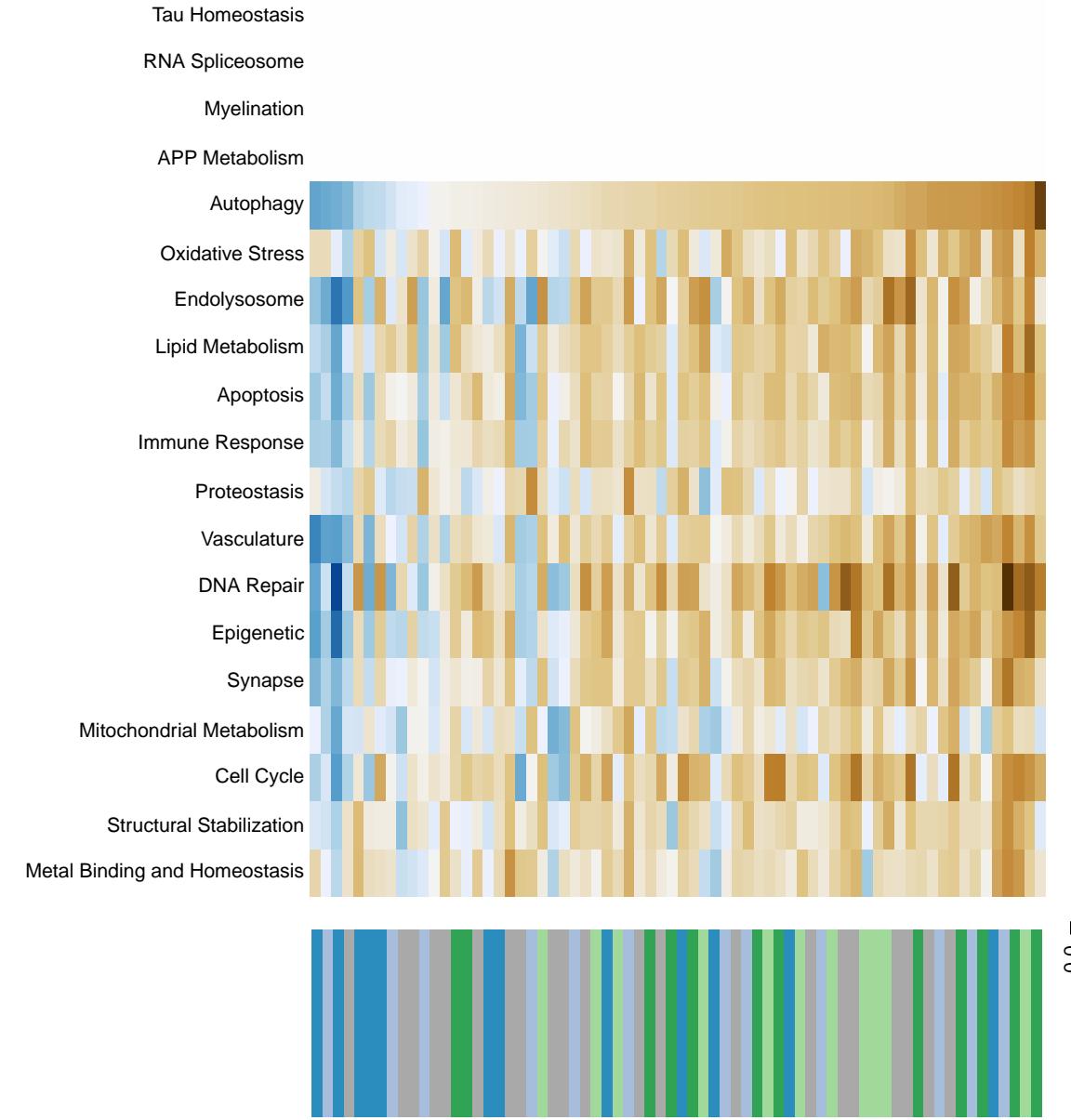
Decomposition



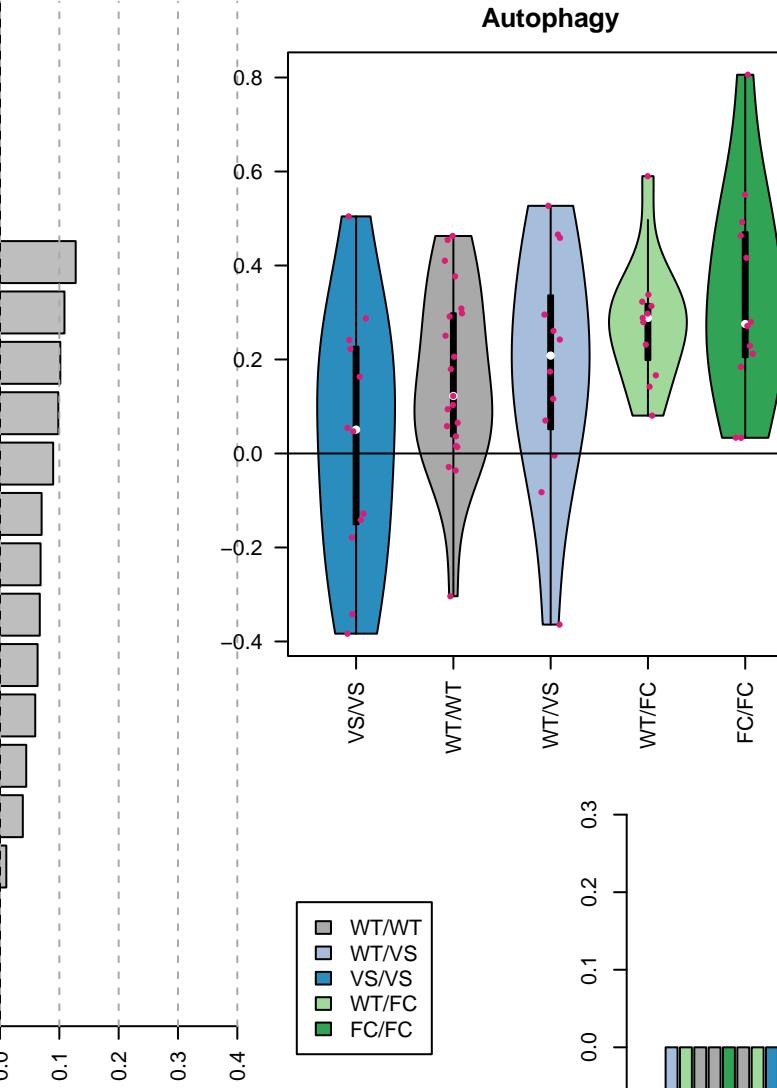
PC1 by genotype



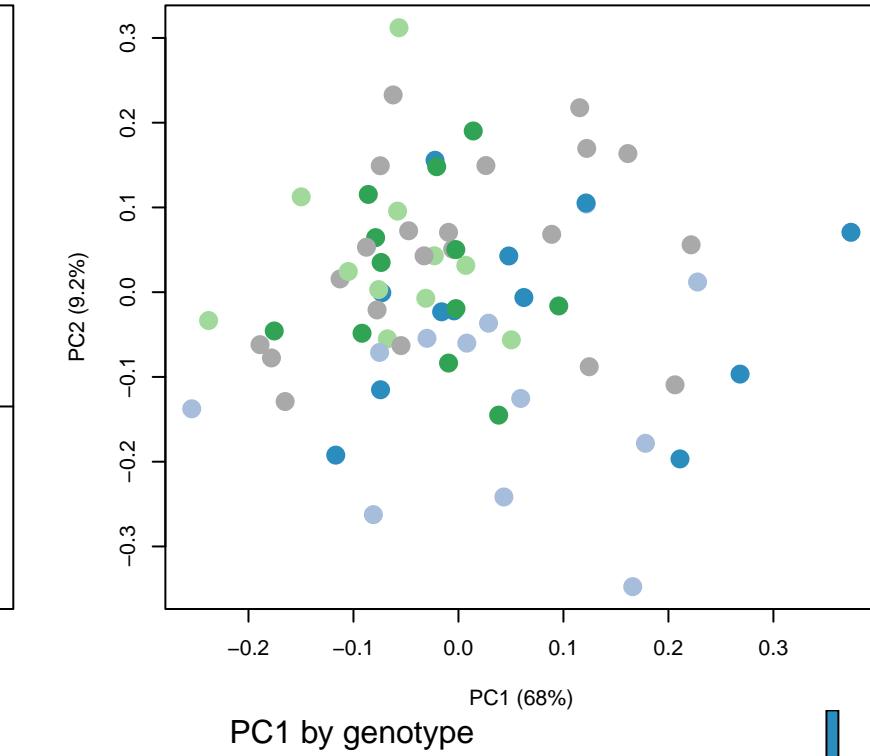
HIF-1 signaling pathway



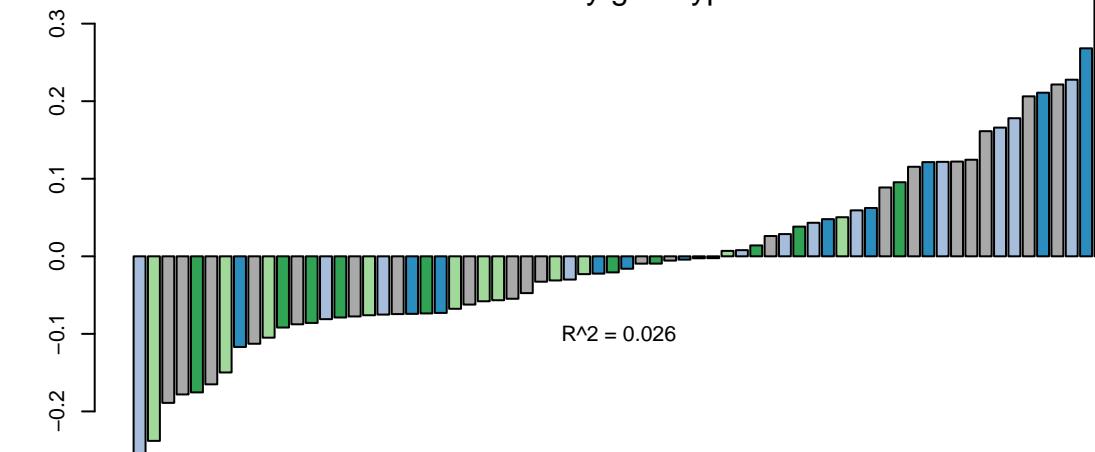
Autophagy



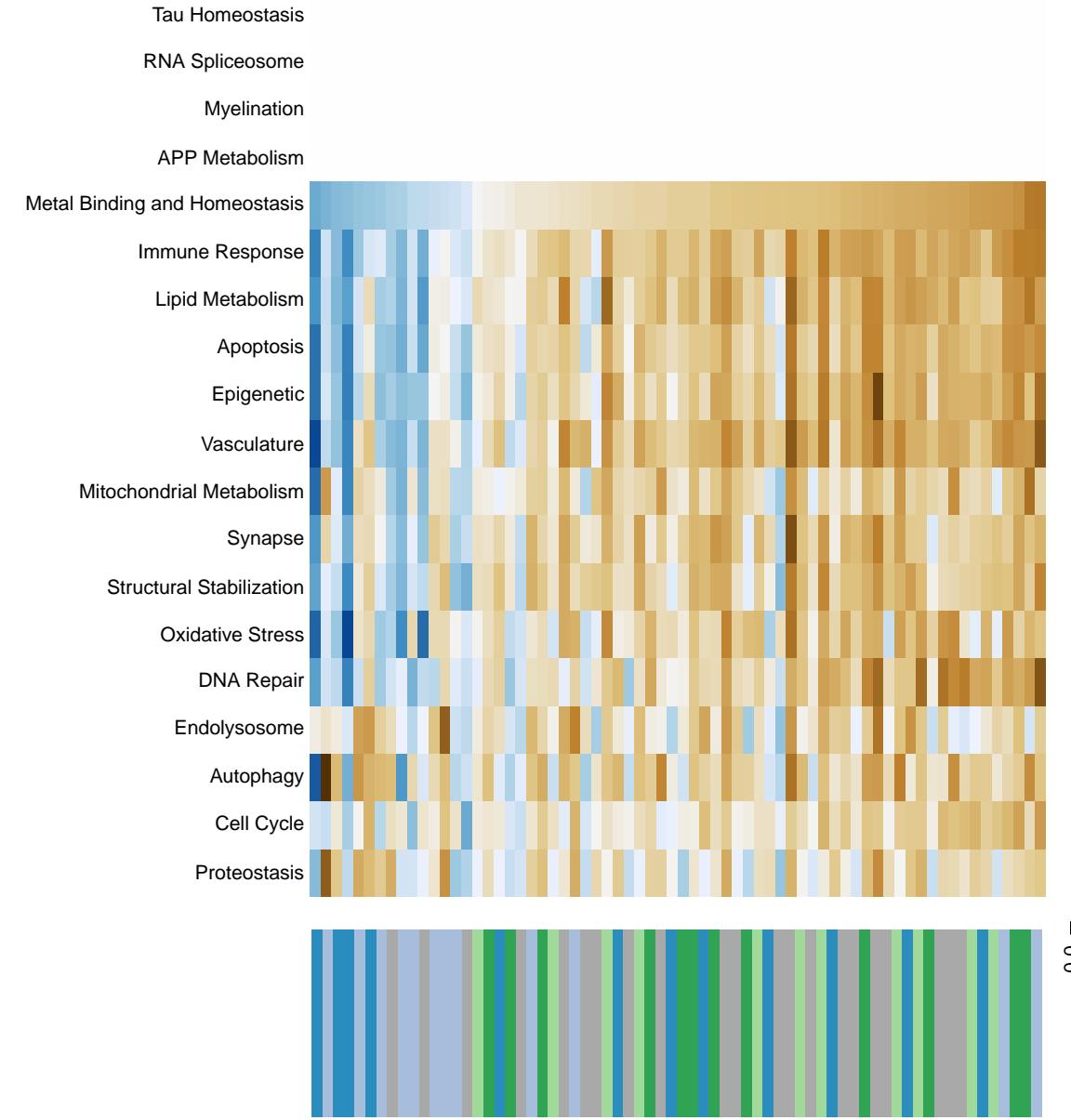
Decomposition



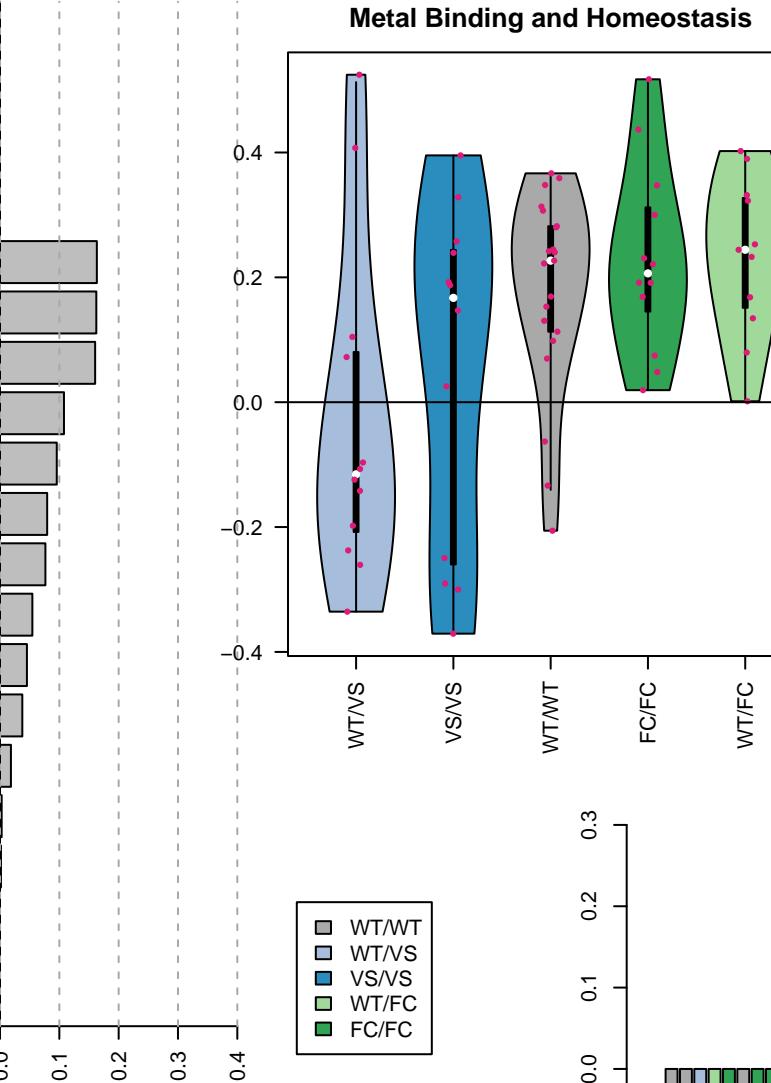
PC1 by genotype



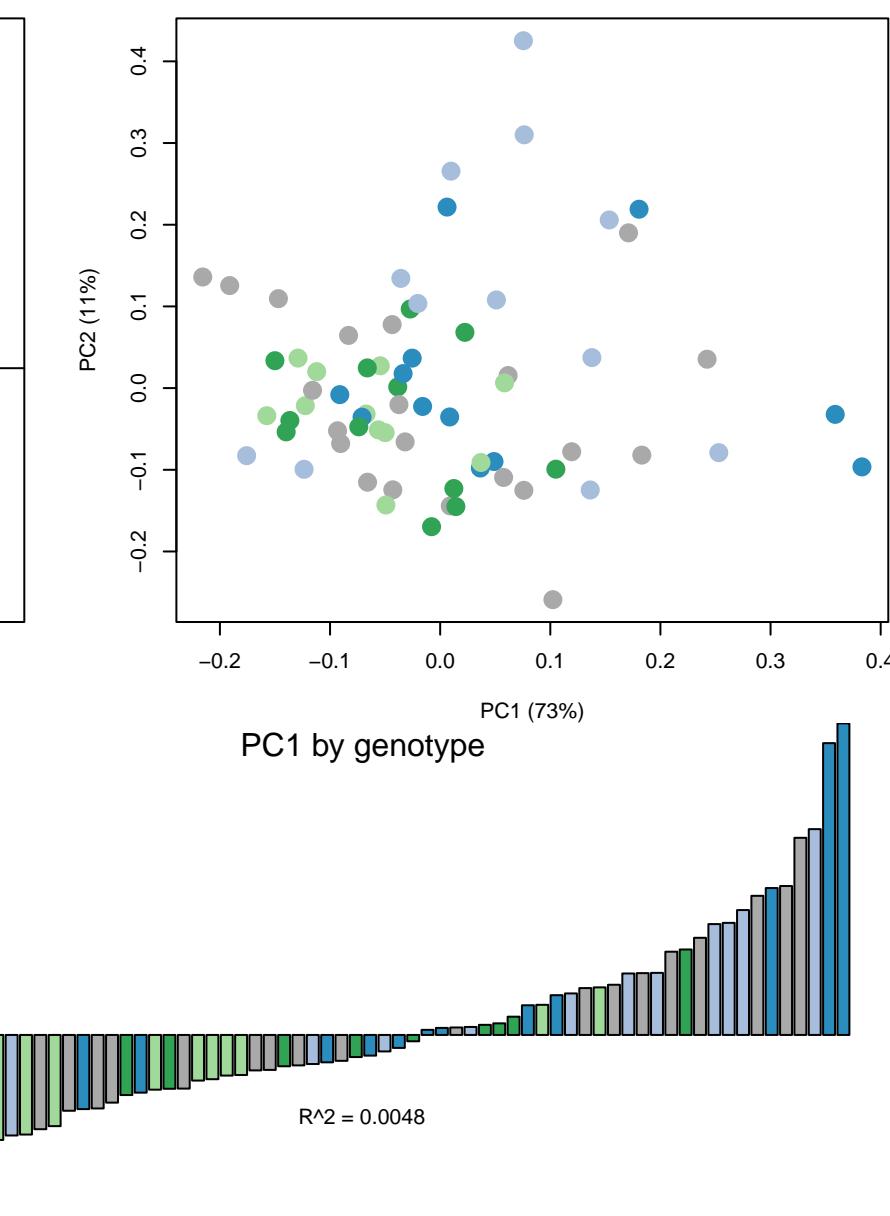
FoxO signaling pathway



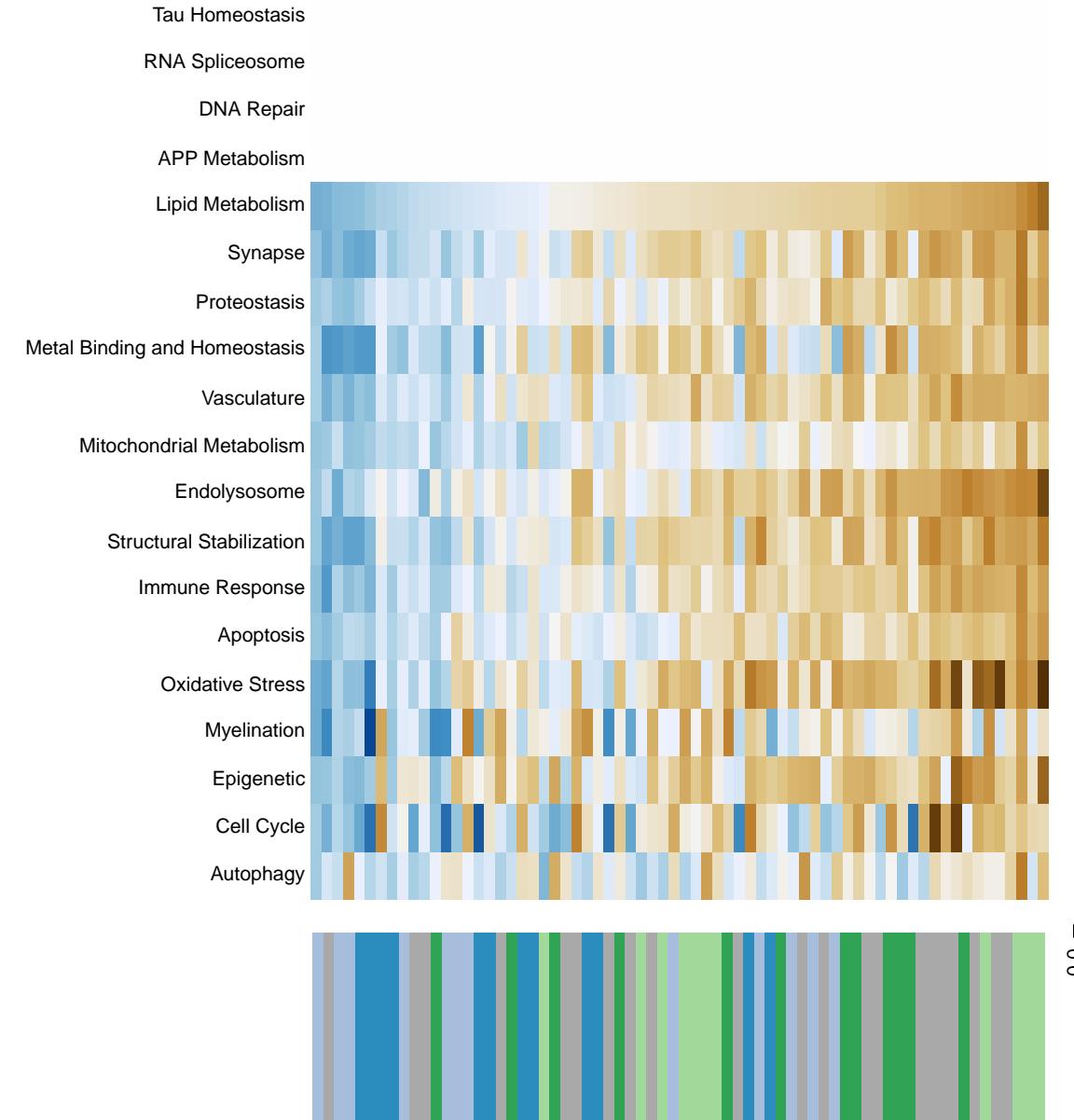
Metal Binding and Homeostasis



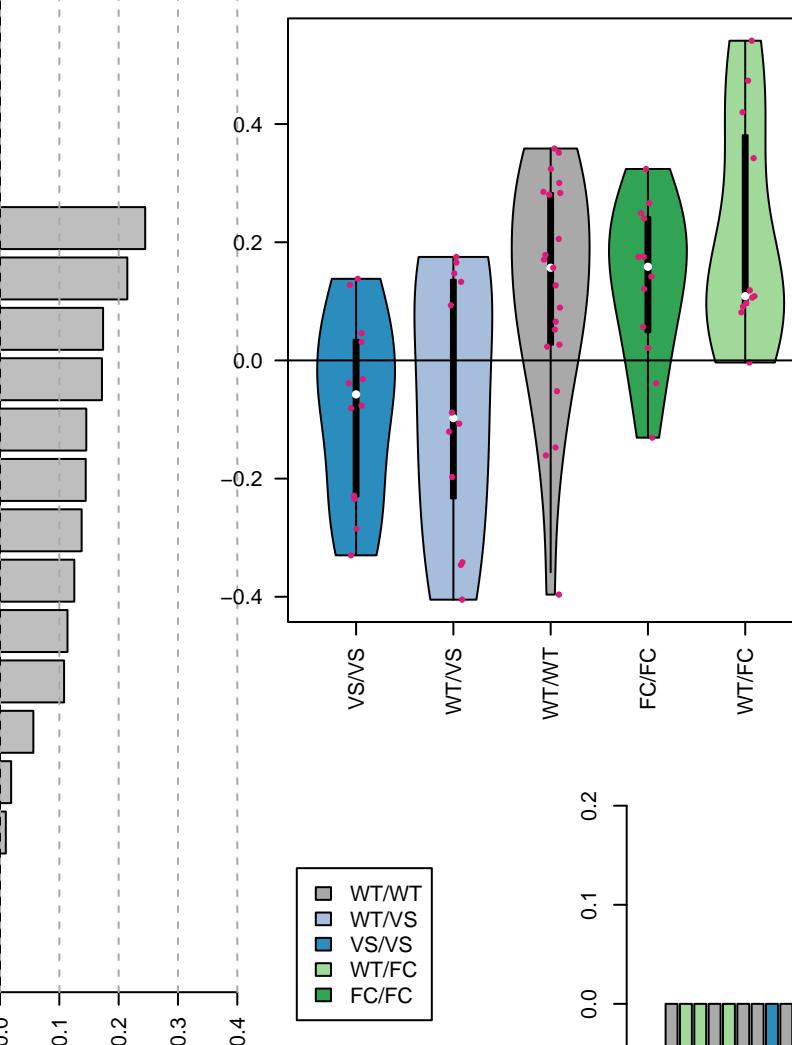
Decomposition



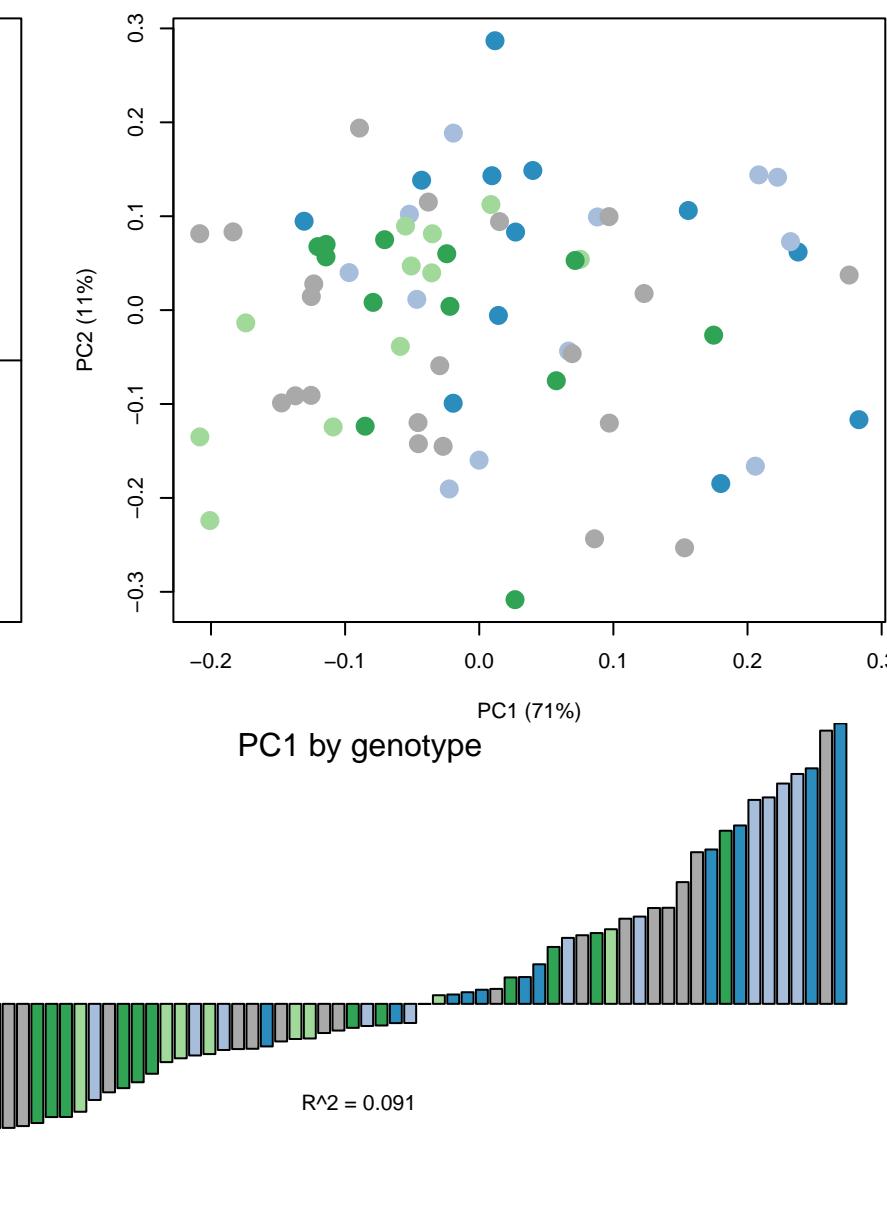
Calcium signaling pathway



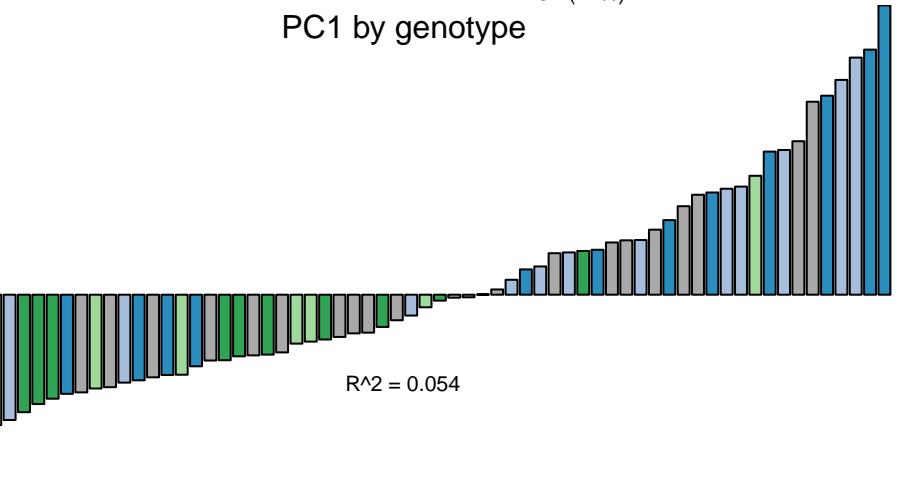
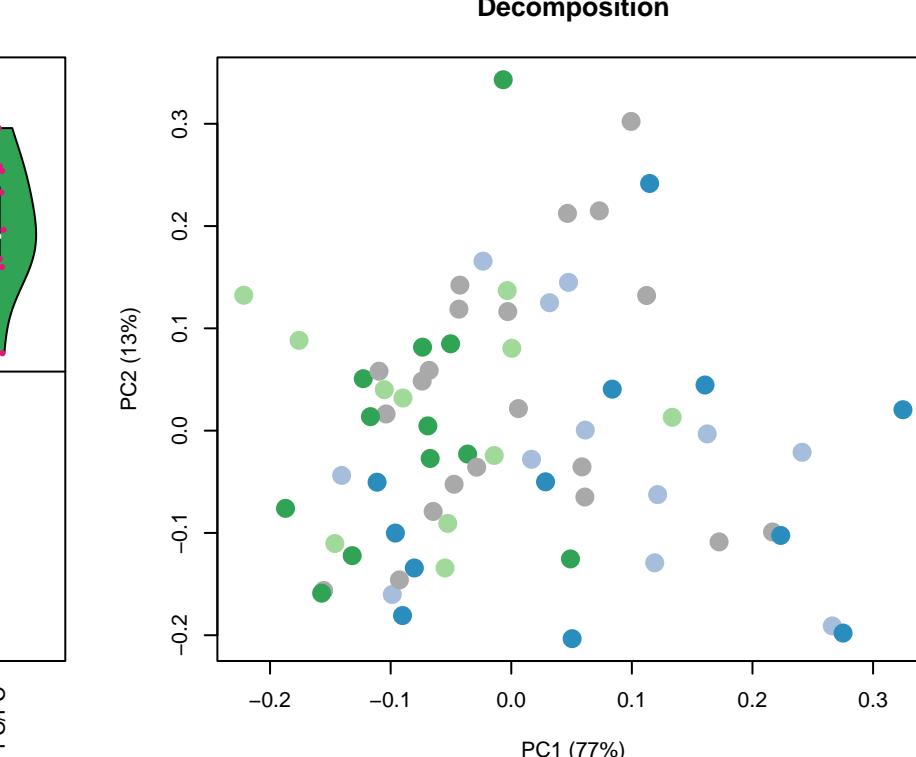
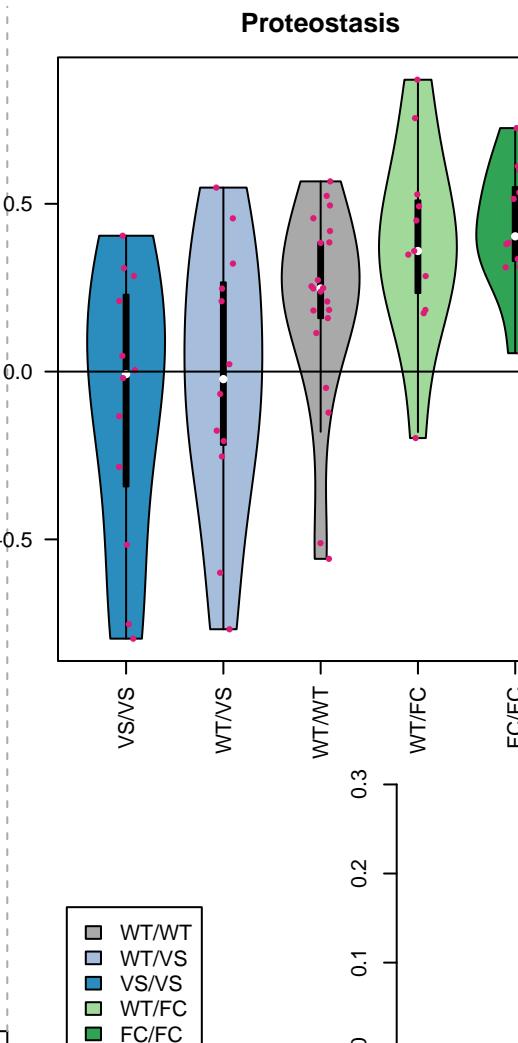
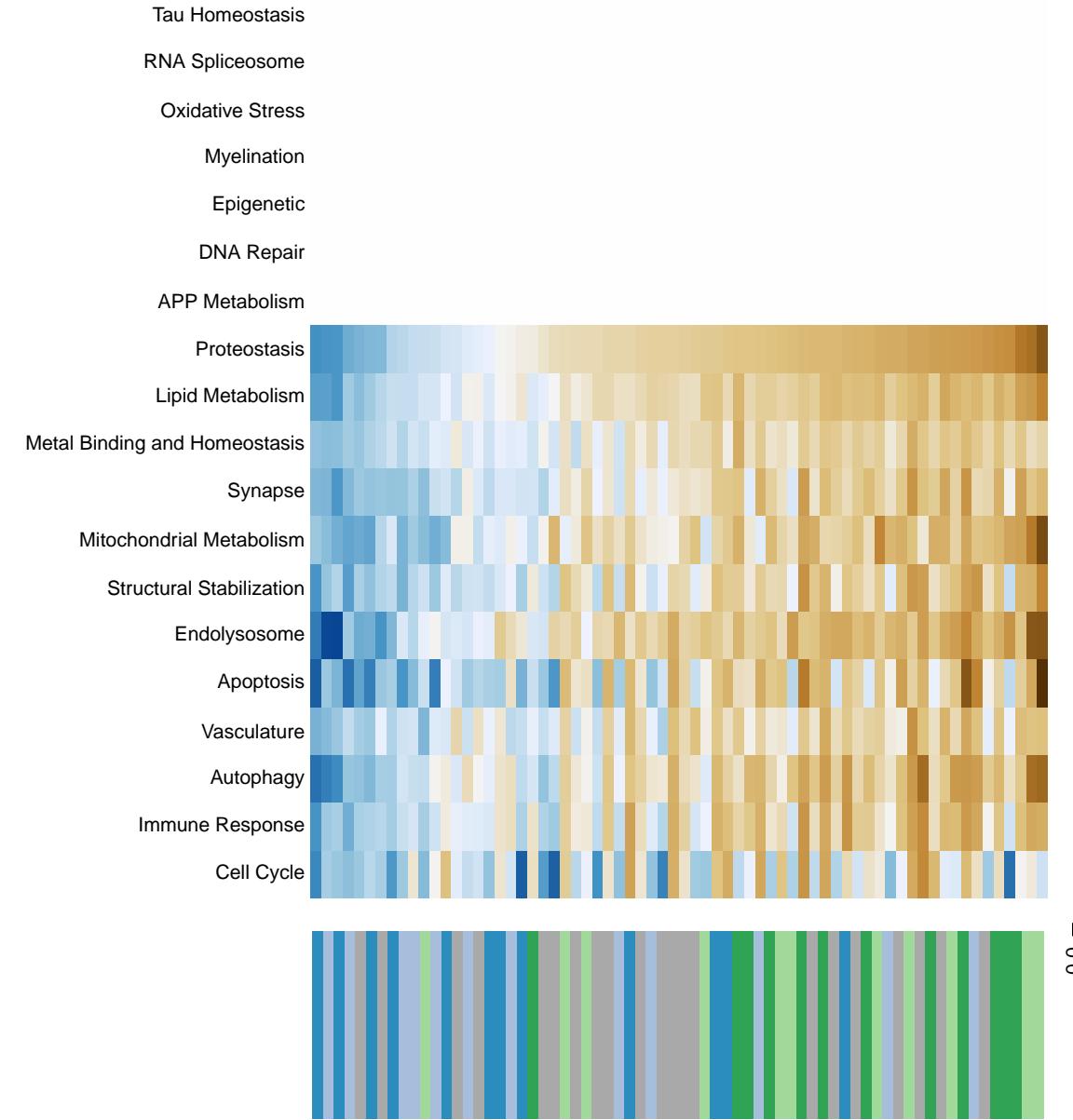
Lipid Metabolism



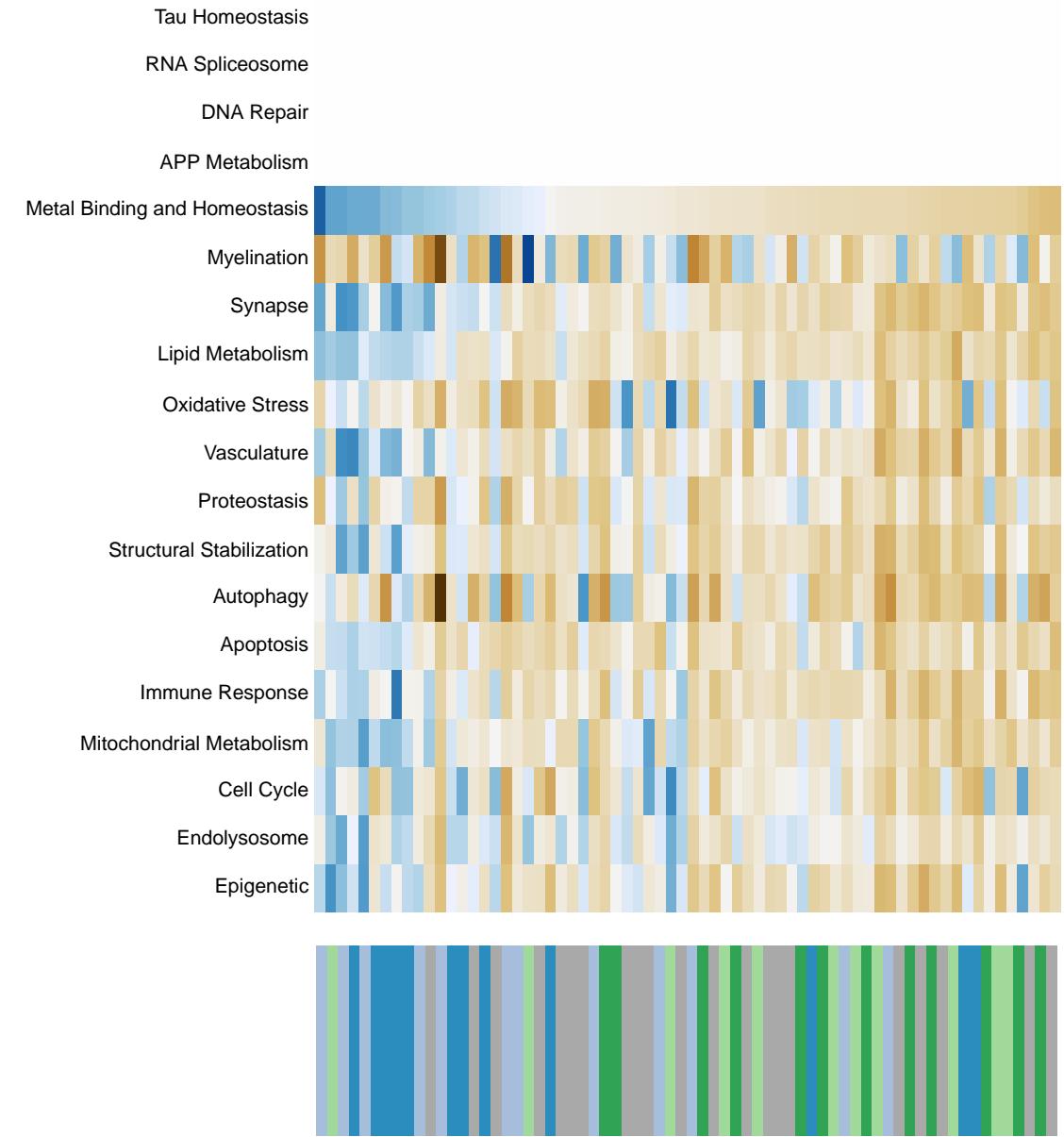
Decomposition



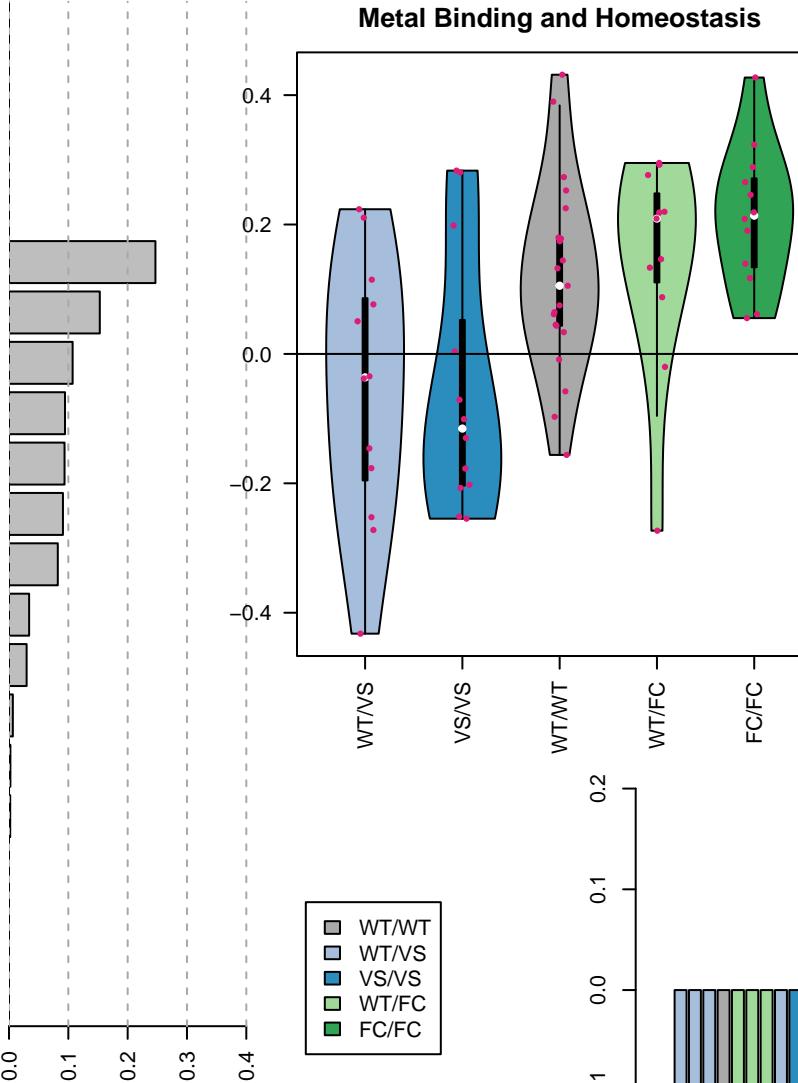
Phosphatidylinositol signaling system



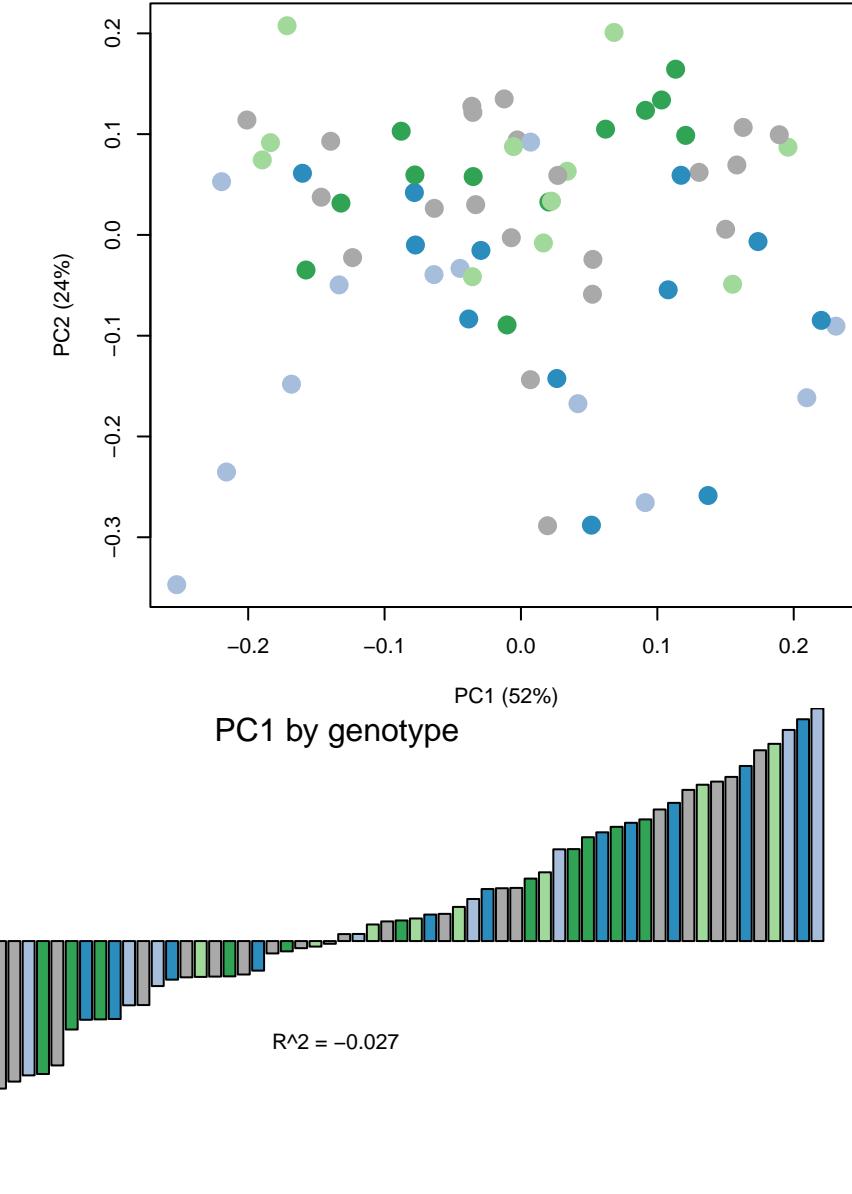
Phospholipase D signaling pathway



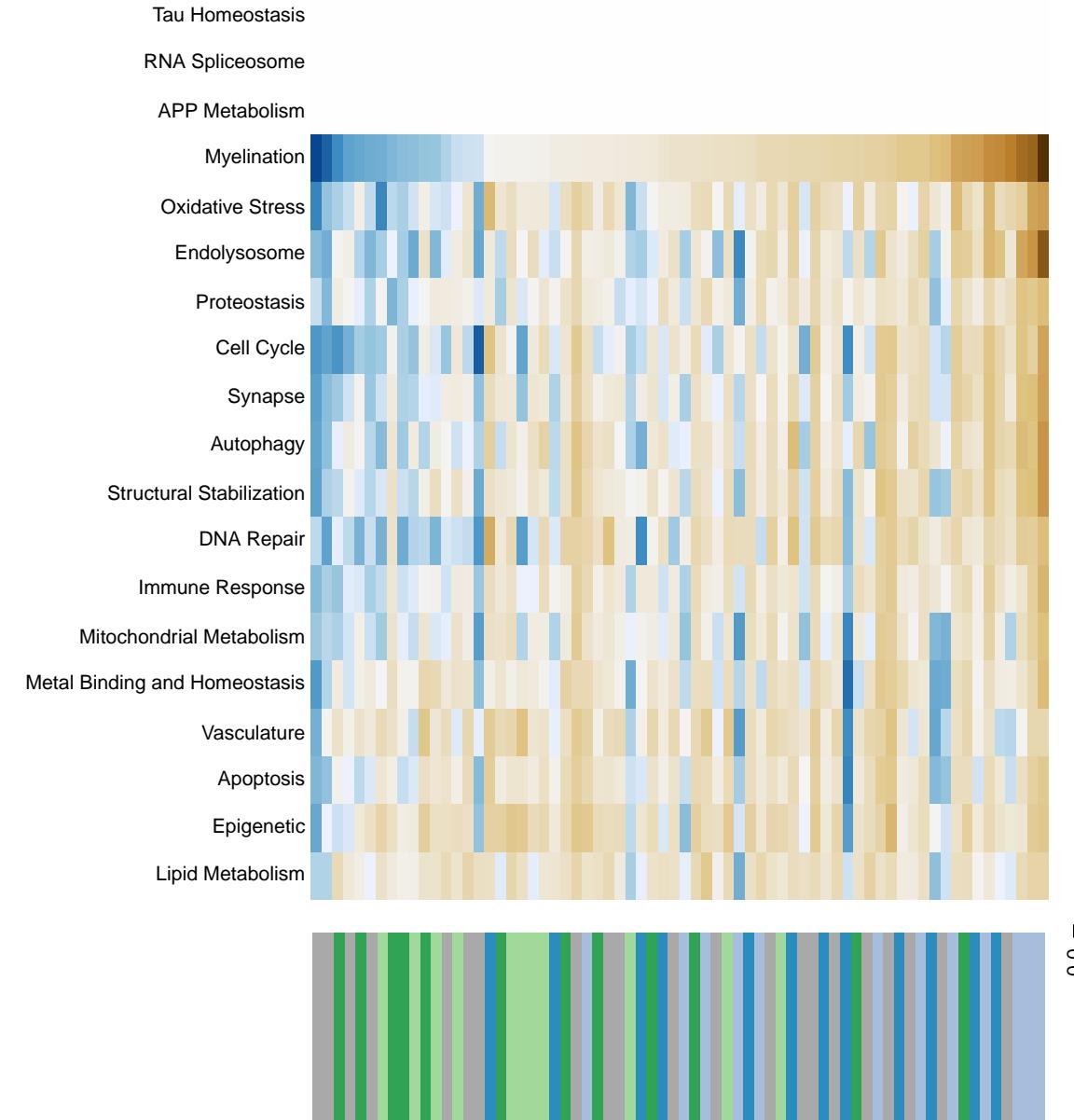
Metal Binding and Homeostasis



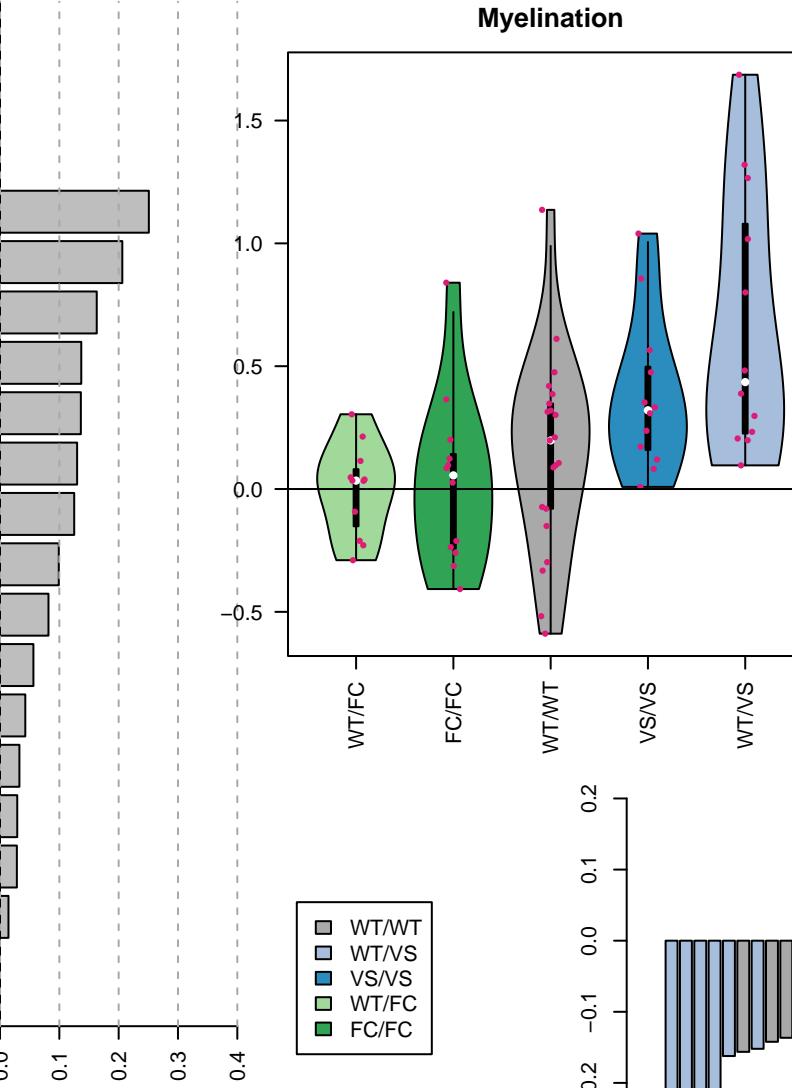
Decomposition



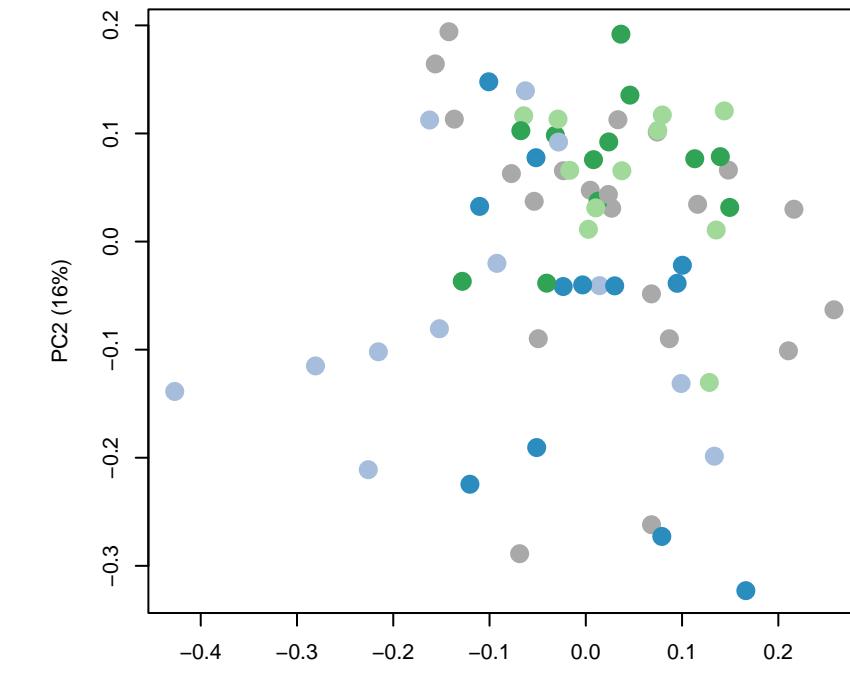
Sphingolipid signaling pathway



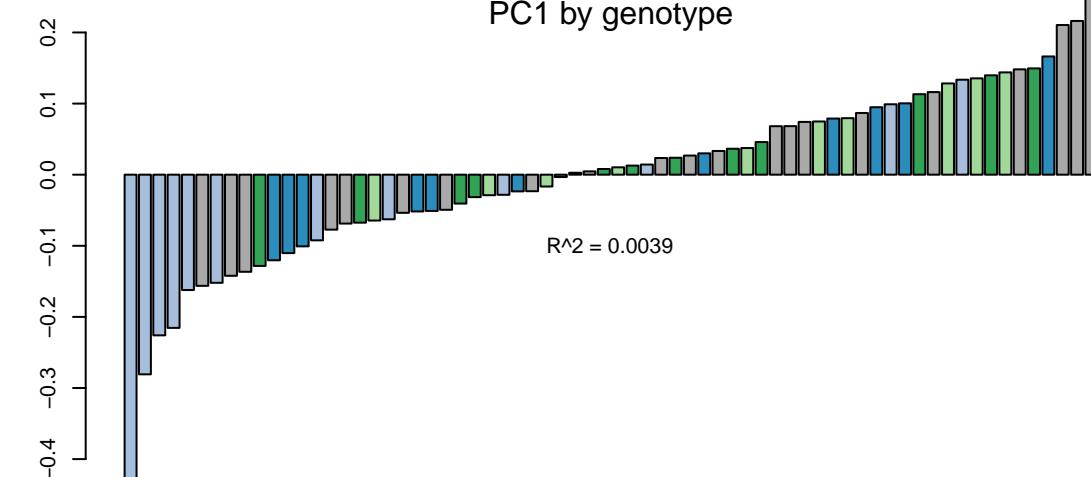
Myelination



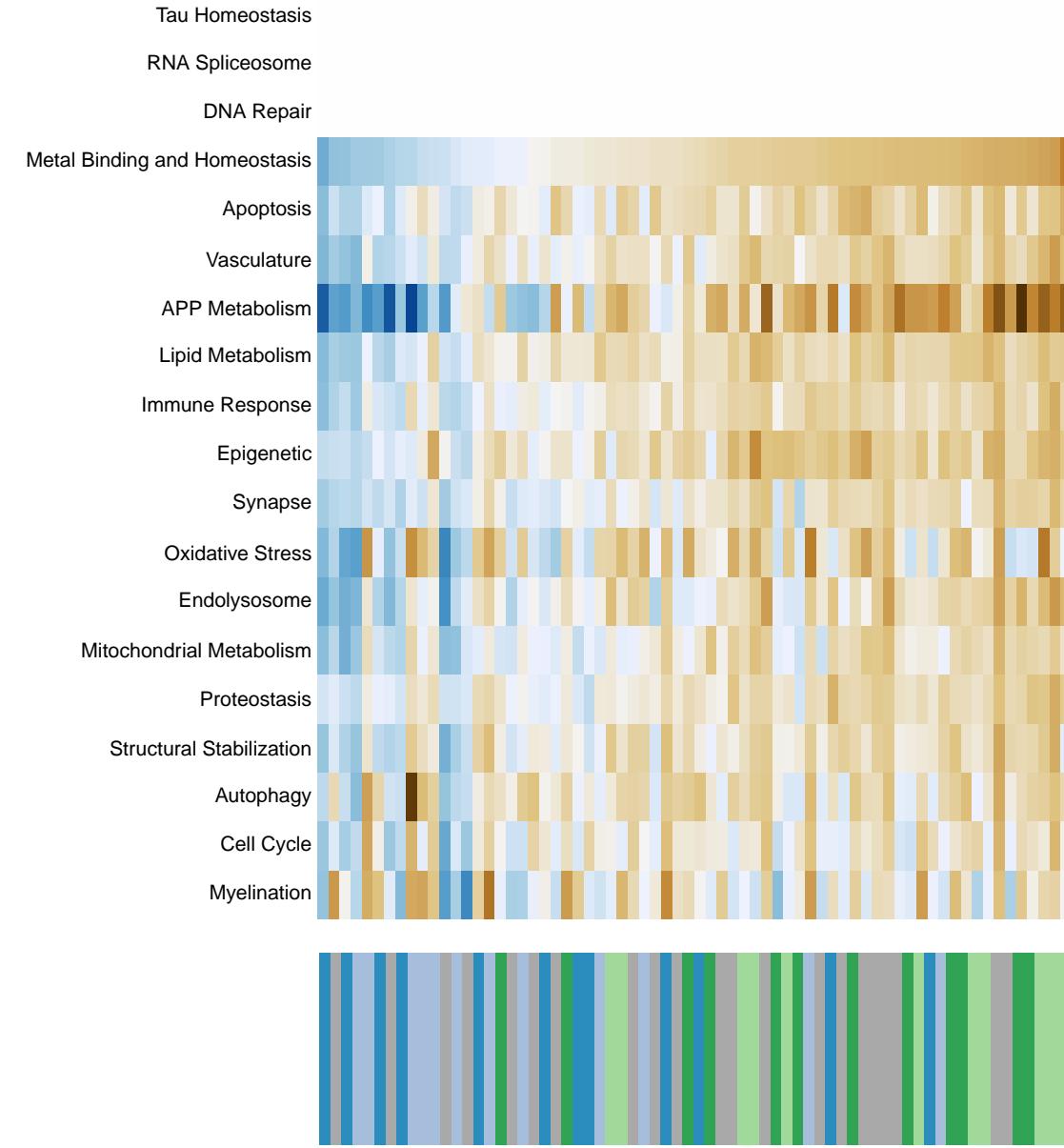
Decomposition



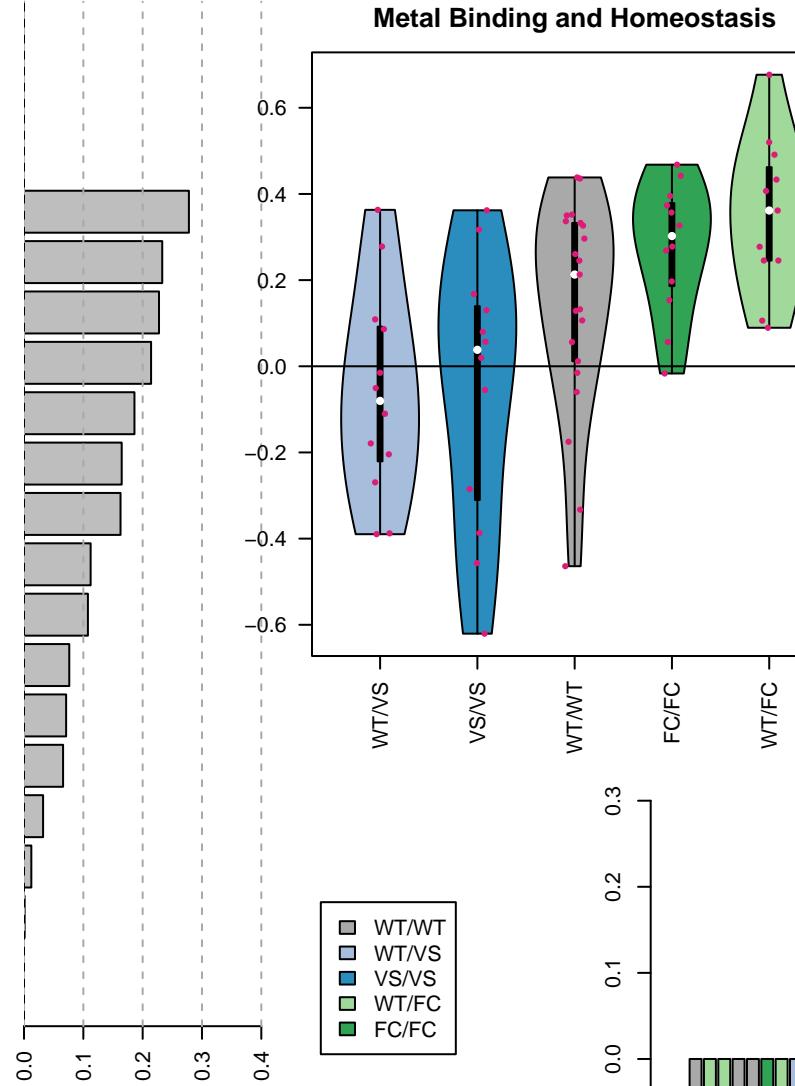
PC1 by genotype



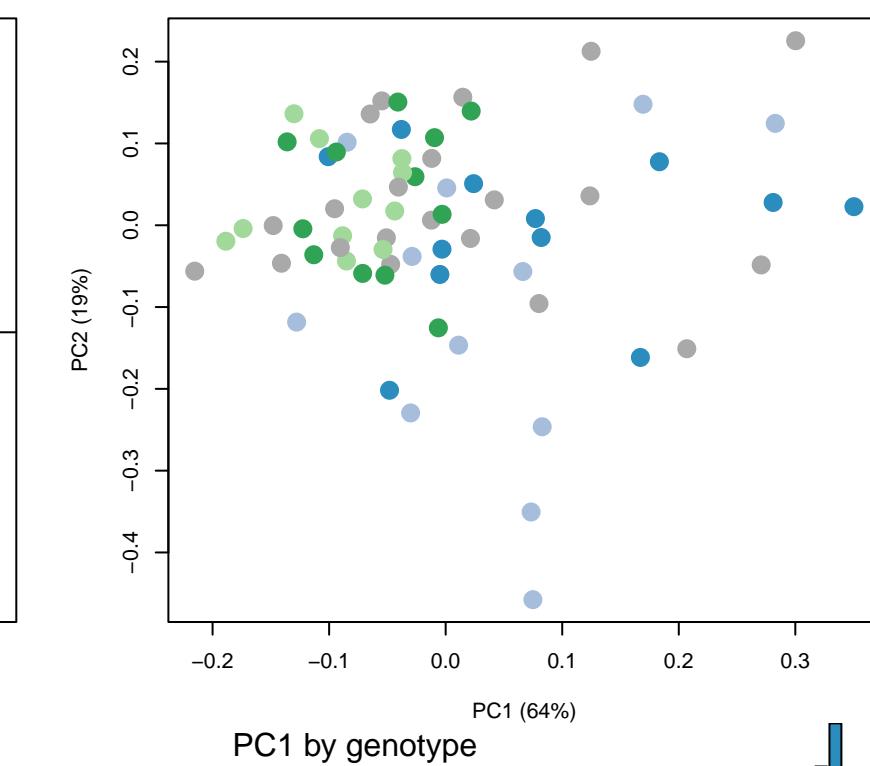
cAMP signaling pathway



Metal Binding and Homeostasis



Decomposition



PC1 by genotype

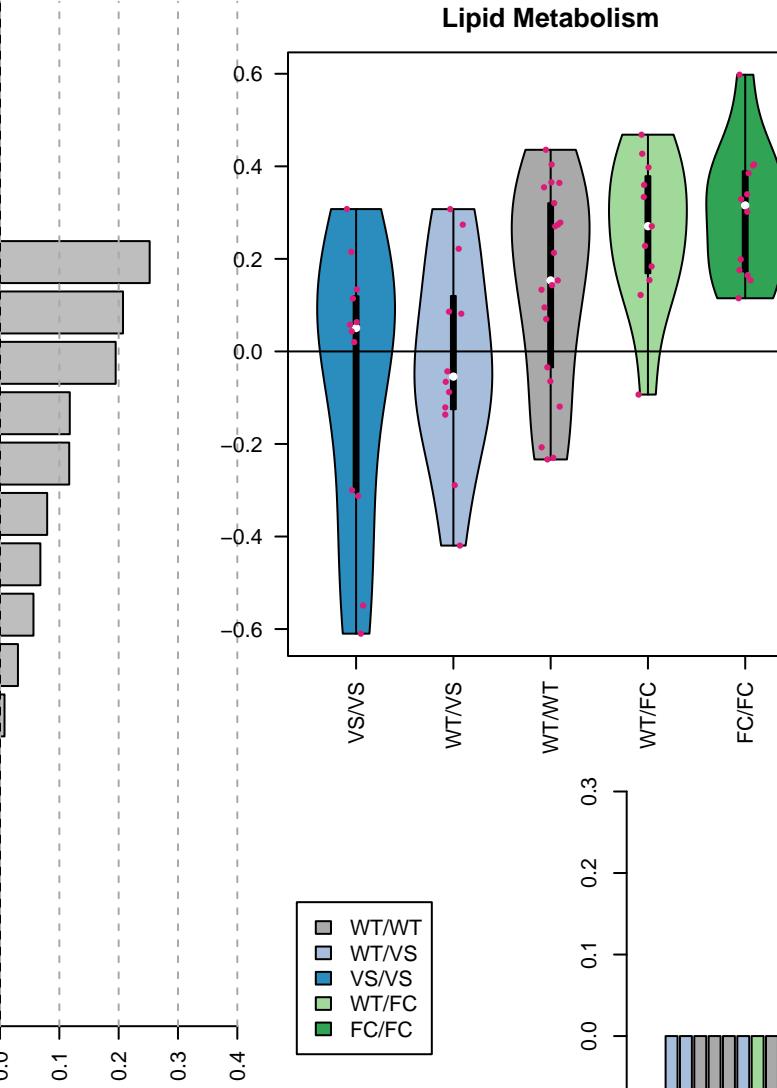
$R^2 = 0.065$

$R^2 = 0.065$

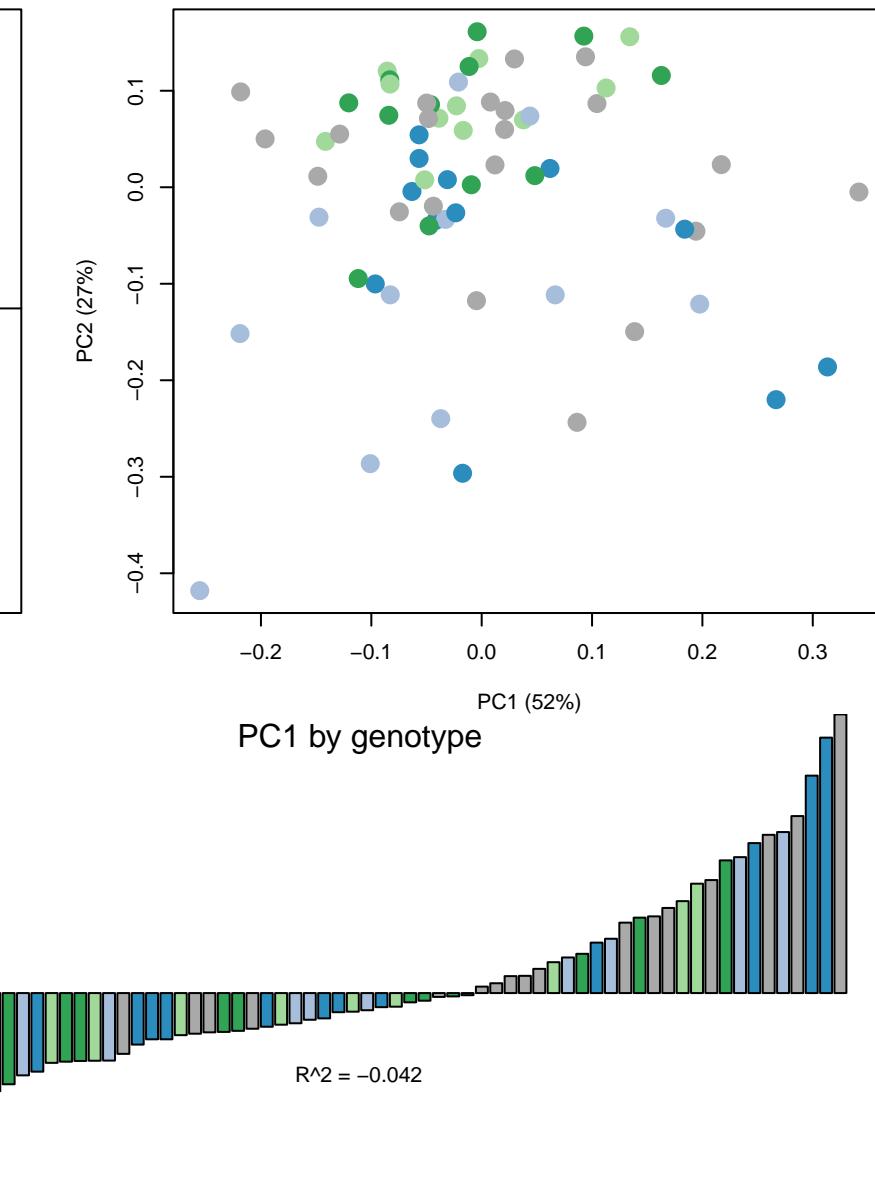
cGMP–PKG signaling pathway



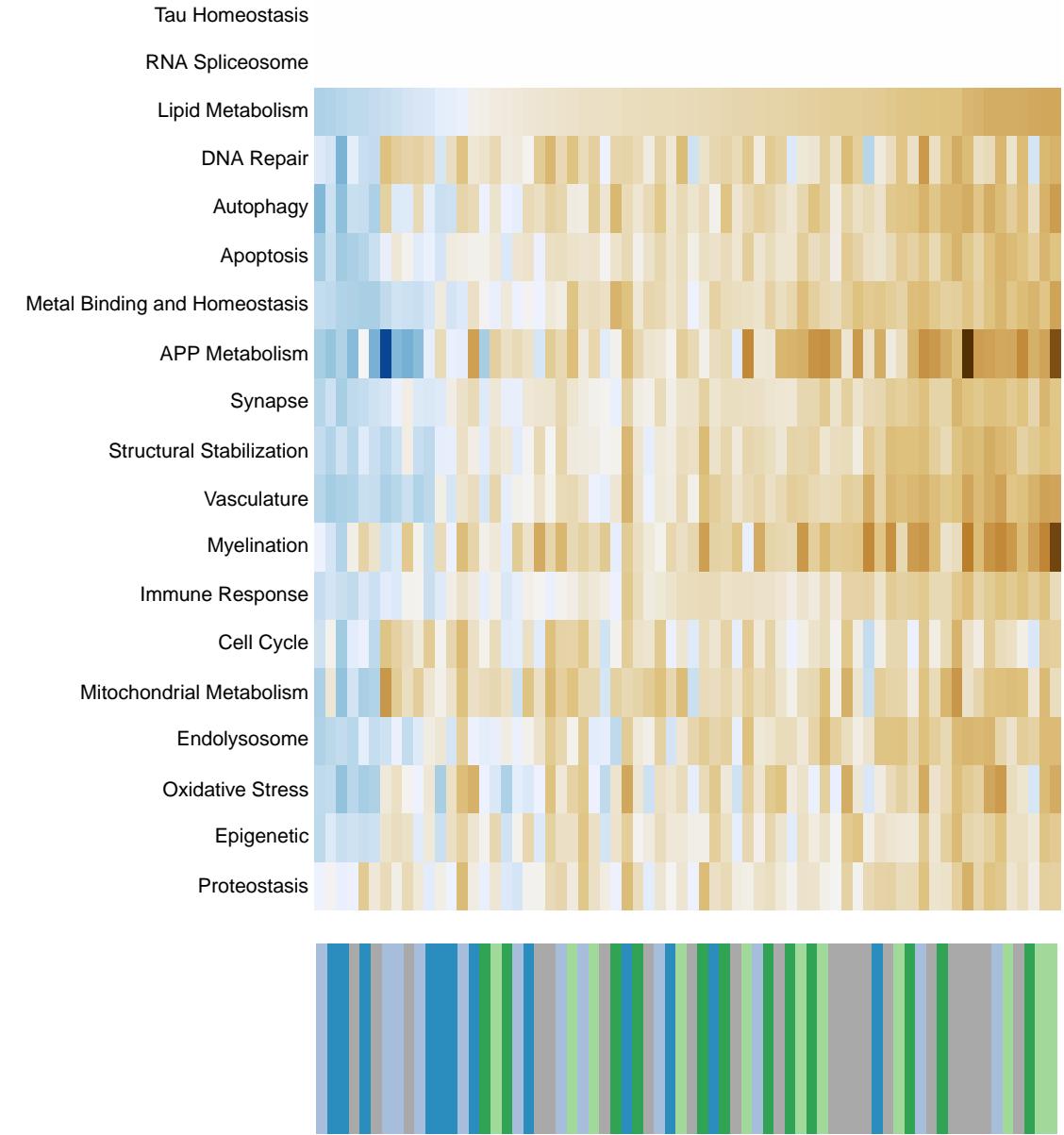
Lipid Metabolism



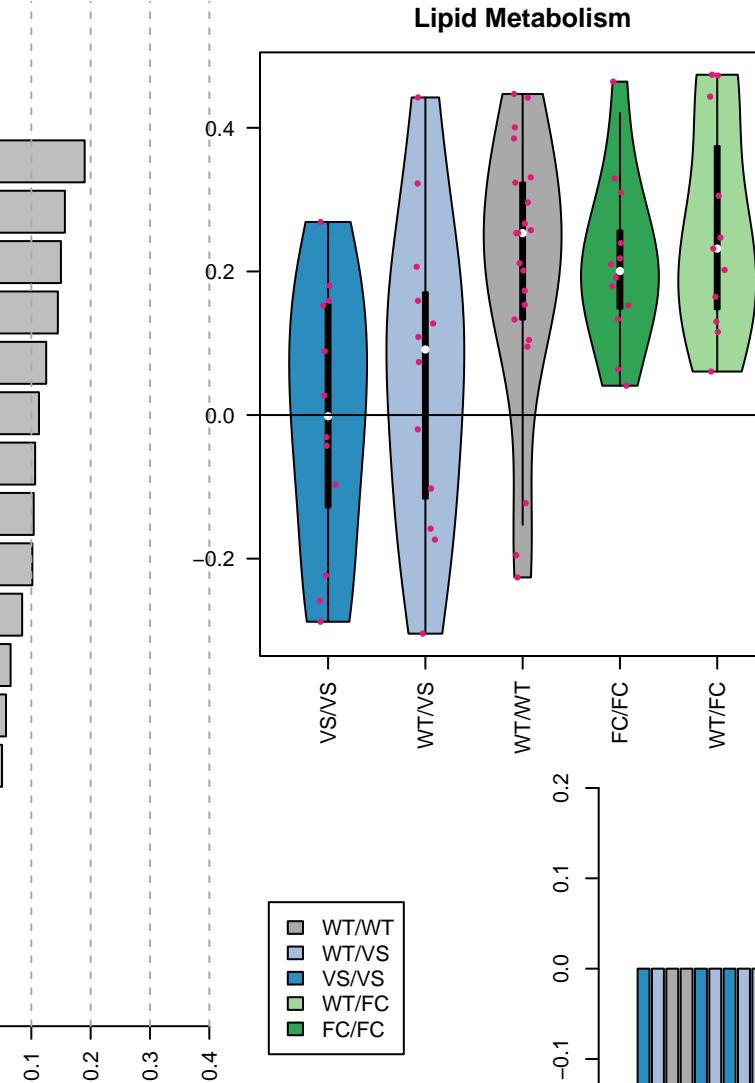
Decomposition



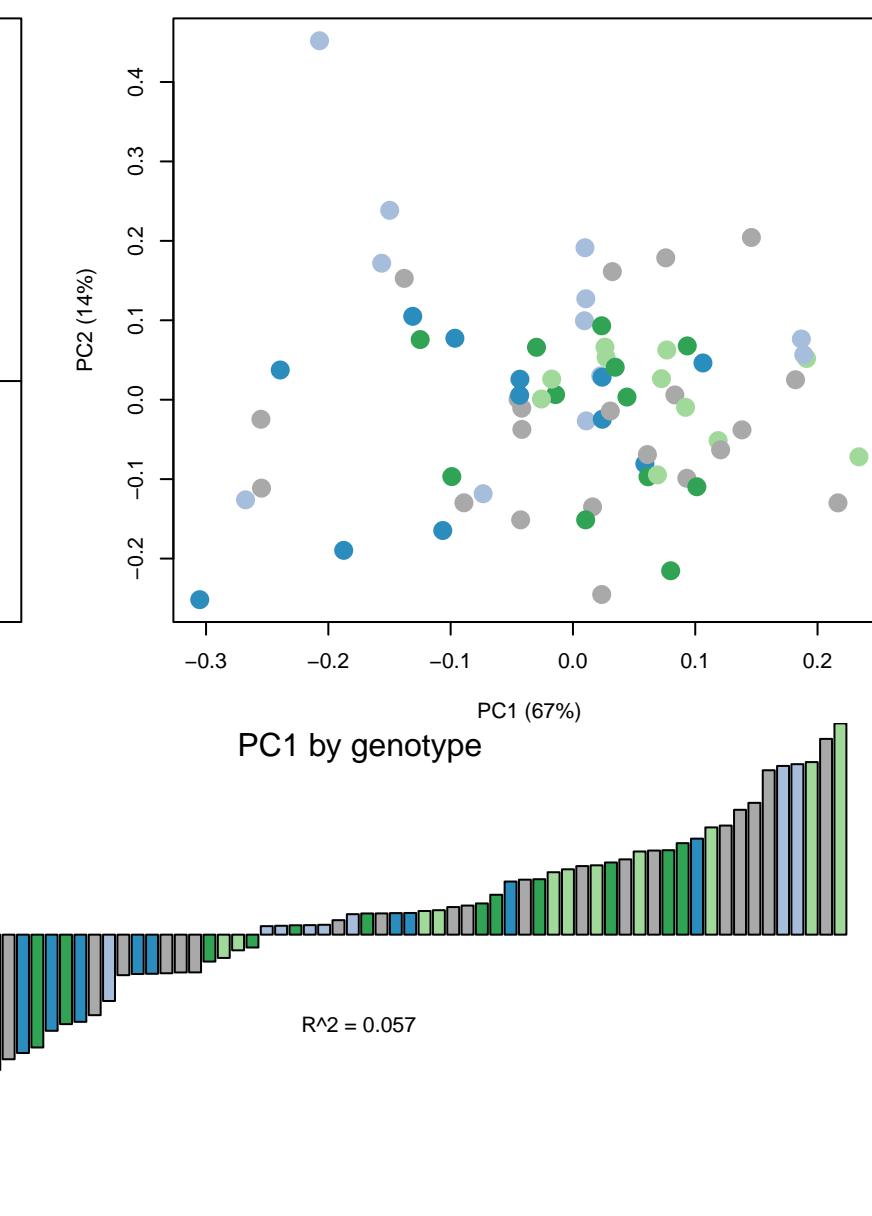
PI3K–Akt signaling pathway



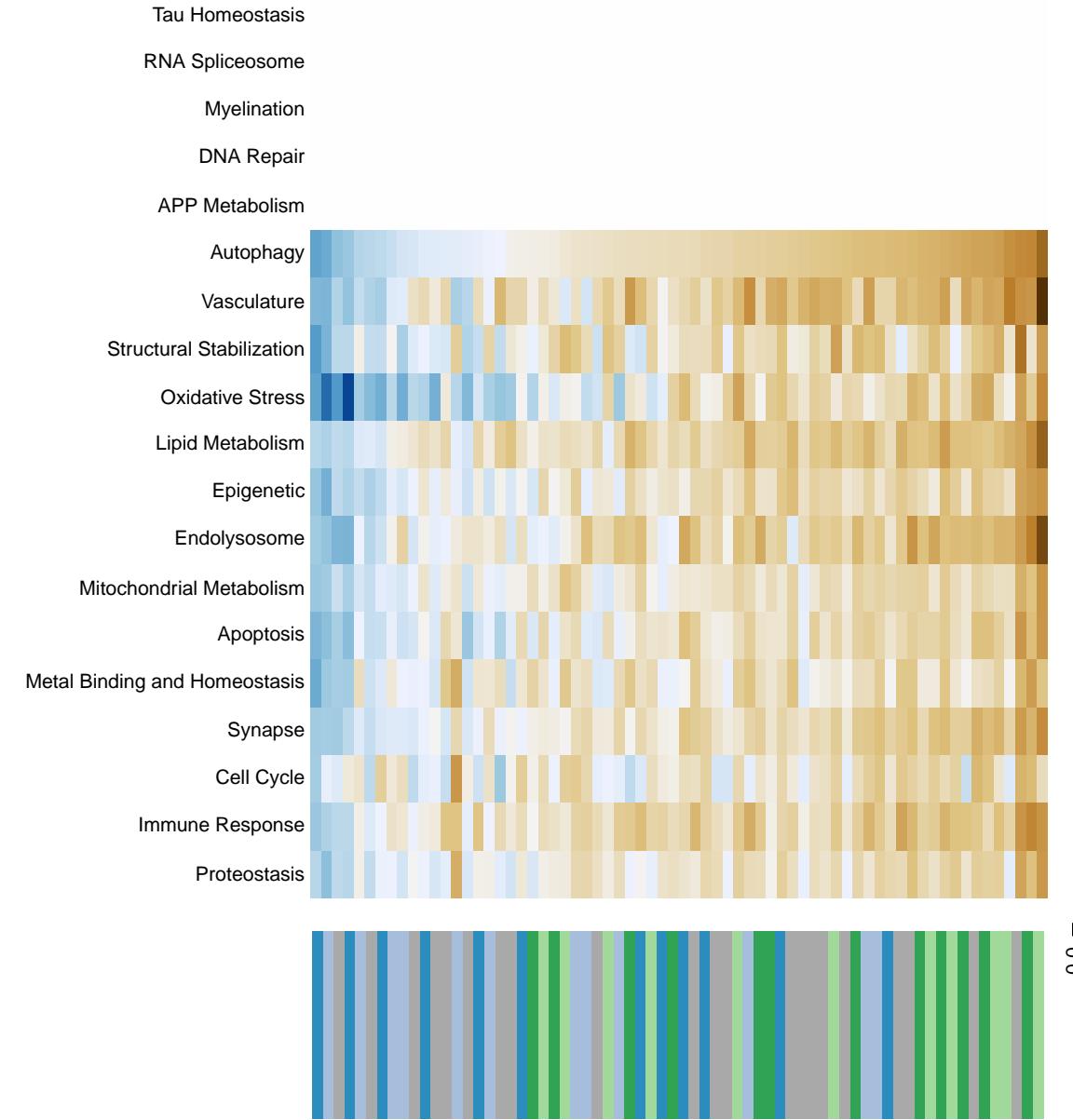
Lipid Metabolism



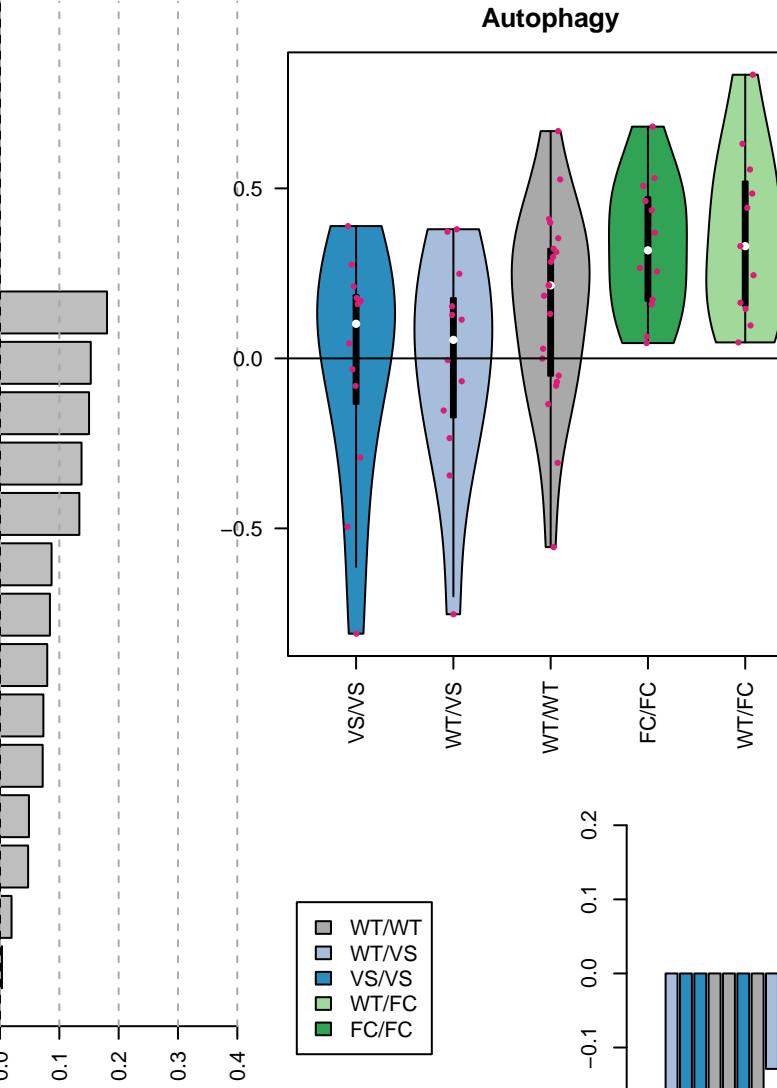
Decomposition



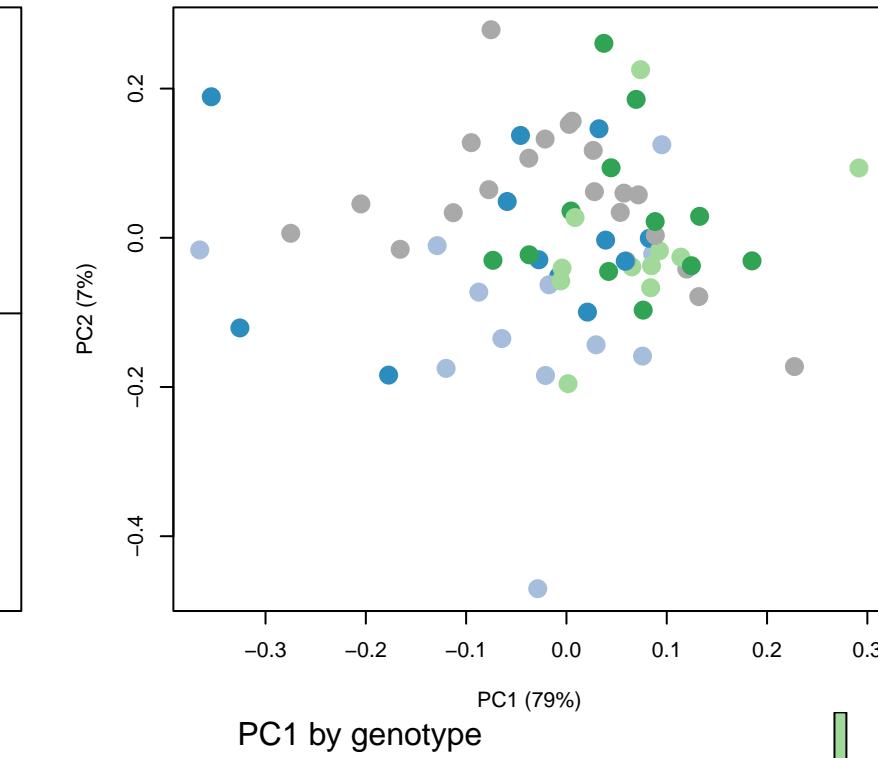
AMPK signaling pathway



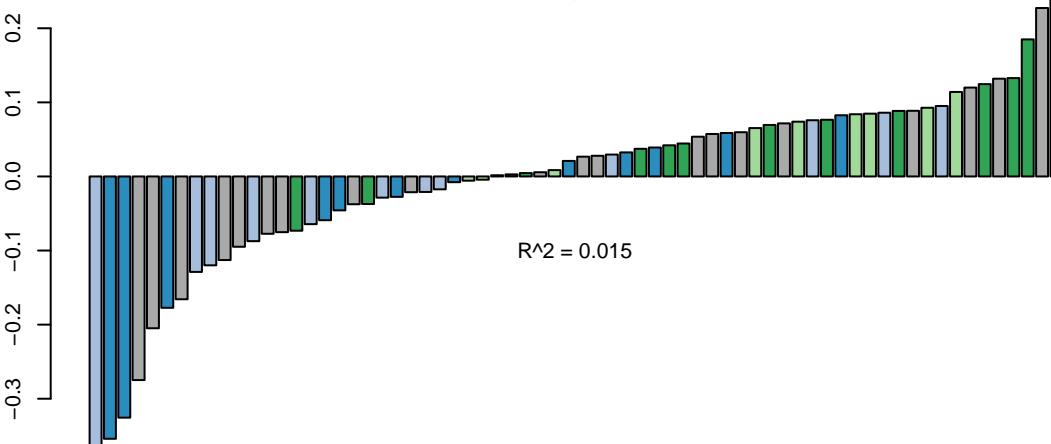
Autophagy



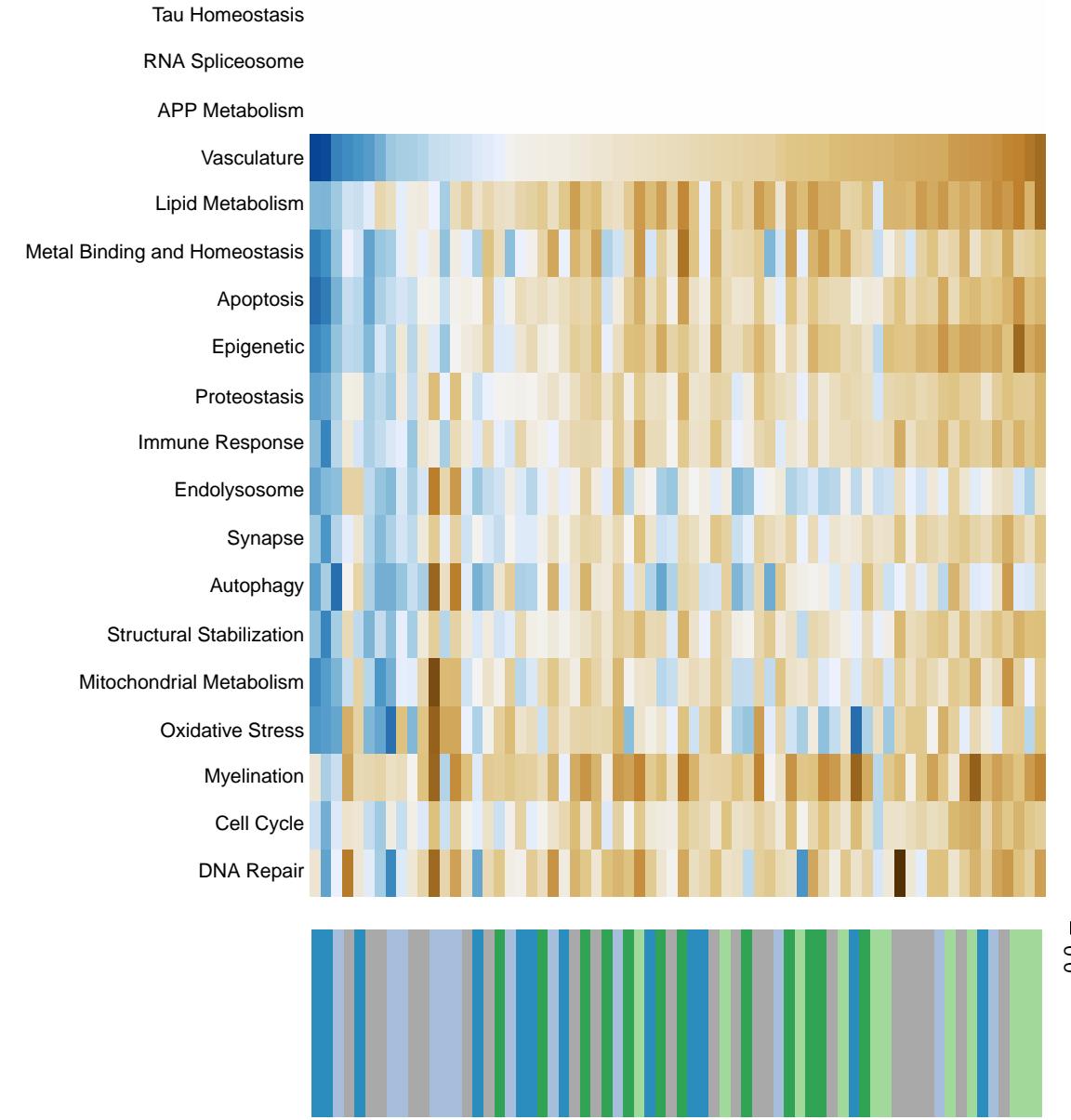
Decomposition



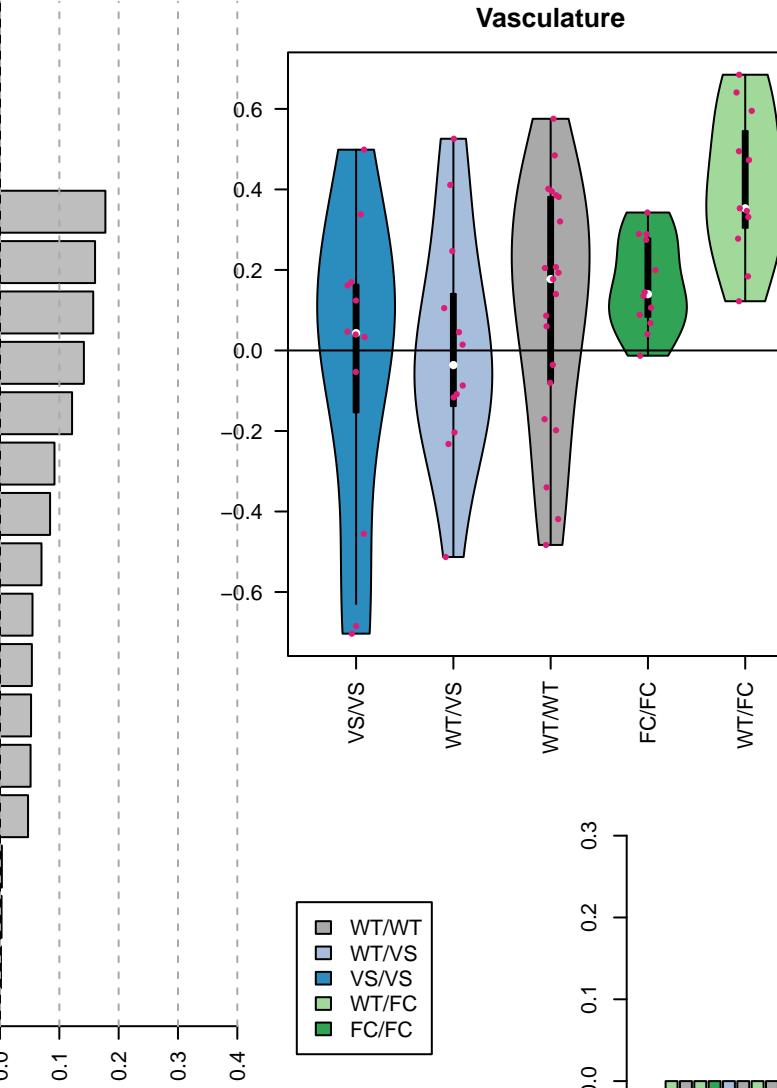
PC1 by genotype



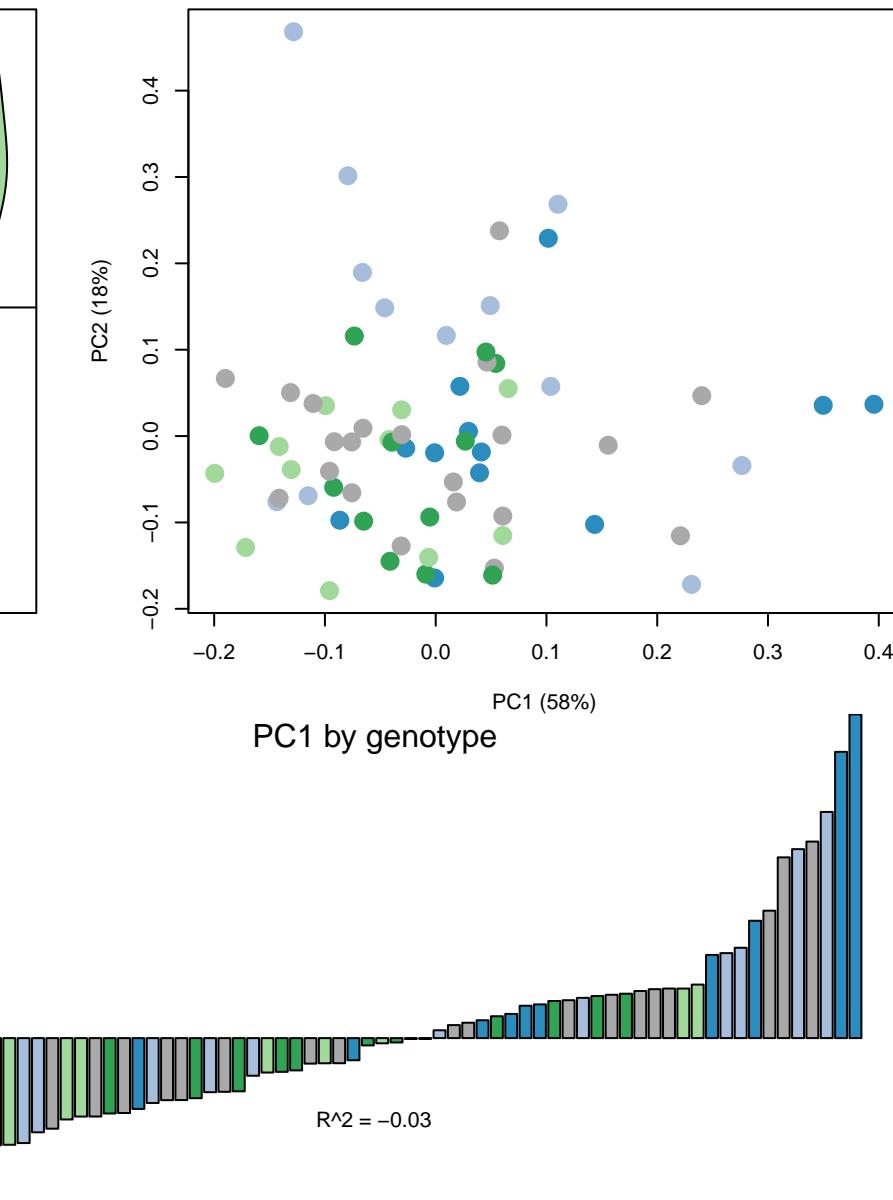
mTOR signaling pathway



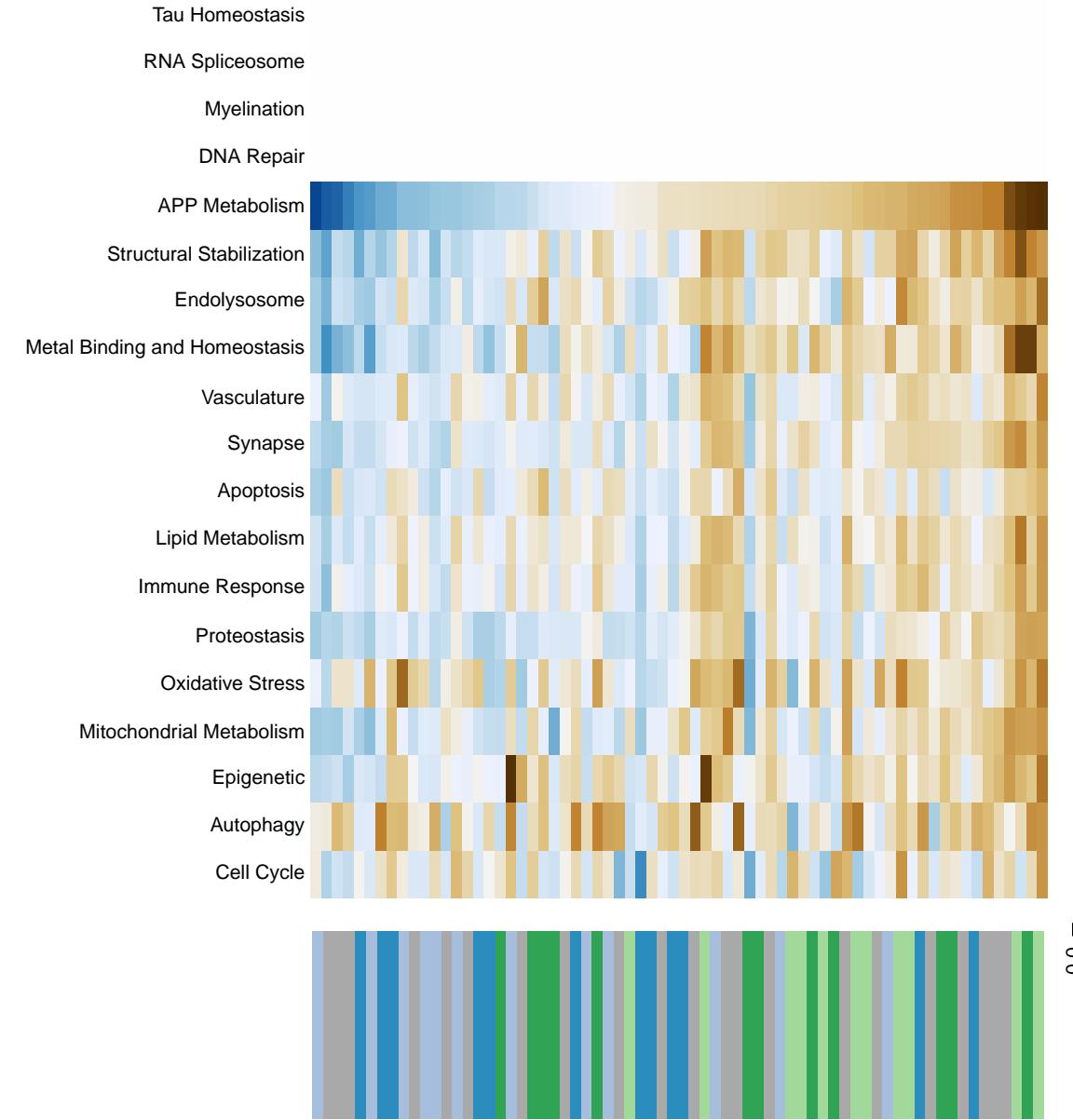
Vasculature



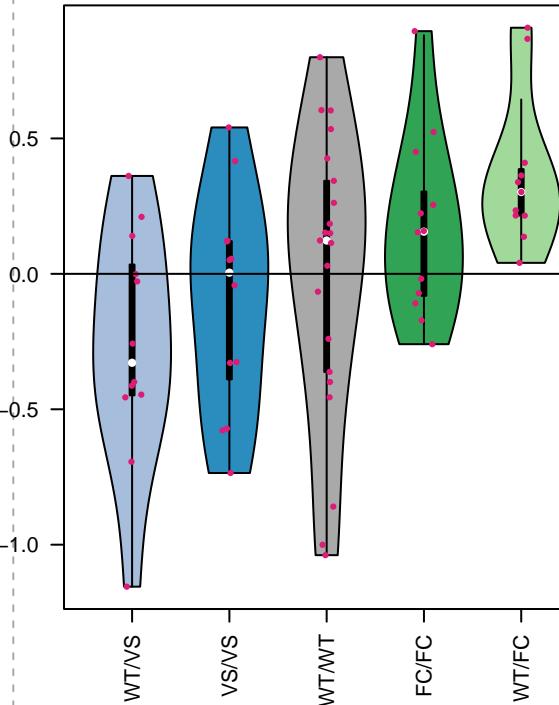
Decomposition



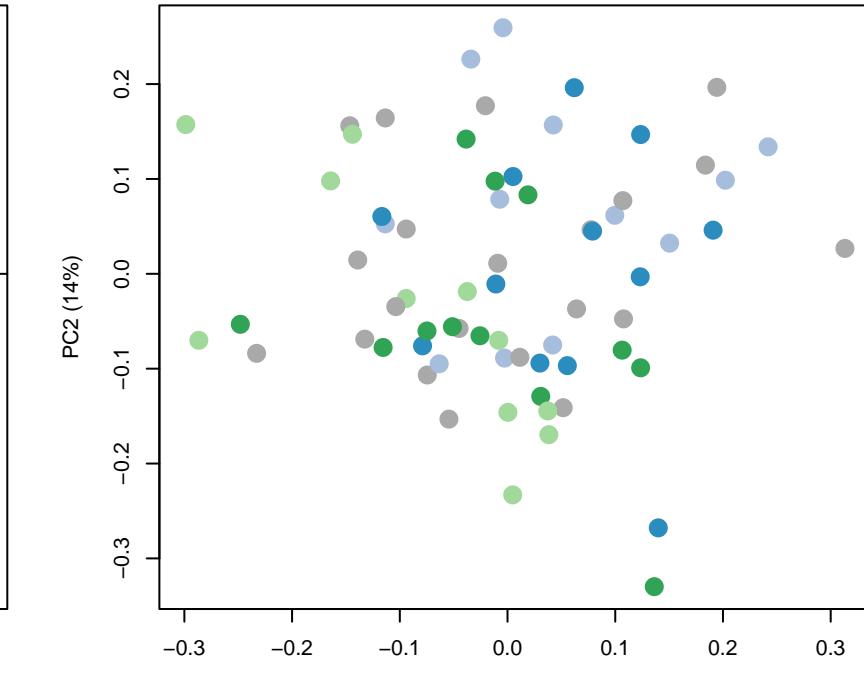
Neuroactive ligand–receptor interaction



APP Metabolism

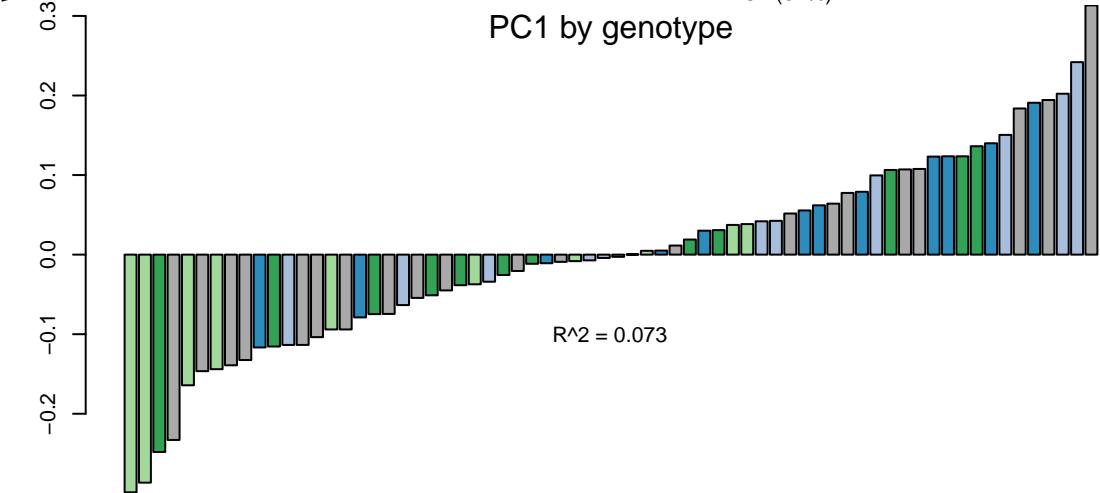


Decomposition

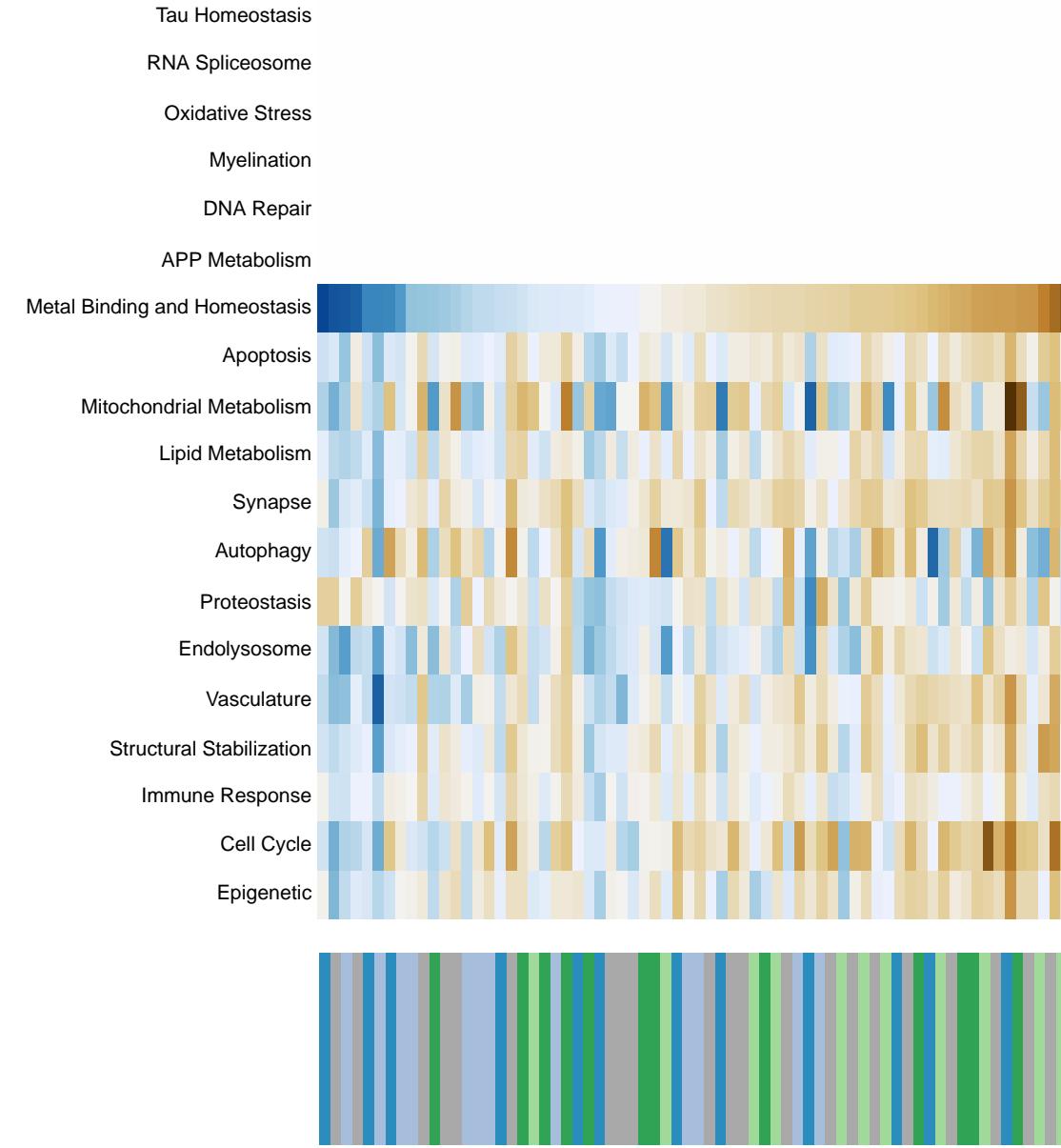


PC1 by genotype

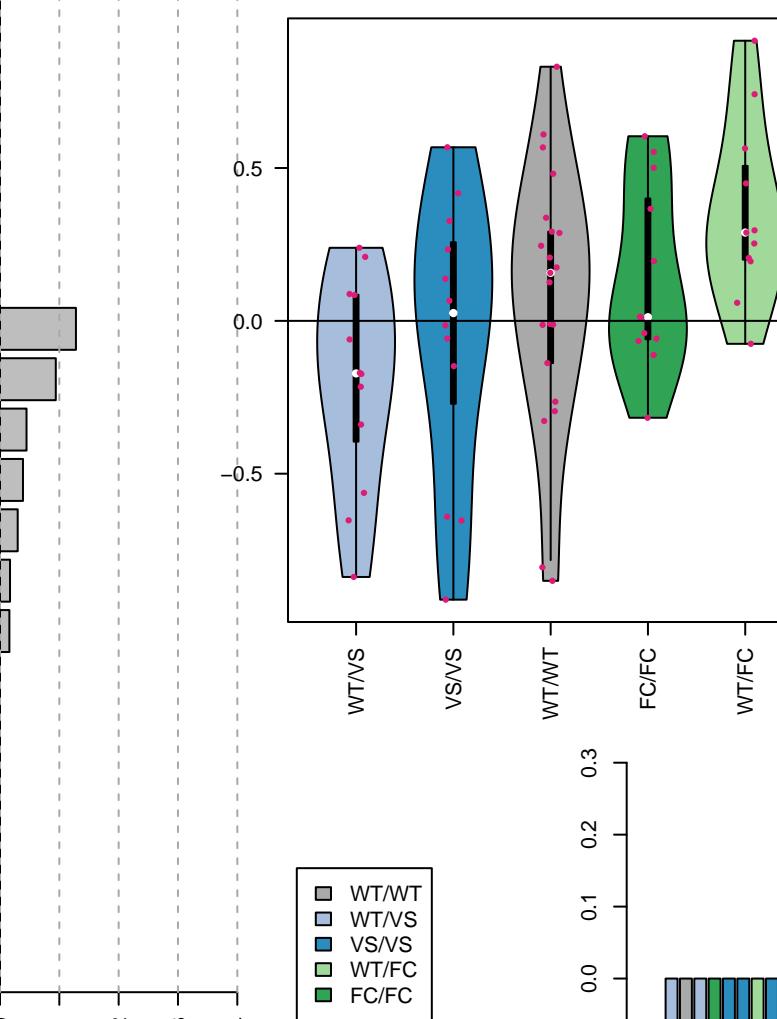
$R^2 = 0.073$



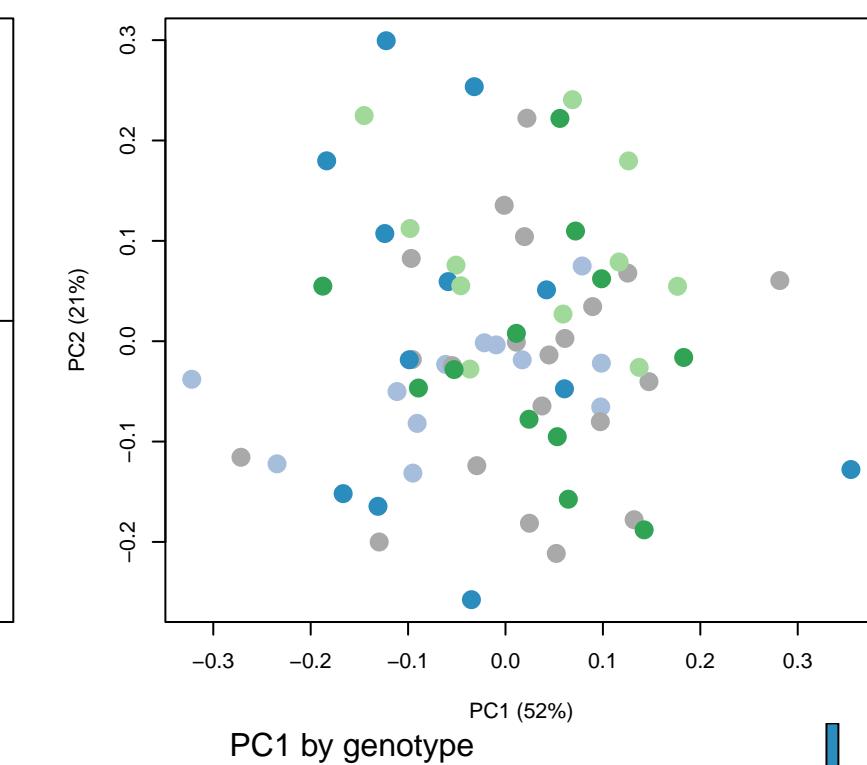
Cytokine–cytokine receptor interaction



Metal Binding and Homeostasis



Decomposition



PC1 by genotype

3

2

1

0

-1

-2

-3

-4

-5

-6

-7

-8

-9

-10

-11

-12

-13

-14

-15

-16

-17

-18

-19

-20

-21

-22

-23

-24

-25

-26

-27

-28

-29

-30

-31

-32

-33

-34

-35

-36

-37

-38

-39

-40

-41

-42

-43

-44

-45

-46

-47

-48

-49

-50

-51

-52

-53

-54

-55

-56

-57

-58

-59

-60

-61

-62

-63

-64

-65

-66

-67

-68

-69

-70

-71

-72

-73

-74

-75

-76

-77

-78

-79

-80

-81

-82

-83

-84

-85

-86

-87

-88

-89

-90

-91

-92

-93

-94

-95

-96

-97

-98

-99

-100

-101

-102

-103

-104

-105

-106

-107

-108

-109

-110

-111

-112

-113

-114

-115

-116

-117

-118

-119

-120

-121

-122

-123

-124

-125

-126

-127

-128

-129

-130

-131

-132

-133

-134

-135

-136

-137

-138

-139

-140

-141

-142

-143

-144

-145

-146

-147

-148

-149

-150

-151

-152

-153

-154

-155

-156

-157

-158

-159

-160

-161

-162

-163

-164

-165

-166

-167

-168

-169

-170

-171

-172

-173

-174

-175

-176

-177

-178

-179

-180

-181

-182

-183

-184

-185

-186

-187

-188

-189

-190

-191

-192

-193

-194

-195

-196

-197

-198

-199

-200

-201

-202

-203

-204

-205

-206

-207

-208

-209

-210

-211

-212

-213

-214

-215

-216

-217

-218

-219

-220

-221

-222

-223

-224

-225

-226

-227

-228

-229

-230

-231

-232

-233

-234

-235

-236

-237

-238

-239

-240

-241

-242

-243

-244

-245

-246

-247

-248

-249

-250

-251

-252

-253

-254

-255

-256

-257

-258

-259

-260

-261

-262

-263

-264

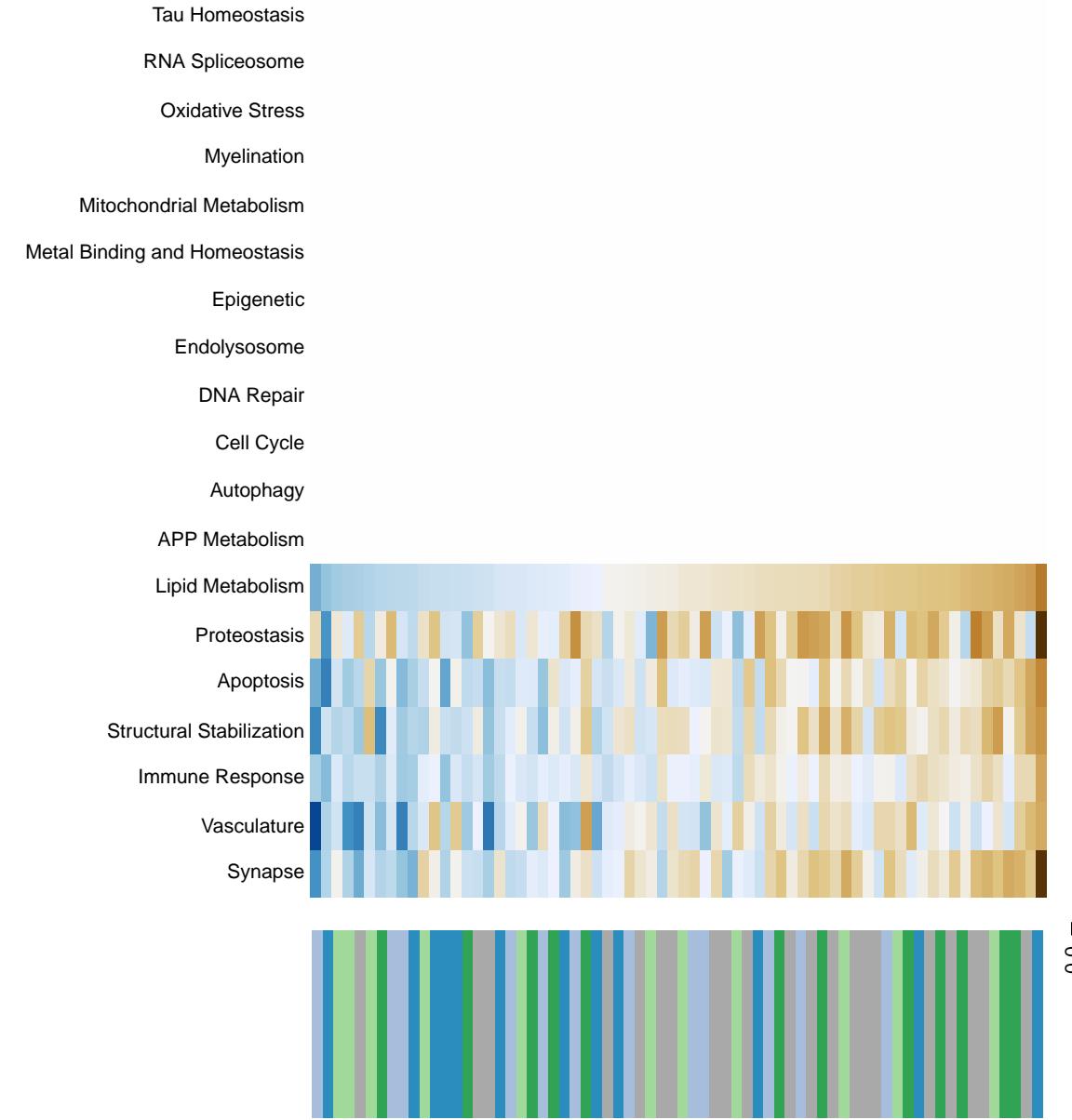
-265

-266

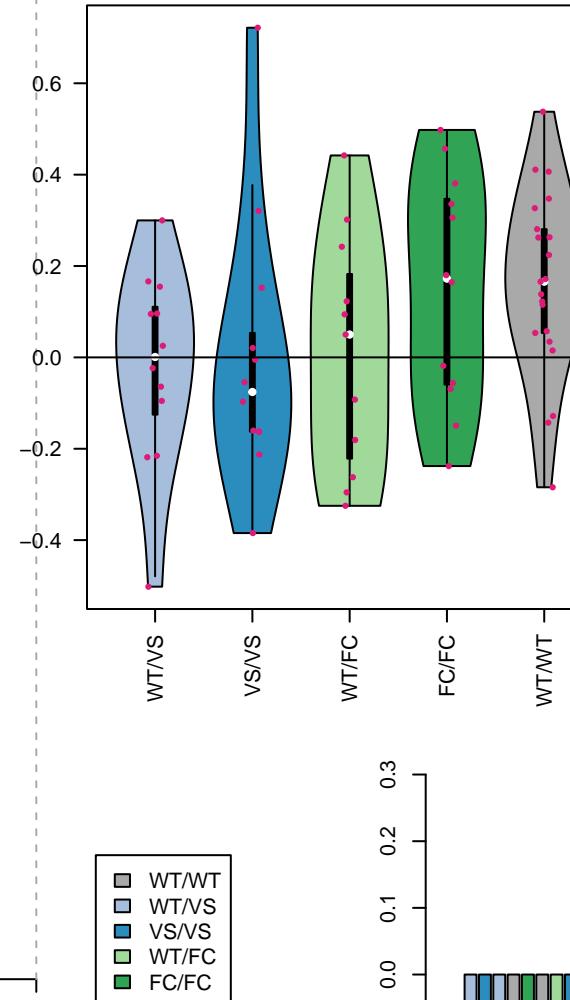
-267

-268

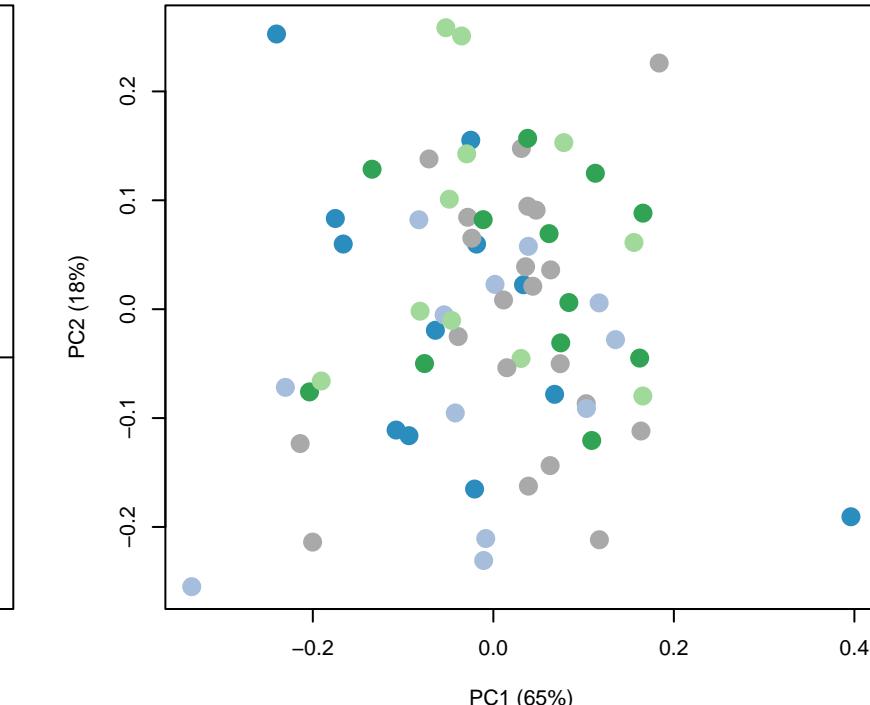
Viral protein interaction with cytokine and cytokine receptor



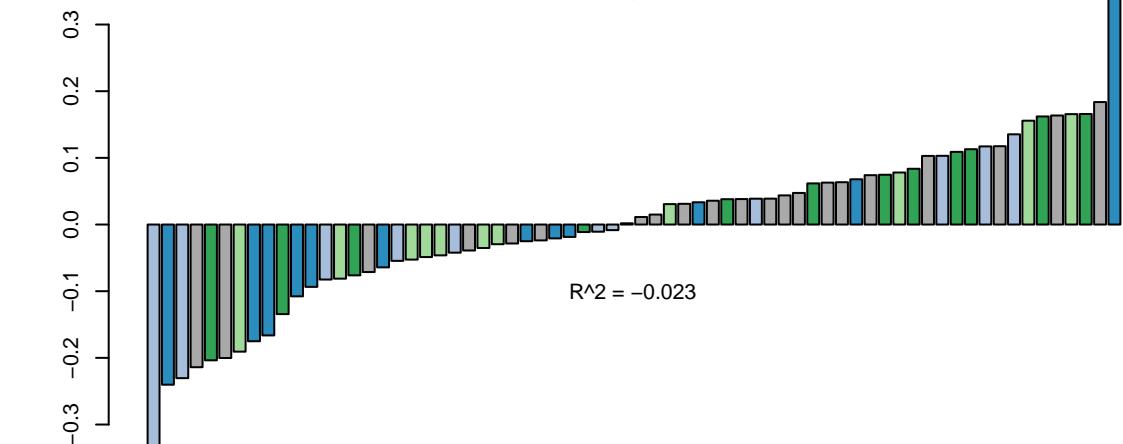
Lipid Metabolism



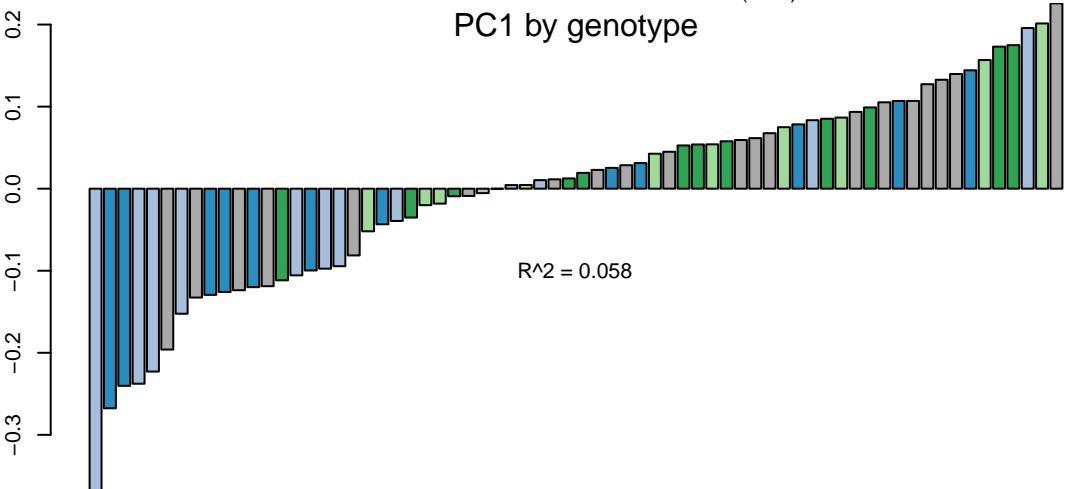
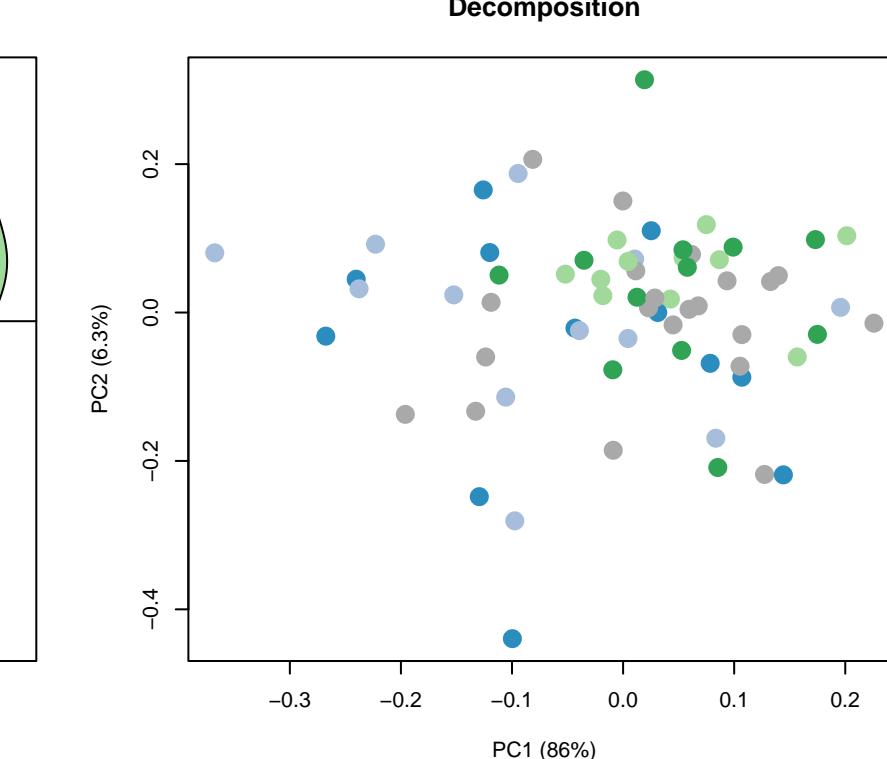
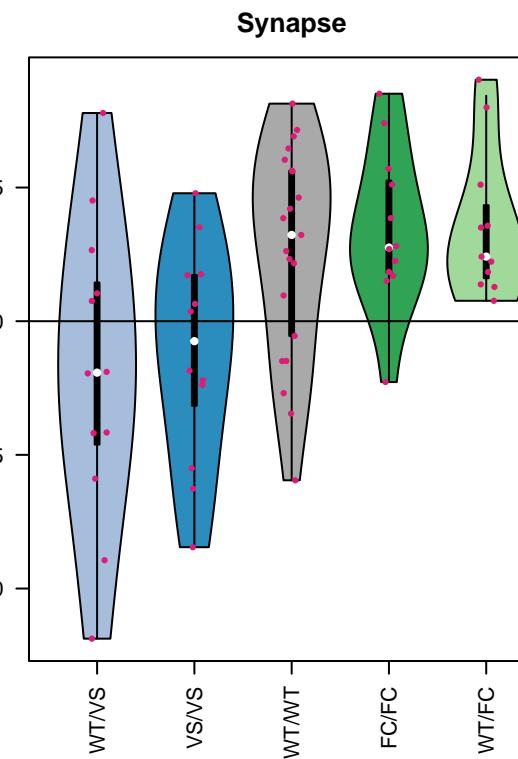
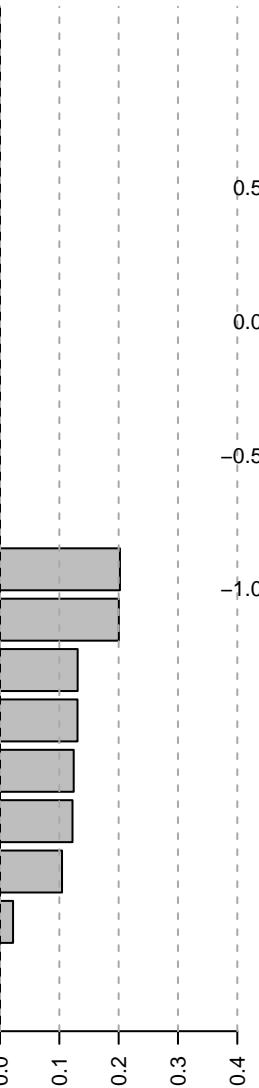
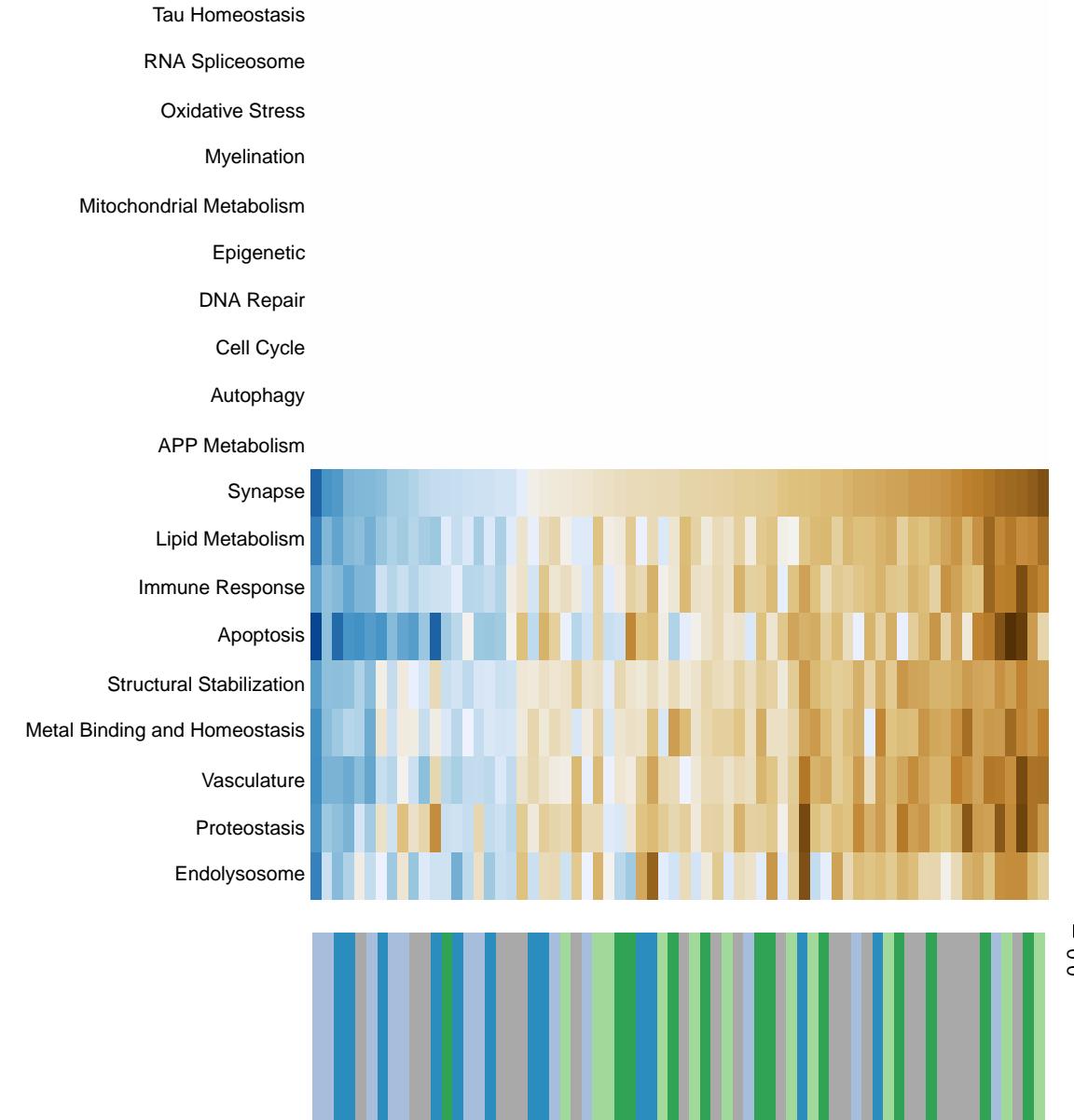
Decomposition



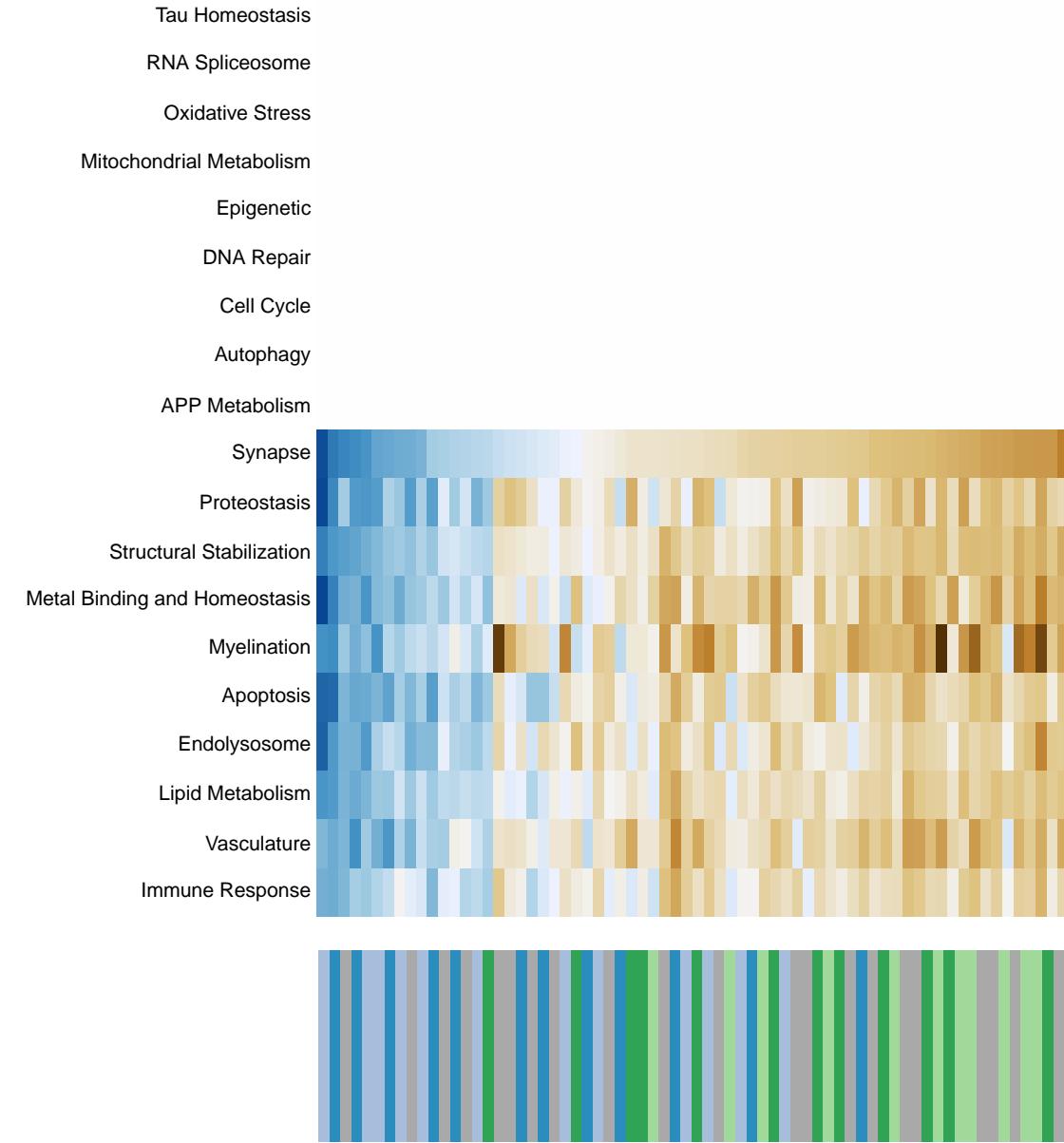
PC1 by genotype



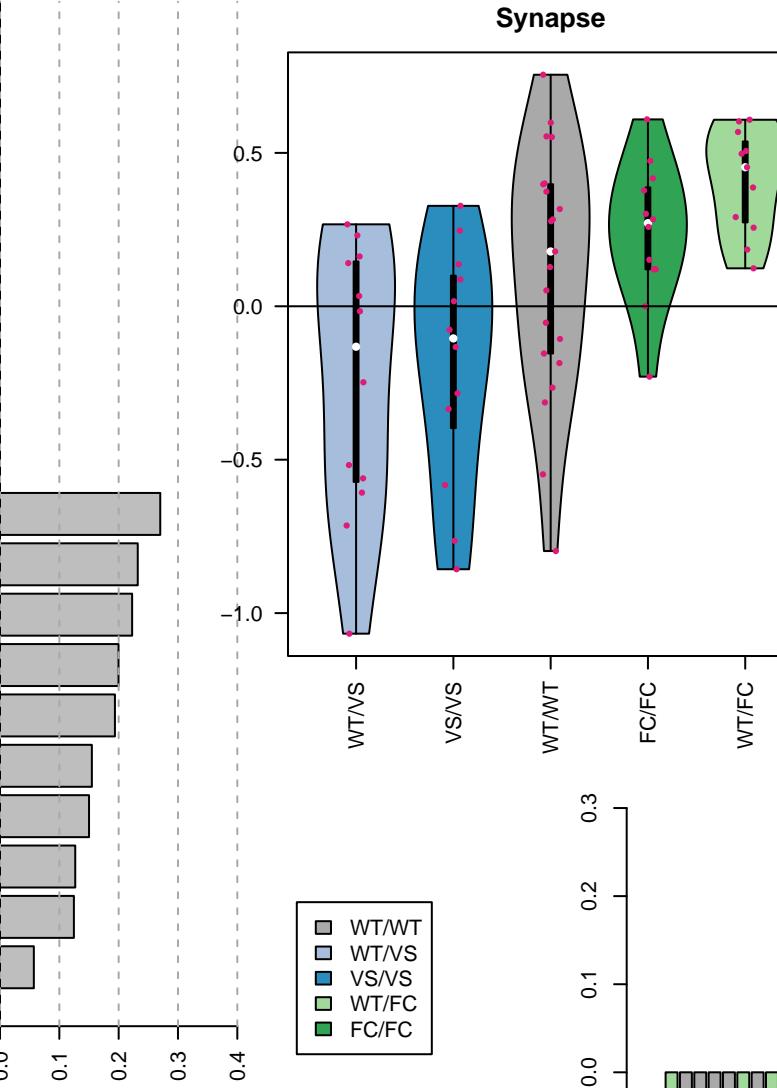
ECM-receptor interaction



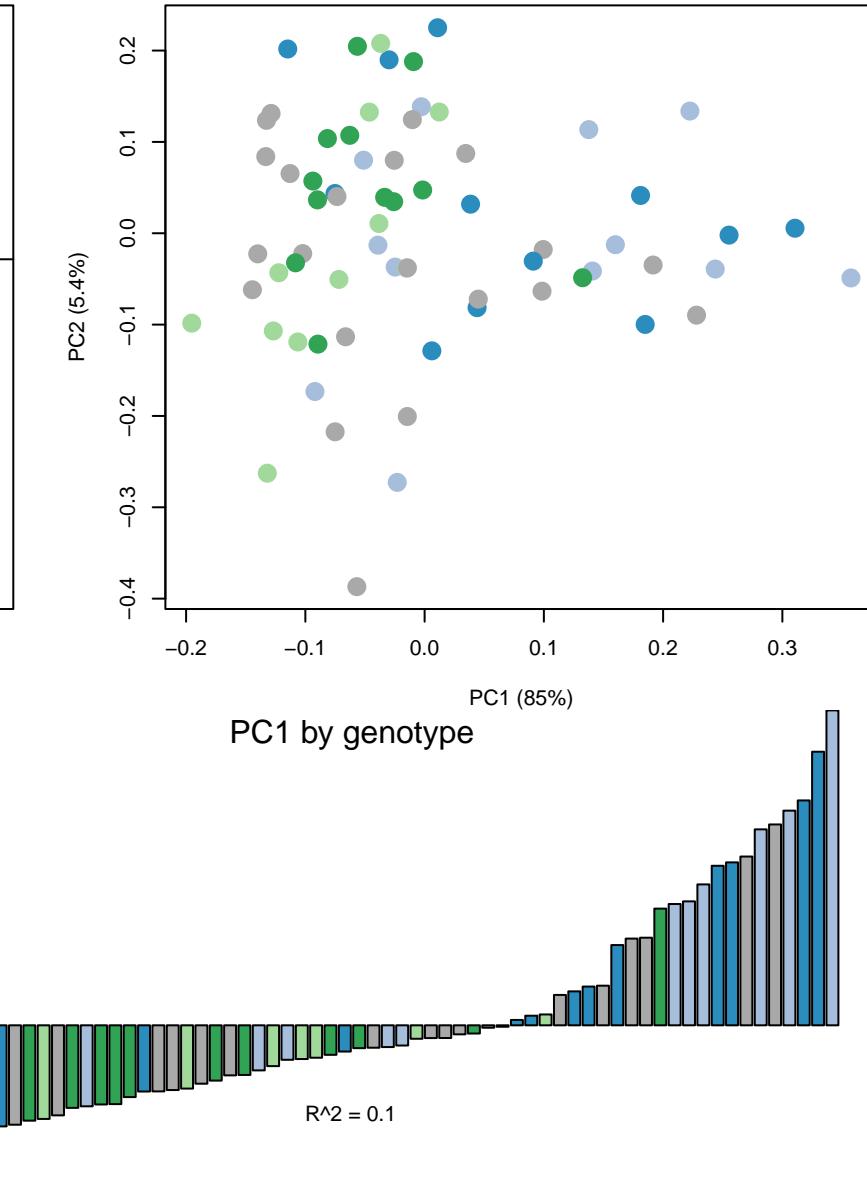
Cell adhesion molecules



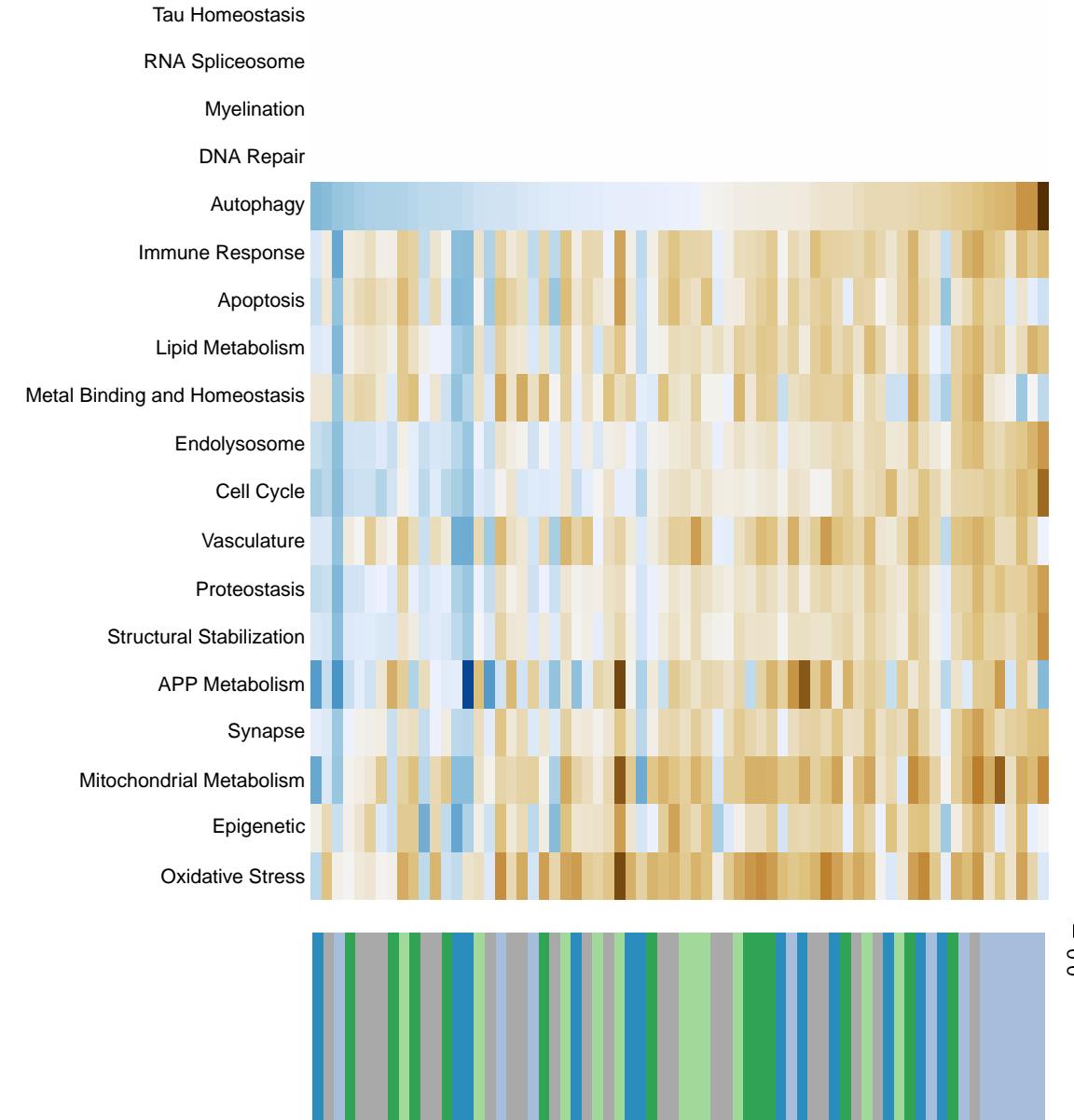
Synapse



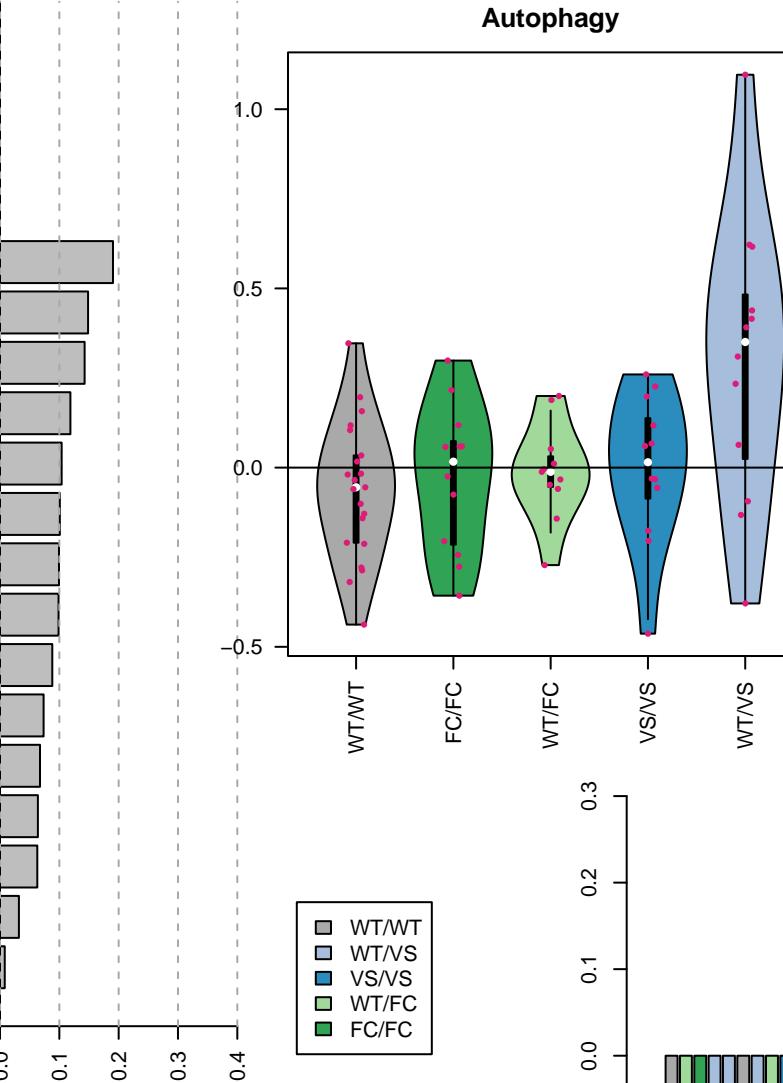
Decomposition



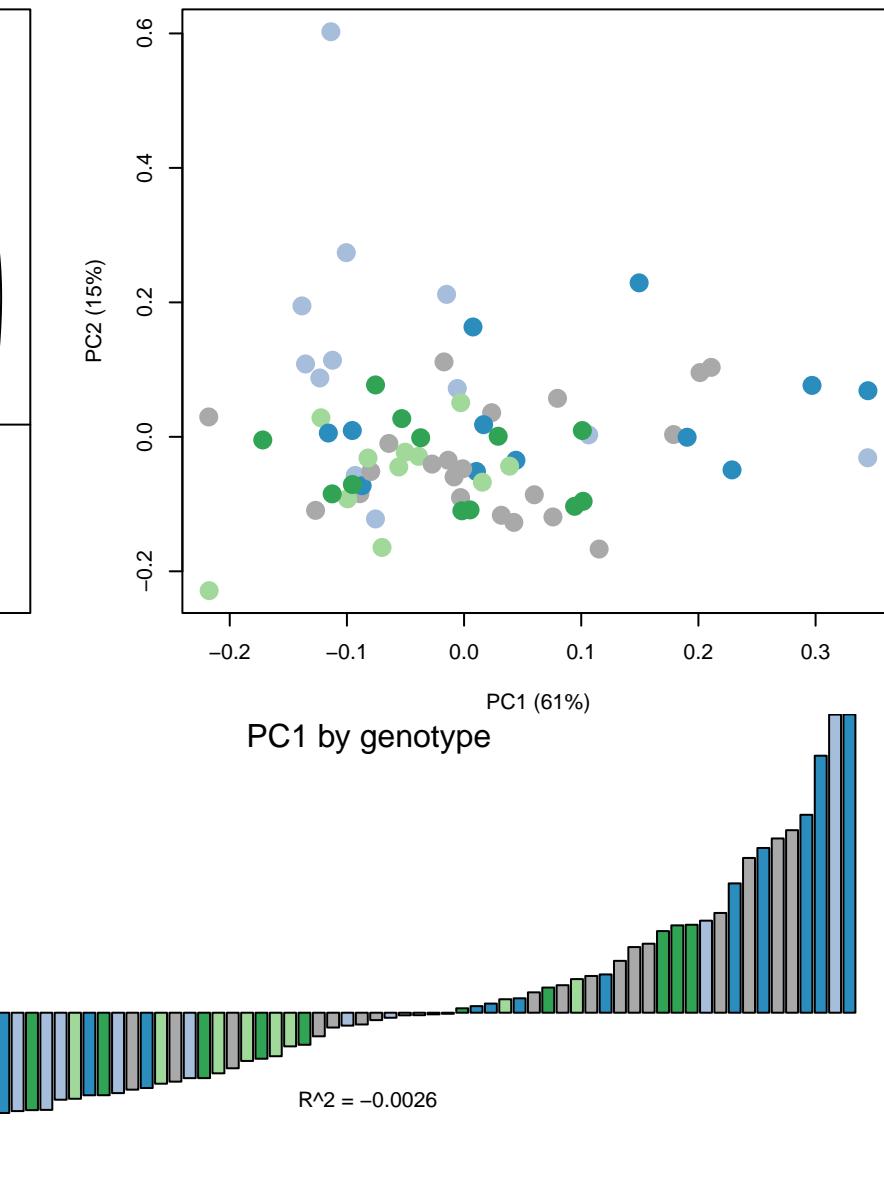
Endocytosis



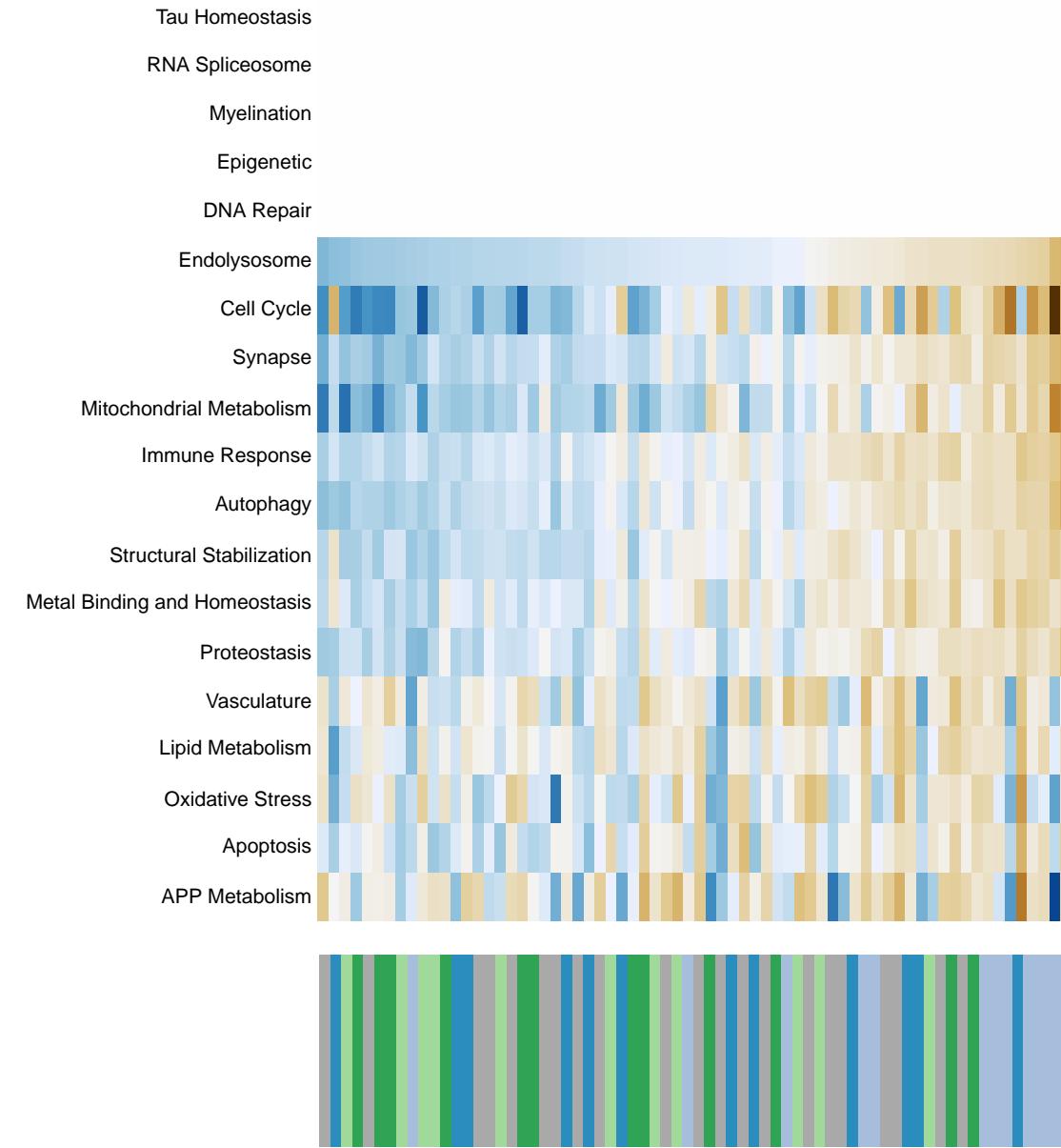
Autophagy



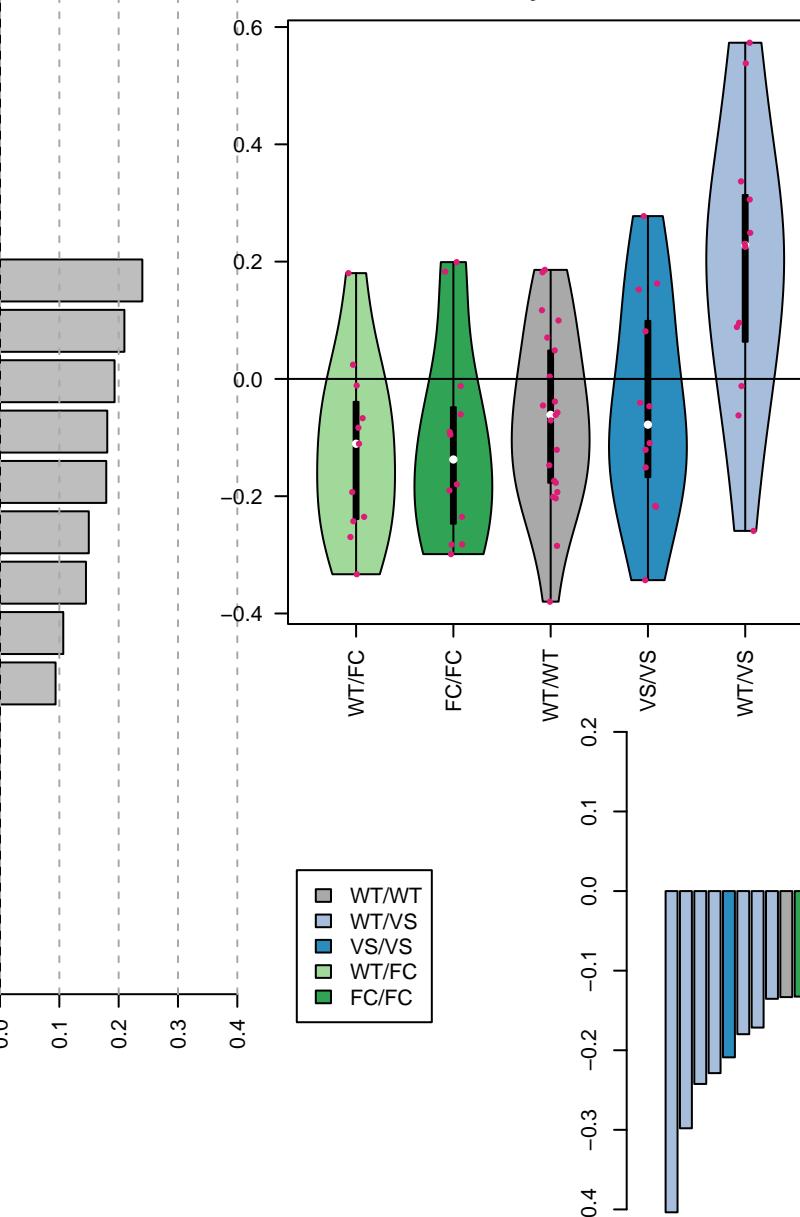
Decomposition



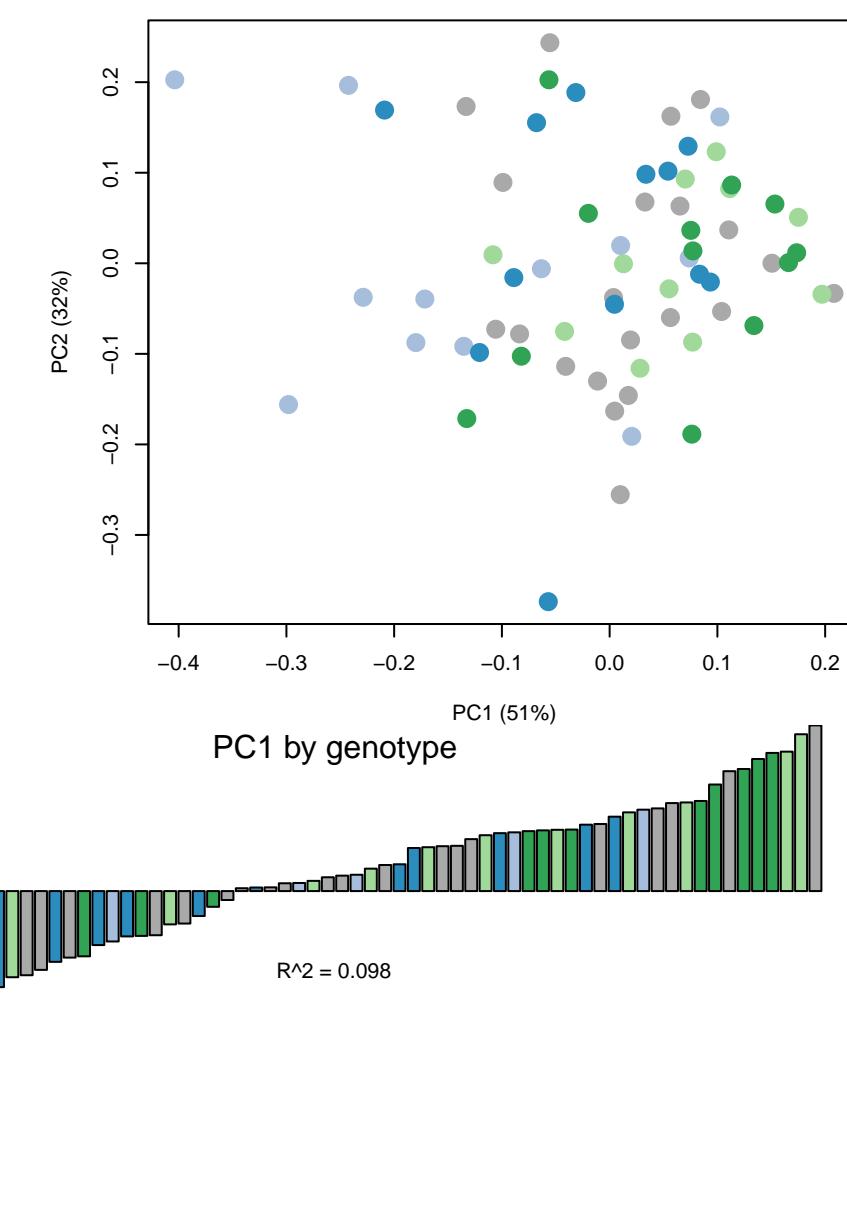
Phagosome



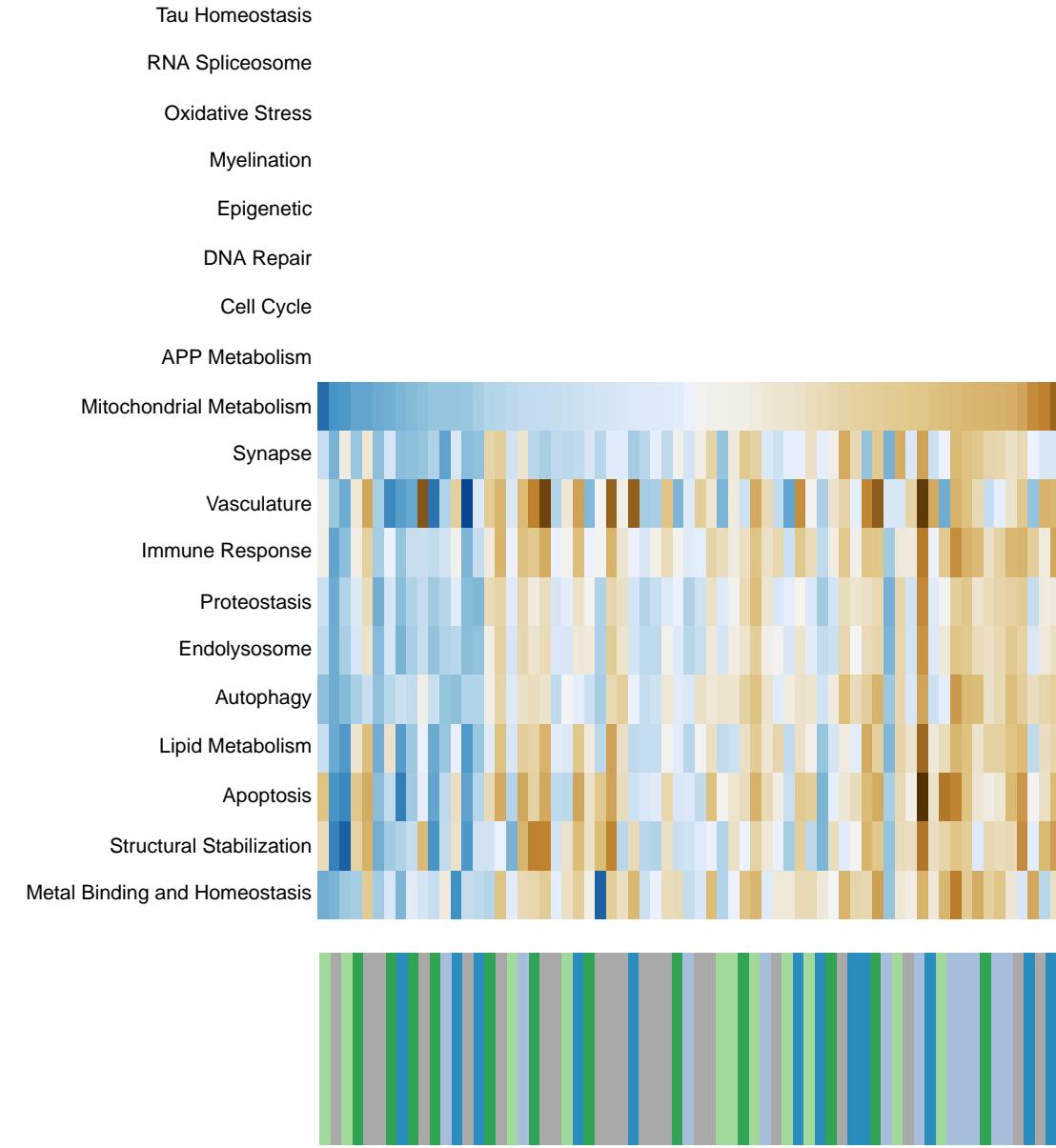
Endolysosome



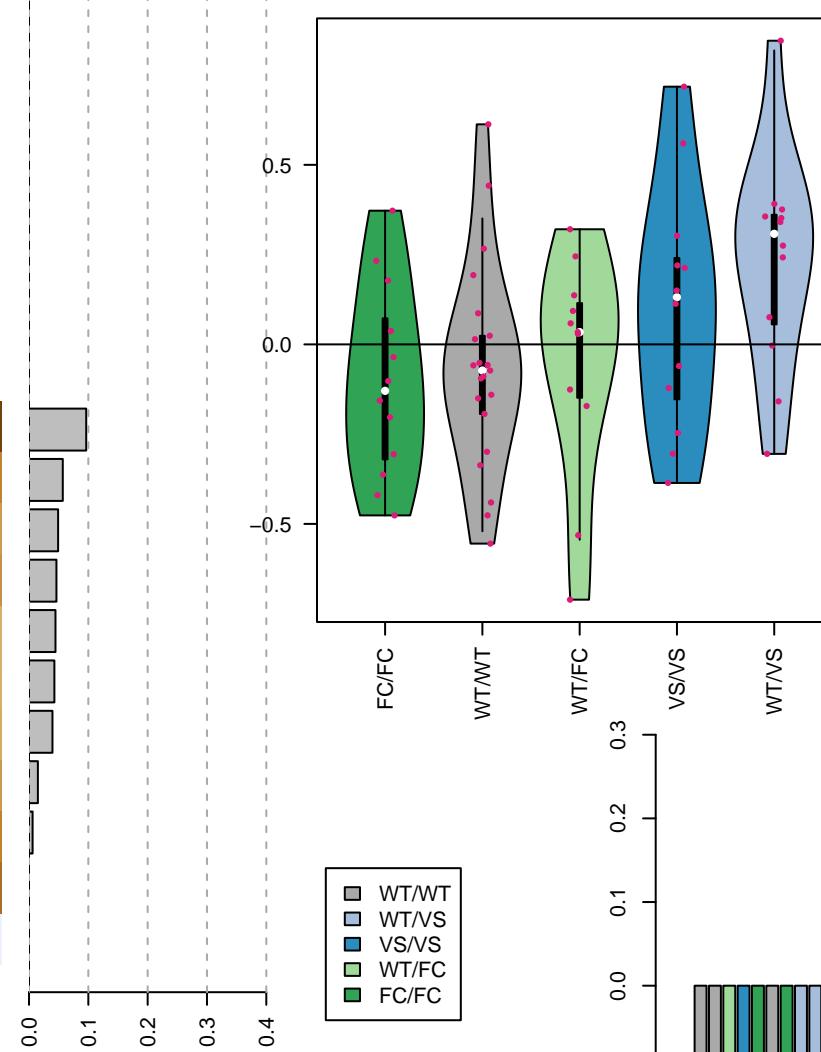
Decomposition



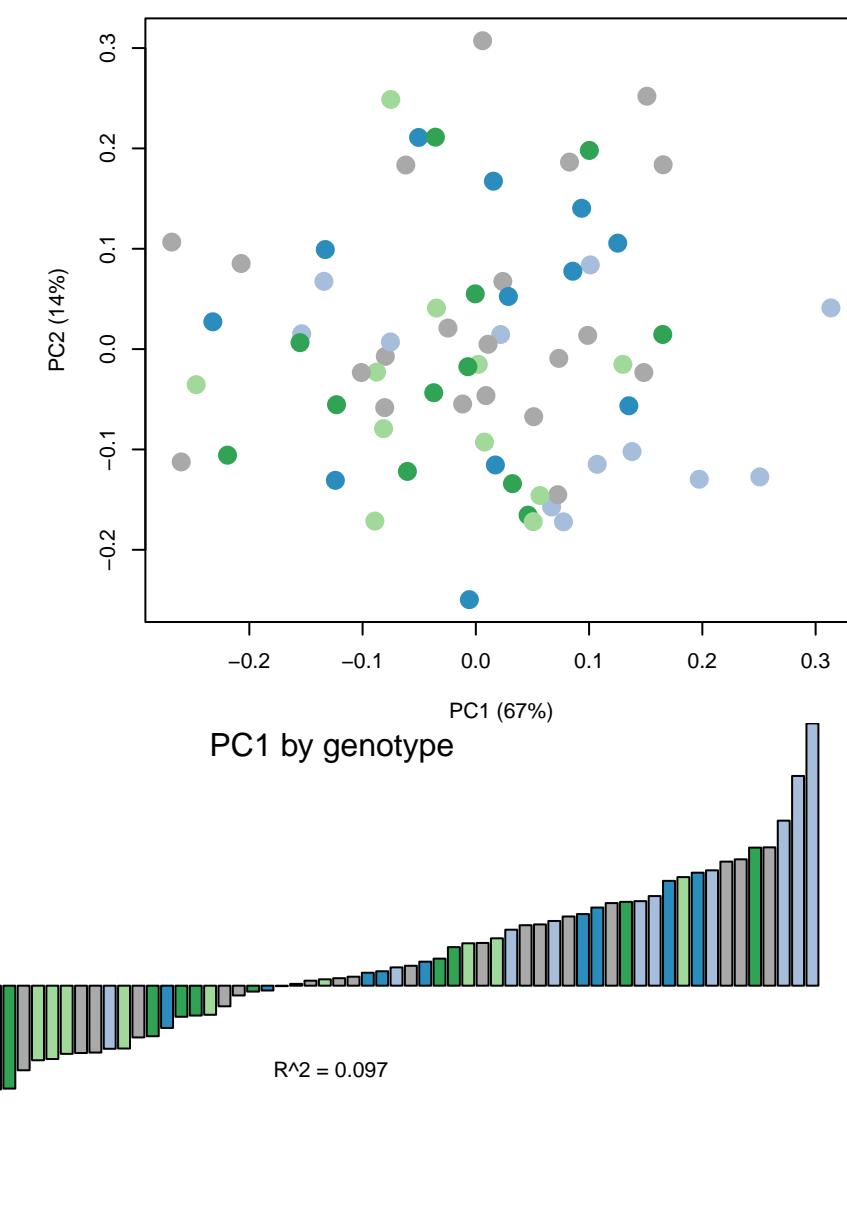
Lysosome



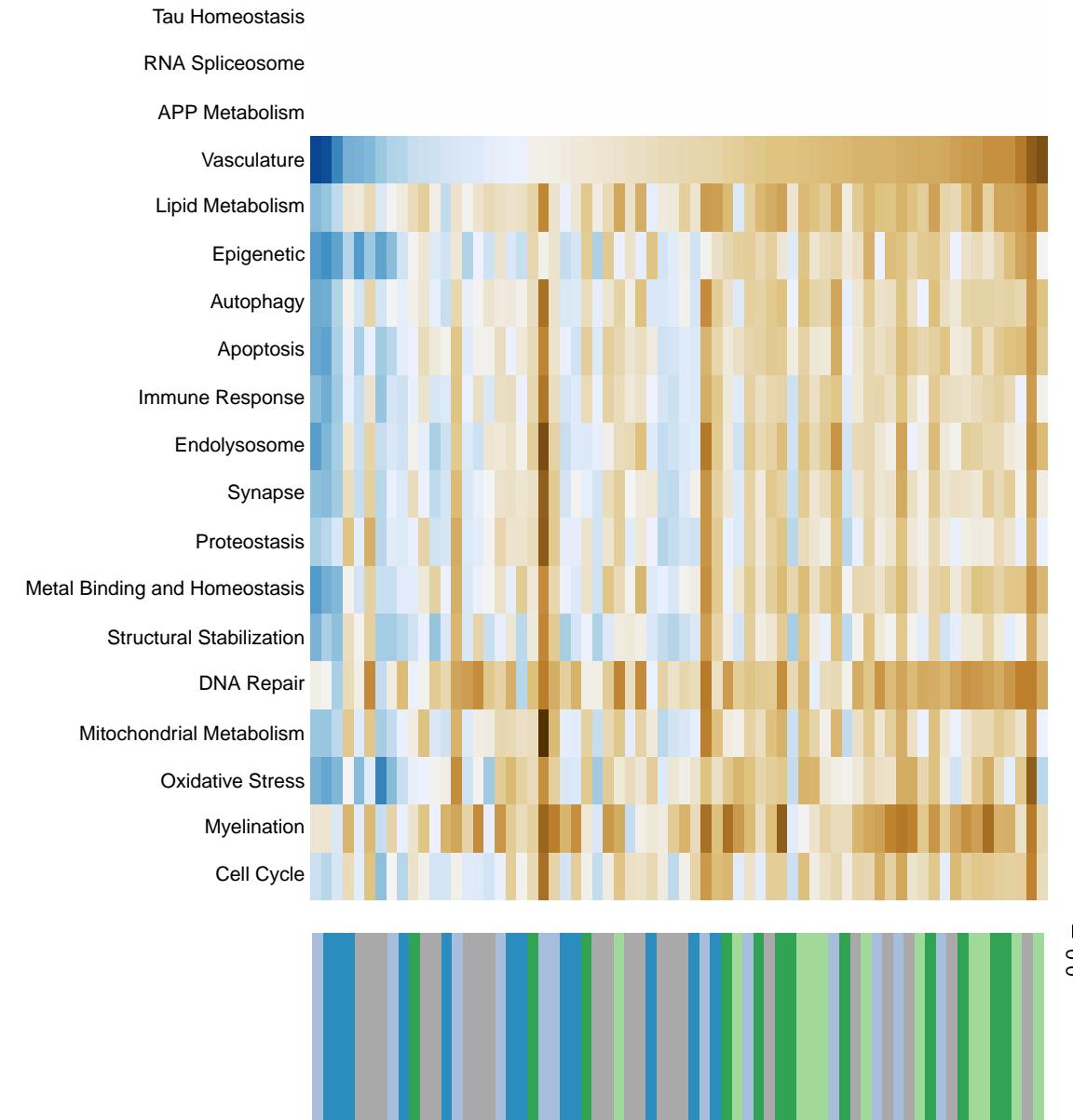
Mitochondrial Metabolism



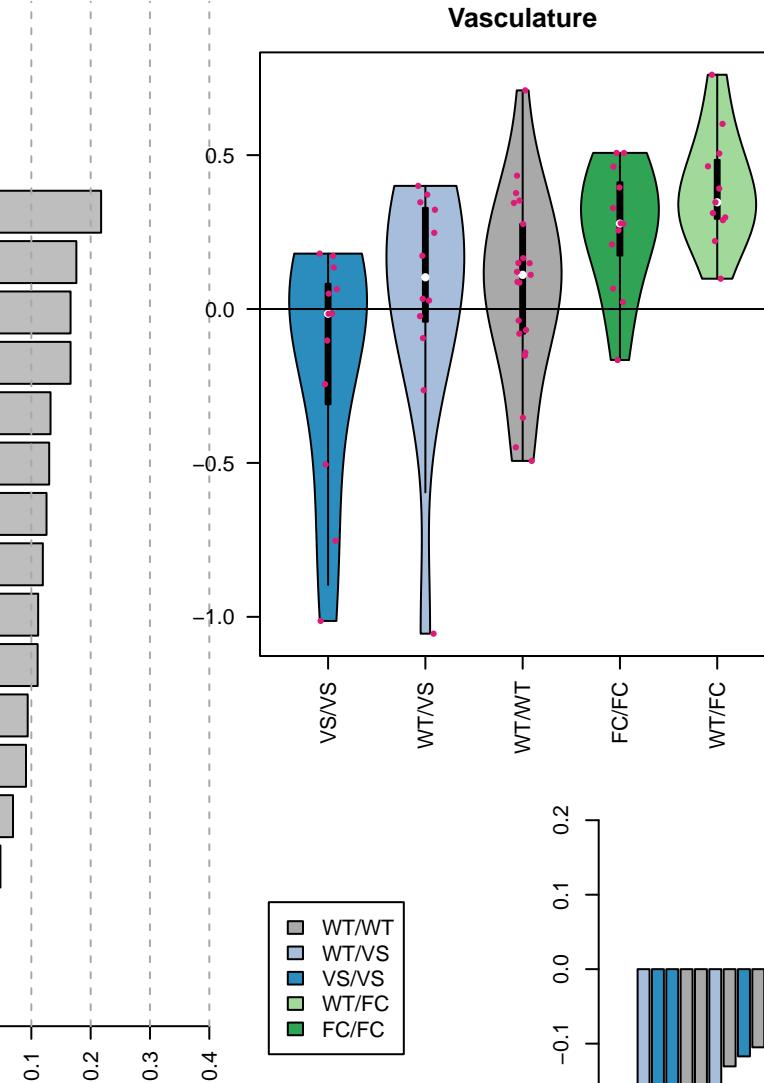
Decomposition



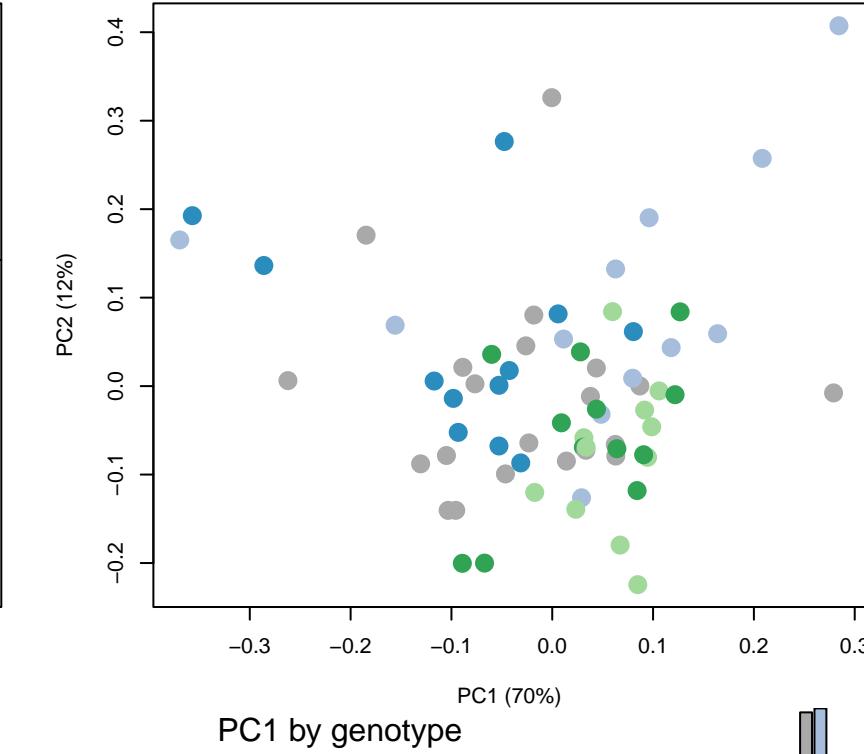
Autophagy – animal



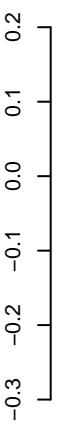
Vasculature



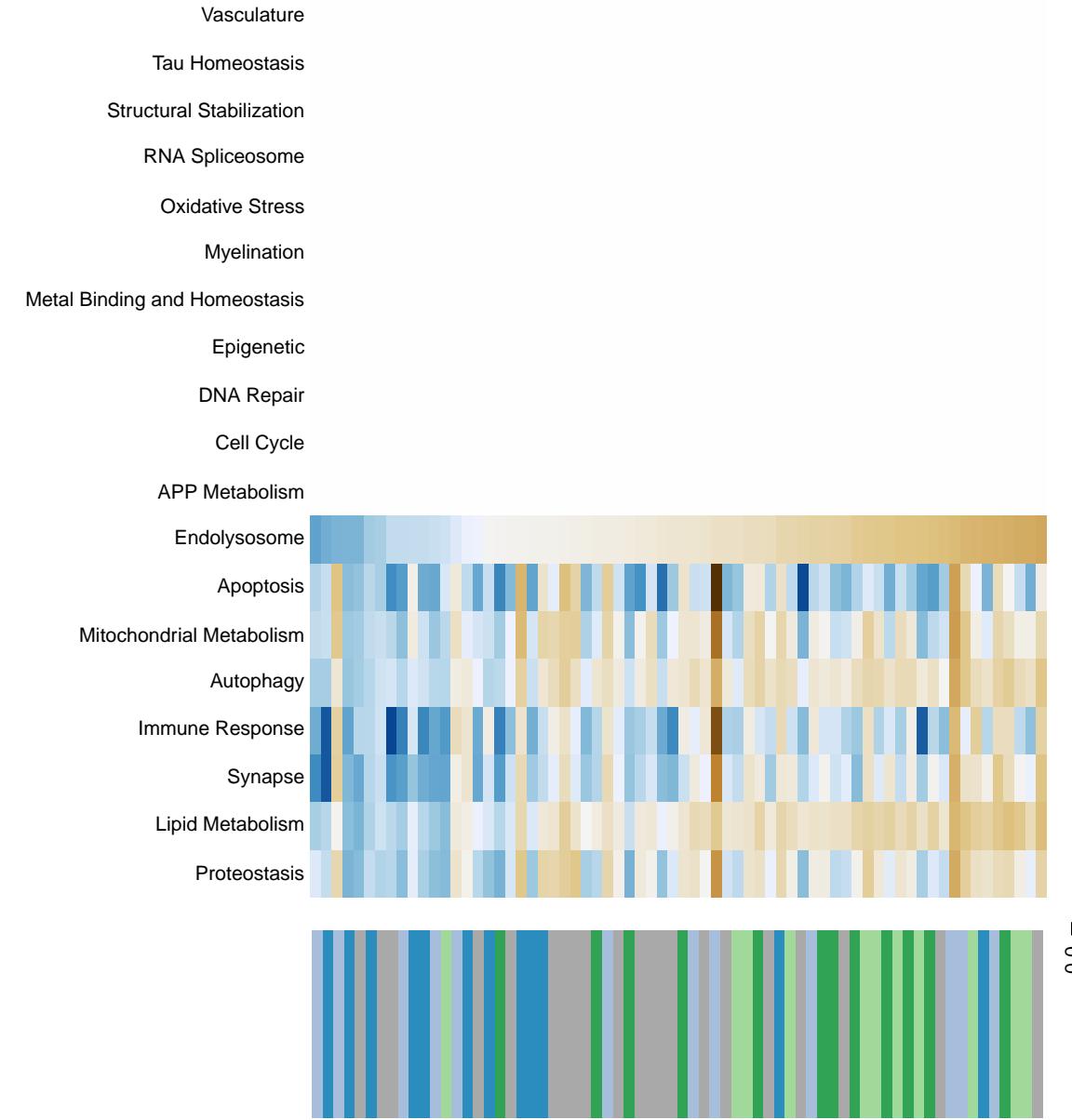
Decomposition



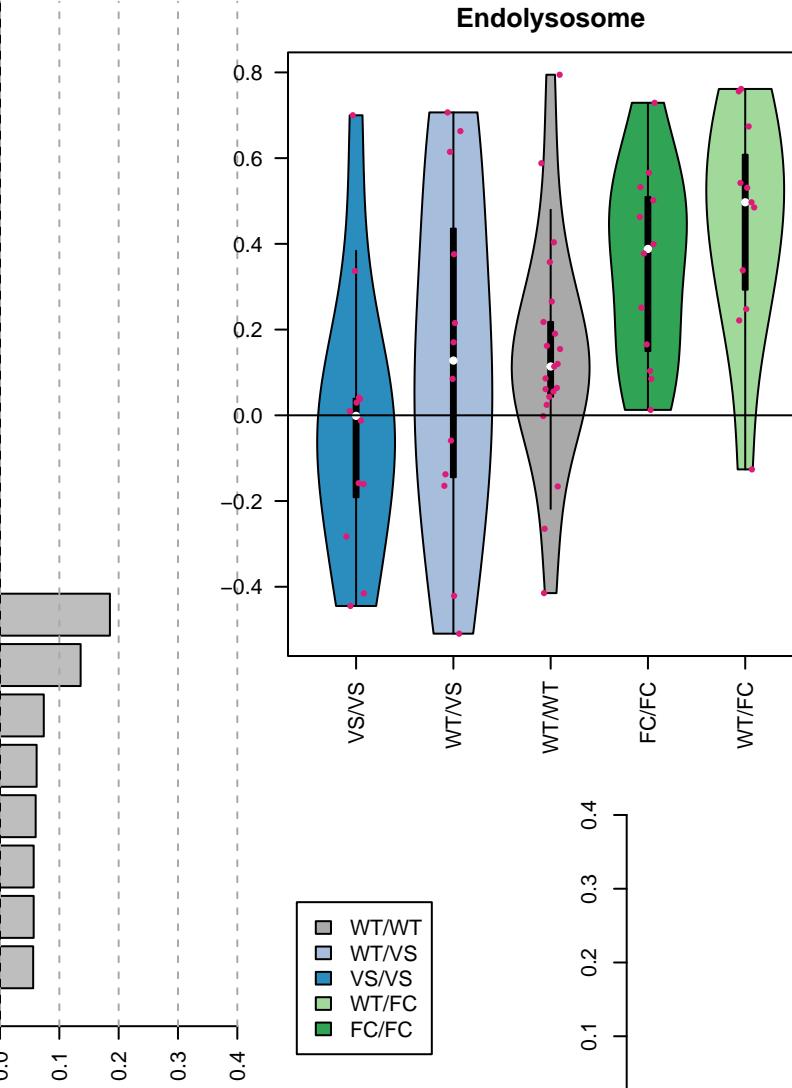
PC1 by genotype



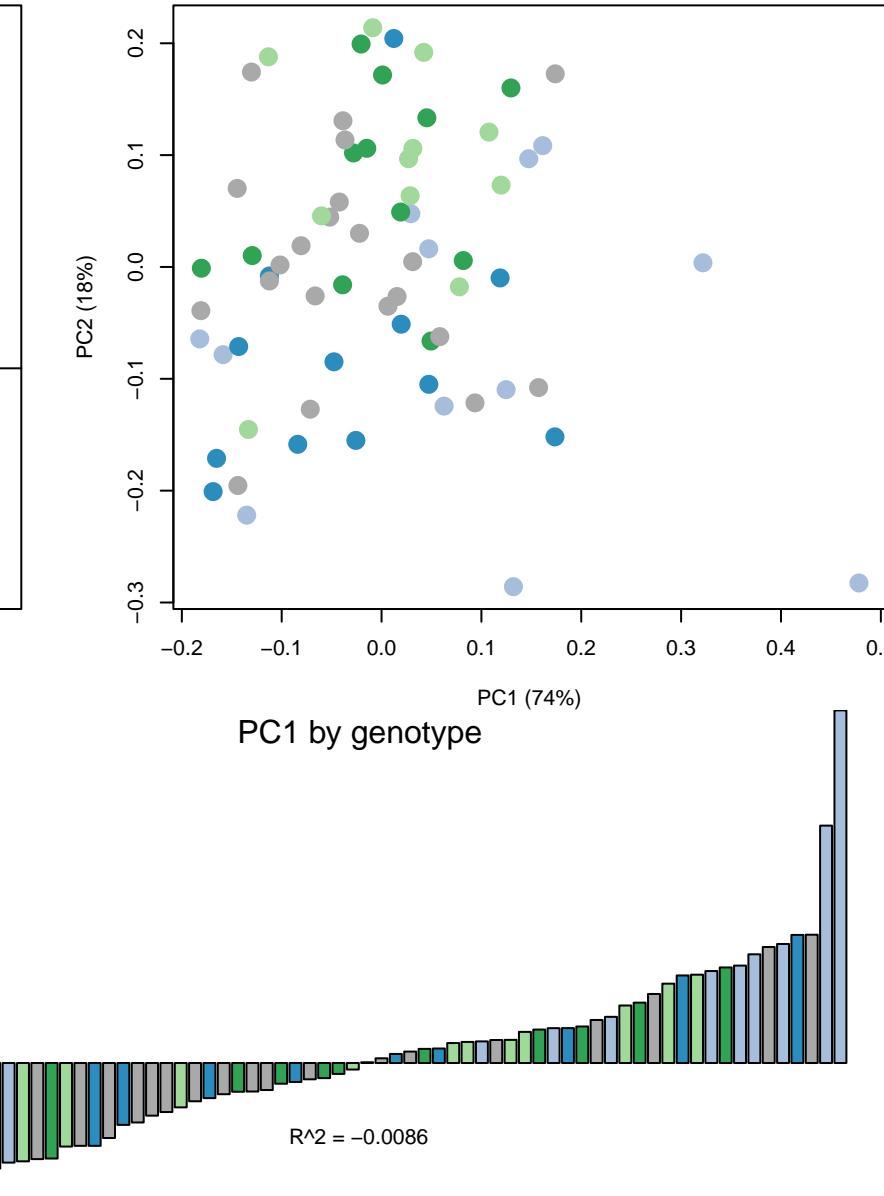
Autophagy – other



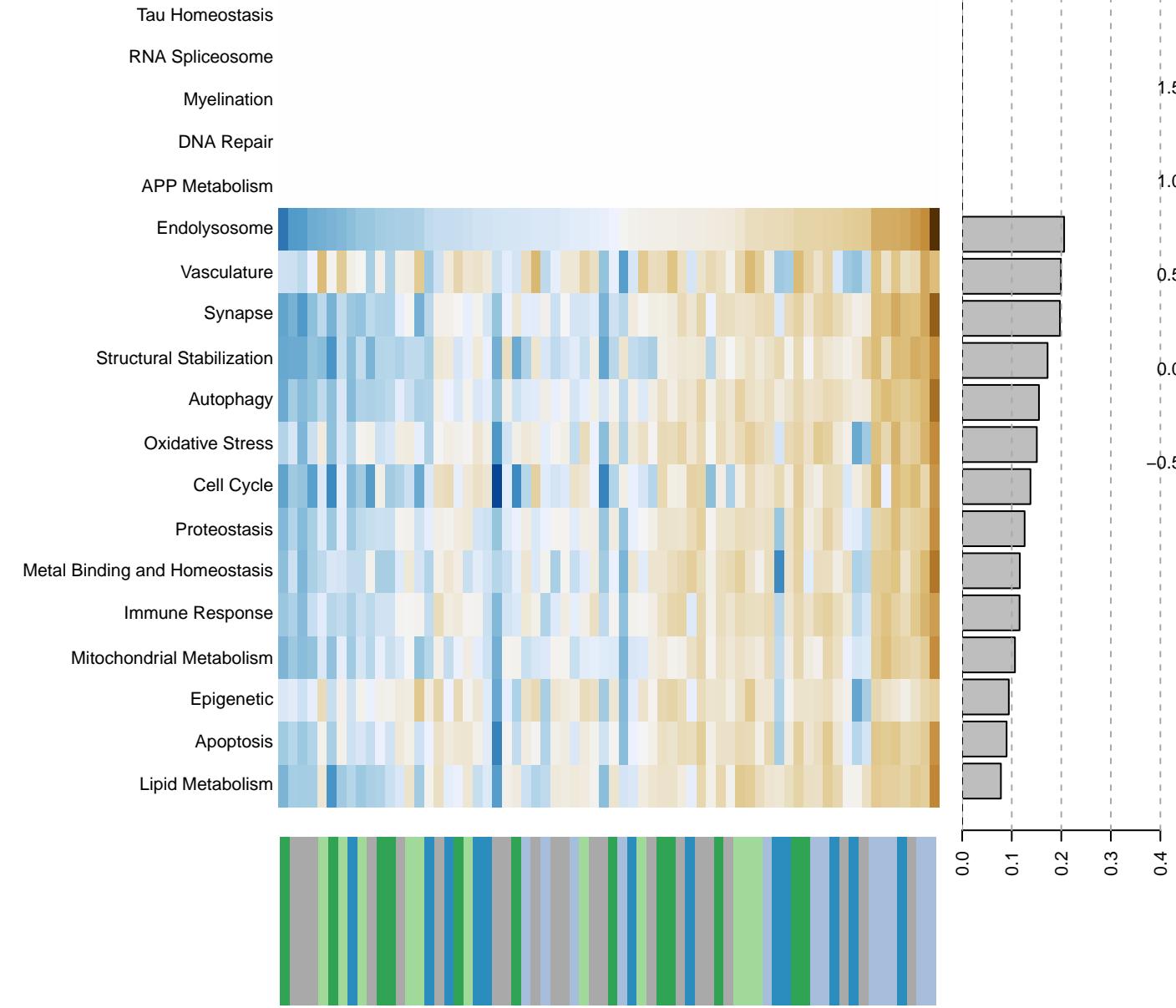
Endolysosome



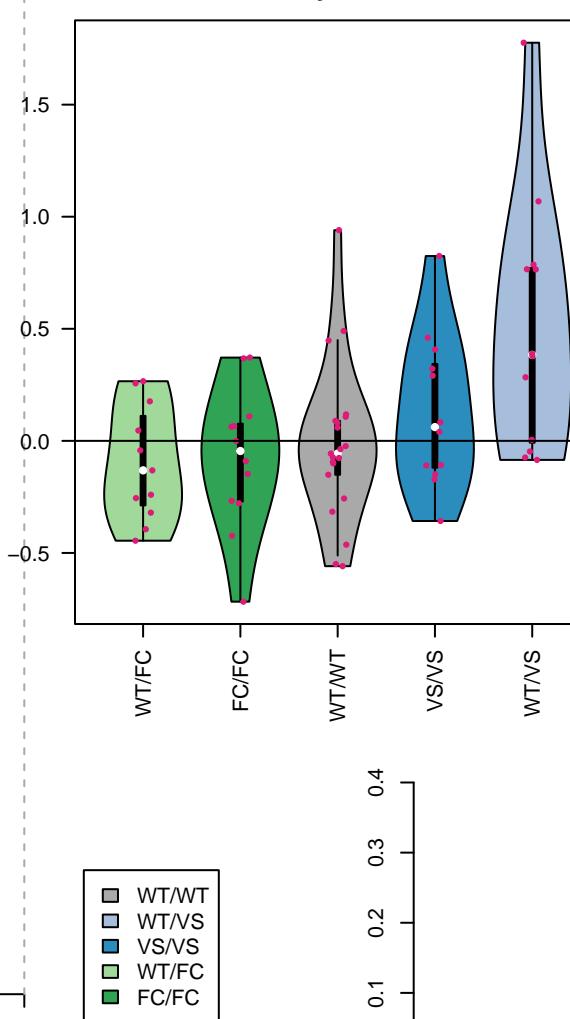
Decomposition



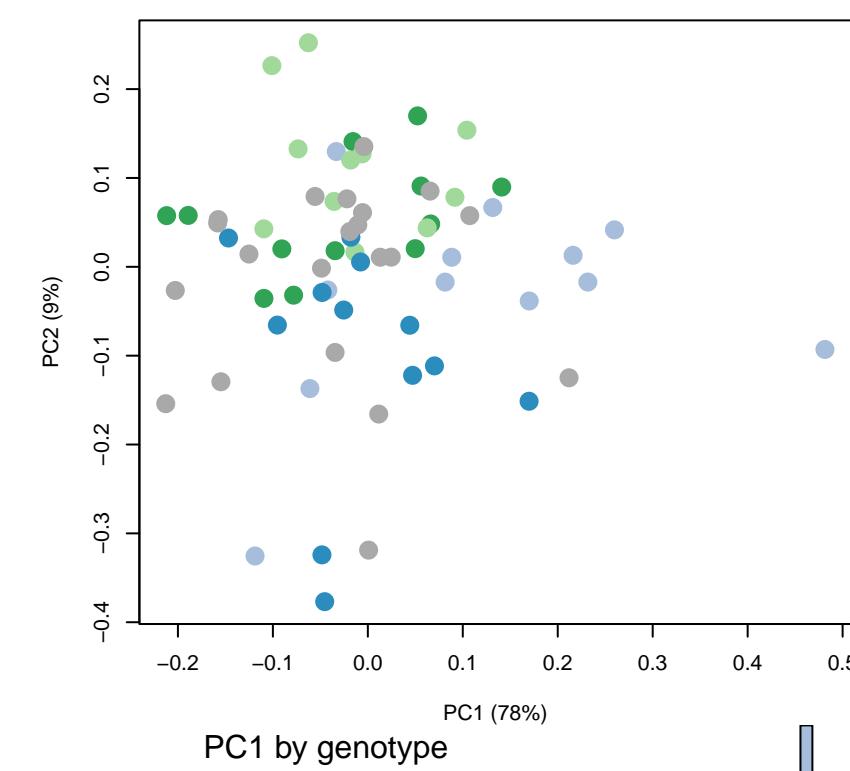
Mitophagy – animal



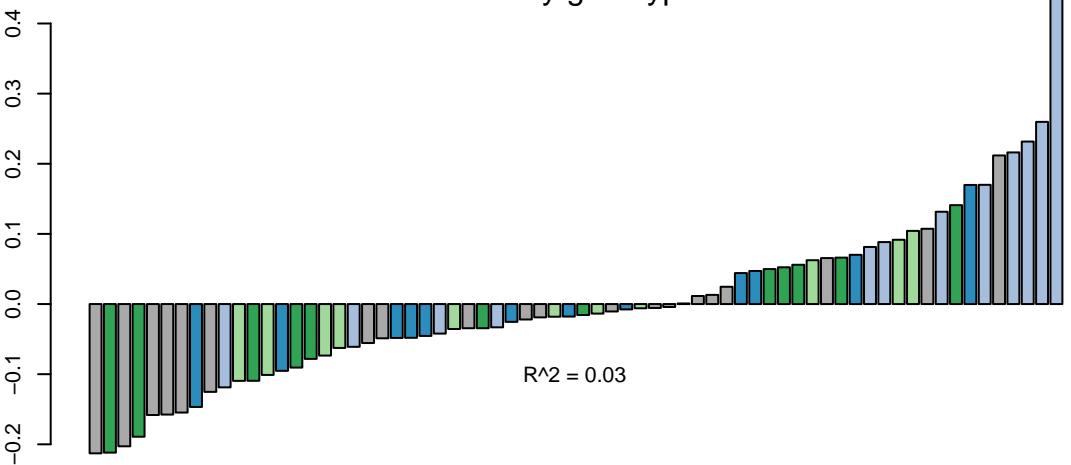
Endolysosome



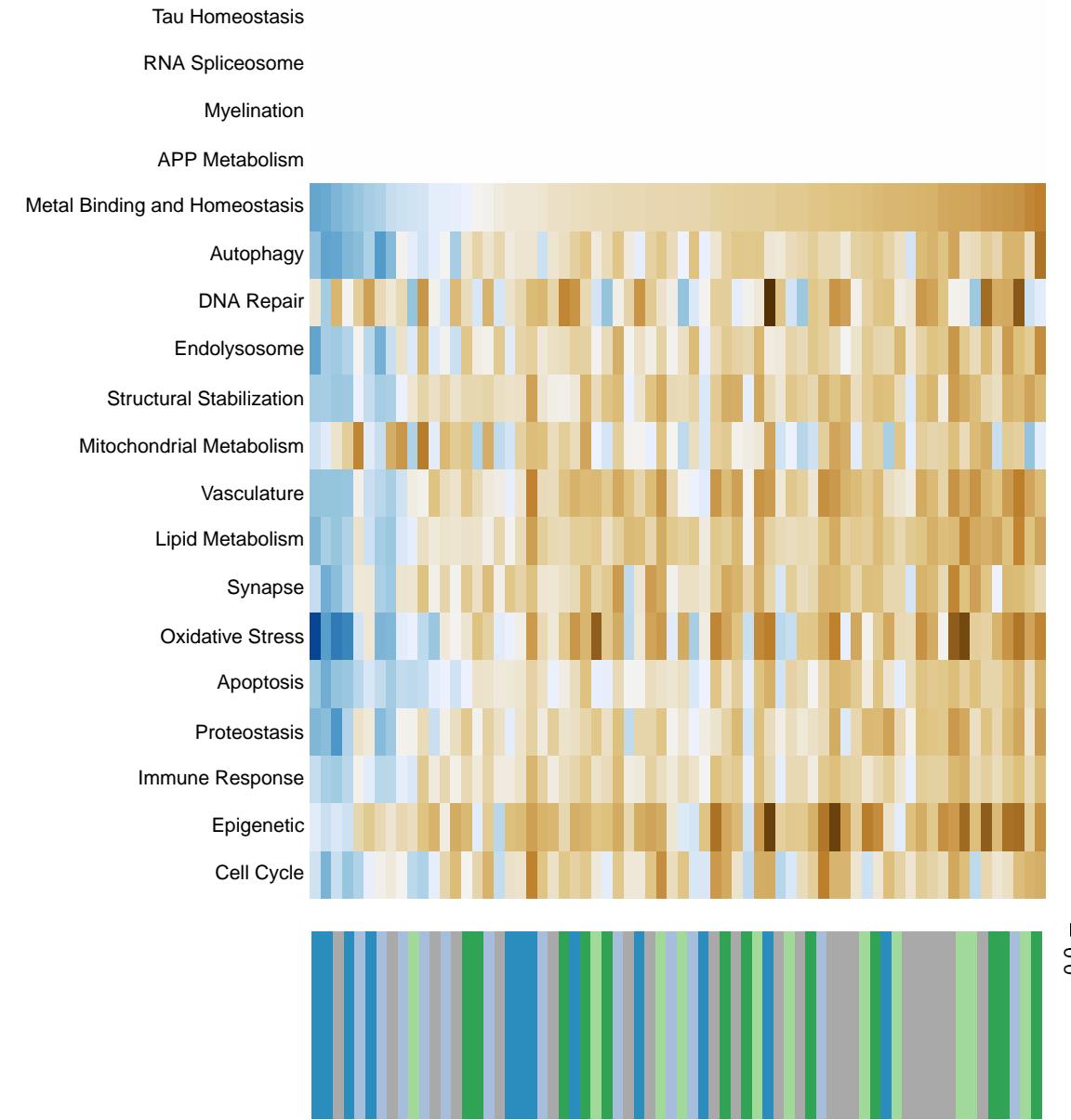
Decomposition



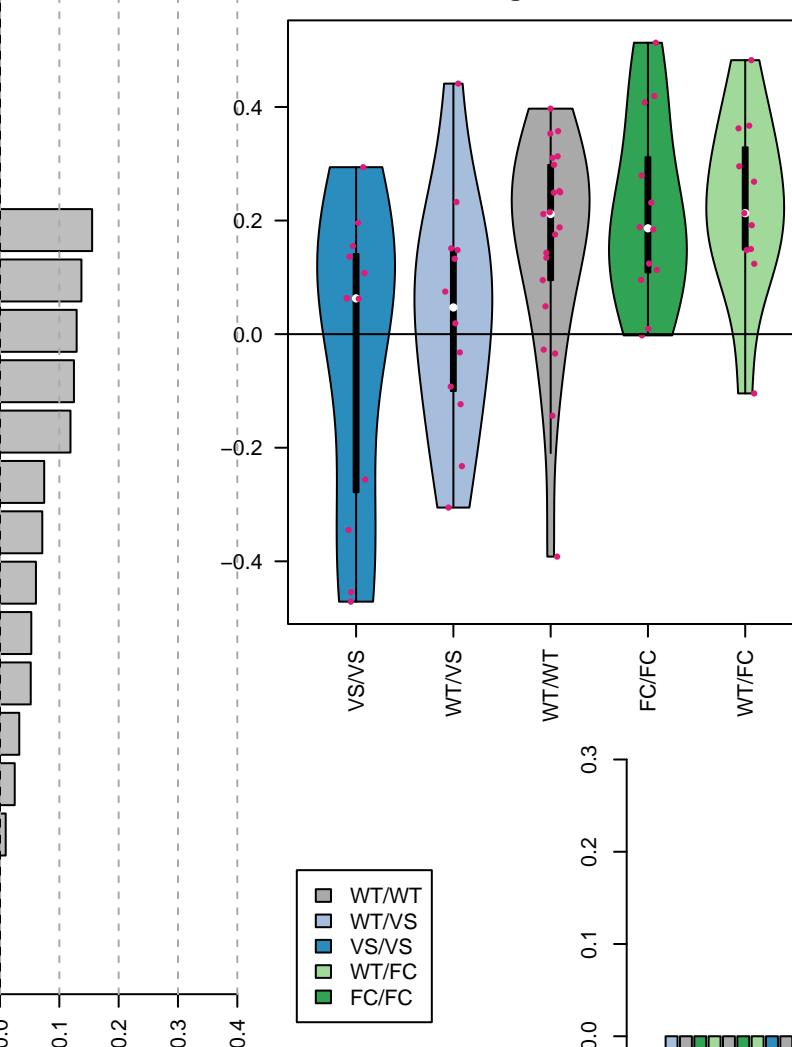
PC1 by genotype



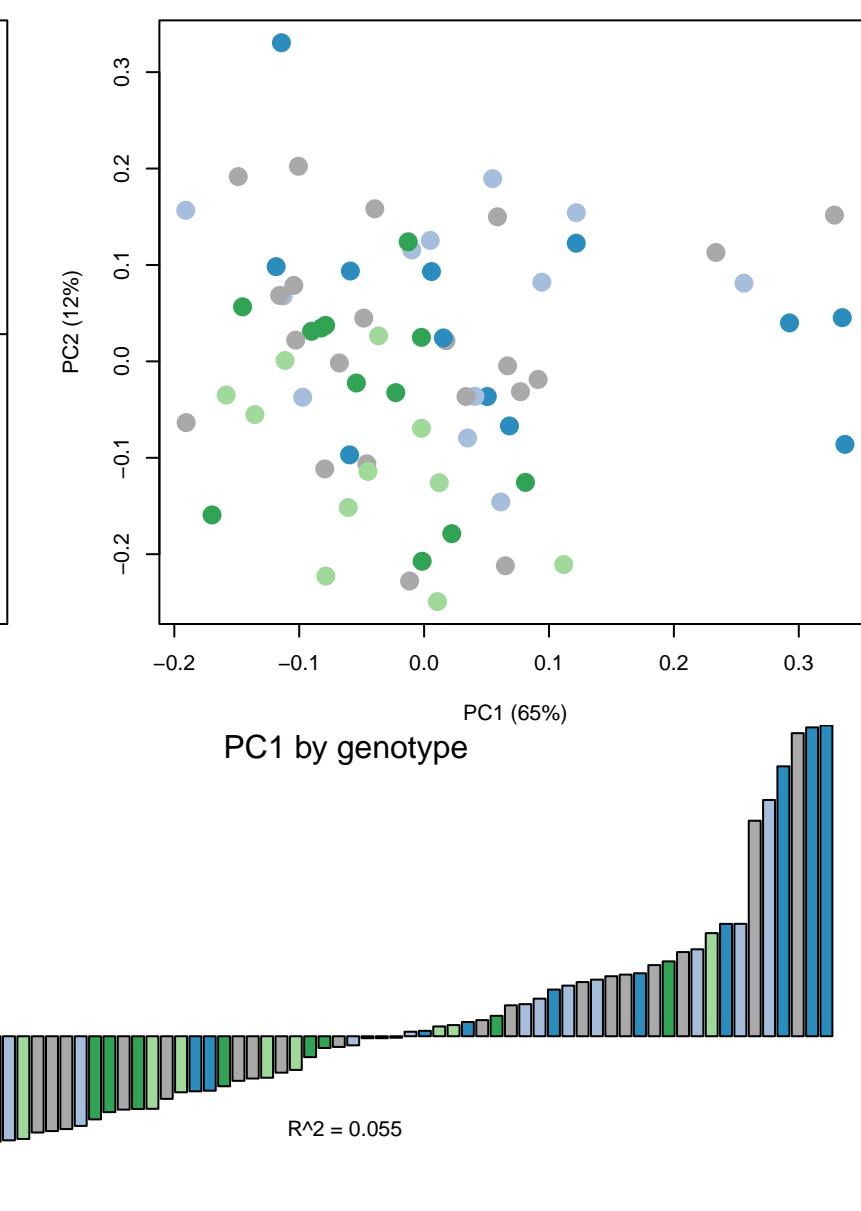
Efferocytosis



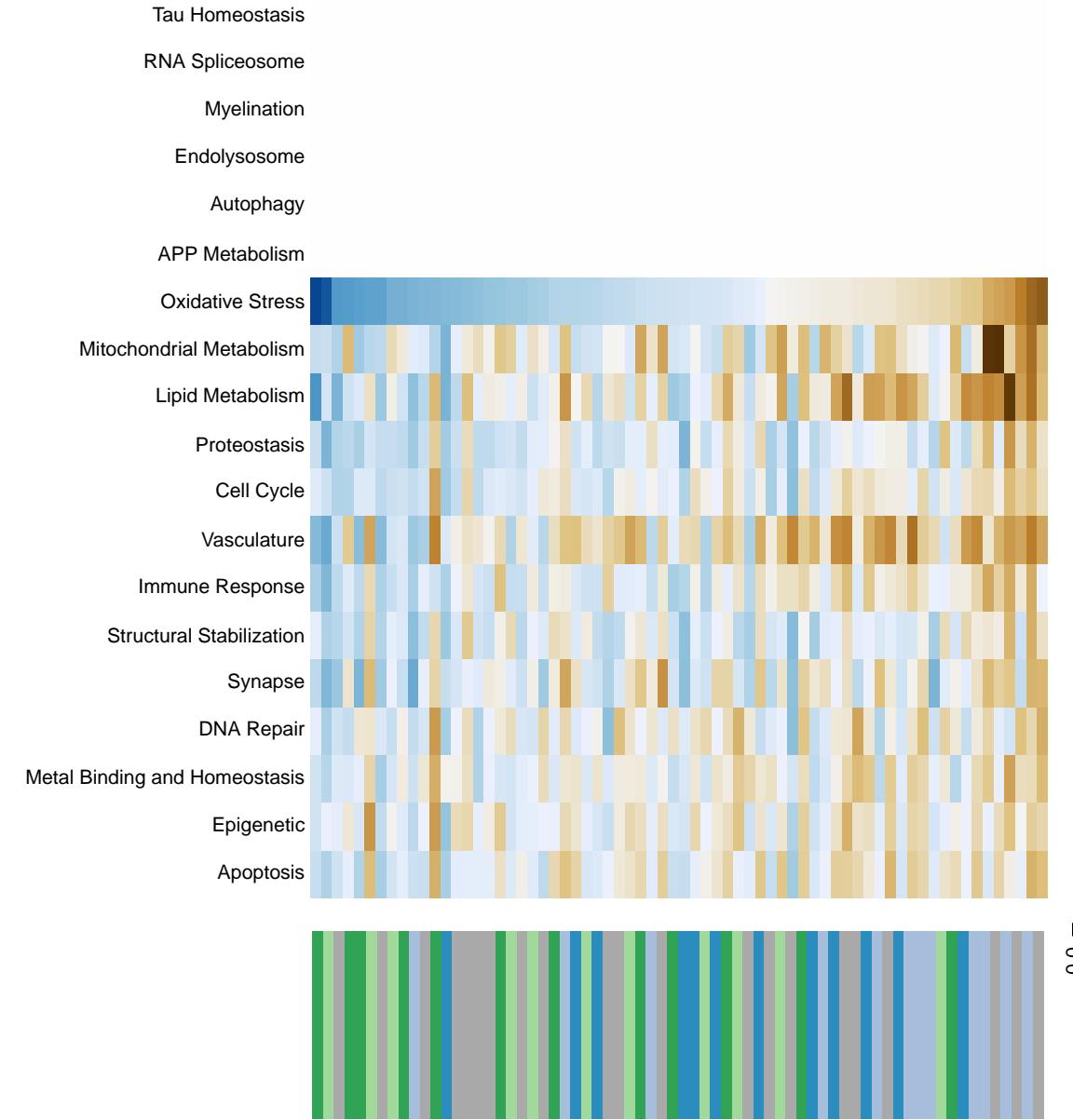
Metal Binding and Homeostasis



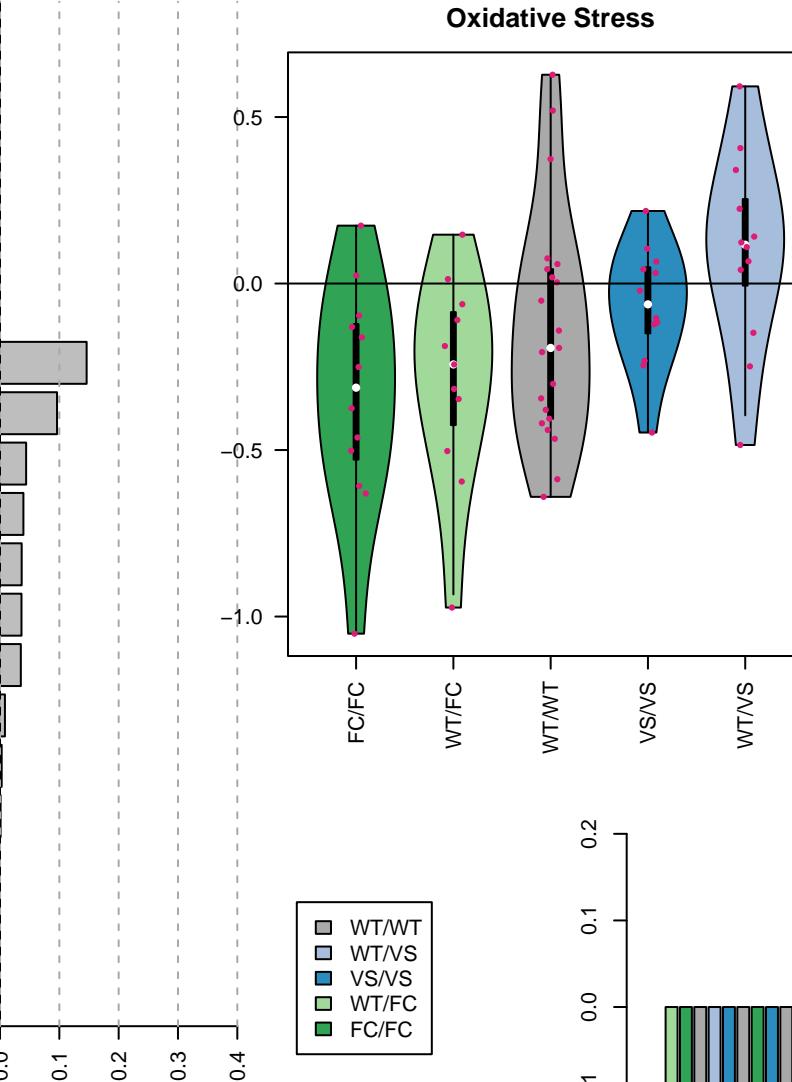
Decomposition



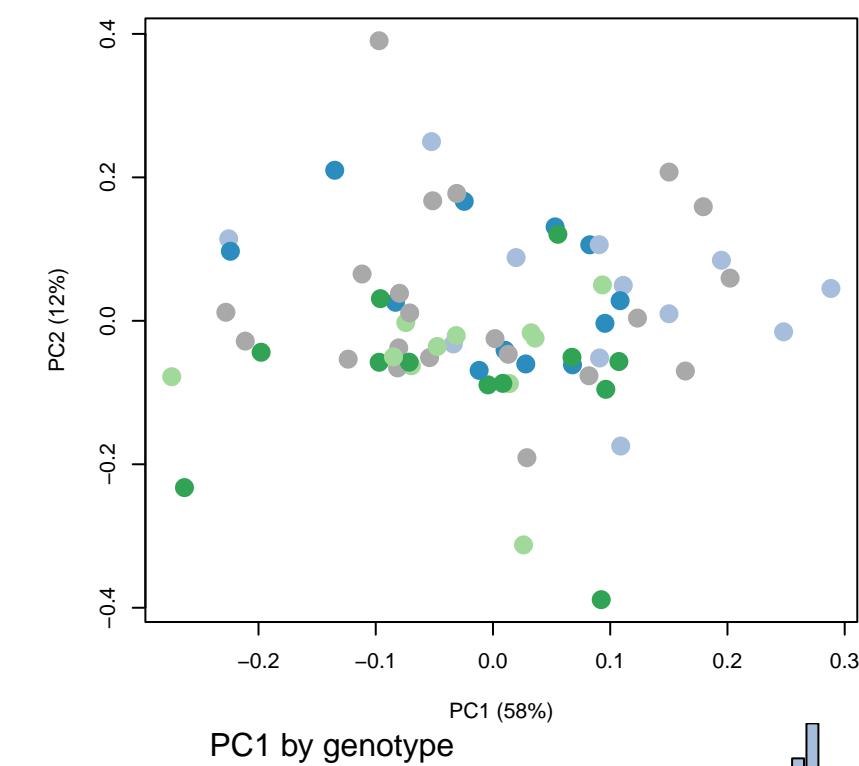
Cell cycle



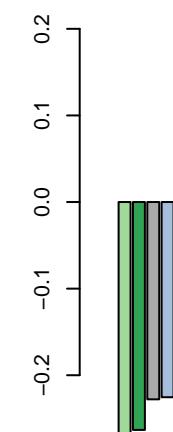
Oxidative Stress



Decomposition

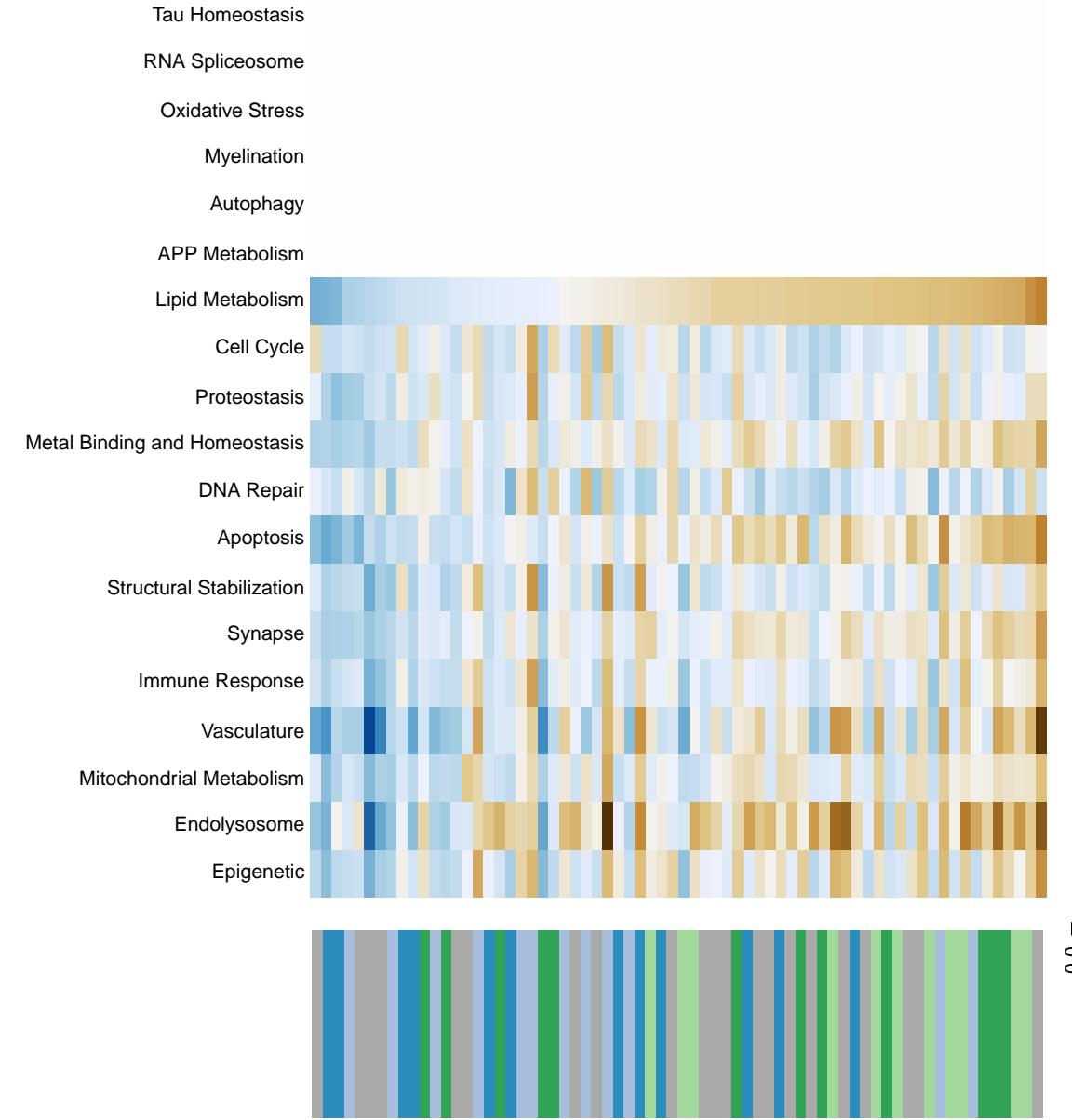


PC1 by genotype

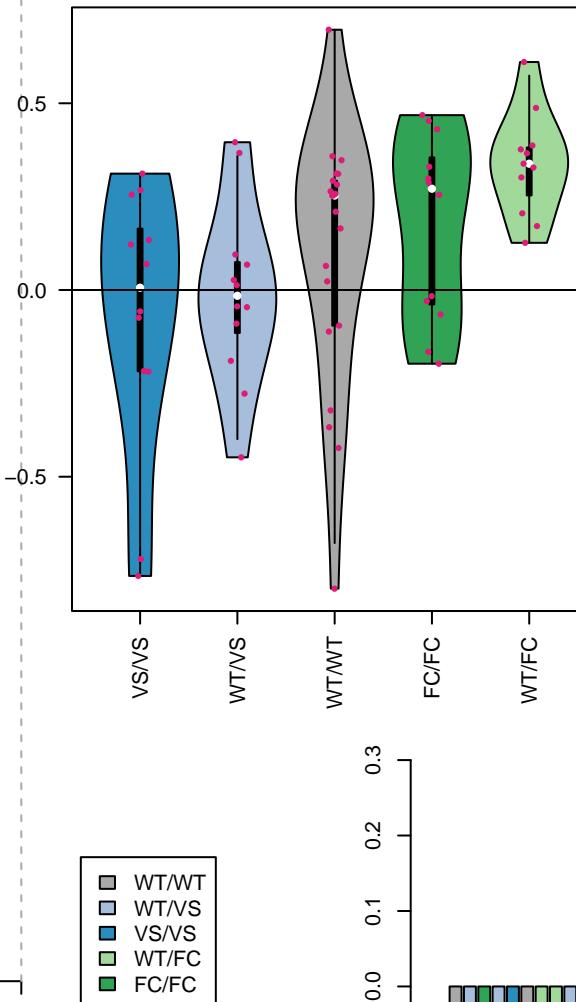


$R^2 = 0.032$

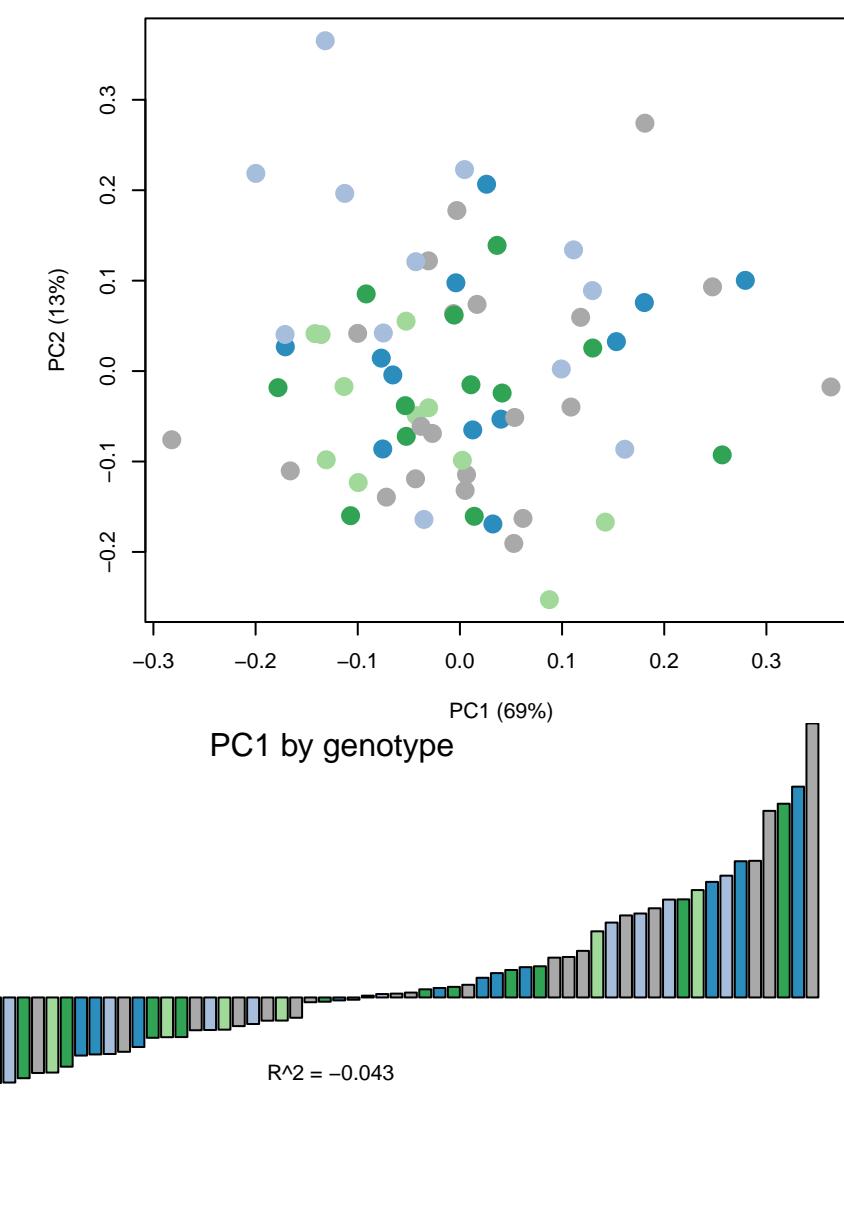
Oocyte meiosis



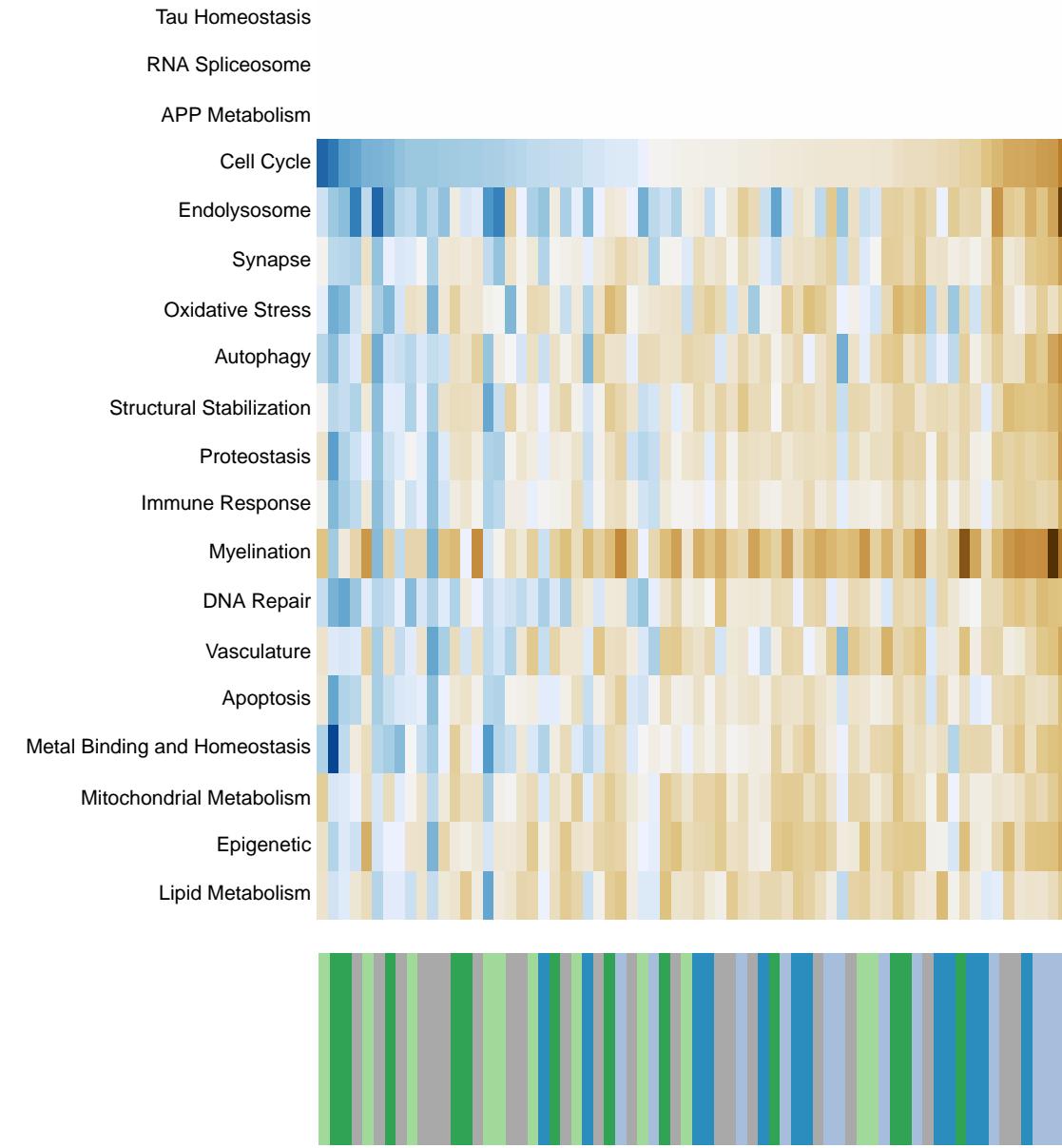
Lipid Metabolism



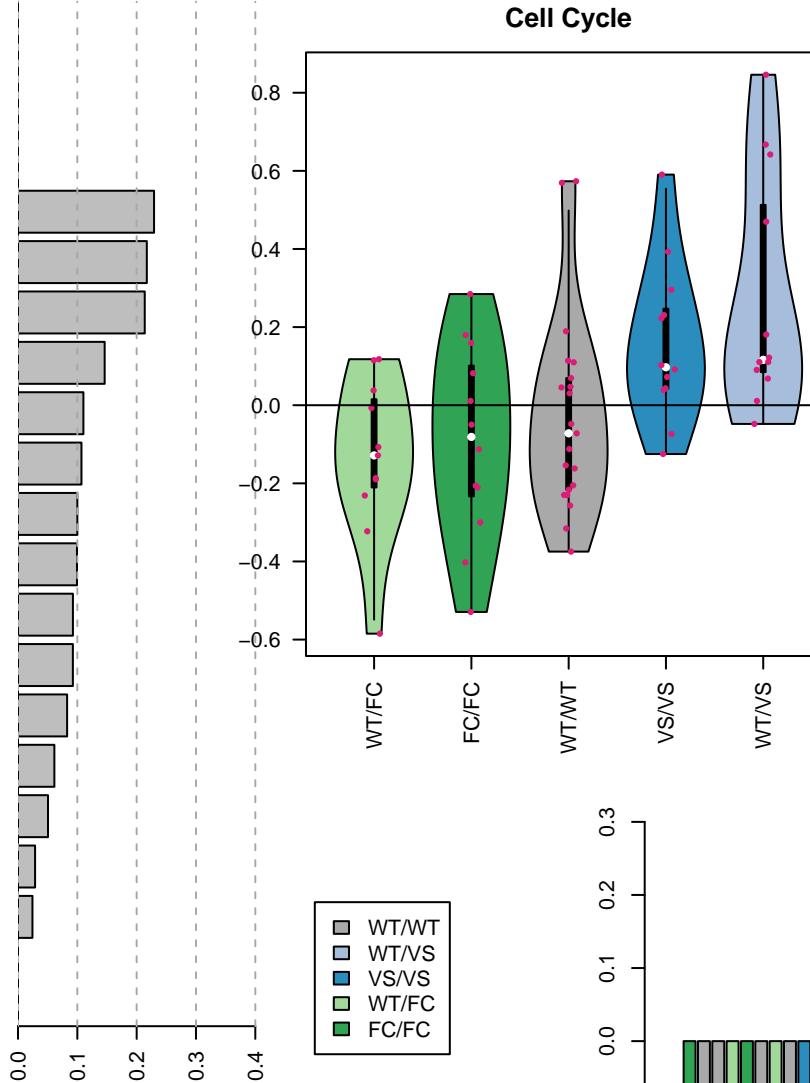
Decomposition



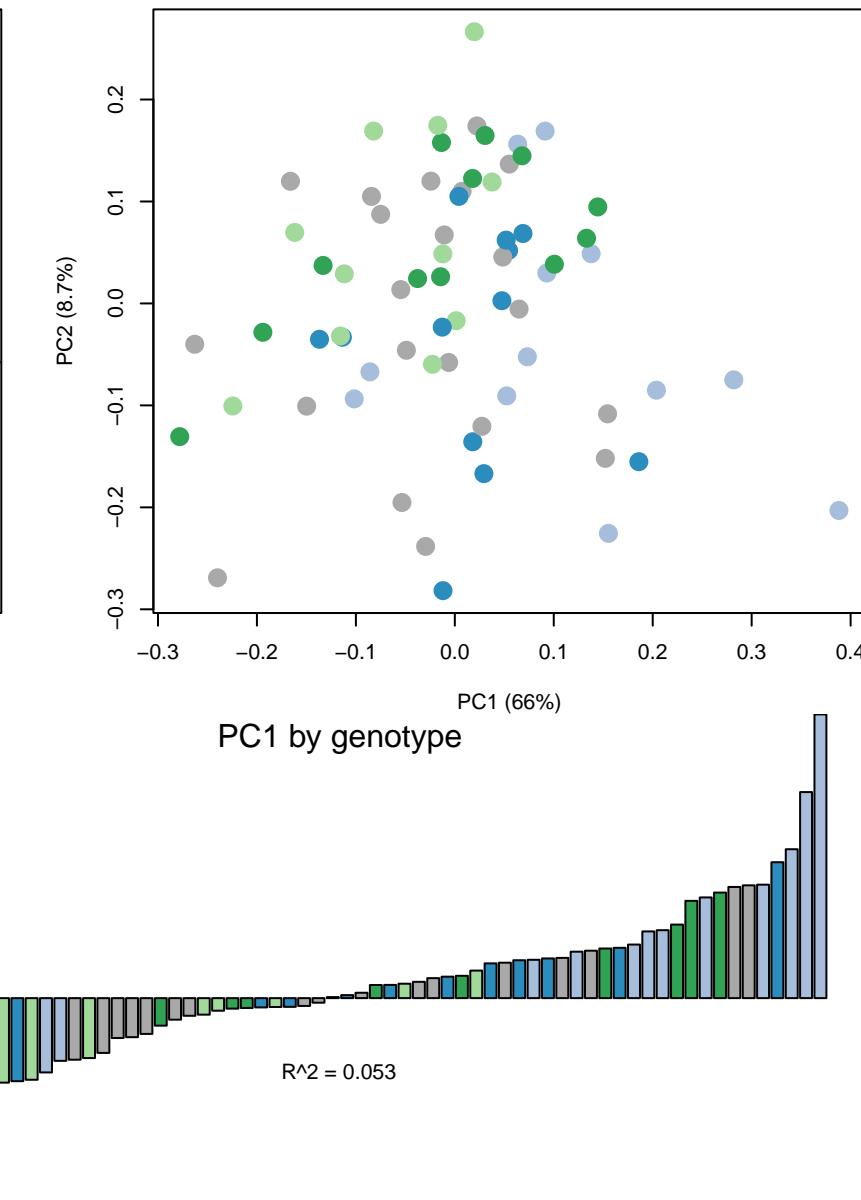
Apoptosis



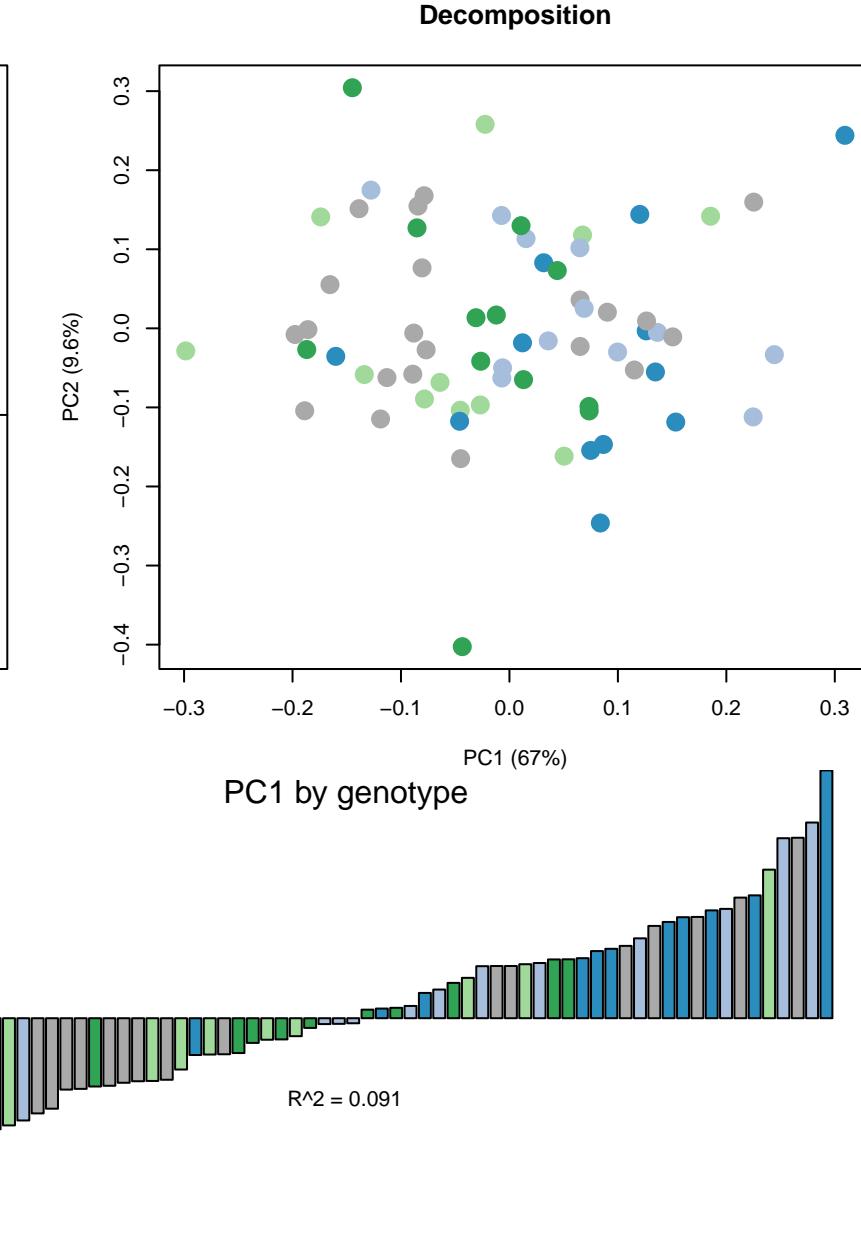
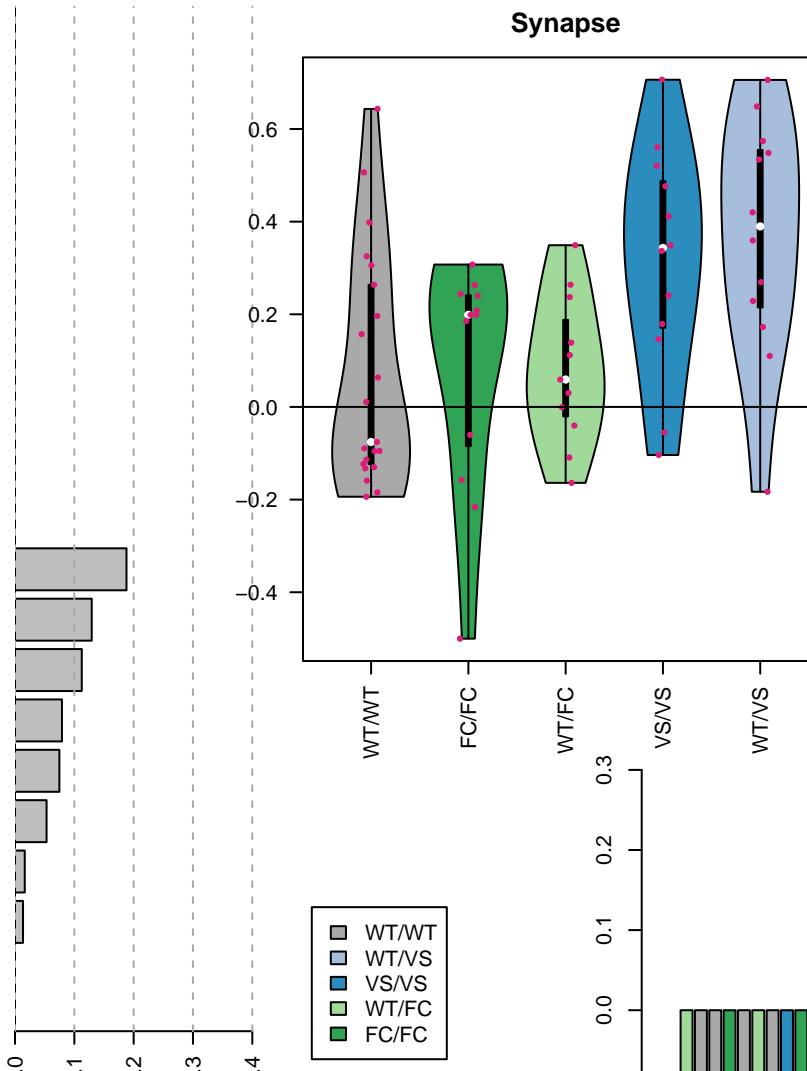
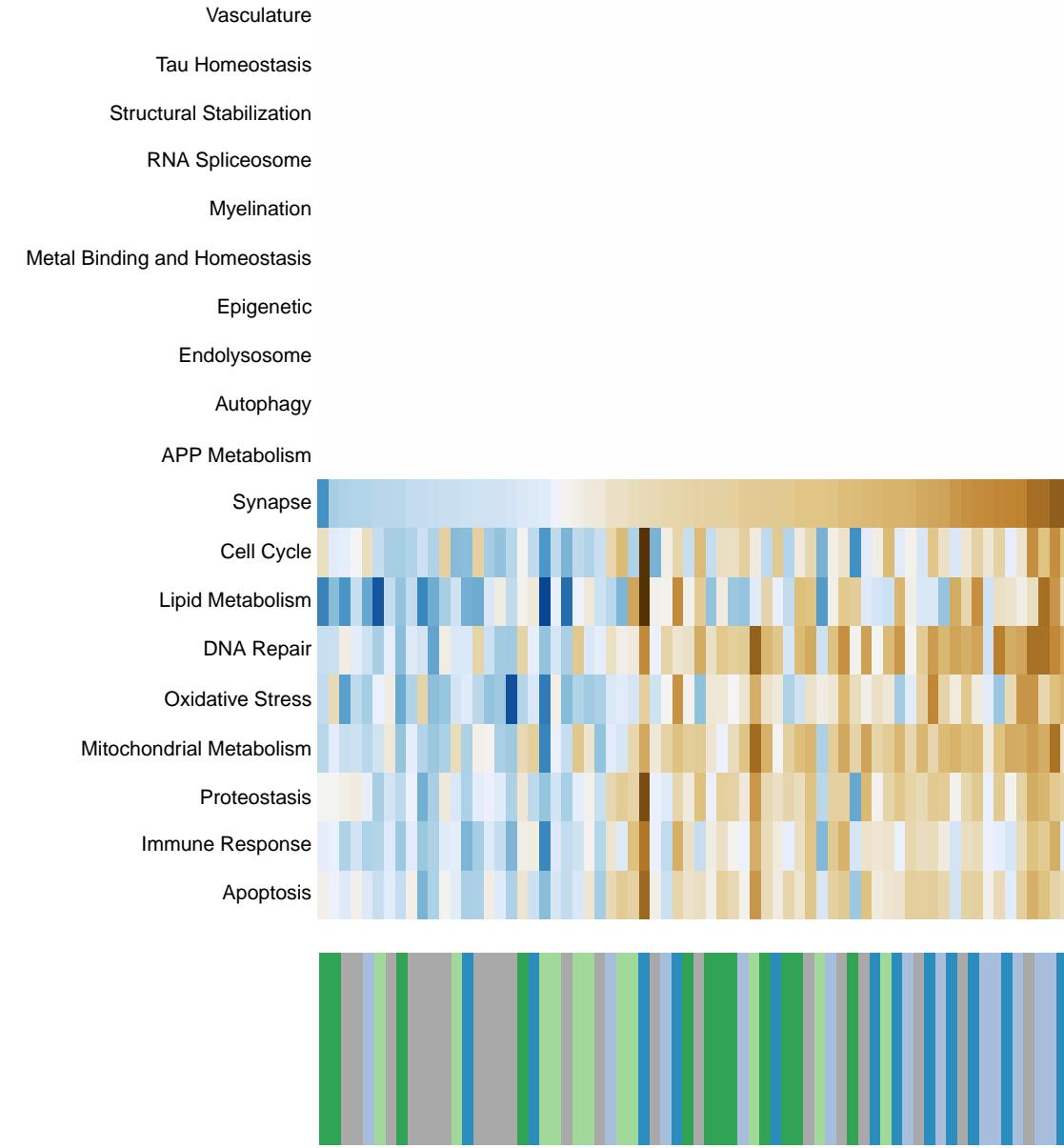
Cell Cycle



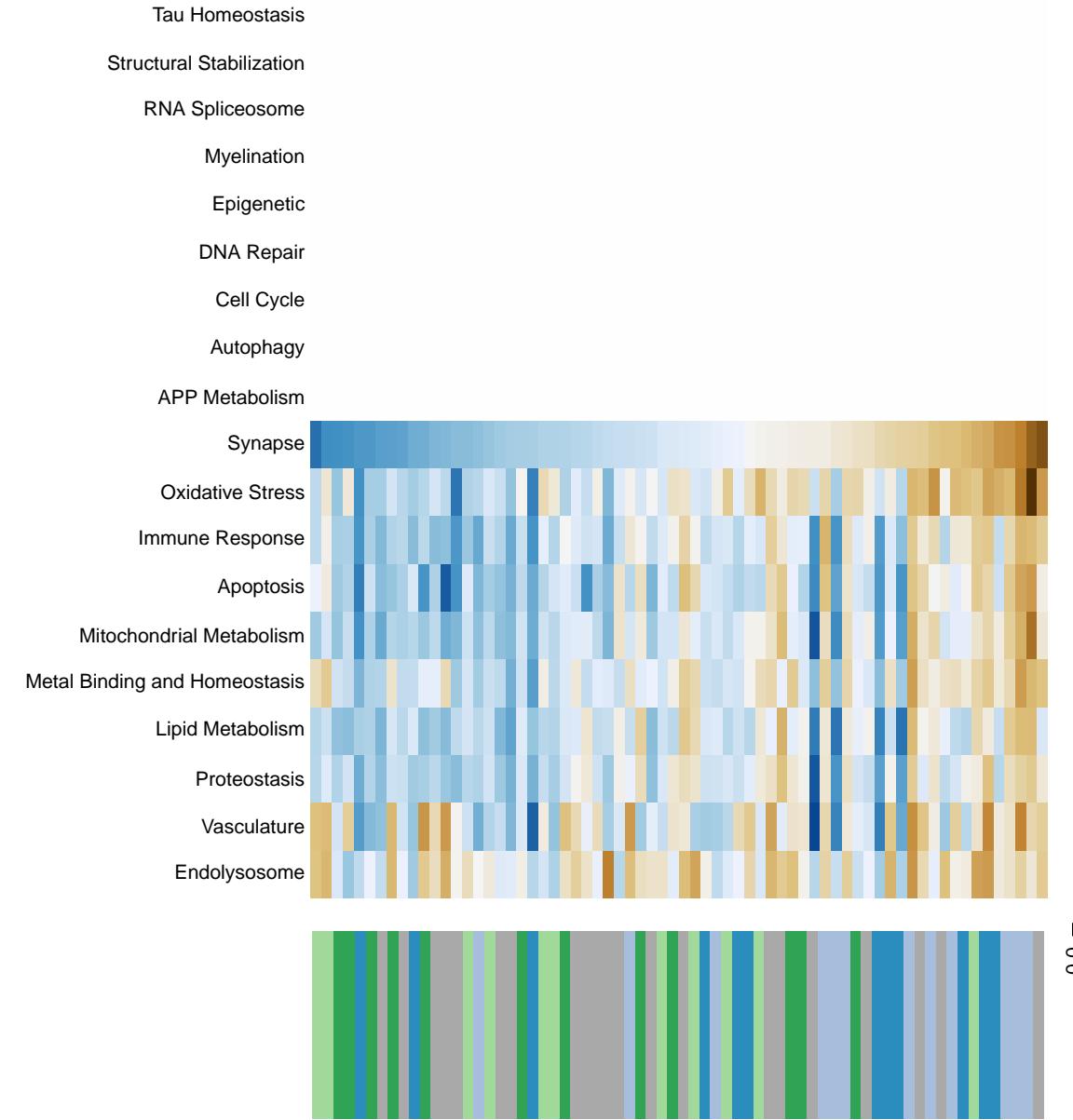
Decomposition



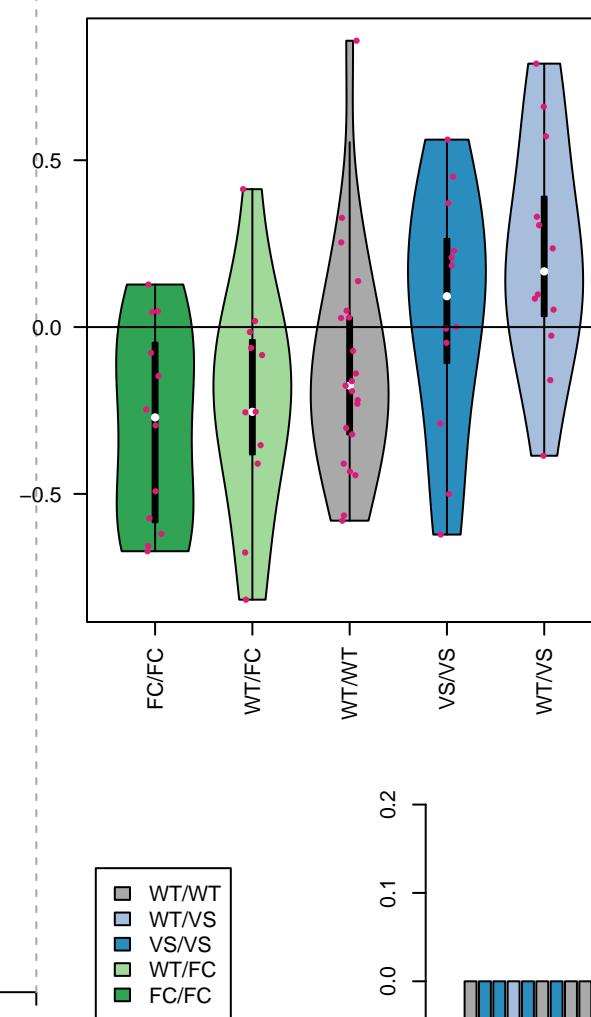
Apoptosis – multiple species



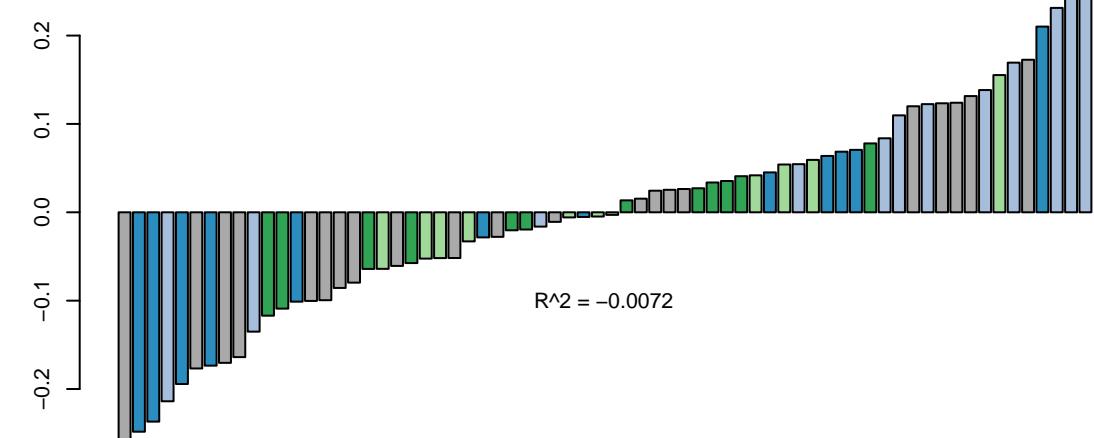
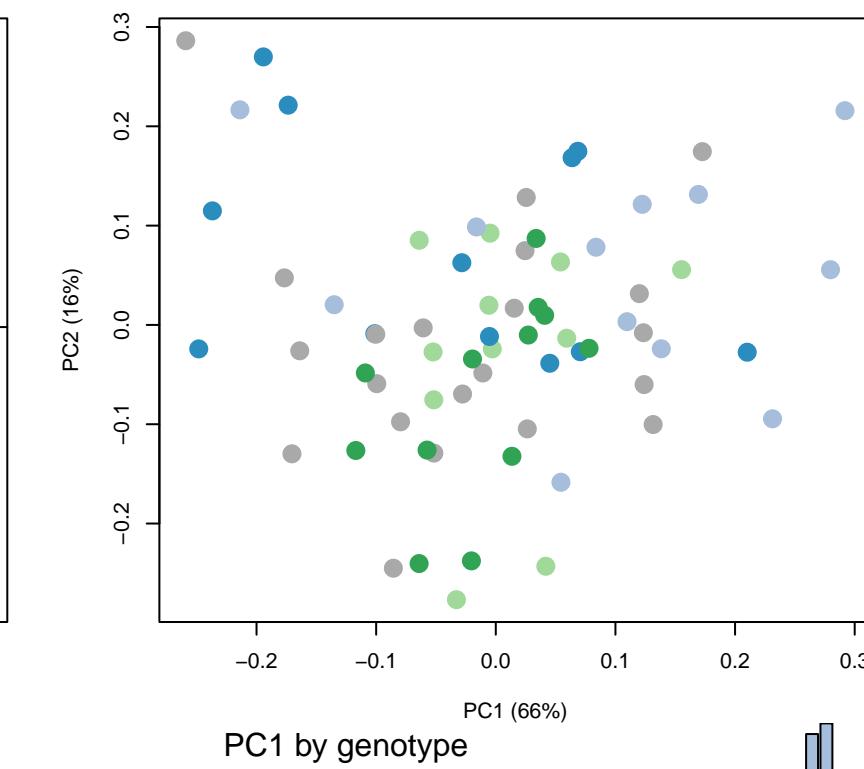
Ferroptosis



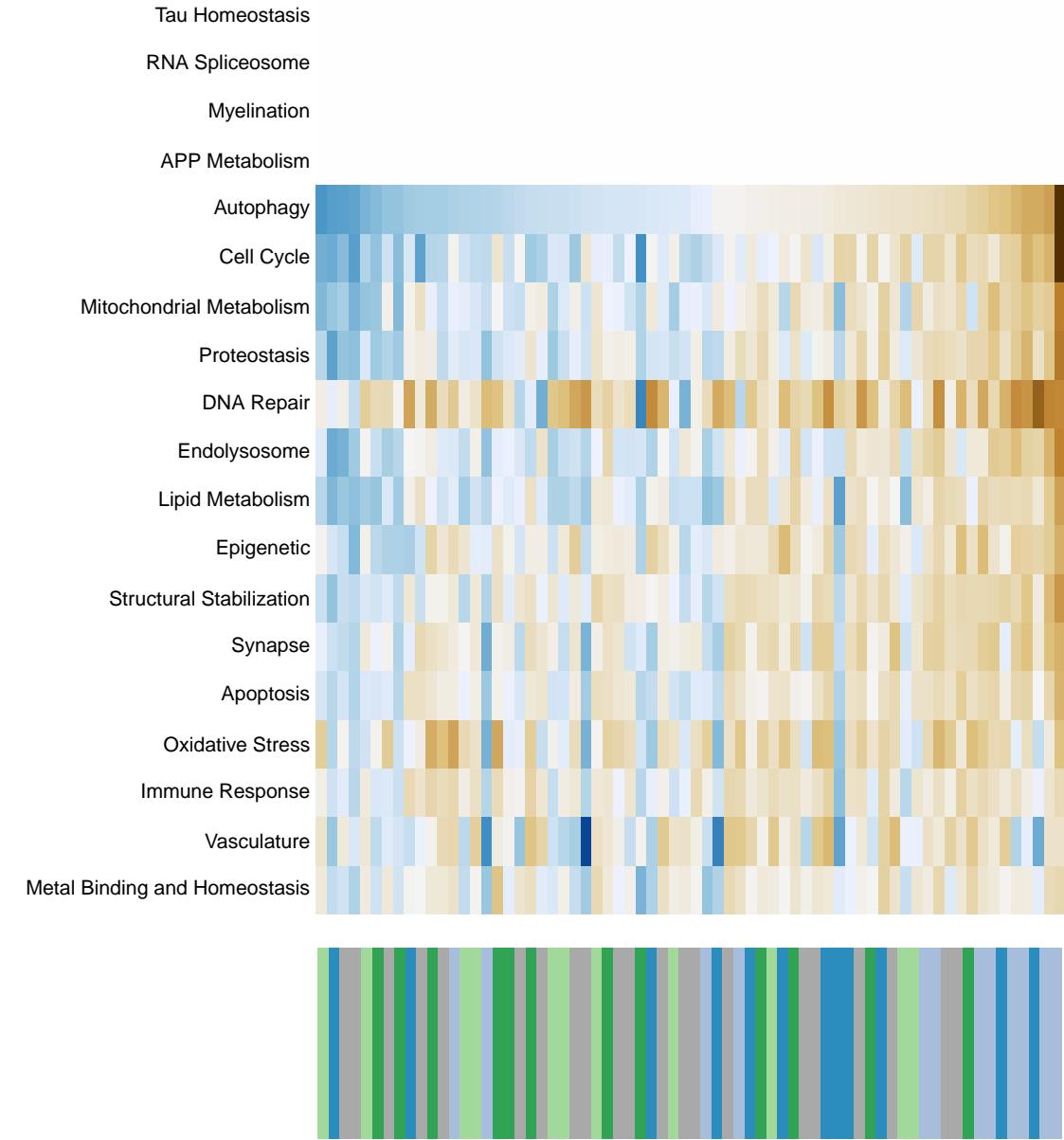
Synapse



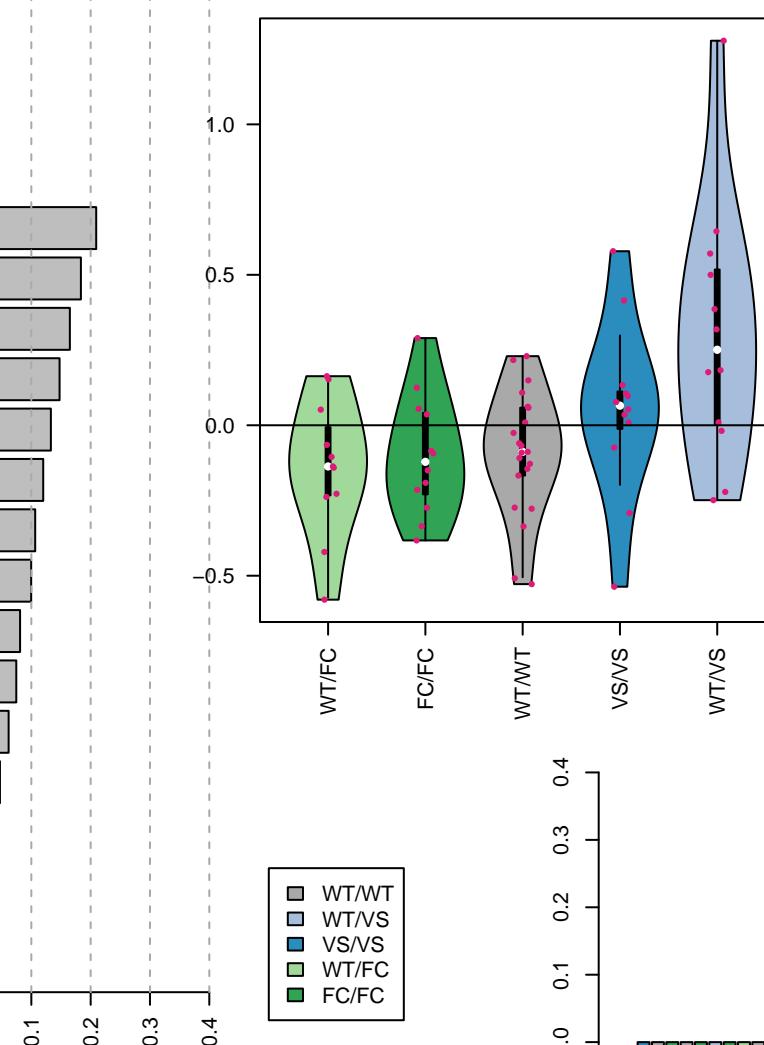
Decomposition



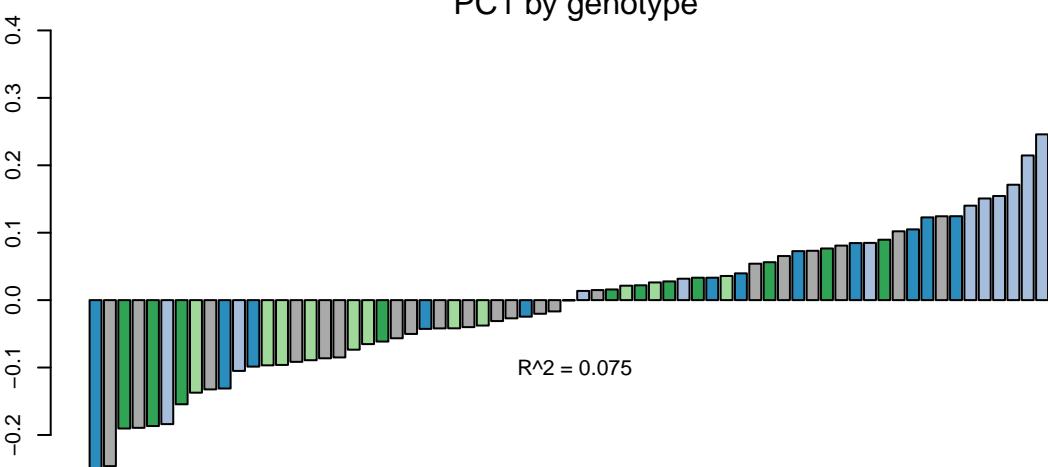
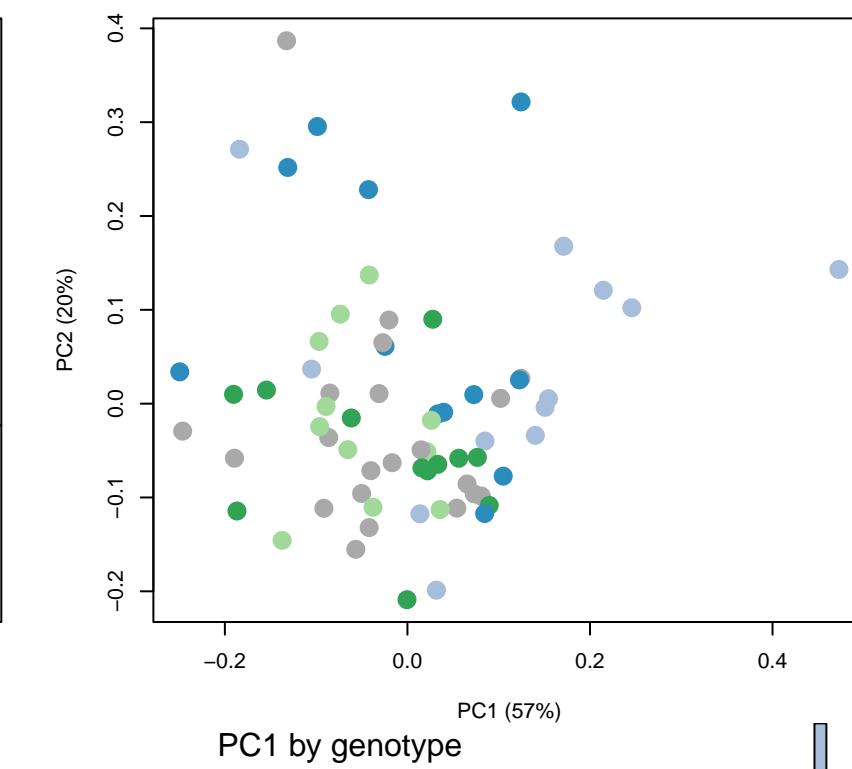
Necroptosis



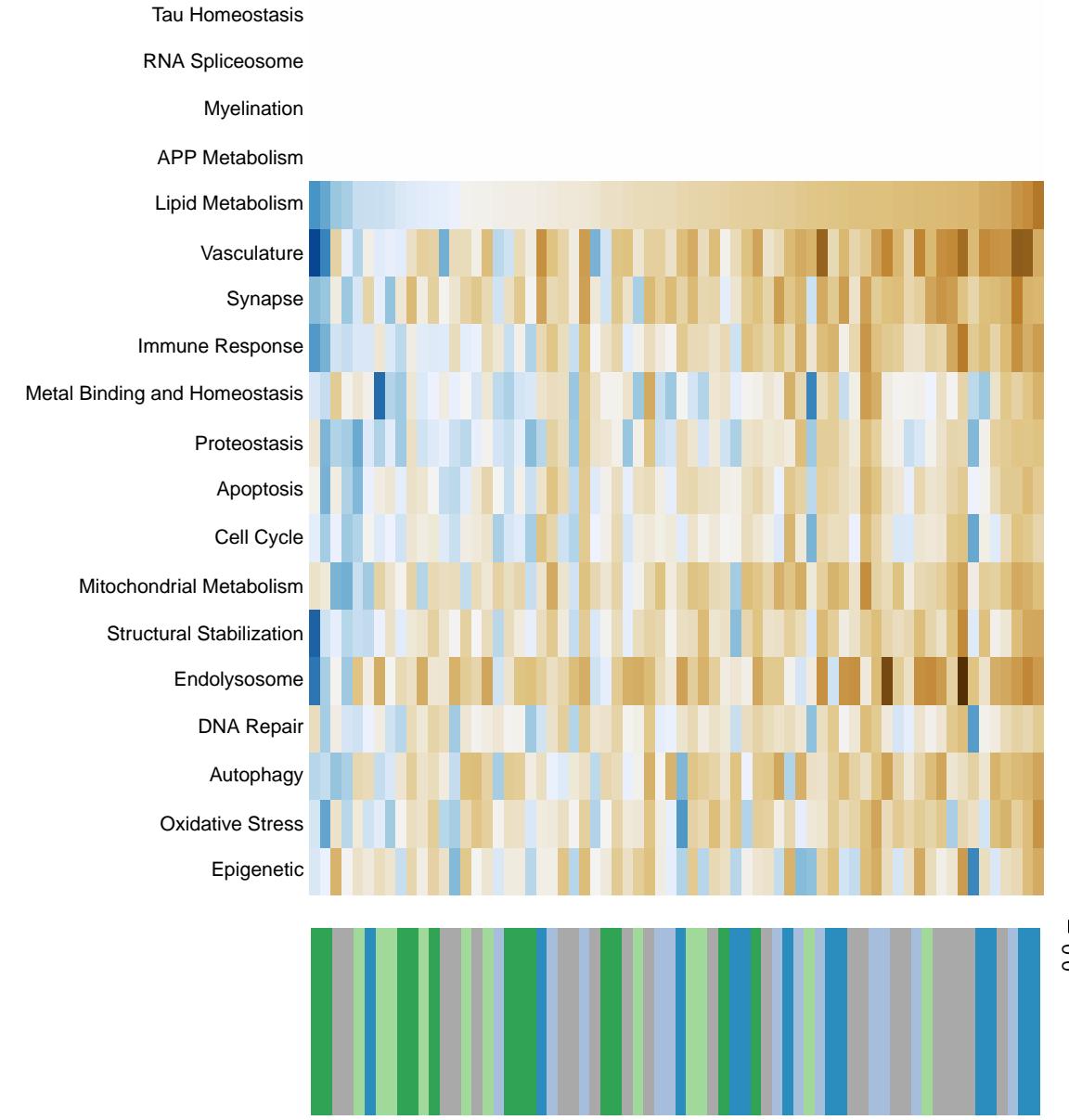
Autophagy



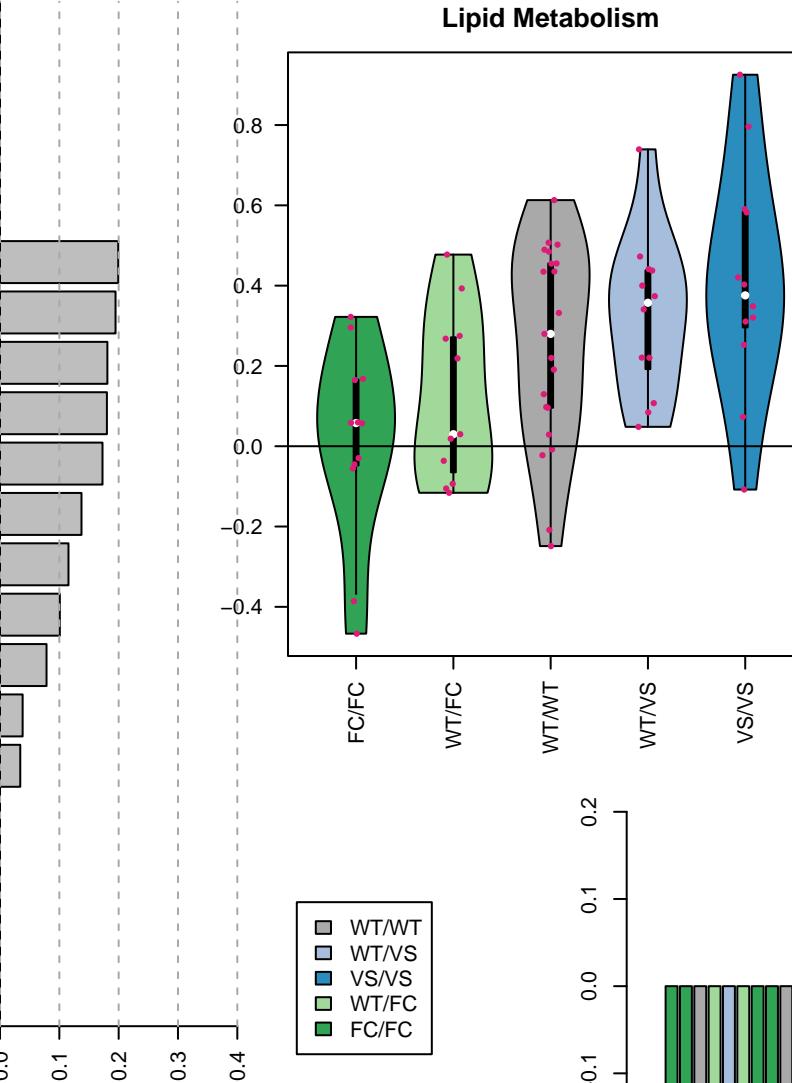
Decomposition



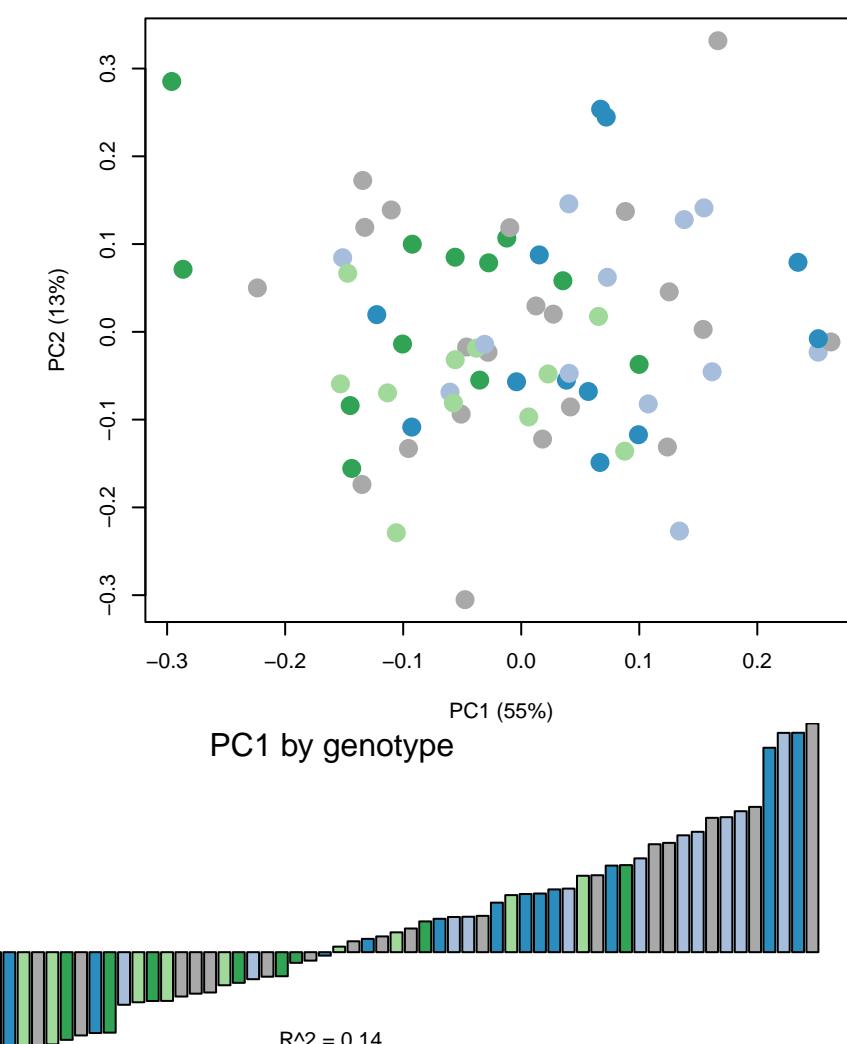
p53 signaling pathway



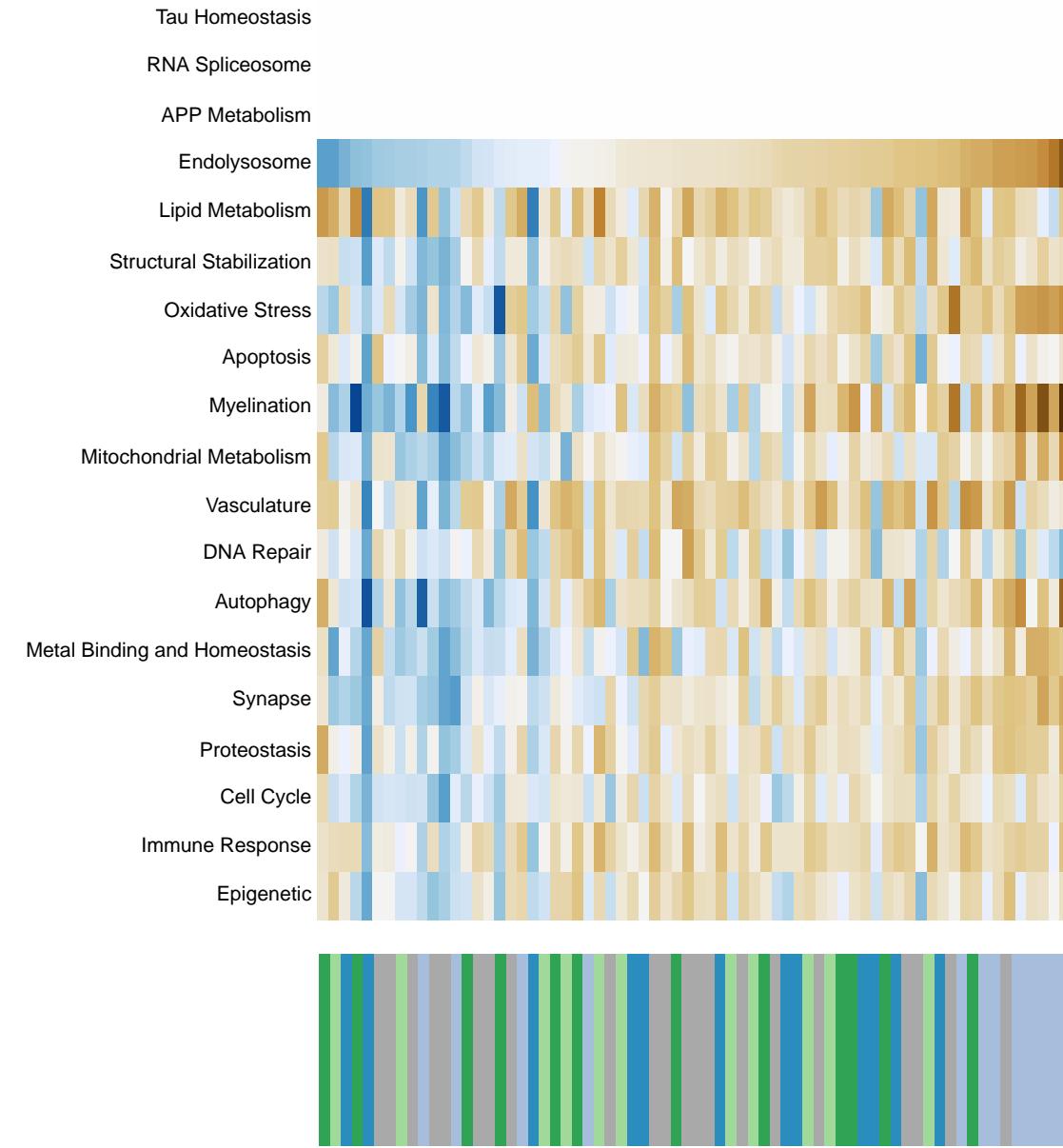
Lipid Metabolism



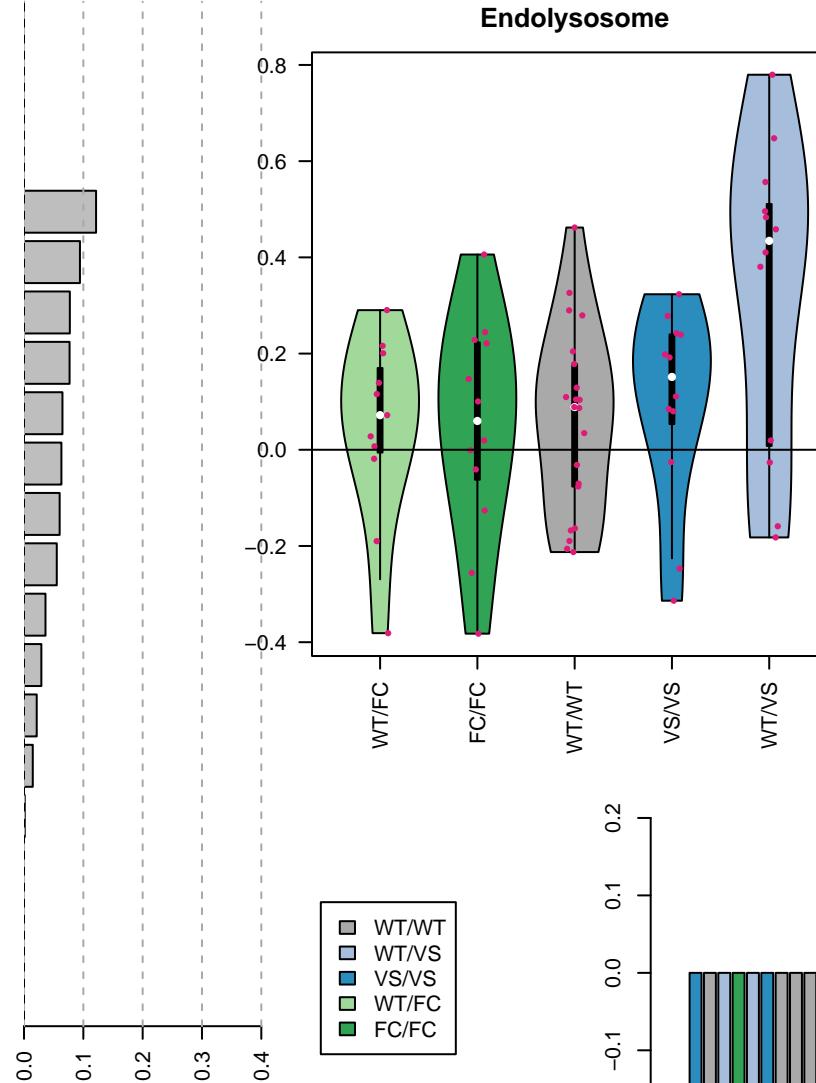
Decomposition



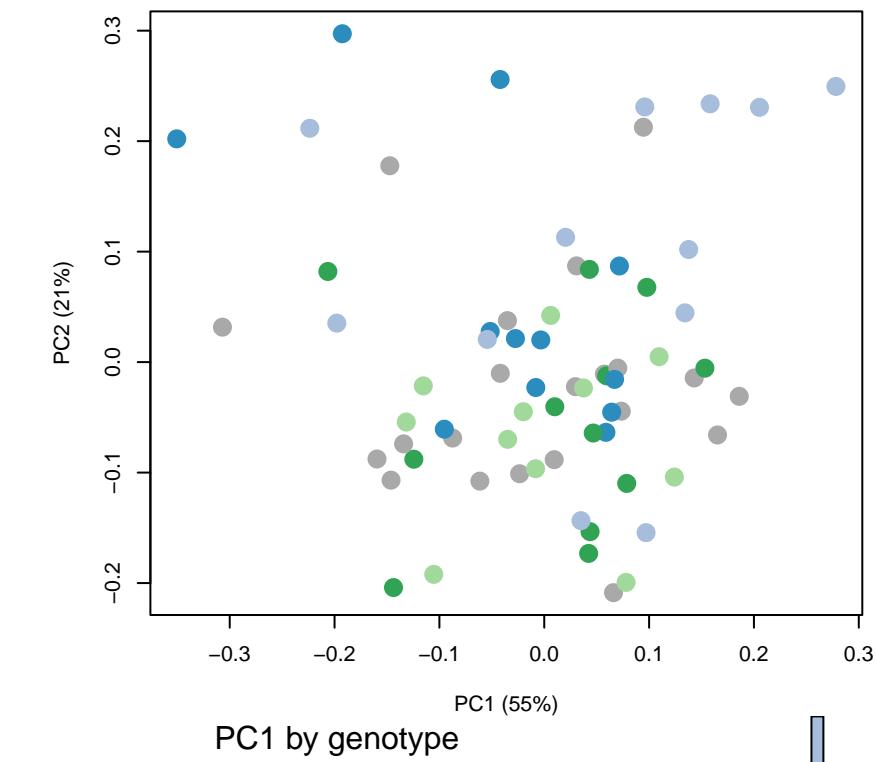
Cellular senescence



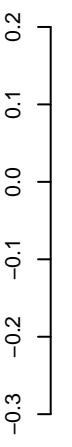
Endolysosome



Decomposition

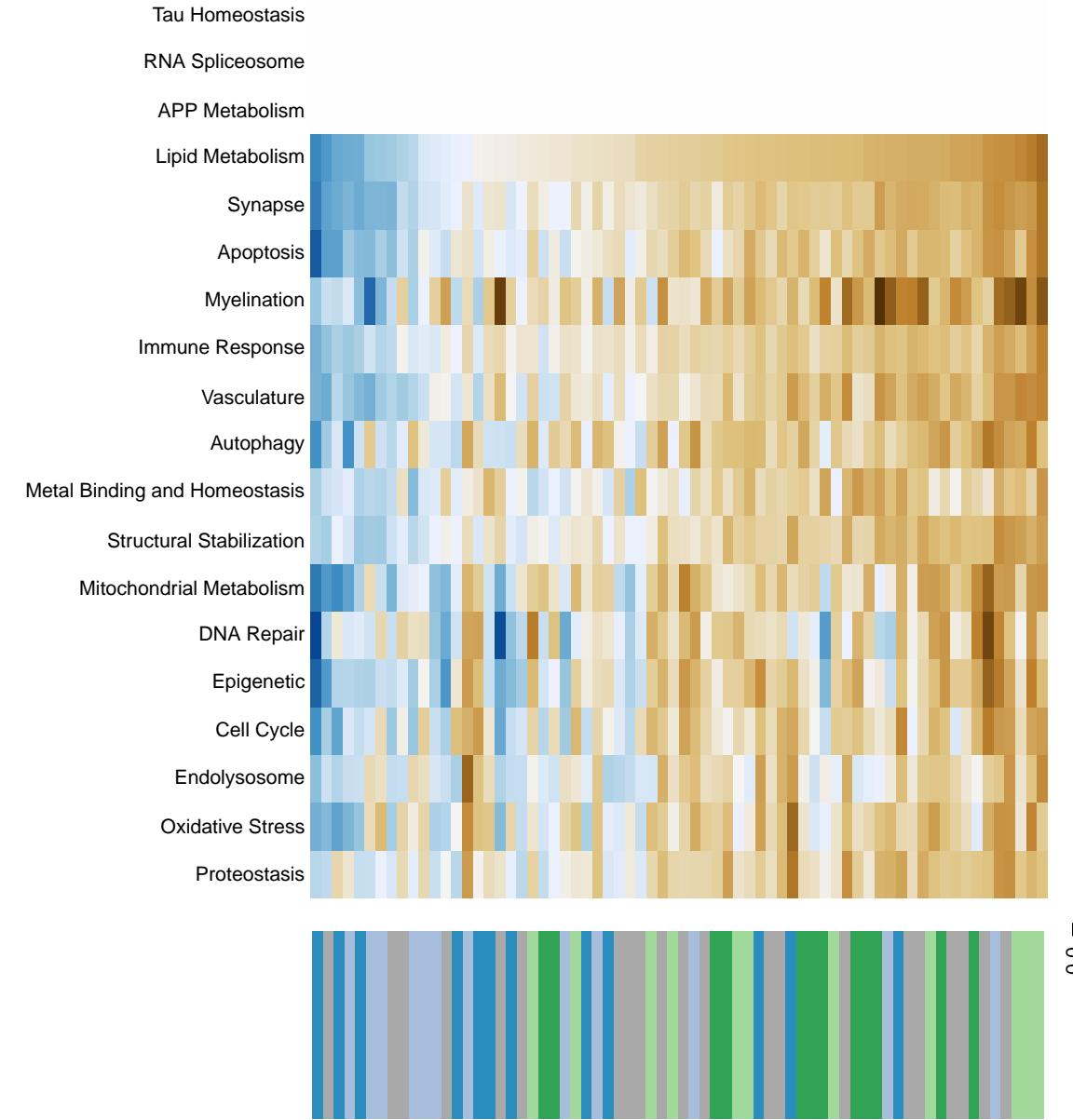


PC1 by genotype

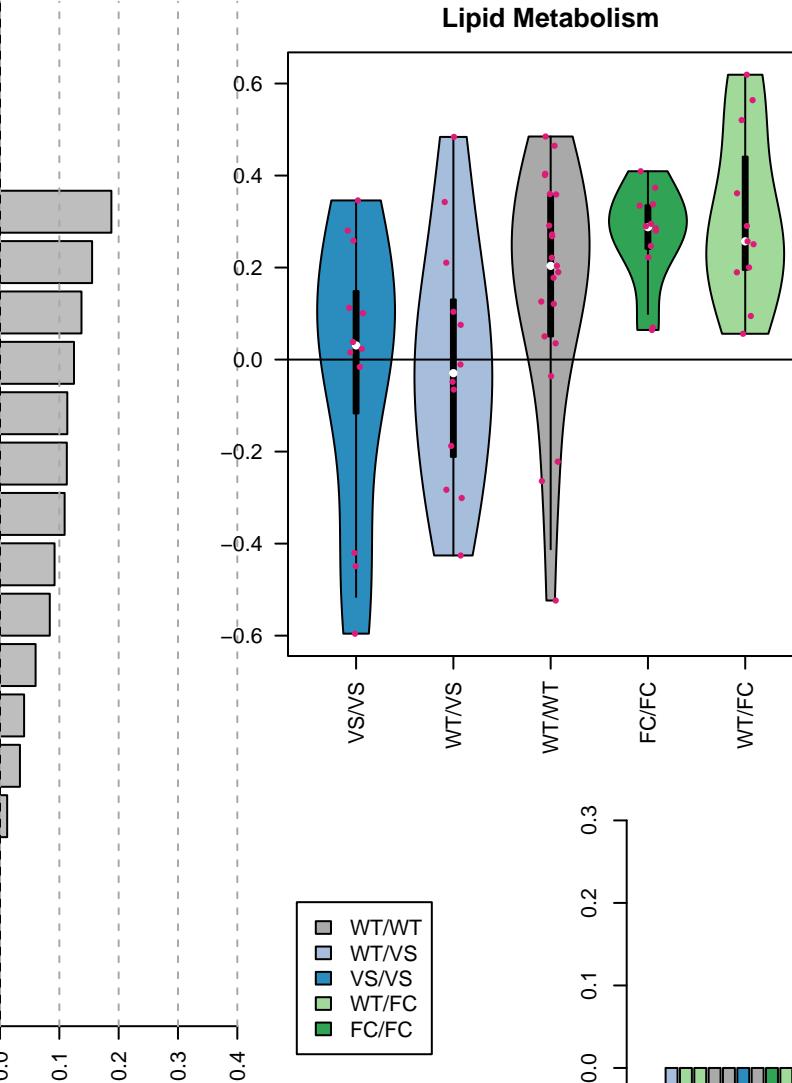


$R^2 = -0.048$

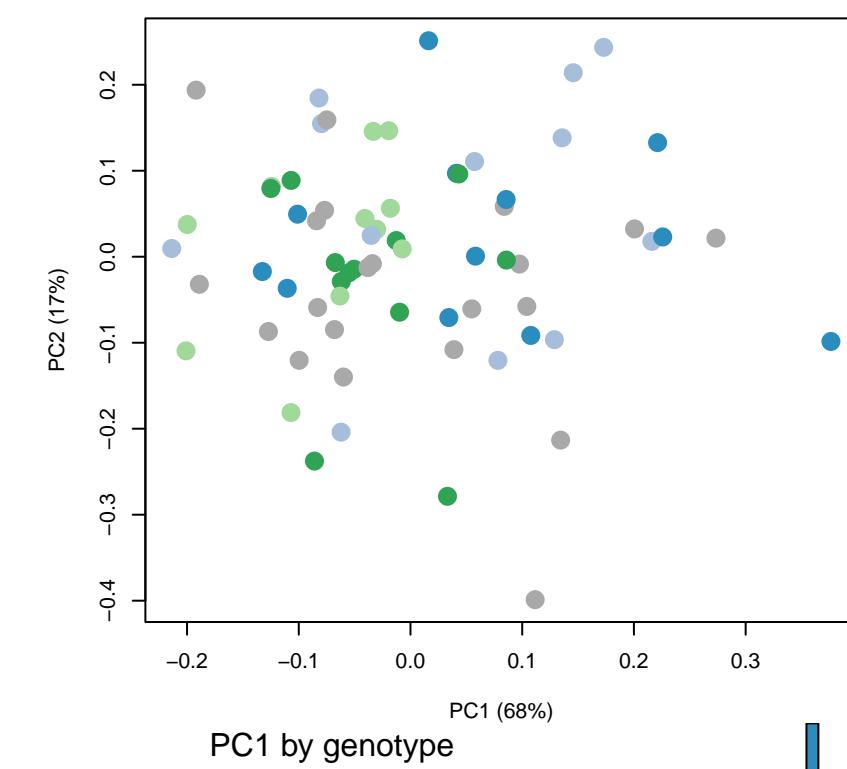
Focal adhesion



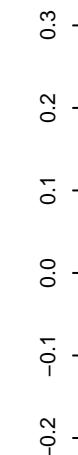
Lipid Metabolism



Decomposition

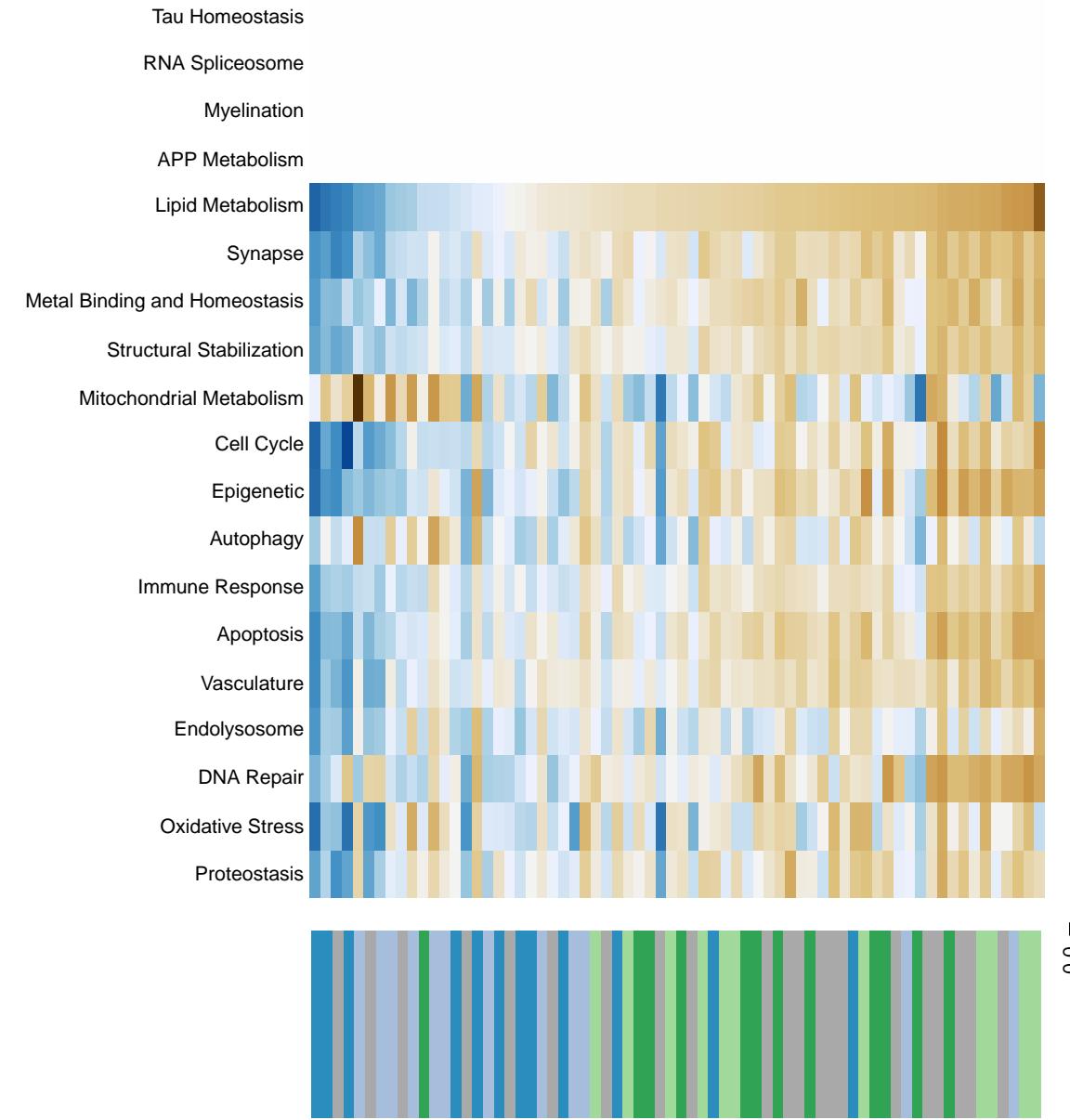


PC1 by genotype

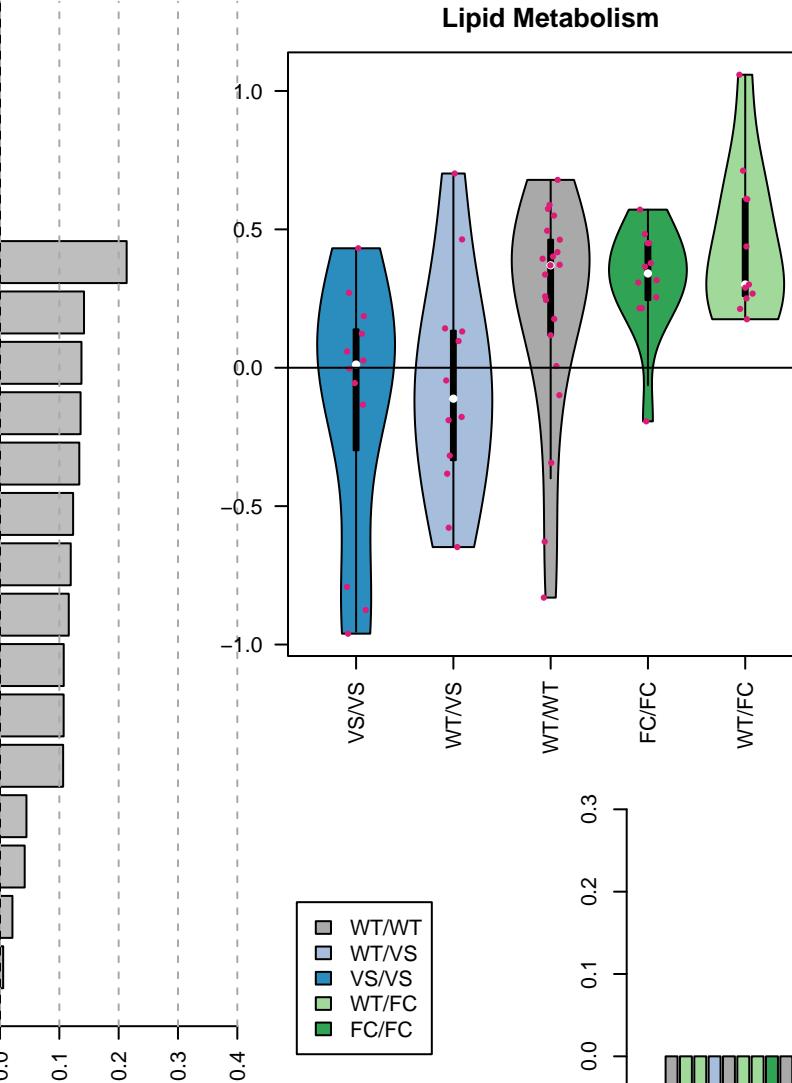


$R^2 = -0.0012$

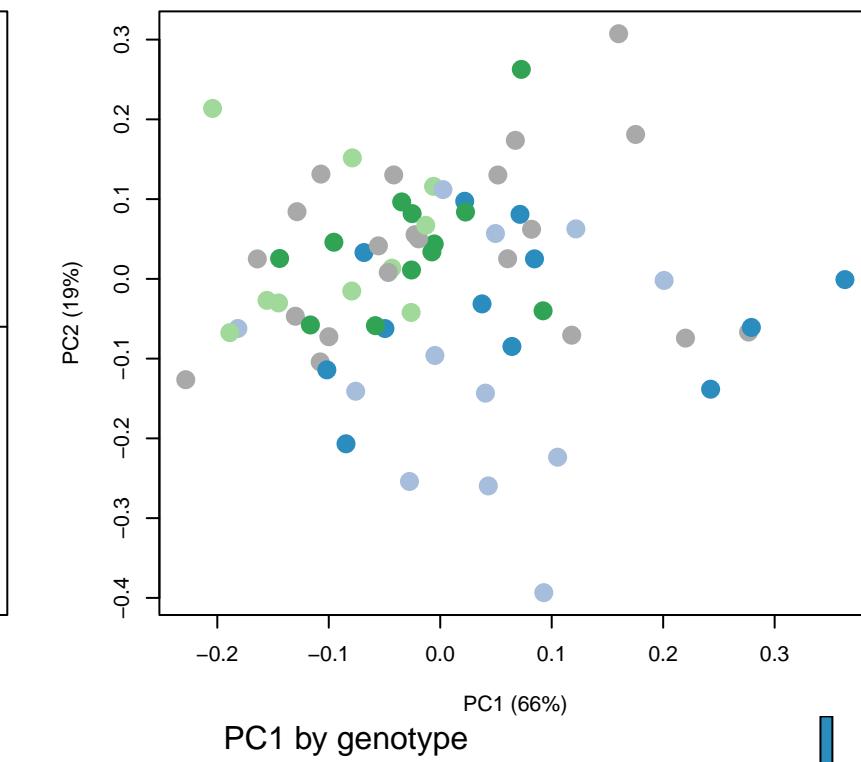
Adherens junction



Lipid Metabolism

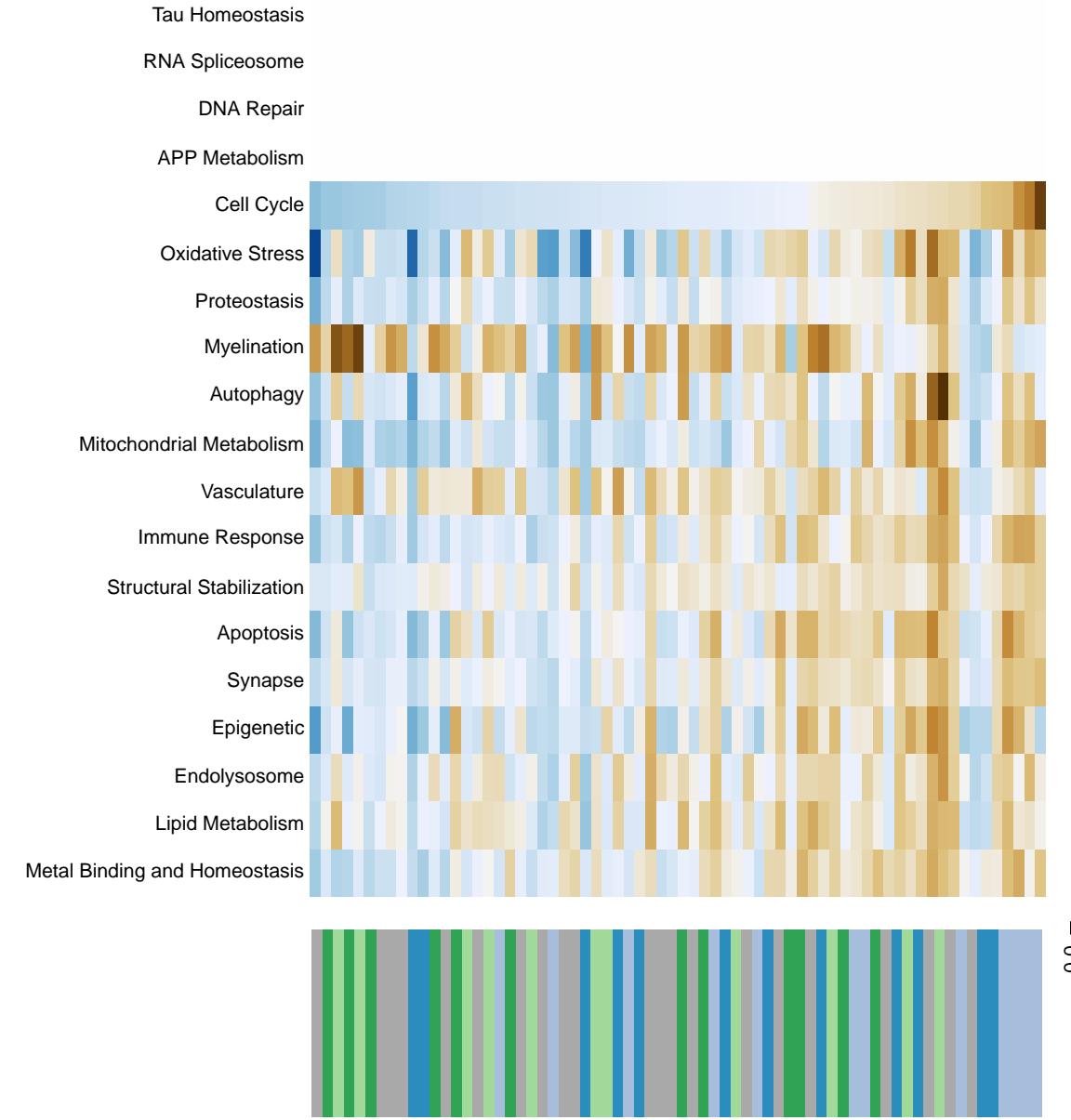


Decomposition

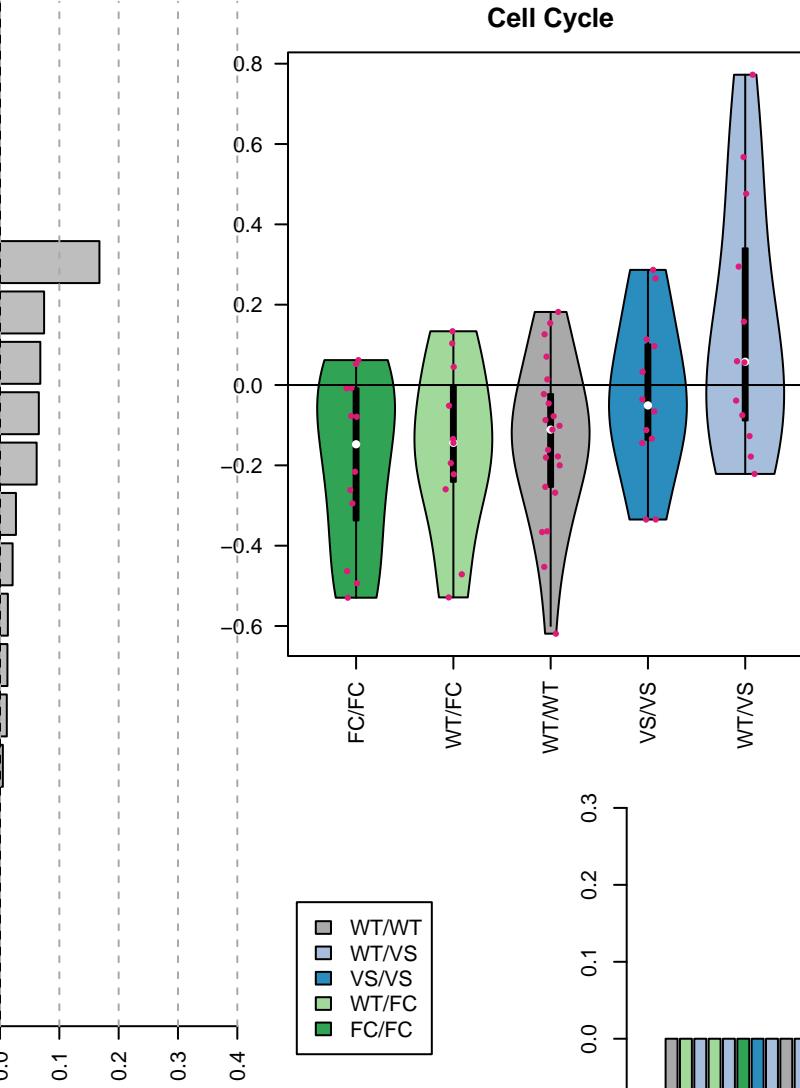


$R^2 = -0.0047$

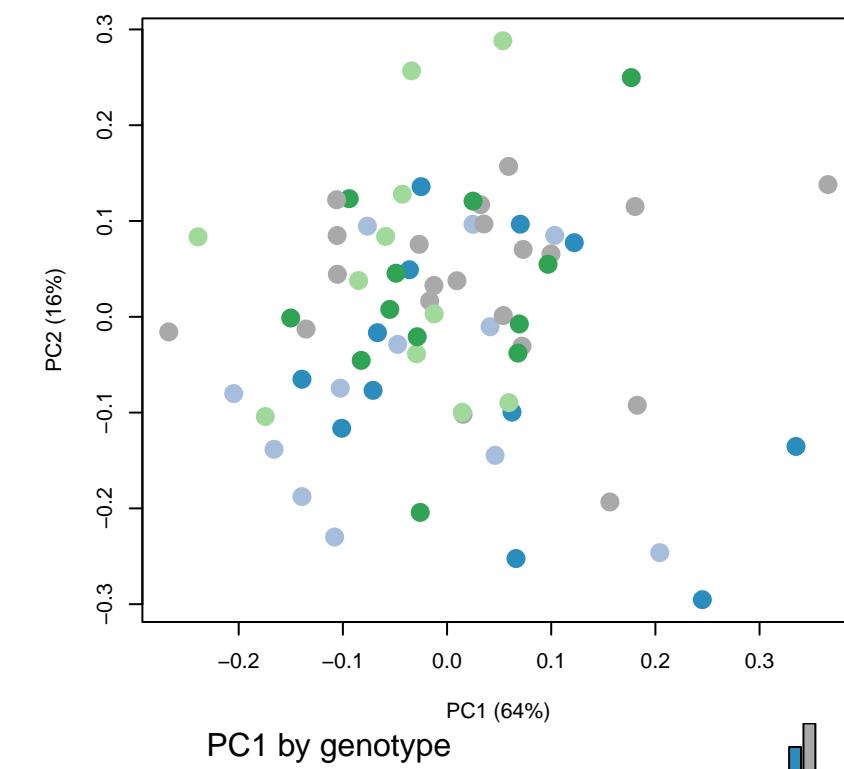
Tight junction



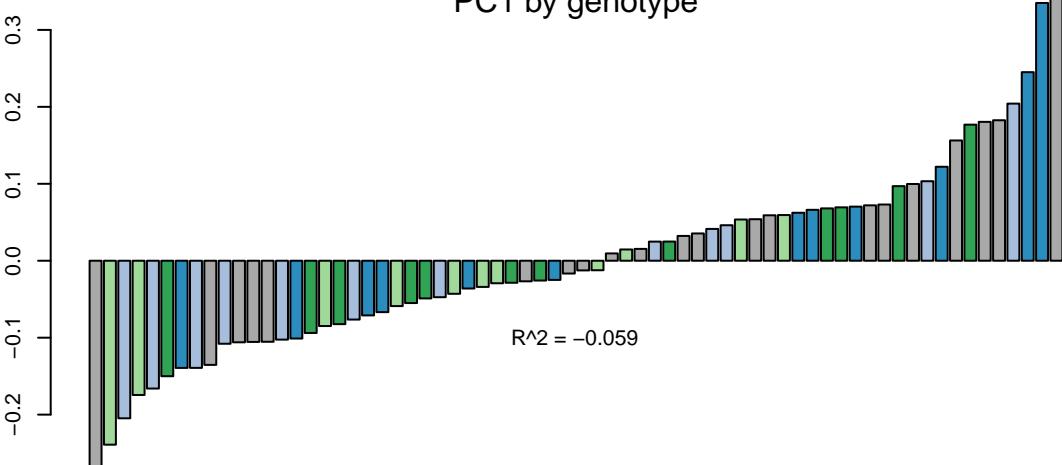
Cell Cycle



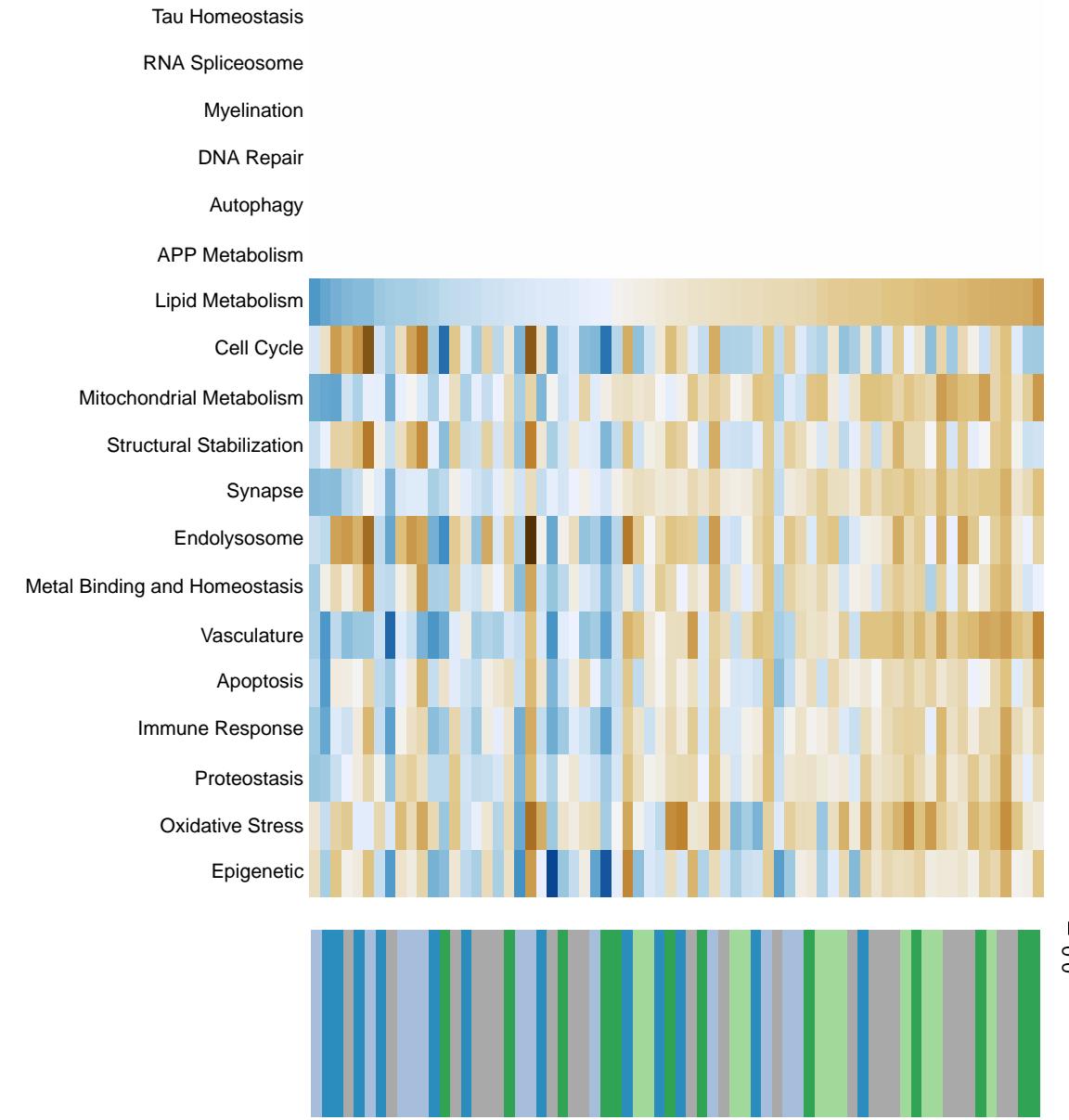
Decomposition



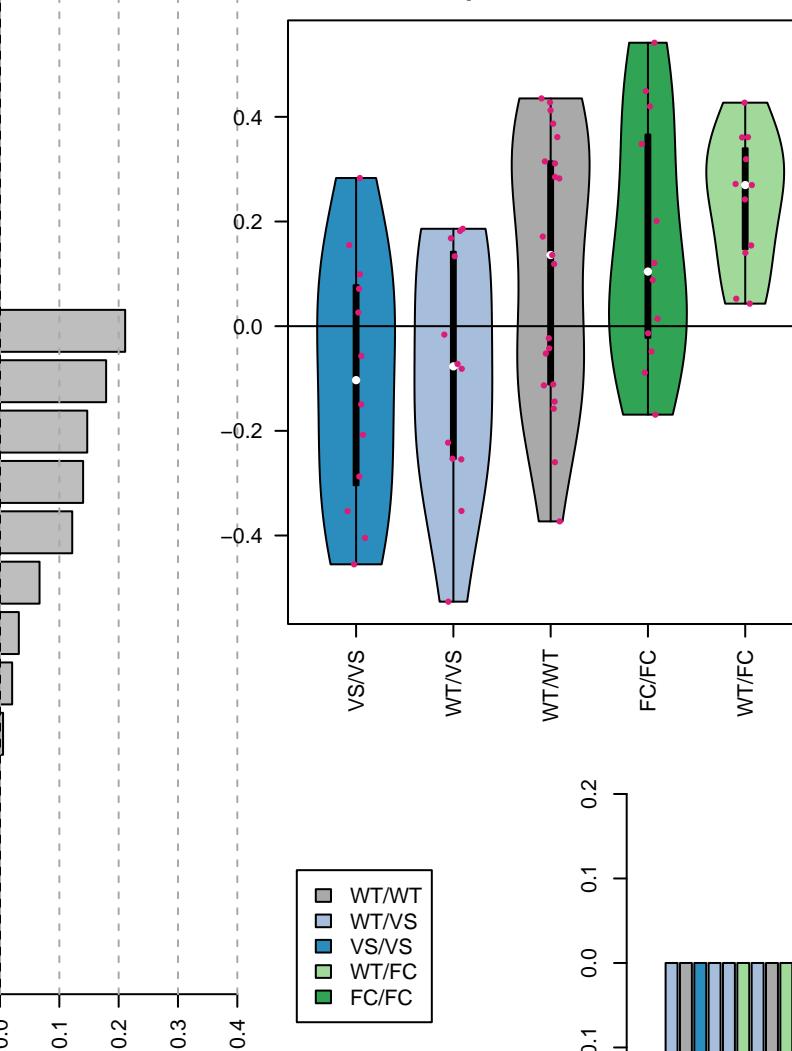
PC1 by genotype



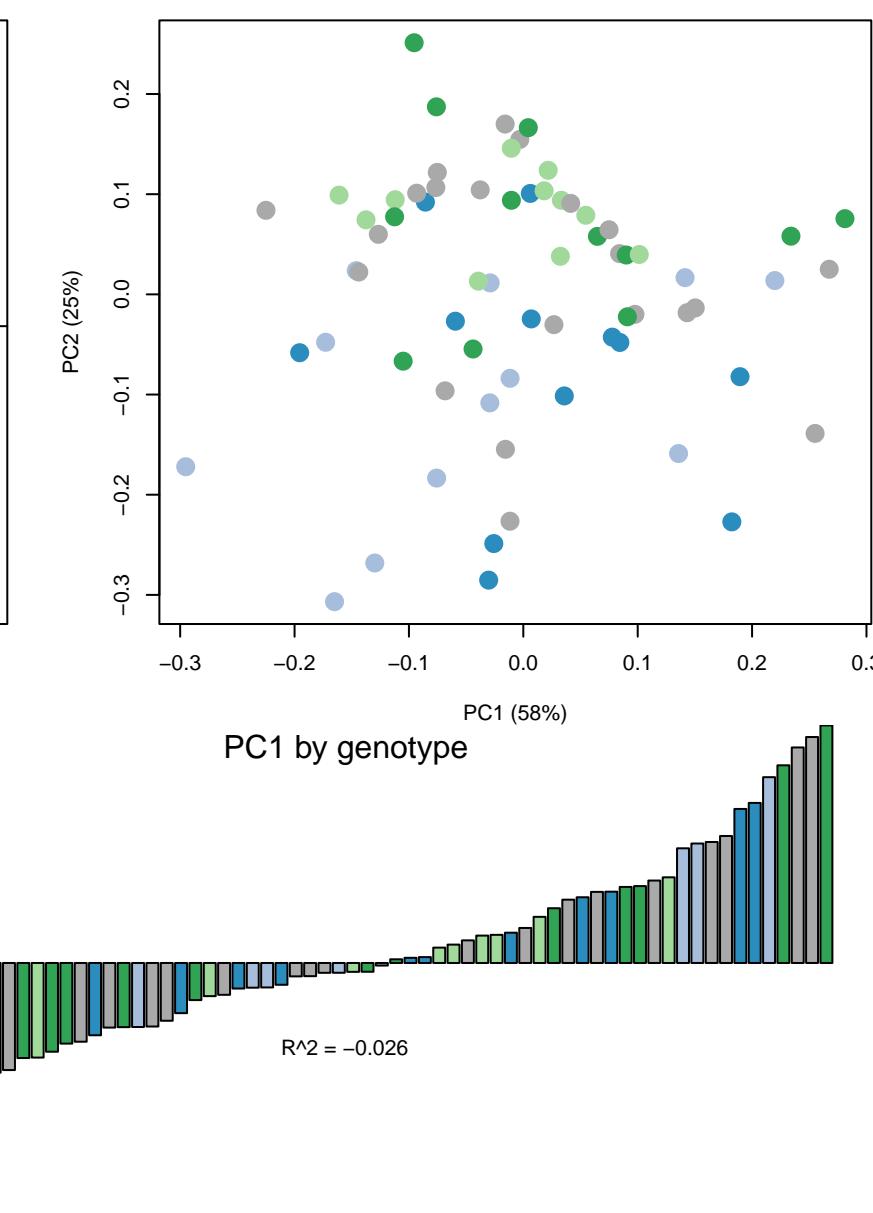
Gap junction



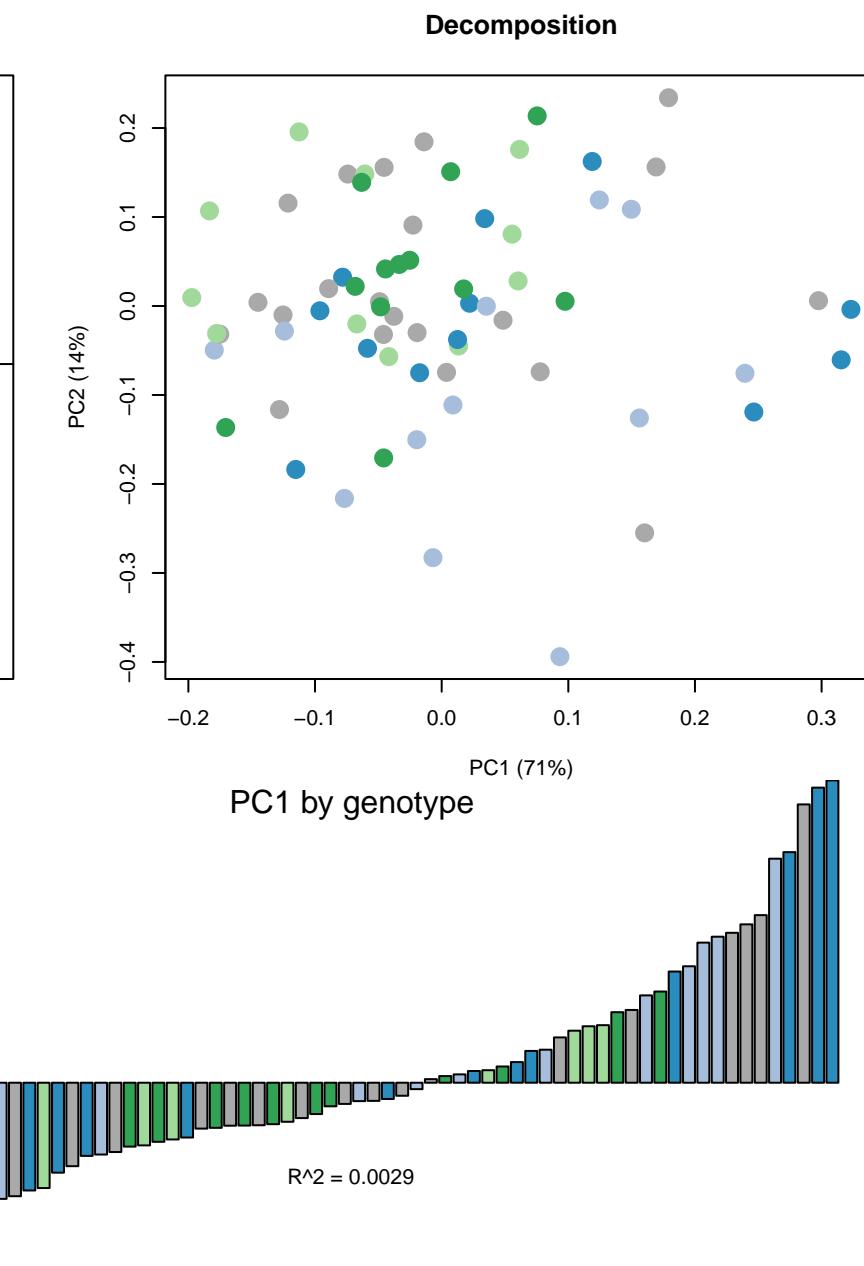
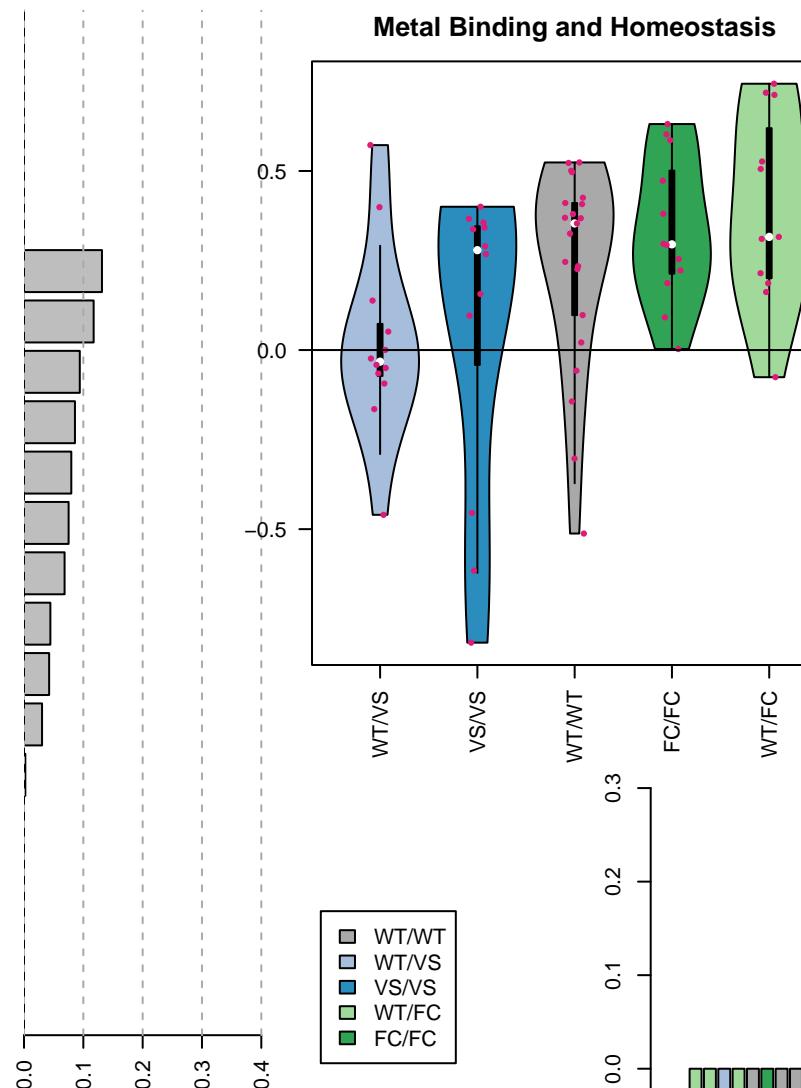
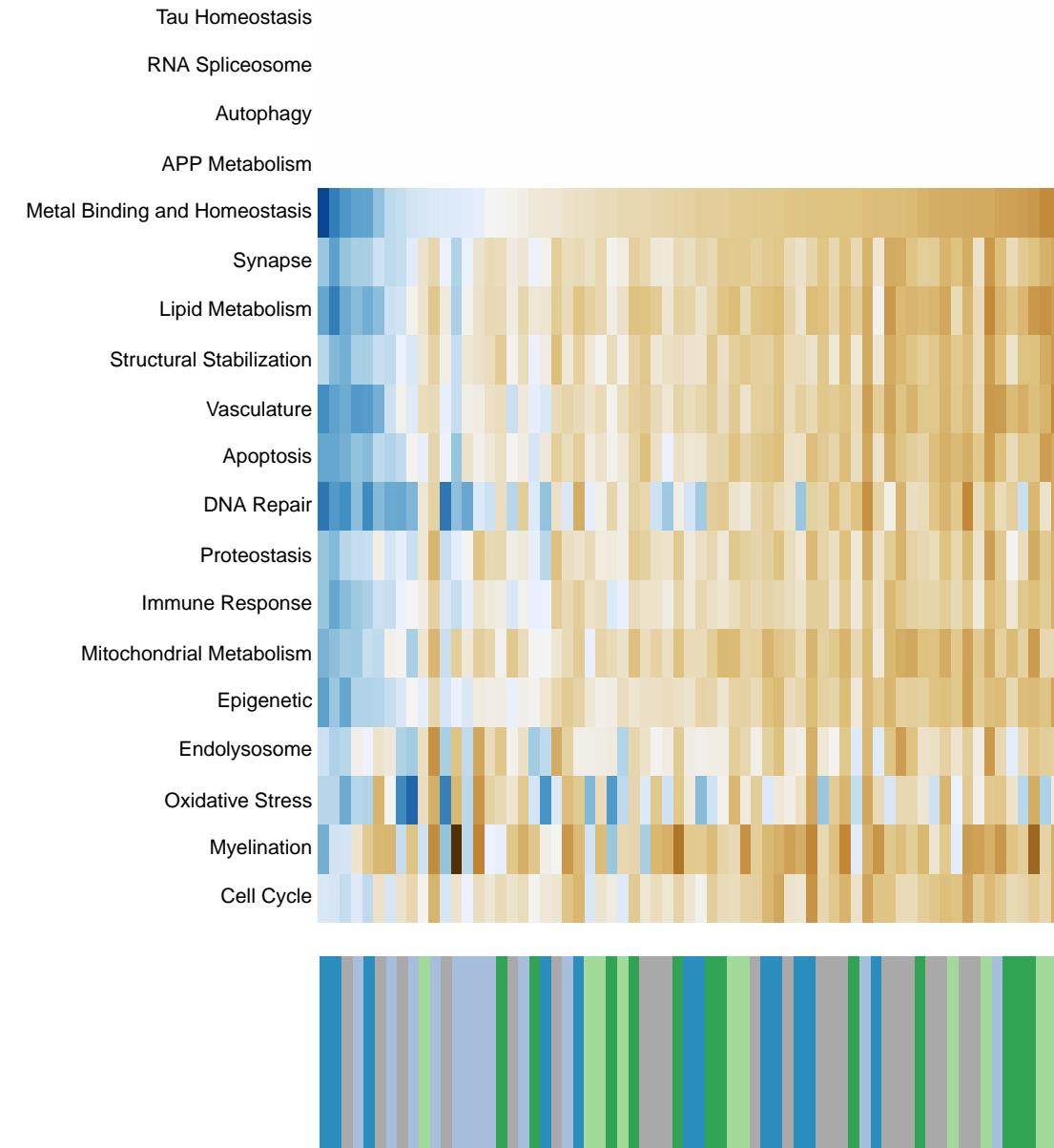
Lipid Metabolism



