Synchronized age-related gene expression changes across multiple

tissues in human and the link to complex diseases

Running Title: Age-related gene expression changes in multiple tissues

Jialiang Yang<sup>1,2</sup>, Tao Huang<sup>1,2,¶</sup>, Francesca Petralia<sup>1,2</sup>, Quan Long<sup>1,2</sup>, Bin Zhang<sup>1,2</sup>, Carmen

Argmann<sup>1,2</sup>, Yong Zhao<sup>1,2</sup>, Charles V Mobbs<sup>3,4,5</sup>, GTEx Consortium, Eric E Schadt<sup>1,2</sup>, Jun Zhu<sup>1,2</sup>,

Zhidong Tu<sup>1,2\*</sup>

<sup>1</sup> Institute of Genomics and Multiscale Biology, Icahn School of Medicine at Mount Sinai, NY, 10029,

**USA** 

<sup>2</sup> Department of Genetics and Genomic Sciences, Icahn School of Medicine at Mount Sinai, NY, 10029,

**USA** 

<sup>3</sup> Department of Neuroscience, Icahn School of Medicine at Mount Sinai, NY, 10029, USA

<sup>4</sup> Department of Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai, NY,

10029, USA

<sup>5</sup> Department of Medicine, Endocrinology, Diabetes and Bone Disease, Icahn School of Medicine at

Mount Sinai, NY, 10029, USA

¶ Current: Institute of Health Sciences, Shanghai Institutes for Biological Sciences, Chinese Academy of

Sciences, Shanghai 200031, People's Republic of China

\*Corresponding author: Zhidong Tu

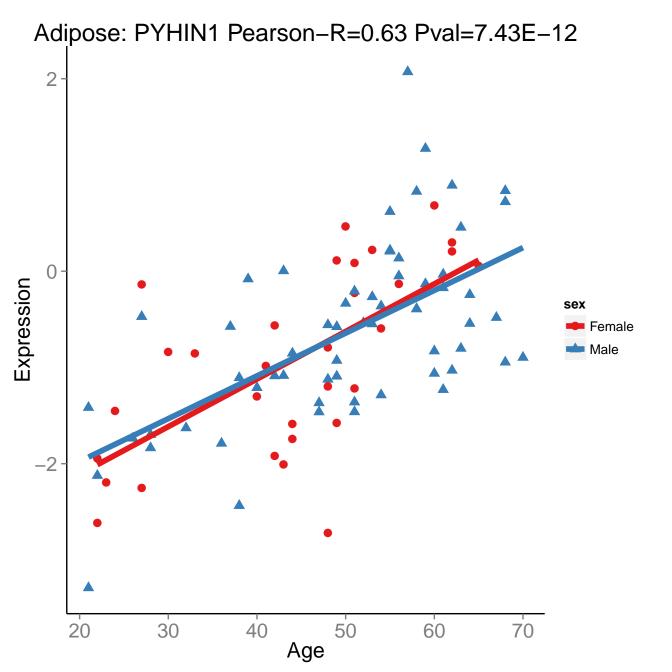
Icahn Institute for Genomics and Multiscale Biology, Department of Genetics and Genomic Sciences,

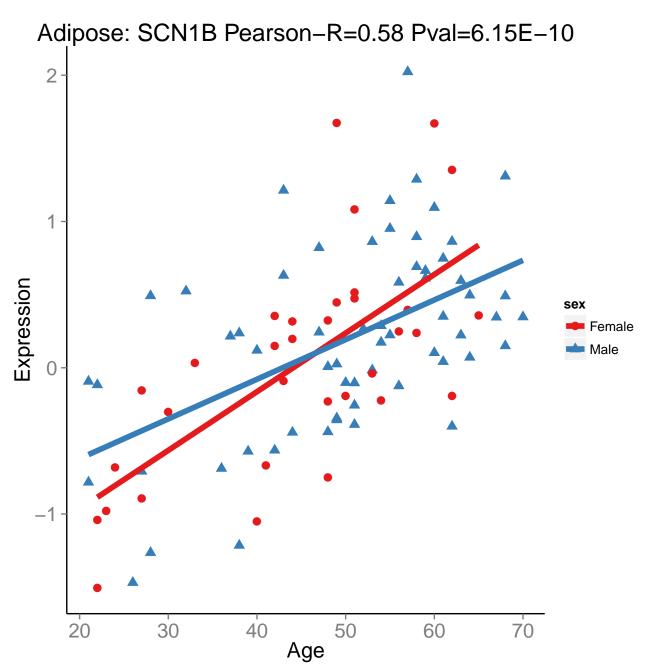
Icahn School of Medicine at Mount Sinai, One Gustave L. Levy Place - Box 1498, 1425 Madison Ave,

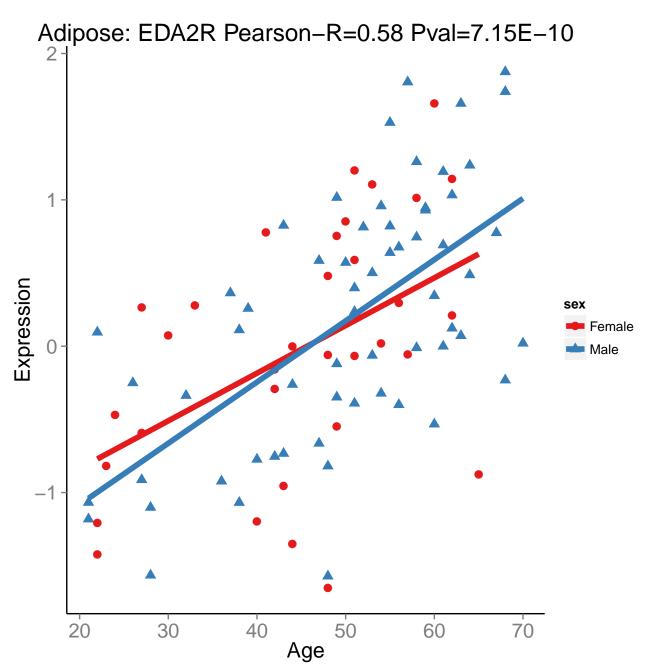
IMI 3-70F, New York, NY 10029-6574

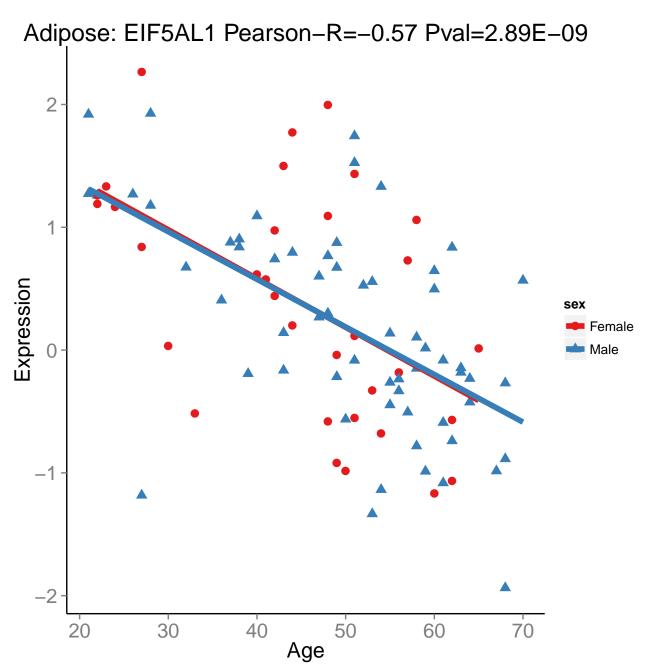
PH: 212-659-8508 Email addresses: zhidong.tu@mssm.edu

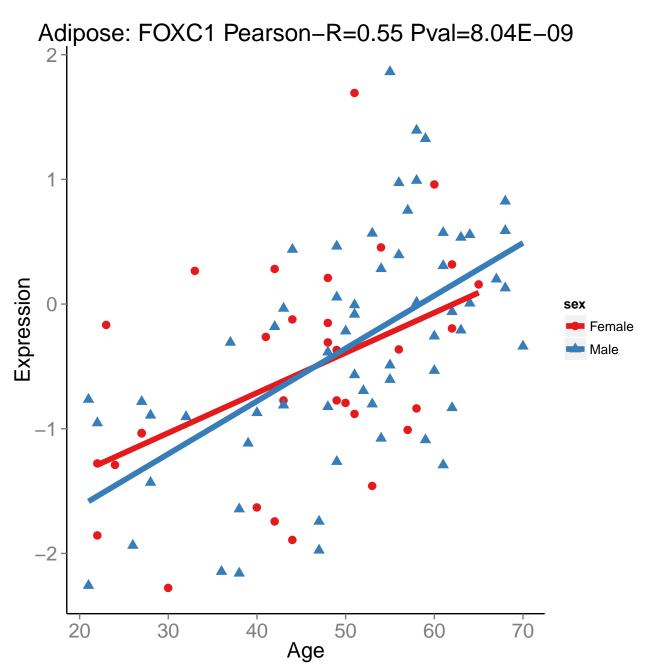
1

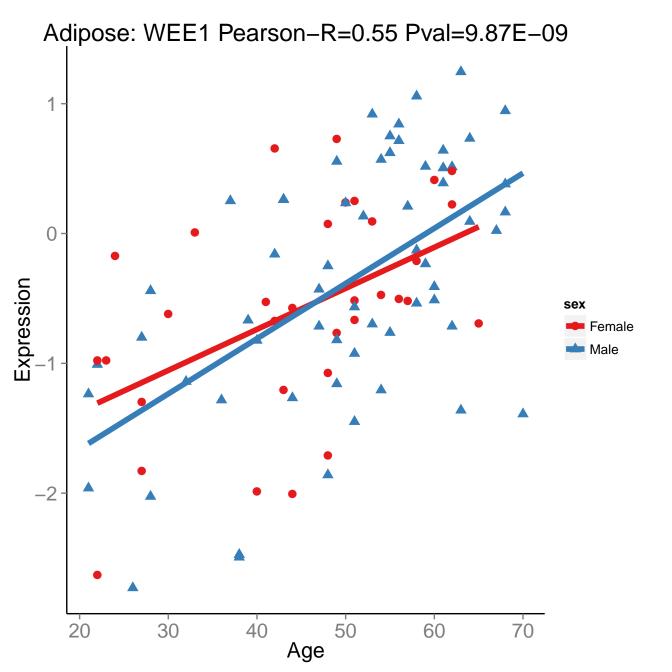


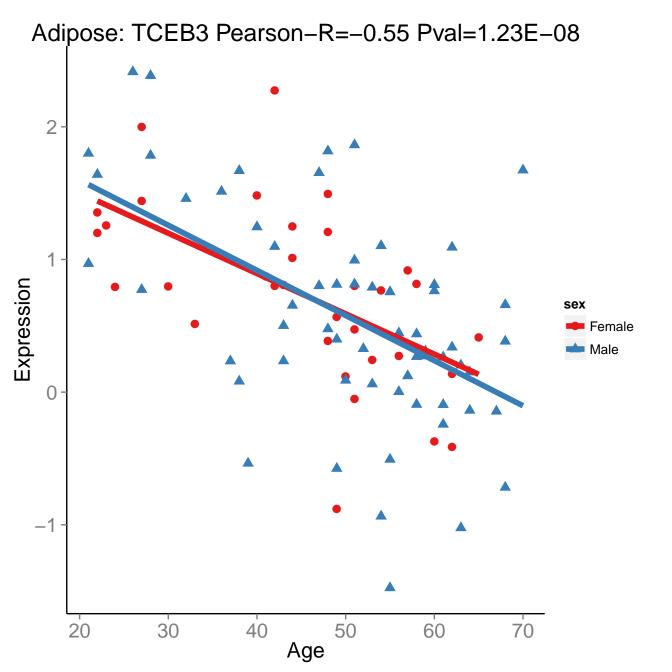


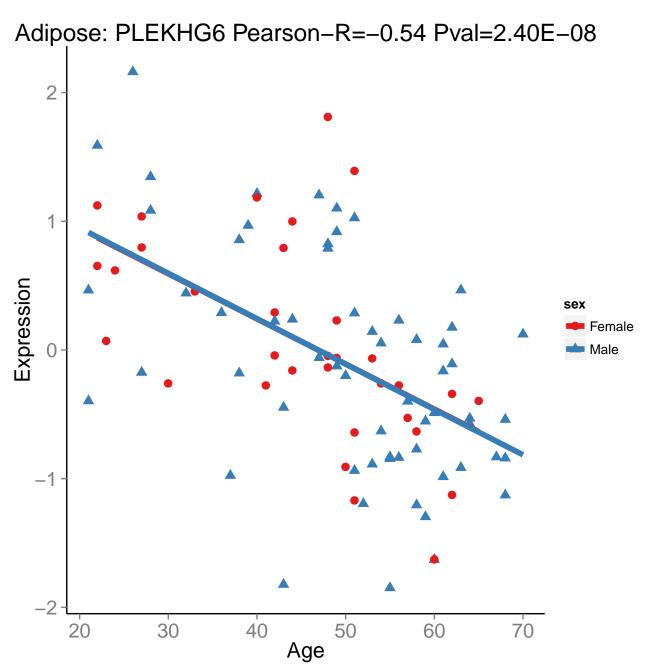


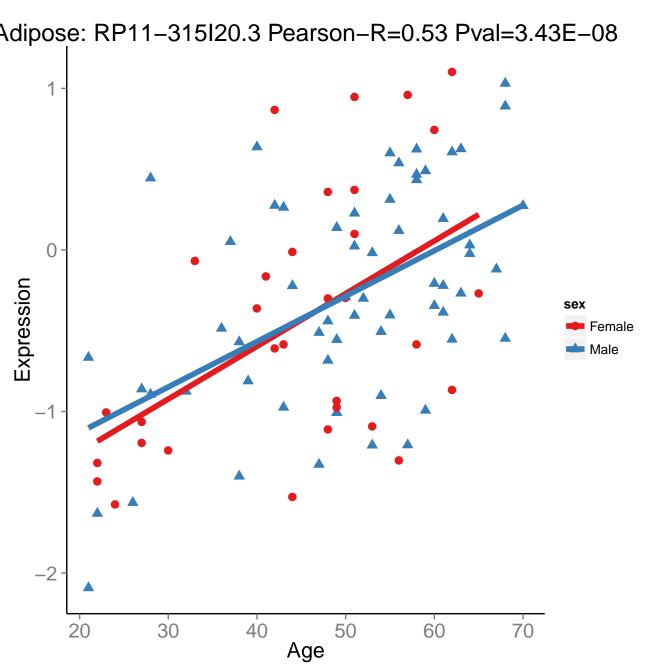


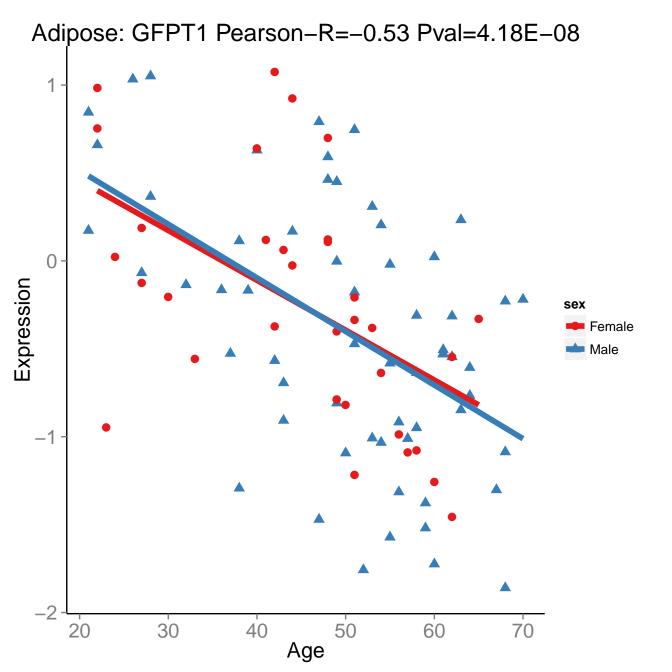


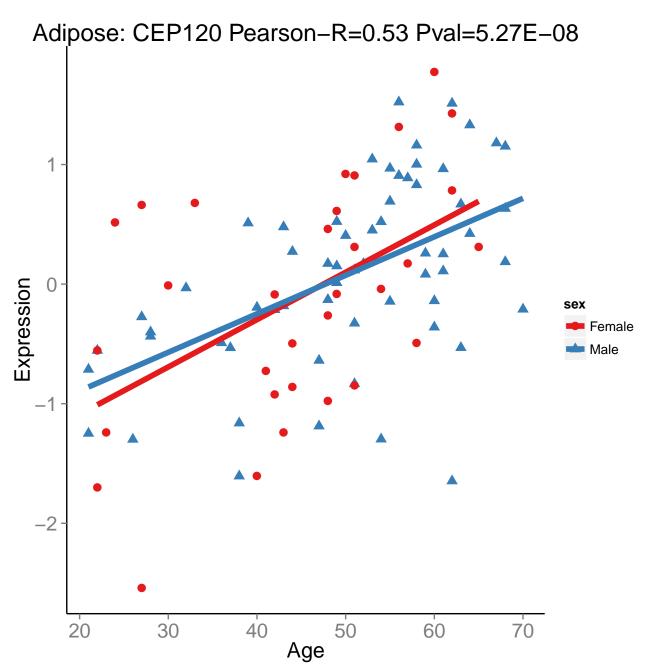


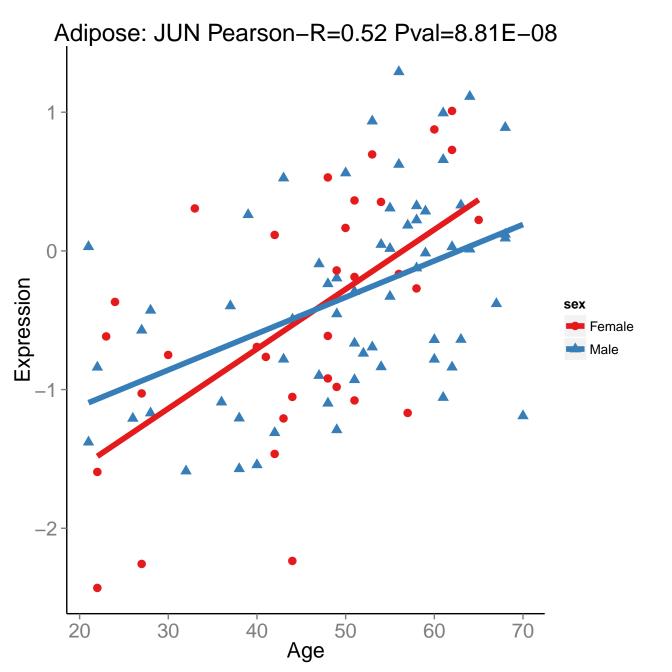


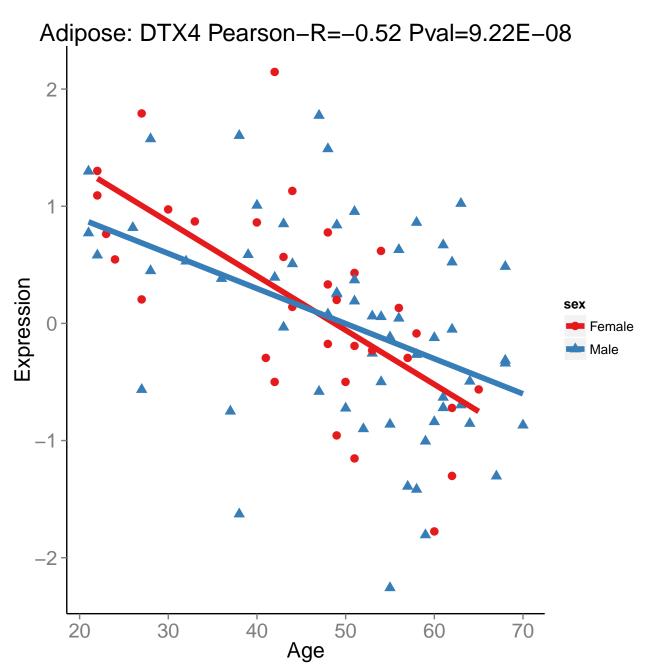


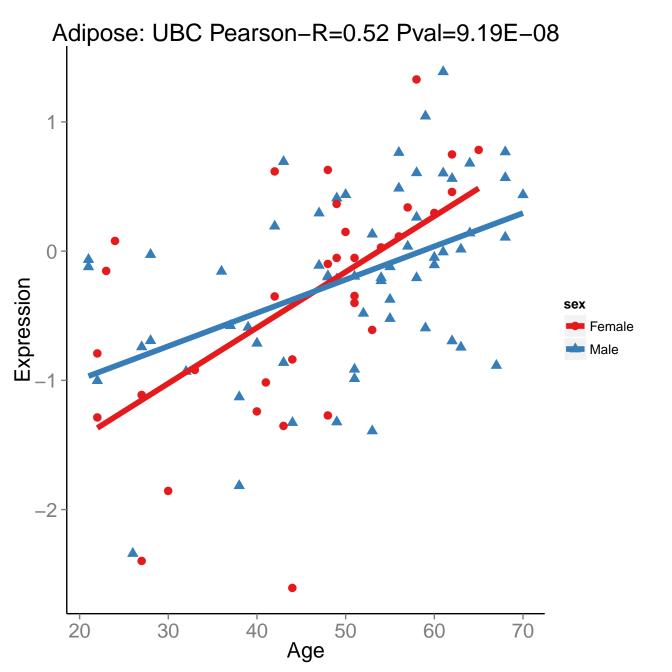


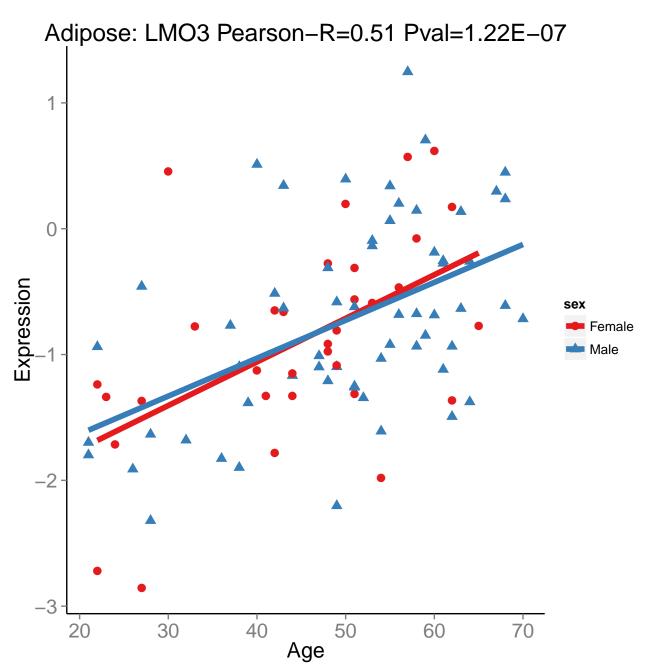


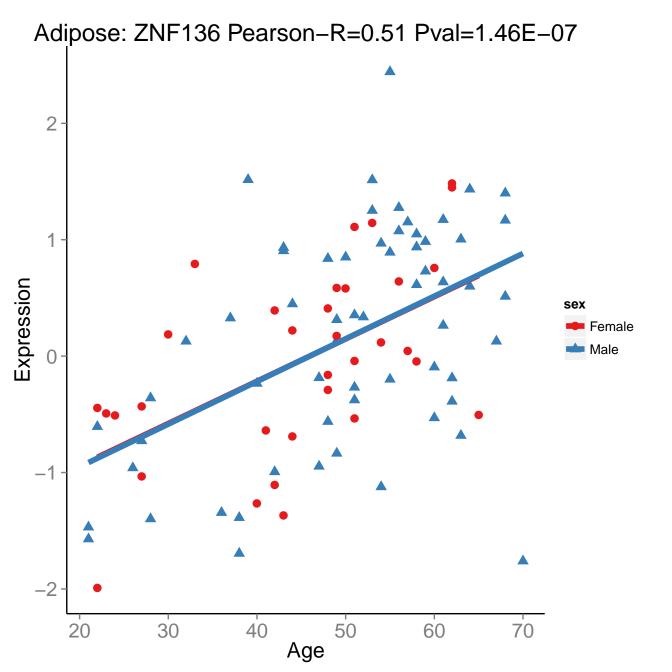


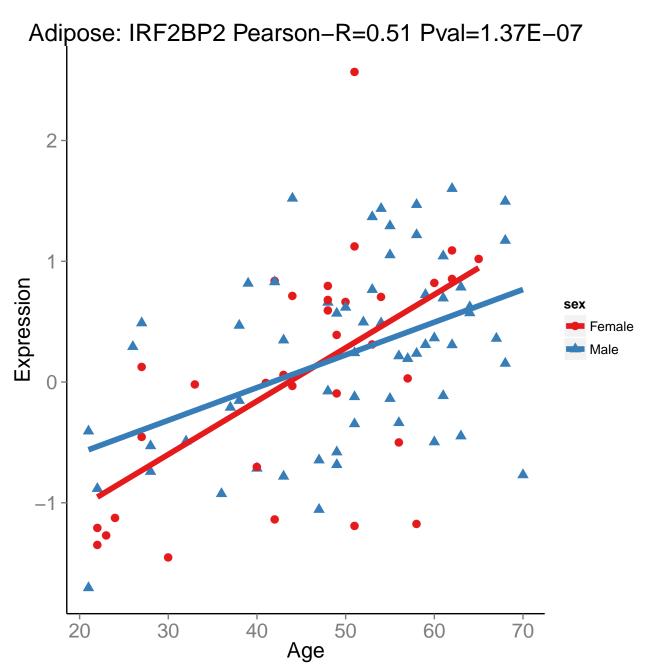


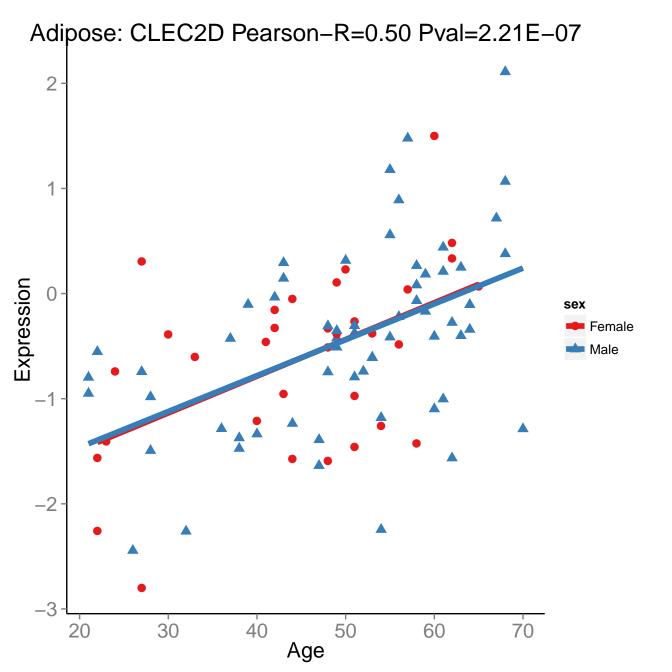


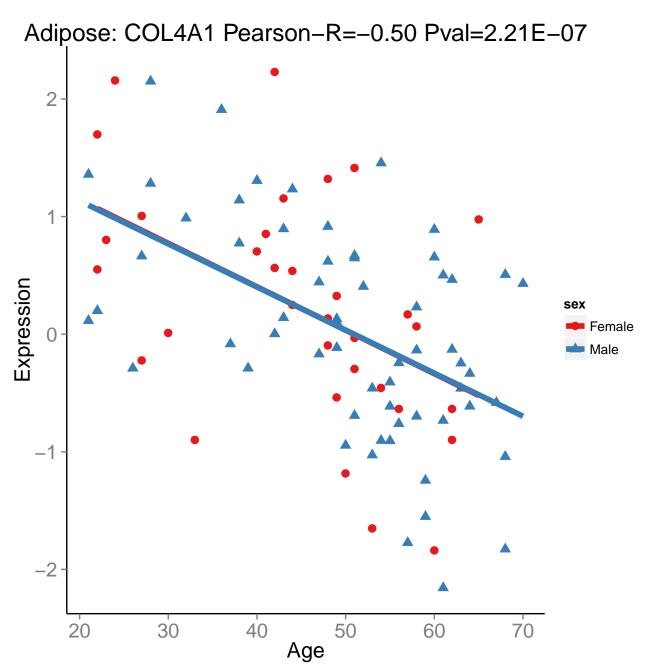


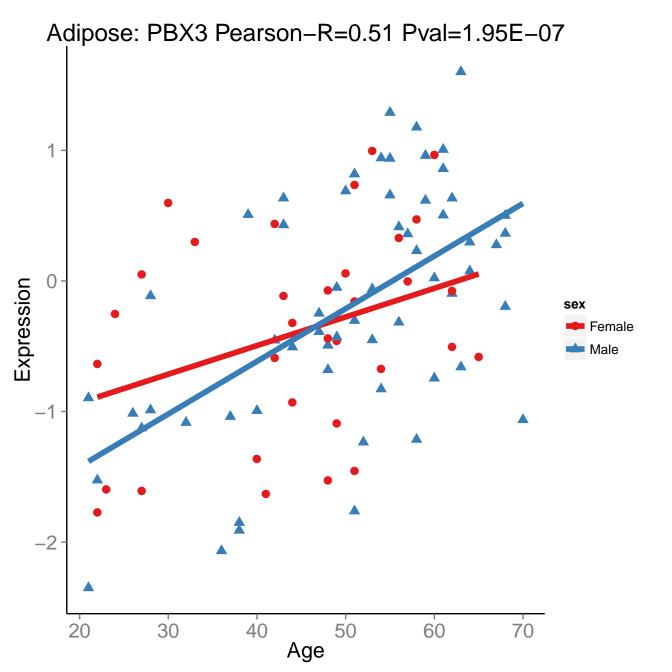


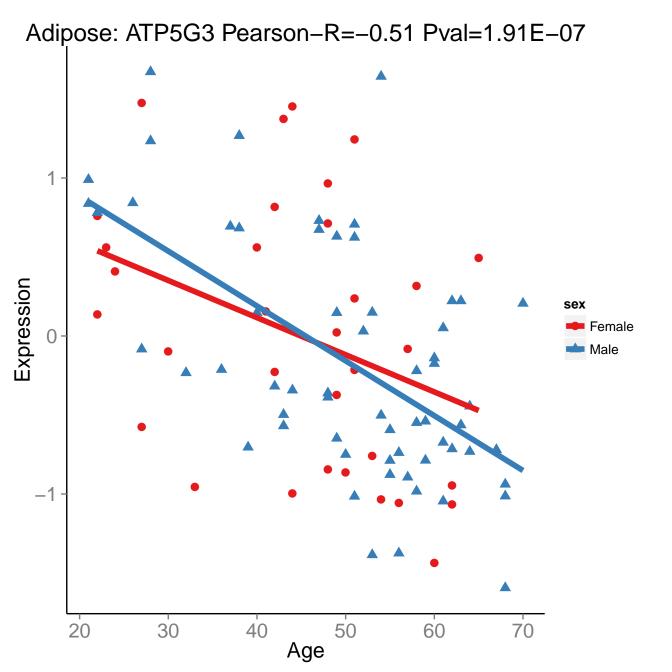


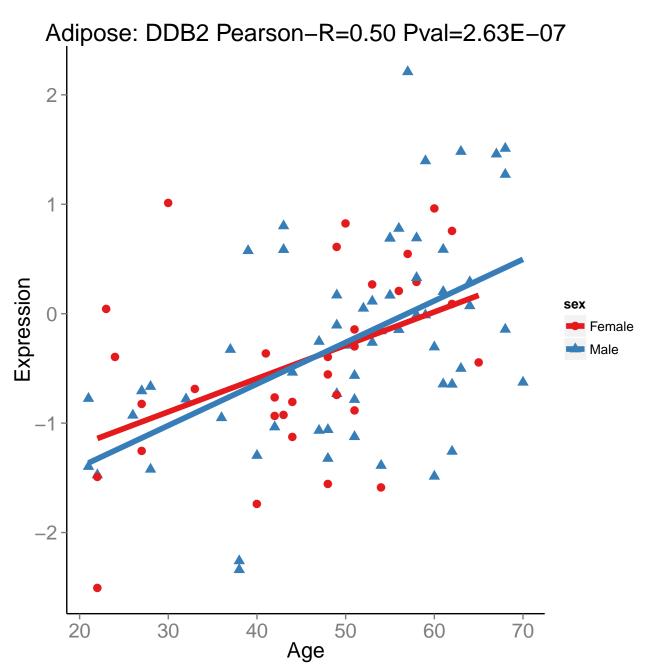


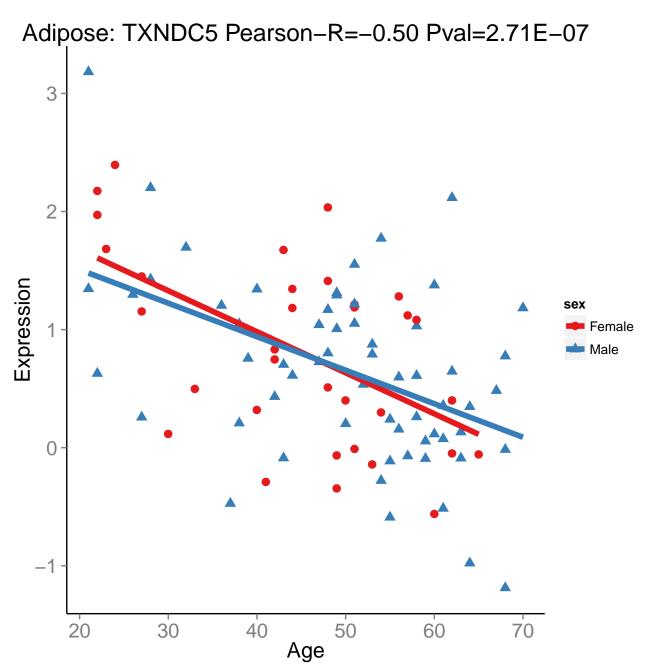


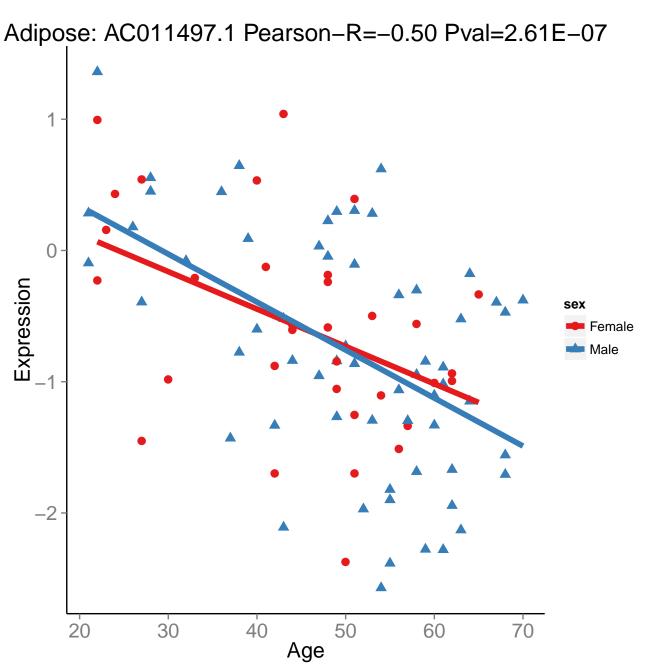


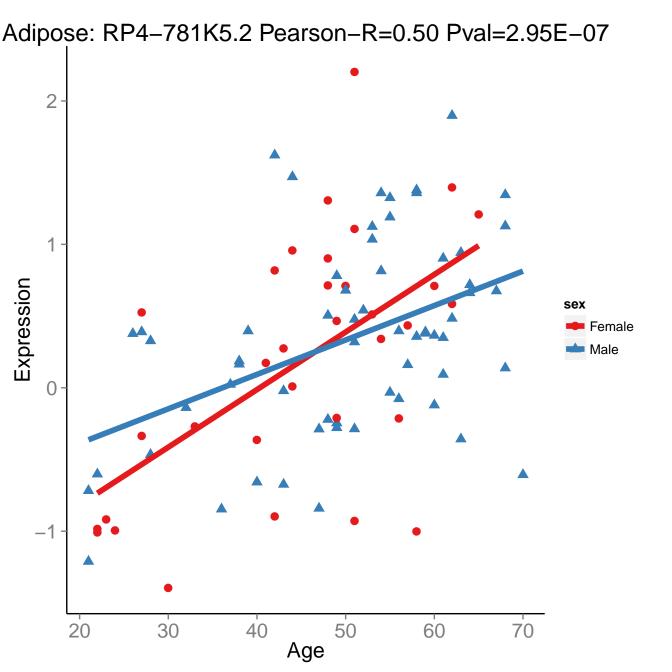


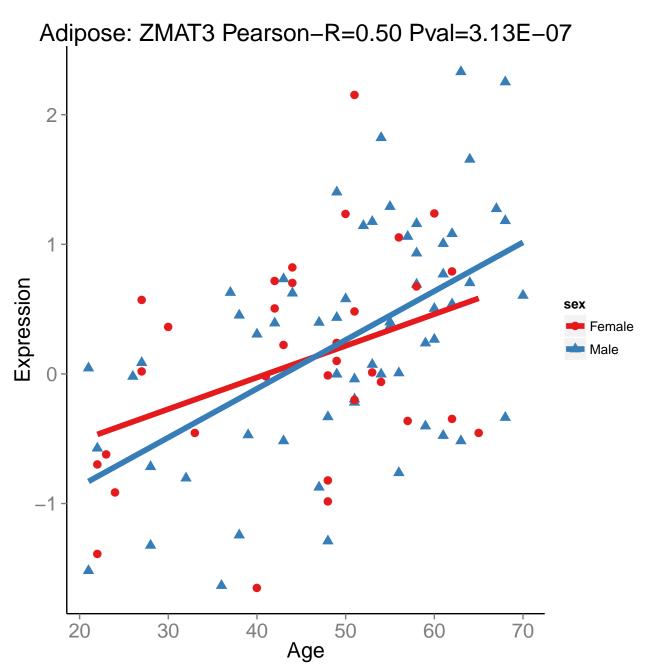


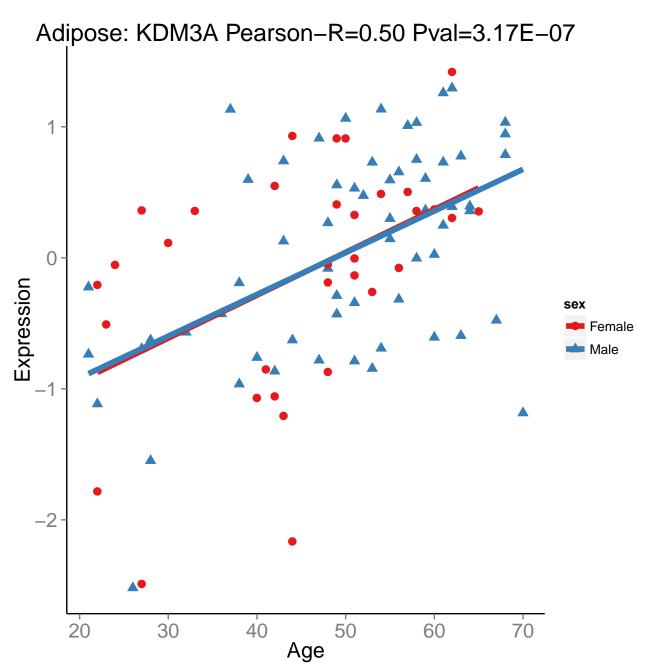


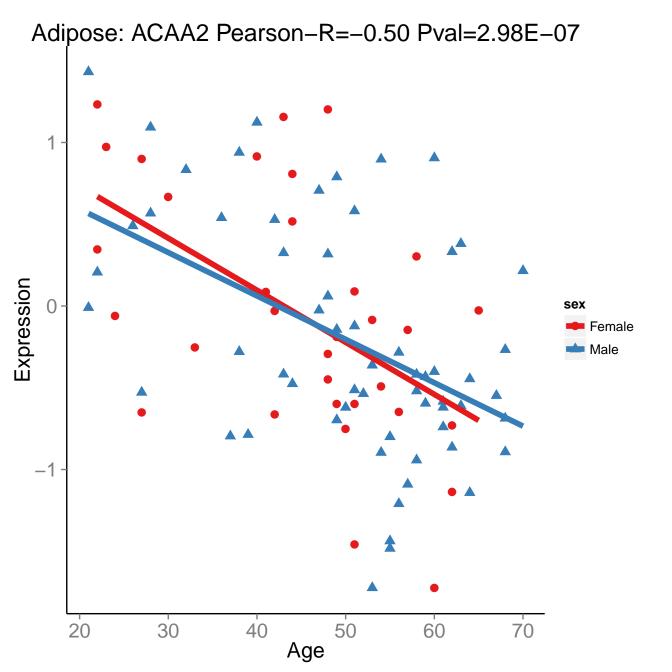


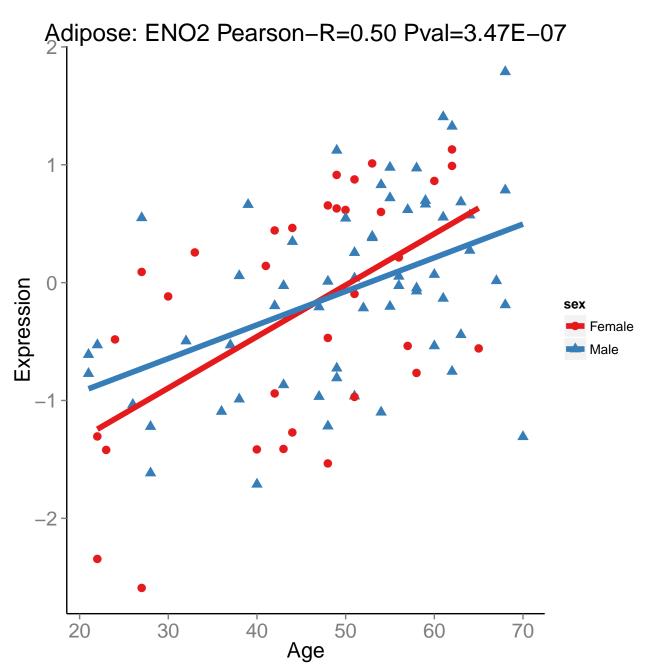


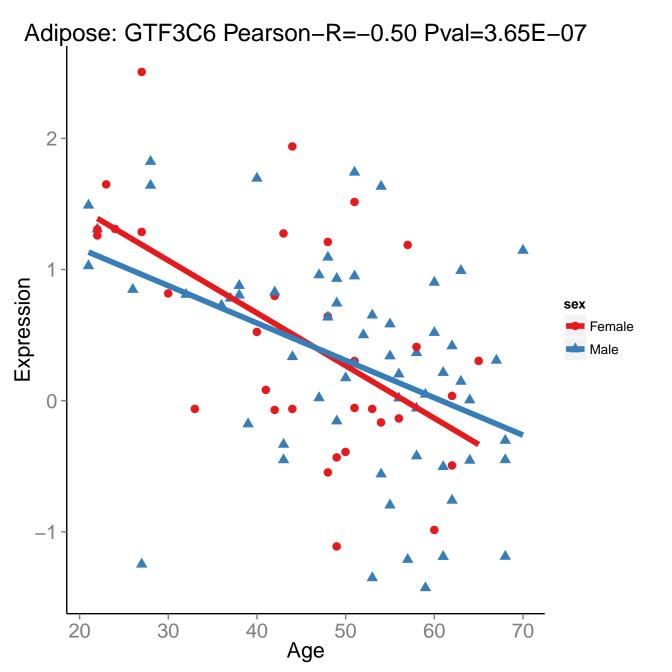


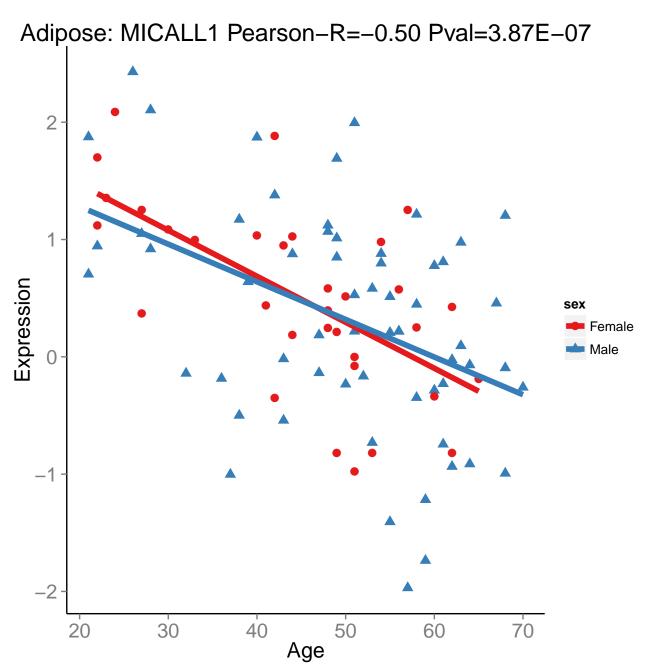


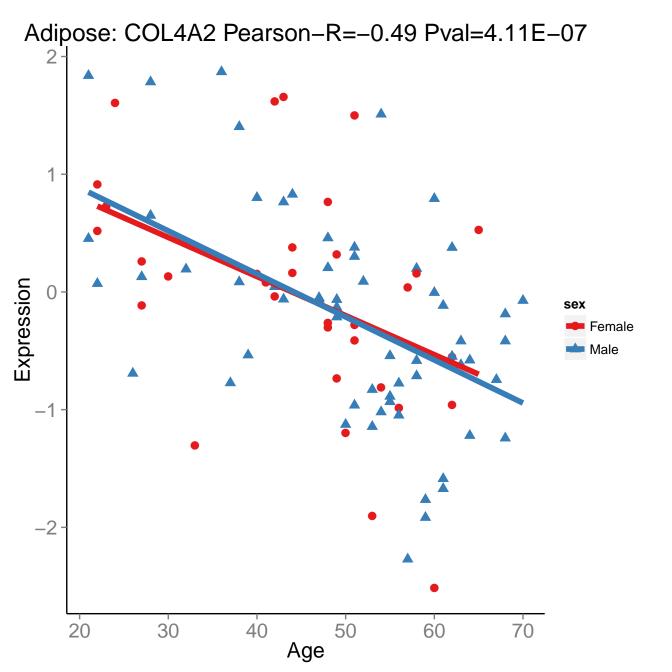


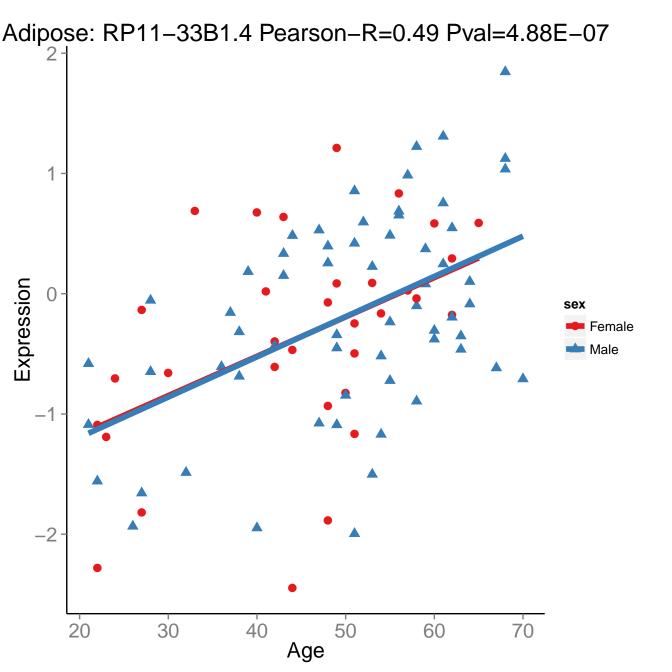


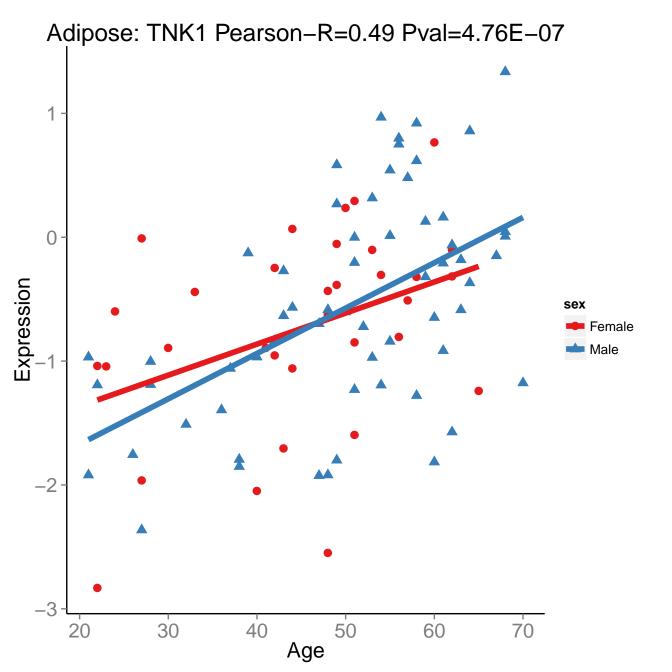


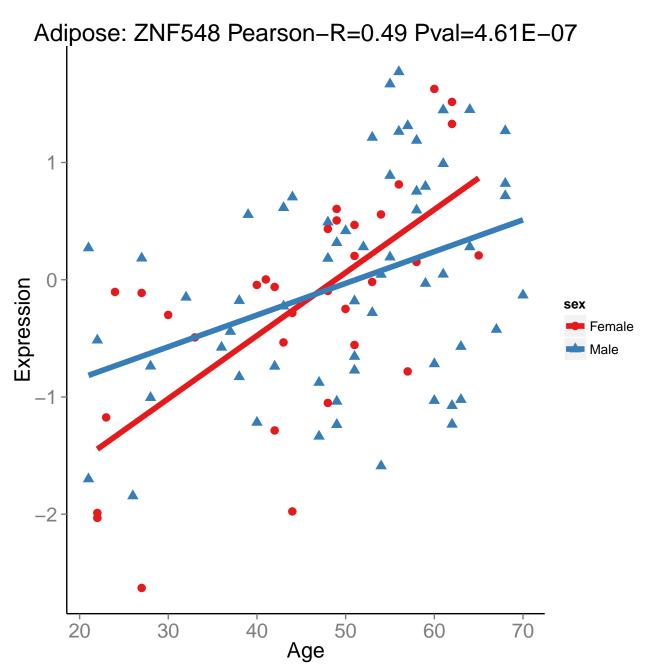


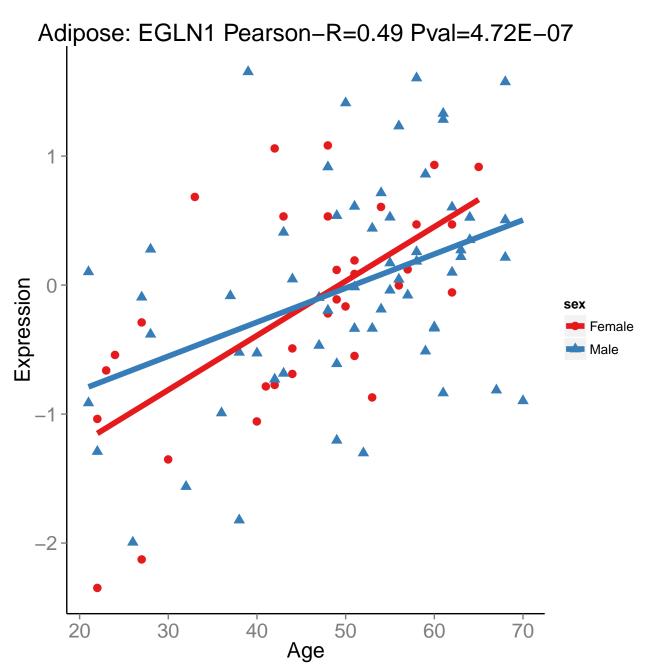


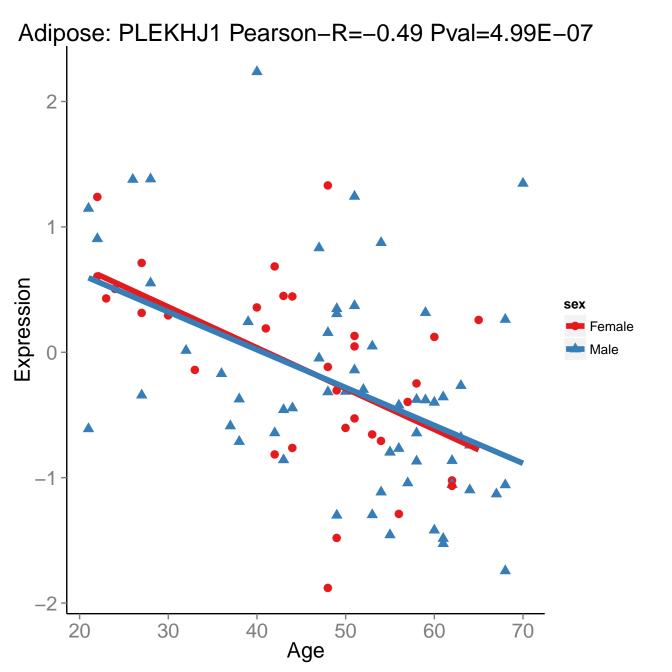


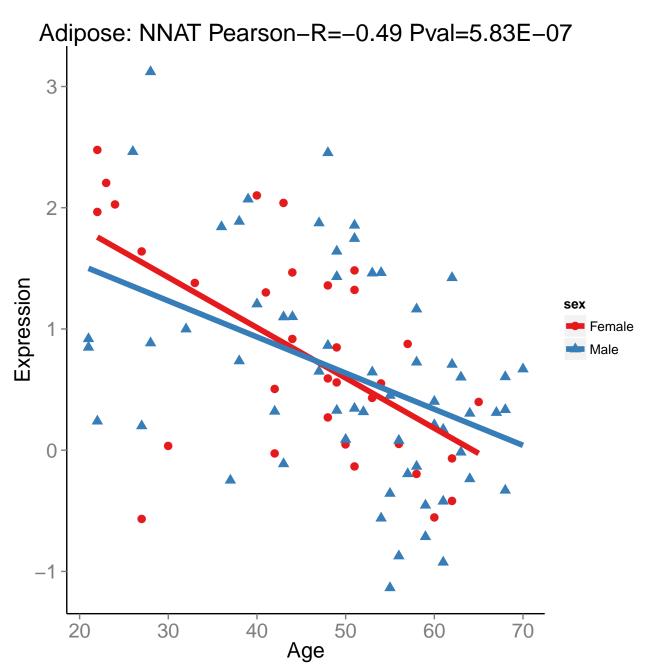


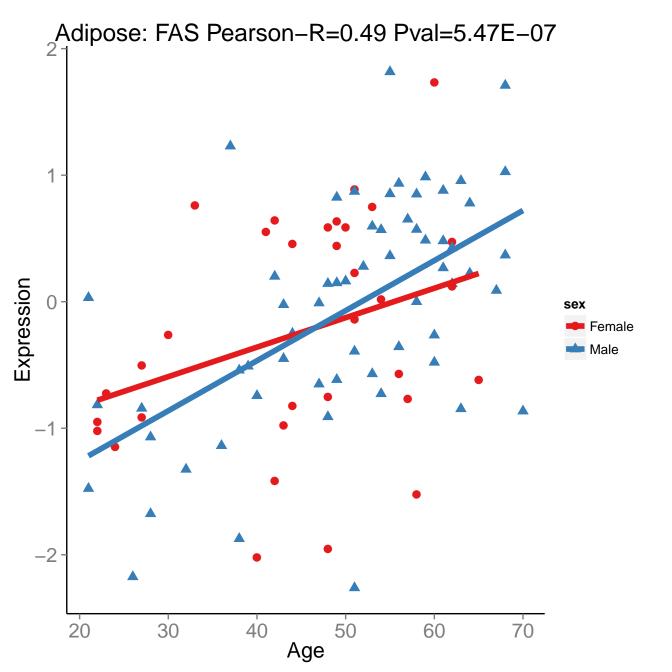


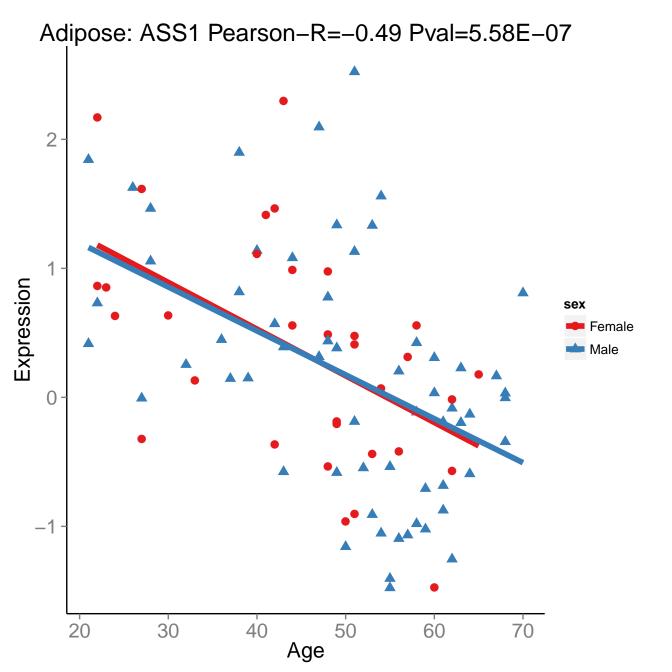


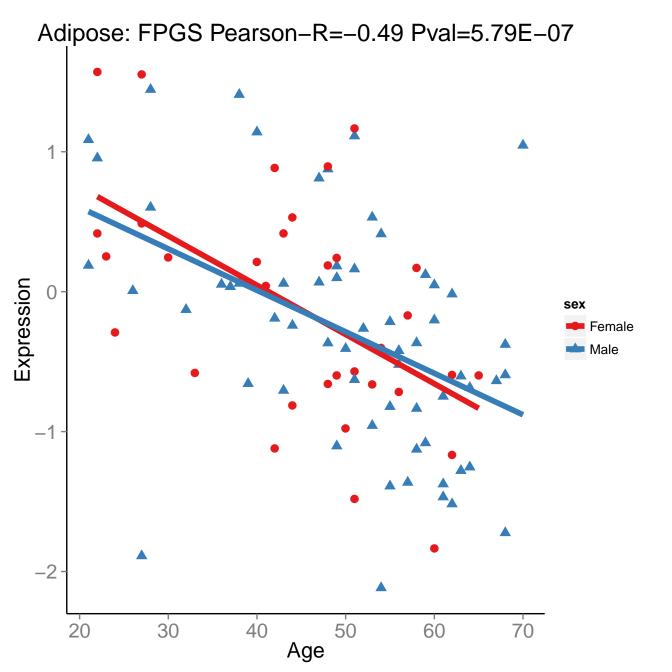


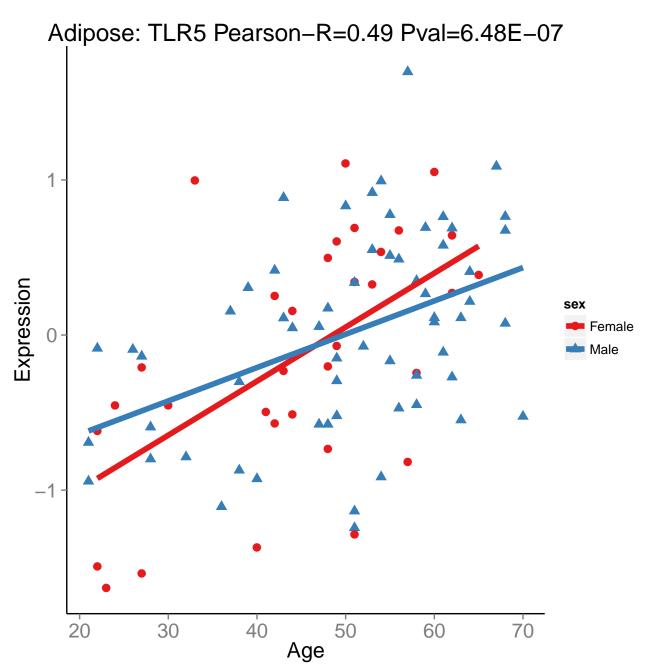


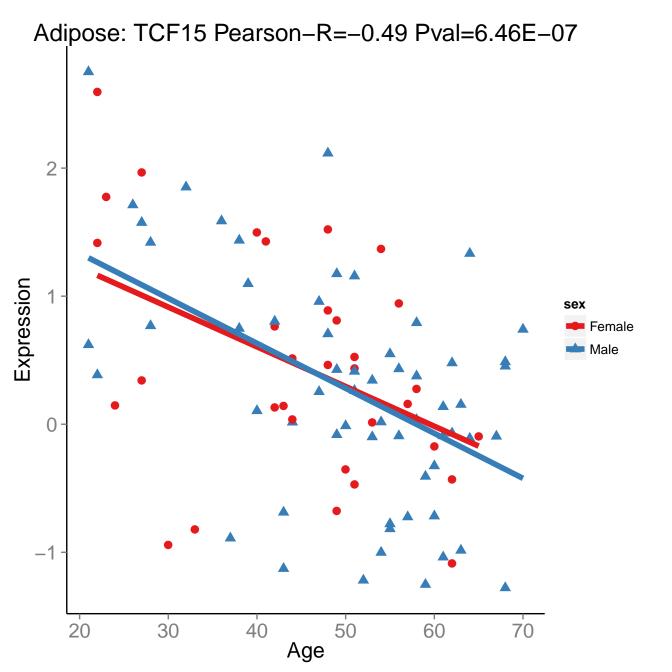


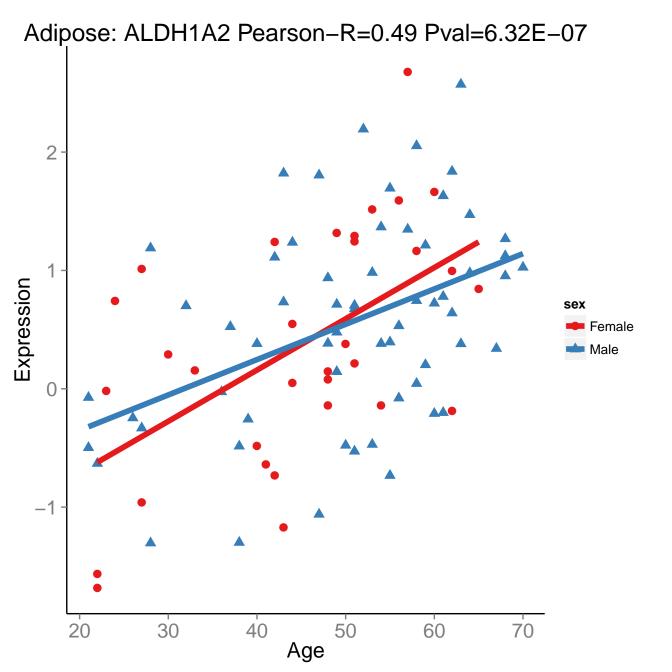


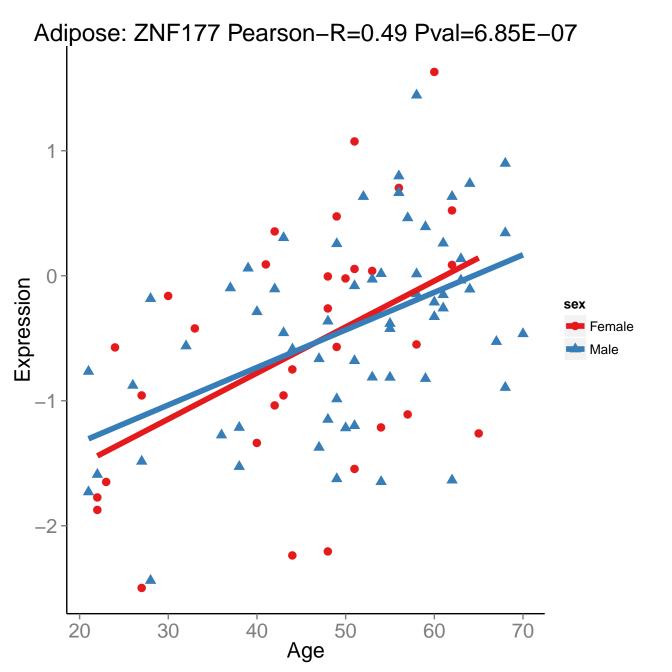


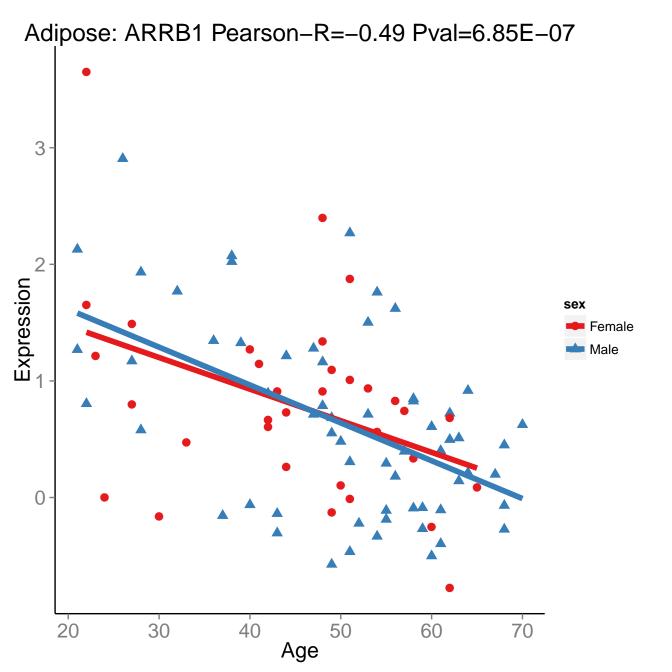


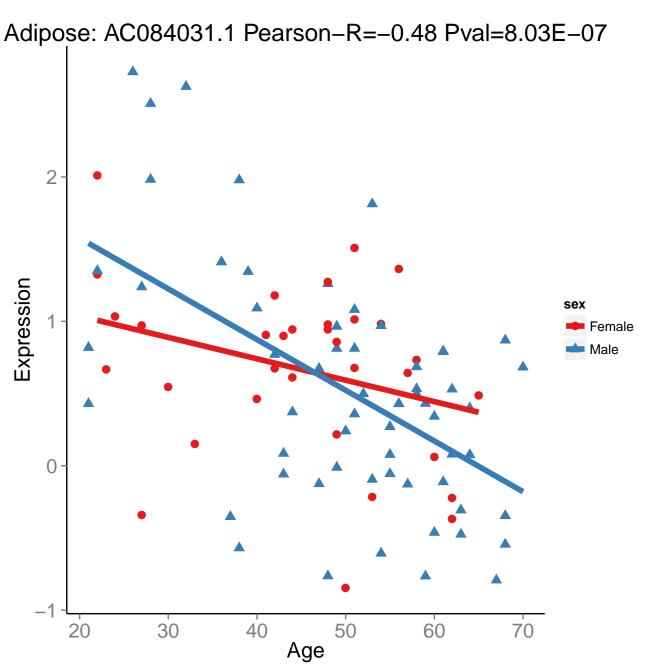


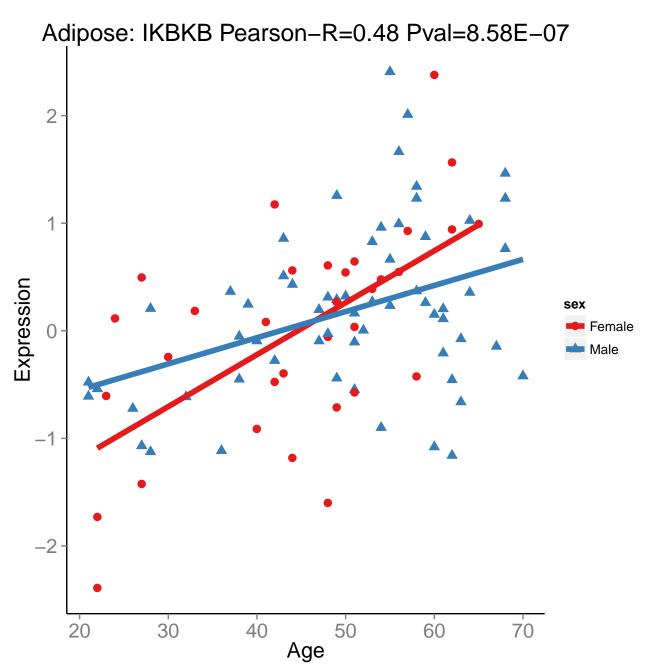


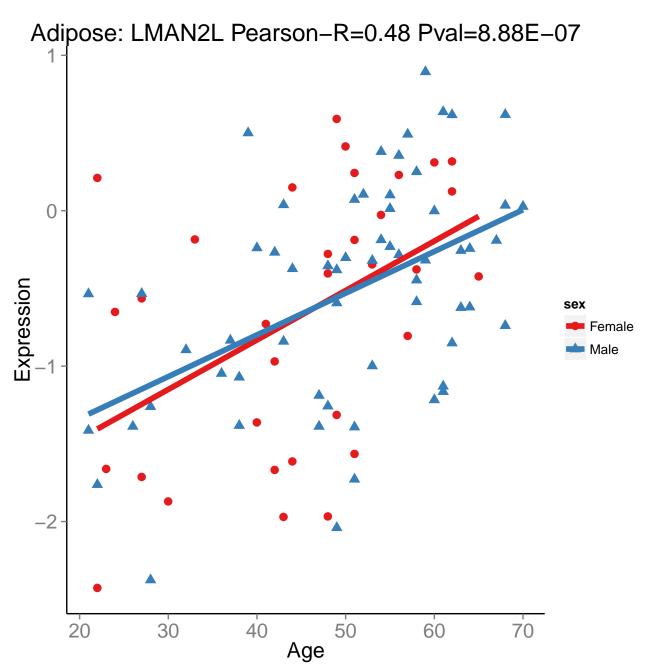


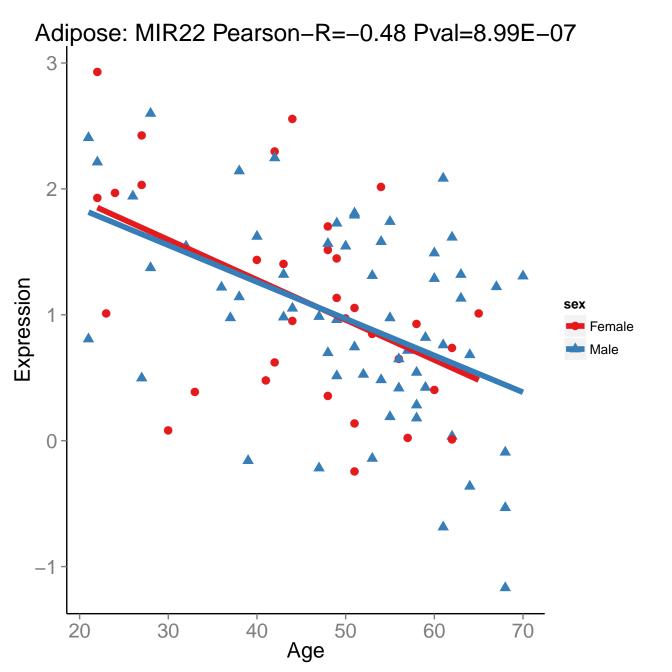




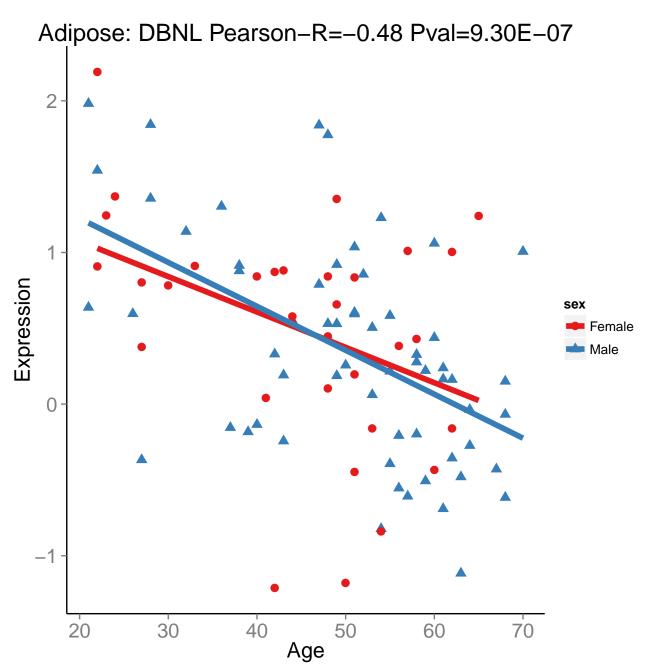


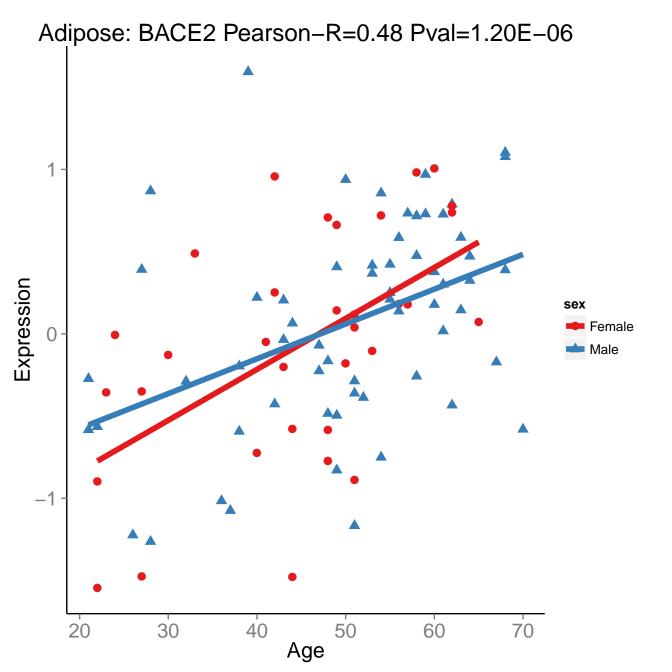


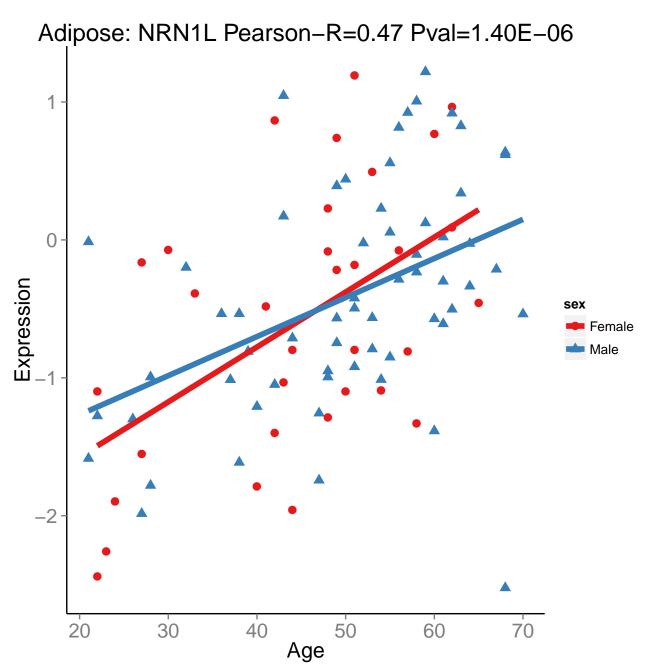




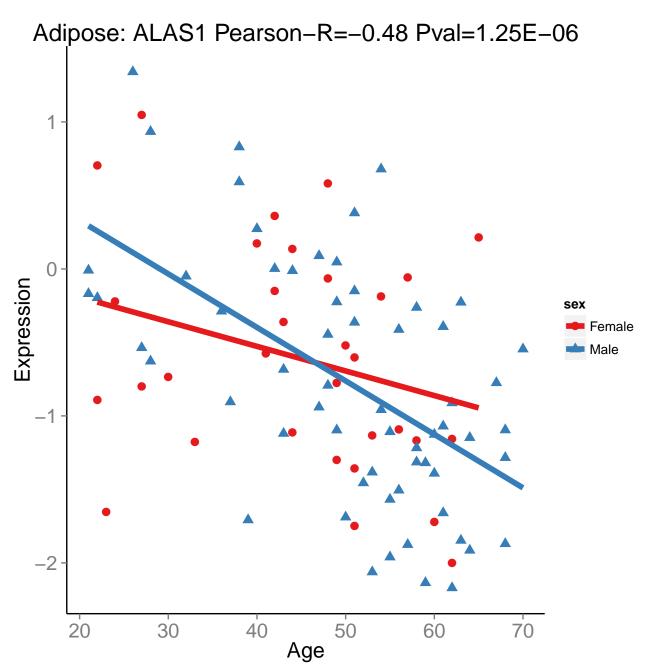
Adipose: FABP4 Pearson-R=-0.48 Pval=9.46E-07 2-1 Expression sex Female Male 40 20 30 50 60 70 Age

