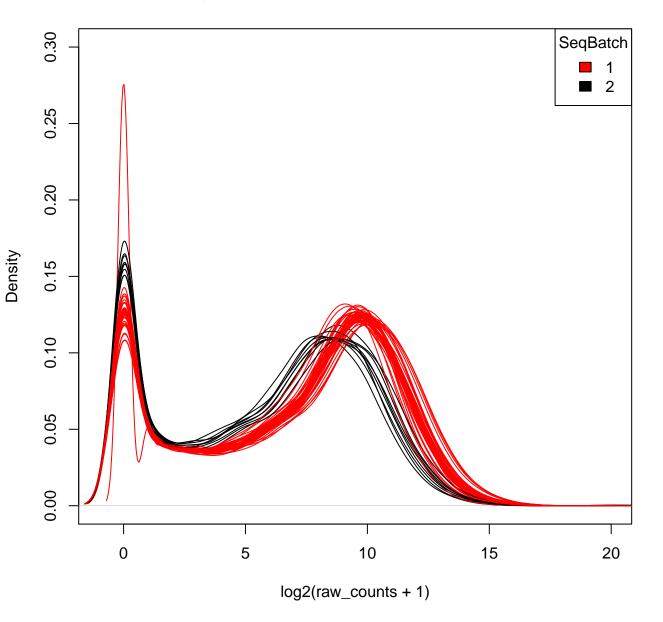
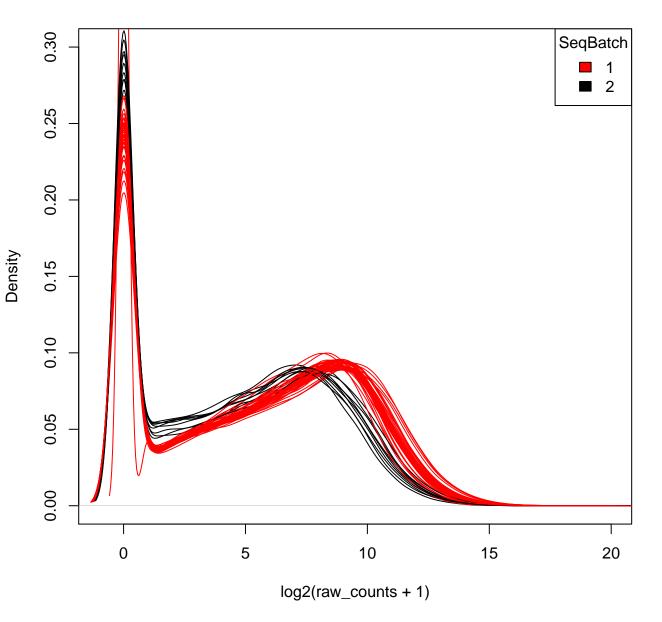


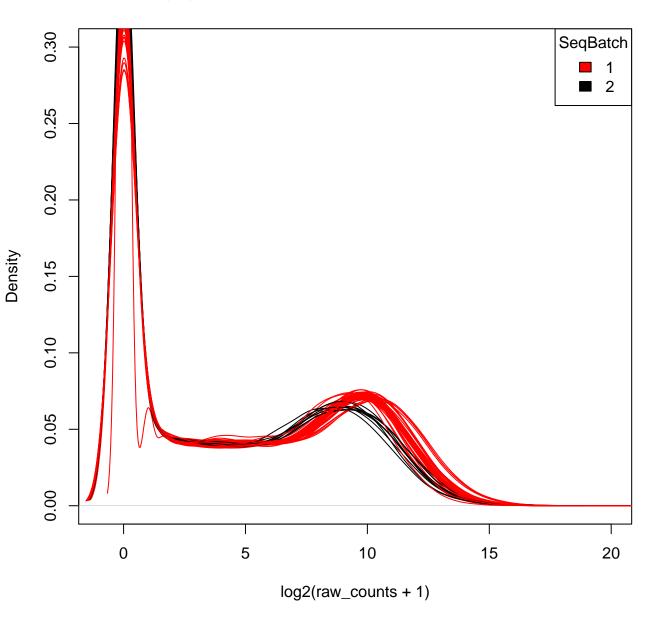
# mmul\_gene raw\_count density pre-normalizaton



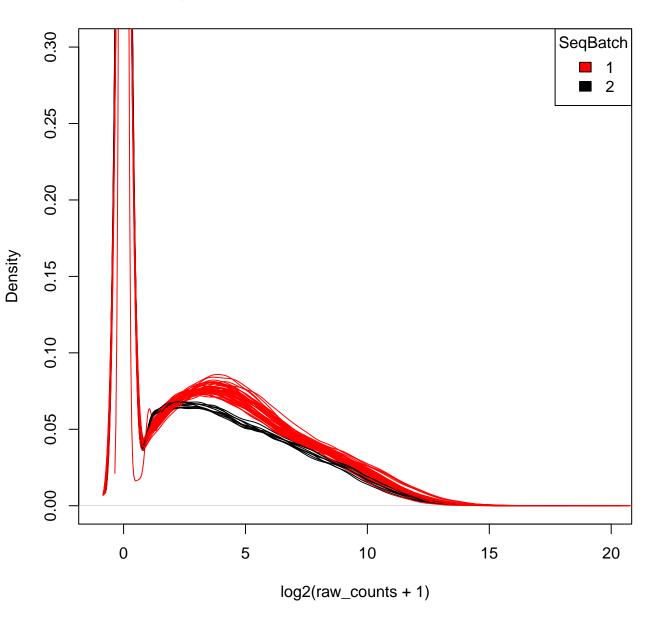
# mmul\_tx raw\_count density pre-normalizaton



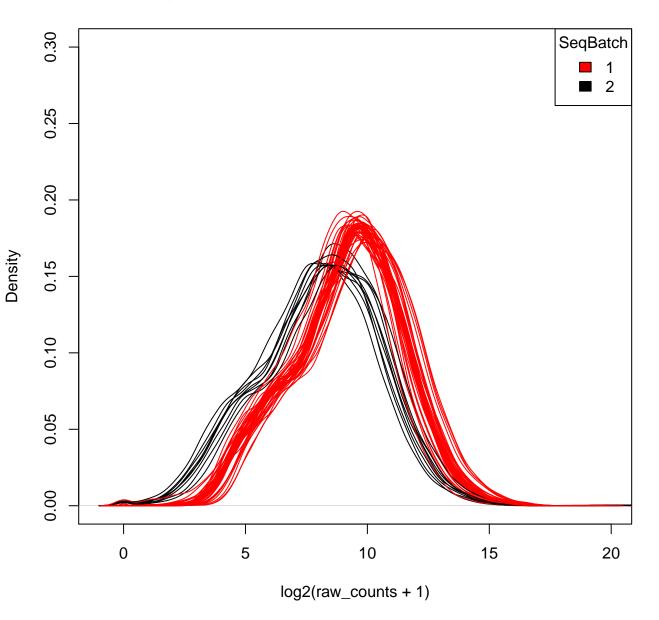
# hg\_gene raw\_count density pre-normalizaton



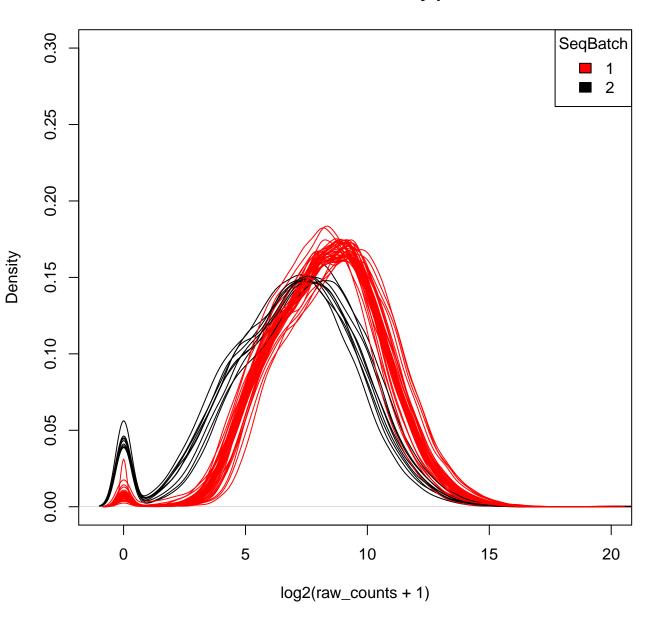
# hg\_tx raw\_count density pre-normalizaton