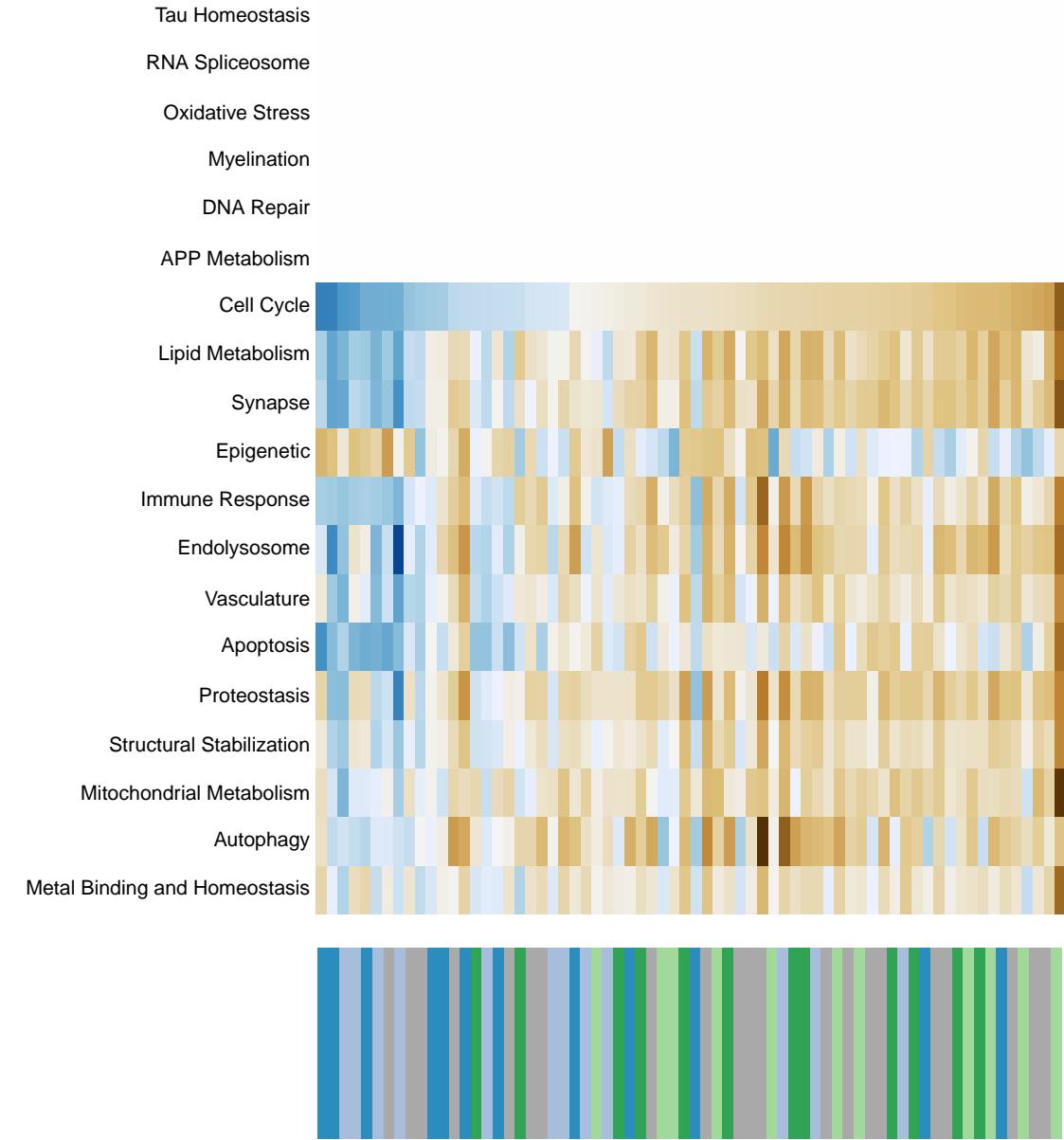
Decomposition



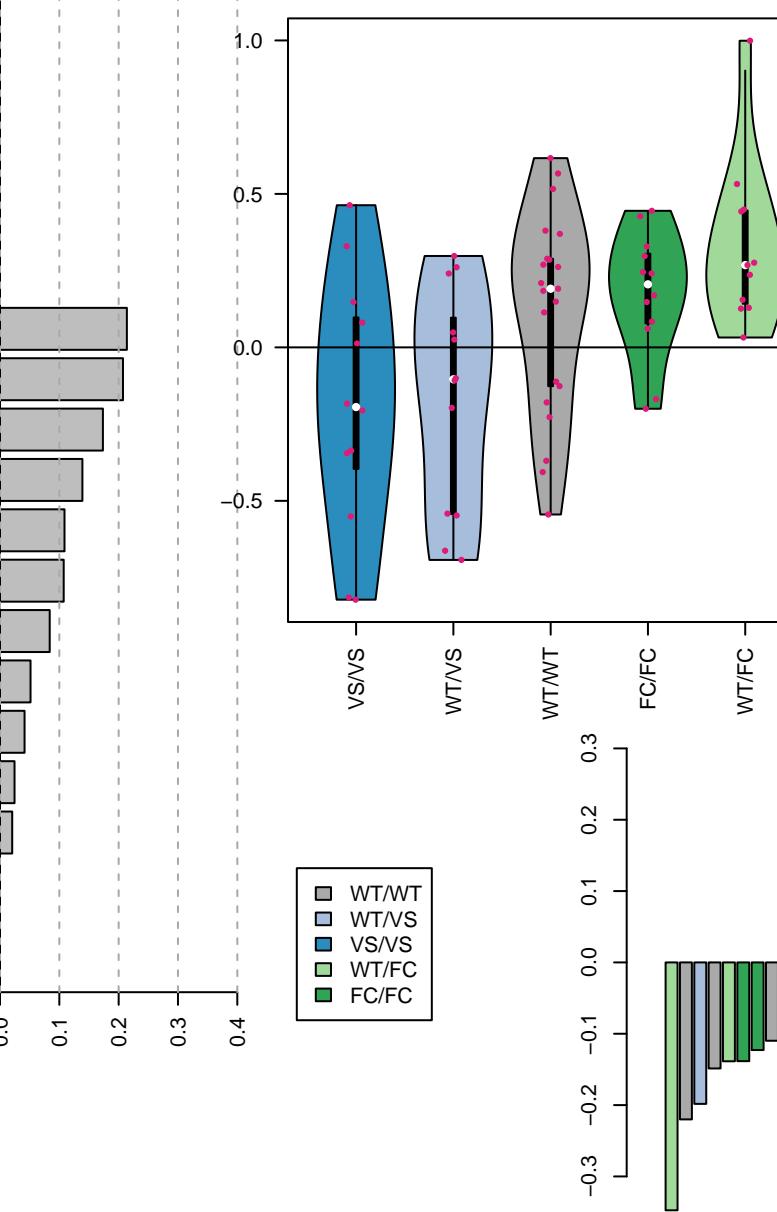
Signaling pathways regulating pluripotency of stem cells



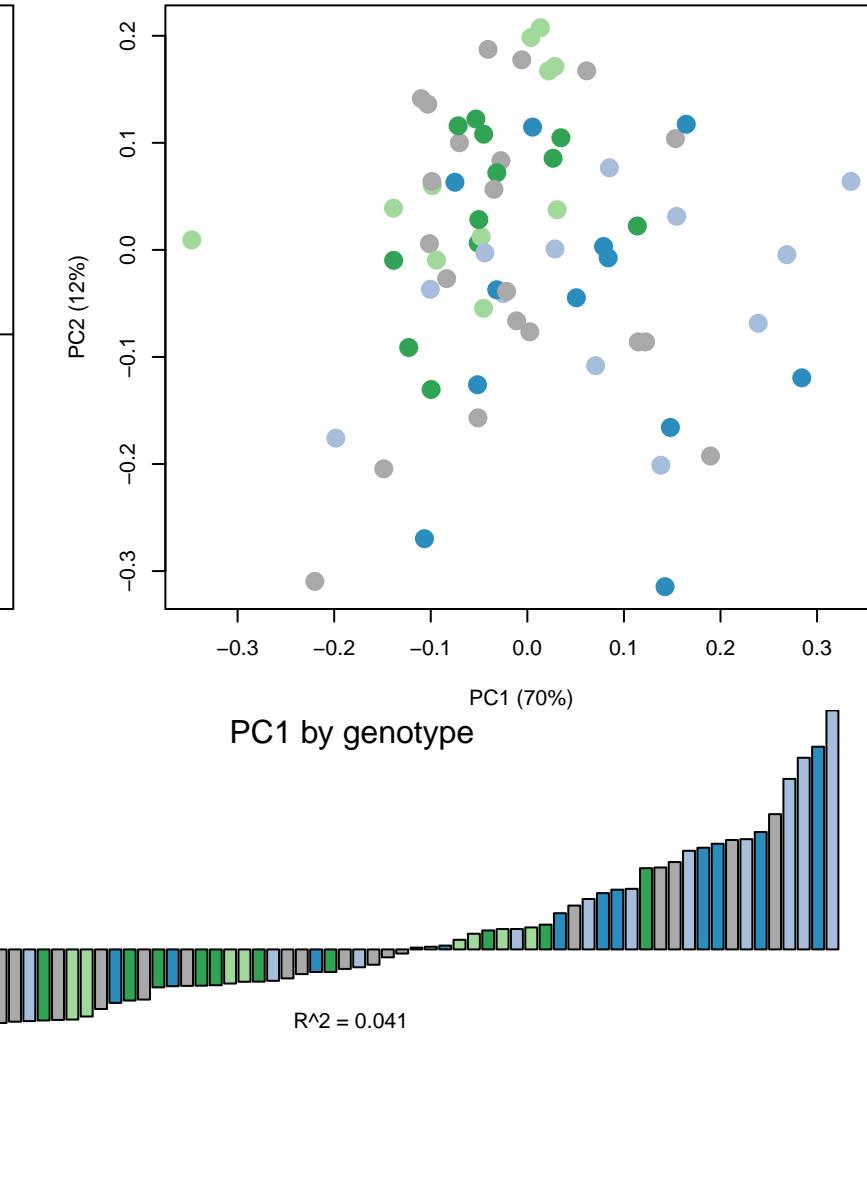
Cytoskeleton in muscle cells



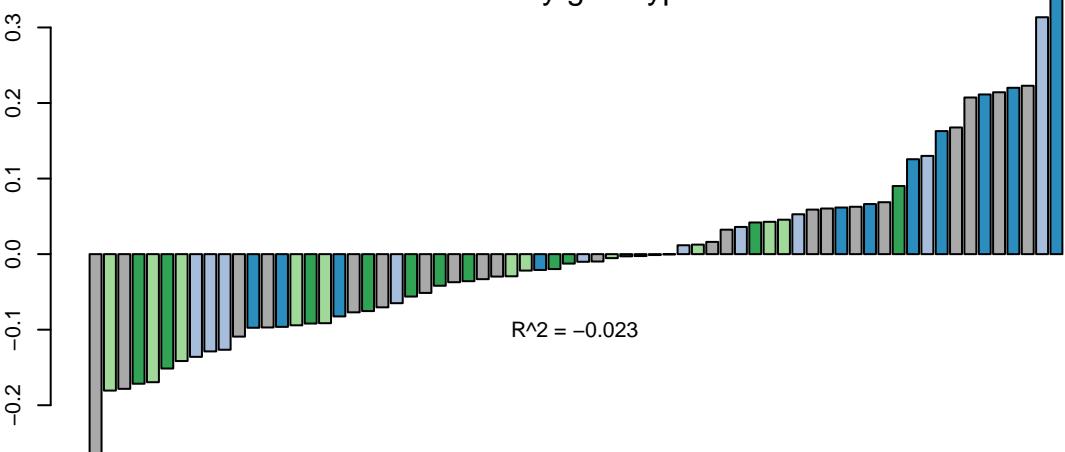
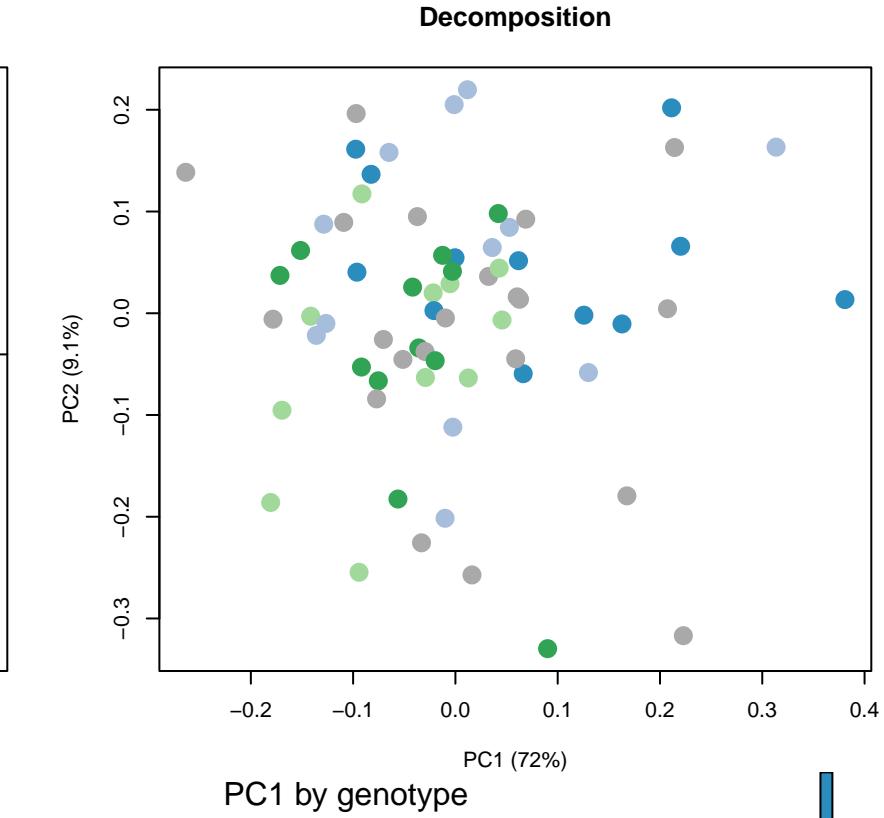
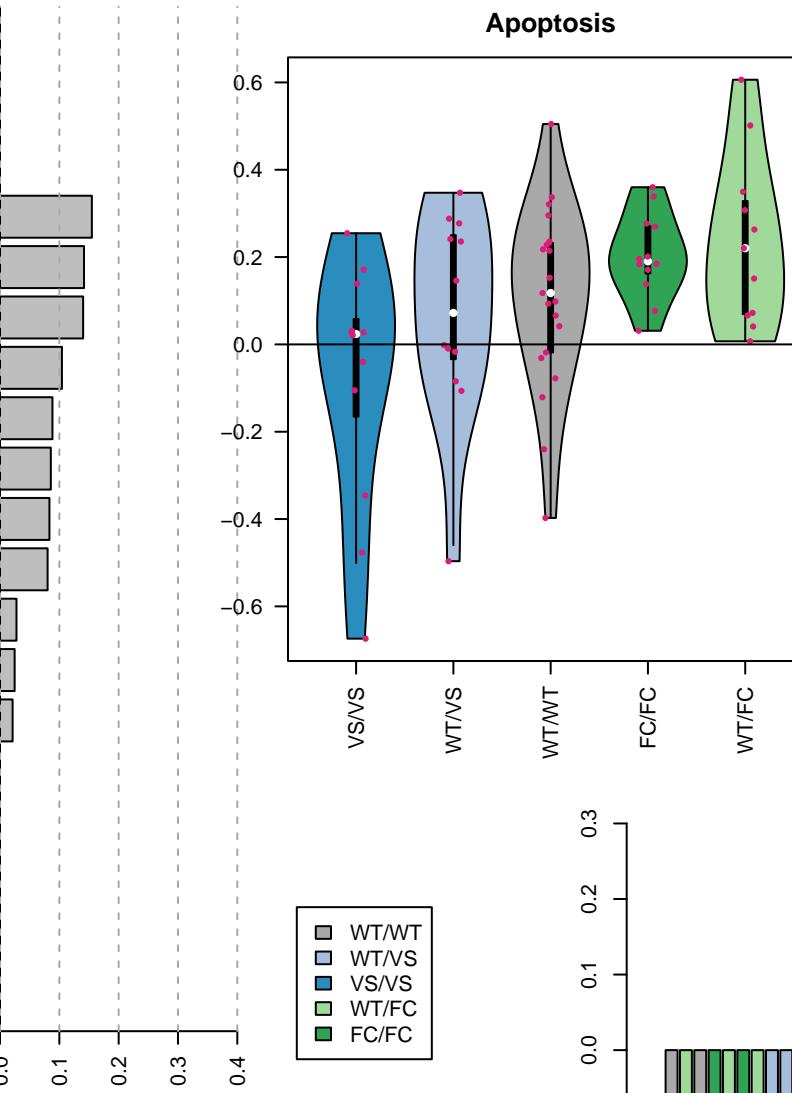
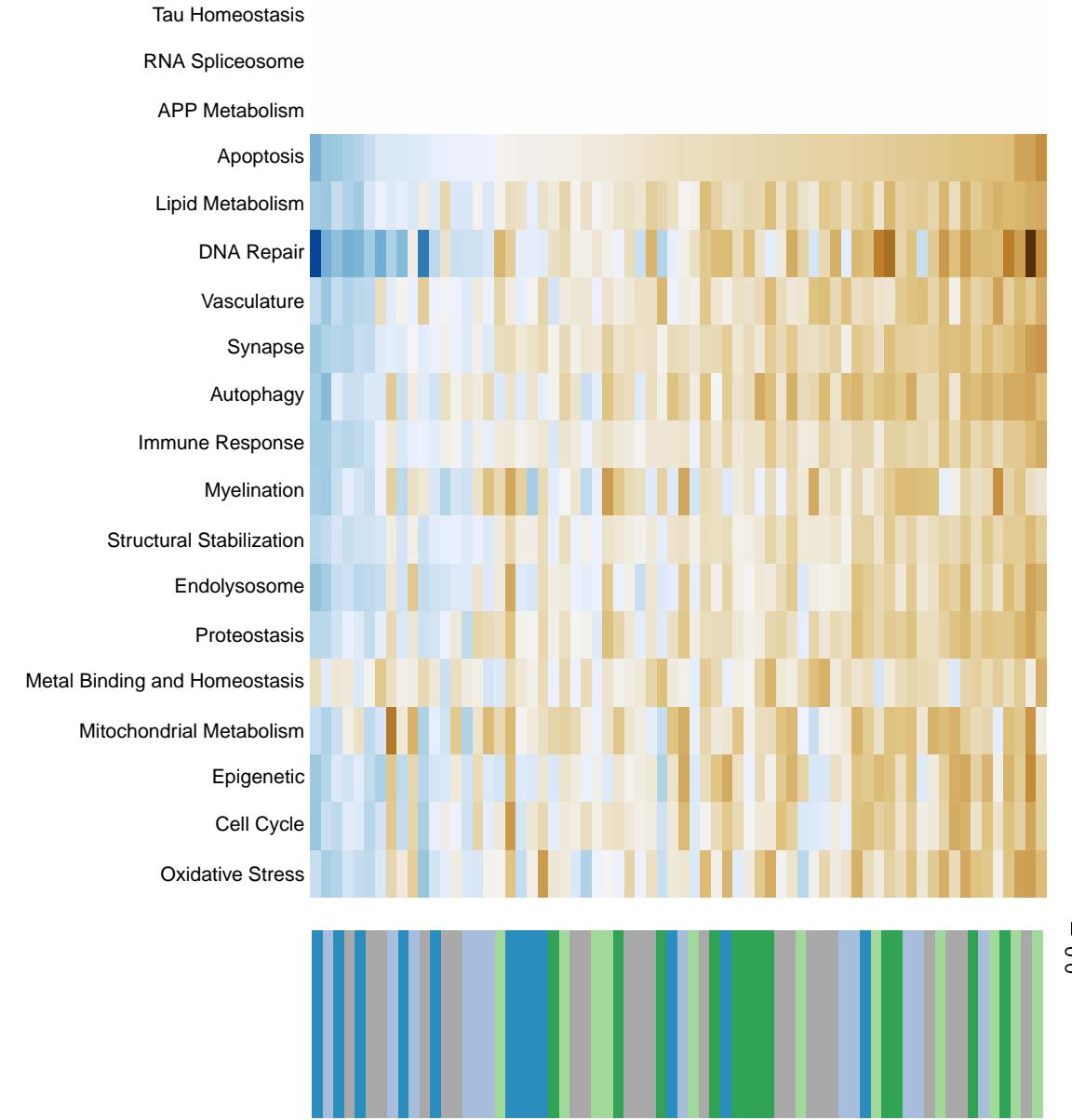
Cell Cycle



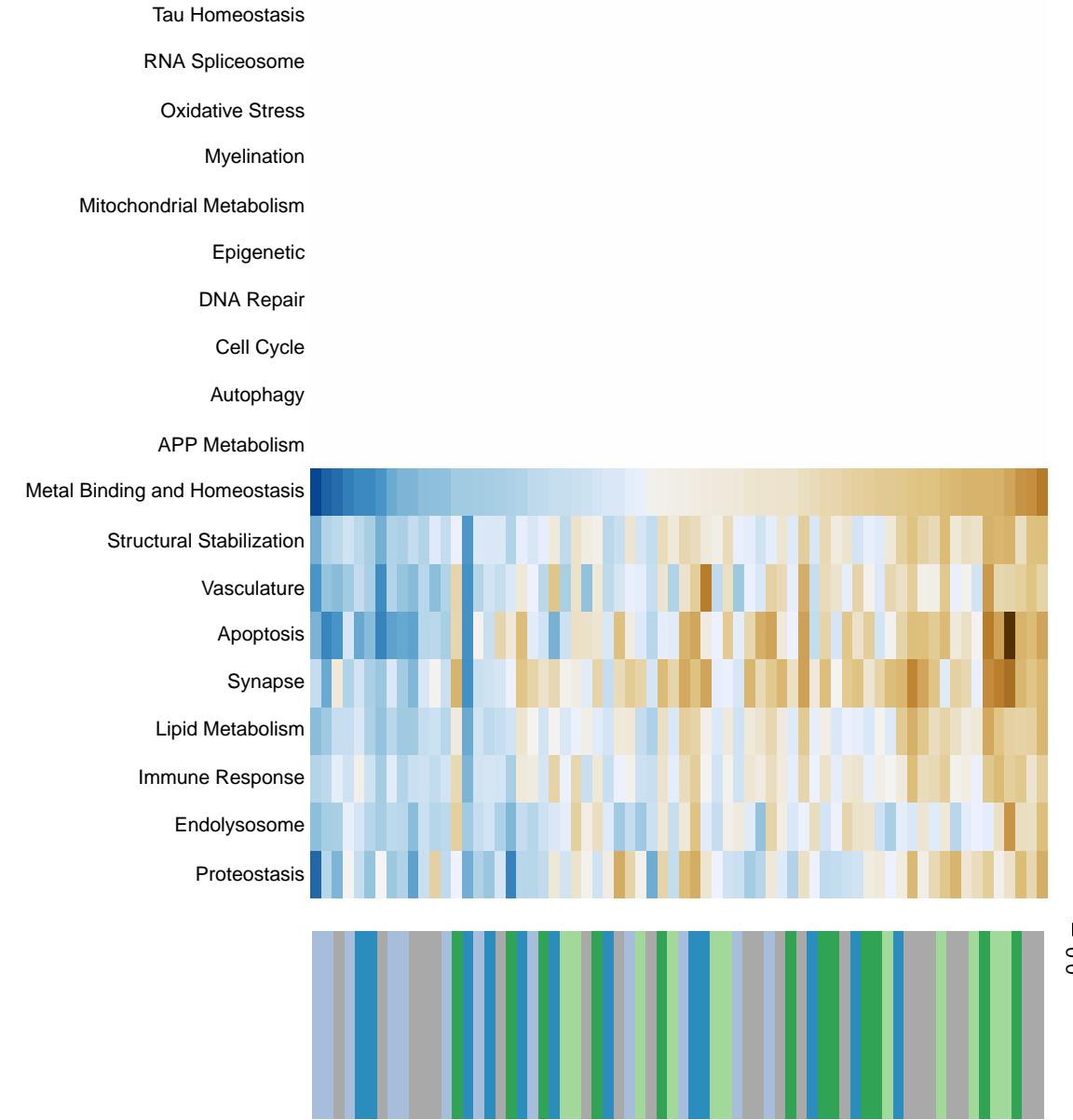
Decomposition



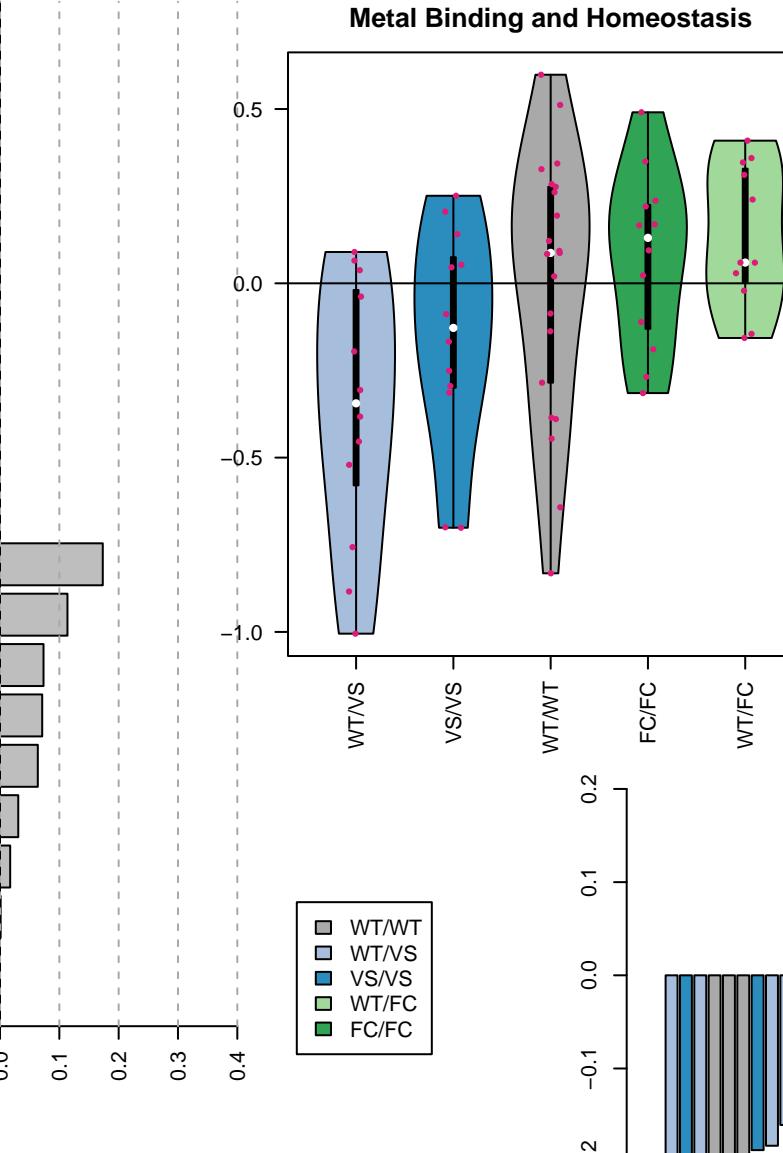
Regulation of actin cytoskeleton



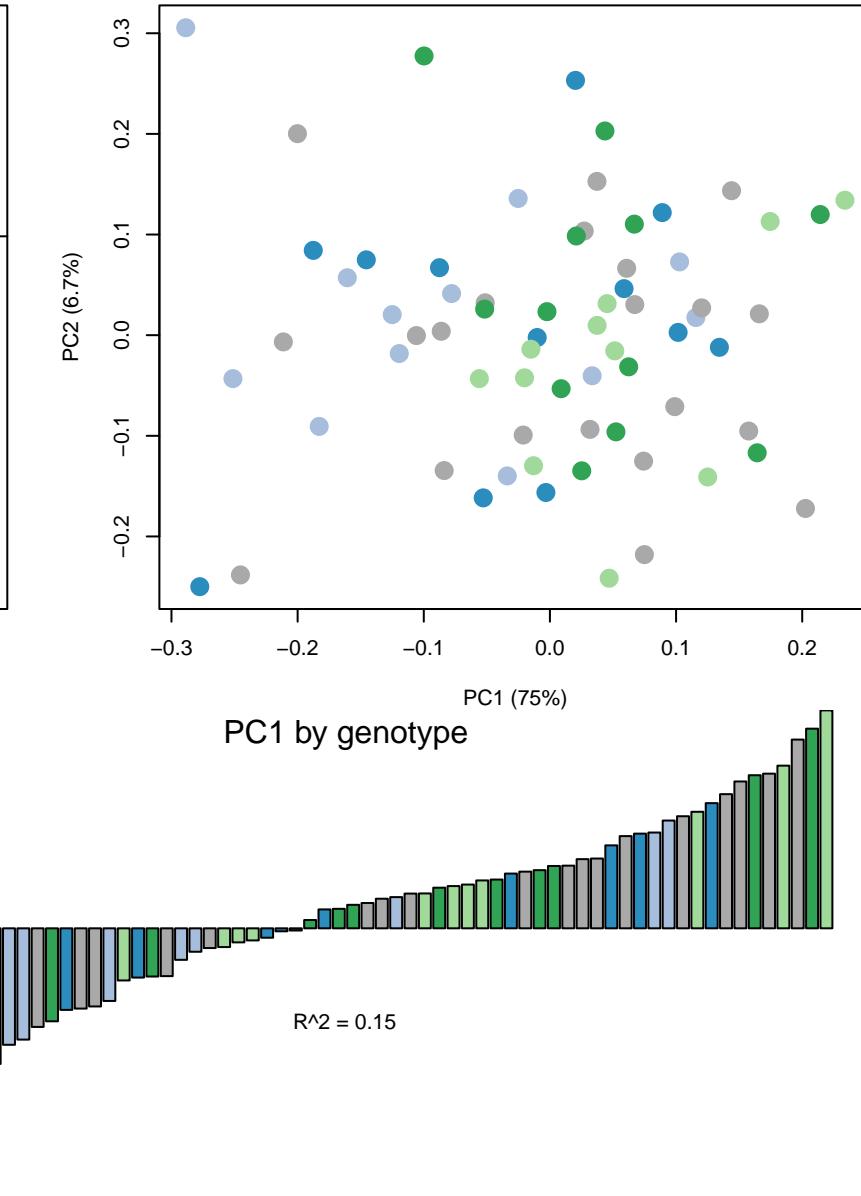
Hematopoietic cell lineage



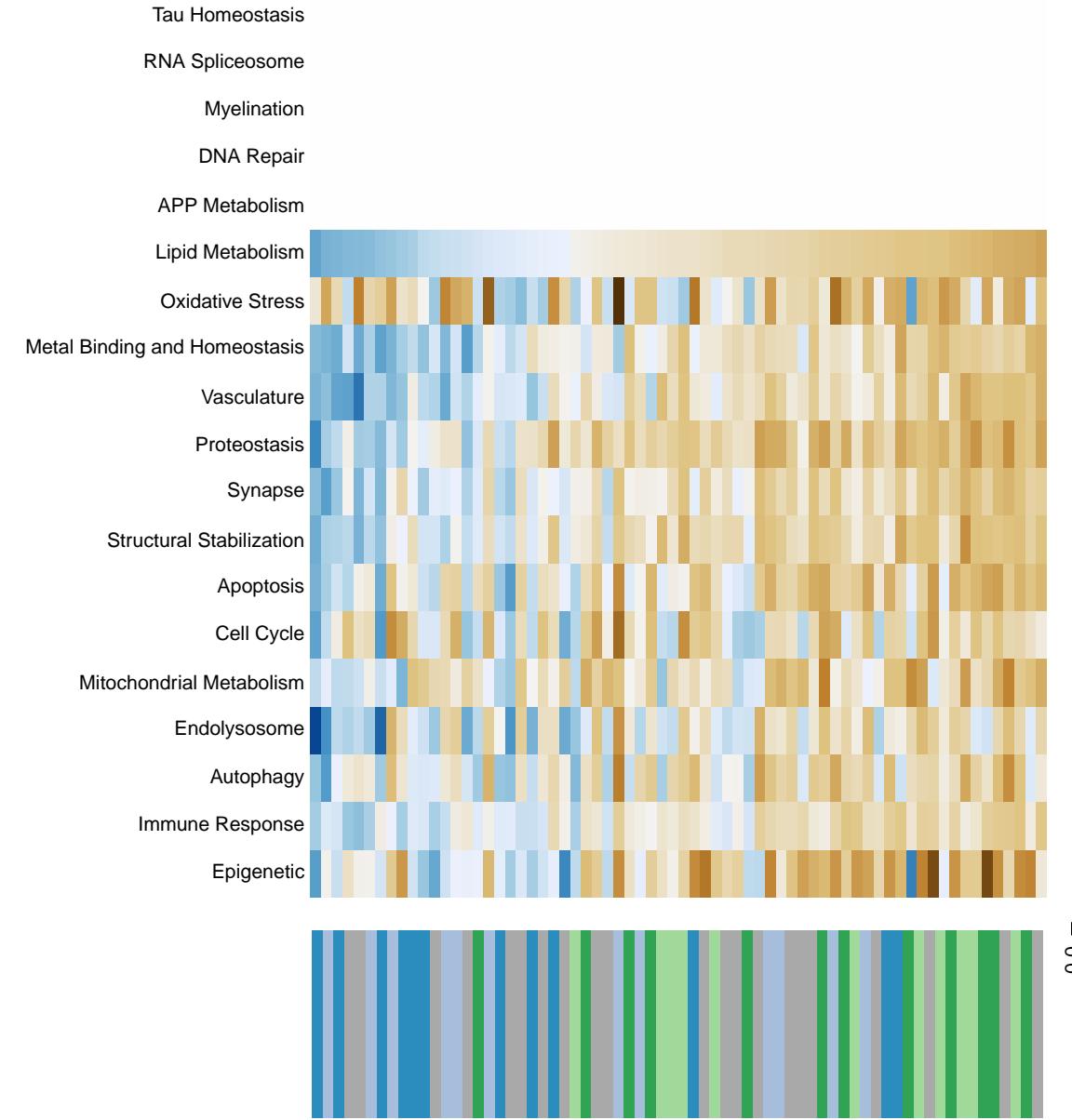
Metal Binding and Homeostasis



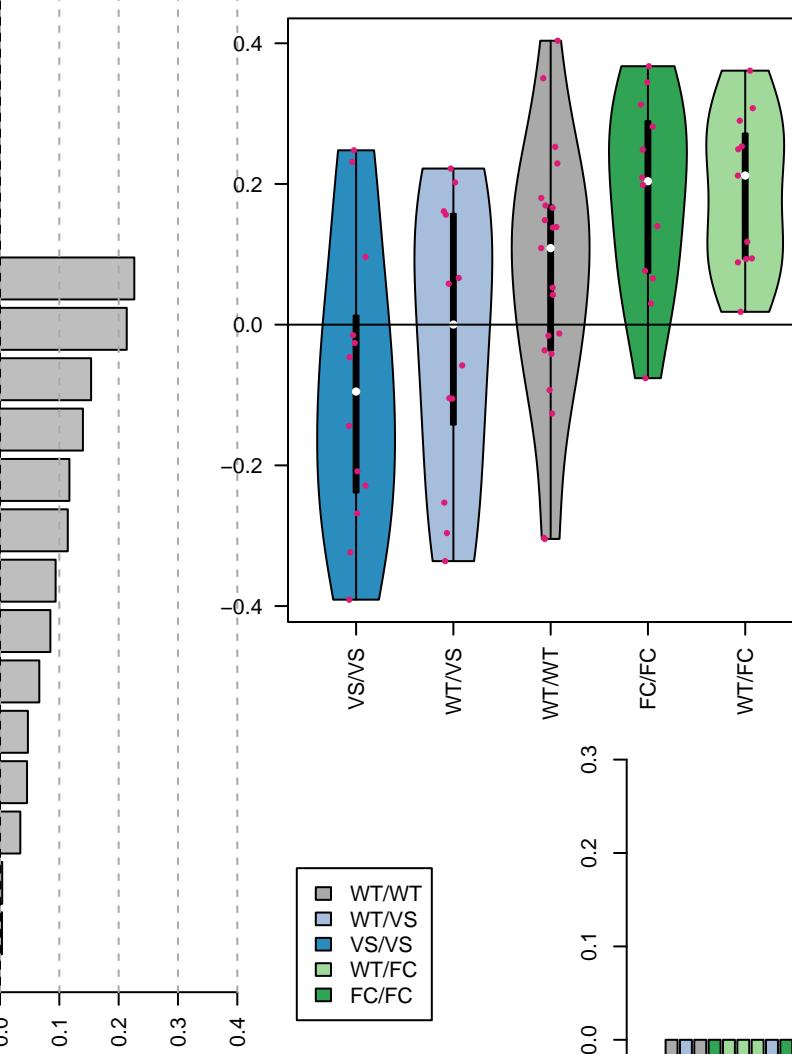
Decomposition



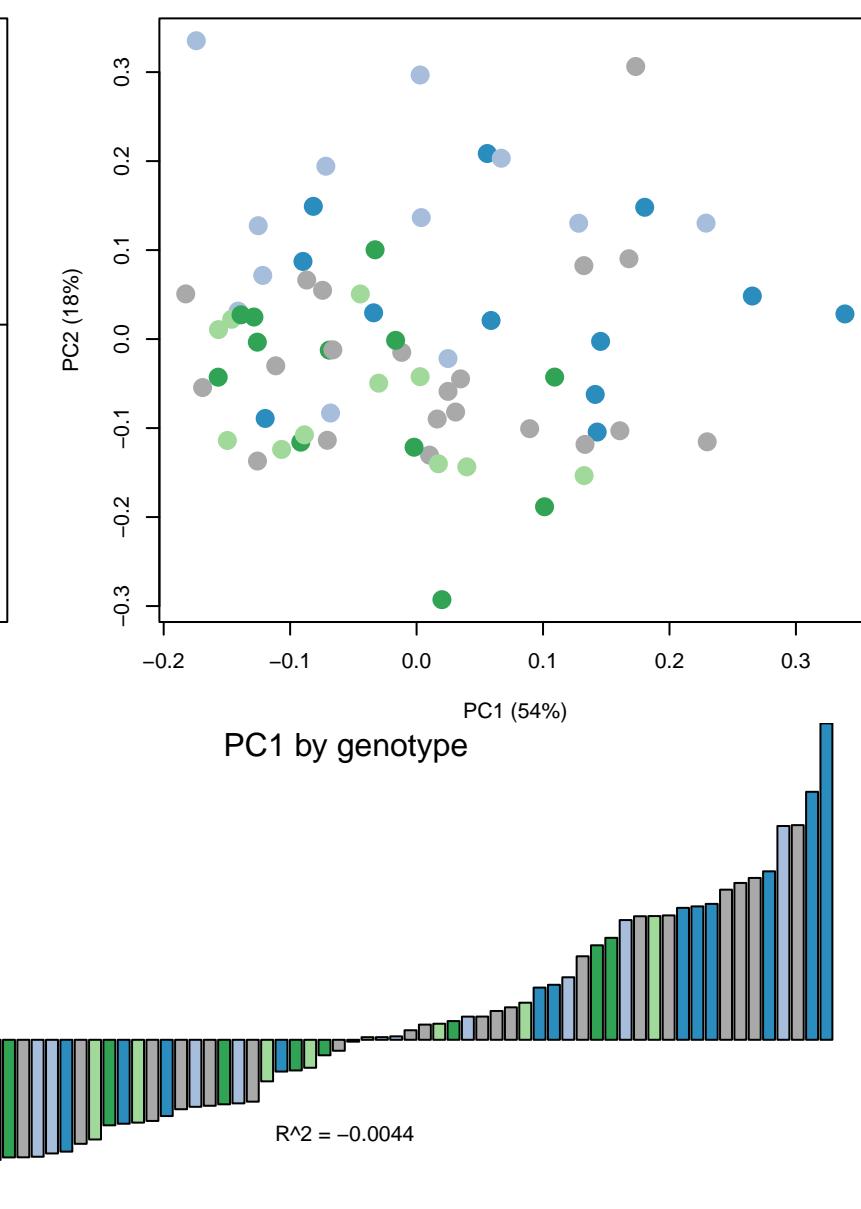
Platelet activation



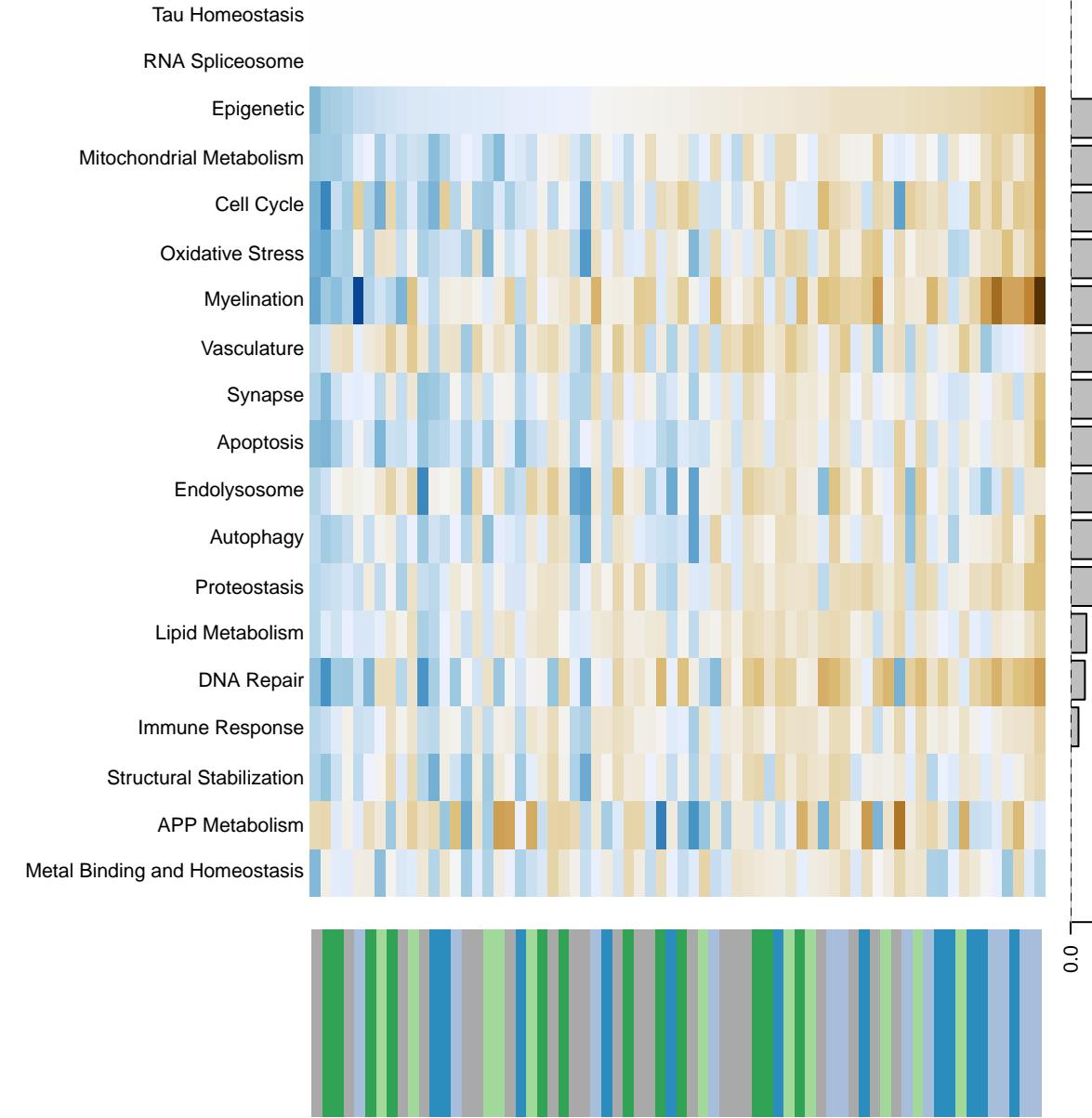
Lipid Metabolism



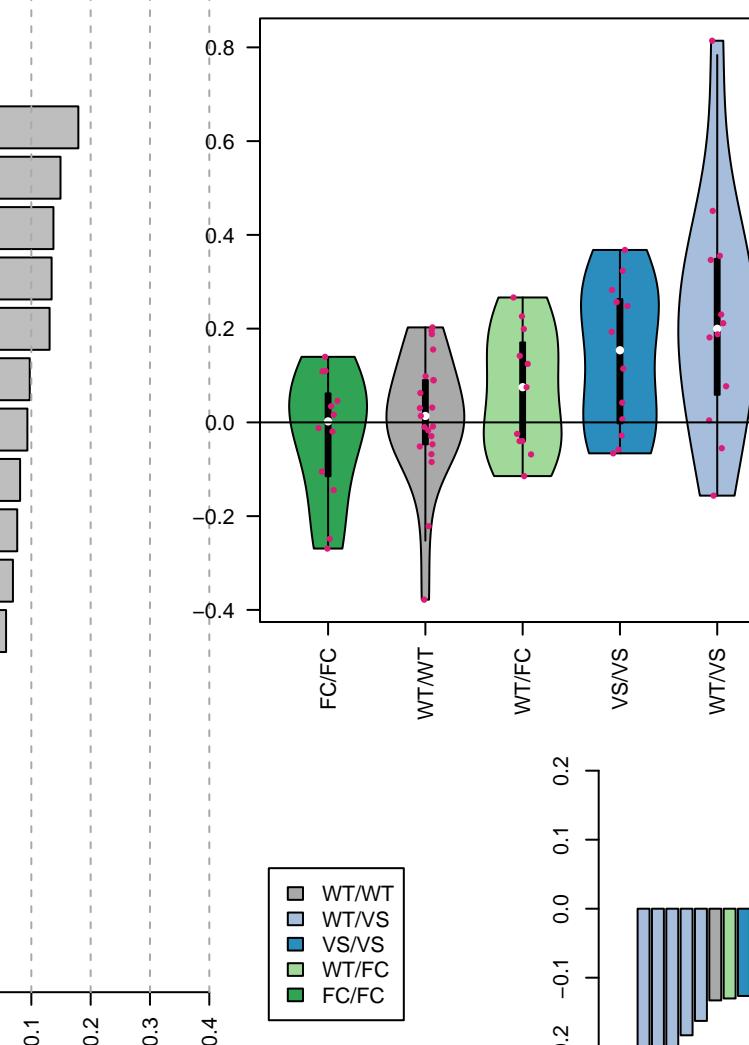
Decomposition



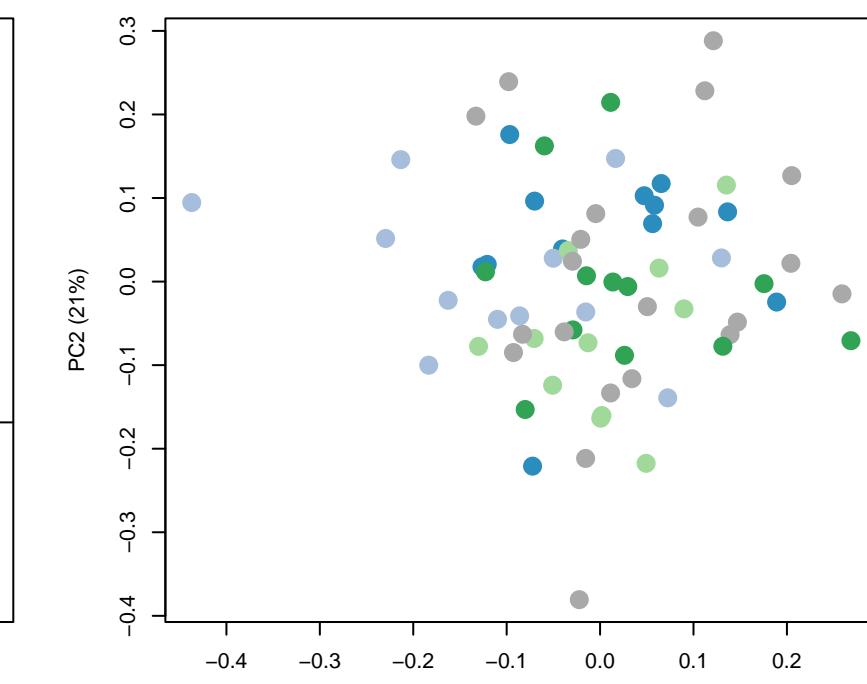
Neutrophil extracellular trap formation



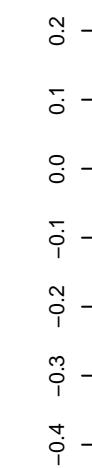
Epigenetic



Decomposition

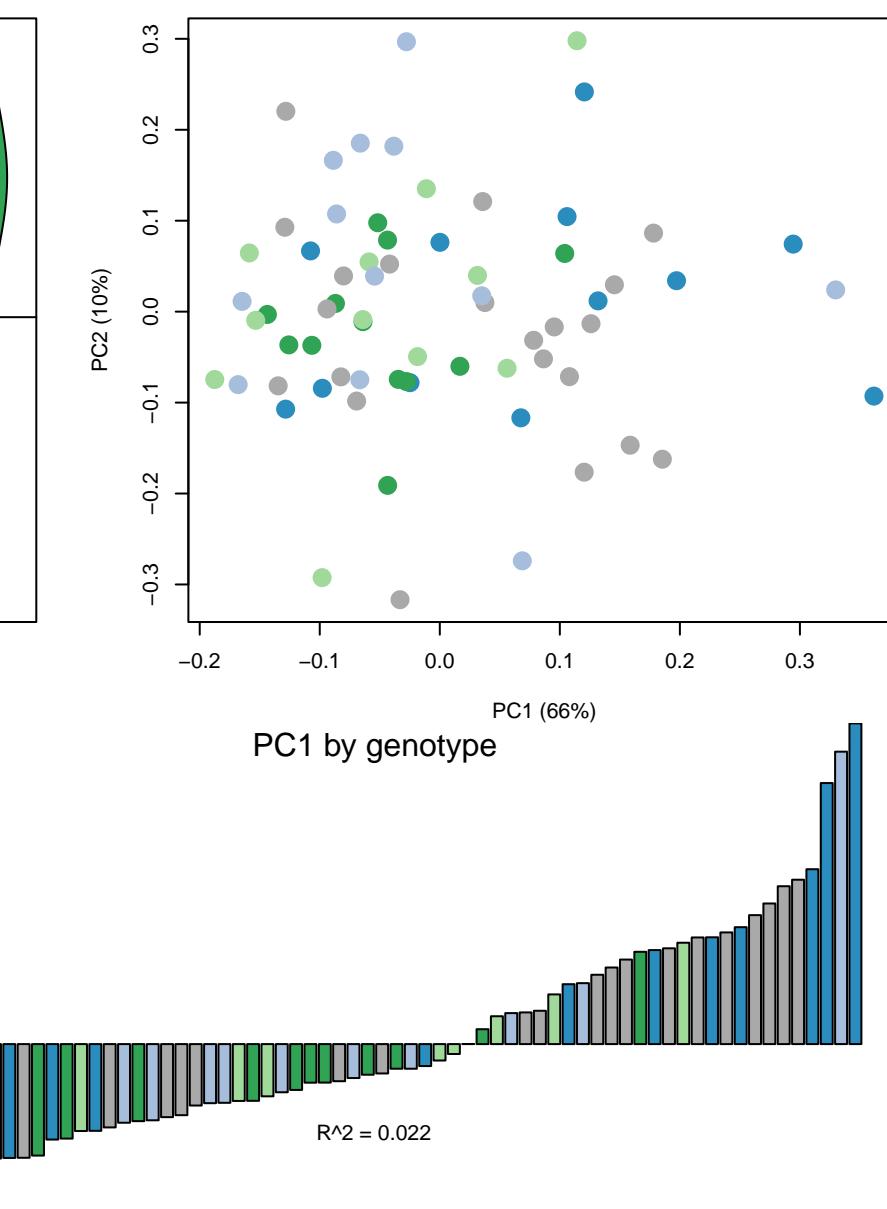
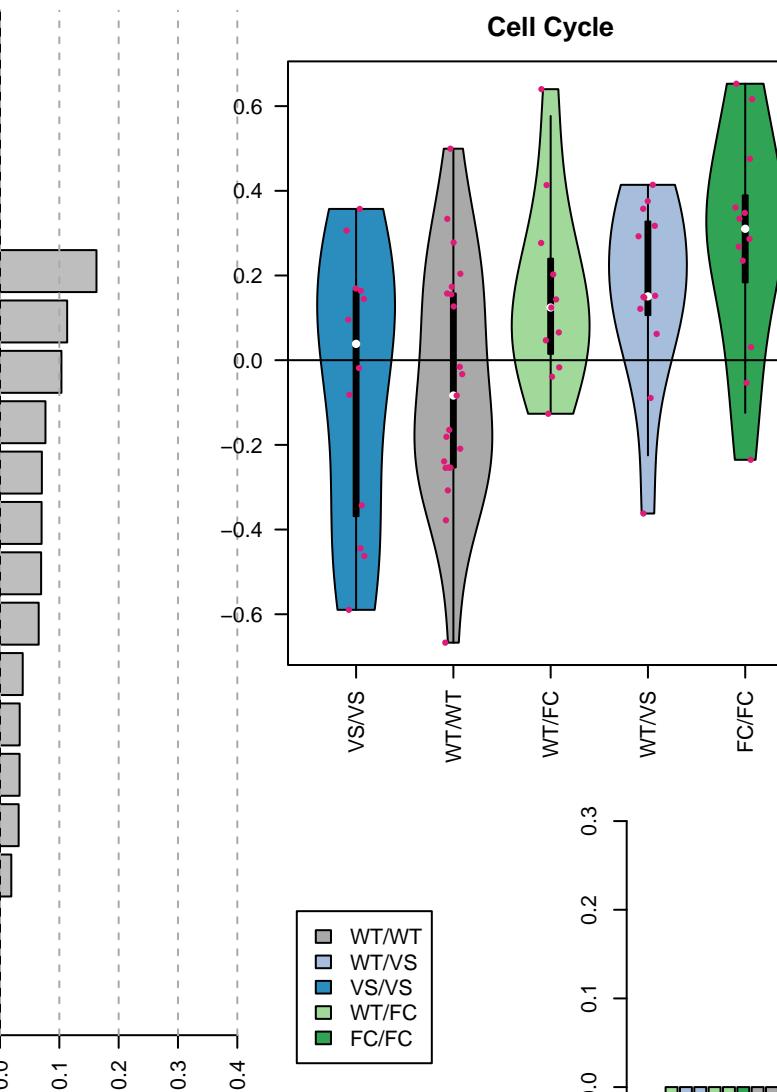
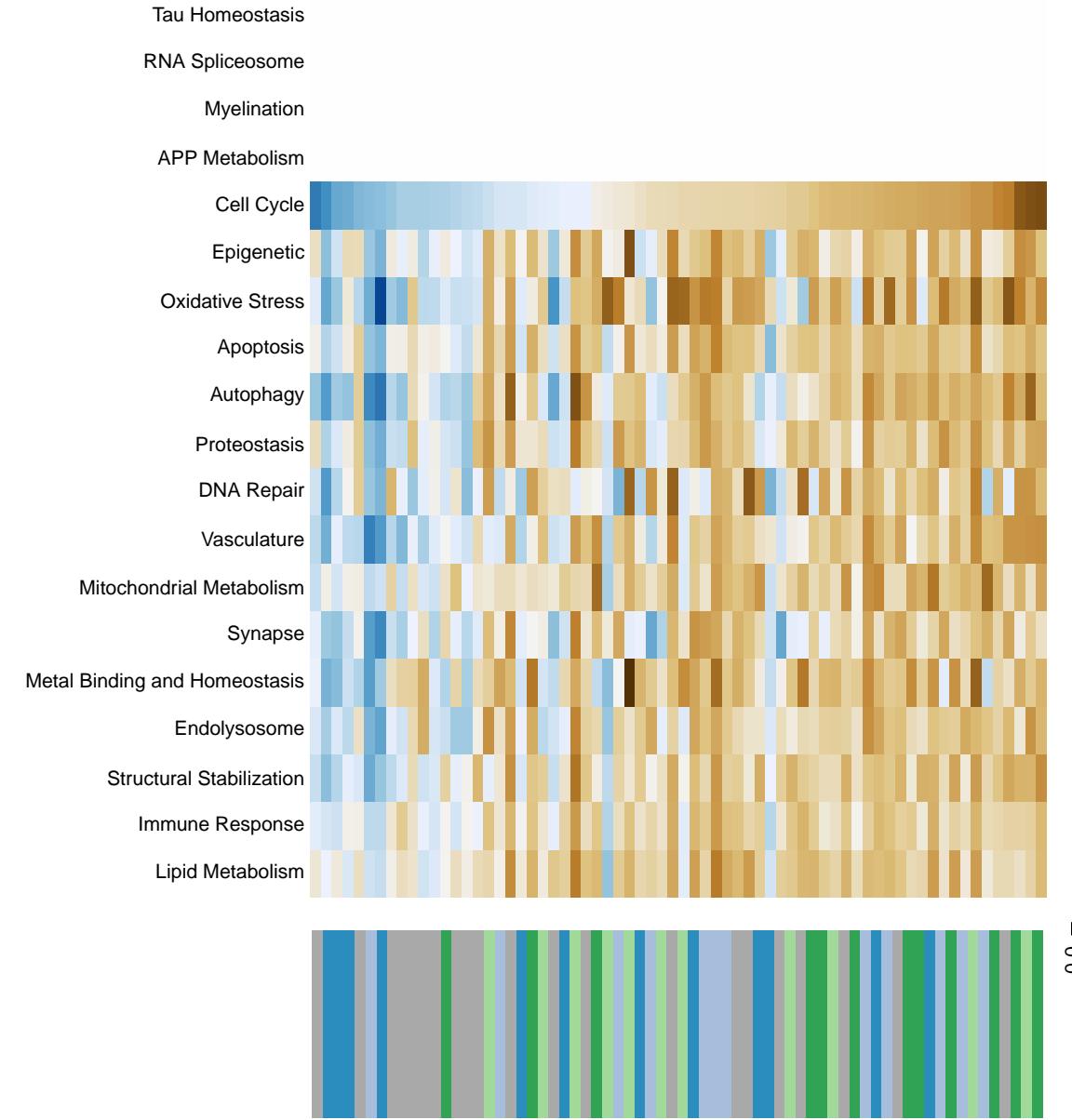


PC1 by genotype

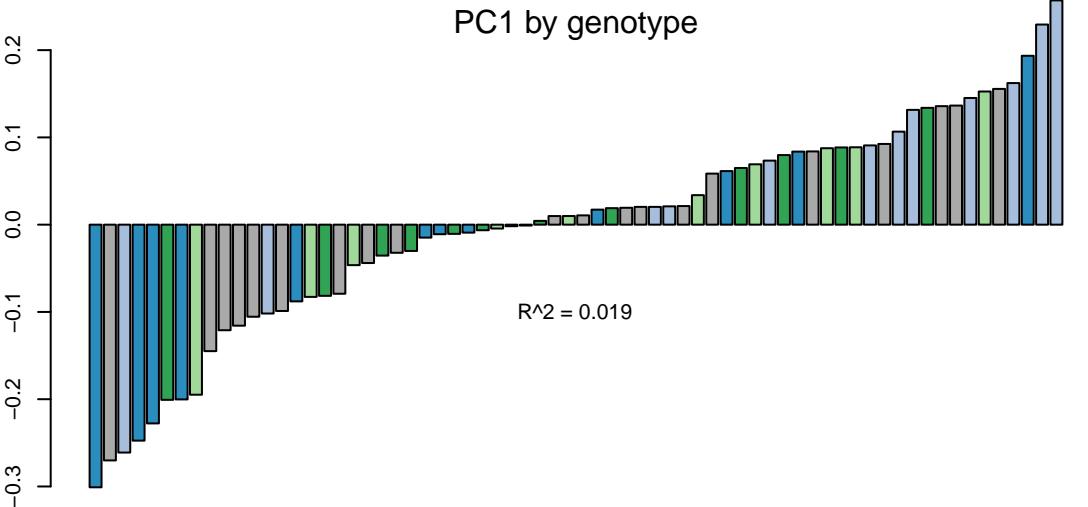
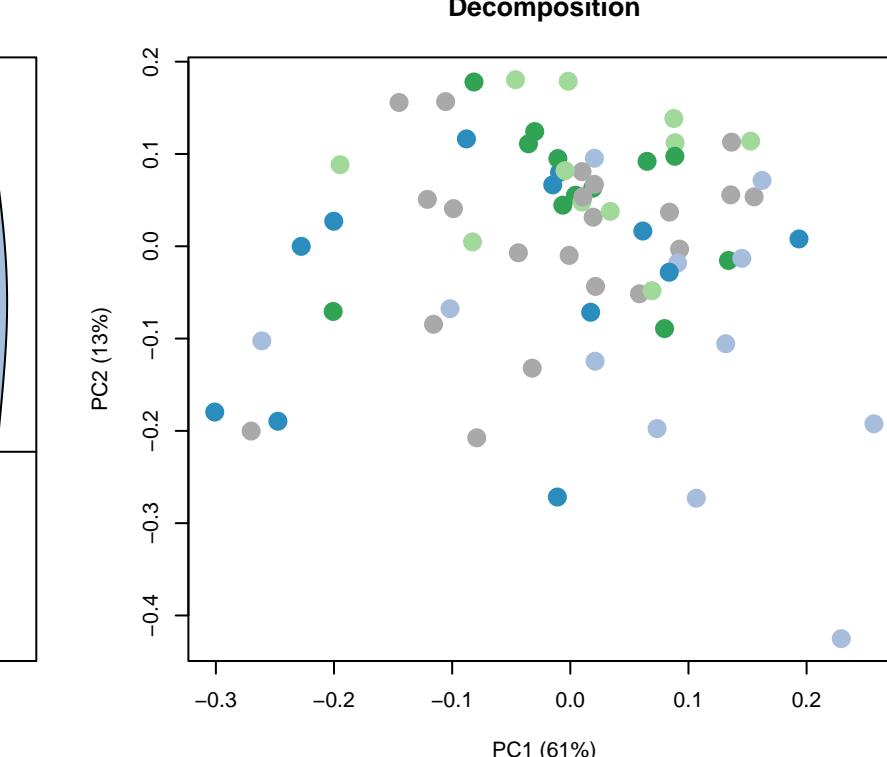
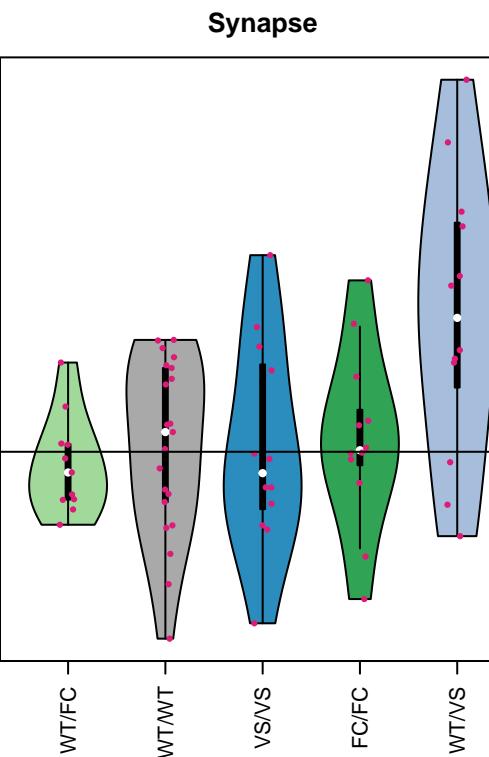
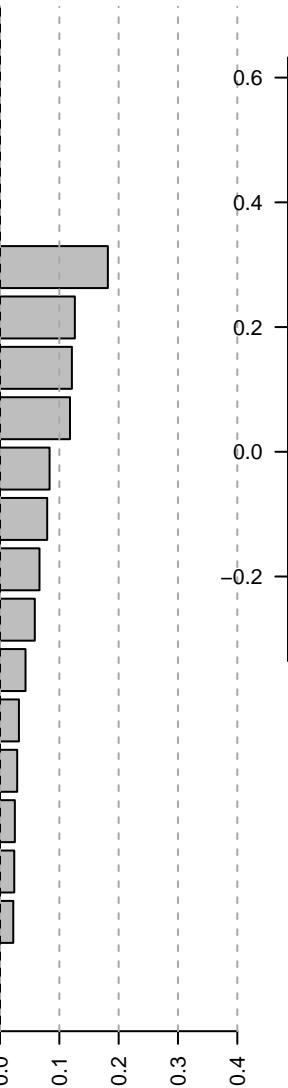
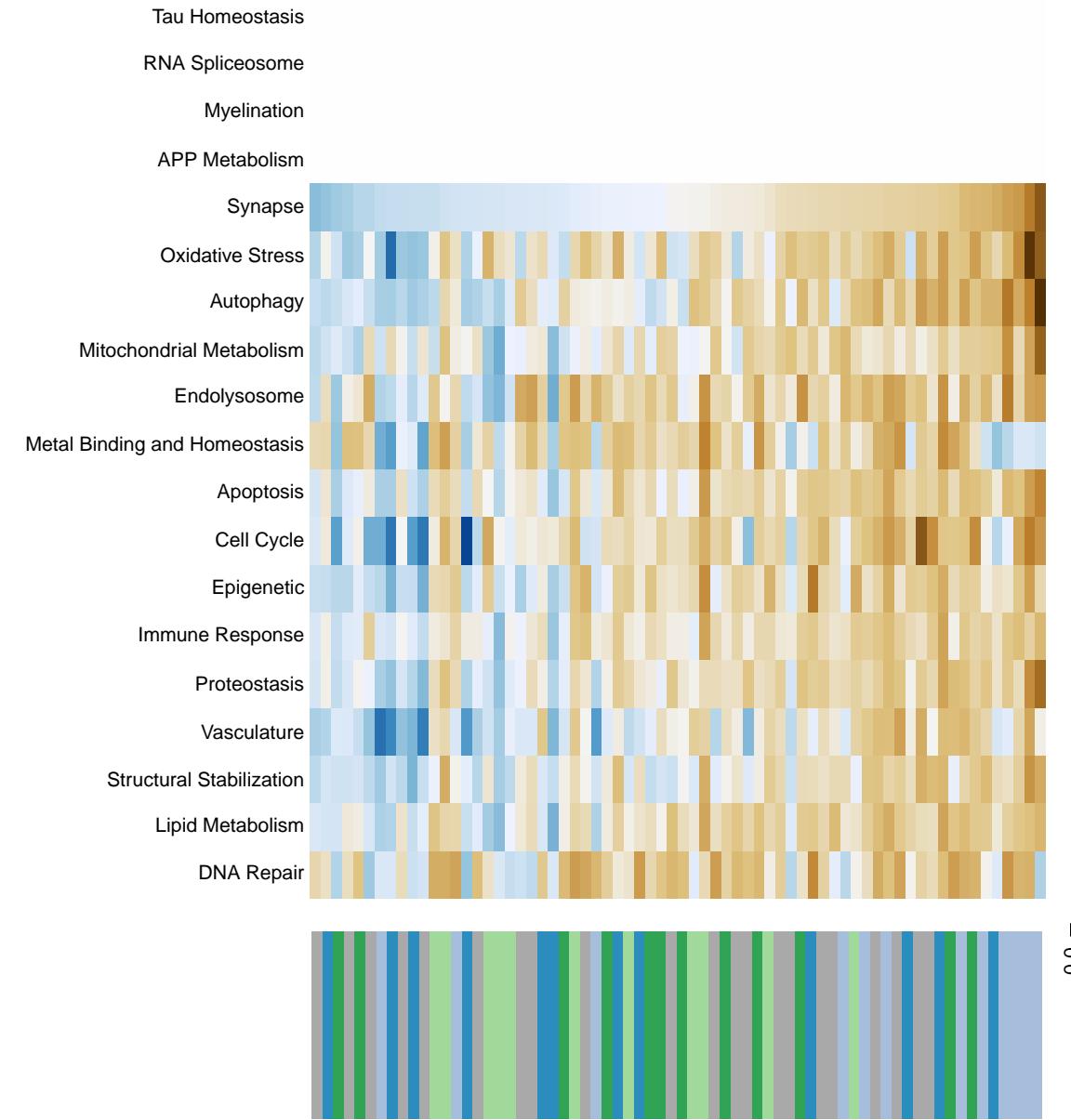


$R^2 = 3.3e-05$

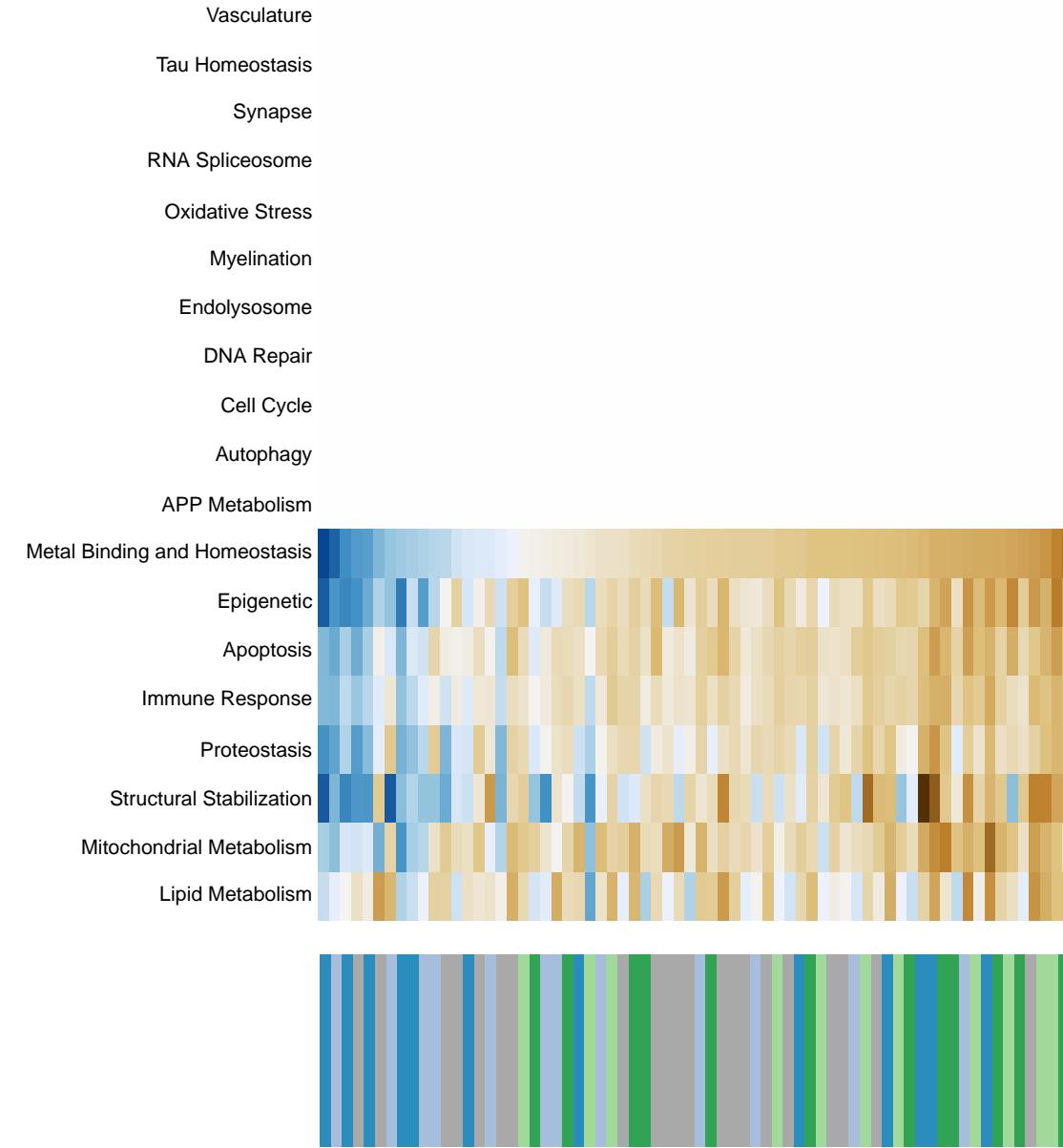
Toll-like receptor signaling pathway



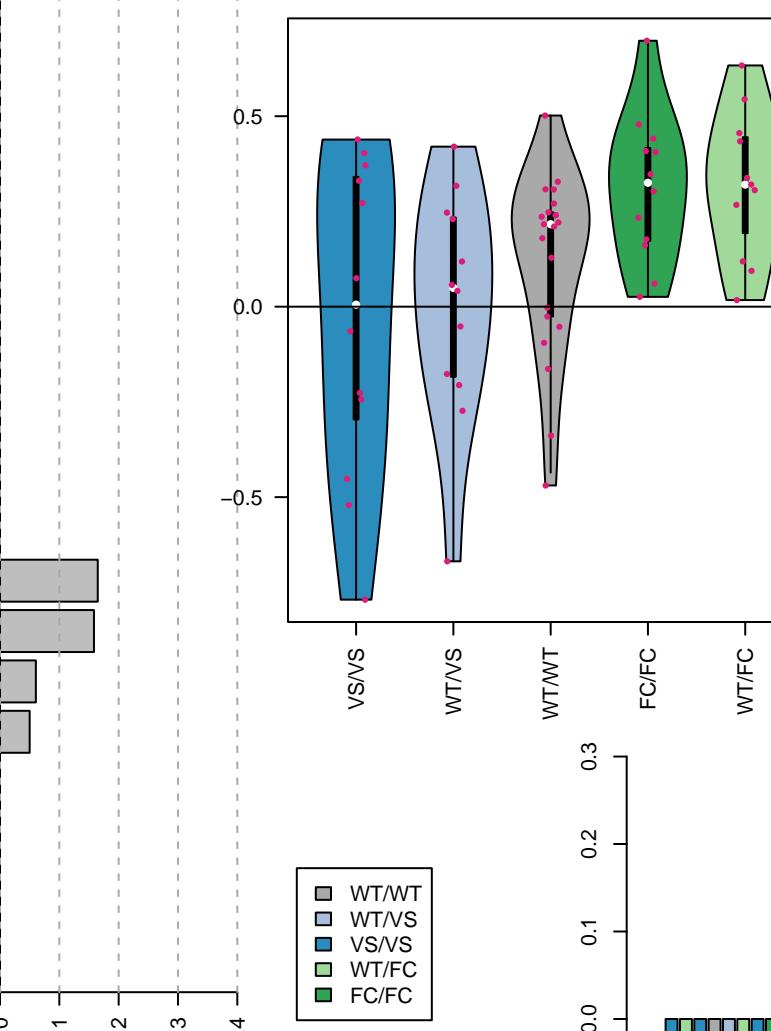
NOD-like receptor signaling pathway



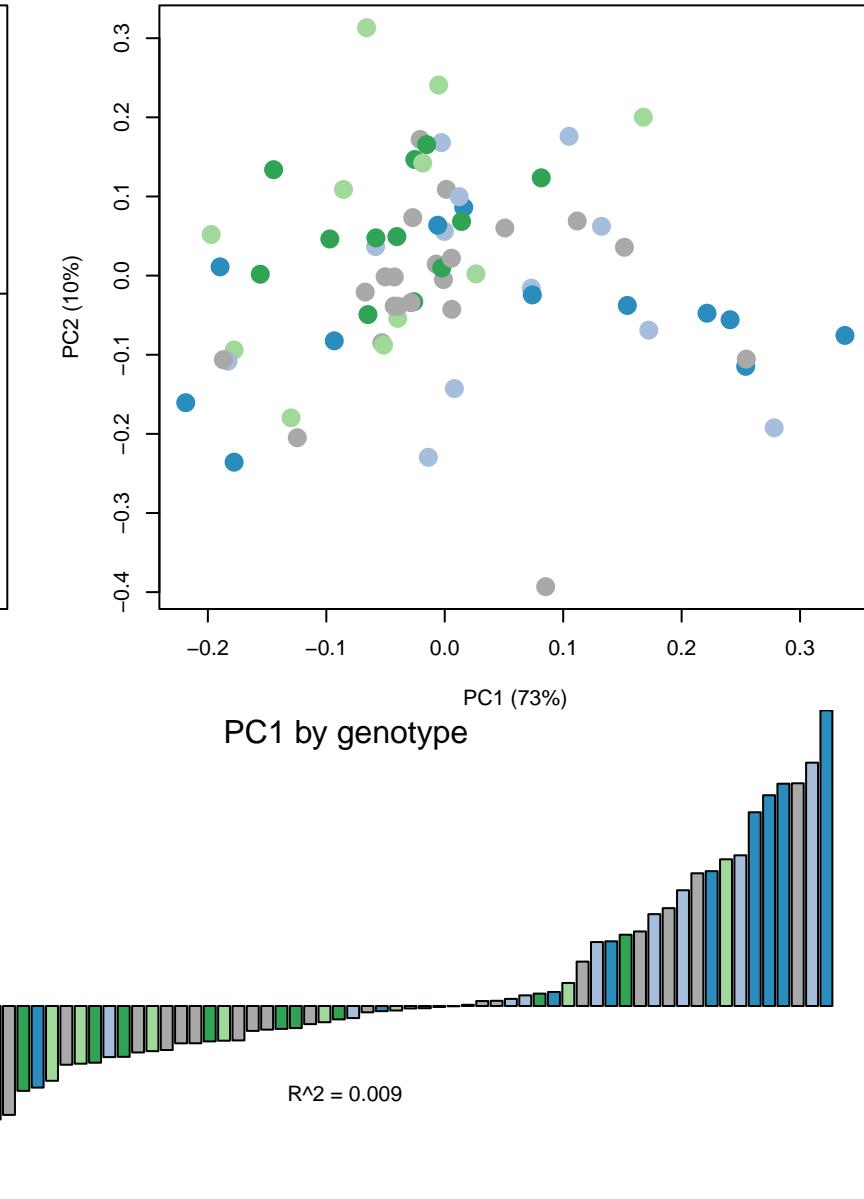
RIG-I-like receptor signaling pathway



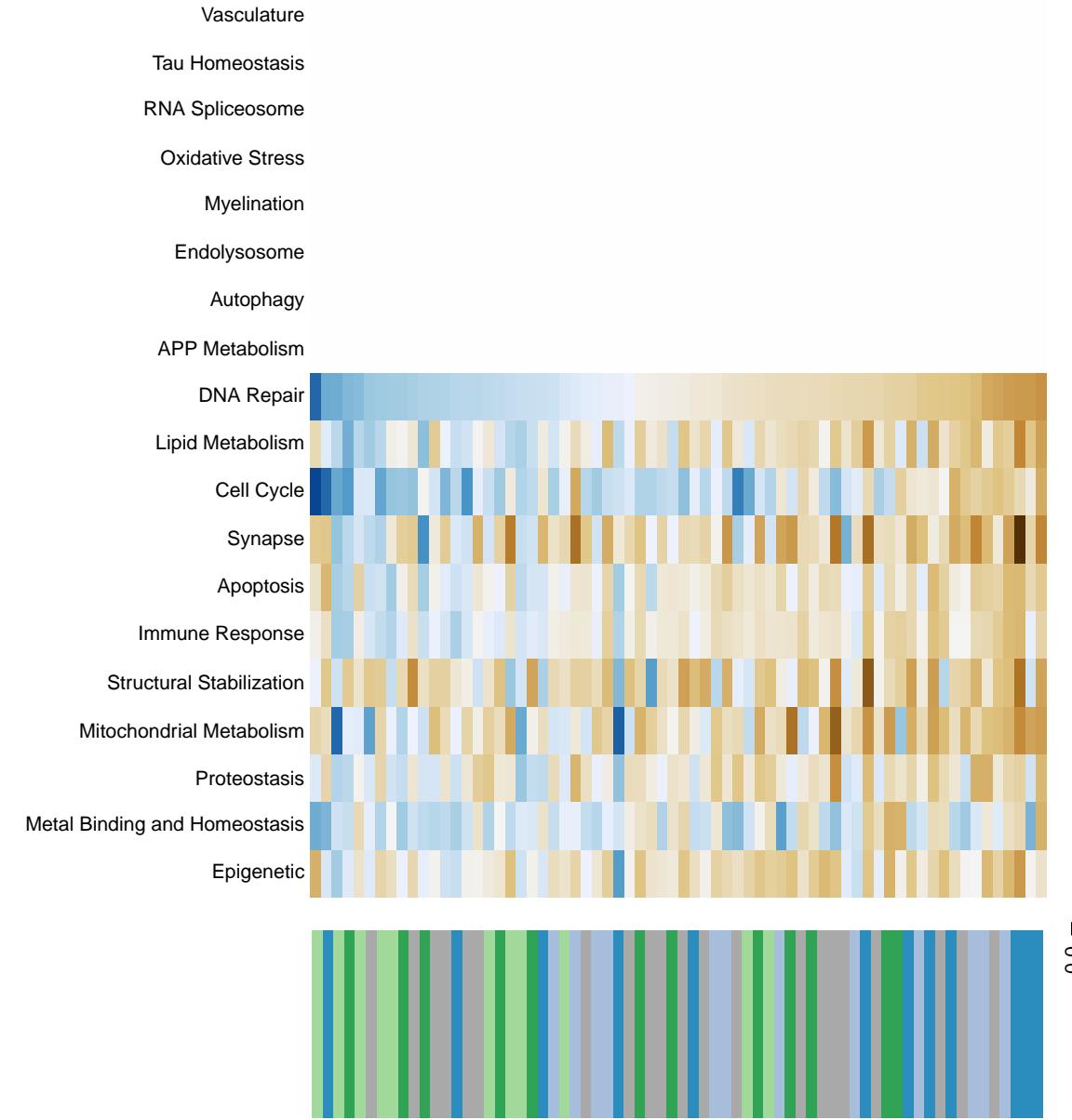
Metal Binding and Homeostasis



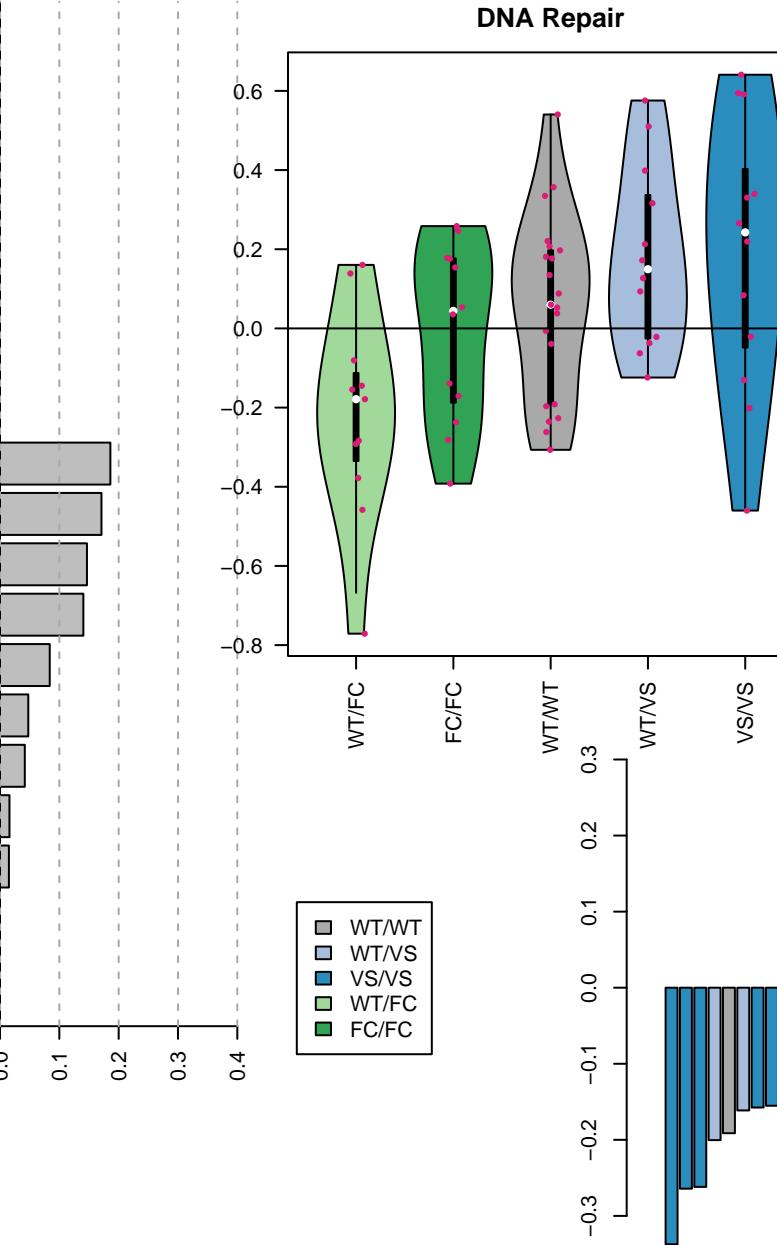
Decomposition



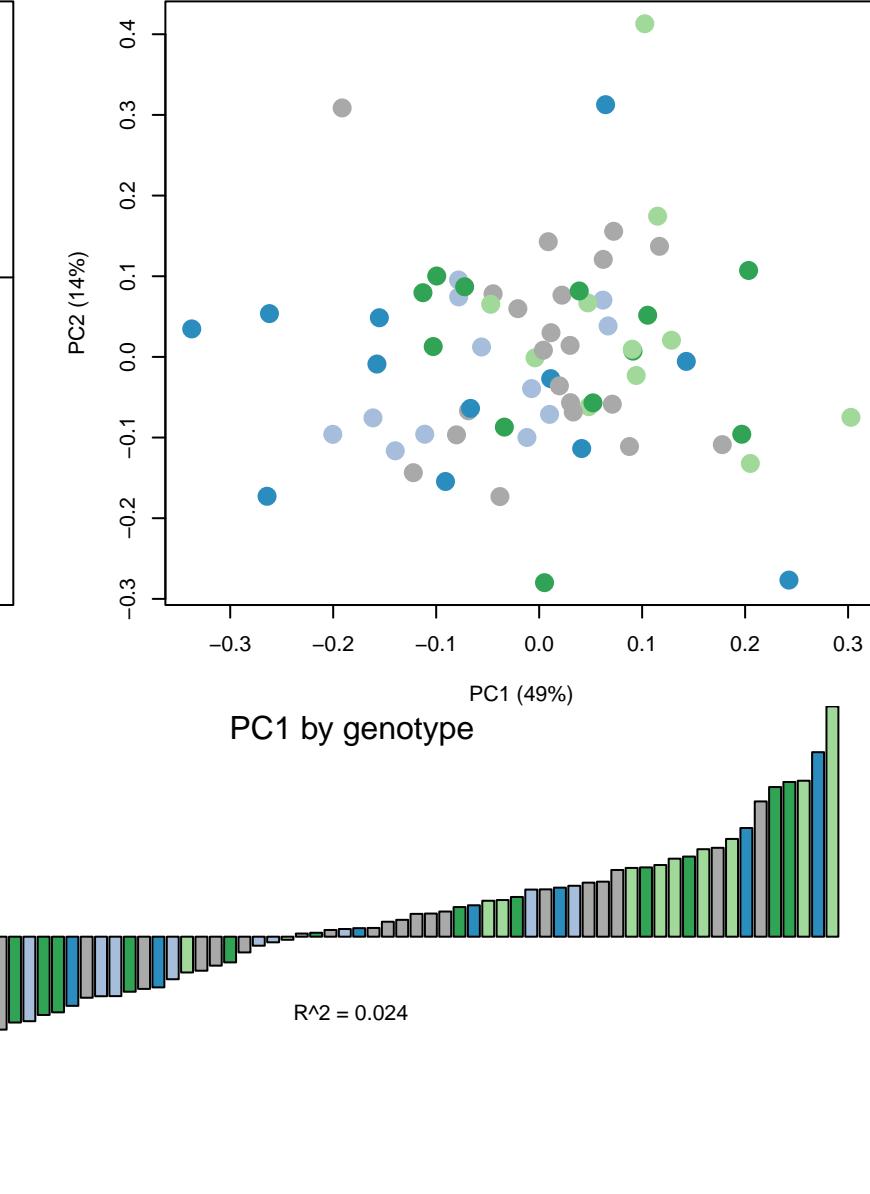
Cytosolic DNA-sensing pathway



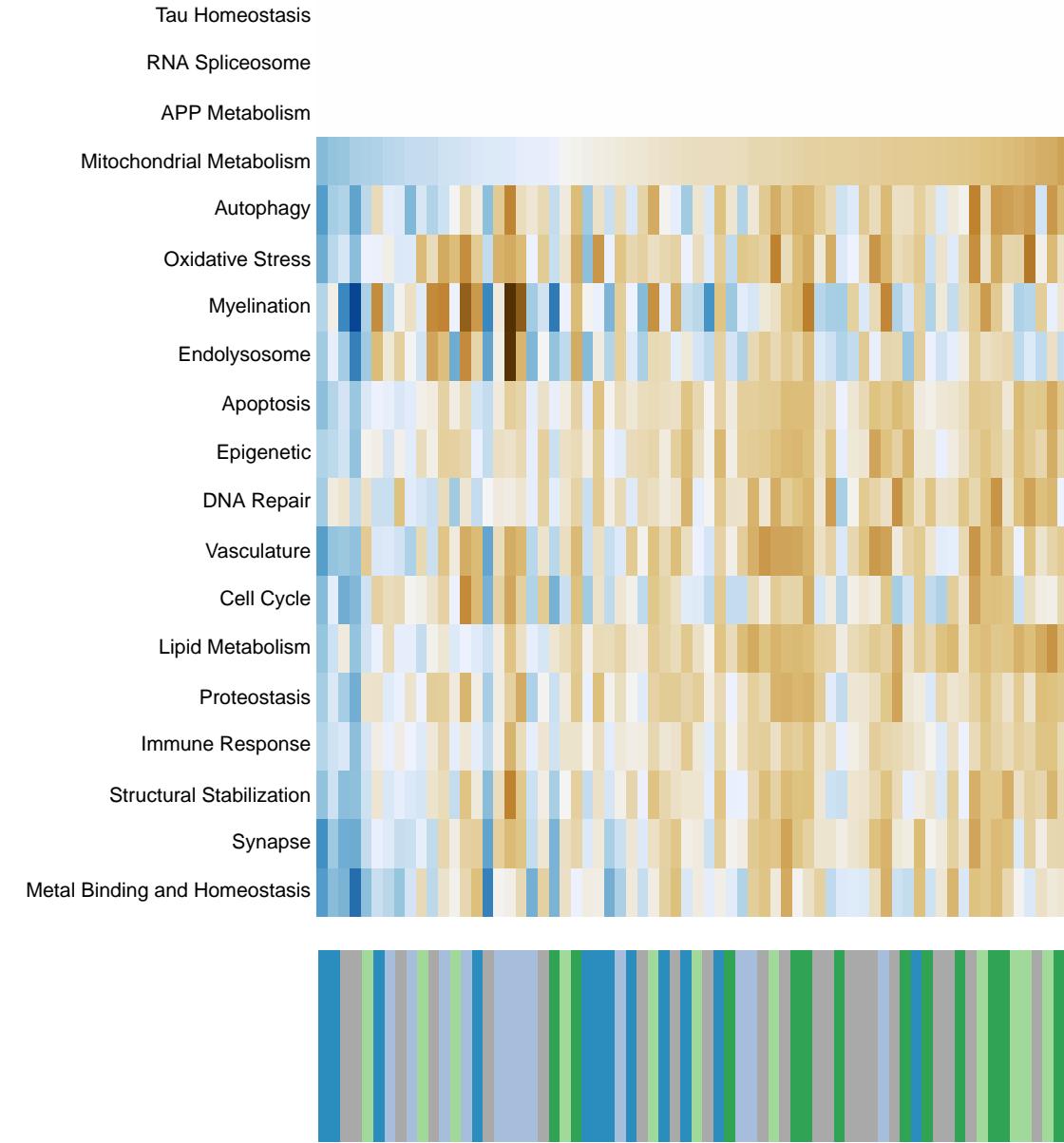
DNA Repair



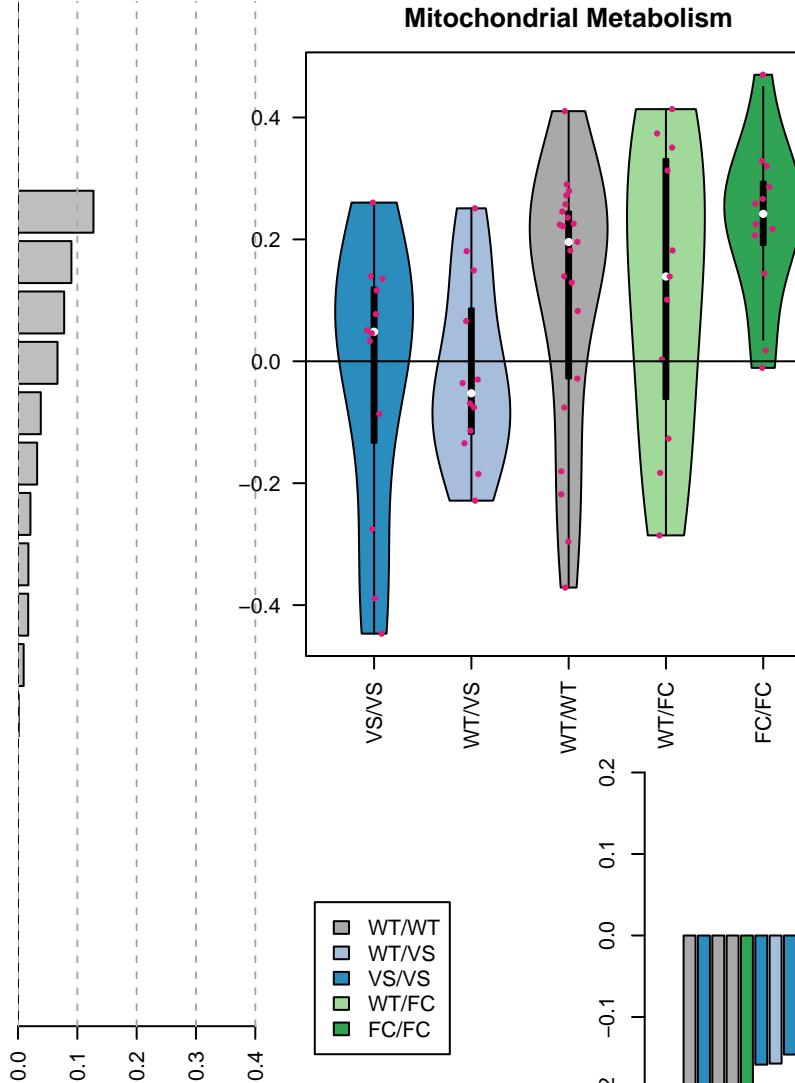
Decomposition



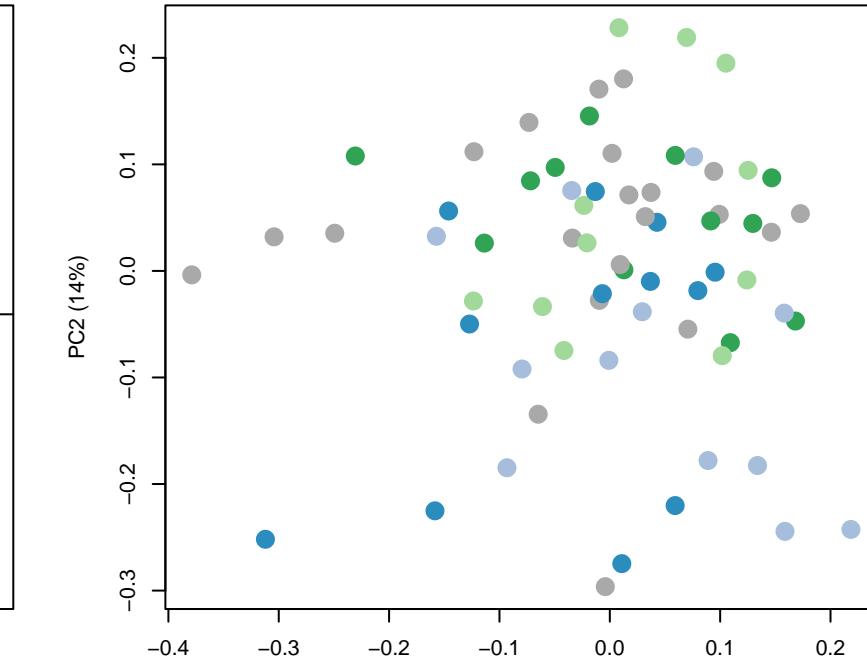
C-type lectin receptor signaling pathway



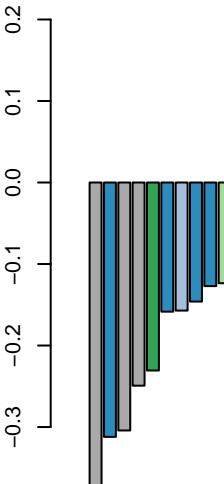
Mitochondrial Metabolism



Decomposition

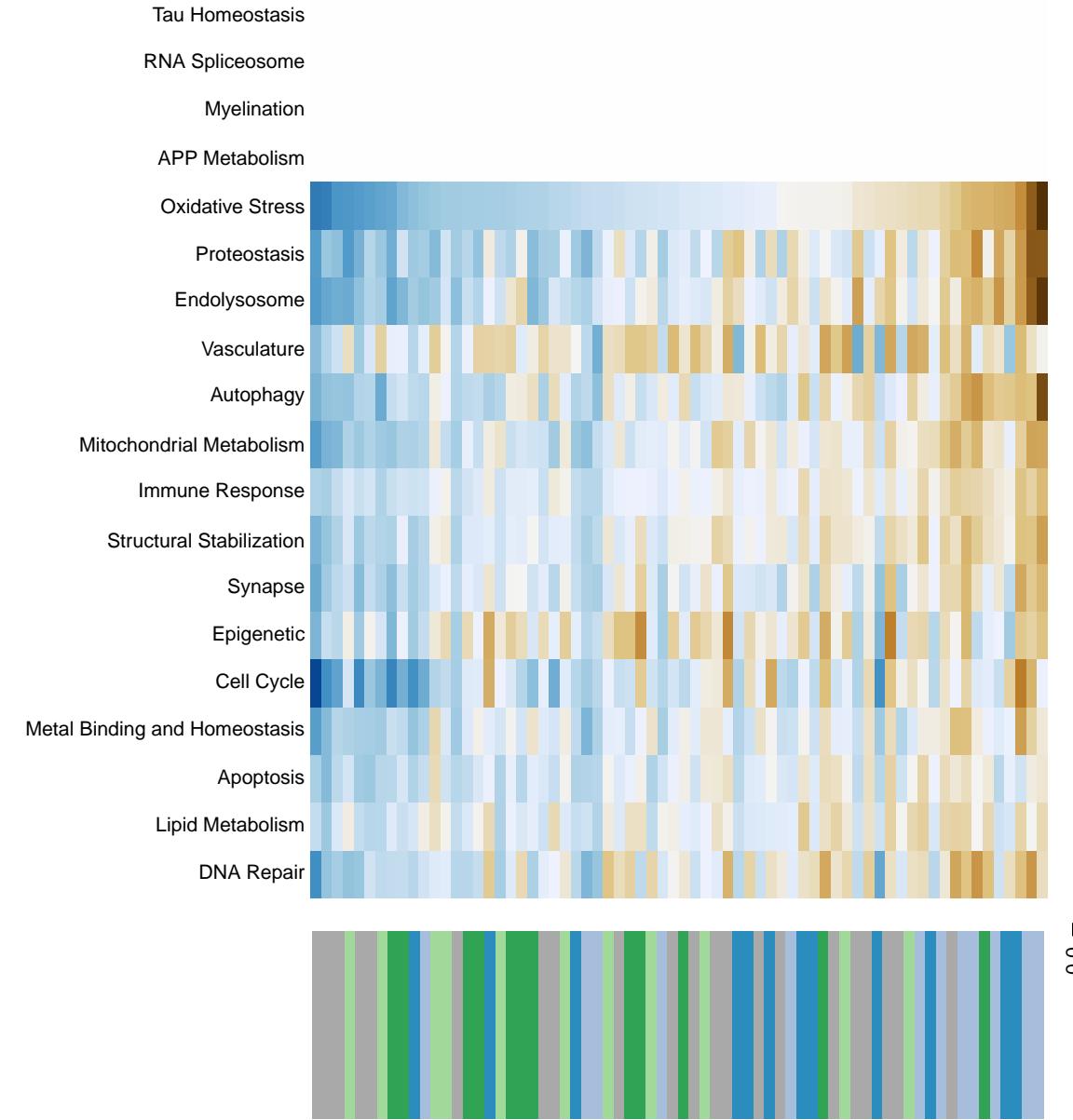


PC1 by genotype

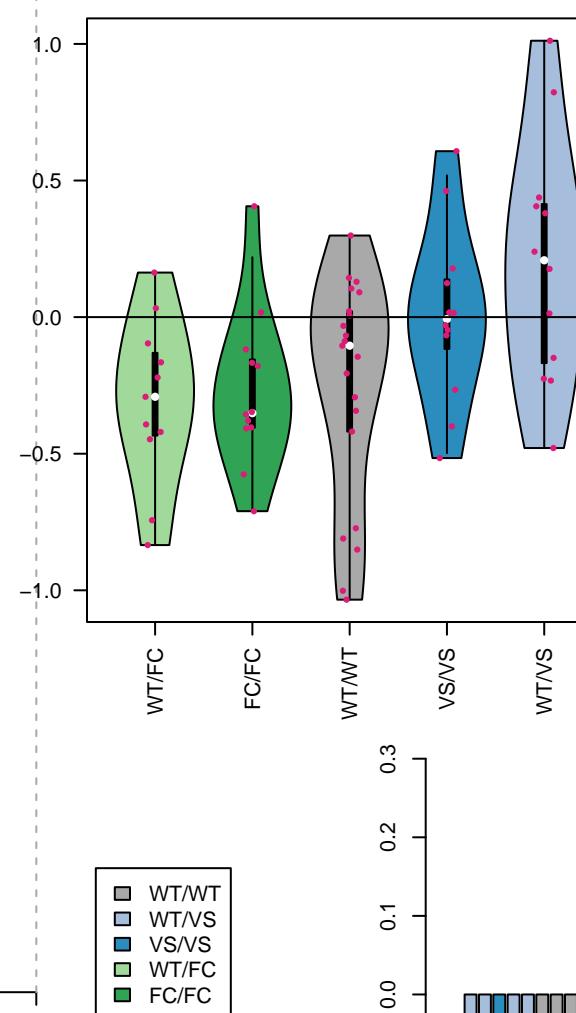


$R^2 = -0.032$

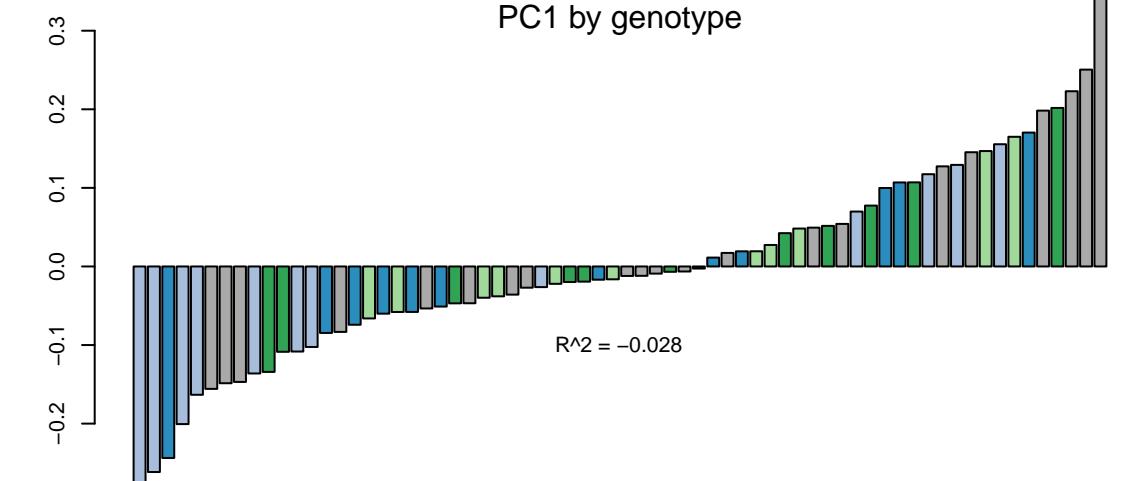
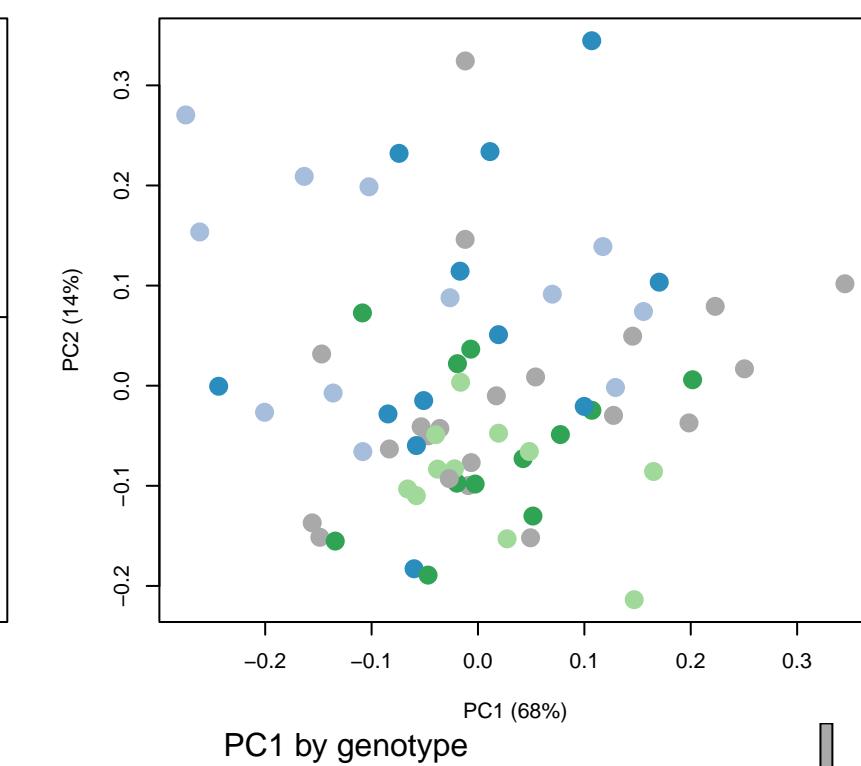
Natural killer cell mediated cytotoxicity



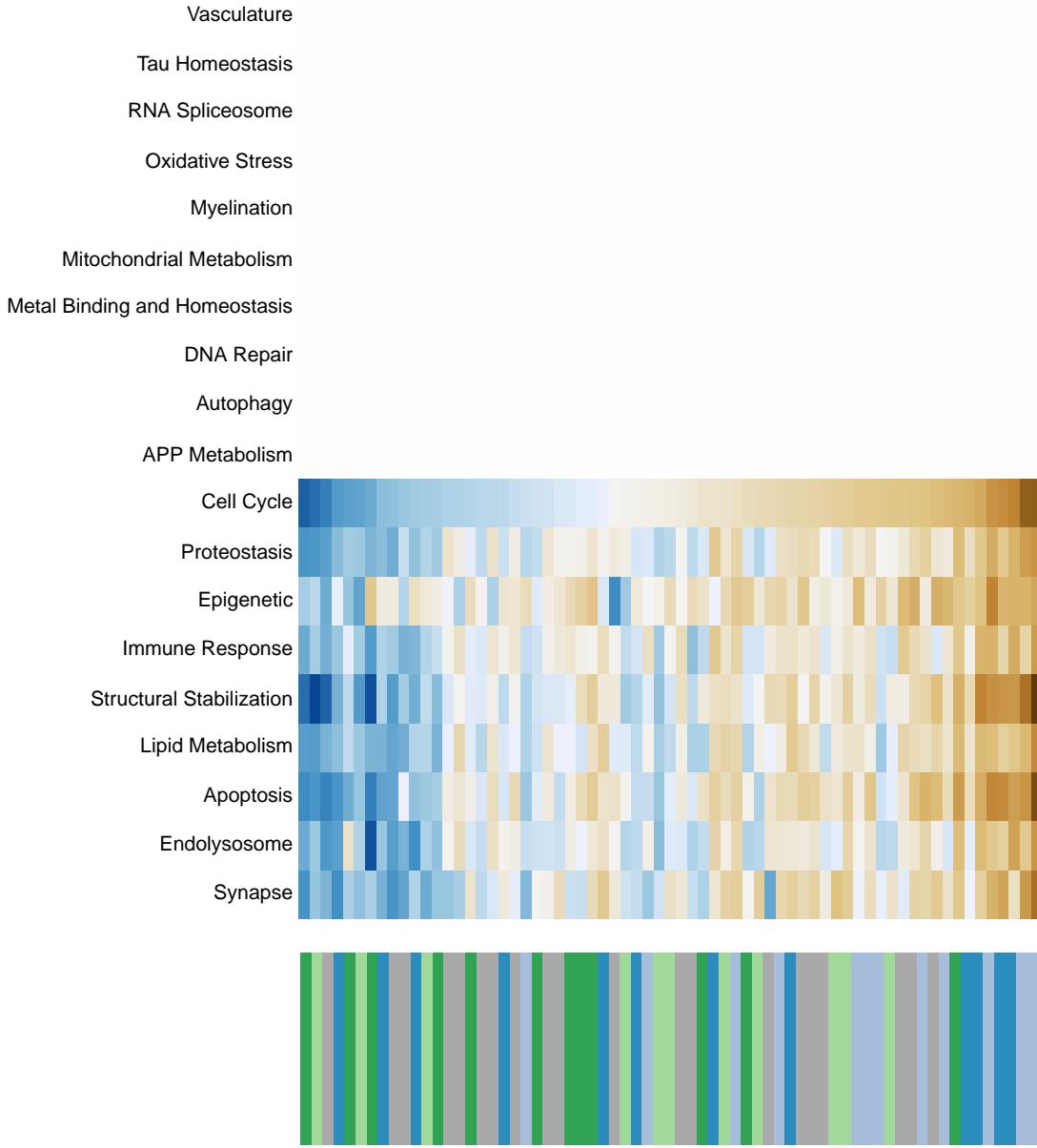
Oxidative Stress



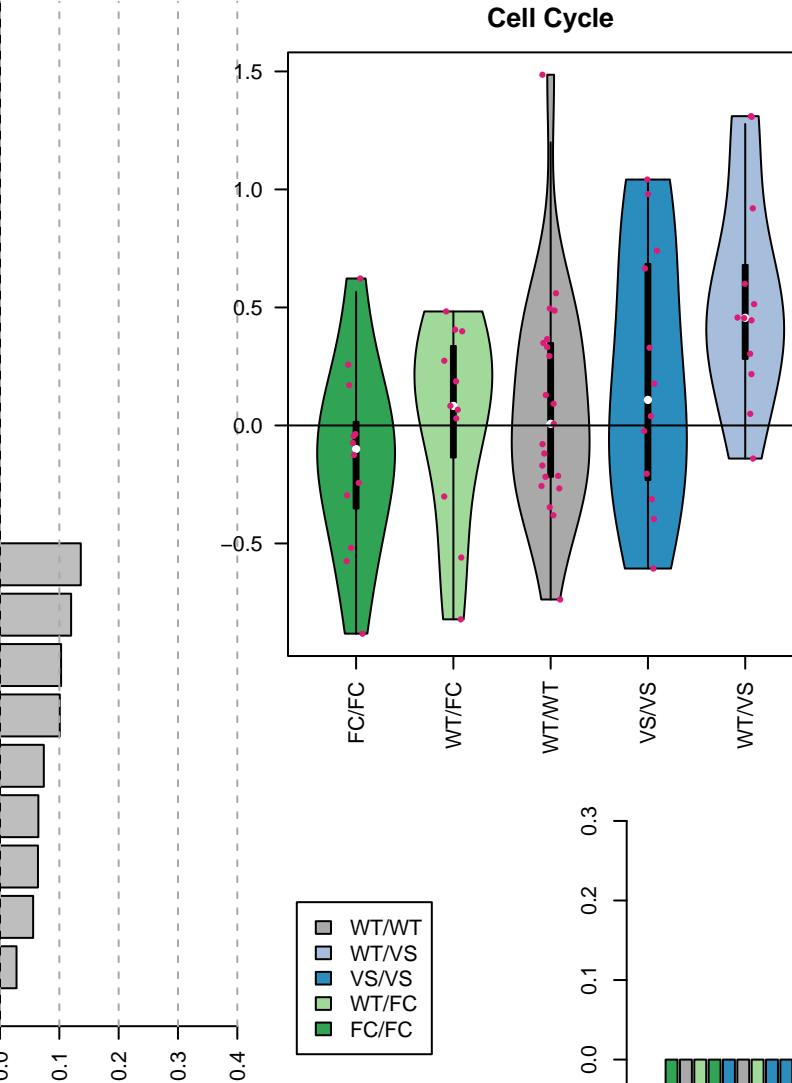
Decomposition



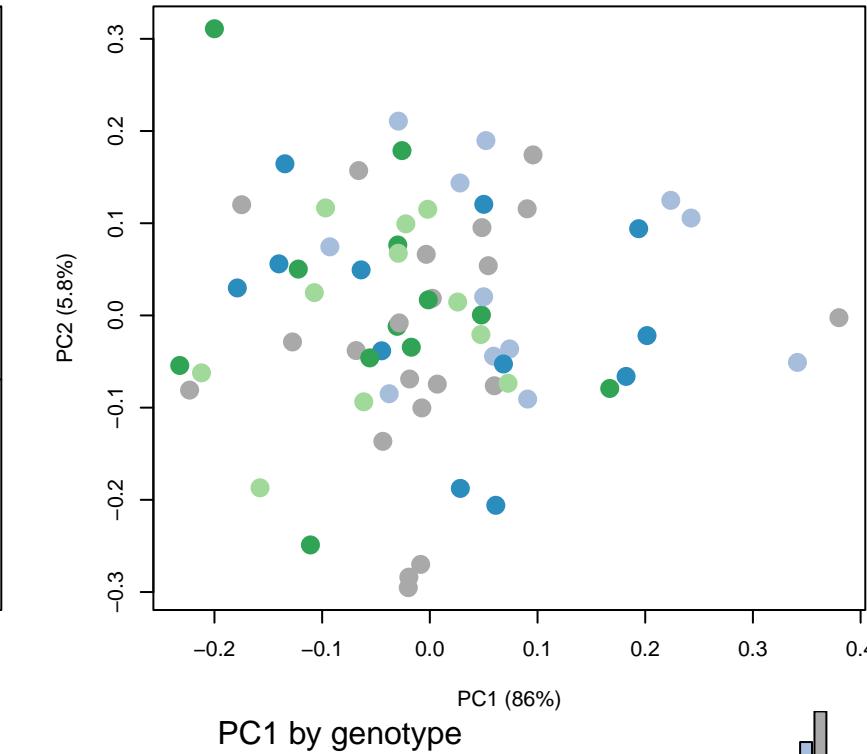
Antigen processing and presentation



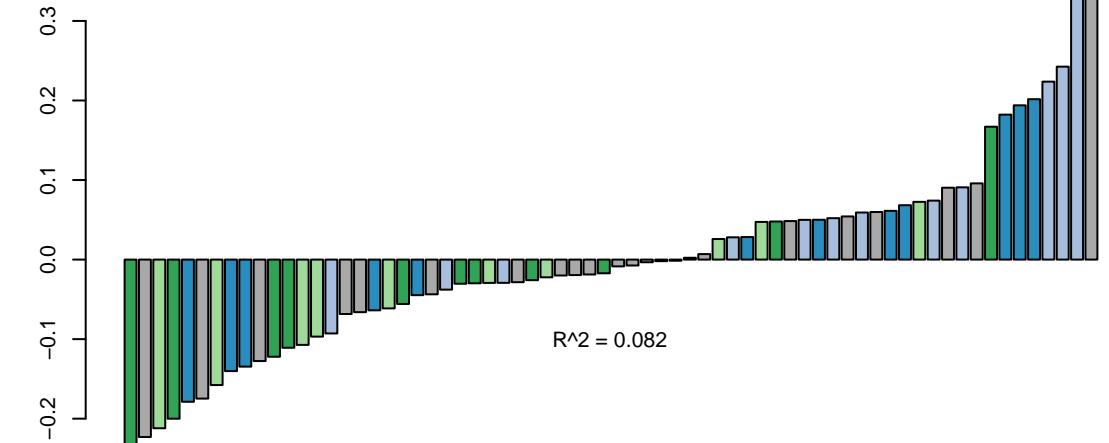
Cell Cycle



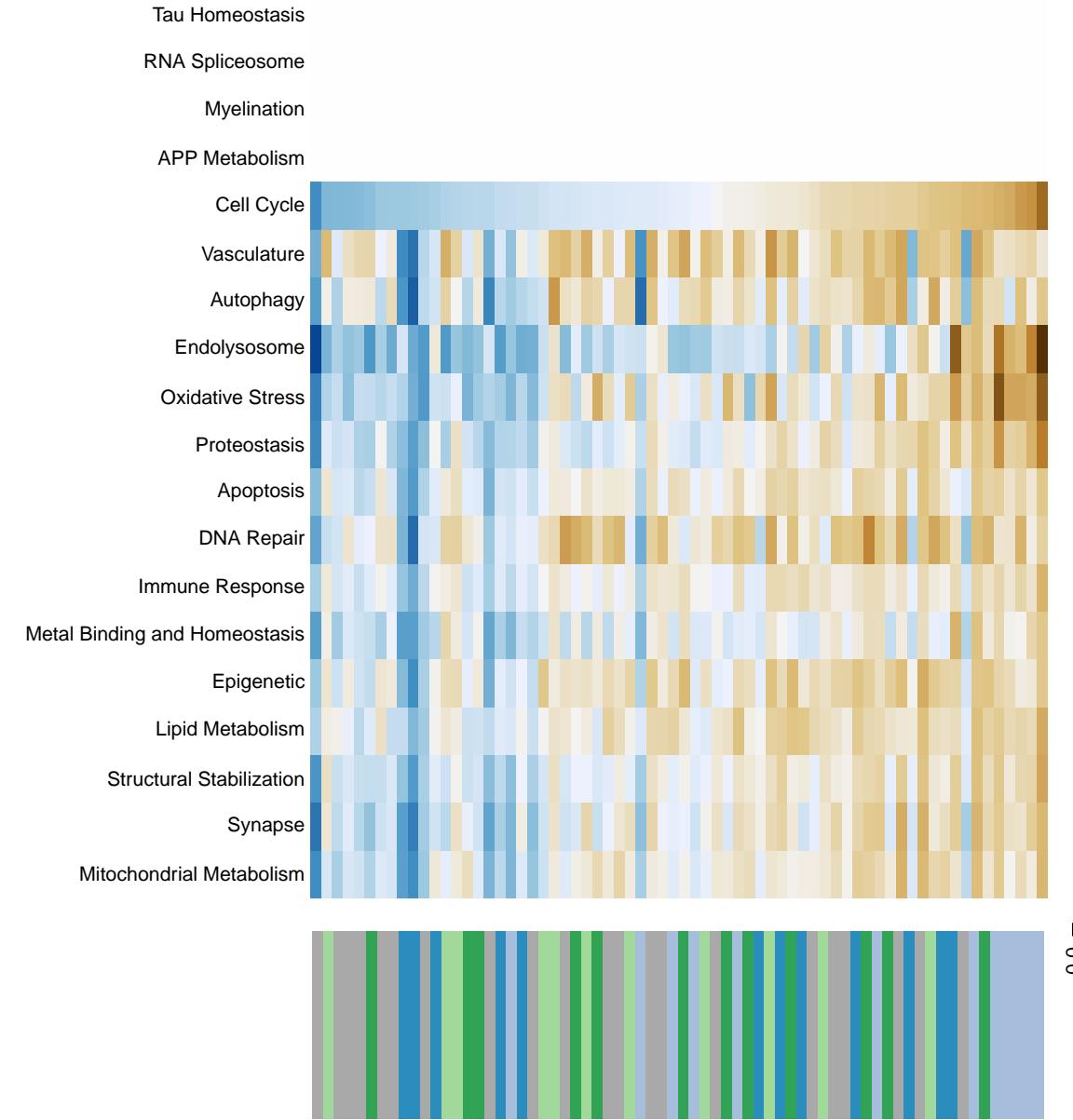
Decomposition



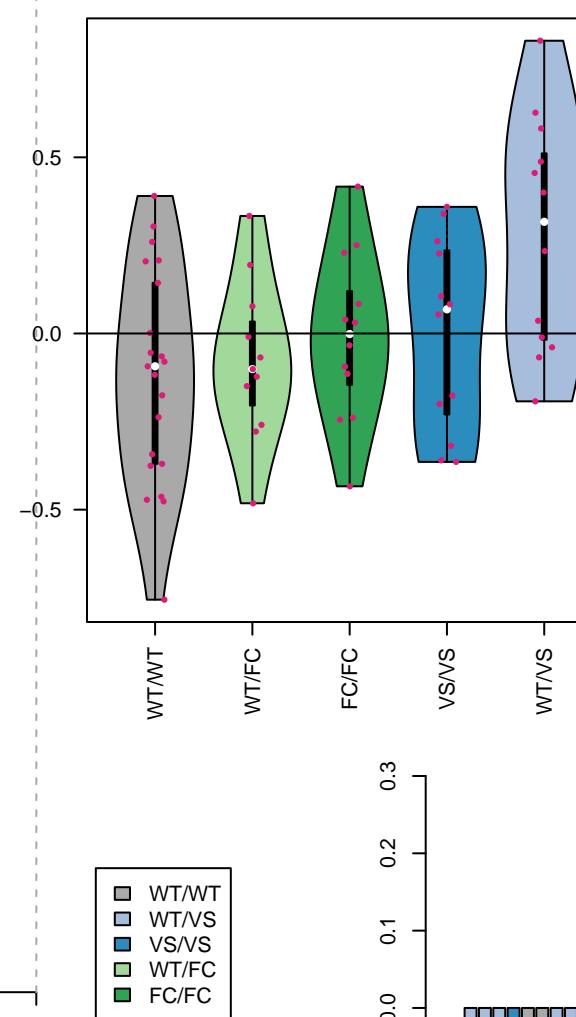
PC1 by genotype



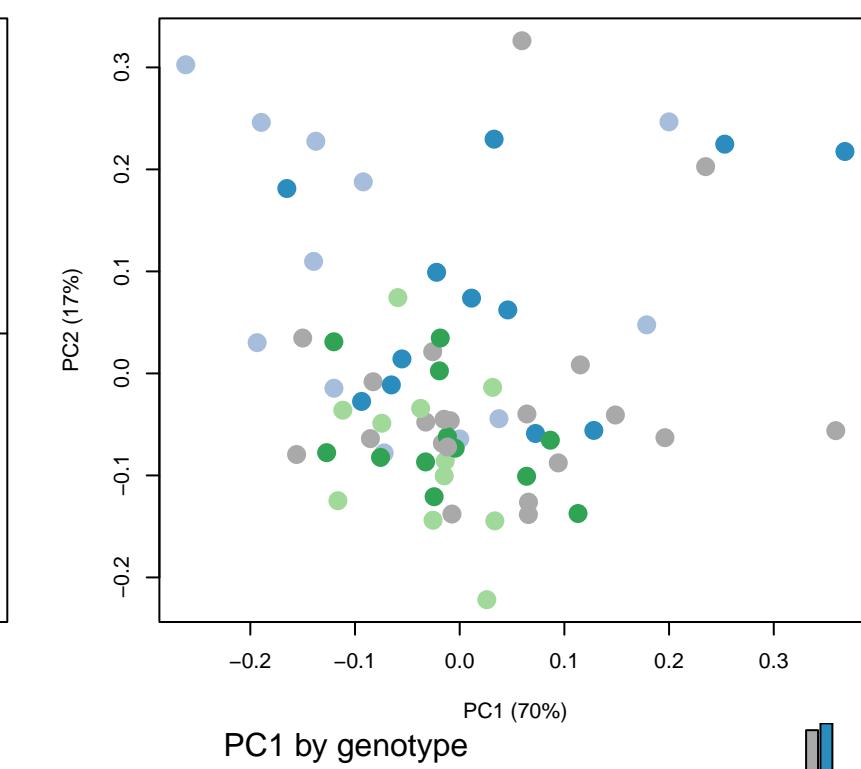
T cell receptor signaling pathway



Cell Cycle



Decomposition

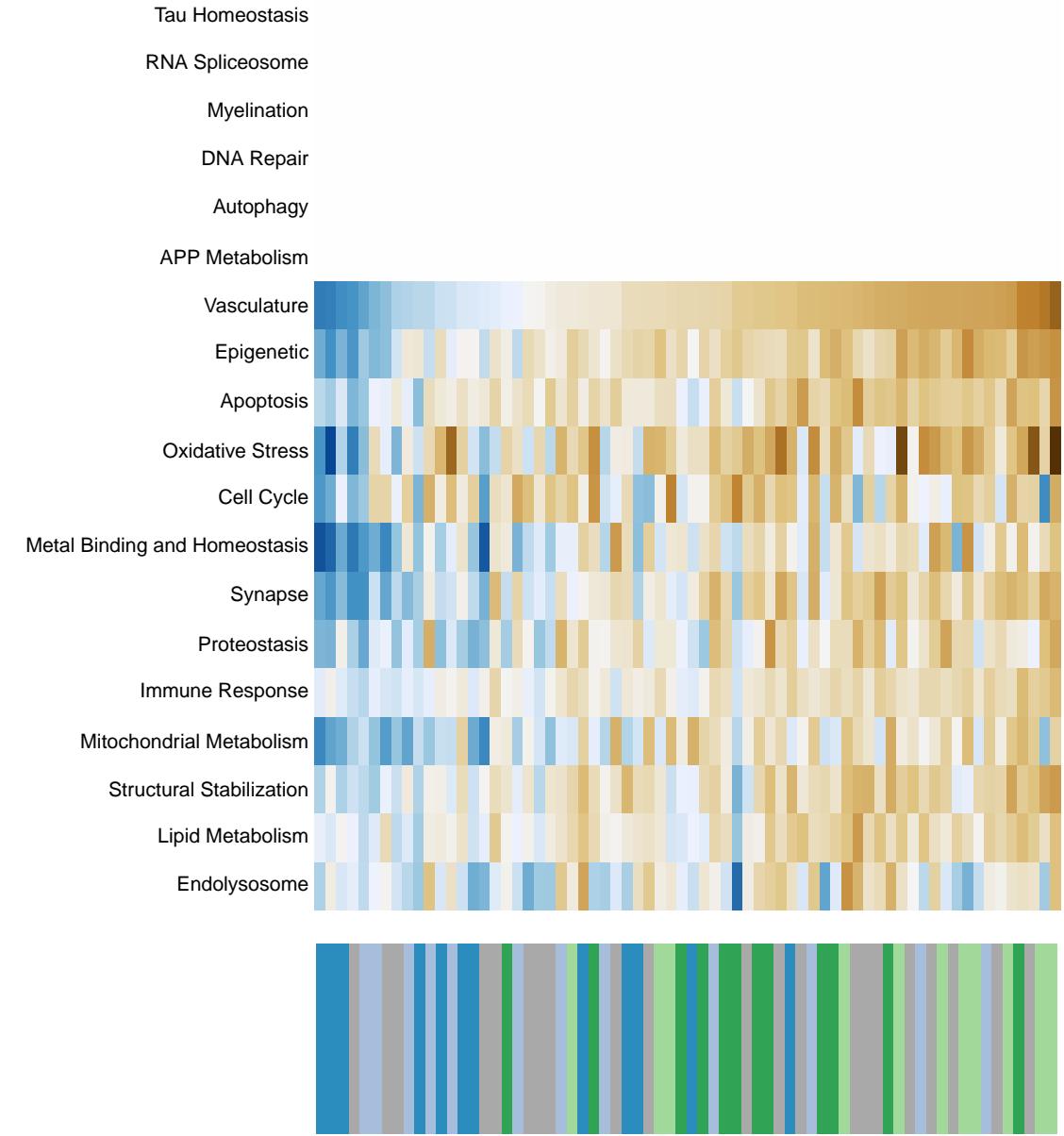


PC1 by genotype

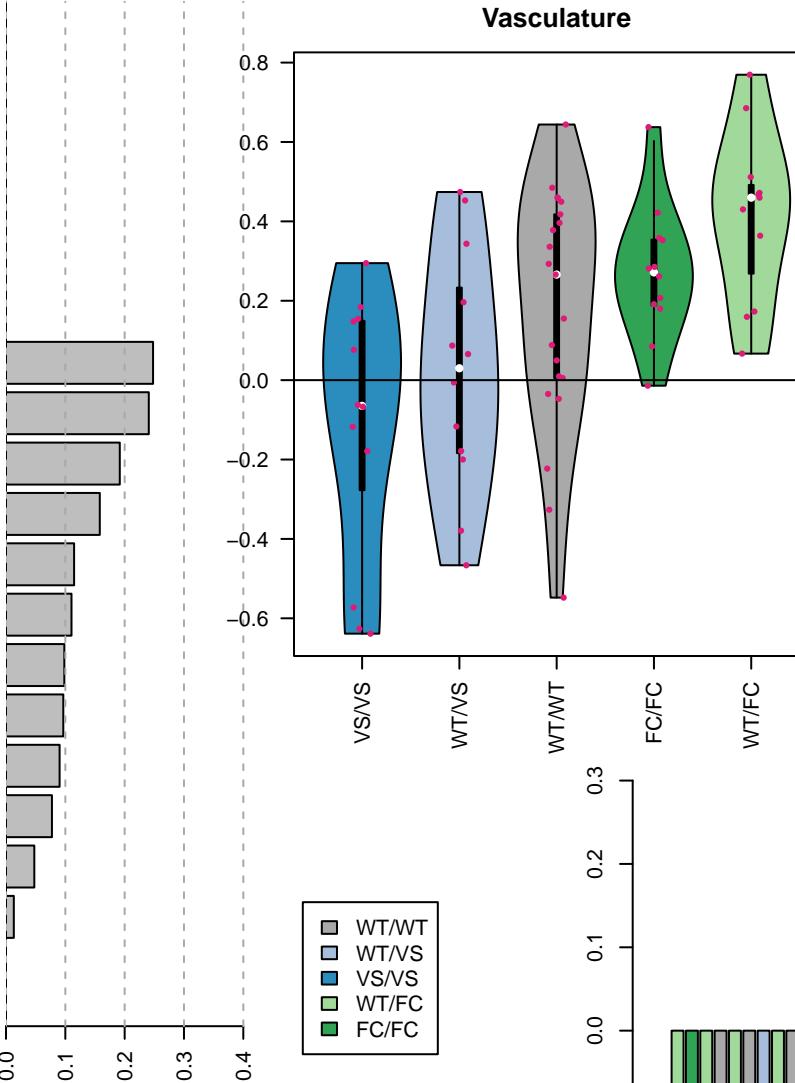
$R^2 = -0.063$

$R^2 = -0.063$

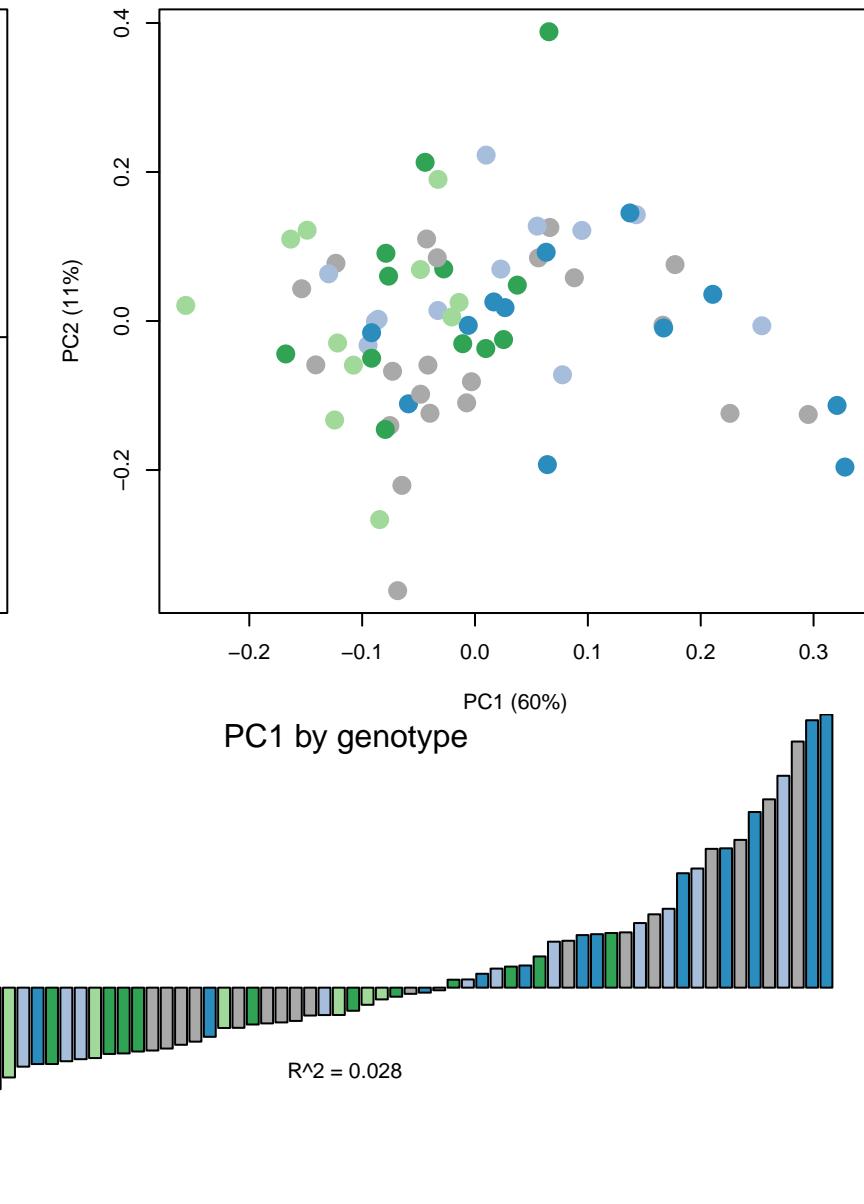
Th1 and Th2 cell differentiation



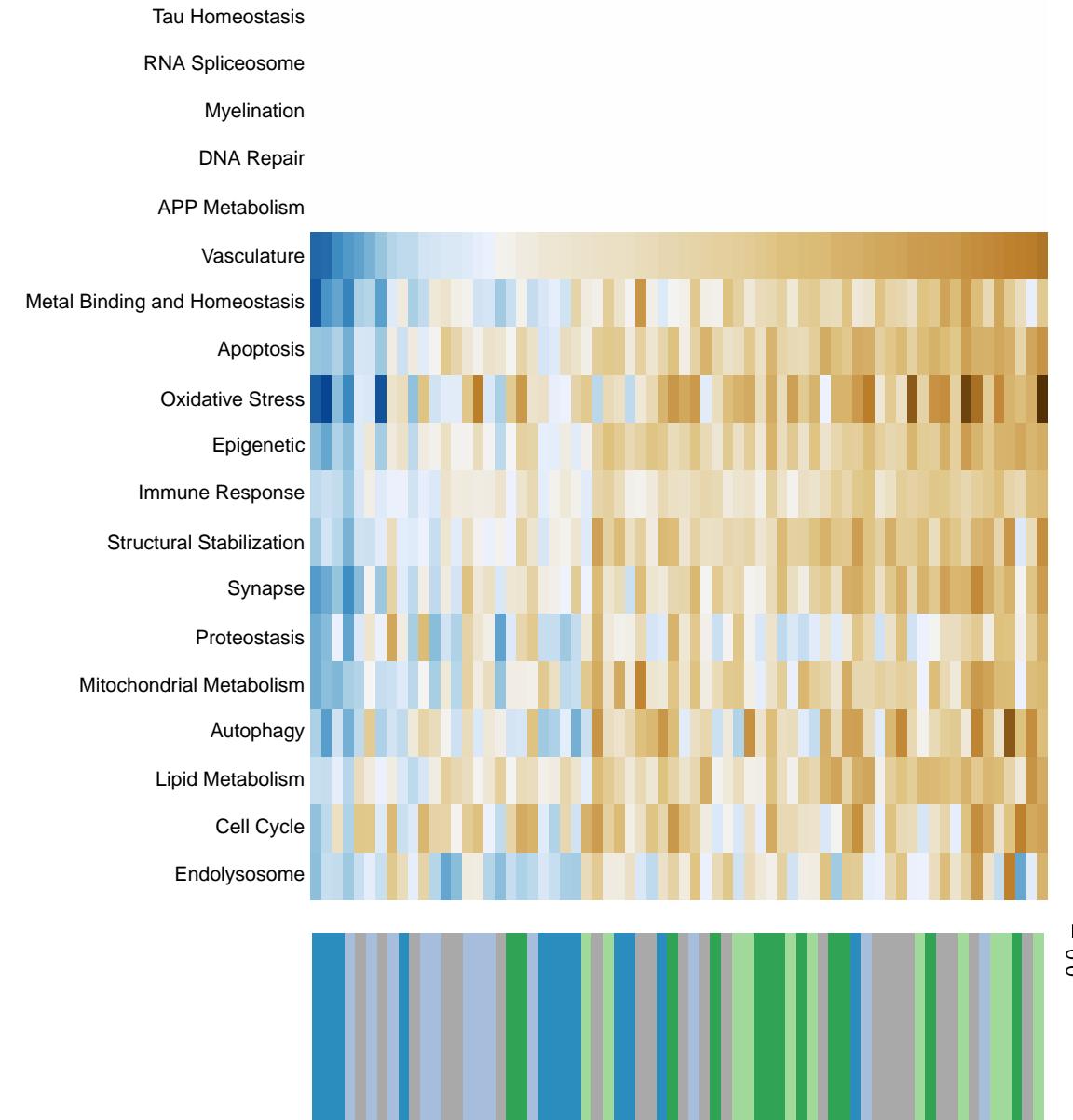
Vasculature



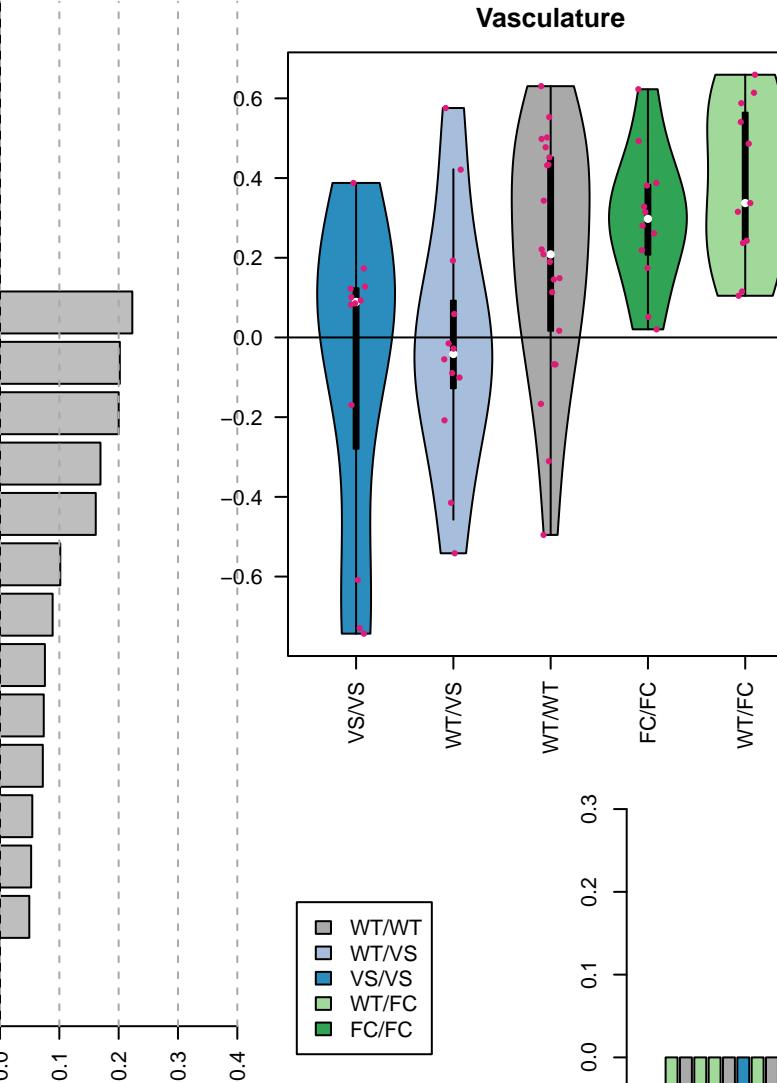
Decomposition



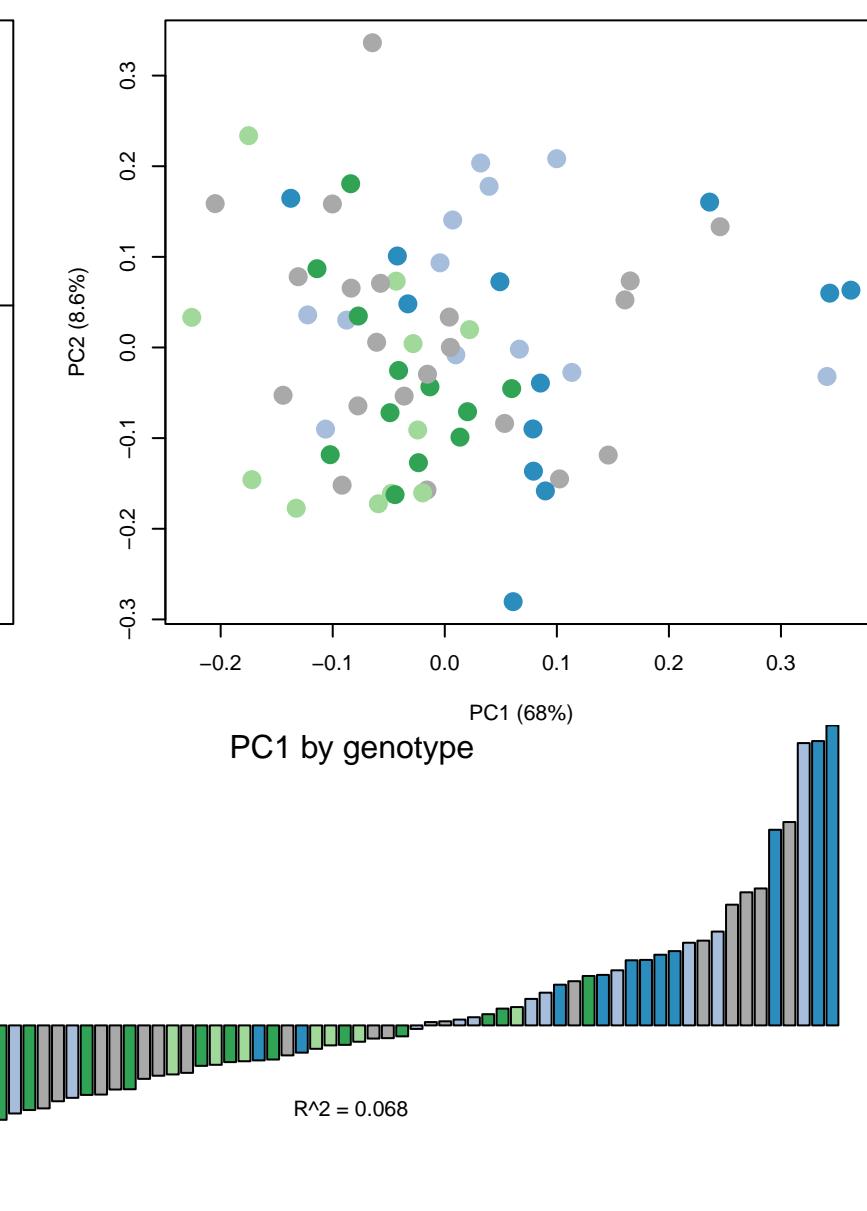
Th17 cell differentiation



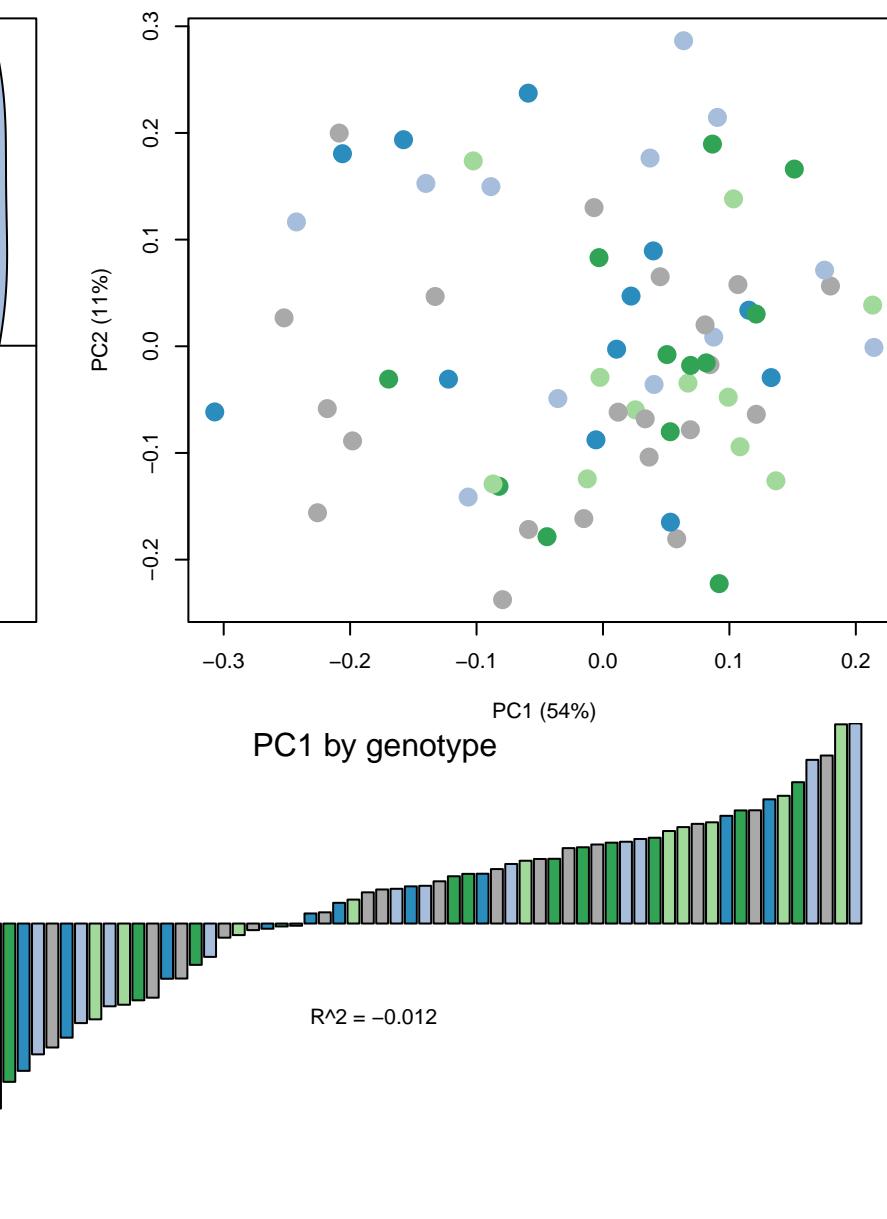
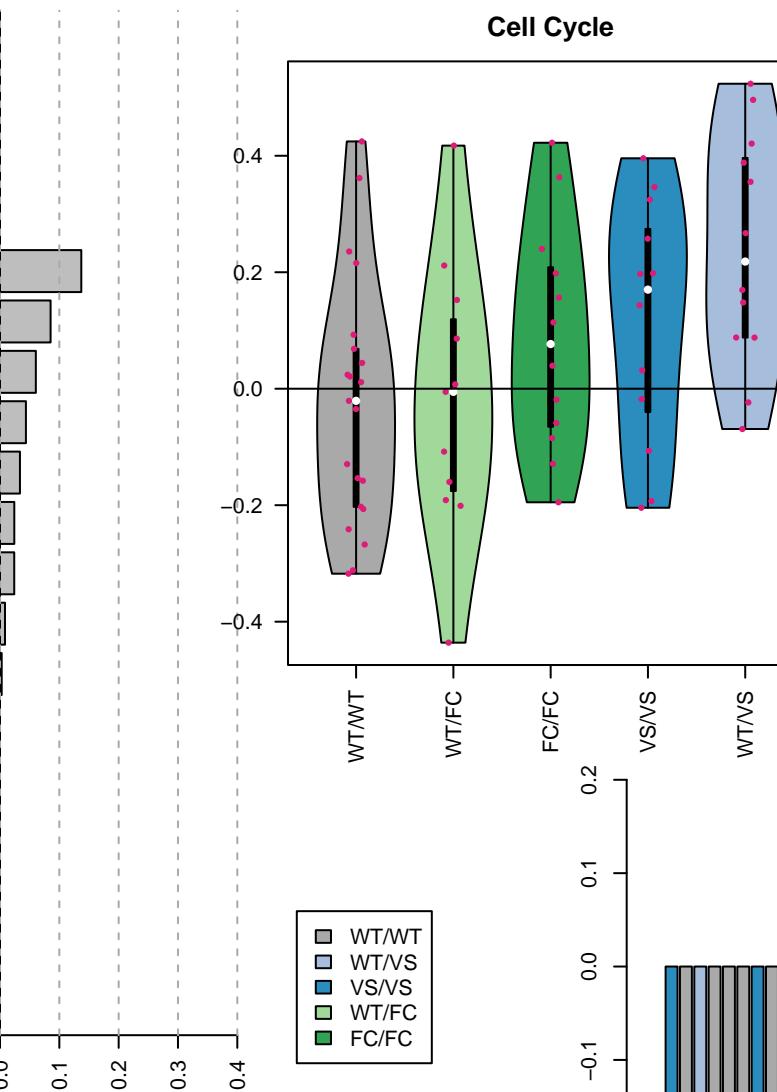
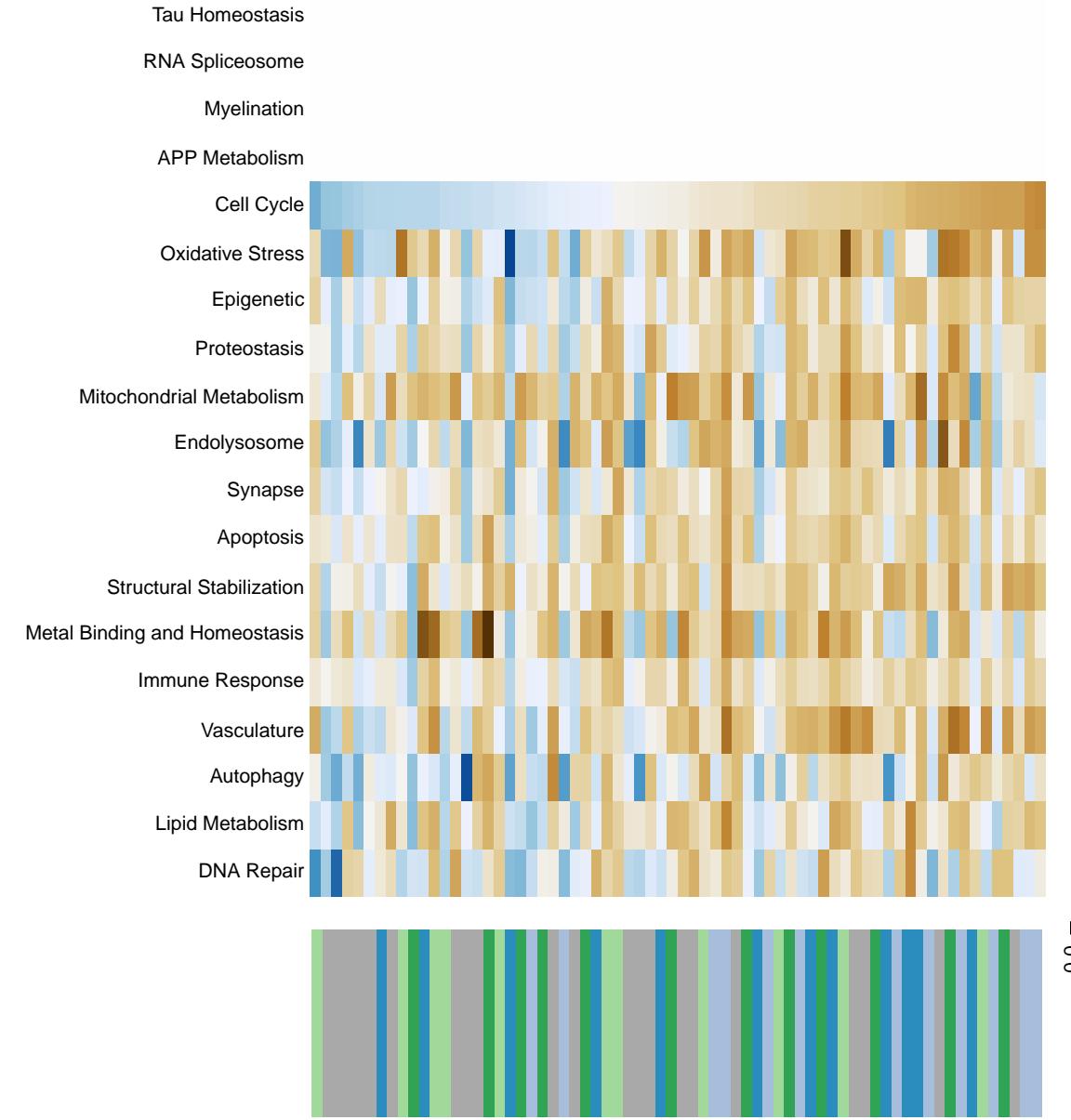
Vasculature



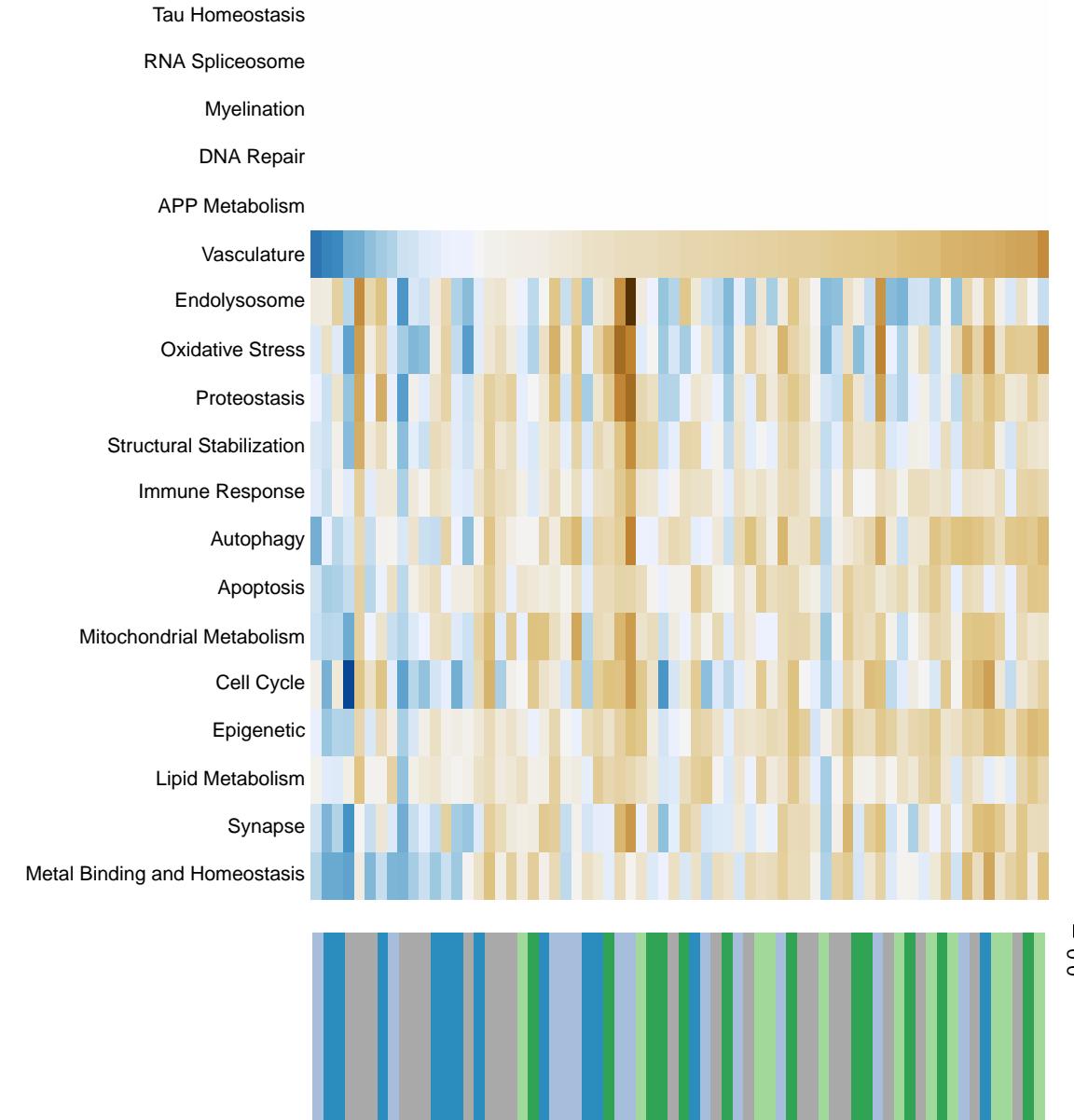
Decomposition



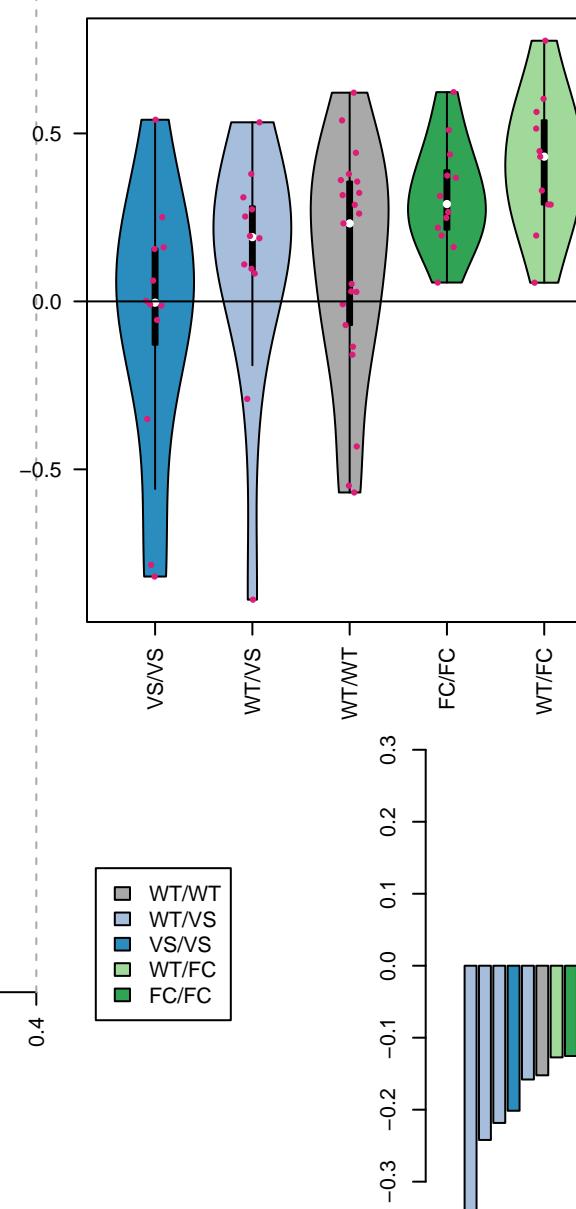
IL-17 signaling pathway



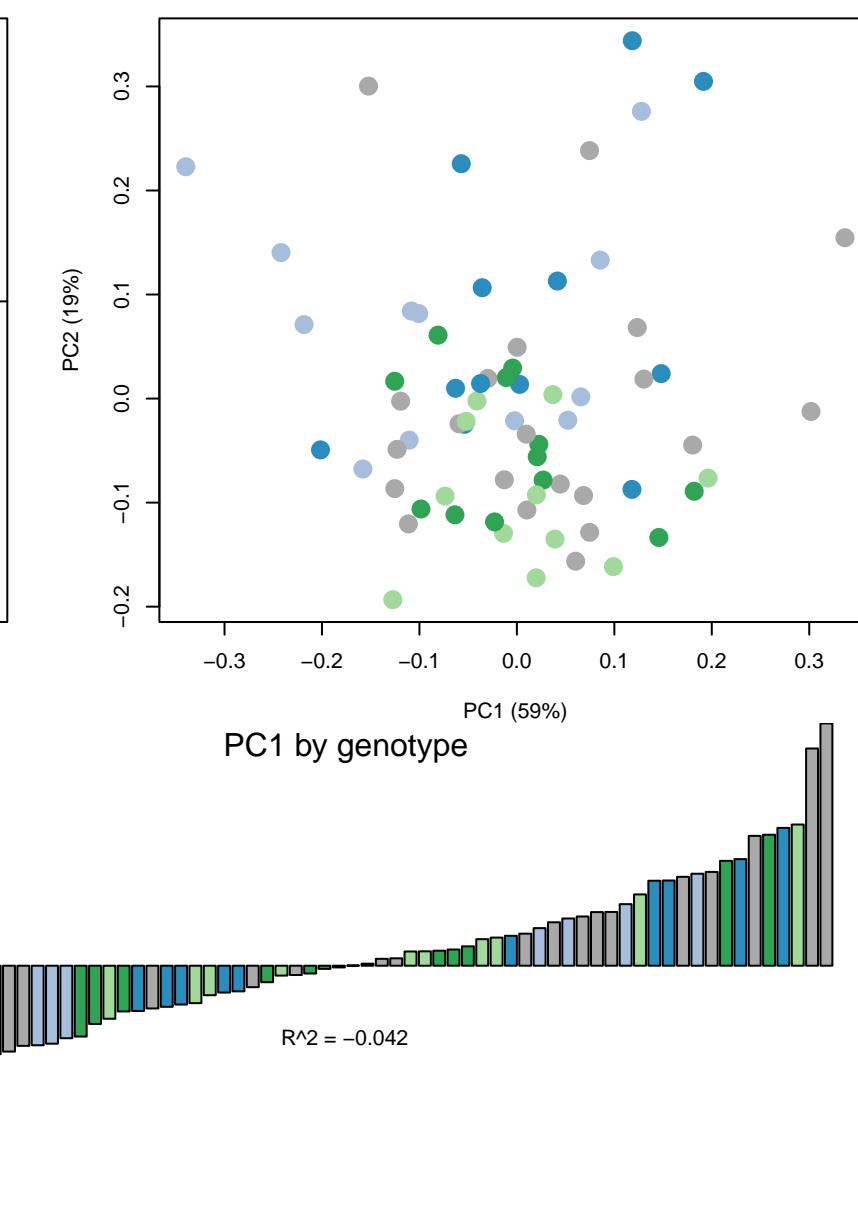
B cell receptor signaling pathway



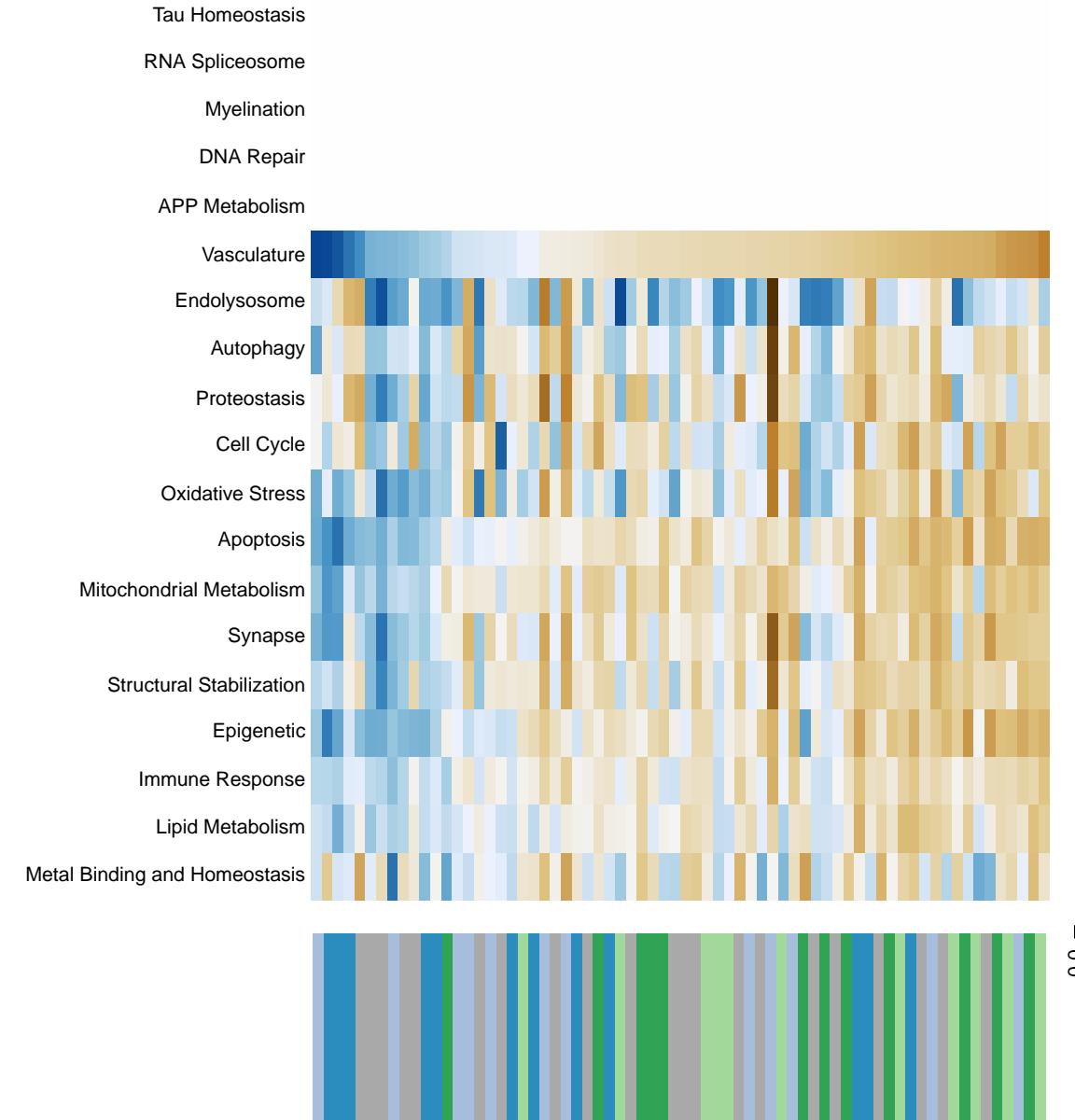
Vasculature



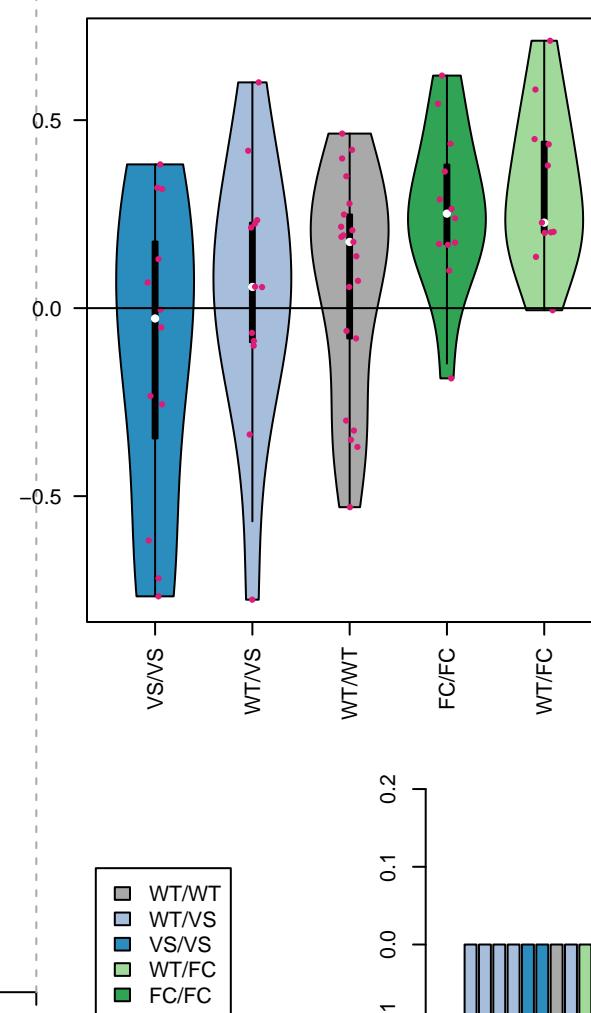
Decomposition



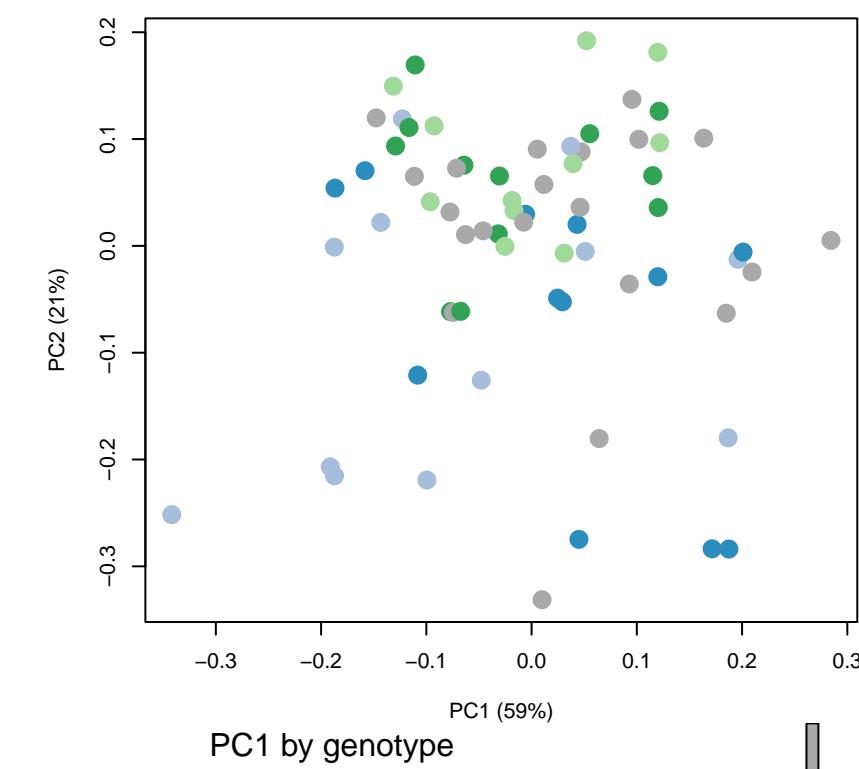
Fc epsilon RI signaling pathway



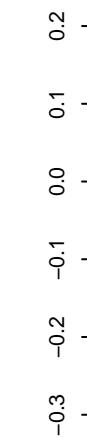
Vasculature



Decomposition

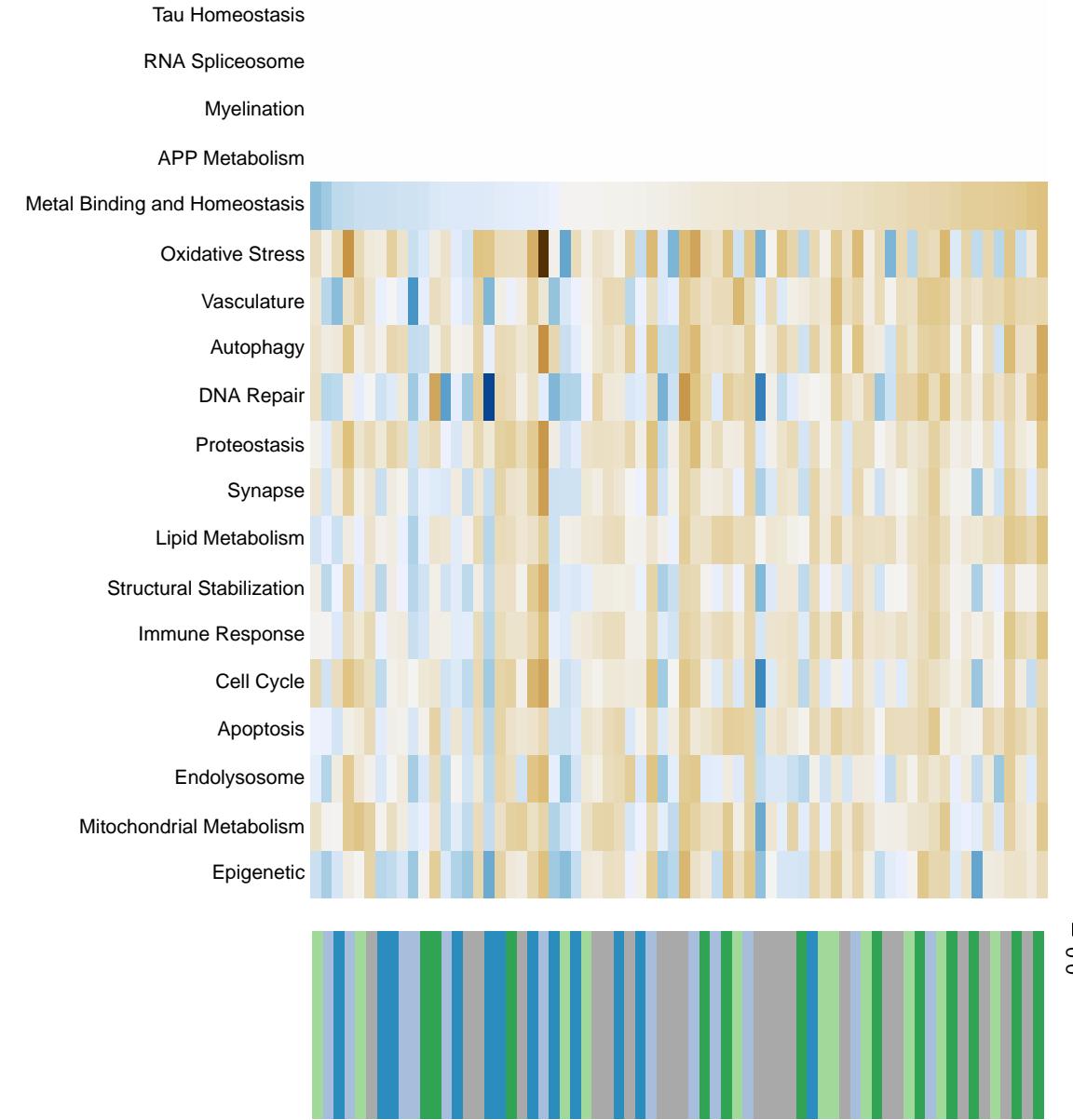


PC1 by genotype

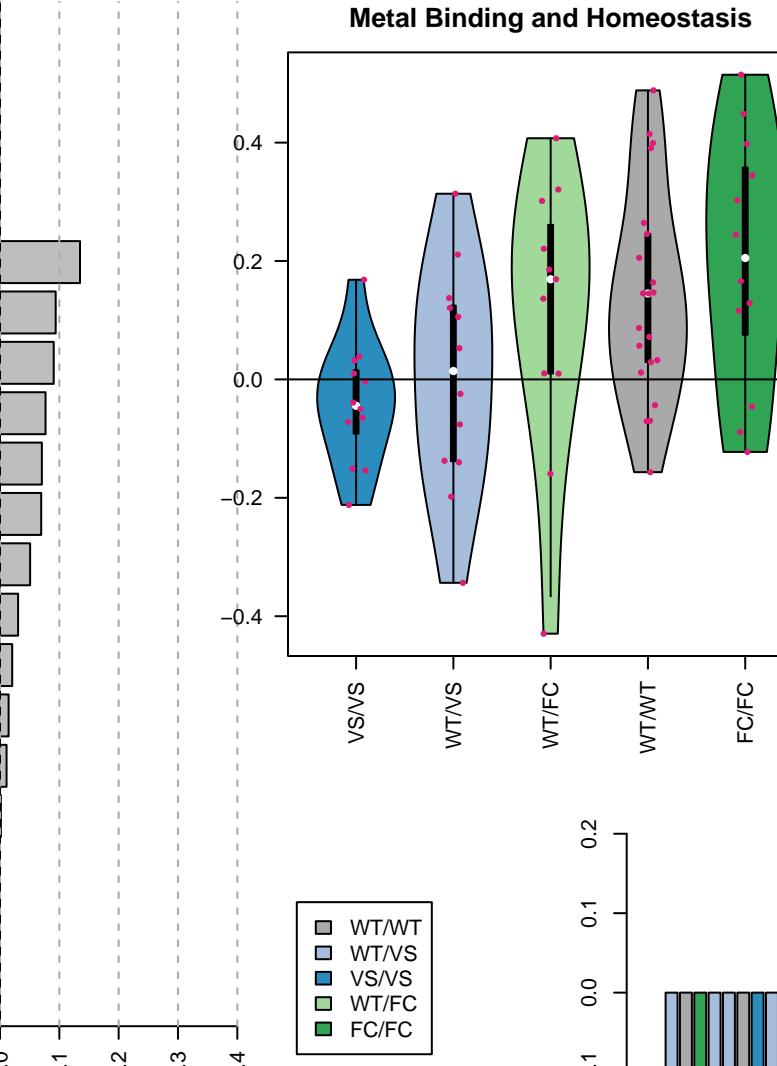


$R^2 = -0.05$

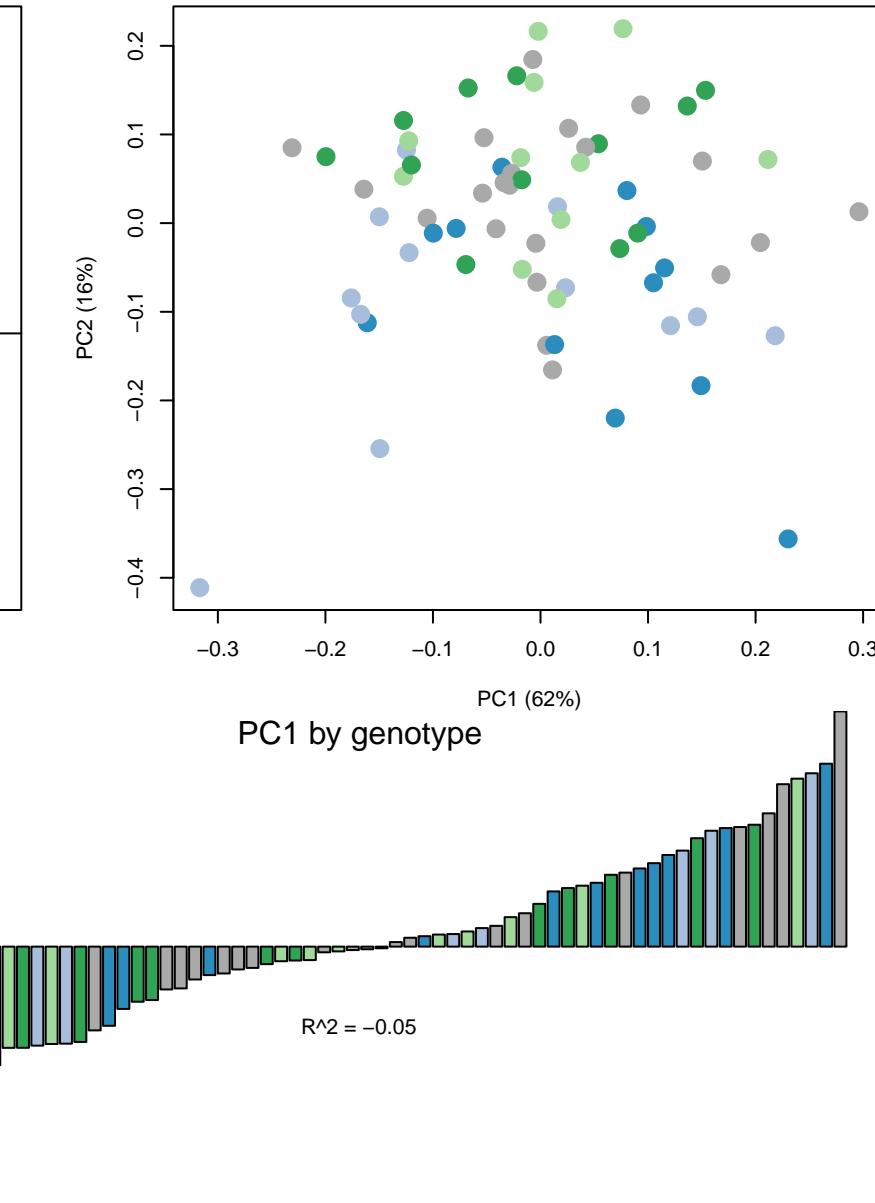
Fc gamma R-mediated phagocytosis



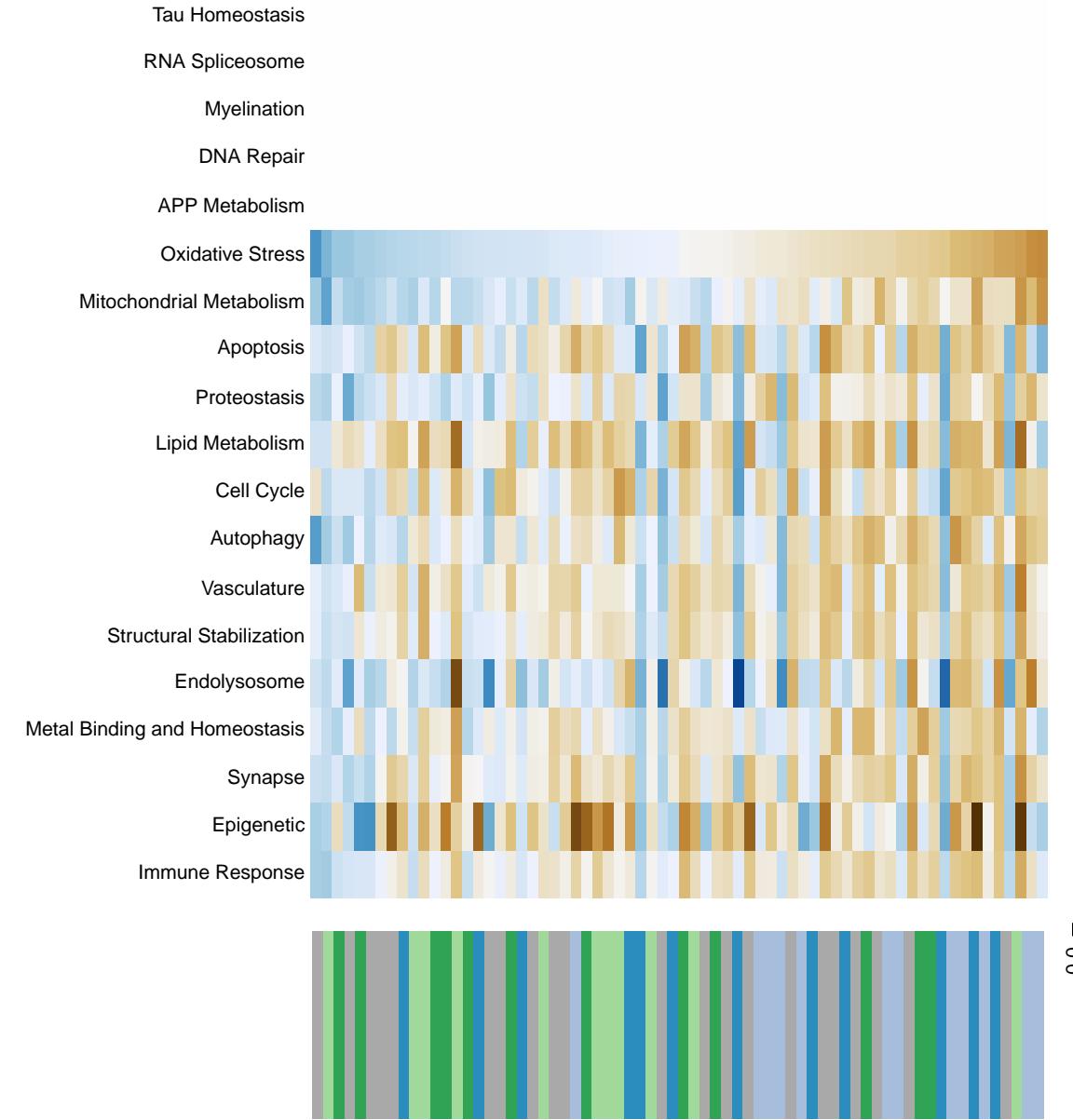
Metal Binding and Homeostasis



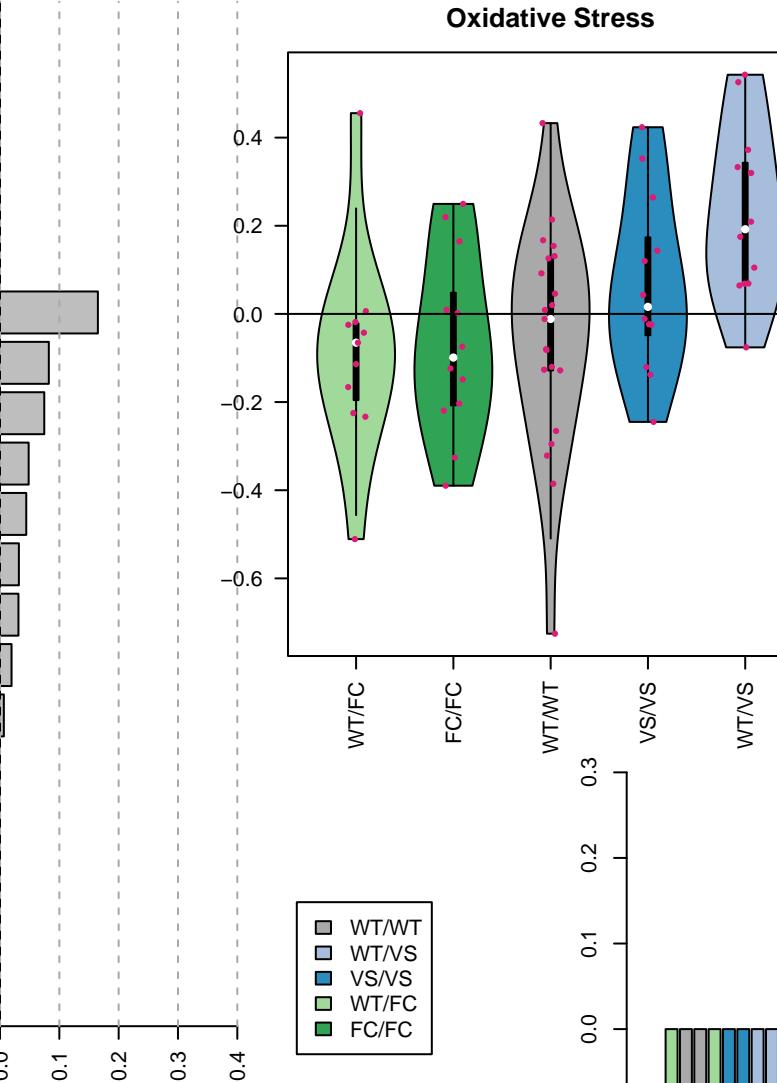
Decomposition



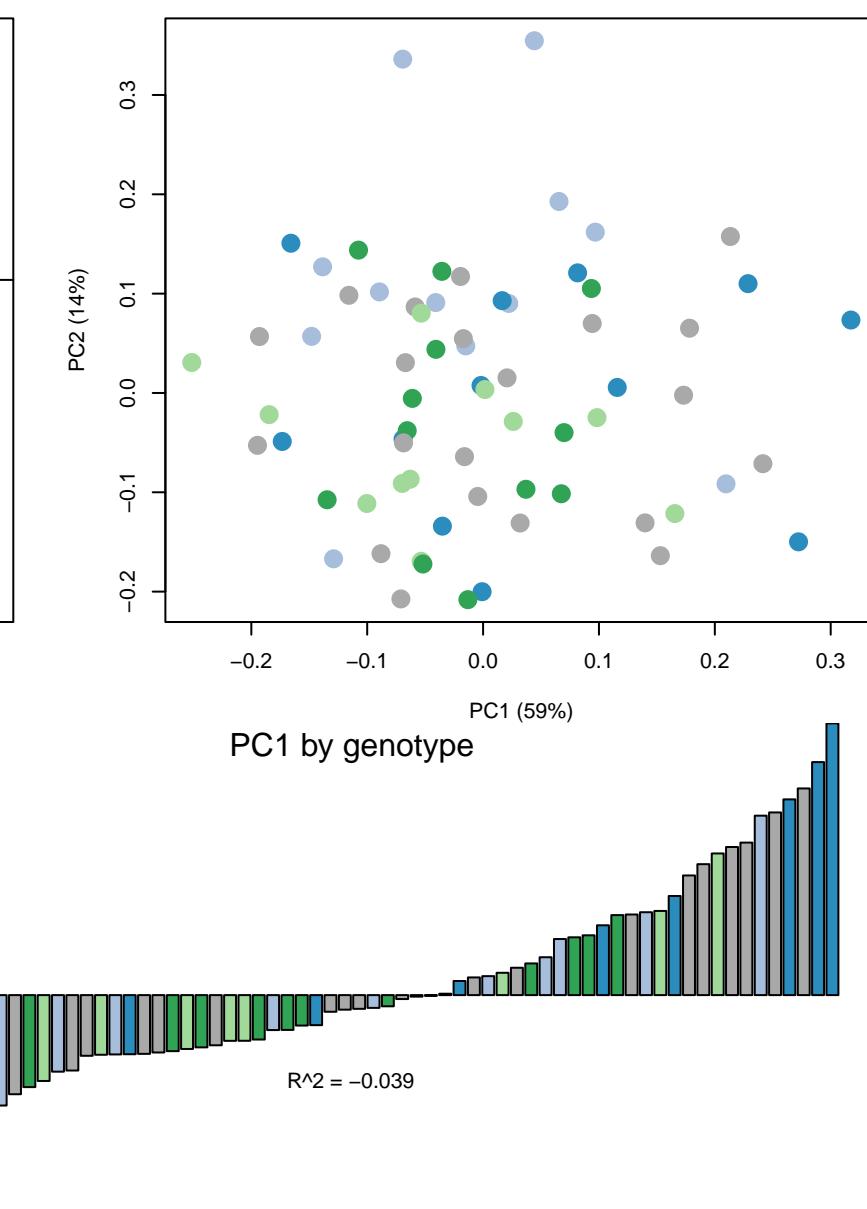
Leukocyte transendothelial migration



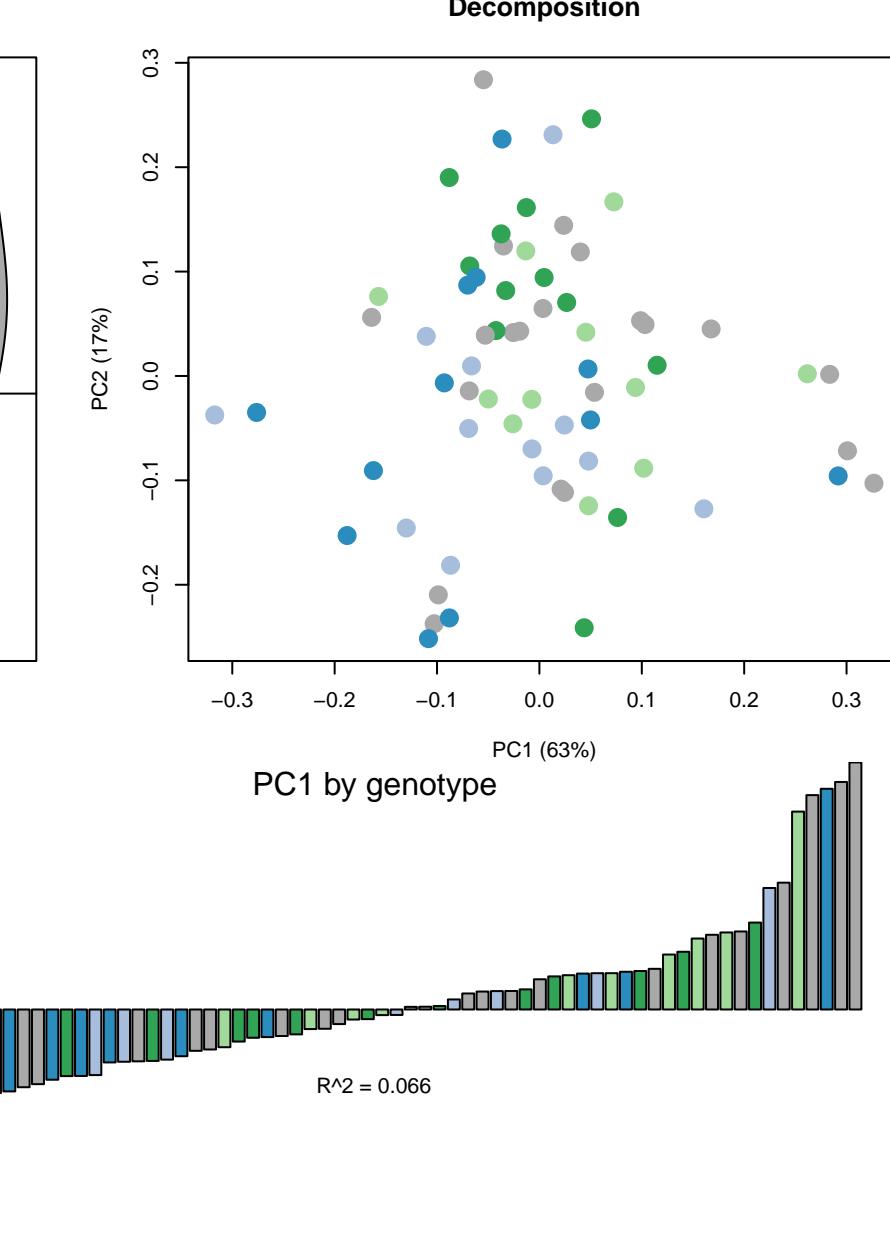
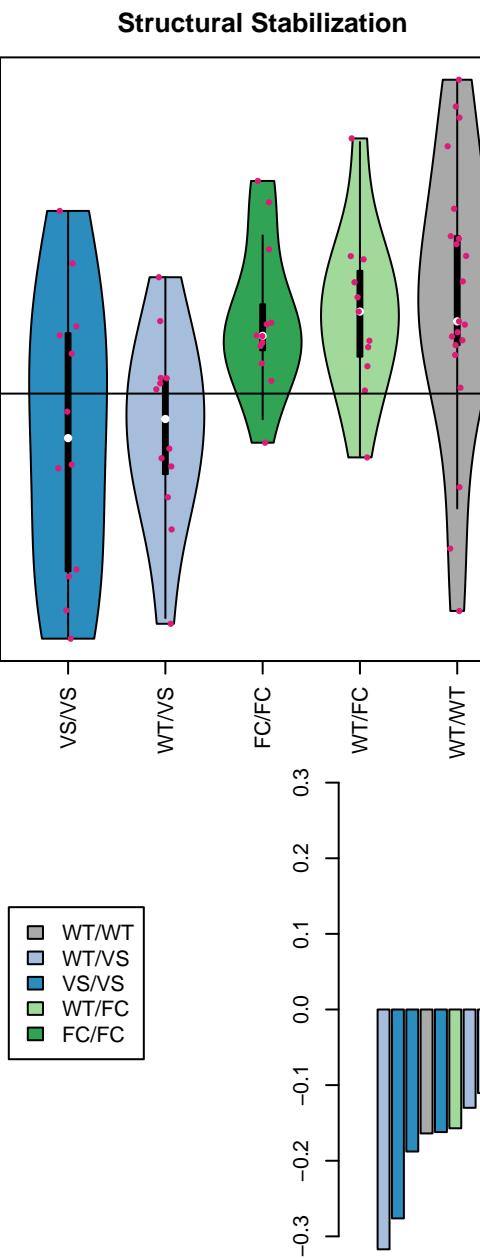
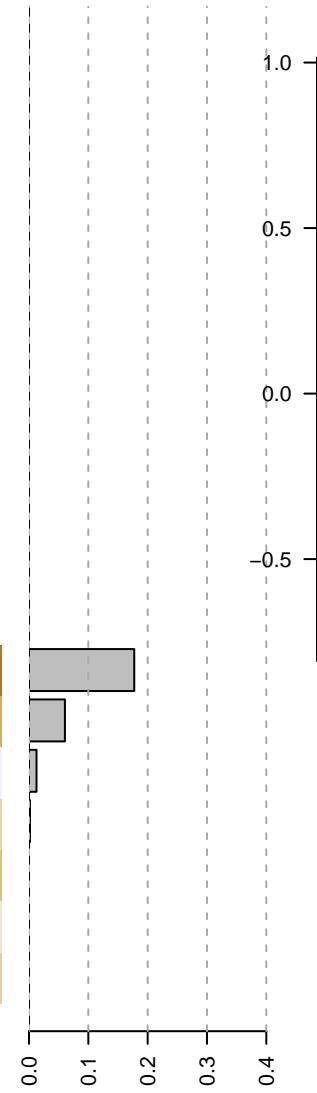
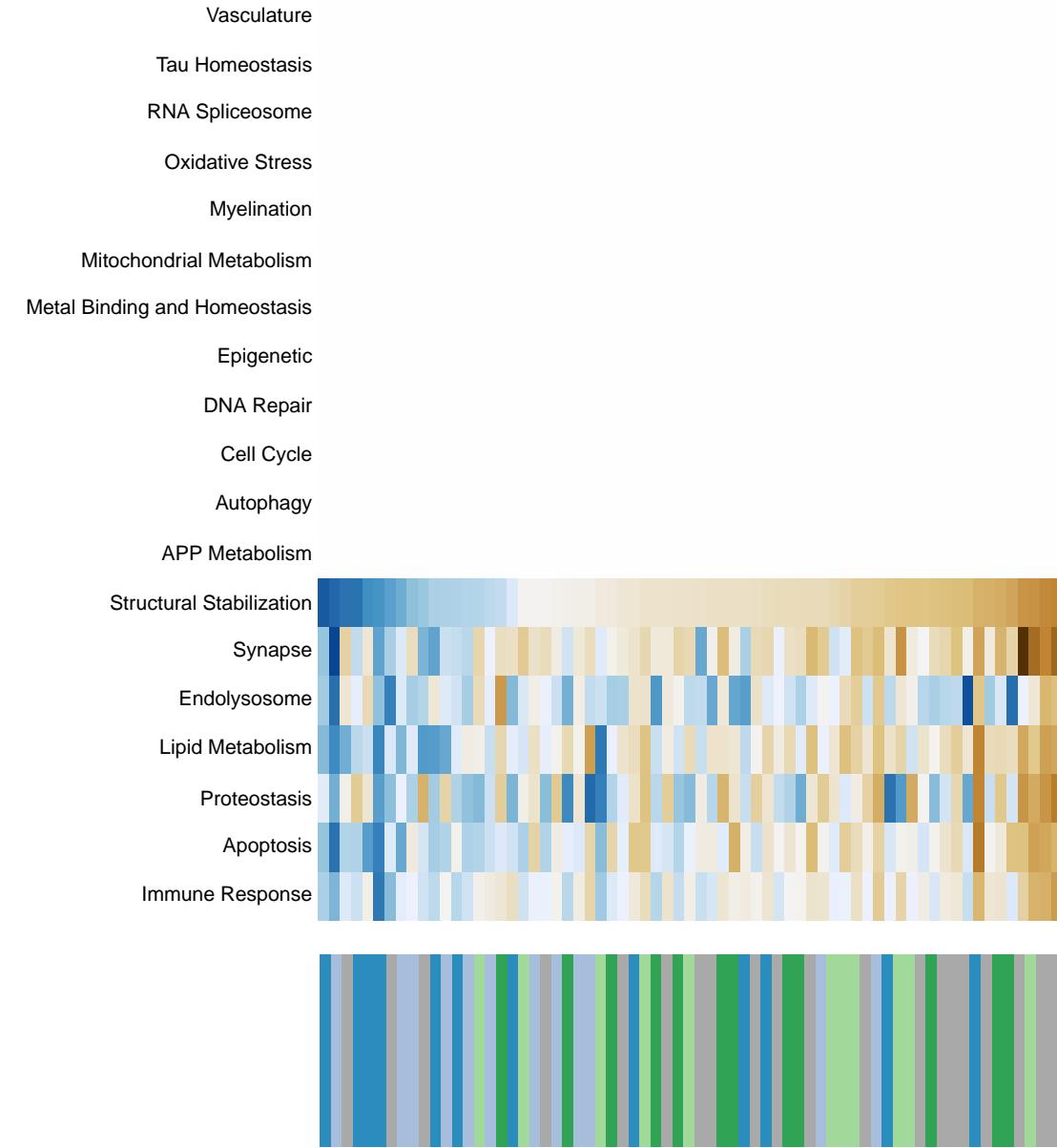
Oxidative Stress



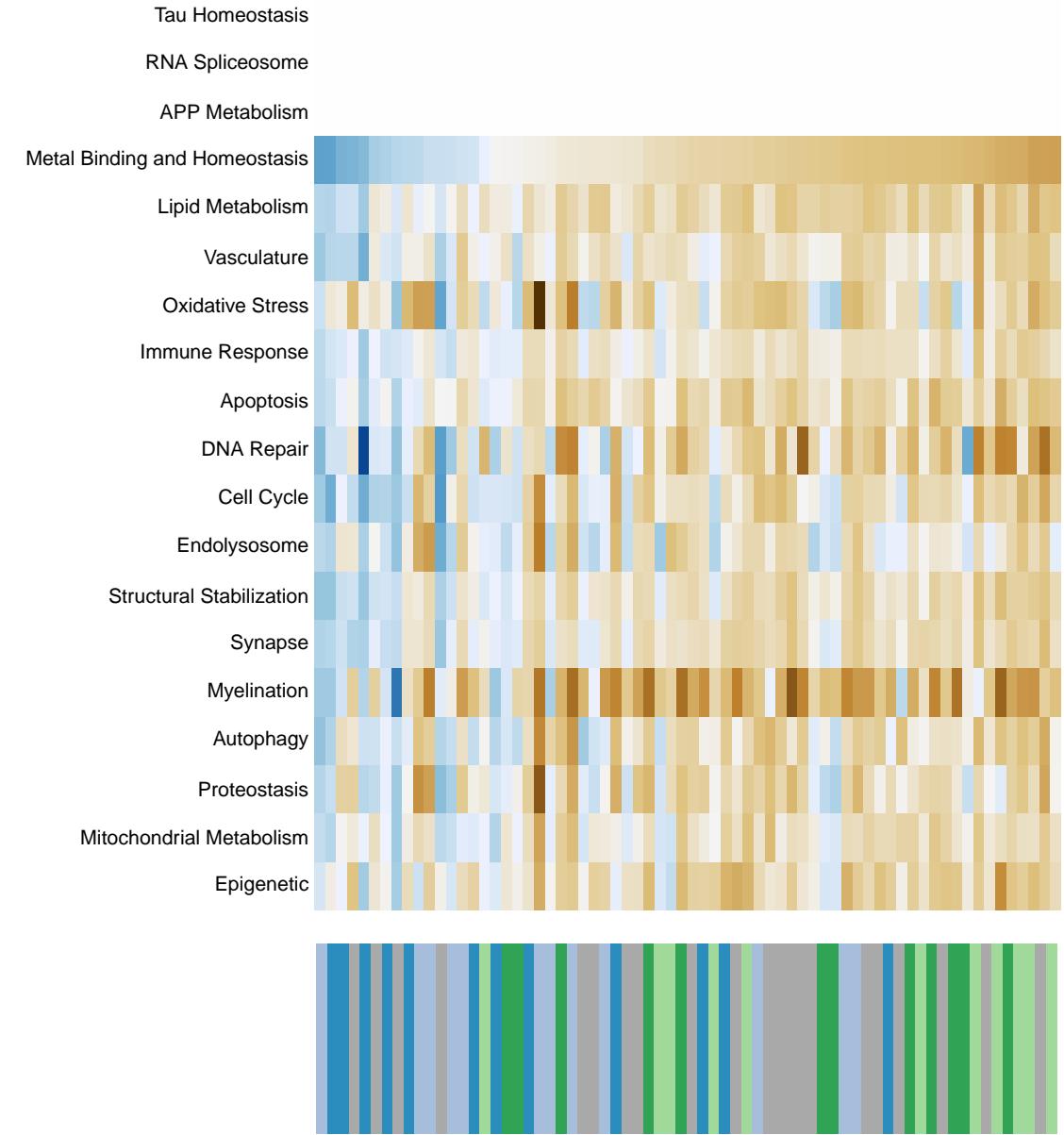
Decomposition



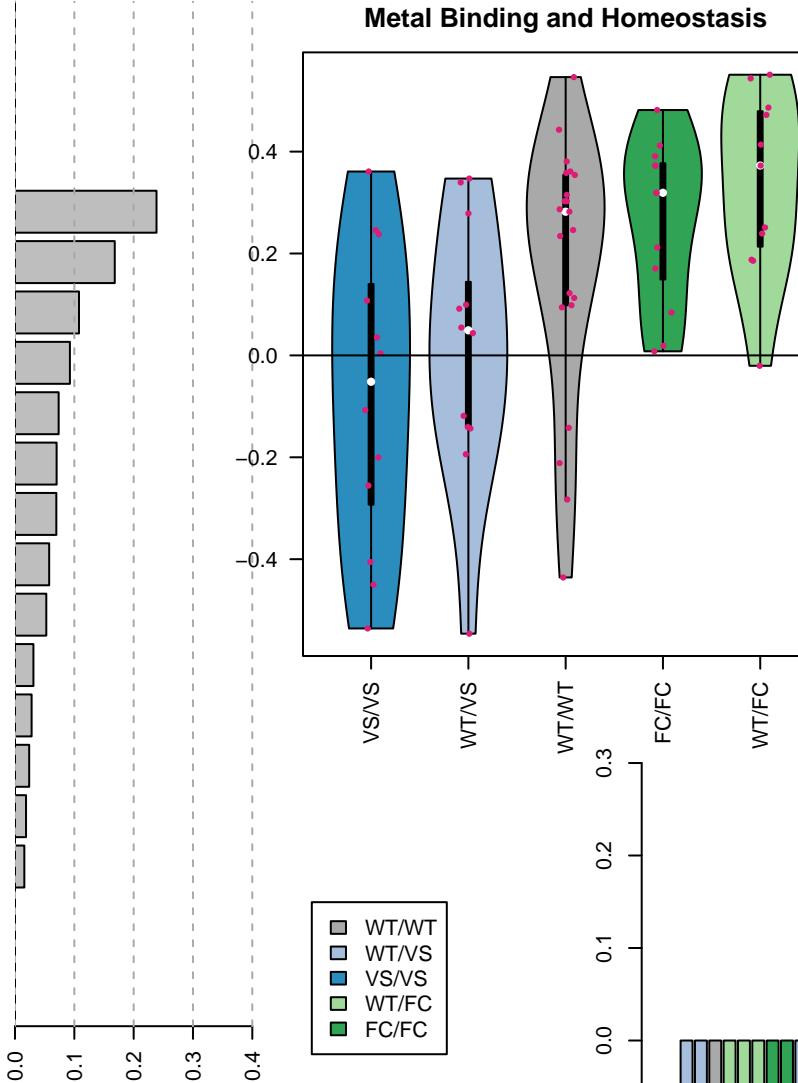
Intestinal immune network for IgA production



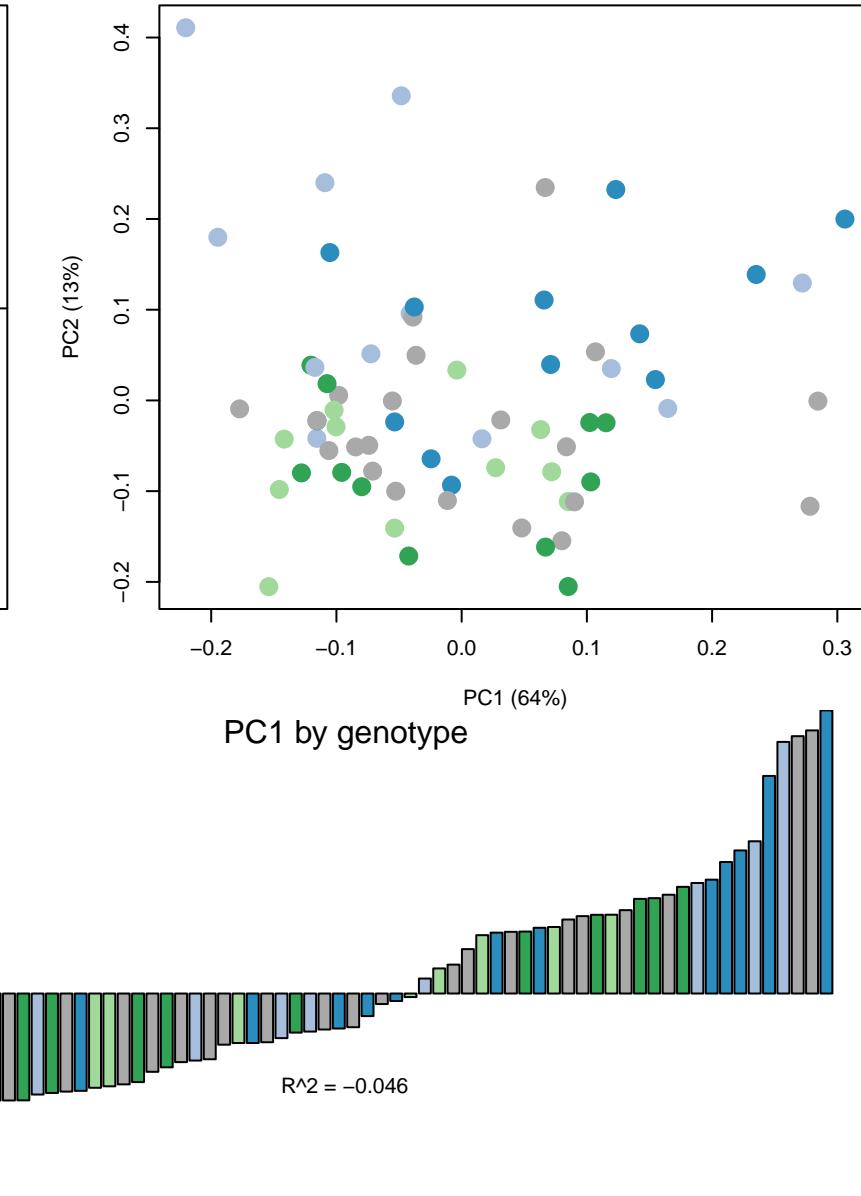
Chemokine signaling pathway



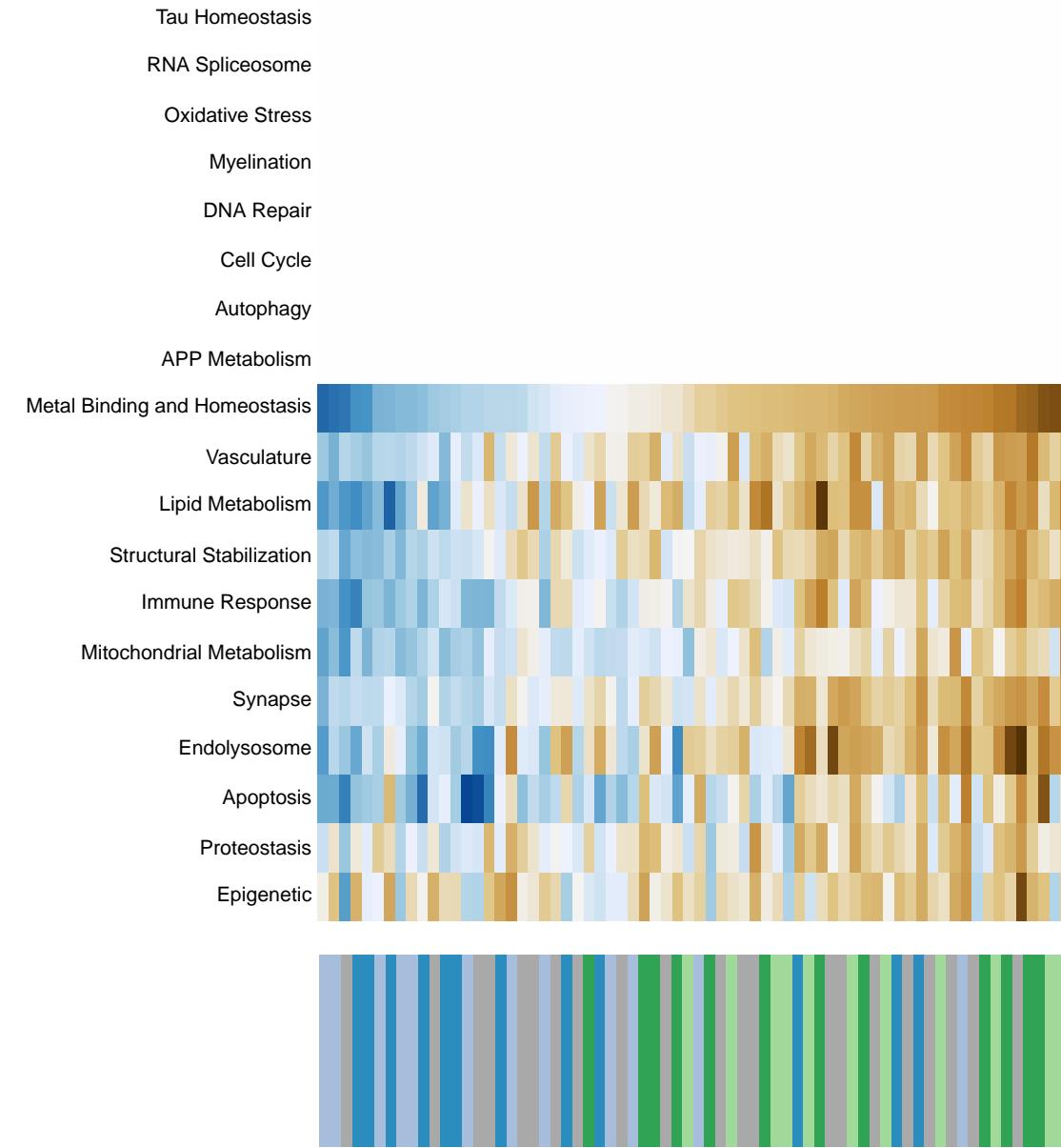
Metal Binding and Homeostasis



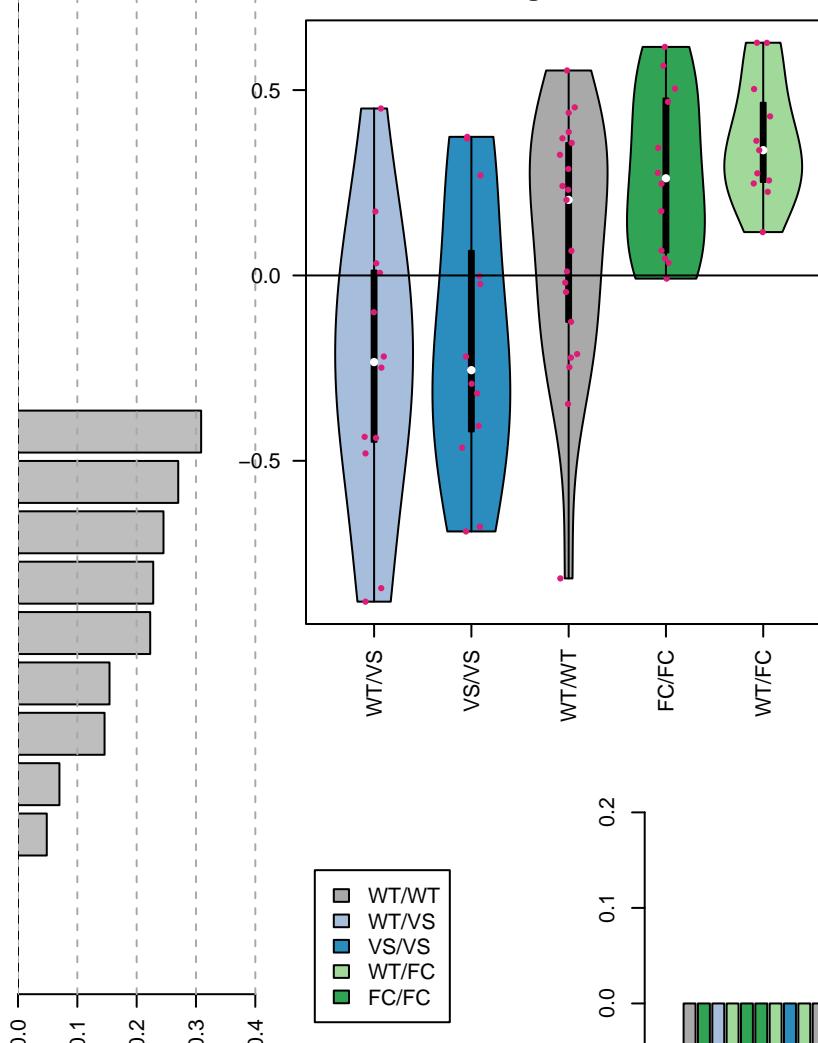
Decomposition



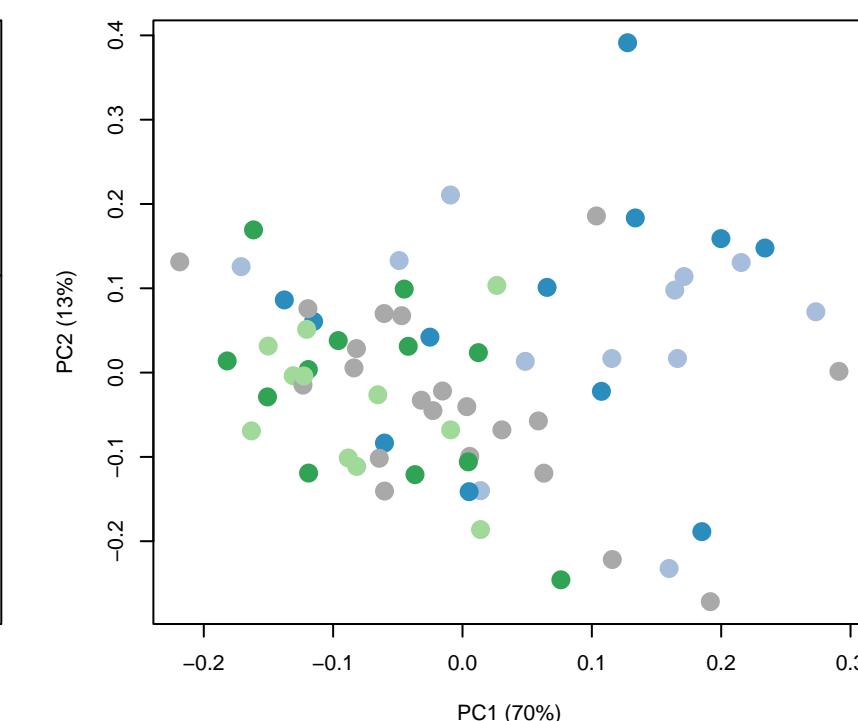
Insulin secretion



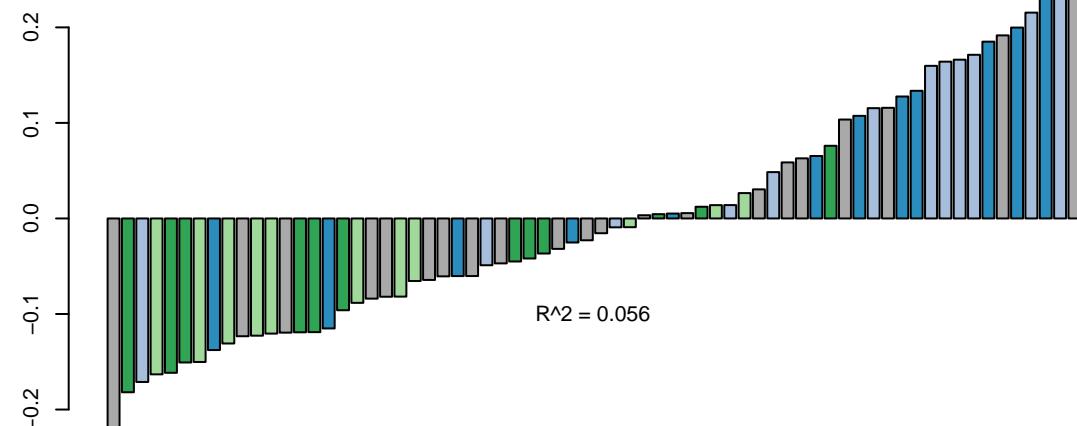
Metal Binding and Homeostasis



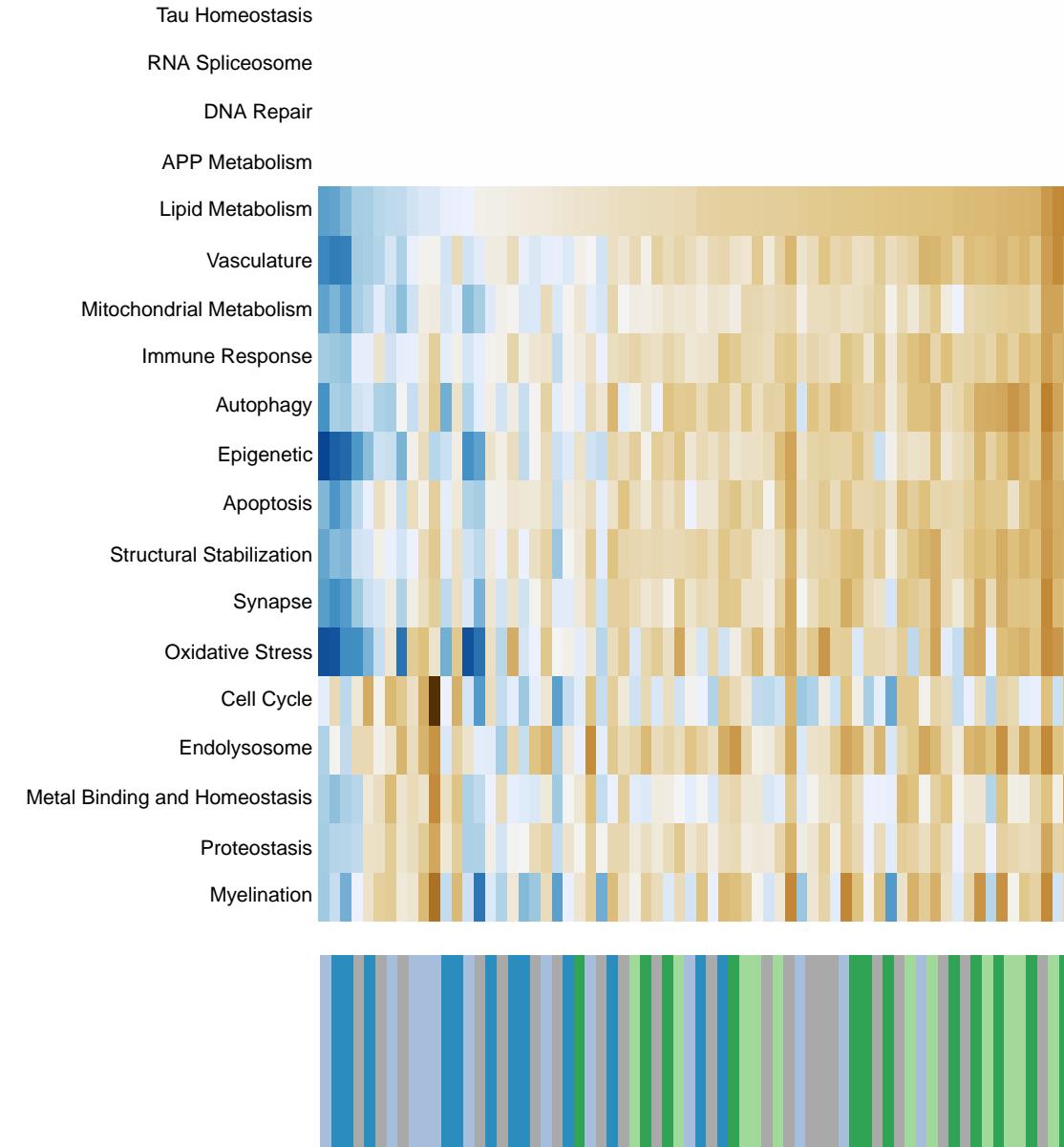
Decomposition



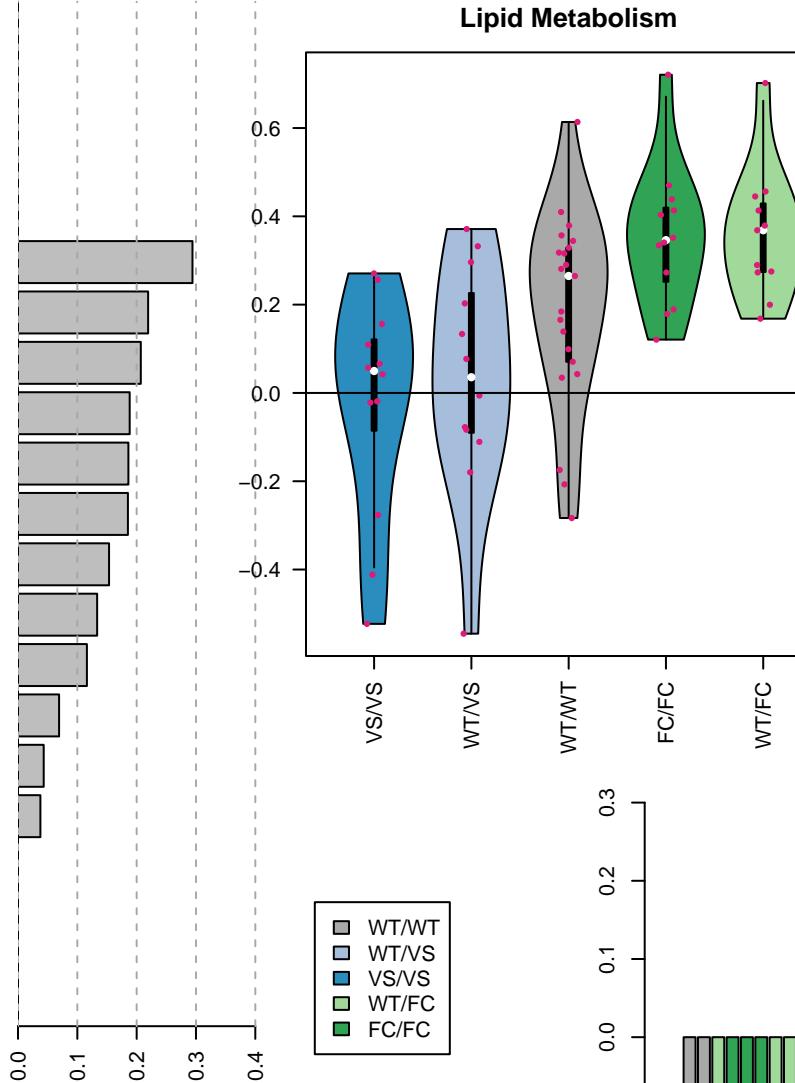
PC1 by genotype



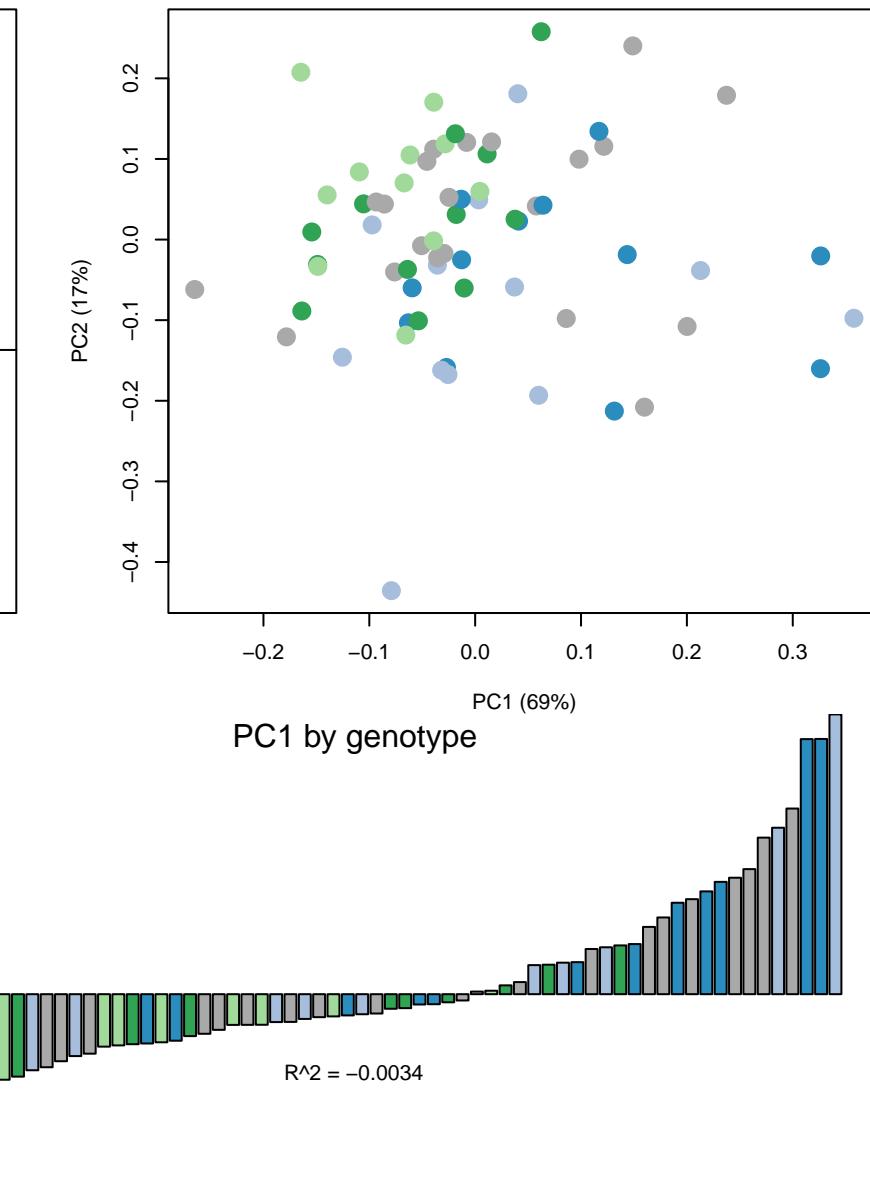
Insulin signaling pathway



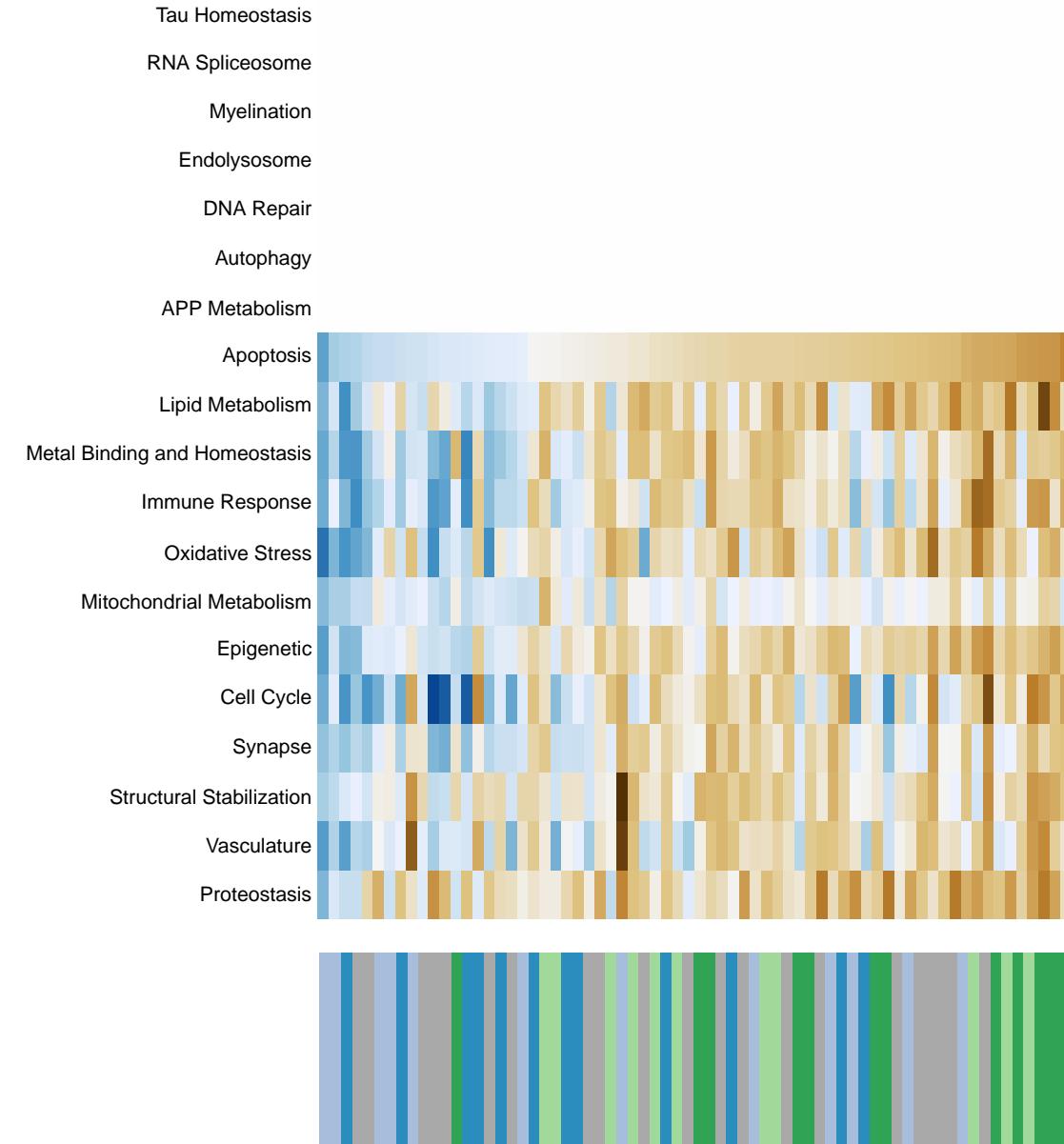
Lipid Metabolism



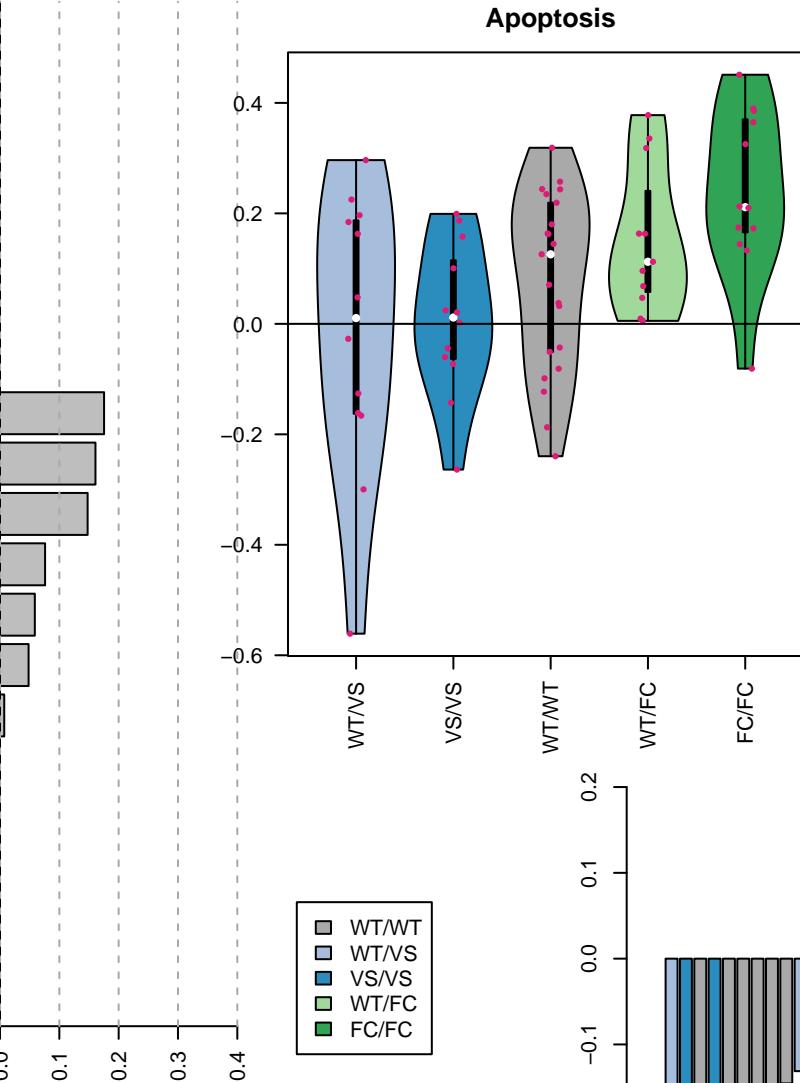
Decomposition



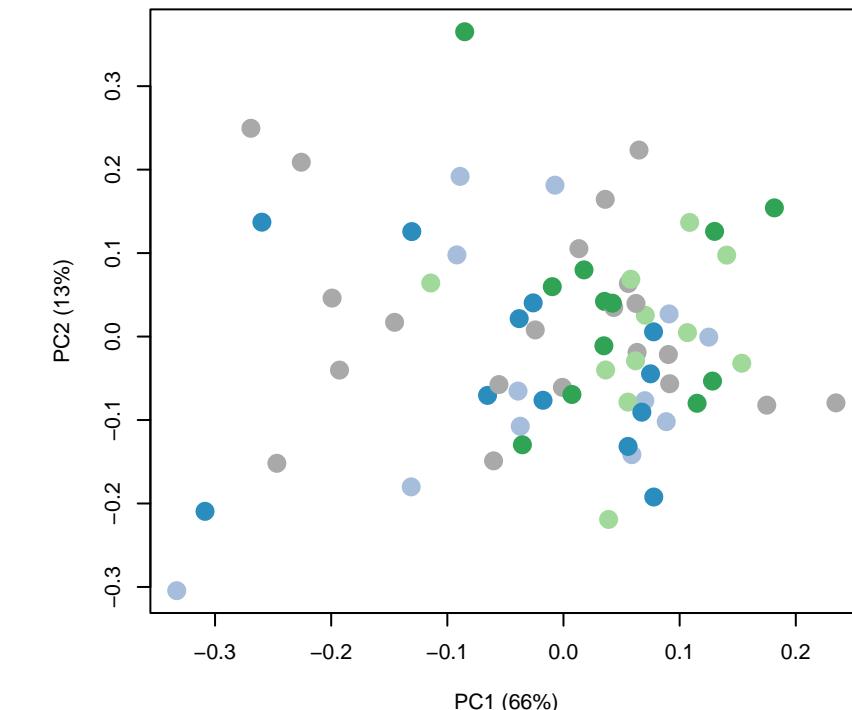
Glucagon signaling pathway



Apoptosis



Decomposition

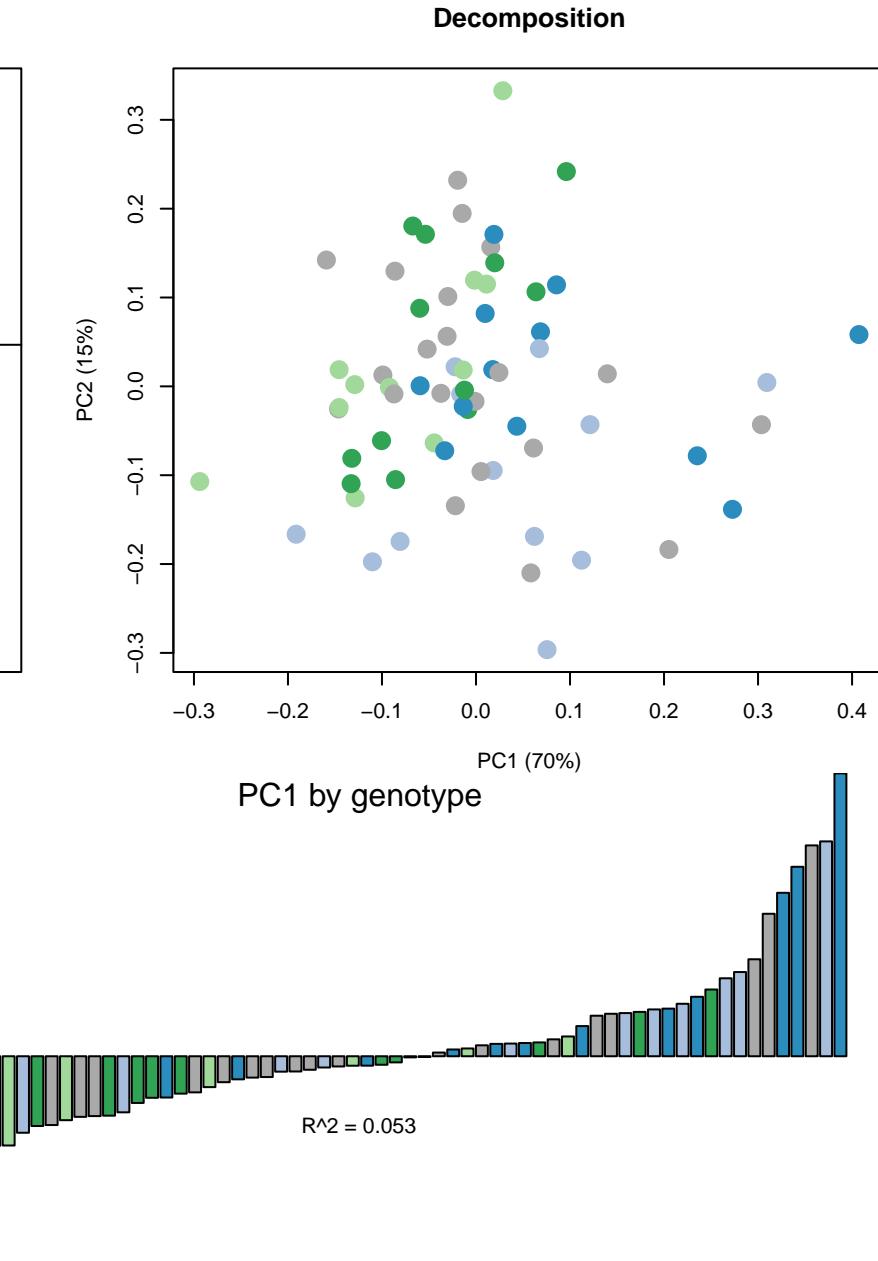
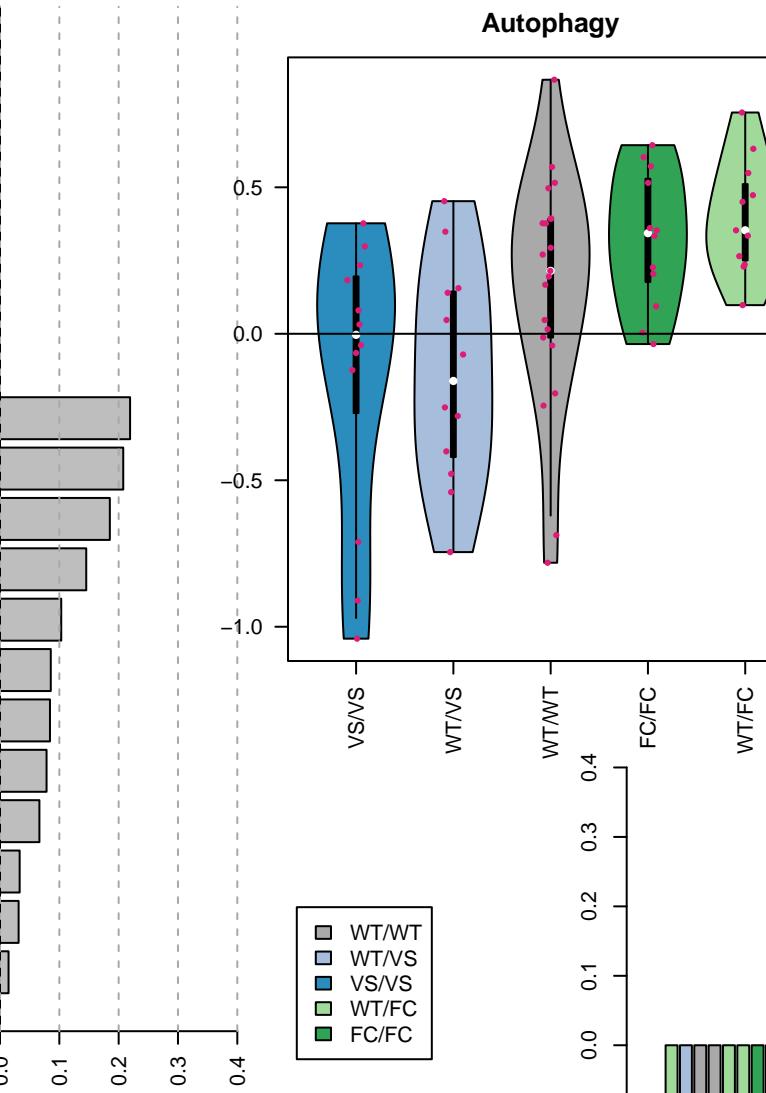
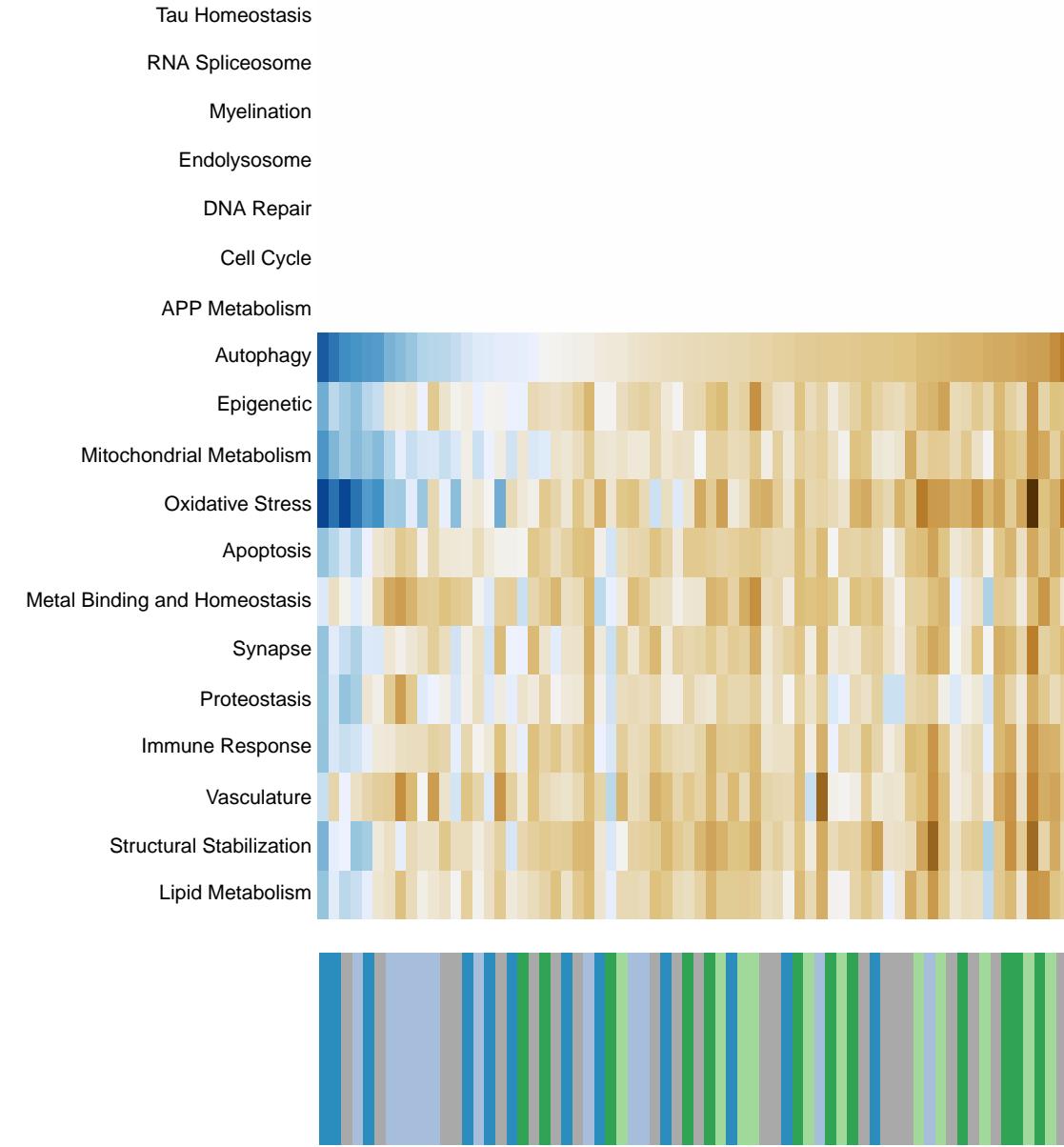


PC1 by genotype

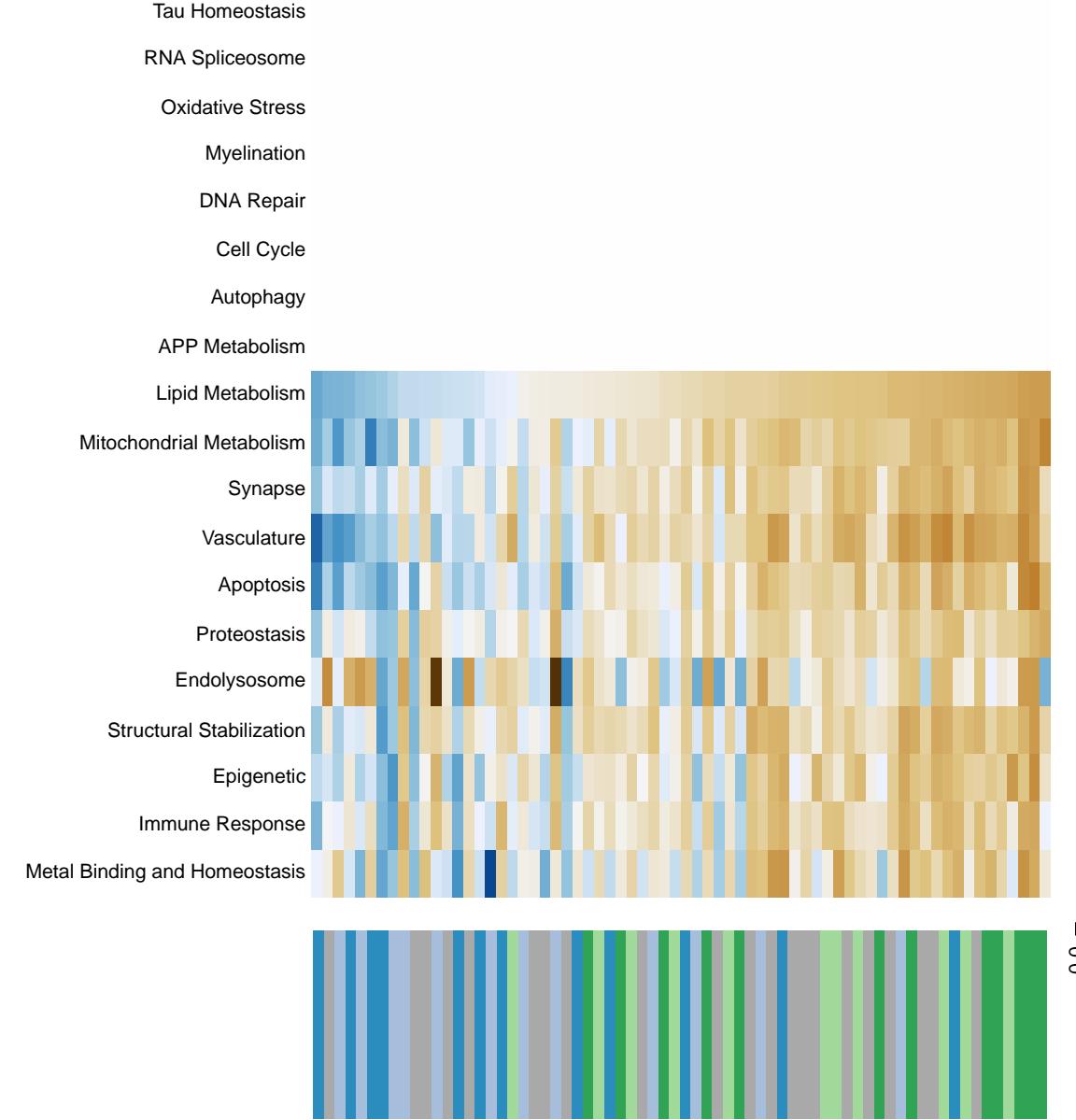
$R^2 = -0.022$

WT/WT
WT/VS
VS/VS
WT/FC
FC/FC

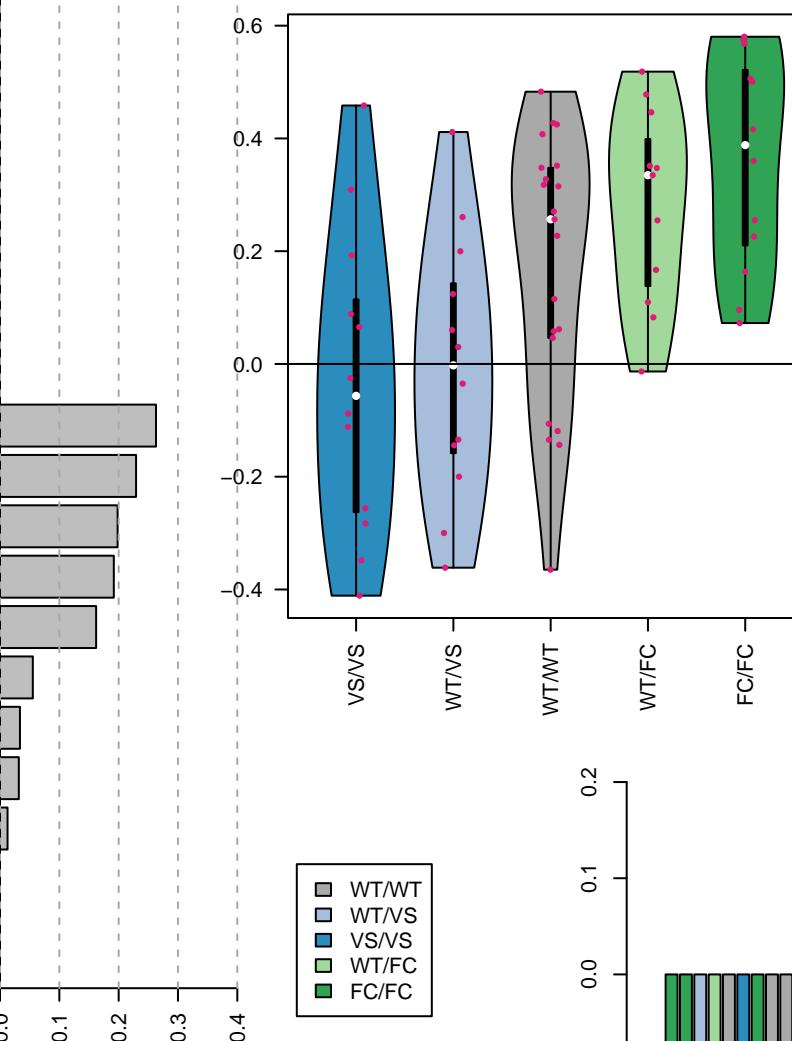
Adipocytokine signaling pathway



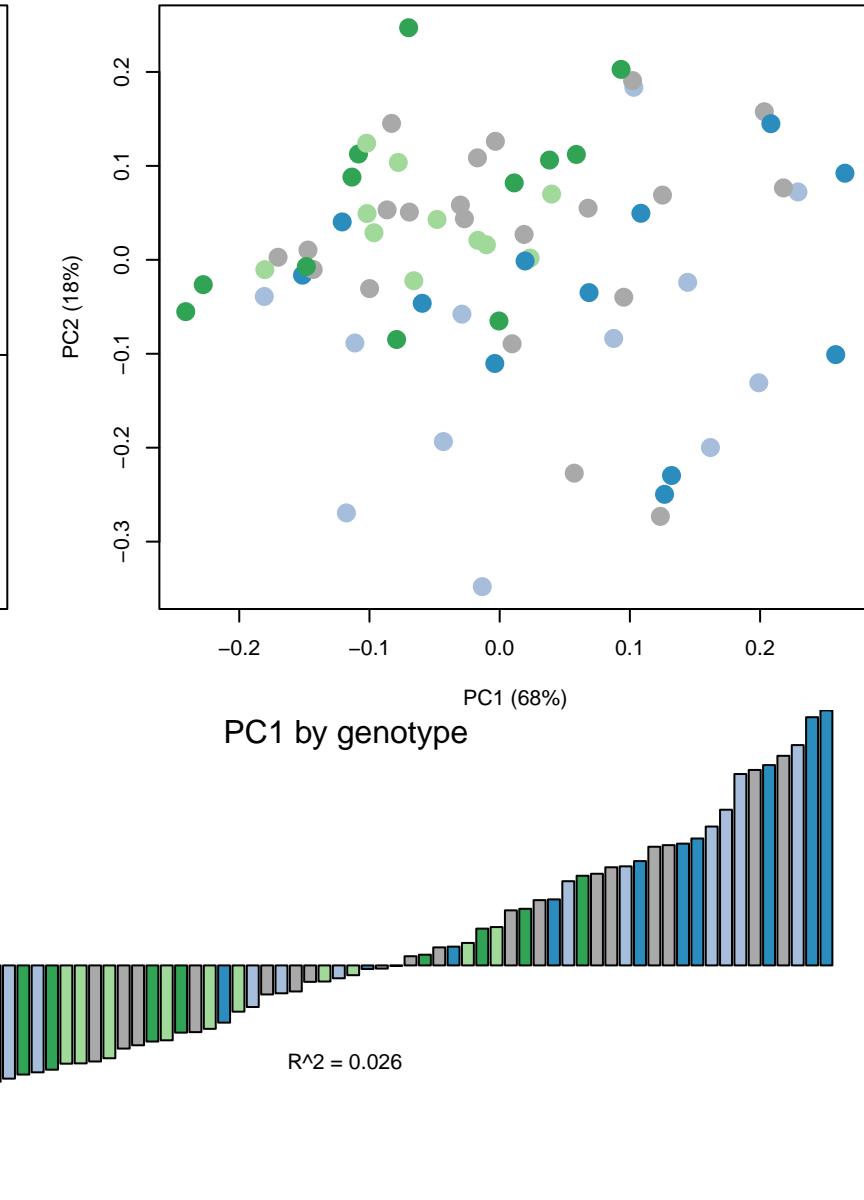
GnRH secretion



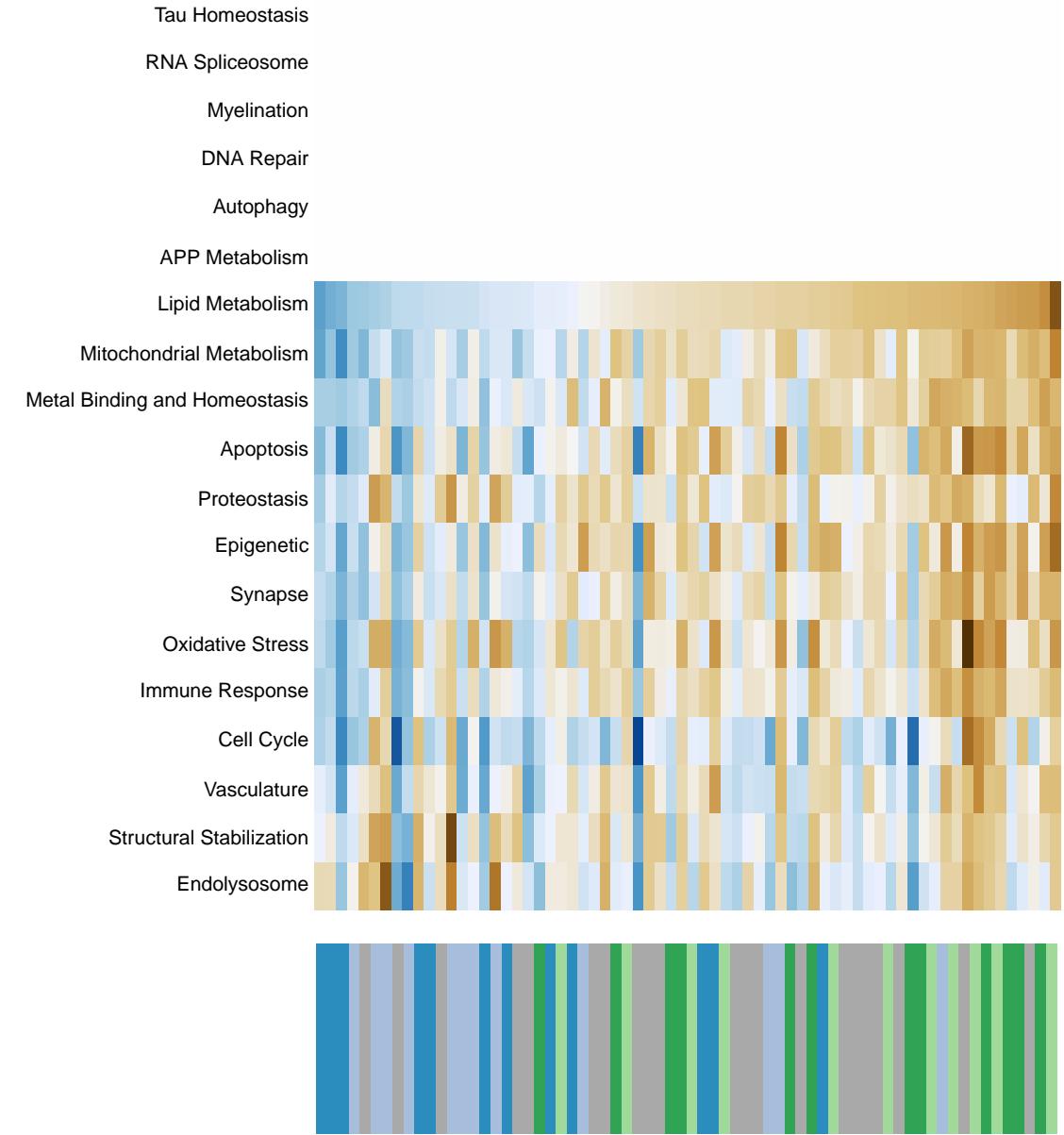
Lipid Metabolism



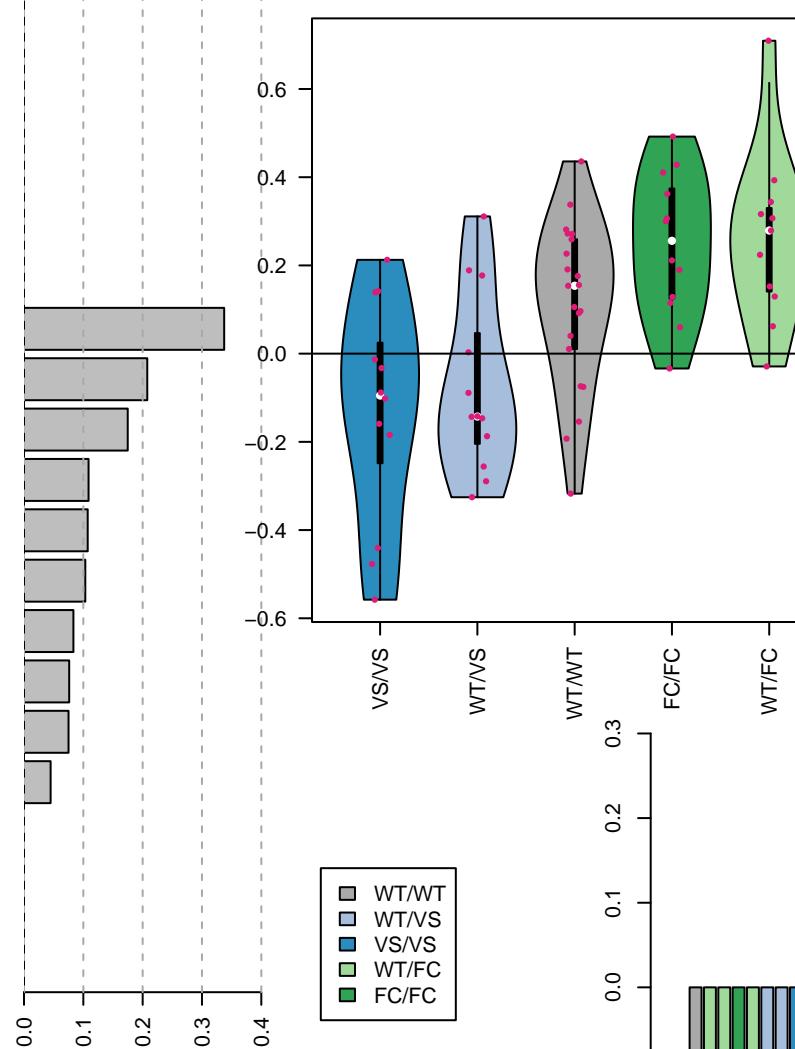
Decomposition



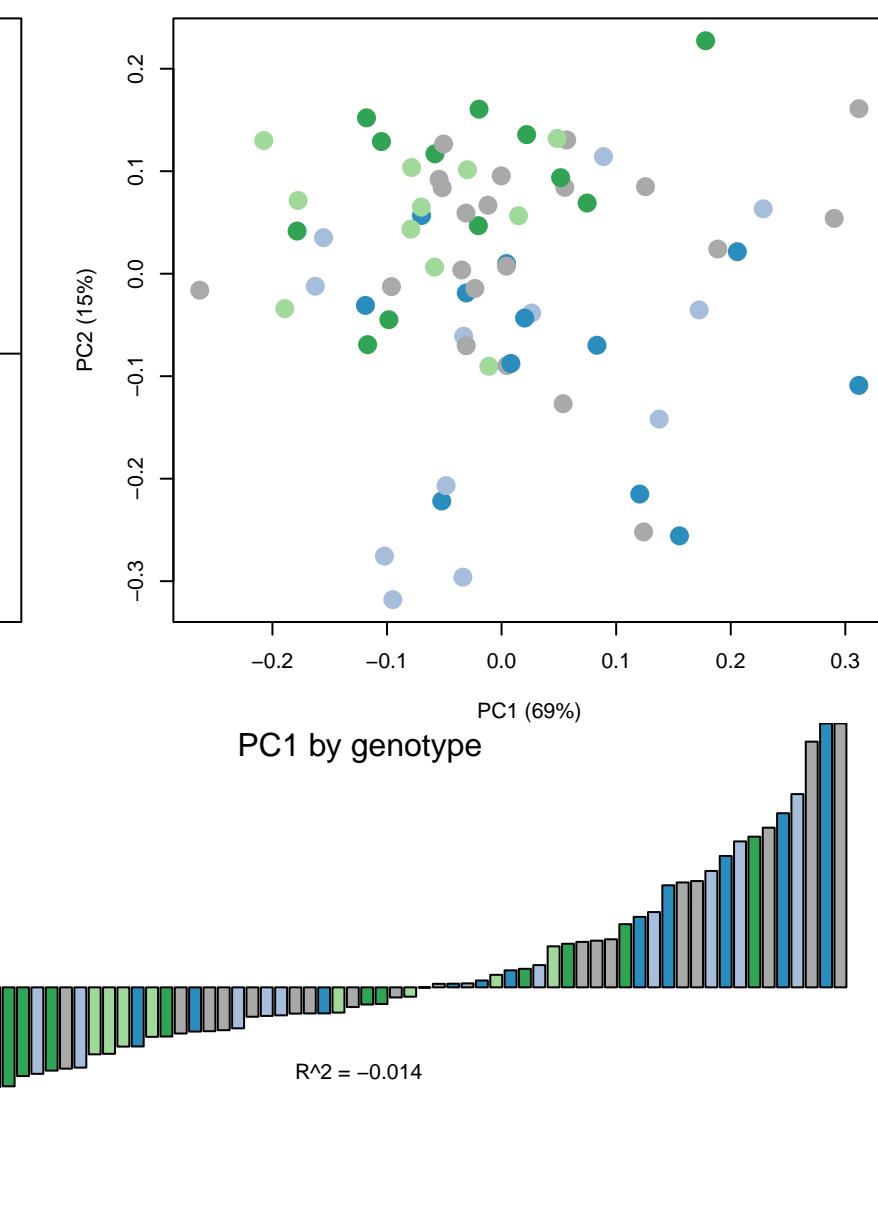
GnRH signaling pathway



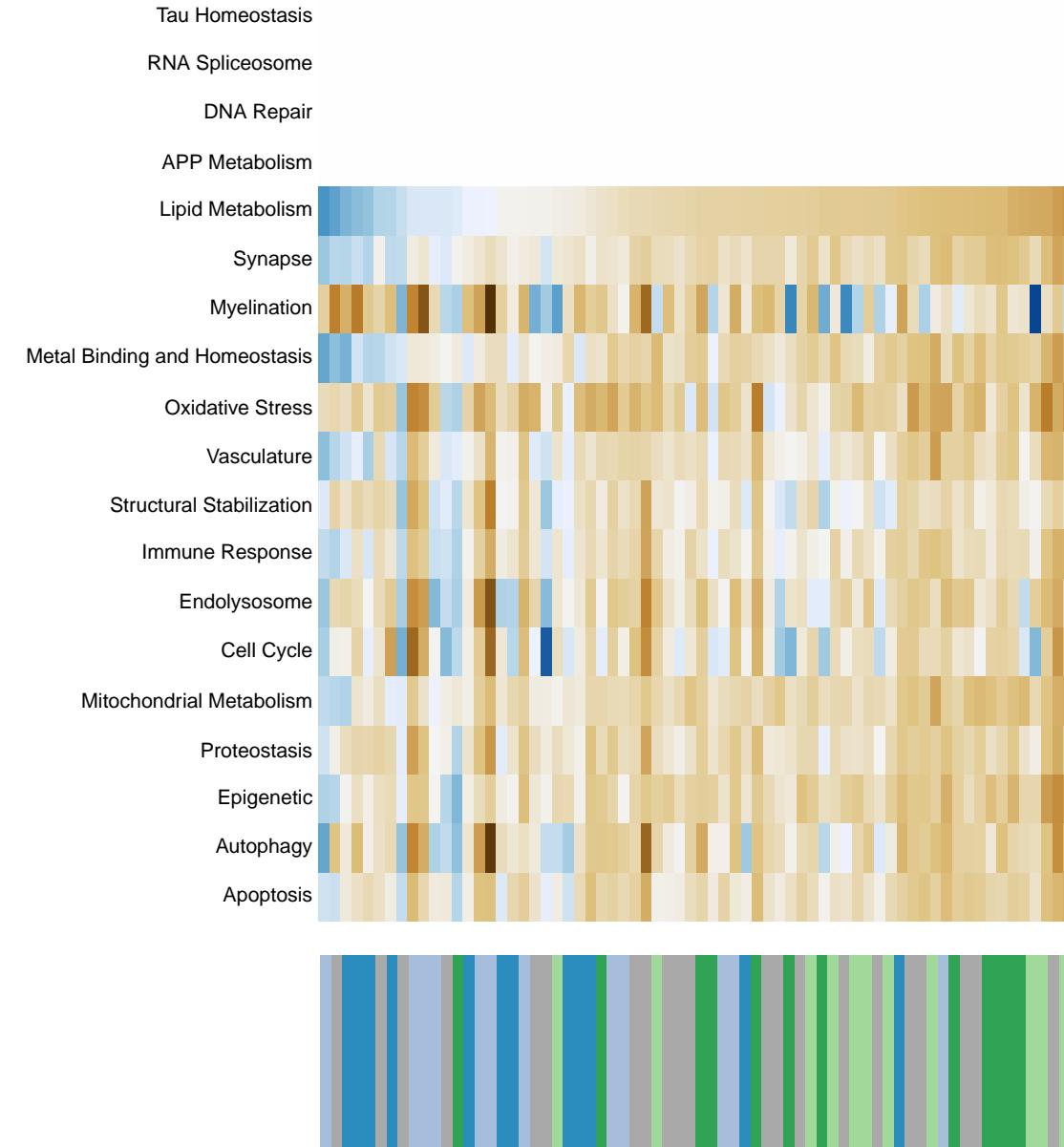
Lipid Metabolism



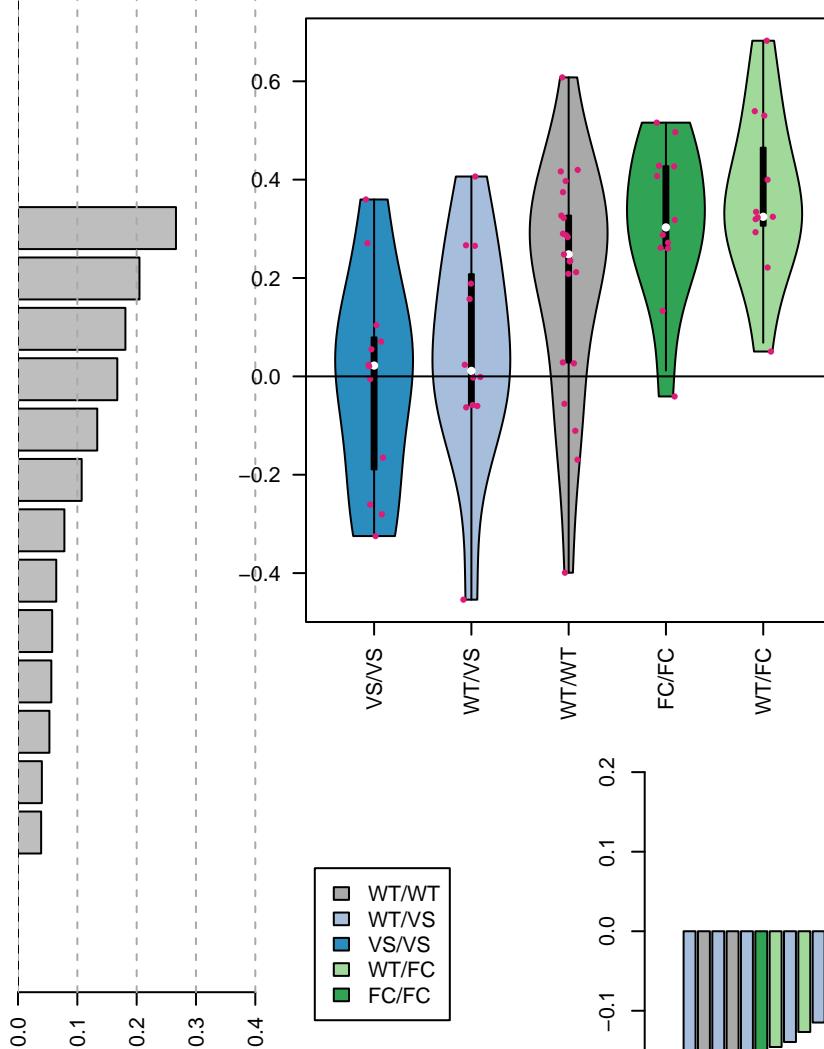
Decomposition



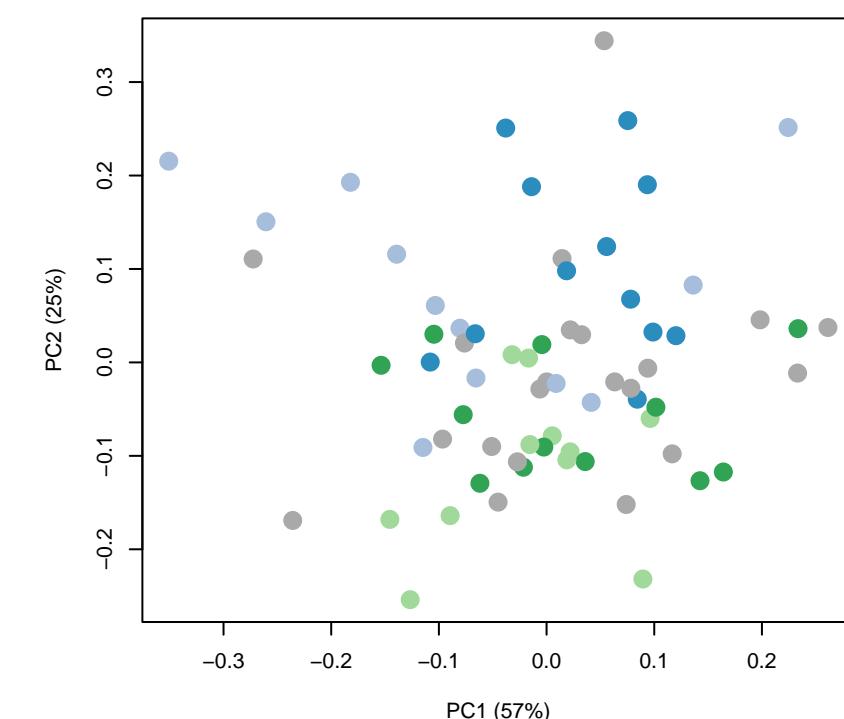
Estrogen signaling pathway



Lipid Metabolism



Decomposition

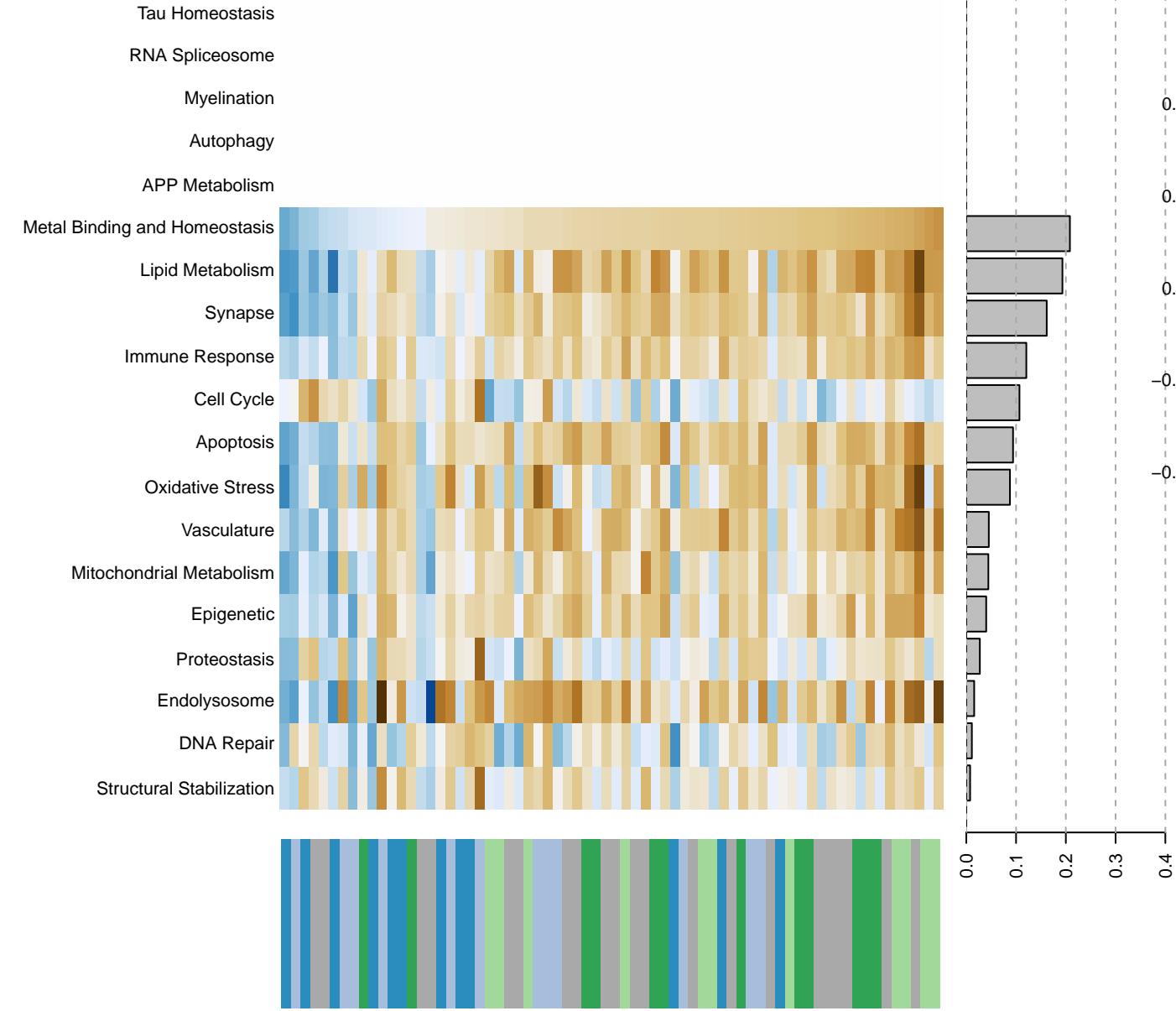


PC1 by genotype

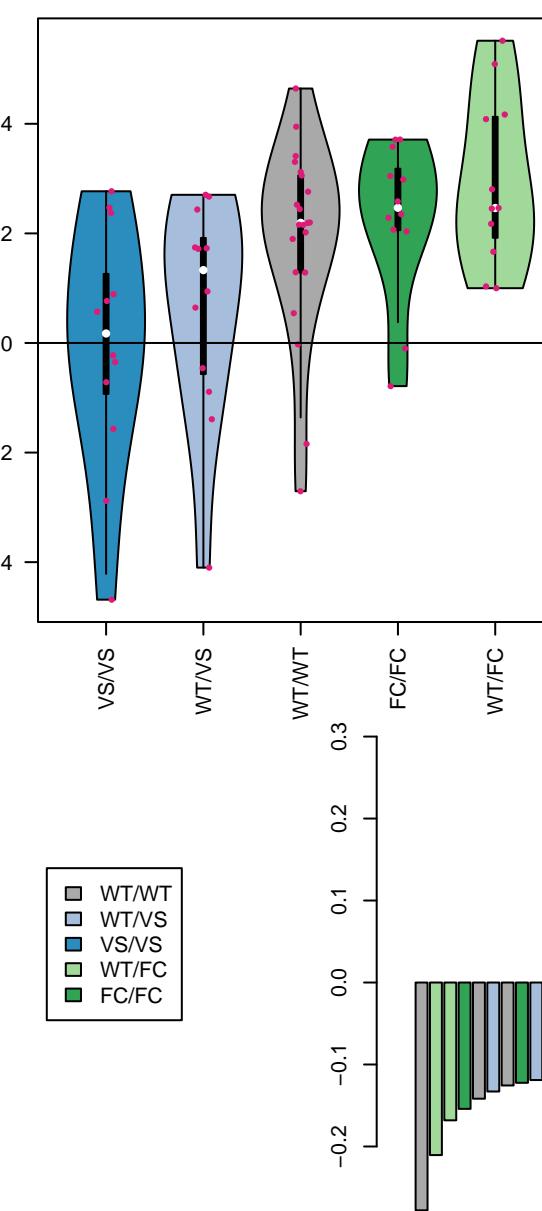


$R^2 = -0.029$

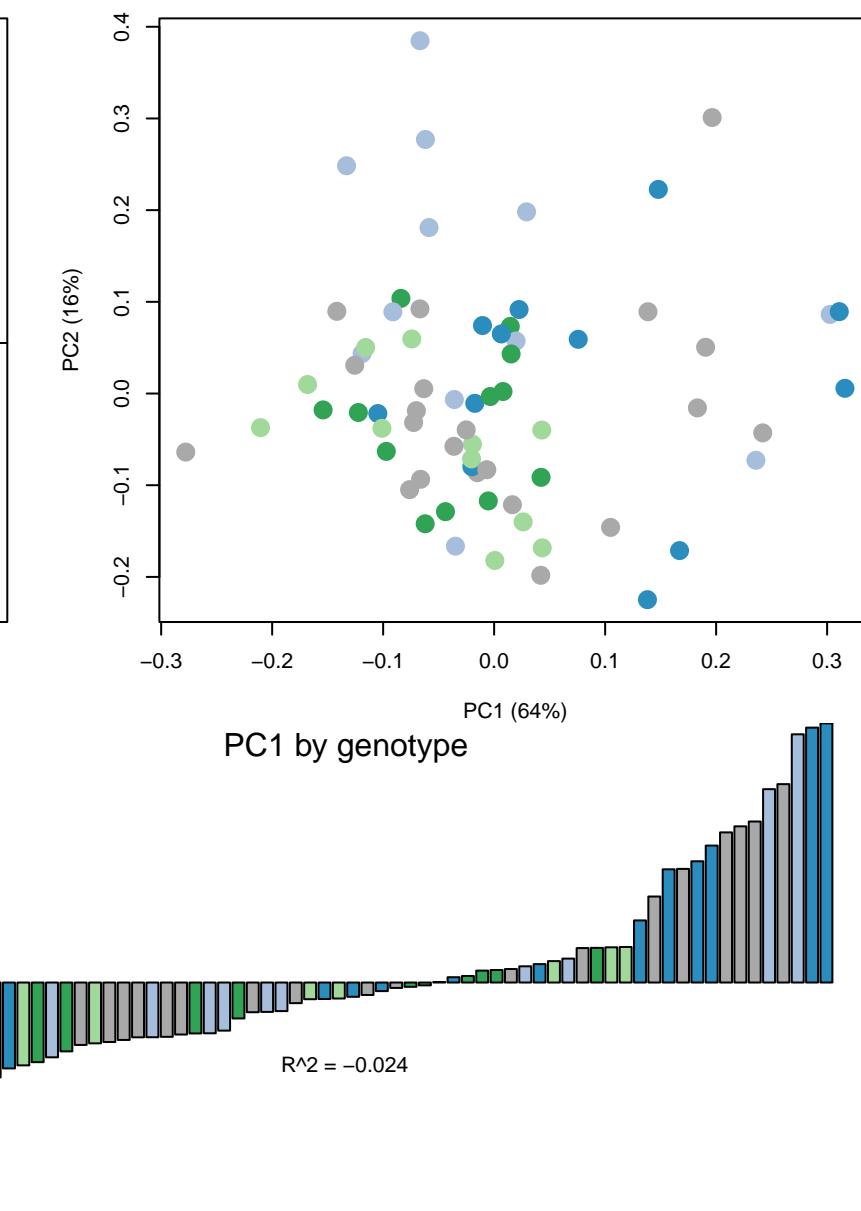
Progesterone-mediated oocyte maturation



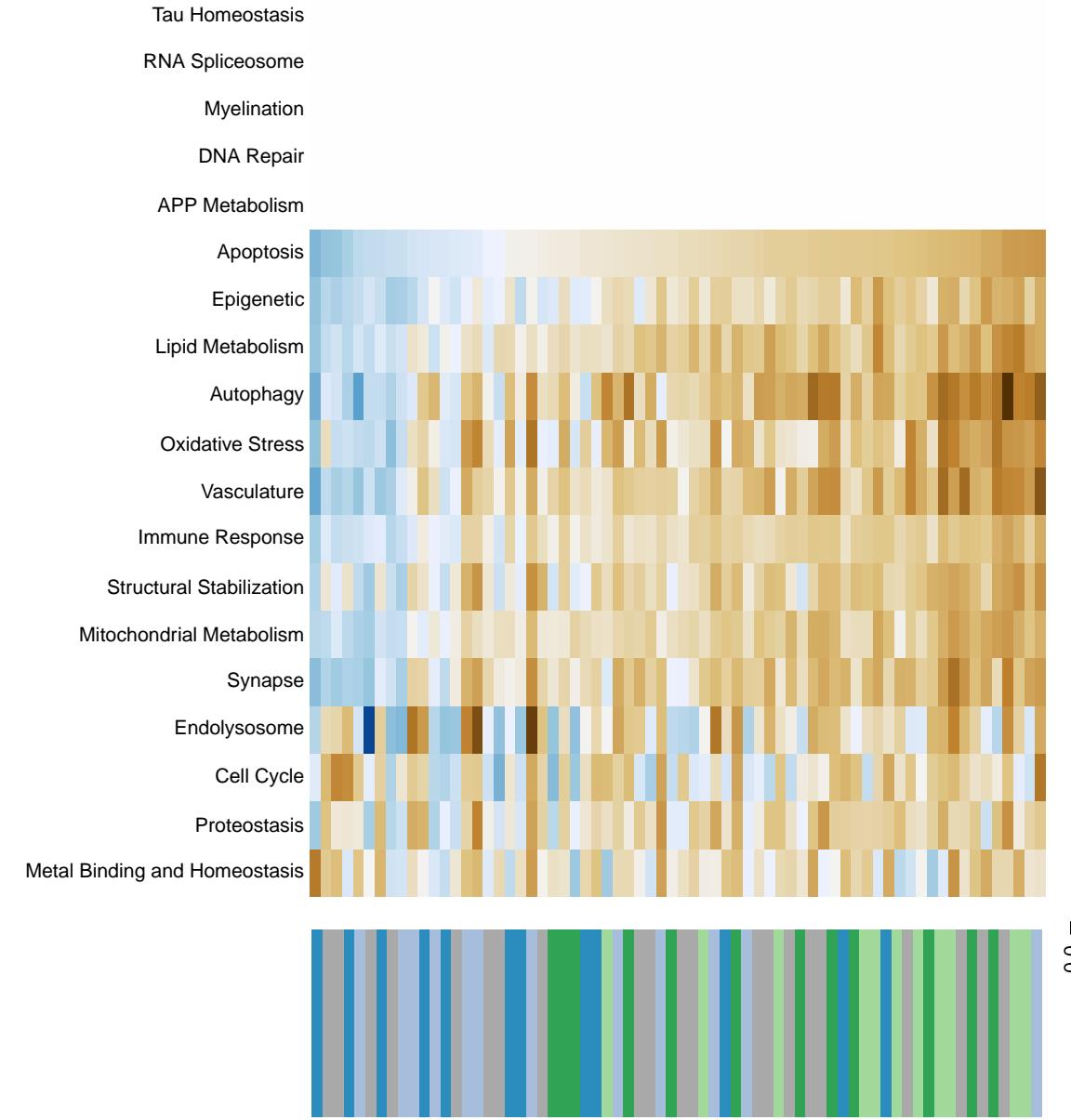
Metal Binding and Homeostasis



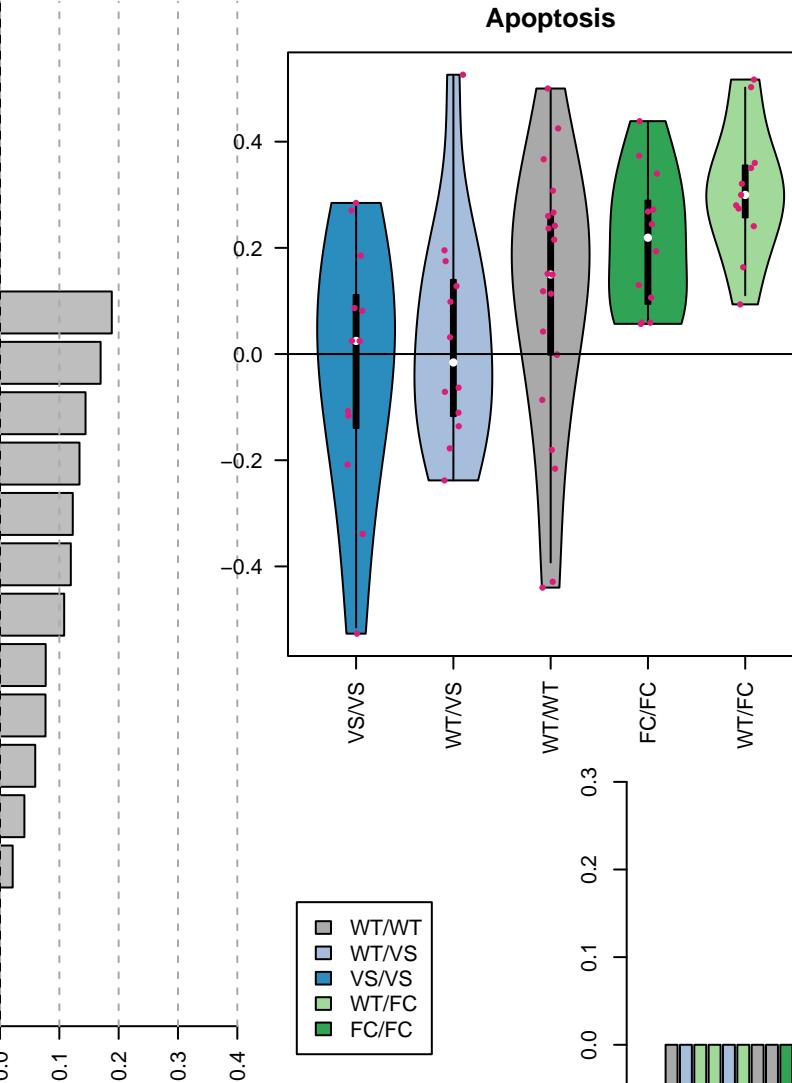
Decomposition



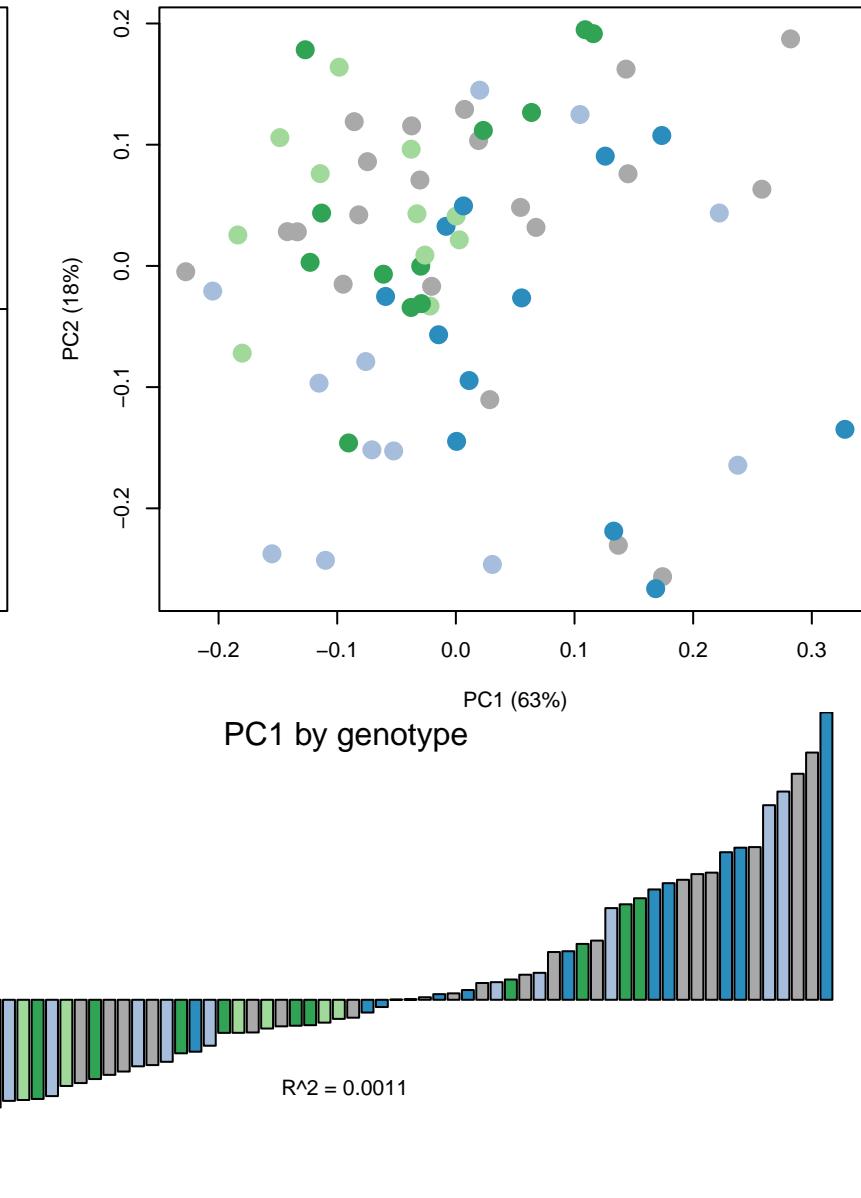
Prolactin signaling pathway



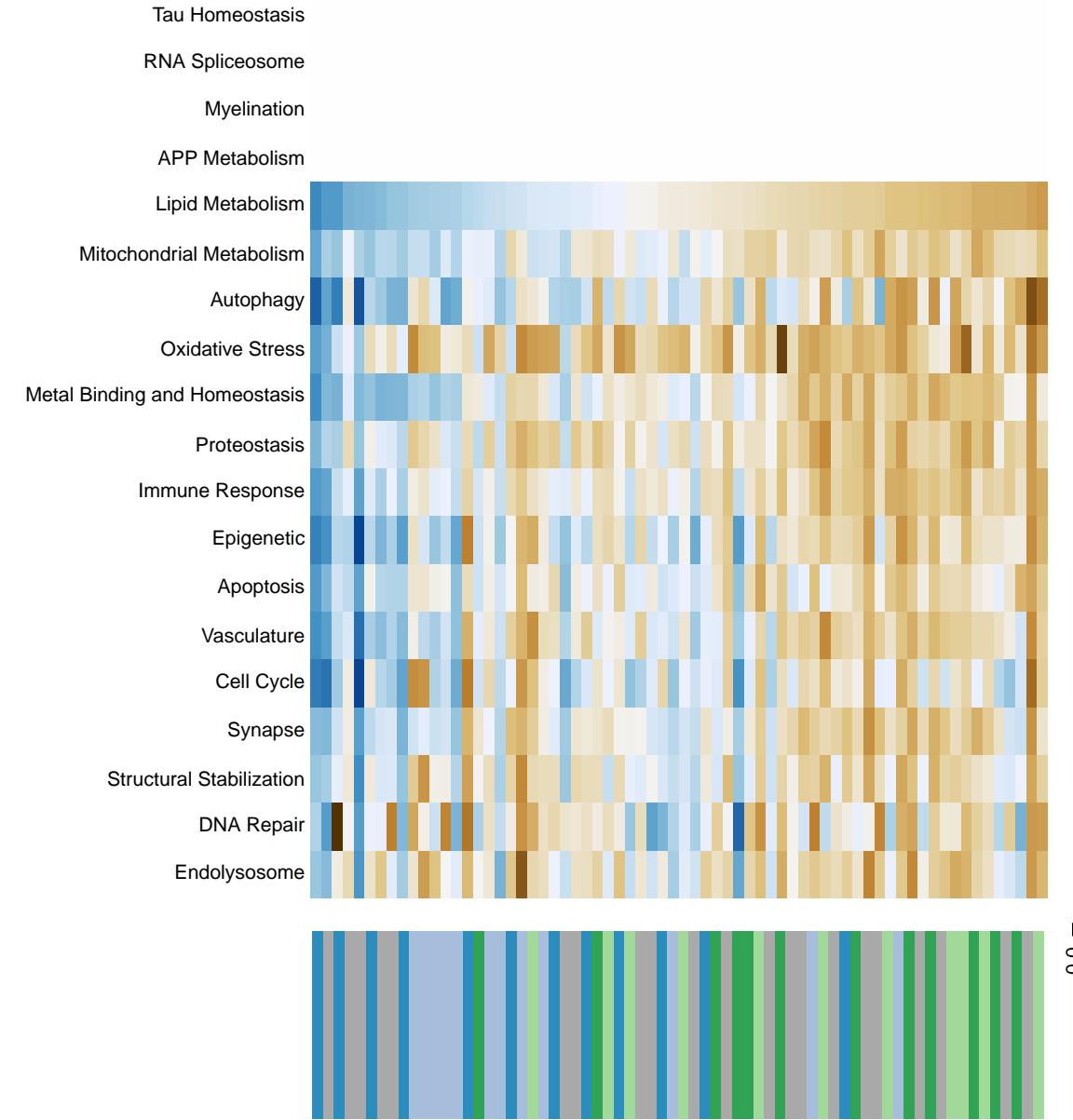
Apoptosis



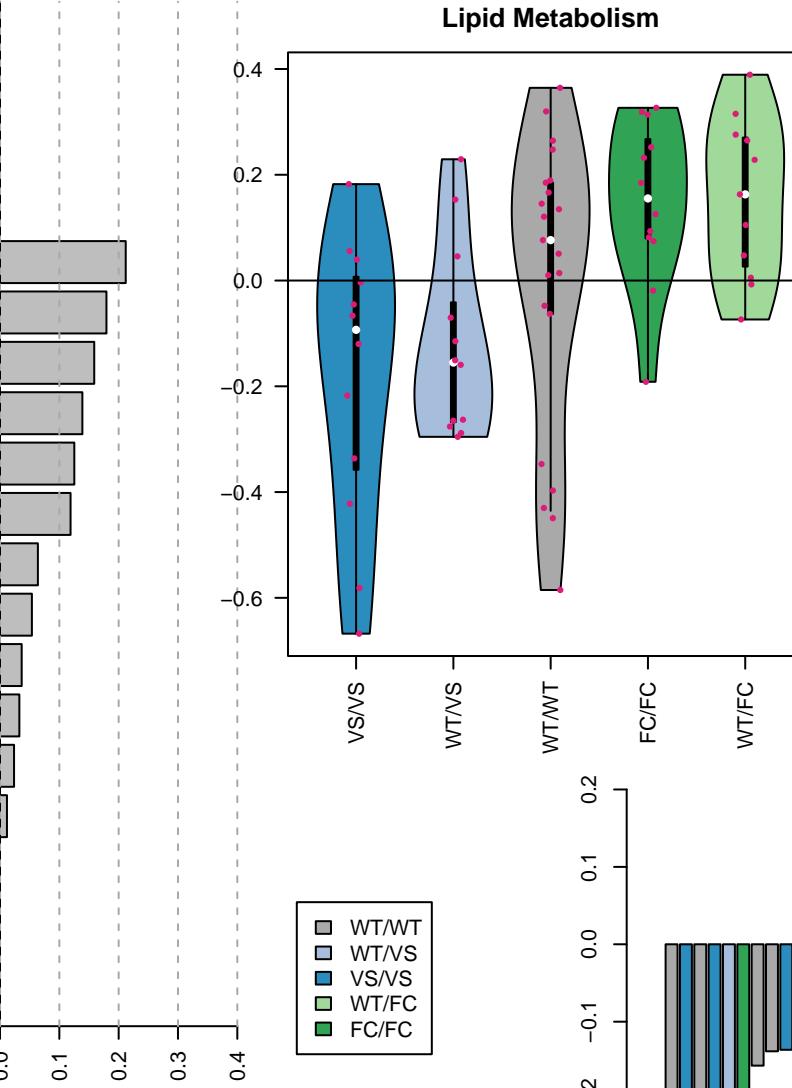
Decomposition



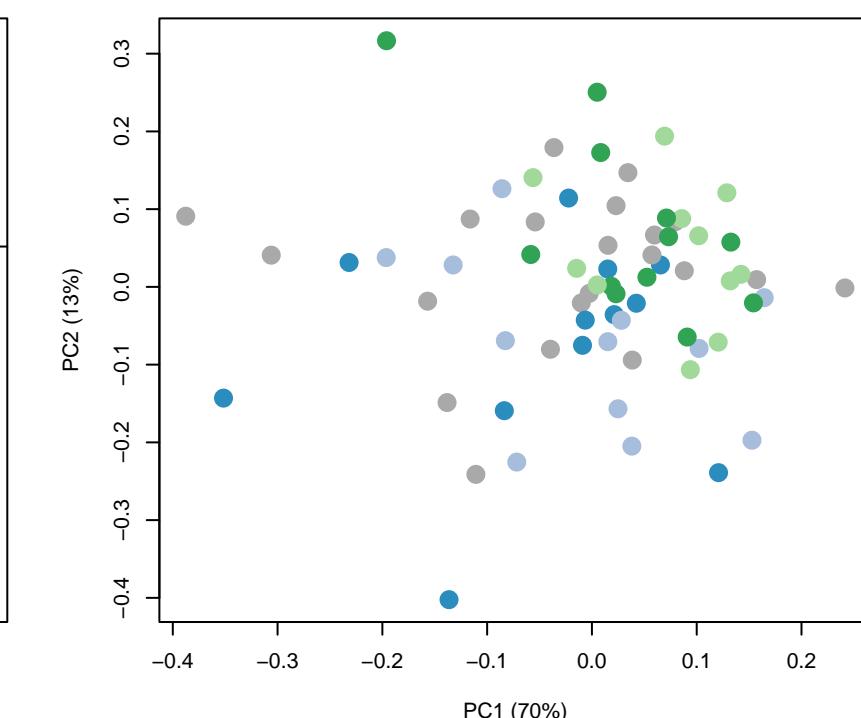
Oxytocin signaling pathway



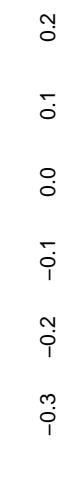
Lipid Metabolism



Decomposition

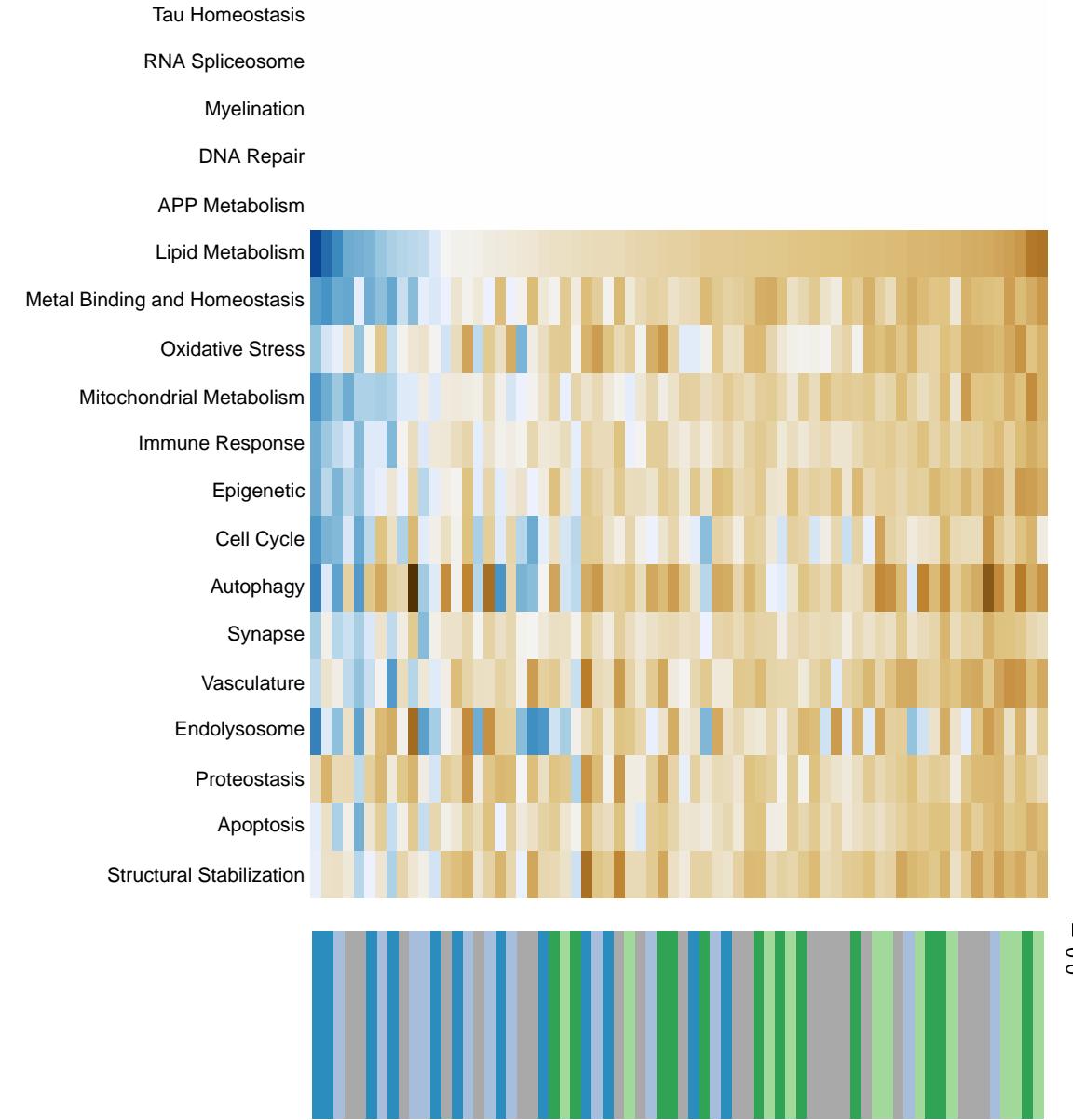


PC1 by genotype

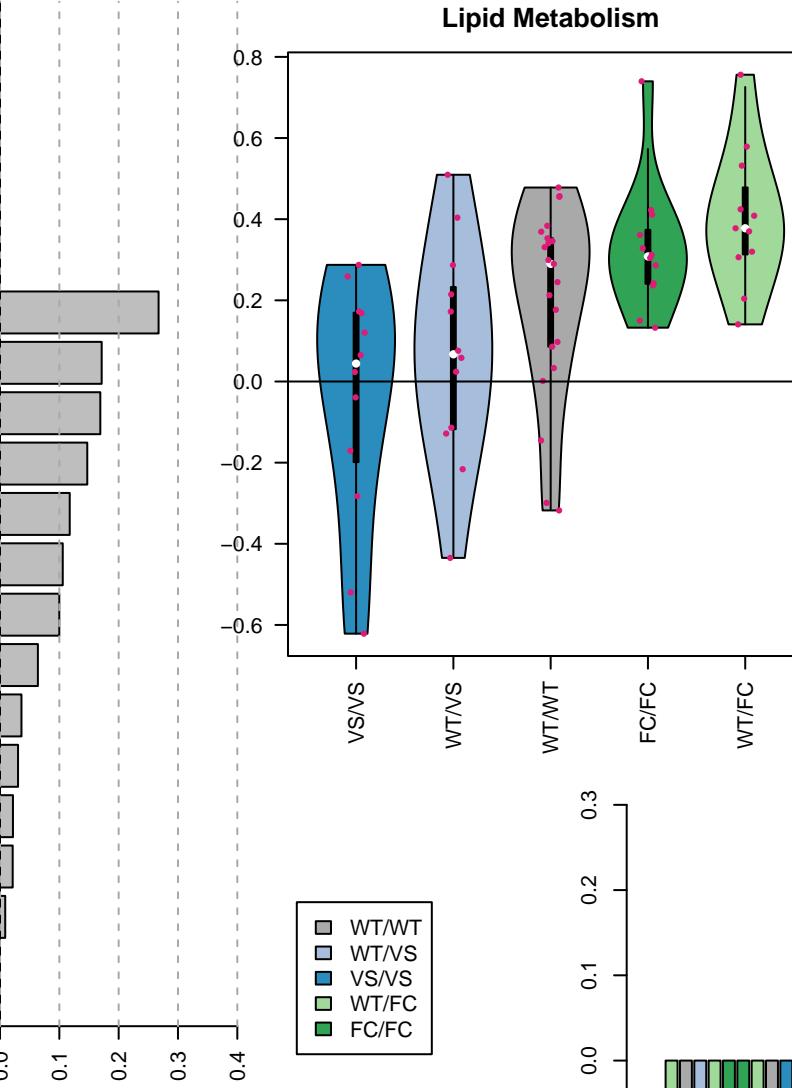


$$R^2 = -0.0013$$

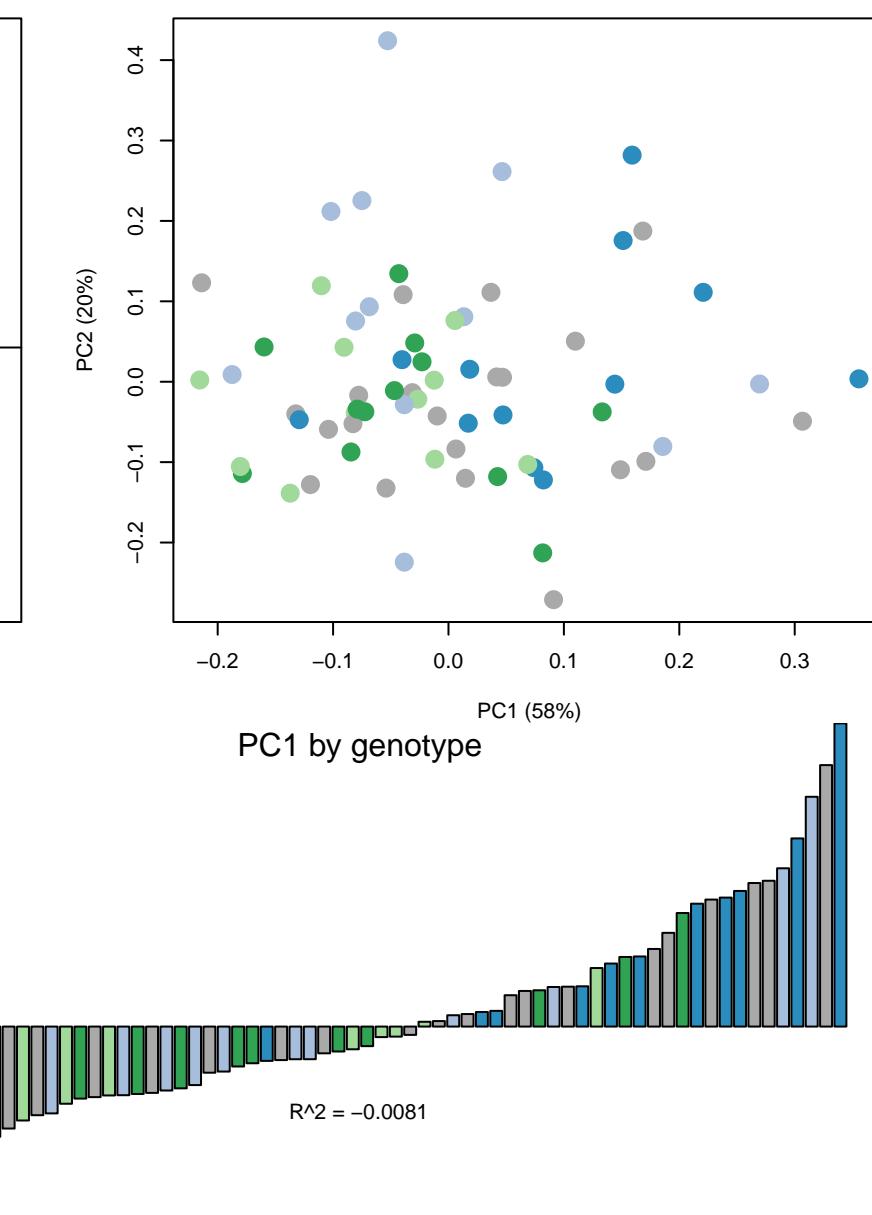
Relaxin signaling pathway



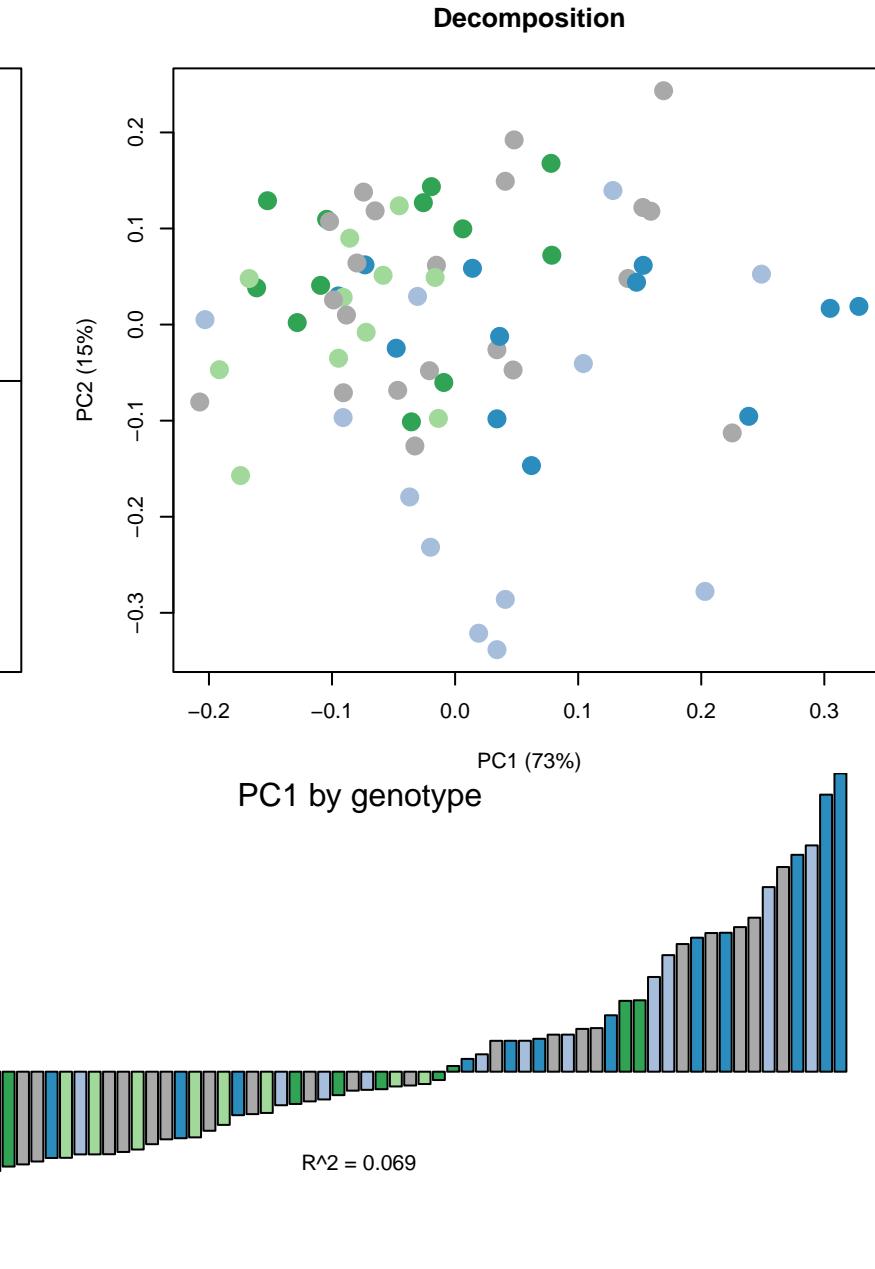
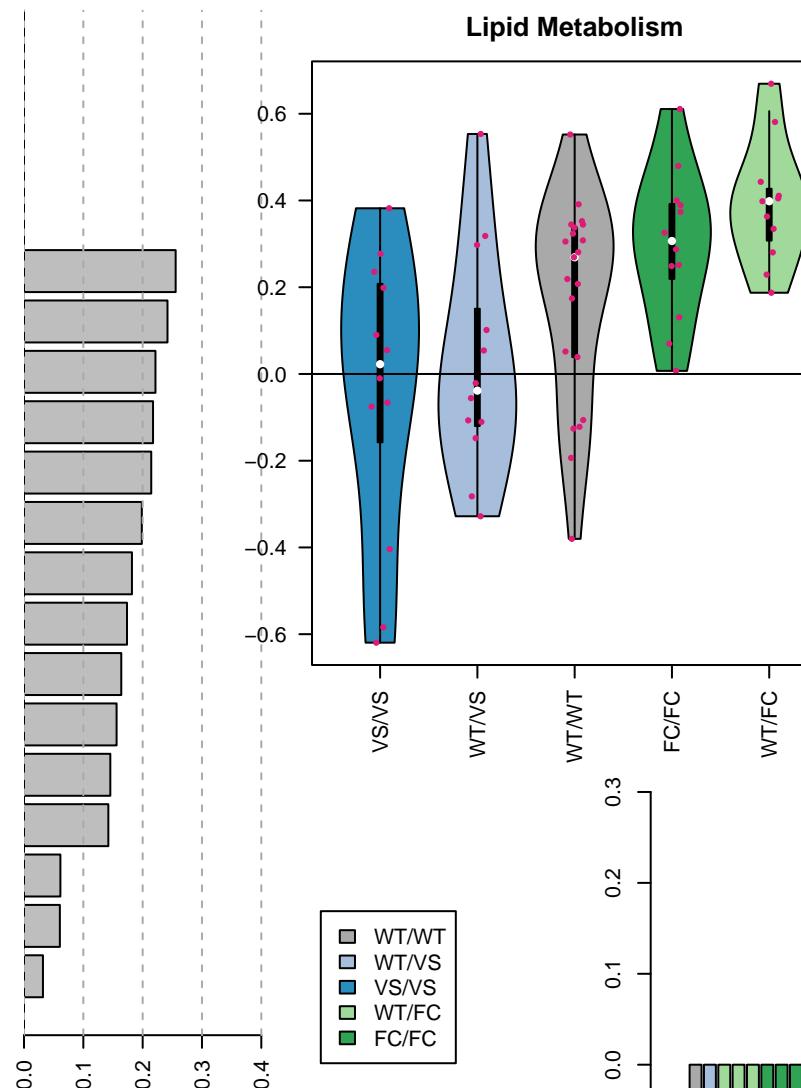
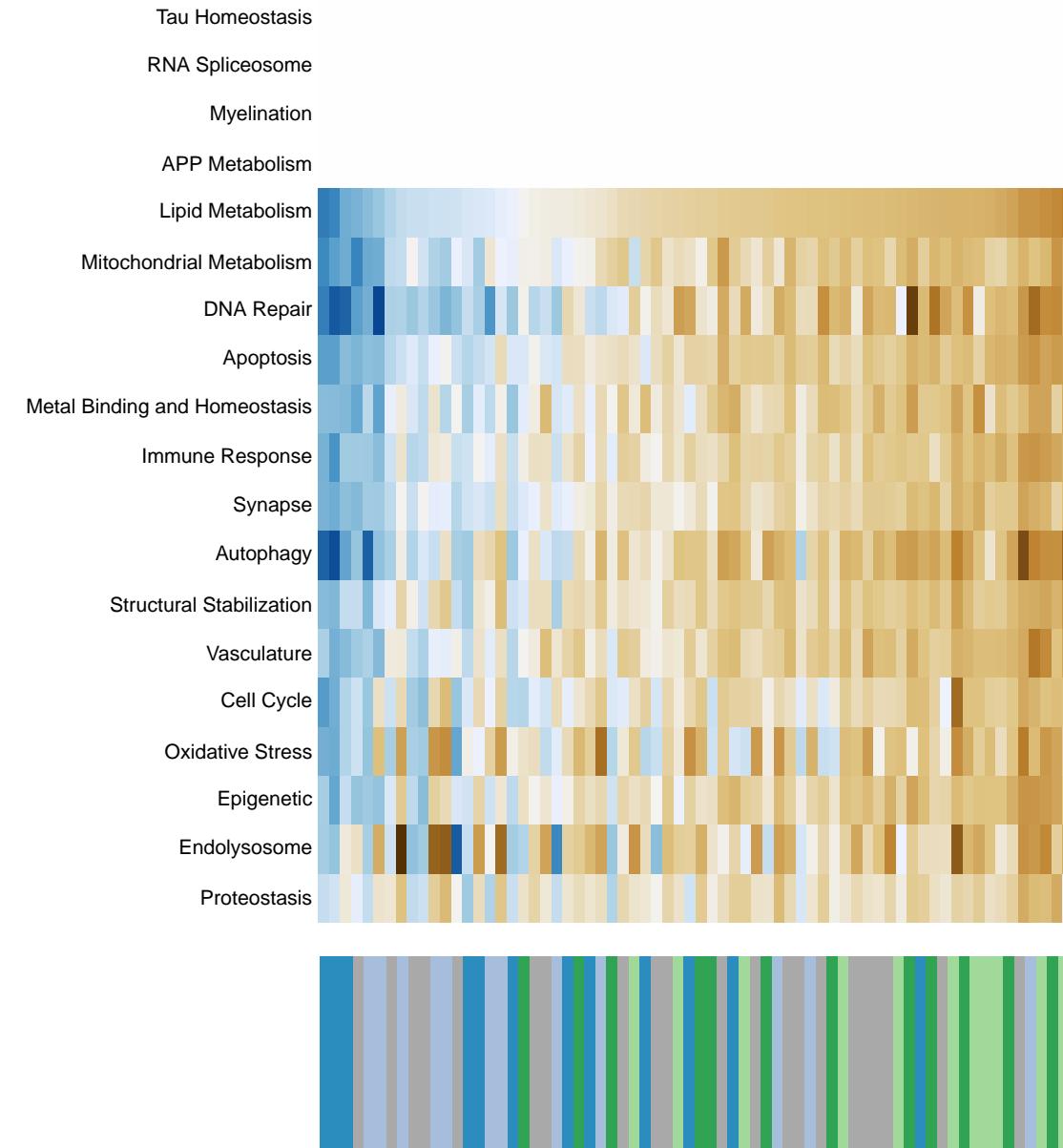
Lipid Metabolism



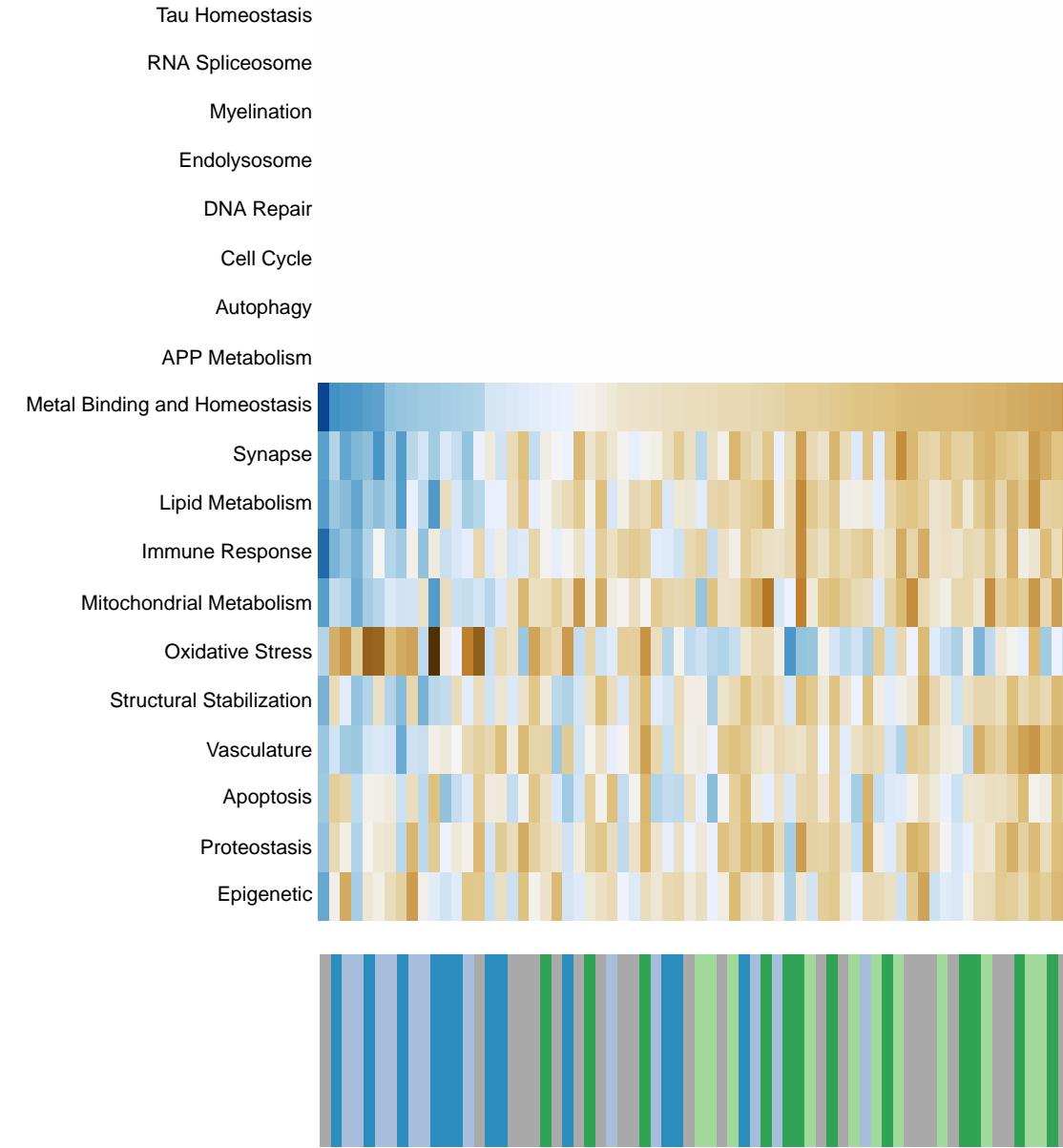
Decomposition



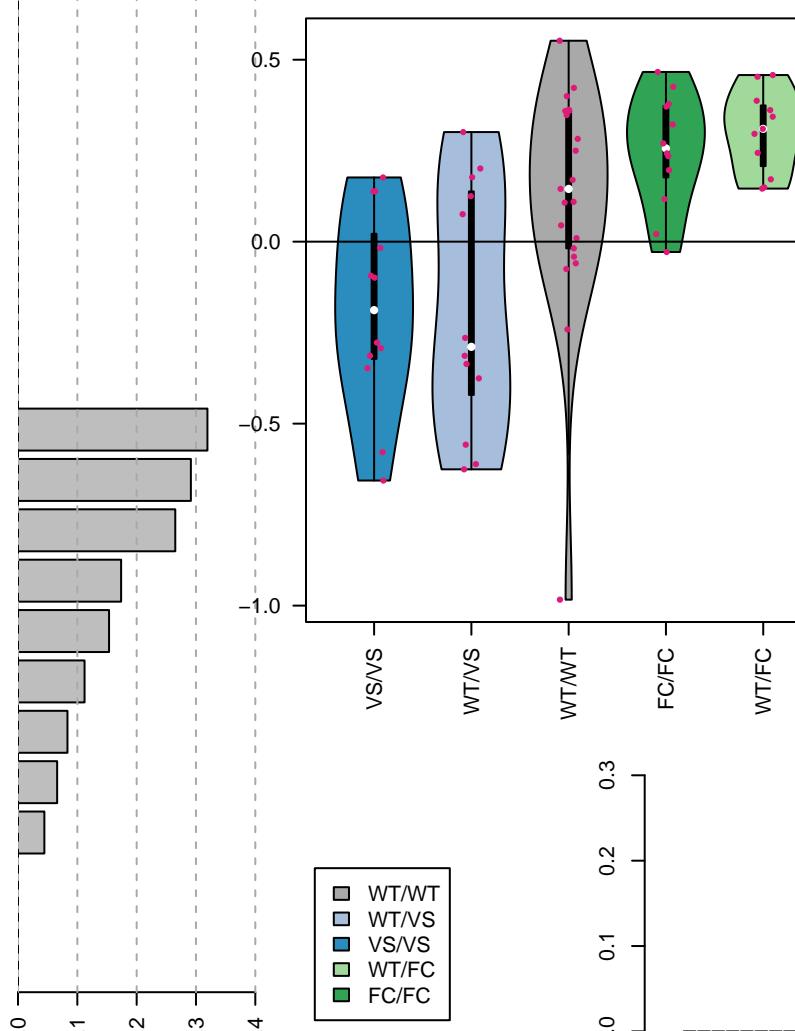
Growth hormone synthesis, secretion and action



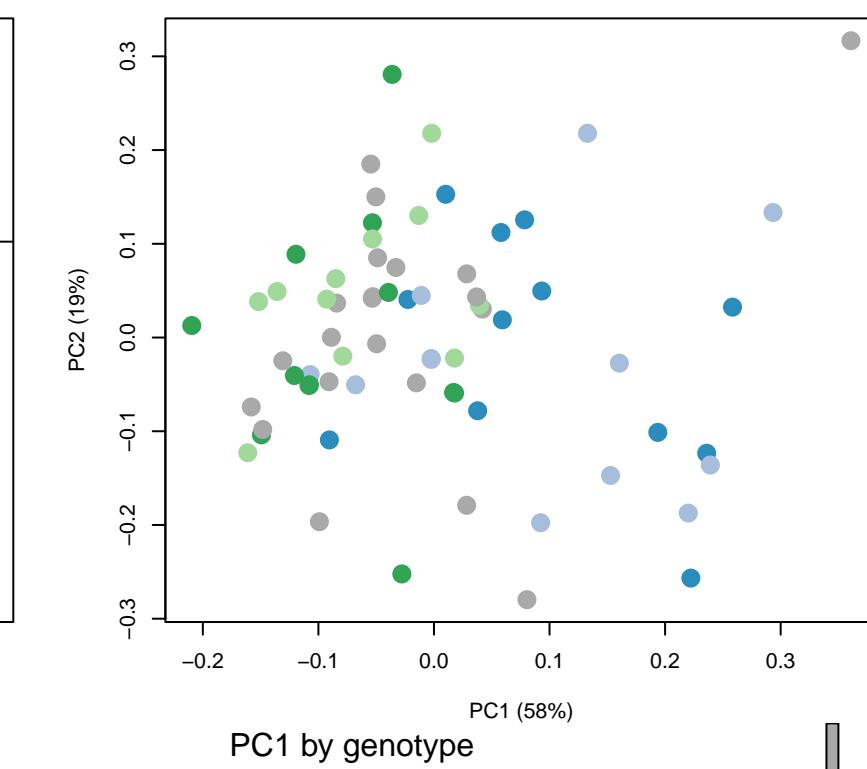
Thyroid hormone synthesis



Metal Binding and Homeostasis



Decomposition

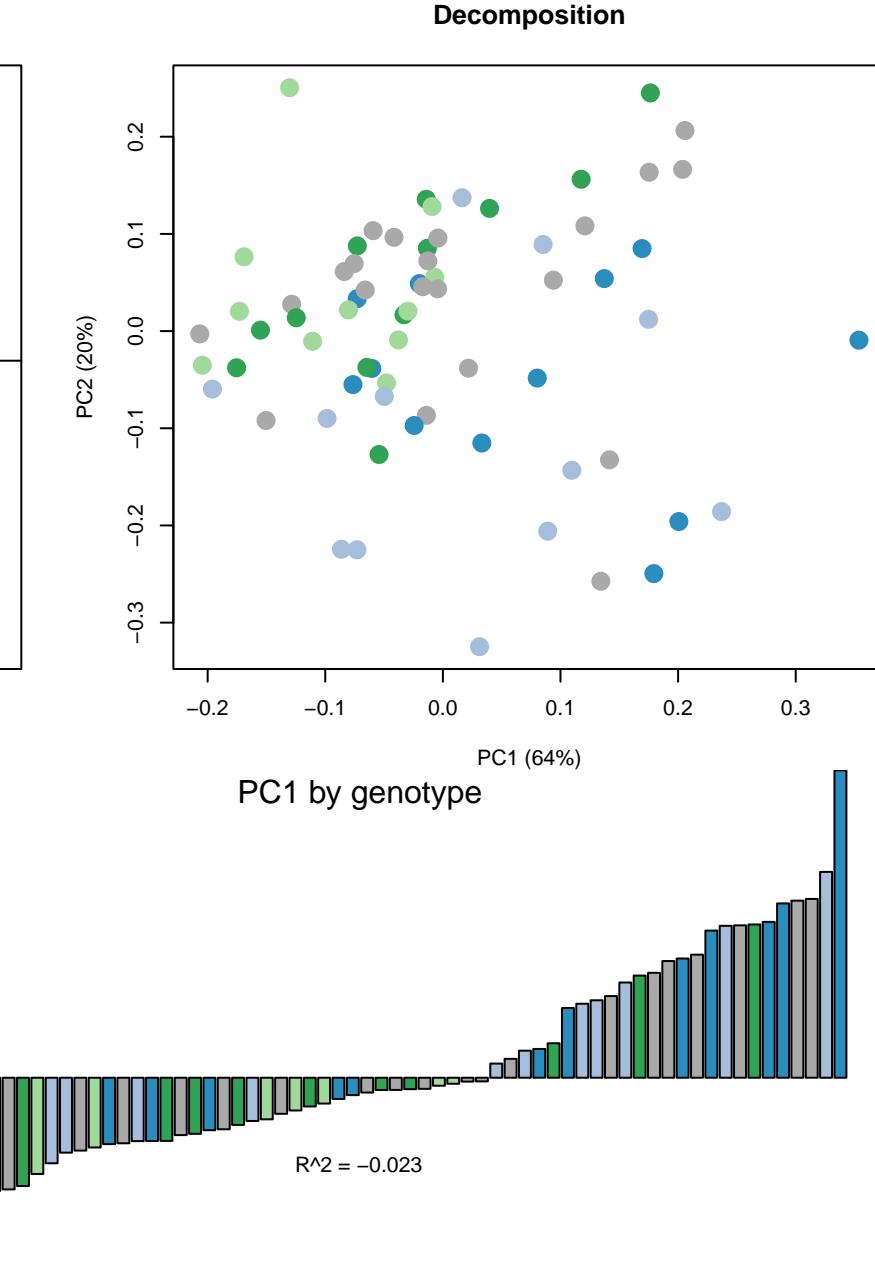
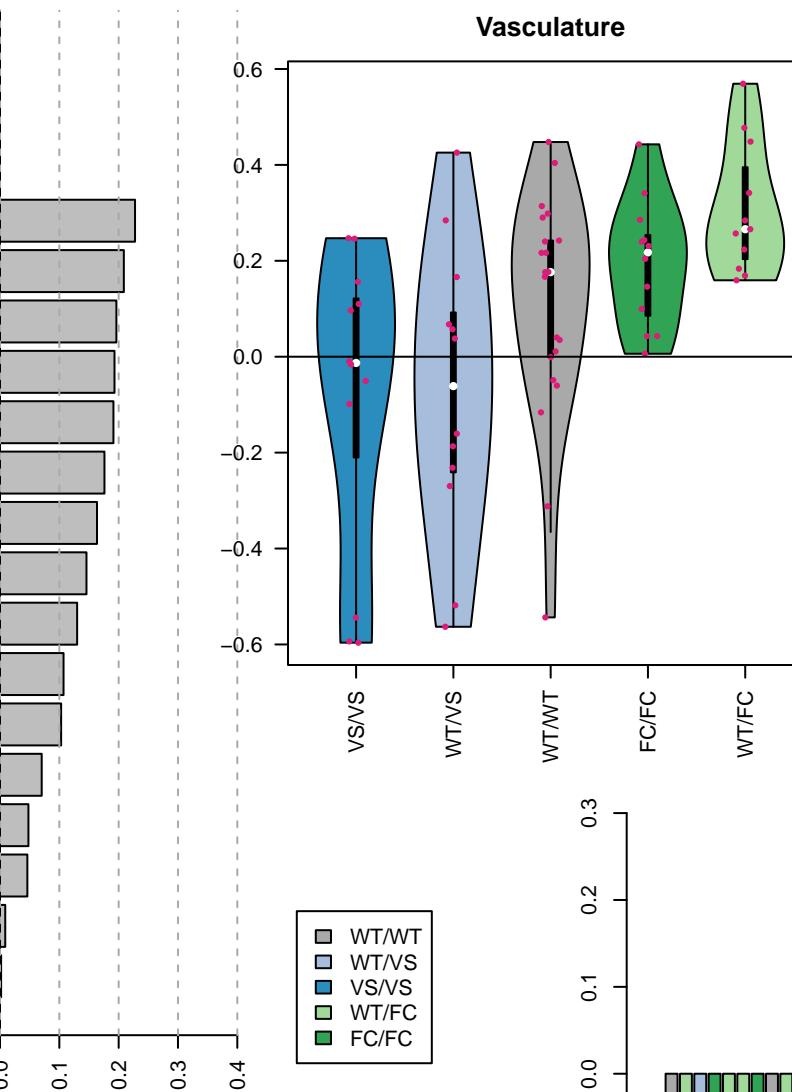
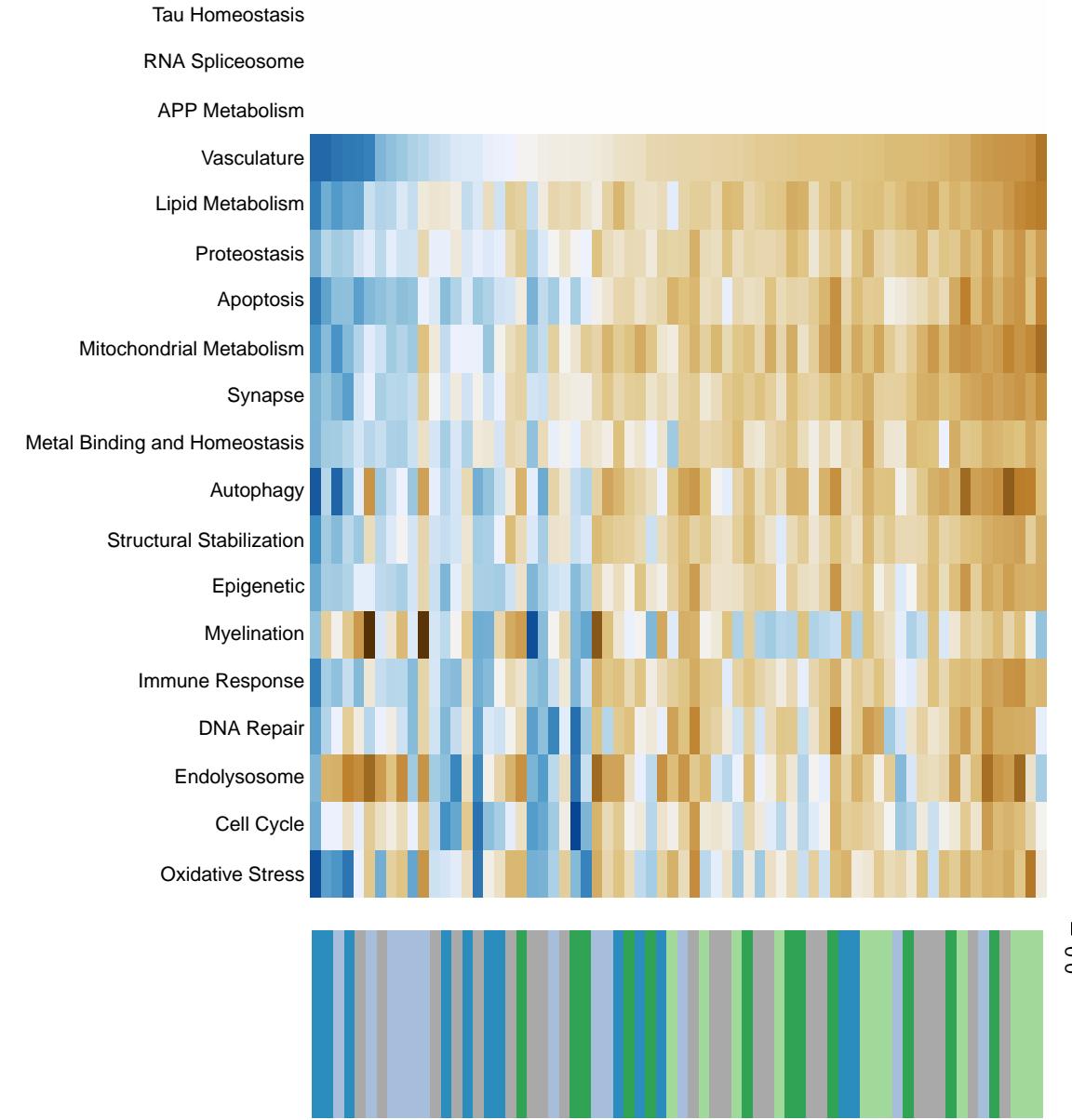


PC1 by genotype

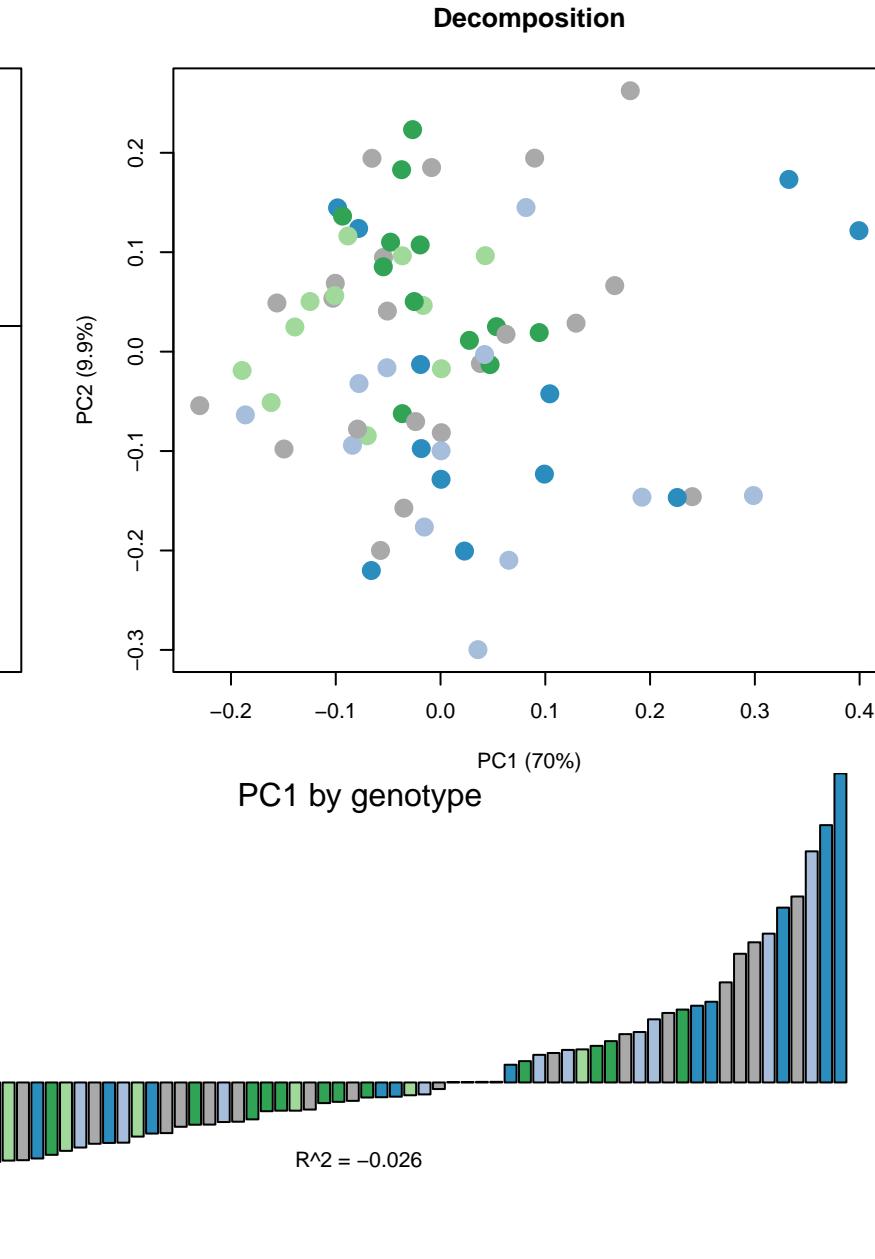
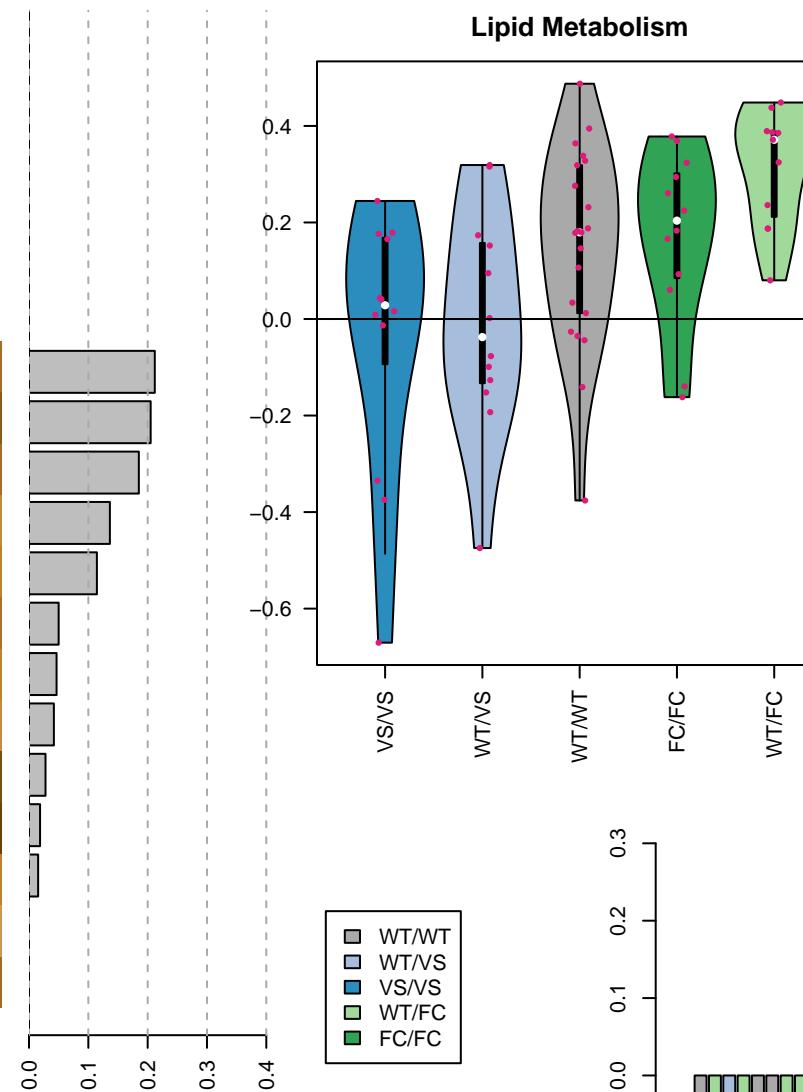
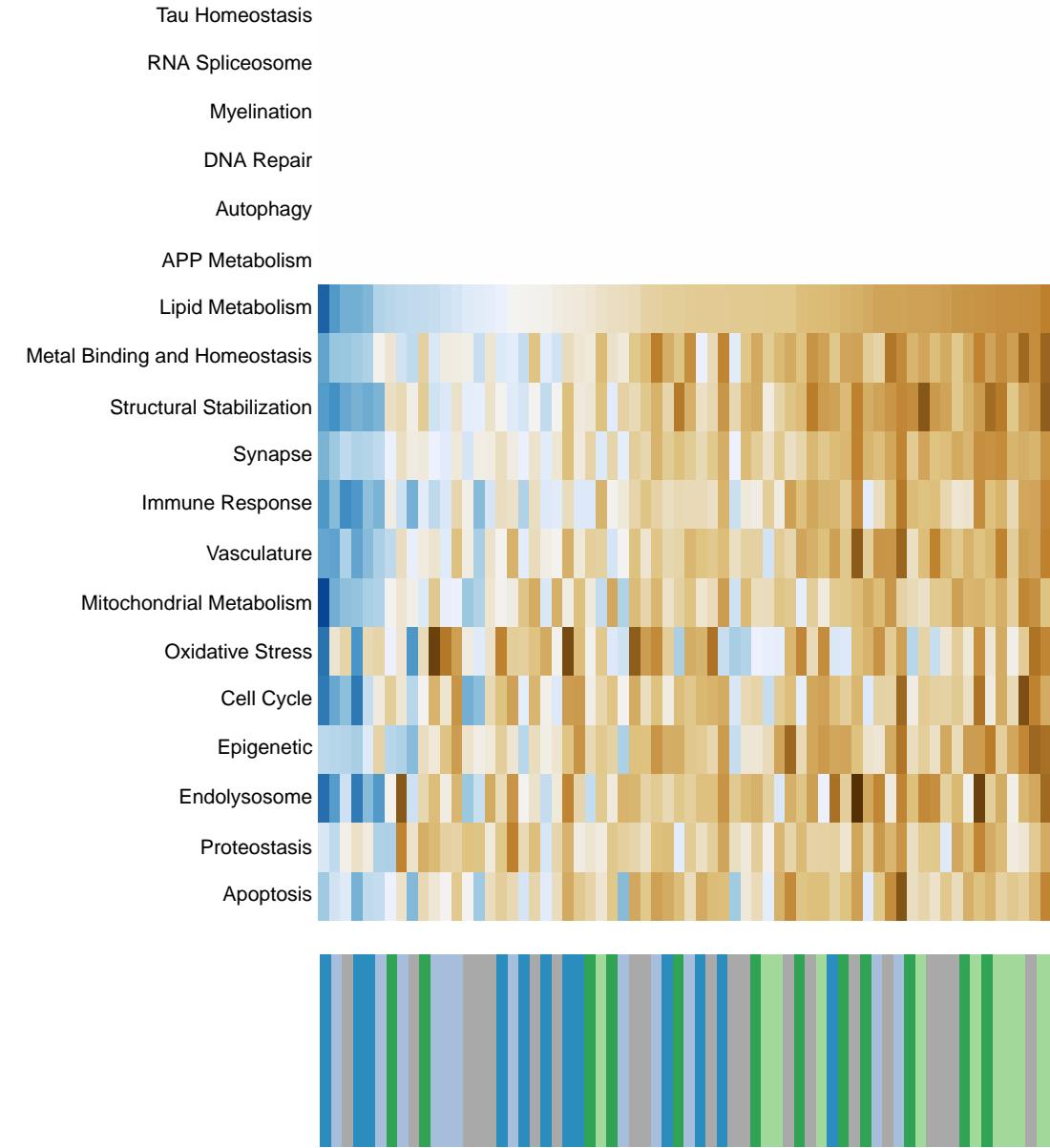
$R^2 = 0.091$

(This text appears to be a duplicate entry in the plot area.)