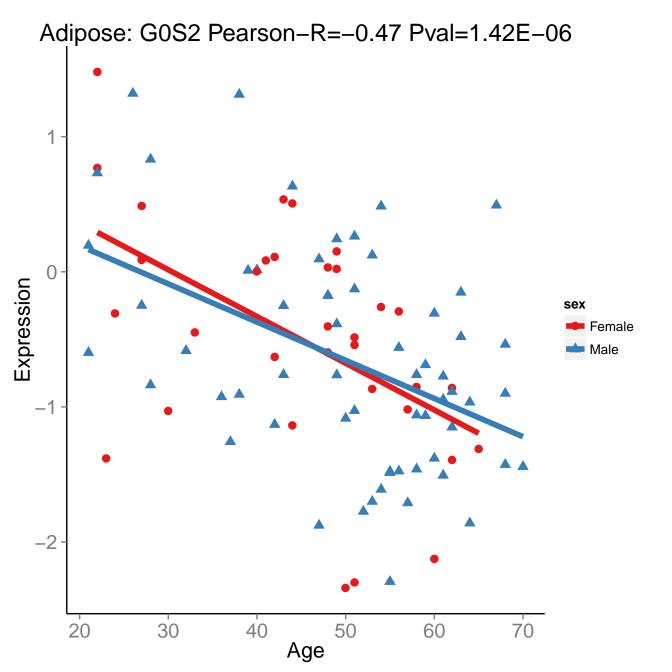


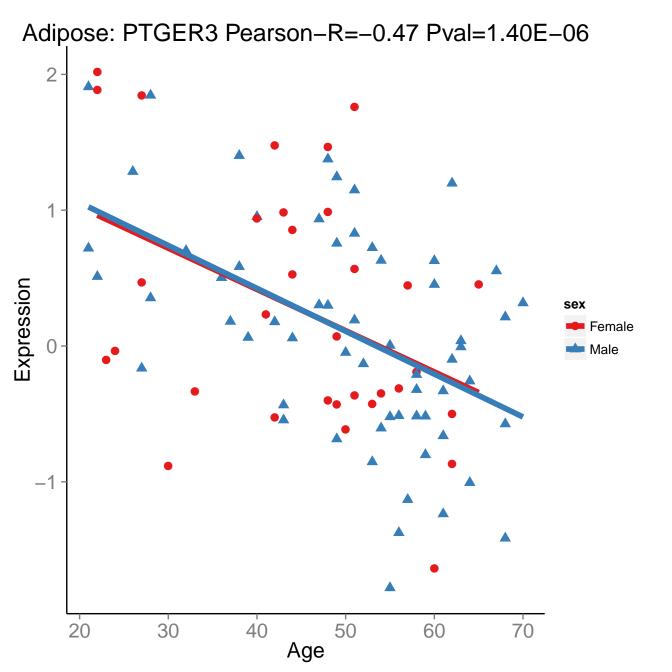


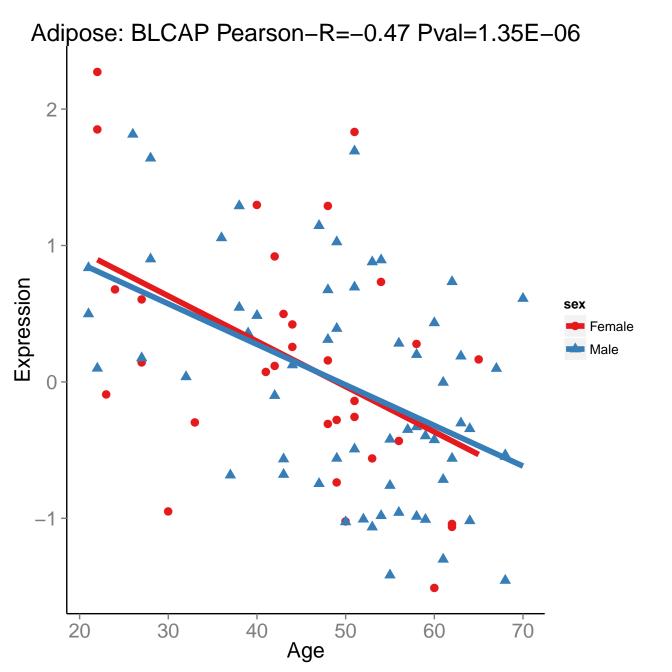


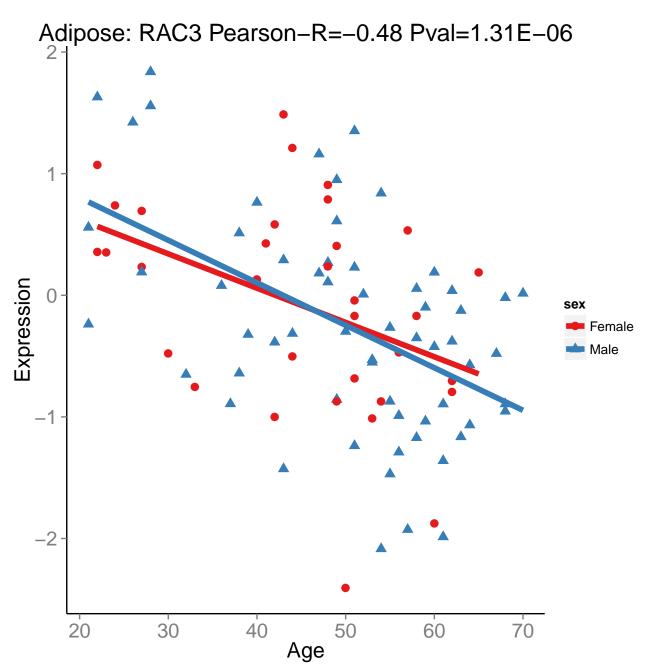


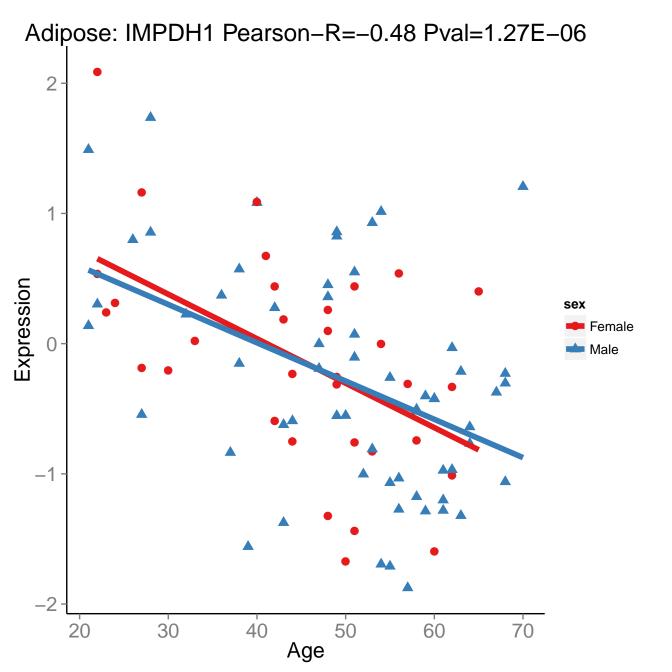


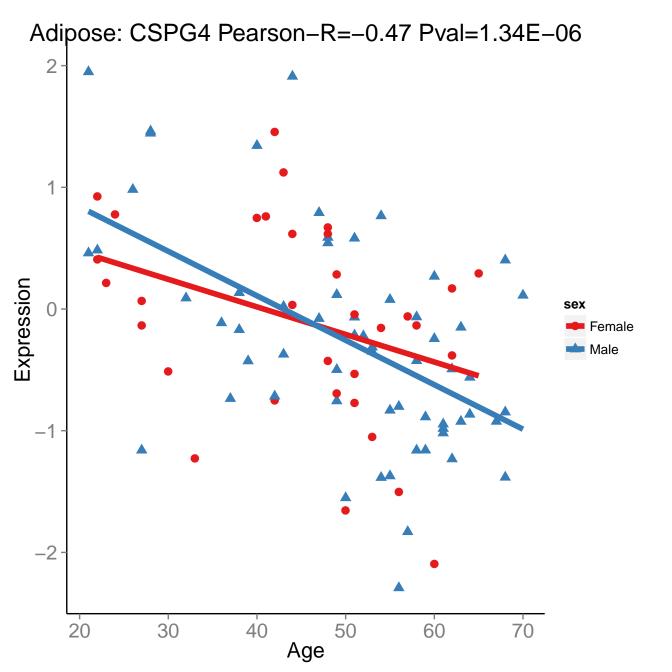


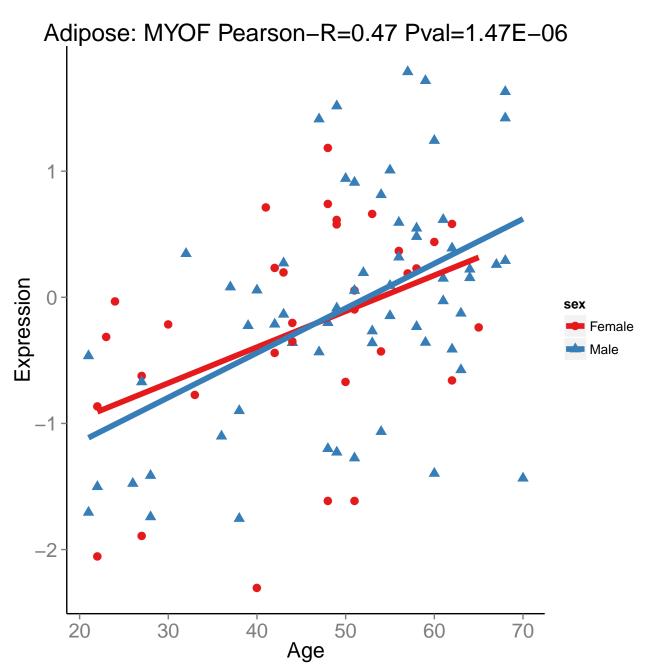


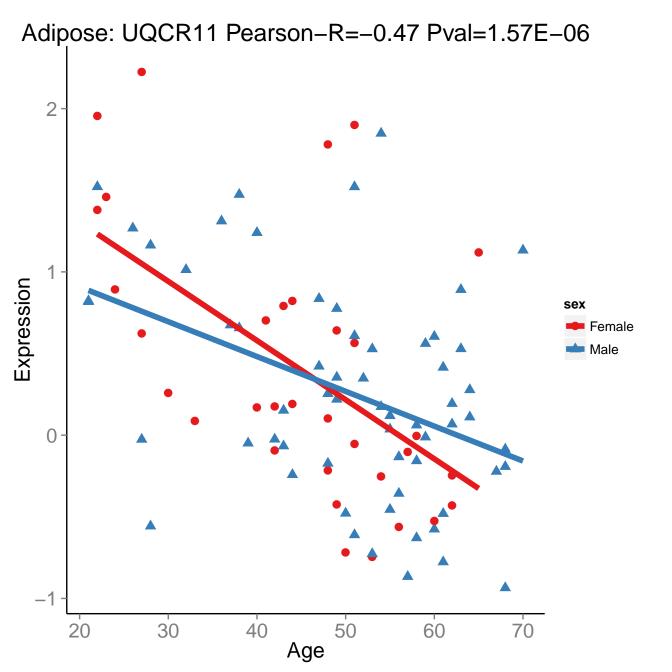


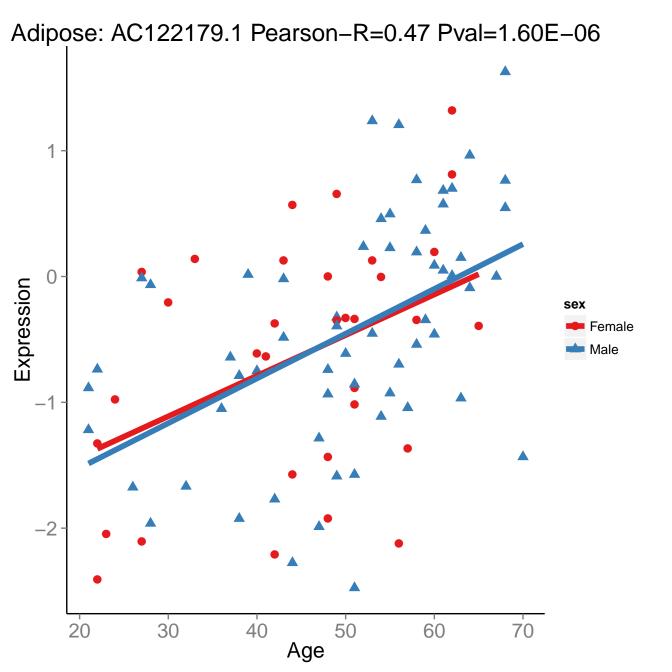


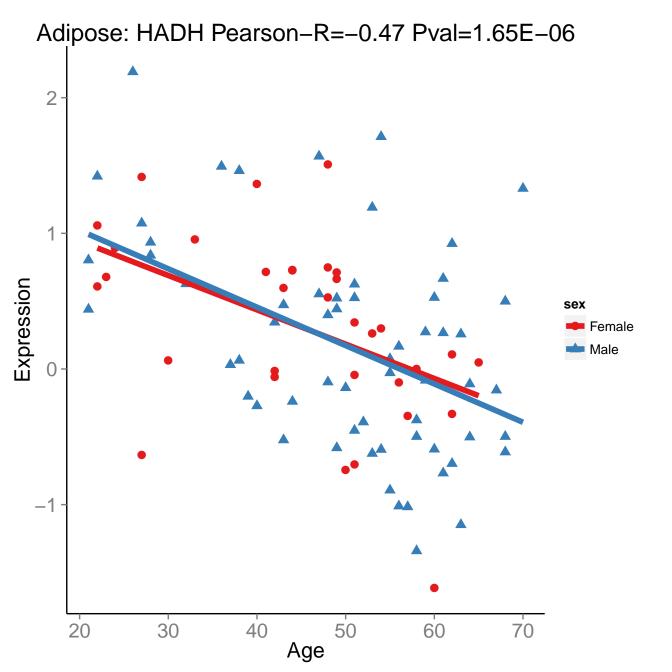


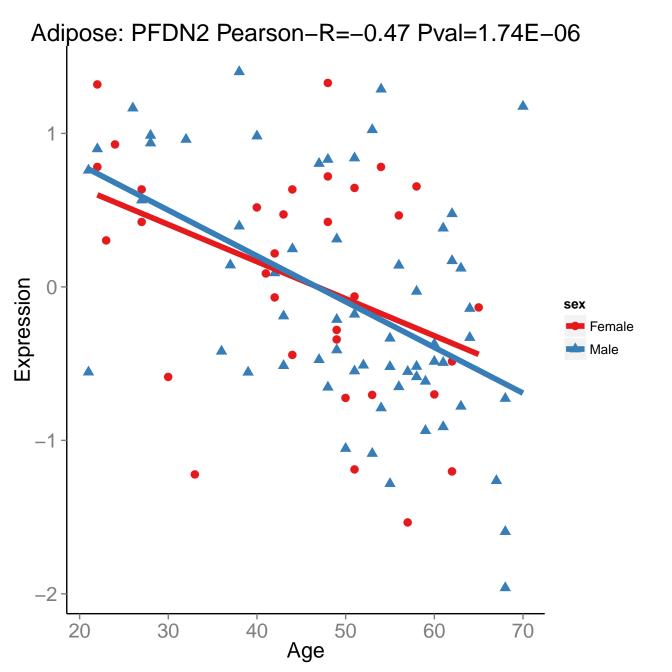


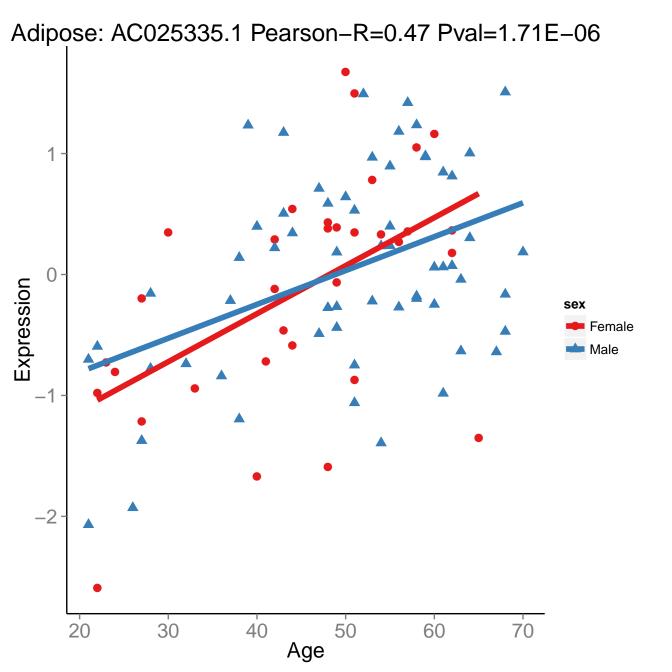


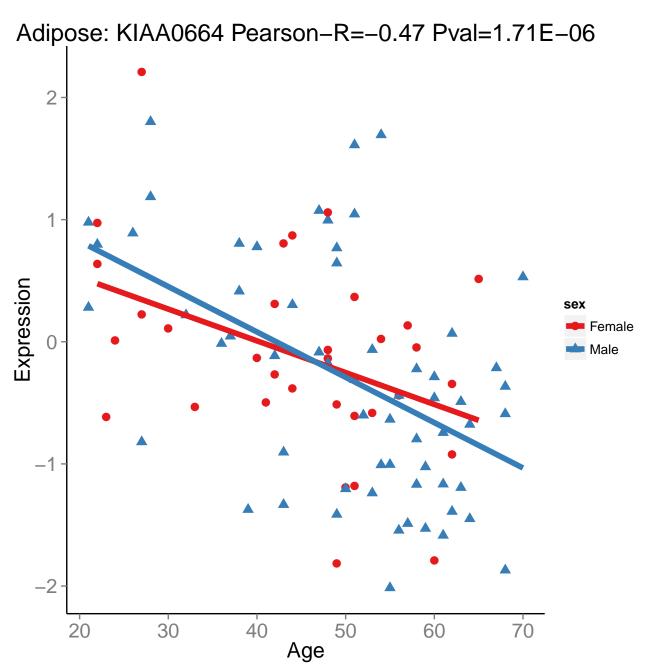


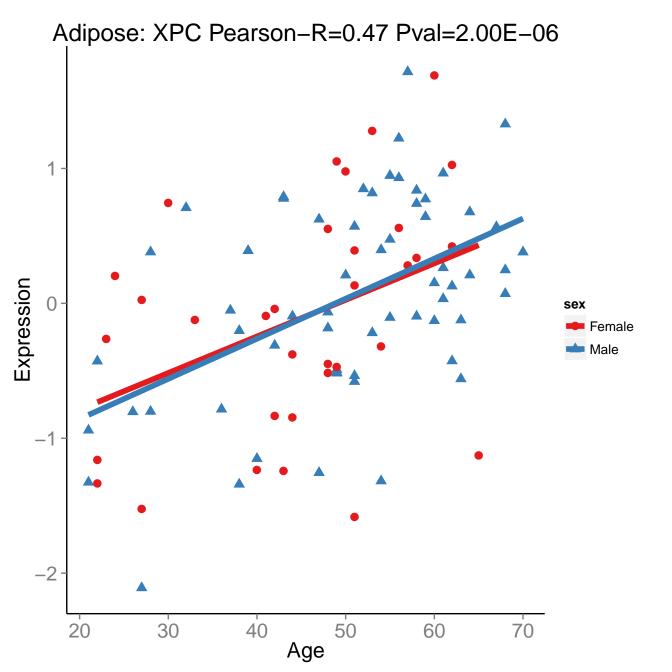


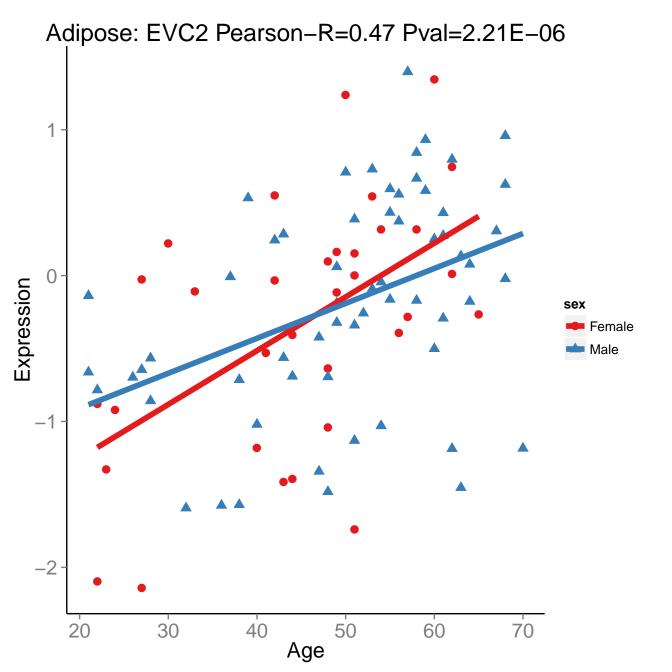


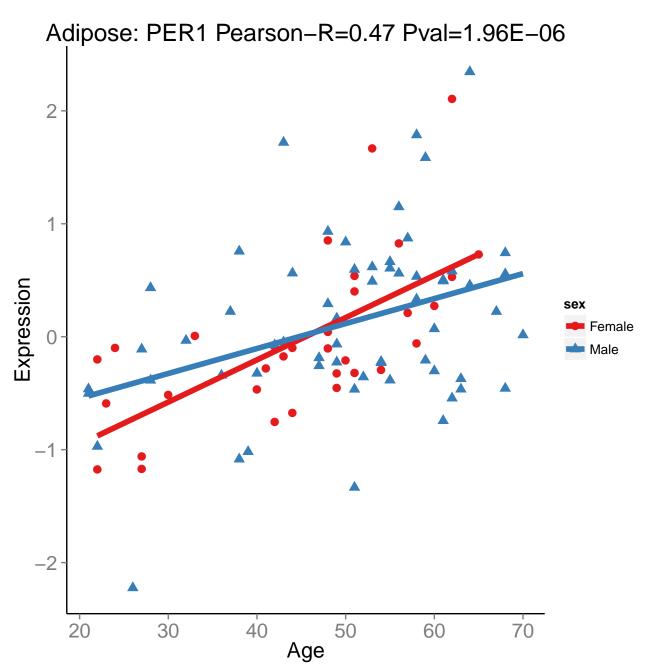




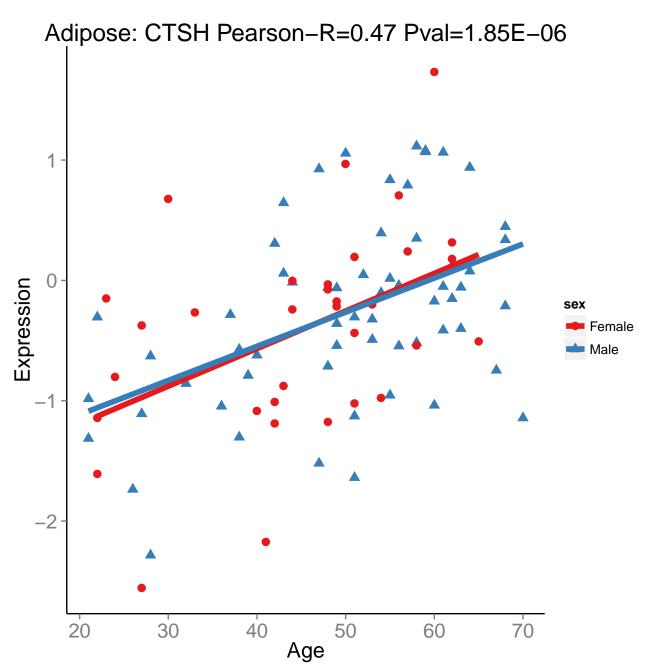


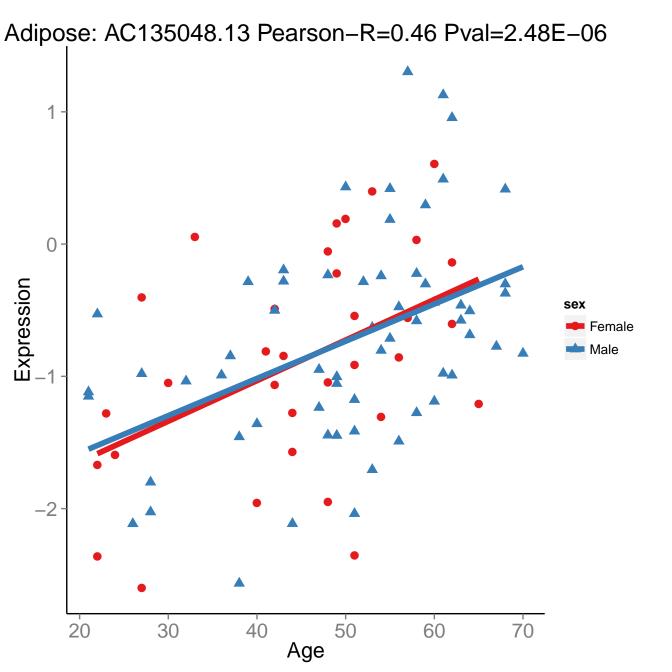


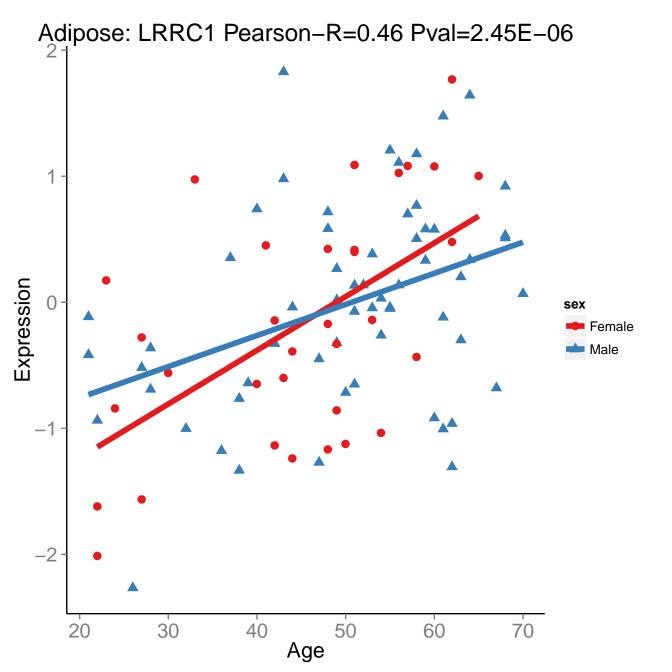


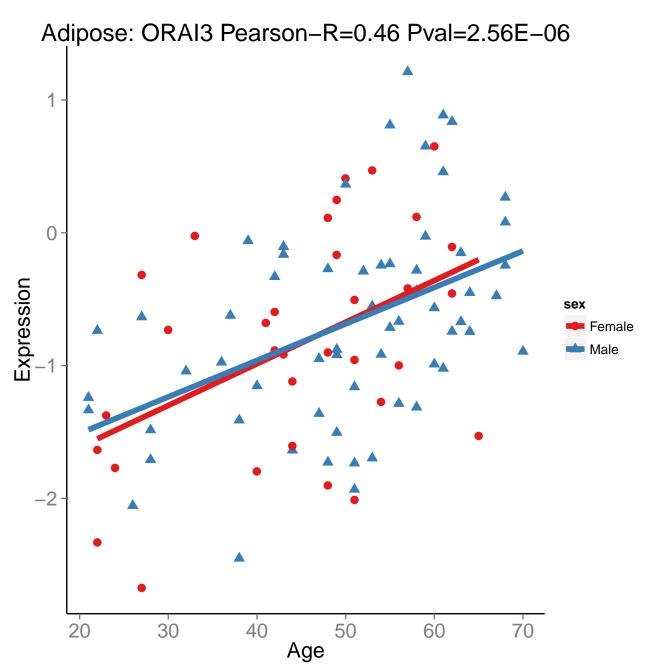


Adipose: ZNF521 Pearson-R=0.47 Pval=2.18E-06 2 Expression sex Female Male 20 30 40 60 70 50 Age

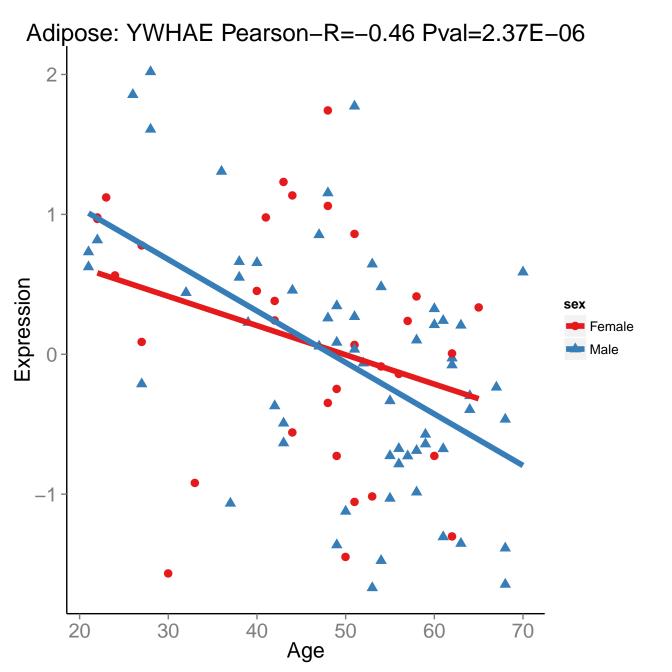


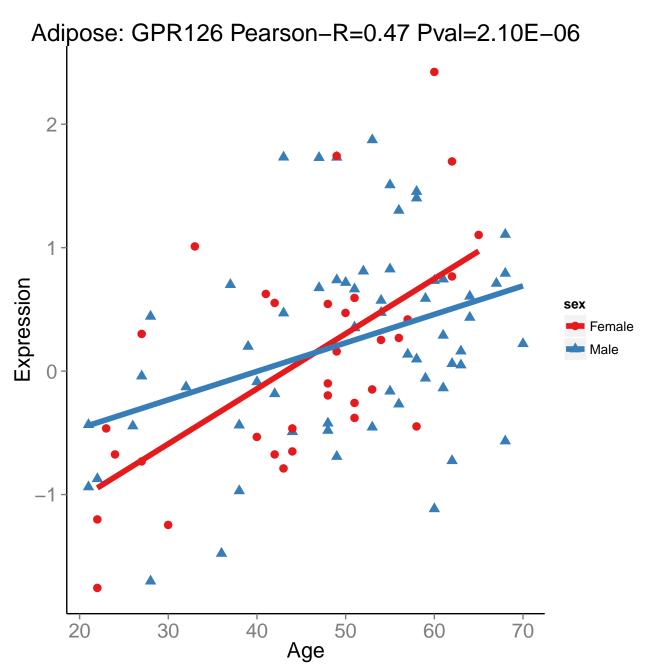


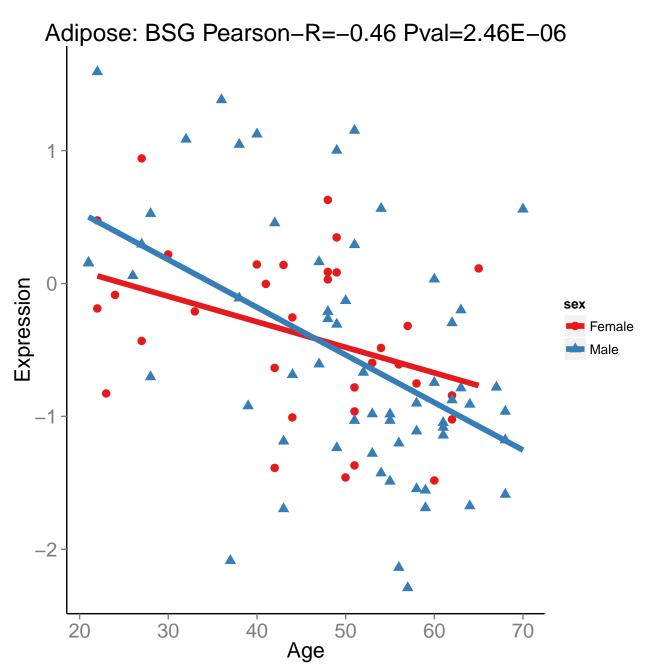


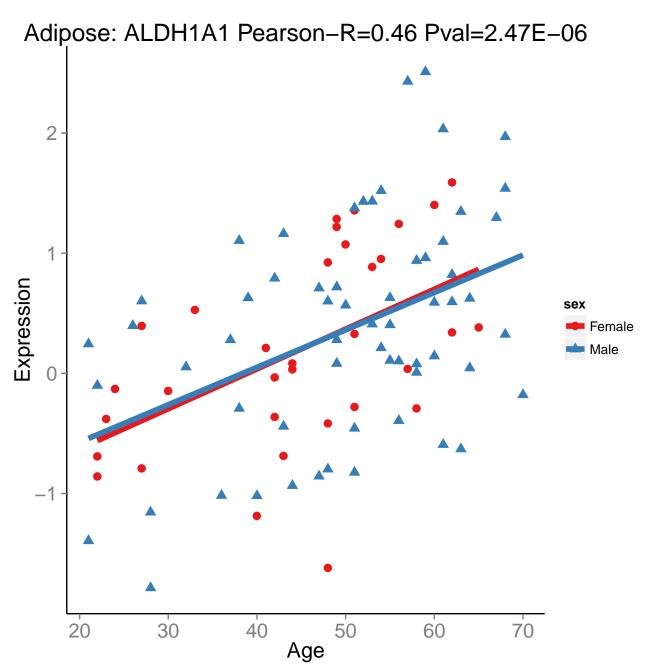


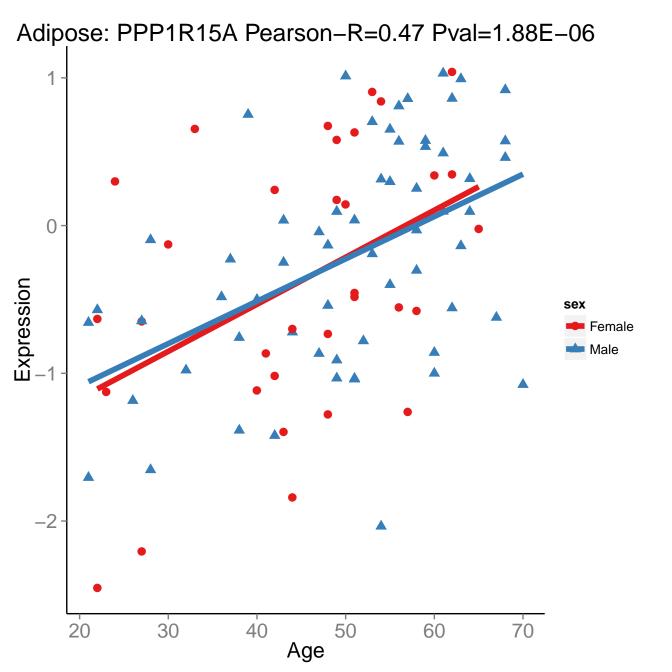
Adipose: ELMO1 Pearson-R=0.46 Pval=2.51E-06 2-Expression 0 sex Female Male -2 40 20 60 70 30 50 Age