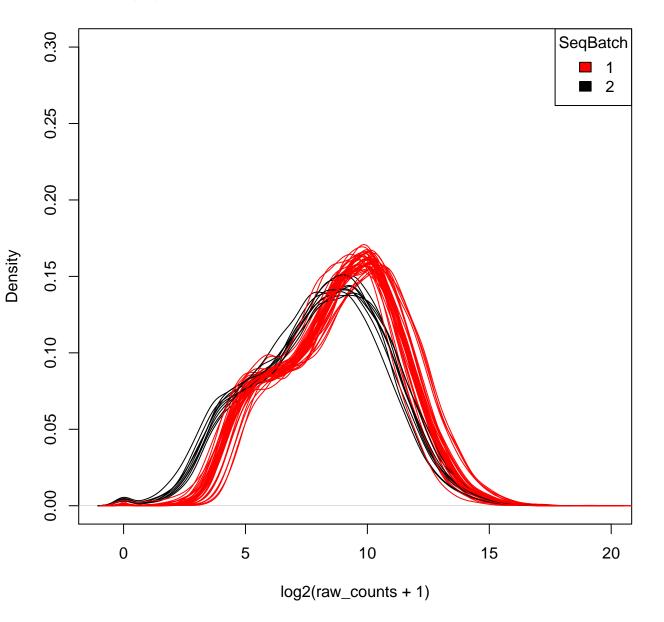
# mmul\_gene filtered raw\_count density pre-normalizaton



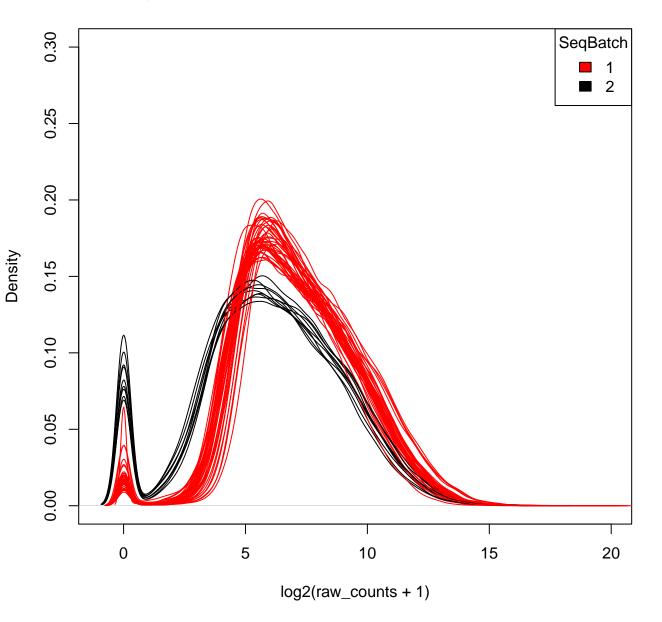
# mmul\_tx filtered raw\_count density pre-normalizaton



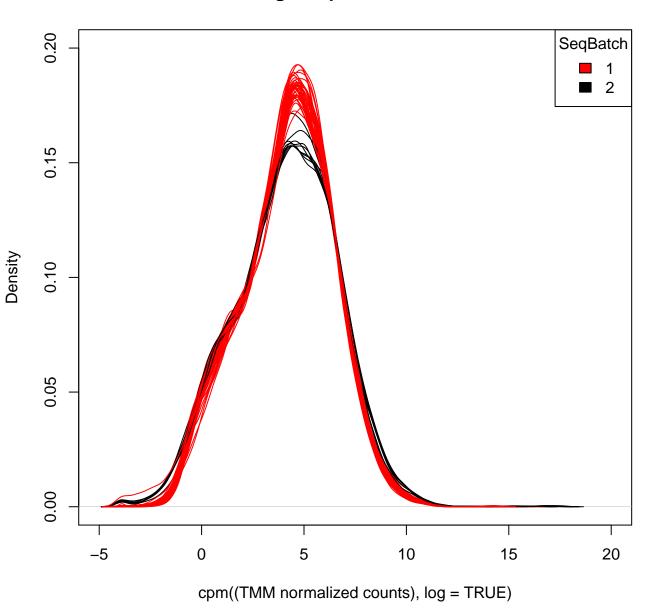
# hg\_gene filtered raw\_count density pre-normalizaton



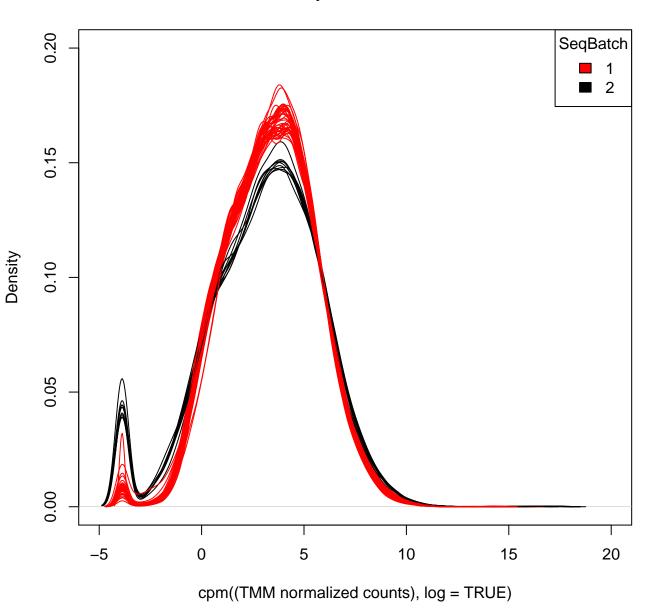
# hg\_tx filtered raw\_count density pre-normalizaton