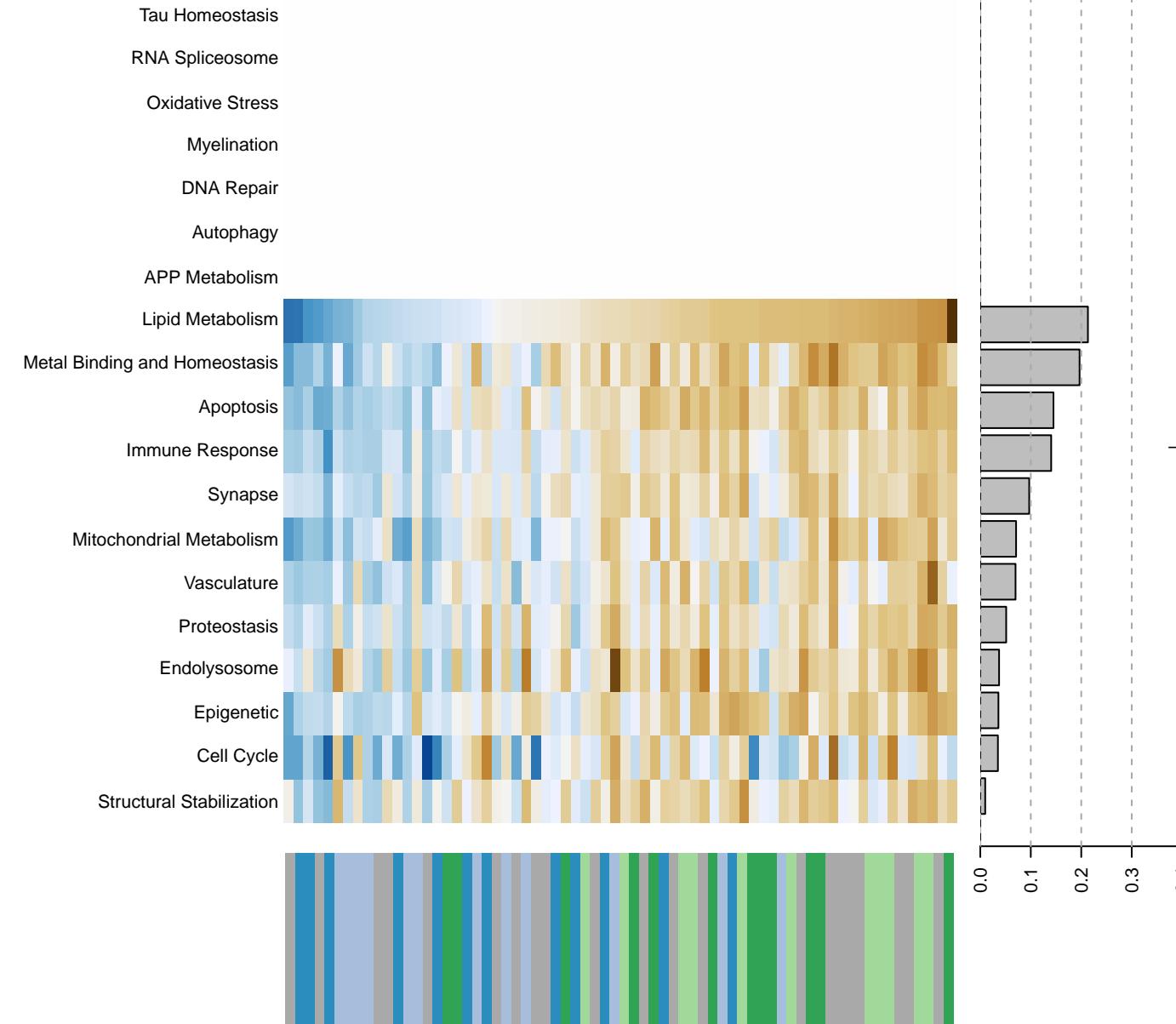
Thyroid hormone signaling pathway



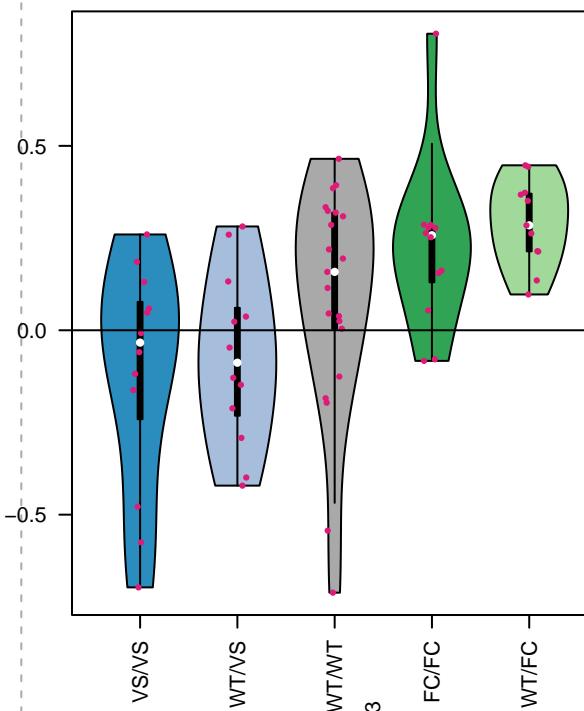
Parathyroid hormone synthesis, secretion and action



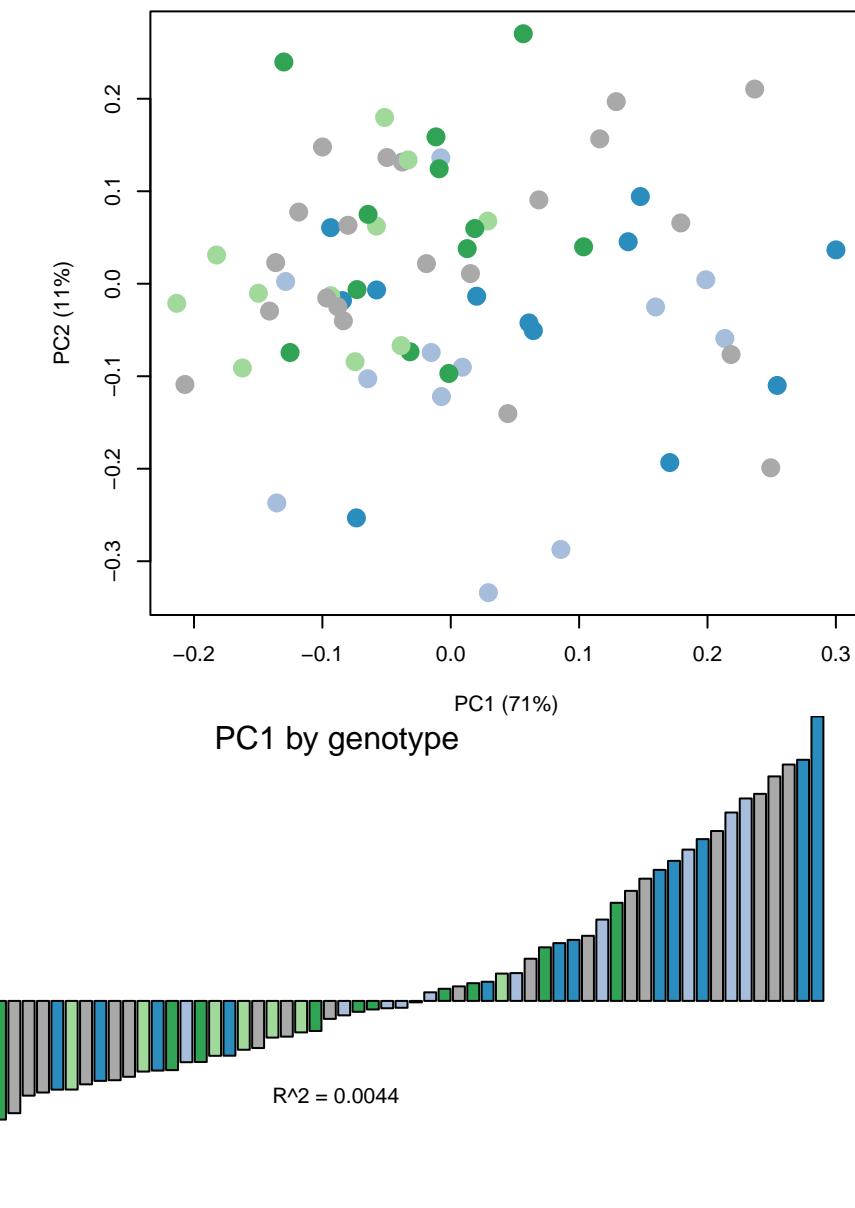
Melanogenesis



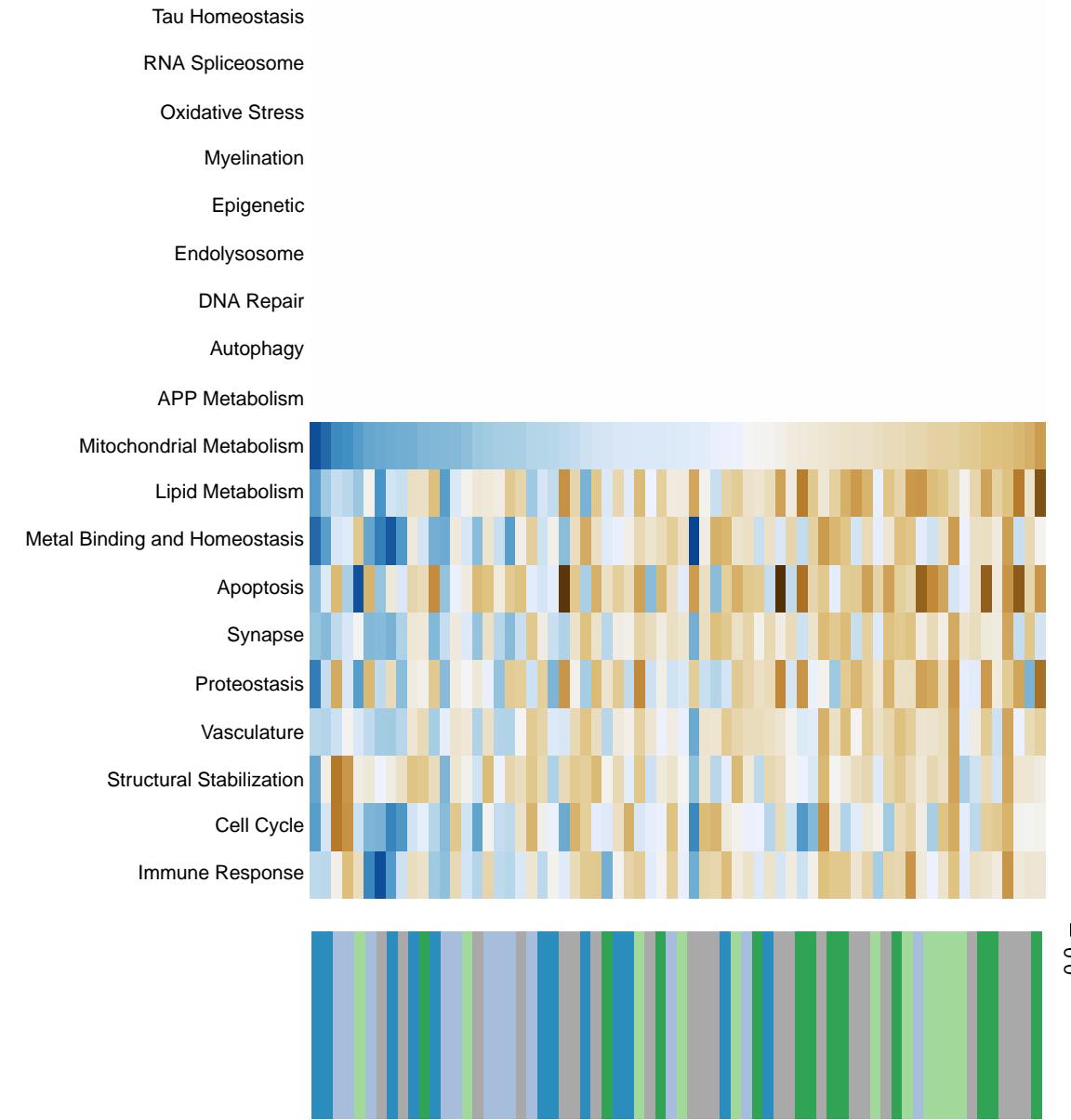
Lipid Metabolism



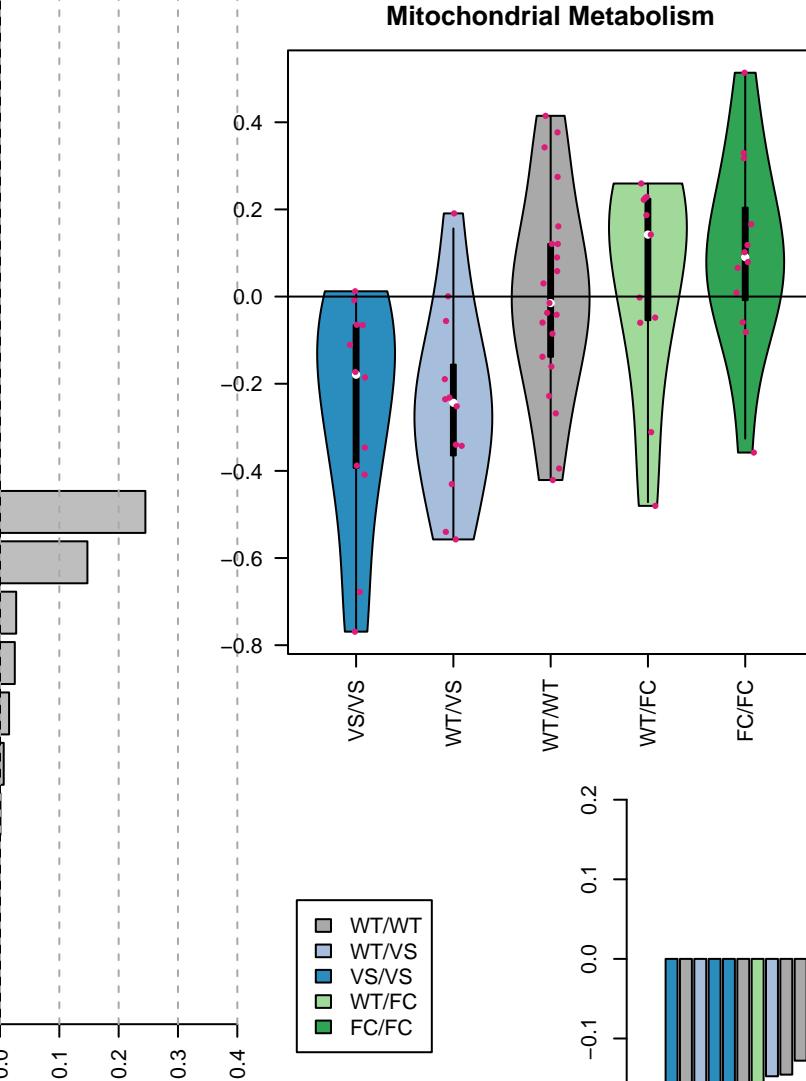
Decomposition



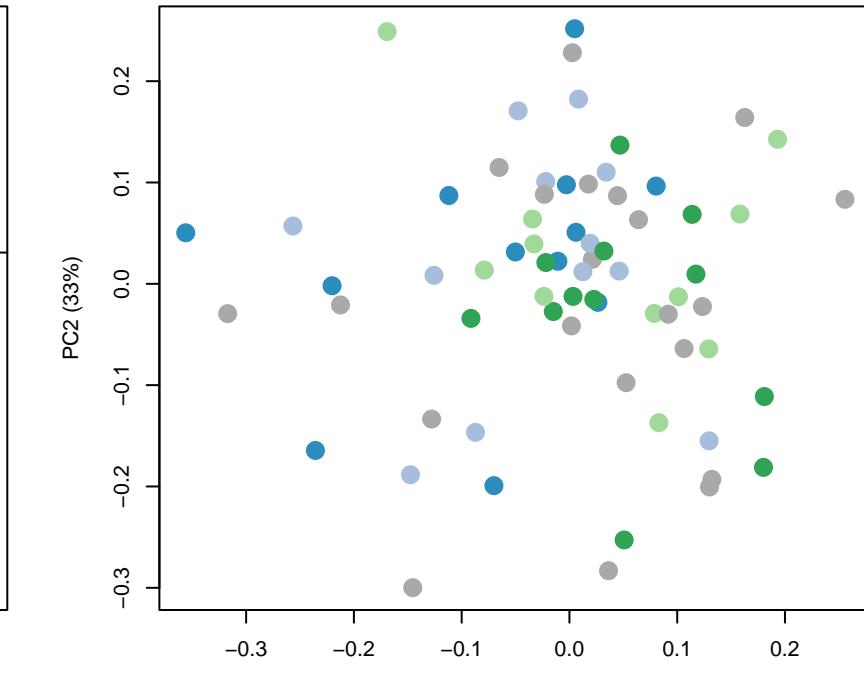
Renin secretion



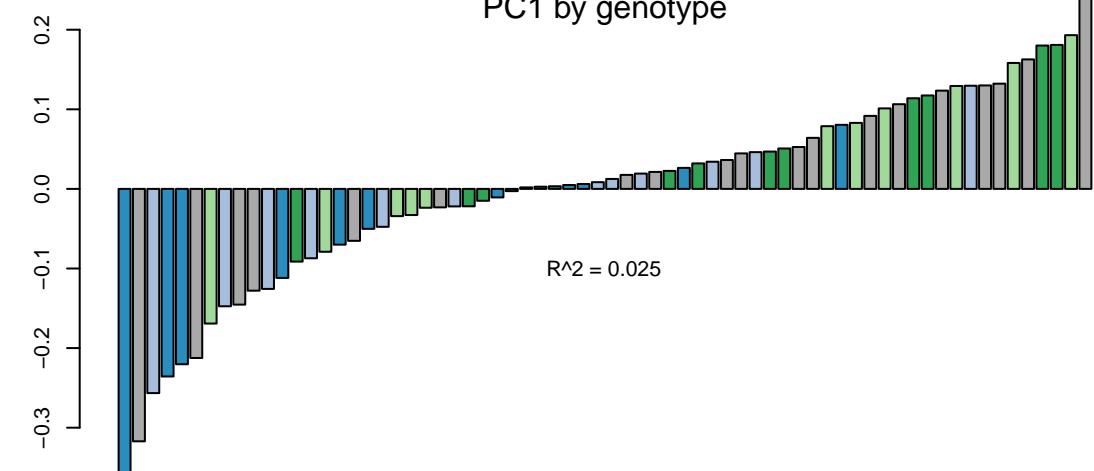
Mitochondrial Metabolism



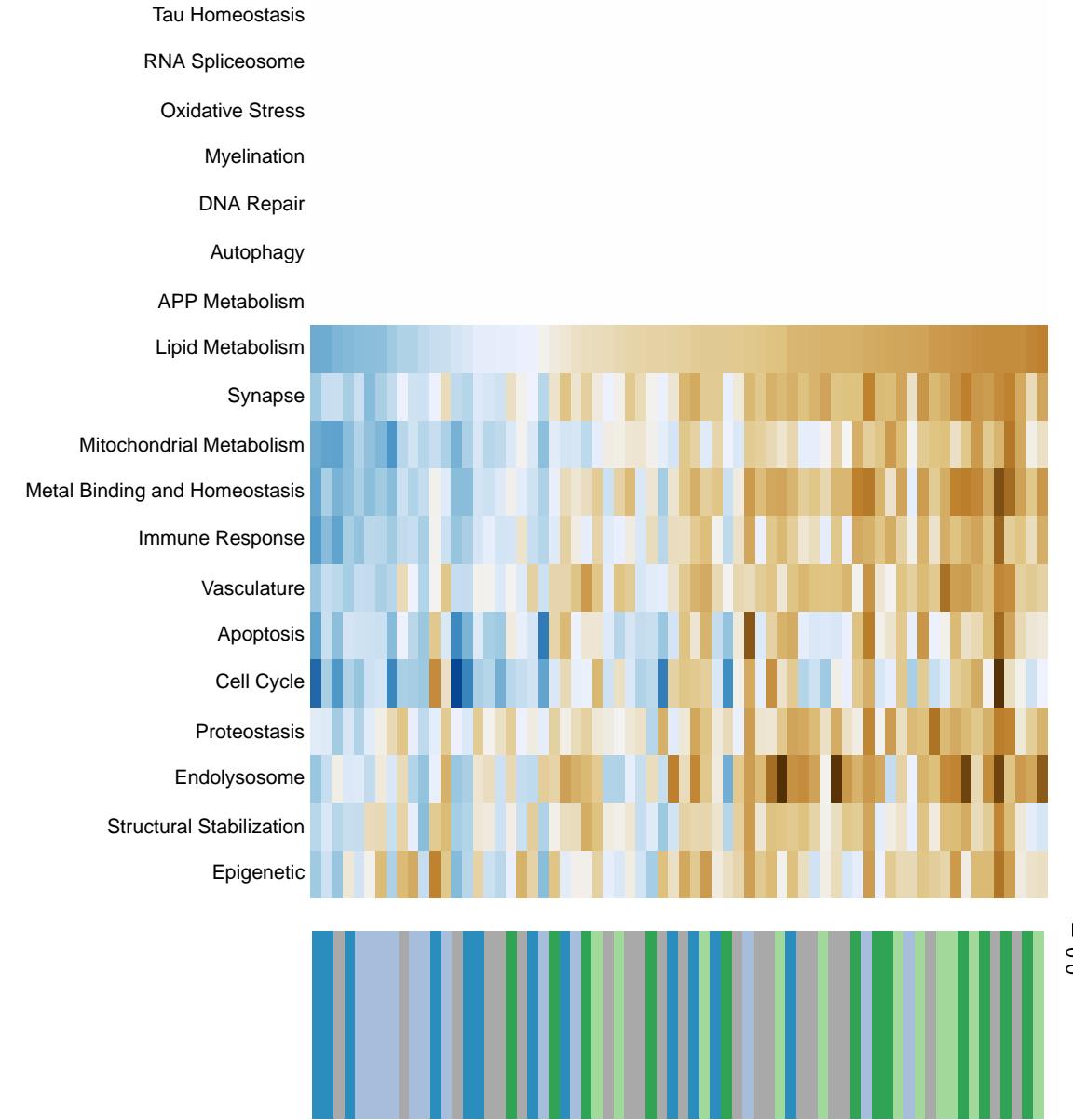
Decomposition



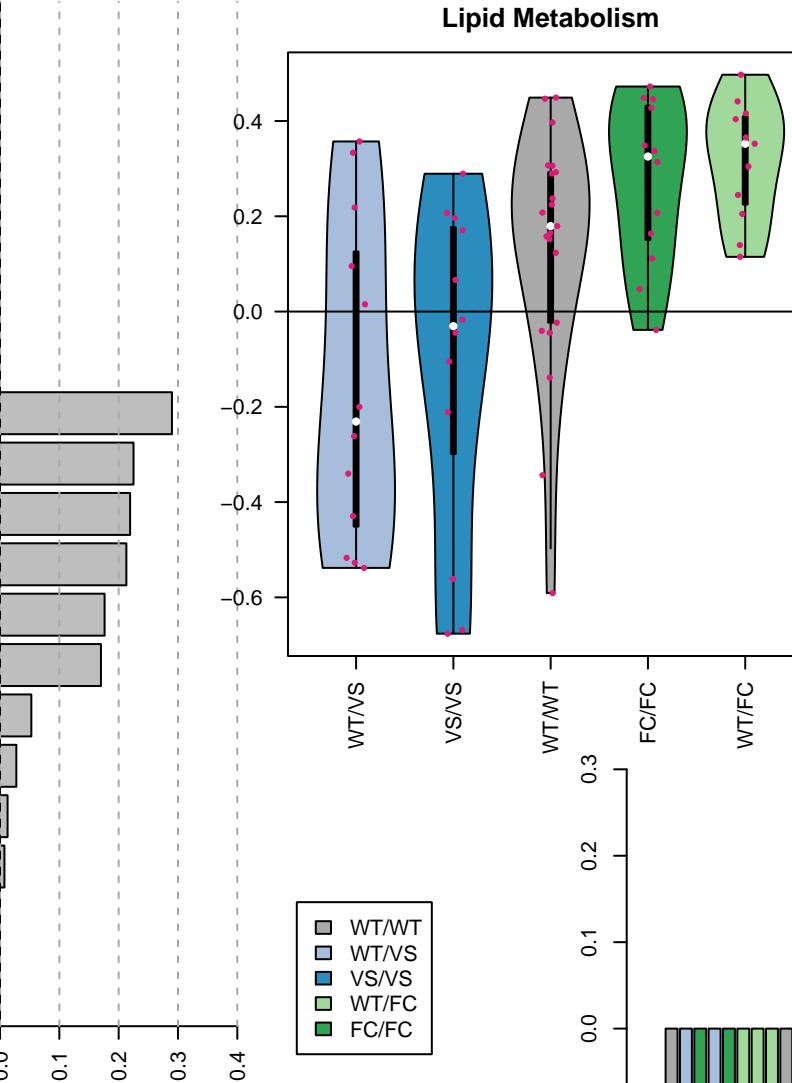
PC1 by genotype



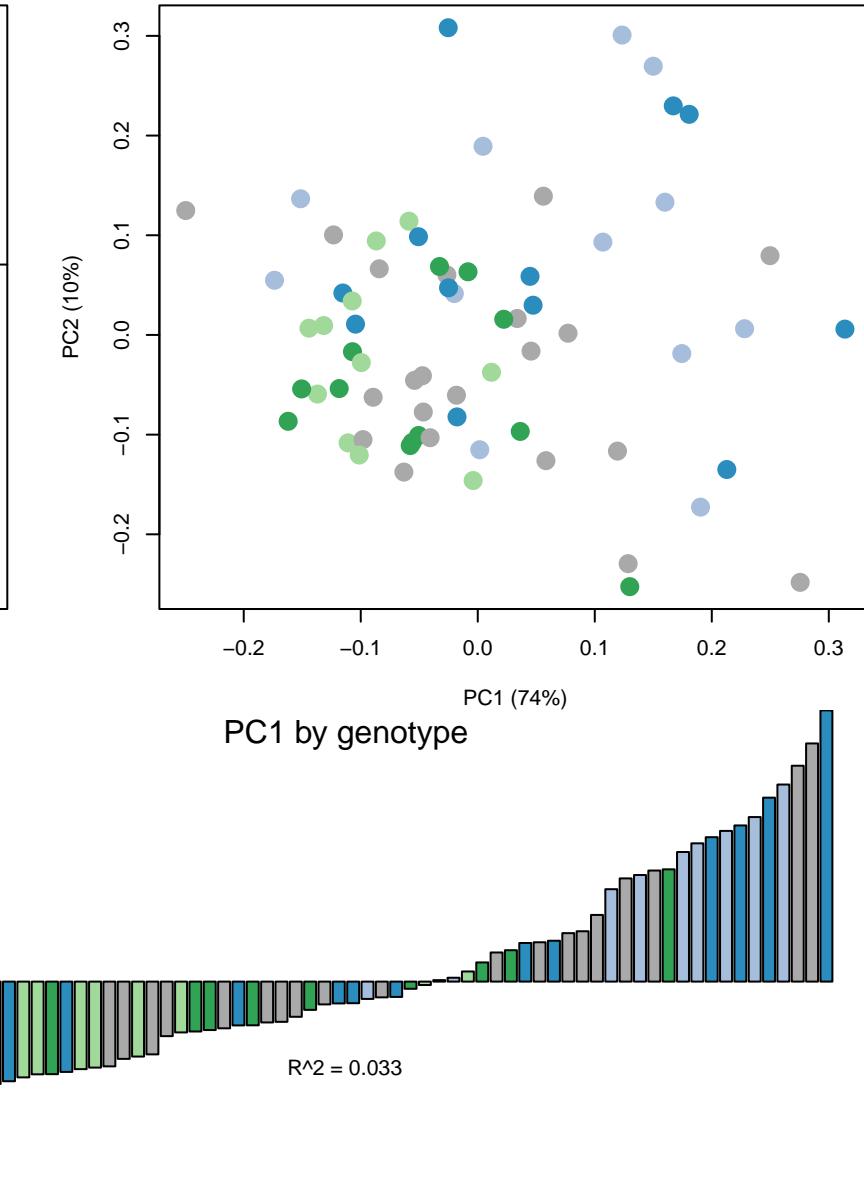
Aldosterone synthesis and secretion



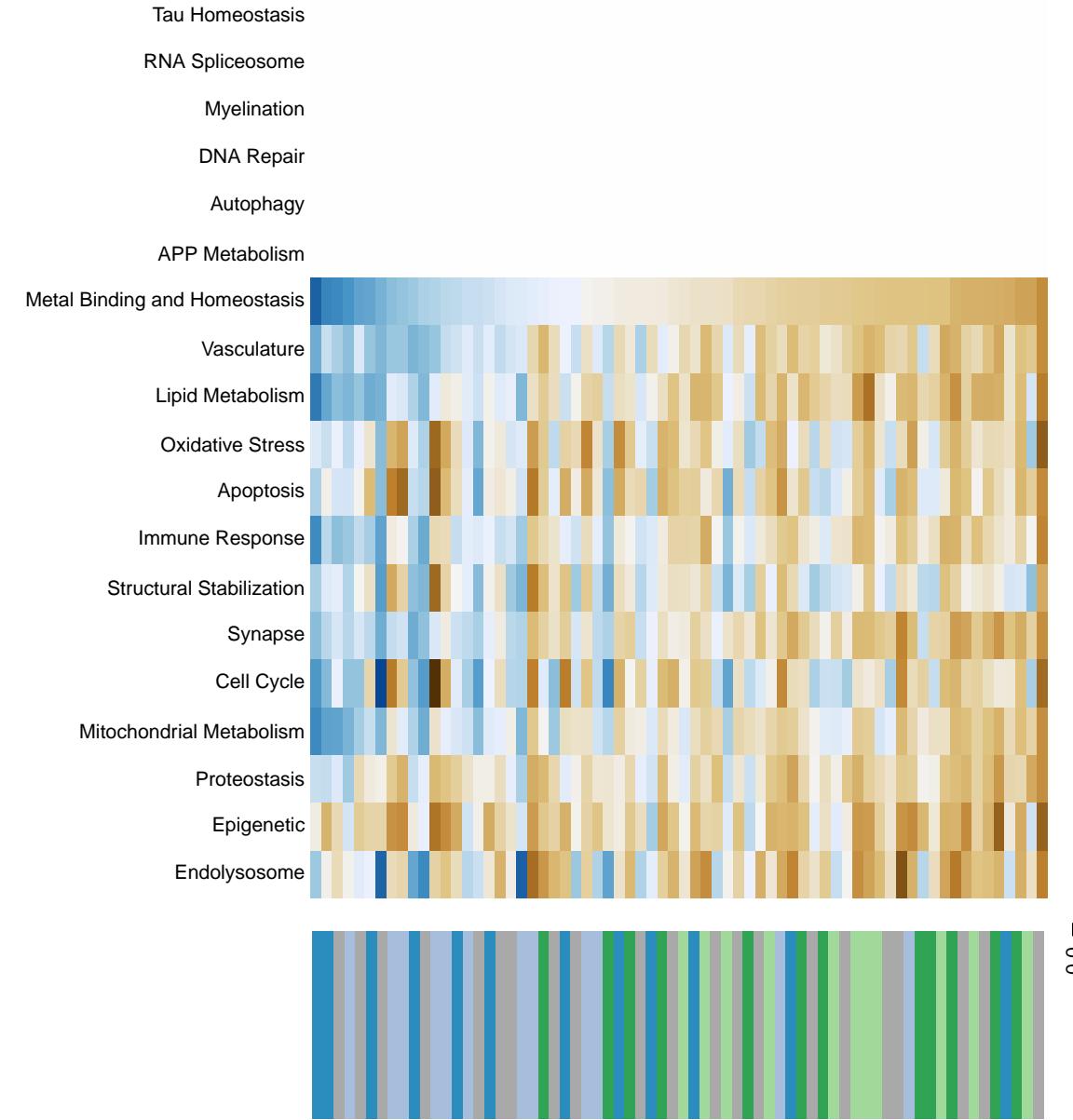
Lipid Metabolism



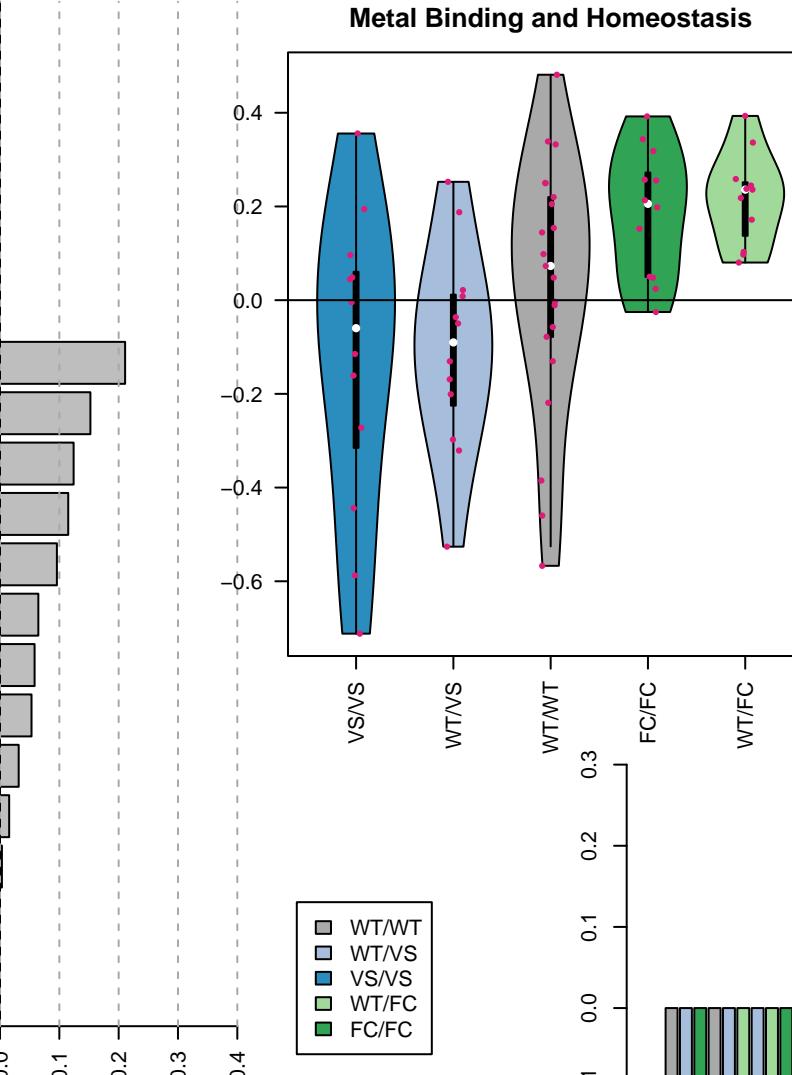
Decomposition



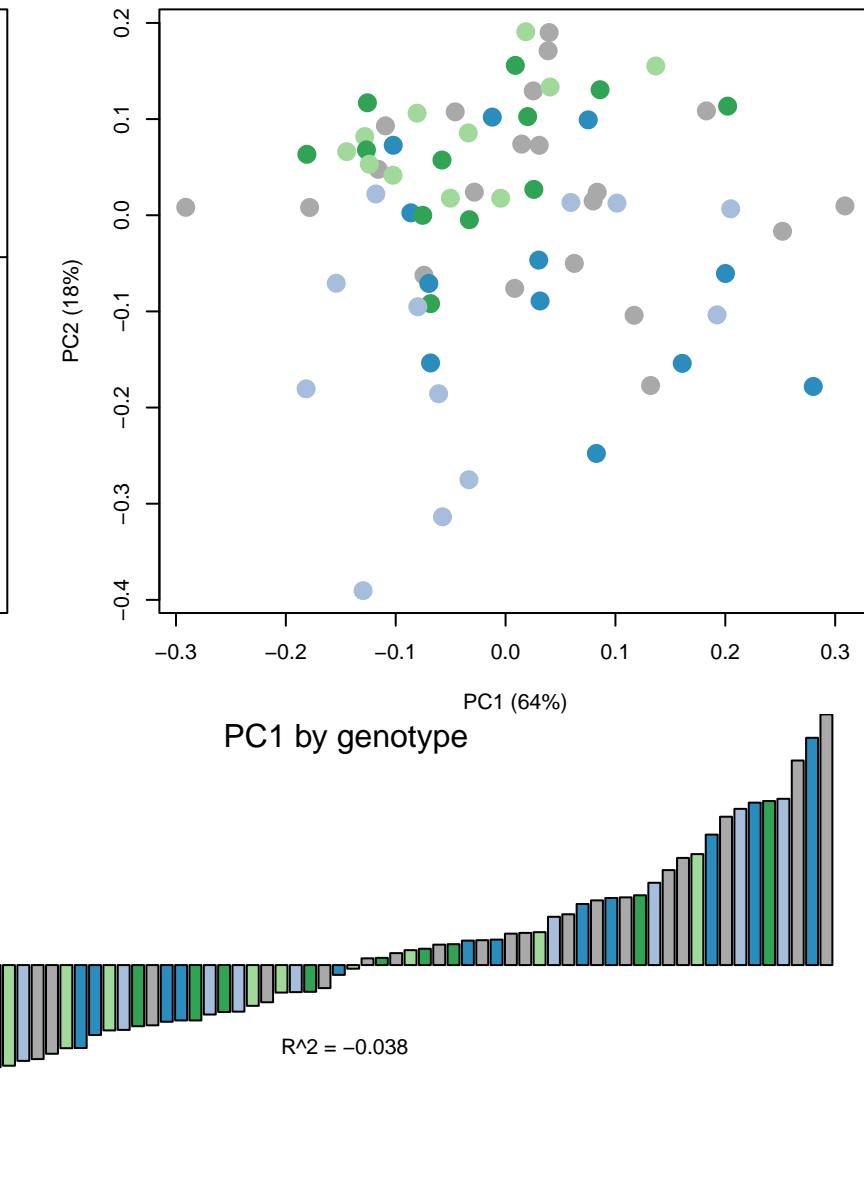
Adrenergic signaling in cardiomyocytes



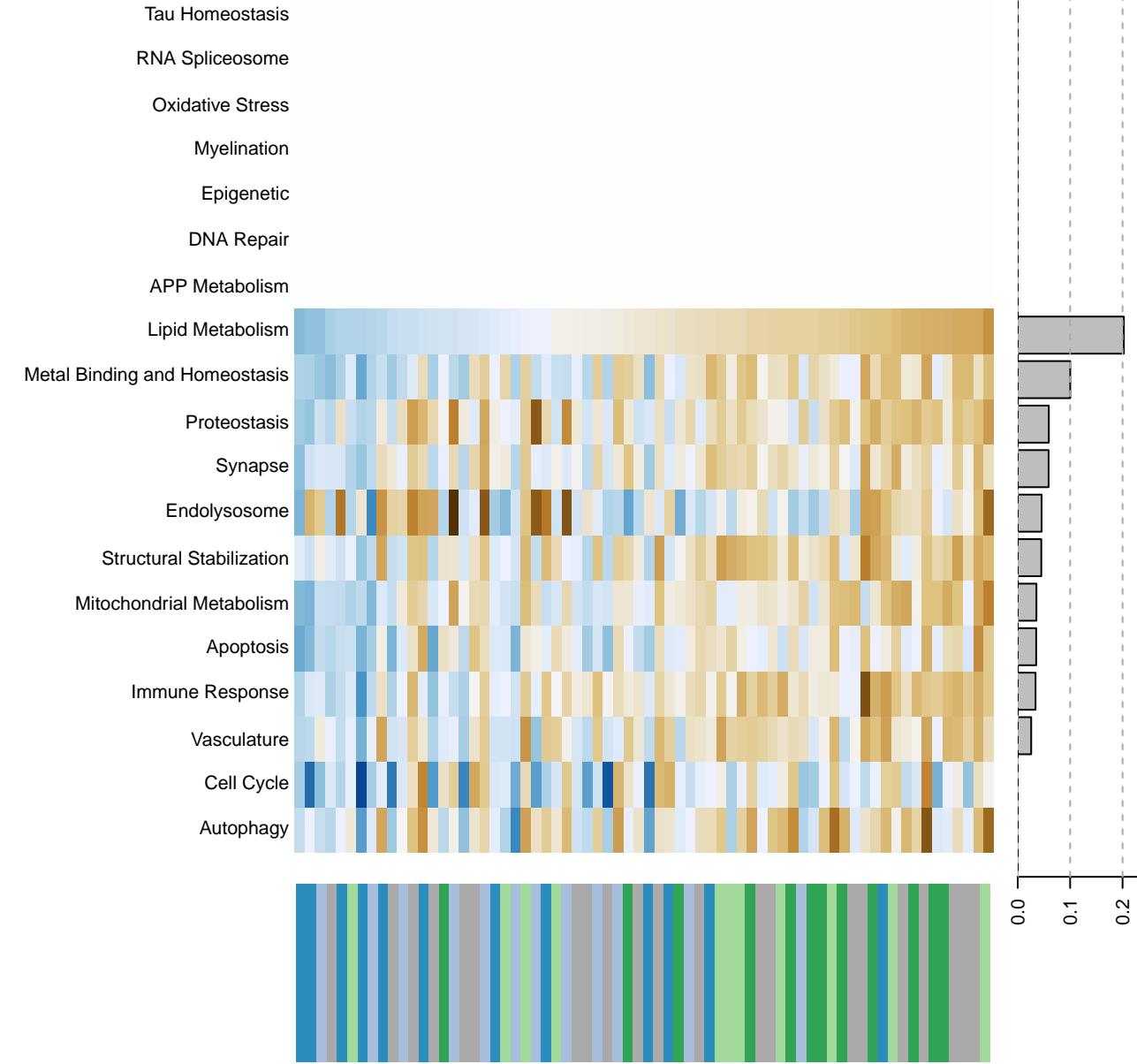
Metal Binding and Homeostasis



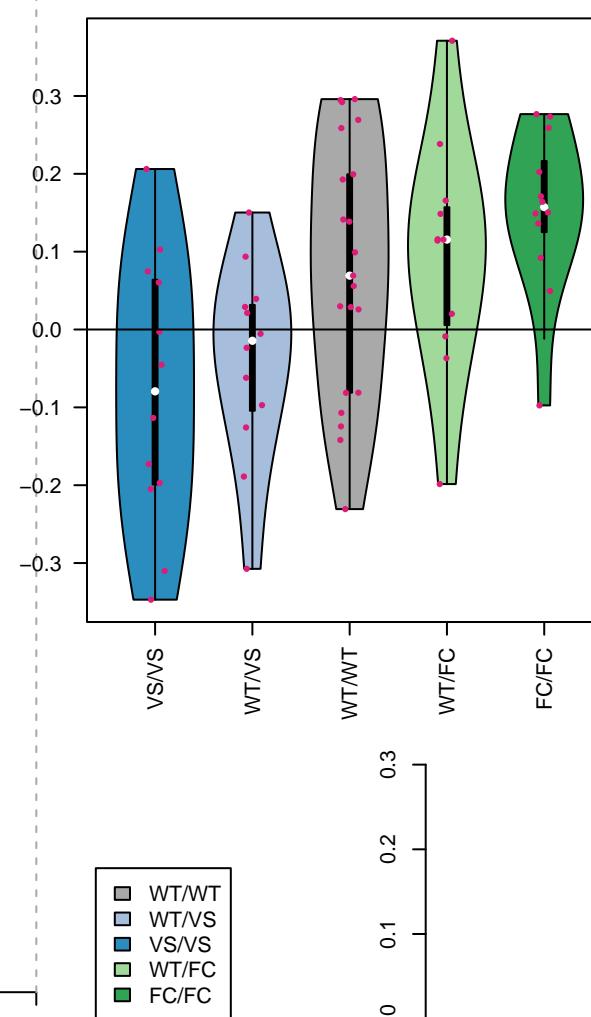
Decomposition



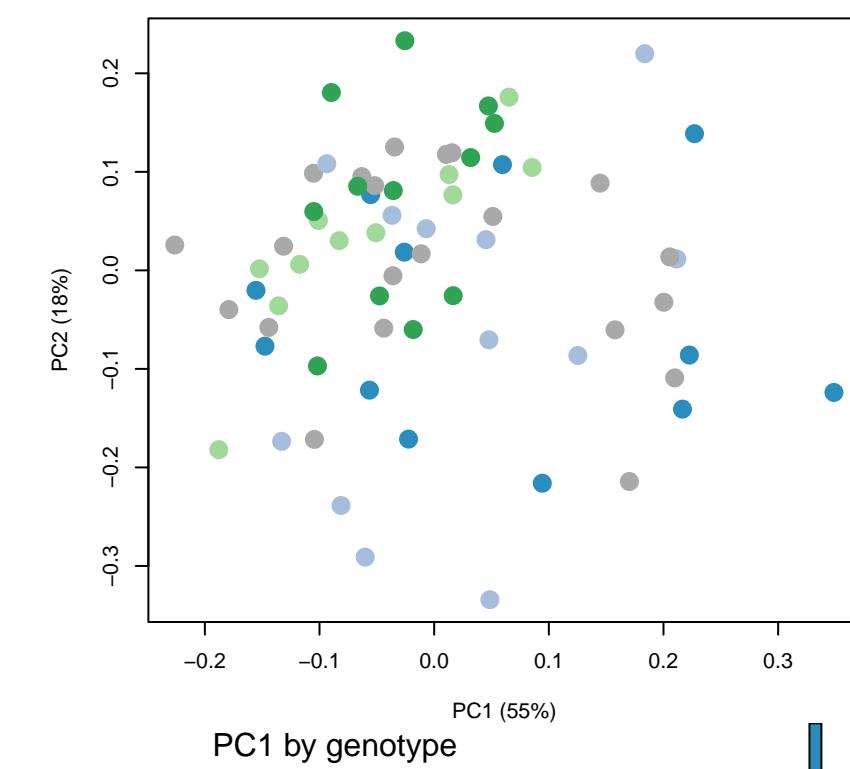
Vascular smooth muscle contraction



Lipid Metabolism



Decomposition



PC1 by genotype

3

2

1

0

-1

-2

-3

-4

-5

-6

-7

-8

-9

-10

-11

-12

-13

-14

-15

-16

-17

-18

-19

-20

-21

-22

-23

-24

-25

-26

-27

-28

-29

-30

-31

-32

-33

-34

-35

-36

-37

-38

-39

-40

-41

-42

-43

-44

-45

-46

-47

-48

-49

-50

-51

-52

-53

-54

-55

-56

-57

-58

-59

-60

-61

-62

-63

-64

-65

-66

-67

-68

-69

-70

-71

-72

-73

-74

-75

-76

-77

-78

-79

-80

-81

-82

-83

-84

-85

-86

-87

-88

-89

-90

-91

-92

-93

-94

-95

-96

-97

-98

-99

-100

-101

-102

-103

-104

-105

-106

-107

-108

-109

-110

-111

-112

-113

-114

-115

-116

-117

-118

-119

-120

-121

-122

-123

-124

-125

-126

-127

-128

-129

-130

-131

-132

-133

-134

-135

-136

-137

-138

-139

-140

-141

-142

-143

-144

-145

-146

-147

-148

-149

-150

-151

-152

-153

-154

-155

-156

-157

-158

-159

-160

-161

-162

-163

-164

-165

-166

-167

-168

-169

-170

-171

-172

-173

-174

-175

-176

-177

-178

-179

-180

-181

-182

-183

-184

-185

-186

-187

-188

-189

-190

-191

-192

-193

-194

-195

-196

-197

-198

-199

-200

-201

-202

-203

-204

-205

-206

-207

-208

-209

-210

-211

-212

-213

-214

-215

-216

-217

-218

-219

-220

-221

-222

-223

-224

-225

-226

-227

-228

-229

-230

-231

-232

-233

-234

-235

-236

-237

-238

-239

-240

-241

-242

-243

-244

-245

-246

-247

-248

-249

-250

-251

-252

-253

-254

-255

-256

-257

-258

-259

-260

-261

-262

-263

-264

-265

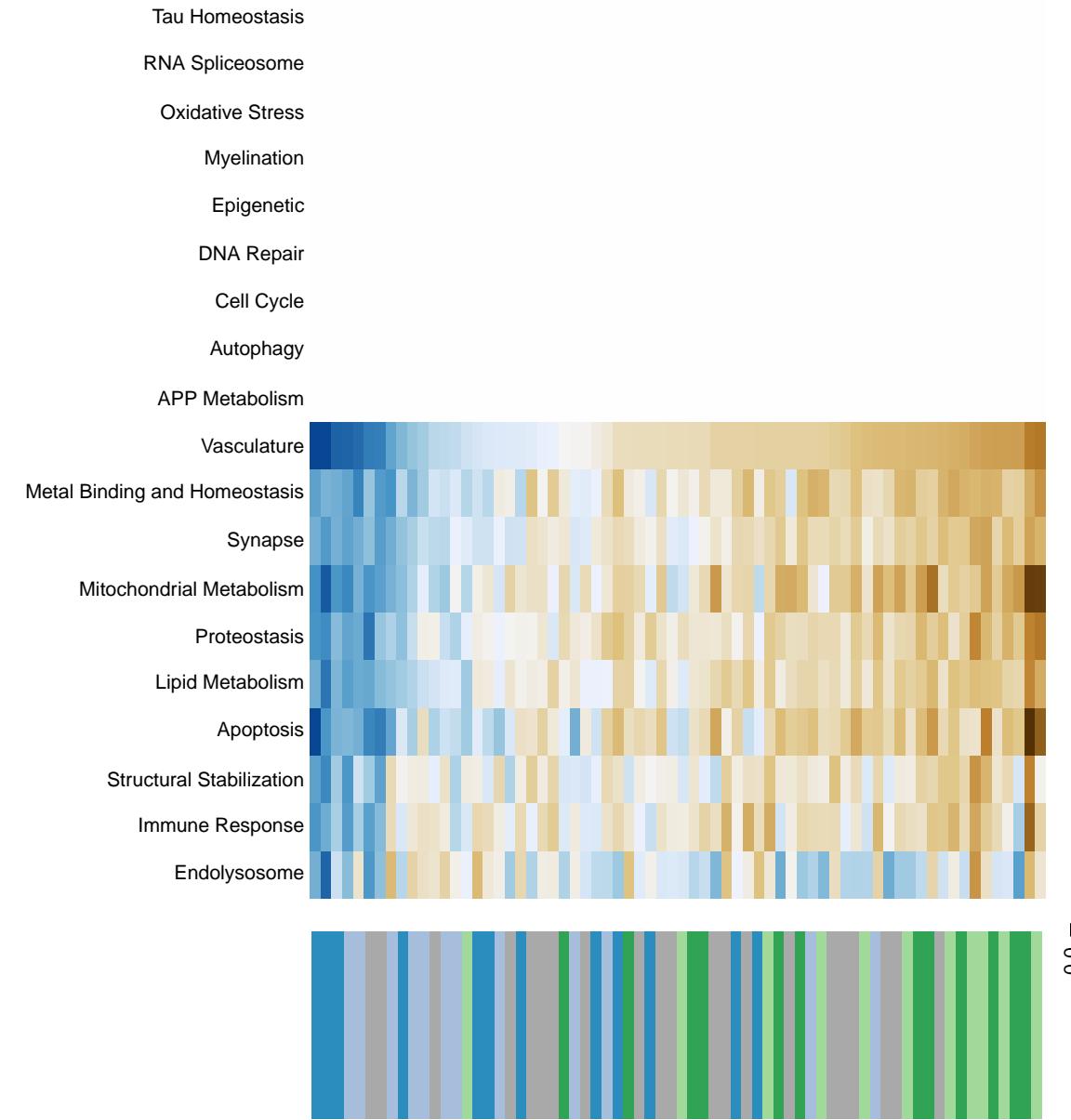
-266

-267

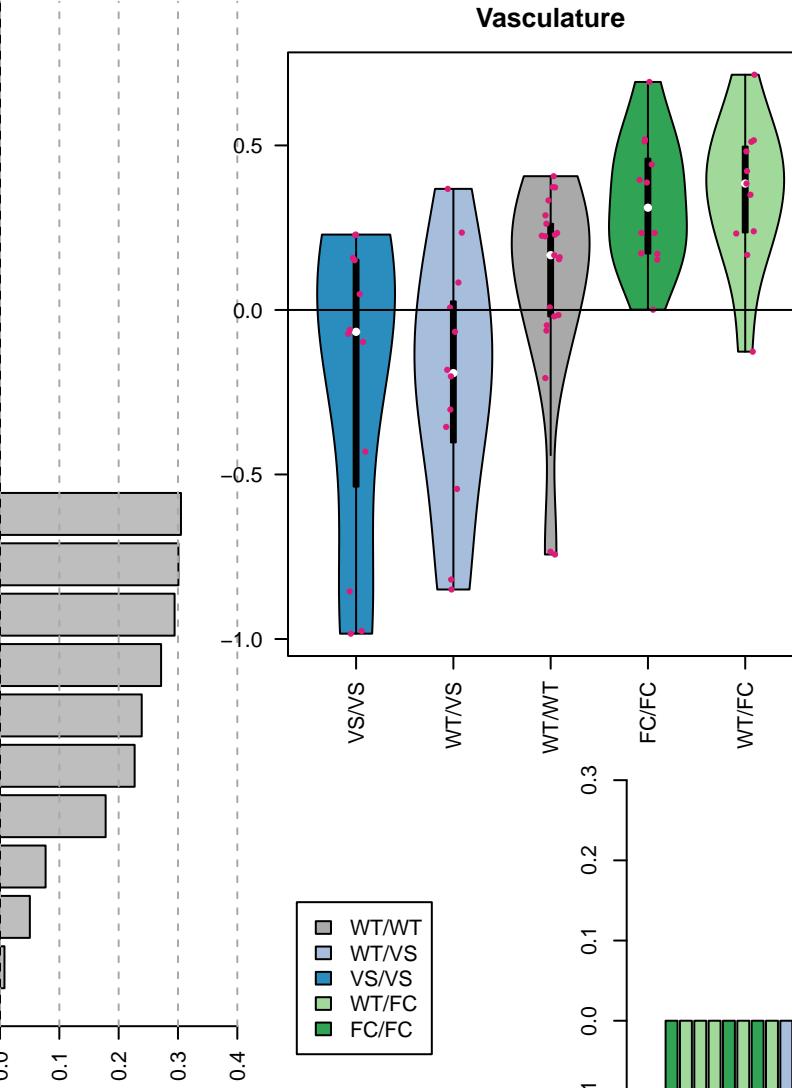
-268

-269

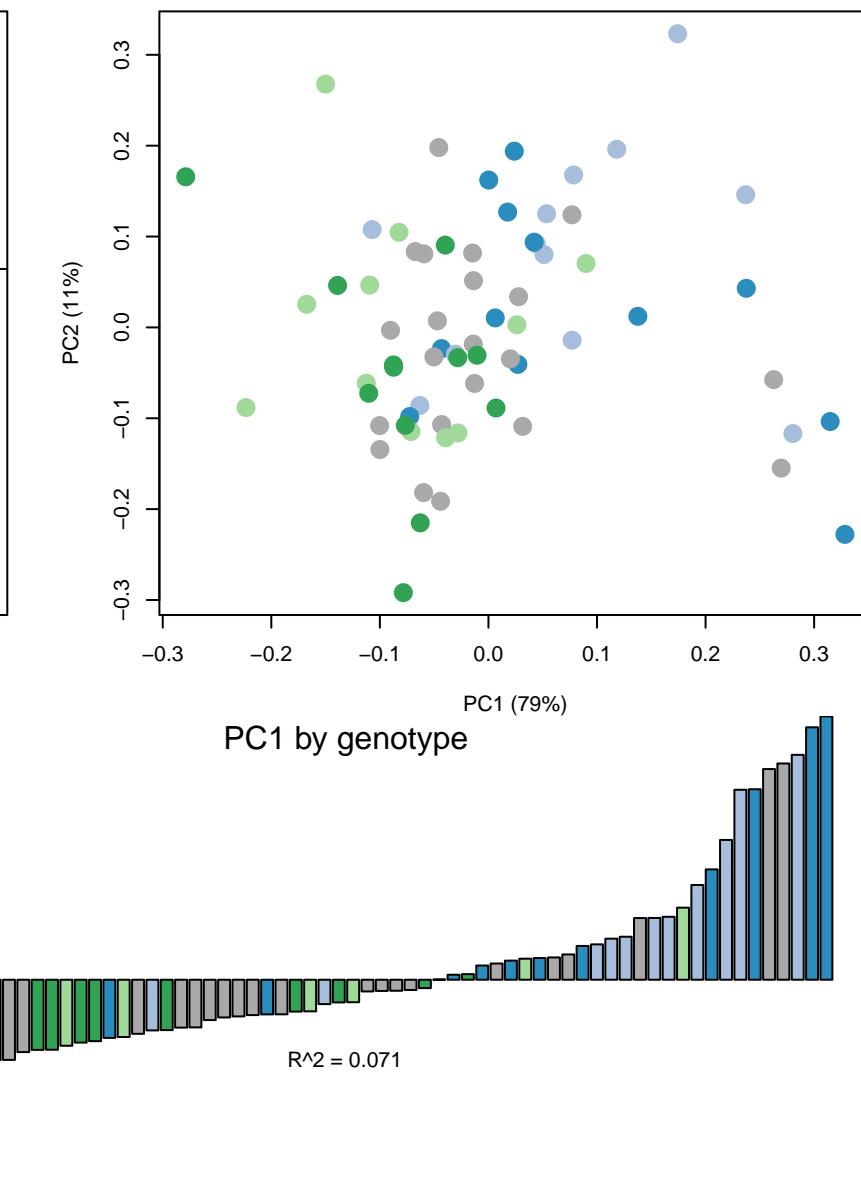
Pancreatic secretion



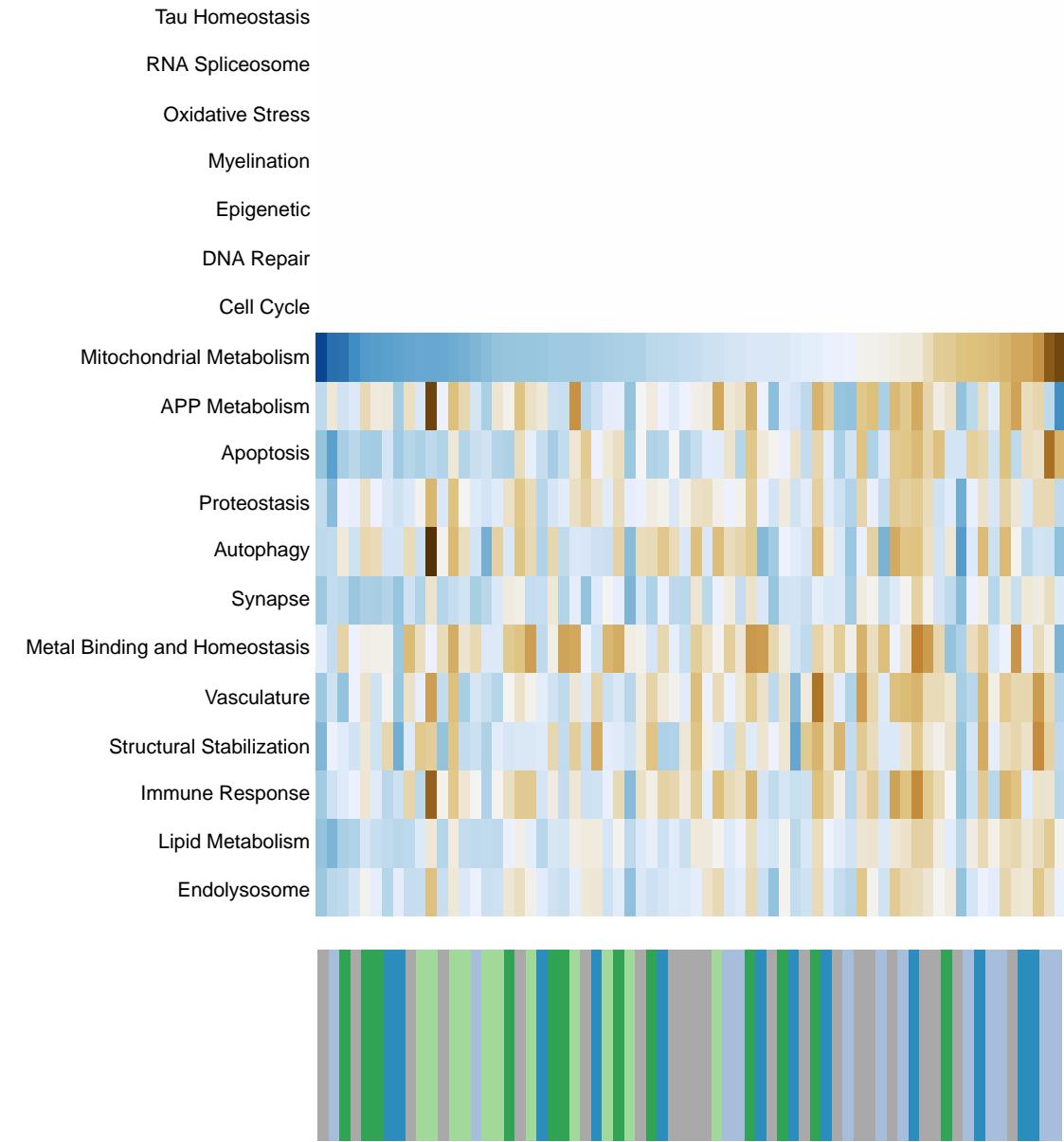
Vasculature



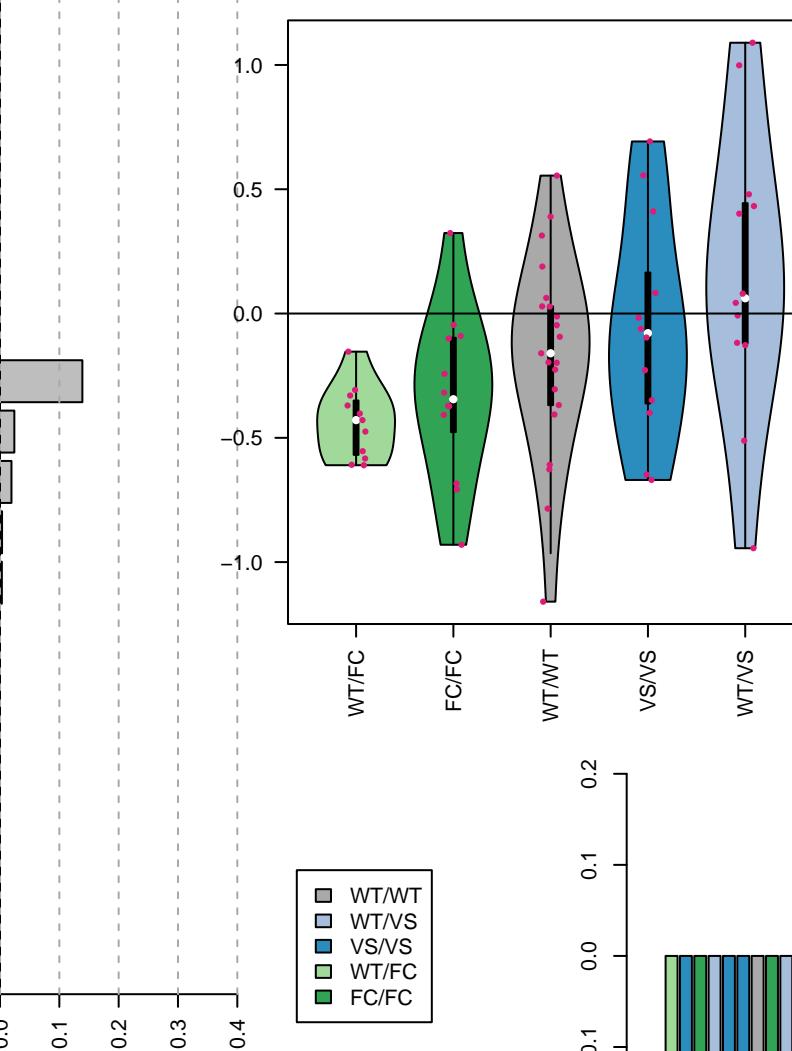
Decomposition



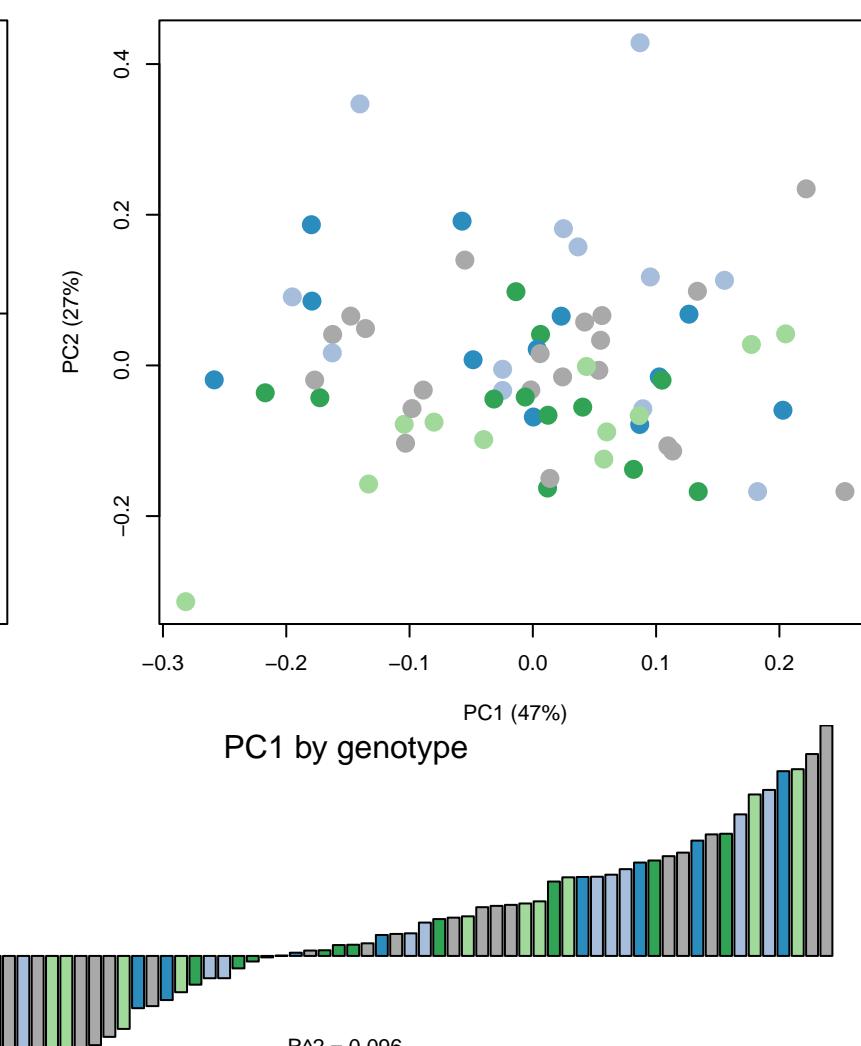
Cholesterol metabolism



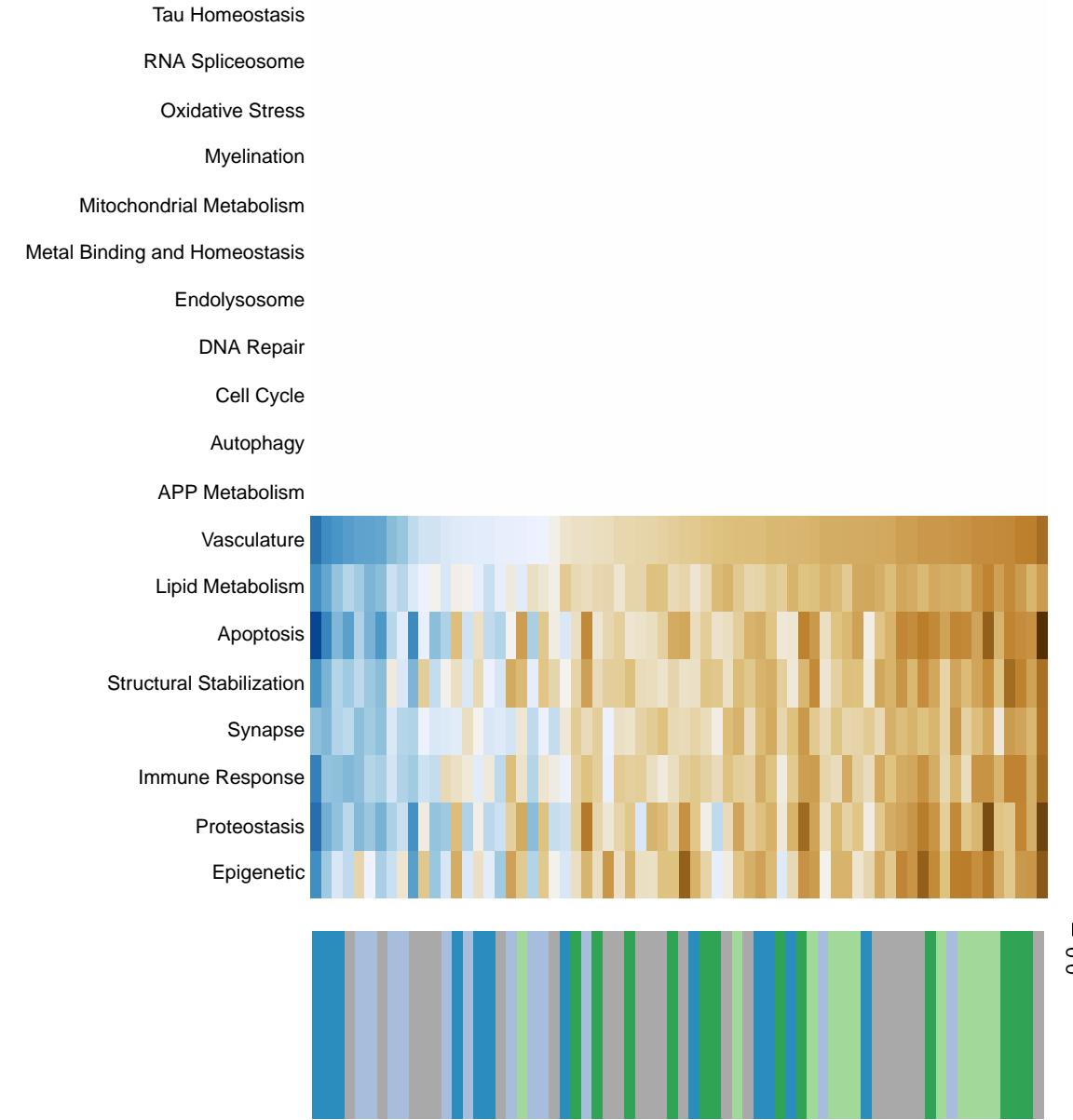
Mitochondrial Metabolism



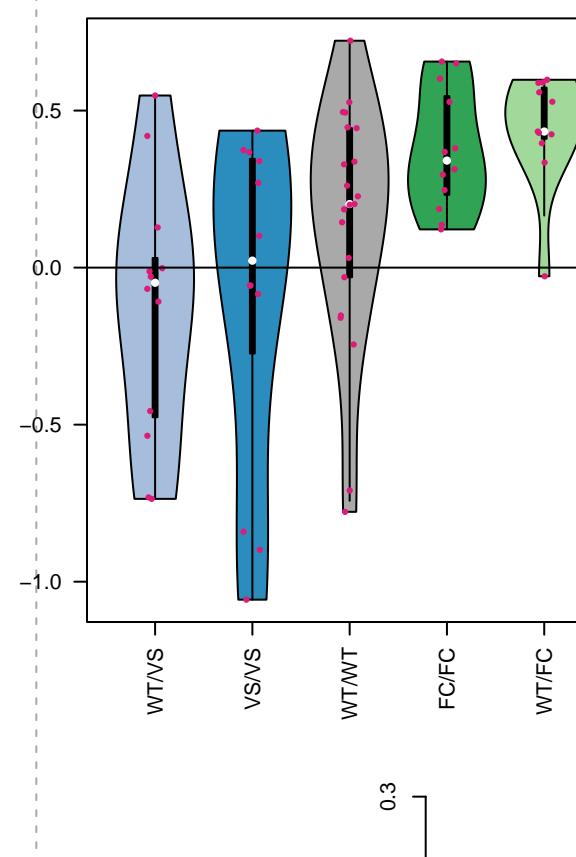
Decomposition



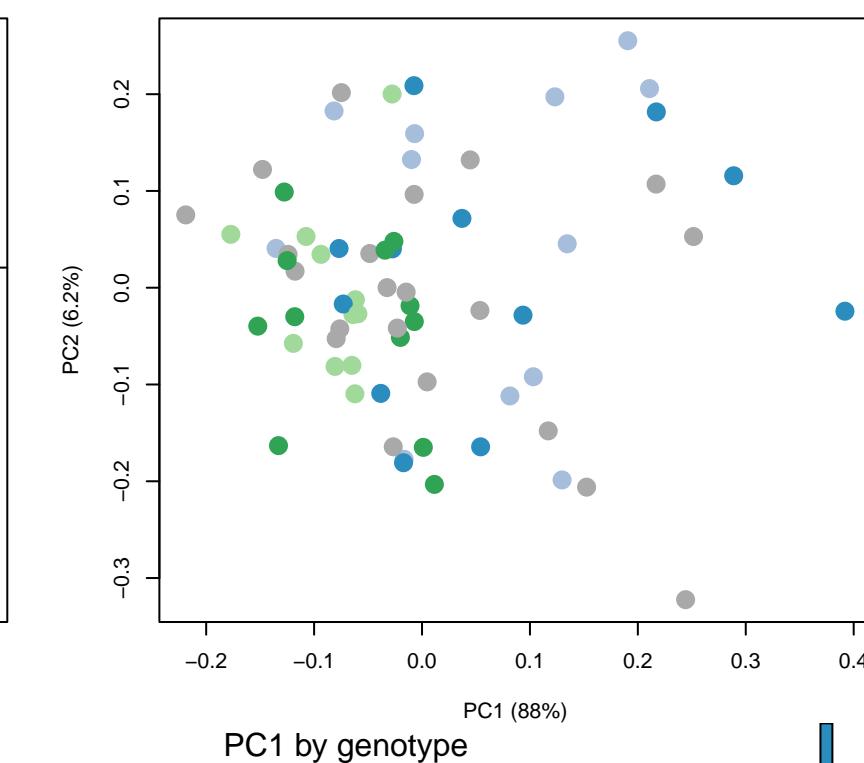
Aldosterone-regulated sodium reabsorption



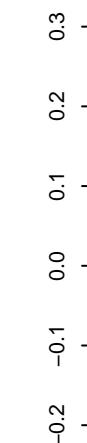
Vasculature



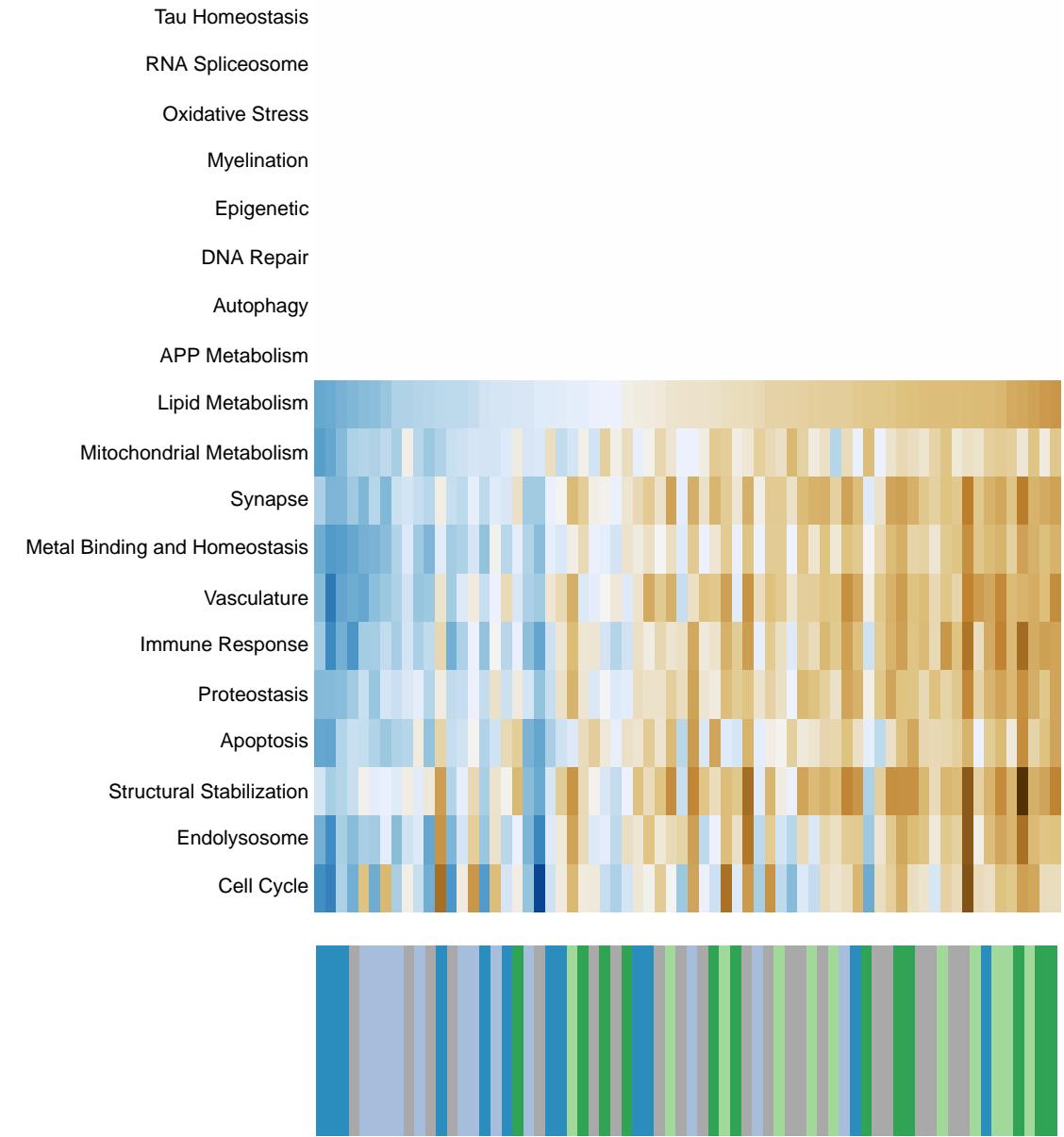
Decomposition



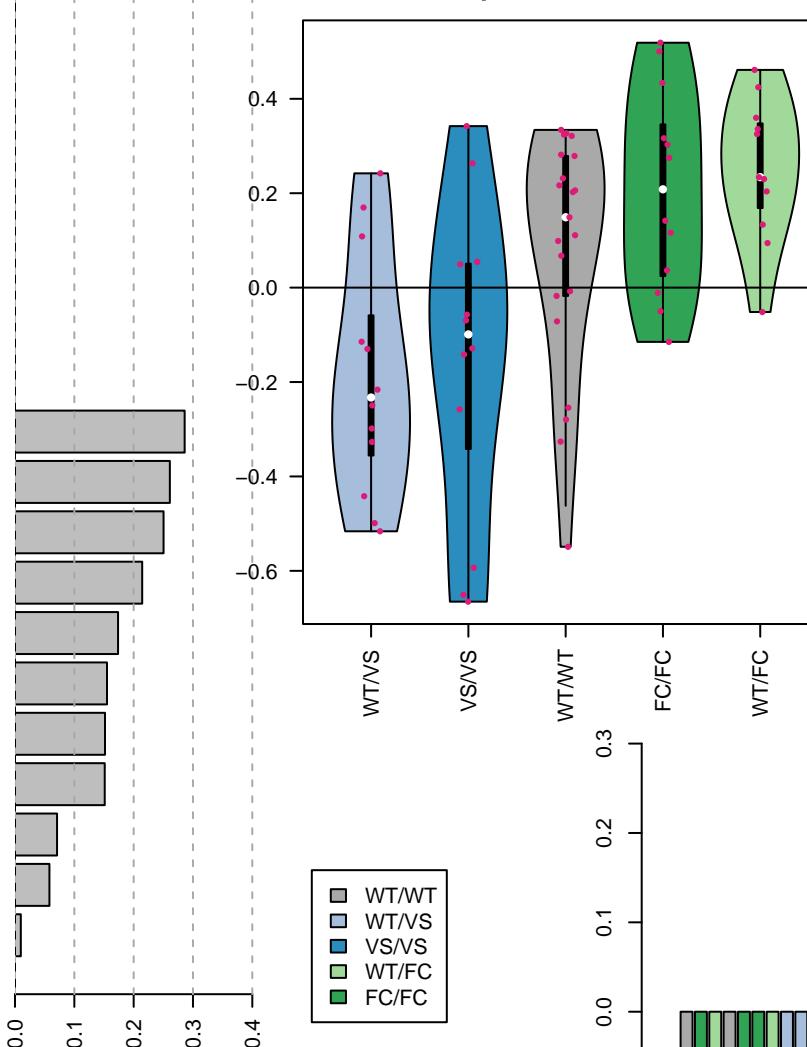
$R^2 = 0.036$



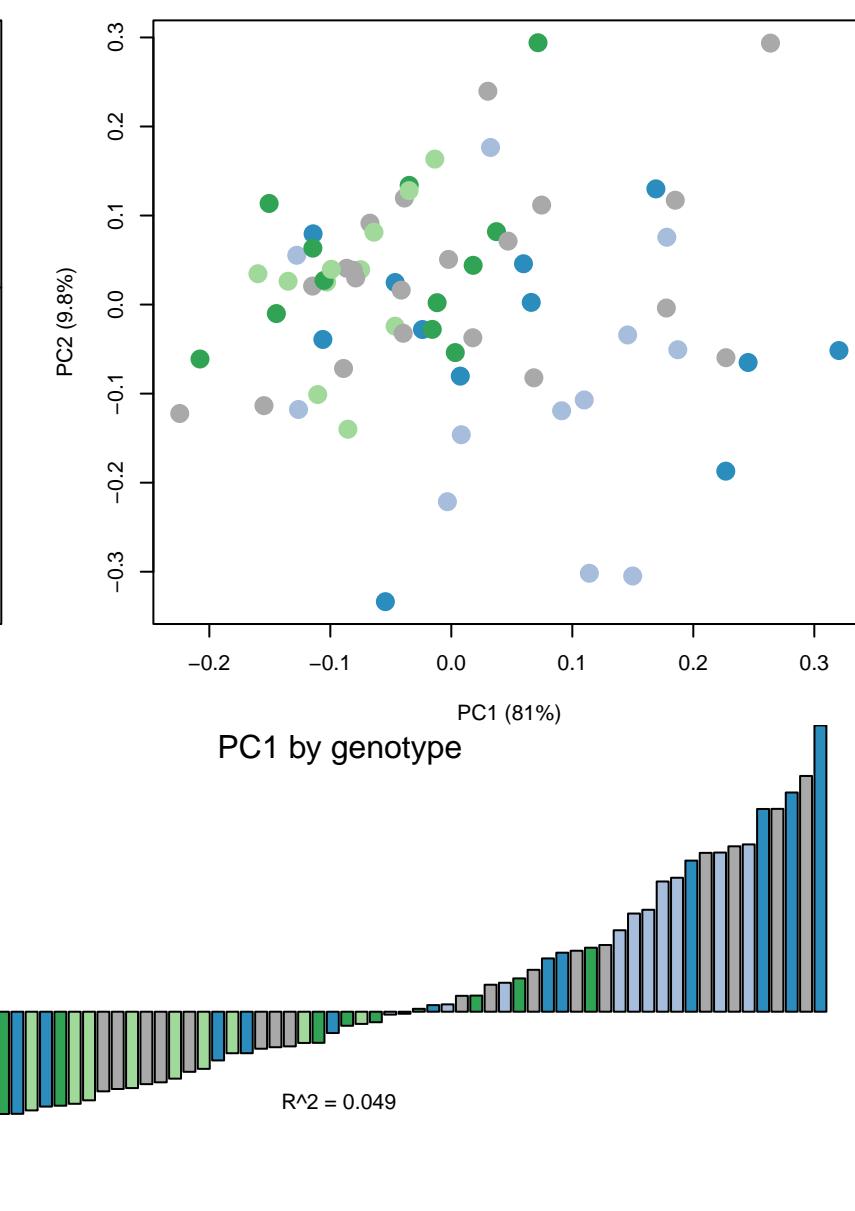
Glutamatergic synapse



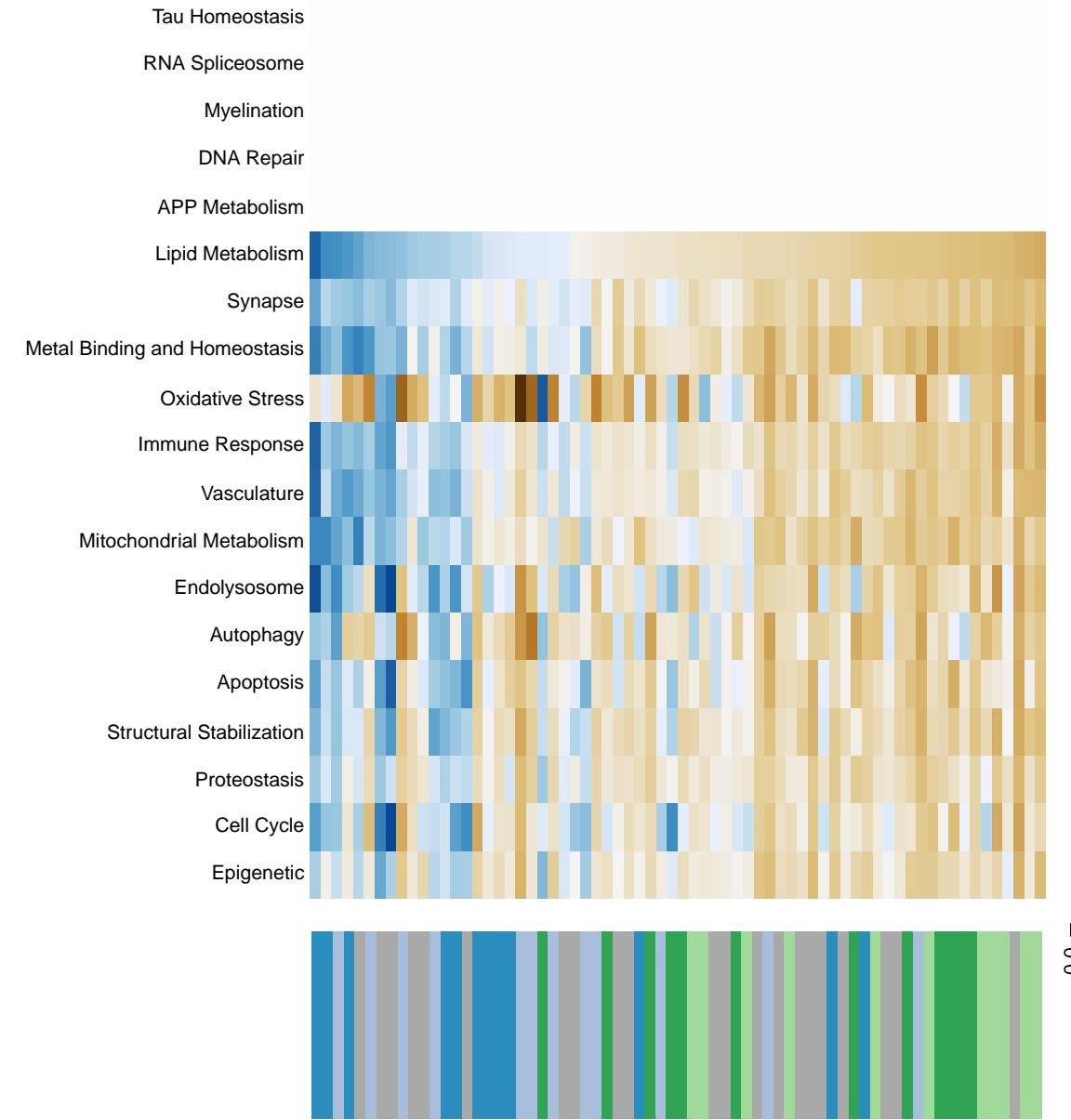
Lipid Metabolism



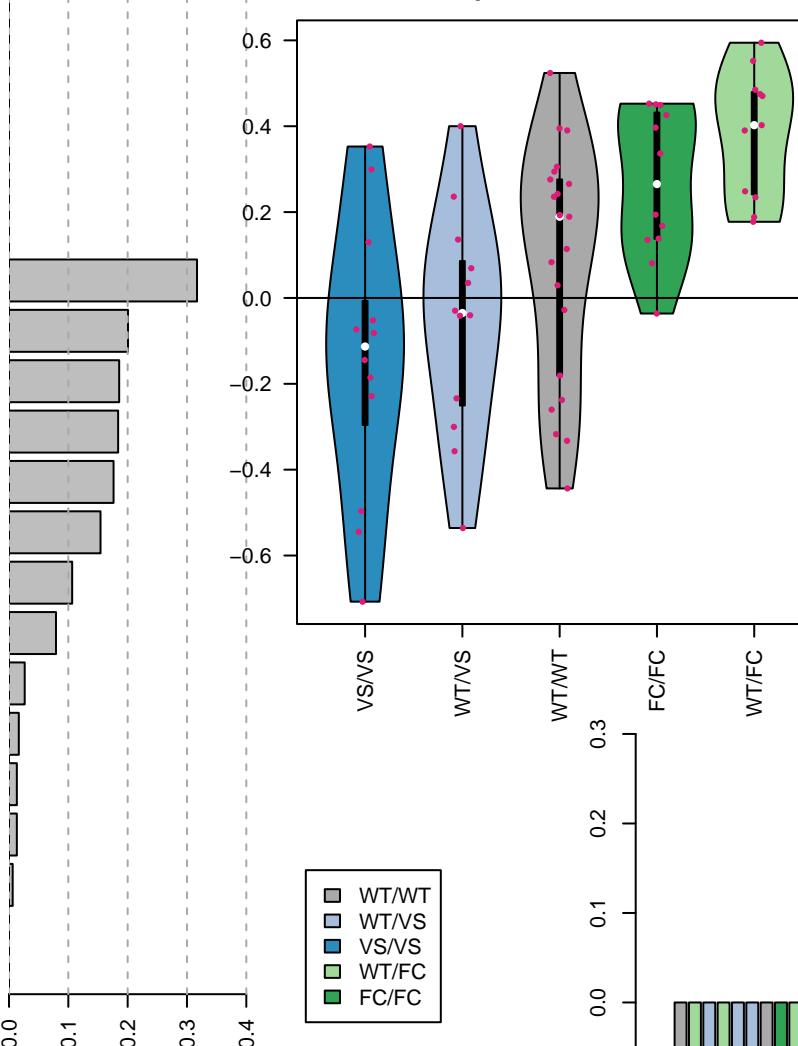
Decomposition



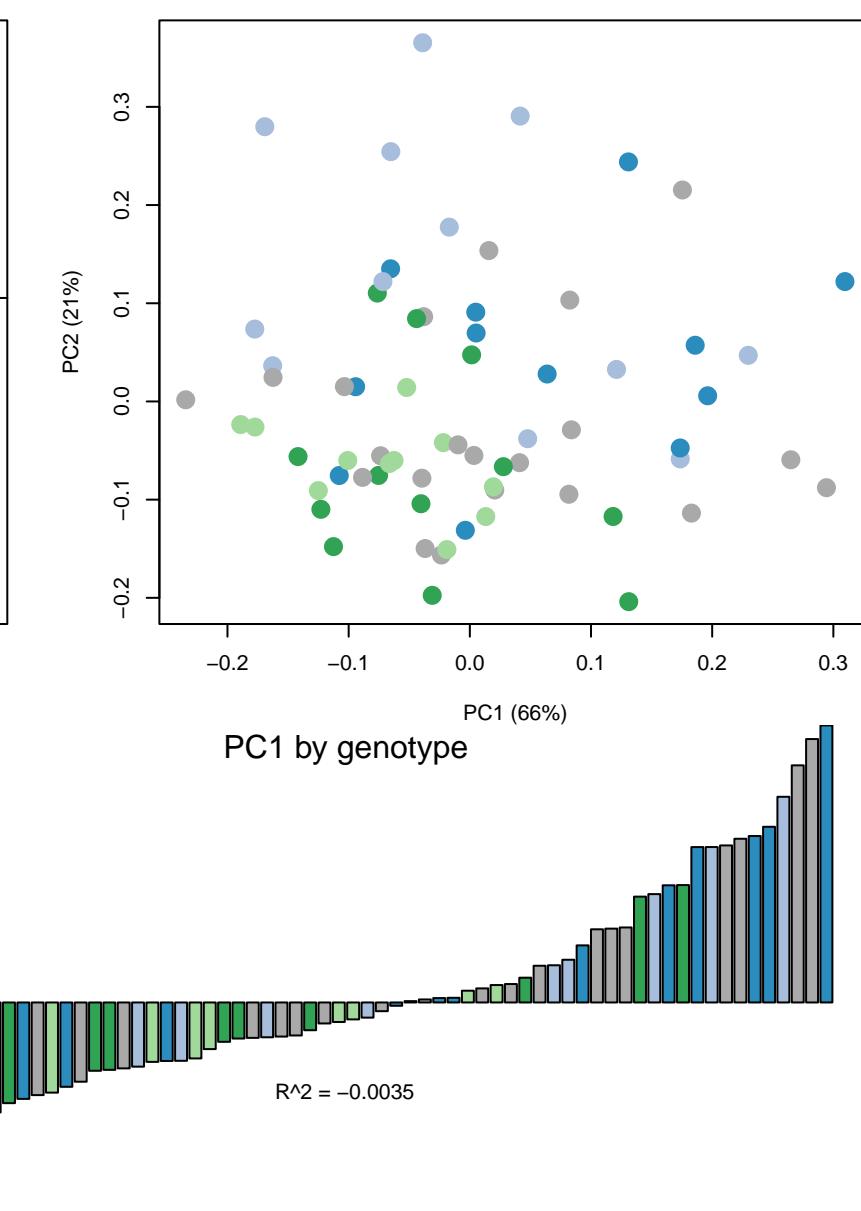
Cholinergic synapse



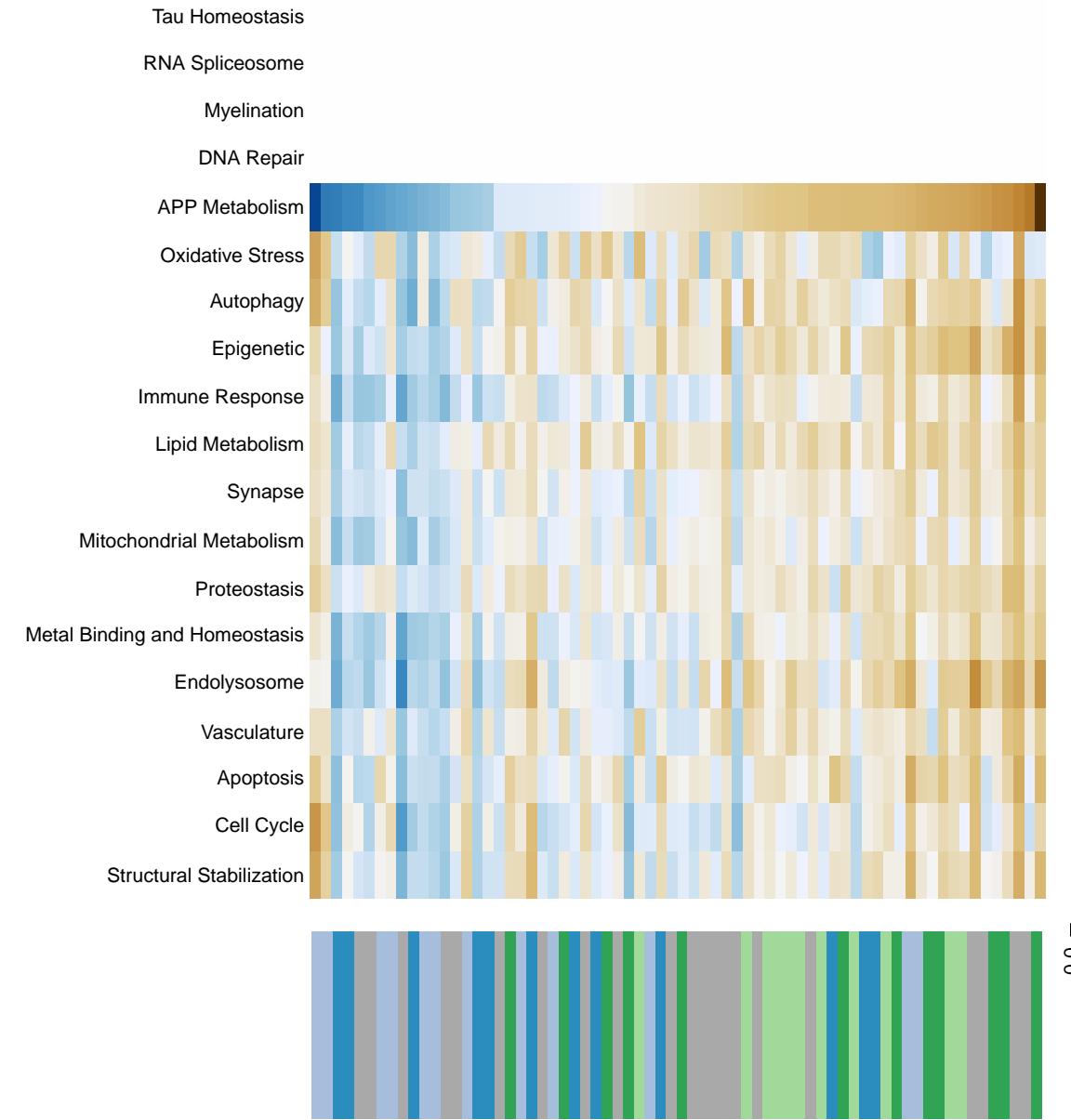
Lipid Metabolism



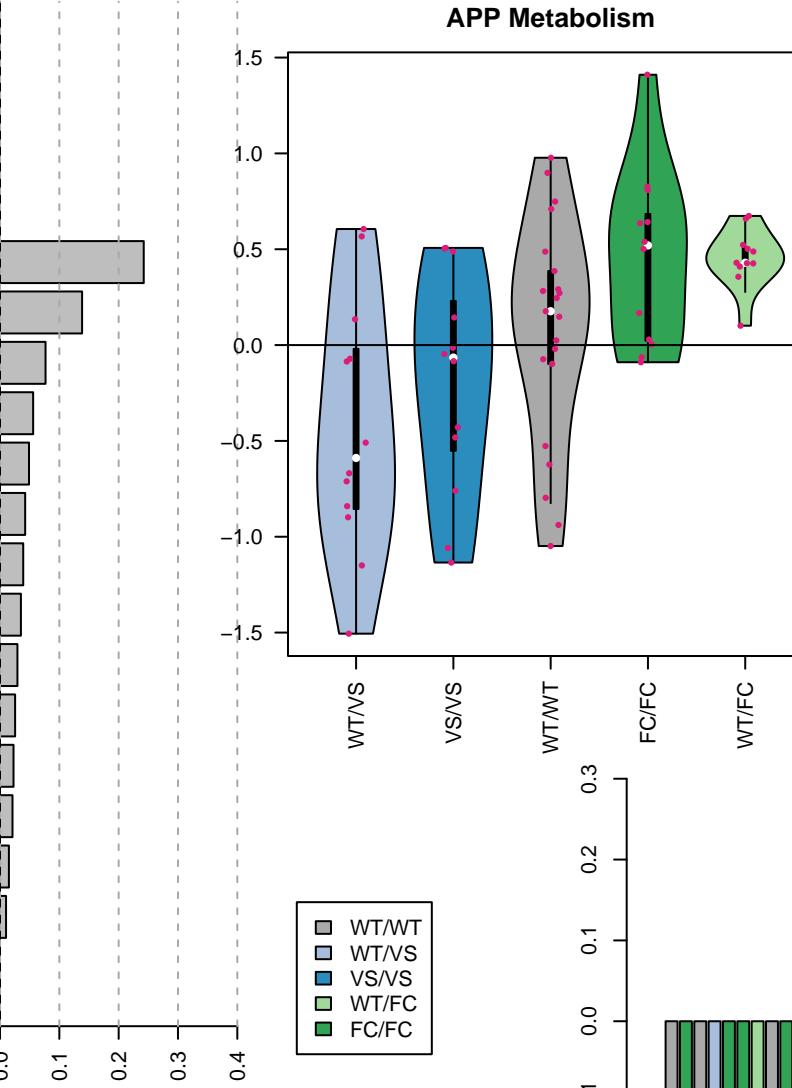
Decomposition



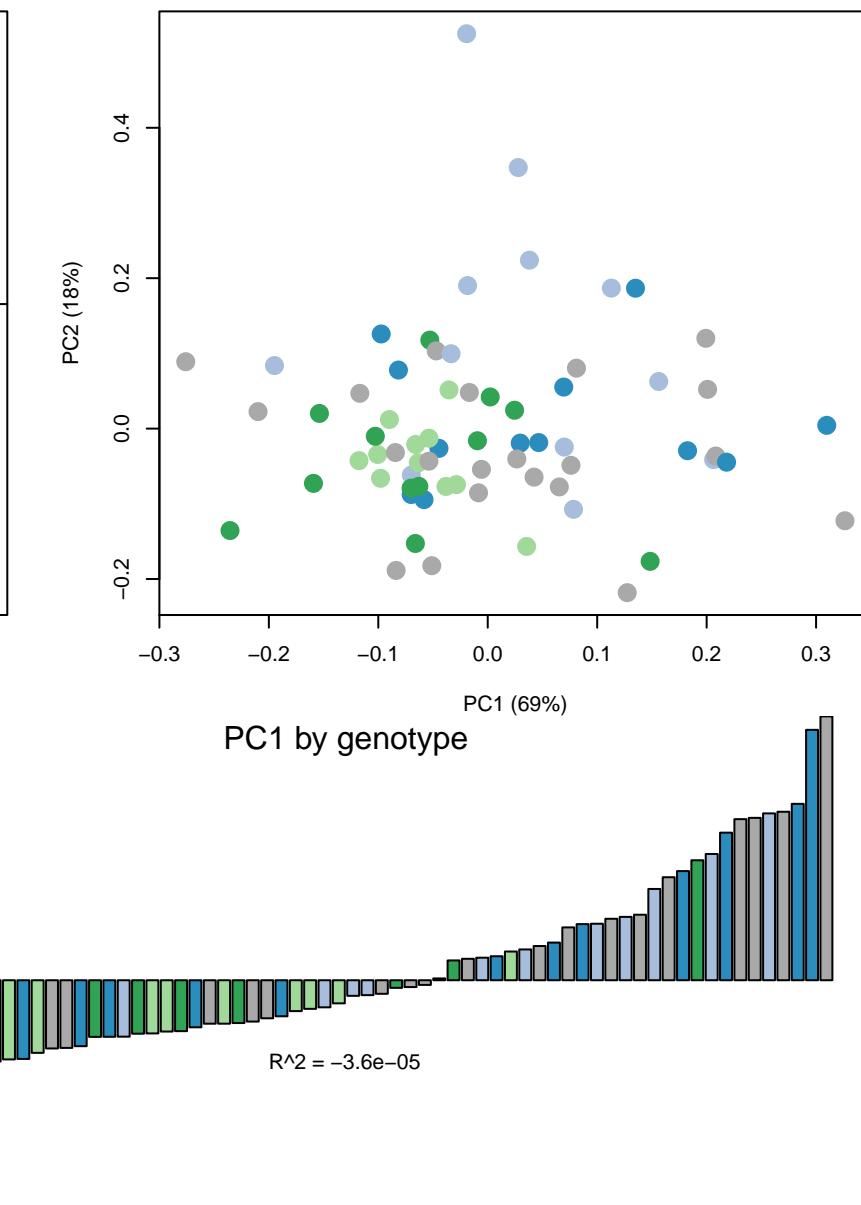
Dopaminergic synapse



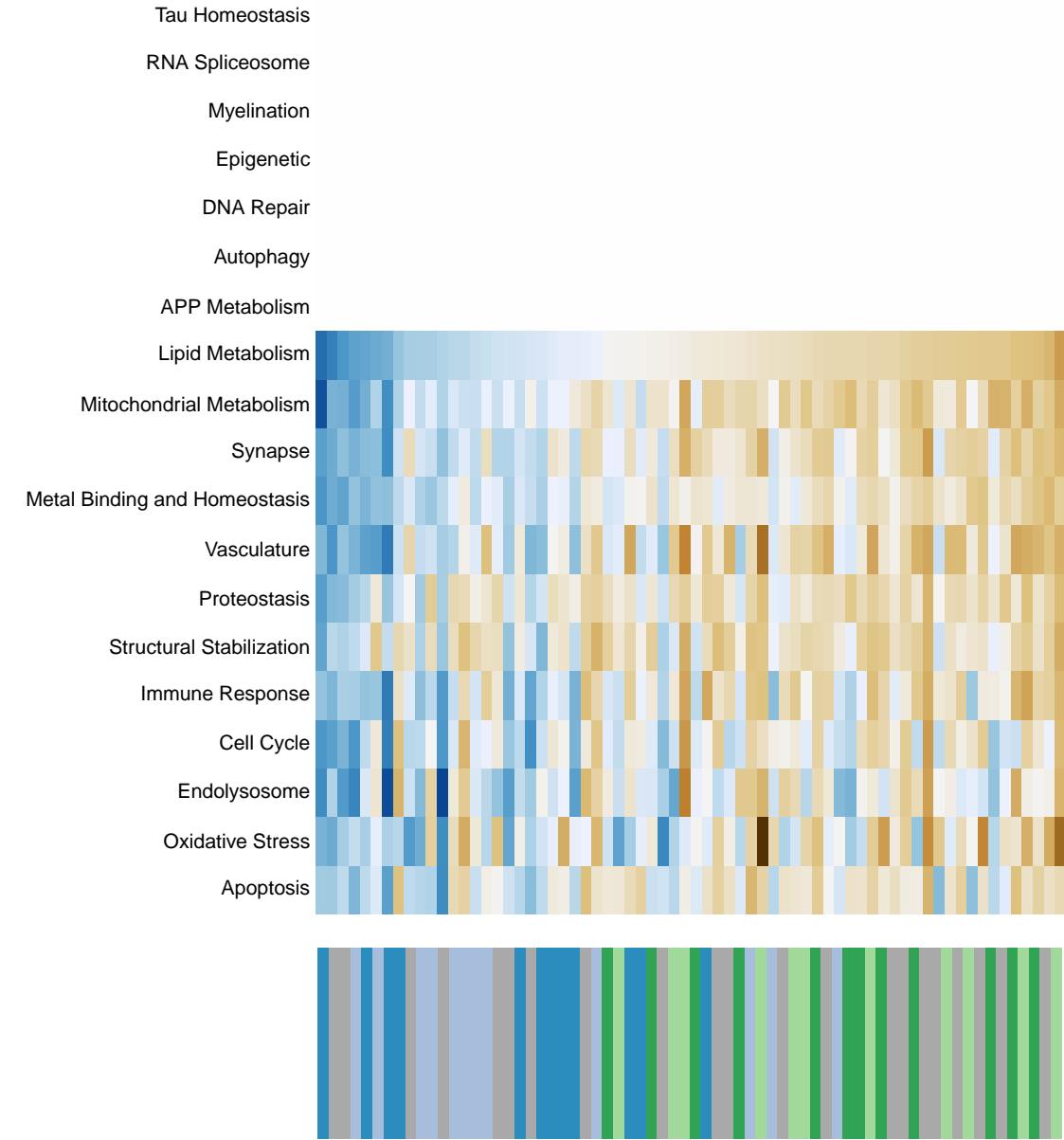
APP Metabolism



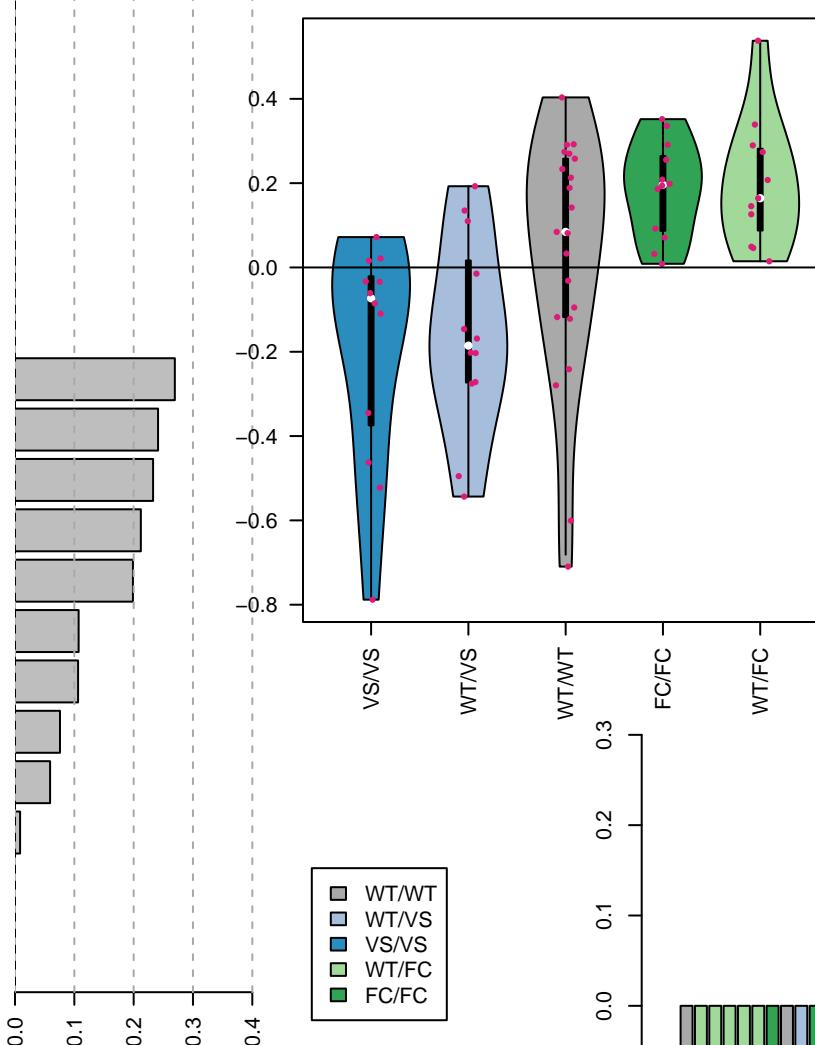
Decomposition



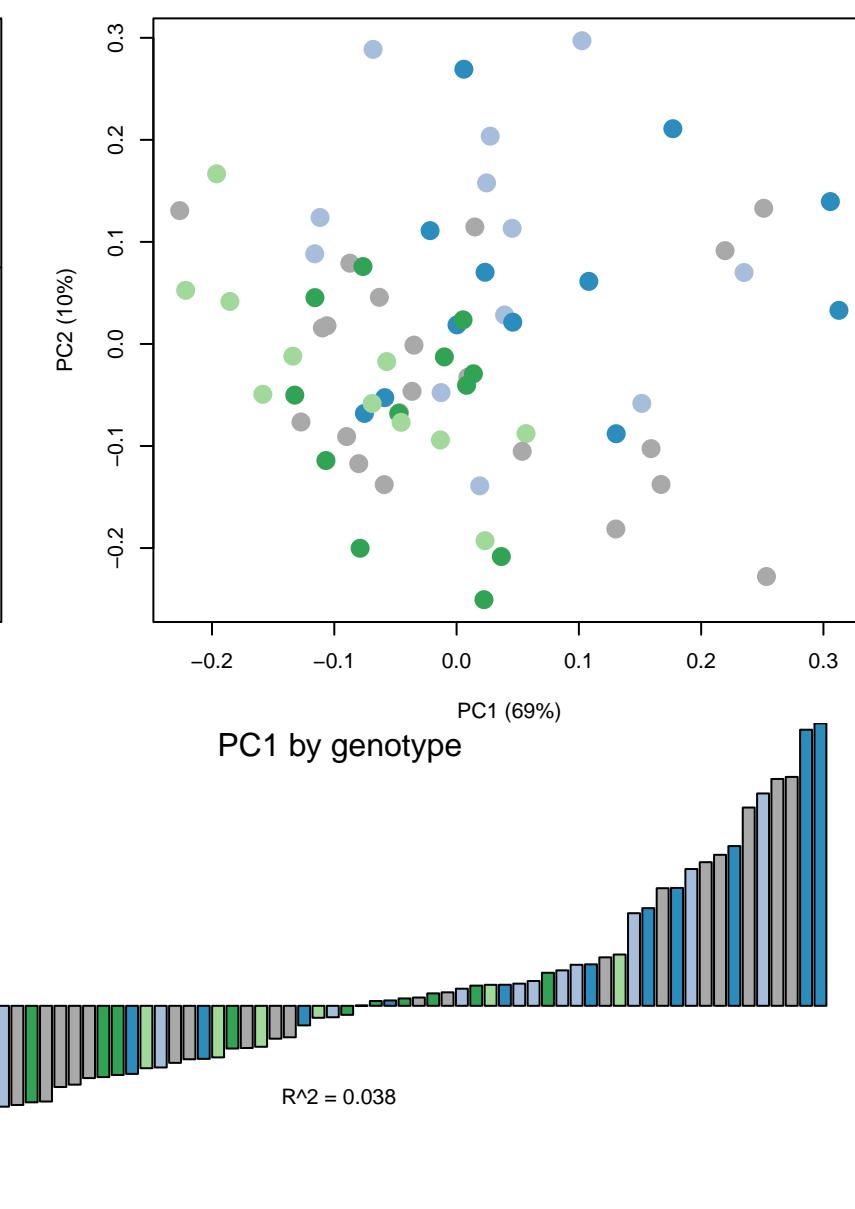
Serotonergic synapse



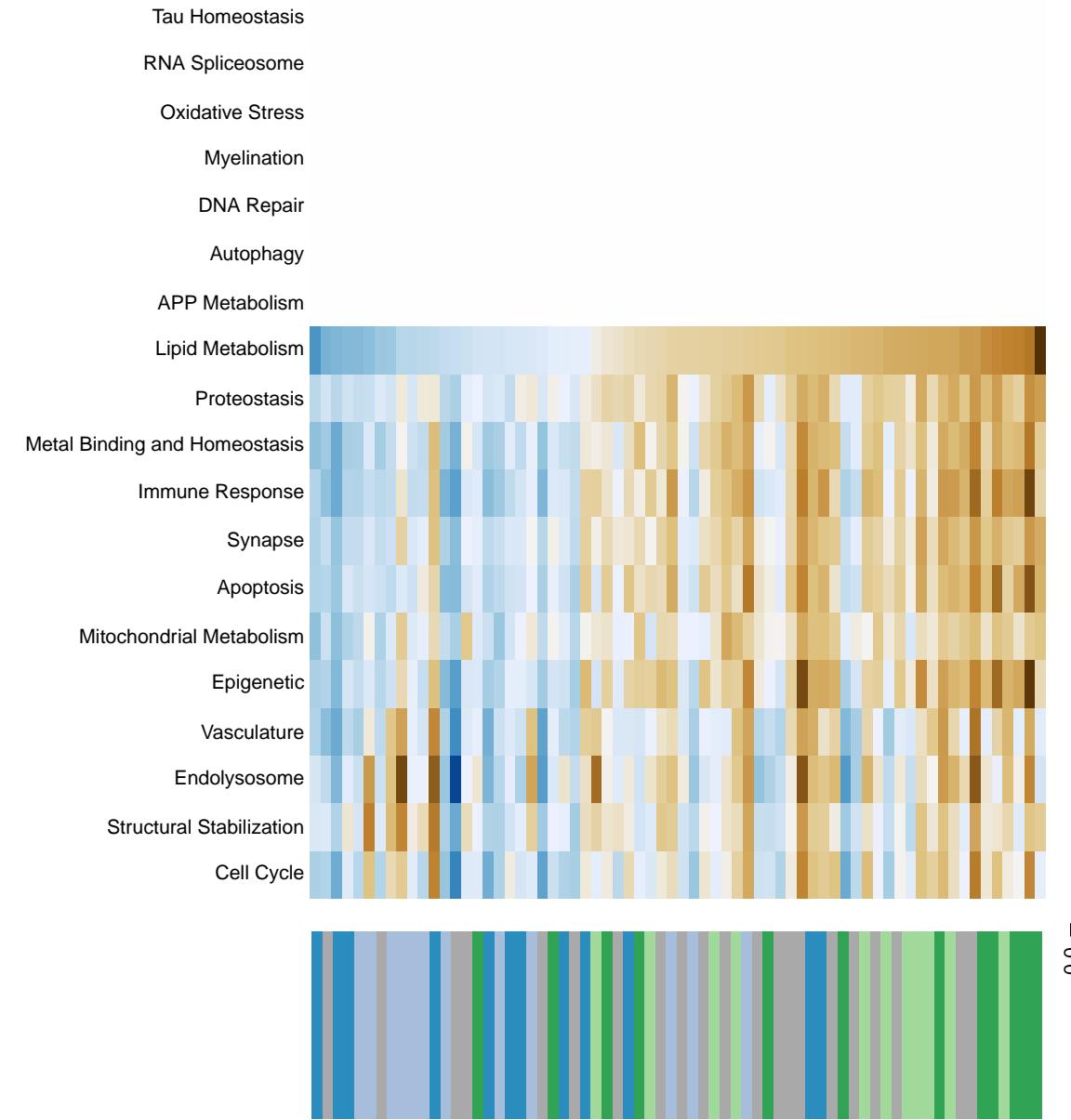
Lipid Metabolism



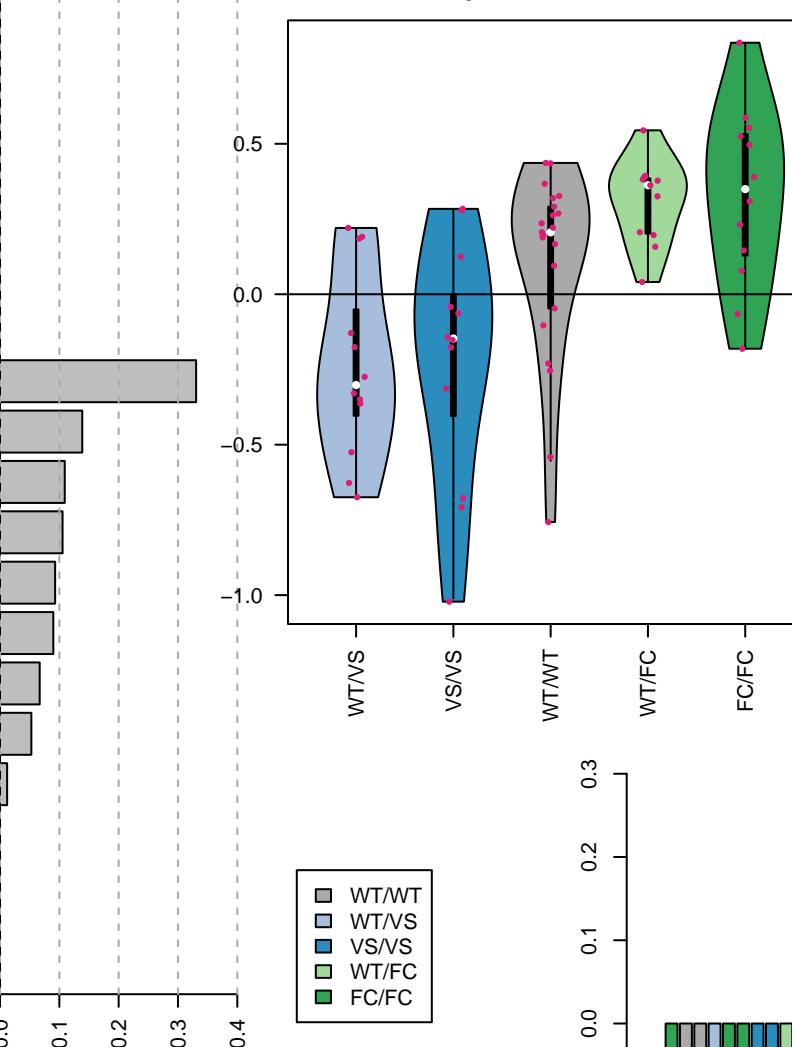
Decomposition



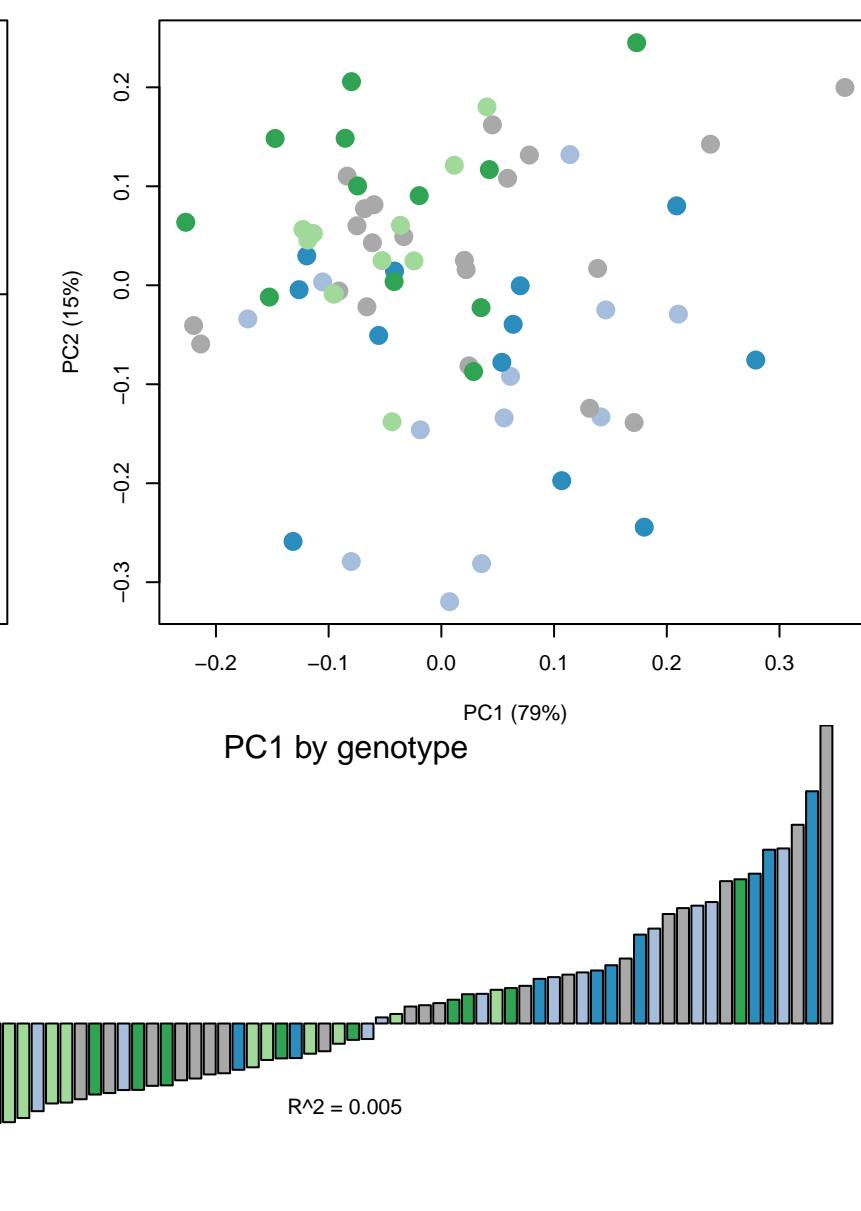
Long-term potentiation



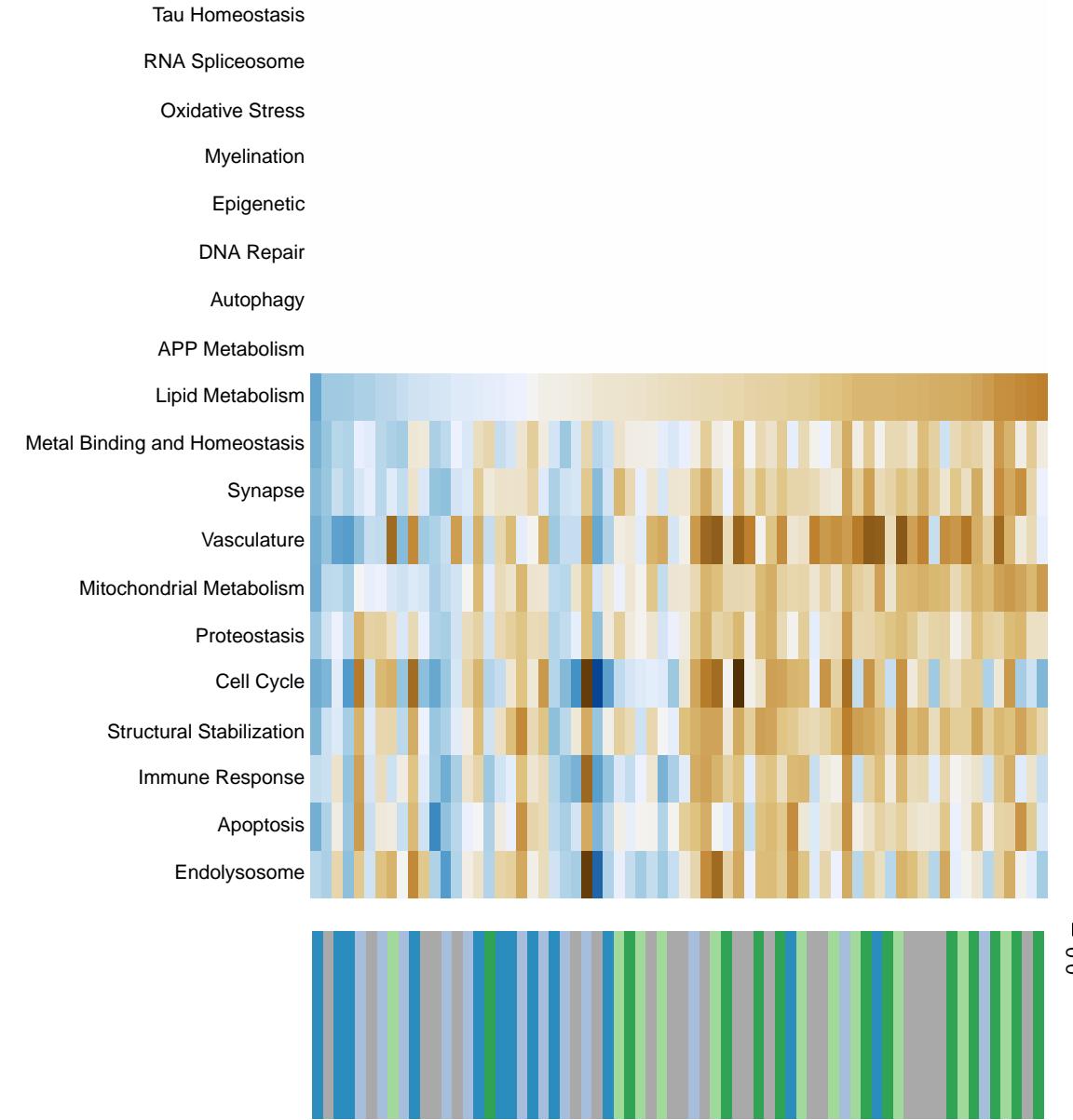
Lipid Metabolism



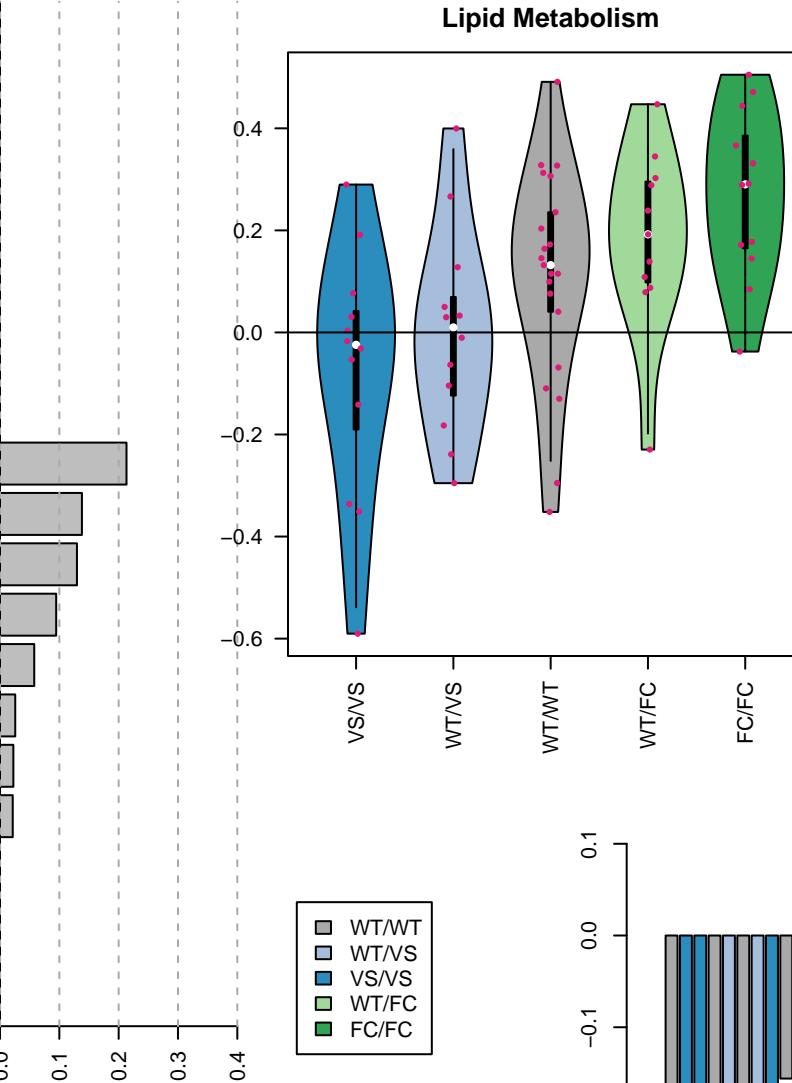
Decomposition



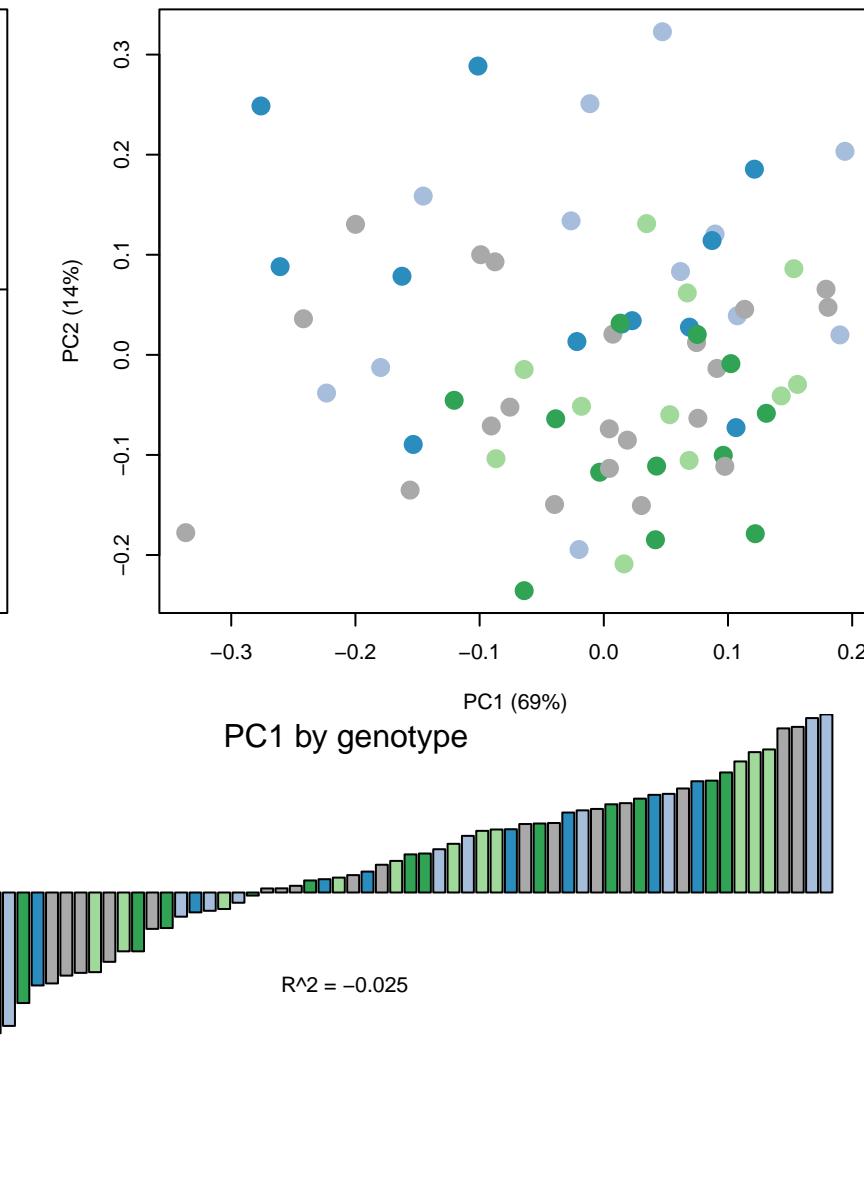
Long-term depression



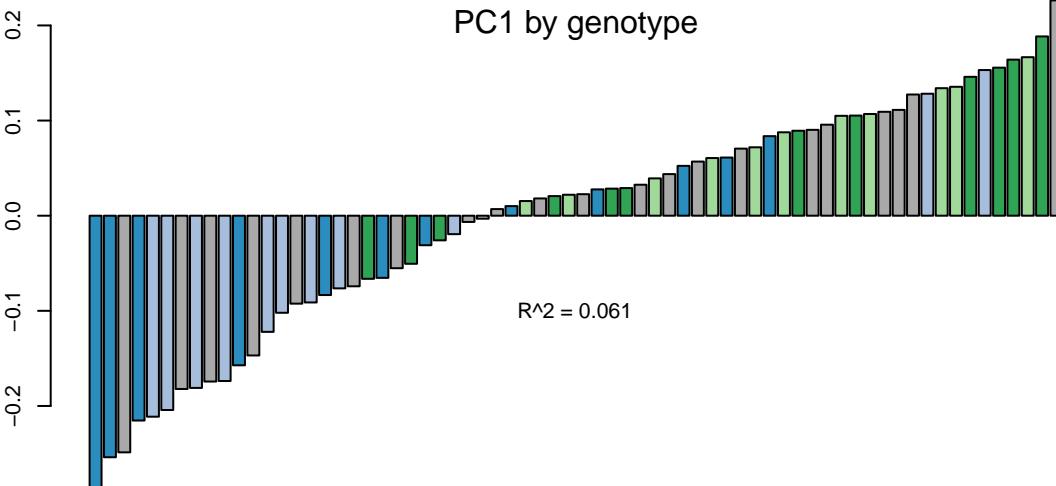
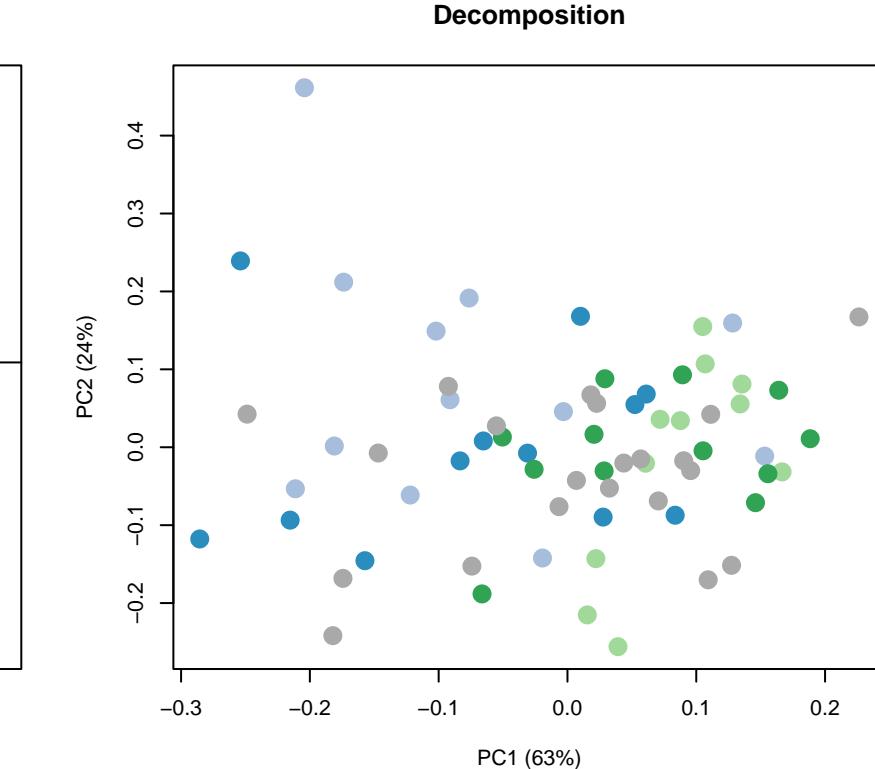
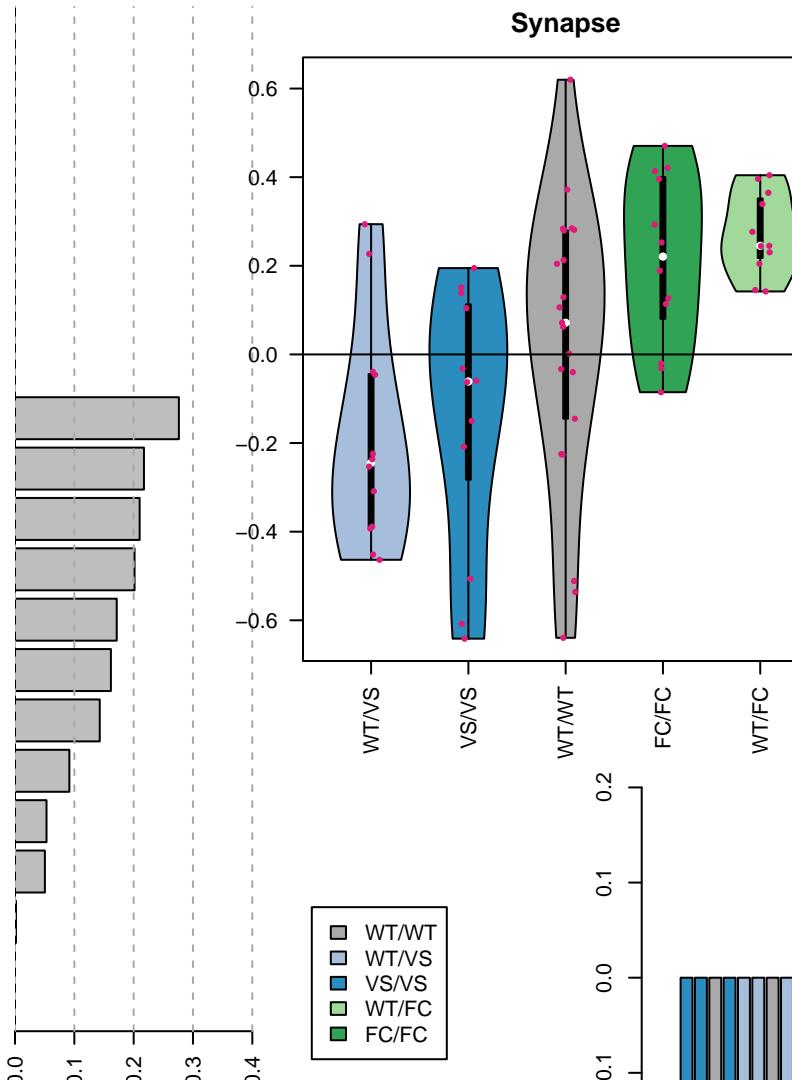
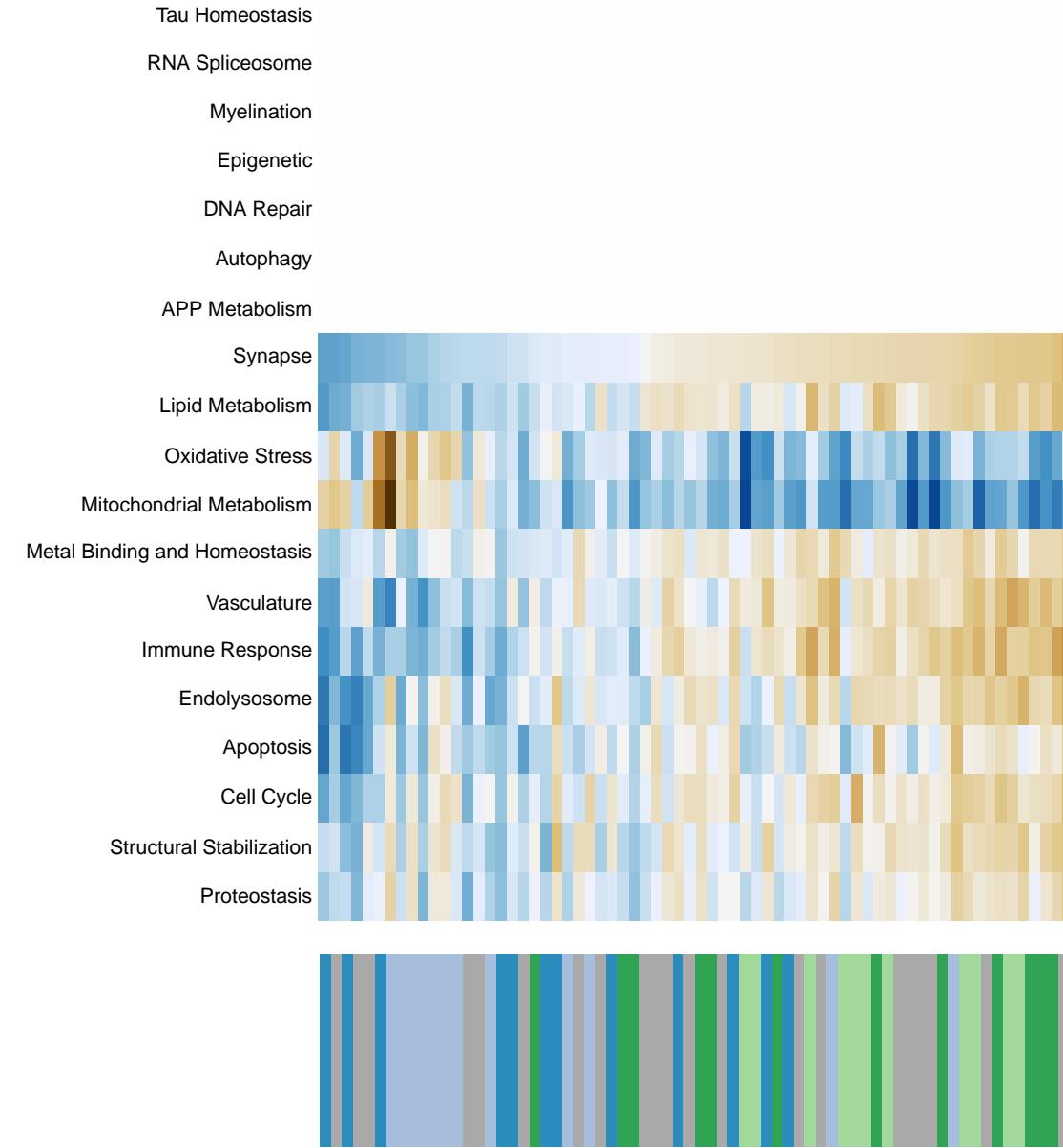
Lipid Metabolism



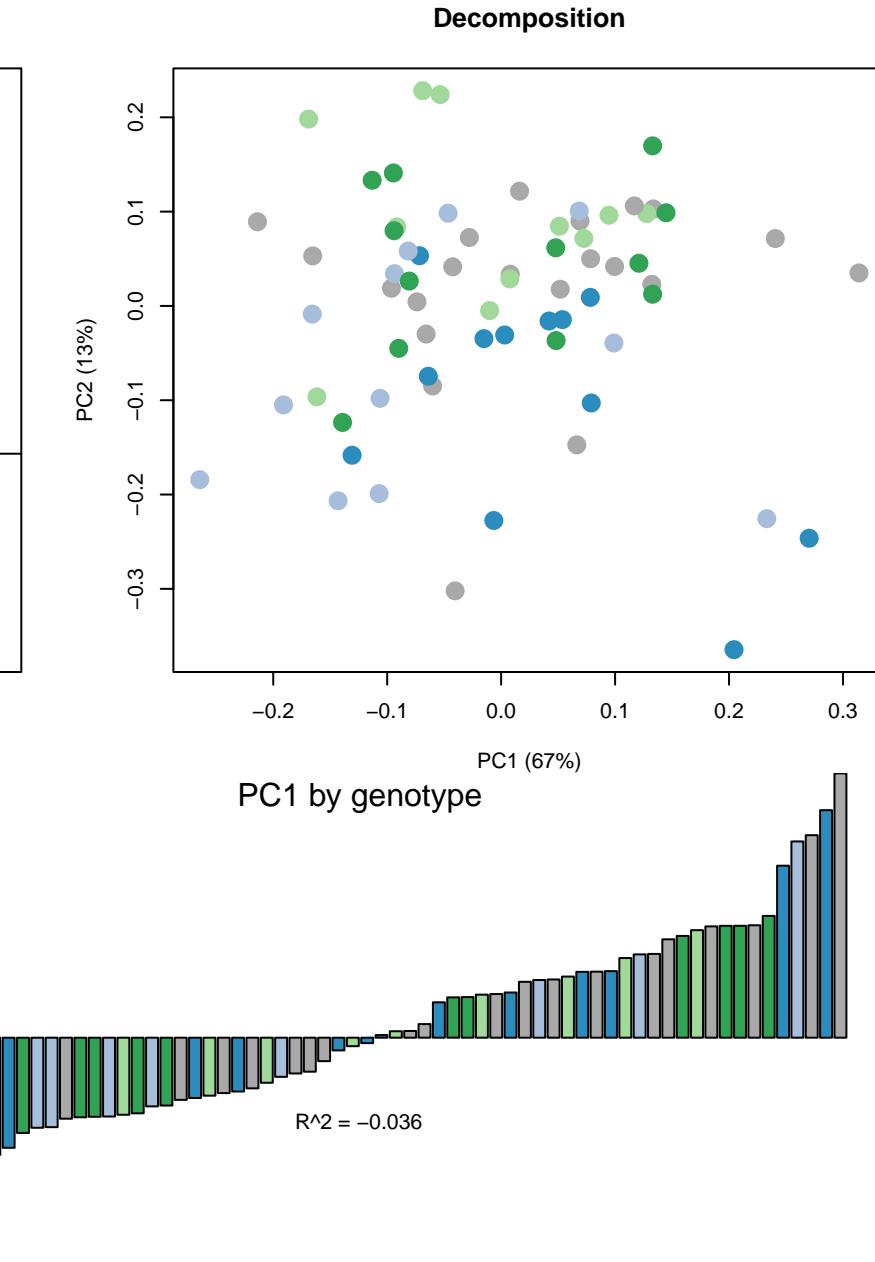
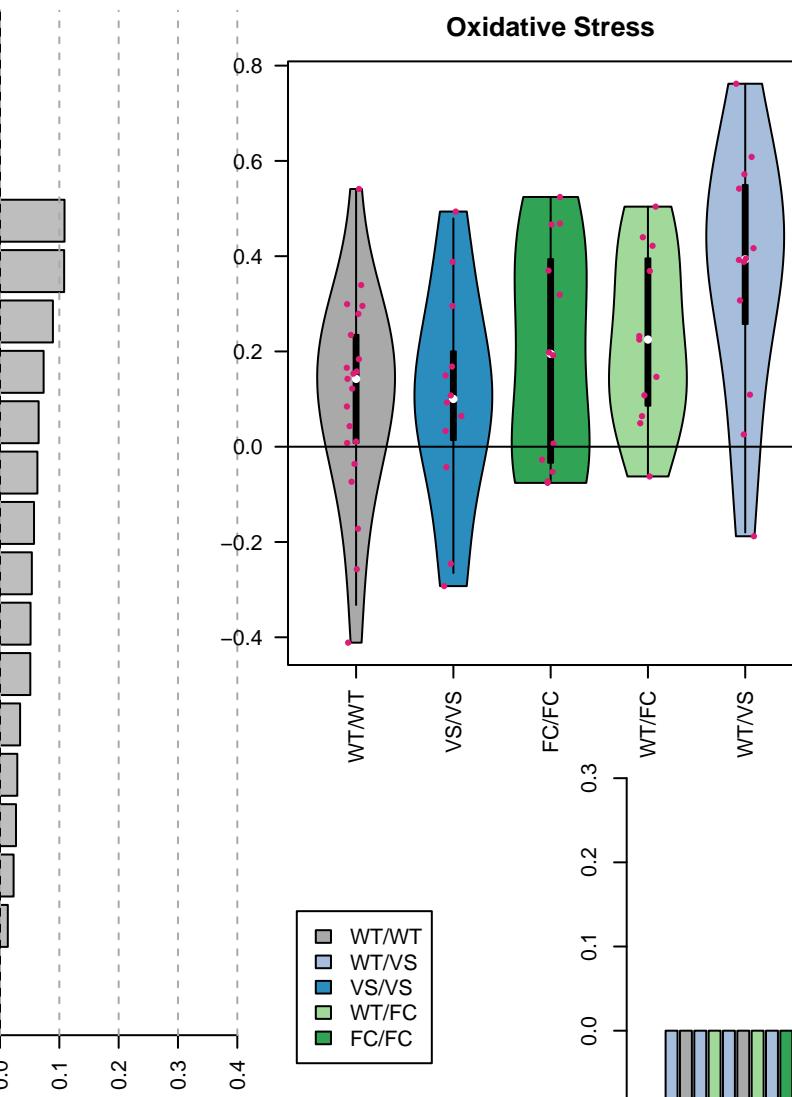
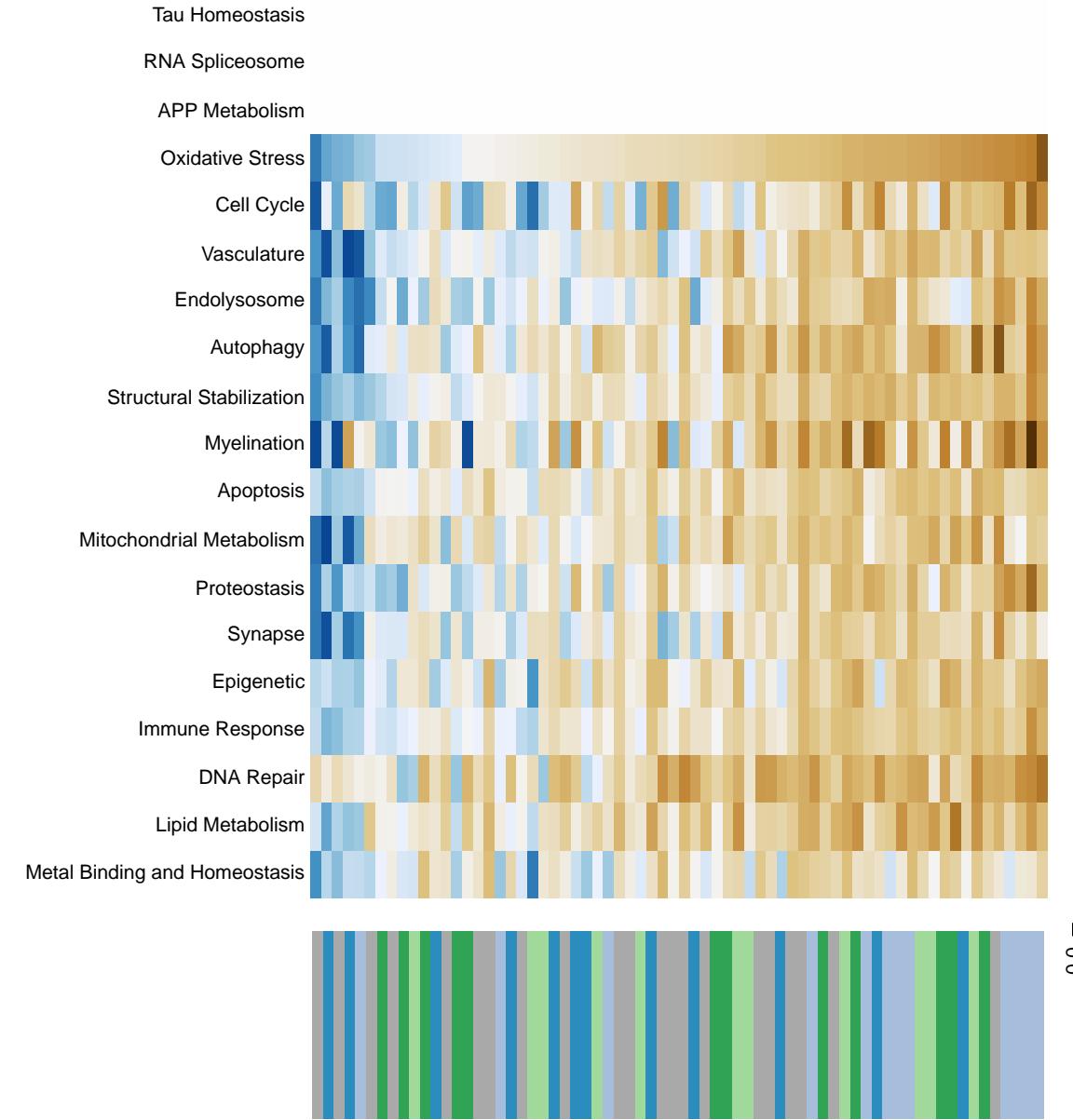
Decomposition



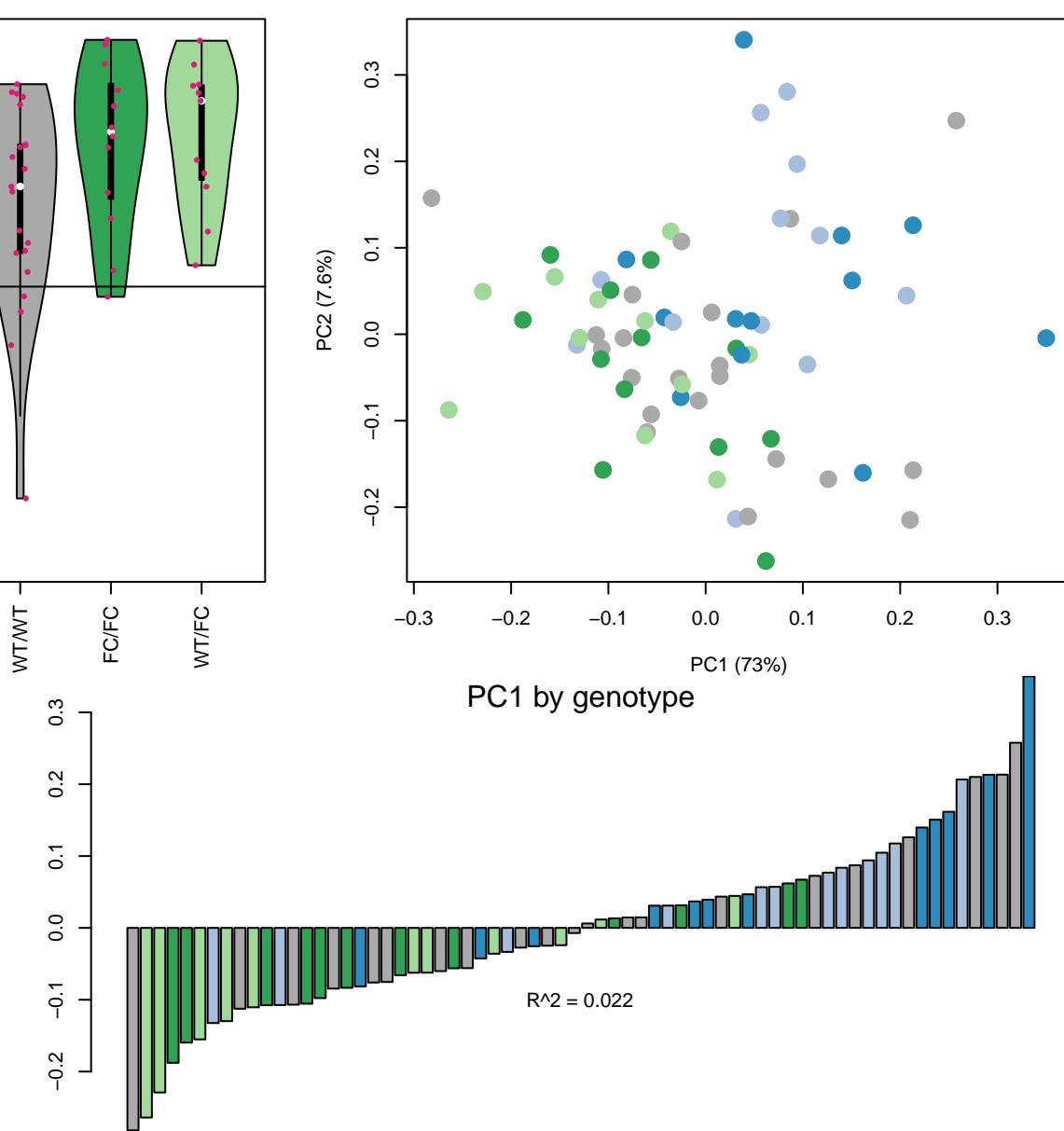
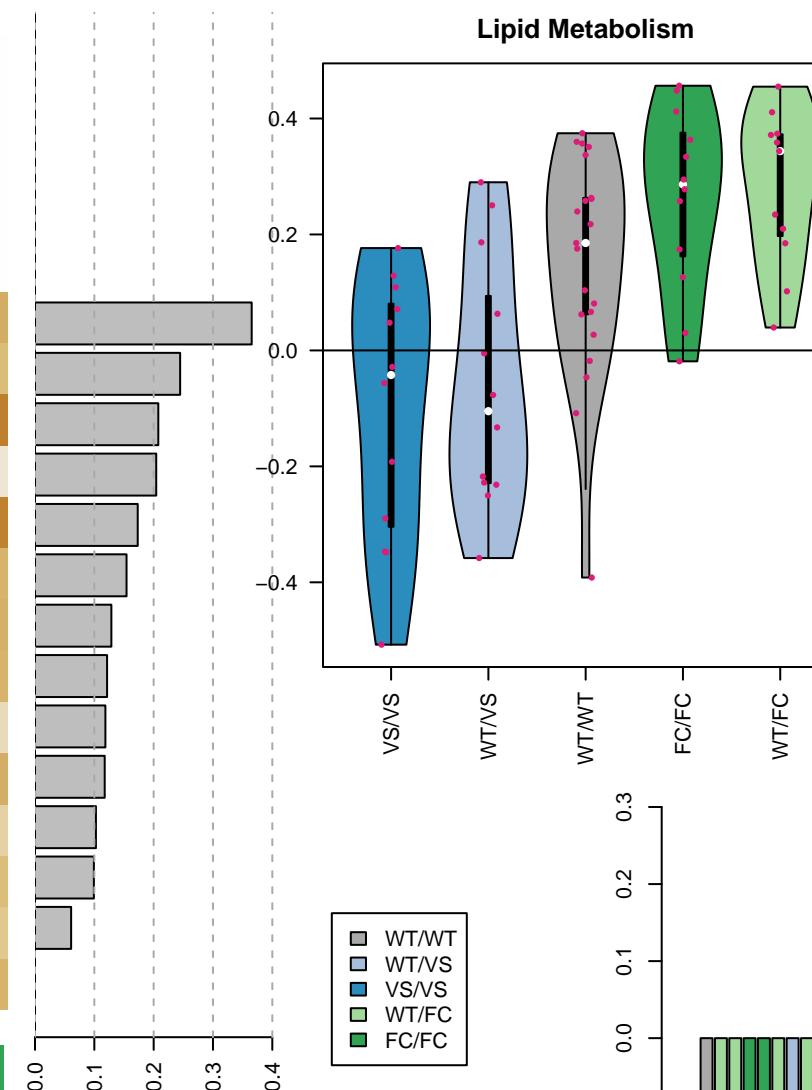
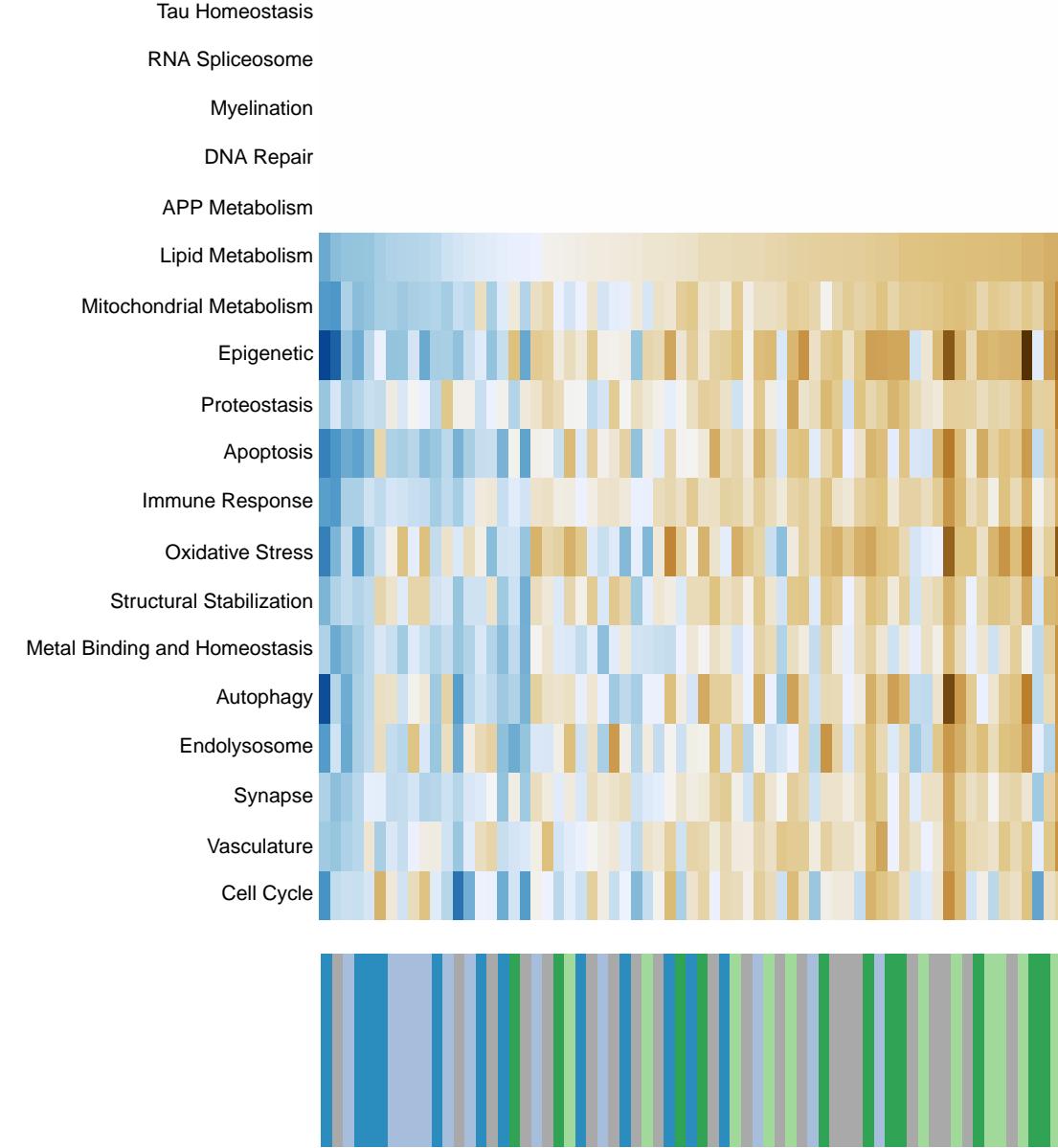
Retrograde endocannabinoid signaling



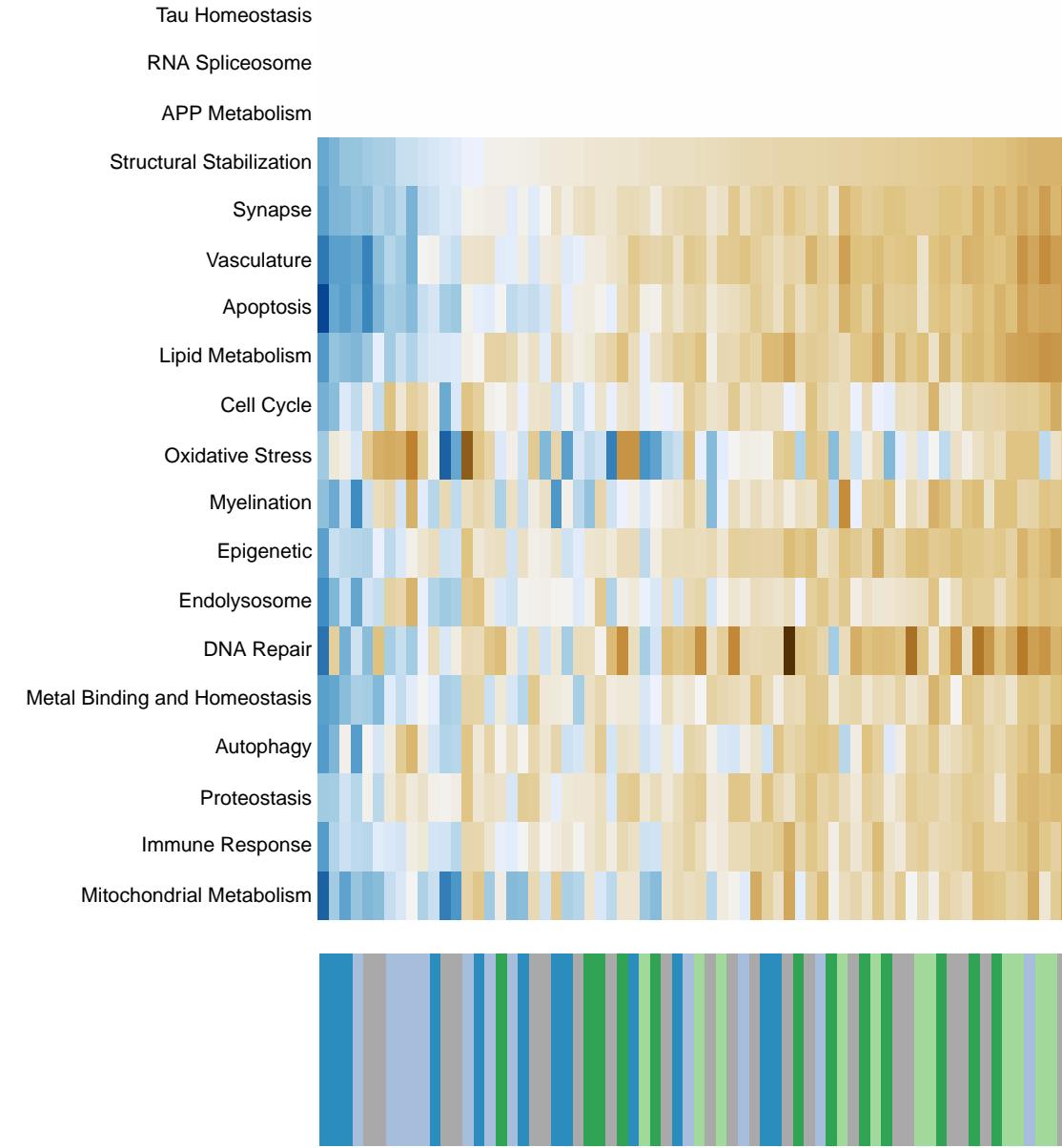
Neurotrophin signaling pathway



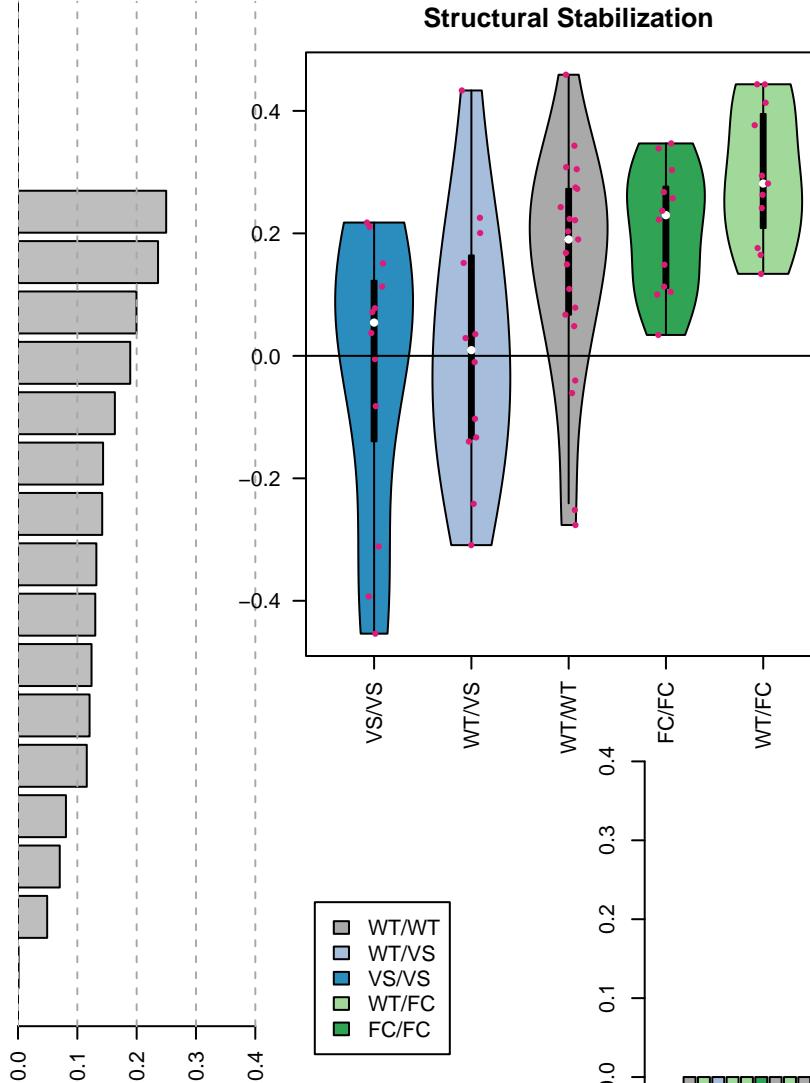
Inflammatory mediator regulation of TRP channels



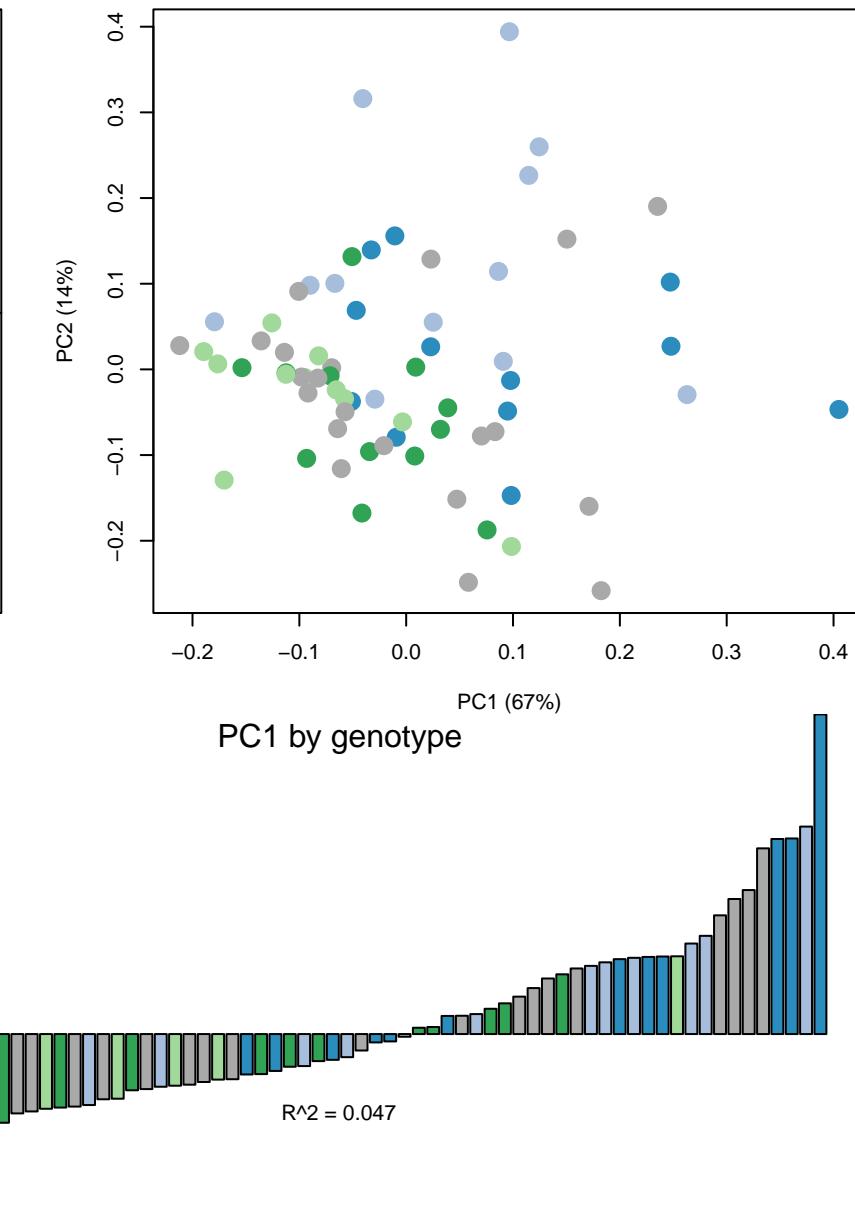
Axon guidance



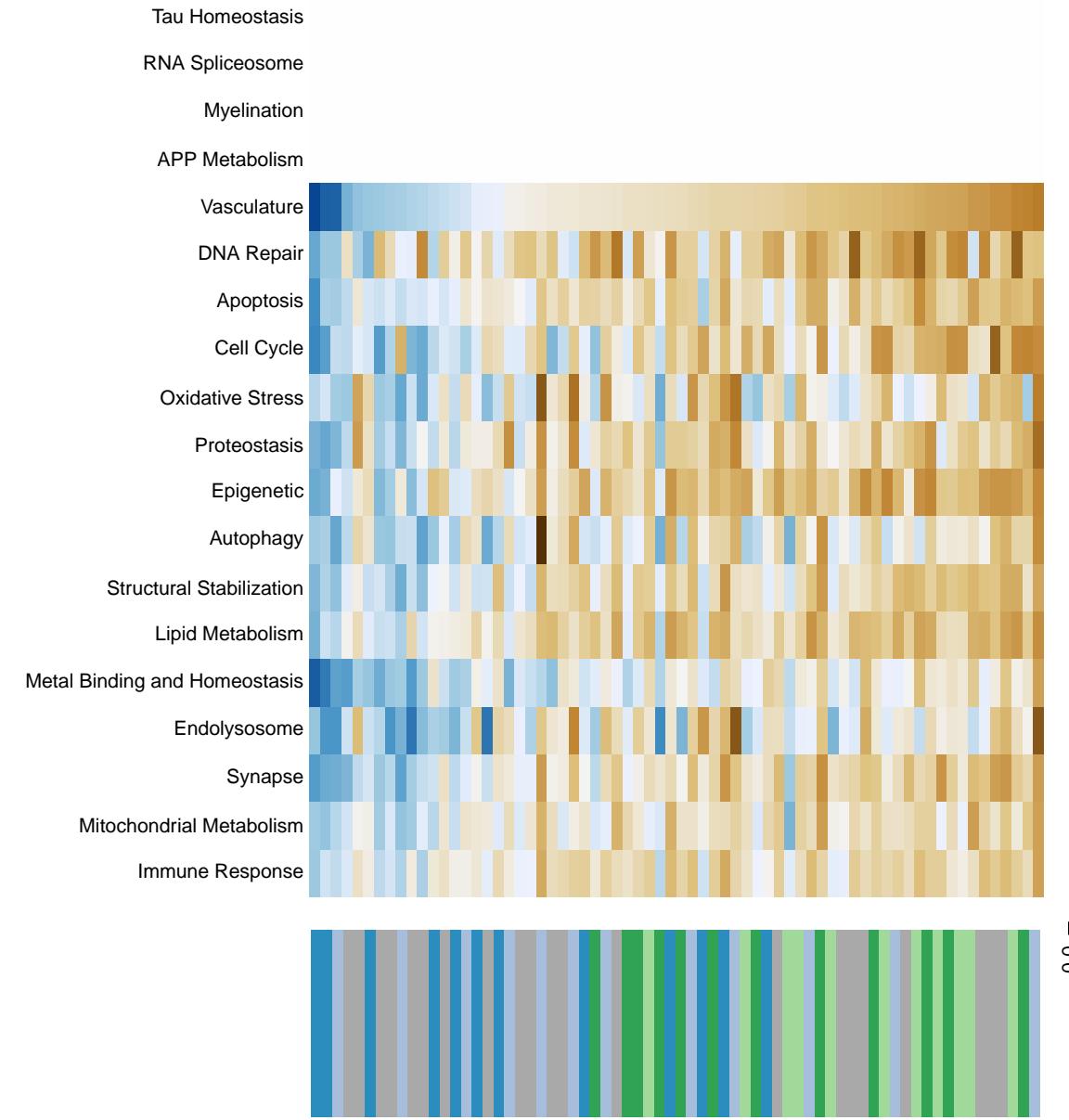
Structural Stabilization



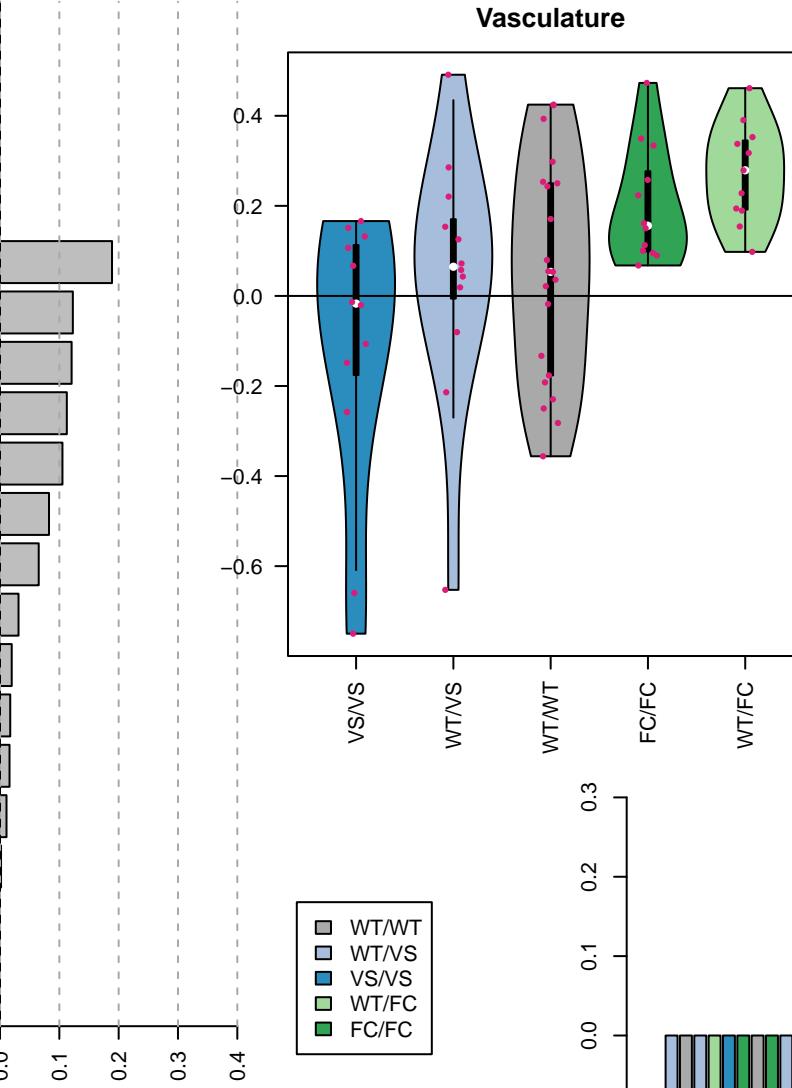
Decomposition



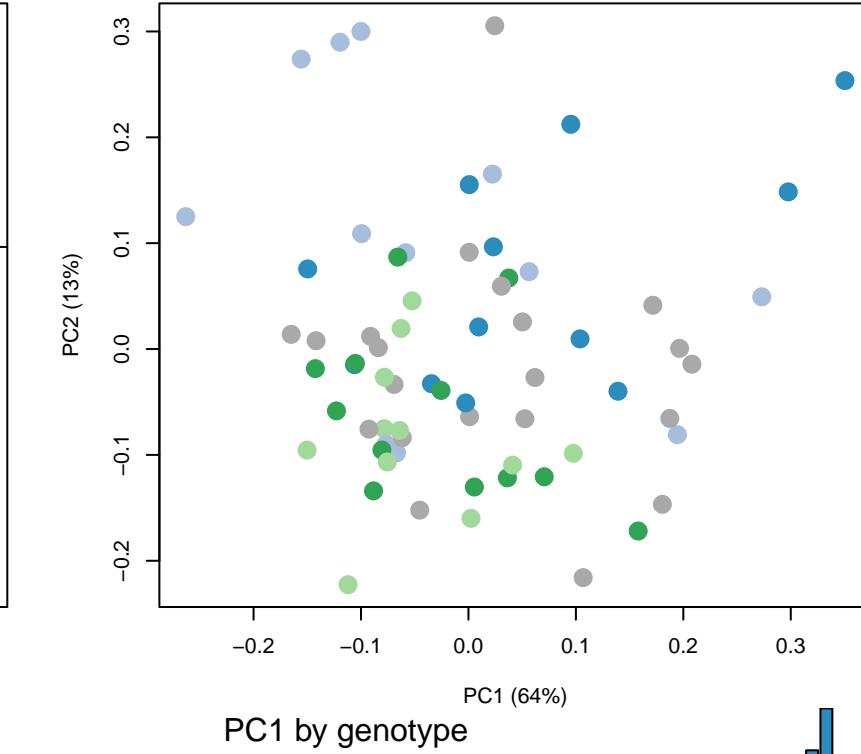
Osteoclast differentiation



Vasculation



Decomposition

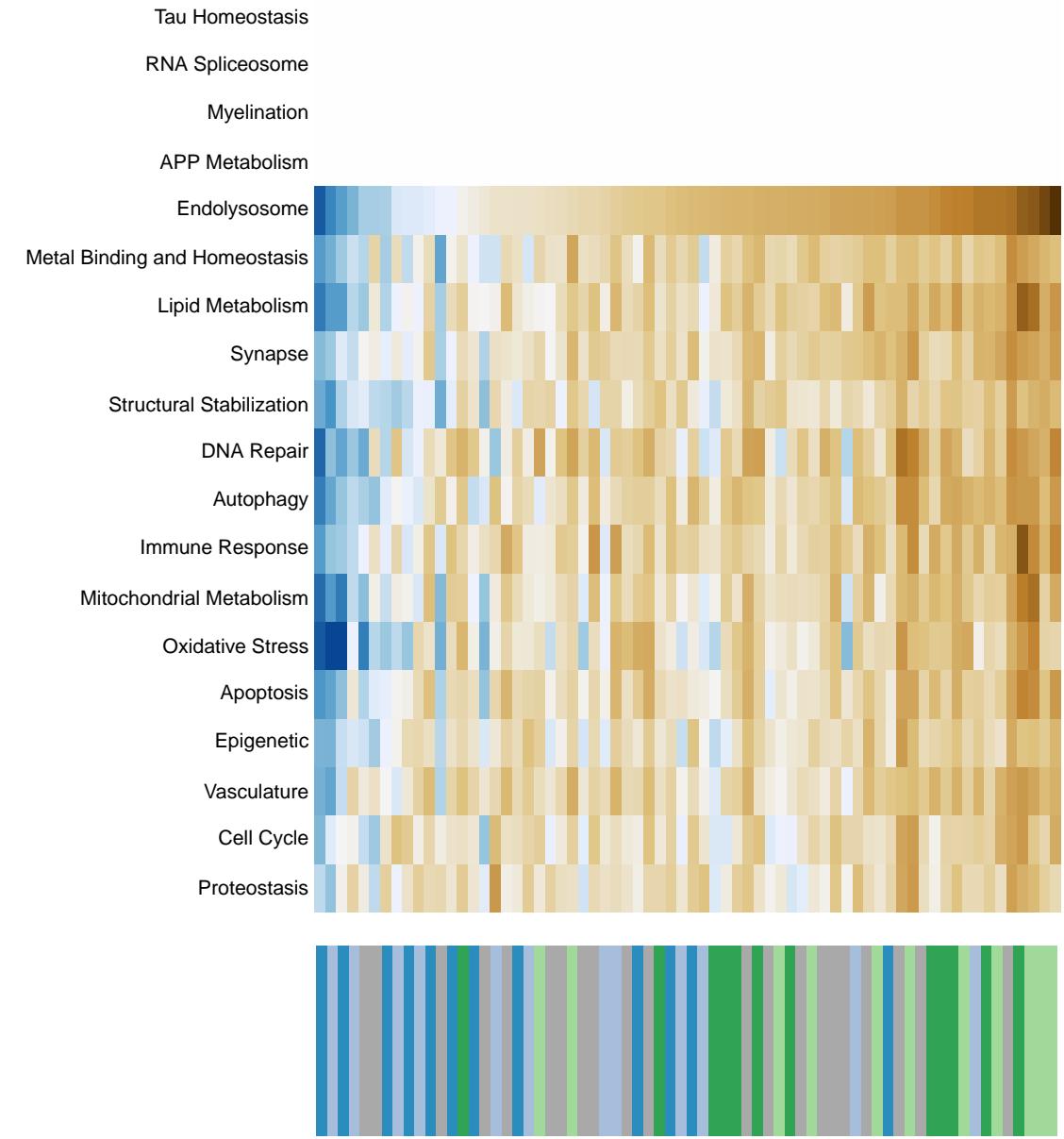


PC1 by genotype

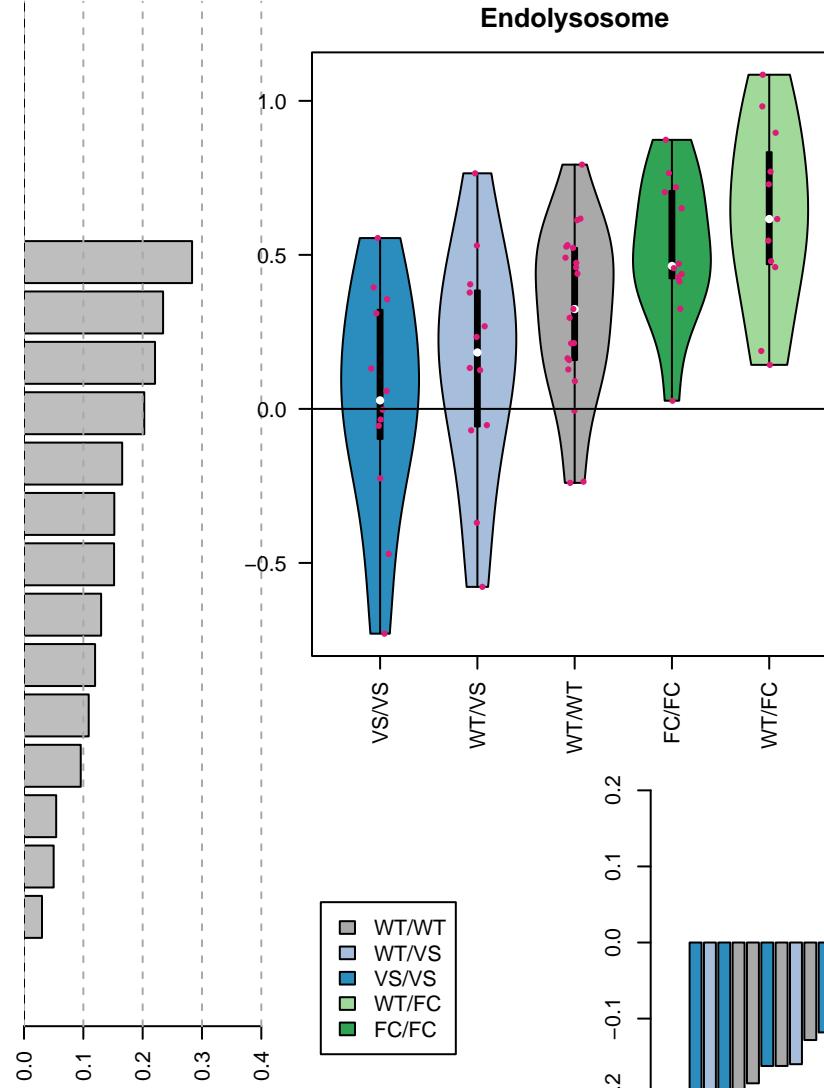
$R^2 = -0.036$

$R^2 = -0.036$

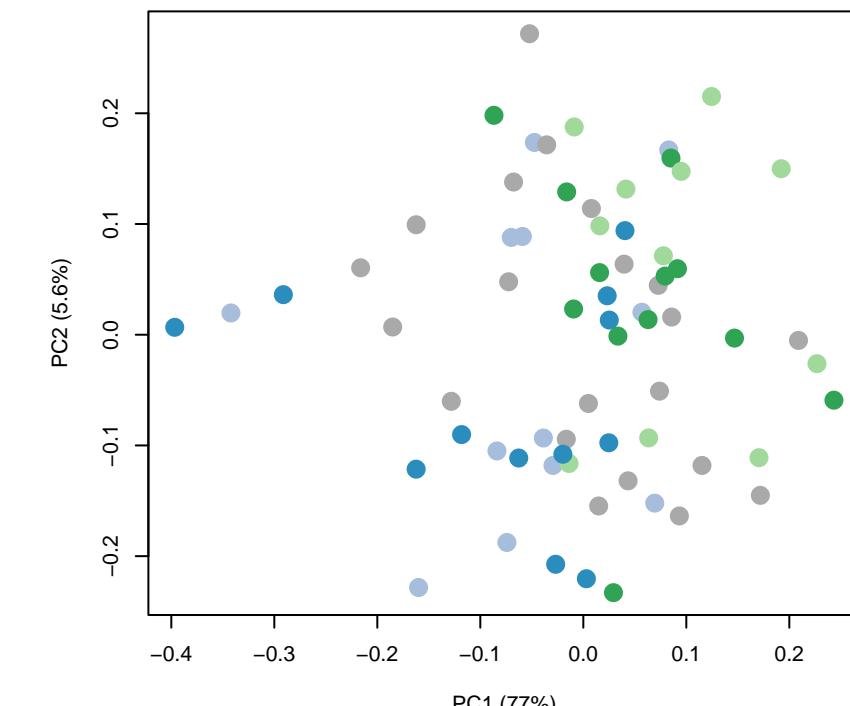
Longevity regulating pathway



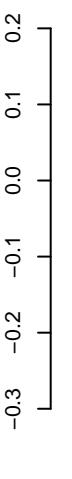
Endlysosome



Decomposition

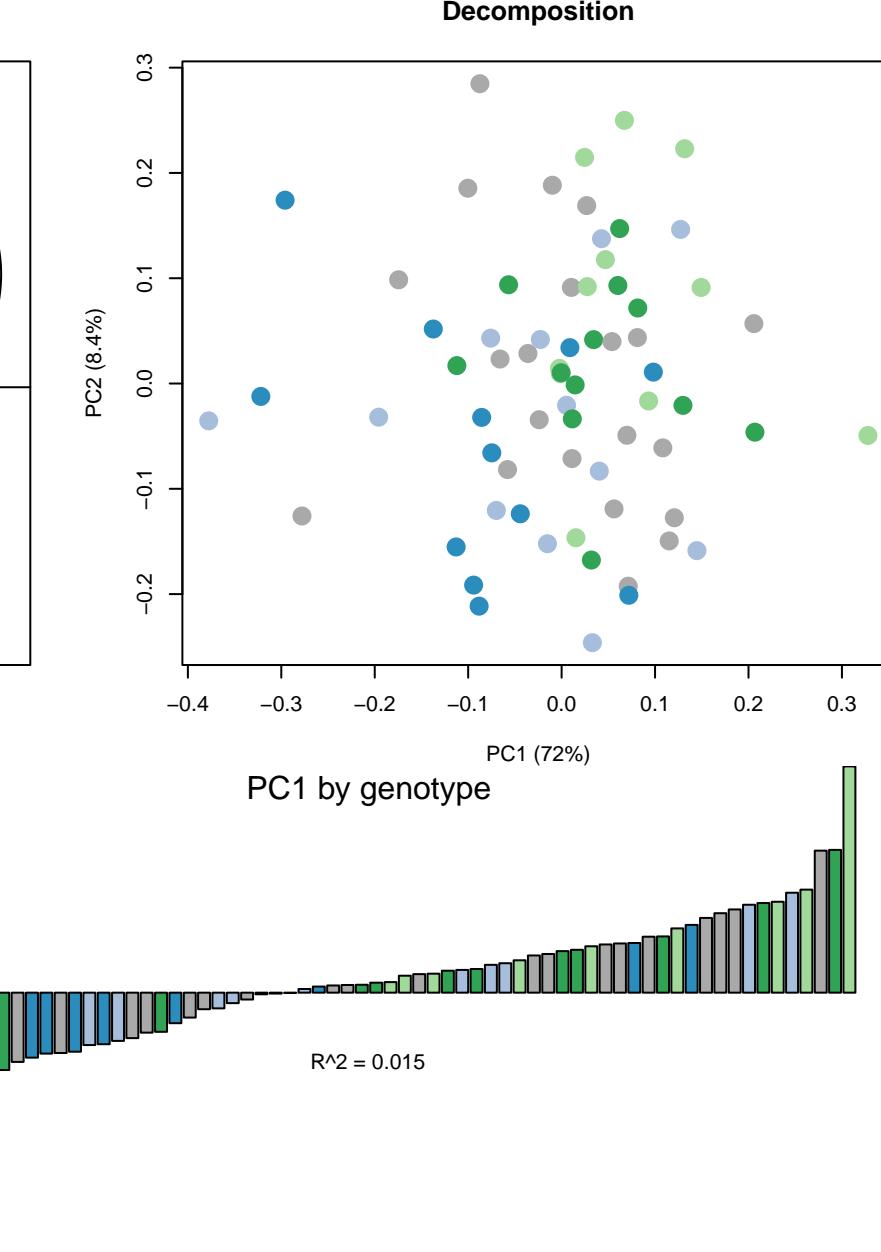
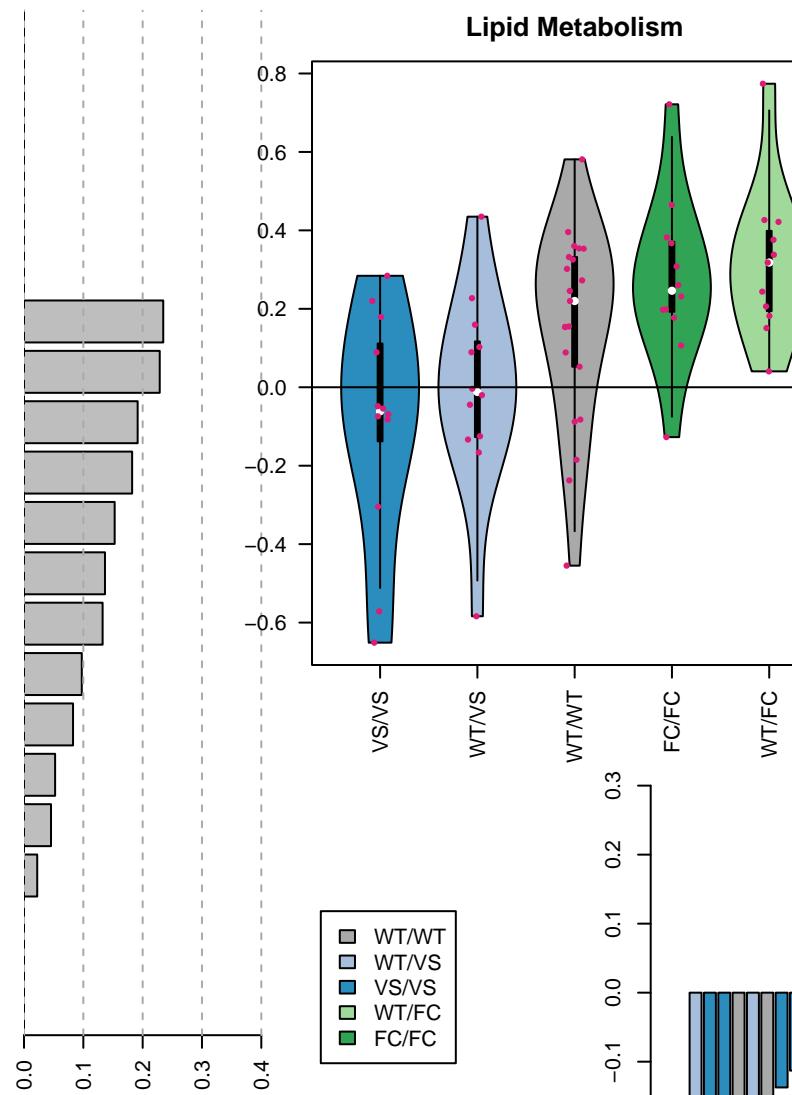
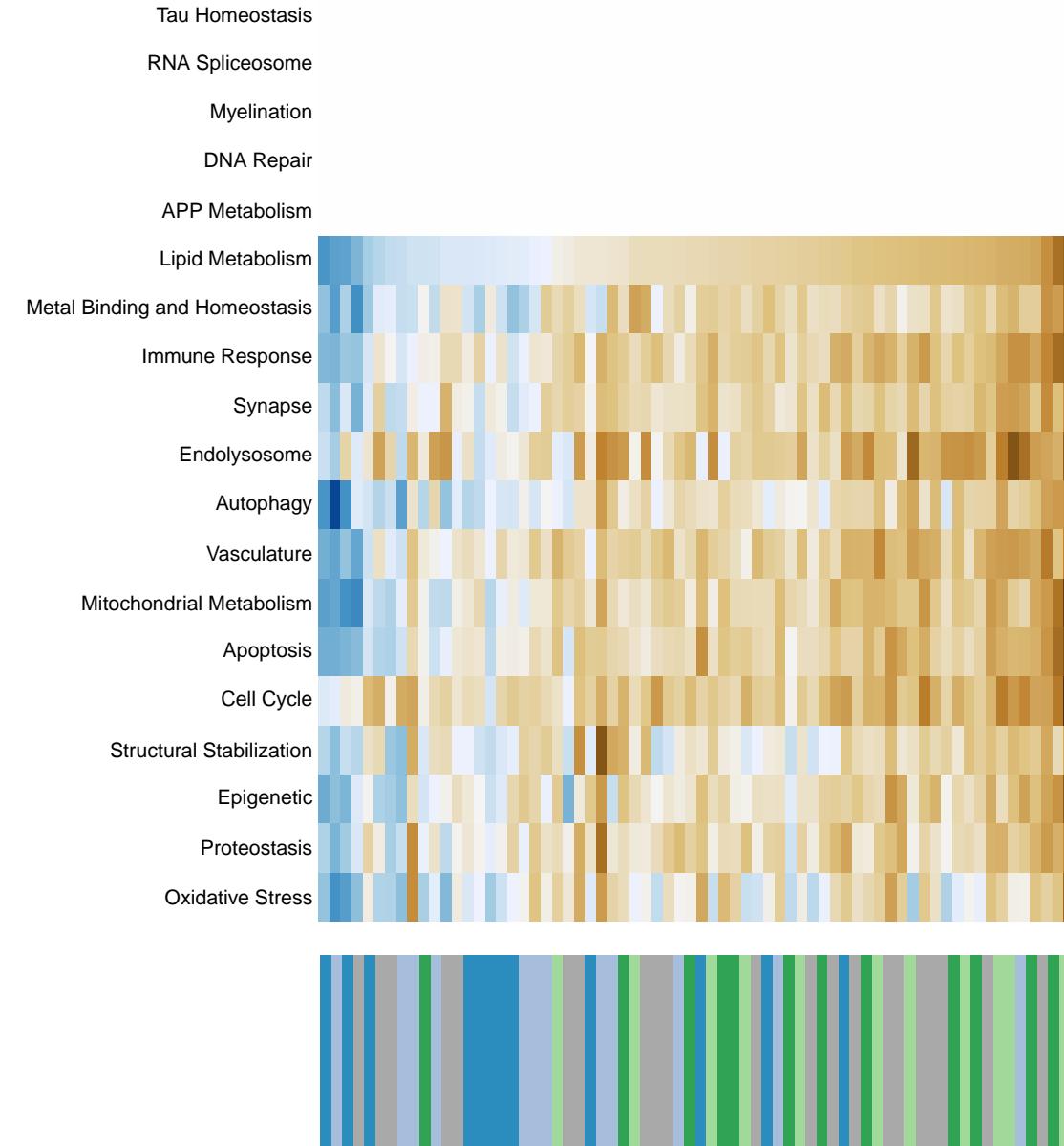


PC1 by genotype

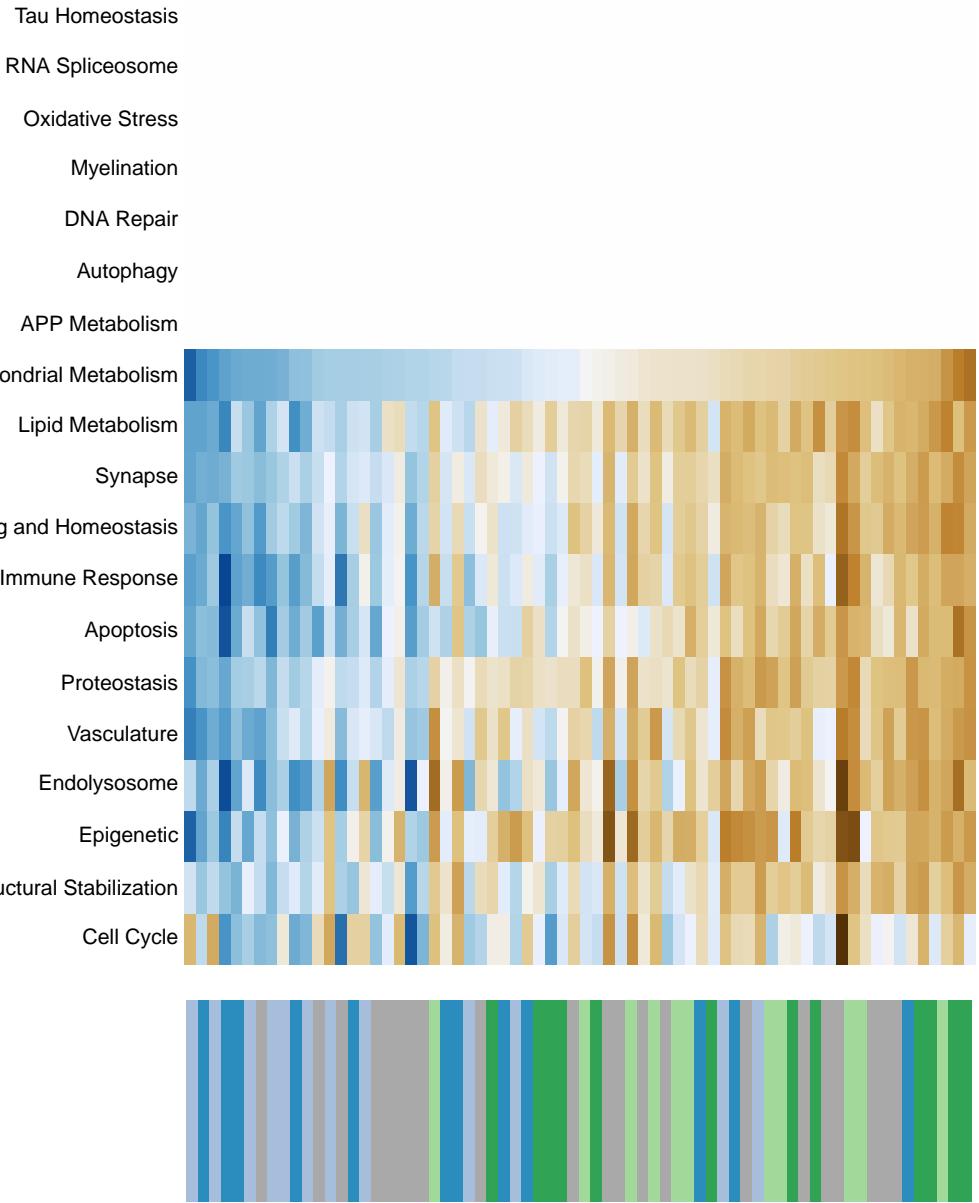


R² = 0.024

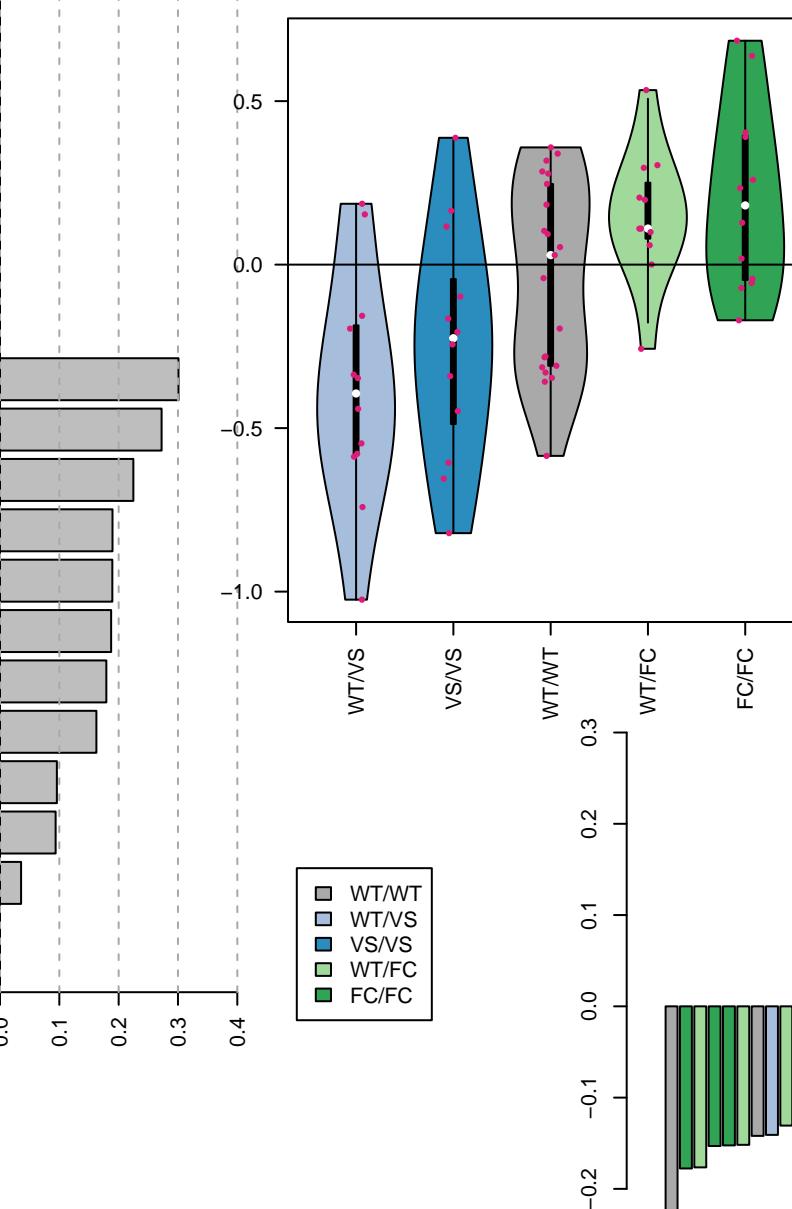
Longevity regulating pathway – multiple species



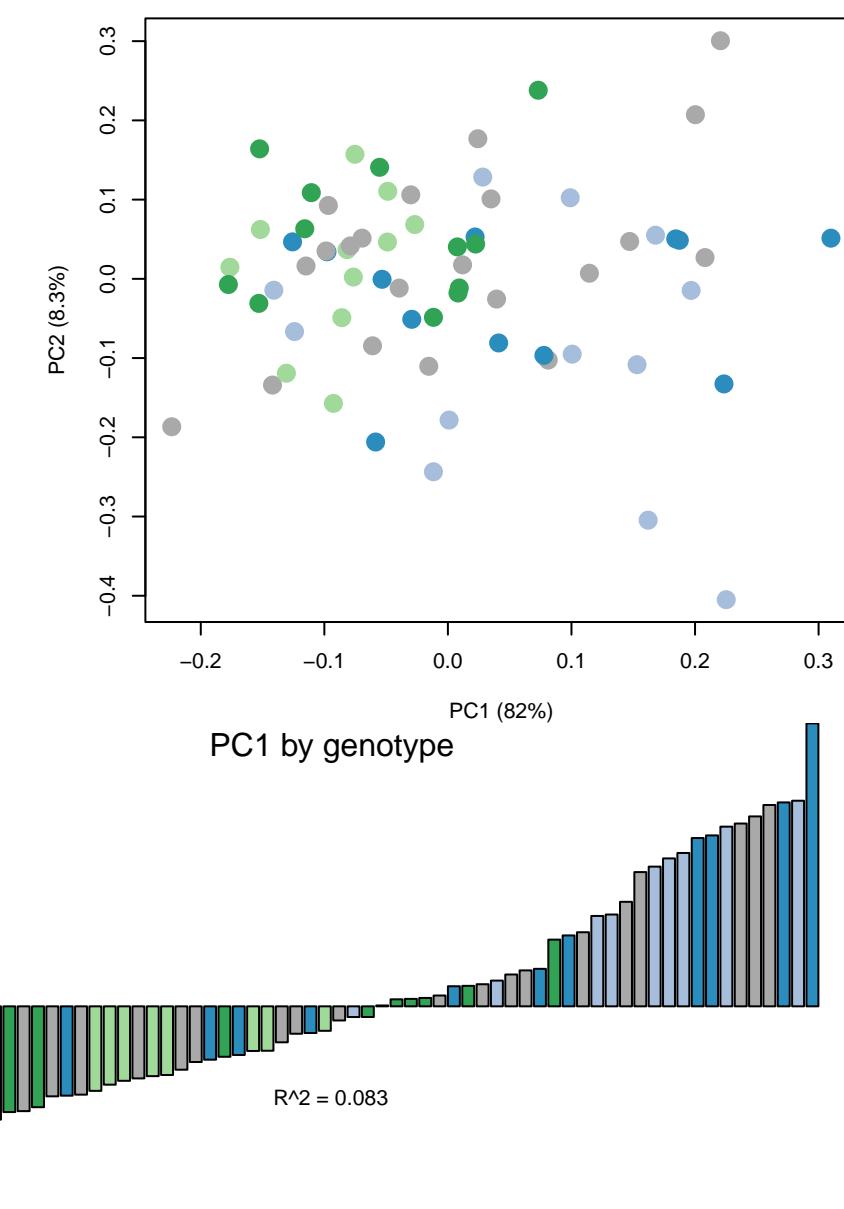
Circadian entrainment



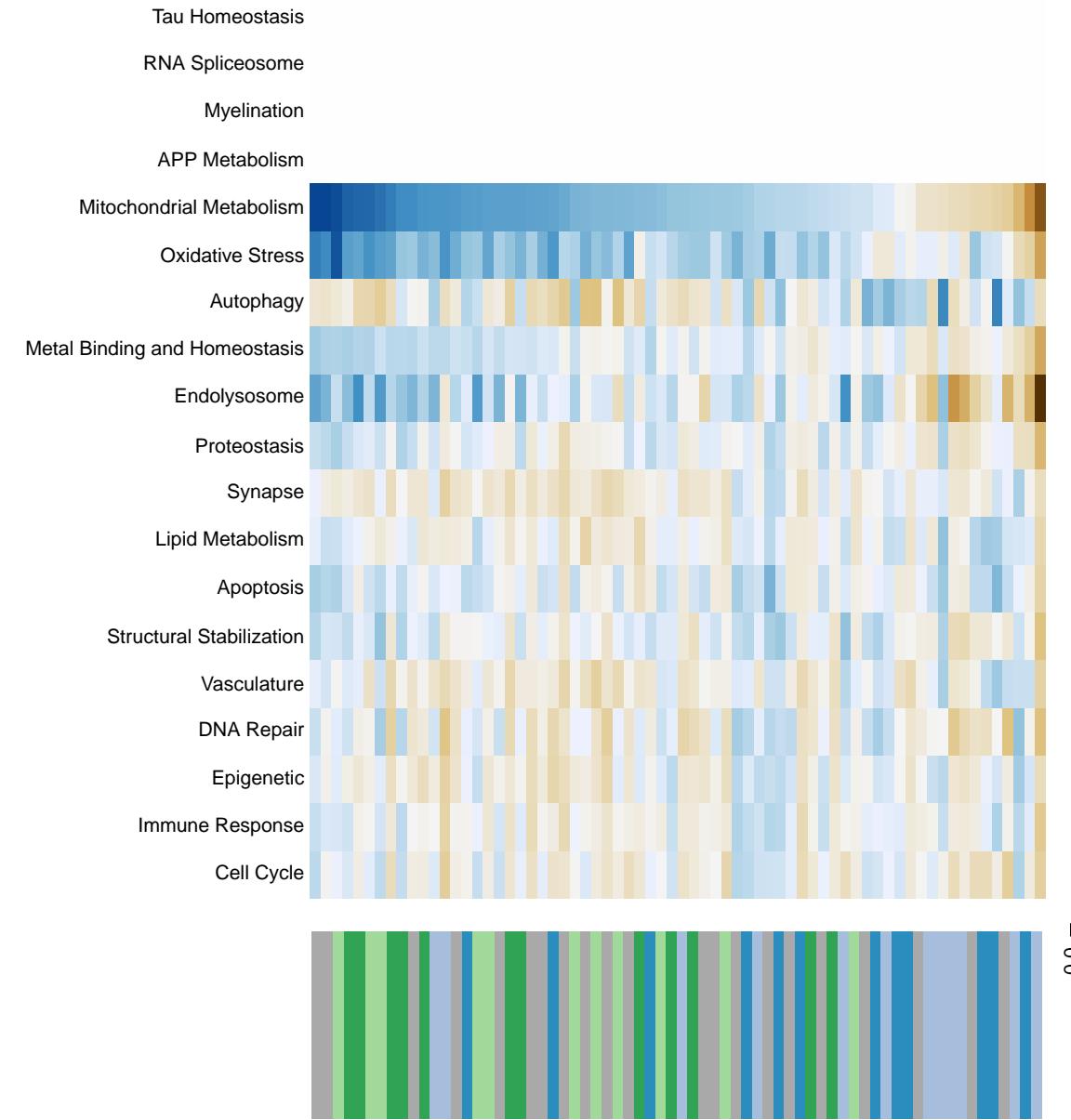
Mitochondrial Metabolism



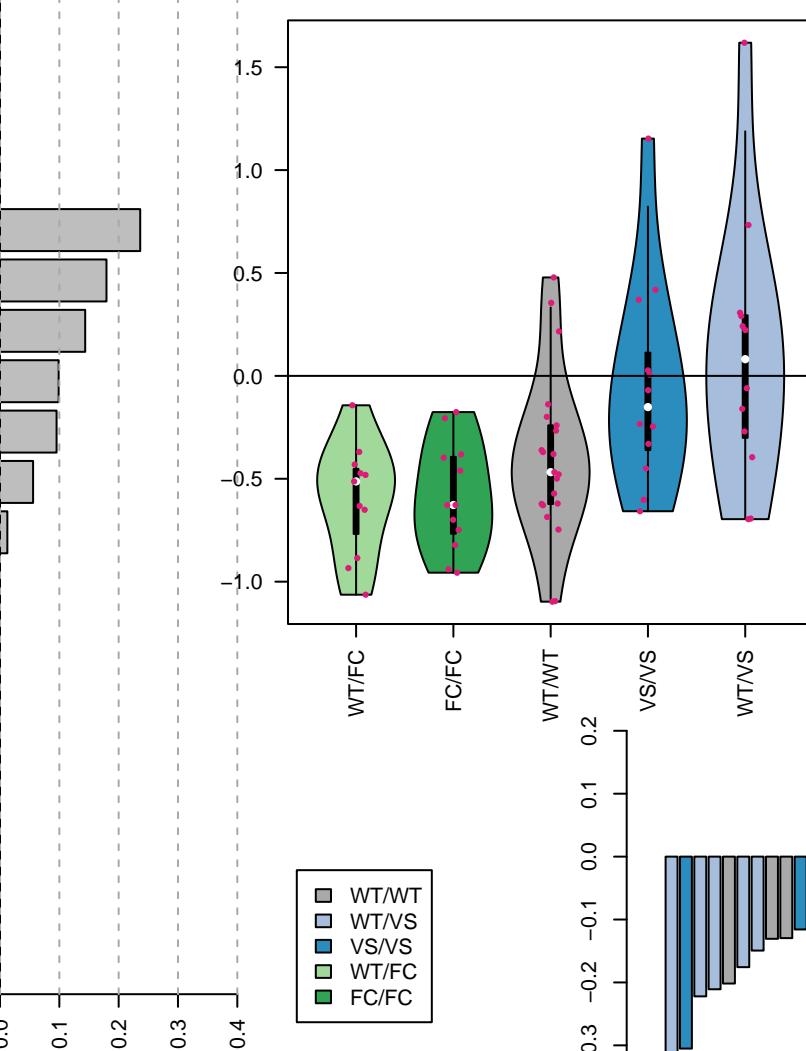
Decomposition



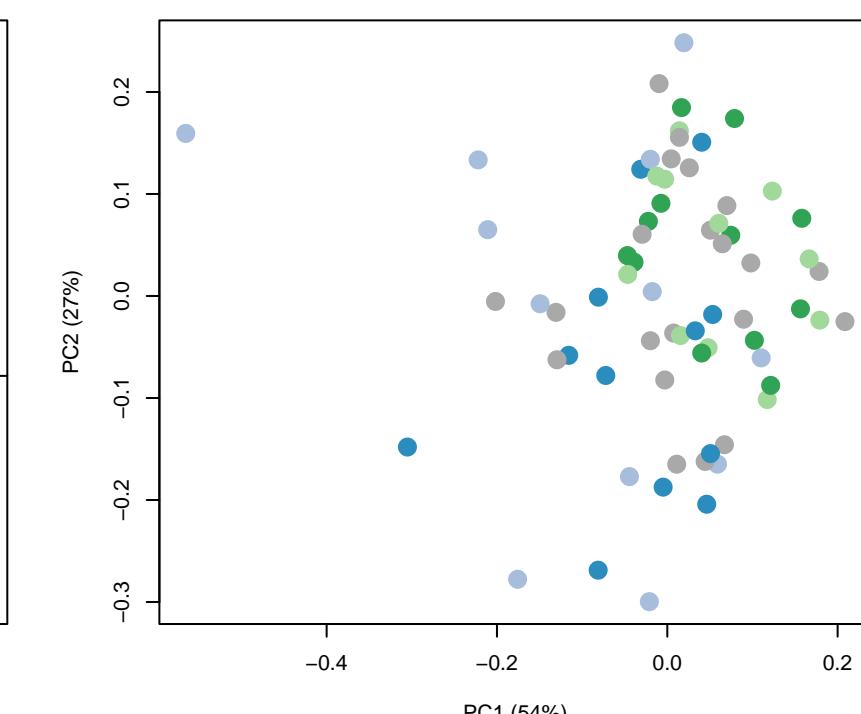
Thermogenesis



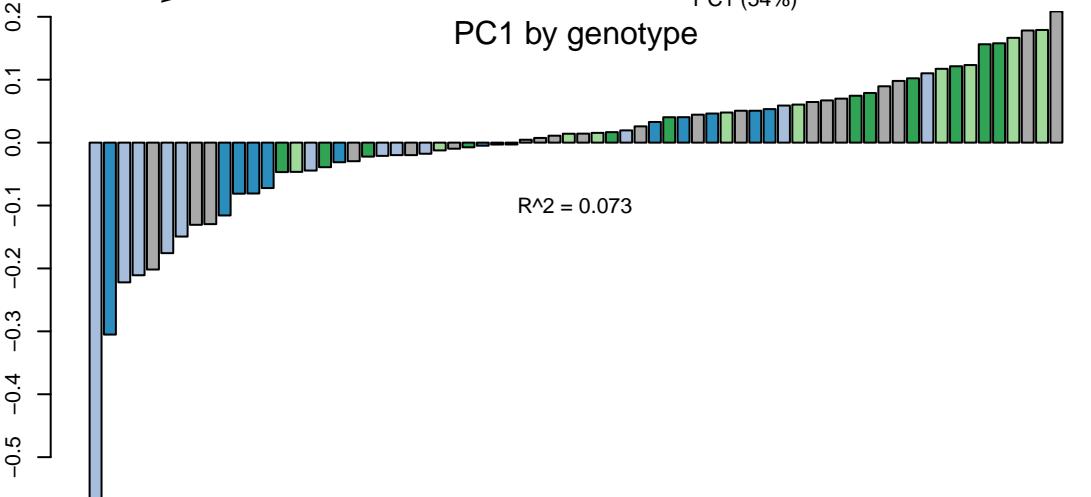
Mitochondrial Metabolism



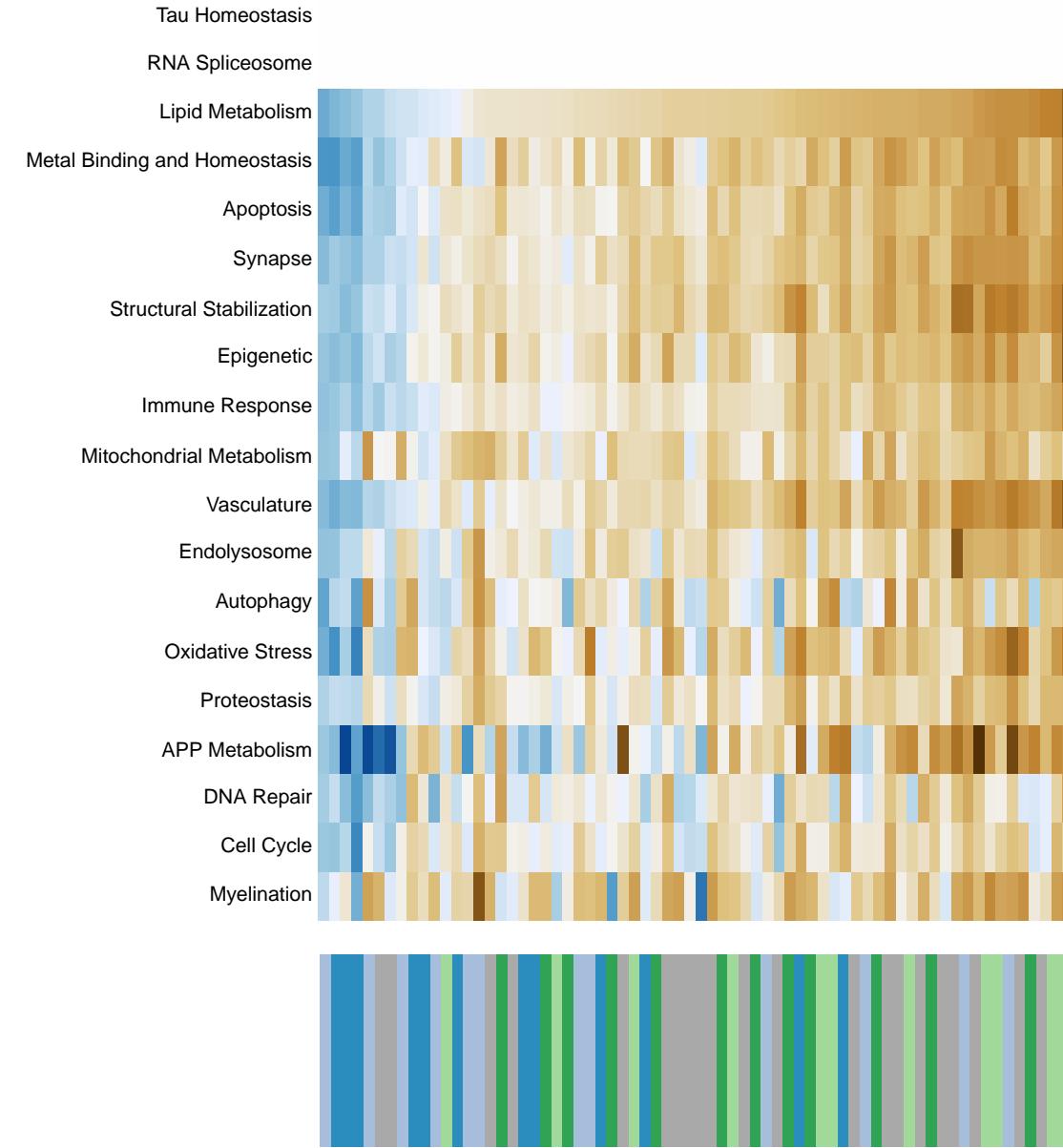
Decomposition



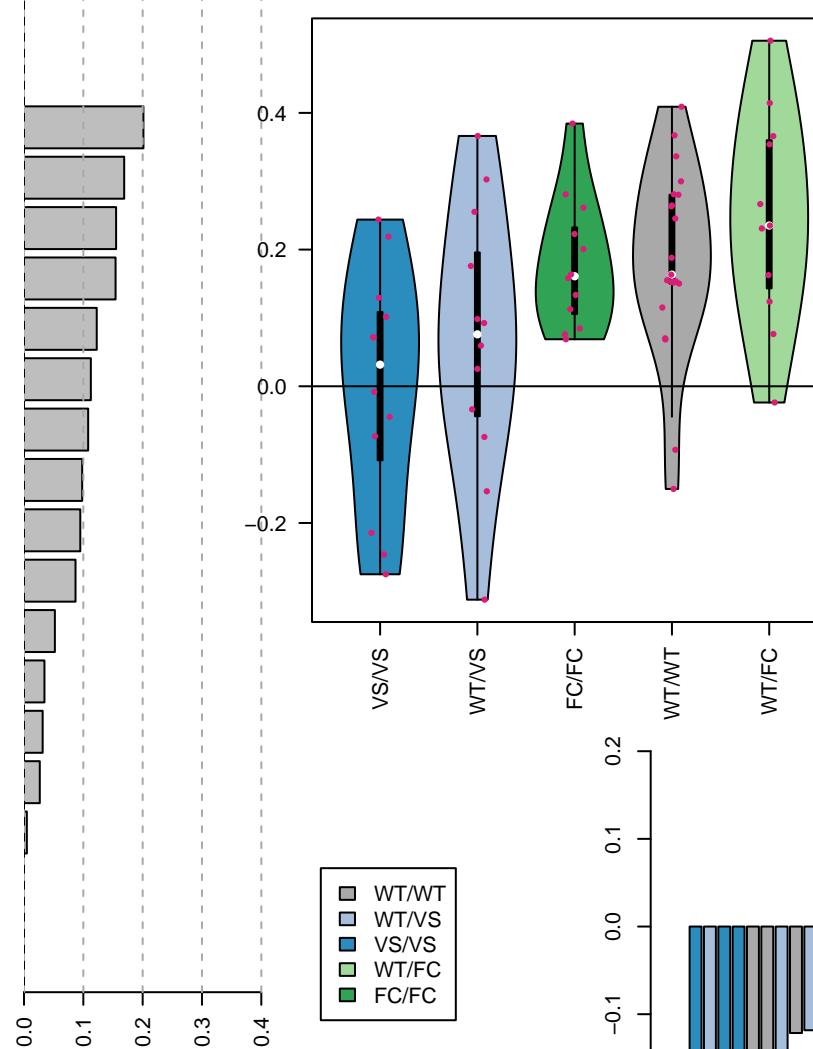
PC1 by genotype



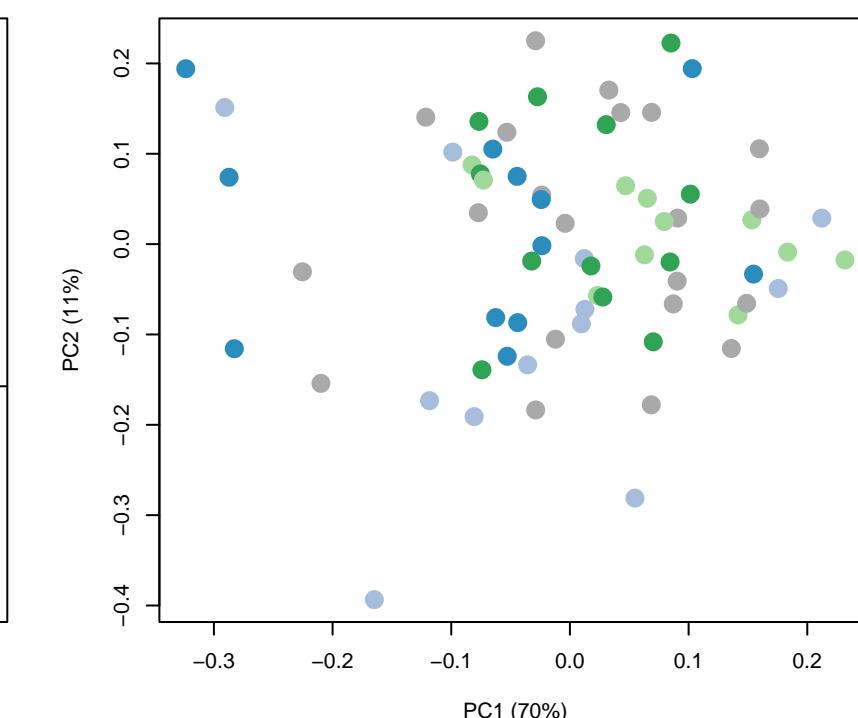
Pathways in cancer



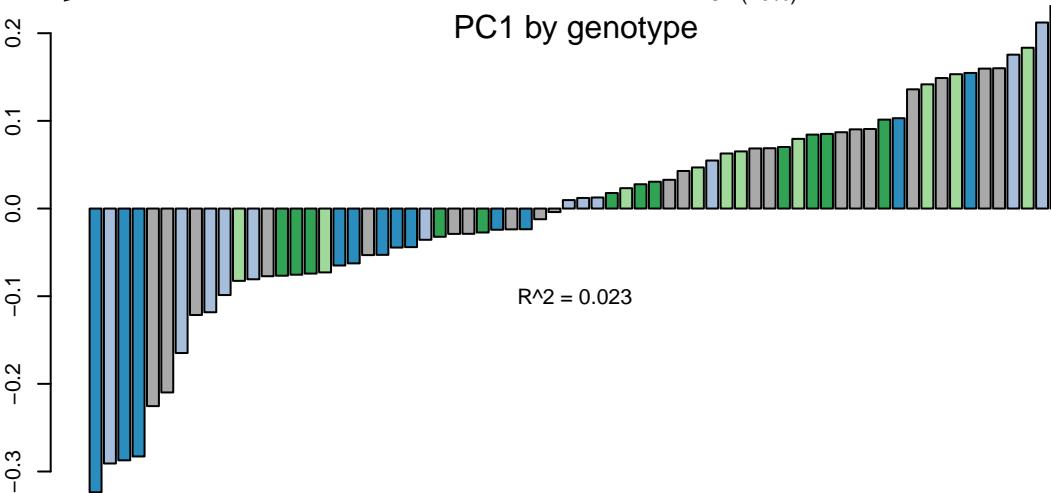
Lipid Metabolism



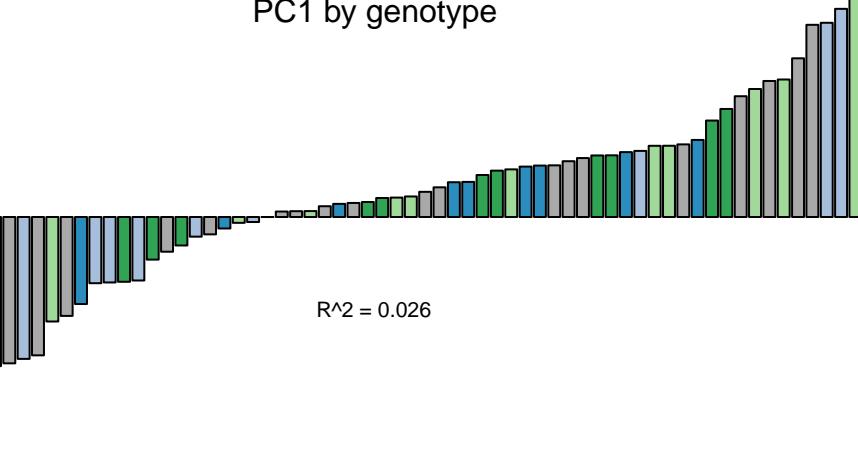
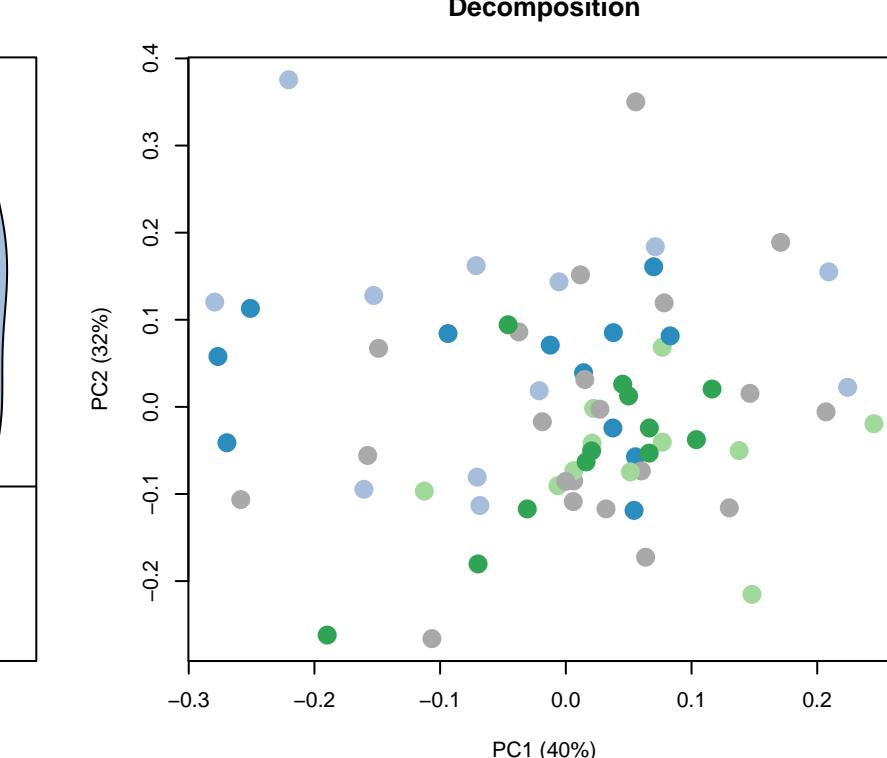
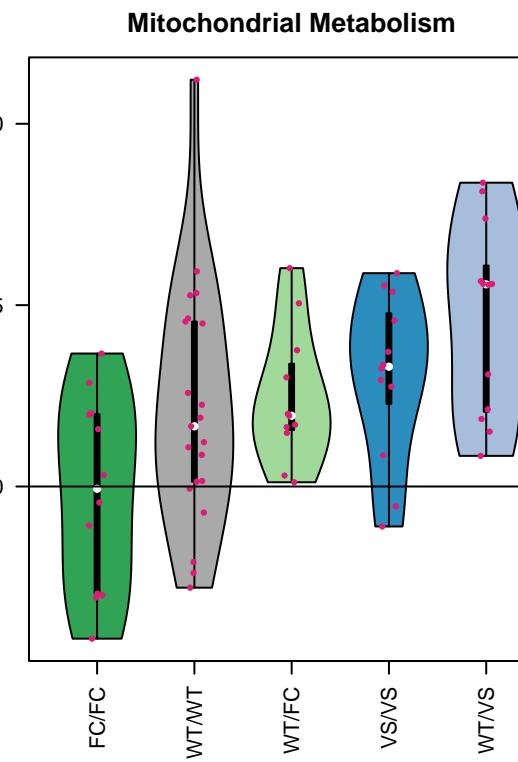
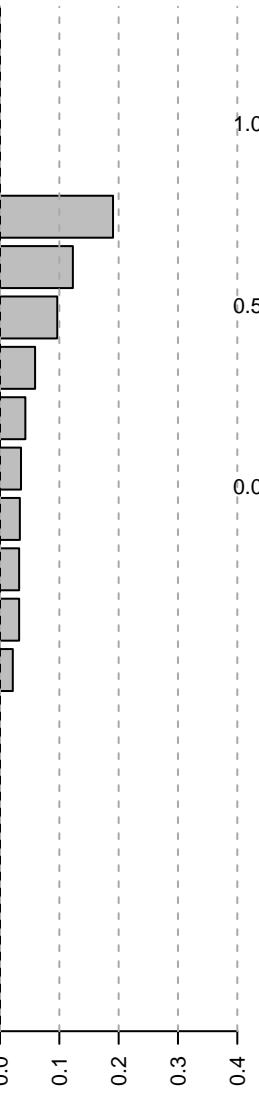
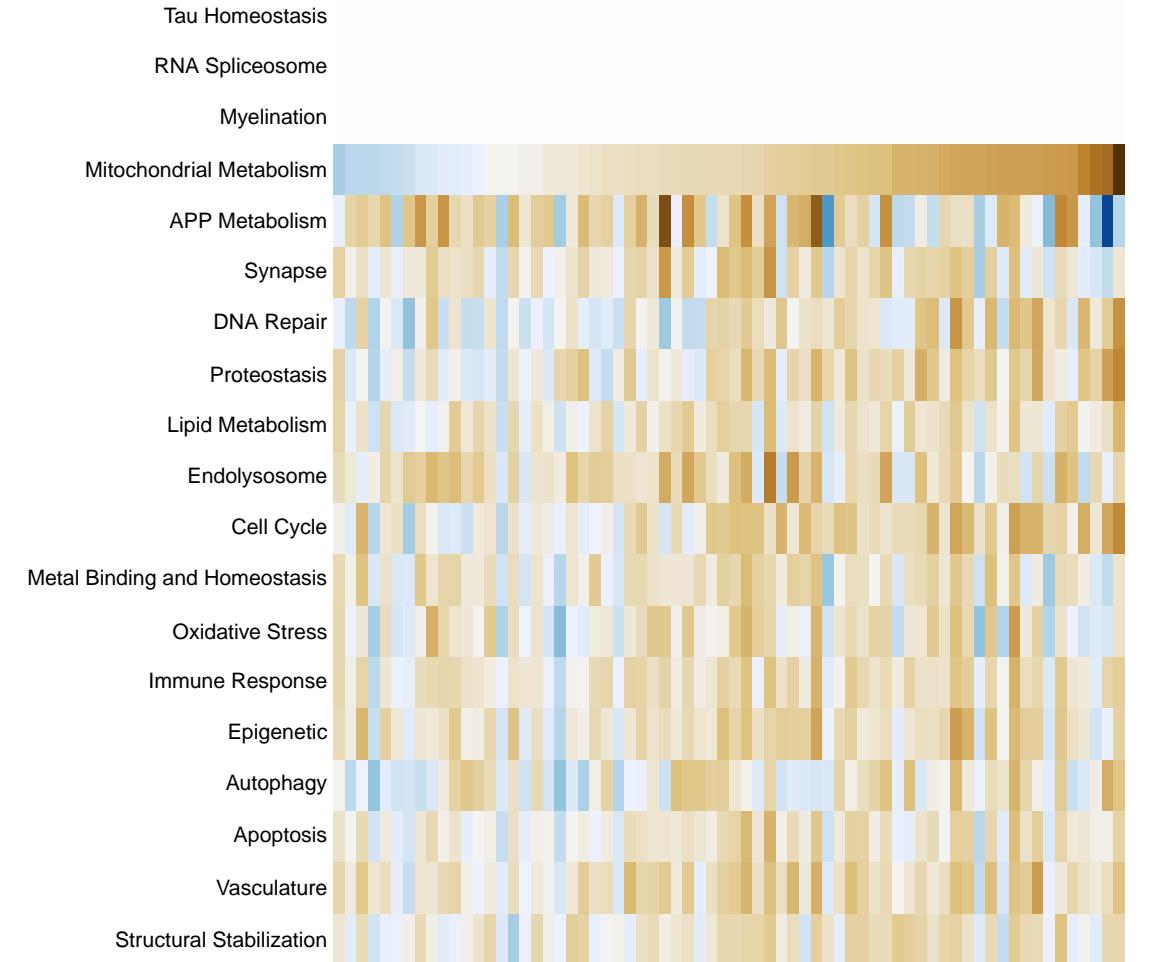
Decomposition



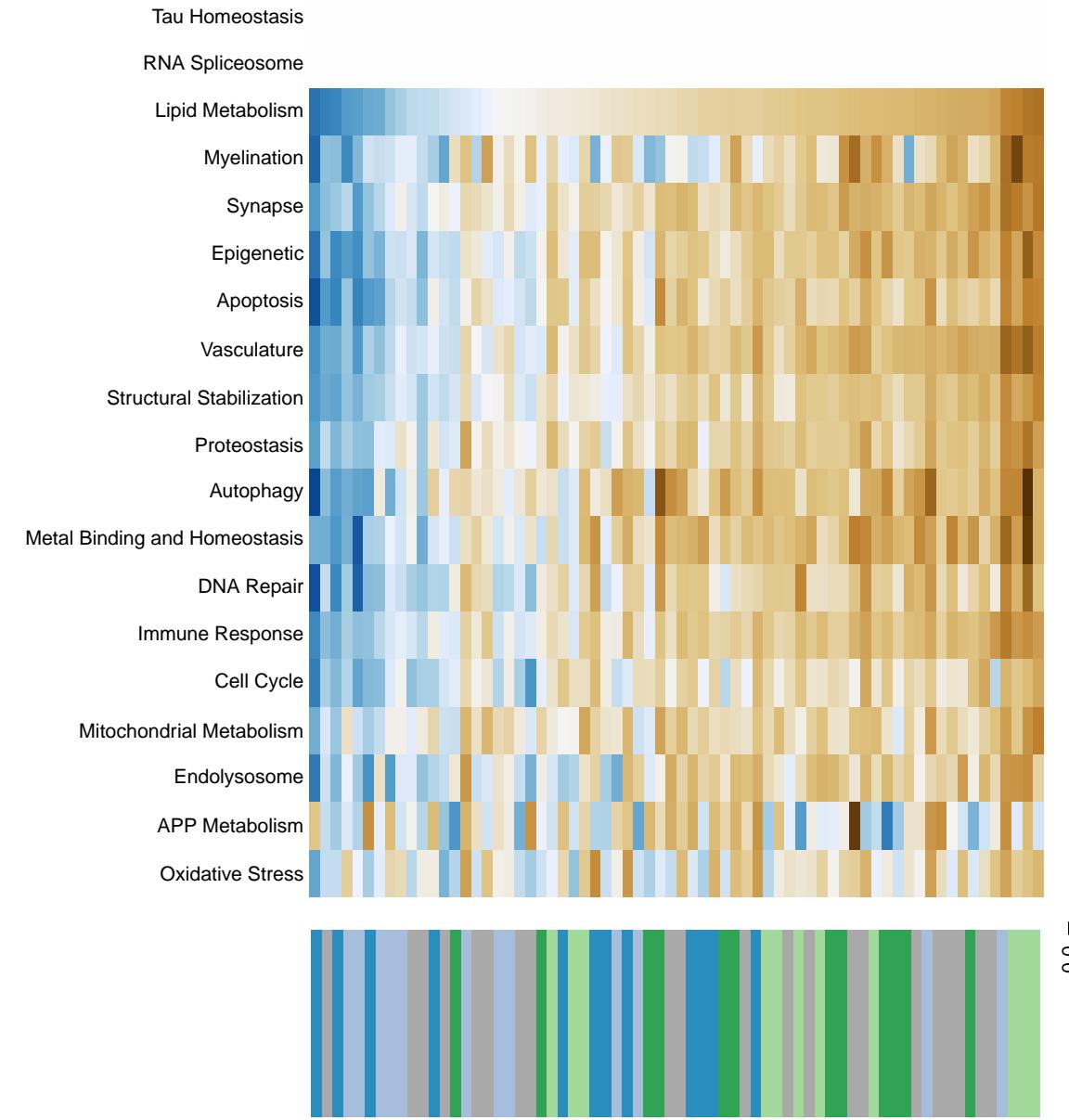
PC1 by genotype



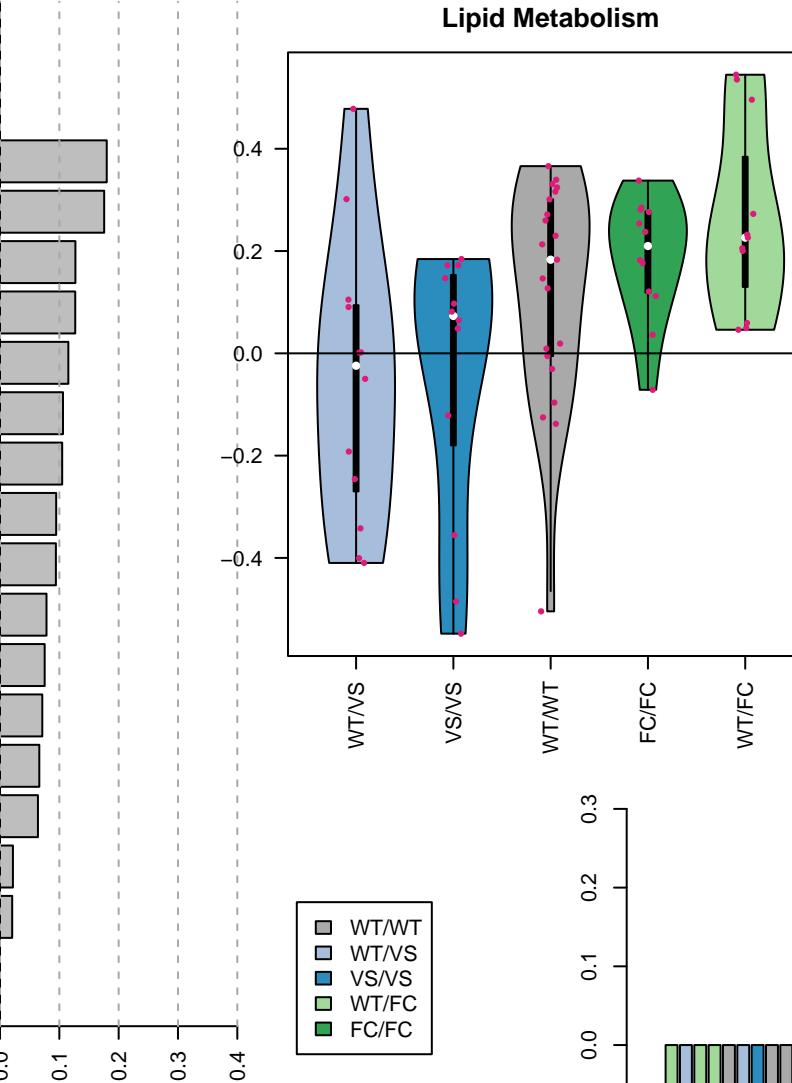
Transcriptional misregulation in cancer



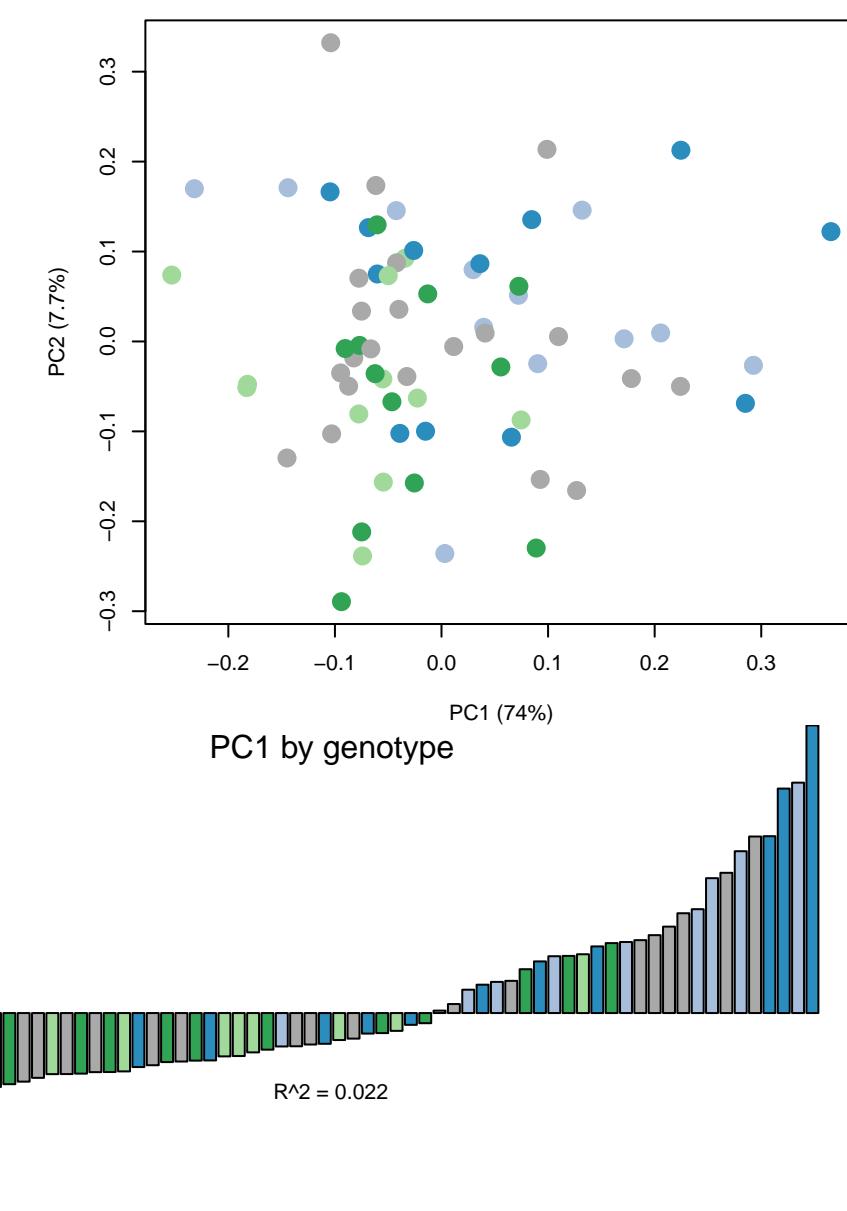
MicroRNAs in cancer



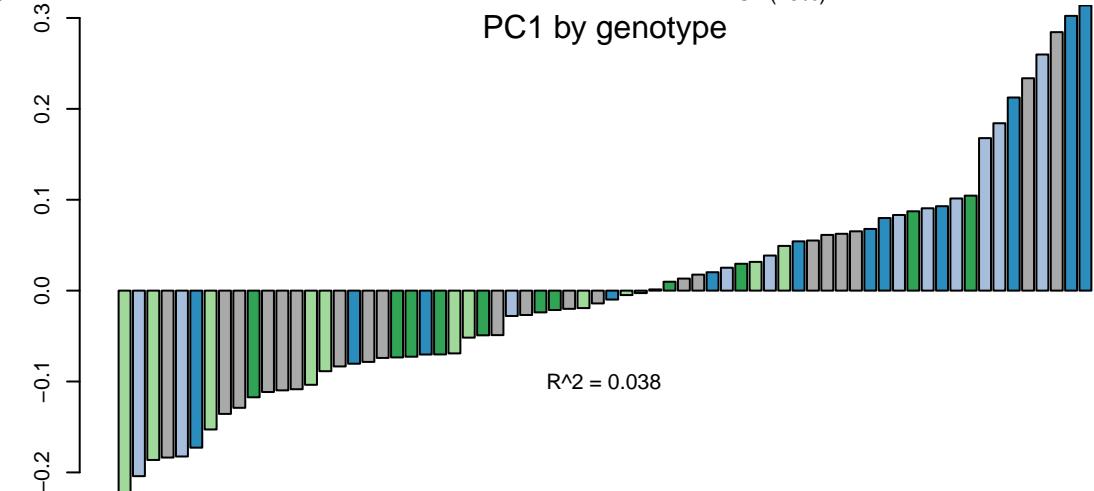
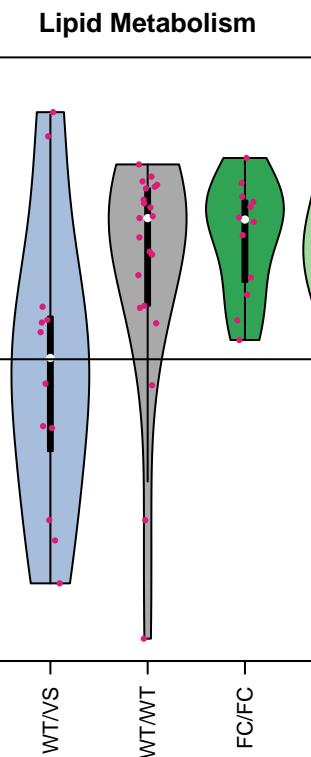
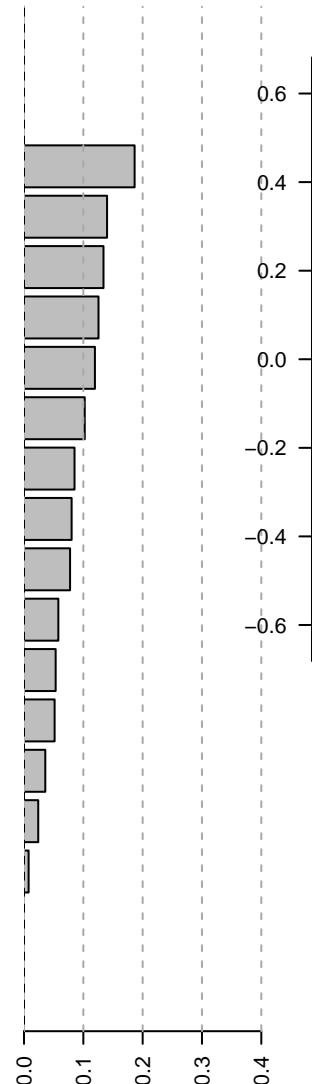
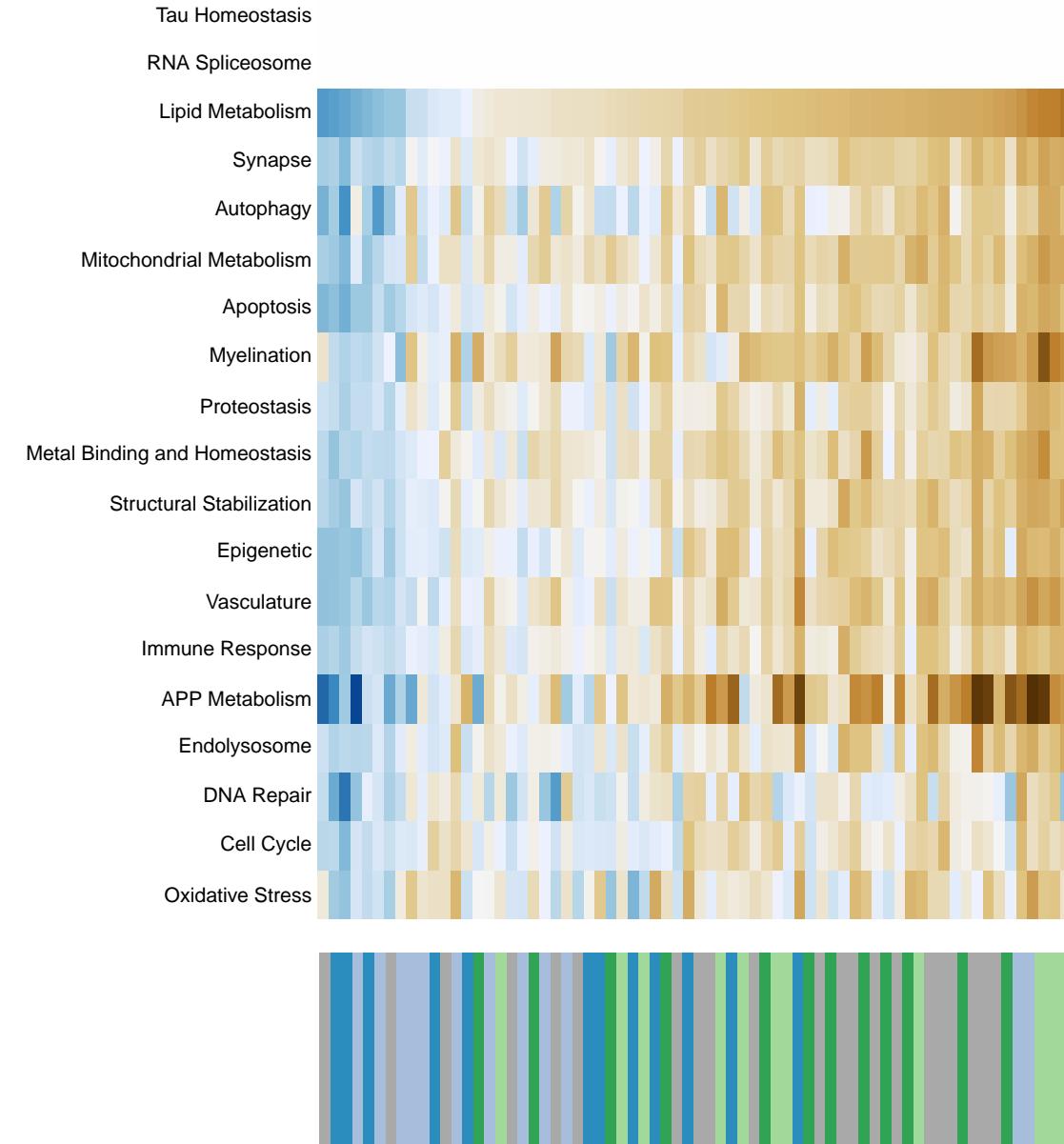
Lipid Metabolism



Decomposition

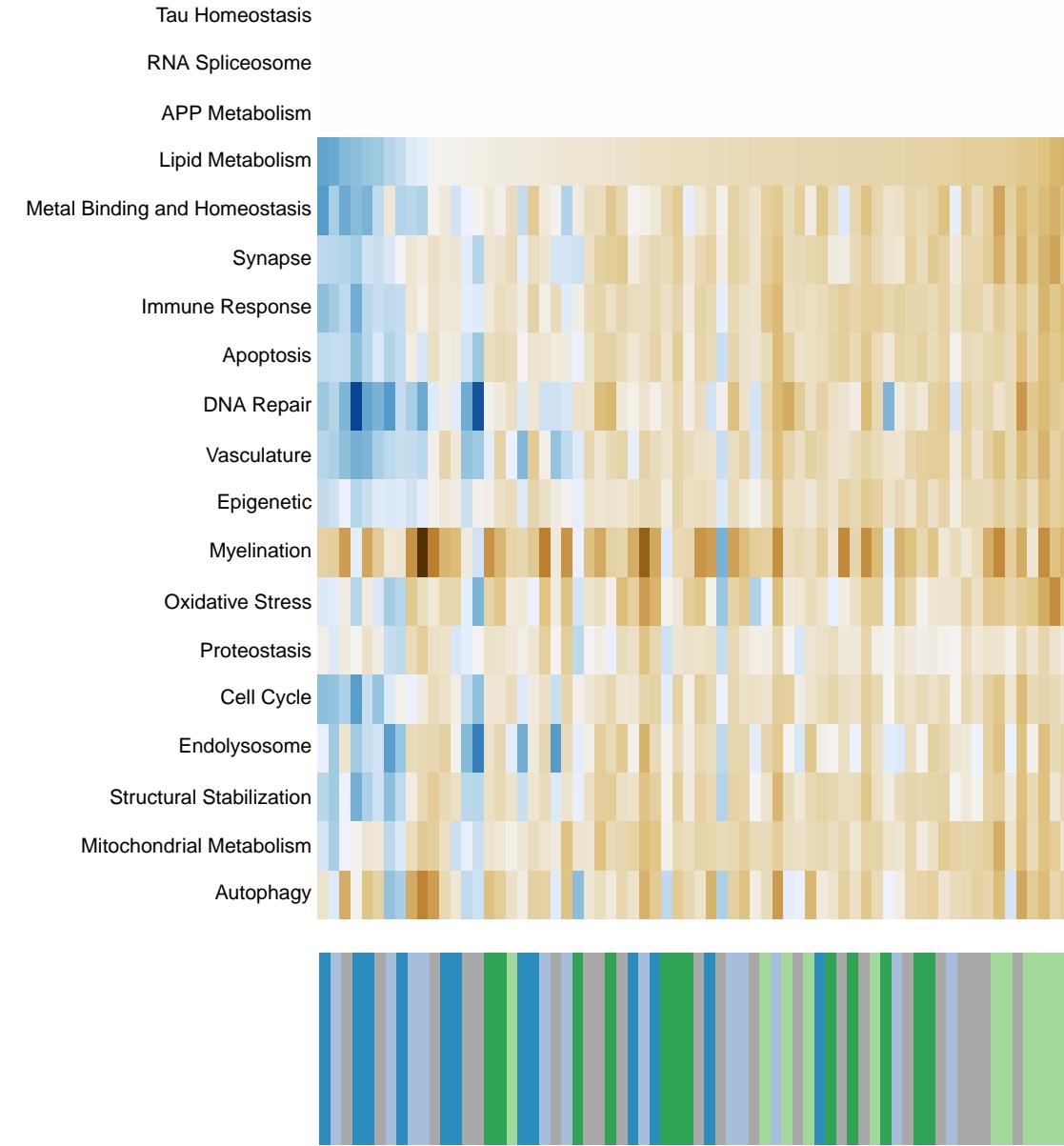


Proteoglycans in cancer

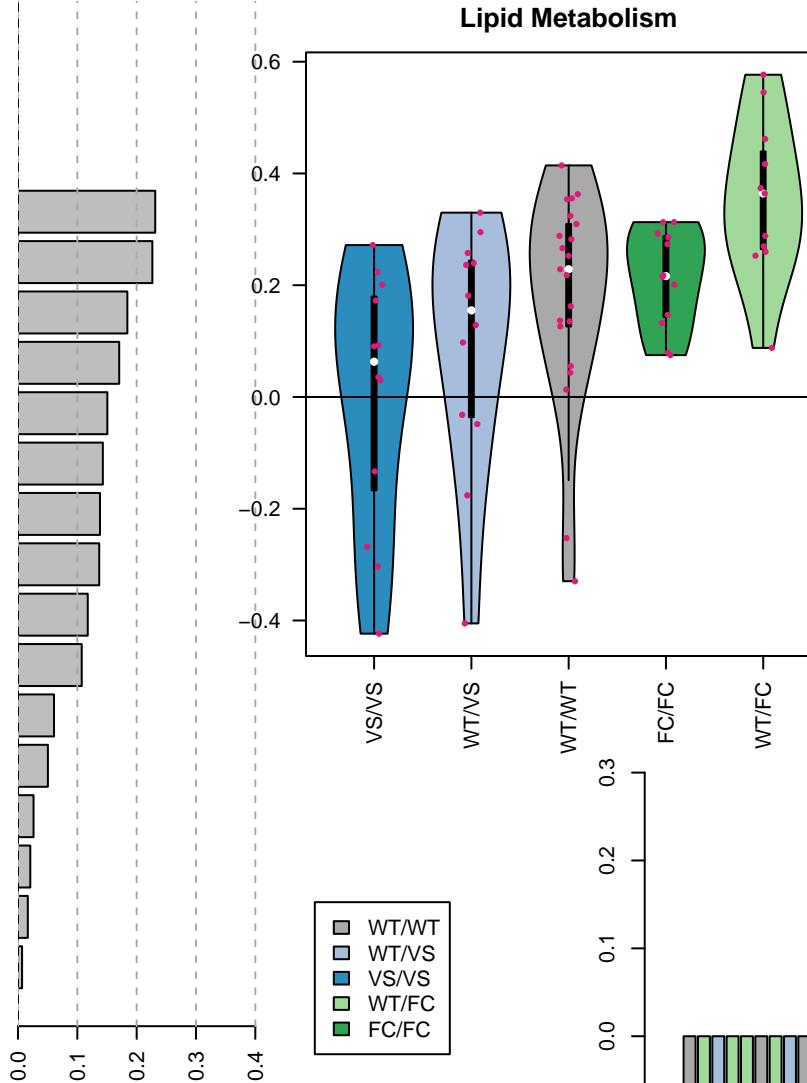


Decomposition

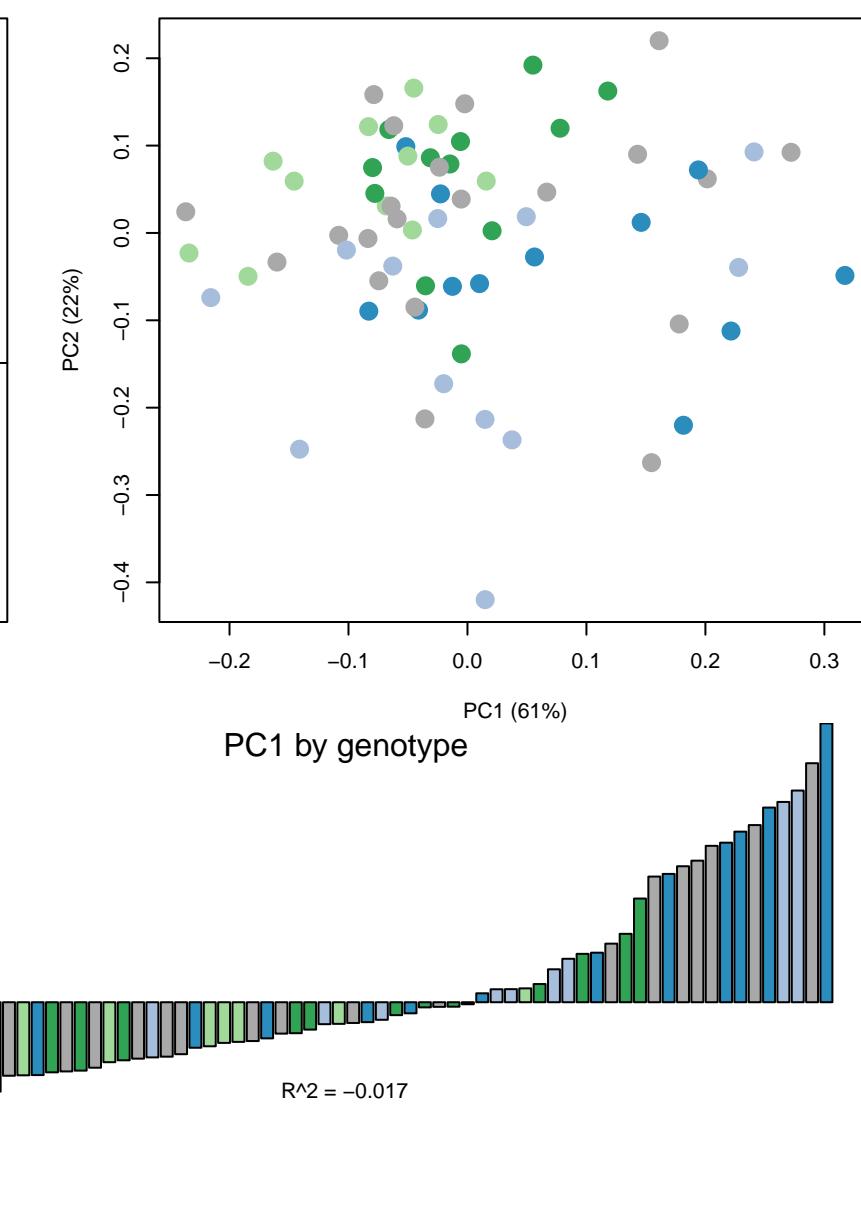
Chemical carcinogenesis – receptor activation



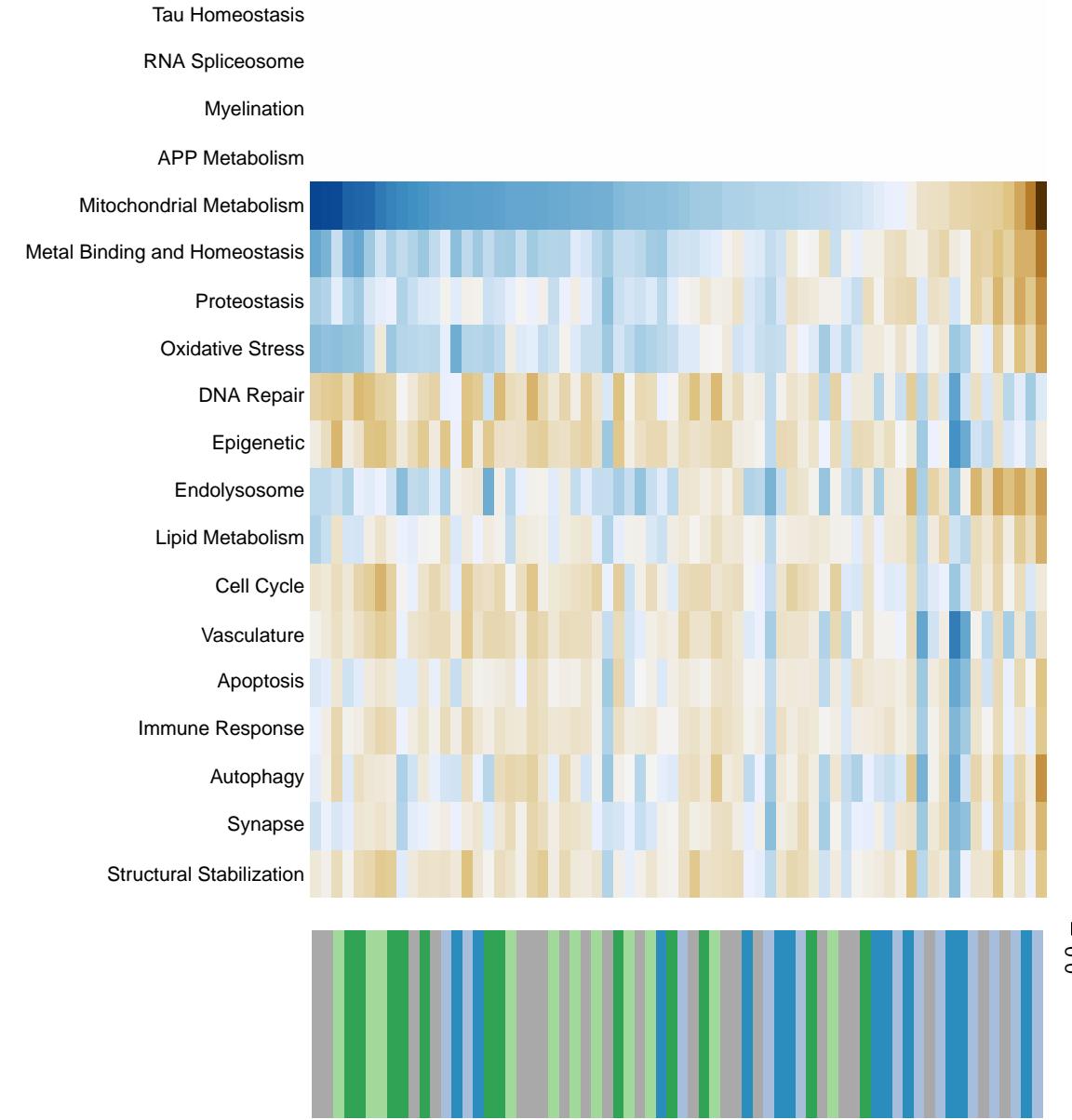
Lipid Metabolism



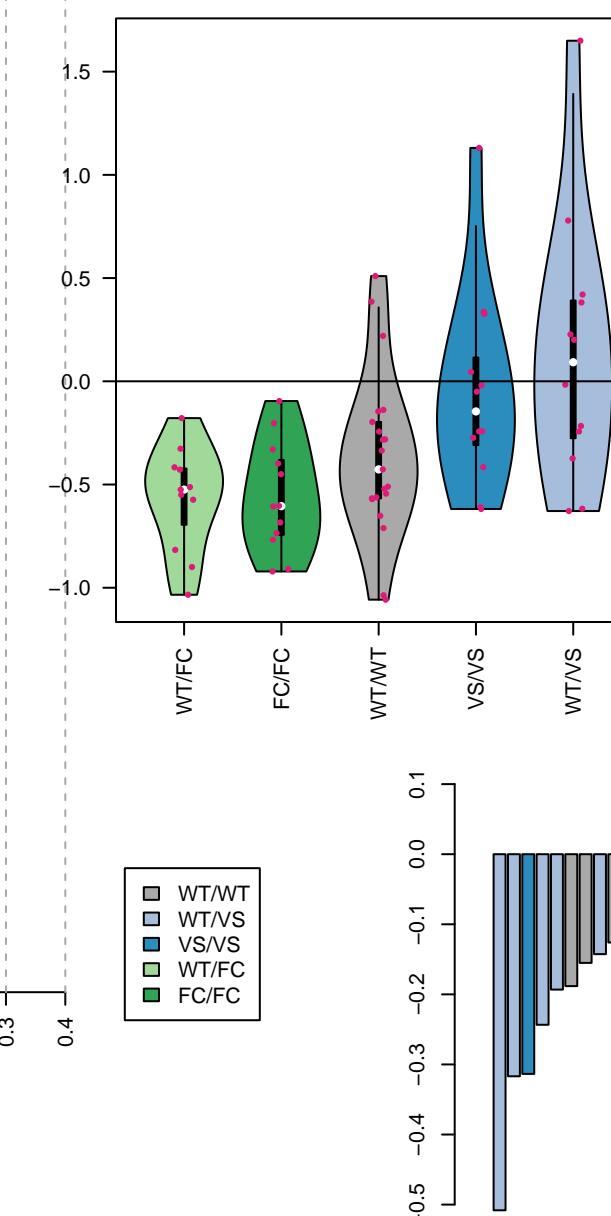
Decomposition



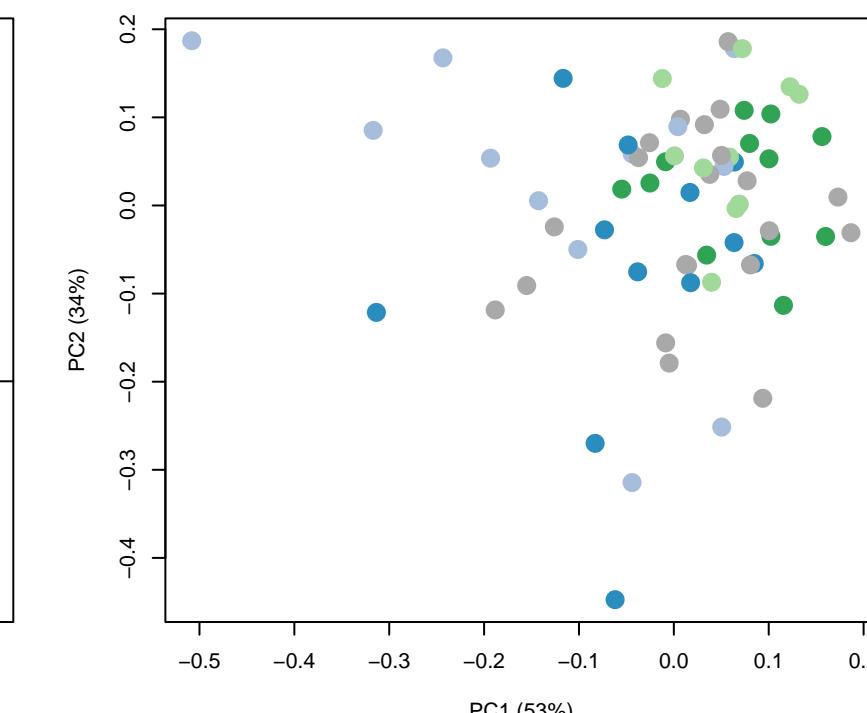
Chemical carcinogenesis – reactive oxygen species



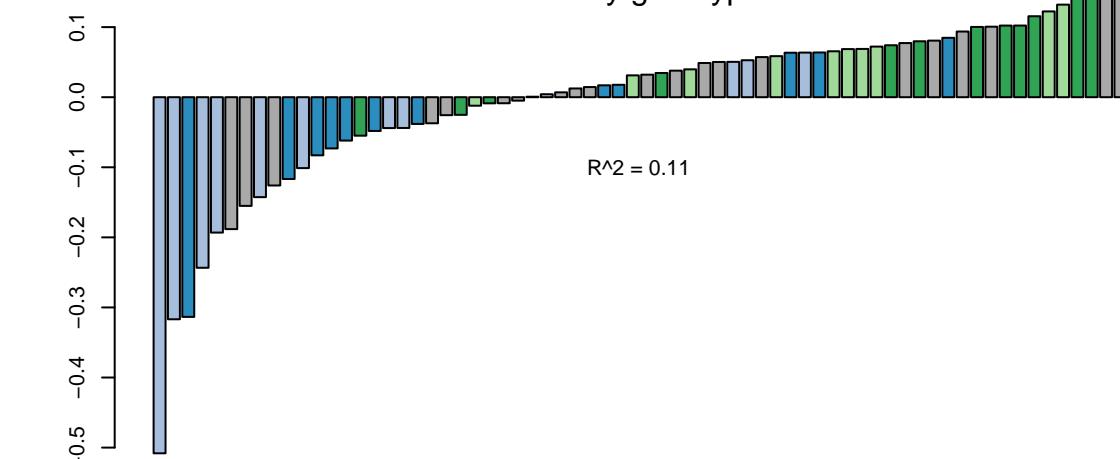
Mitochondrial Metabolism



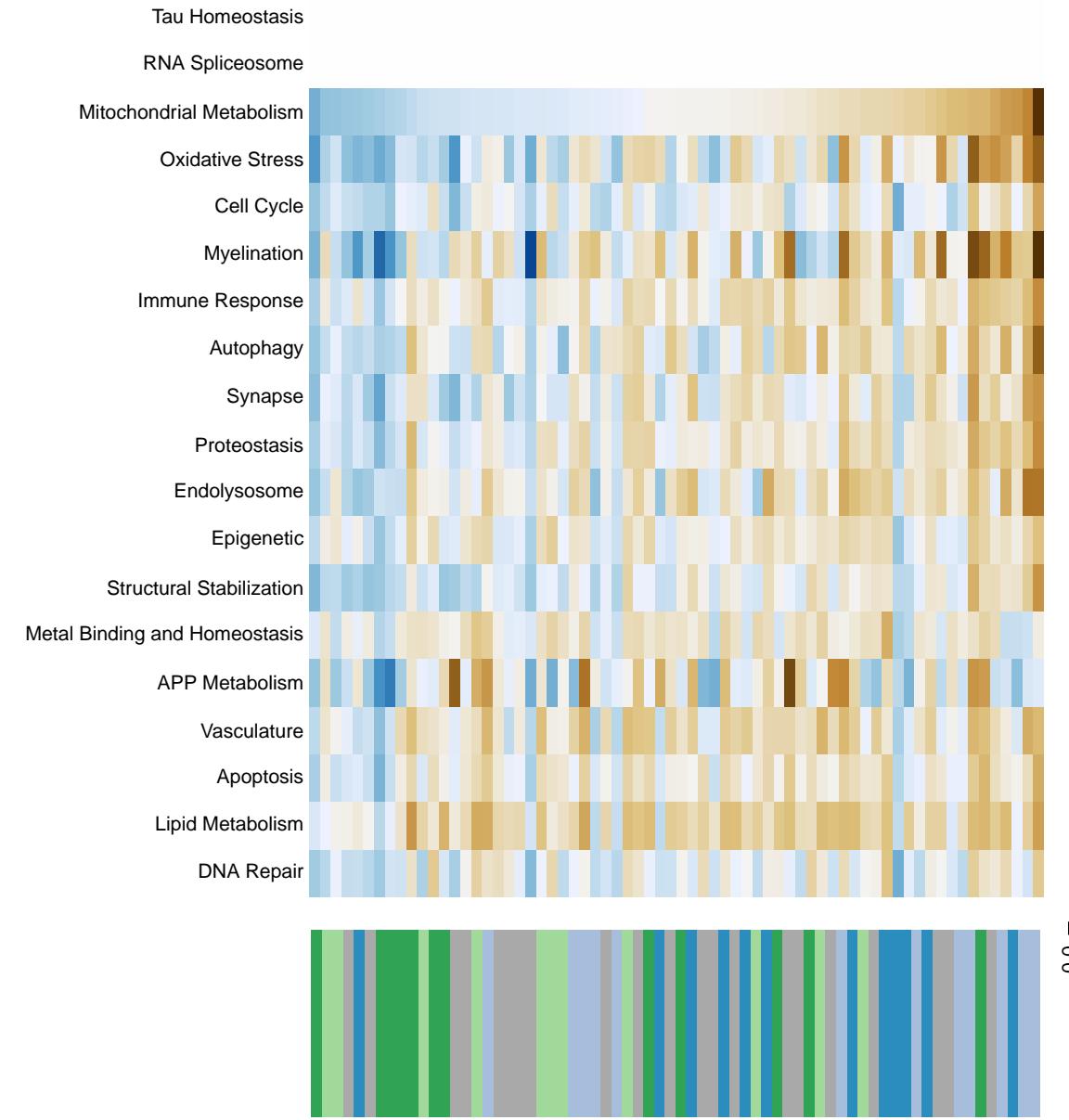
Decomposition



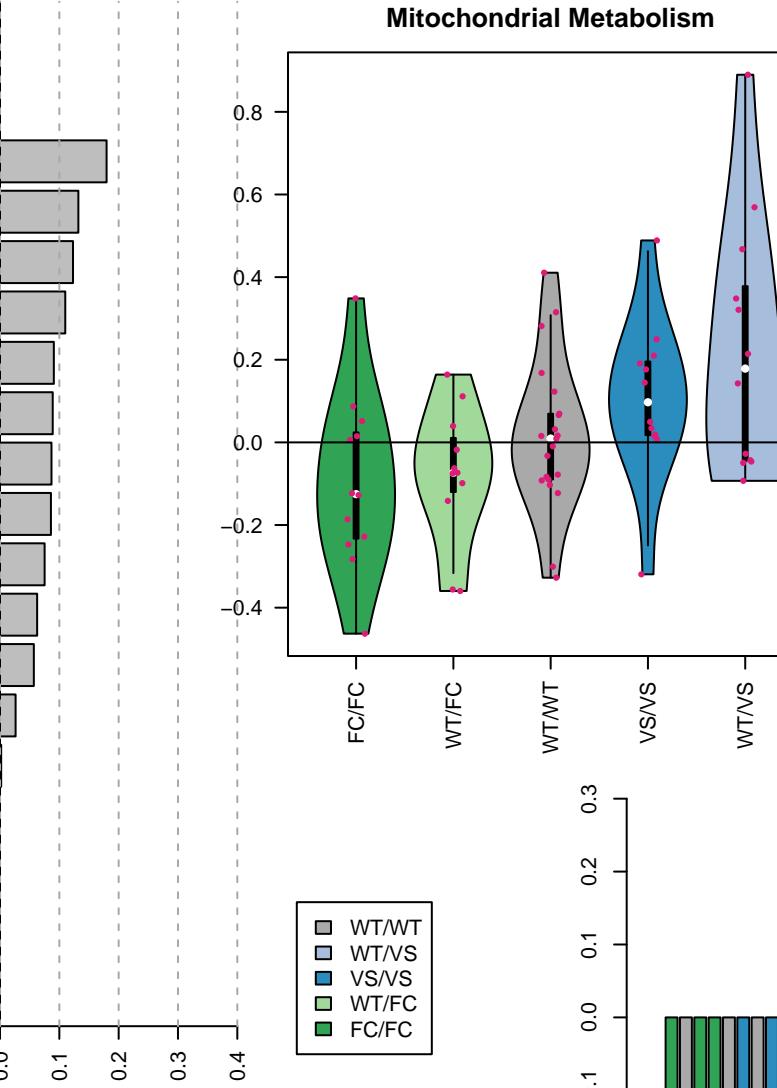
PC1 by genotype



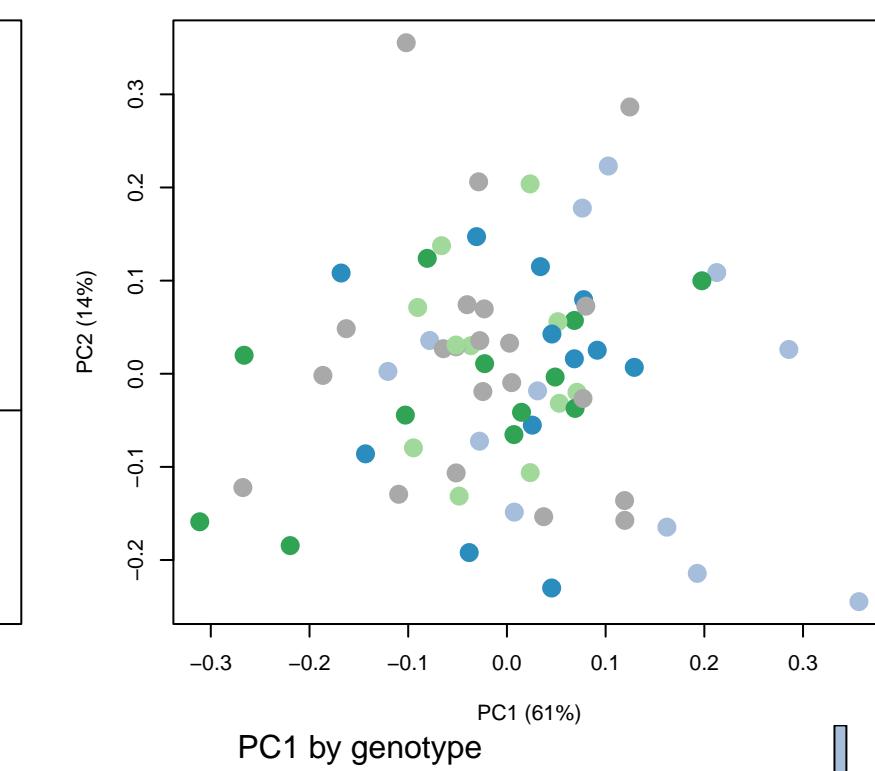
Viral carcinogenesis



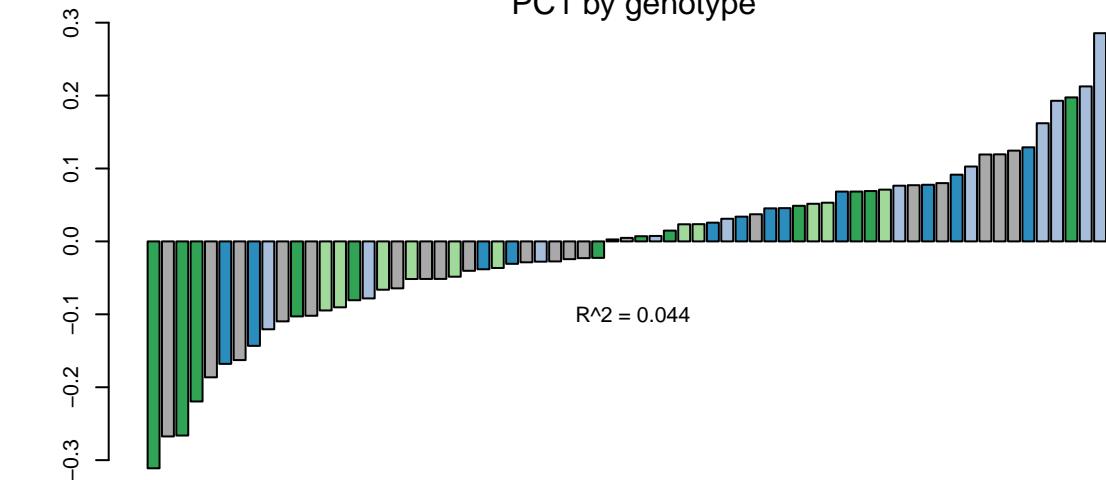
Mitochondrial Metabolism



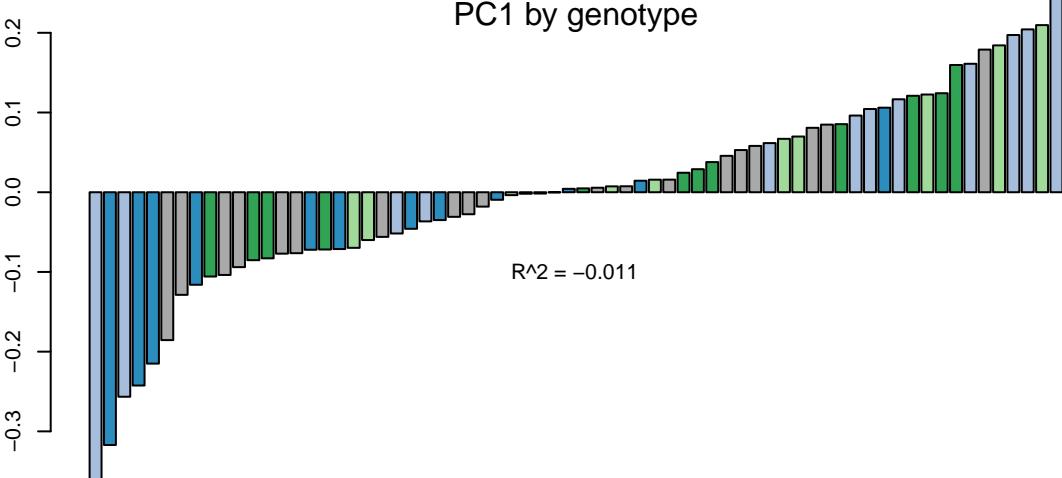
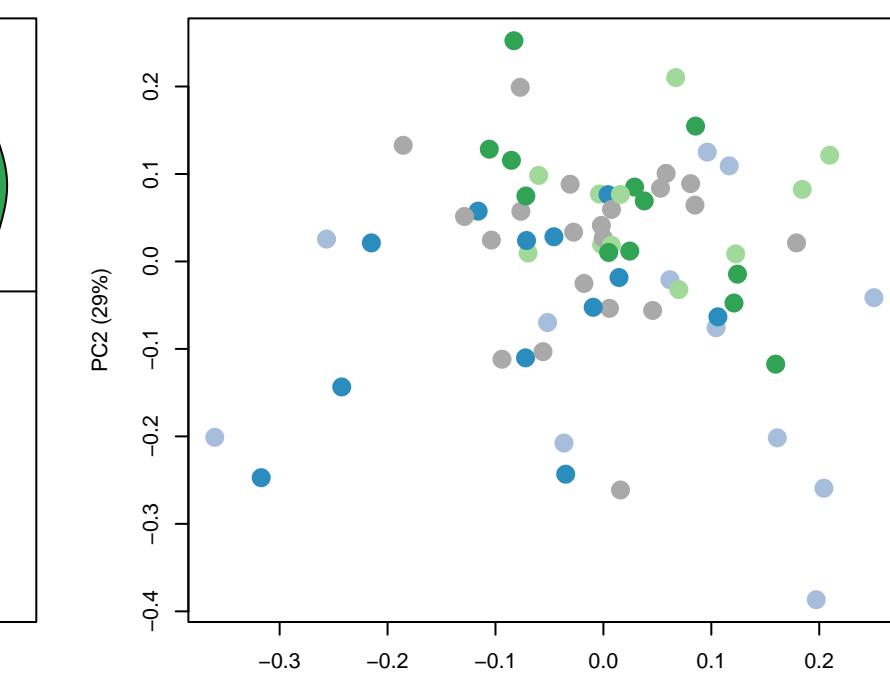
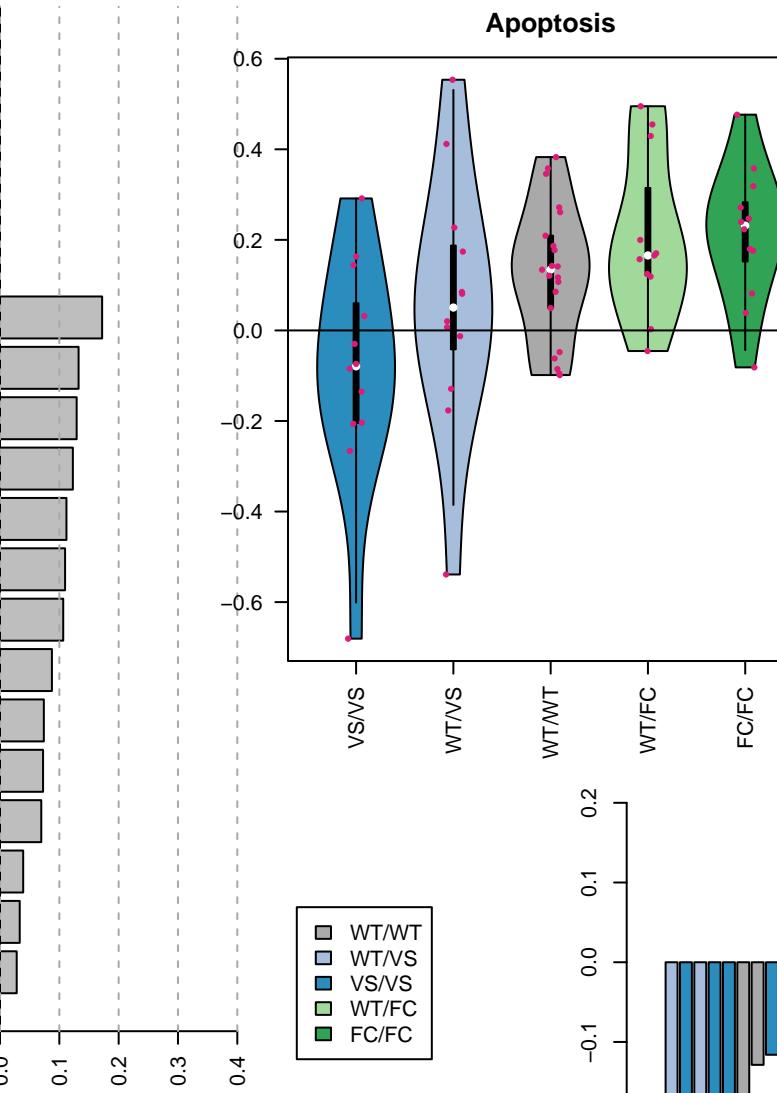
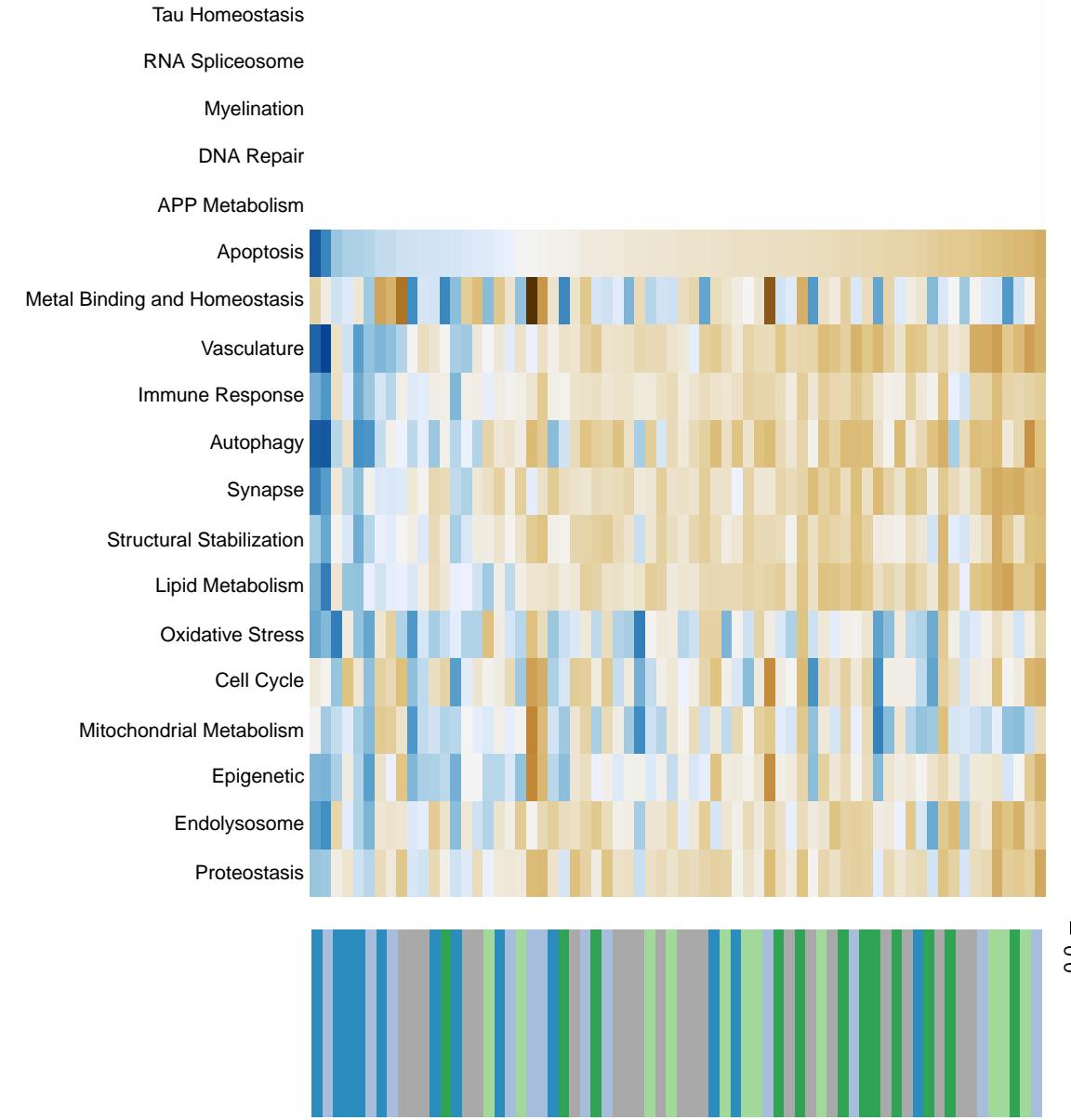
Decomposition



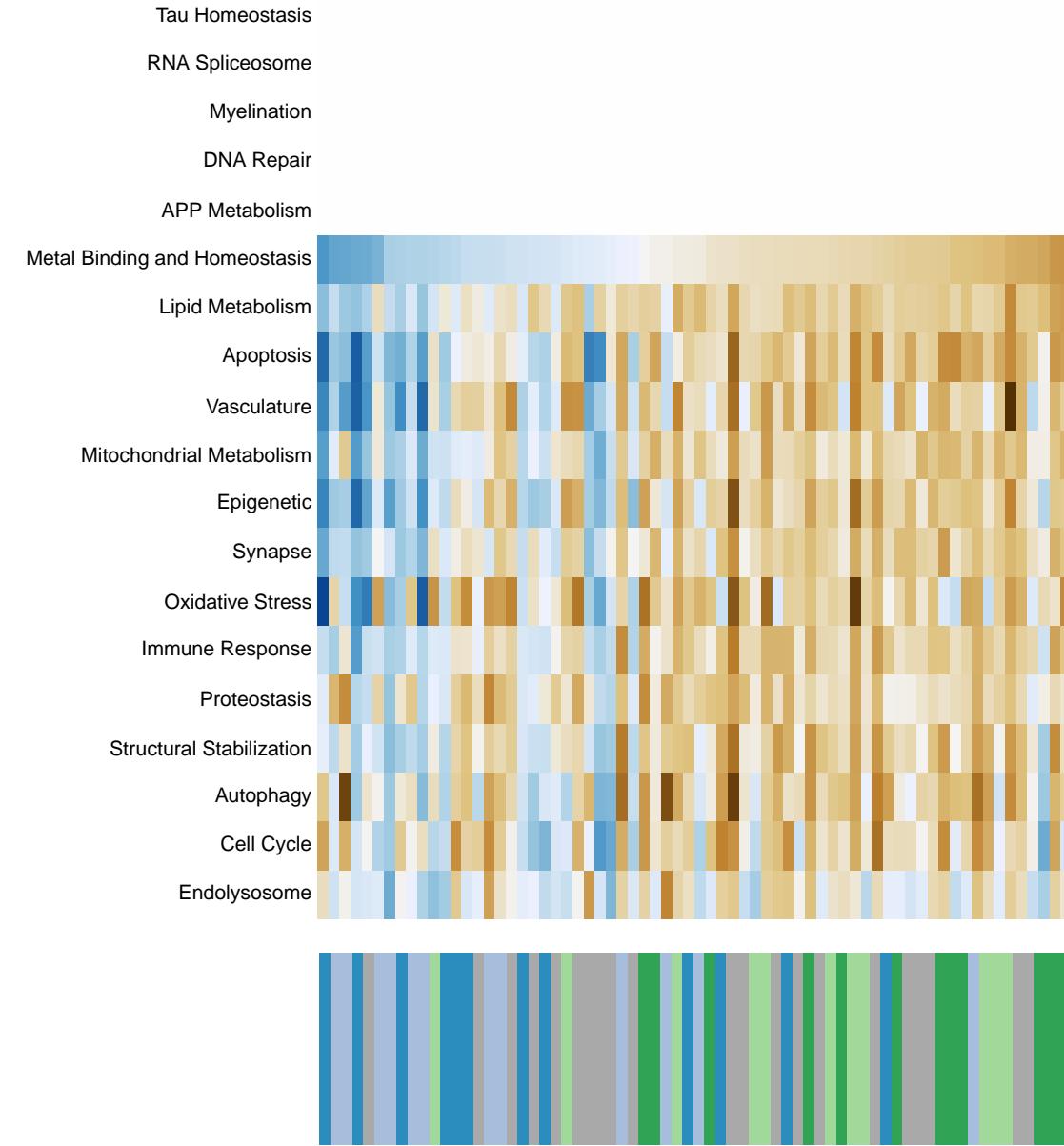
PC1 by genotype



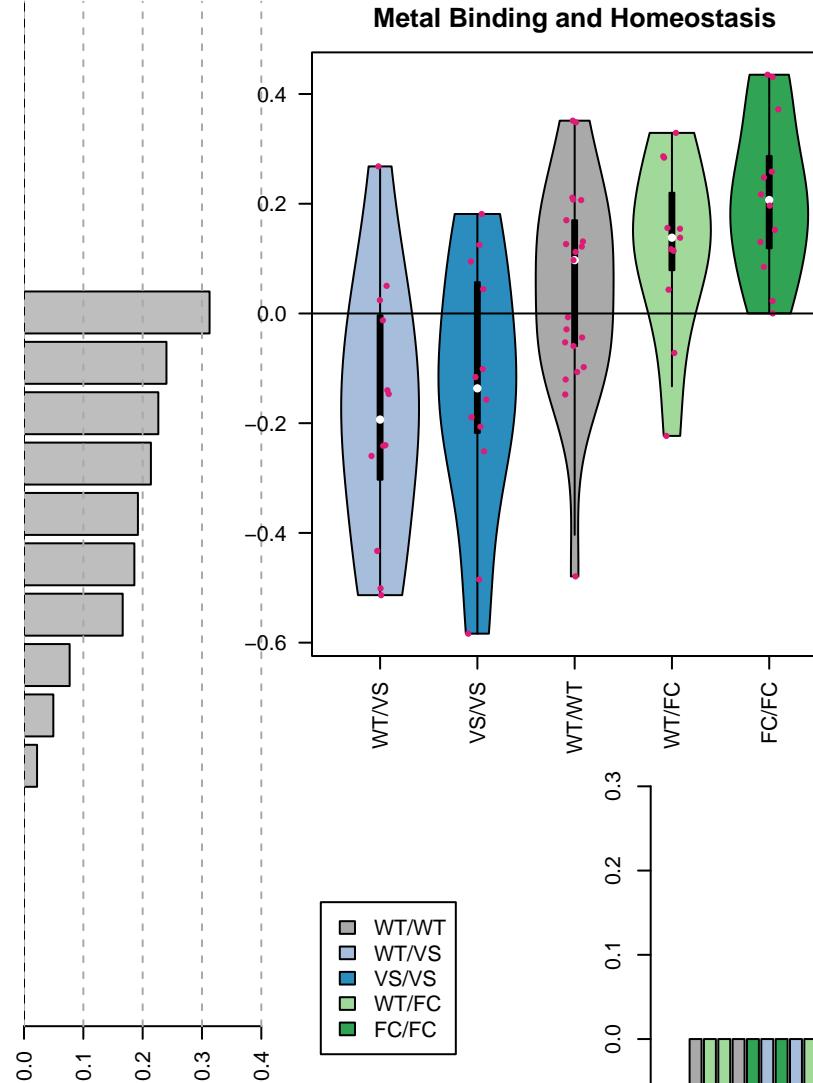
Central carbon metabolism in cancer



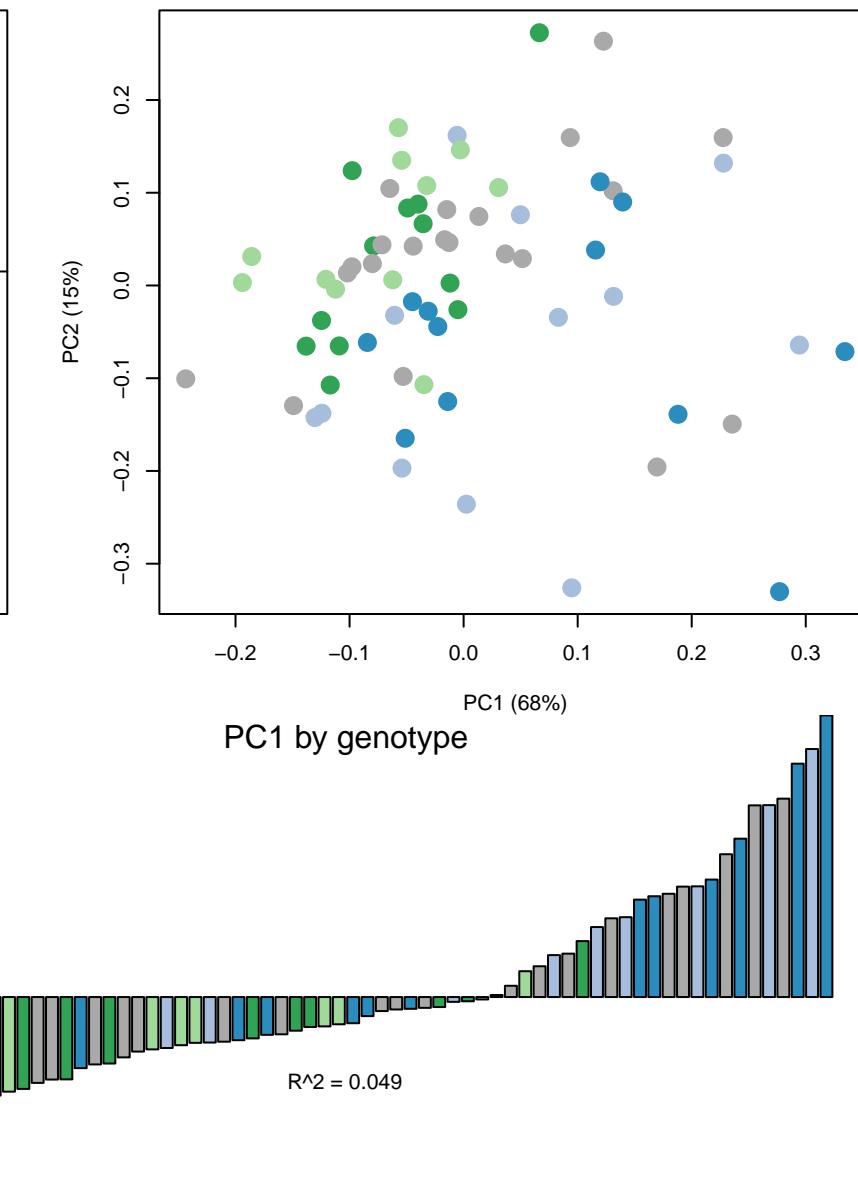
Choline metabolism in cancer



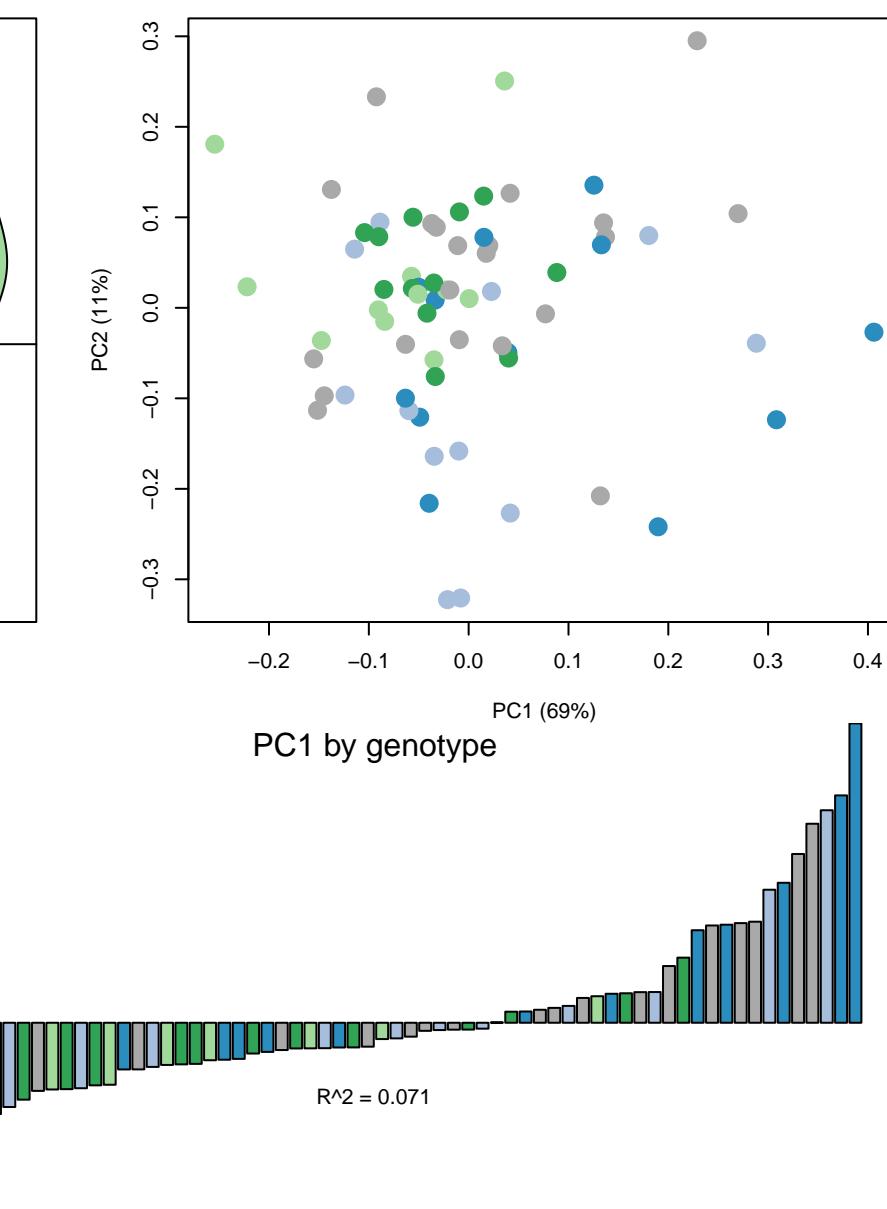
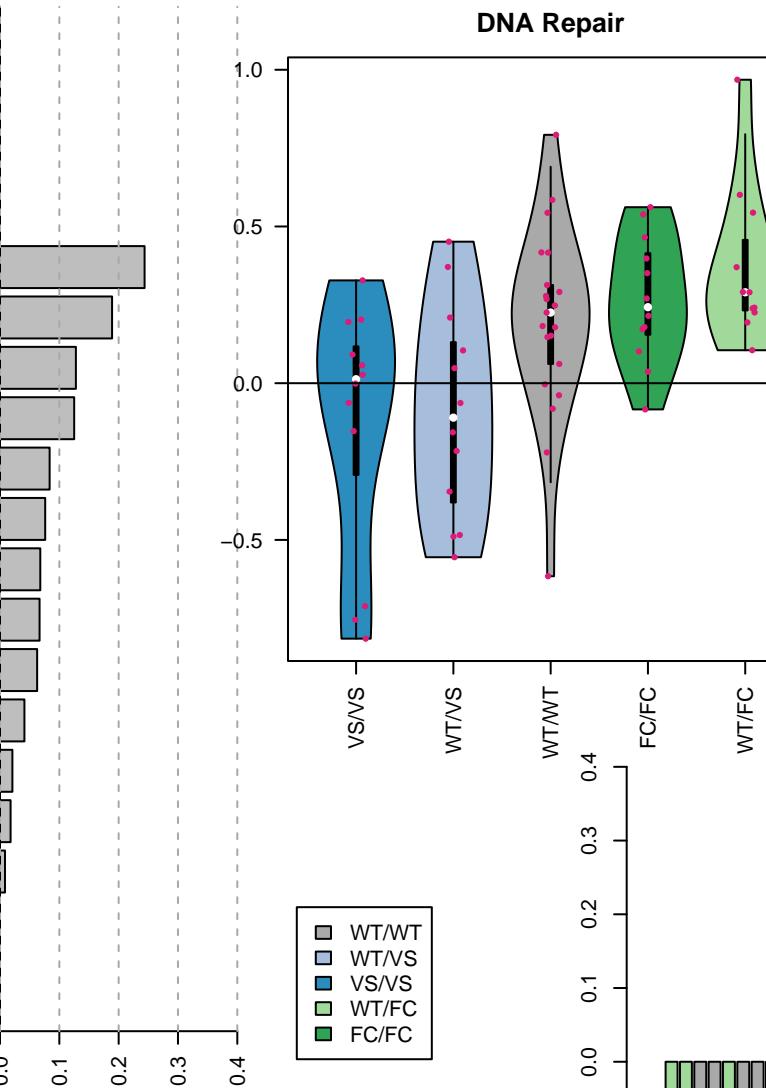
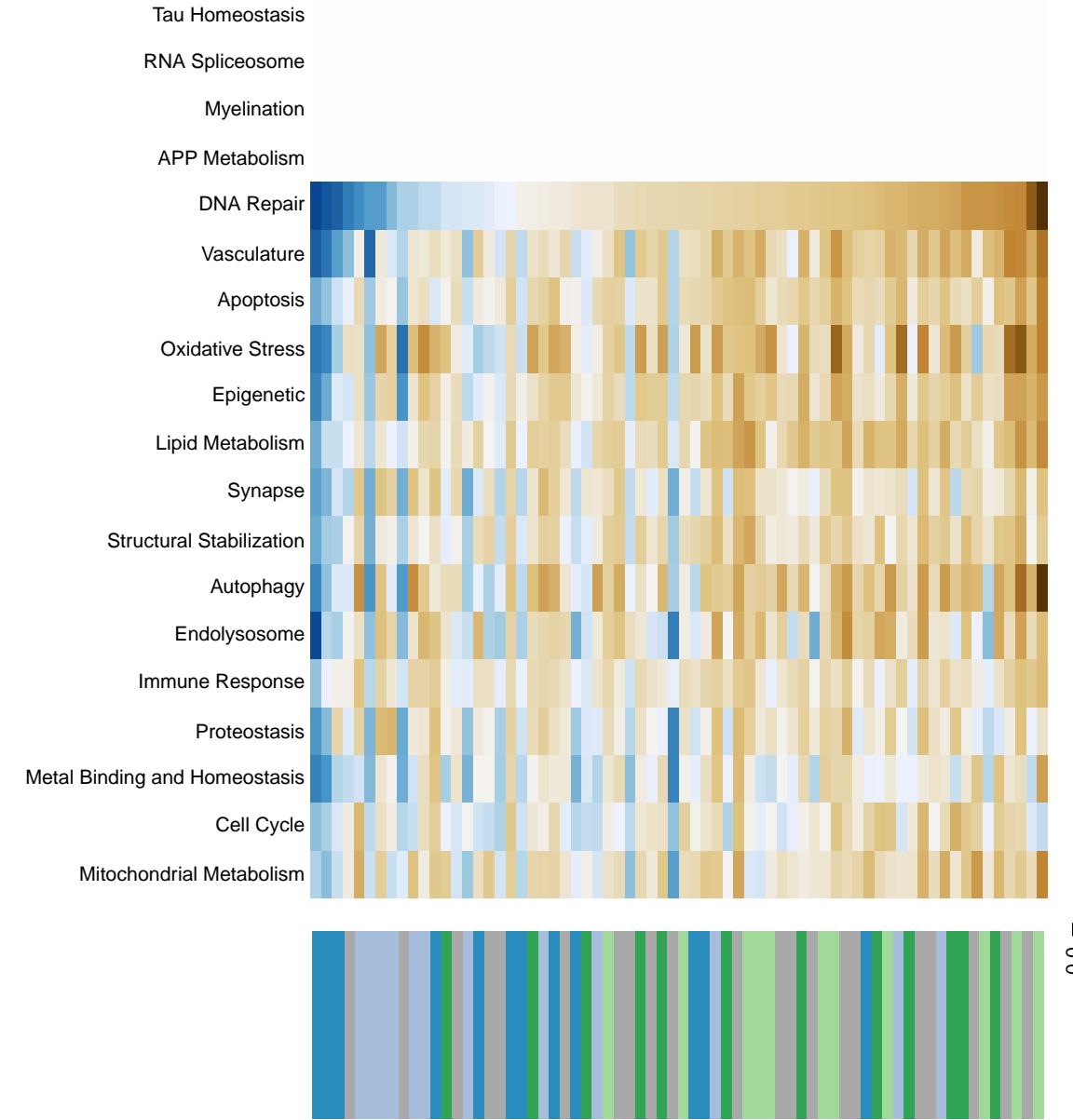
Metal Binding and Homeostasis



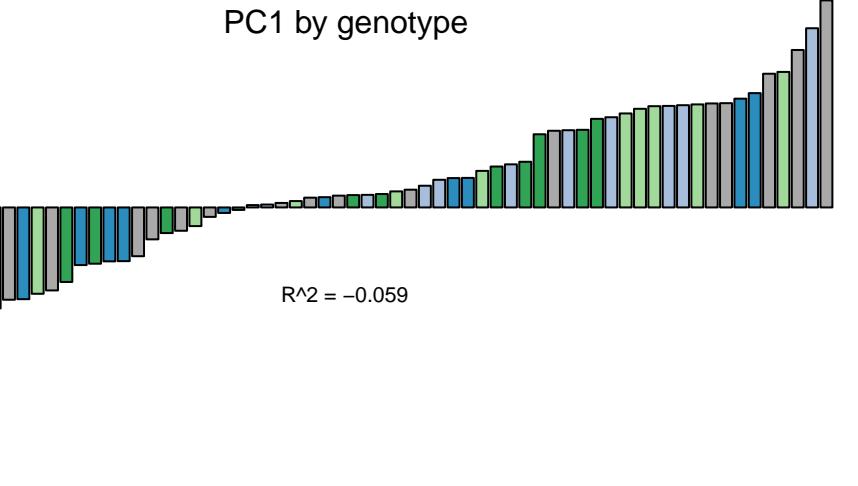
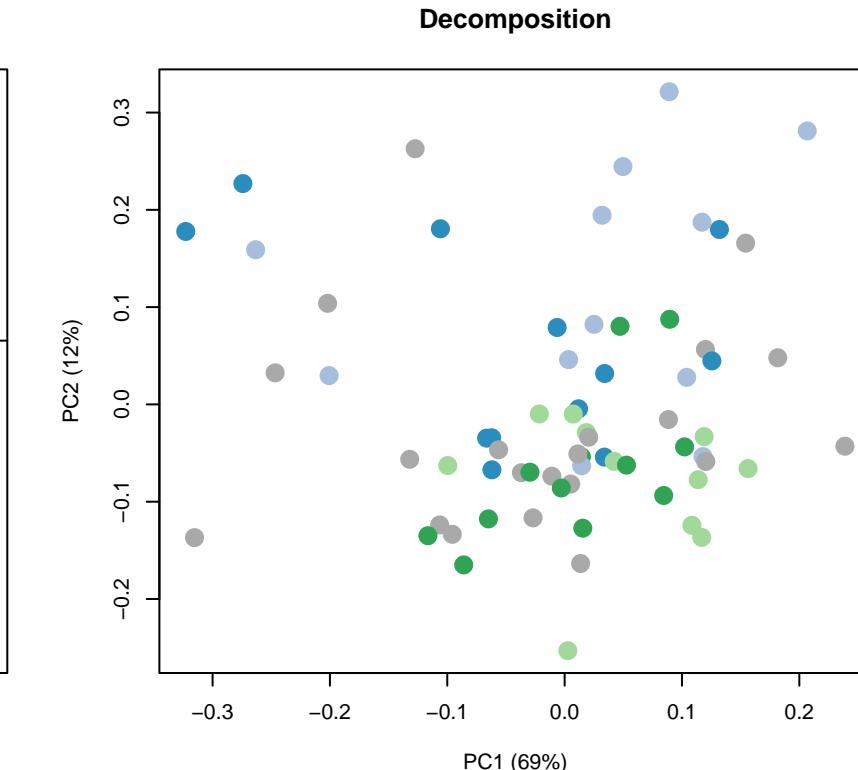
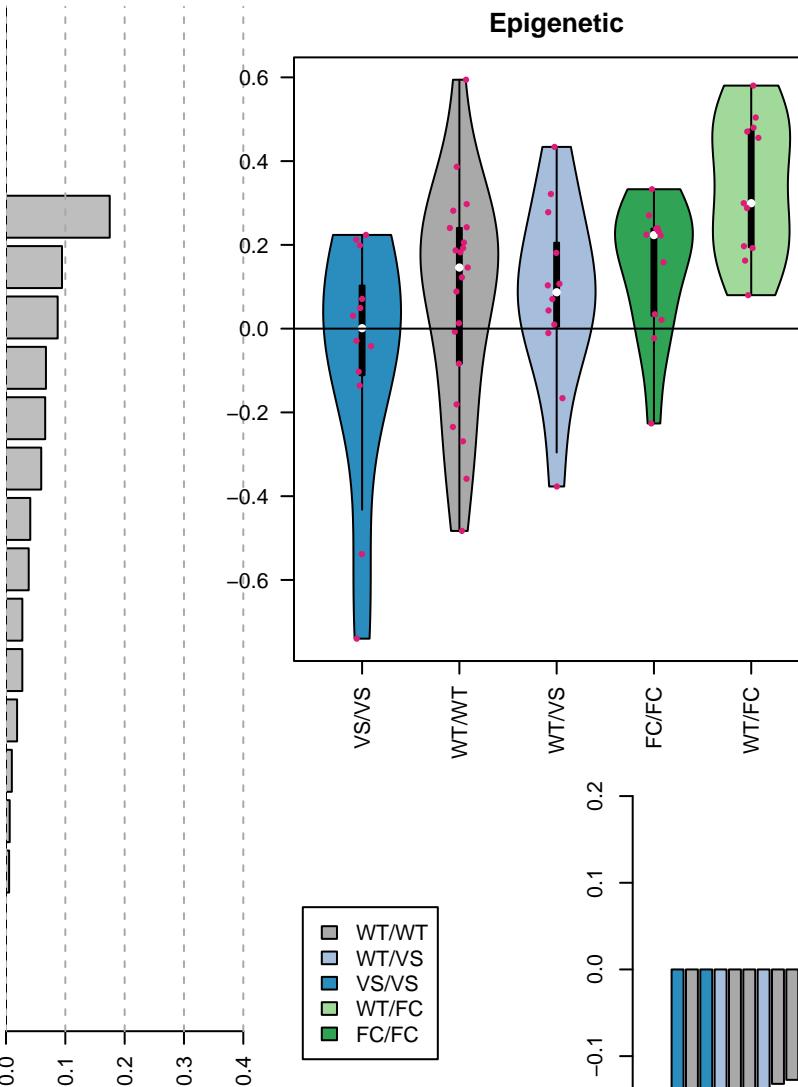
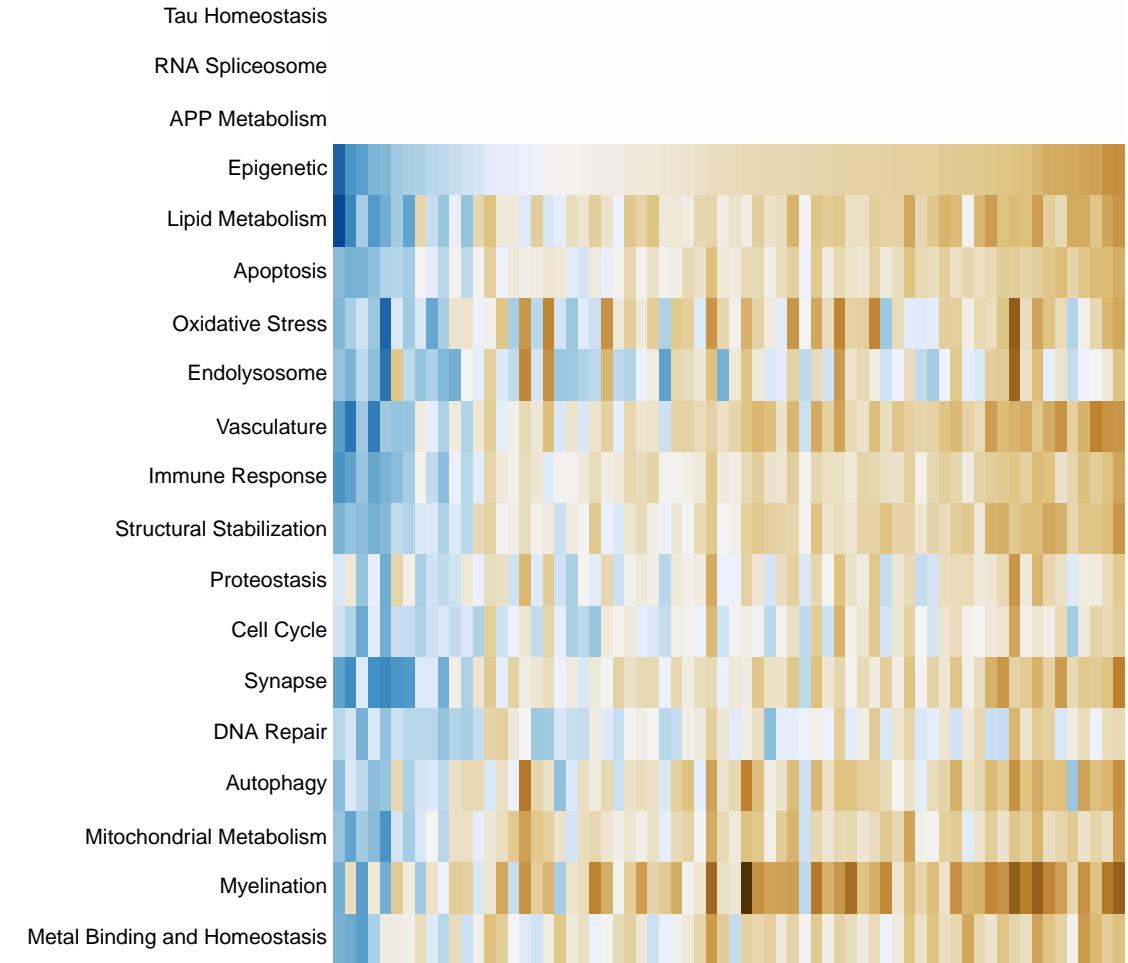
Decomposition



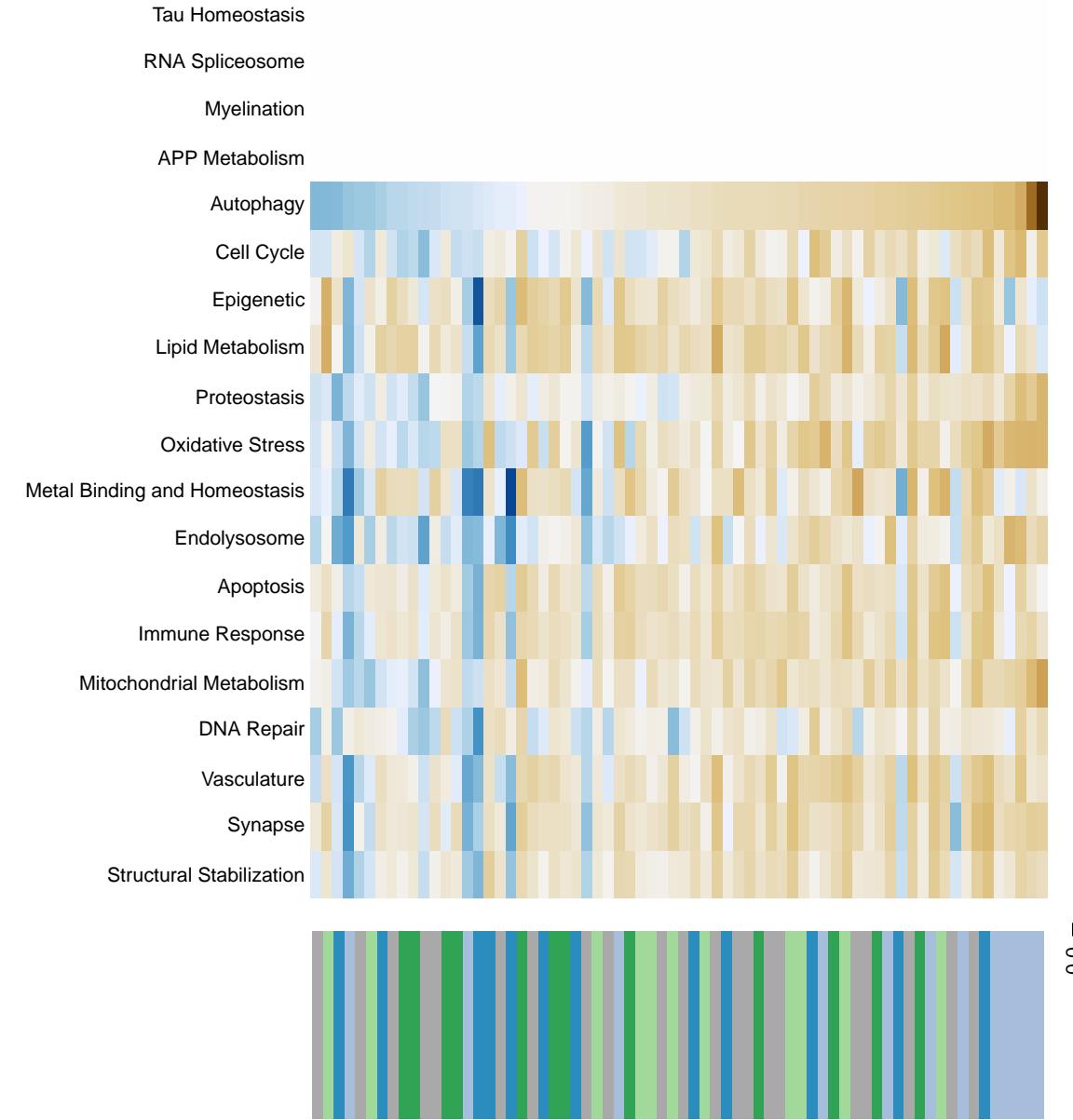
PD-L1 expression and PD-1 checkpoint pathway in cancer