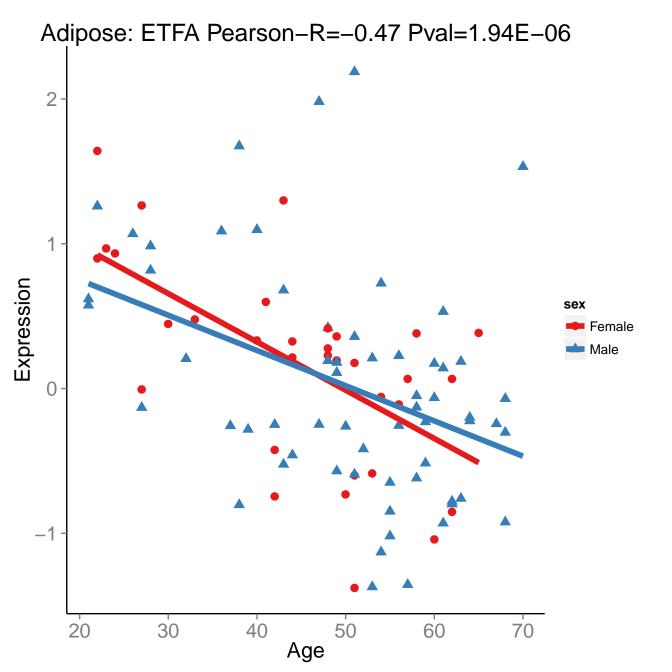


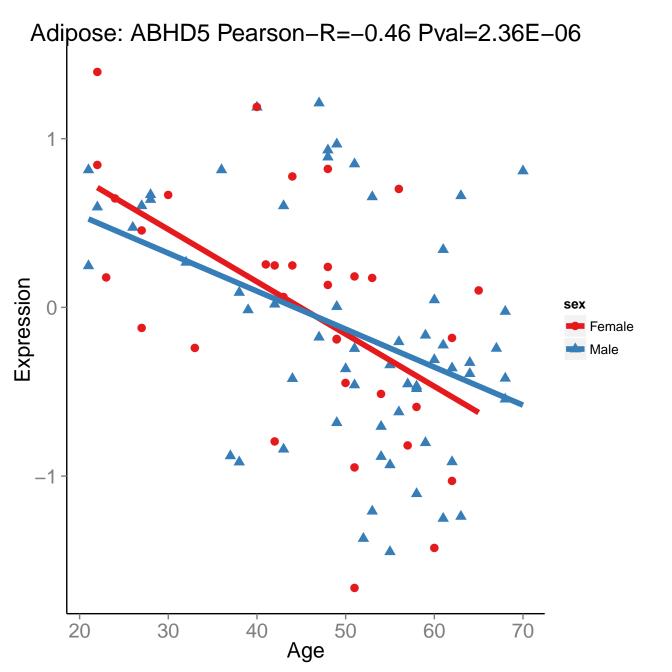


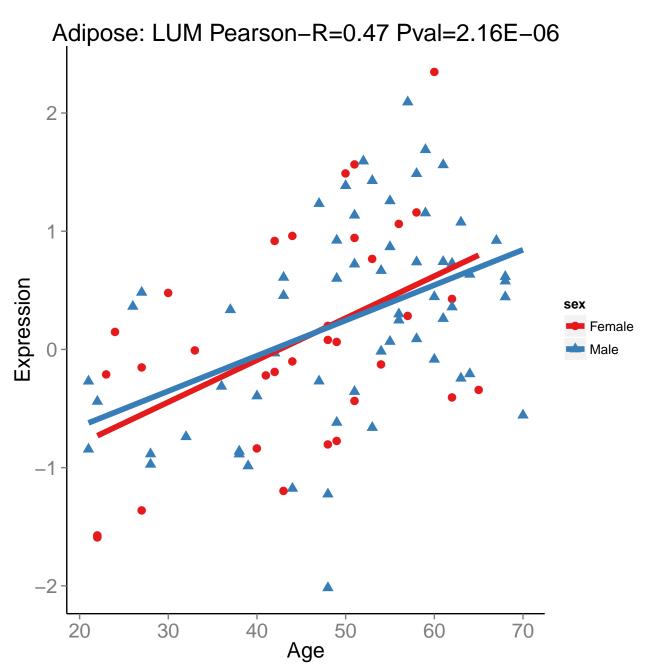


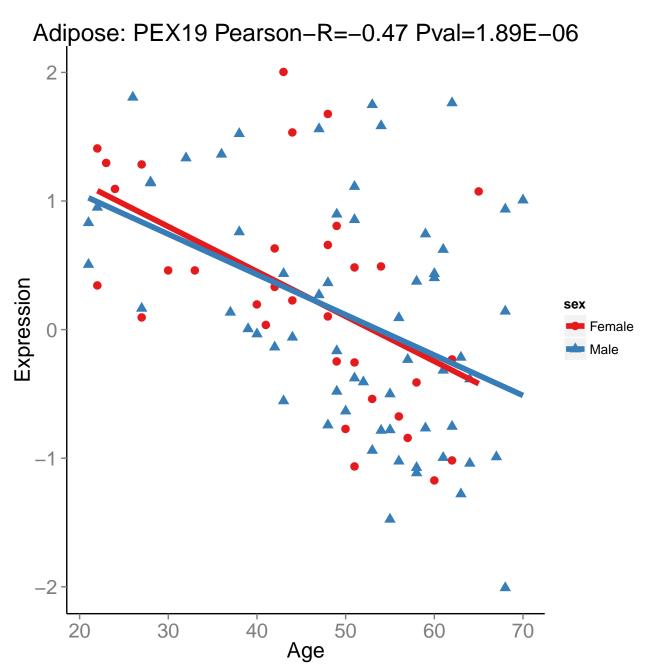


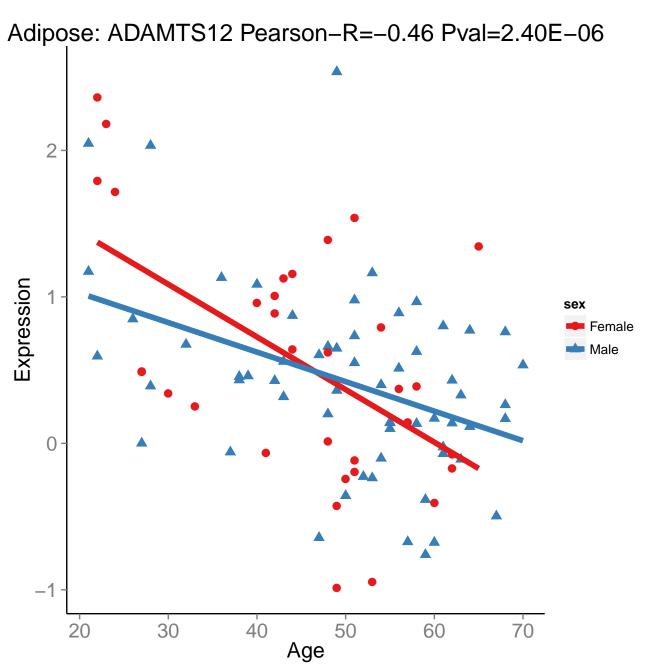


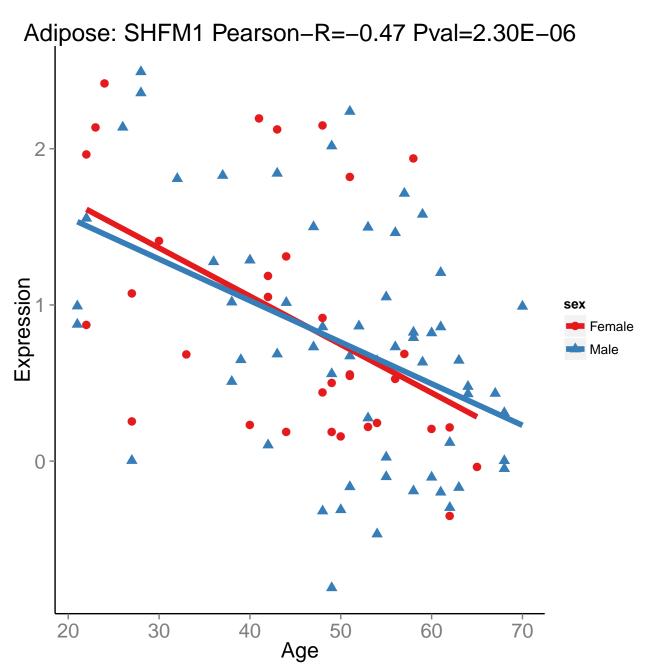


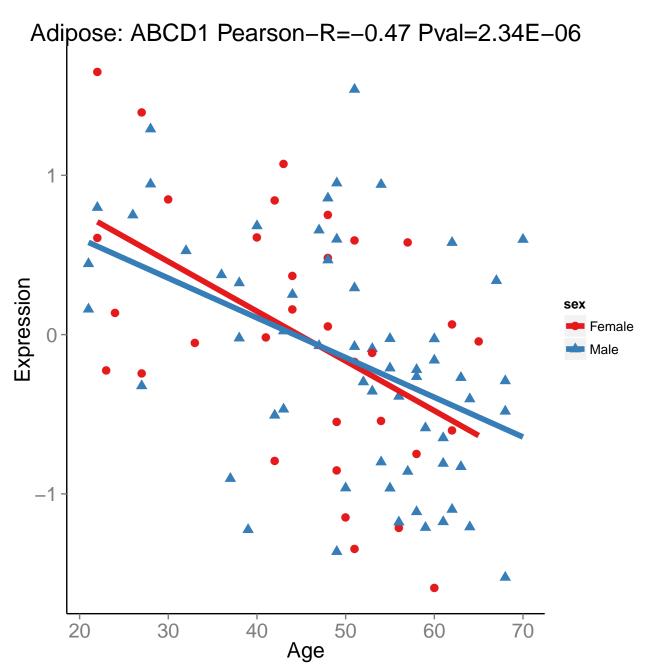


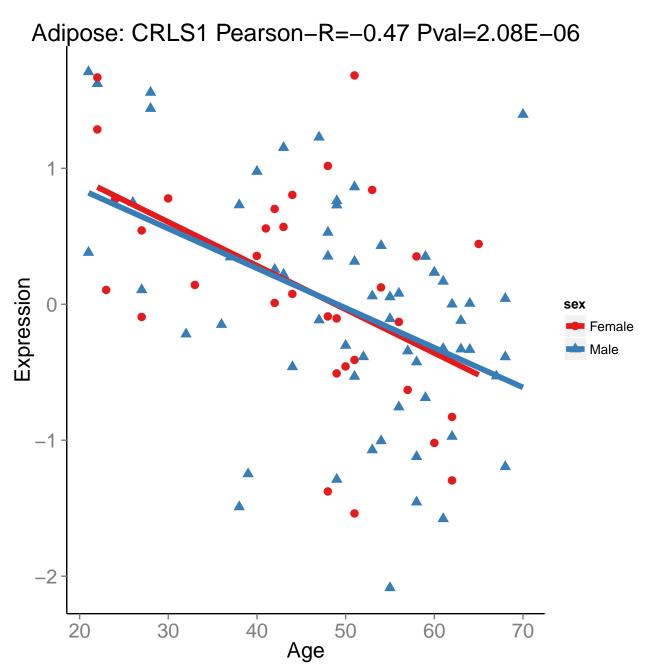


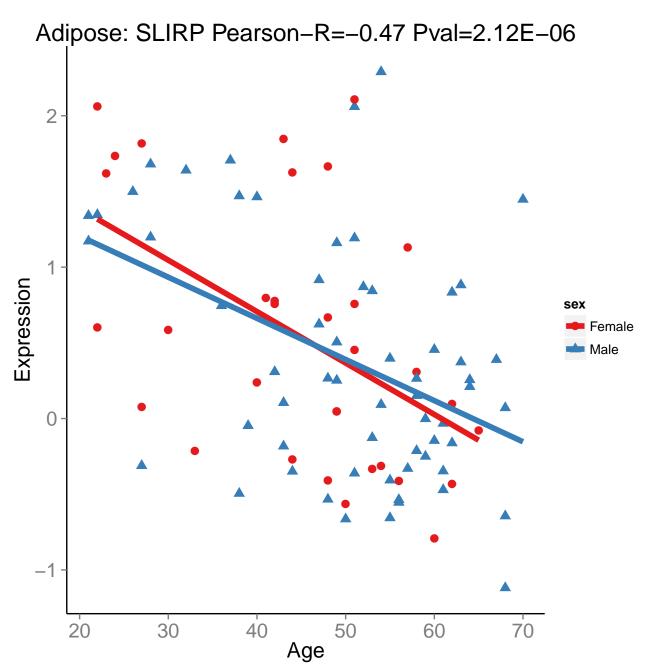




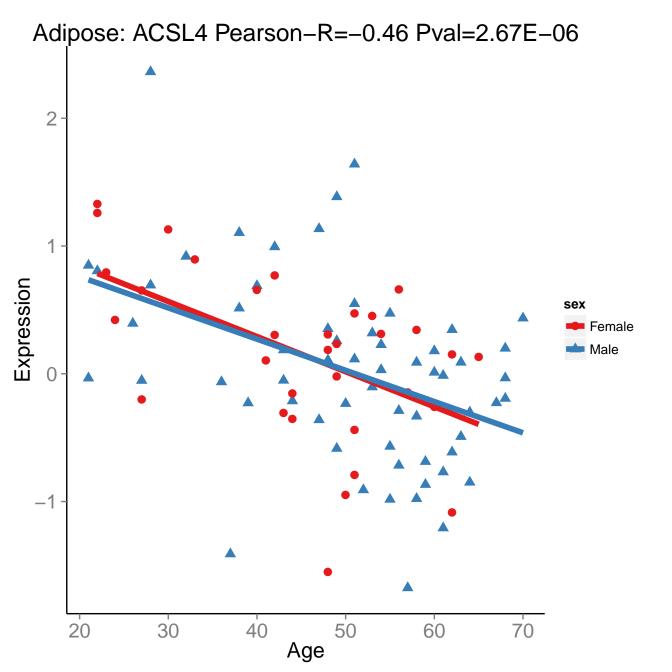


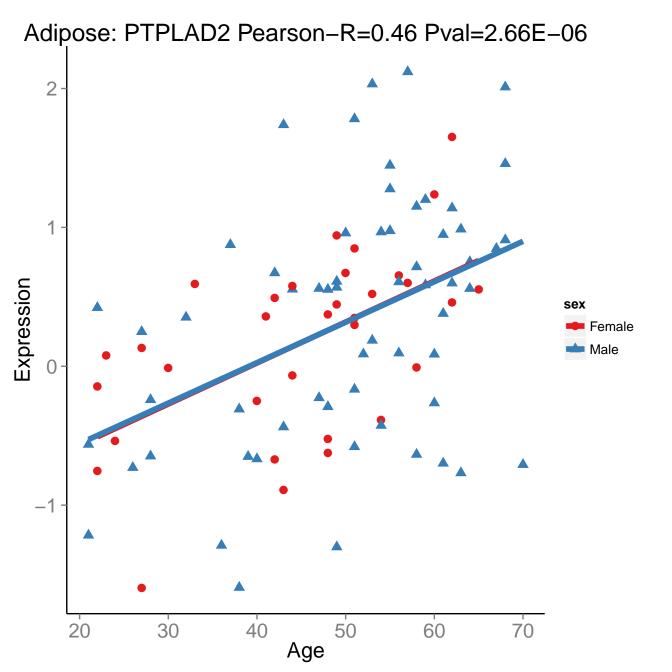




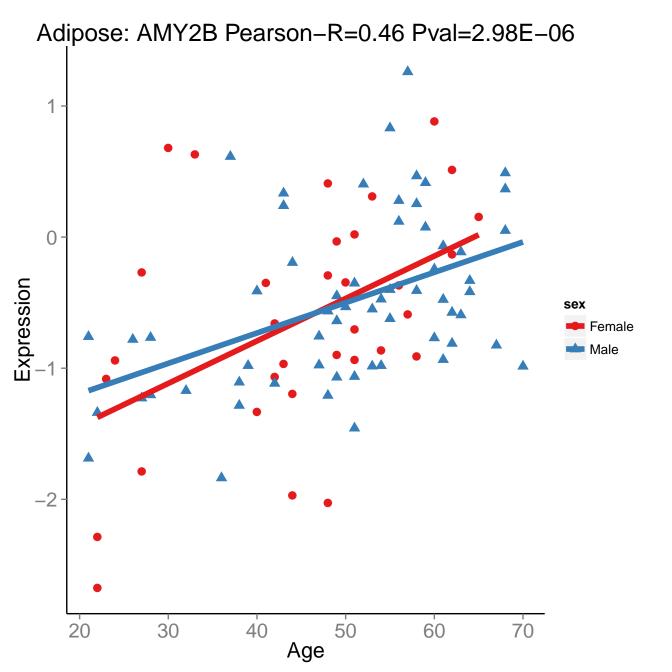


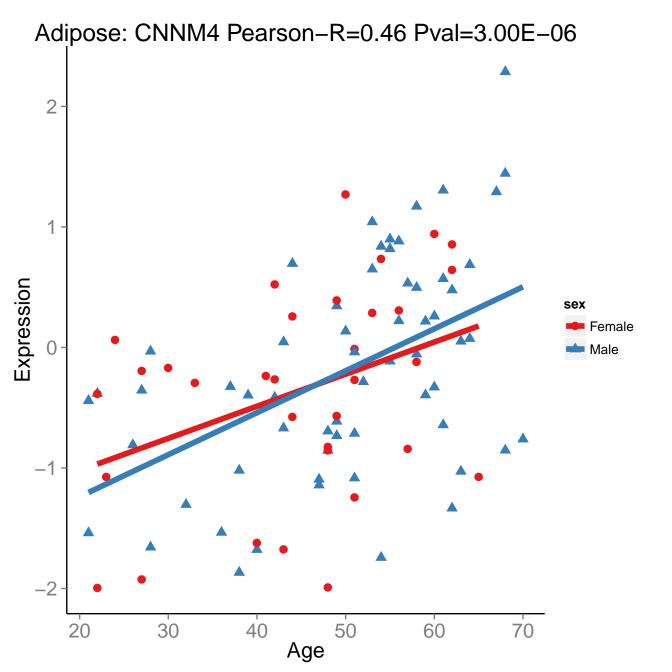


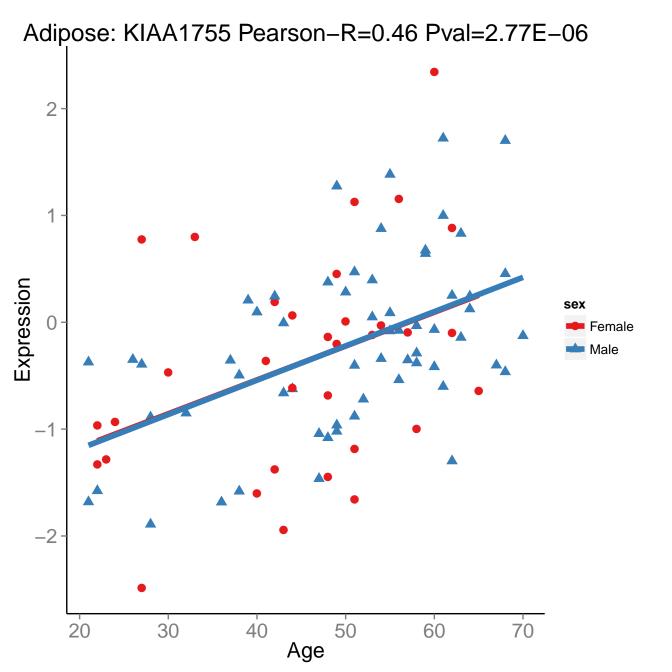


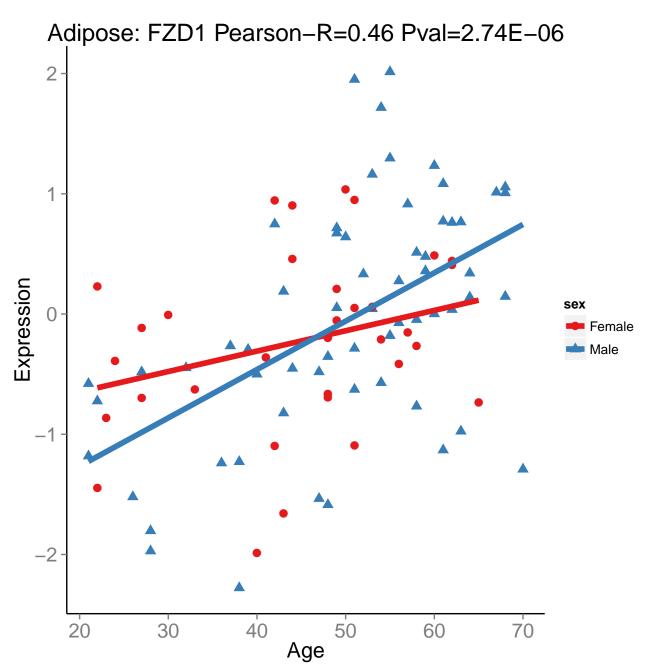


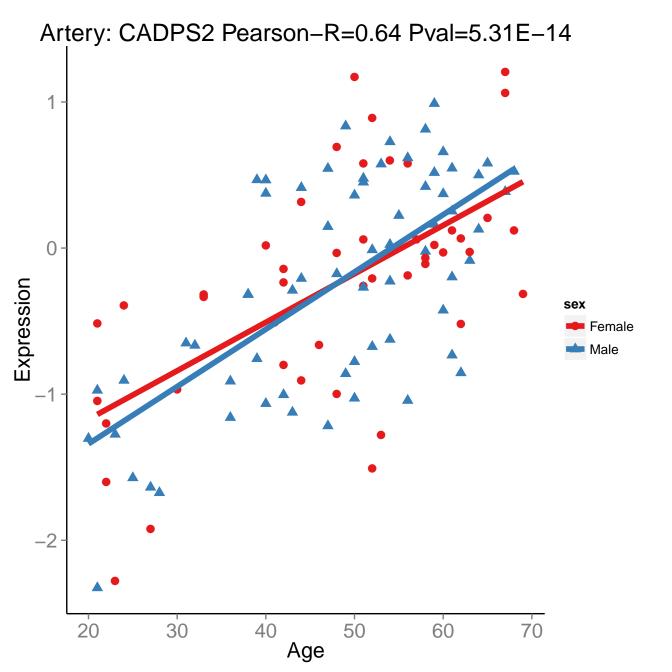






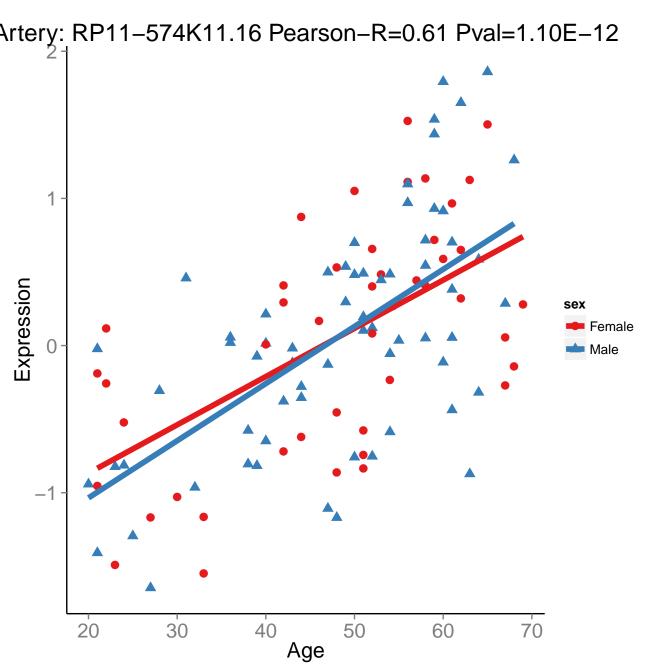


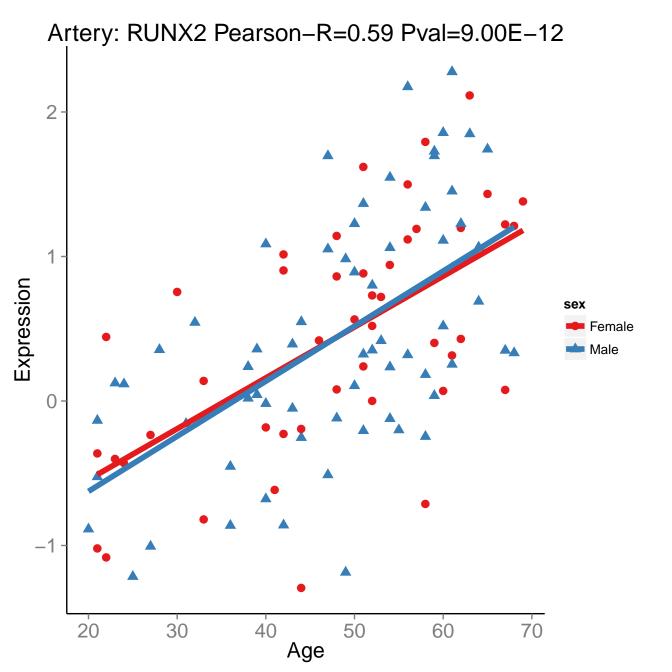






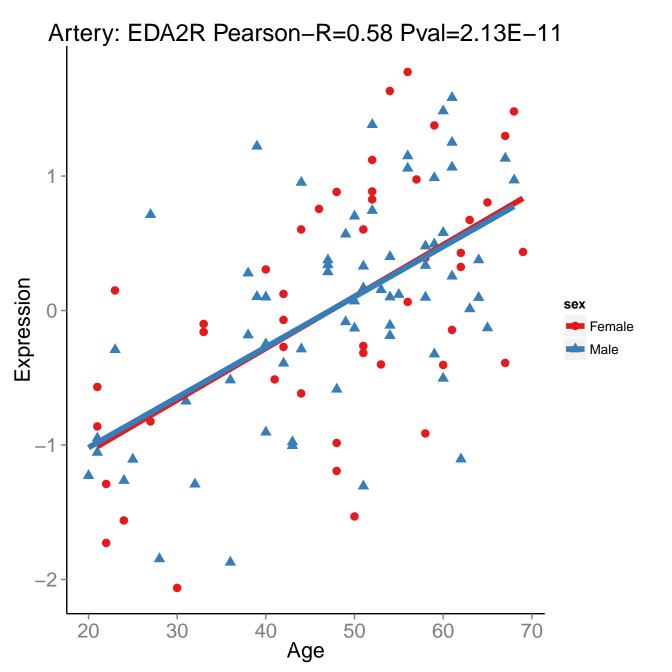




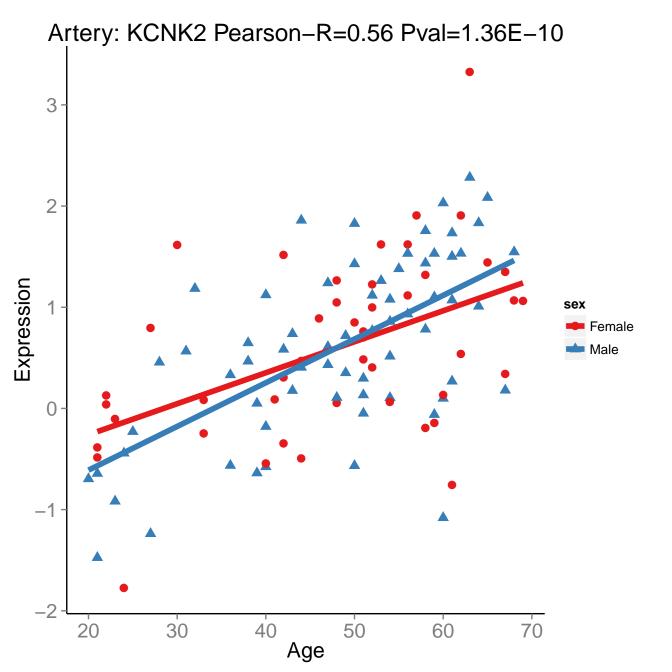


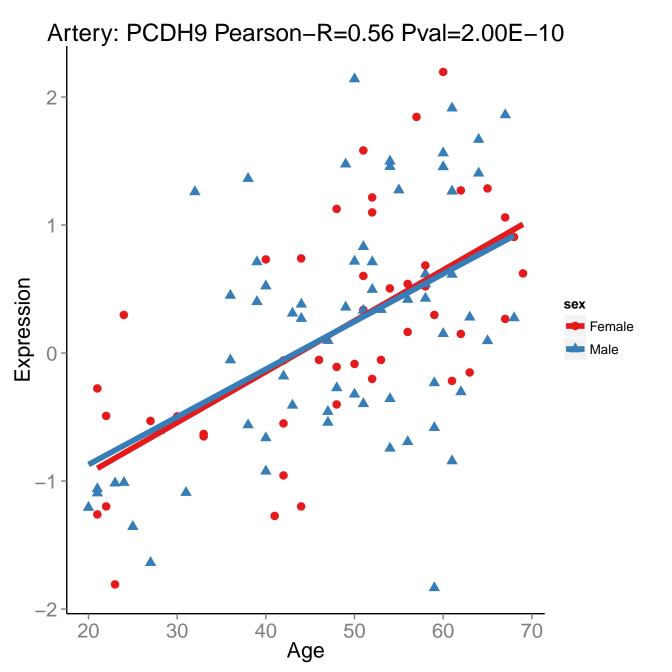


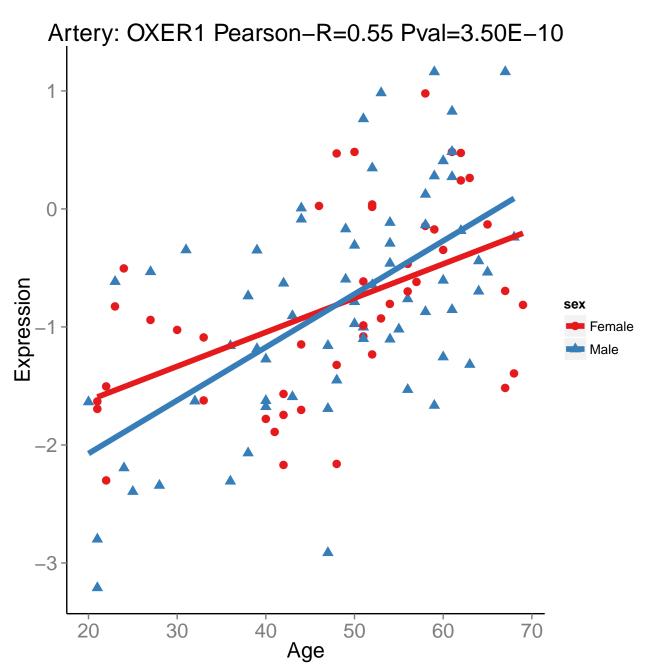




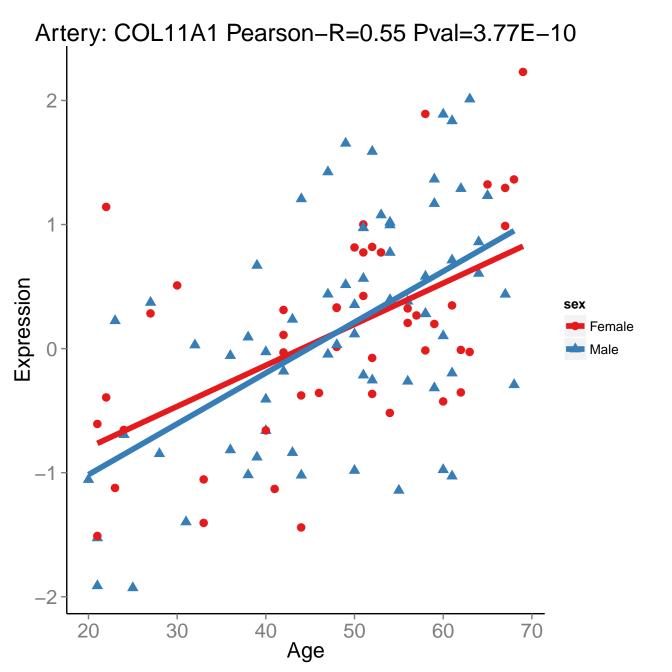




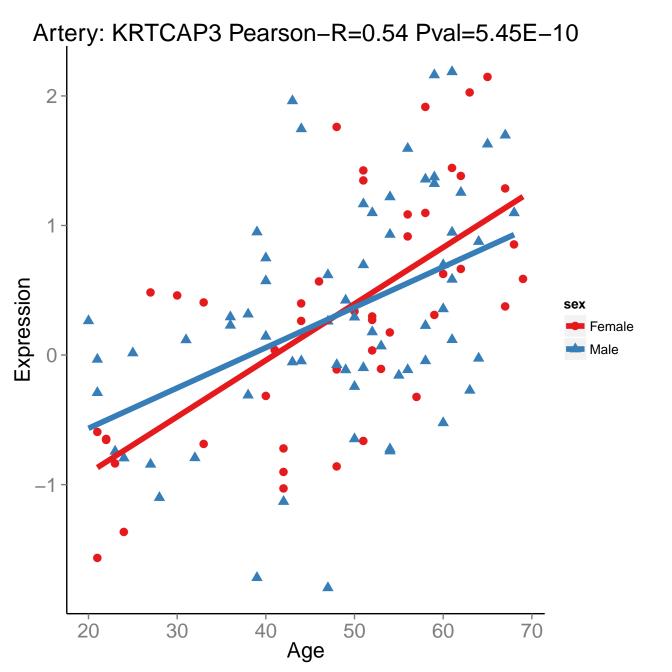








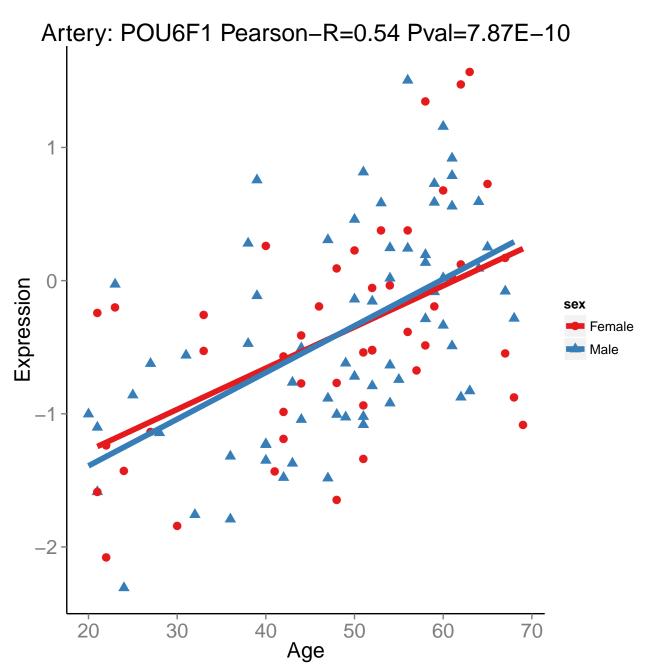


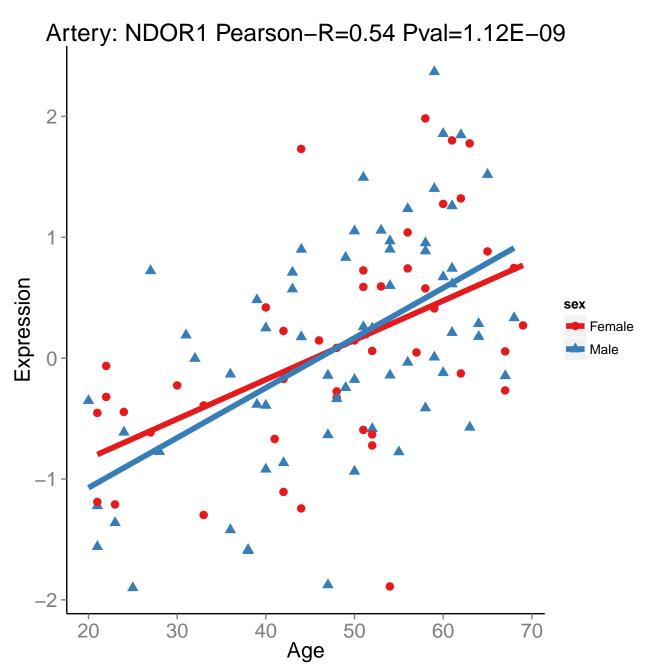


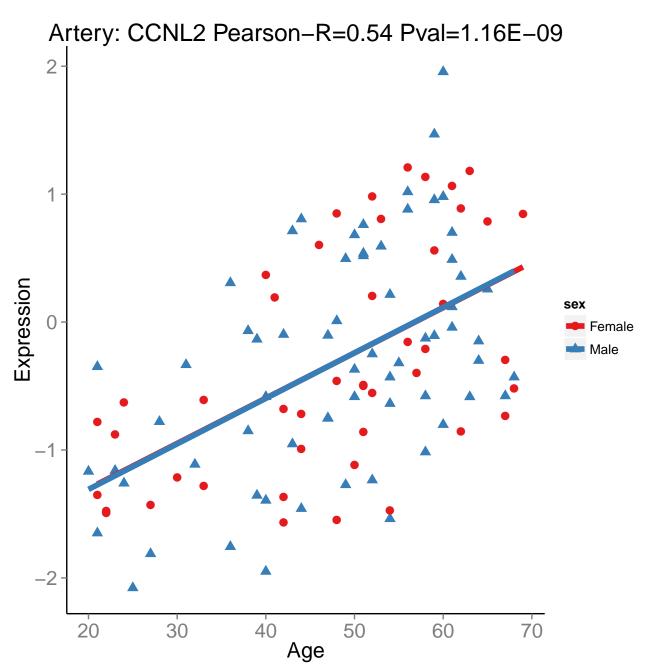


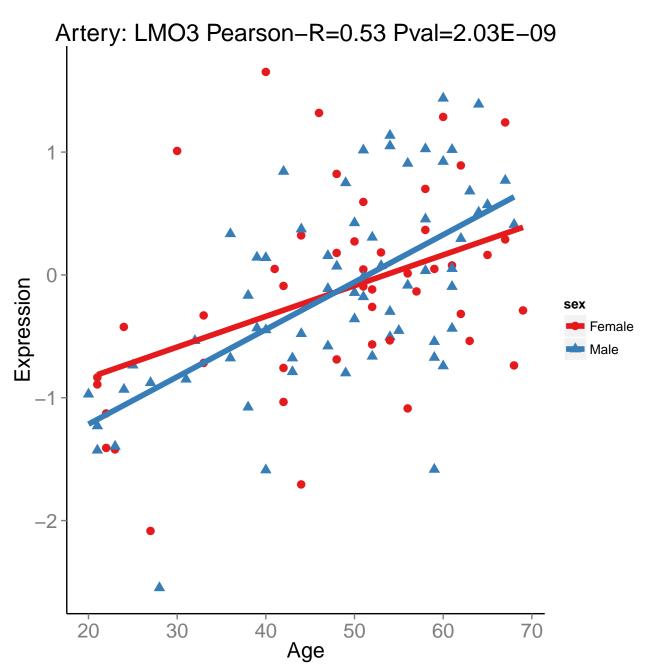


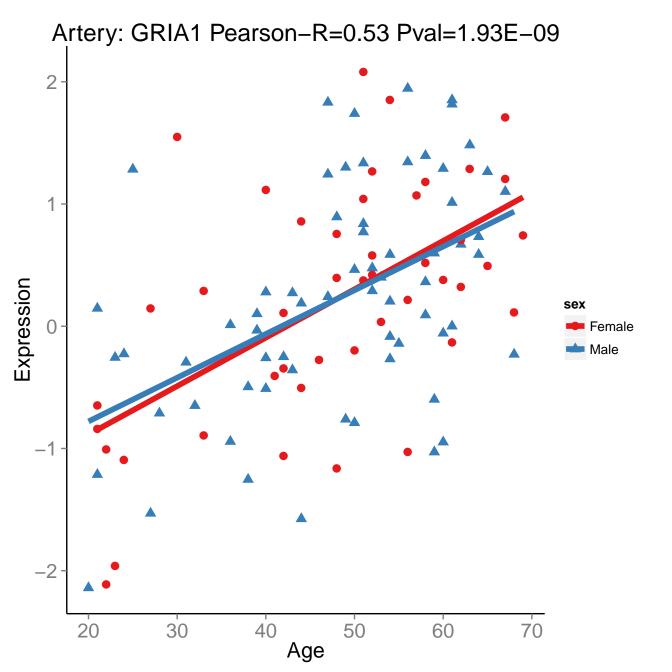


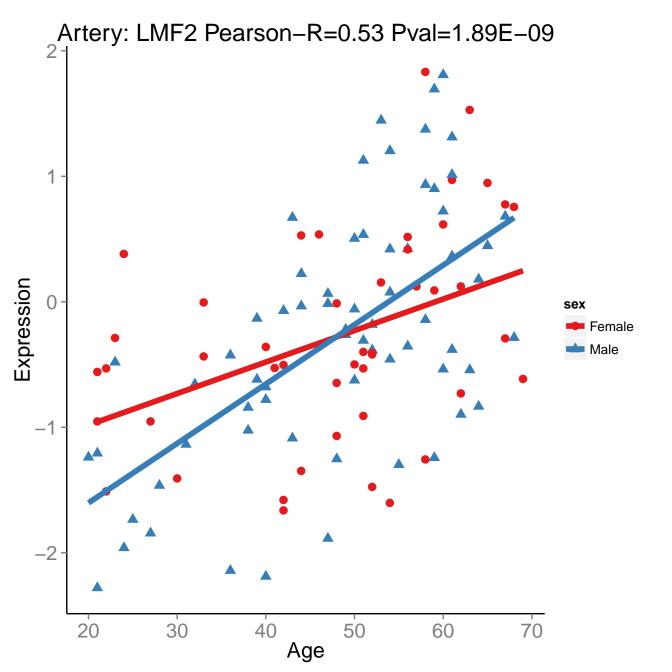


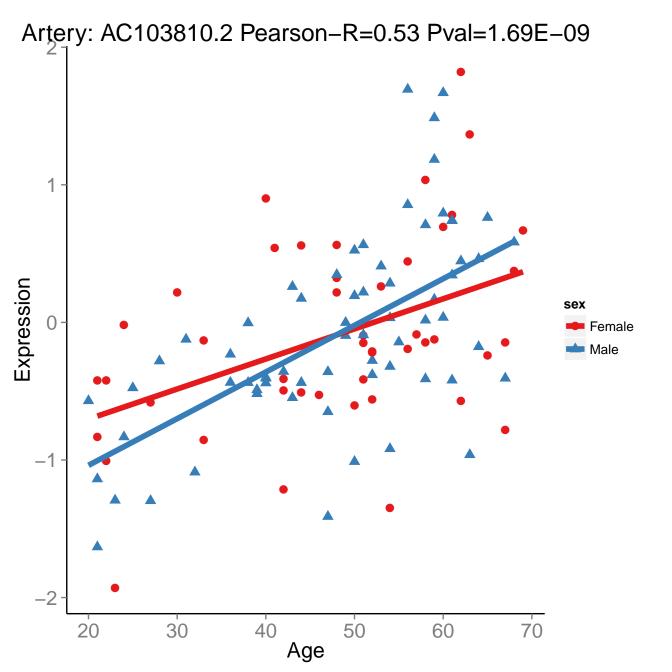


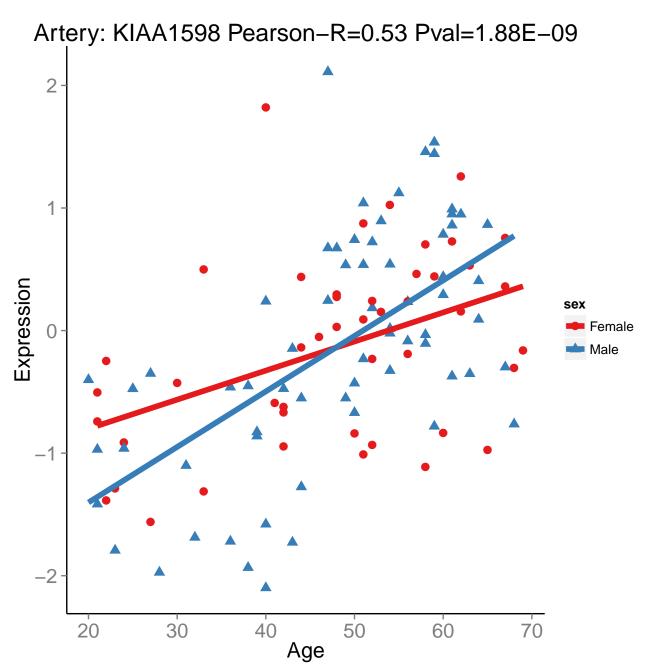


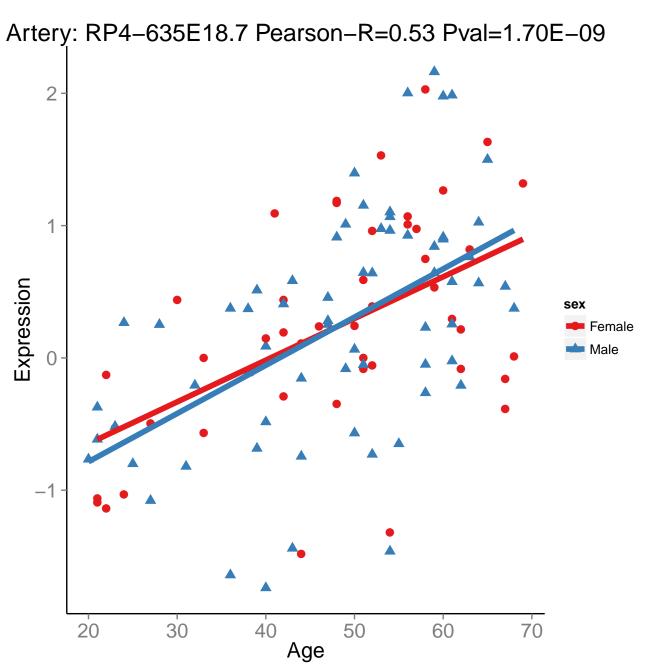










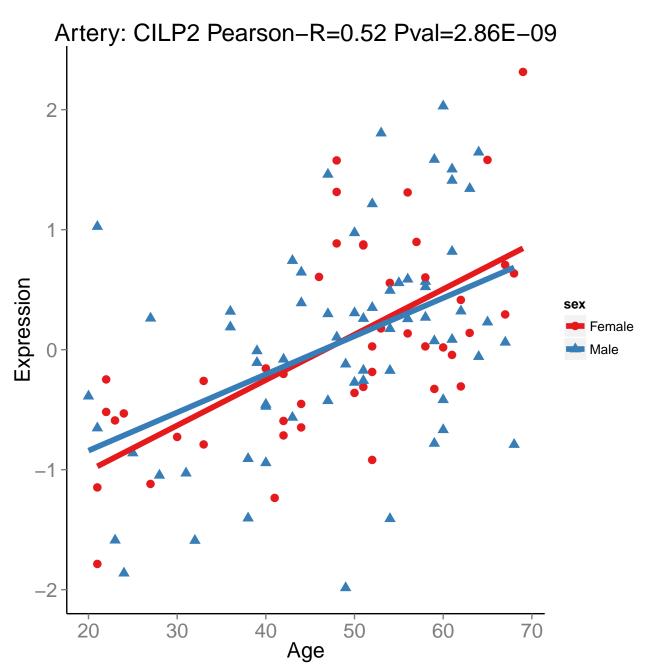


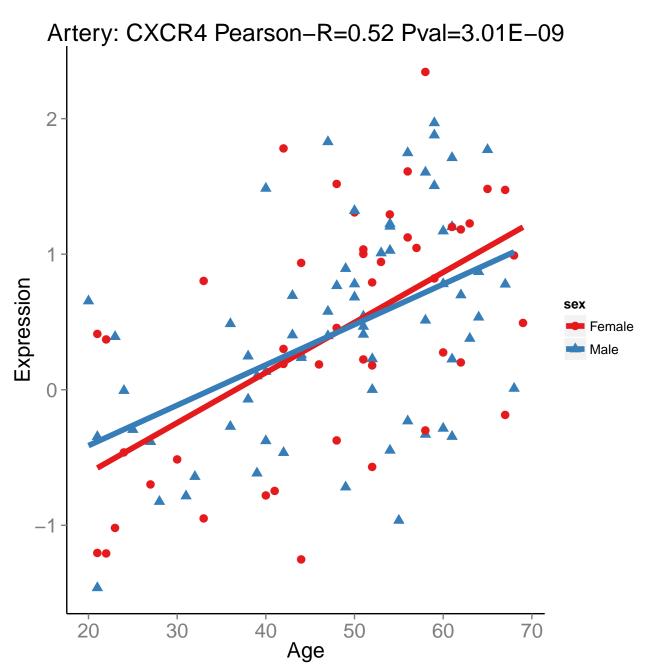




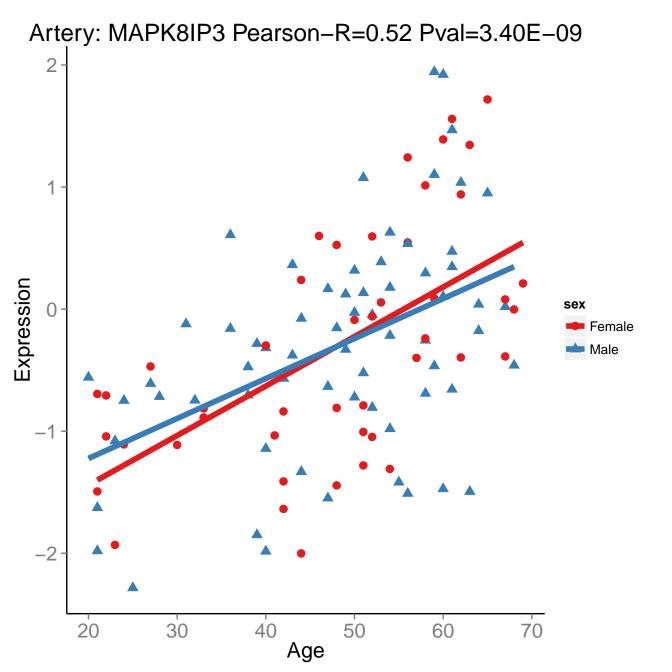


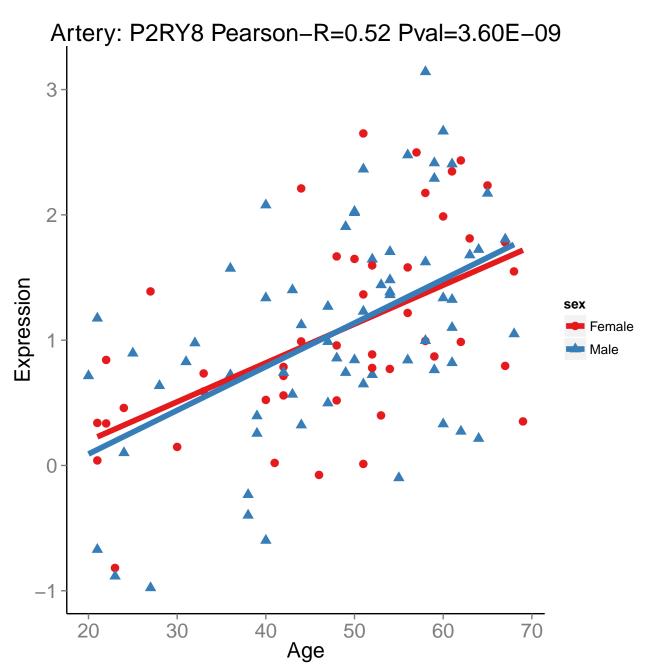


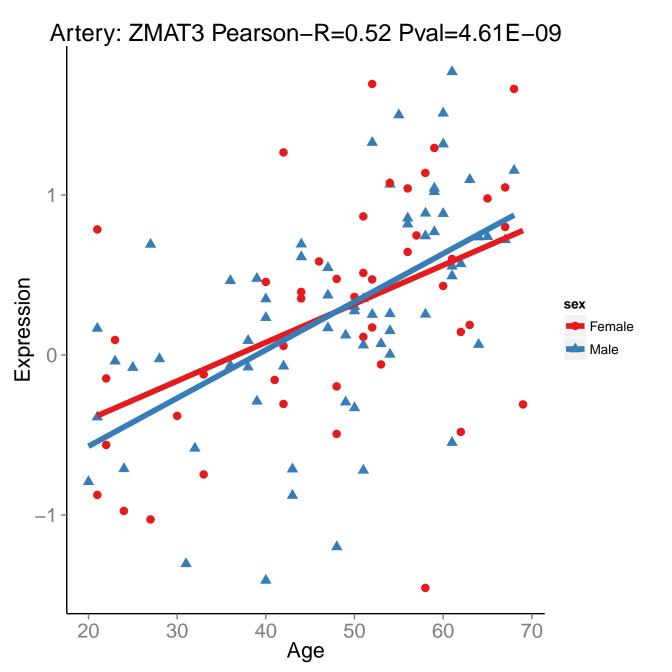


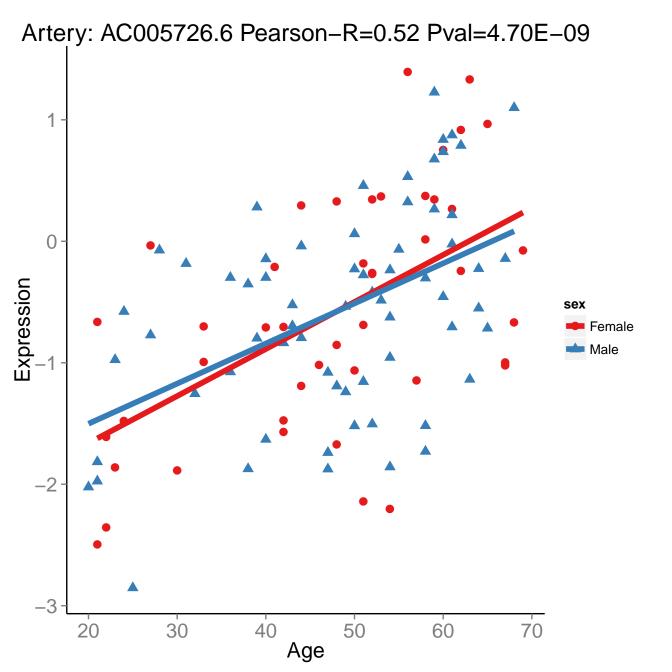




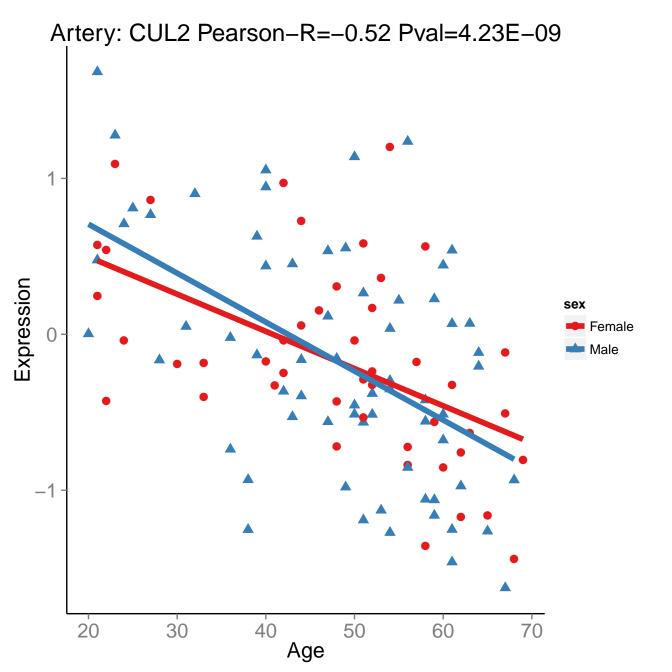




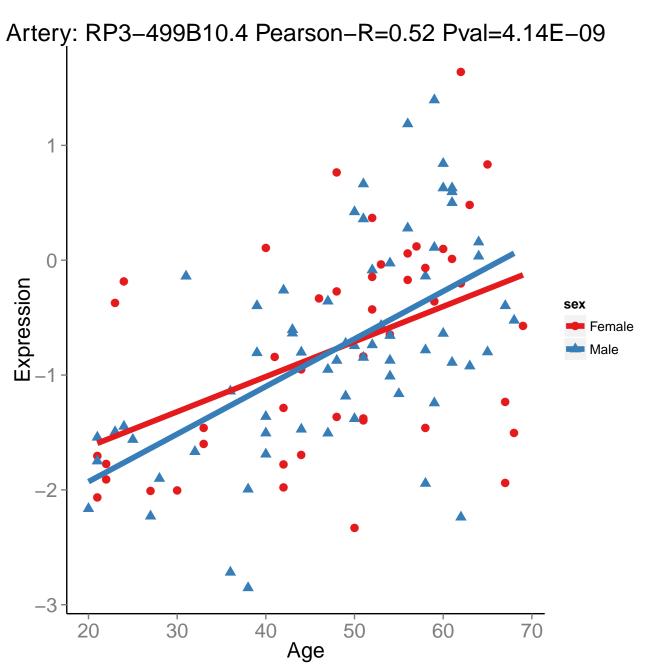


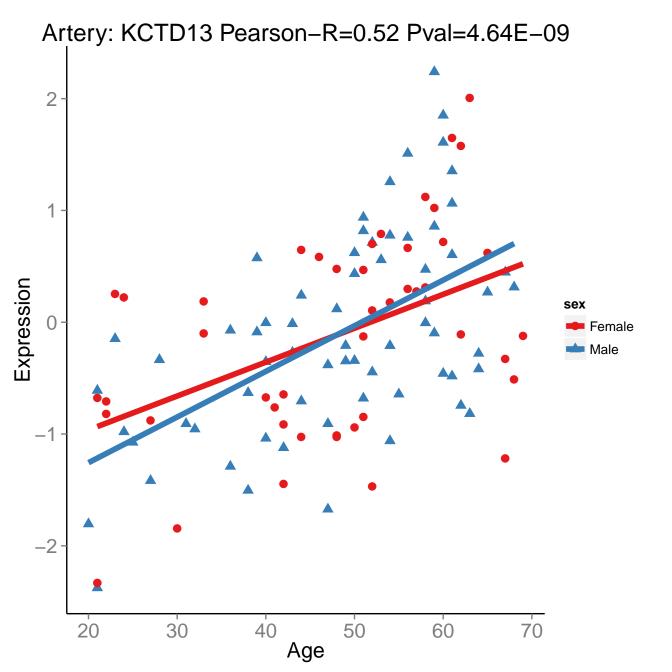


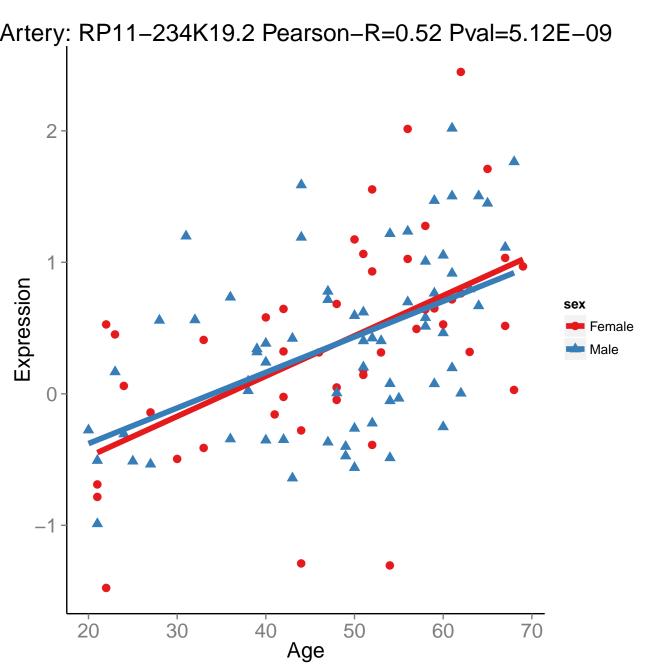




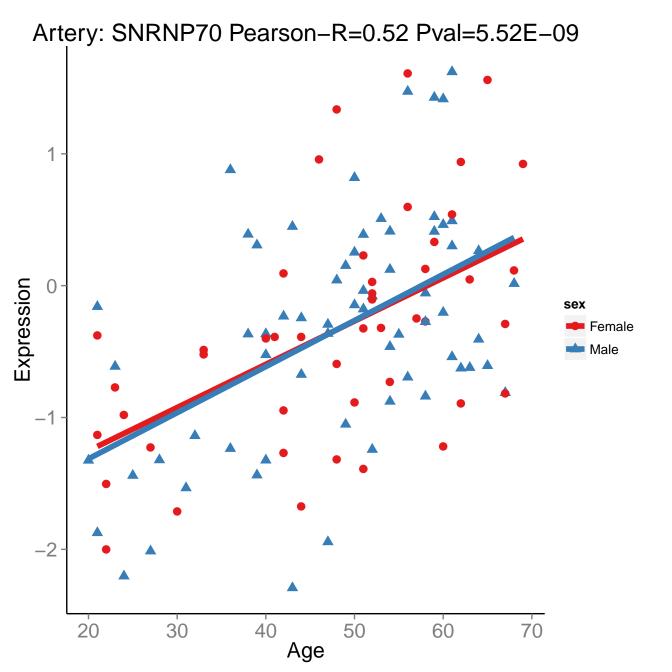










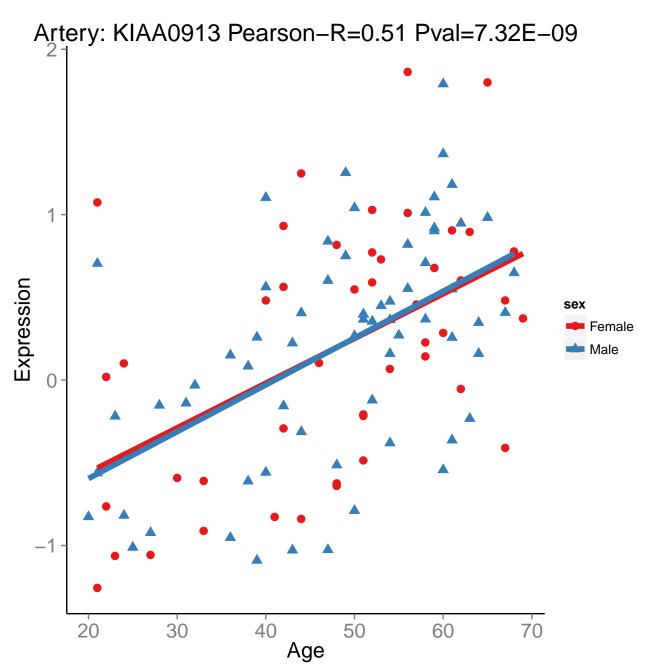


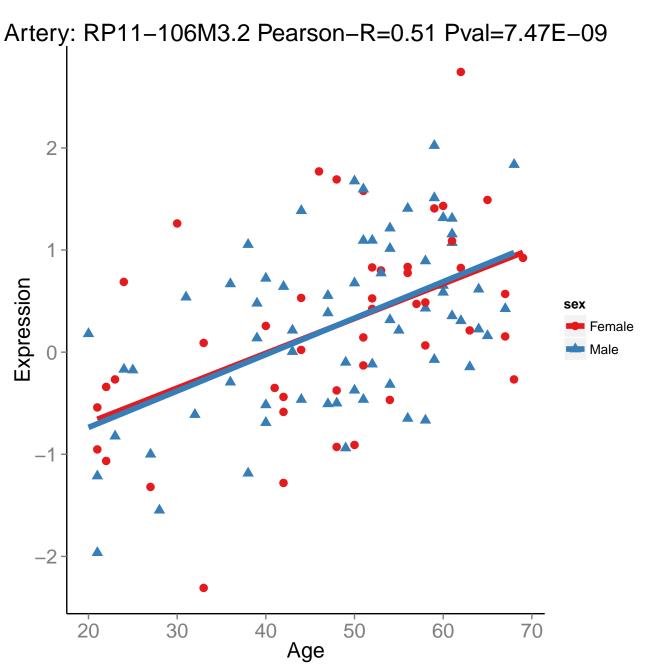


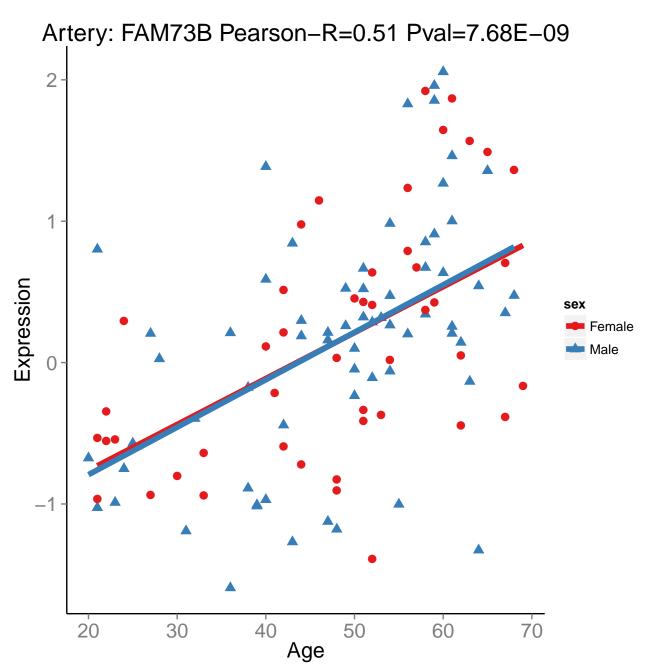


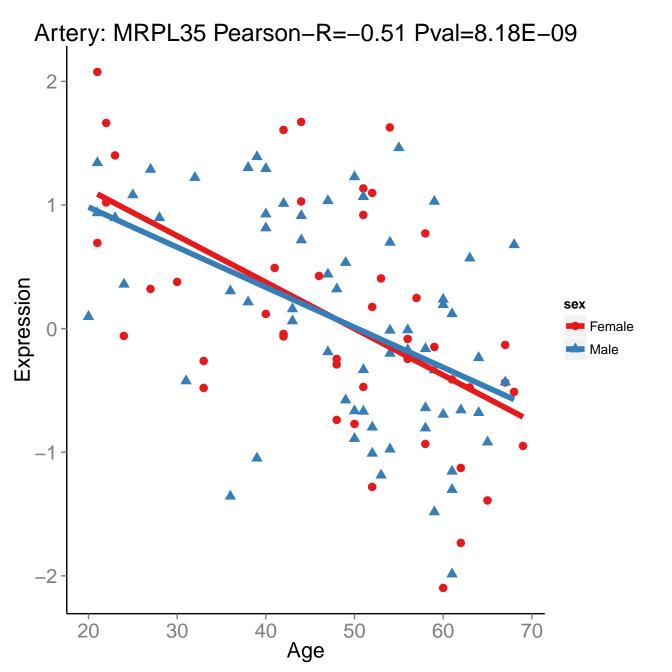




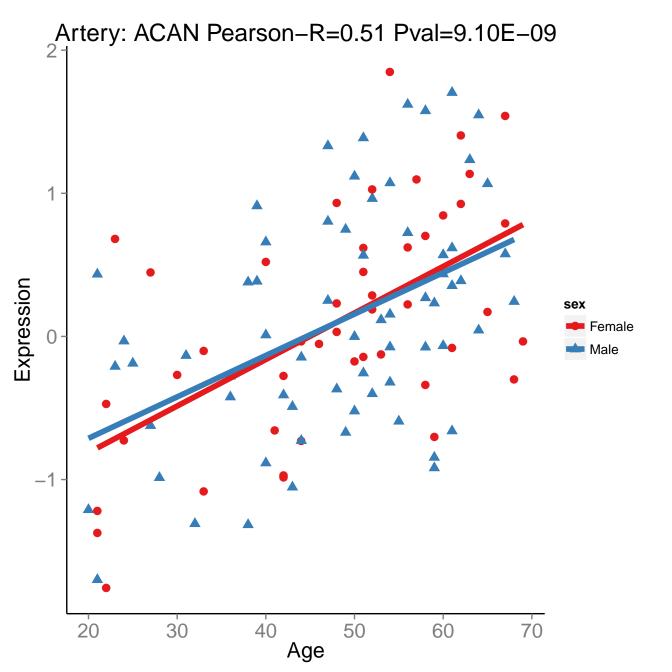


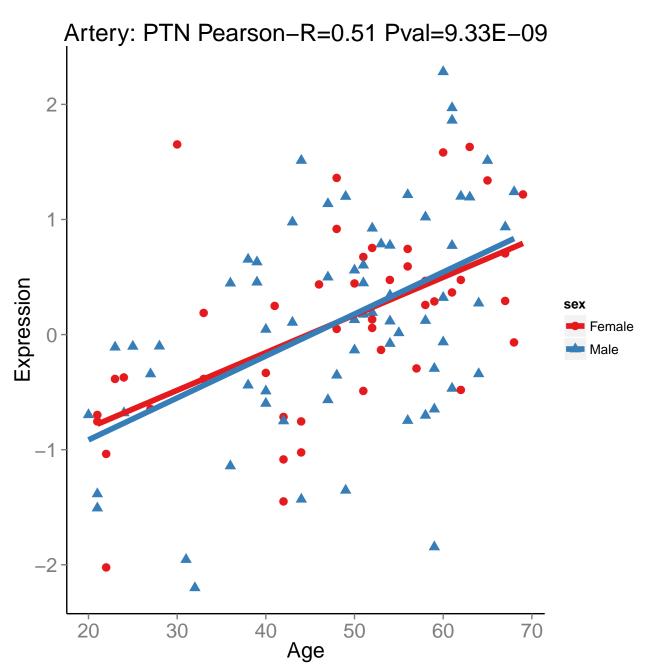






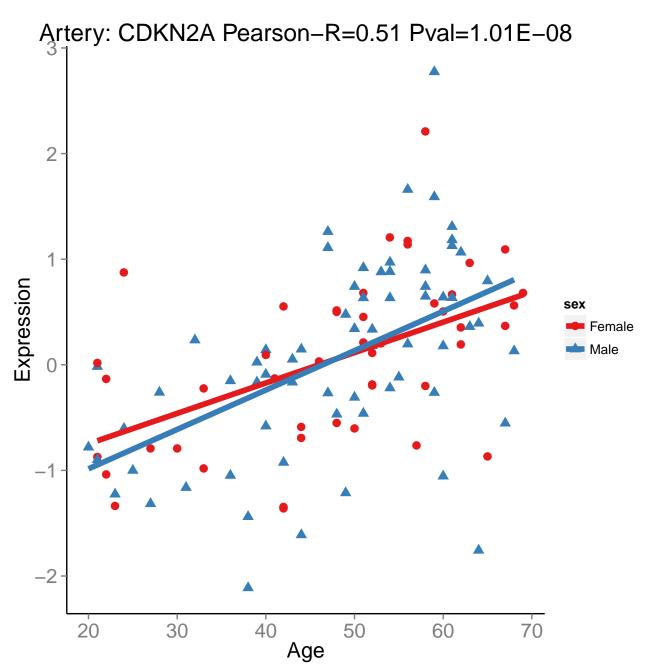


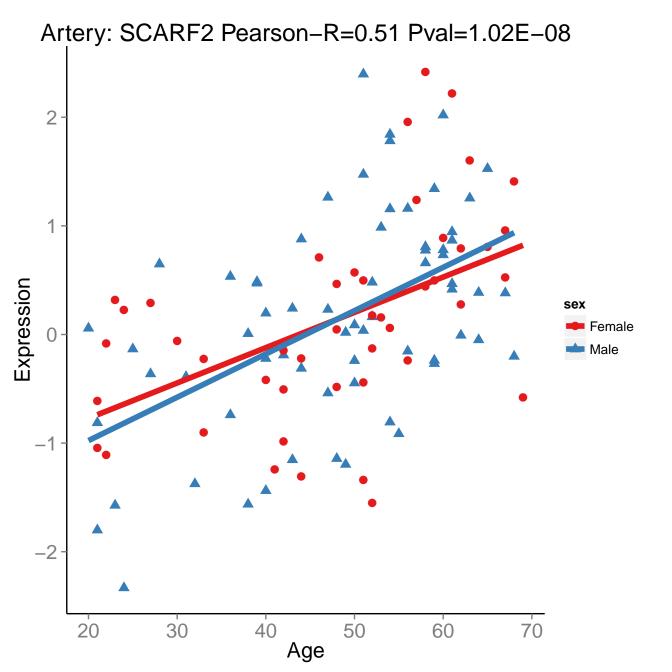


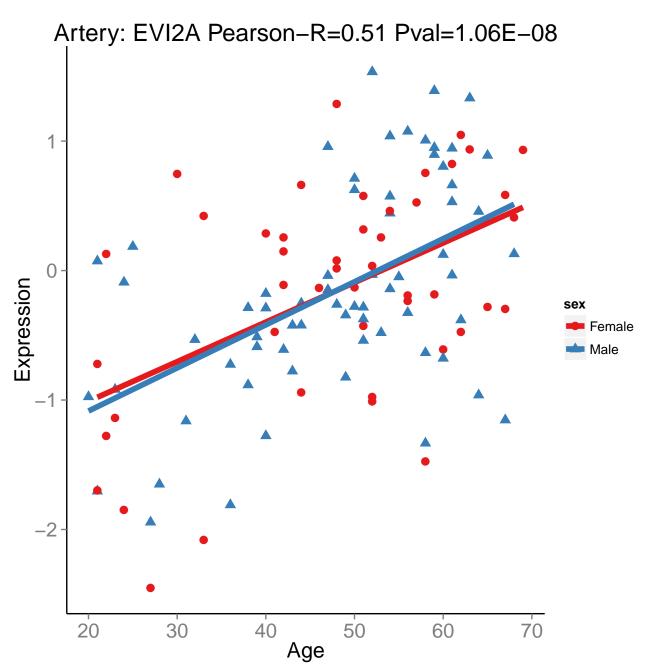


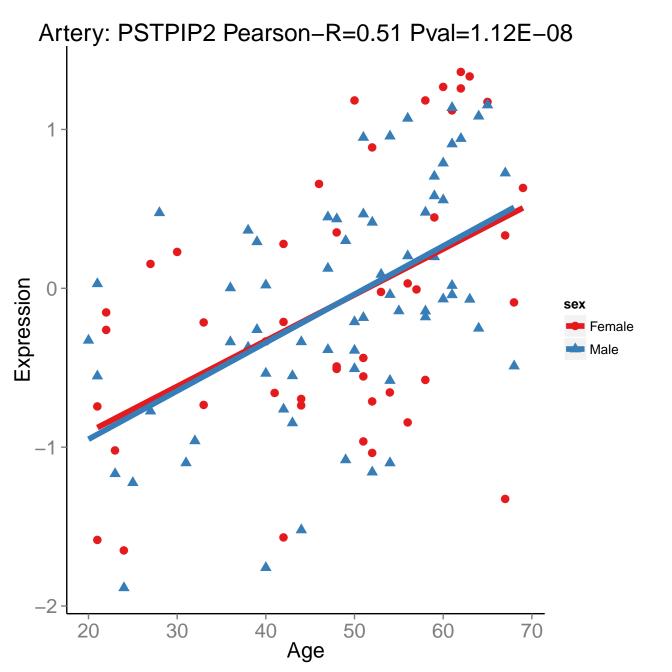


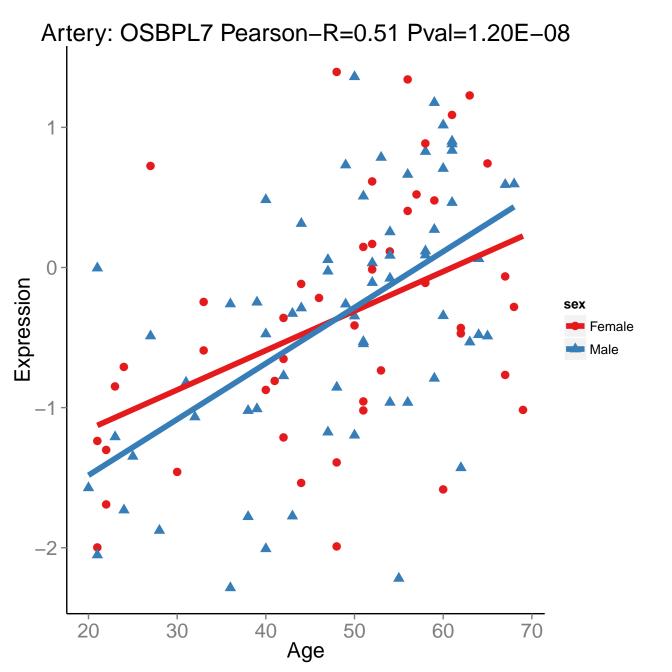








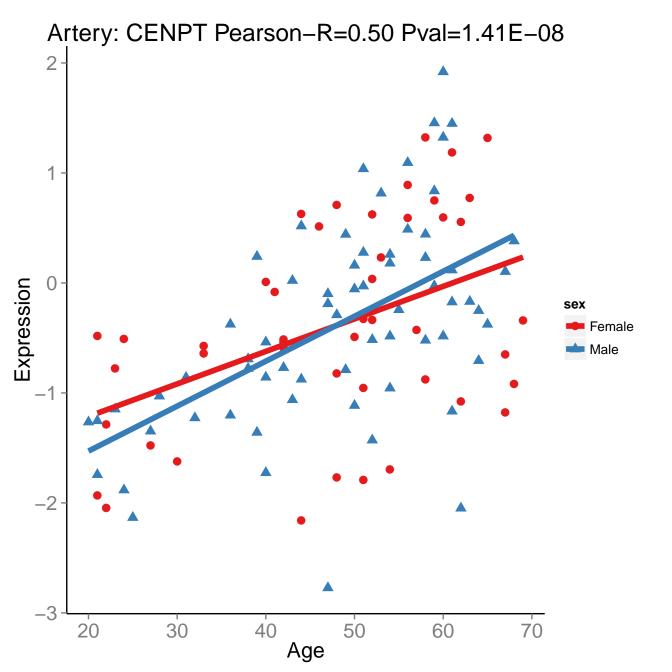


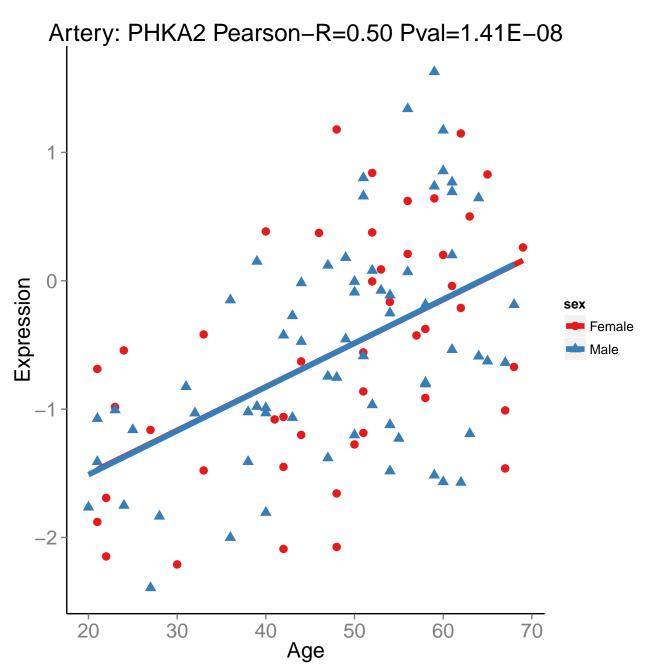


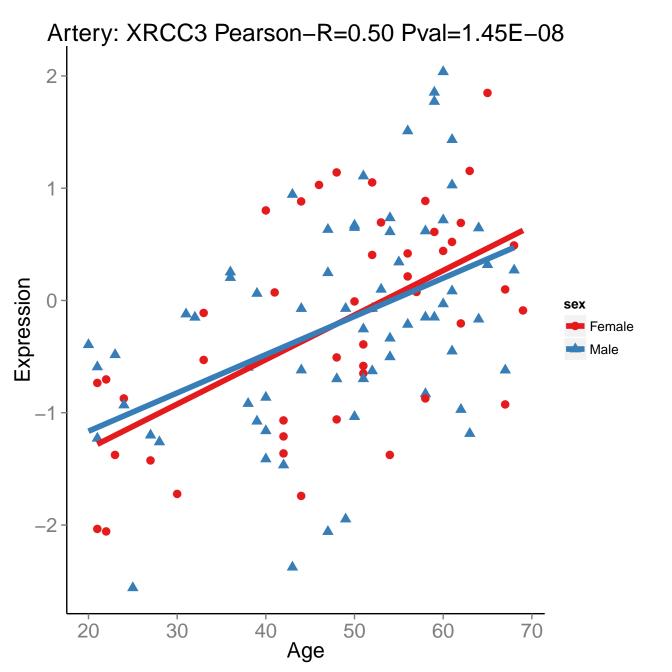


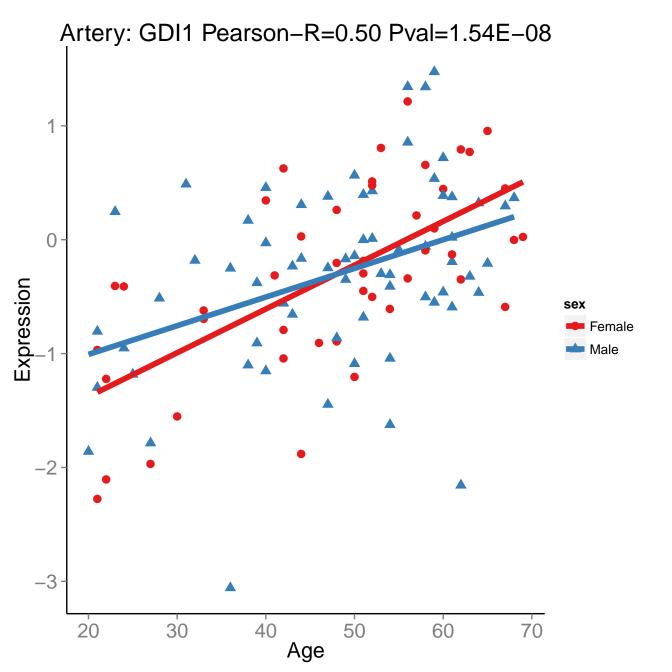










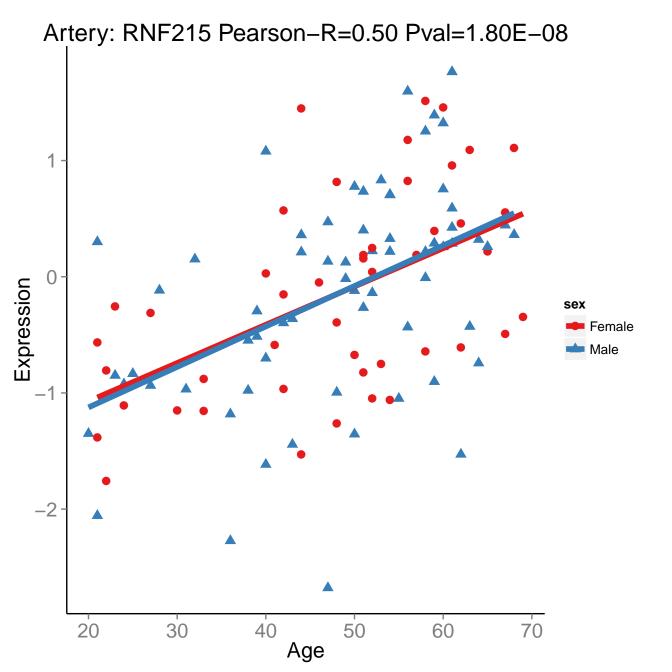


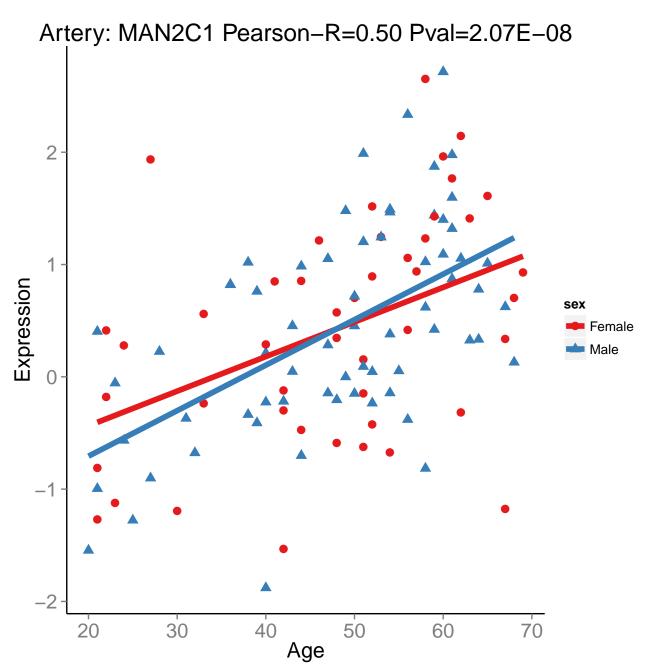




Artery: RP11-709B3.2 Pearson-R=0.50 Pval=1.63E-08 2 Expression sex Female Male 20 30 40 60 50 Age

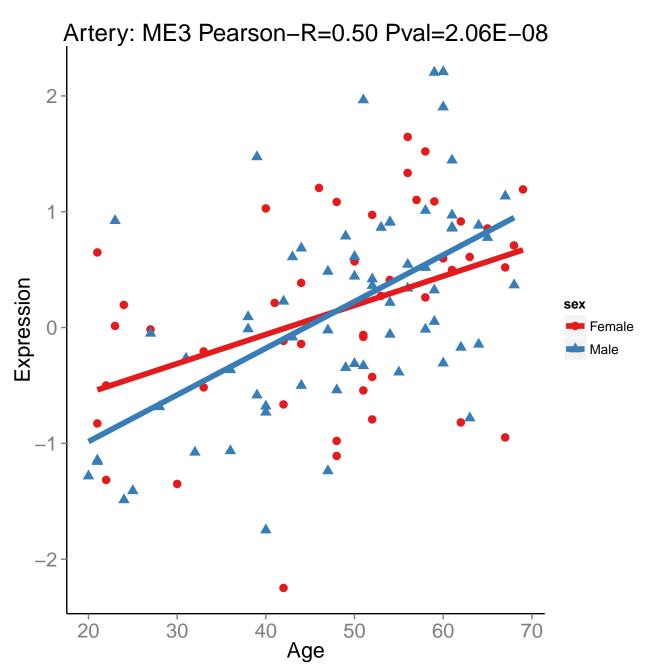


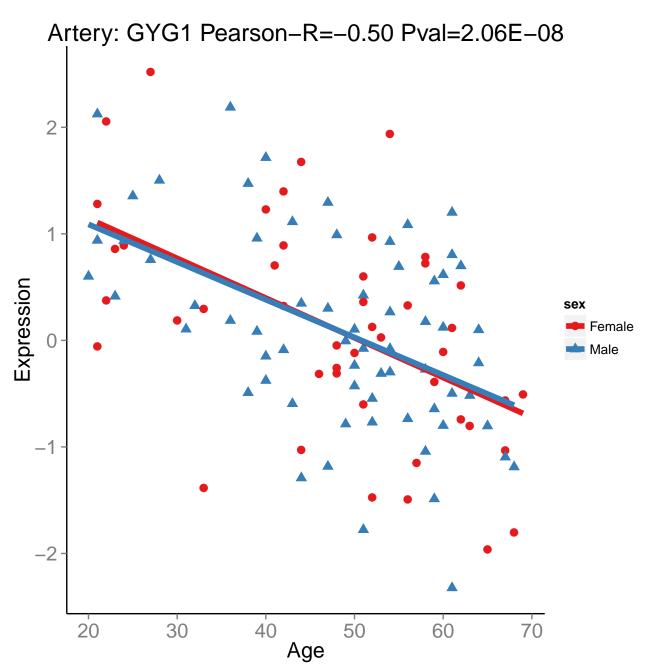


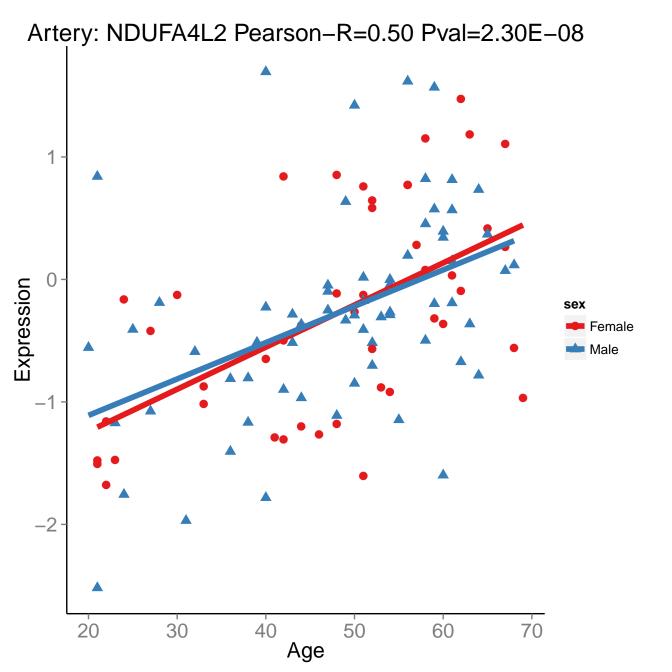








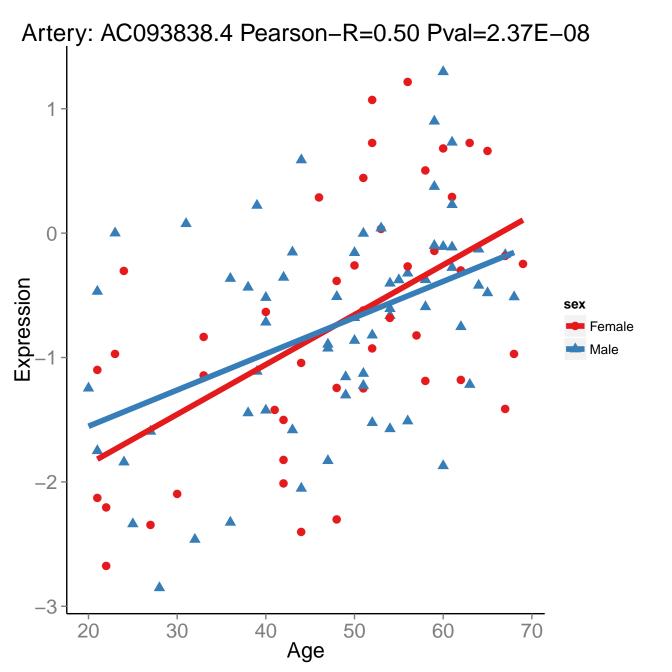




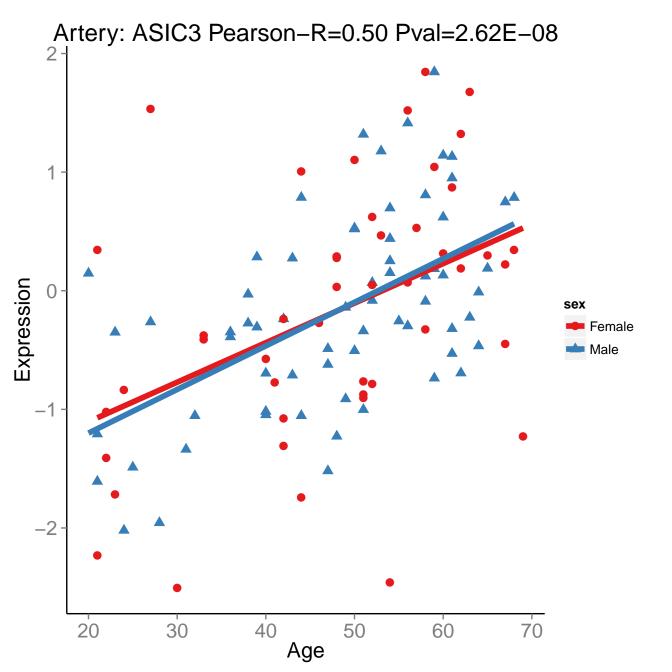






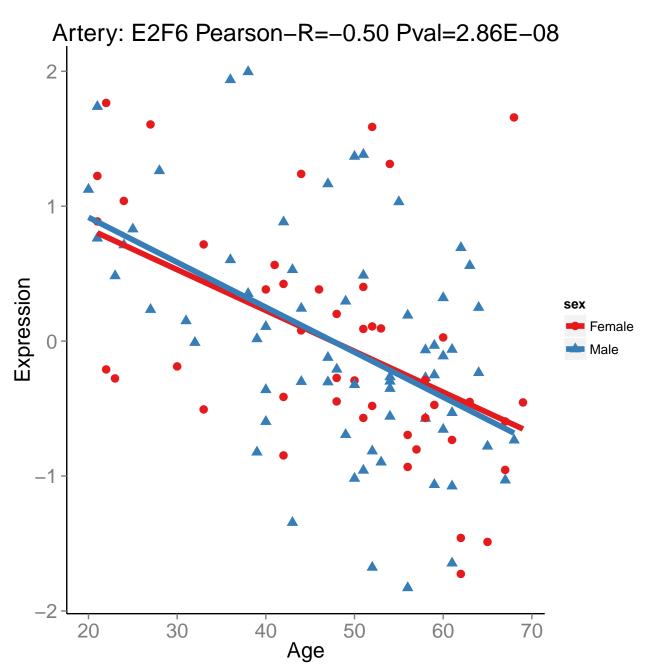


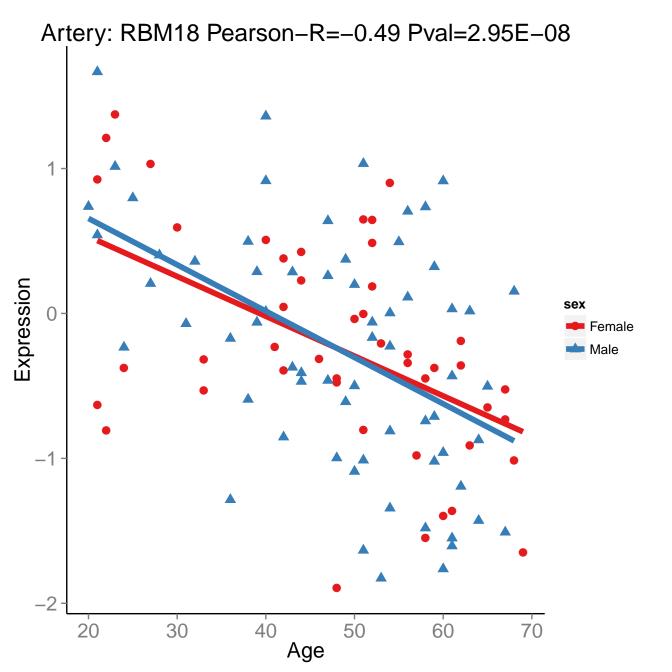


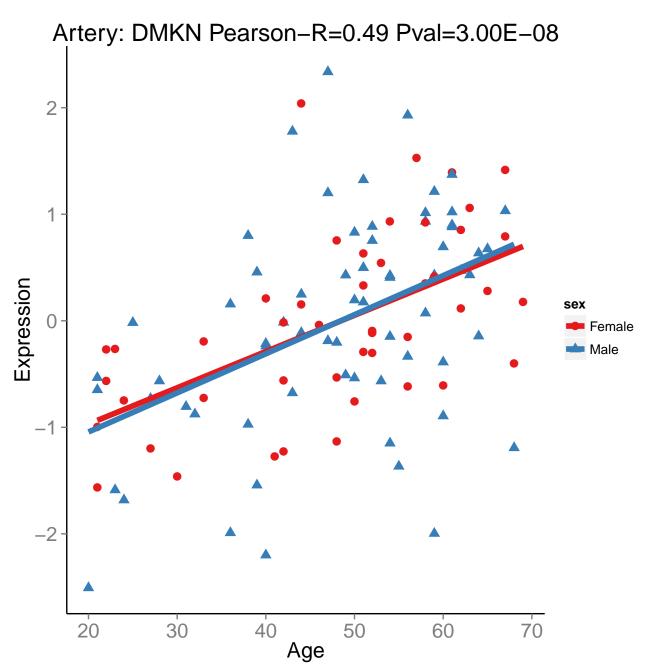




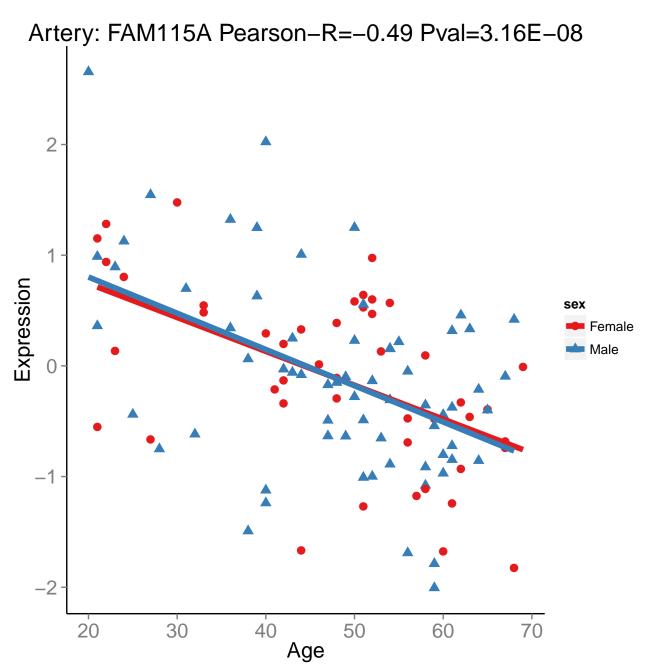




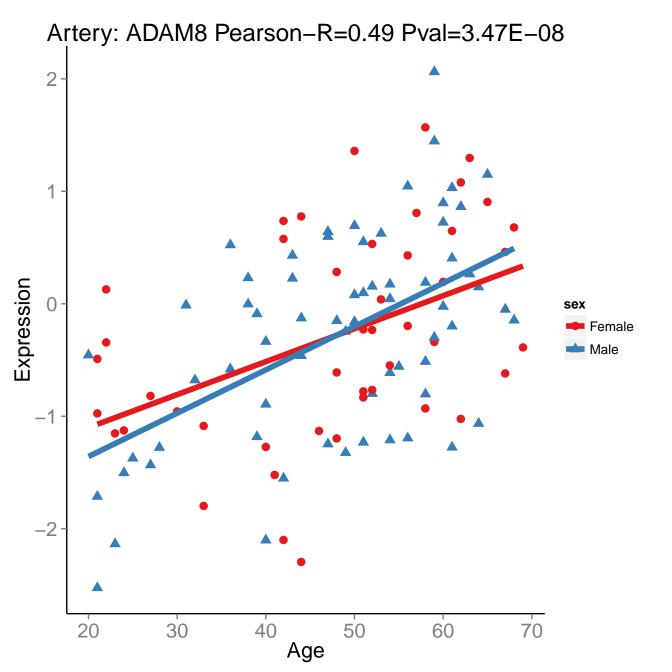


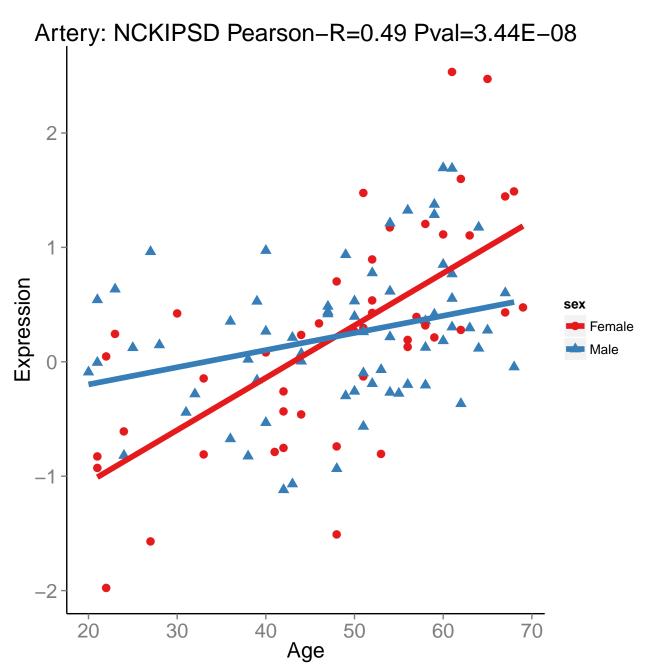








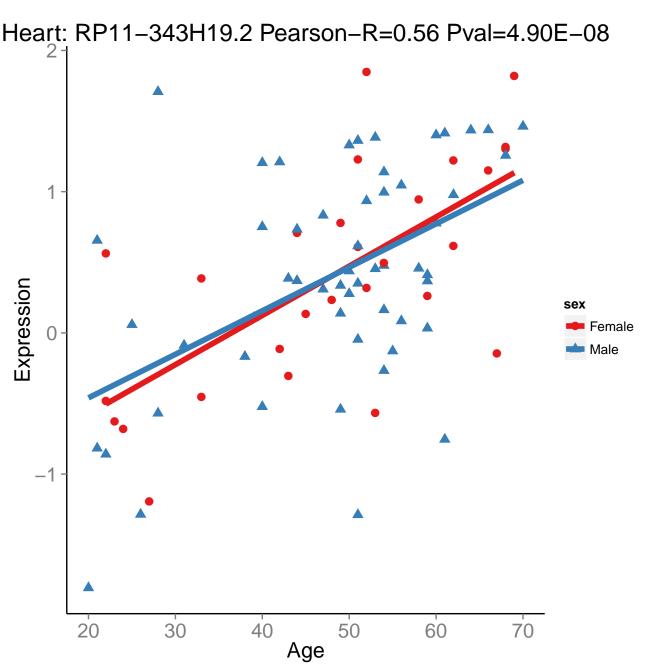


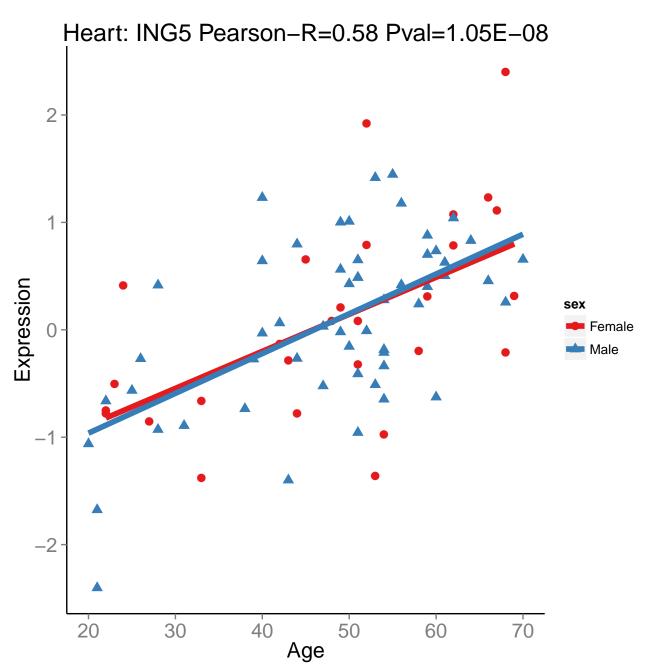


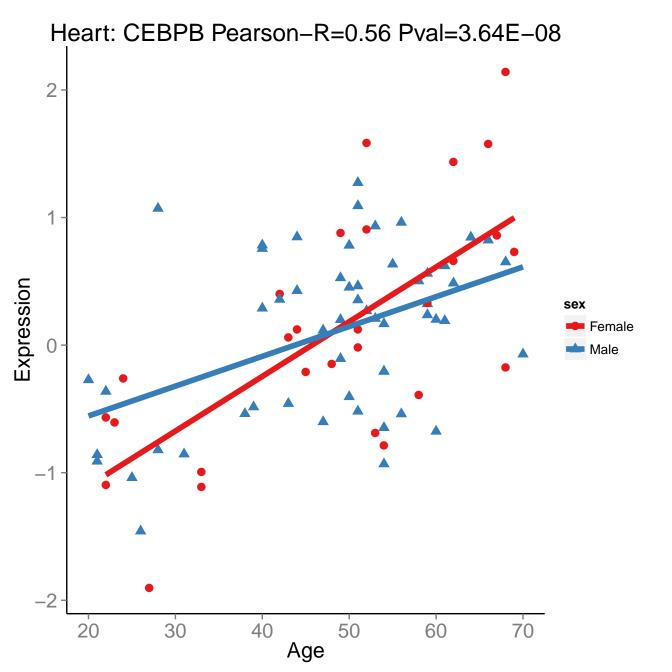




Heart: MT1X Pearson-R=0.57 Pval=2.07E-08 2-1 Expression sex Female Male 40 20 30 50 60 70 Age

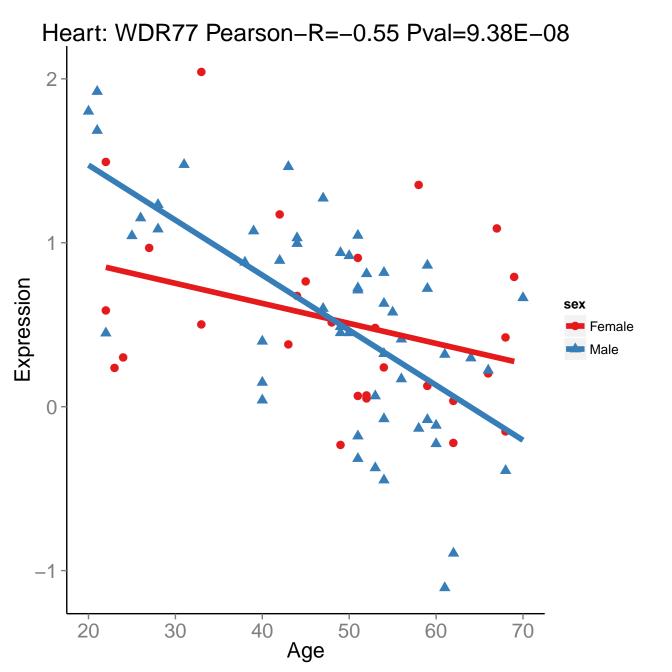


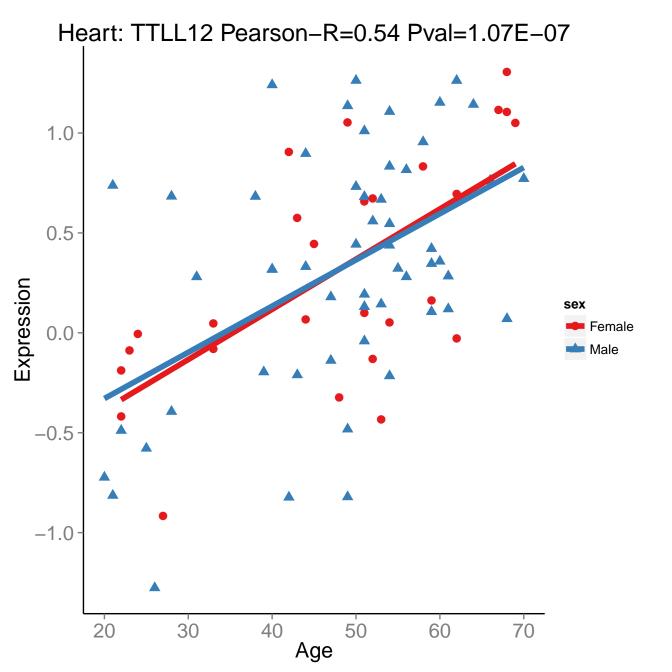




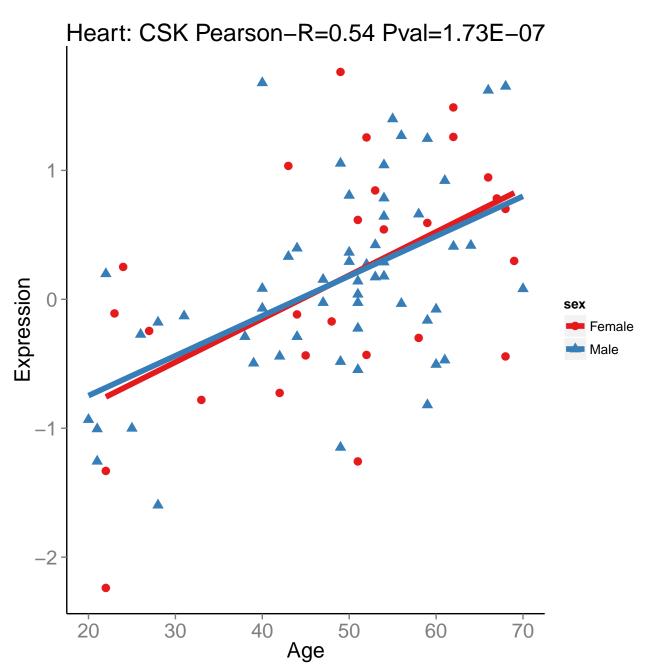


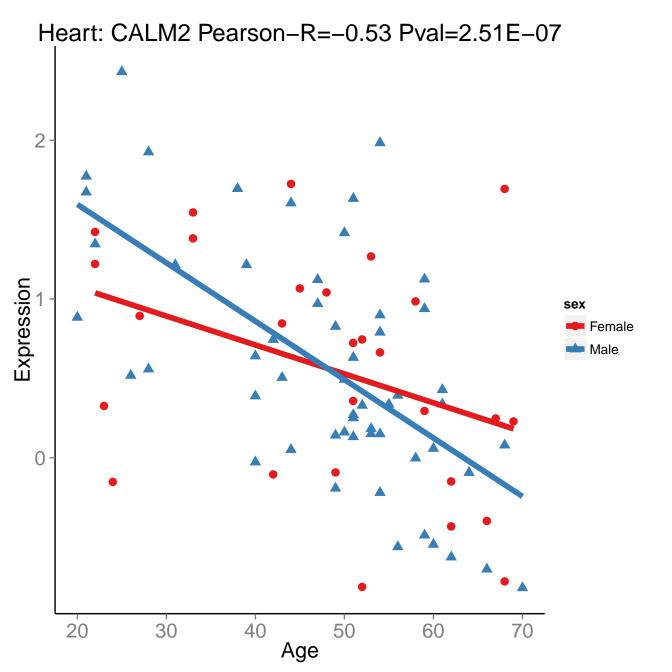
Heart: SNX24 Pearson-R=-0.55 Pval=5.71E-08 2-1 Expression sex Female Male 0 20 40 60 30 50 70 Age

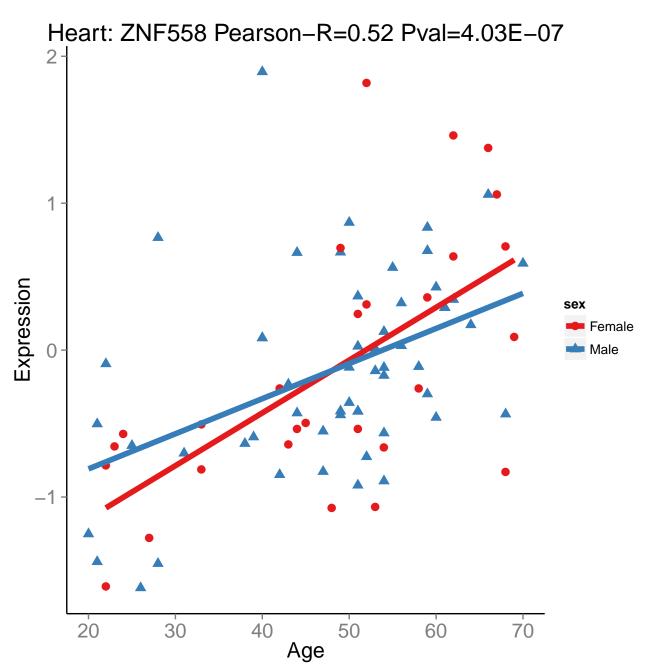


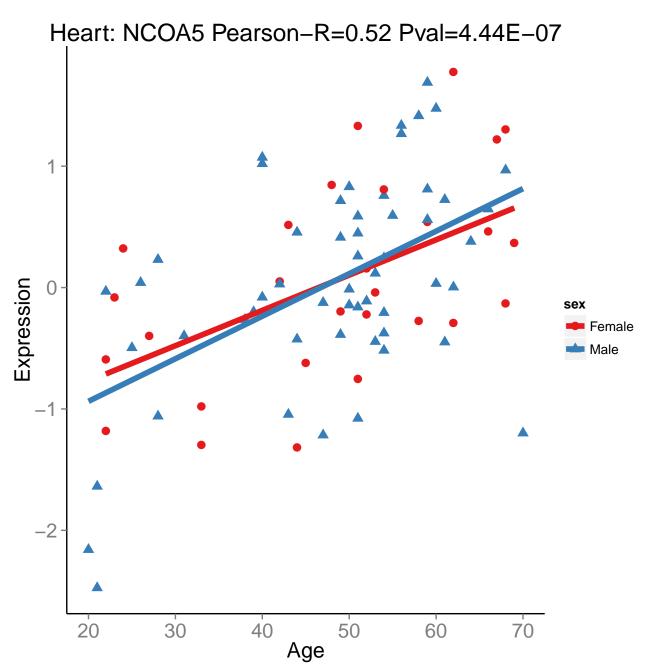




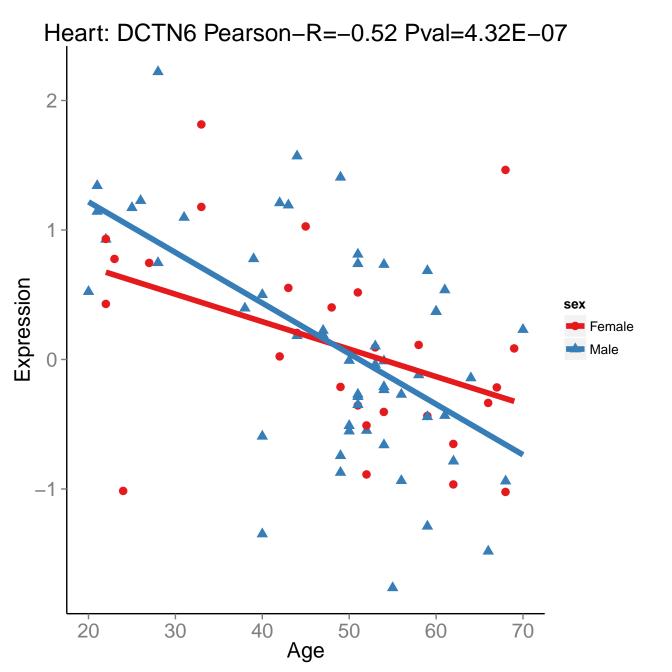


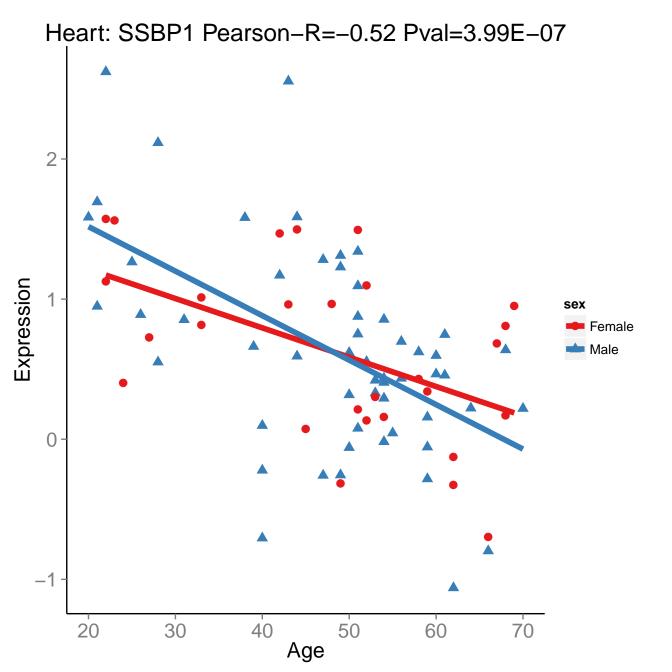






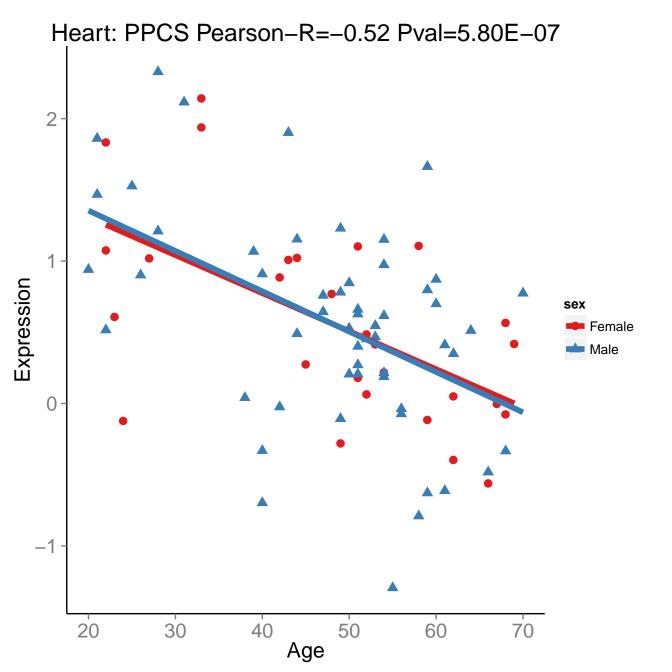






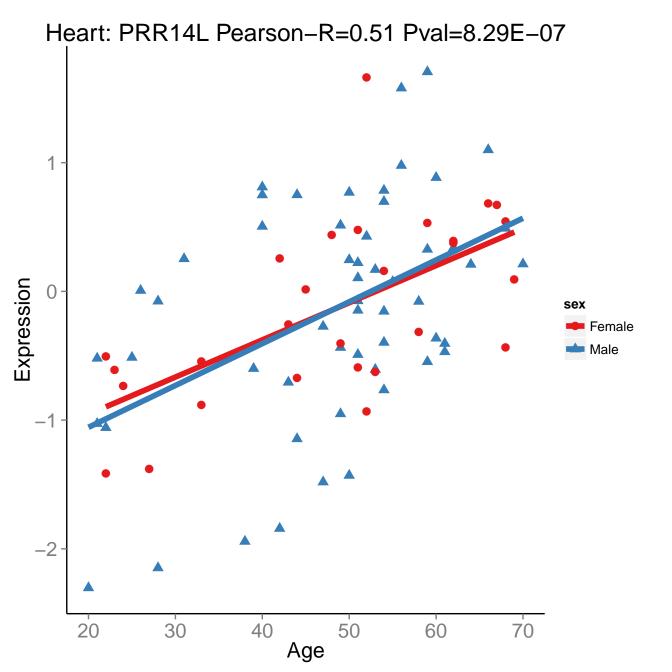




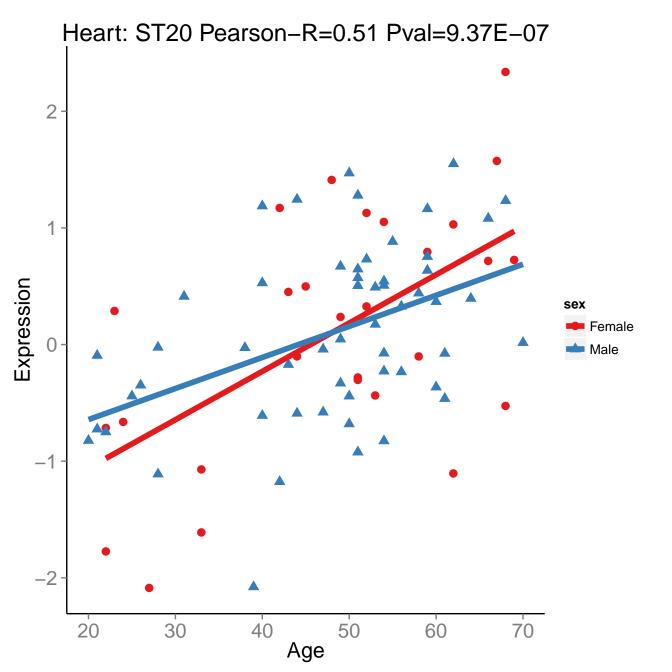


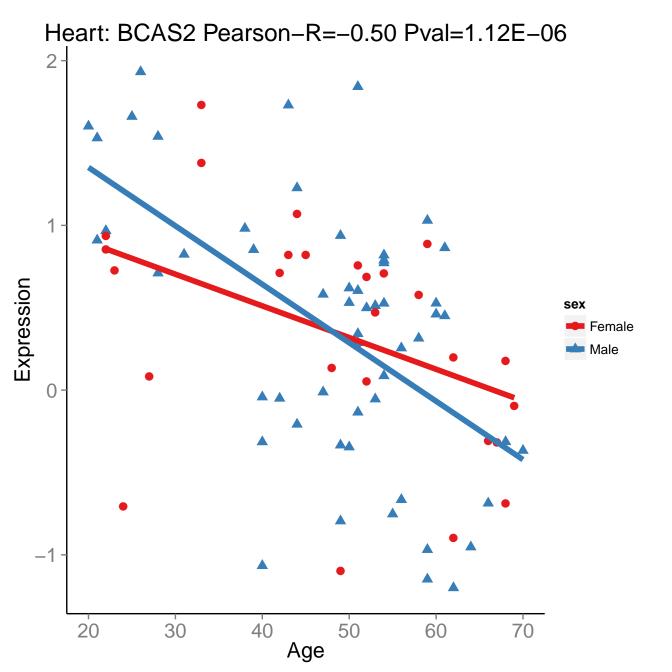


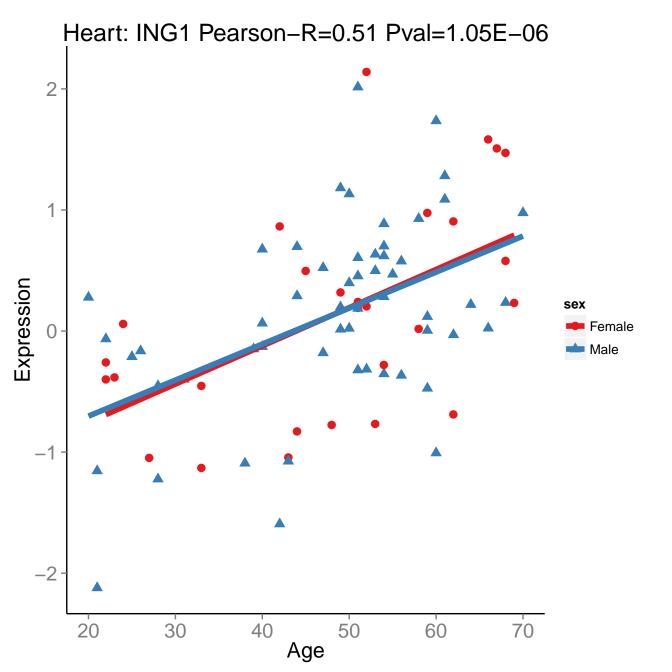


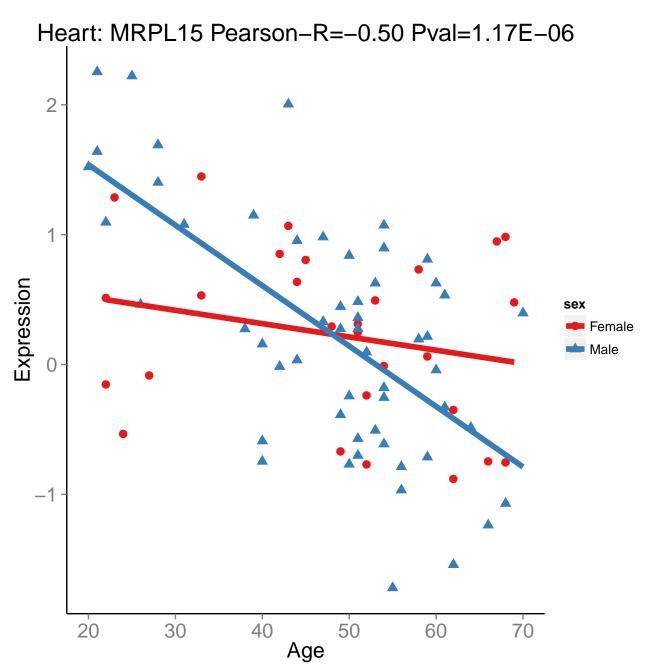


Heart: TWISTNB Pearson-R=-0.51 Pval=8.04E-07 1.5-1.0 0.5 Expression sex Female Male 0.0 -0.5-1.040 20 30 60 50 70 Age