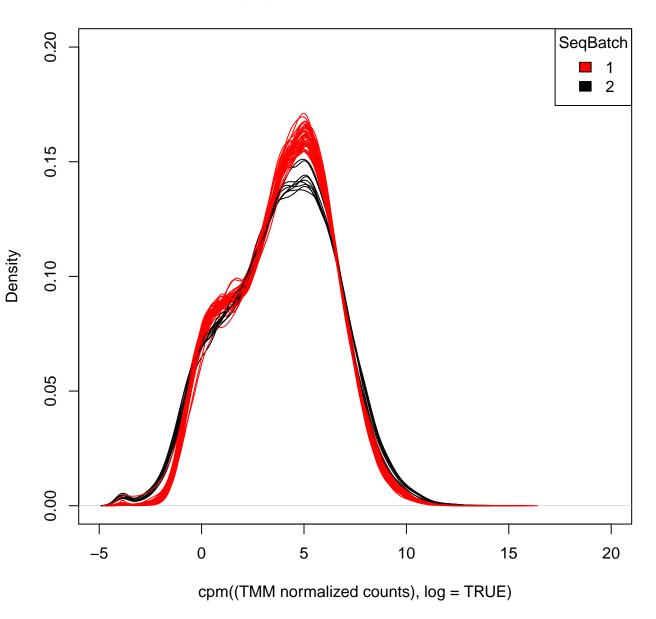
# mmul\_gene\_post-normalizaton



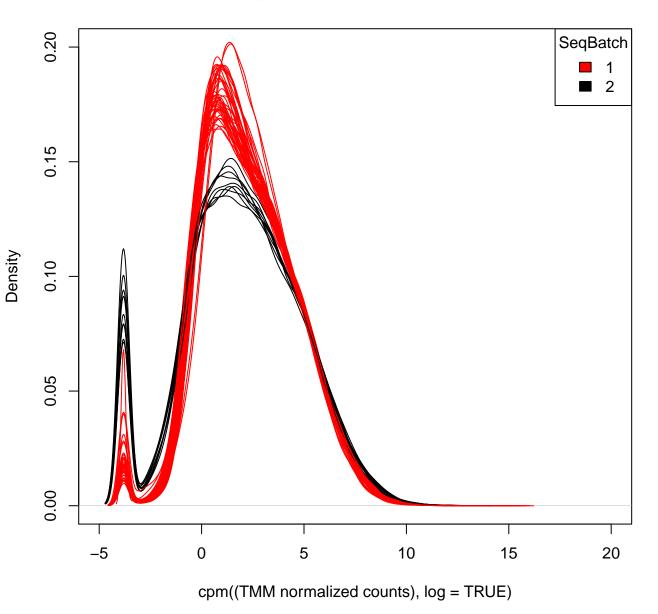
# mmul\_tx\_post-normalizaton

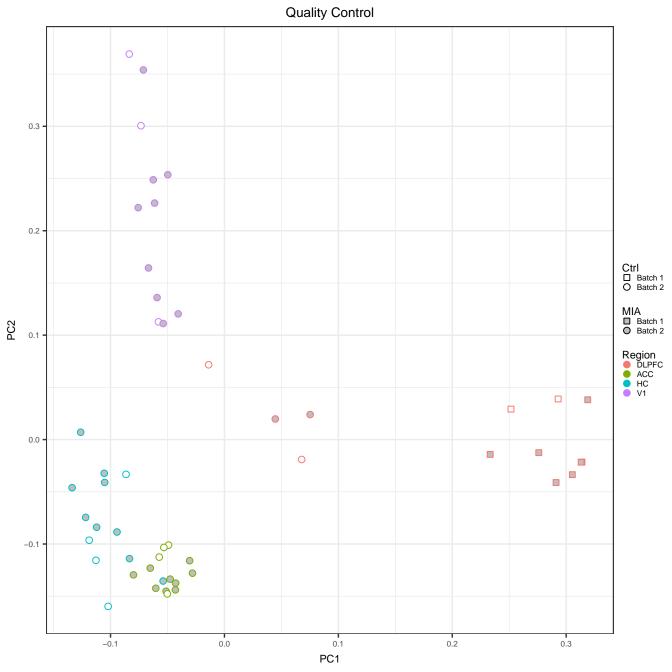


# hg\_gene\_post-normalizaton



# hg\_tx\_post-normalizaton

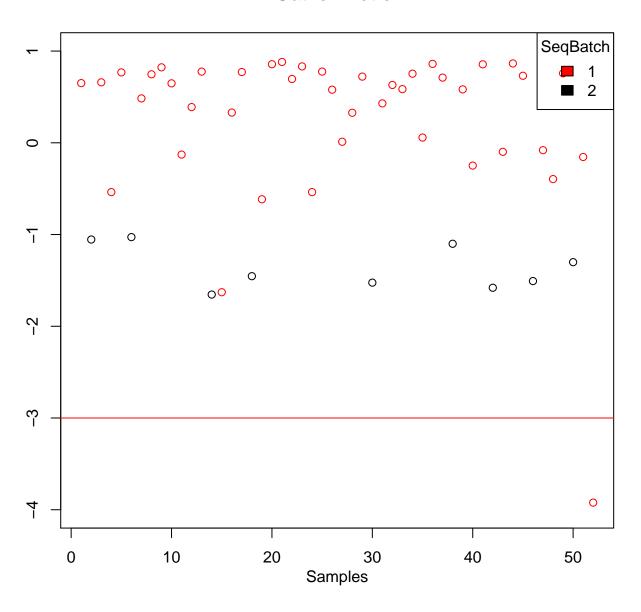


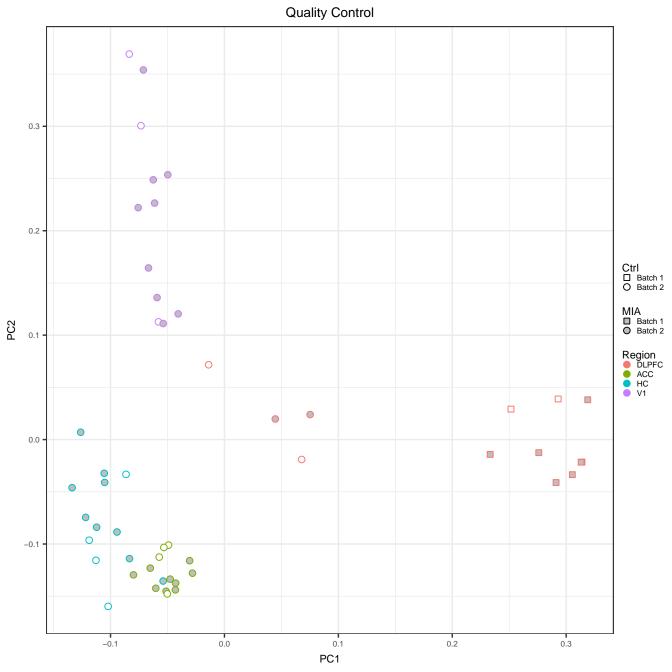


#### Trait Correlations -- |Pearson's rho|

Subject	Region	Group	SeqBatch	X260.280	X260.230	MIA	seqPC1	seqPC2	seqPC3	seqPC4	exprPC1	exprPC2	exprPC3	exprPC4	exprPC5
0.08 0.06 0.04 0.02 0.00	Corr: -0.0441	Corr: -0.396	Corr: -0.0567	Corr: 0.34	Corr: 0.327	Corr: -0.512	Corr: -0.0686	Corr: -0.0382	Corr: -0.0289	Corr: 0.0432	Corr: 0.0415	Corr: -0.0735	Corr: -0.0199	Corr: 0.0635	Corr: 55 0.334 55
4 3 2		Corr: 0.0347	Corr: 0.614	Corr: -0.115	Corr: -0.0895	Corr: 0.0411	Corr: 0.0881	Corr: -0.788	Corr: -0.164	Corr: -0.131	Corr: -0.712	Corr: 0.526	Corr: -0.135	Corr: 0.152	Corr: Region 0.0446 co
3.0 2.5 2.0 1.5 1.0		$\sim$	Corr: -0.0543	Corr: -0.0951	Corr: -0.131	Corr: 0.844	Corr: 0.138	Corr: 0.0369	Corr: 0.0647	Corr: -0.0353	Corr: 0.0563	Corr: -0.0169	Corr: -0.0657	Corr: -0.0565	Corr: 8
2.00 1.75 1.50 1.25				Corr: -0.26	Corr: 0.134	Corr: -0.073	Corr: -0.501	Corr: -0.817	Corr: 0.146	Corr: 0.0769	Corr: -0.954	Corr: 0.0141	Corr: 0.198	Corr: -0.0733	Corr: 39 BB
2.16 2.12 2.08 2.04				$\mathcal{N}$	Corr: 0.322	Corr: -0.251	Corr: -0.0233	Corr: 0.189	Corr: -0.292	Corr: -0.161	Corr: 0.232	Corr: 0.118	Corr: -0.302	Corr: -0.0299	Corr: 88 00 0.344 128 88
2.5 2.3 2.1 1.9 1.7	111	ijį		.4.	$\Lambda$	Corr: -0.317	Corr: -0.374	Corr: -0.0131	Corr: 0.0375	Corr: -0.148	Corr: -0.0947	Corr: -0.143	Corr: 0.0763	Corr: -0.199	Corr: 88 0.183 13 8
2.00 1.75 1.50 1.25							Corr: 0.193	Corr: 0.0708	Corr: 0.0881	Corr: 0.0288	Corr: 0.0756	Corr: -0.0103	Corr: -0.067	Corr: 0.0479	Corr: 8 5
0.25 0.00 -0.25	111			<b>.</b>	W		$\mathbb{L}$	Corr: 0.00328	Corr: 0.00158	Corr: 0.0171	Corr: 0.295	Corr: 0.0658	Corr: -0.306	Corr: 0.32	Corr: \$ 49 -0.179 Ω
0.3 0.2 0.1 0.0 0.1 -0.2				. 1 <b>4</b> 00			. **	$\Lambda_{\Lambda}$	Corr: -0.00107	Corr: -0.0115	Corr: 0.892	Corr: -0.181	Corr: -0.0765	Corr: -0.0918	Corr: 32 0.0379 C
0.0 - -0.2 - -0.4 -		<b>!!!</b>			· <b>*</b>		<b>4</b>	<b>#</b> 5		Corr: -0.00556	Corr: -0.186	Corr: -0.757	Corr: -0.0325	Corr: -0.0305	Corr: 32 P
0.2 0.0 -0.2 -0.4	ii			<b>.</b>						$\triangle$	Corr: -0.0977	Corr: -0.383	Corr: 0.0168	Corr: 0.218	Corr: \$ 49 0.163 \$
0.3 0.2 0.1 0.0 -0.1					ndt .		· · · · · · · · · · · · · · · · · · ·		, r. žigi			Corr: 2.02e-17	Corr: 1.78e-17	Corr: 1.84e-16	Corr: -1.22e-16 0
0.3 0.2 0.1 0.0 -0.1				ě.					· de				Corr: -3.45e-17	Corr: -2.52e-16	Corr: 897 1.15e-16 PO 20
0.2 0.0 -0.2 -0.4				1	<b>等</b> :		*		· · · · · · ·			Ç	$\nearrow$	Corr: -3.6e-16	Corr: 9.03e-17
0.4 0.2 0.0 -0.2	11				4		. 4				4.	<b>N</b> . *:	-	$\Delta$	Corr: 9 7.33e-16 P
0.2 0.0 -0.2 -0.4	1 2 3 4	3.0 2.5 2.0 1.5	2.00 1.75 1.50 1.25 1.00	2.16 2.12 2.08 2.04	2.5 2.3 2.1 1.9	2.00 1.75 1.50 1.25 1.00	0.25 0.00 -0.25	-000 -000 -000 -000	0.0 -0.2 -0.4	0.2 0.0 -0.2	0.3 0.2 0.0 0.0 0.1	00000	0.2 0.0 -0.2	0.4 0.2 0.0 0.0	0.2 0.0 -0.2

