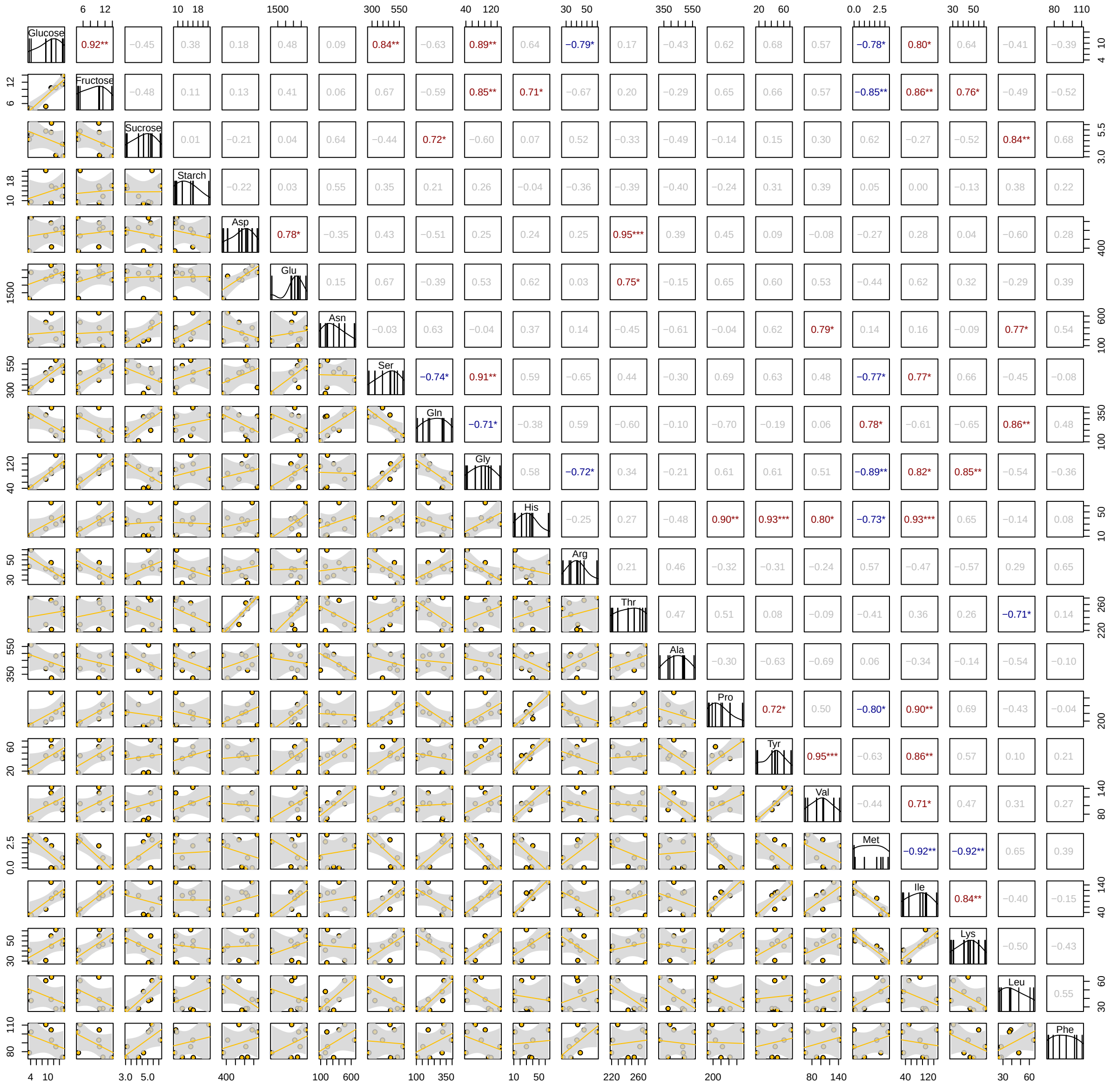
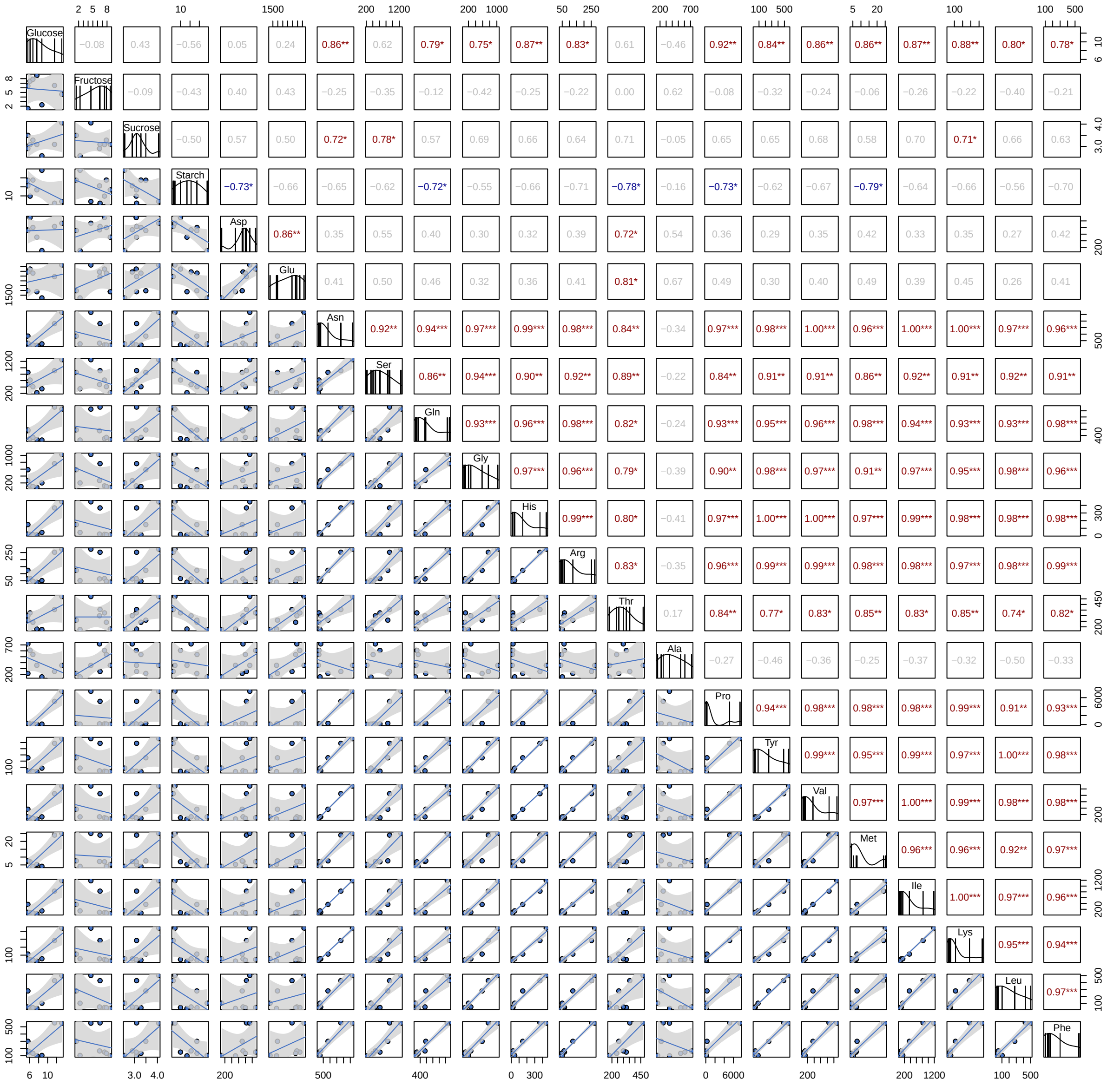
Glucose
Sucrose
Starch
Asp
Glu
Asn
Ser
Gln
Gly
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu

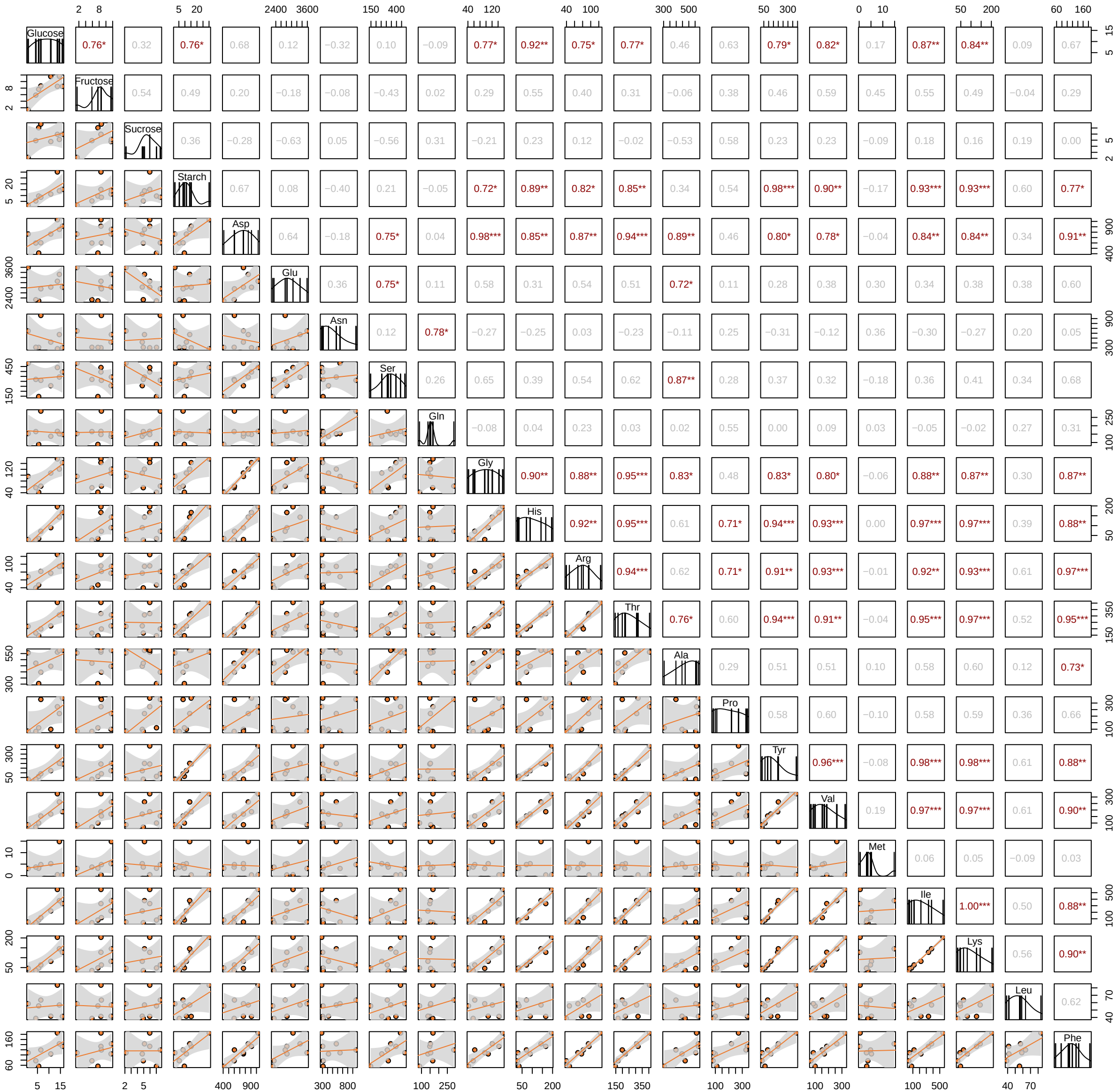
Desiree D


Glucose
Fructose
Sucrose
Starch
Asp
Glu
Asn
Ser
Gln
Gly
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe

Desiree W


Glucose
Fructose
Sucrose
Starch
Asp
Glu
Asn
Ser
Gln
Gly
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe