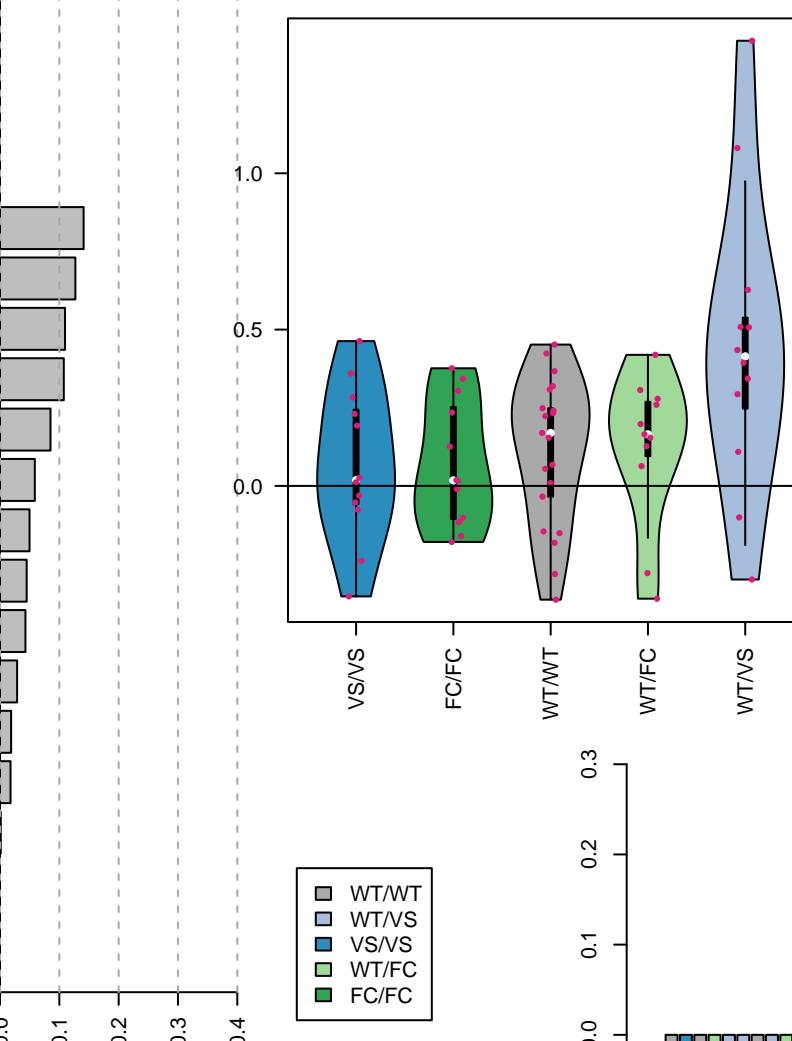
Colorectal cancer



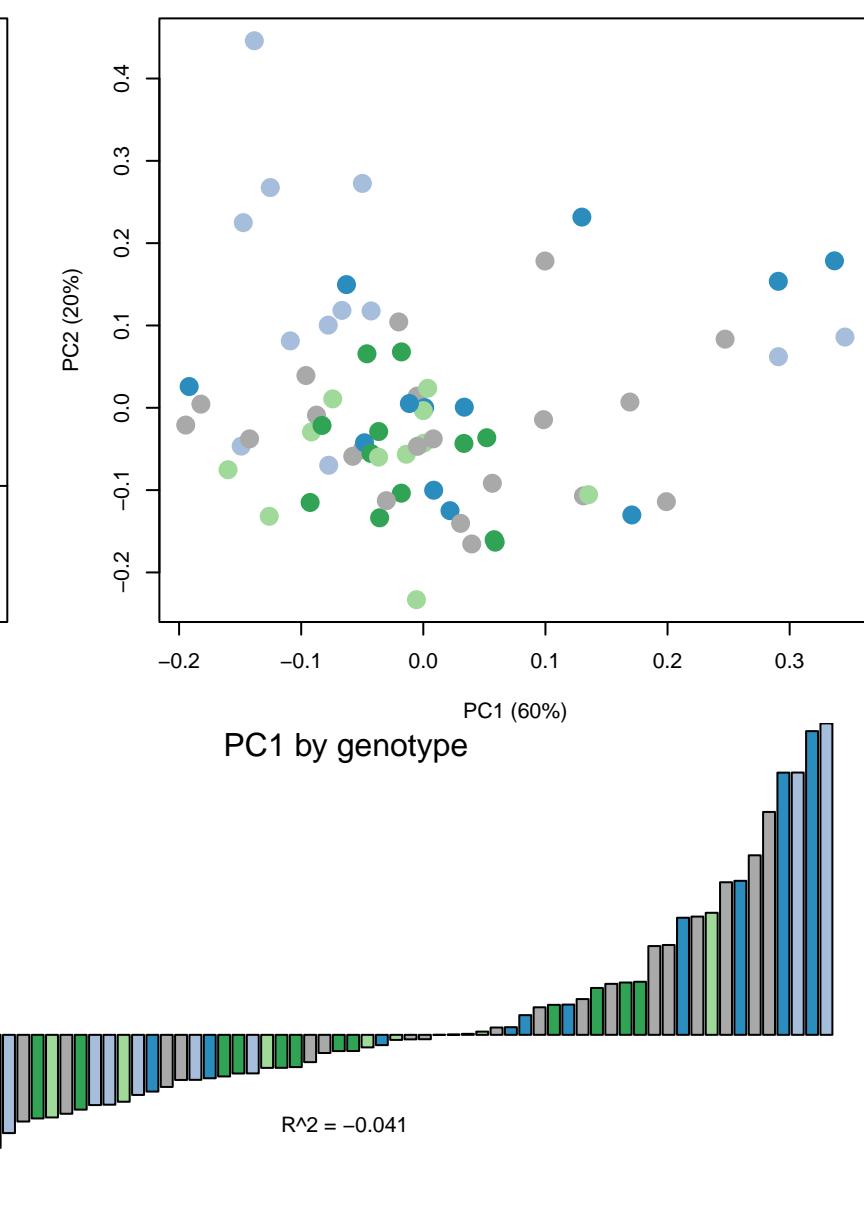
Pancreatic cancer



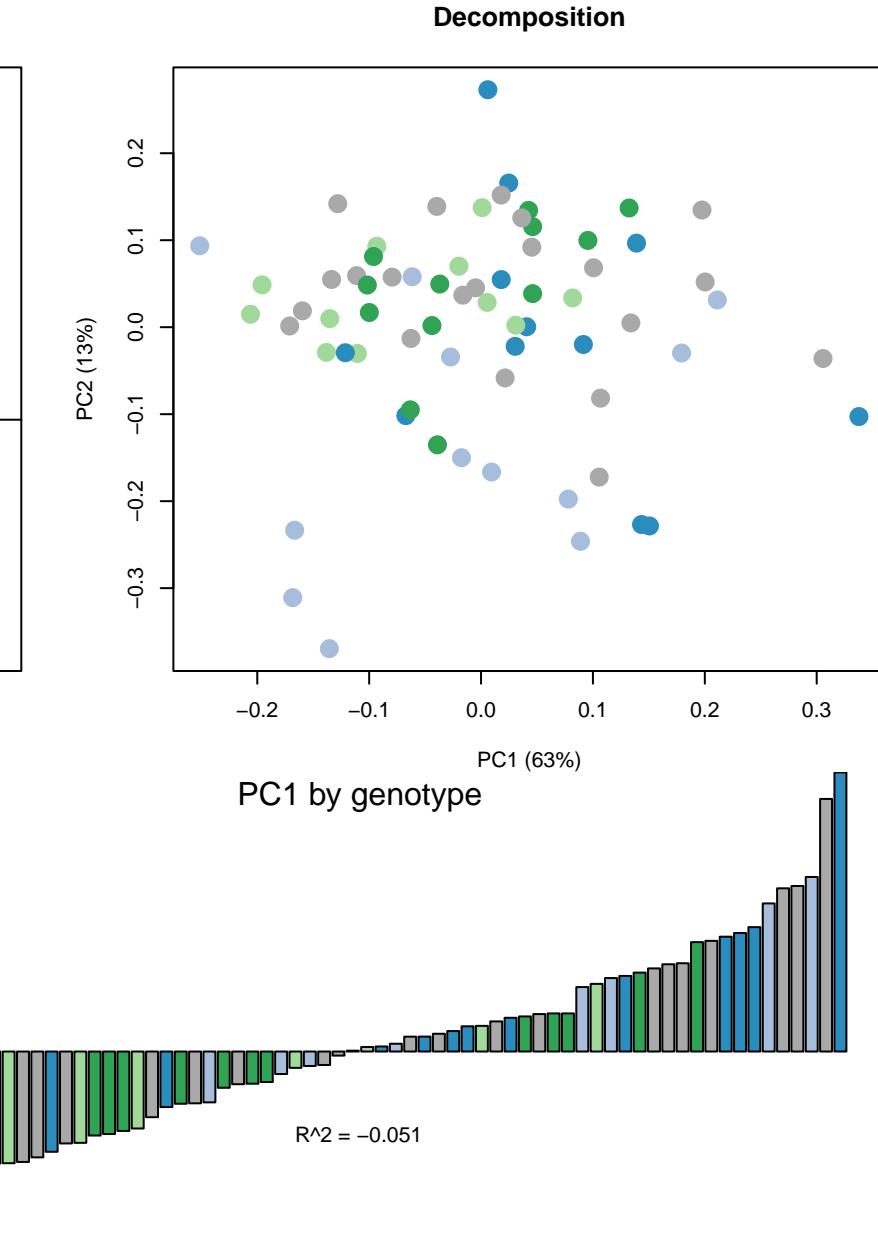
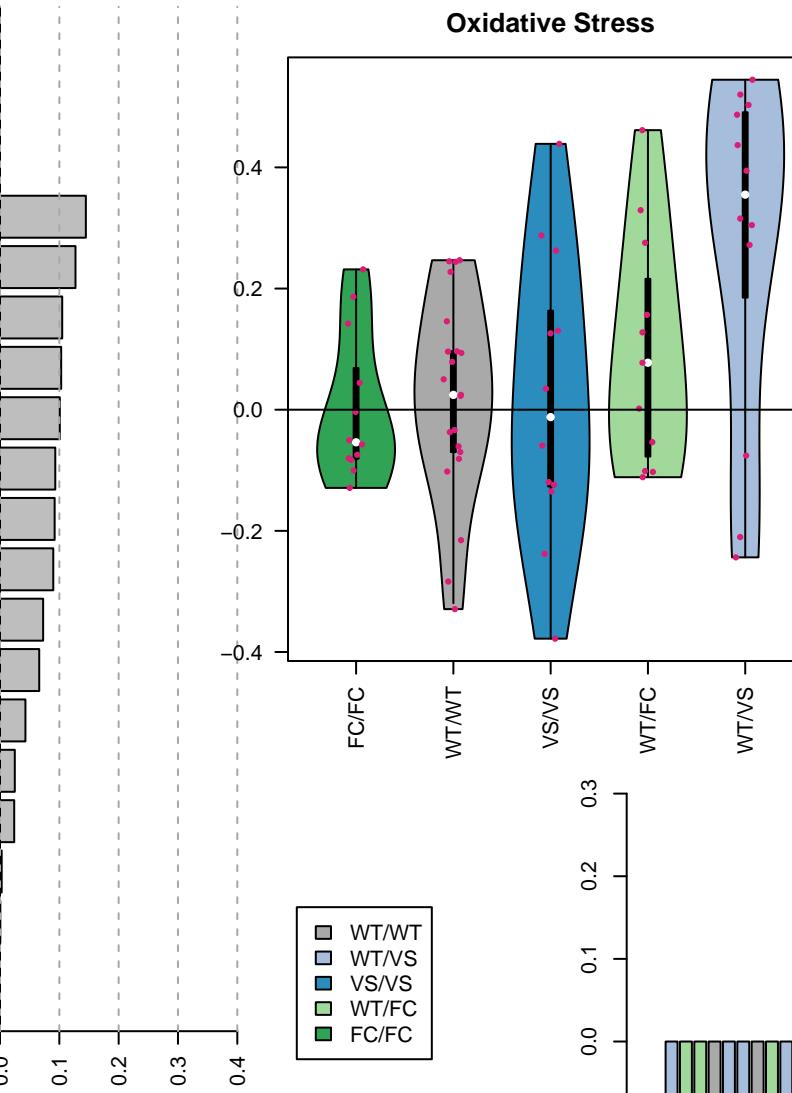
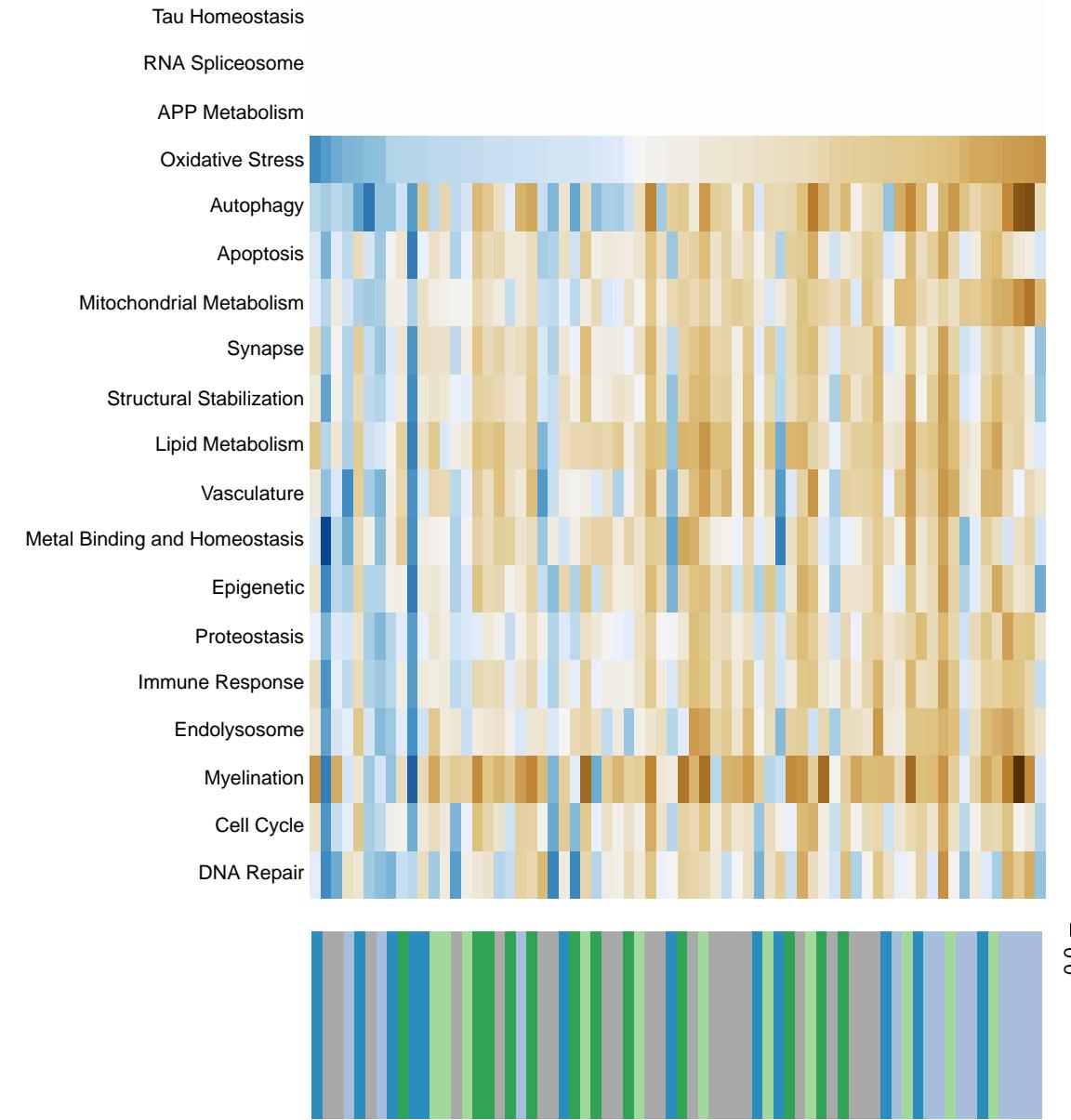
Autophagy



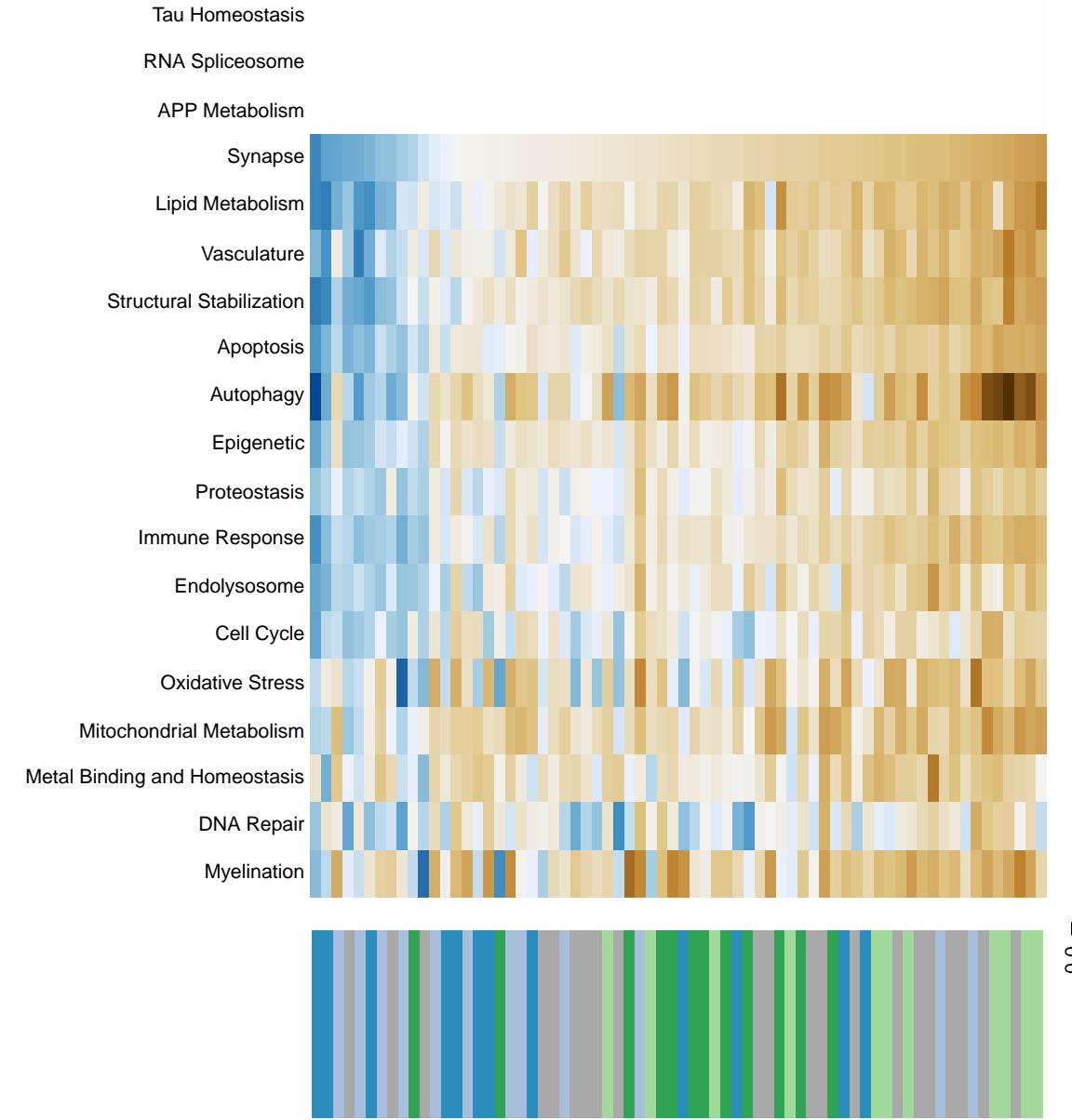
Decomposition



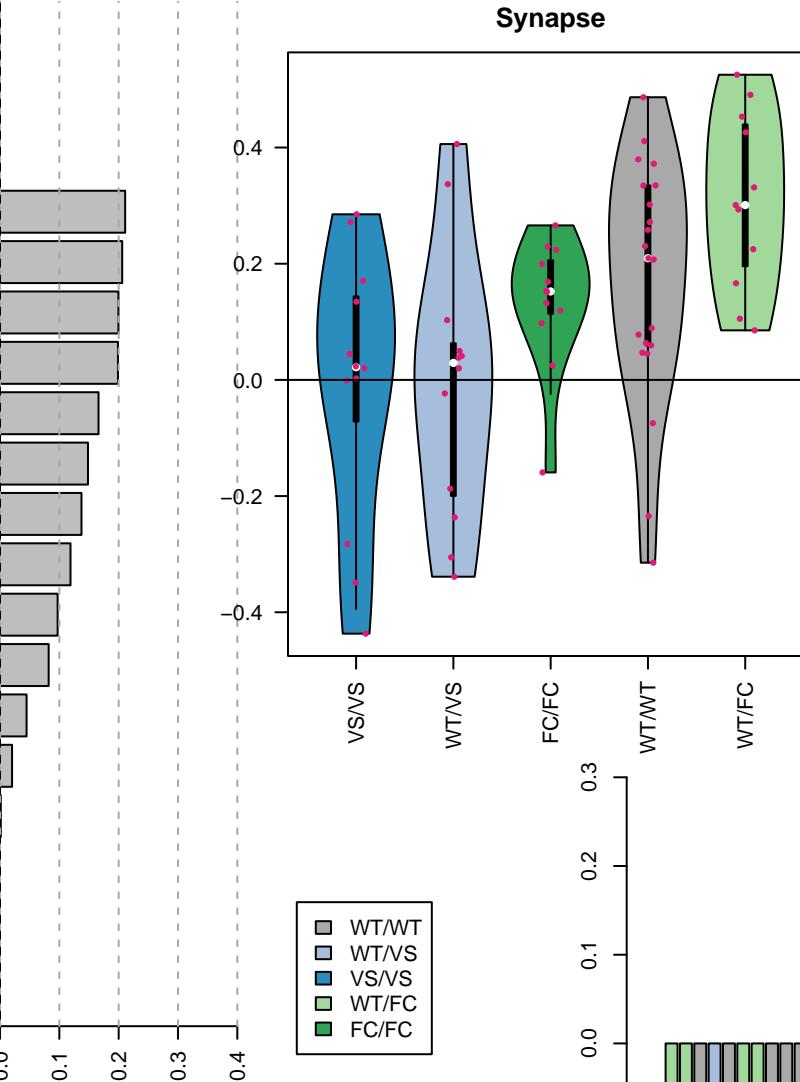
Hepatocellular carcinoma



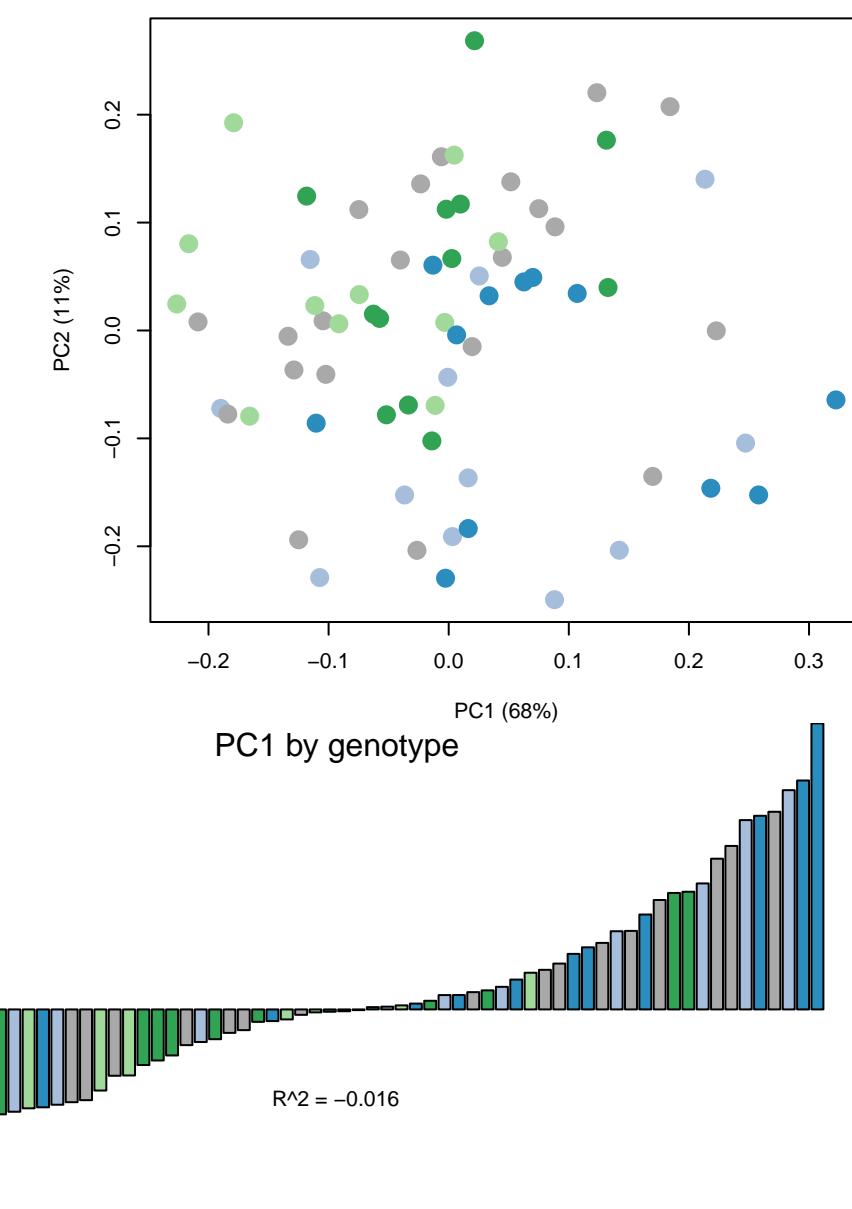
Gastric cancer



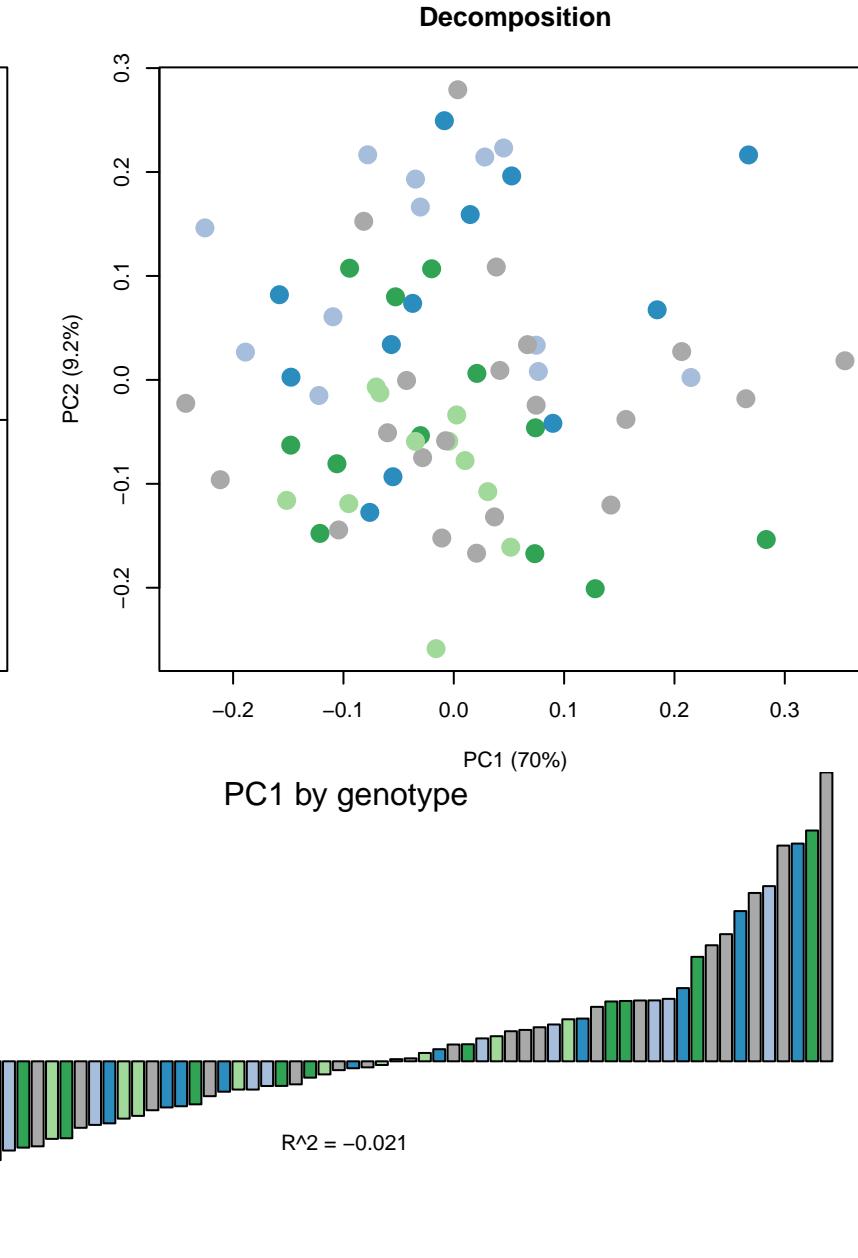
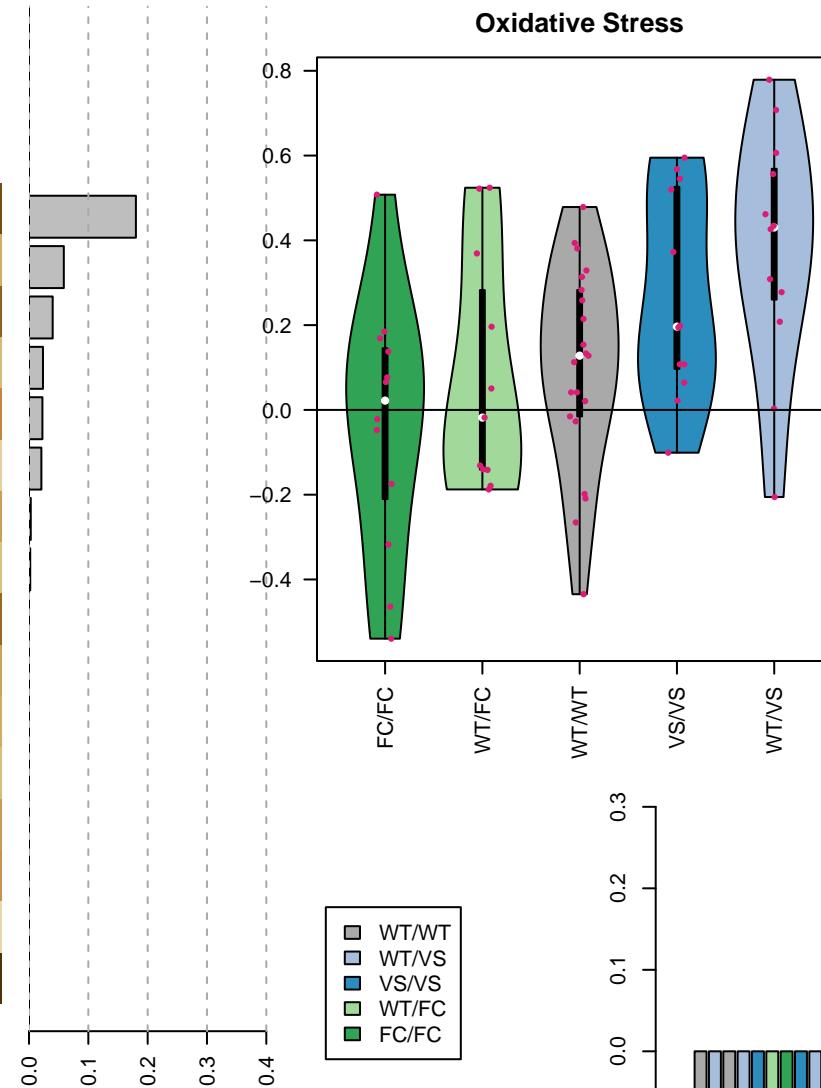
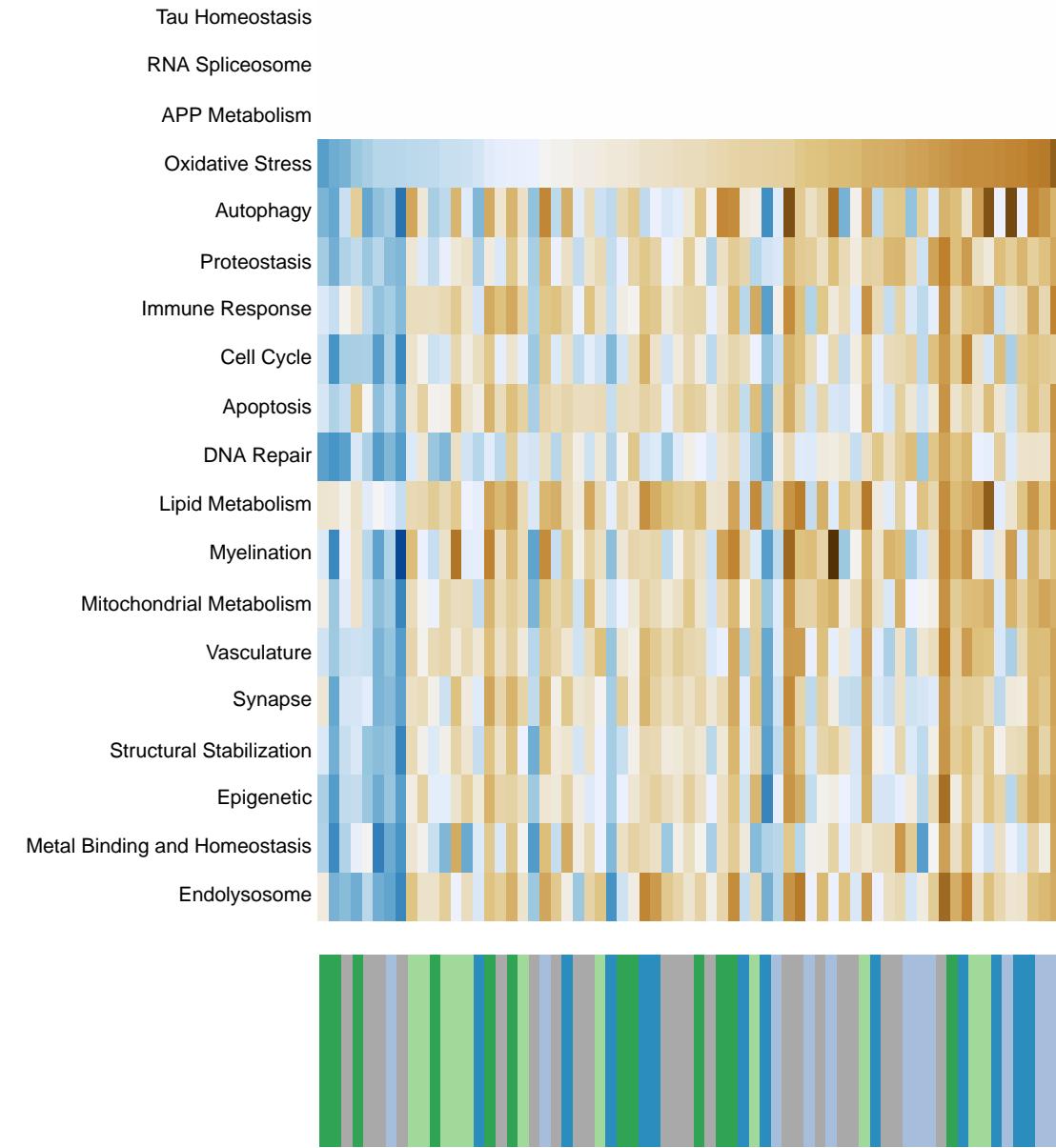
Synapse



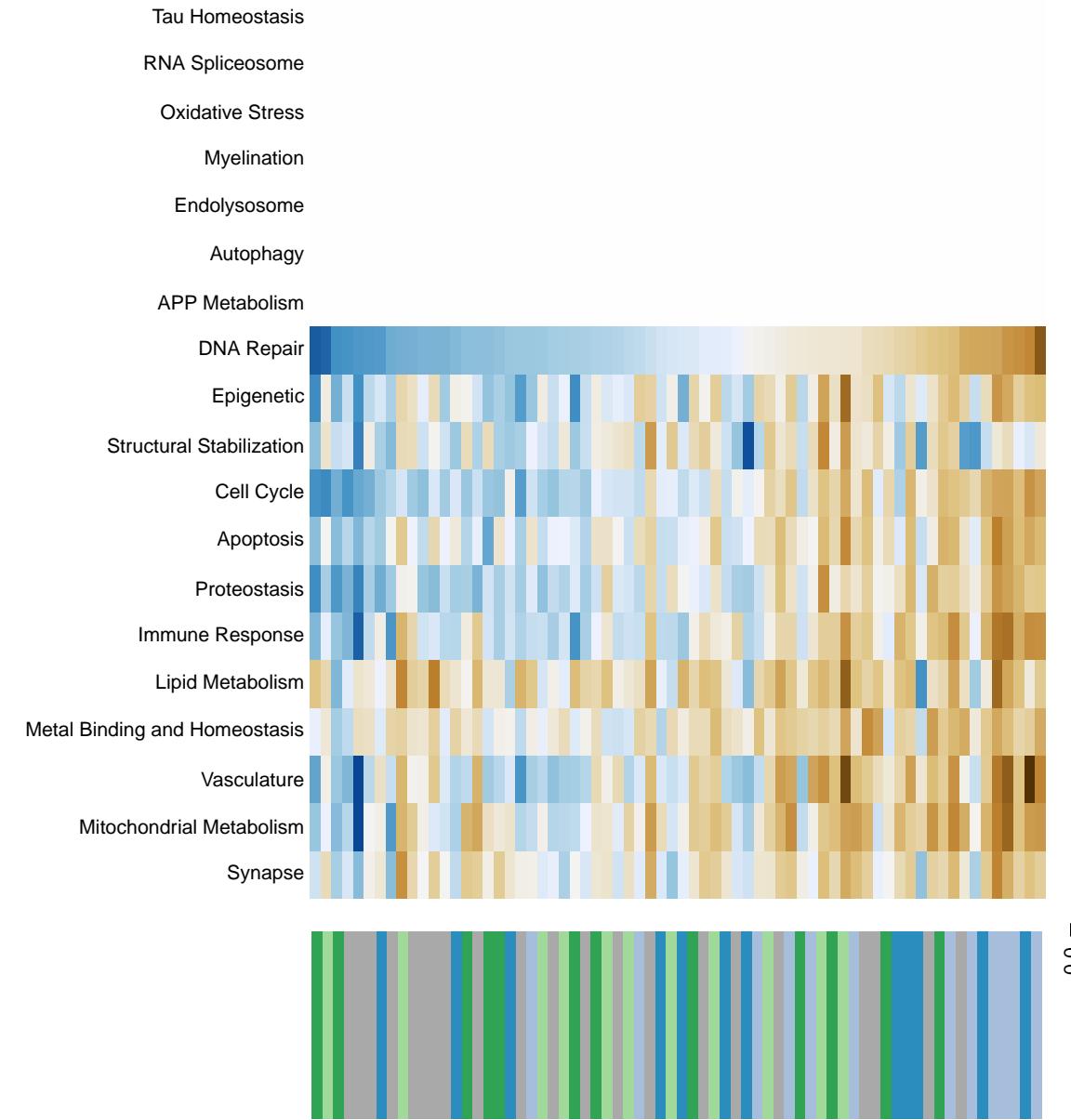
Decomposition



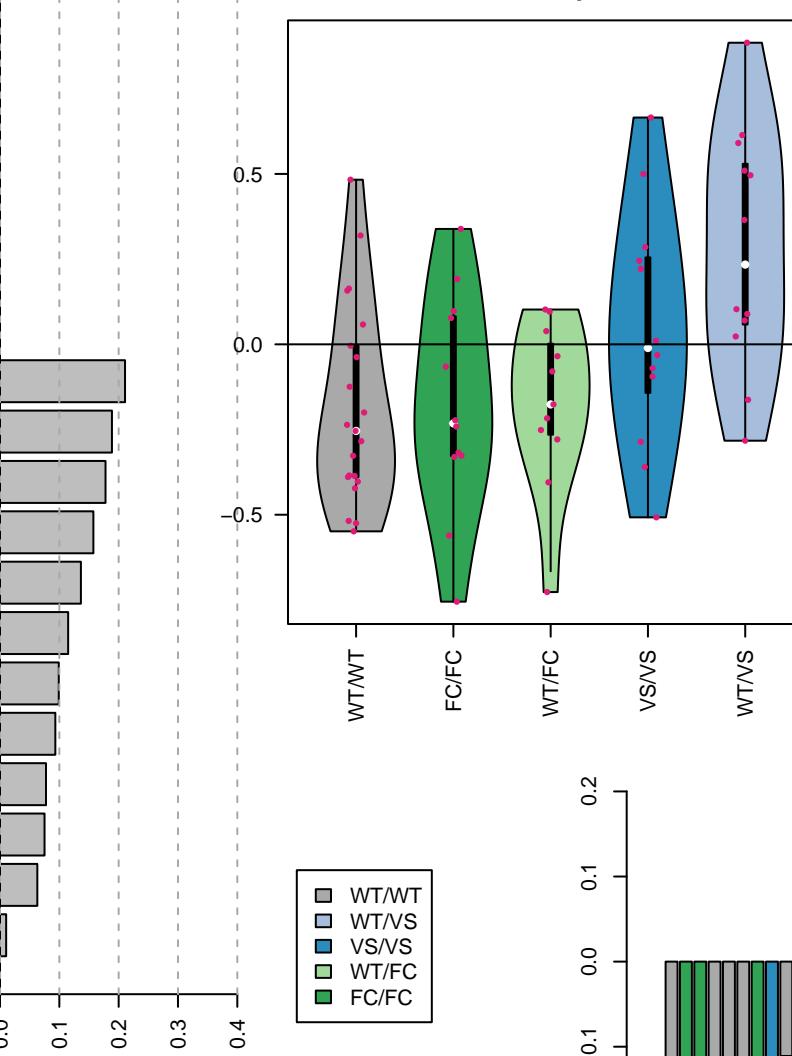
Glioma



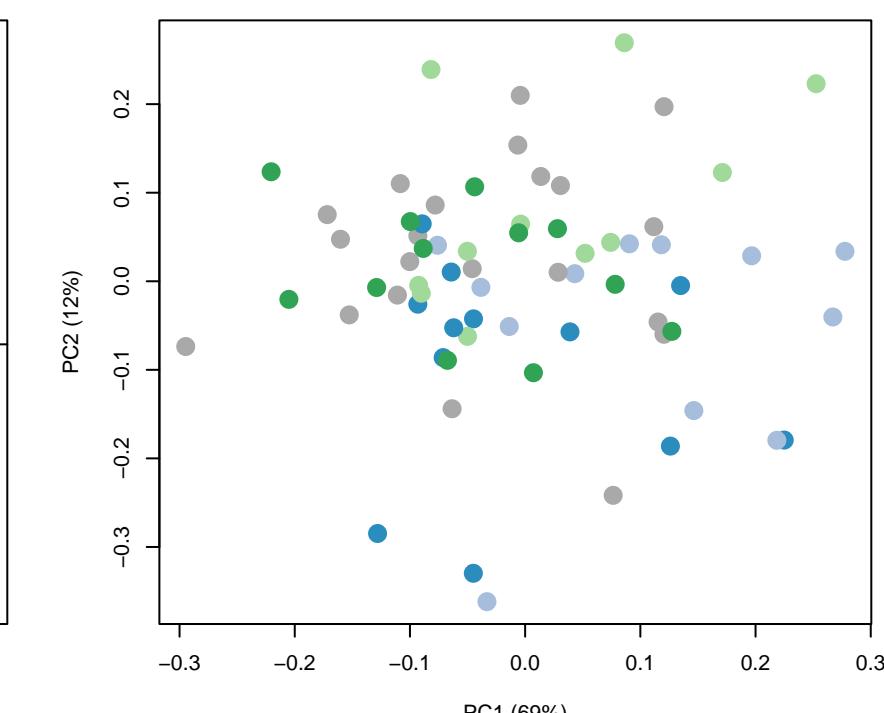
Thyroid cancer



DNA Repair



Decomposition



0.2

0.1

0.0

-0.1

-0.2

-0.3

$R^2 = 0.029$

-0.3

-0.2

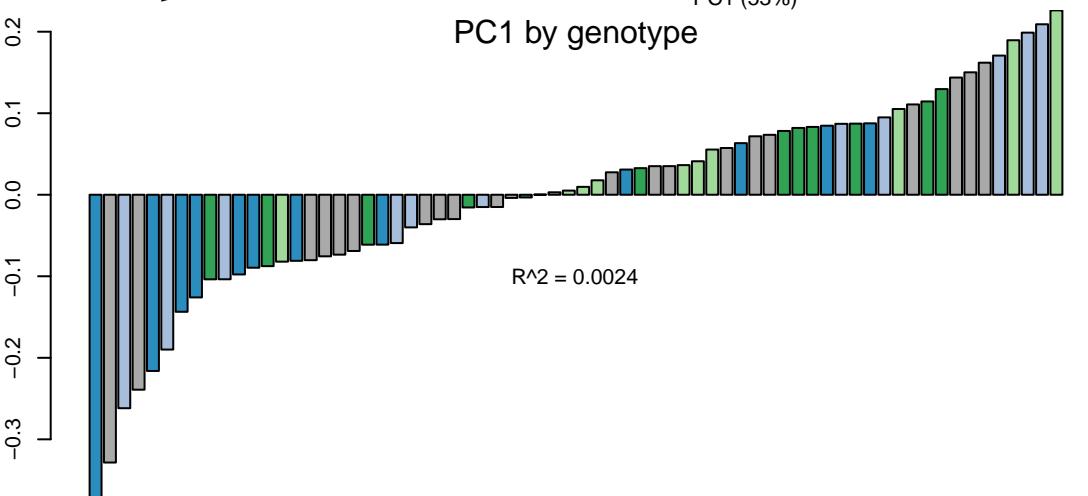
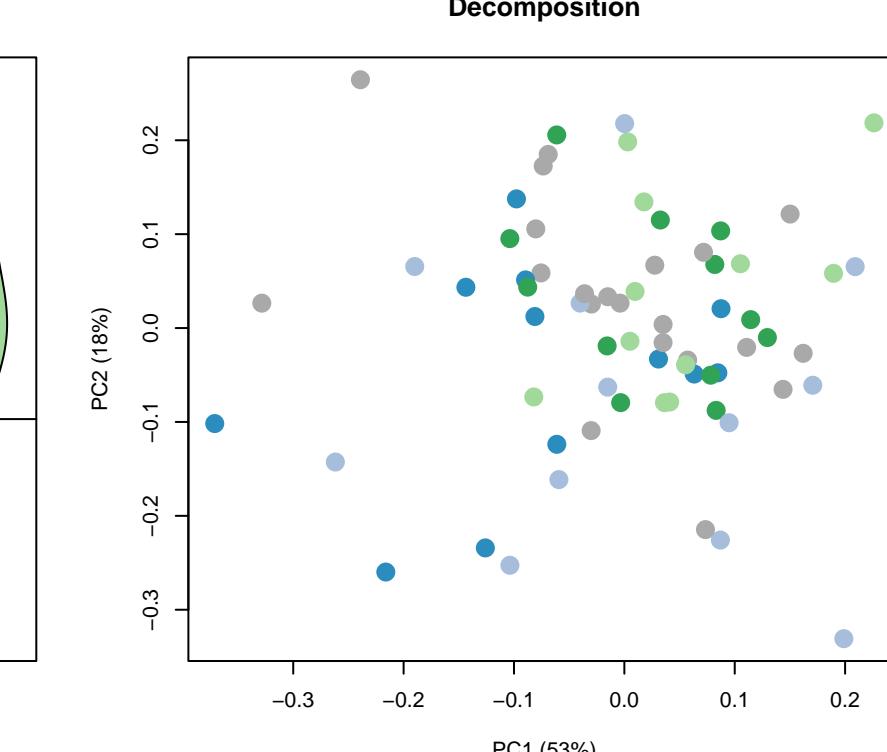
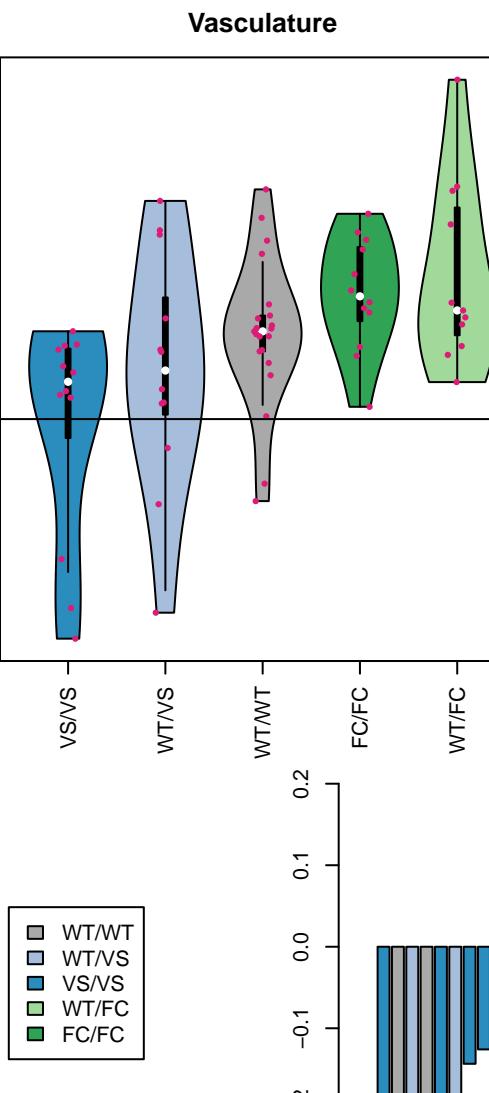
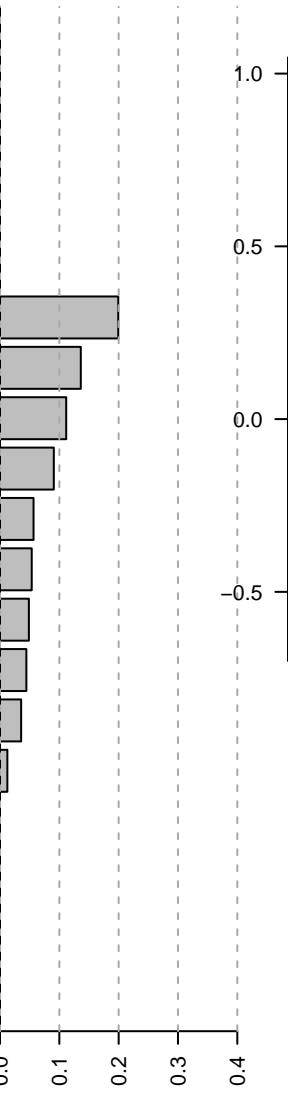
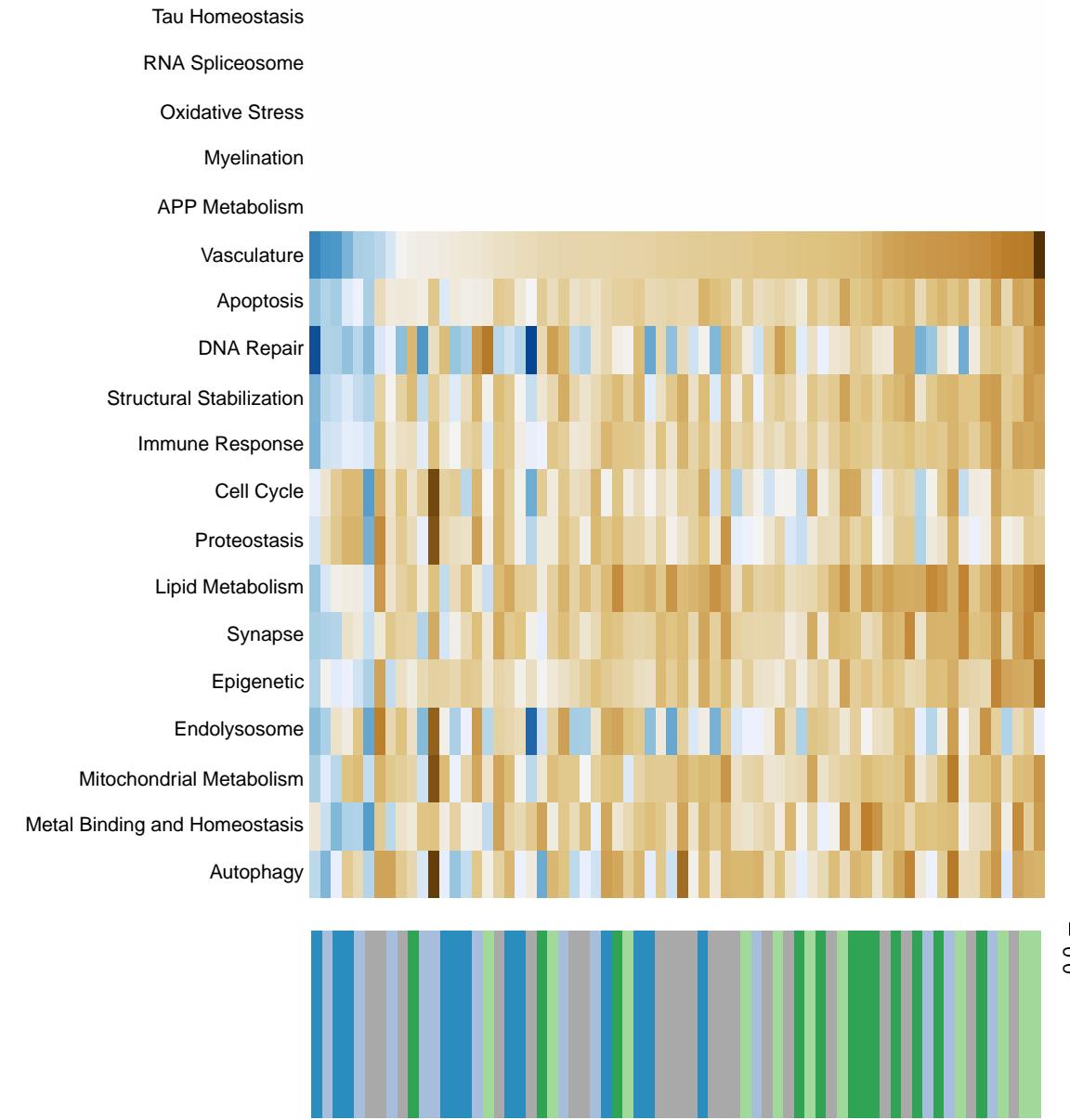
-0.1

0.0

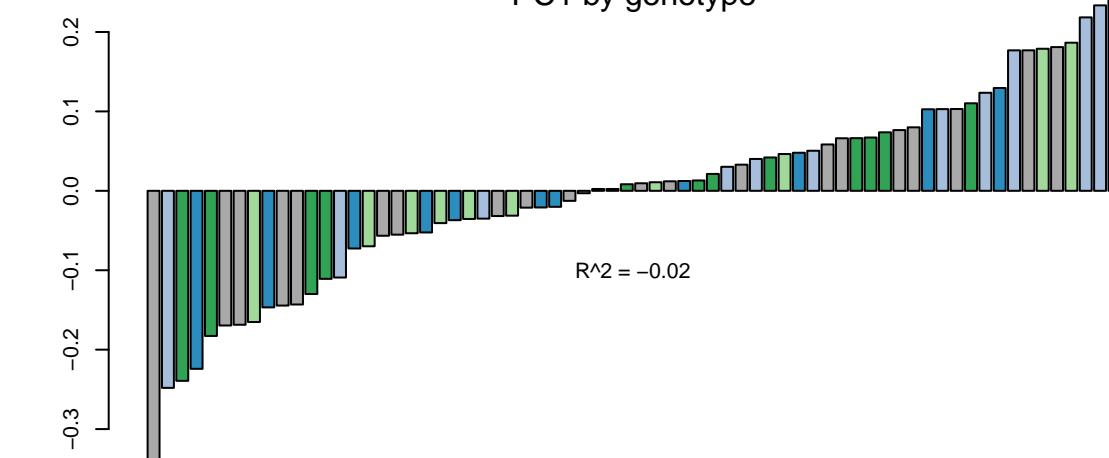
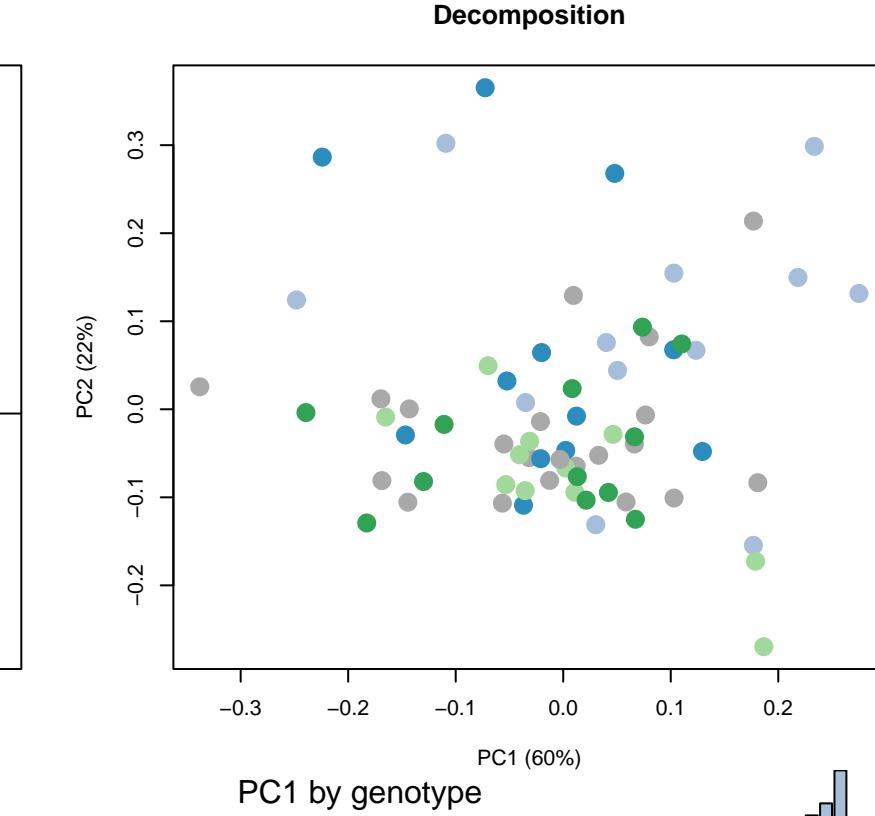
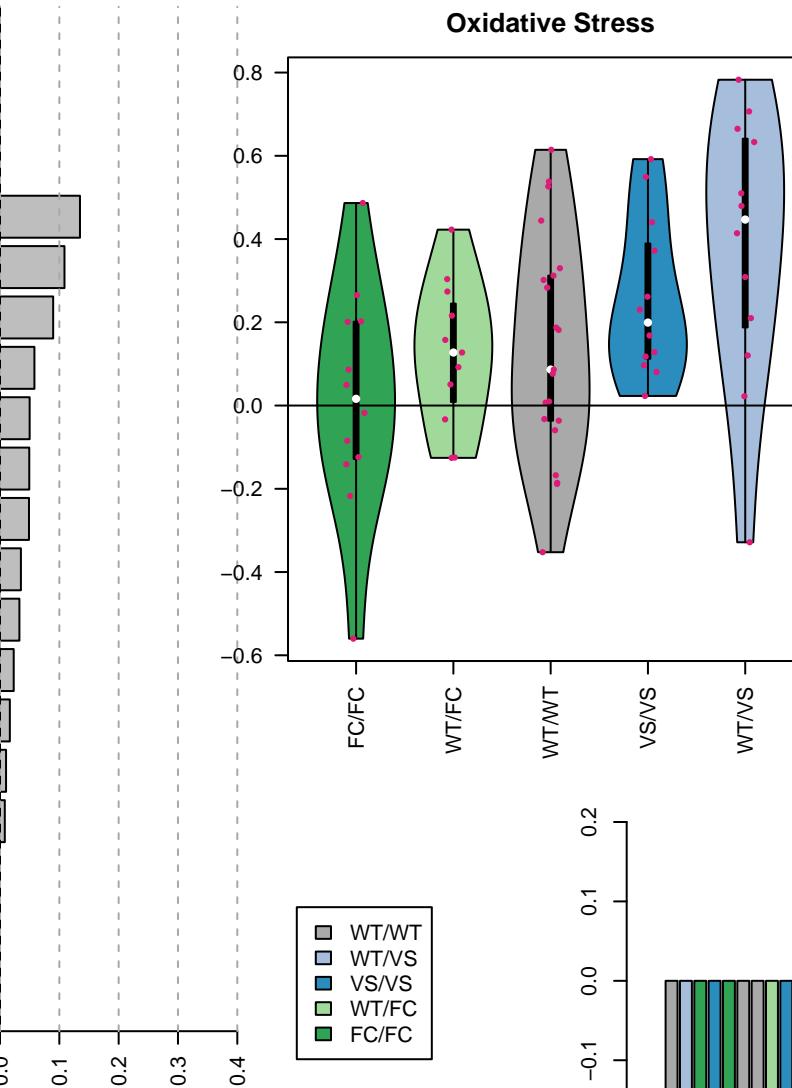
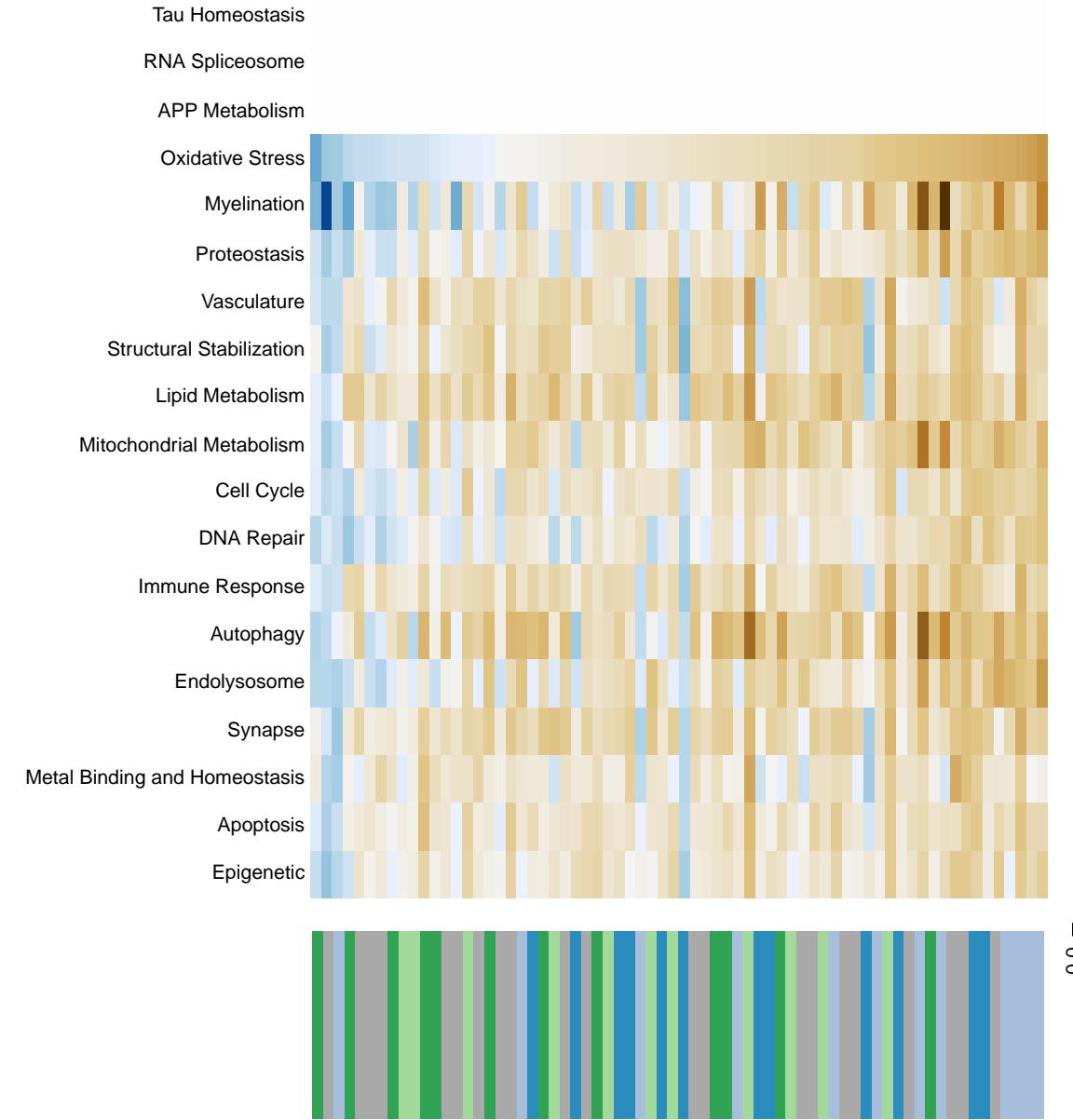
0.1

0.2

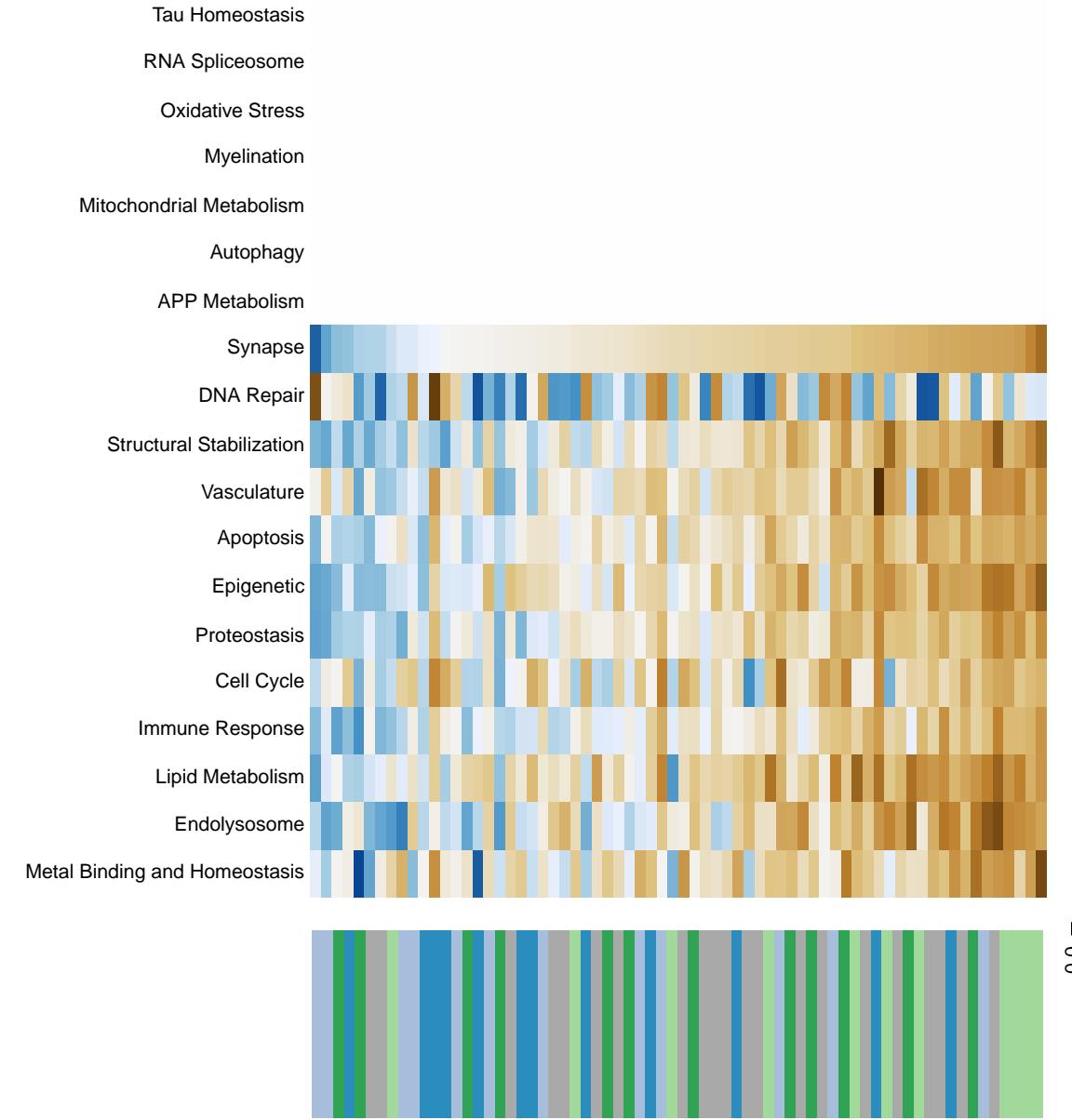
Acute myeloid leukemia



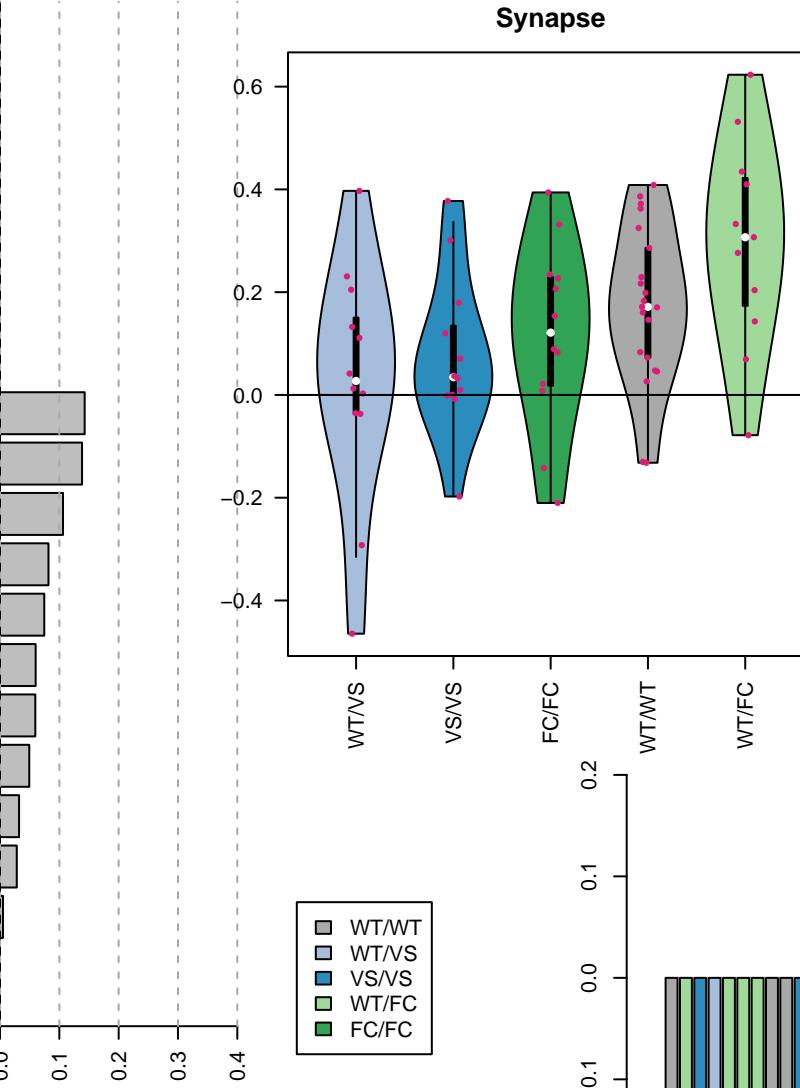
Chronic myeloid leukemia



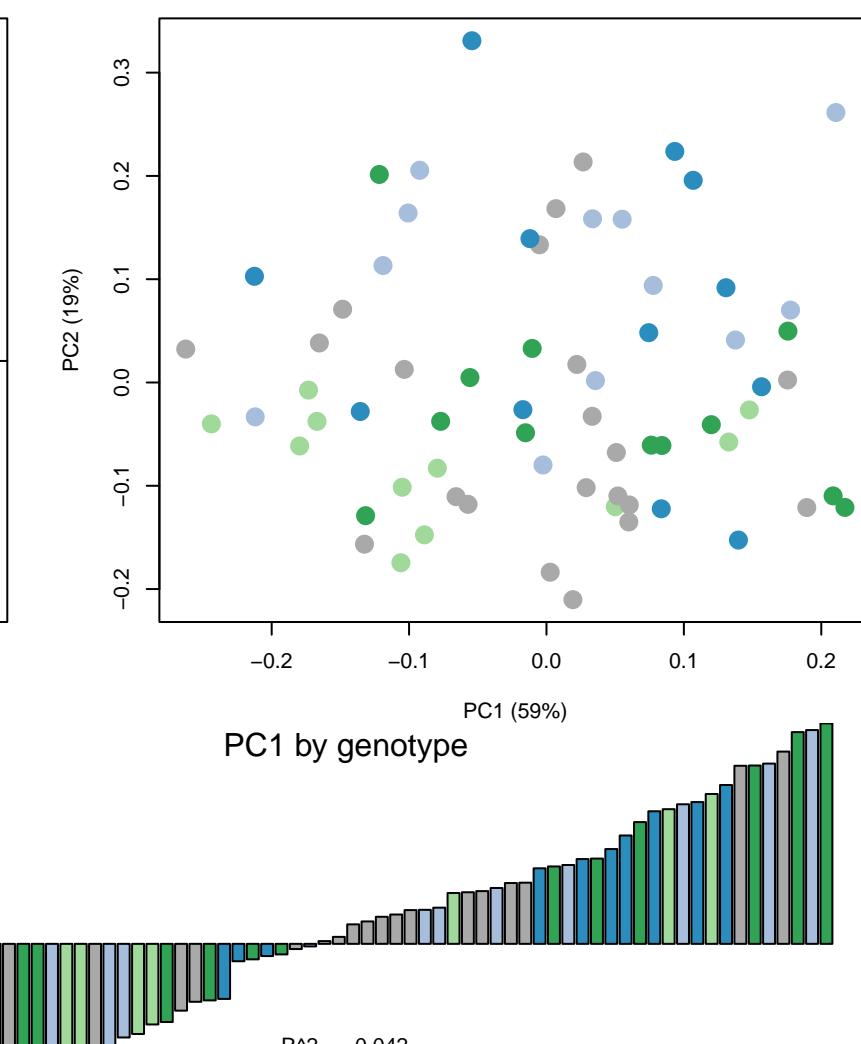
Basal cell carcinoma



Synapse

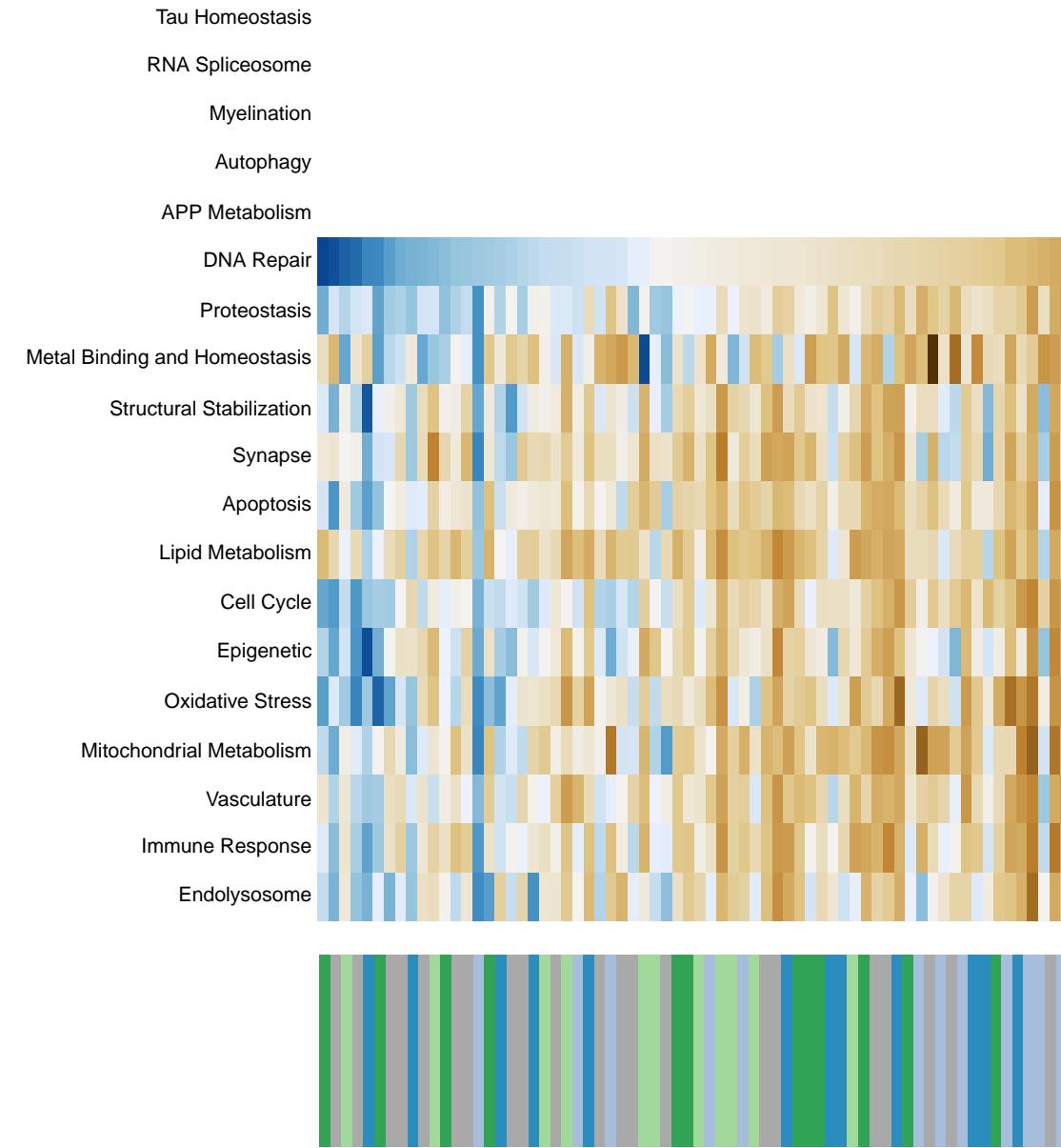


Decomposition

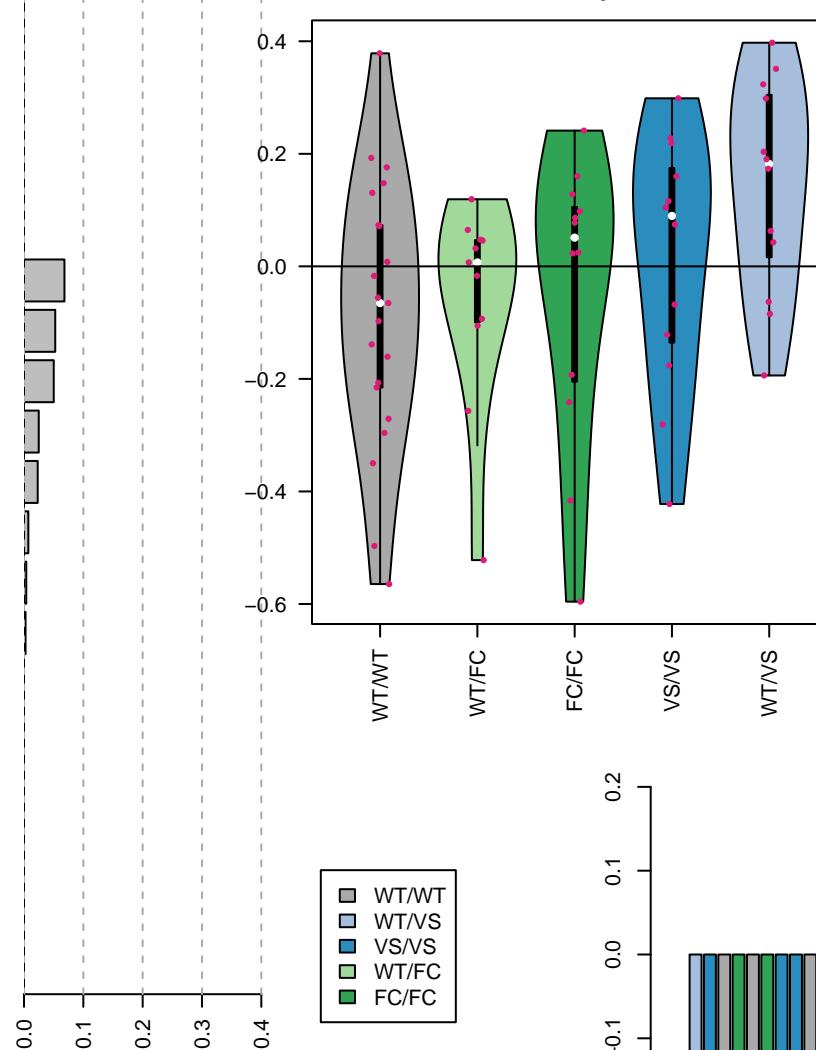


PC1 by genotype

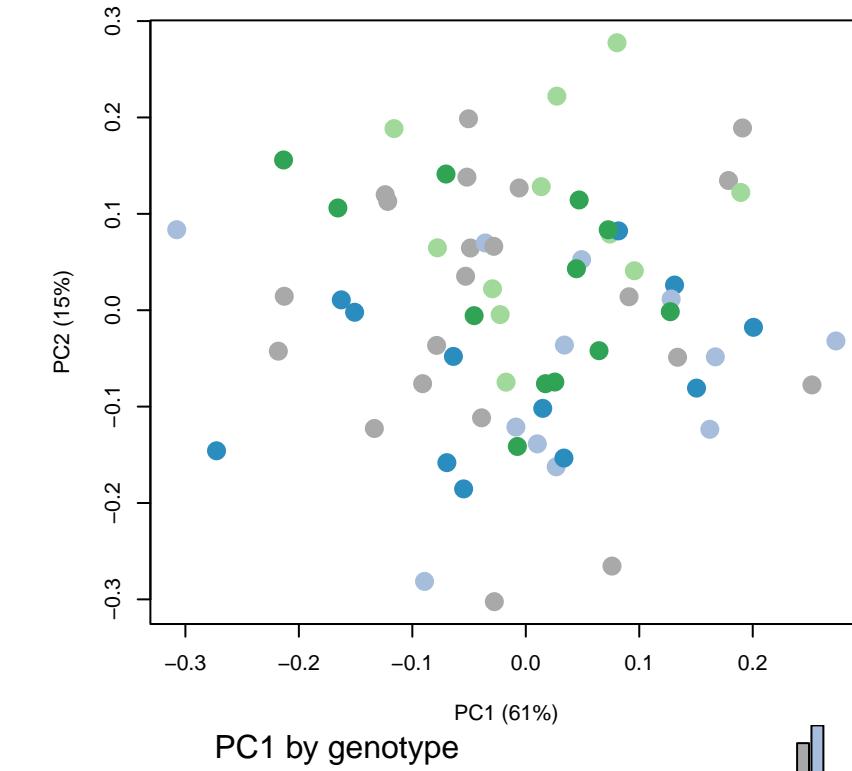
Melanoma



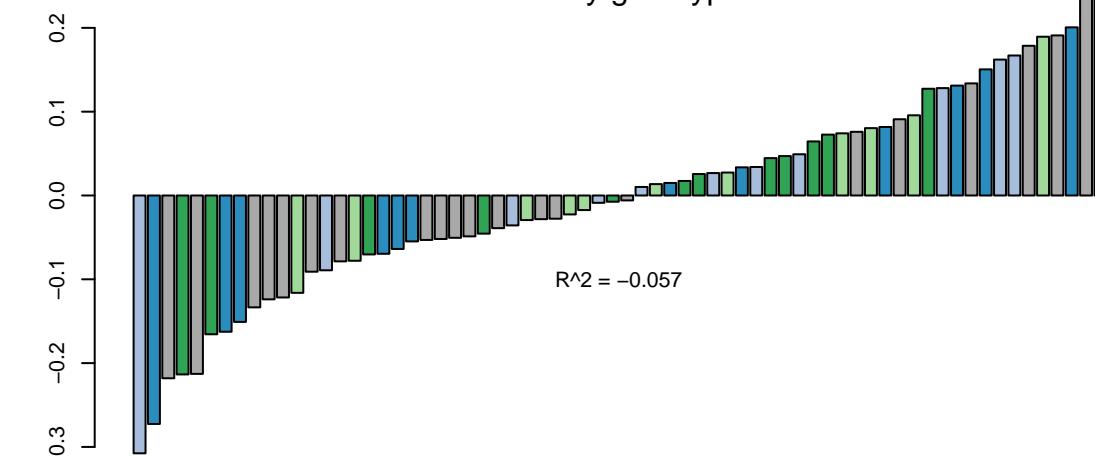
DNA Repair



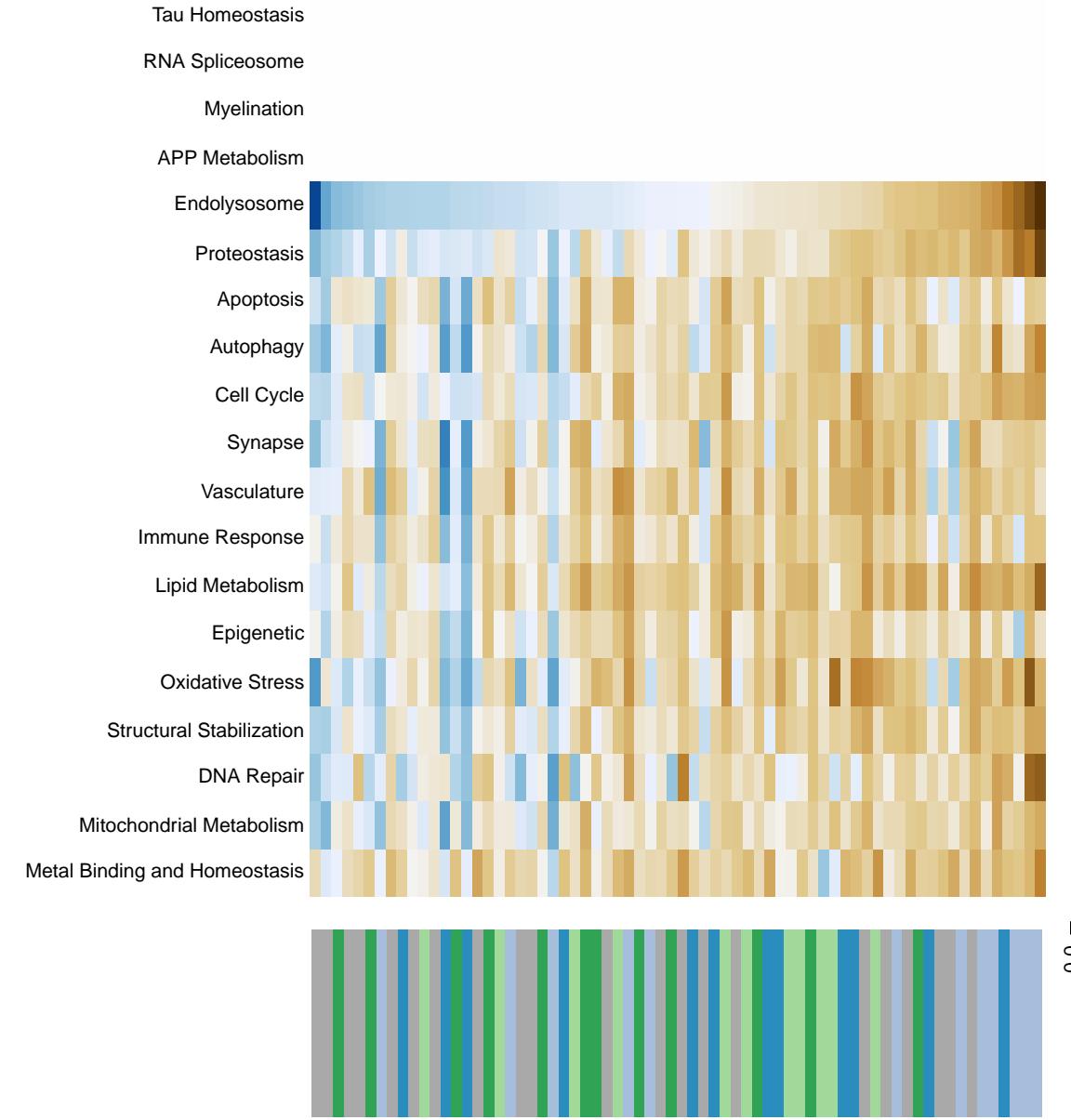
Decomposition



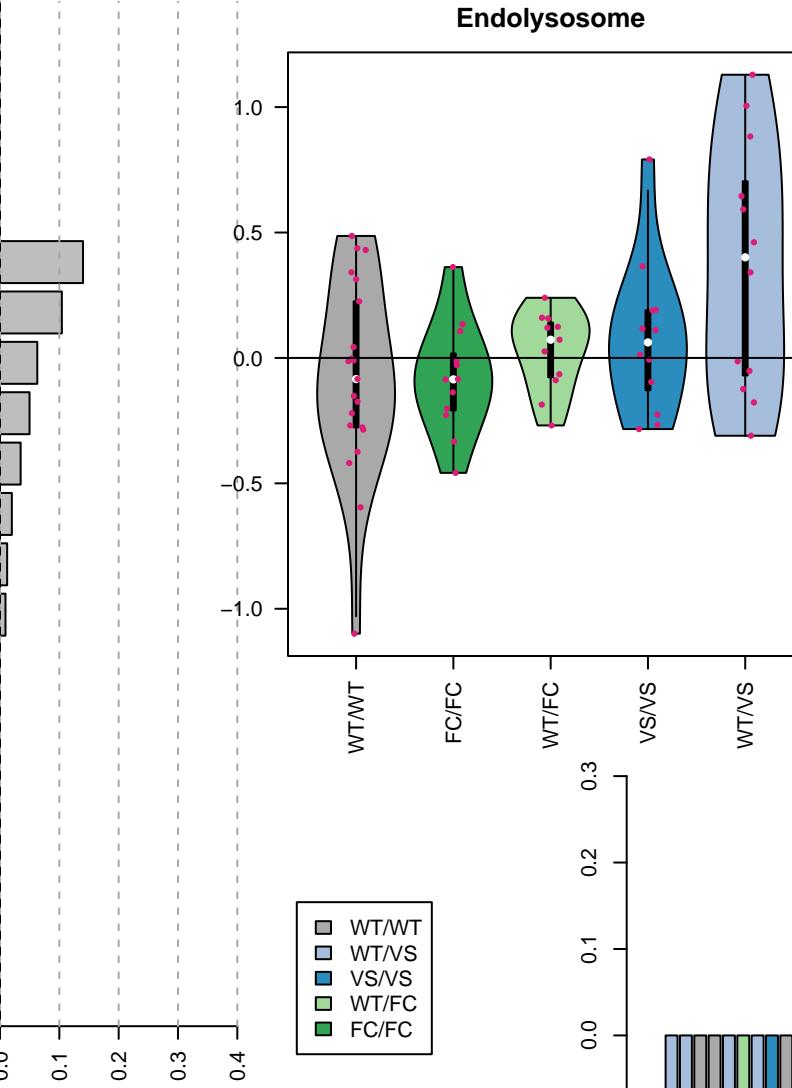
PC1 by genotype



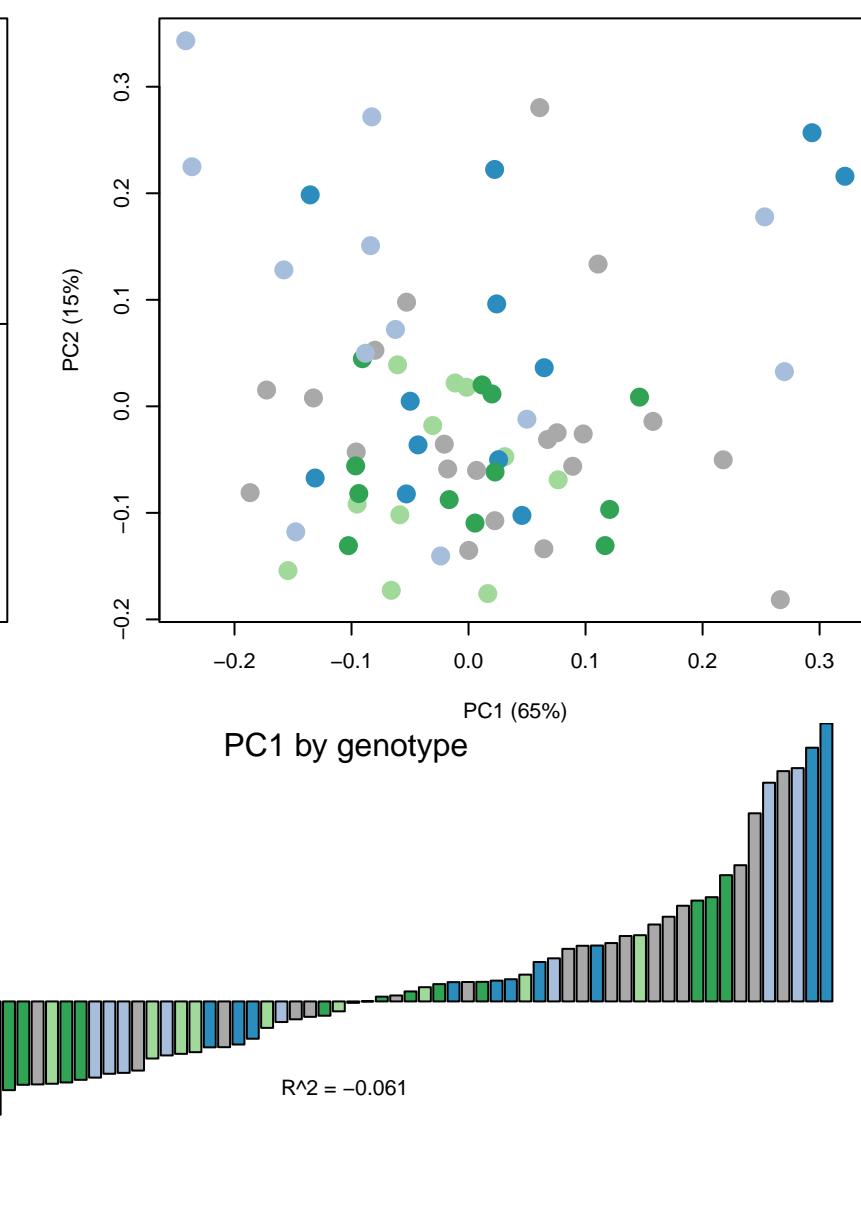
Renal cell carcinoma



Endlysosome

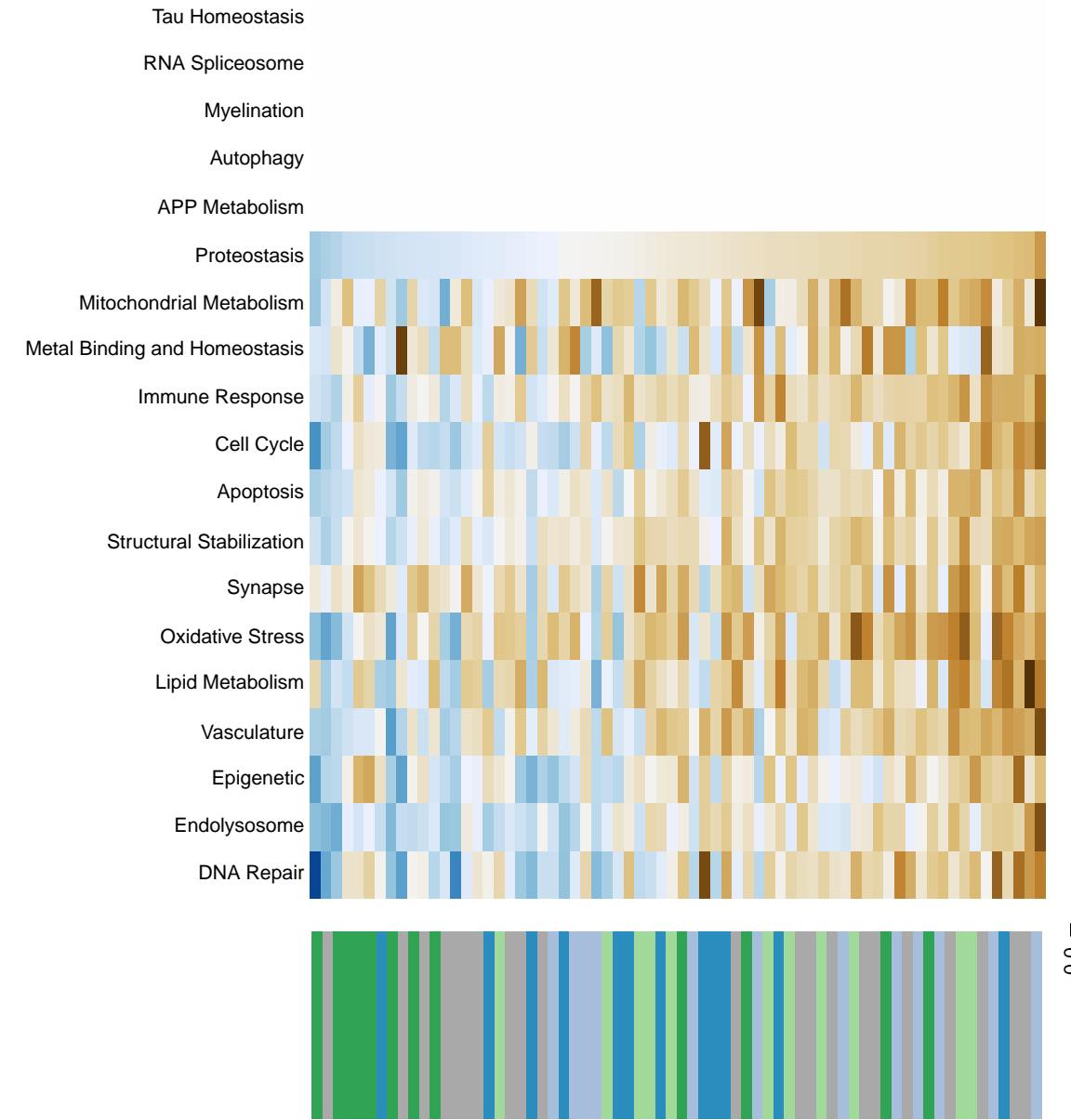


Decomposition

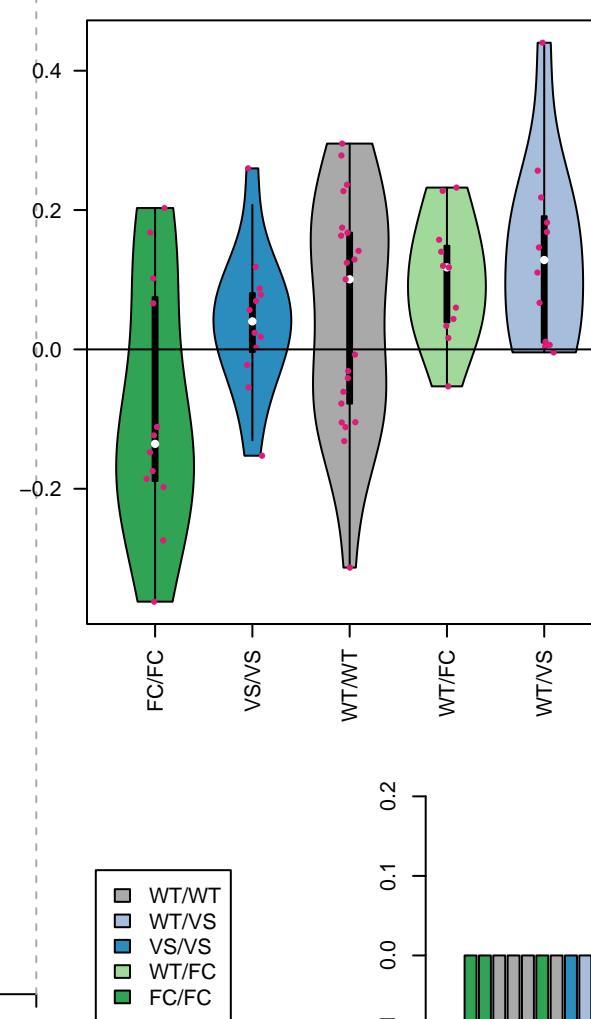


PC1 by genotype

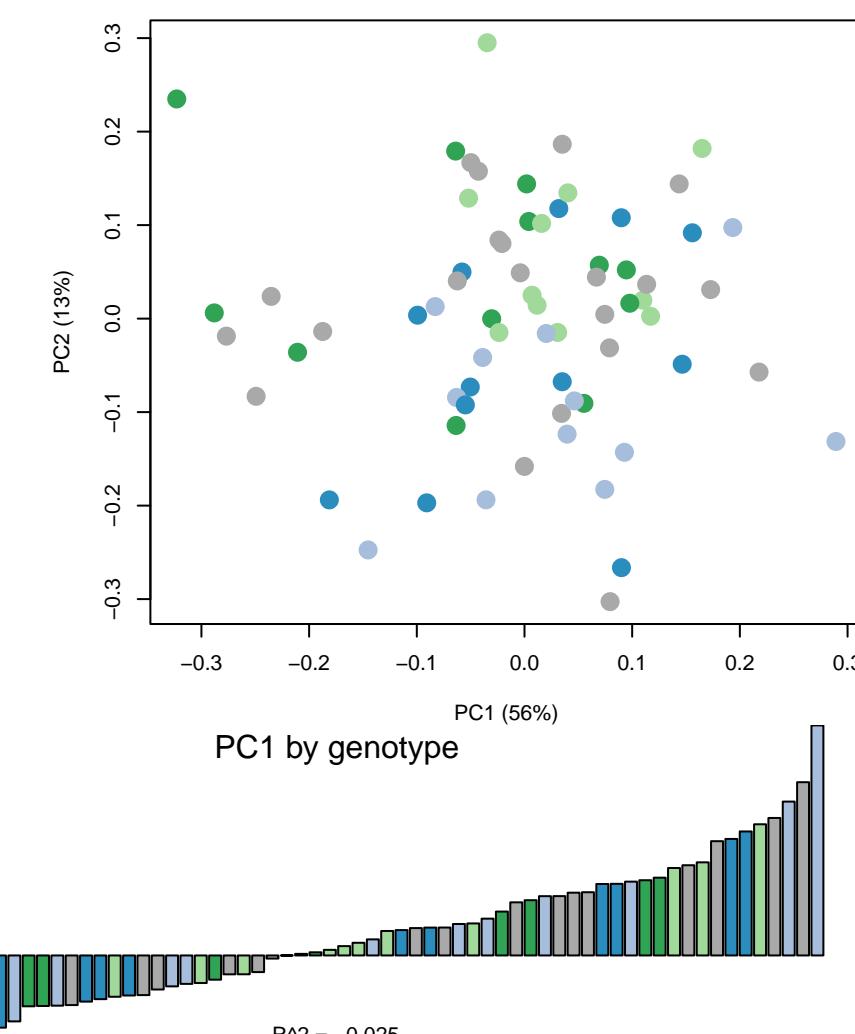
Bladder cancer



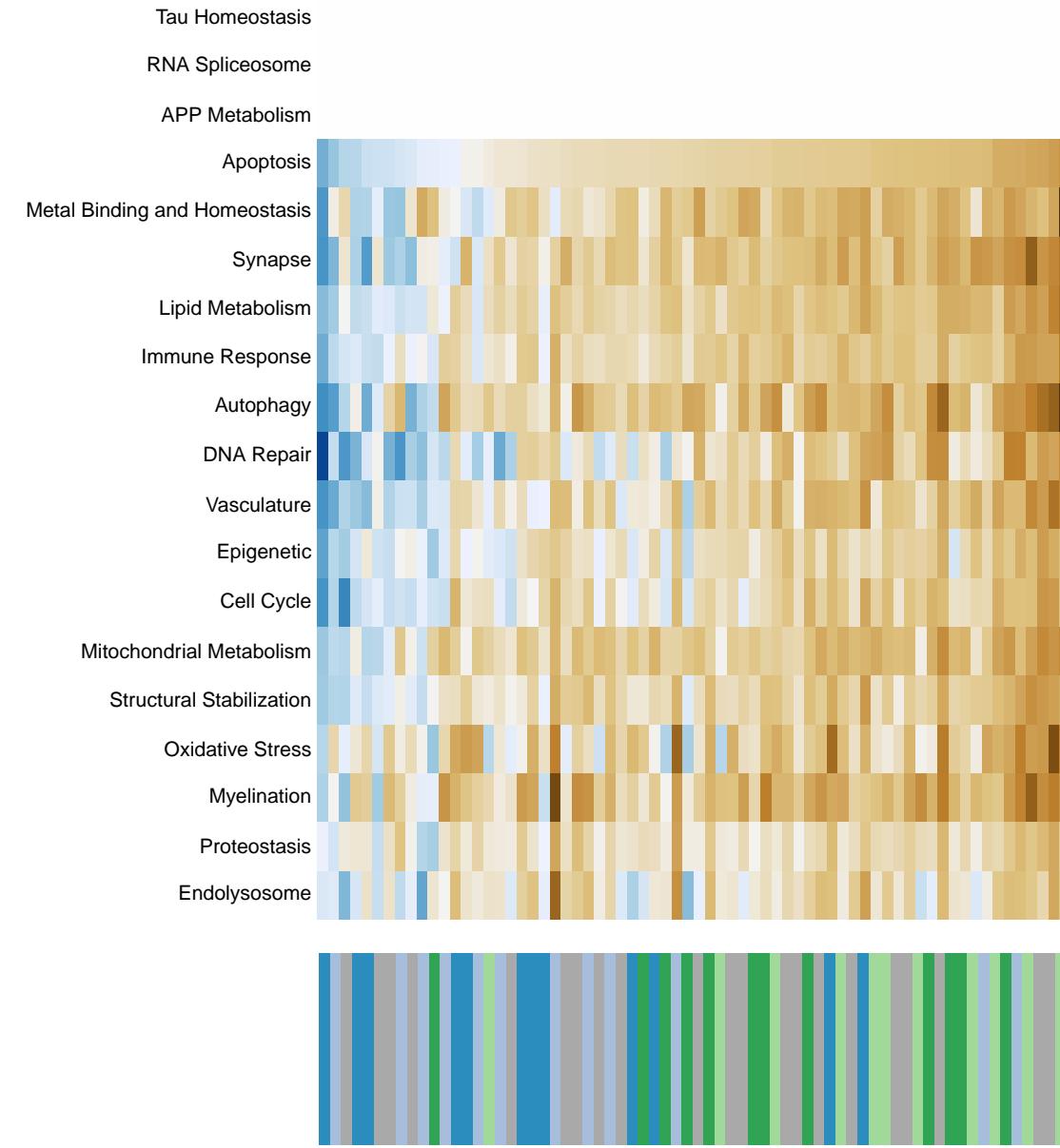
Proteostasis



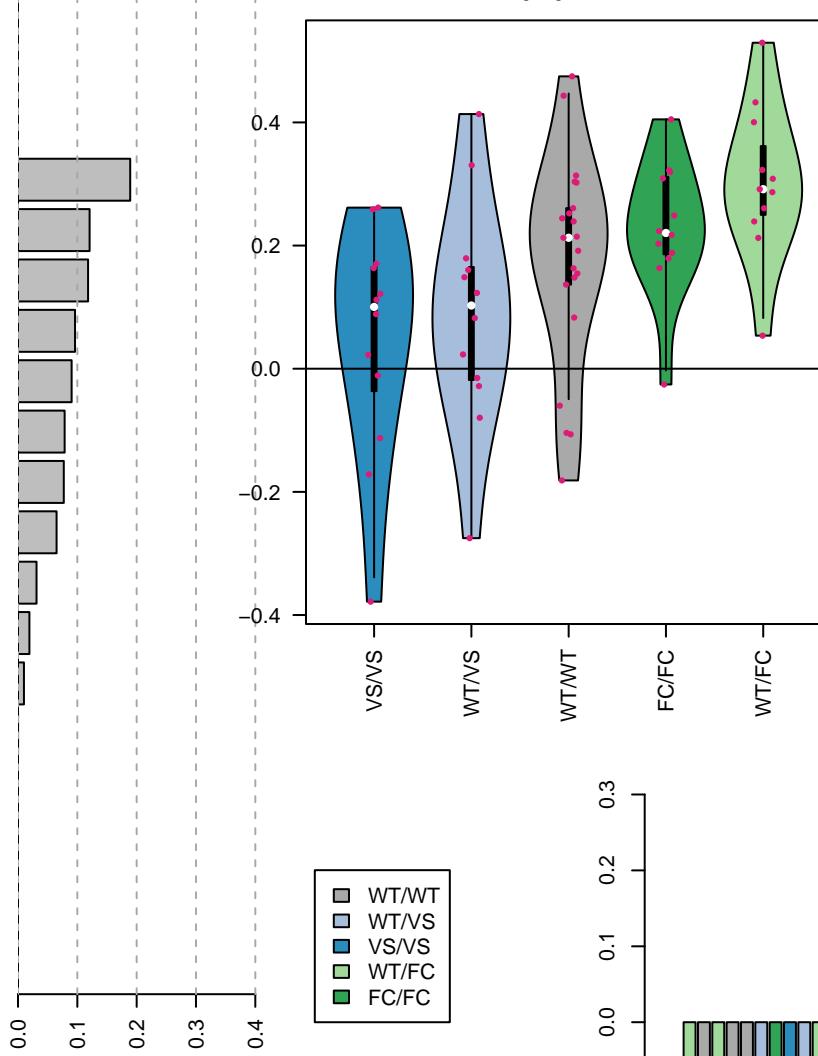
Decomposition



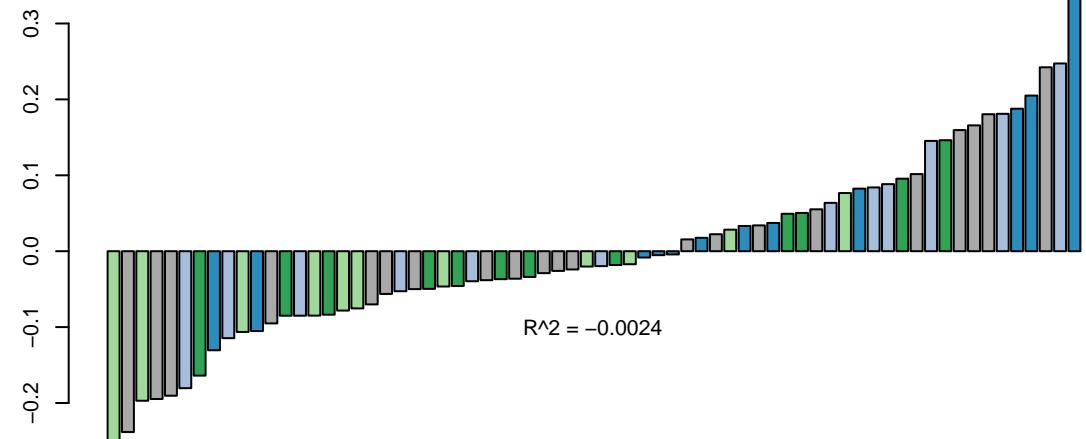
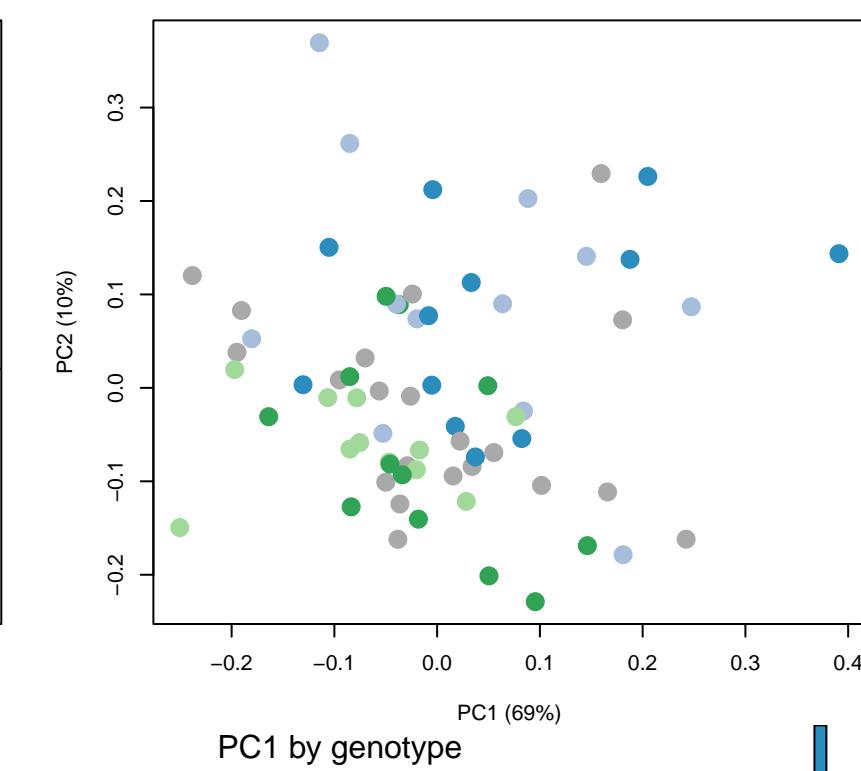
Prostate cancer



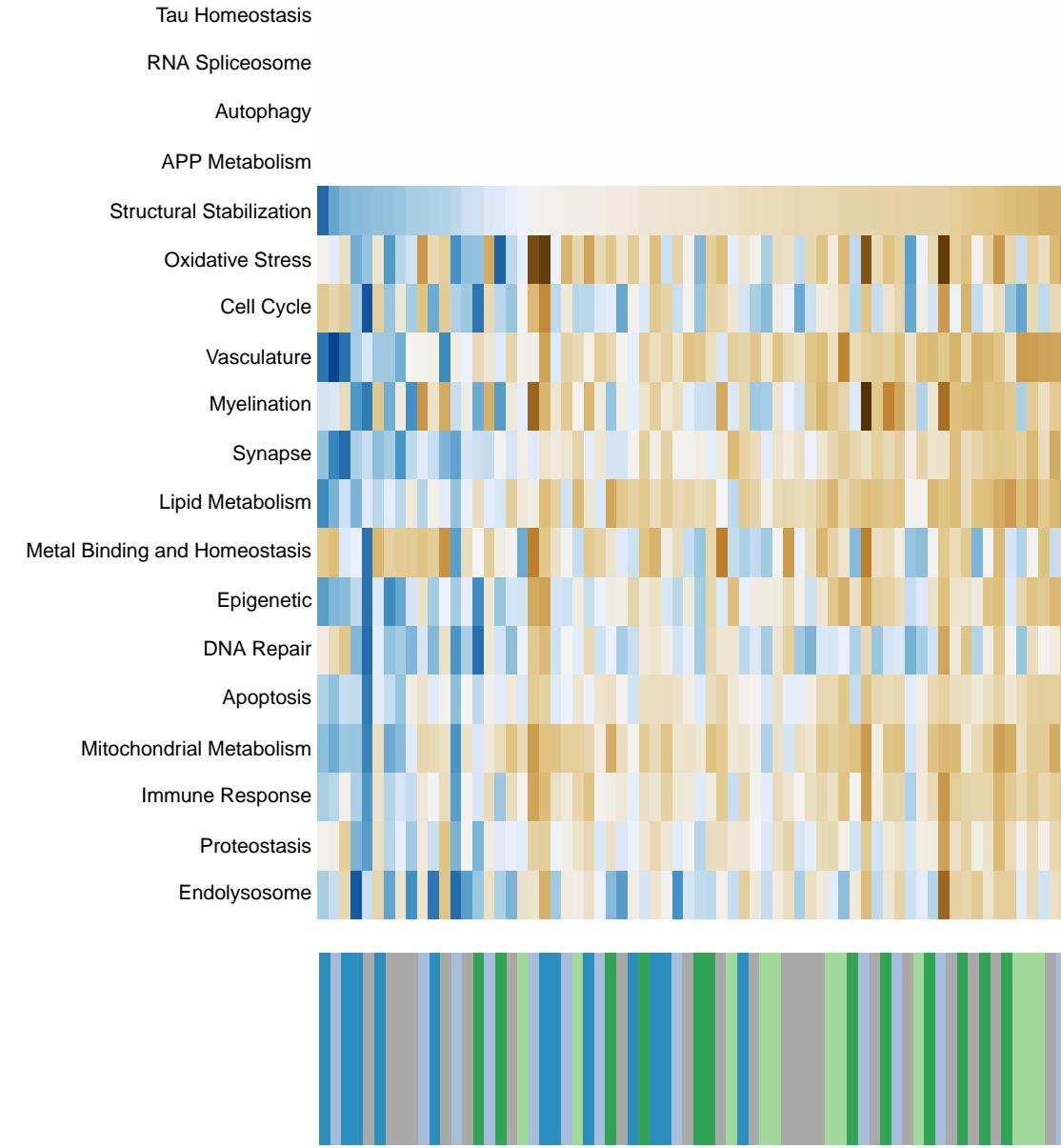
Apoptosis



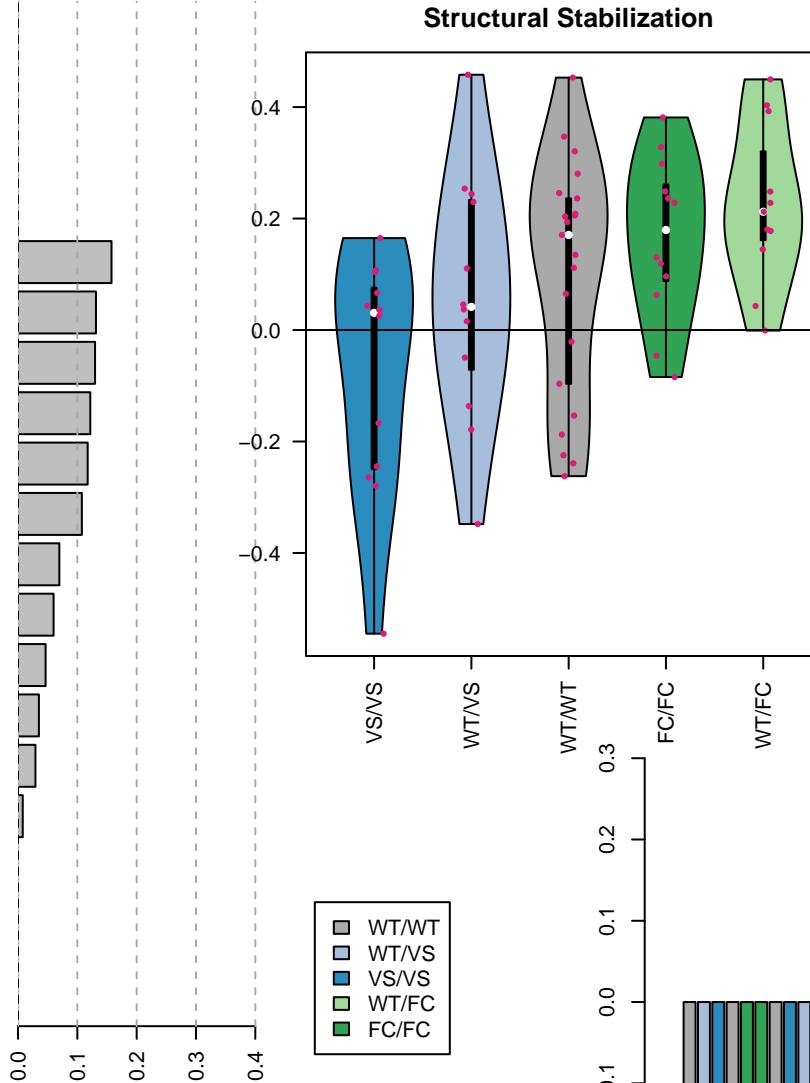
Decomposition



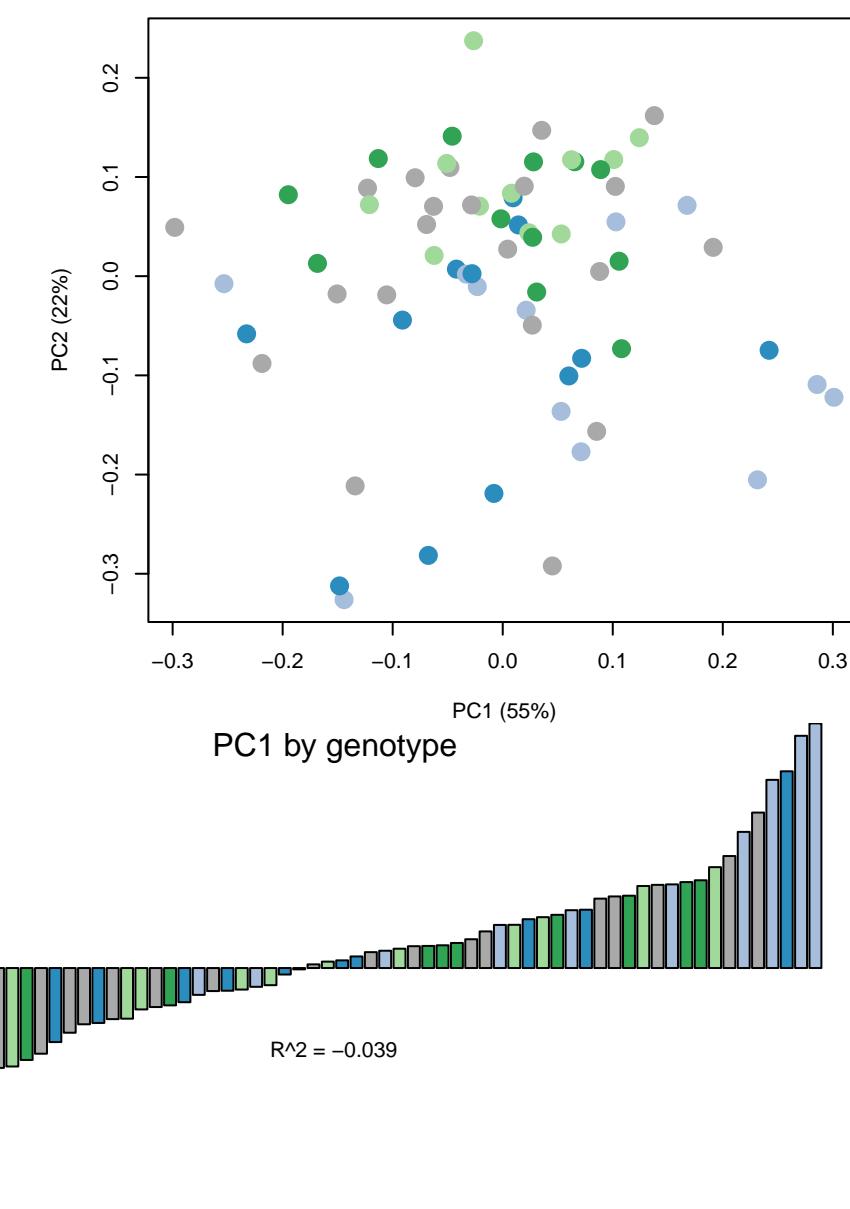
Endometrial cancer



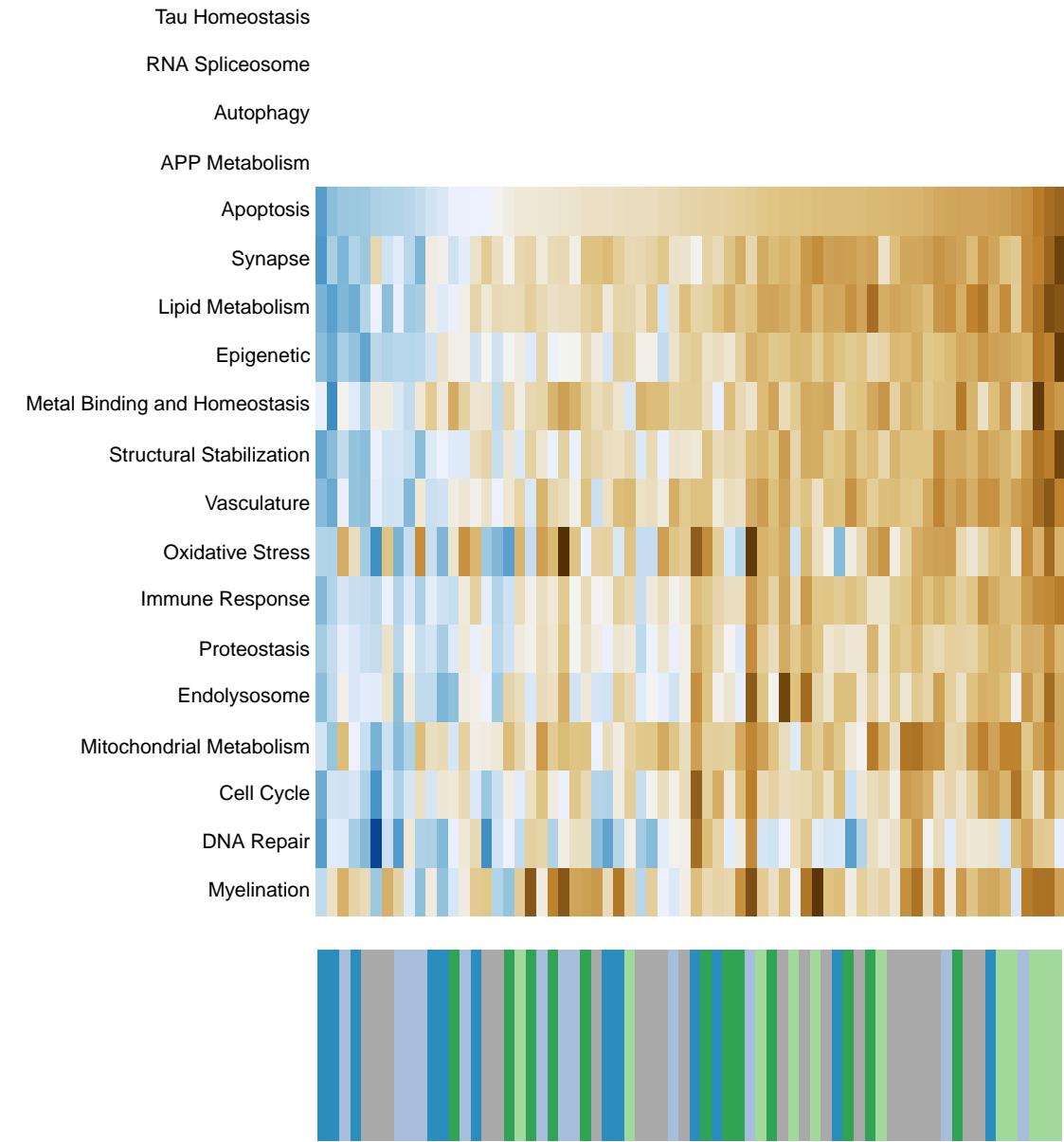
Structural Stabilization



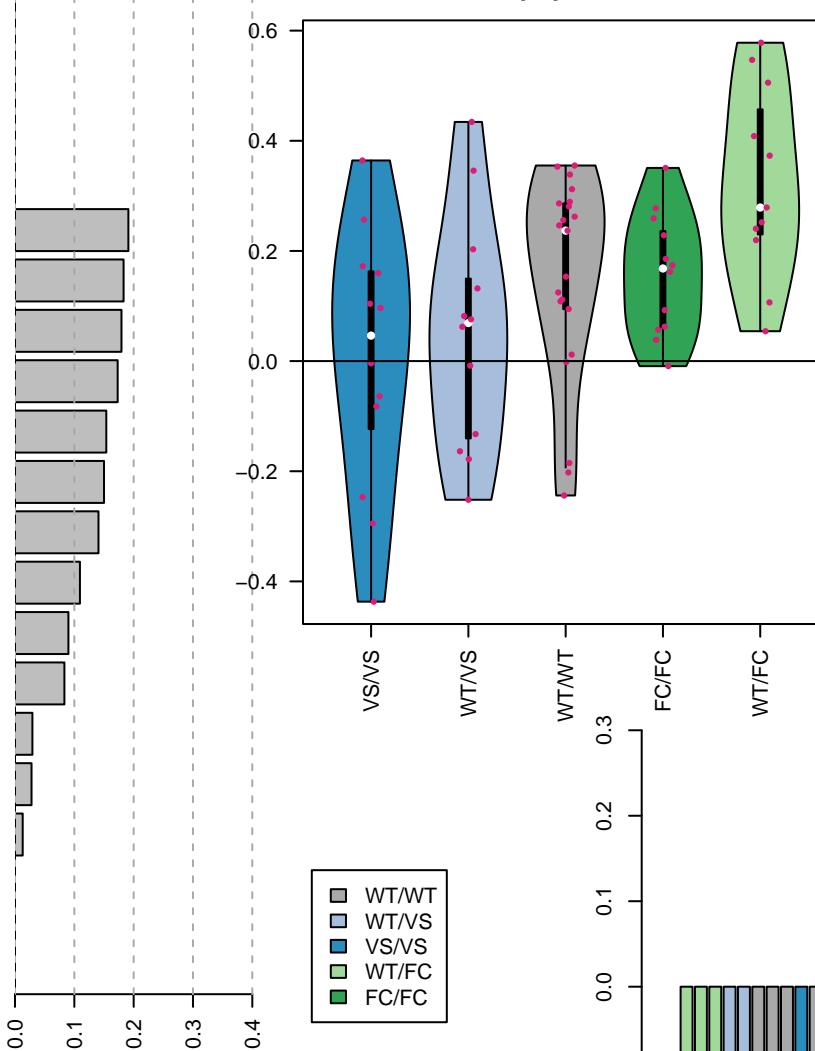
Decomposition



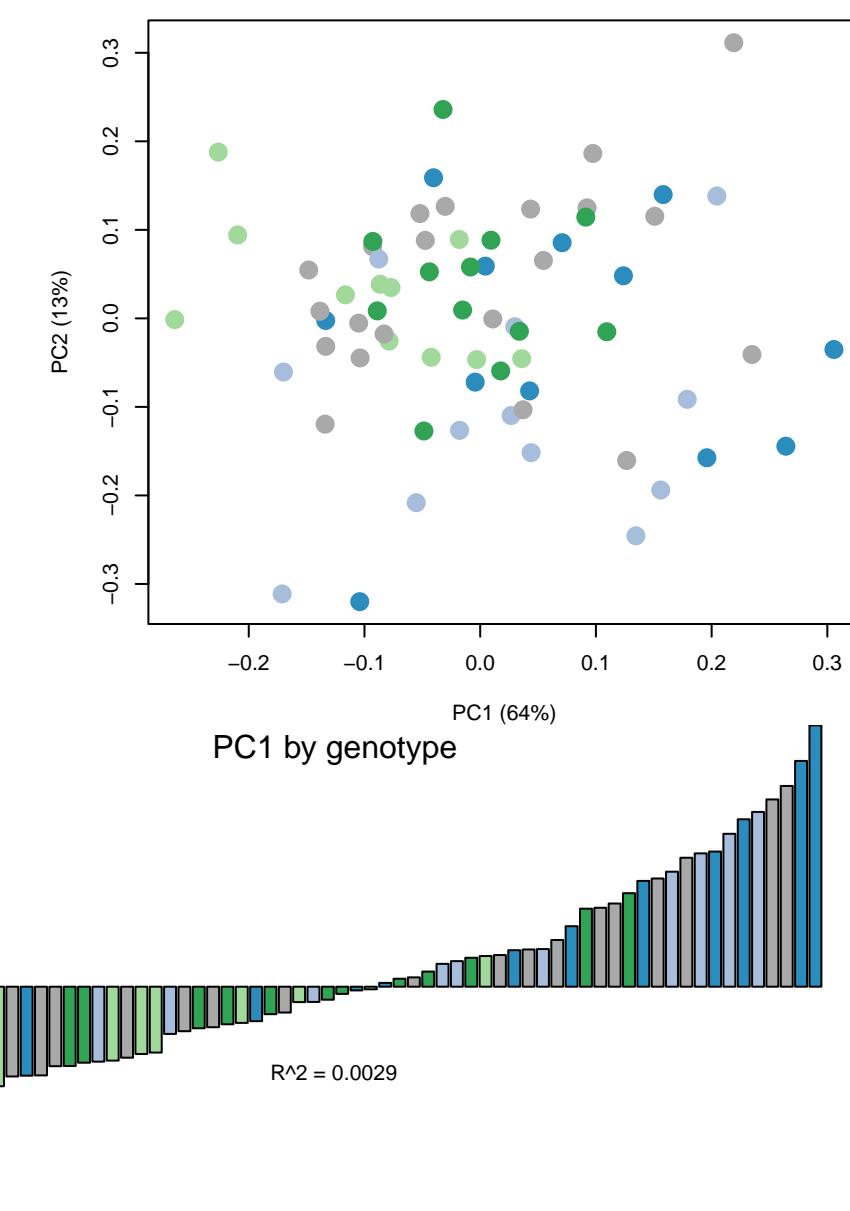
Breast cancer



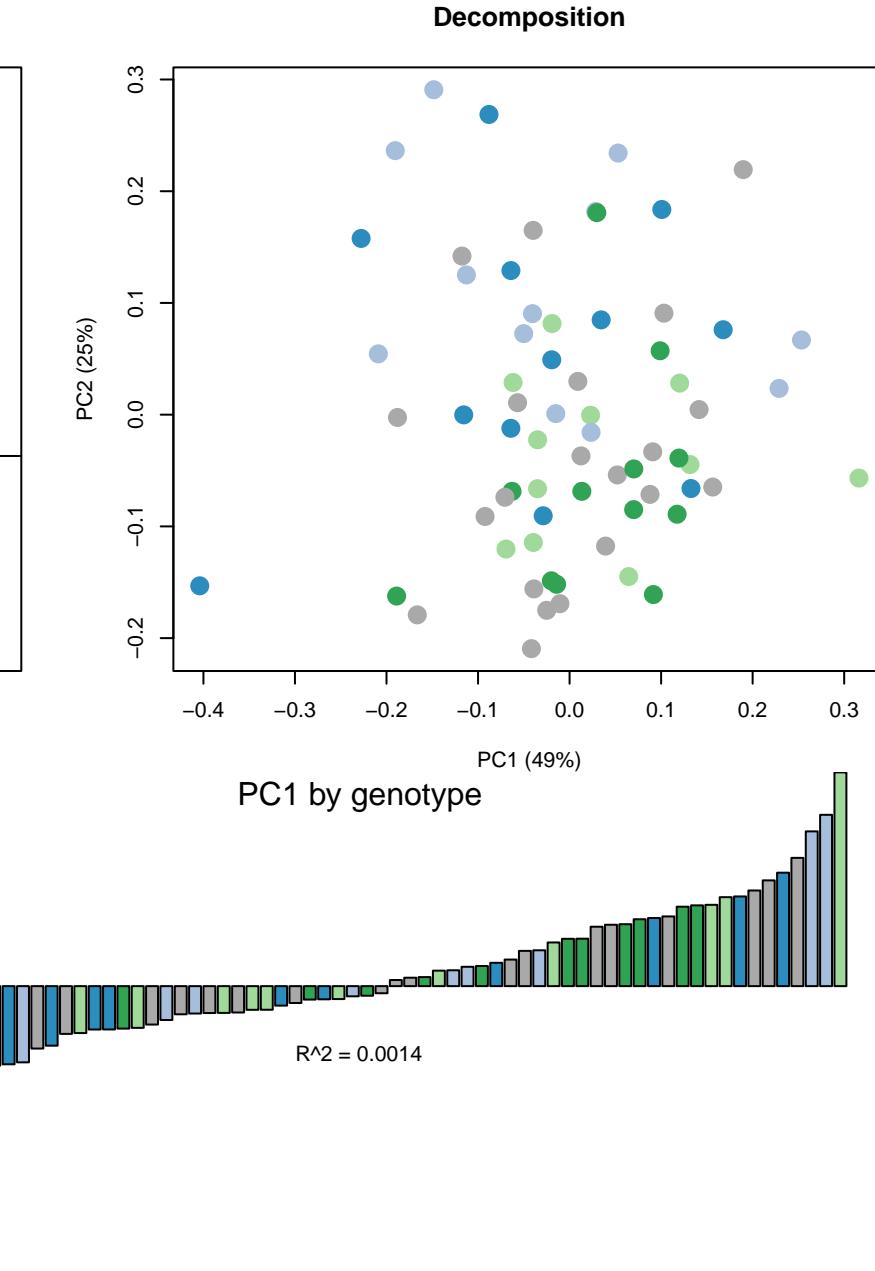
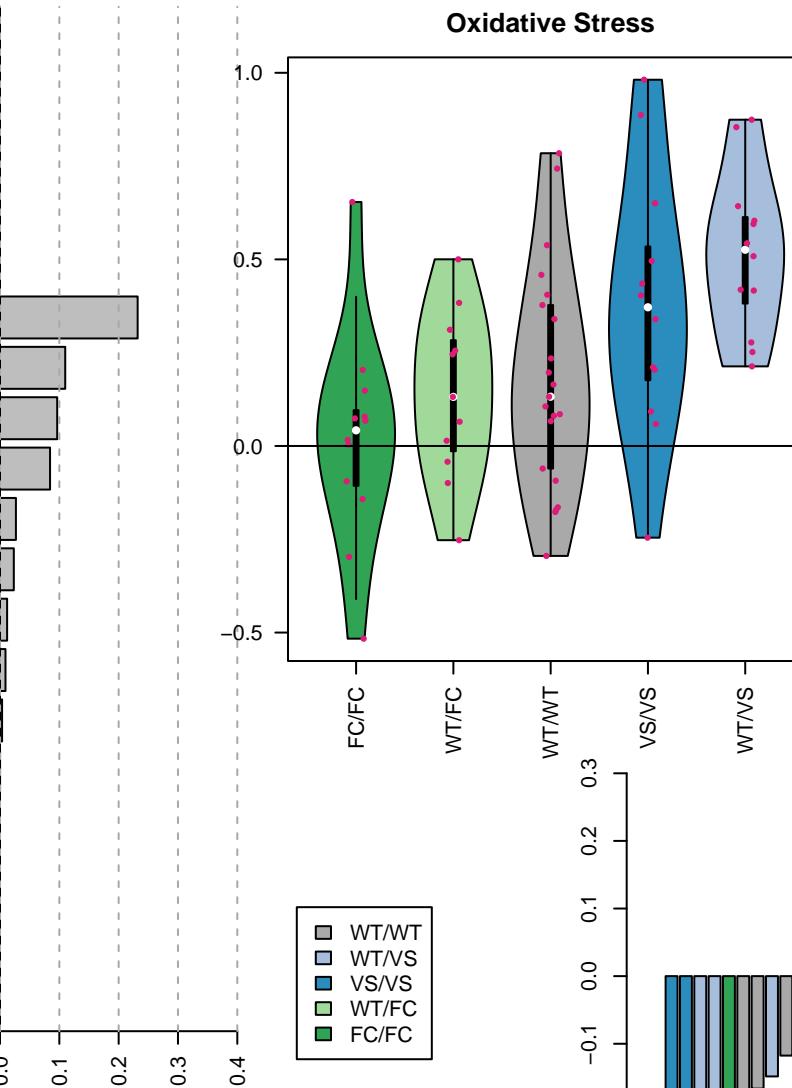
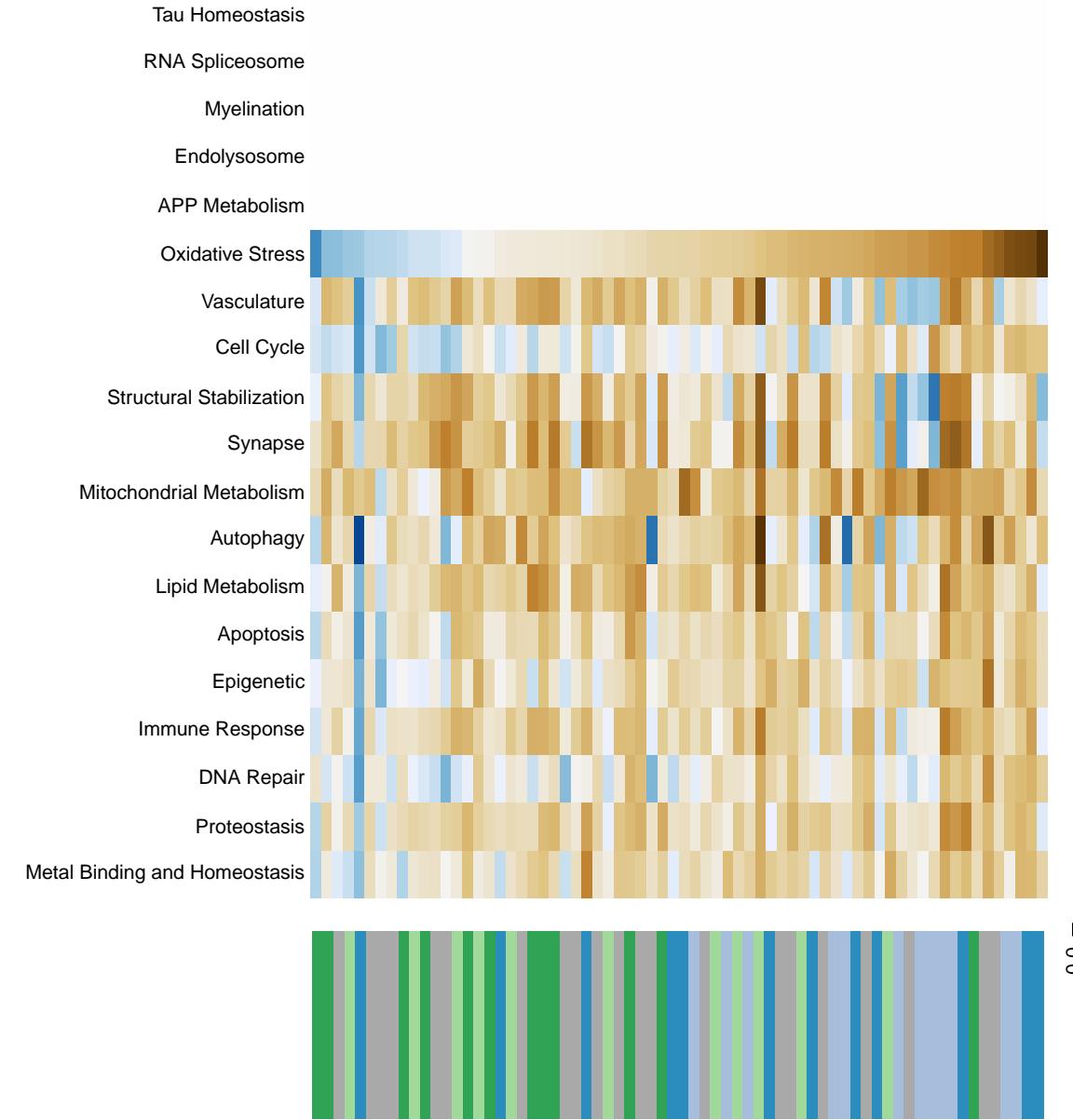
Apoptosis



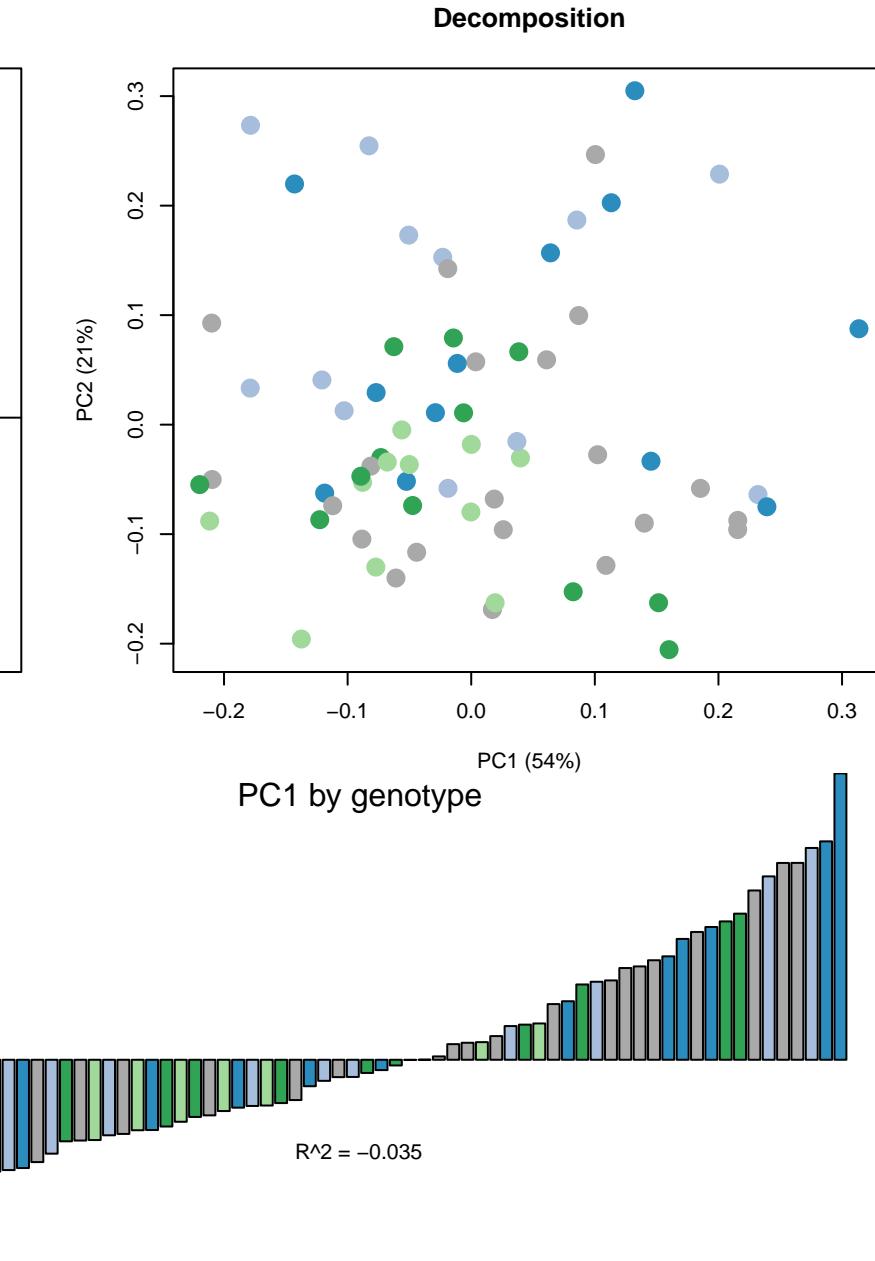
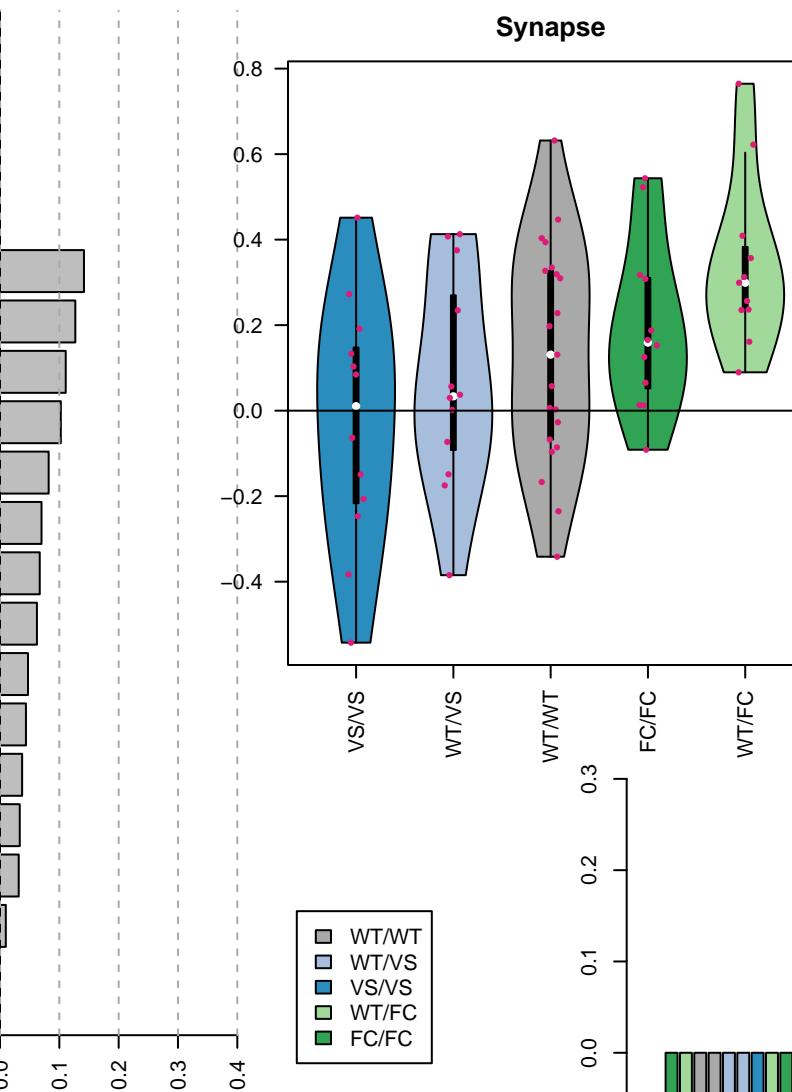
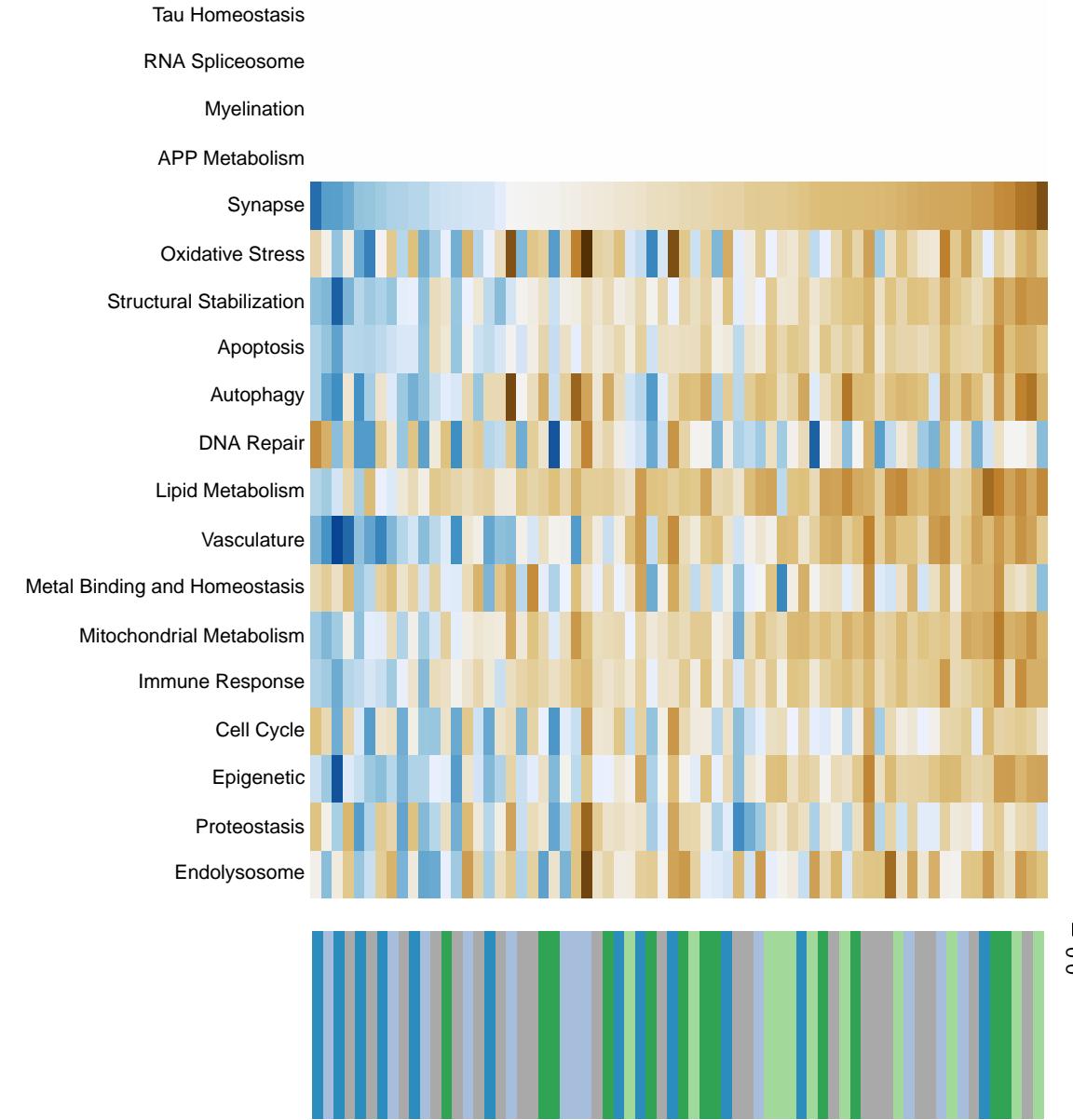
Decomposition



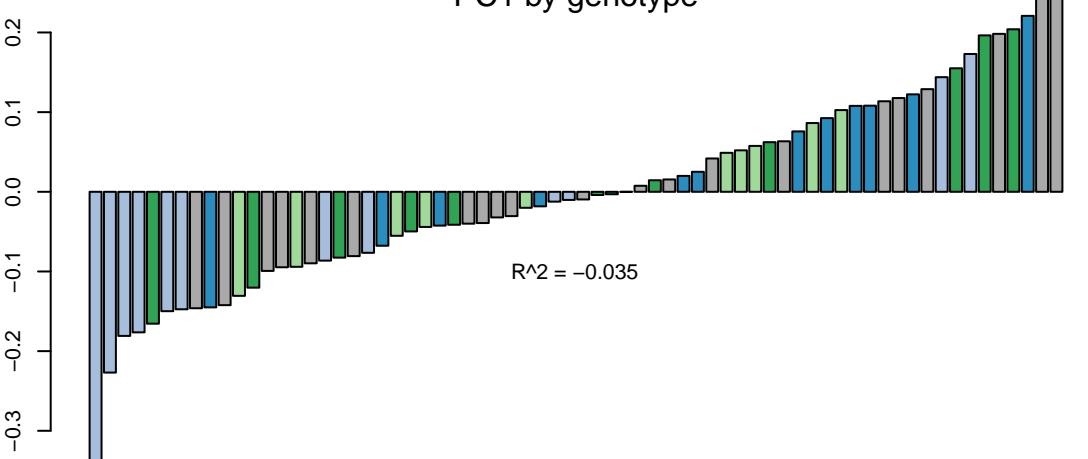
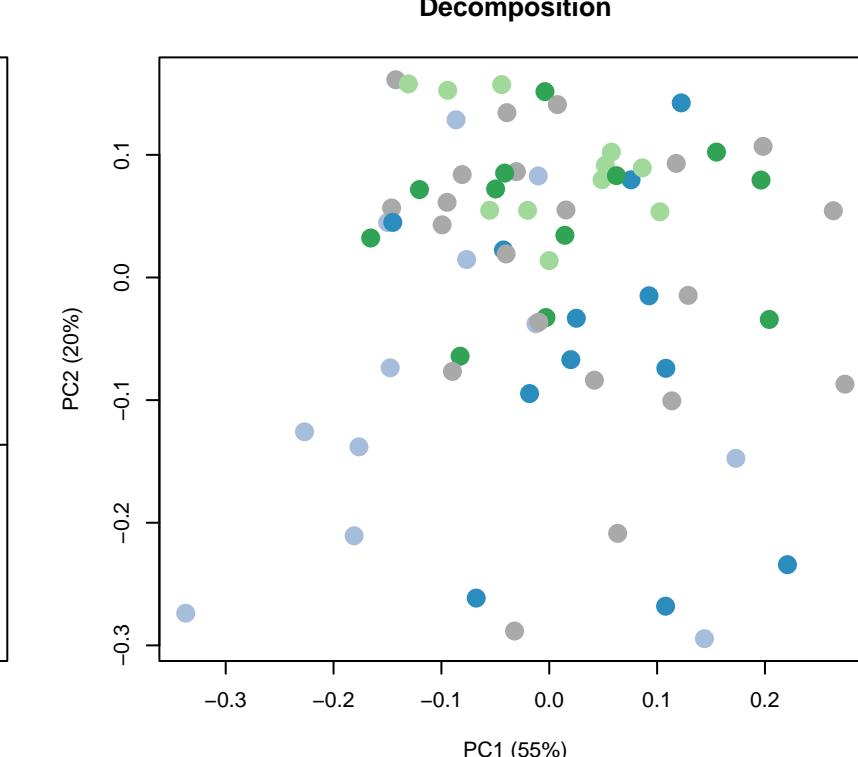
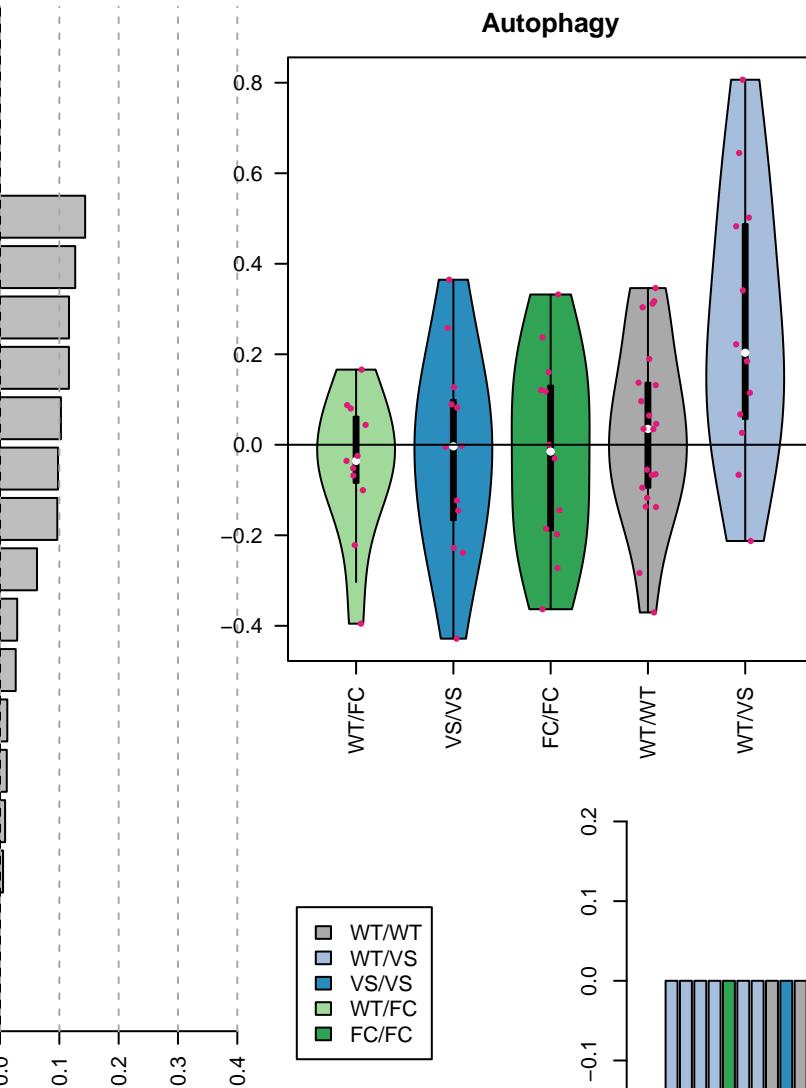
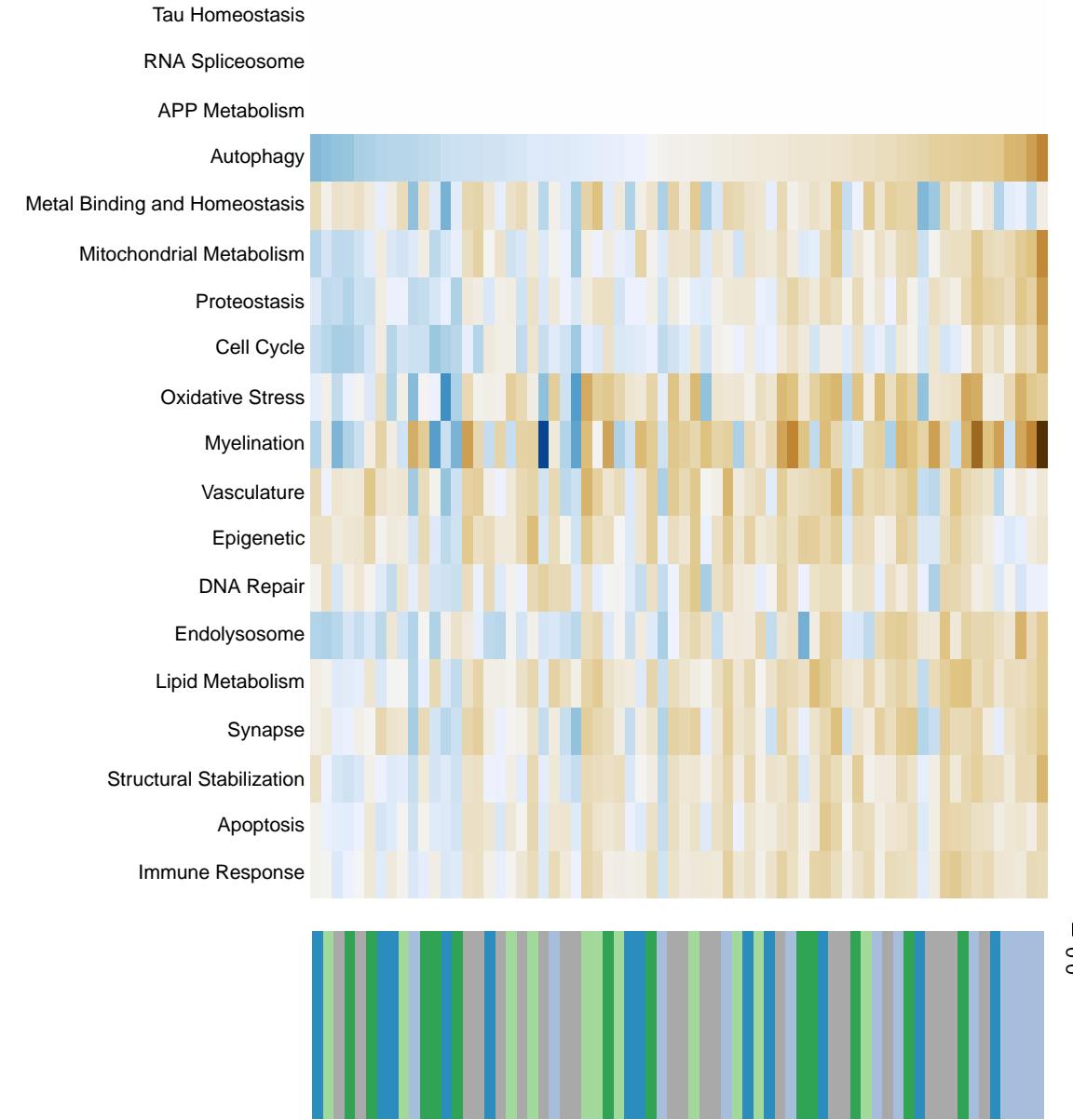
Small cell lung cancer



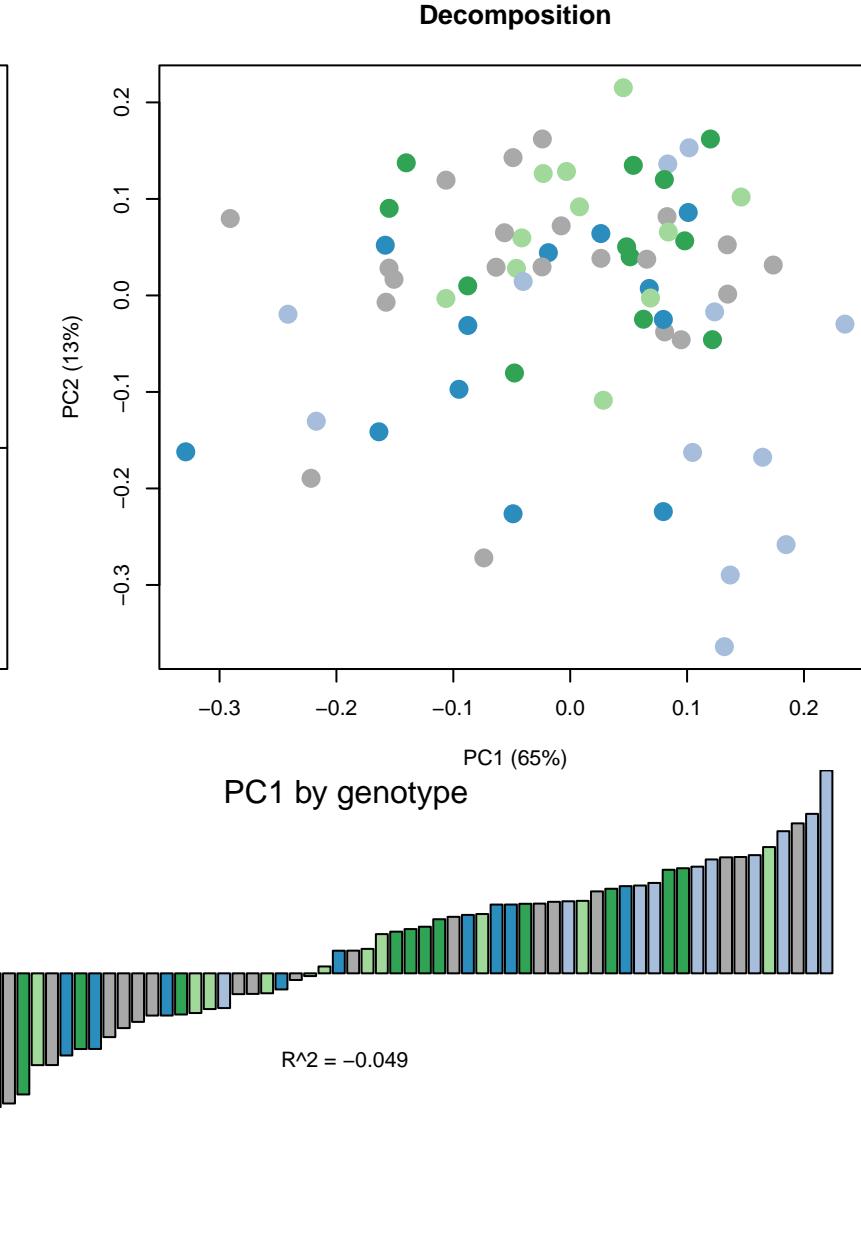
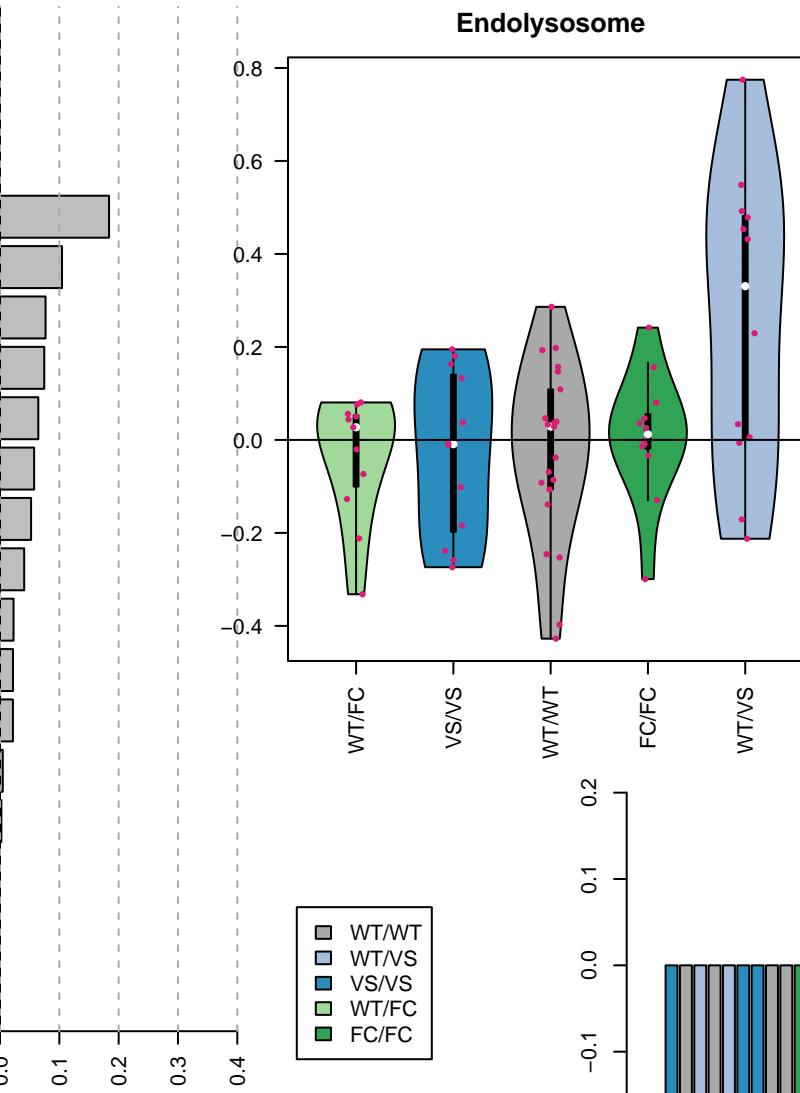
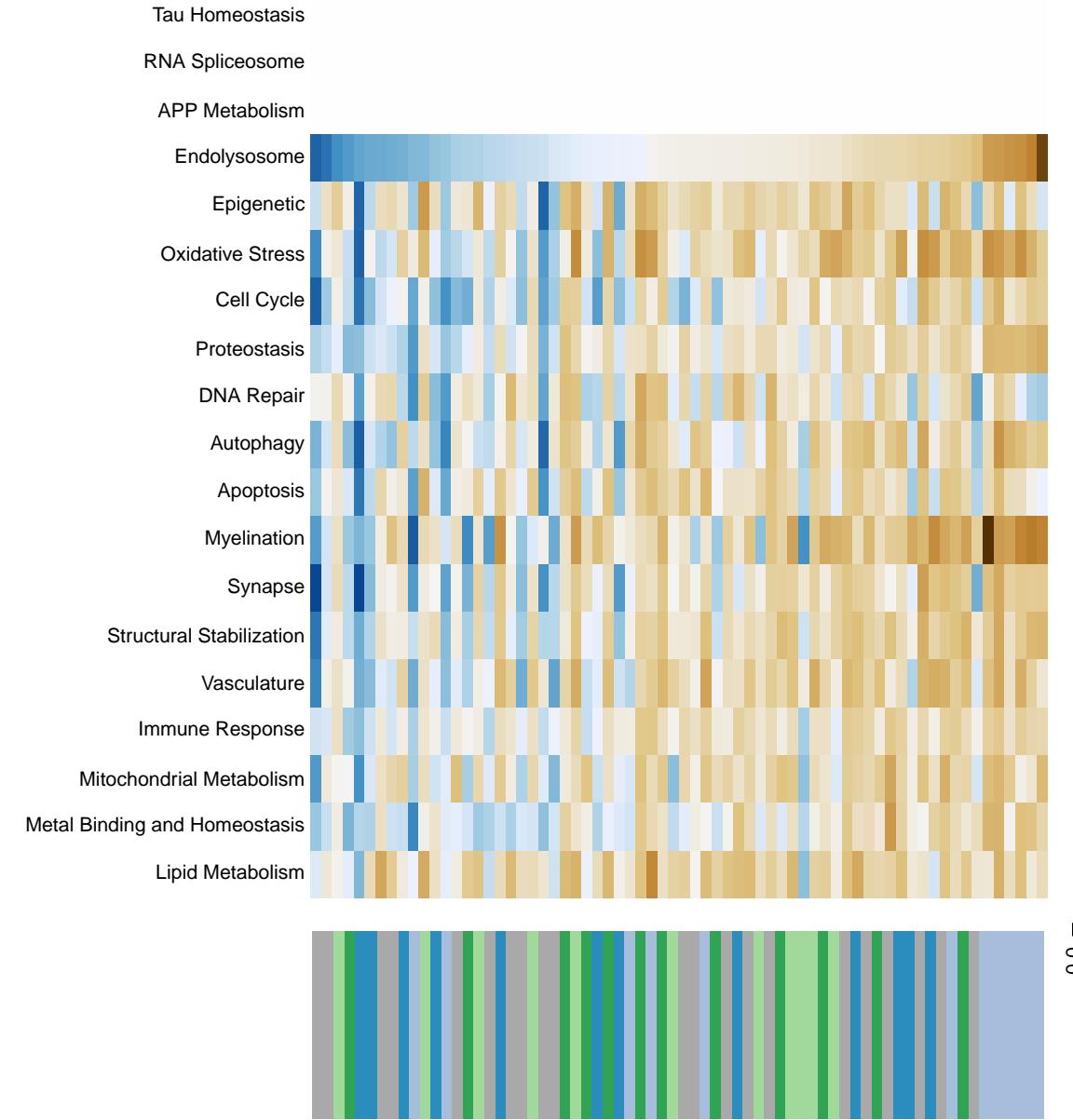
Non-small cell lung cancer



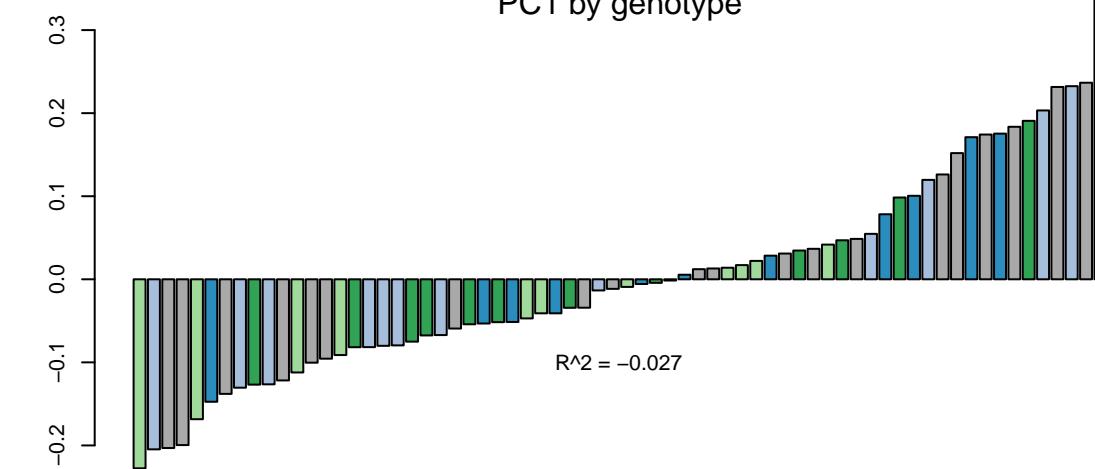
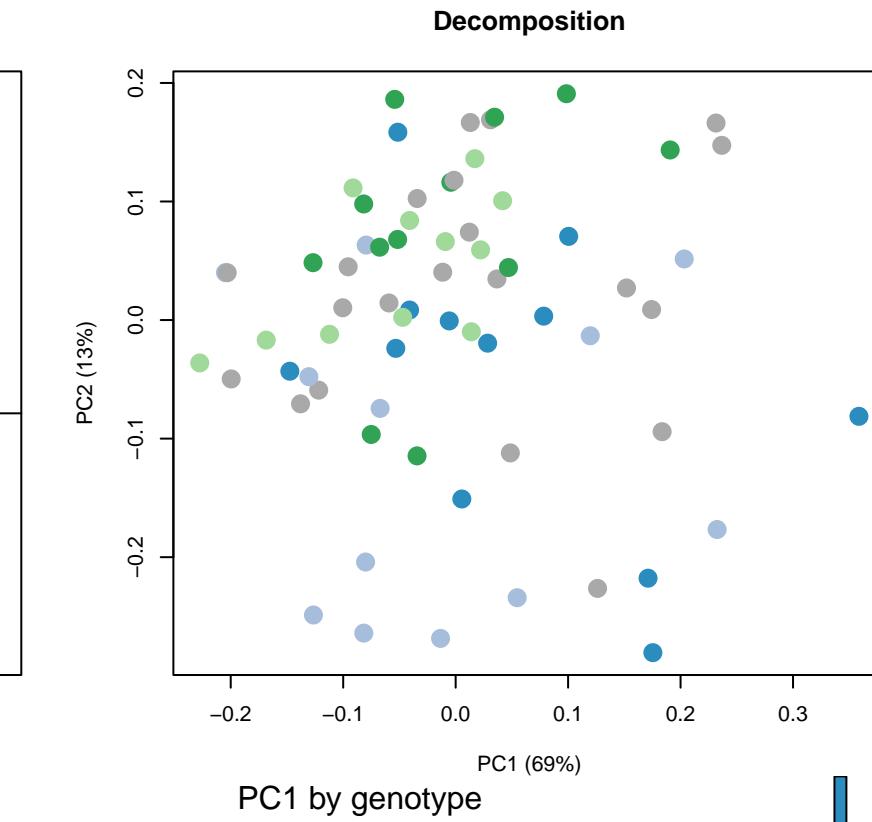
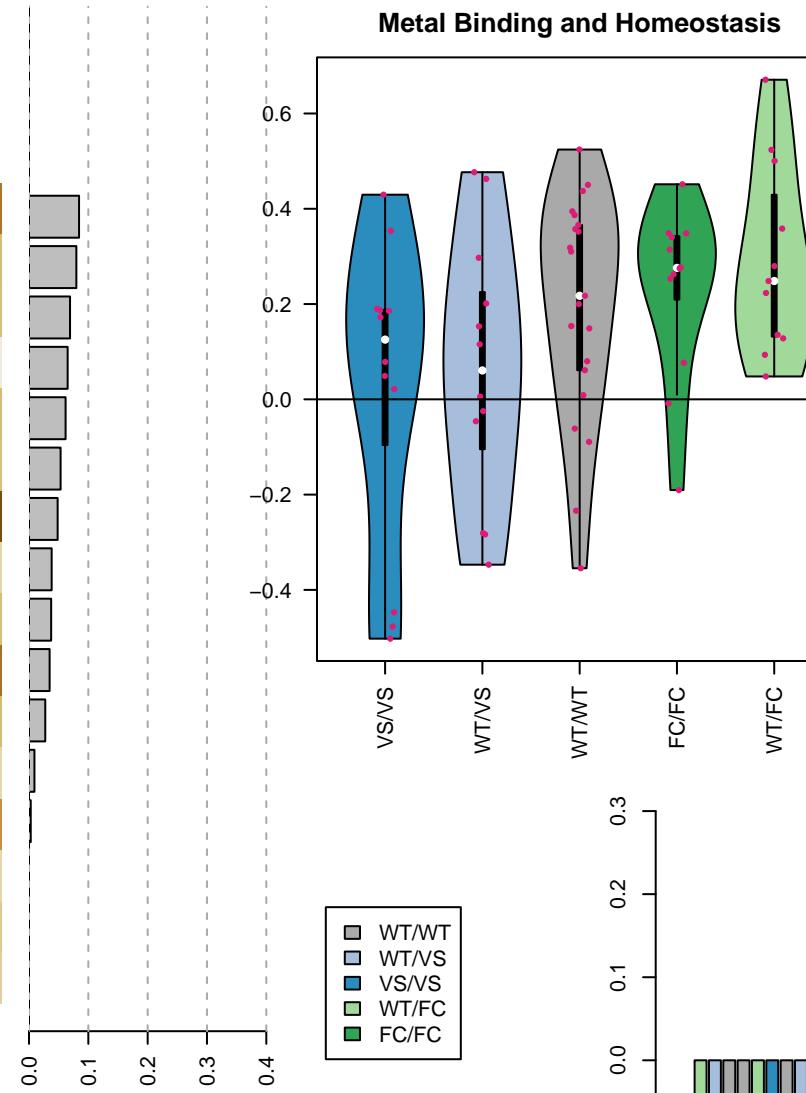
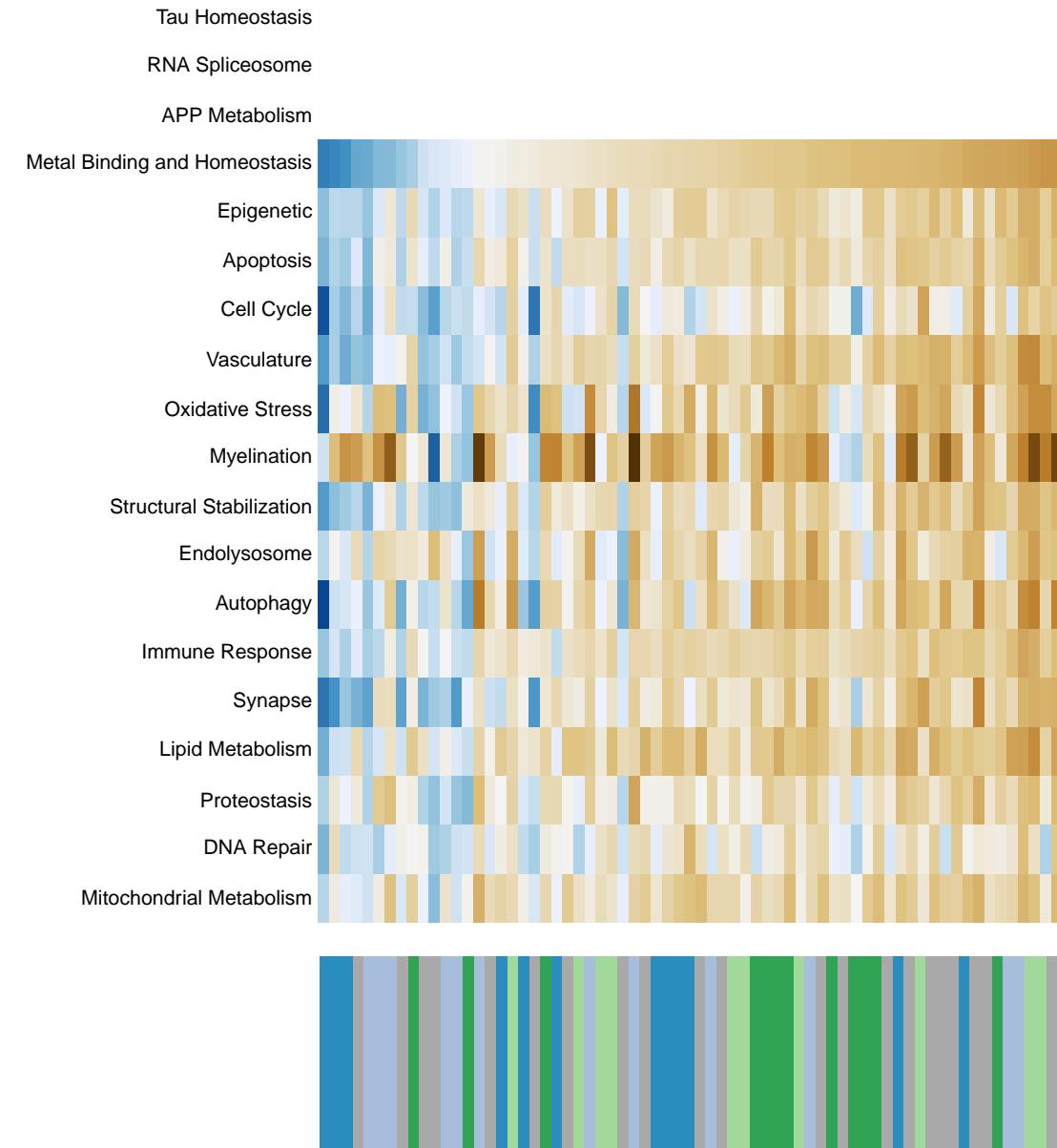
Human T-cell leukemia virus 1 infection



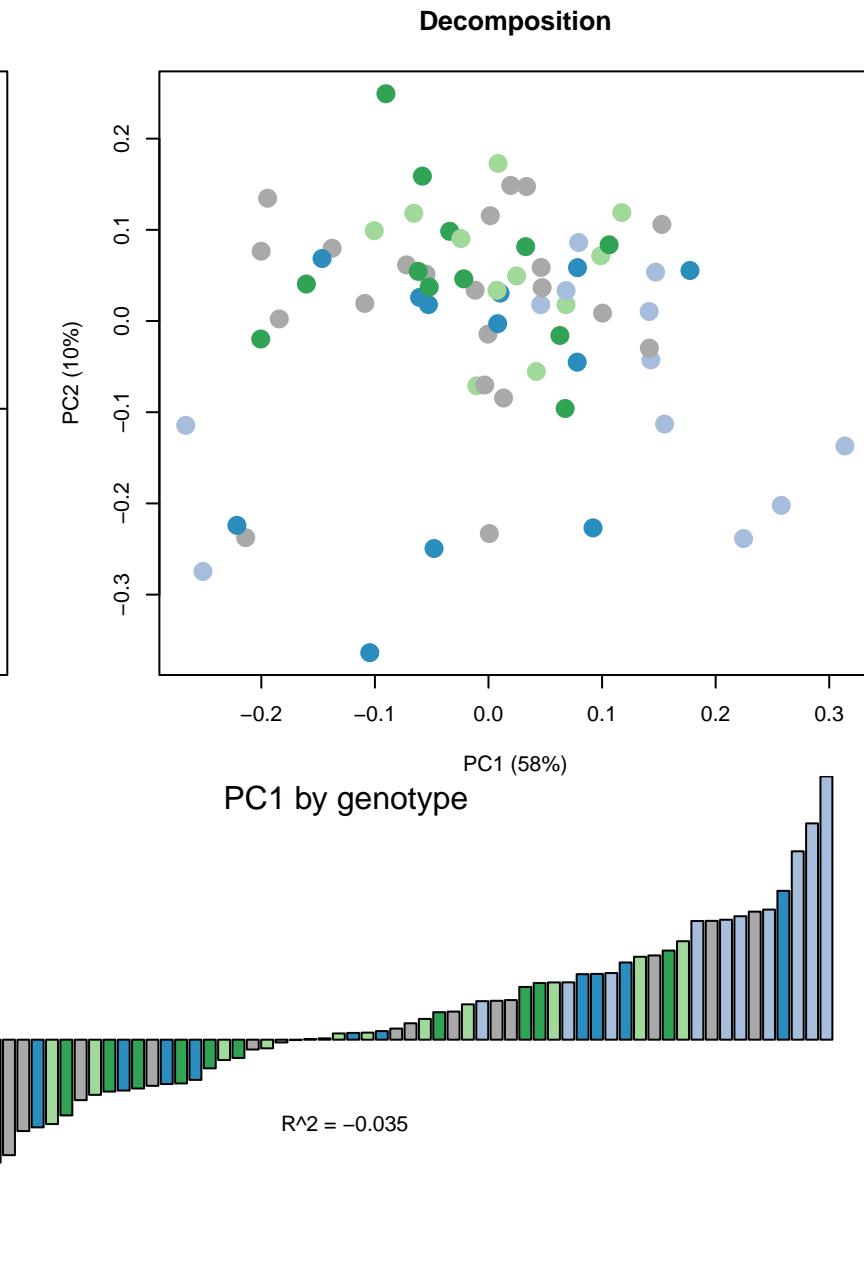
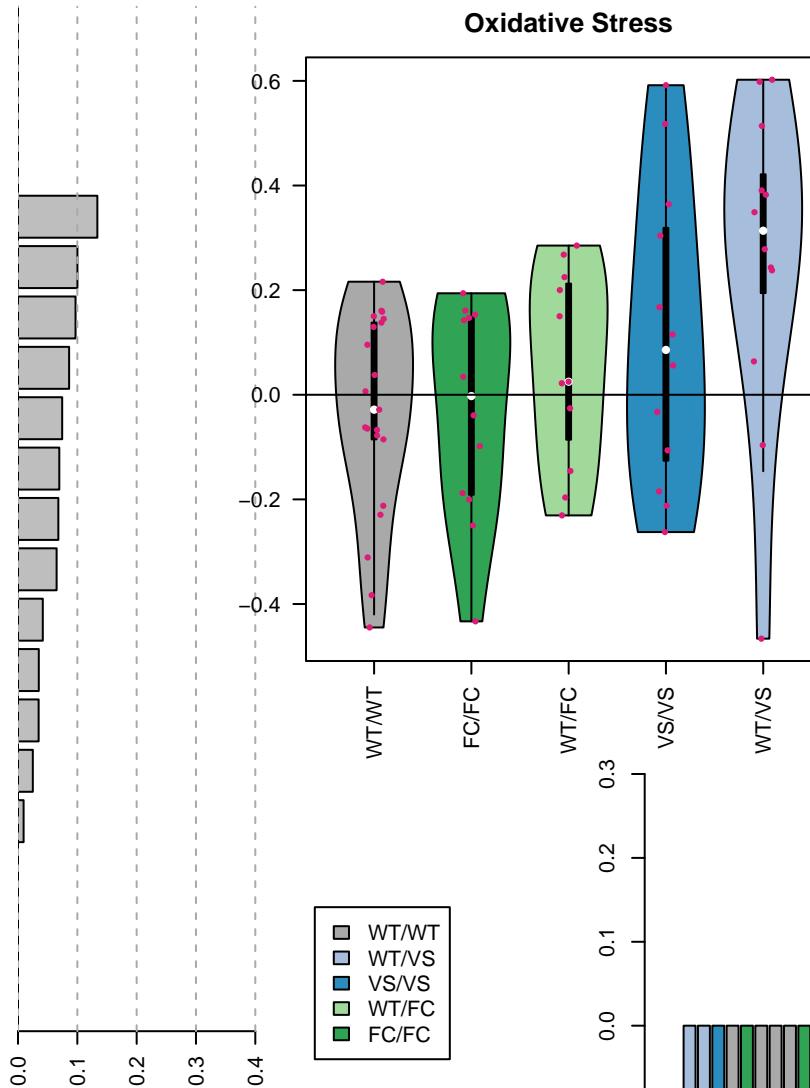
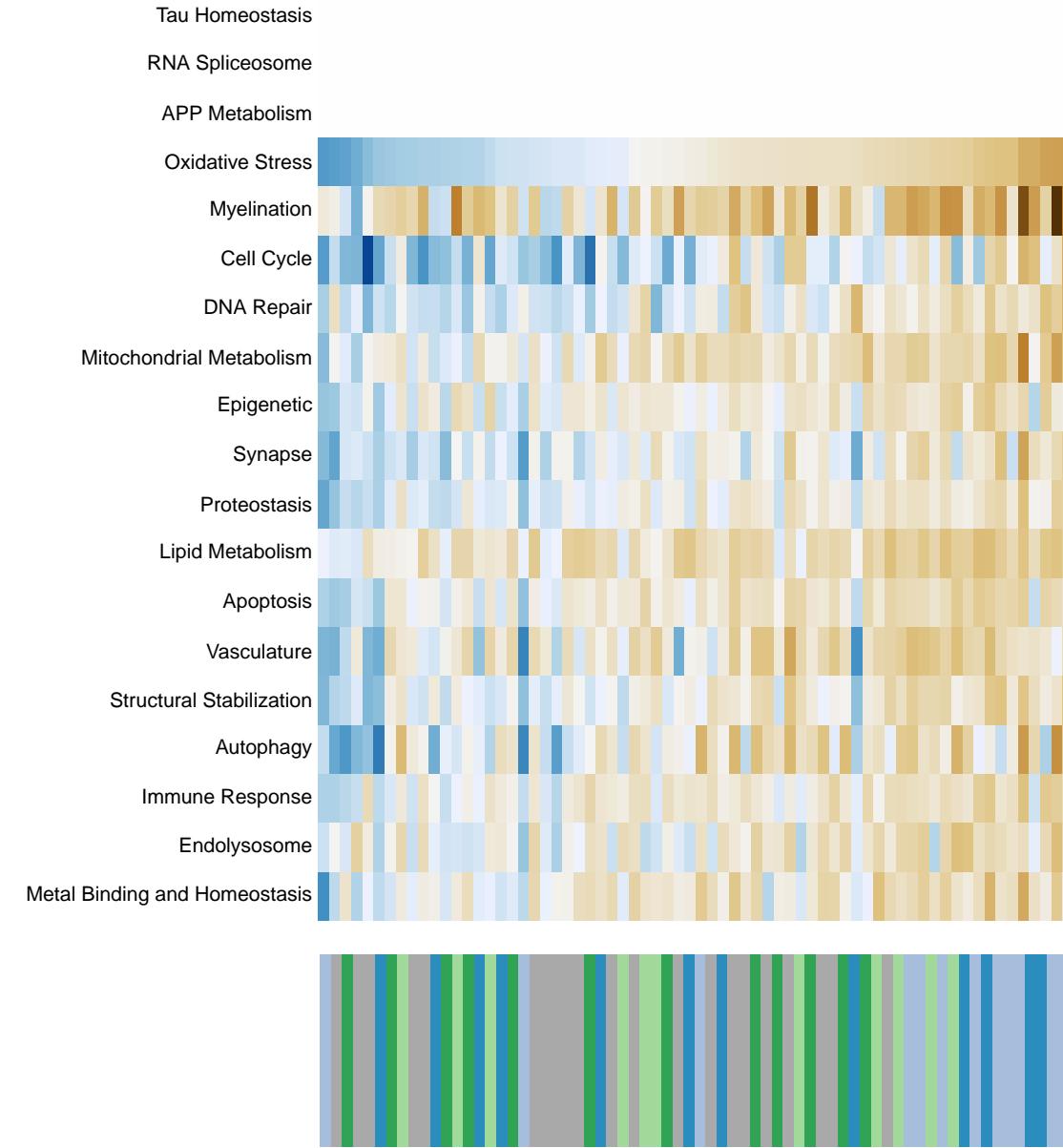
Human immunodeficiency virus 1 infection



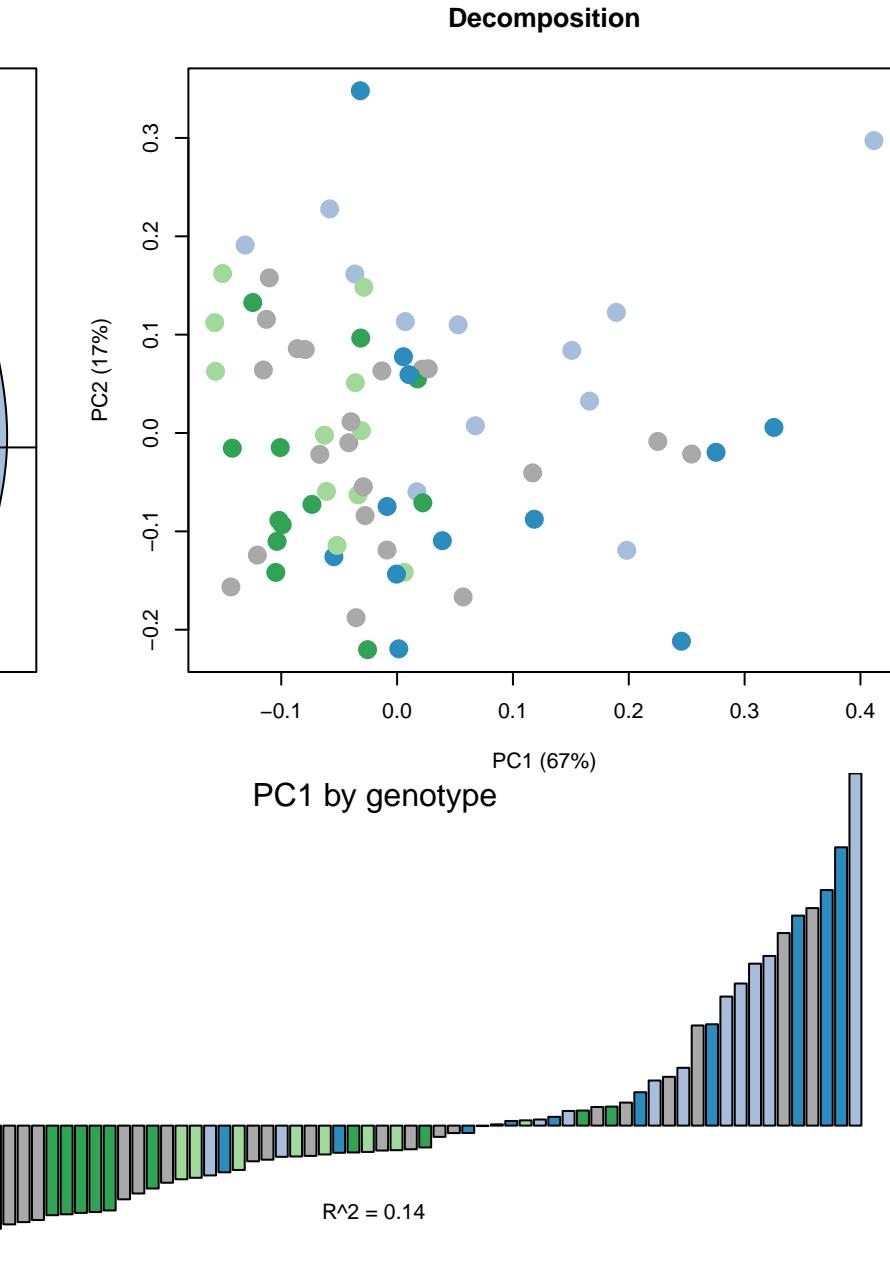
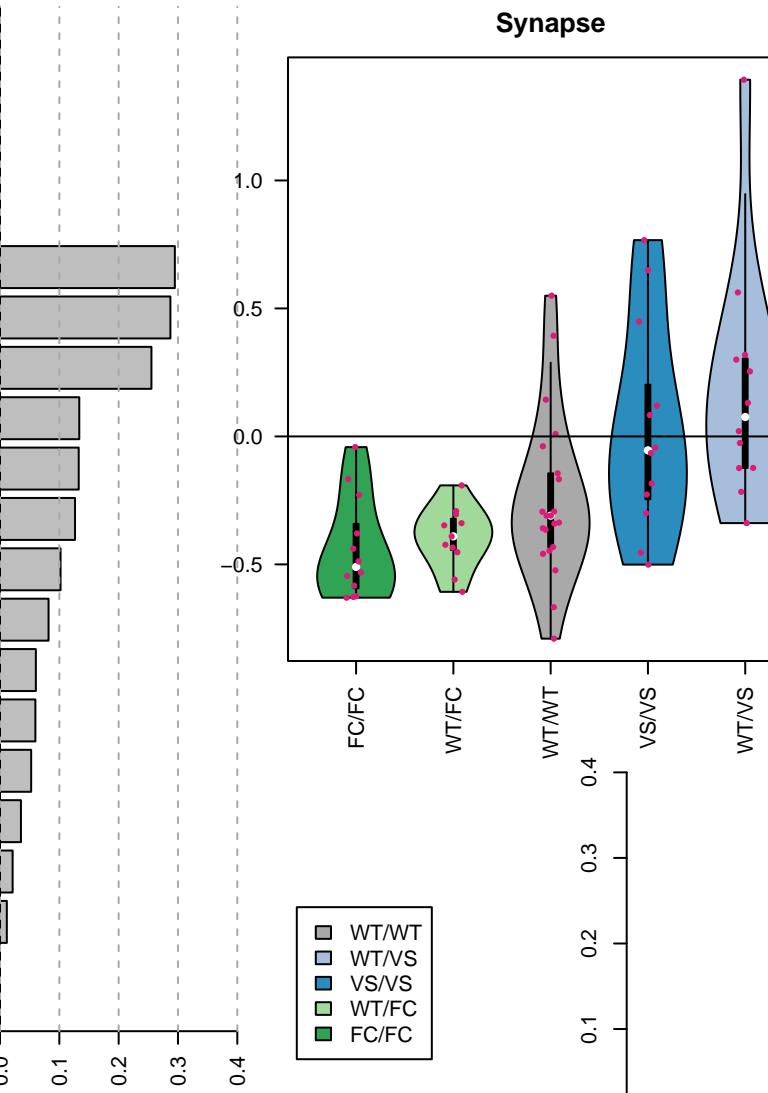
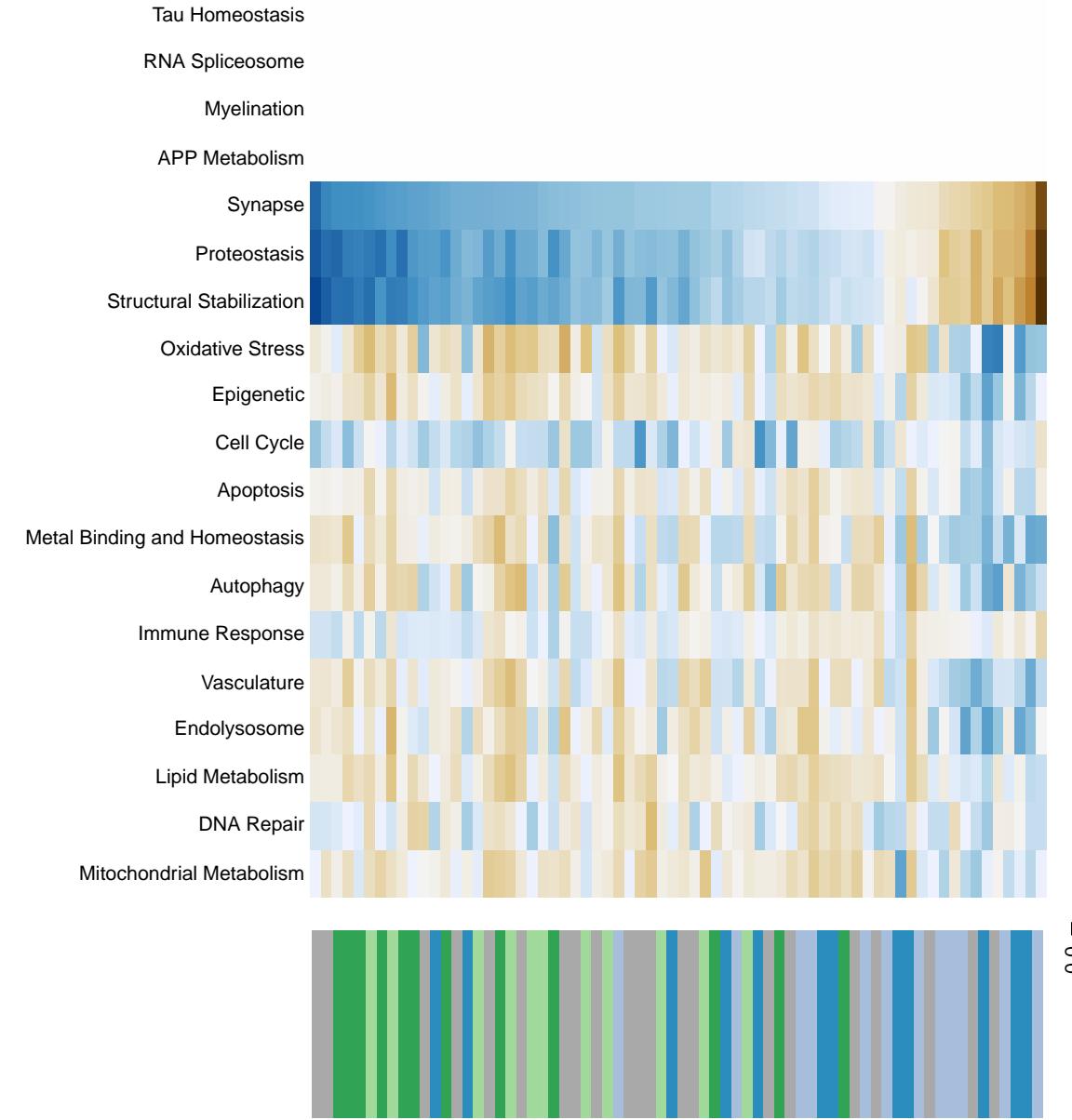
Hepatitis B



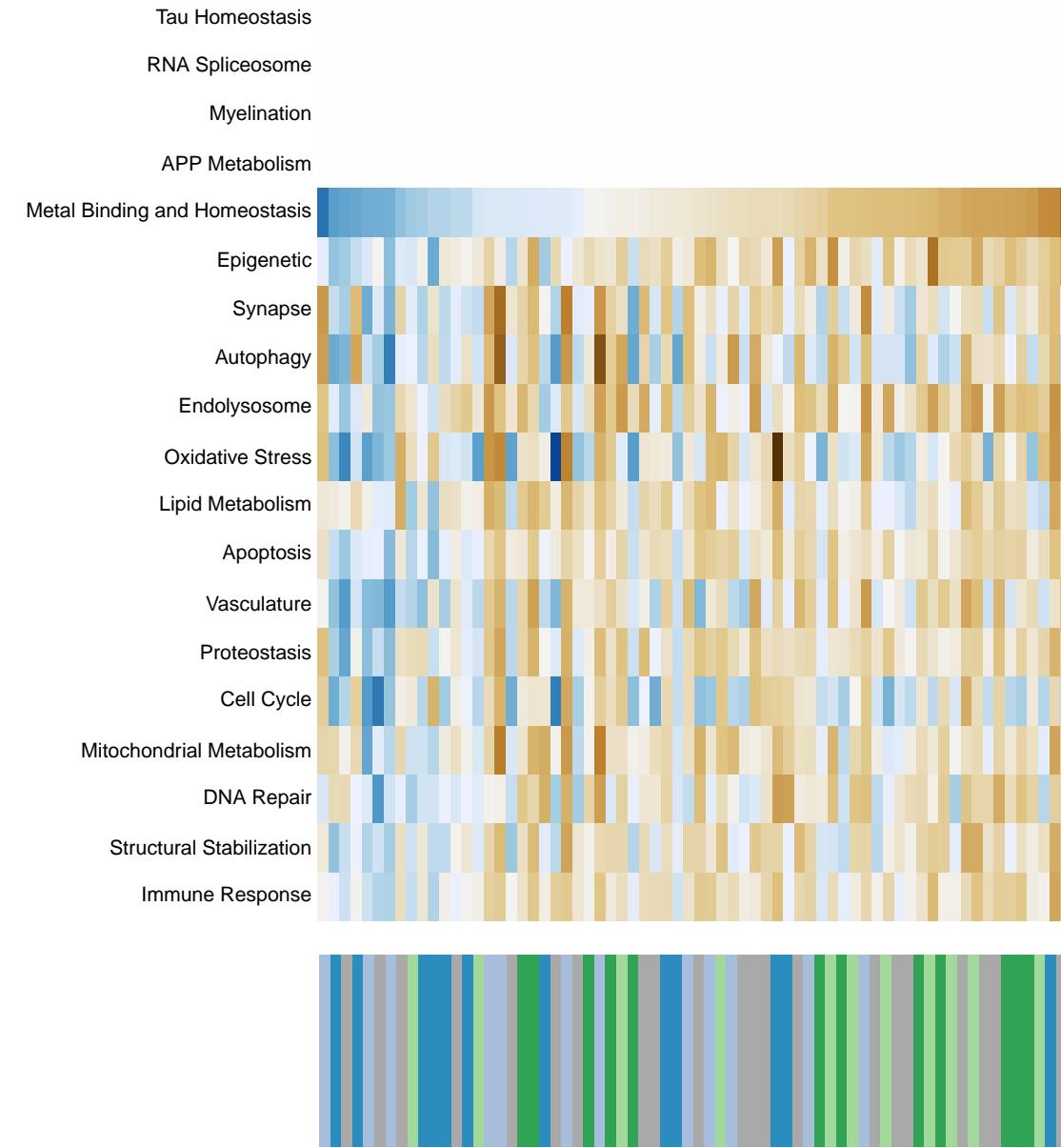
Hepatitis C



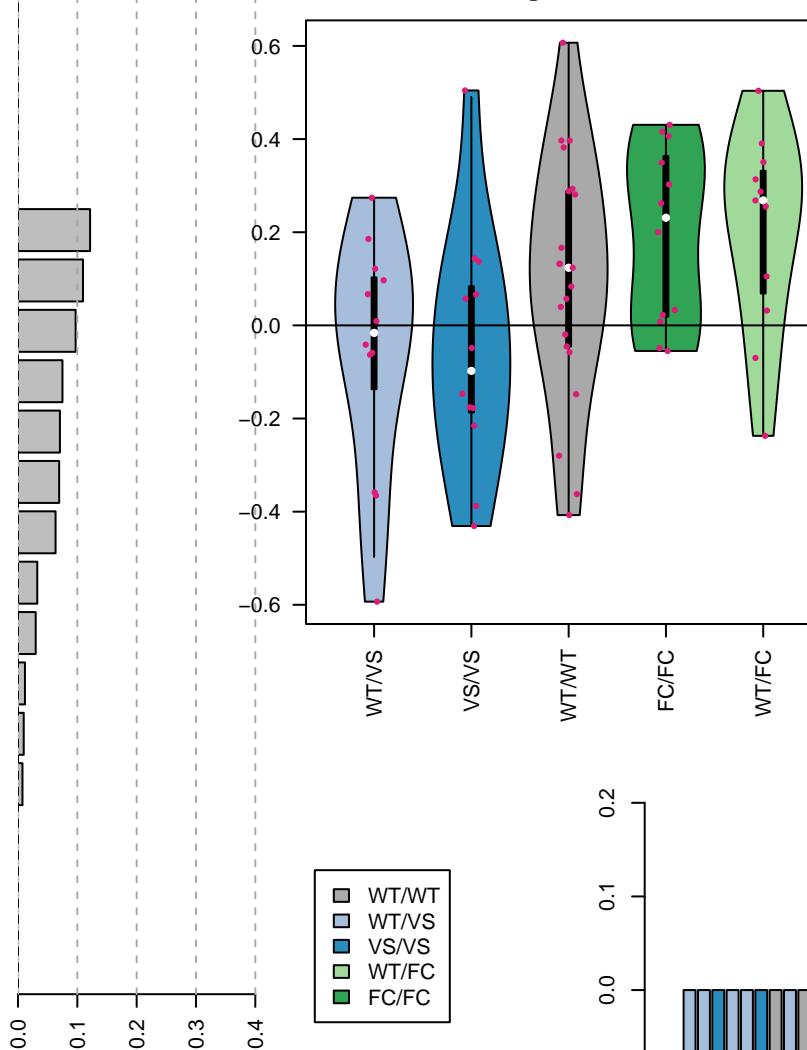
Coronavirus disease – COVID-19



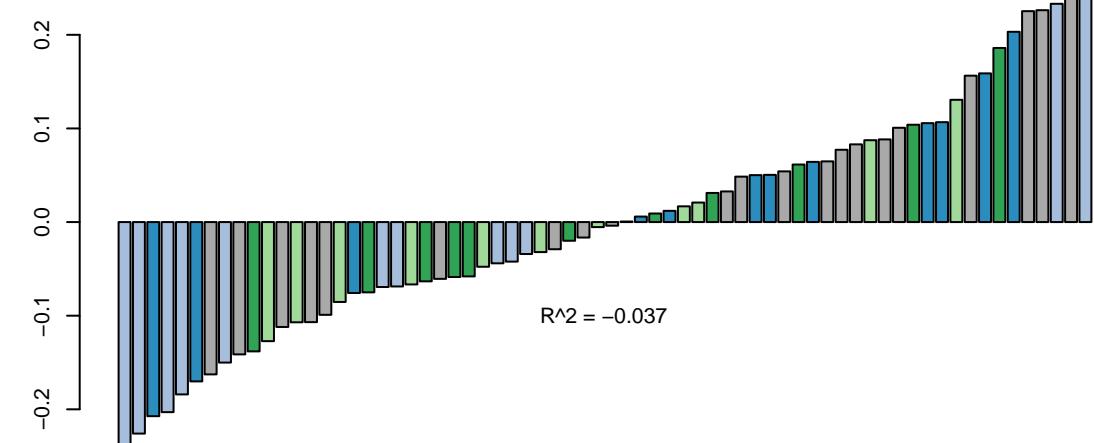
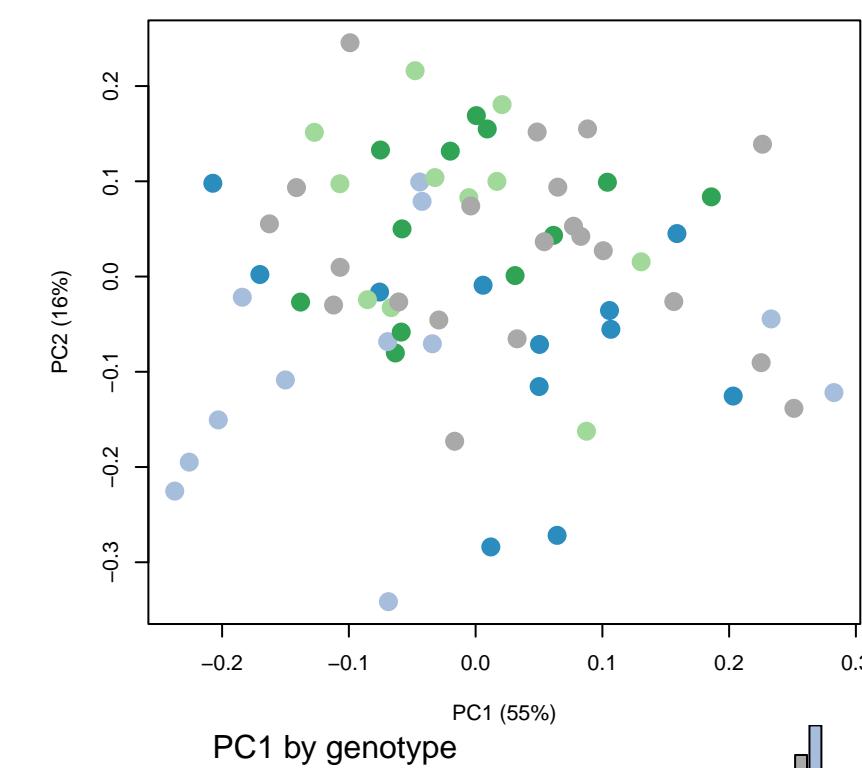
Influenza A



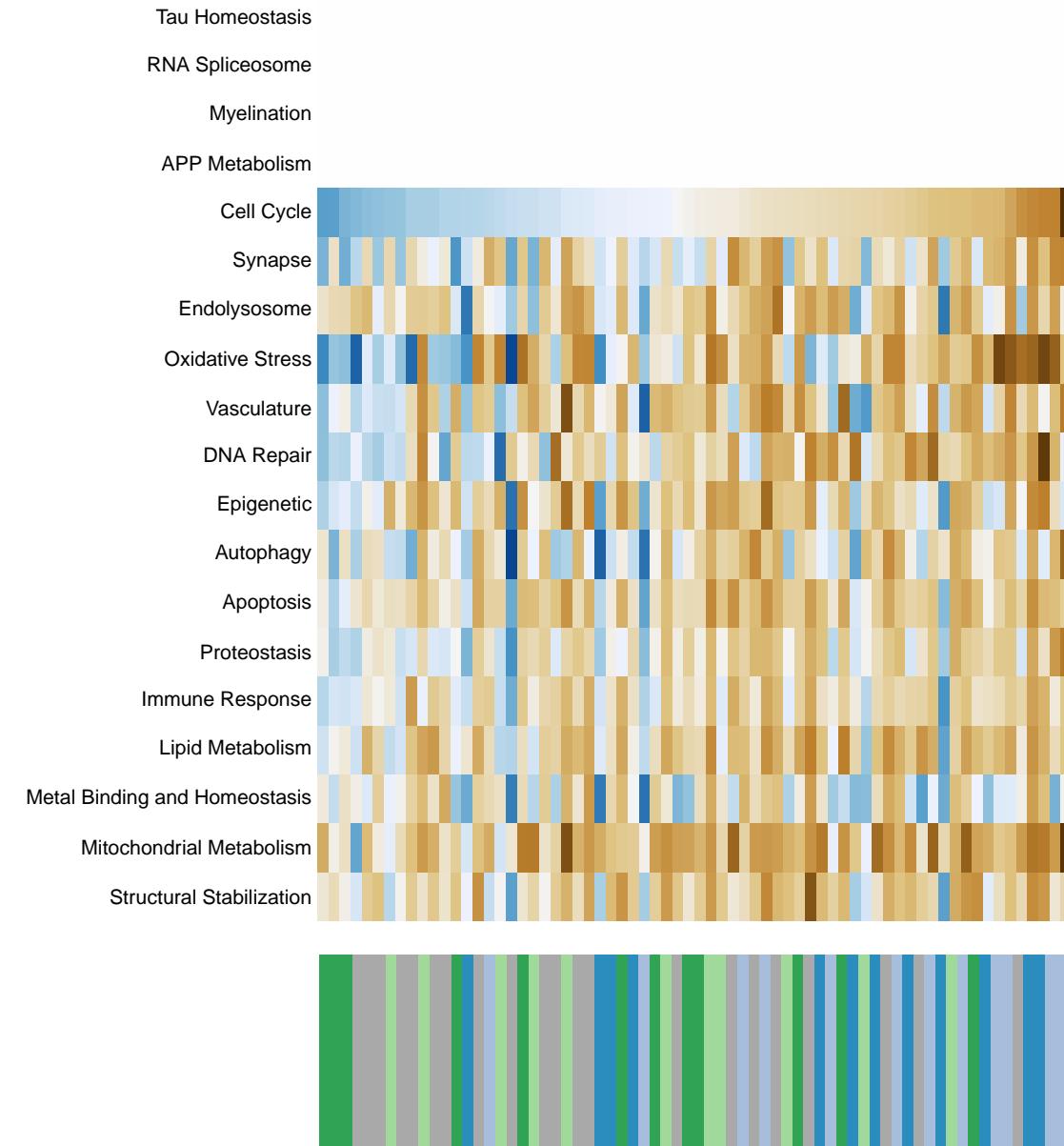
Metal Binding and Homeostasis



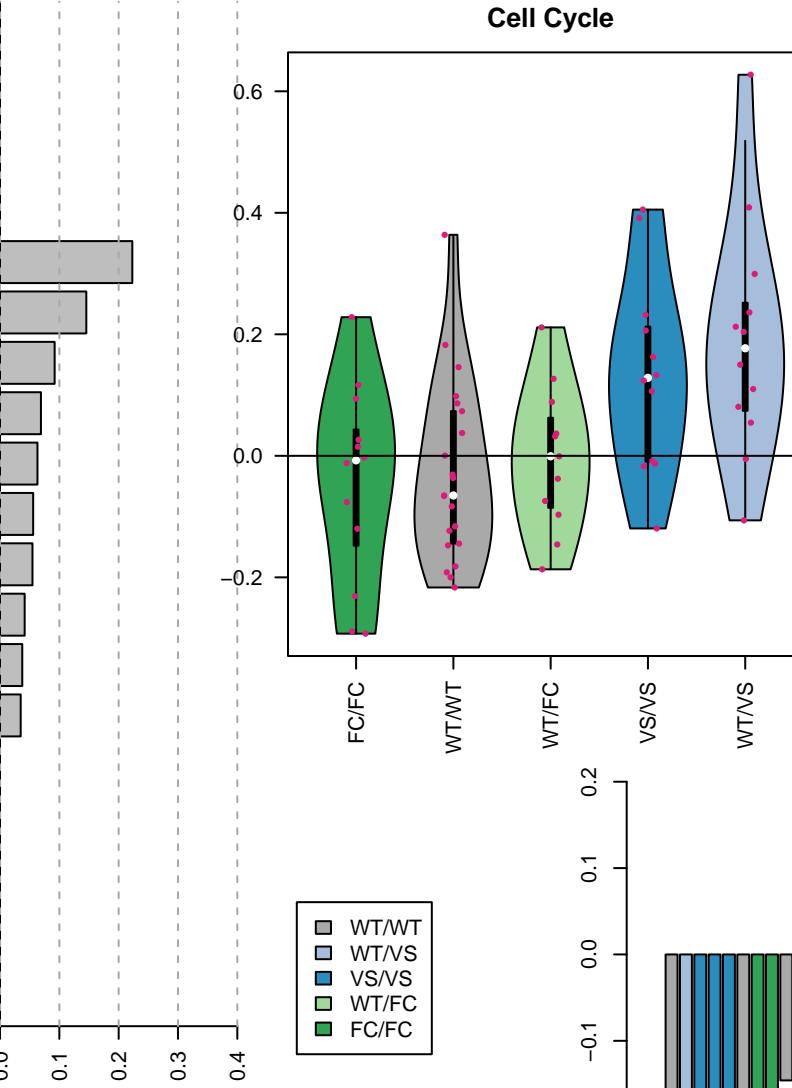
Decomposition



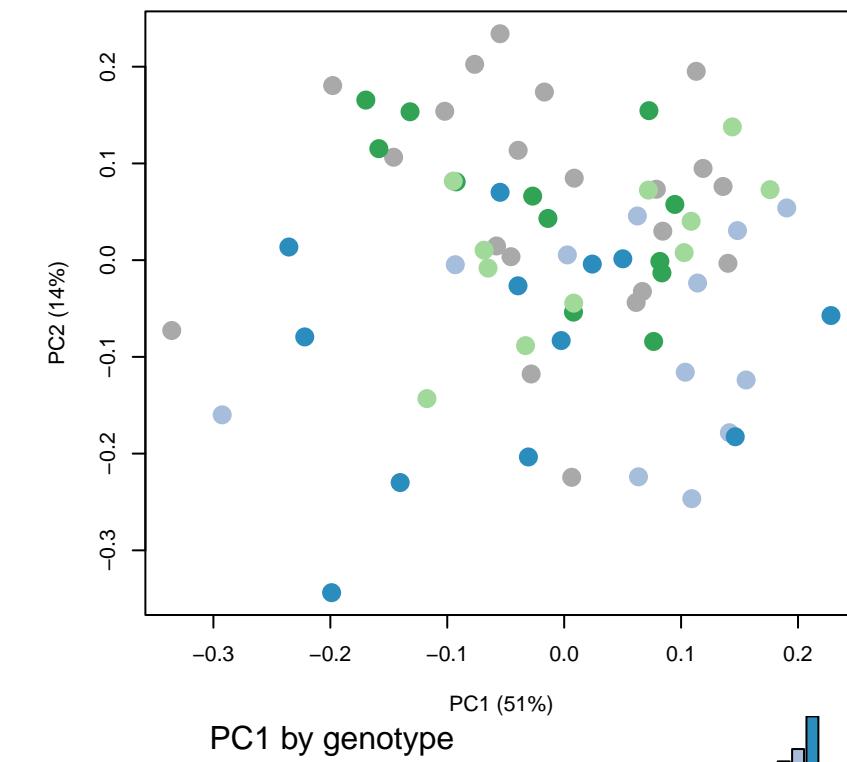
Measles



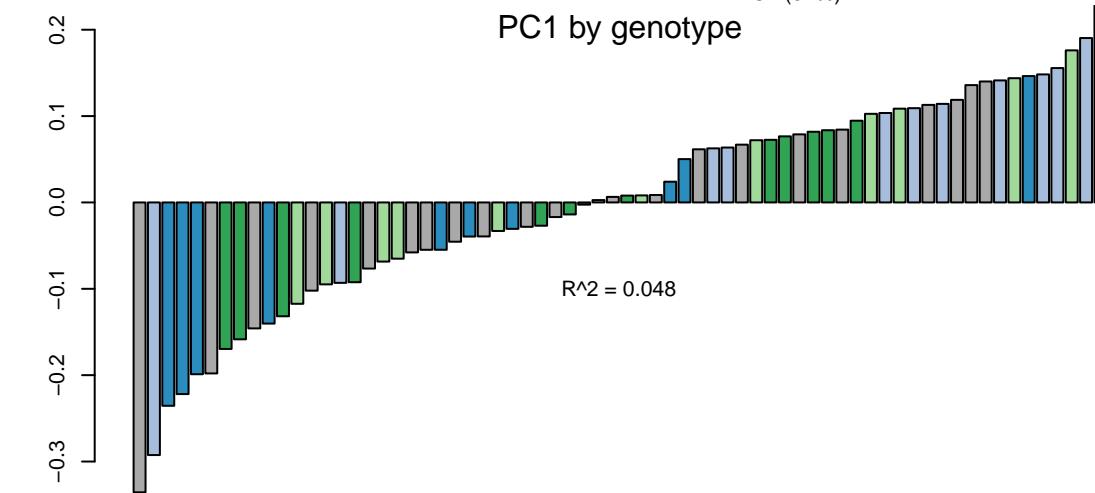
Cell Cycle



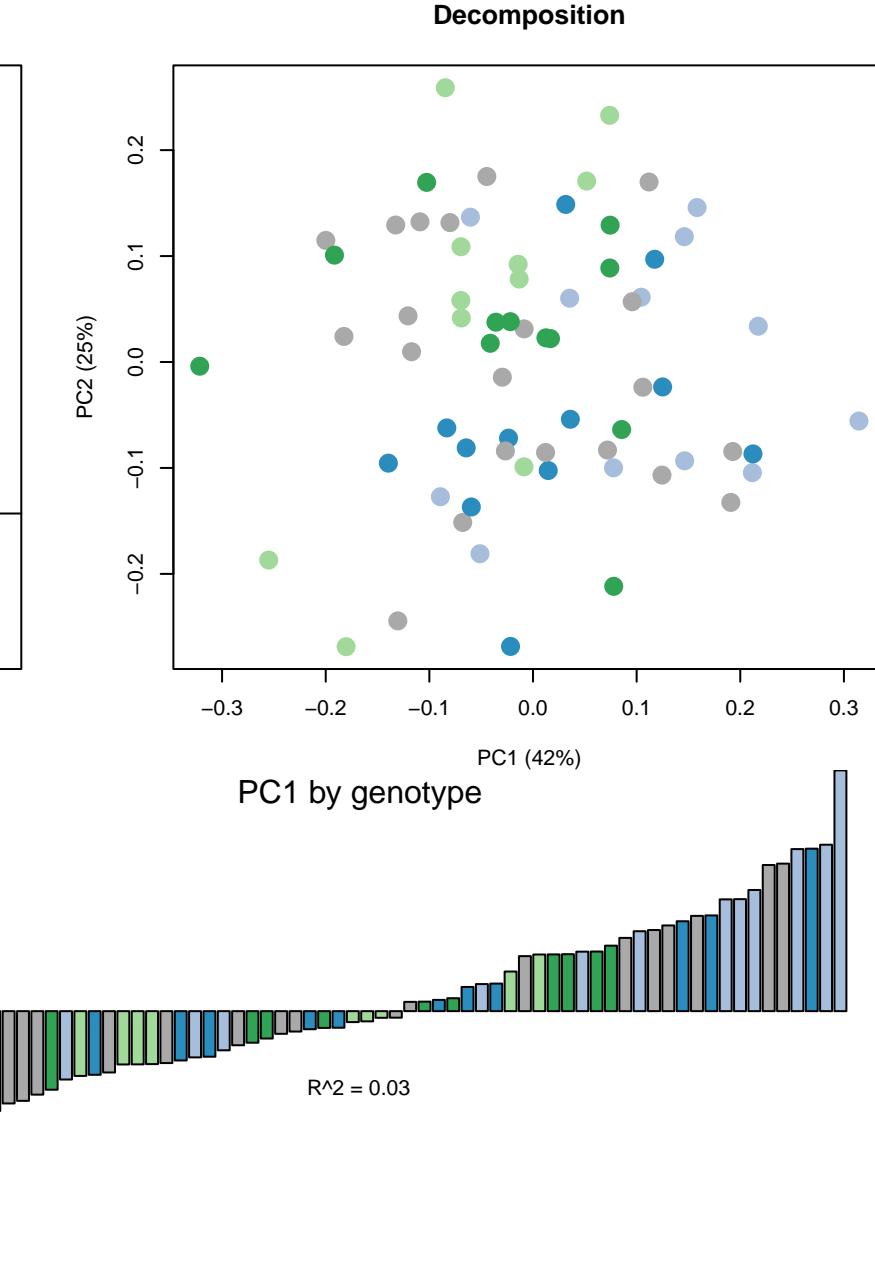
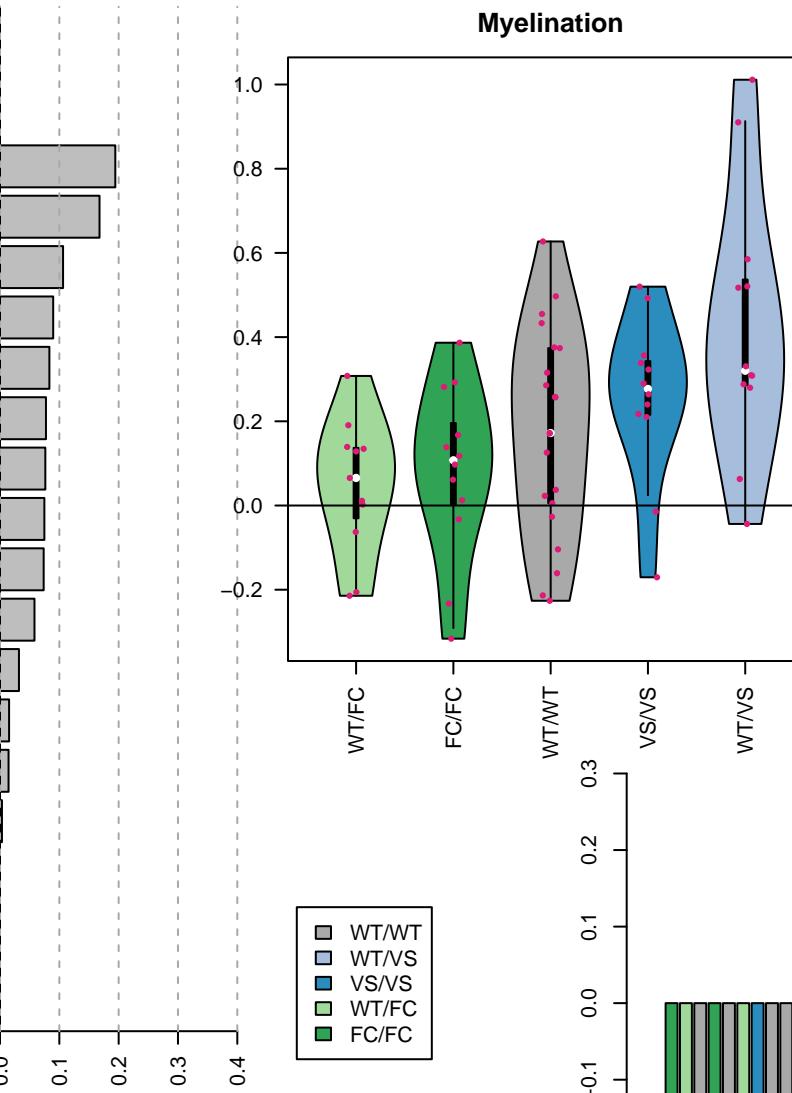
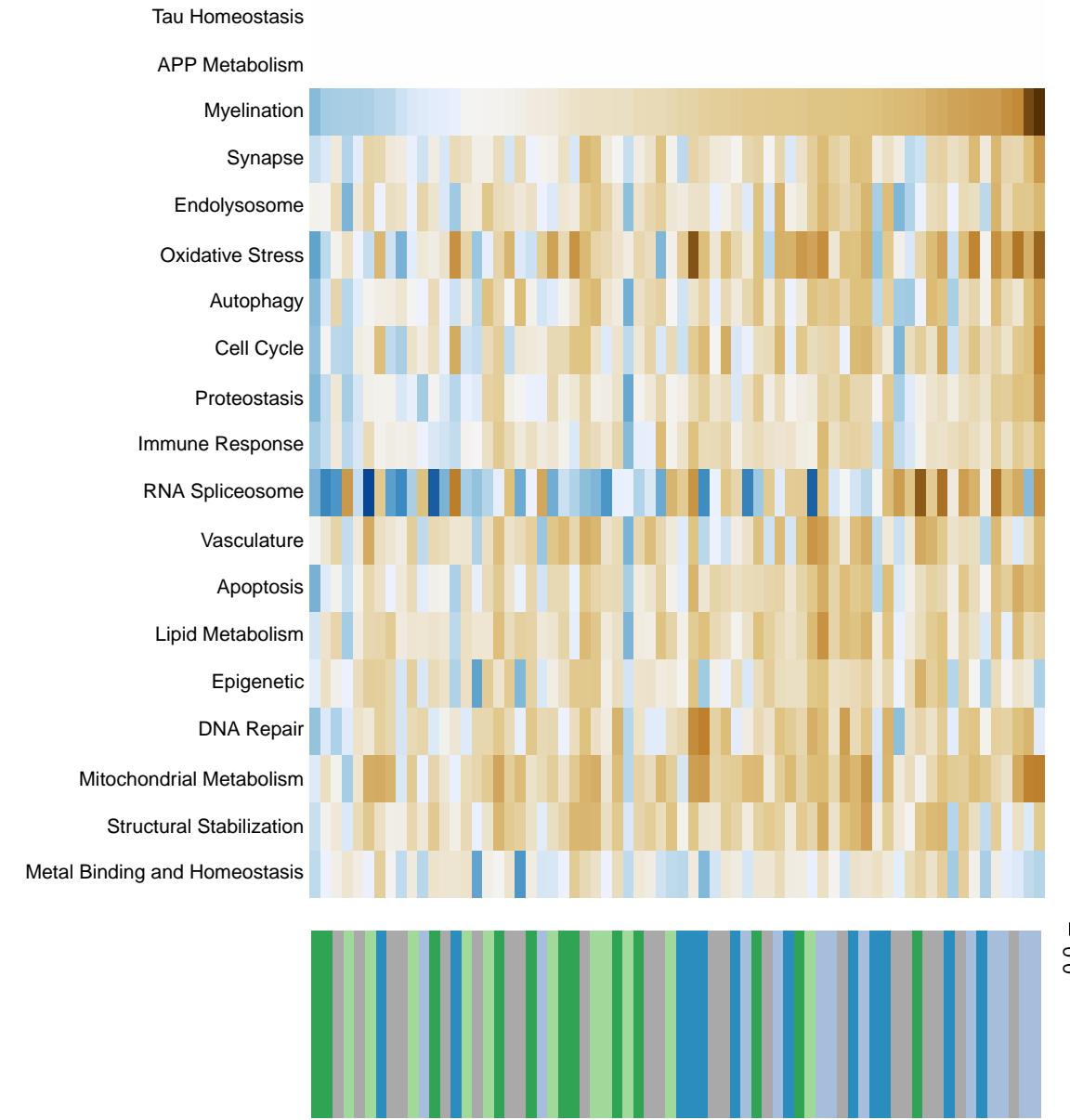
Decomposition



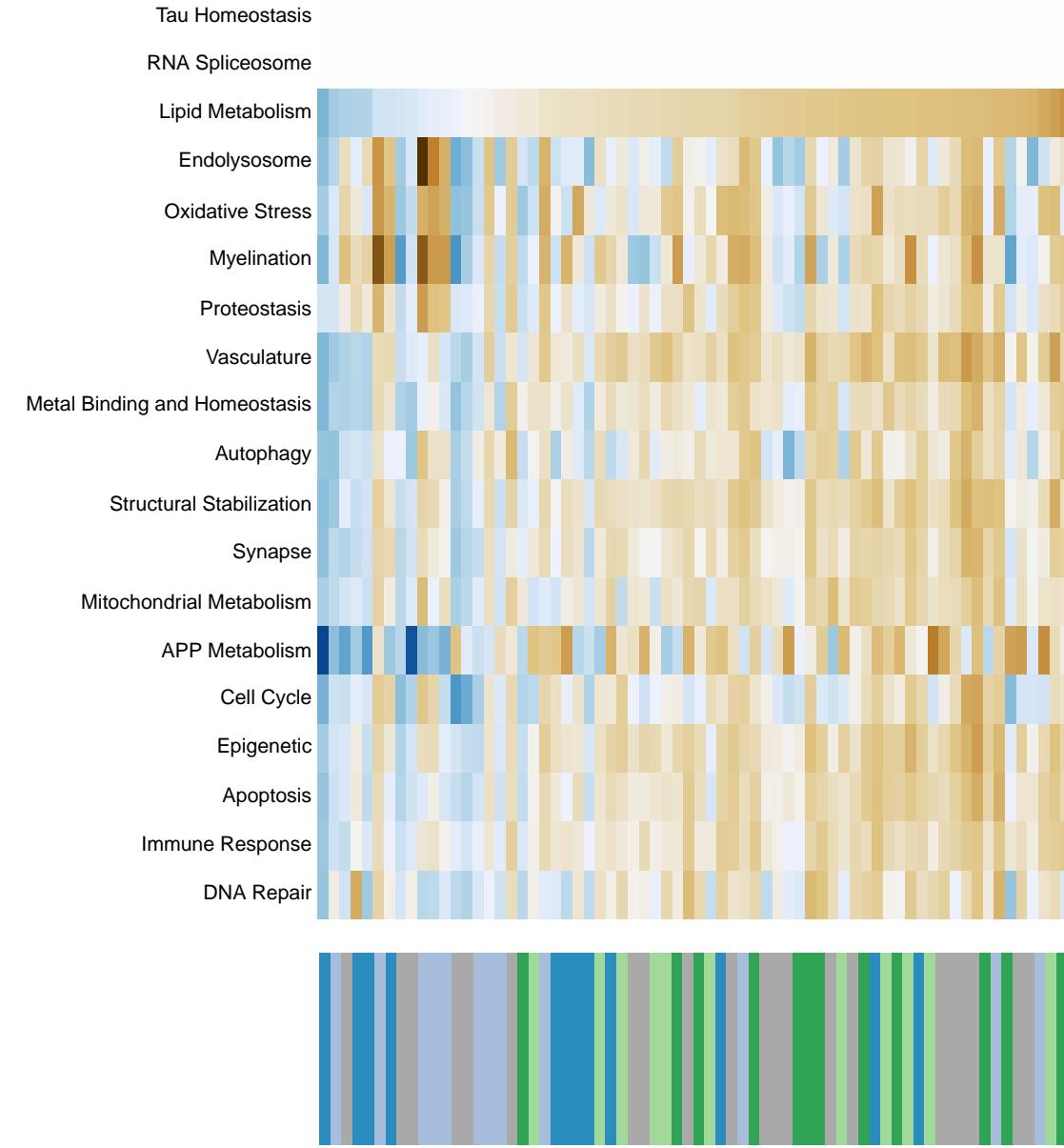
PC1 by genotype



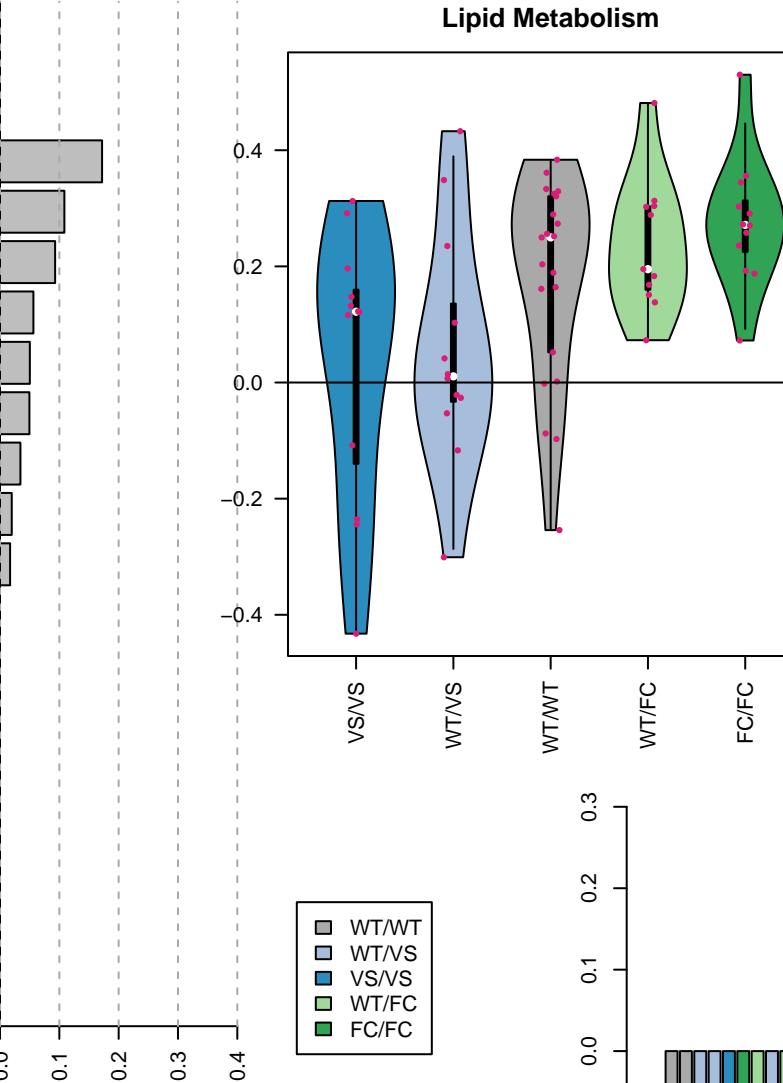
Herpes simplex virus 1 infection



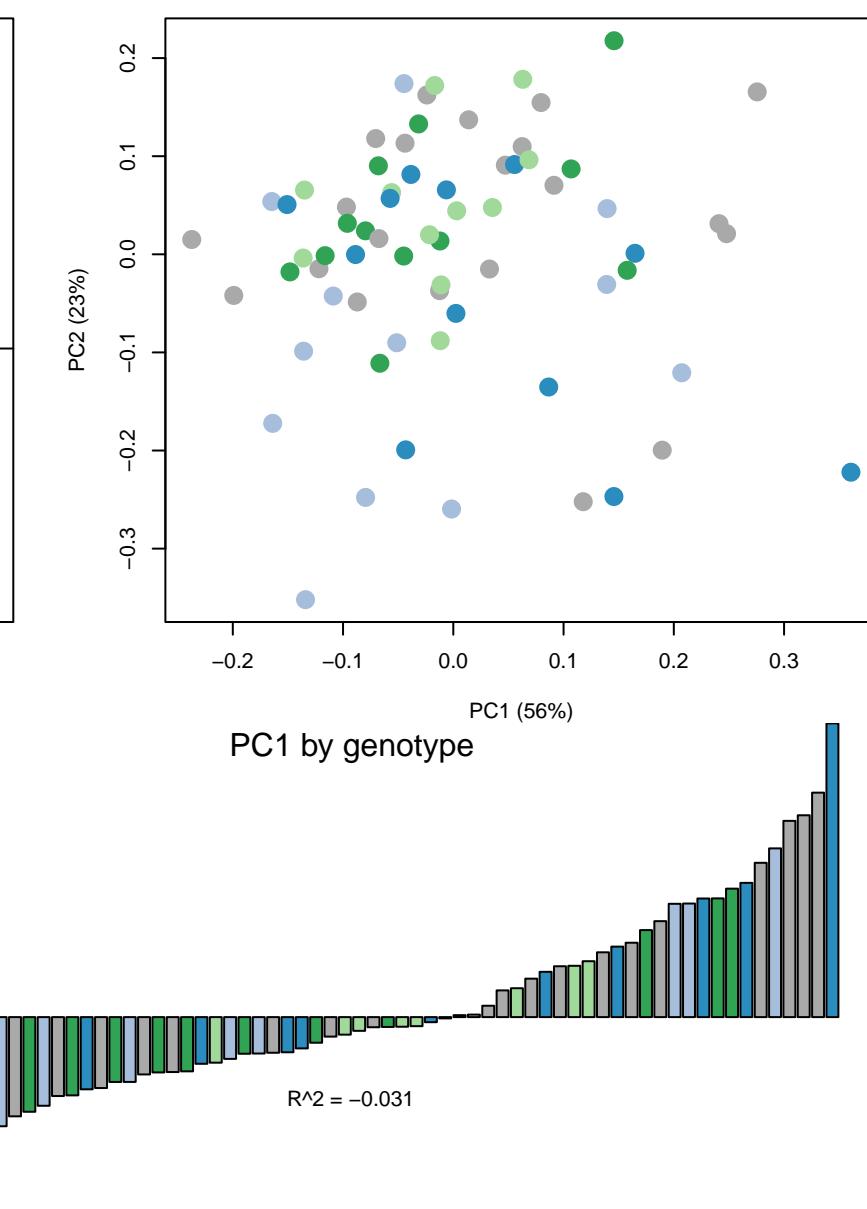
Human cytomegalovirus infection



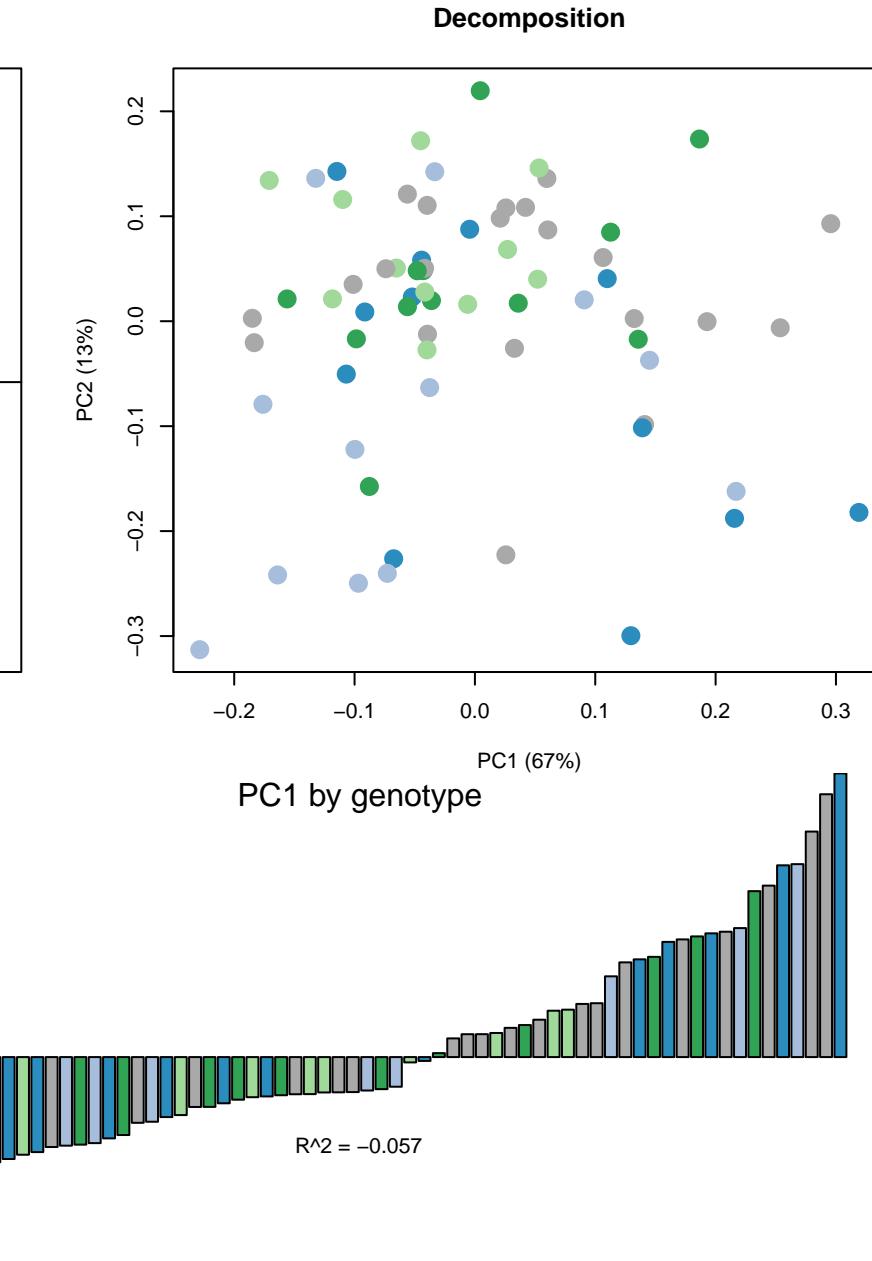
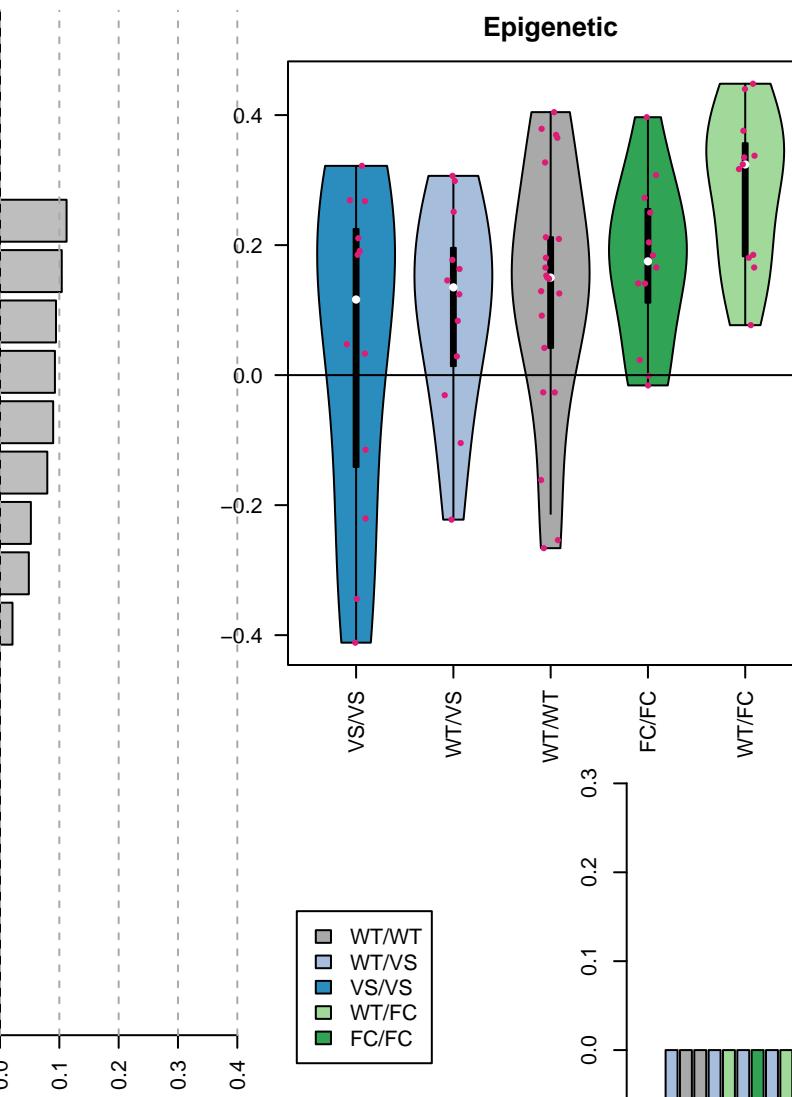
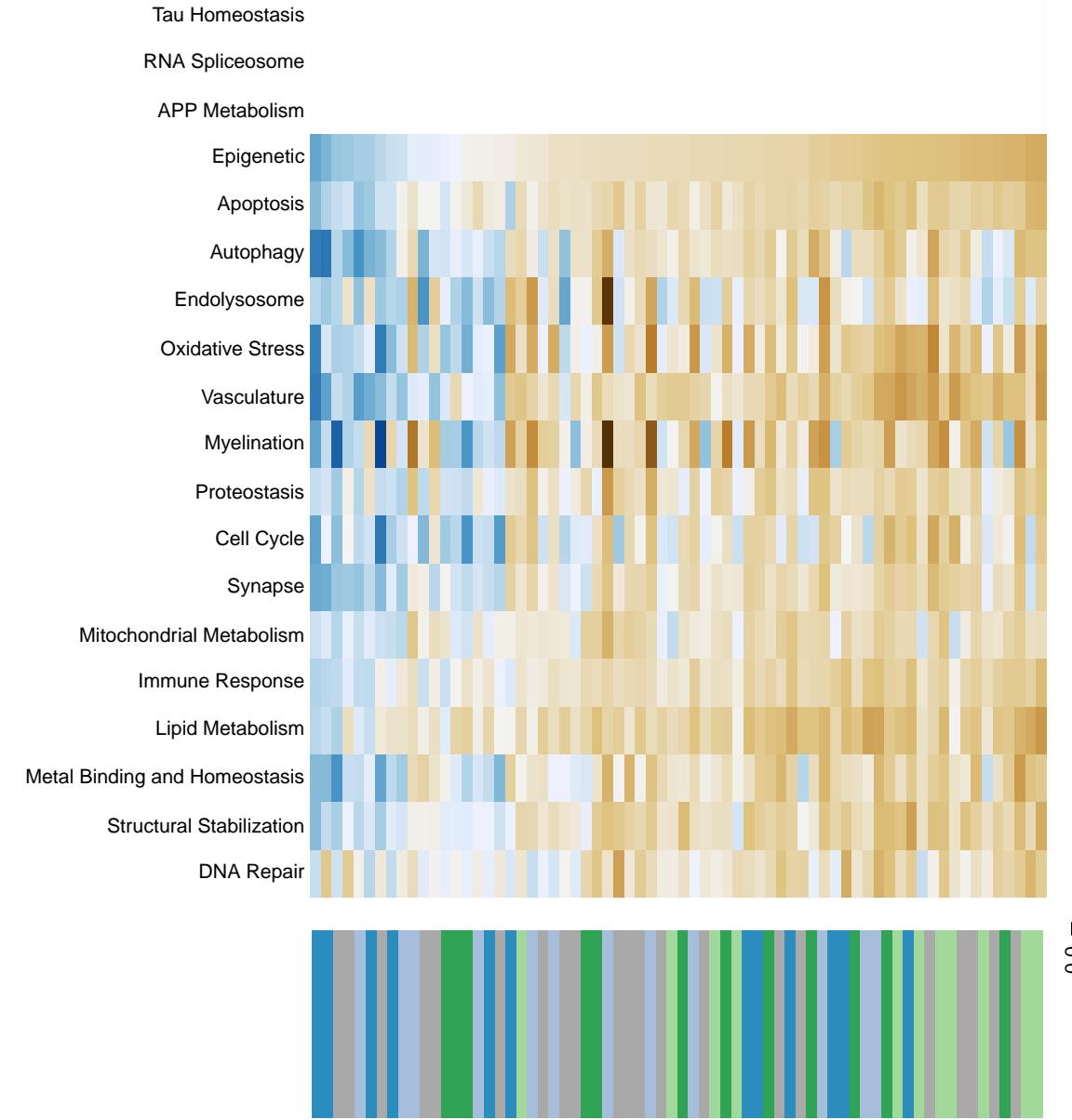
Lipid Metabolism



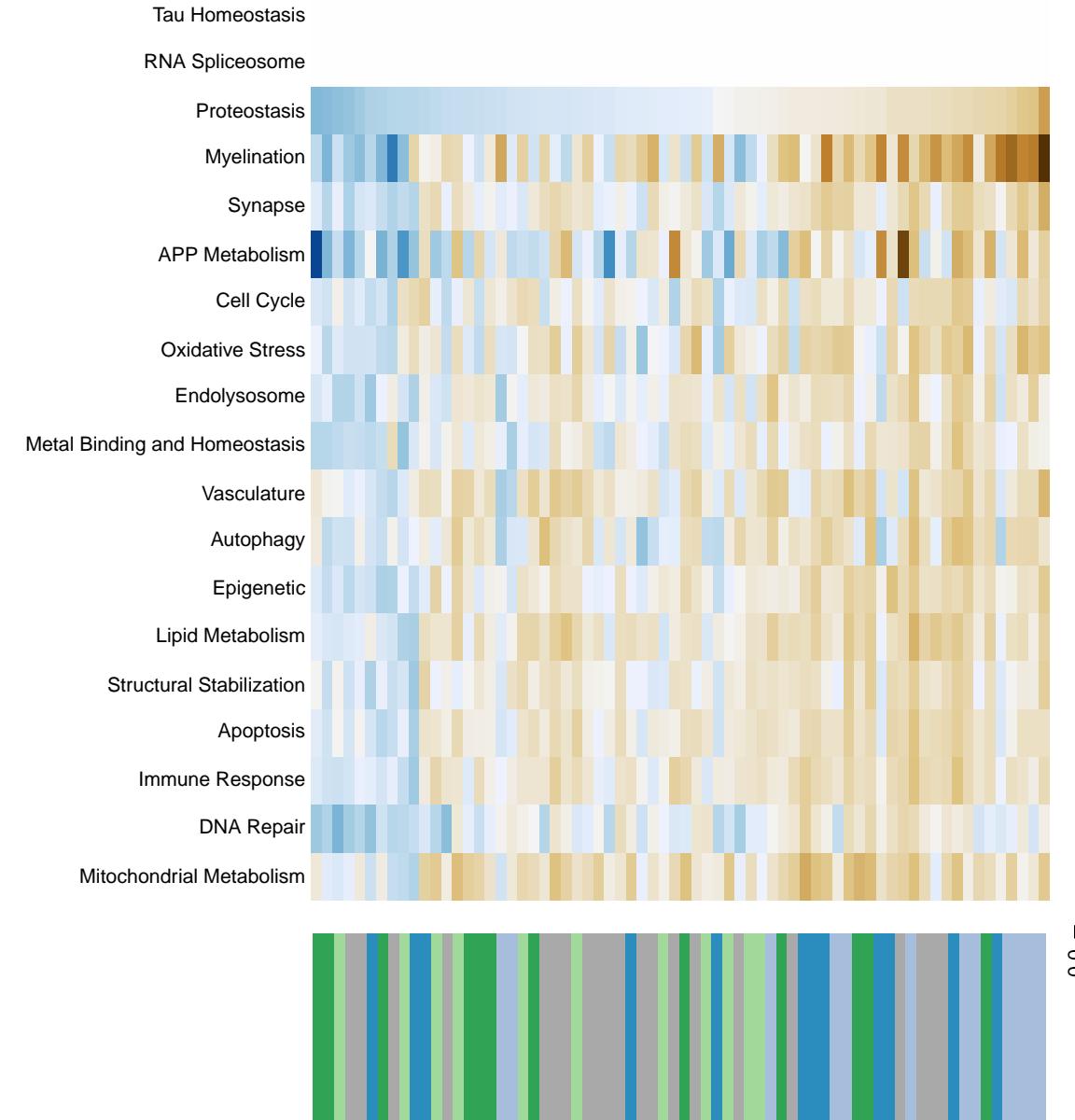
Decomposition



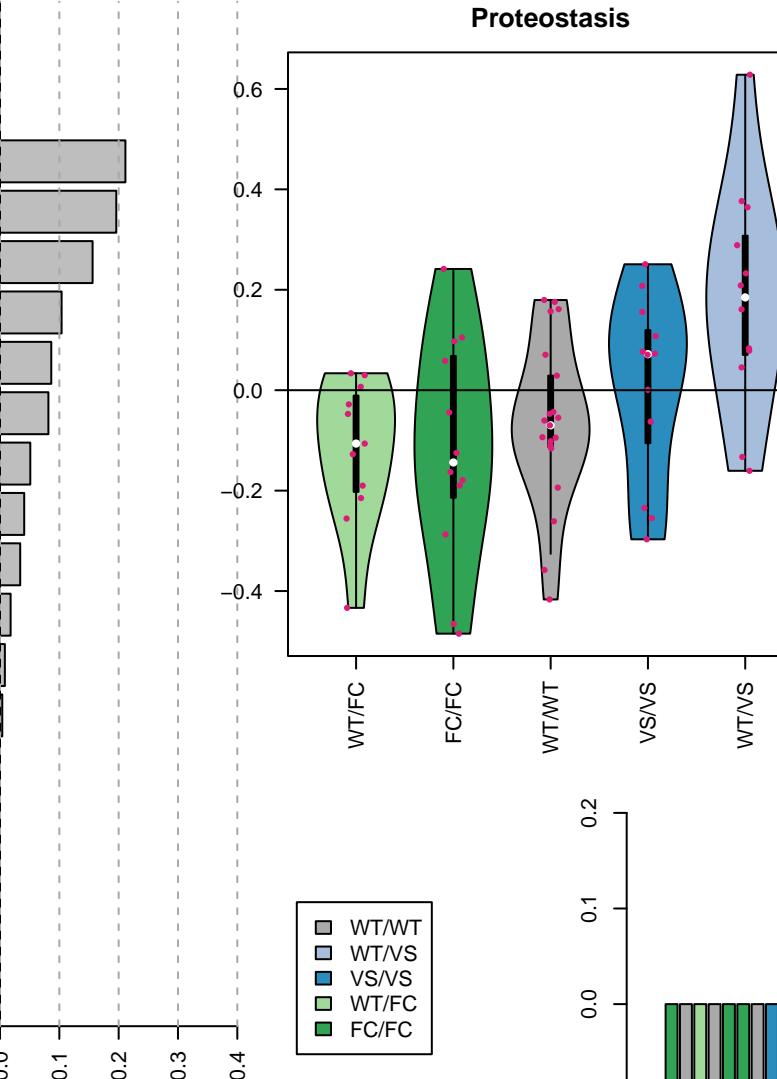
Kaposi sarcoma-associated herpesvirus infection



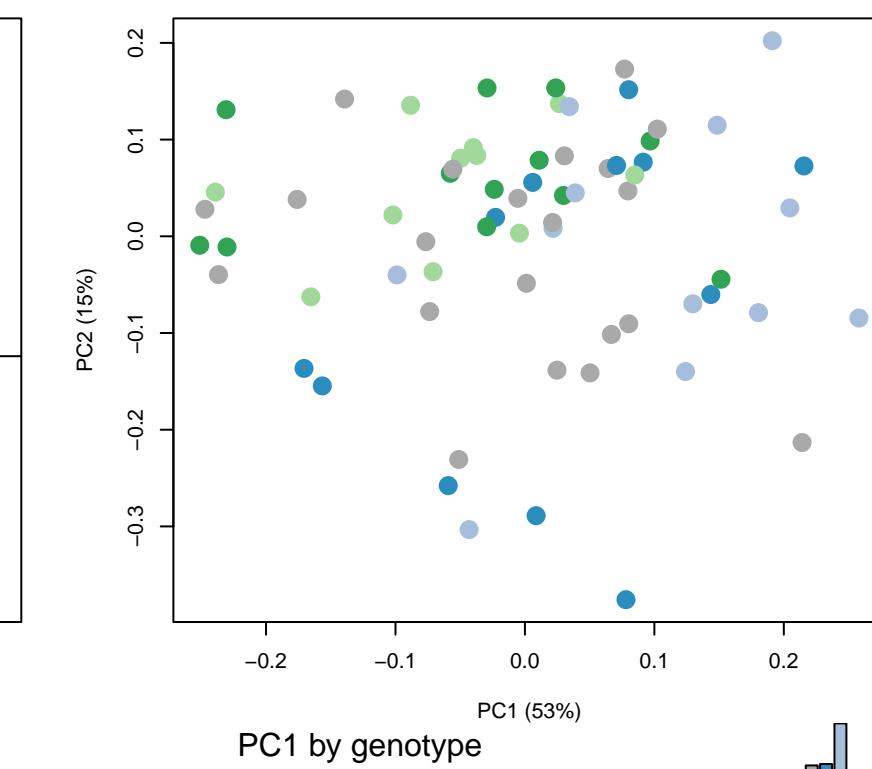
Epstein–Barr virus infection



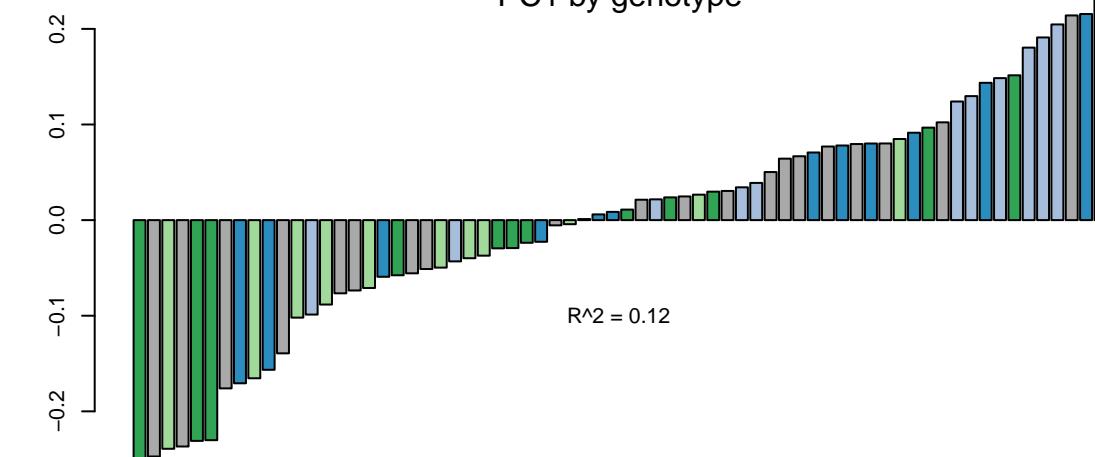
Proteostasis



Decomposition

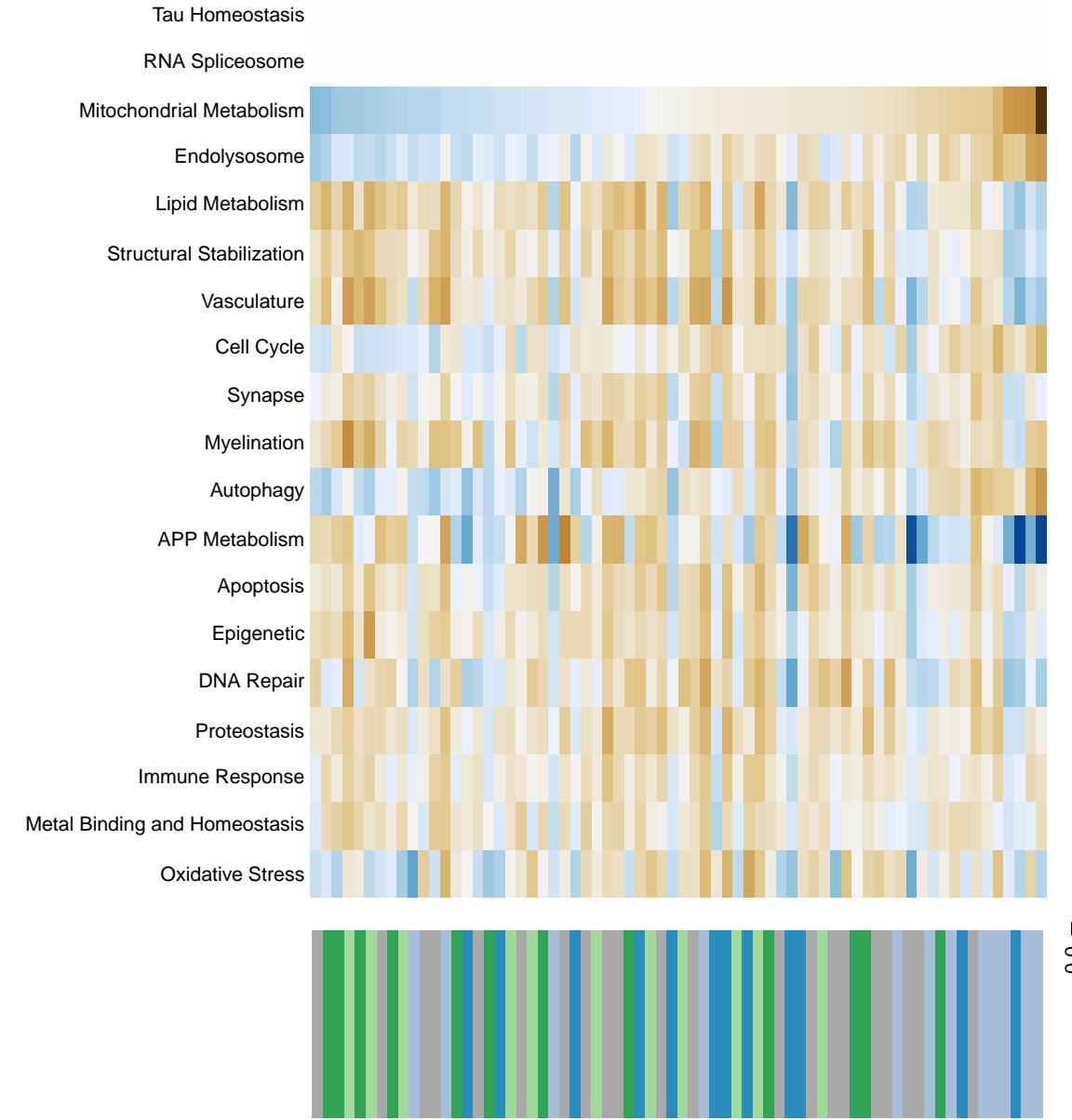


PC1 by genotype

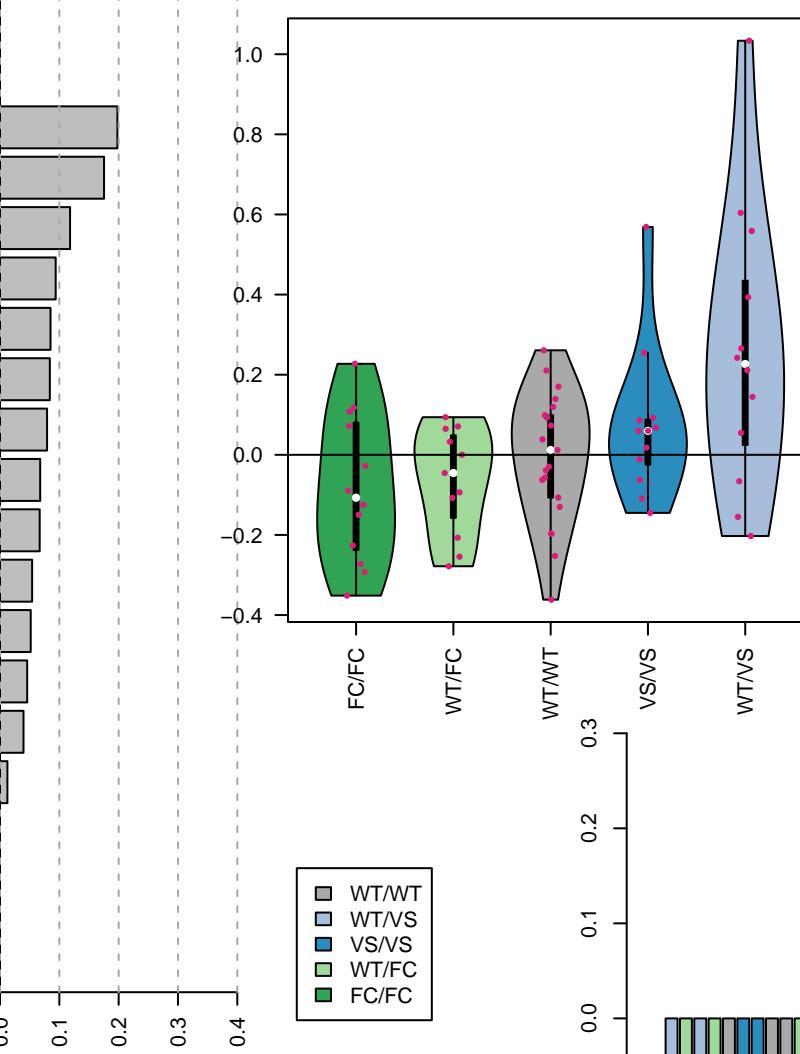


$R^2 = 0.12$

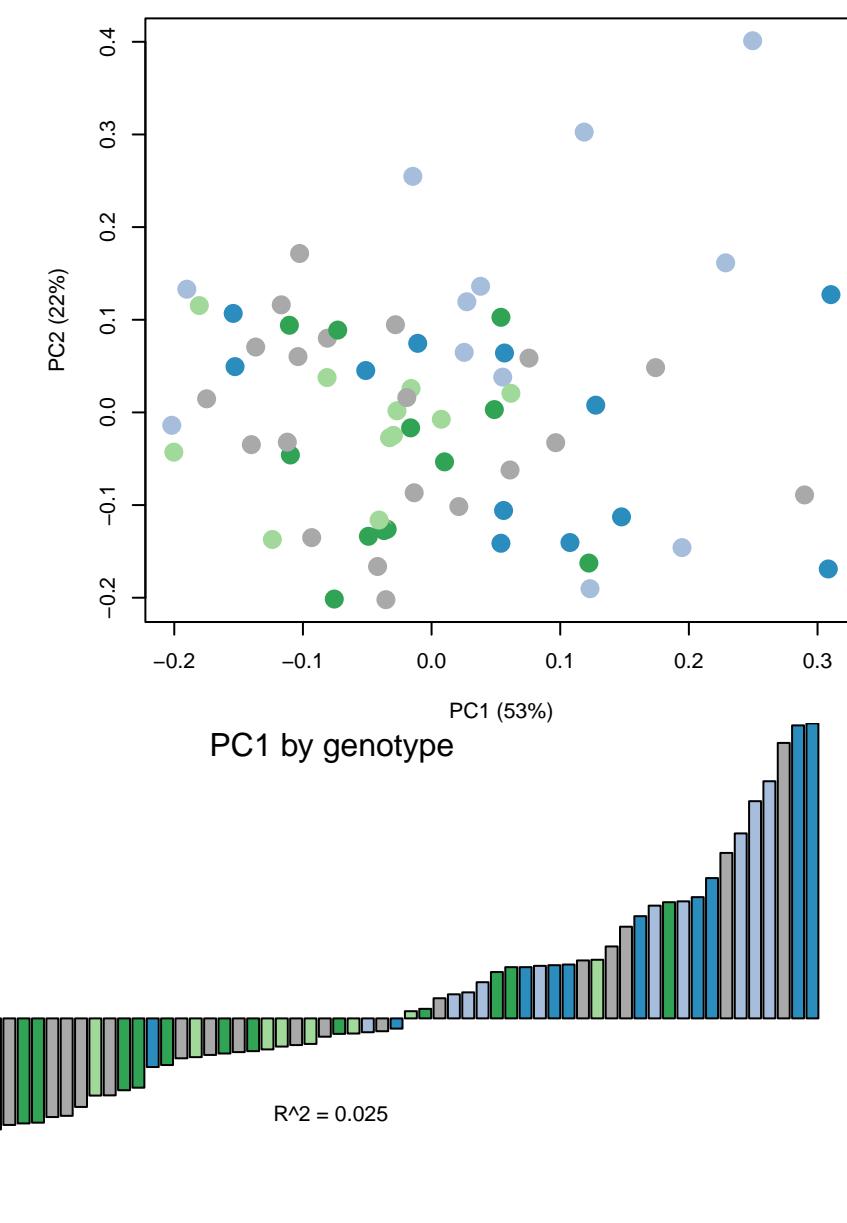
Human papillomavirus infection



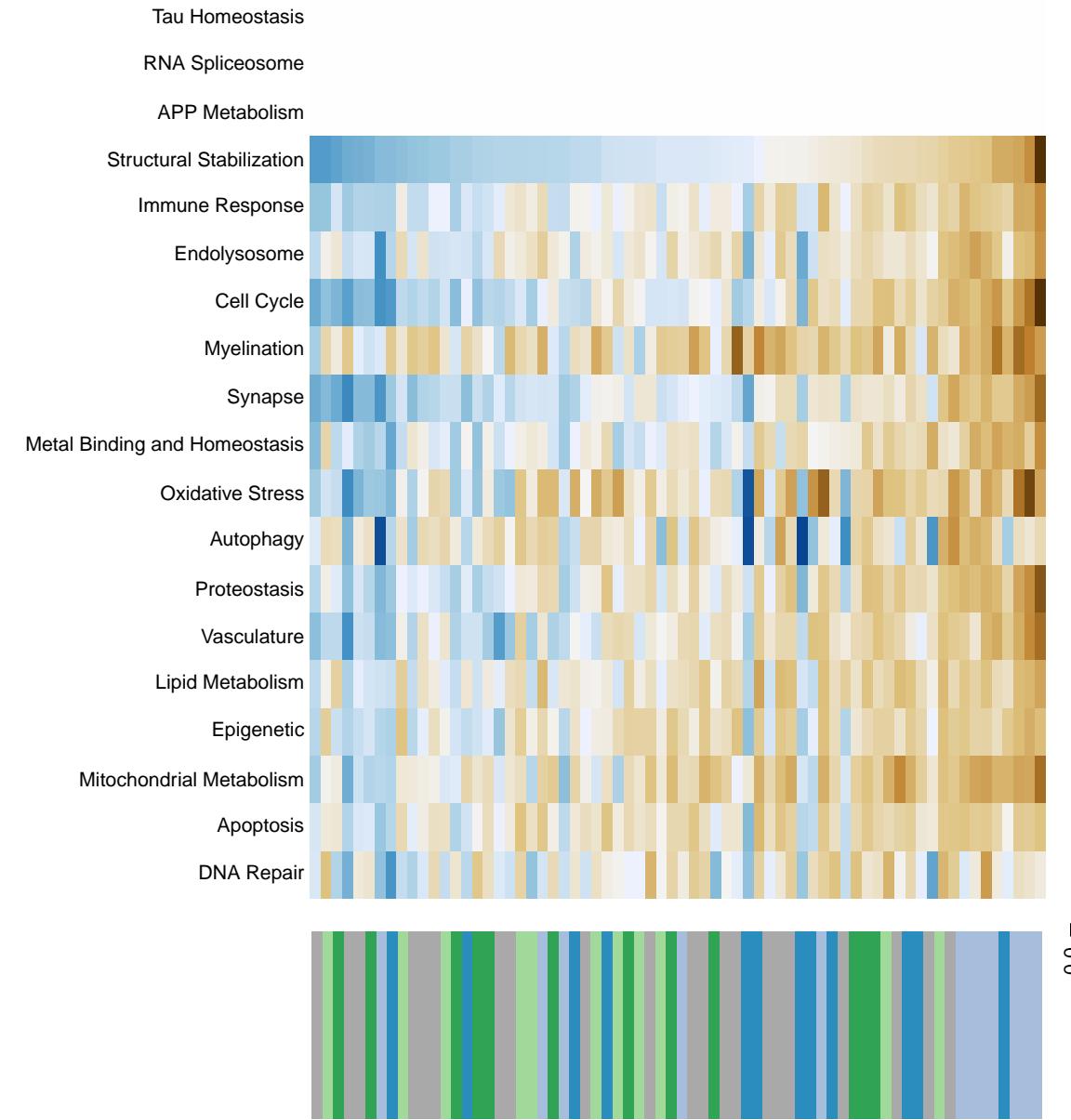
Mitochondrial Metabolism



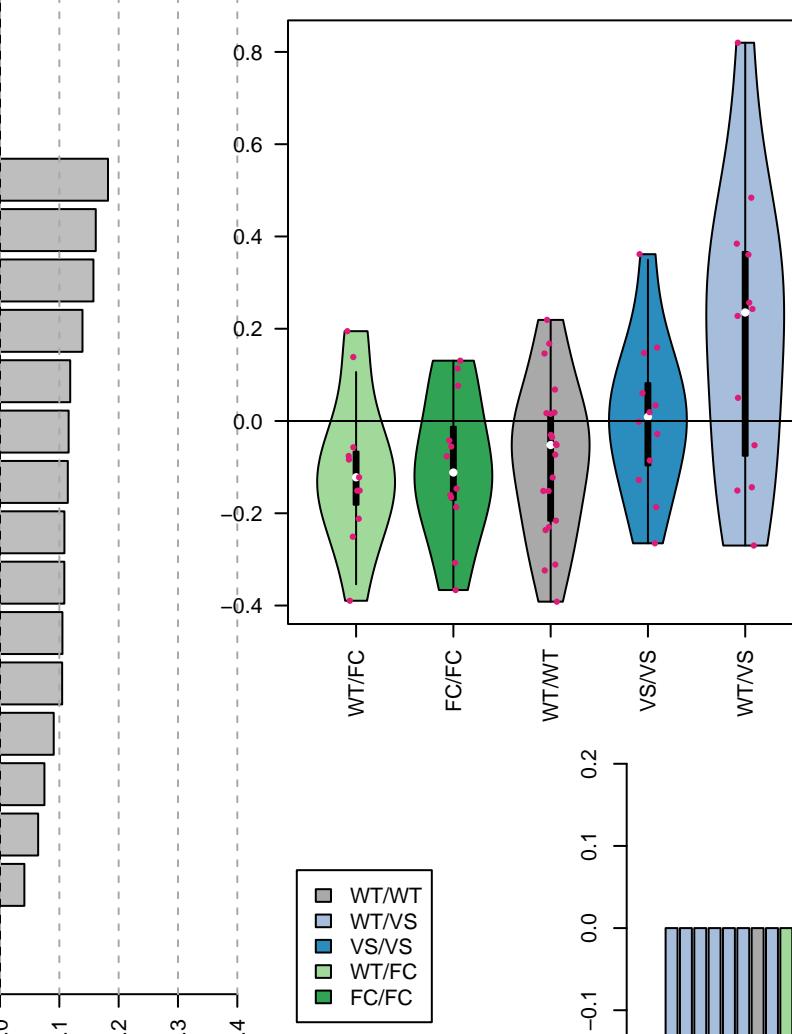
Decomposition



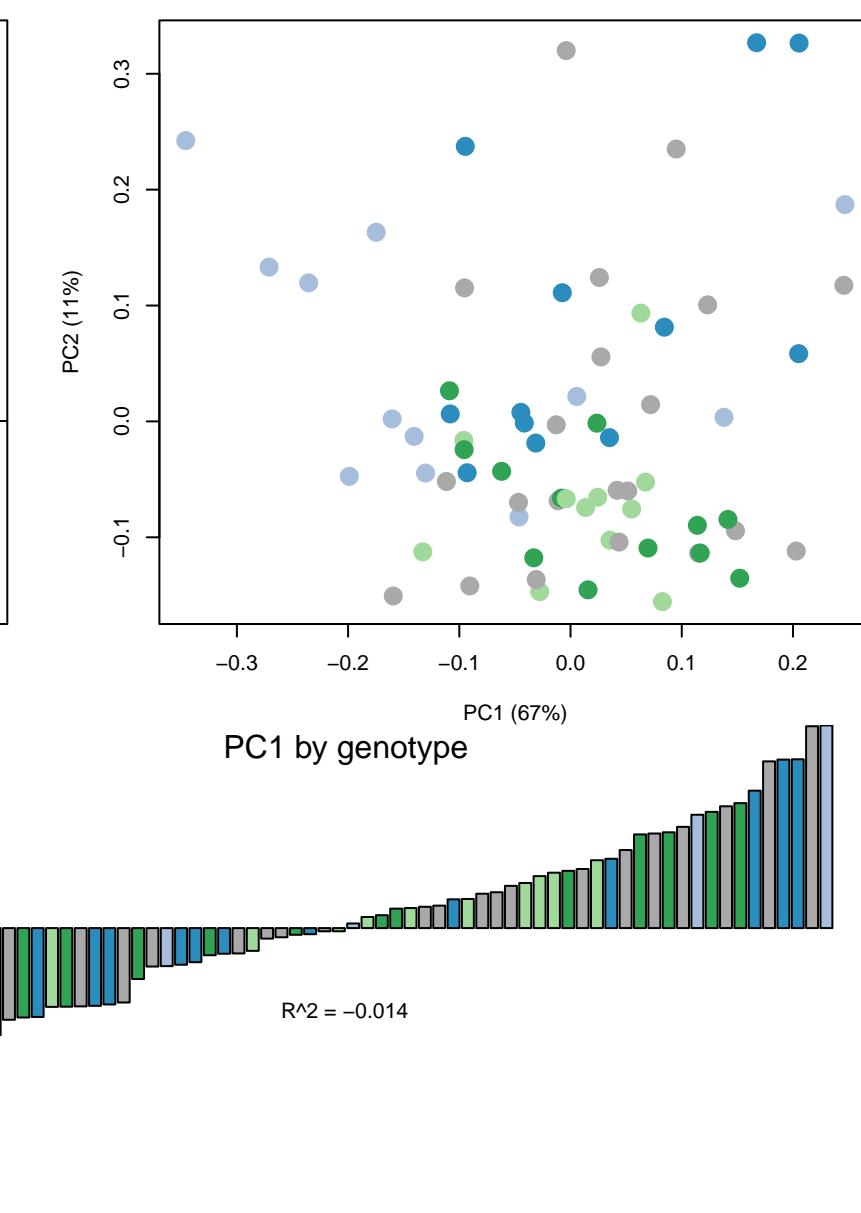
Salmonella infection



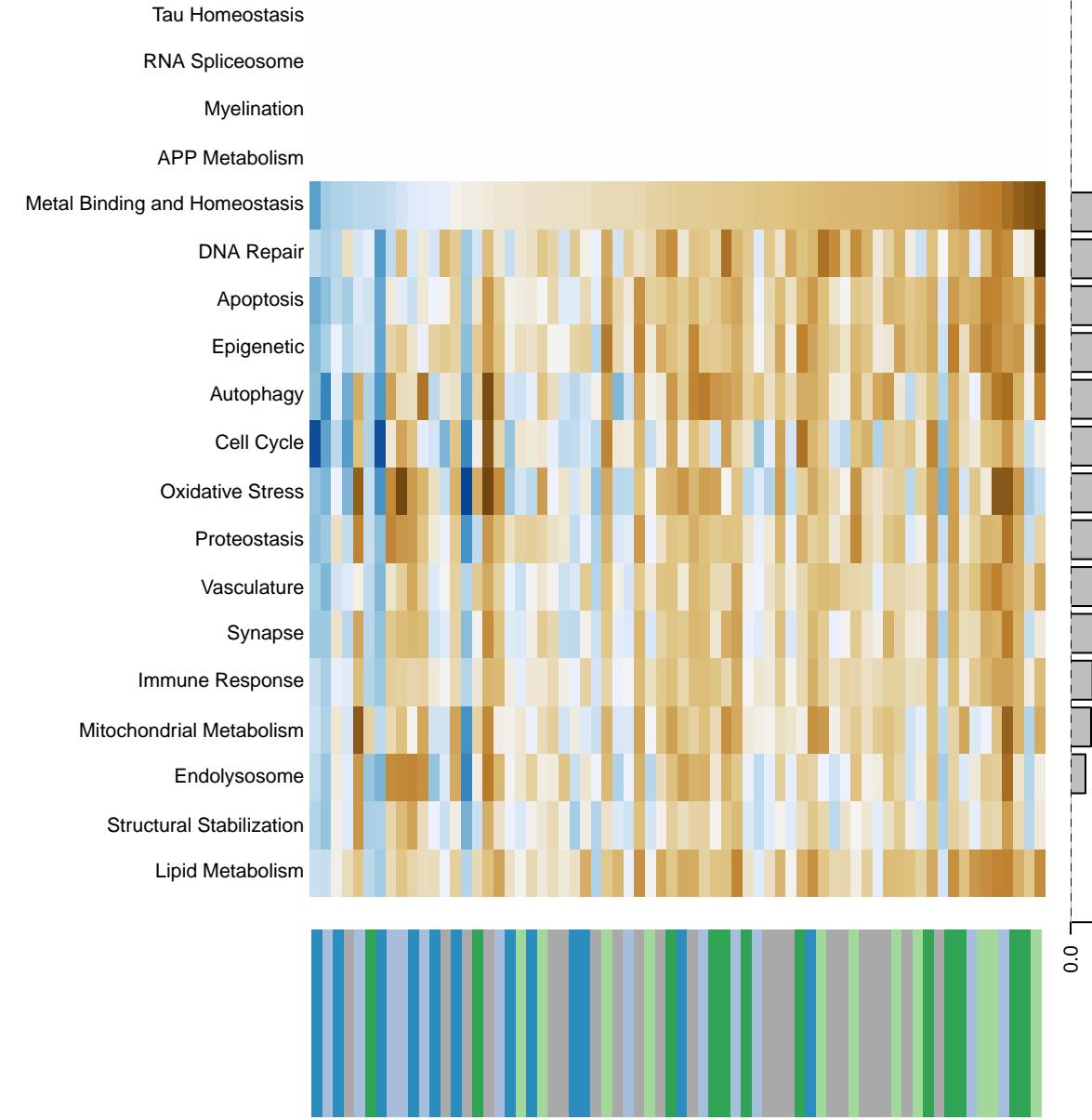
Structural Stabilization



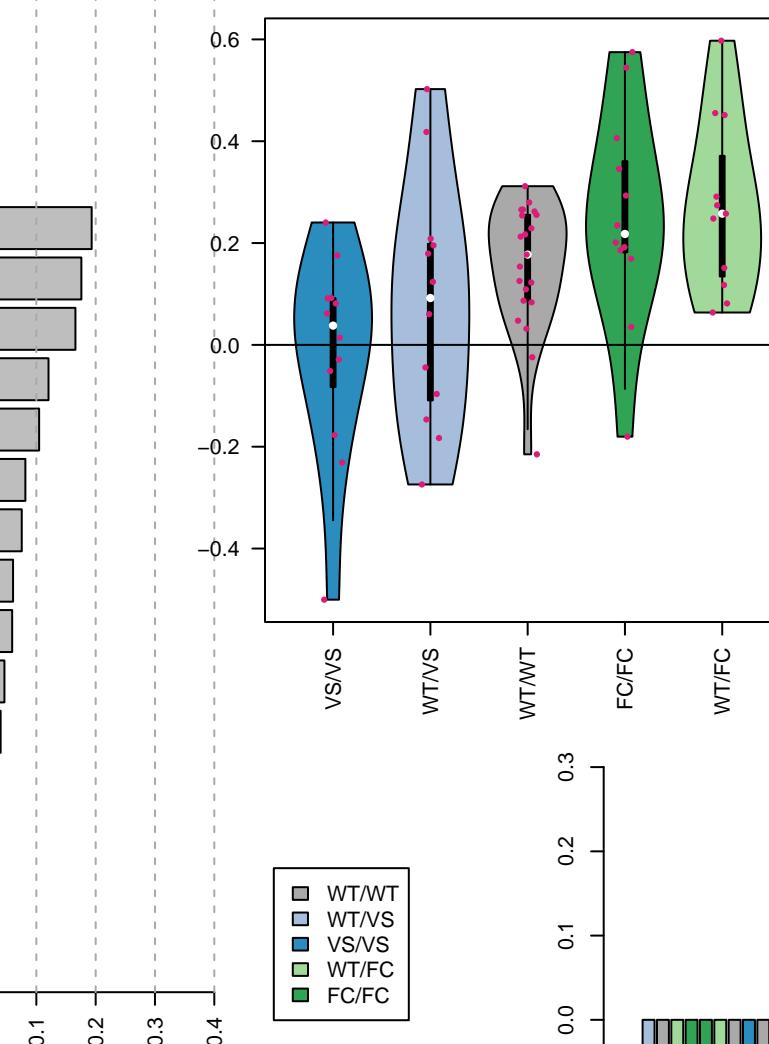
Decomposition



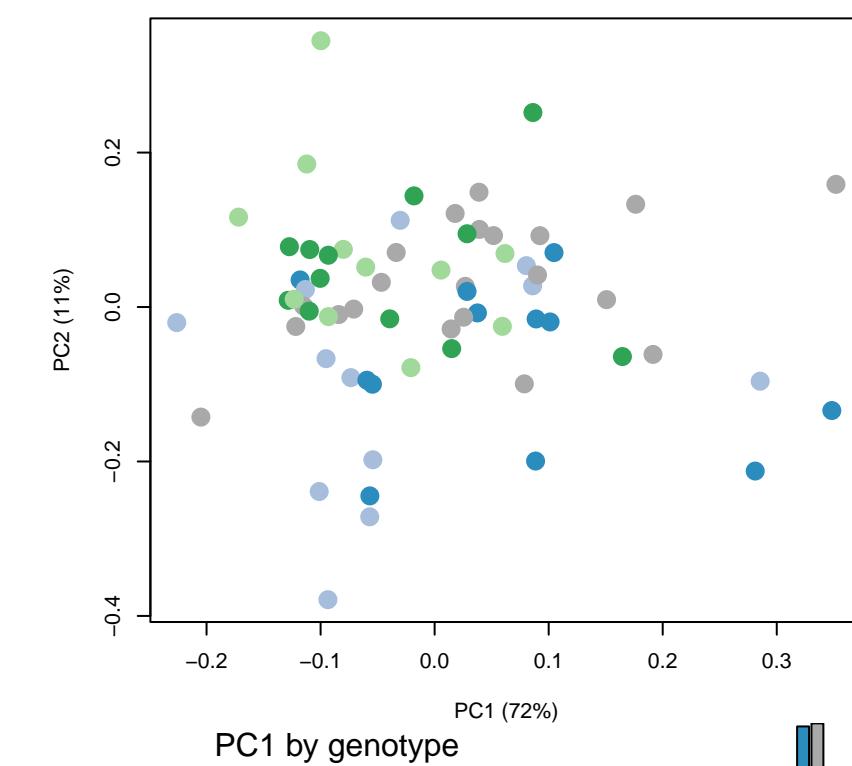
Yersinia infection



Metal Binding and Homeostasis



Decomposition

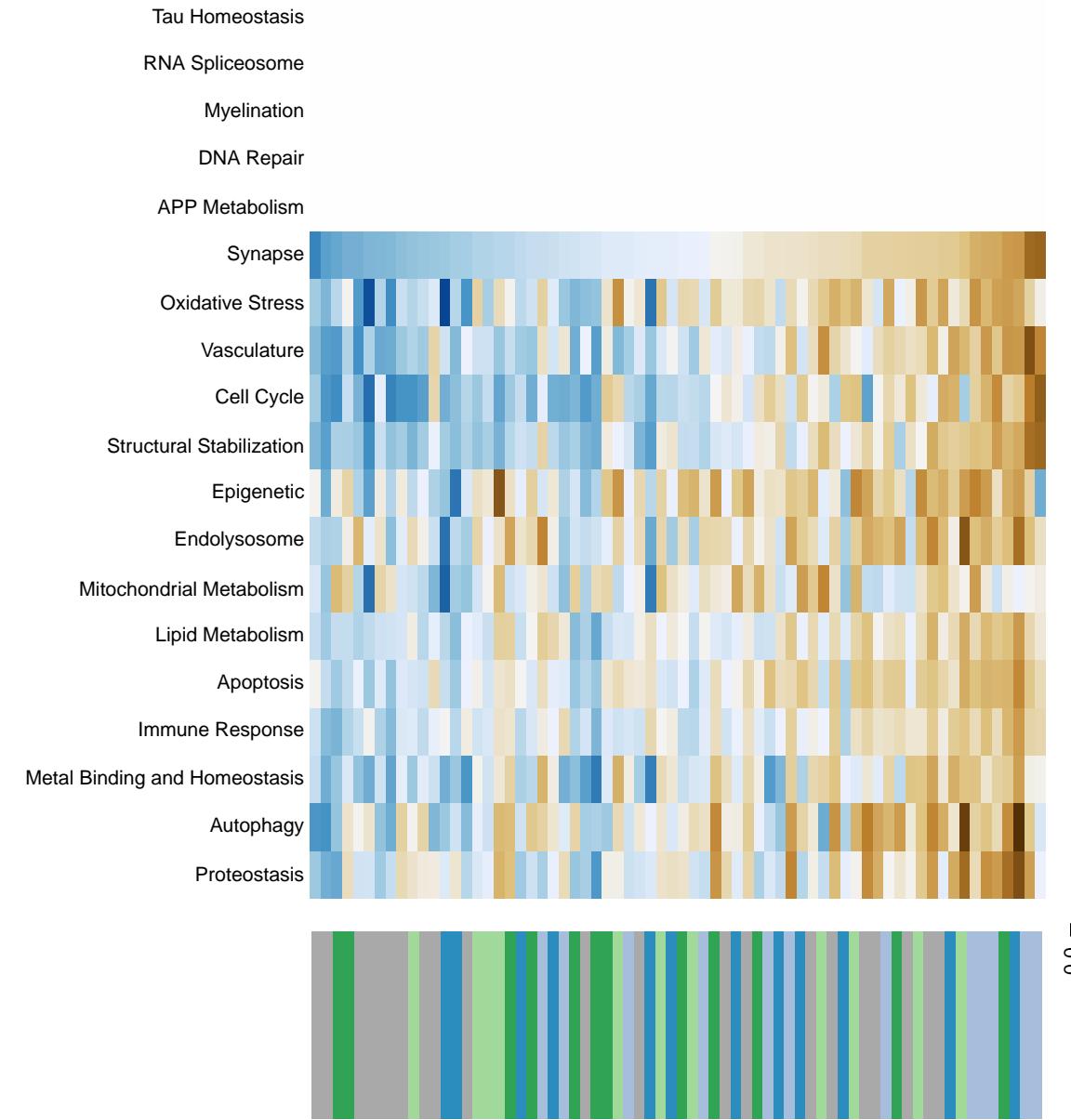


PC1 by genotype

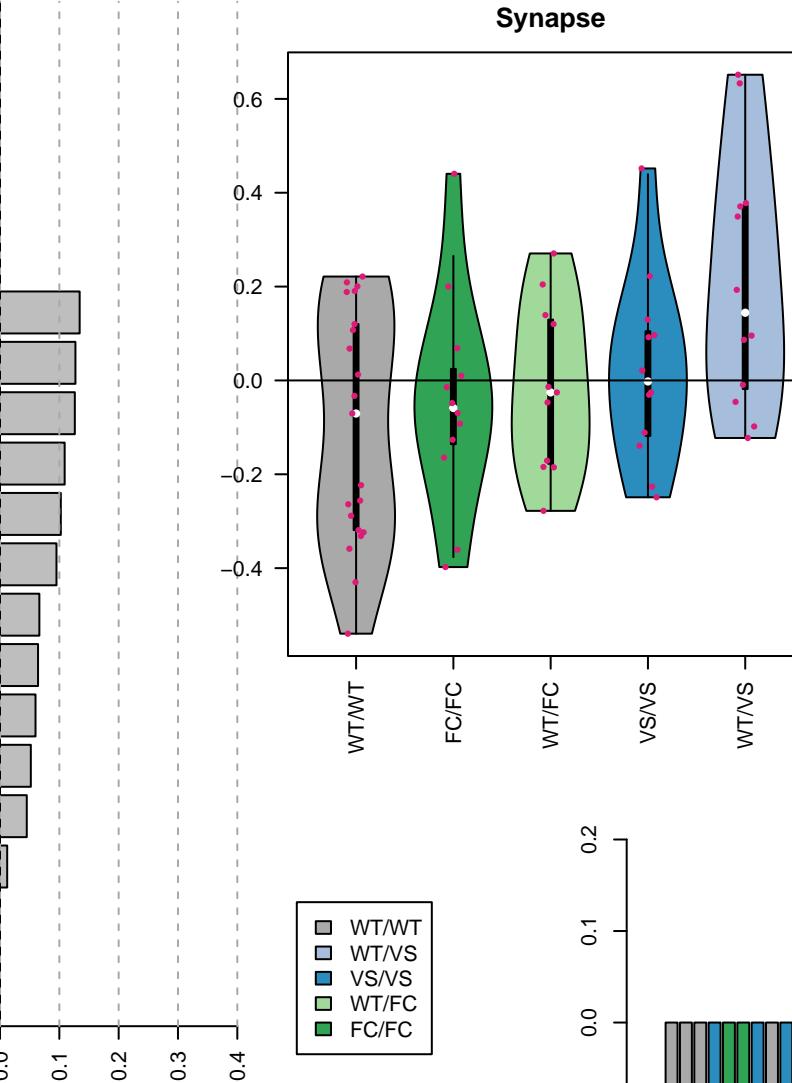


$R^2 = -0.035$

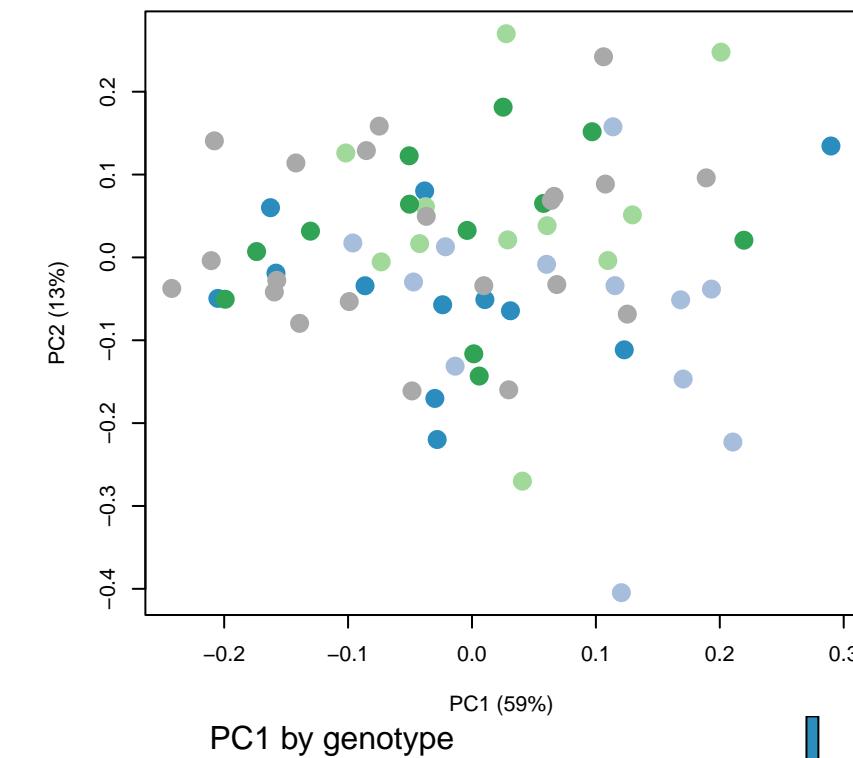
Pertussis



Synapse



Decomposition



0.2

0.1

0.0

-0.1

-0.2

-0.3

-0.4

$R^2 = -0.046$

0.2

0.1

0.0

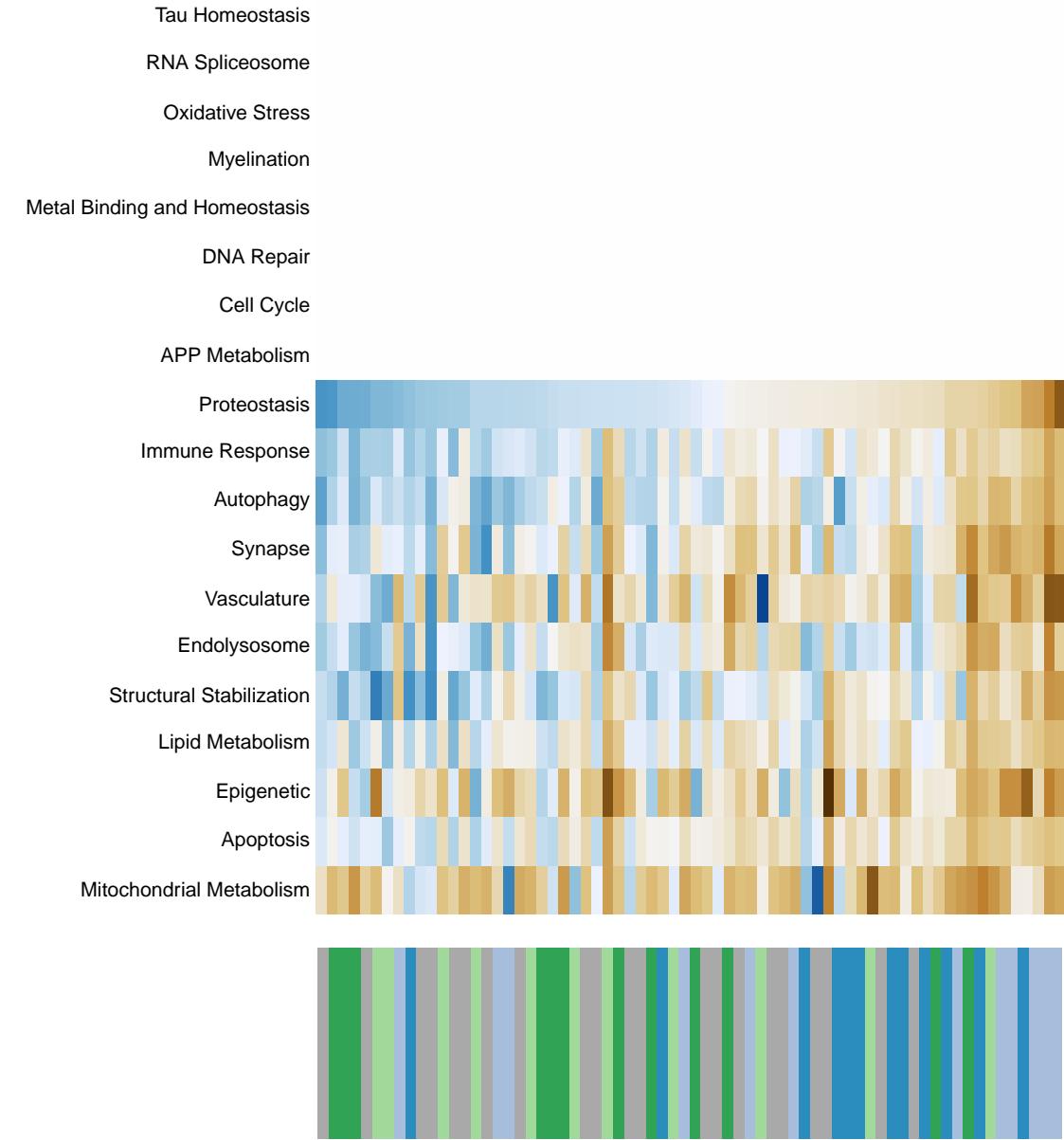
-0.1

-0.2

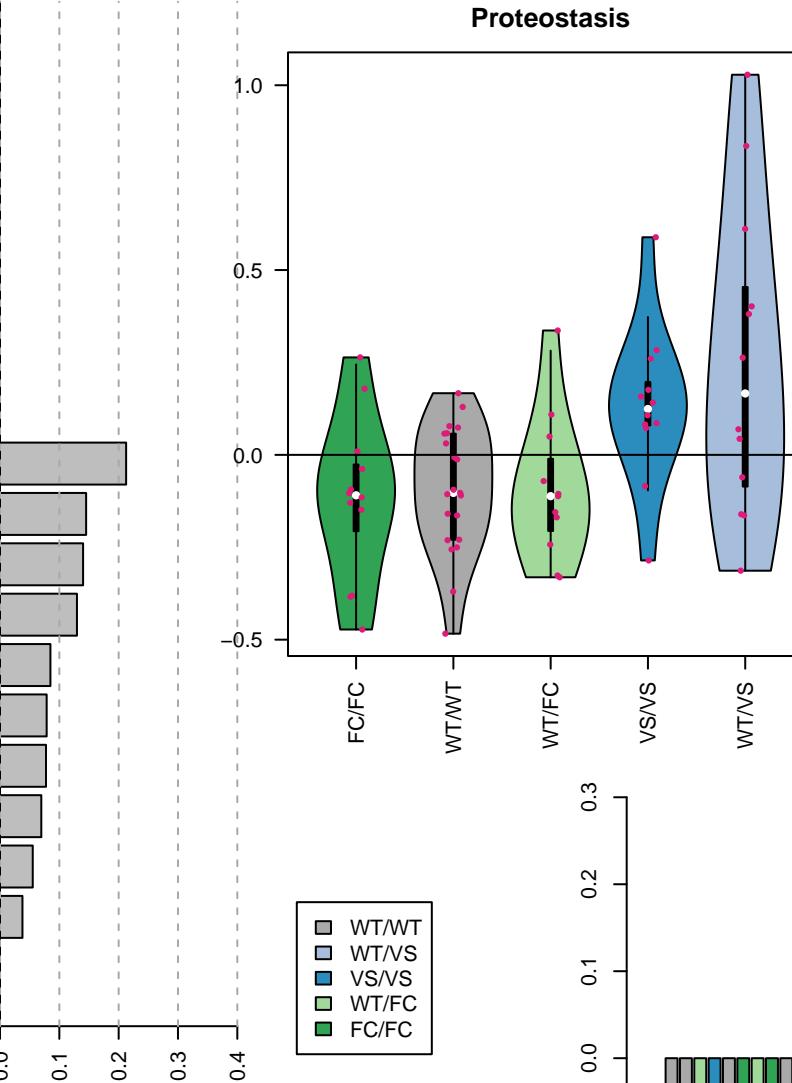
-0.3

-0.4

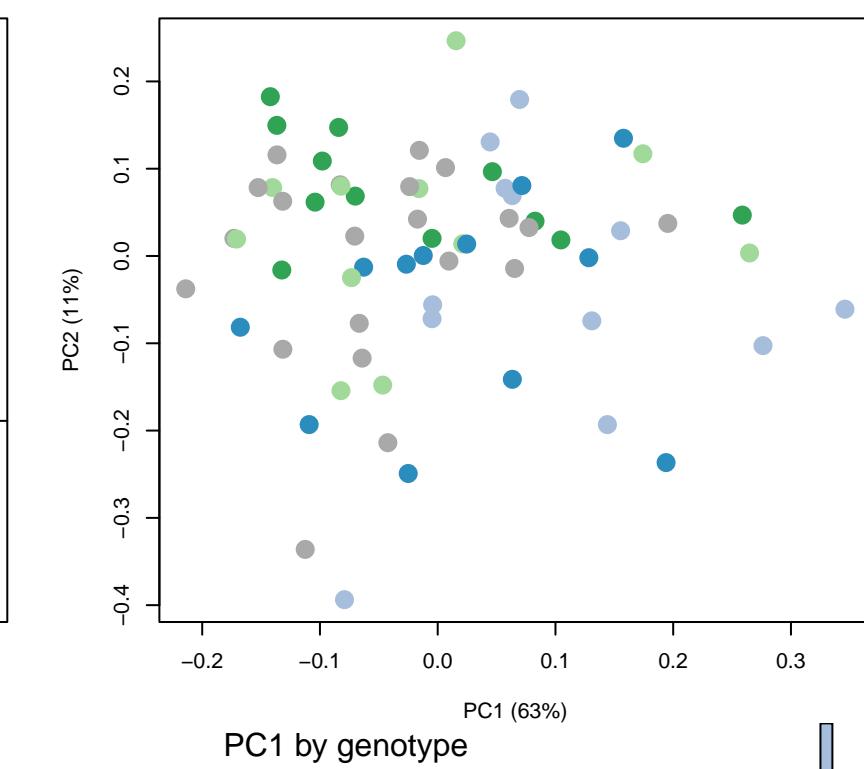
Legionellosis



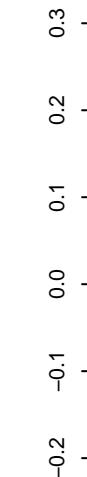
Proteostasis



Decomposition



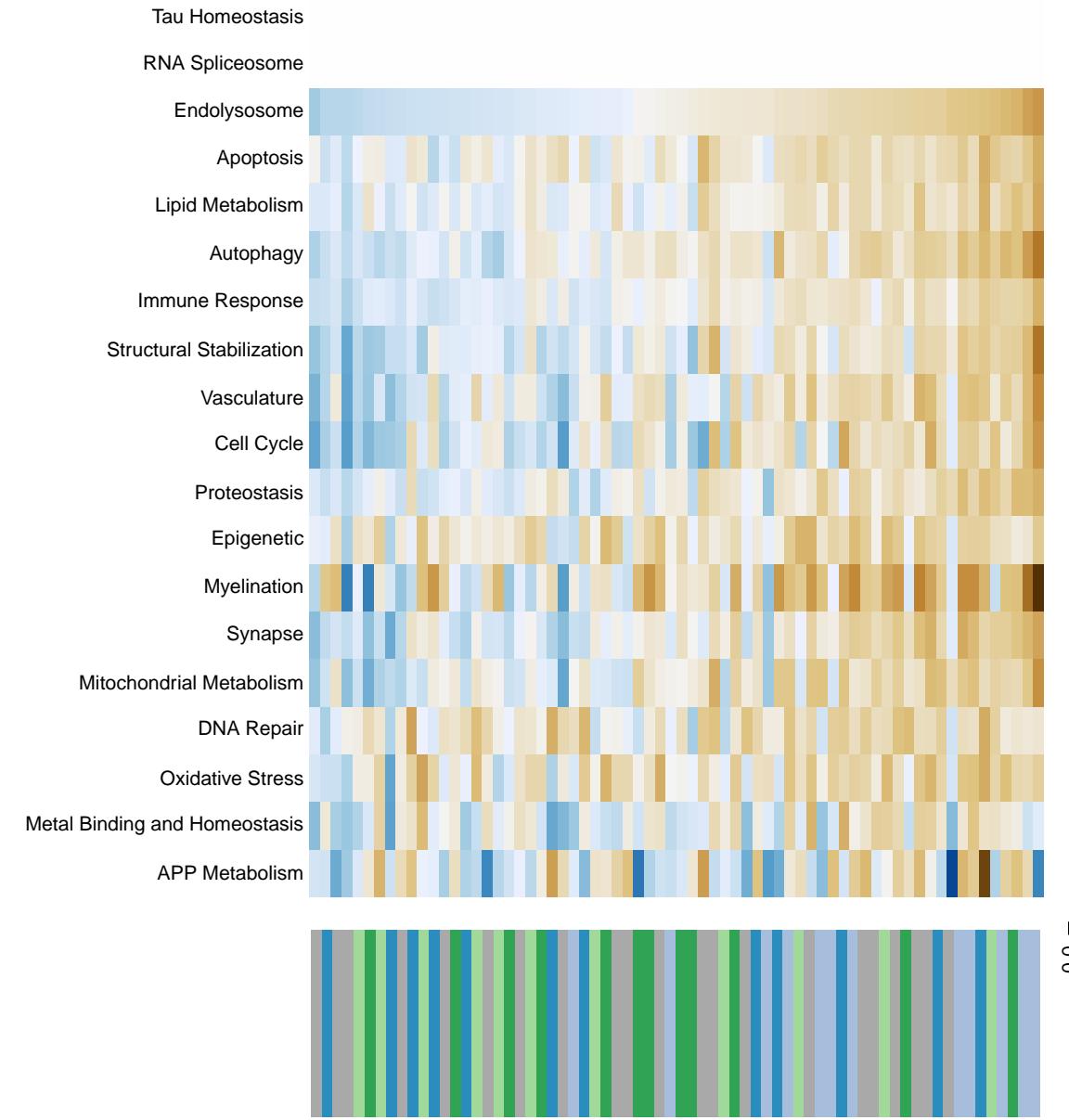
PC1 by genotype



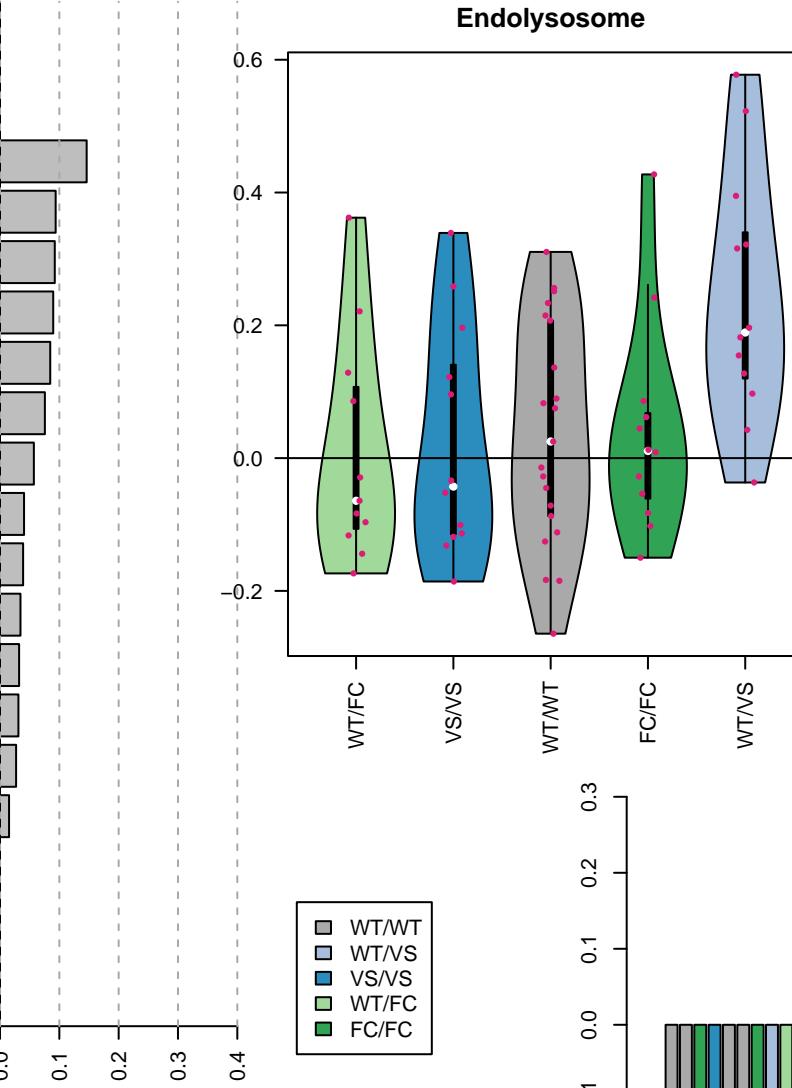
$R^2 = 0.021$



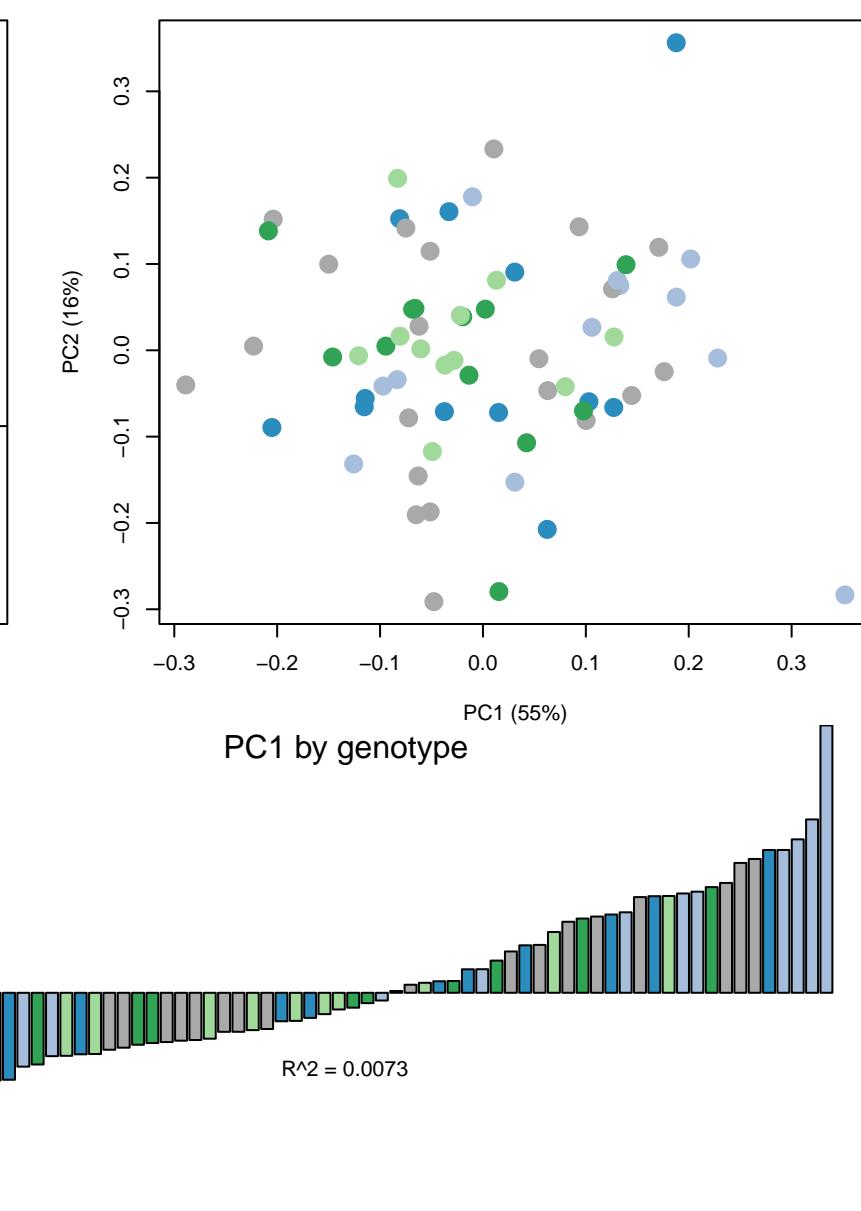
Tuberculosis



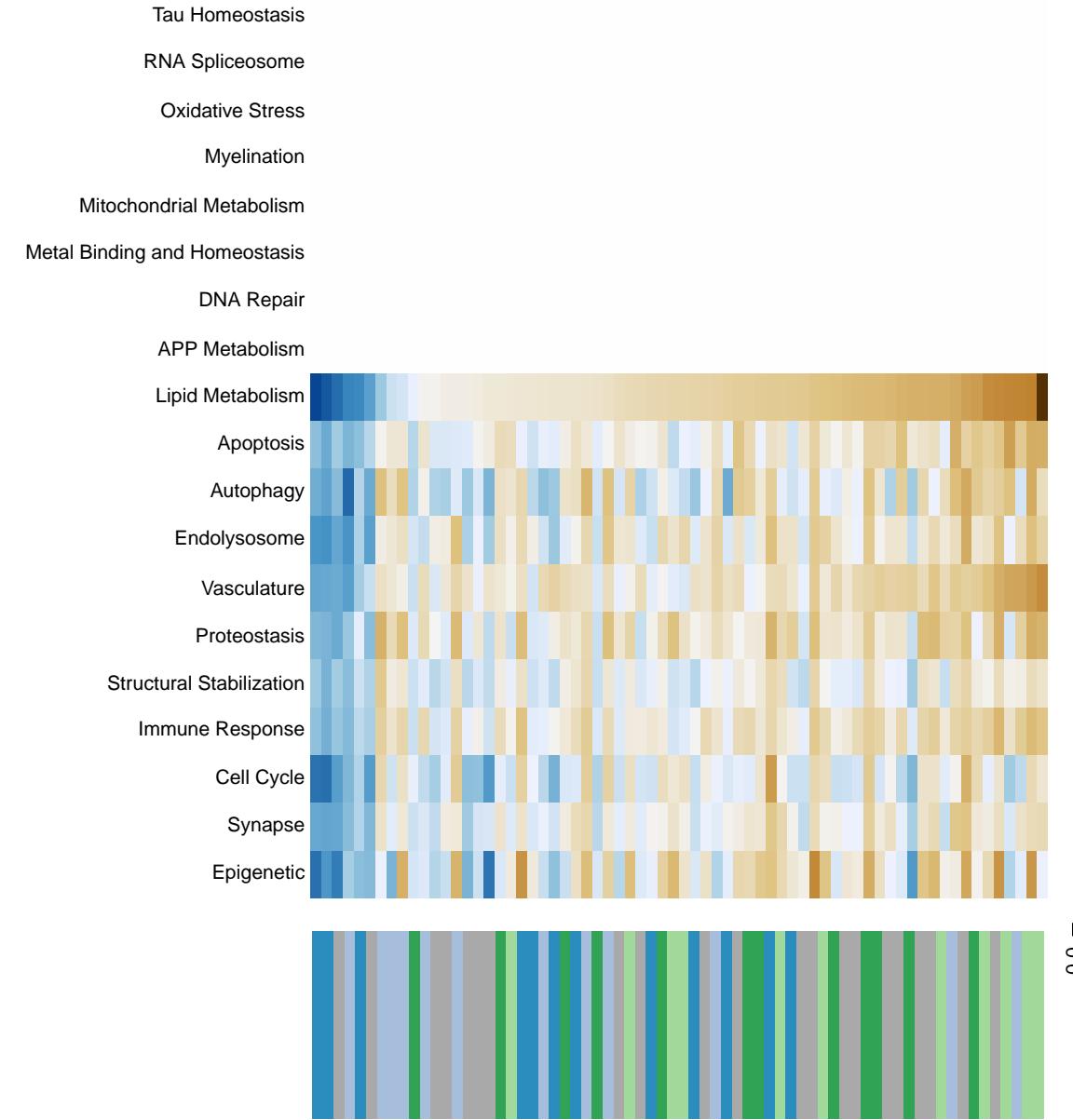
Endolysosome



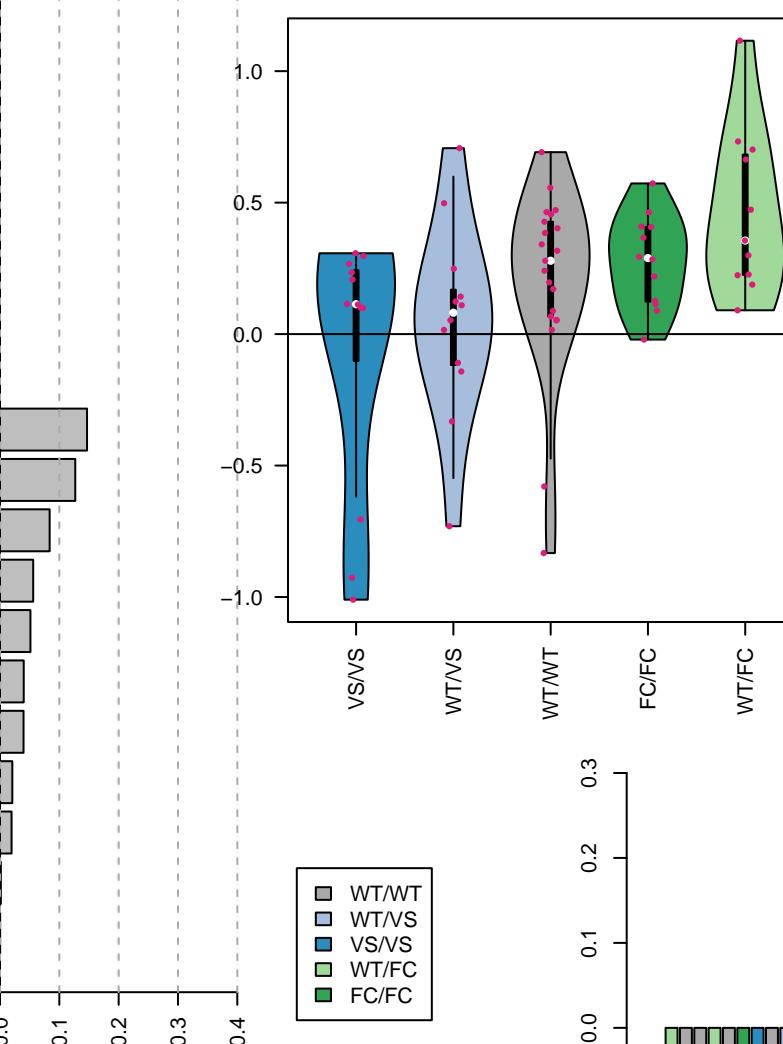
Decomposition



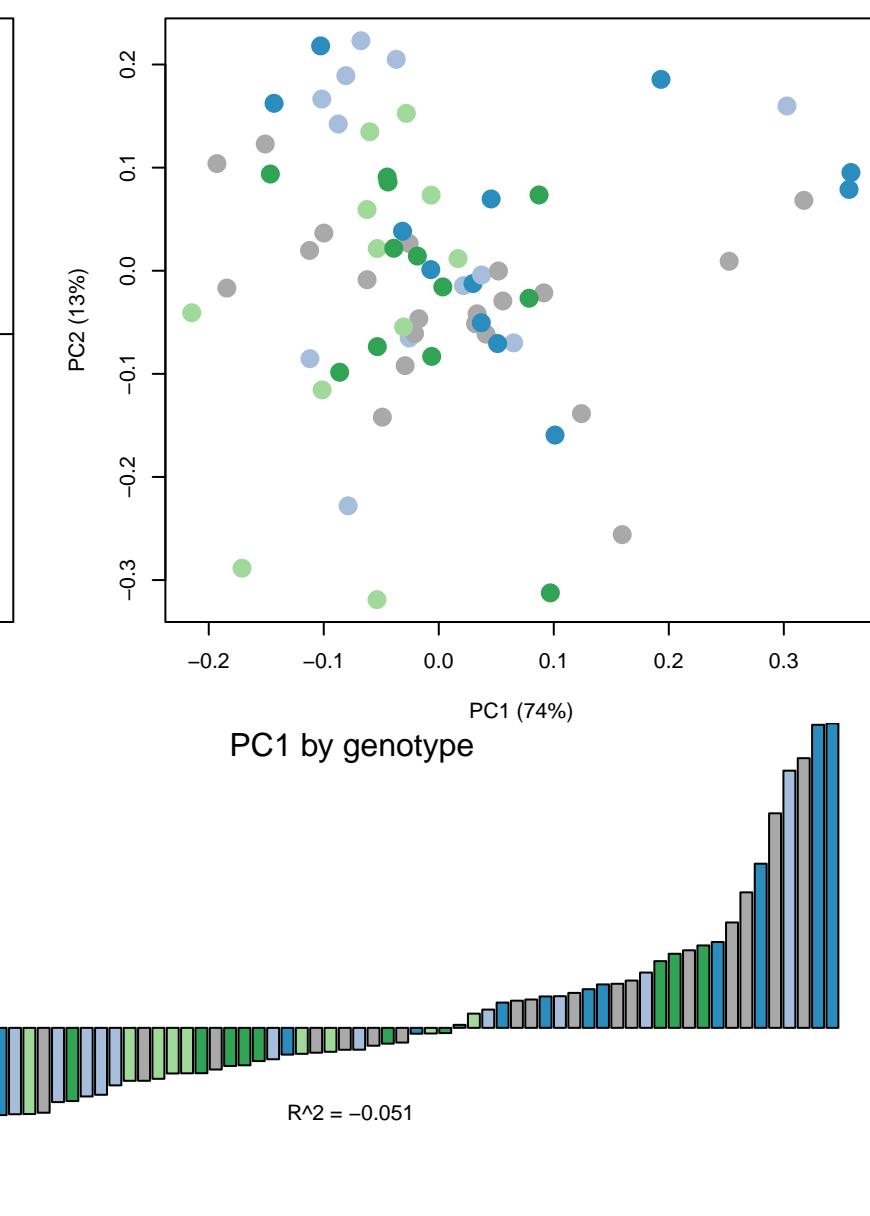
Bacterial invasion of epithelial cells



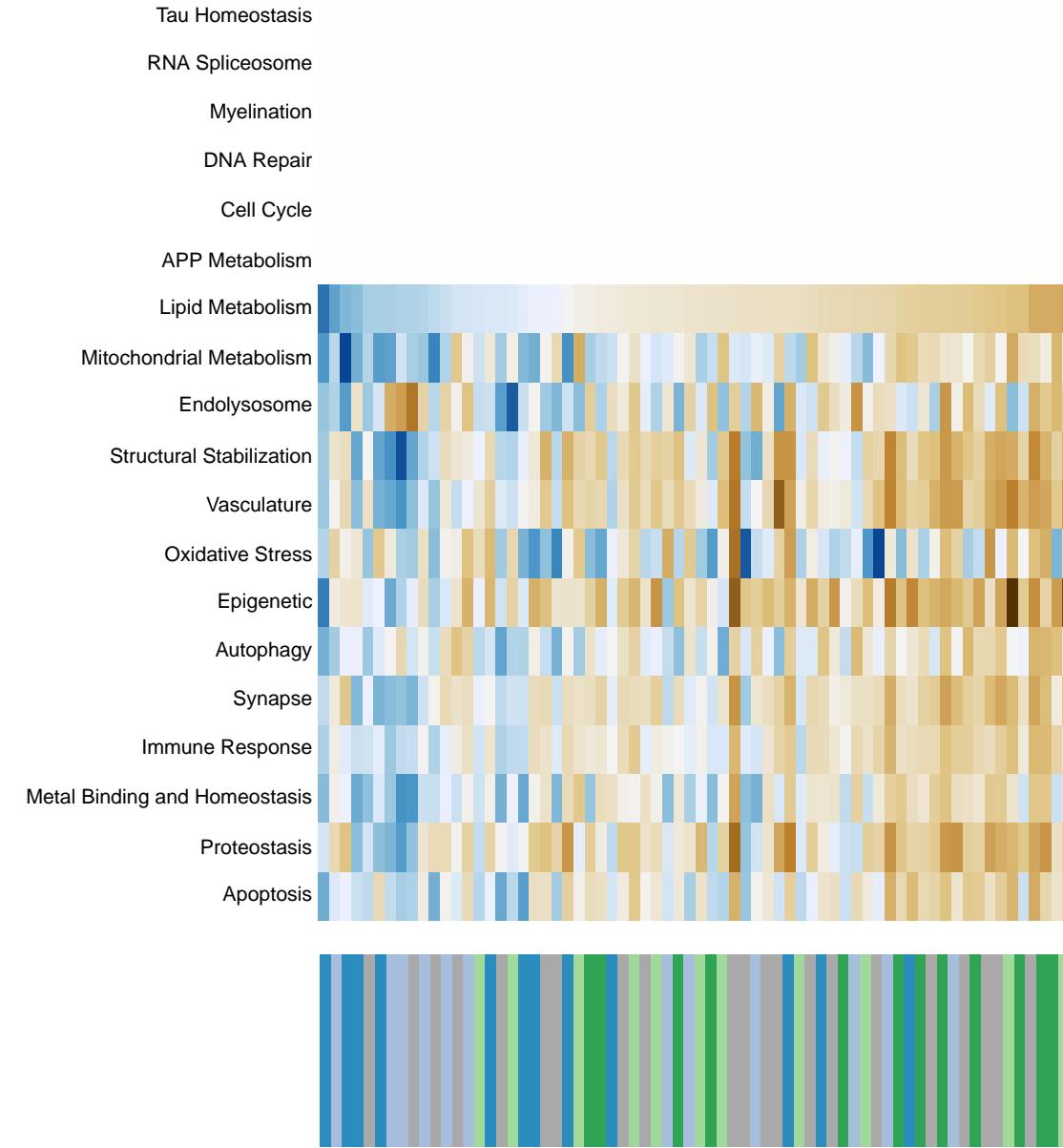
Lipid Metabolism



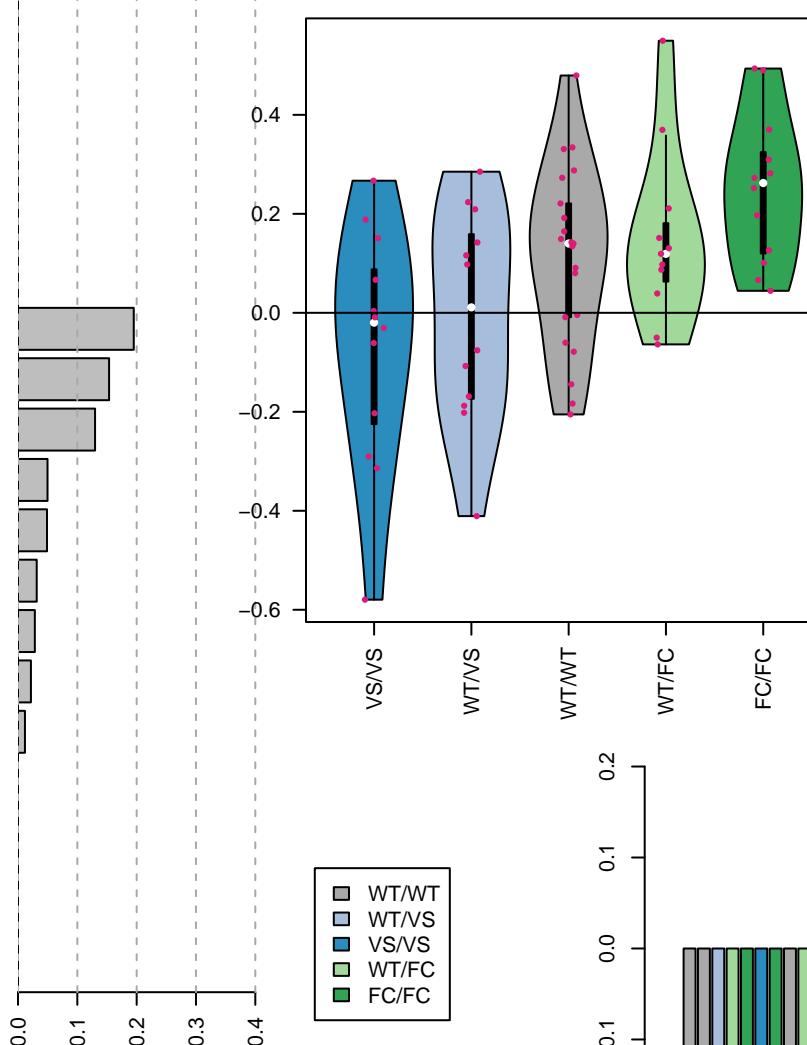
Decomposition



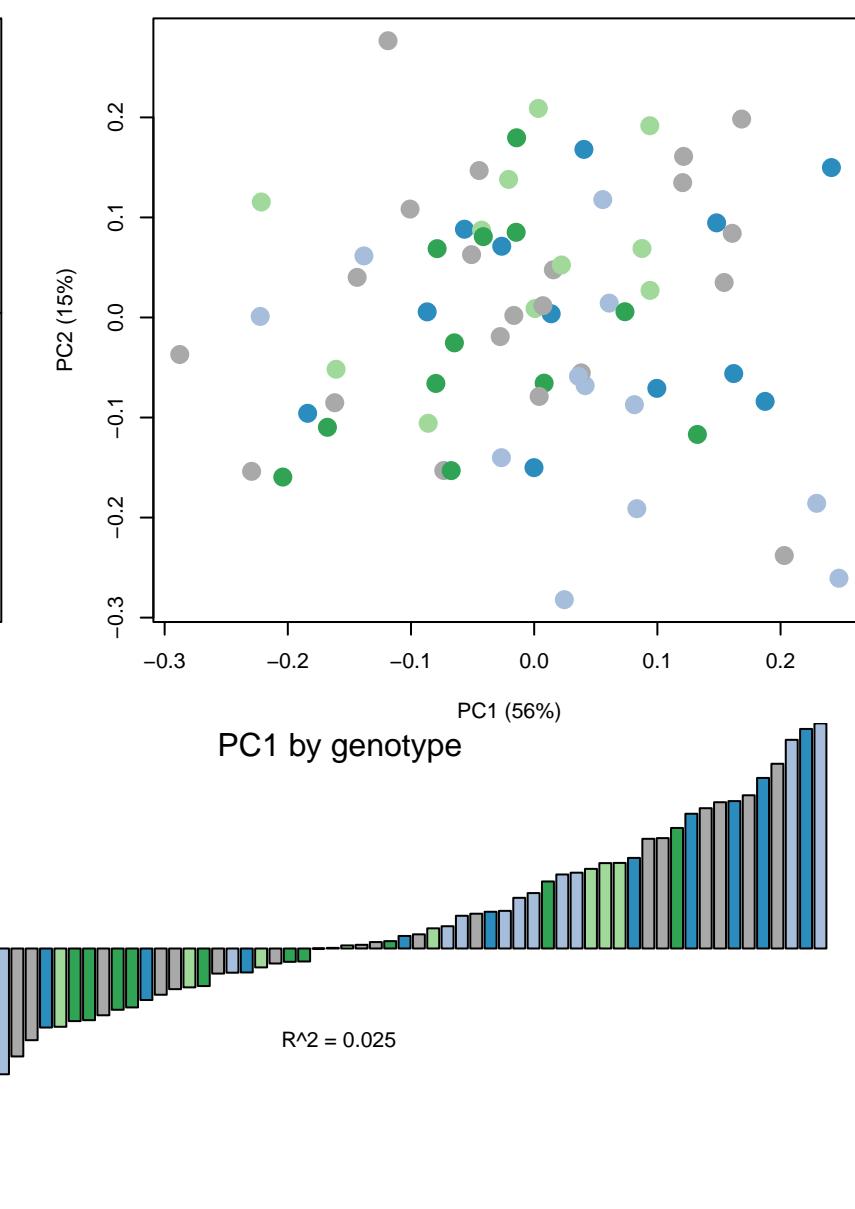
Amoebiasis



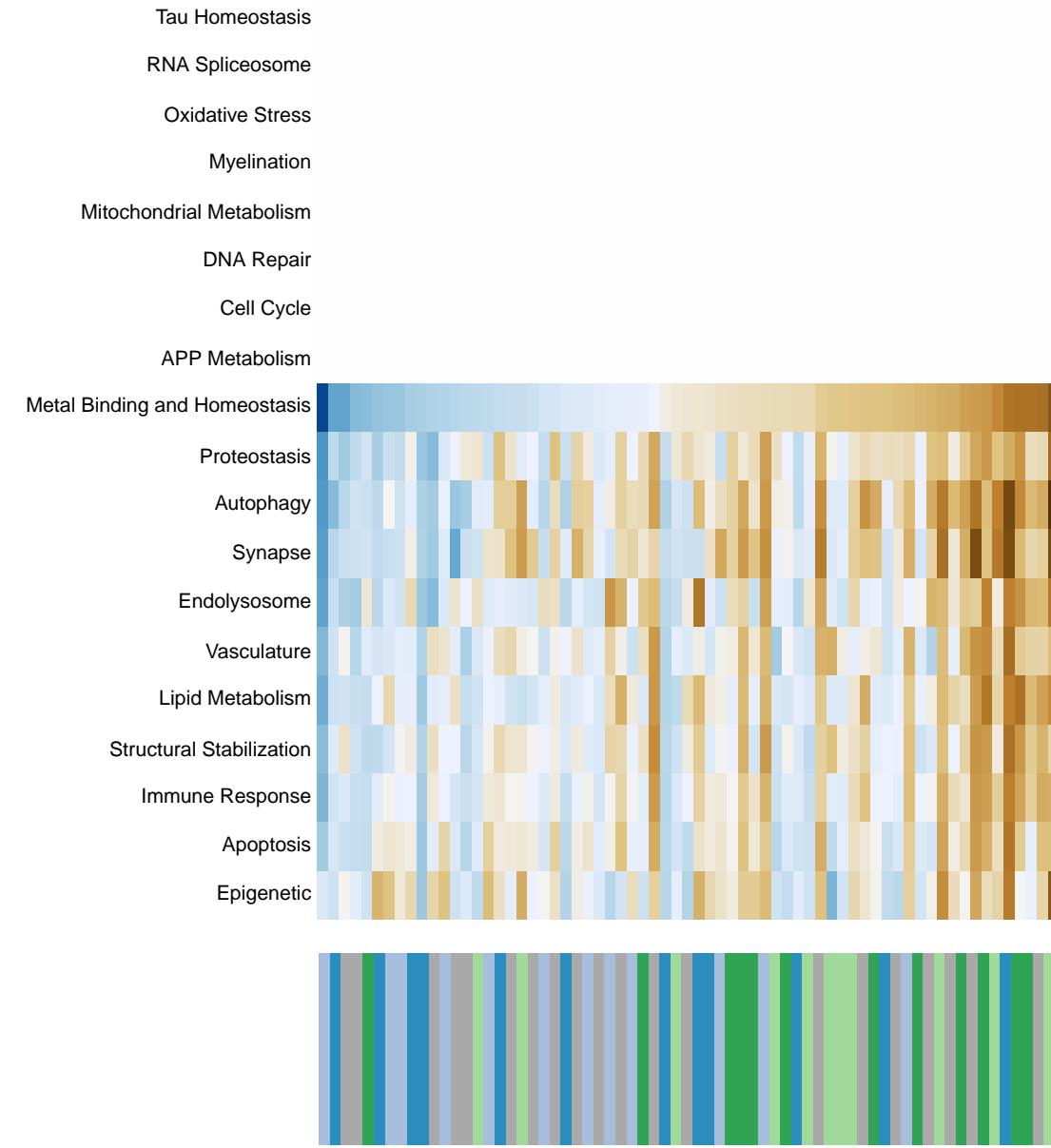
Lipid Metabolism



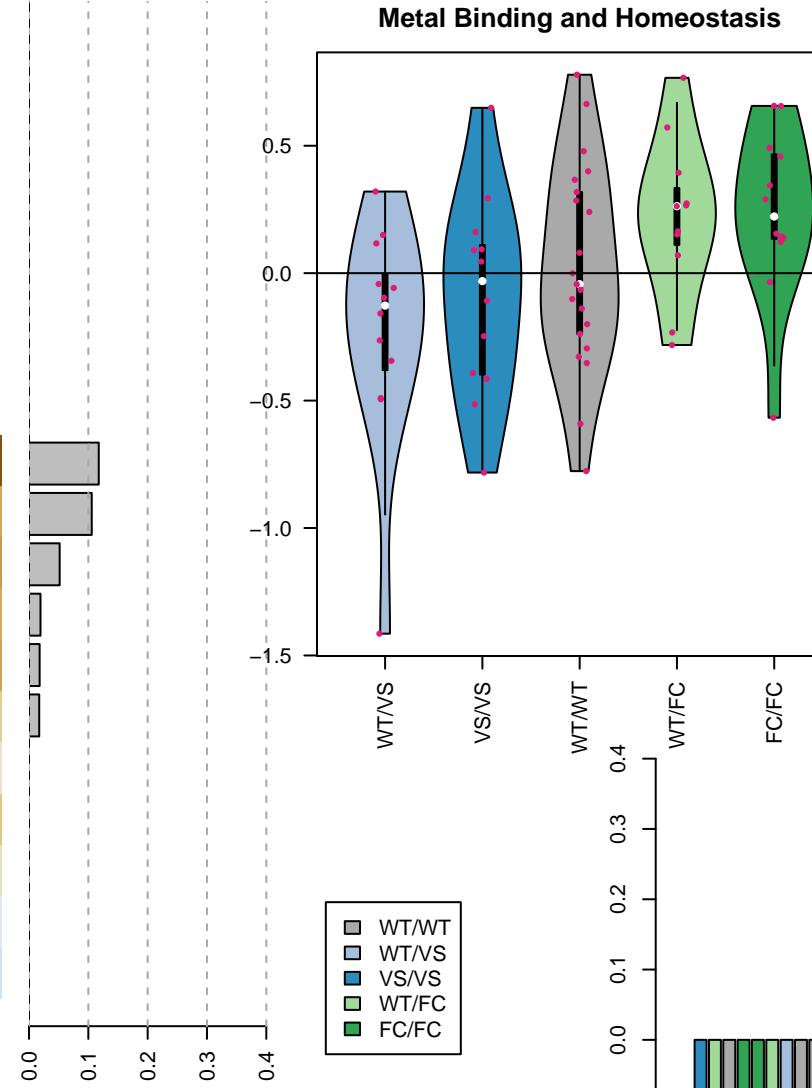
Decomposition



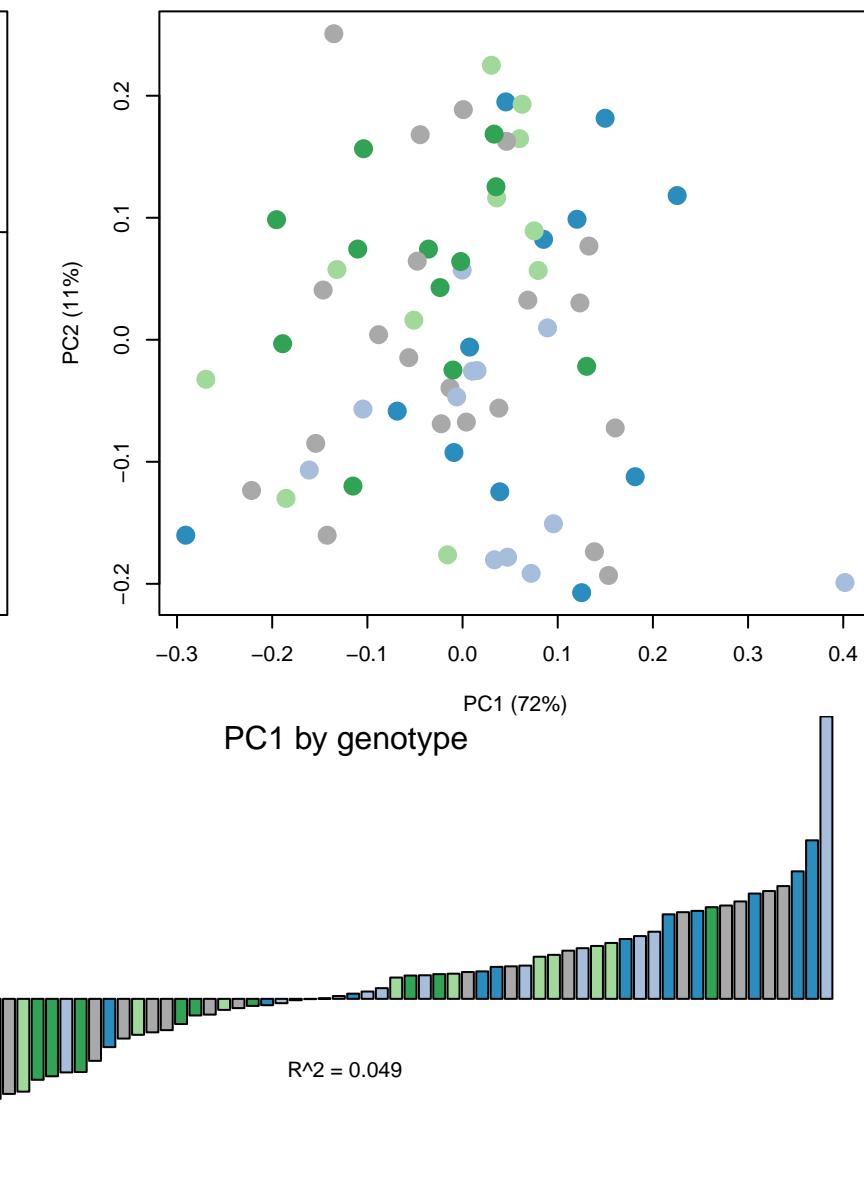
Malaria



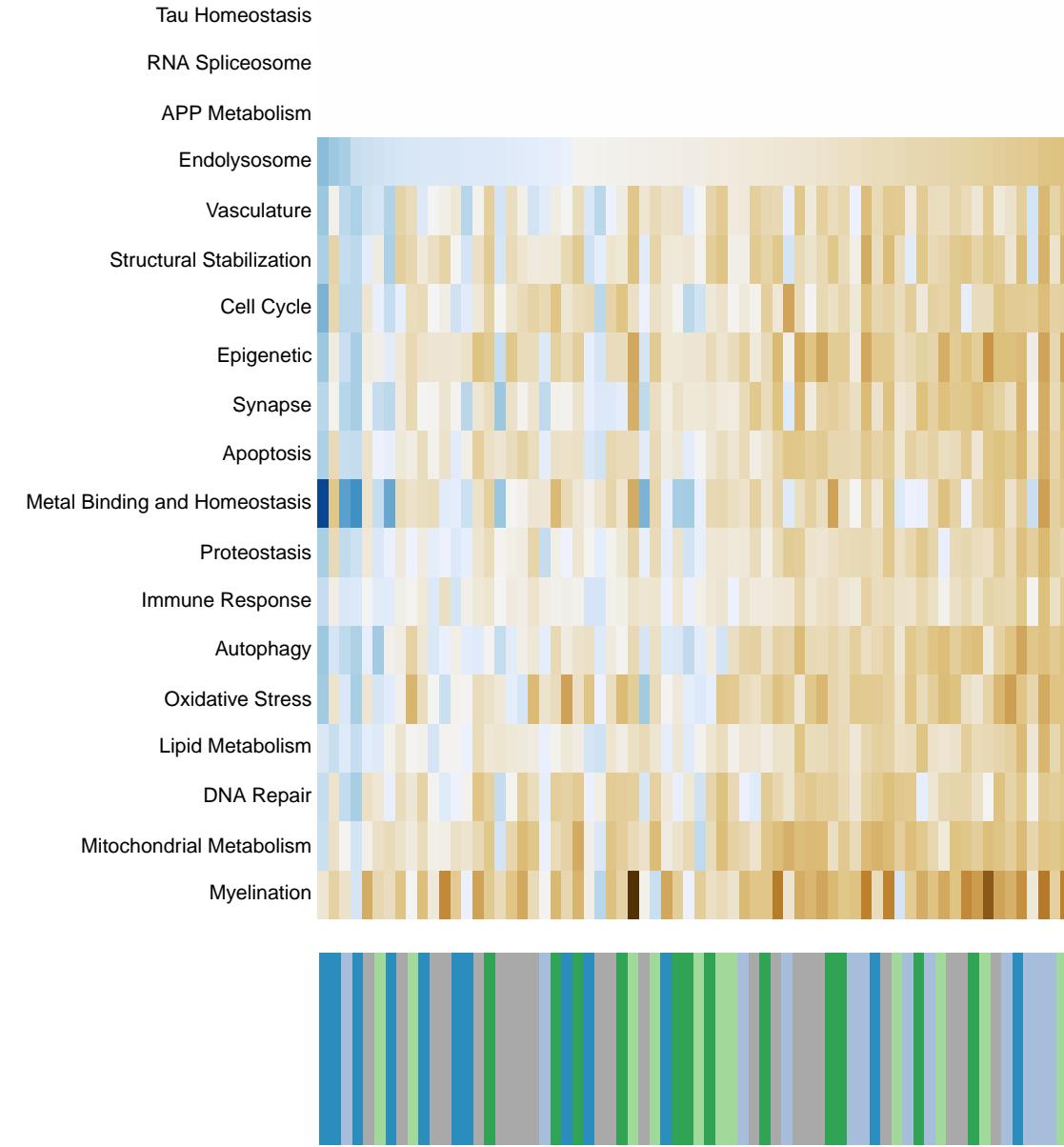
Metal Binding and Homeostasis



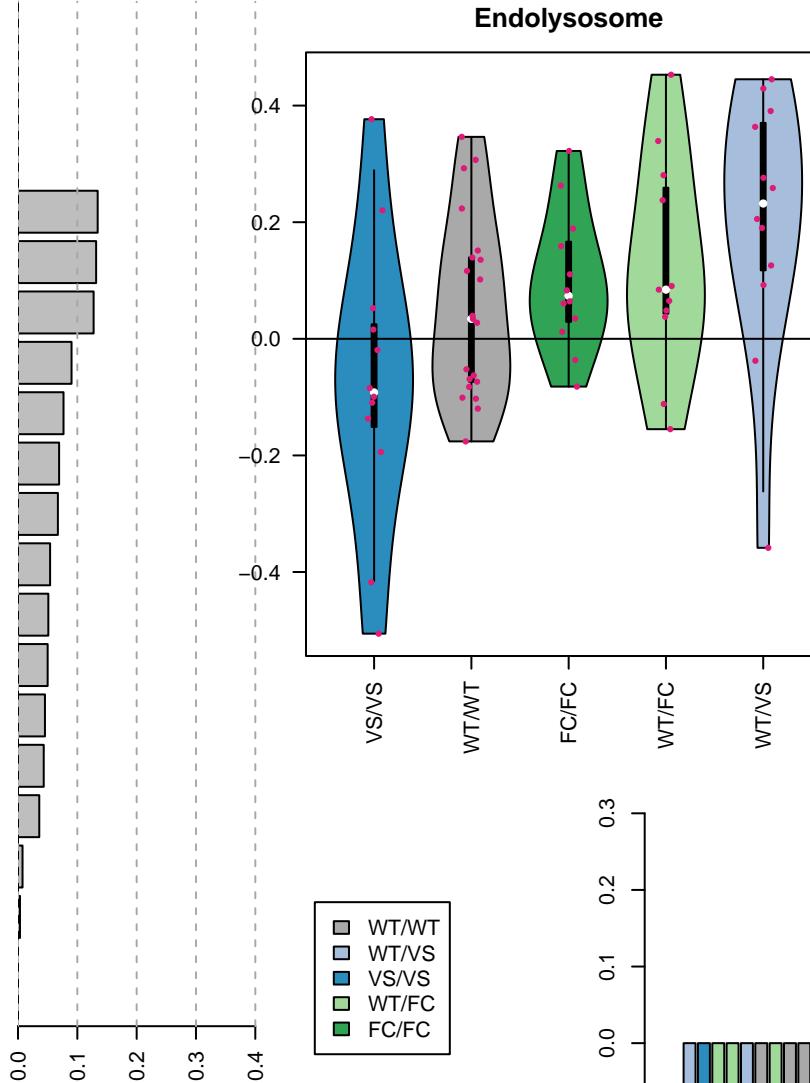
Decomposition



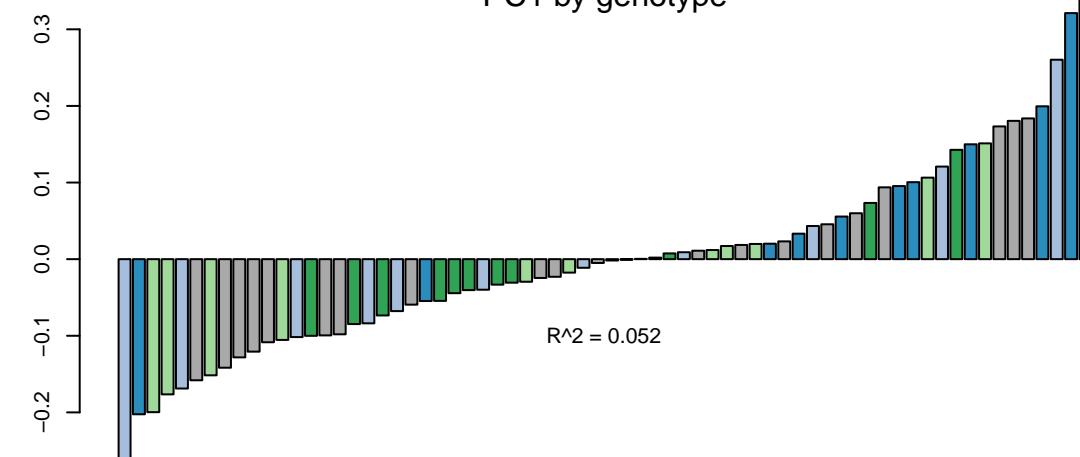
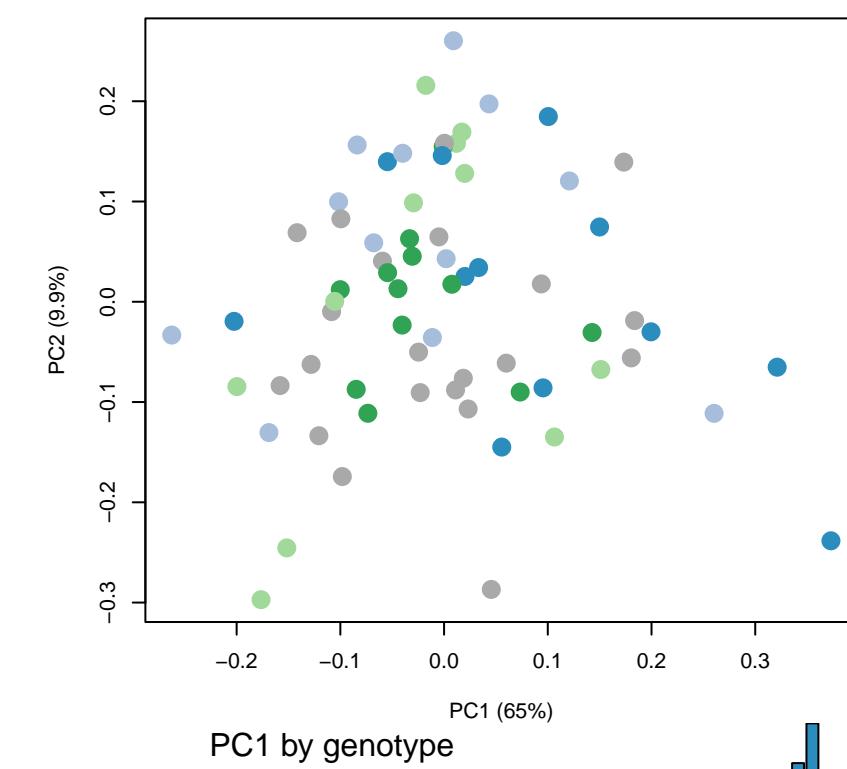
Toxoplasmosis