#### **Outlier Plot of**

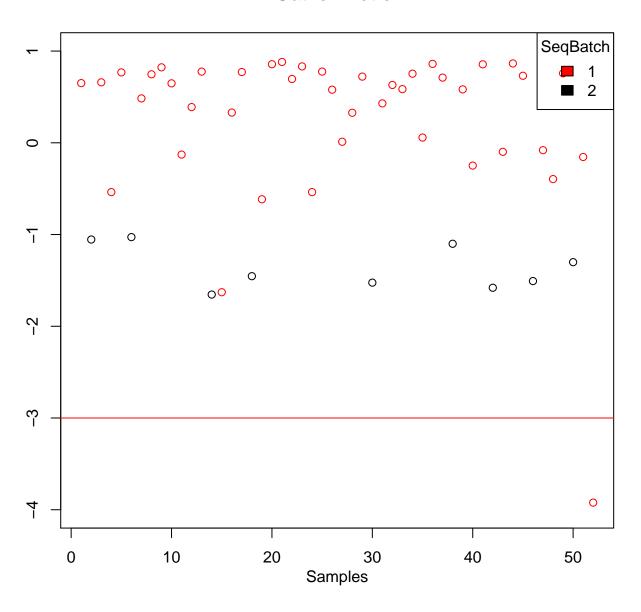


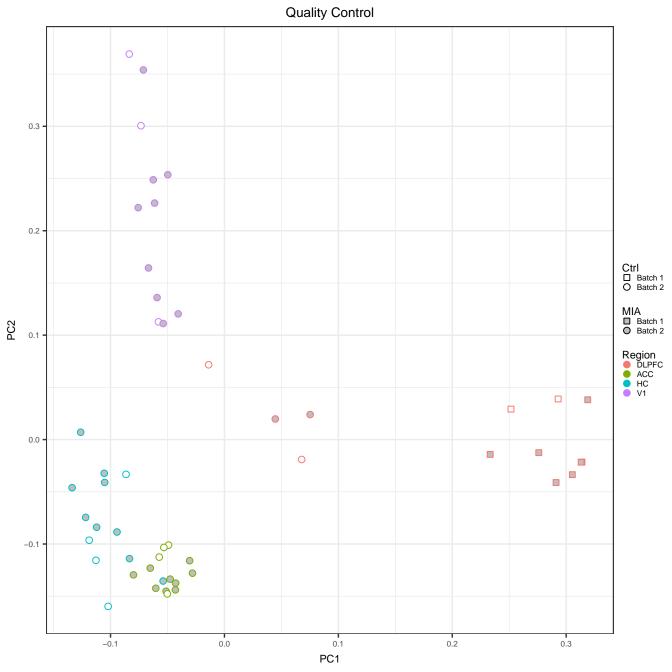


#### Trait Correlations -- |Pearson's rho|

Subject	Region	Group	SeqBatch	X260.280	X260.230	MIA	seqPC1	seqPC2	seqPC3	seqPC4	exprPC1	exprPC2	exprPC3	exprPC4	exprPC5
0.08 0.06 0.04 0.02 0.00	Corr: -0.0441	Corr: -0.396	Corr: -0.0567	Corr: 0.34	Corr: 0.327	Corr: -0.512	Corr: -0.0686	Corr: -0.0382	Corr: -0.0289	Corr: 0.0432	Corr: 0.0415	Corr: -0.0735	Corr: -0.0199	Corr: 0.0635	Corr: 55 0.334 55
4 3 2		Corr: 0.0347	Corr: 0.614	Corr: -0.115	Corr: -0.0895	Corr: 0.0411	Corr: 0.0881	Corr: -0.788	Corr: -0.164	Corr: -0.131	Corr: -0.712	Corr: 0.526	Corr: -0.135	Corr: 0.152	Corr: Region 0.0446 co
3.0 2.5 2.0 1.5 1.0		$\sim$	Corr: -0.0543	Corr: -0.0951	Corr: -0.131	Corr: 0.844	Corr: 0.138	Corr: 0.0369	Corr: 0.0647	Corr: -0.0353	Corr: 0.0563	Corr: -0.0169	Corr: -0.0657	Corr: -0.0565	Corr: 8
2.00 1.75 1.50 1.25				Corr: -0.26	Corr: 0.134	Corr: -0.073	Corr: -0.501	Corr: -0.817	Corr: 0.146	Corr: 0.0769	Corr: -0.954	Corr: 0.0141	Corr: 0.198	Corr: -0.0733	Corr: 39 BB
2.16 2.12 2.08 2.04				$\mathcal{N}$	Corr: 0.322	Corr: -0.251	Corr: -0.0233	Corr: 0.189	Corr: -0.292	Corr: -0.161	Corr: 0.232	Corr: 0.118	Corr: -0.302	Corr: -0.0299	Corr: 88 00 0.344 128 88
2.5 2.3 2.1 1.9 1.7	111	ijį		.4.	$\Lambda$	Corr: -0.317	Corr: -0.374	Corr: -0.0131	Corr: 0.0375	Corr: -0.148	Corr: -0.0947	Corr: -0.143	Corr: 0.0763	Corr: -0.199	Corr: 88 0.183 13 8
2.00 1.75 1.50 1.25							Corr: 0.193	Corr: 0.0708	Corr: 0.0881	Corr: 0.0288	Corr: 0.0756	Corr: -0.0103	Corr: -0.067	Corr: 0.0479	Corr: 8 5
0.25 0.00 -0.25	111			<b>.</b>	W		$\mathbb{L}$	Corr: 0.00328	Corr: 0.00158	Corr: 0.0171	Corr: 0.295	Corr: 0.0658	Corr: -0.306	Corr: 0.32	Corr: \$ 49 -0.179 Ω
0.3 0.2 0.1 0.0 0.1 -0.2	• • •			. 1 <b>4</b> 00			. **	$\Lambda_{\Lambda}$	Corr: -0.00107	Corr: -0.0115	Corr: 0.892	Corr: -0.181	Corr: -0.0765	Corr: -0.0918	Corr: 32 0.0379 C
0.0 - -0.2 - -0.4 -		<b>!!!</b>			· <b>*</b>		<b>4</b>	<b>#</b> 5		Corr: -0.00556	Corr: -0.186	Corr: -0.757	Corr: -0.0325	Corr: -0.0305	Corr: 32 P
0.2 0.0 -0.2 -0.4	ii			<b>.</b>						$\triangle$	Corr: -0.0977	Corr: -0.383	Corr: 0.0168	Corr: 0.218	Corr: \$ 49 0.163 \$
0.3 0.2 0.1 0.0 -0.1					ndt .		., <b>**</b>		, r. žigi			Corr: 2.02e-17	Corr: 1.78e-17	Corr: 1.84e-16	Corr: -1.22e-16 0
0.3 0.2 0.1 0.0 -0.1				ě.					· de				Corr: -3.45e-17	Corr: -2.52e-16	Corr: 897 1.15e-16 PO 20
0.2 0.0 -0.2 -0.4				1	<b>等</b> :		*		· · · · · · ·			Ç	$\nearrow$	Corr: -3.6e-16	Corr: 9.03e-17
0.4 0.2 0.0 -0.2	11				4		. 4				4.	<b>N</b> . *:	-	$\Delta$	Corr: 9 7.33e-16 P
0.2 0.0 -0.2 -0.4	1 2 3 4	3.0 2.5 2.0 1.5	2.00 1.75 1.50 1.25 1.00	2.16 2.12 2.08 2.04	2.5 2.3 2.1 1.9	2.00 1.75 1.50 1.25 1.00	0.25 0.00 -0.25	-000 -000 -000 -000	0.0 -0.2 -0.4	0.2 0.0 -0.2	0.3 0.2 0.0 0.0 0.1	00000	0.2 0.0 -0.2	0.4 0.2 0.0 0.0	0.2 0.0 -0.2