Desiree HD


Glucose
Fructose
Sucrose
Starch
Asp
Glu
Asn
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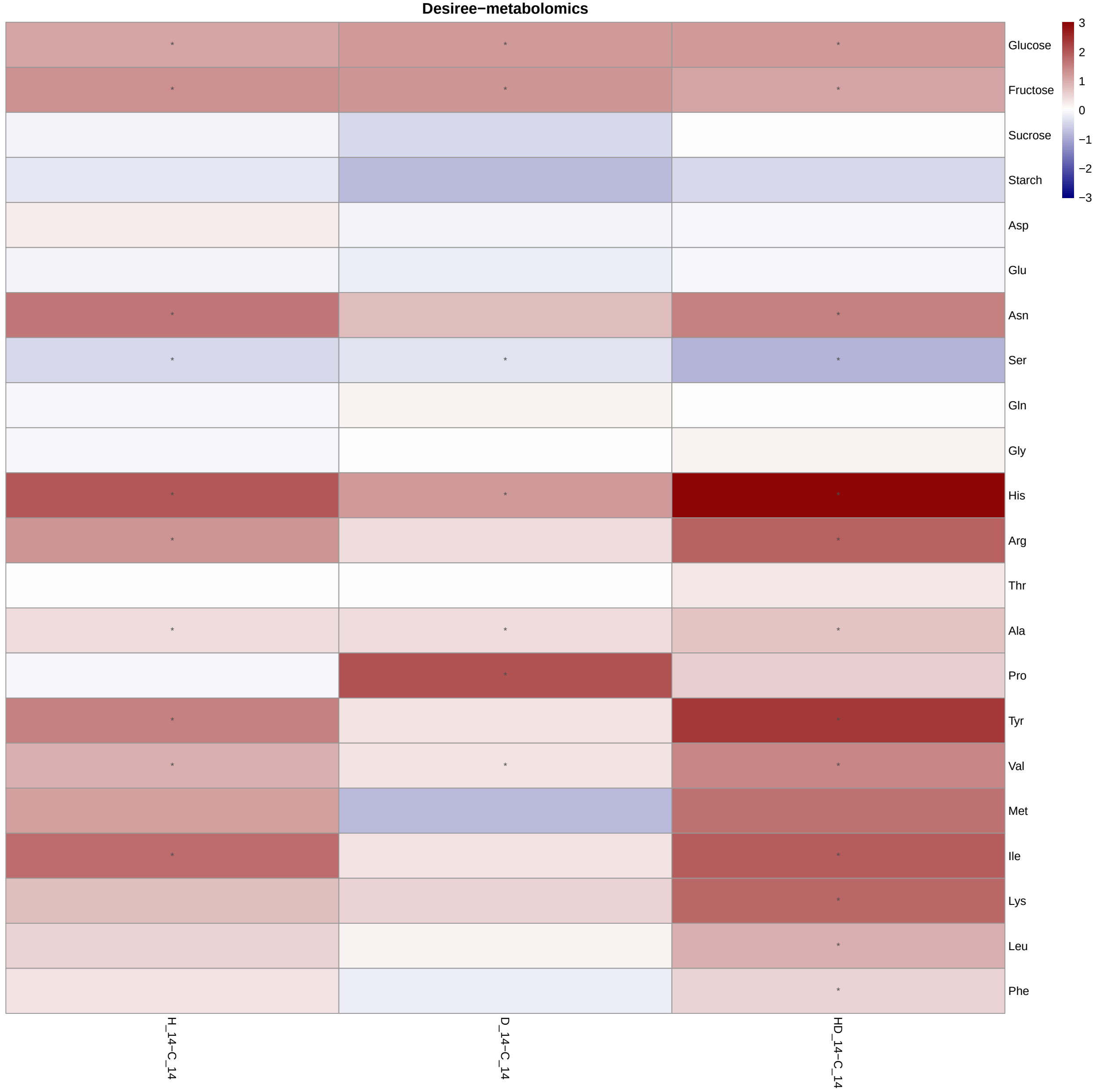
Gln
Gly
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe


Desiree−metabolomics
Glucose
Fructose
Sucrose
Starch
Asp
Glu
Asn
Ser
Gln
Gly
His
Arg
Thr
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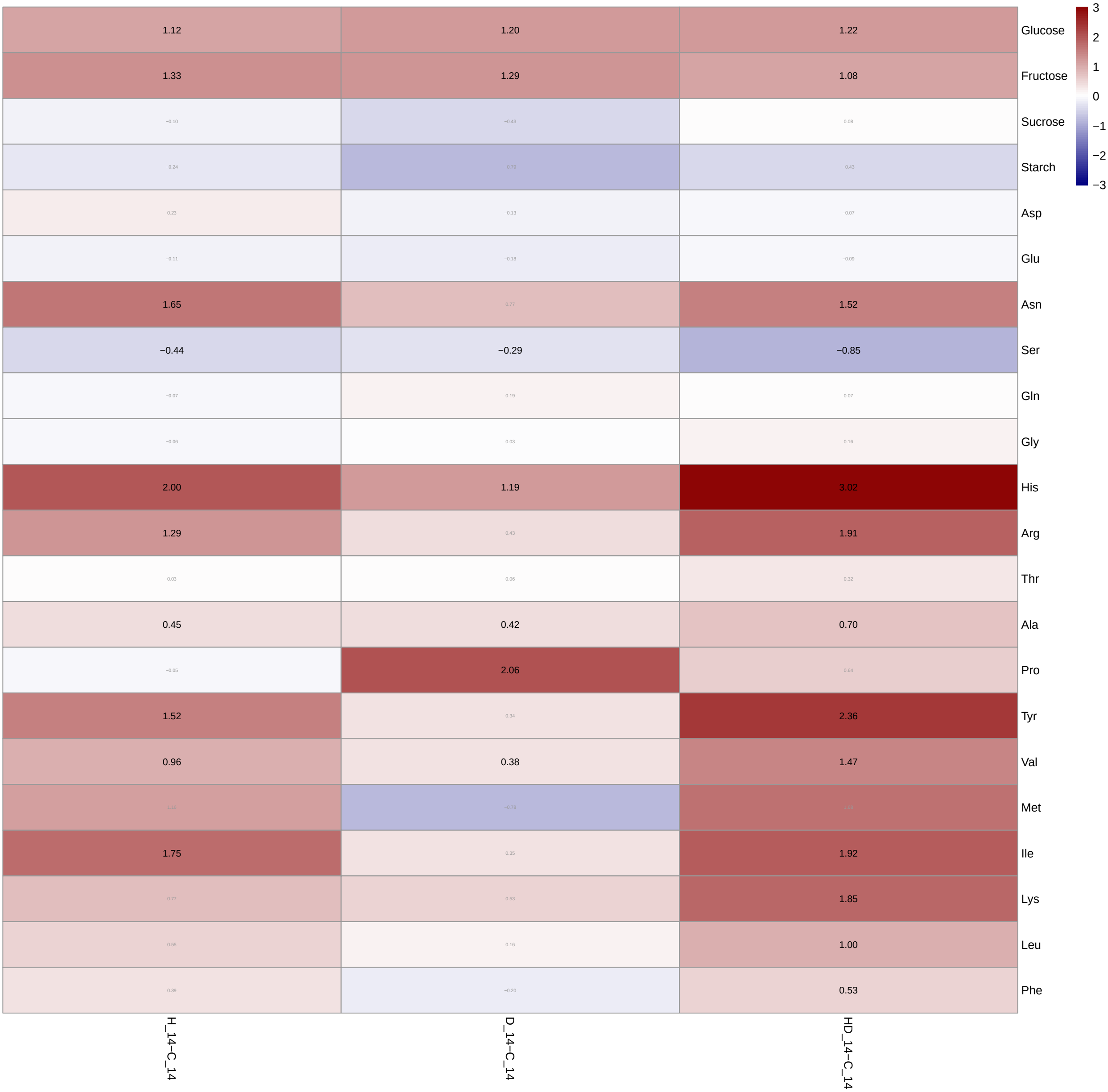
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe
H_14−C_14
D_14−C_14
HD_14−C_14
3
2
1
0
−1
−2
−3