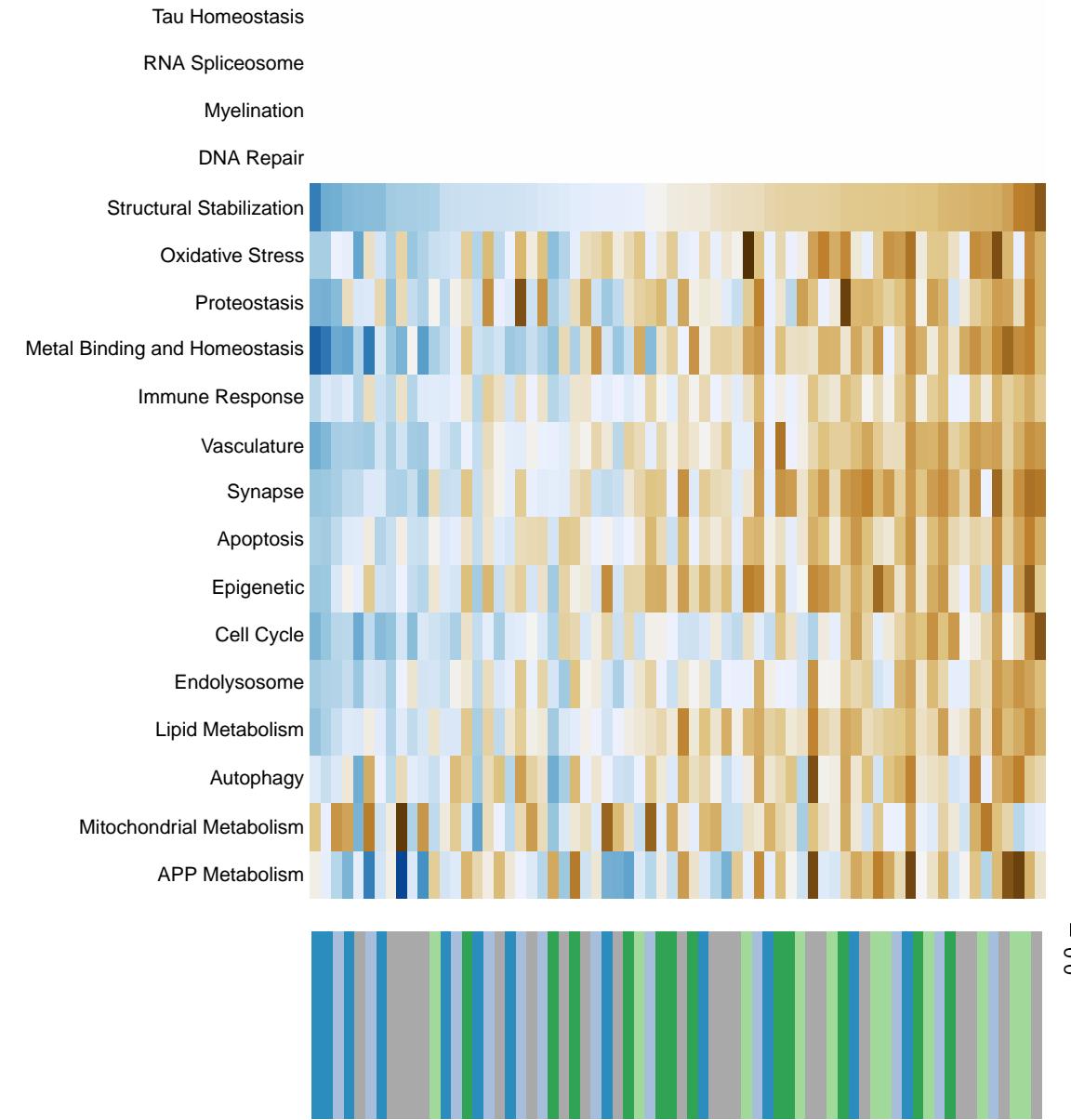
Endolysosome



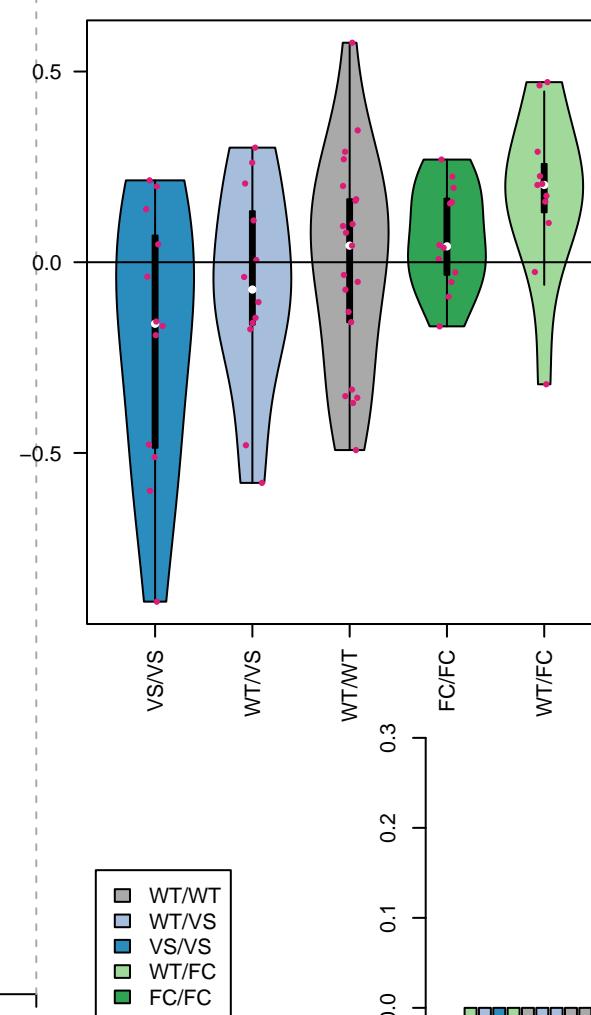
Decomposition



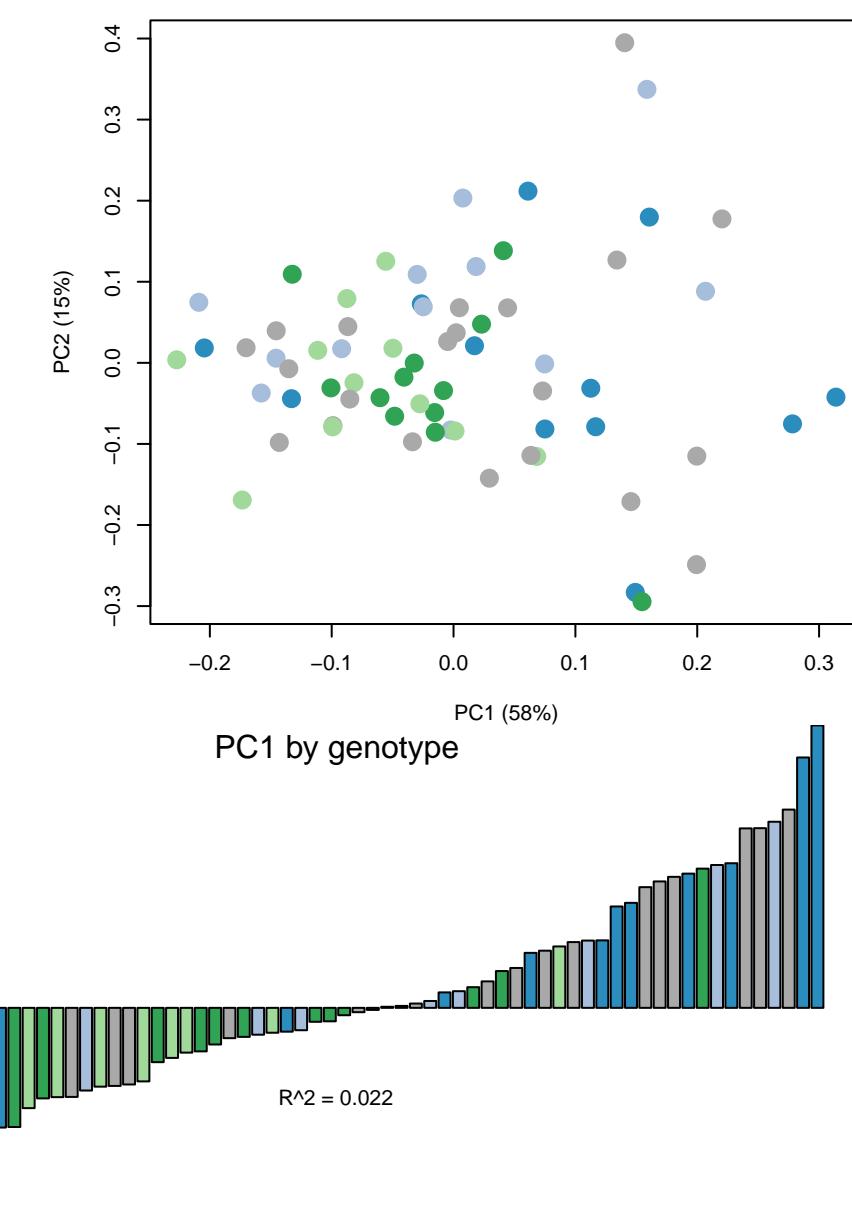
Leishmaniasis



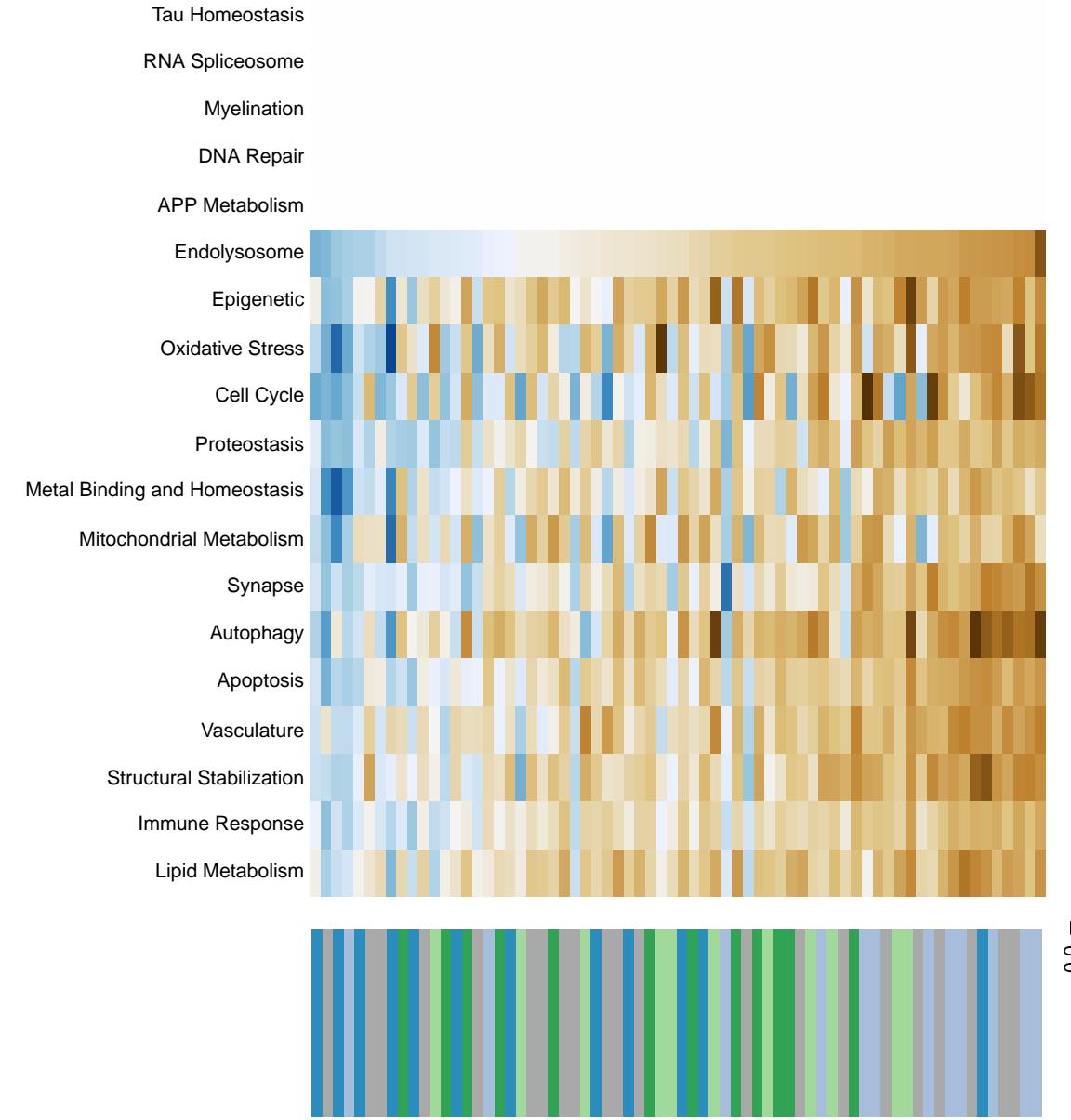
Structural Stabilization



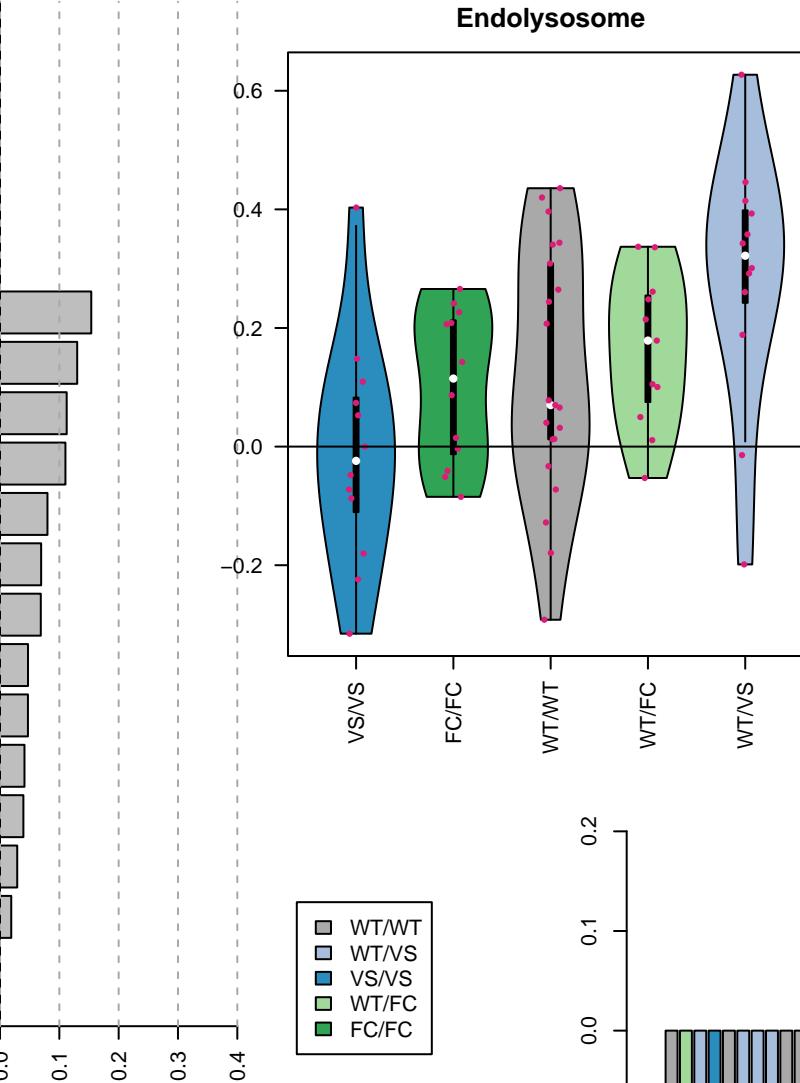
Decomposition



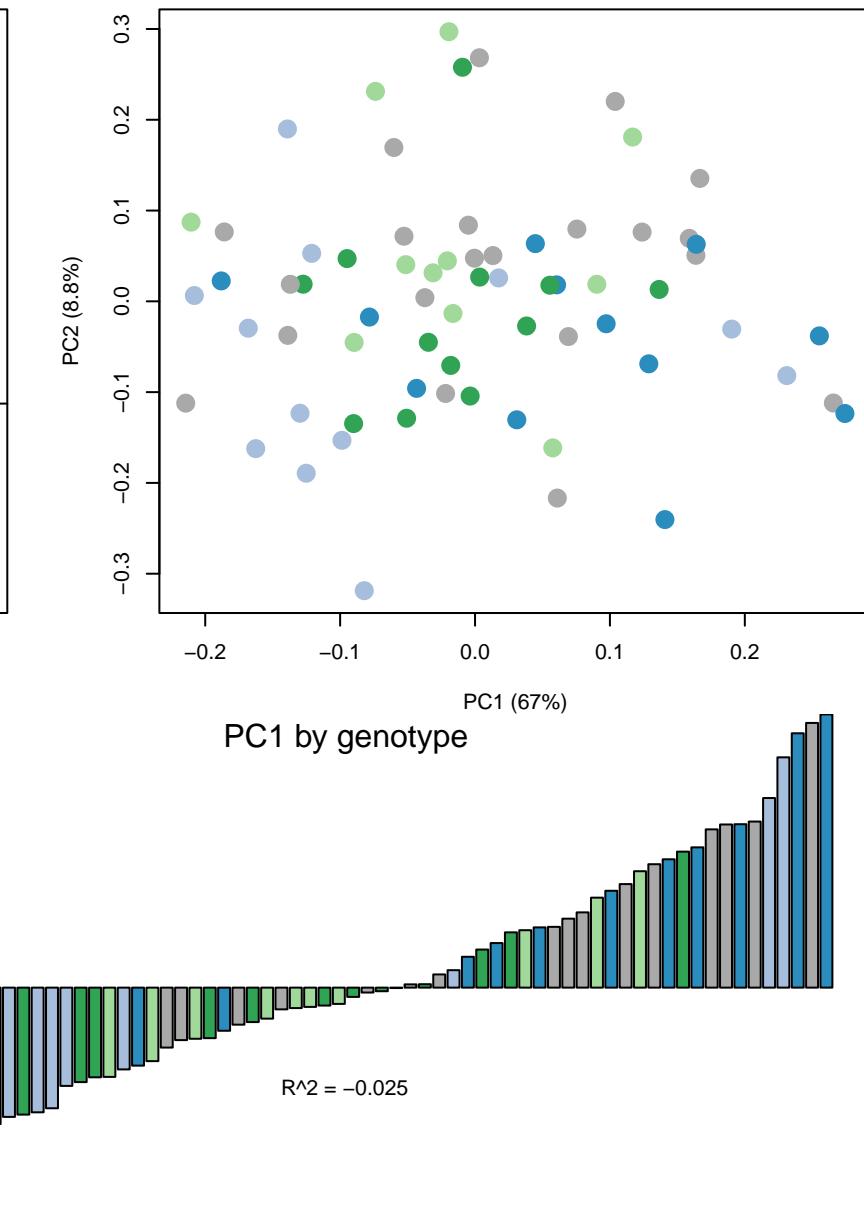
Chagas disease



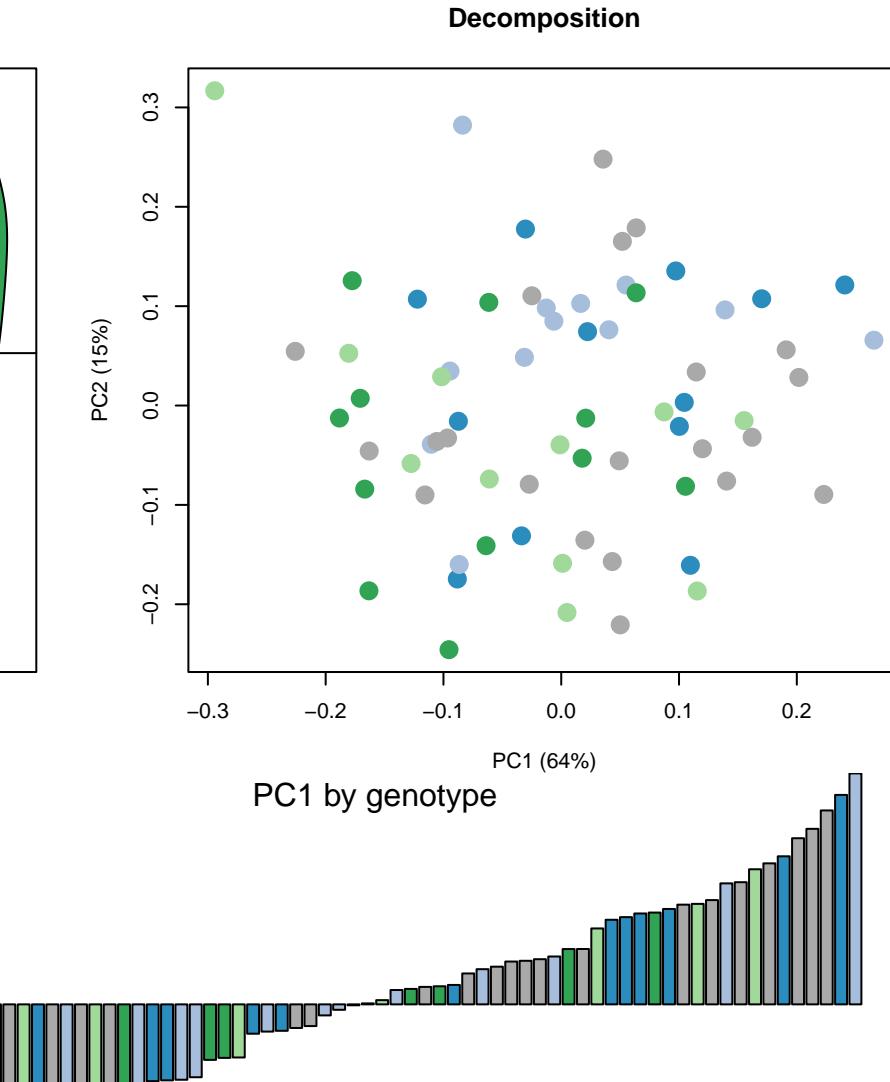
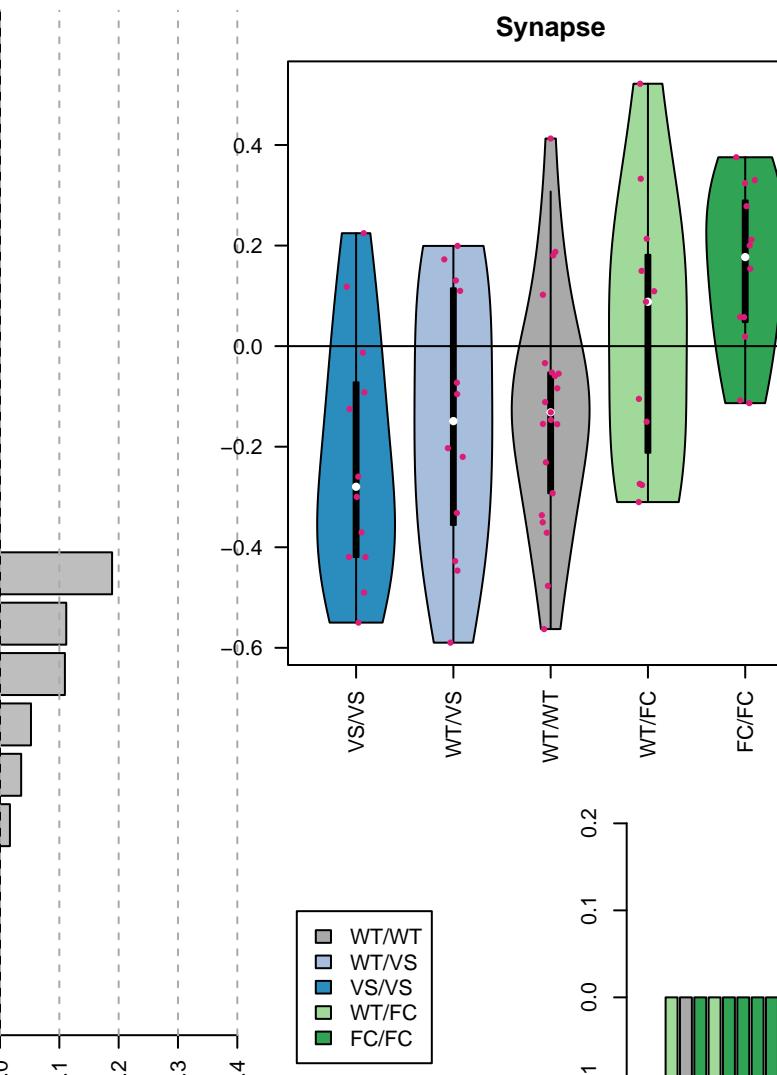
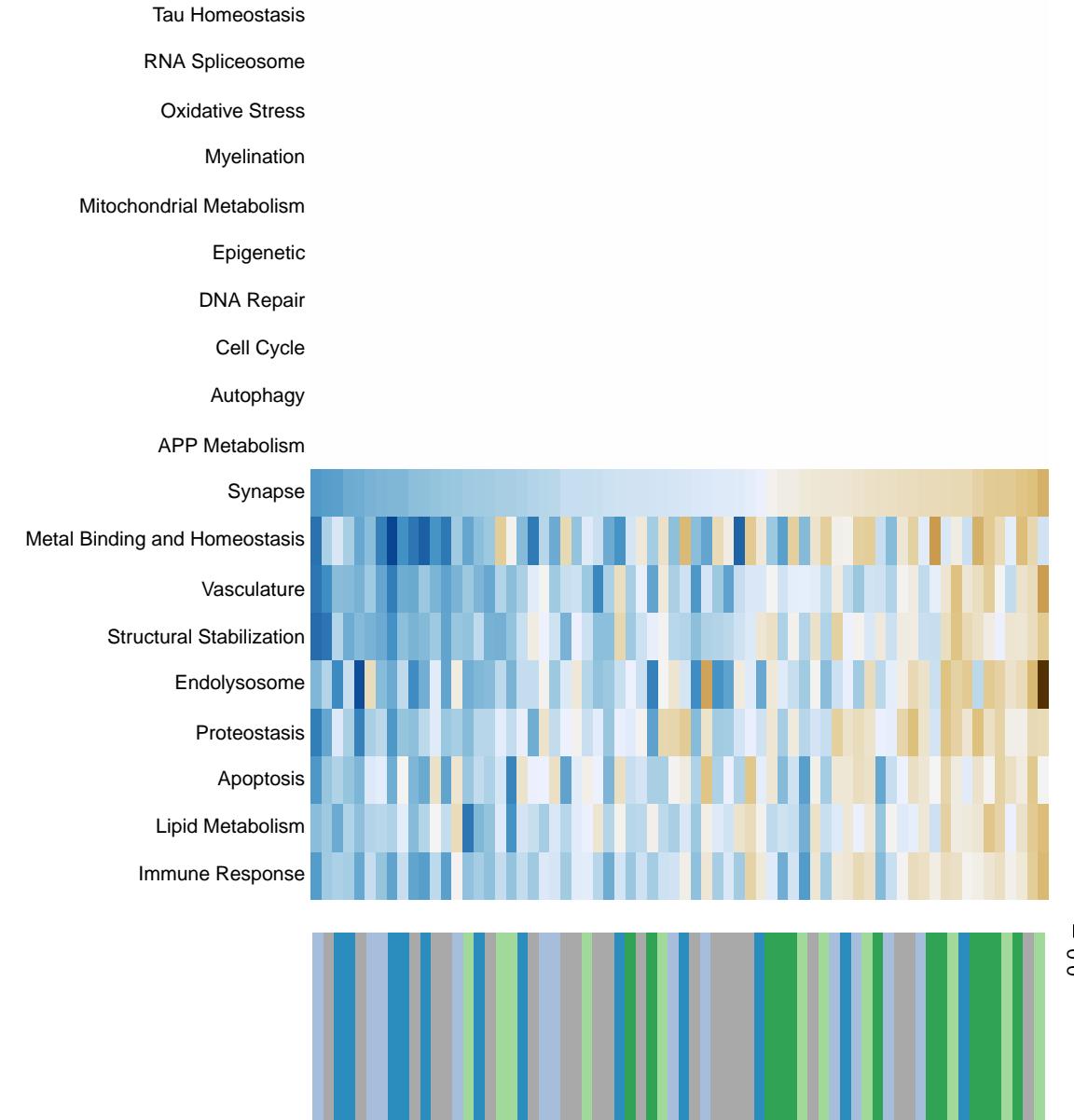
Endolysosome



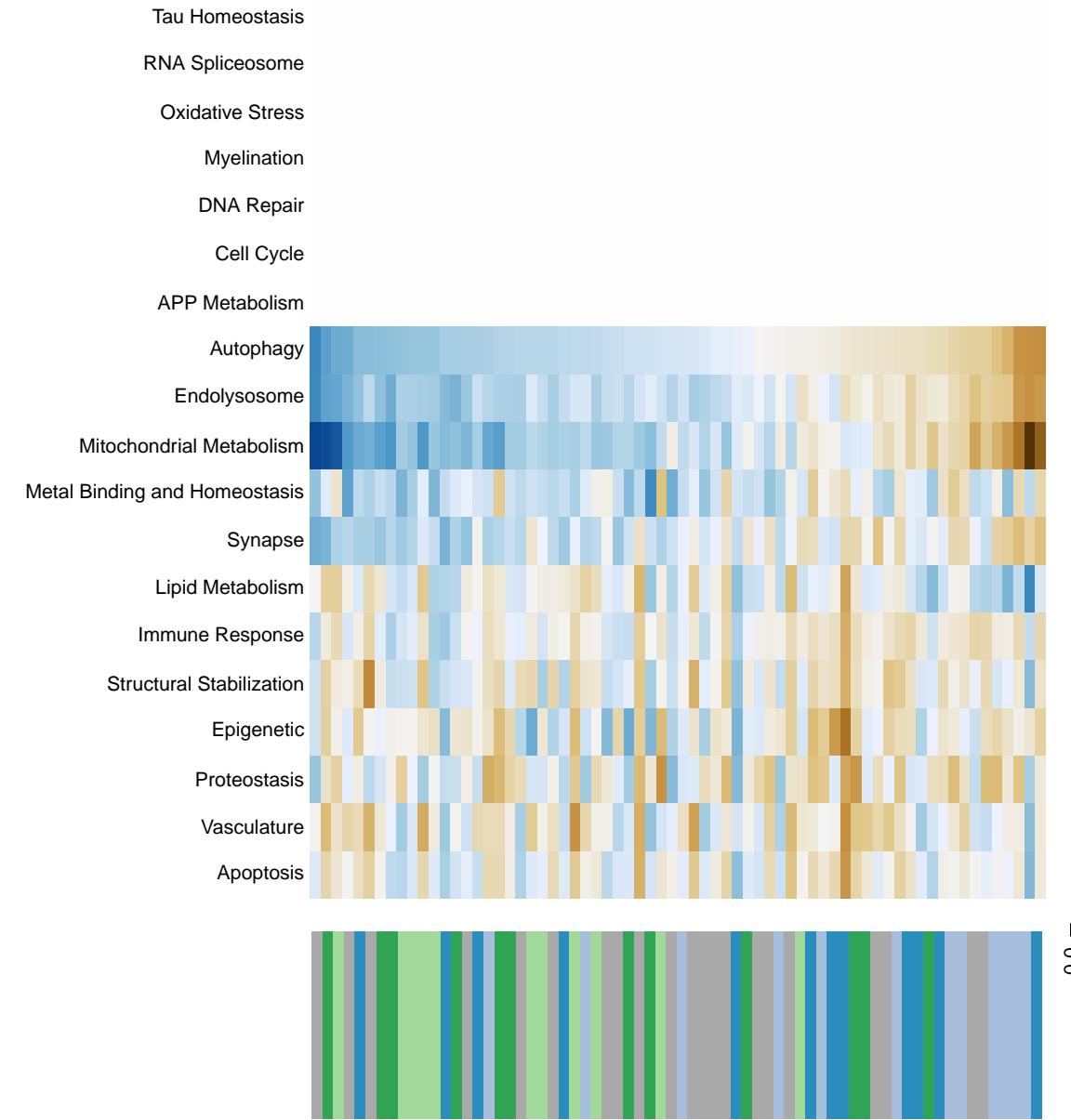
Decomposition



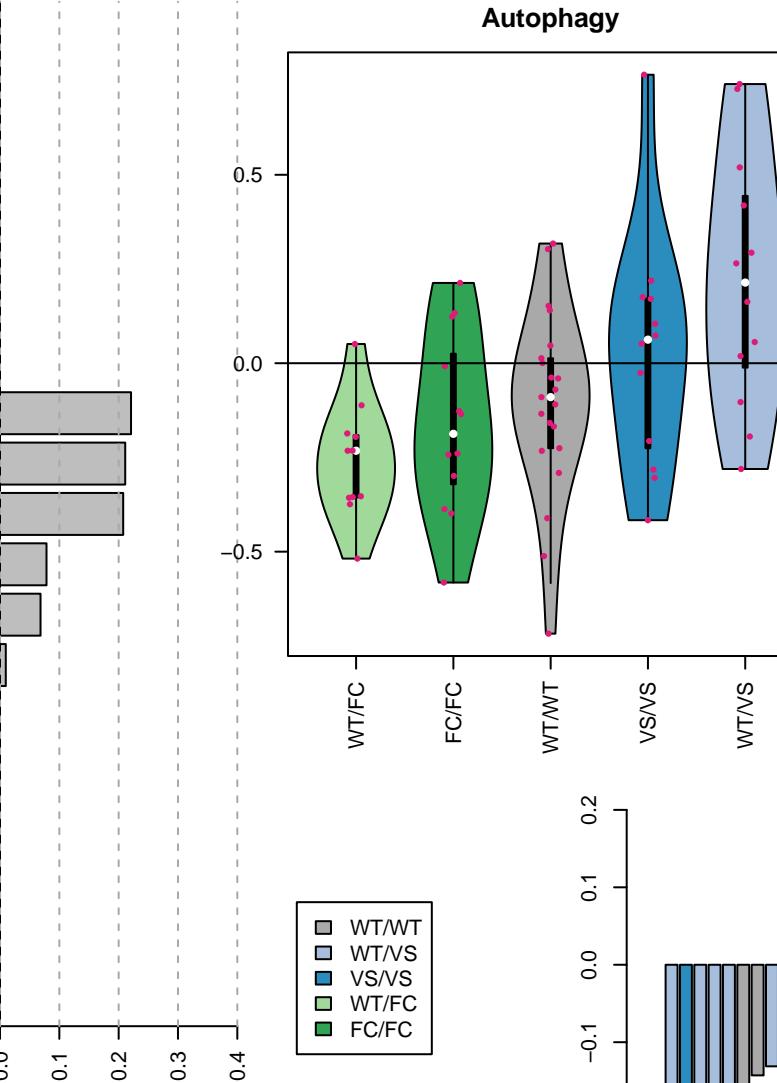
African trypanosomiasis



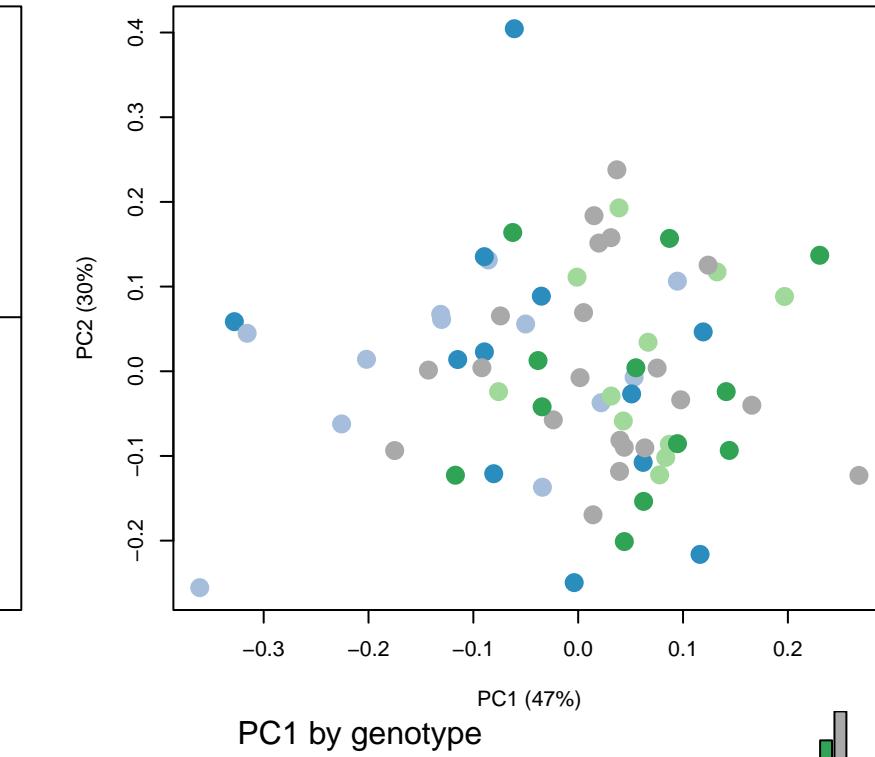
Rheumatoid arthritis



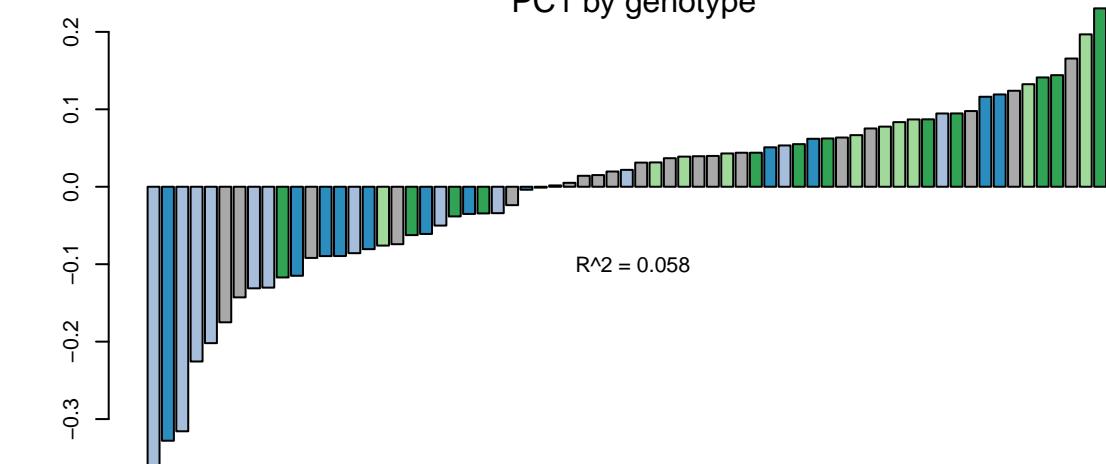
Autophagy



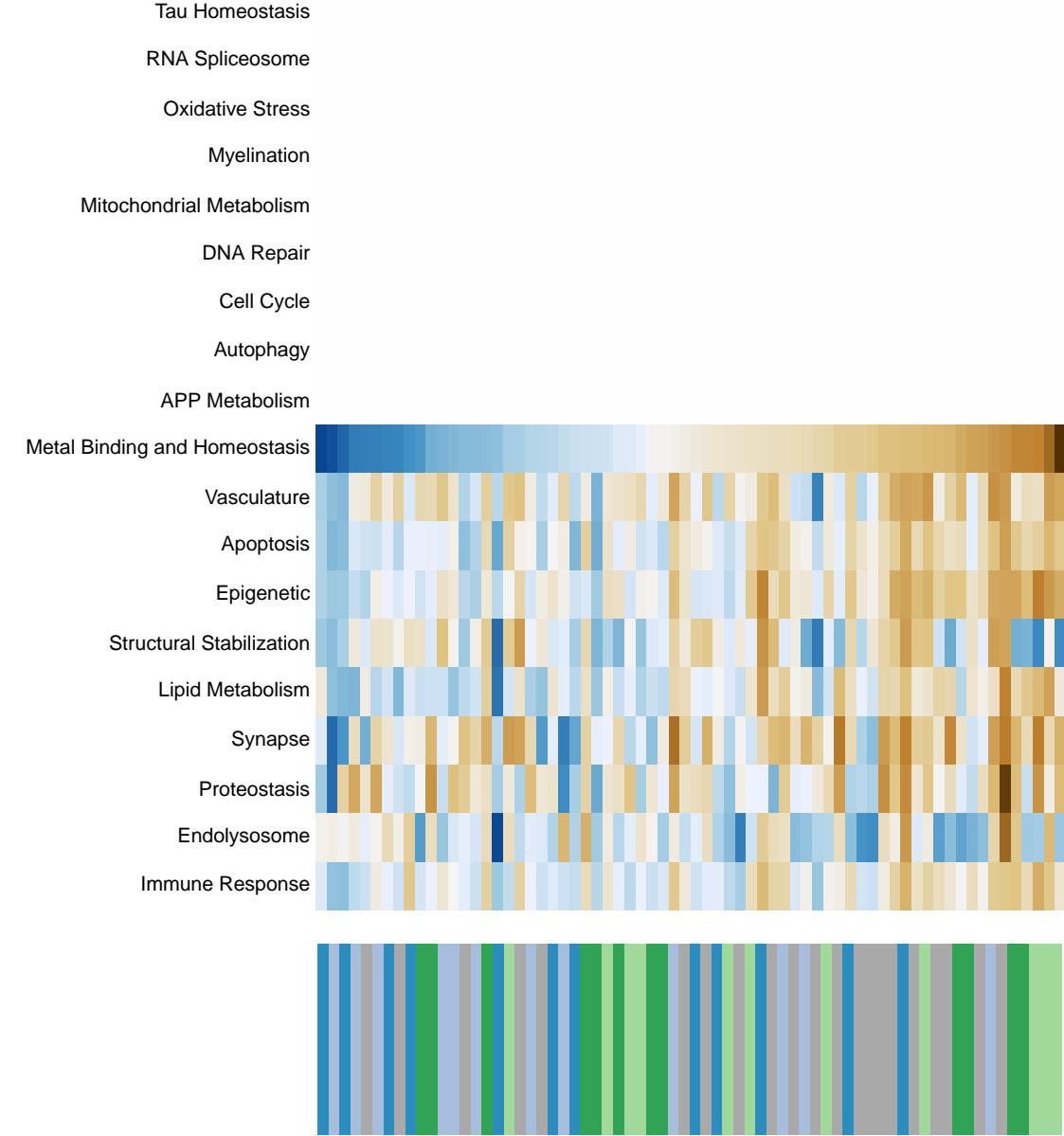
Decomposition



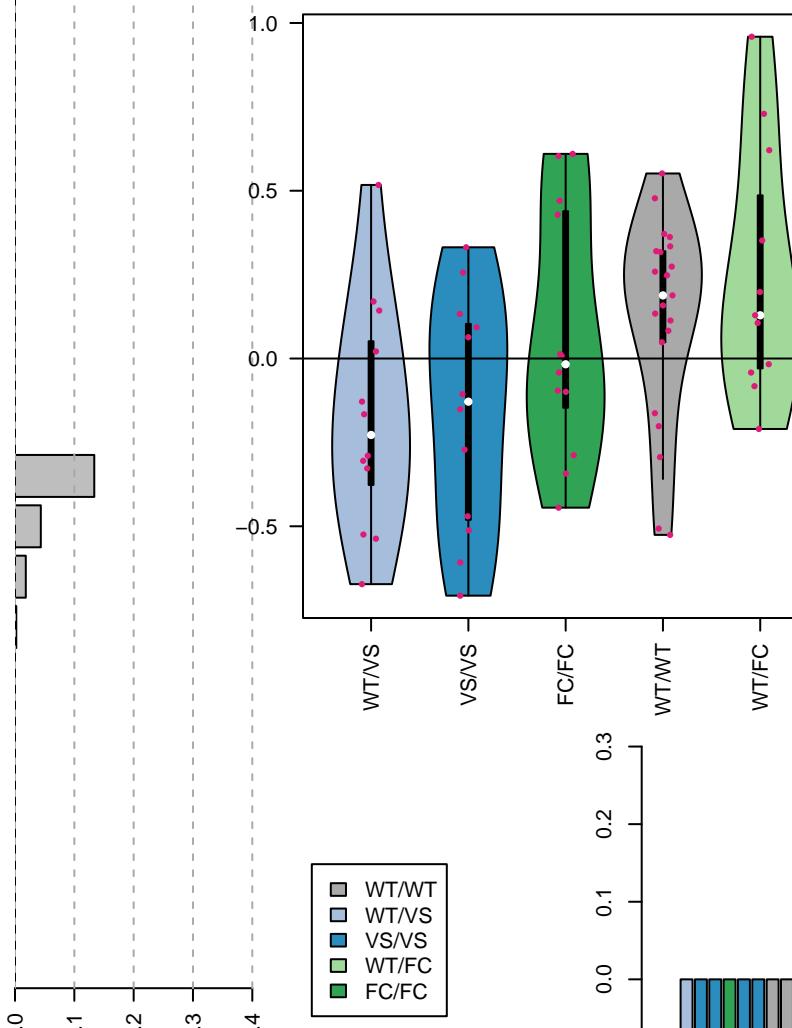
PC1 by genotype



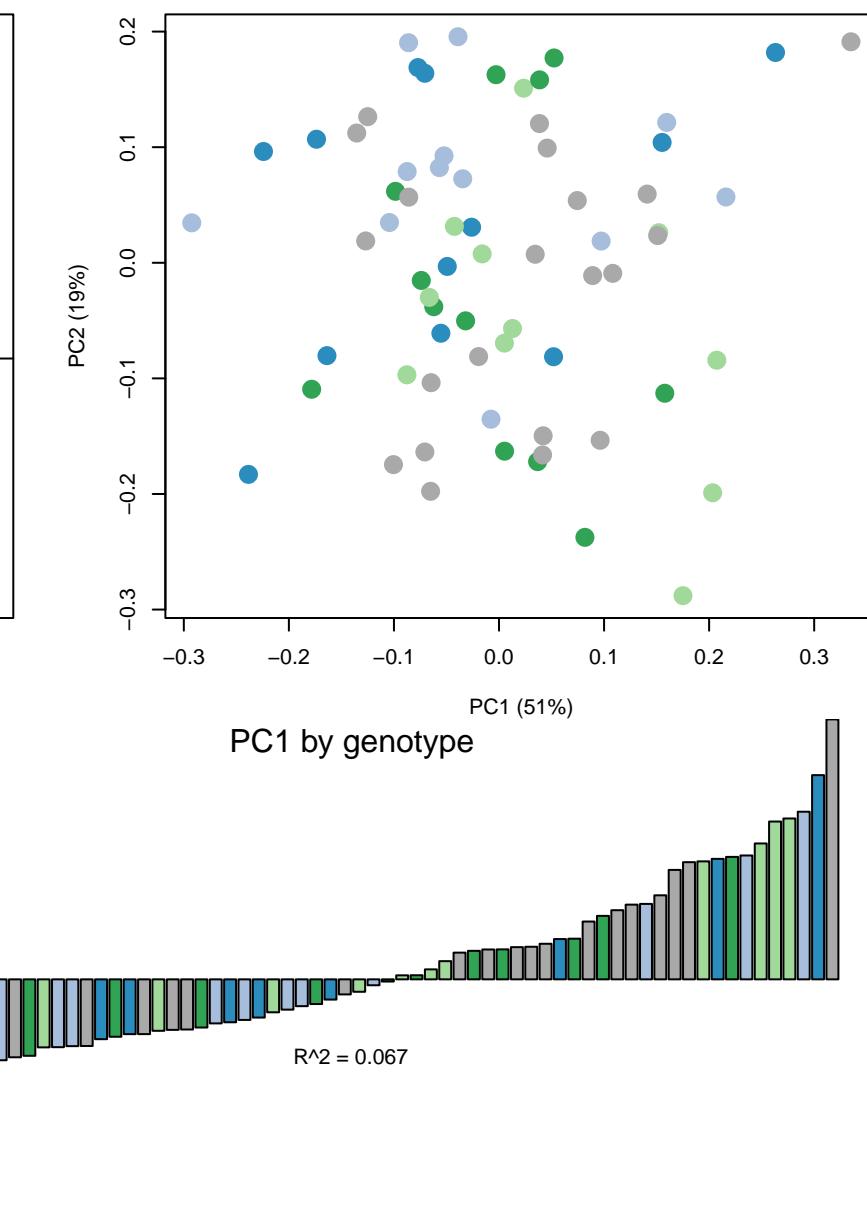
Inflammatory bowel disease



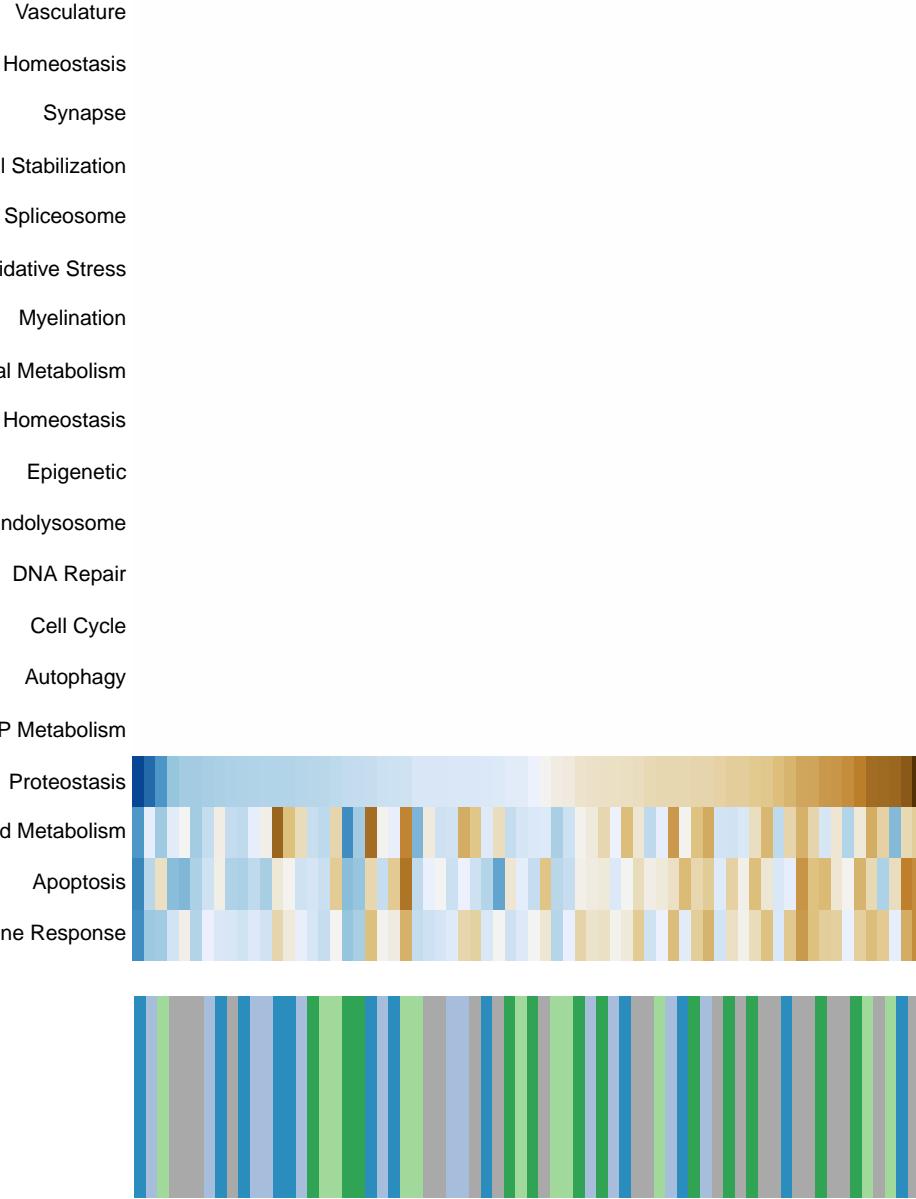
Metal Binding and Homeostasis



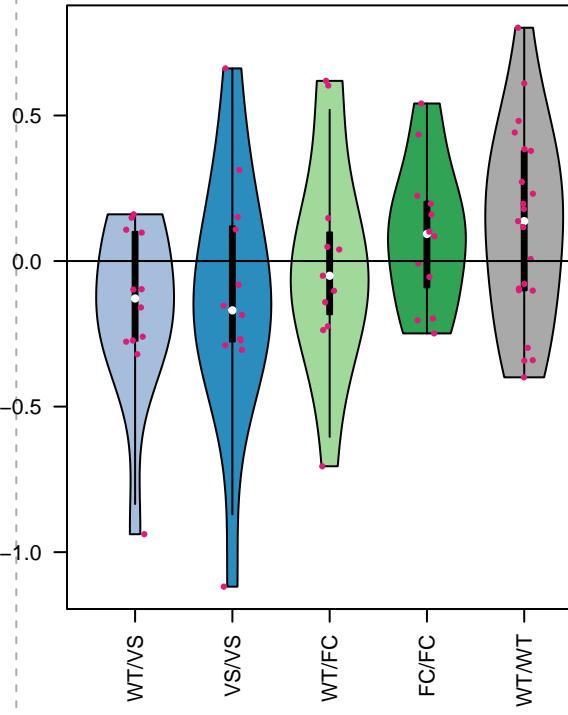
Decomposition



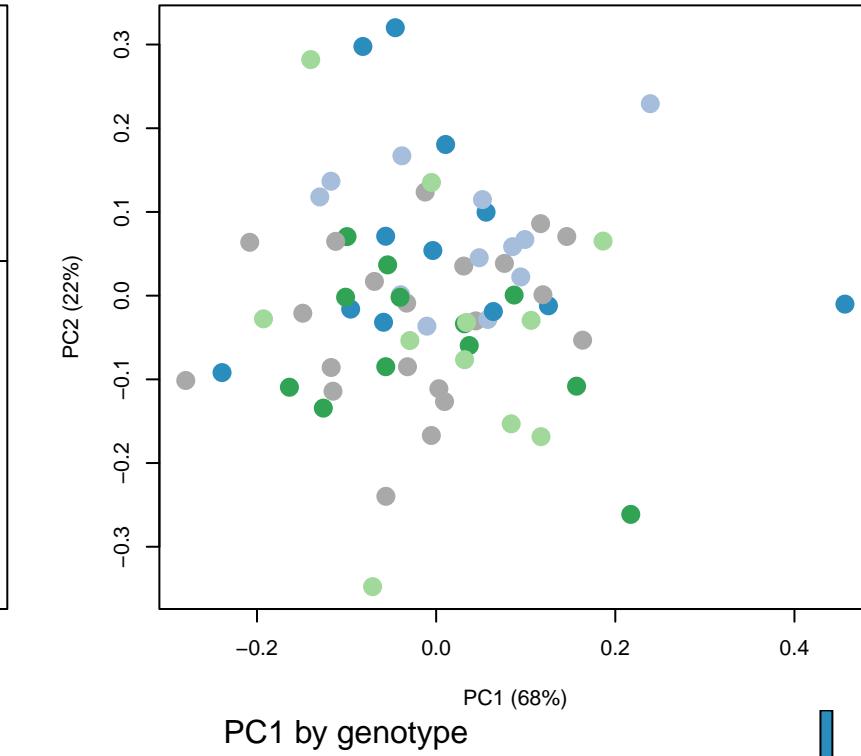
Primary immunodeficiency



Proteostasis

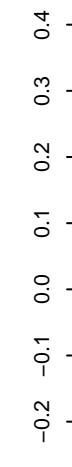


Decomposition

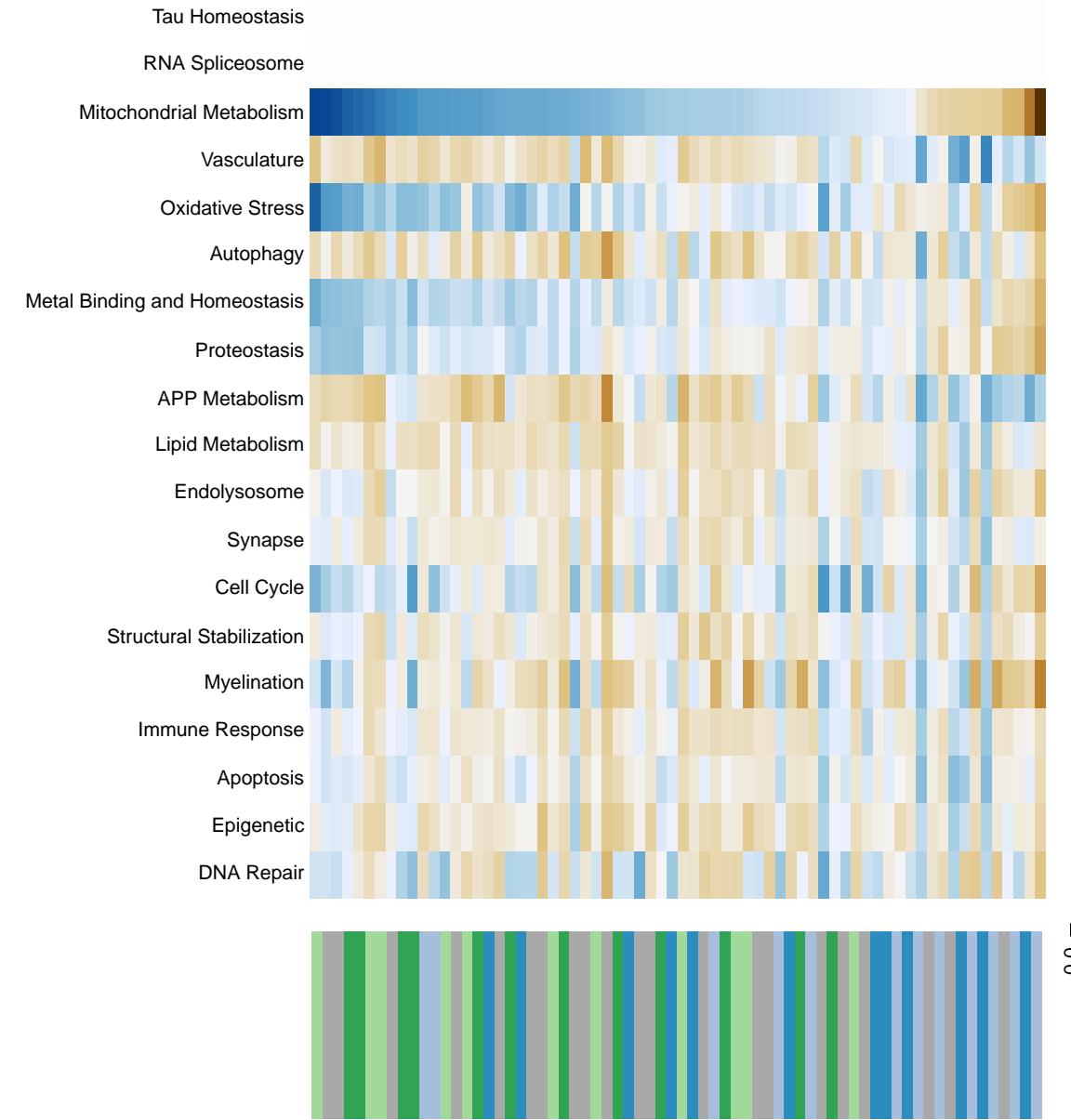


PC1 by genotype

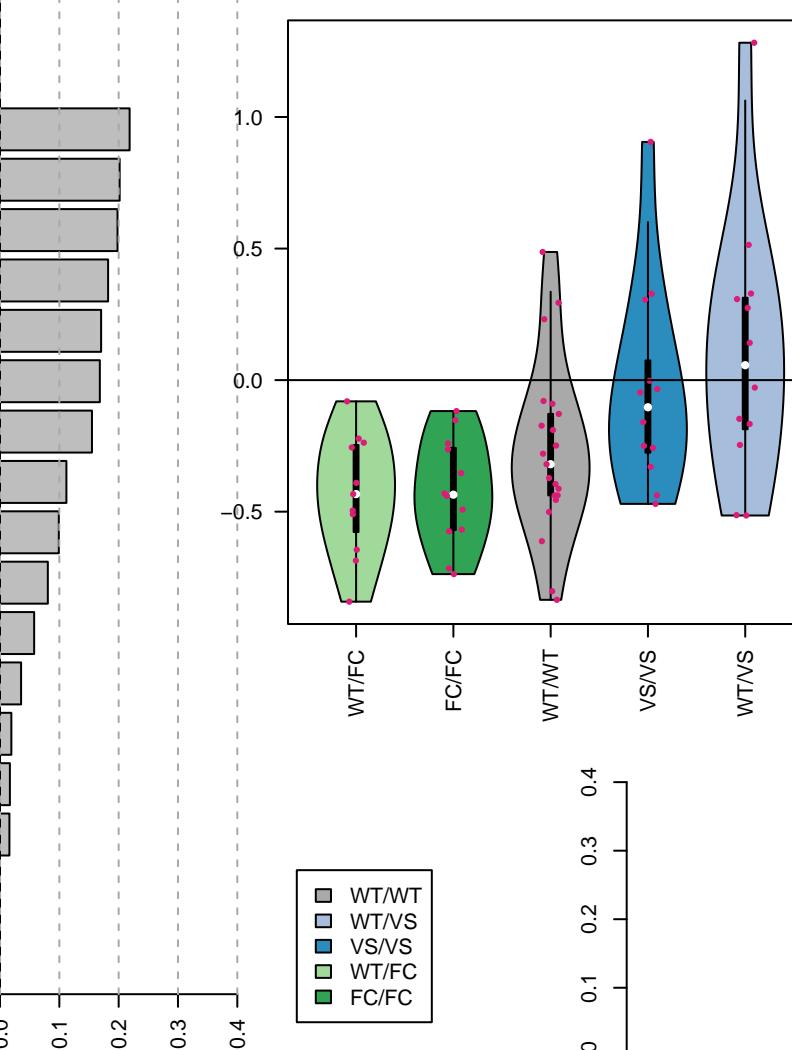
$R^2 = 0.007$



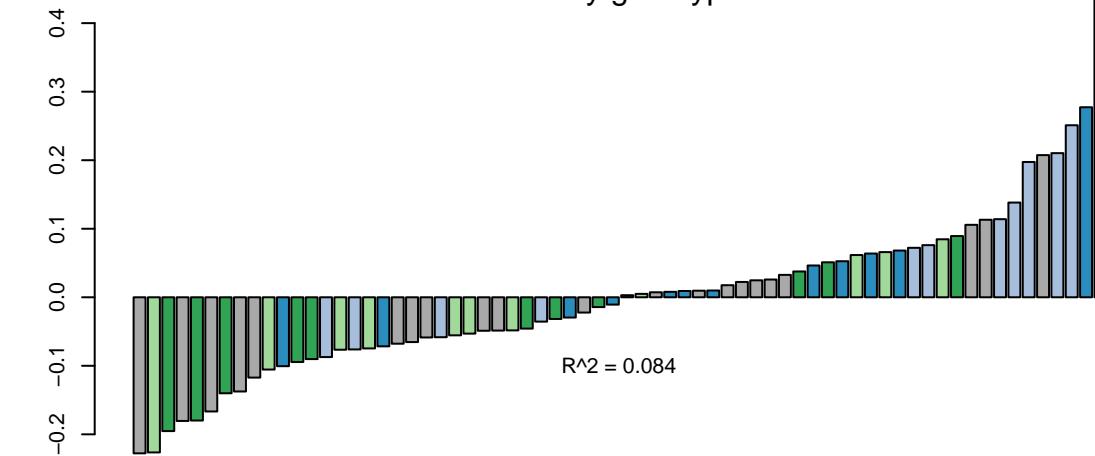
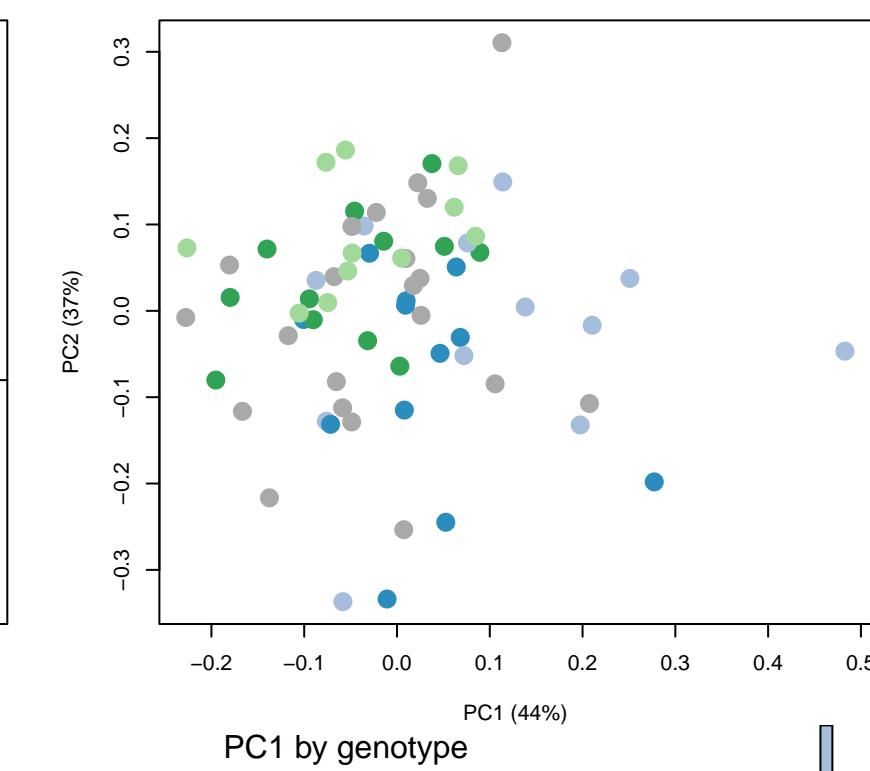
Alzheimer disease



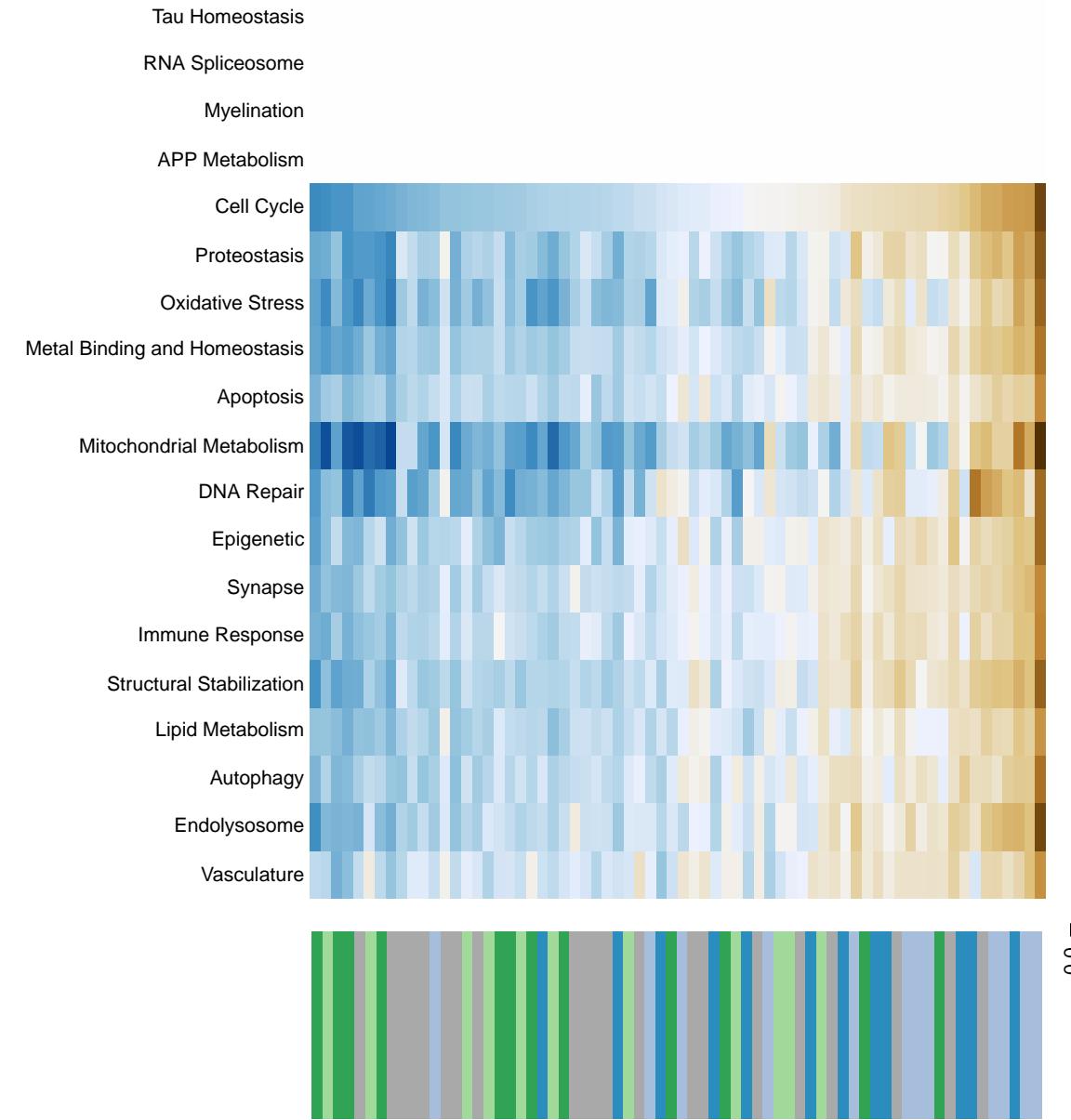
Mitochondrial Metabolism



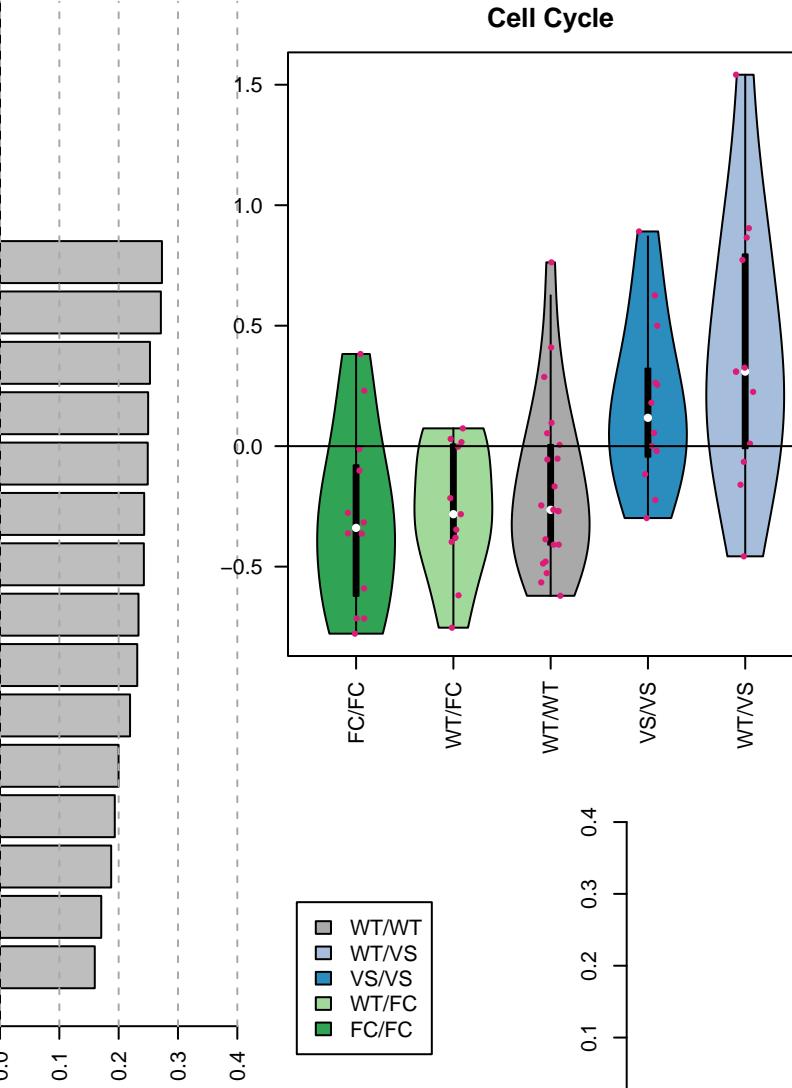
Decomposition



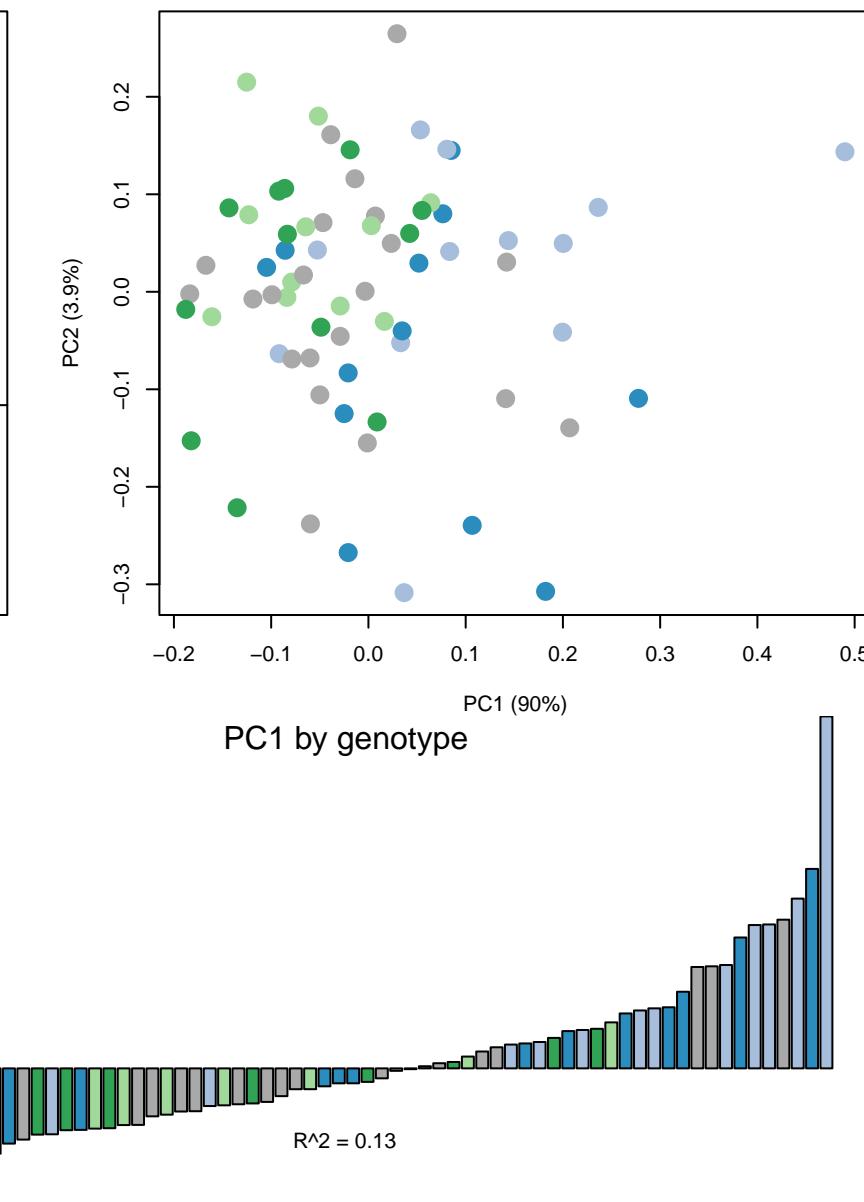
Parkinson disease



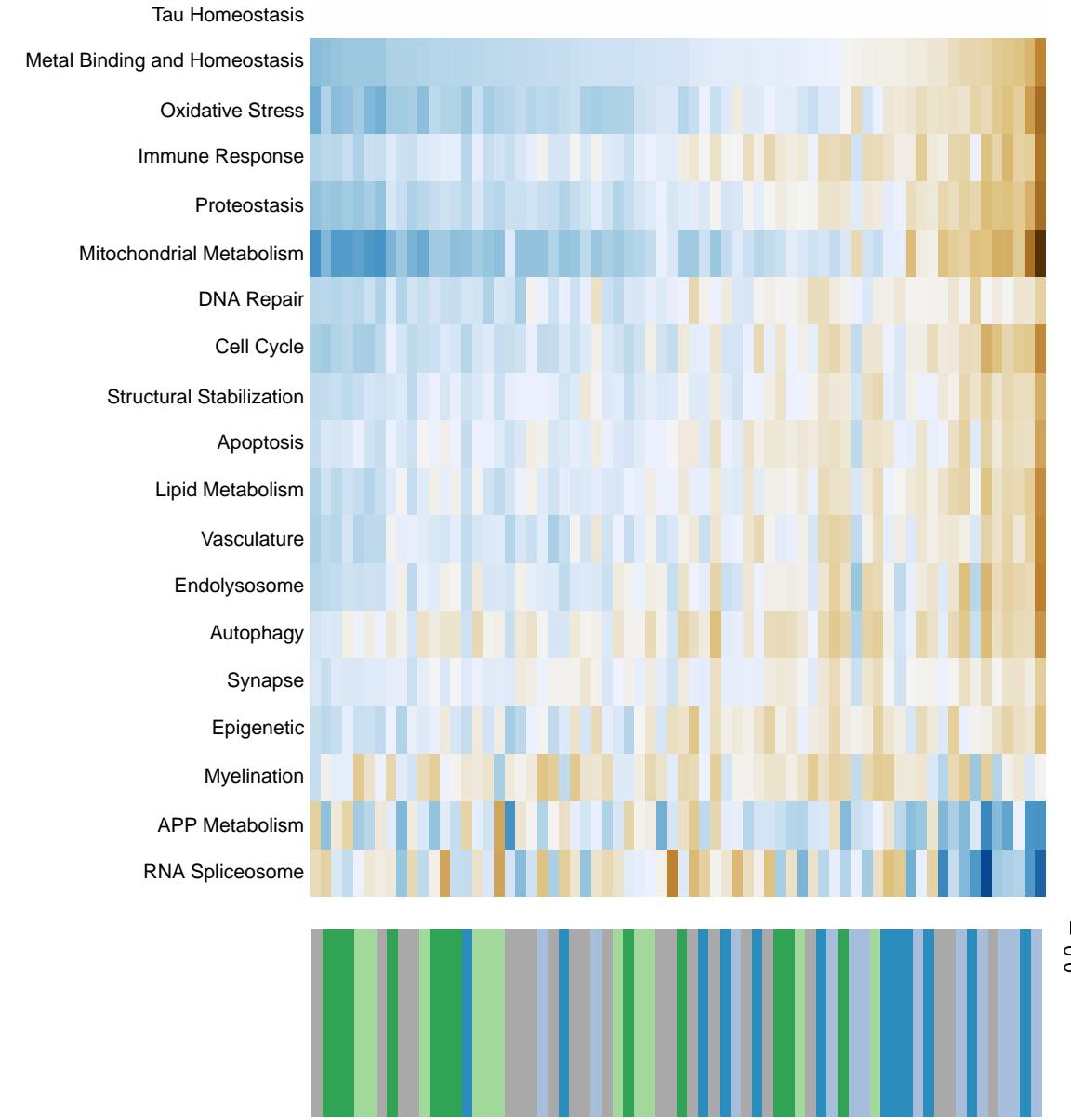
Cell Cycle



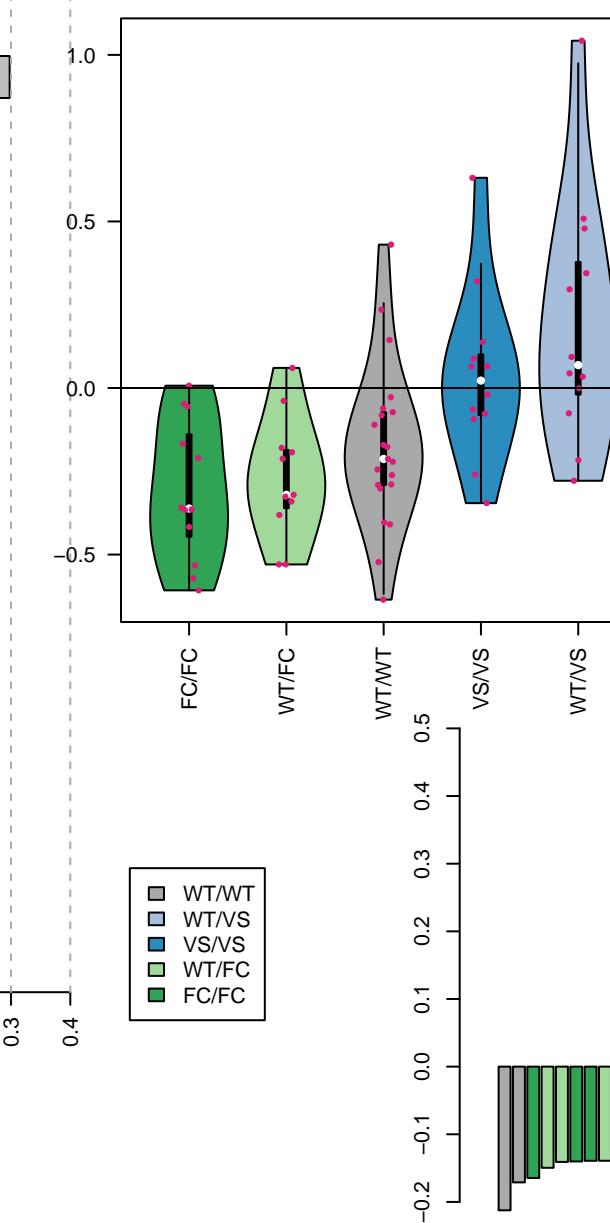
Decomposition



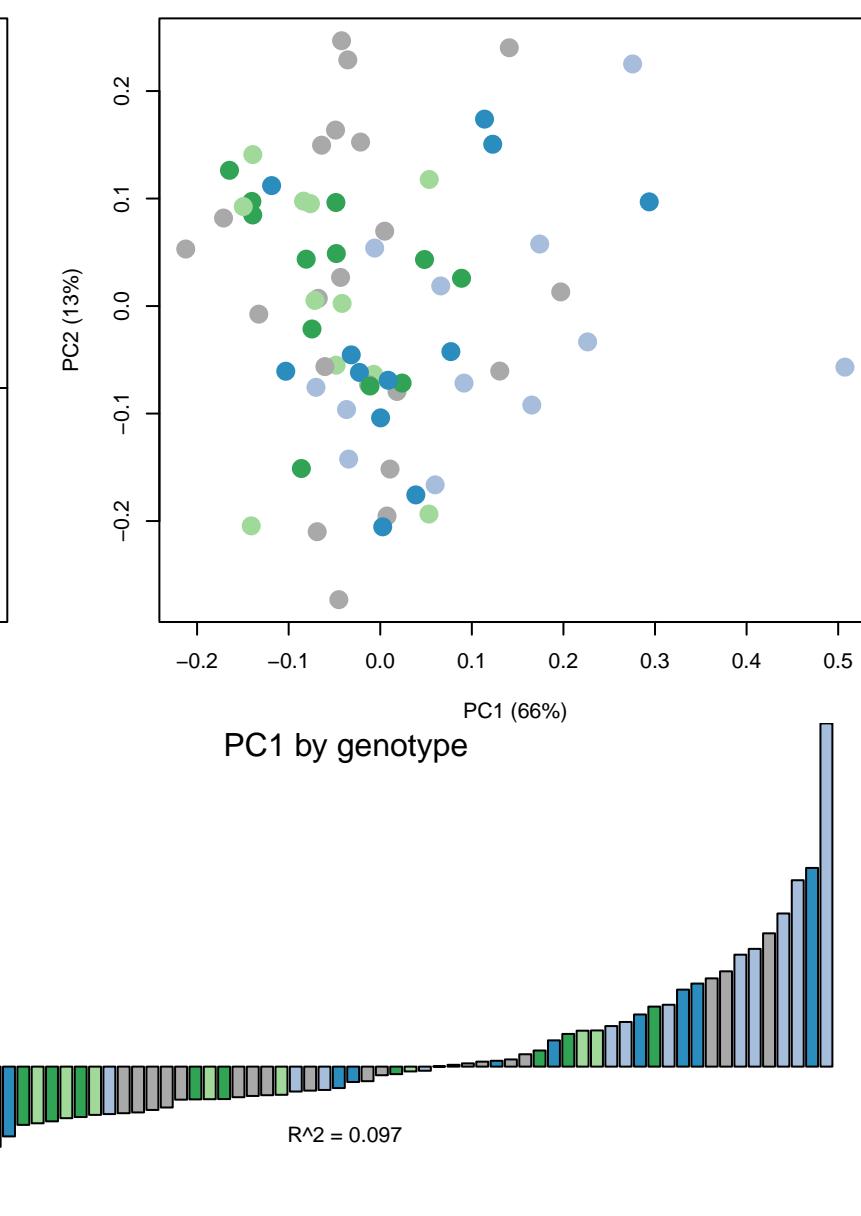
Amyotrophic lateral sclerosis



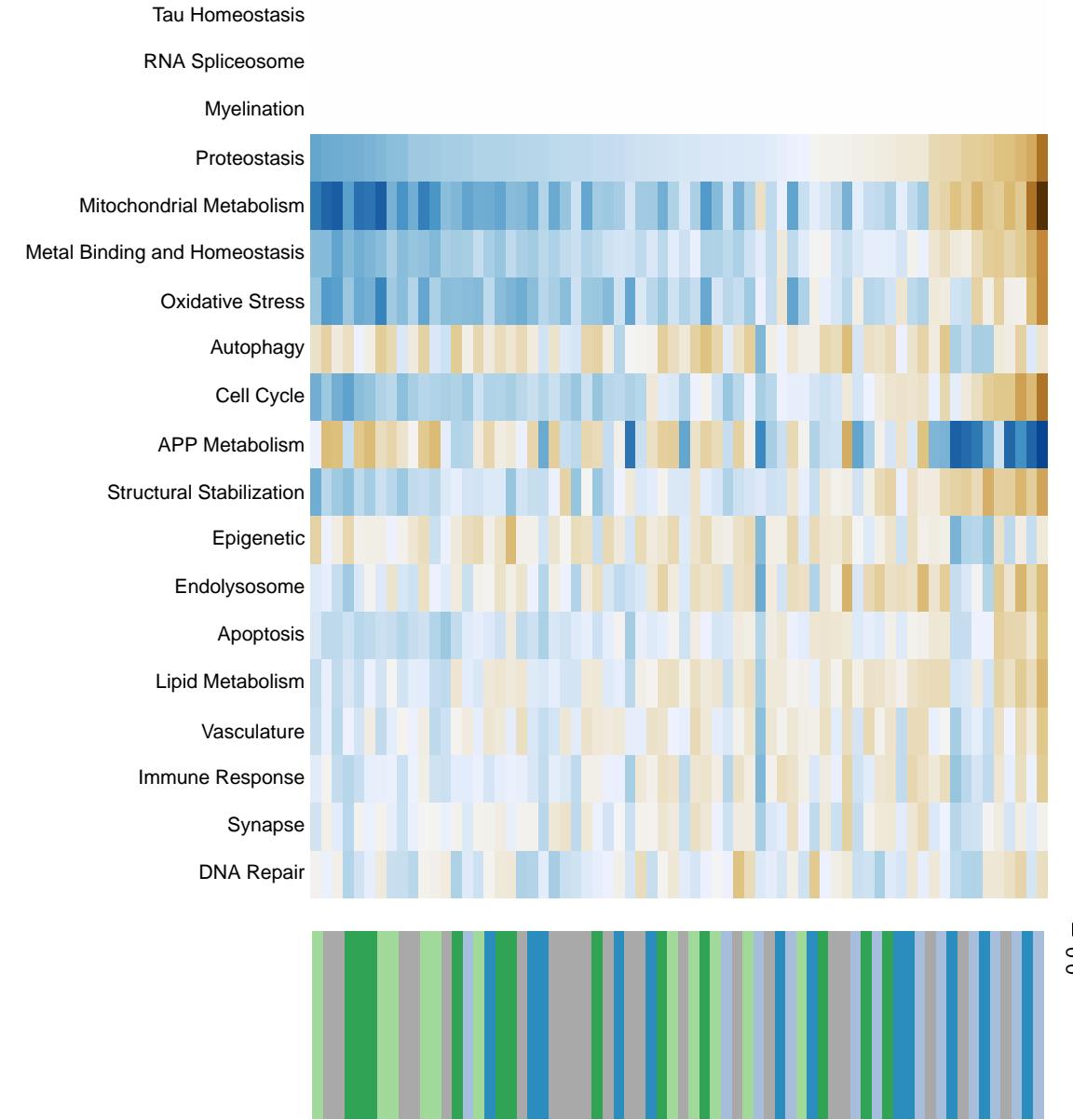
Metal Binding and Homeostasis



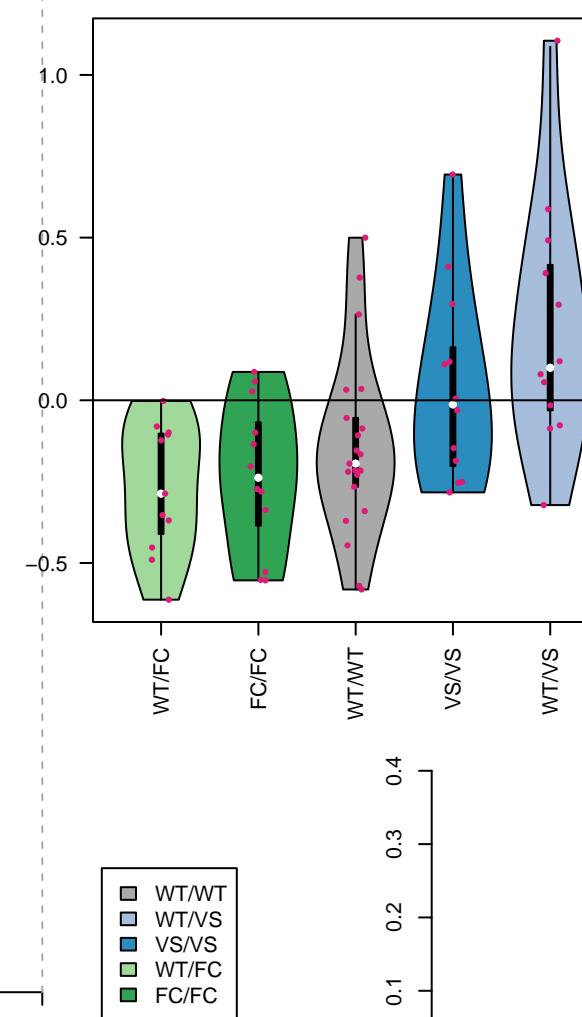
Decomposition



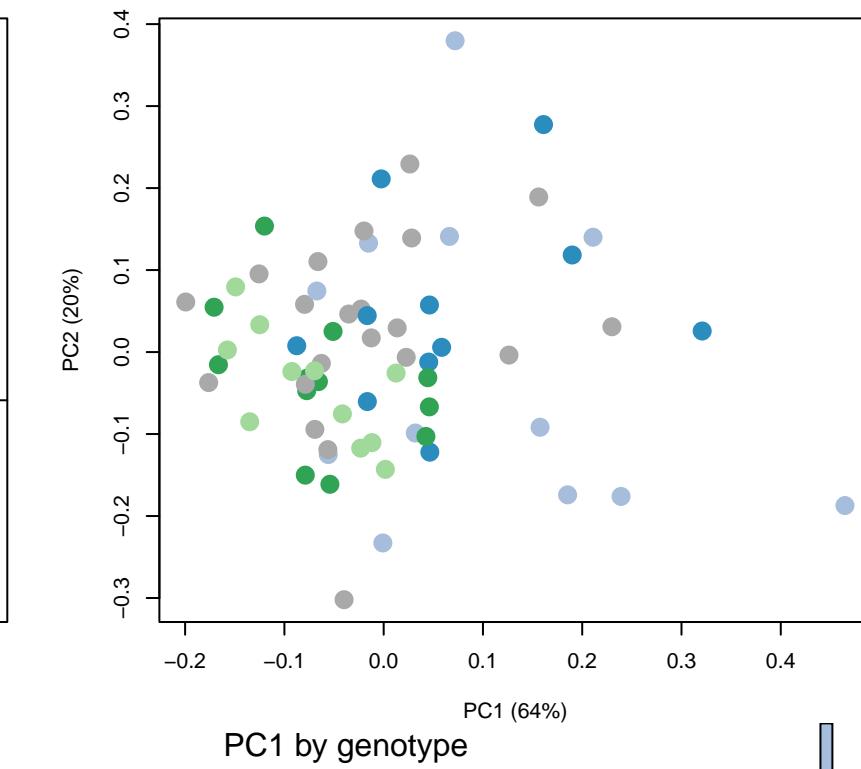
Huntington disease



Proteostasis



Decomposition



PC1 by genotype

4

3

2

1

0

-1

-2

-3

-4

-5

-6

-7

-8

-9

-10

-11

-12

-13

-14

-15

-16

-17

-18

-19

-20

-21

-22

-23

-24

-25

-26

-27

-28

-29

-30

-31

-32

-33

-34

-35

-36

-37

-38

-39

-40

-41

-42

-43

-44

-45

-46

-47

-48

-49

-50

-51

-52

-53

-54

-55

-56

-57

-58

-59

-60

-61

-62

-63

-64

-65

-66

-67

-68

-69

-70

-71

-72

-73

-74

-75

-76

-77

-78

-79

-80

-81

-82

-83

-84

-85

-86

-87

-88

-89

-90

-91

-92

-93

-94

-95

-96

-97

-98

-99

-100

-101

-102

-103

-104

-105

-106

-107

-108

-109

-110

-111

-112

-113

-114

-115

-116

-117

-118

-119

-120

-121

-122

-123

-124

-125

-126

-127

-128

-129

-130

-131

-132

-133

-134

-135

-136

-137

-138

-139

-140

-141

-142

-143

-144

-145

-146

-147

-148

-149

-150

-151

-152

-153

-154

-155

-156

-157

-158

-159

-160

-161

-162

-163

-164

-165

-166

-167

-168

-169

-170

-171

-172

-173

-174

-175

-176

-177

-178

-179

-180

-181

-182

-183

-184

-185

-186

-187

-188

-189

-190

-191

-192

-193

-194

-195

-196

-197

-198

-199

-200

-201

-202

-203

-204

-205

-206

-207

-208

-209

-210

-211

-212

-213

-214

-215

-216

-217

-218

-219

-220

-221

-222

-223

-224

-225

-226

-227

-228

-229

-230

-231

-232

-233

-234

-235

-236

-237

-238

-239

-240

-241

-242

-243

-244

-245

-246

-247

-248

-249

-250

-251

-252

-253

-254

-255

-256

-257

-258

-259

-260

-261

-262

-263

-264

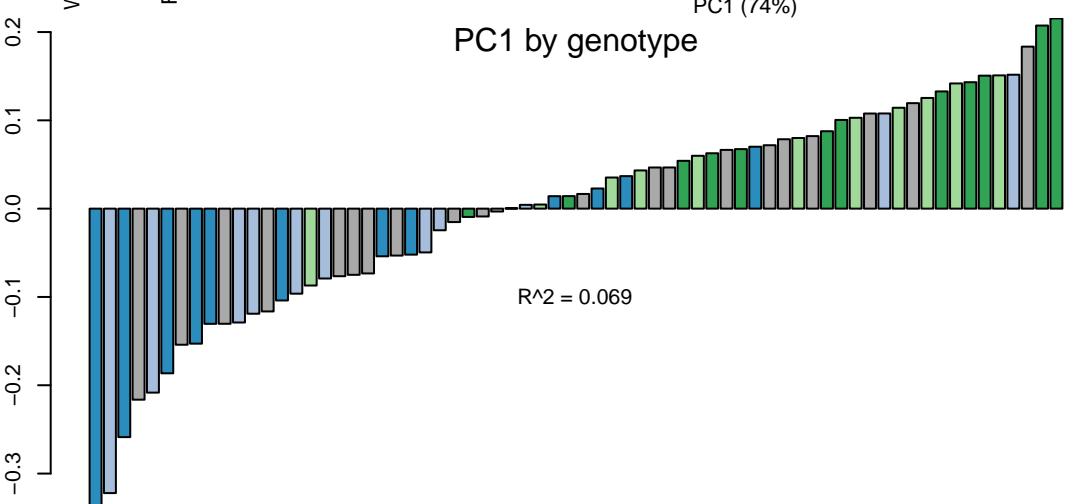
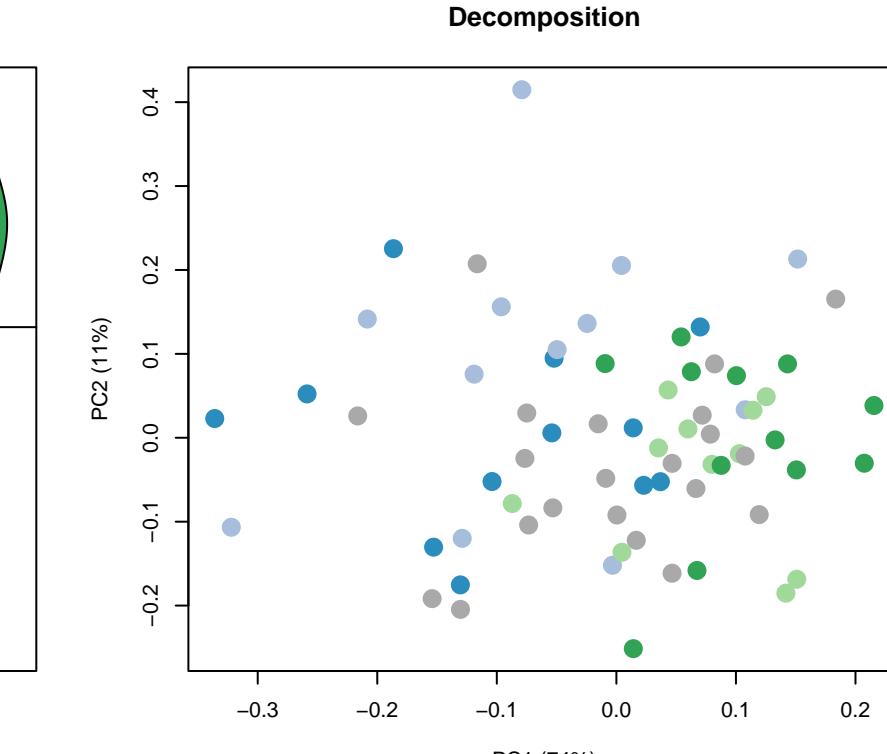
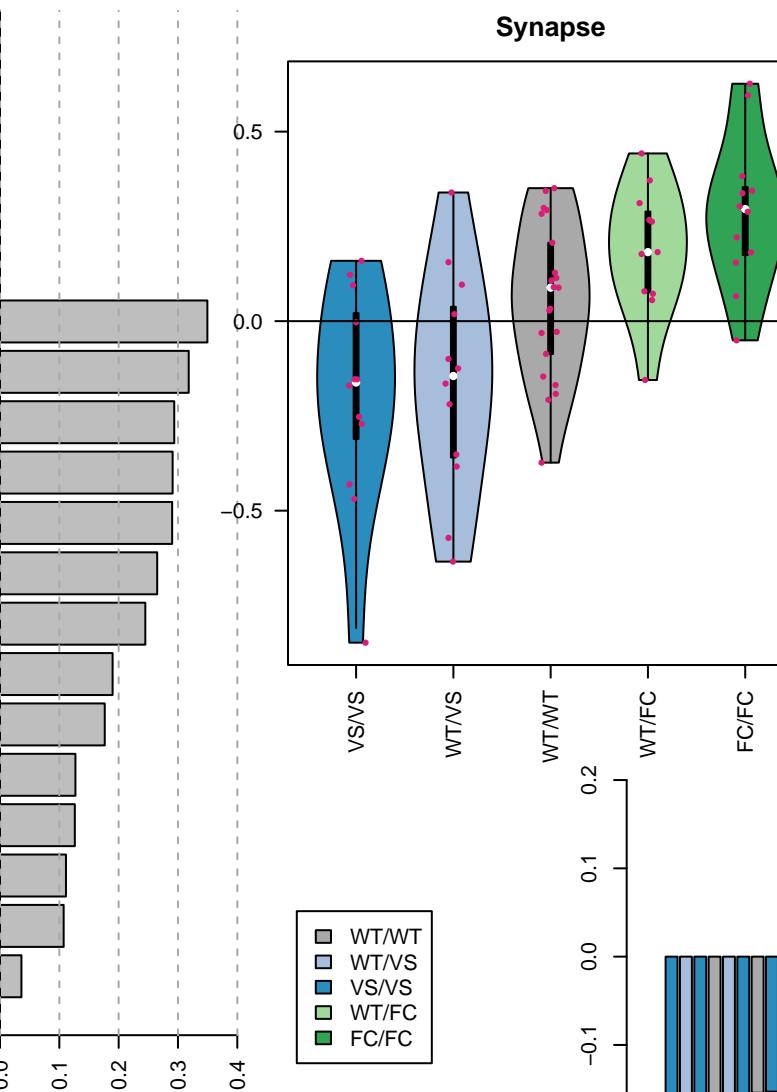
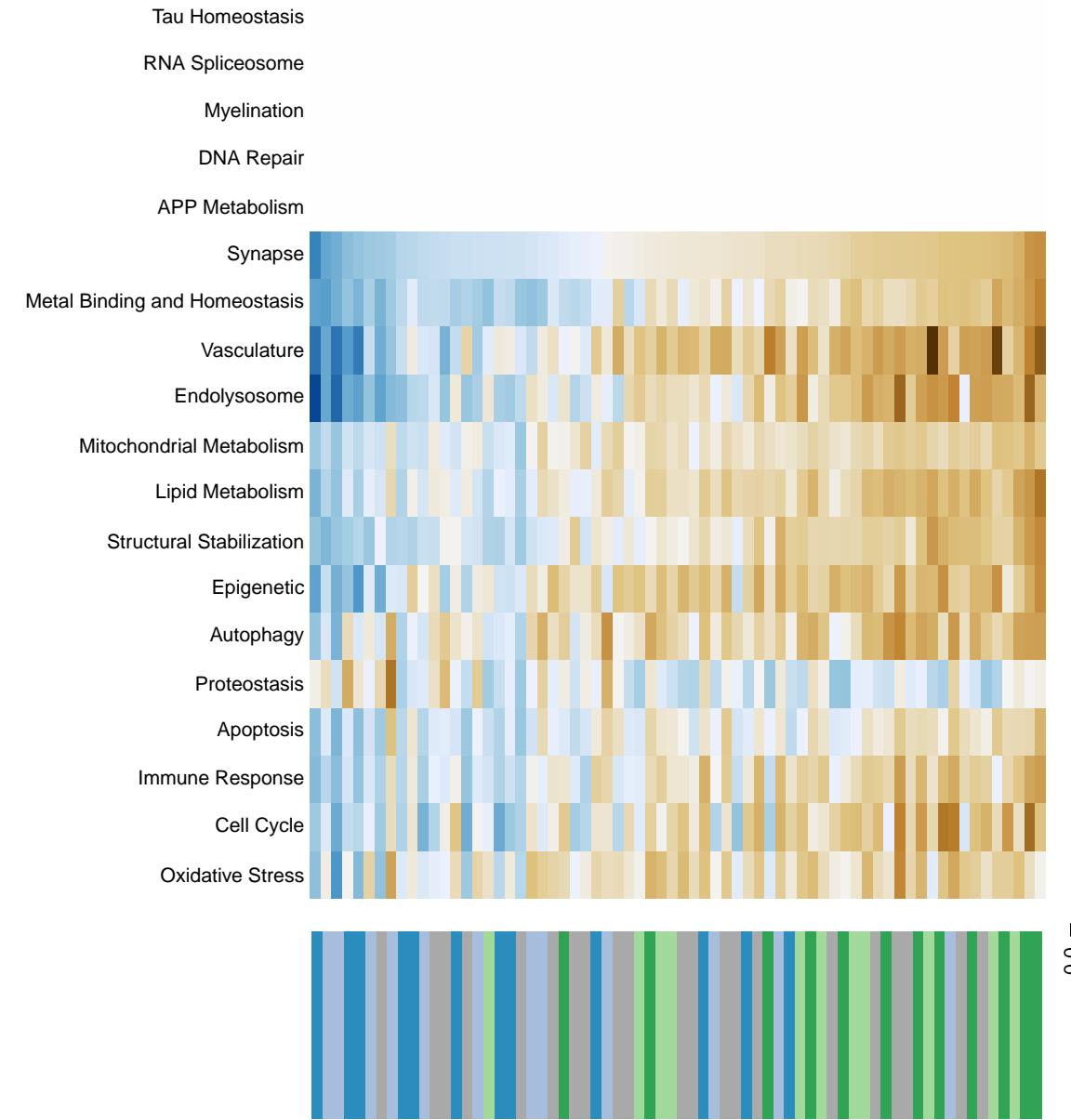
-265

-266

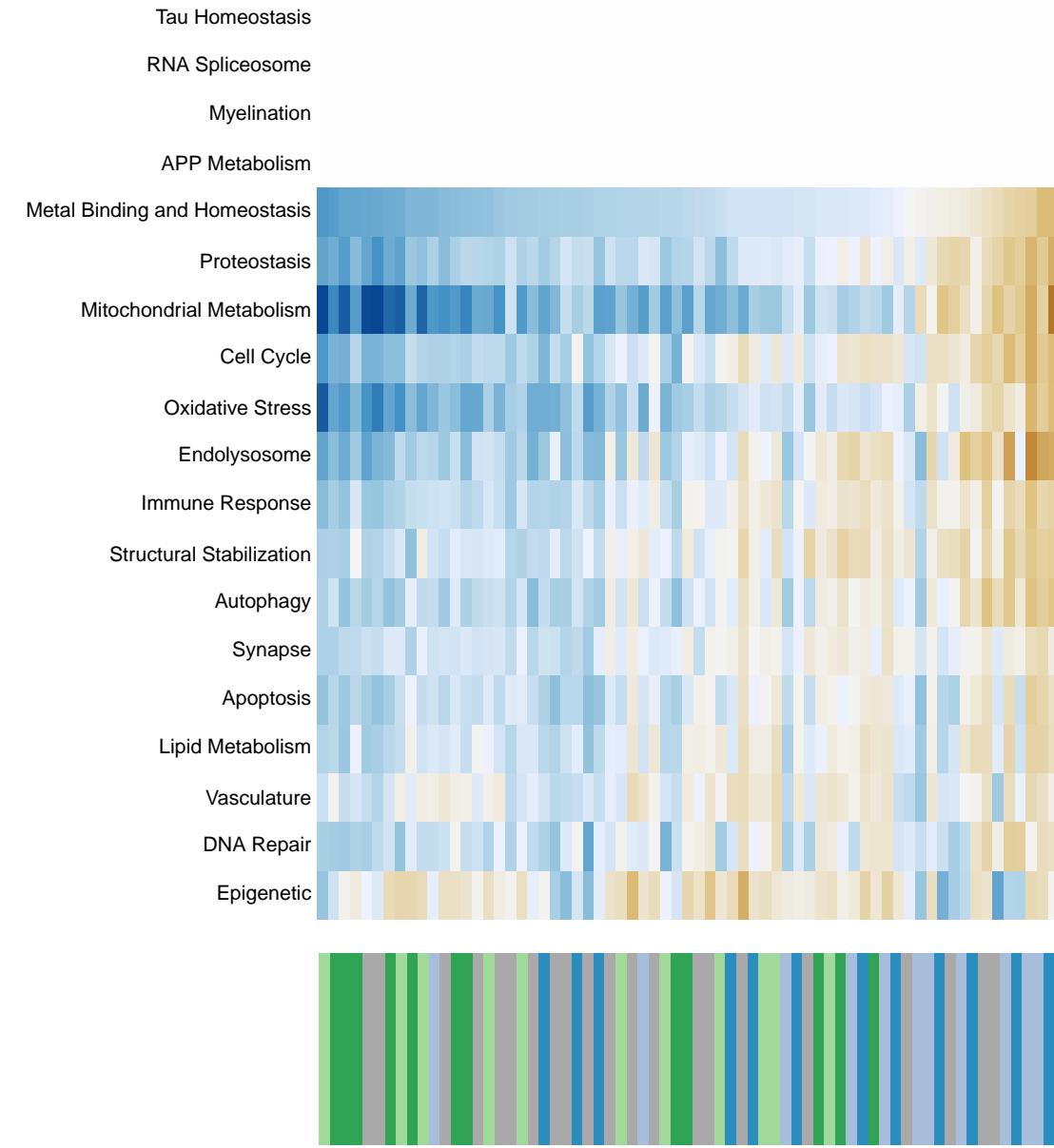
-267

-268</p

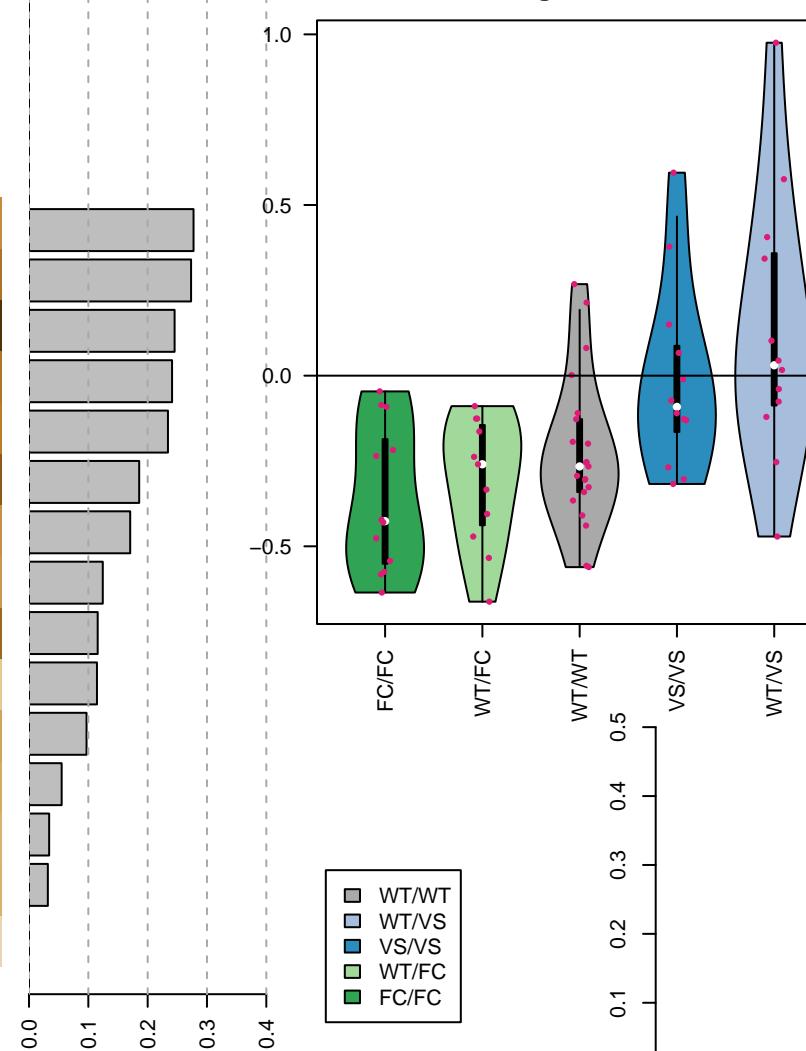
Spinocerebellar ataxia



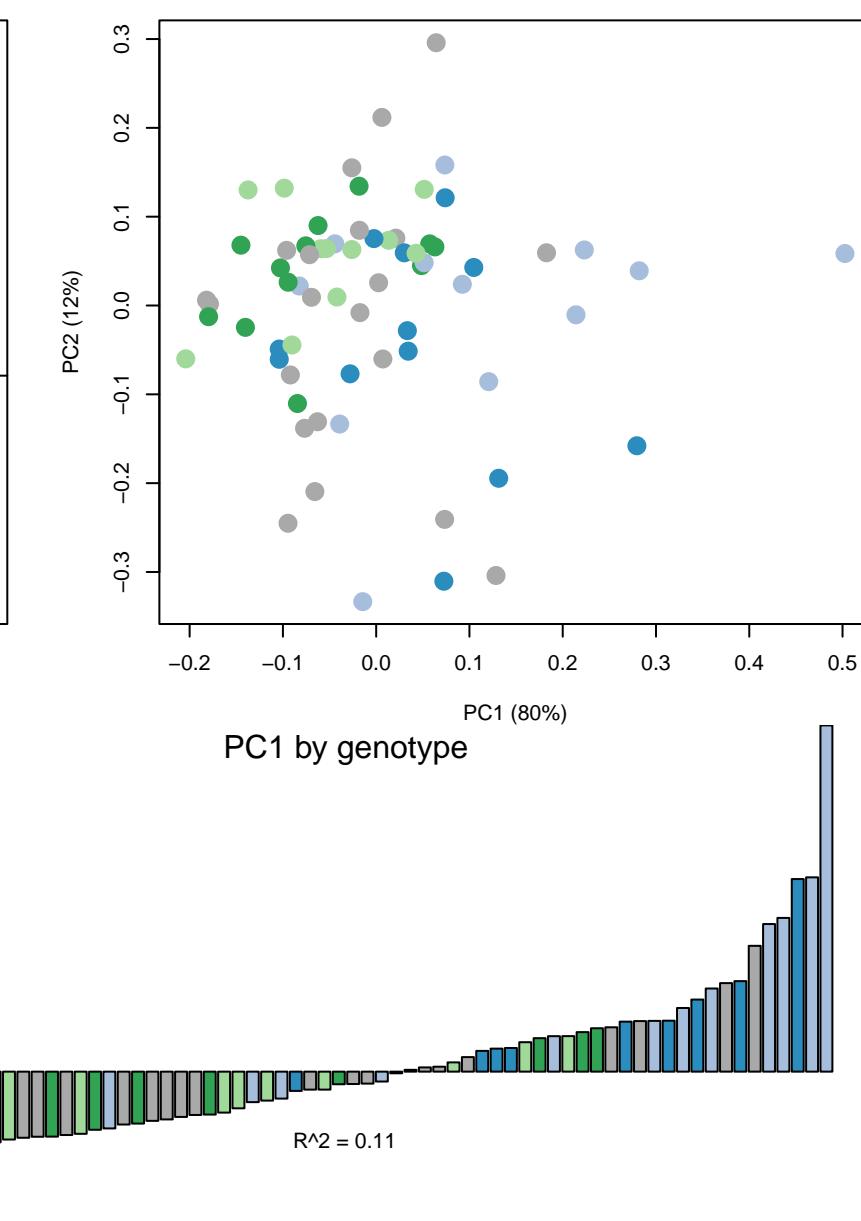
Prion disease



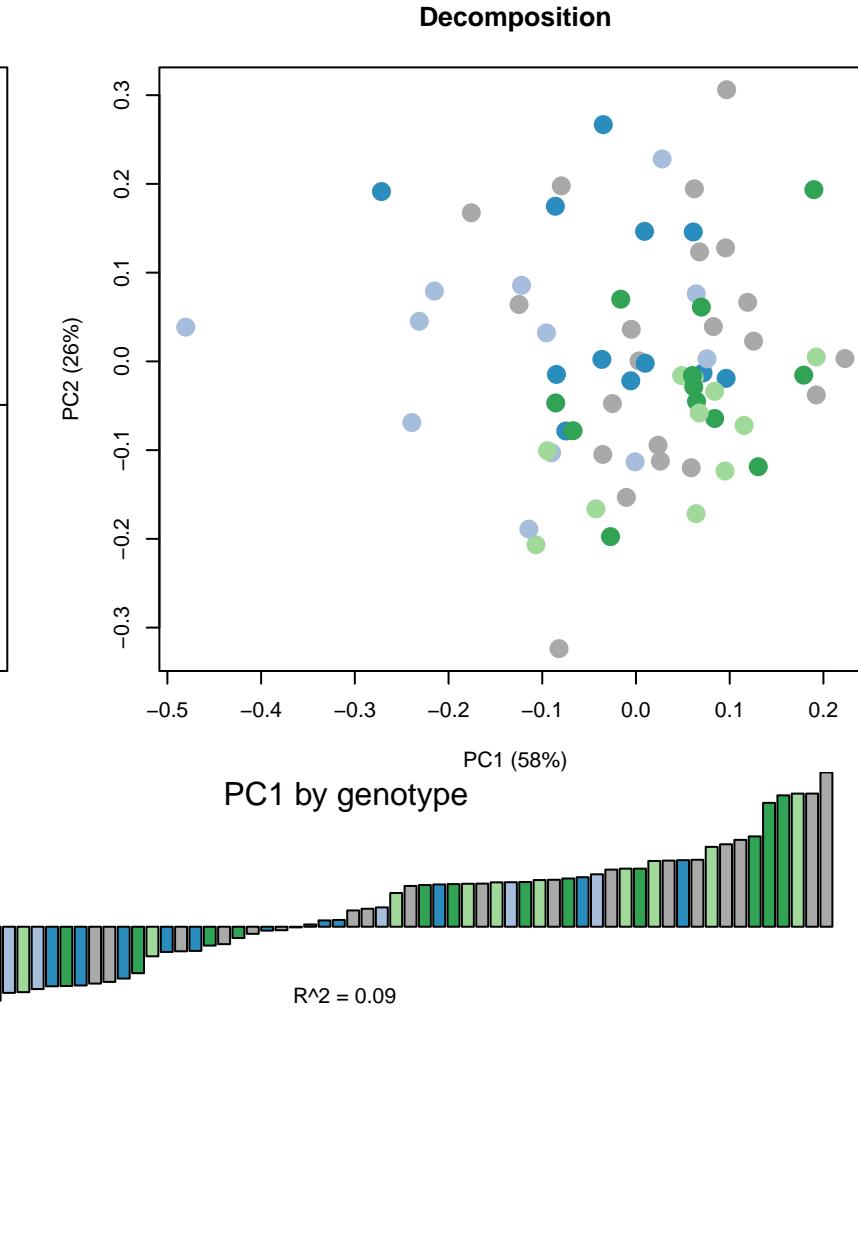
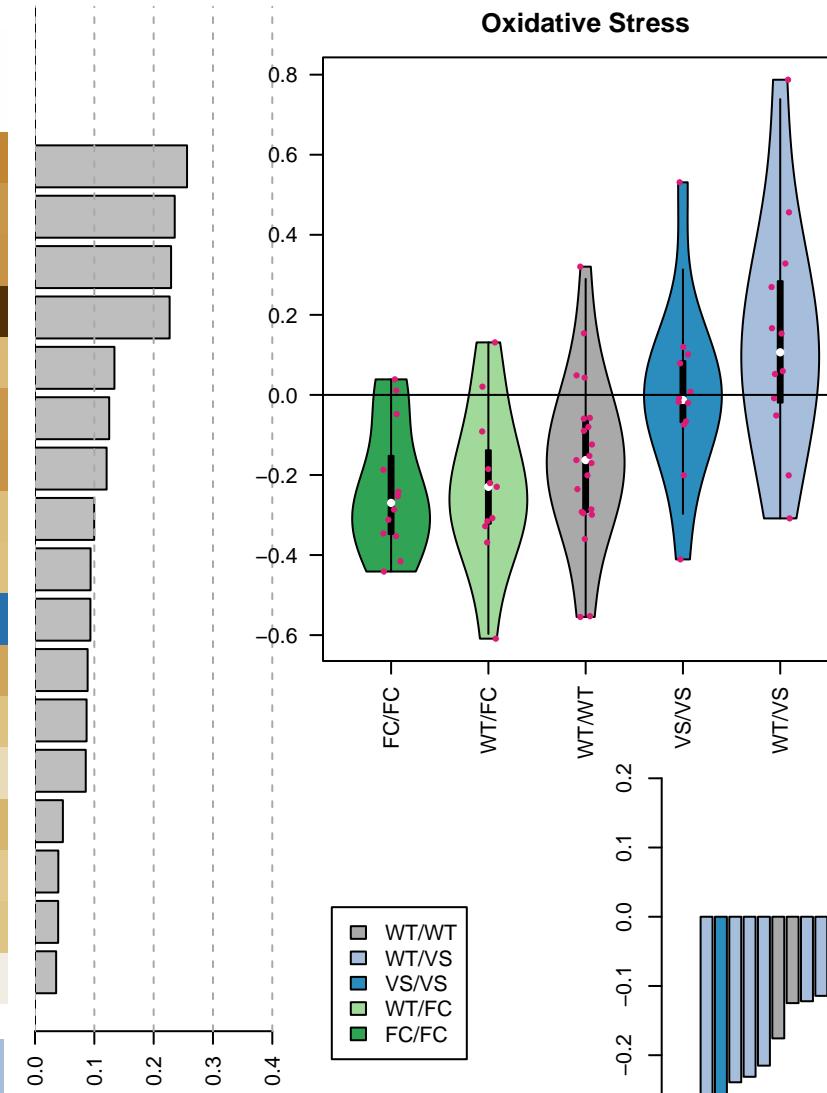
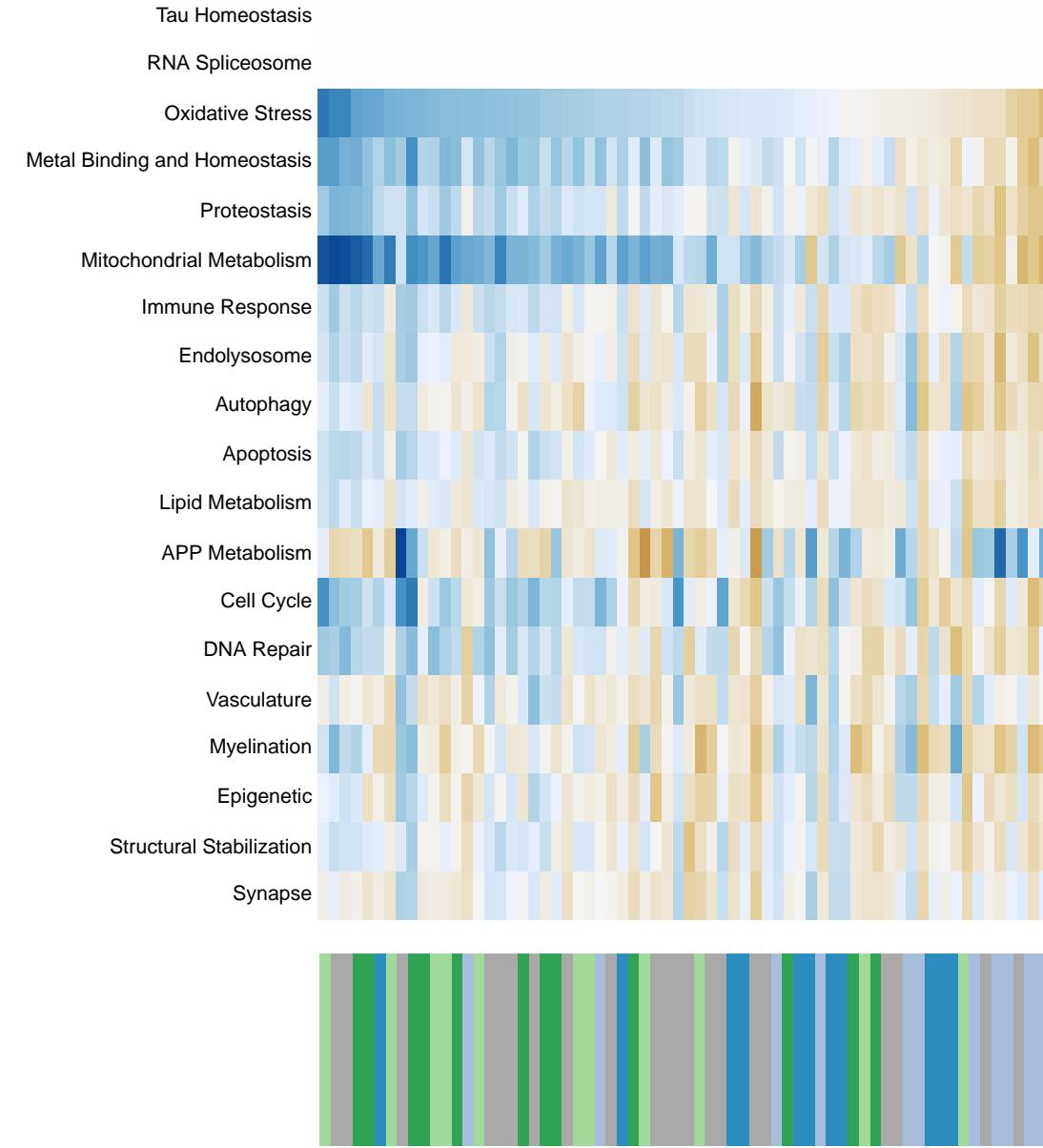
Metal Binding and Homeostasis



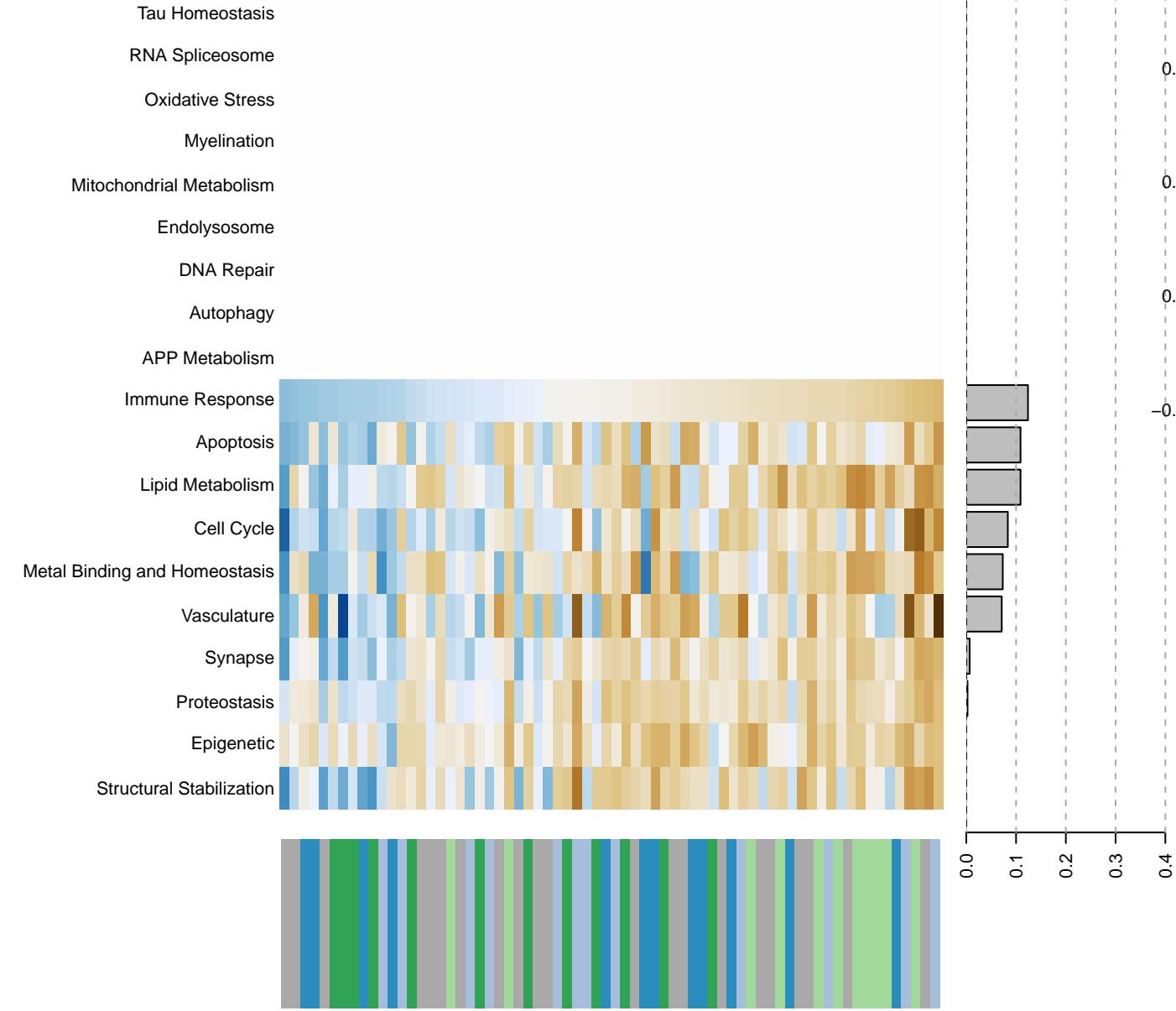
Decomposition



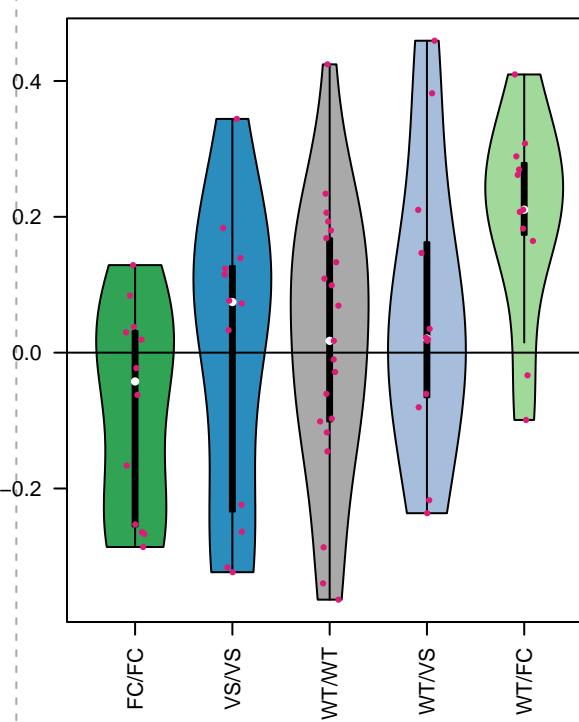
Pathways of neurodegeneration – multiple diseases



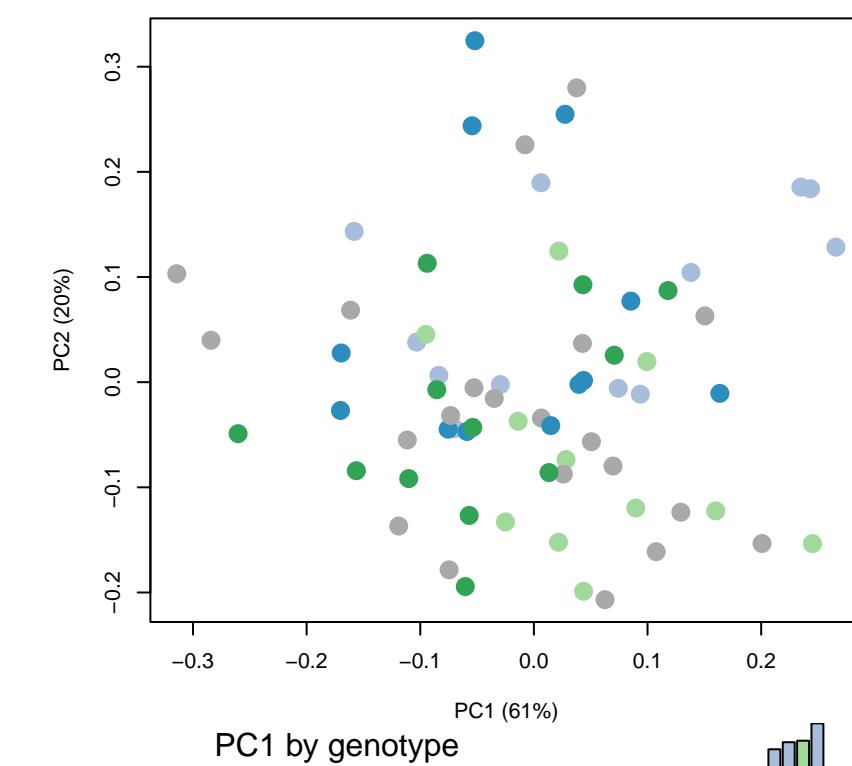
Cocaine addiction



Immune Response



Decomposition

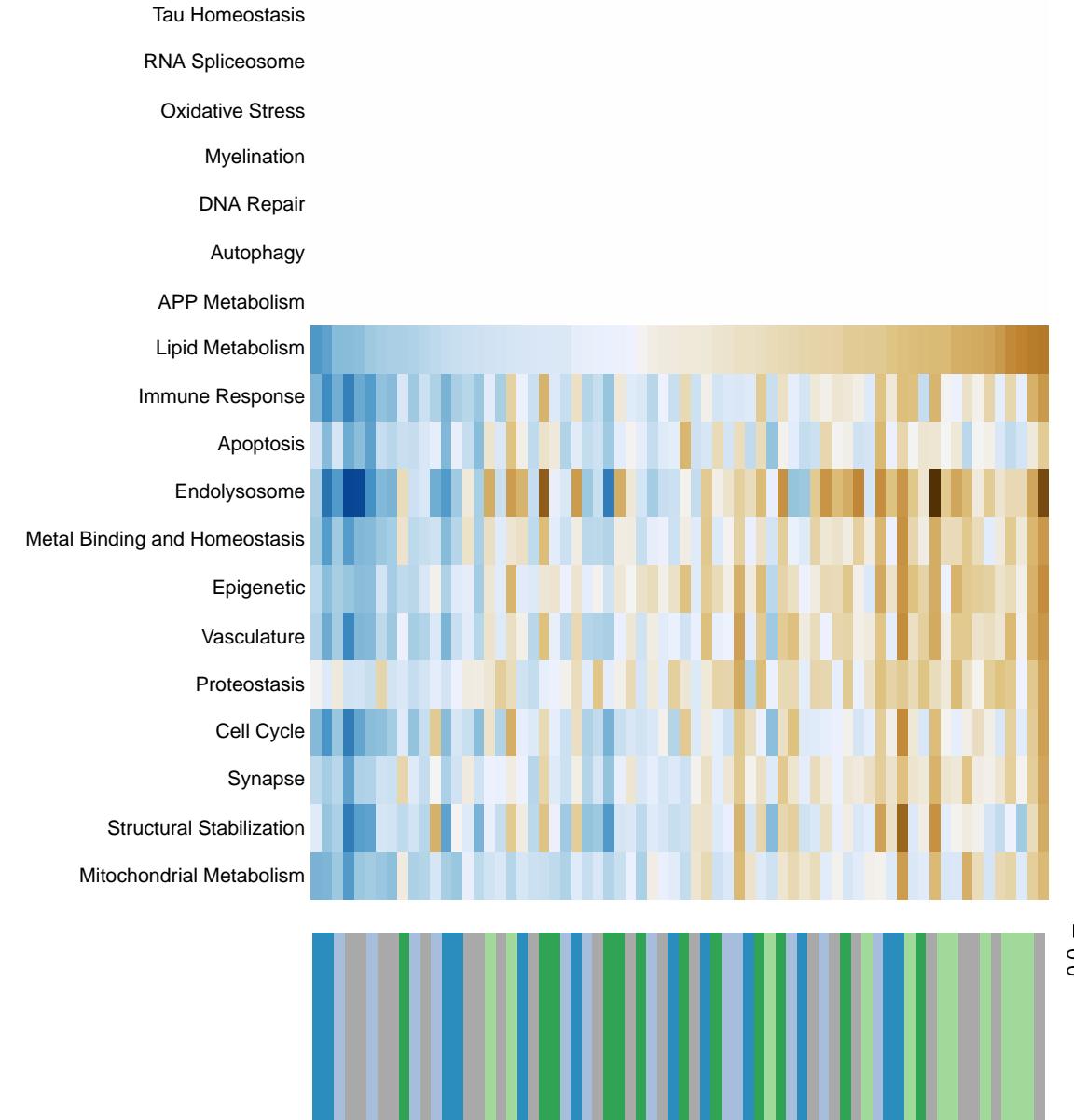


PC1 by genotype

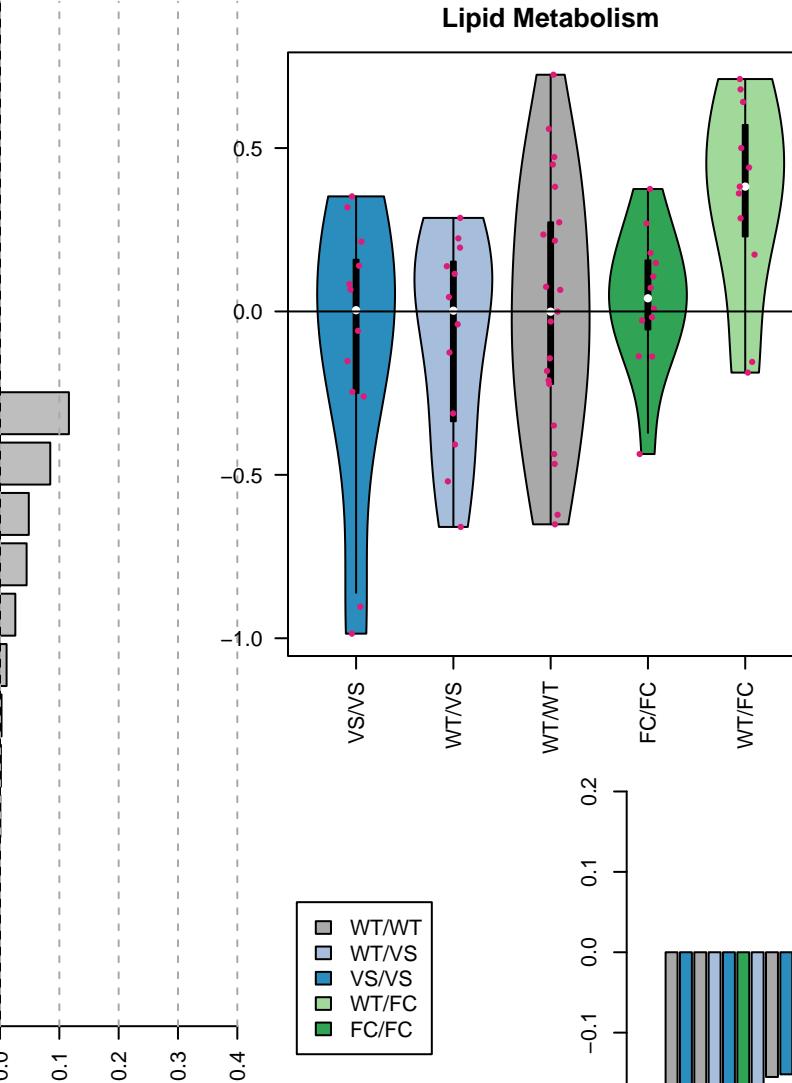


$R^2 = -0.045$

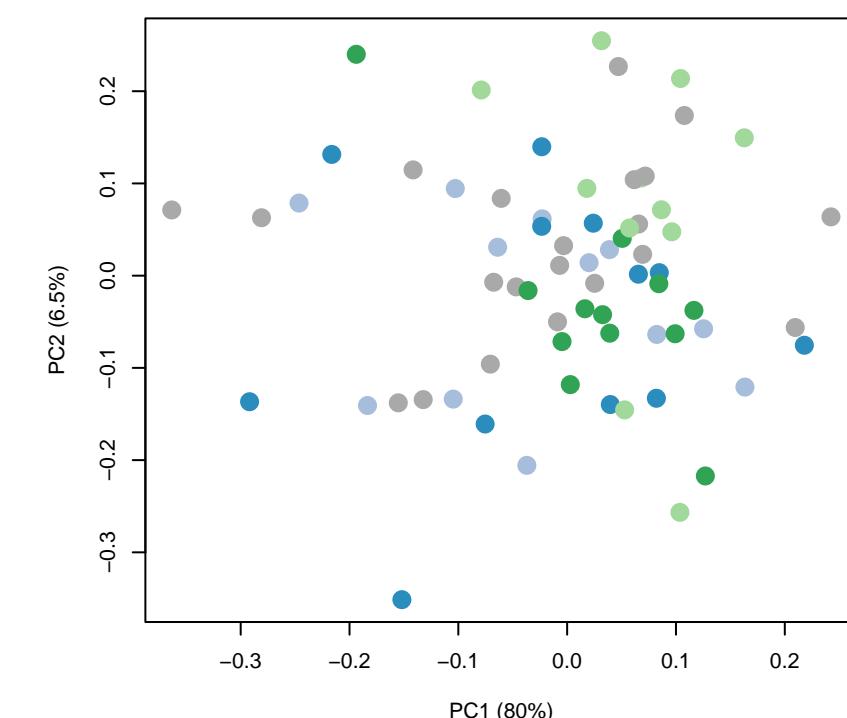
Amphetamine addiction



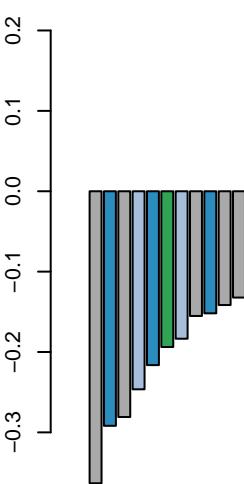
Lipid Metabolism



Decomposition

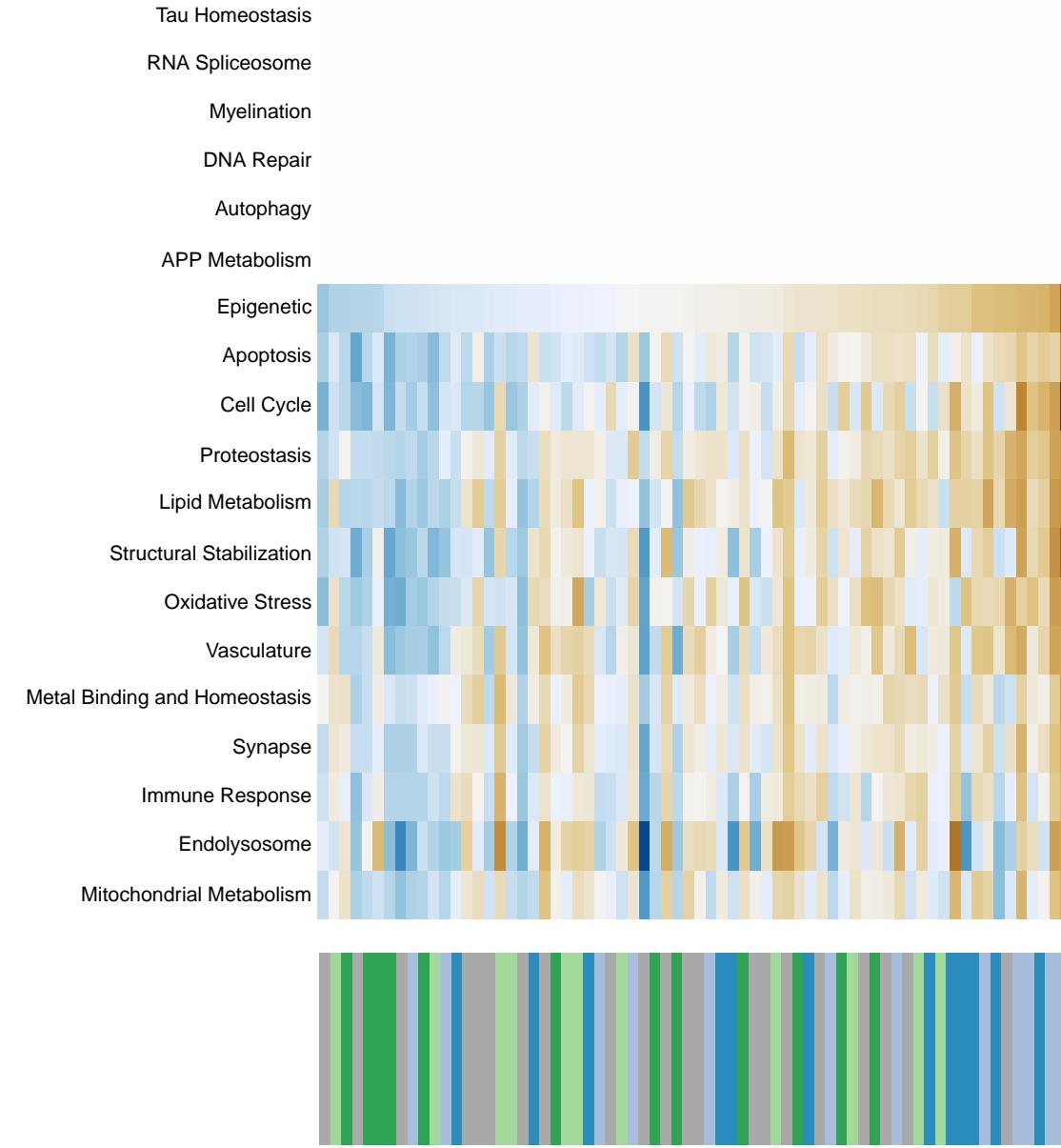


PC1 by genotype

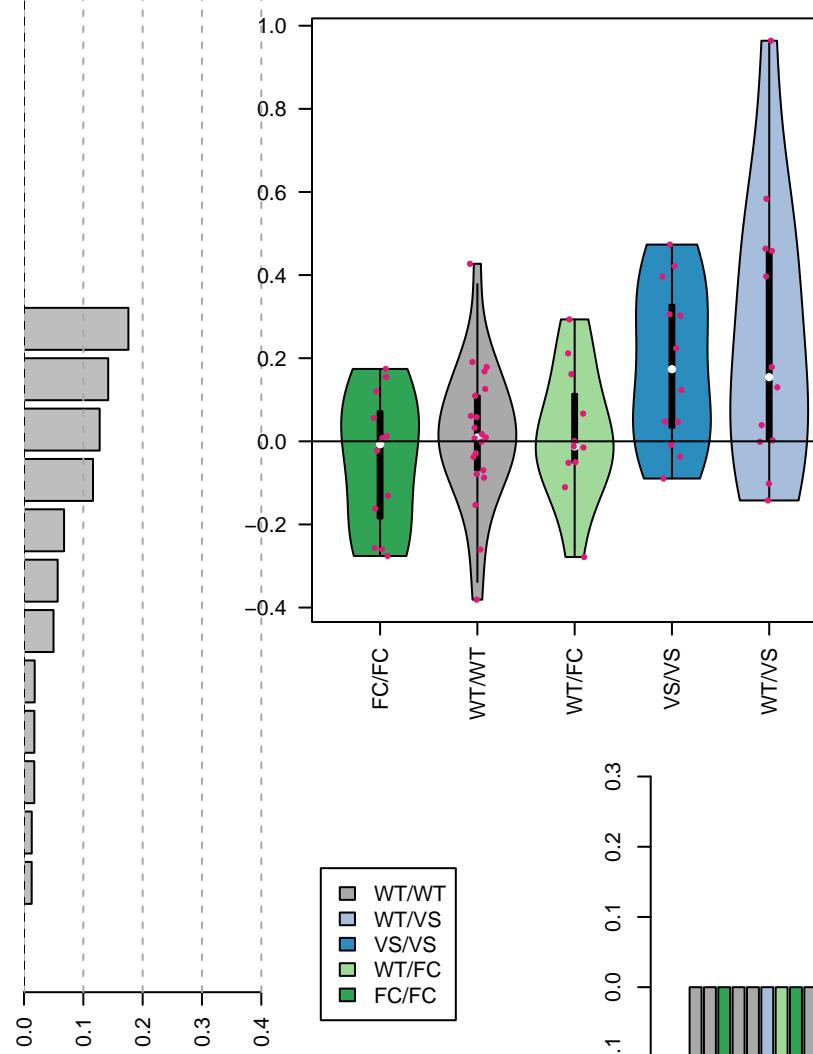


R² = 0.017

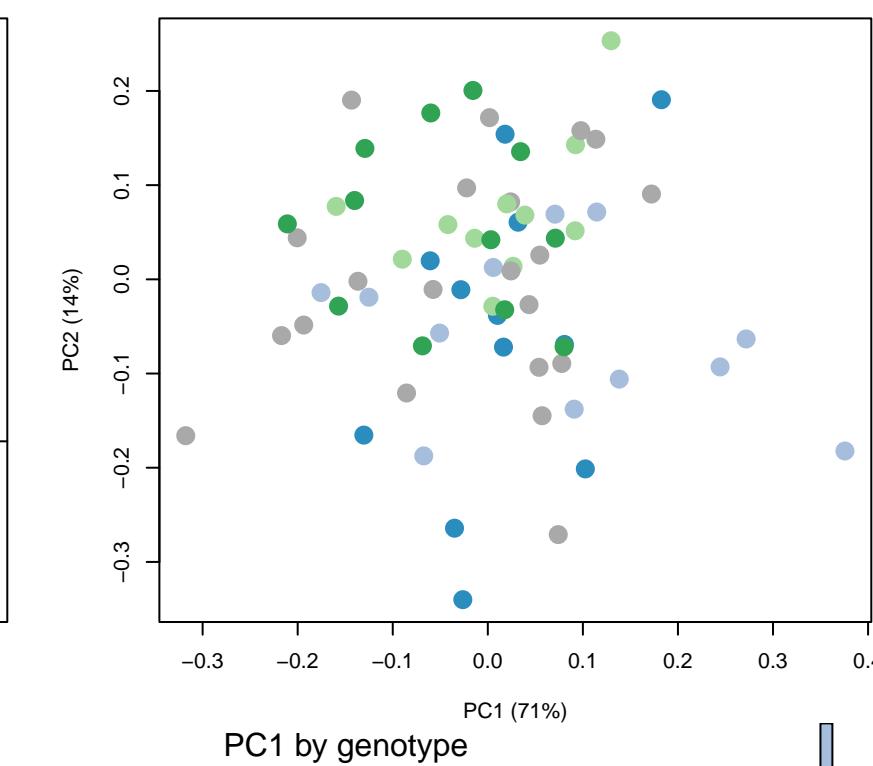
Alcoholism



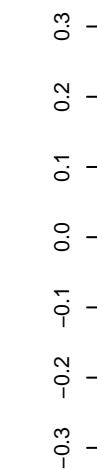
Epigenetic



Decomposition

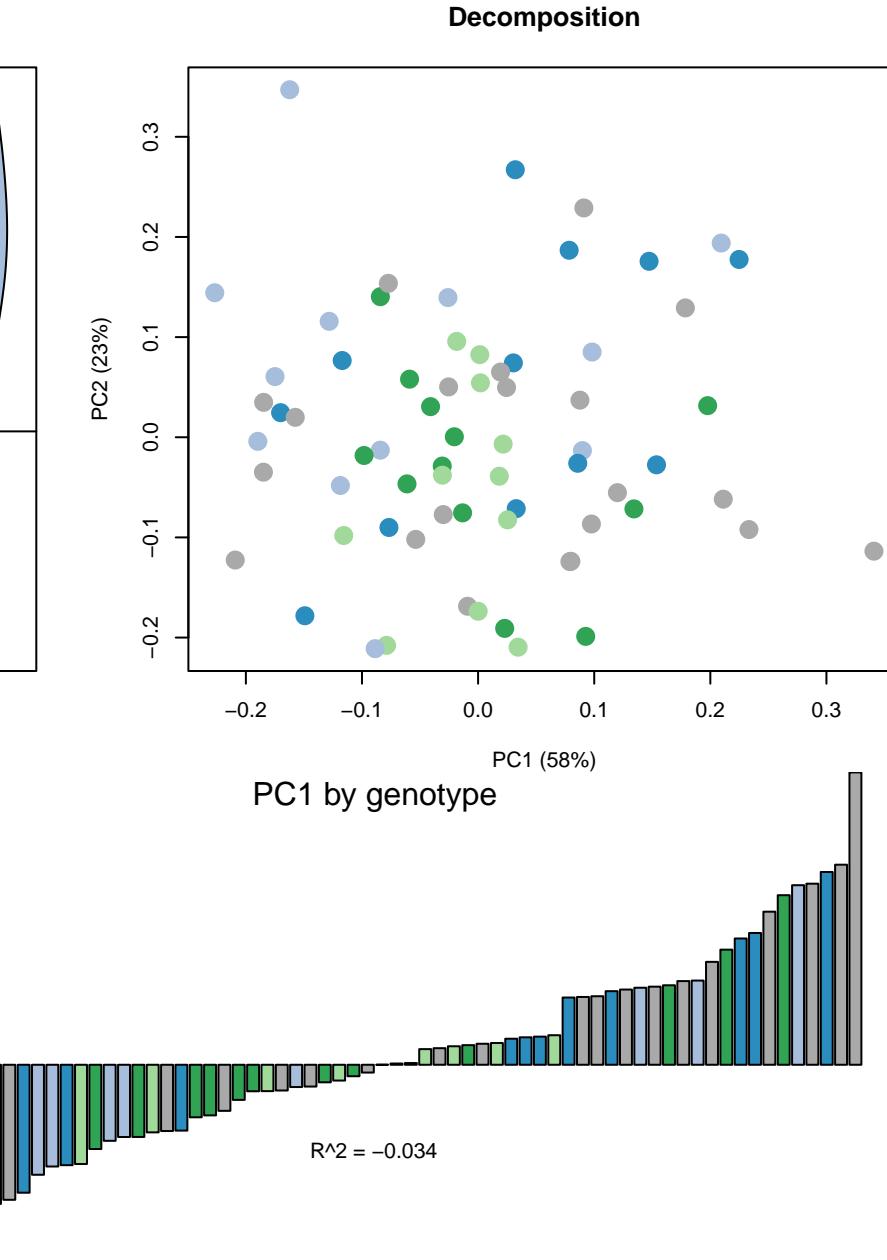
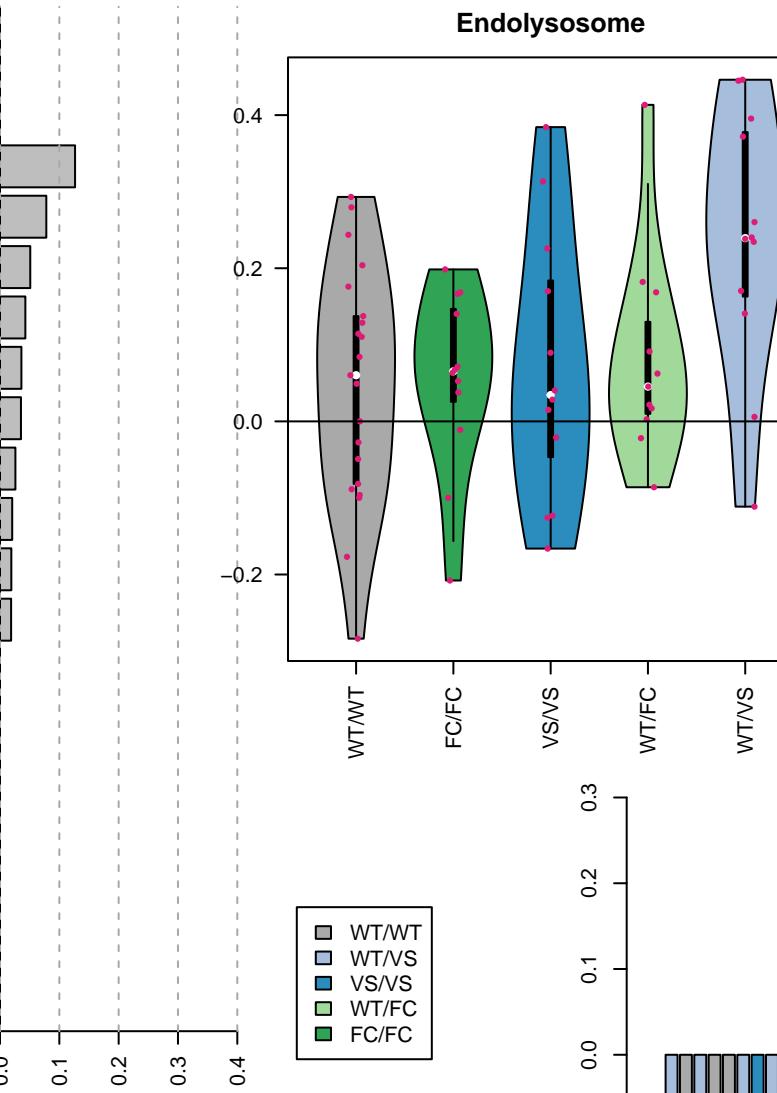
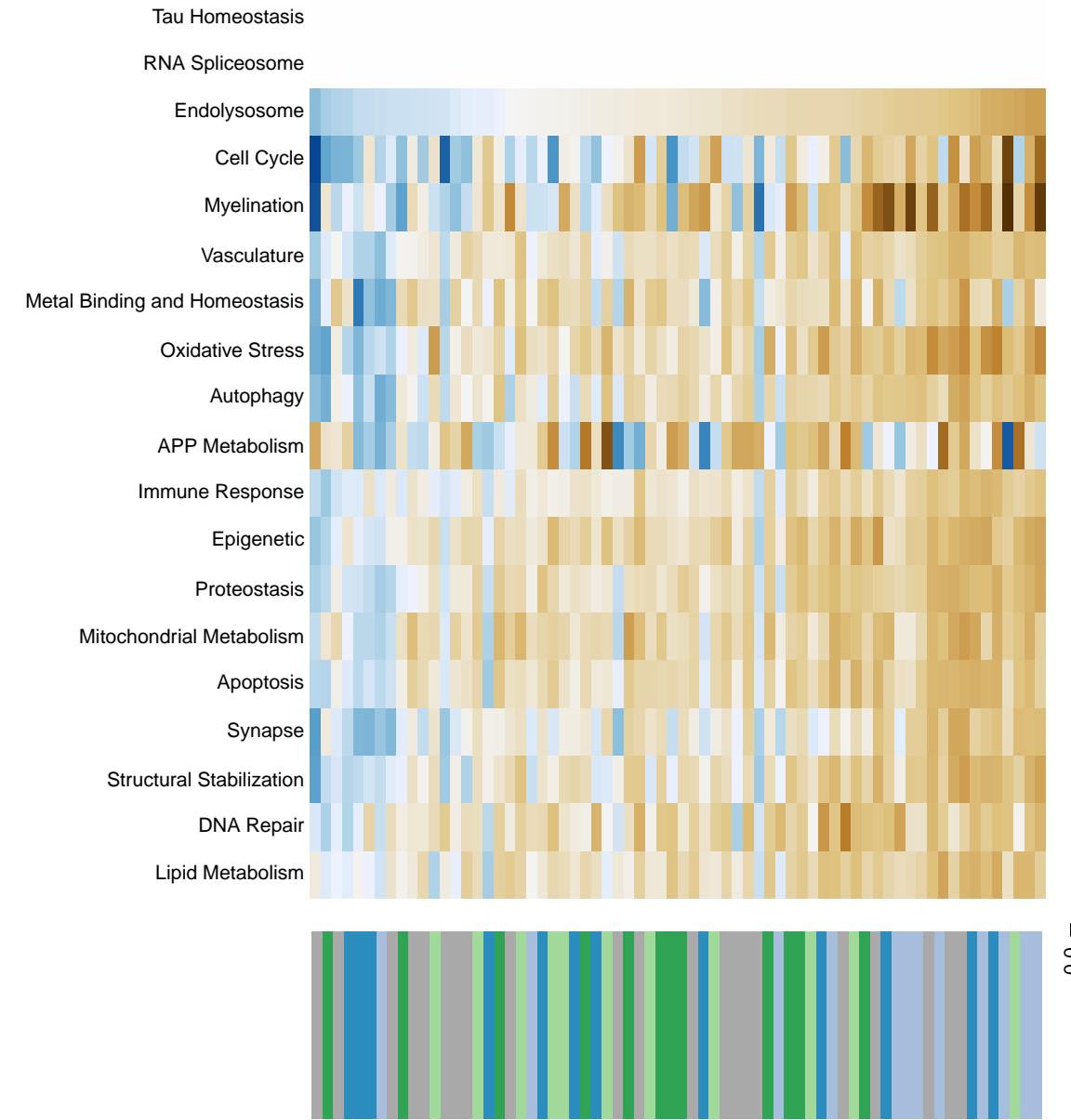


PC1 by genotype

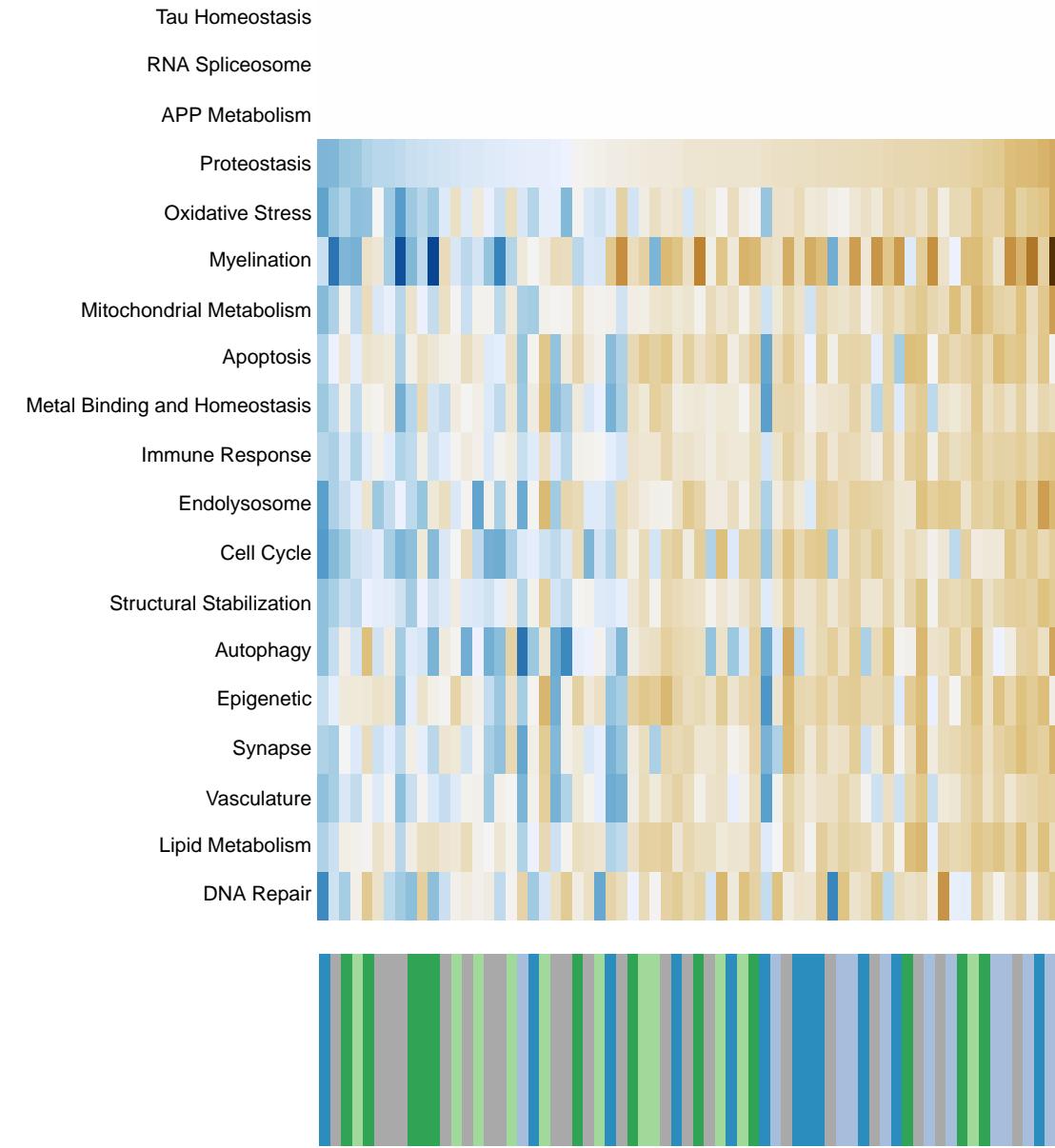


$R^2 = -0.0013$

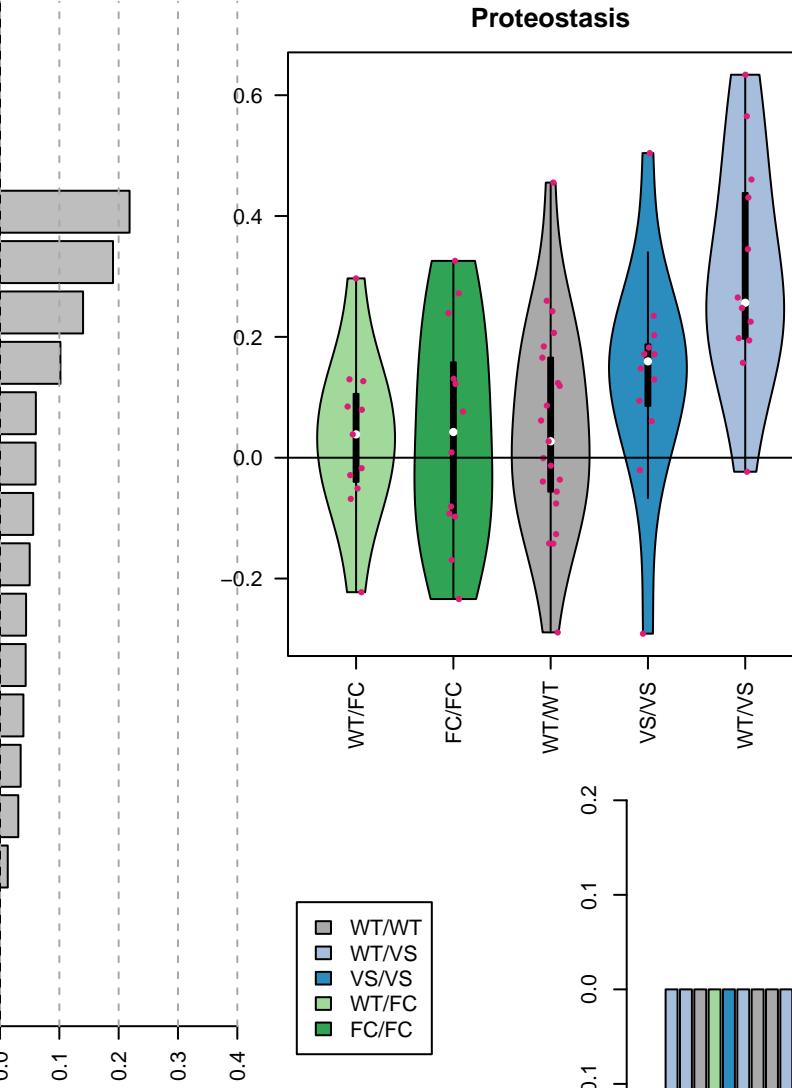
Lipid and atherosclerosis



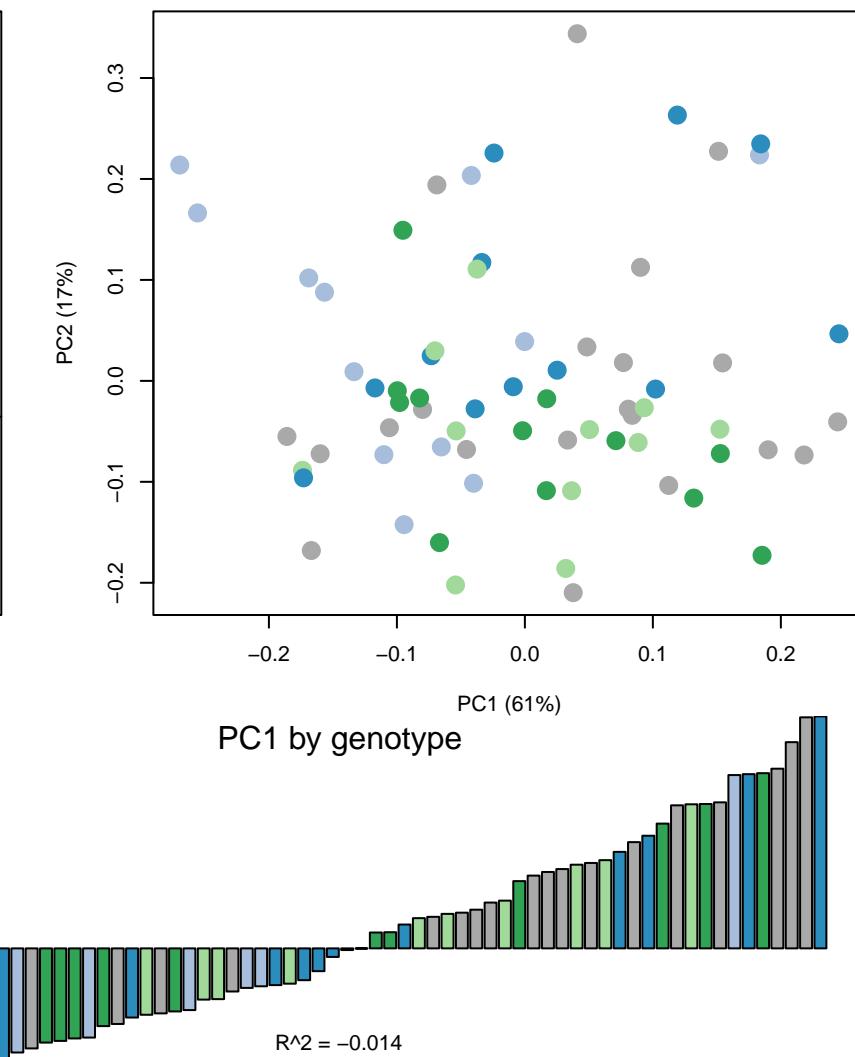
Fluid shear stress and atherosclerosis



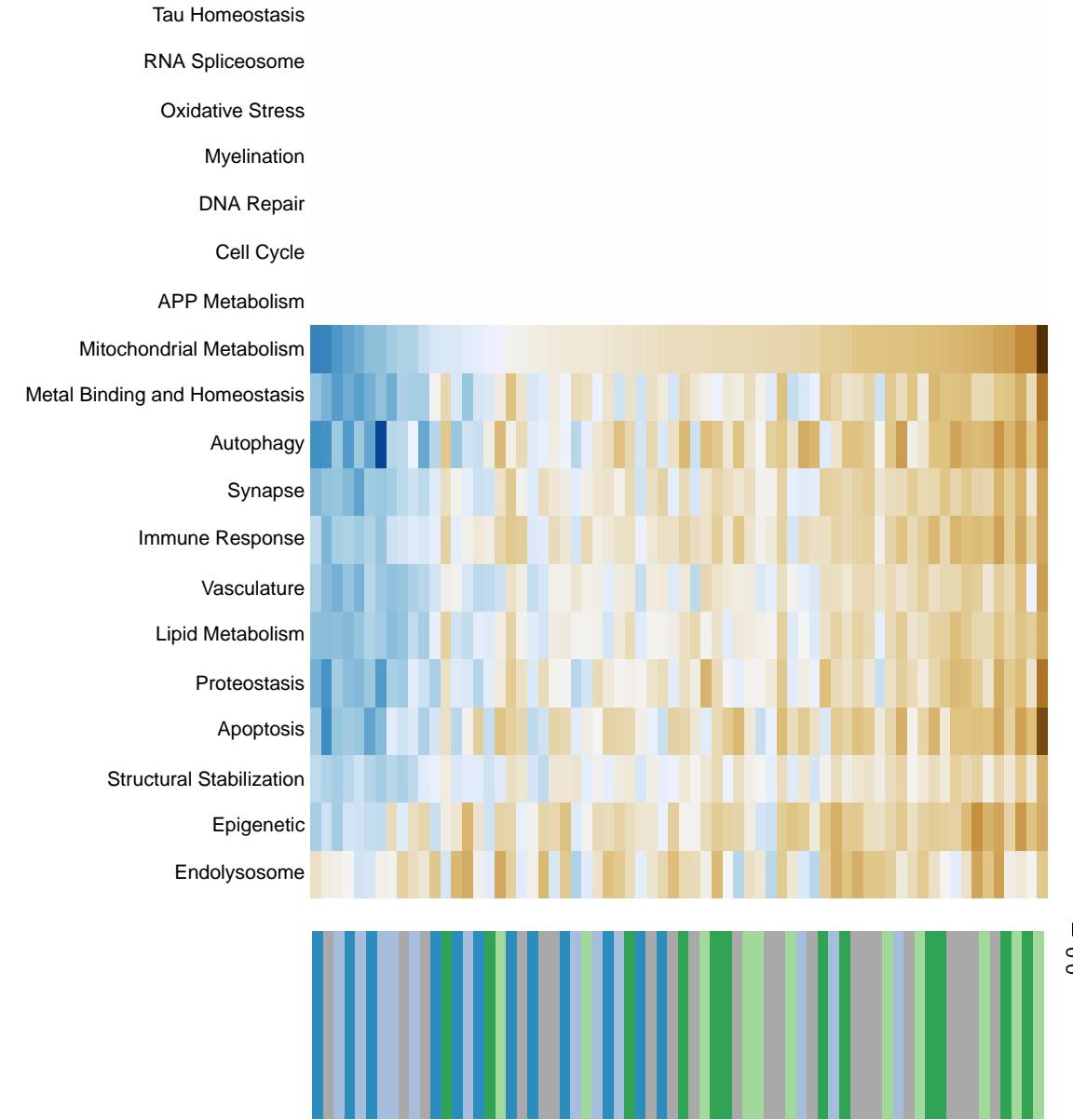
Proteostasis



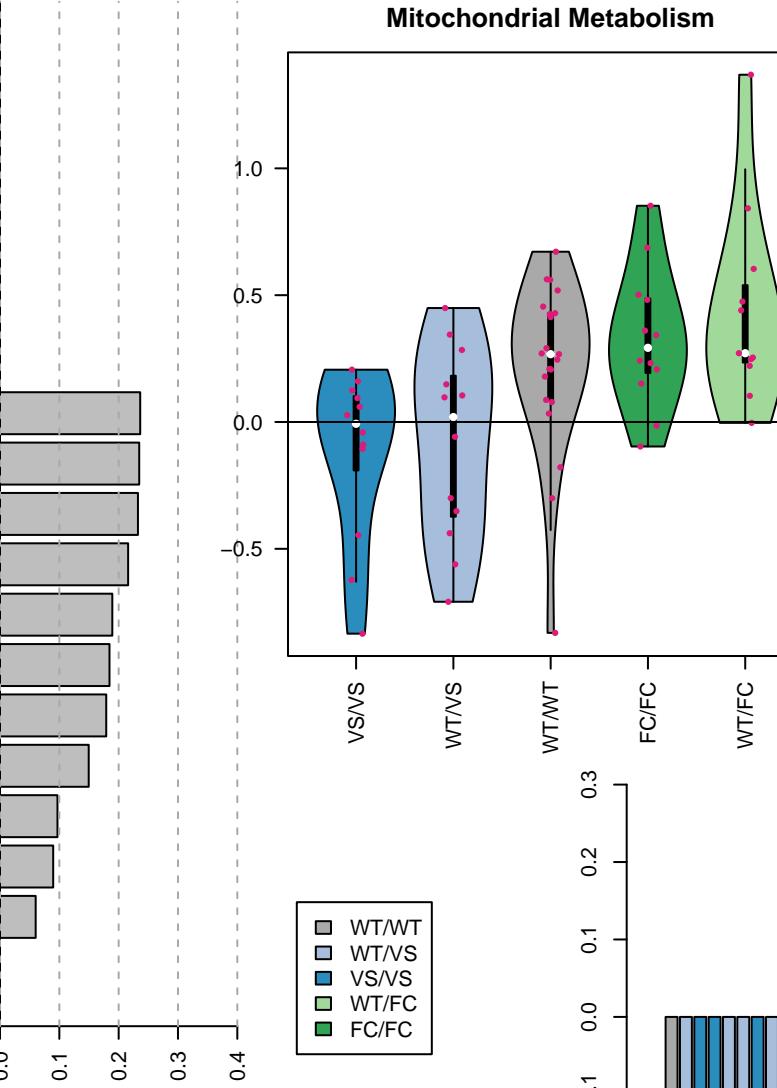
Decomposition



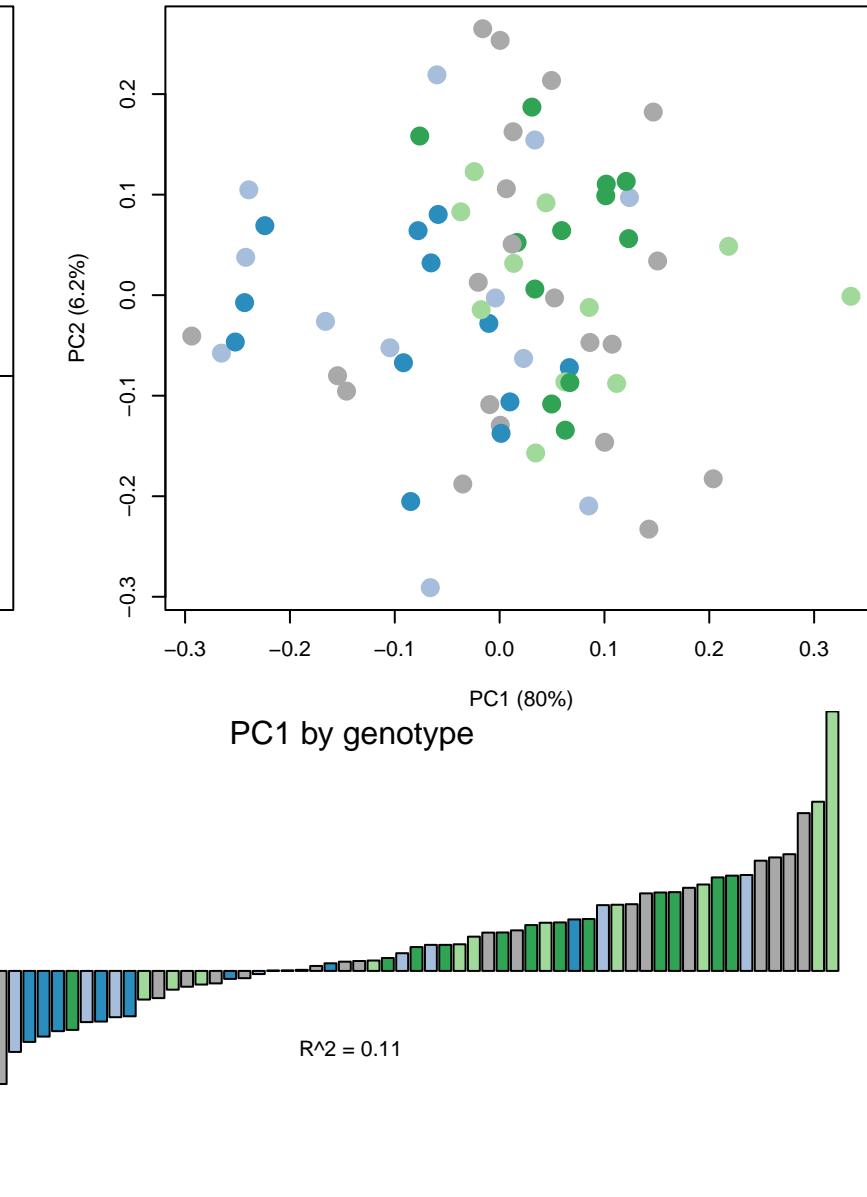
Hypertrophic cardiomyopathy



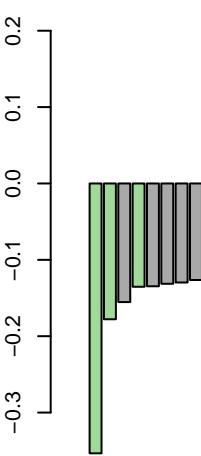
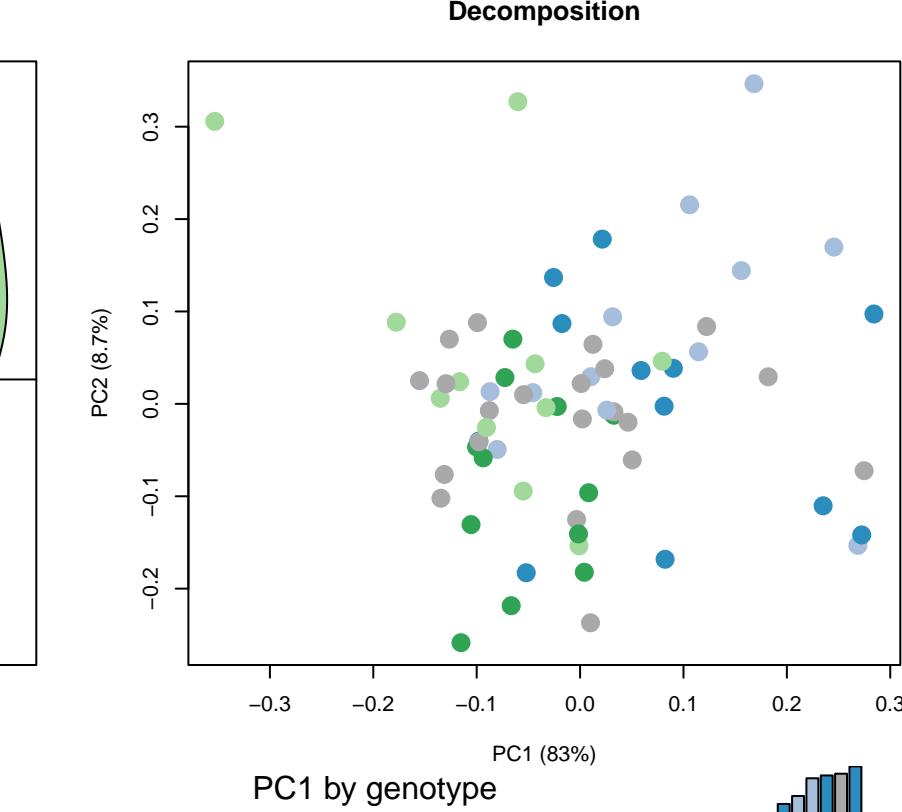
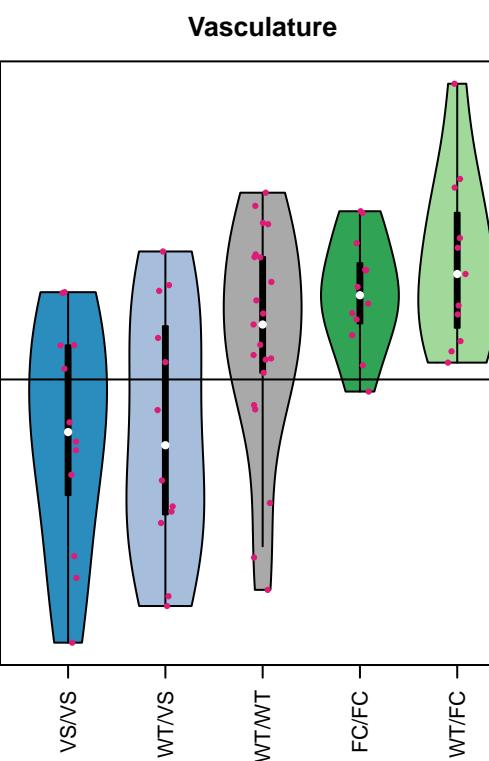
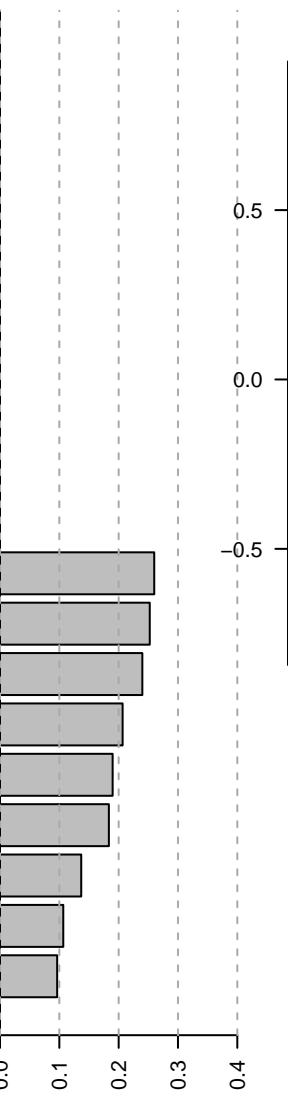
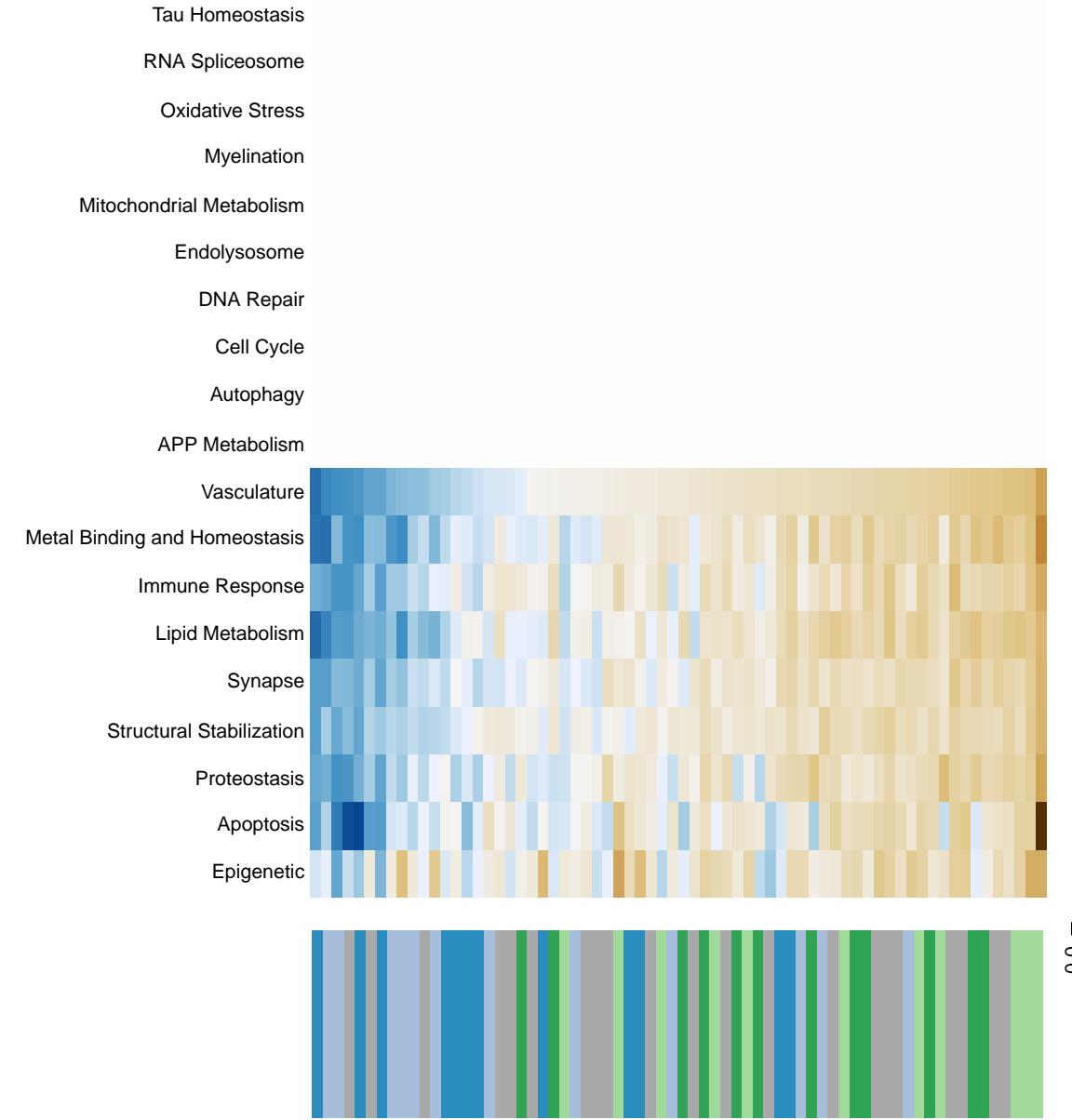
Mitochondrial Metabolism



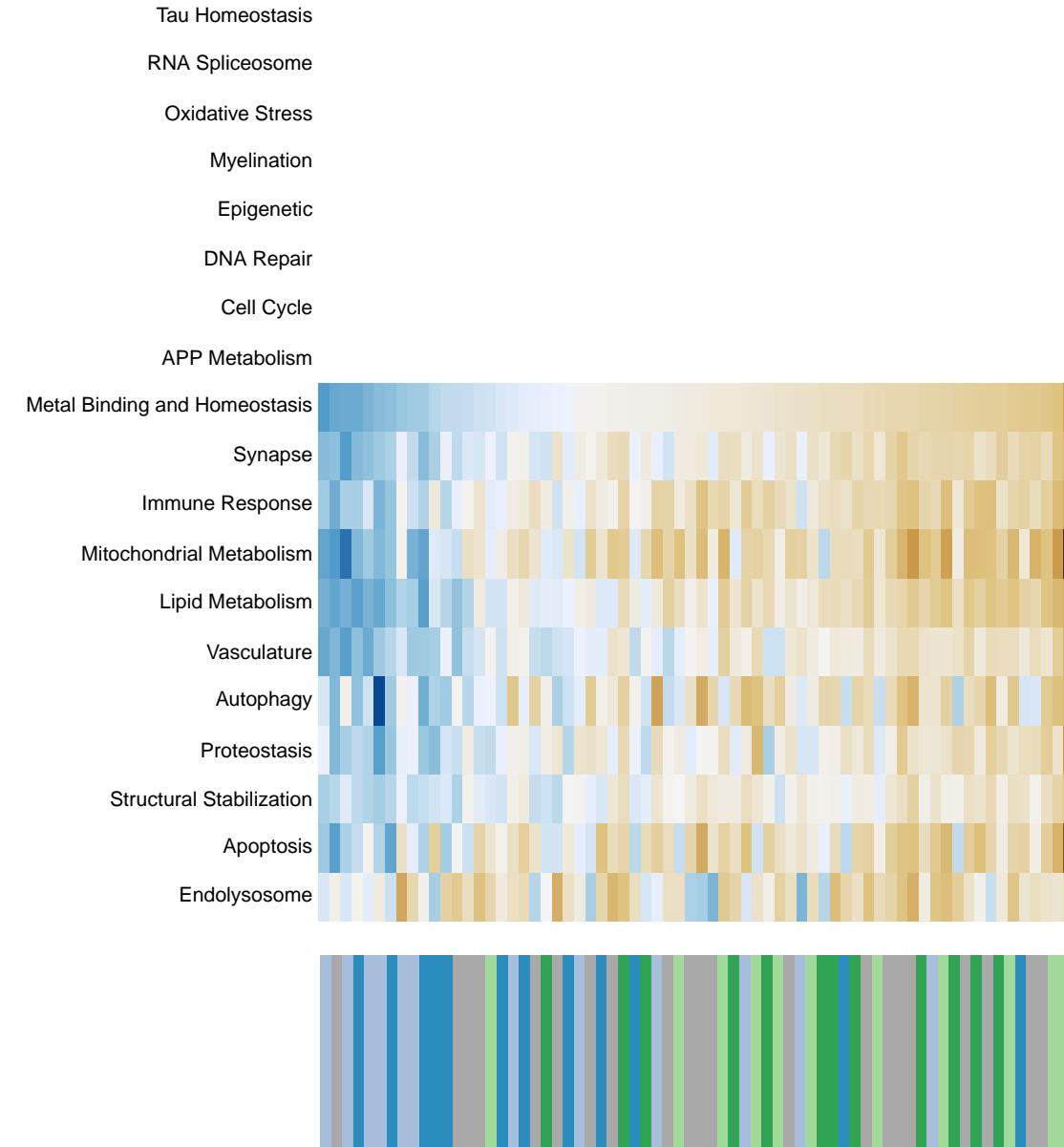
Decomposition



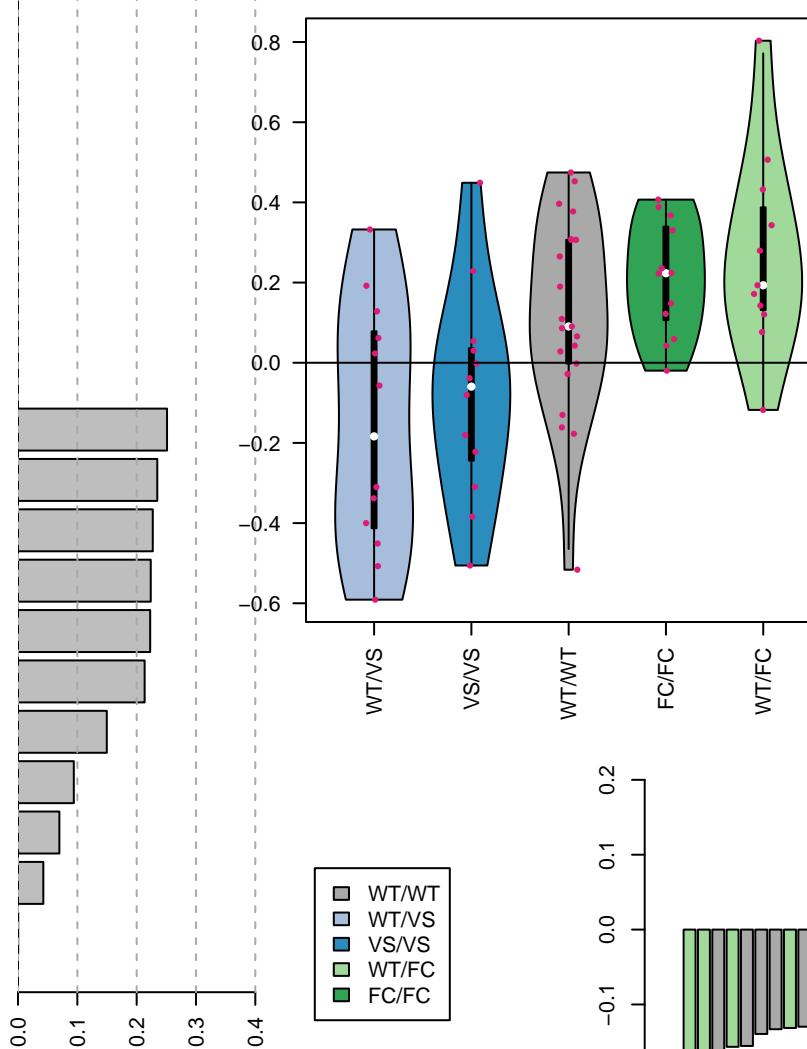
Arrhythmogenic right ventricular cardiomyopathy



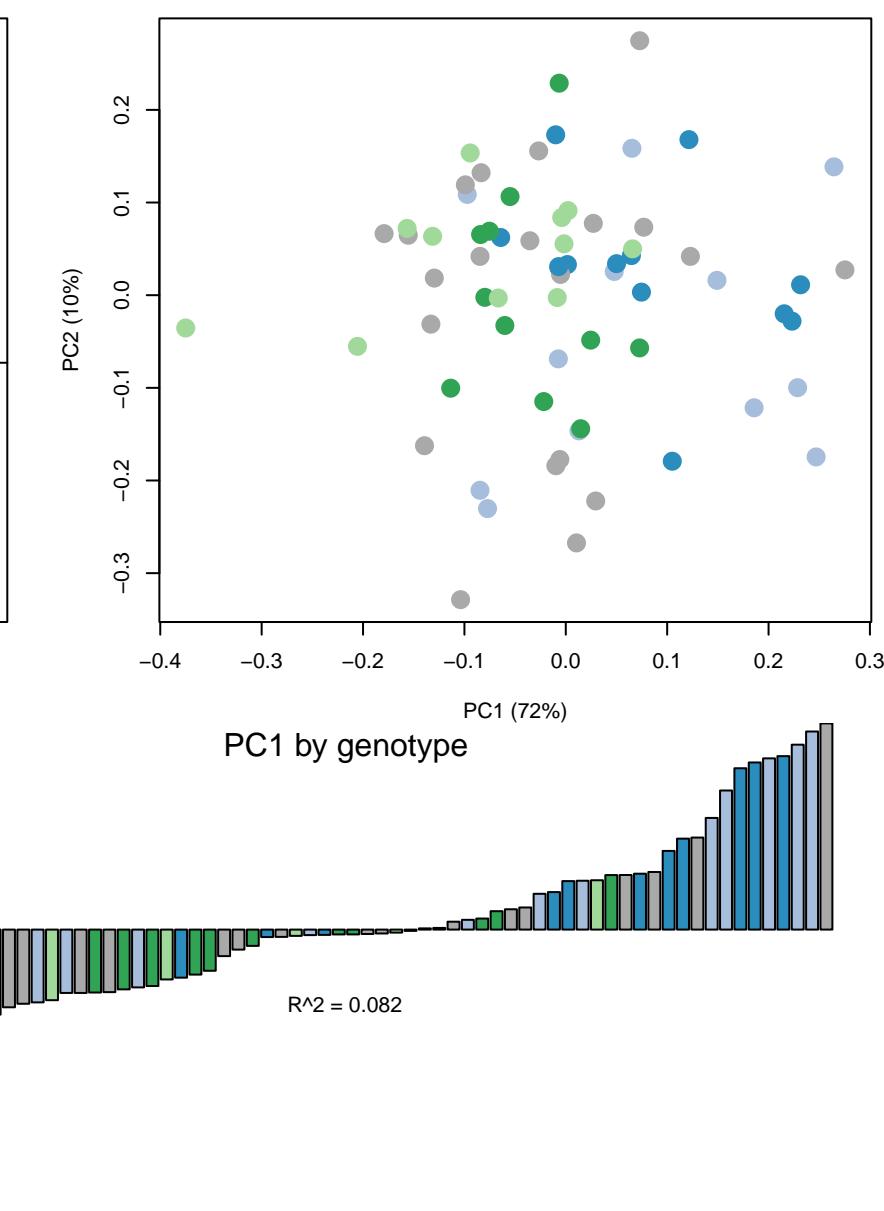
Dilated cardiomyopathy



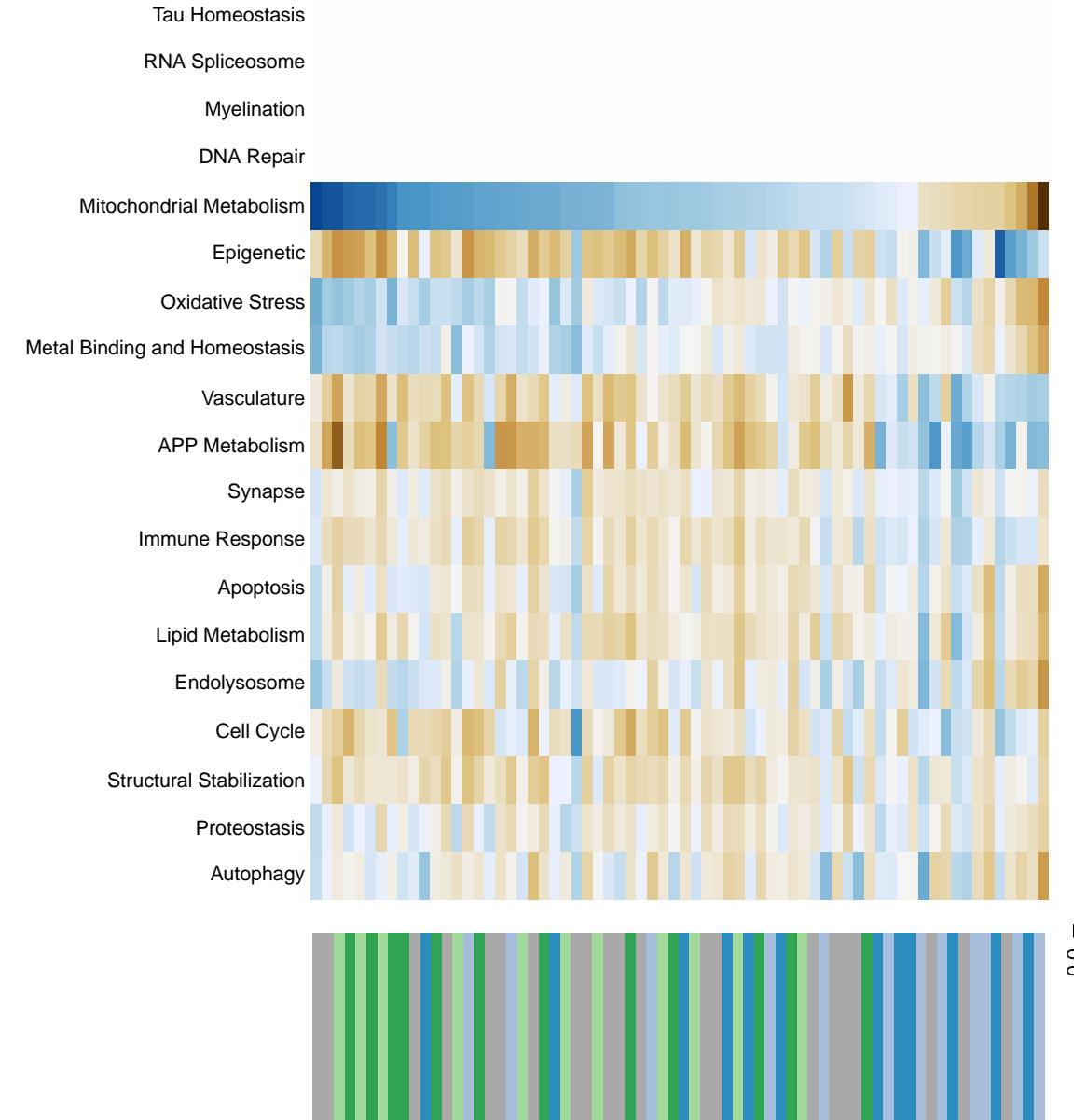
Metal Binding and Homeostasis



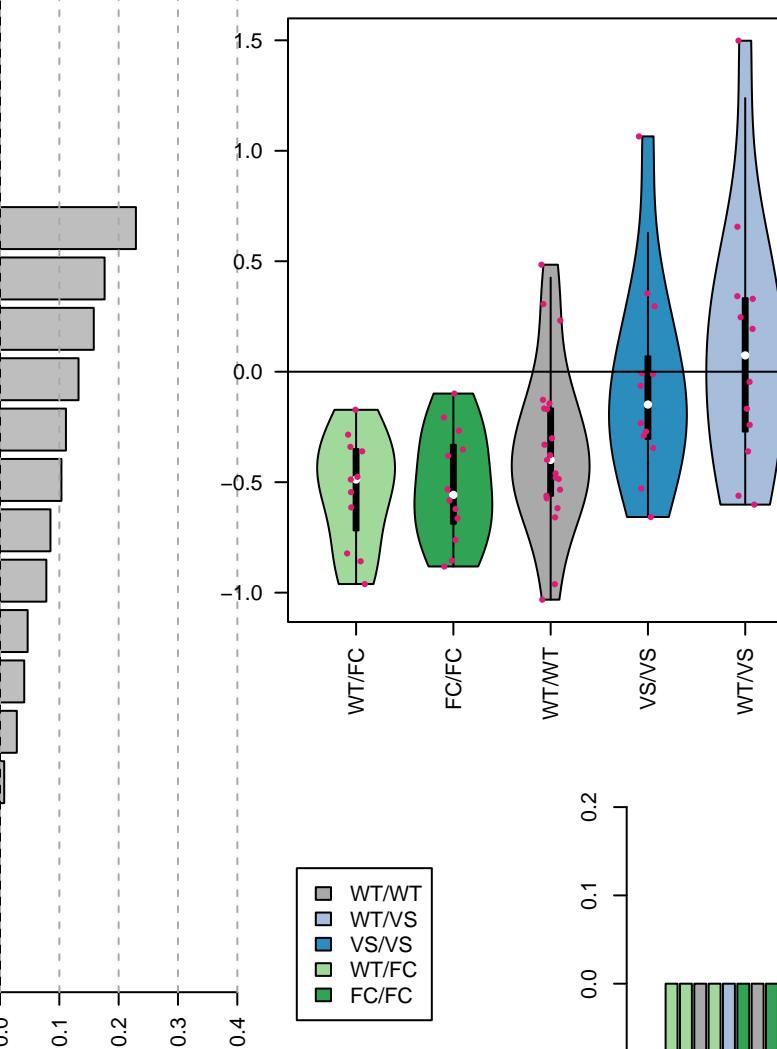
Decomposition



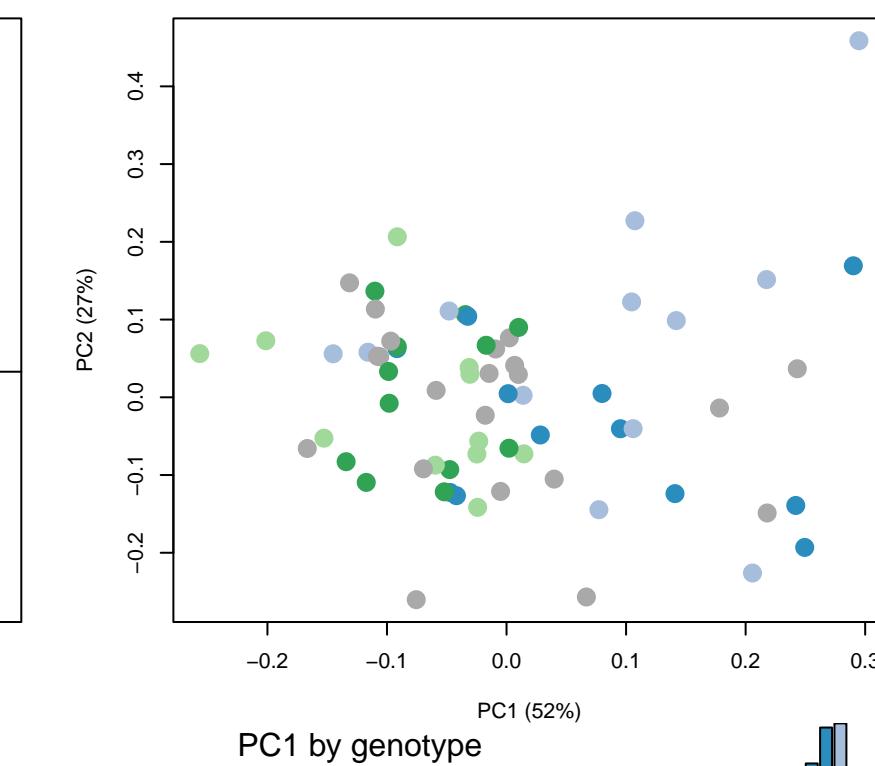
Diabetic cardiomyopathy



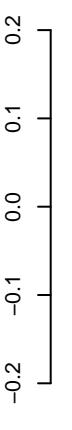
Mitochondrial Metabolism



Decomposition

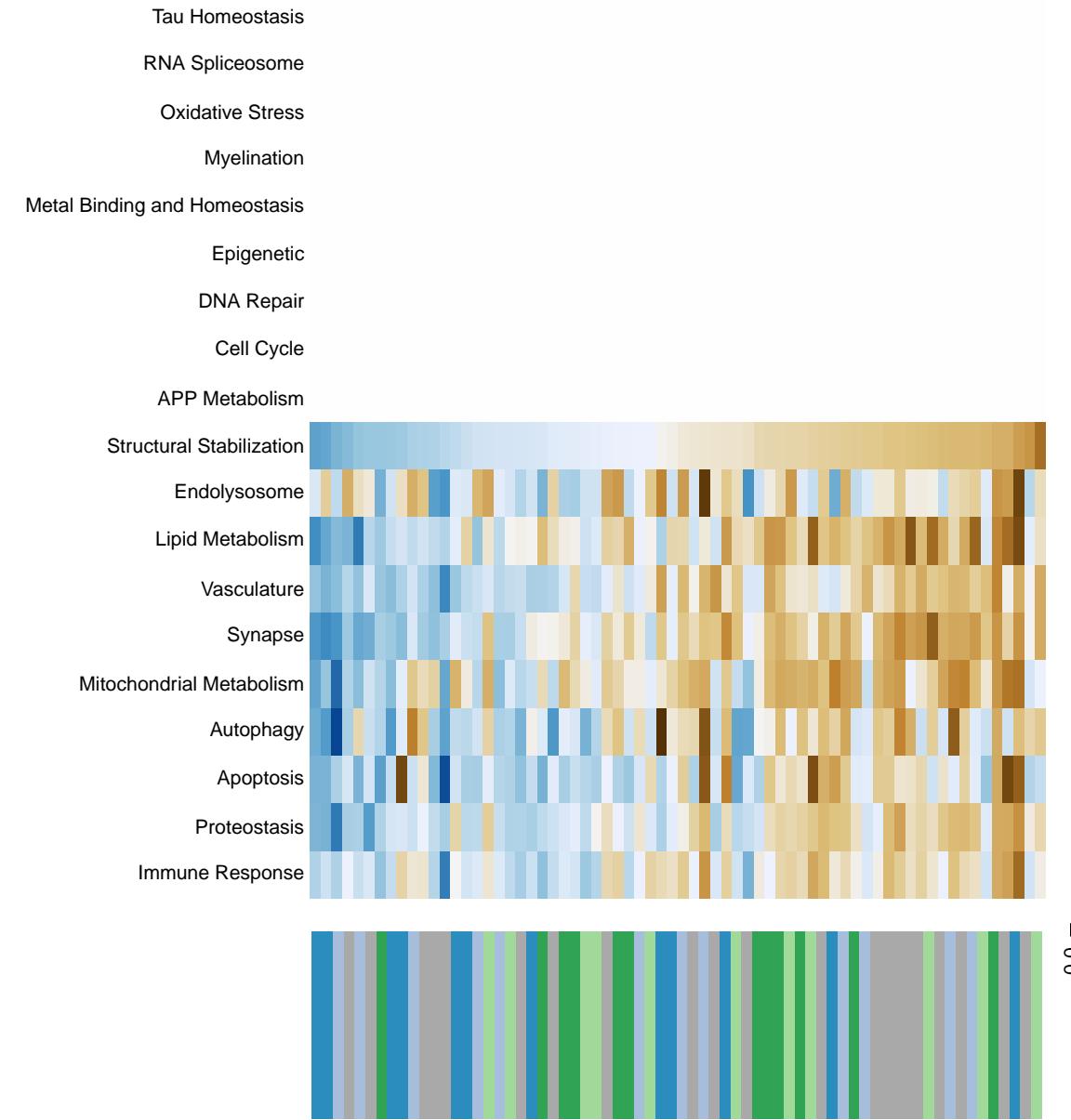


PC1 by genotype

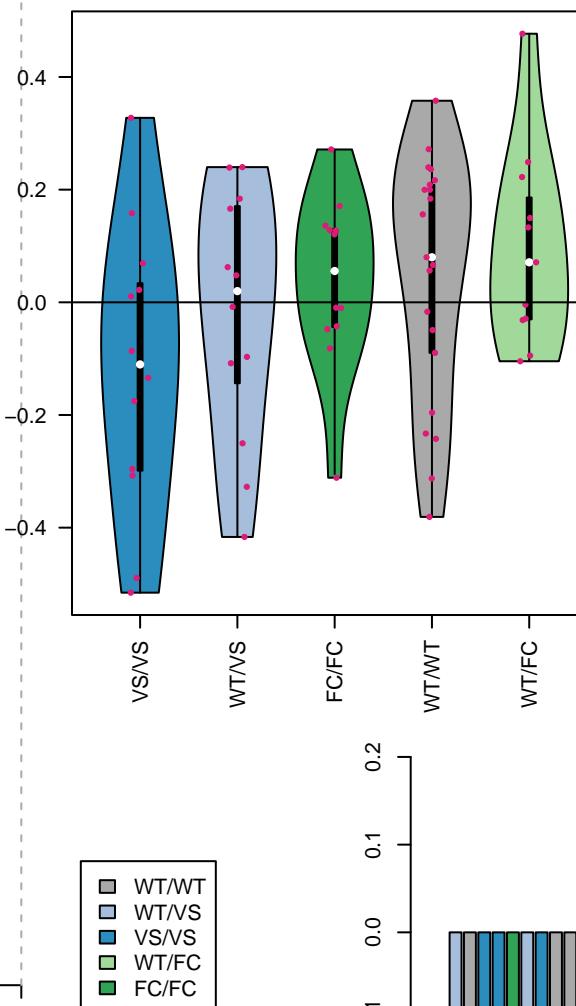


$R^2 = 0.1$

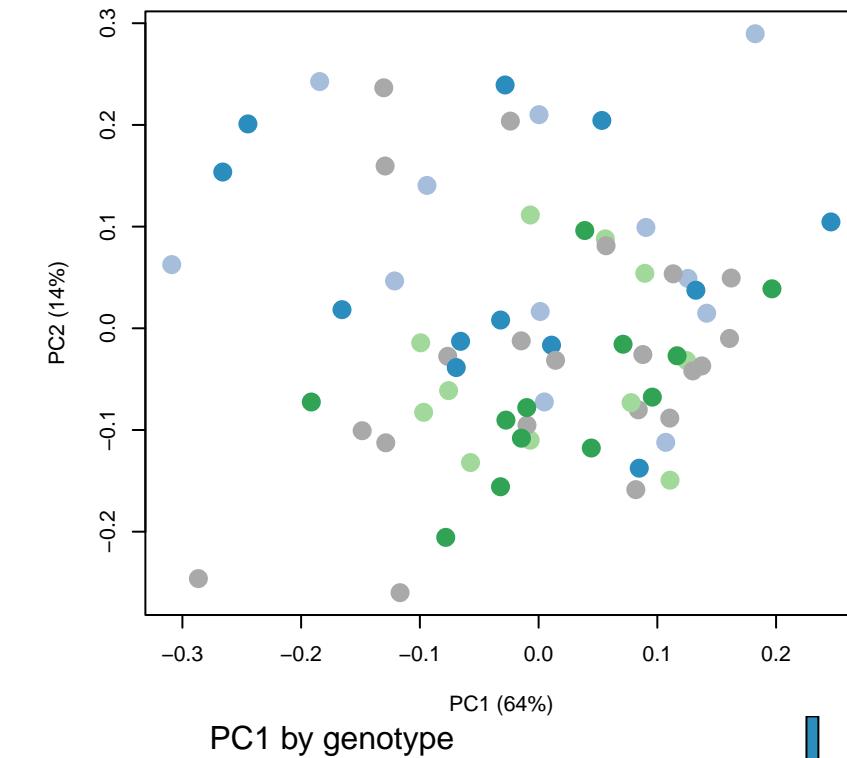
Viral myocarditis



Structural Stabilization



Decomposition



PC1 by genotype

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

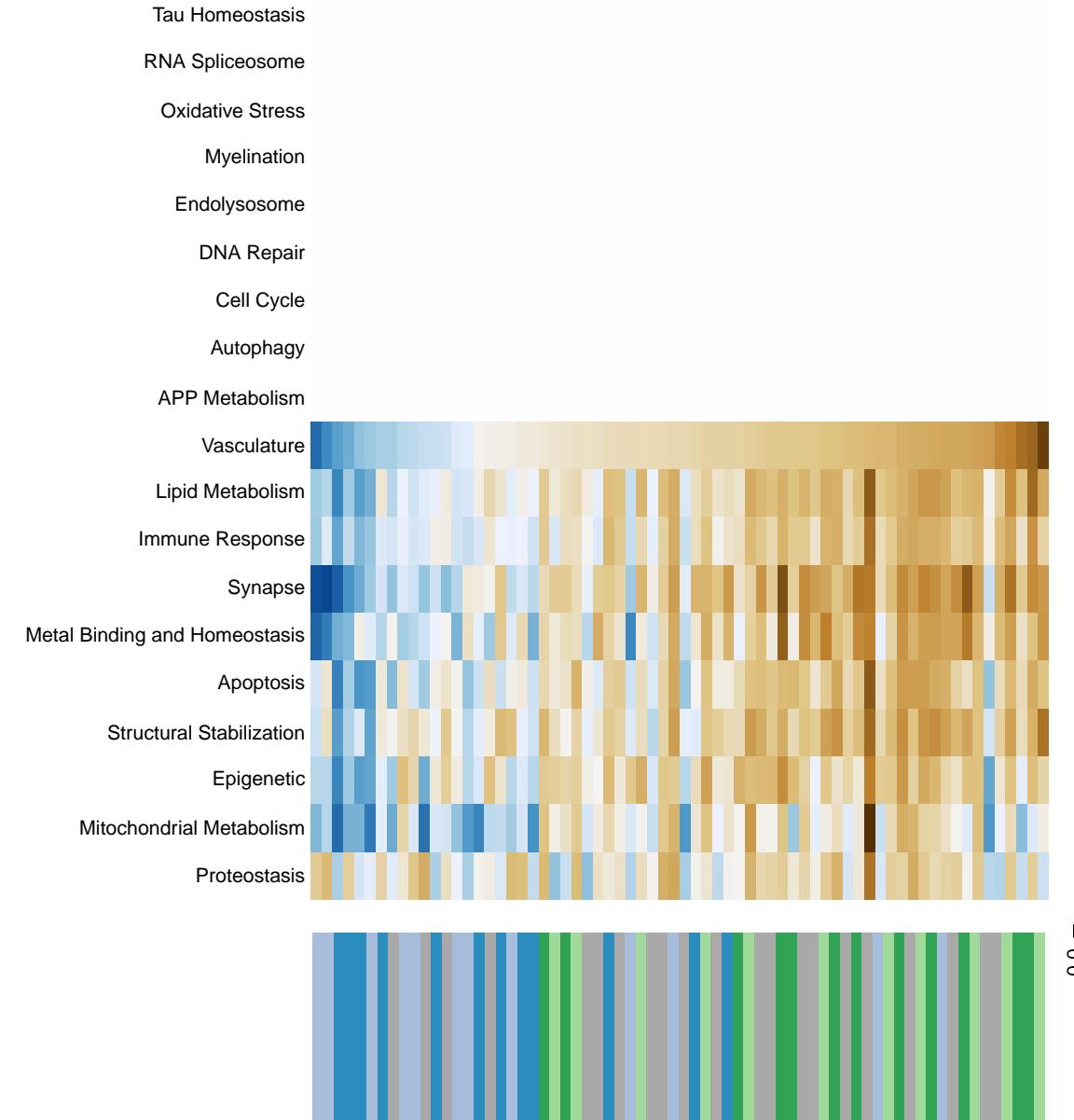
274

275

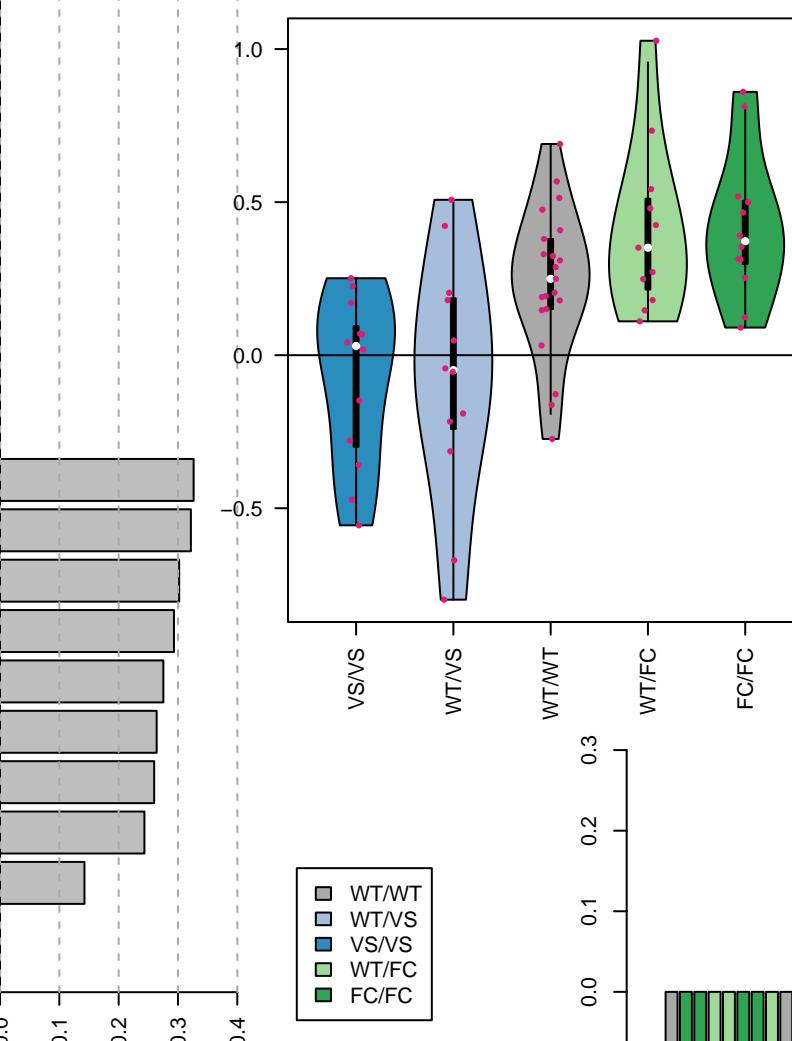
276

277

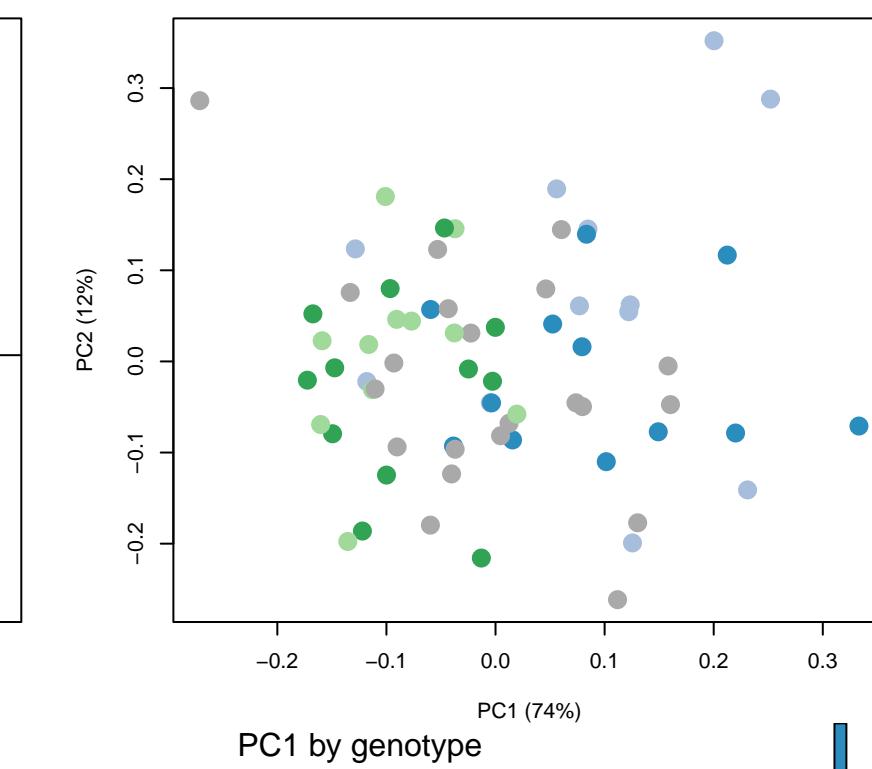
Type II diabetes mellitus



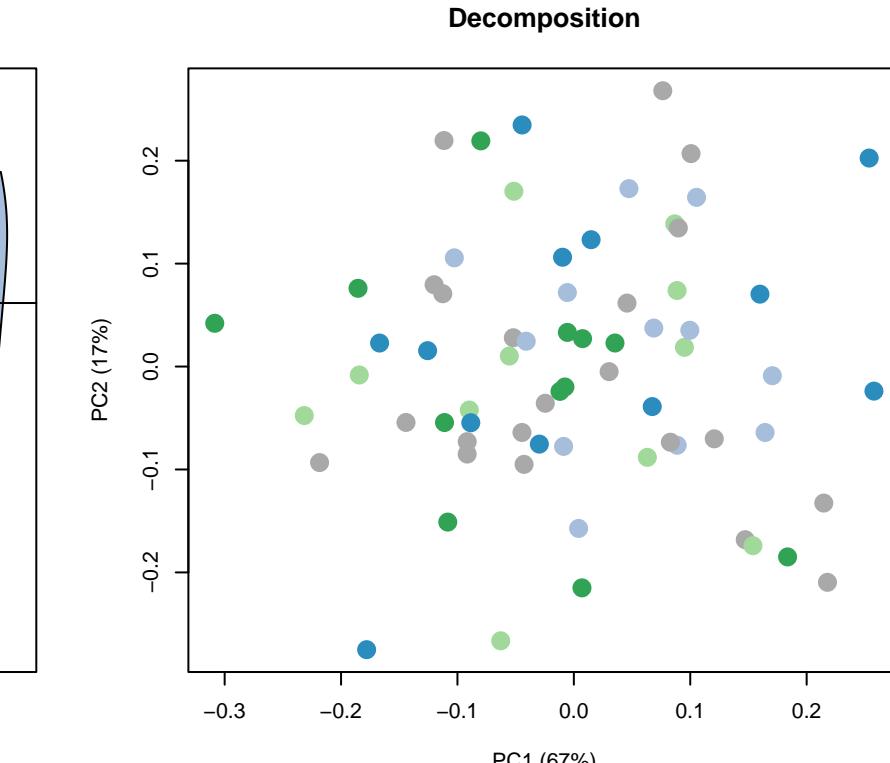
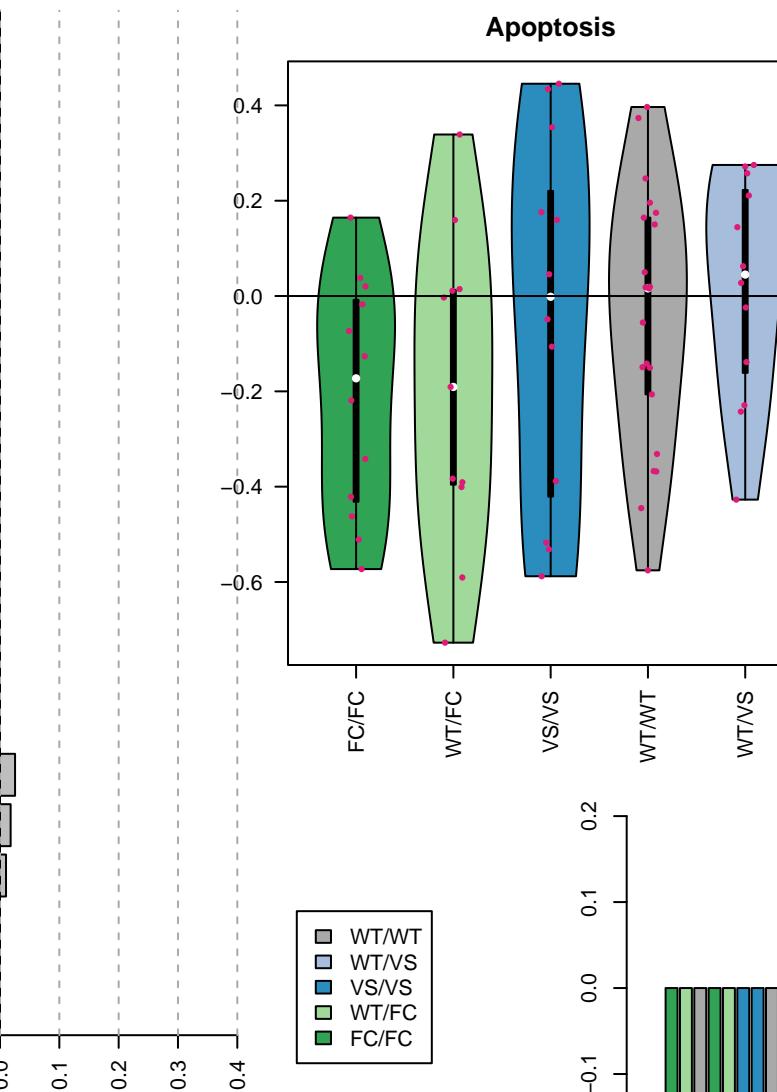
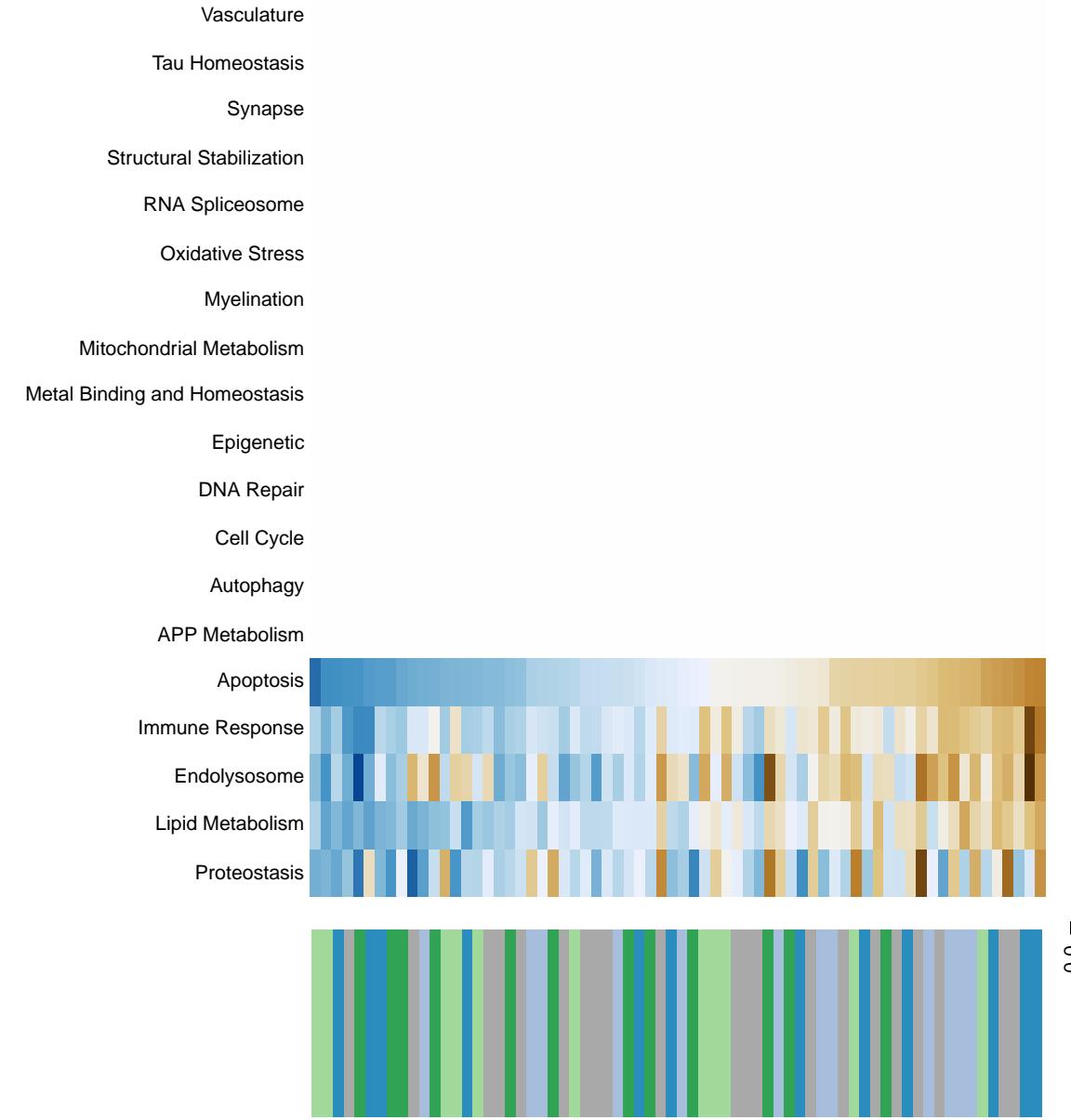
Vasculature



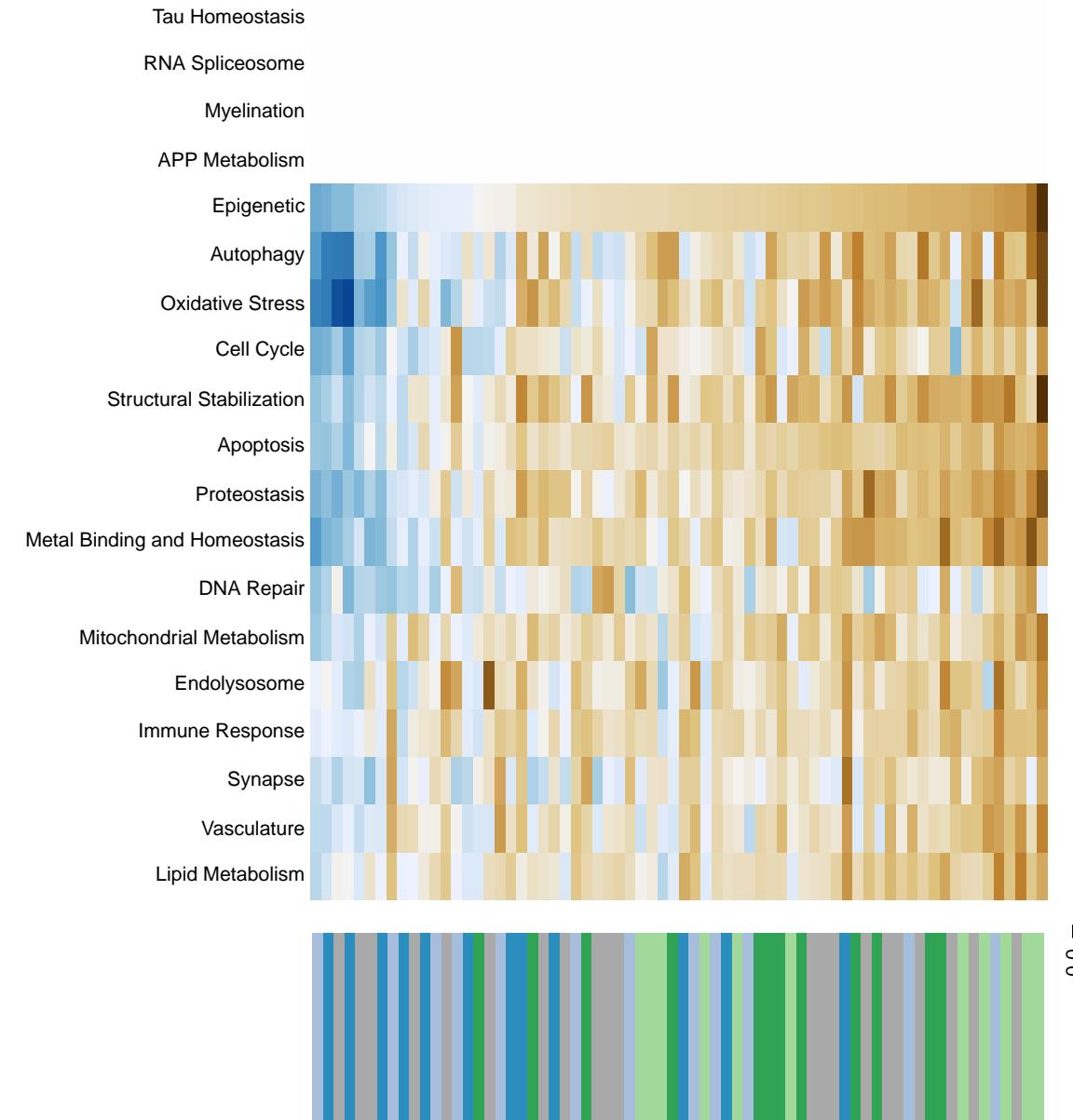
Decomposition



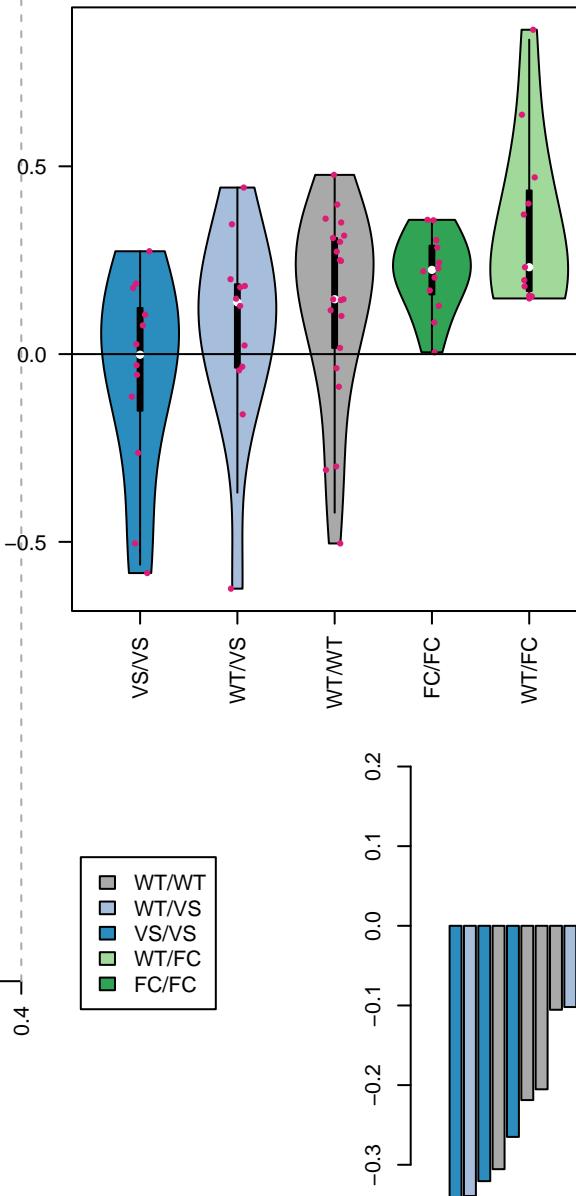
Type I diabetes mellitus



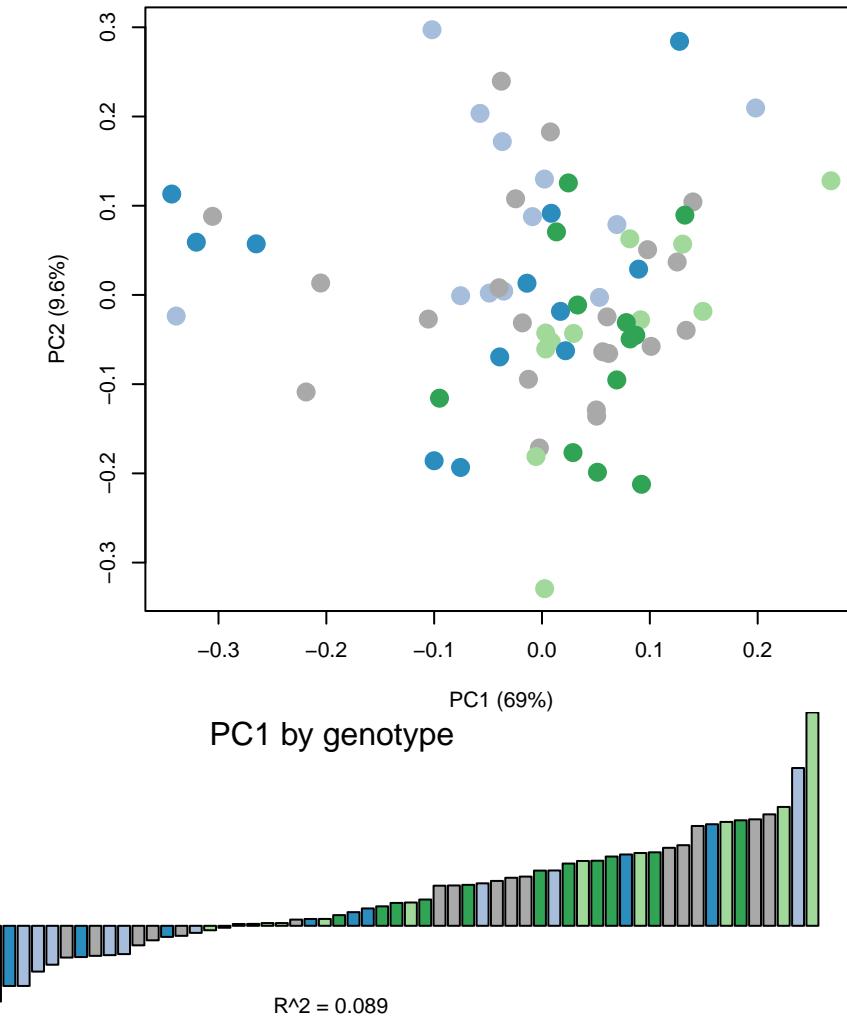
Alcoholic liver disease



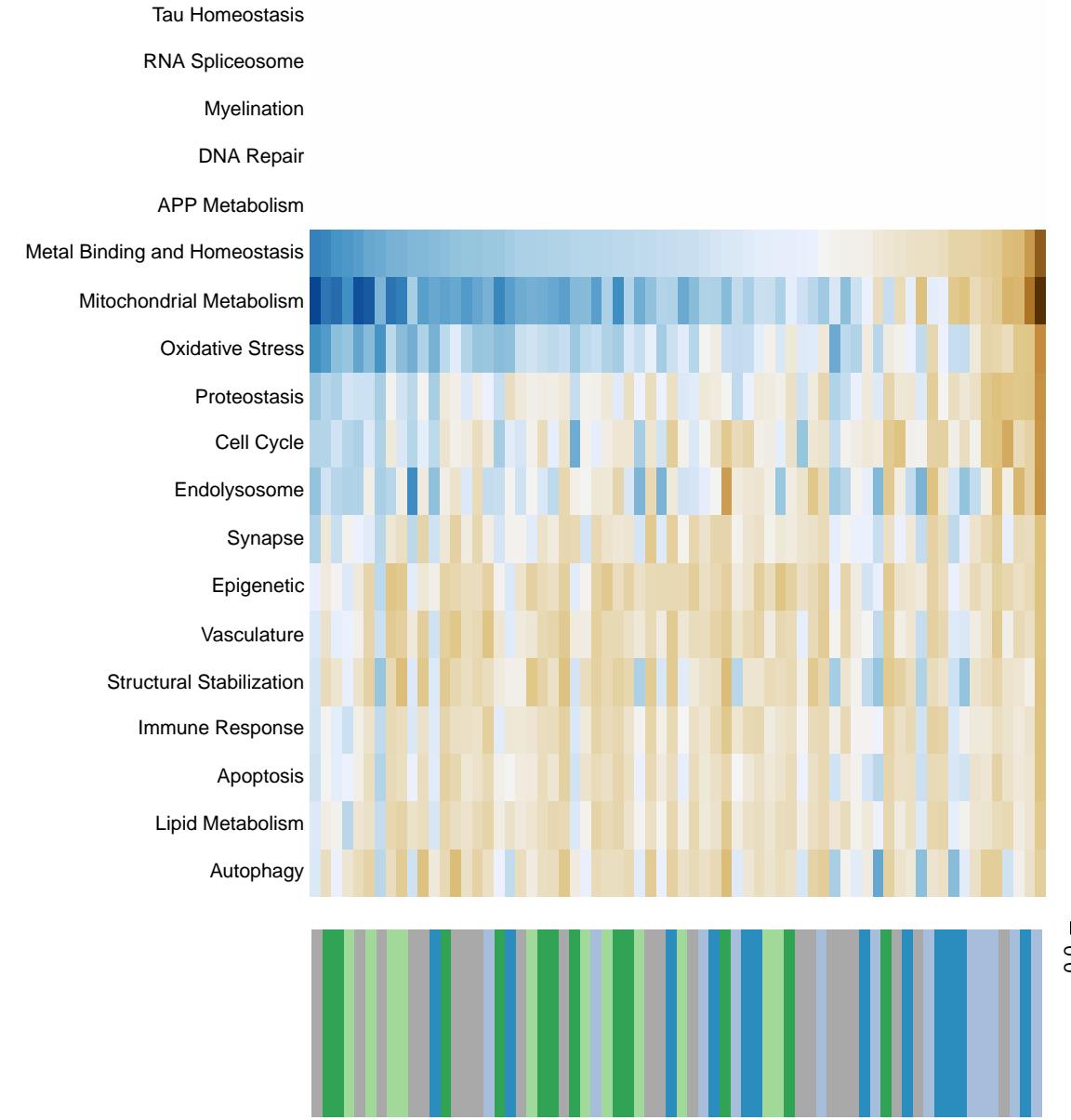
Epigenetic



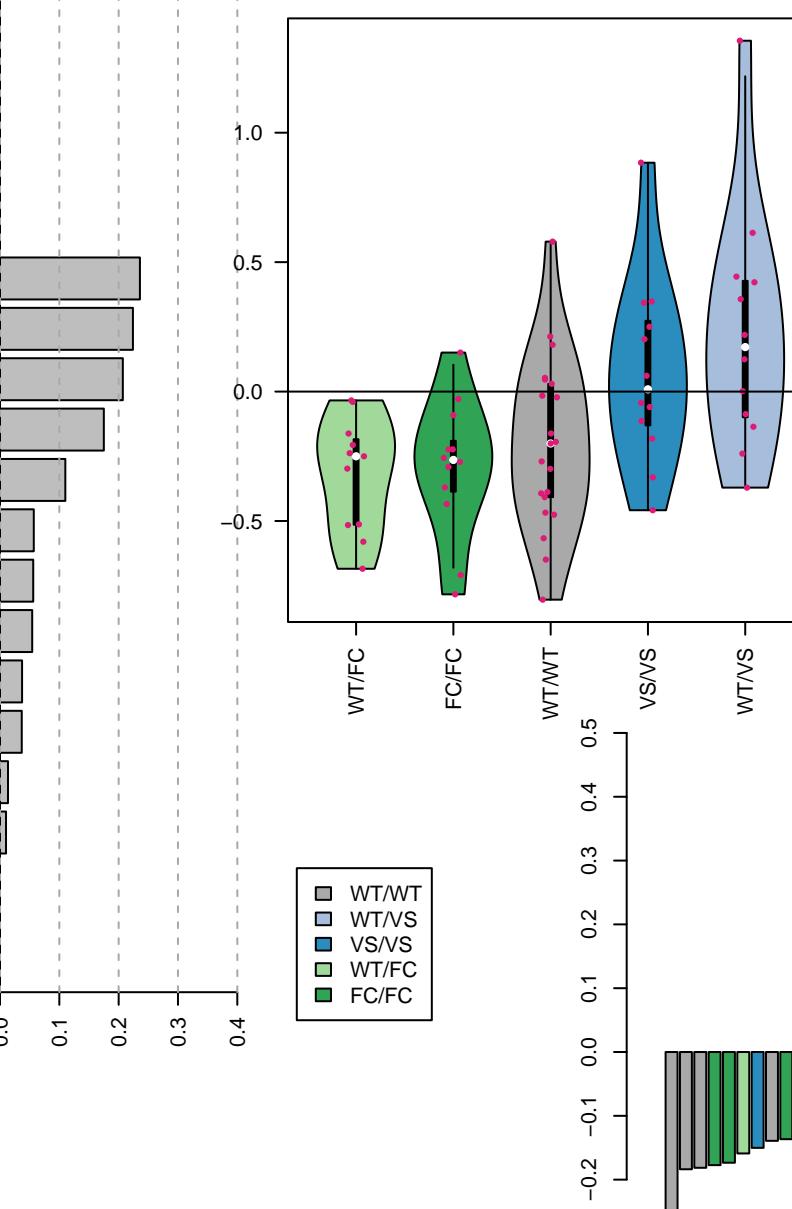
Decomposition



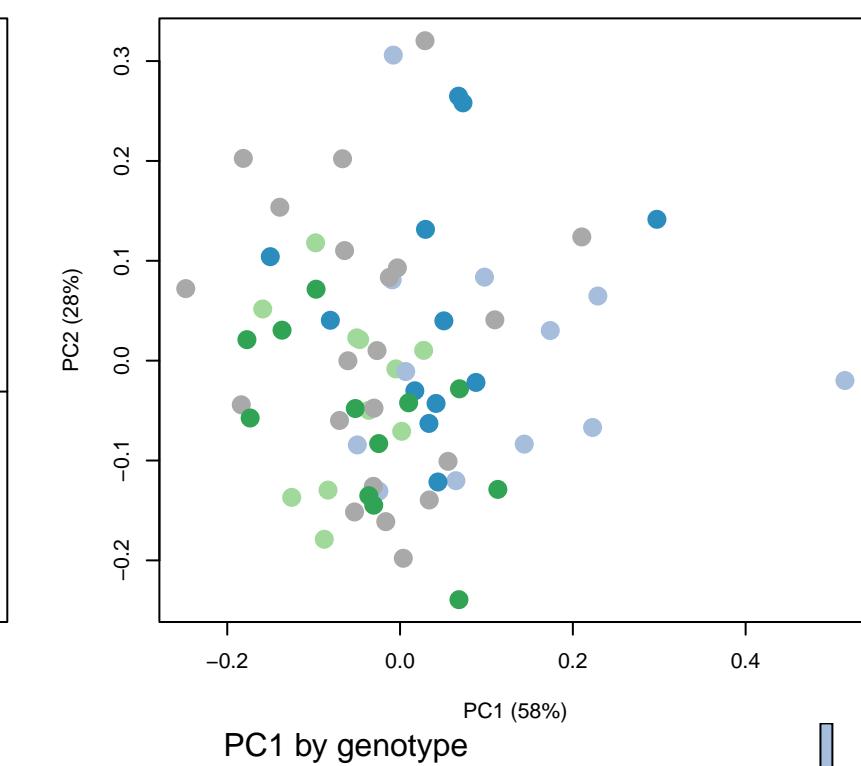
Non-alcoholic fatty liver disease



Metal Binding and Homeostasis



Decomposition

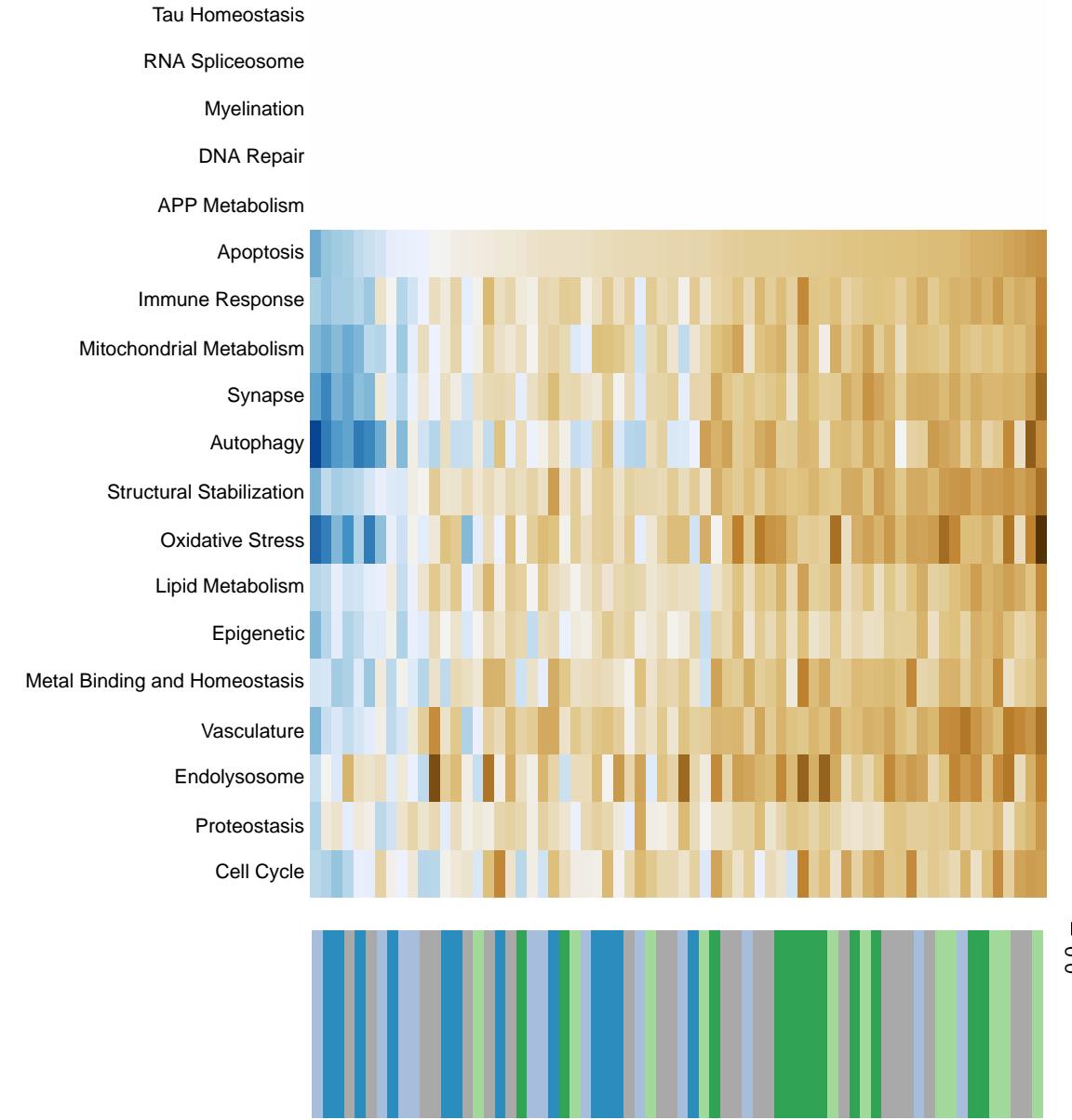


PC1 by genotype

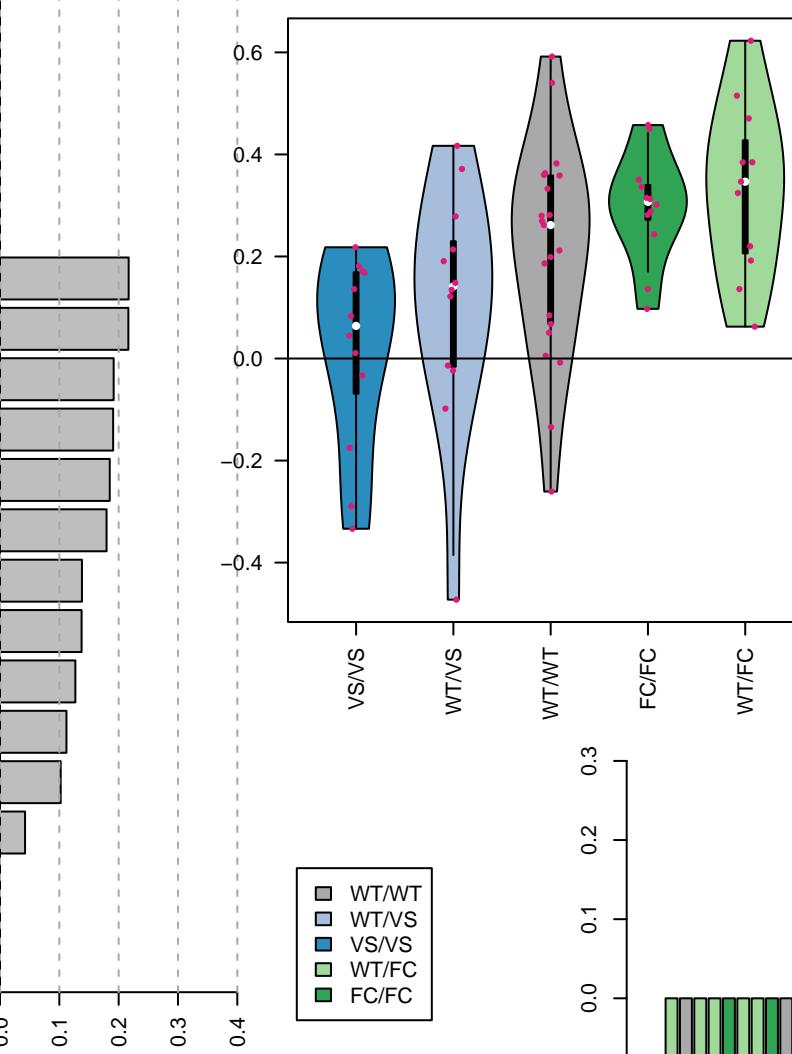


$R^2 = 0.051$

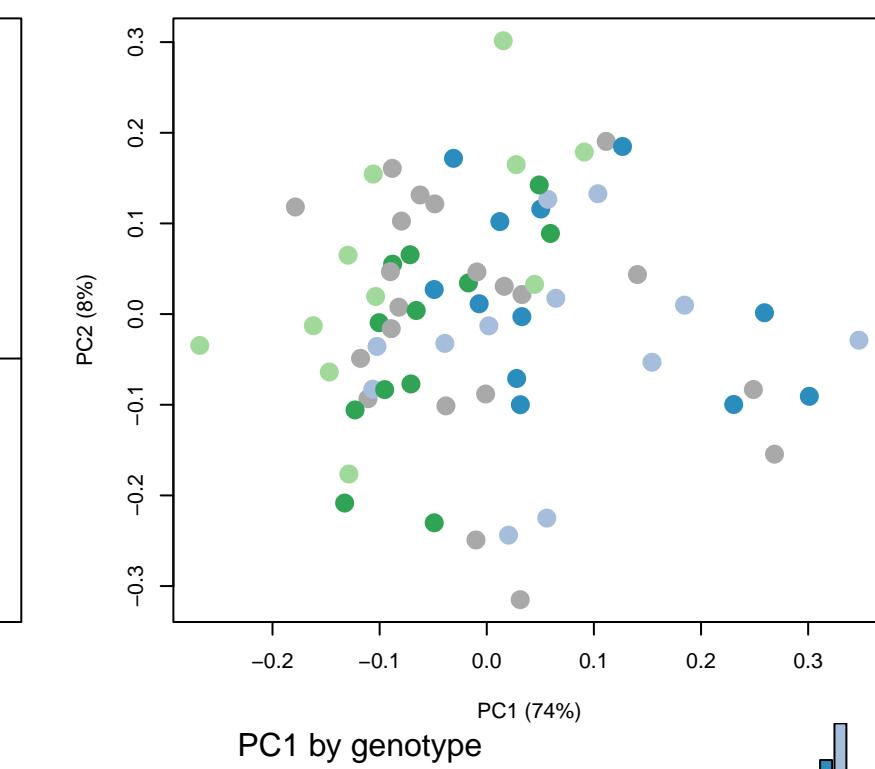
Insulin resistance



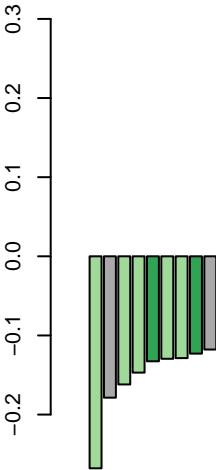
Apoptosis



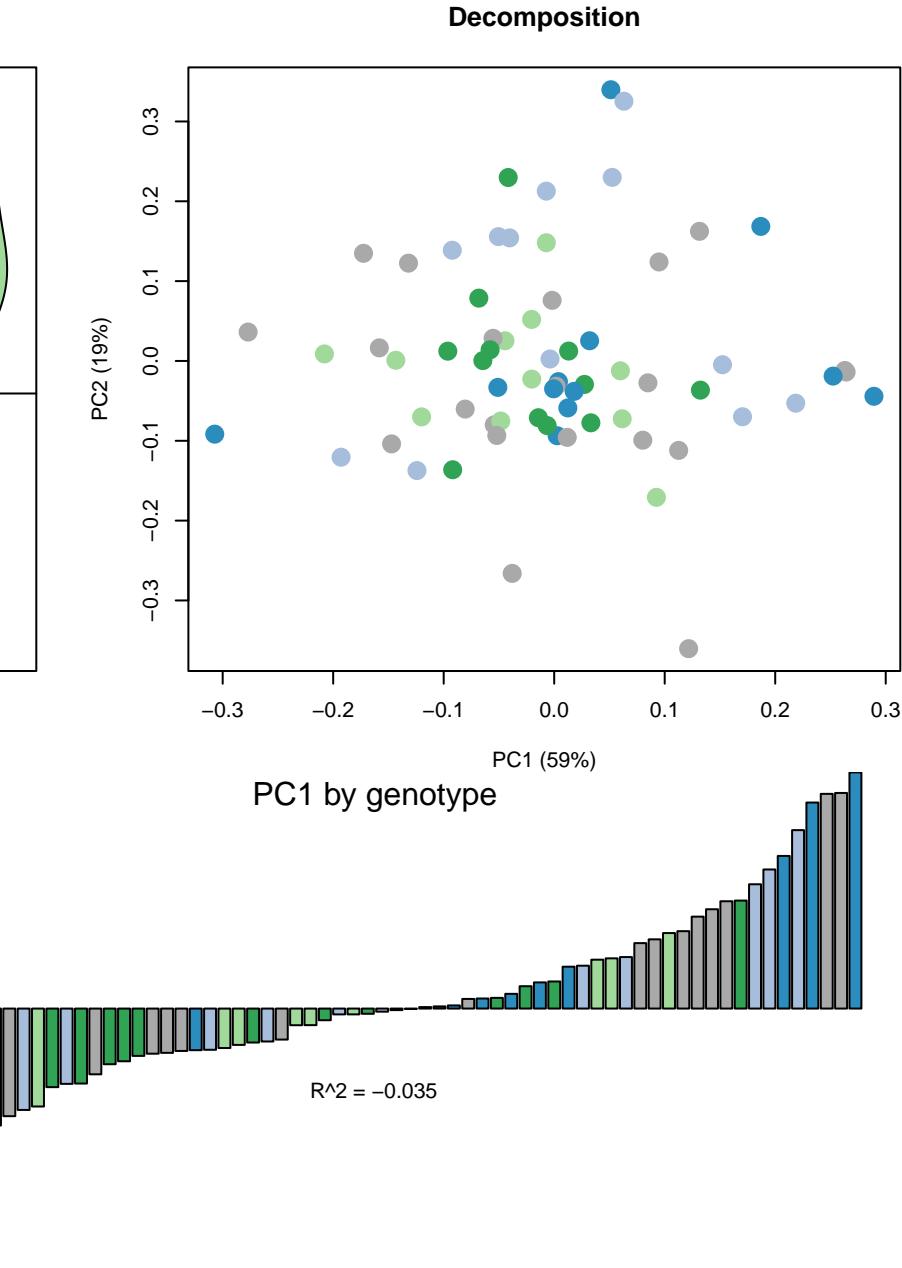
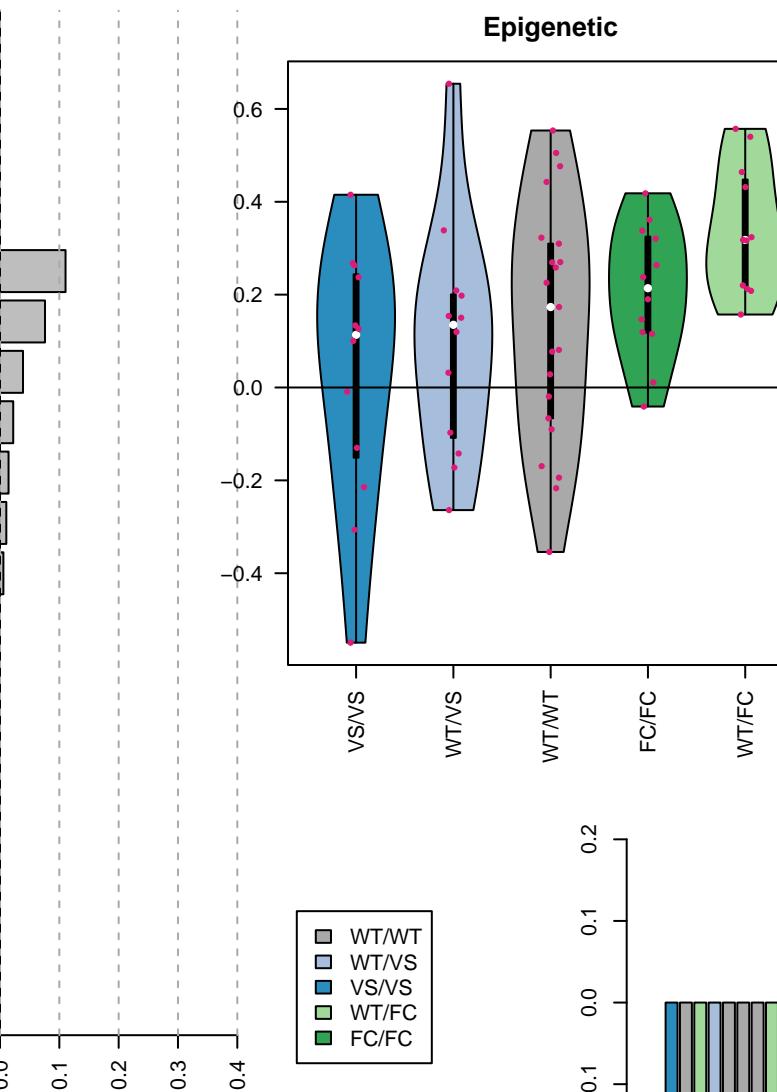
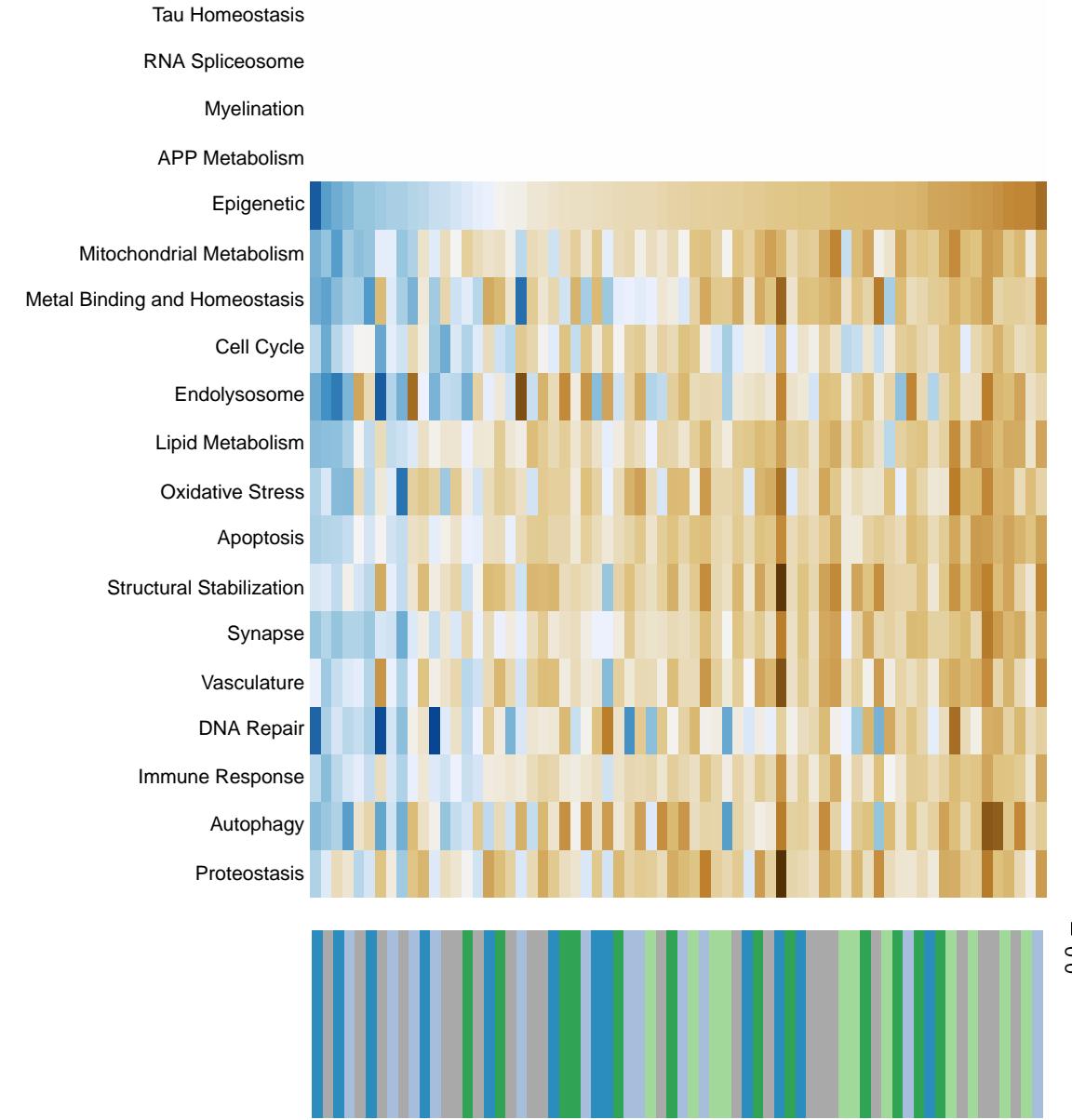
Decomposition



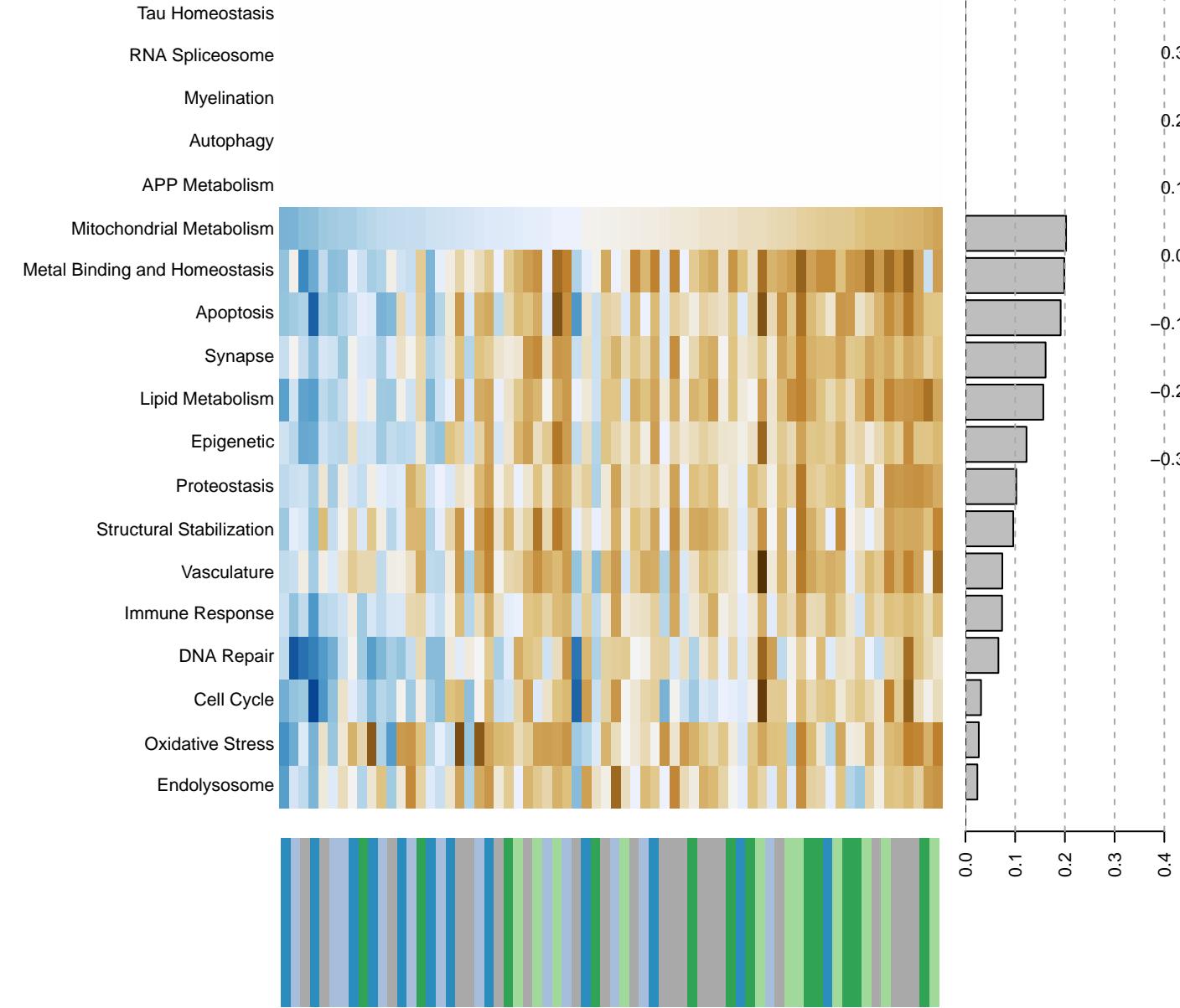
PC1 by genotype



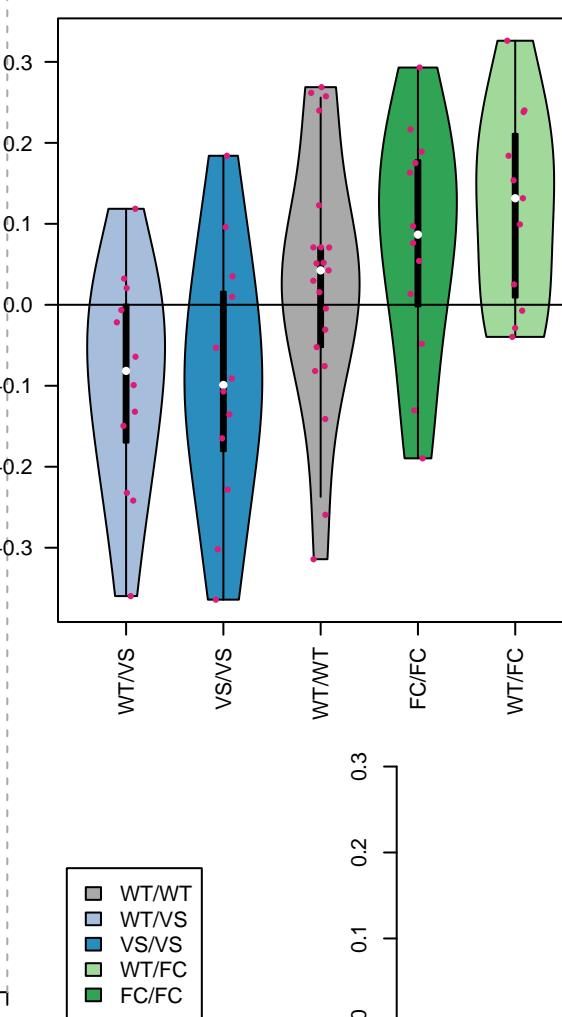
AGE–RAGE signaling pathway in diabetic complications



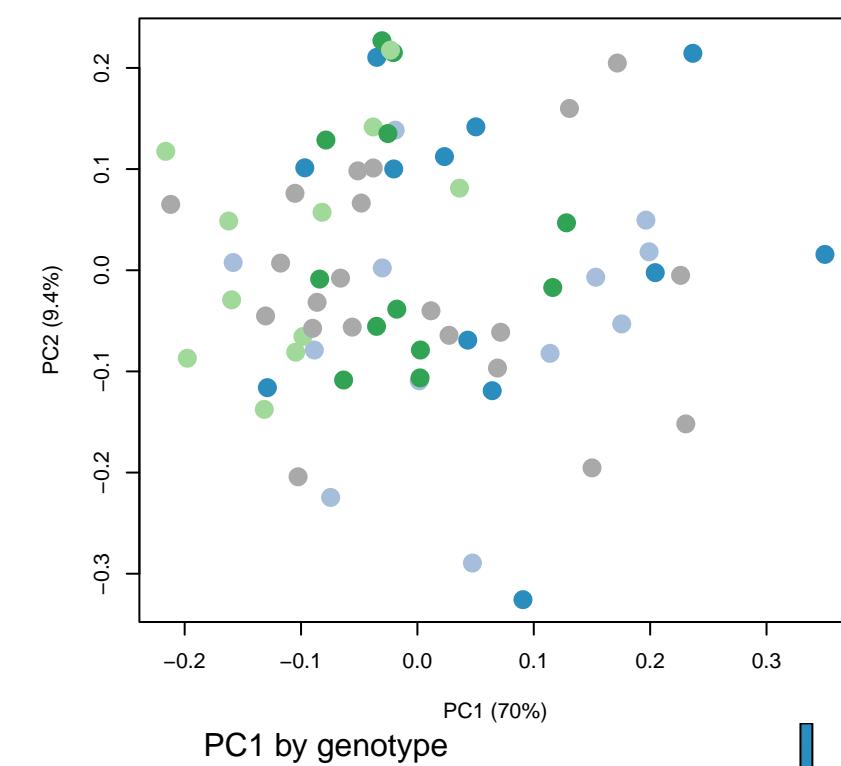
Cushing syndrome



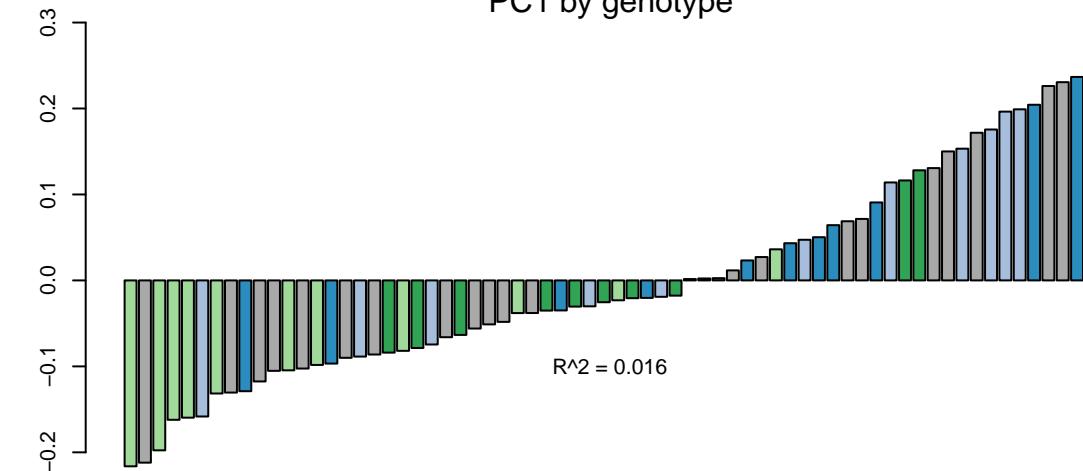
Mitochondrial Metabolism



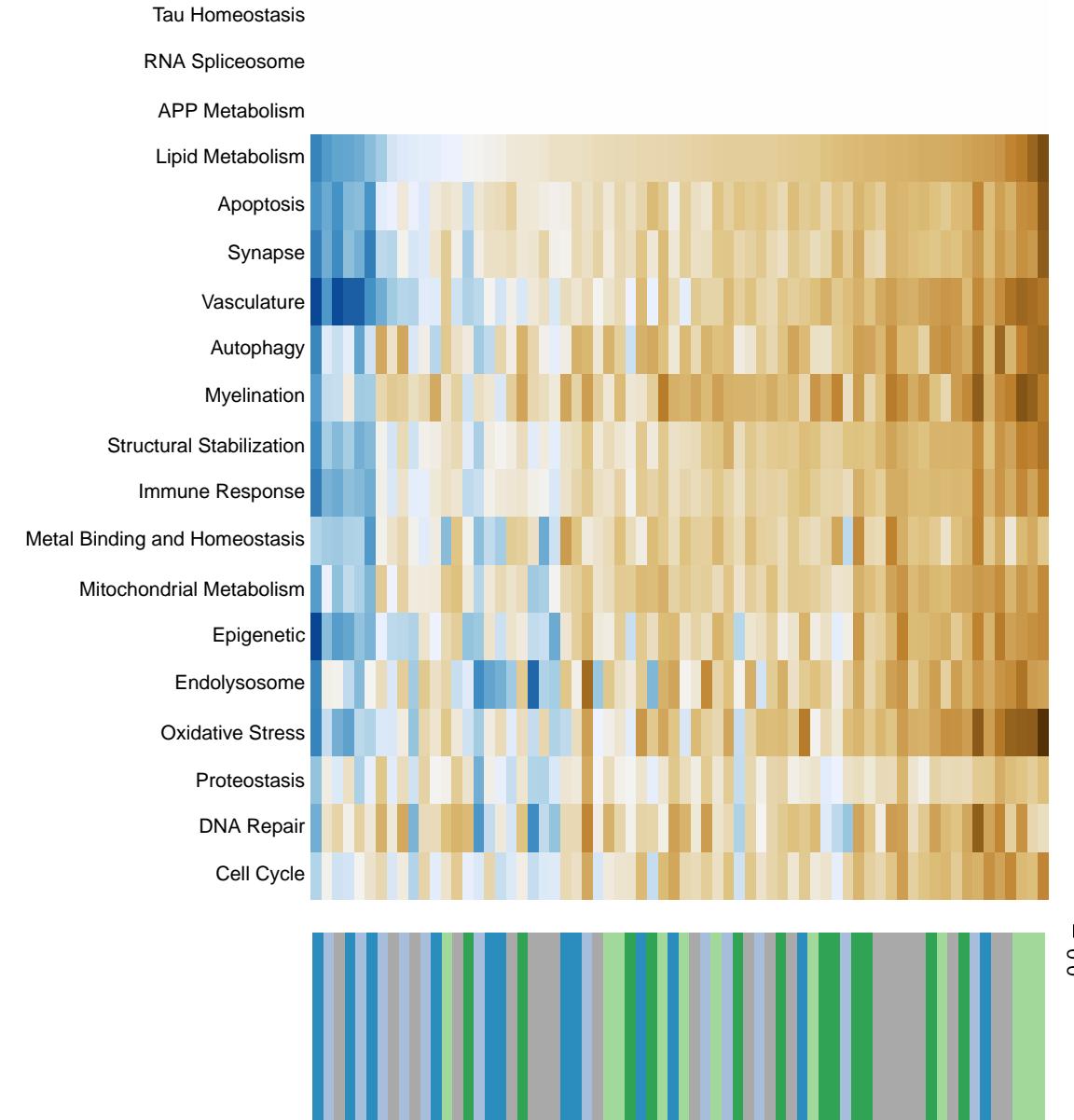
Decomposition



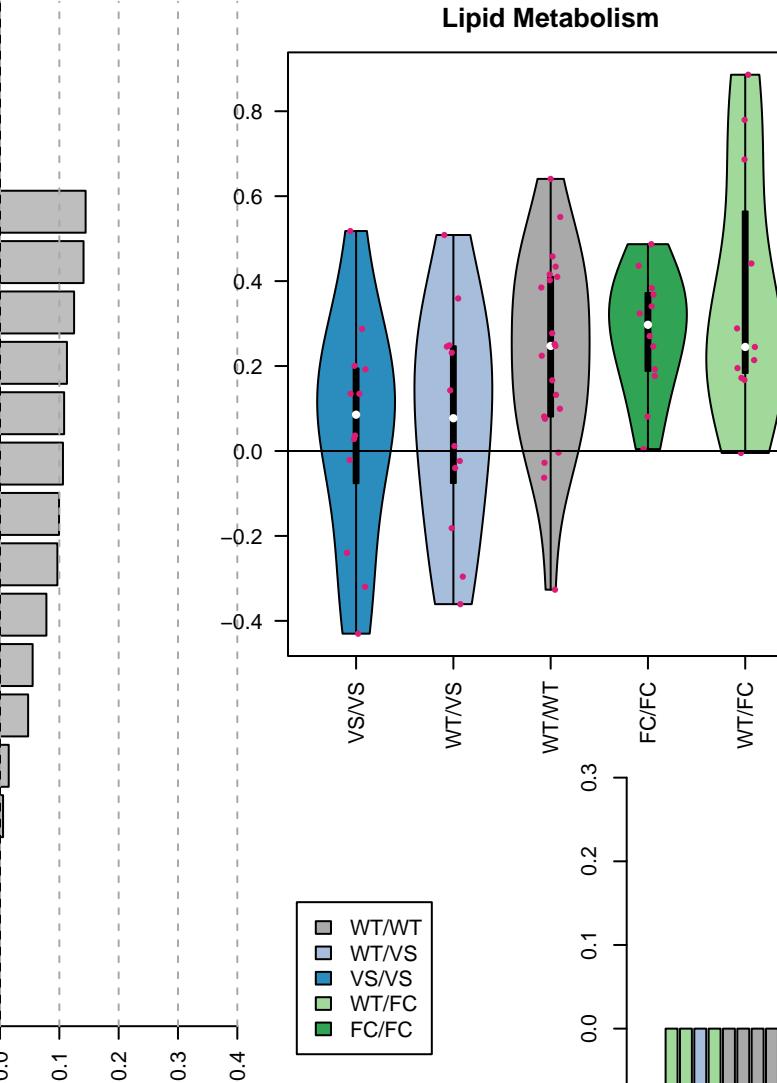
PC1 by genotype



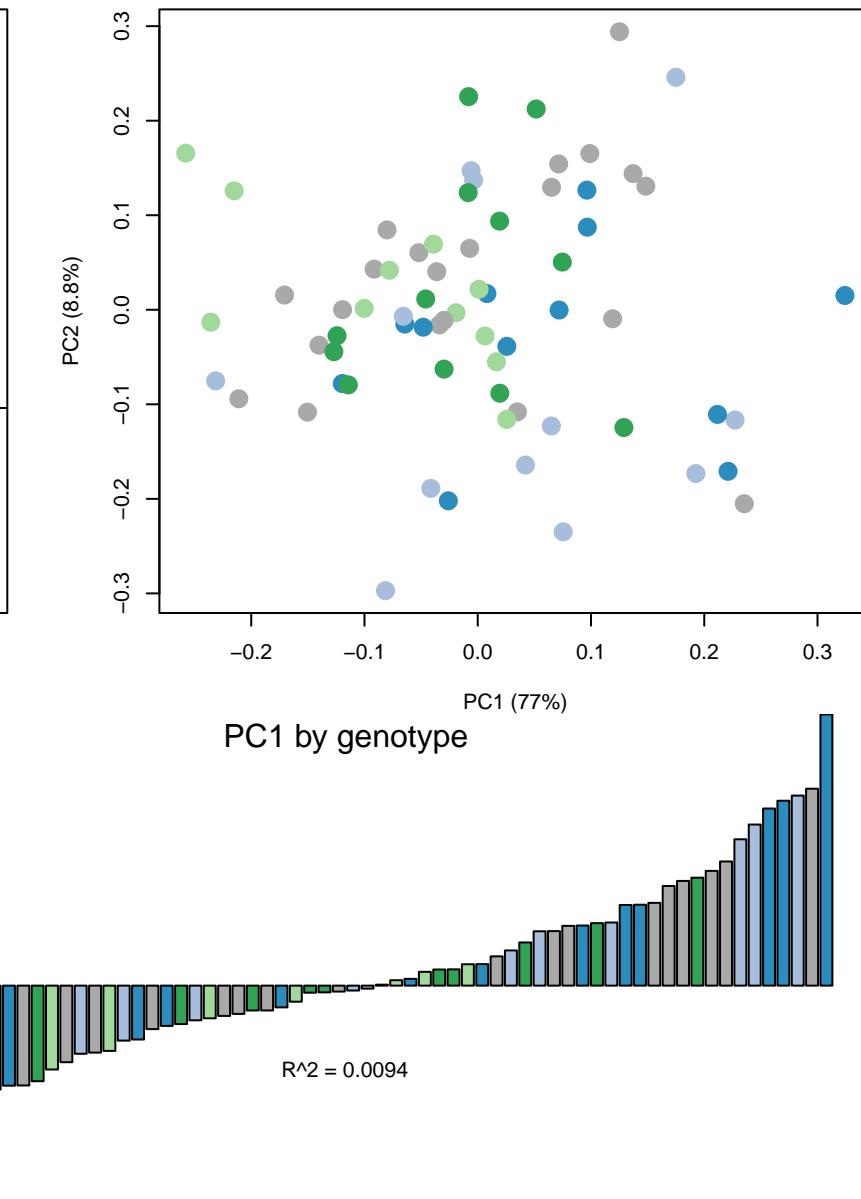
EGFR tyrosine kinase inhibitor resistance



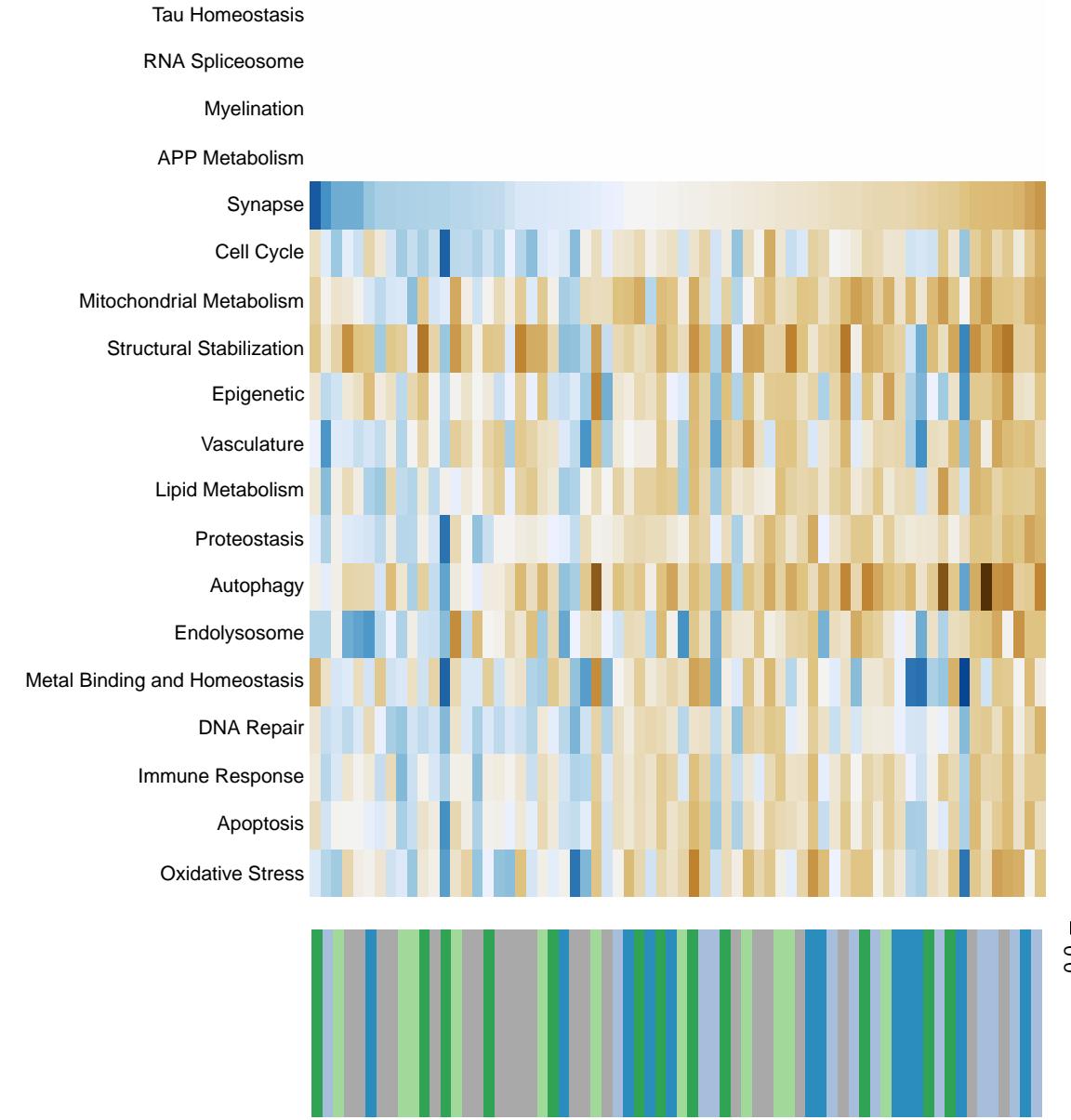
Lipid Metabolism



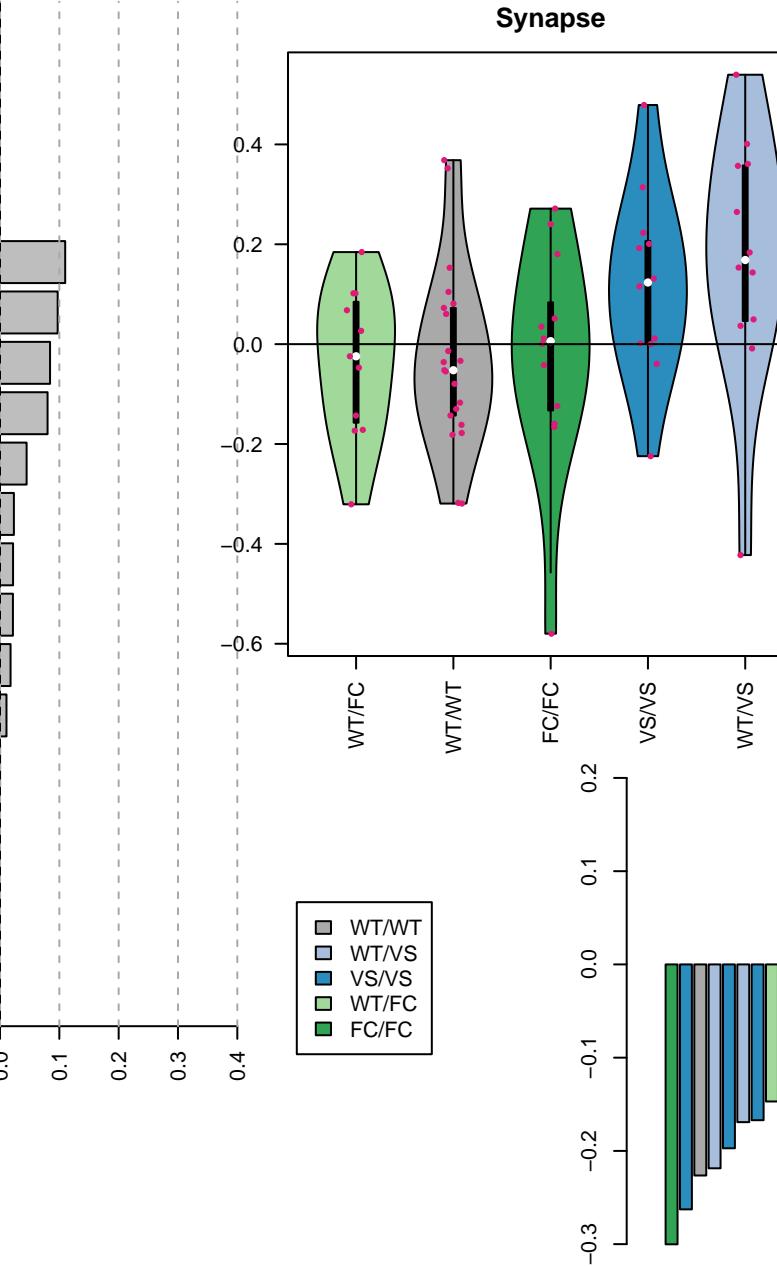
Decomposition



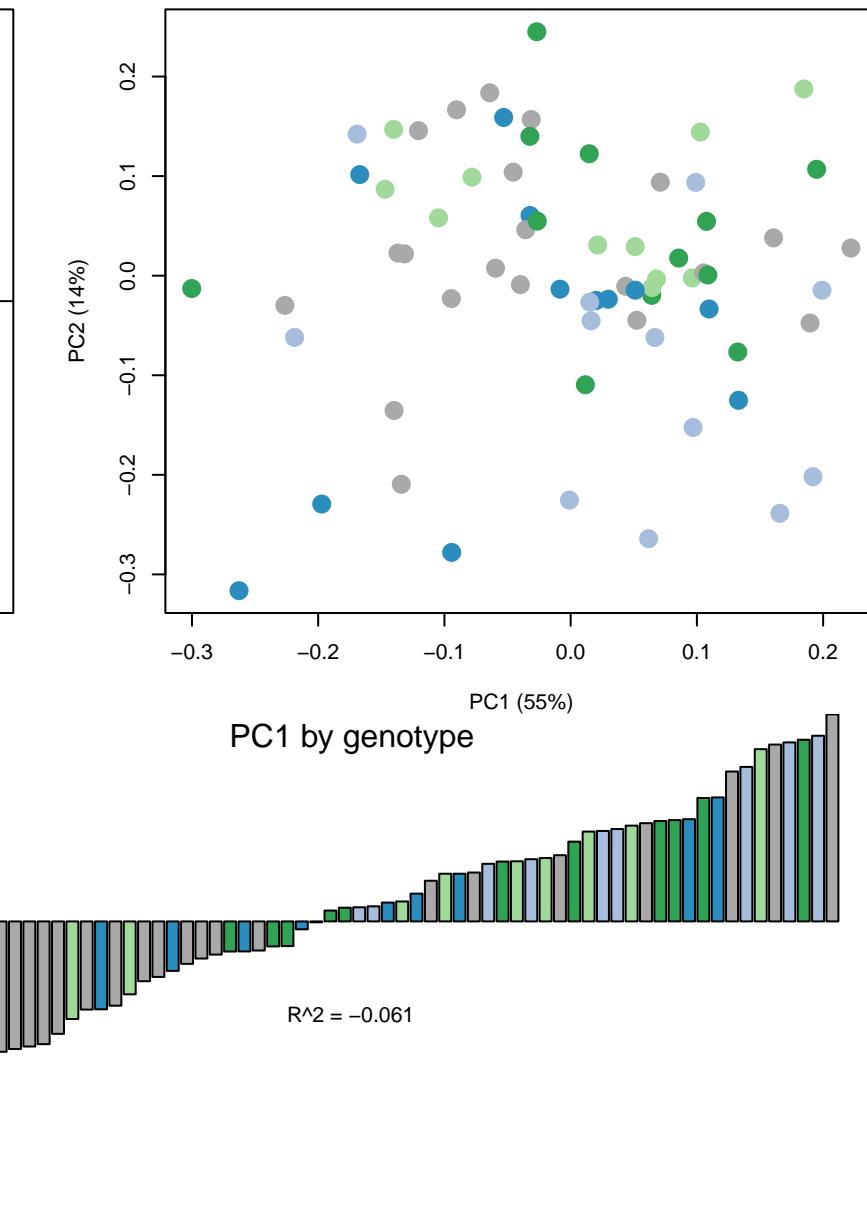
Platinum drug resistance



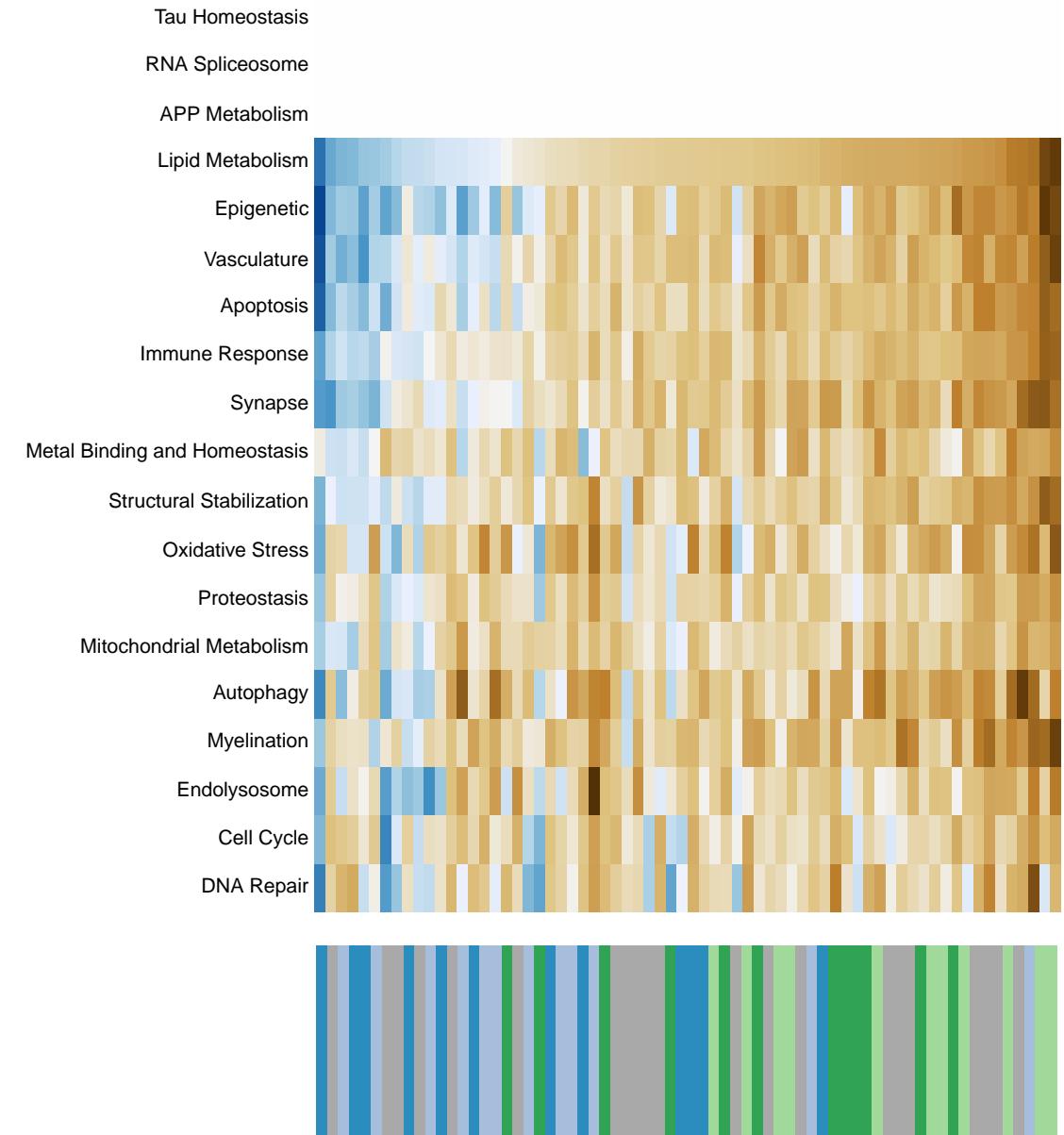
Synapse



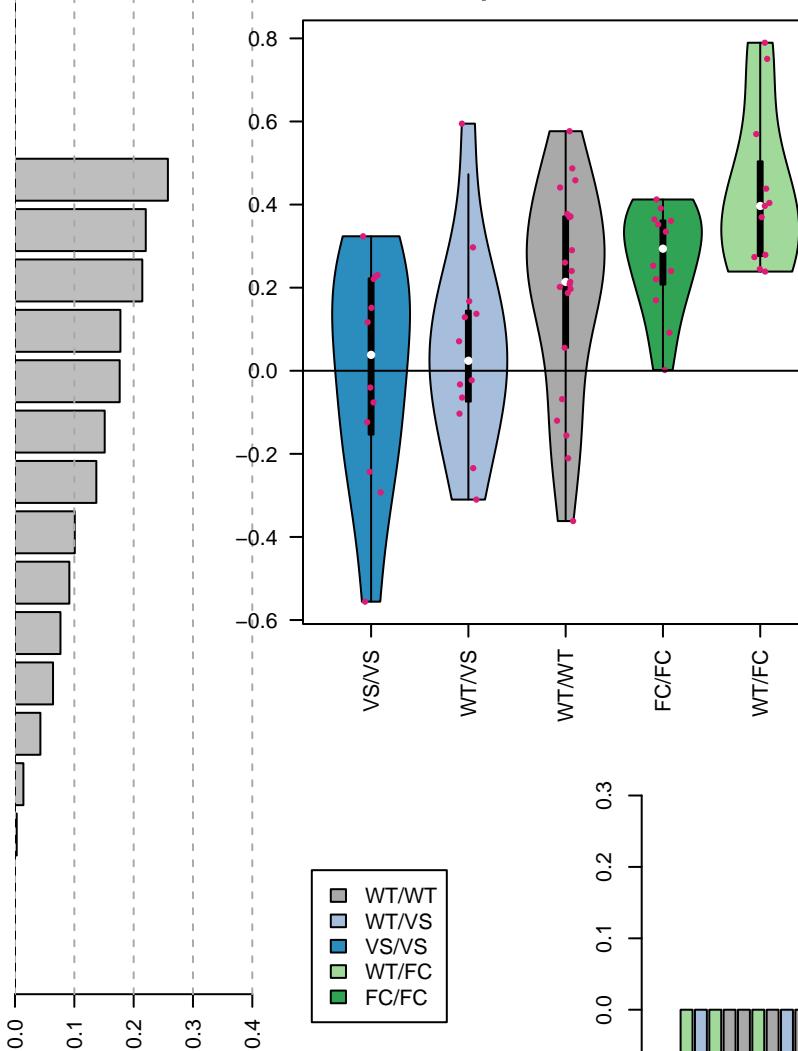
Decomposition



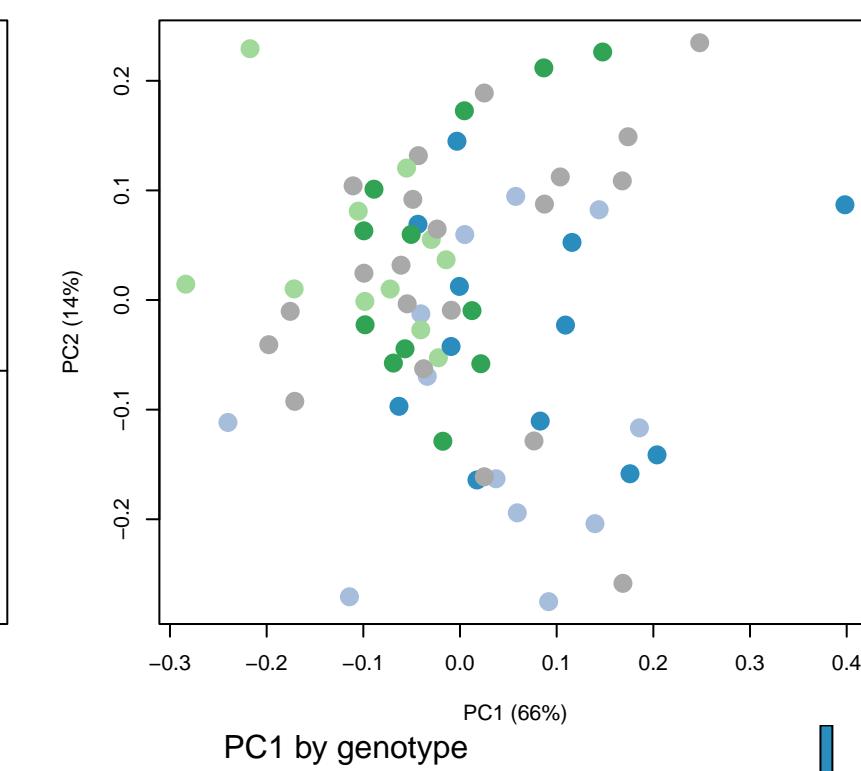
Endocrine resistance



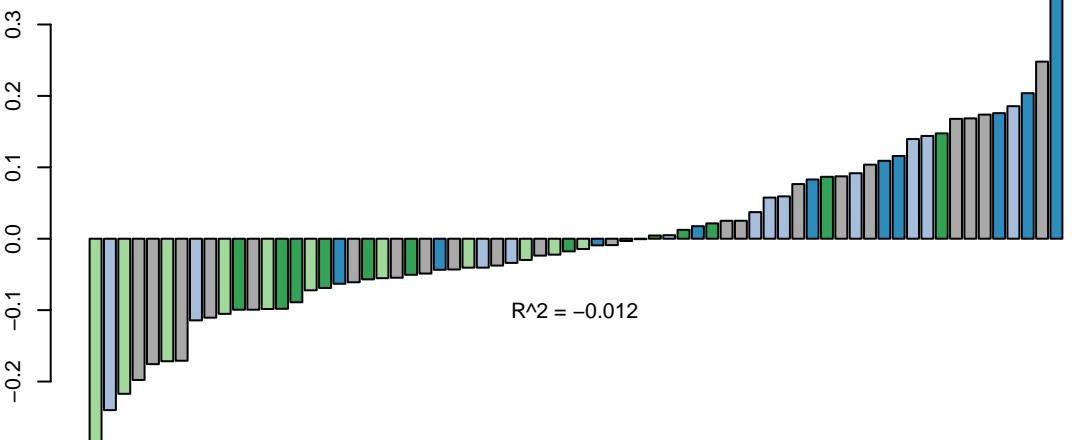
Lipid Metabolism



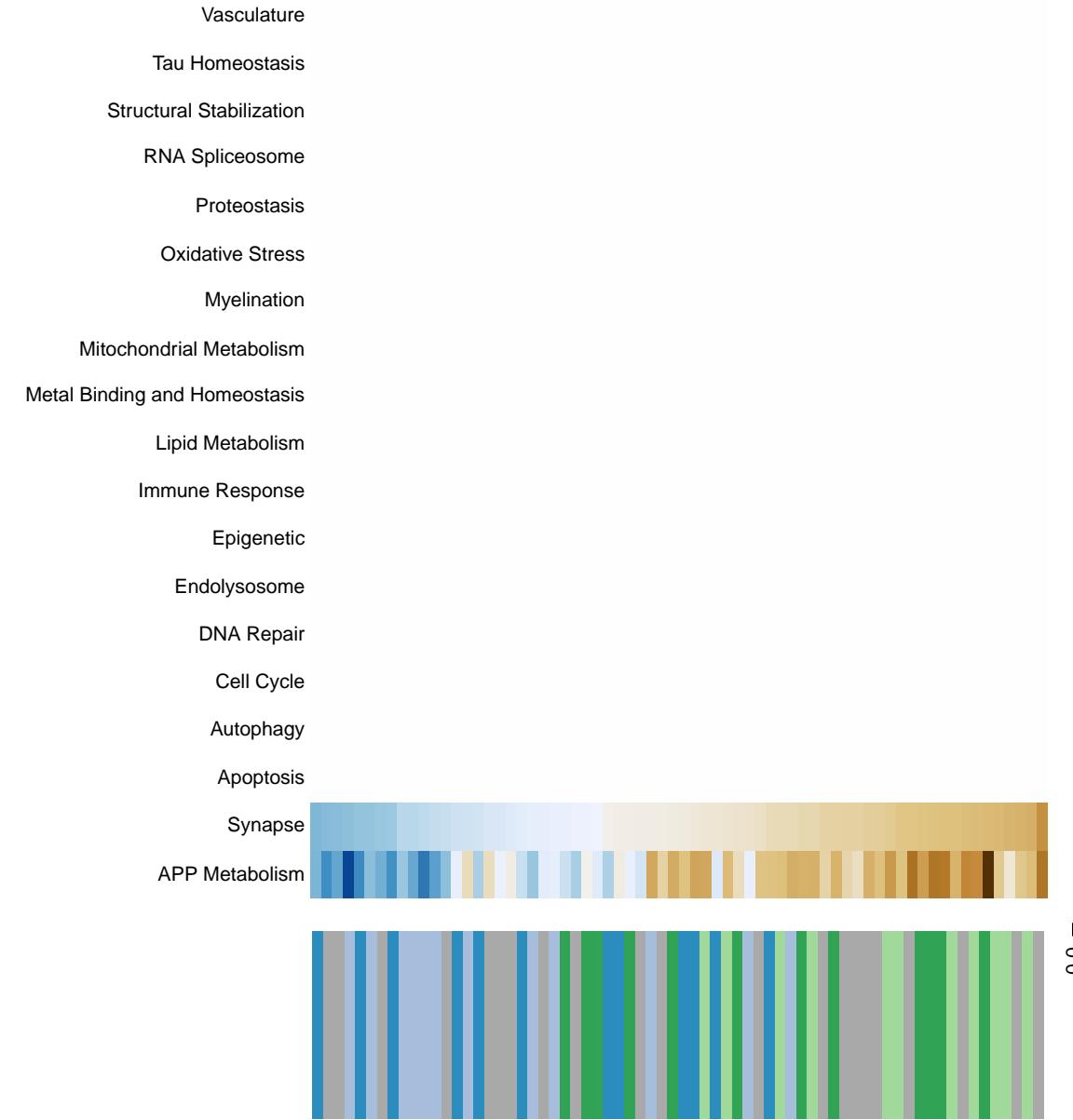
Decomposition



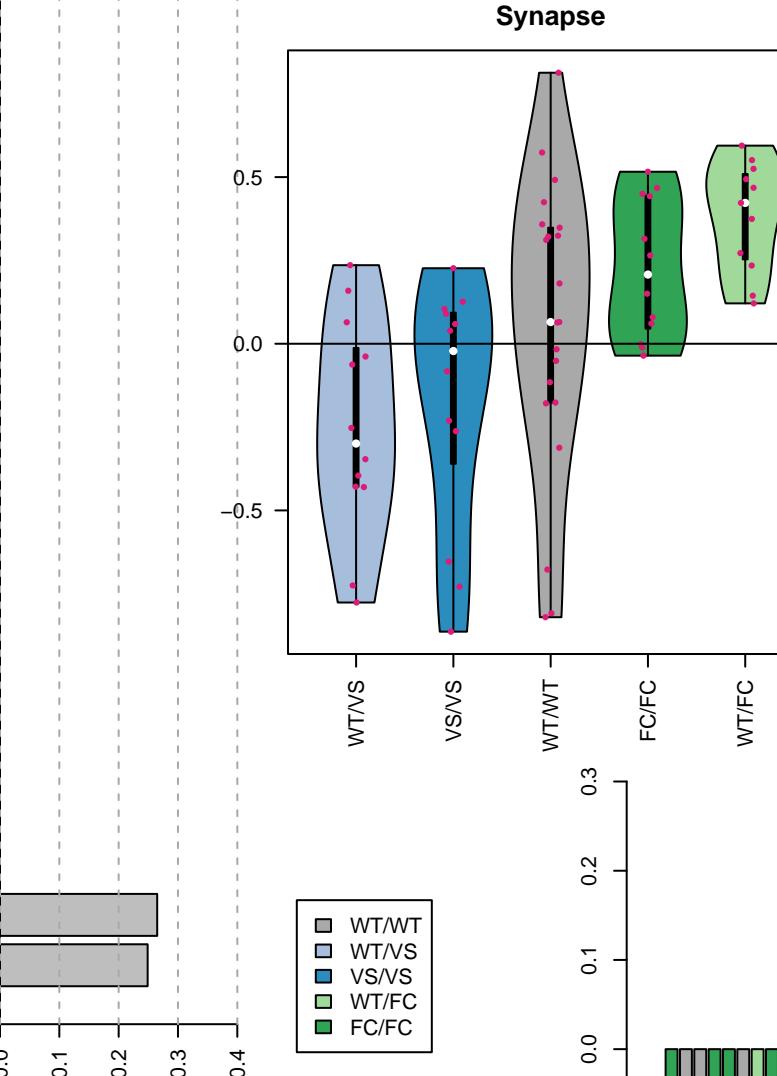
PC1 by genotype



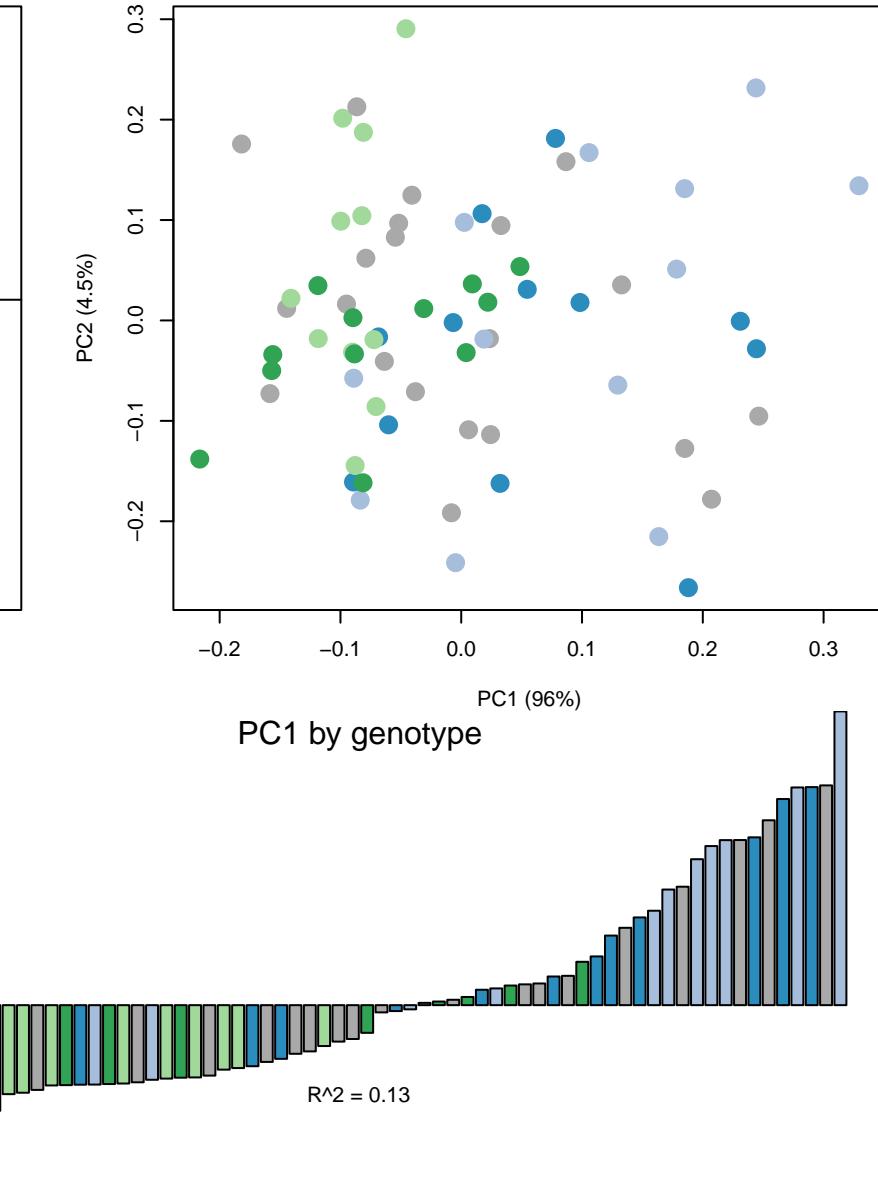
Nicotine addiction



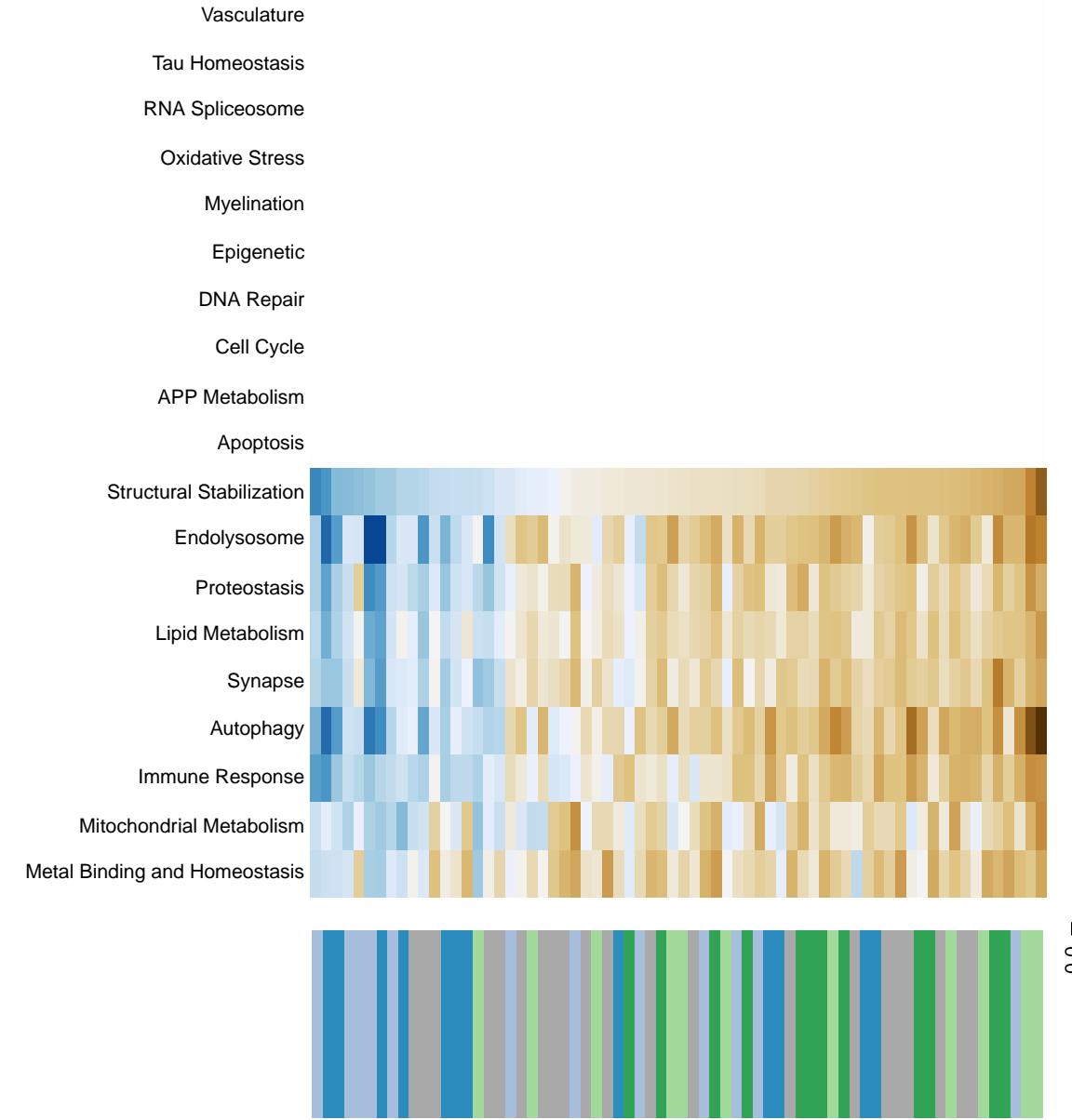
Synapse



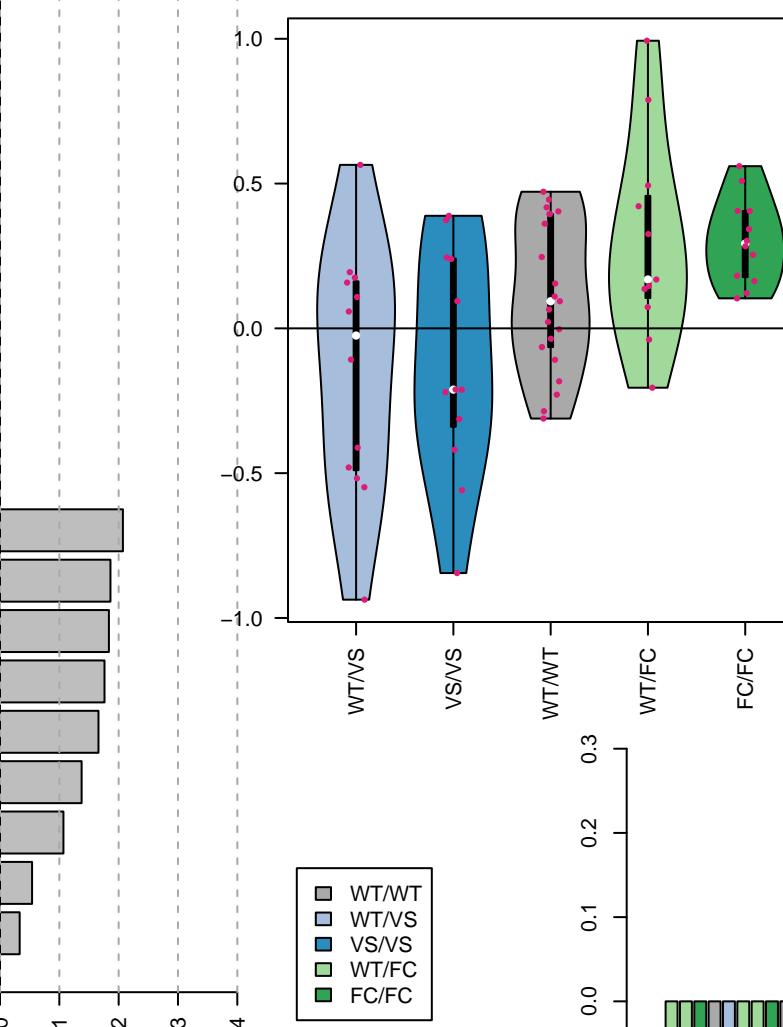
Decomposition



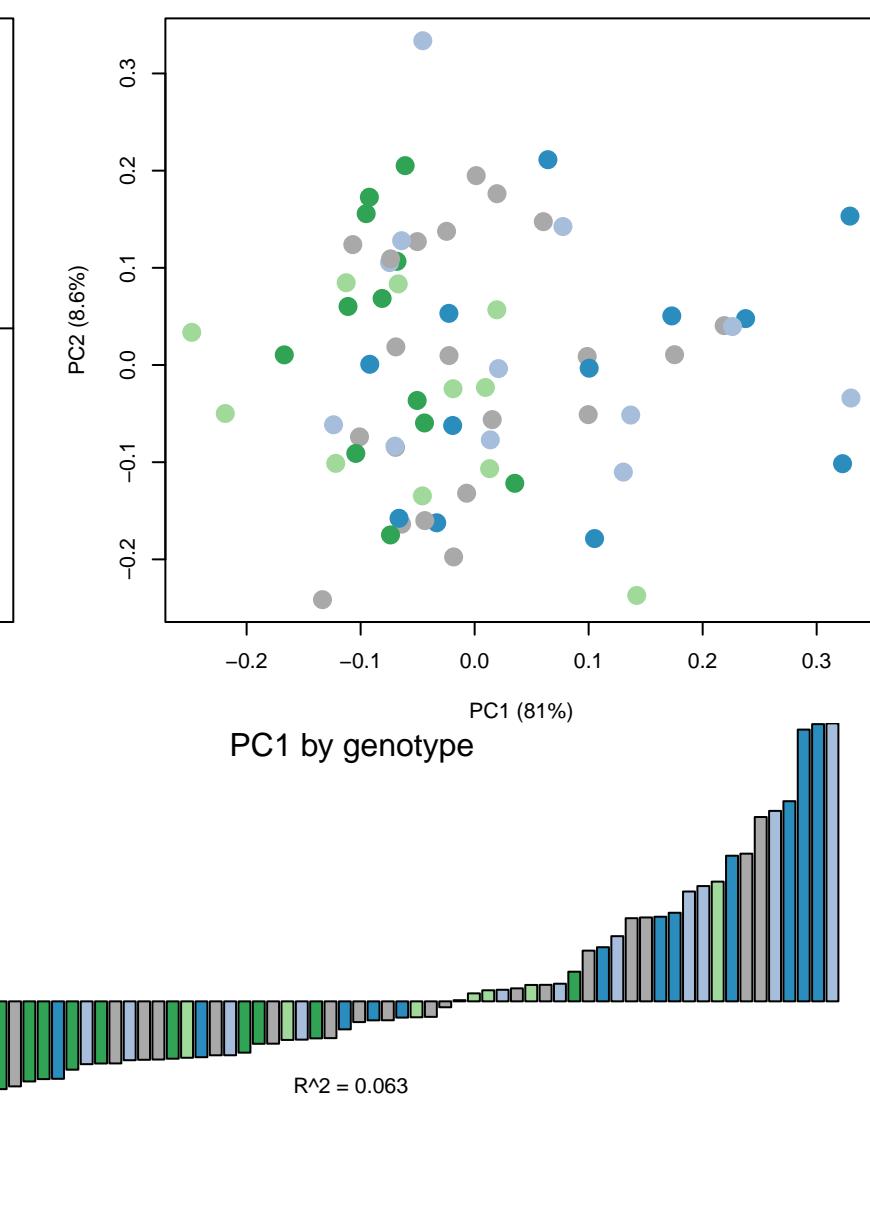
Inositol phosphate metabolism



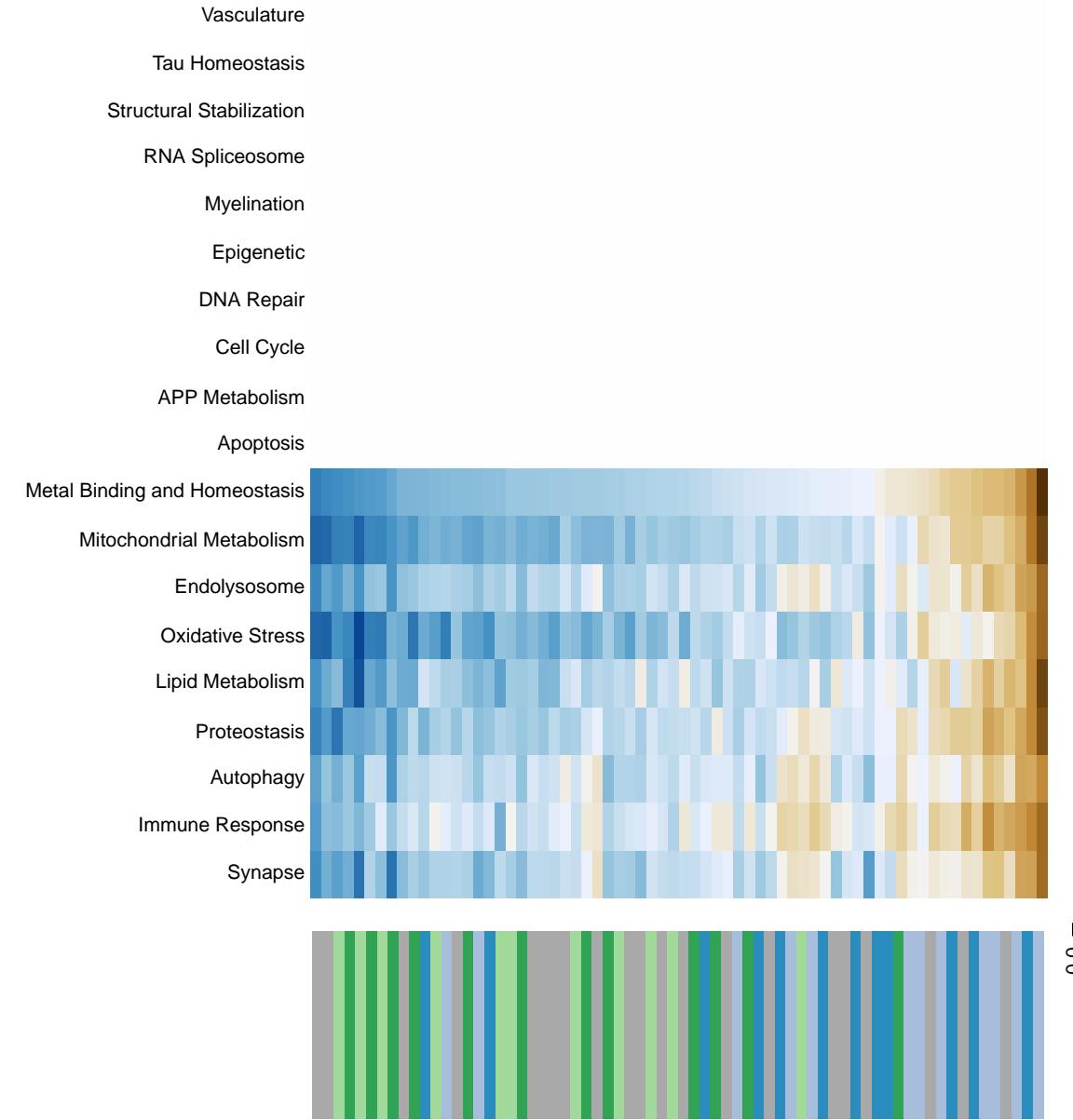
Structural Stabilization



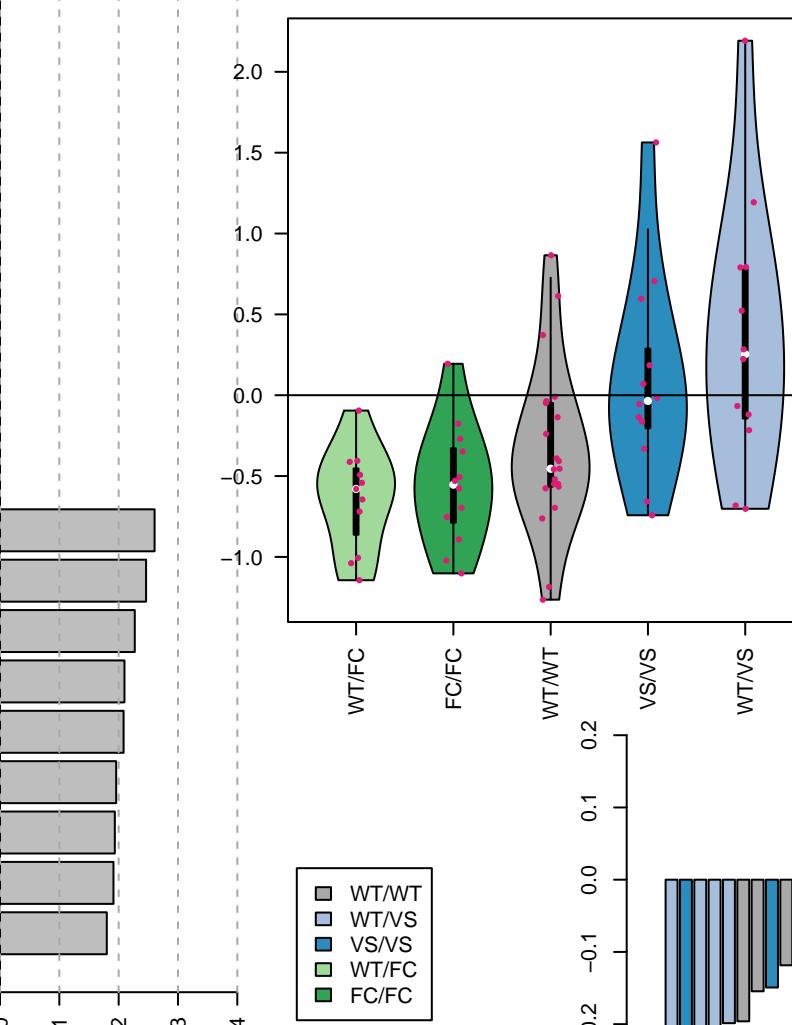
Decomposition



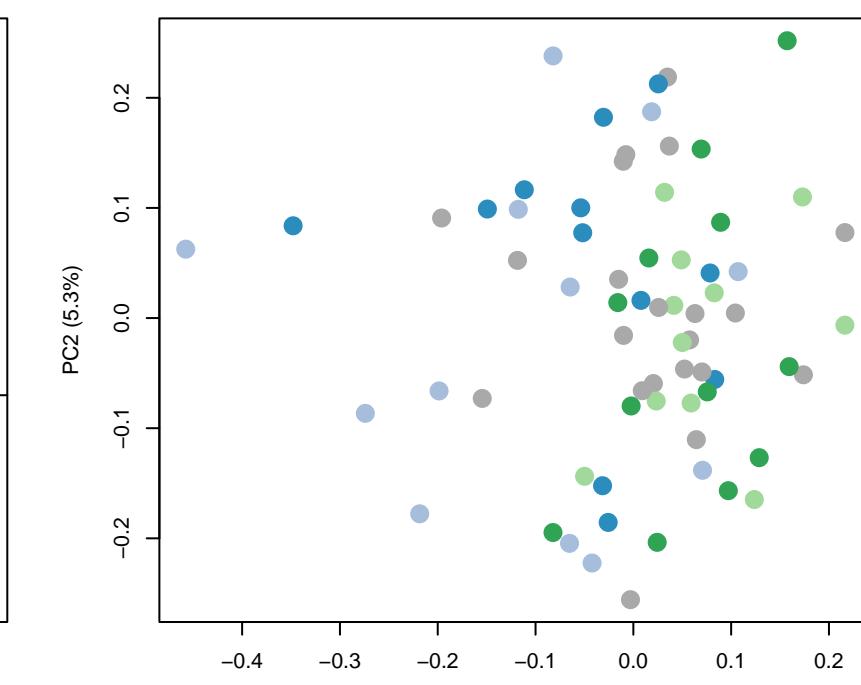
Oxidative phosphorylation



Metal Binding and Homeostasis



Decomposition



PC1 by genotype

$R^2 = 0.11$

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

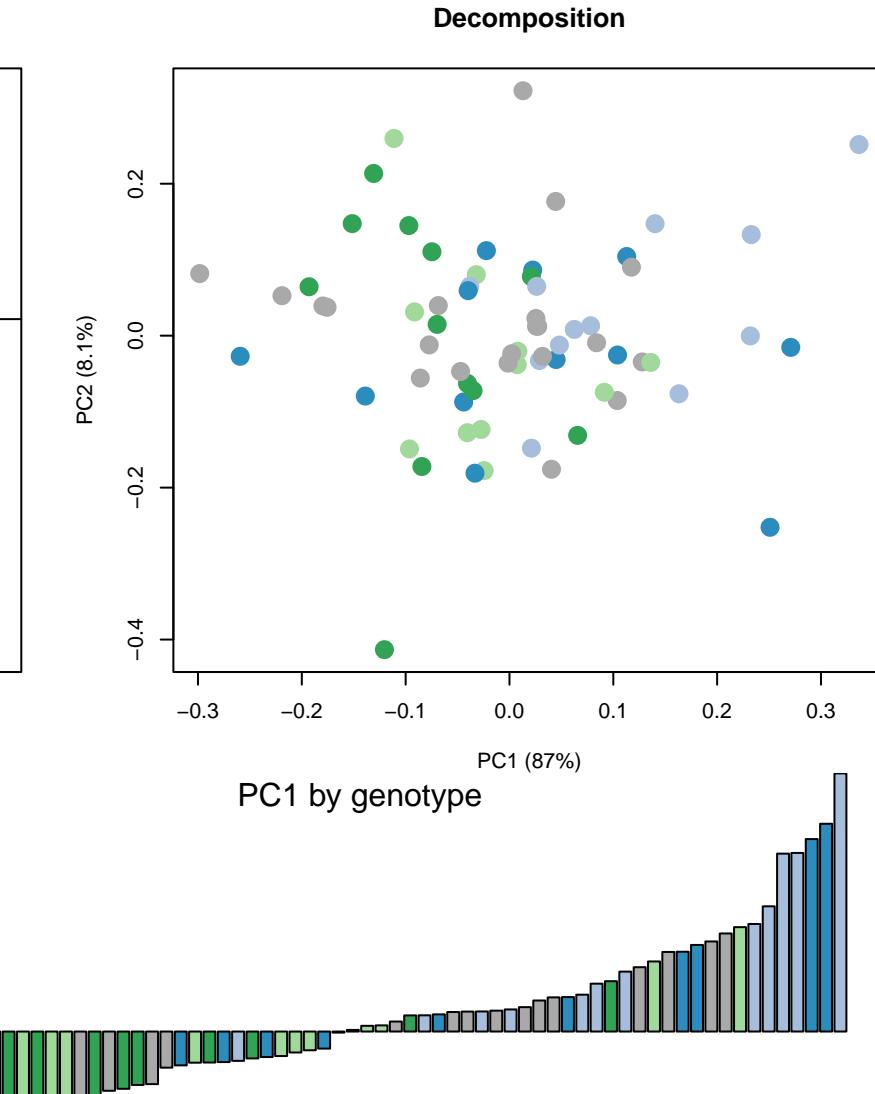
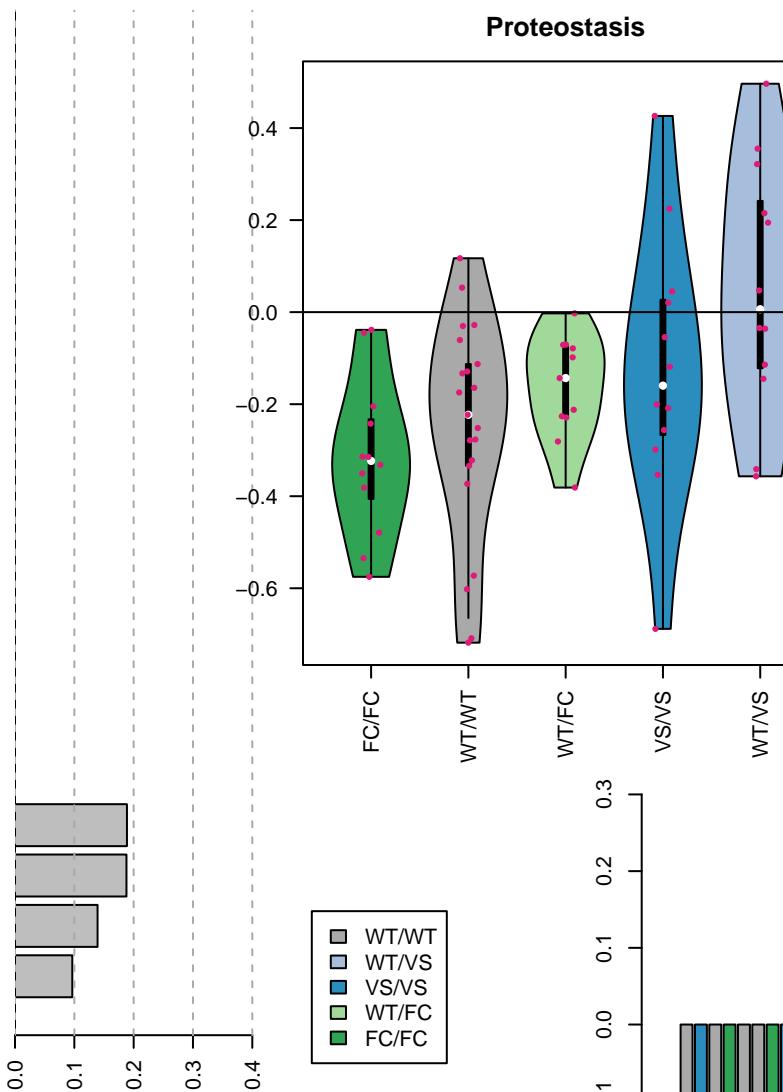
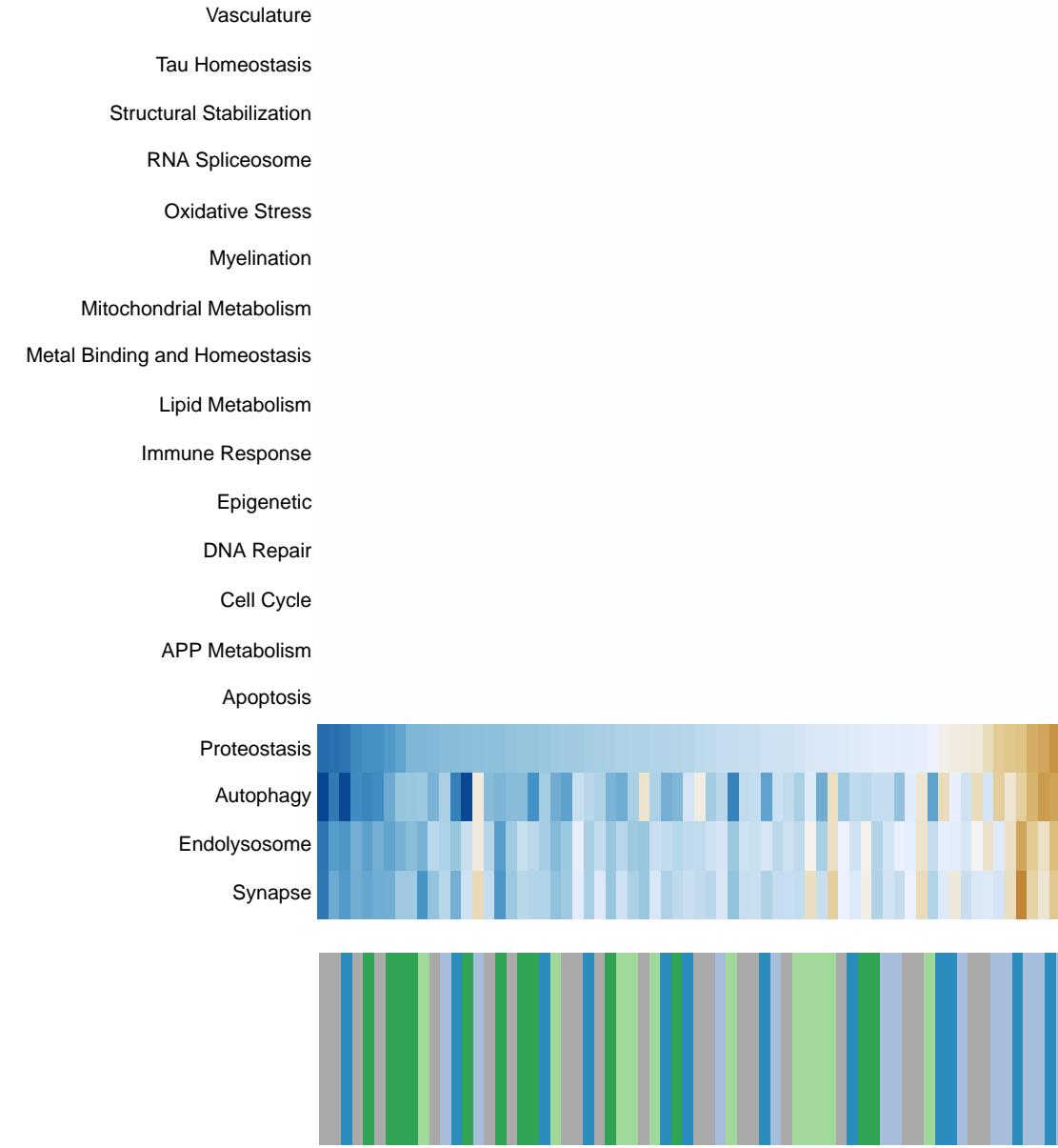
17