#### **Outlier Plot of**

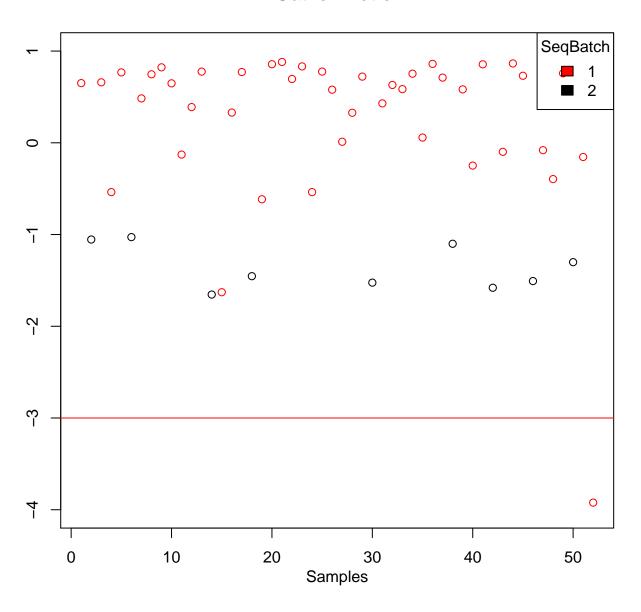


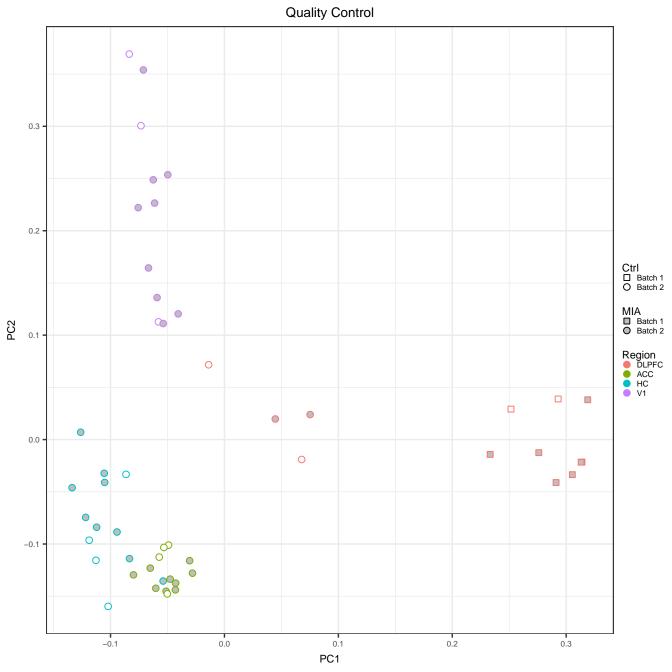


#### Trait Correlations -- |Pearson's rho|

Subject	Region	Group	SeqBatch	X260.280	X260.230	MIA	seqPC1	seqPC2	seqPC3	seqPC4	exprPC1	exprPC2	exprPC3	exprPC4	exprPC5
0.08 0.06 0.04 0.02 0.00	Corr: -0.0441	Corr: -0.396	Corr: -0.0567	Corr: 0.34	Corr: 0.327	Corr: -0.512	Corr: -0.0686	Corr: -0.0382	Corr: -0.0289	Corr: 0.0432	Corr: 0.0415	Corr: -0.0735	Corr: -0.0199	Corr: 0.0635	Corr: 55 0.334 55
4 3 2		Corr: 0.0347	Corr: 0.614	Corr: -0.115	Corr: -0.0895	Corr: 0.0411	Corr: 0.0881	Corr: -0.788	Corr: -0.164	Corr: -0.131	Corr: -0.712	Corr: 0.526	Corr: -0.135	Corr: 0.152	Corr: Region 0.0446 co
3.0 2.5 2.0 1.5 1.0		$\sim$	Corr: -0.0543	Corr: -0.0951	Corr: -0.131	Corr: 0.844	Corr: 0.138	Corr: 0.0369	Corr: 0.0647	Corr: -0.0353	Corr: 0.0563	Corr: -0.0169	Corr: -0.0657	Corr: -0.0565	Corr: 8
2.00 1.75 1.50 1.25				Corr: -0.26	Corr: 0.134	Corr: -0.073	Corr: -0.501	Corr: -0.817	Corr: 0.146	Corr: 0.0769	Corr: -0.954	Corr: 0.0141	Corr: 0.198	Corr: -0.0733	Corr: 39 BB
2.16 2.12 2.08 2.04				$\mathcal{N}$	Corr: 0.322	Corr: -0.251	Corr: -0.0233	Corr: 0.189	Corr: -0.292	Corr: -0.161	Corr: 0.232	Corr: 0.118	Corr: -0.302	Corr: -0.0299	Corr: 88 00 0.344 128 88
2.5 2.3 2.1 1.9 1.7	111	ijį		.4.	$\bigwedge$	Corr: -0.317	Corr: -0.374	Corr: -0.0131	Corr: 0.0375	Corr: -0.148	Corr: -0.0947	Corr: -0.143	Corr: 0.0763	Corr: -0.199	Corr: 88 0.183 13 8
2.00 1.75 1.50 1.25							Corr: 0.193	Corr: 0.0708	Corr: 0.0881	Corr: 0.0288	Corr: 0.0756	Corr: -0.0103	Corr: -0.067	Corr: 0.0479	Corr: 8 5
0.25 0.00 -0.25	111			<b>.</b>	W		$\mathbb{L}$	Corr: 0.00328	Corr: 0.00158	Corr: 0.0171	Corr: 0.295	Corr: 0.0658	Corr: -0.306	Corr: 0.32	Corr: \$ 49 -0.179 Ω
0.3 0.2 0.1 0.0 0.1 -0.2	• • •			. 1 <b>4</b> 00			. **	$\Lambda_{\Lambda}$	Corr: -0.00107	Corr: -0.0115	Corr: 0.892	Corr: -0.181	Corr: -0.0765	Corr: -0.0918	Corr: 32 0.0379 C
0.0 - -0.2 - -0.4 -		<b>!!!</b>			· •		<b>4</b>	<b>#</b> 5		Corr: -0.00556	Corr: -0.186	Corr: -0.757	Corr: -0.0325	Corr: -0.0305	Corr: 32 P
0.2 0.0 -0.2 -0.4	ii			<b>.</b>						$\triangle$	Corr: -0.0977	Corr: -0.383	Corr: 0.0168	Corr: 0.218	Corr: \$ 49 0.163 \$
0.3 0.2 0.1 0.0 -0.1					ndt .		., <b>**</b>		, r. žigi			Corr: 2.02e-17	Corr: 1.78e-17	Corr: 1.84e-16	Corr: -1.22e-16 0
0.3 0.2 0.1 0.0 -0.1				ě.					· de				Corr: -3.45e-17	Corr: -2.52e-16	Corr: 897 1.15e-16 PO 20
0.2 0.0 -0.2 -0.4				1	<b>等</b> :		*		· · · · · · ·			Ç	$\nearrow$	Corr: -3.6e-16	Corr: 9.03e-17
0.4 0.2 0.0 -0.2	11				4		. 4				4.	<b>N</b> . *:	-	$\Delta$	Corr: 9 7.33e-16 P
0.2 0.0 -0.2 -0.4	1 2 3 4	3.0 2.5 2.0 1.5	2.00 1.75 1.50 1.25 1.00	2.16 2.12 2.08 2.04	2.5 2.3 2.1 1.9	2.00 1.75 1.50 1.25 1.00	0.25 0.00 -0.25	-000 -000 -000 -000	0.0 -0.2 -0.4	0.2 0.0 -0.2	0.3 0.2 0.0 0.0 0.1	00000	0.2 0.0 -0.2	0.4 0.2 0.0 0.0	0.2 0.0 -0.2