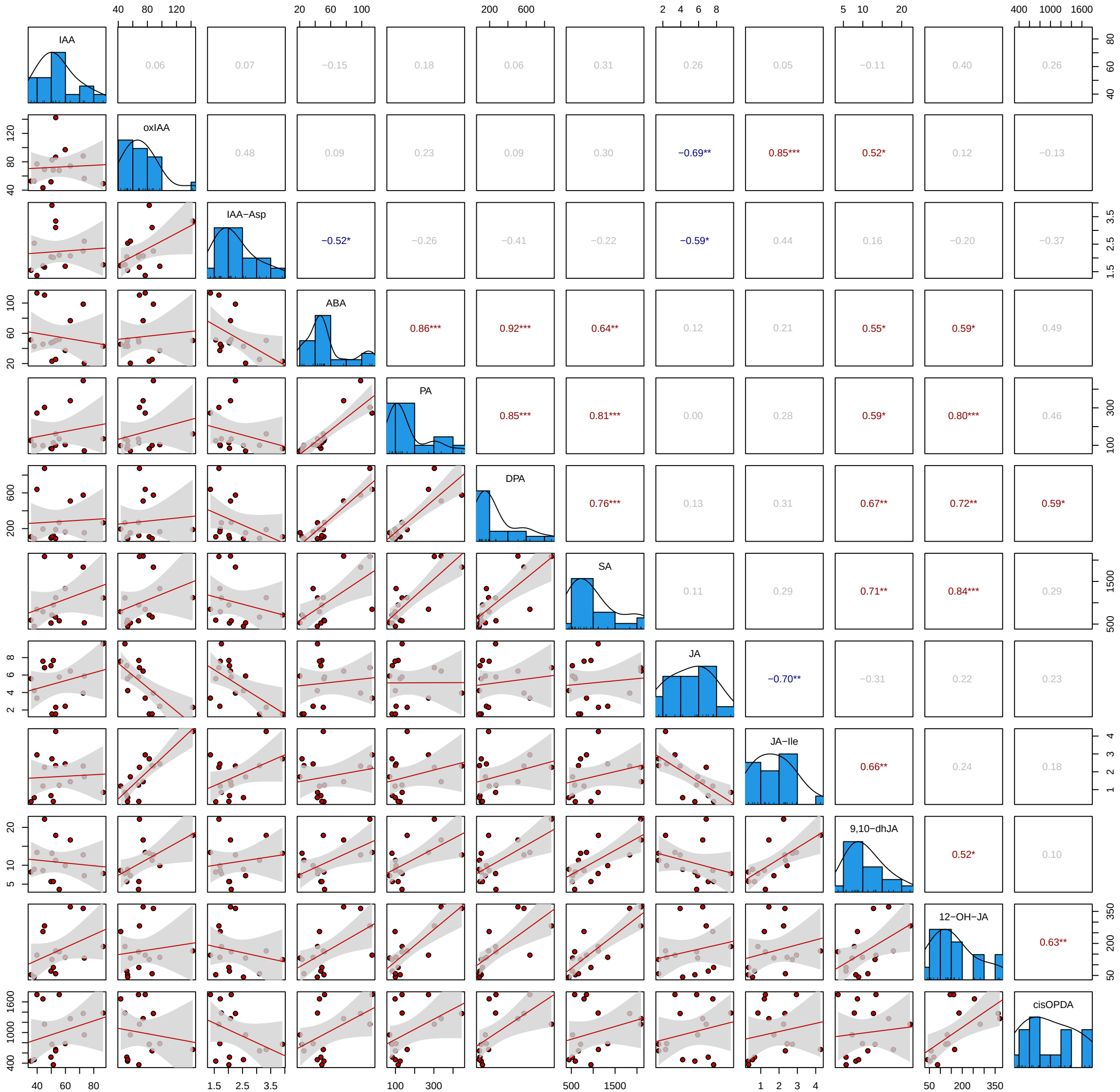
Desiree−metabolomics



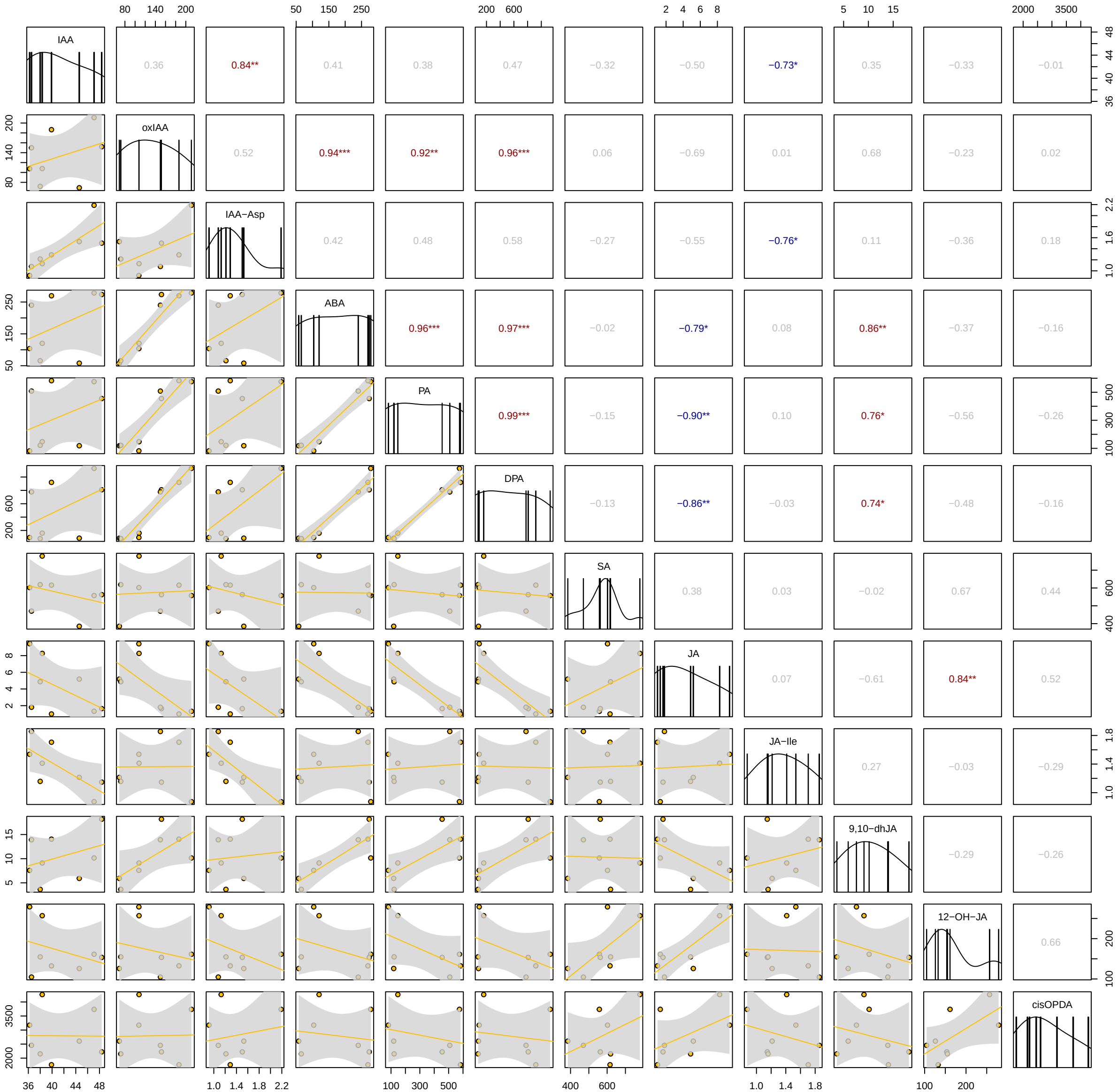
Desiree C

IAA
oxIAA
IAA−Asp
ABA
PA
DPA
SA
JA
JA−Ile
9,10−dhJA
12−OH−JA
cisOPDA
−0.12 −0.19 −0.36 −0.19 −0.17 0.27 −0.16 −0.21 −0.13 0.11 −0.22
−0.07 0.78*** 0.64** 0.69** 0.15 −0.23 0.66** 0.75*** 0.55* 0.30
−0.06 −0.25 −0.09 −0.12 −0.16 0.32 0.37 −0.18 −0.22
0.93*** 0.95*** 0.26 0.28 0.60* 0.72** 0.80*** 0.65**
0.94*** 0.44 0.48 0.31 0.55* 0.91*** 0.78***
0.40 0.36 0.56* 0.72** 0.90*** 0.70**
0.32 0.10 0.27 0.65** 0.28
−0.29 −0.09 0.44 0.66**
0.77*** 0.33 0.08
0.59* 0.38
0.72**

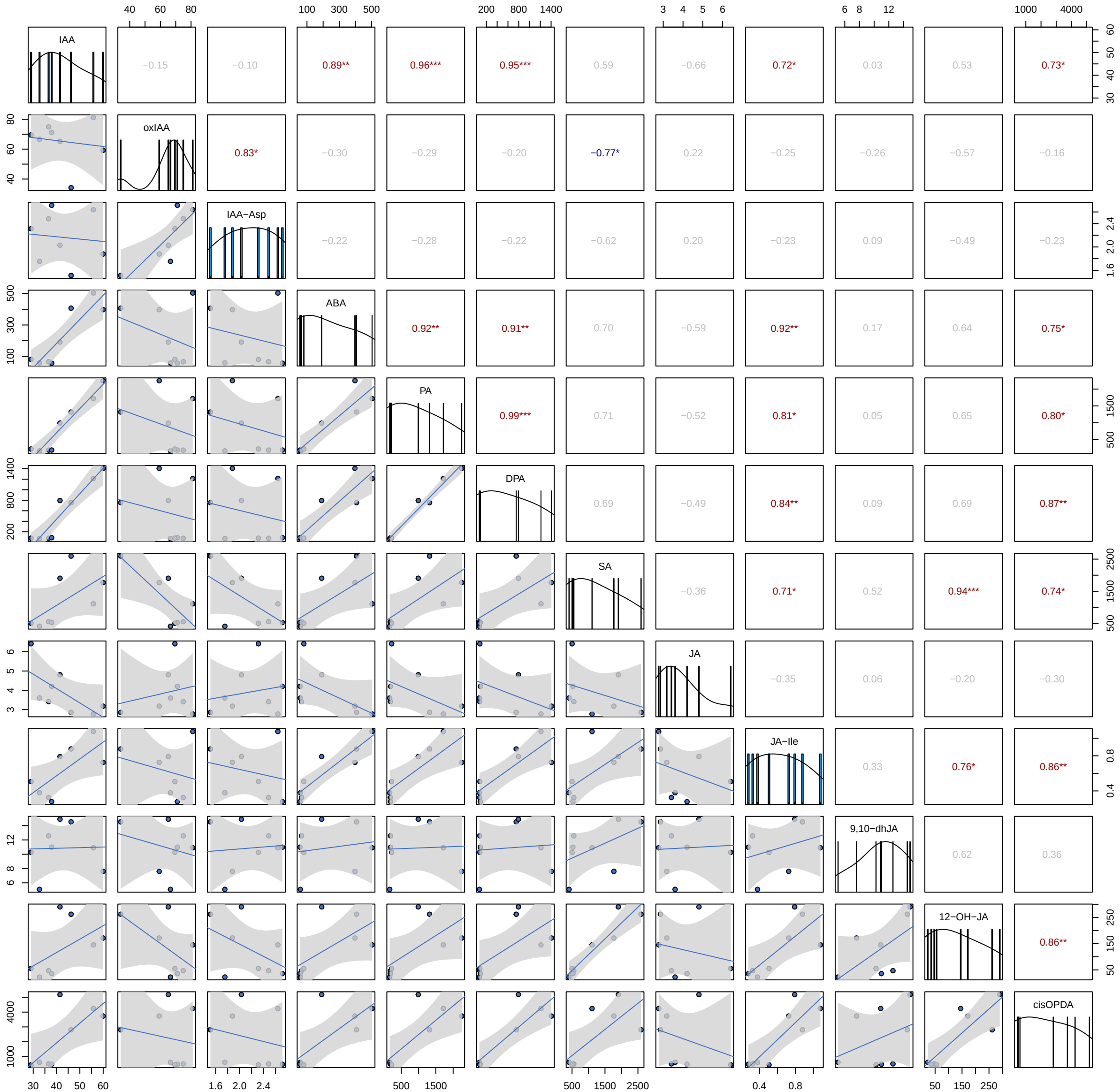
Desiree H


IAA
0.06 0.07 −0.15 0.18 0.06 0.31 0.26 0.05 −0.11 0.40 0.26
oxIAA
0.48 0.09 0.23 0.09 0.30 −0.69** 0.85*** 0.52* 0.12 −0.13
IAA−Asp
−0.52* −0.26 −0.41 −0.22 −0.59* 0.44 0.16 −0.20 −0.37
ABA
0.86*** 0.92*** 0.64** 0.12 0.21 0.55* 0.59* 0.49
PA
0.85*** 0.81*** 0.00 0.28 0.59* 0.80*** 0.46
DPA
0.76*** 0.13 0.31 0.67** 0.72** 0.59*
SA
0.11 0.29 0.71** 0.84*** 0.29
JA
−0.70** −0.31 0.22 0.23
JA−Ile
0.66** 0.24 0.18
9,10−dhJA
0.52* 0.10
12−OH−JA
0.63**
cisOPDA