18

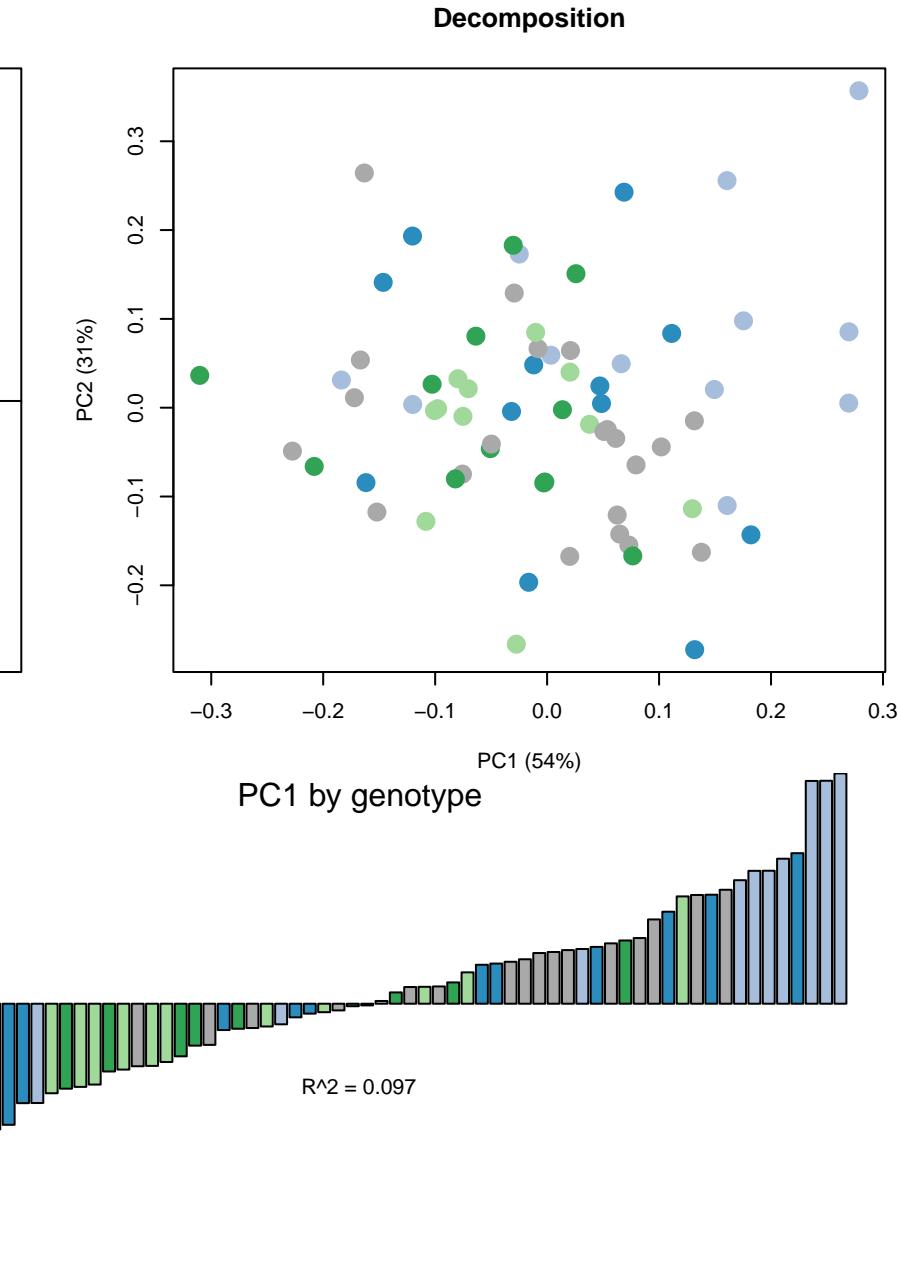
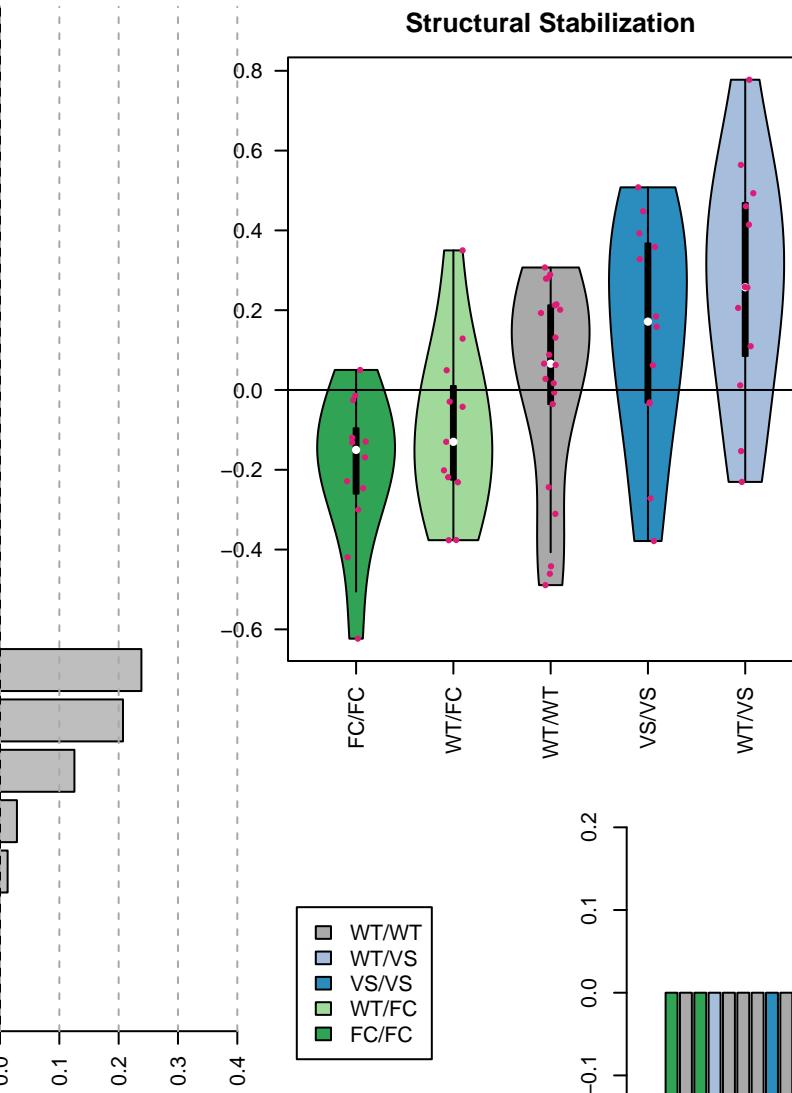
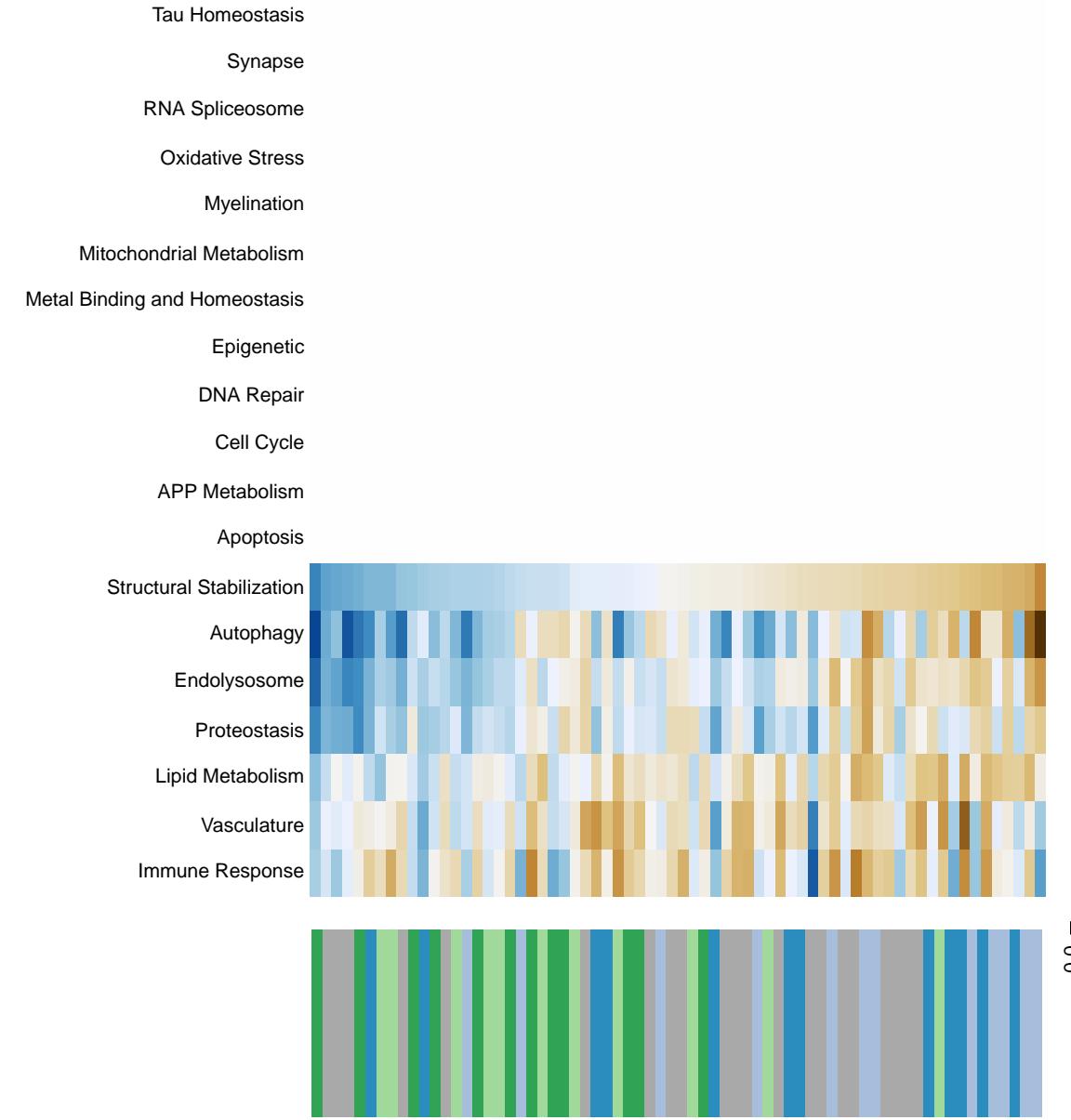
19

20

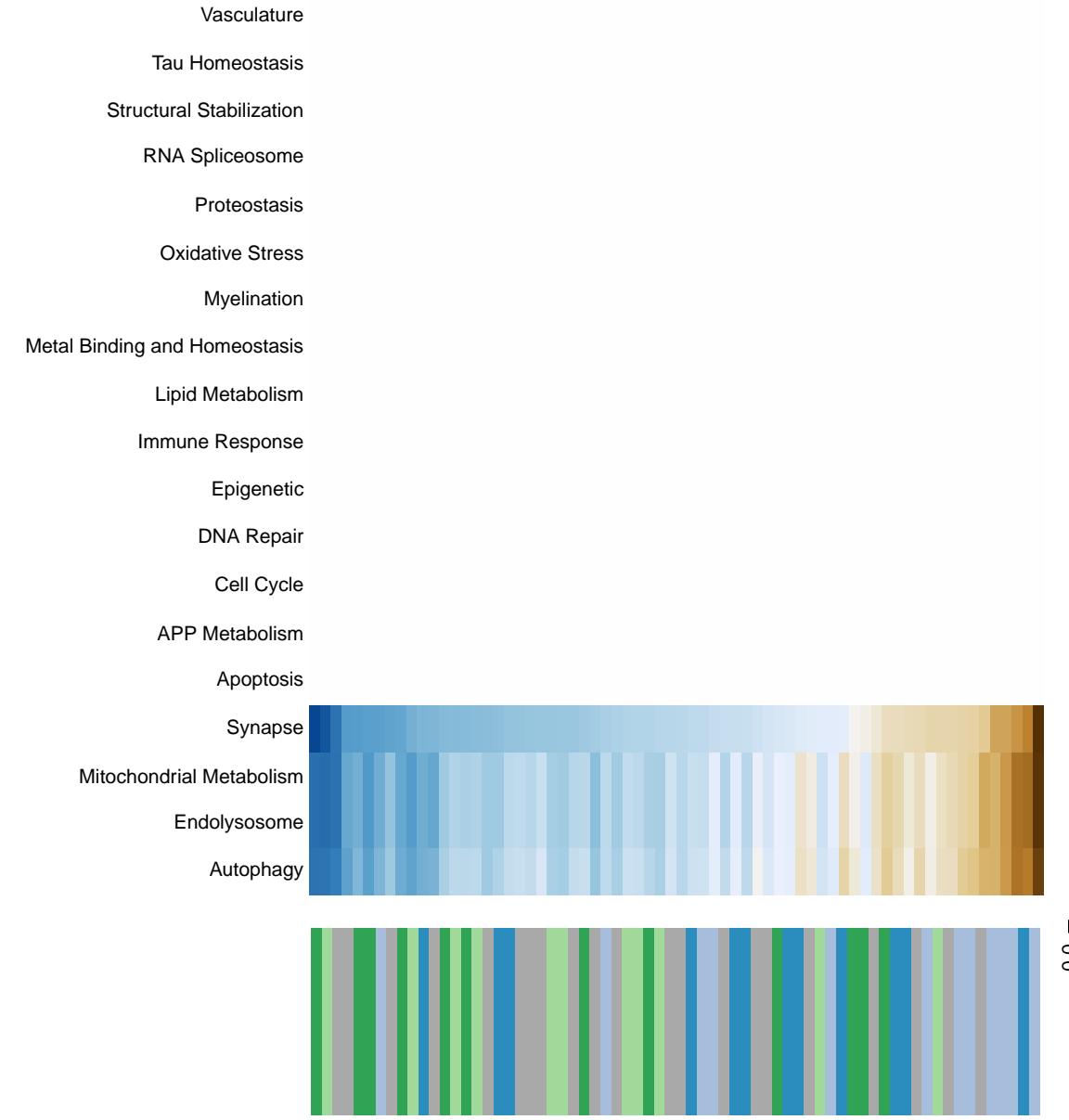
SNARE interactions in vesicular transport



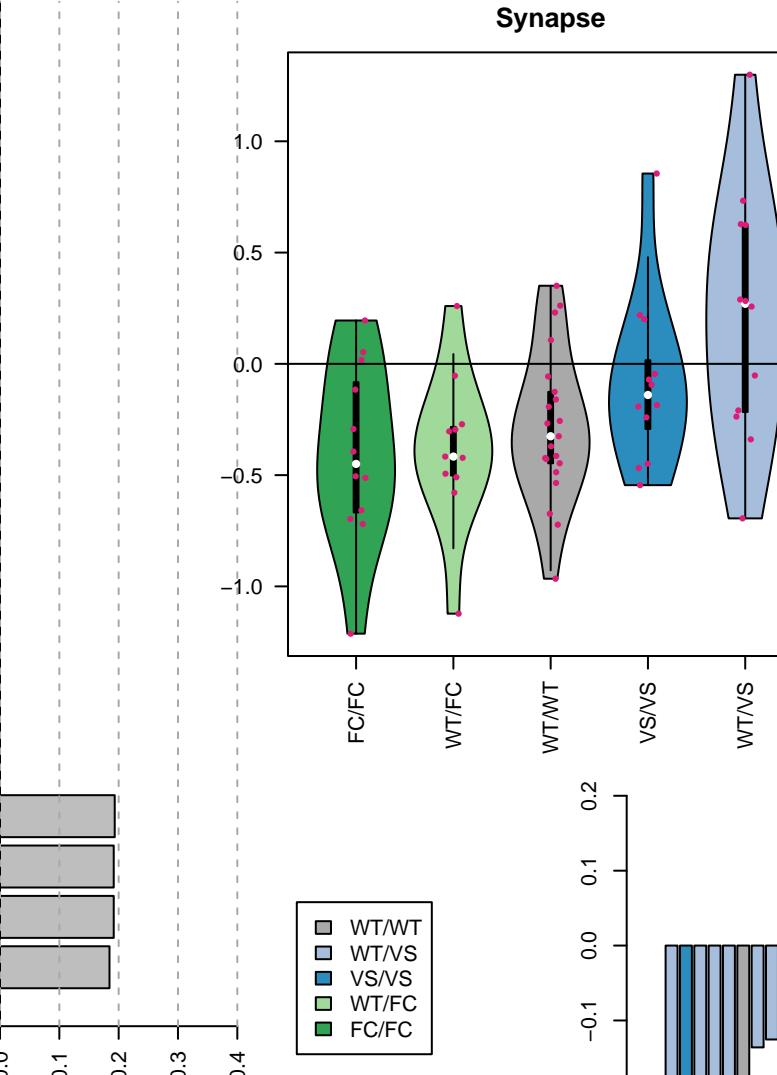
Virion – Hepatitis viruses



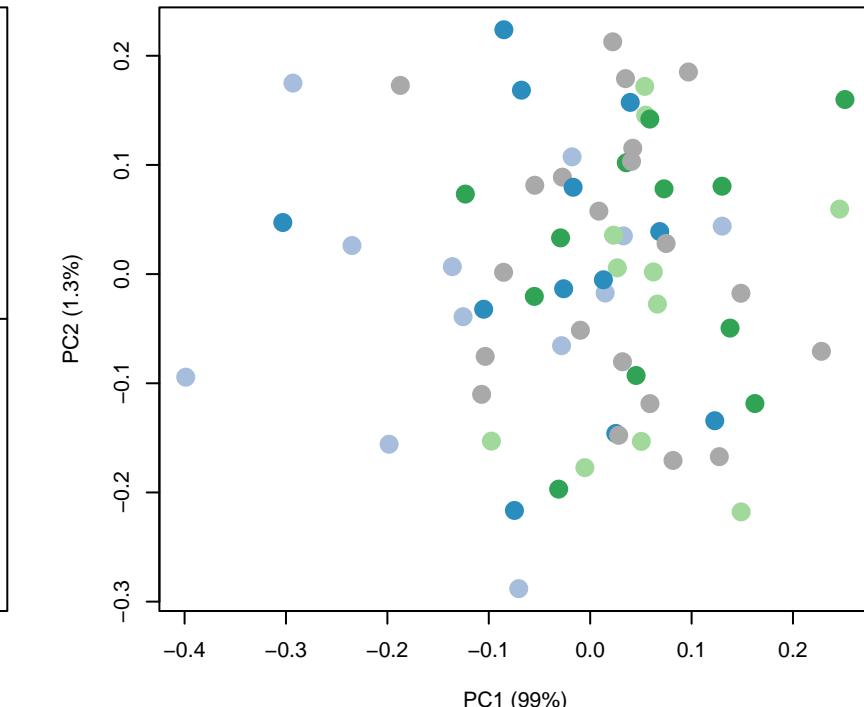
Collecting duct acid secretion



Synapse

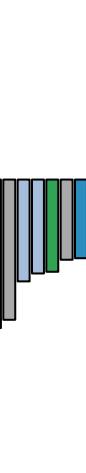
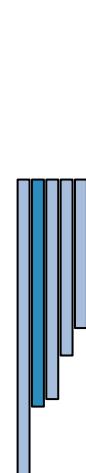
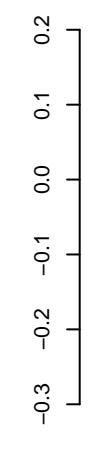


Decomposition

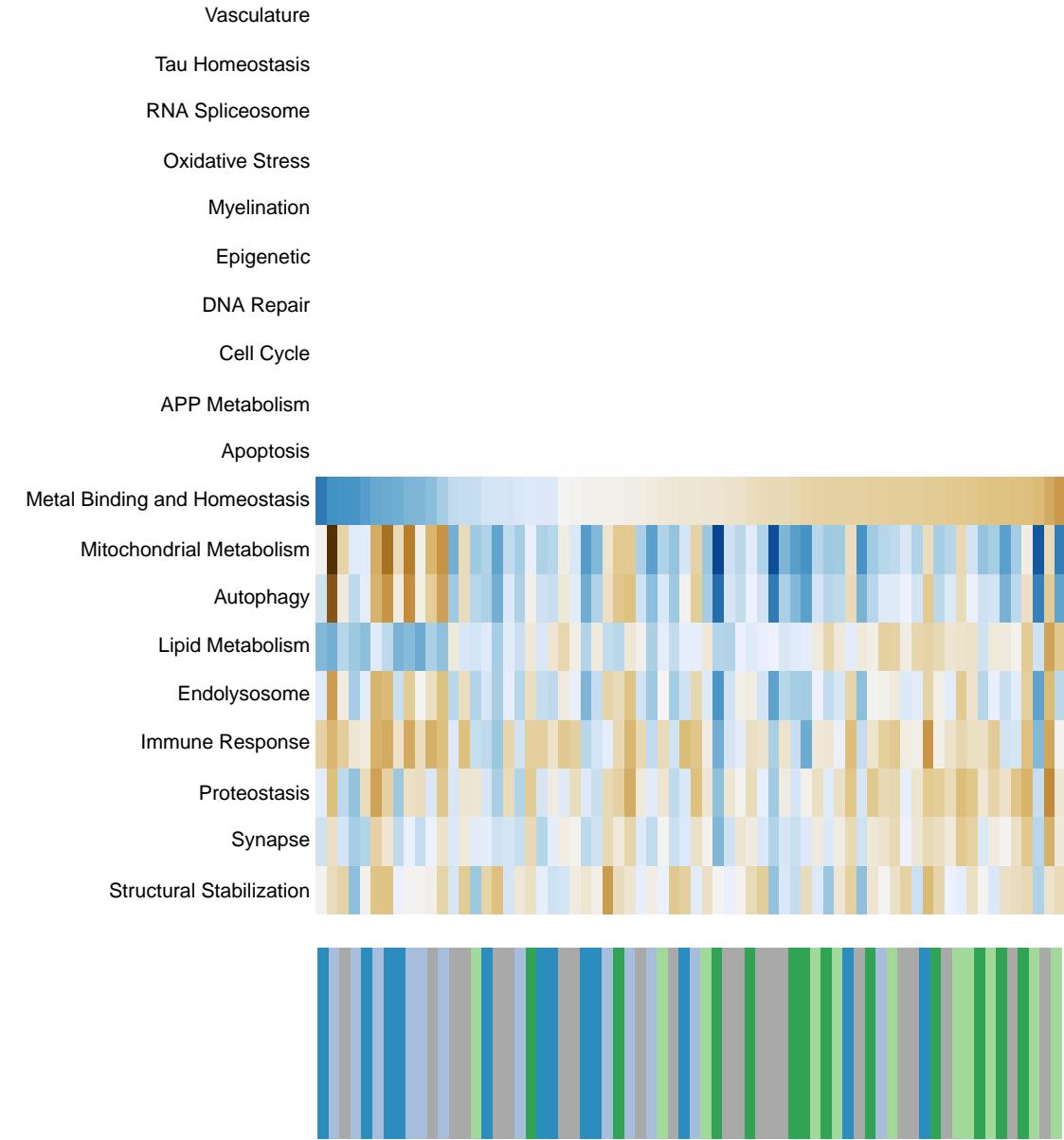


PC1 by genotype

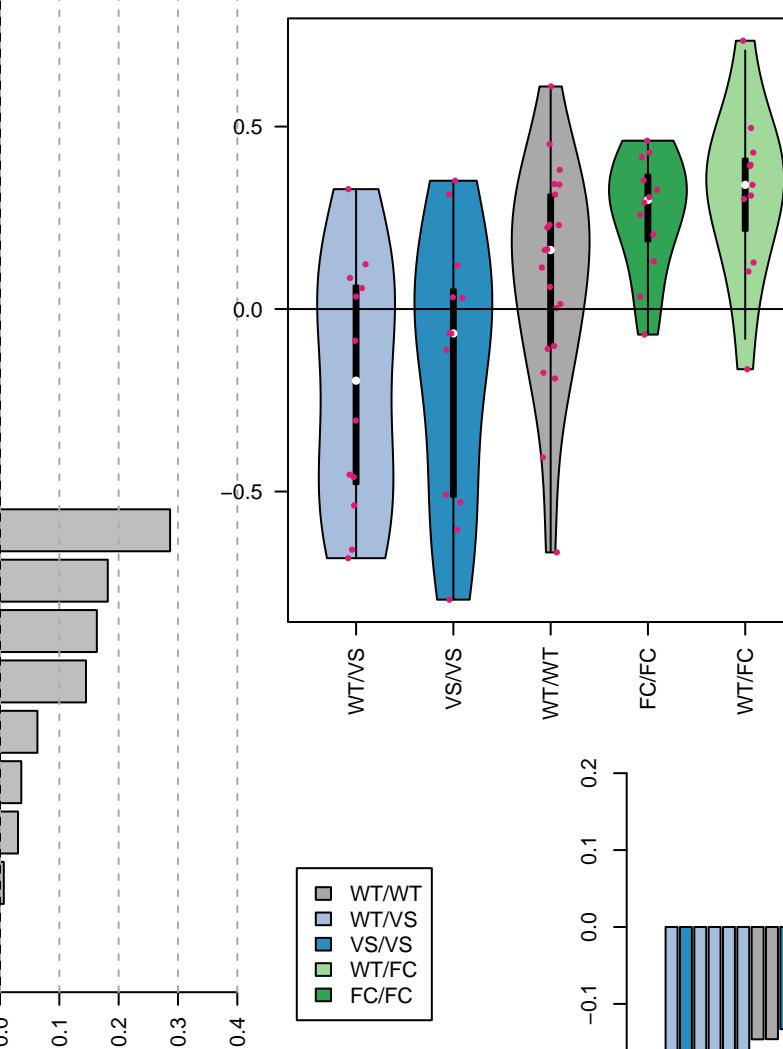
$R^2 = 0.076$



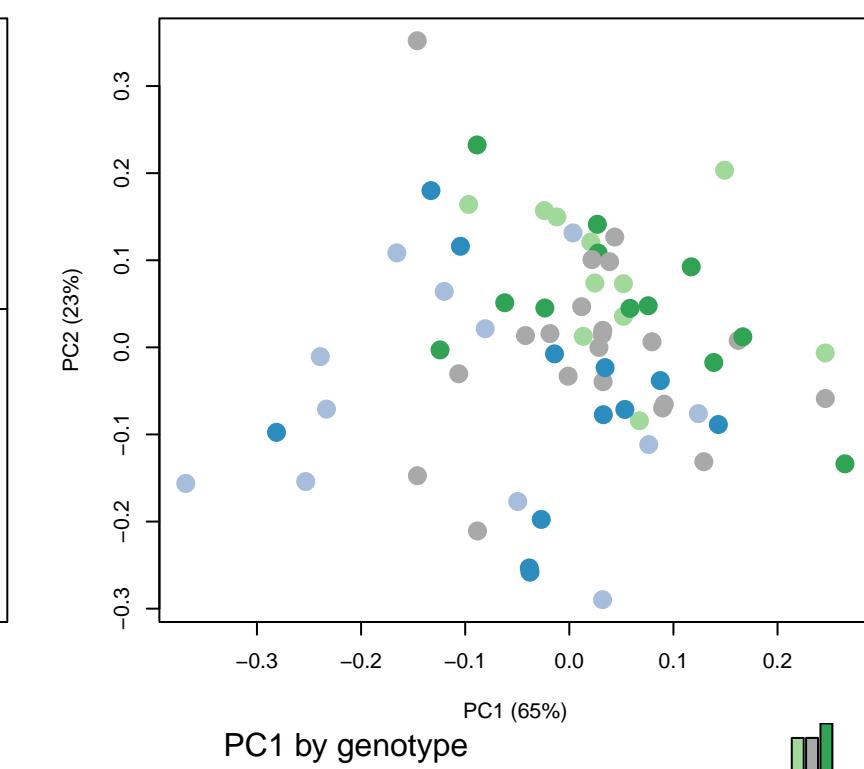
Synaptic vesicle cycle



Metal Binding and Homeostasis



Decomposition

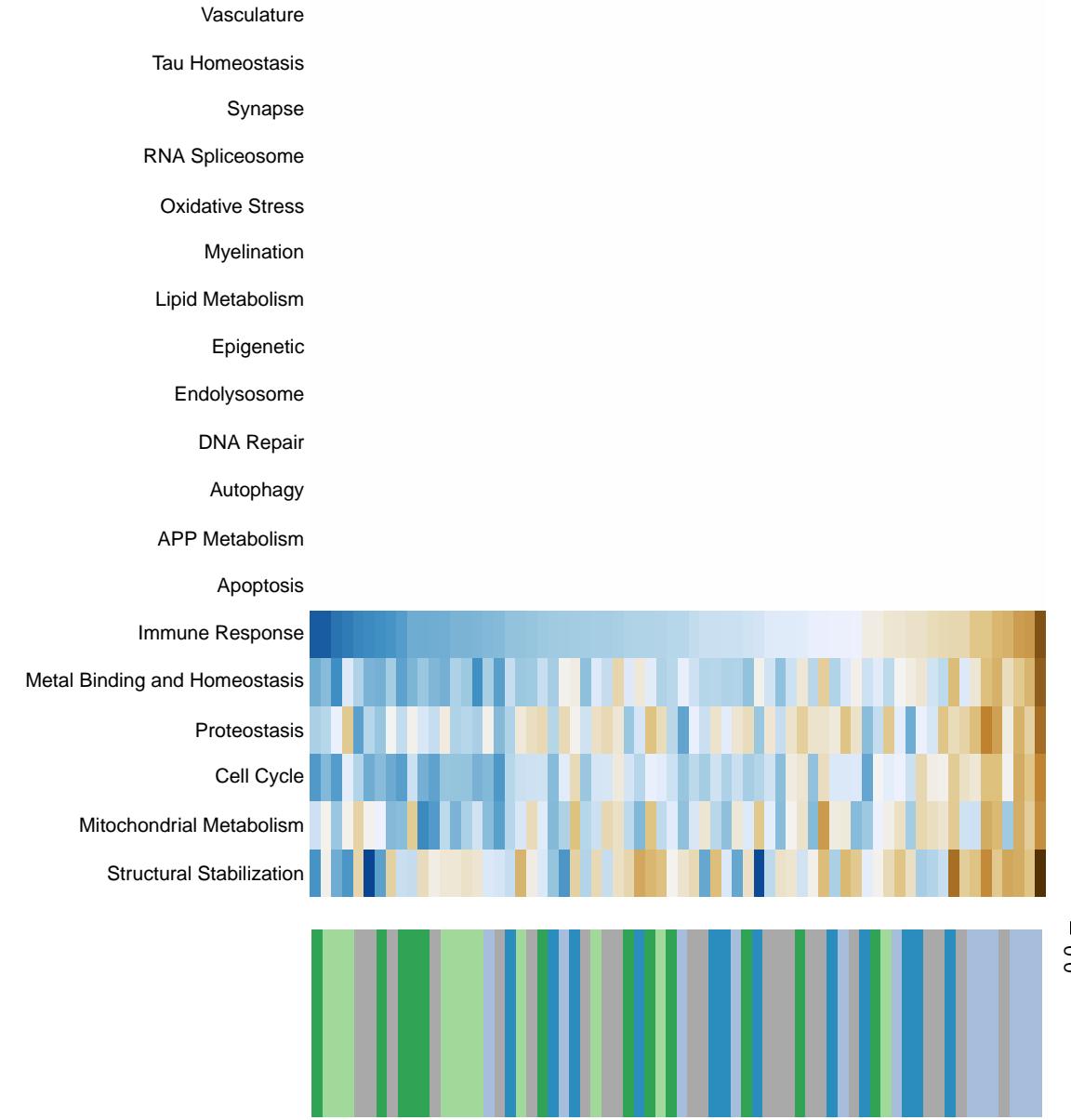


PC1 by genotype

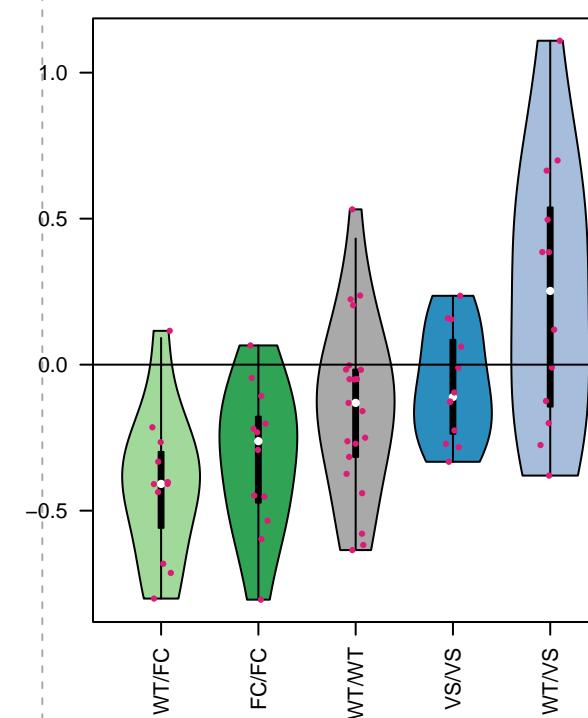
$R^2 = 0.049$

L

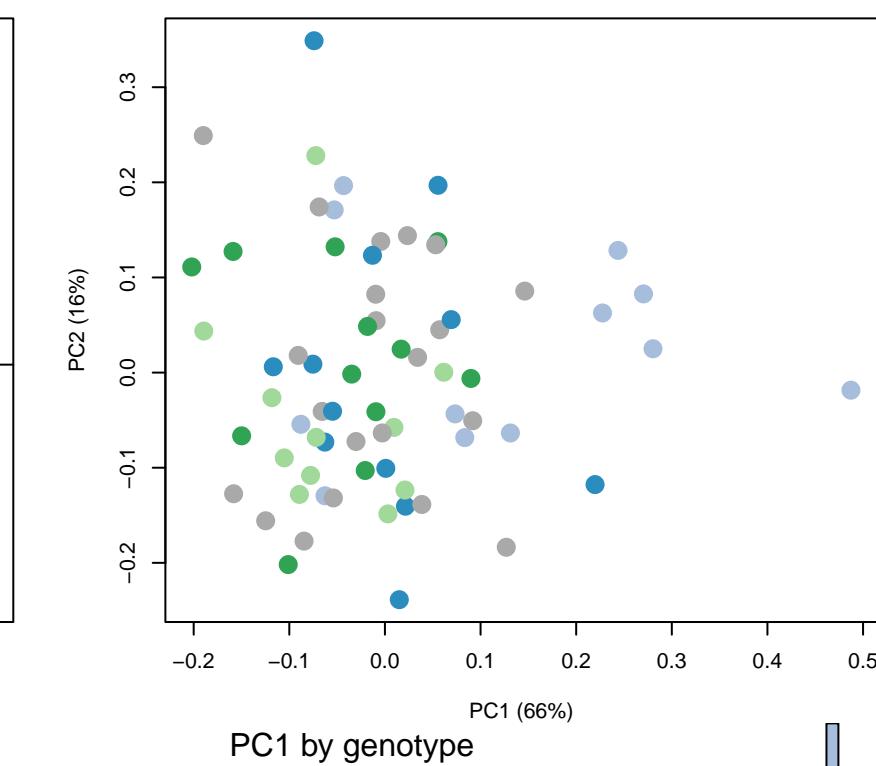
Nucleotide metabolism



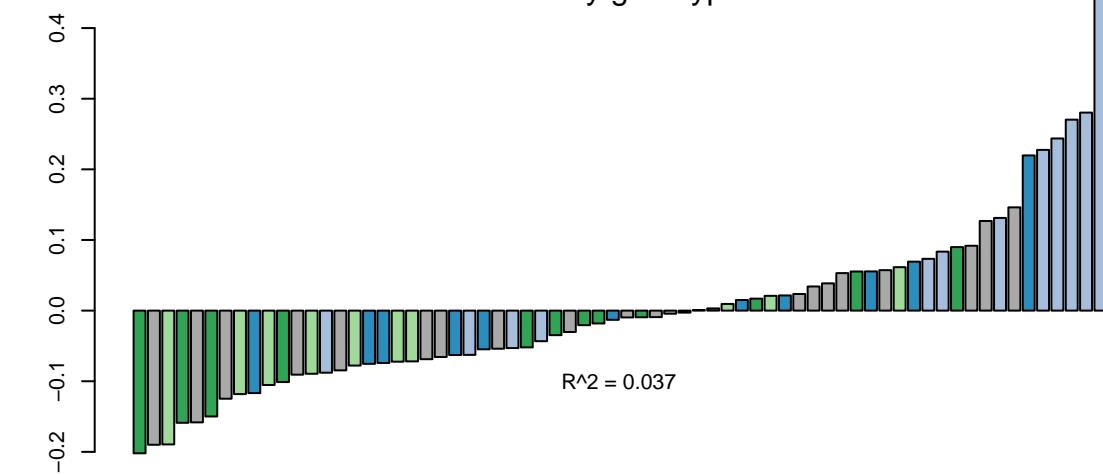
Immune Response



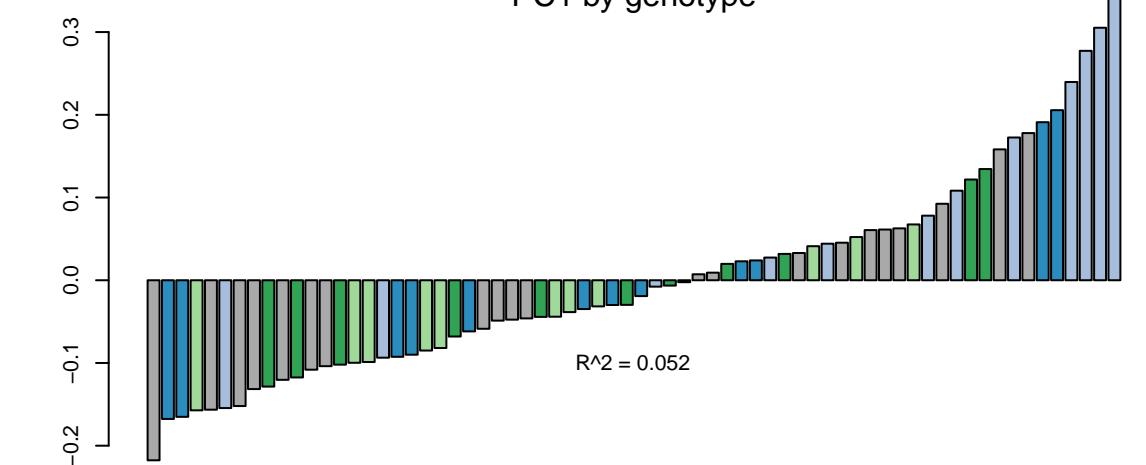
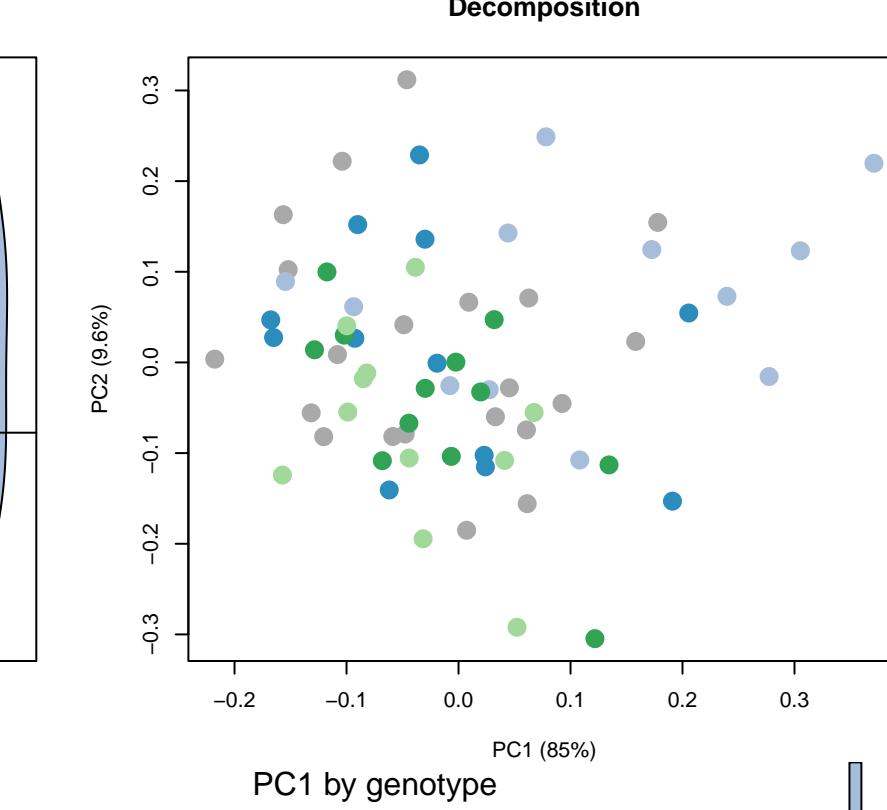
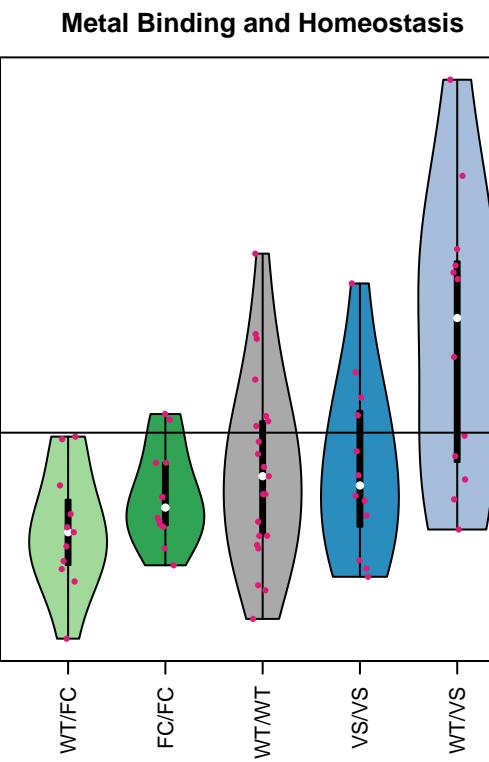
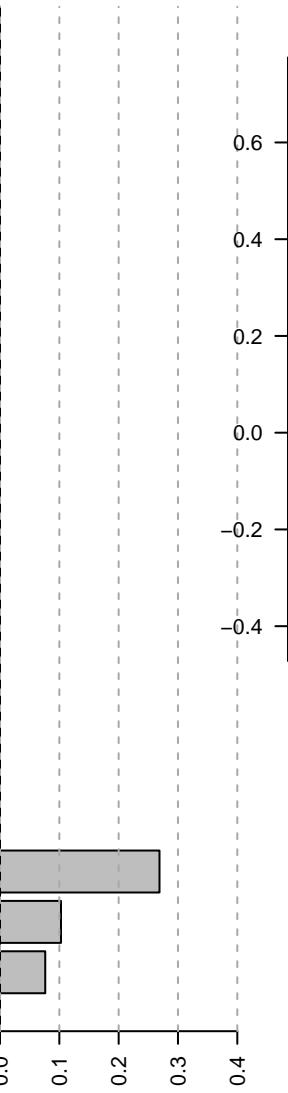
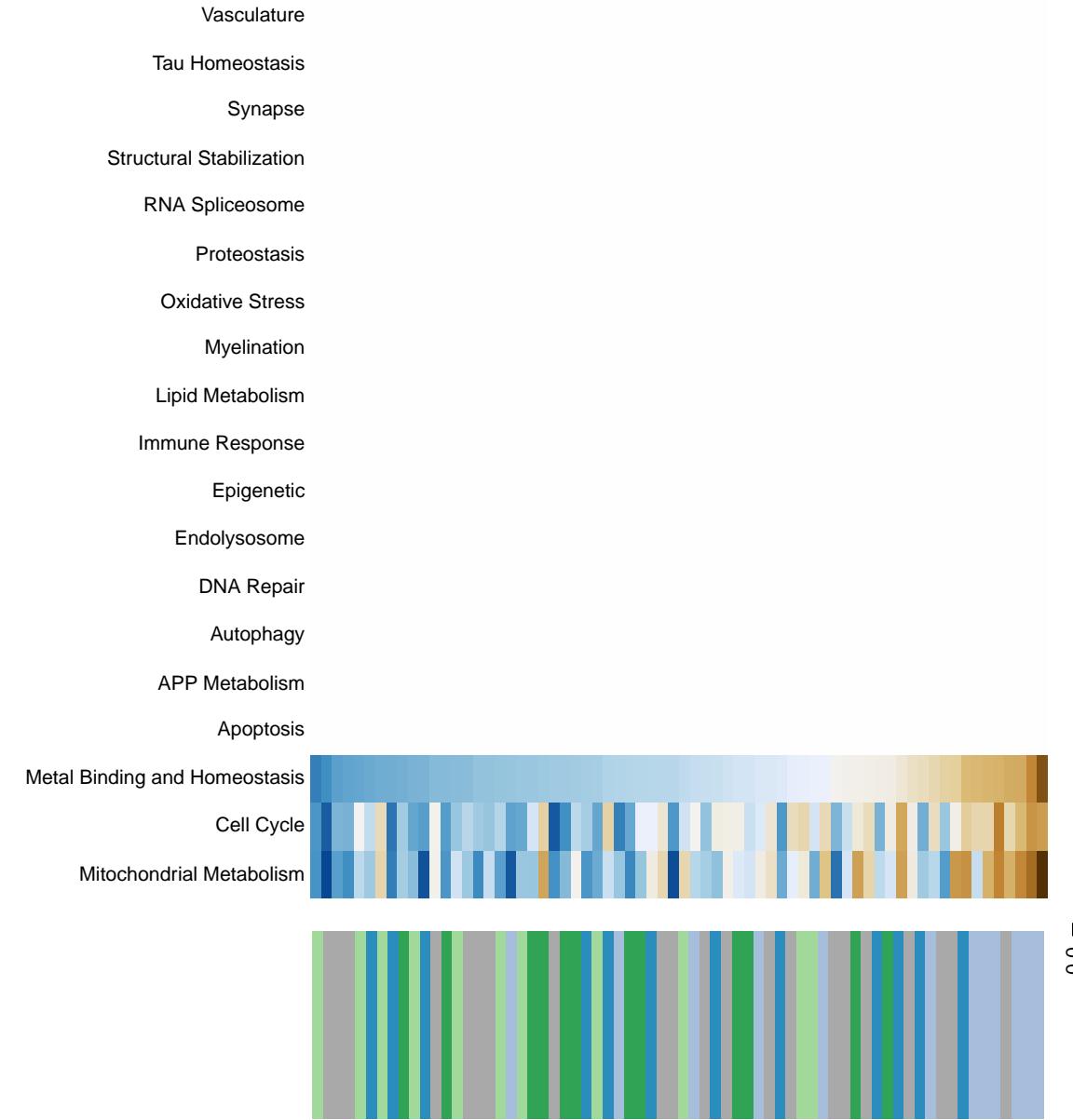
Decomposition



PC1 by genotype

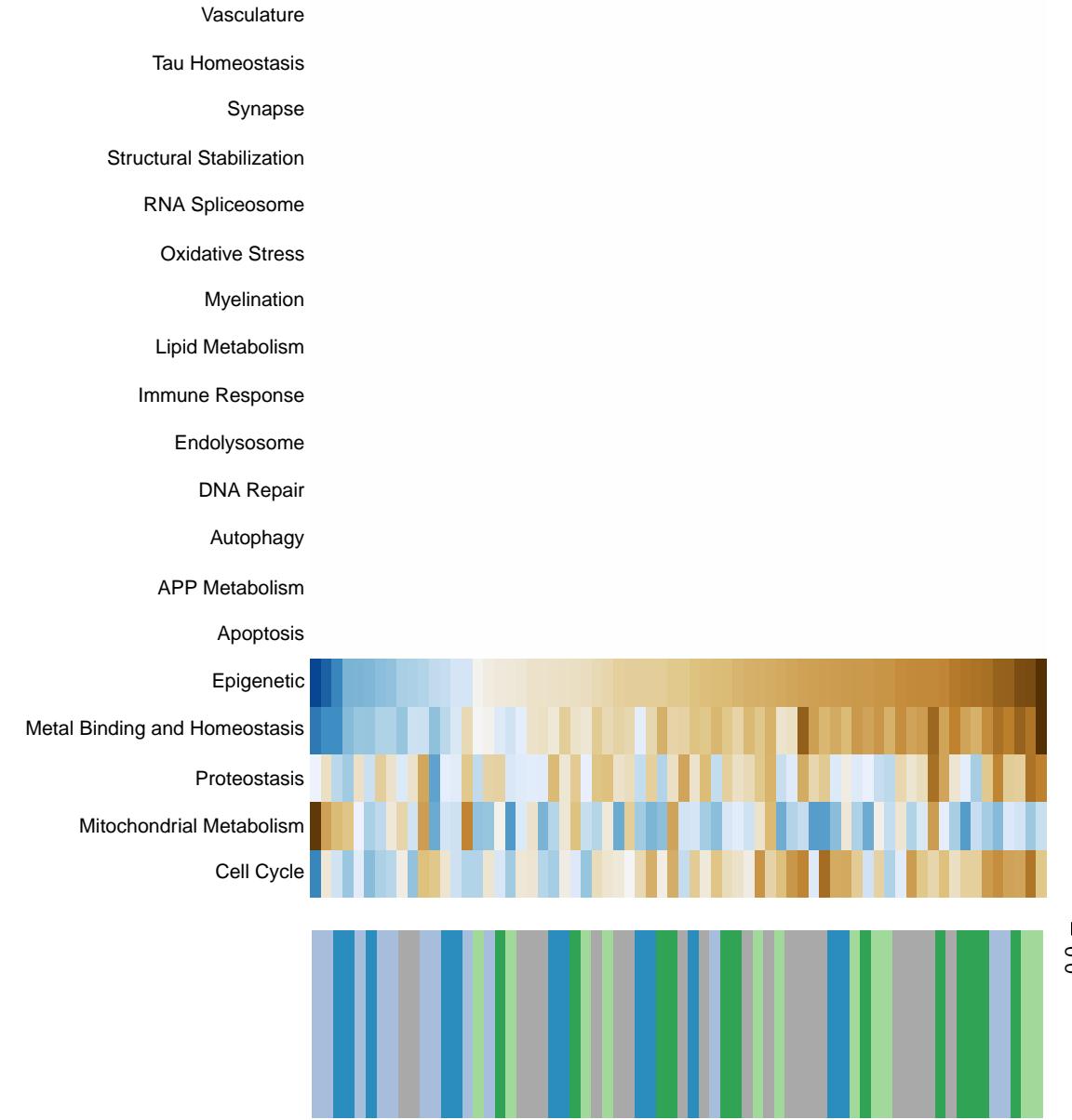


Pyrimidine metabolism

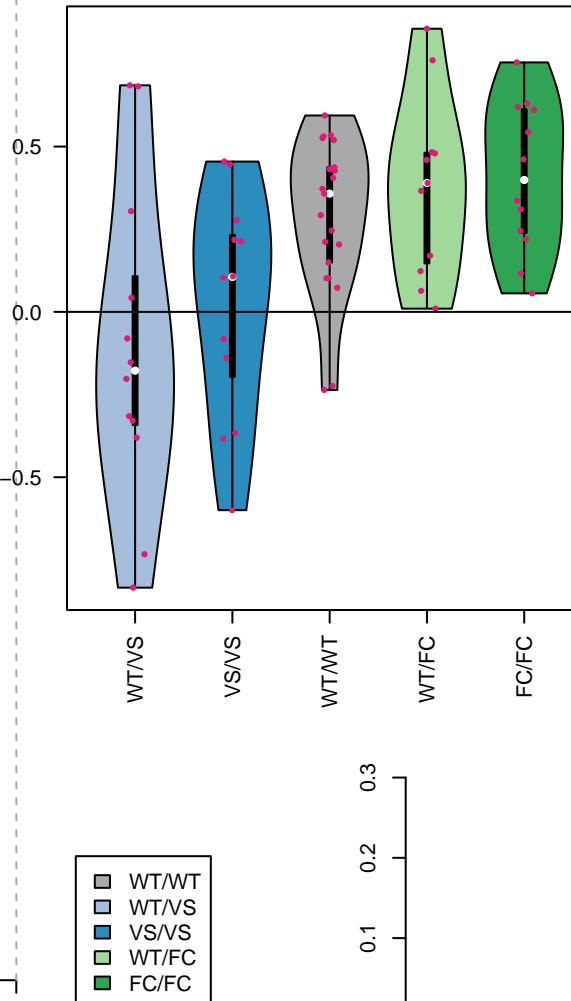


Decomposition

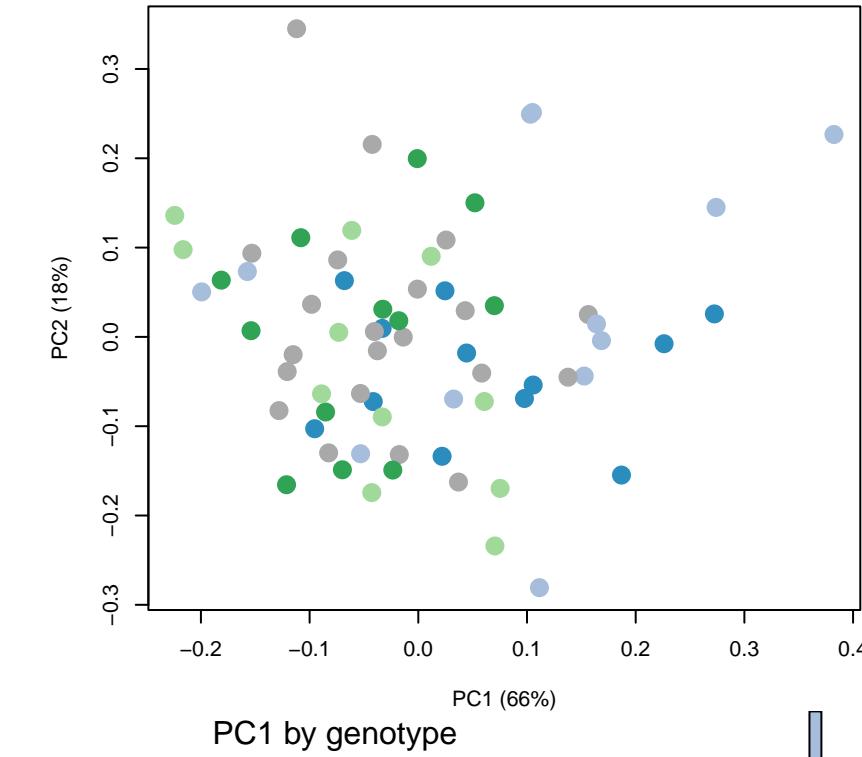
Lysine degradation



Epigenetic



Decomposition



PC1 by genotype

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

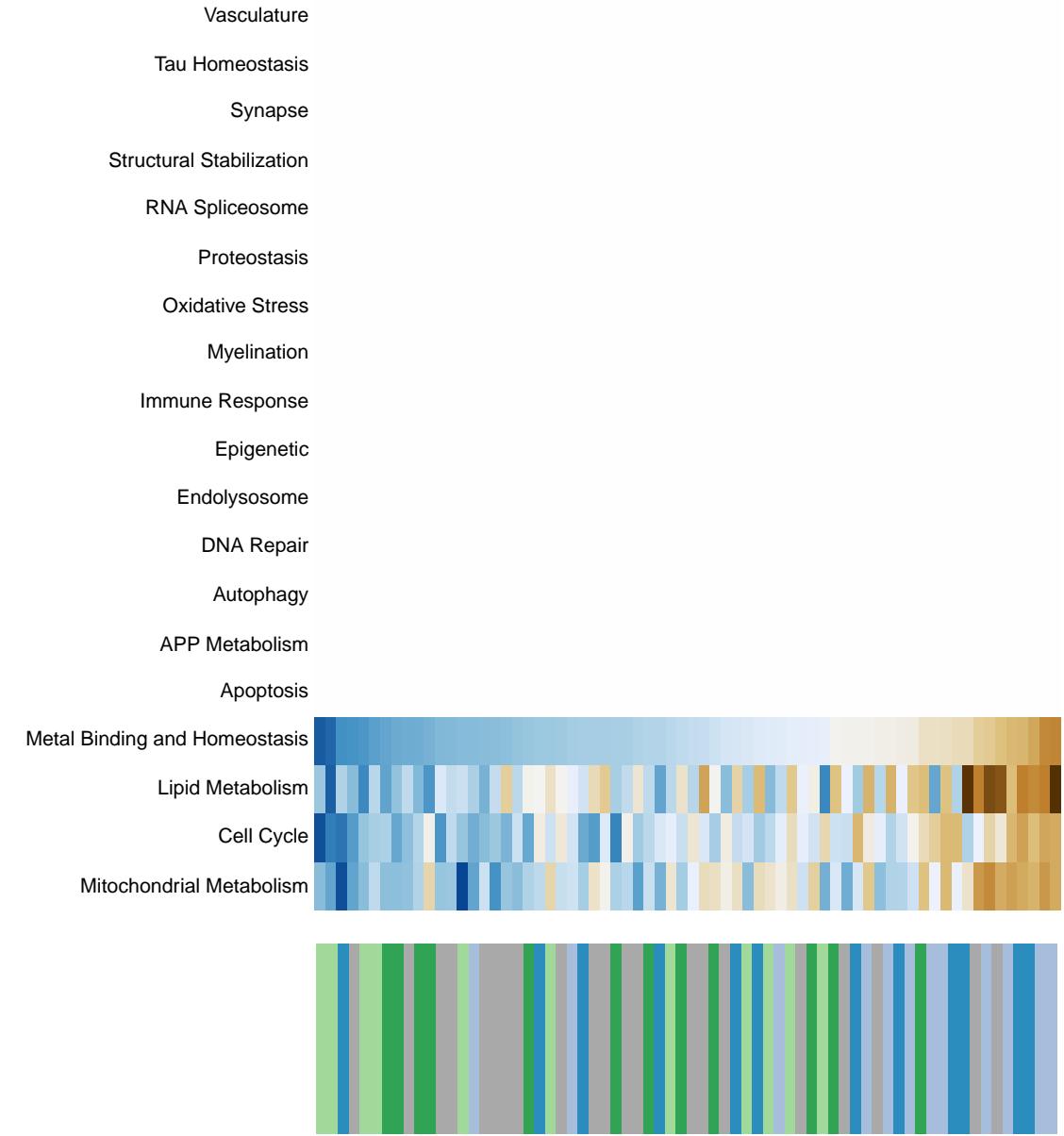
258

259

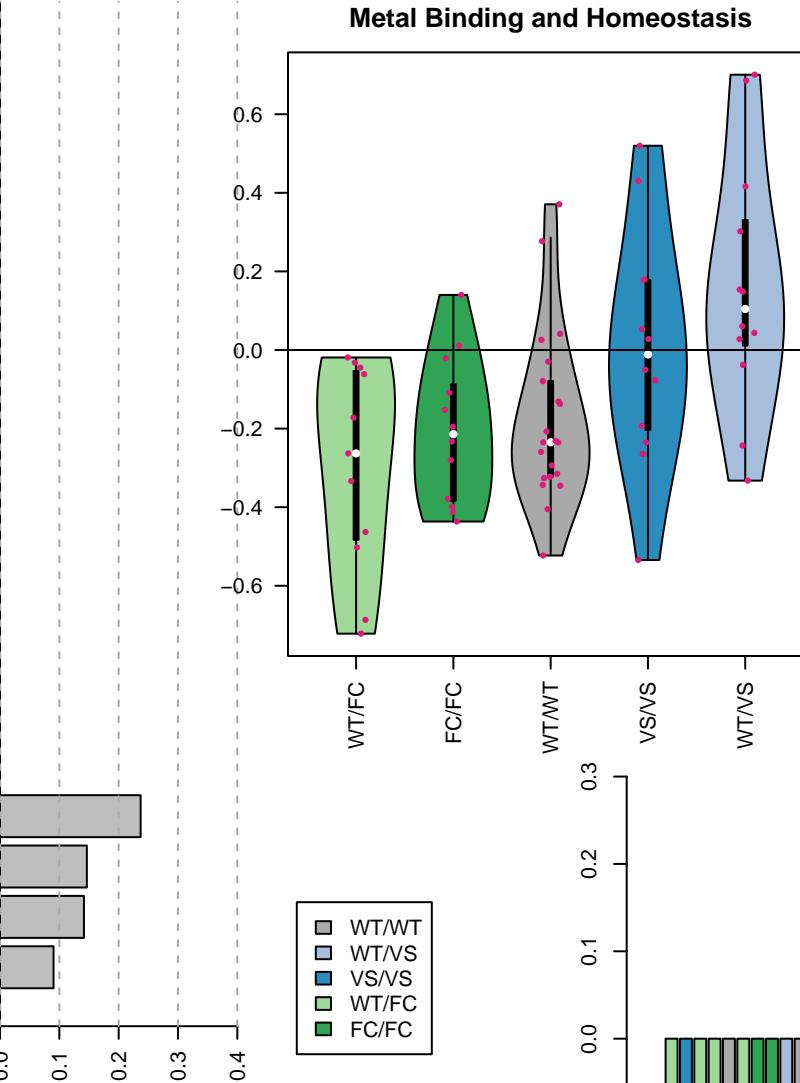
260

</

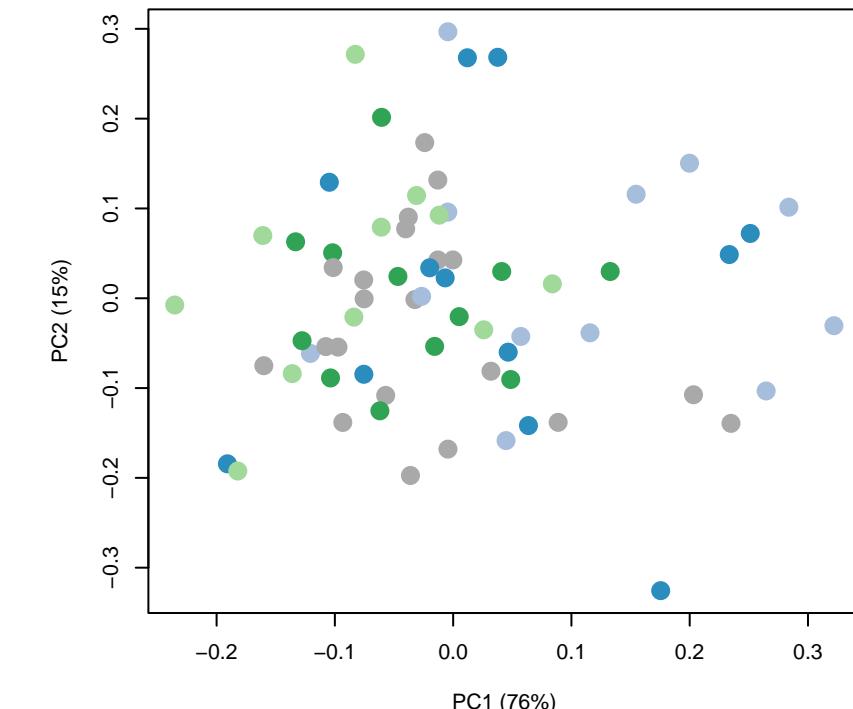
Drug metabolism – other enzymes



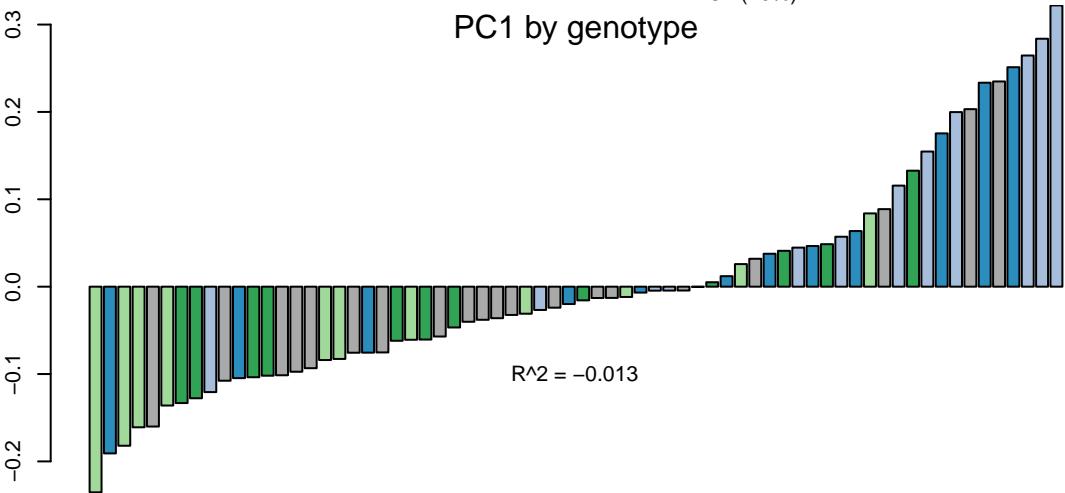
Metal Binding and Homeostasis



Decomposition

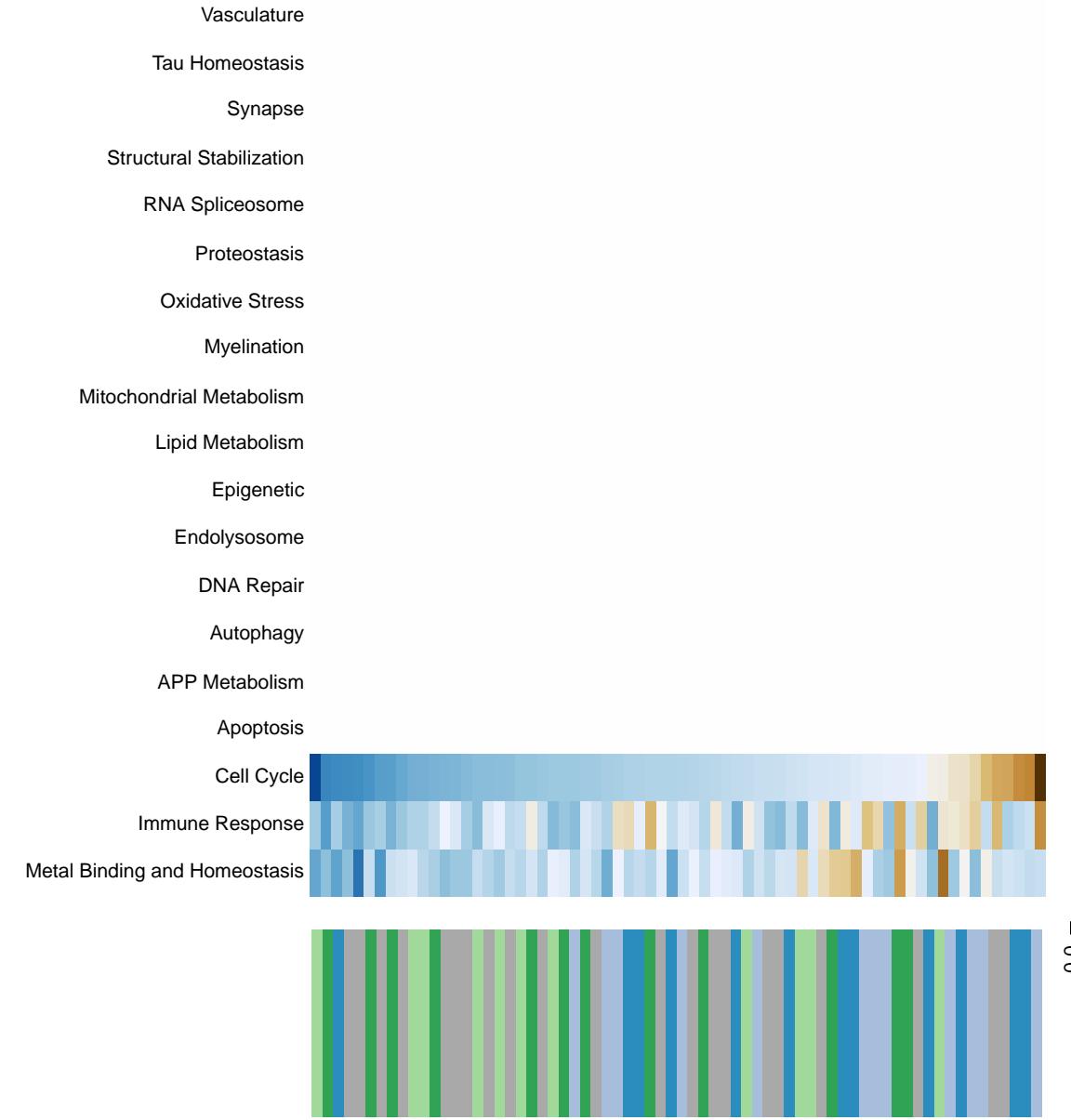


PC1 by genotype

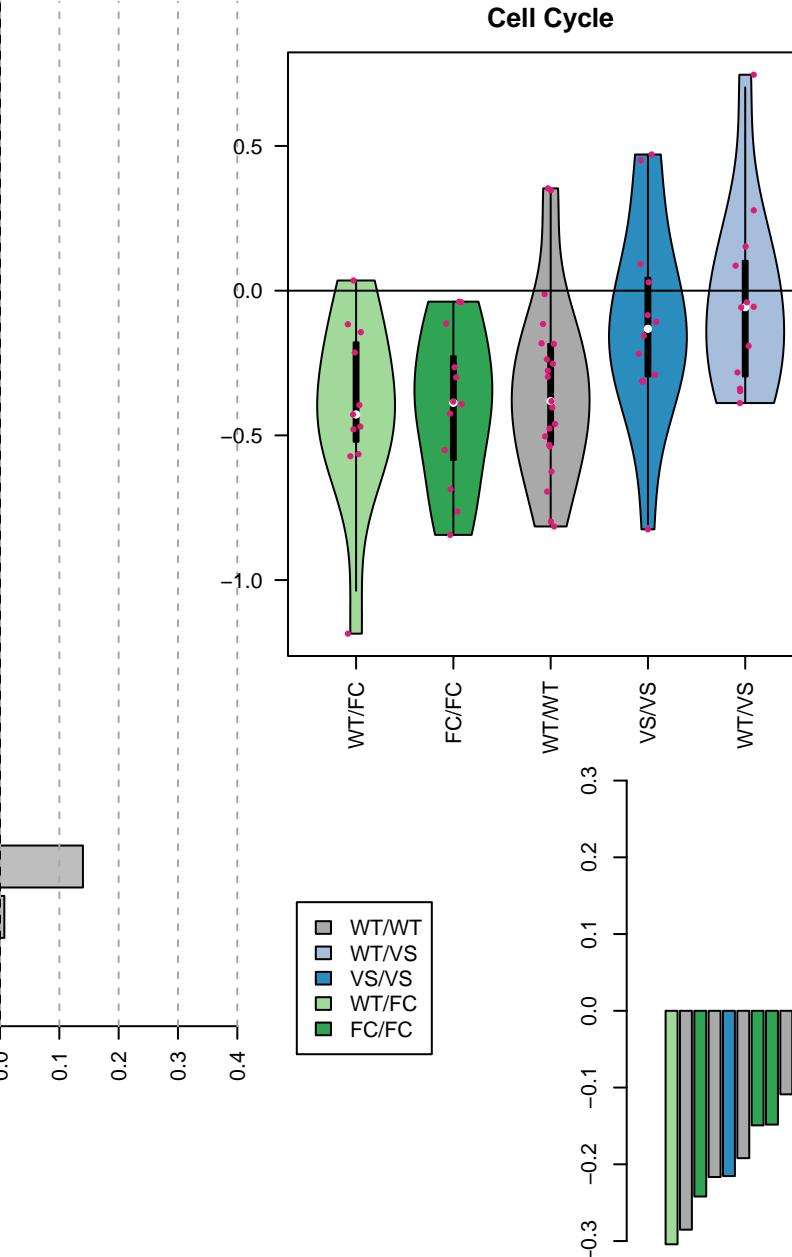


$R^2 = -0.013$

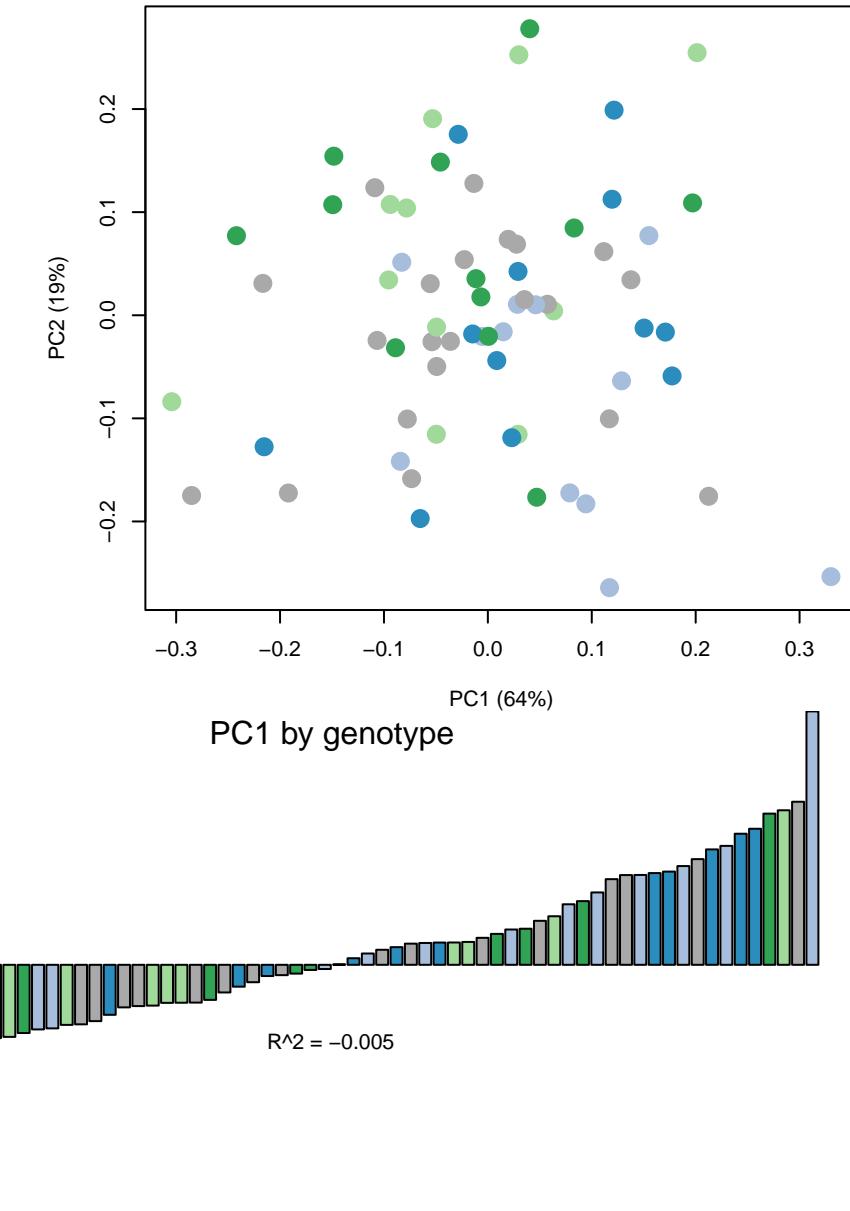
RNA polymerase



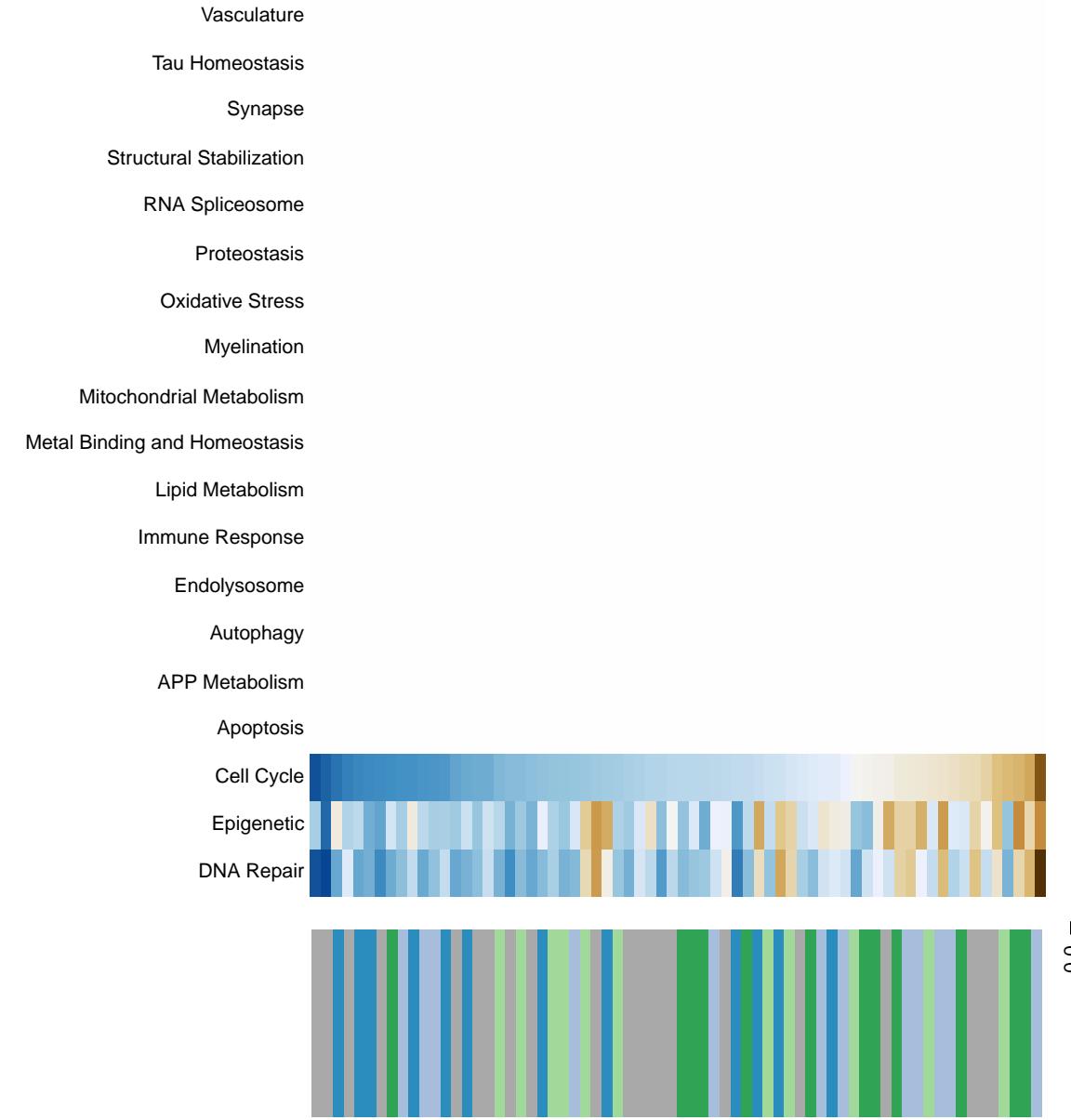
Cell Cycle



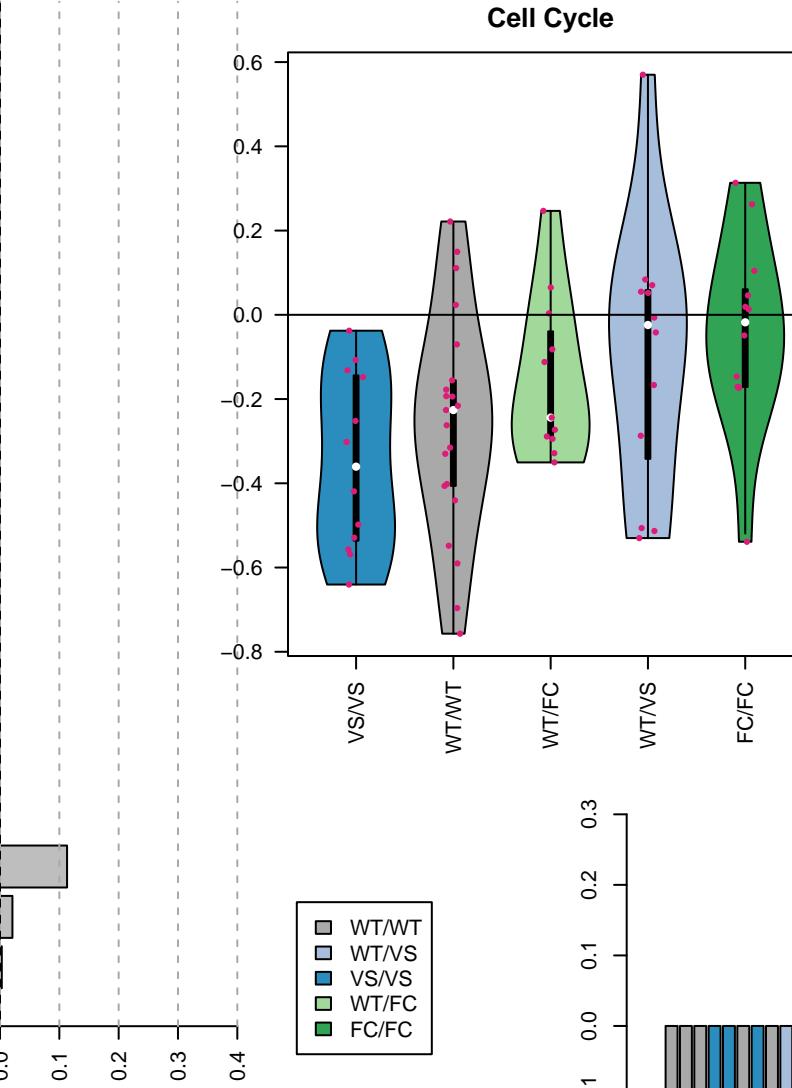
Decomposition



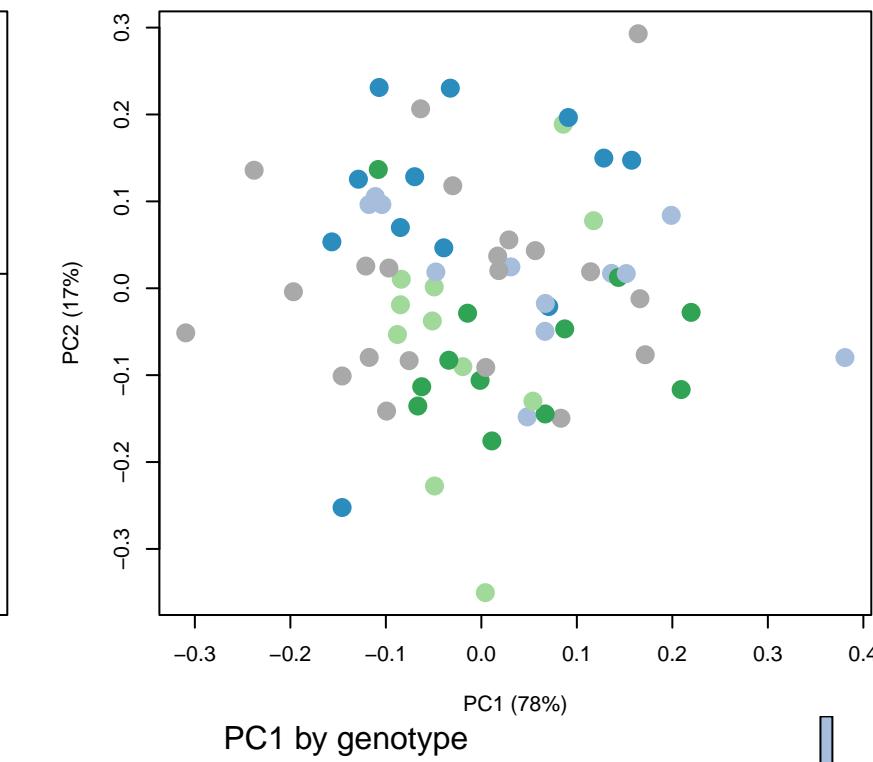
Basal transcription factors



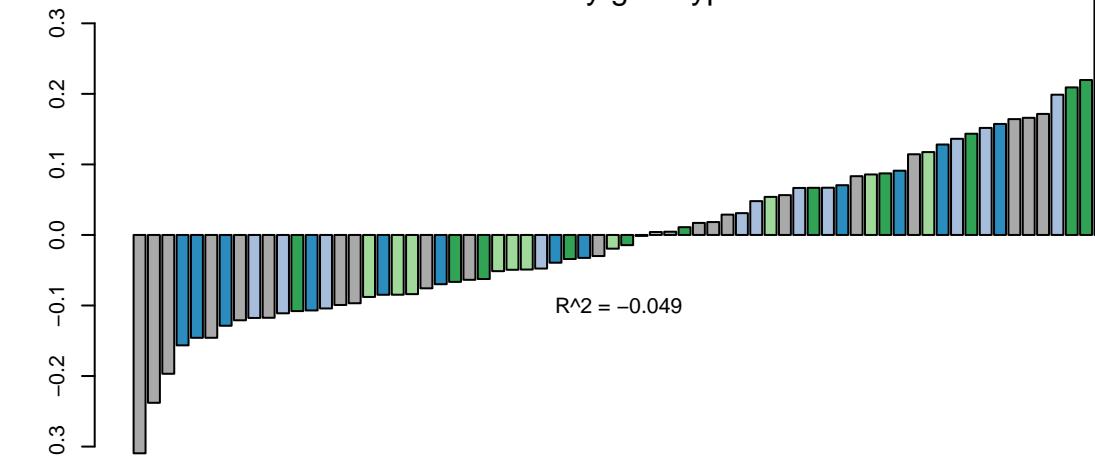
Cell Cycle



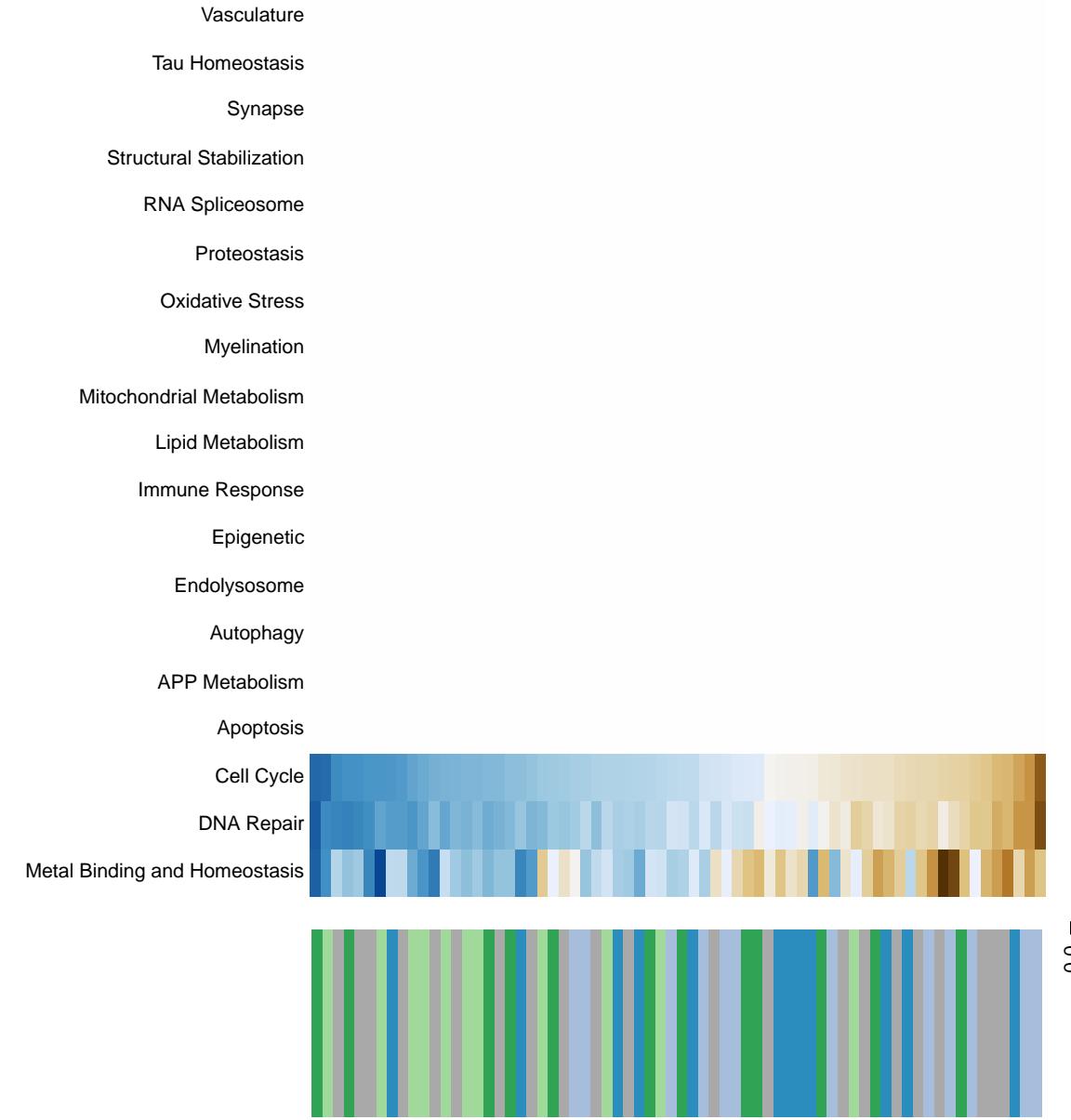
Decomposition



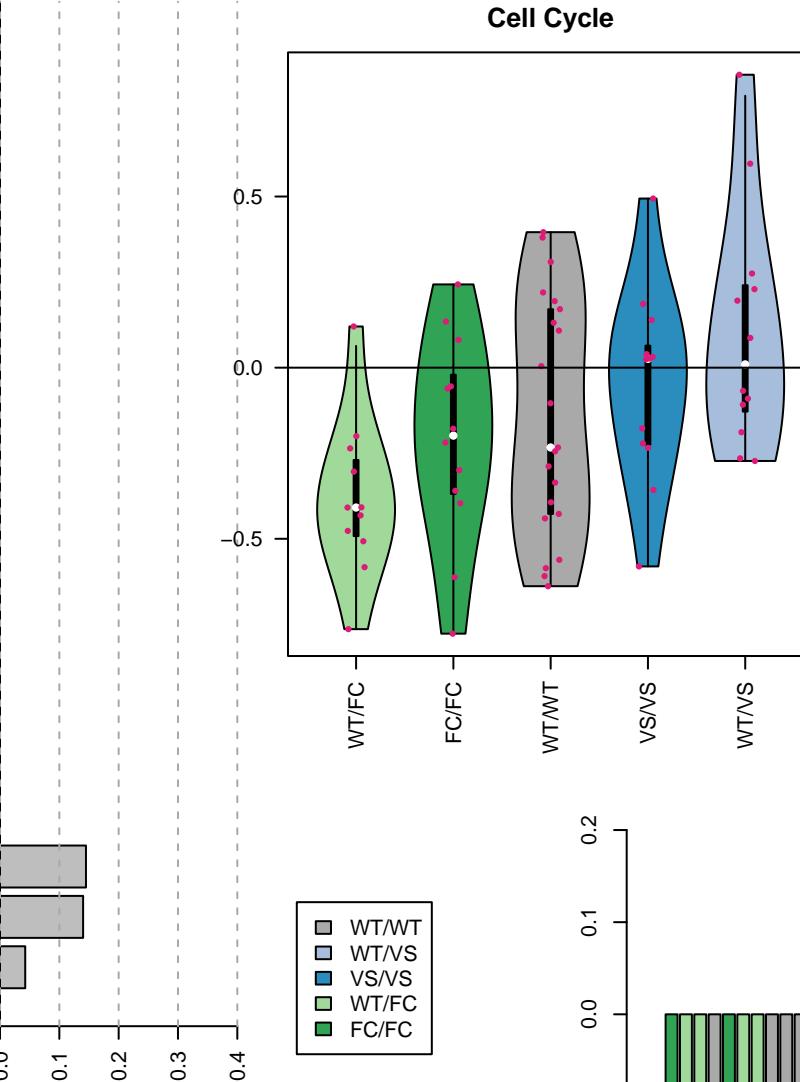
PC1 by genotype



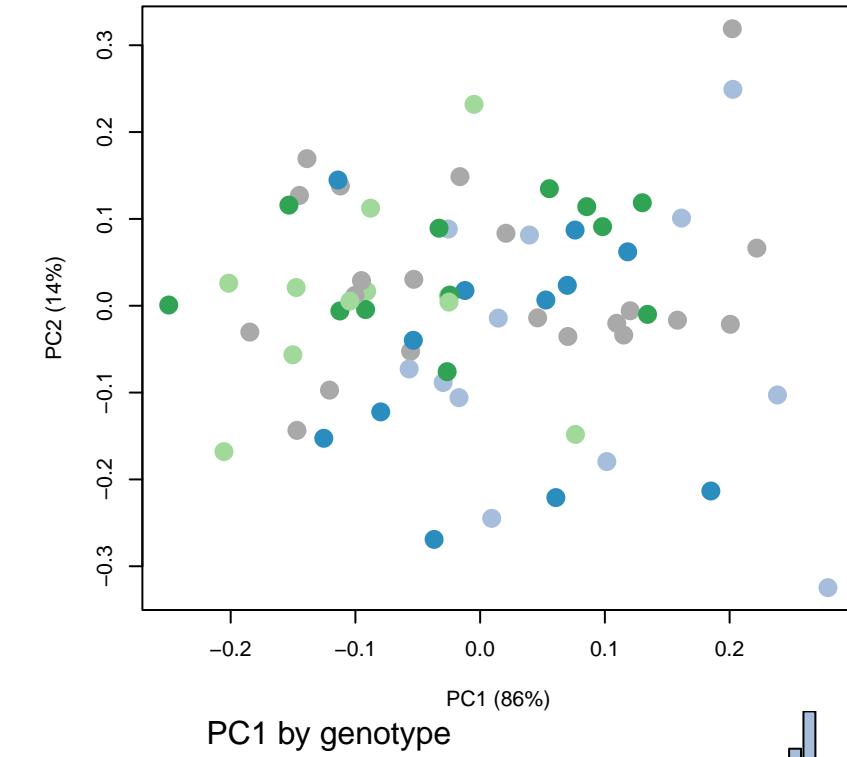
DNA replication



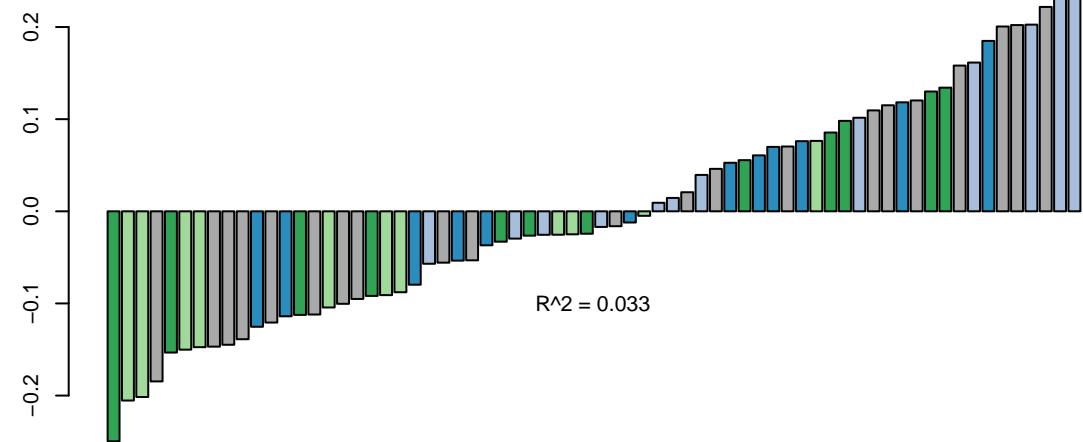
Cell Cycle



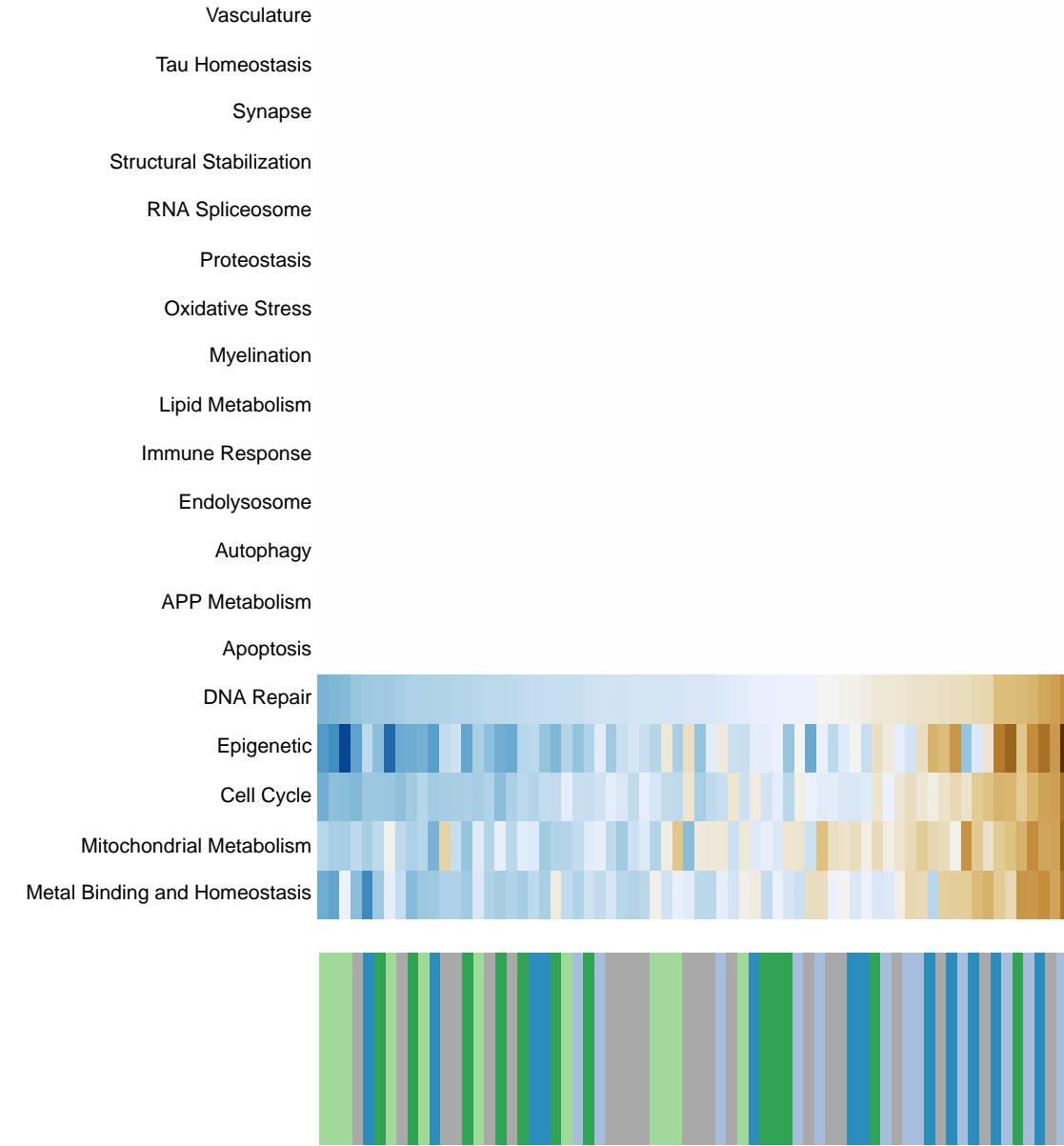
Decomposition



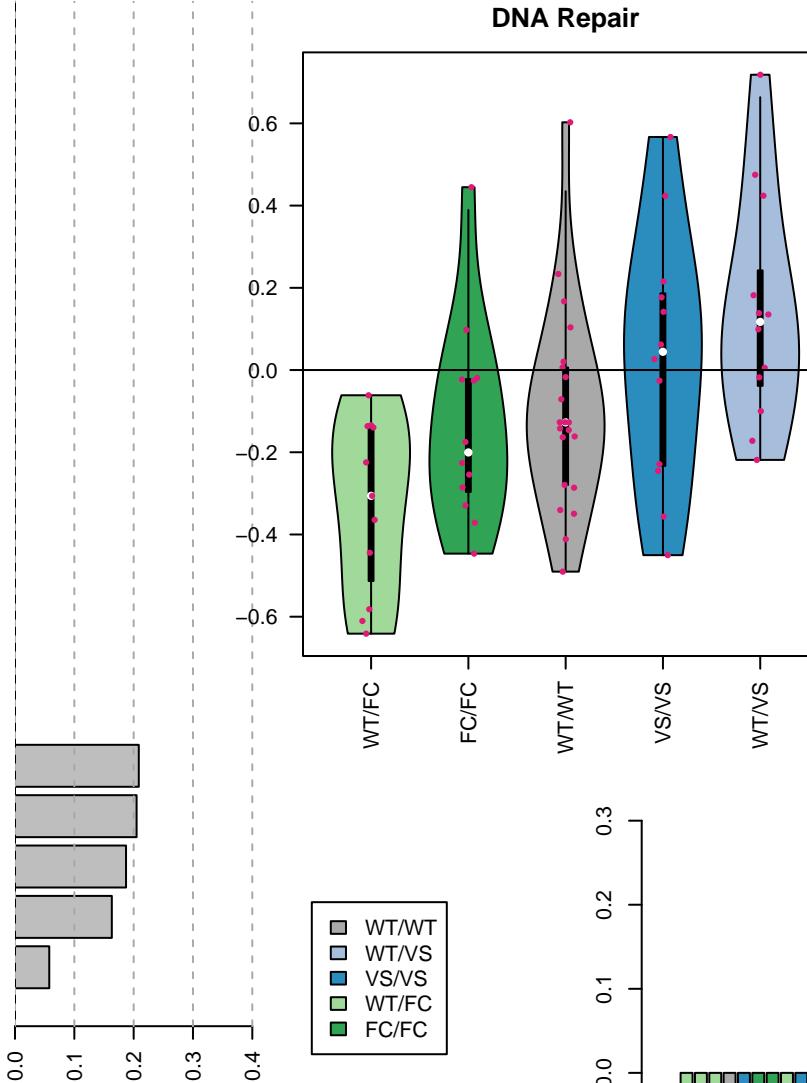
PC1 by genotype



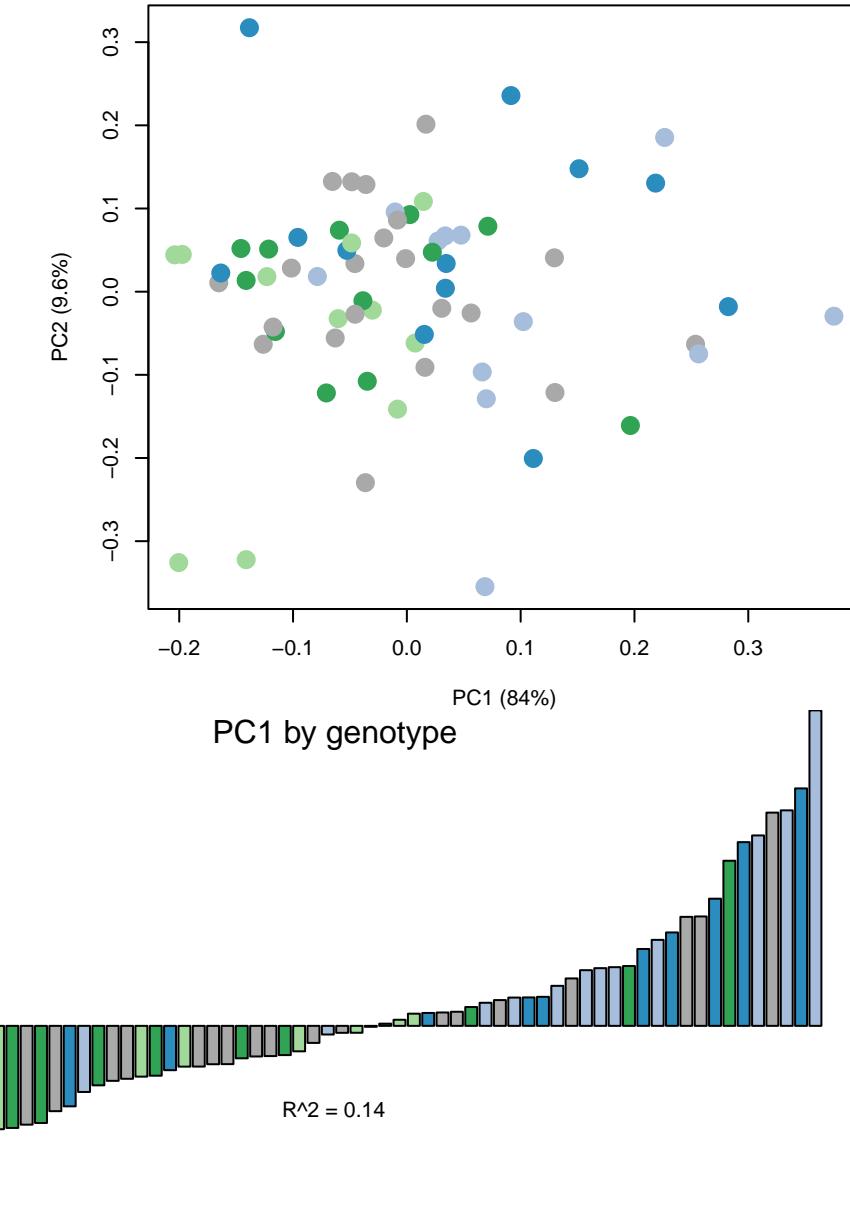
Base excision repair



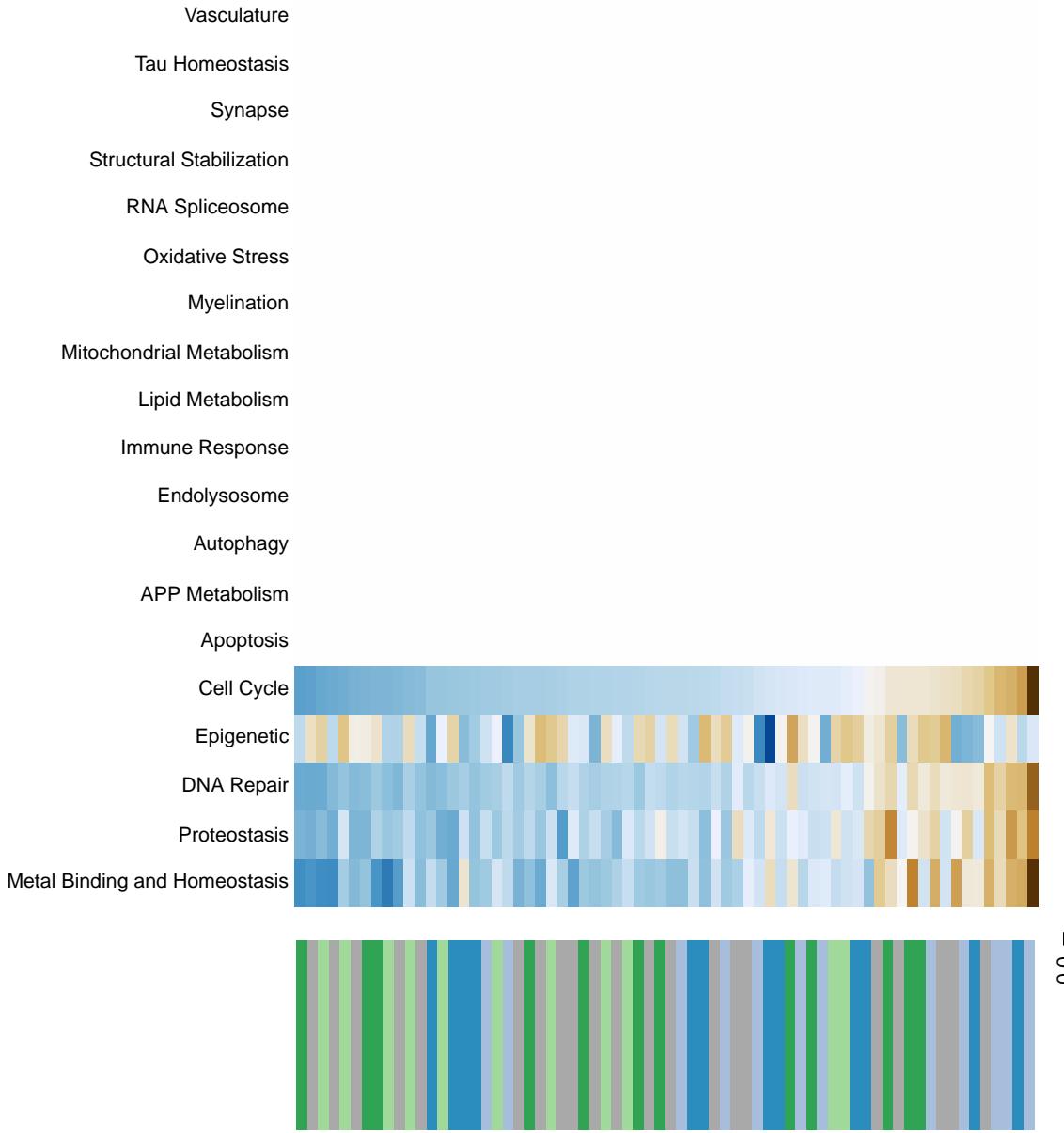
DNA Repair



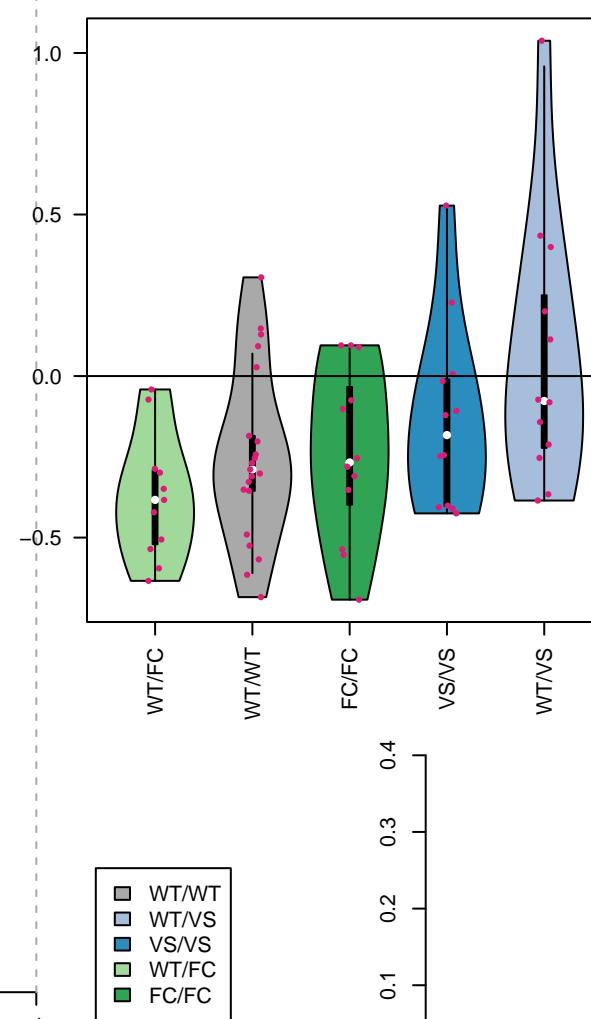
Decomposition



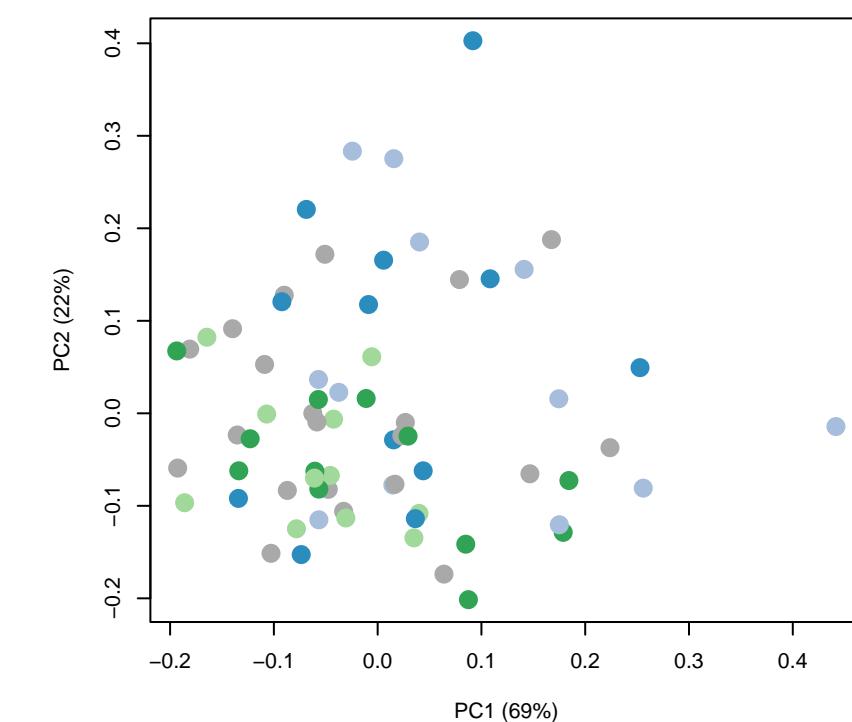
Nucleotide excision repair



Cell Cycle



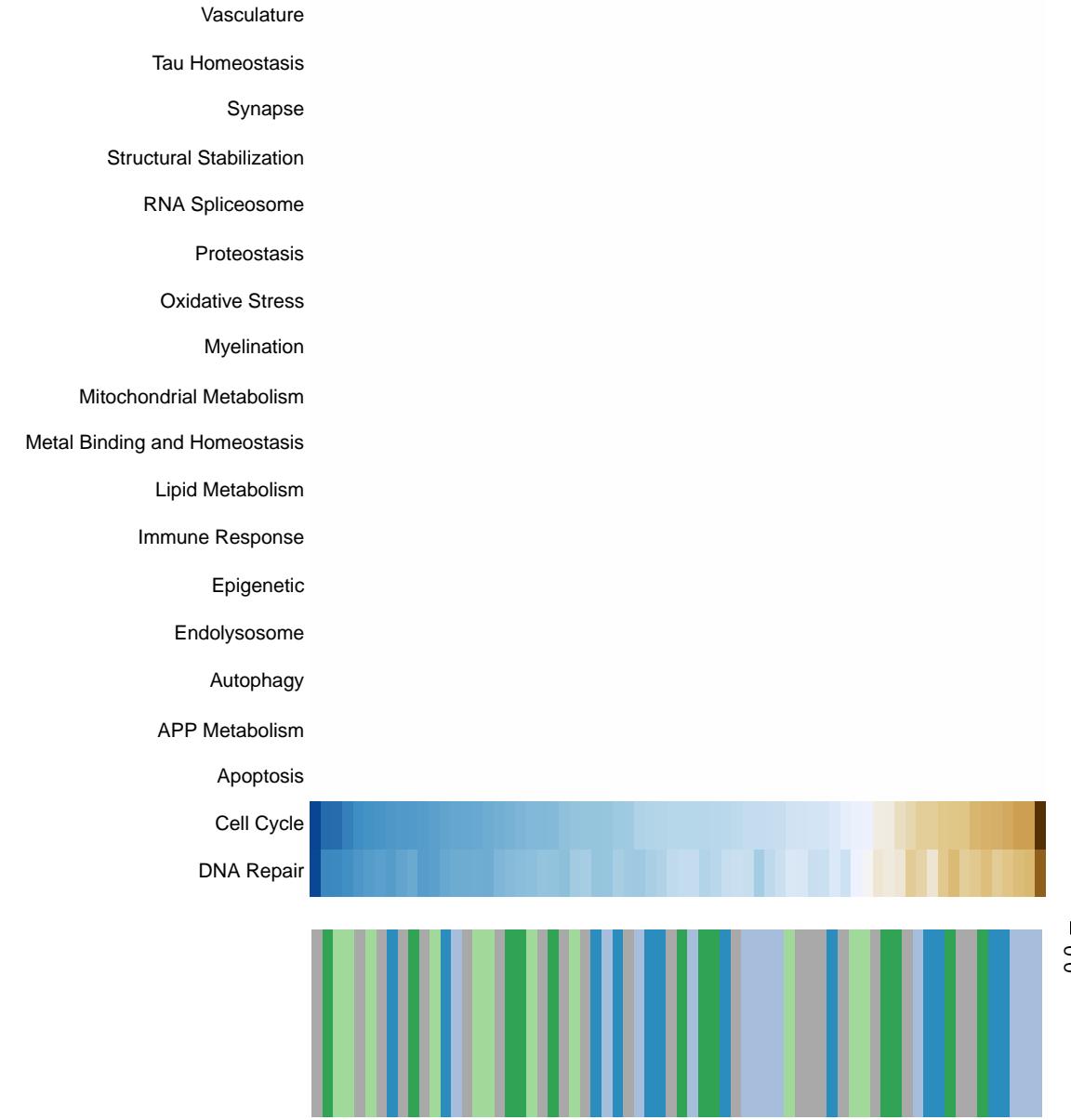
Decomposition



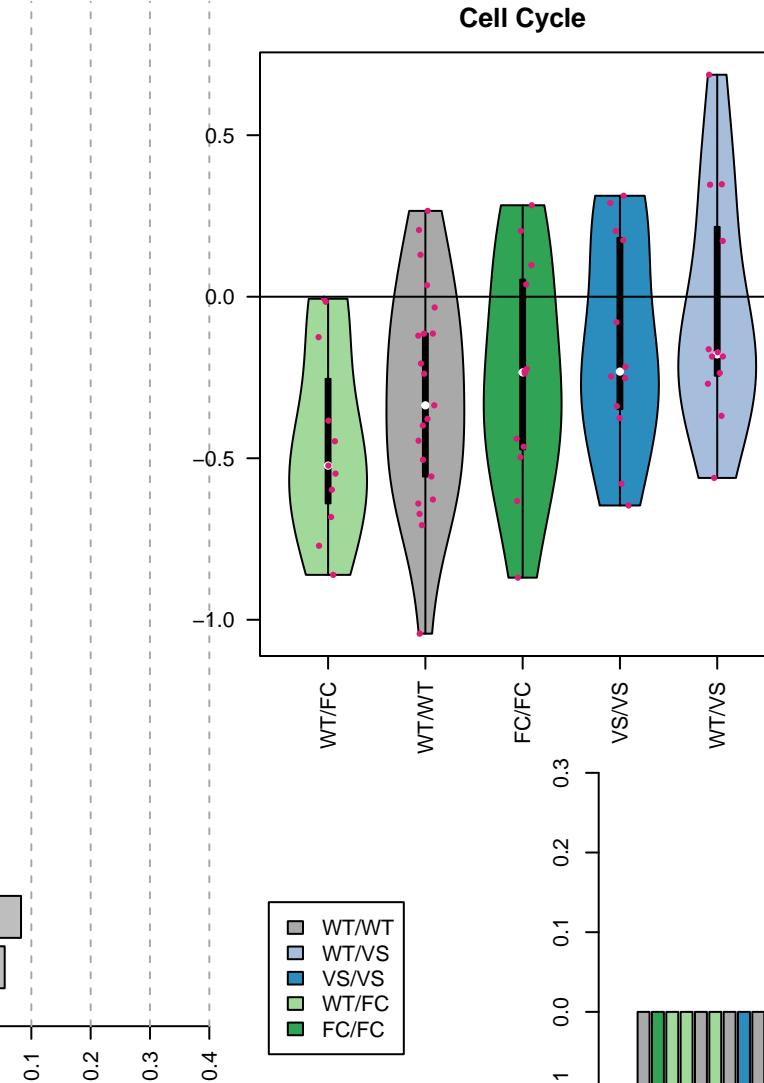
PC1 by genotype

$R^2 = 0.041$

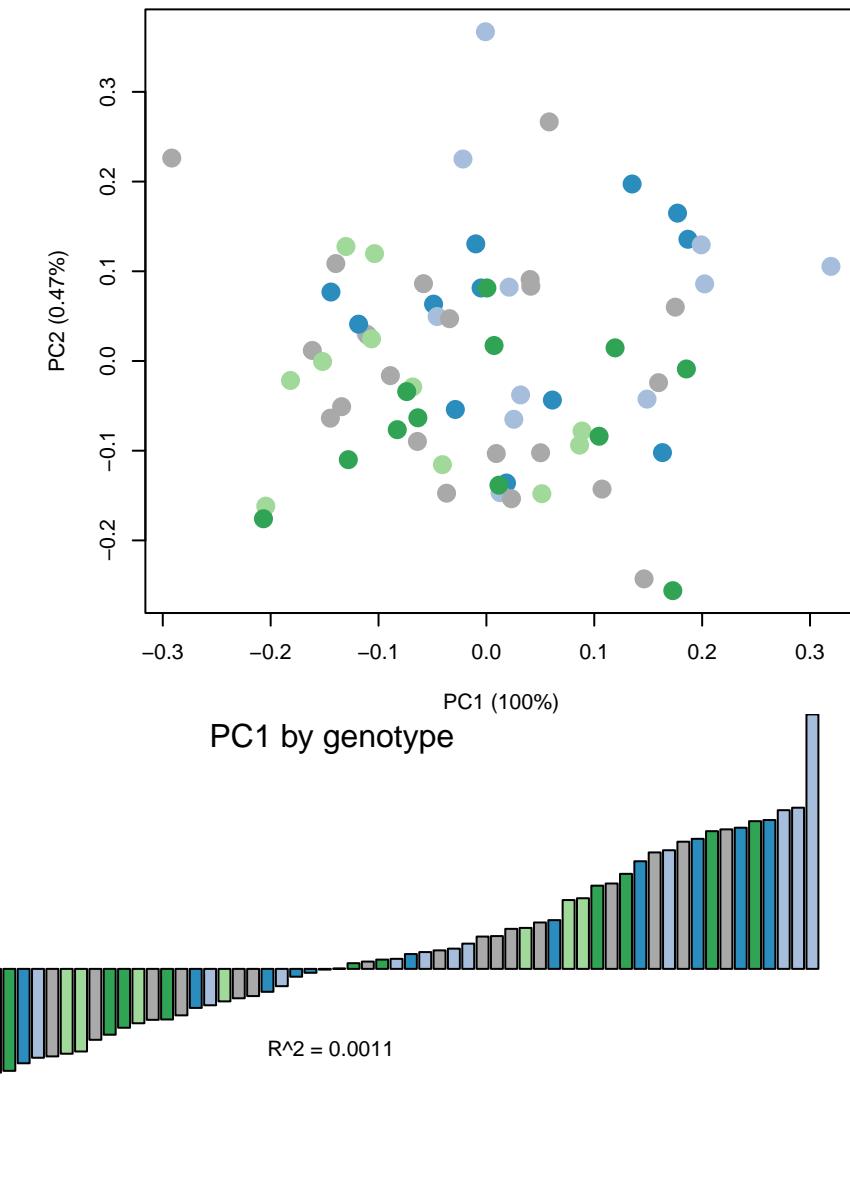
Mismatch repair



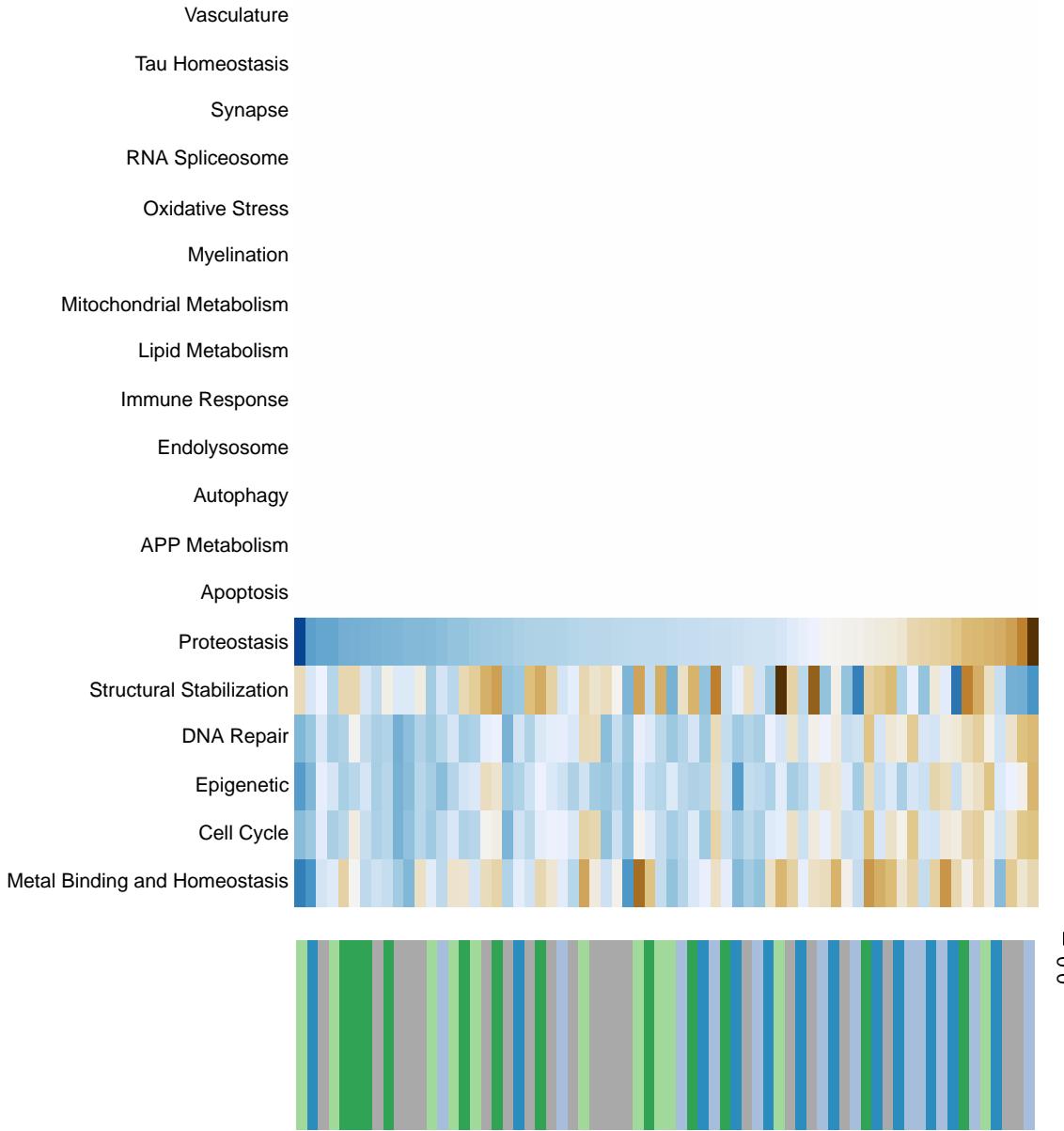
Cell Cycle



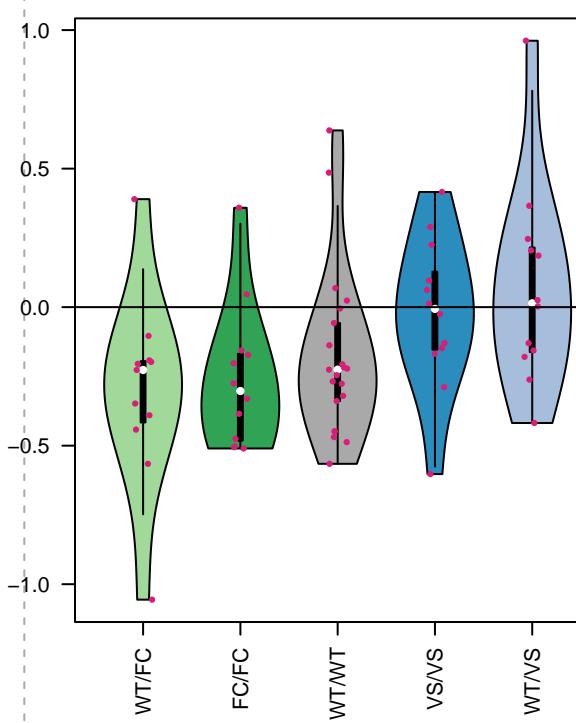
Decomposition



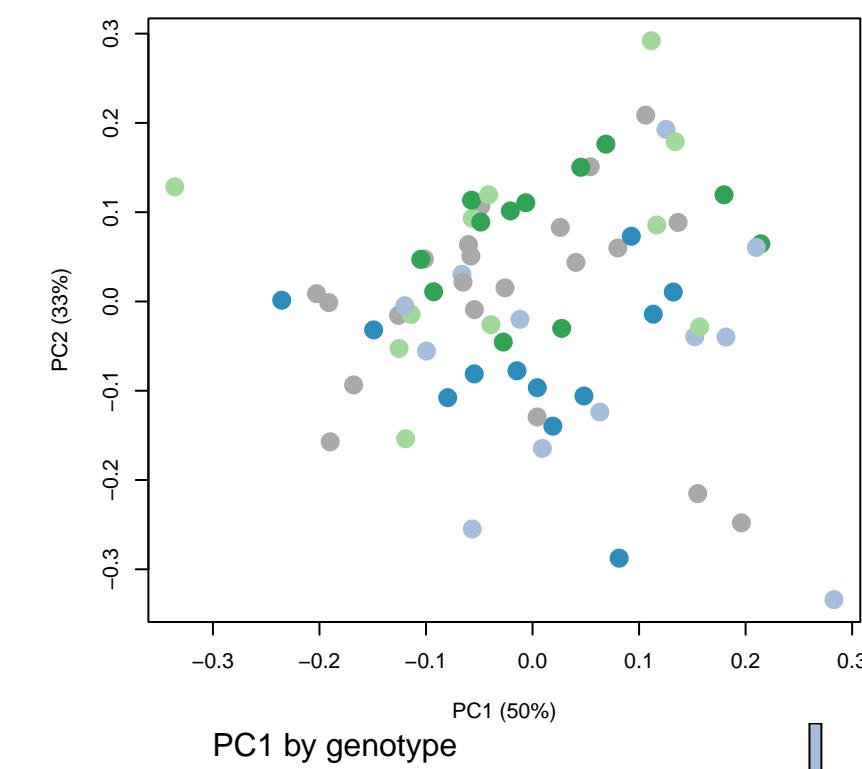
Homologous recombination



Proteostasis



Decomposition

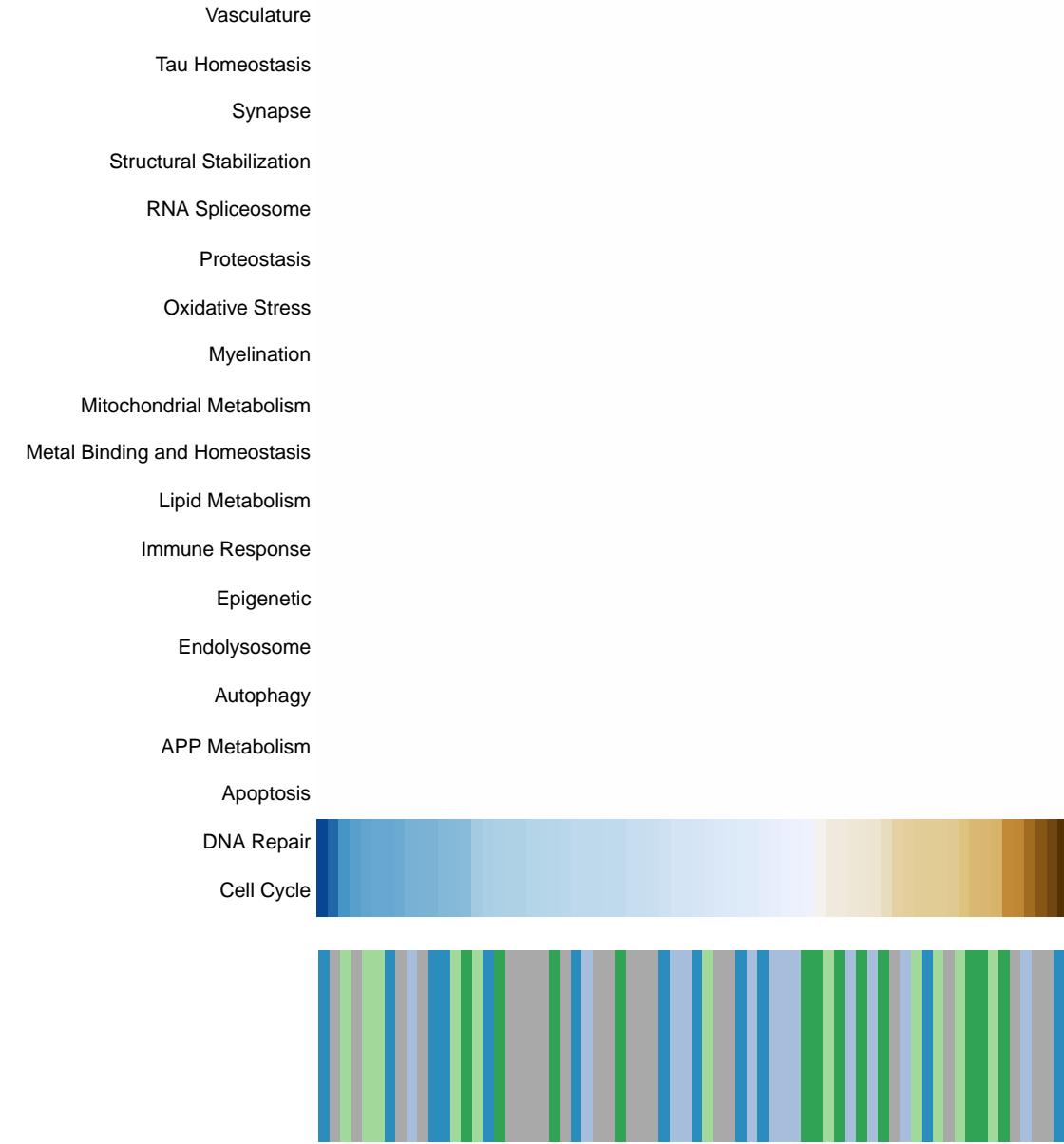


PC1 by genotype

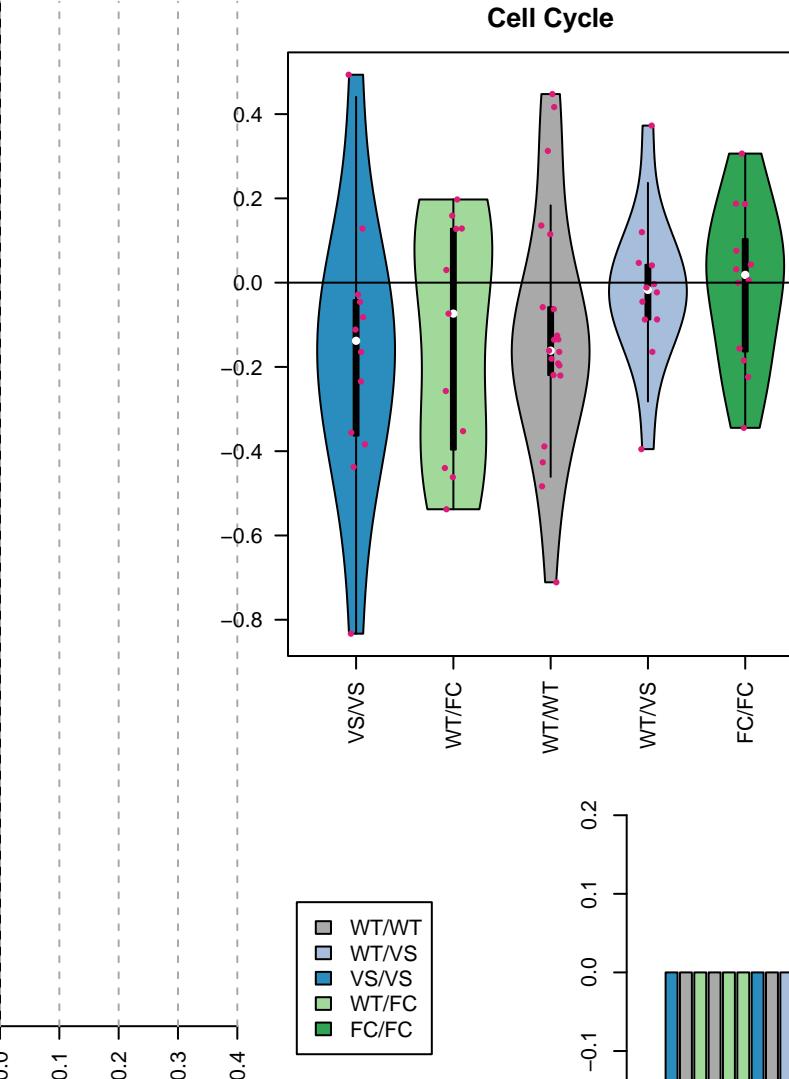


$R^2 = -0.022$

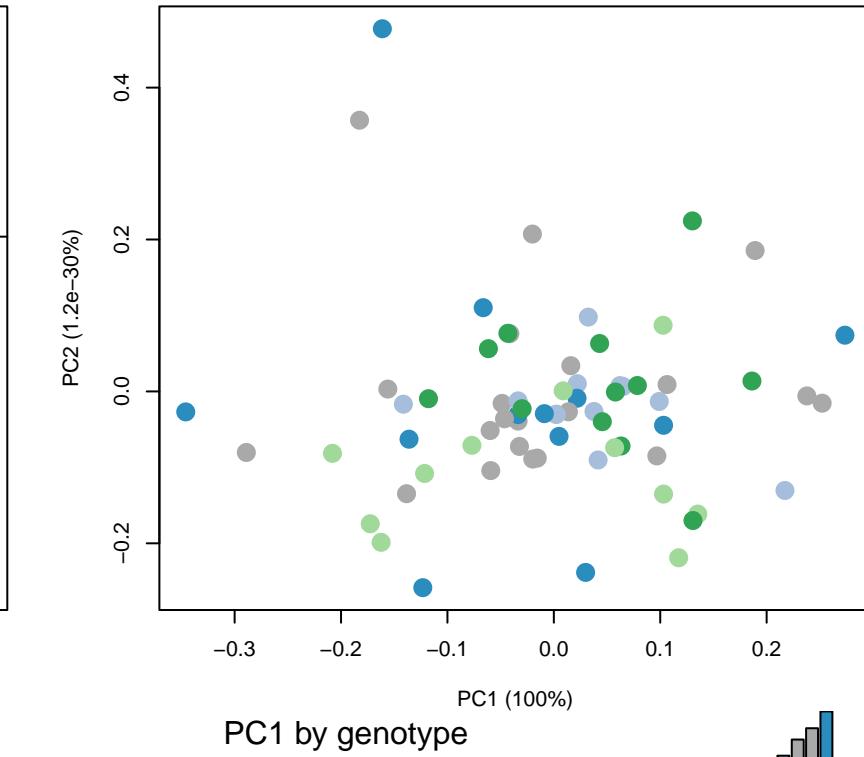
Non-homologous end-joining



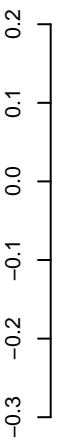
Cell Cycle



Decomposition

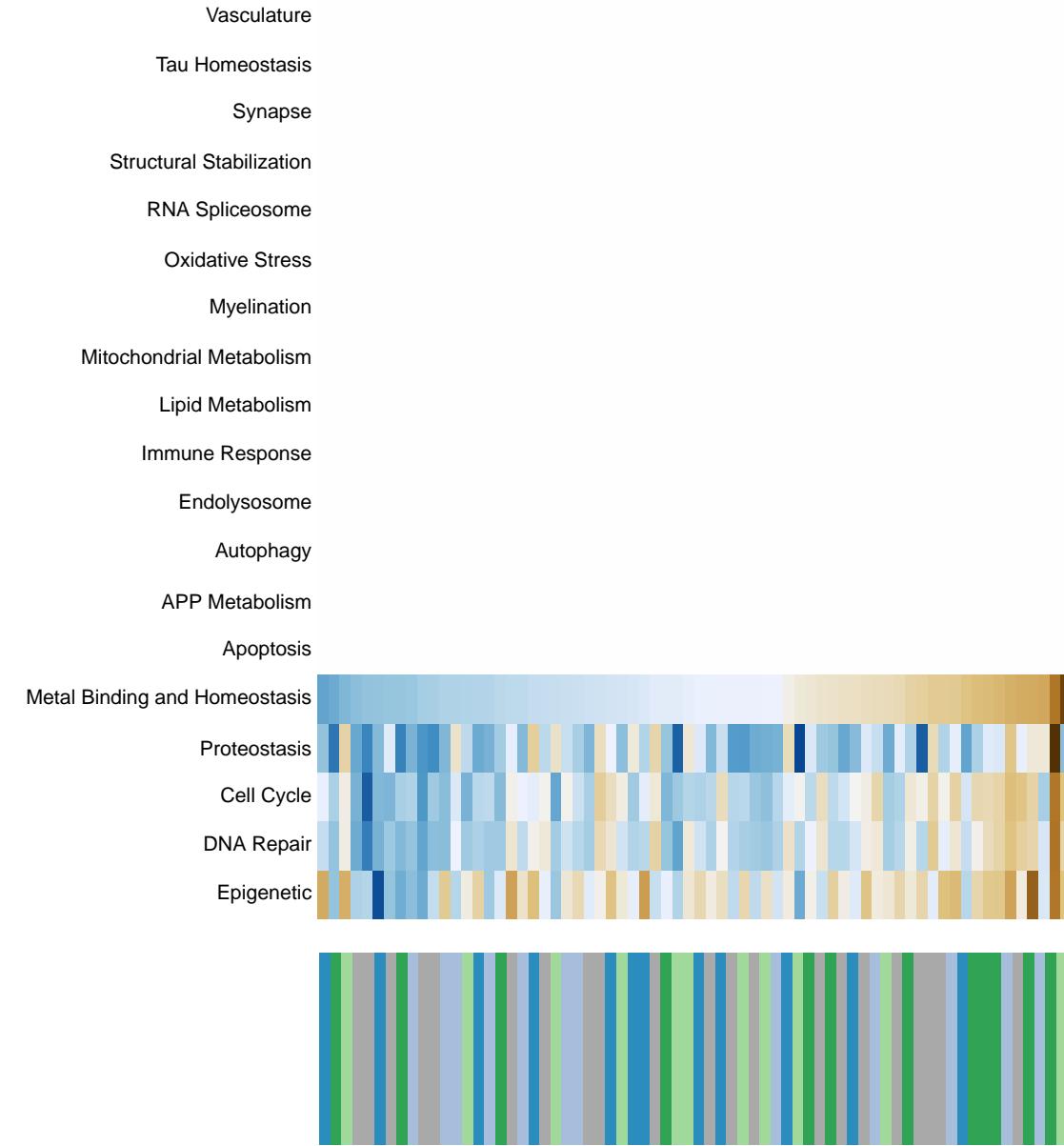


PC1 by genotype

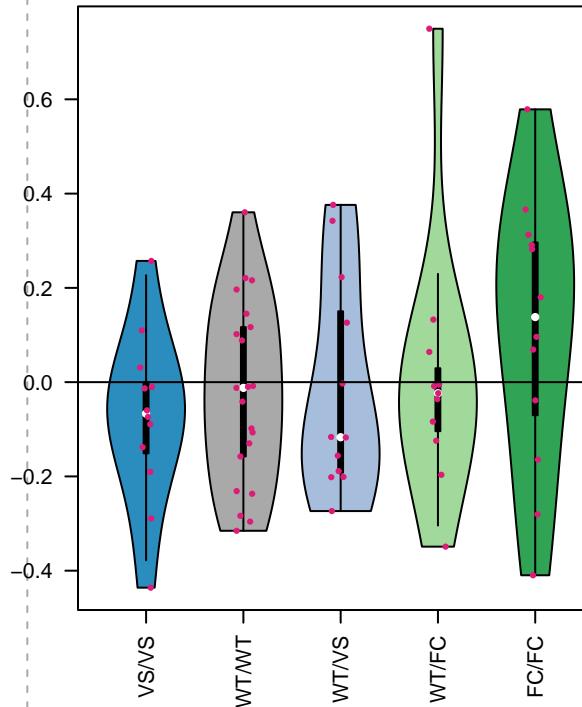


$R^2 = 0.016$

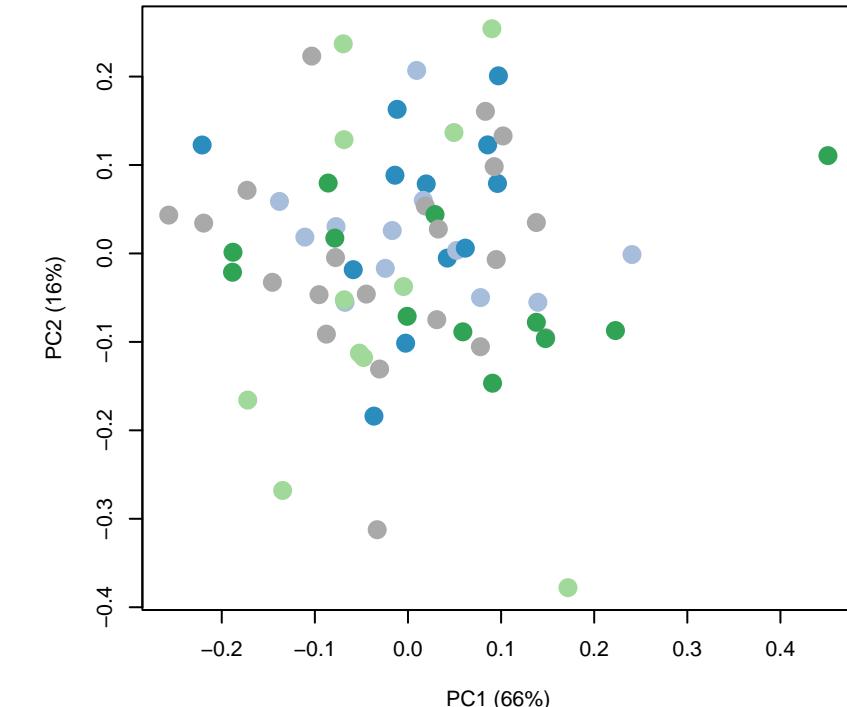
Fanconi anemia pathway



Metal Binding and Homeostasis

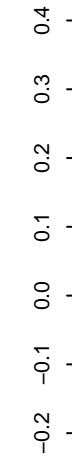


Decomposition

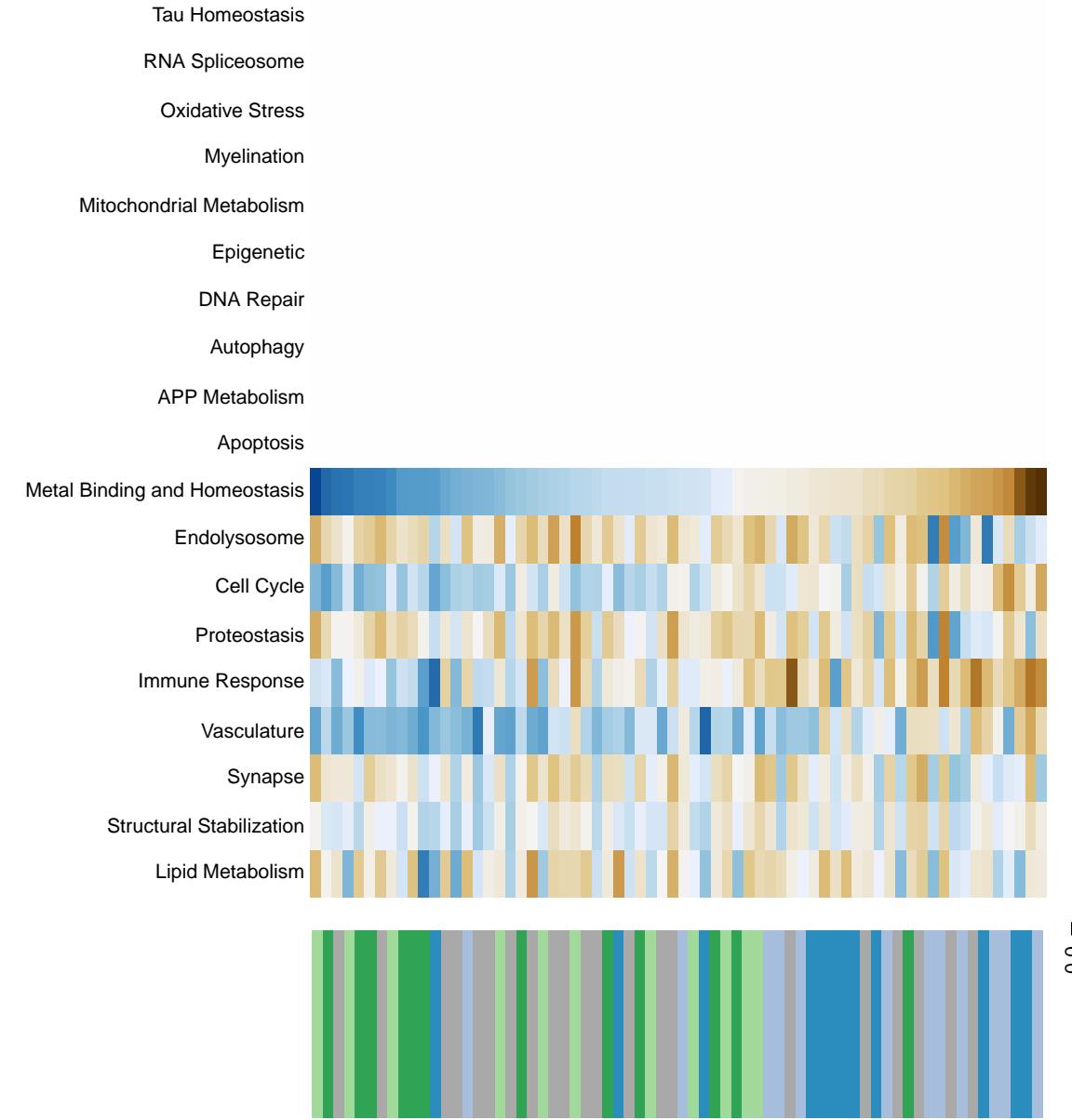


PC1 by genotype

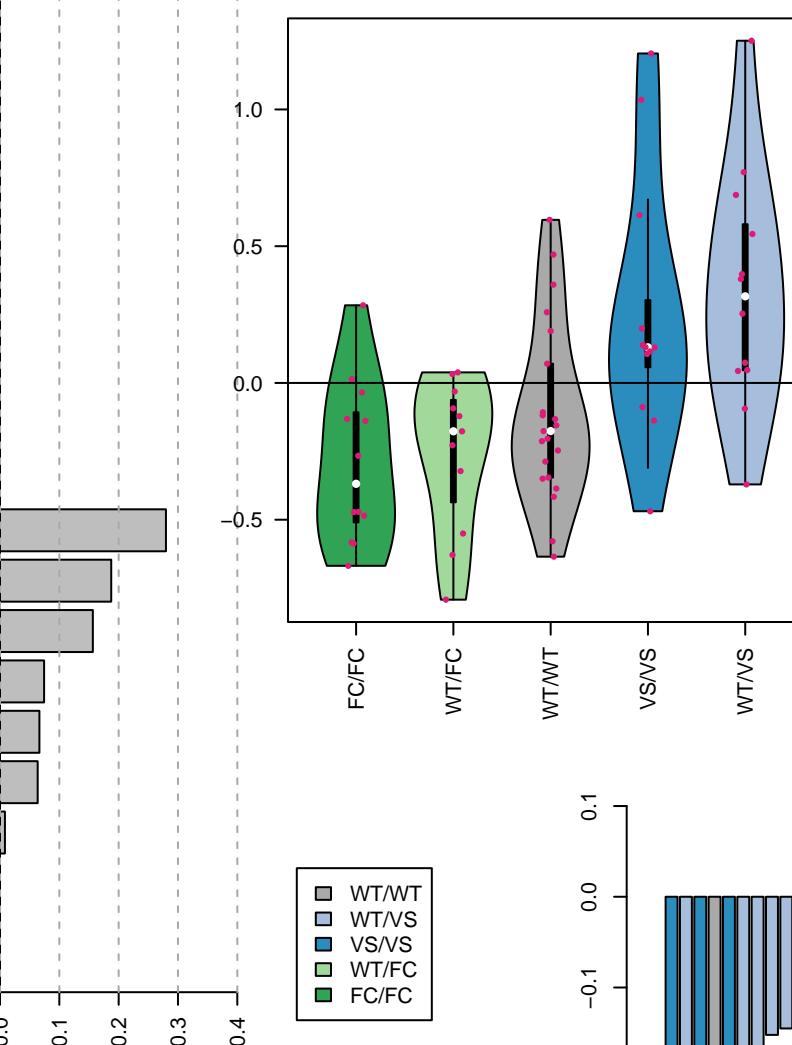
$R^2 = 0.041$



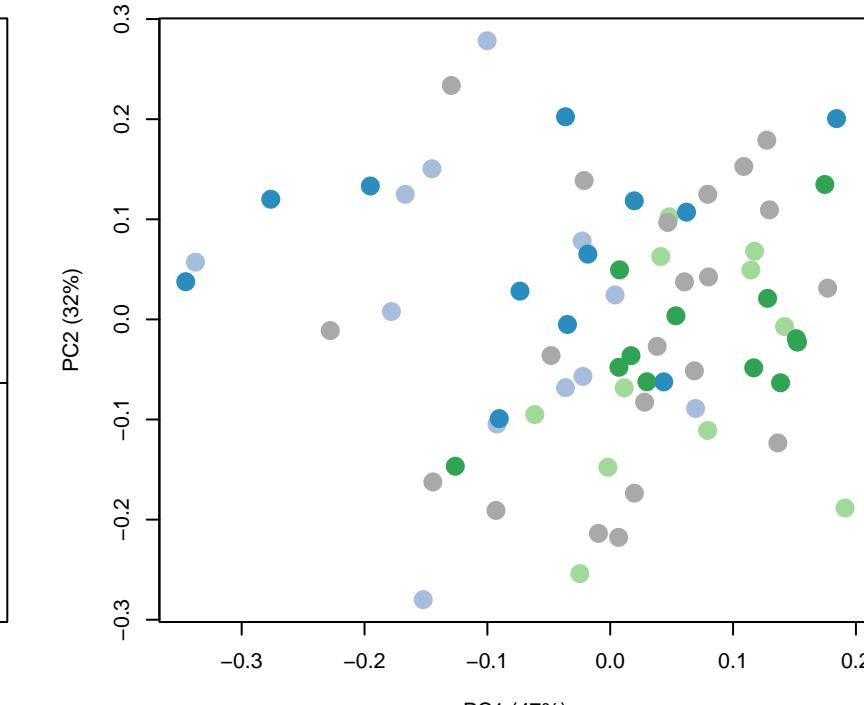
Motor proteins



Metal Binding and Homeostasis



Decomposition



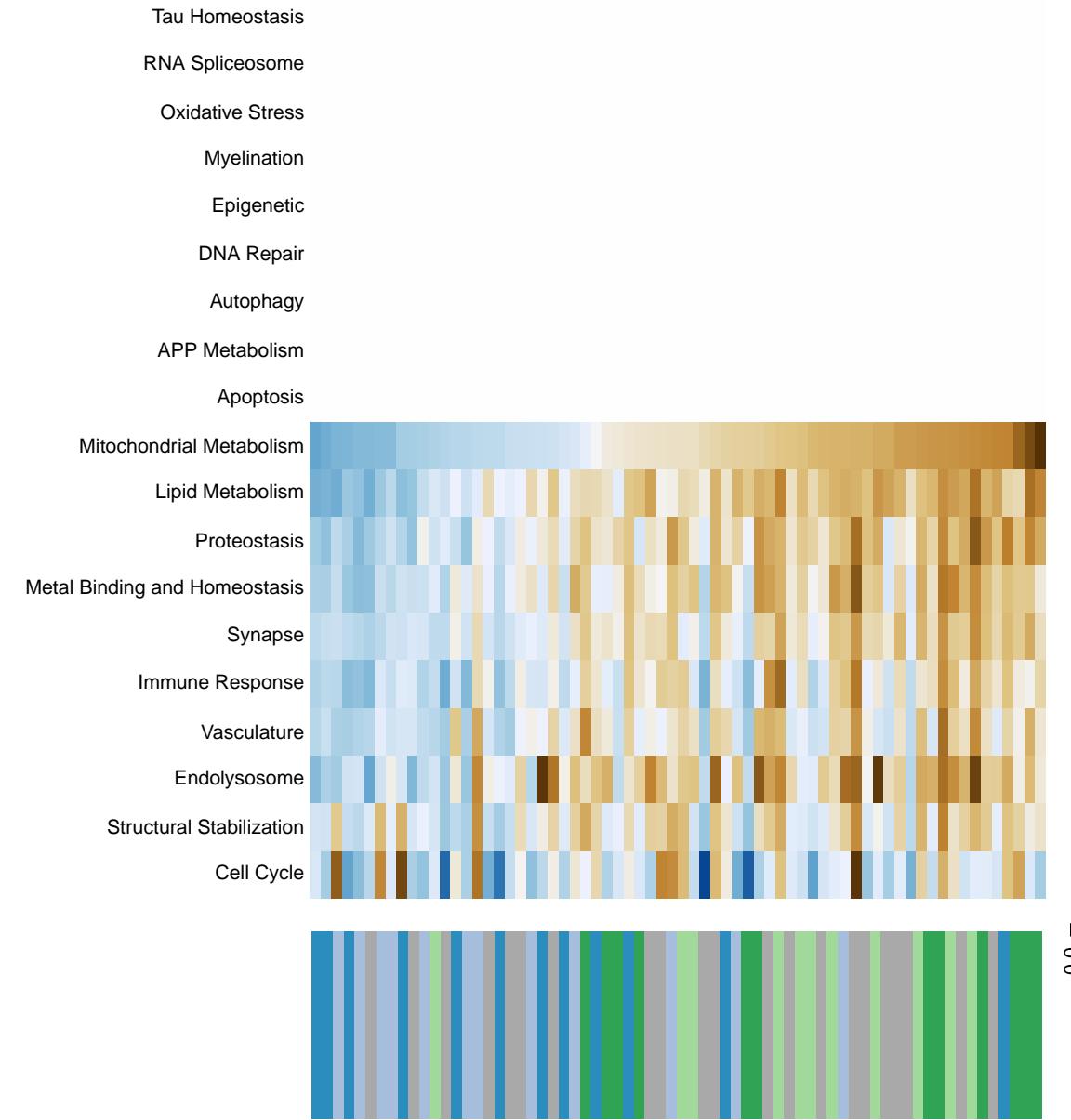
PC1 by genotype

$R^2 = 0.051$

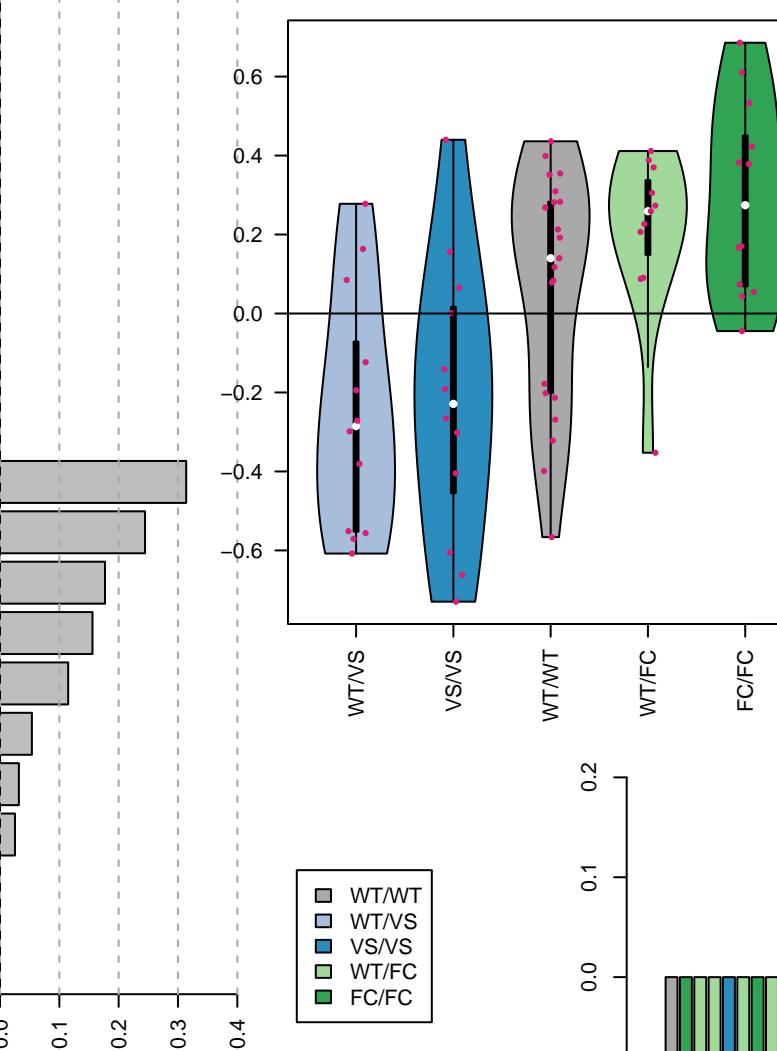
(This text is located at the bottom center of the PCA plot area)

(This text is located at the bottom center of the PCA plot area)

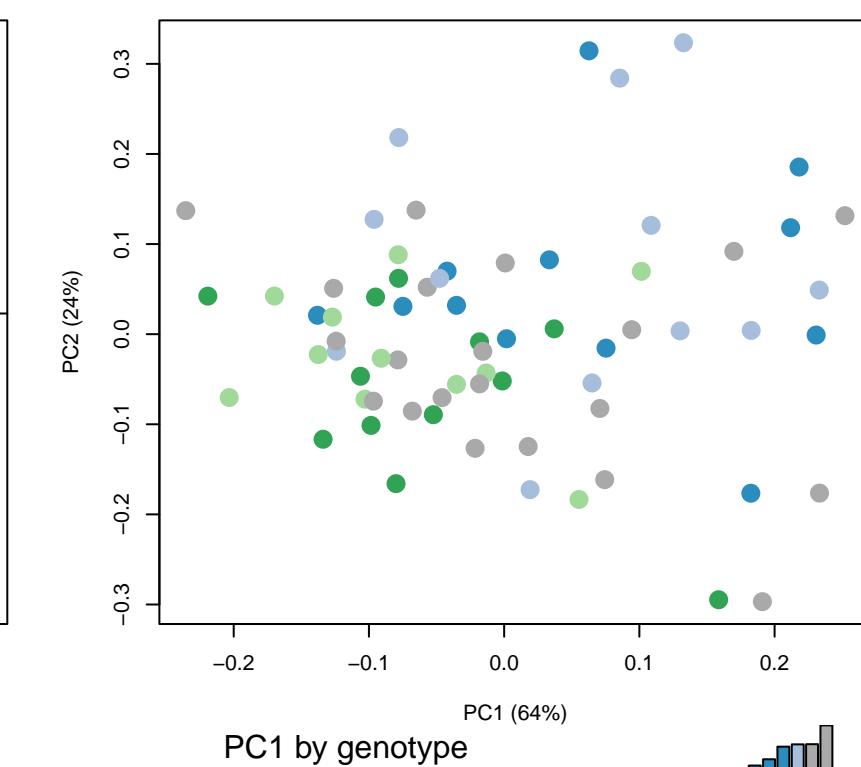
Gastric acid secretion



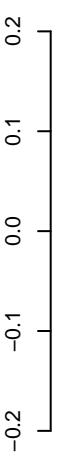
Mitochondrial Metabolism



Decomposition



PC1 by genotype



$R^2 = 0.013$

Vasopressin-regulated water reabsorption

Vasculature

Tau Homeostasis

RNA Spliceosome

Oxidative Stress

Myelination

Mitochondrial Metabolism

Metal Binding and Homeostasis

Lipid Metabolism

Epigenetic

DNA Repair

Autophagy

APP Metabolism

Apoptosis

Endolysosome

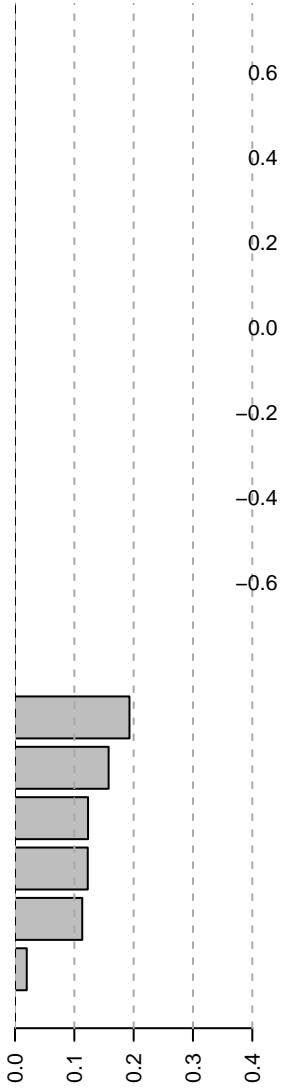
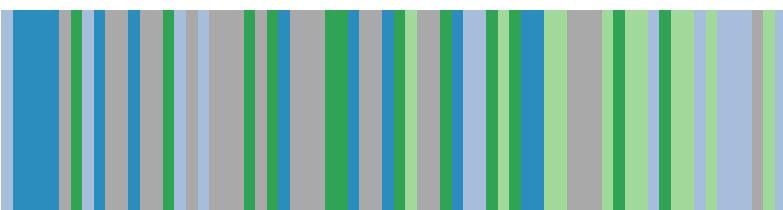
Immune Response

Cell Cycle

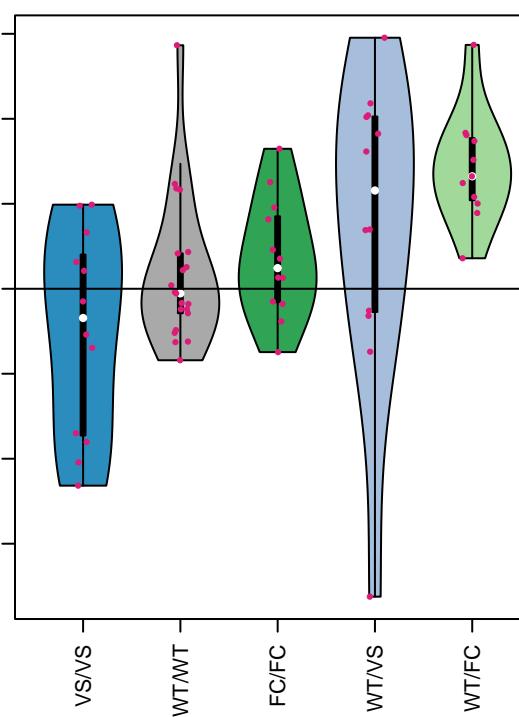
Structural Stabilization

Synapse

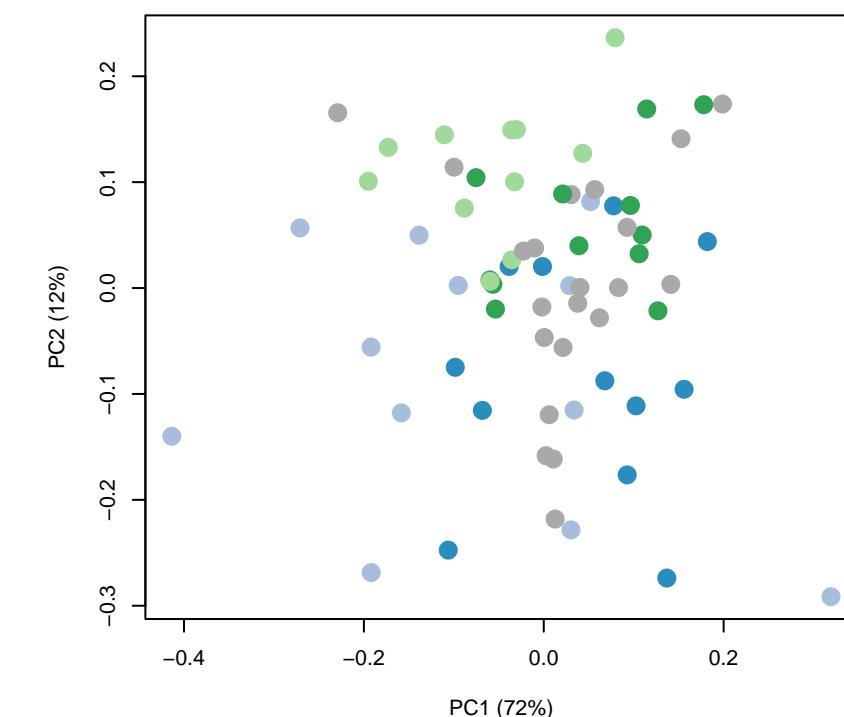
Proteostasis



Endolysosome

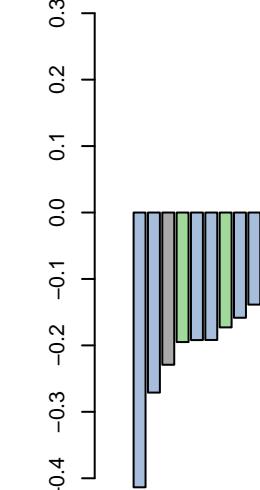


Decomposition

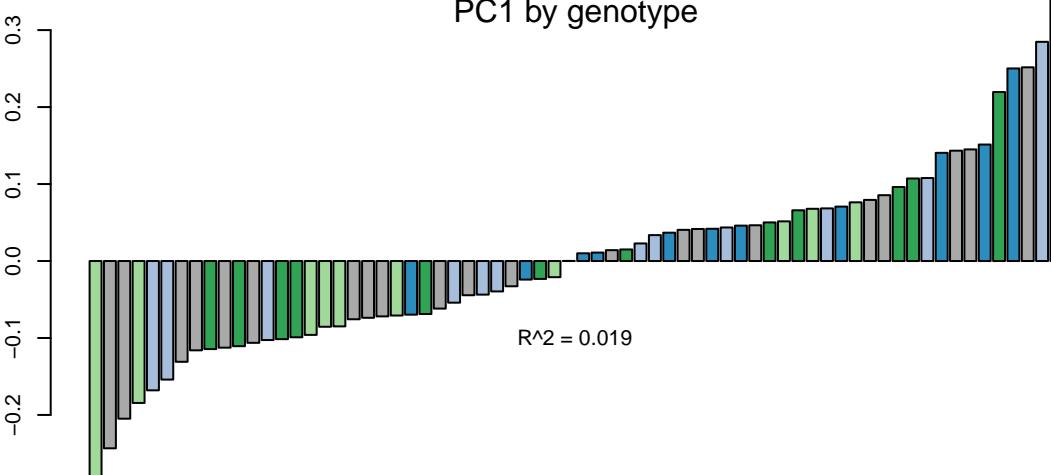
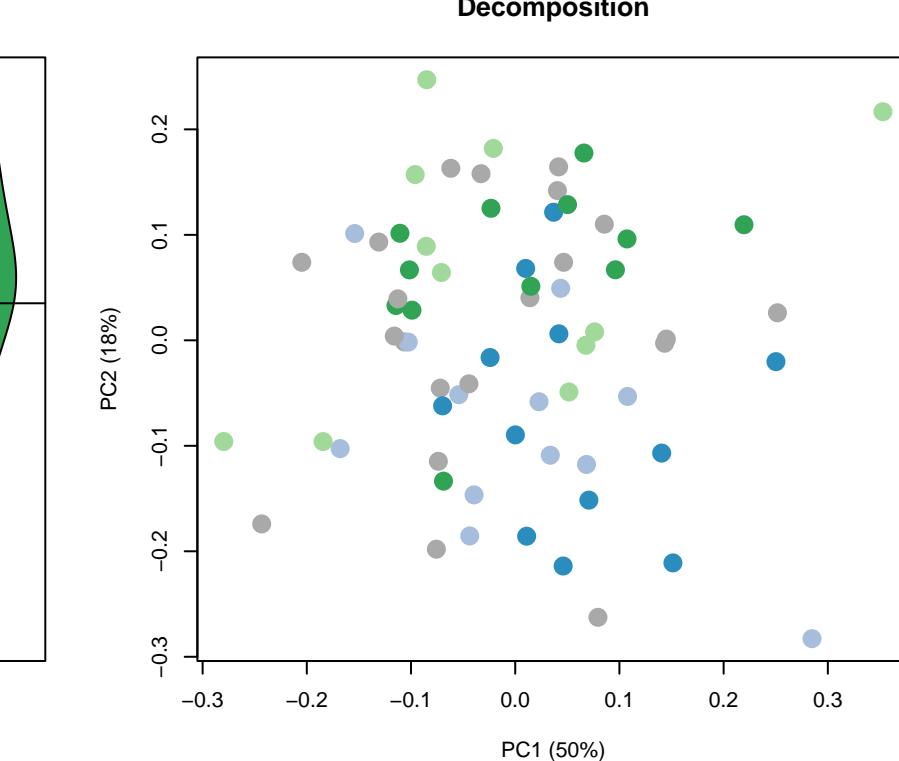
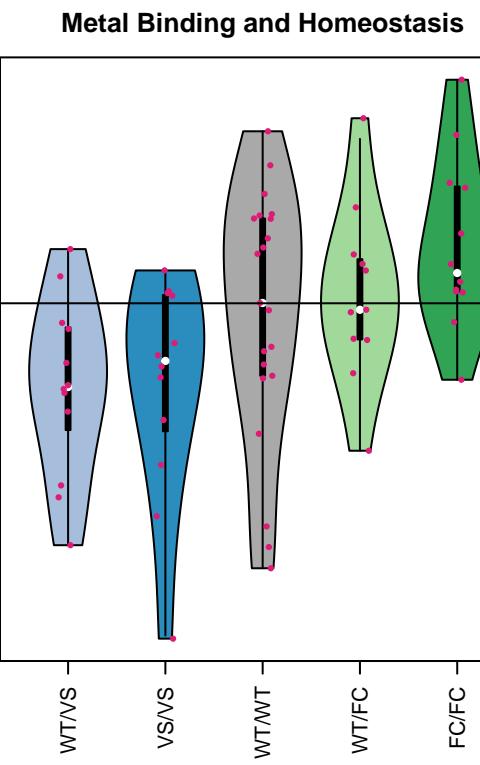
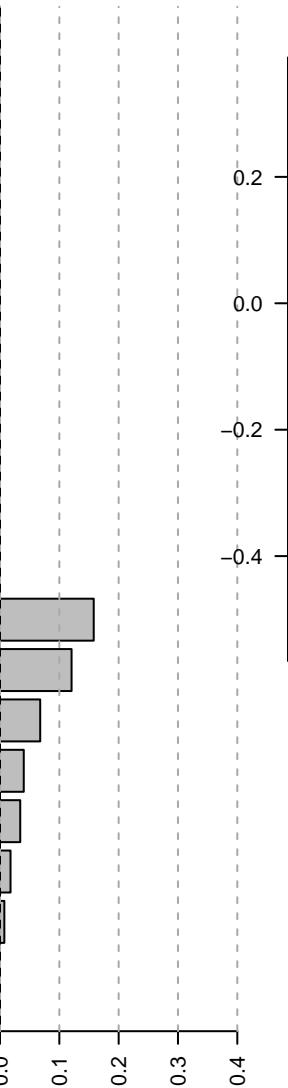
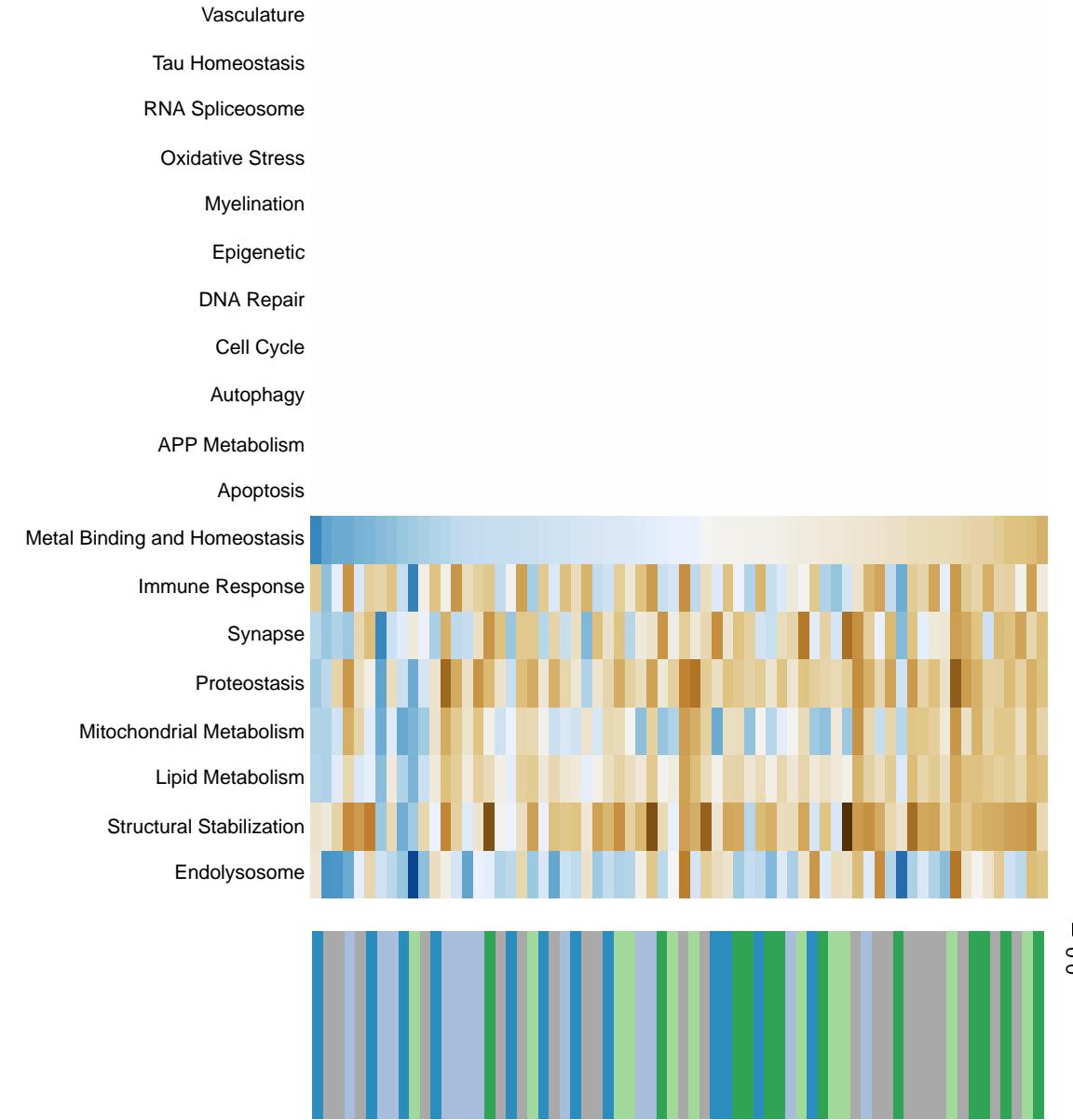


PC1 by genotype

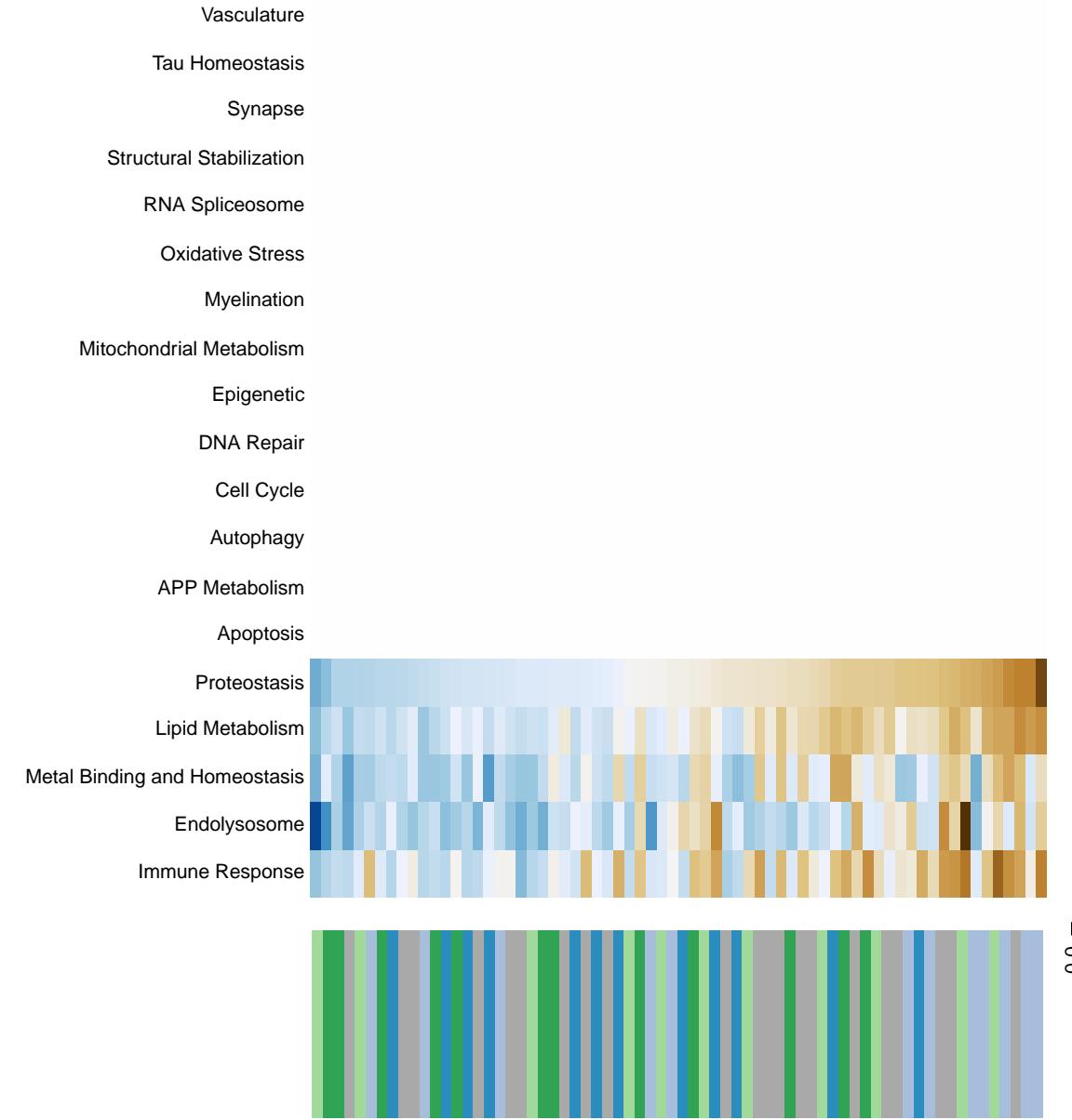
$R^2 = 0.063$



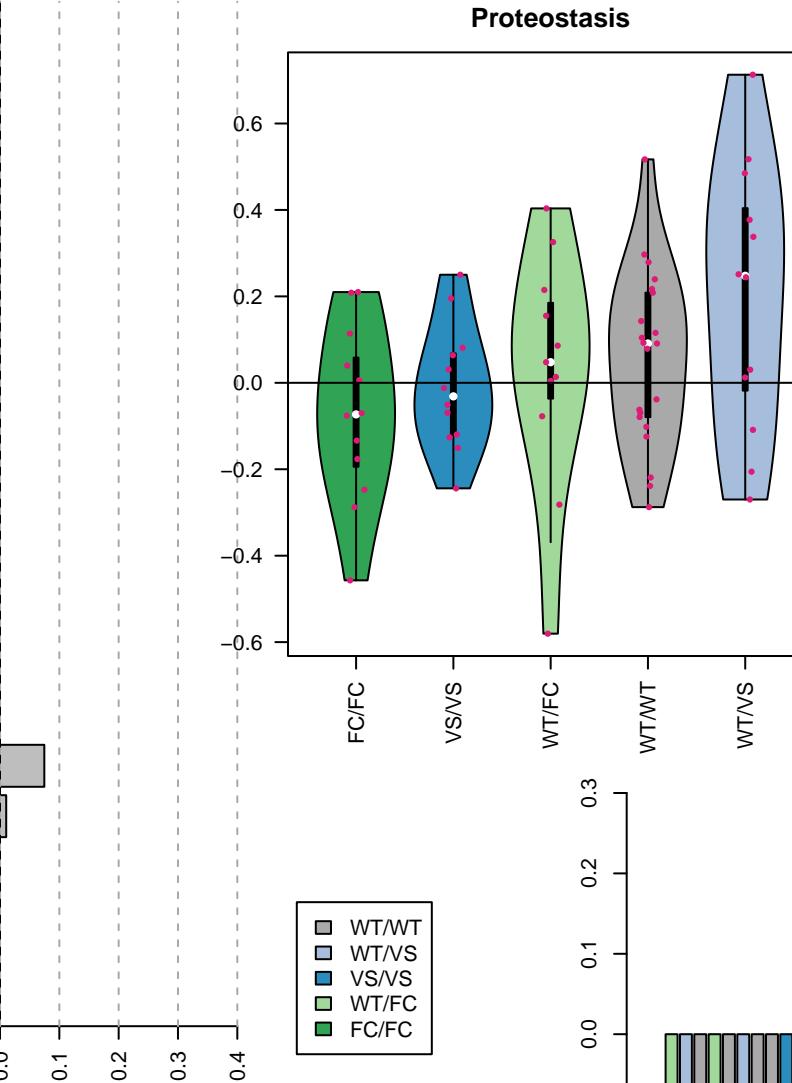
Glycerophospholipid metabolism



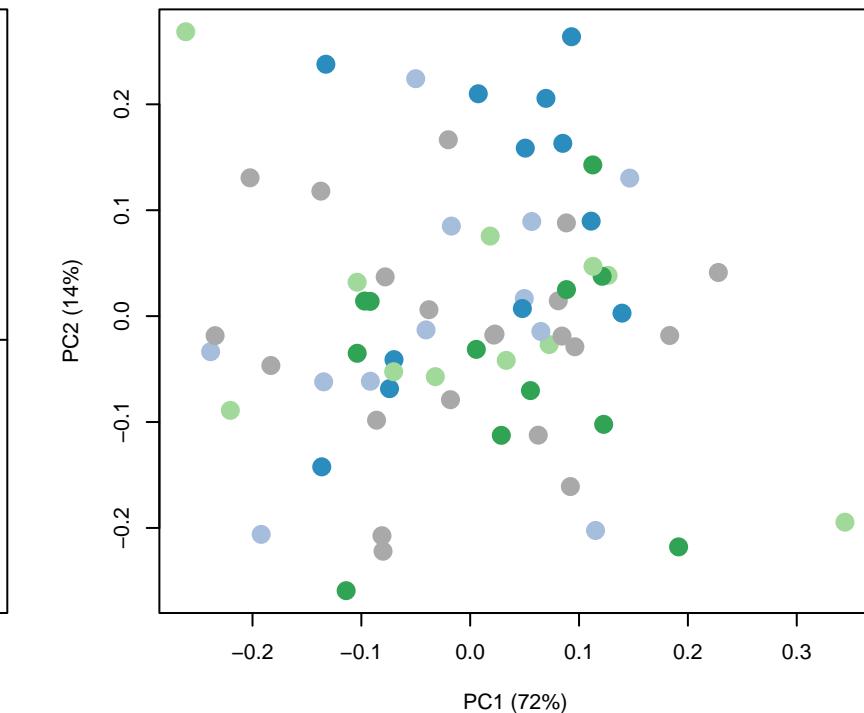
Ether lipid metabolism



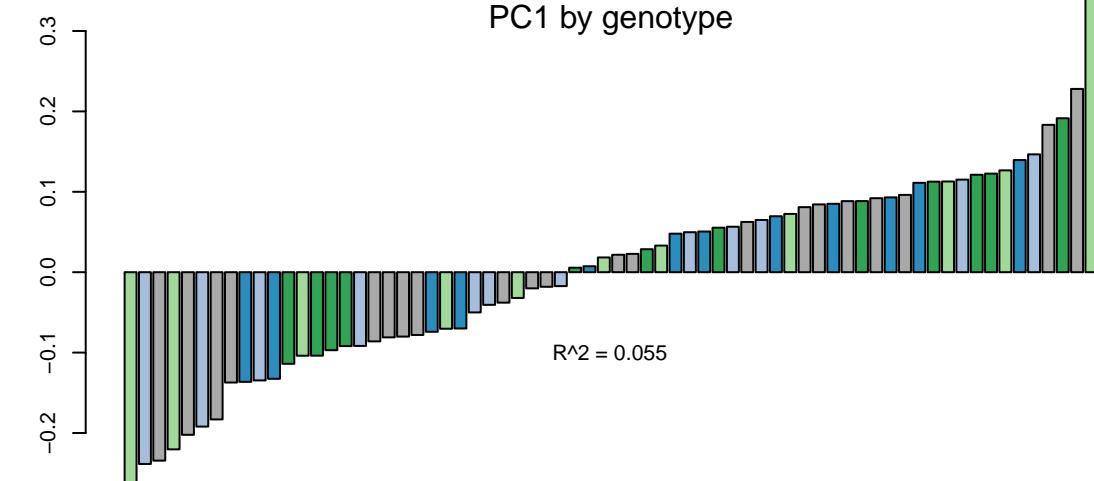
Proteostasis



Decomposition



PC1 by genotype



Glycosaminoglycan degradation

Vasculature

Tau Homeostasis

Synapse

Structural Stabilization

RNA Spliceosome

Proteostasis

Oxidative Stress

Myelination

Mitochondrial Metabolism

Metal Binding and Homeostasis

Lipid Metabolism

Immune Response

Epigenetic

DNA Repair

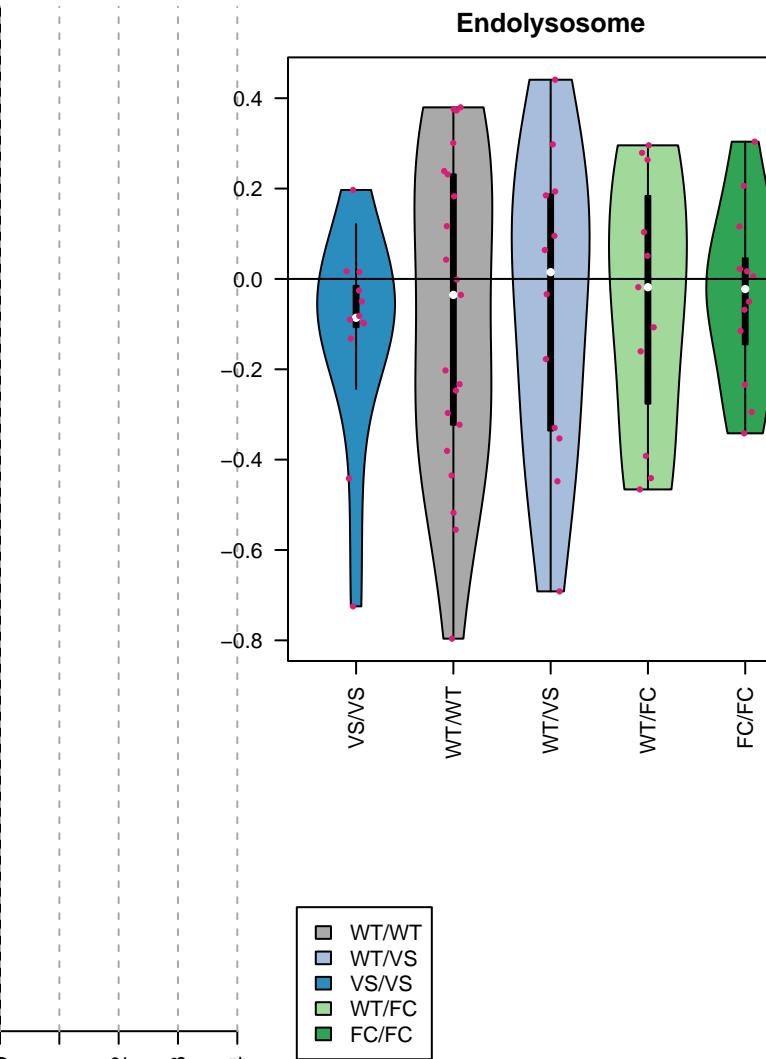
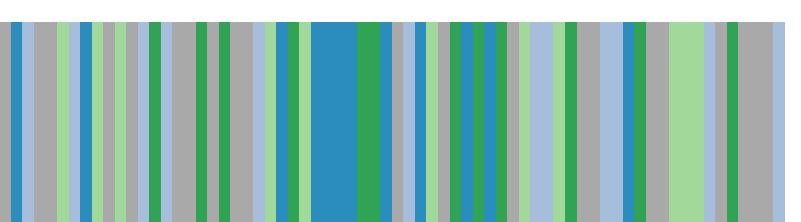
Cell Cycle

Autophagy

APP Metabolism

Apoptosis

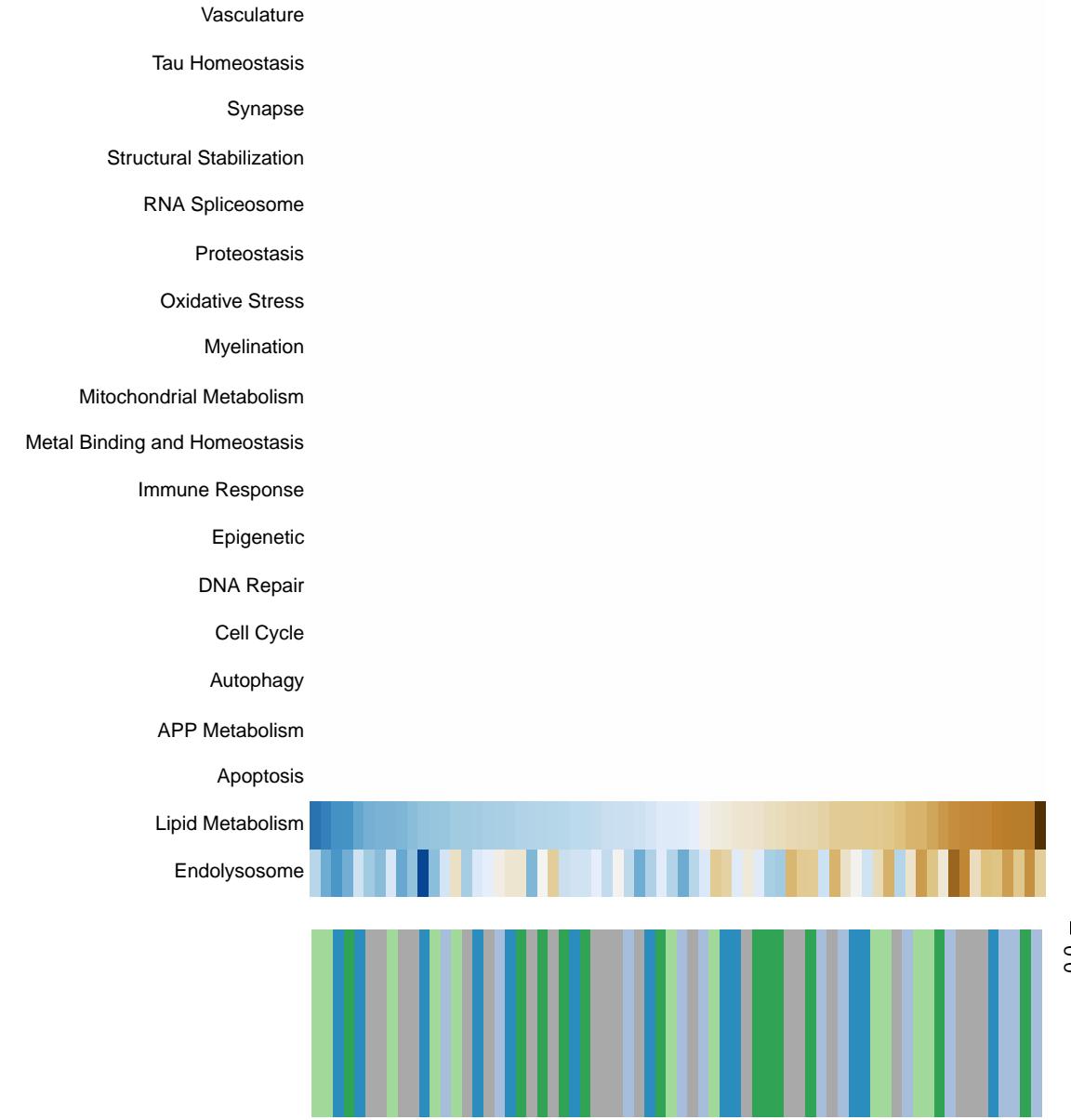
Endolysosome



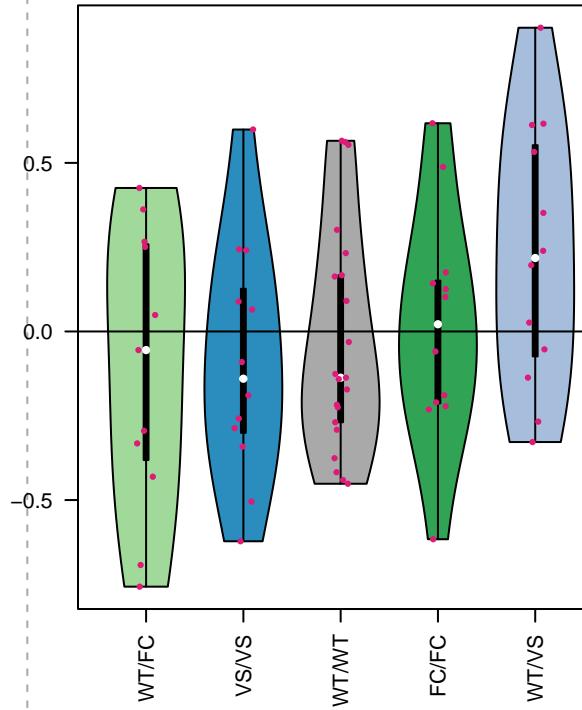
Not enough rows to decompose

Not enough rows to decompose

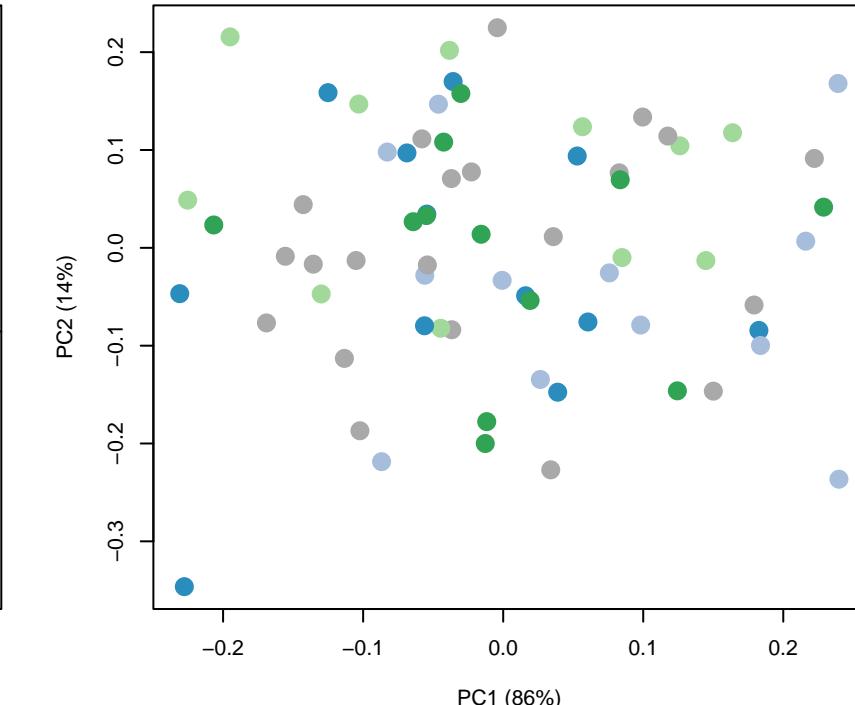
Other glycan degradation



Lipid Metabolism

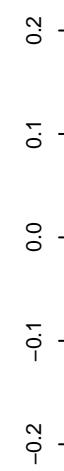


Decomposition

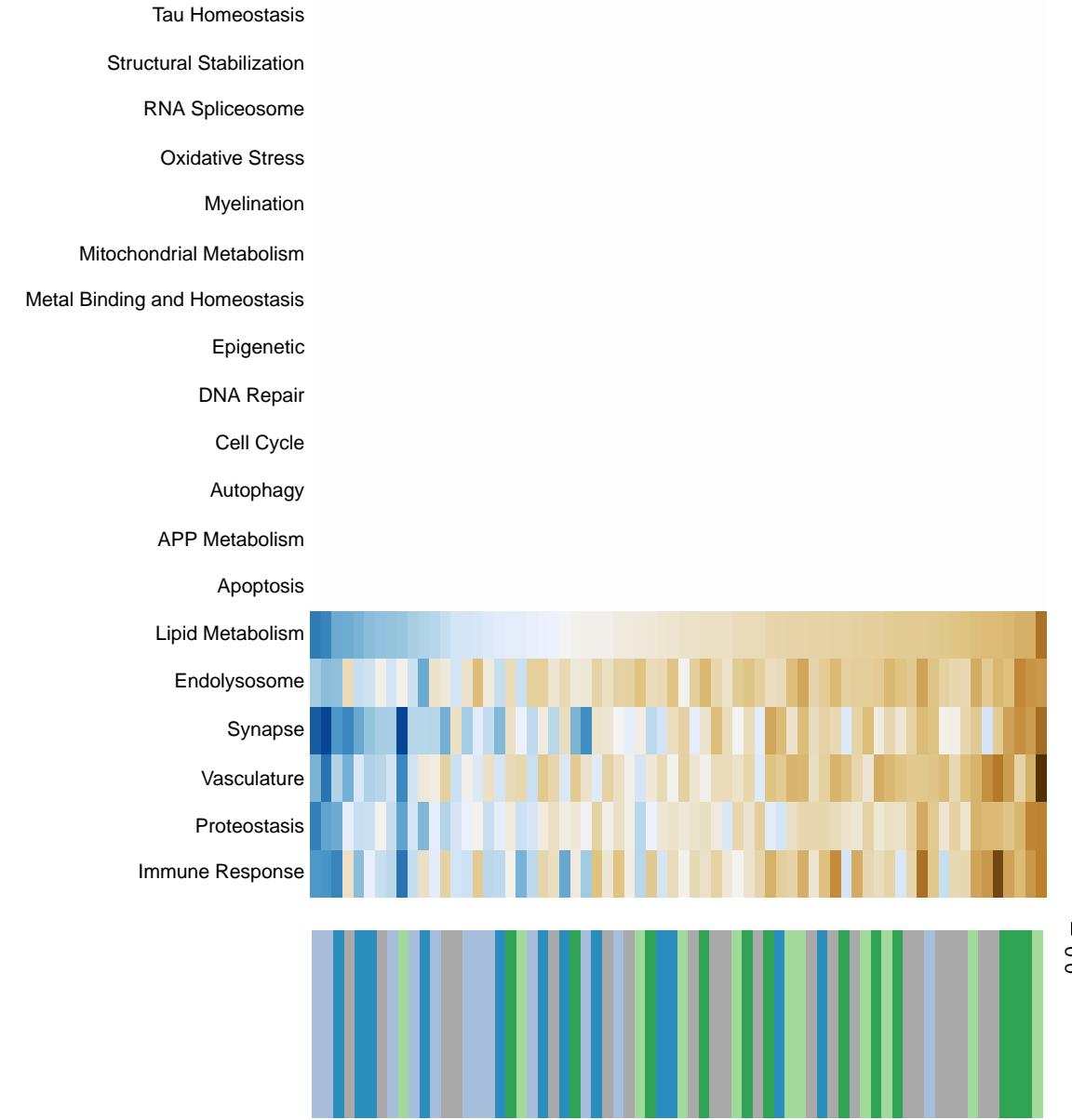


PC1 by genotype

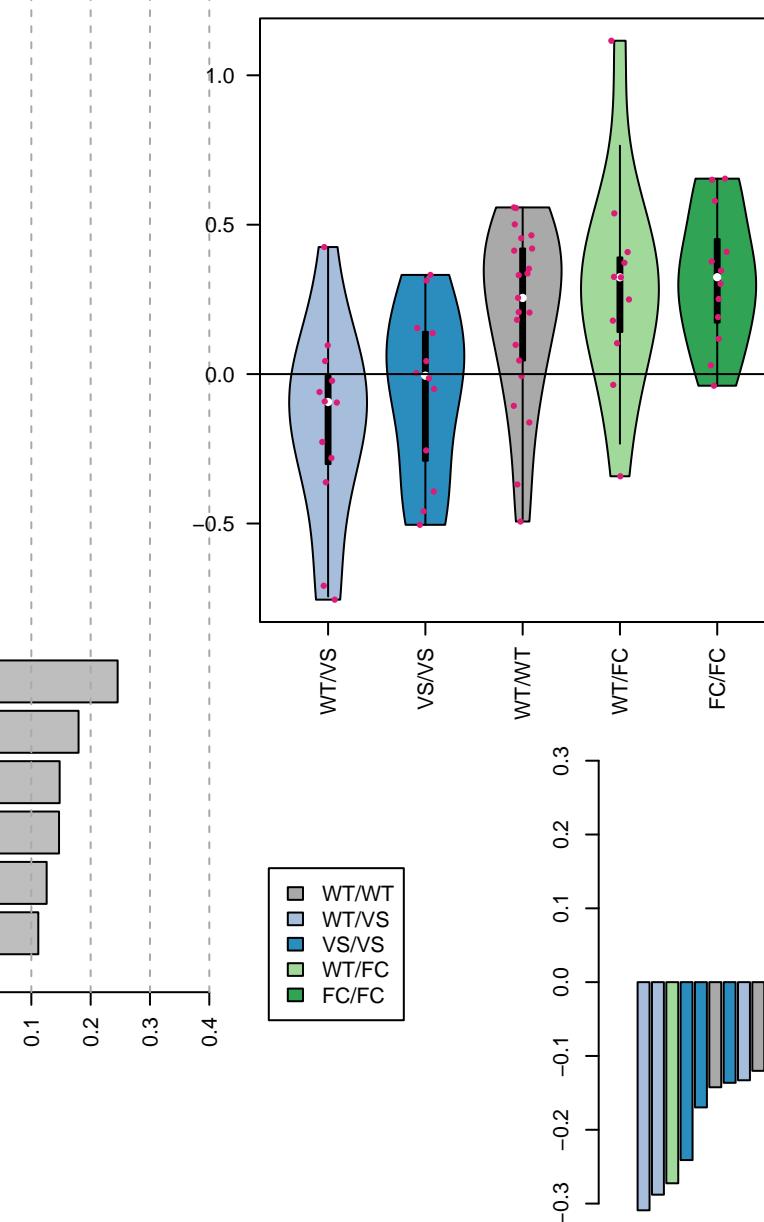
$$R^2 = -0.014$$



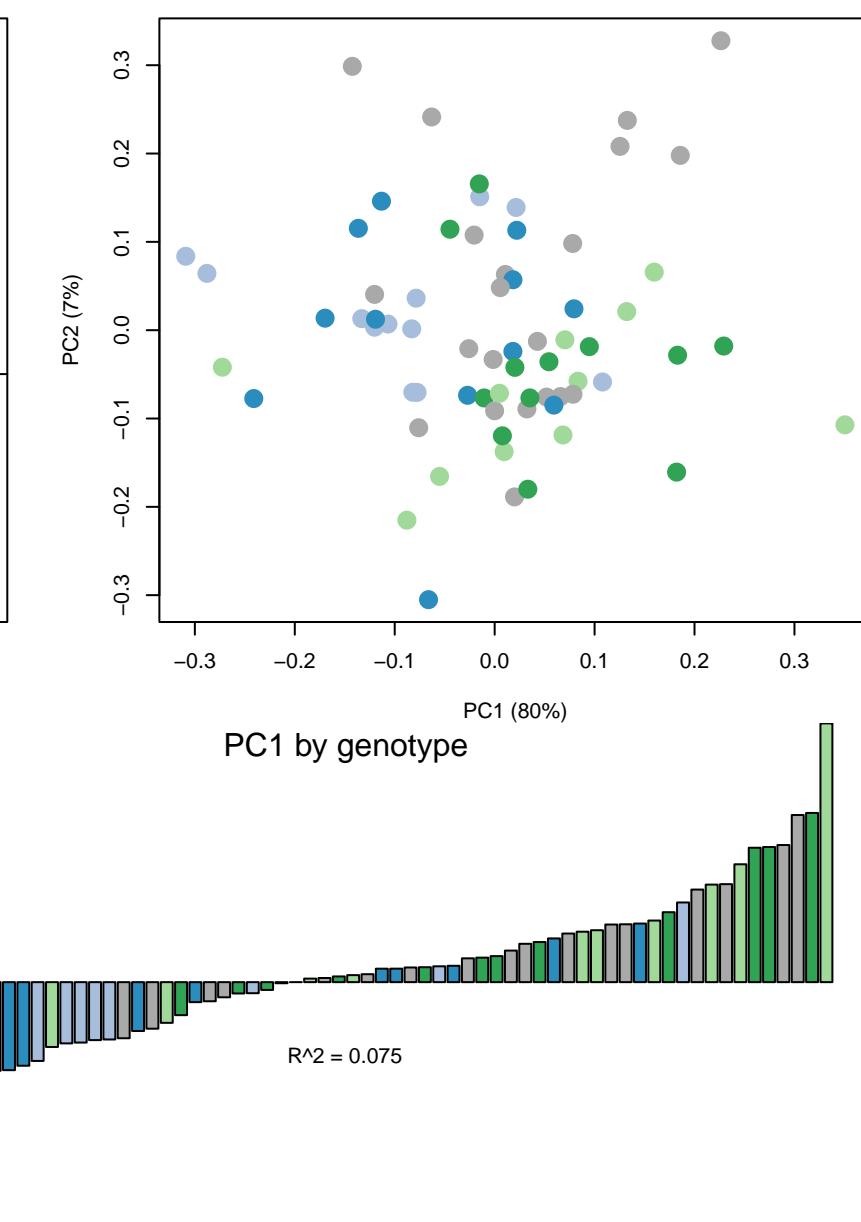
ABC transporters



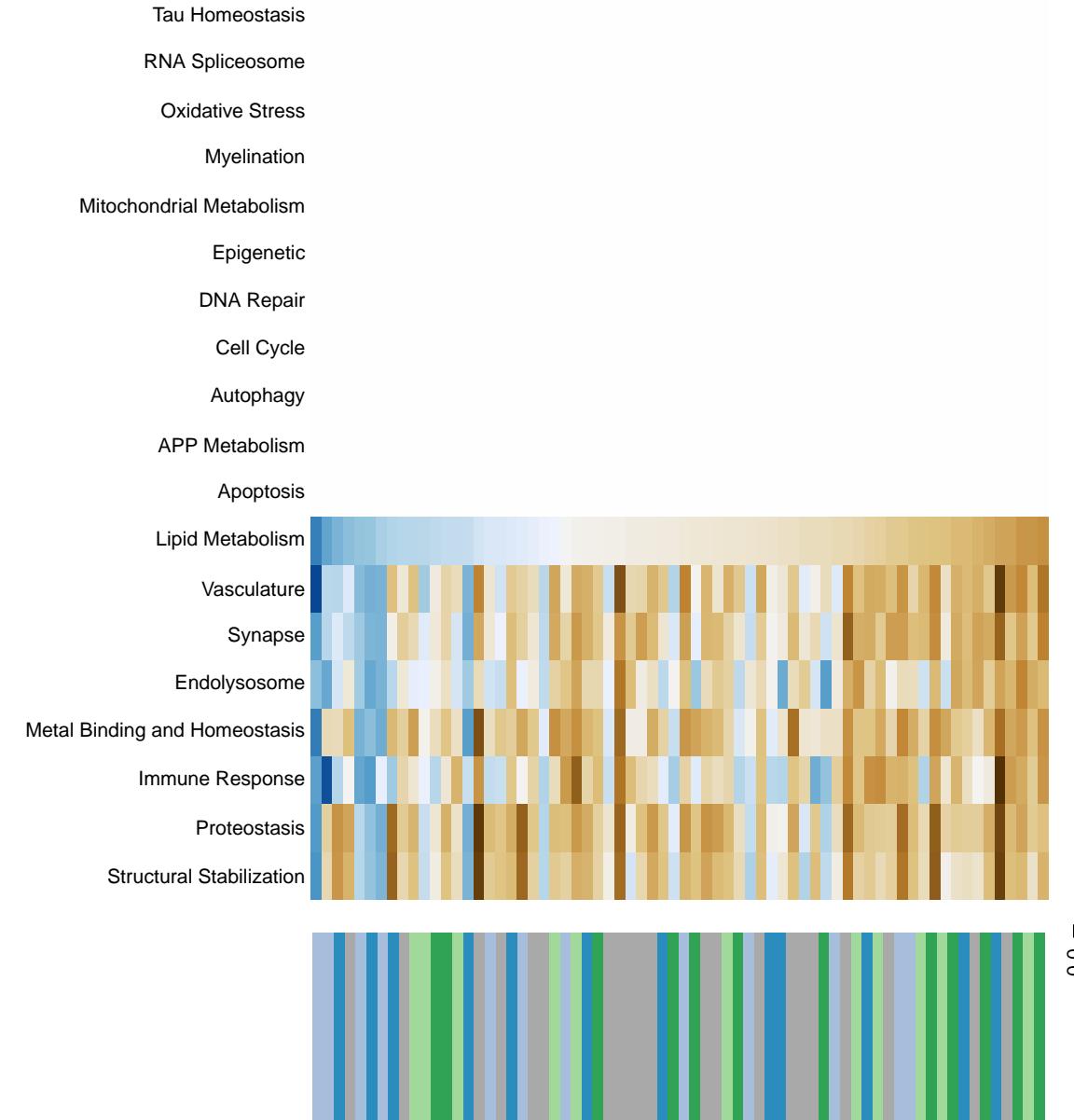
Lipid Metabolism



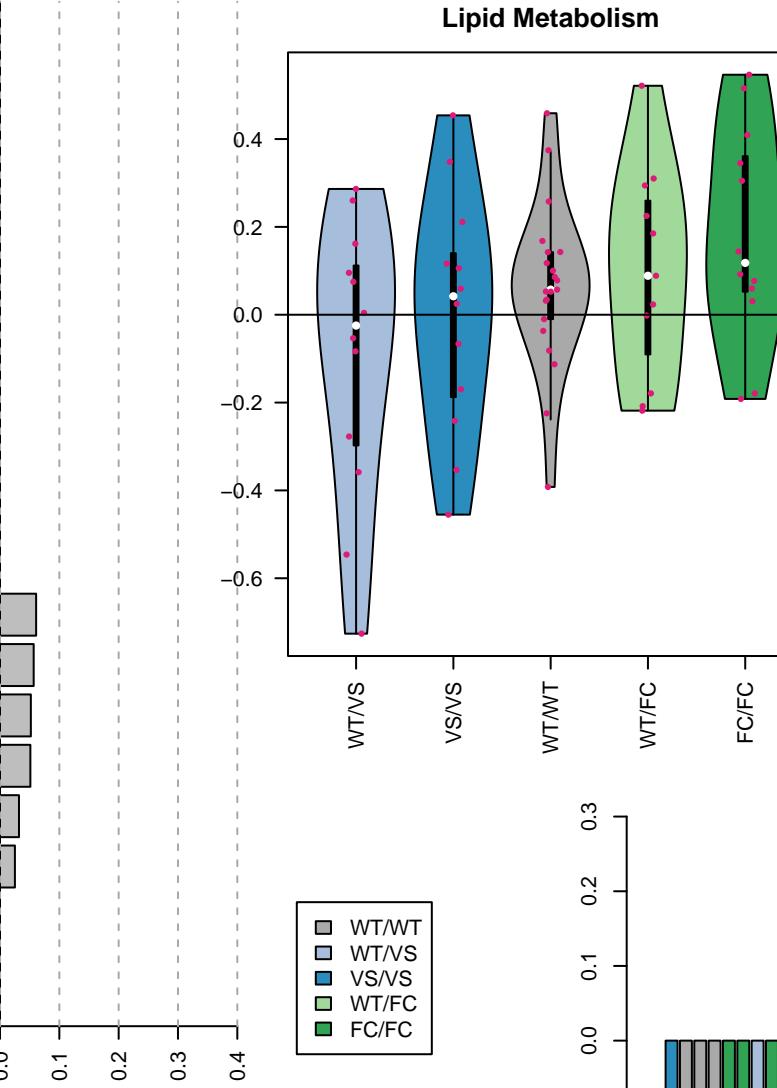
Decomposition



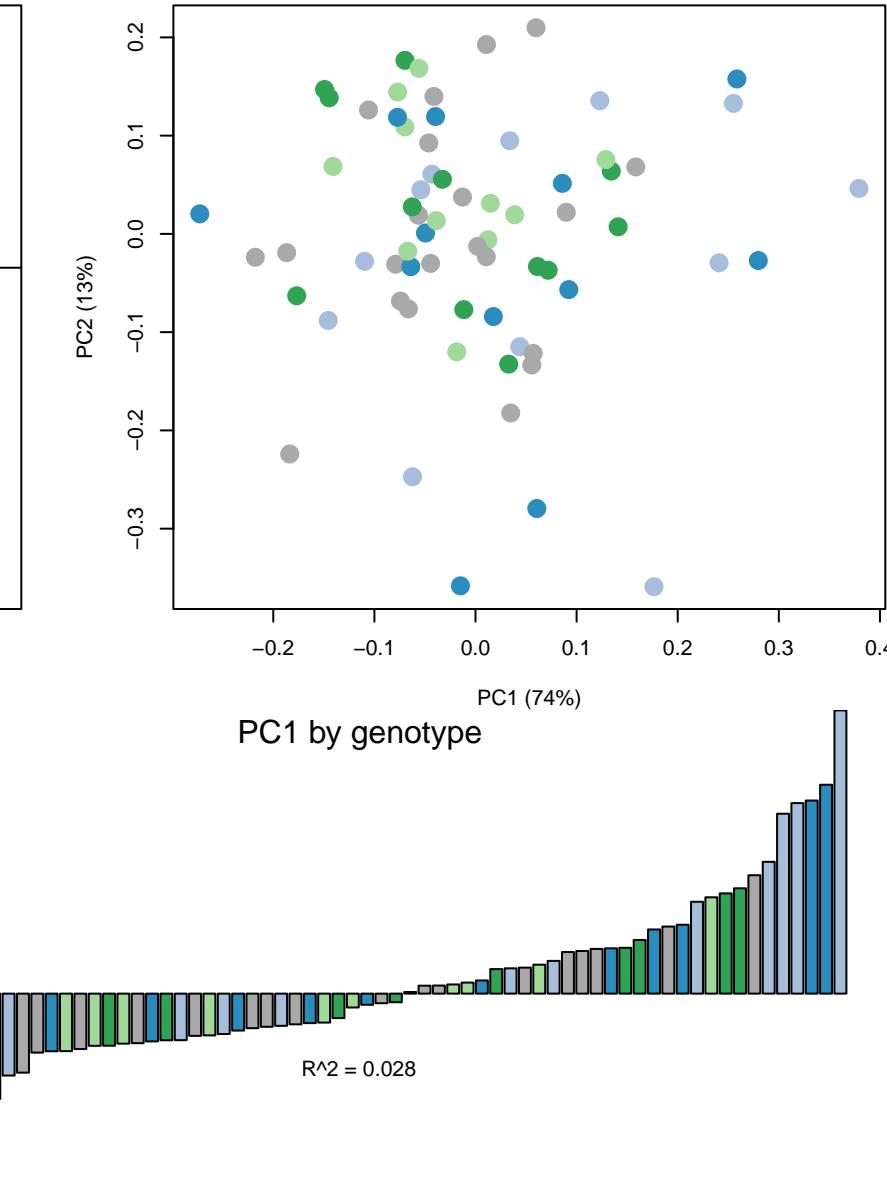
Protein digestion and absorption



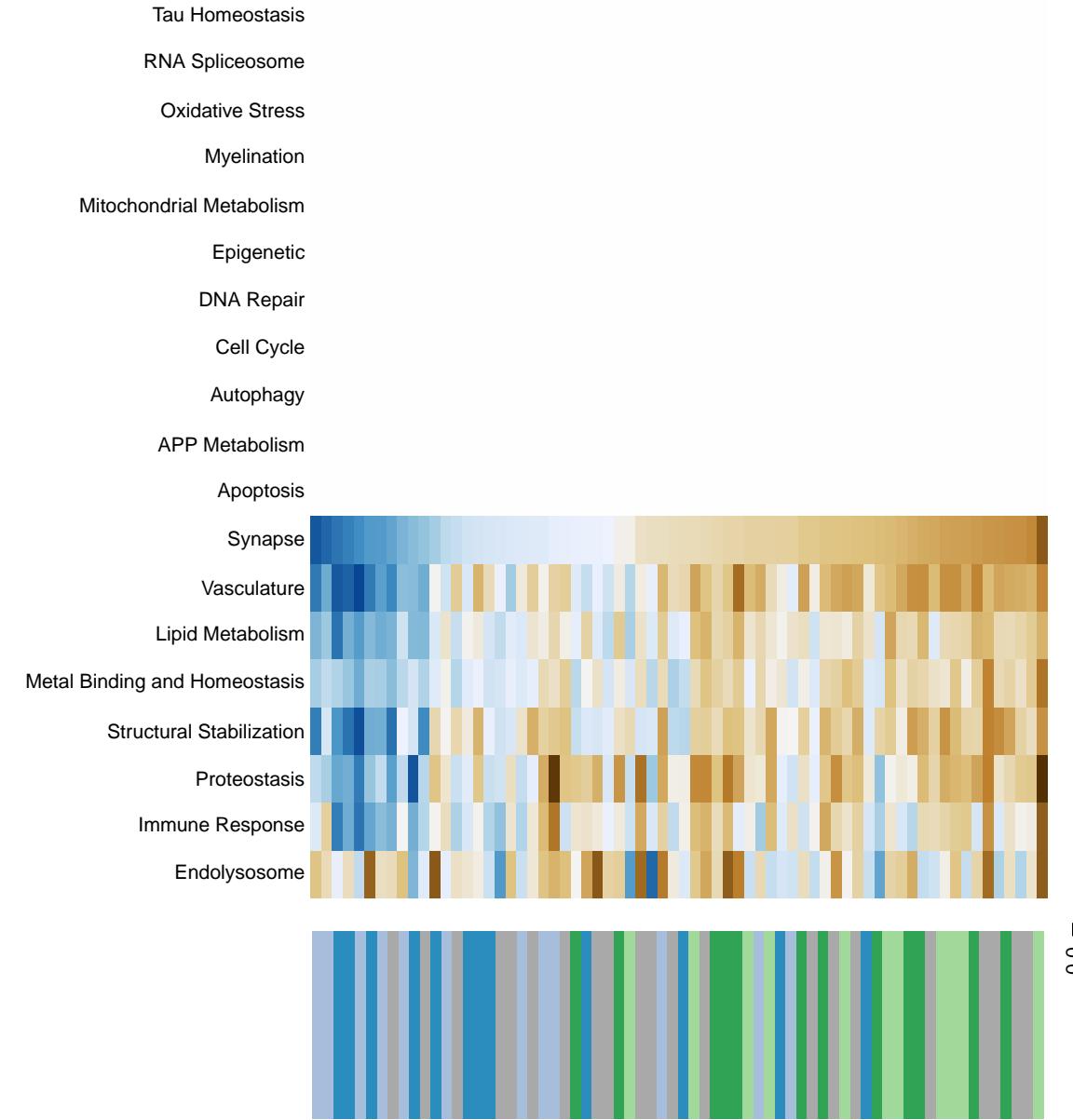
Lipid Metabolism



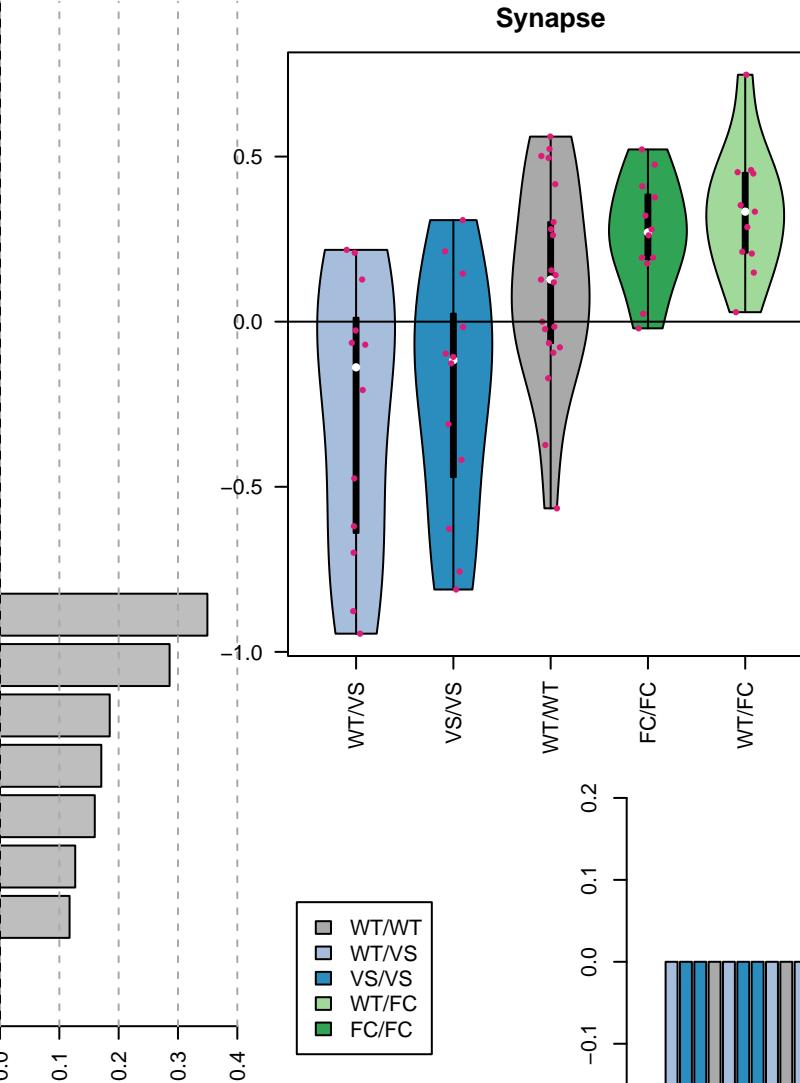
Decomposition



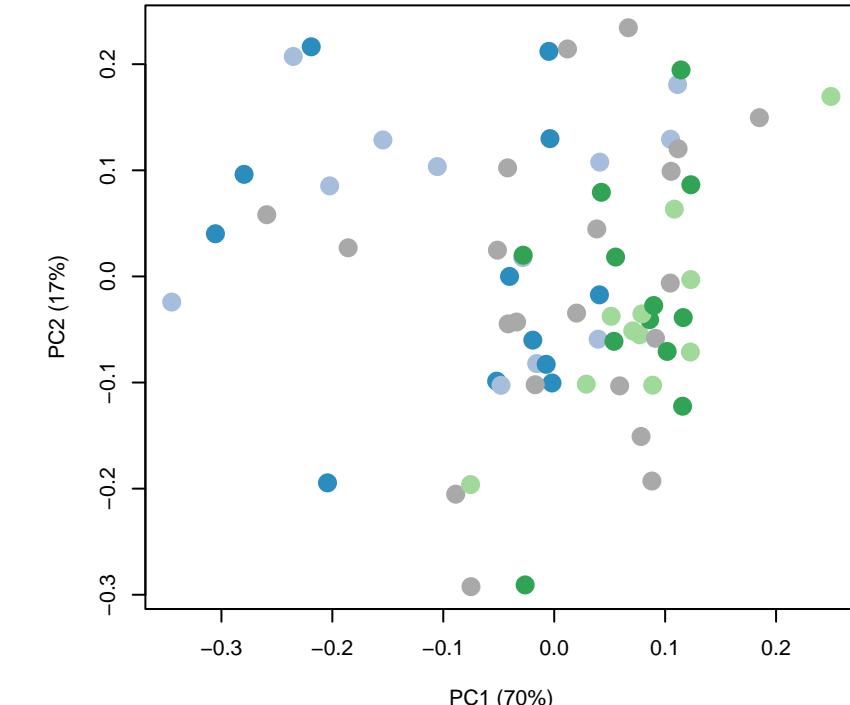
Mineral absorption



Synapse



Decomposition

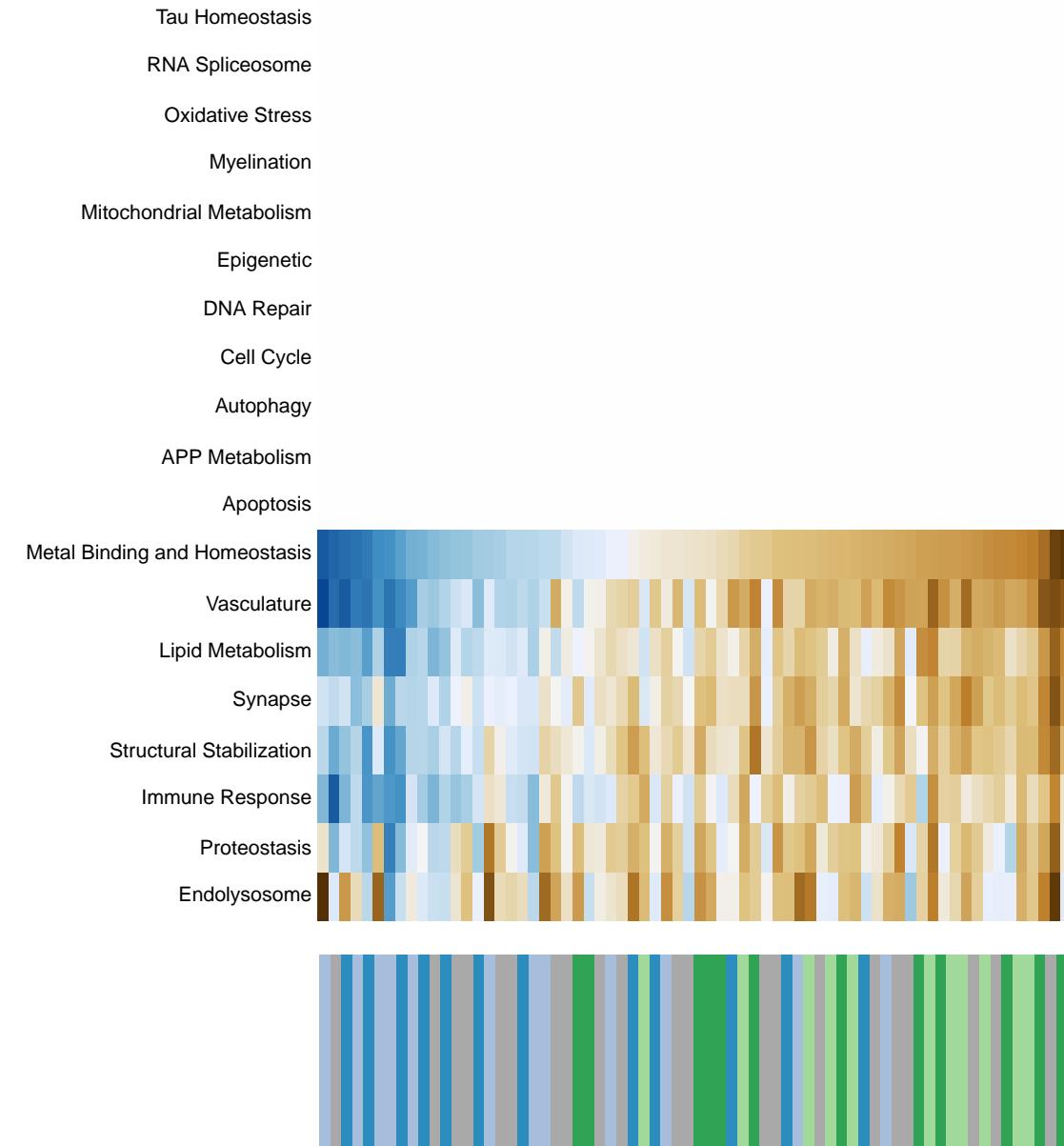


PC1 by genotype

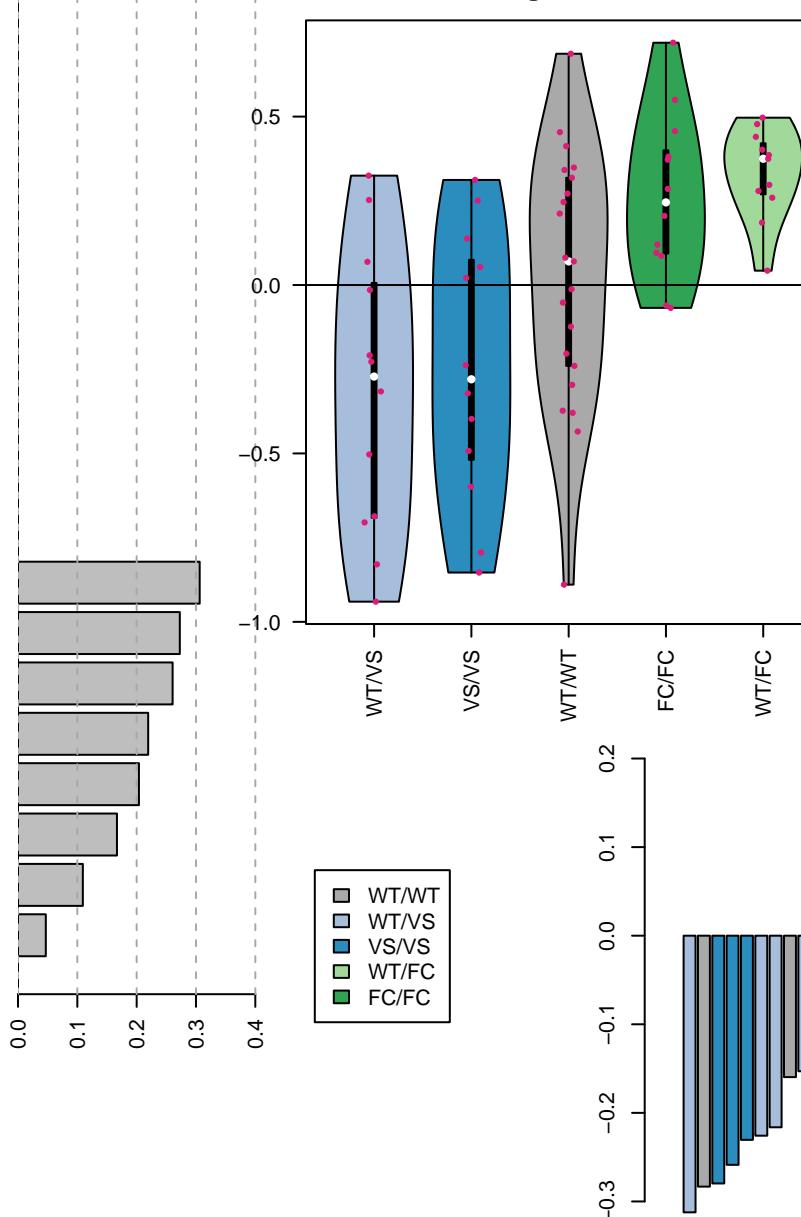
$R^2 = 0.13$



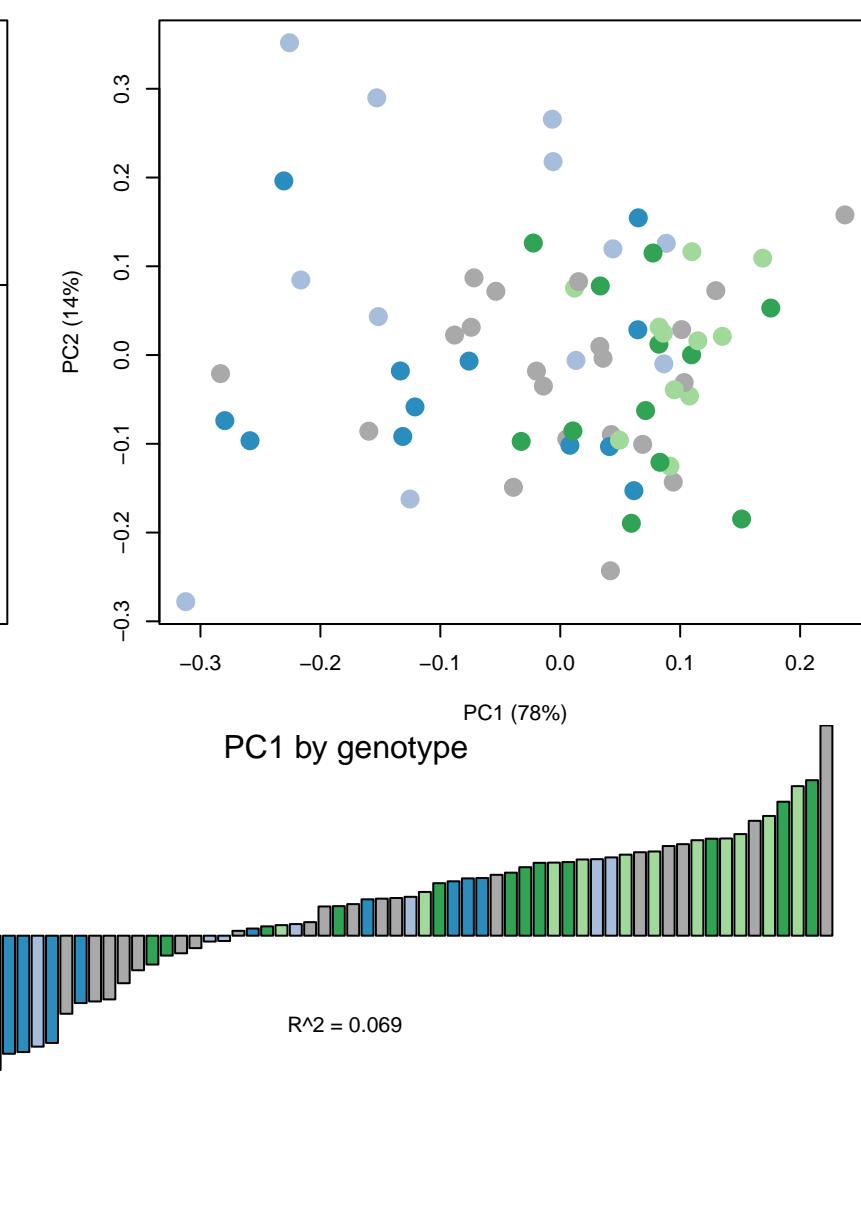
Endocrine and other factor-regulated calcium reabsorption



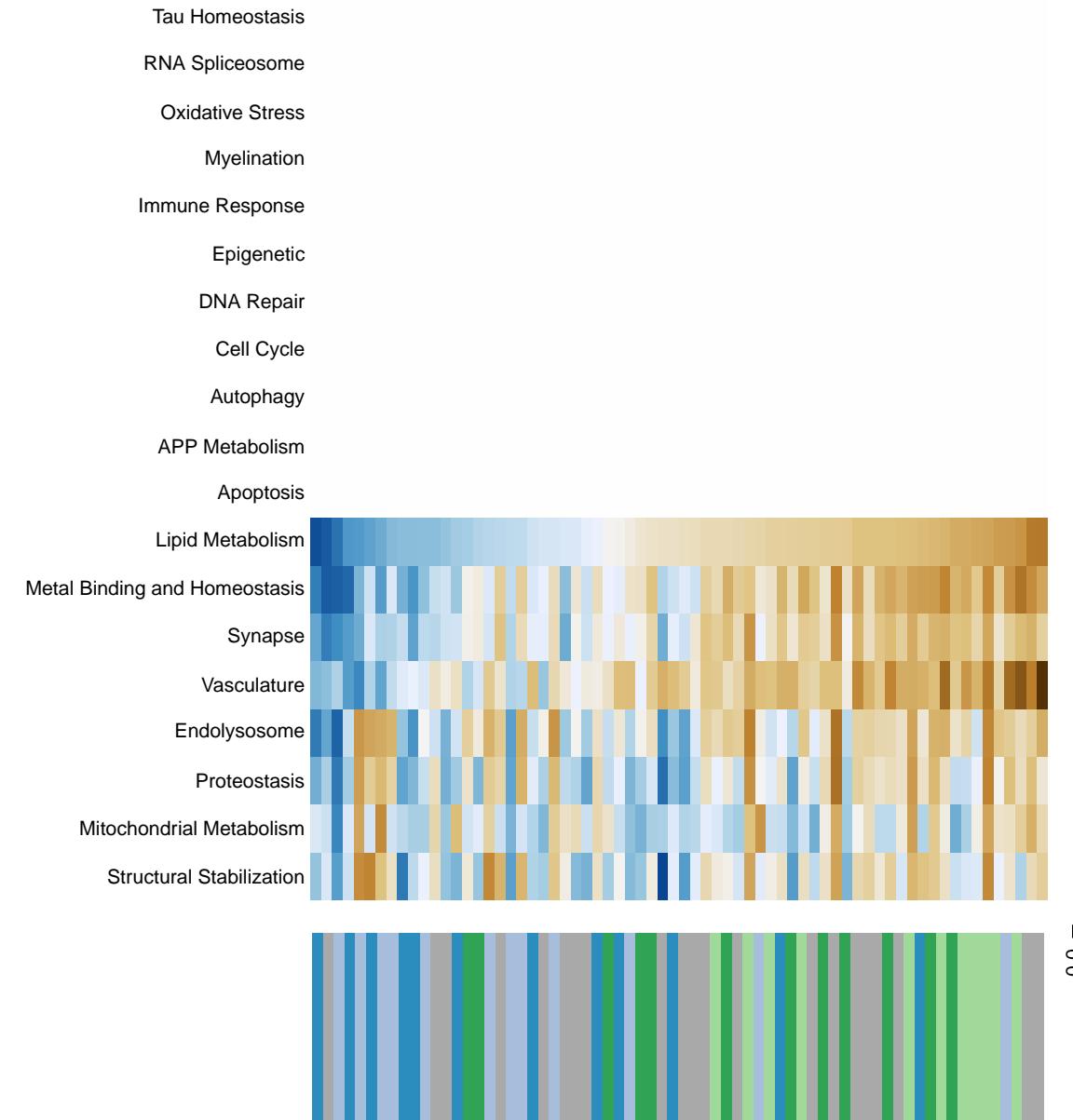
Metal Binding and Homeostasis



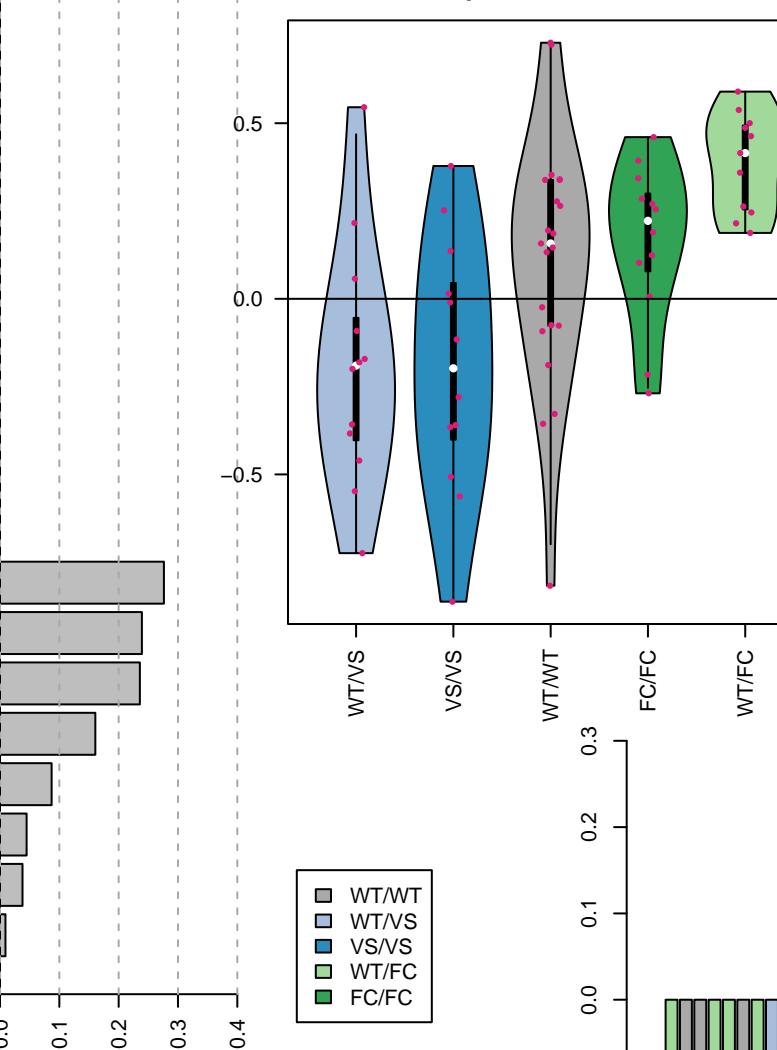
Decomposition



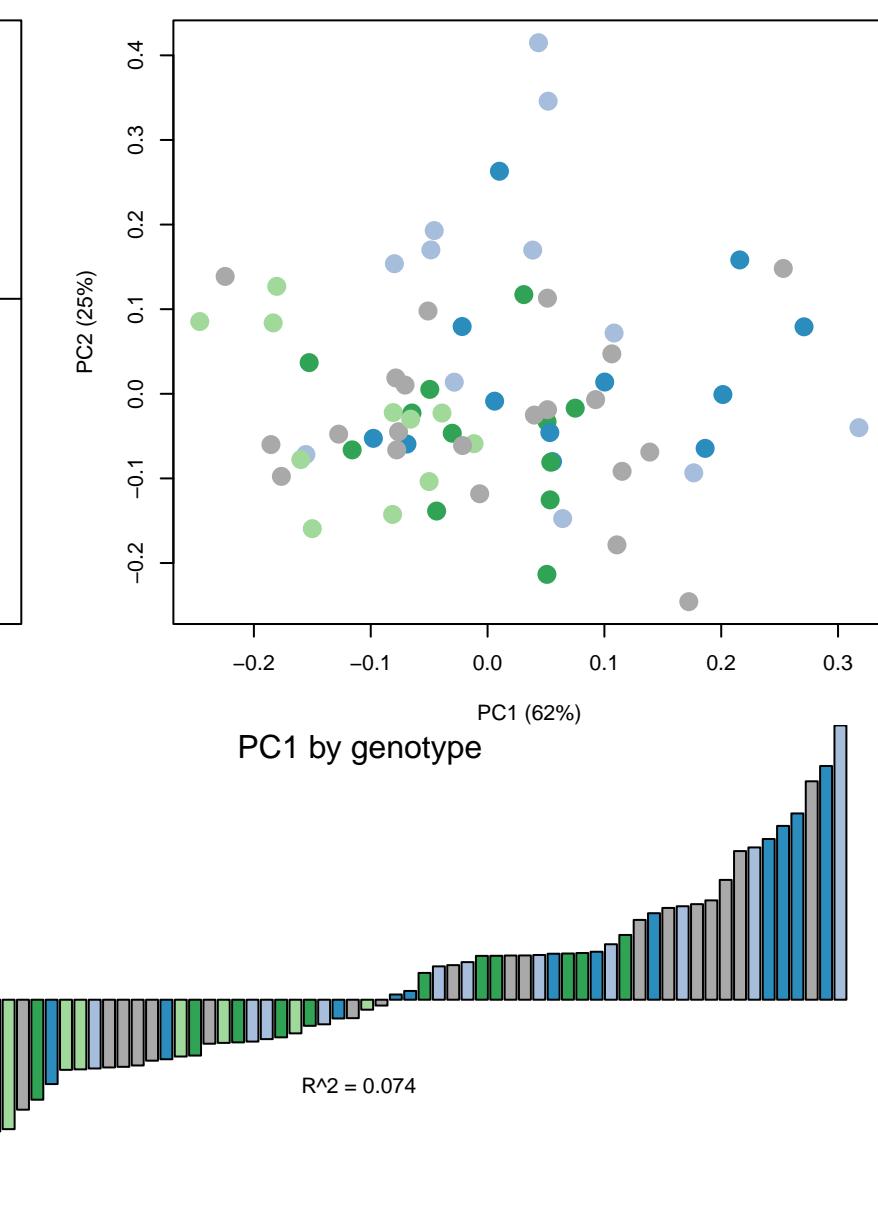
GABAergic synapse



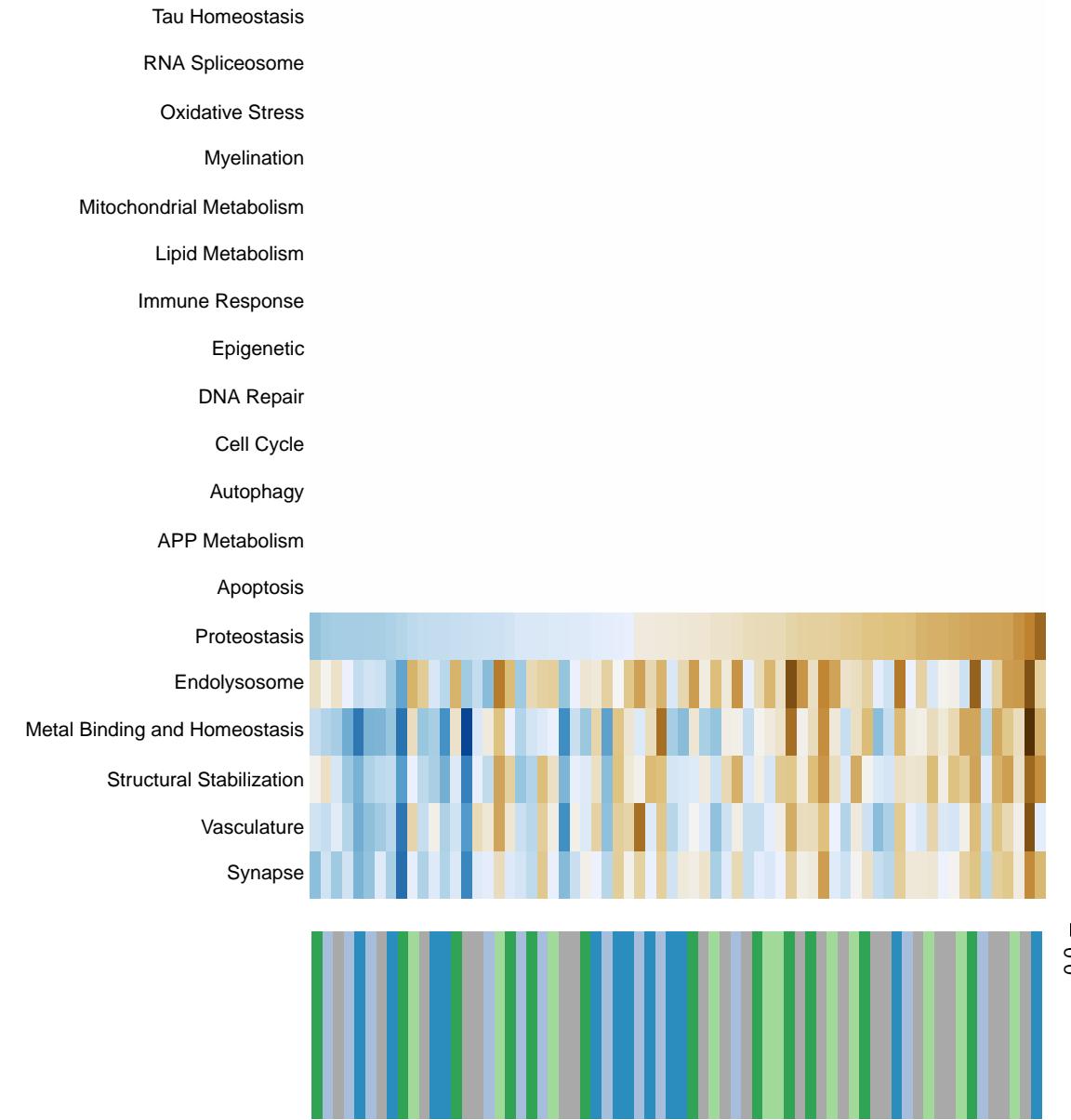
Lipid Metabolism



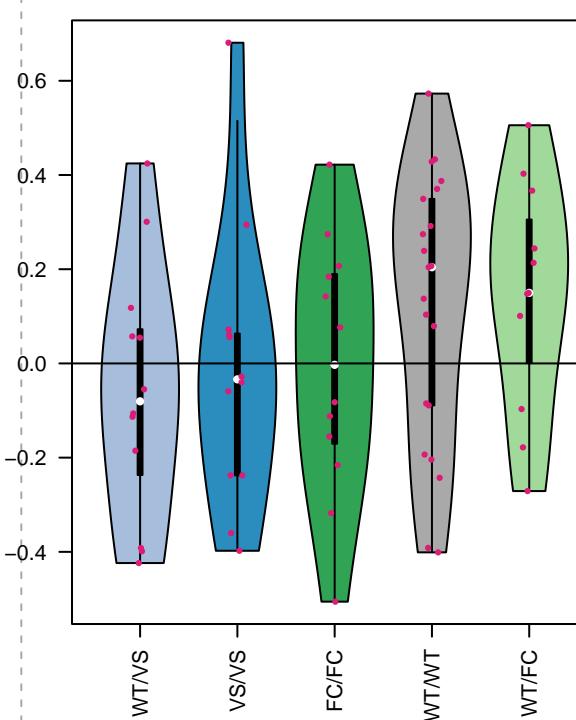
Decomposition



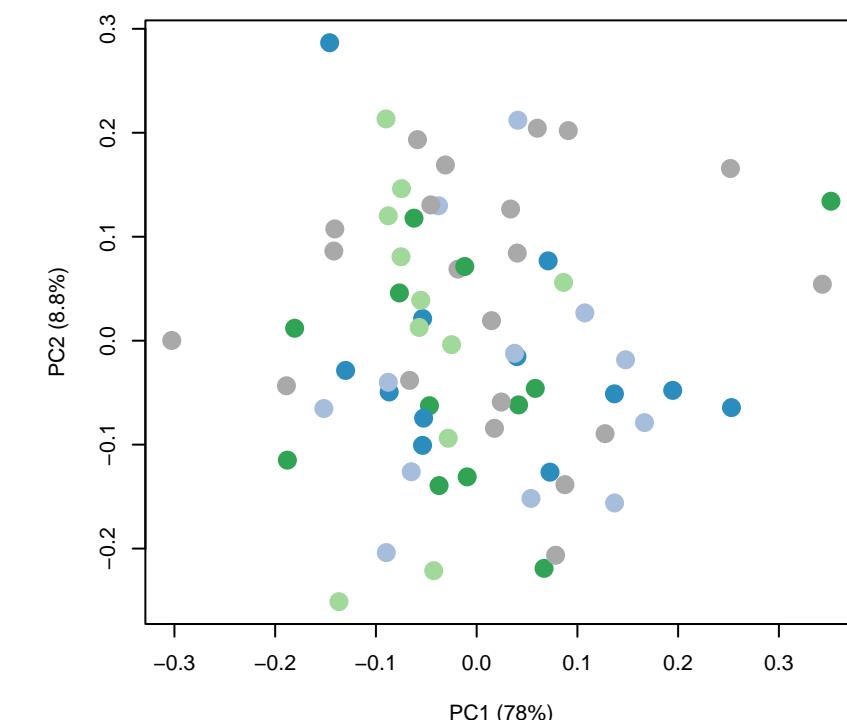
Olfactory transduction



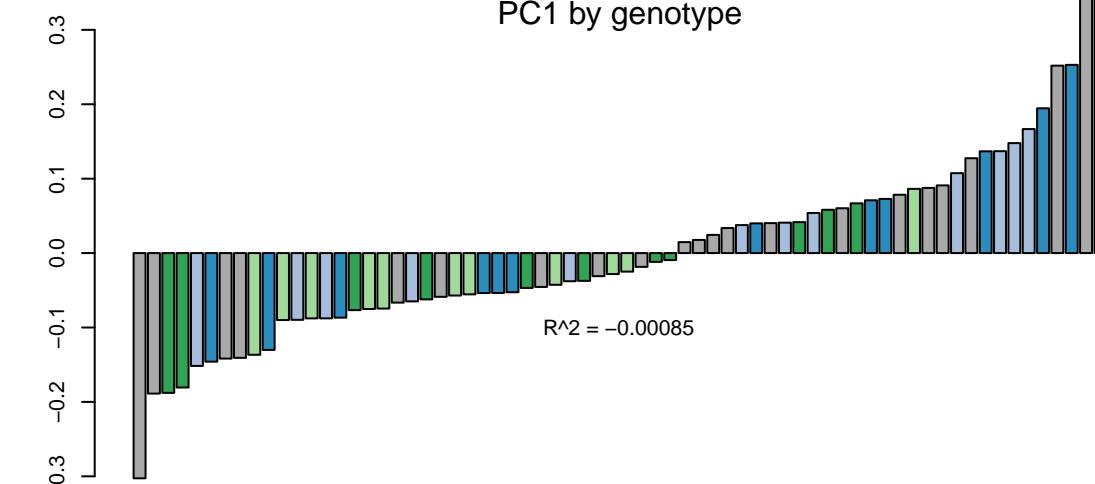
Proteostasis



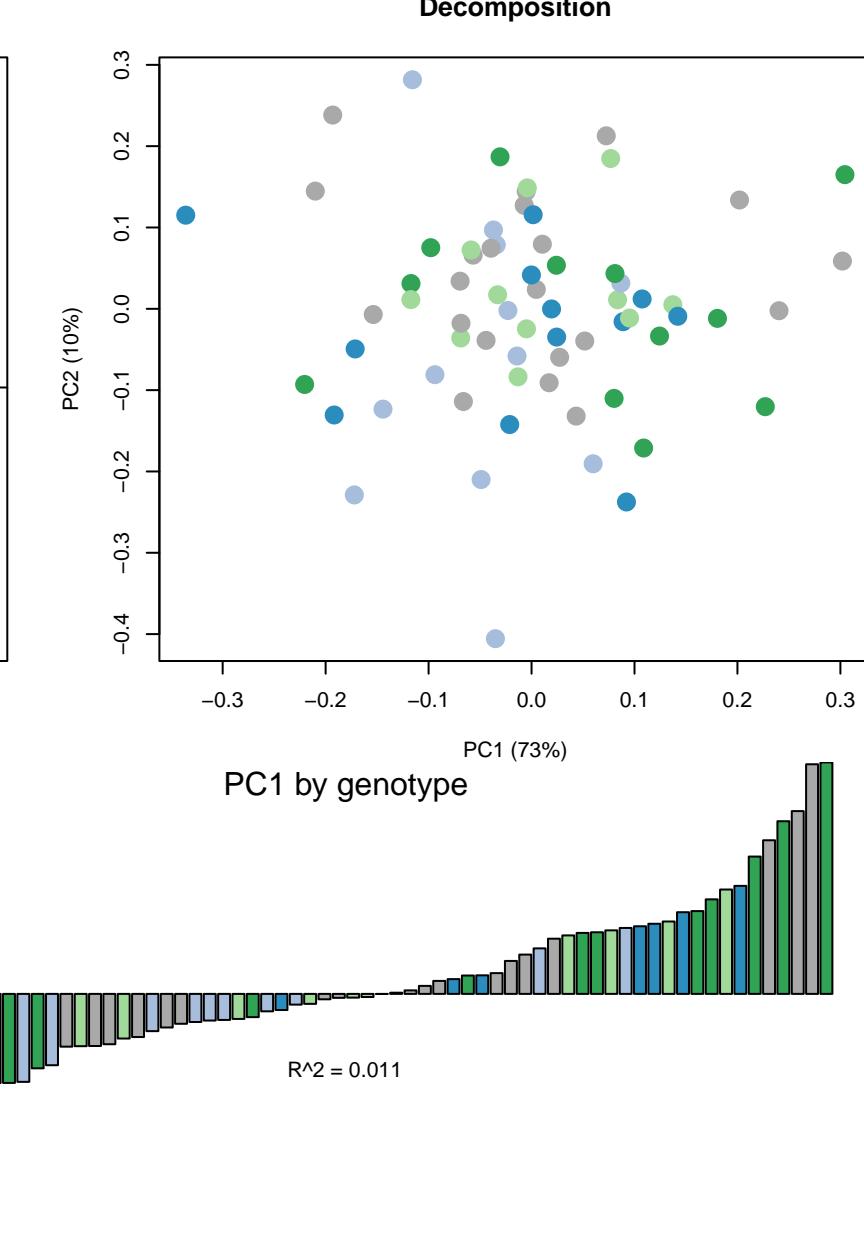
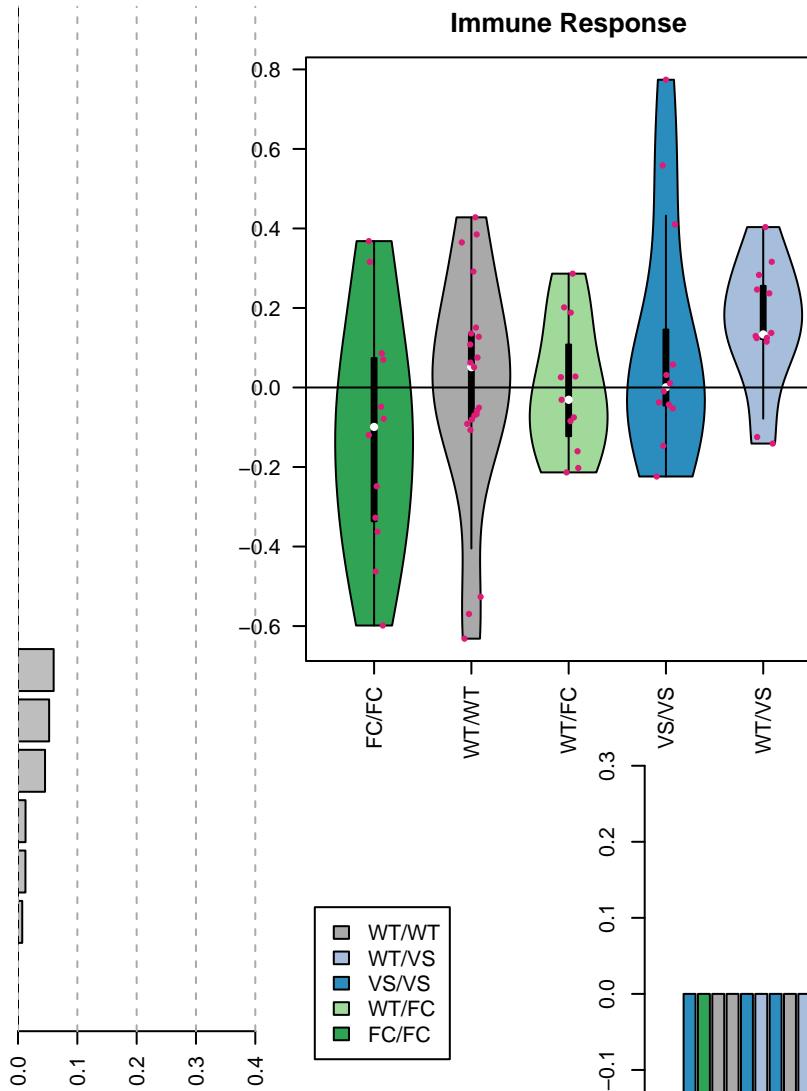
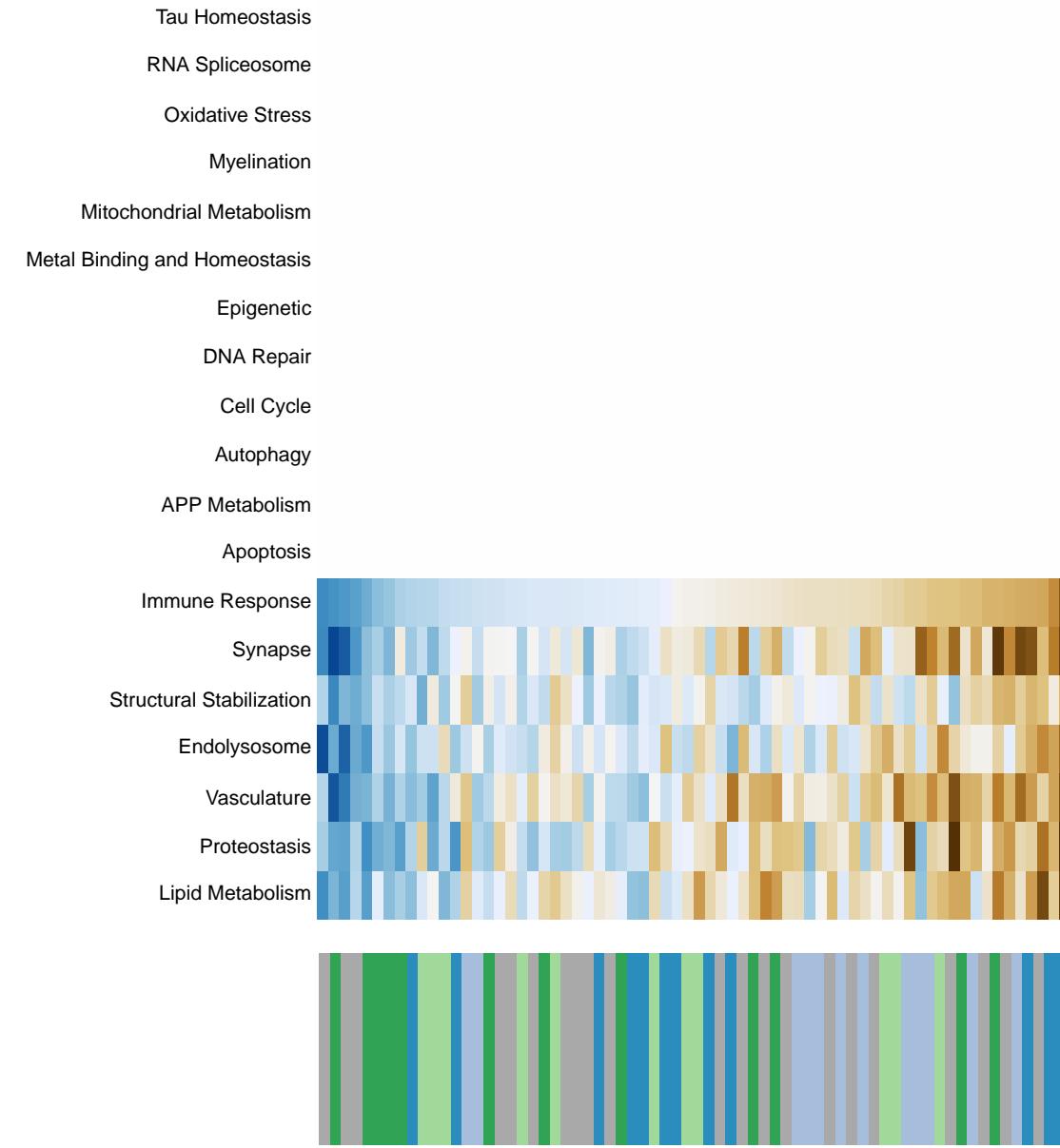
Decomposition



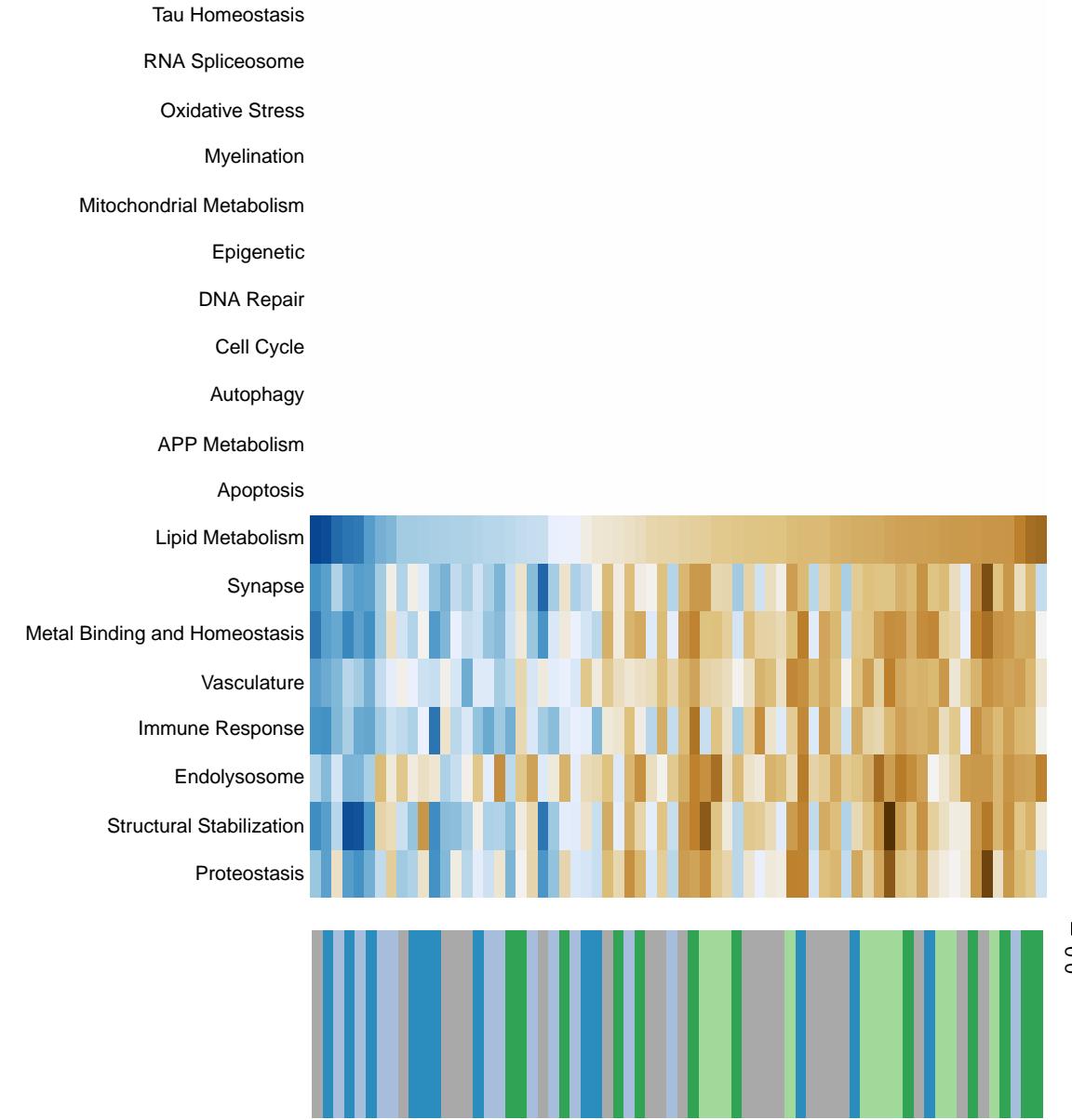
PC1 by genotype



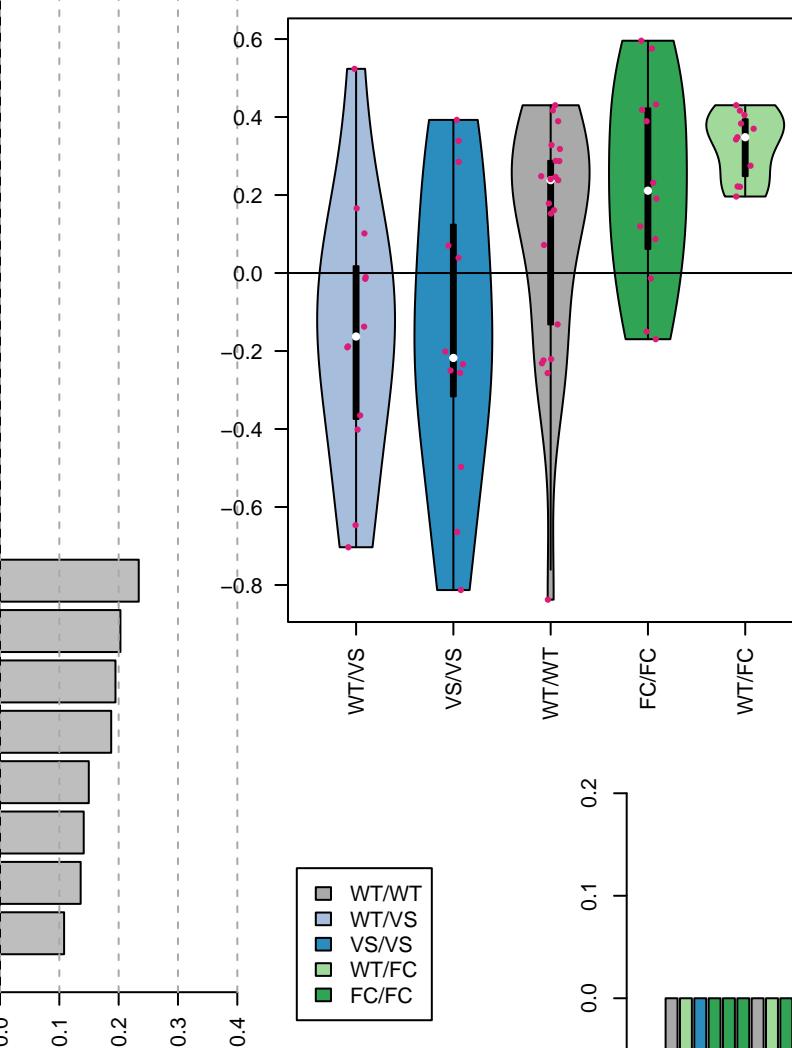
Staphylococcus aureus infection



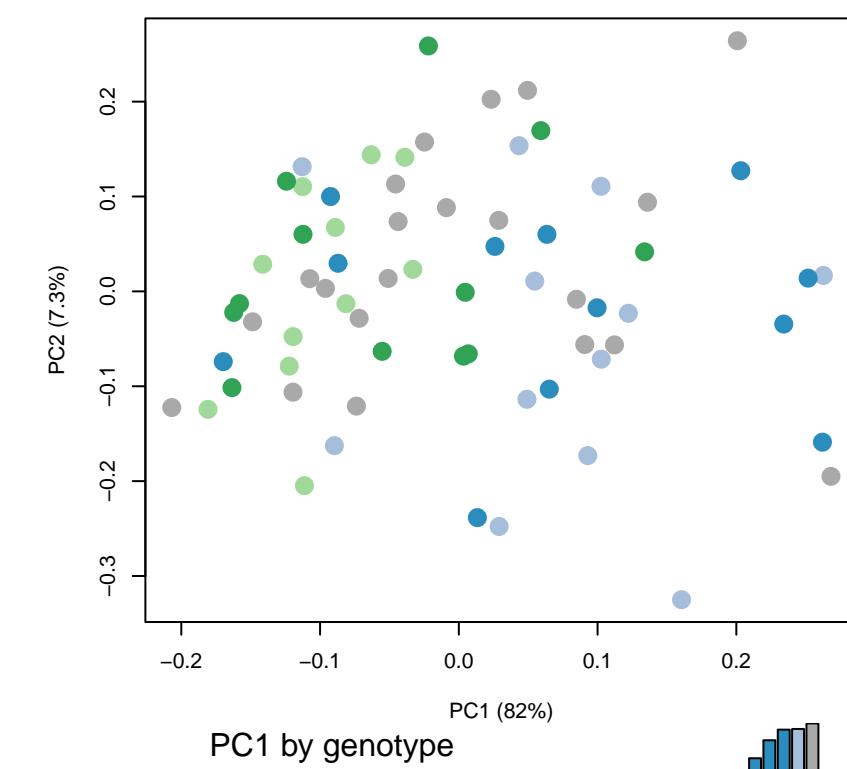
Morphine addiction



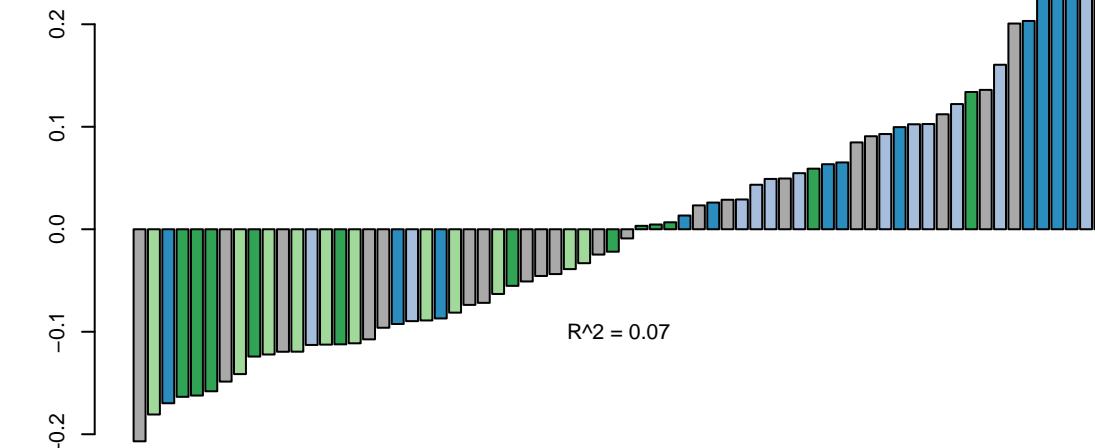
Lipid Metabolism



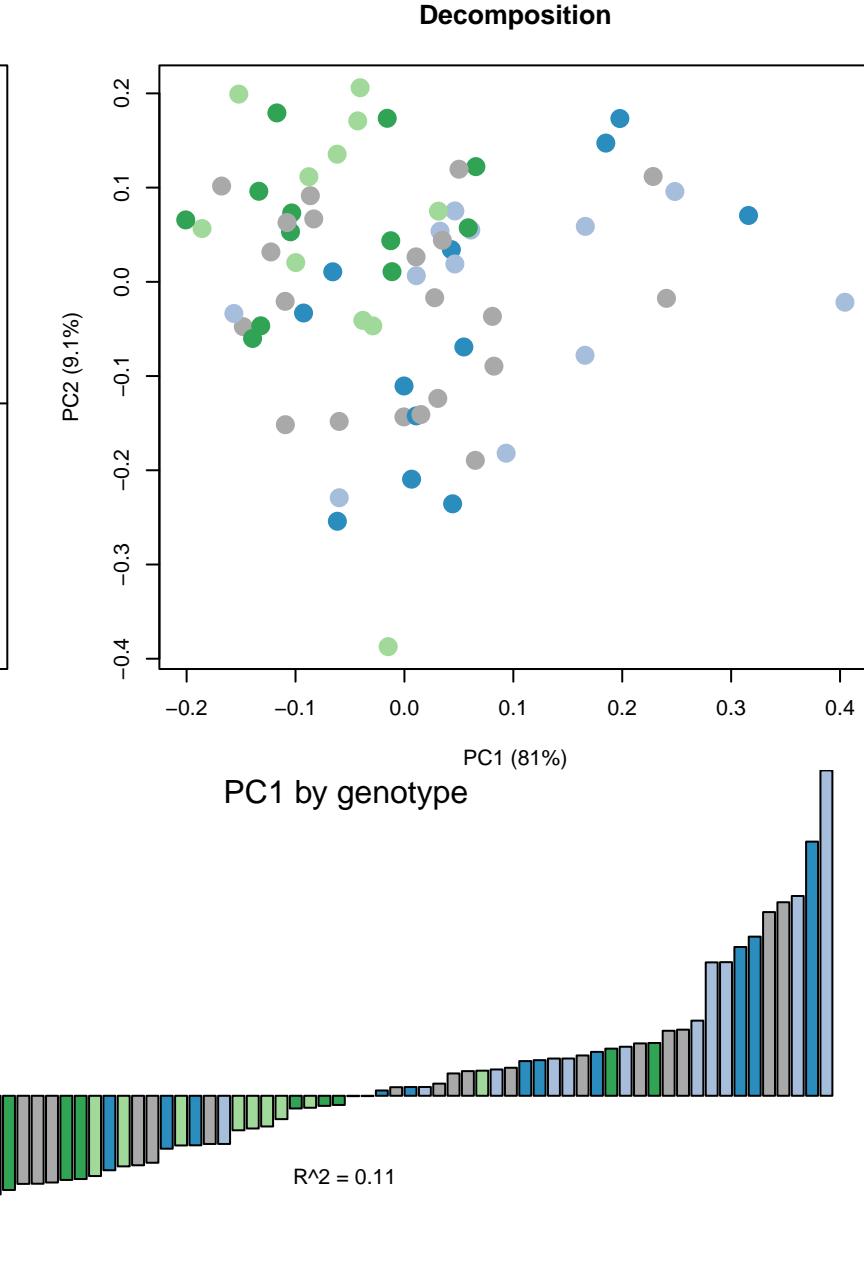
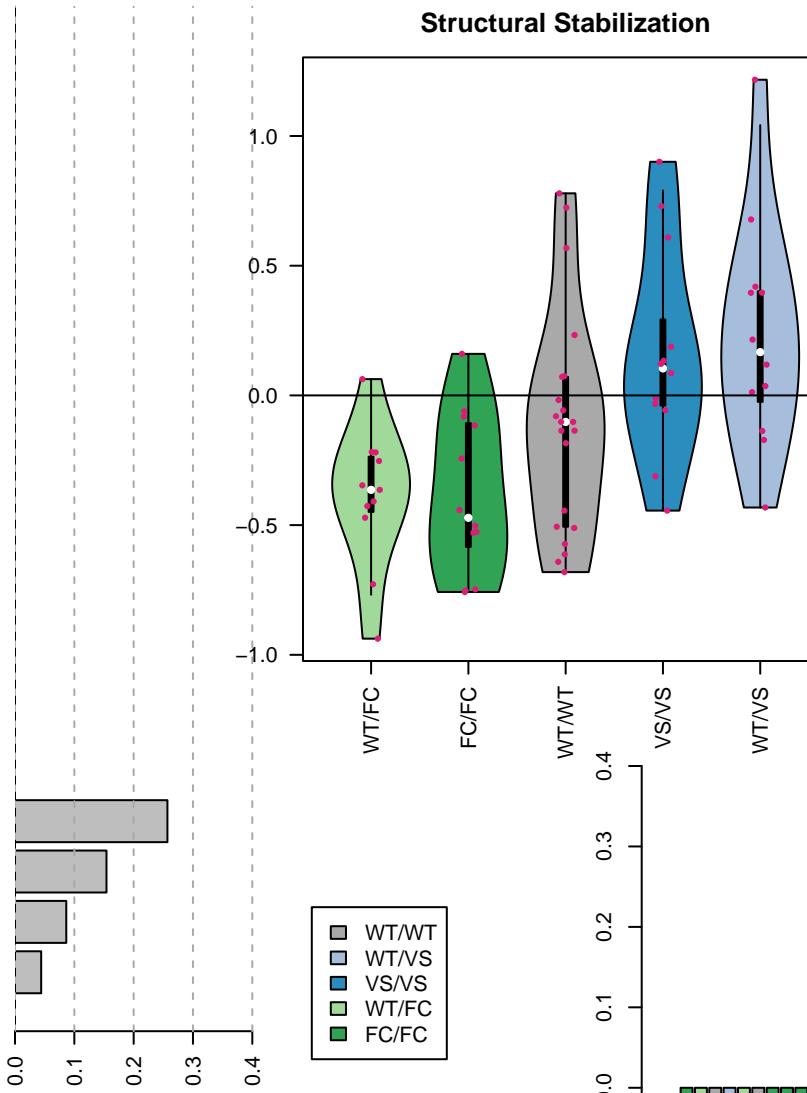
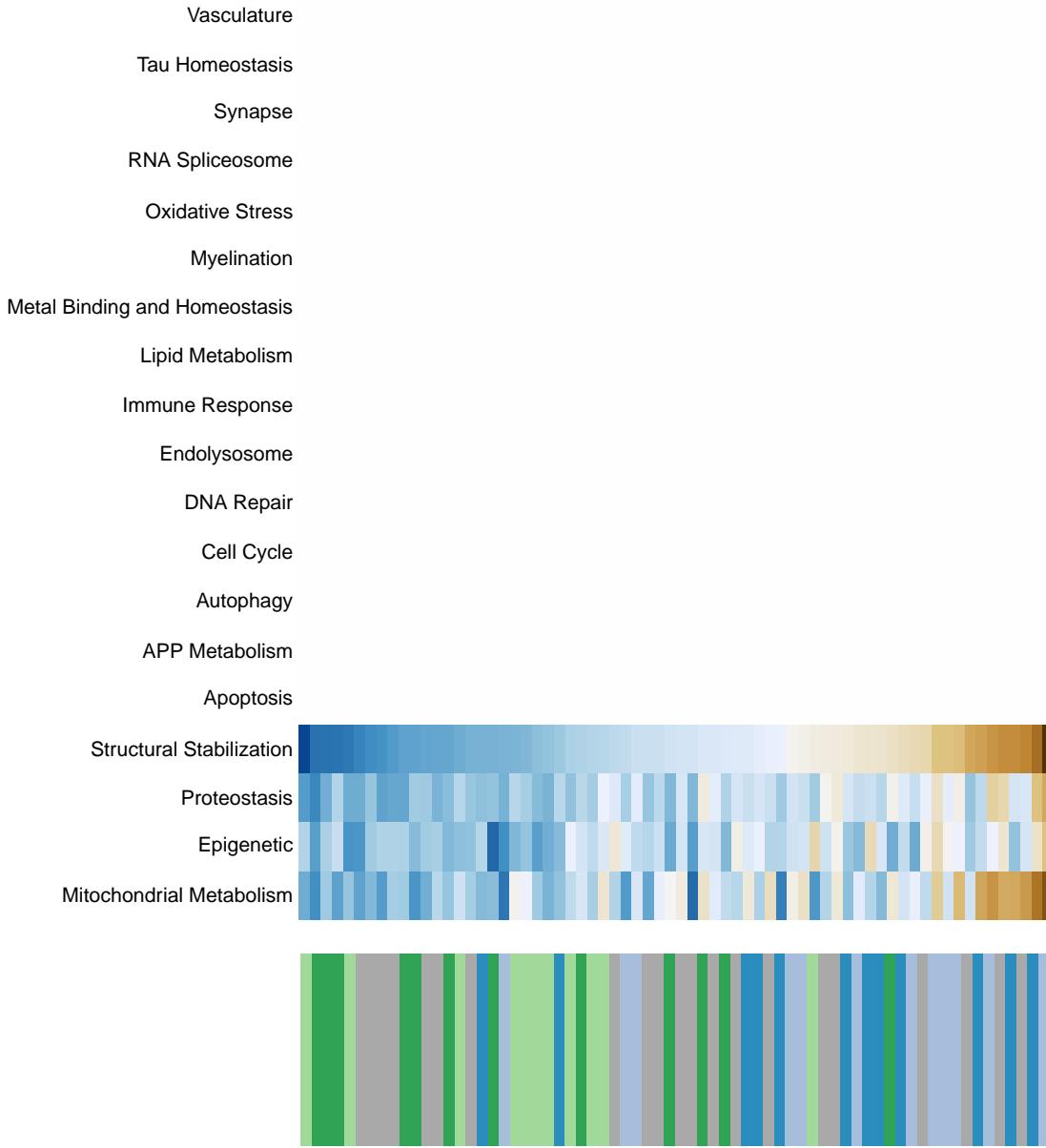
Decomposition



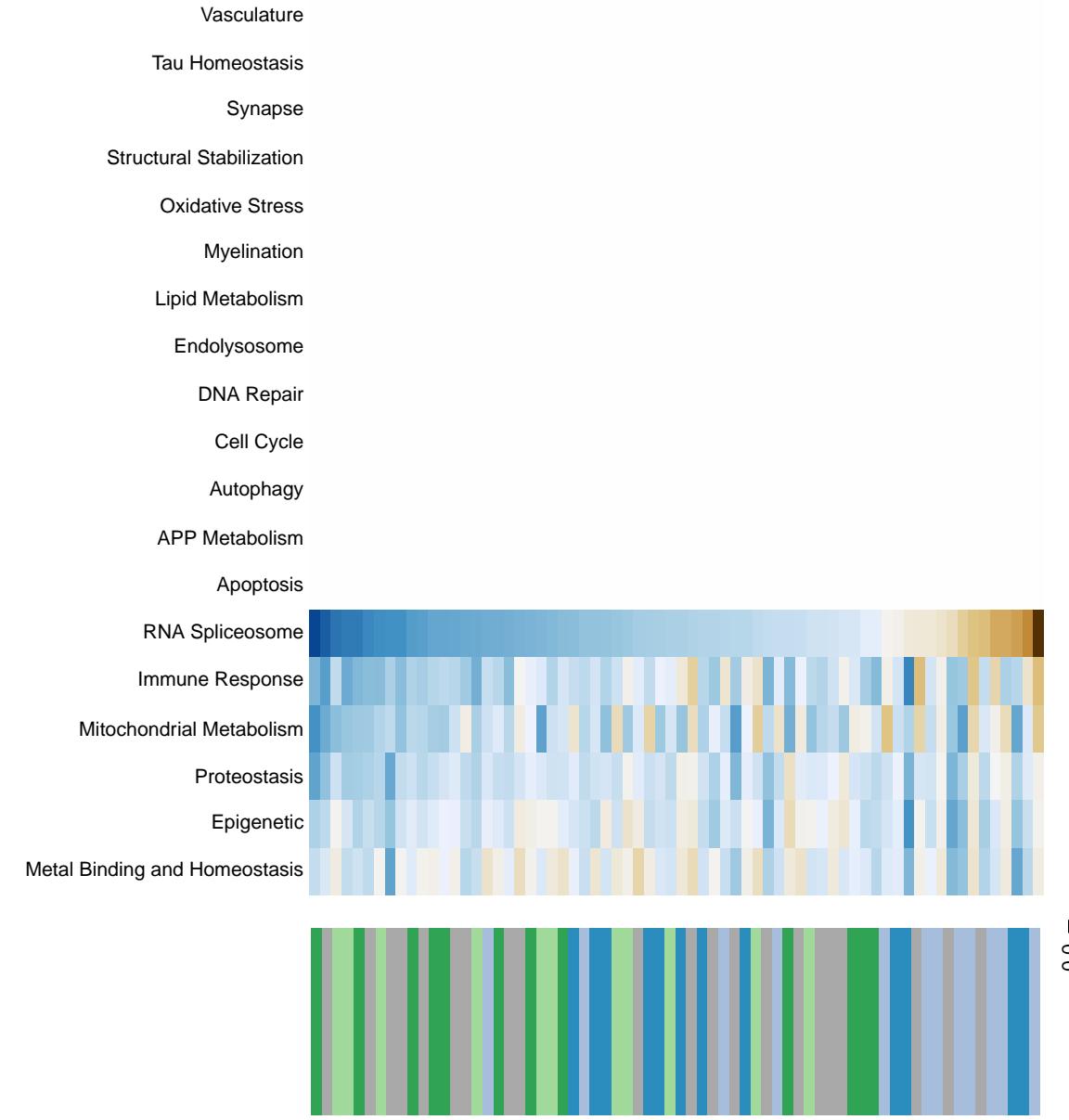
PC1 by genotype



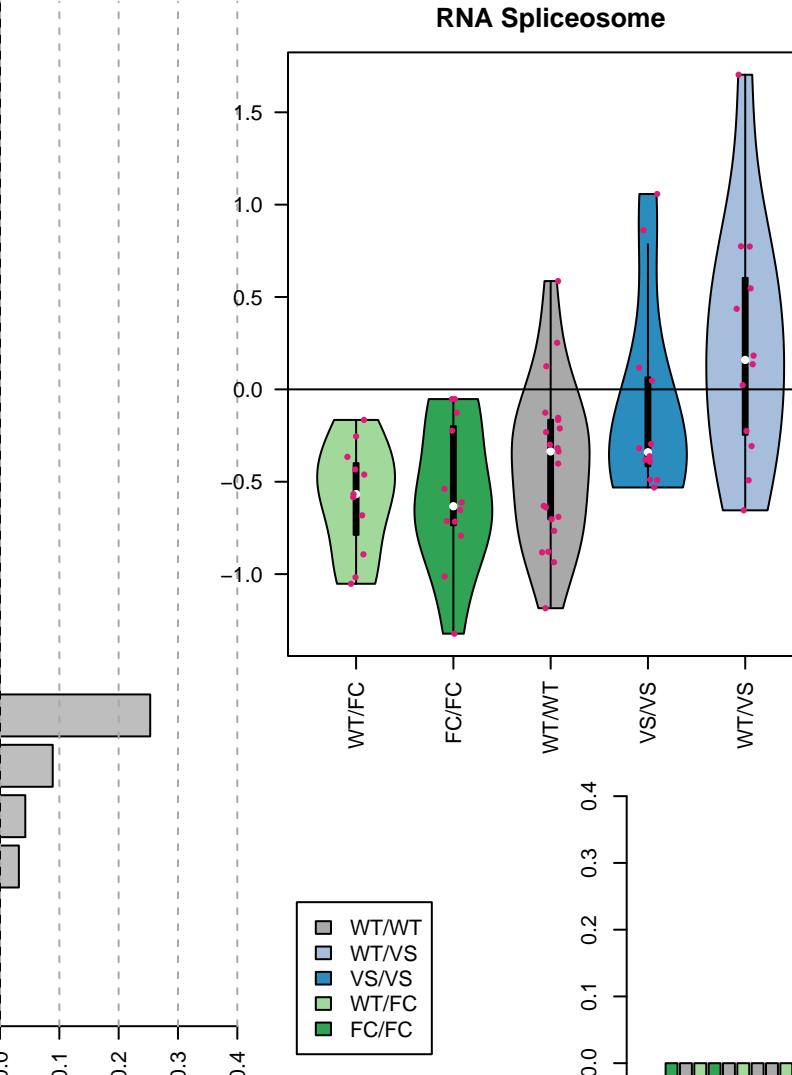
Ribosome biogenesis in eukaryotes



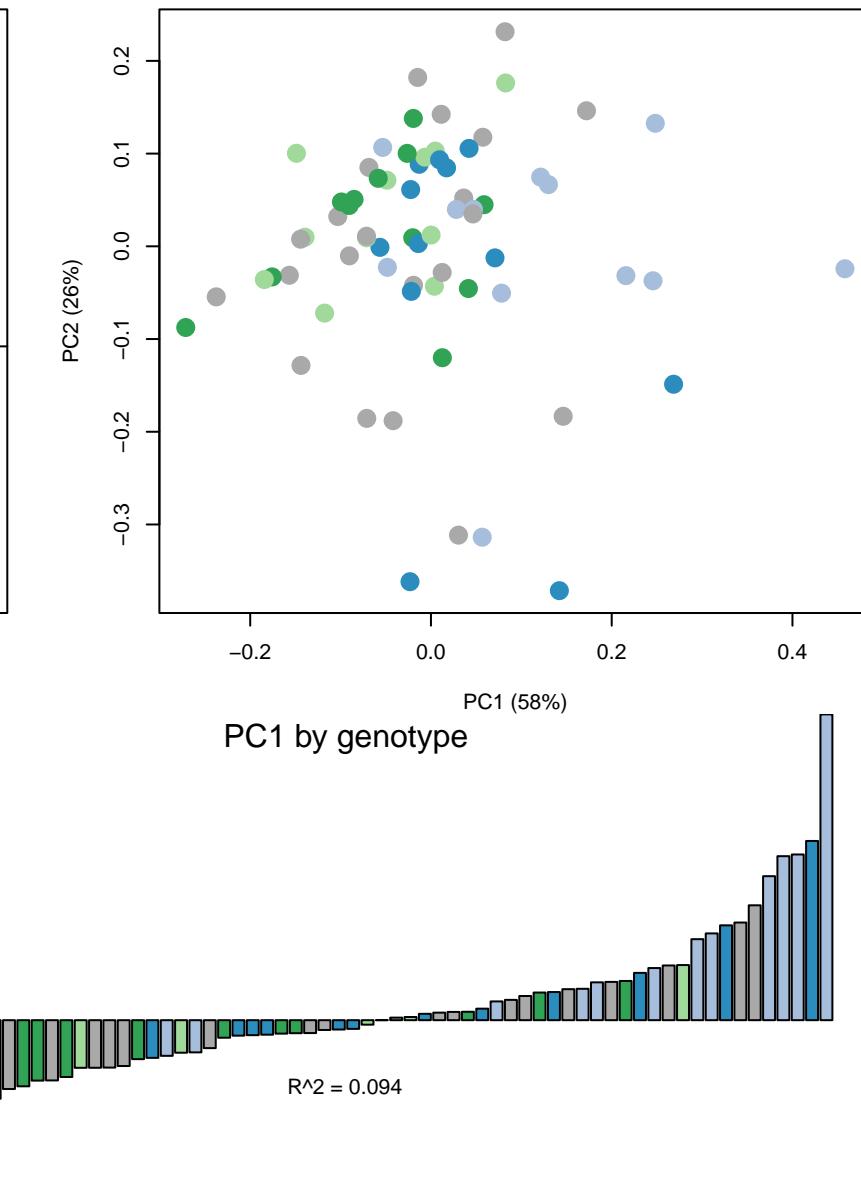
RNA degradation



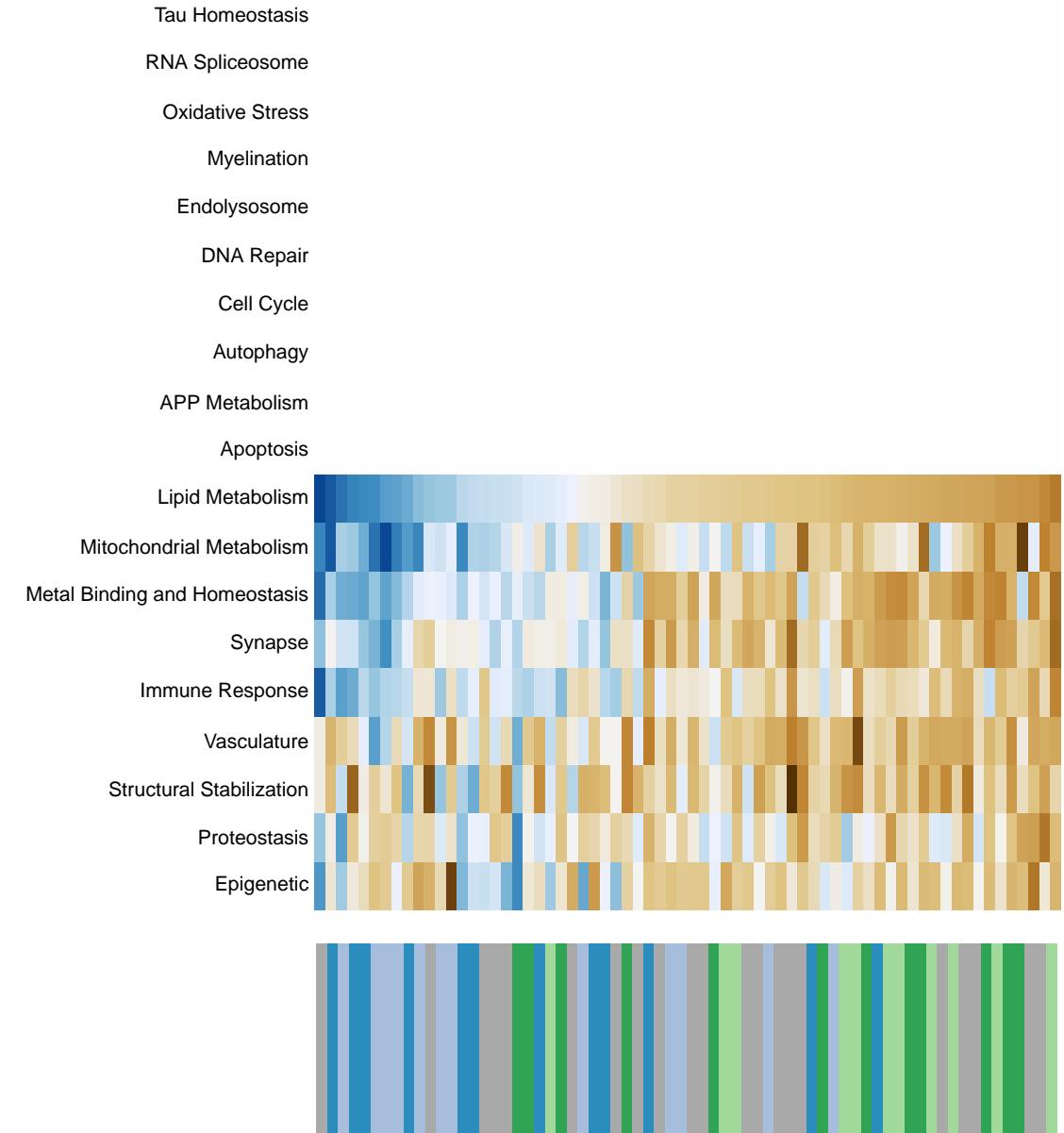
RNA Spliceosome



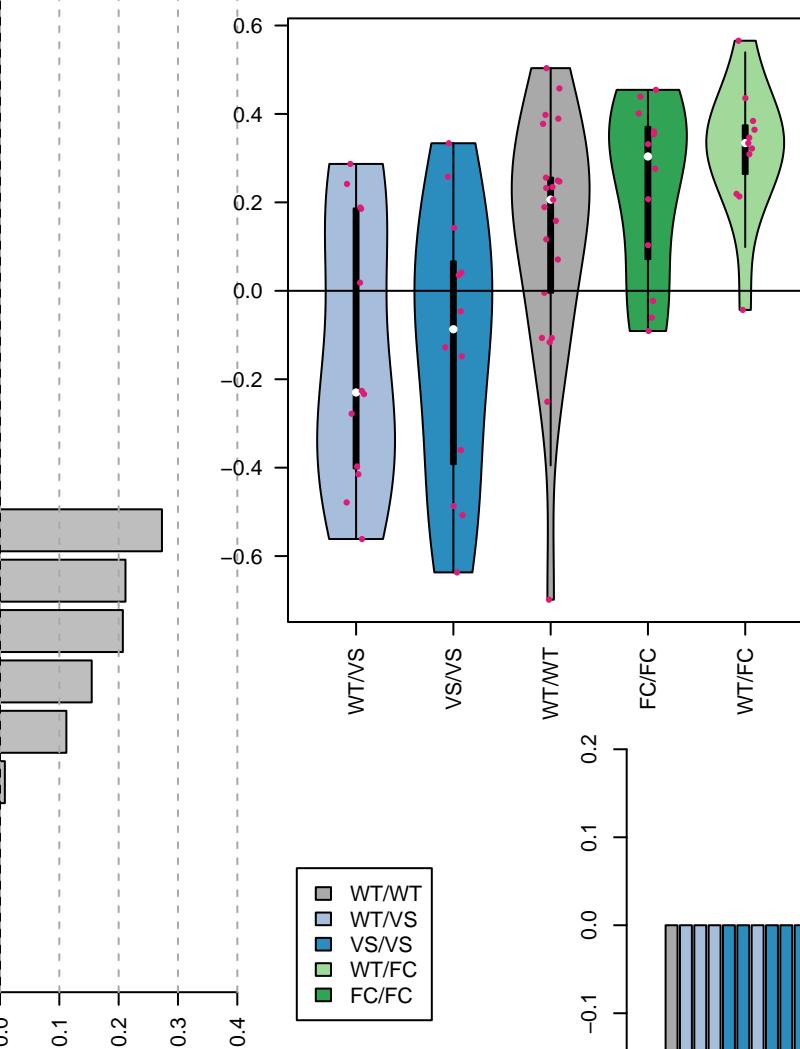
Decomposition



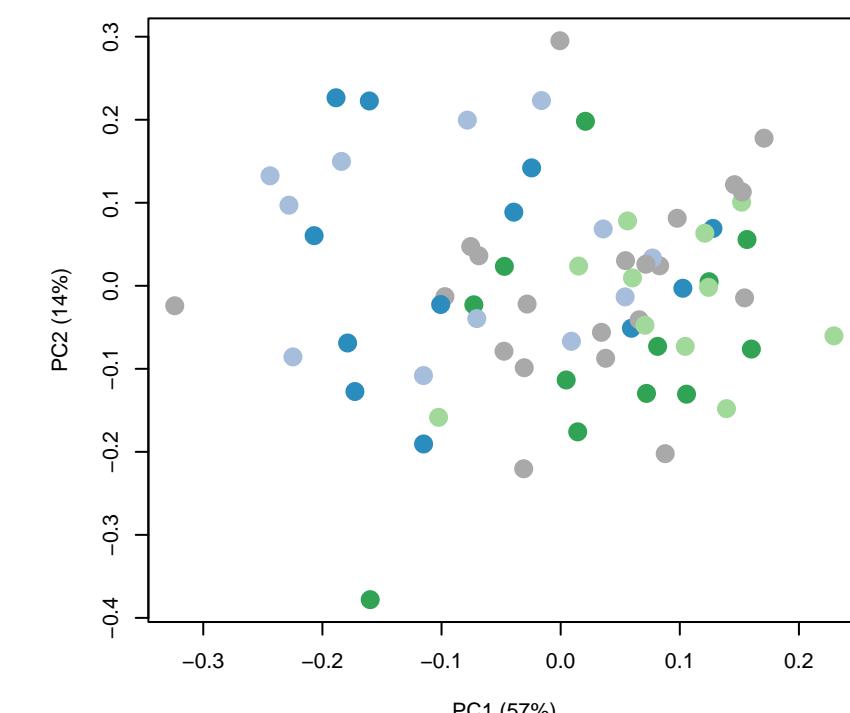
Cortisol synthesis and secretion



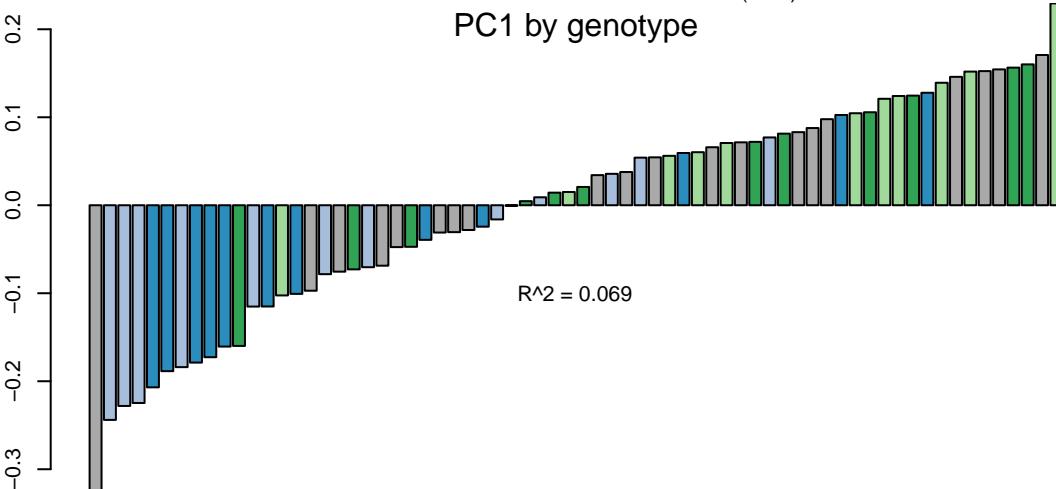
Lipid Metabolism



Decomposition

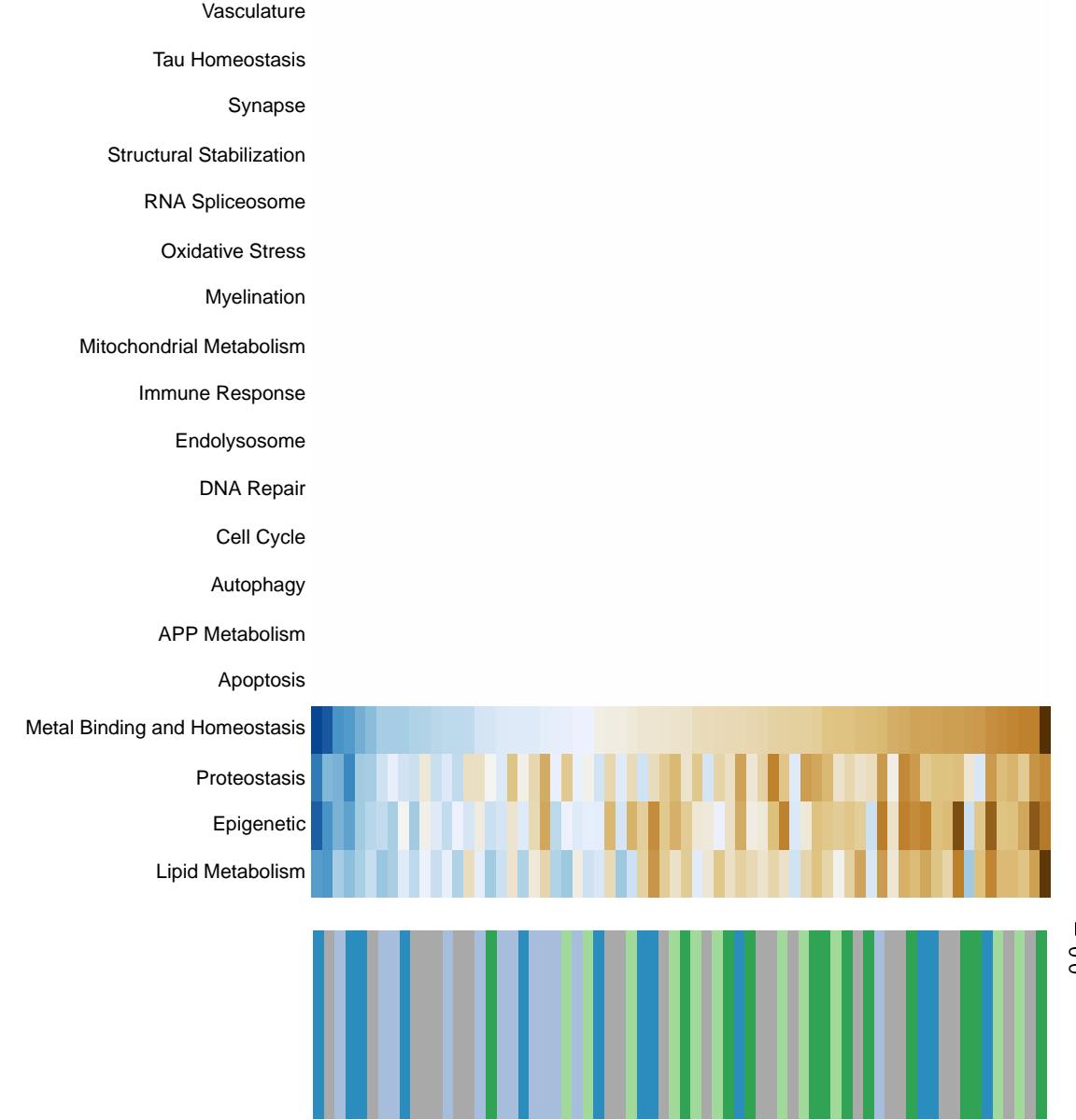


PC1 by genotype

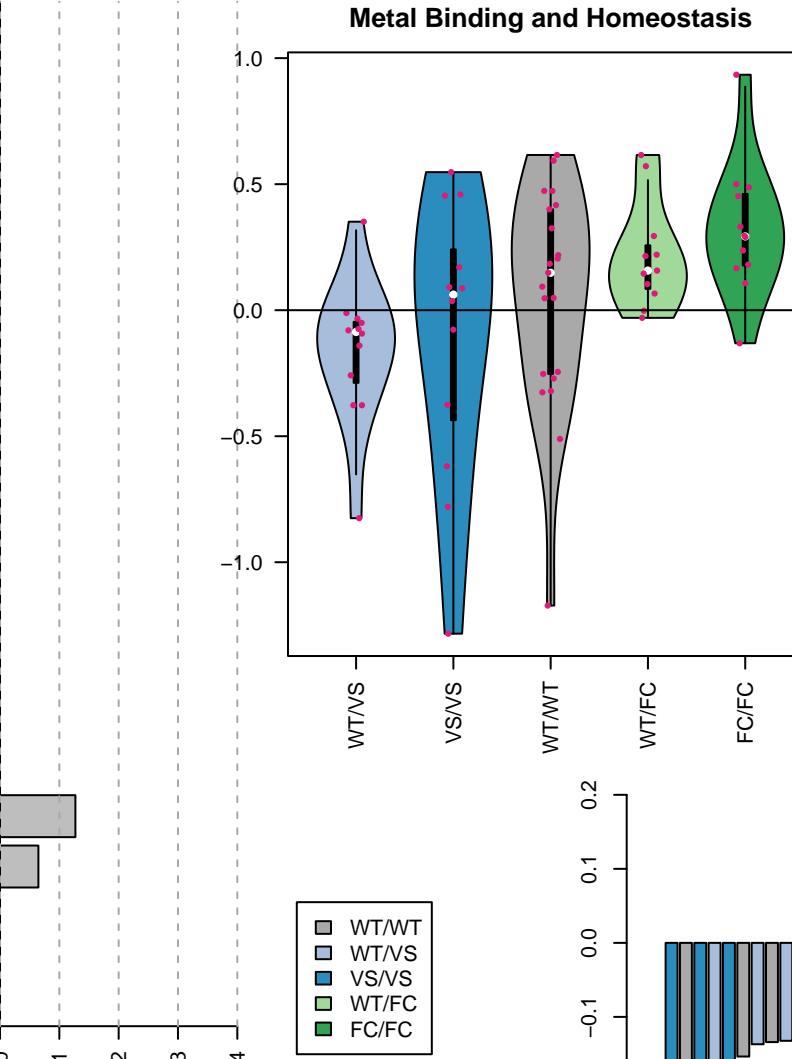


$R^2 = 0.069$

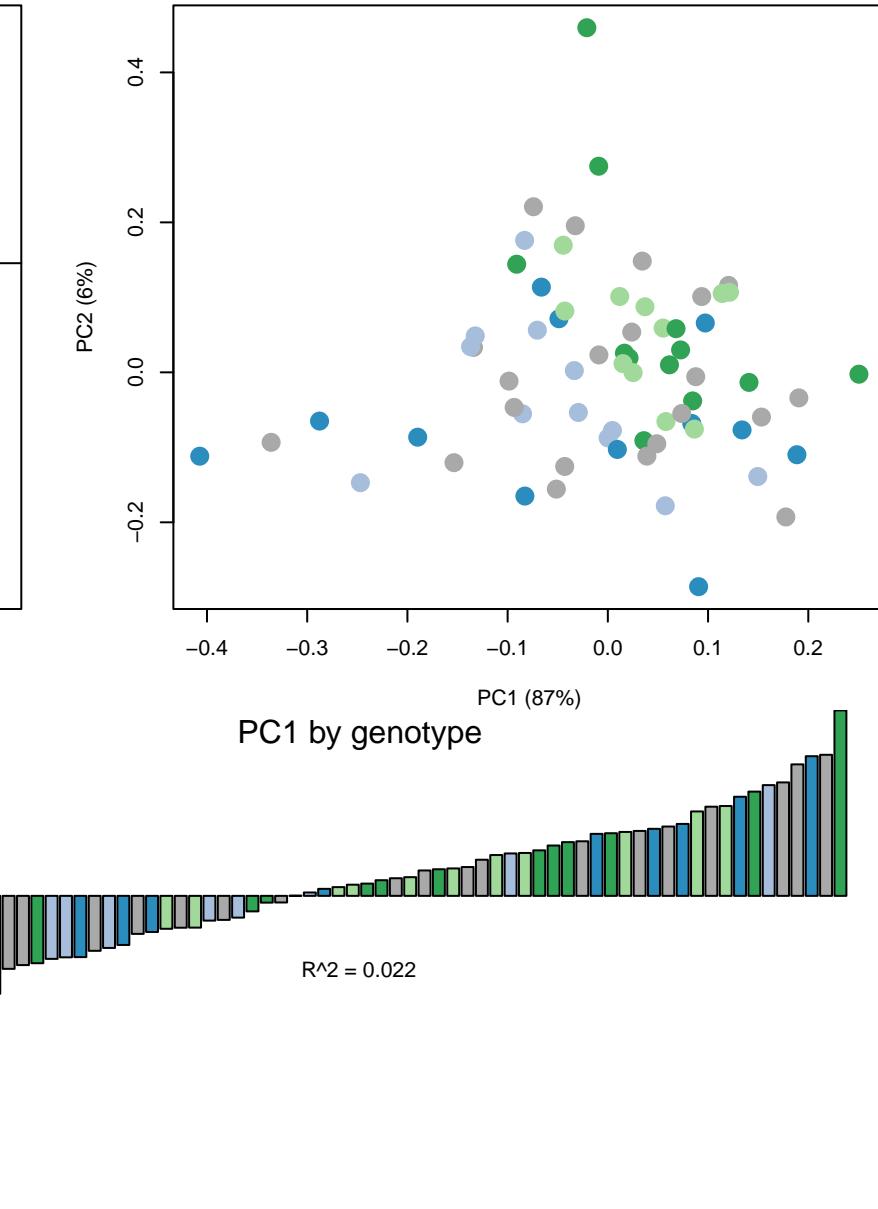
Circadian rhythm



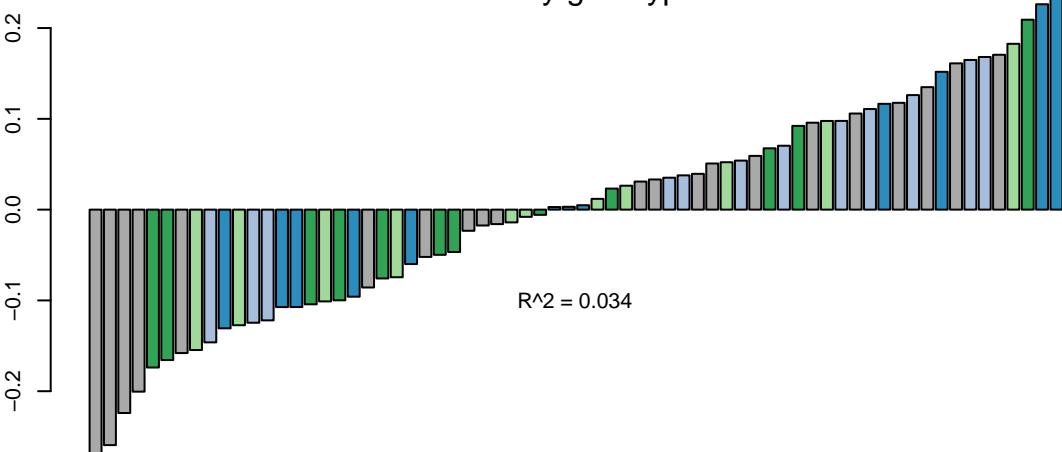
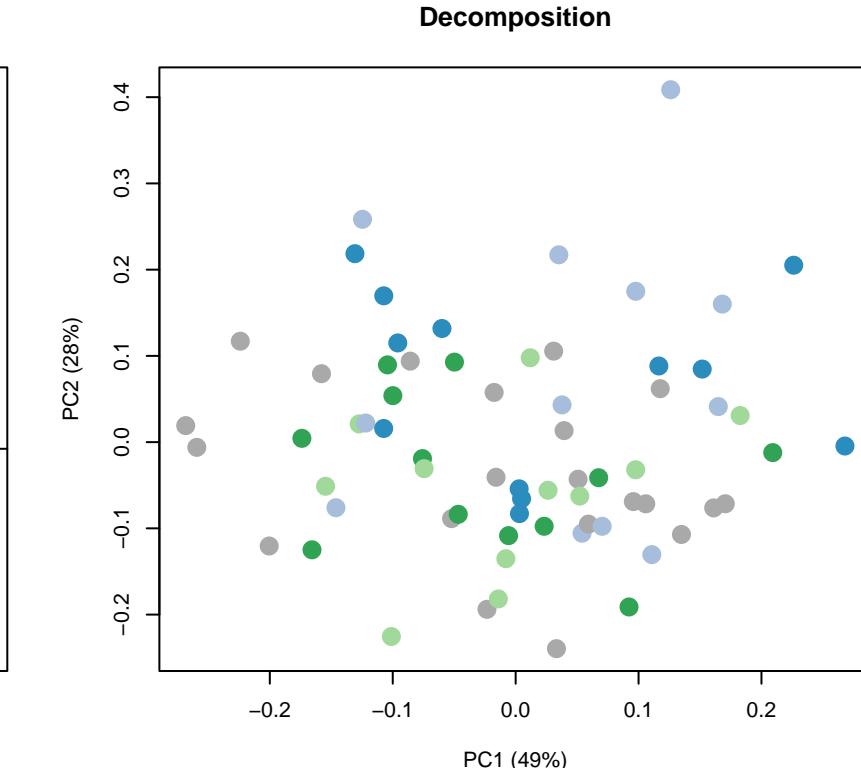
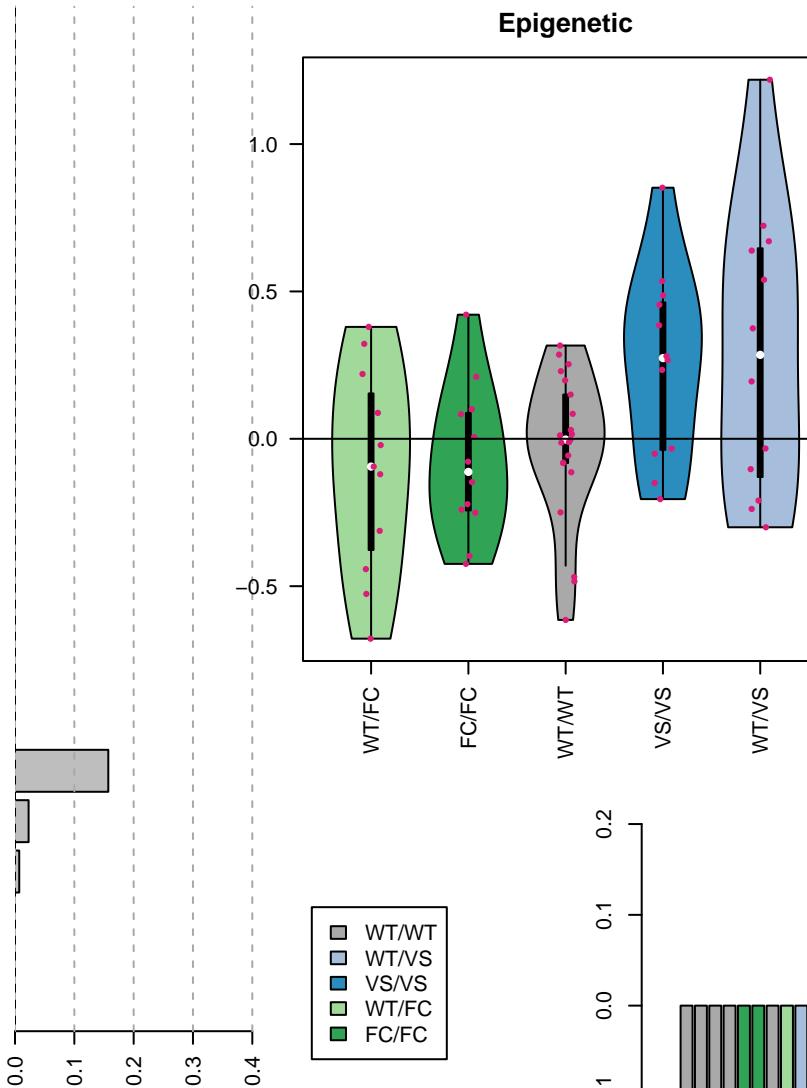
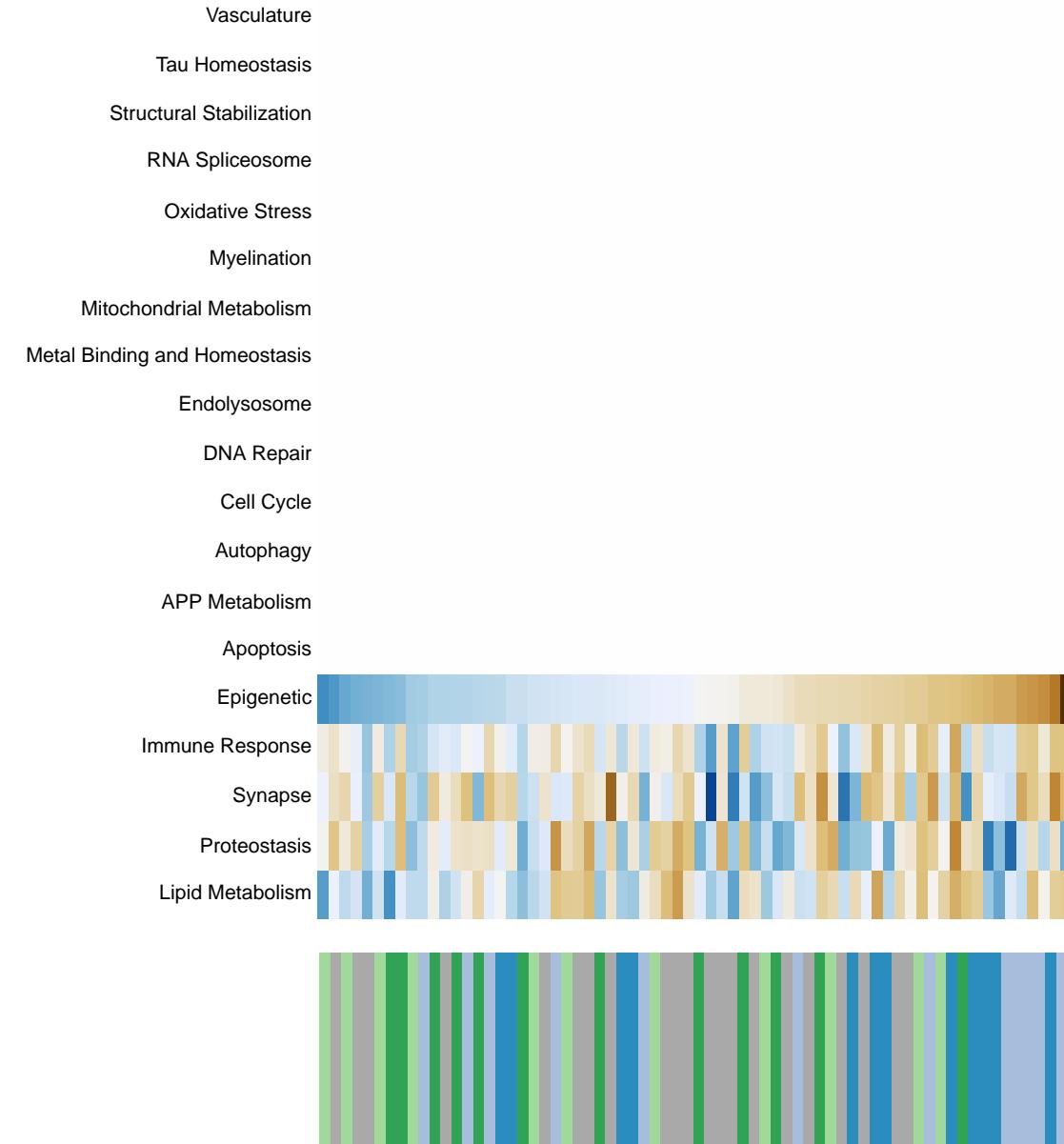
Metal Binding and Homeostasis



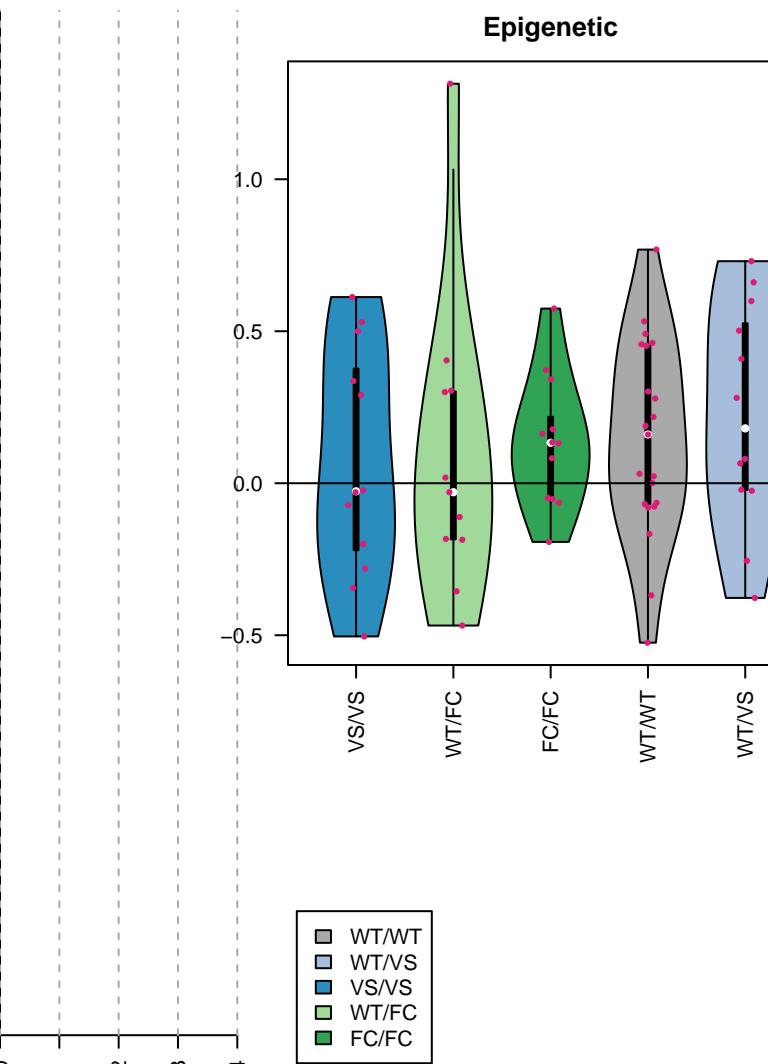
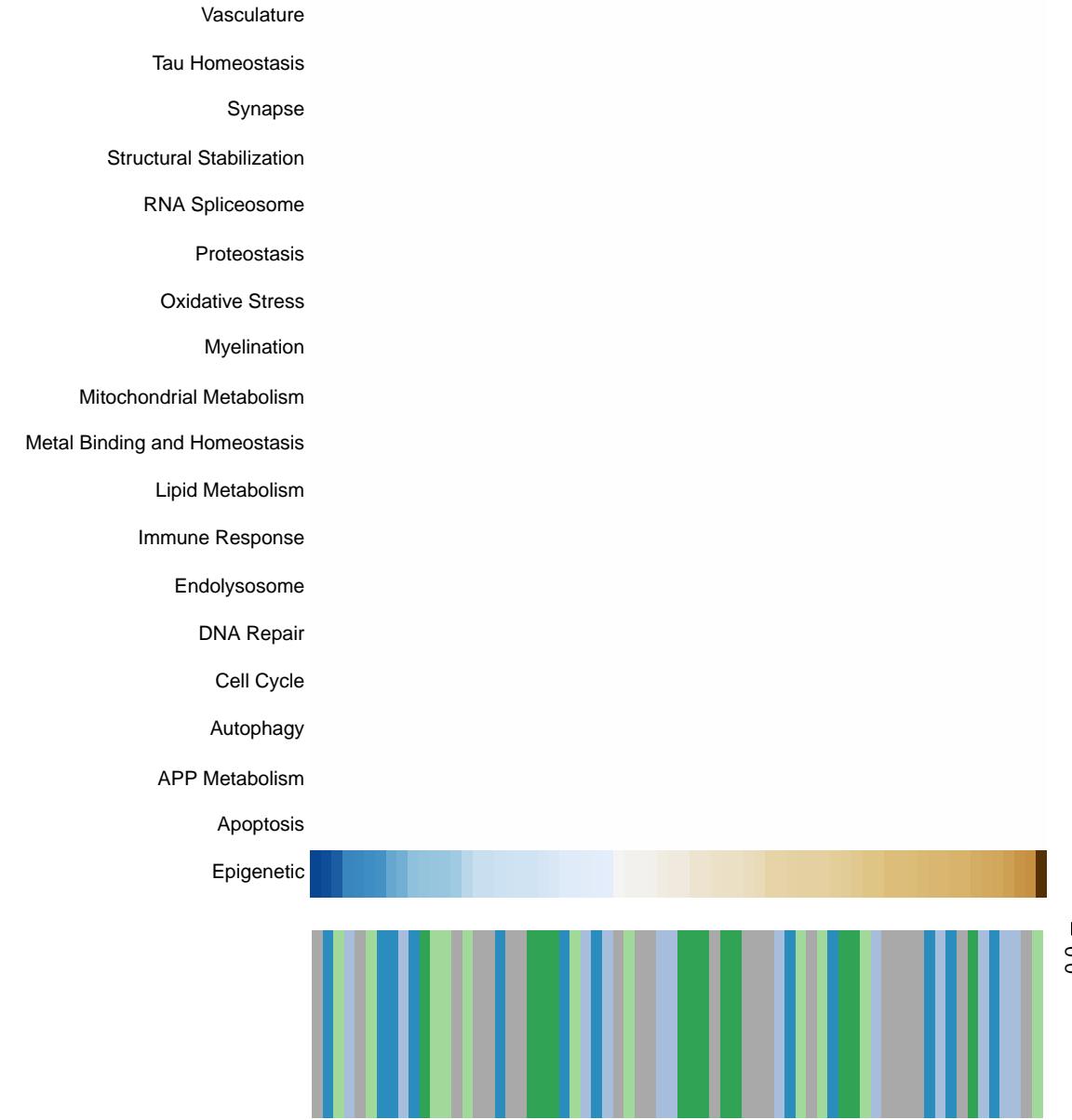
Decomposition