#### **Outlier Plot of**

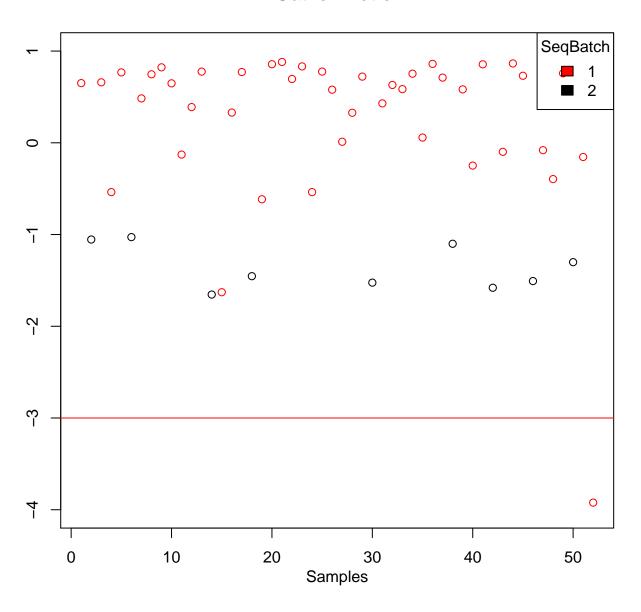


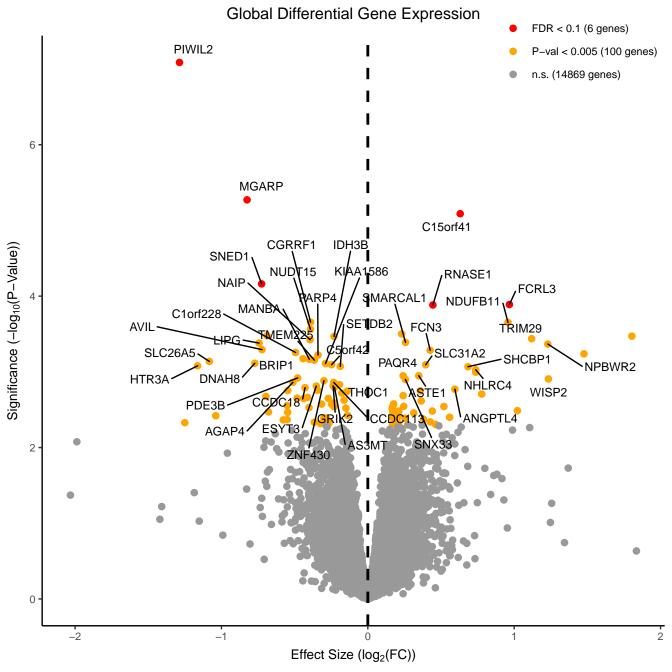


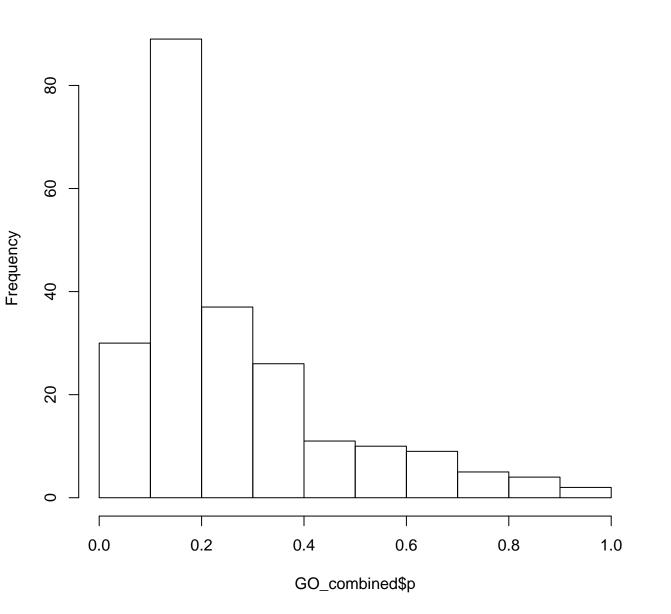
#### Trait Correlations -- |Pearson's rho|

Subject	Region	Group	SeqBatch	X260.280	X260.230	MIA	seqPC1	seqPC2	seqPC3	seqPC4	exprPC1	exprPC2	exprPC3	exprPC4	exprPC5
0.08 0.06 0.04 0.02 0.00	Corr: -0.0441	Corr: -0.396	Corr: -0.0567	Corr: 0.34	Corr: 0.327	Corr: -0.512	Corr: -0.0686	Corr: -0.0382	Corr: -0.0289	Corr: 0.0432	Corr: 0.0415	Corr: -0.0735	Corr: -0.0199	Corr: 0.0635	Corr: 55 0.334 55
4 3 2		Corr: 0.0347	Corr: 0.614	Corr: -0.115	Corr: -0.0895	Corr: 0.0411	Corr: 0.0881	Corr: -0.788	Corr: -0.164	Corr: -0.131	Corr: -0.712	Corr: 0.526	Corr: -0.135	Corr: 0.152	Corr: Region 0.0446 co
3.0 2.5 2.0 1.5 1.0		$\sim$	Corr: -0.0543	Corr: -0.0951	Corr: -0.131	Corr: 0.844	Corr: 0.138	Corr: 0.0369	Corr: 0.0647	Corr: -0.0353	Corr: 0.0563	Corr: -0.0169	Corr: -0.0657	Corr: -0.0565	Corr: 8
2.00 1.75 1.50 1.25				Corr: -0.26	Corr: 0.134	Corr: -0.073	Corr: -0.501	Corr: -0.817	Corr: 0.146	Corr: 0.0769	Corr: -0.954	Corr: 0.0141	Corr: 0.198	Corr: -0.0733	Corr: 39 BB
2.16 2.12 2.08 2.04				$\mathcal{N}$	Corr: 0.322	Corr: -0.251	Corr: -0.0233	Corr: 0.189	Corr: -0.292	Corr: -0.161	Corr: 0.232	Corr: 0.118	Corr: -0.302	Corr: -0.0299	Corr: 88 00 0.344 128 88
2.5 2.3 2.1 1.9 1.7	111	ijį		.4.	$\Lambda$	Corr: -0.317	Corr: -0.374	Corr: -0.0131	Corr: 0.0375	Corr: -0.148	Corr: -0.0947	Corr: -0.143	Corr: 0.0763	Corr: -0.199	Corr: 88 0.183 13 8
2.00 1.75 1.50 1.25							Corr: 0.193	Corr: 0.0708	Corr: 0.0881	Corr: 0.0288	Corr: 0.0756	Corr: -0.0103	Corr: -0.067	Corr: 0.0479	Corr: 8 5
0.25 0.00 -0.25	111			<b>.</b>	W		$\mathbb{L}$	Corr: 0.00328	Corr: 0.00158	Corr: 0.0171	Corr: 0.295	Corr: 0.0658	Corr: -0.306	Corr: 0.32	Corr: \$ 49 -0.179 Ω
0.3 0.2 0.1 0.0 0.1 -0.2				. 1 <b>4</b> 00			. **	$\Lambda_{\Lambda}$	Corr: -0.00107	Corr: -0.0115	Corr: 0.892	Corr: -0.181	Corr: -0.0765	Corr: -0.0918	Corr: 32 0.0379 C
0.0 - -0.2 - -0.4 -		<b>!!!</b>			· •		<b>4</b>	<b>#</b> 5		Corr: -0.00556	Corr: -0.186	Corr: -0.757	Corr: -0.0325	Corr: -0.0305	Corr: 32 P
0.2 0.0 -0.2 -0.4	ii			<b>.</b>						$\triangle$	Corr: -0.0977	Corr: -0.383	Corr: 0.0168	Corr: 0.218	Corr: \$ 49 0.163 \$
0.3 0.2 0.1 0.0 -0.1					ndt .		., <b>**</b>		, r. žigi			Corr: 2.02e-17	Corr: 1.78e-17	Corr: 1.84e-16	Corr: -1.22e-16 0
0.3 0.2 0.1 0.0 -0.1				ě.					· de				Corr: -3.45e-17	Corr: -2.52e-16	Corr: 897 1.15e-16 PO 20
0.2 0.0 -0.2 -0.4				1	<b>等</b> :		*		· · · · · · ·			Ç	$\nearrow$	Corr: -3.6e-16	Corr: 9.03e-17
0.4 0.2 0.0 -0.2	11				4		. 4				4.	<b>N</b> . *:	-	$\Delta$	Corr: 9 7.33e-16 P
0.2 0.0 -0.2 -0.4	1 2 3 4	3.0 2.5 2.0 1.5	2.00 1.75 1.50 1.25 1.00	2.16 2.12 2.08 2.04	2.5 2.3 2.1 1.9	2.00 1.75 1.50 1.25 1.00	0.25 0.00 -0.25	-000 -000 -000 -000	0.0 -0.2 -0.4	0.2 0.0 -0.2	0.3 0.2 0.0 0.0 0.1	00000	0.2 0.0 -0.2	0.4 0.2 0.0 0.0	0.2 0.0 -0.2