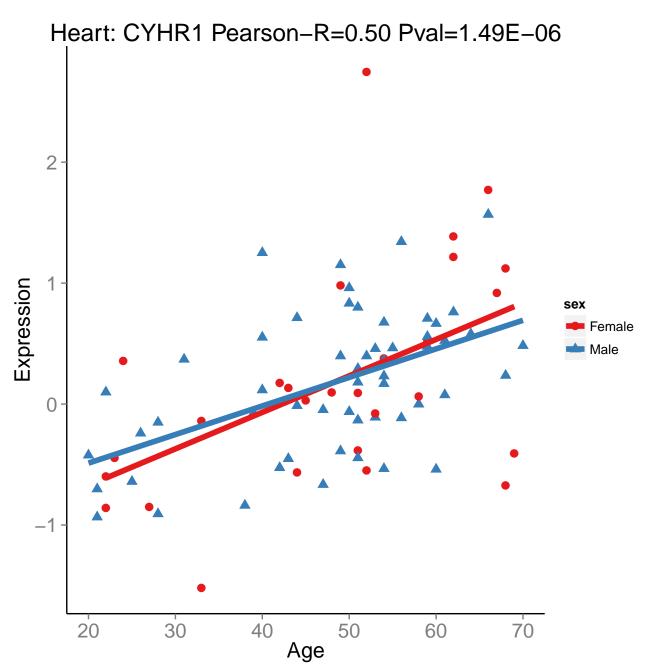


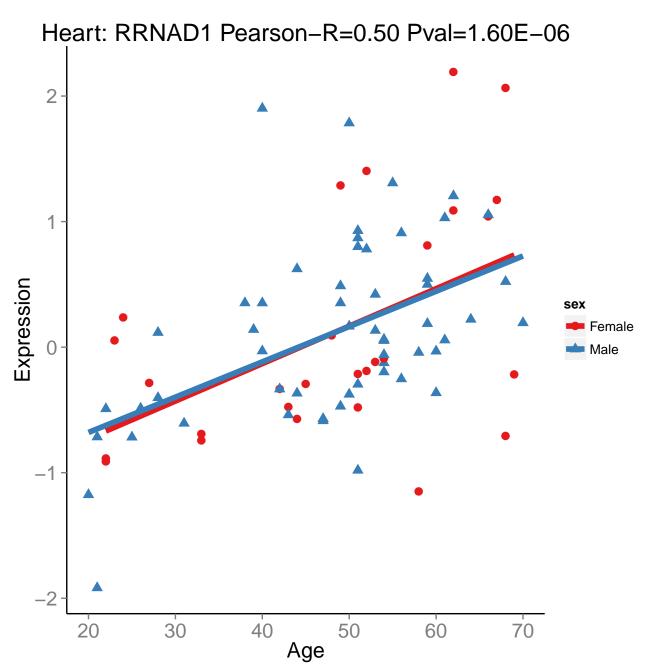


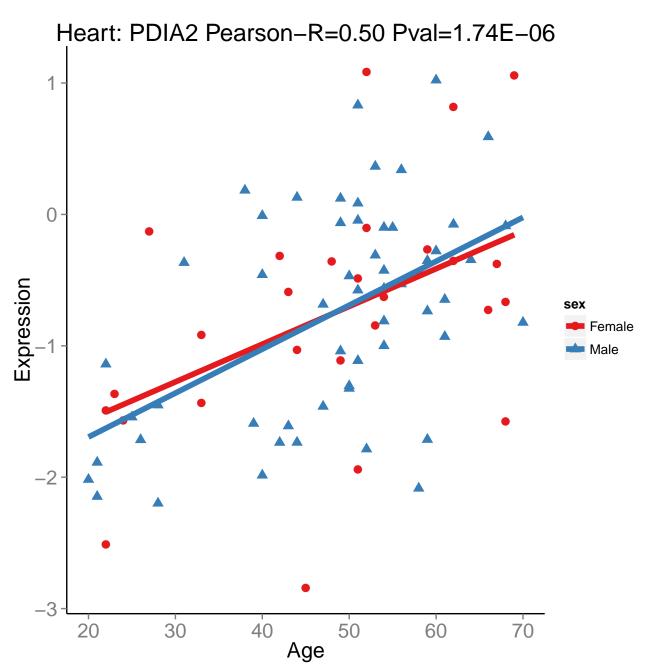


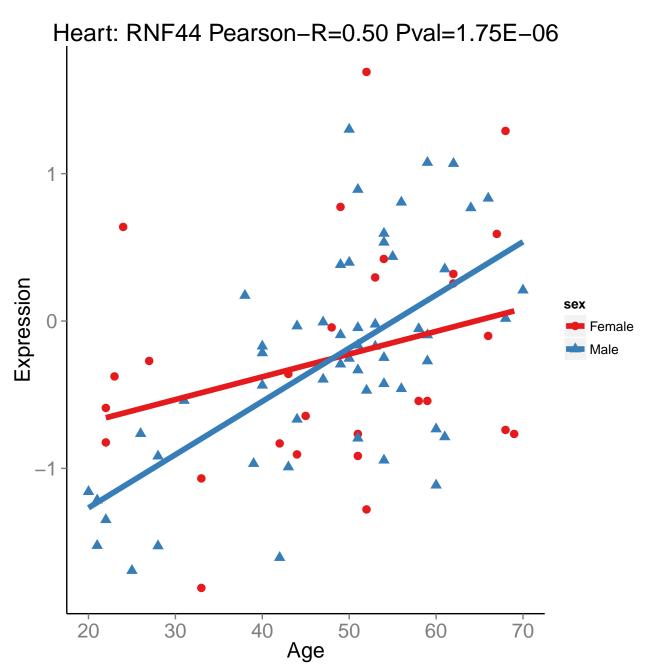


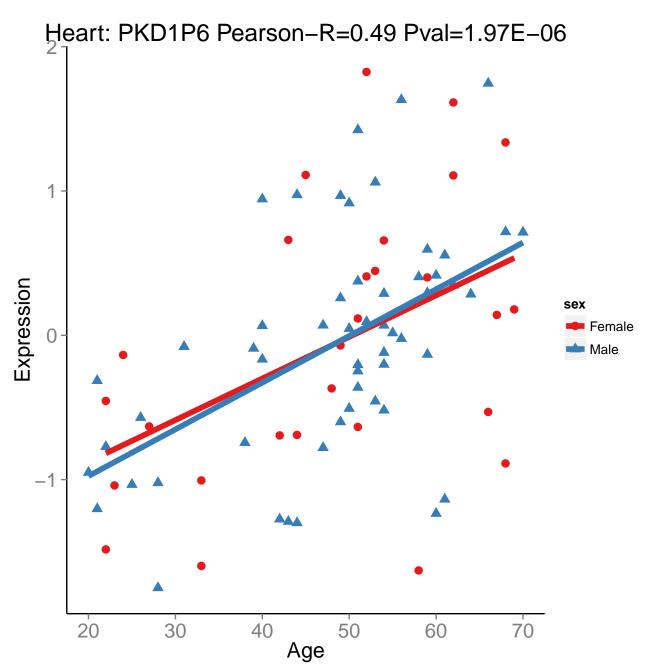


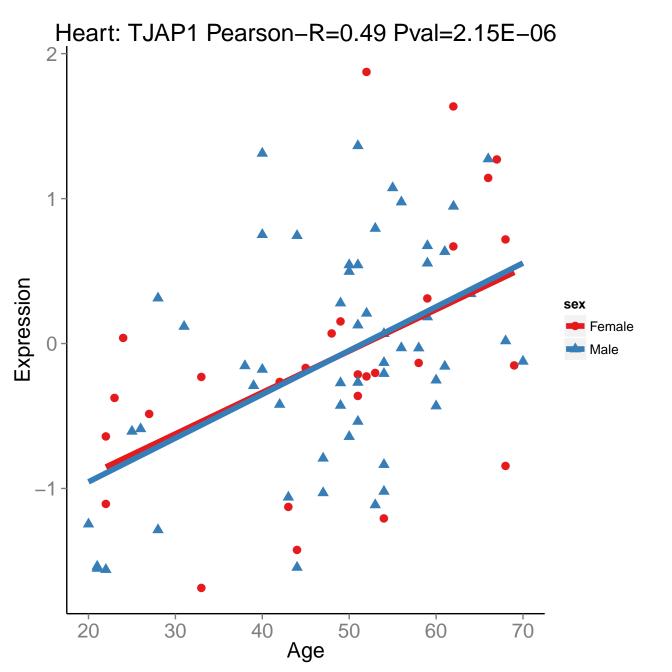




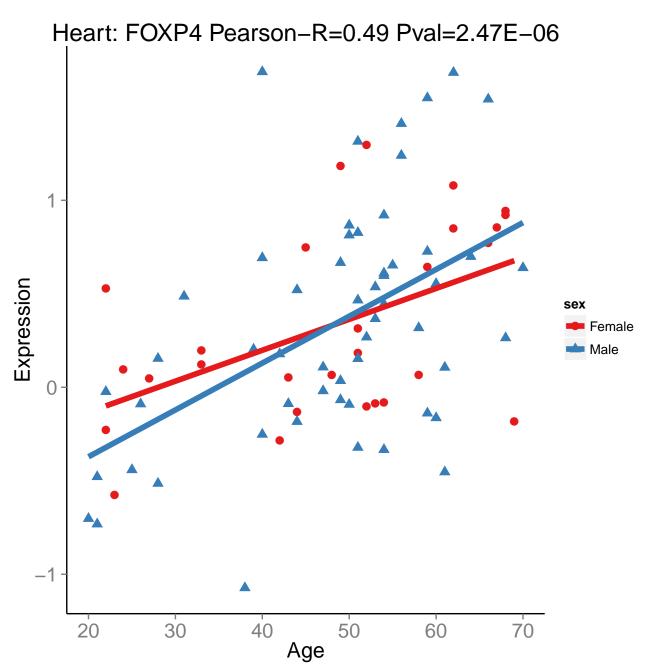




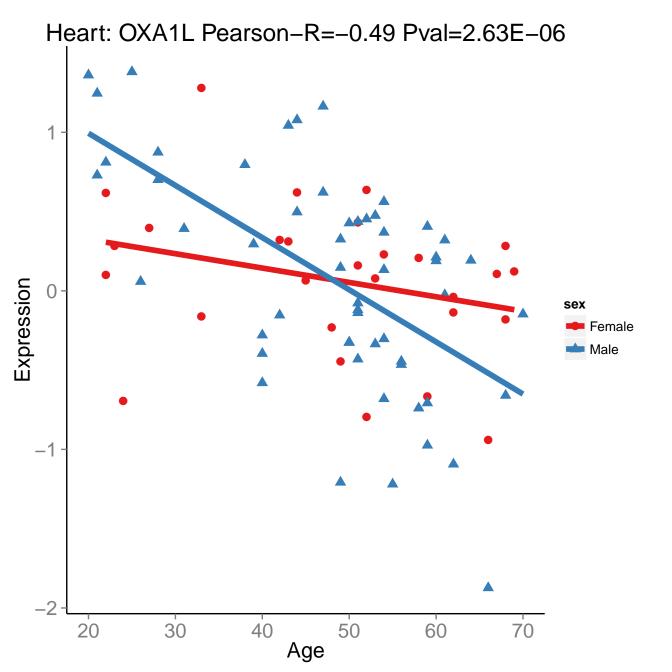




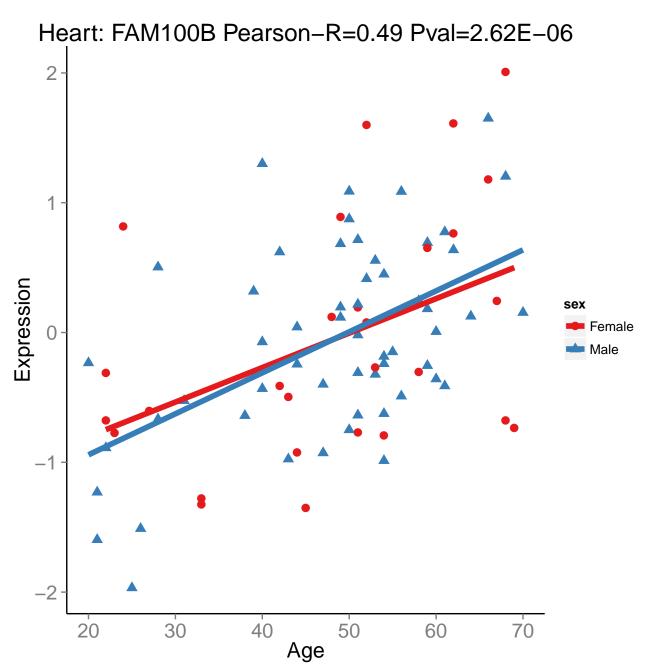


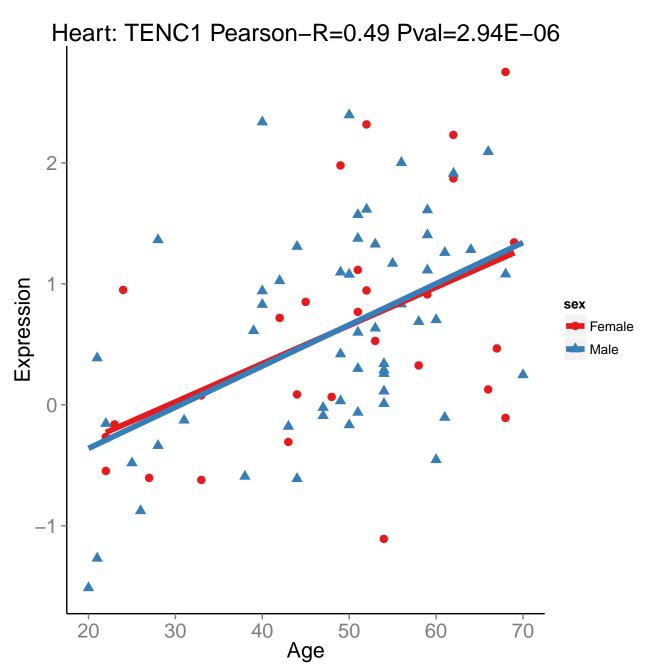


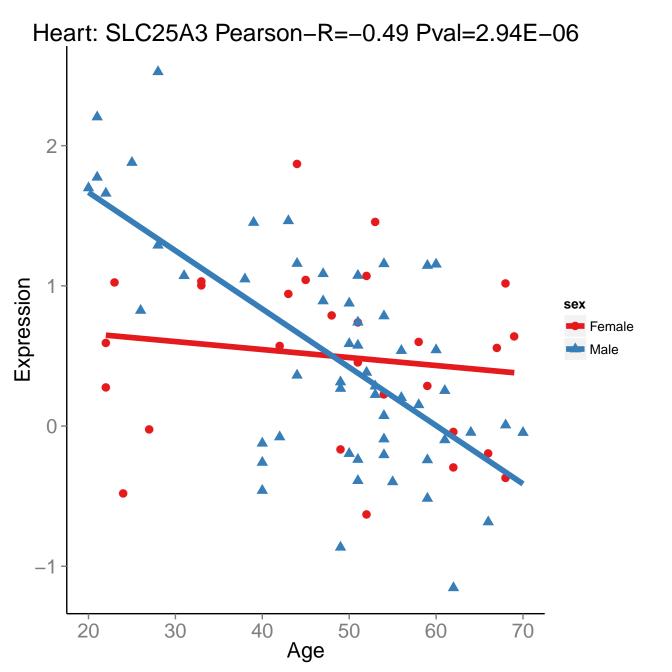


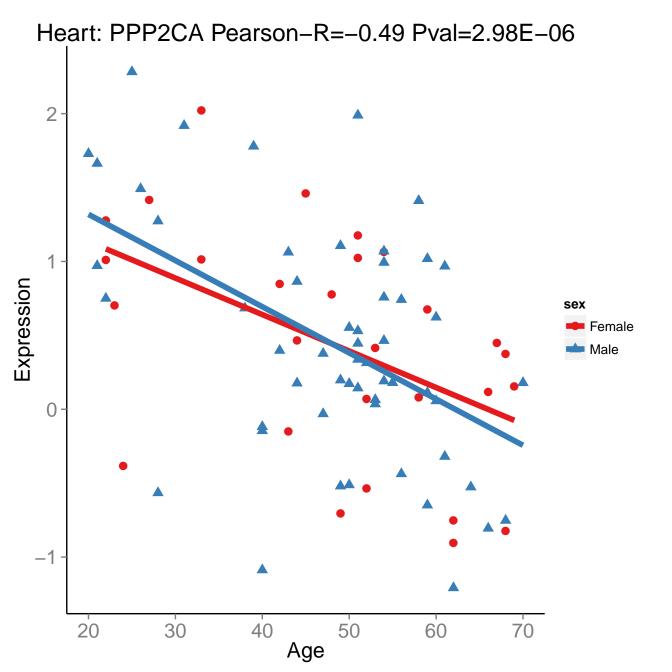


Heart: ELMOD3 Pearson-R=0.49 Pval=2.55E-06 2 1 Expression sex Female Male 20 40 60 30 50 70 Age

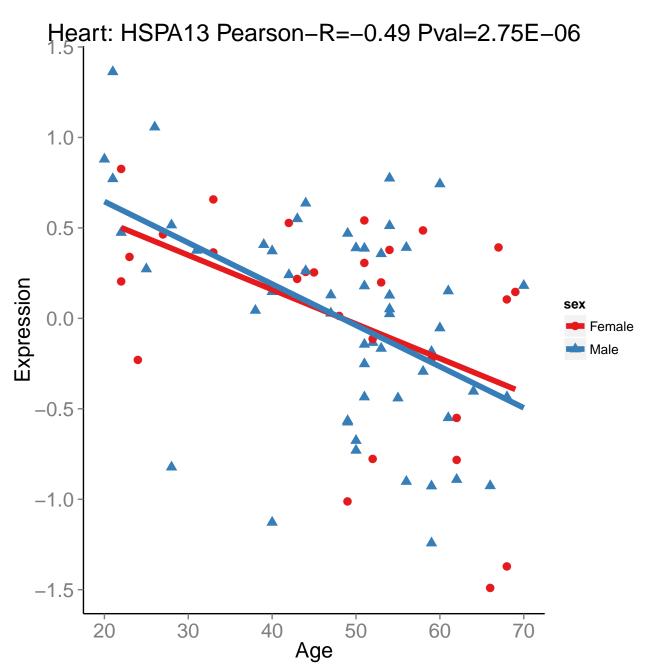


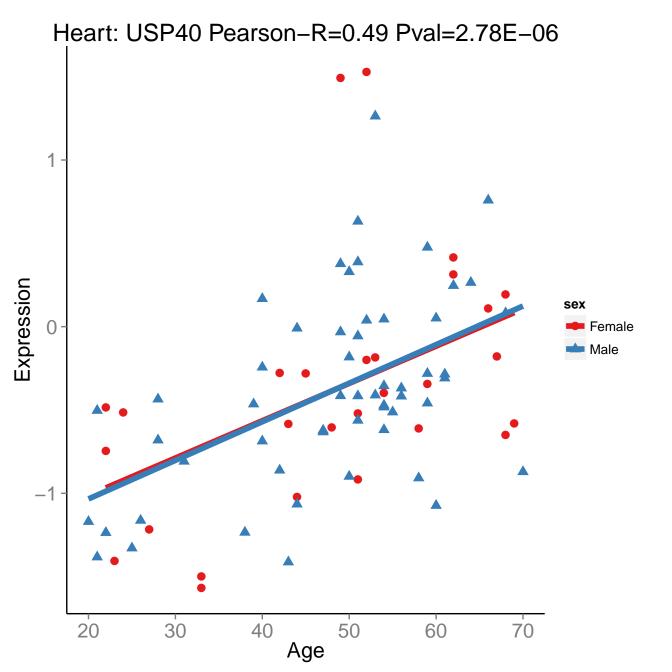


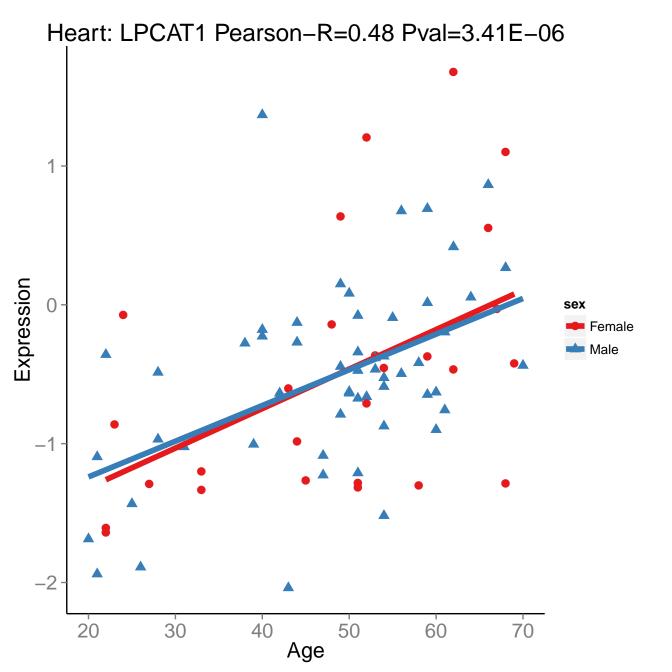


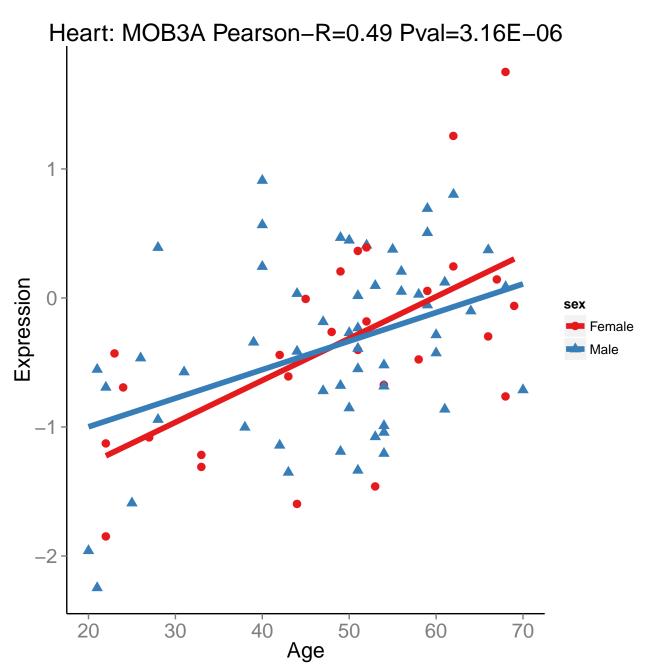


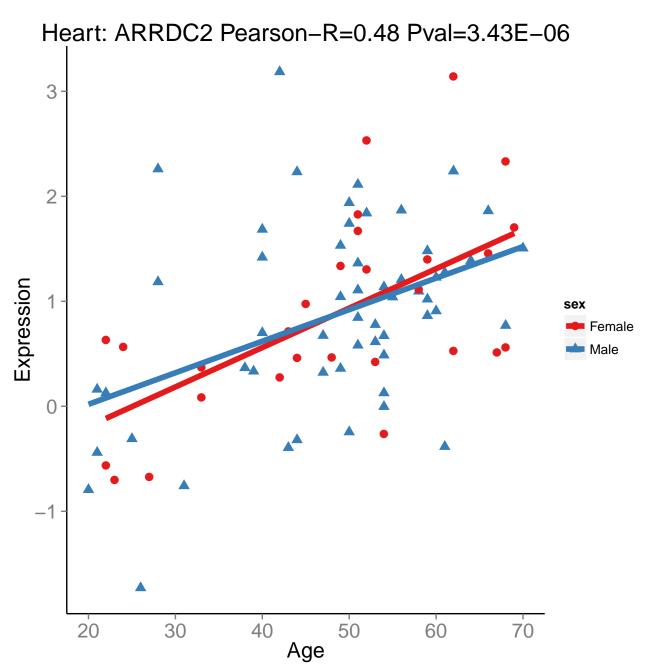




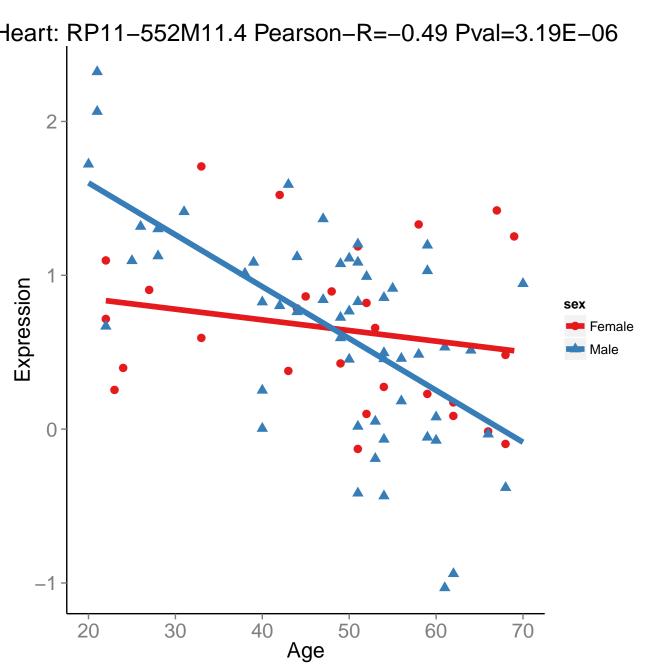




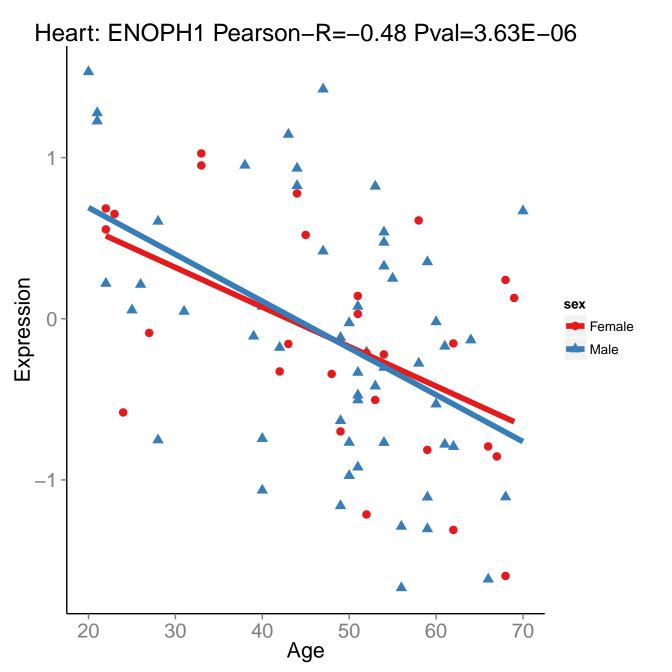




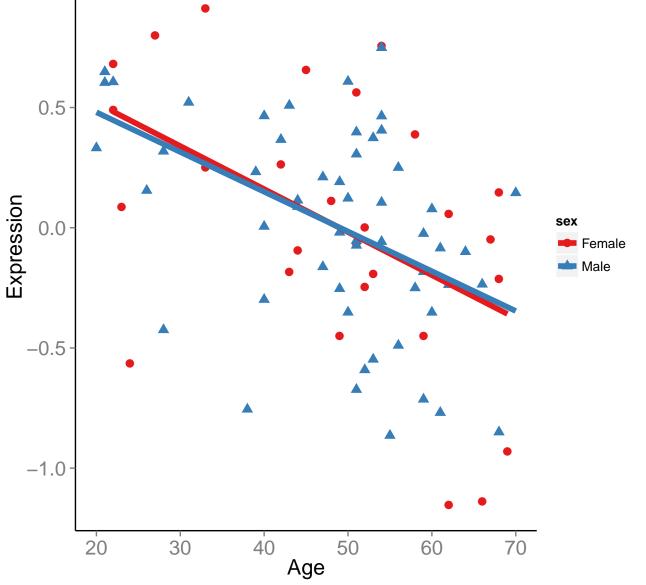


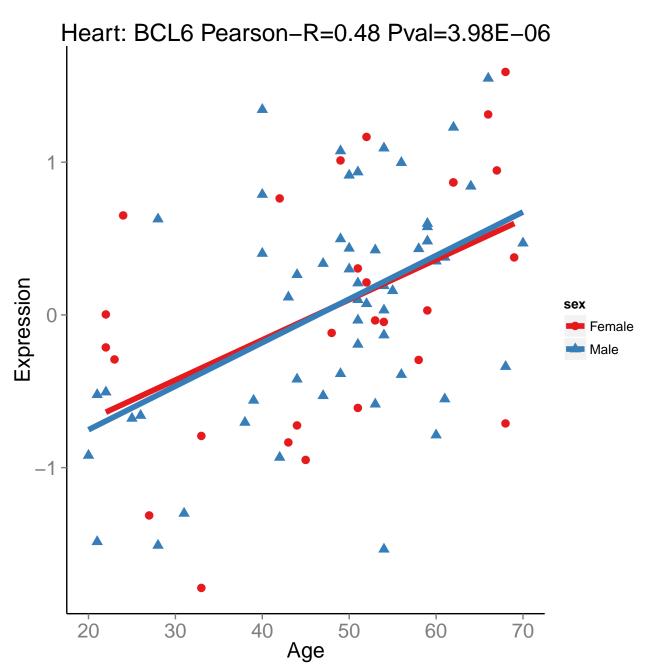


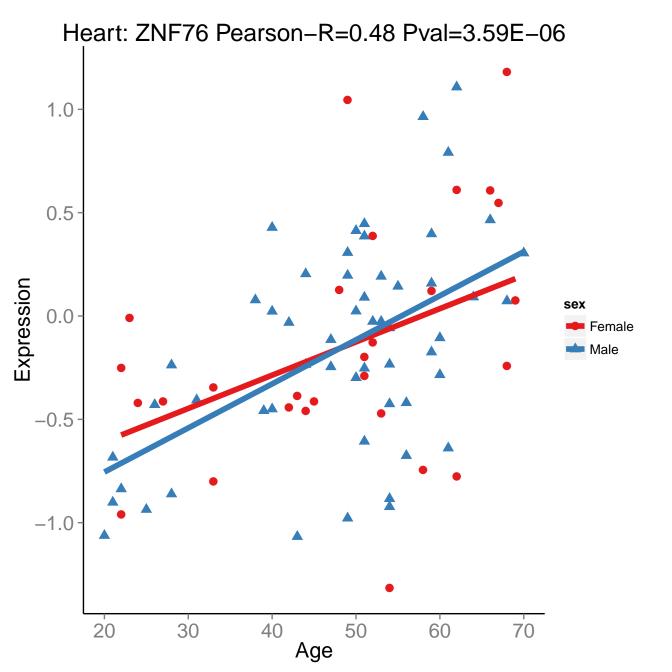


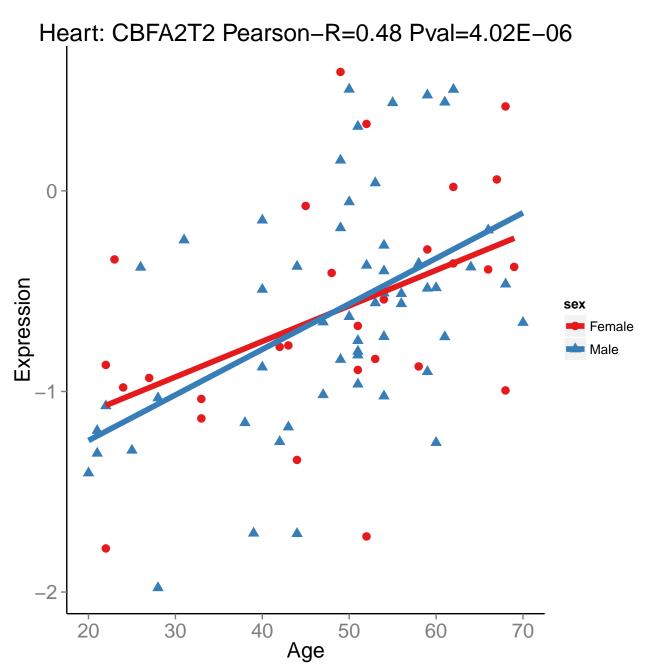


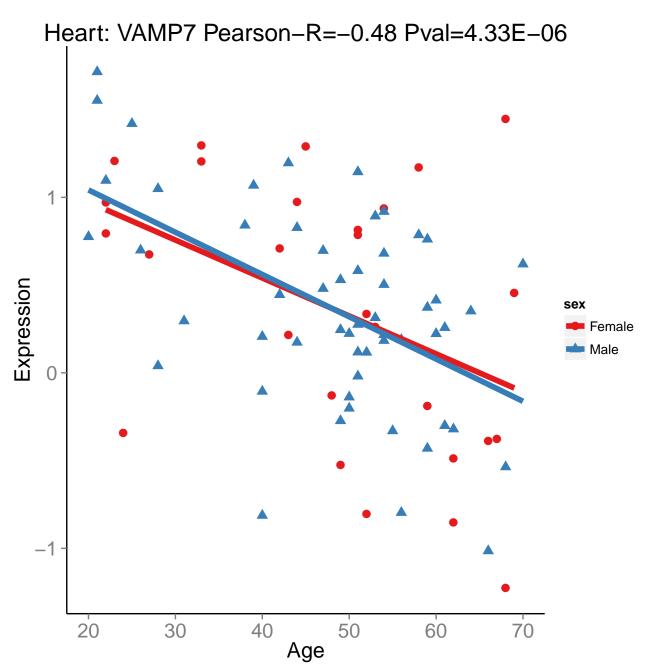
Heart: PLEKHB2 Pearson-R=-0.48 Pval=3.98E-06 1.0 0.5 sex 0.0 Female Male

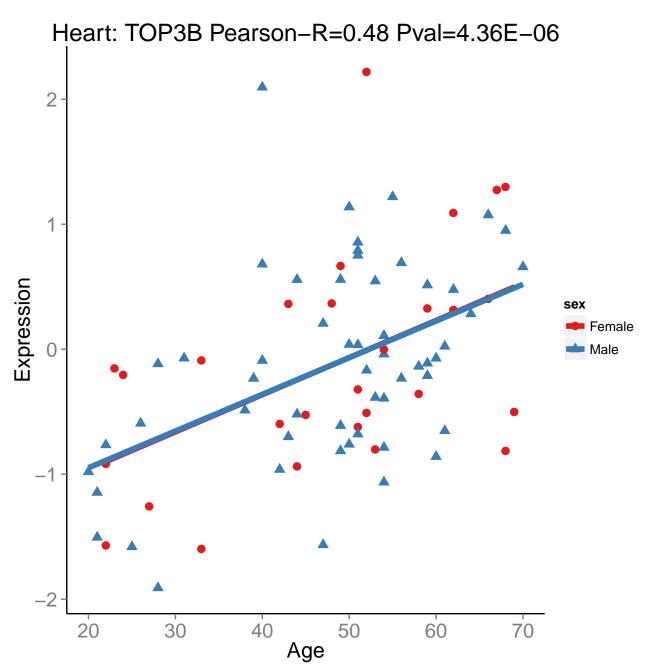


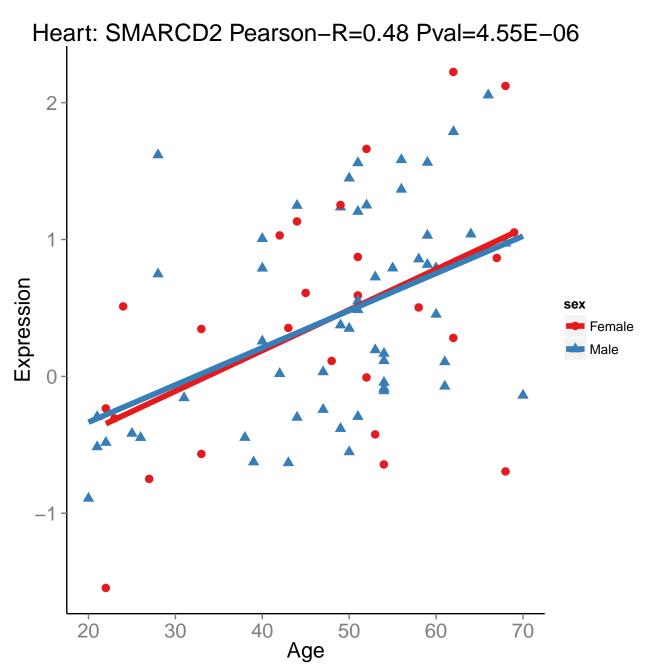


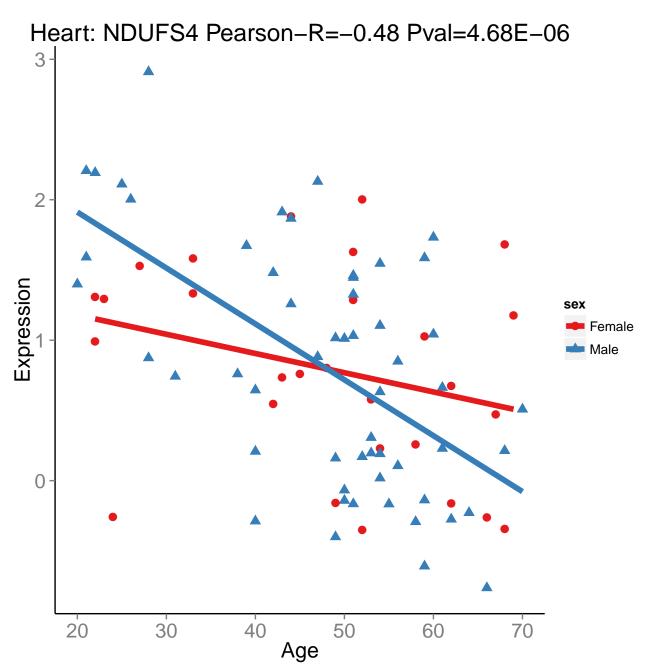






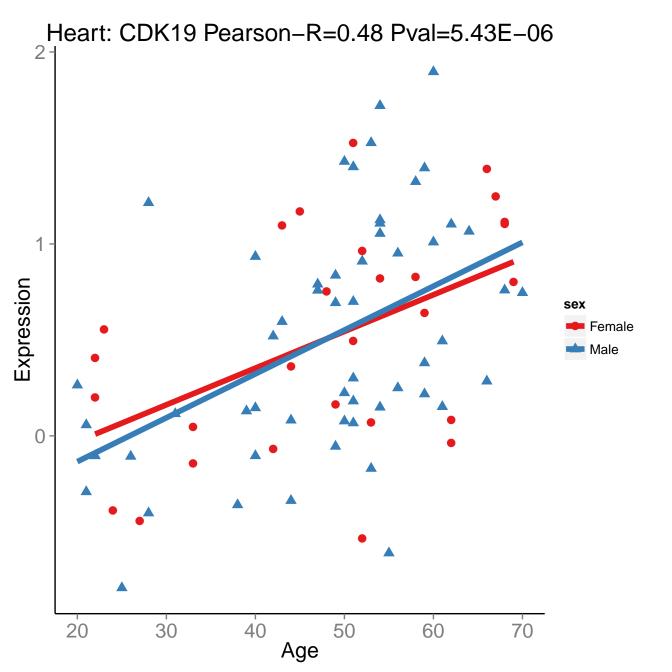


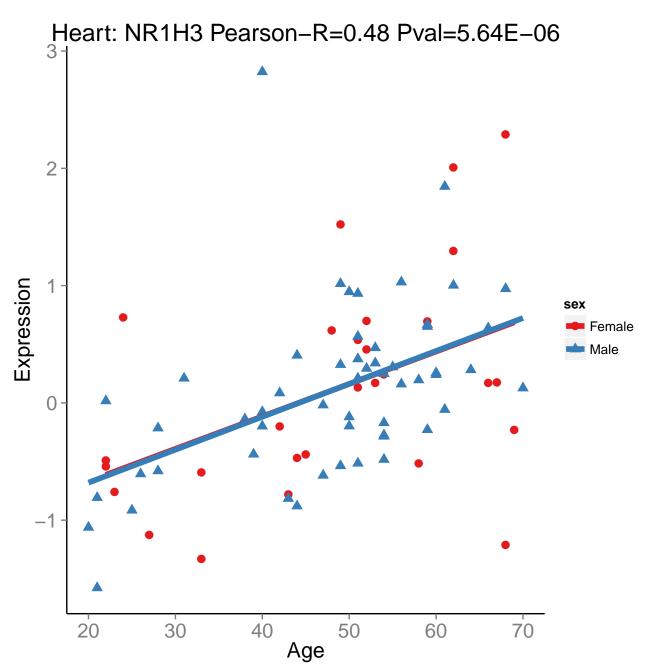


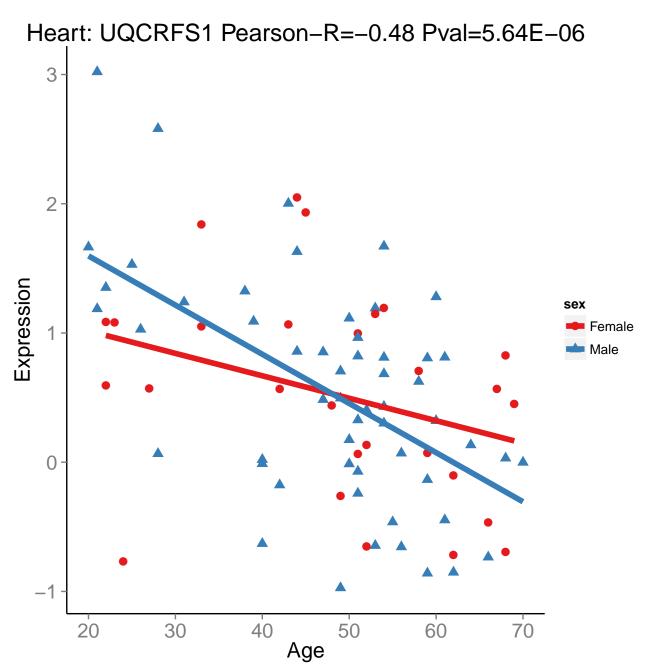


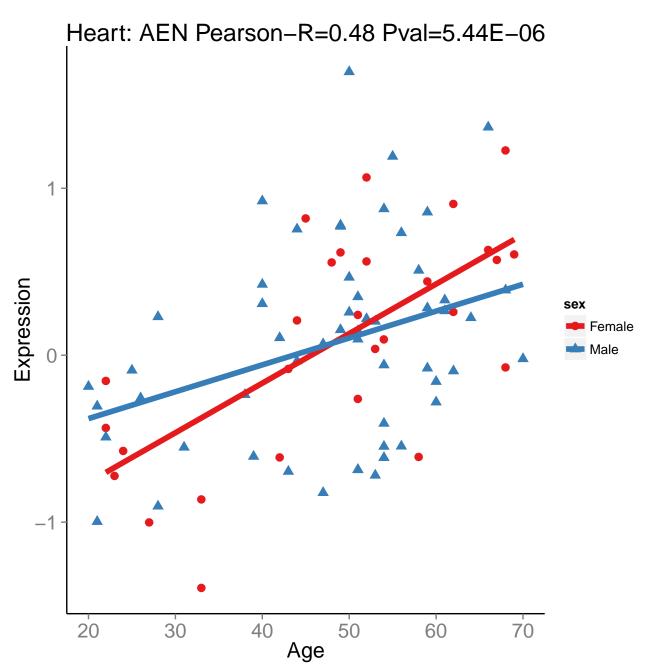


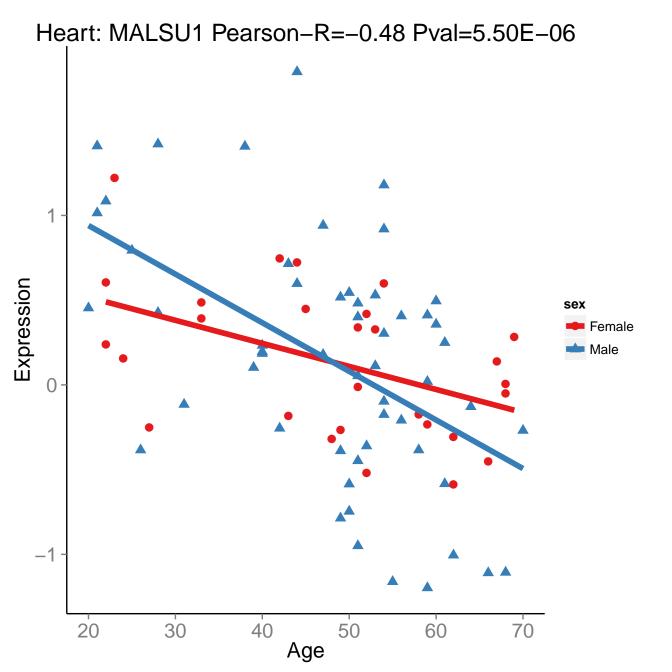




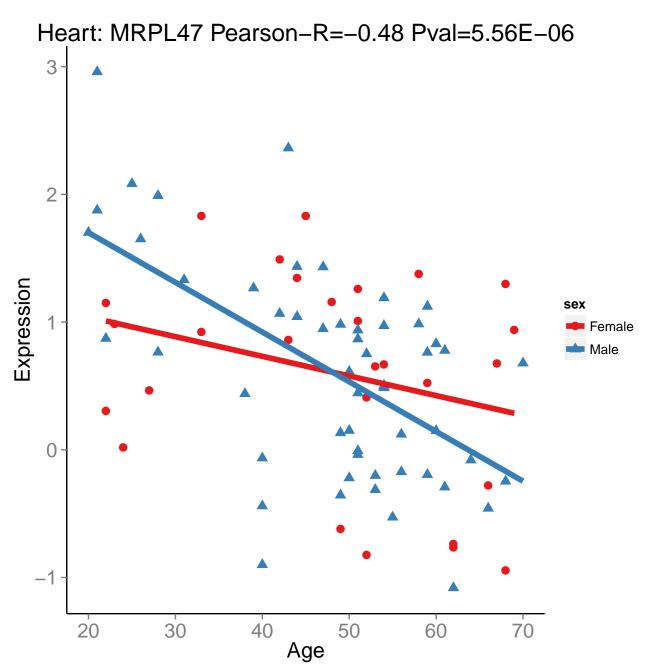


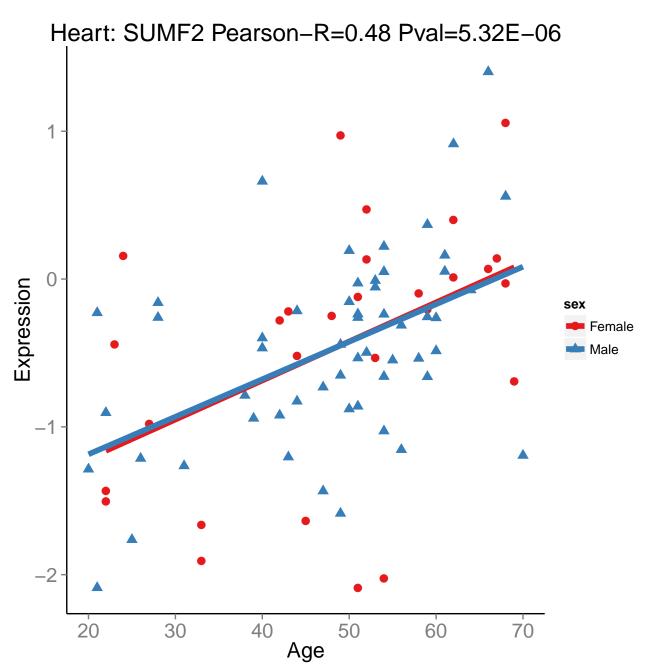


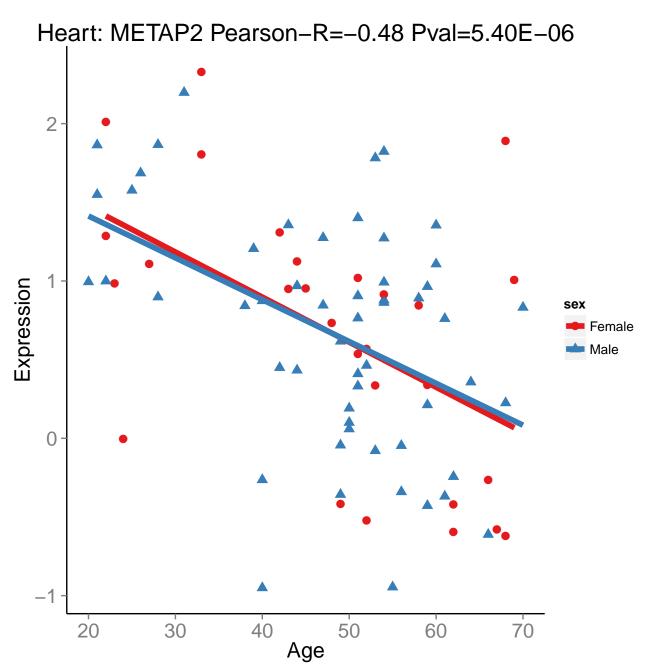




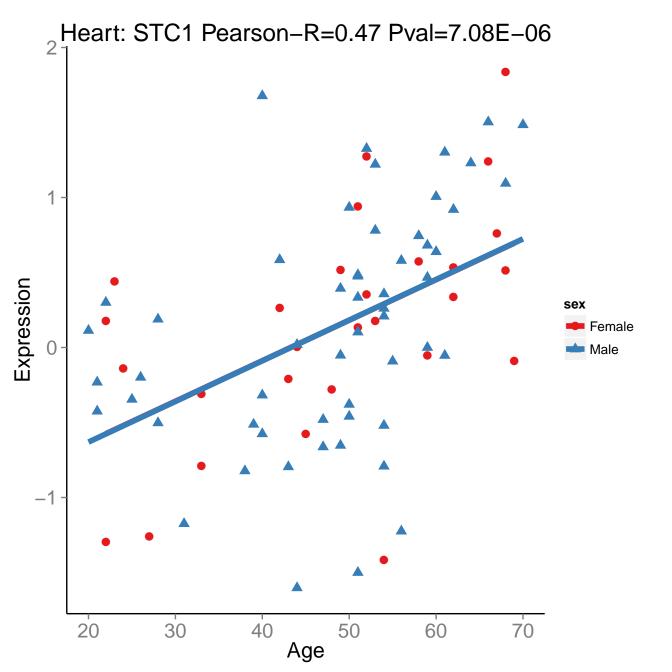


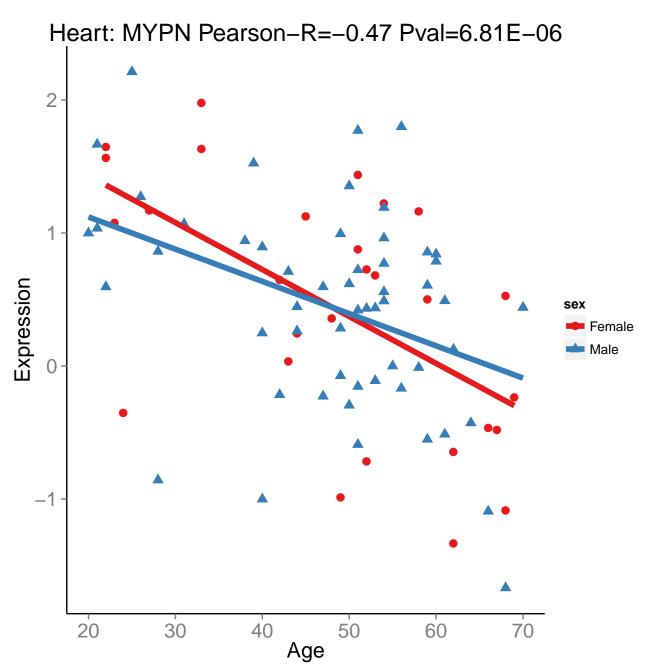


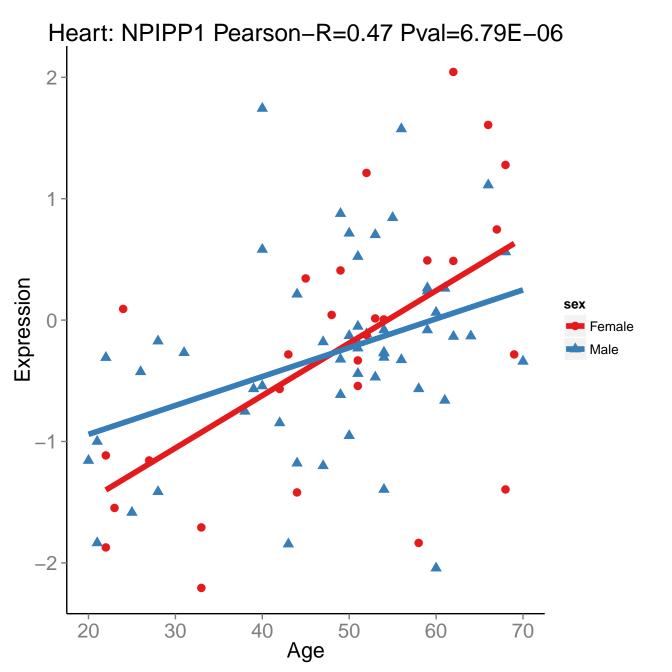


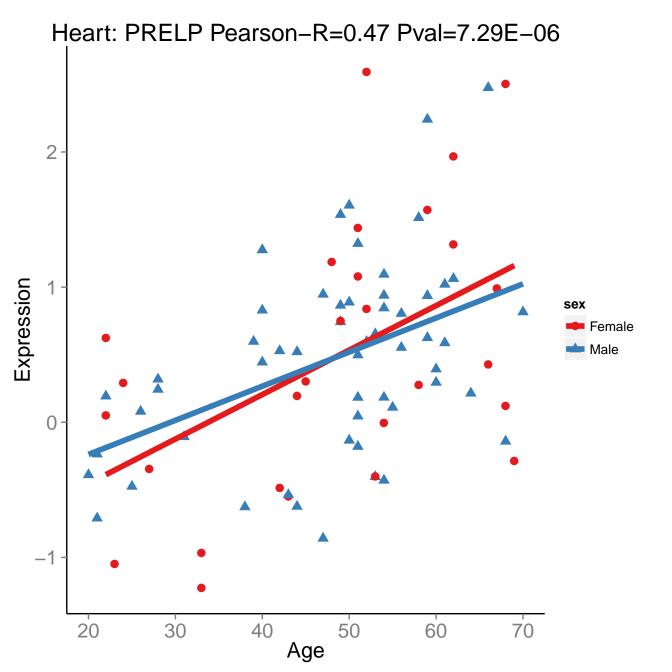


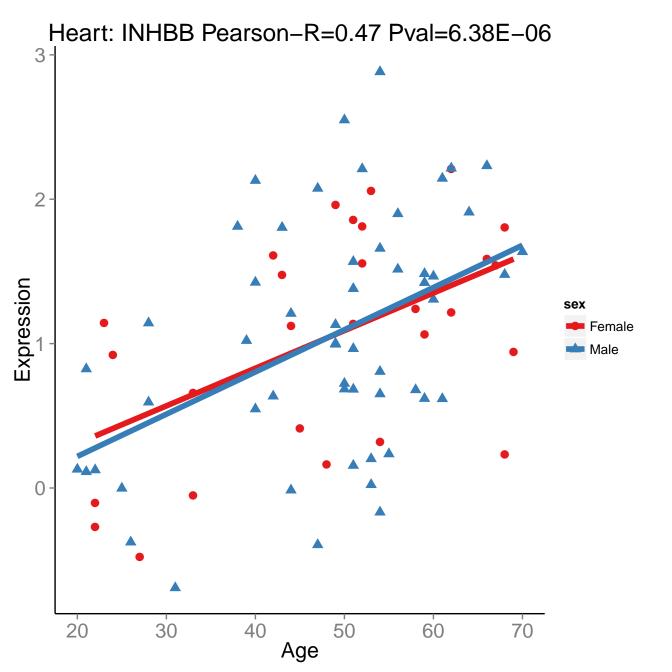


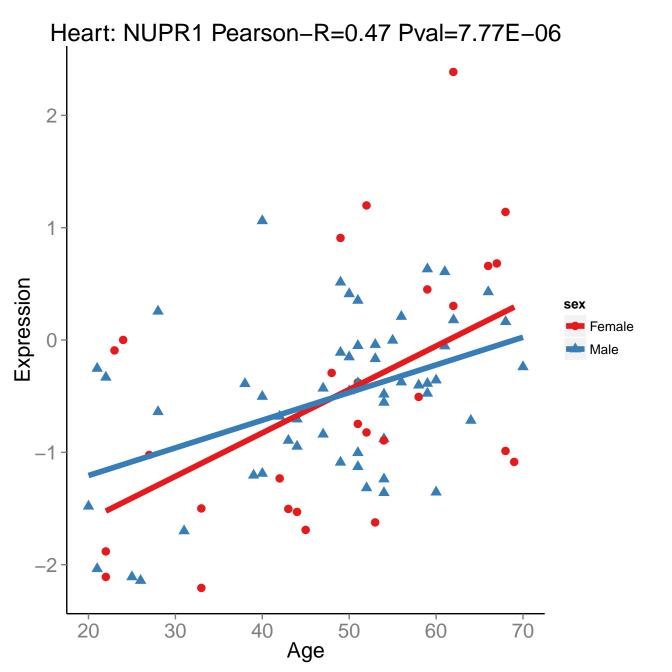


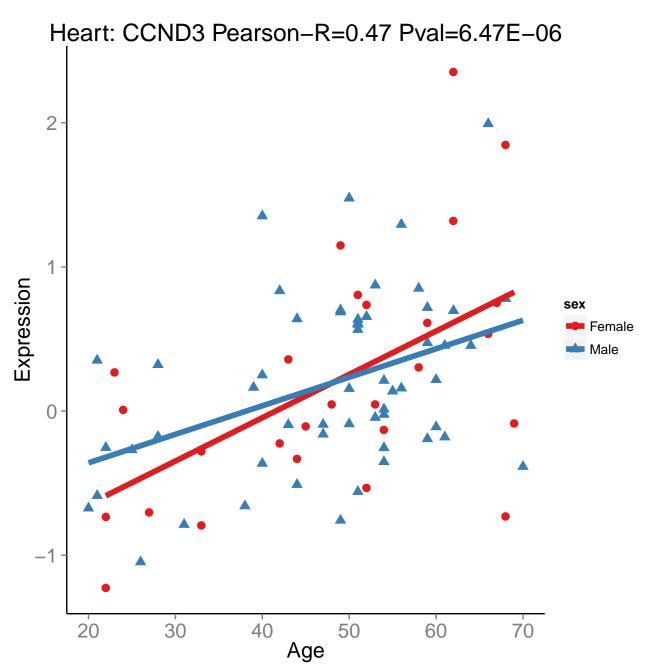


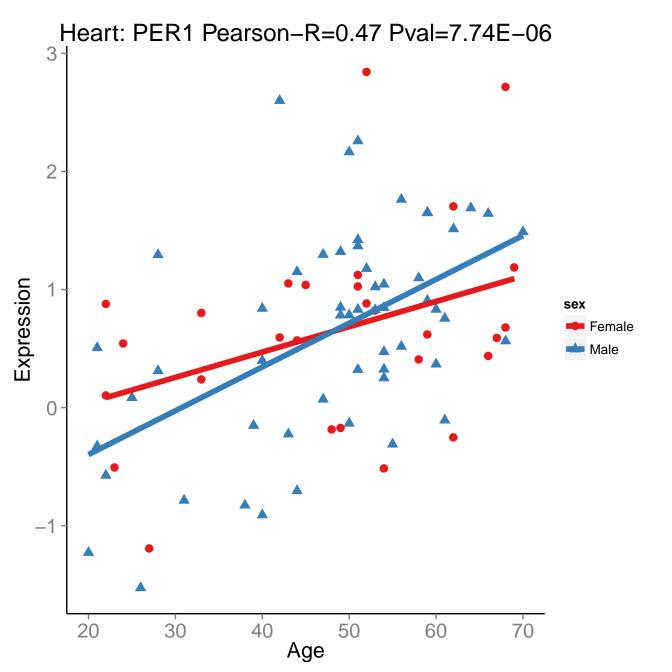


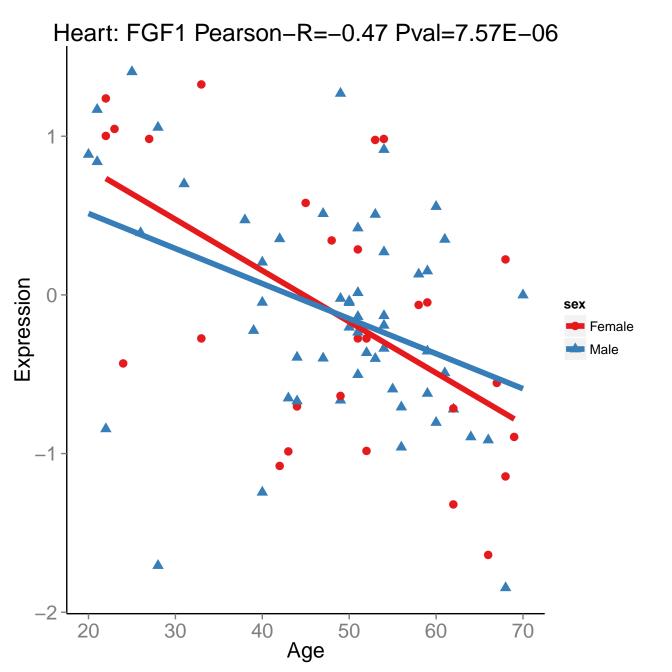


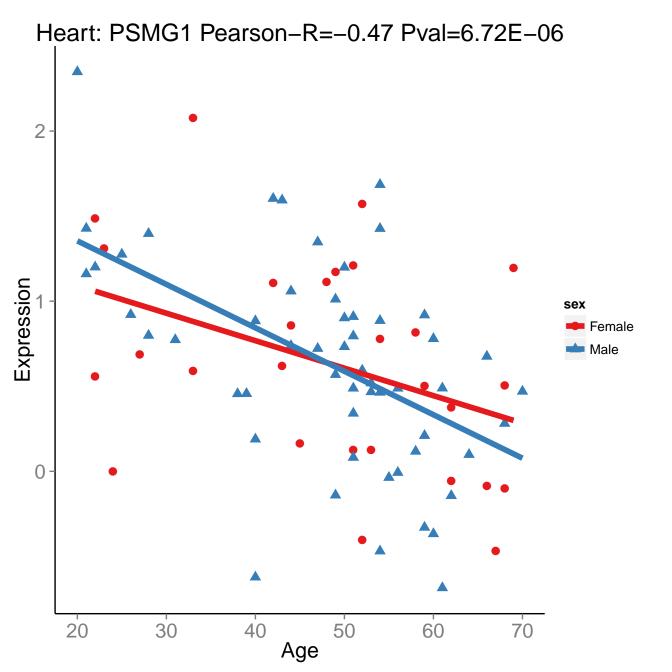


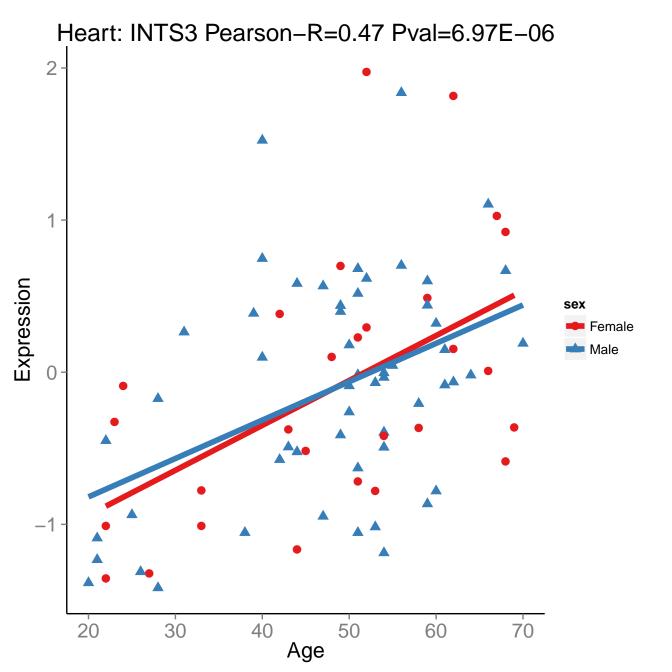




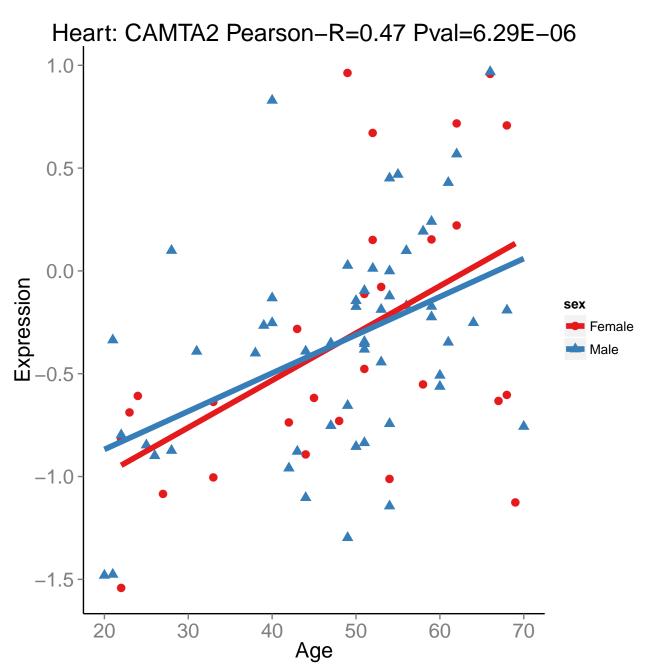


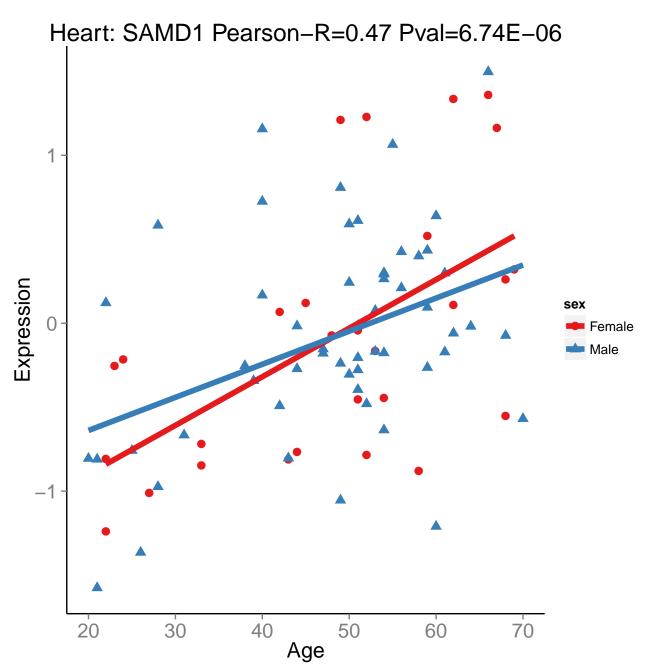


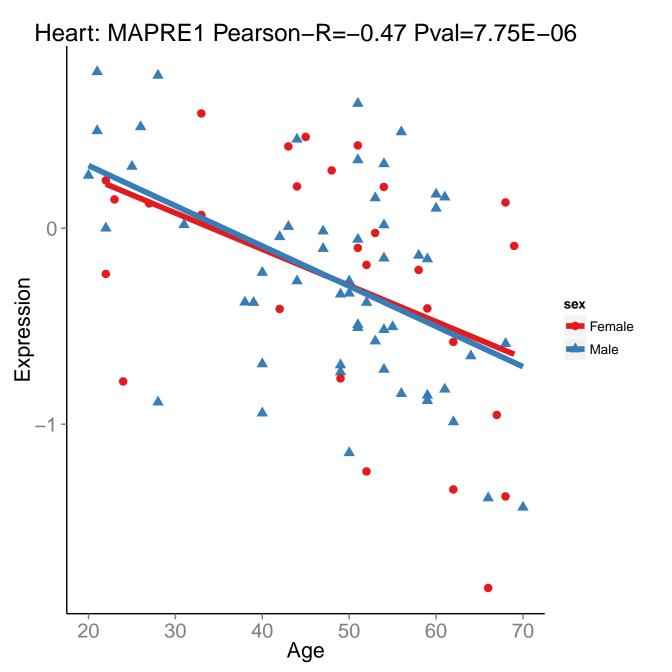






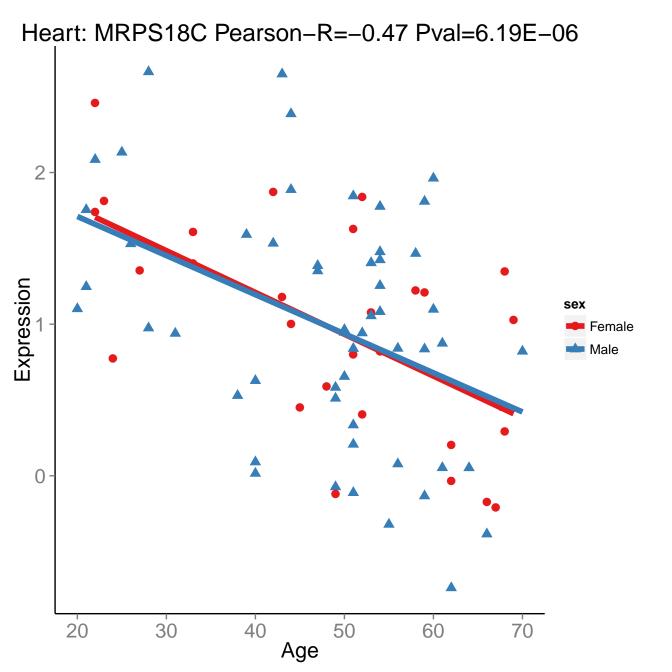


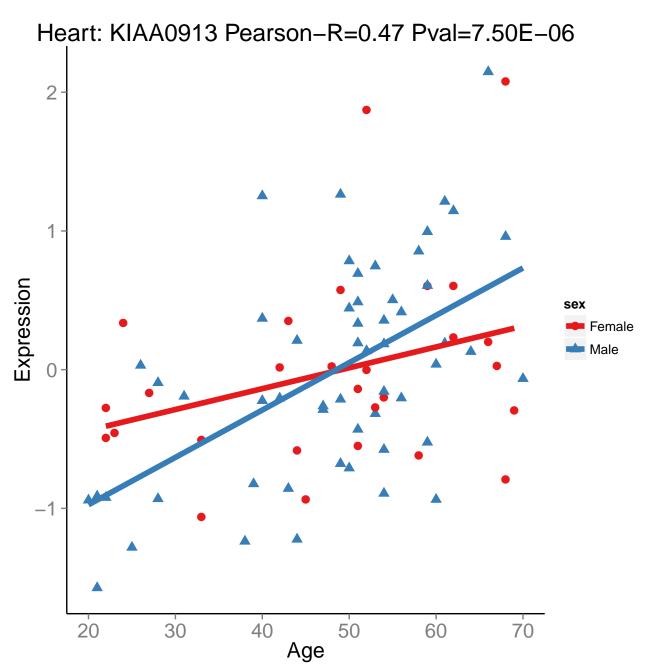


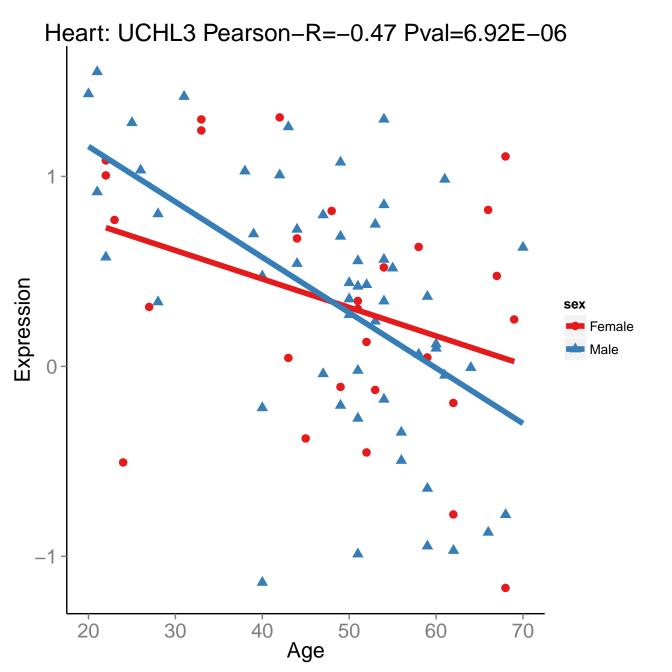


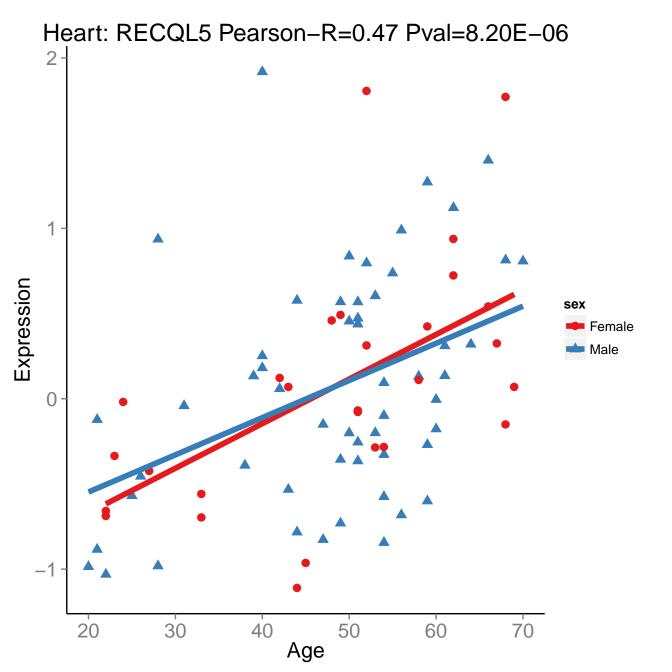
Heart: ATXN10 Pearson-R=-0.47 Pval=6.77E-06 2-1 Expression sex Female Male 20 40 60 30 50 70 Age