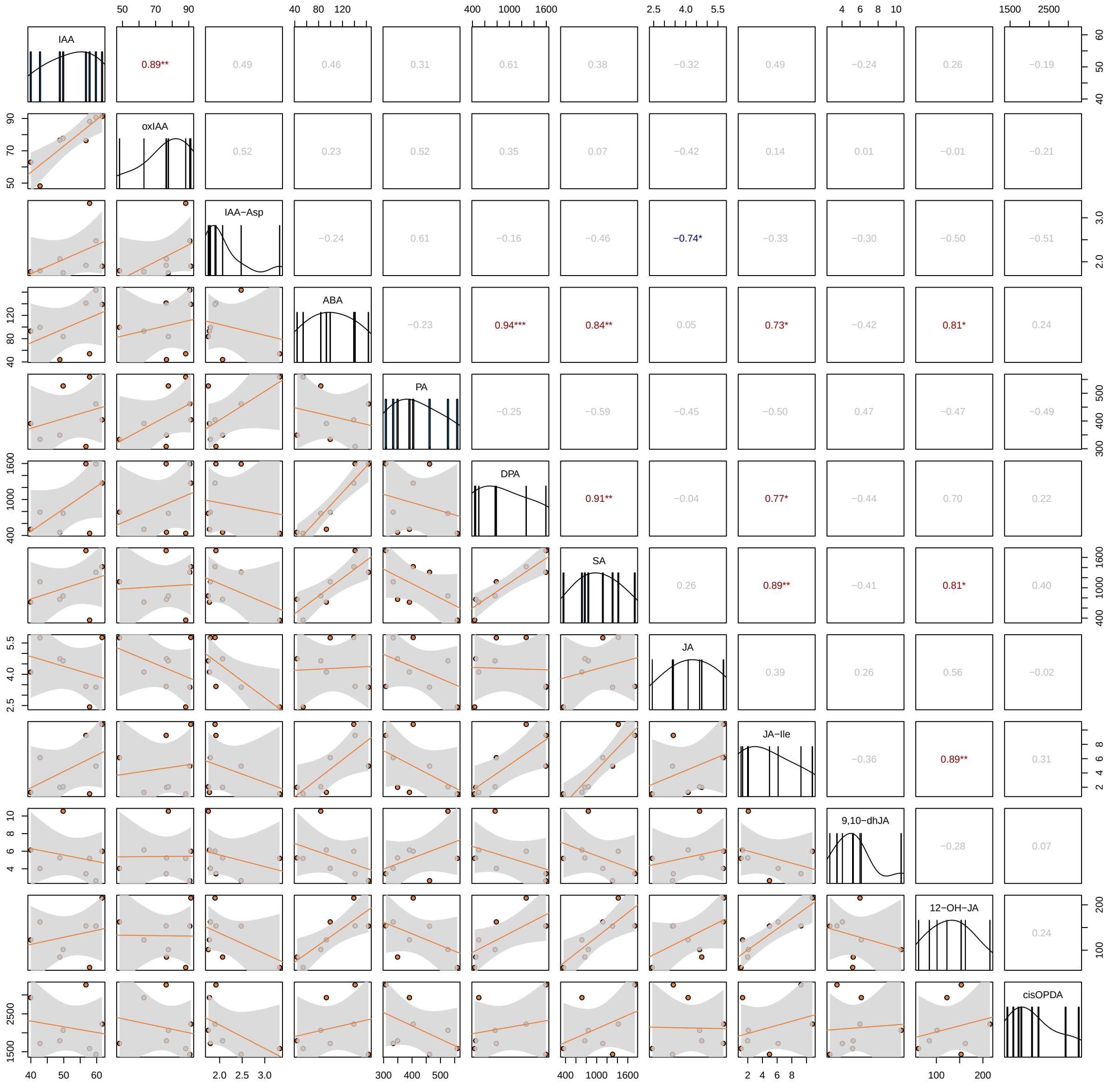
Desiree D

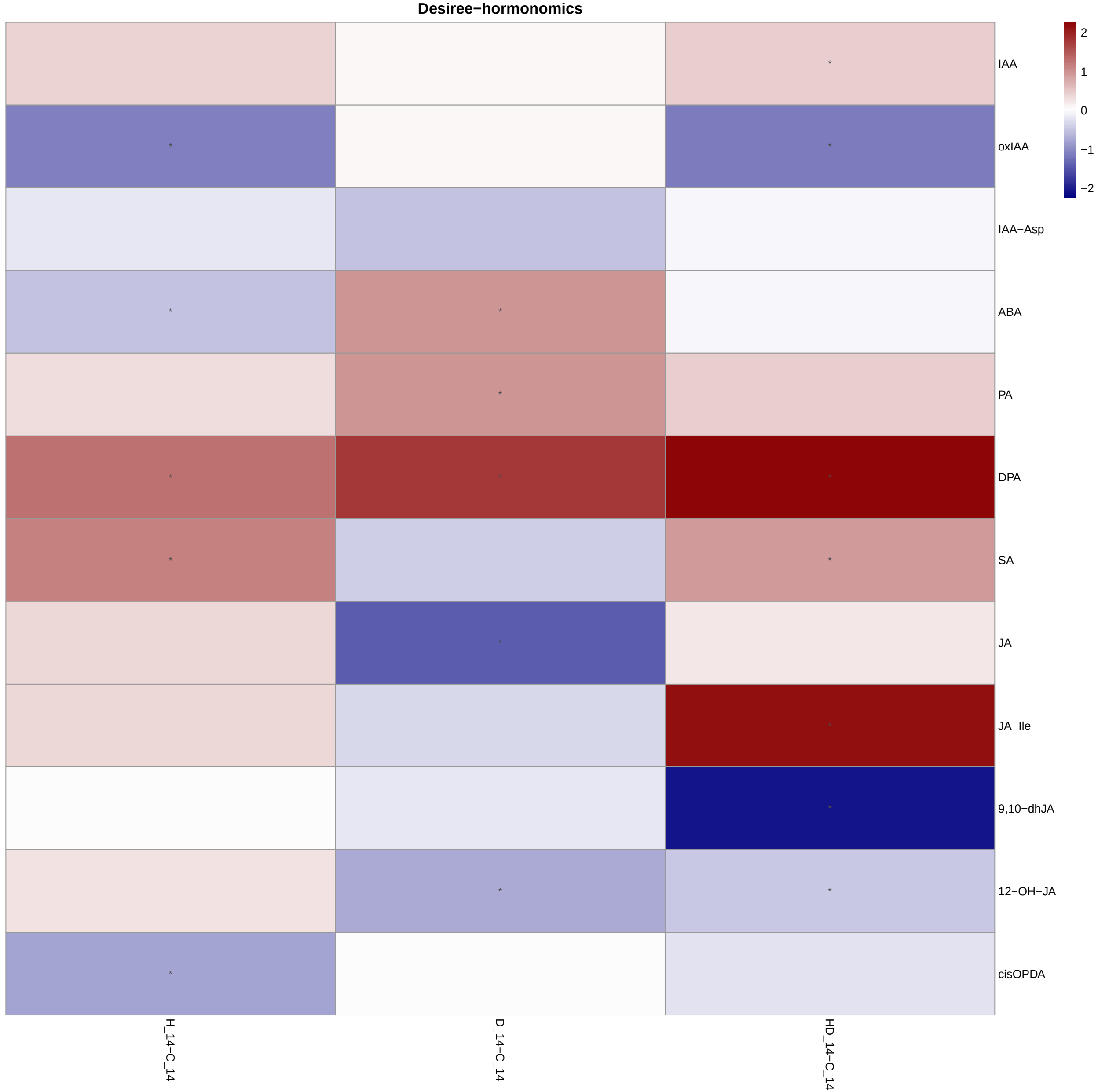

IAA
oxIAA
IAA−Asp
ABA
PA
DPA
SA
JA
JA−Ile
9,10−dhJA
12−OH−JA
cisOPDA
0.36
0.84**
0.41
0.38
0.47
−0.32
−0.50
−0.73*
0.35
−0.33
−0.01
0.52
0.94***
0.92**
0.96***
0.06
−0.69
0.01
0.68
−0.23
0.02
0.42
0.48
0.58
−0.27
−0.55
−0.76*
0.11
−0.36
0.18
0.96***
0.97***
−0.02
−0.79*
0.08
0.86**
−0.37
−0.16
0.99***
−0.15
−0.90**
0.10
0.76*
−0.56
−0.26
−0.13
−0.86**
−0.03
0.74*
−0.48
−0.16
0.38
0.03
−0.02
0.67
0.44
0.07
−0.61
0.84**
0.52
0.27
−0.03
−0.29
−0.29
−0.26
0.66

Desiree W

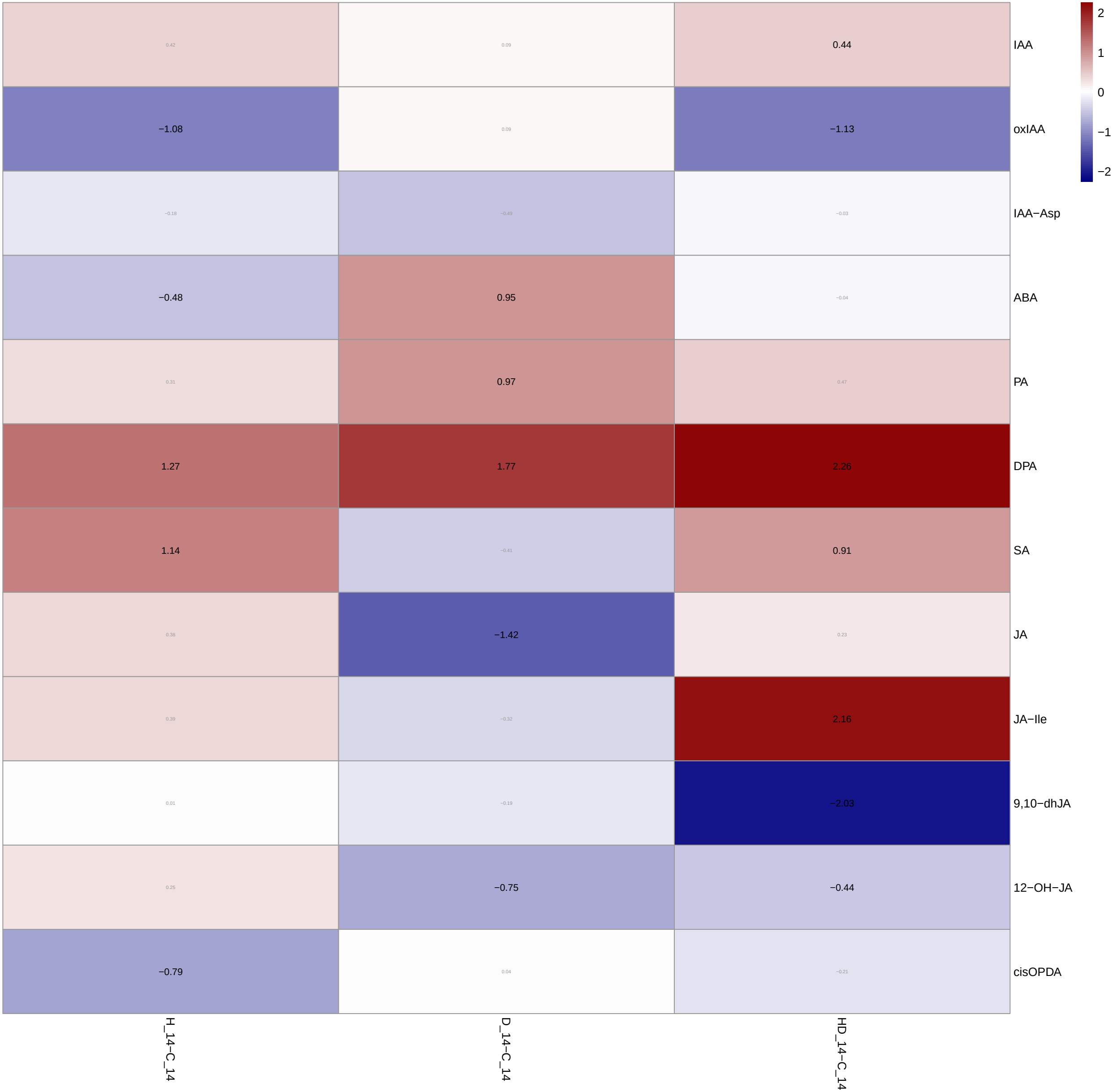

IAA
oxIAA
IAA−Asp
ABA
PA
DPA
SA
JA
JA−Ile
9,10−dhJA
12−OH−JA
cisOPDA
−0.15 −0.10 0.89** 0.96*** 0.95*** 0.59 −0.66 0.72* 0.03 0.53 0.73*
0.83* −0.30 −0.29 −0.20 −0.77* 0.22 −0.25 −0.26 −0.57 −0.16
−0.22 −0.28 −0.22 −0.62 0.20 −0.23 0.09 −0.49 −0.23
0.92** 0.91** 0.70 −0.59 0.92** 0.17 0.64 0.75*
0.99*** 0.71 −0.52 0.81* 0.05 0.65 0.80*
0.69 −0.49 0.84** 0.09 0.69 0.87**
−0.36 0.71* 0.52 0.94*** 0.74*
−0.35 0.06 −0.20 −0.30
0.33 0.76* 0.86**
0.62 0.36
0.86**

Desiree HD


IAA
0.89** 0.49 0.46 0.31 0.61 0.38 −0.32 0.49 −0.24 0.26 −0.19
oxIAA
0.52 0.23 0.52 0.35 0.07 −0.42 0.14 0.01 −0.01 −0.21
IAA−Asp
−0.24 0.61 −0.16 −0.46 −0.74* −0.33 −0.30 −0.50 −0.51
ABA
−0.23 0.94*** 0.84** 0.05 0.73* −0.42 0.81* 0.24
PA
−0.25 −0.59 −0.45 −0.50 0.47 −0.47 −0.49
DPA
0.91** −0.04 0.77* −0.44 0.70 0.22
SA
0.26 0.89** −0.41 0.81* 0.40
JA
0.39 0.26 0.56 −0.02
JA−Ile
−0.36 0.89** 0.31
9,10−dhJA
−0.28 0.07
12−OH−JA
0.24
cisOPDA


Desiree−hormonomics
IAA
oxIAA
IAA−Asp
ABA
PA
DPA
SA
JA
JA−Ile
9,10−dhJA
12−OH−JA
cisOPDA
H_14−C_14
D_14−C_14
HD_14−C_14
2
1
0
−1
−2