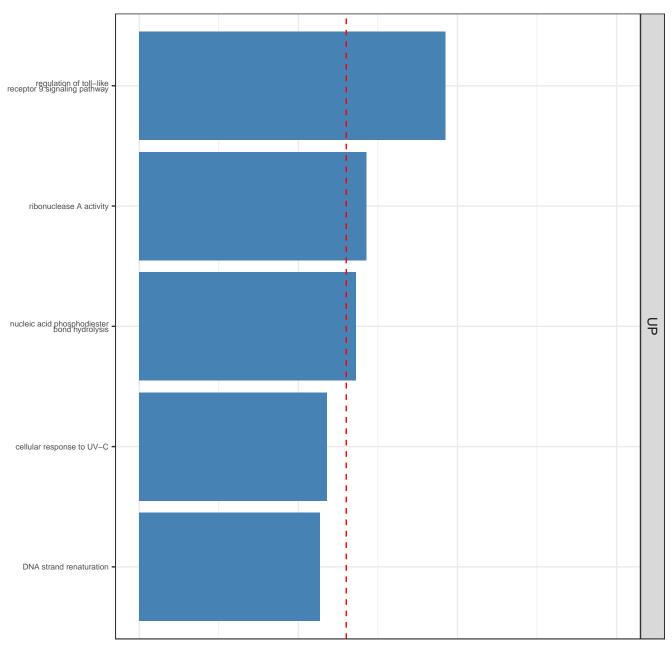
#### **Outlier Plot of**

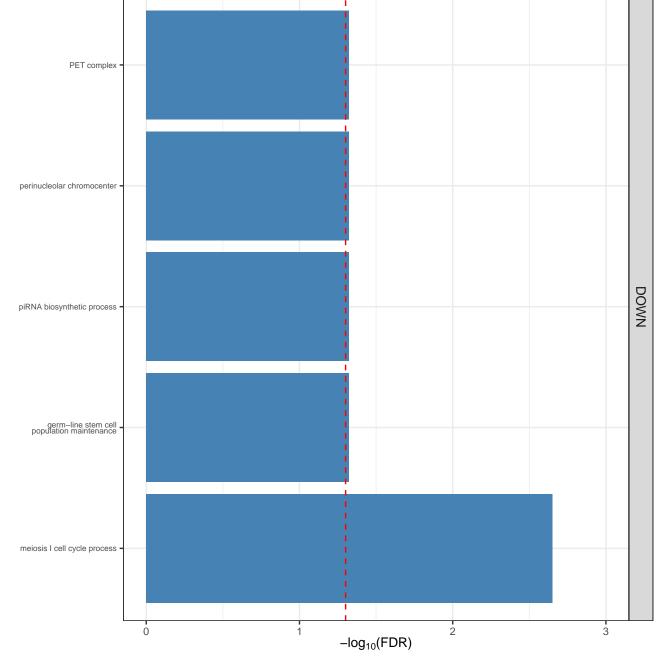




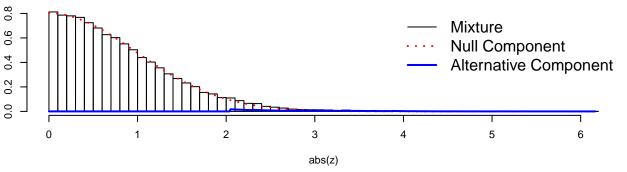


#### **GO** Enrichment

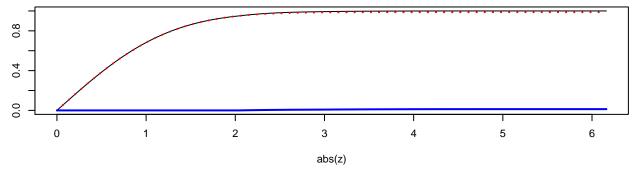




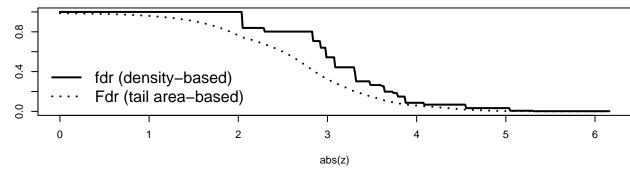
# Type of Statistic: z-Score (sd = 0.983, eta0 = 0.9872)