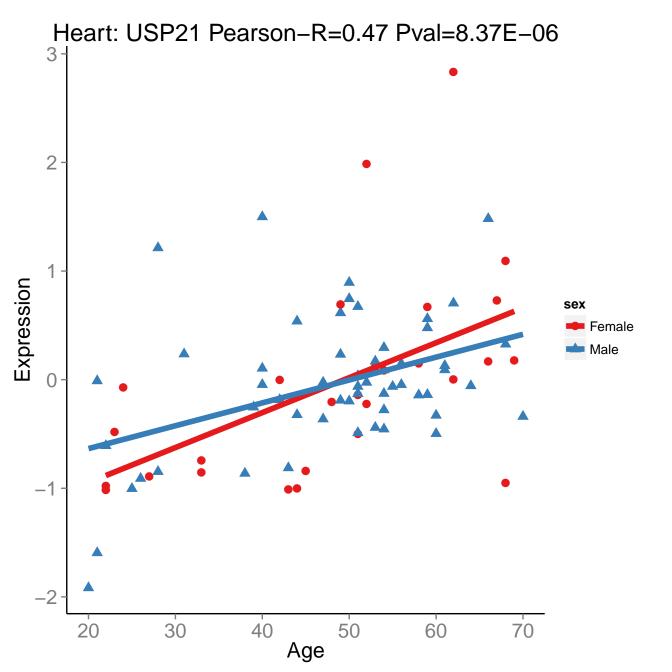


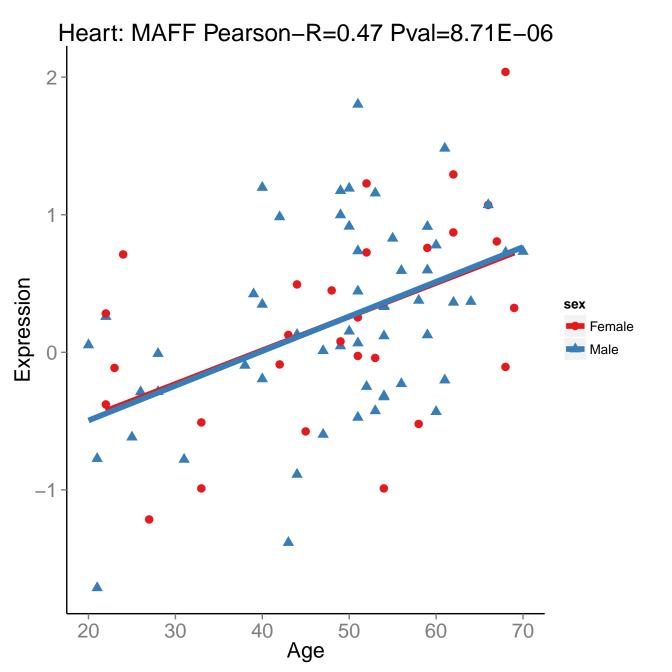




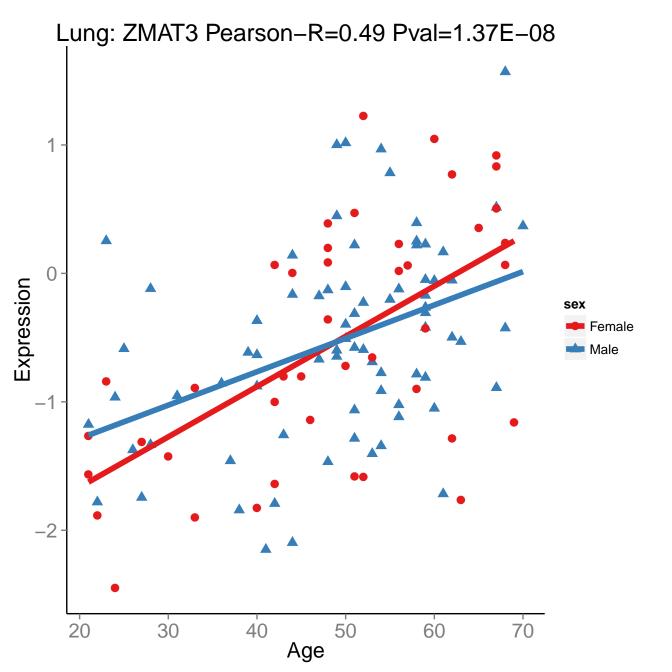


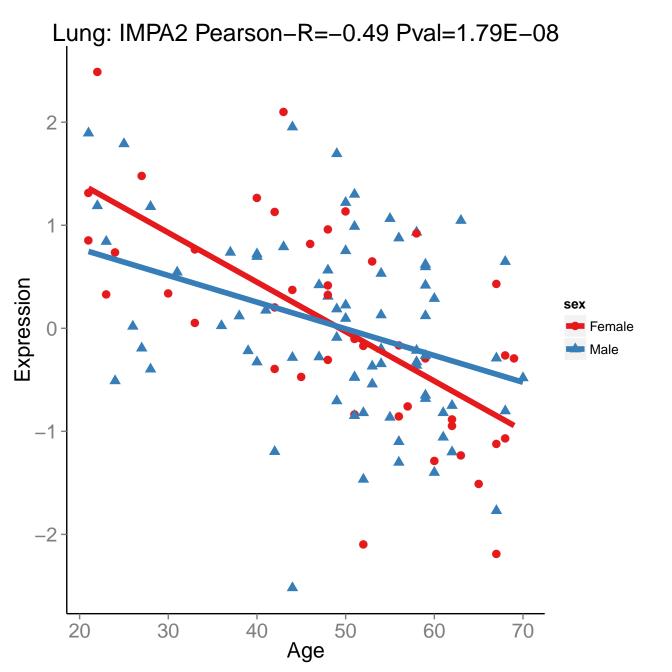


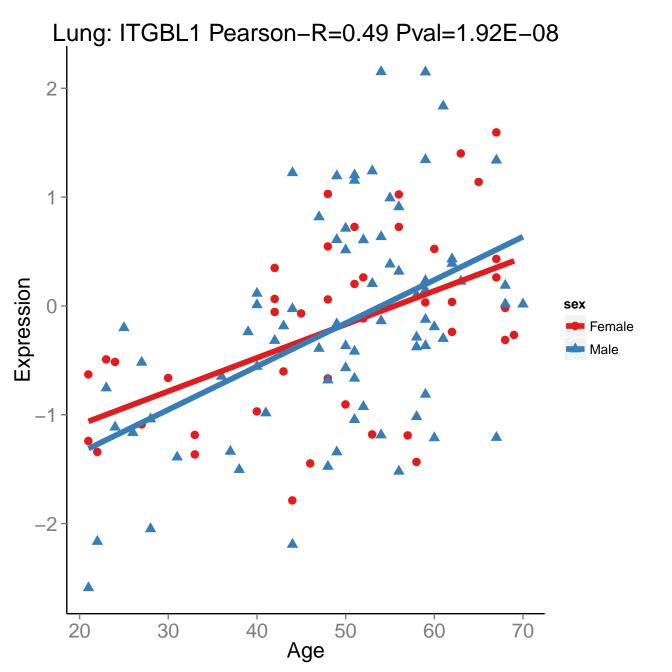




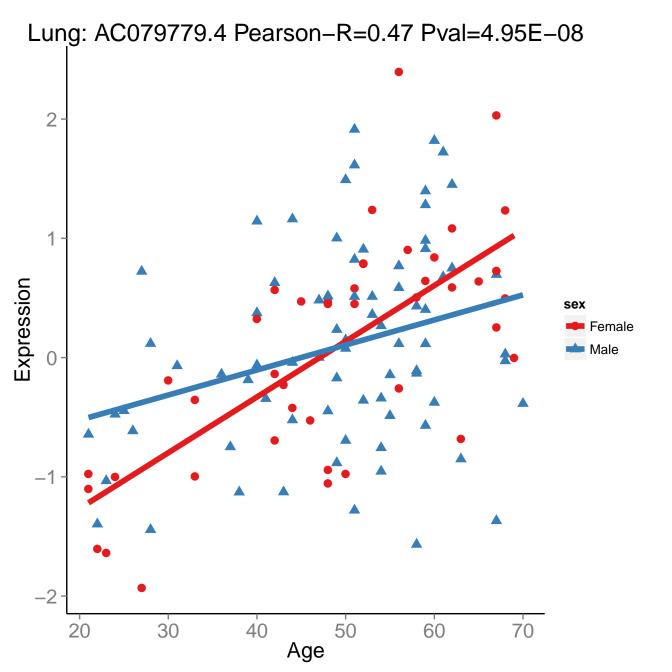


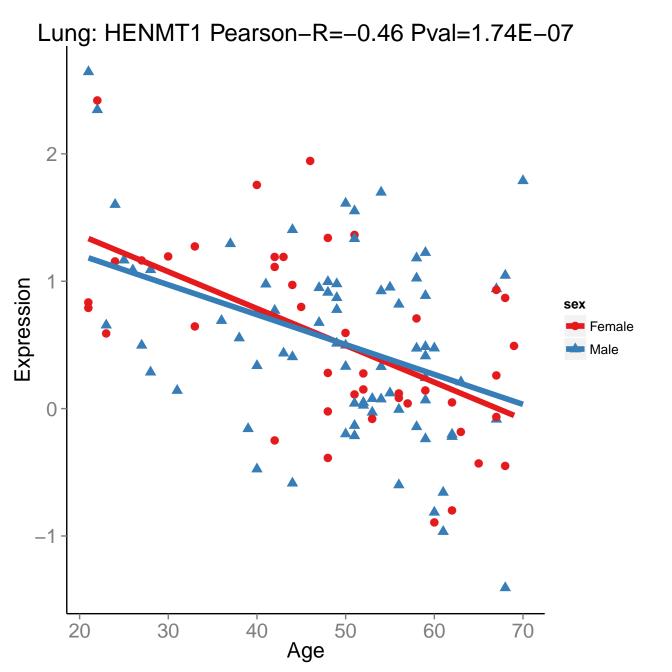


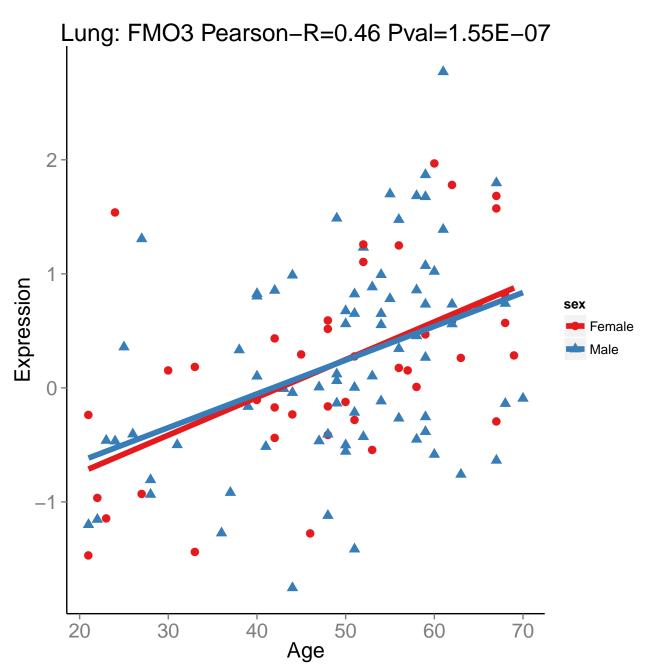


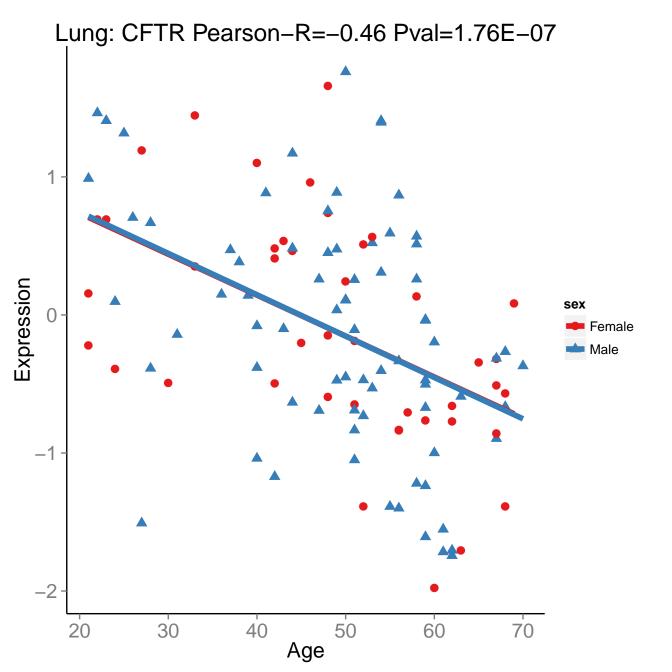


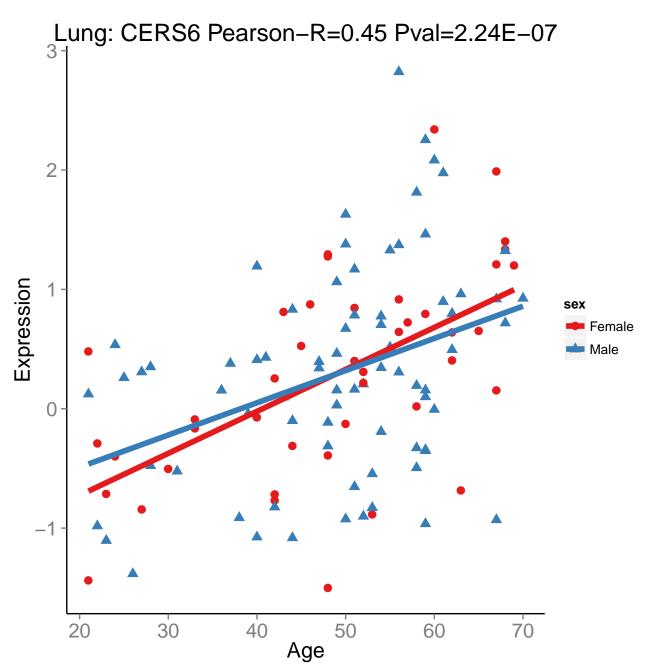


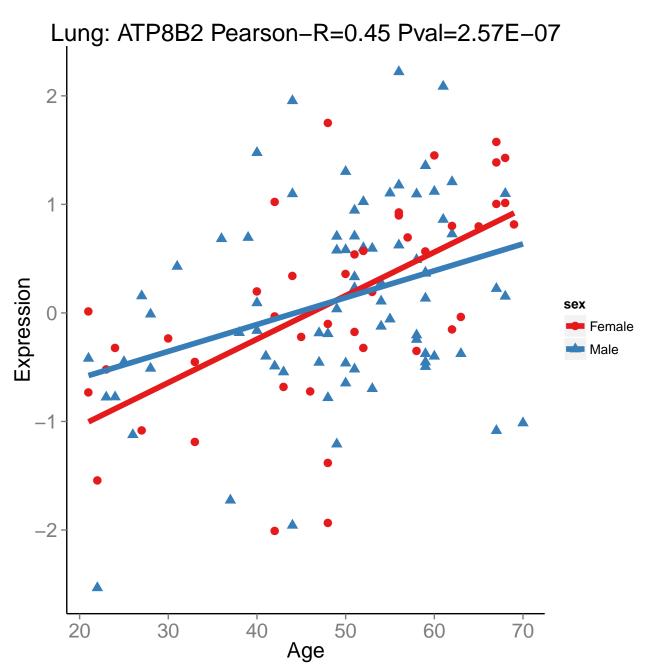


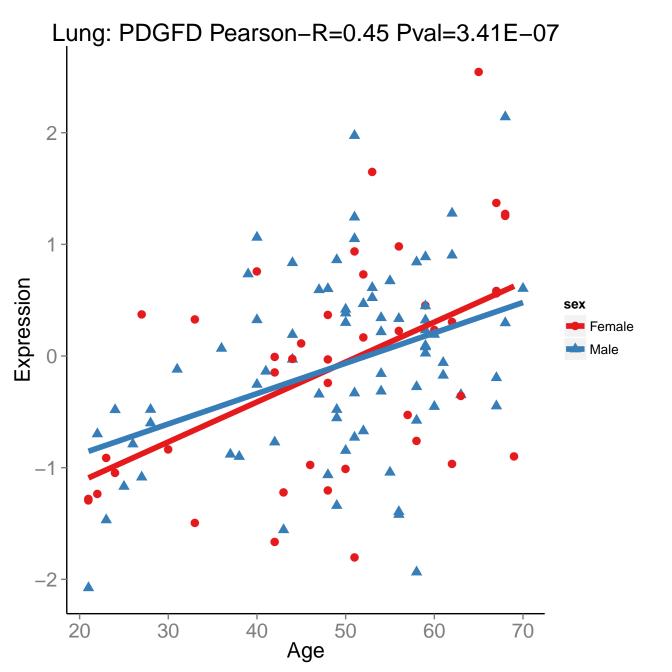


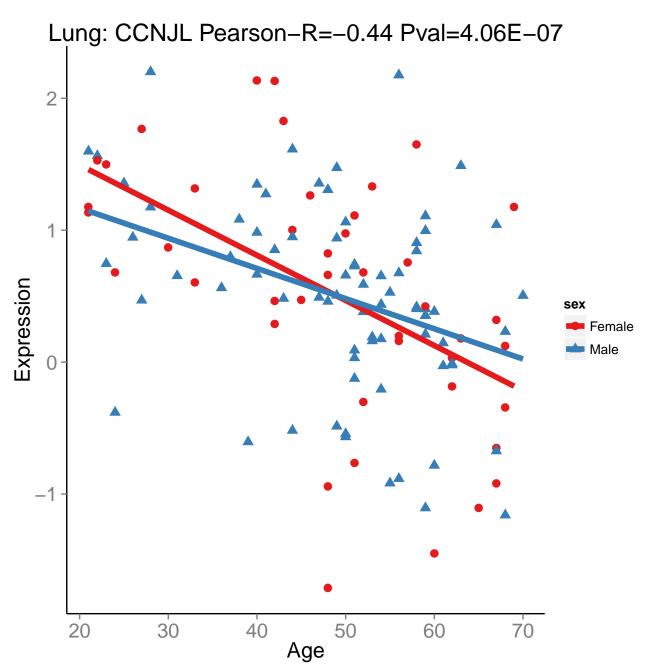


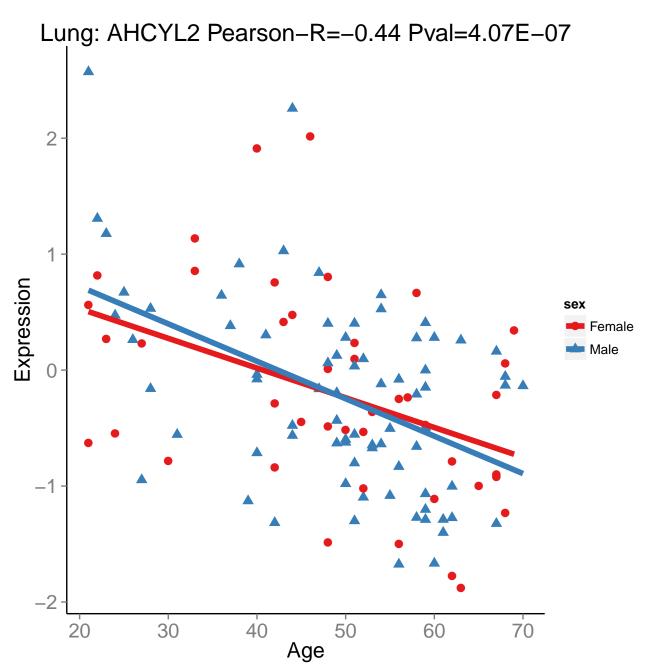


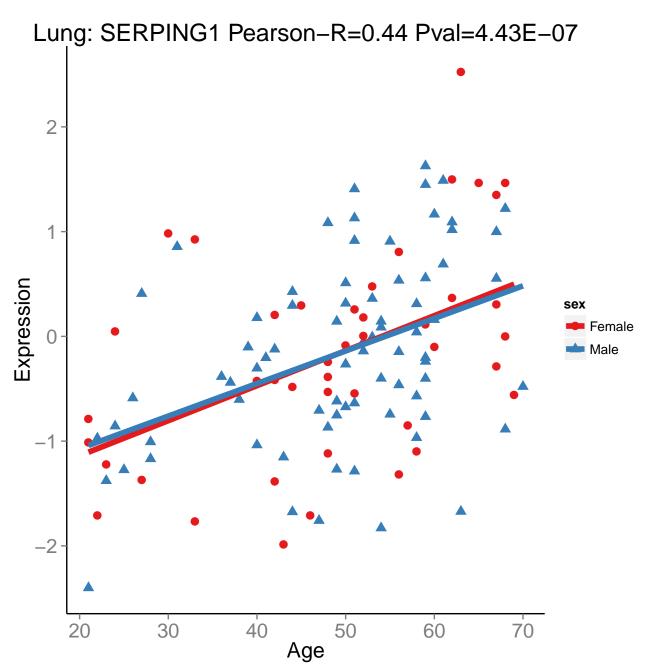


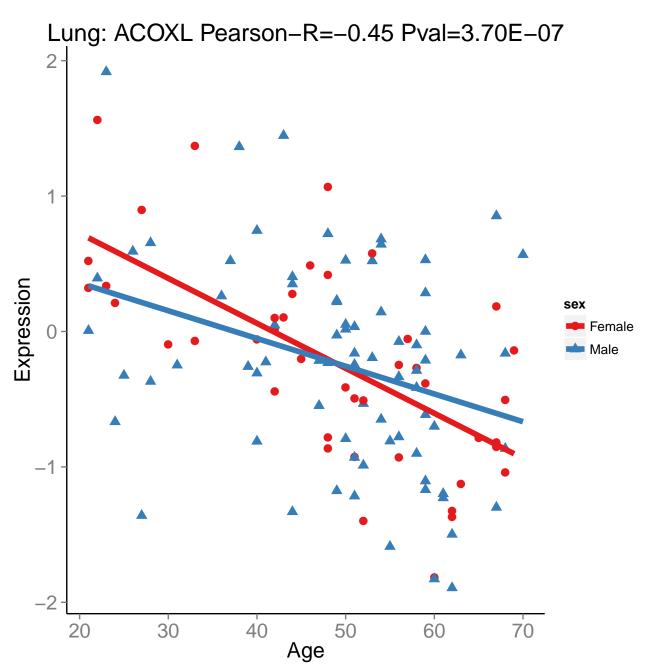


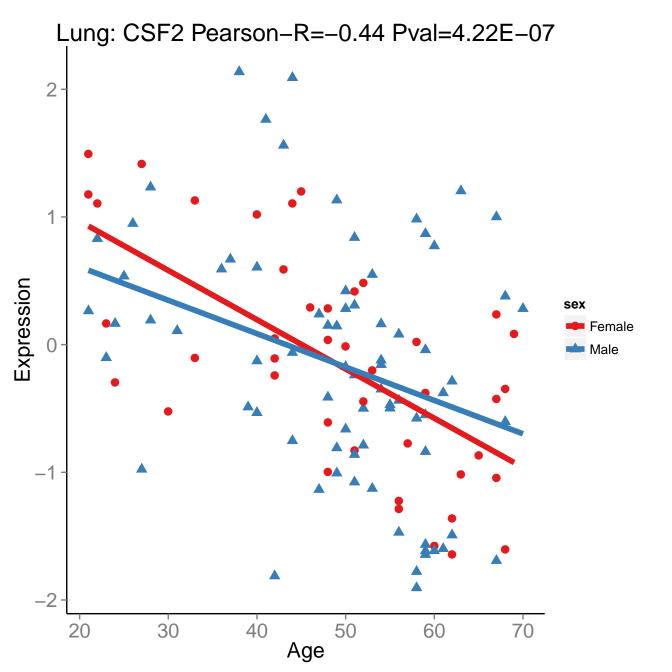


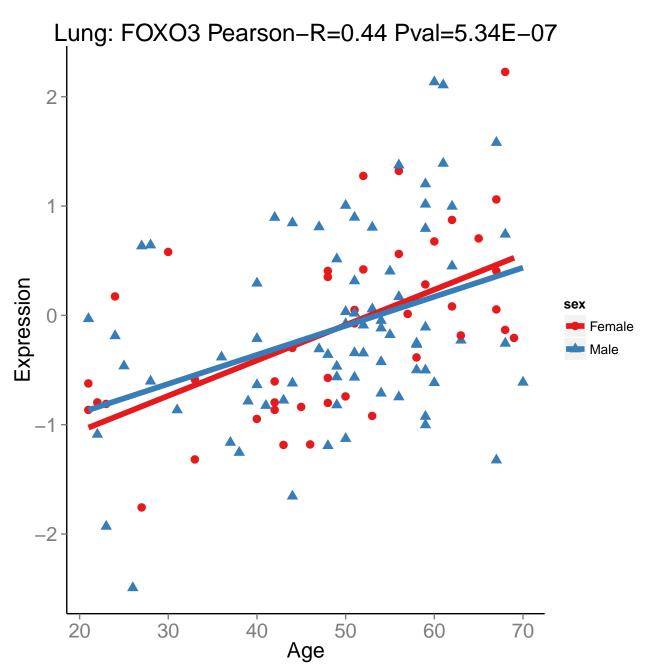


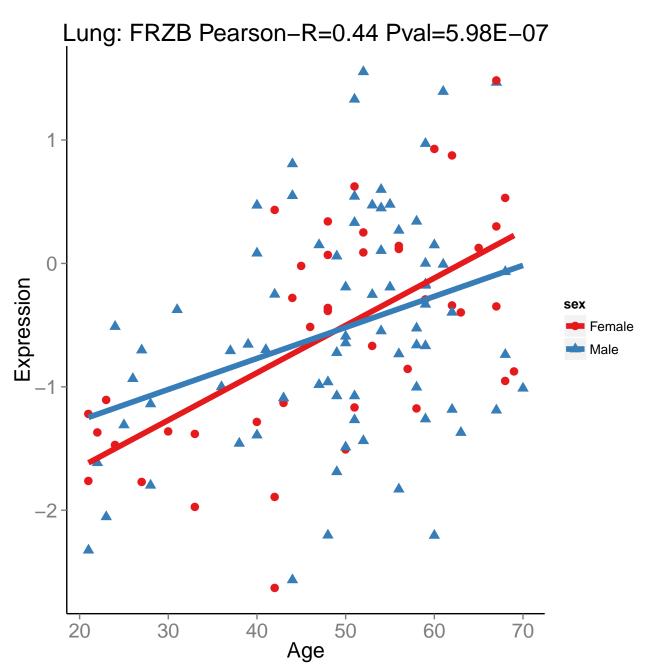


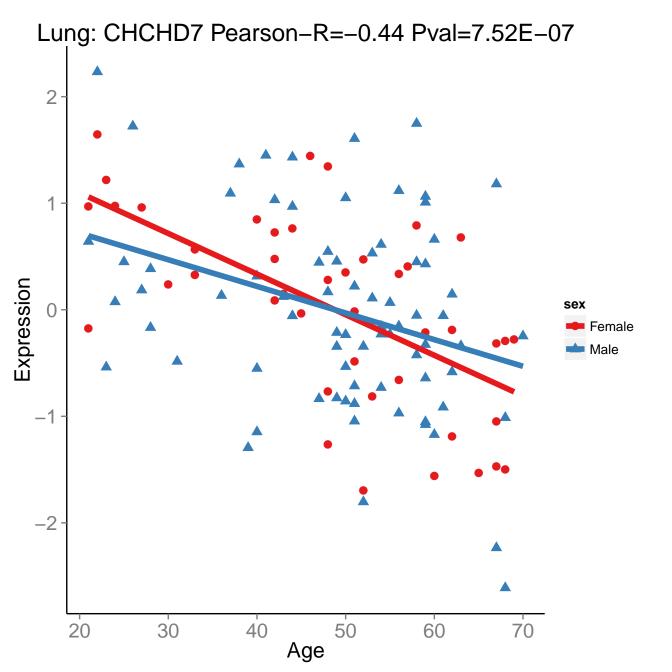




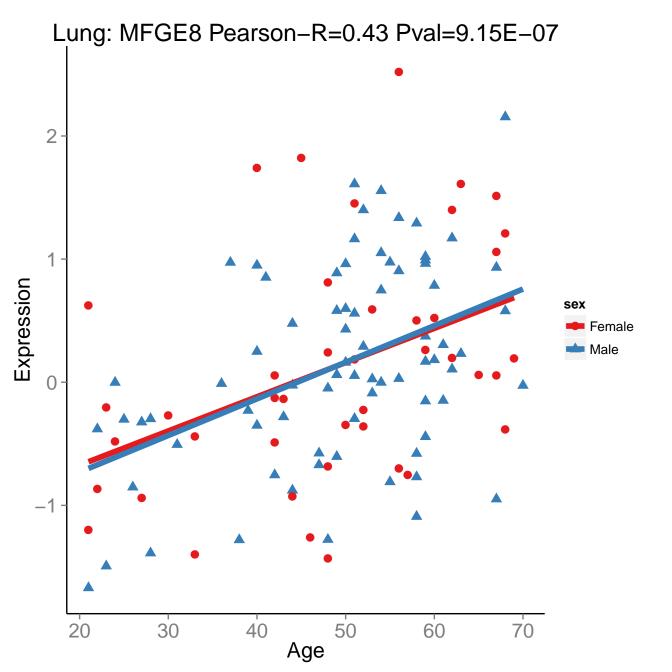


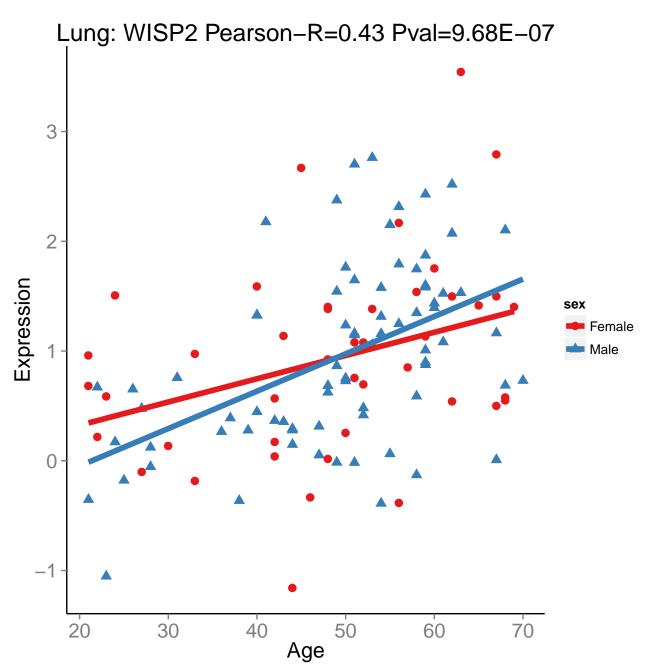


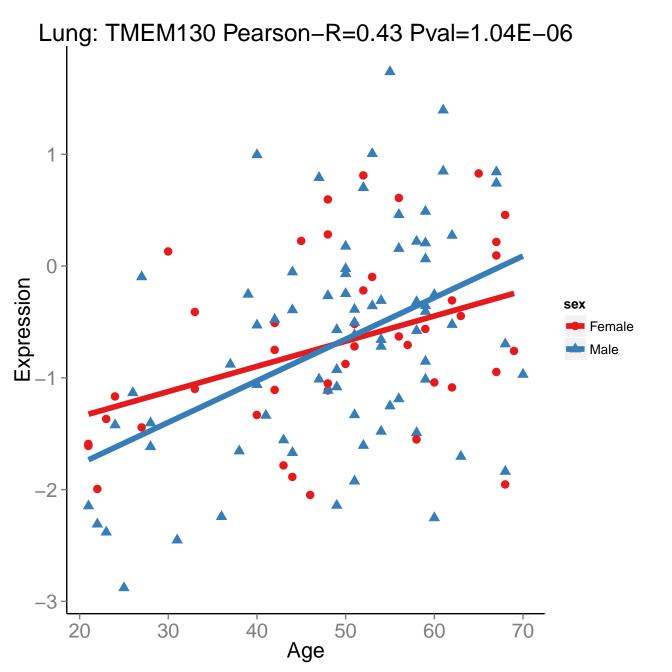


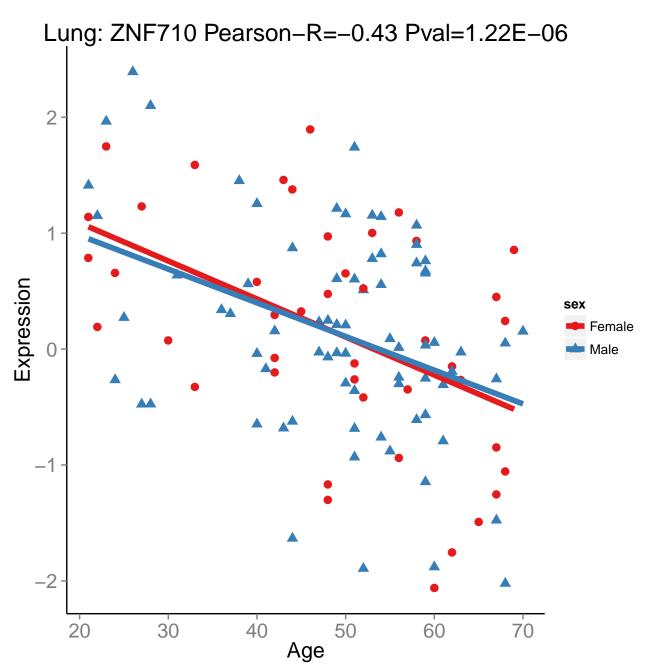


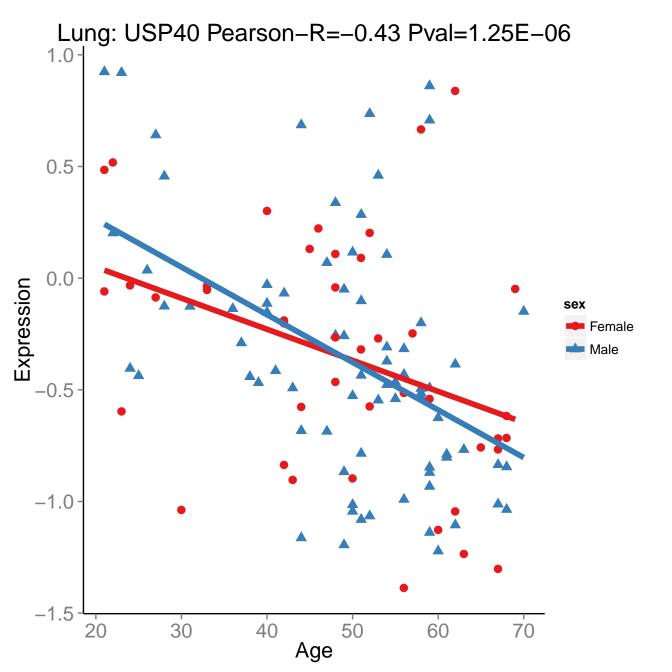




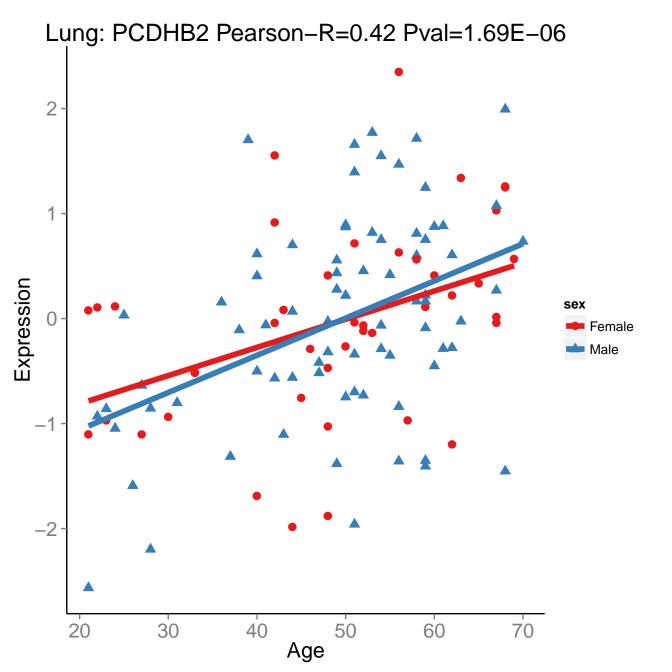


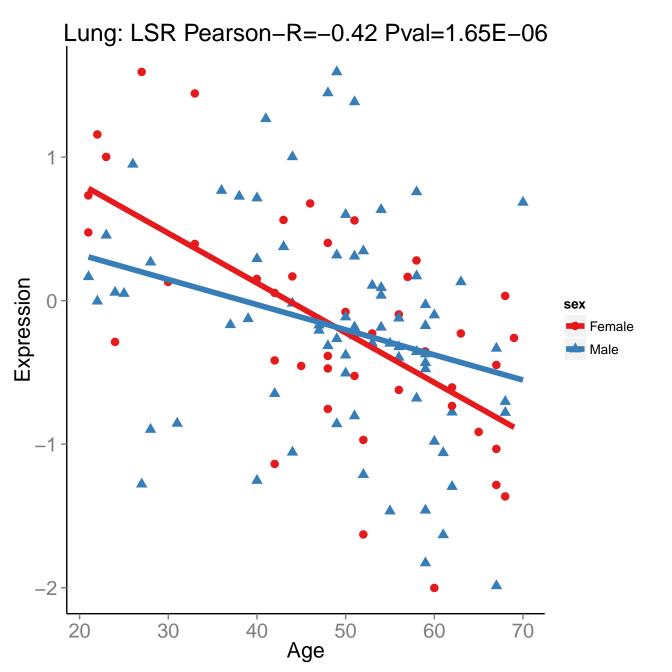


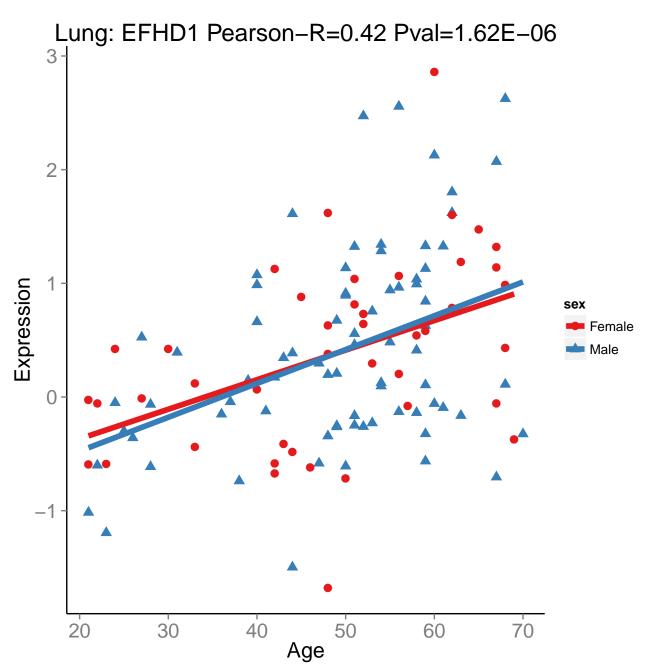


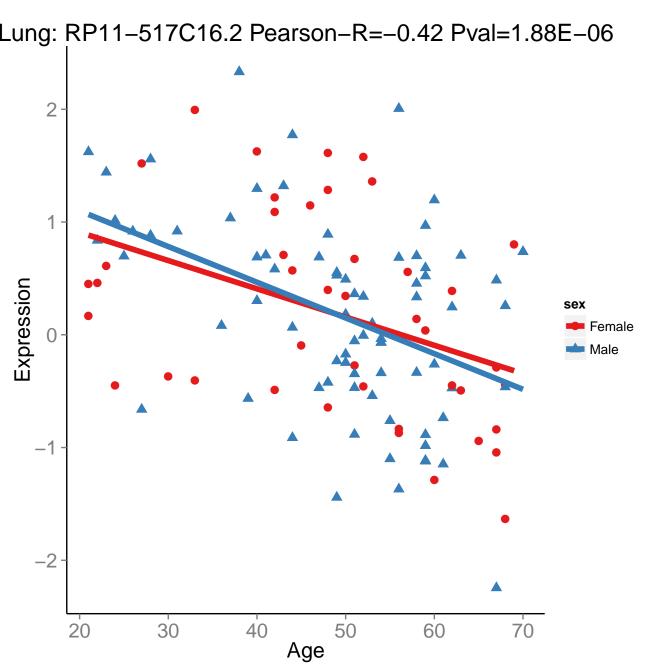


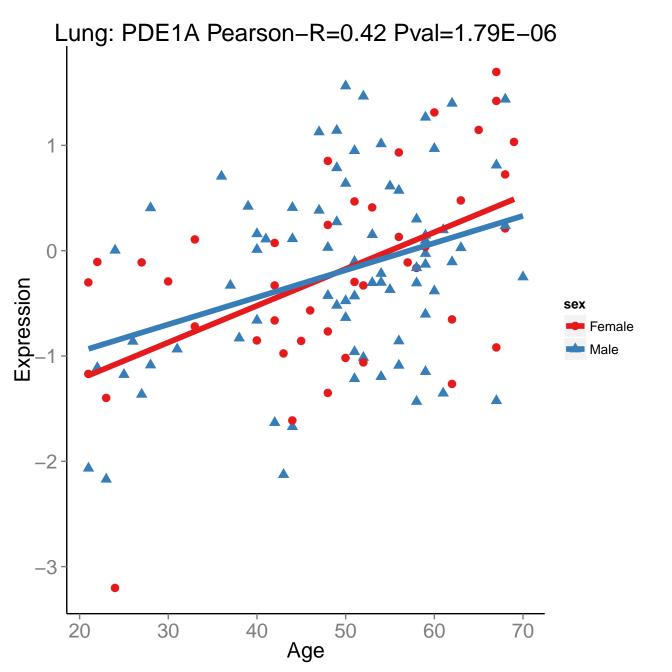


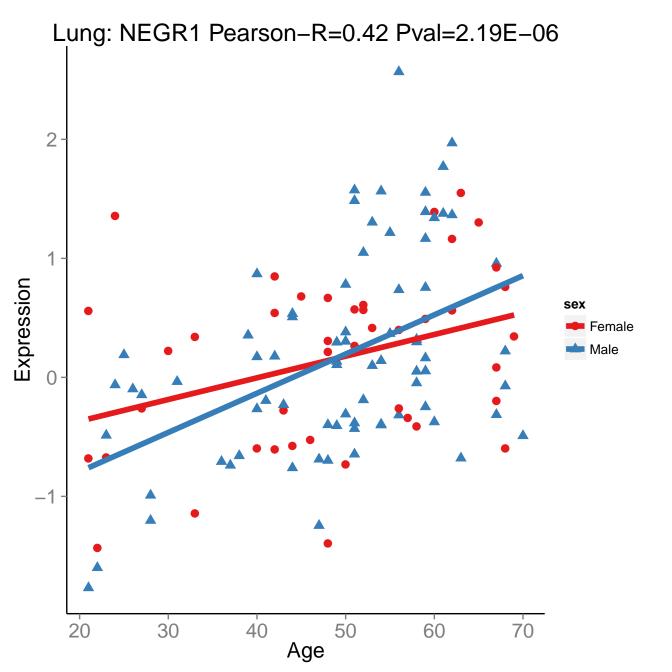


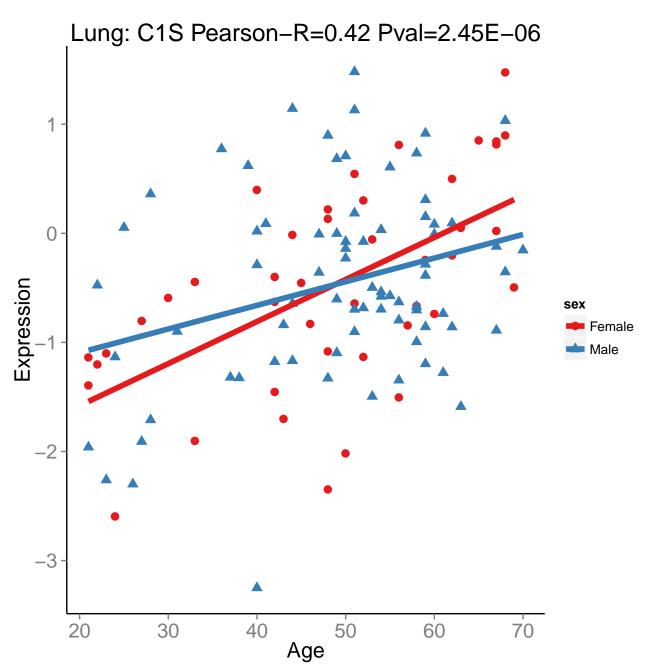


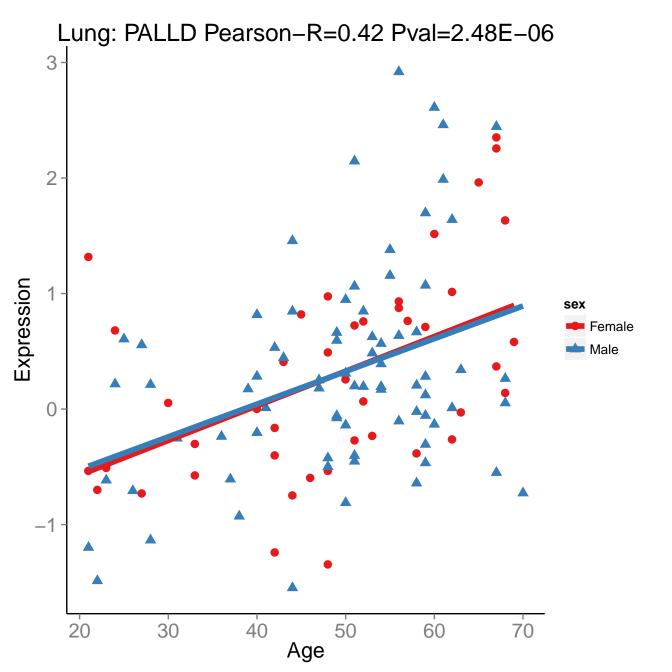


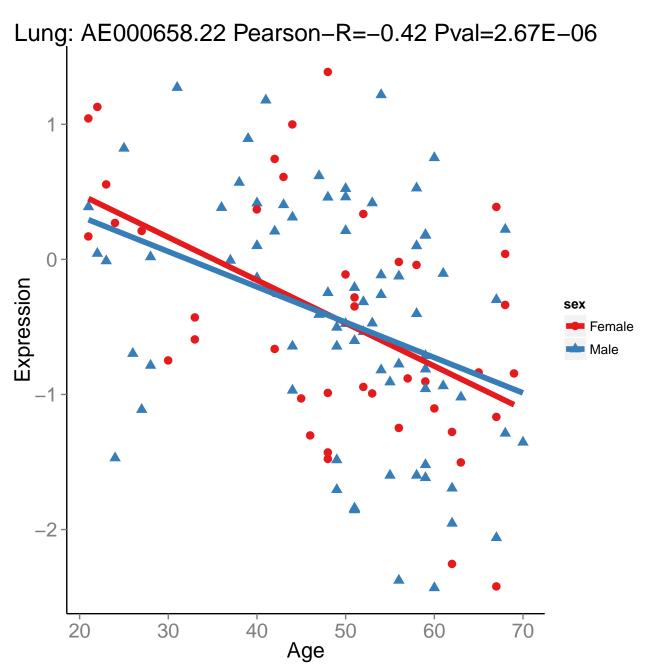


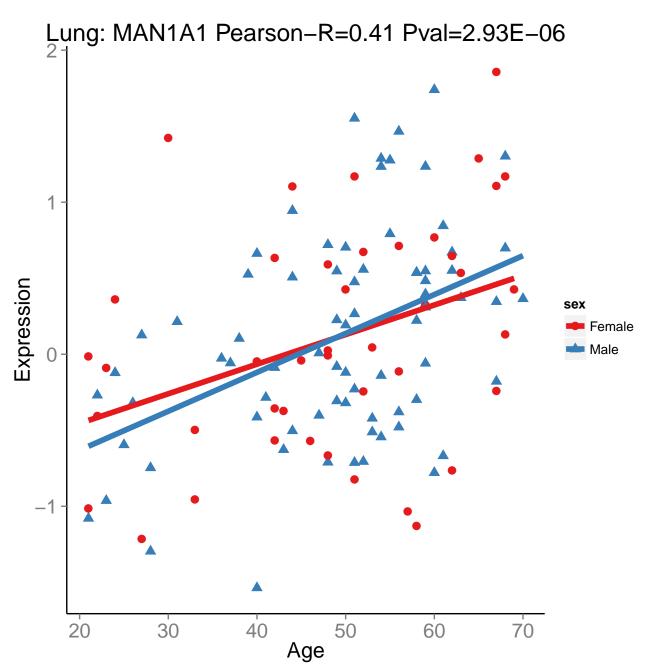


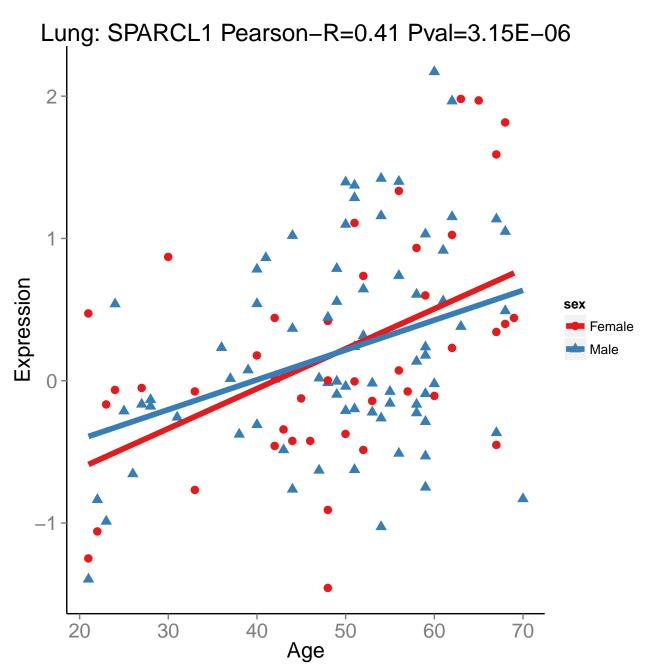


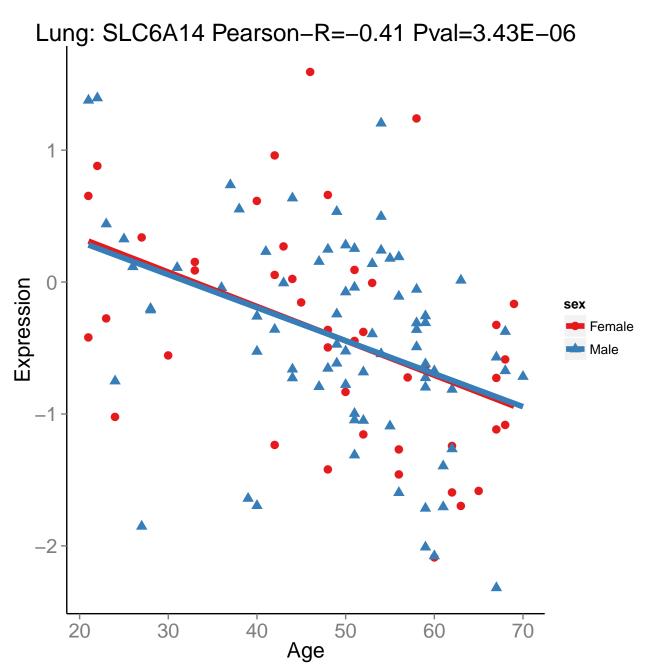


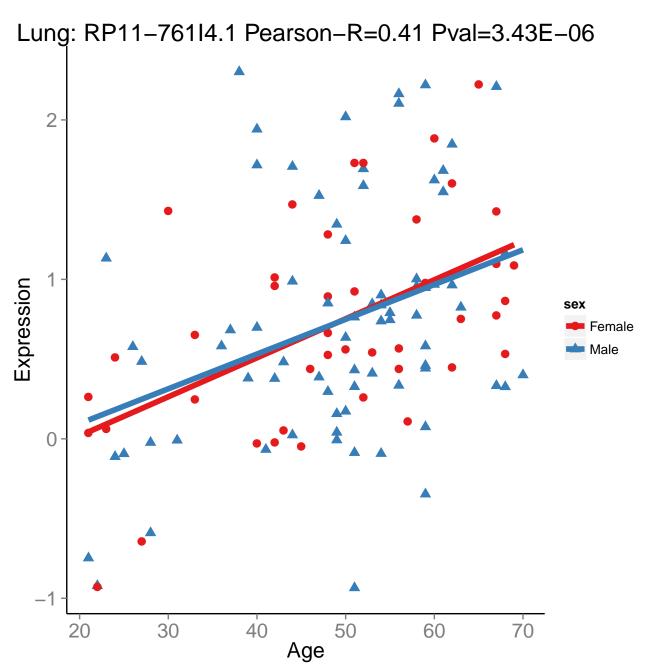


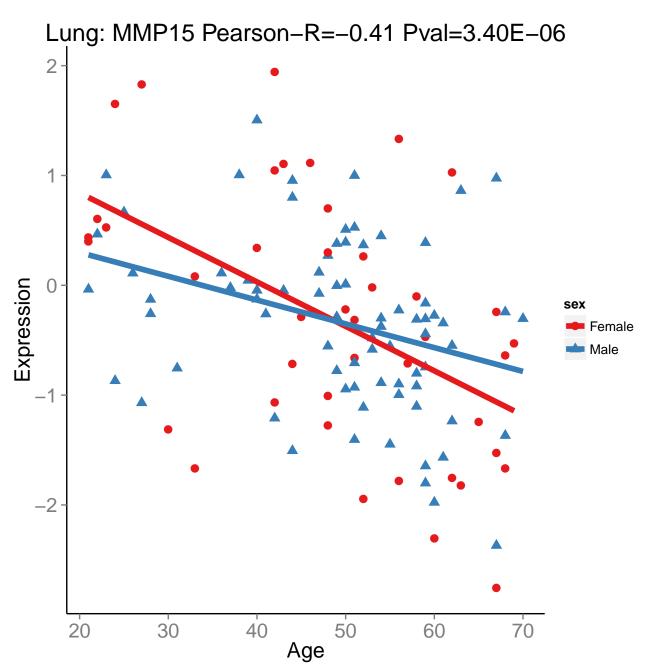


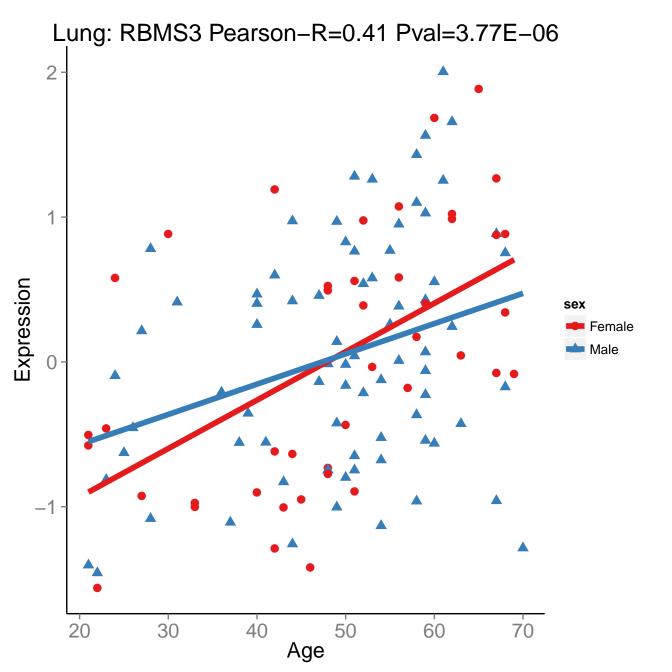


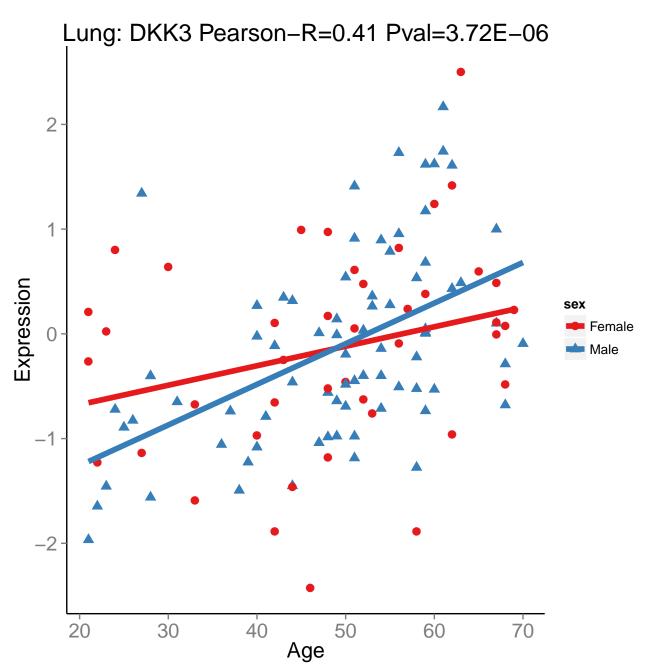


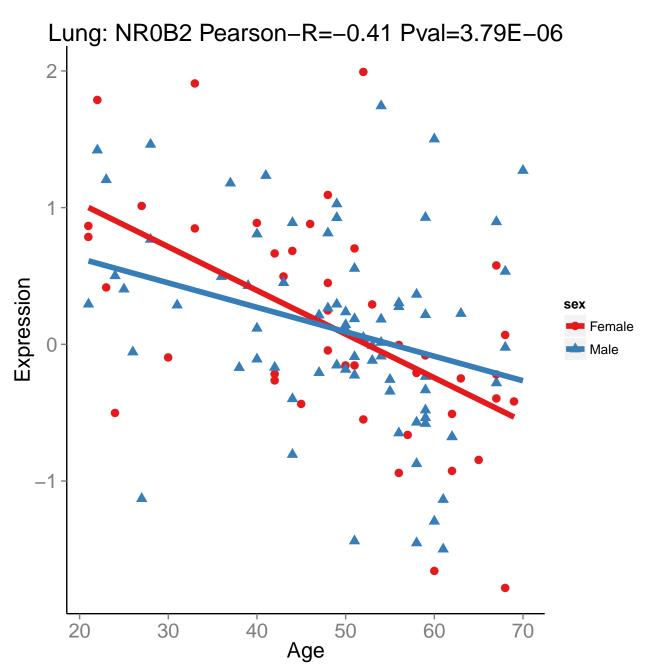


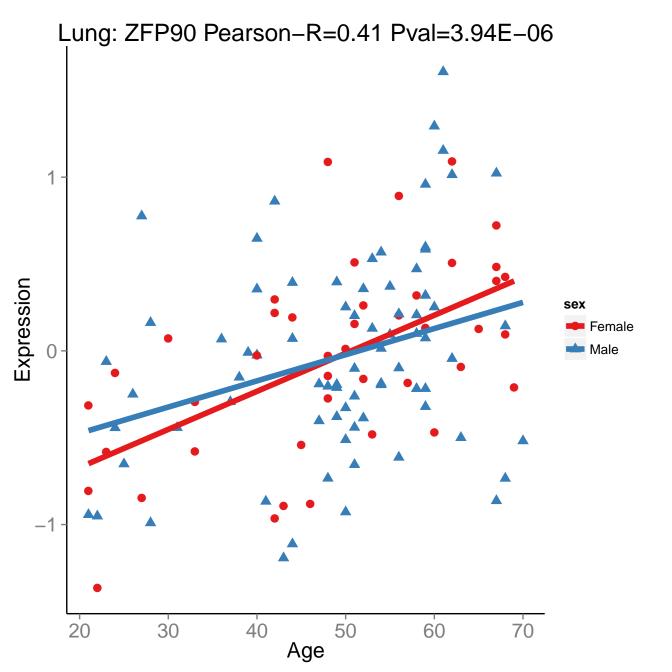


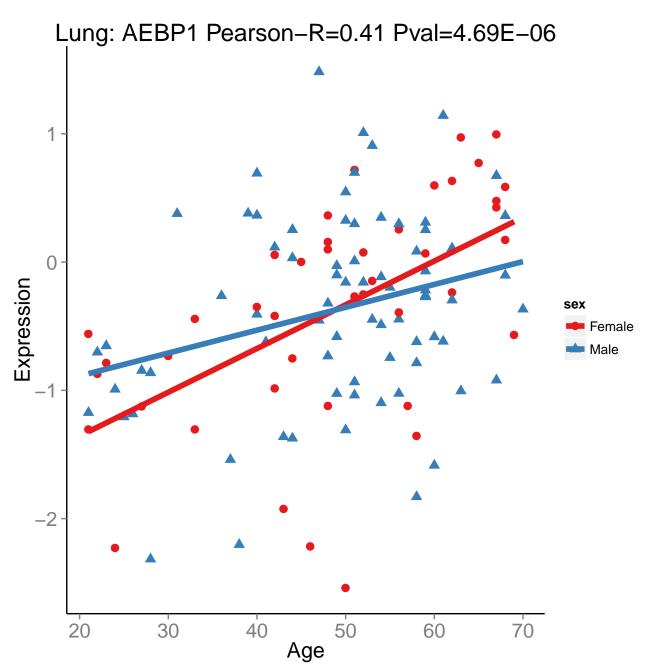


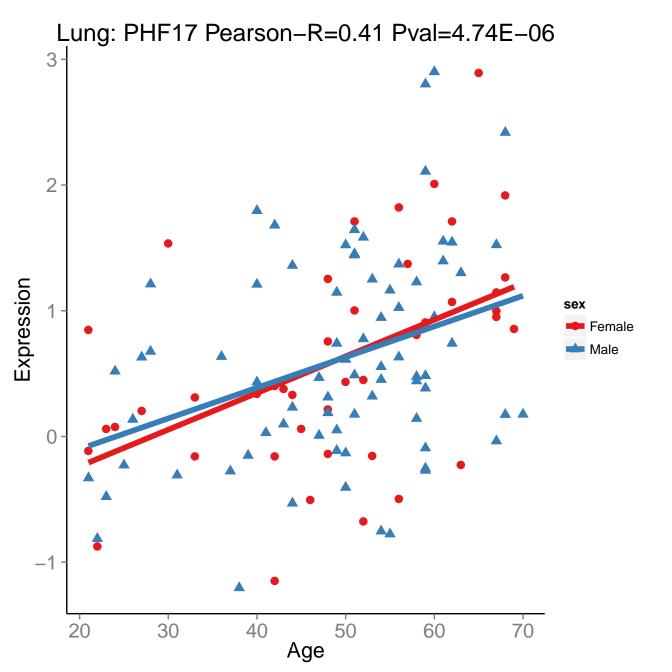


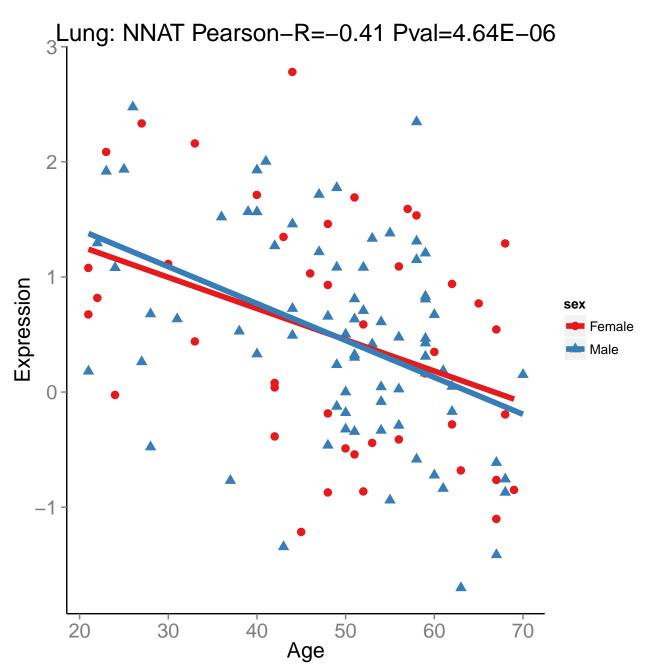






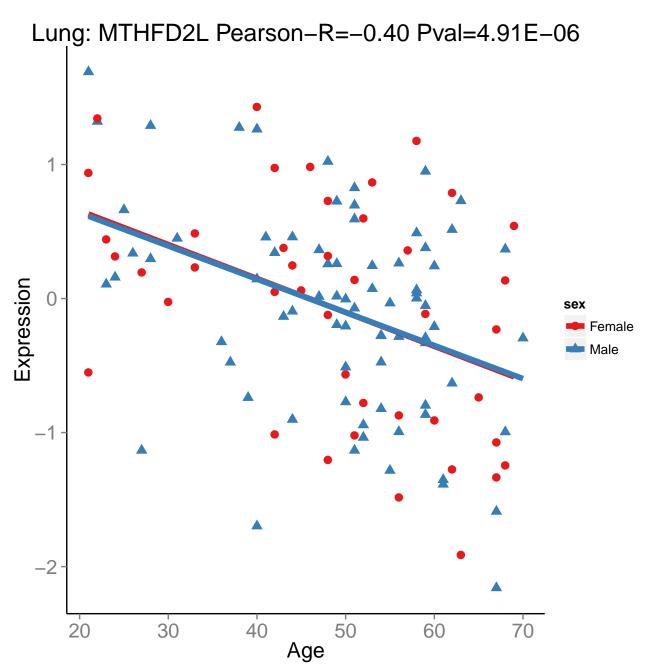


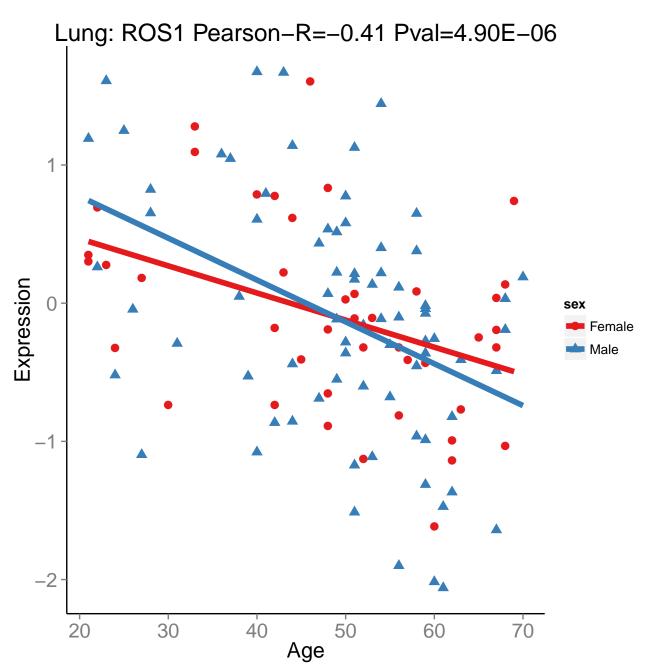


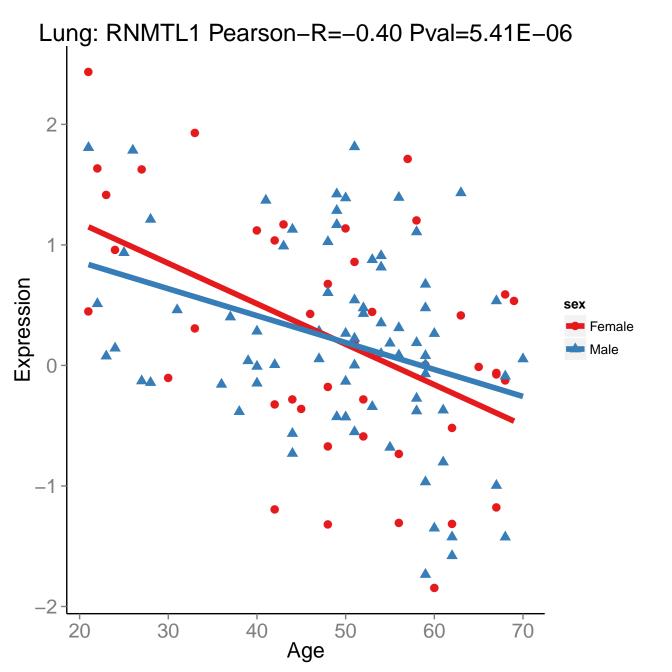




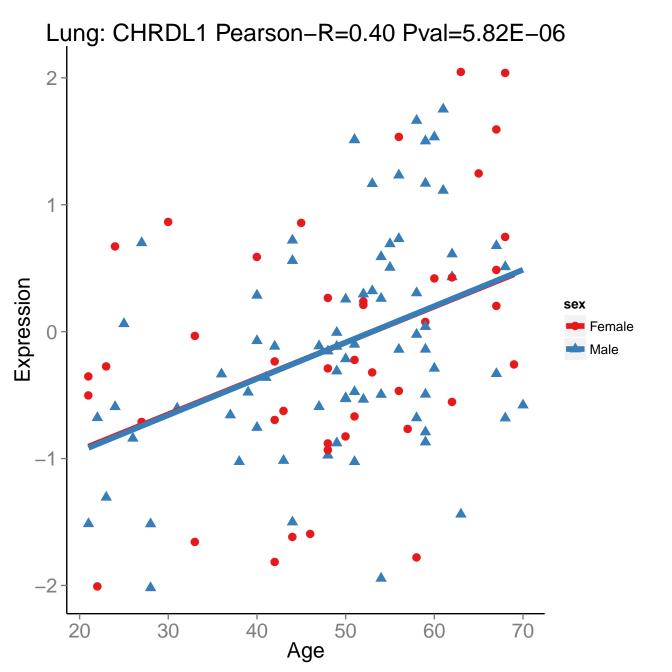




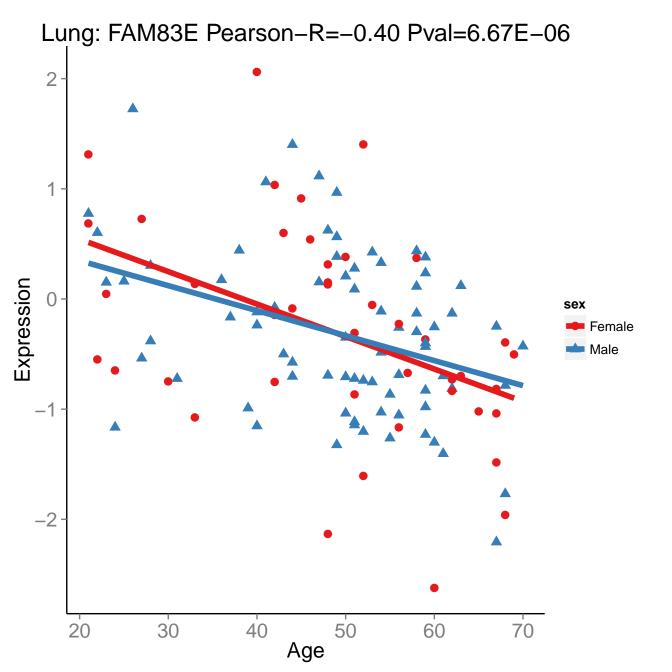


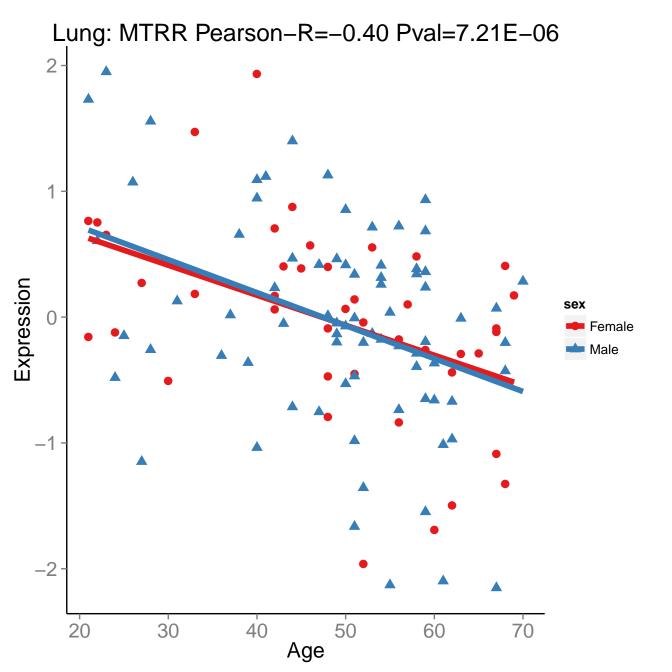


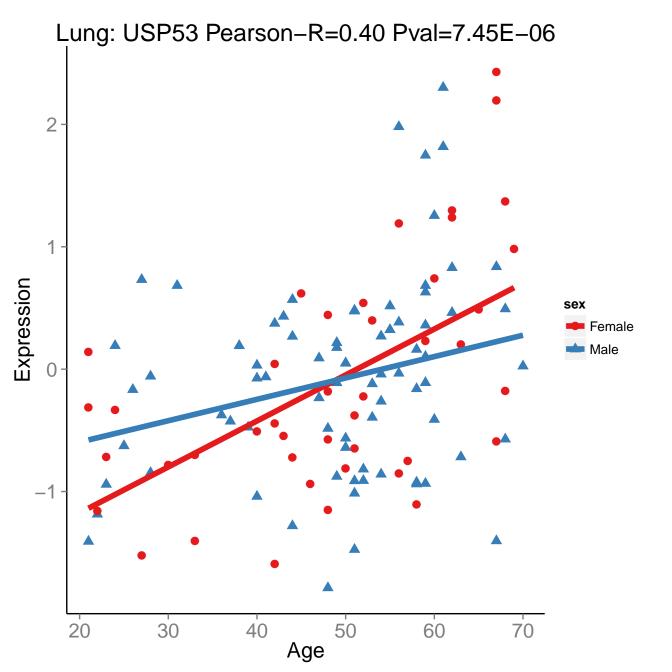


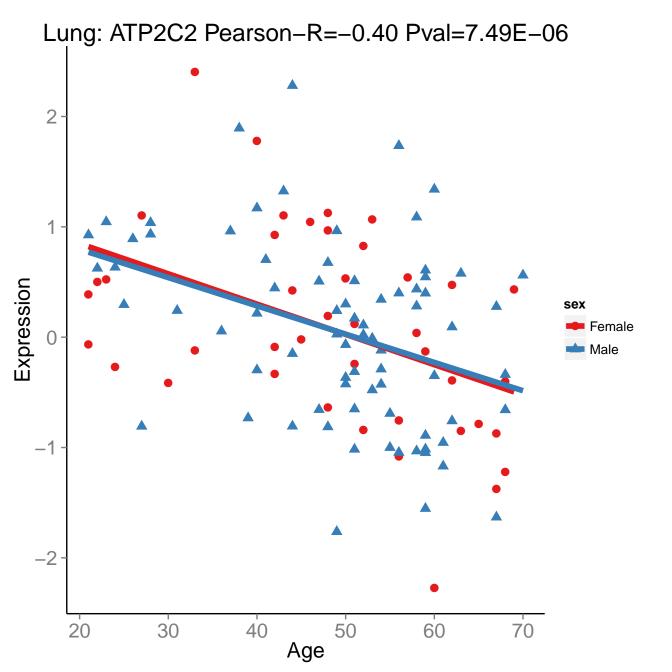


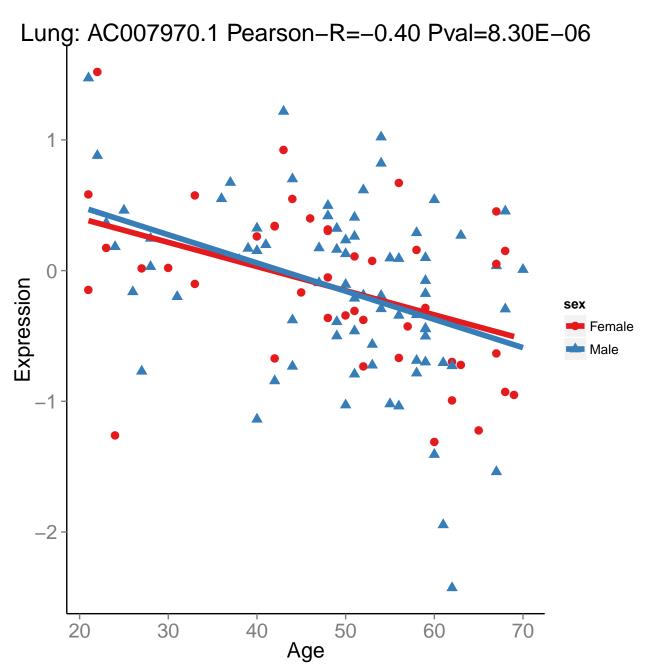


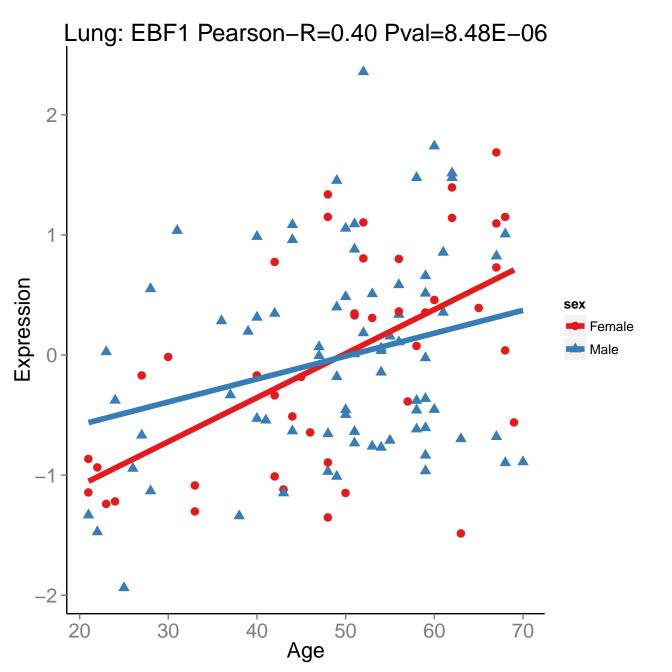


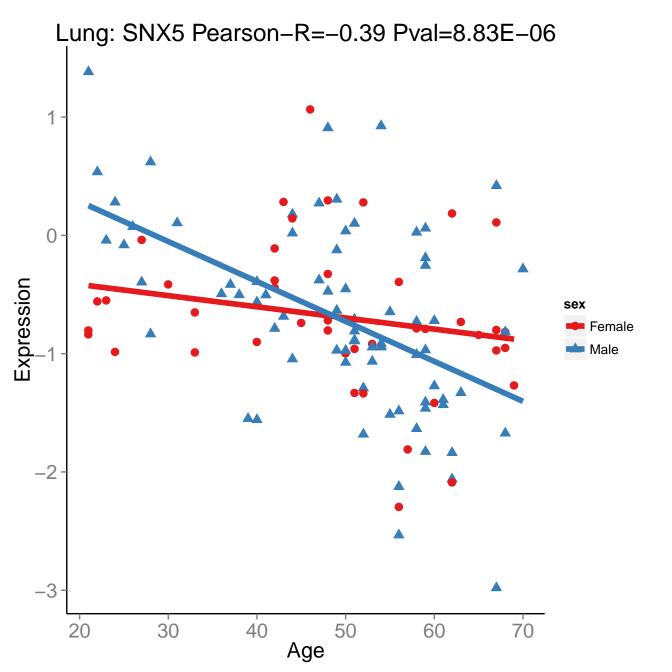




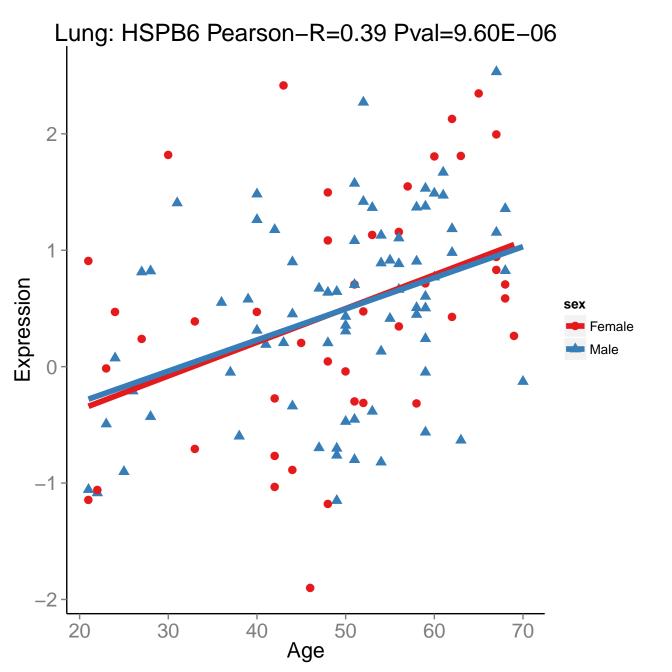


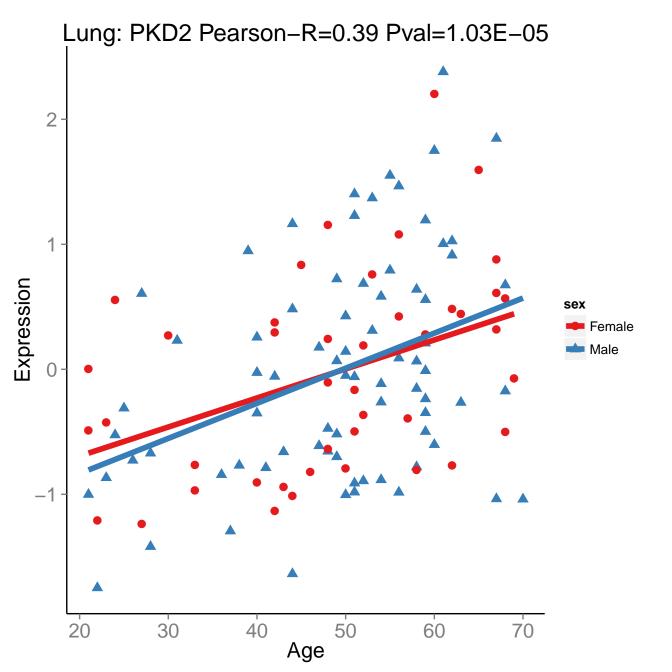