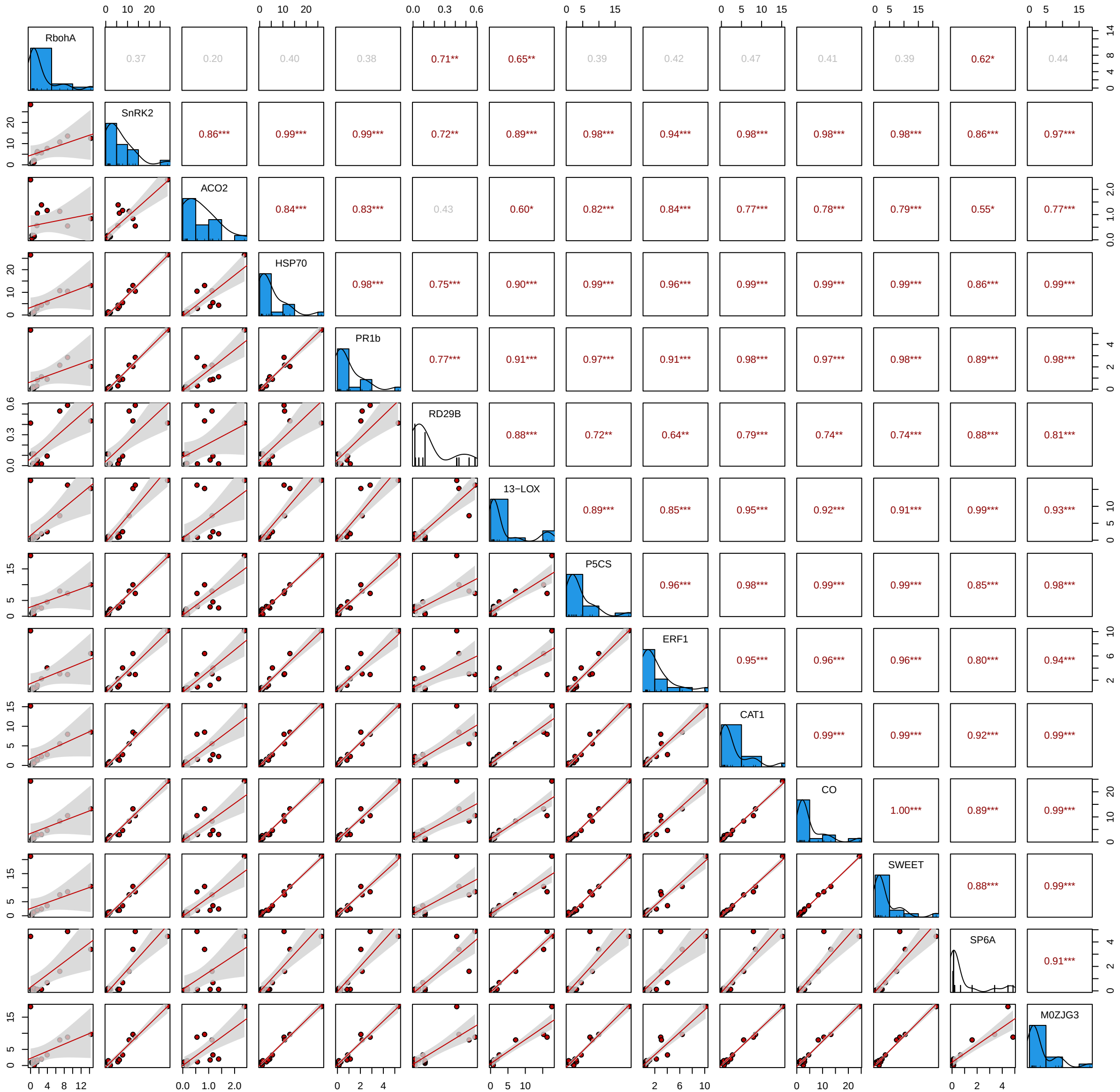
Desiree−hormonomics



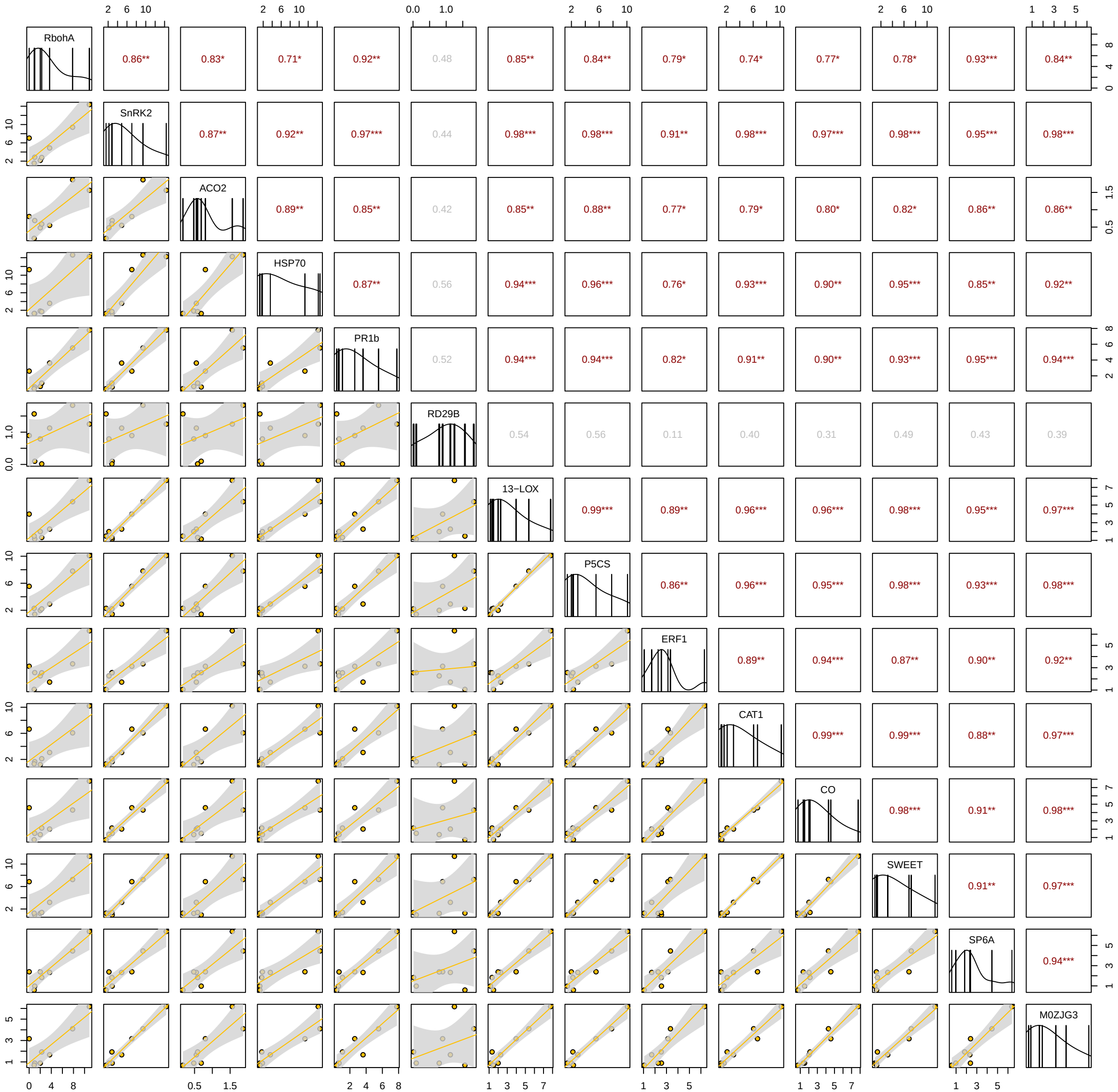
Desiree C

RbohA
SnRK2
ACO2
HSP70
PR1b
RD29B
13−LOX
P5CS
ERF1
CAT1
CO
SWEET
SP6A
M0ZJG3

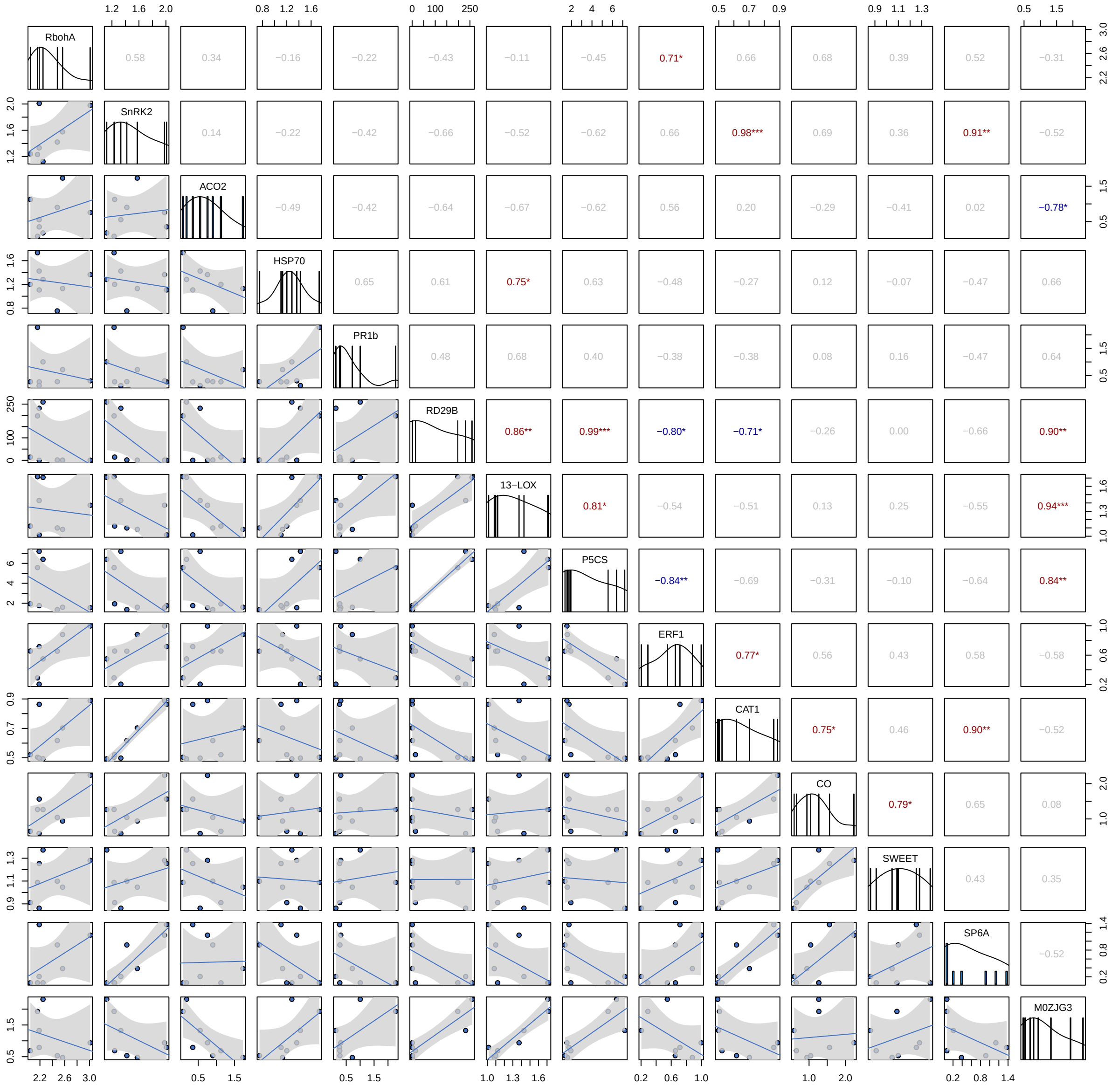
Desiree H


RbohA
SnRK2
ACO2
HSP70
PR1b
RD29B
13−LOX
P5CS
ERF1
CAT1
CO
SWEET
SP6A
M0ZJG3
0.37 0.20 0.40 0.38 0.71** 0.65** 0.39 0.42 0.47 0.41 0.39 0.62* 0.44
0.86*** 0.99*** 0.99*** 0.72** 0.89*** 0.98*** 0.94*** 0.98*** 0.98*** 0.98*** 0.86*** 0.97***
0.84*** 0.83*** 0.43 0.60* 0.82*** 0.84*** 0.77*** 0.78*** 0.79*** 0.55* 0.77***
0.98*** 0.75*** 0.90*** 0.99*** 0.96*** 0.99*** 0.99*** 0.99*** 0.86*** 0.99***
0.77*** 0.91*** 0.97*** 0.91*** 0.98*** 0.97*** 0.98*** 0.89*** 0.98***
0.88*** 0.72** 0.64** 0.79*** 0.74** 0.74*** 0.88*** 0.81***
0.89*** 0.85*** 0.95*** 0.92*** 0.91*** 0.99*** 0.93***
0.96*** 0.98*** 0.99*** 0.99*** 0.85*** 0.98***
0.95*** 0.96*** 0.96*** 0.80*** 0.94***
0.99*** 0.99*** 0.92*** 0.99***
1.00*** 0.89*** 0.99***
0.88*** 0.99***
0.91***