# Density (first row) and Distribution Function (second row)

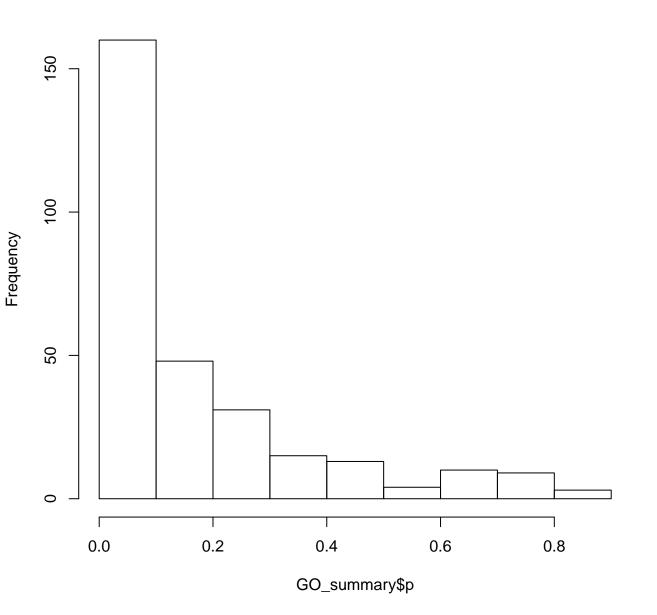


# (Local) False Discovery Rate

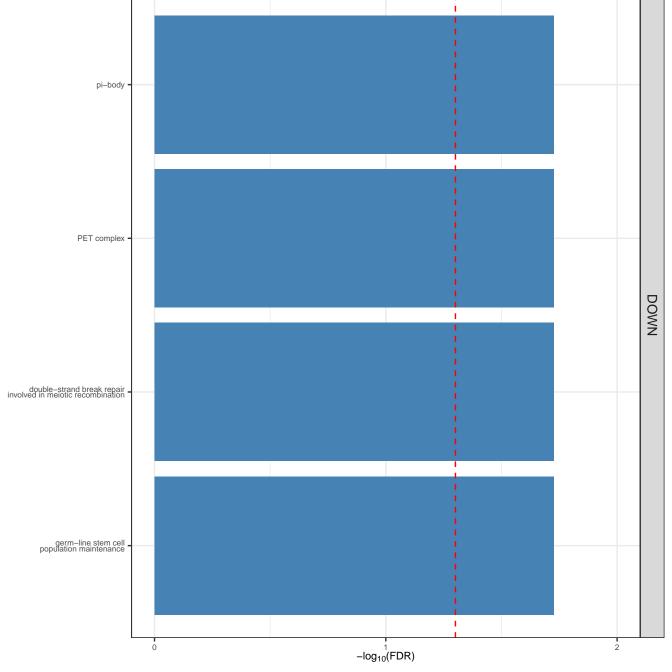


Fdr and fdr

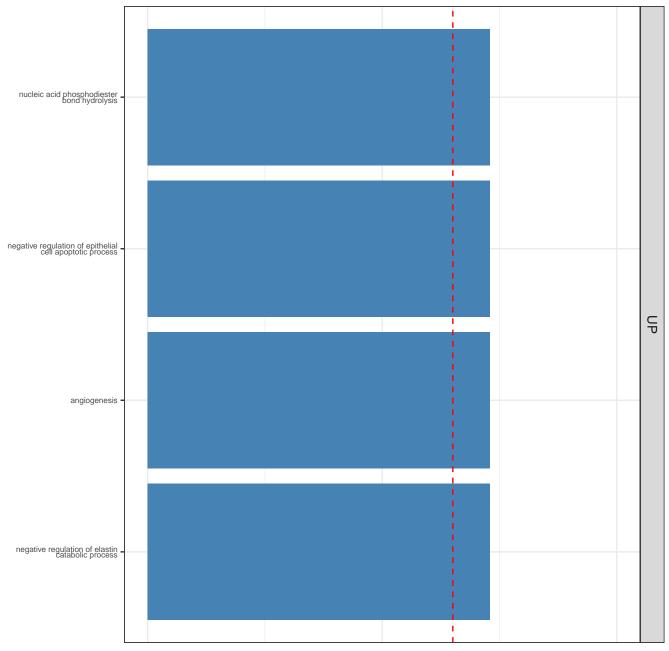
# **Histogram of GO\_summary\$p**

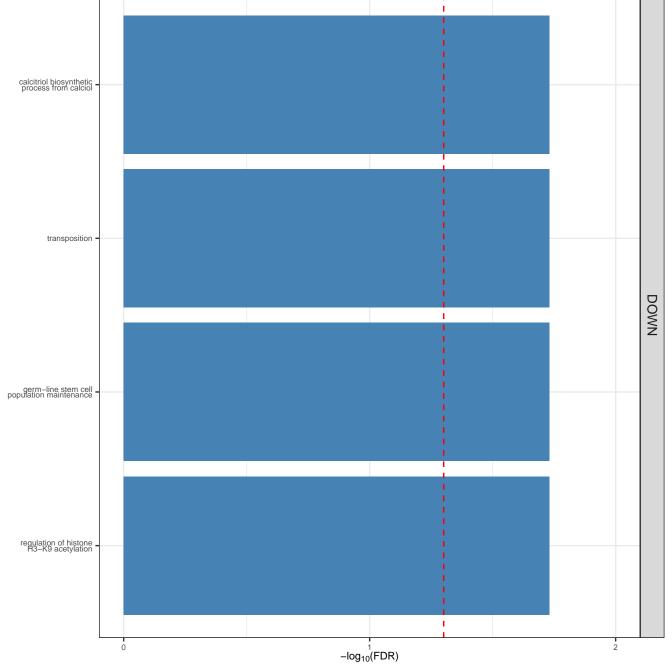


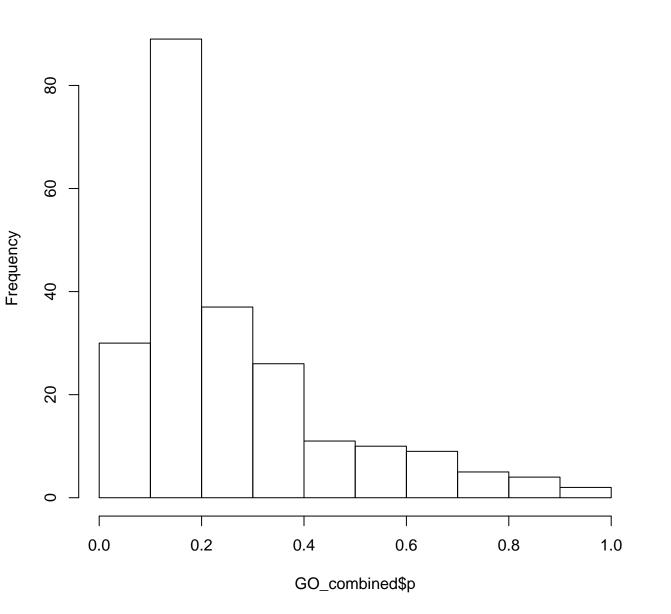
1st Trim MIA nucleic acid phosphodiester bond hydrolysis leucine metabolic process cellular response to UV-C protein repair -

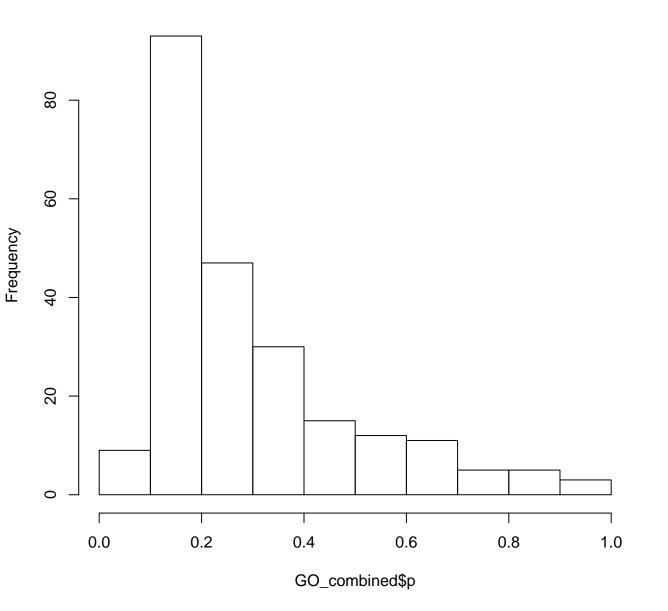


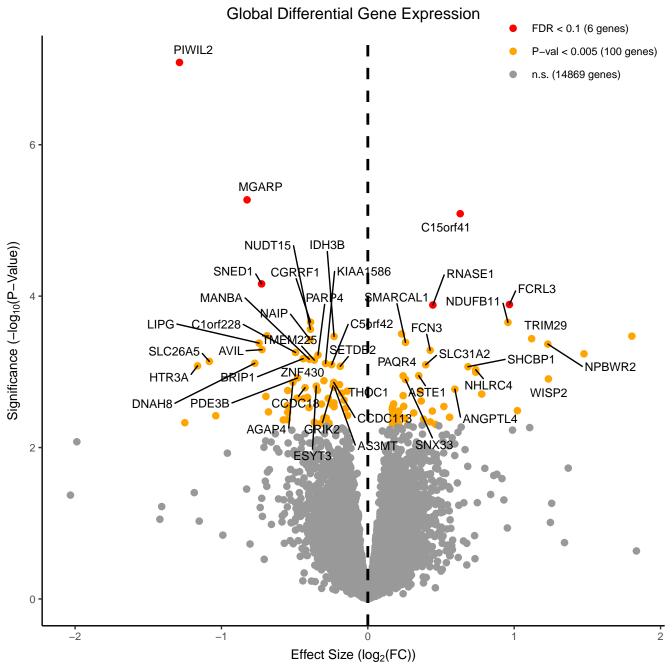
2nd Trim MIA

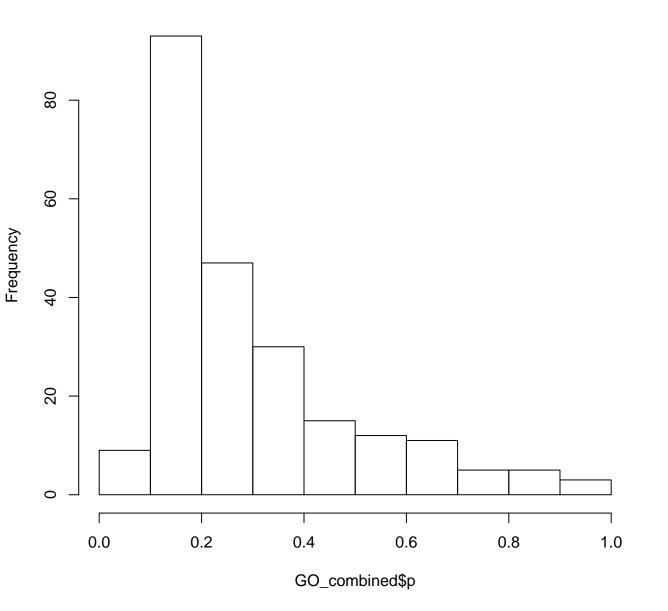












GO Enrichment