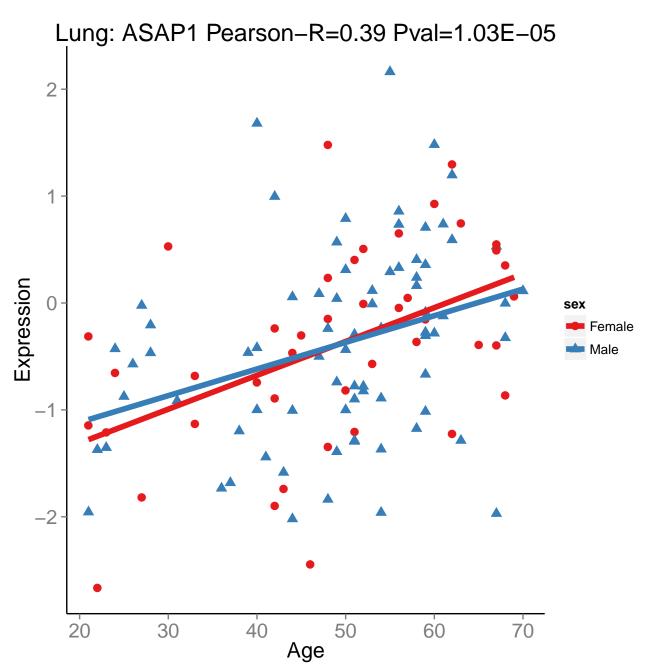


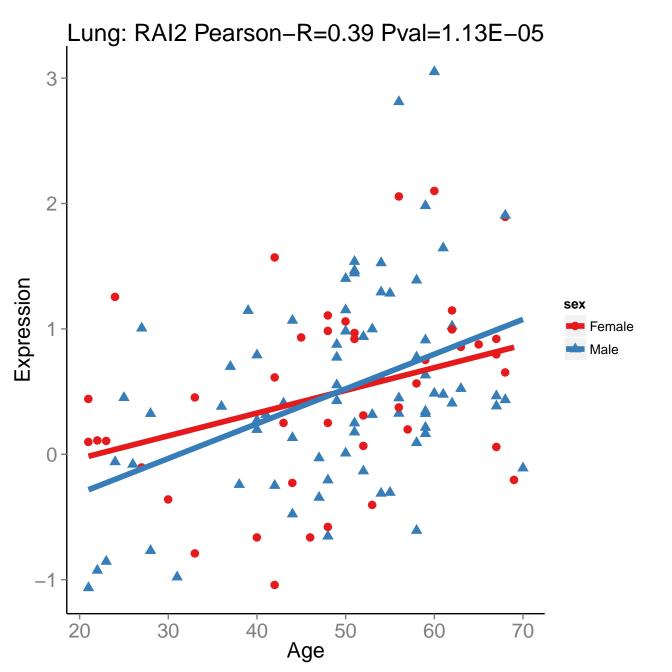




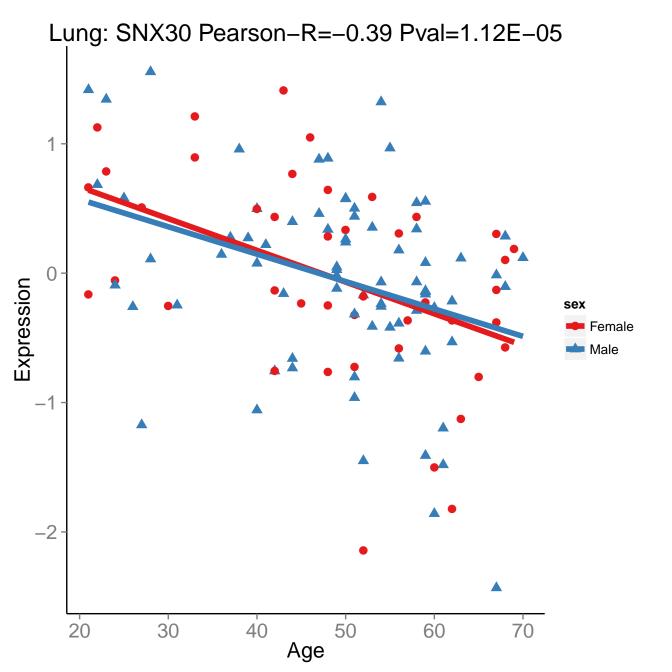


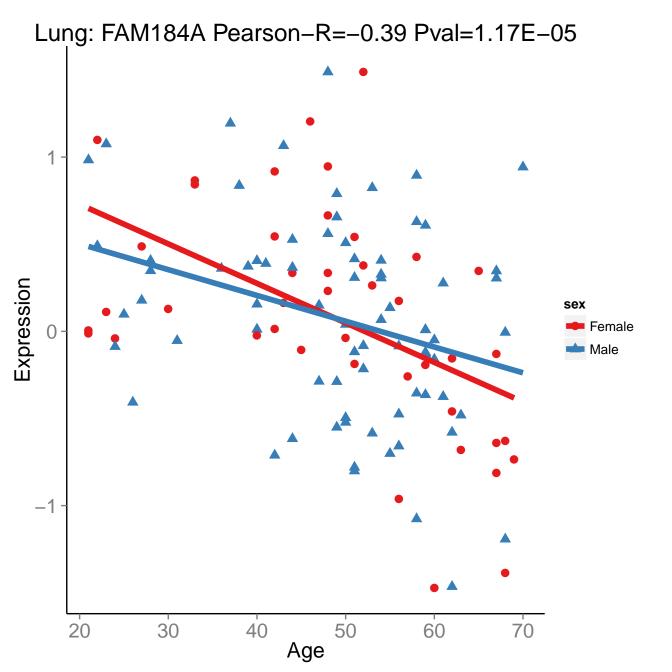


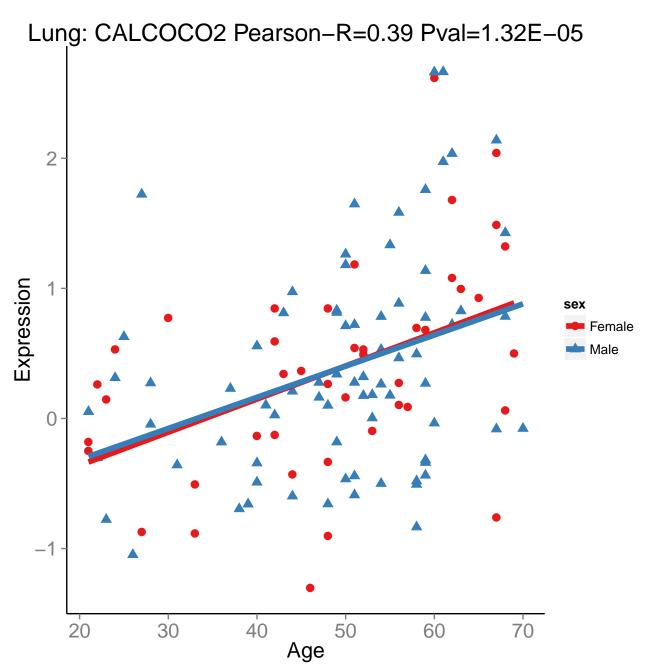


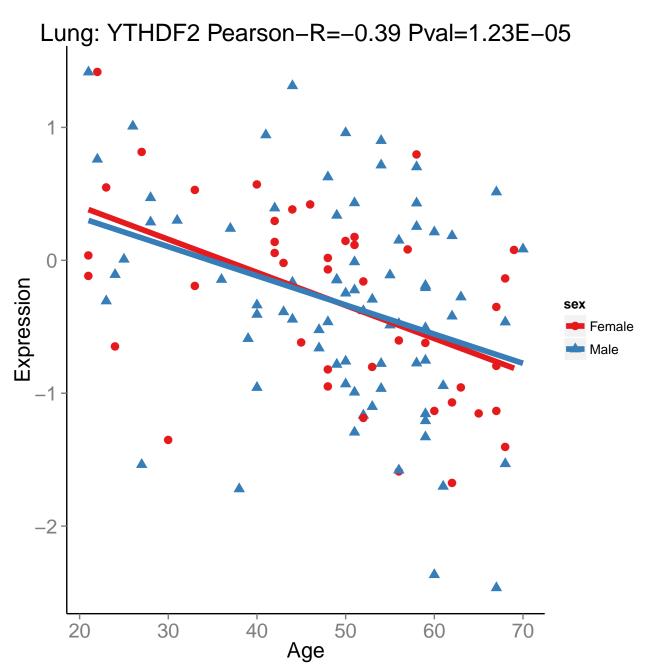




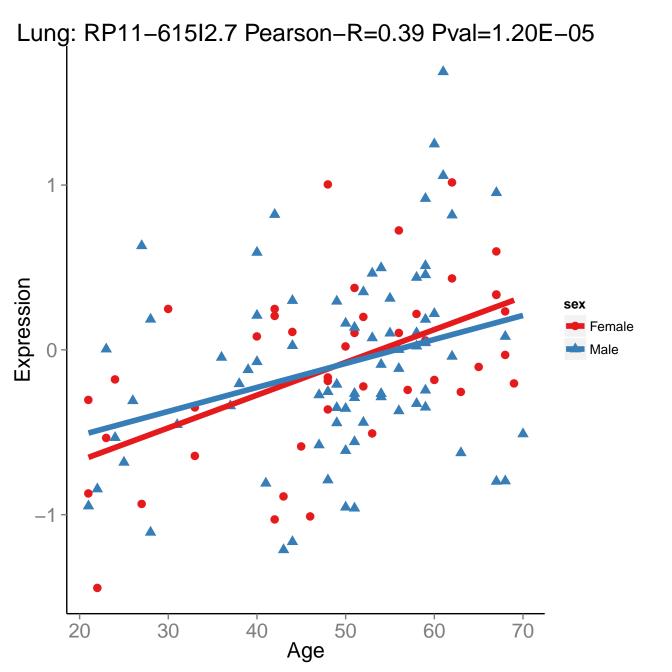


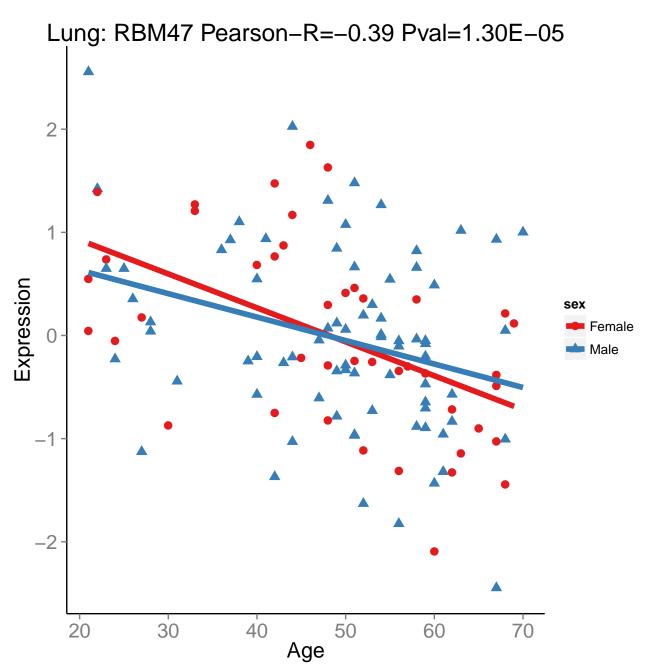


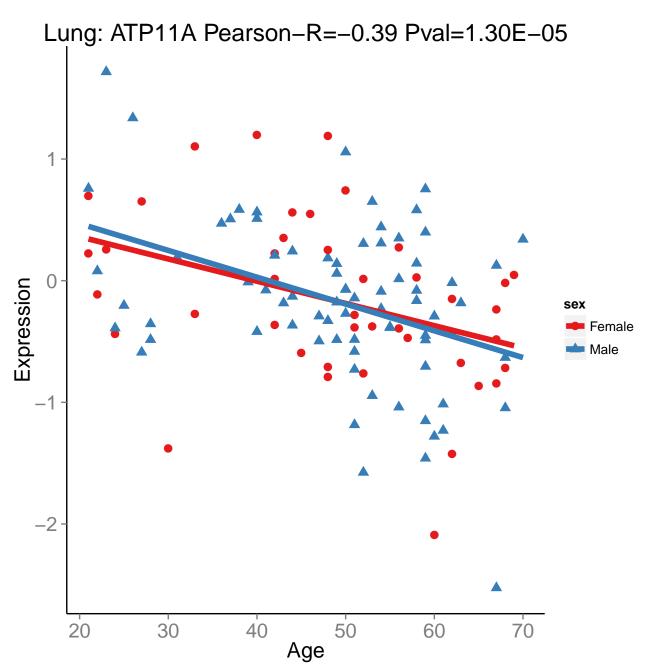


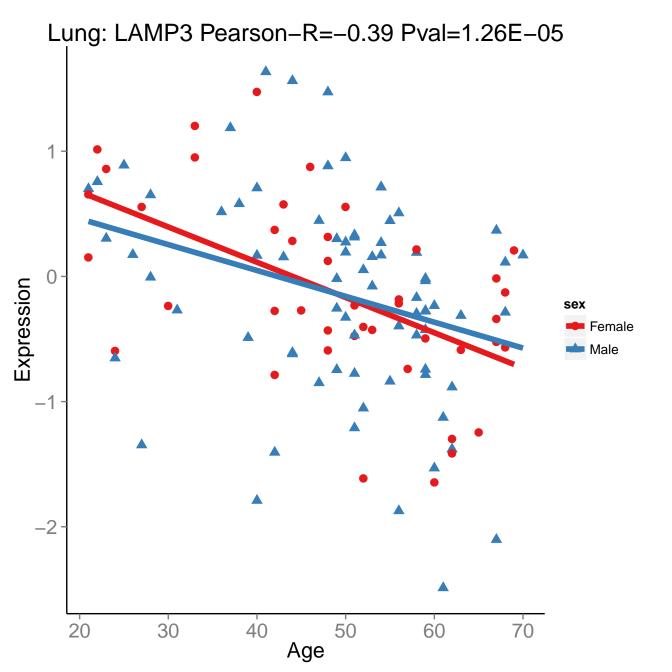


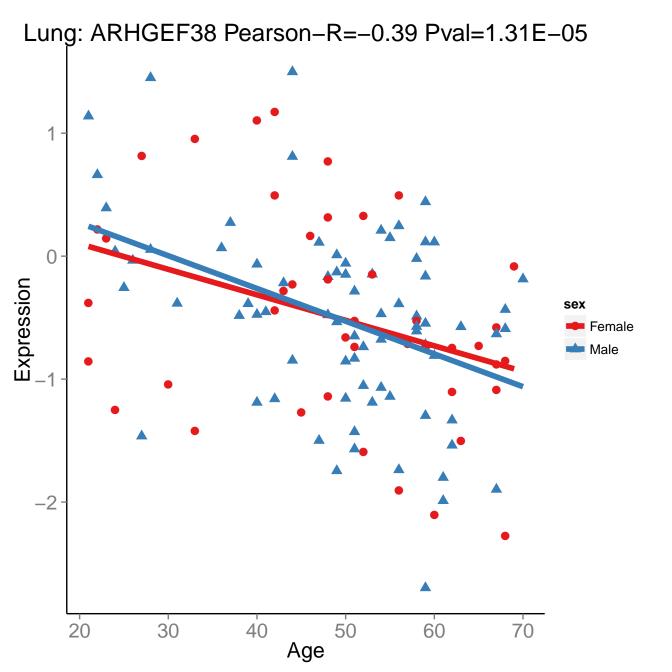


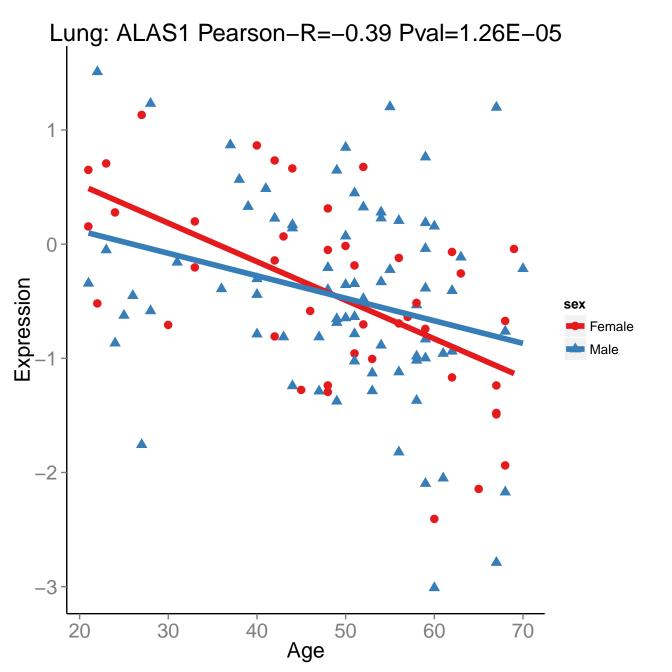


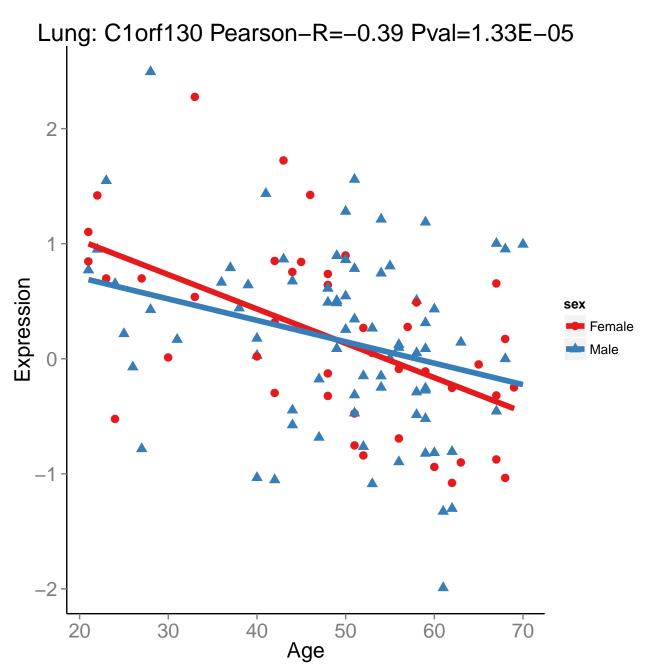


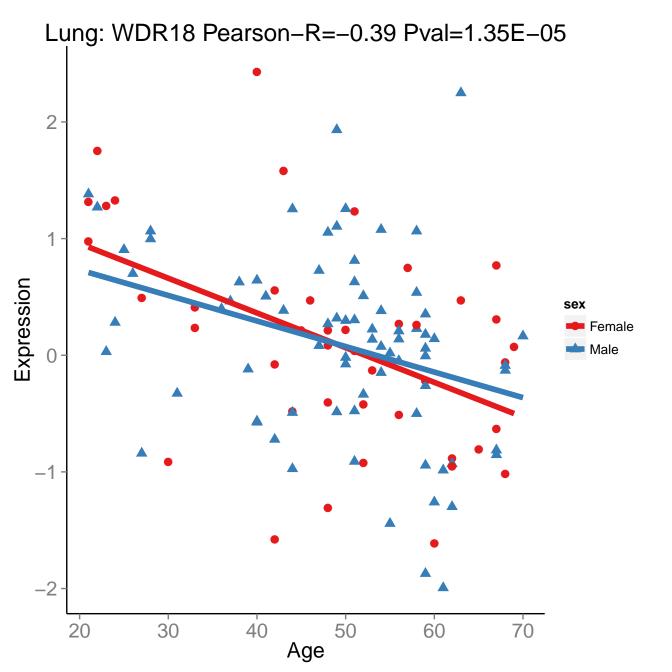


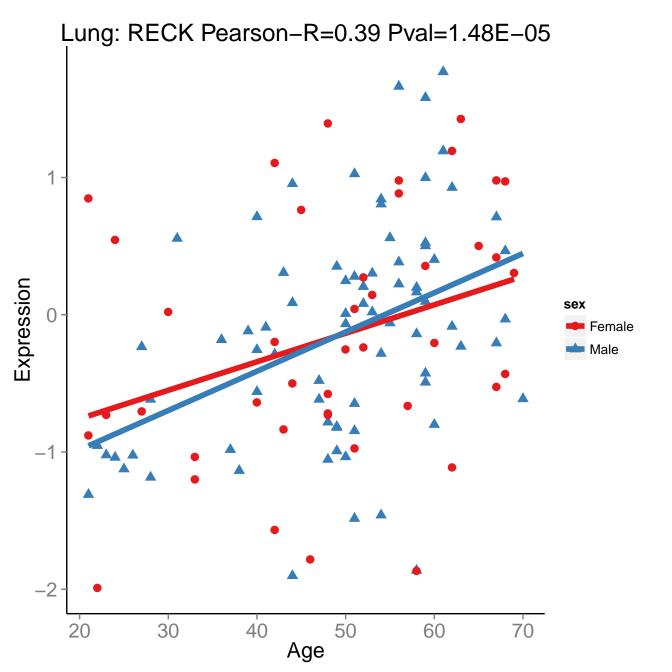


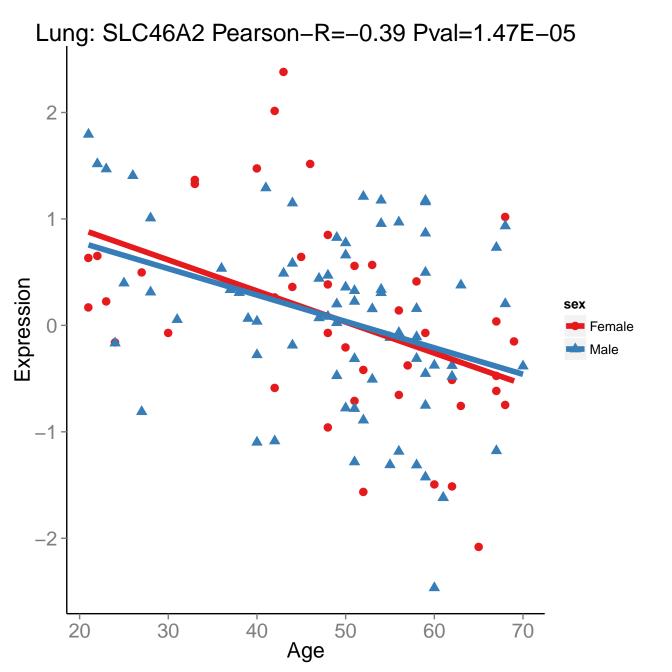


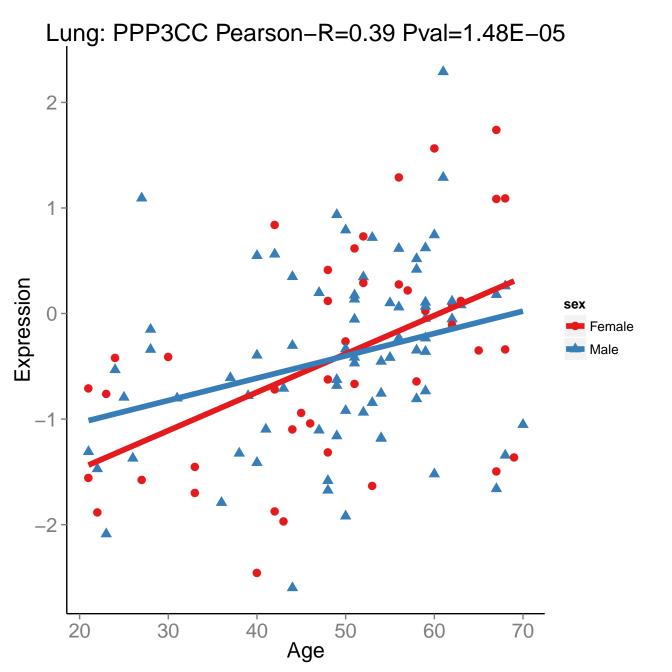


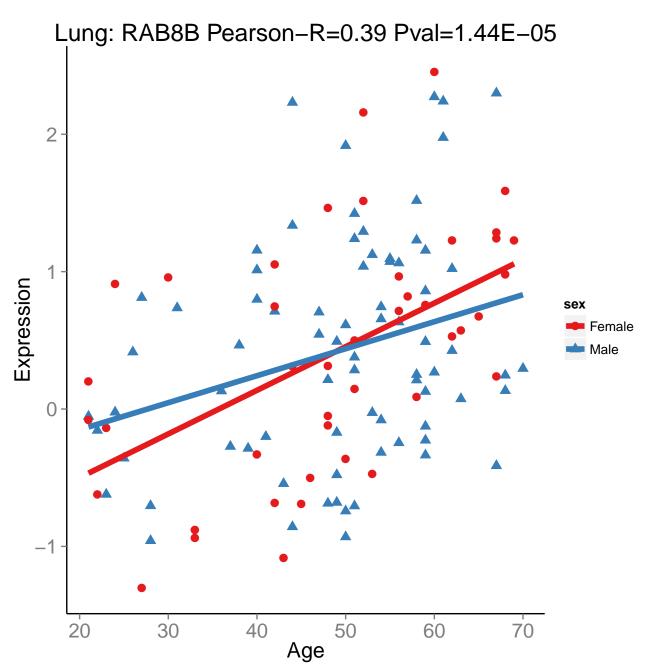




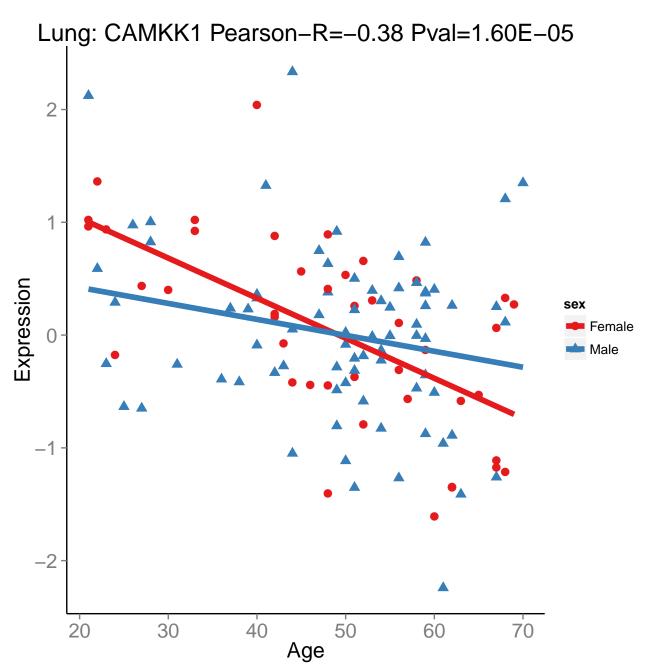


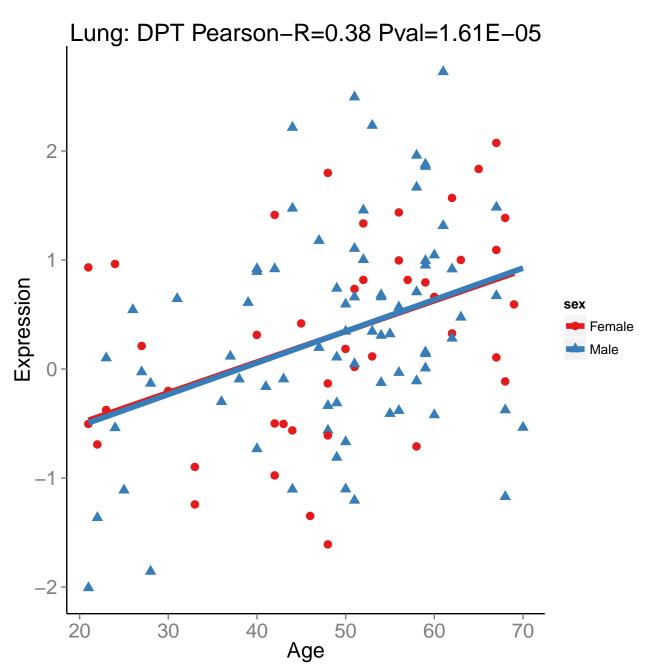


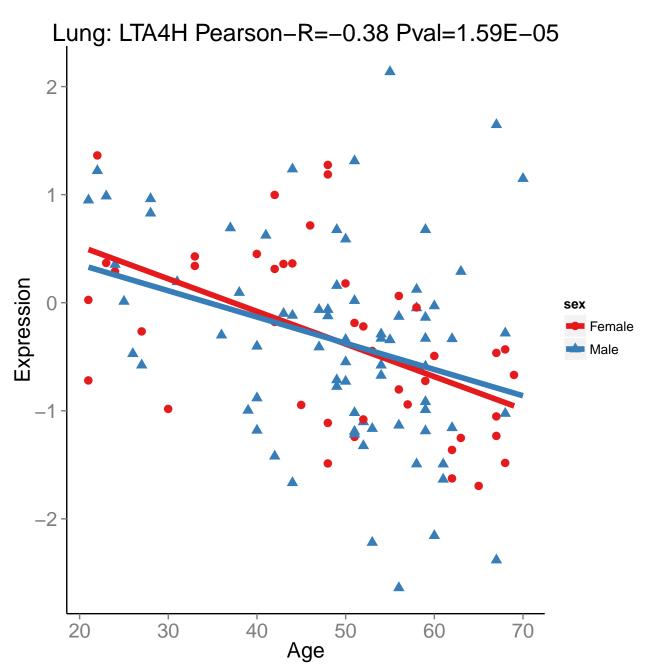




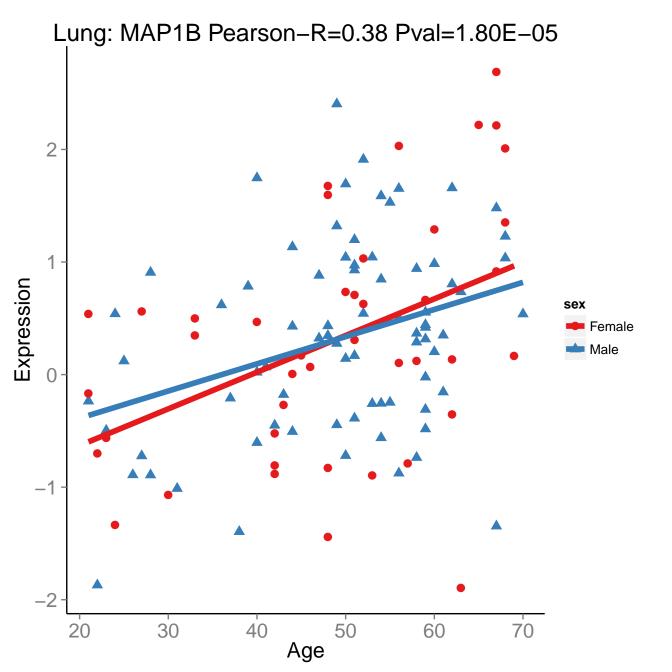


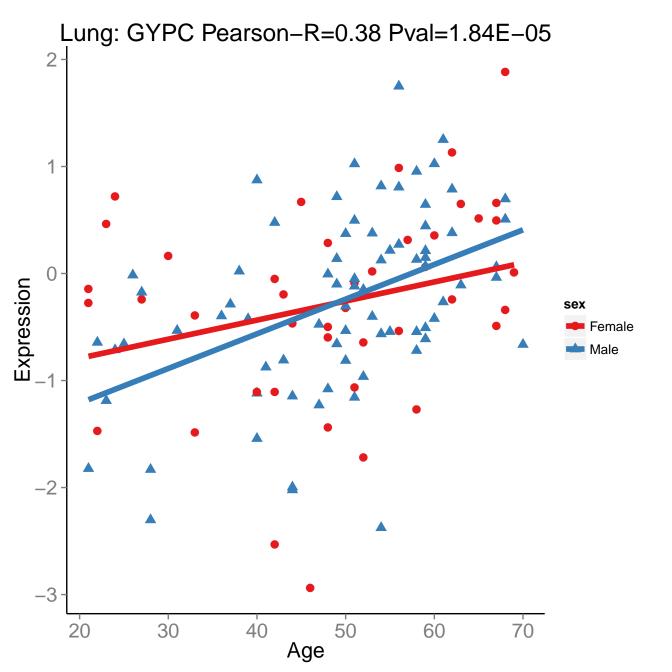


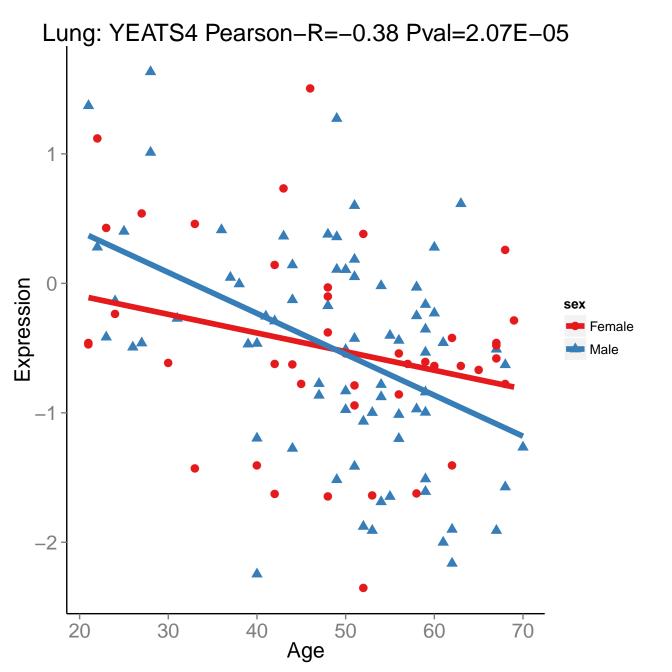


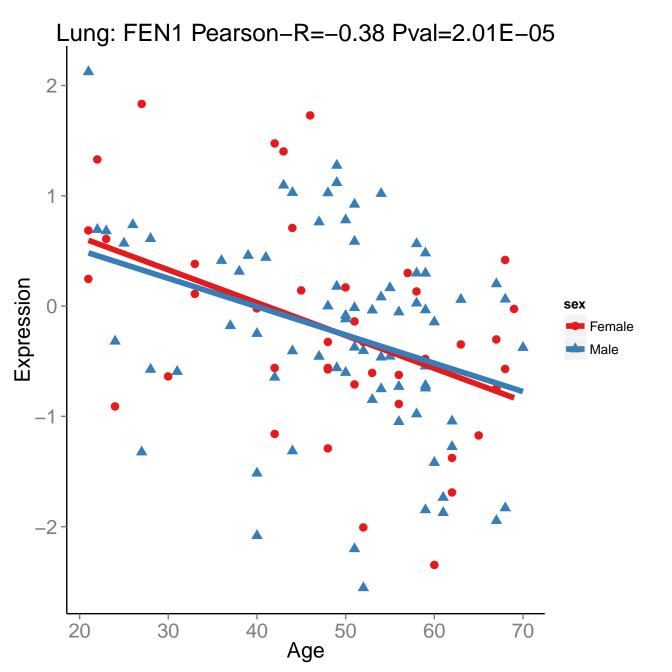


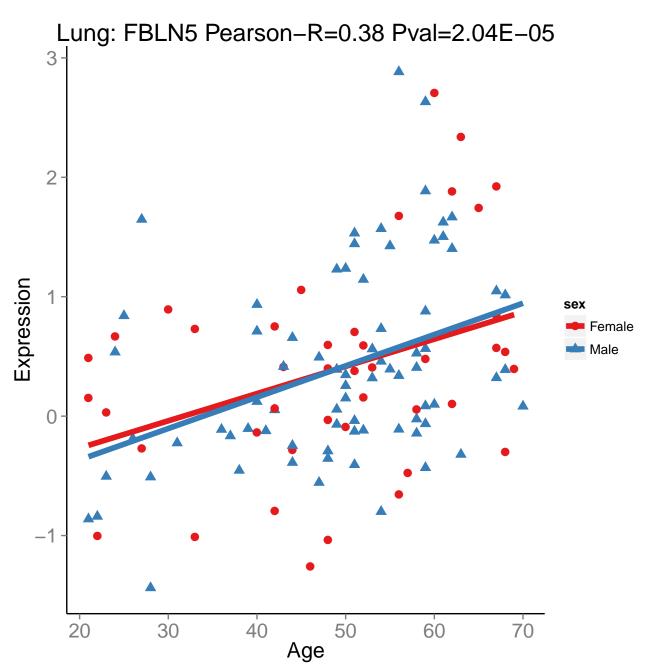


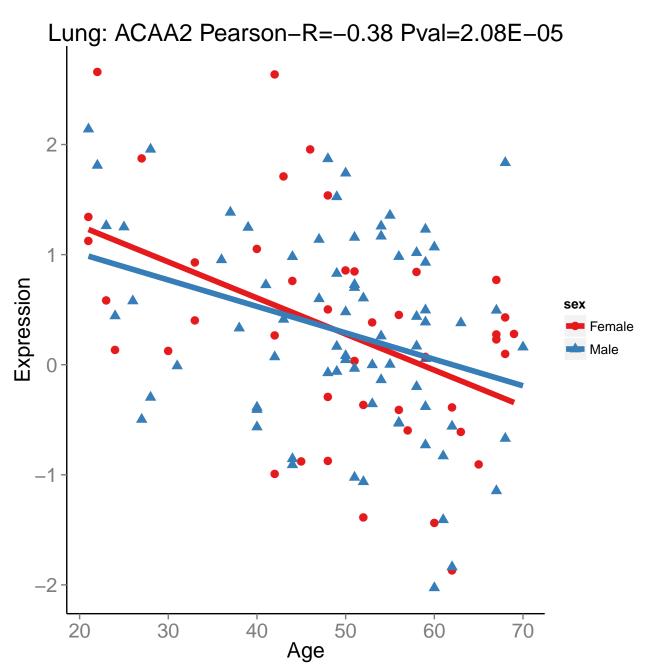


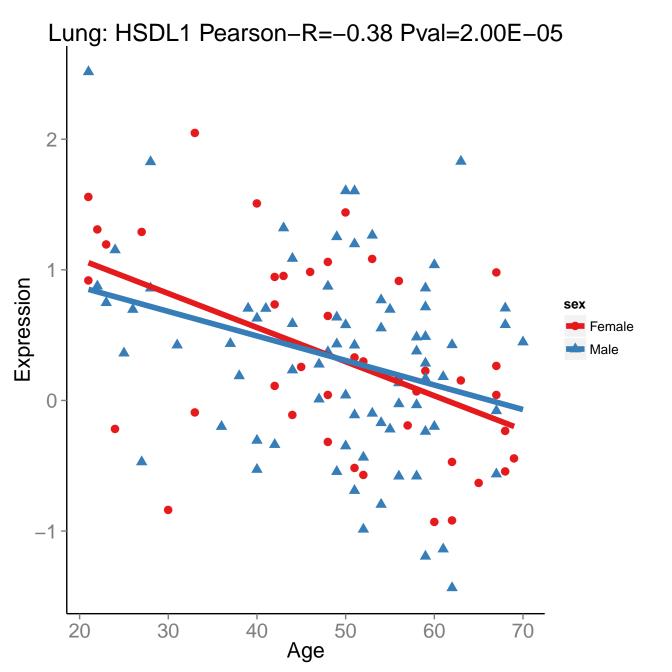


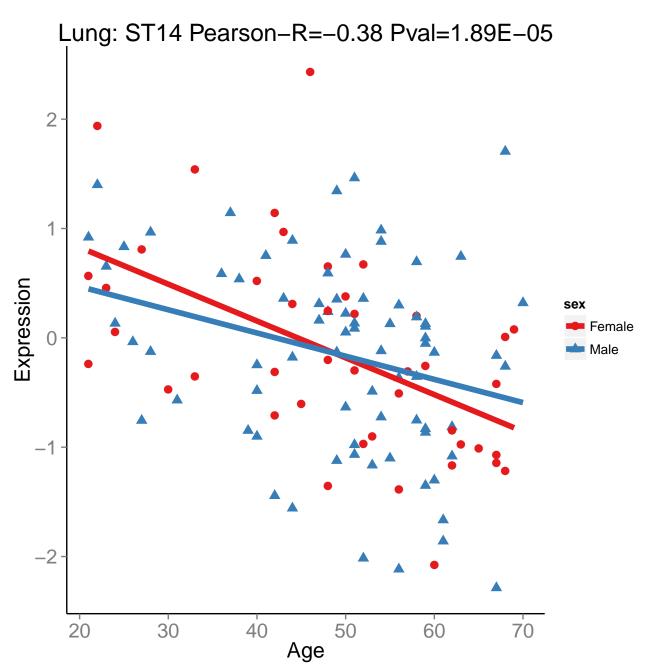


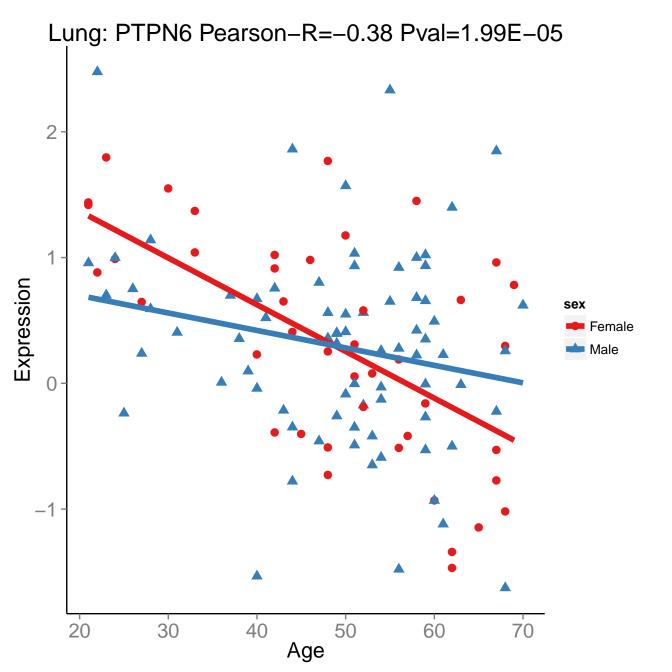


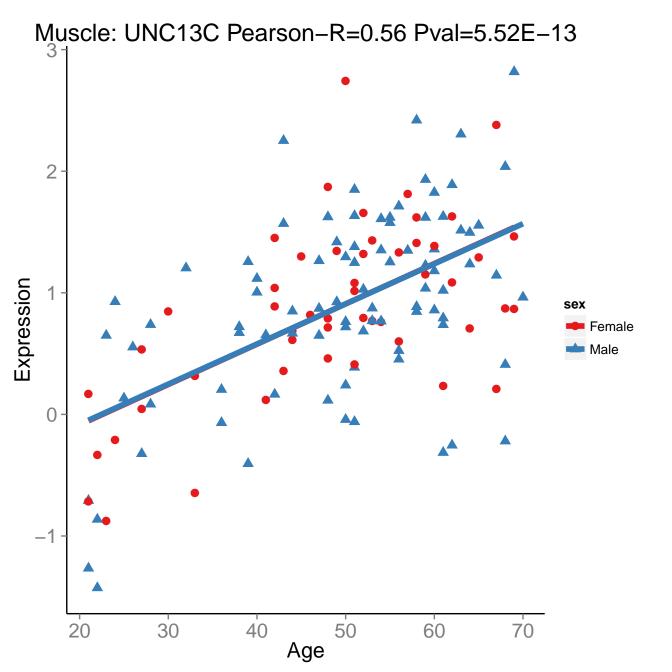


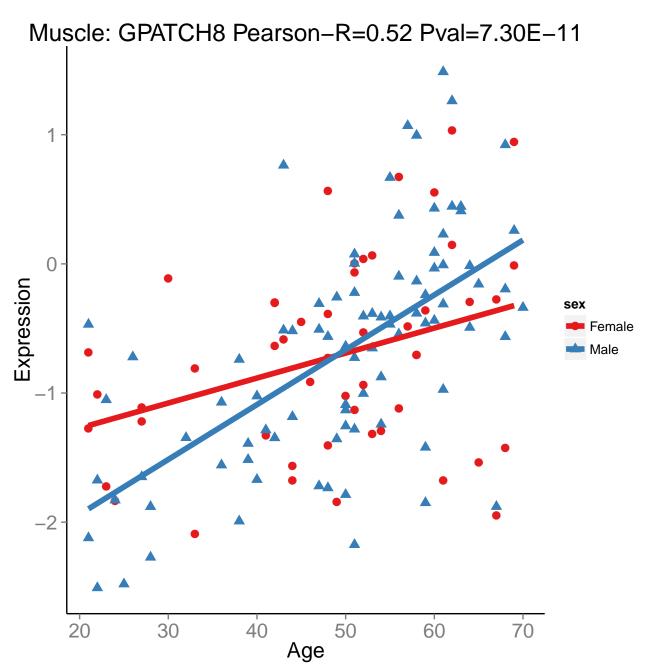


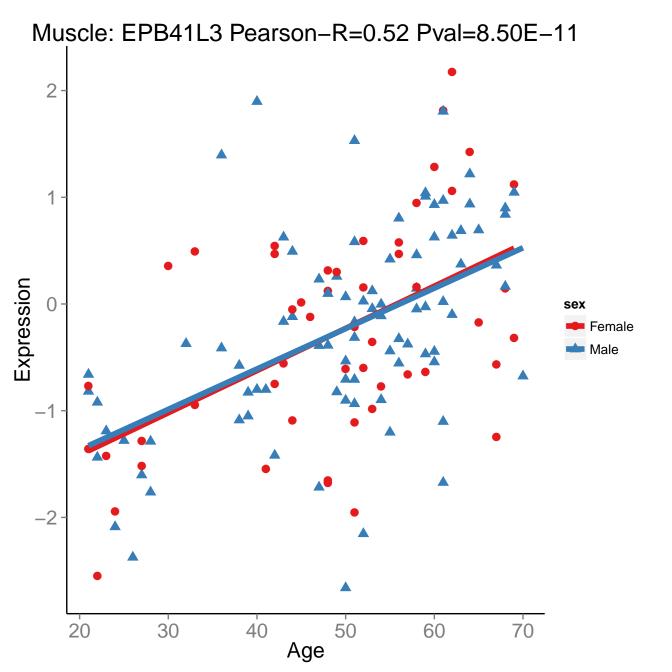


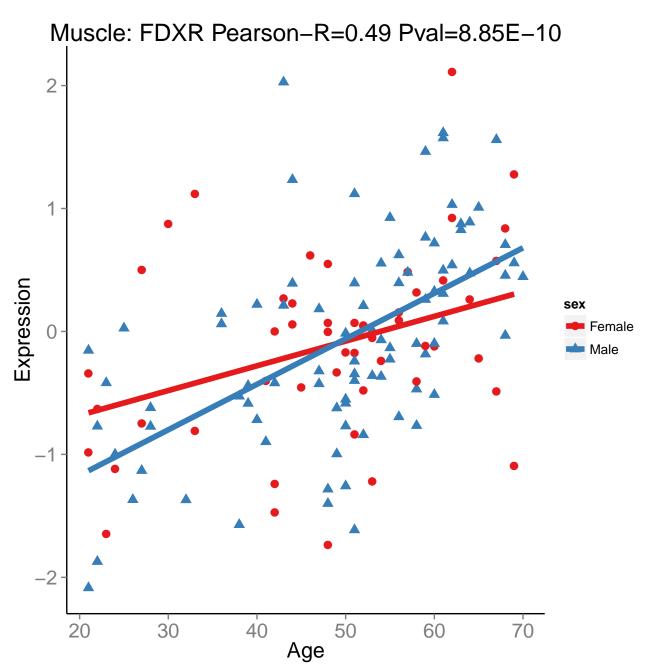


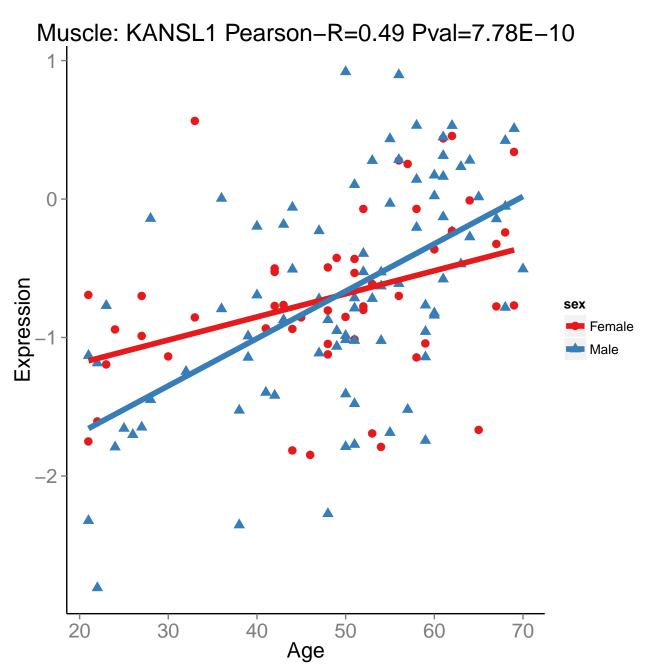




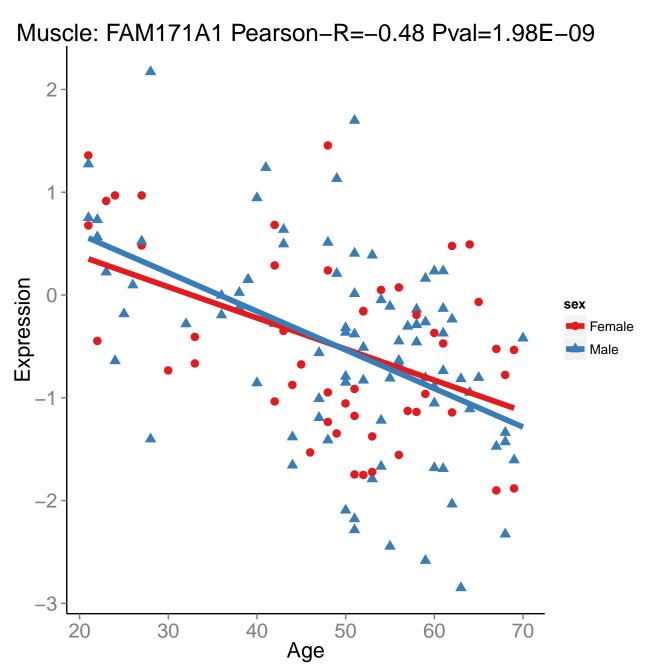


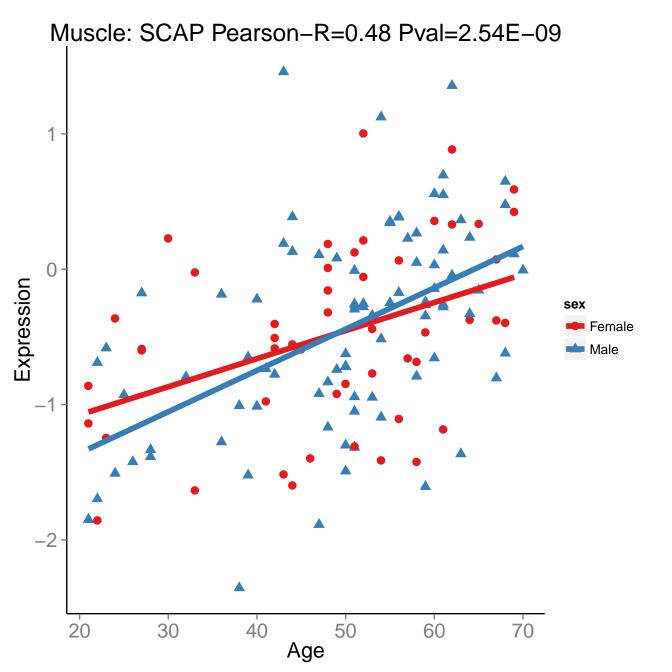


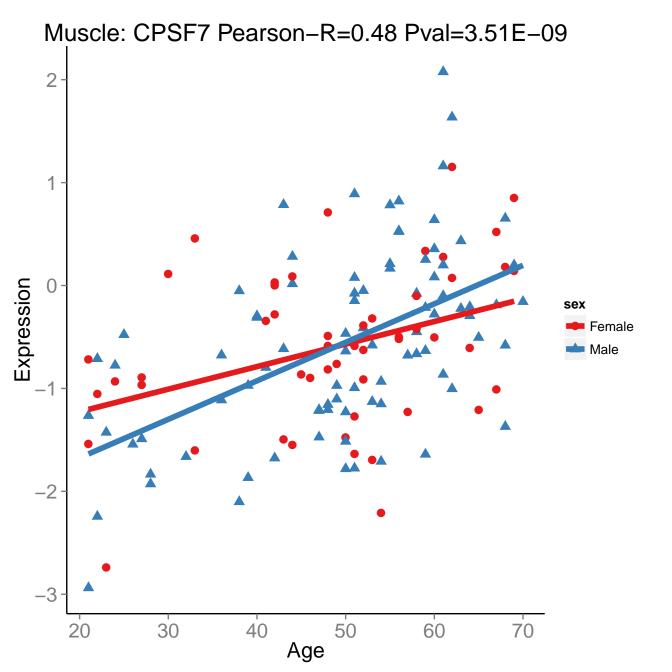




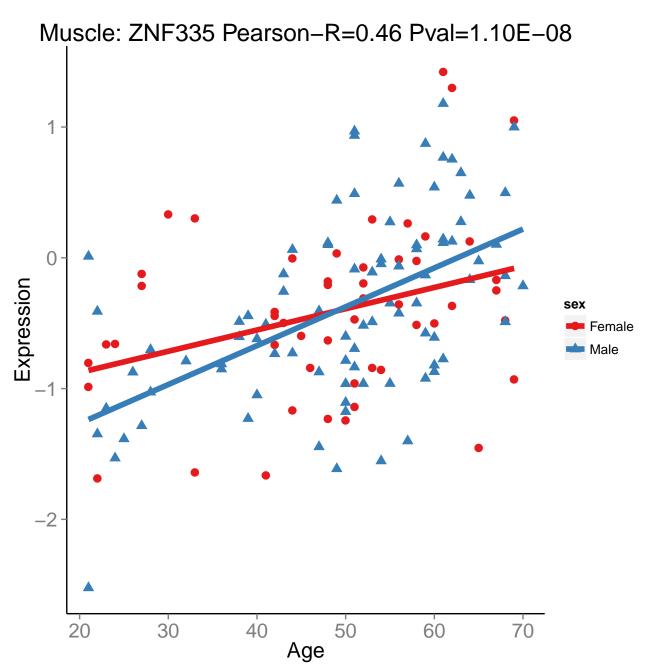


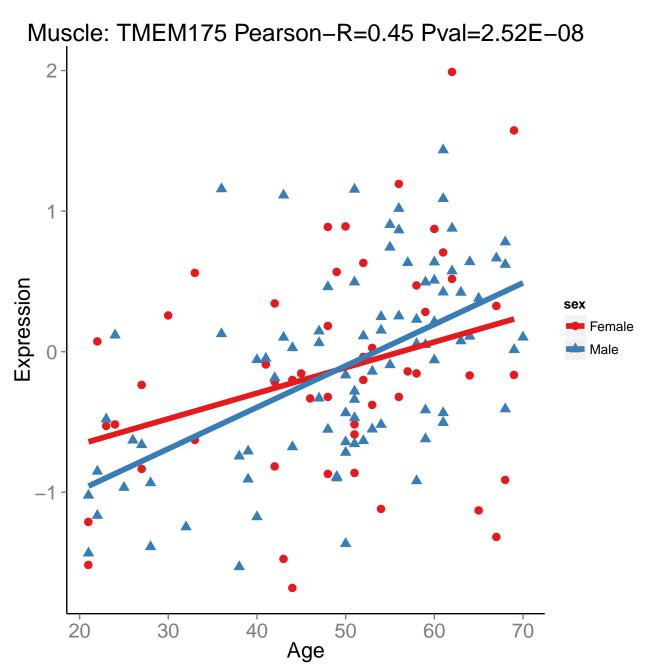


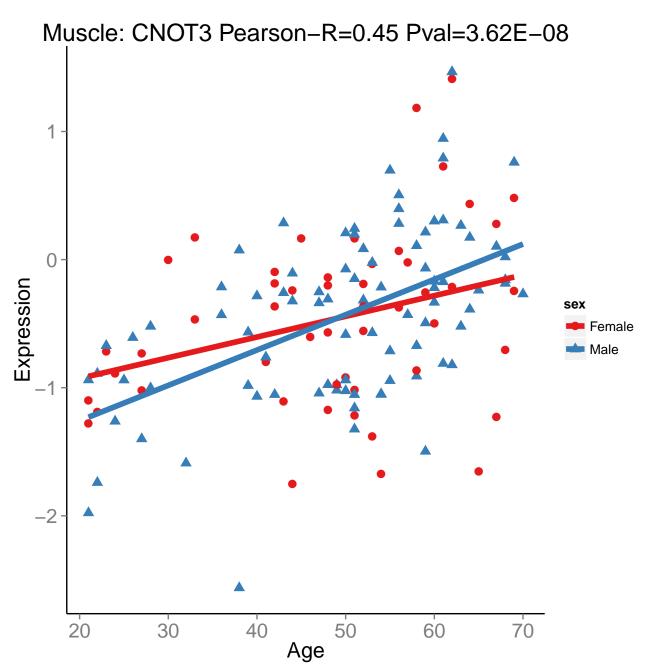


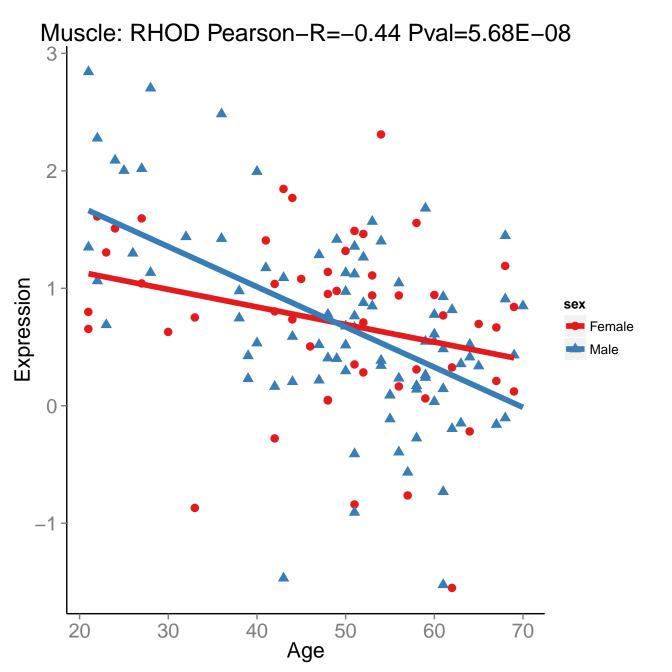


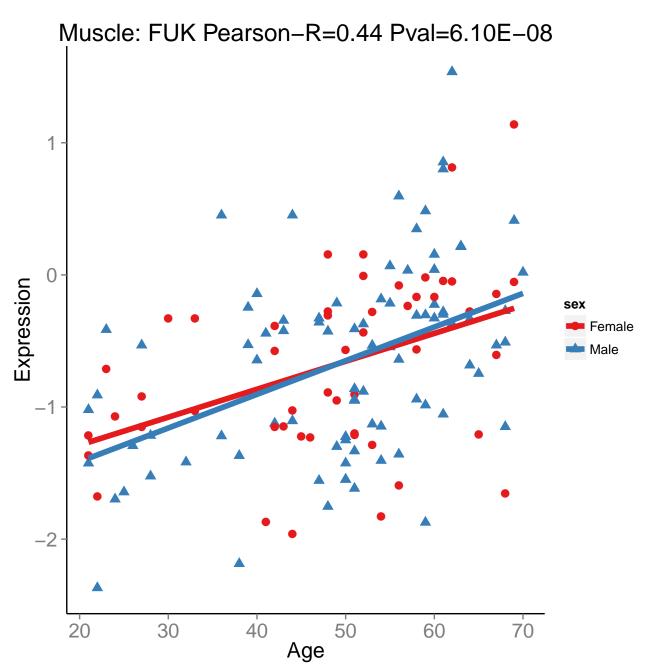
Muscle: ANKRD17 Pearson-R=0.46 Pval=1.17E-08 1 0 Expression sex Female Male -2 40 30 50 60 20 70 Age

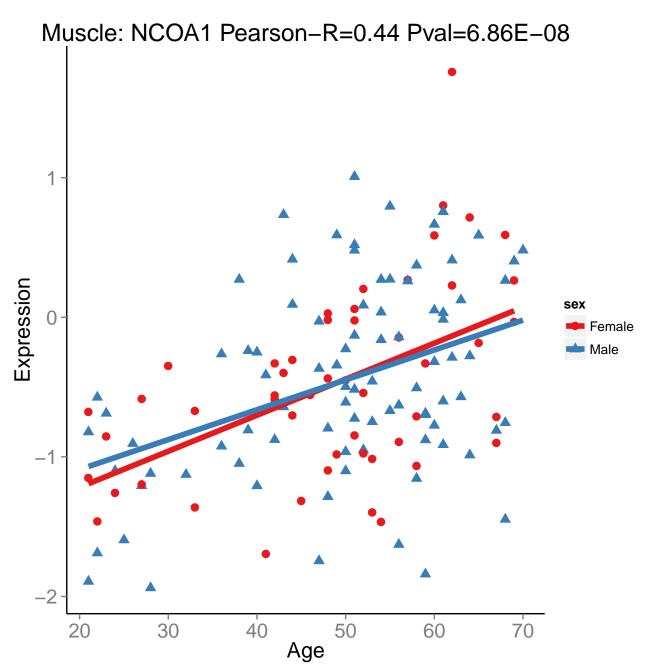


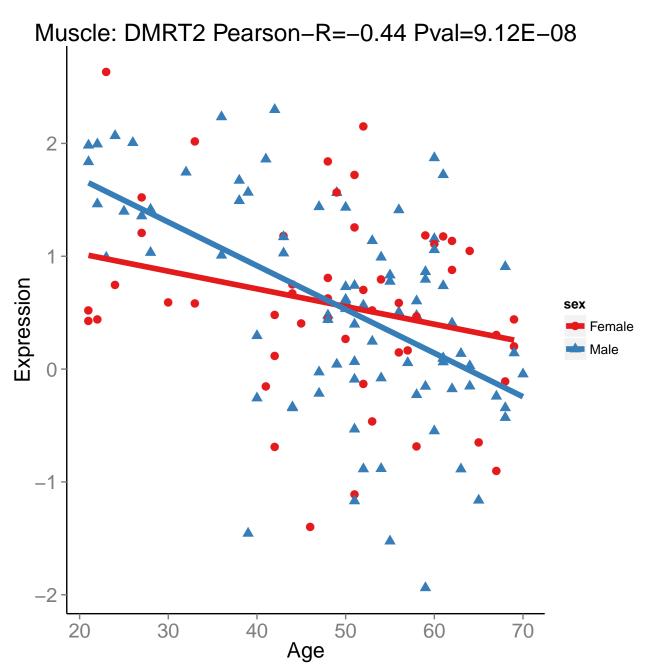




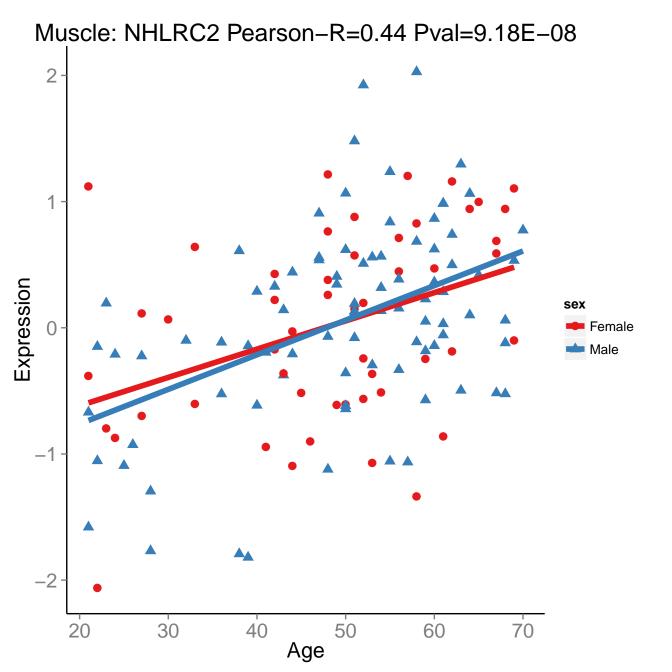


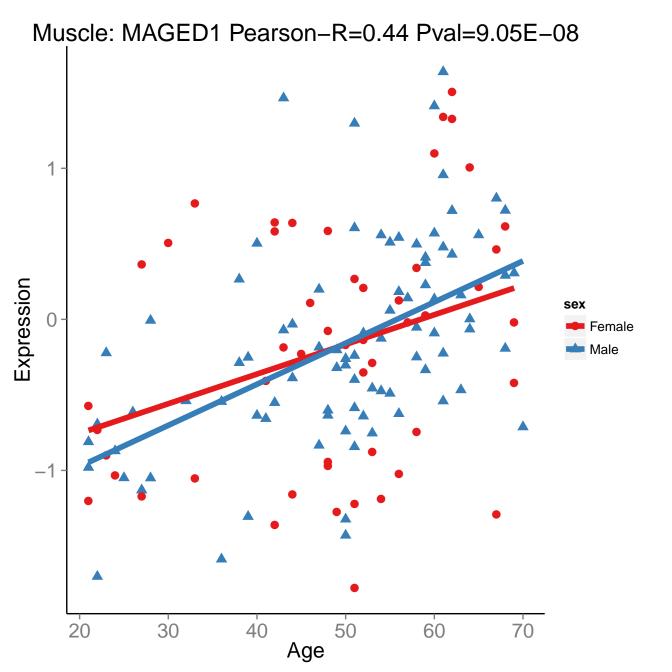


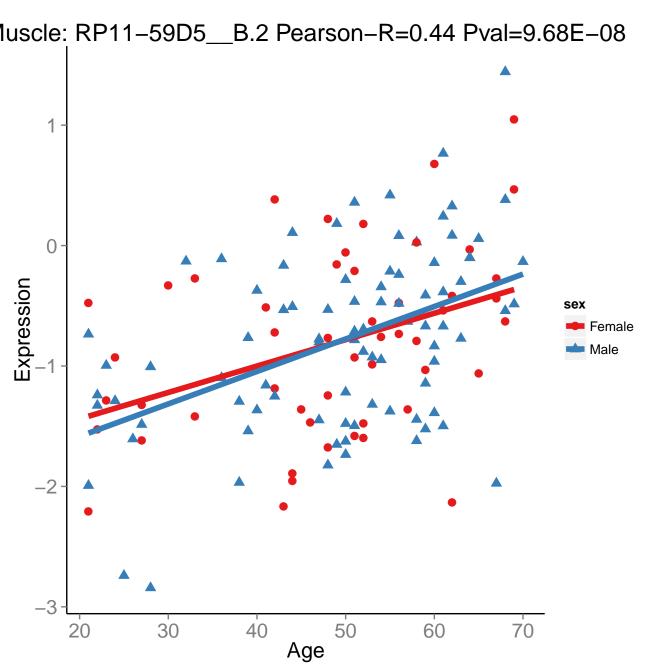


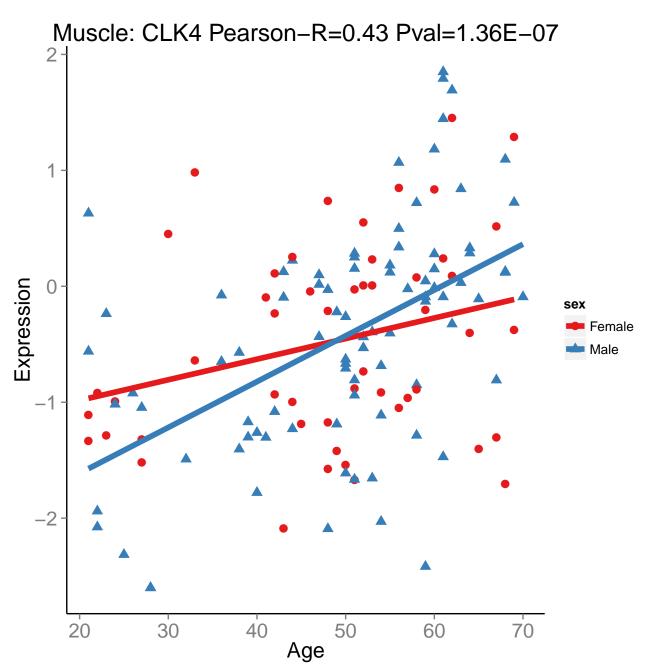






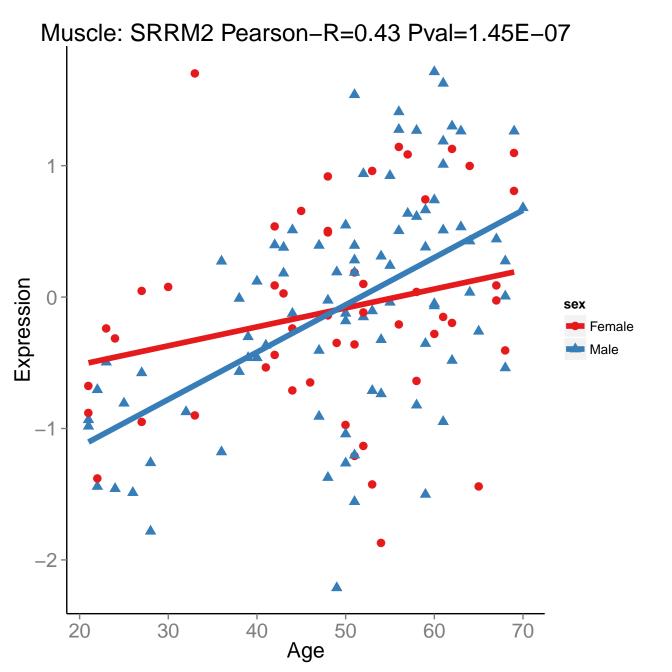


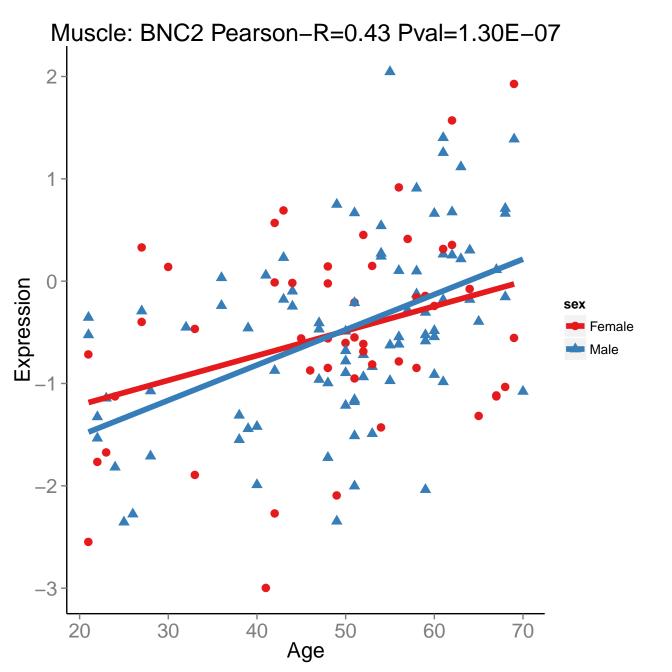




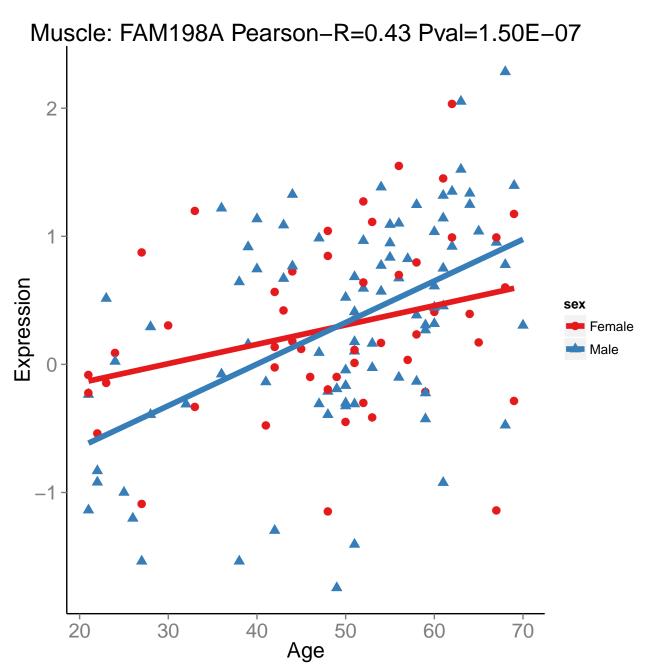




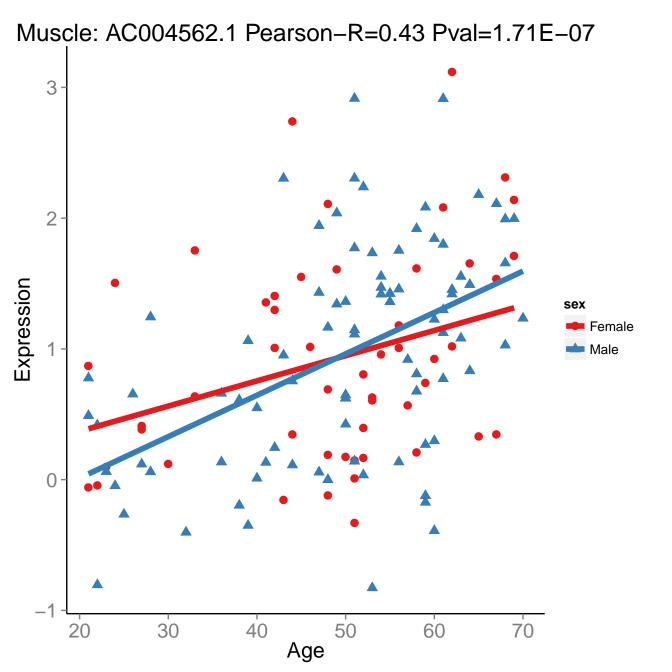


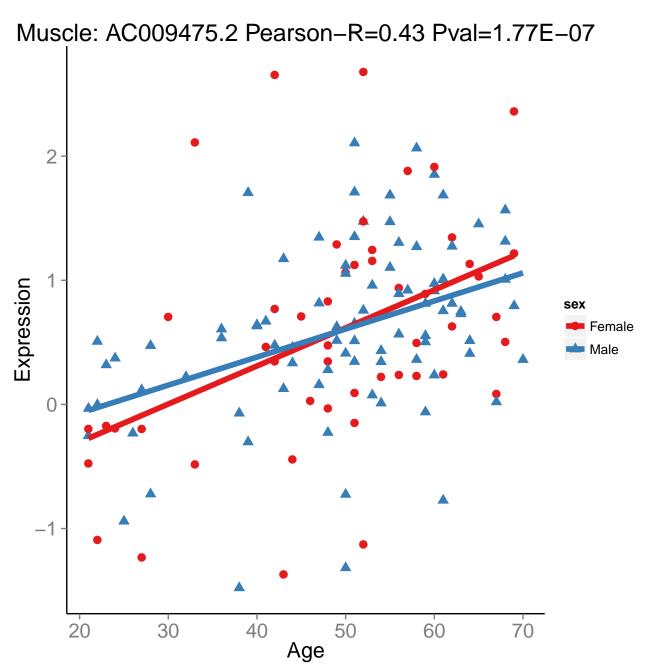


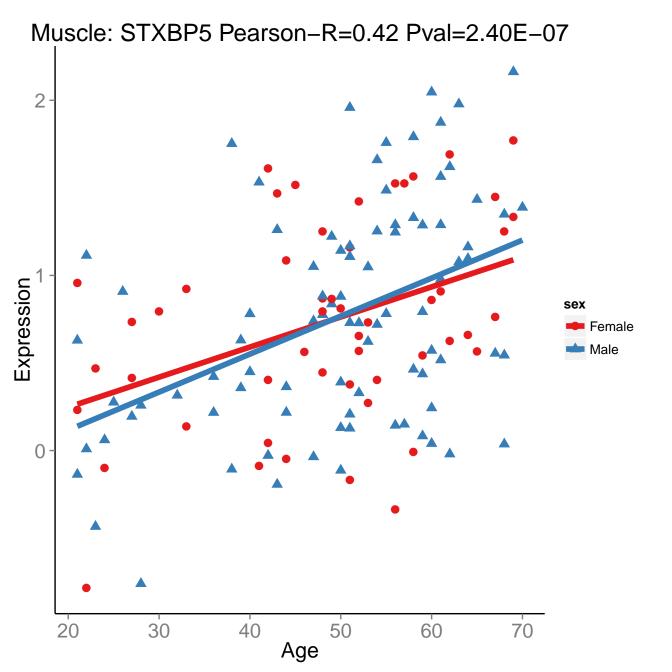
Muscle: NFKBIB Pearson-R=-0.43 Pval=1.28E-07 2-1 Expression sex Female Male 40 20 30 50 60 70 Age