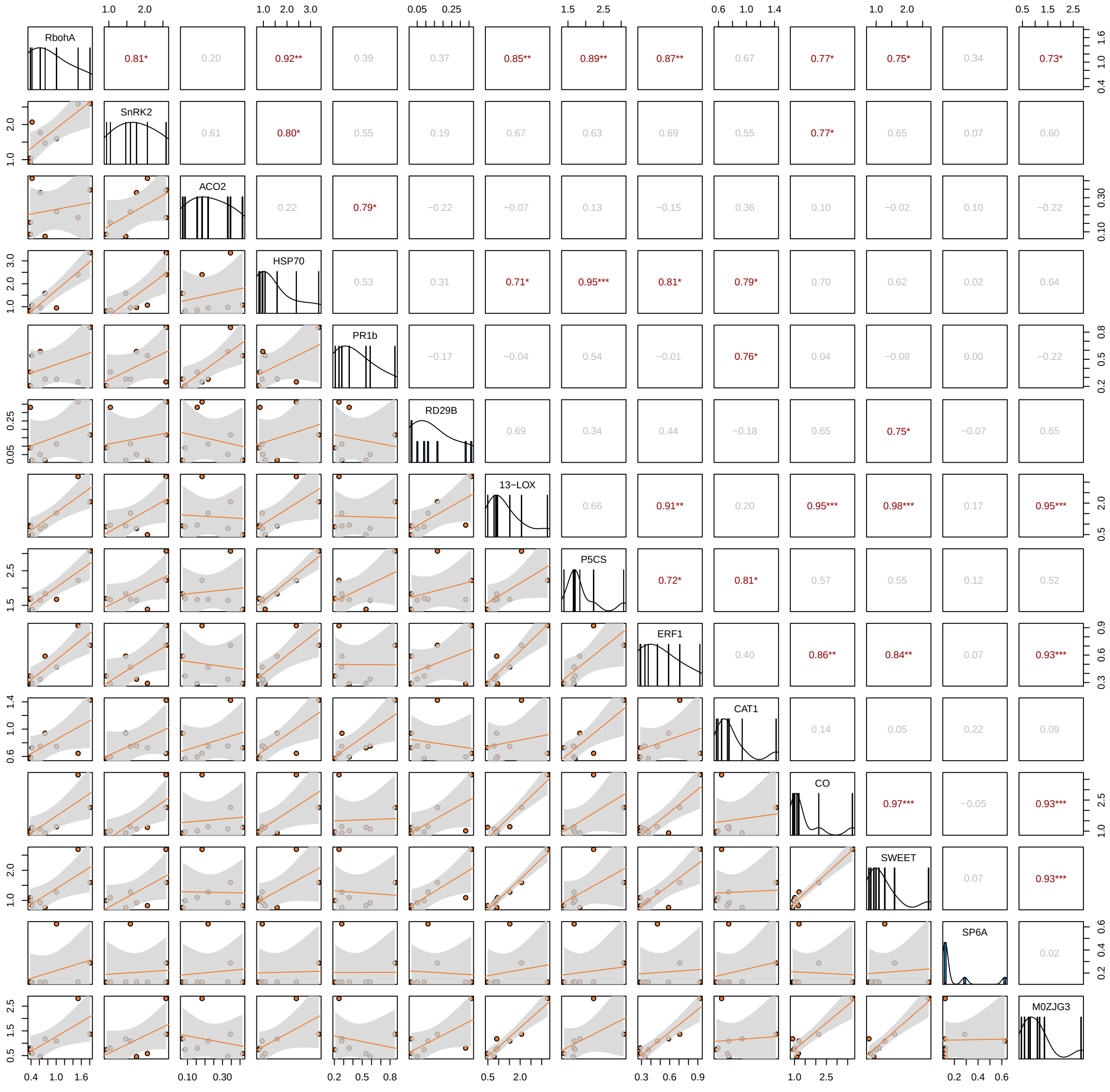
Desiree D

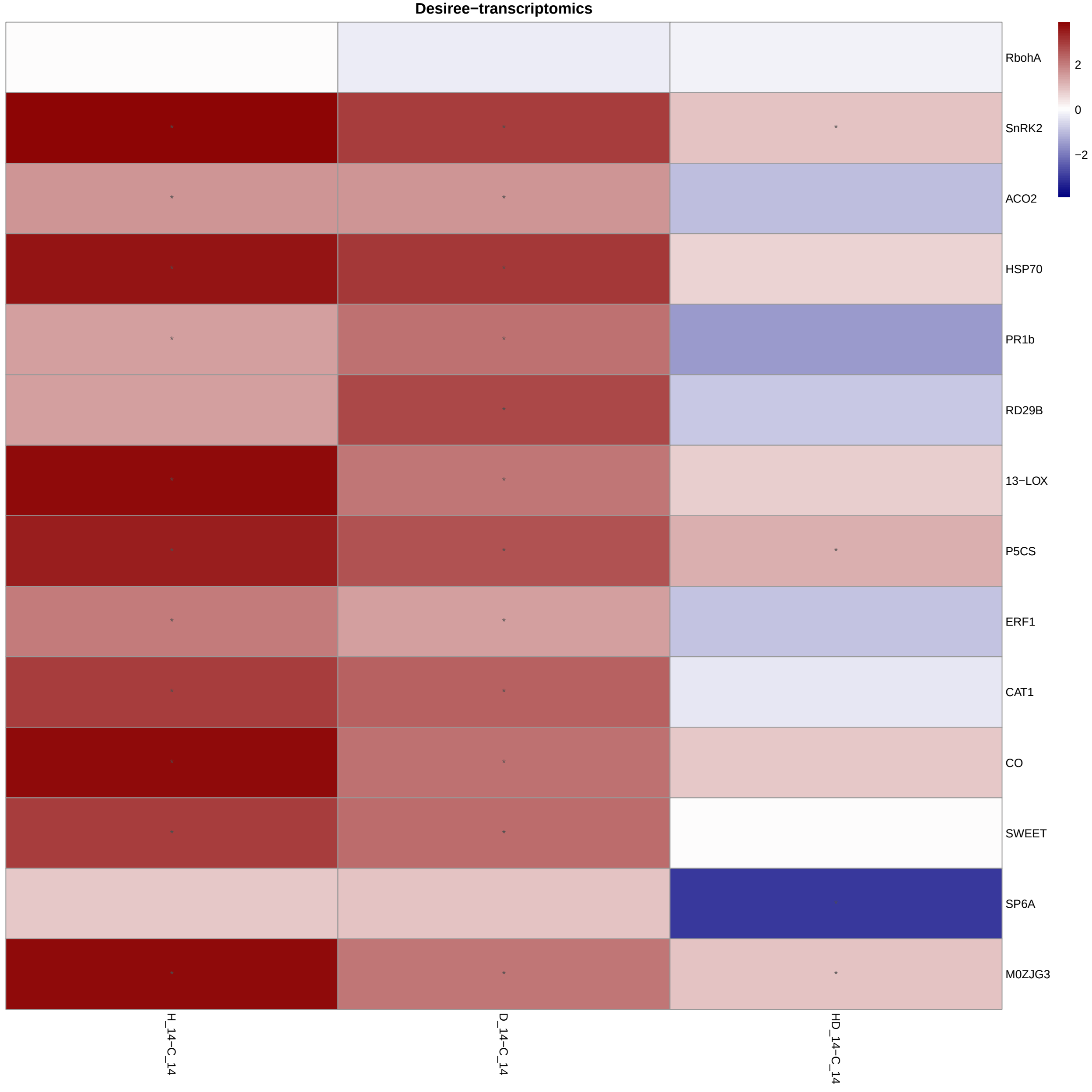

RbohA
SnRK2
ACO2
HSP70
PR1b
RD29B
13−LOX
P5CS
ERF1
CAT1
CO
SWEET
SP6A
M0ZJG3
0.86** 0.83* 0.71* 0.92** 0.48 0.85** 0.84** 0.79* 0.74* 0.77* 0.78* 0.93*** 0.84**
0.87** 0.92** 0.97*** 0.44 0.98*** 0.98*** 0.91** 0.98*** 0.97*** 0.98*** 0.95*** 0.98***
0.89** 0.85** 0.42 0.85** 0.88** 0.77* 0.79* 0.80* 0.82* 0.86** 0.86**
0.87** 0.56 0.94*** 0.96*** 0.76* 0.93*** 0.90** 0.95*** 0.85** 0.92**
0.52 0.94*** 0.94*** 0.82* 0.91** 0.90** 0.93*** 0.95*** 0.94***
0.54 0.56 0.11 0.40 0.31 0.49 0.43 0.39
0.99*** 0.89** 0.96*** 0.96*** 0.98*** 0.95*** 0.97***
0.86** 0.96*** 0.95*** 0.98*** 0.93*** 0.98***
0.89** 0.94*** 0.87** 0.90** 0.92**
0.99*** 0.99*** 0.88** 0.97***
0.98*** 0.91** 0.98***
0.91** 0.97***
0.94***

Desiree W

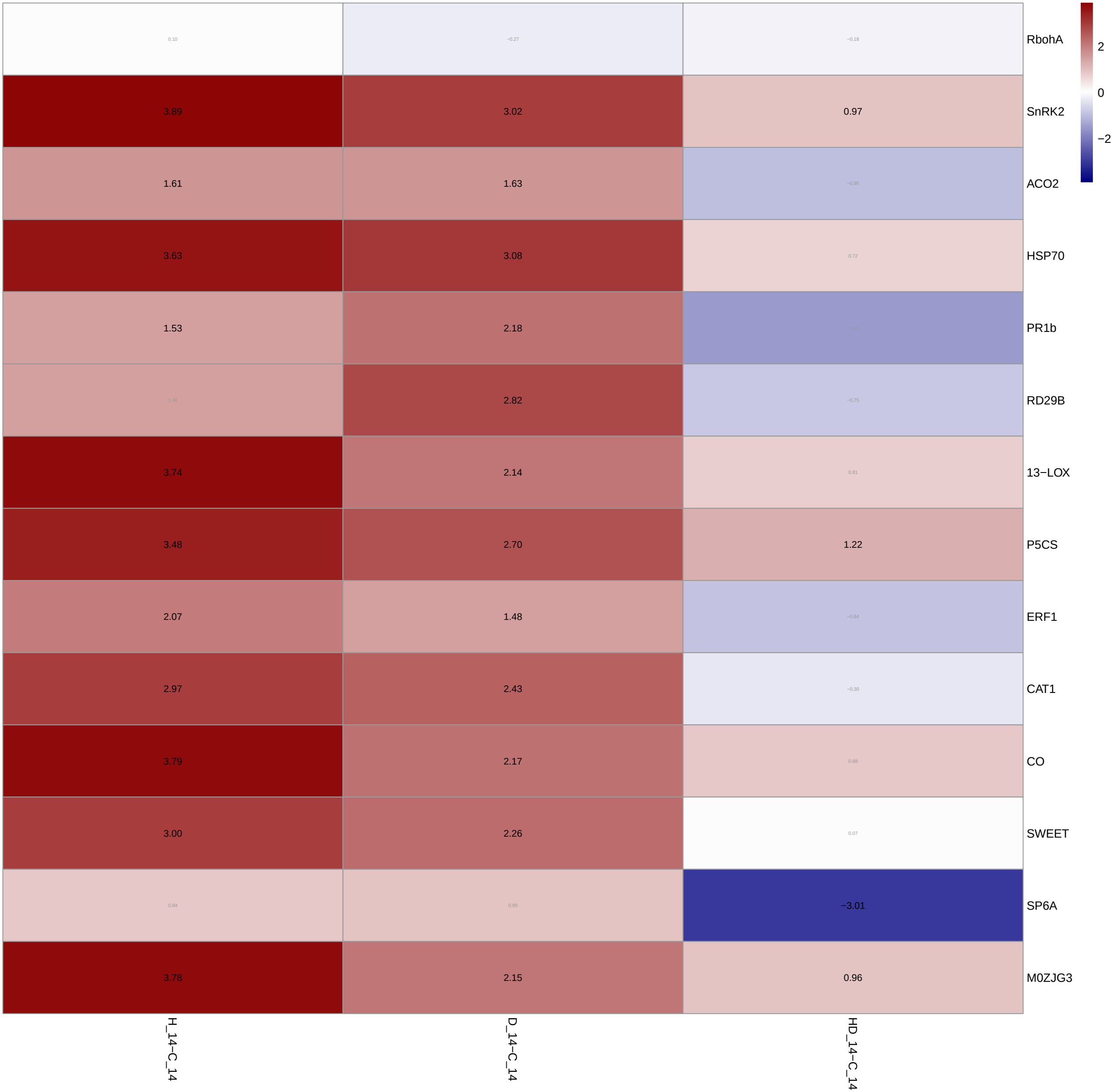

RbohA
SnRK2
ACO2
HSP70
PR1b
RD29B
13−LOX
P5CS
ERF1
CAT1
CO
SWEET
SP6A
M0ZJG3

Desiree HD

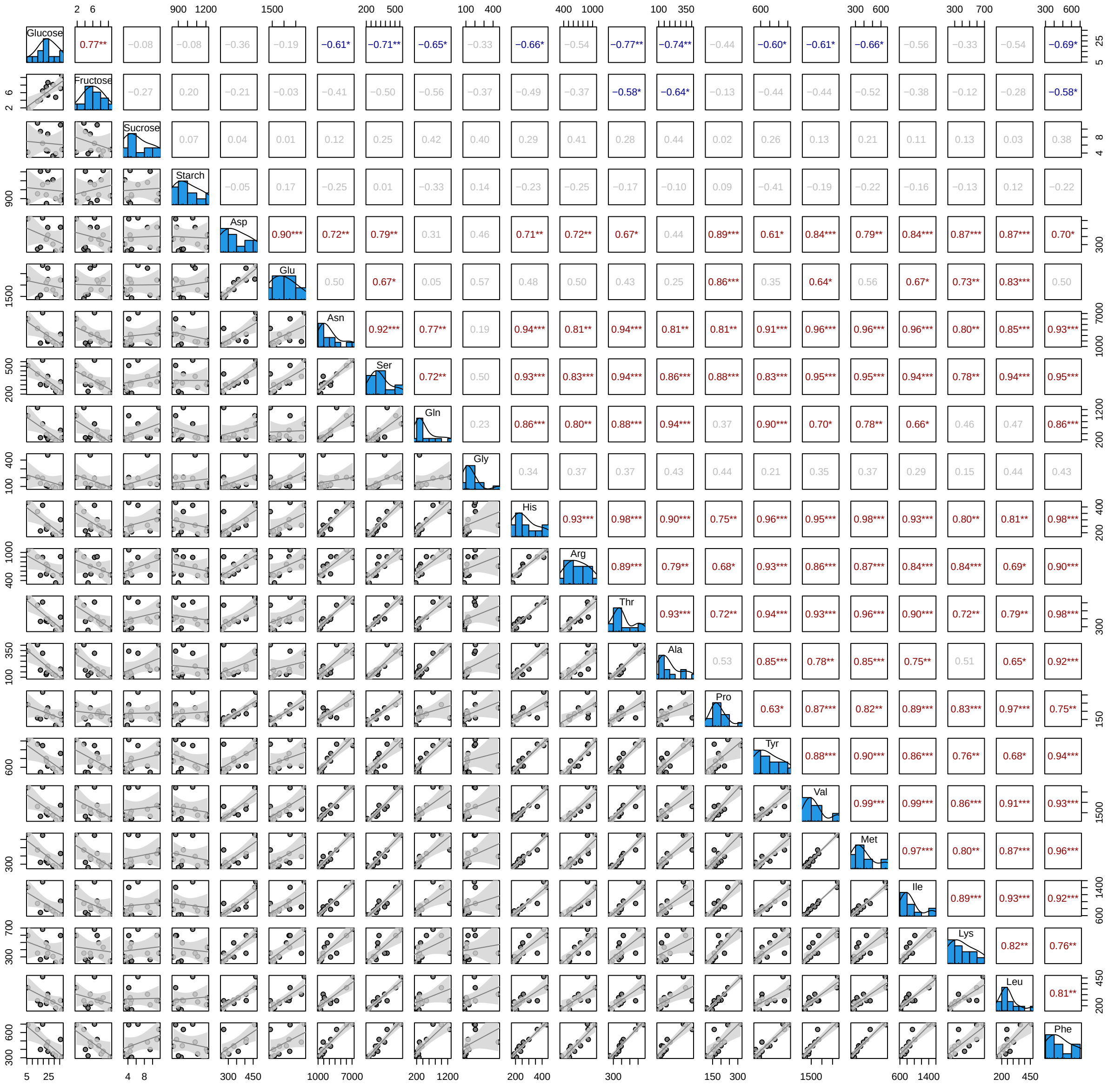

RbohA
SnRK2
ACO2
HSP70
PR1b
RD29B
13−LOX
P5CS
ERF1
CAT1
CO
SWEET
SP6A
M0ZJG3
0.81* 0.20 0.92** 0.39 0.37 0.85** 0.89** 0.87** 0.67 0.77* 0.75* 0.34 0.73*
0.61 0.80* 0.55 0.19 0.67 0.63 0.69 0.55 0.77* 0.65 0.07 0.60
0.22 0.79* −0.22 −0.07 0.13 −0.15 0.36 0.10 −0.02 0.10 −0.22
0.53 0.31 0.71* 0.95*** 0.81* 0.79* 0.70 0.62 0.02 0.64
−0.17 −0.04 0.54 −0.01 0.76* 0.04 −0.08 0.00 −0.22
0.69 0.34 0.44 −0.18 0.65 0.75* −0.07 0.65
0.66 0.91** 0.20 0.95*** 0.98*** 0.17 0.95***
0.72* 0.81* 0.57 0.55 0.12 0.52
0.40 0.86** 0.84** 0.07 0.93***
0.14 0.05 0.22 0.09
0.97*** −0.05 0.93***
0.07 0.93***
0.02