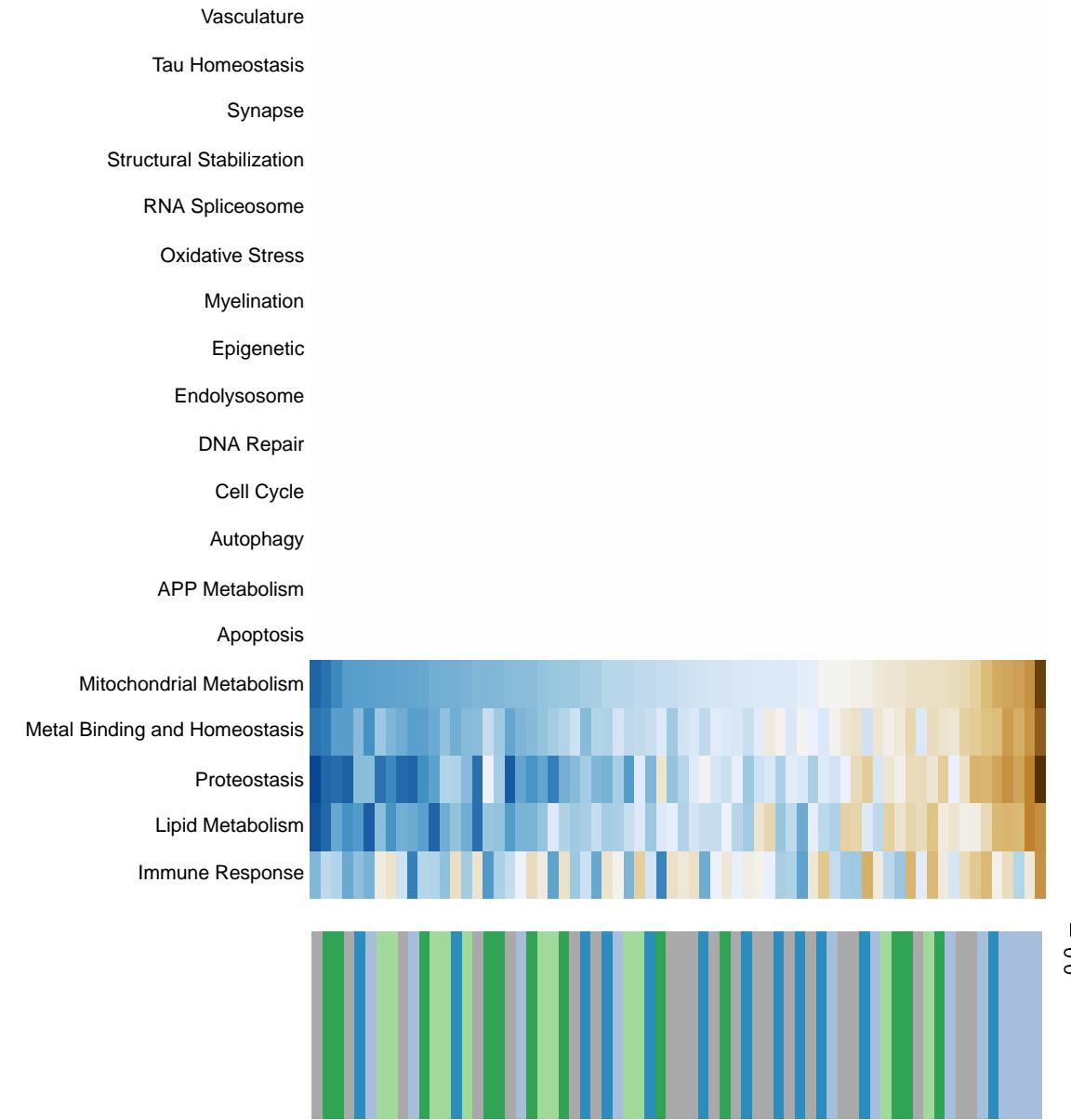
Systemic lupus erythematosus



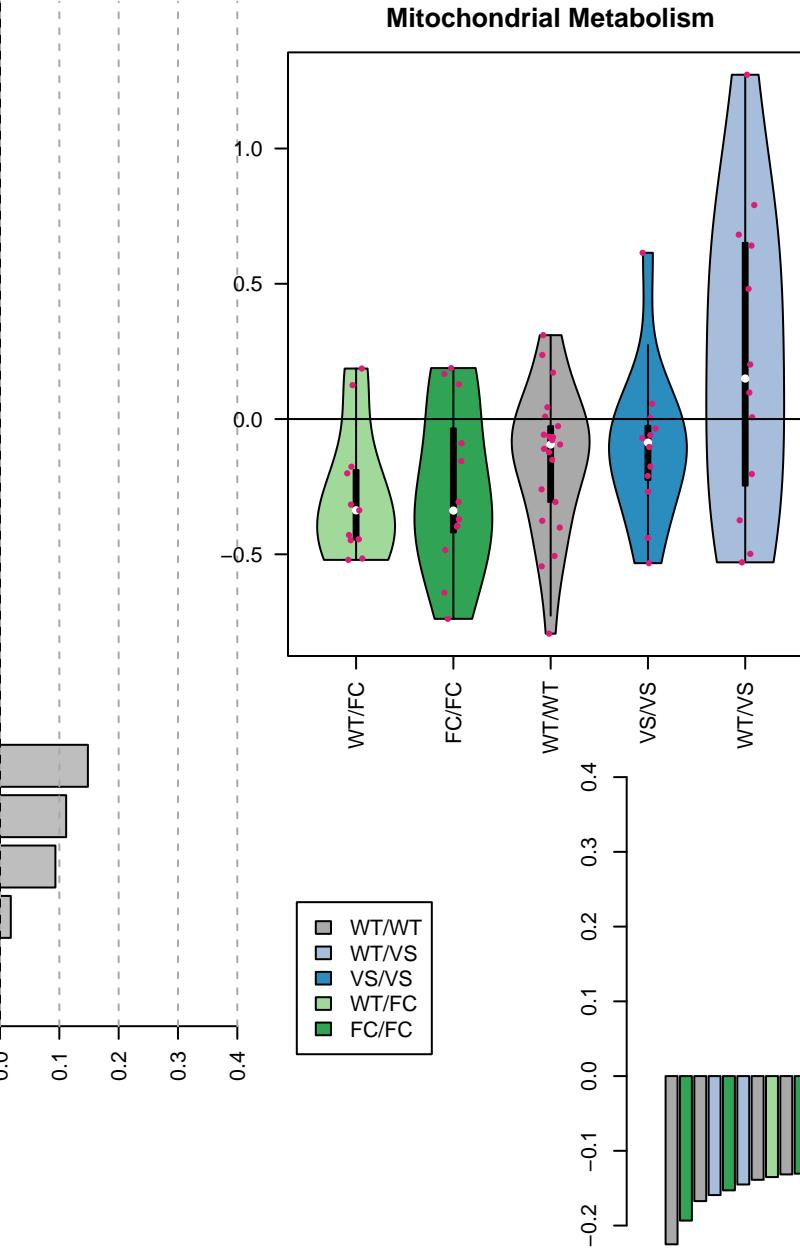
Maturity onset diabetes of the young



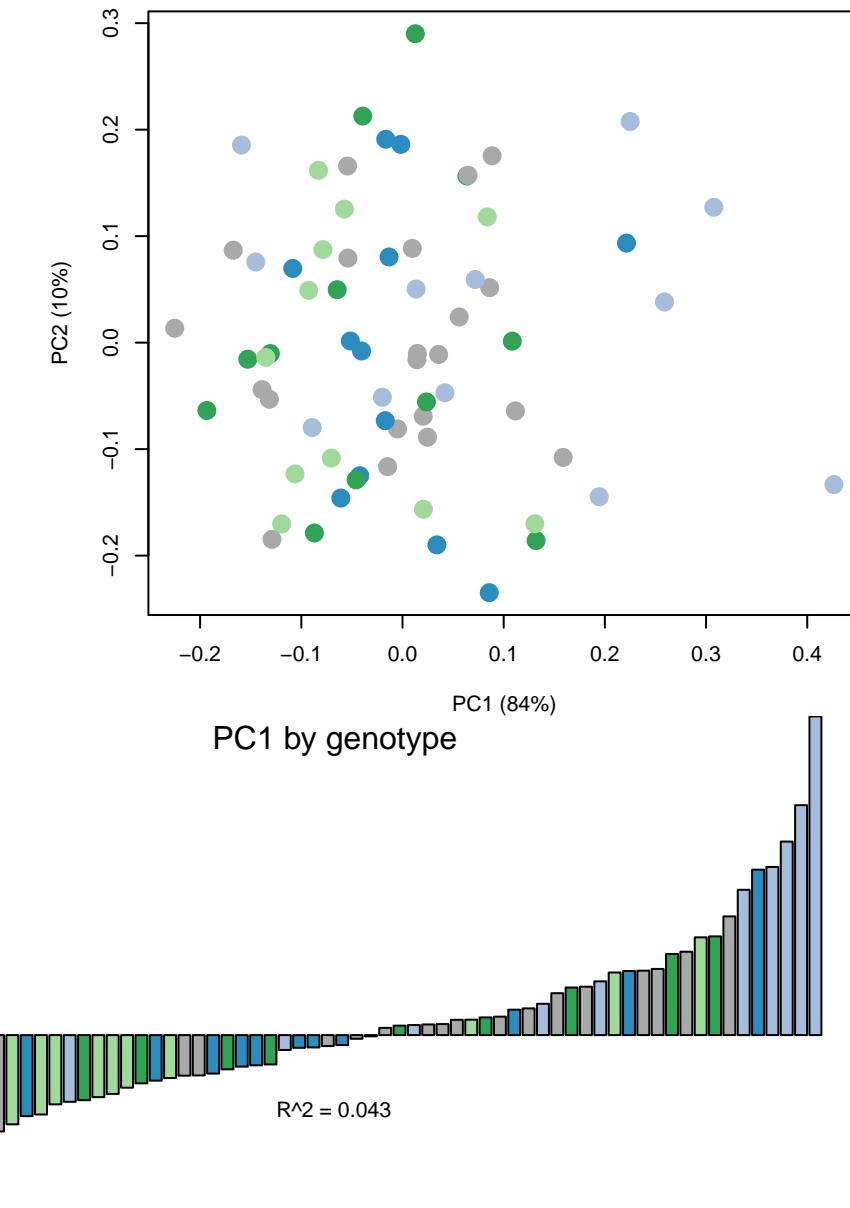
Carbon metabolism



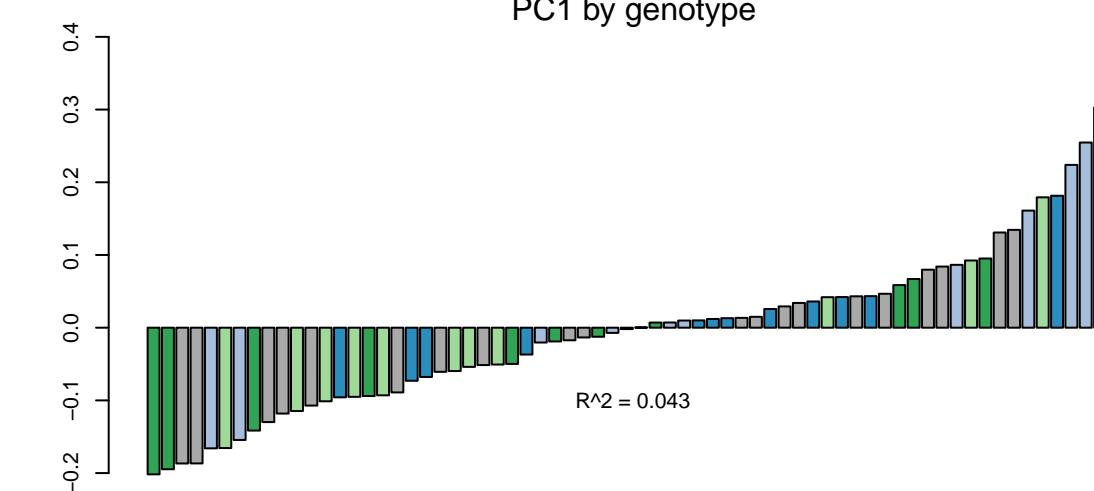
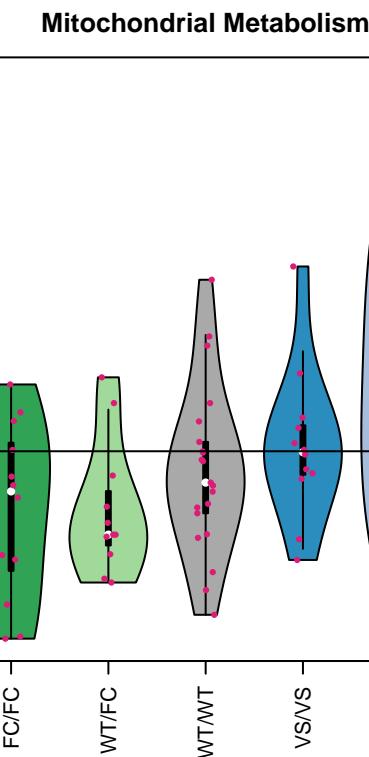
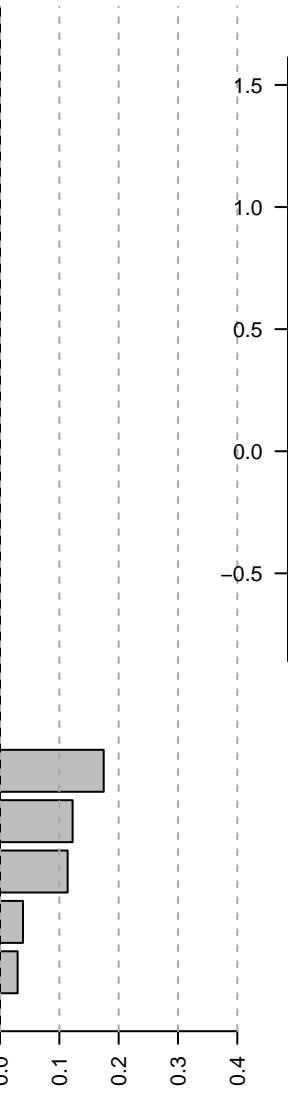
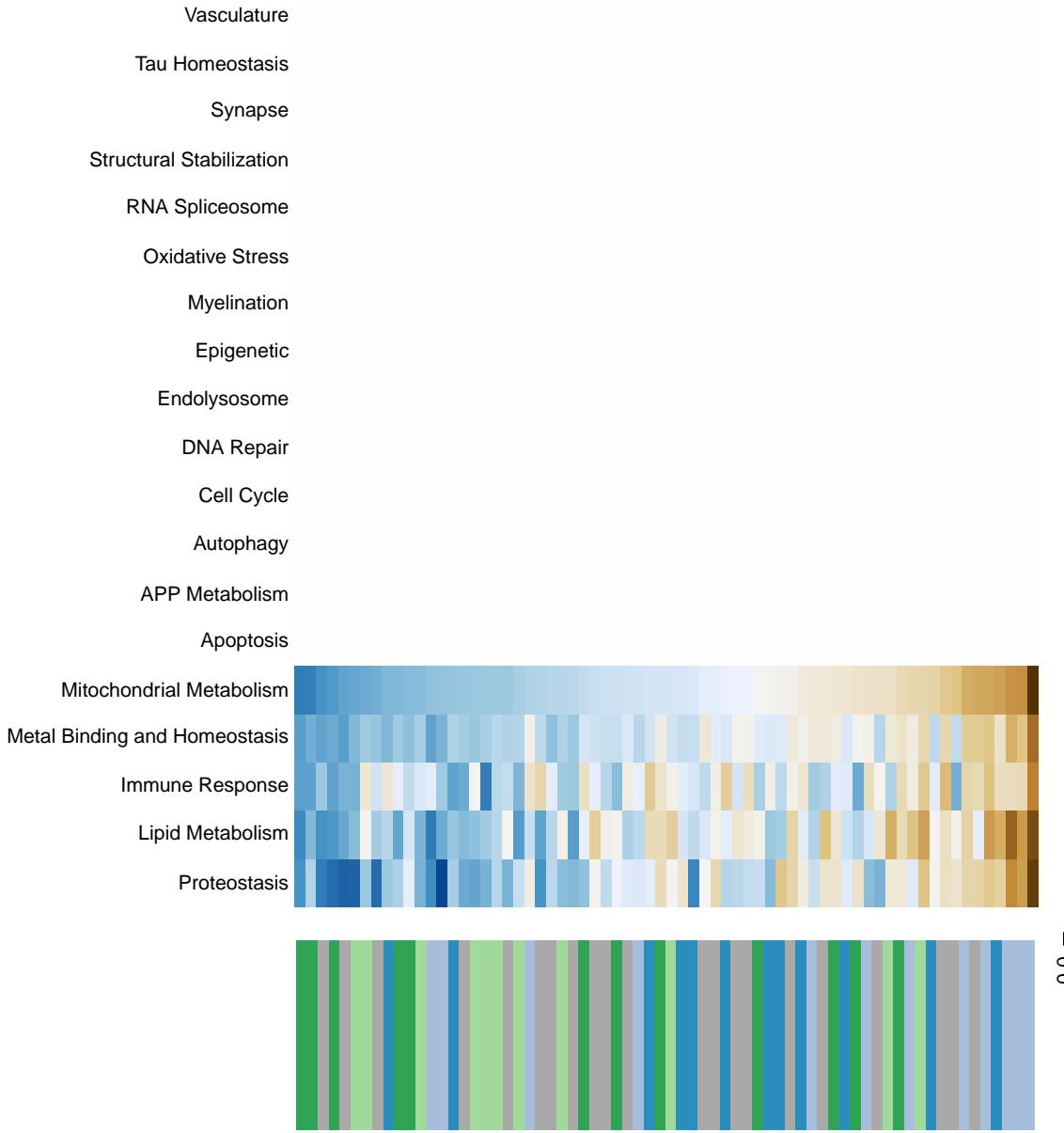
Mitochondrial Metabolism



Decomposition

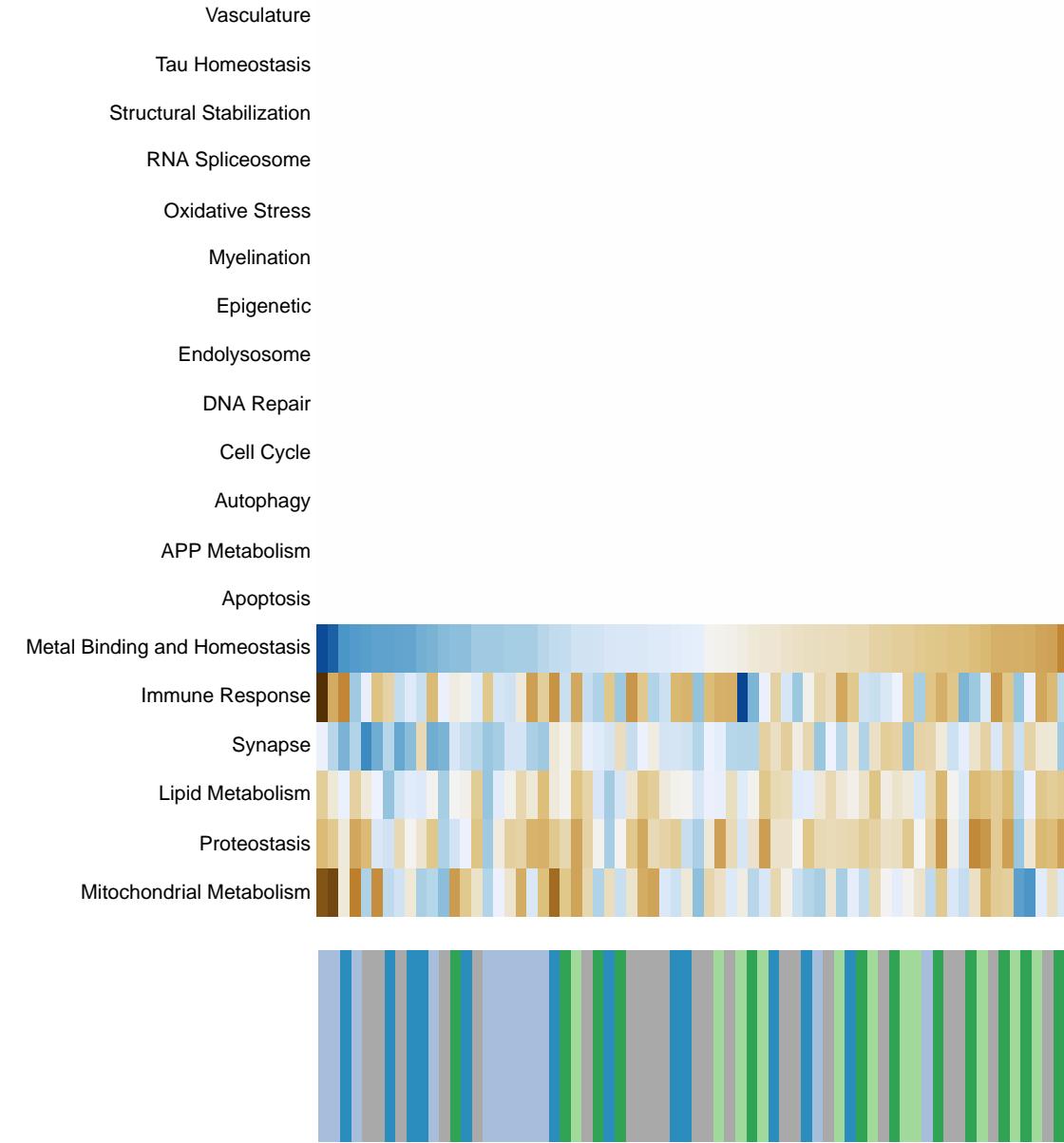


Biosynthesis of amino acids

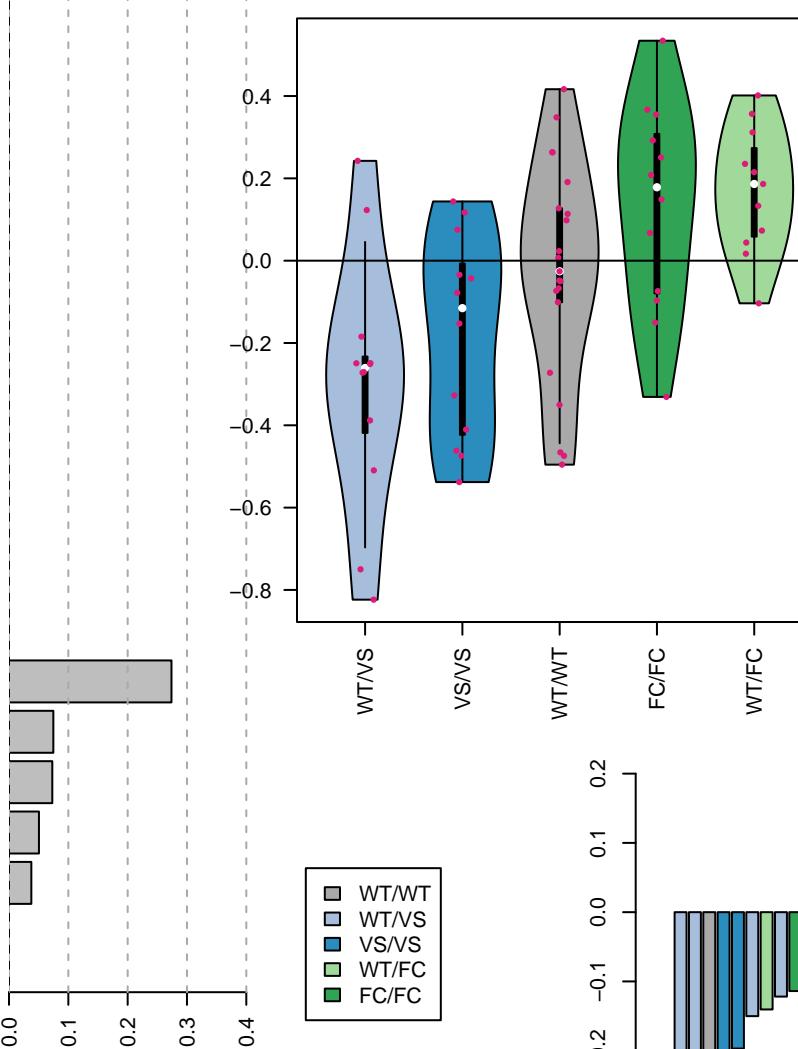


Decomposition

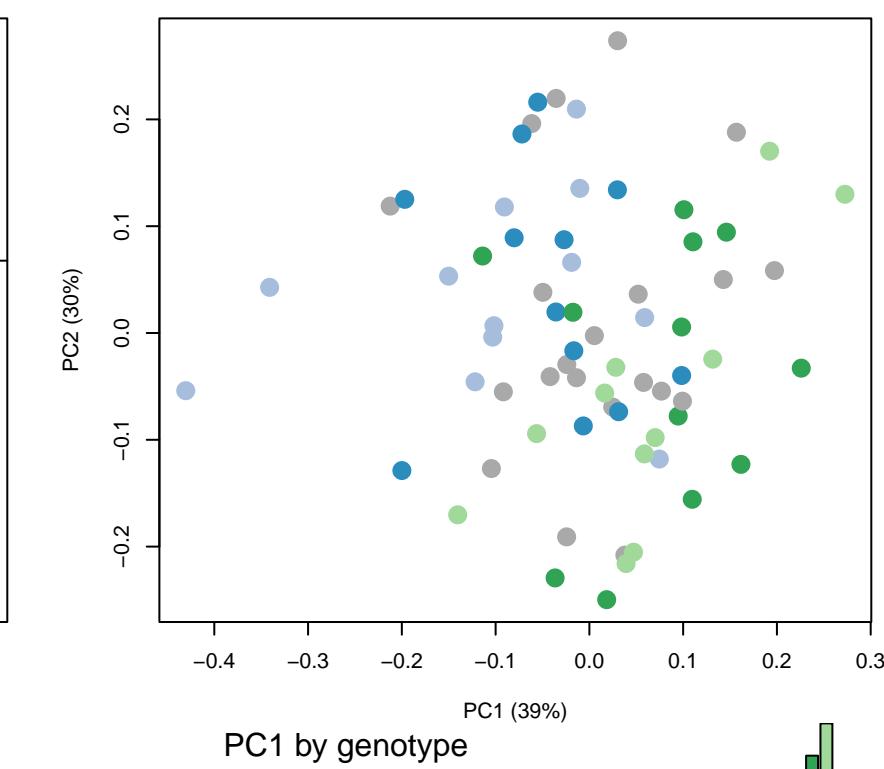
Glycerolipid metabolism



Metal Binding and Homeostasis

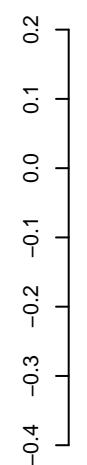


Decomposition

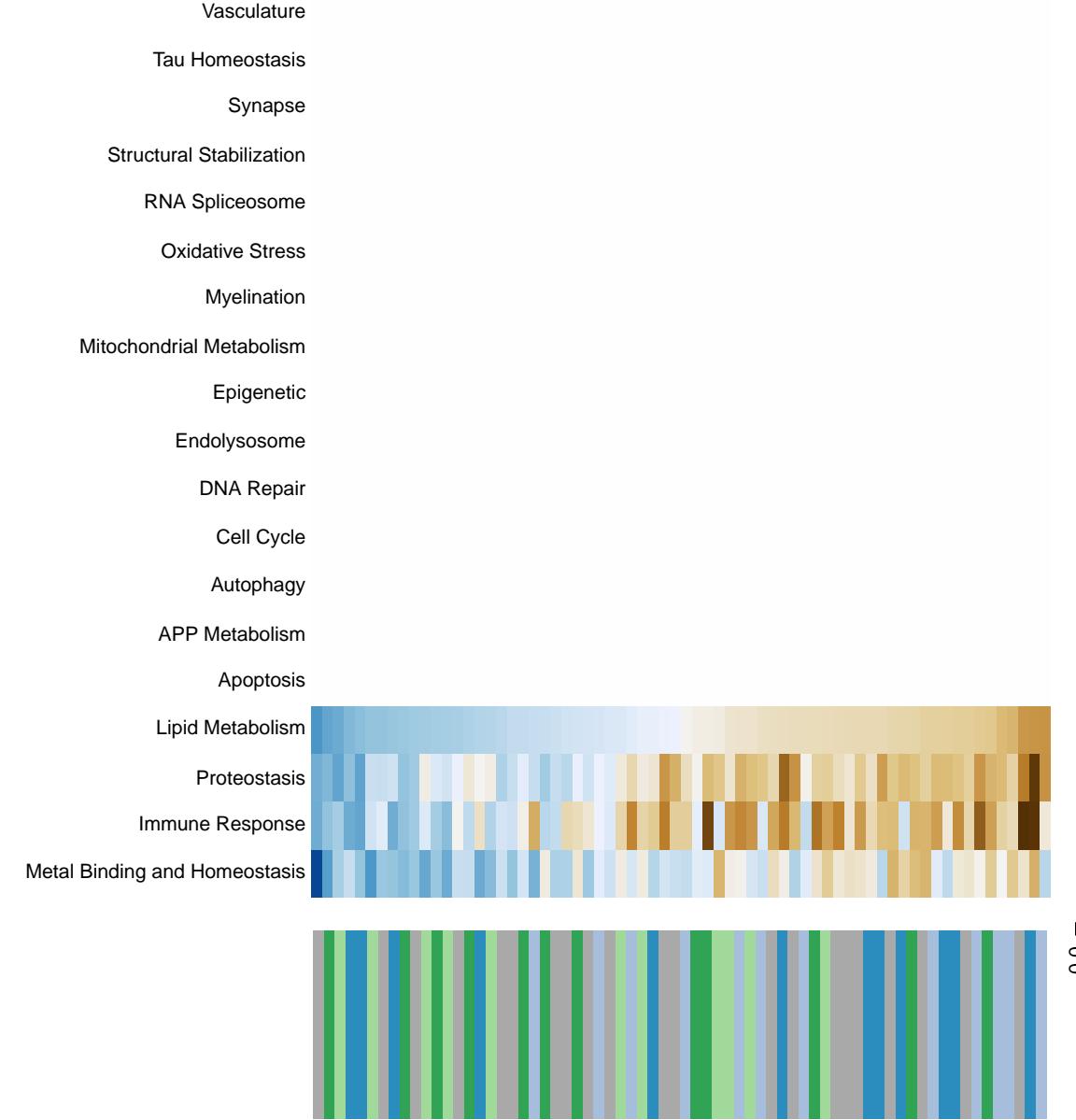


PC1 by genotype

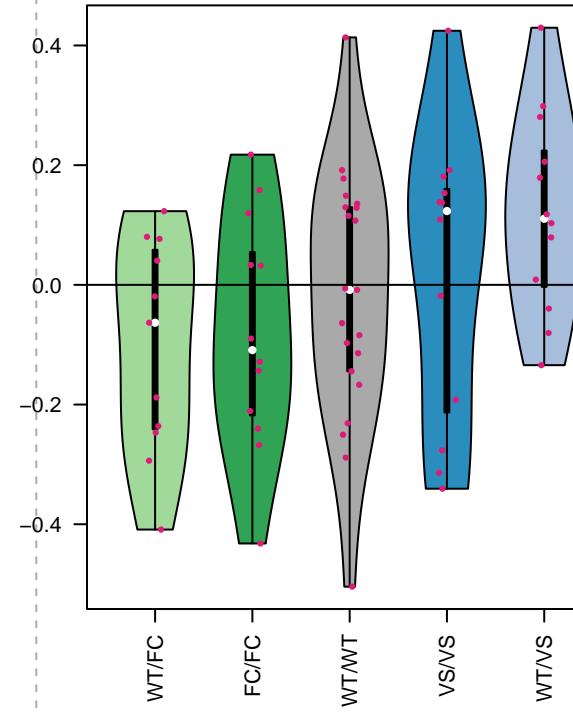
$R^2 = 0.11$



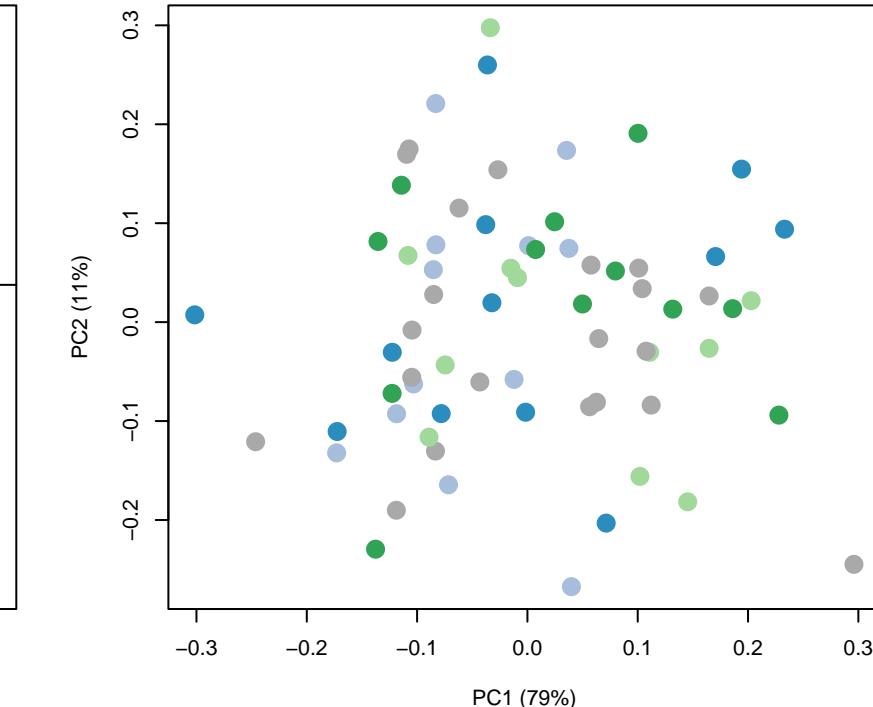
Arachidonic acid metabolism



Lipid Metabolism

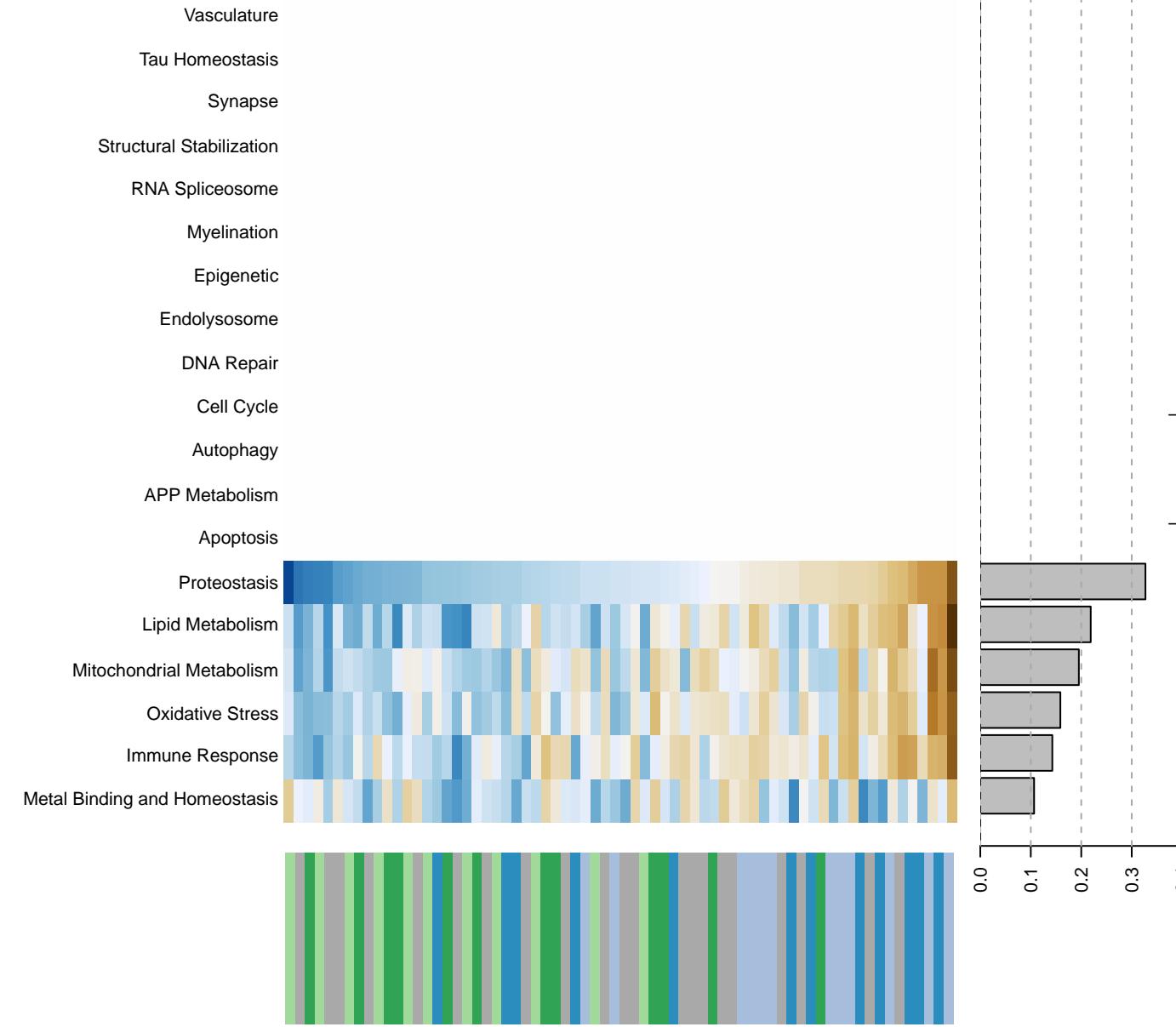


Decomposition

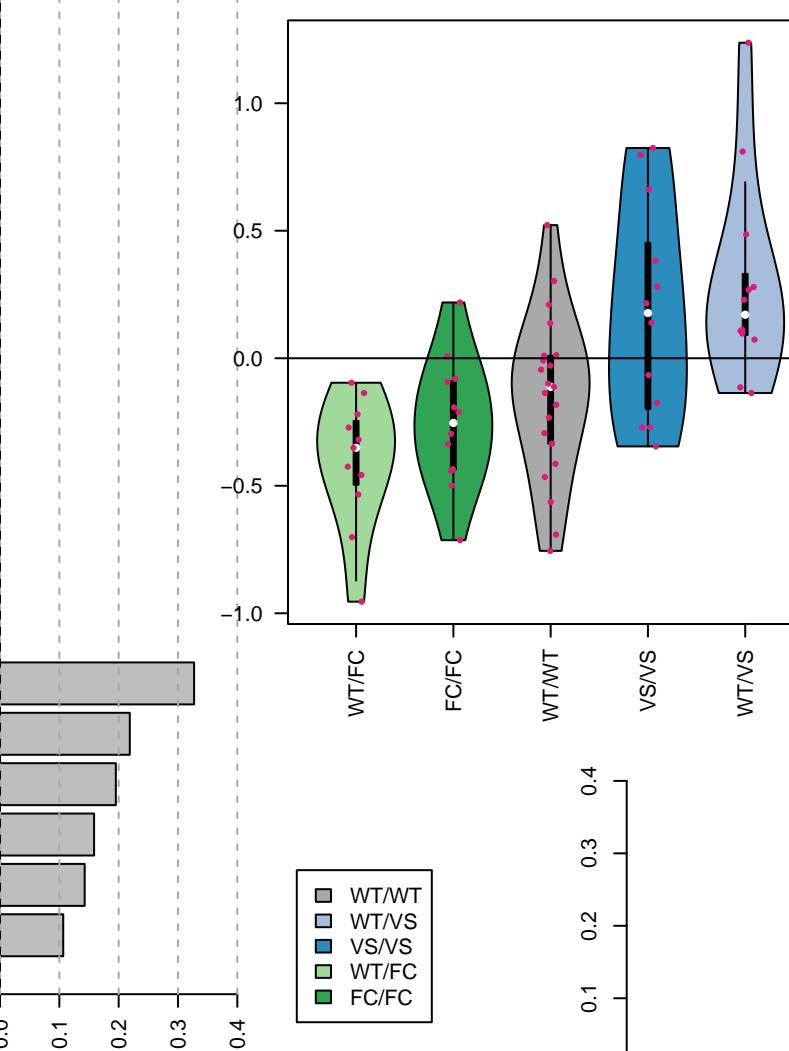


R² = 0.08

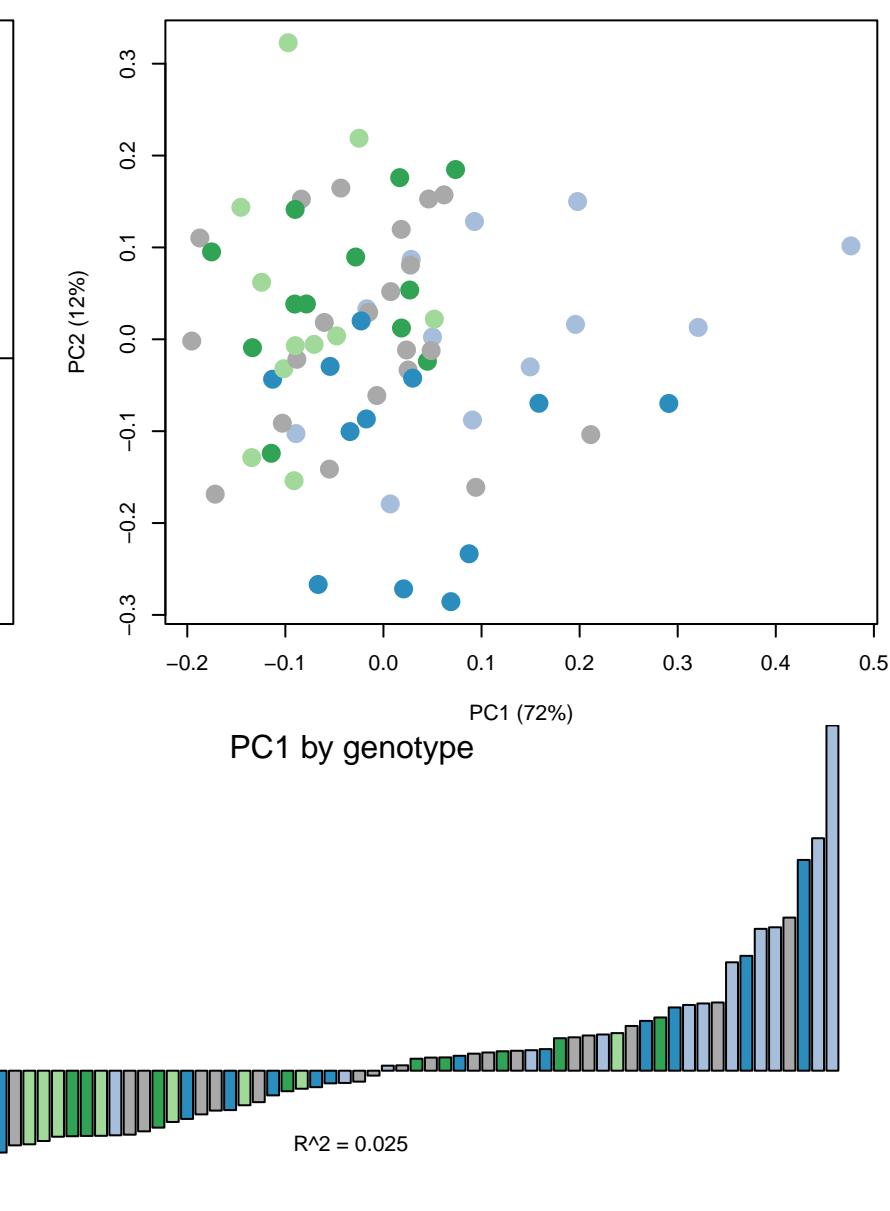
Glutathione metabolism



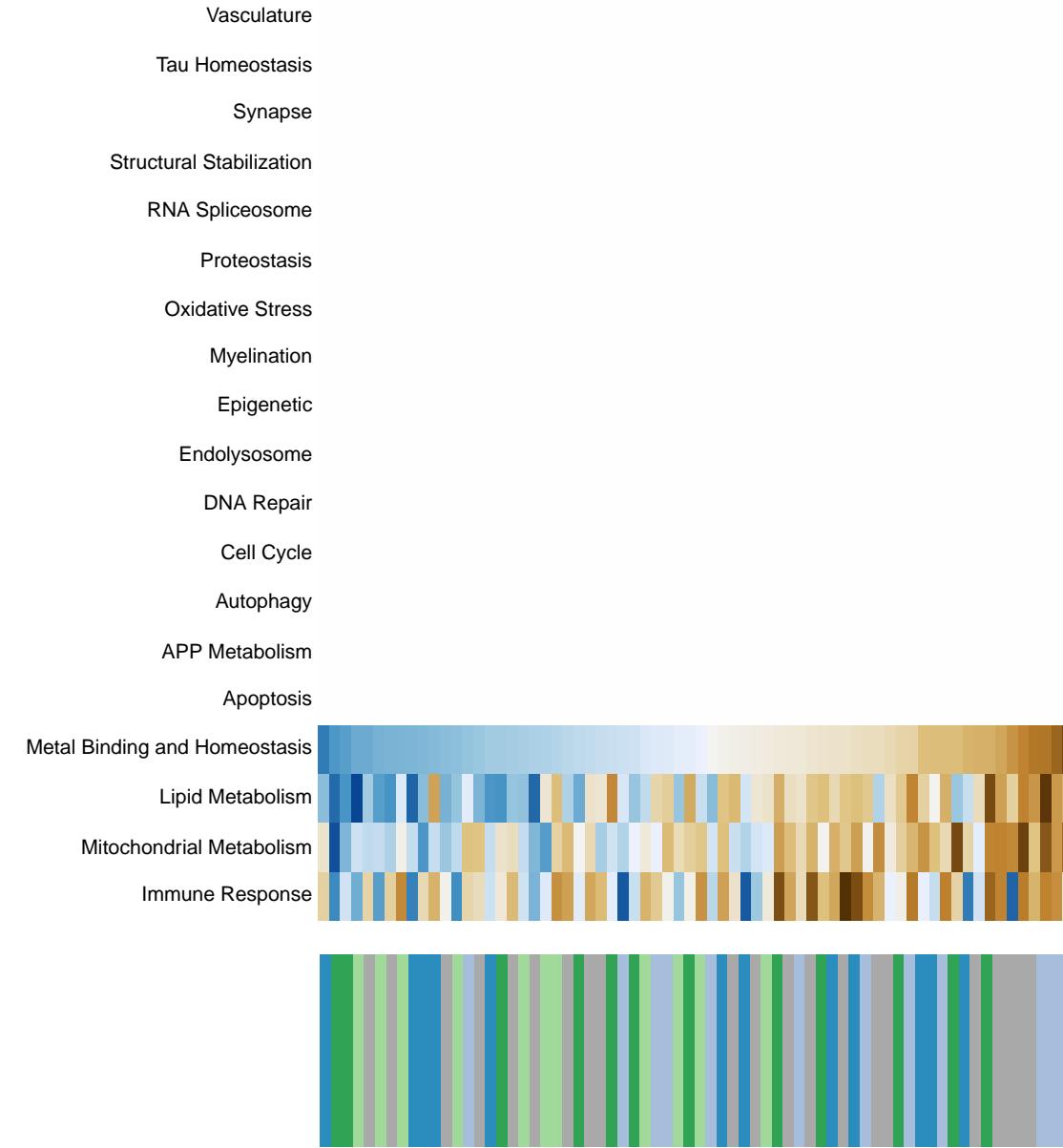
Proteostasis



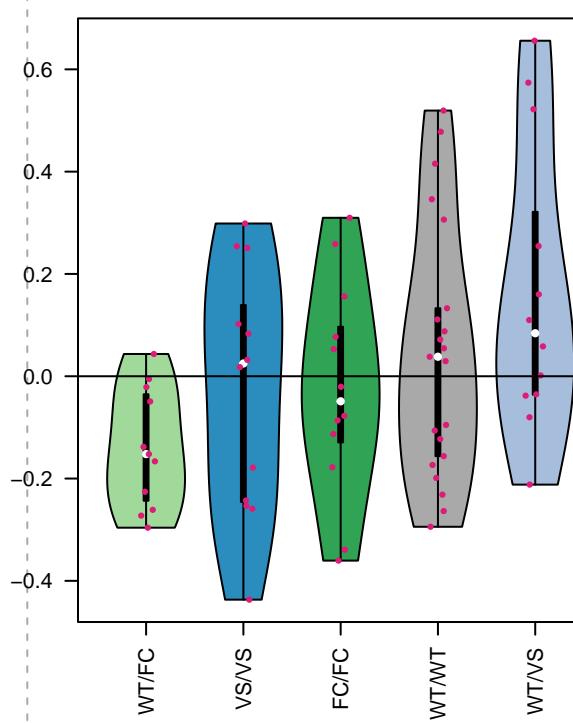
Decomposition



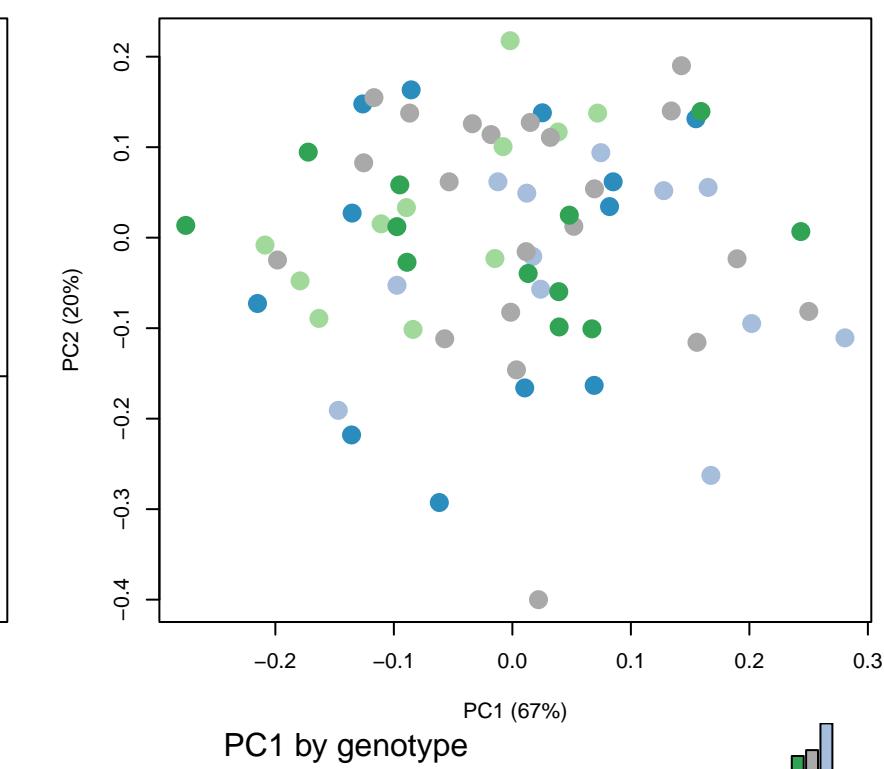
Nicotinate and nicotinamide metabolism



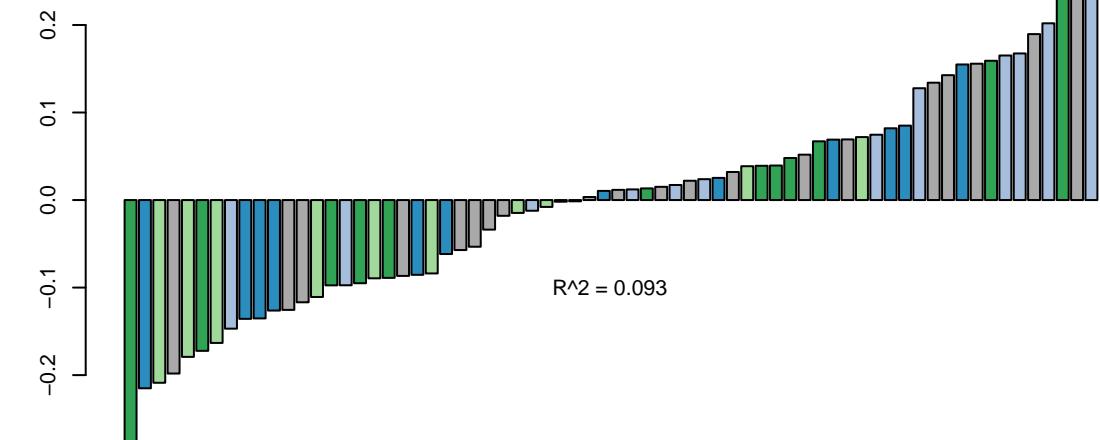
Metal Binding and Homeostasis



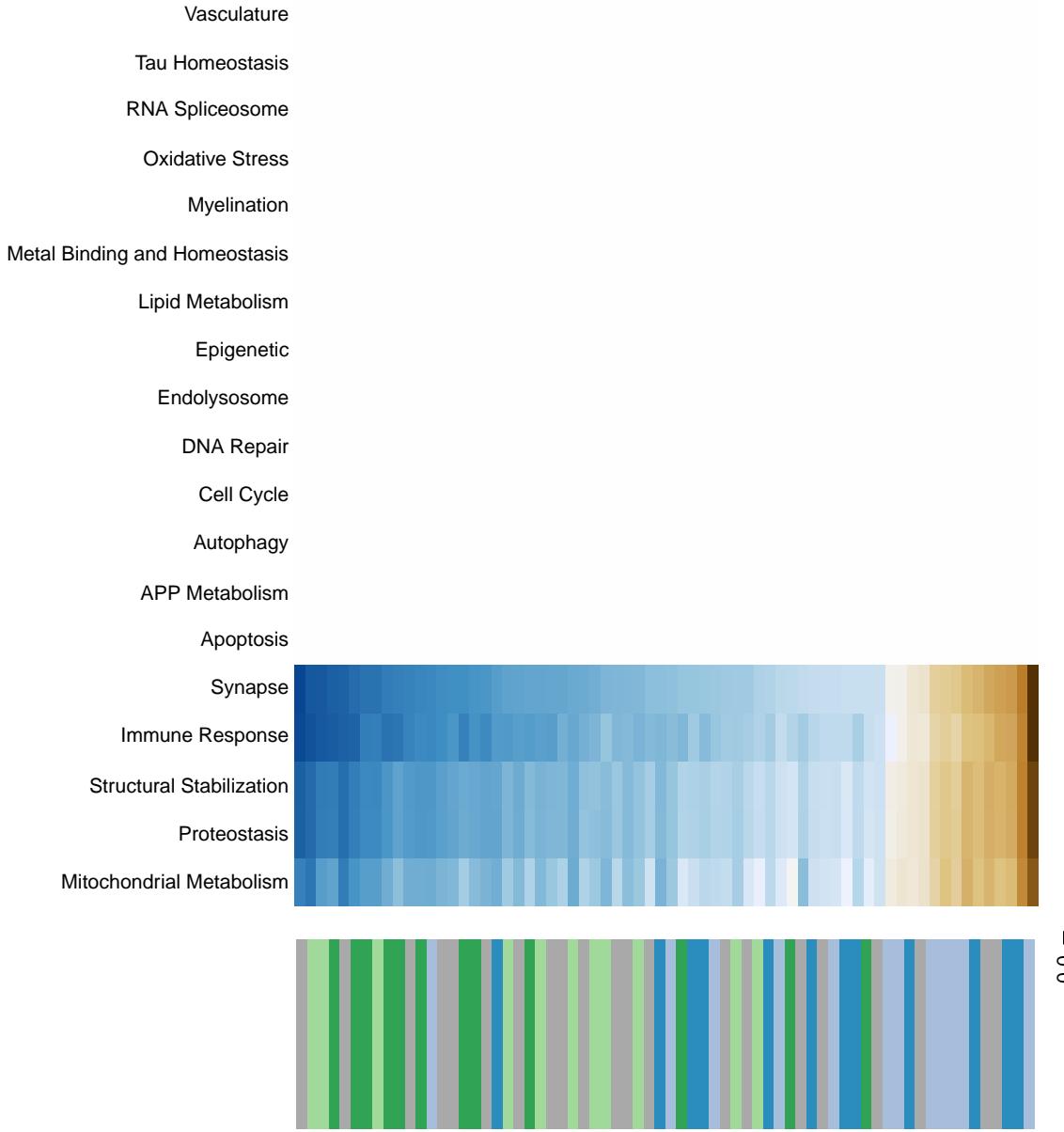
Decomposition



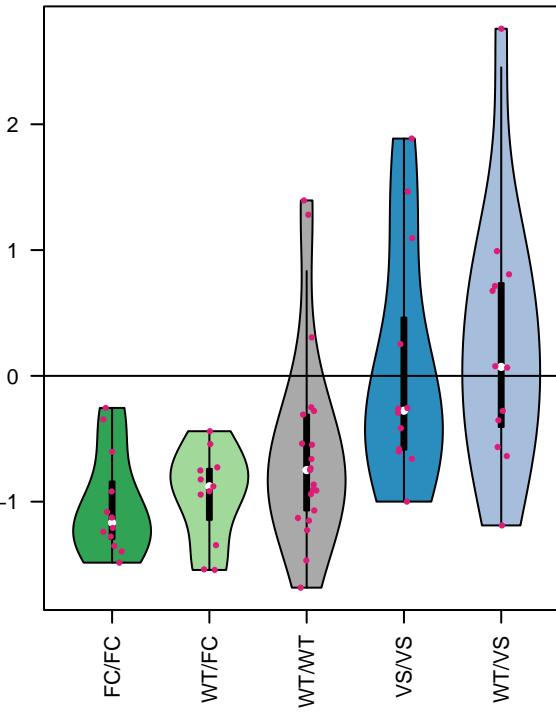
PC1 by genotype



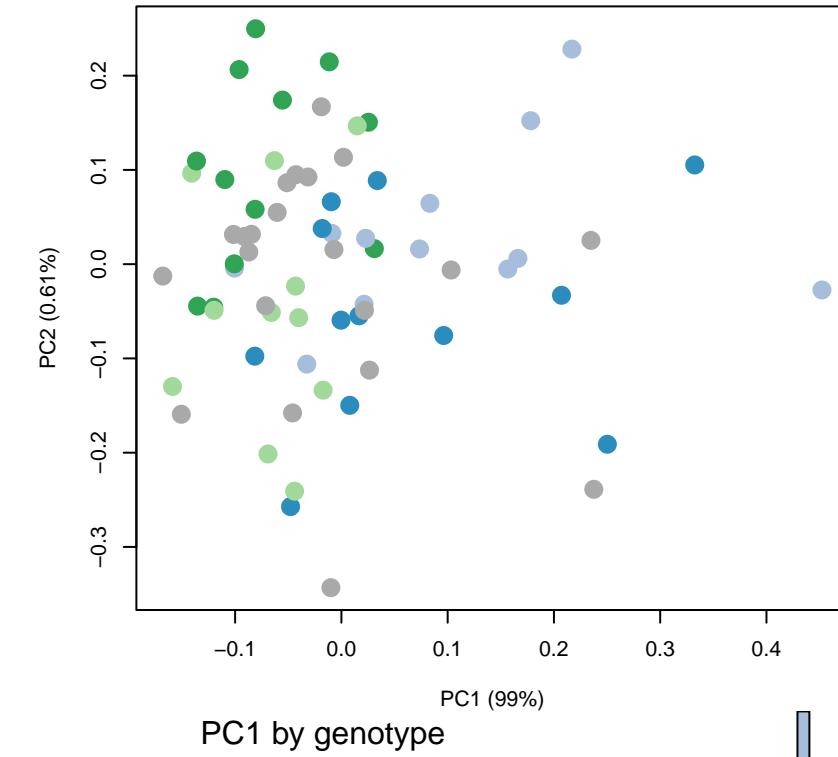
Ribosome



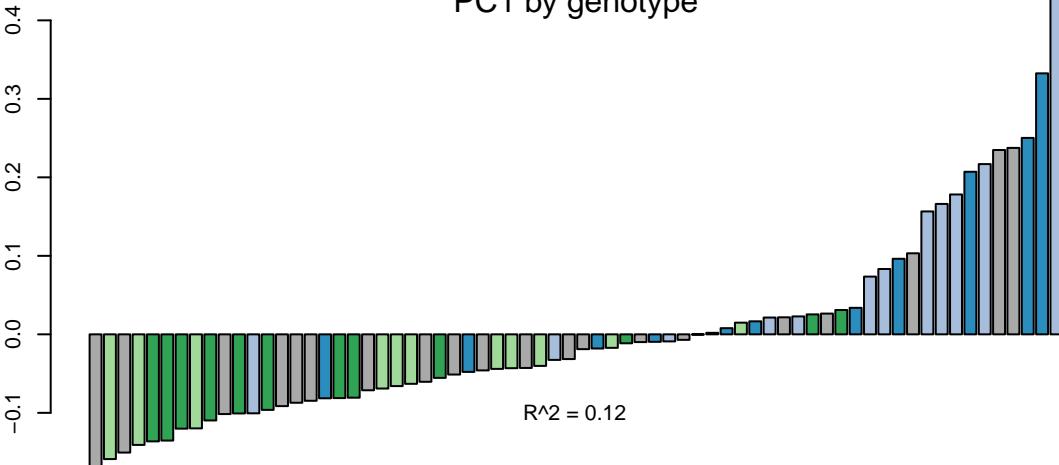
Synapse



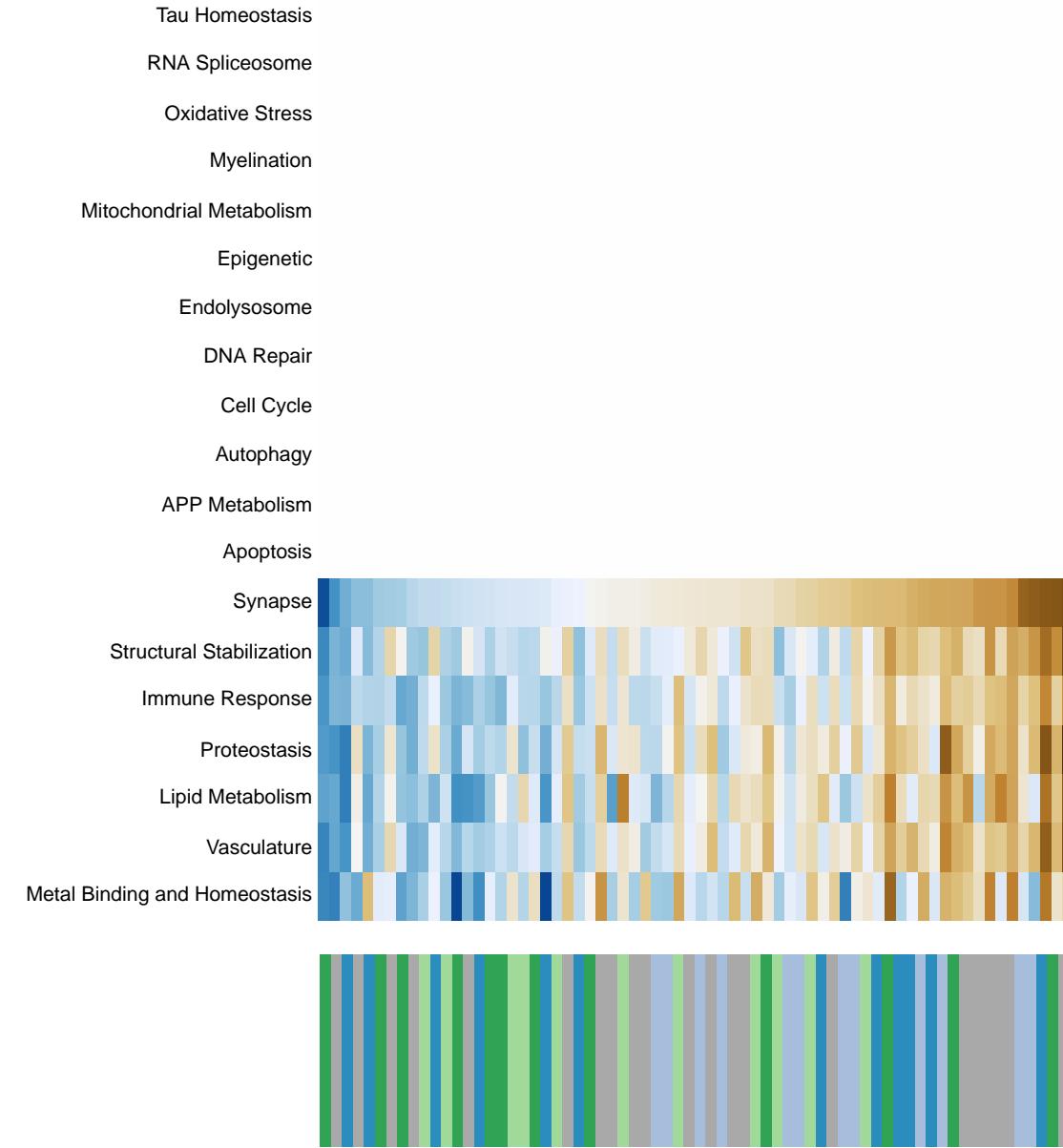
Decomposition



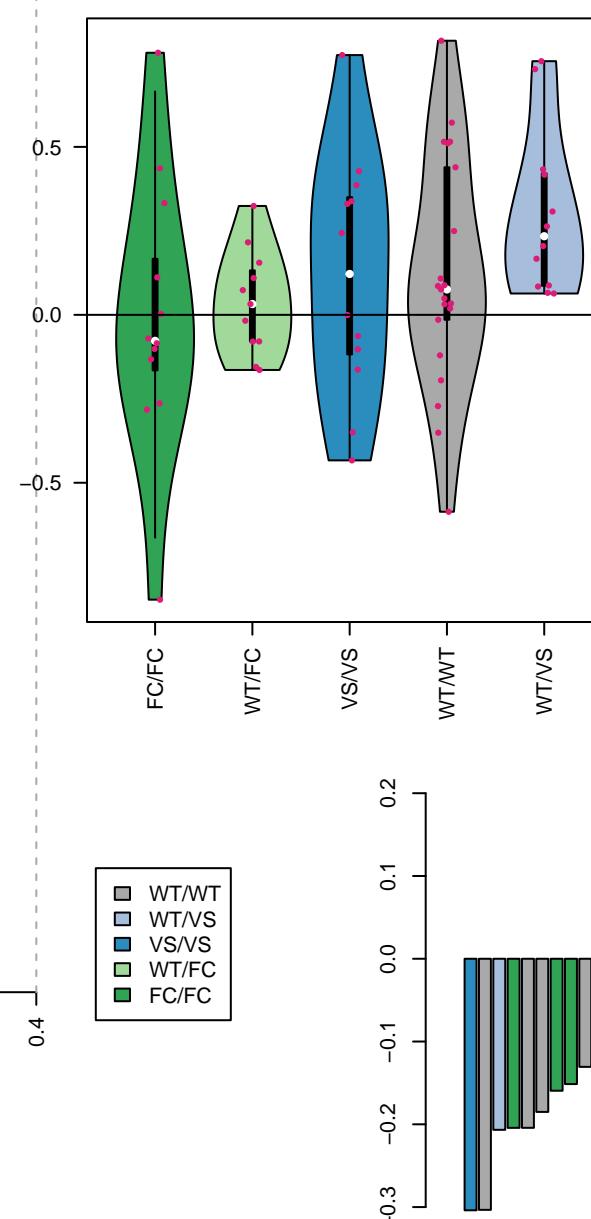
PC1 by genotype



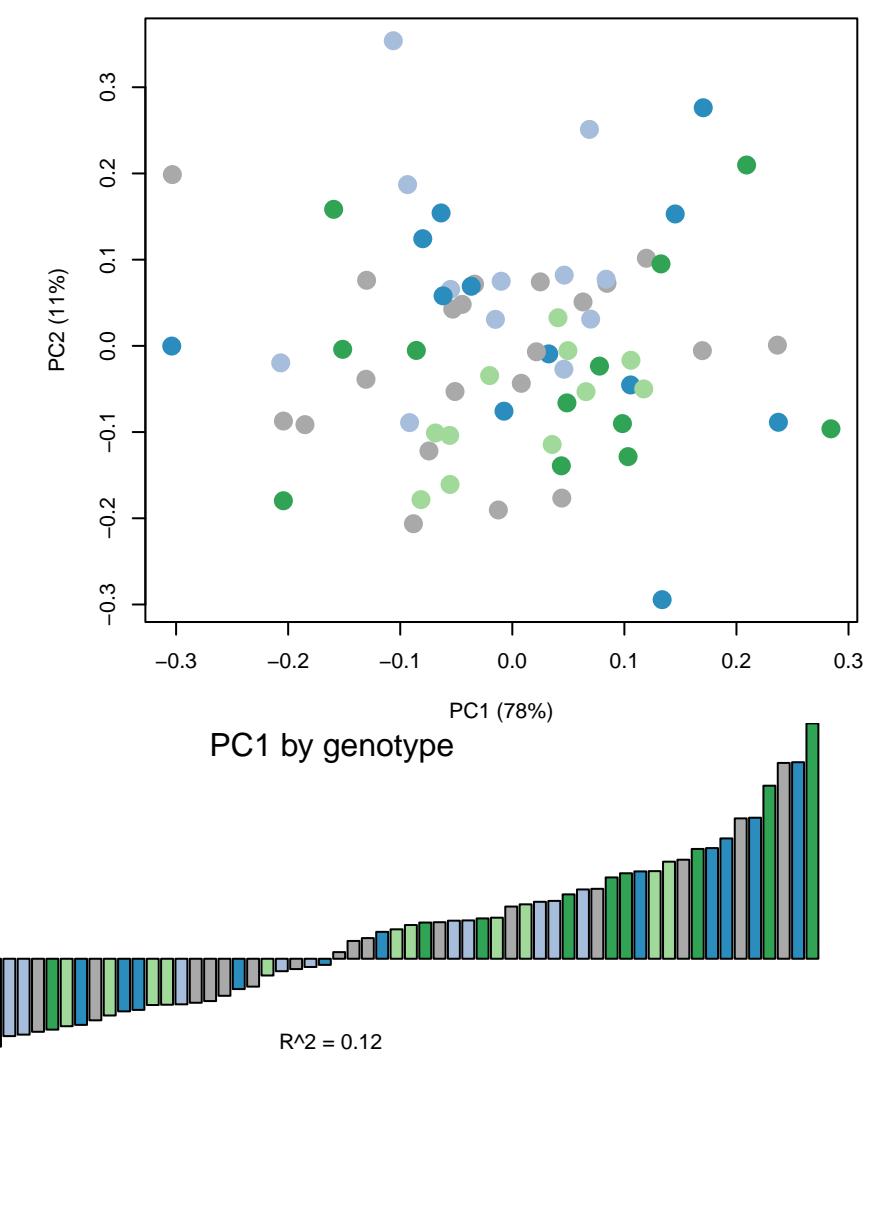
Complement and coagulation cascades



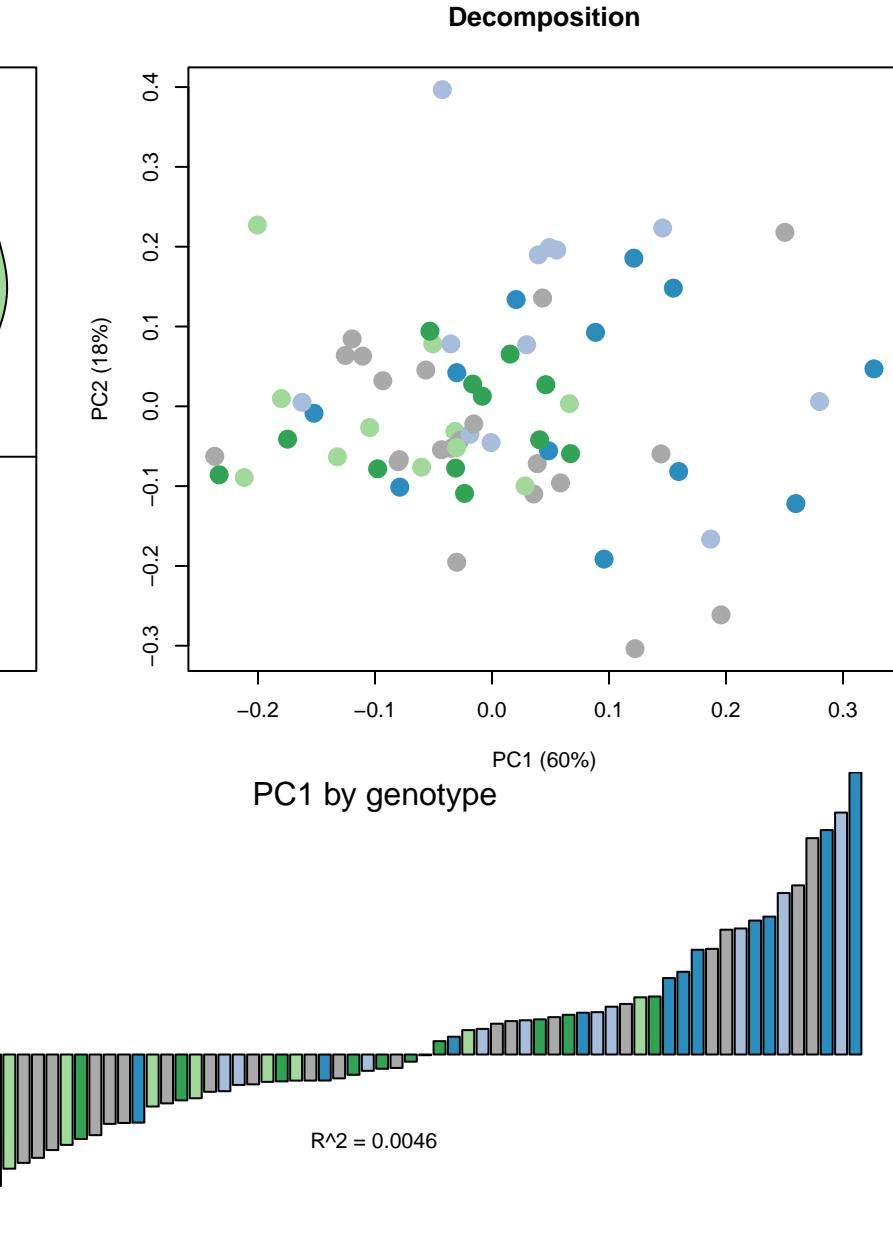
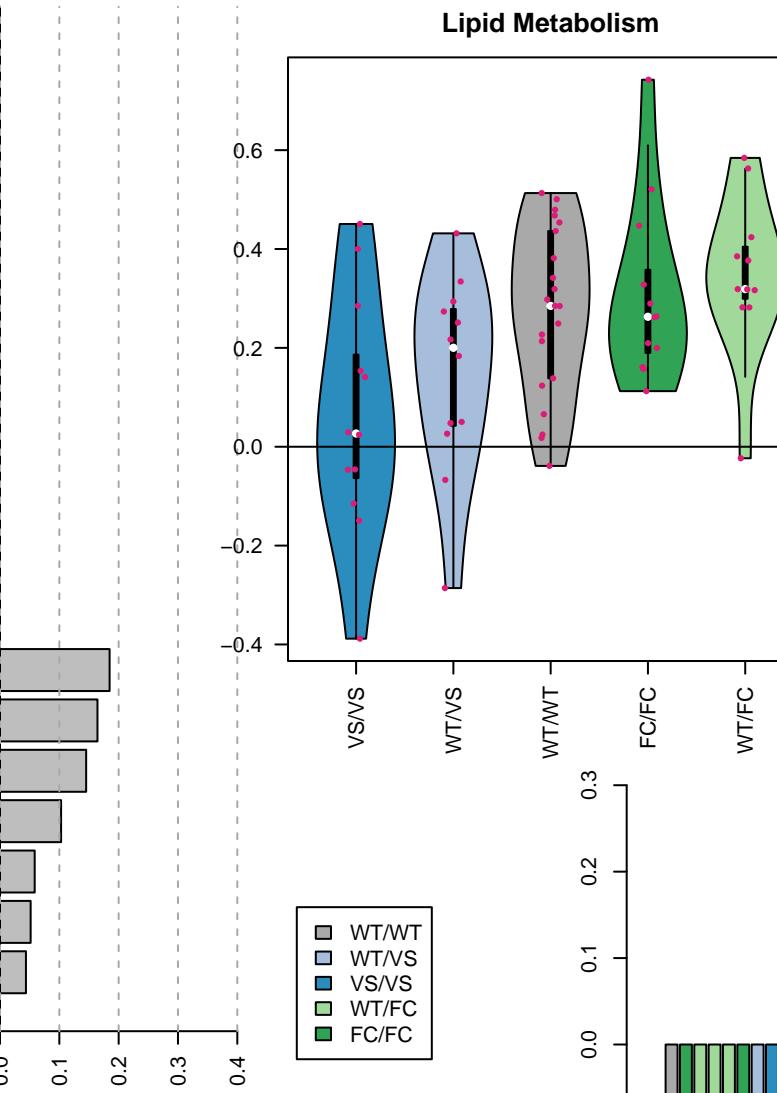
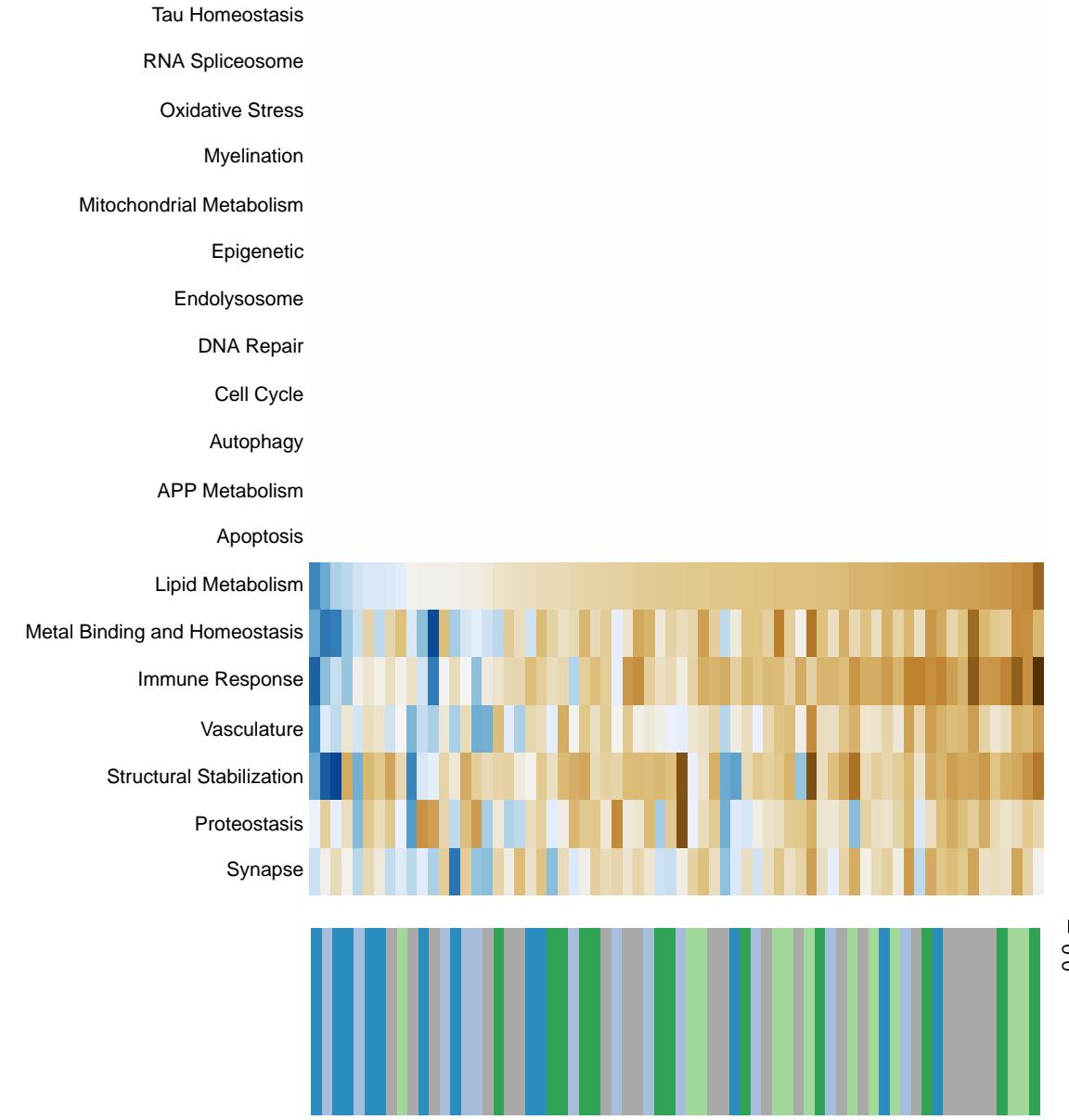
Synapse



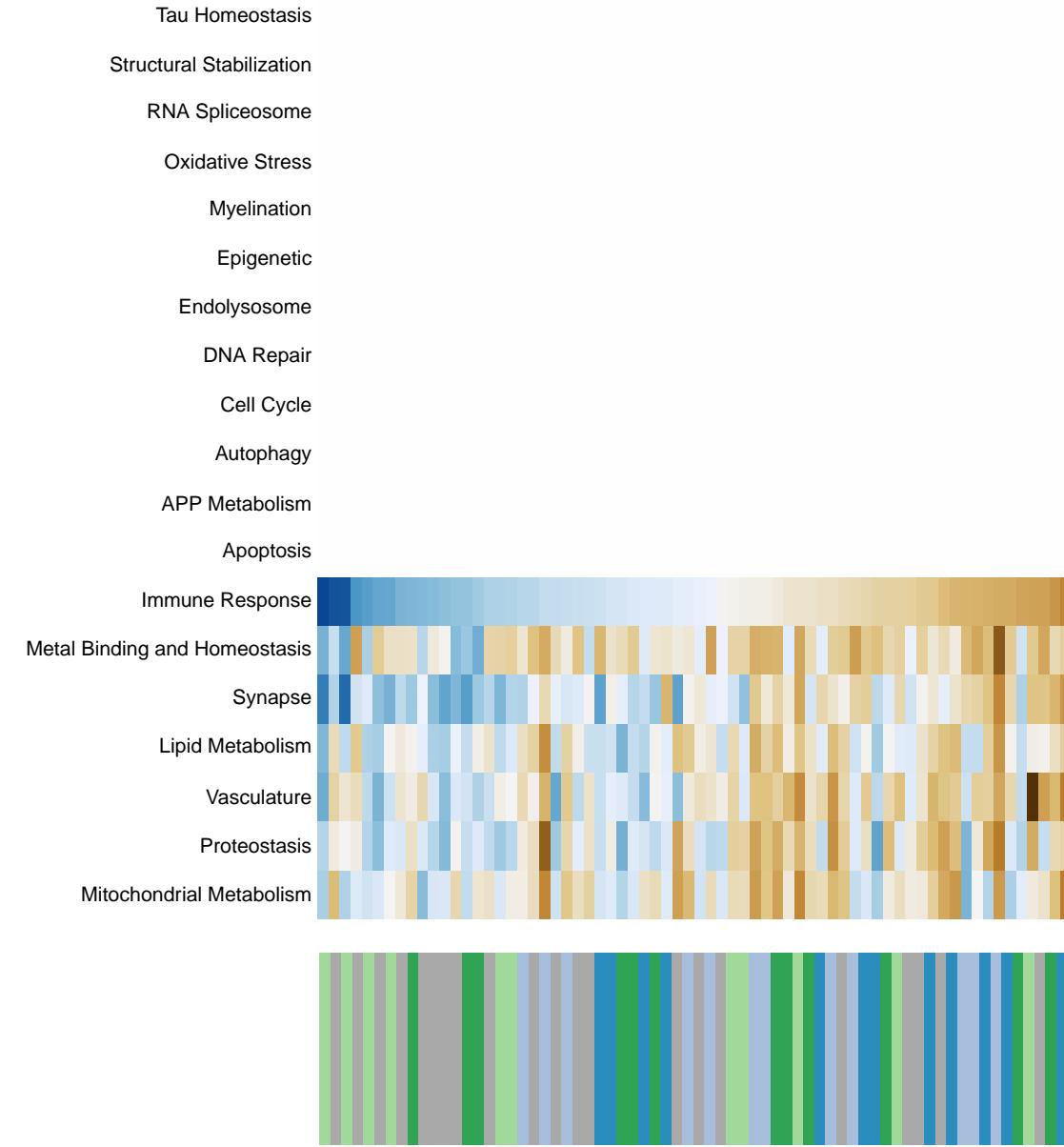
Decomposition



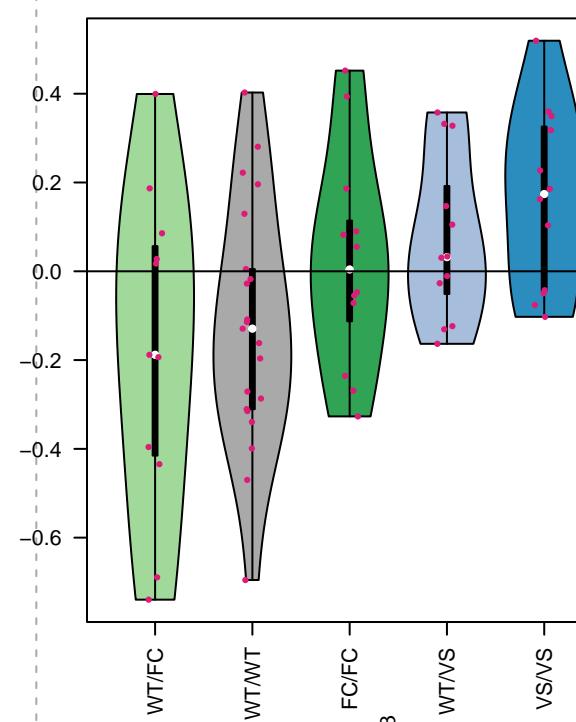
Regulation of lipolysis in adipocytes



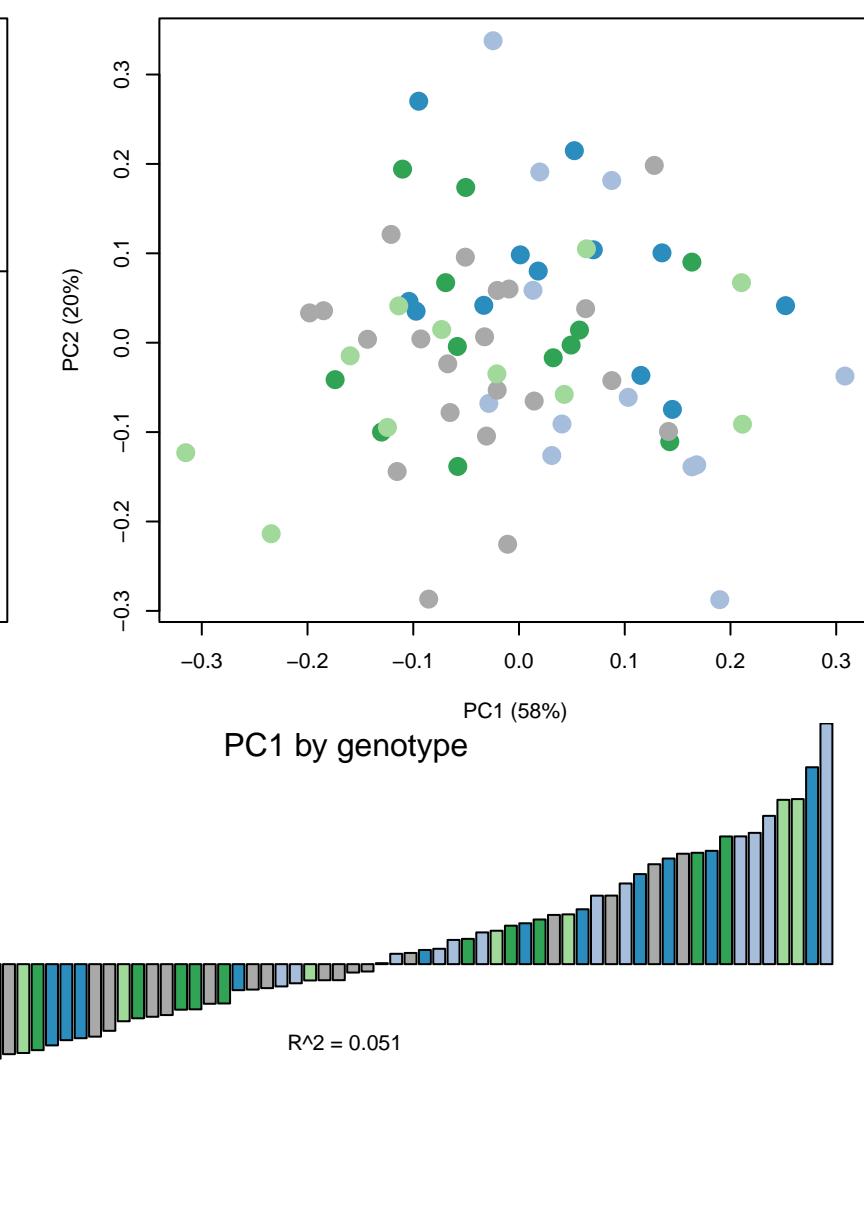
PPAR signaling pathway



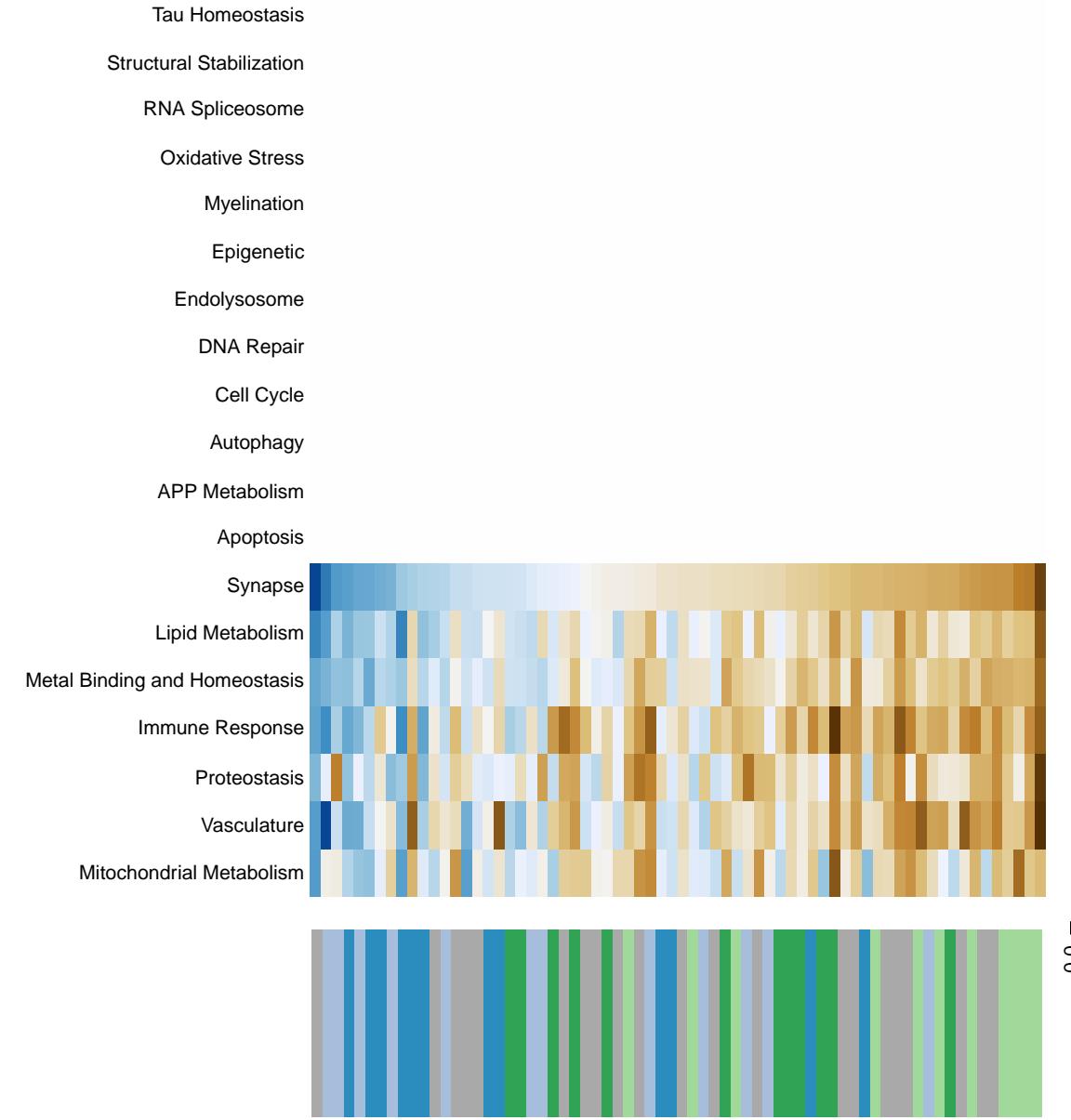
Immune Response



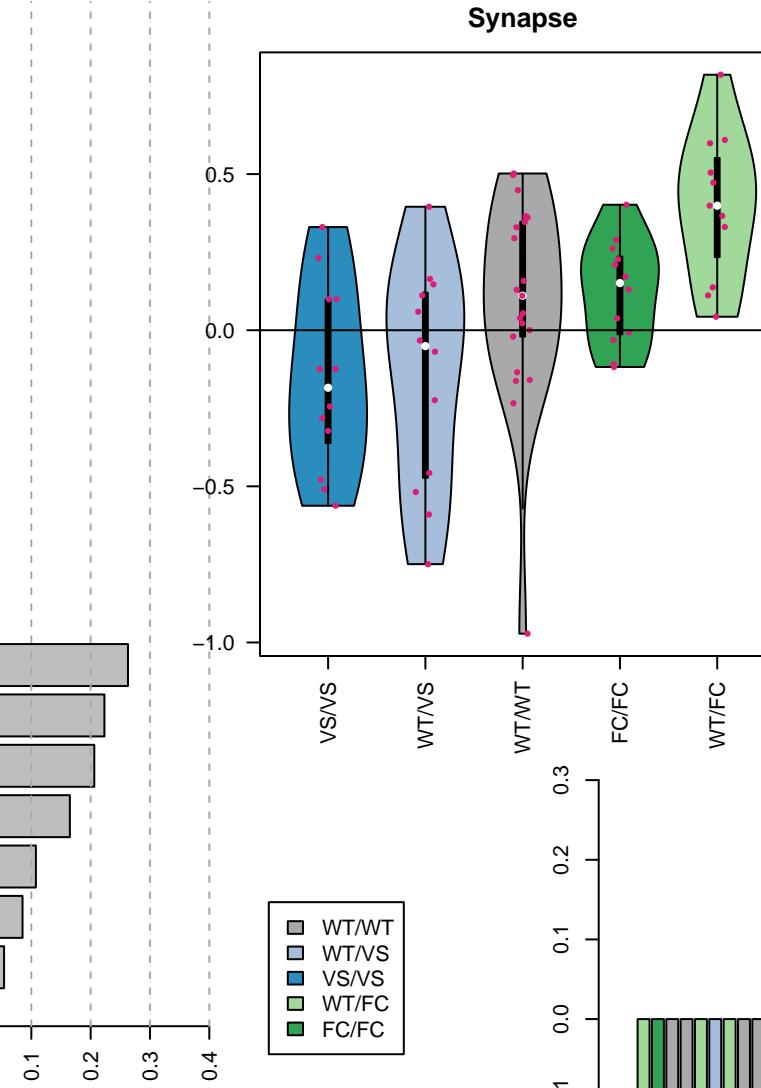
Decomposition



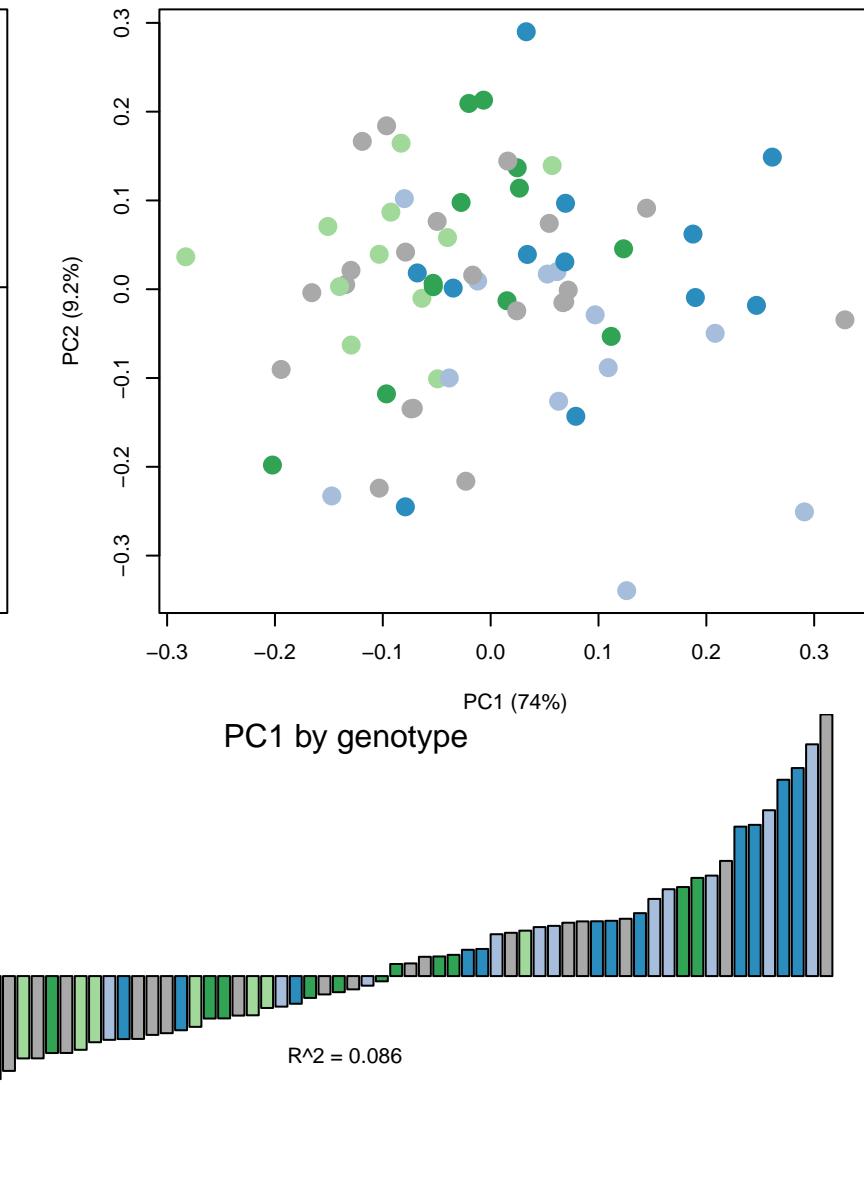
Ovarian steroidogenesis



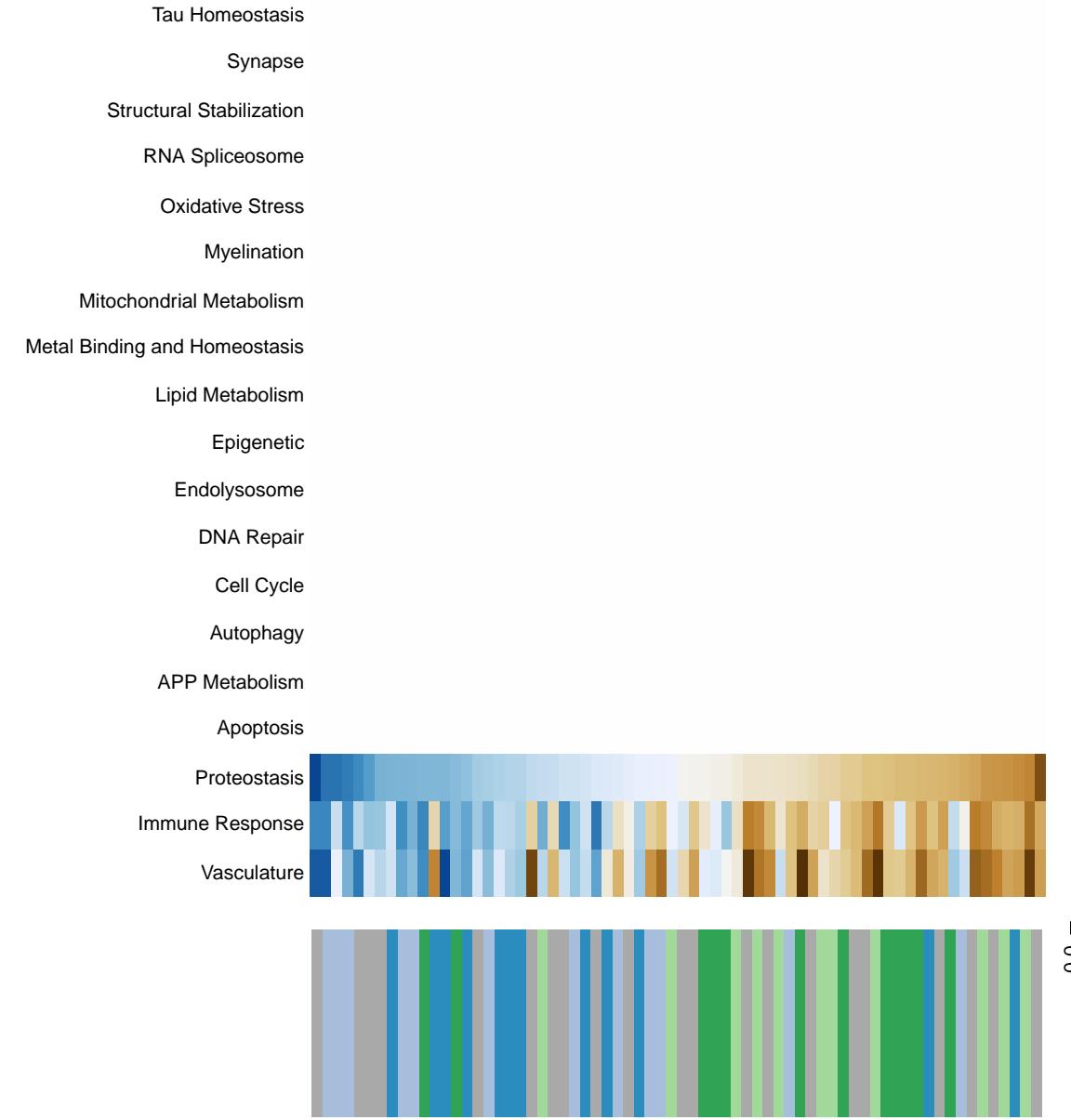
Synapse



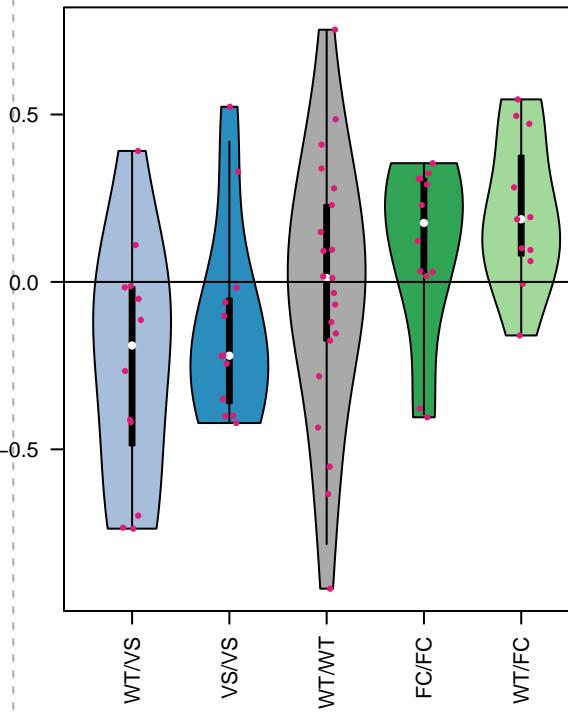
Decomposition



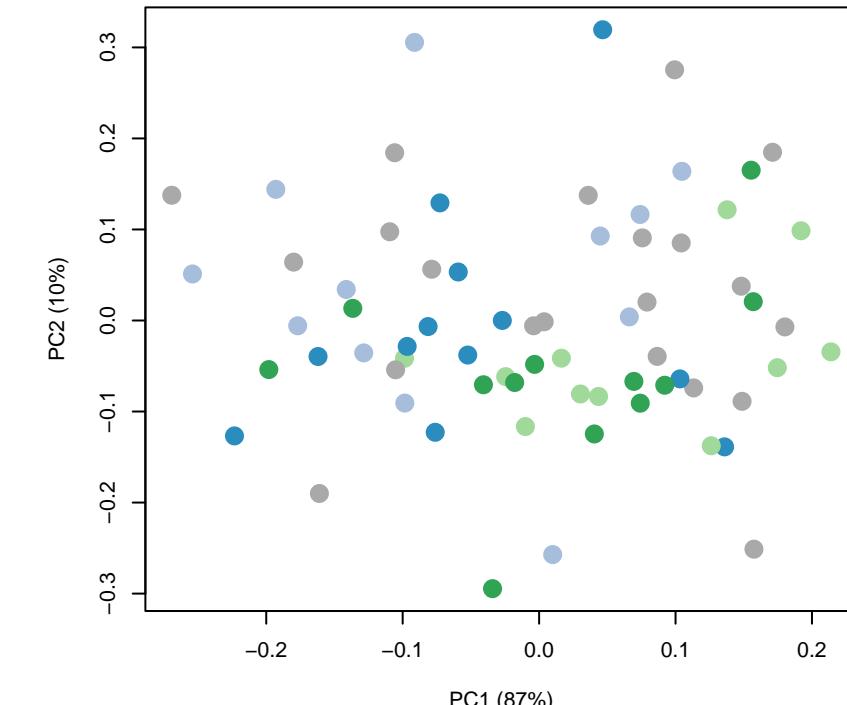
Renin–angiotensin system



Proteostasis

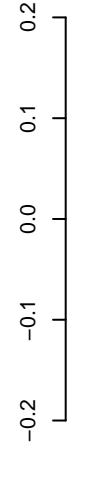


Decomposition

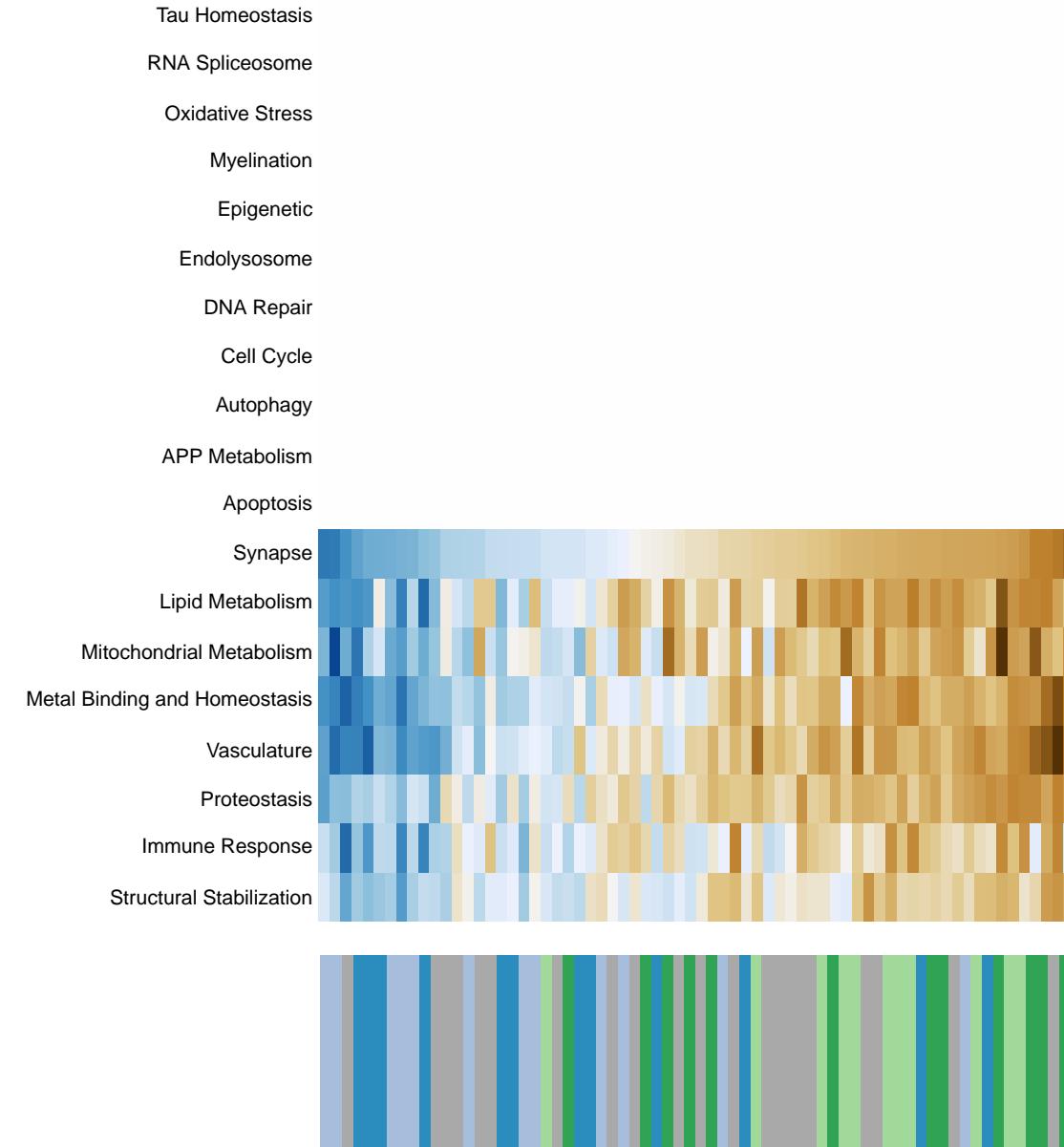


PC1 by genotype

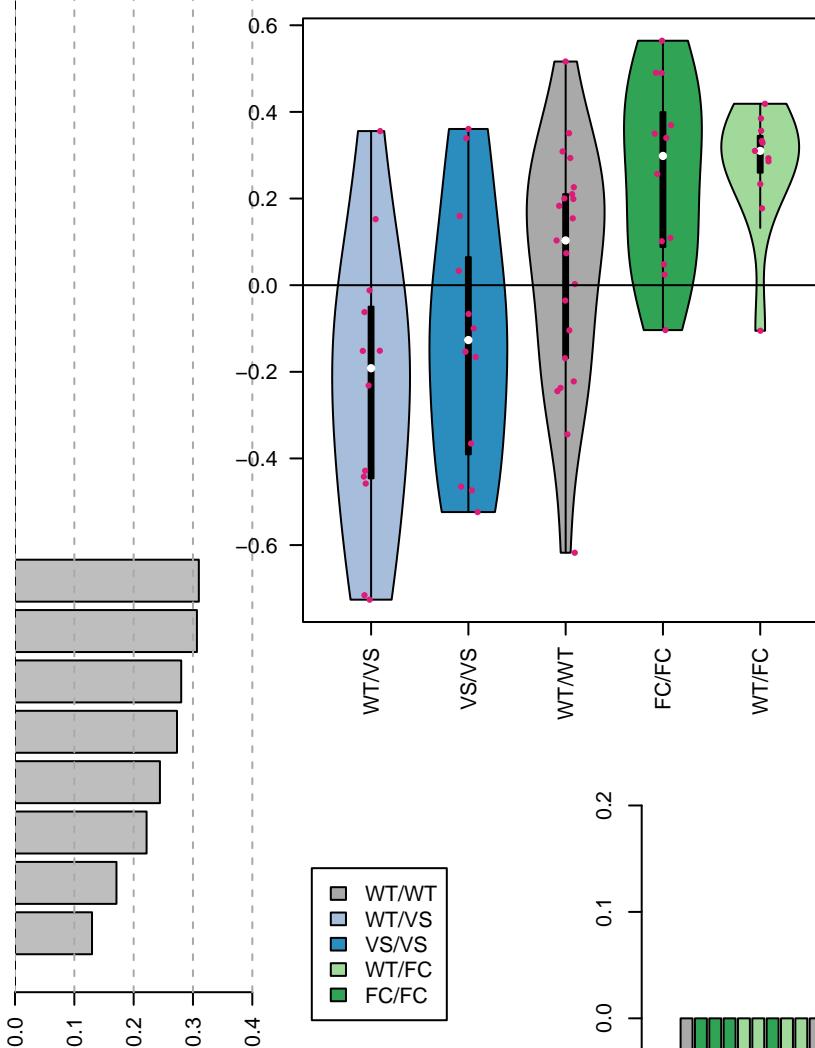
R² = 0.11



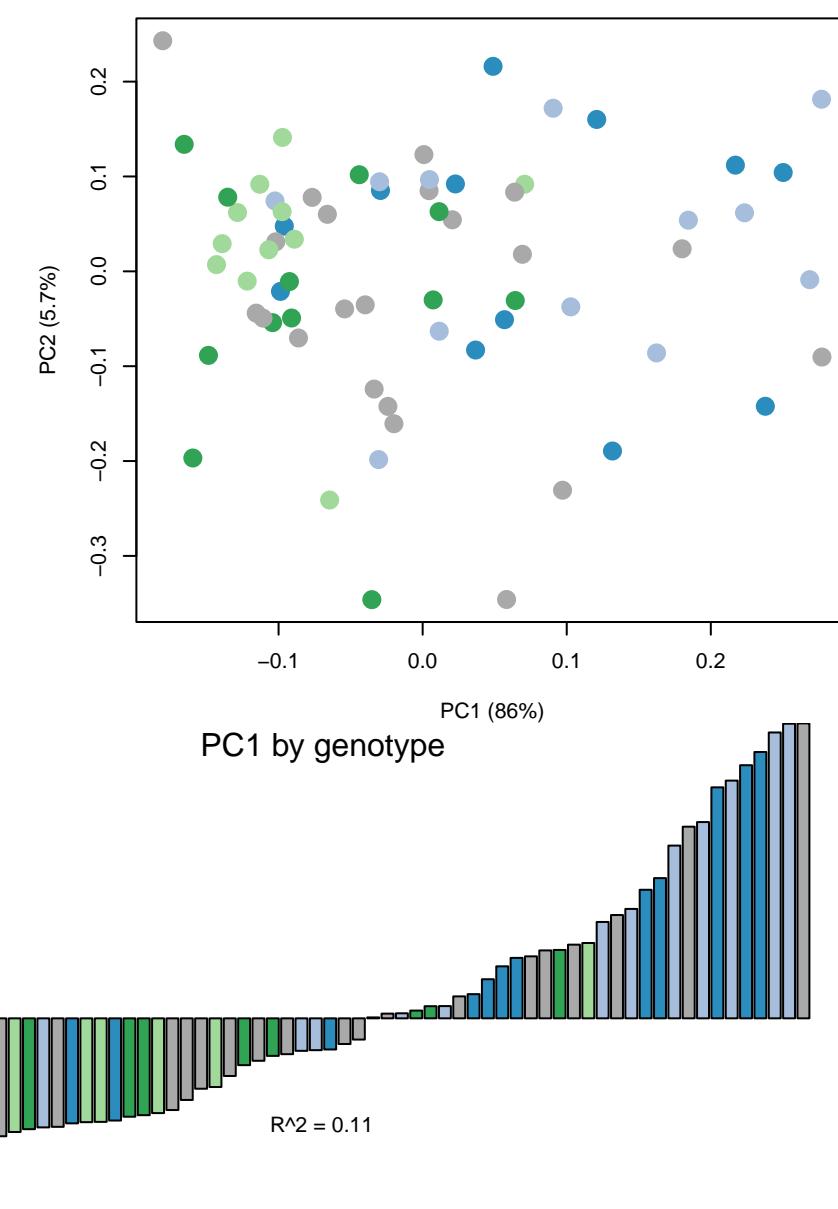
Salivary secretion



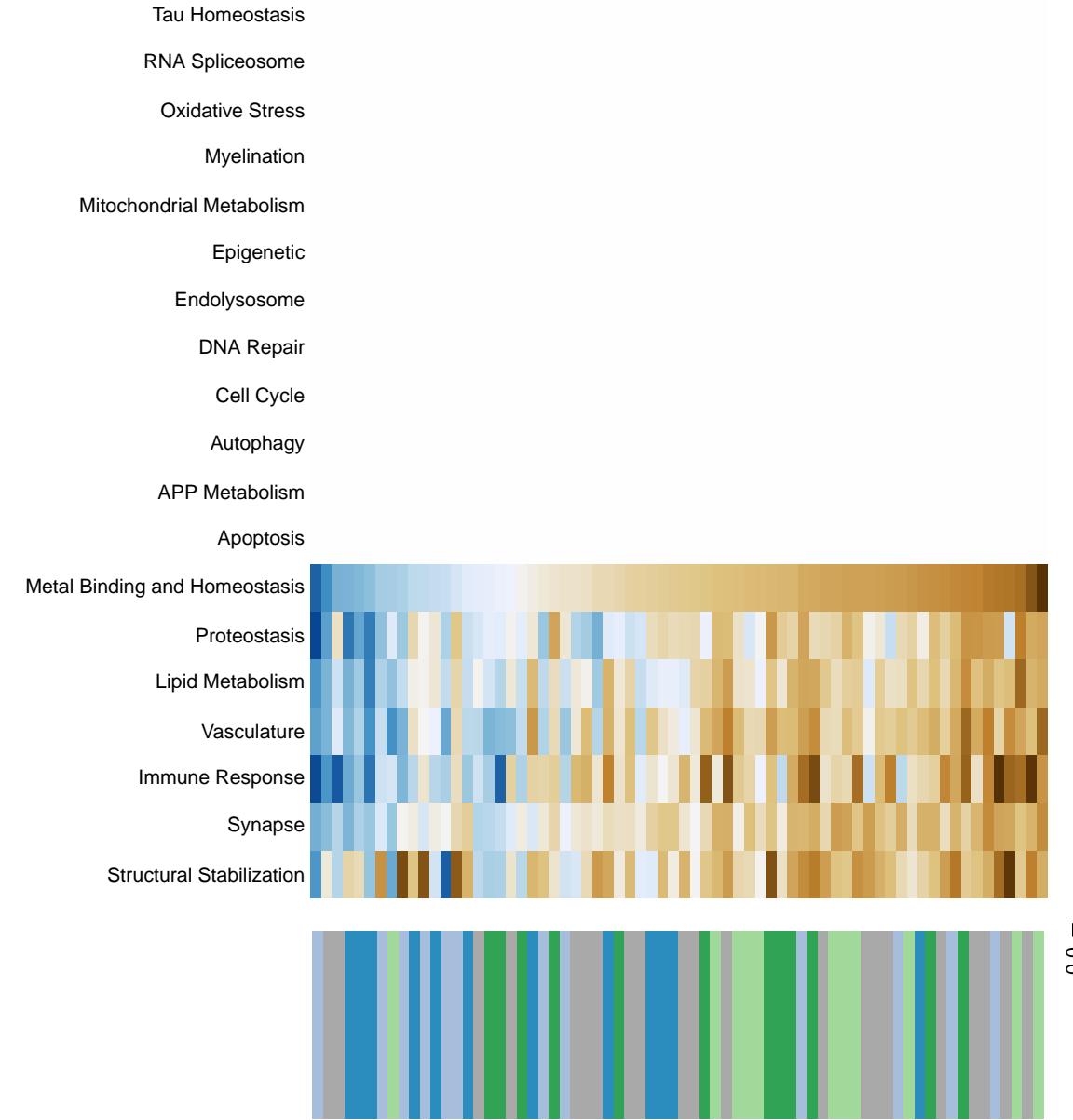
Synapse



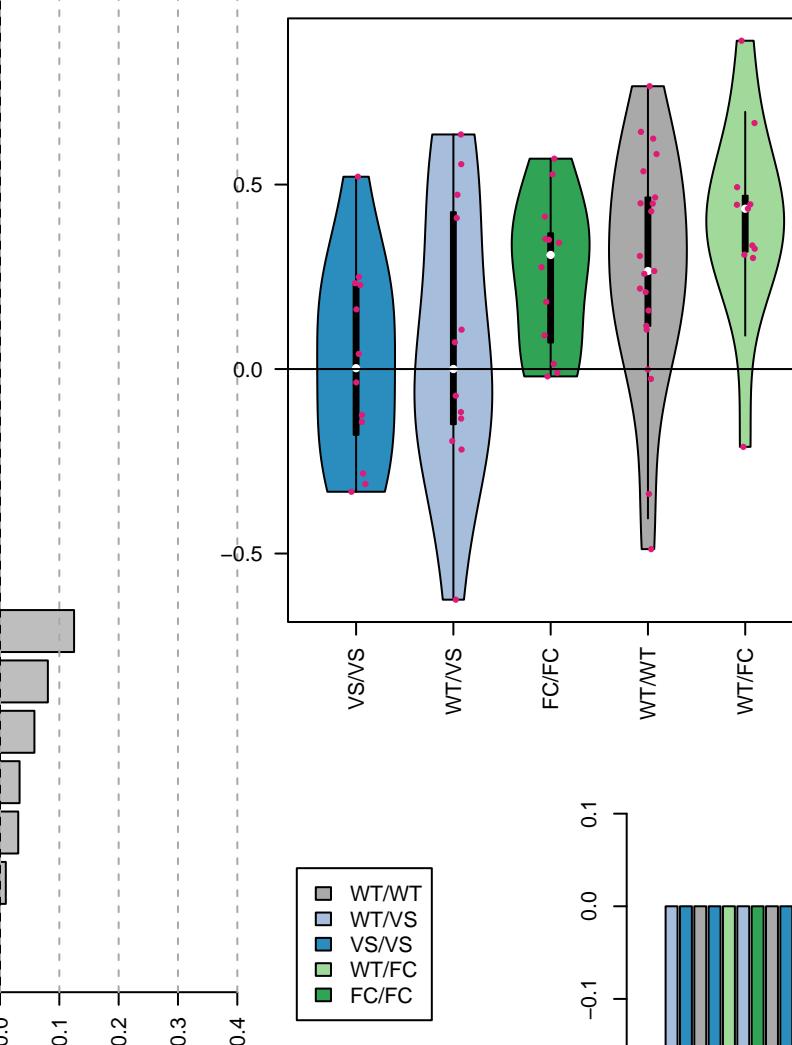
Decomposition



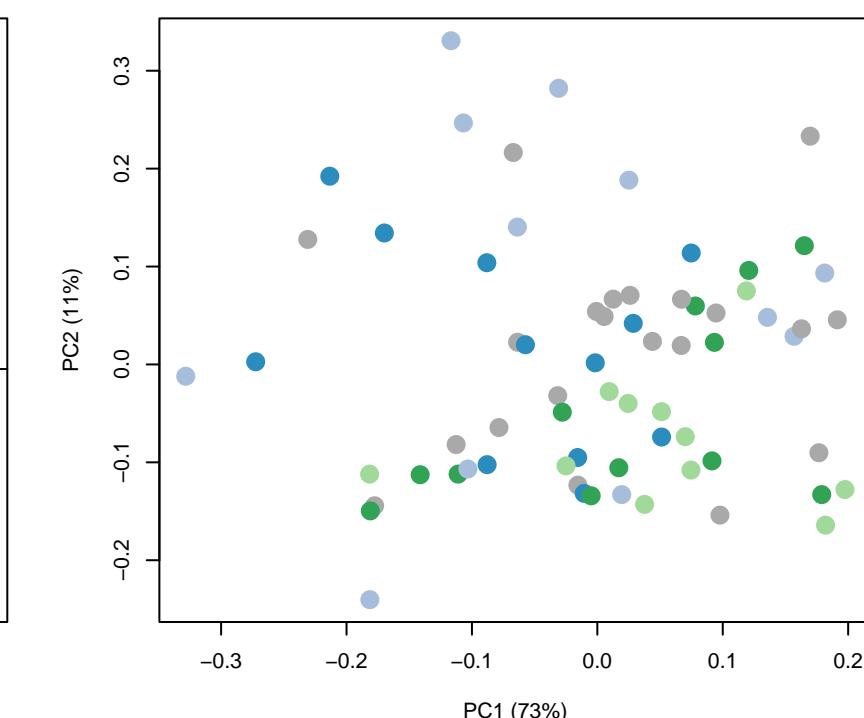
Bile secretion



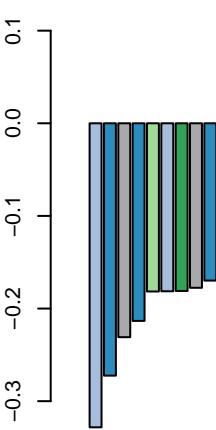
Metal Binding and Homeostasis



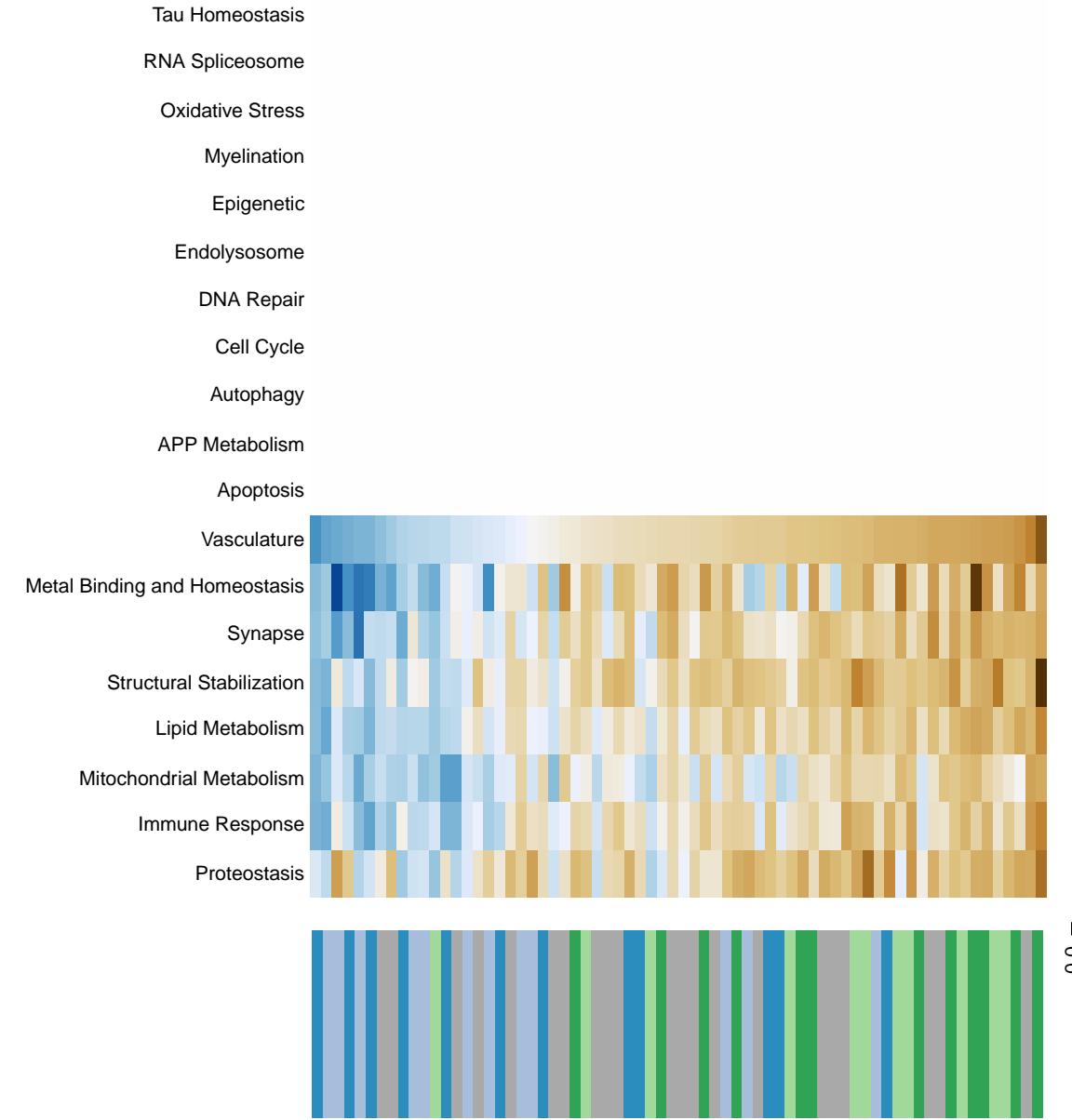
Decomposition



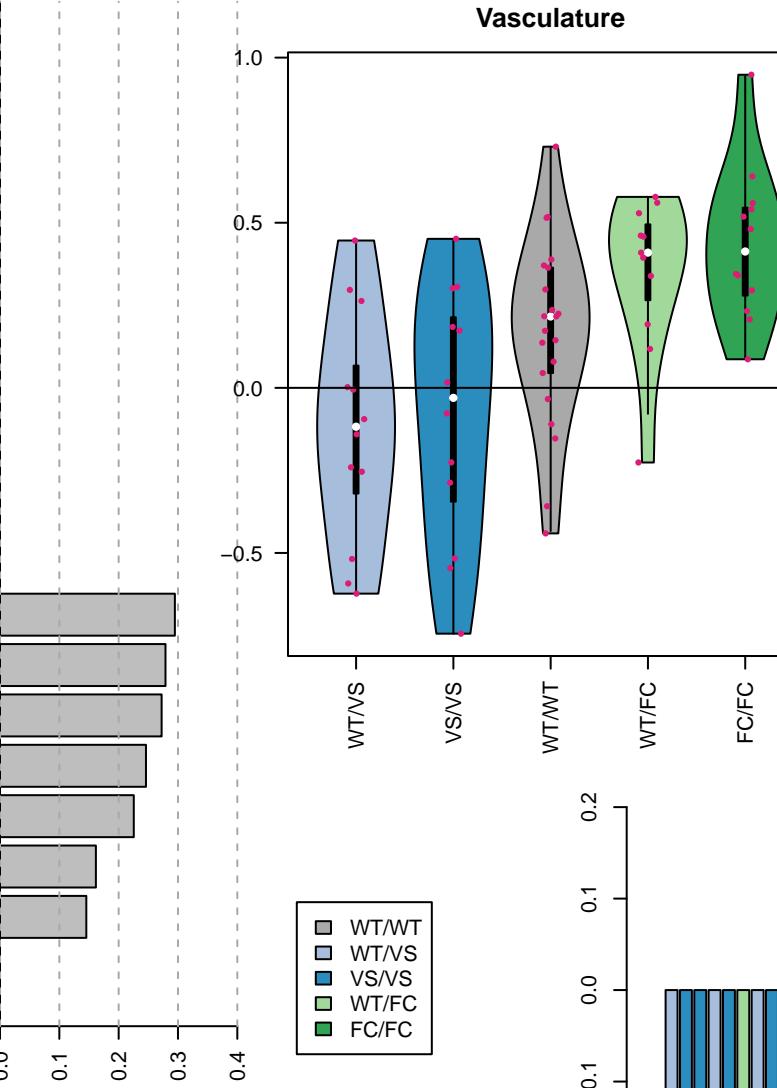
PC1 by genotype



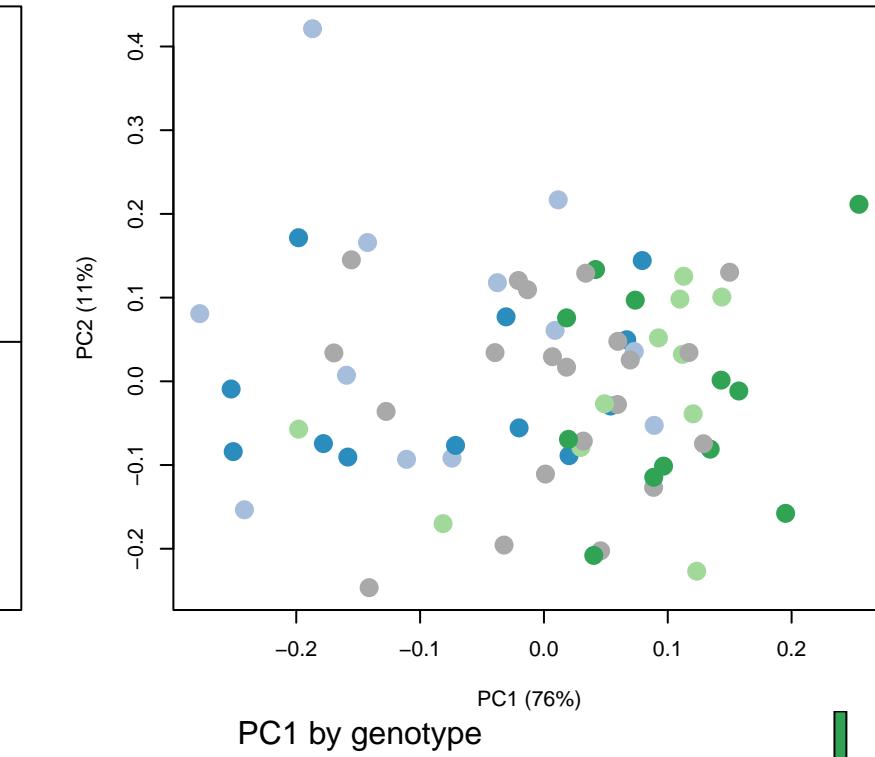
Carbohydrate digestion and absorption



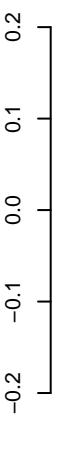
Vasculature



Decomposition

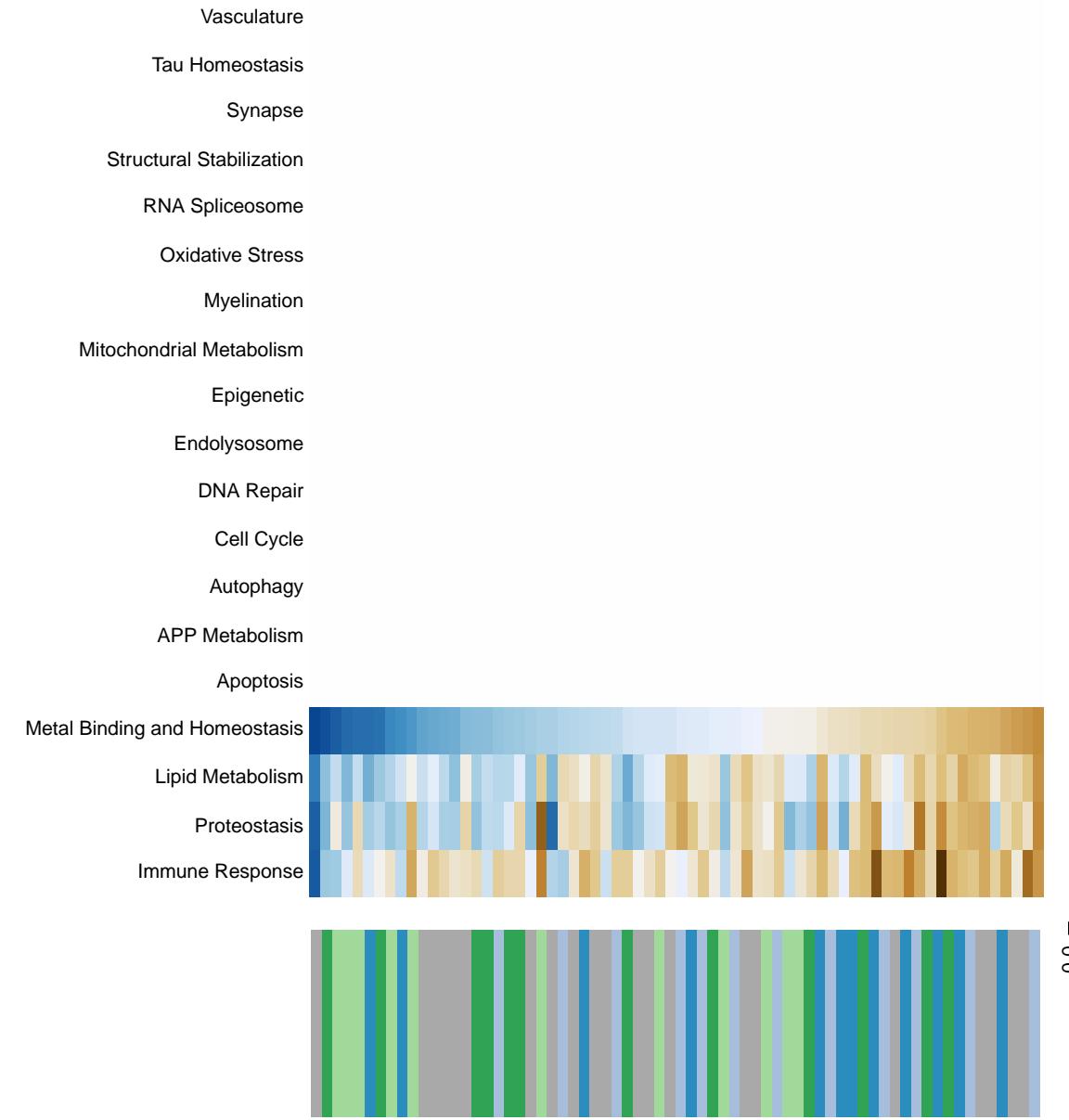


PC1 by genotype

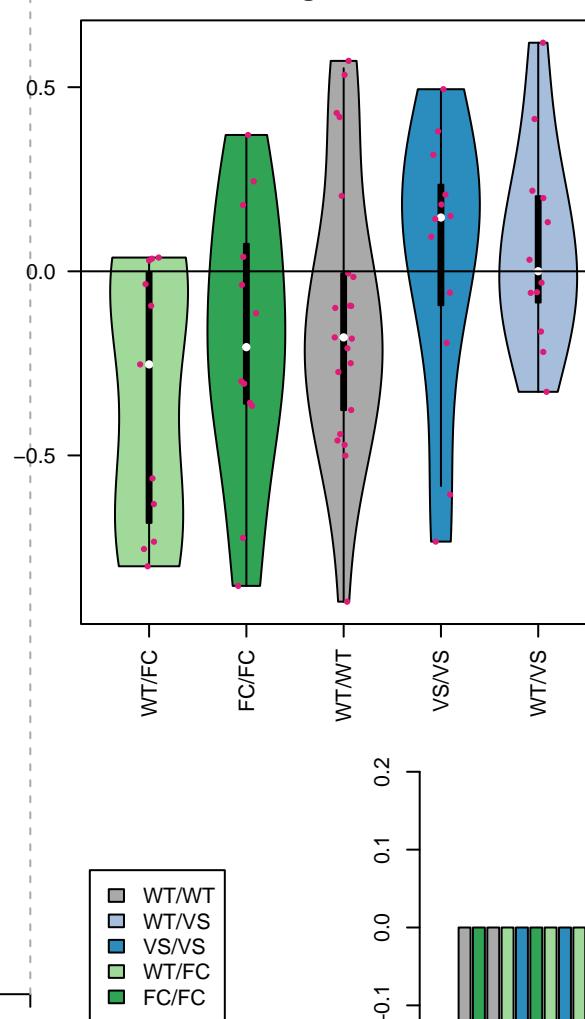


$R^2 = 0.036$

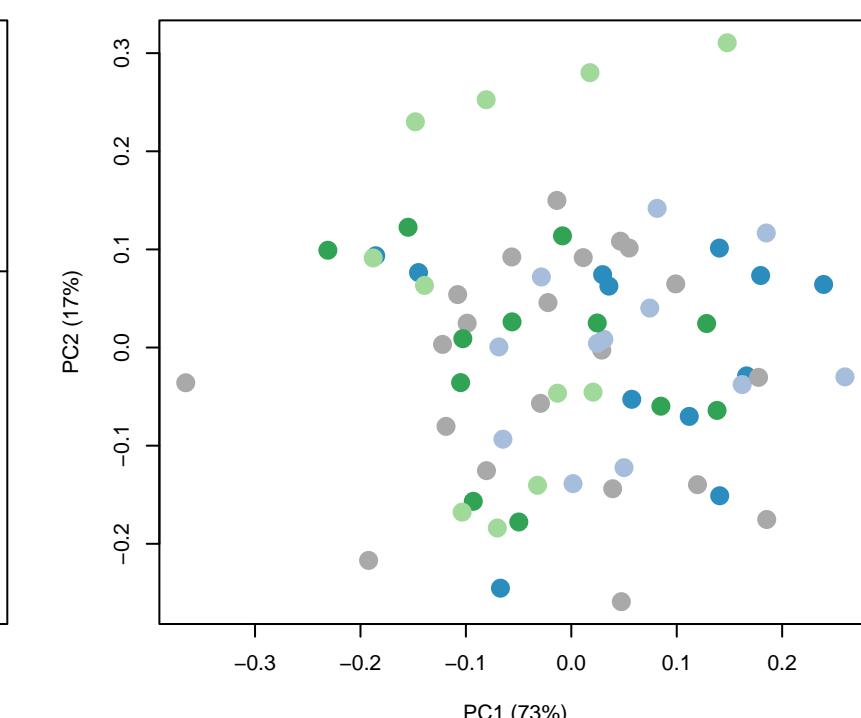
Fat digestion and absorption



Metal Binding and Homeostasis



Decomposition

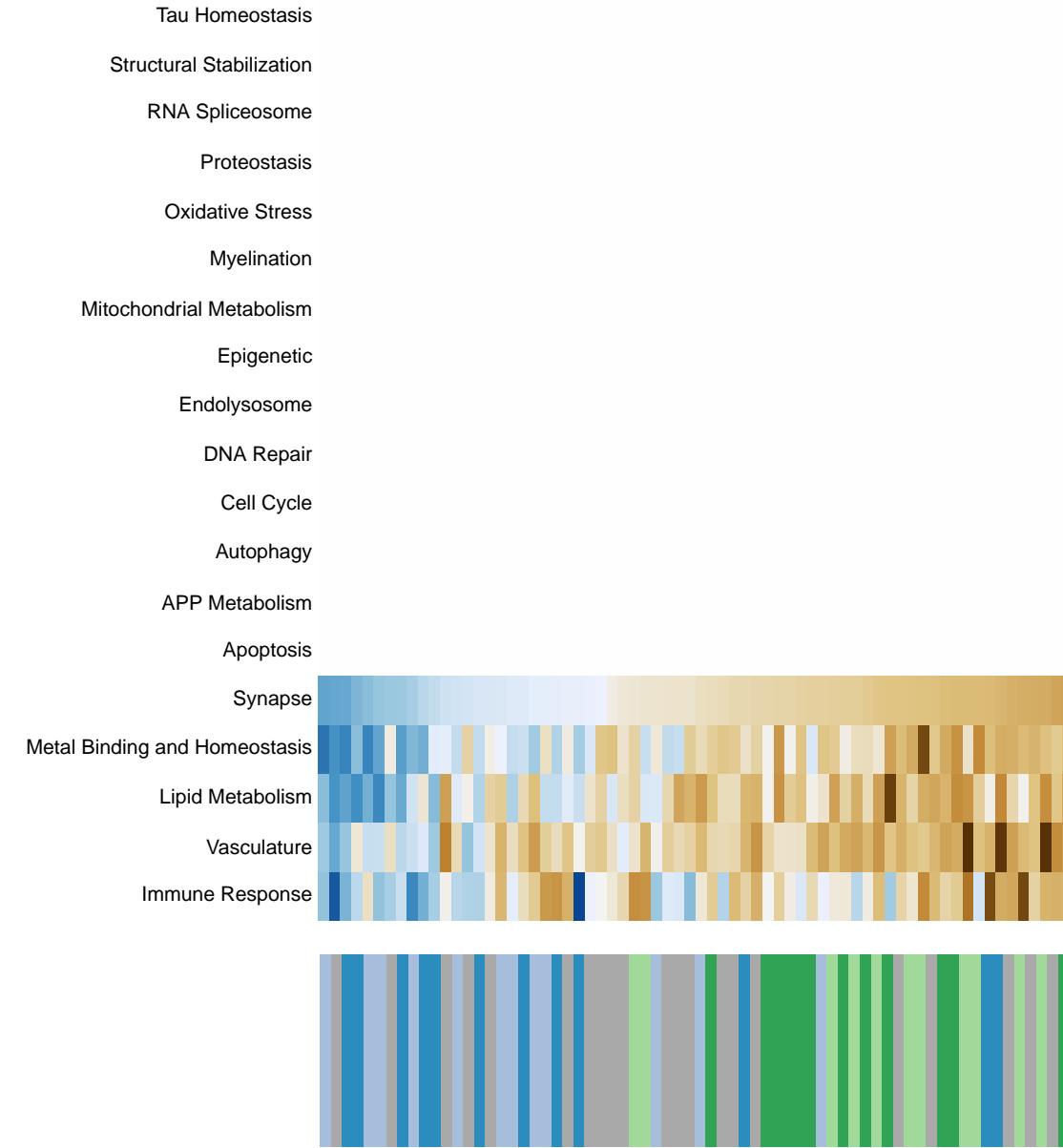


PC1 by genotype

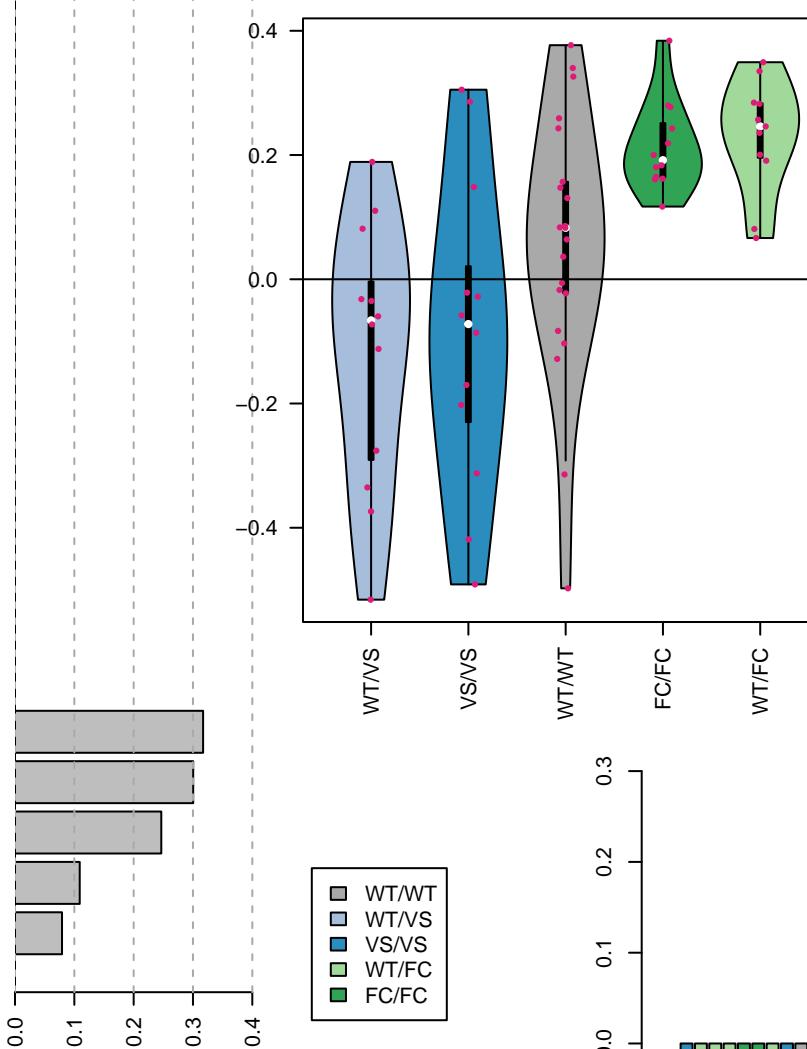
$R^2 = -0.0049$



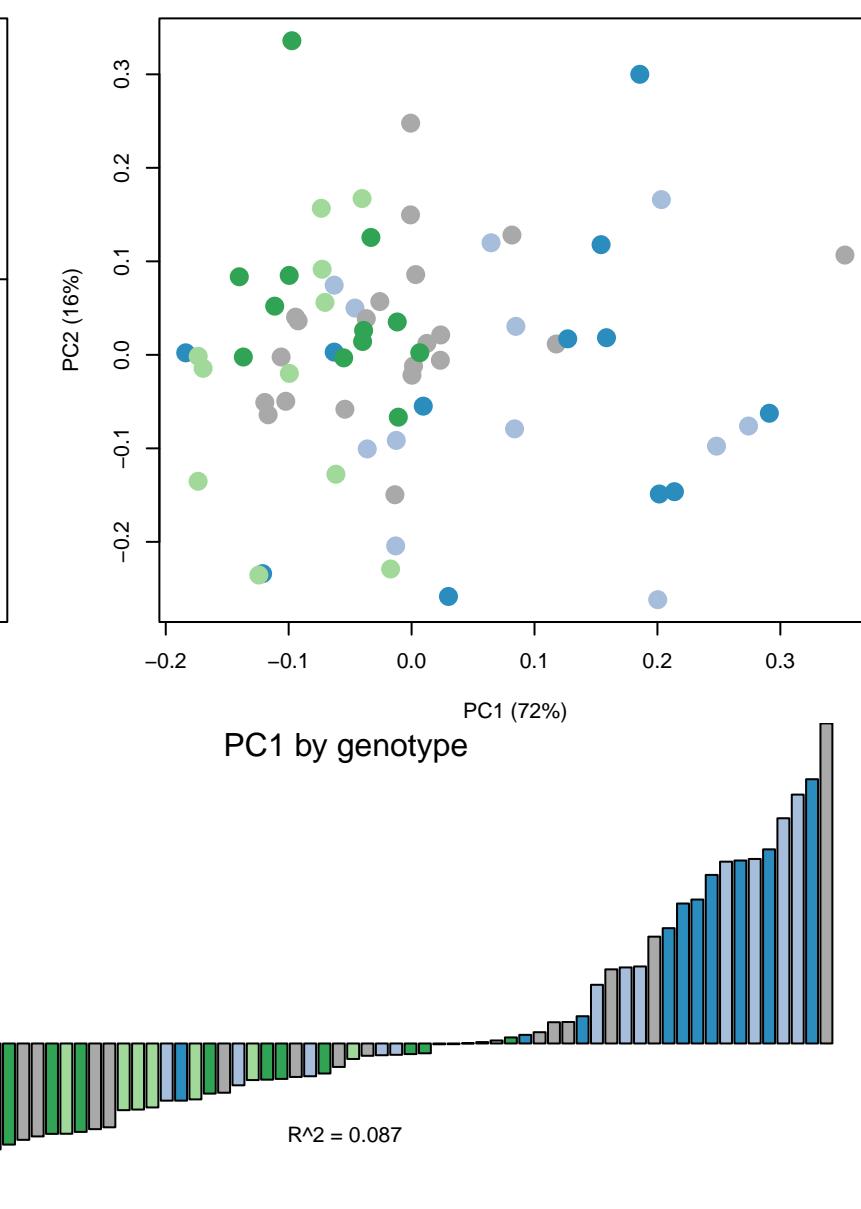
Taste transduction



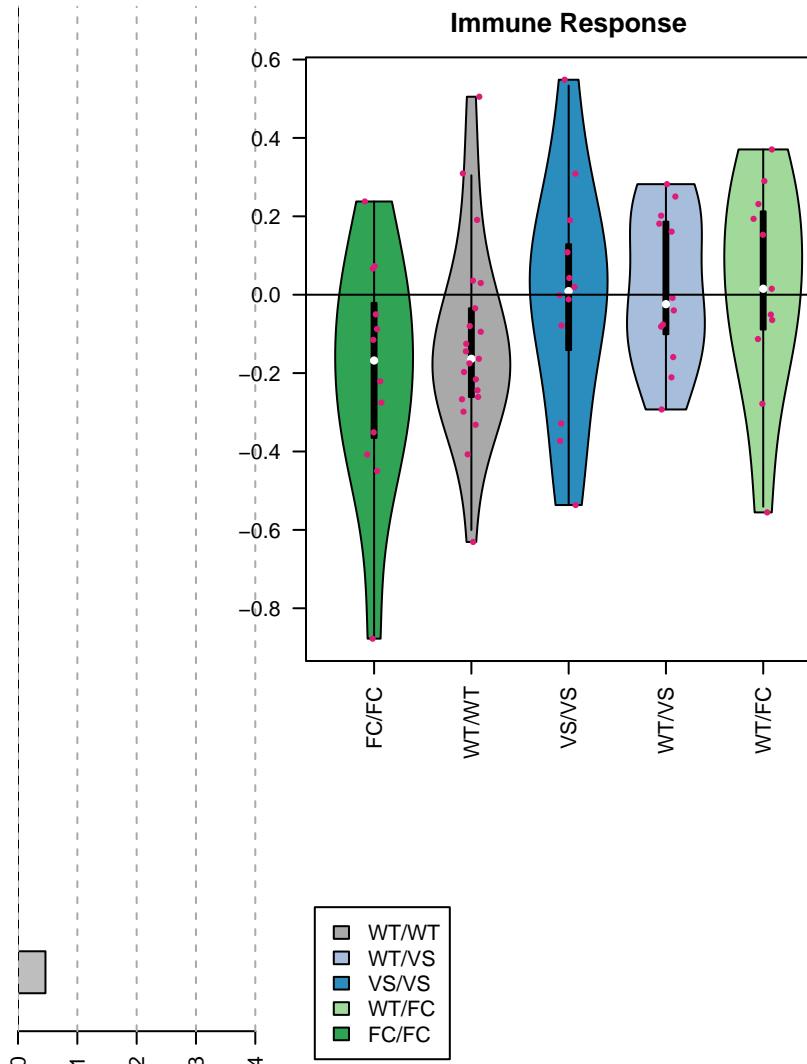
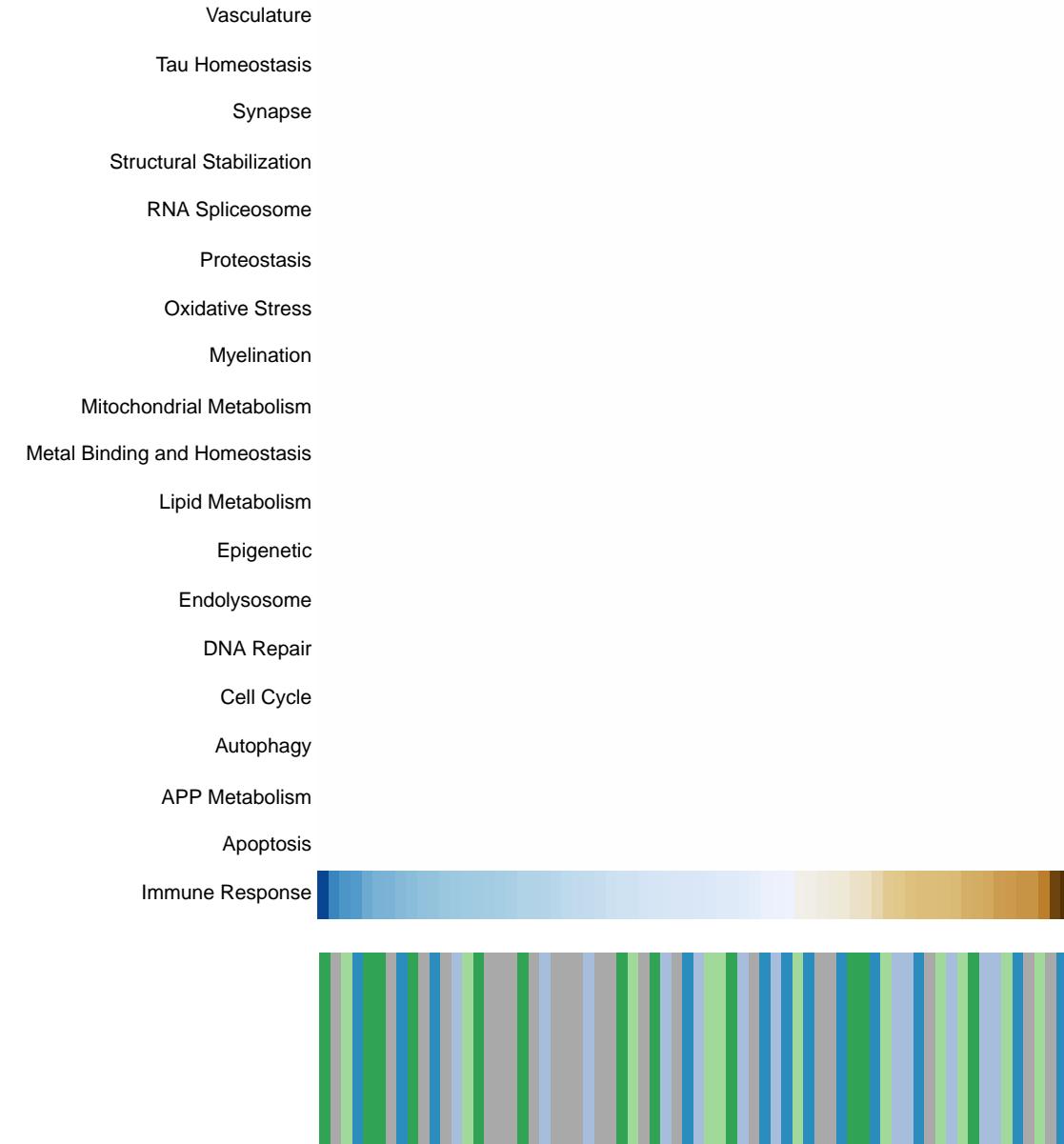
Synapse



Decomposition



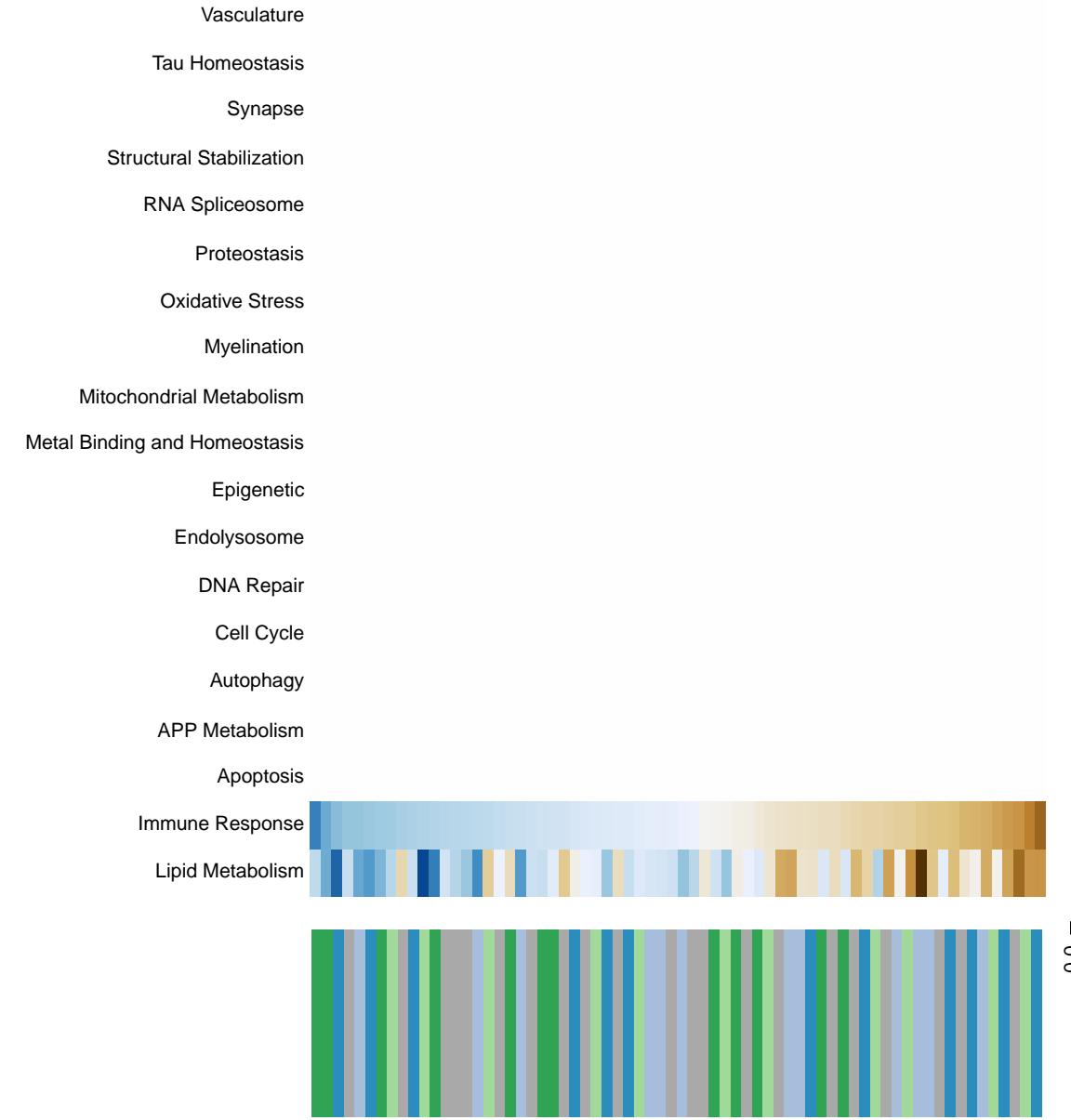
Asthma



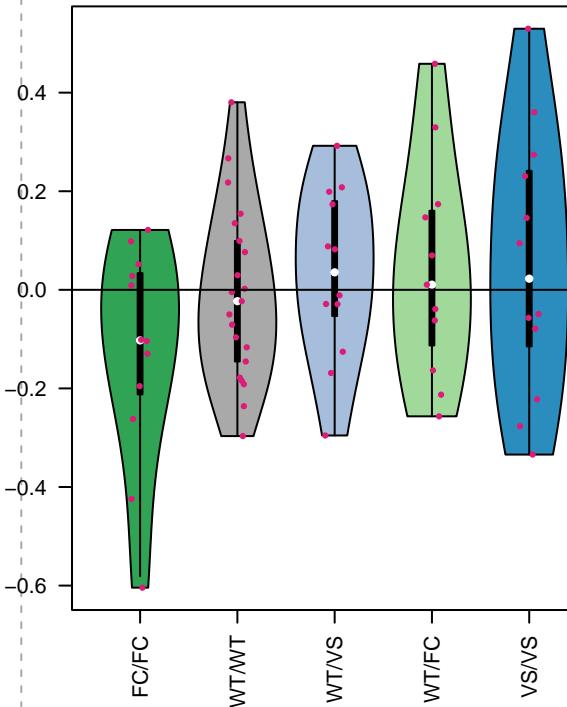
Not enough rows to decompose

Not enough rows to decompose

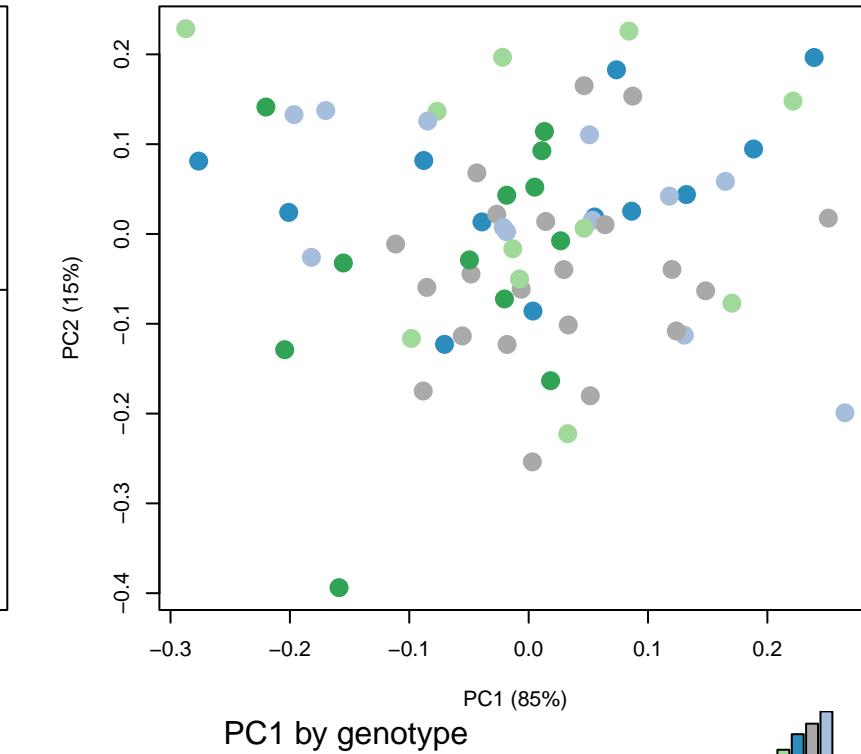
Autoimmune thyroid disease



Immune Response

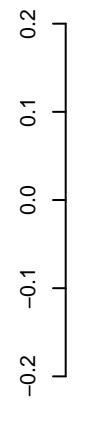


Decomposition

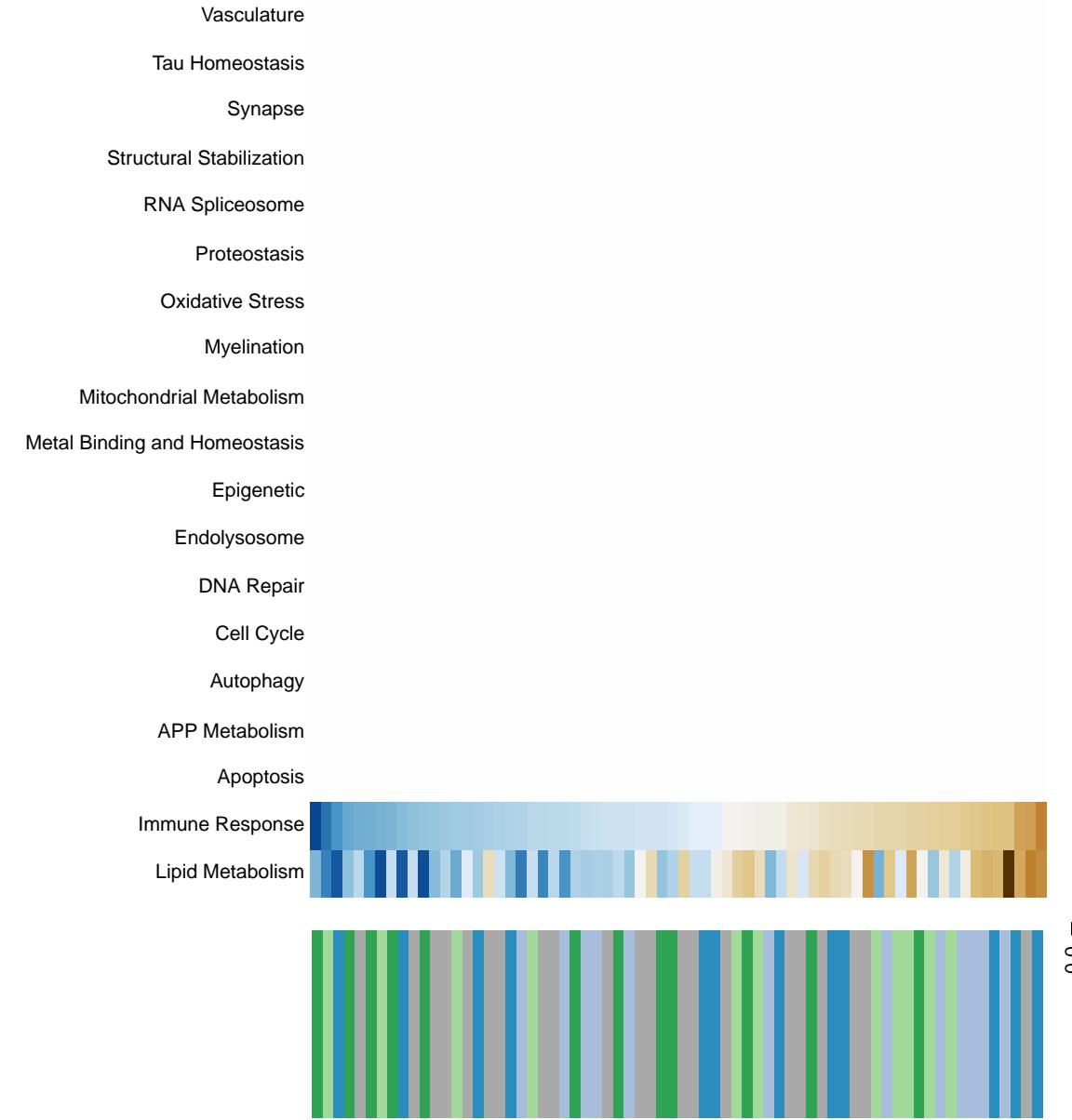


PC1 by genotype

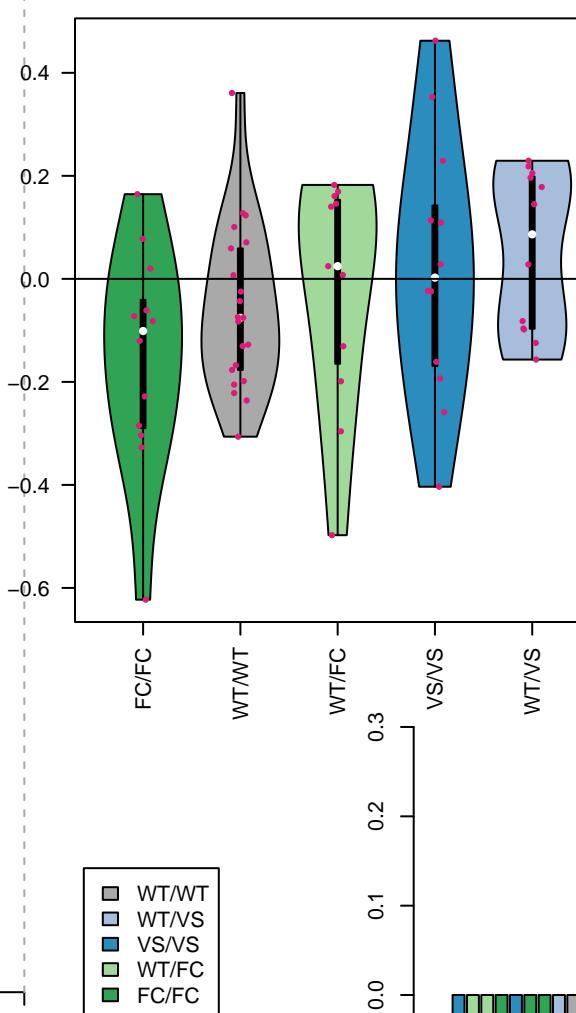
$R^2 = -0.015$



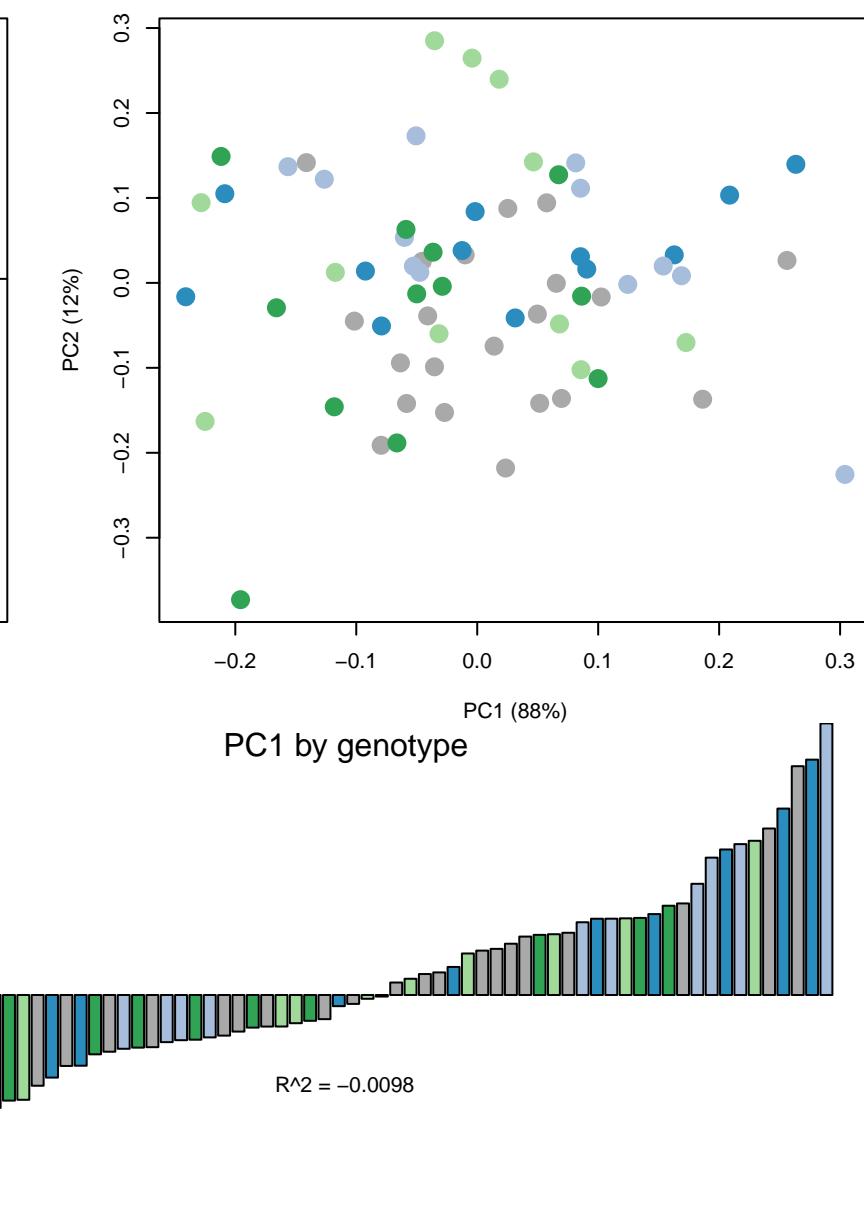
Allograft rejection



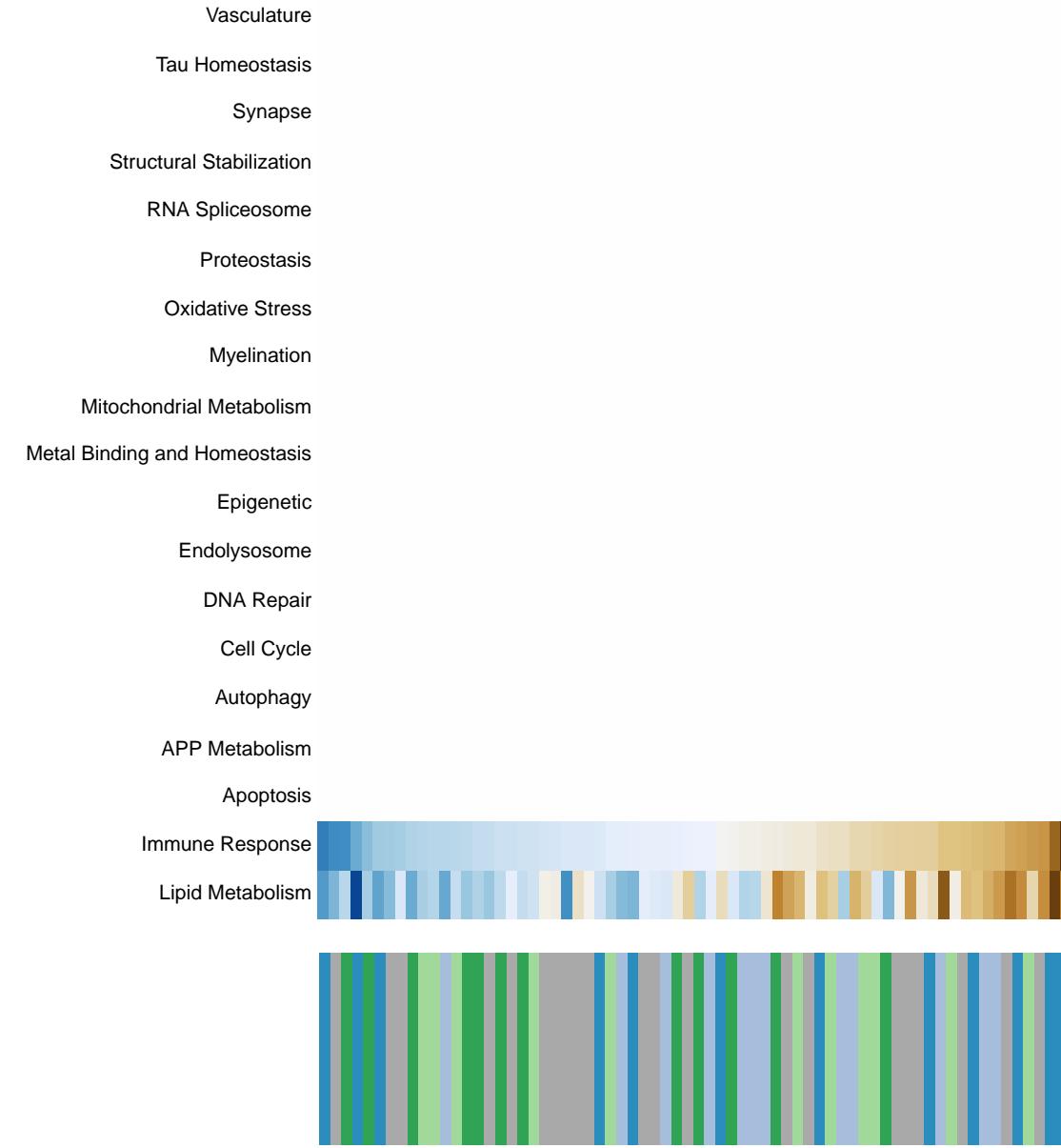
Immune Response



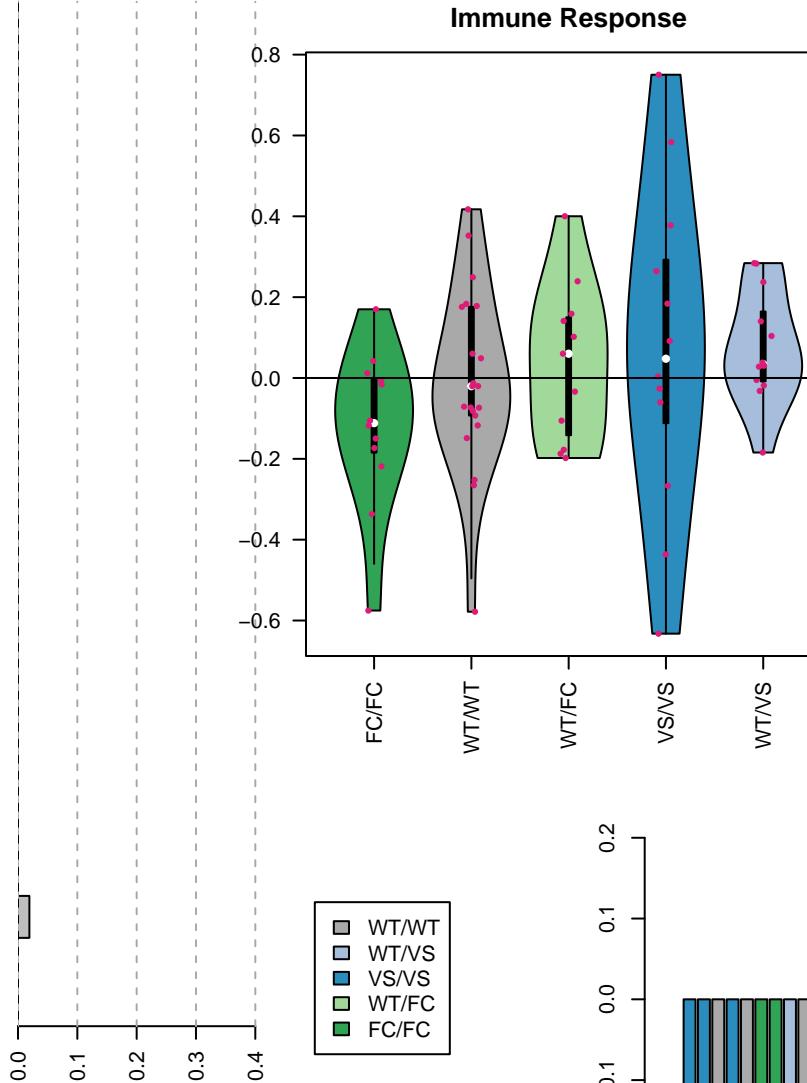
Decomposition



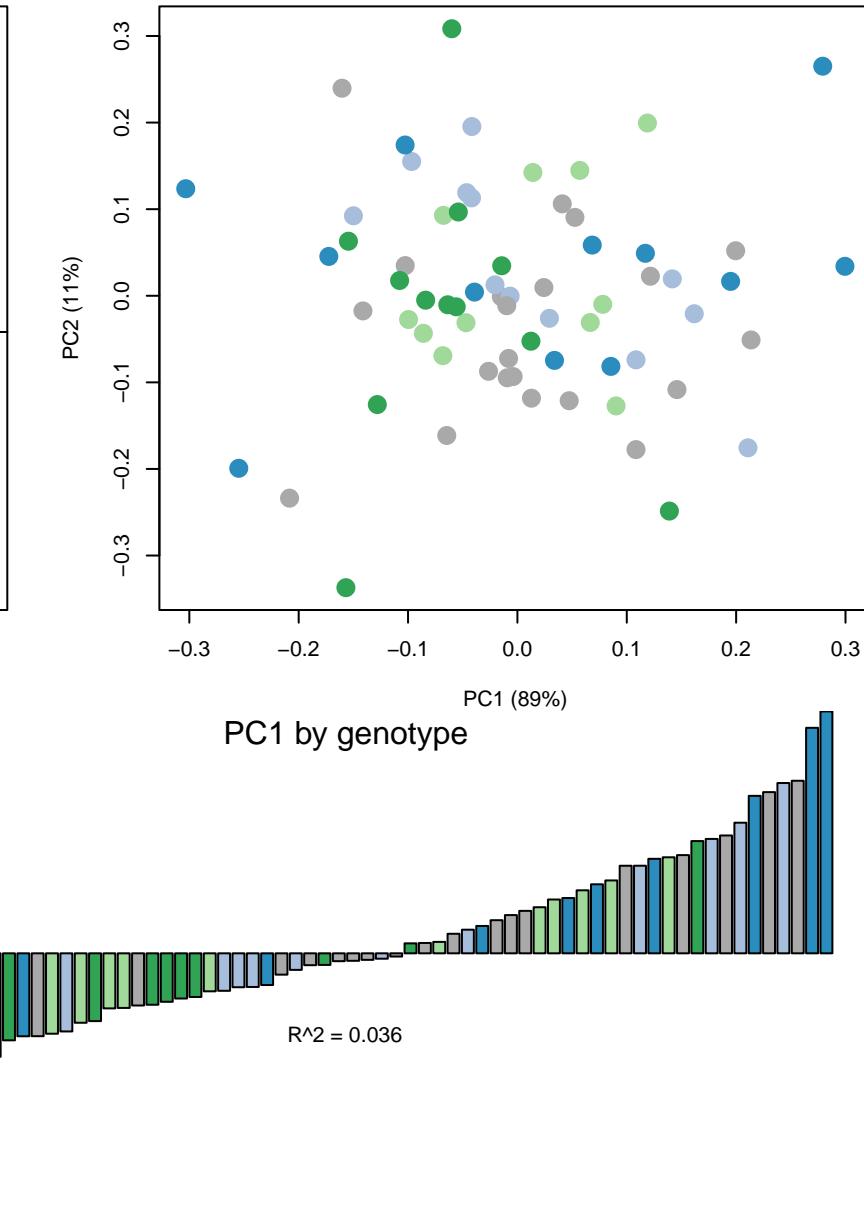
Graft–versus–host disease



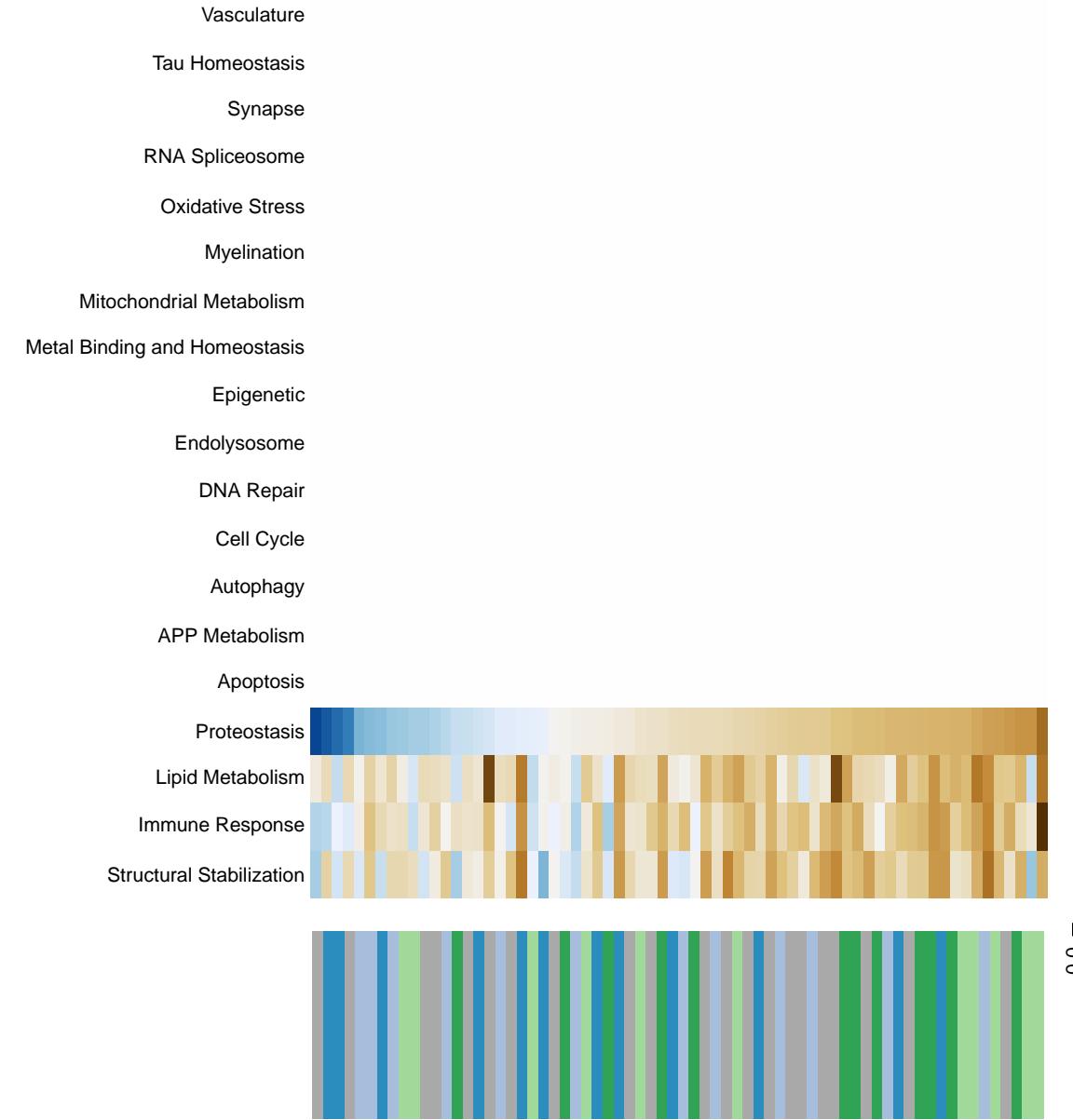
Immune Response



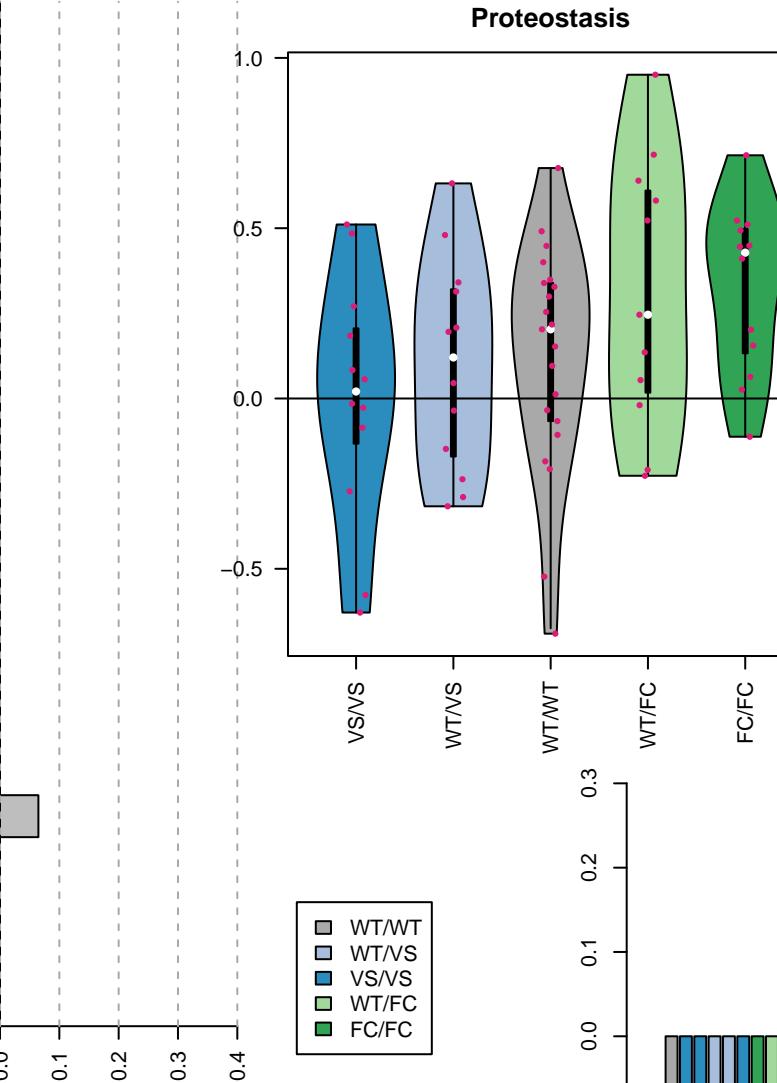
Decomposition



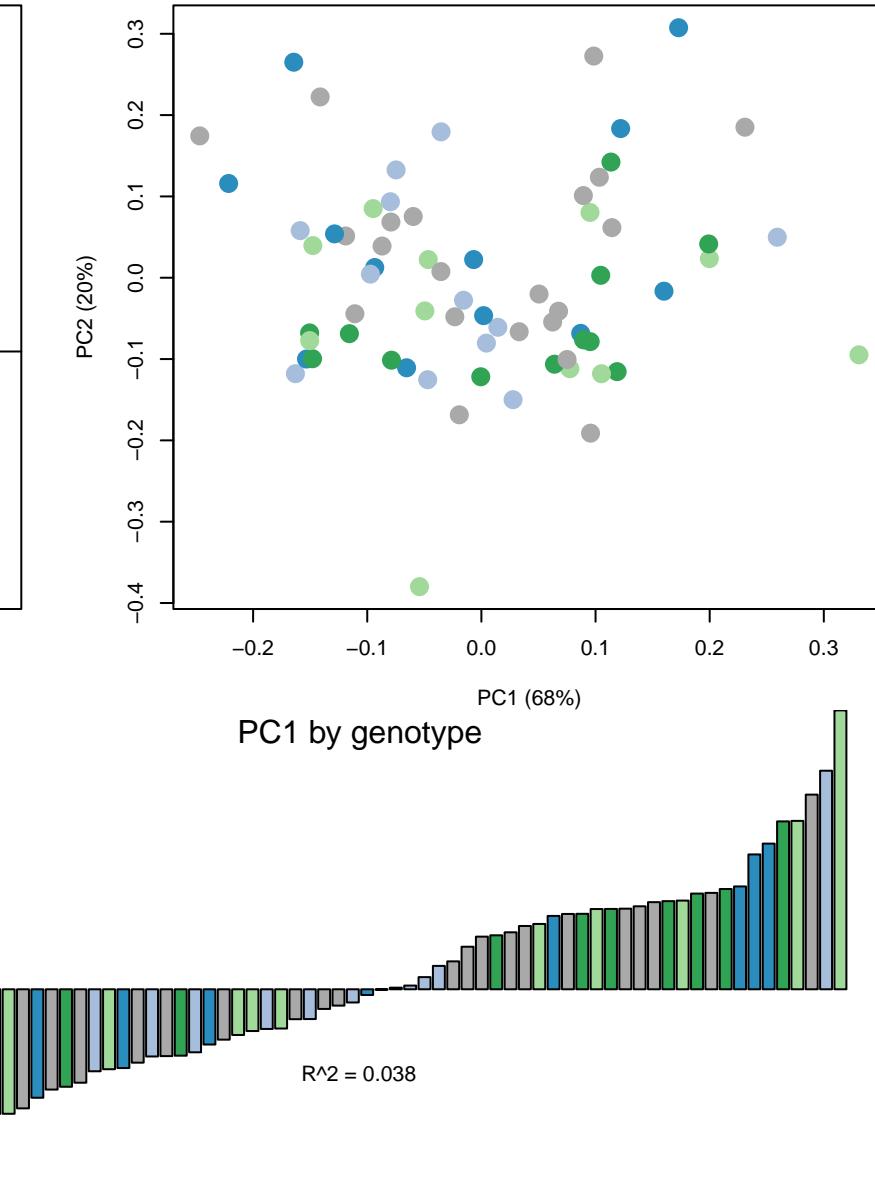
Antifolate resistance



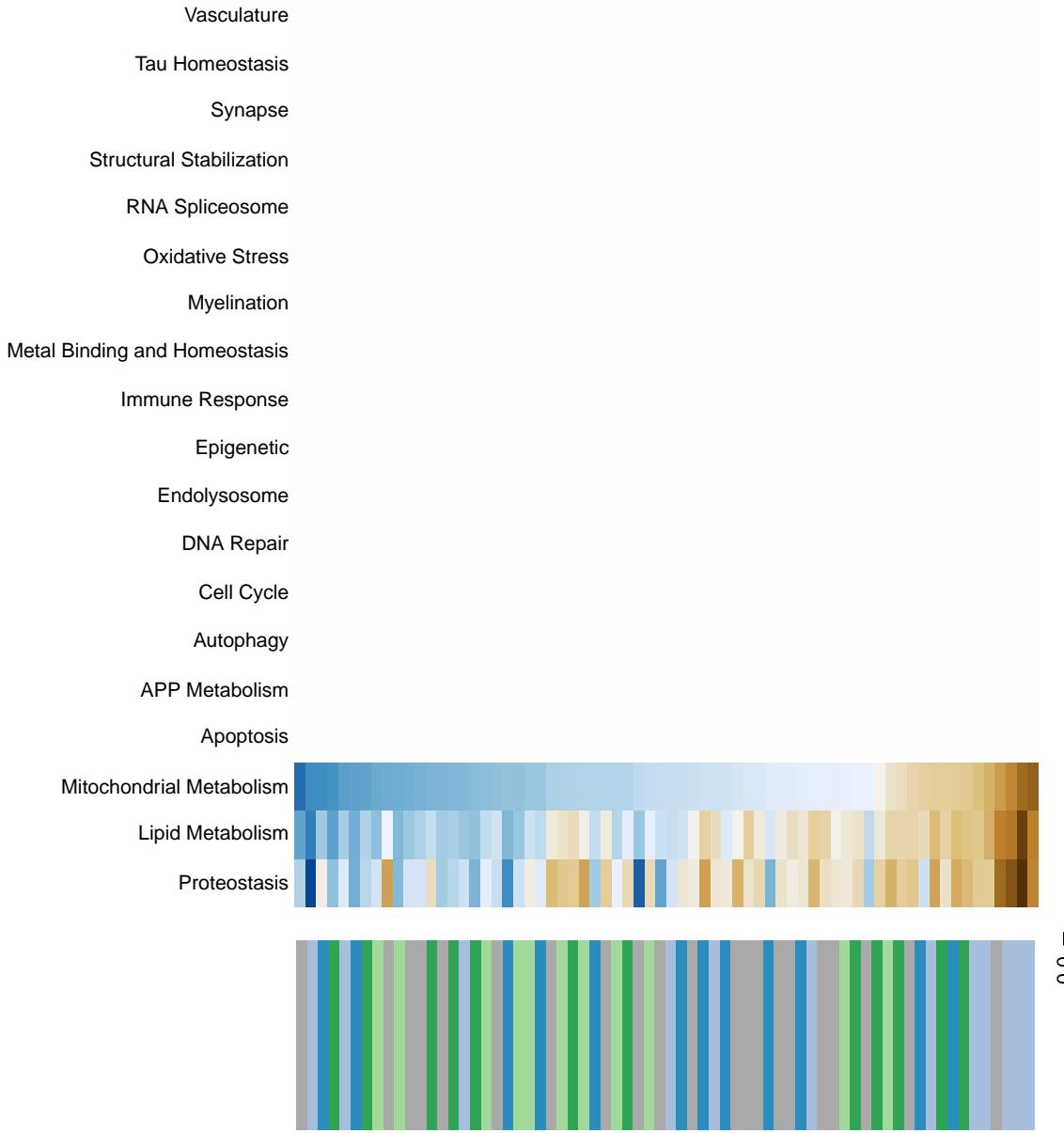
Proteostasis



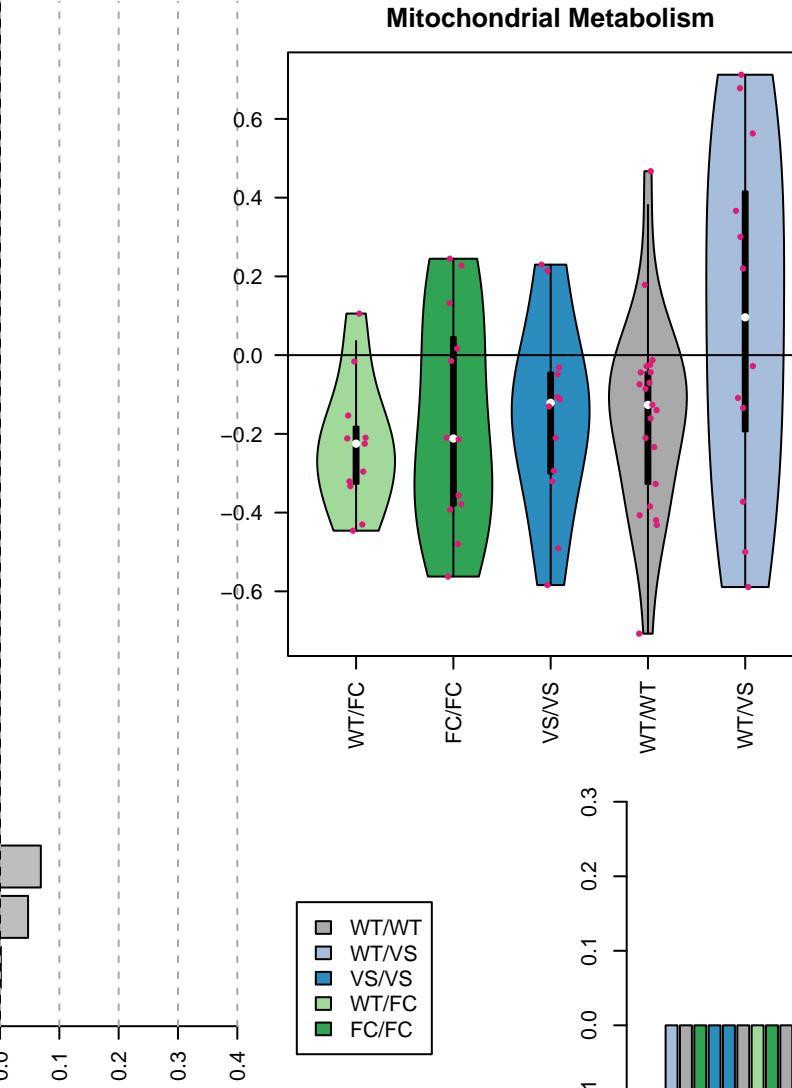
Decomposition



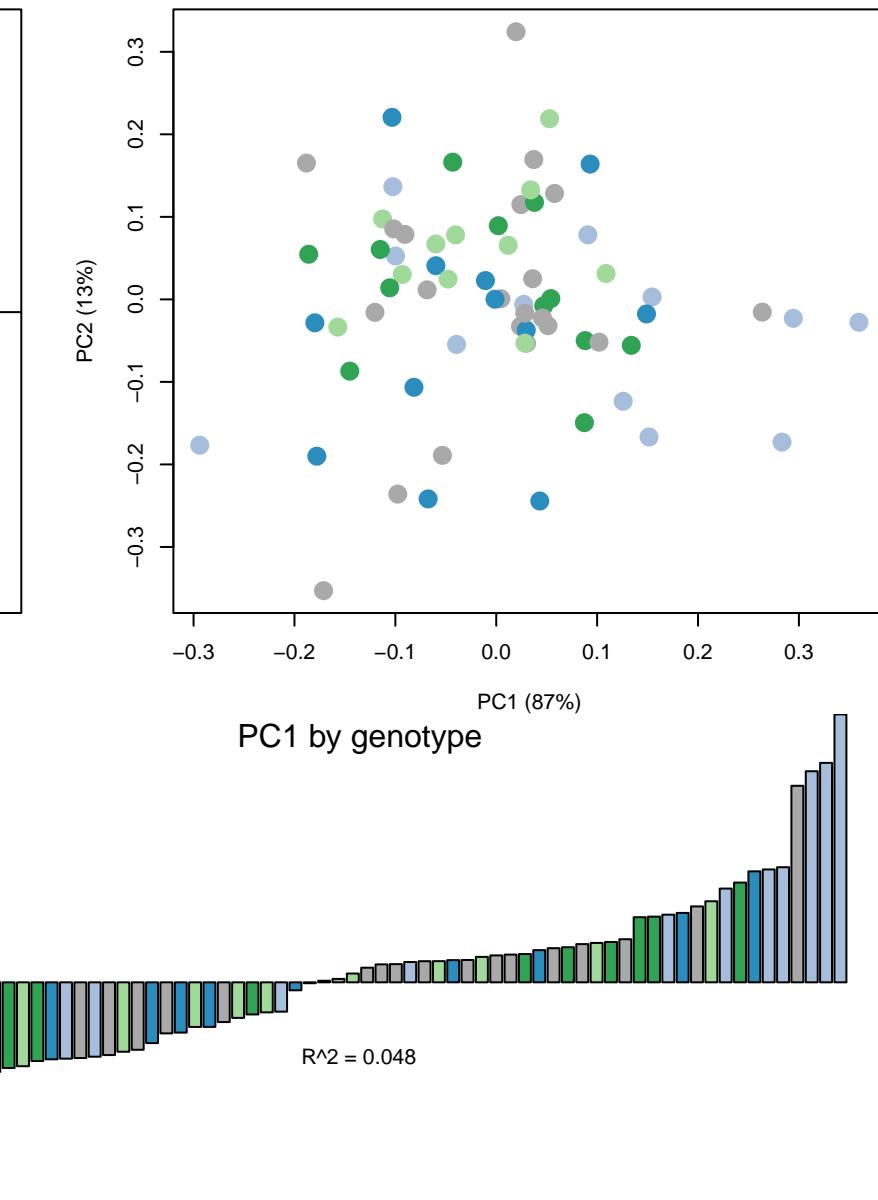
Fatty acid metabolism



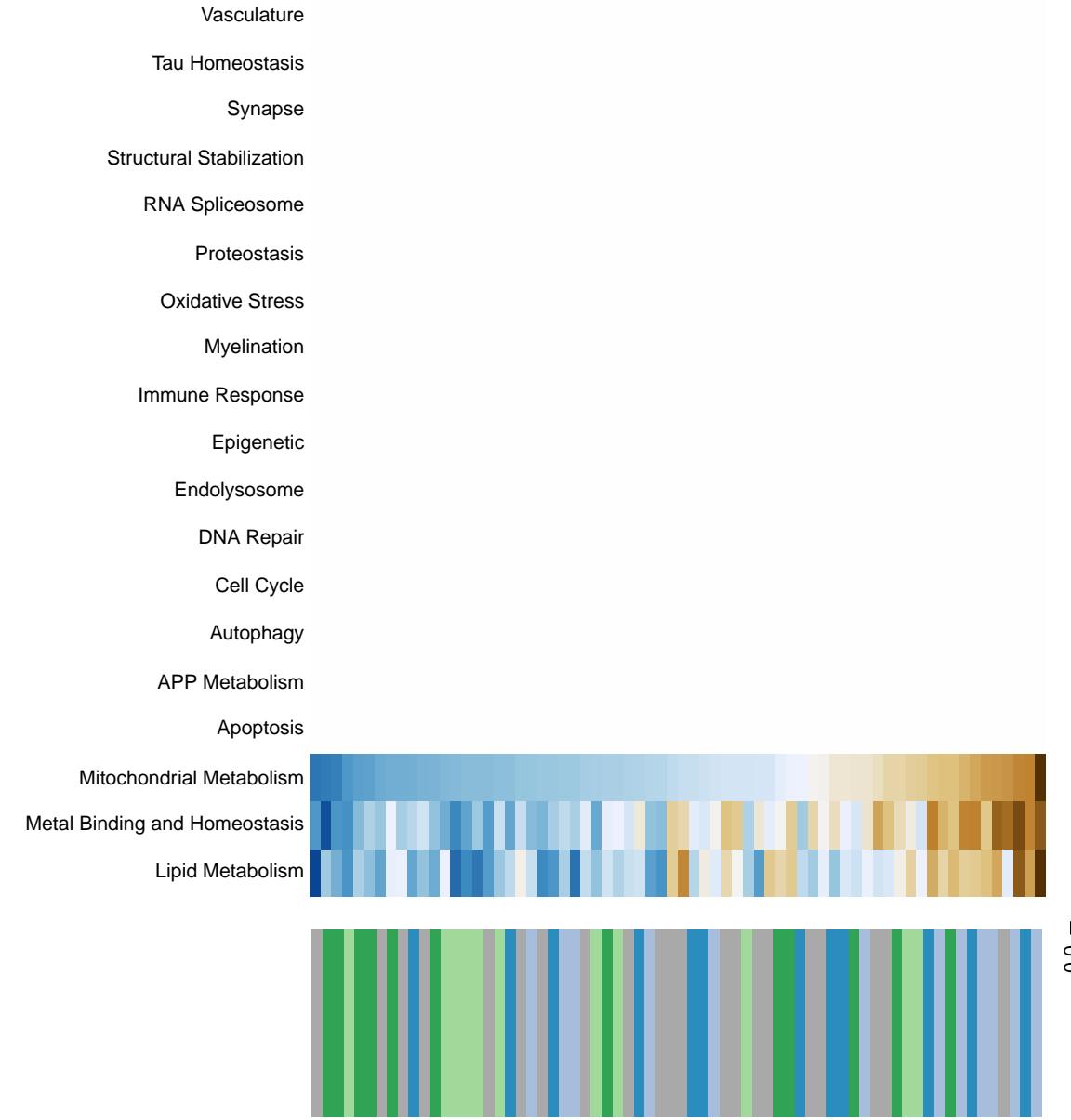
Mitochondrial Metabolism



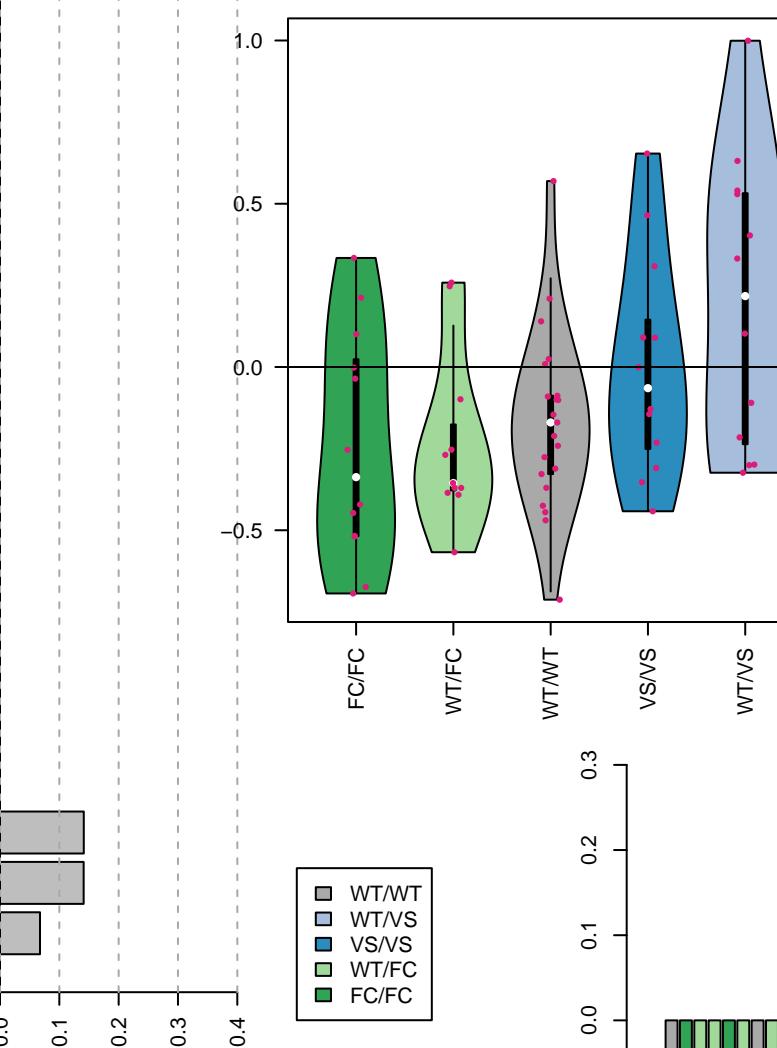
Decomposition



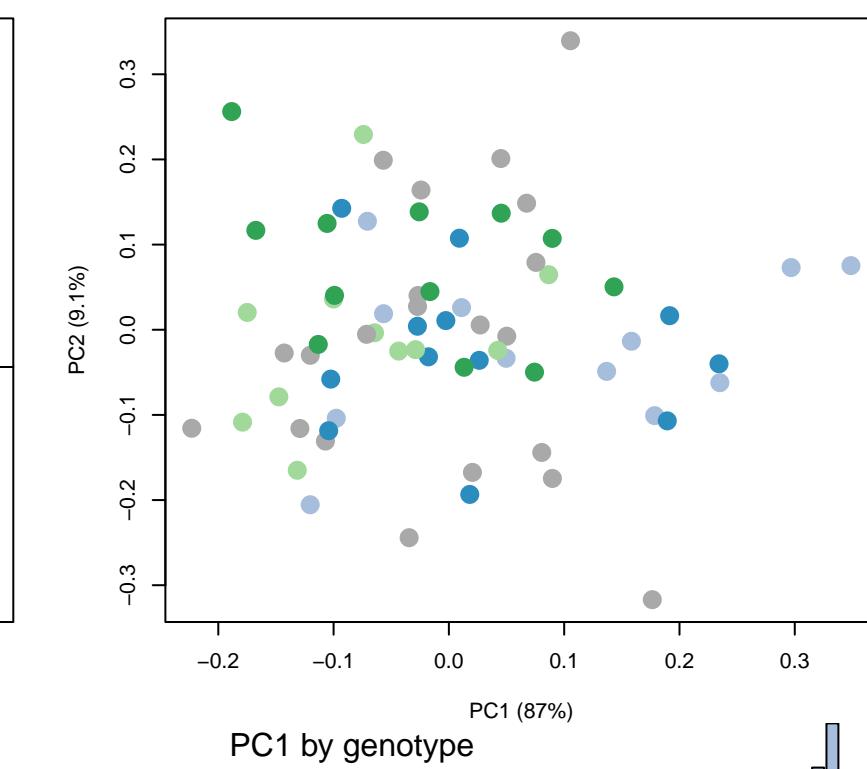
Glycolysis / Gluconeogenesis



Mitochondrial Metabolism



Decomposition

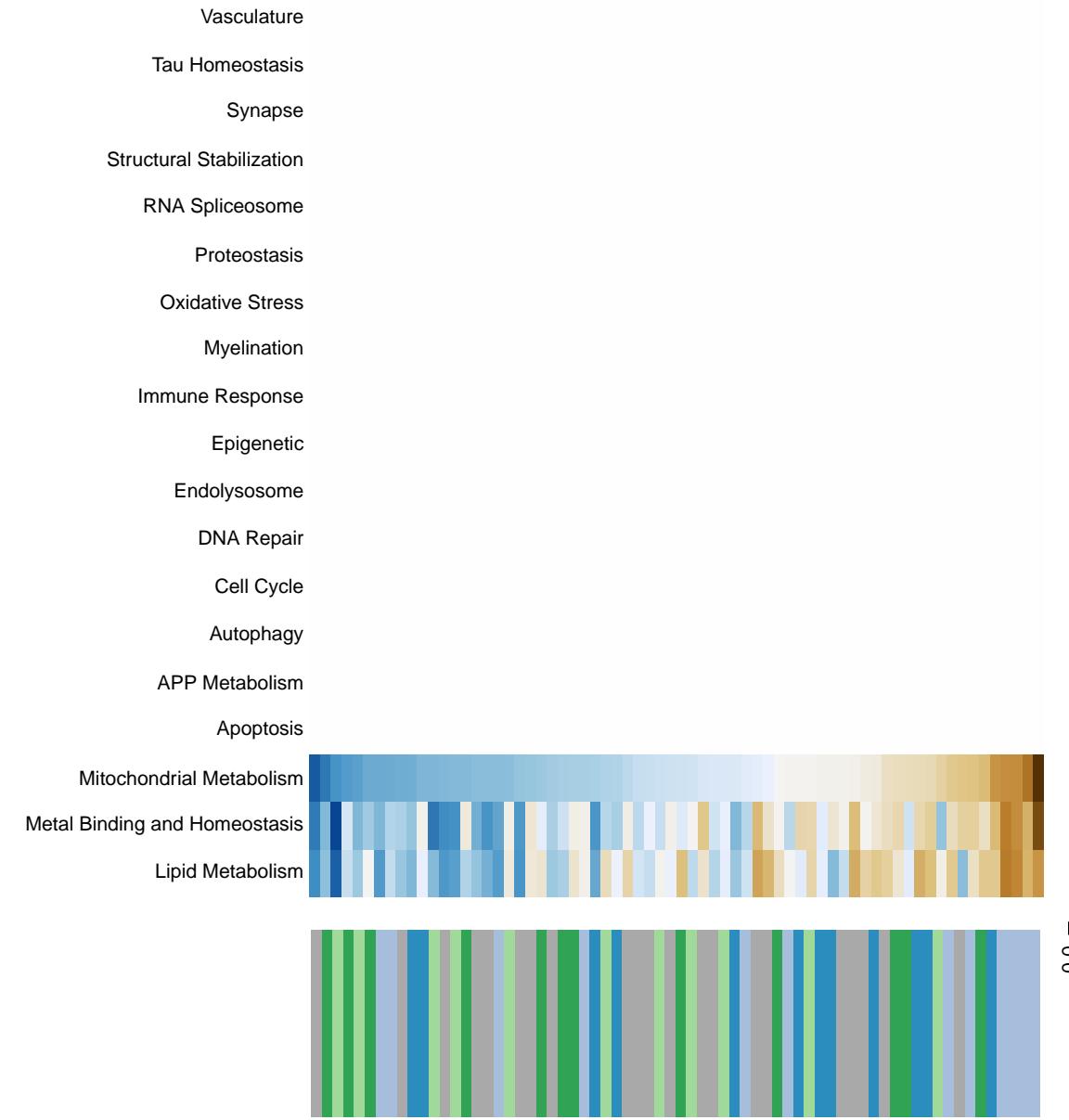


PC1 by genotype

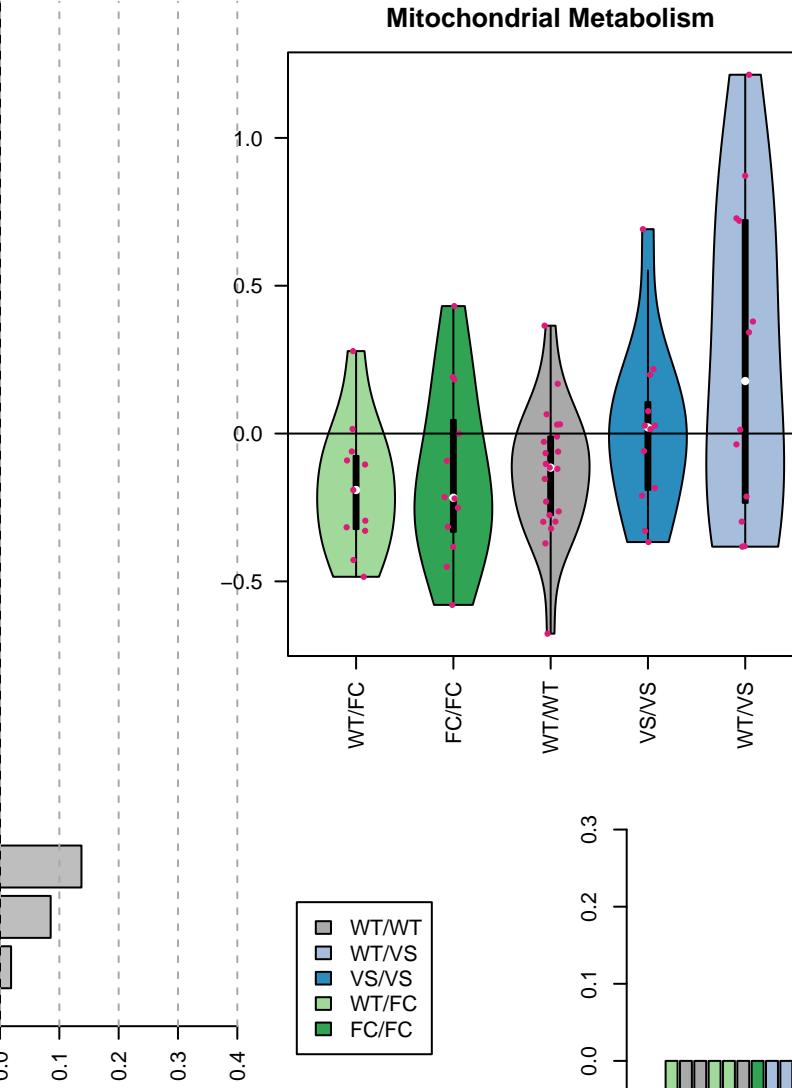


$R^2 = 0.026$

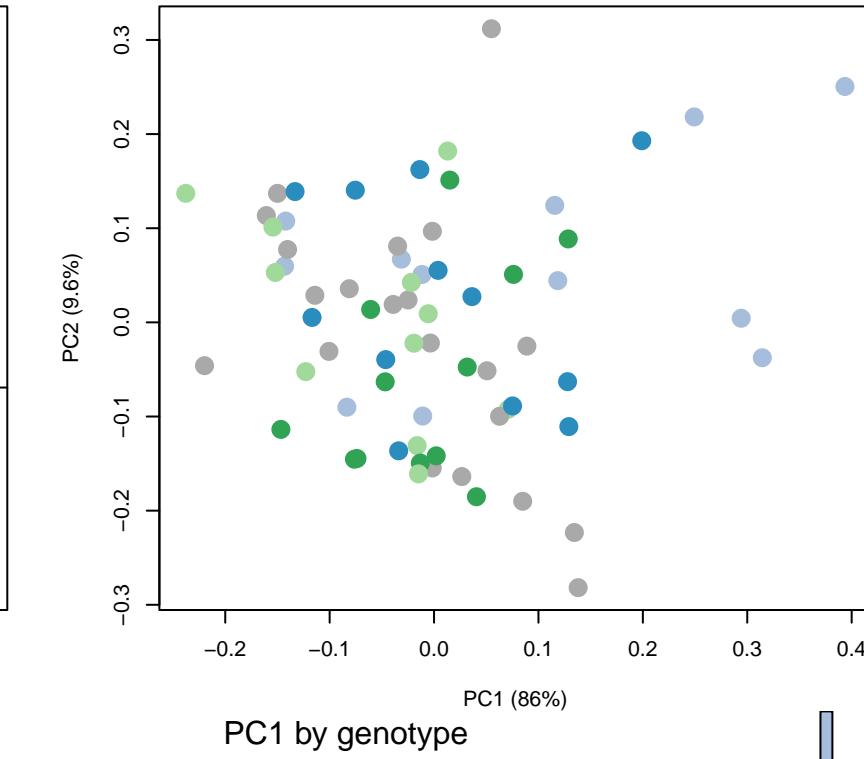
Pyruvate metabolism



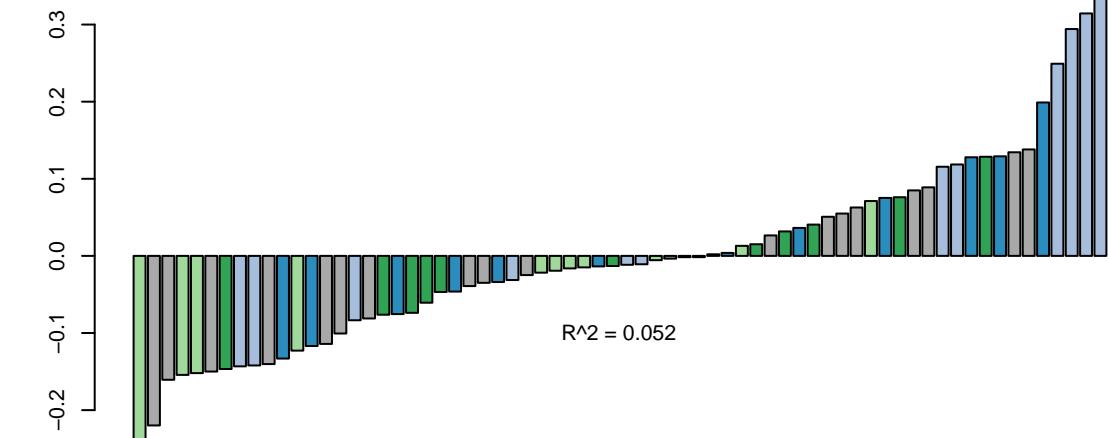
Mitochondrial Metabolism



Decomposition

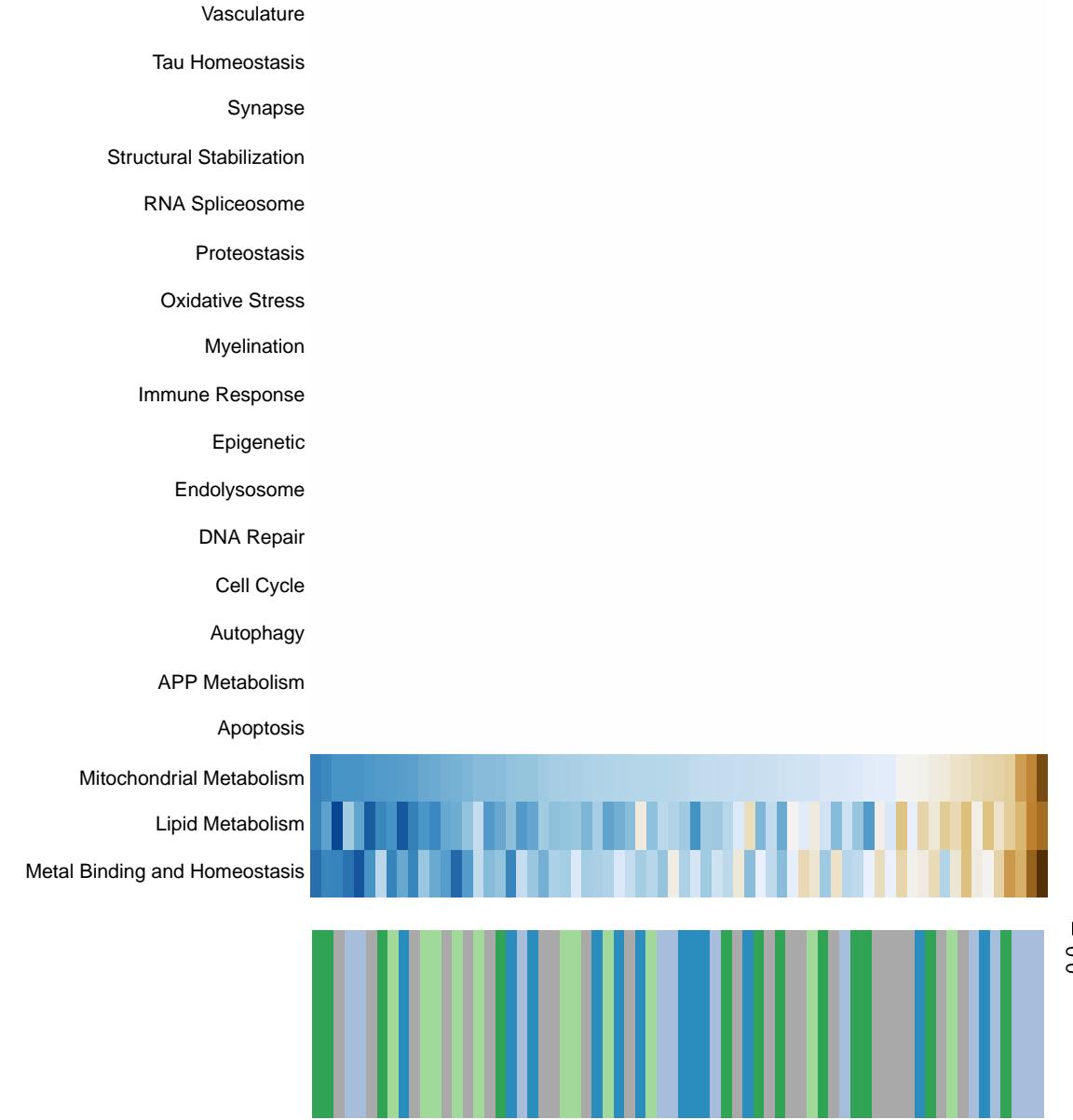


PC1 by genotype

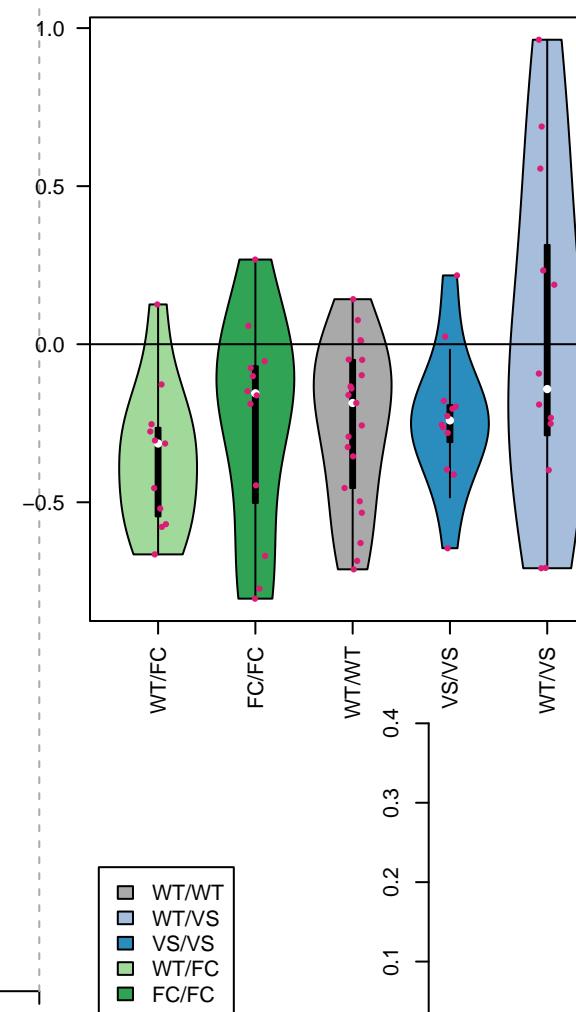


$R^2 = 0.052$

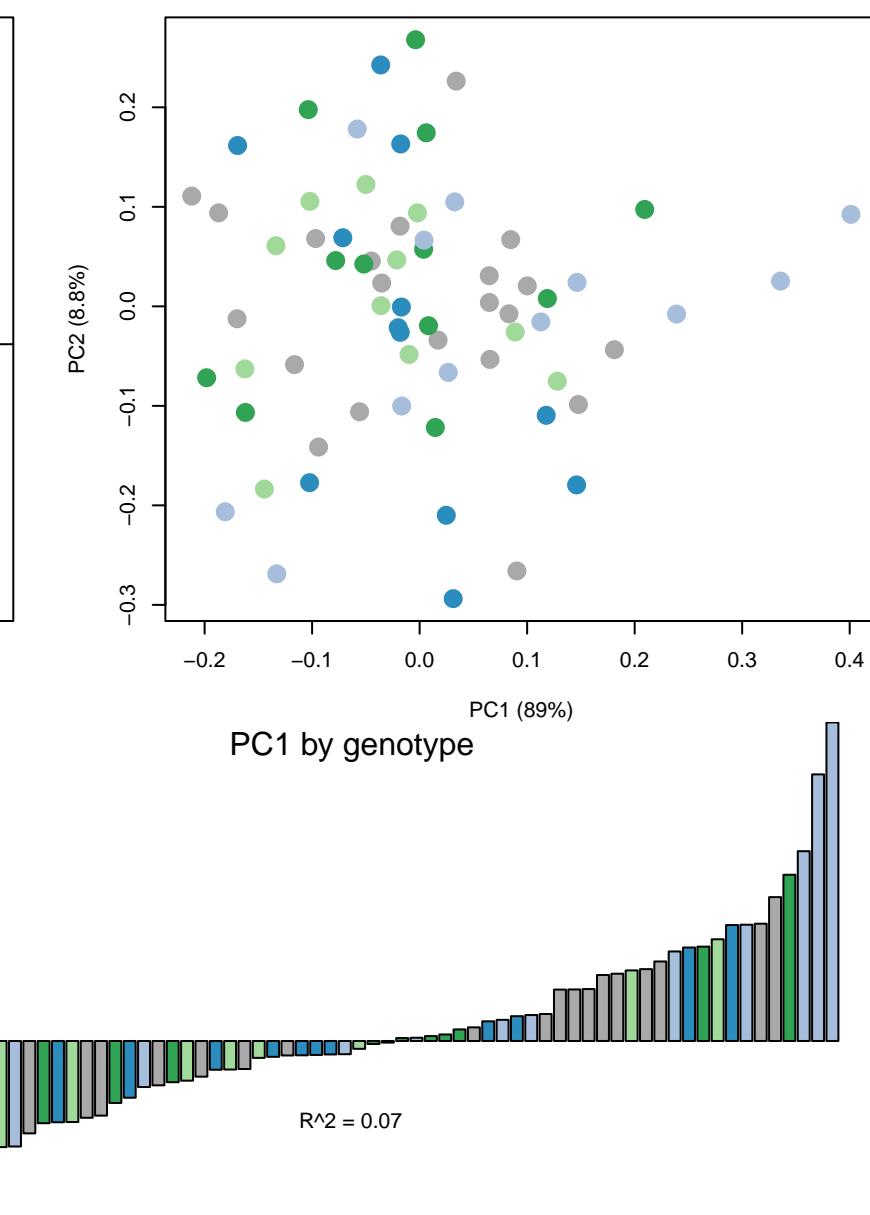
Glyoxylate and dicarboxylate metabolism



Mitochondrial Metabolism

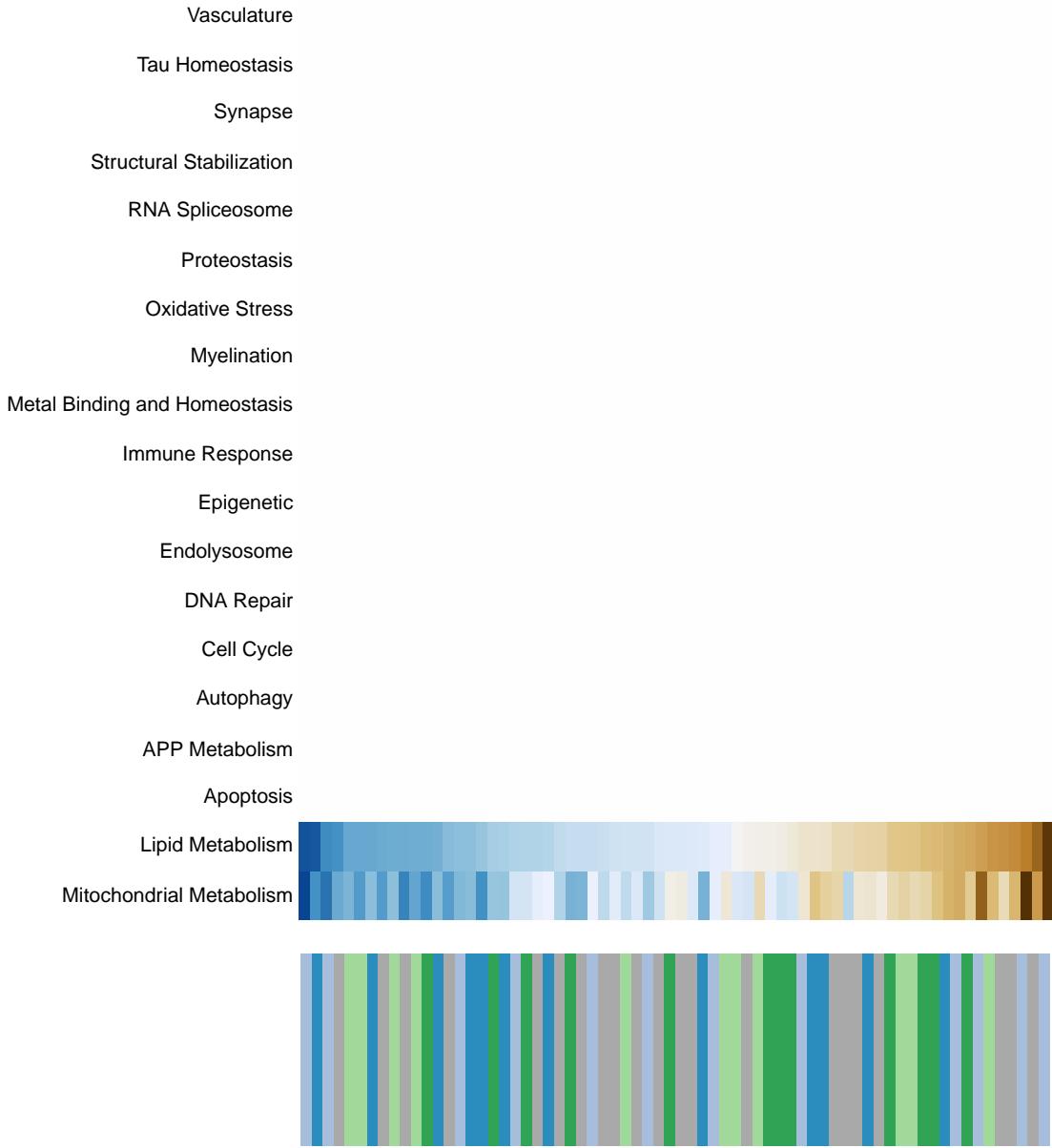


Decomposition

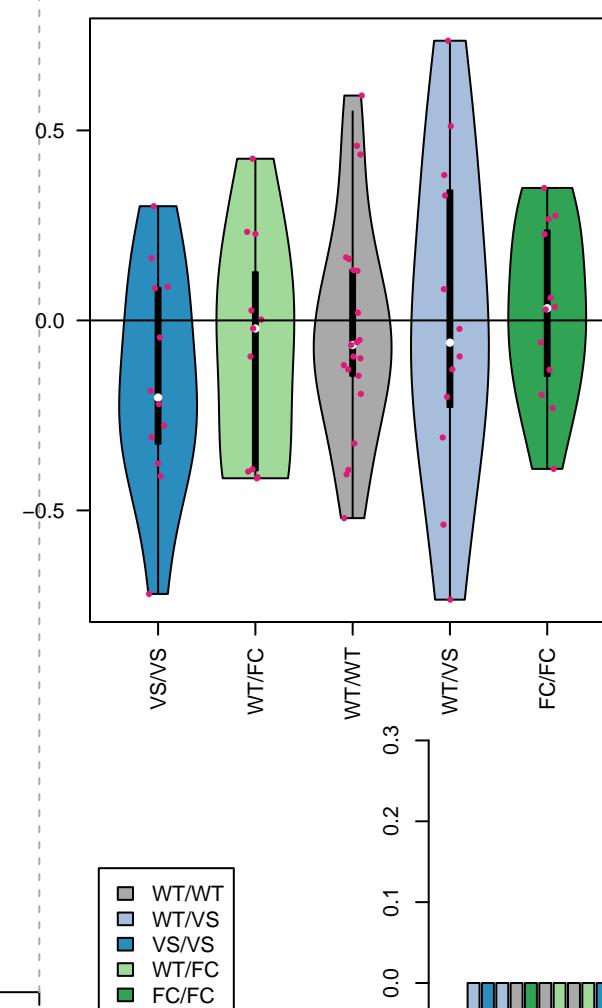


PC1 by genotype

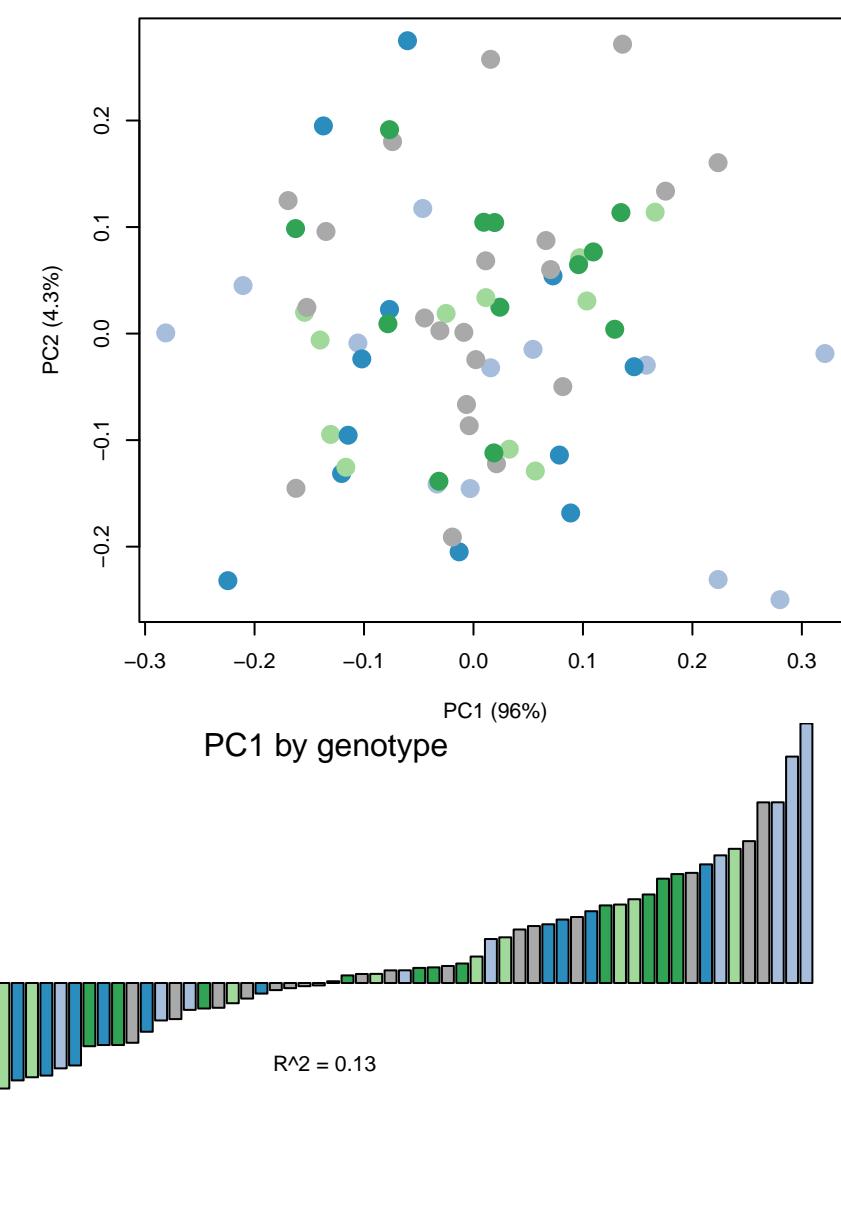
Propanoate metabolism



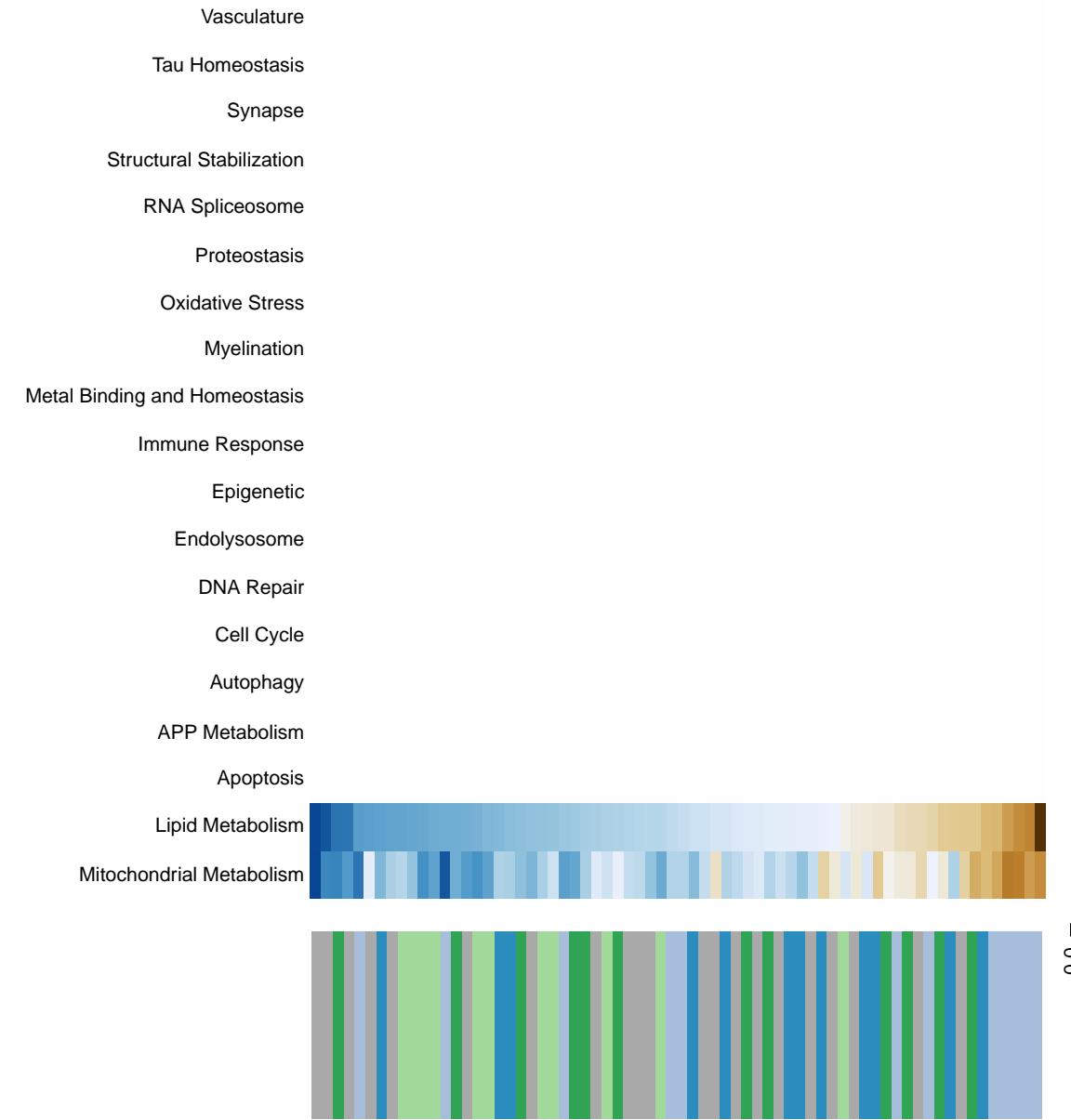
Lipid Metabolism



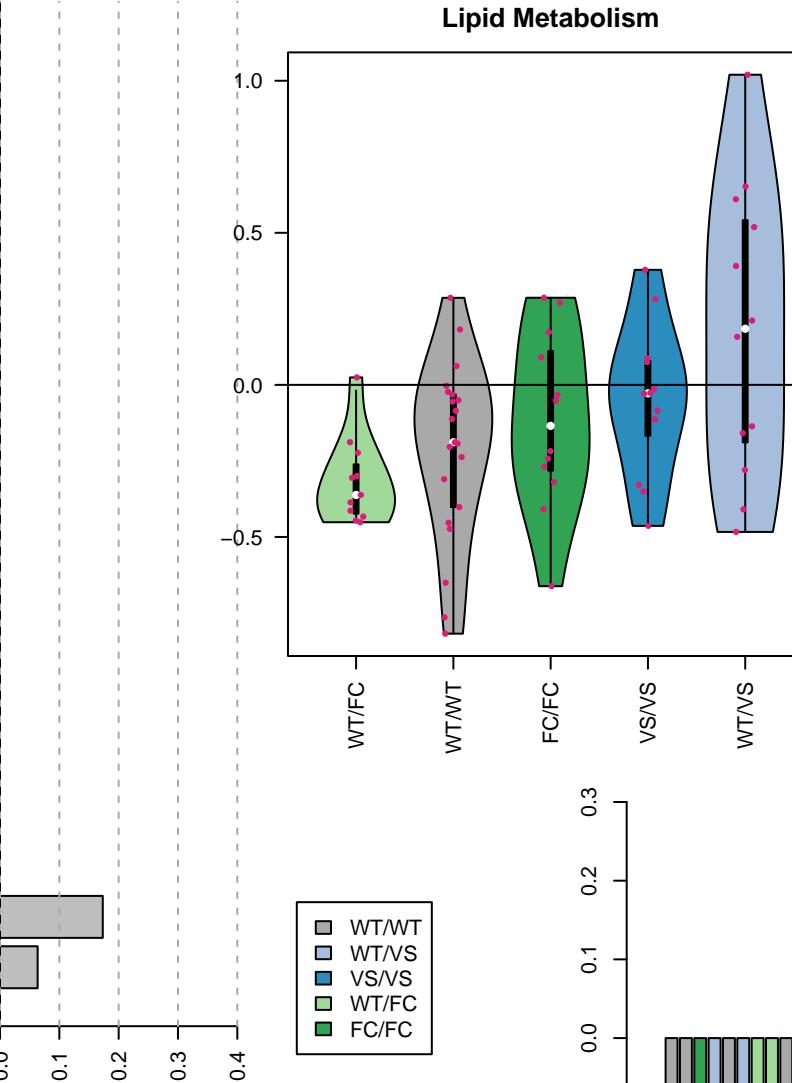
Decomposition



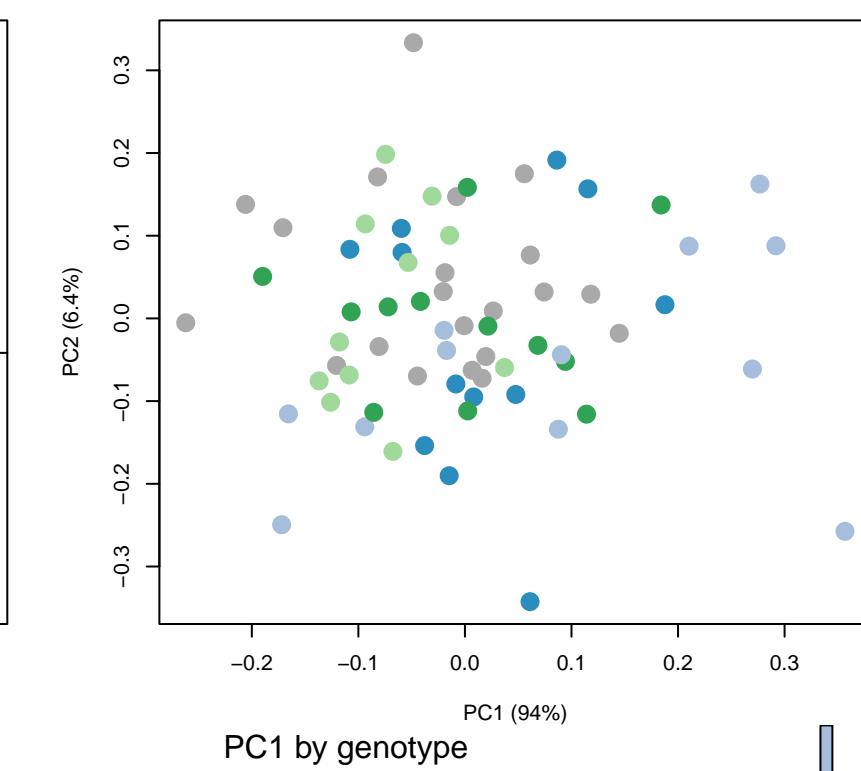
Butanoate metabolism



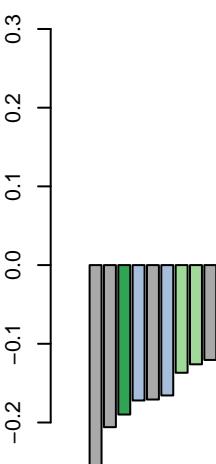
Lipid Metabolism



Decomposition

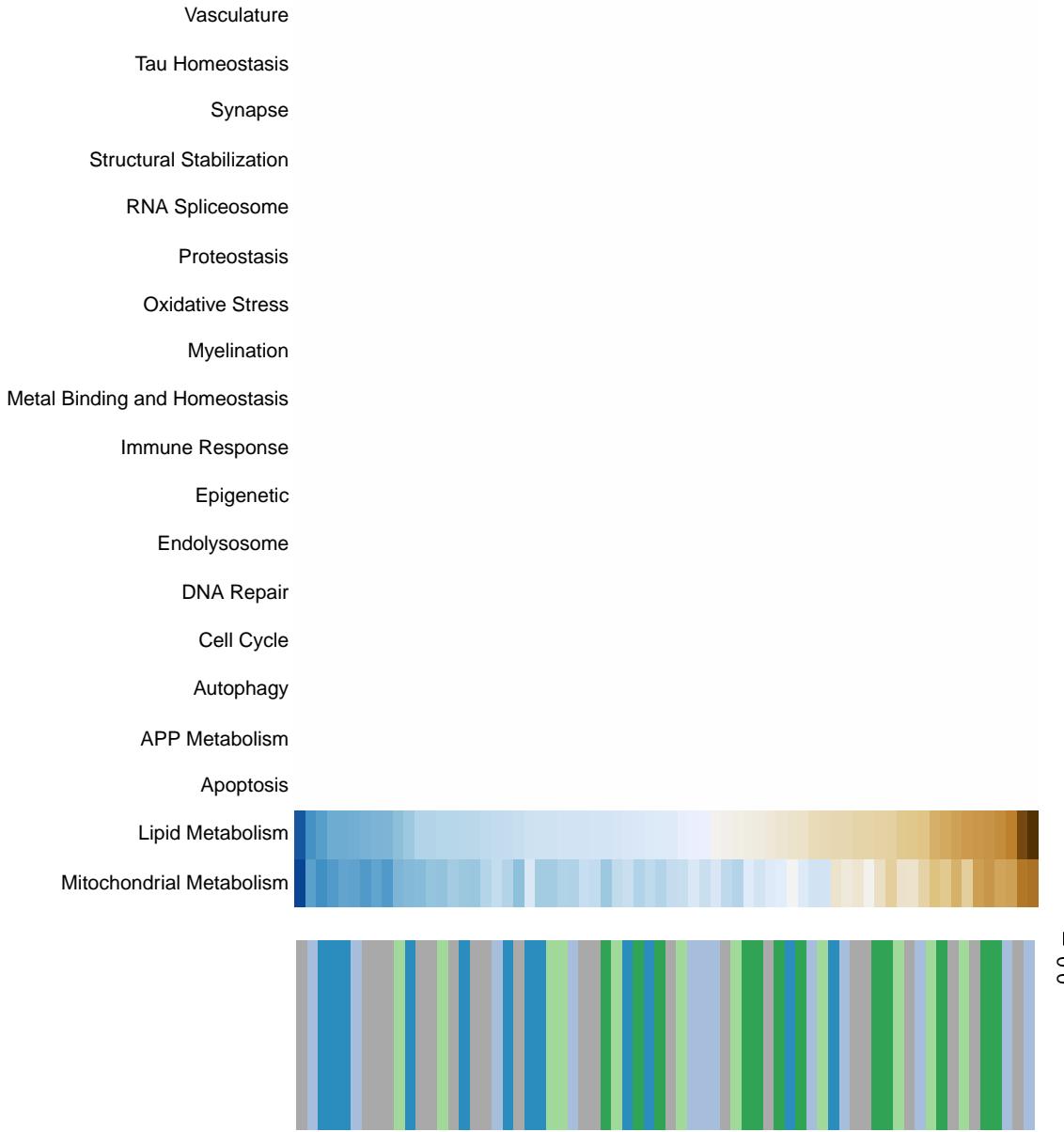


PC1 by genotype

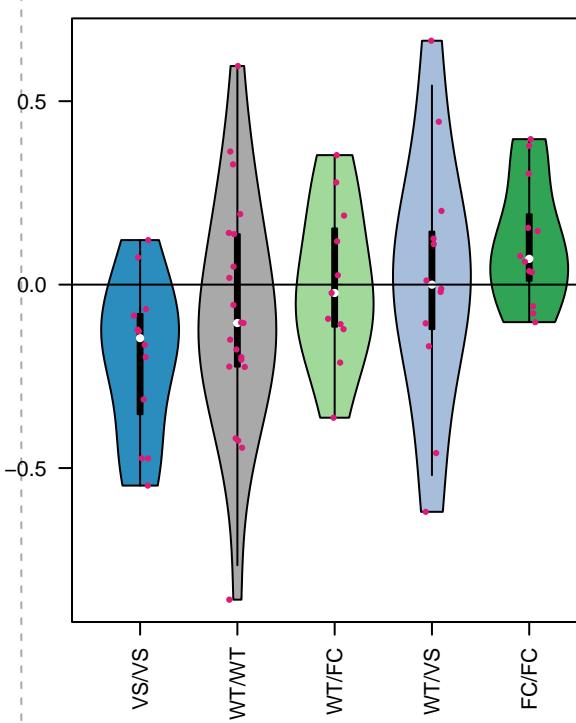


$R^2 = 0.034$

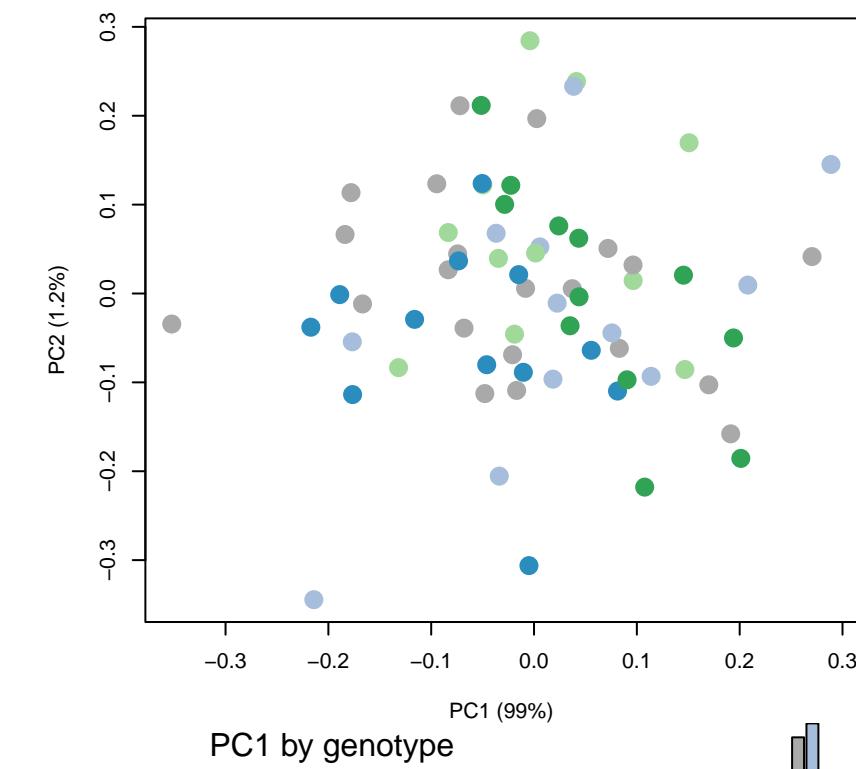
Fatty acid biosynthesis



Lipid Metabolism

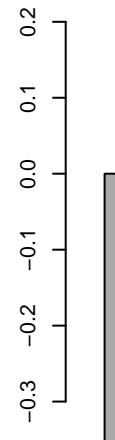


Decomposition

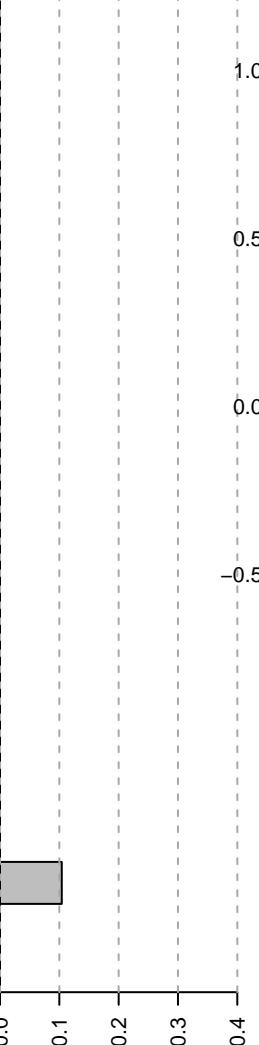
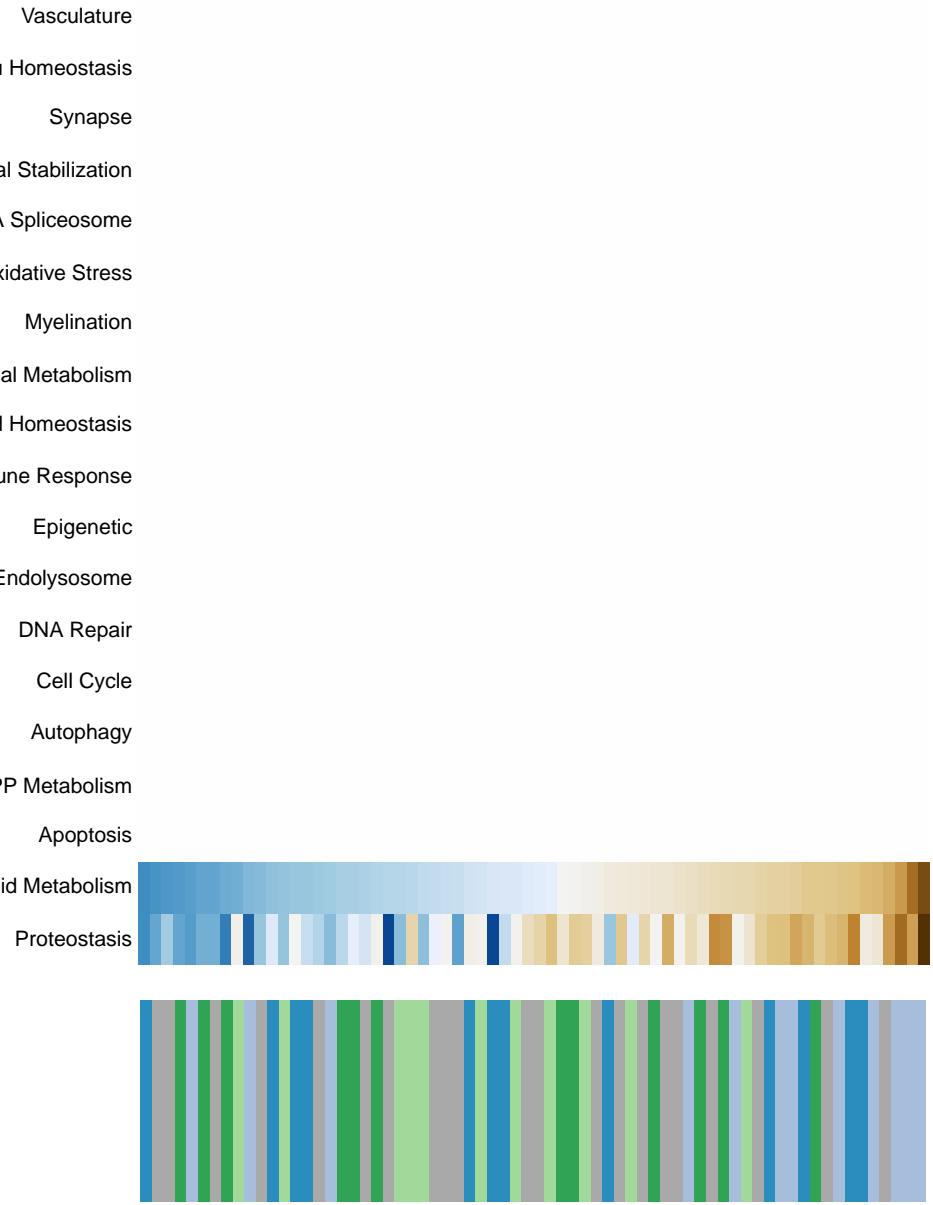


PC1 by genotype

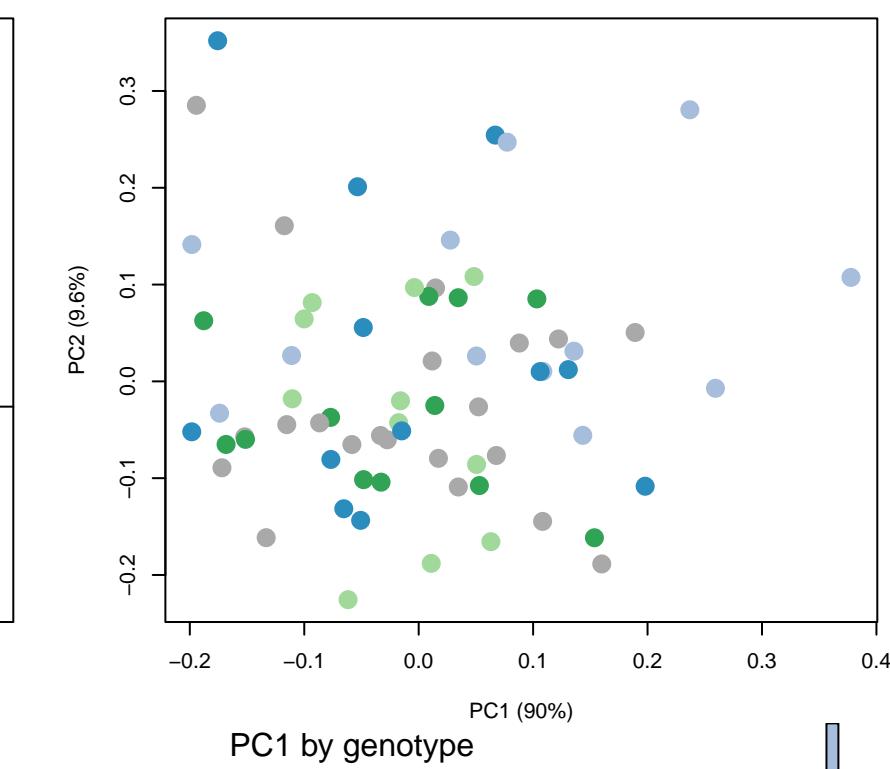
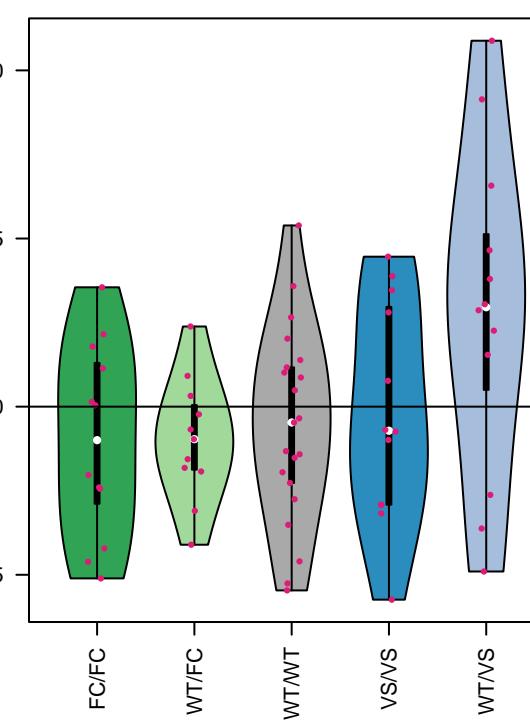
R² = 0.049



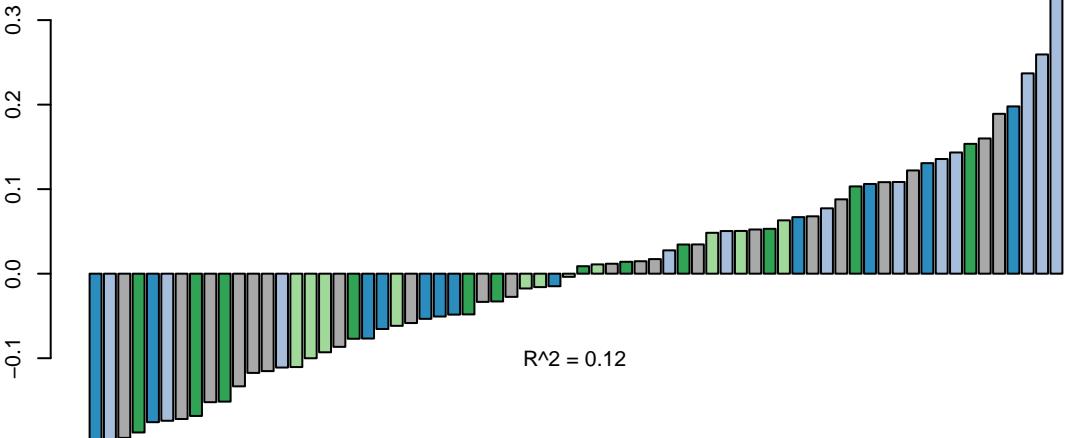
Fatty acid elongation



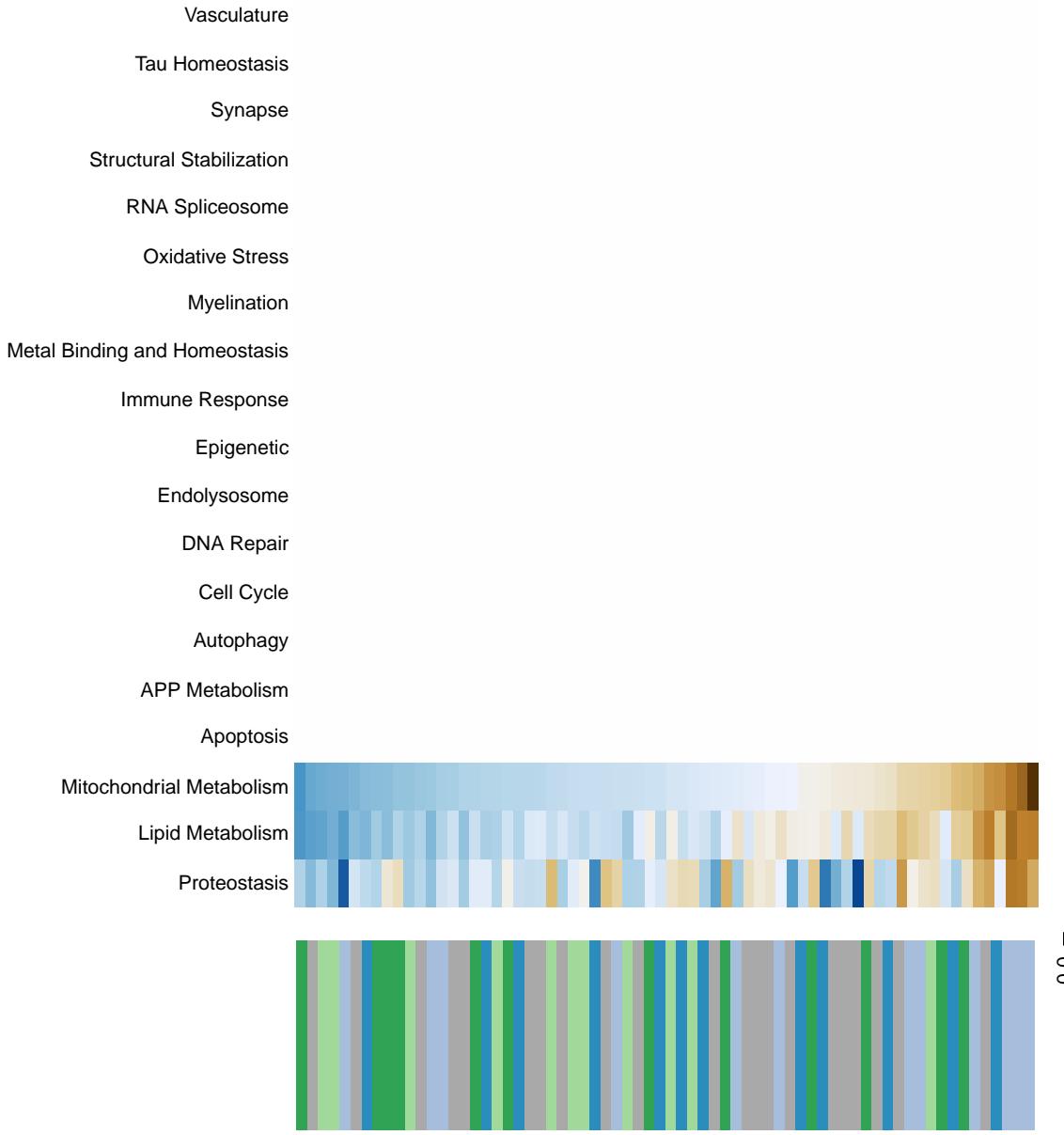
Lipid Metabolism



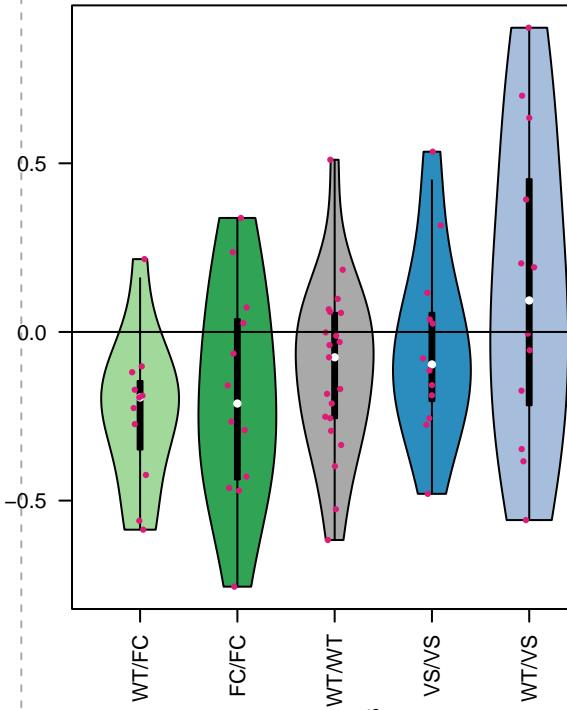
PC1 by genotype



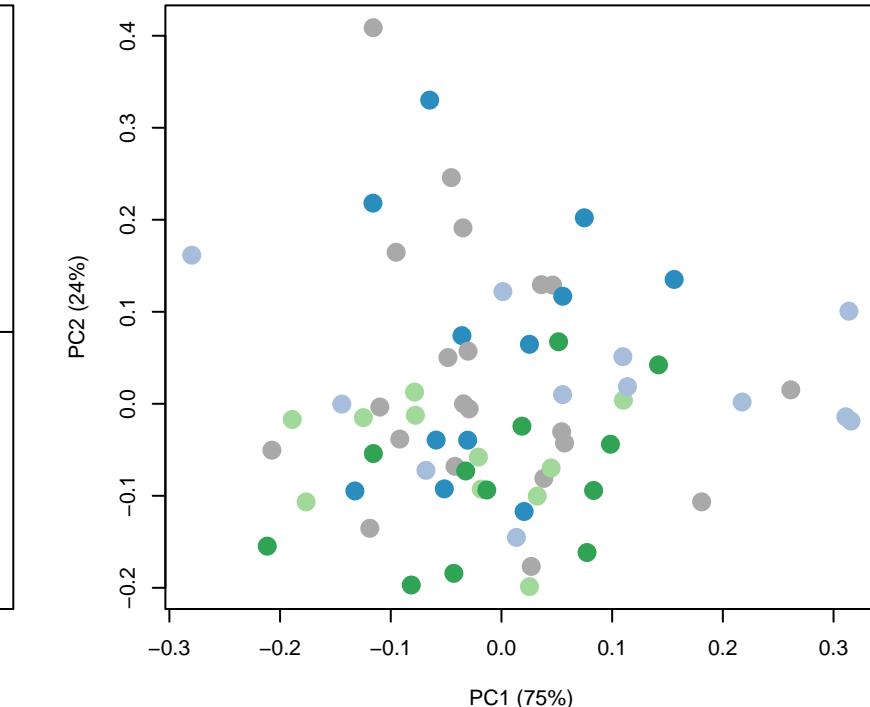
Fatty acid degradation



Mitochondrial Metabolism



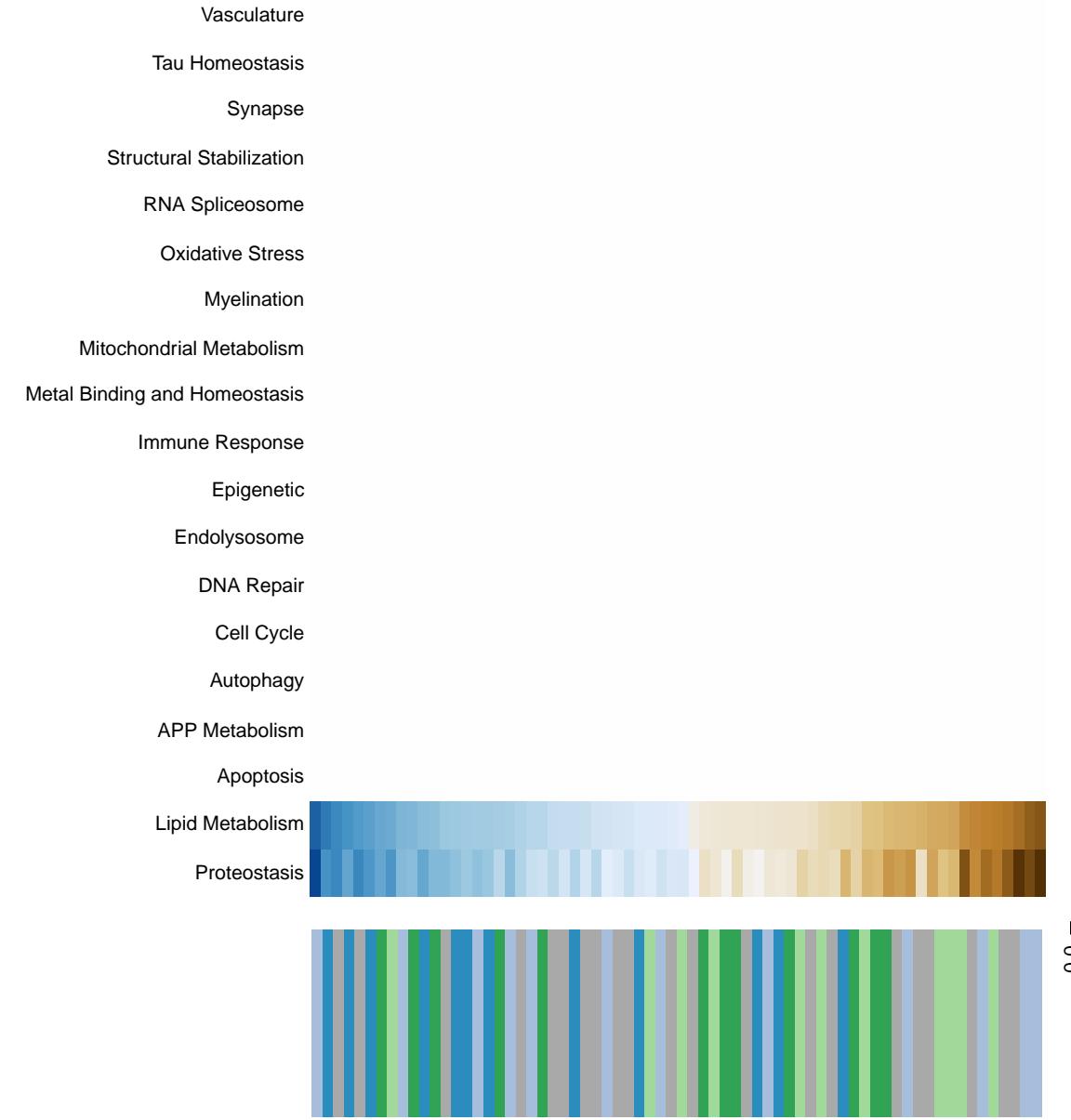
Decomposition



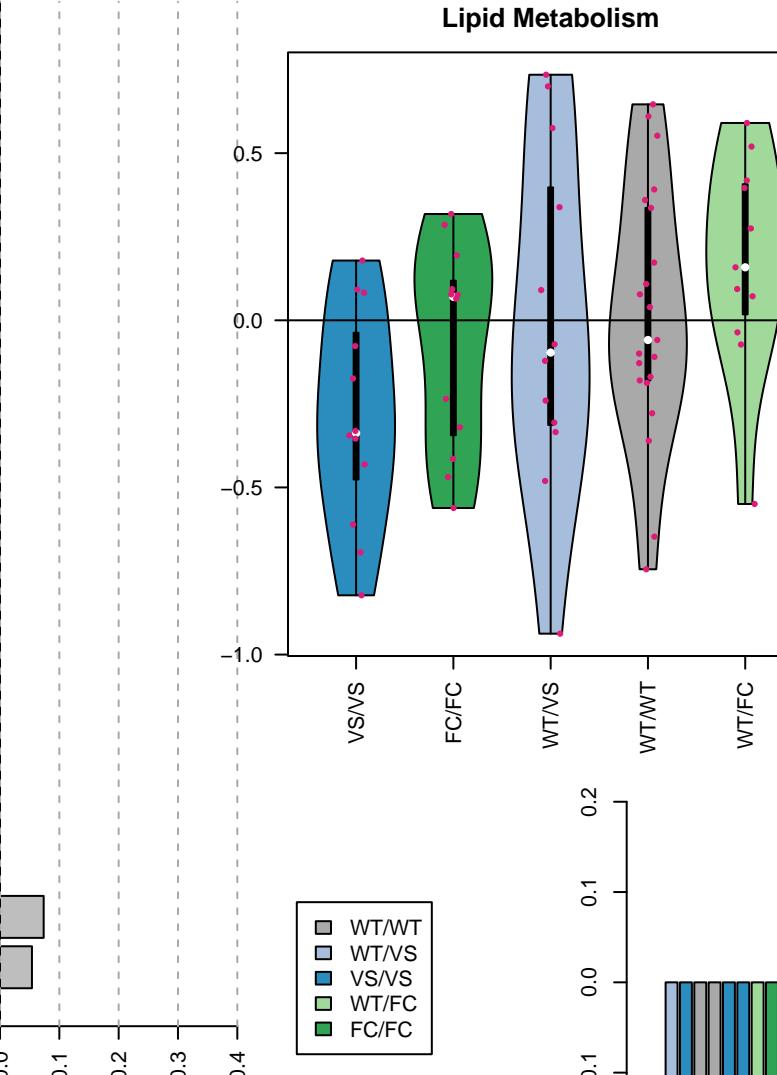
PC1 by genotype

$R^2 = 0.0084$

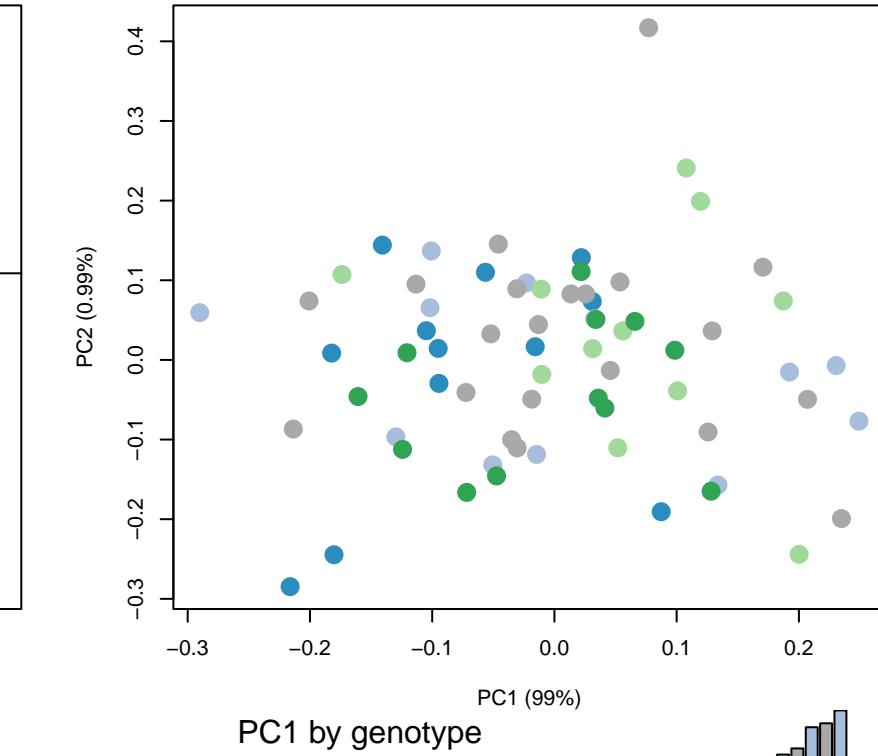
Steroid biosynthesis



Lipid Metabolism

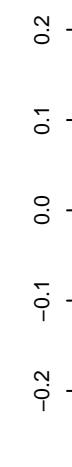


Decomposition

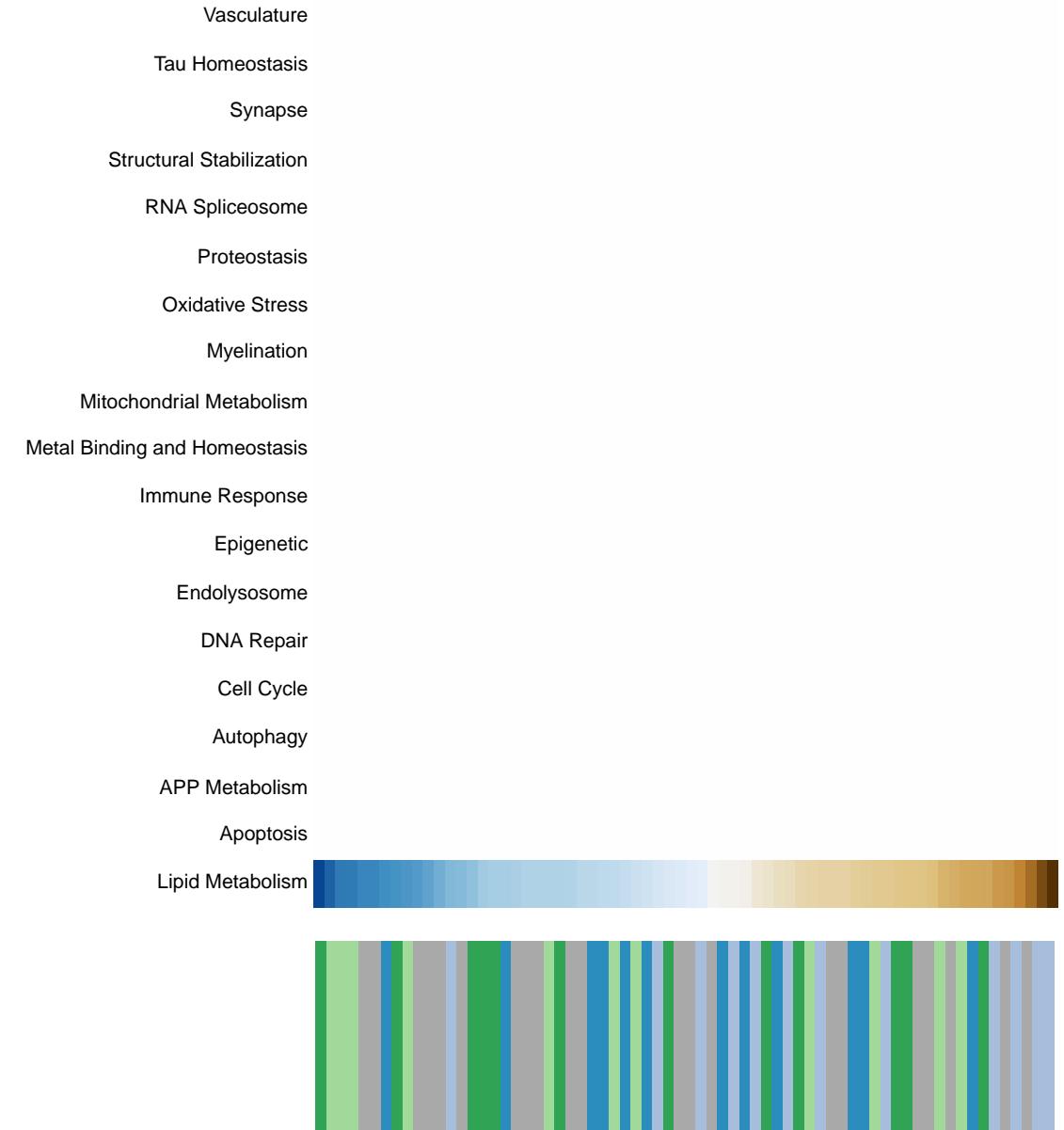


PC1 by genotype

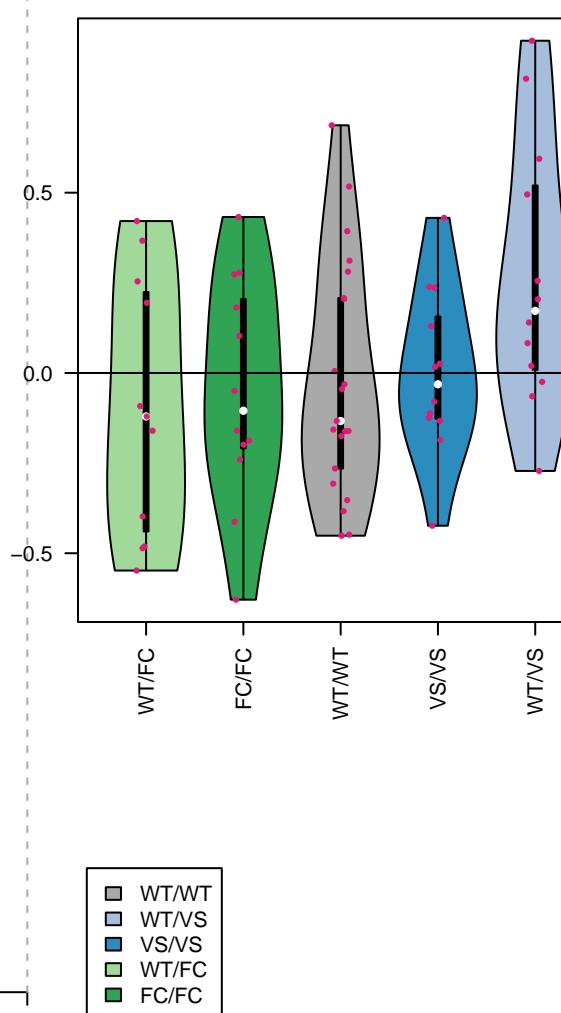
$R^2 = 0.12$



Primary bile acid biosynthesis



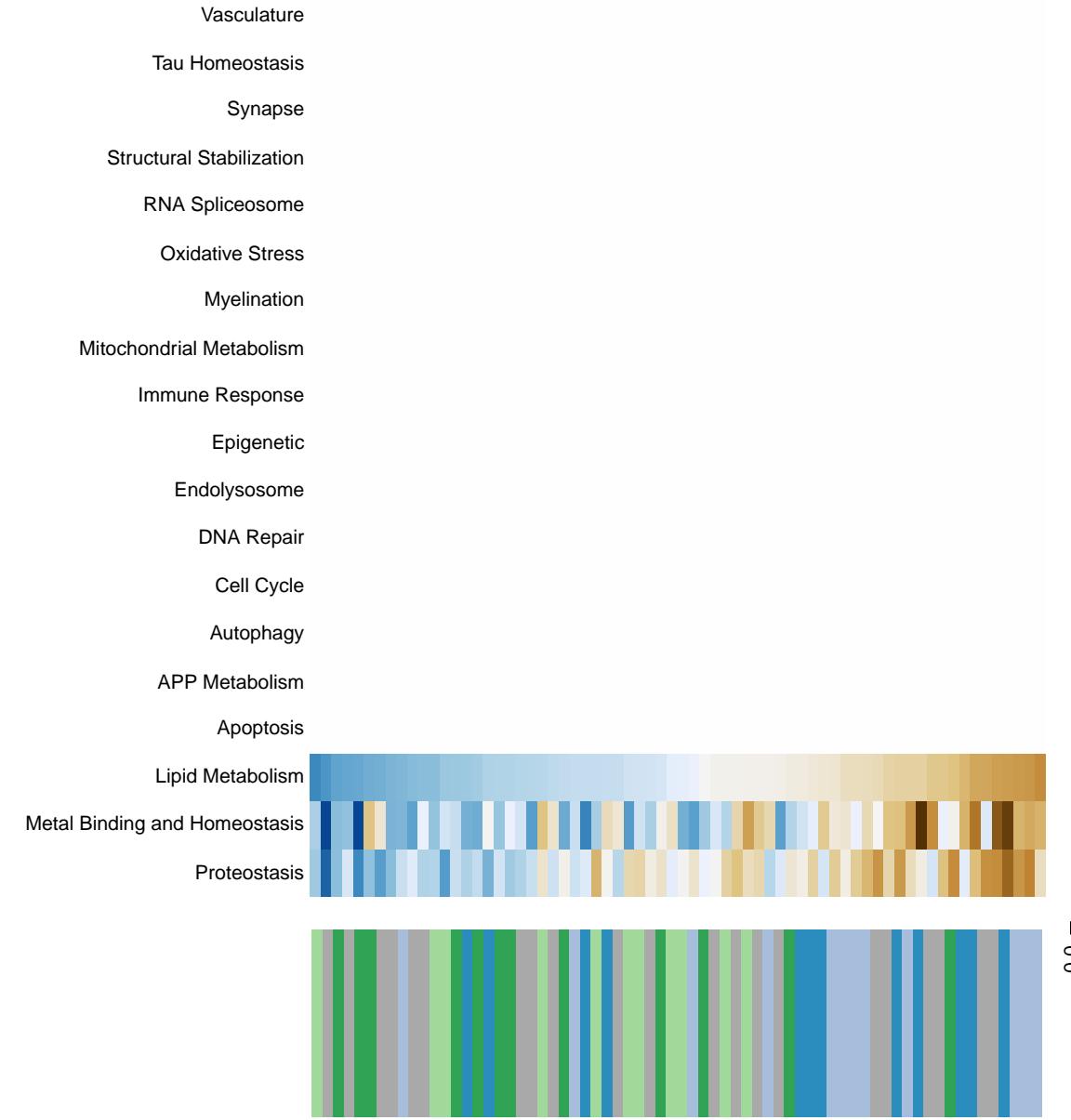
Lipid Metabolism



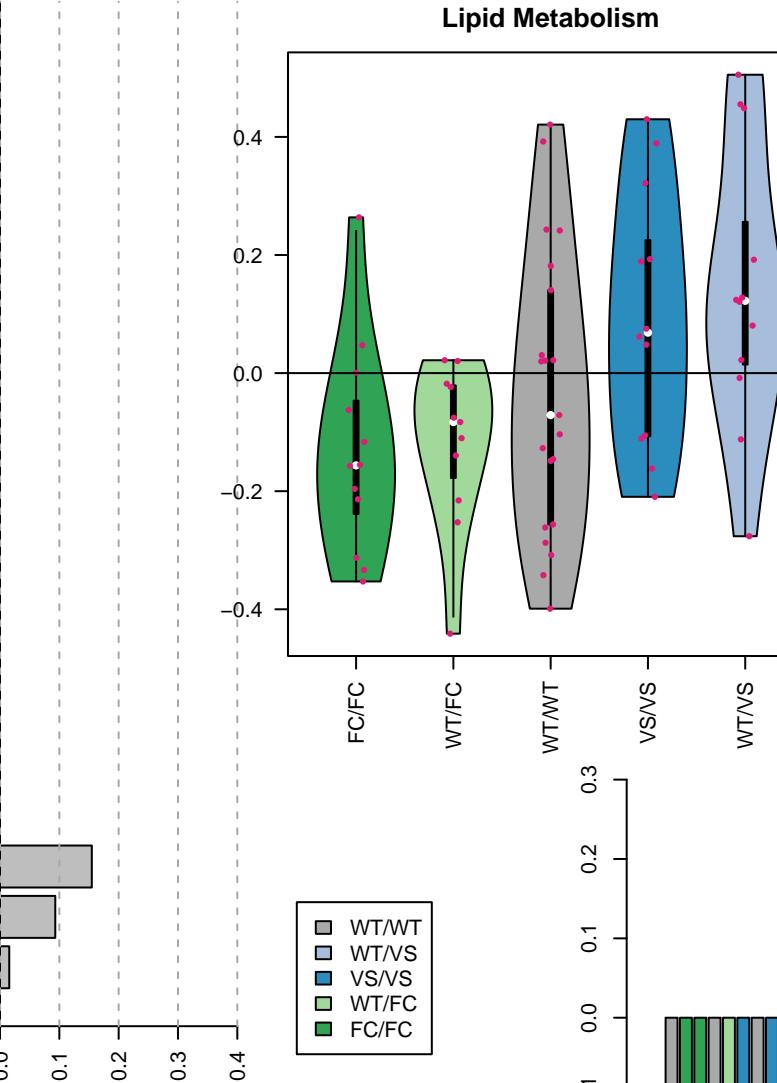
Not enough rows to decompose

Not enough rows to decompose

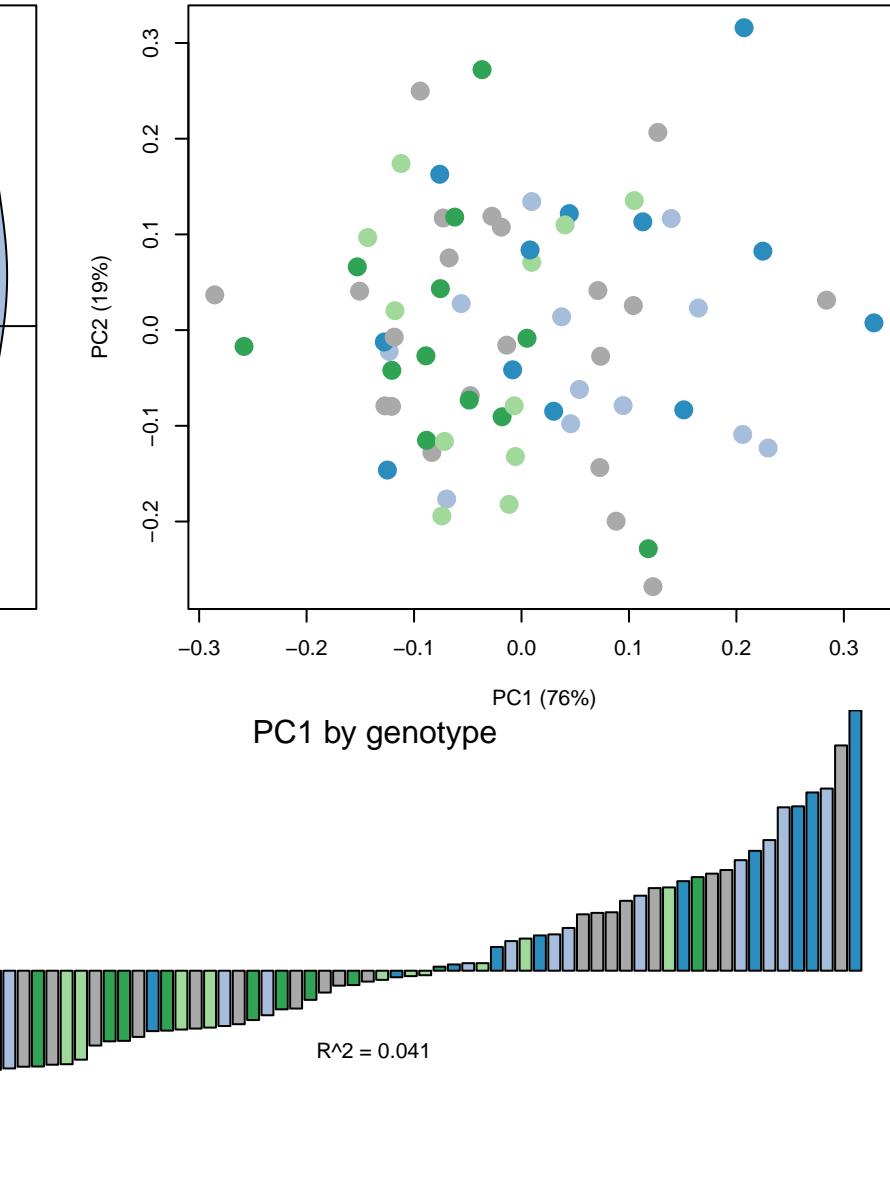
Steroid hormone biosynthesis



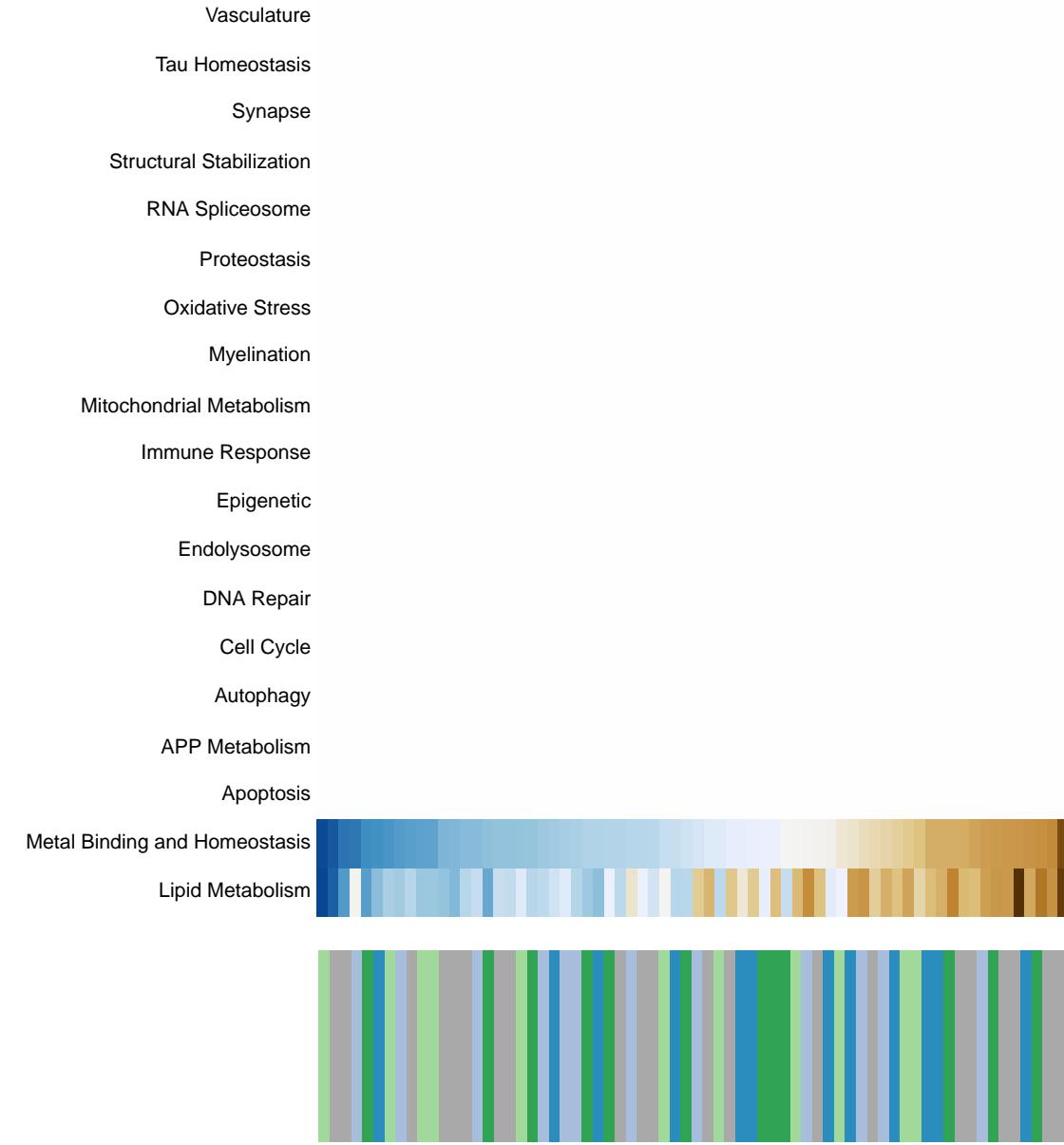
Lipid Metabolism



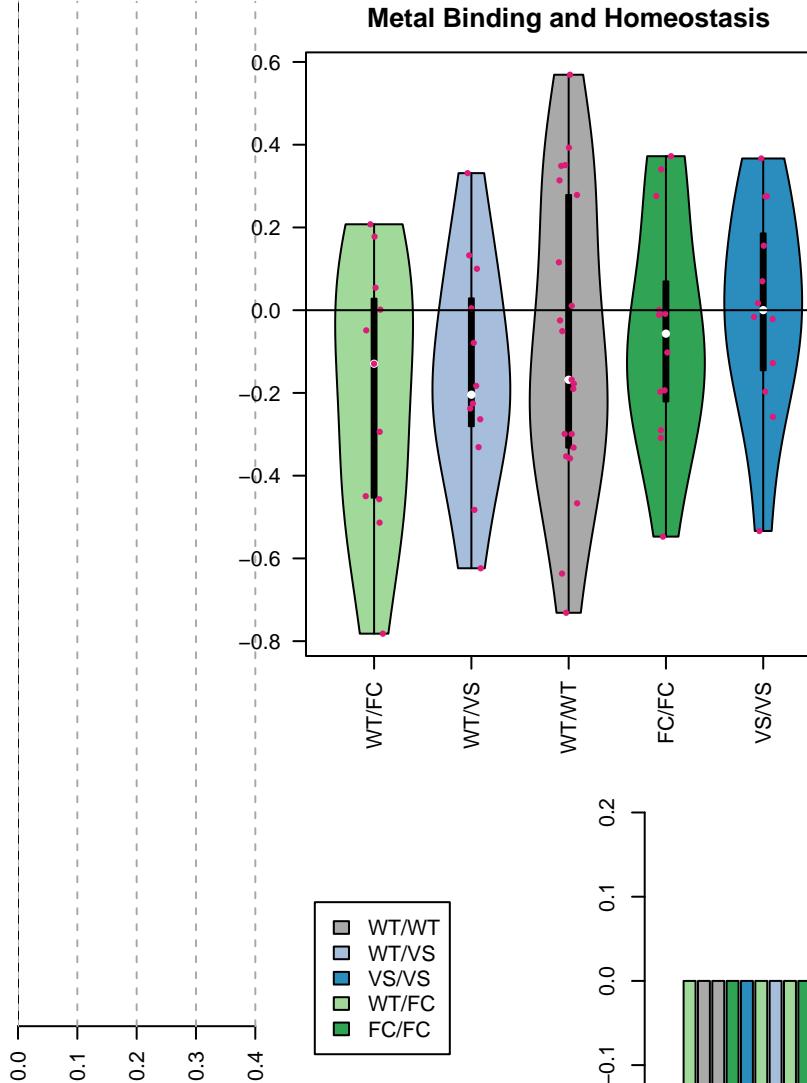
Decomposition



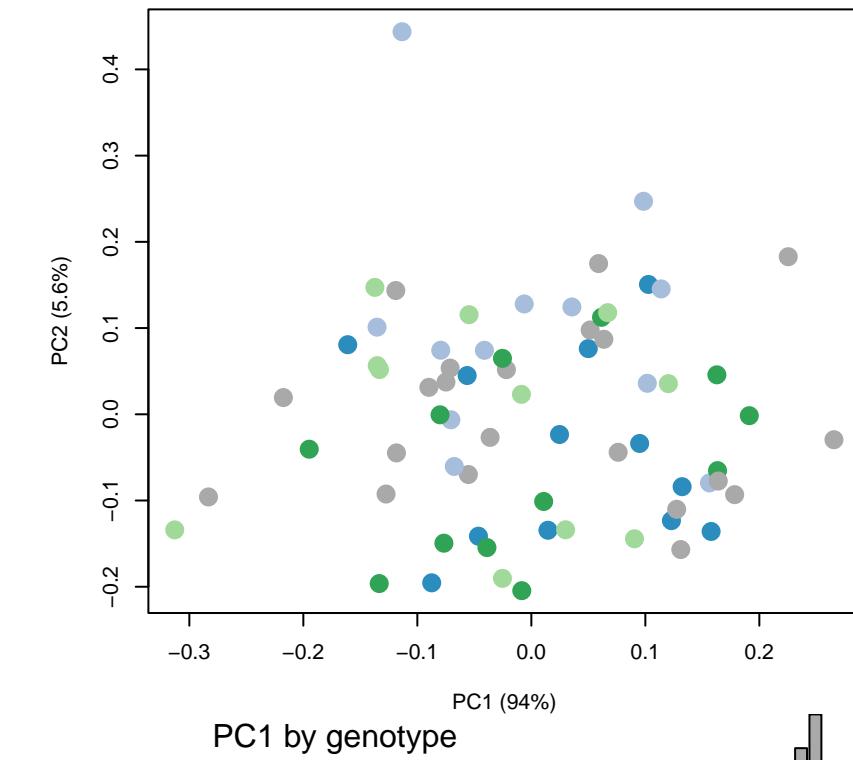
Linoleic acid metabolism



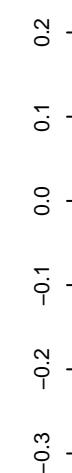
Metal Binding and Homeostasis



Decomposition

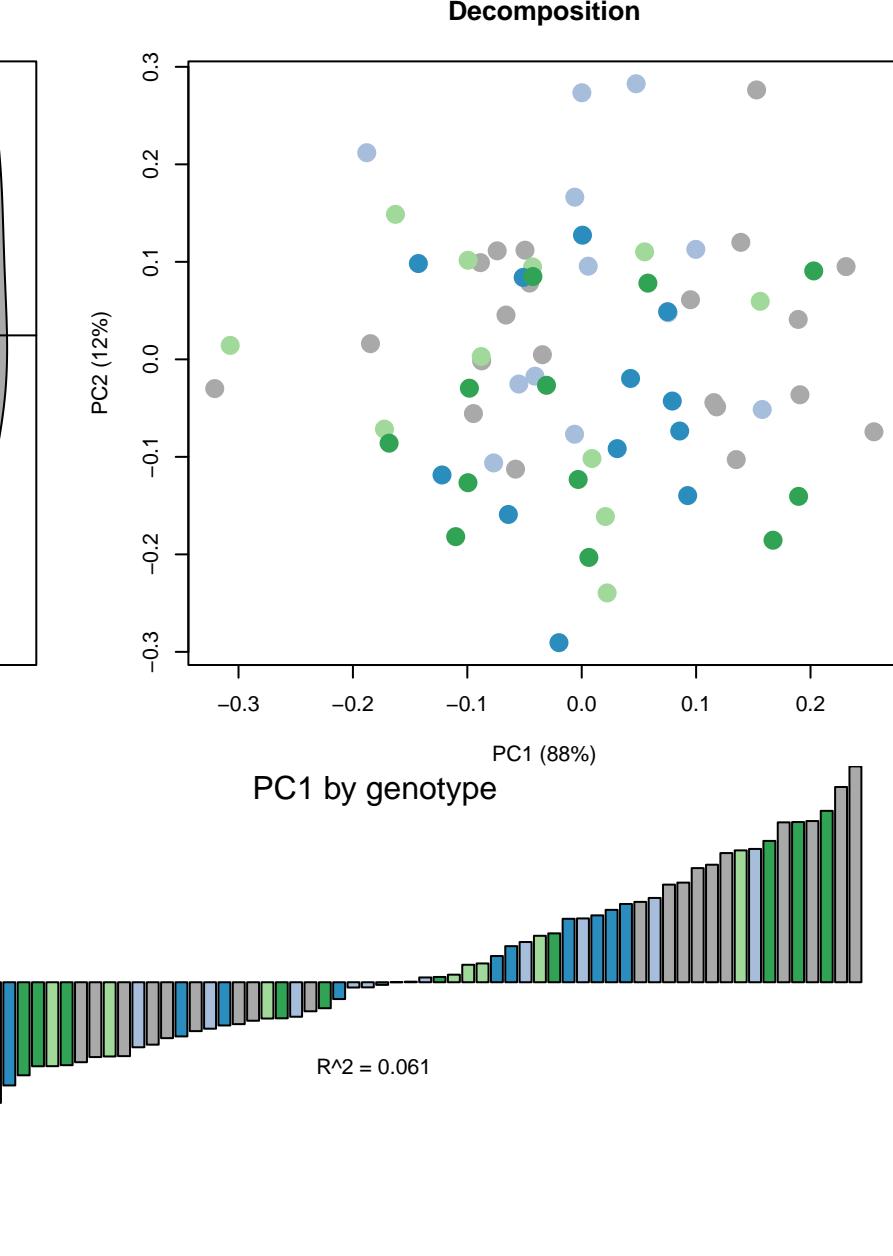
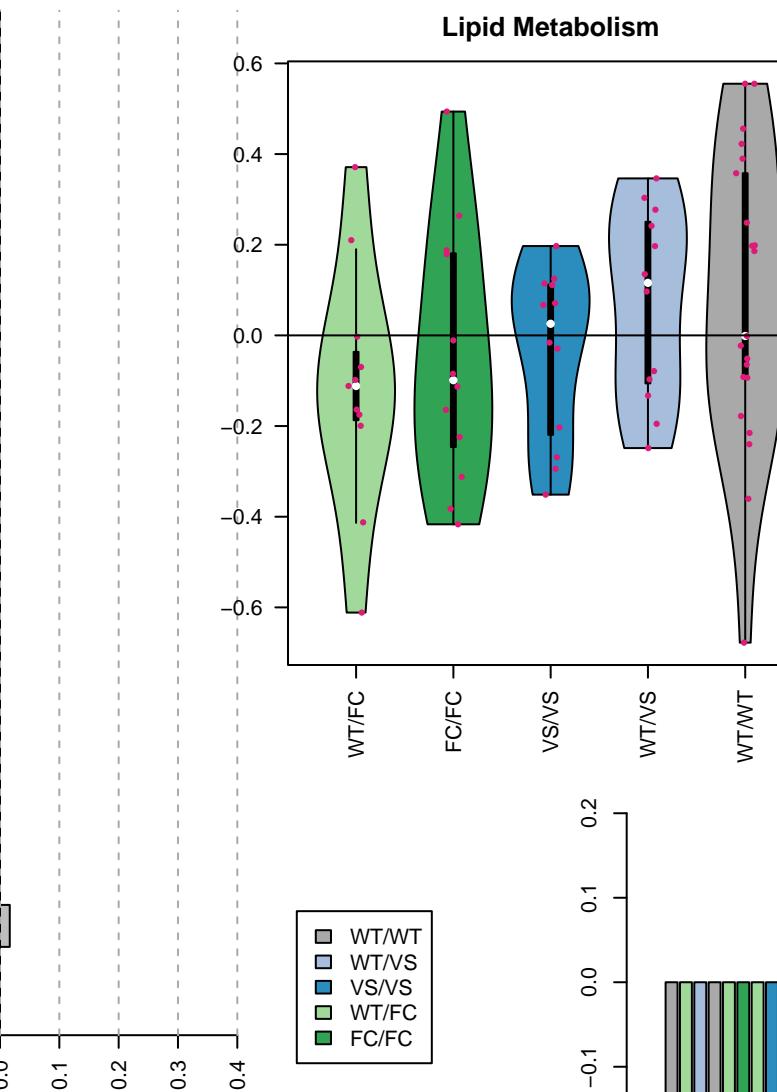
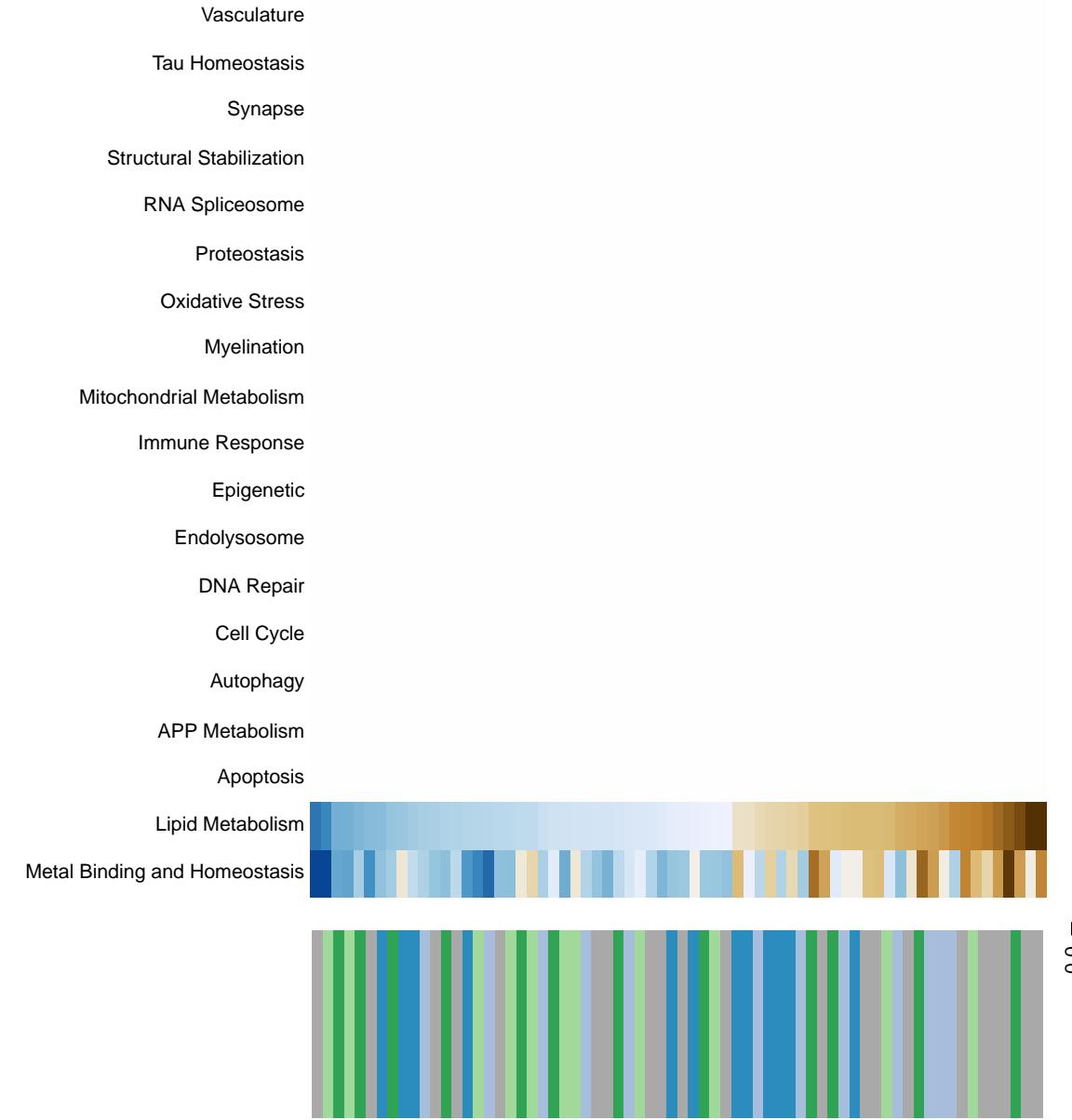


PC1 by genotype

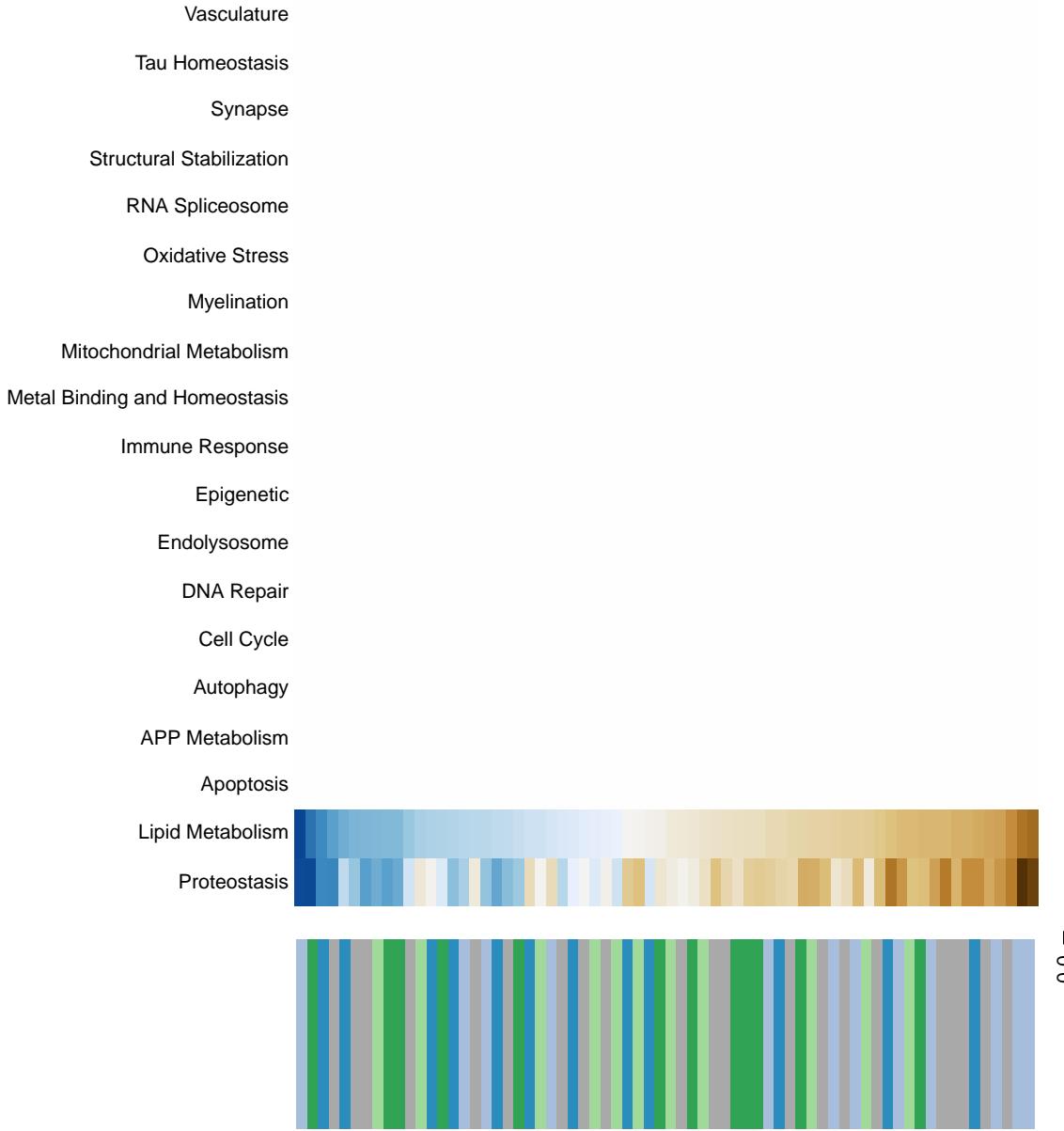


$R^2 = 0.014$

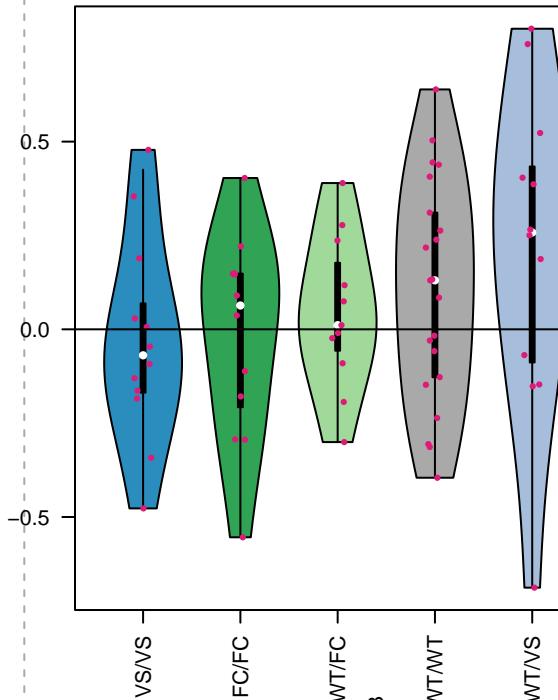
alpha-Linolenic acid metabolism



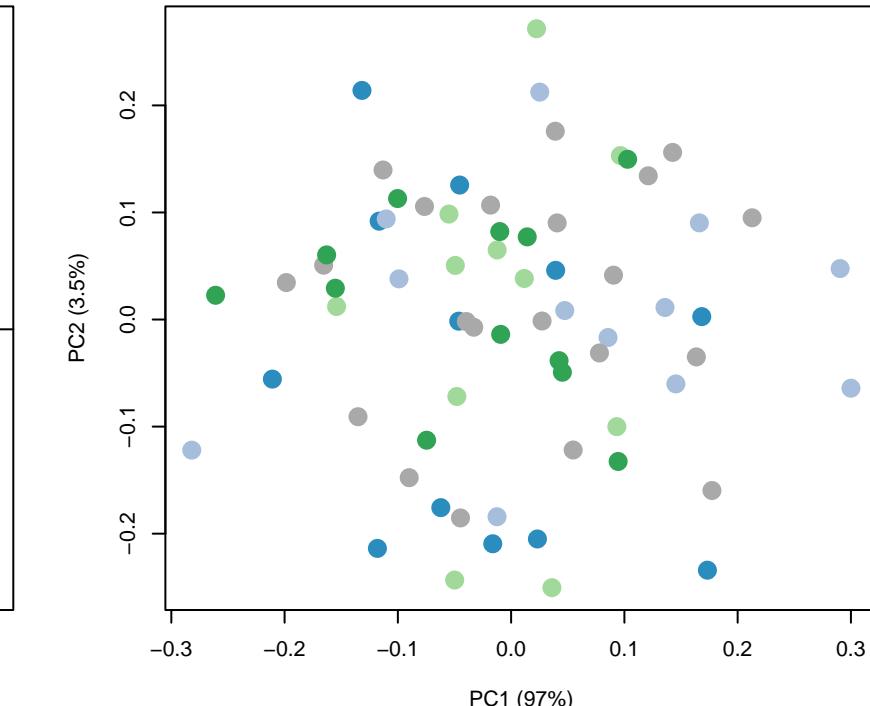
Biosynthesis of unsaturated fatty acids



Lipid Metabolism

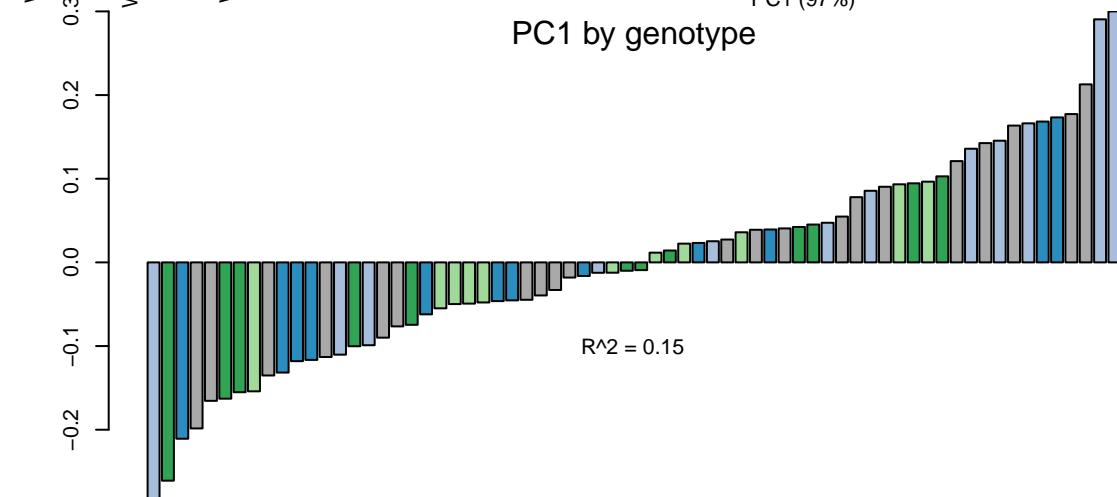


Decomposition

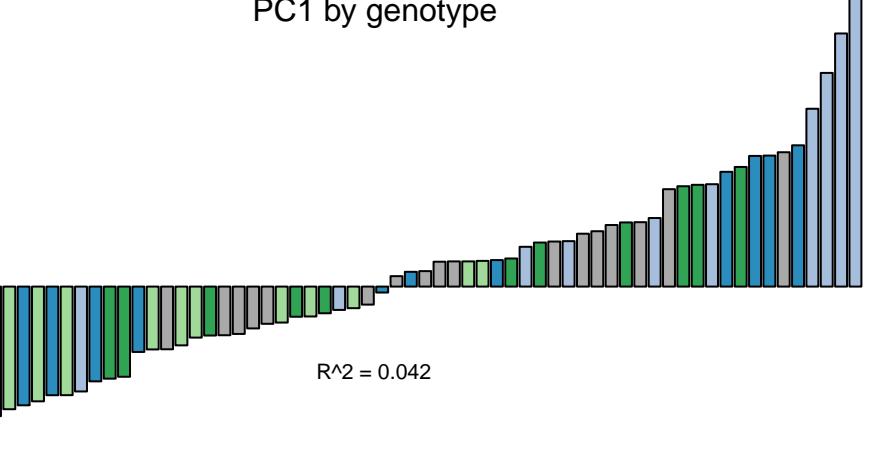
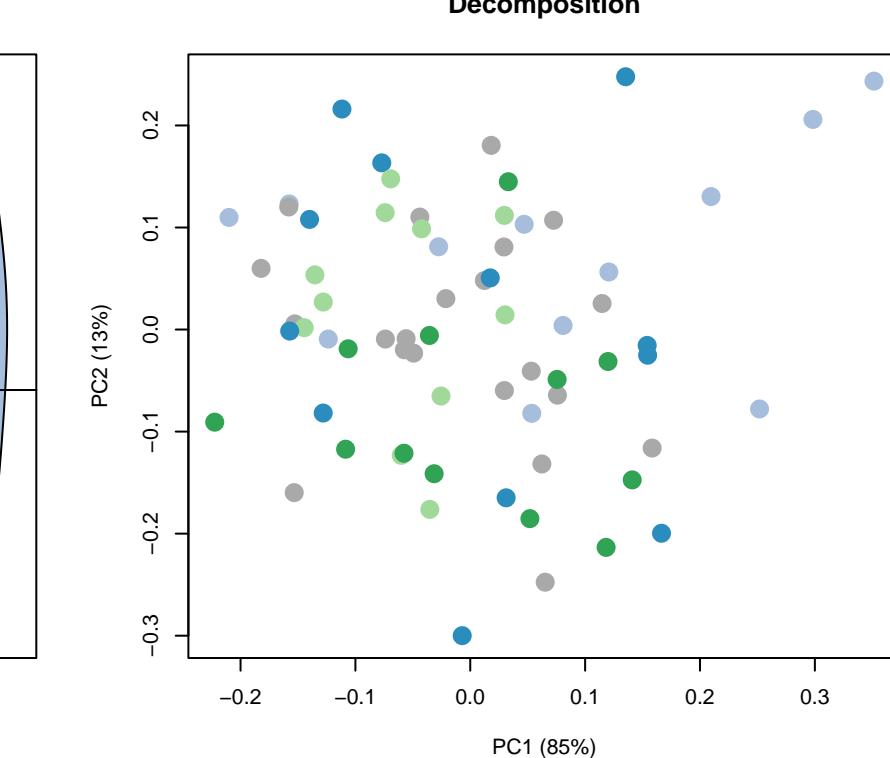
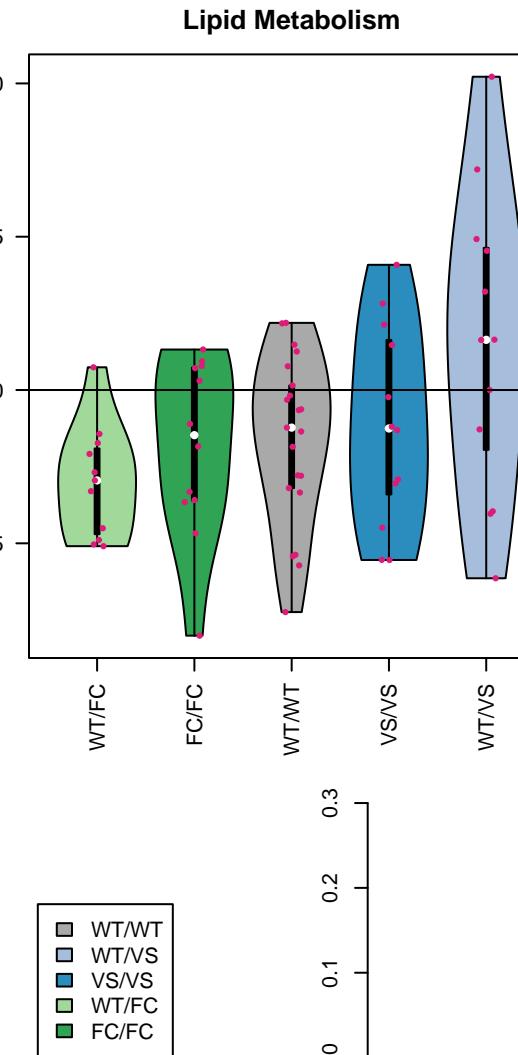
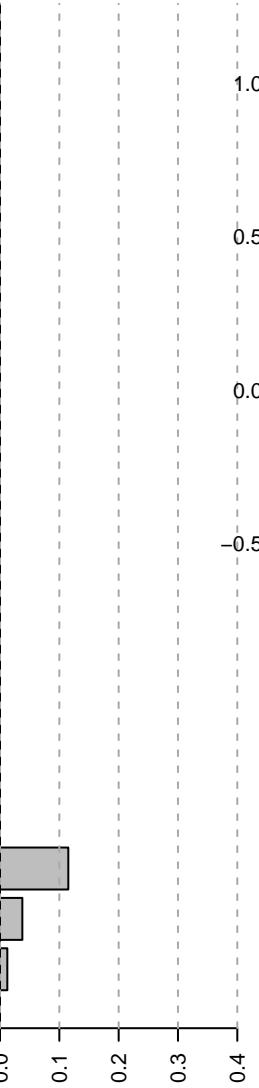
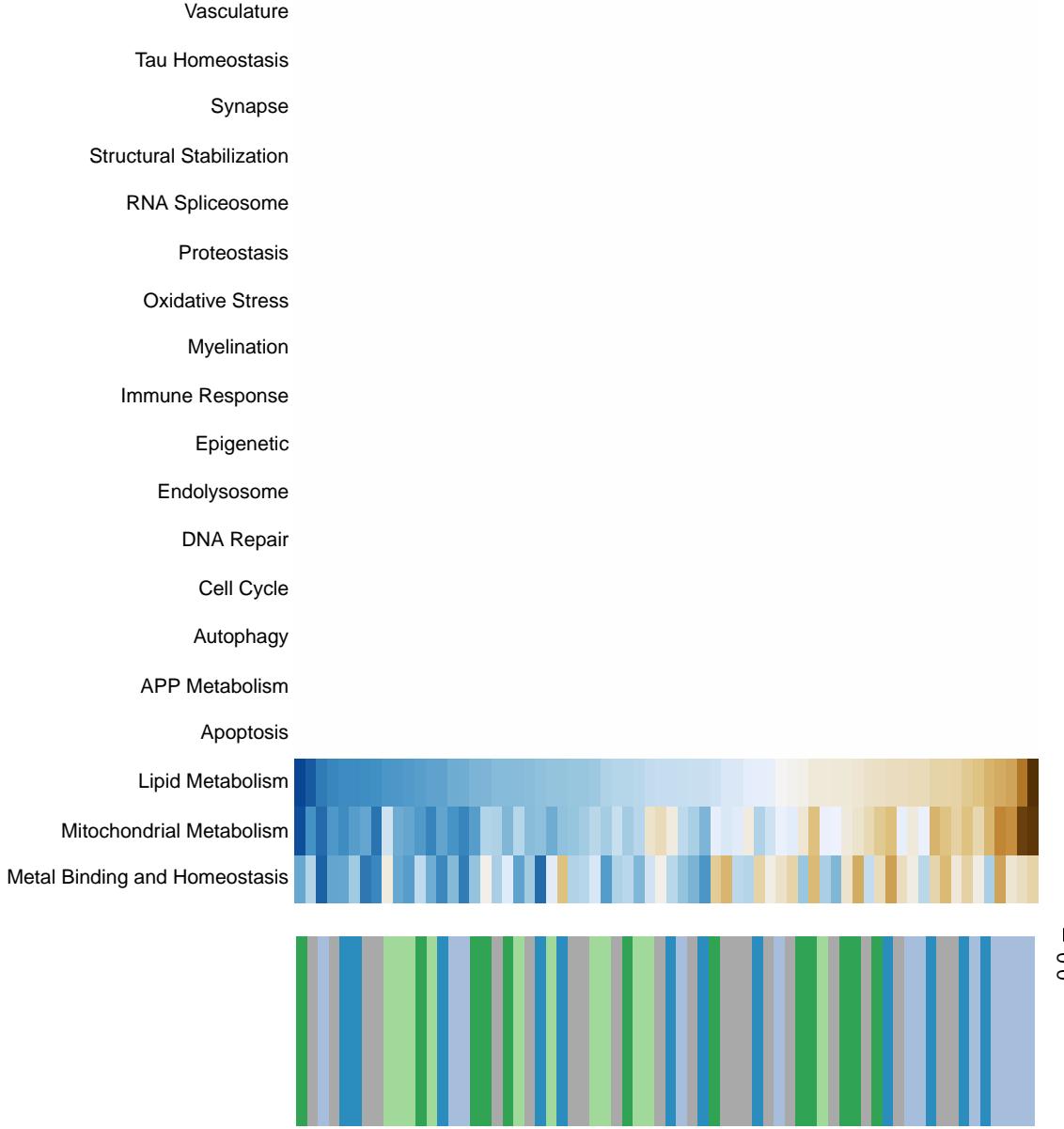


PC1 by genotype

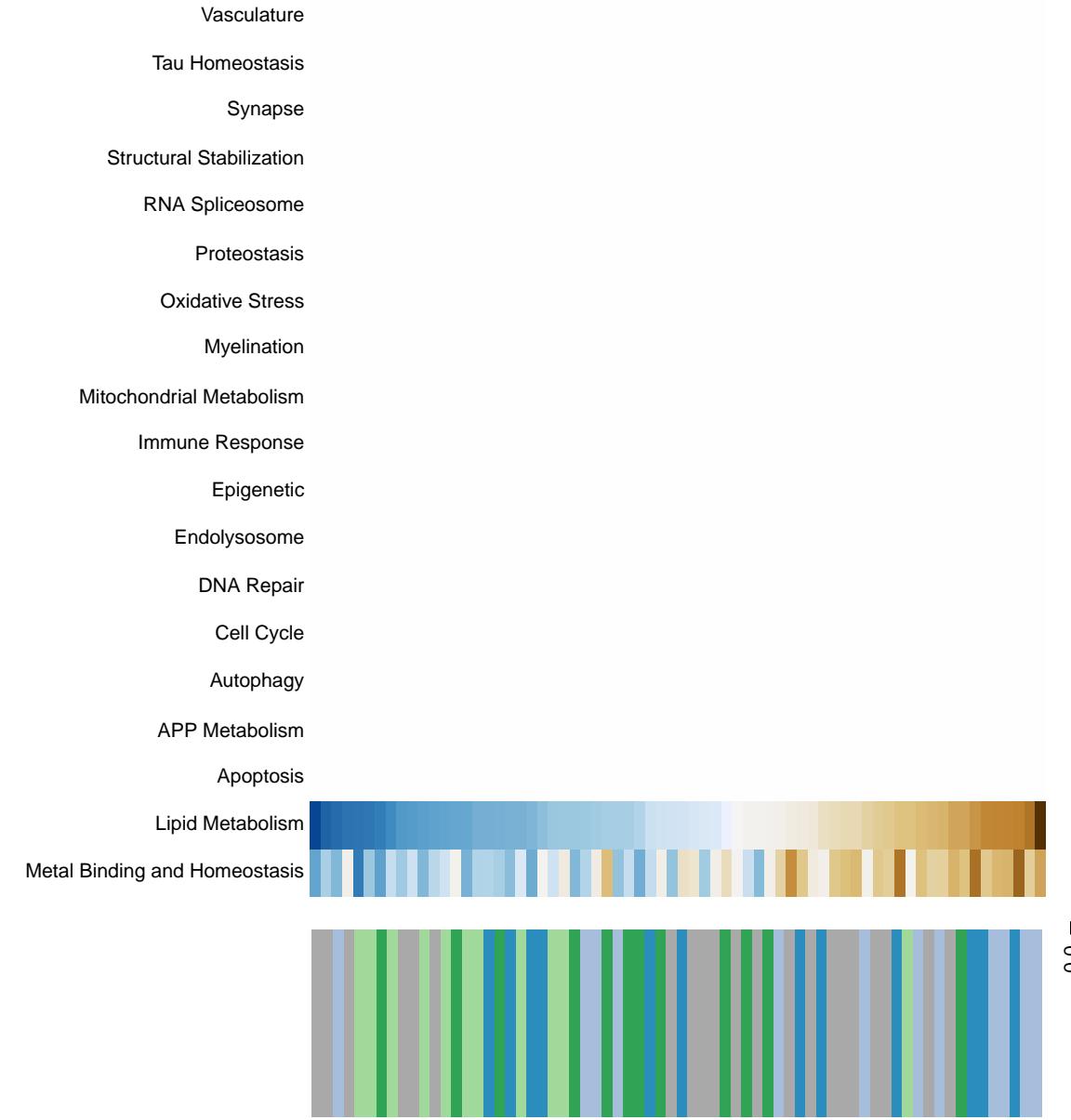
$R^2 = 0.15$



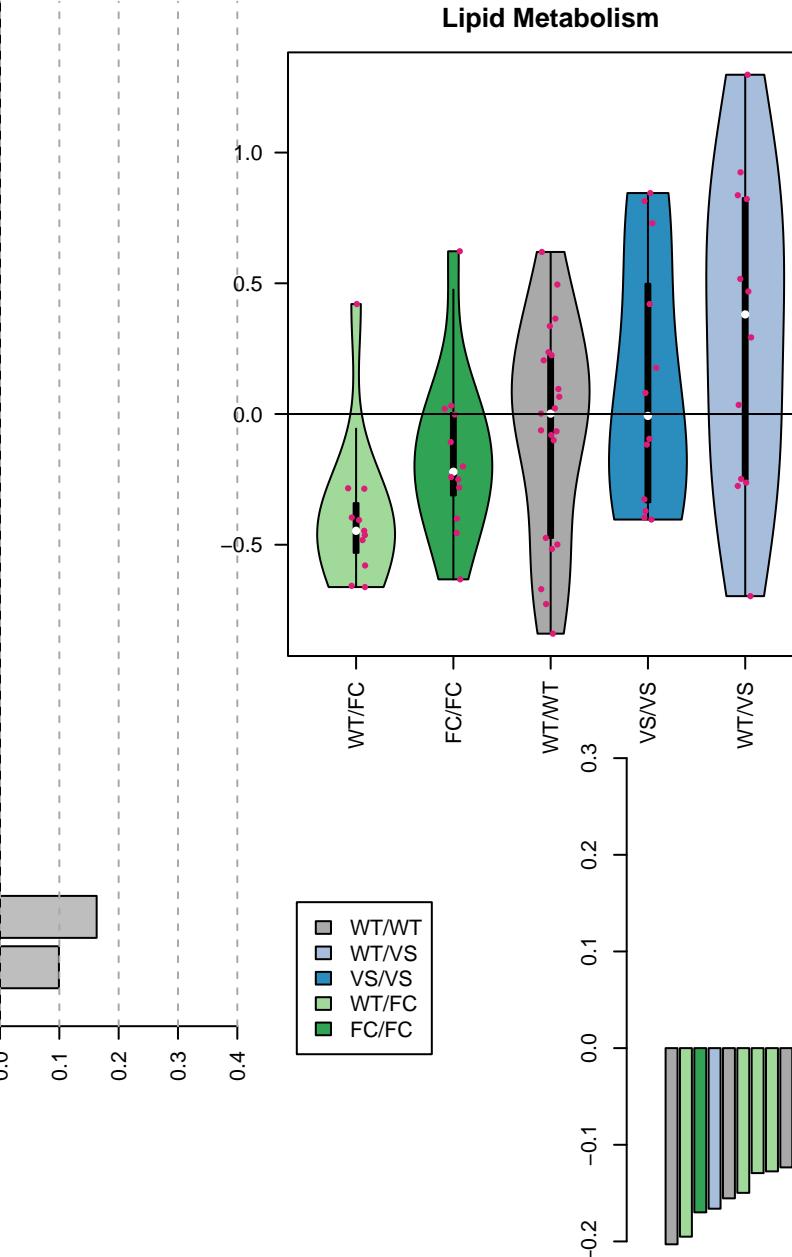
Valine, leucine and isoleucine degradation