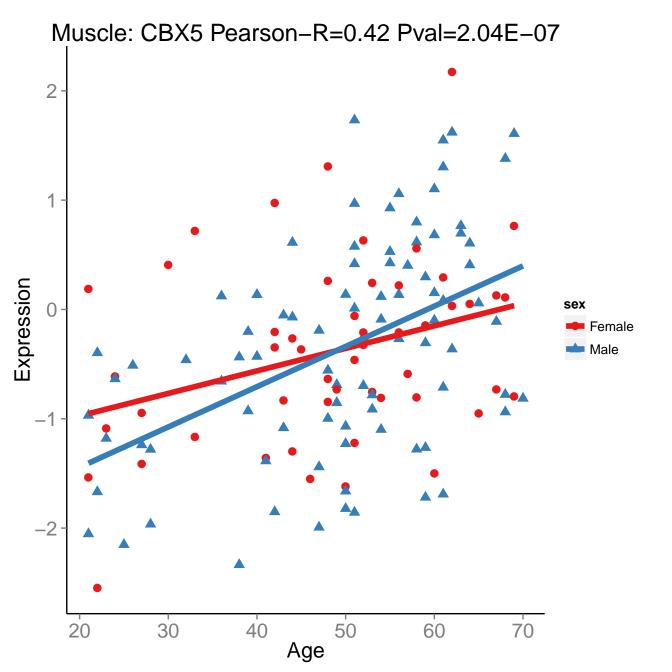


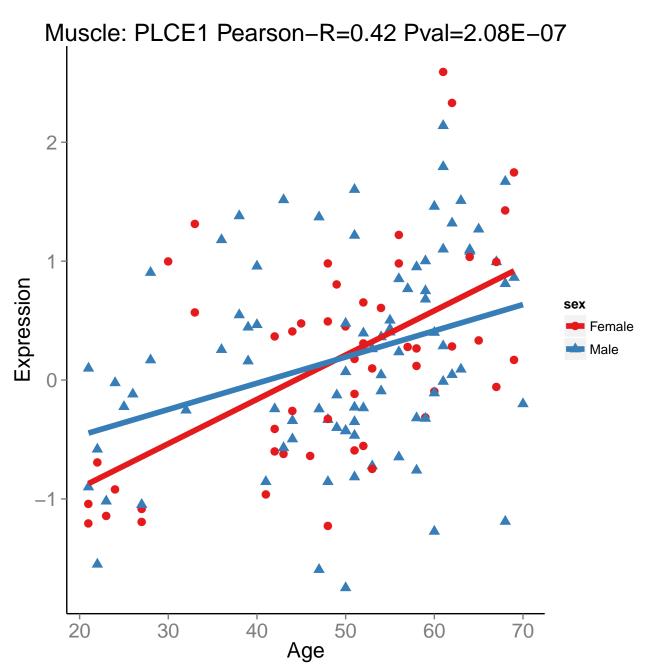


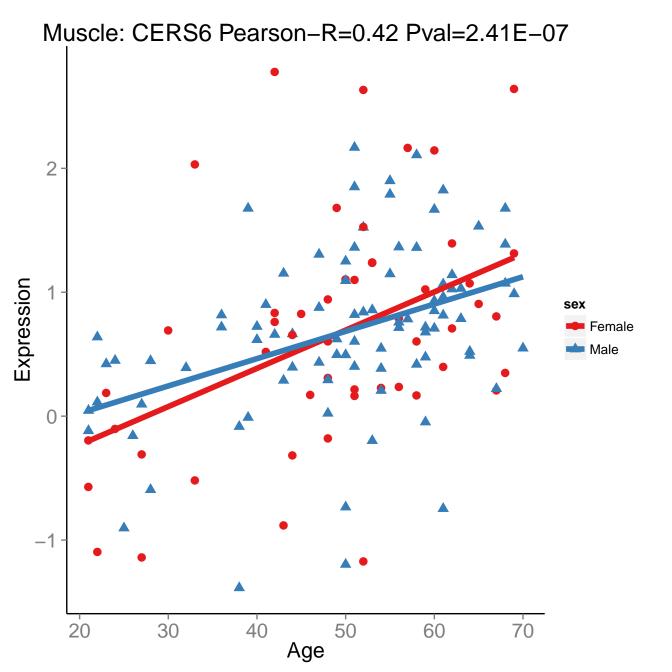




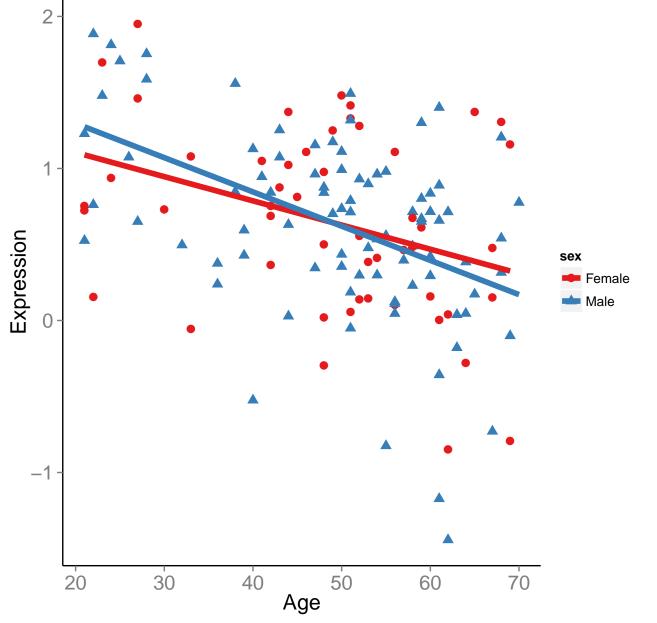


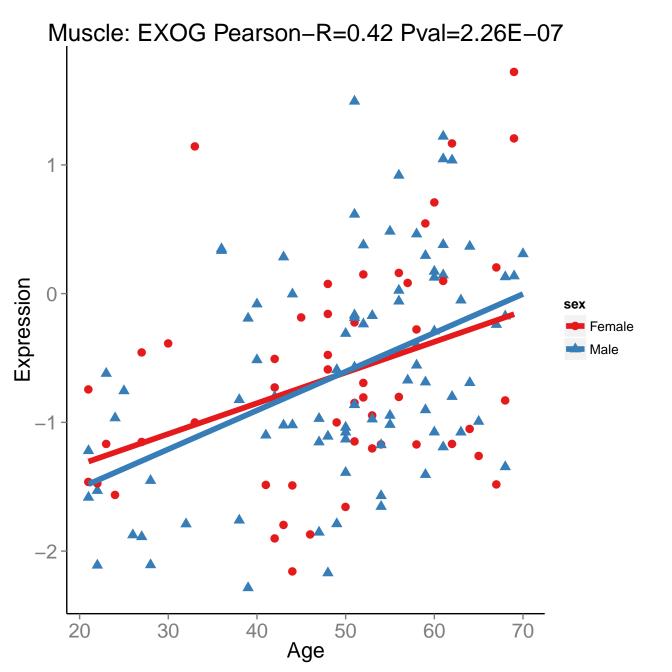


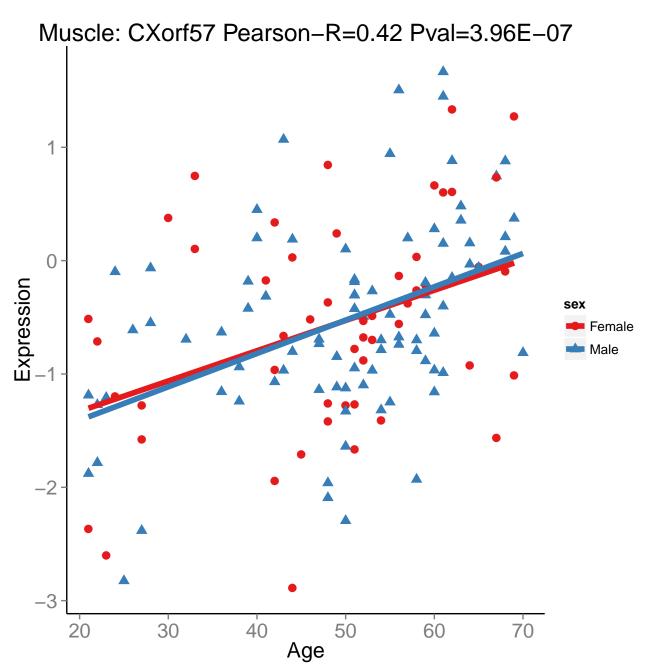


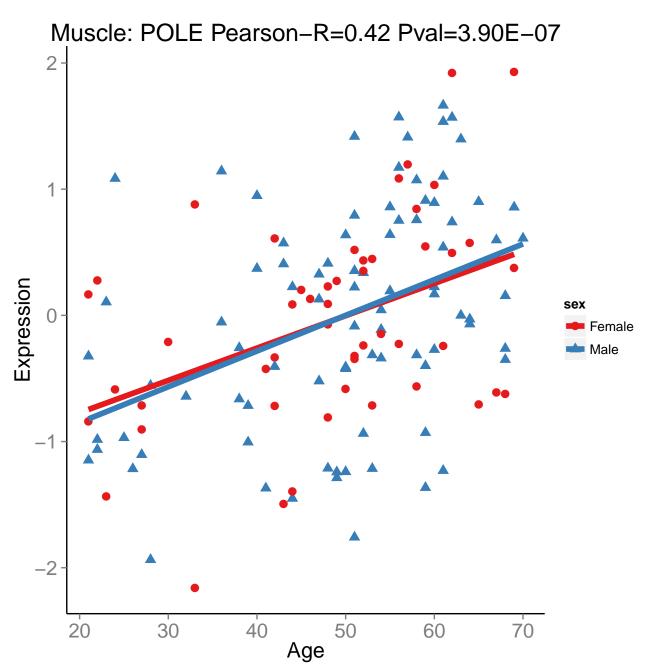


Muscle: NFE2L1 Pearson-R=-0.42 Pval=2.19E-07

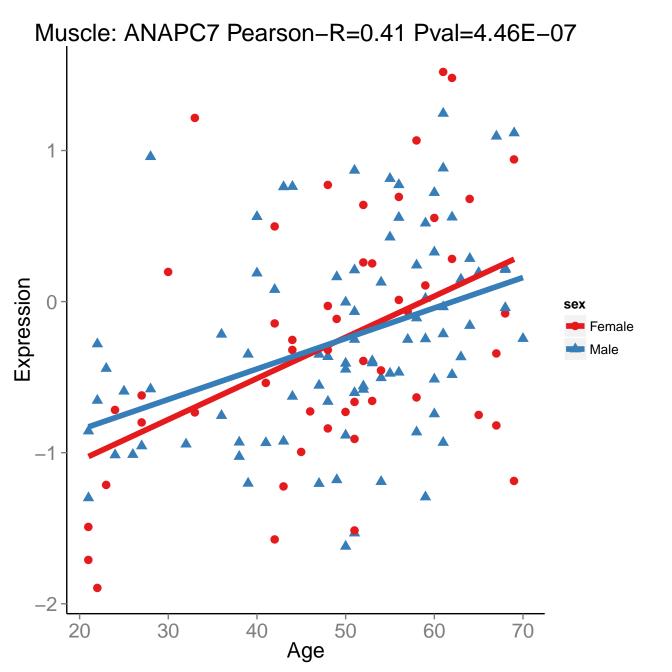


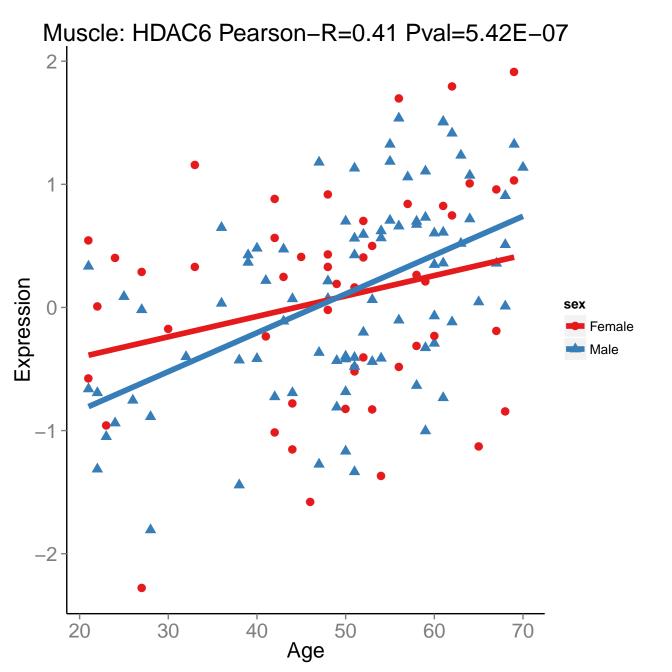


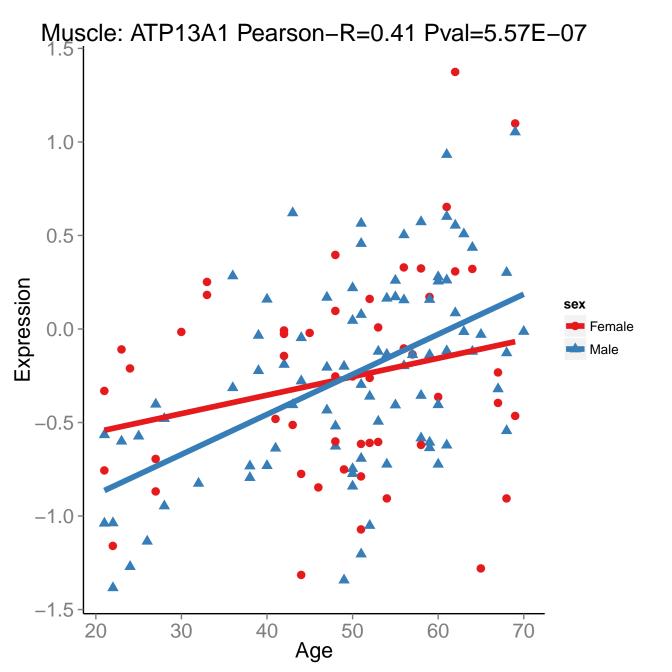


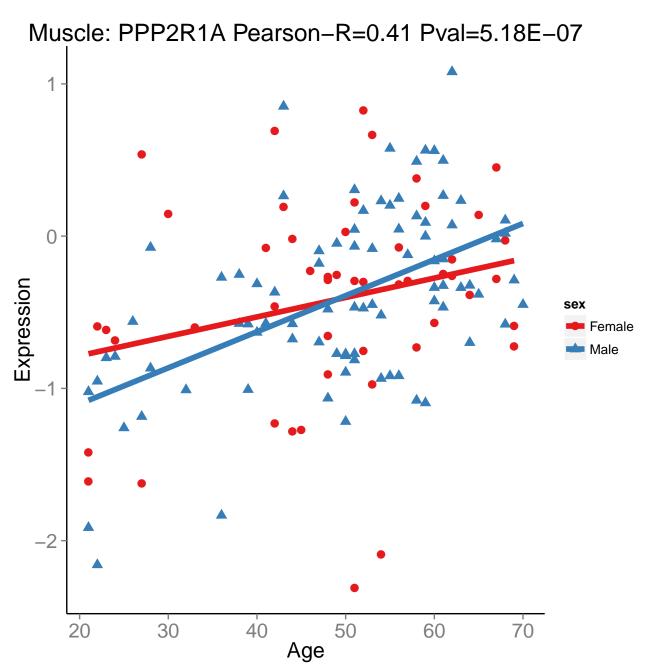


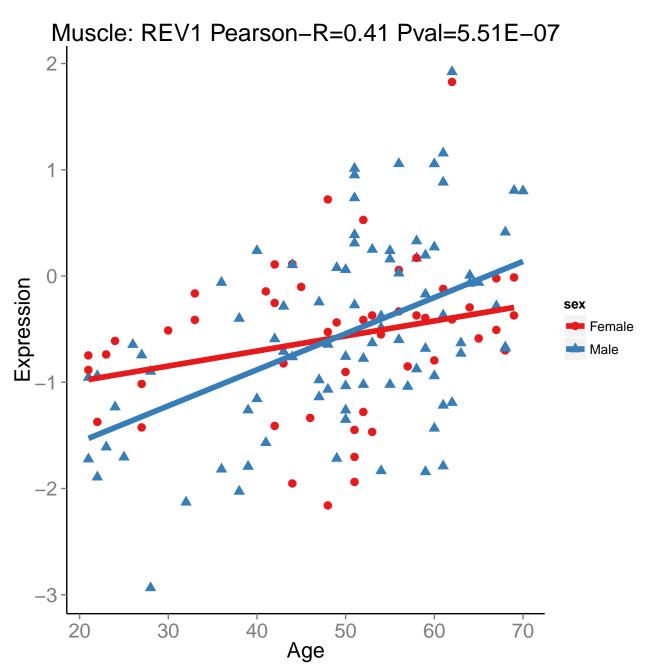


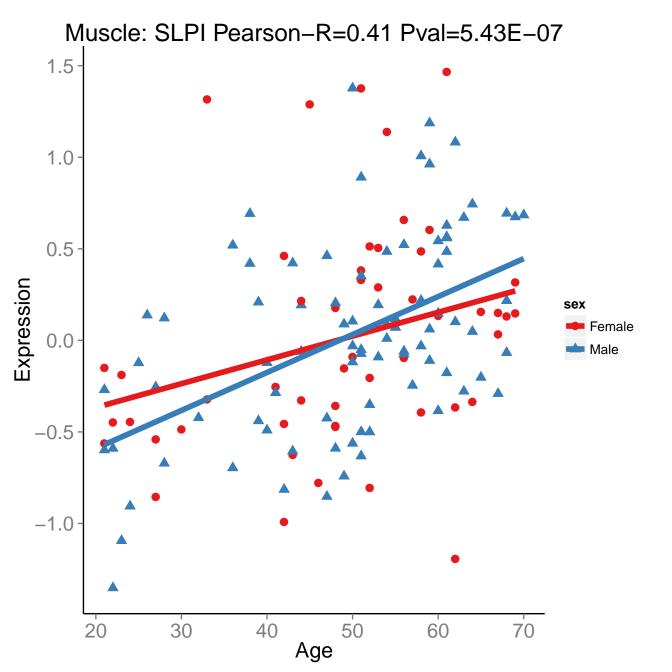


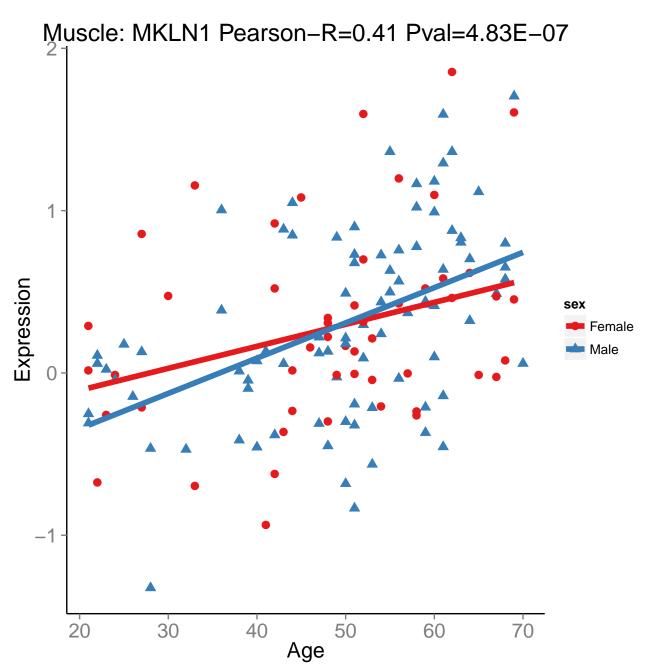




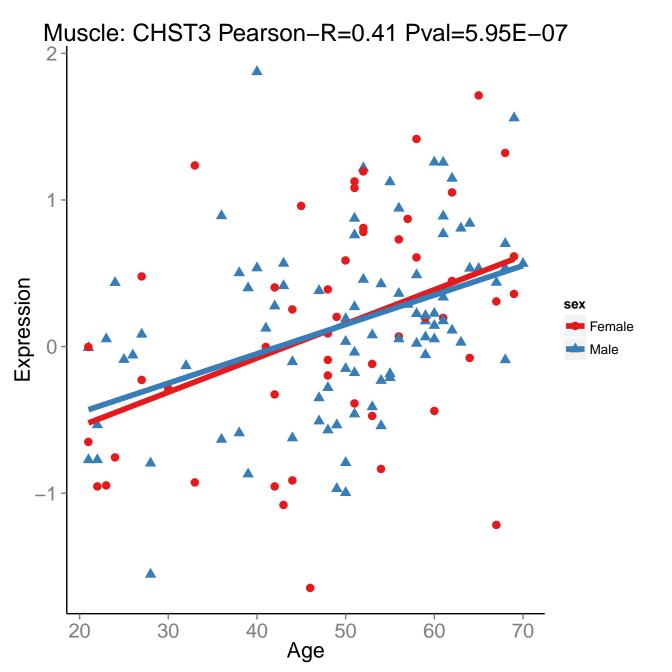


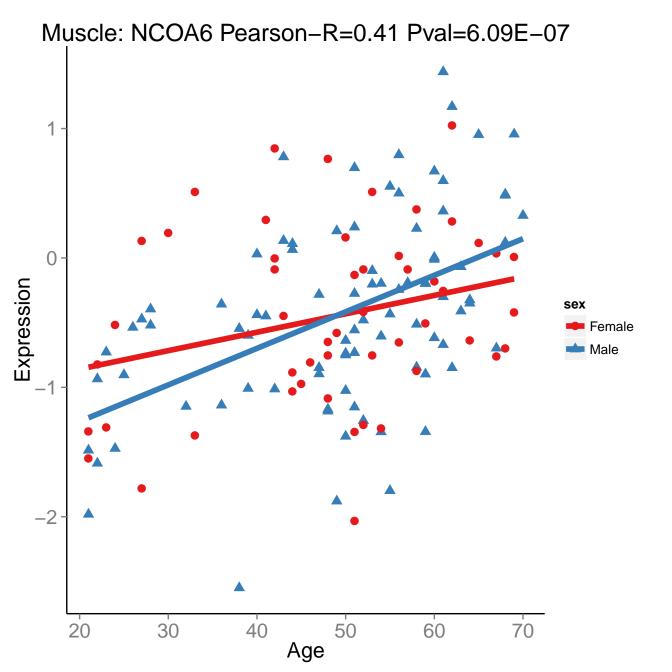




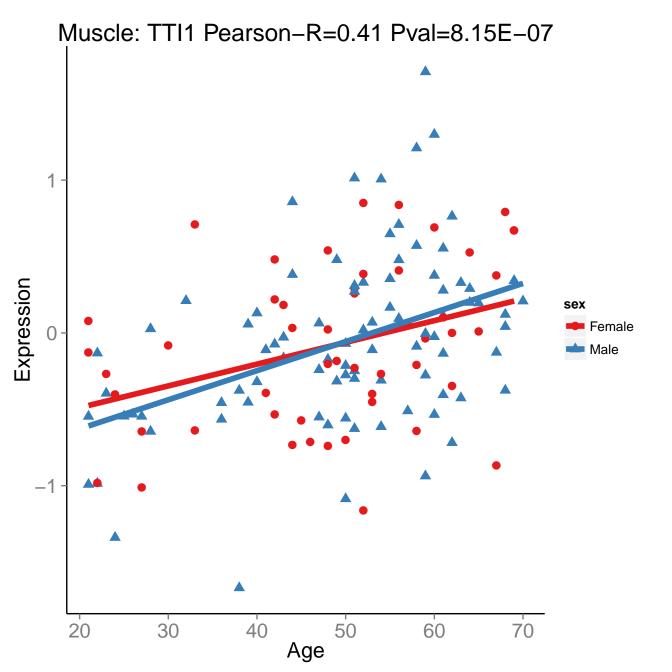


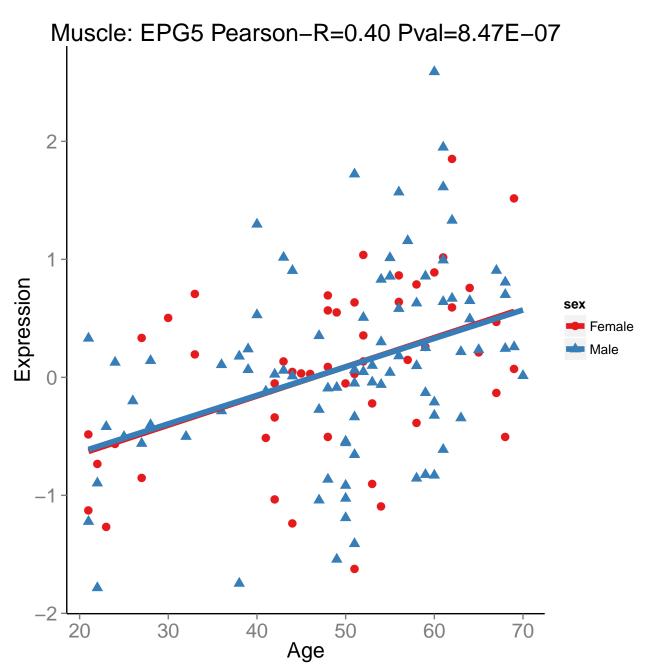


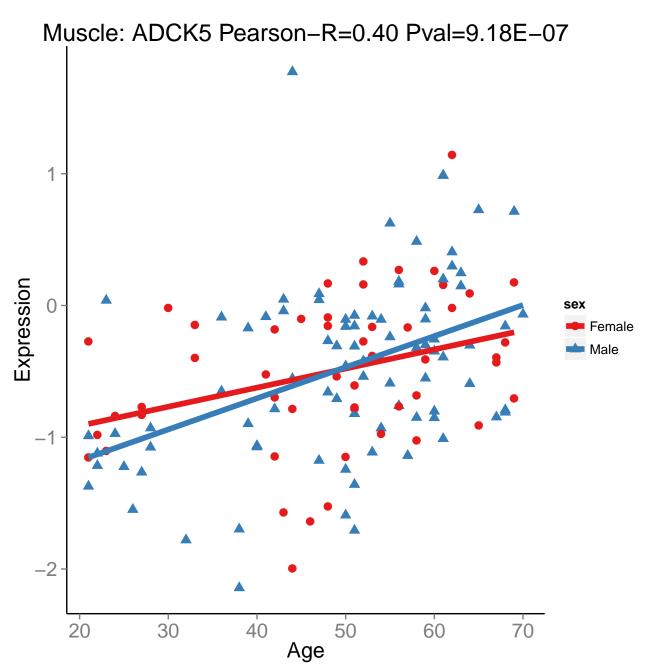




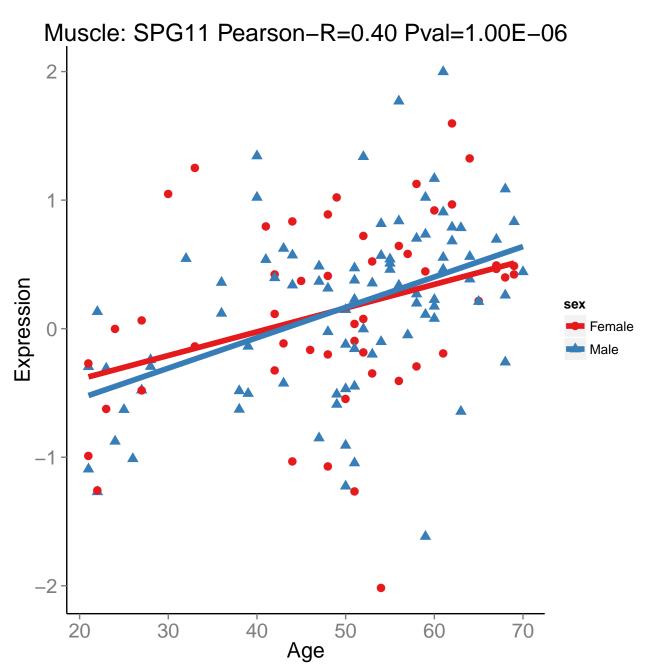
Muscle: SAE1 Pearson-R=0.41 Pval=6.49E-07 1.5-1.0 0.5 Expression sex Female 0.0 Male -1.0 30 40 60 50 70 20 Age

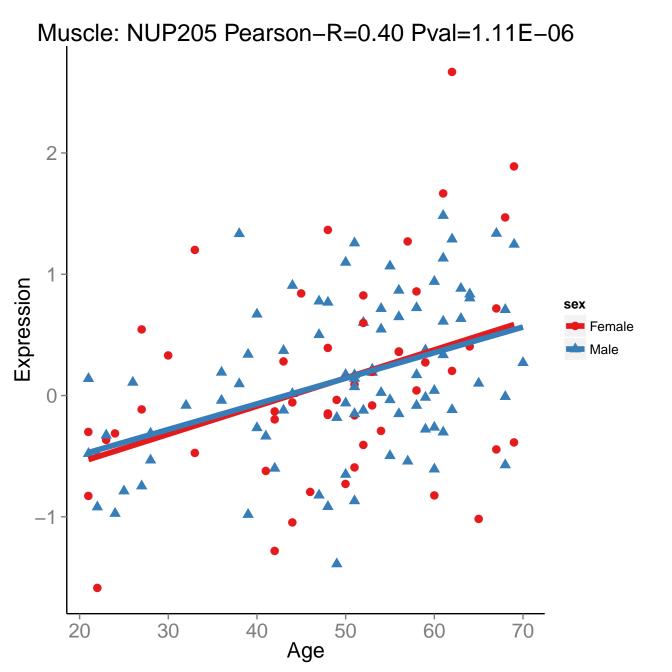


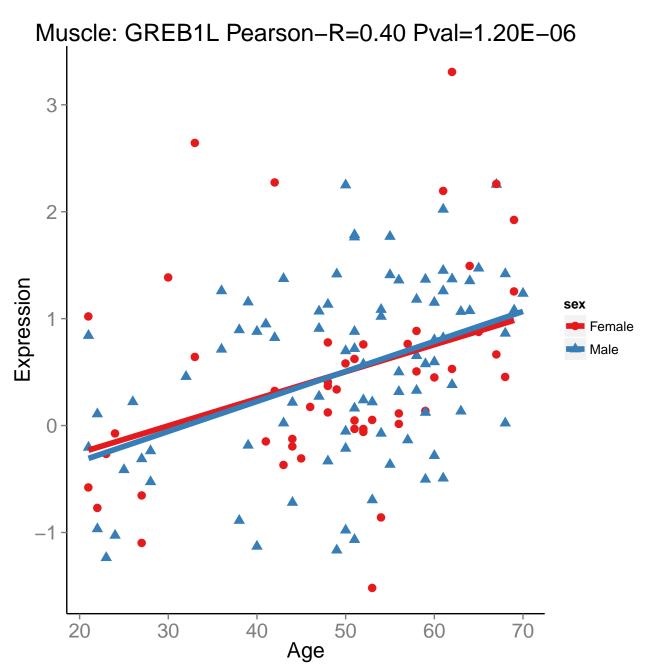


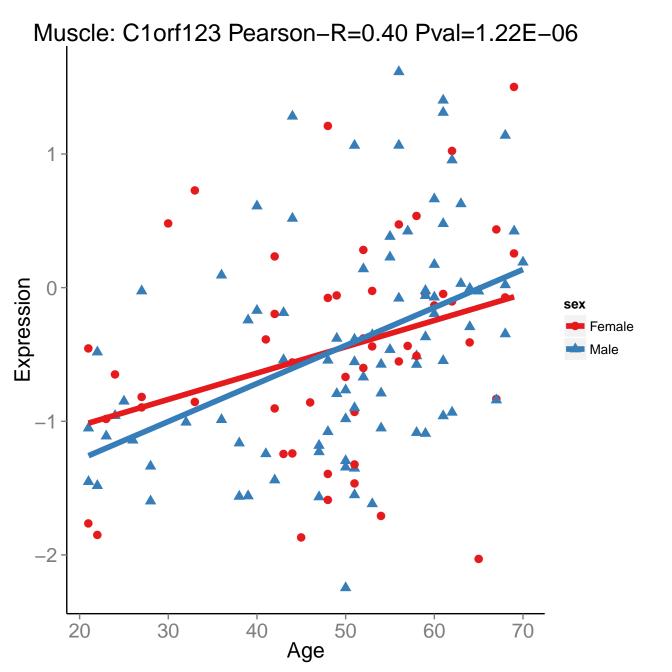


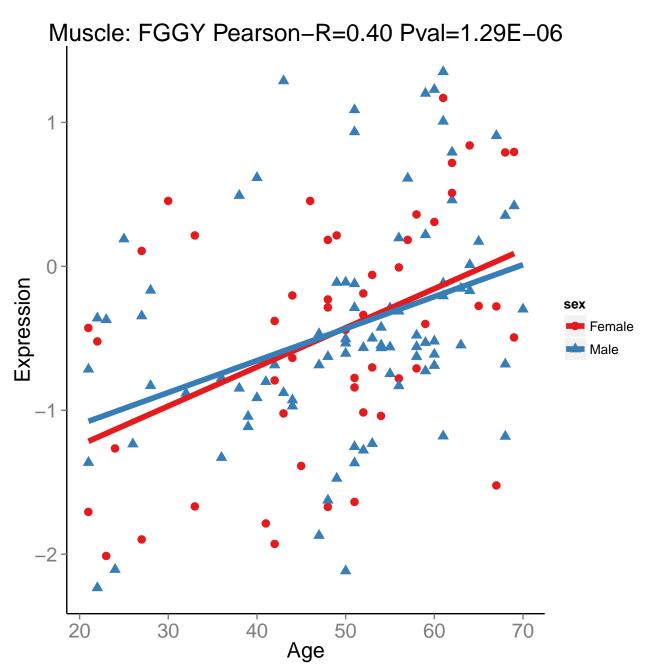


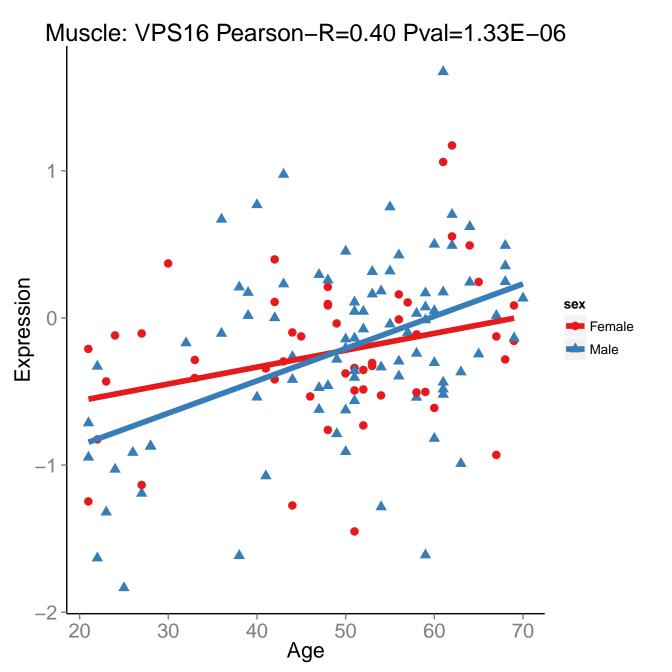


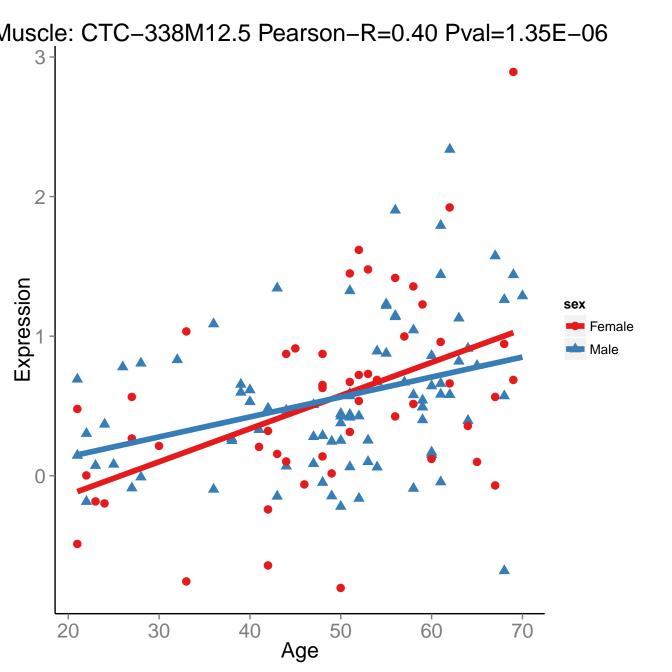


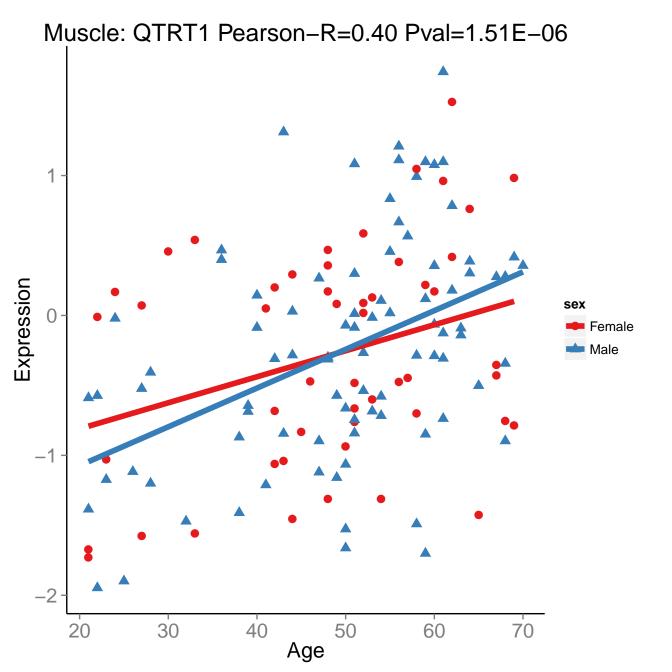


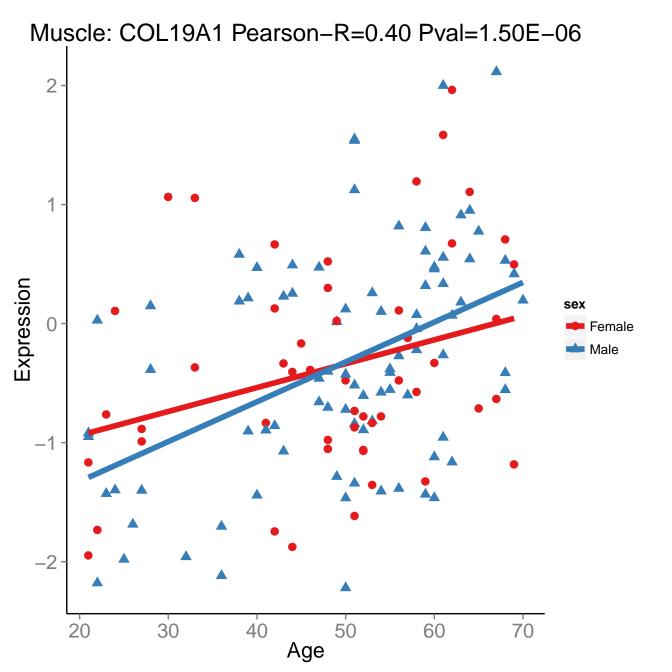


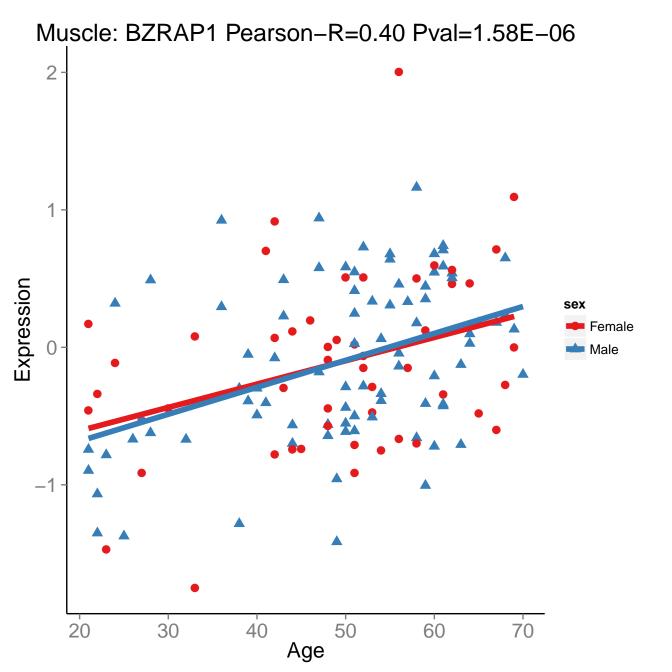


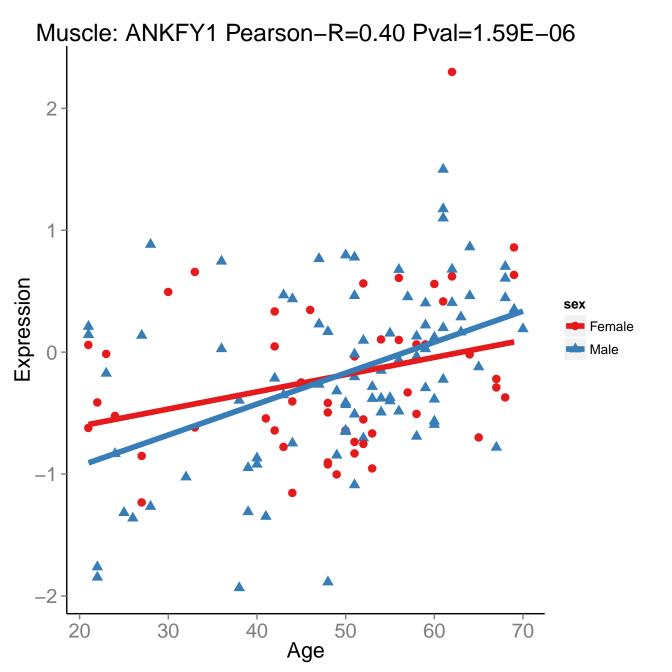


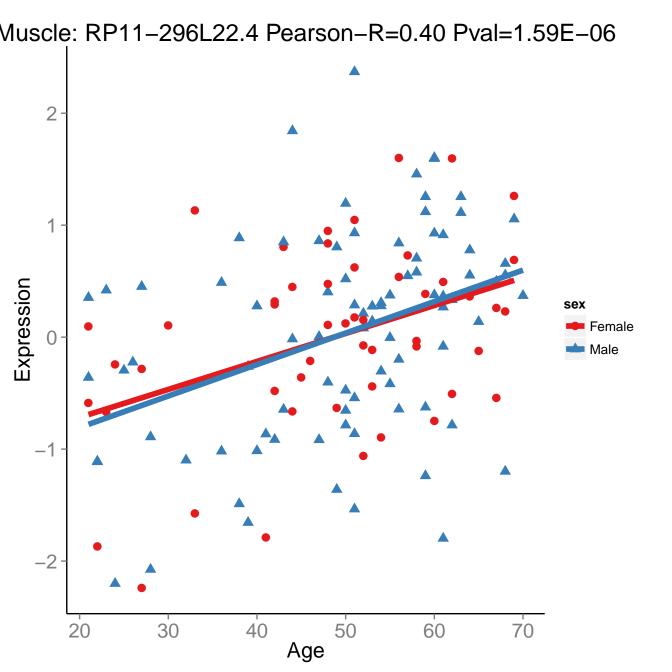




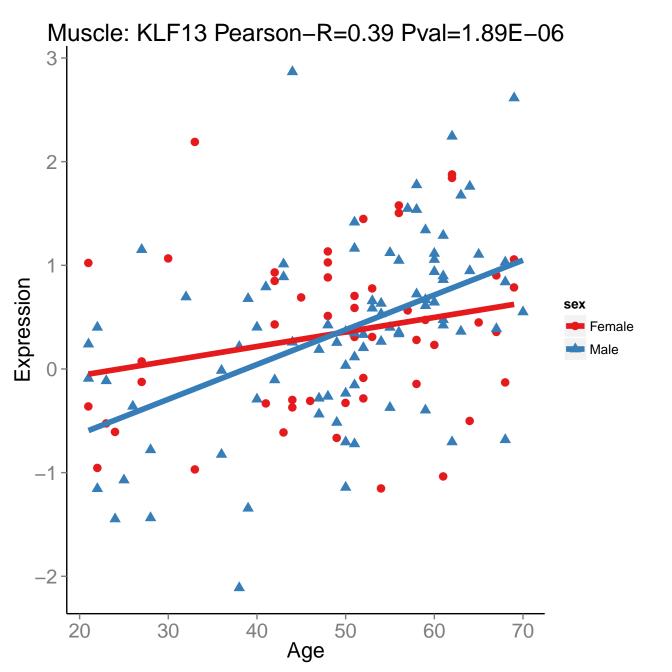


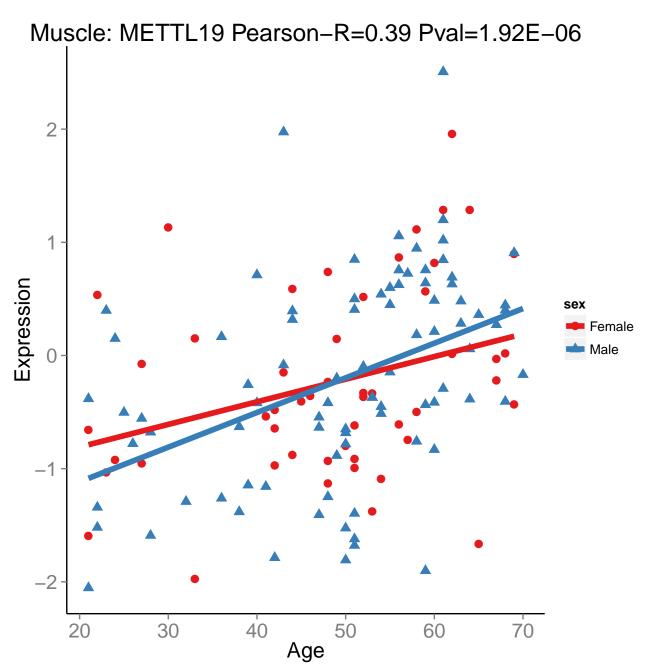


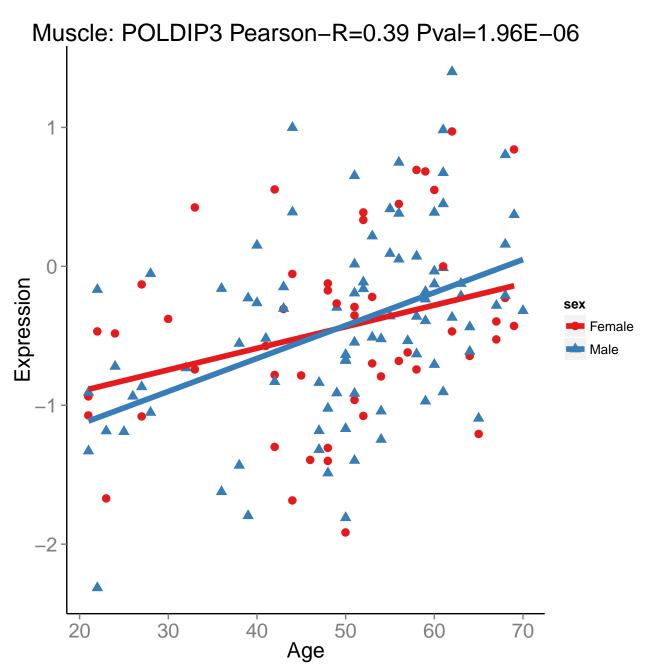


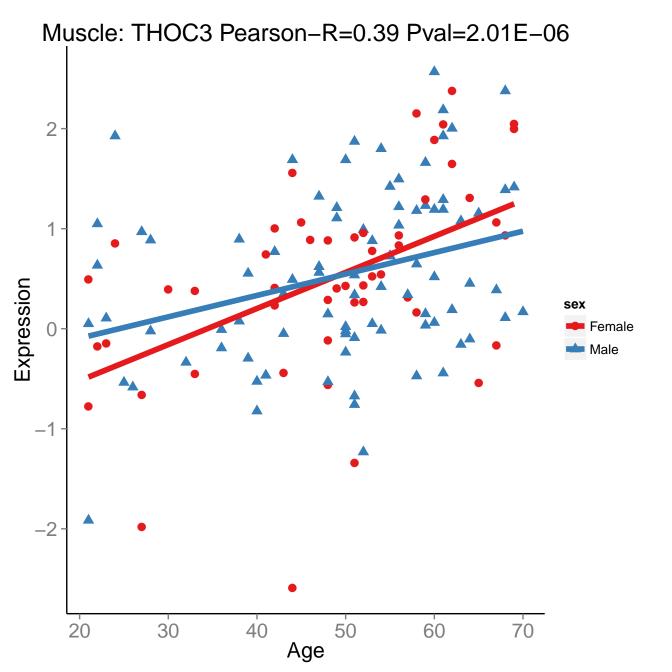


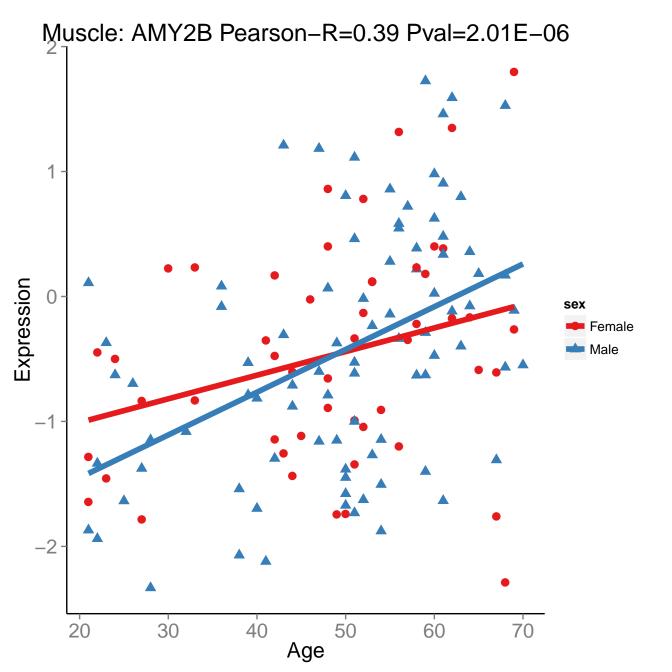




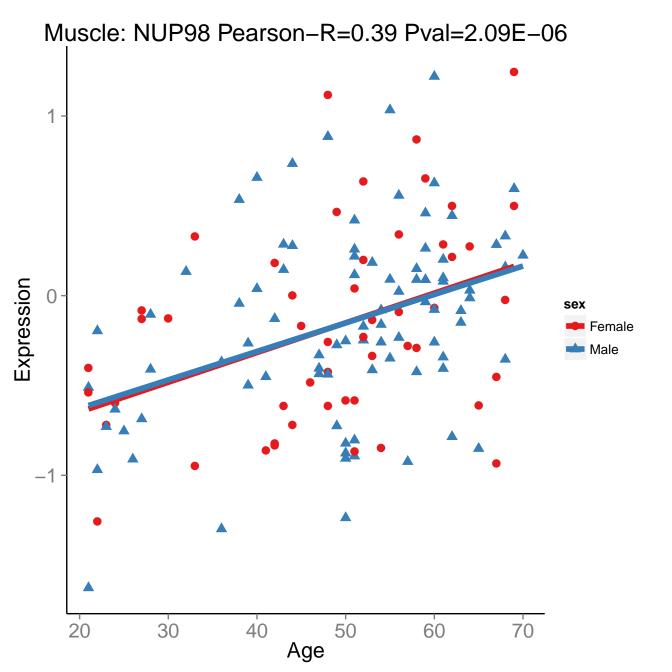


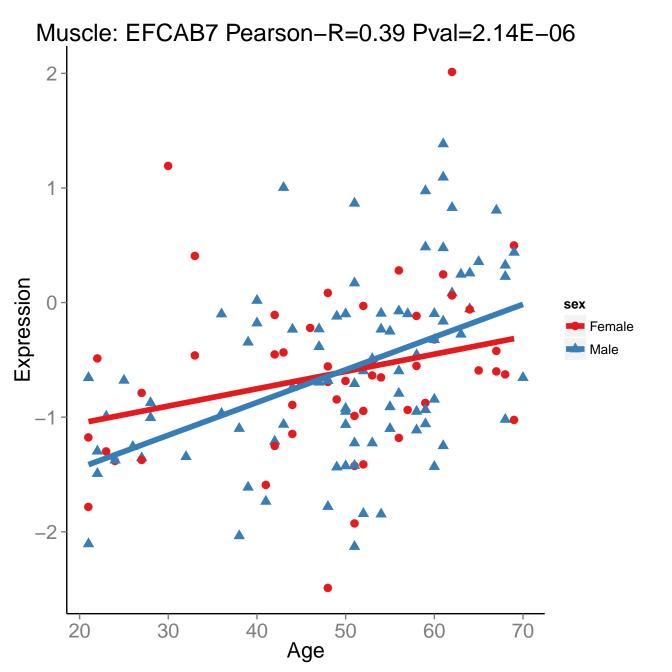


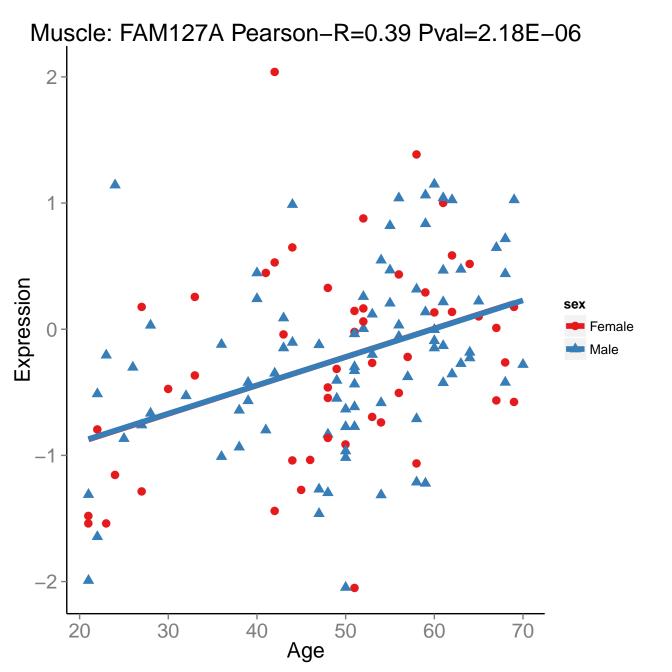


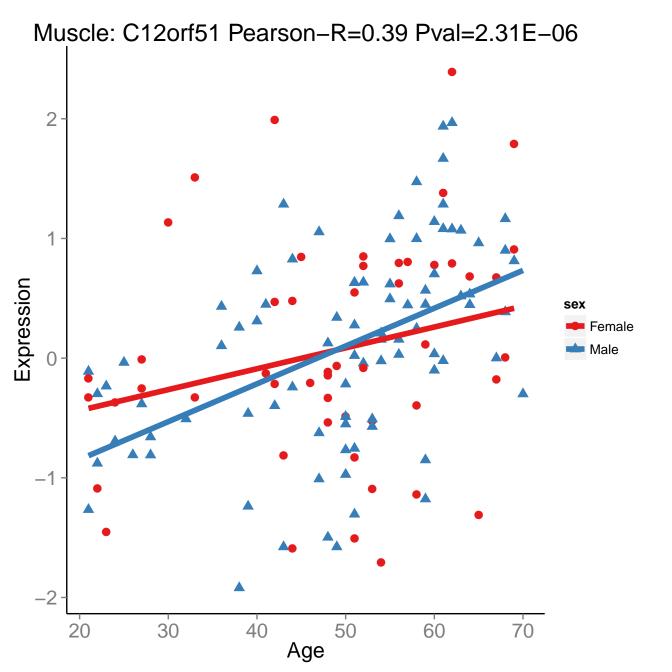


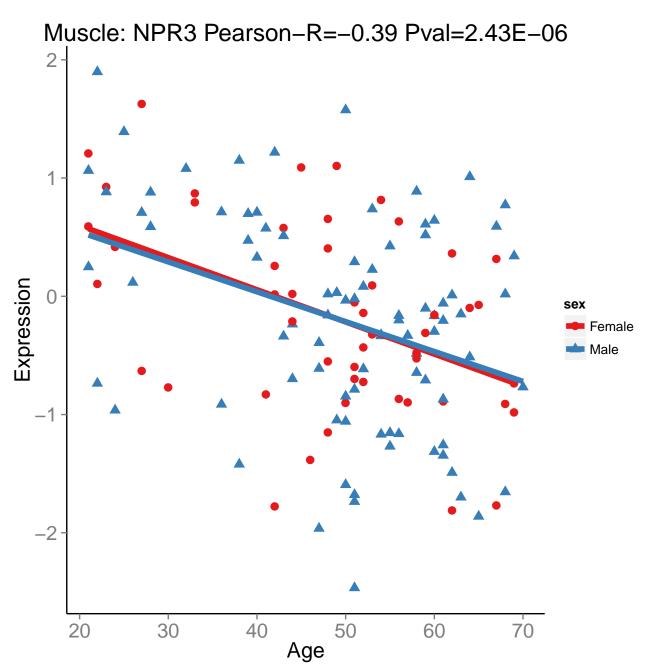


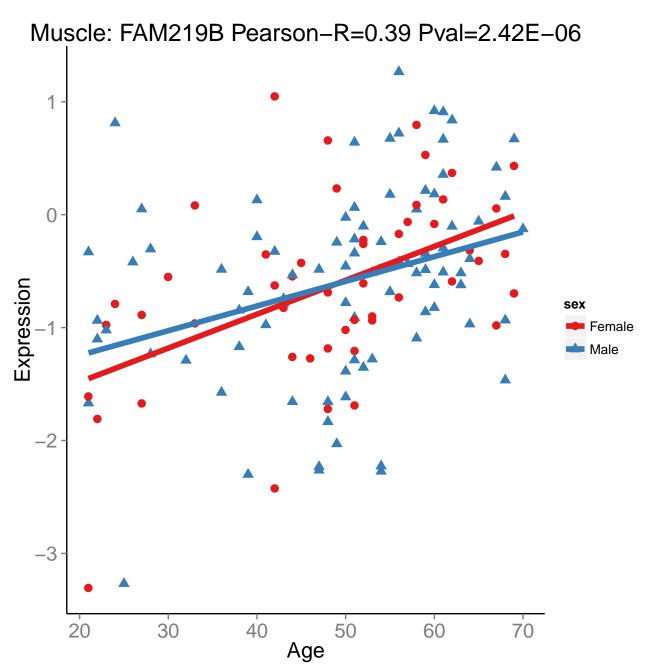


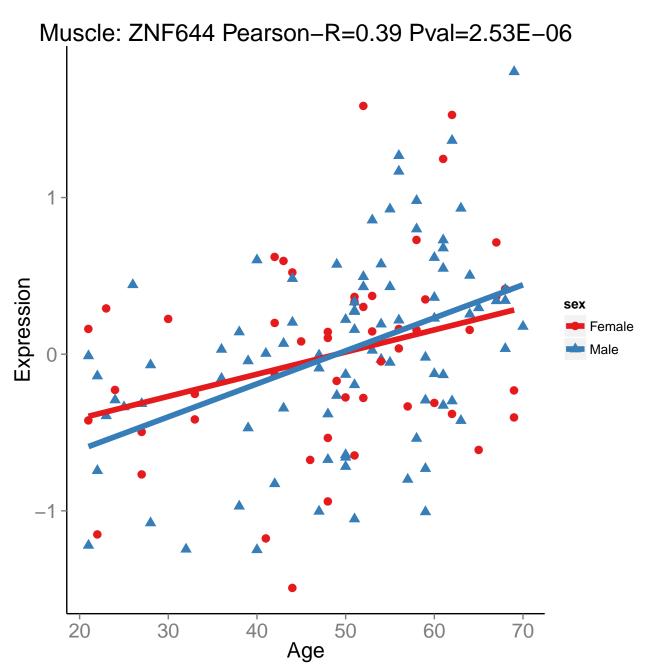


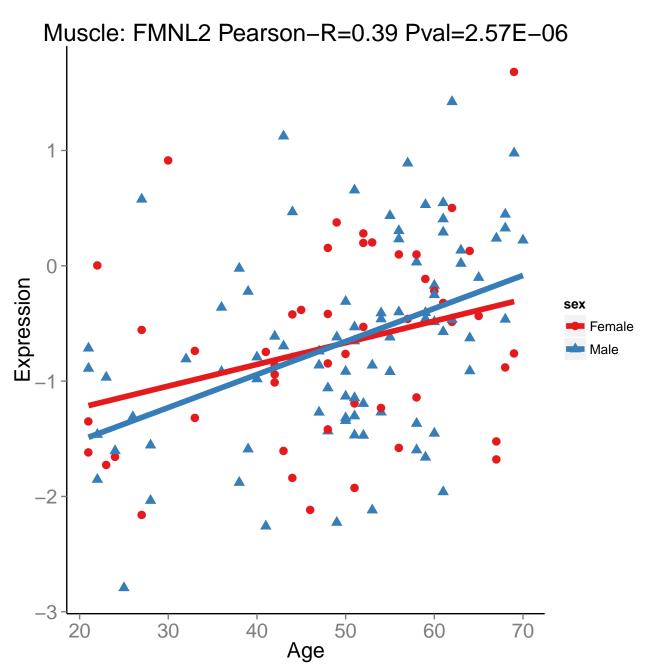


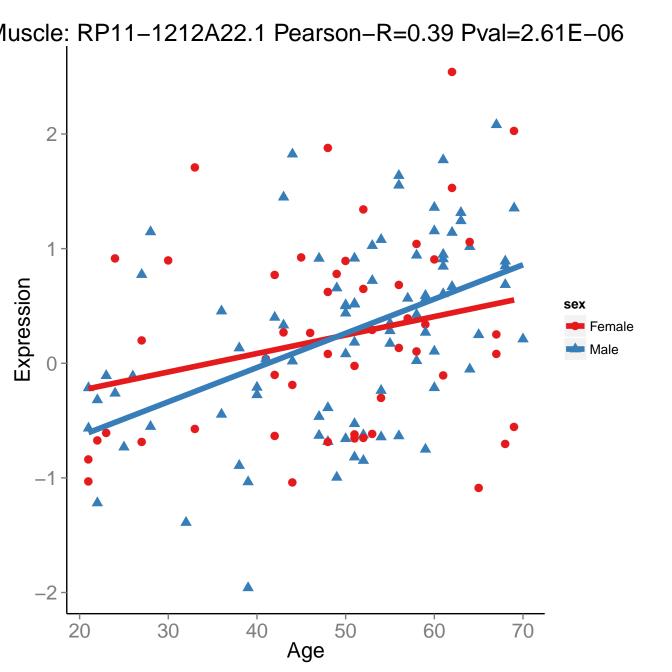


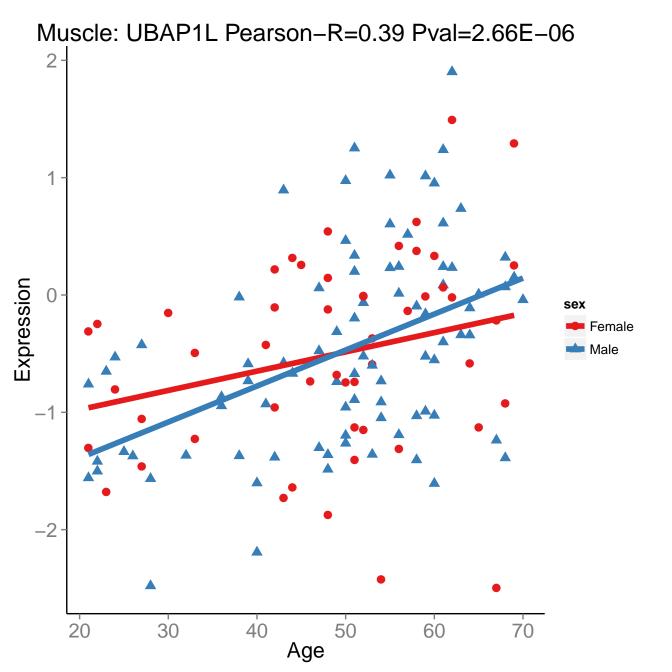




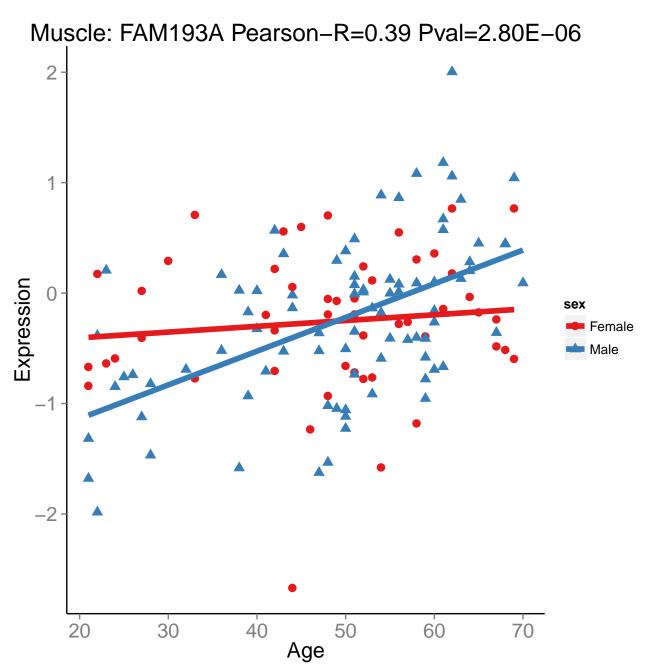


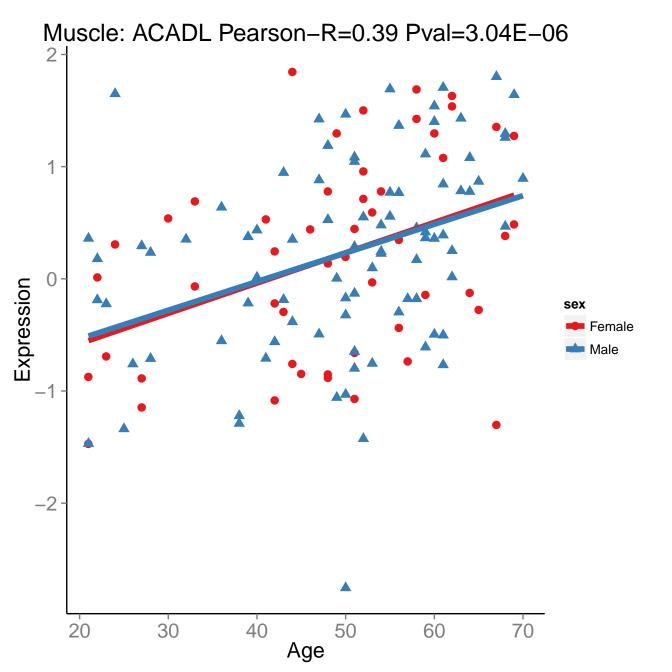




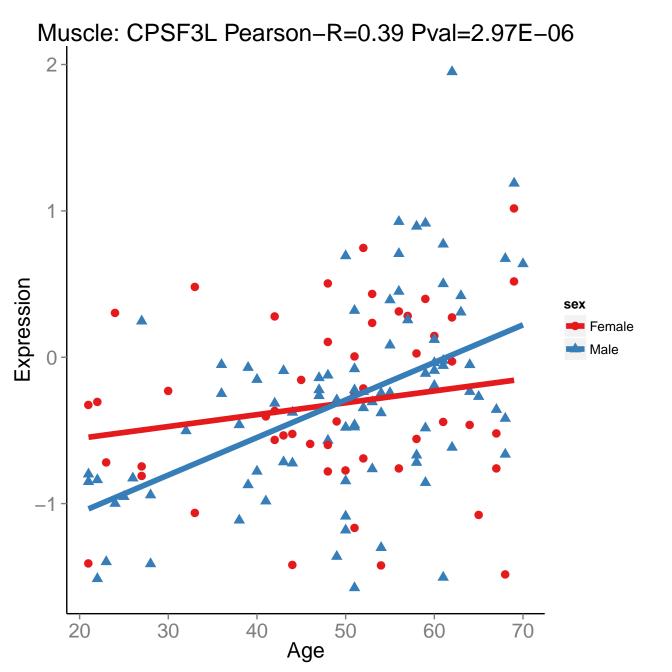


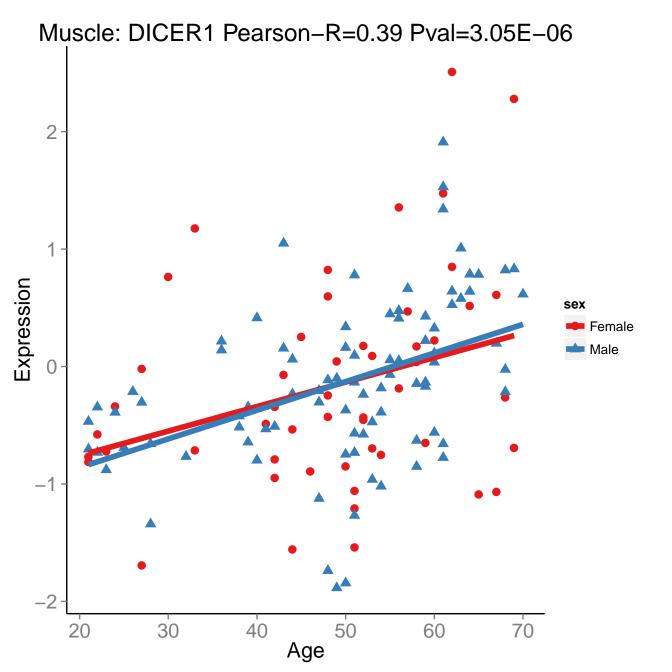




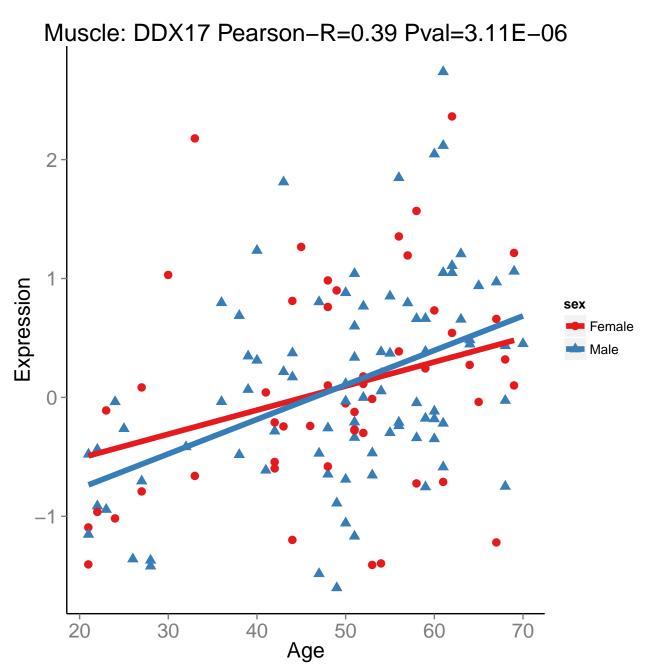




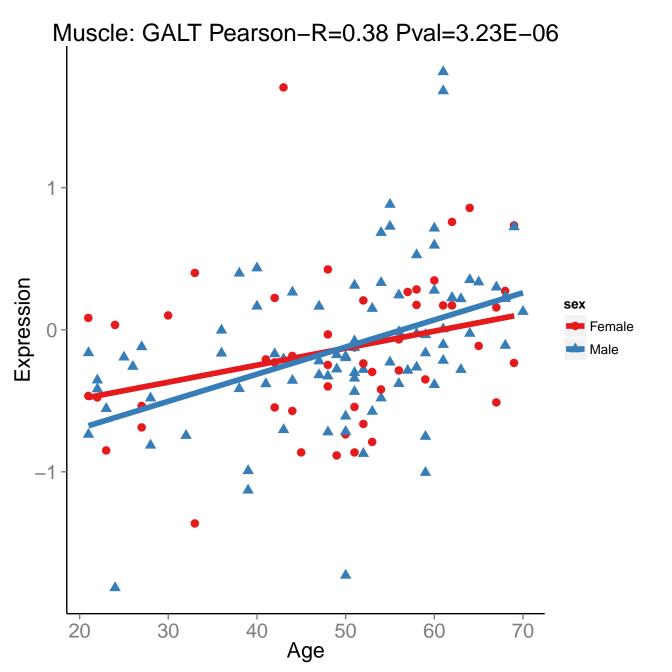


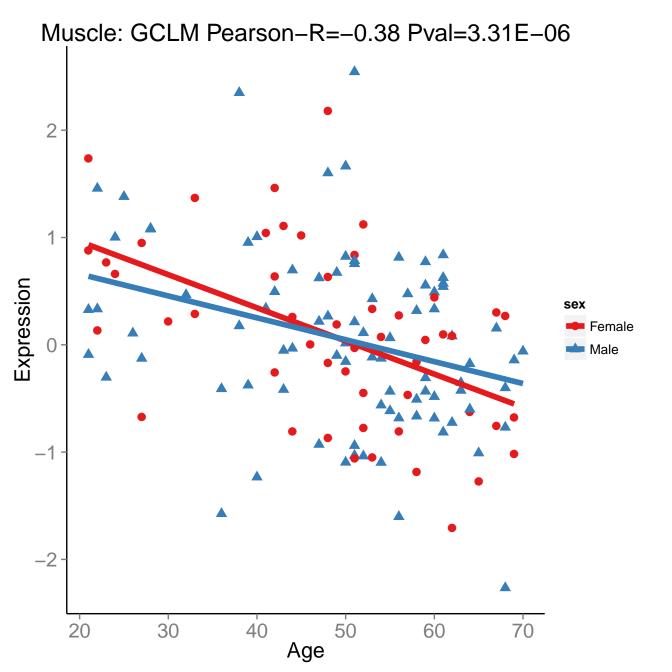


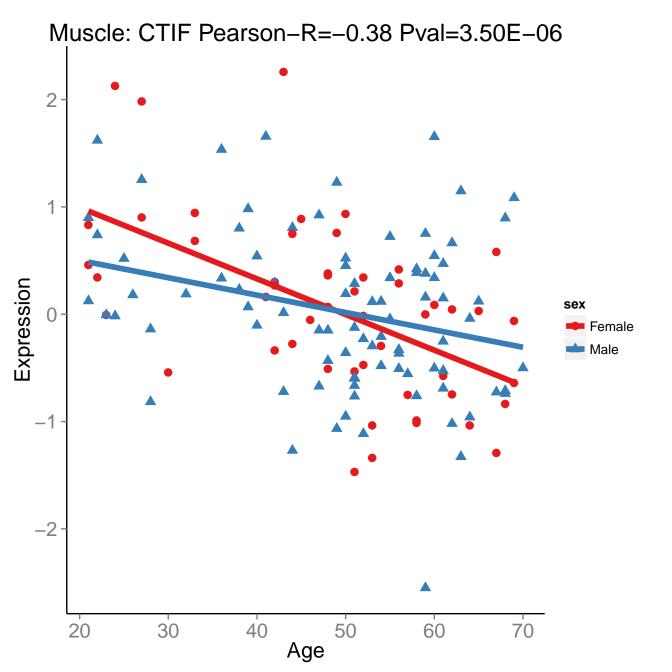


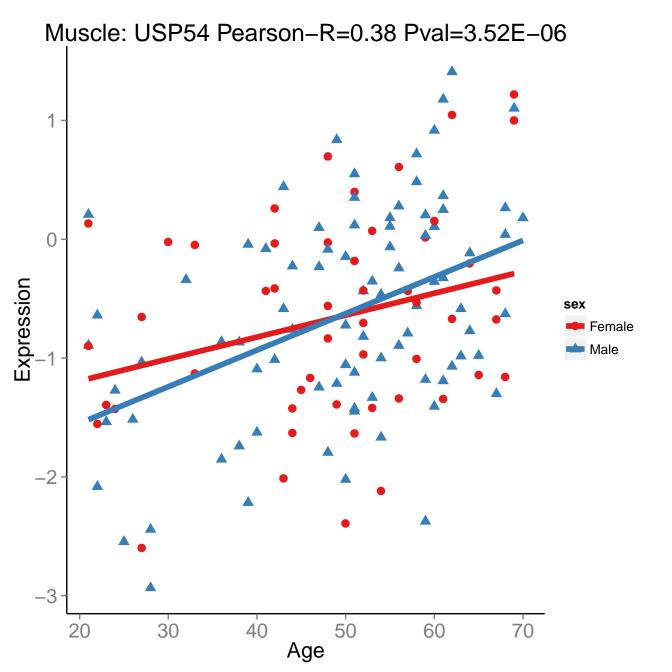


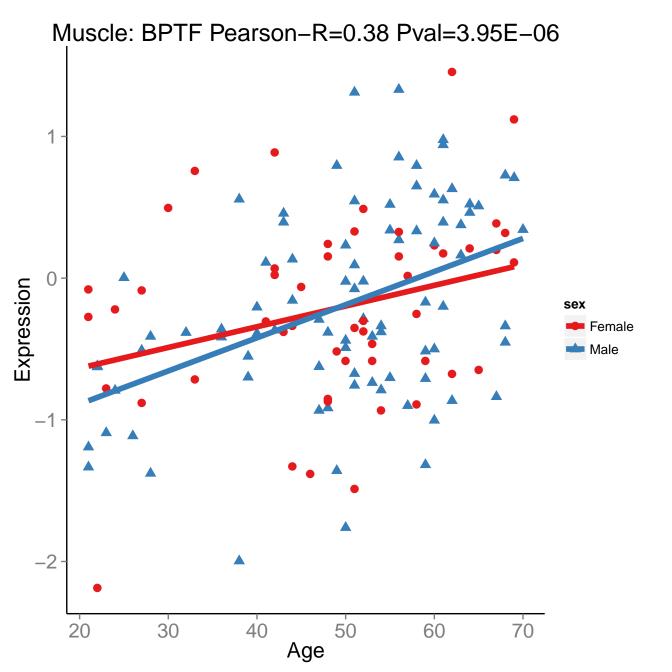


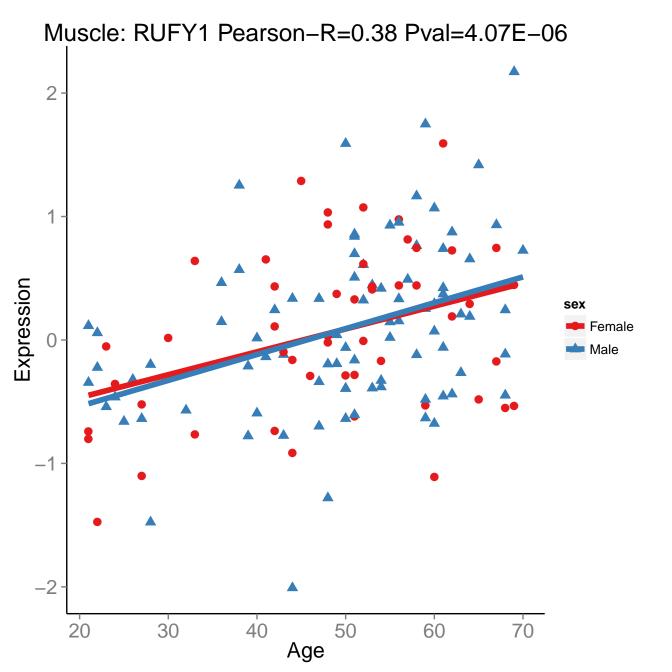






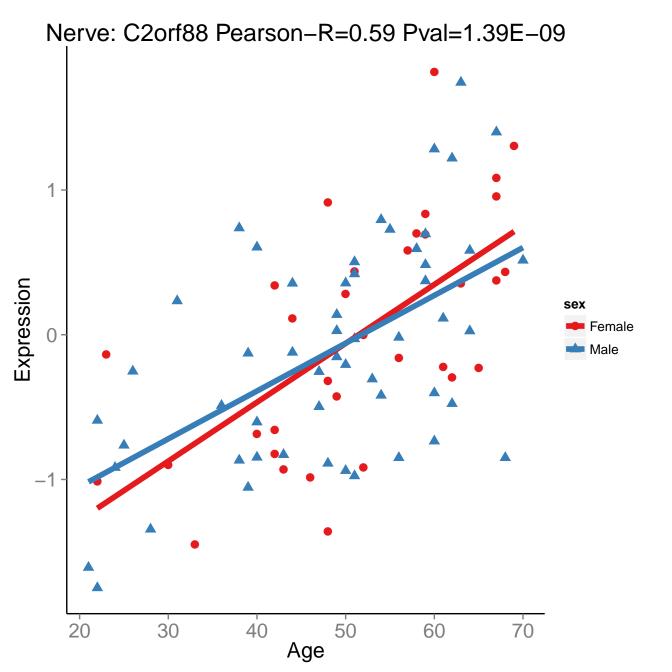


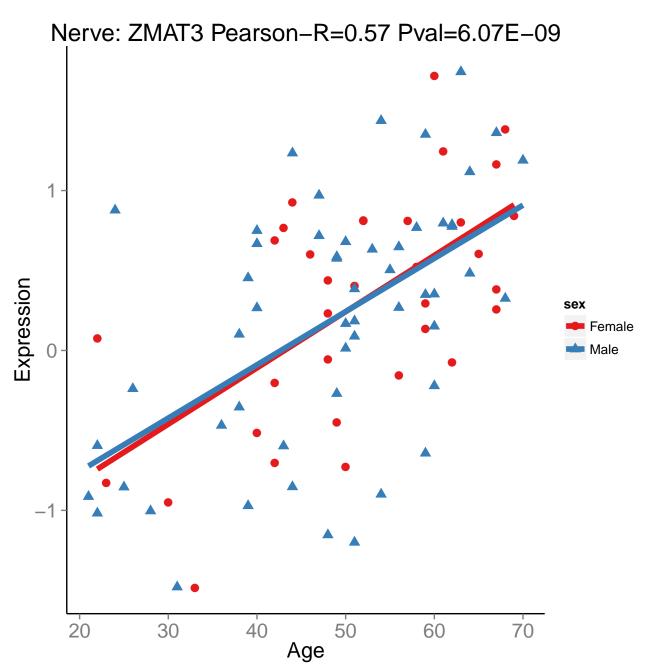


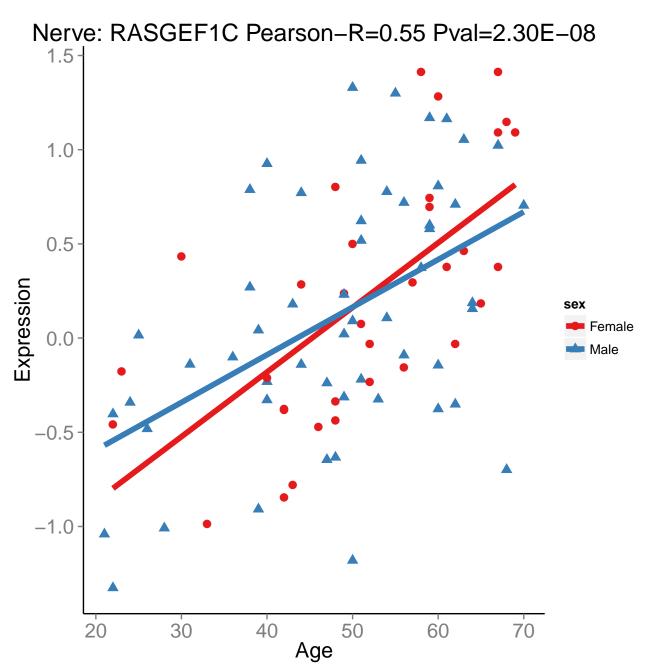


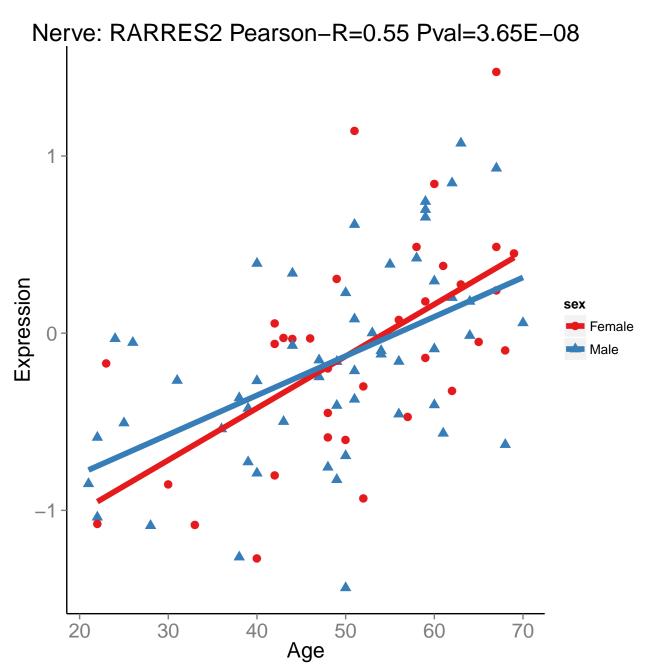


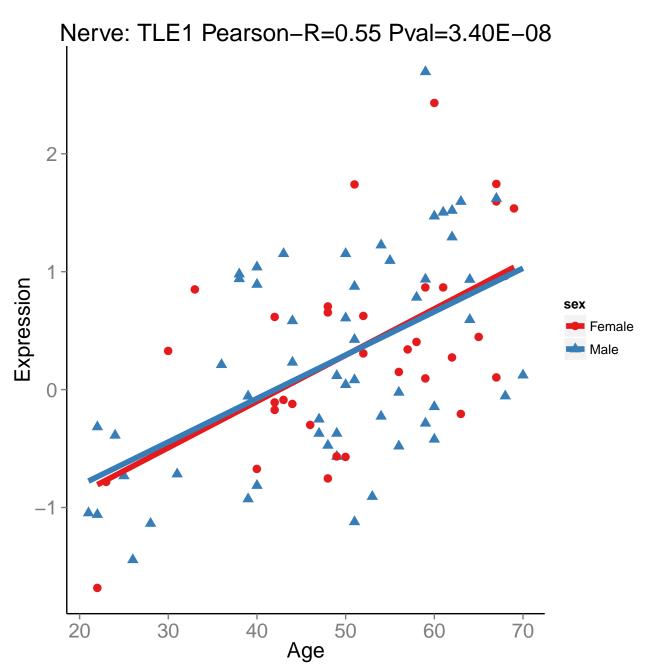
Nerve: ATXN1 Pearson-R=-0.65 Pval=4.78E-12 1.5 1.0 0.5 Expression sex Female 0.0 Male -0.5 -1.0 40 30 60 20 50 70 Age