Desiree−transcriptomics
RbohA
SnRK2
ACO2
HSP70
PR1b
RD29B
13−LOX
P5CS
ERF1
CAT1
CO
SWEET
SP6A
M0ZJG3
H_14−C_14
D_14−C_14
HD_14−C_14
2
0
−2

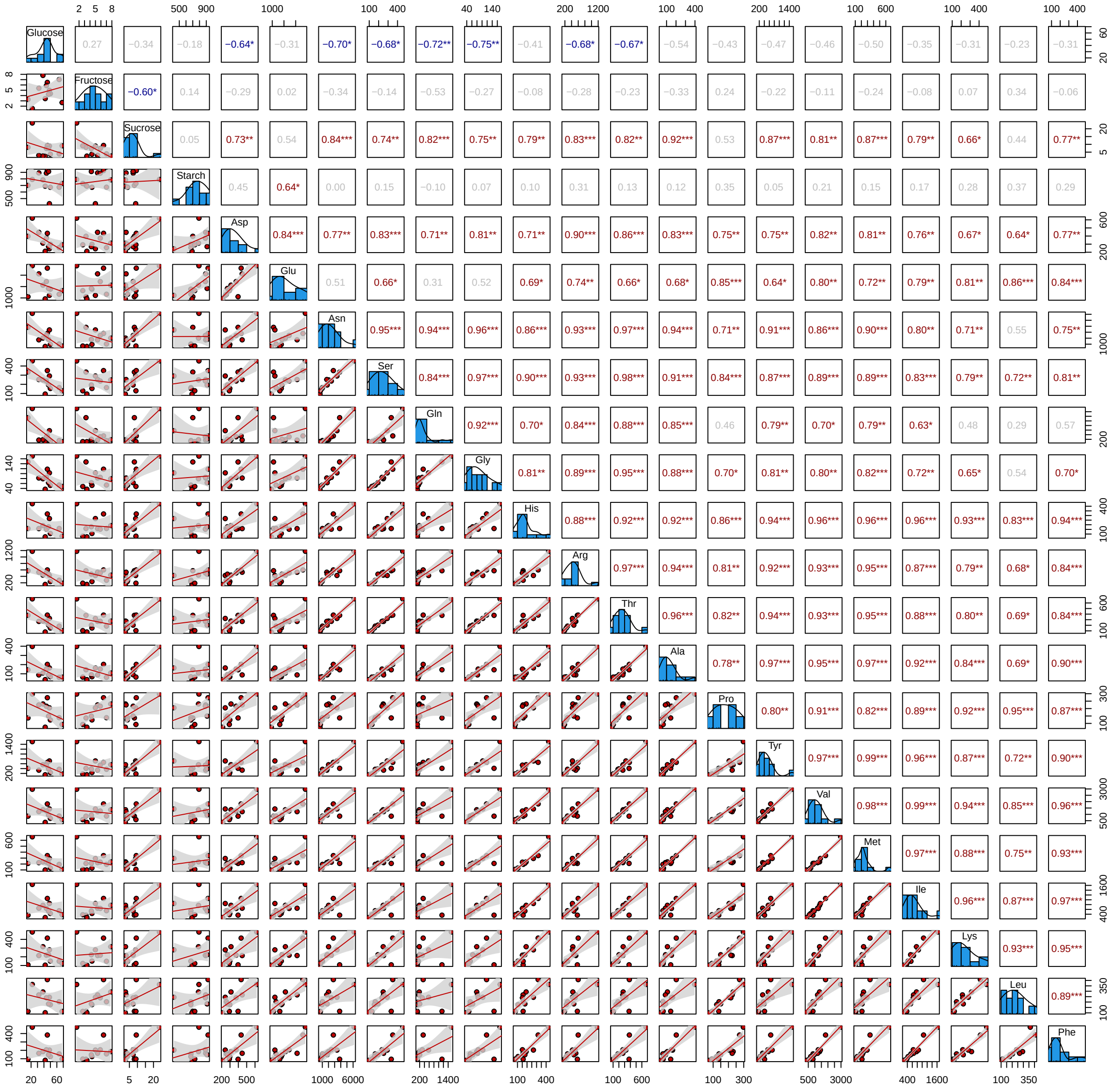
Desiree−transcriptomics



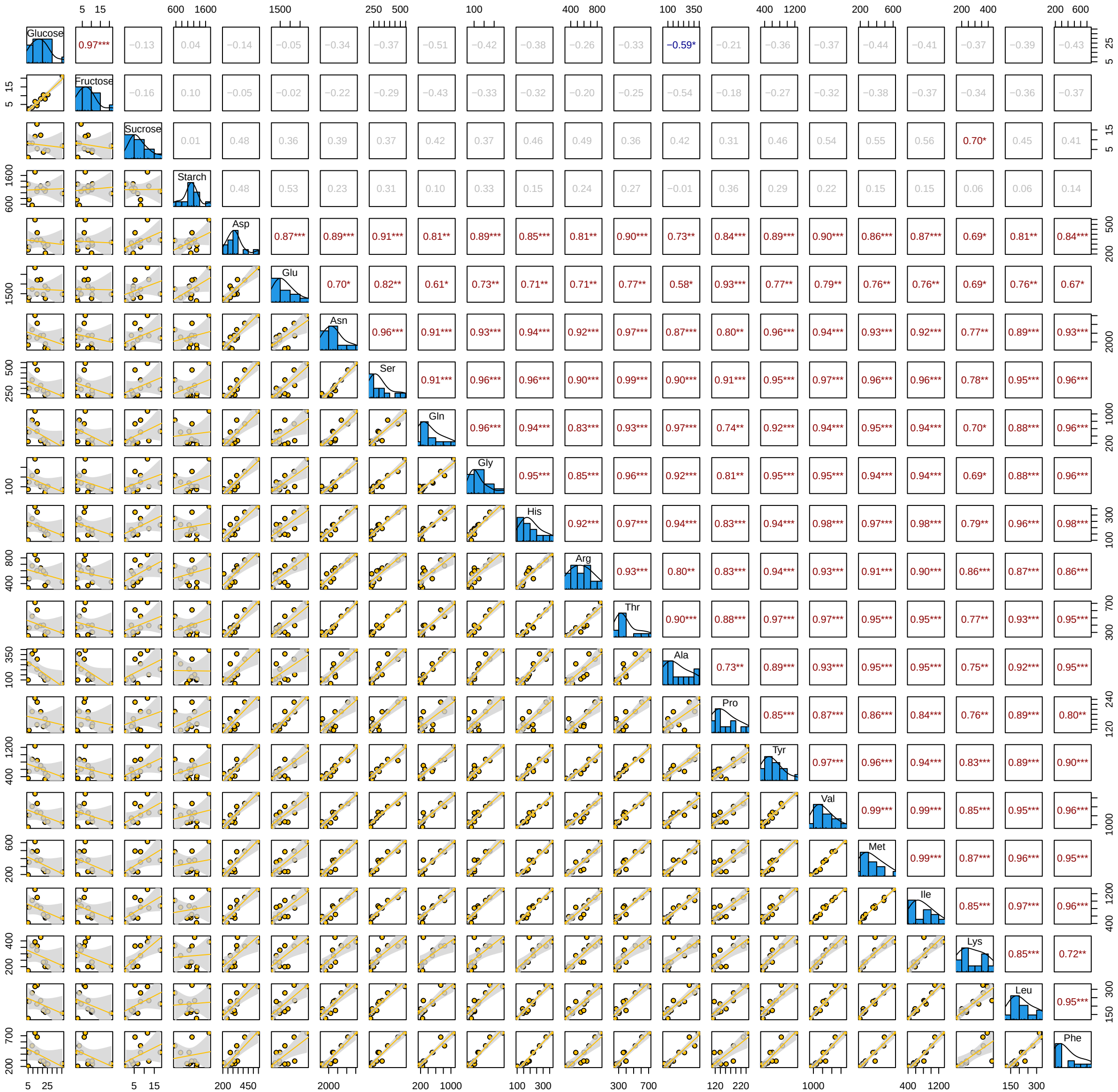
Desiree C


Glucose
Fructose
Sucrose
Starch
Asp
Glu
Asn
Ser
Gln
Gly
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe

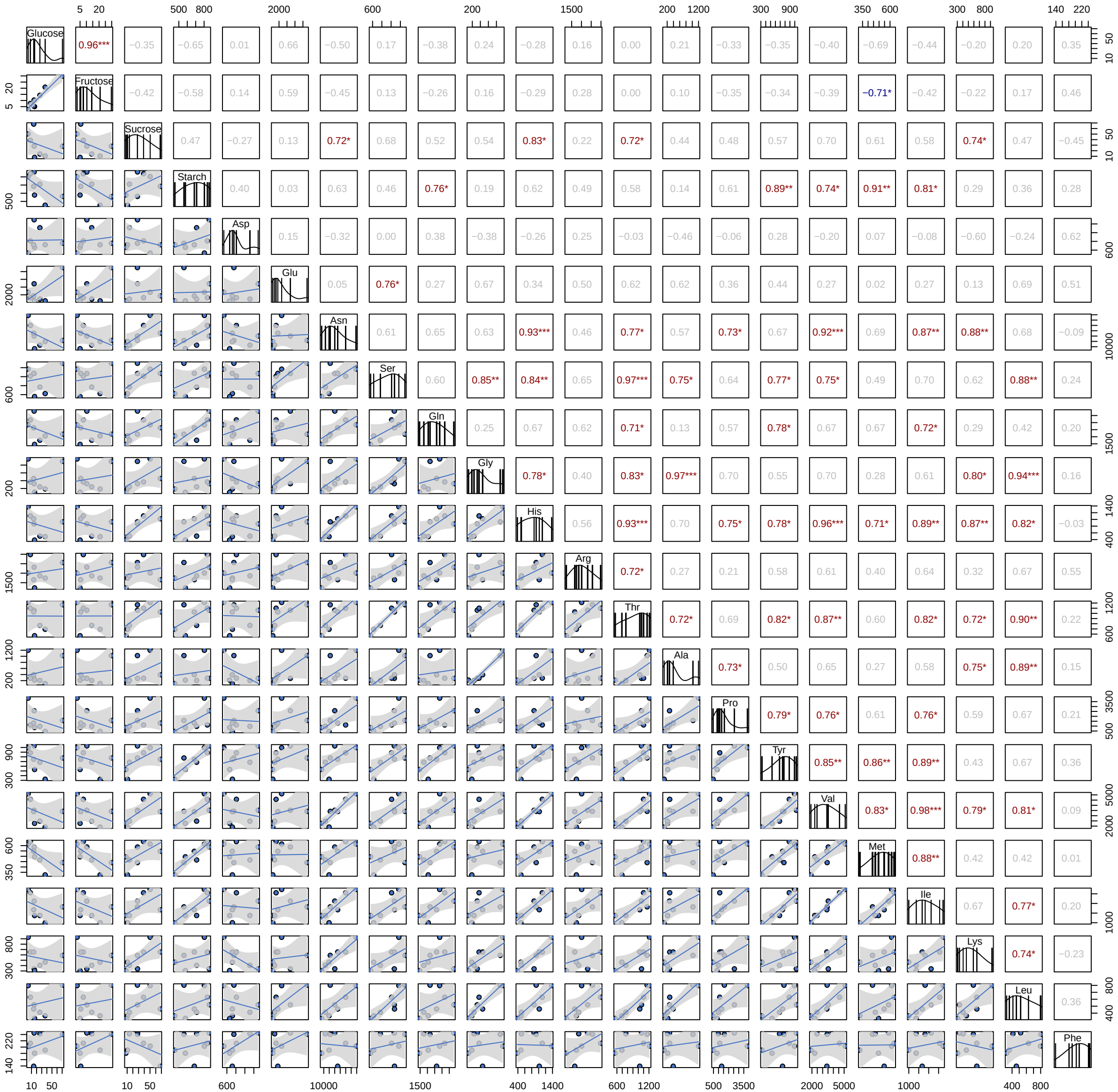
Desiree H


Glucose
Fructose
Sucrose
Starch
Asp
Glu
Asn
Ser
Gln
Gly
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe