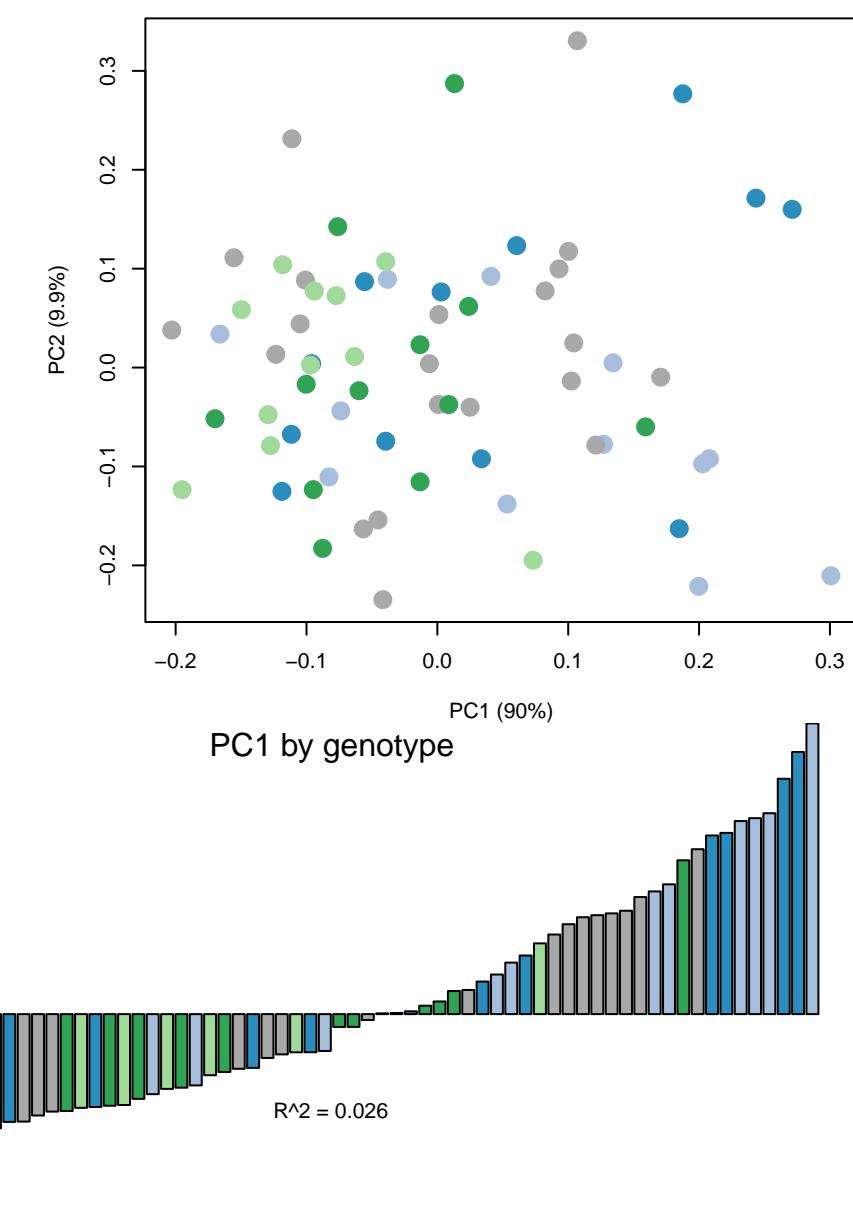
Tyrosine metabolism



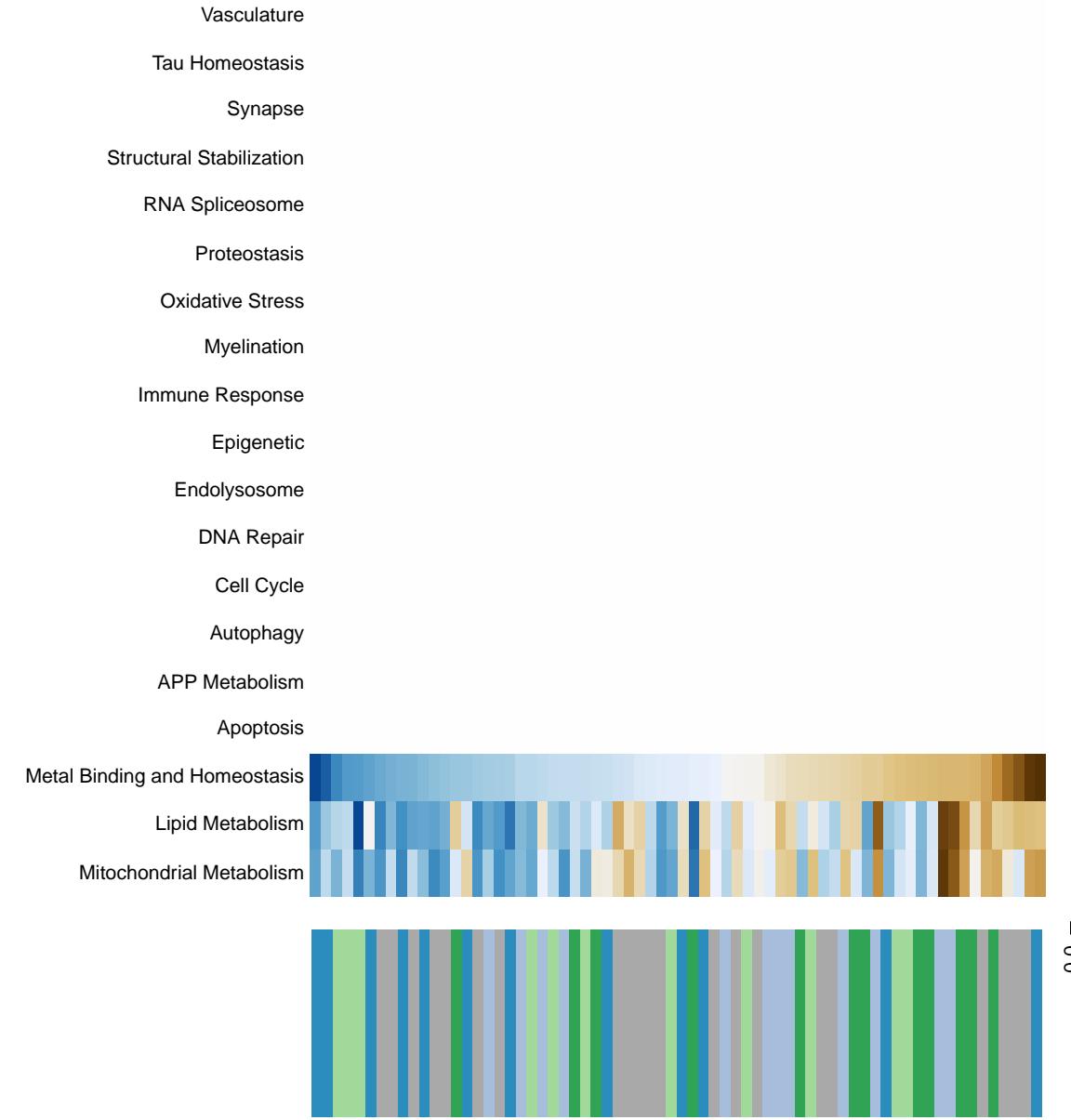
Lipid Metabolism



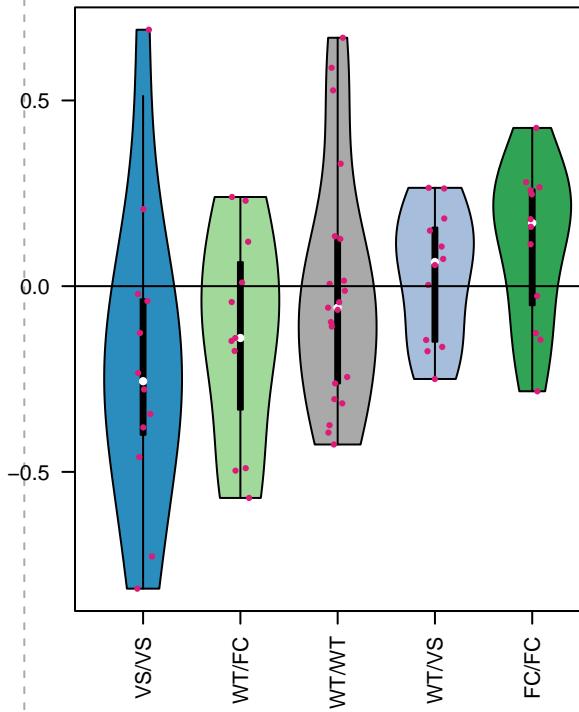
Decomposition



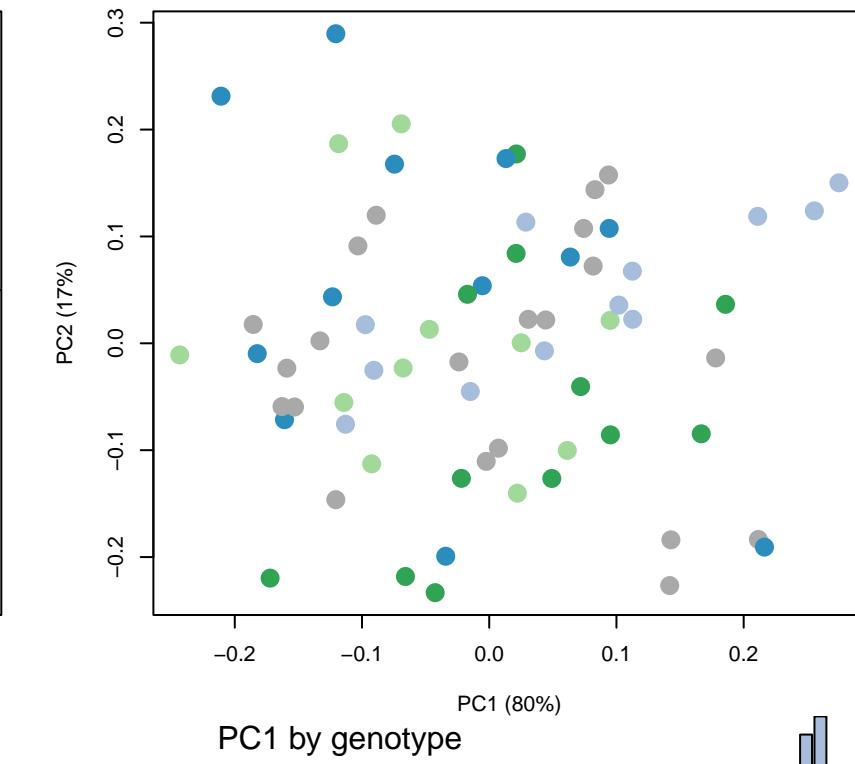
Tryptophan metabolism



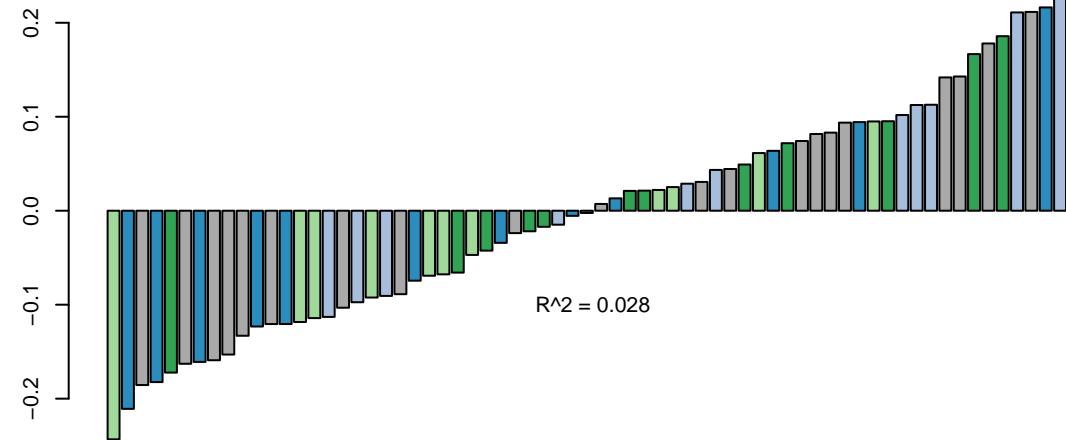
Metal Binding and Homeostasis



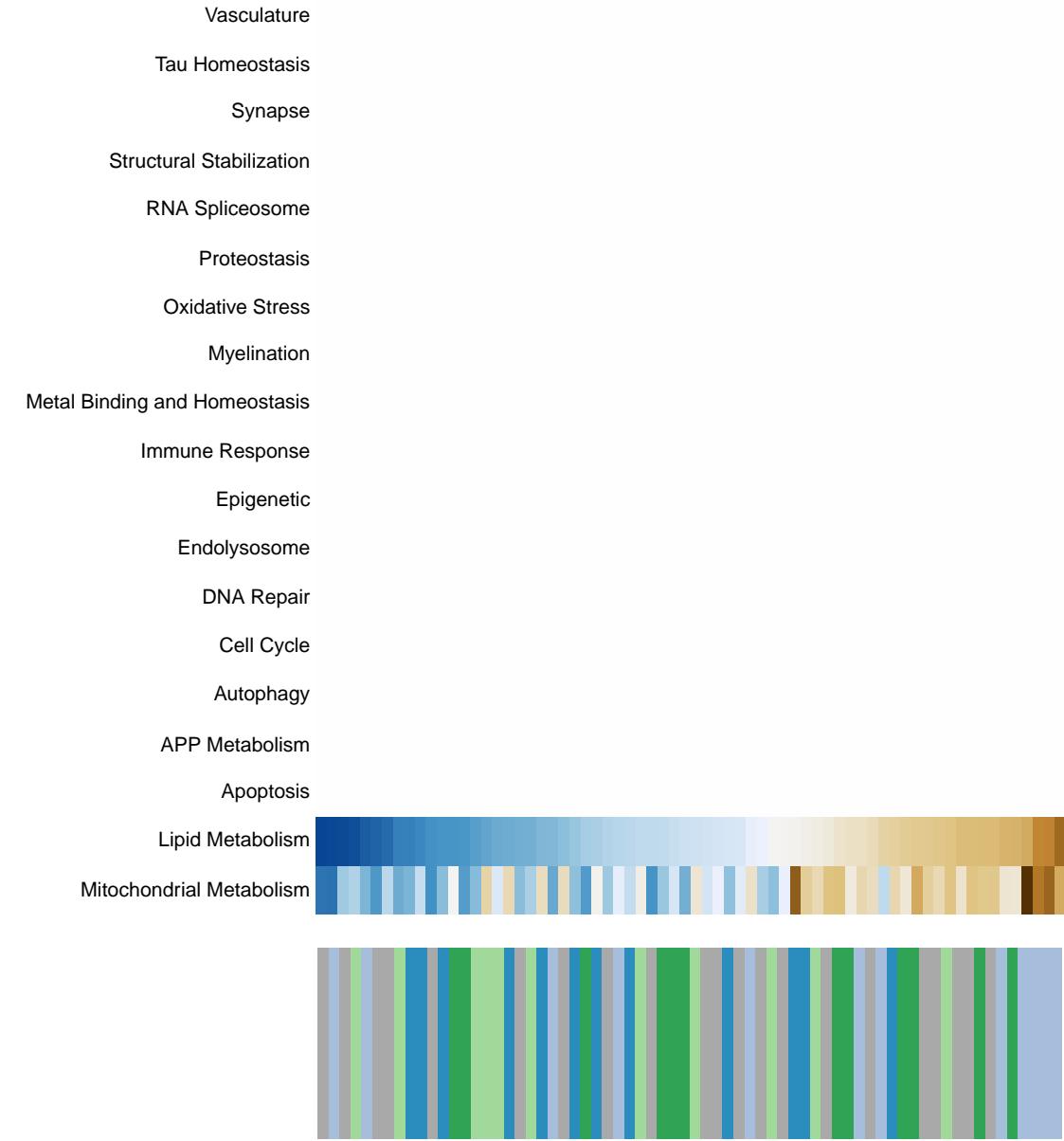
Decomposition



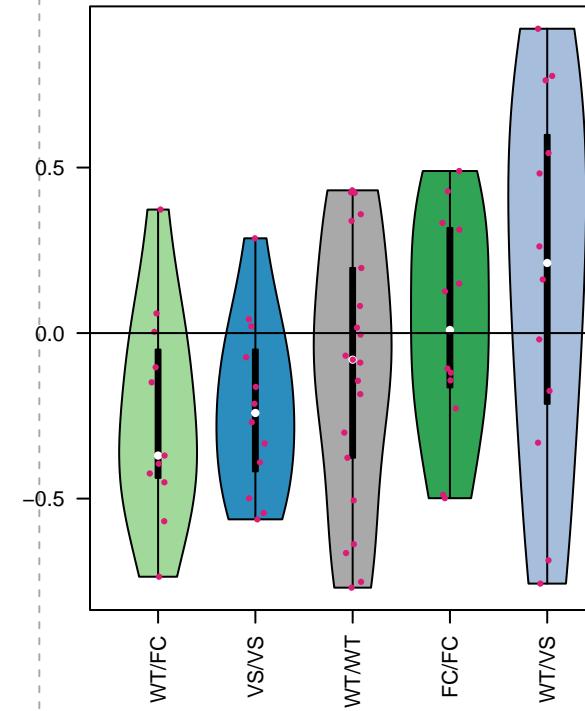
PC1 by genotype



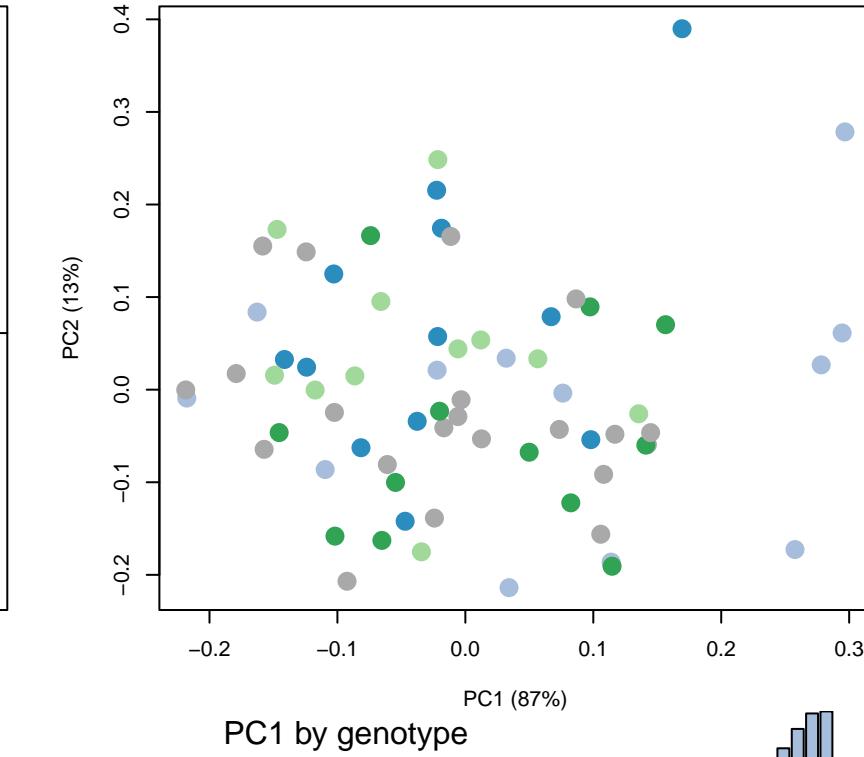
beta-Alanine metabolism



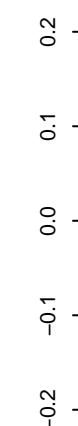
Lipid Metabolism



Decomposition

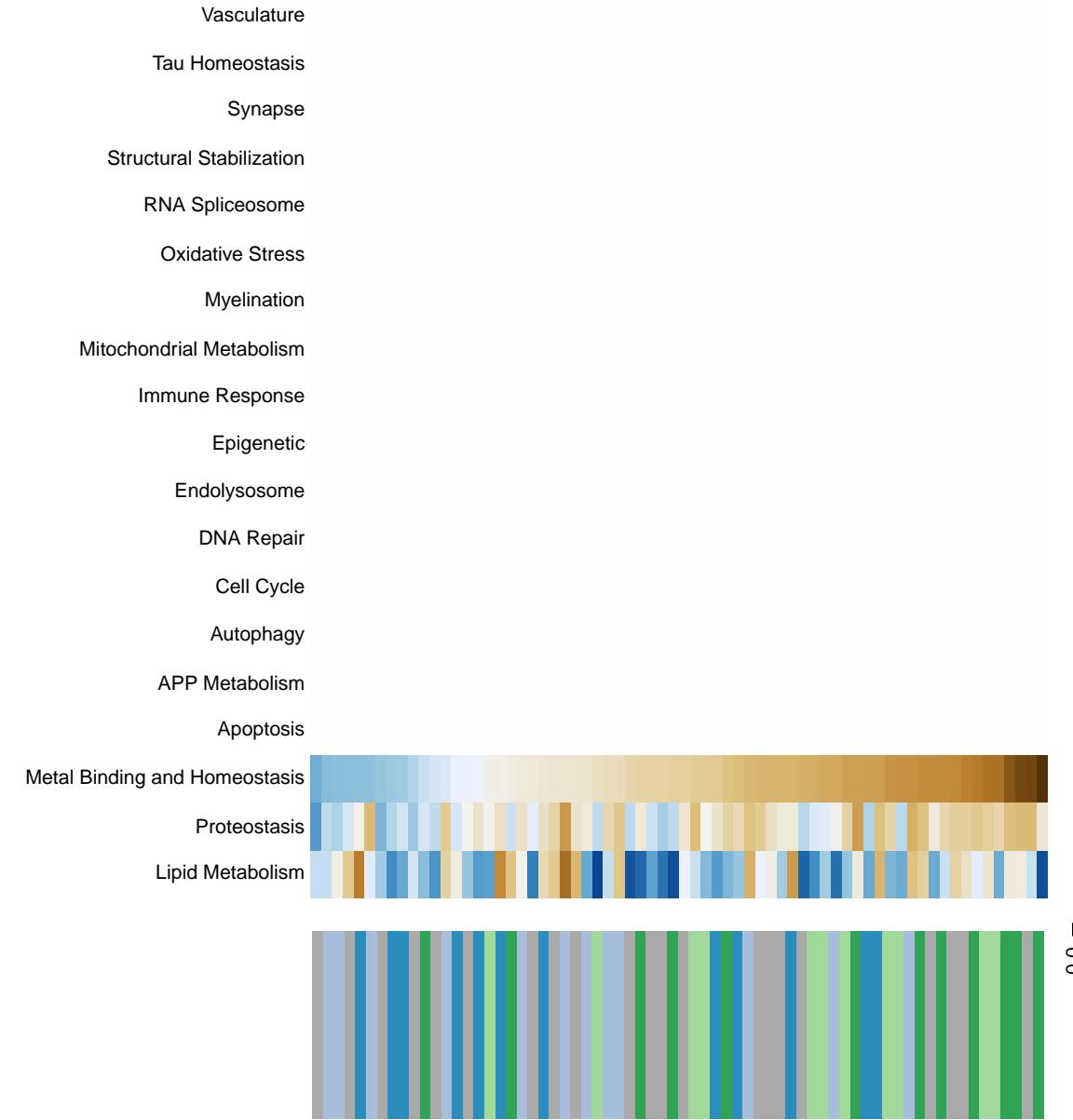


PC1 by genotype

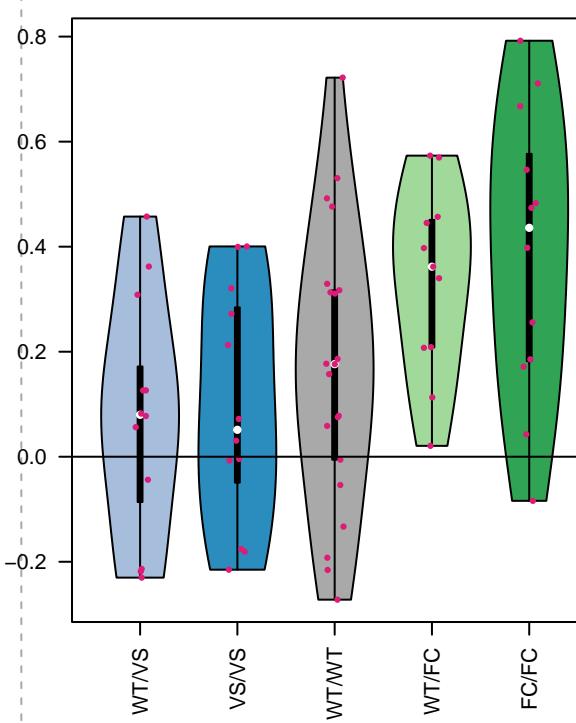


$R^2 = 0.044$

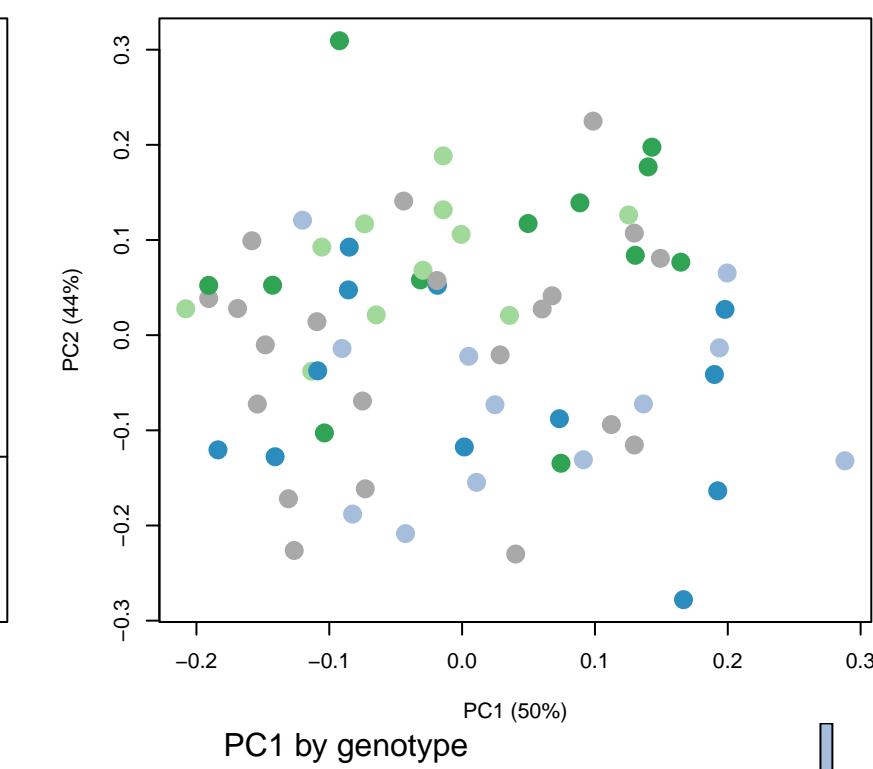
N-Glycan biosynthesis



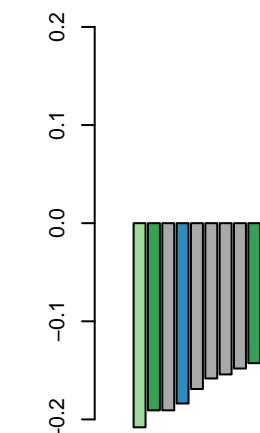
Metal Binding and Homeostasis



Decomposition

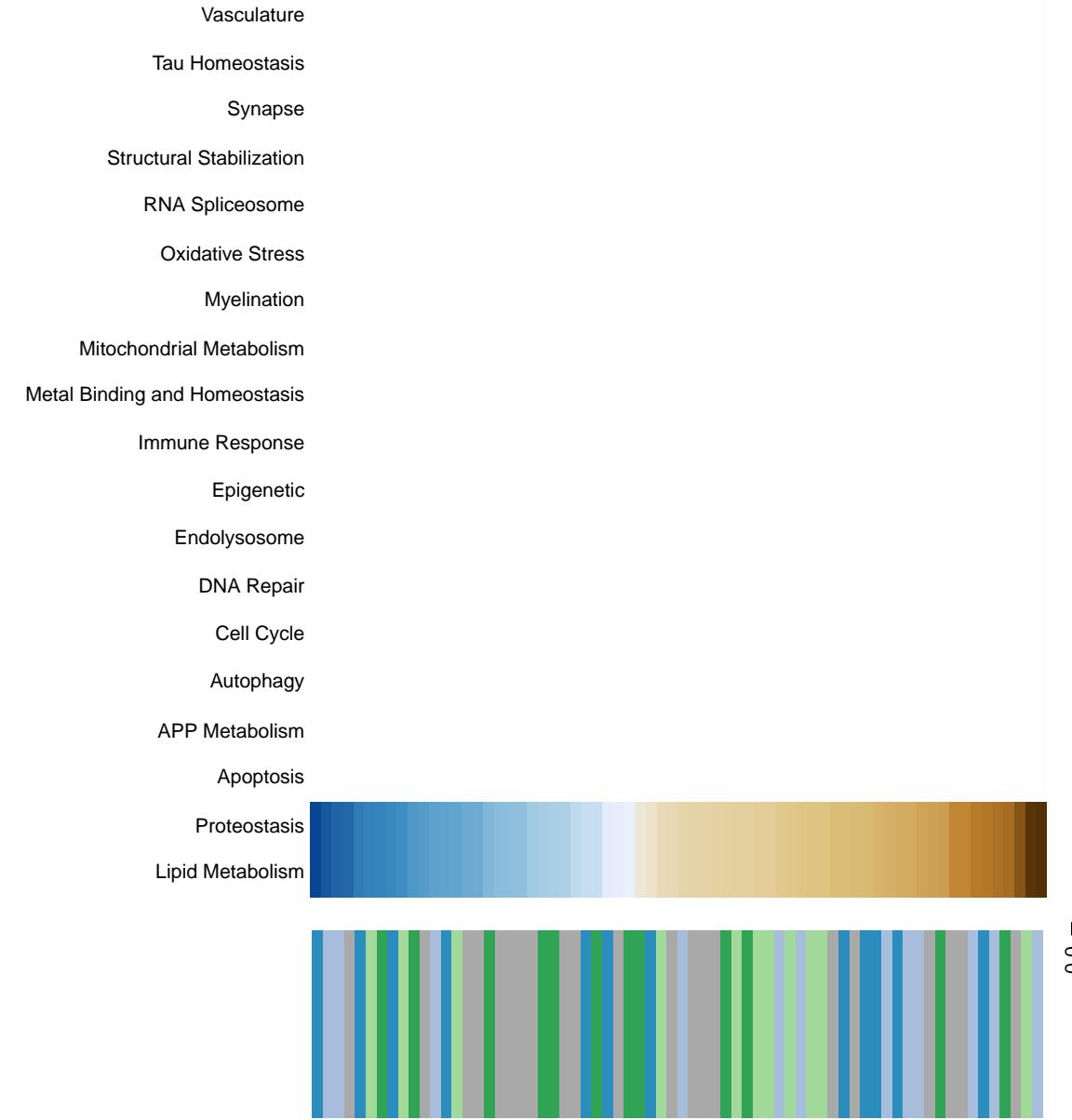


PC1 by genotype

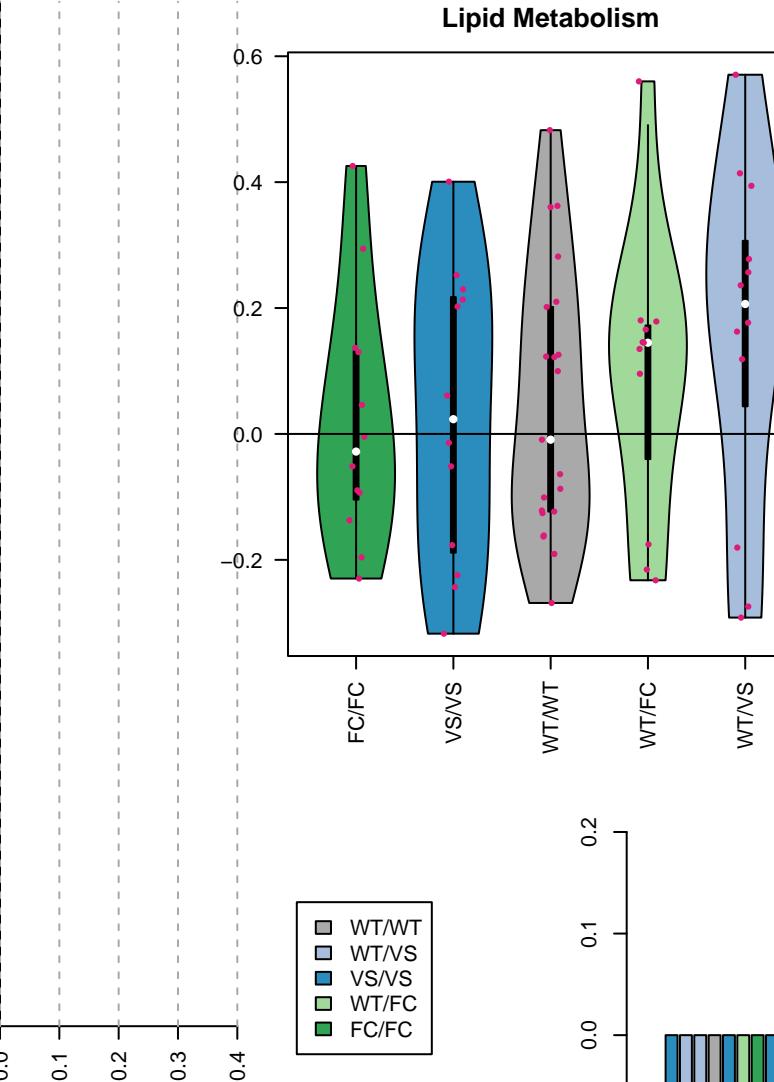


$R^2 = 0.024$

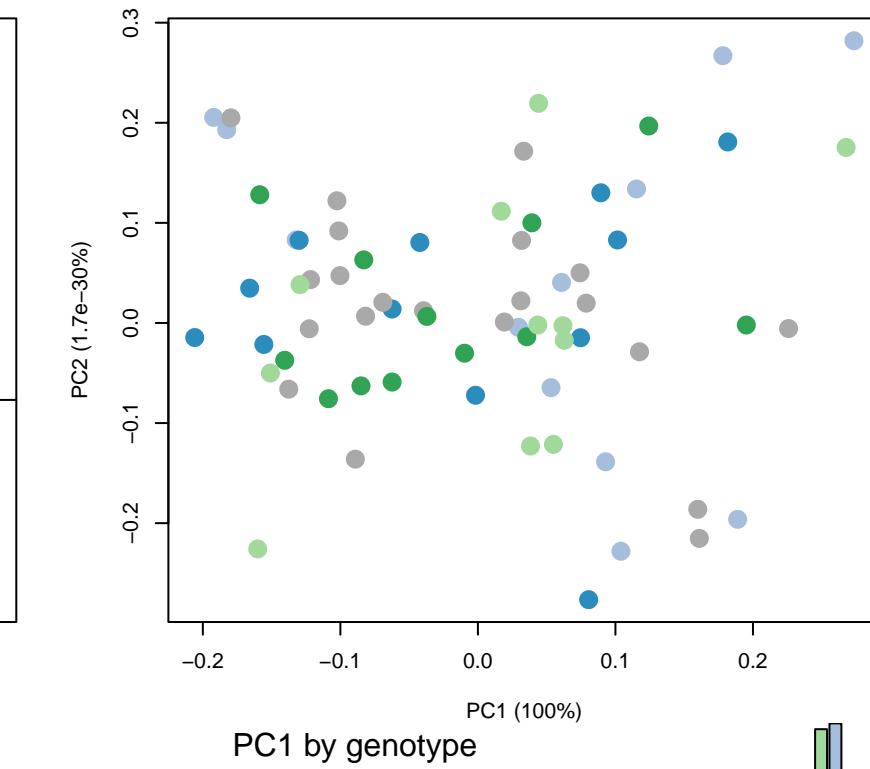
Glycosylphosphatidylinositol (GPI)–anchor biosynthesis



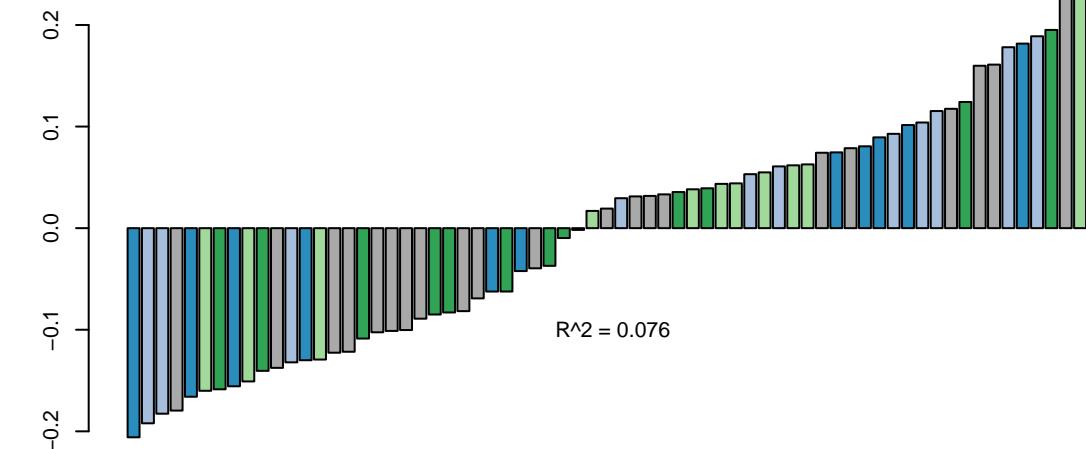
Lipid Metabolism



Decomposition



PC1 by genotype



Glycosphingolipid biosynthesis – lacto and neolacto series

Vasculature

Tau Homeostasis

Synapse

Structural Stabilization

RNA Spliceosome

Oxidative Stress

Myelination

Mitochondrial Metabolism

Metal Binding and Homeostasis

Immune Response

Epigenetic

Endolysosome

DNA Repair

Cell Cycle

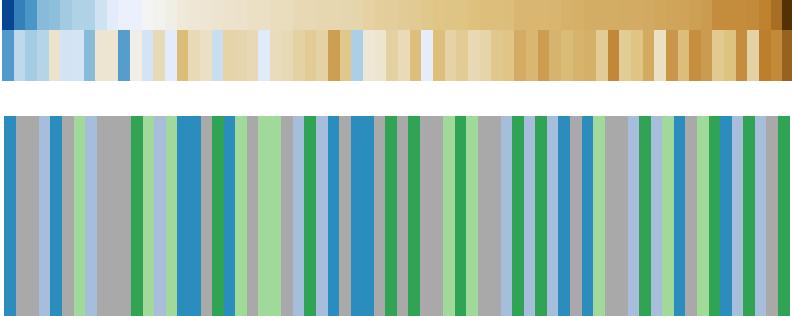
Autophagy

APP Metabolism

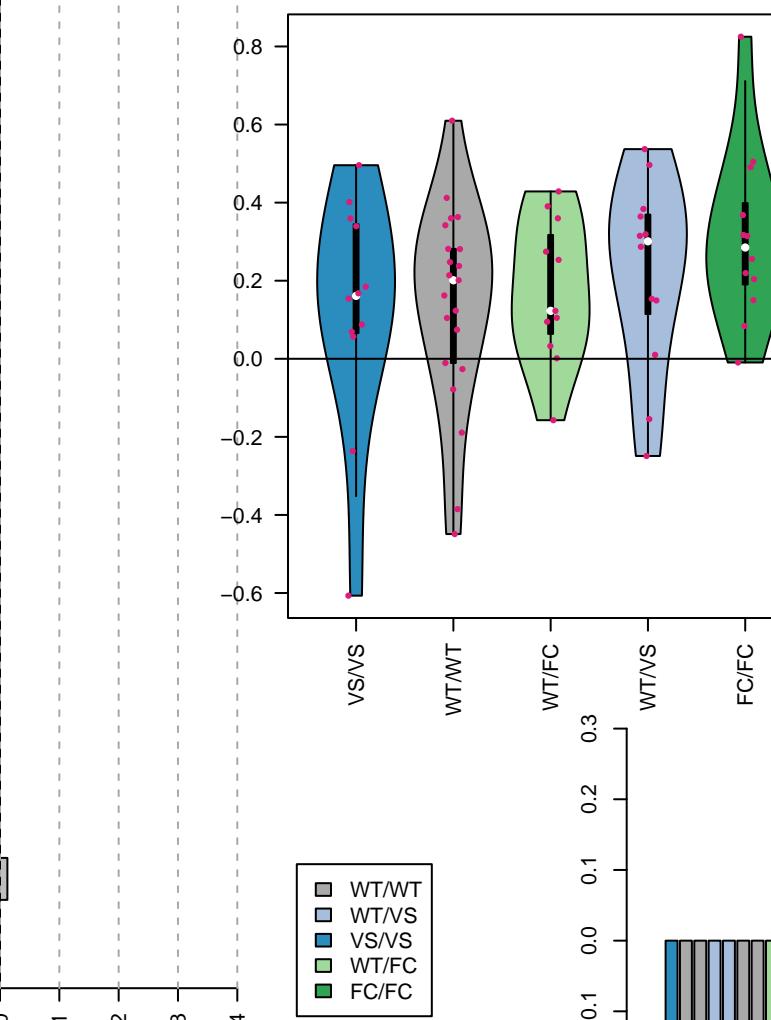
Apoptosis

Lipid Metabolism

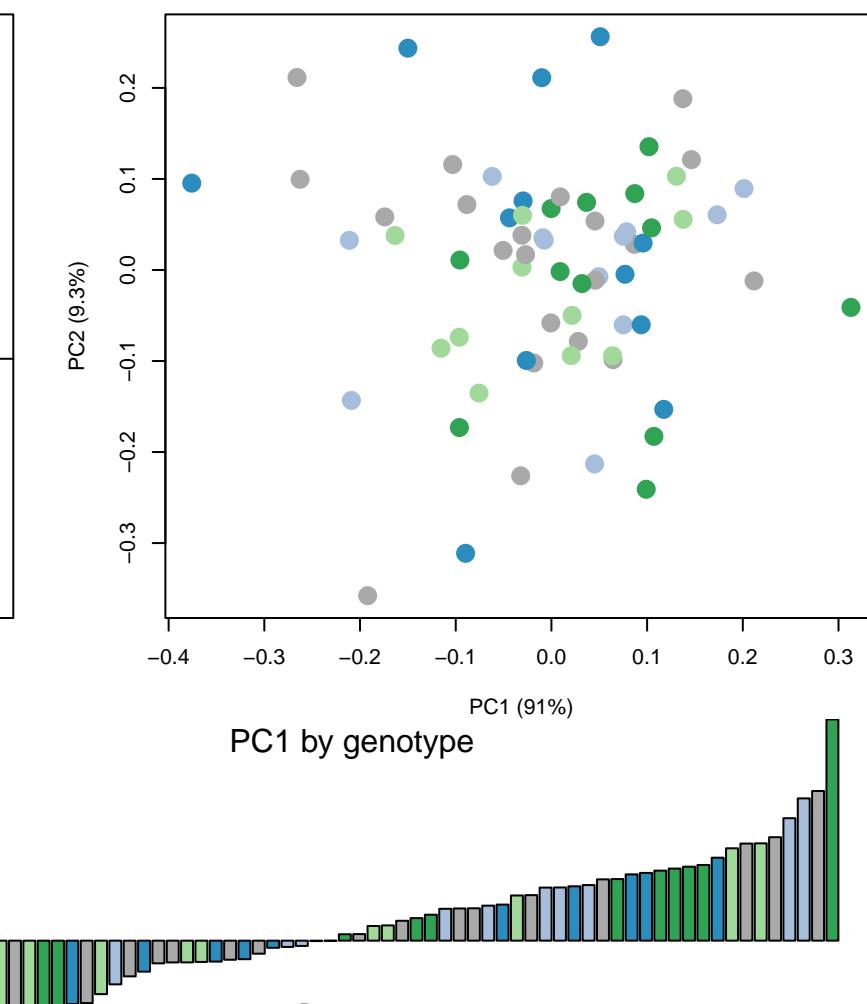
Proteostasis



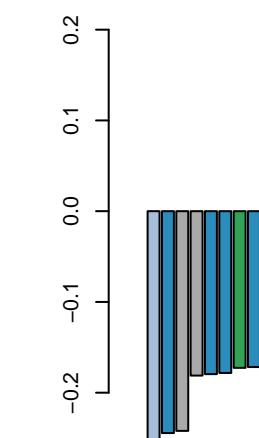
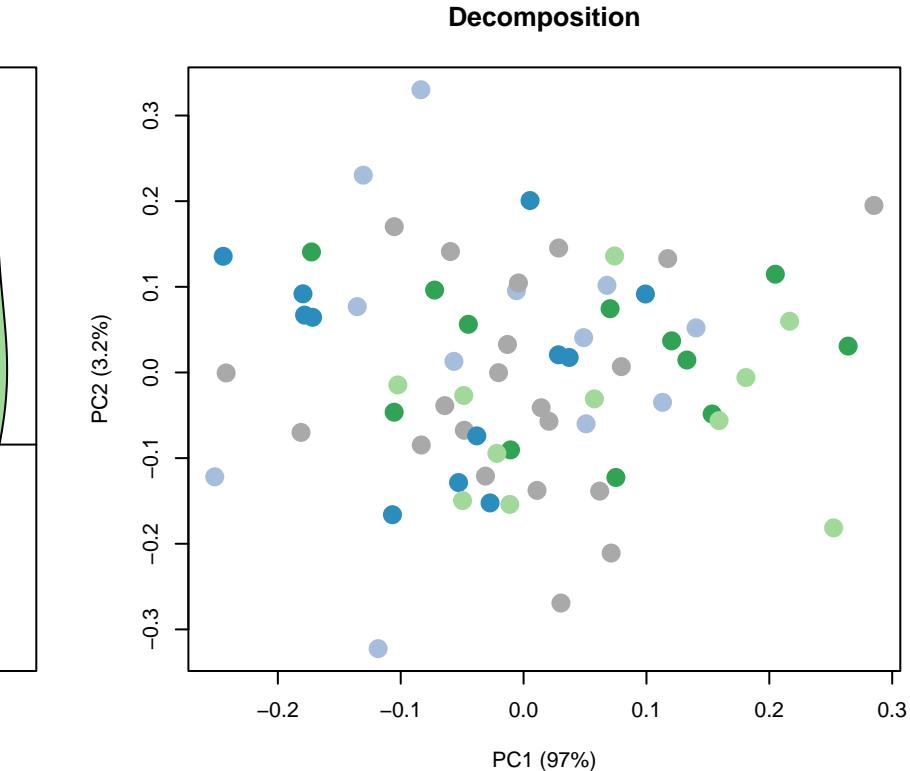
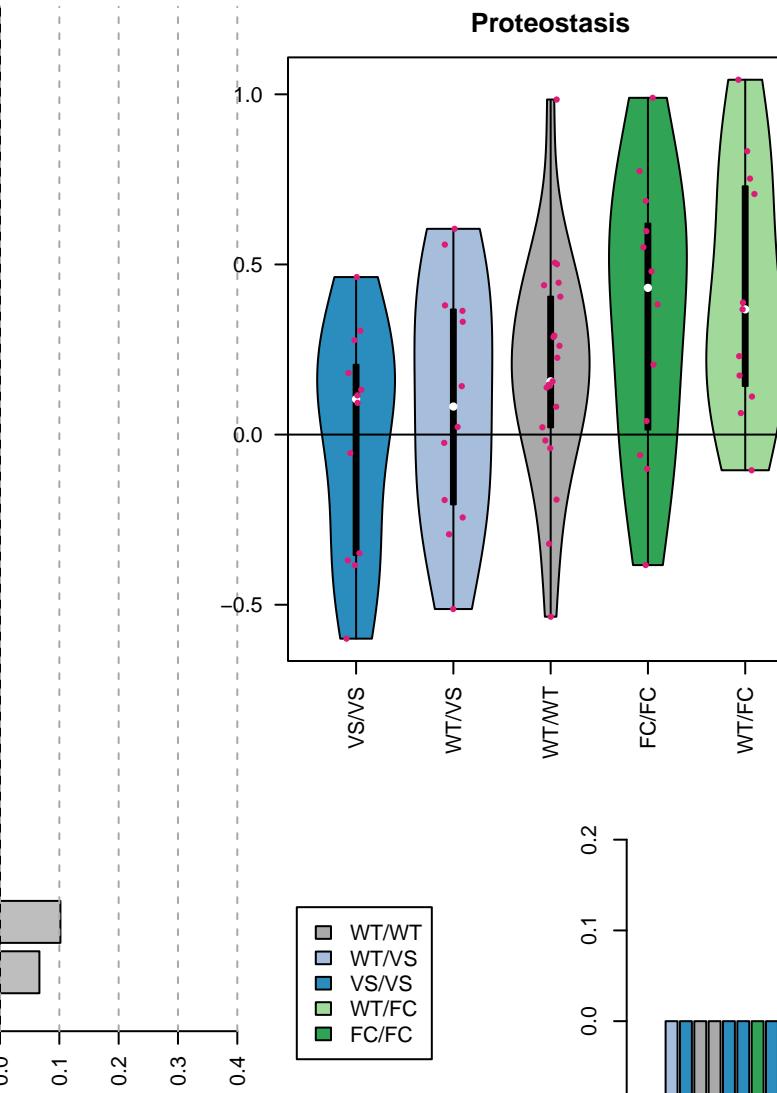
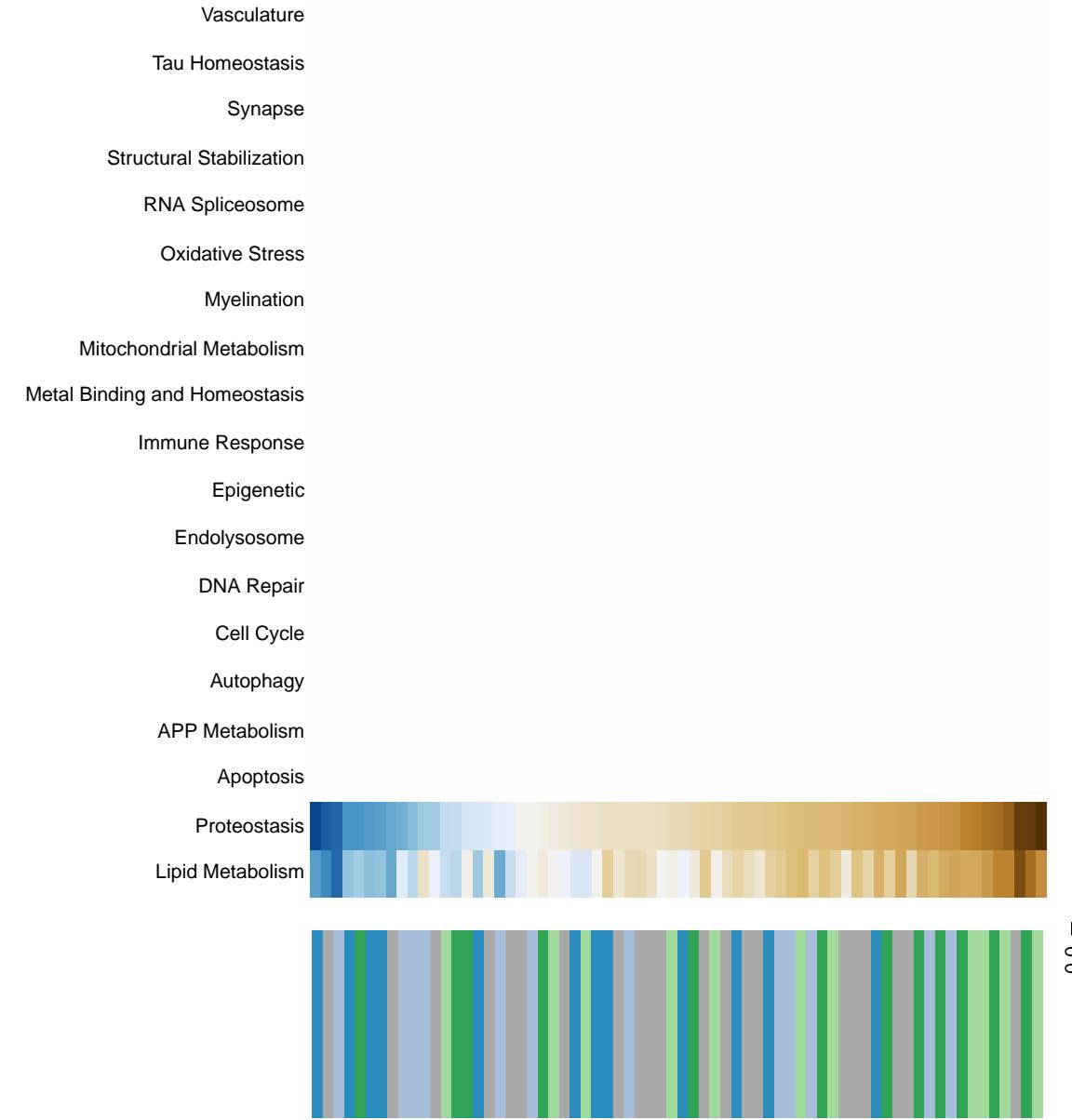
Lipid Metabolism



Decomposition

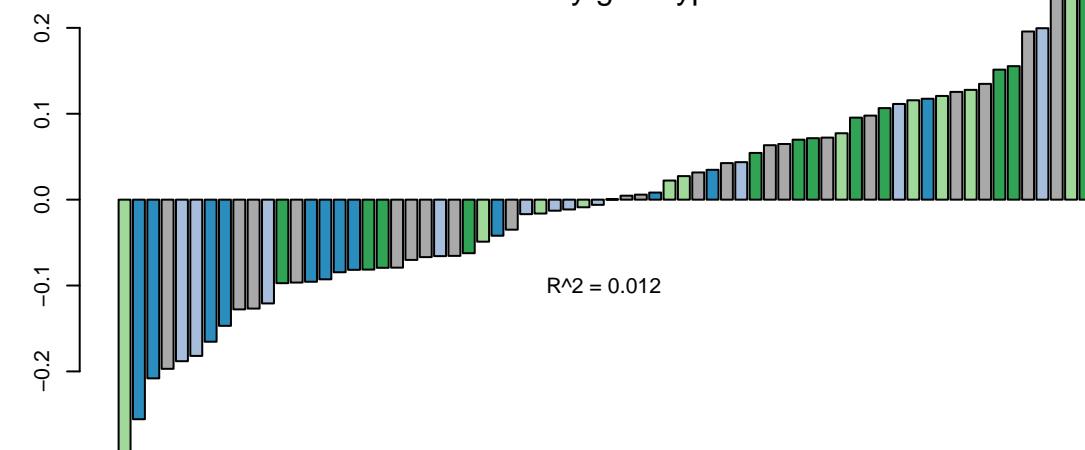
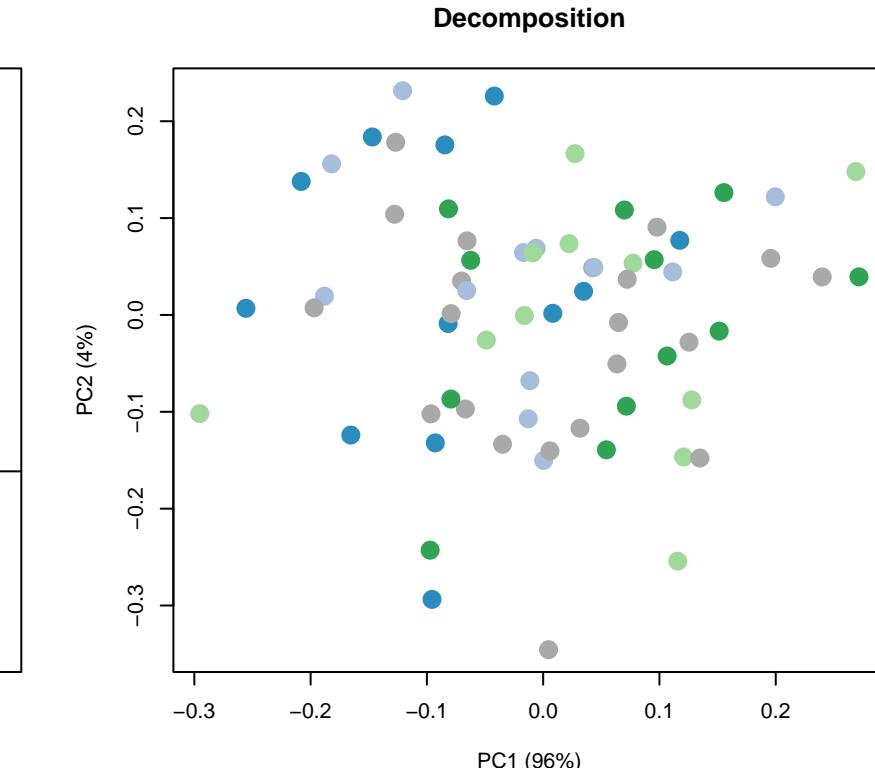
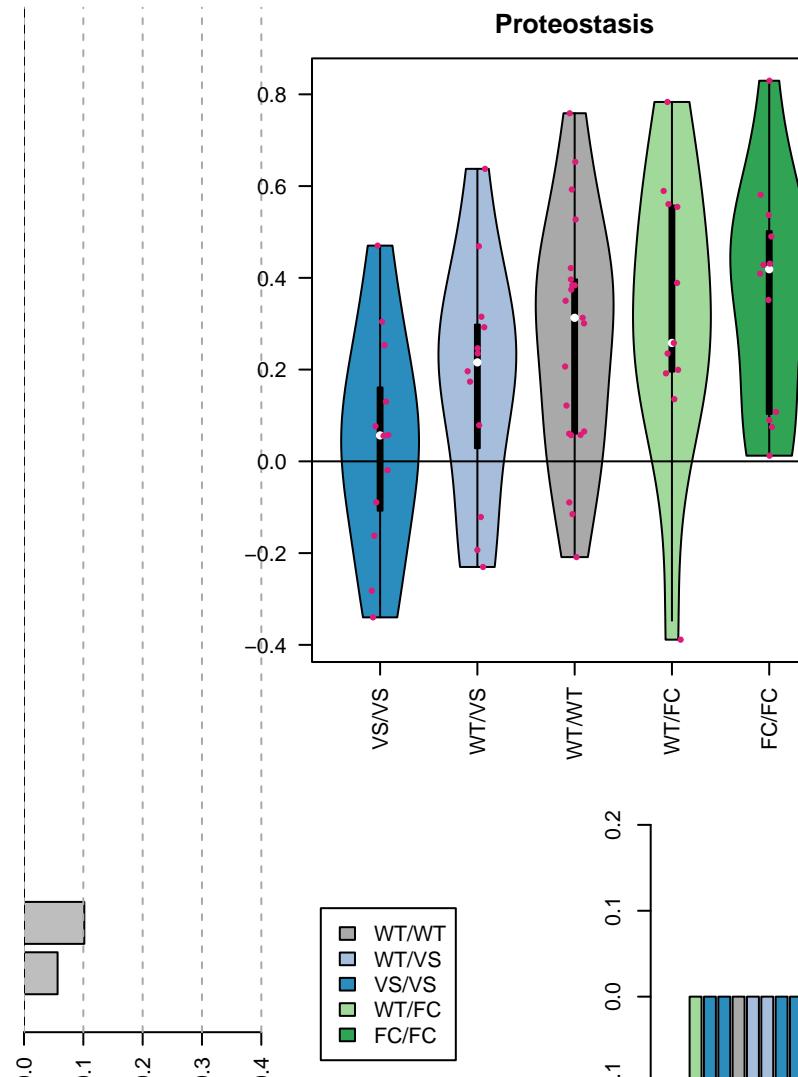
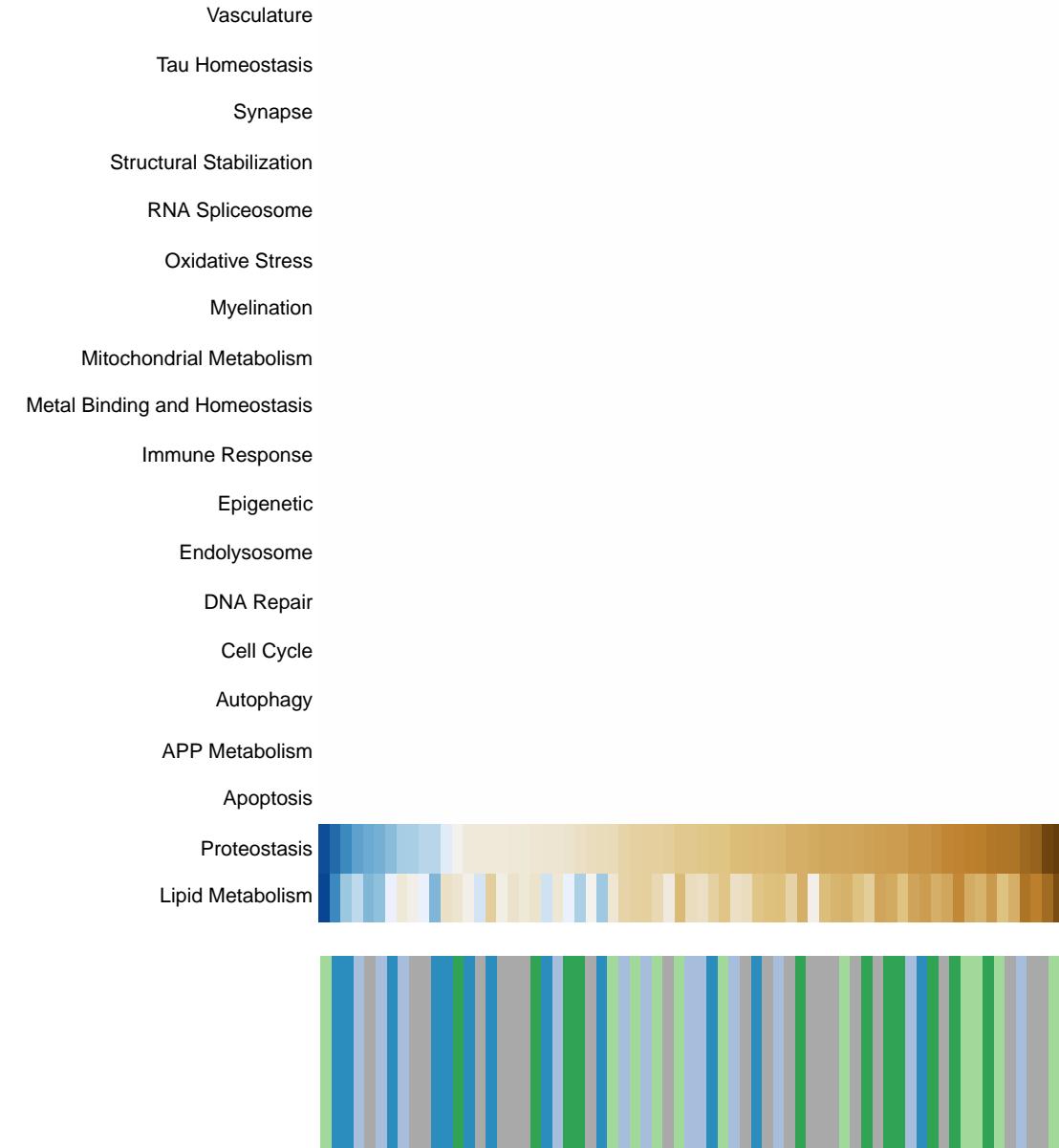


Glycosphingolipid biosynthesis – globo and isoglobo series

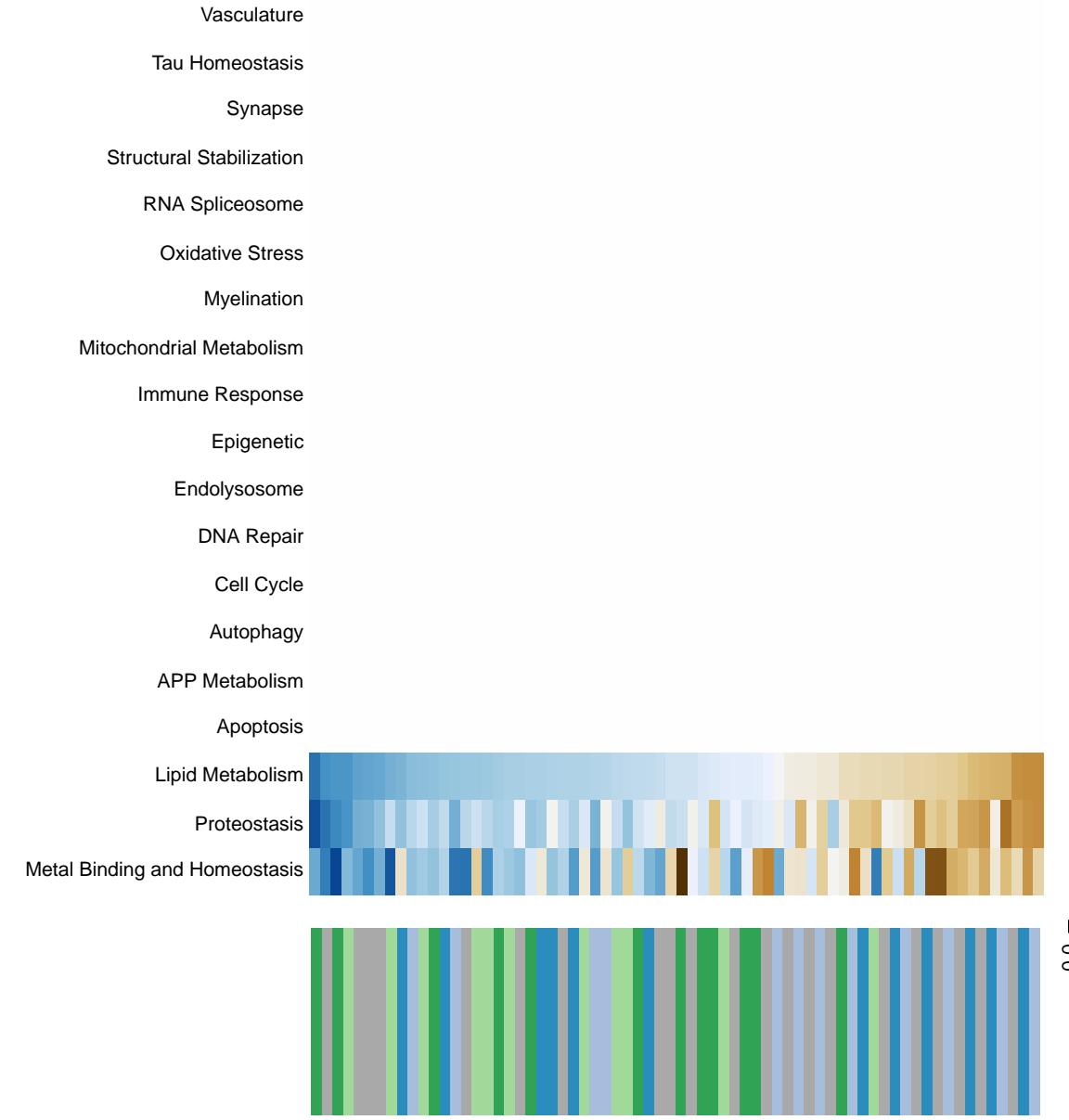


$R^2 = 0.23$

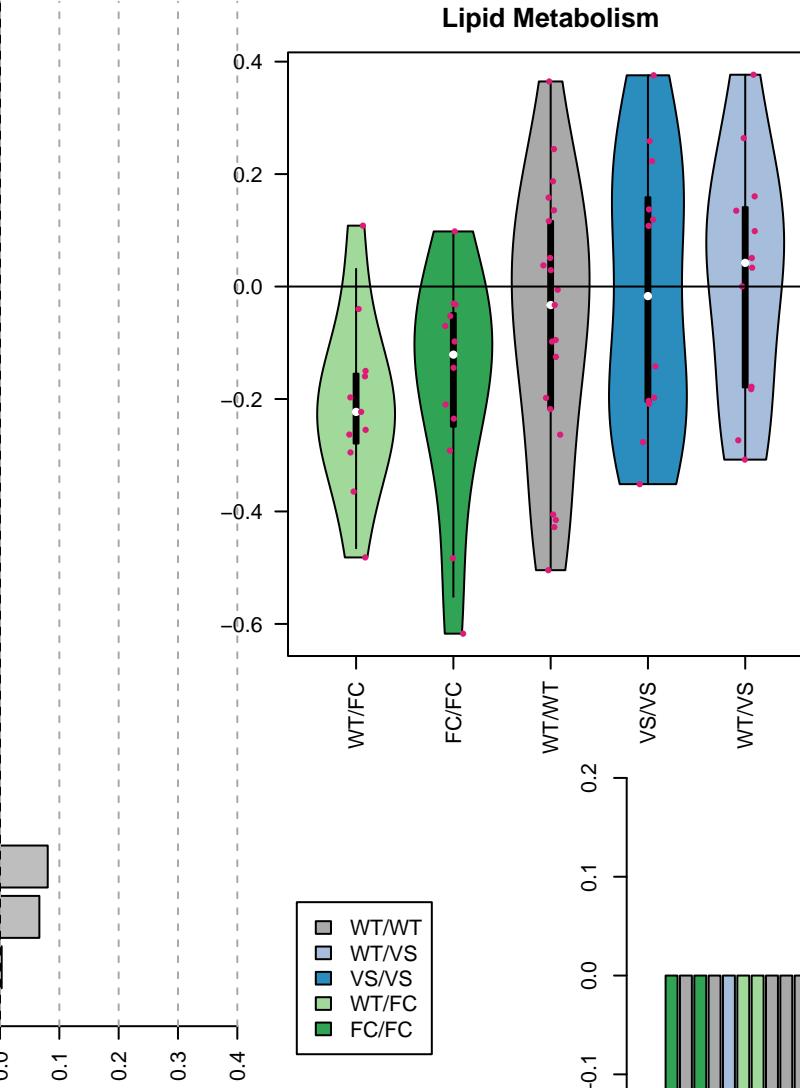
Glycosphingolipid biosynthesis – ganglio series



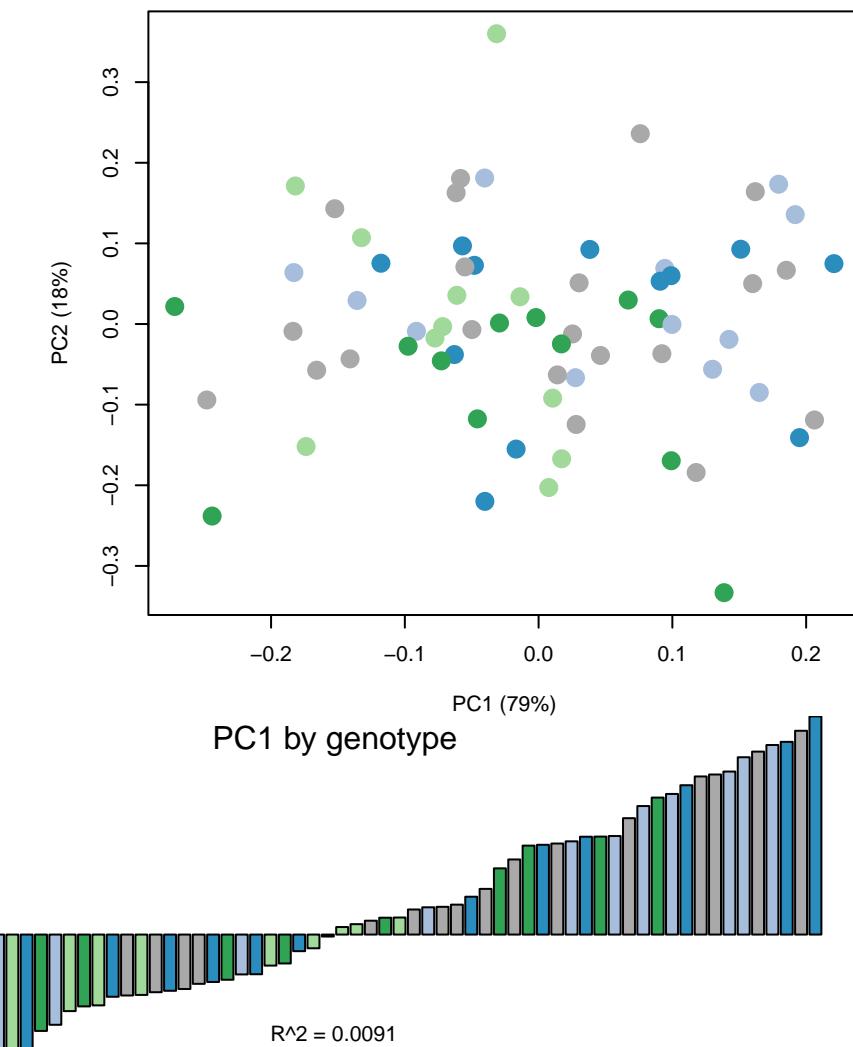
Retinol metabolism



Lipid Metabolism



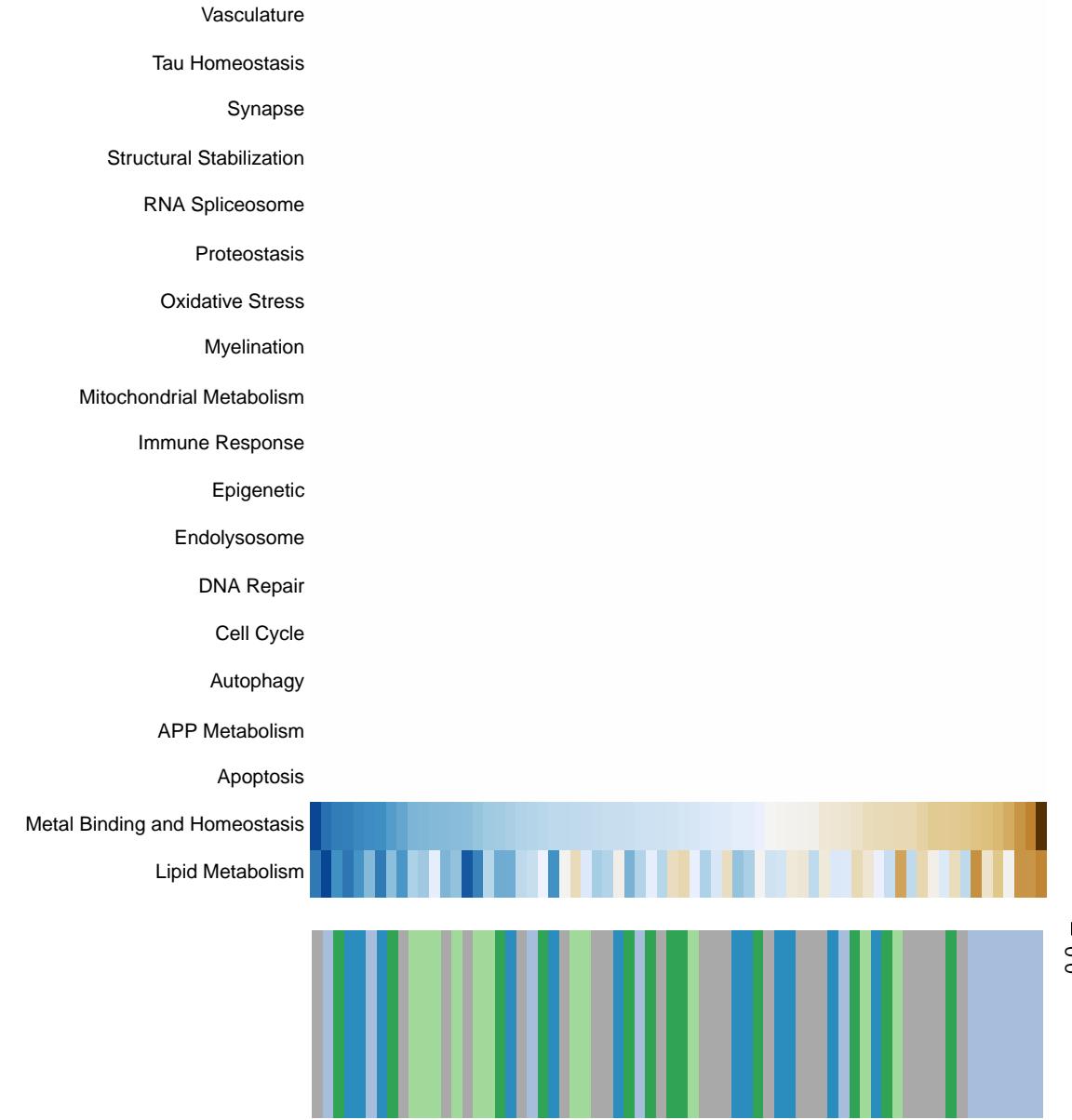
Decomposition



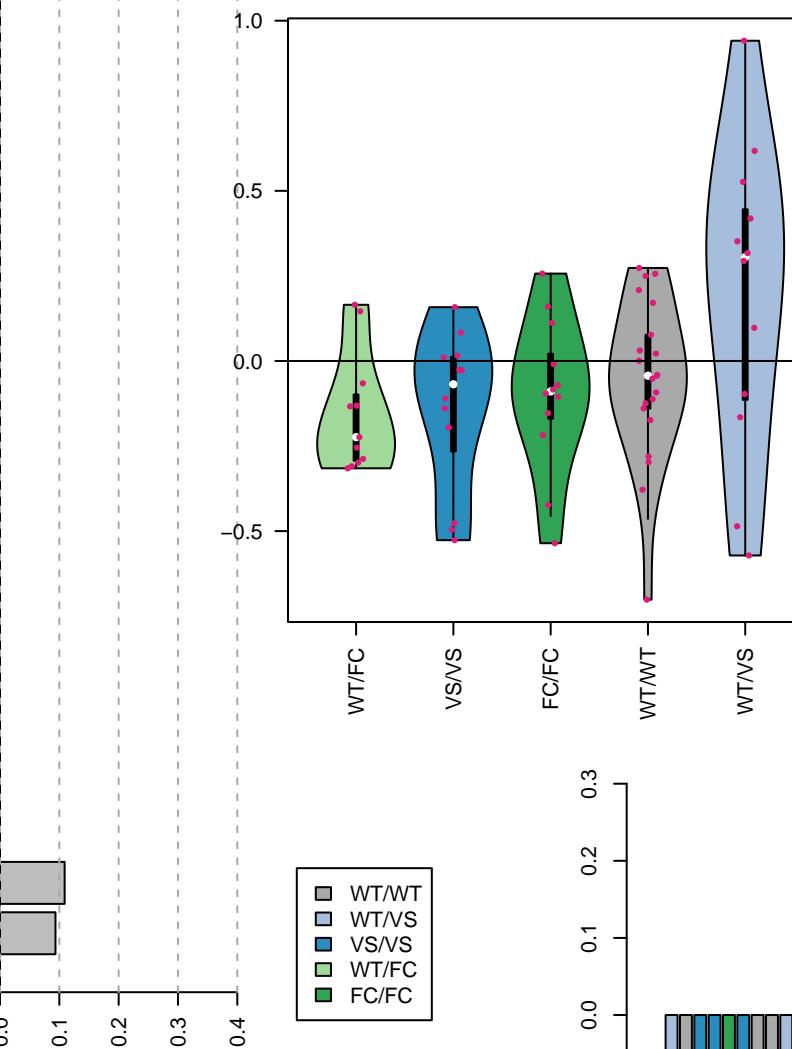
PC1 by genotype

$R^2 = 0.0091$

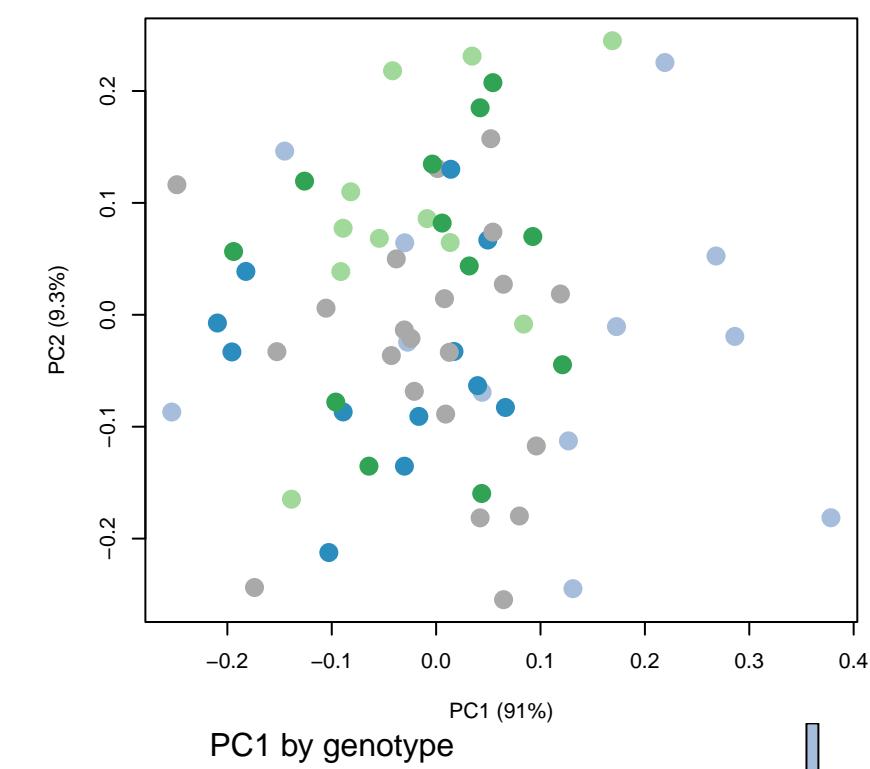
Terpenoid backbone biosynthesis



Metal Binding and Homeostasis



Decomposition

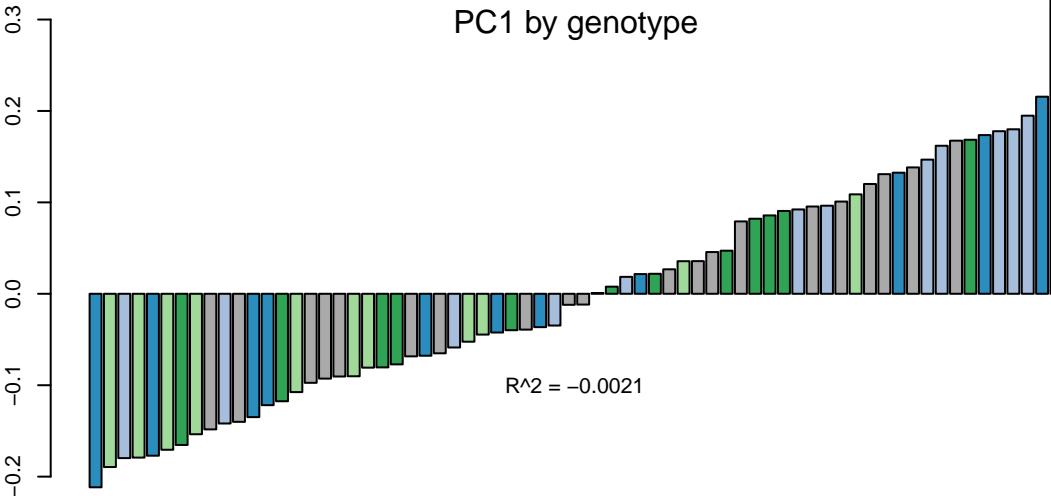
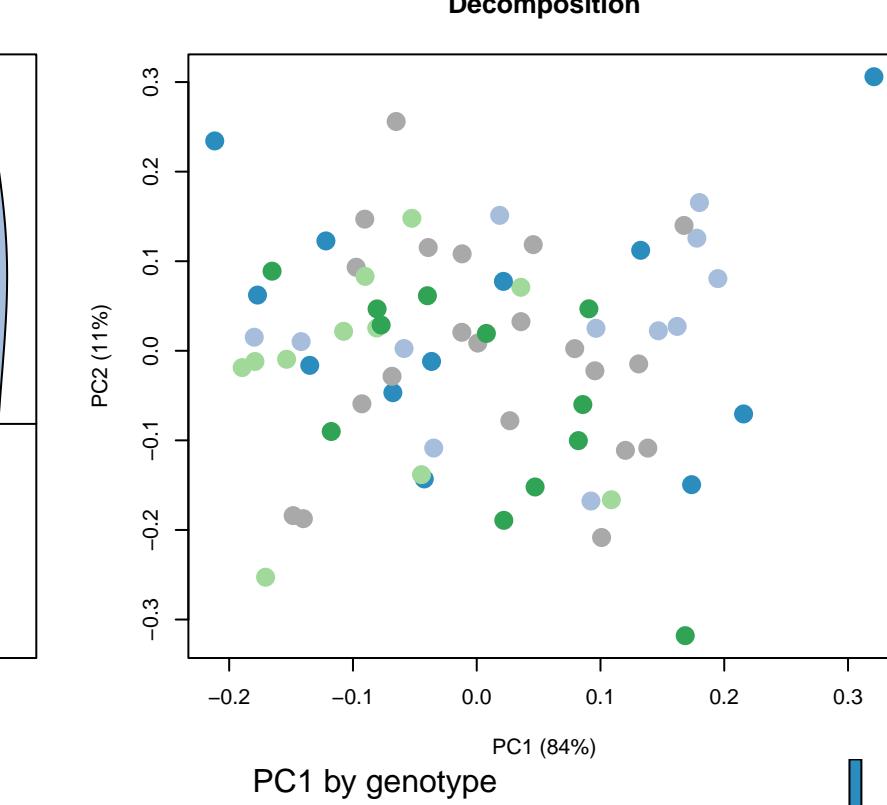
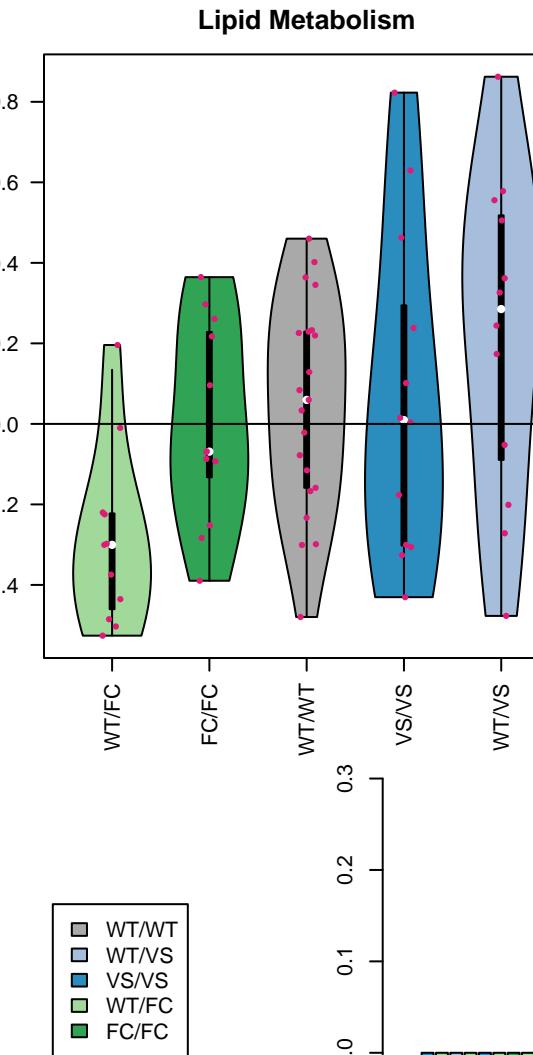
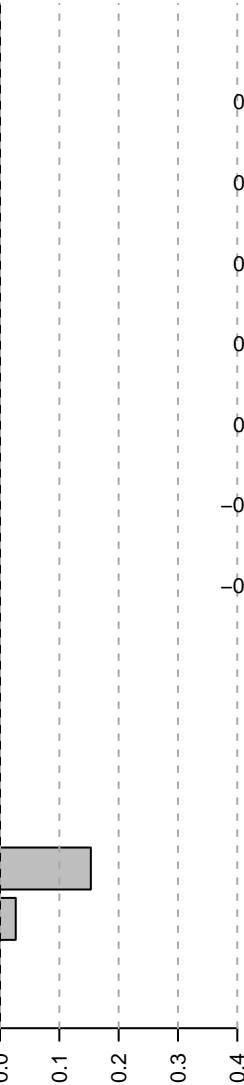
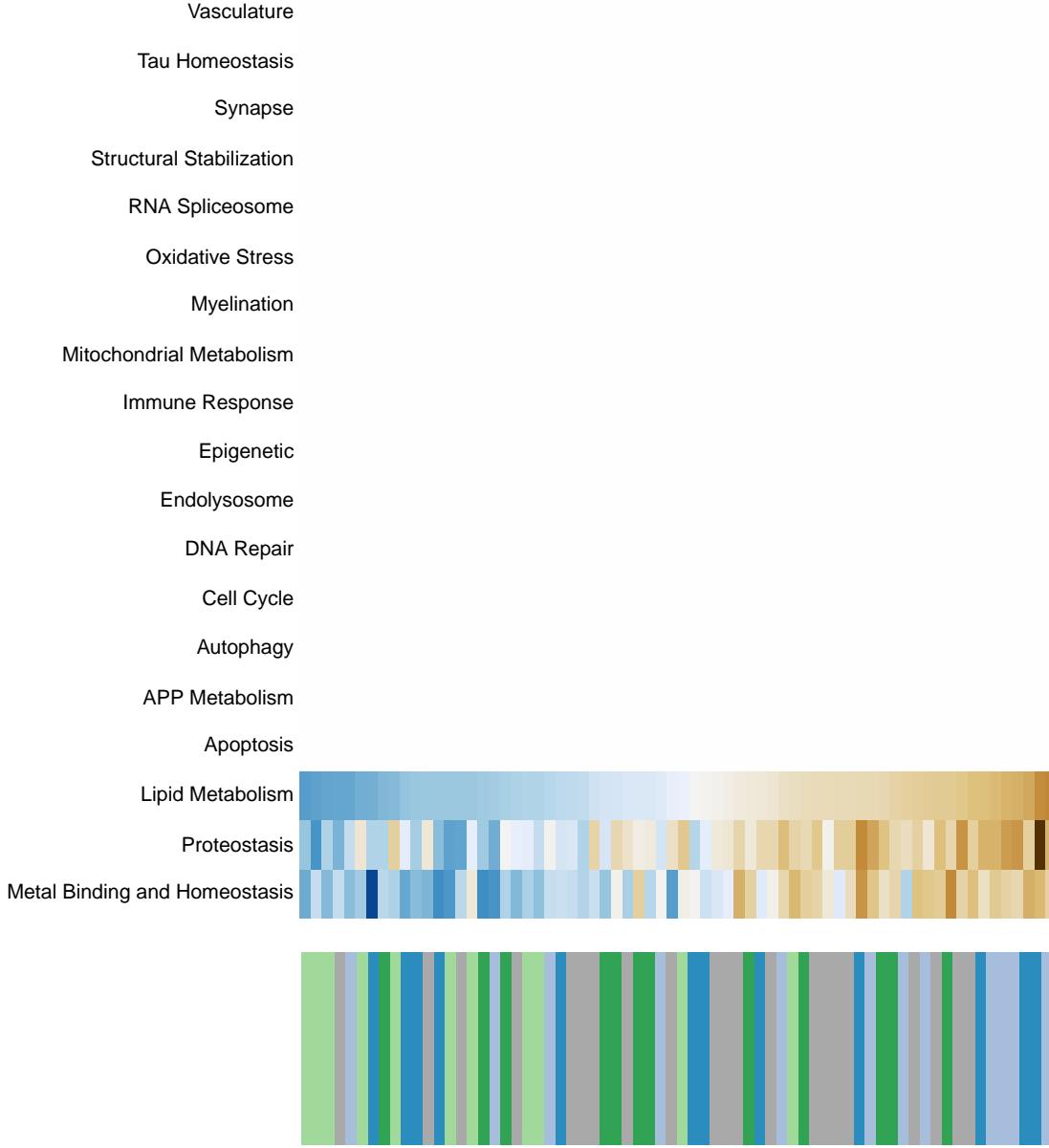


PC1 by genotype

$R^2 = 0.13$

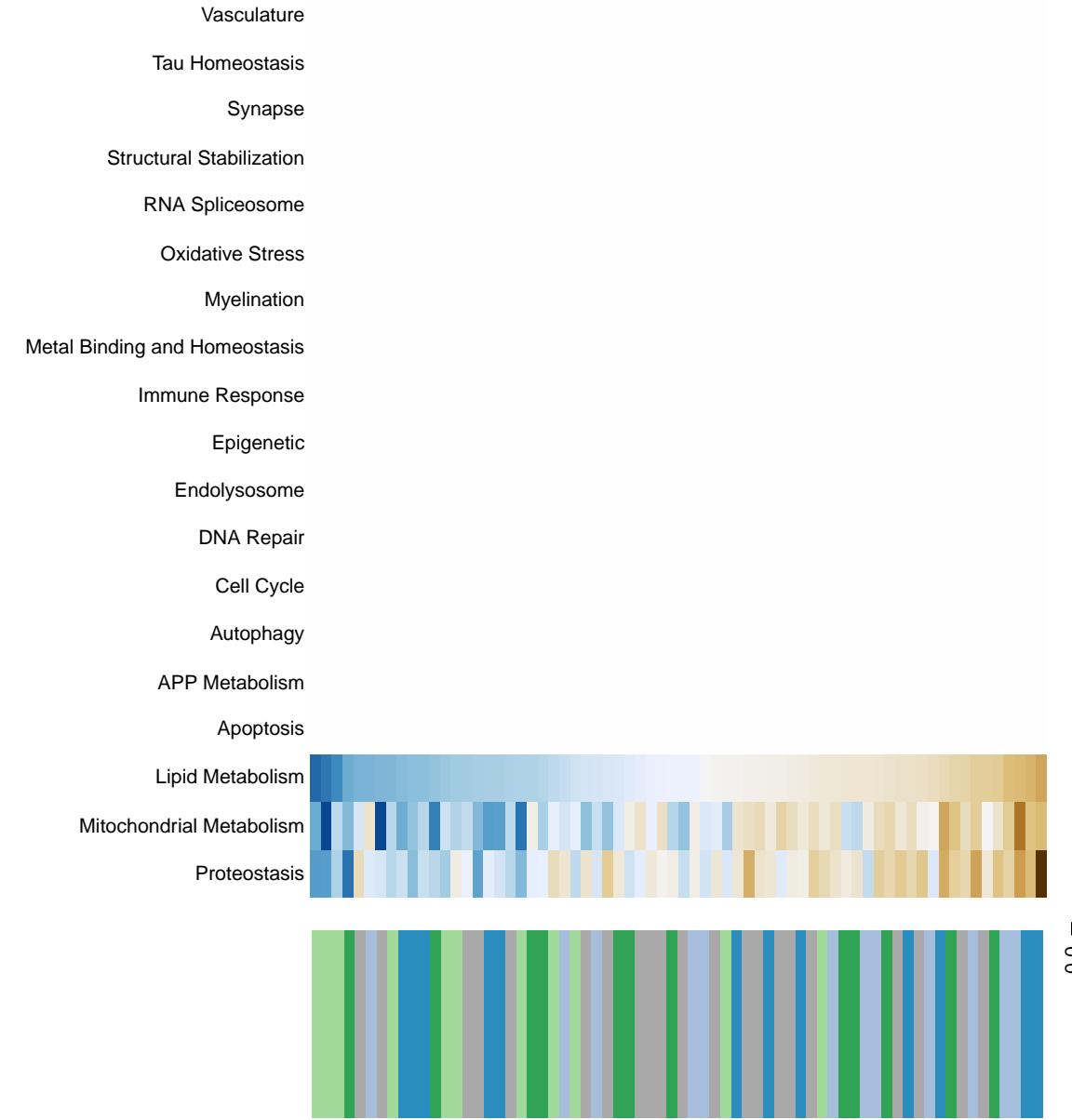
$R^2 = 0.13$

Metabolism of xenobiotics by cytochrome P450

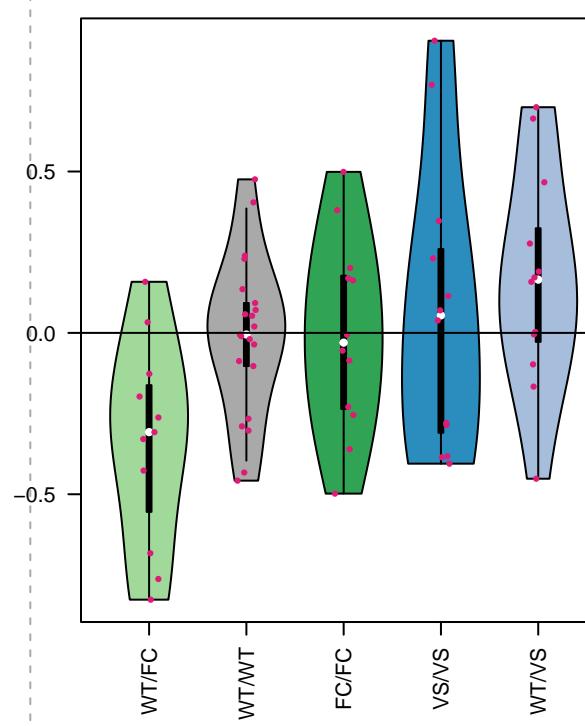


Decomposition

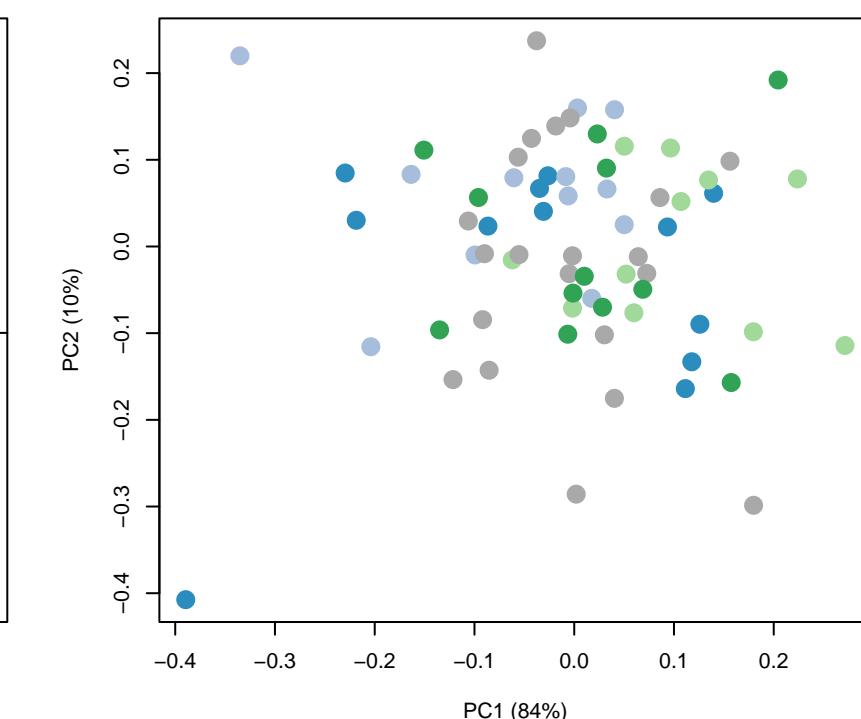
Drug metabolism – cytochrome P450



Lipid Metabolism



Decomposition

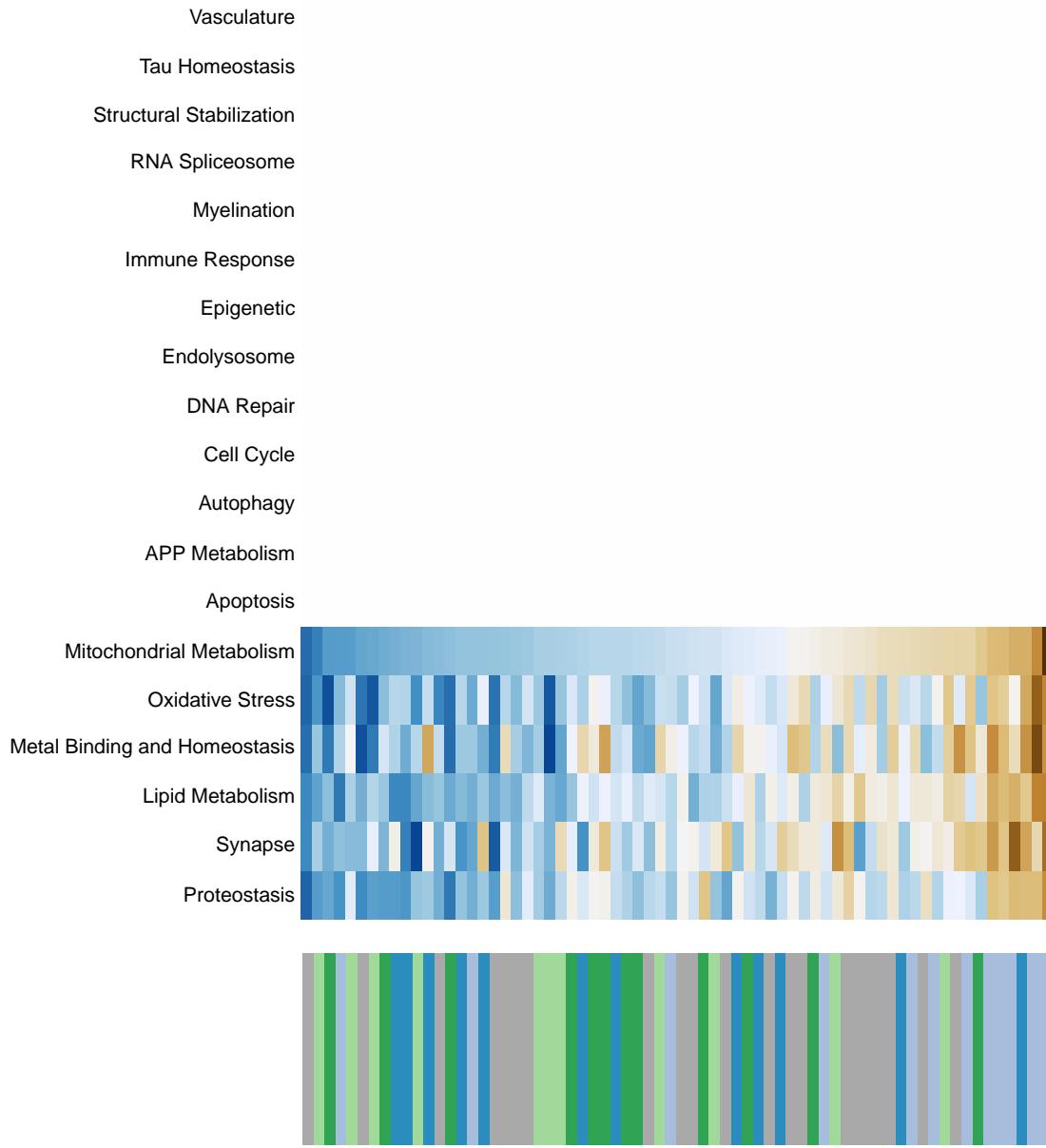


PC1 by genotype

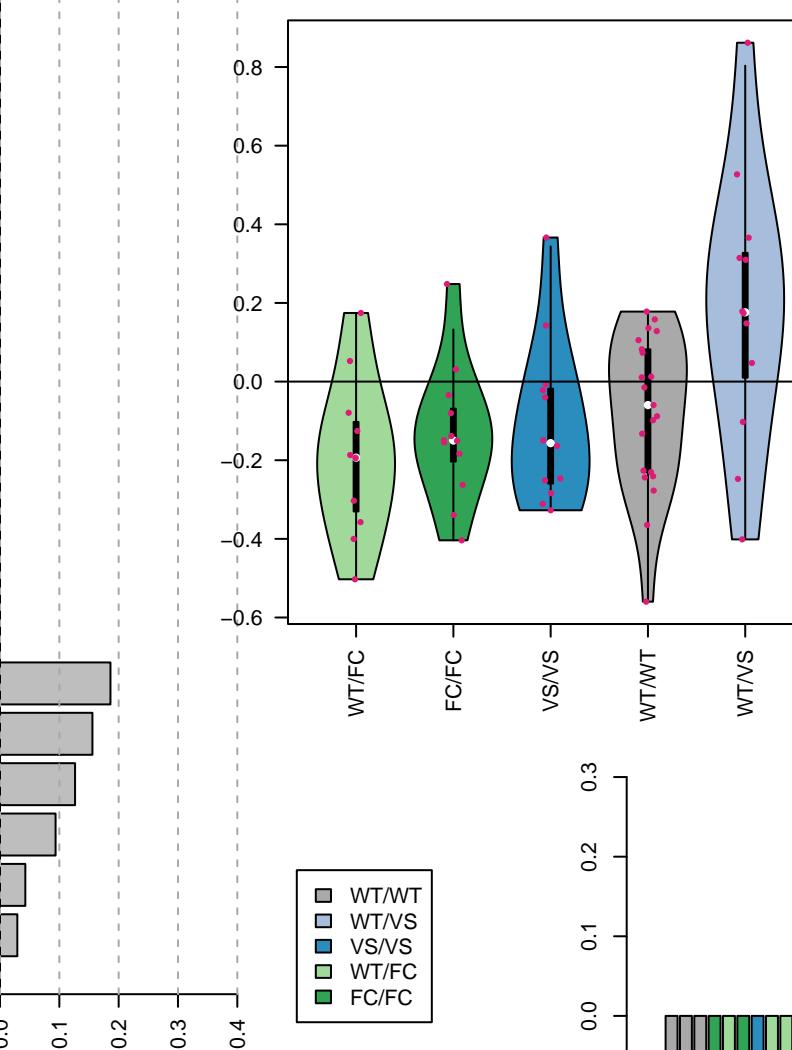
$R^2 = 0.00068$



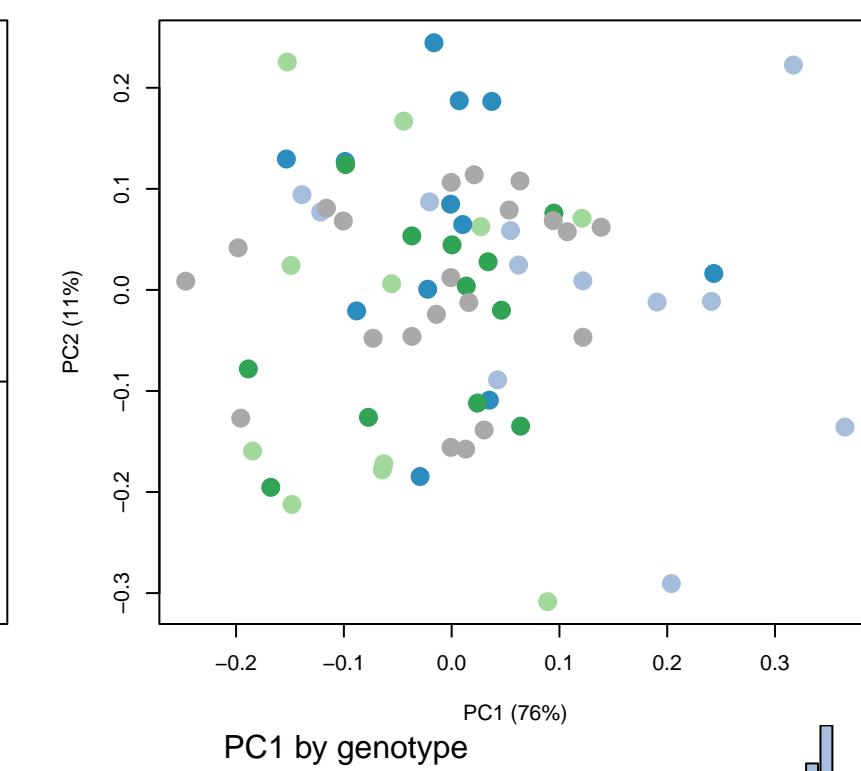
Peroxisome



Mitochondrial Metabolism



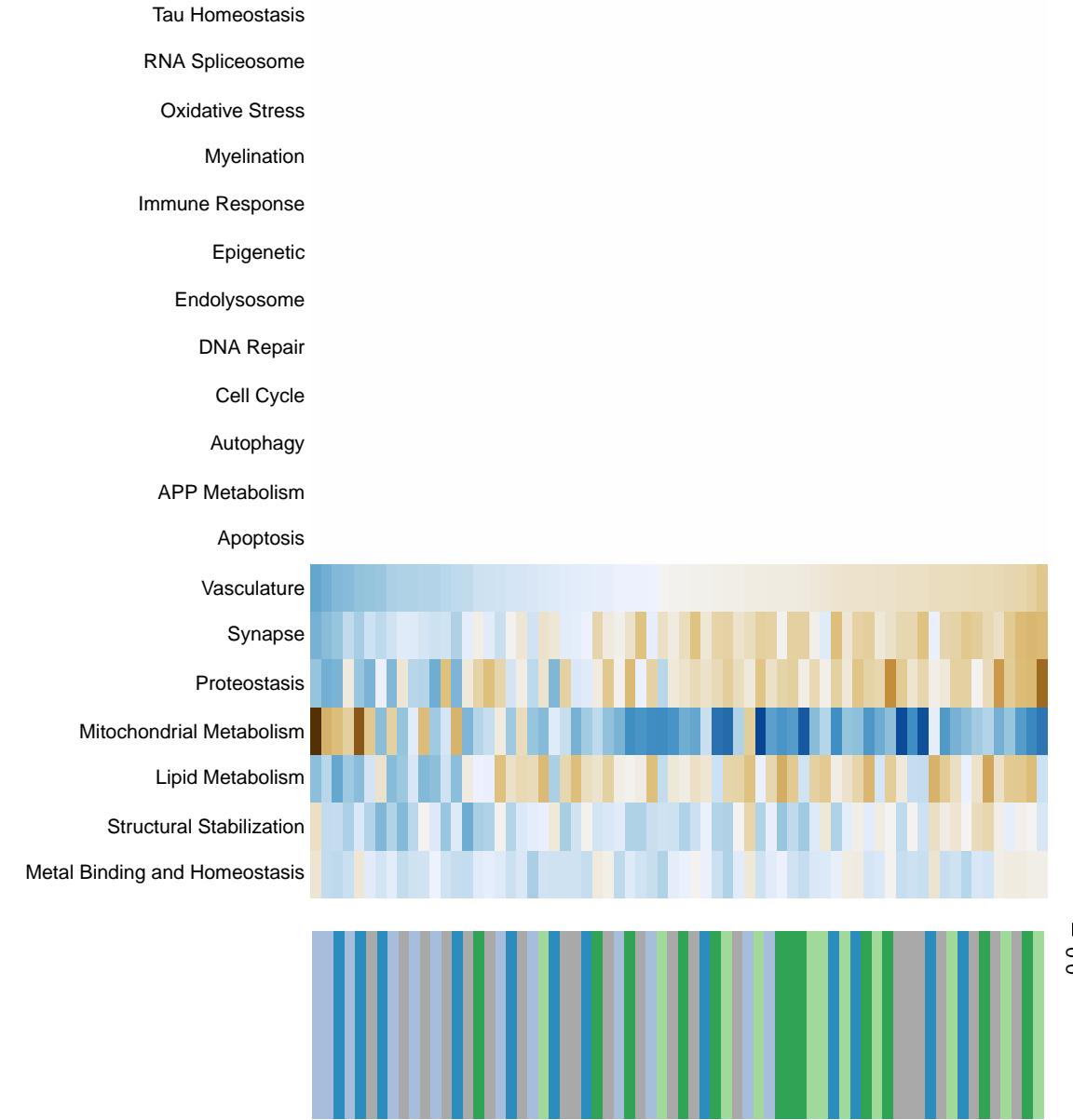
Decomposition



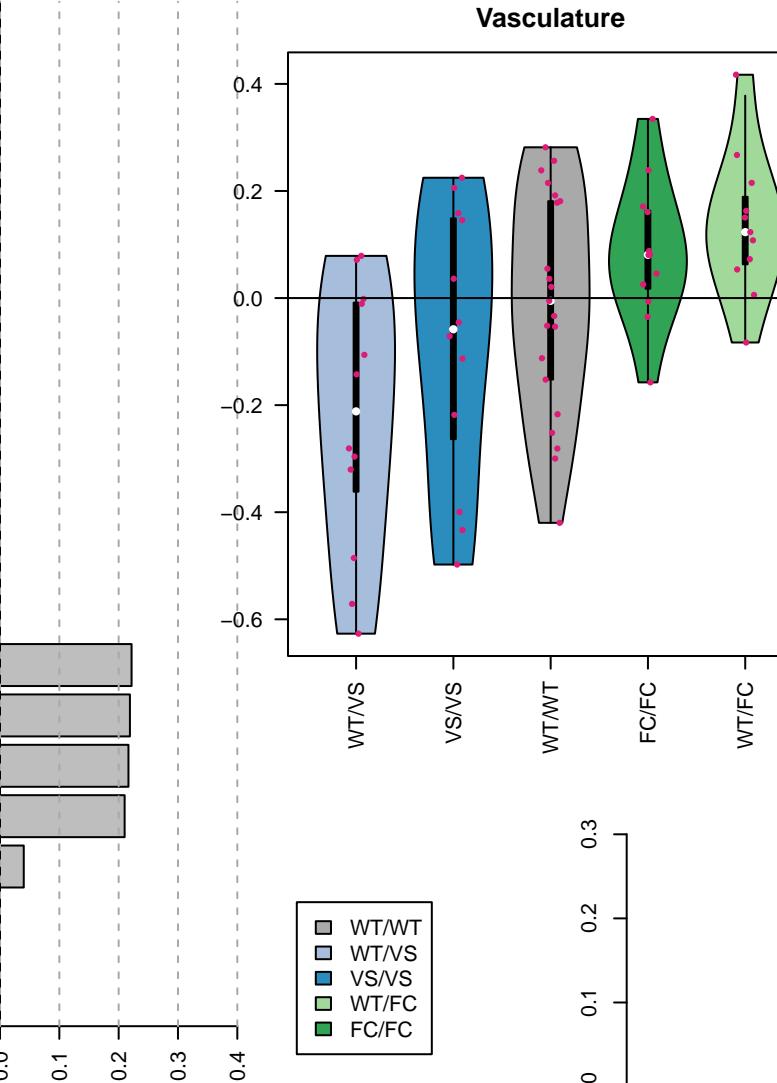
$R^2 = 0.038$



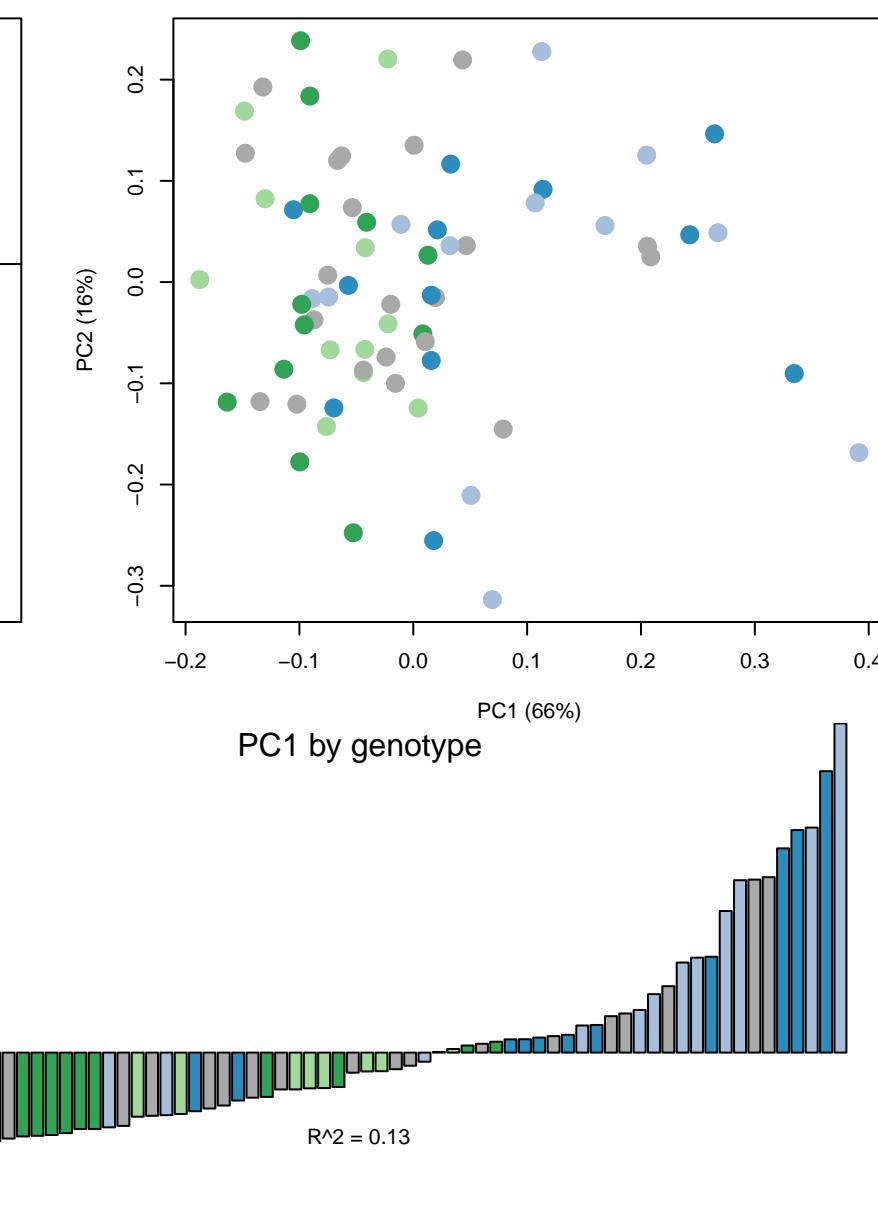
Cardiac muscle contraction



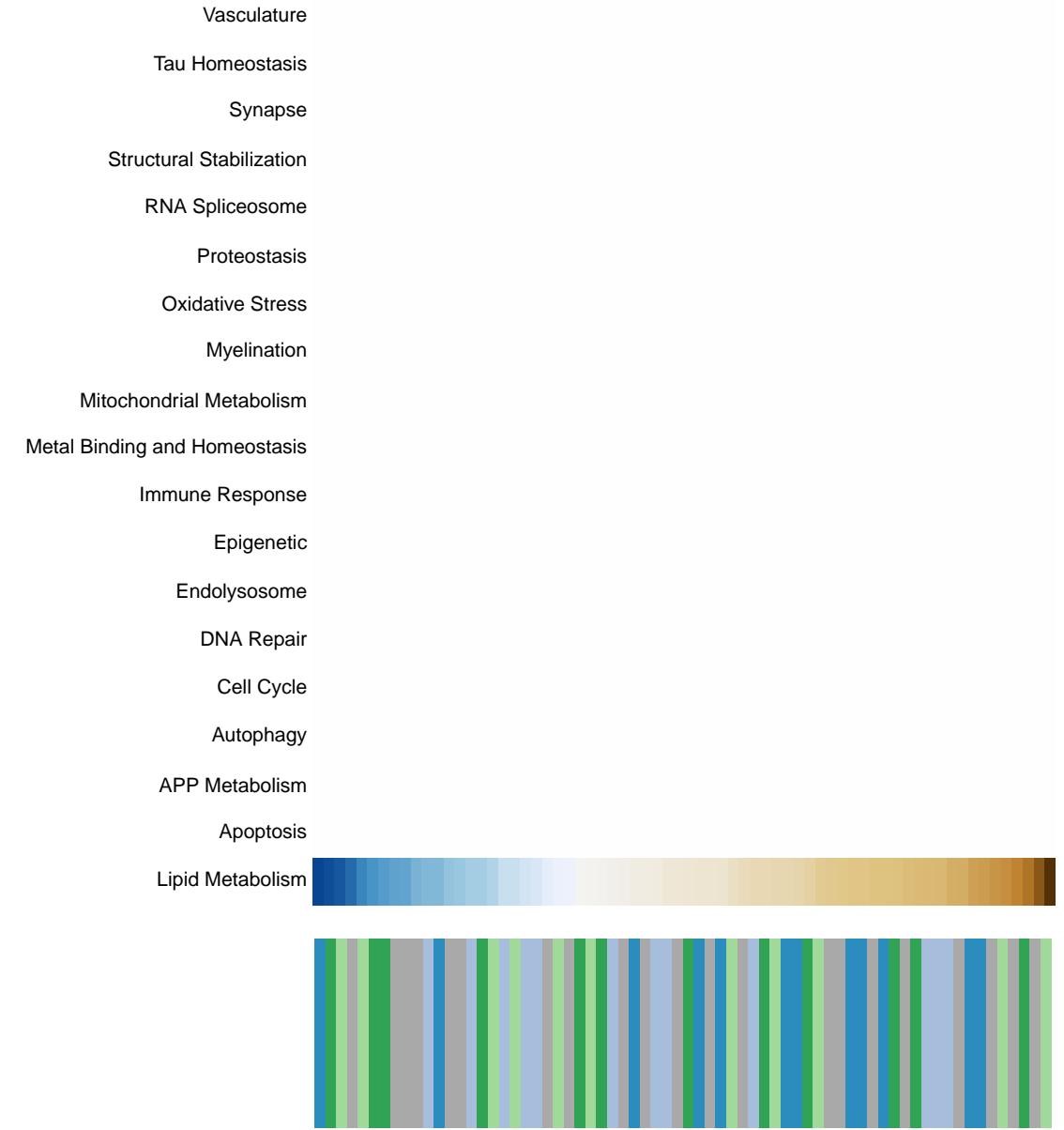
Vasculature



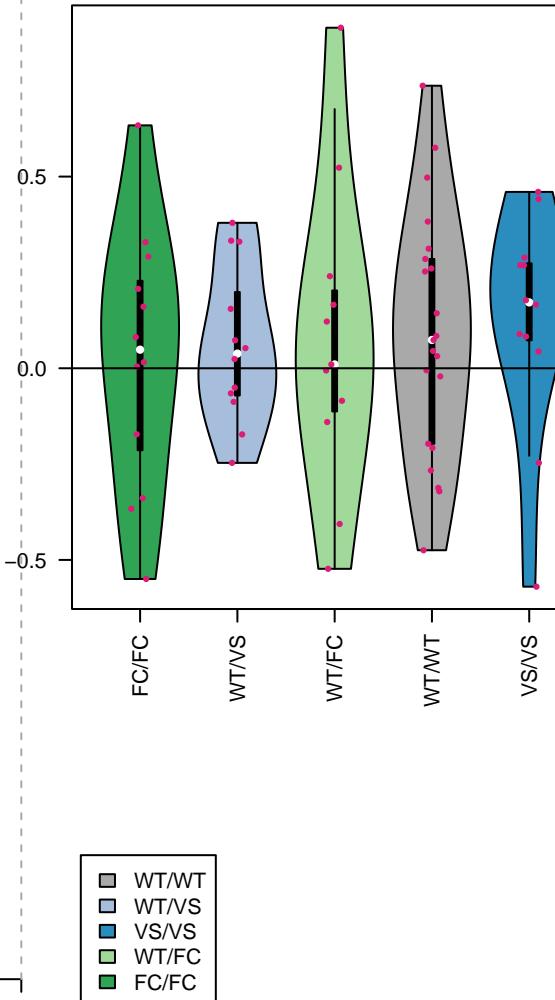
Decomposition



Vitamin digestion and absorption



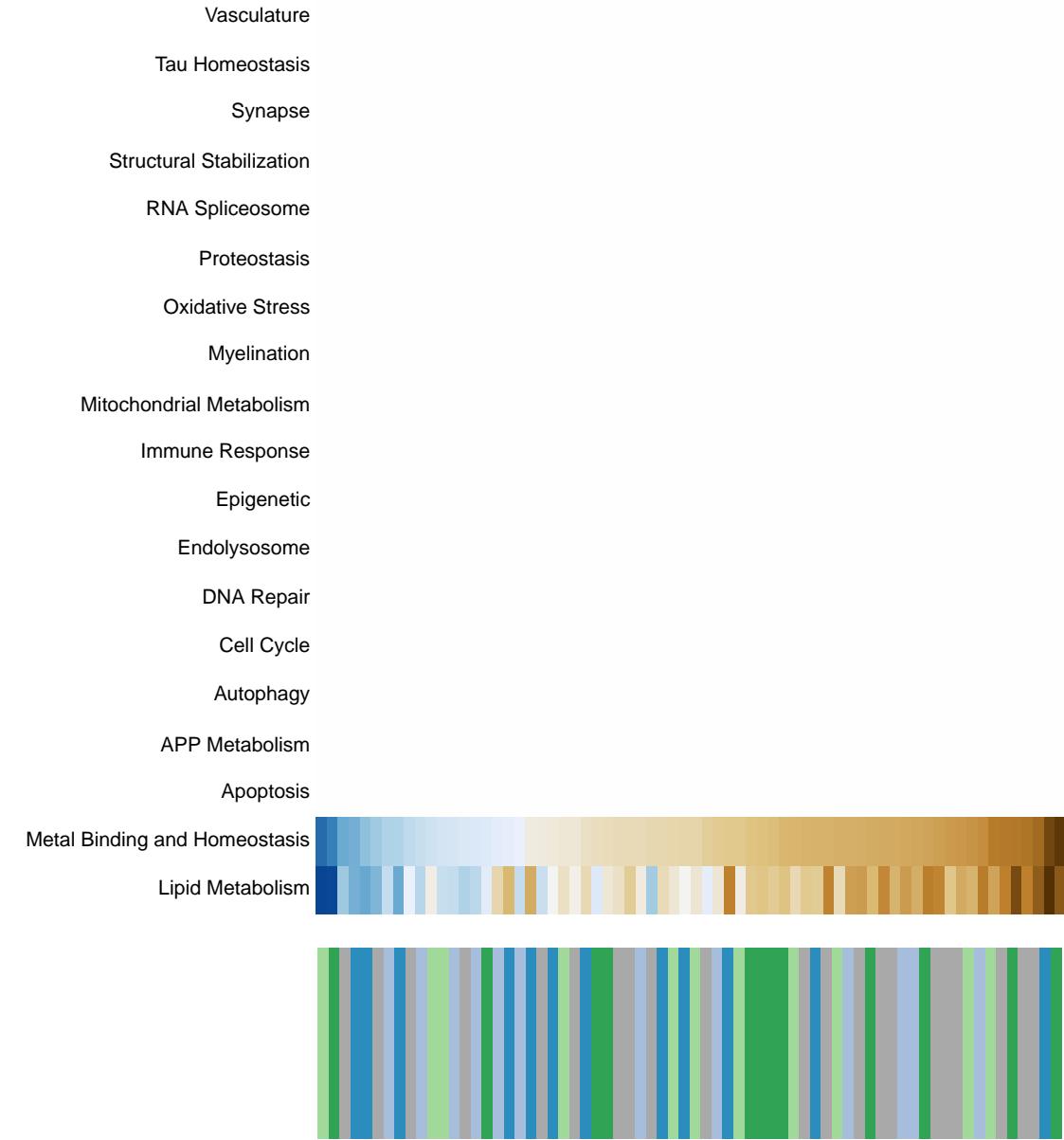
Lipid Metabolism



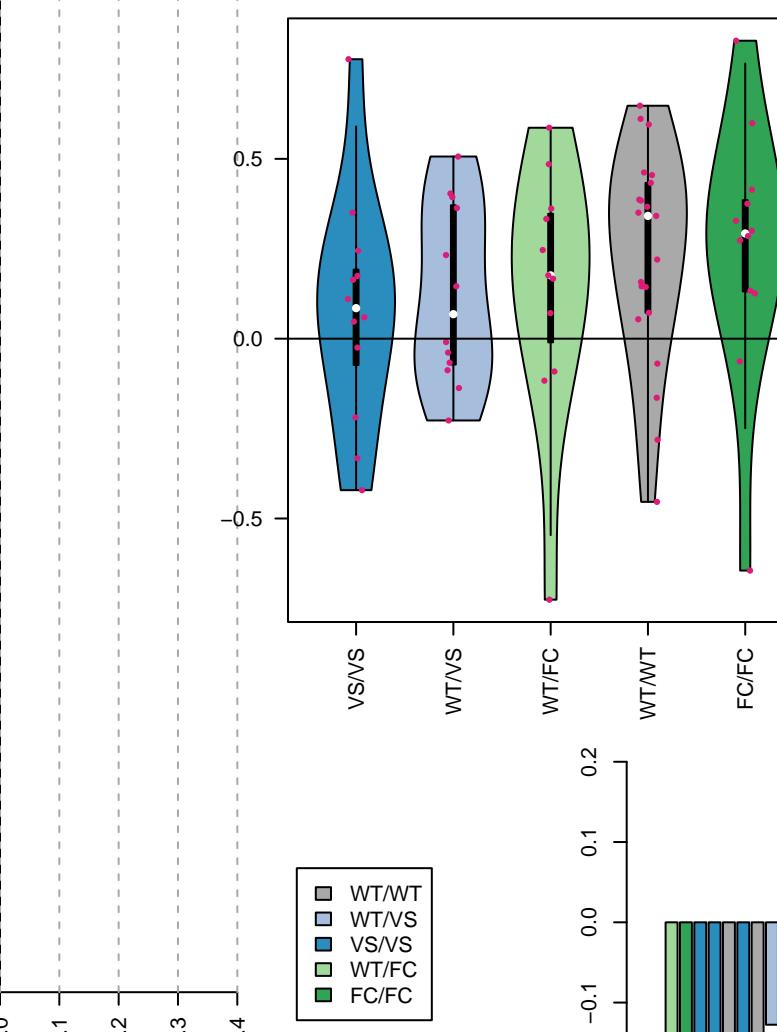
Not enough rows to decompose

Not enough rows to decompose

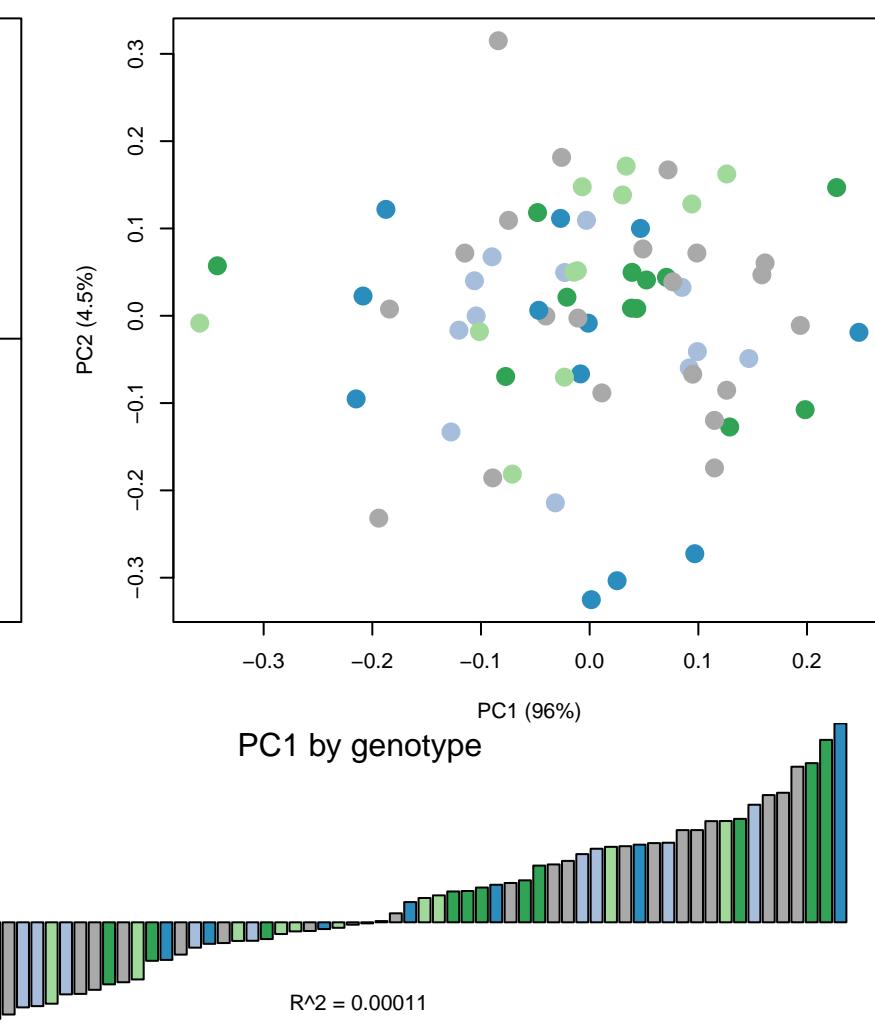
Proximal tubule bicarbonate reclamation



Metal Binding and Homeostasis



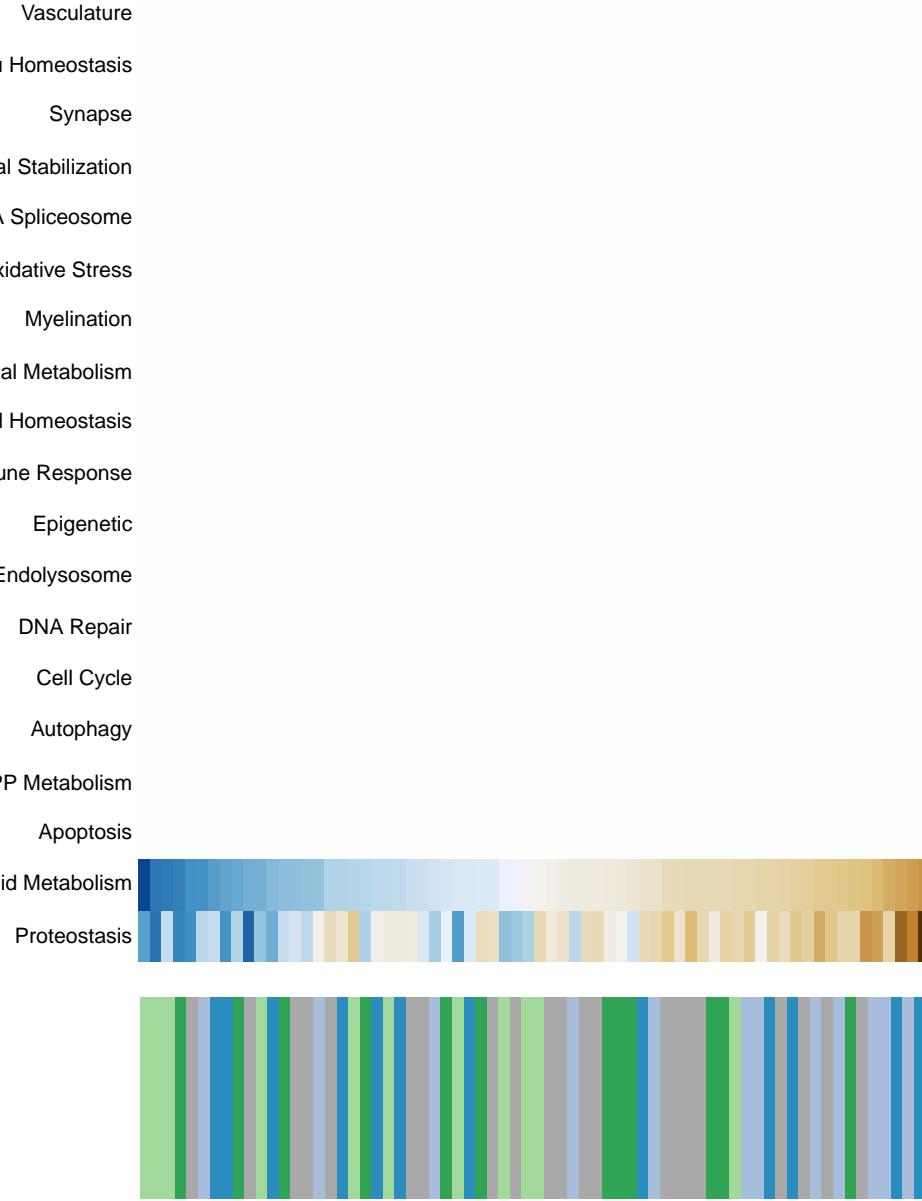
Decomposition



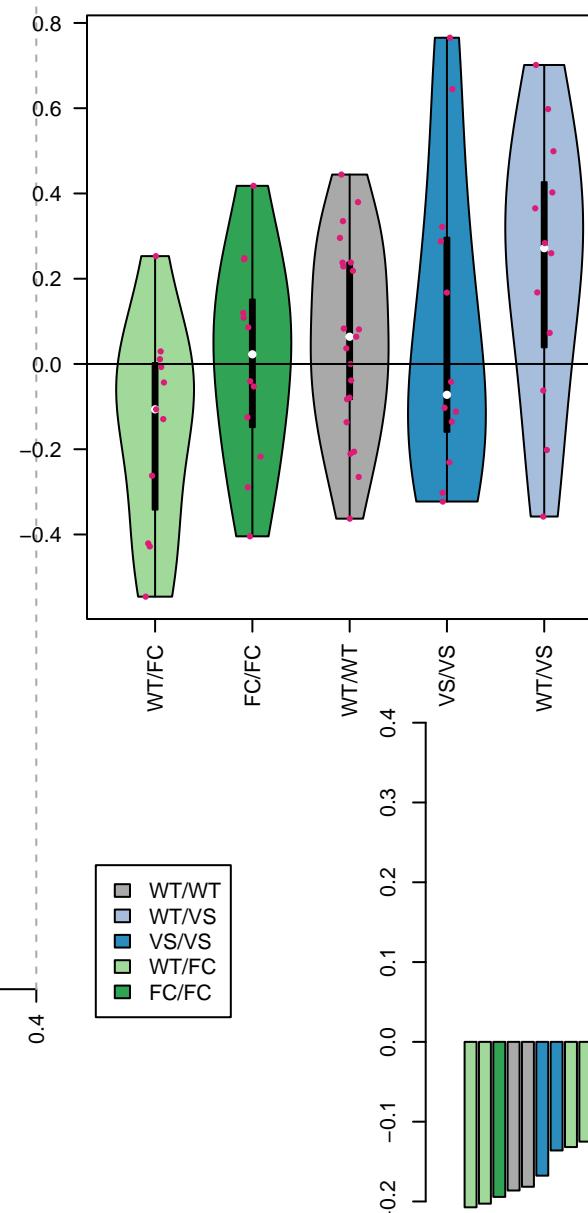
PC1 by genotype

$R^2 = 0.00011$

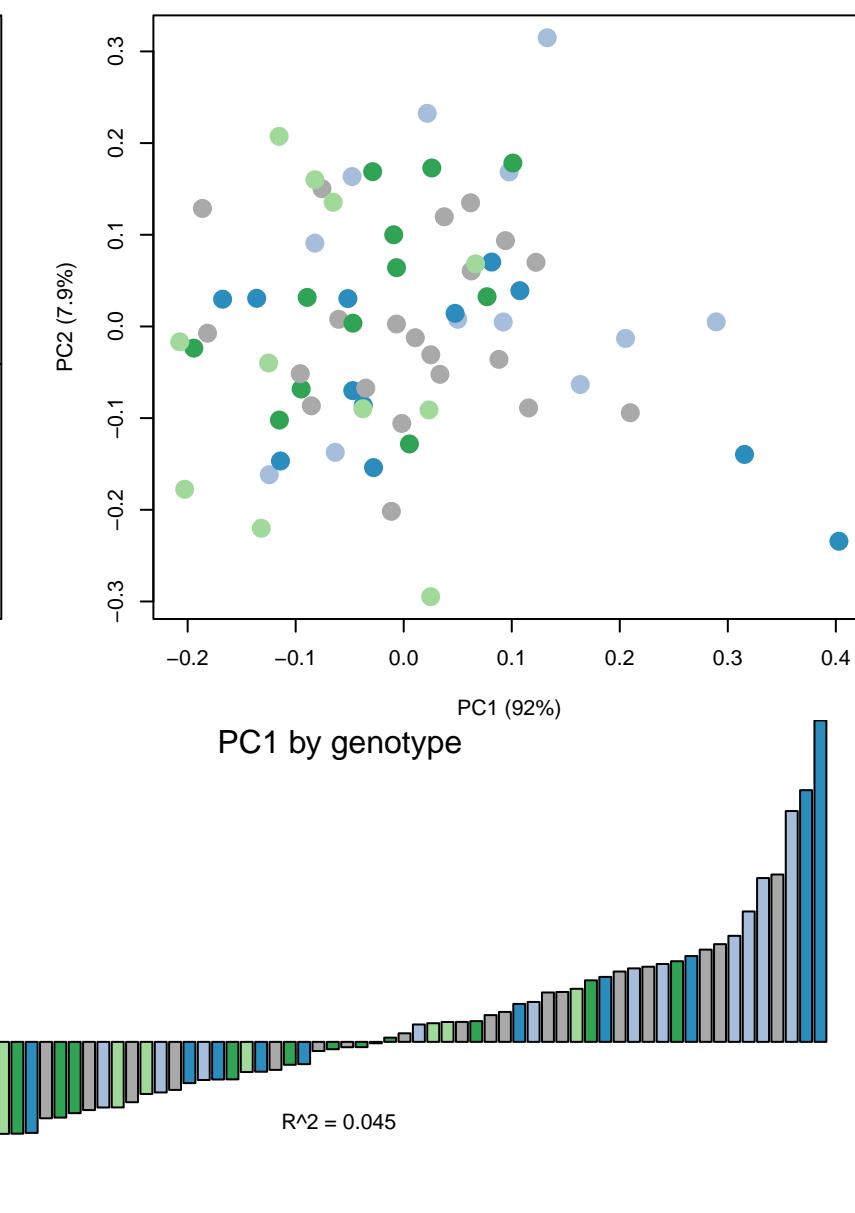
Chemical carcinogenesis – DNA adducts



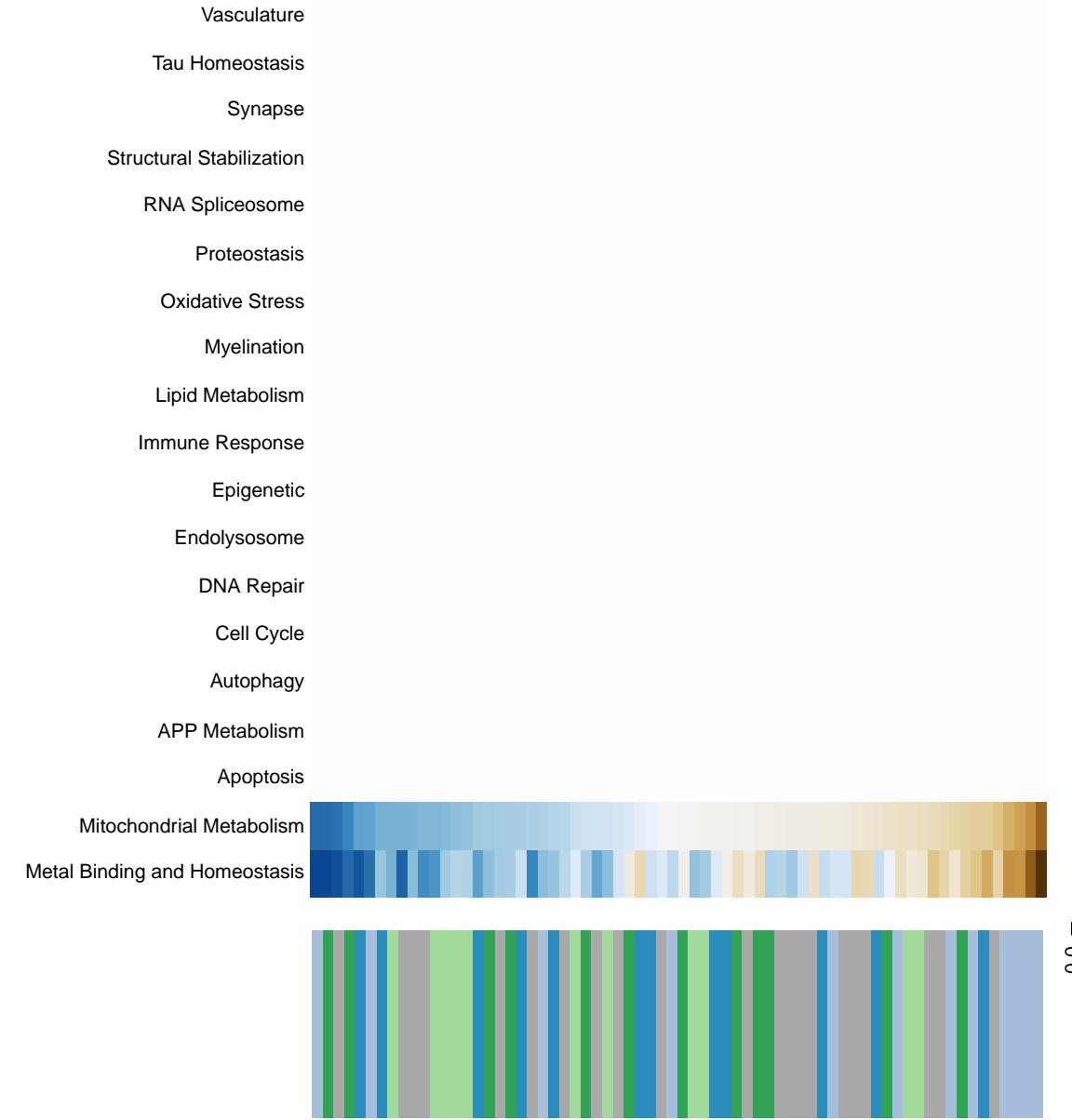
Lipid Metabolism



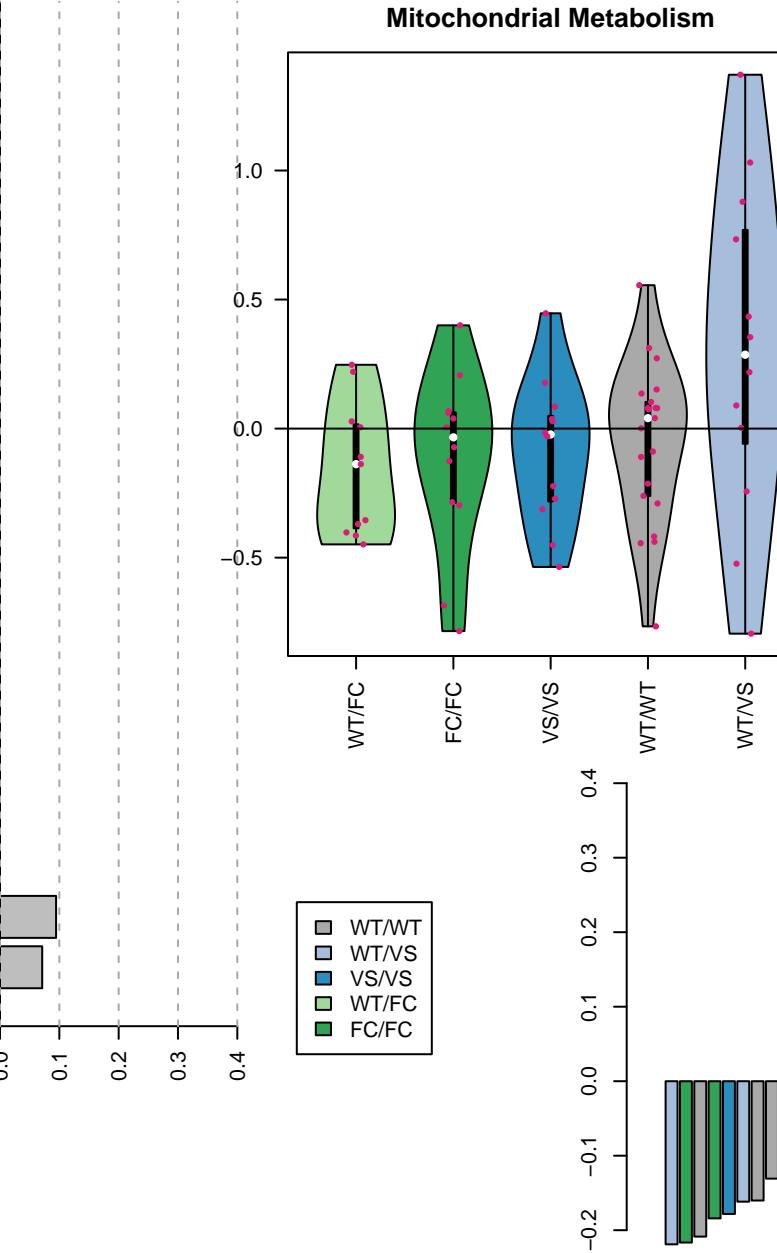
Decomposition



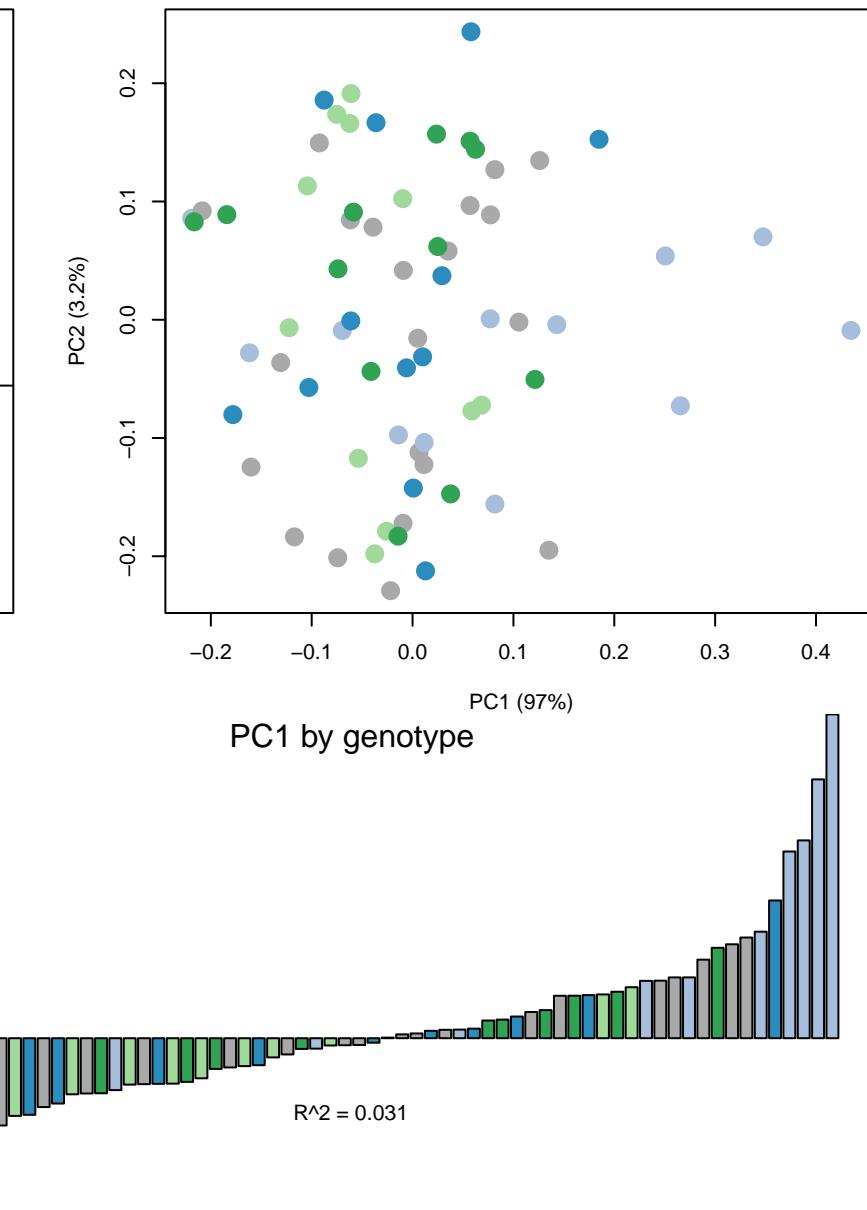
2-Oxocarboxylic acid metabolism



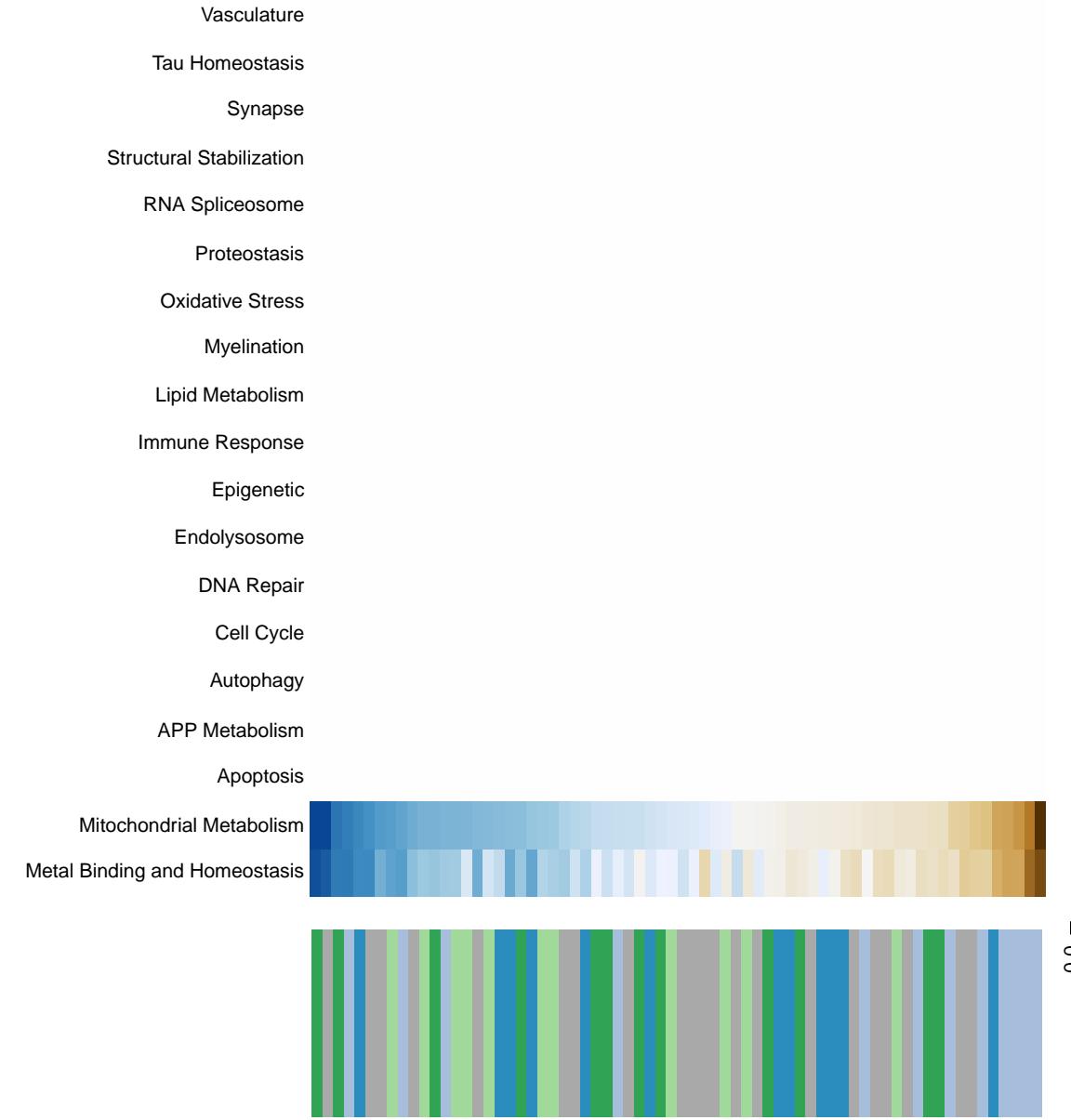
Mitochondrial Metabolism



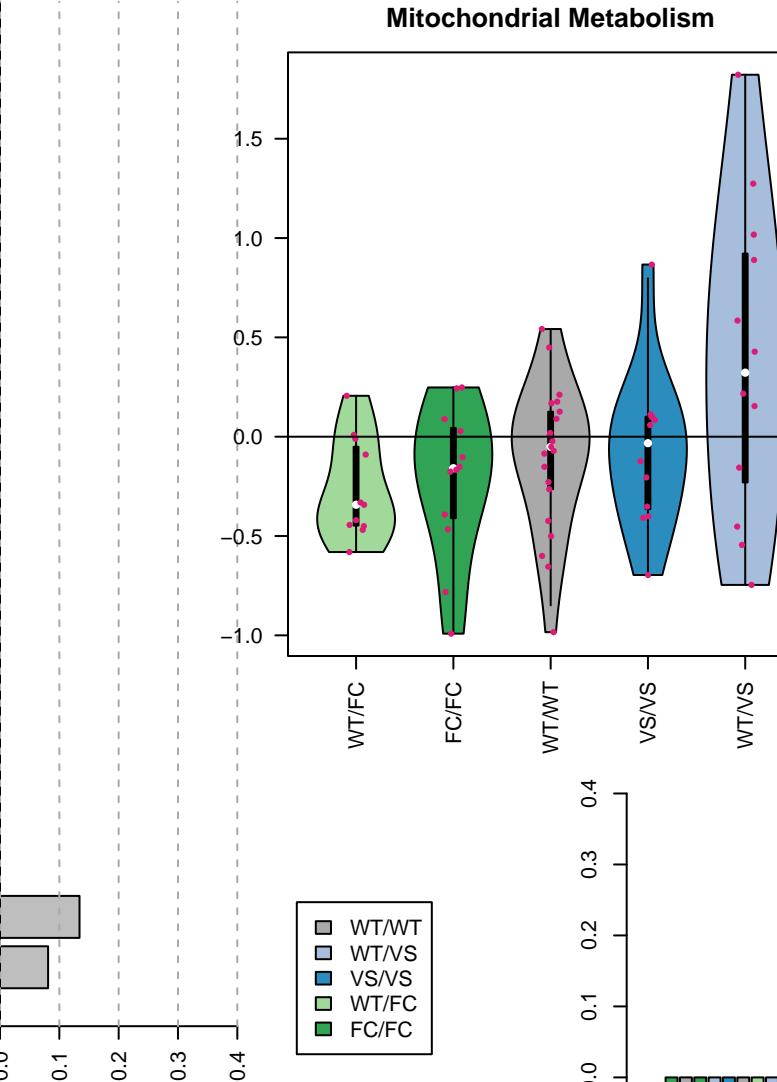
Decomposition



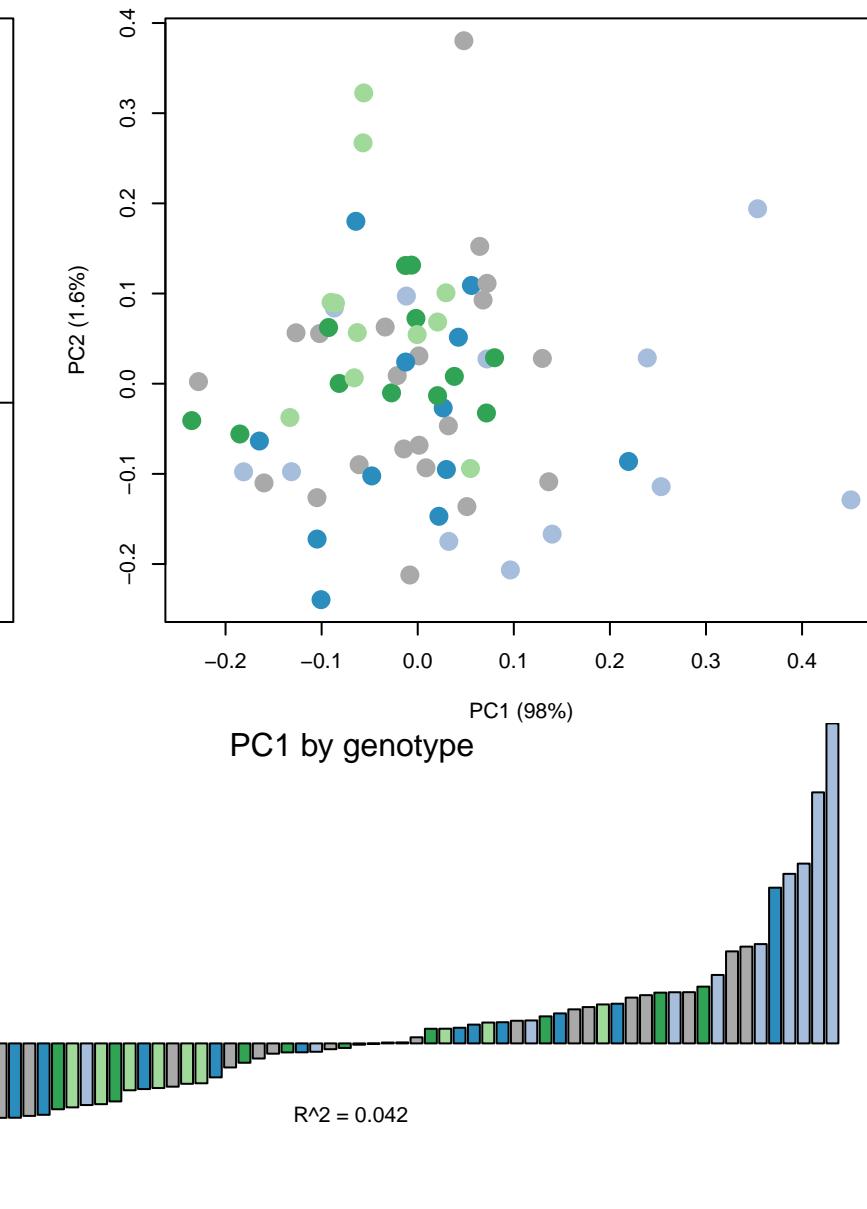
Citrate cycle (TCA cycle)



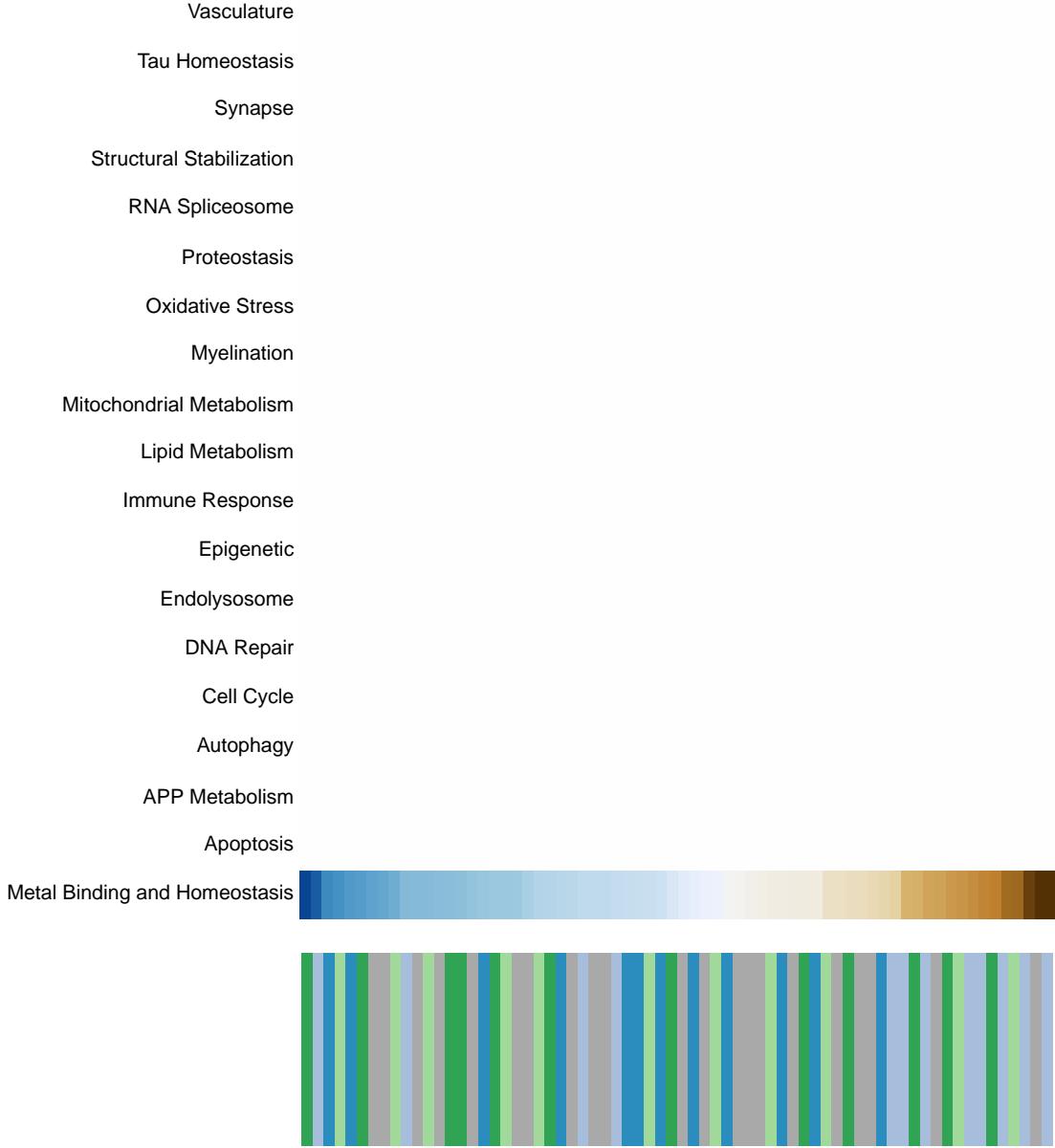
Mitochondrial Metabolism



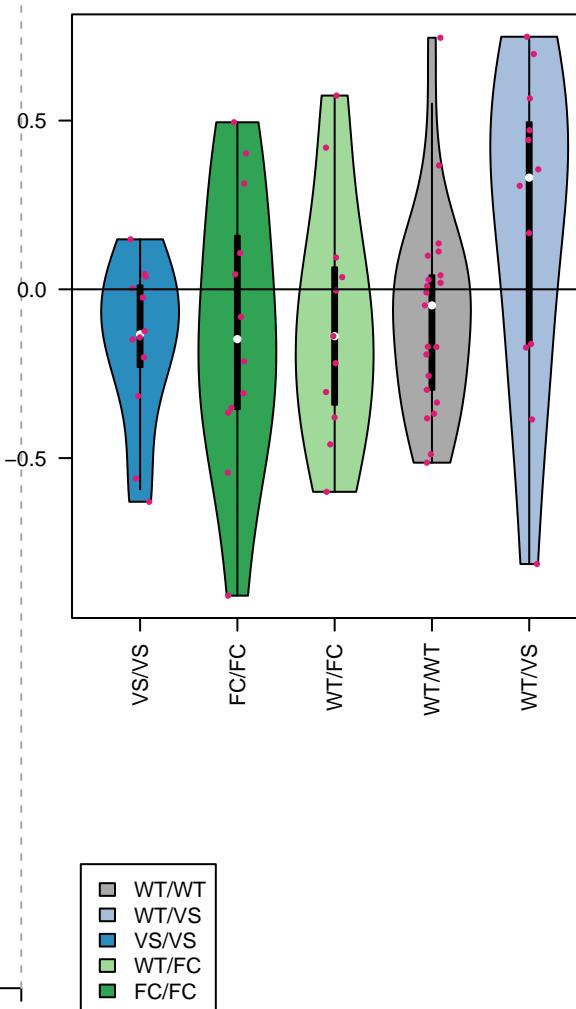
Decomposition



Pentose phosphate pathway



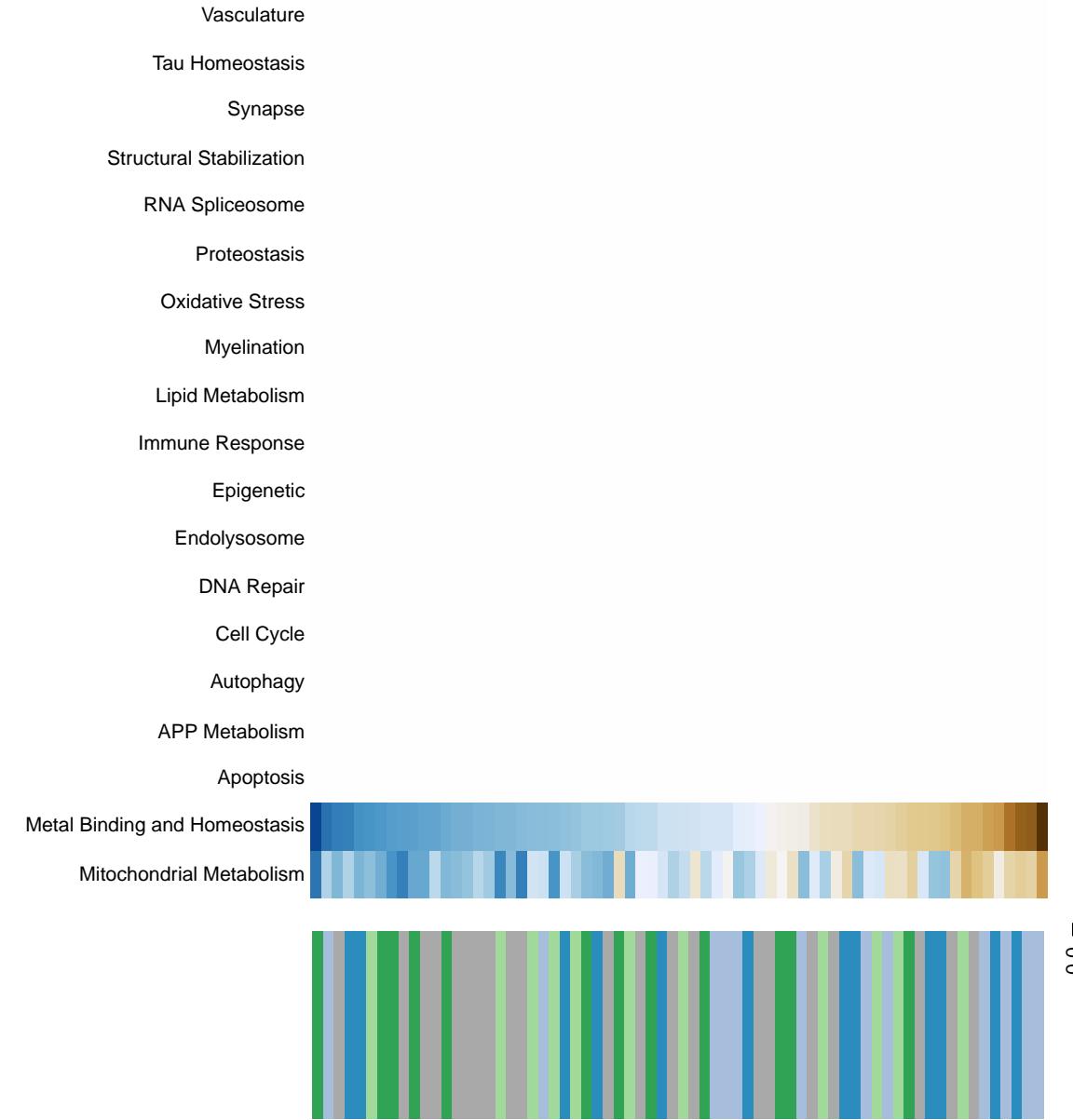
Metal Binding and Homeostasis



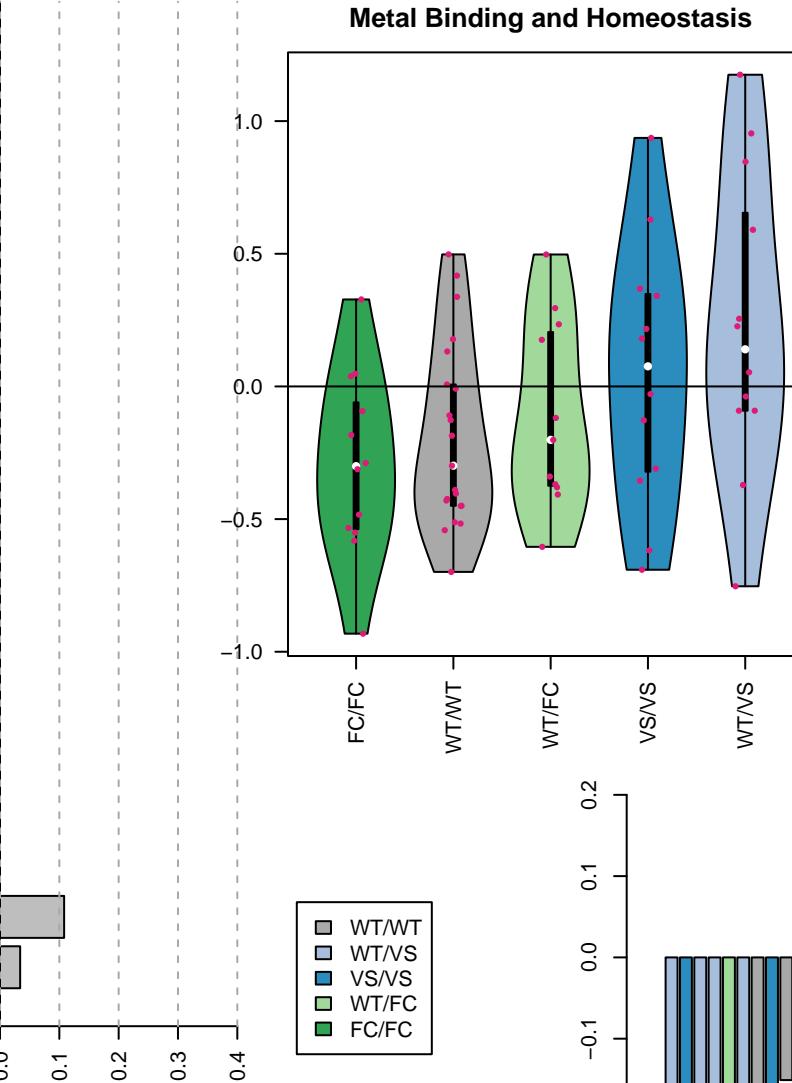
Not enough rows to decompose

Not enough rows to decompose

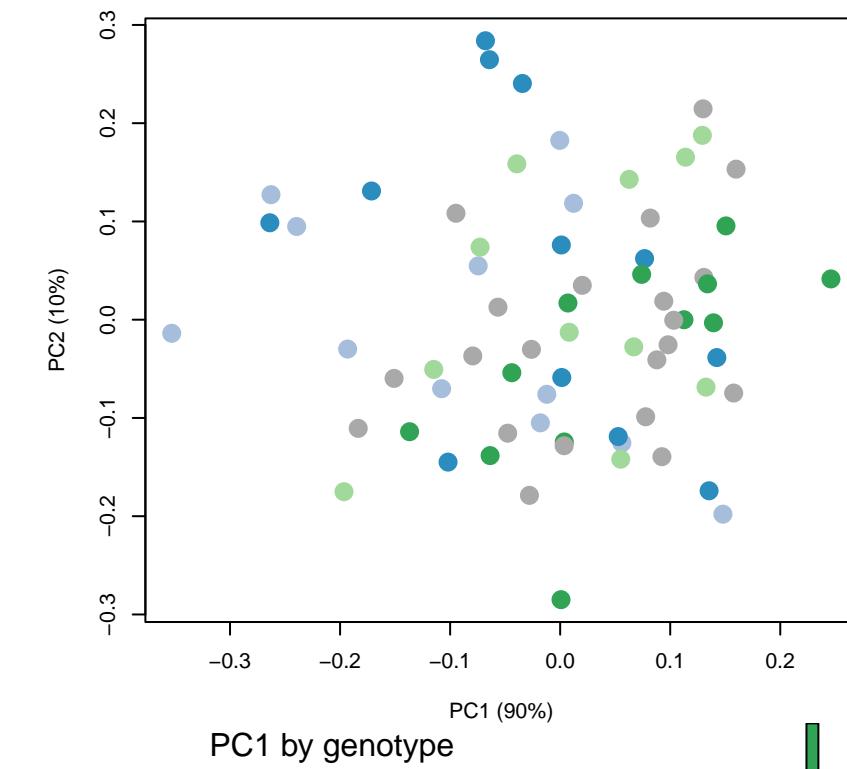
Fructose and mannose metabolism



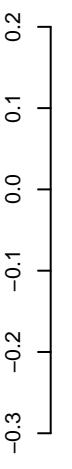
Metal Binding and Homeostasis



Decomposition

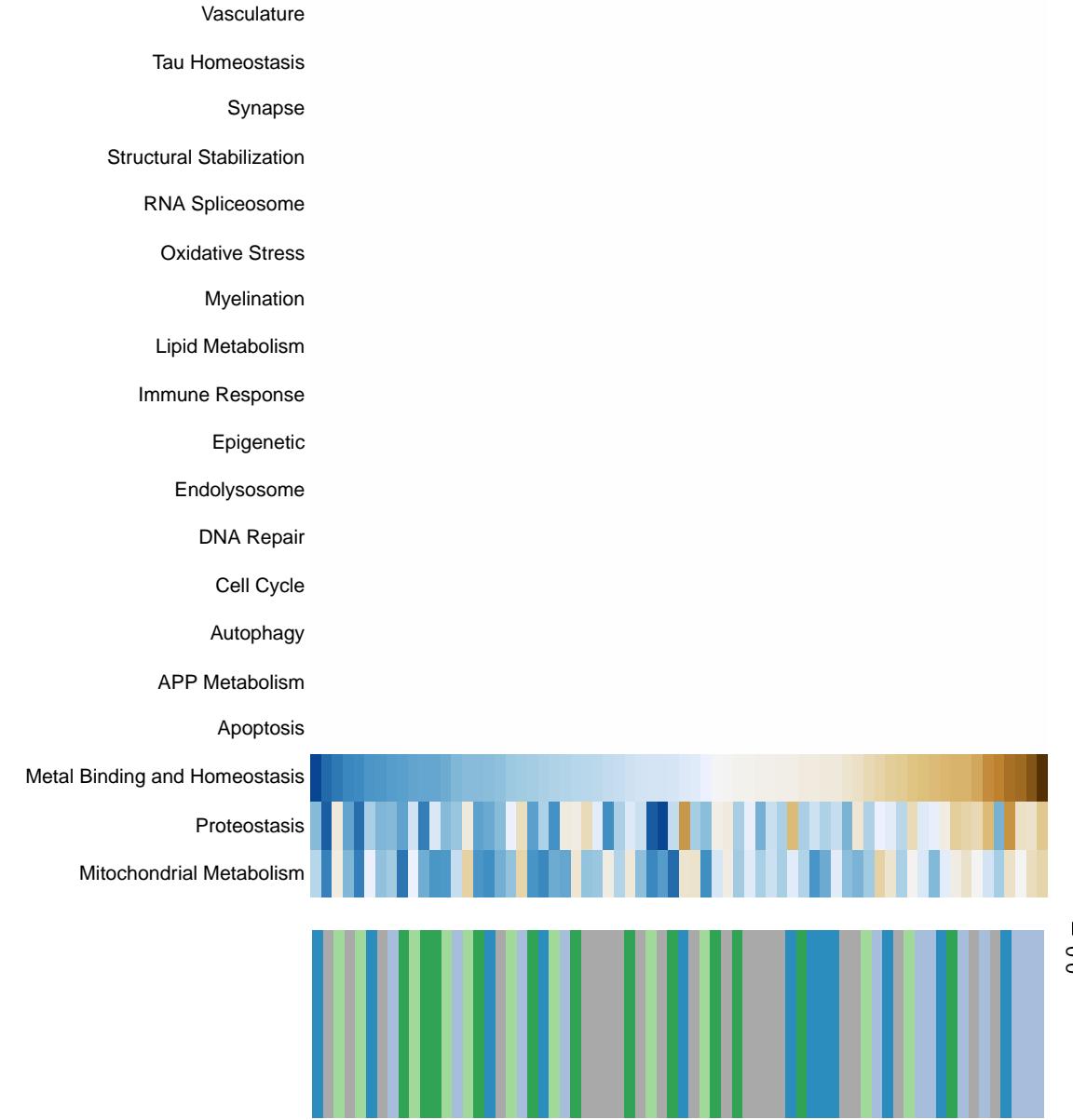


PC1 by genotype

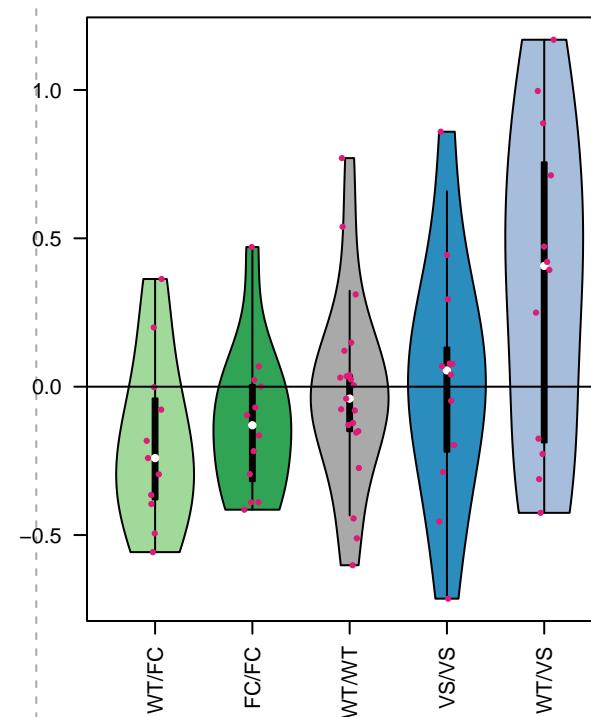


$R^2 = 0.017$

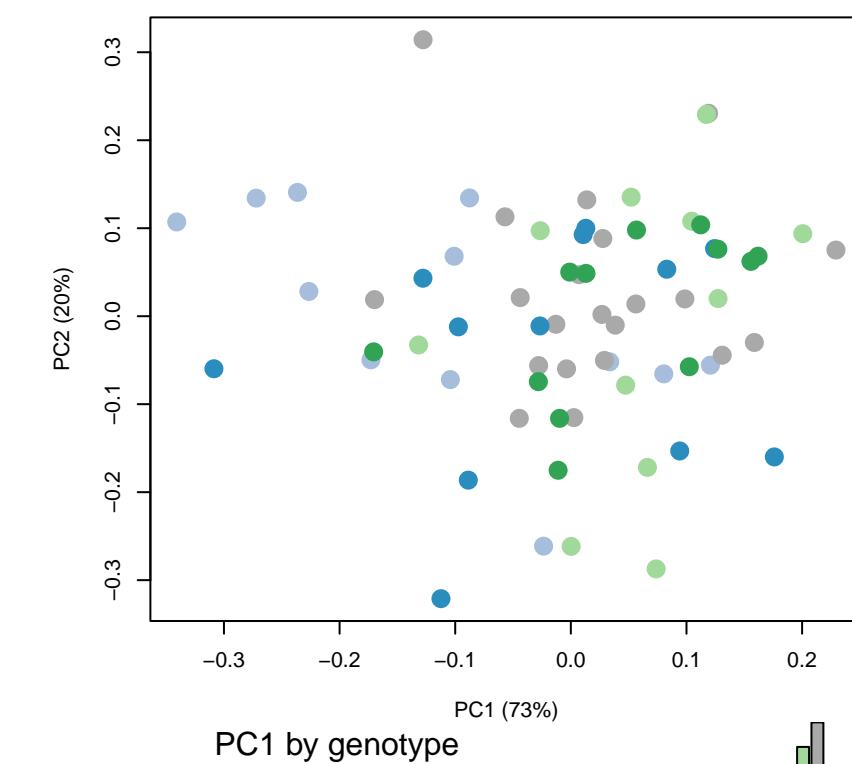
Amino sugar and nucleotide sugar metabolism



Metal Binding and Homeostasis

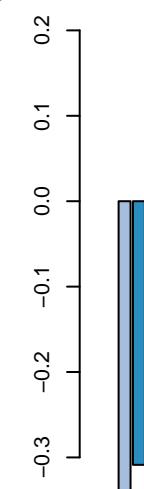


Decomposition



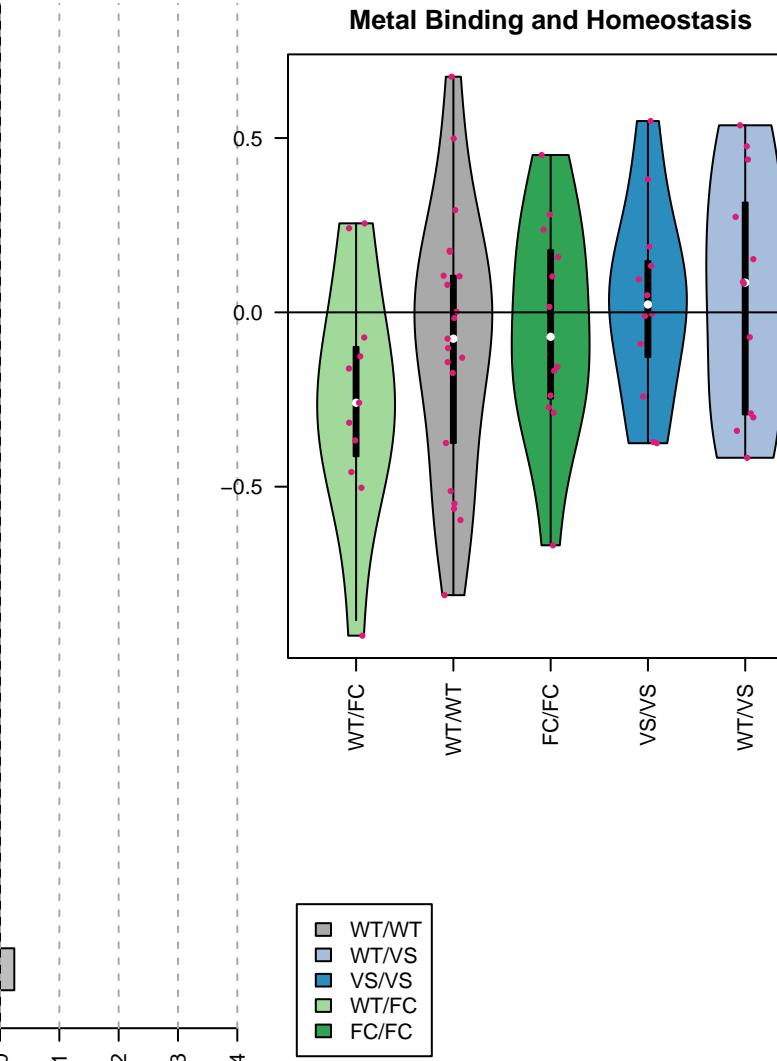
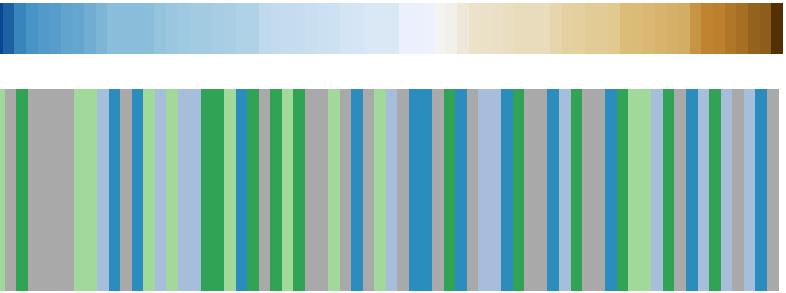
PC1 by genotype

$R^2 = 0.099$



Nitrogen metabolism

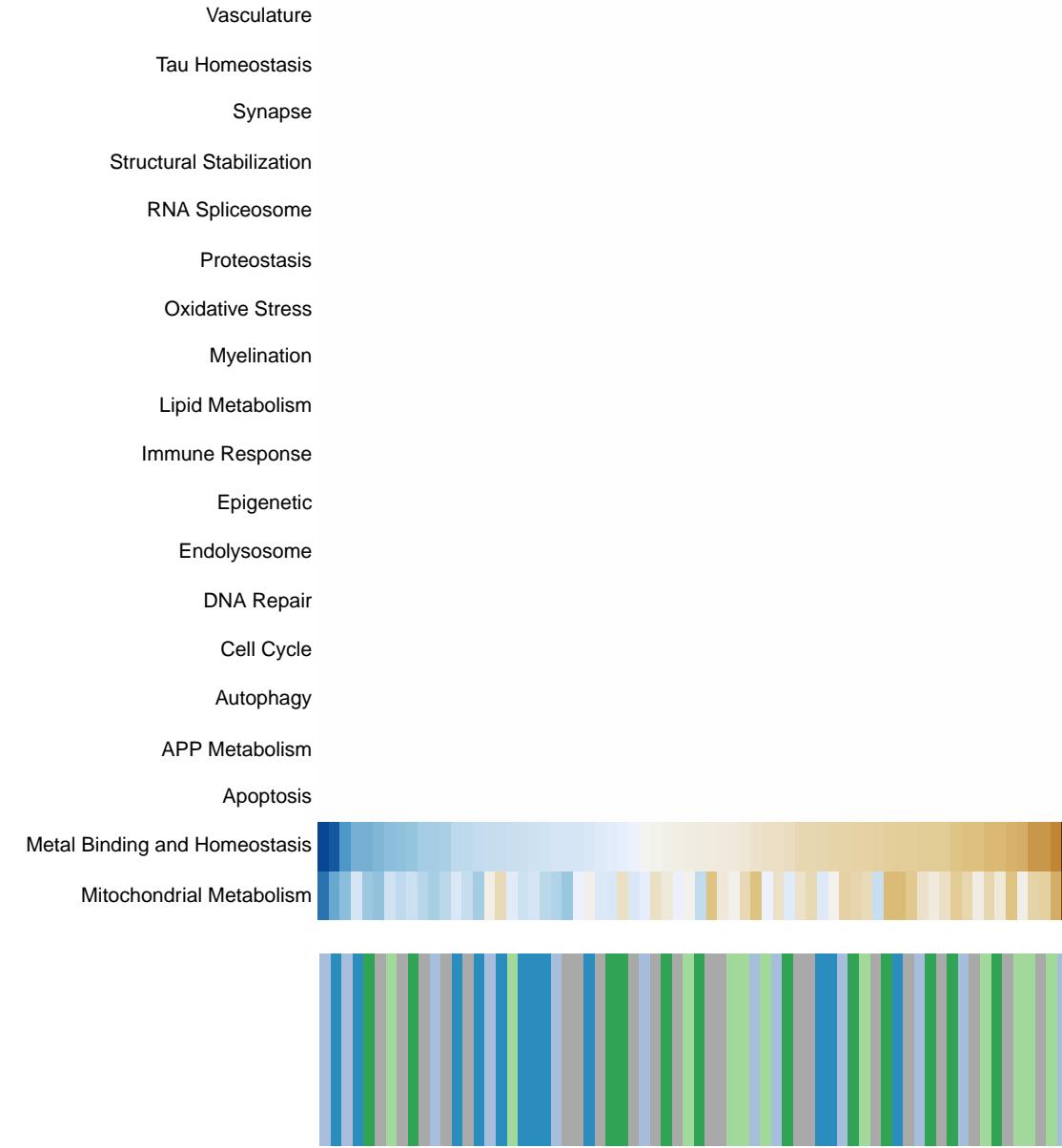
Vasculature
Tau Homeostasis
Synapse
Structural Stabilization
RNA Spliceosome
Proteostasis
Oxidative Stress
Myelination
Mitochondrial Metabolism
Lipid Metabolism
Immune Response
Epigenetic
Endolysosome
DNA Repair
Cell Cycle
Autophagy
APP Metabolism
Apoptosis
Metal Binding and Homeostasis



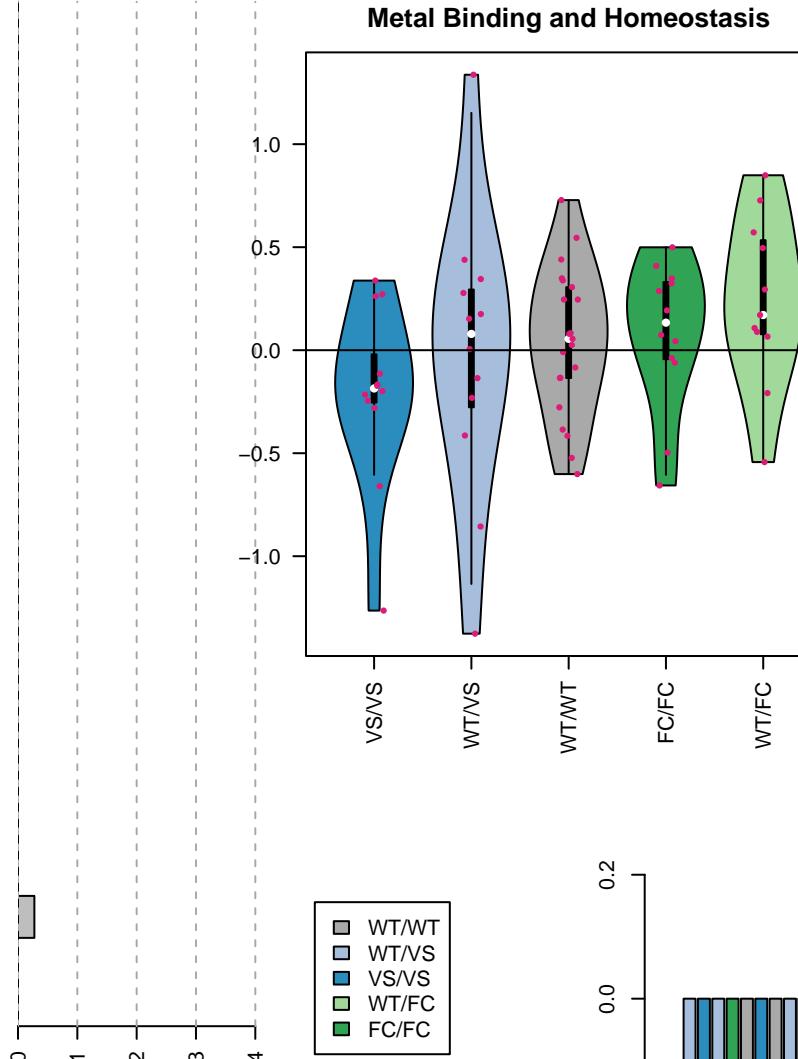
Not enough rows to decompose

Not enough rows to decompose

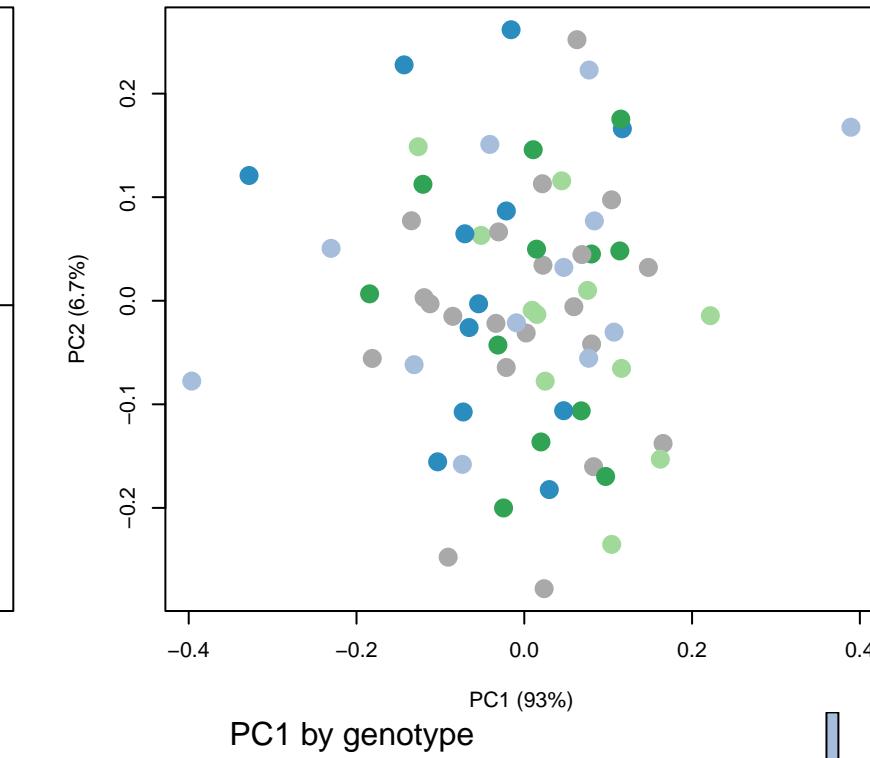
Alanine, aspartate and glutamate metabolism



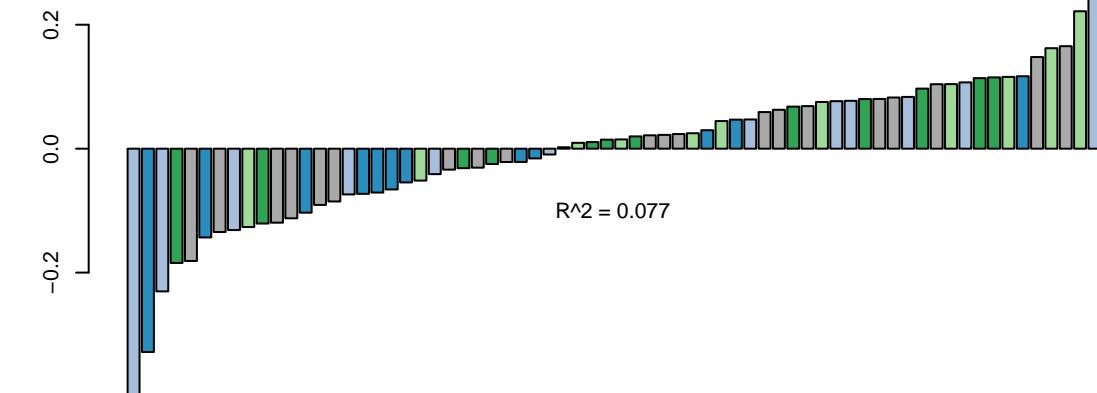
Metal Binding and Homeostasis



Decomposition

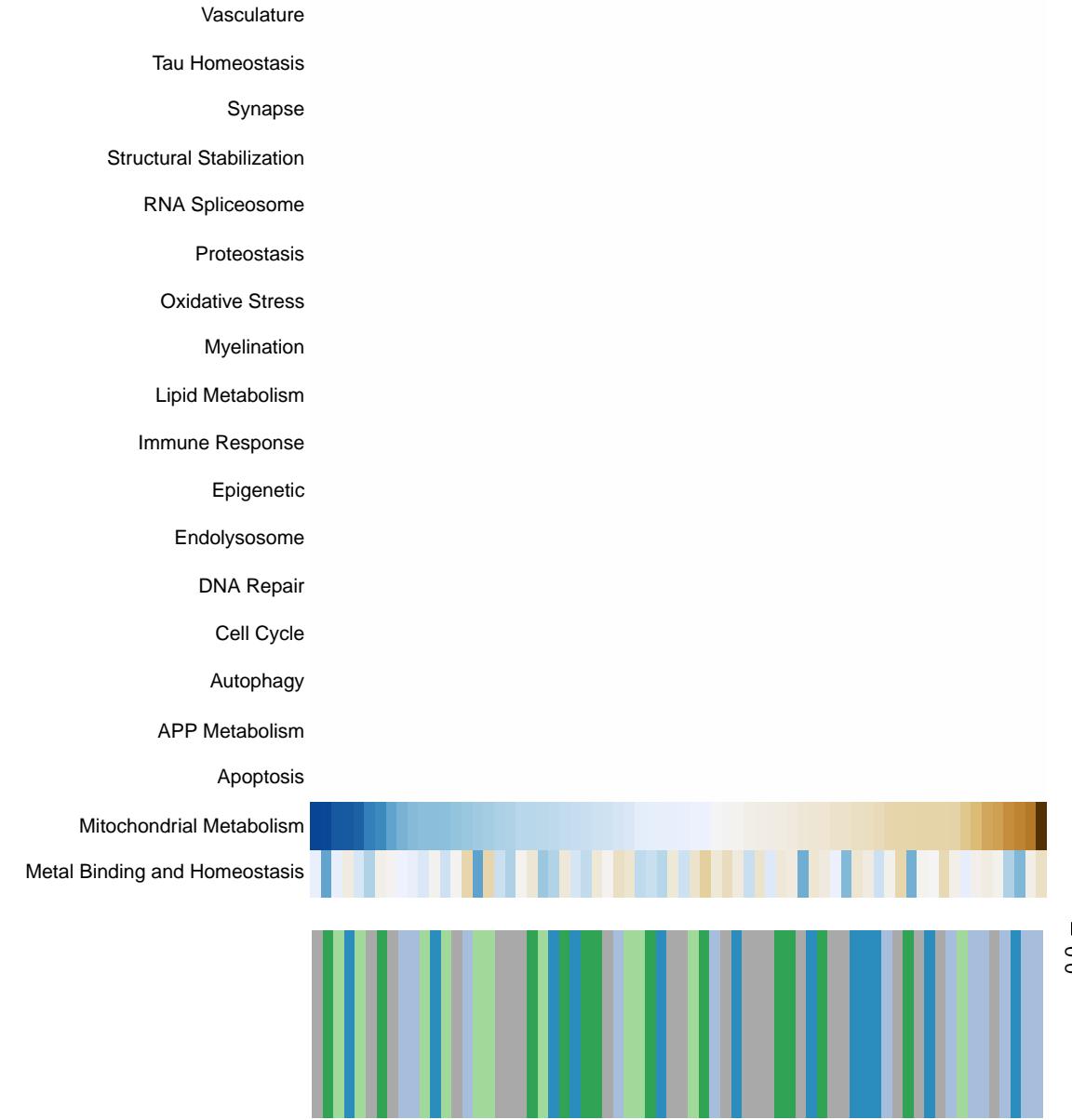


PC1 by genotype

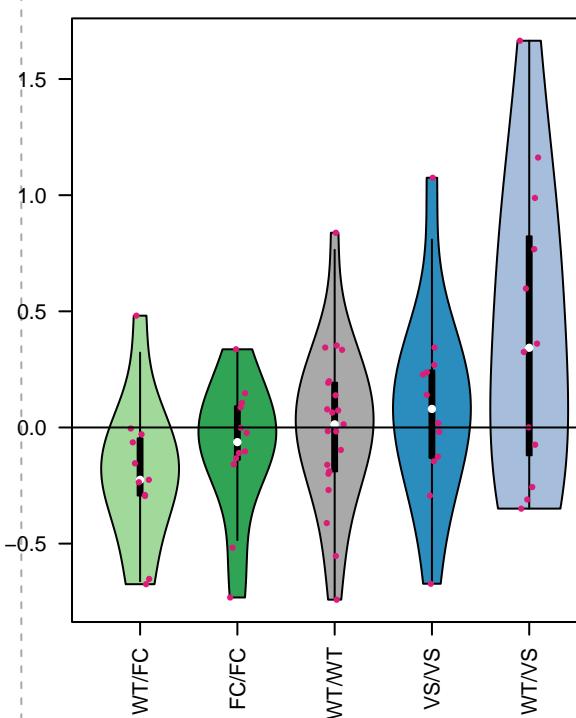


$R^2 = 0.077$

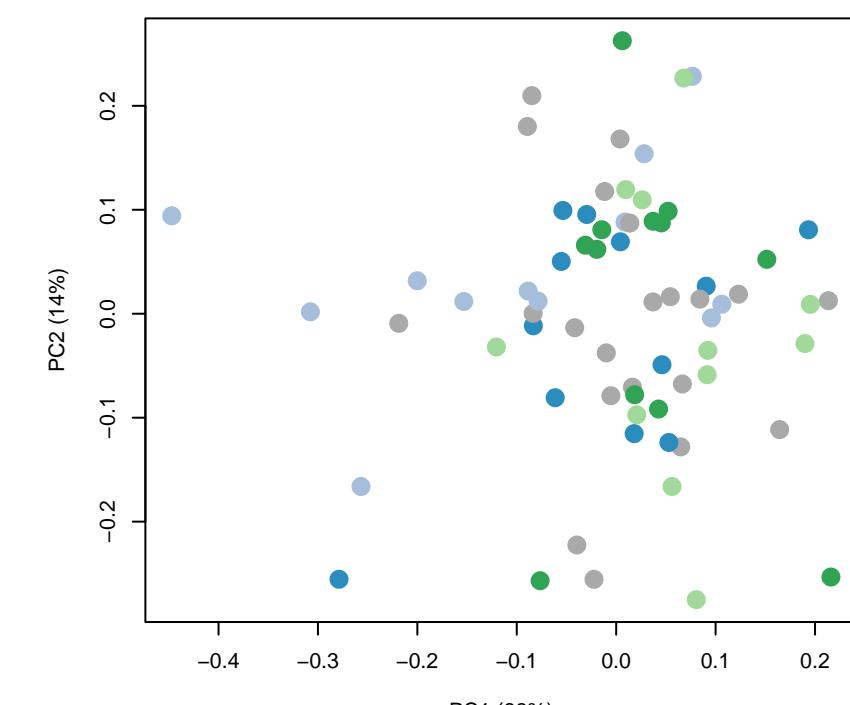
Cysteine and methionine metabolism



Mitochondrial Metabolism

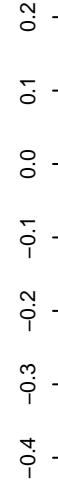


Decomposition

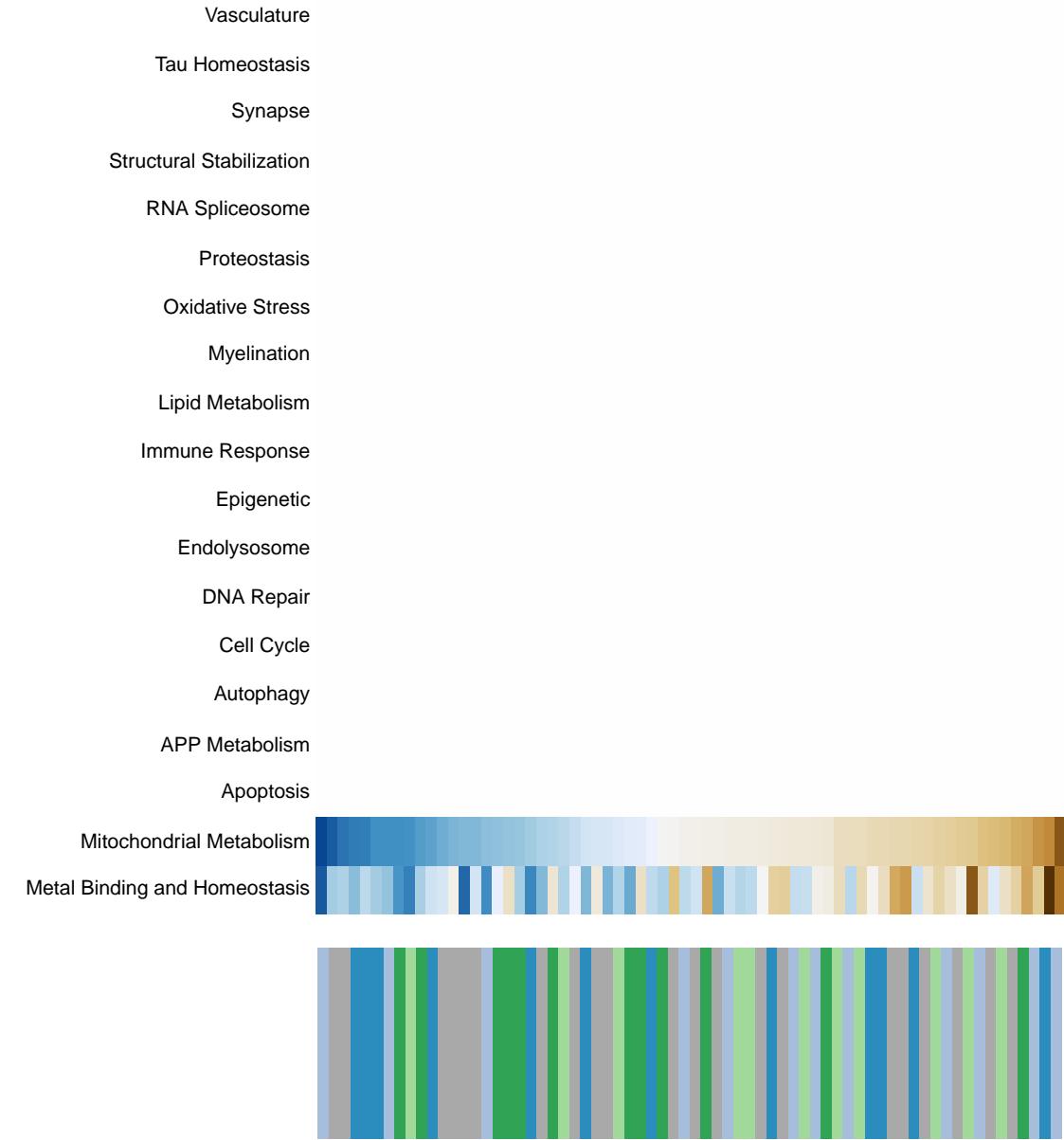


PC1 by genotype

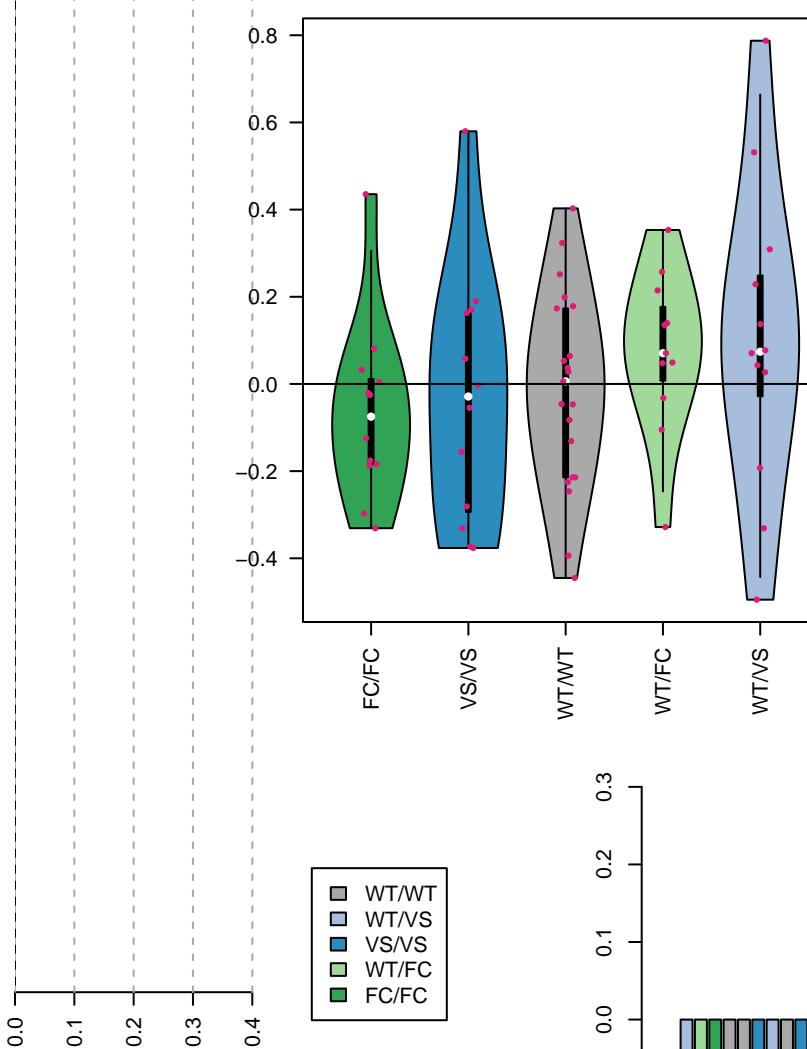
$R^2 = 0.029$



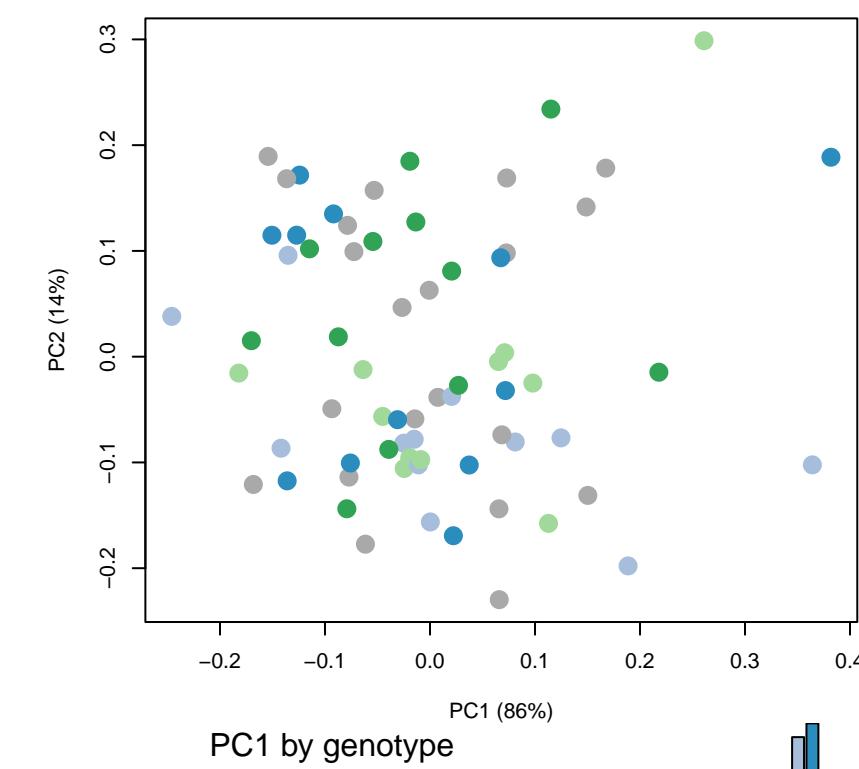
Arginine biosynthesis



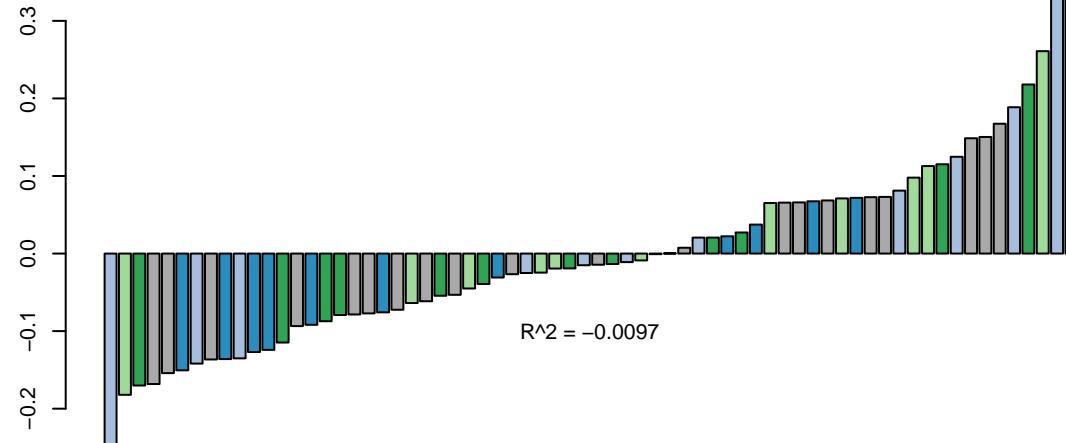
Mitochondrial Metabolism



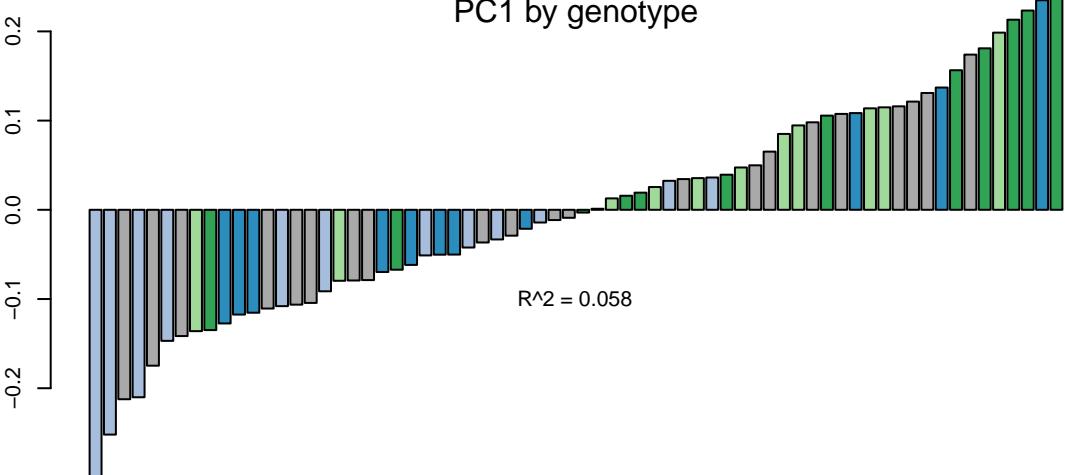
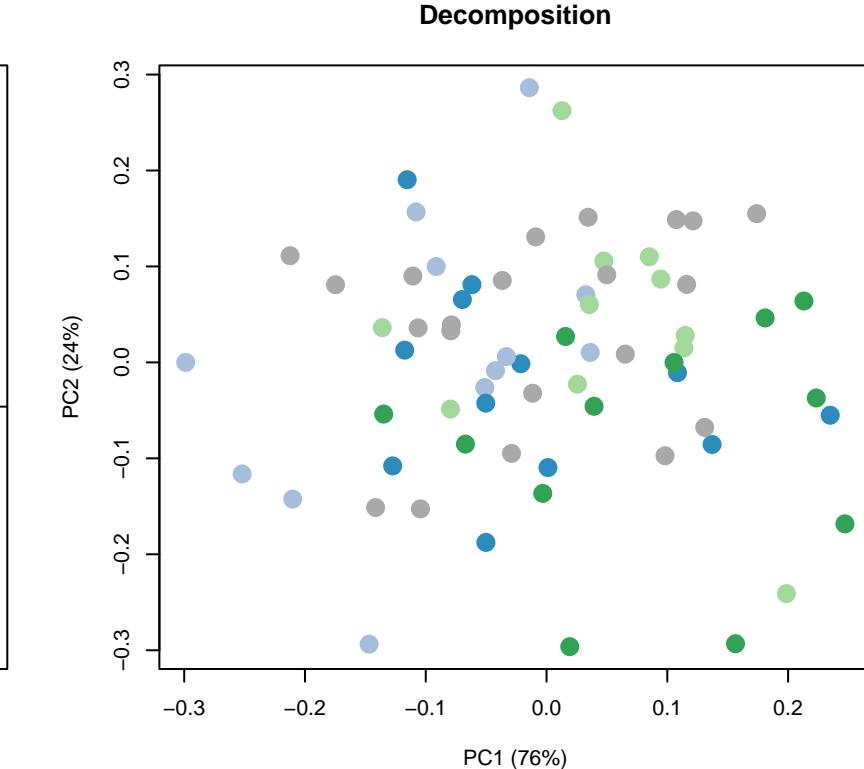
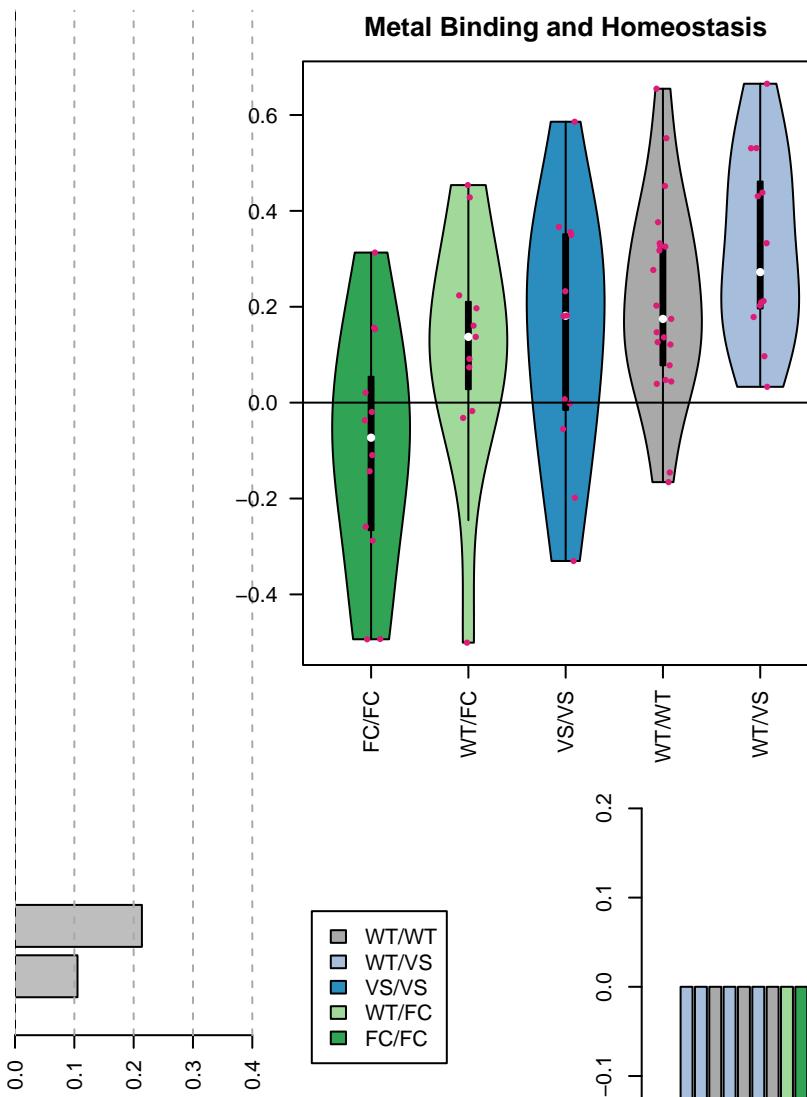
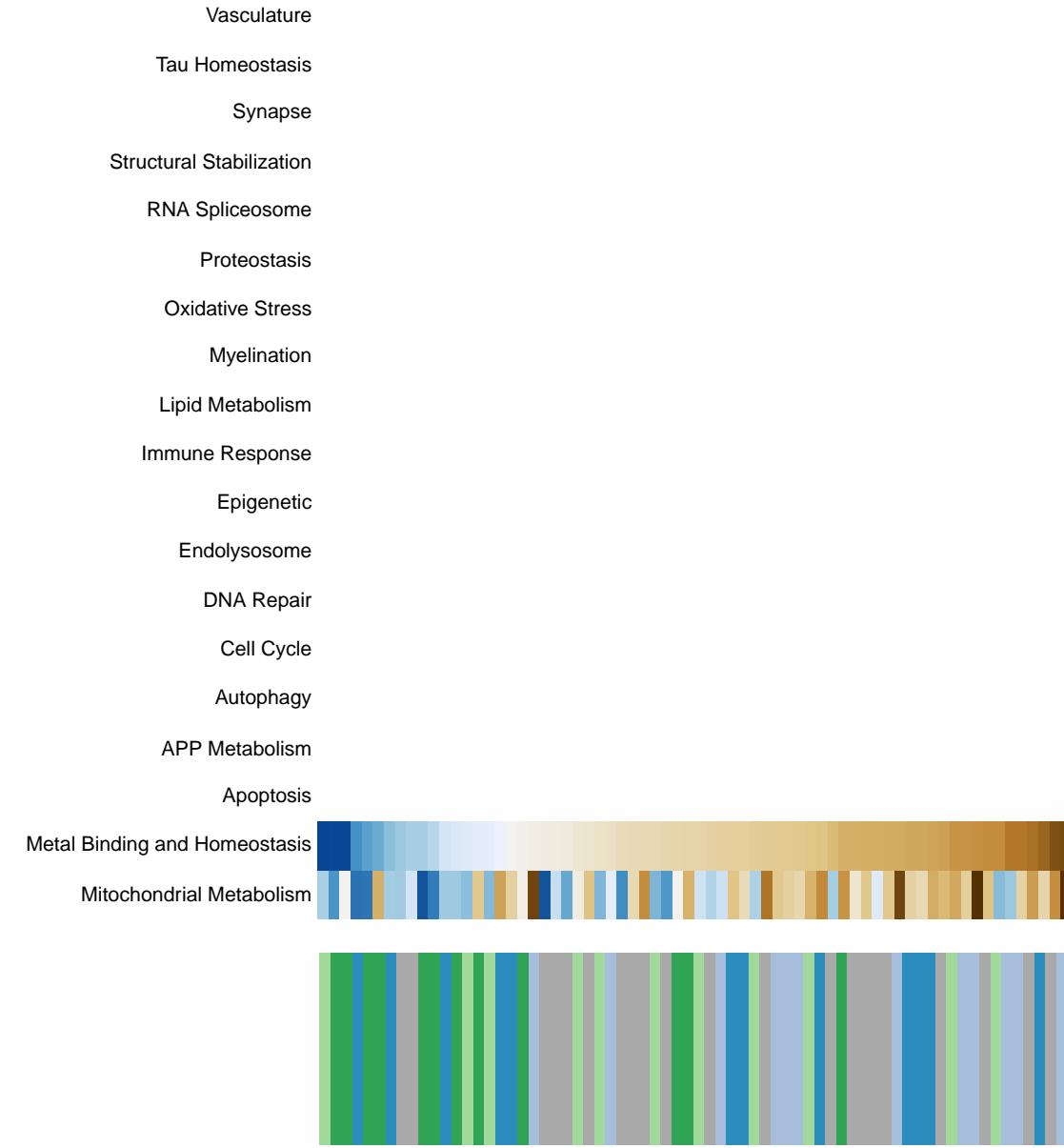
Decomposition



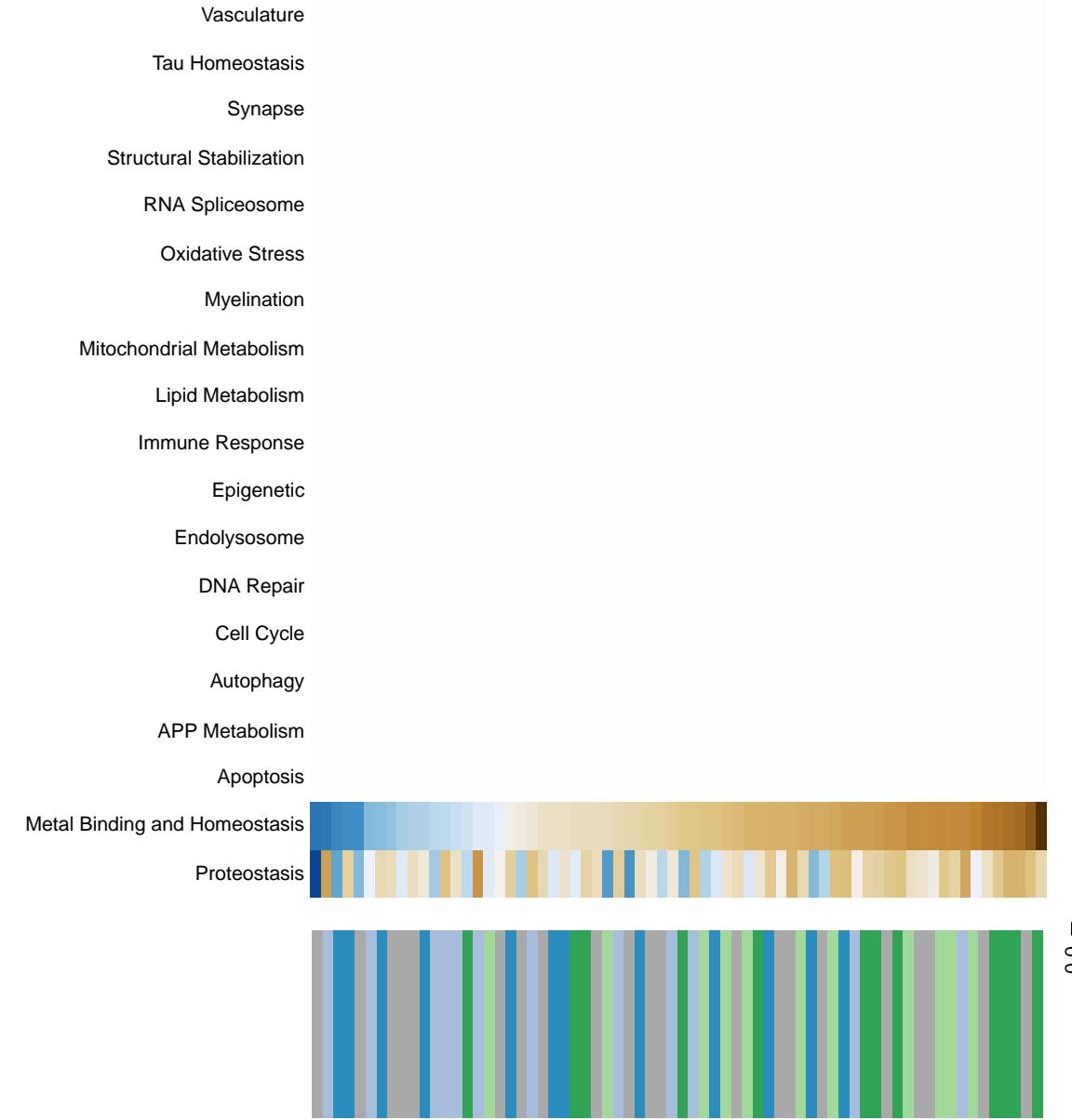
PC1 by genotype



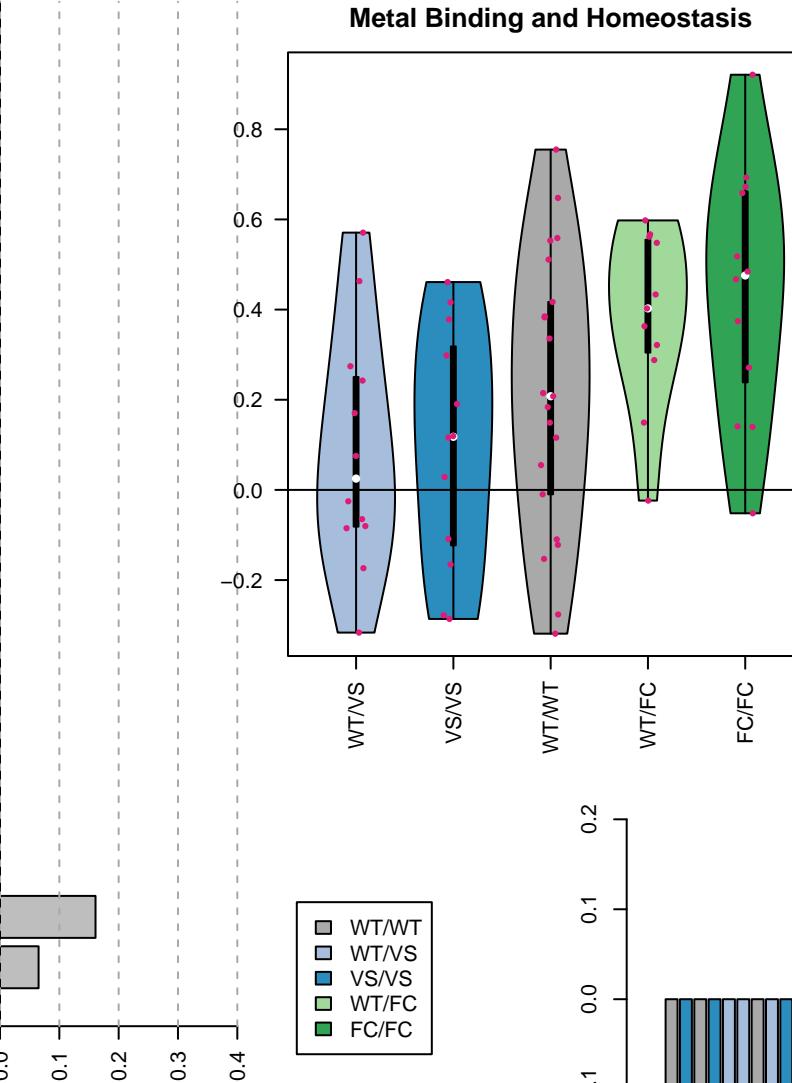
Arginine and proline metabolism



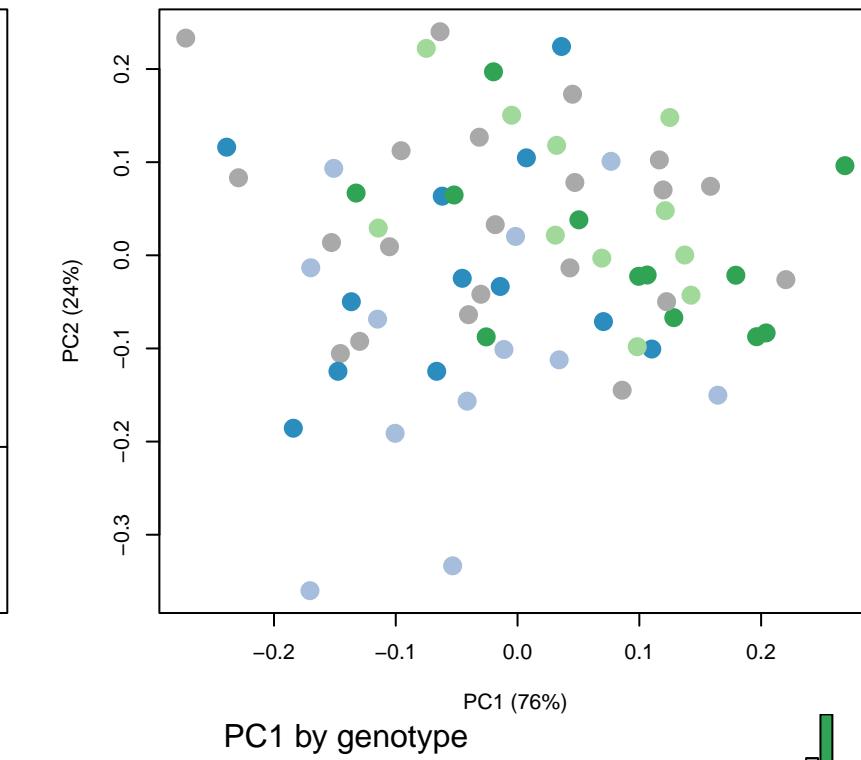
Various types of N-glycan biosynthesis



Metal Binding and Homeostasis



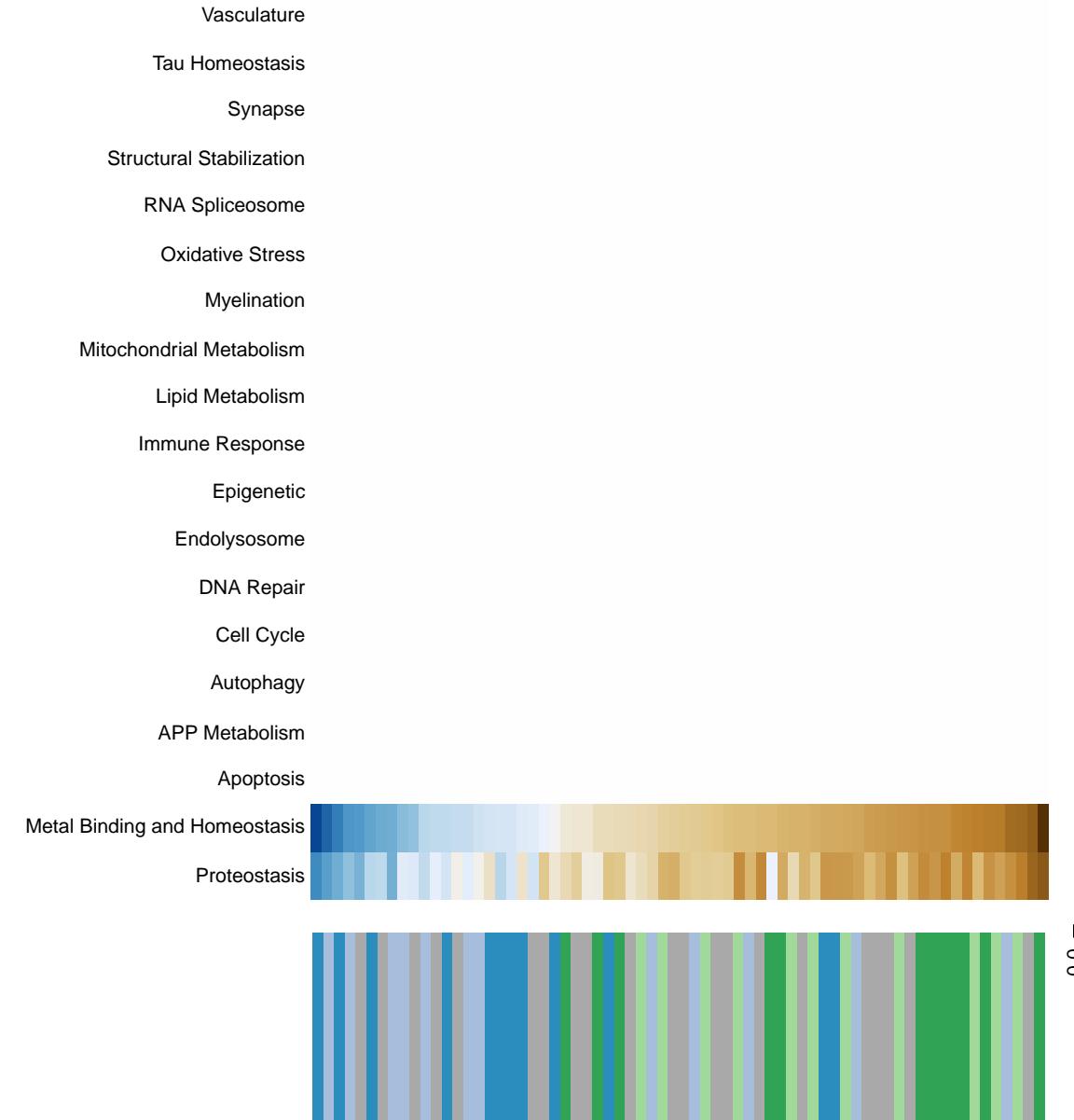
Decomposition



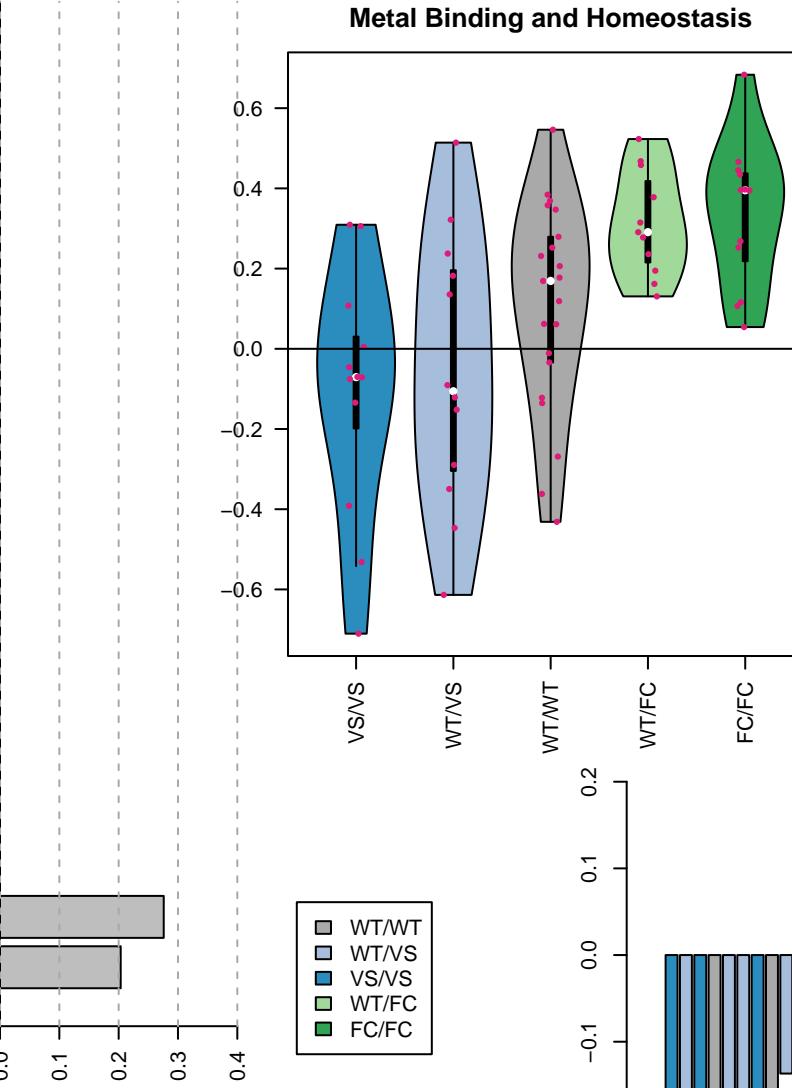
PC1 by genotype

$R^2 = 0.009$

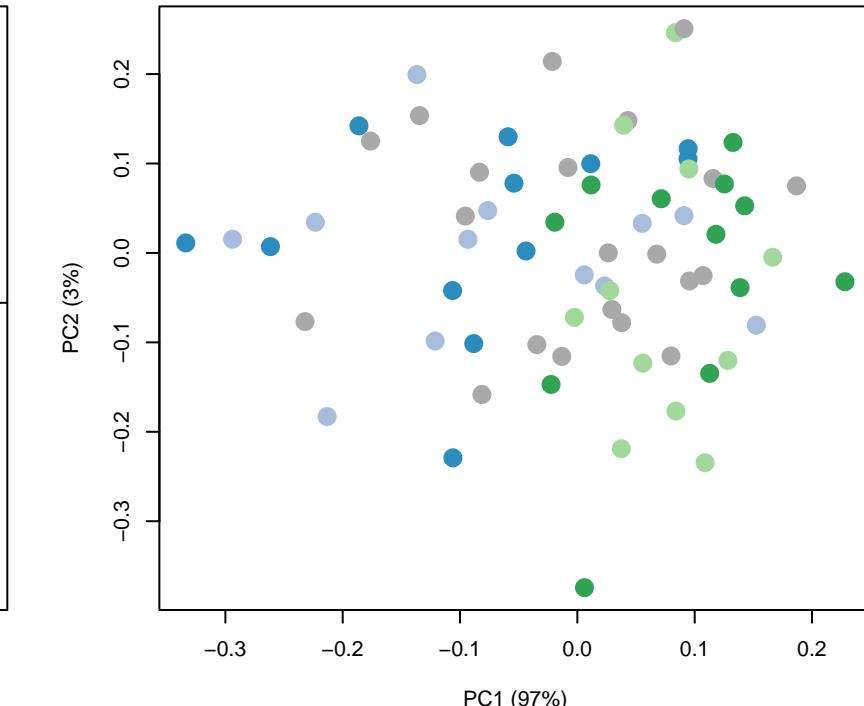
Mucin type O-glycan biosynthesis



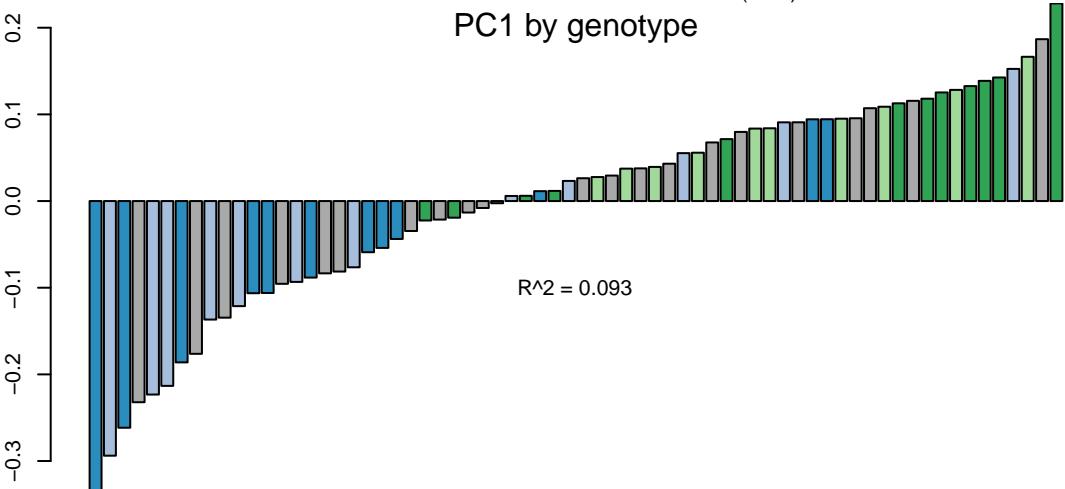
Metal Binding and Homeostasis



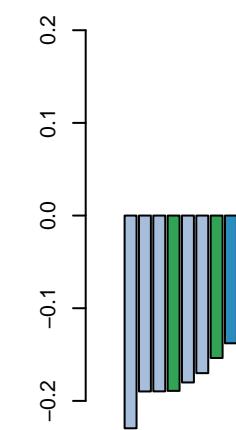
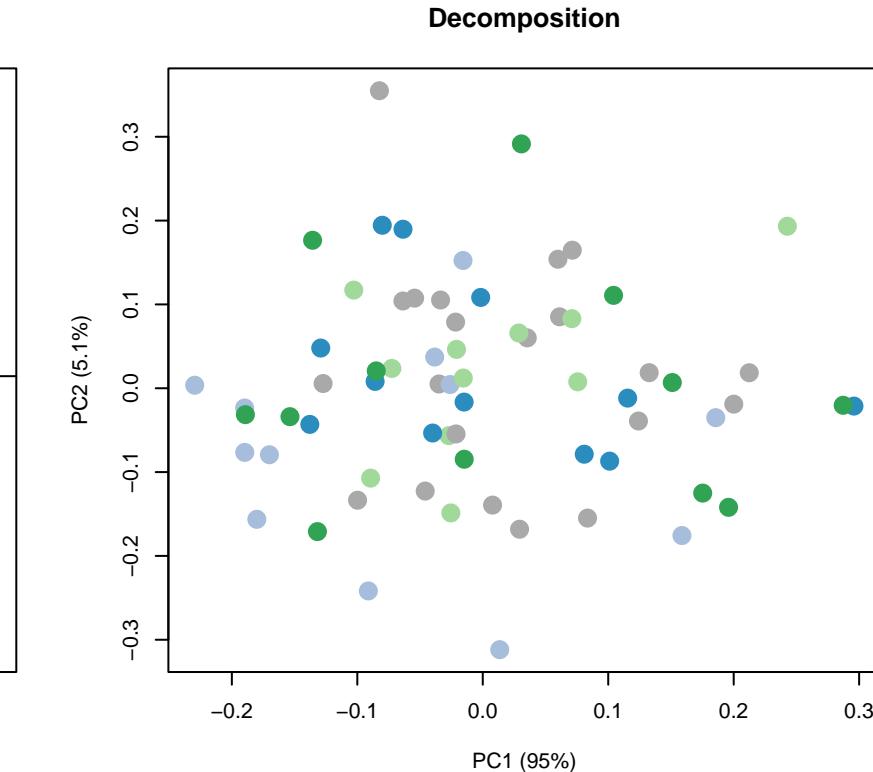
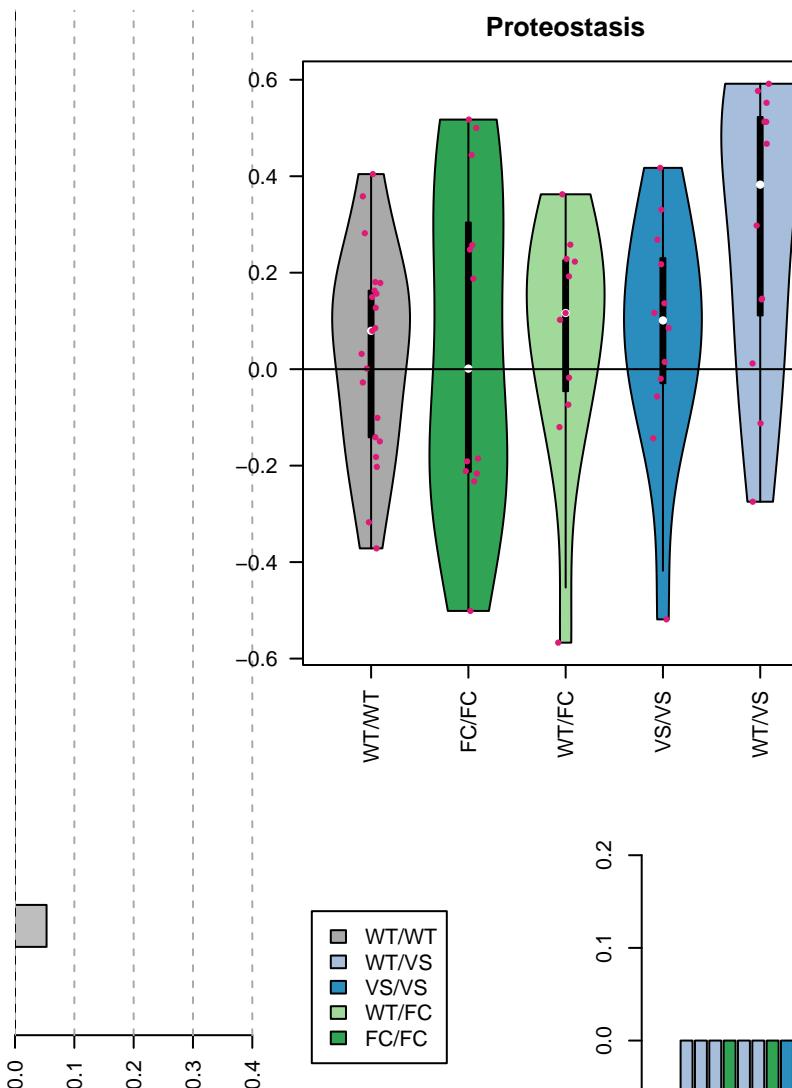
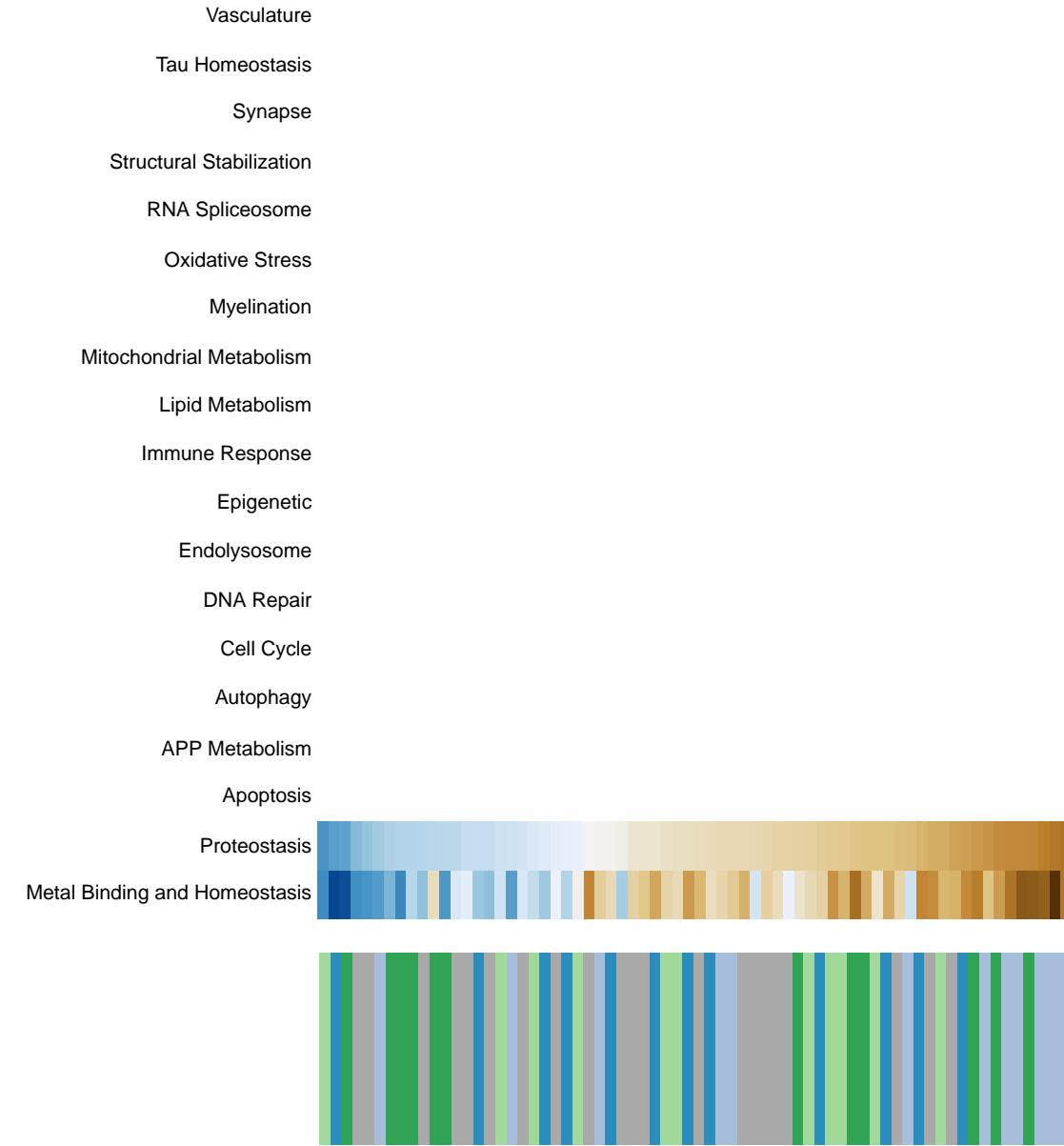
Decomposition



PC1 by genotype

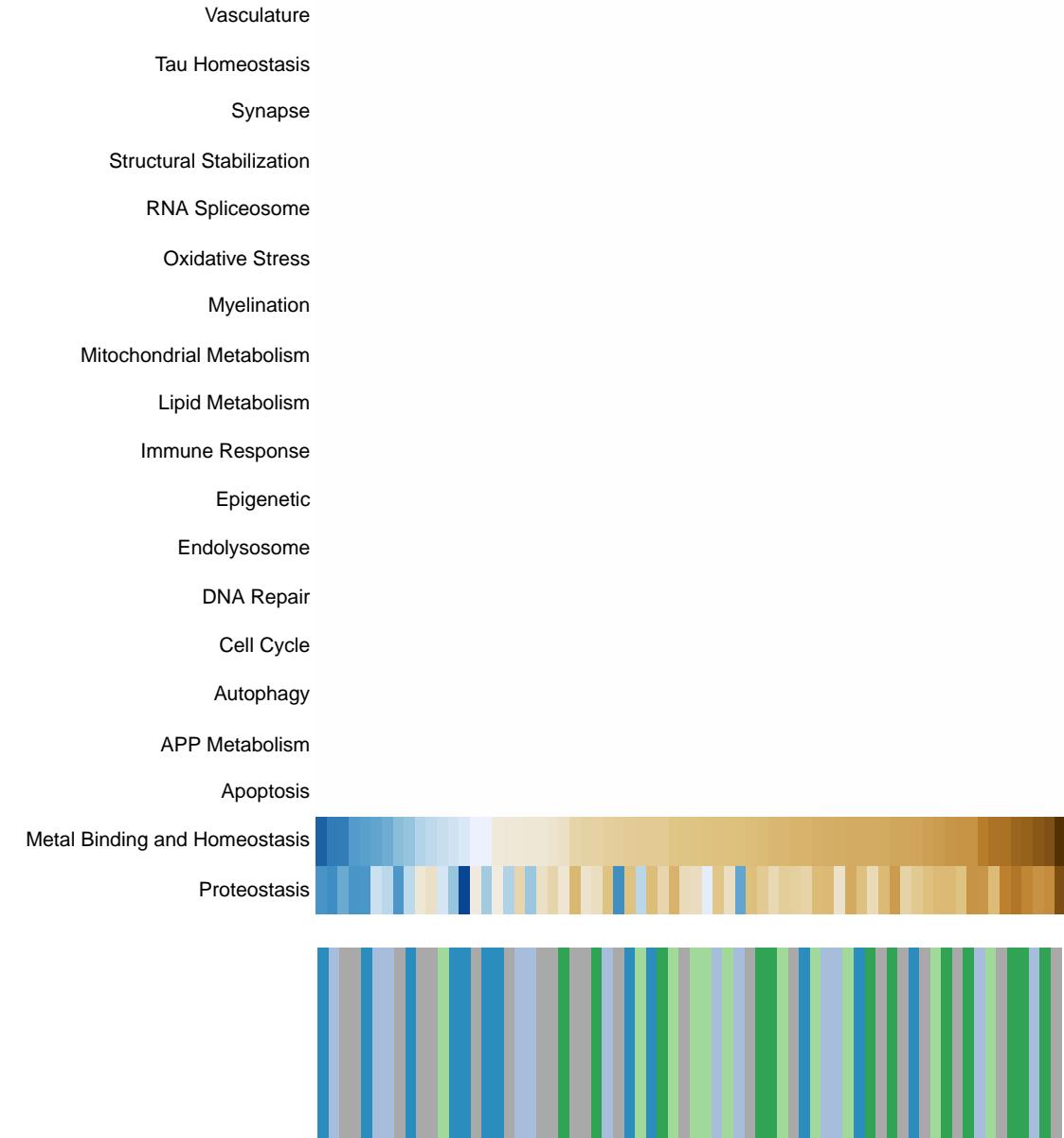


Mannose type O-glycan biosynthesis

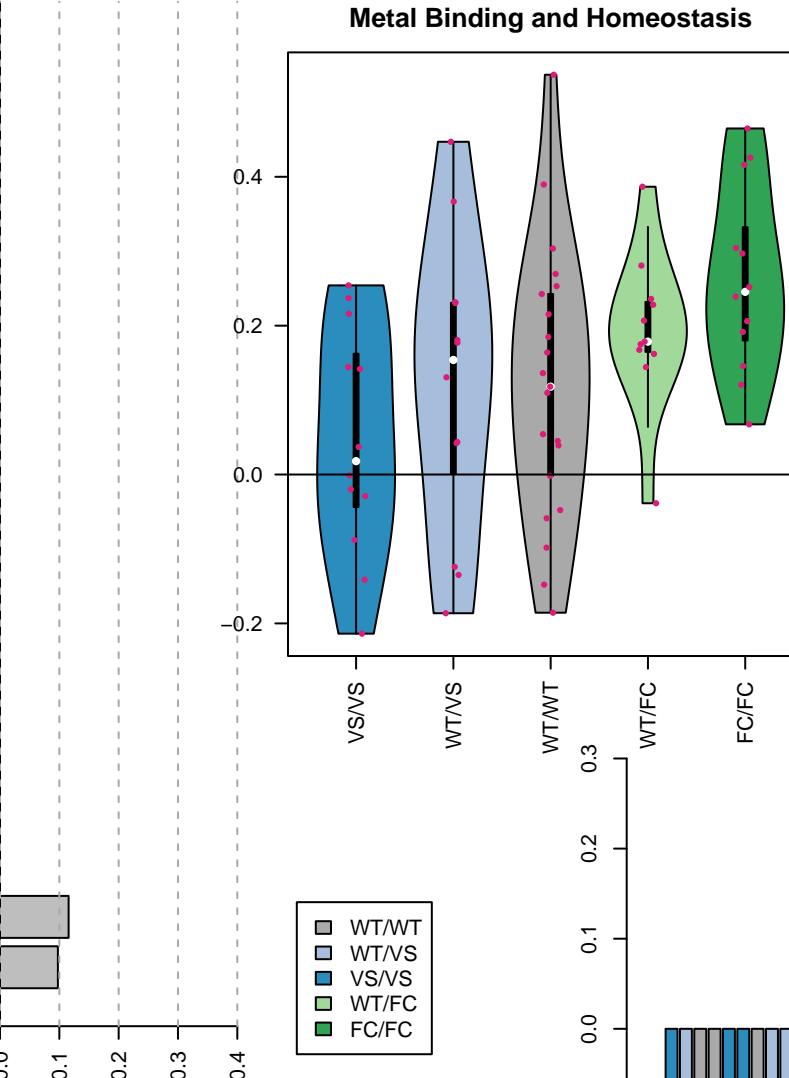


$R^2 = 0.022$

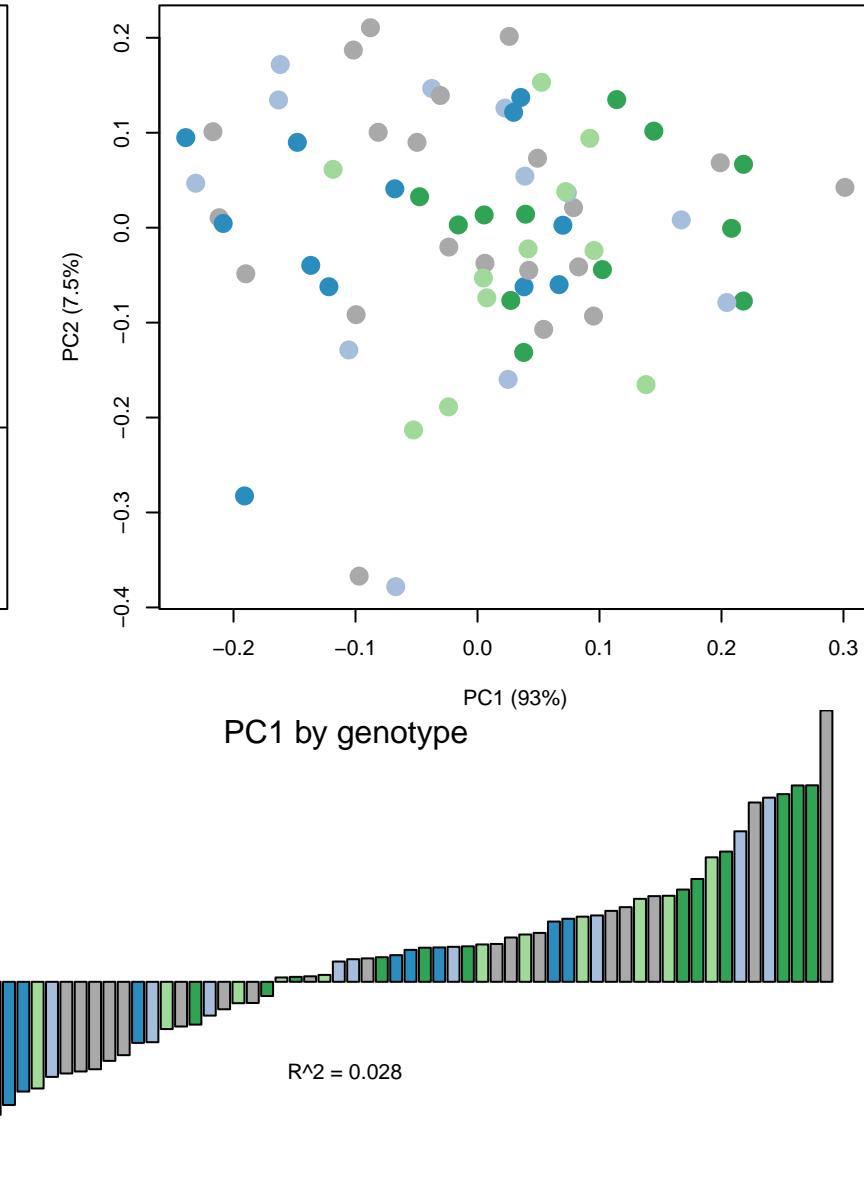
Other types of O-glycan biosynthesis



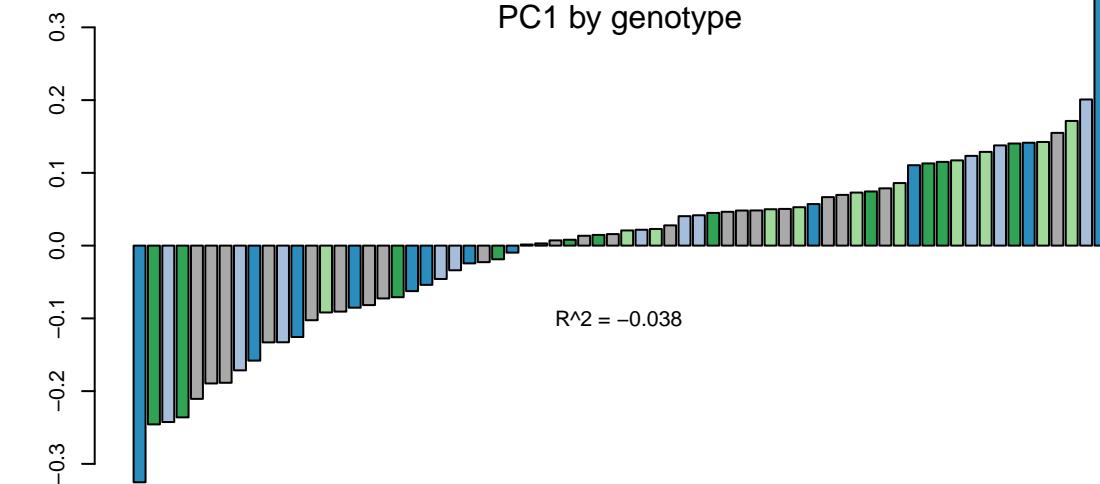
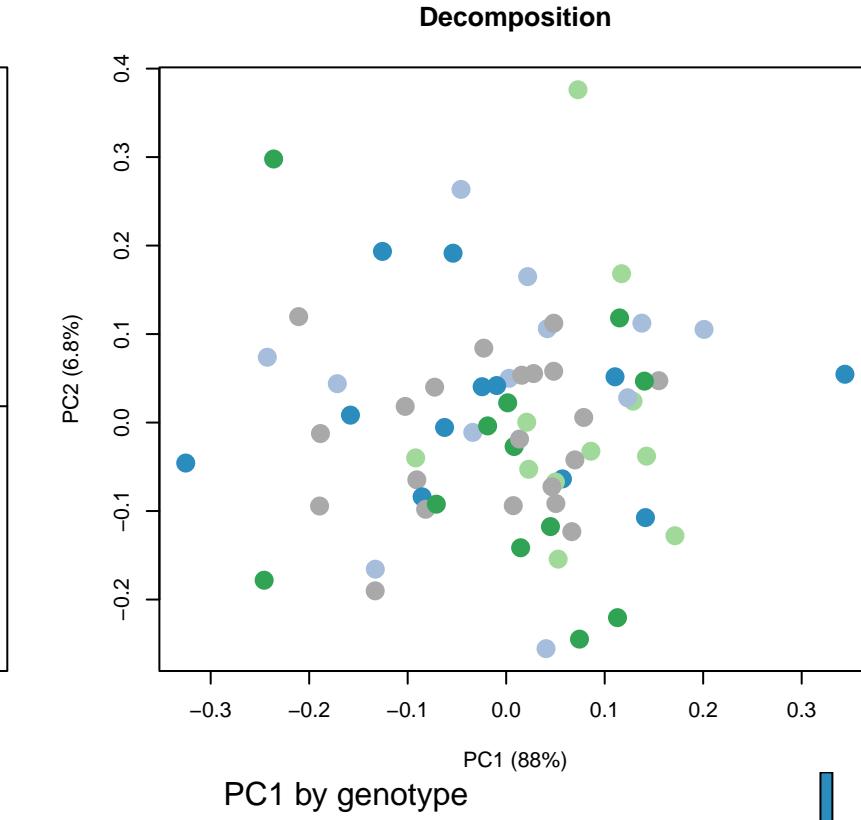
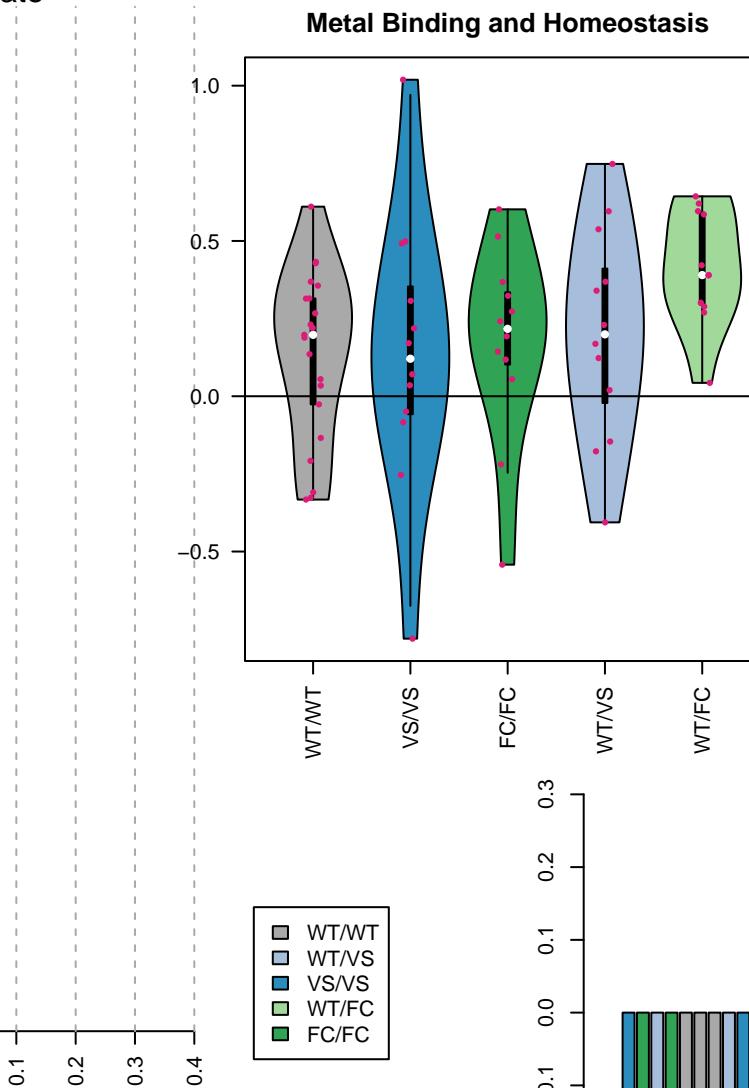
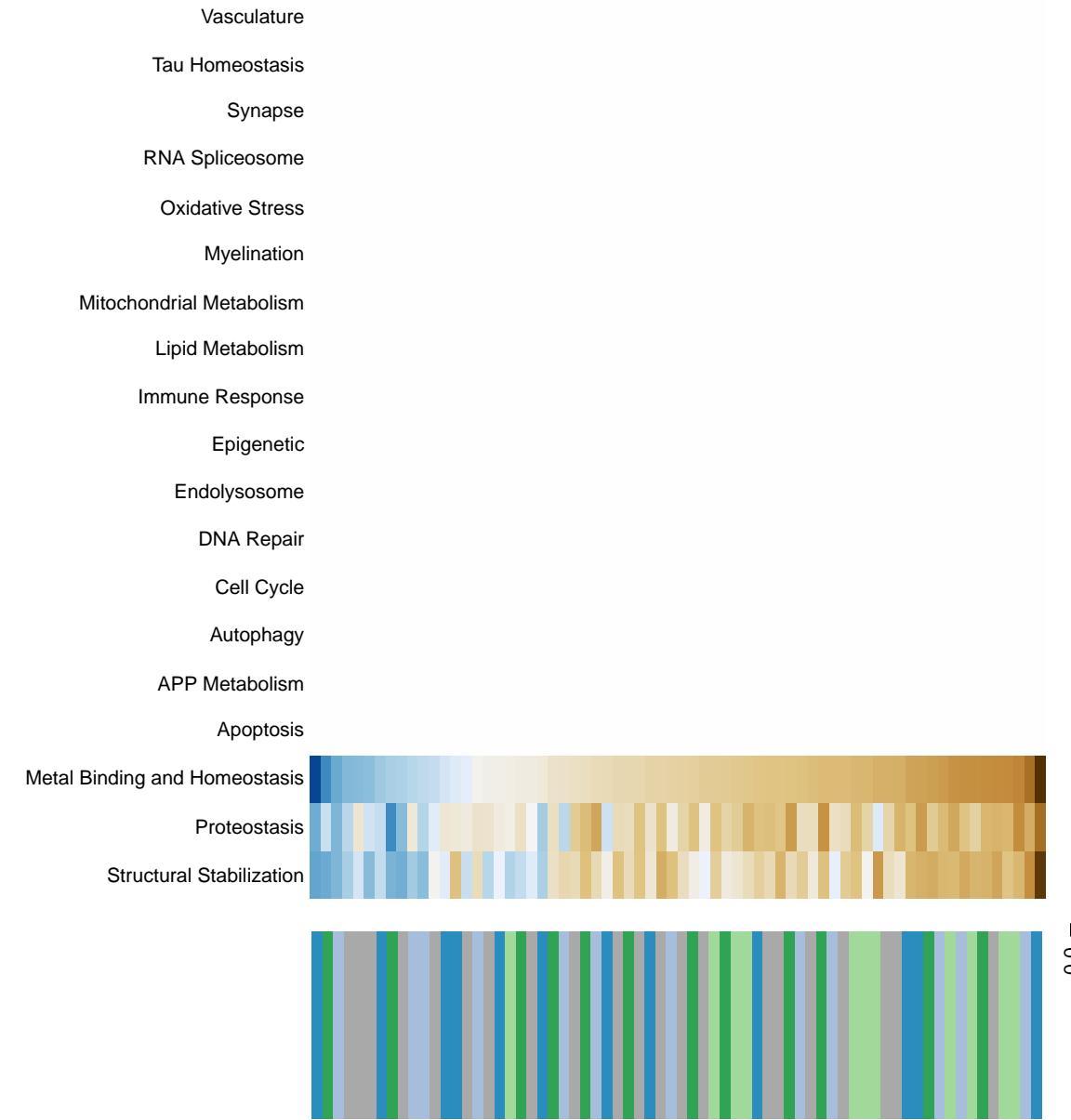
Metal Binding and Homeostasis



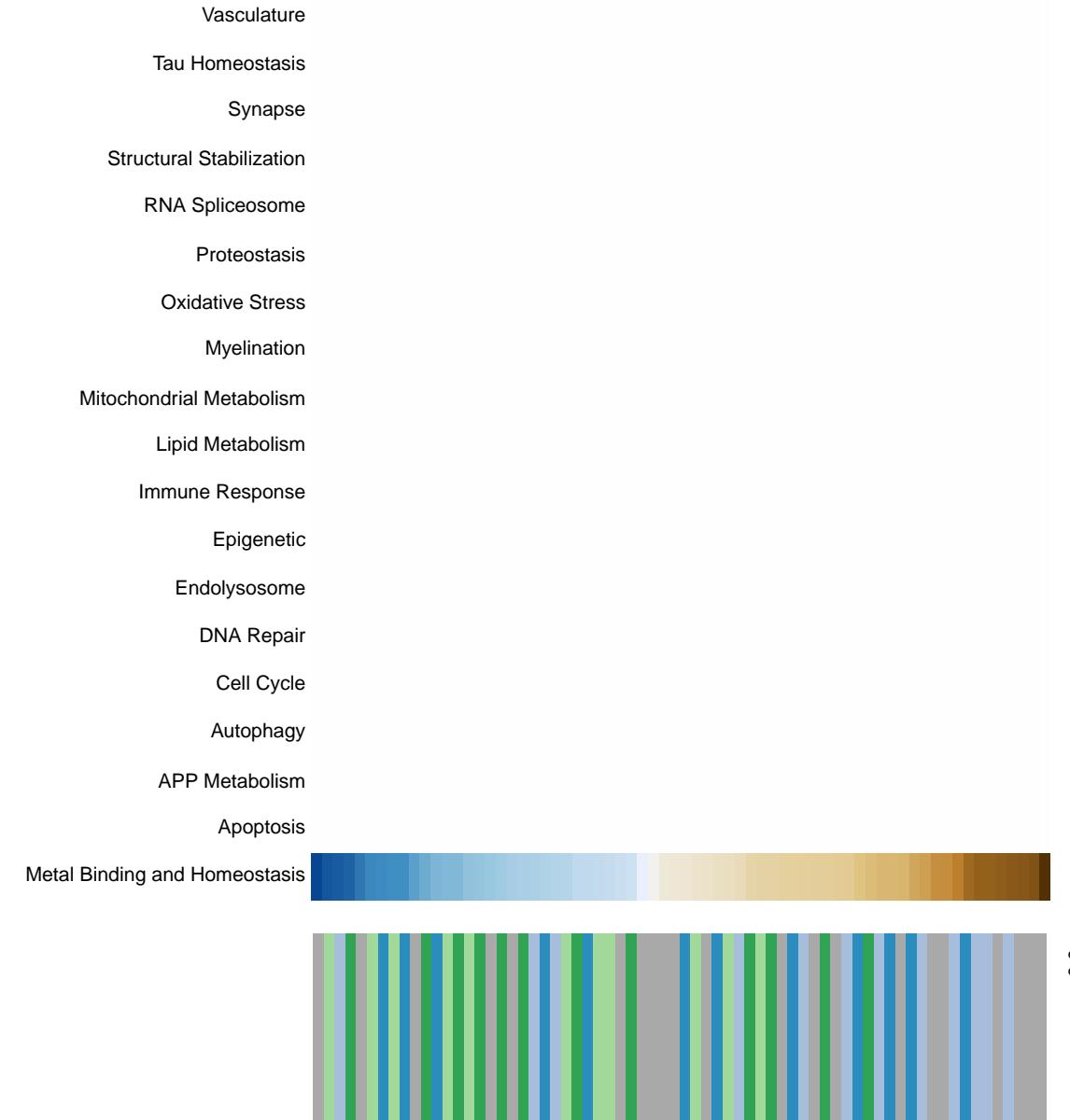
Decomposition



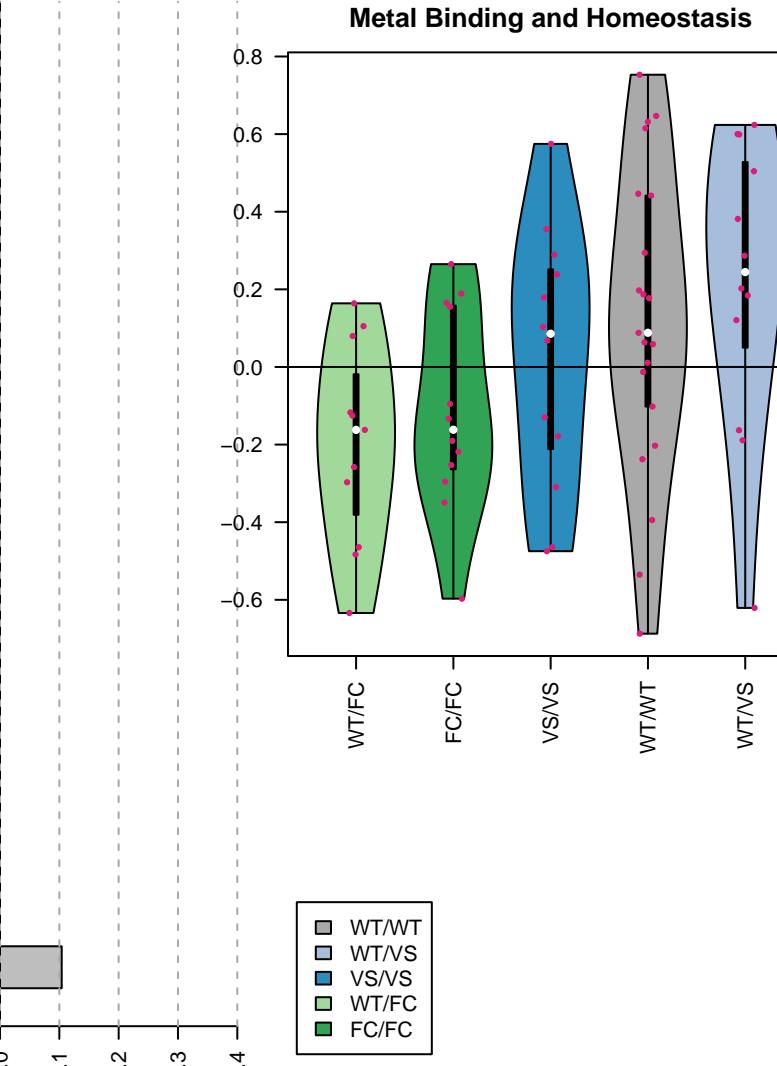
Glycosaminoglycan biosynthesis – chondroitin sulfate / dermatan sulfate



Folate biosynthesis



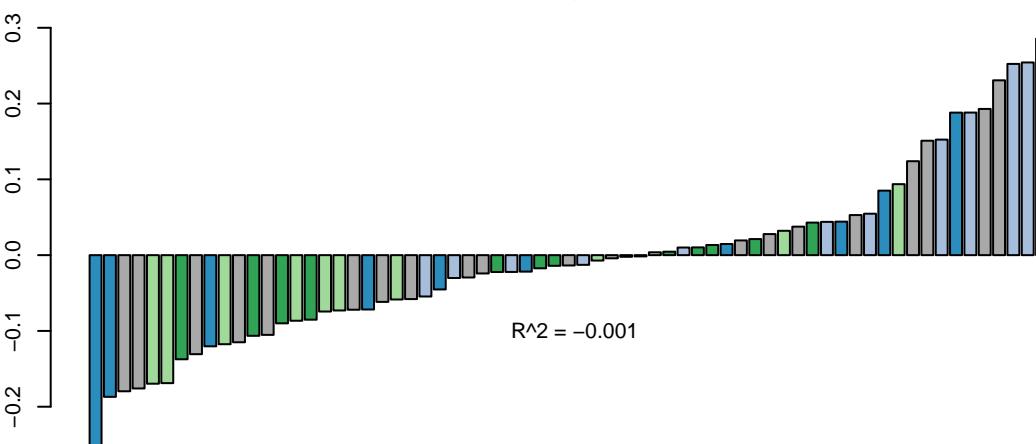
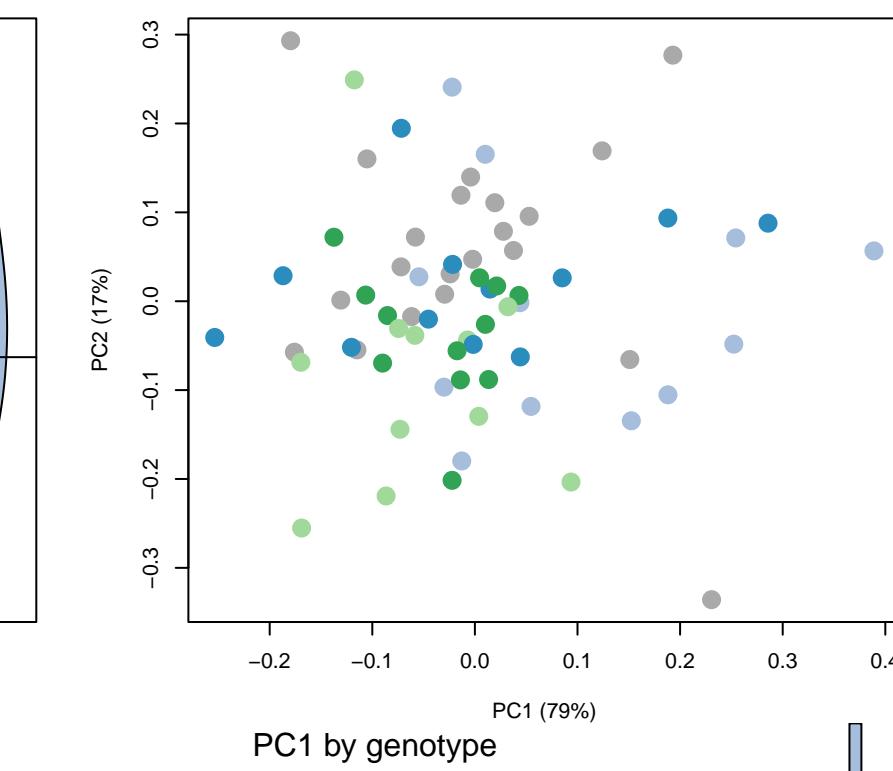
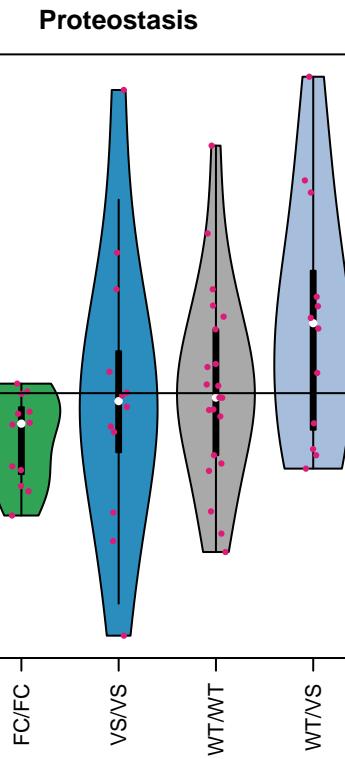
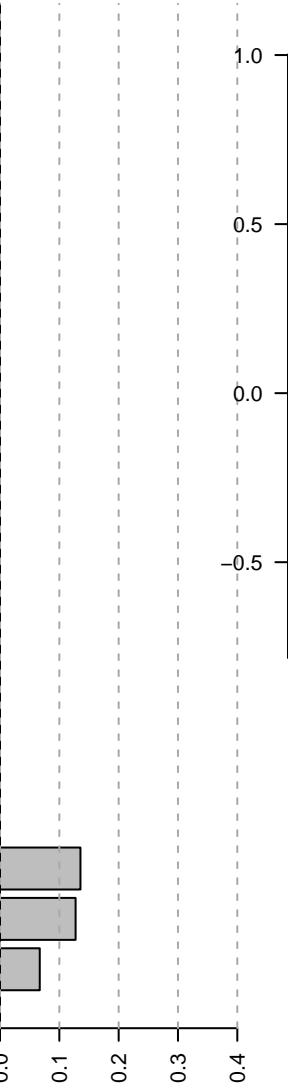
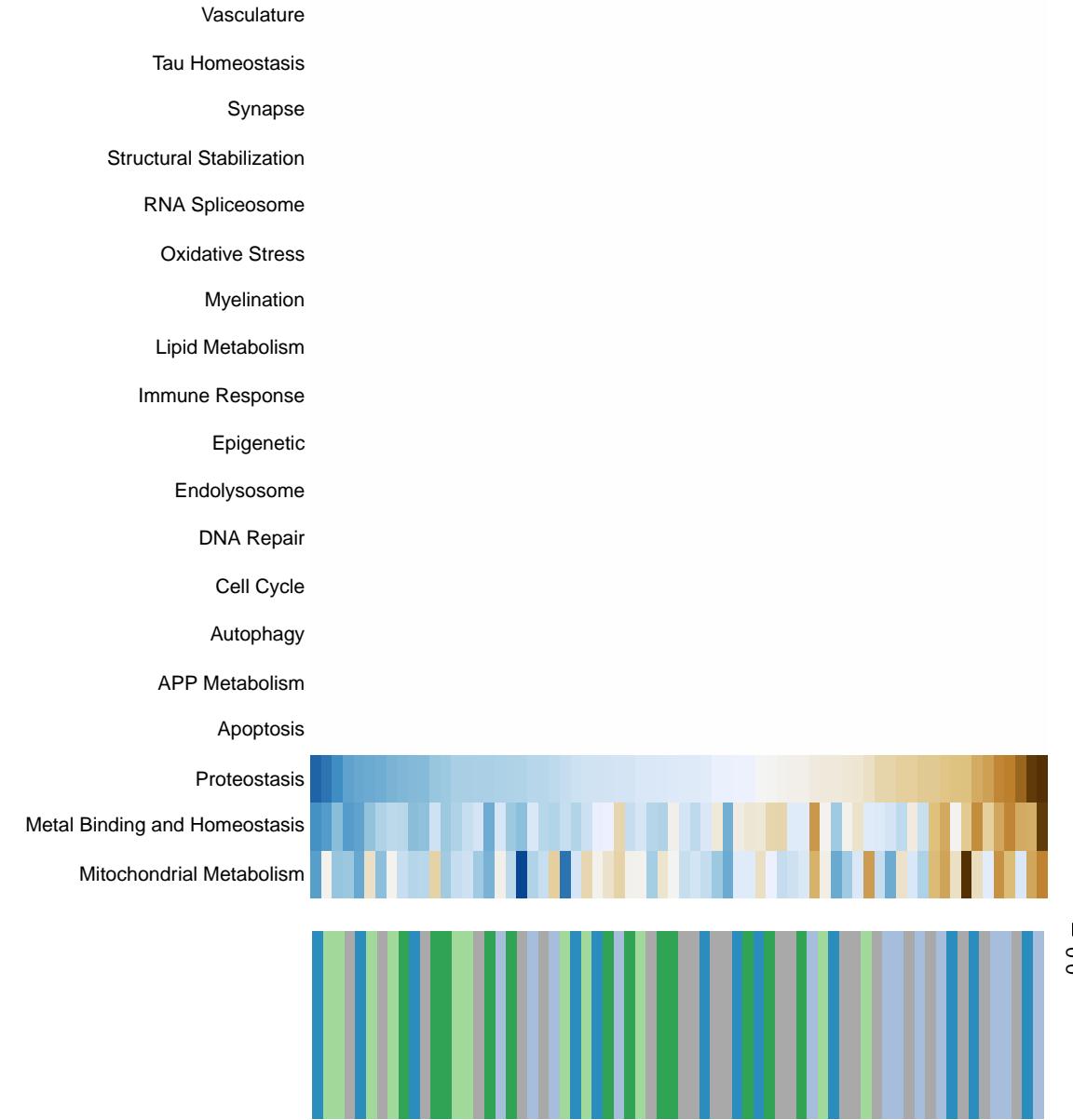
Metal Binding and Homeostasis



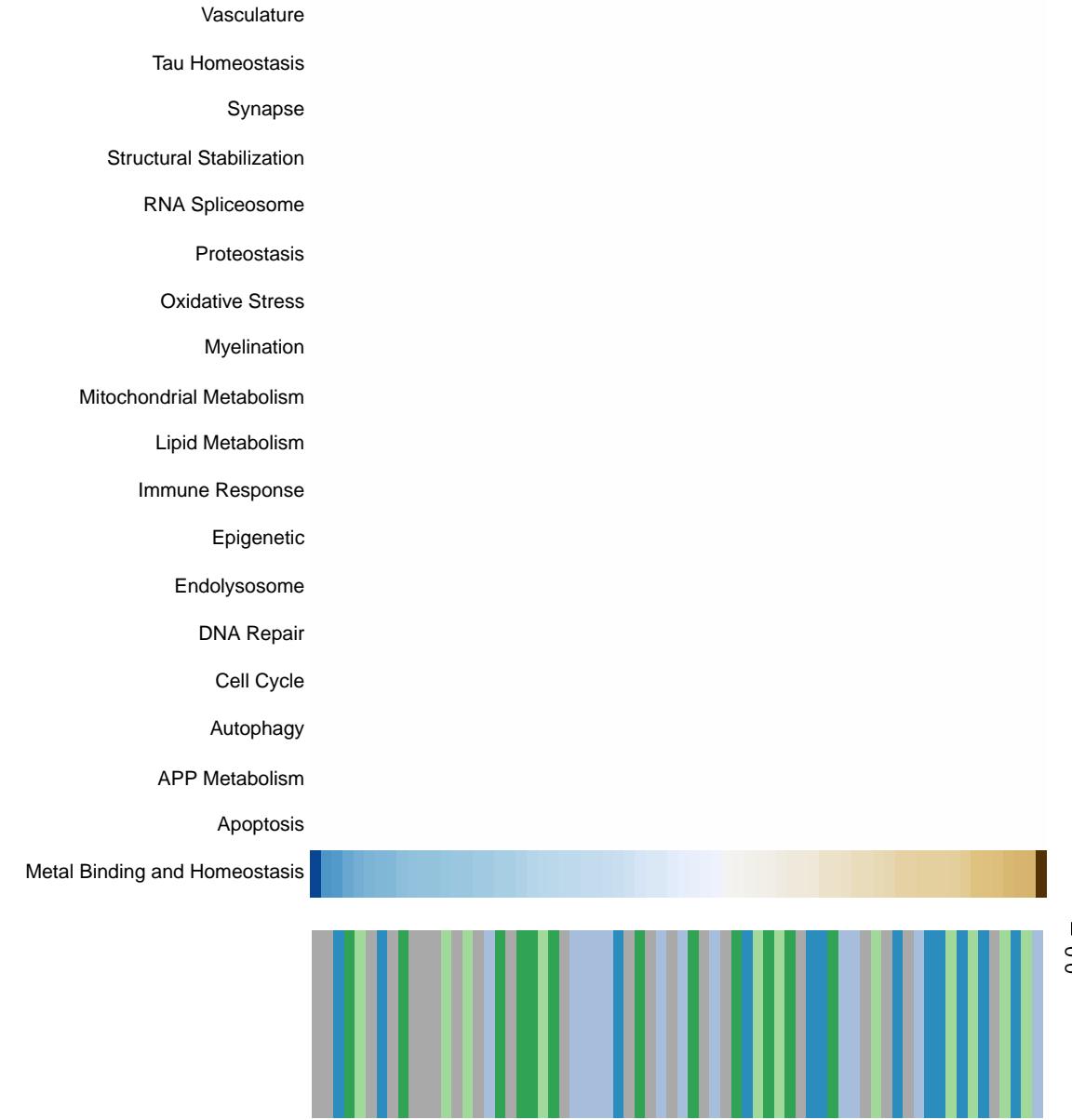
Not enough rows to decompose

Not enough rows to decompose

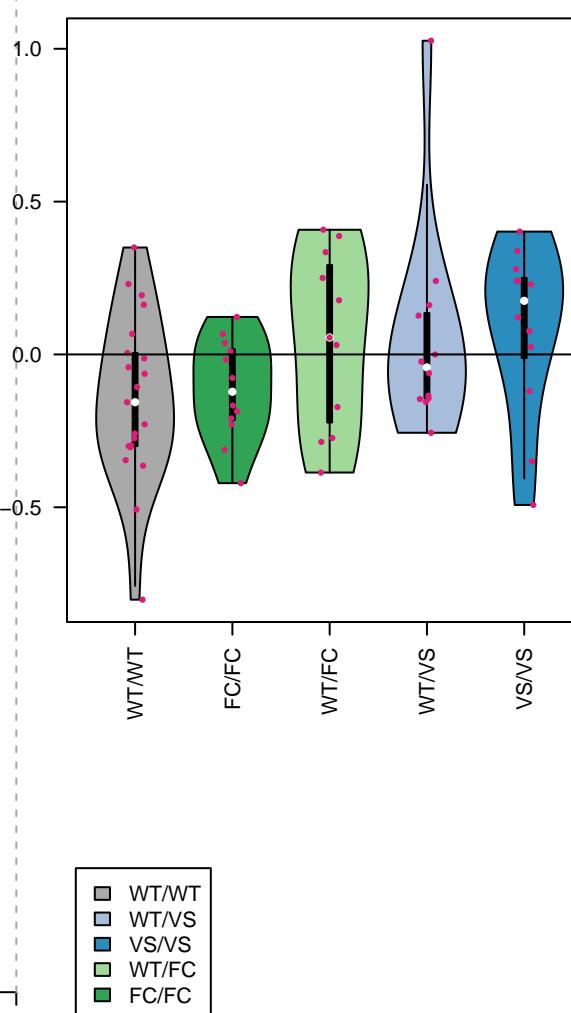
Porphyrin metabolism



Phototransduction



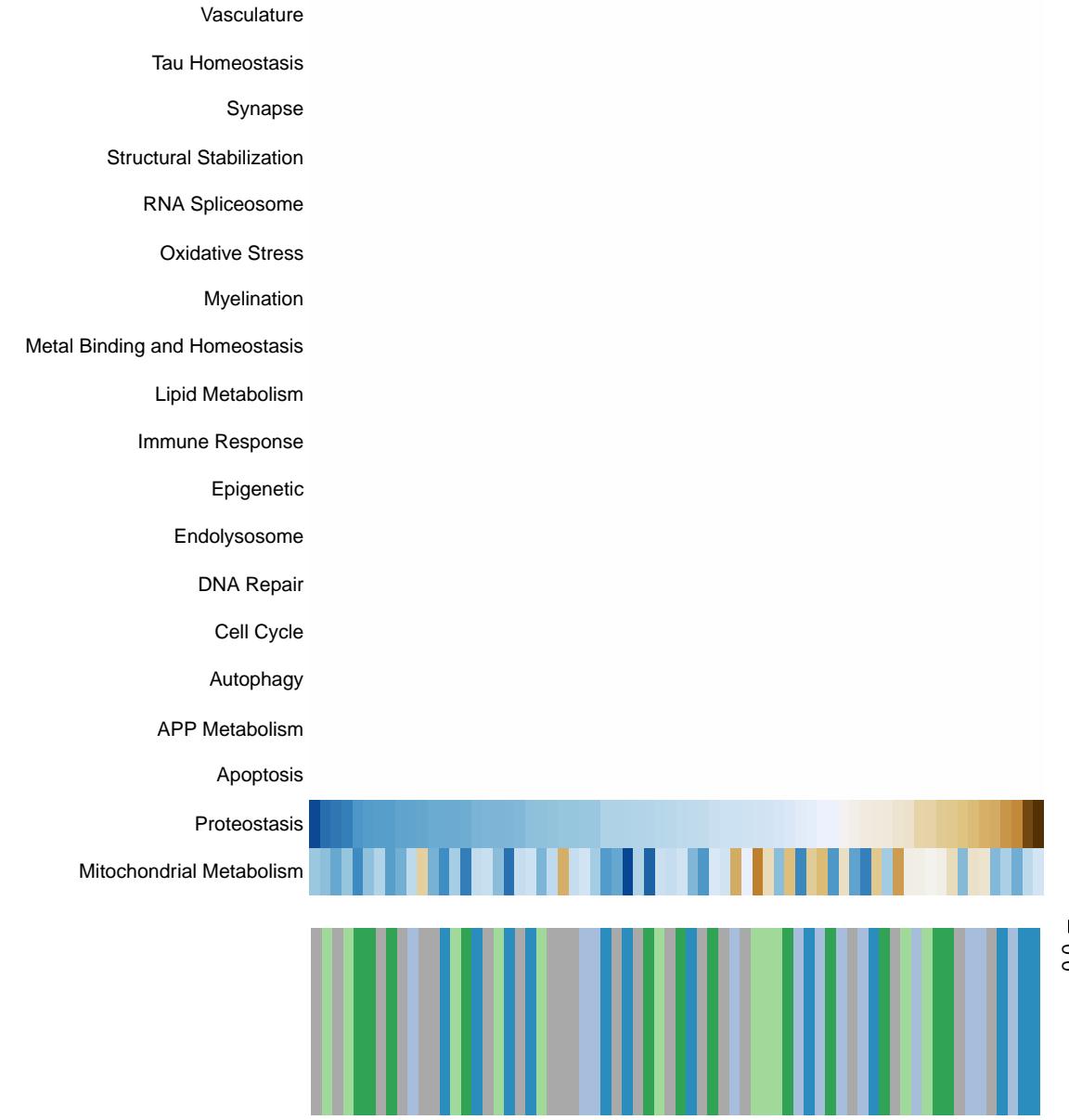
Metal Binding and Homeostasis



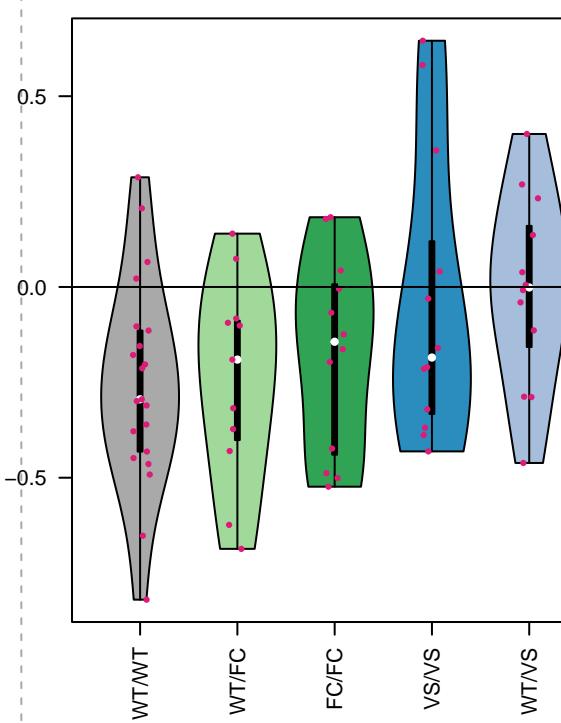
Not enough rows to decompose

Not enough rows to decompose

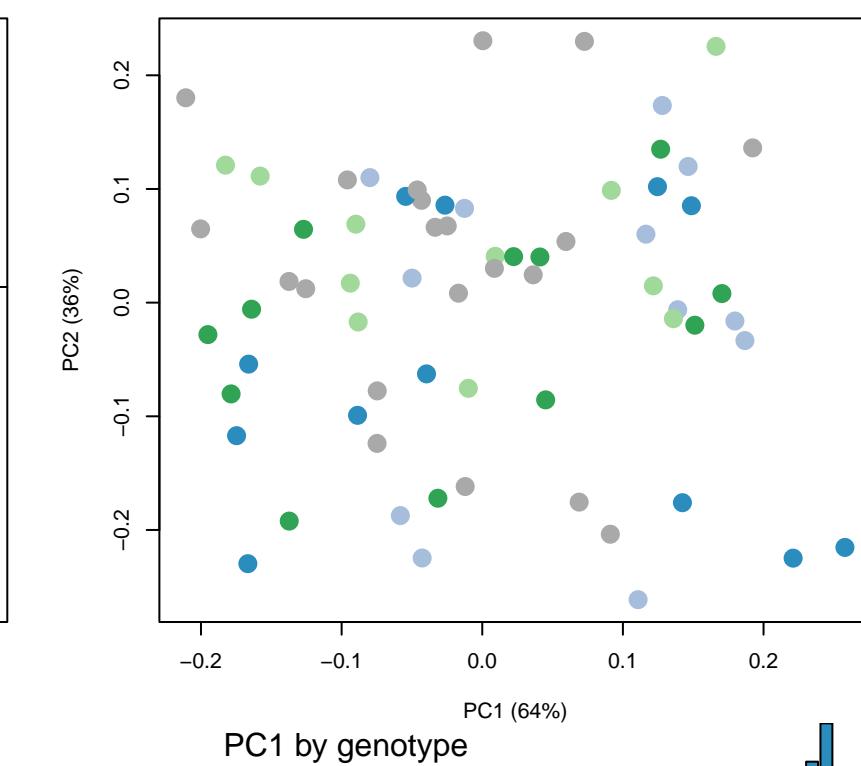
Biosynthesis of nucleotide sugars



Proteostasis

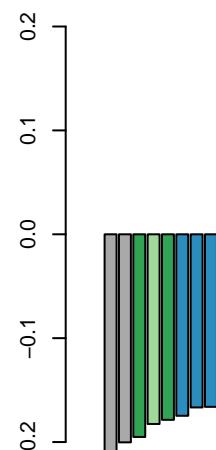


Decomposition

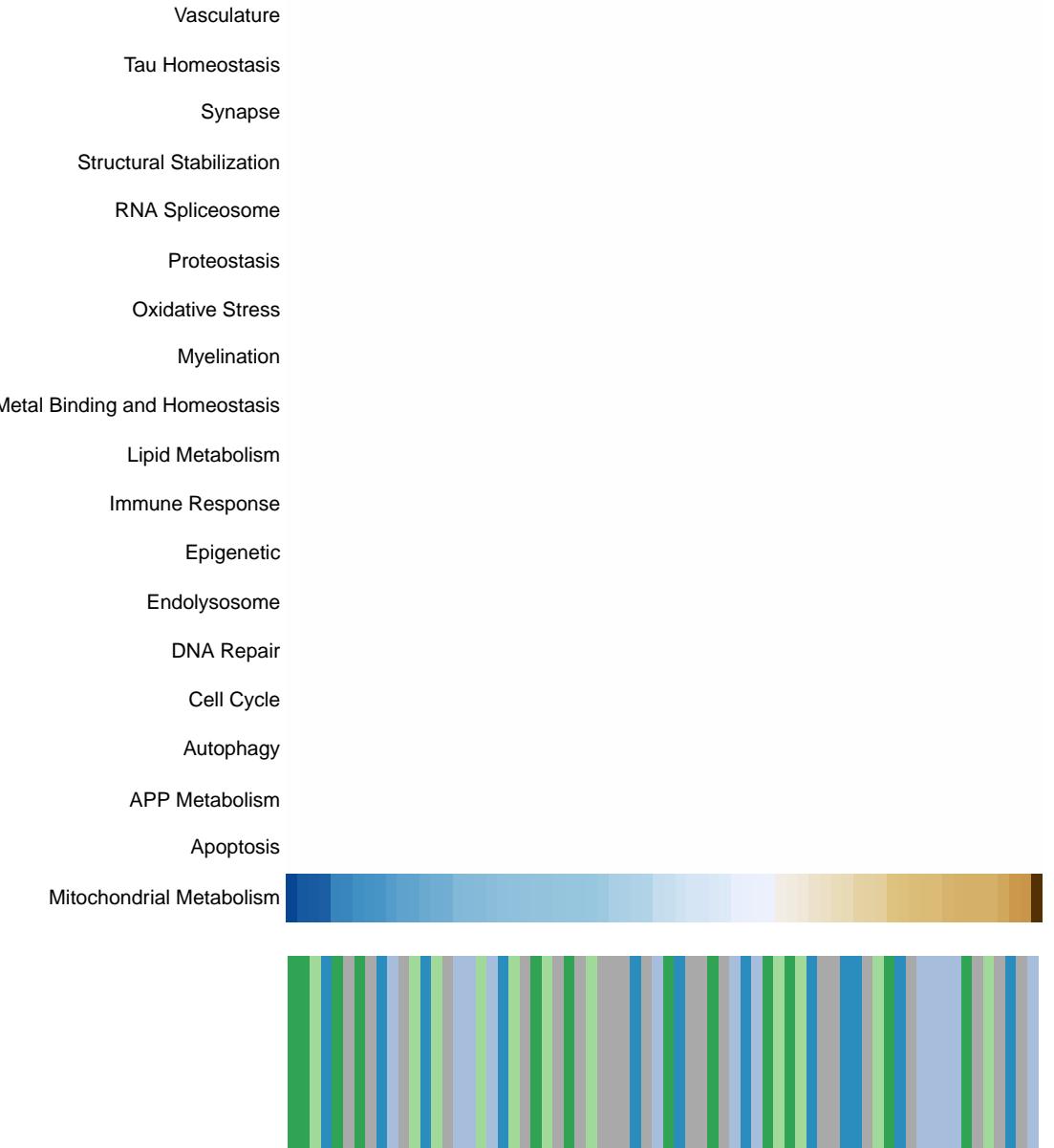


PC1 by genotype

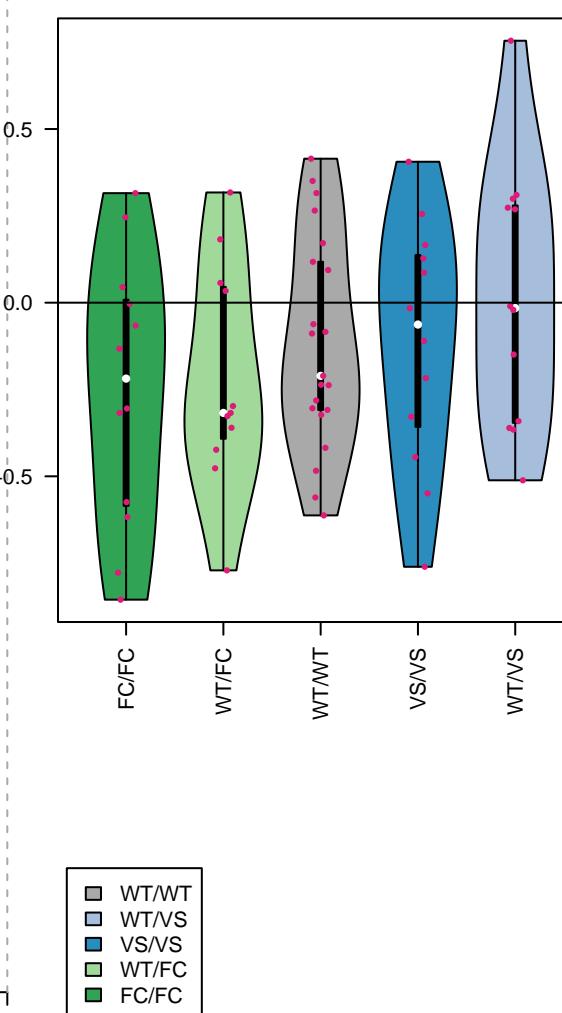
$R^2 = 0.078$



Galactose metabolism



Mitochondrial Metabolism

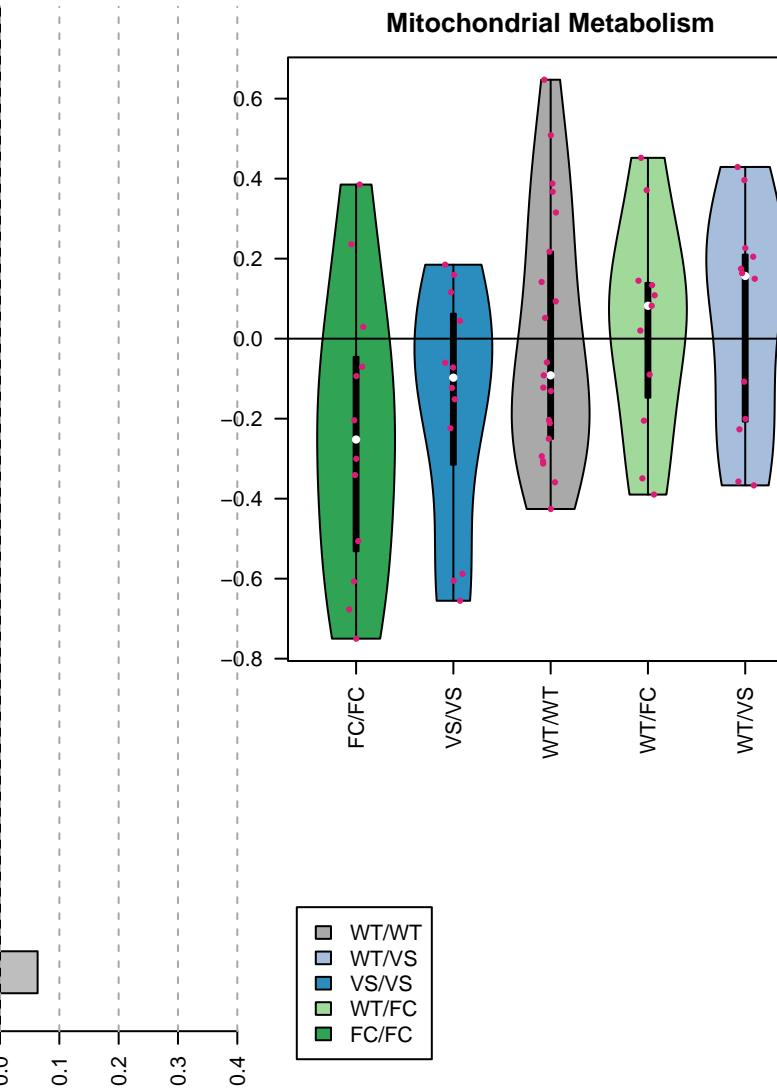
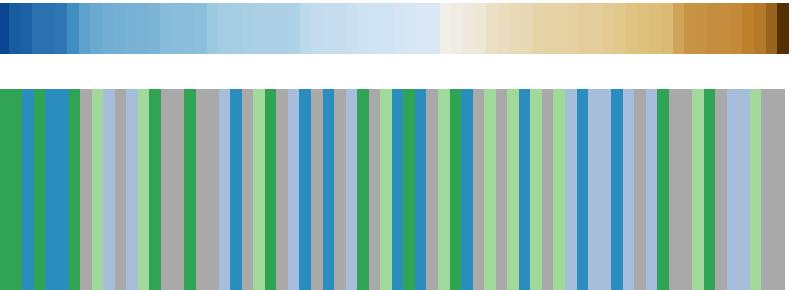


Not enough rows to decompose

Not enough rows to decompose

Starch and sucrose metabolism

Vasculature
Tau Homeostasis
Synapse
Structural Stabilization
RNA Spliceosome
Proteostasis
Oxidative Stress
Myelination
Metal Binding and Homeostasis
Lipid Metabolism
Immune Response
Epigenetic
Endolysosome
DNA Repair
Cell Cycle
Autophagy
APP Metabolism
Apoptosis
Mitochondrial Metabolism

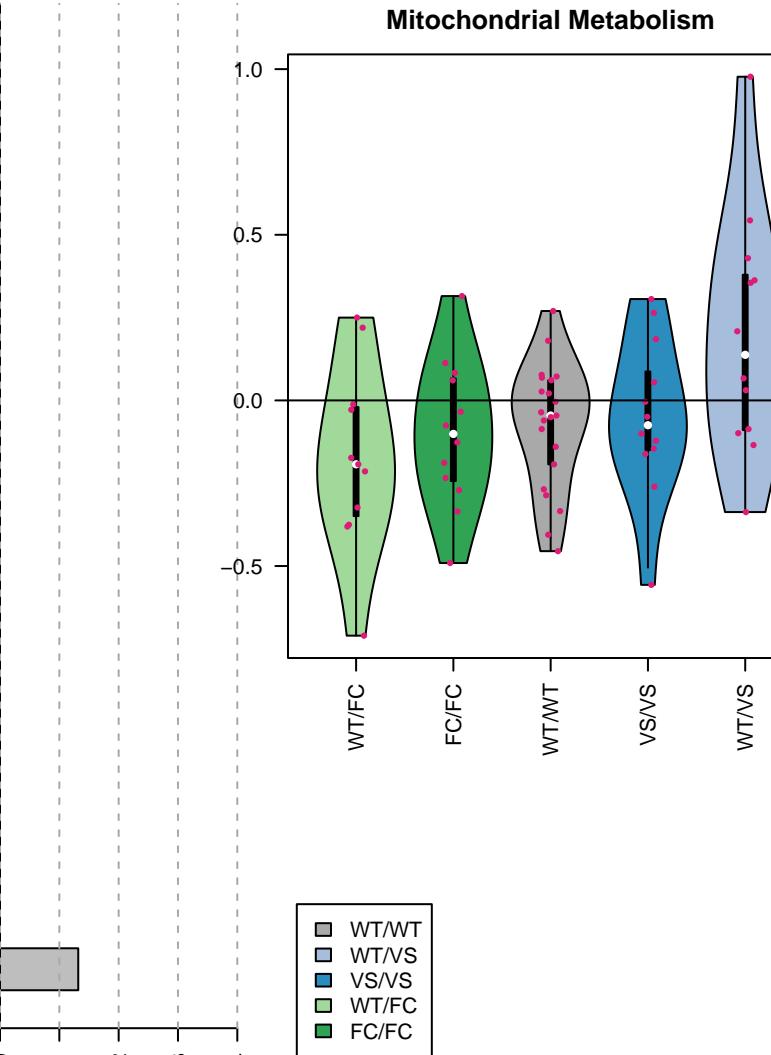
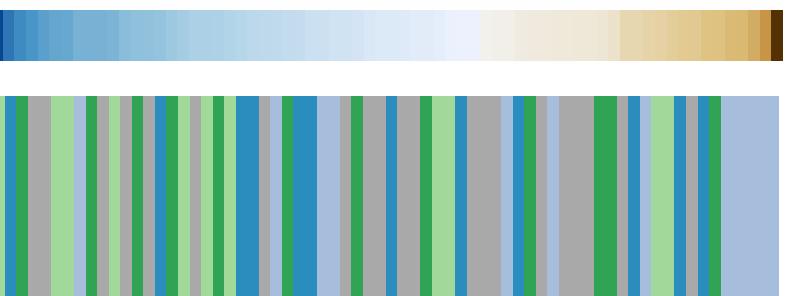


Not enough rows to decompose

Not enough rows to decompose

Glycine, serine and threonine metabolism

Vasculature
Tau Homeostasis
Synapse
Structural Stabilization
RNA Spliceosome
Proteostasis
Oxidative Stress
Myelination
Metal Binding and Homeostasis
Lipid Metabolism
Immune Response
Epigenetic
Endolysosome
DNA Repair
Cell Cycle
Autophagy
APP Metabolism
Apoptosis
Mitochondrial Metabolism

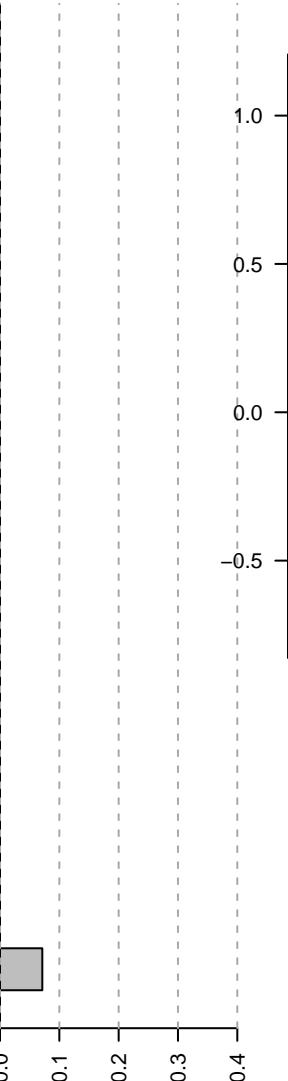
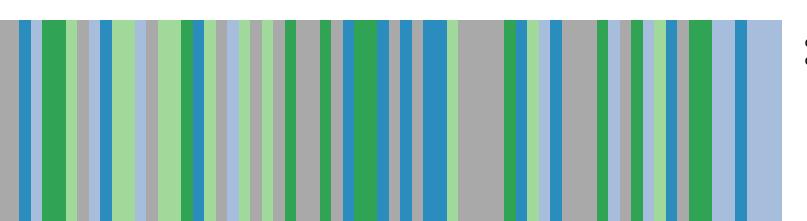


Not enough rows to decompose

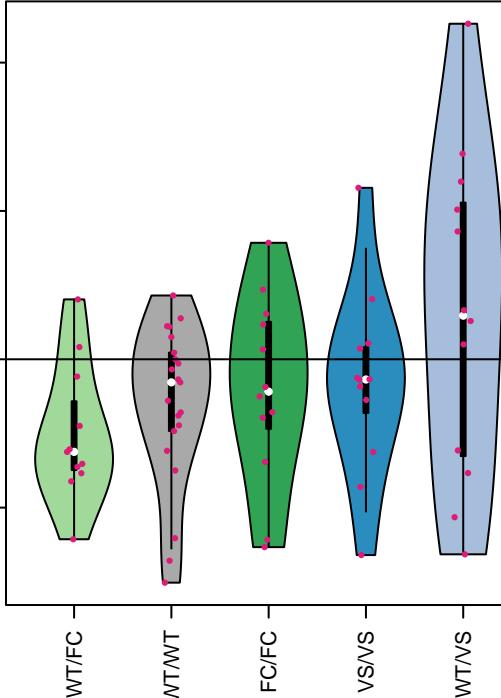
Not enough rows to decompose

Lipoic acid metabolism

Vasculature
Tau Homeostasis
Synapse
Structural Stabilization
RNA Spliceosome
Proteostasis
Oxidative Stress
Myelination
Metal Binding and Homeostasis
Lipid Metabolism
Immune Response
Epigenetic
Endolysosome
DNA Repair
Cell Cycle
Autophagy
APP Metabolism
Apoptosis
Mitochondrial Metabolism



Mitochondrial Metabolism

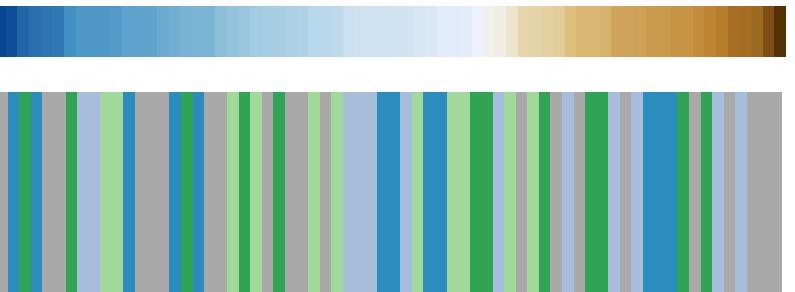


Not enough rows to decompose

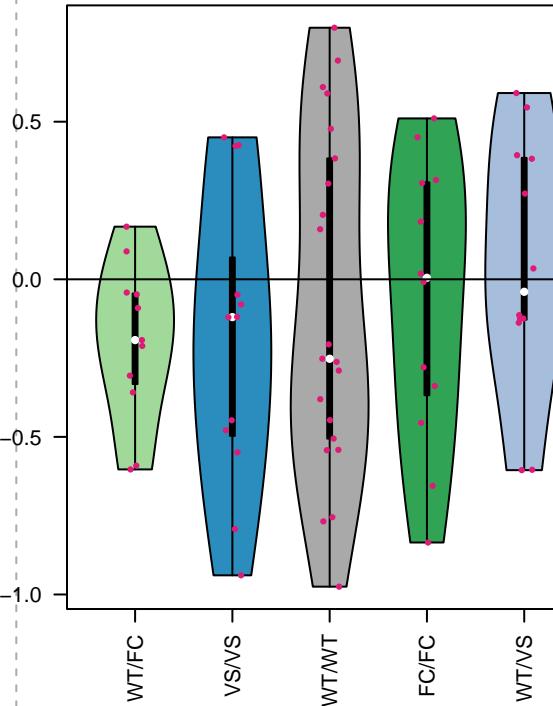
Not enough rows to decompose

One carbon pool by folate

Vasculature
Tau Homeostasis
Synapse
Structural Stabilization
RNA Spliceosome
Proteostasis
Oxidative Stress
Myelination
Metal Binding and Homeostasis
Lipid Metabolism
Immune Response
Epigenetic
Endolysosome
DNA Repair
Cell Cycle
Autophagy
APP Metabolism
Apoptosis
Mitochondrial Metabolism



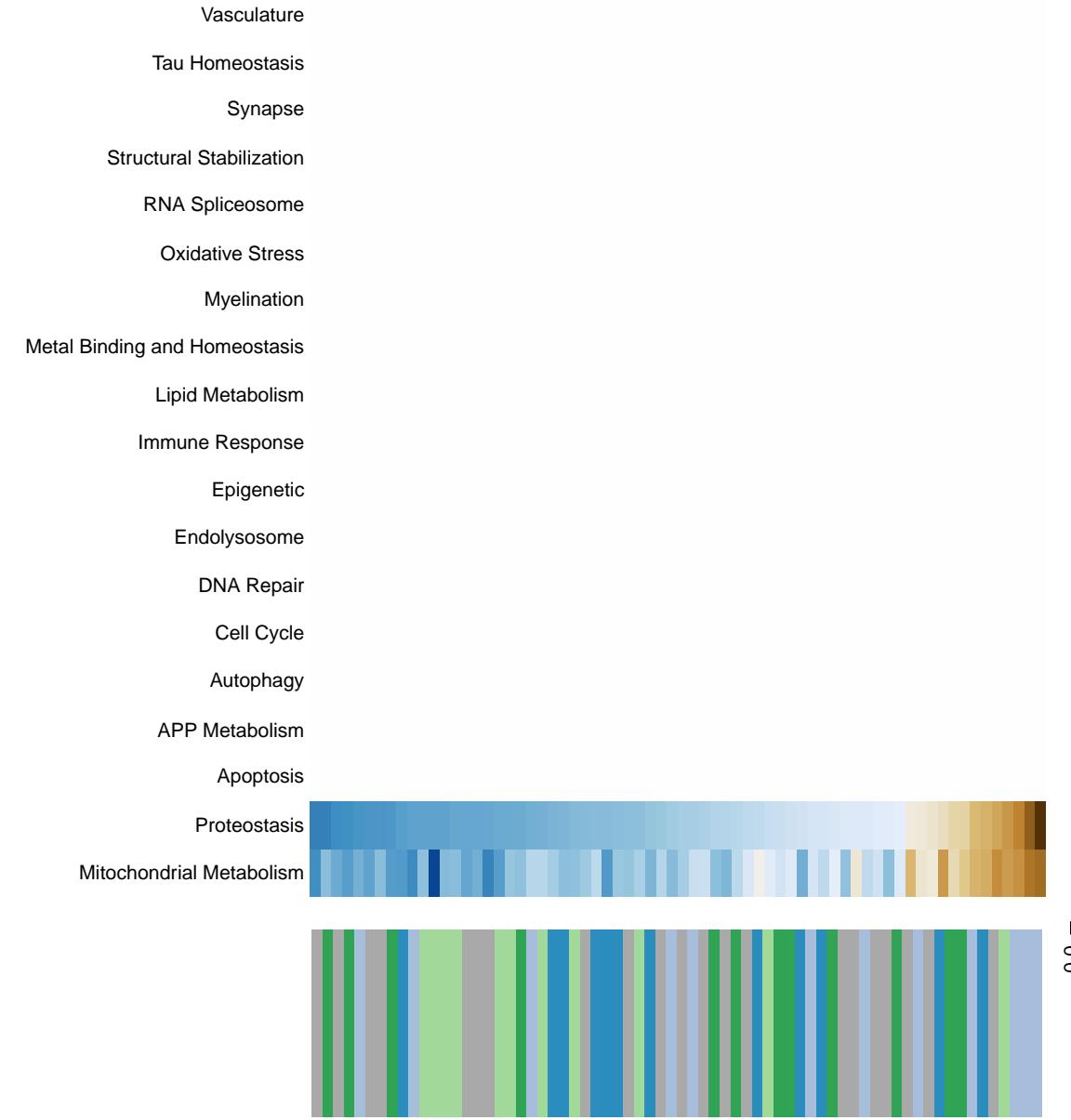
Mitochondrial Metabolism



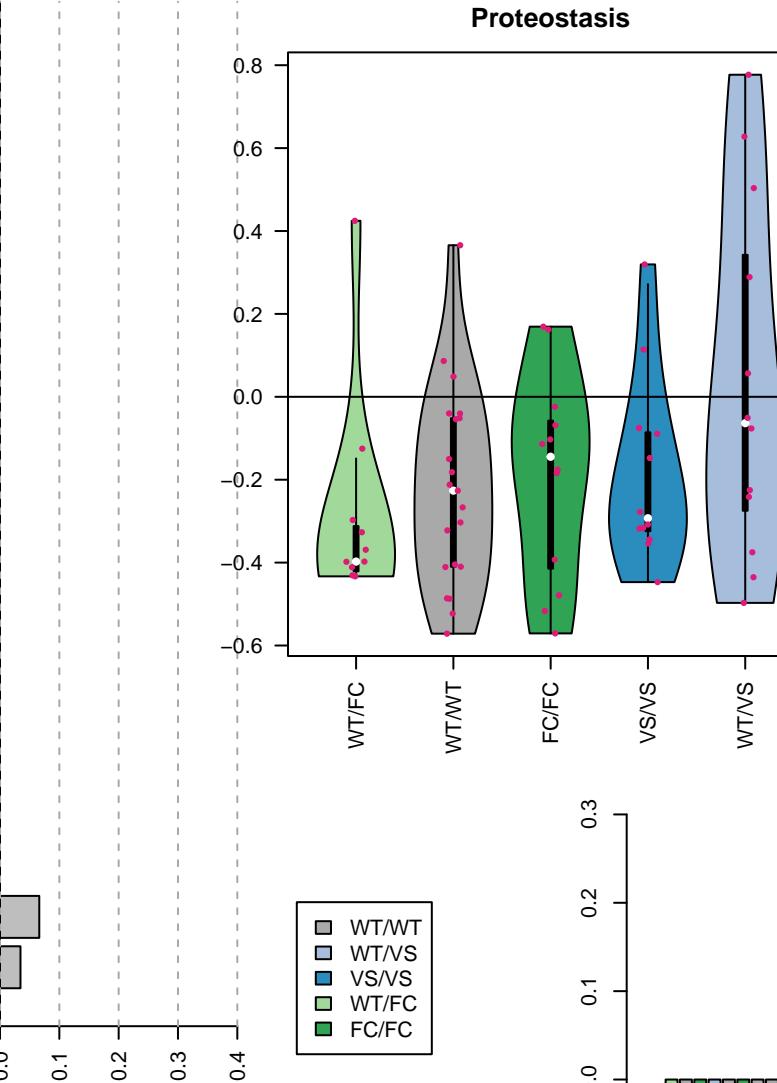
Not enough rows to decompose

Not enough rows to decompose

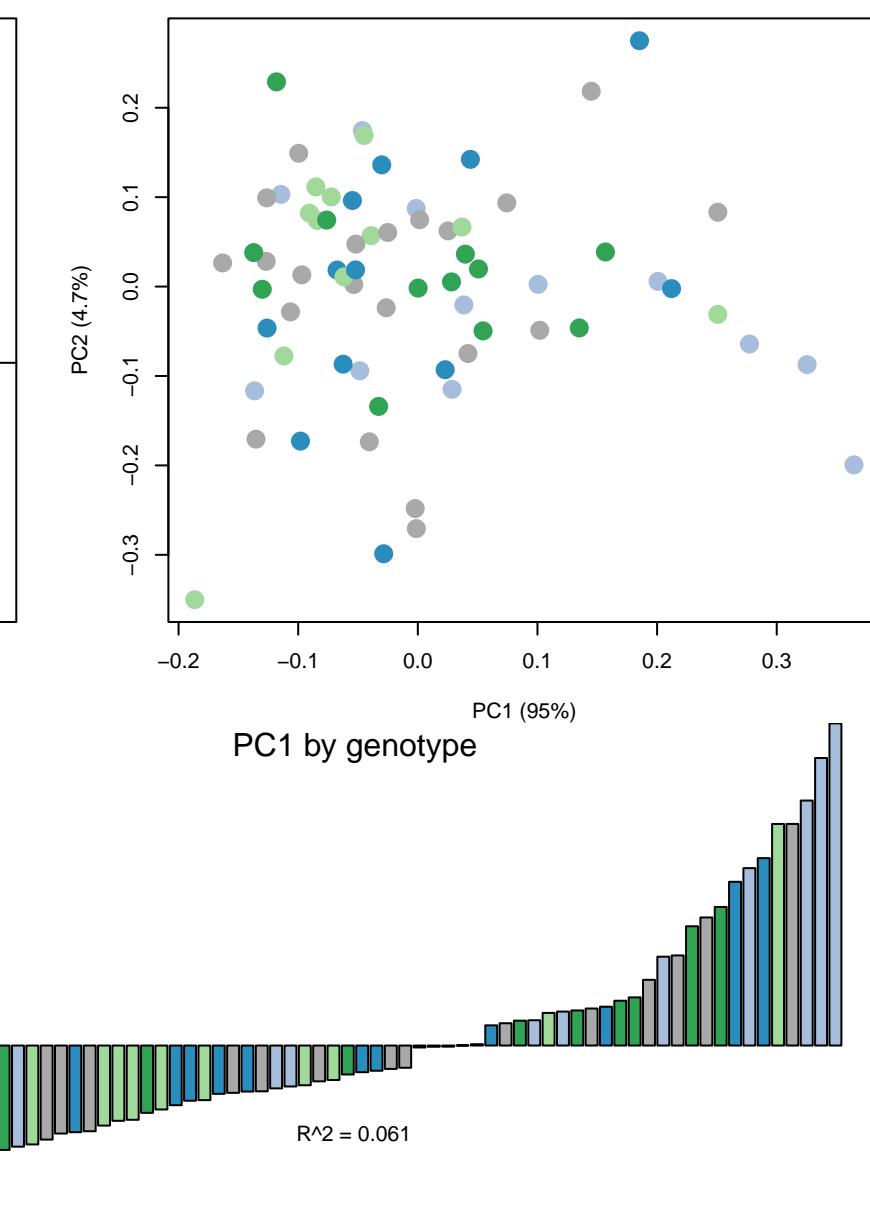
Aminoacyl-tRNA biosynthesis



Proteostasis



Decomposition



Glycosaminoglycan biosynthesis – heparan sulfate / heparin

Vasculature

Tau Homeostasis

Synapse

RNA Spliceosome

Oxidative Stress

Myelination

Mitochondrial Metabolism

Metal Binding and Homeostasis

Lipid Metabolism

Immune Response

Epigenetic

Endolysosome

DNA Repair

Cell Cycle

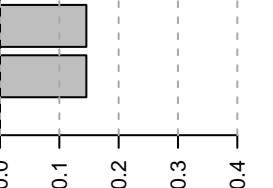
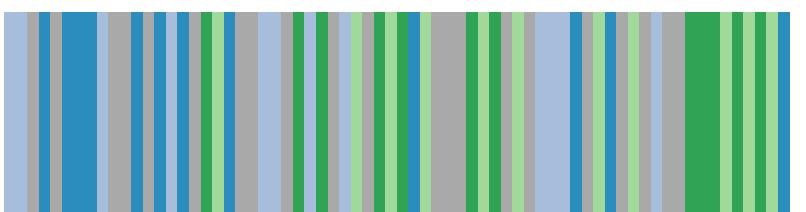
Autophagy

APP Metabolism

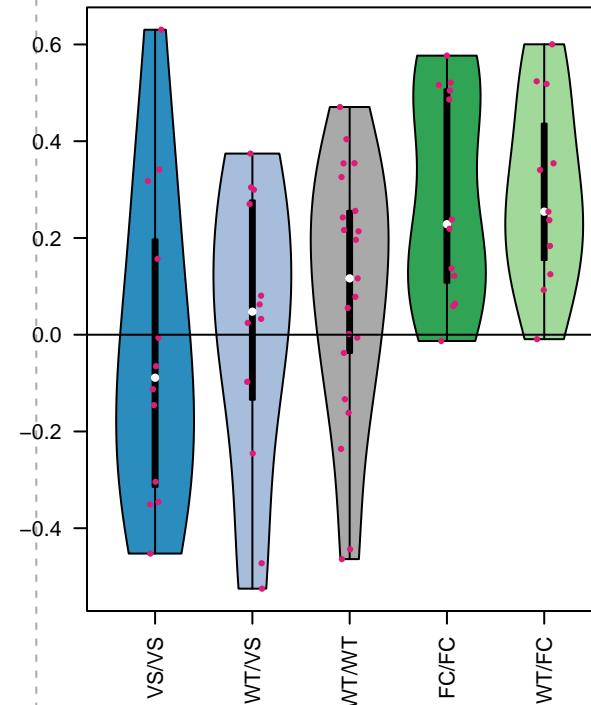
Apoptosis

Structural Stabilization

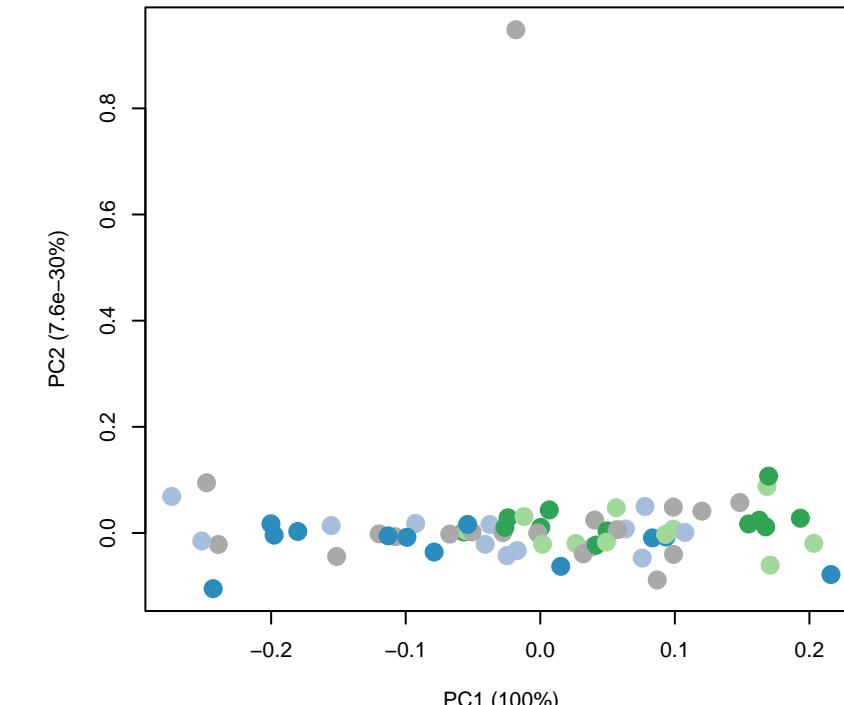
Proteostasis



Proteostasis

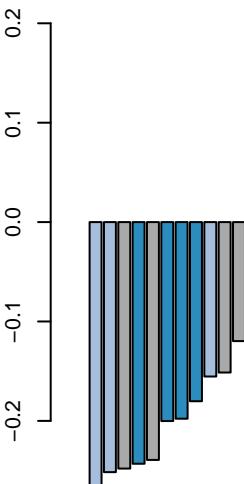


Decomposition



PC1 by genotype

$R^2 = 0.047$



Glycosaminoglycan biosynthesis – keratan sulfate

Vasculature

Tau Homeostasis

Synapse

Structural Stabilization

RNA Spliceosome

Oxidative Stress

Myelination

Mitochondrial Metabolism

Metal Binding and Homeostasis

Lipid Metabolism

Immune Response

Epigenetic

Endolysosome

DNA Repair

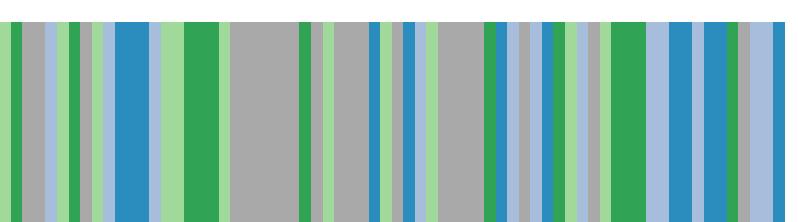
Cell Cycle

Autophagy

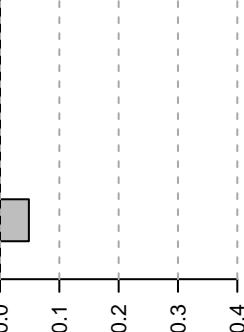
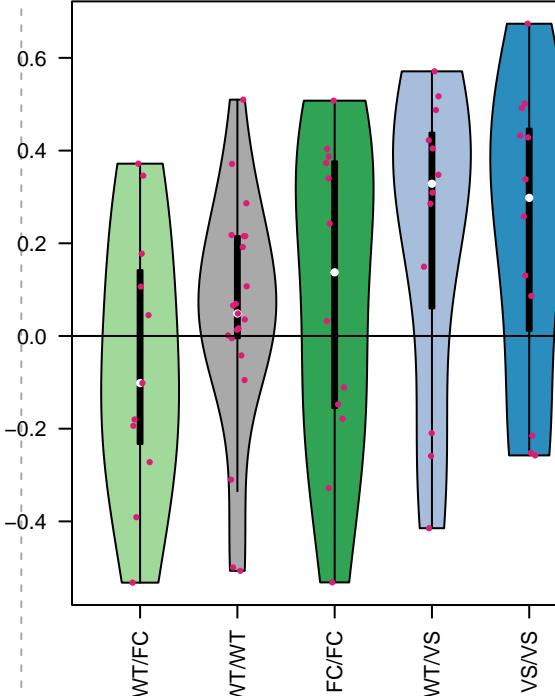
APP Metabolism

Apoptosis

Proteostasis



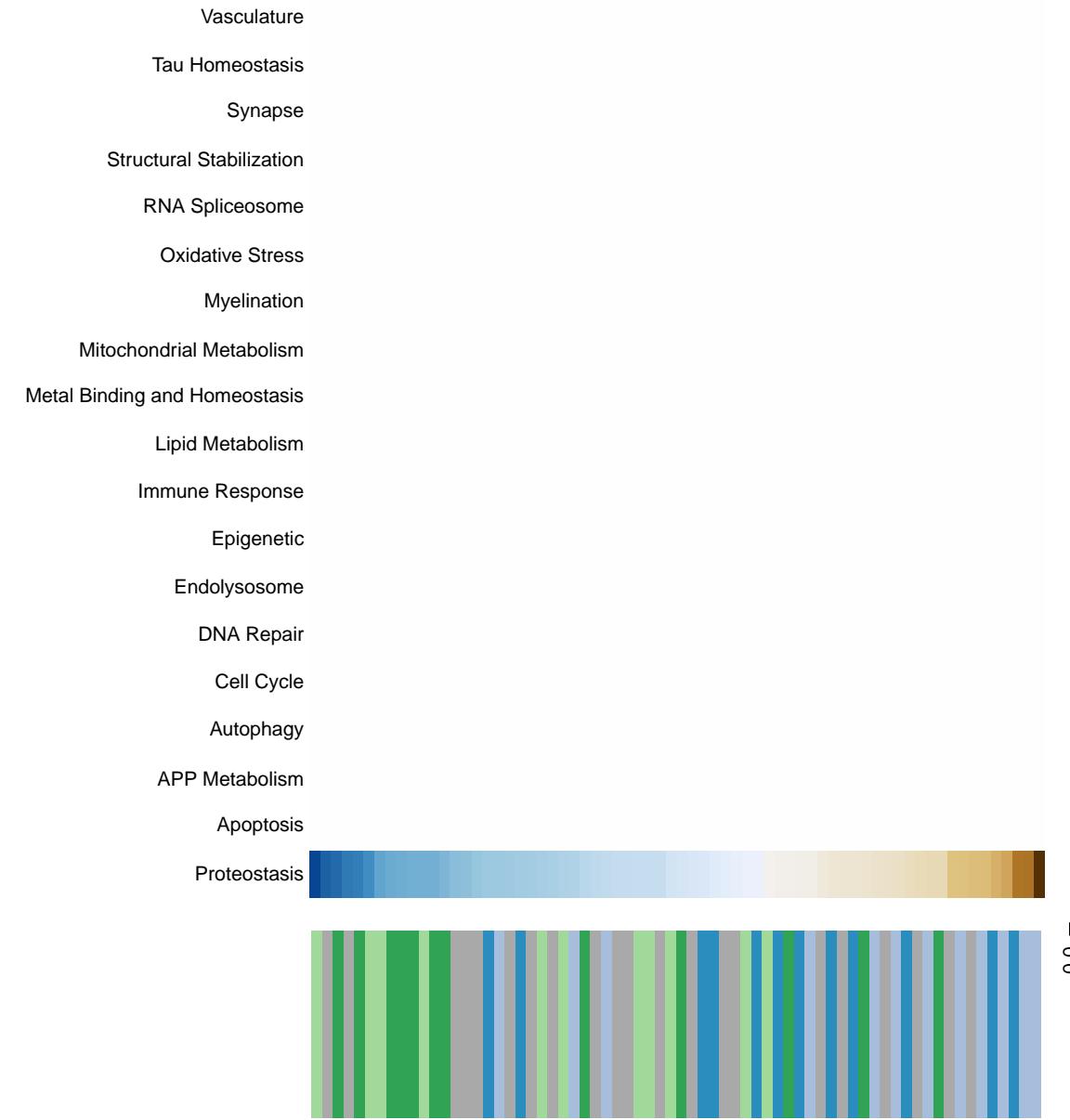
Proteostasis



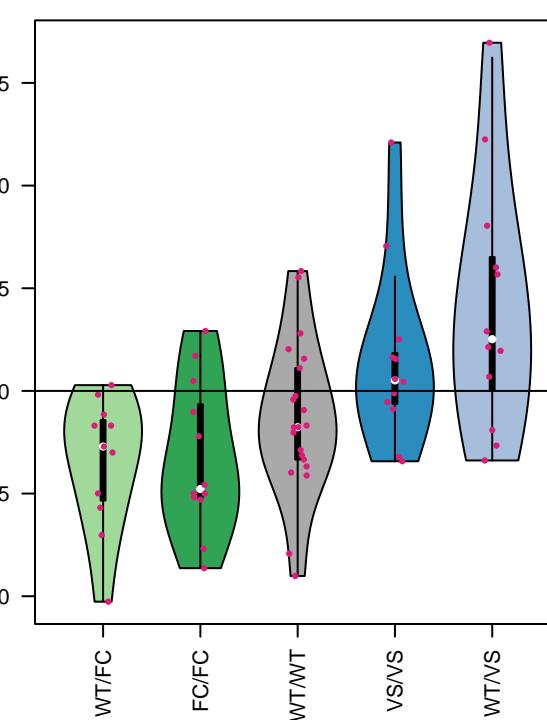
Not enough rows to decompose

Not enough rows to decompose

Protein export



Proteostasis

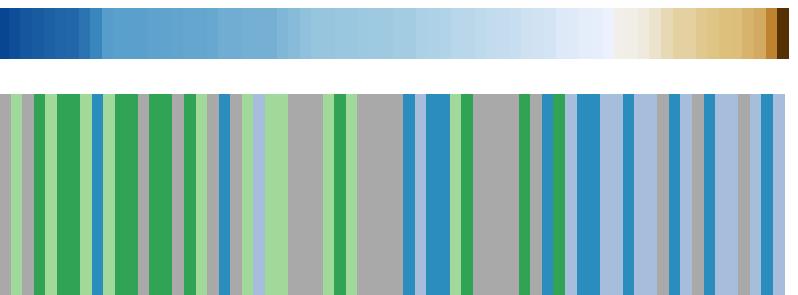


Not enough rows to decompose

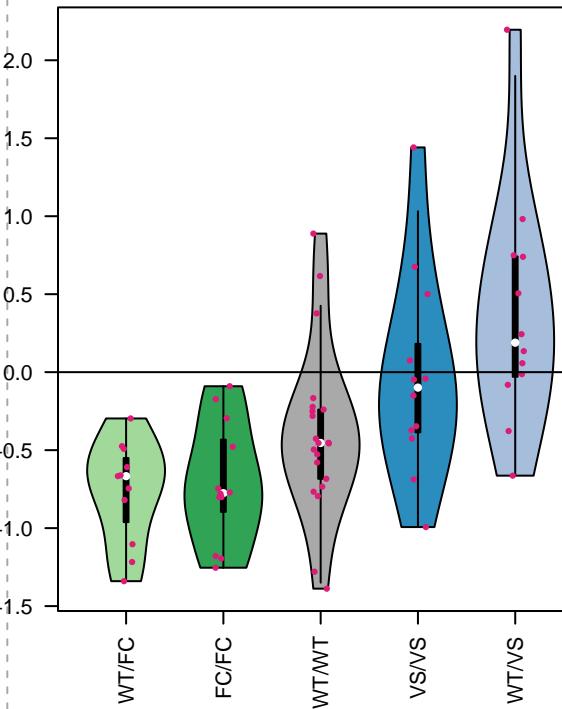
Not enough rows to decompose

Proteasome

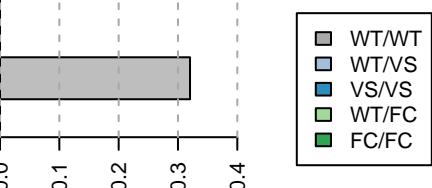
Vasculature
Tau Homeostasis
Synapse
Structural Stabilization
RNA Spliceosome
Oxidative Stress
Myelination
Mitochondrial Metabolism
Metal Binding and Homeostasis
Lipid Metabolism
Immune Response
Epigenetic
Endolysosome
DNA Repair
Cell Cycle
Autophagy
APP Metabolism
Apoptosis
Proteostasis



Proteostasis



Not enough rows to decompose



Not enough rows to decompose