Desiree D


Glucose
Fructose
Sucrose
Starch
Asp
Glu
Asn
Ser
Gln
Gly
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe

Desiree W


Glucose
Fructose
Sucrose
Starch
Asp
Glu
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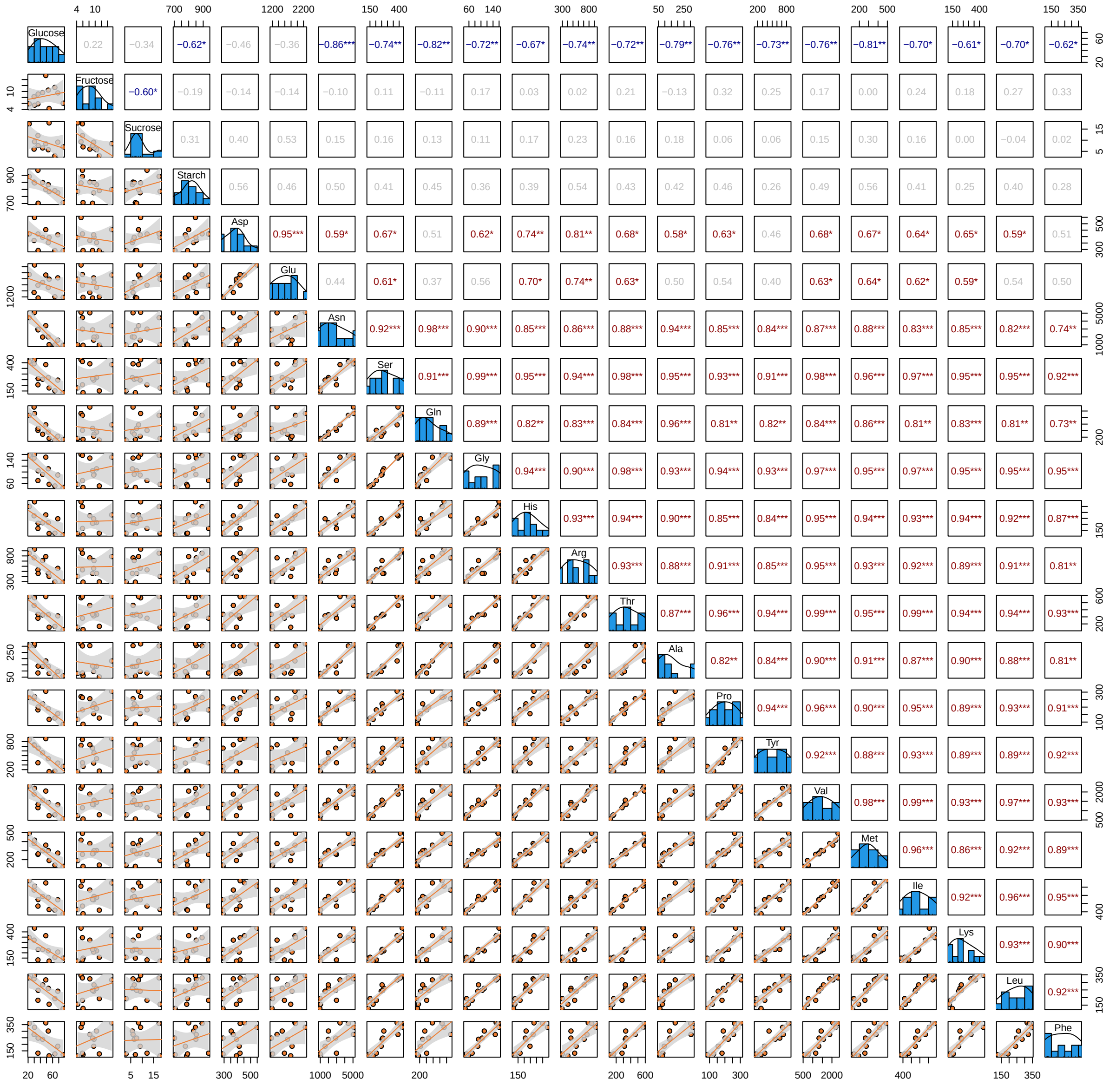
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe

Desiree HD


Glucose
Fructose
Sucrose
Starch
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Asn
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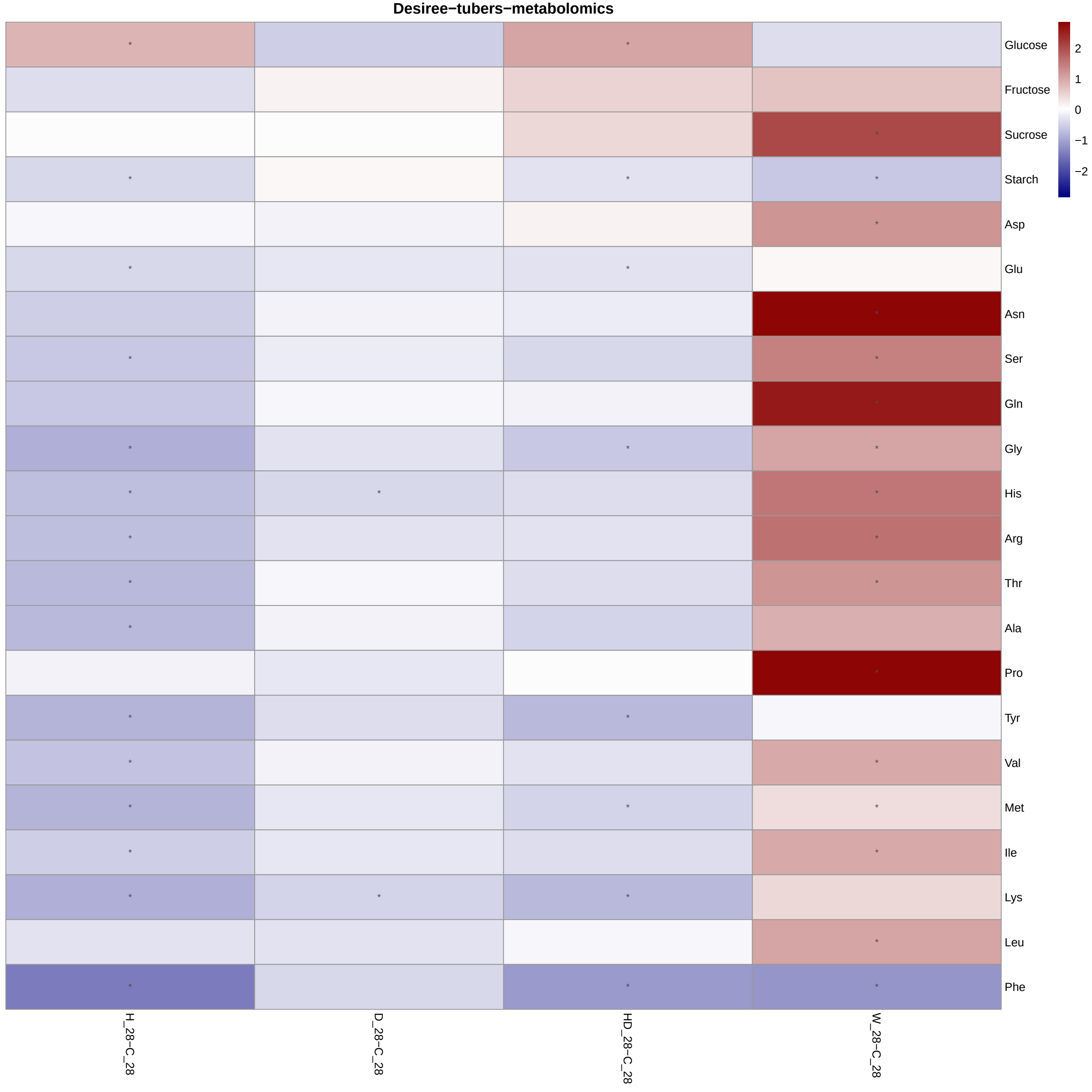
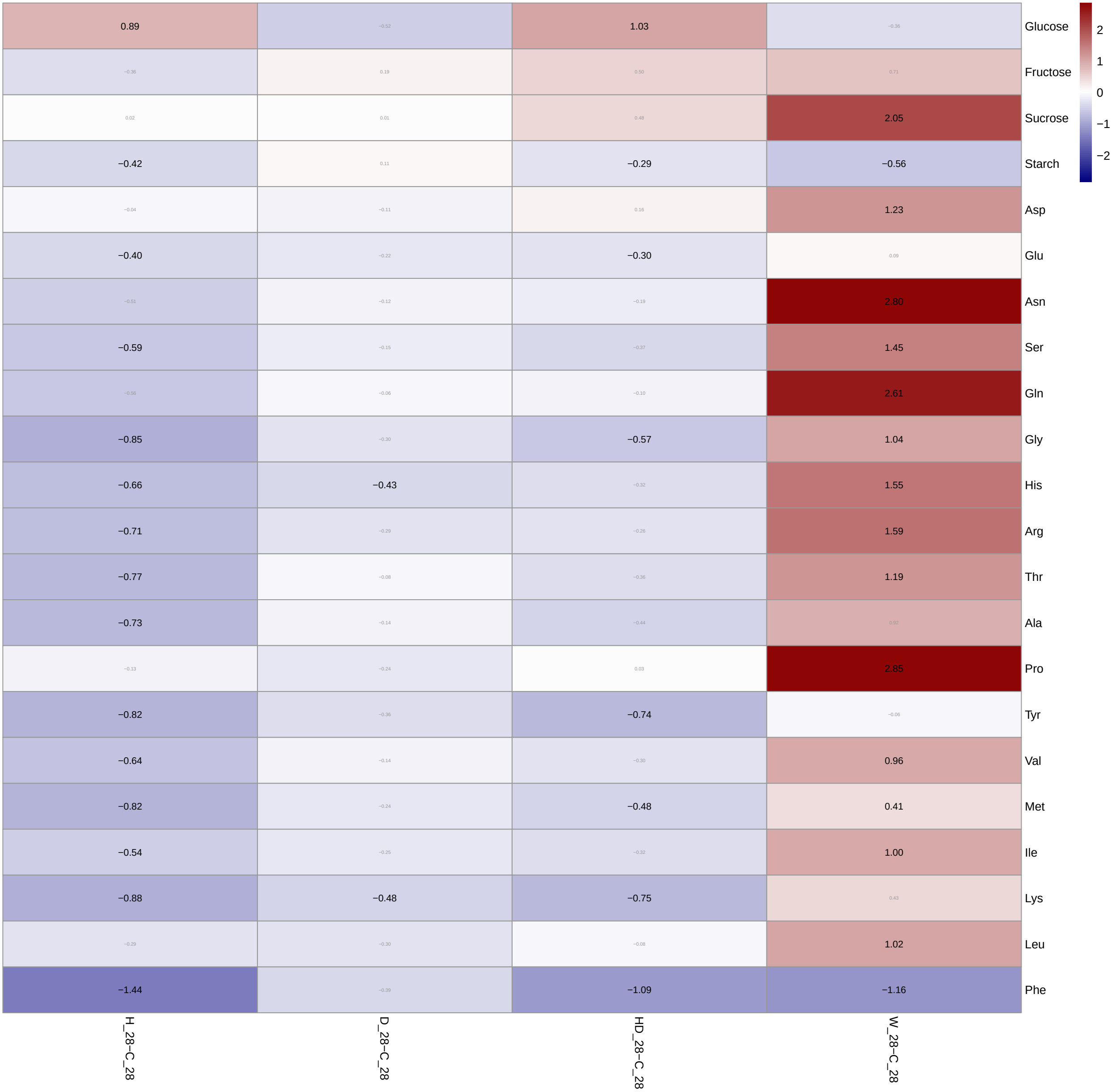
Gly
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe


Desiree−tubers−metabolomics
Glucose
Fructose
Sucrose
Starch
Asp
Glu
Asn
Ser
Gln
Gly
His
Arg
Thr
Ala
Pro
Tyr
Val
Met
Ile
Lys
Leu
Phe
H_28−C_28
D_28−C_28
HD_28−C_28
W_28−C_28
2
1
0
−1
−2

Desiree−tubers−metabolomics