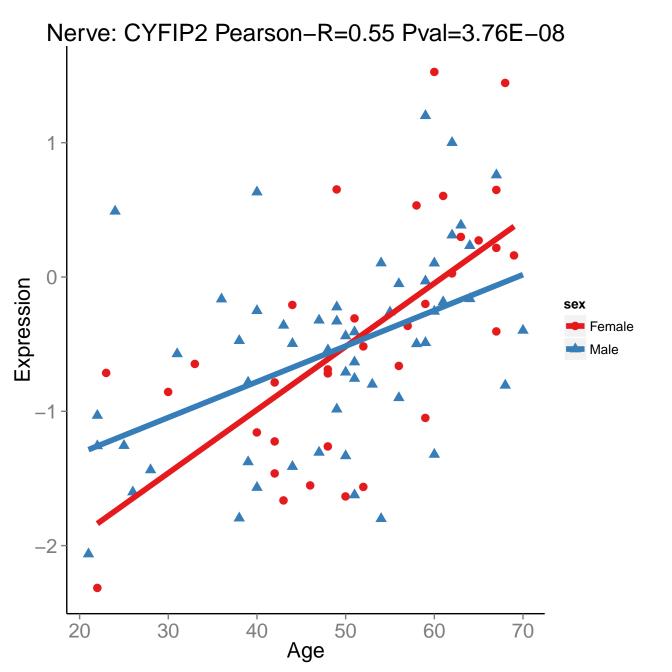


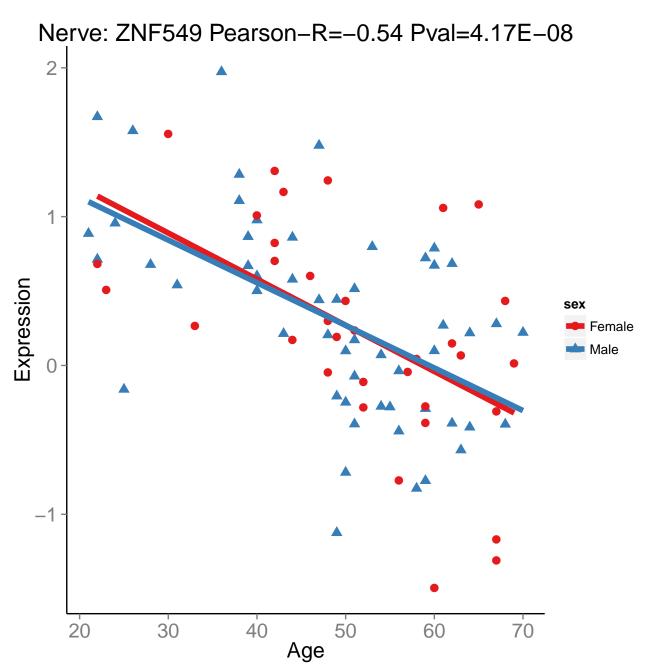


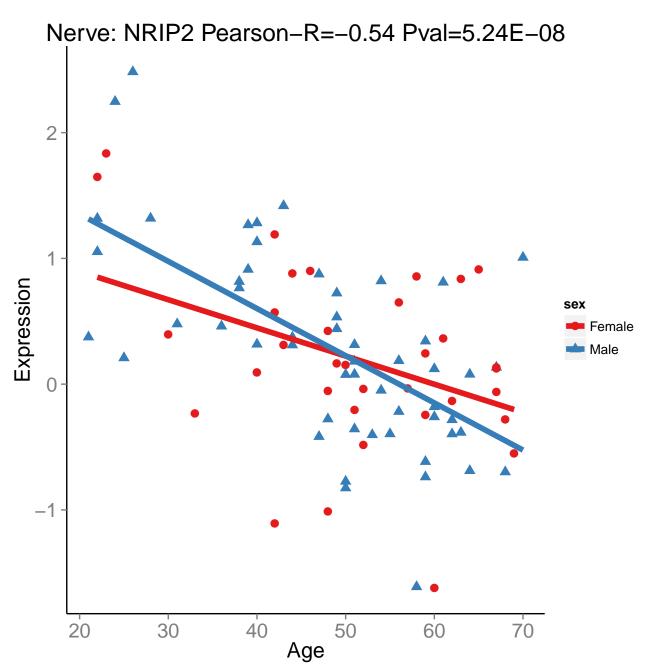


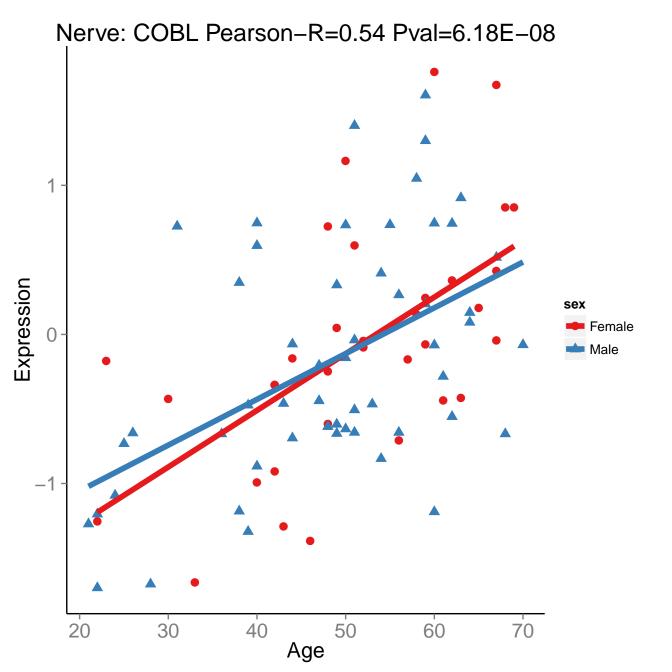


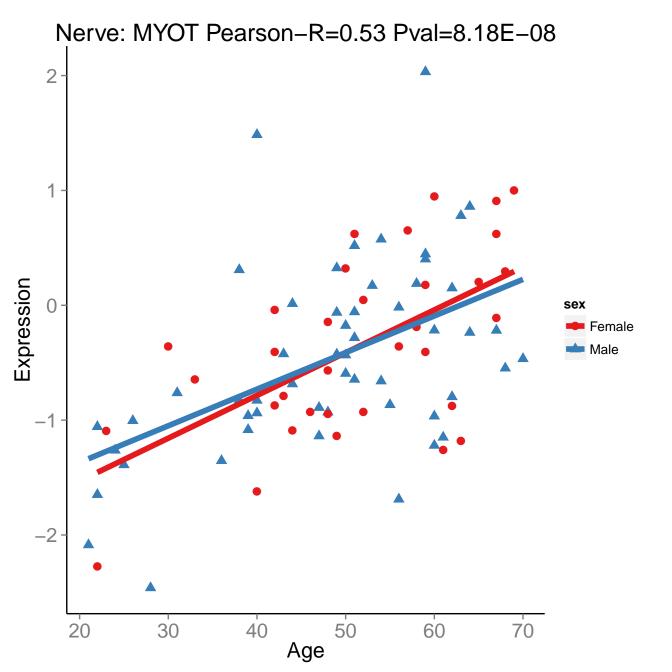


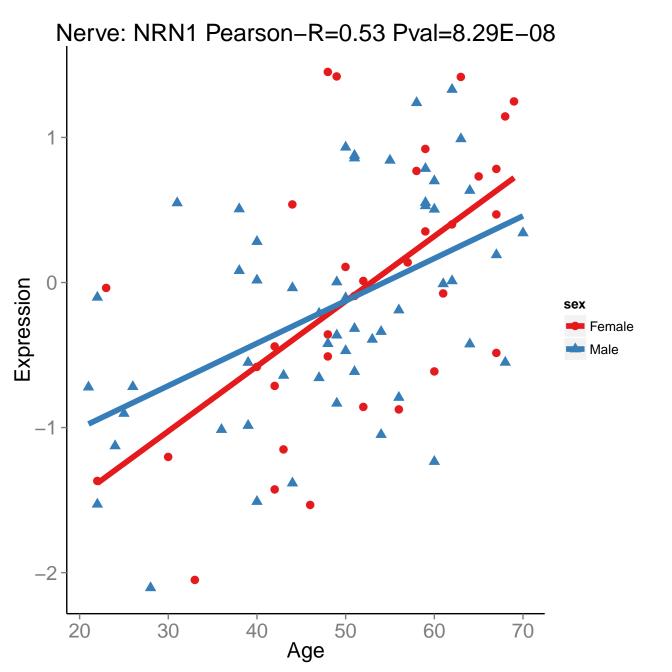


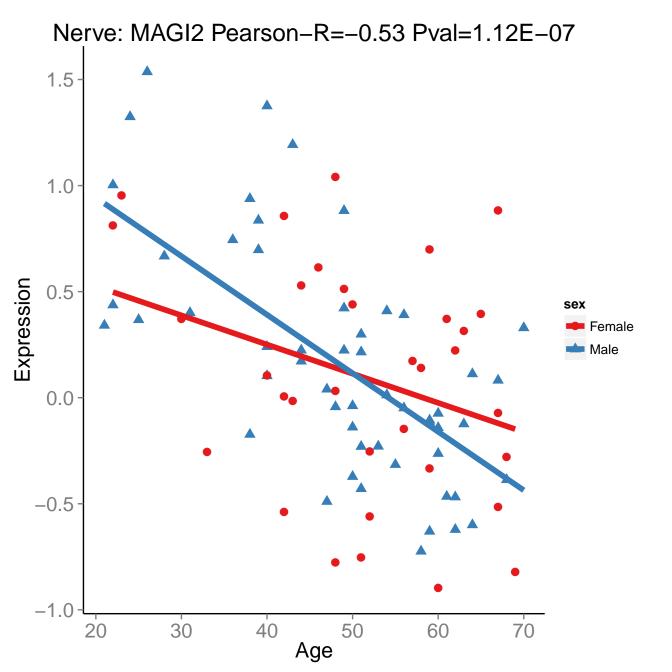


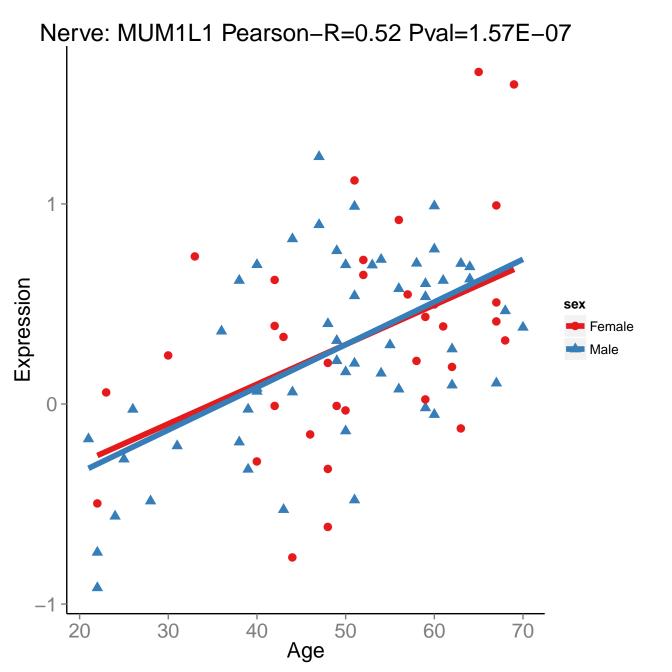


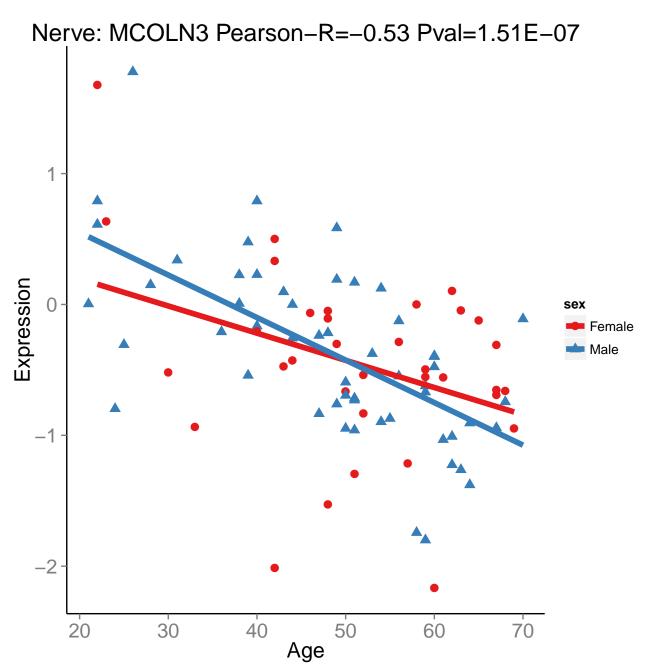


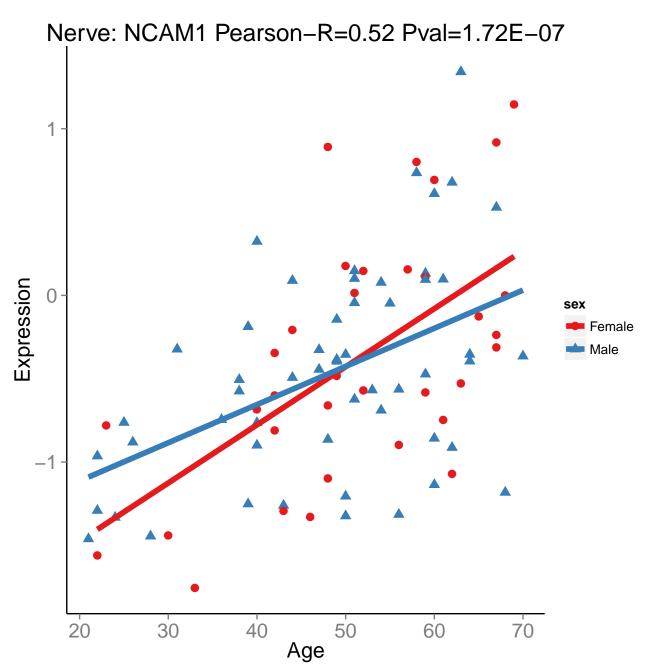


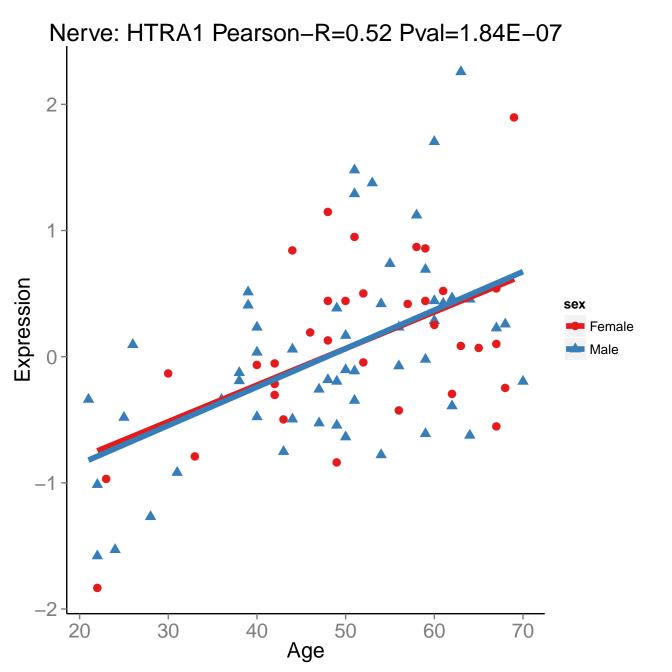


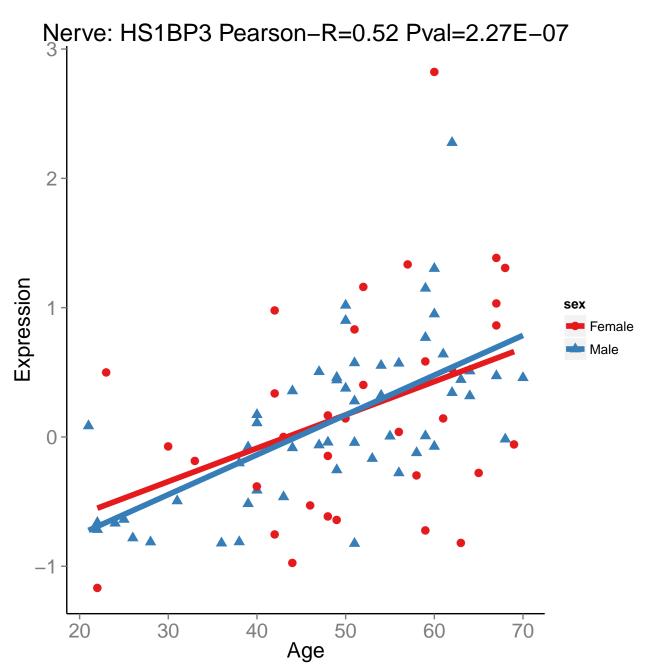


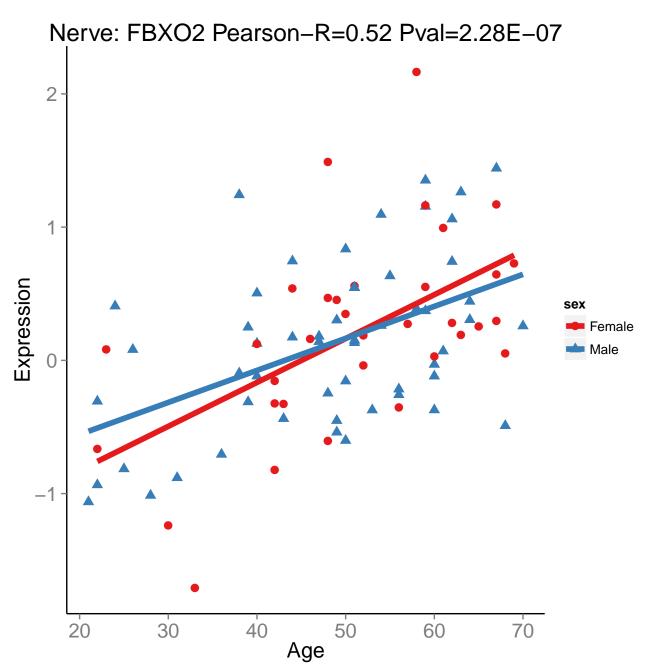


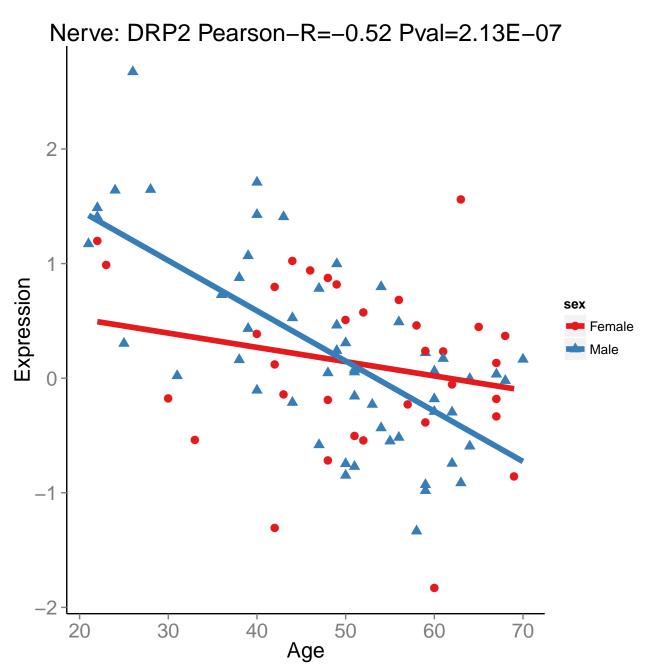


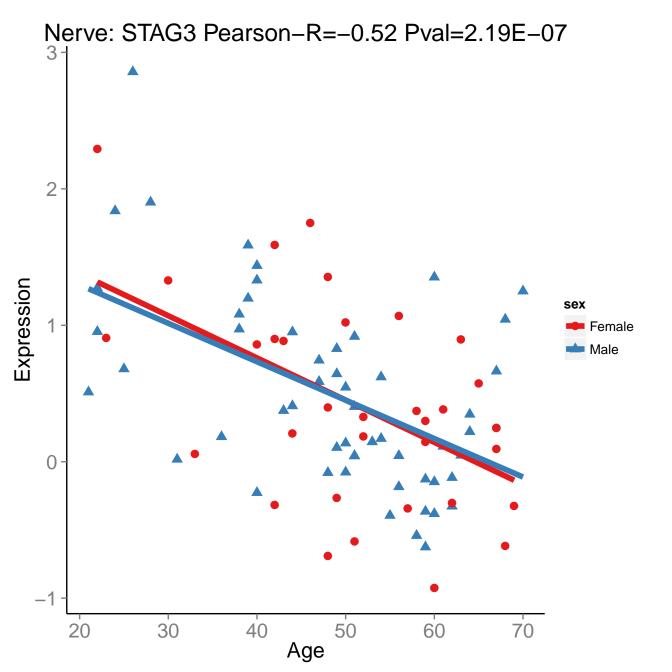


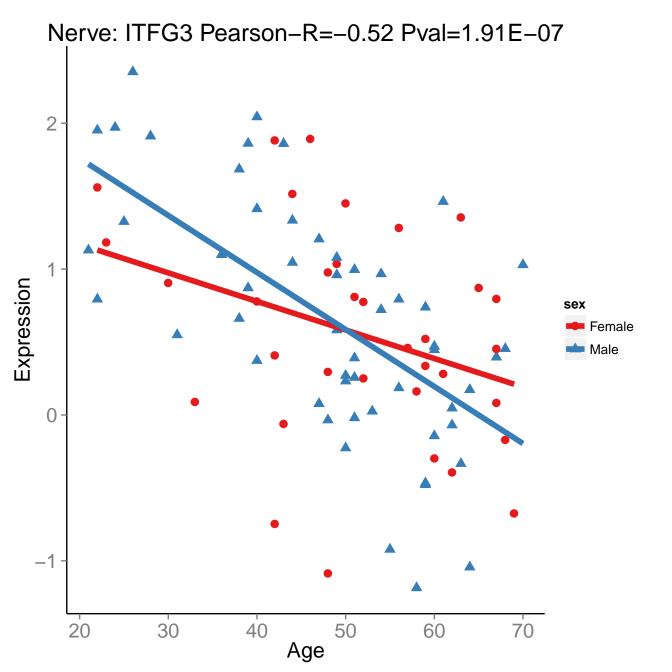


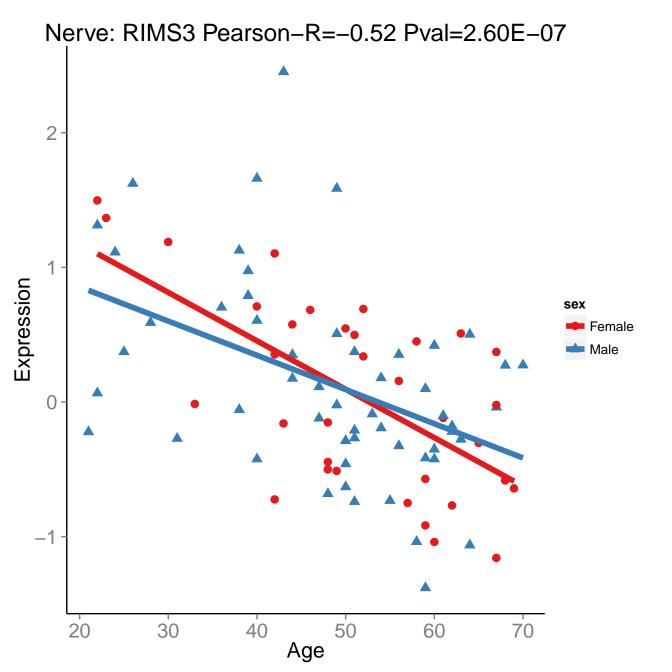


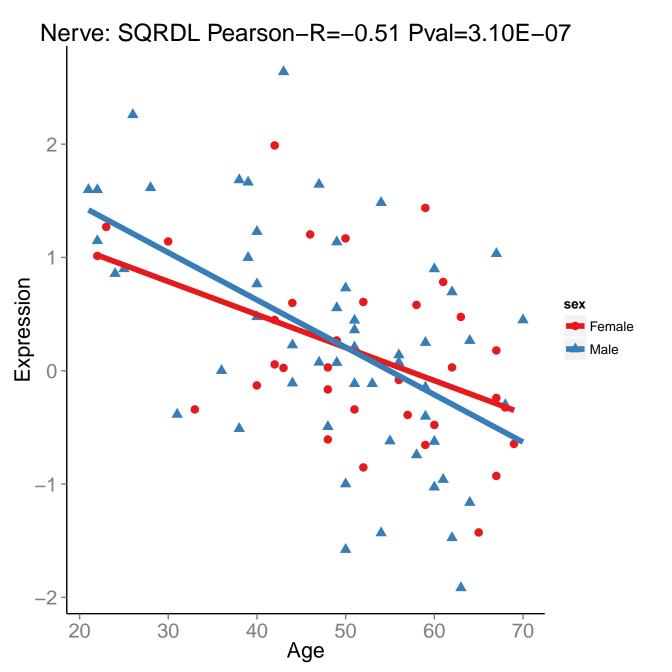


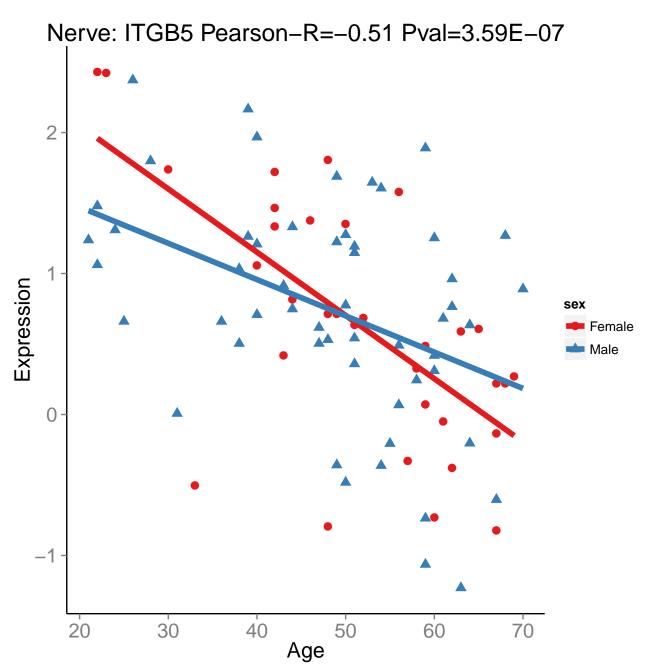




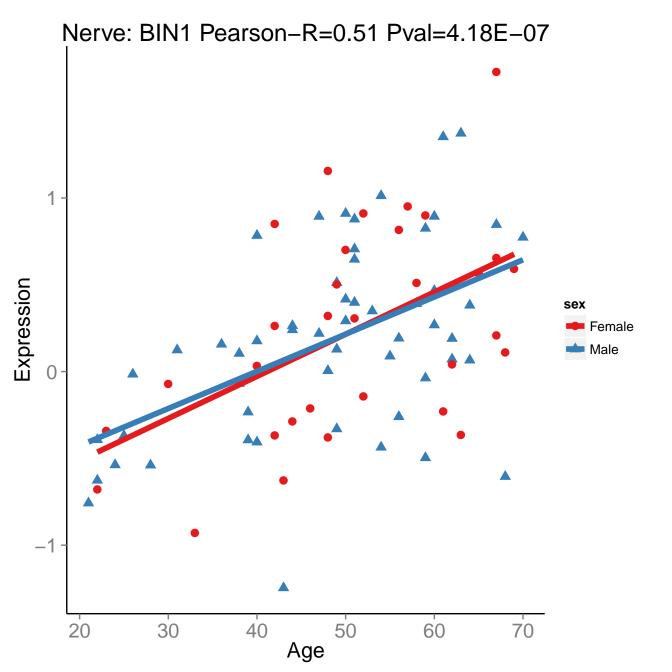


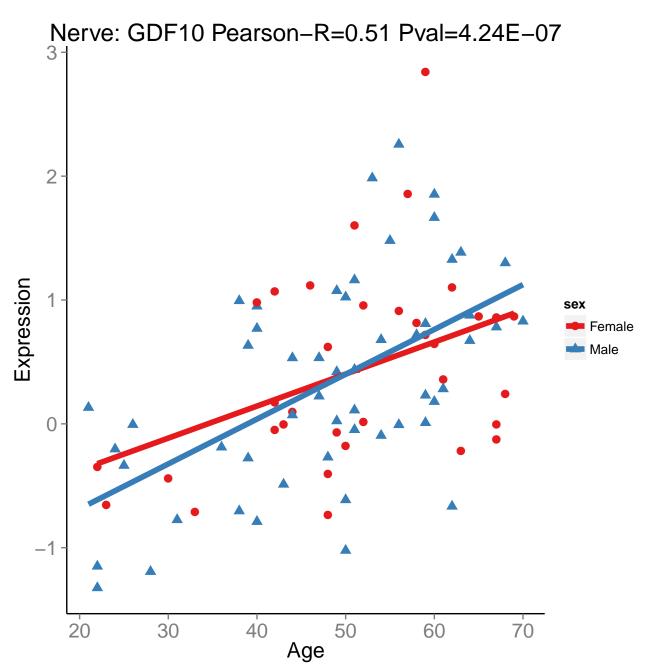


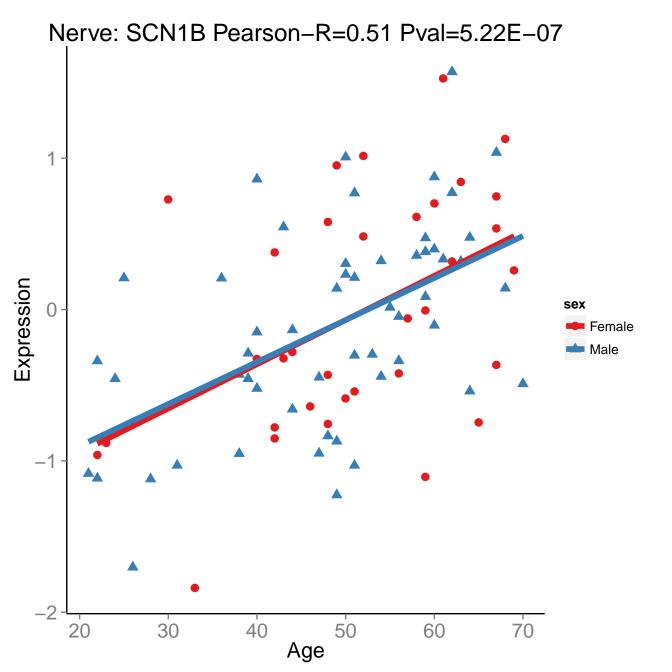


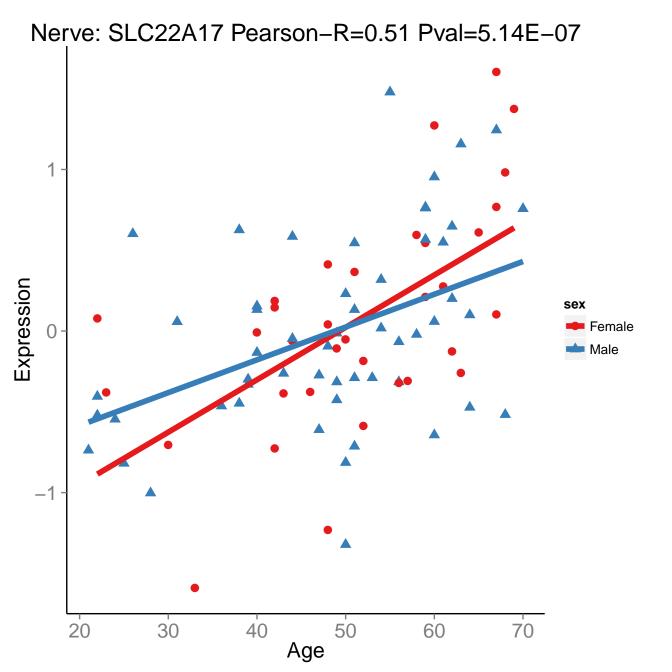


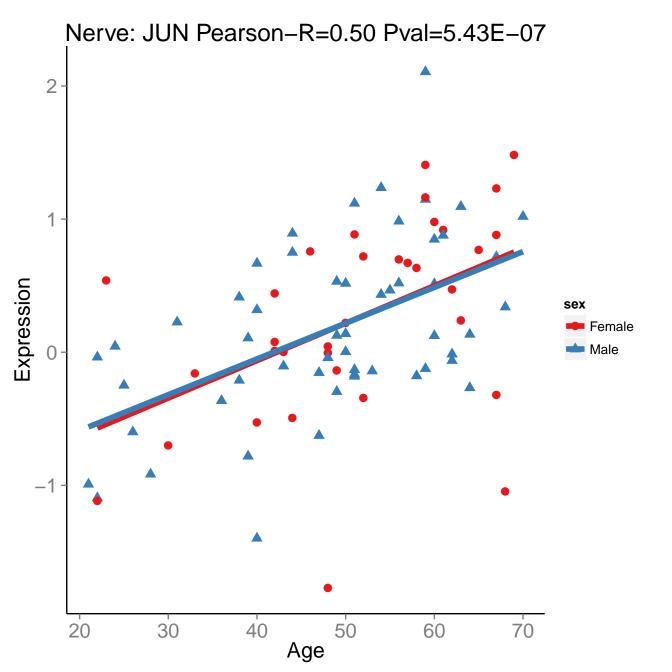


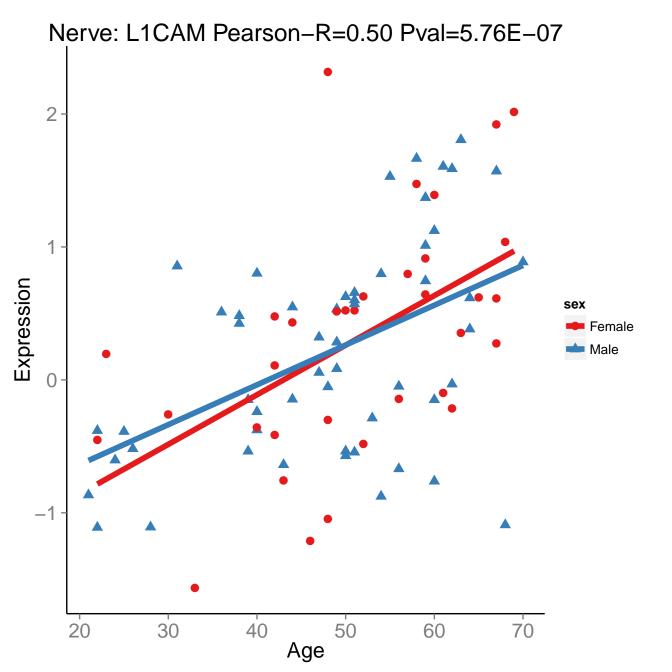


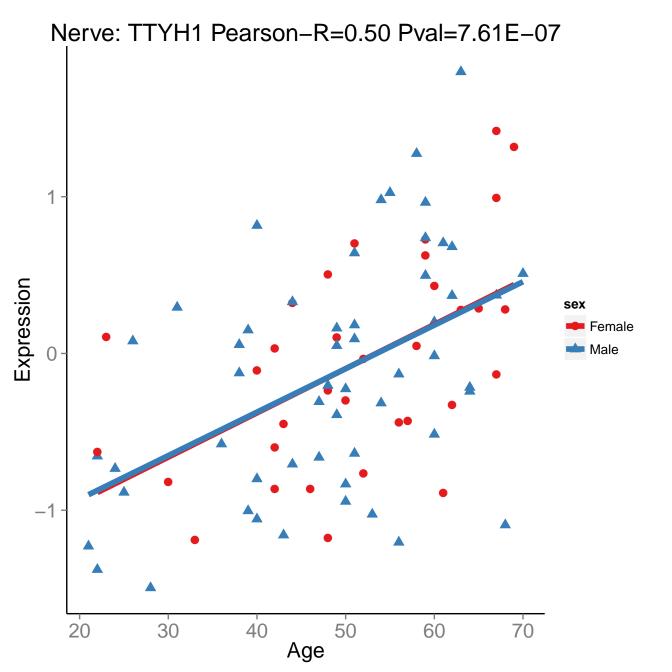


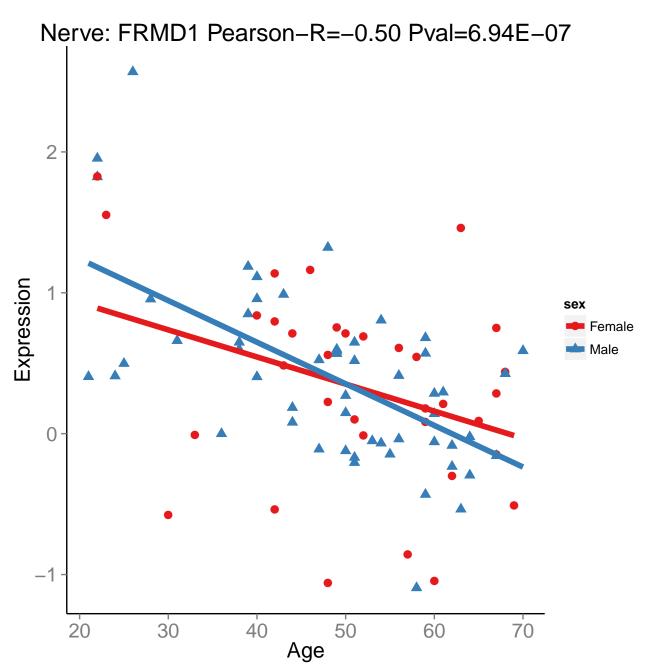


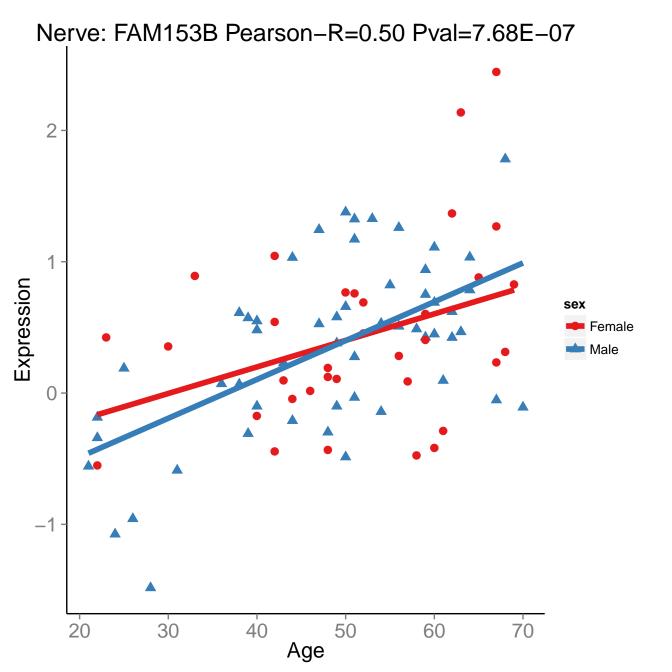




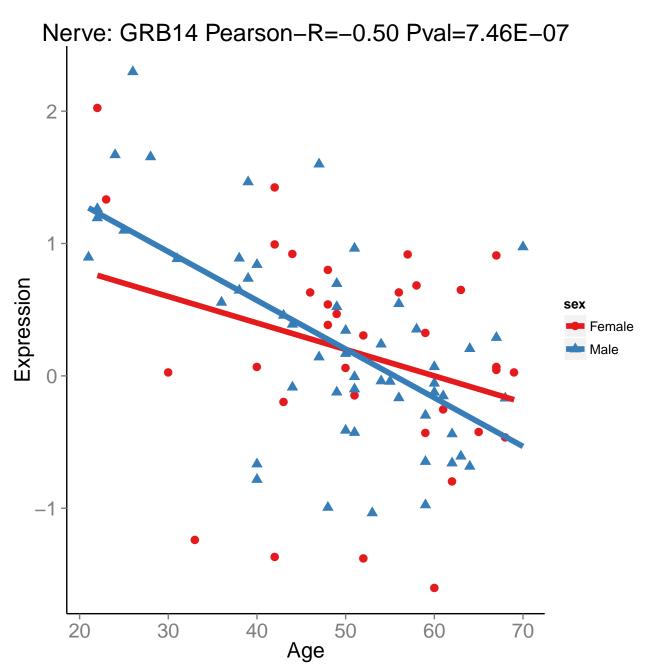


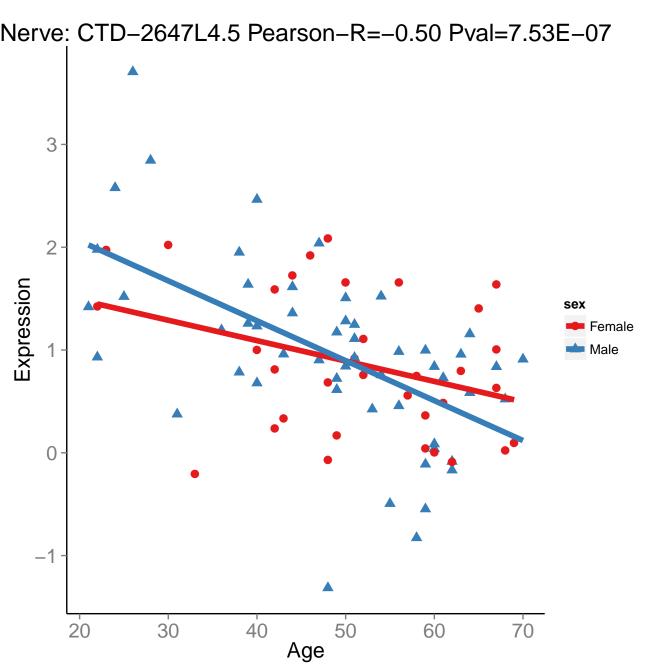


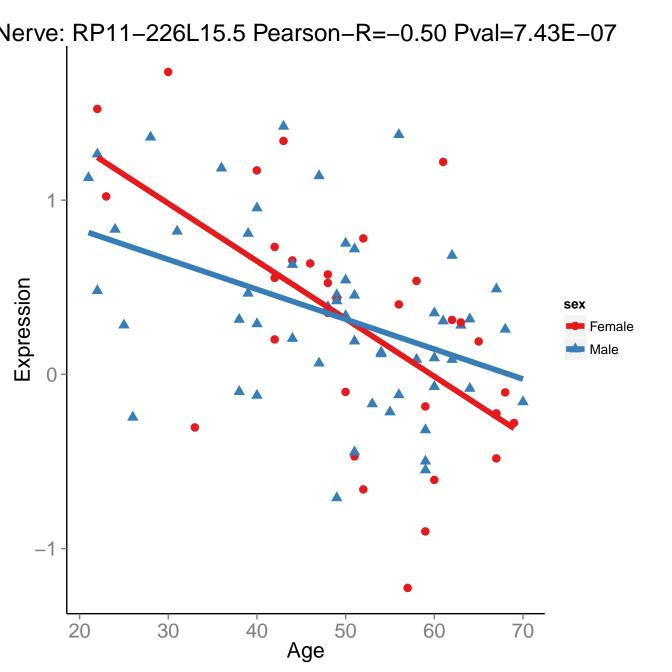


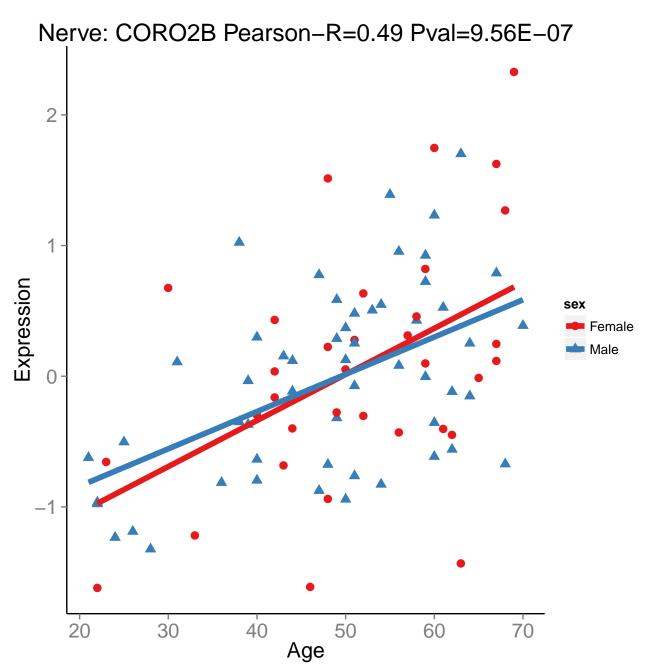


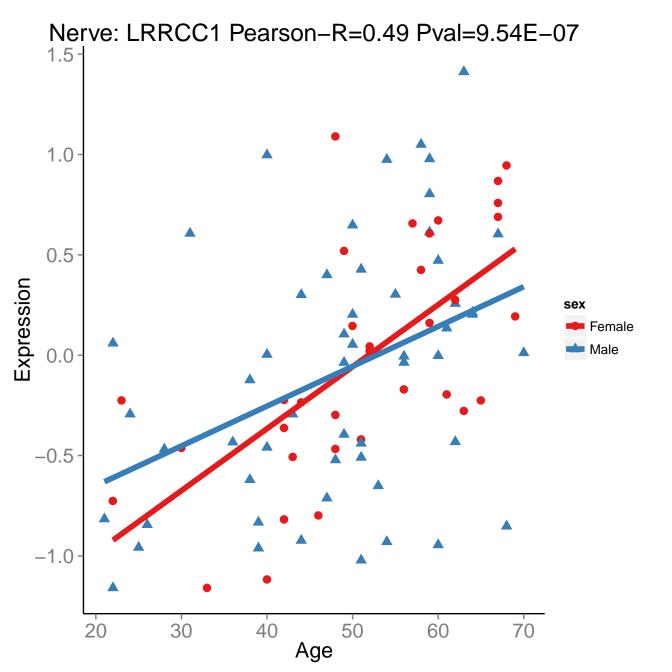


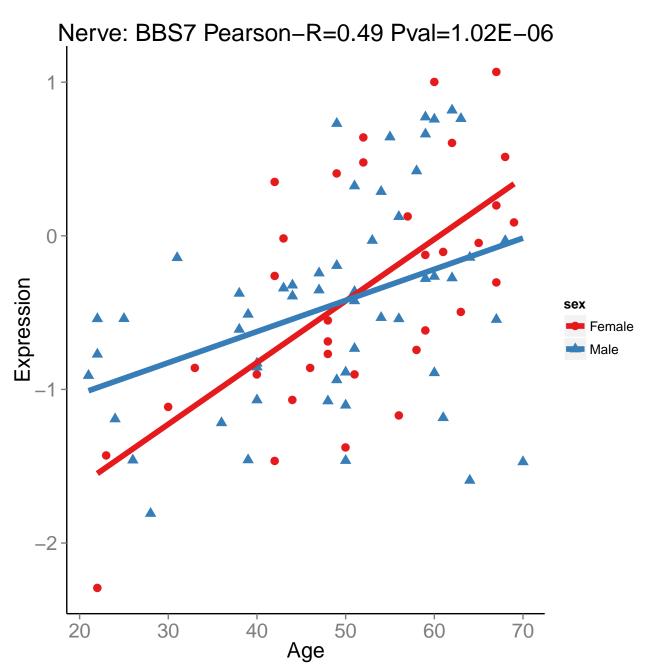


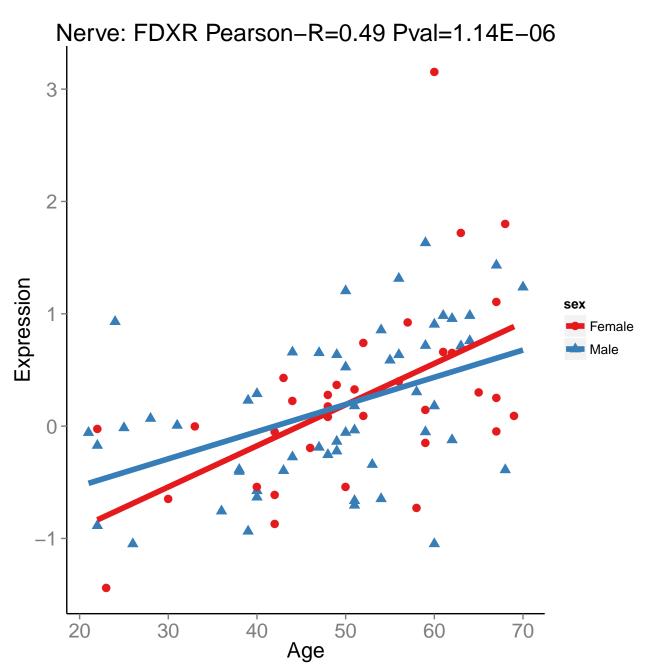


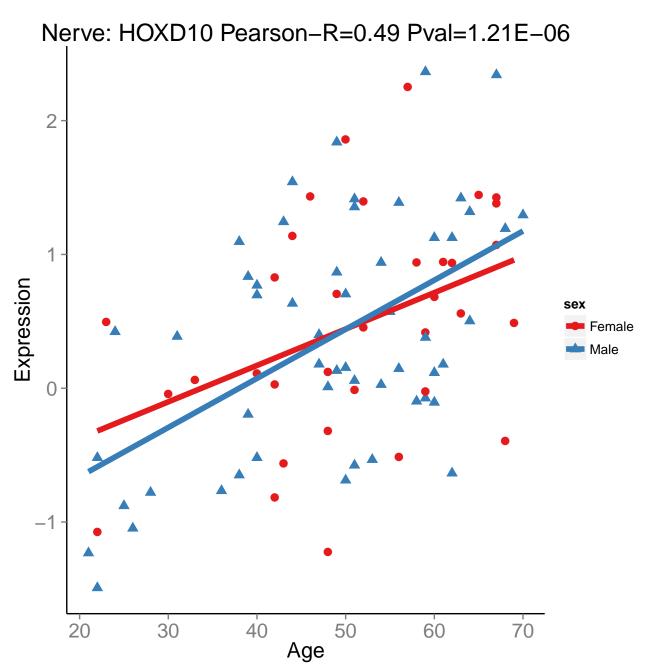


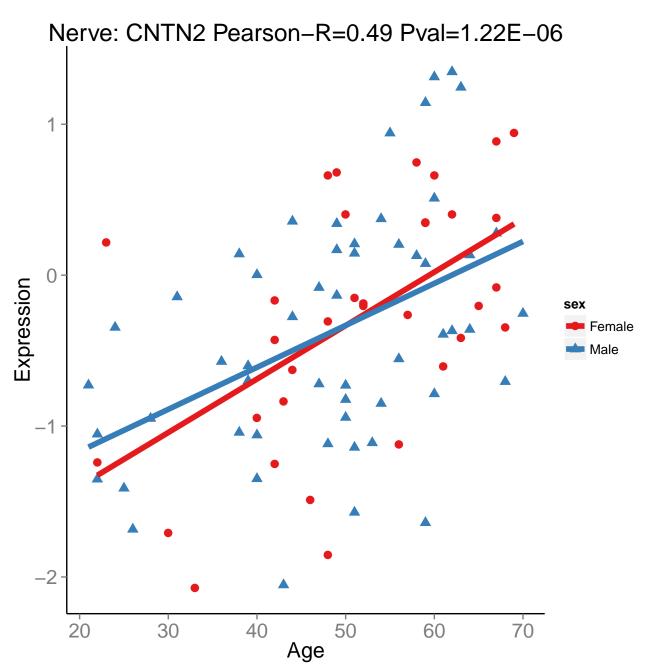


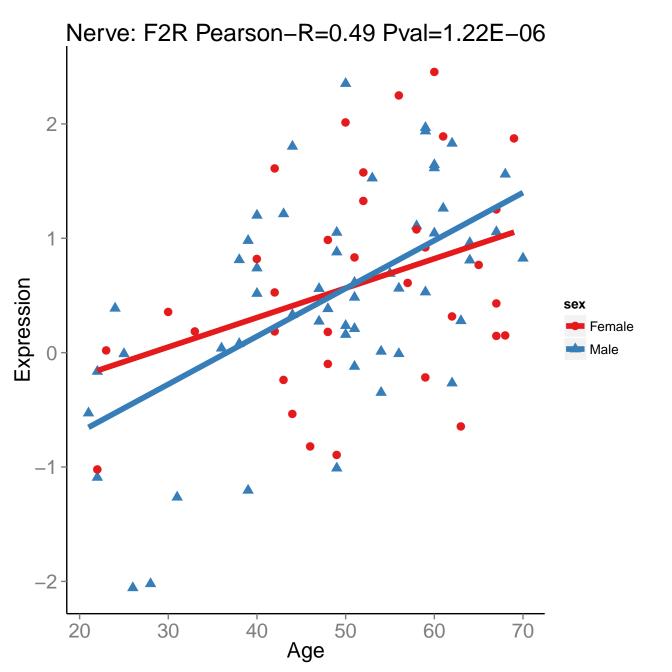


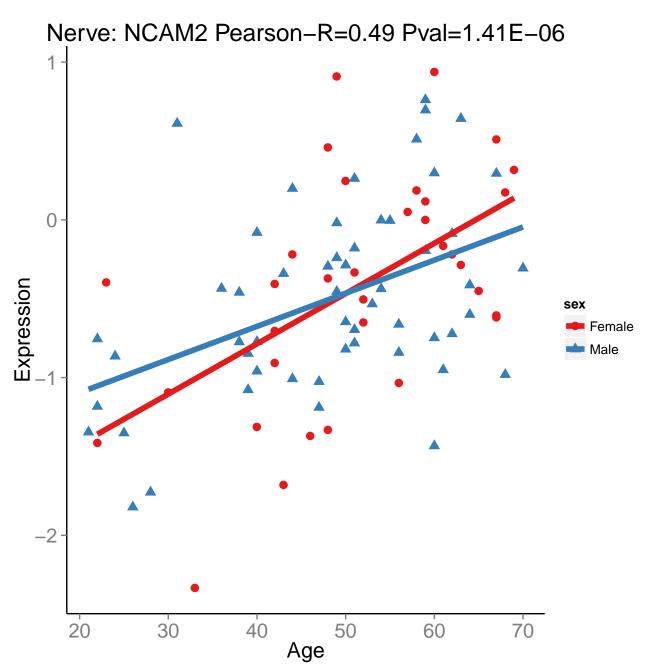


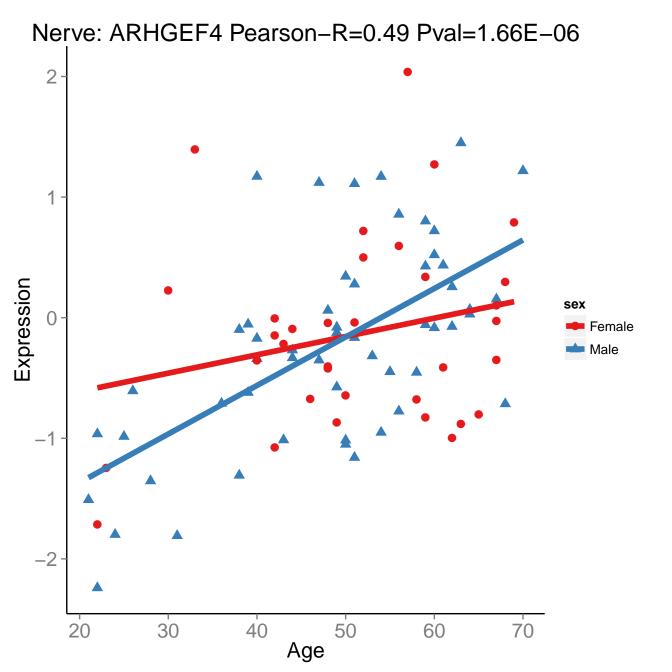


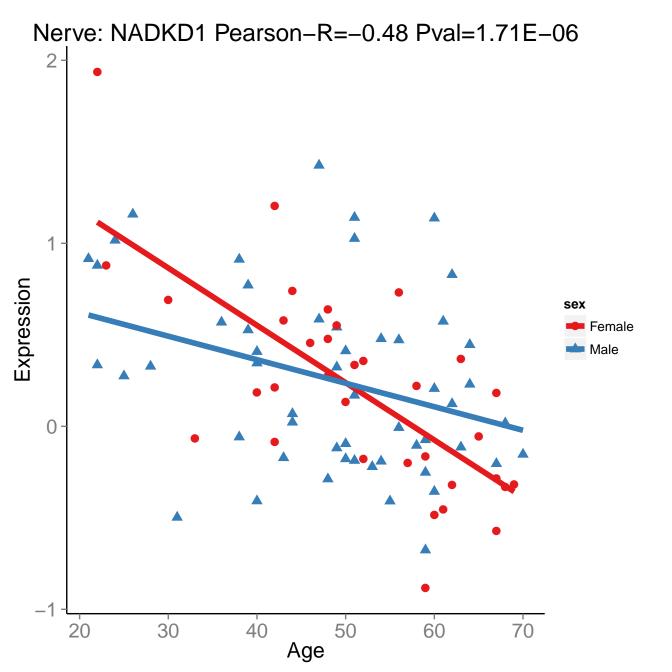


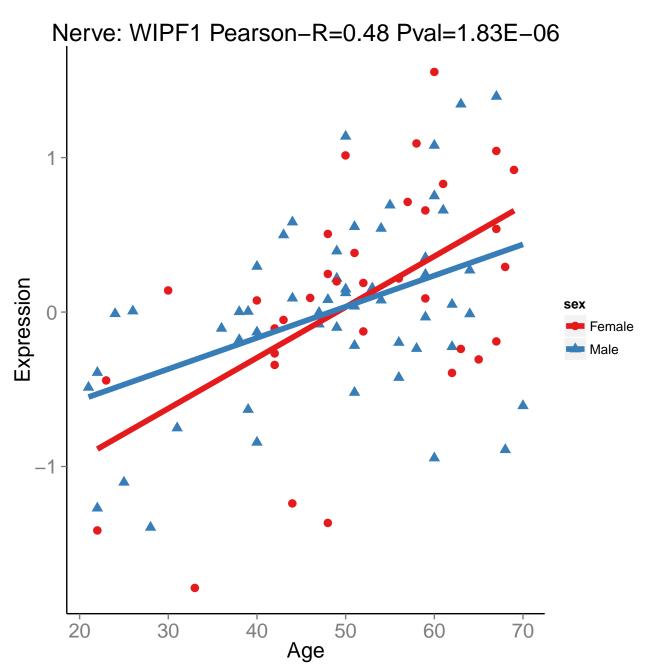


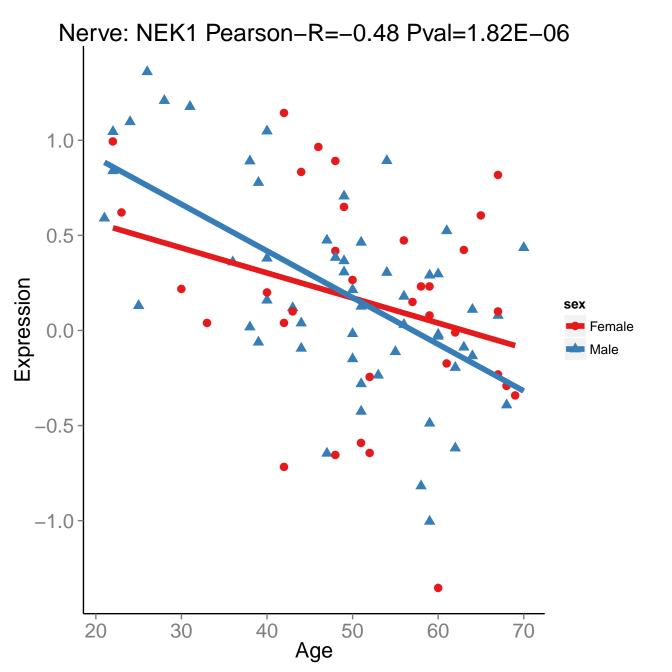


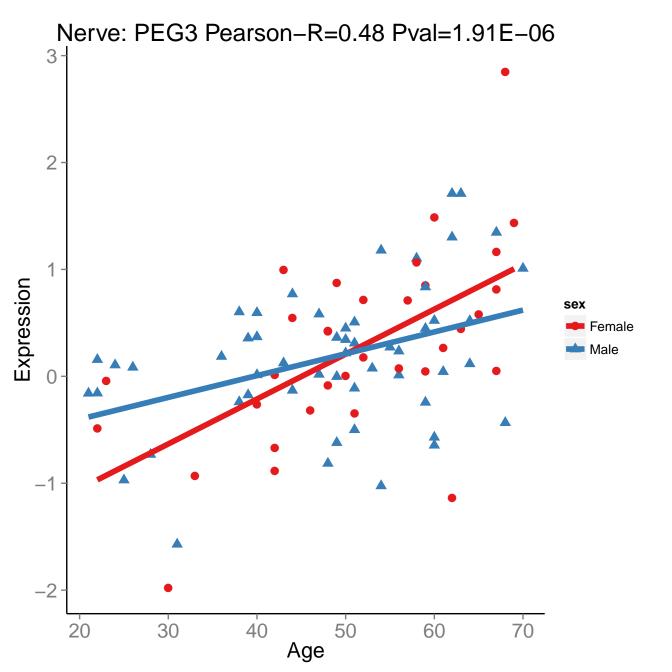


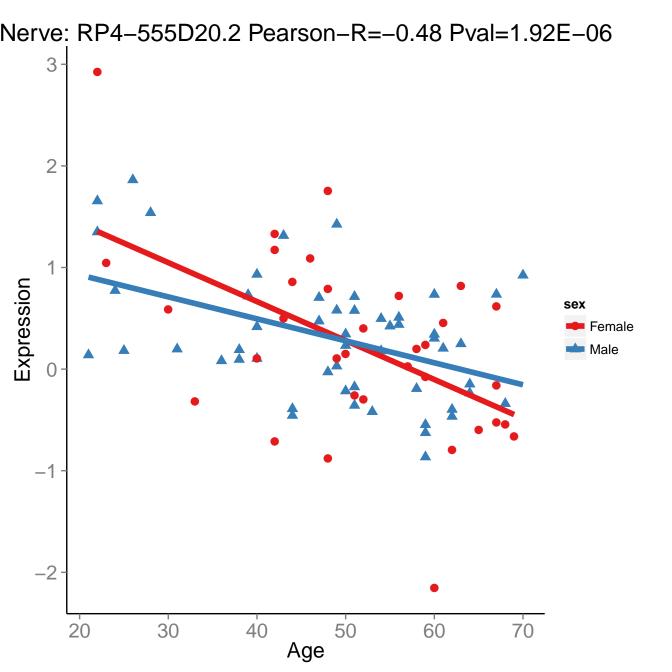


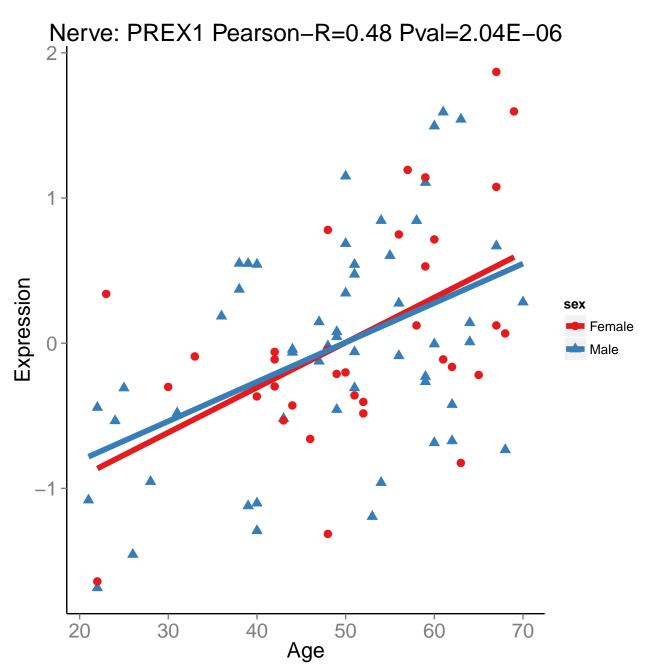


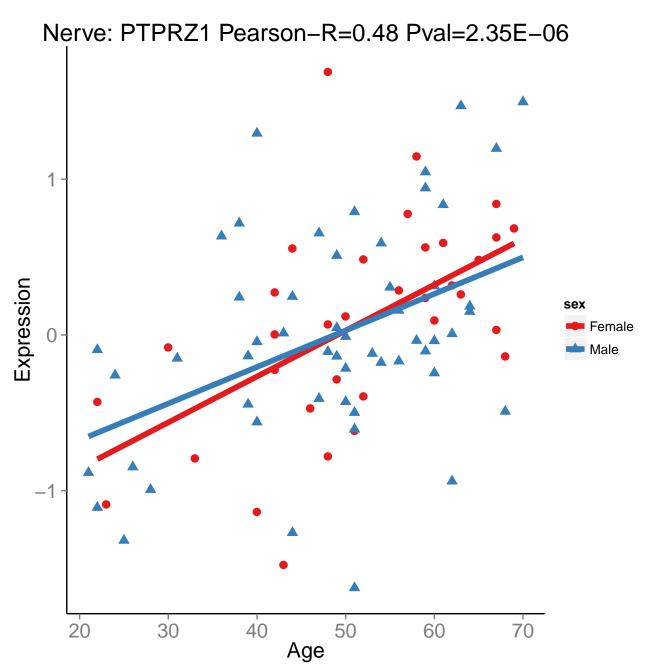


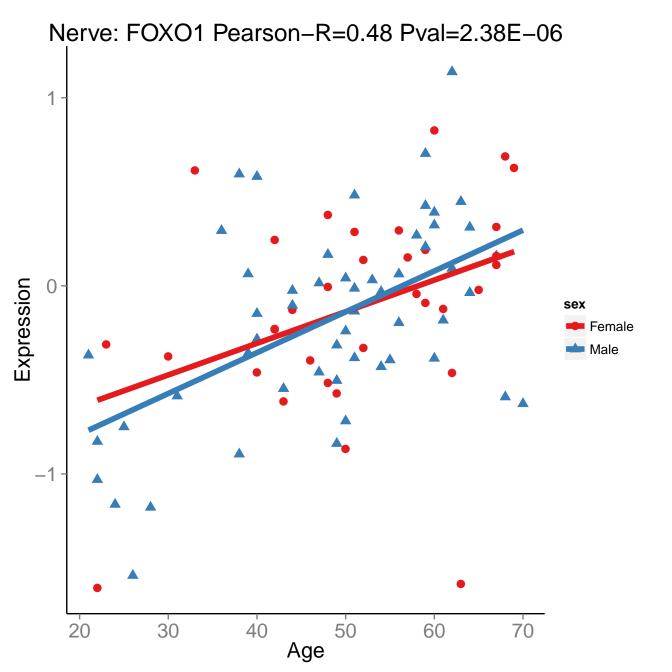


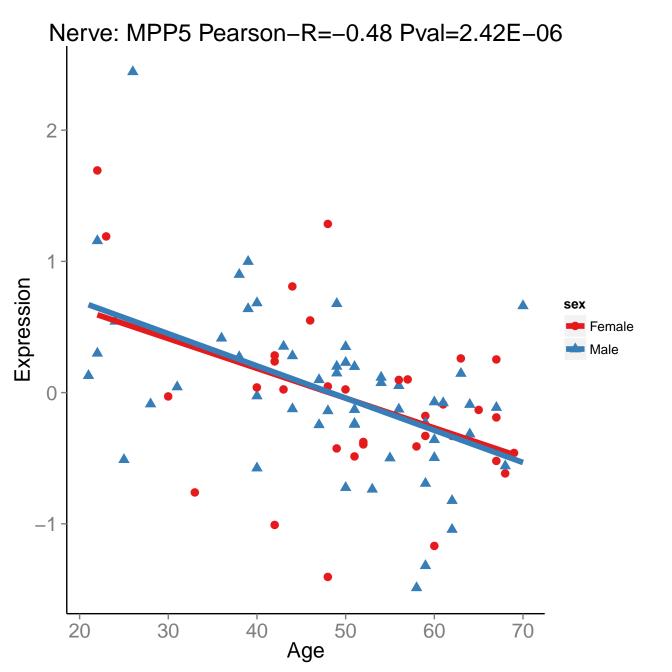


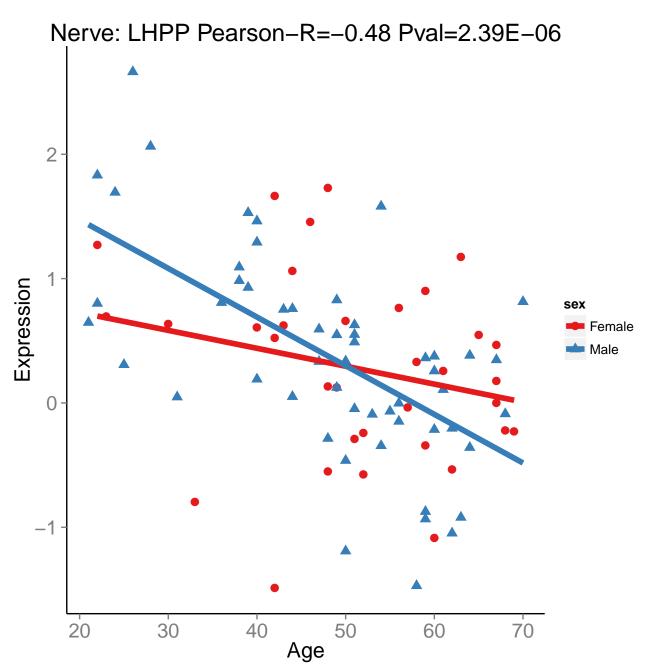


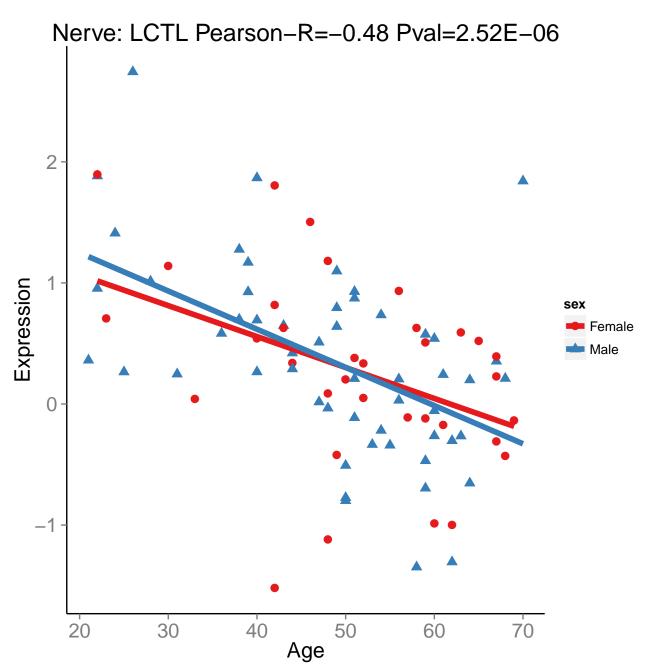


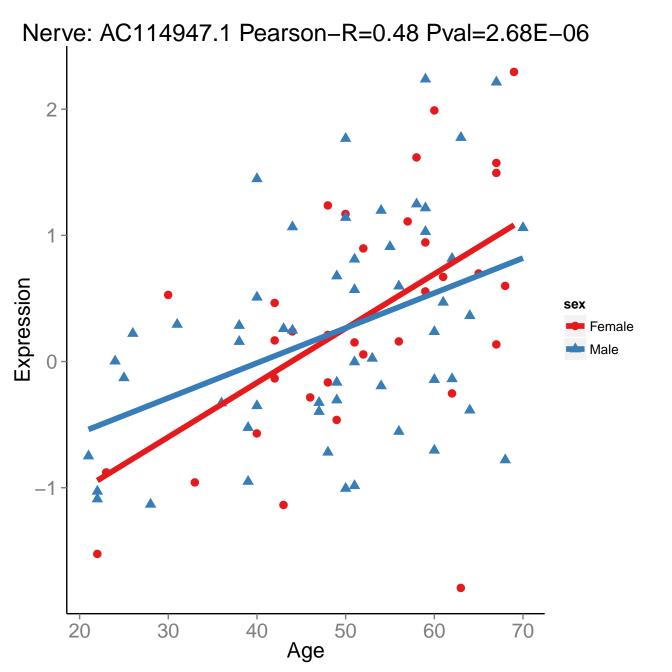


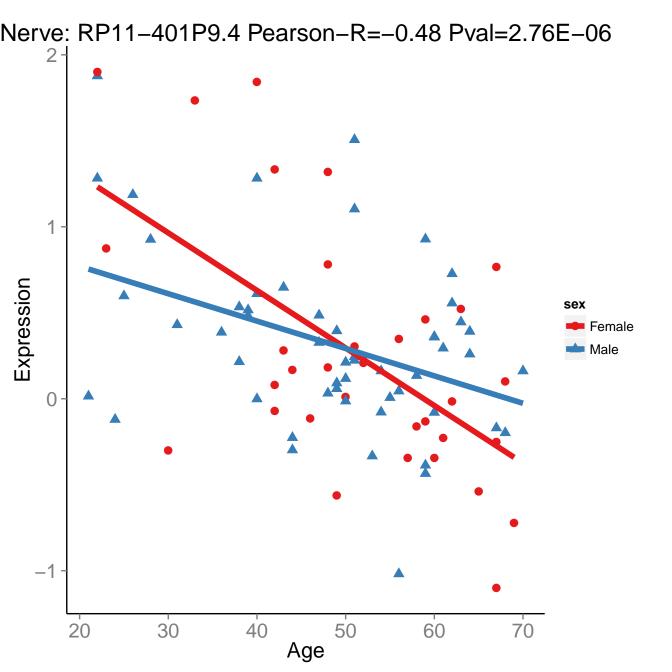


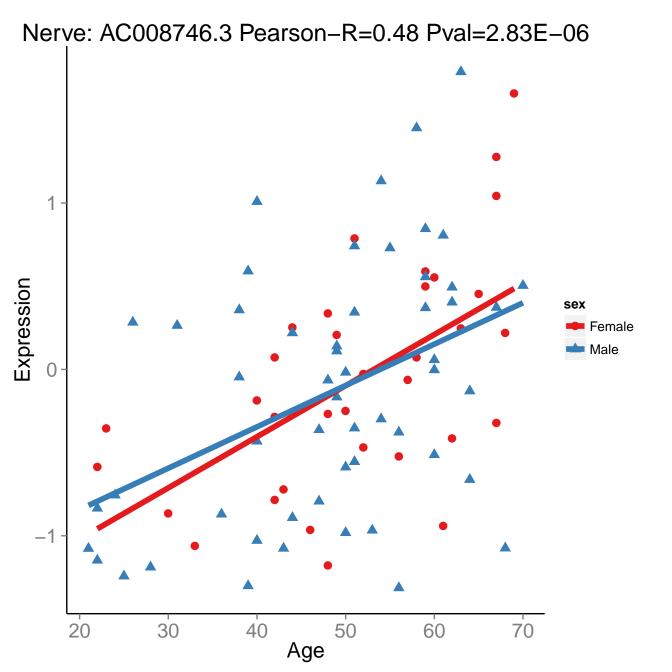


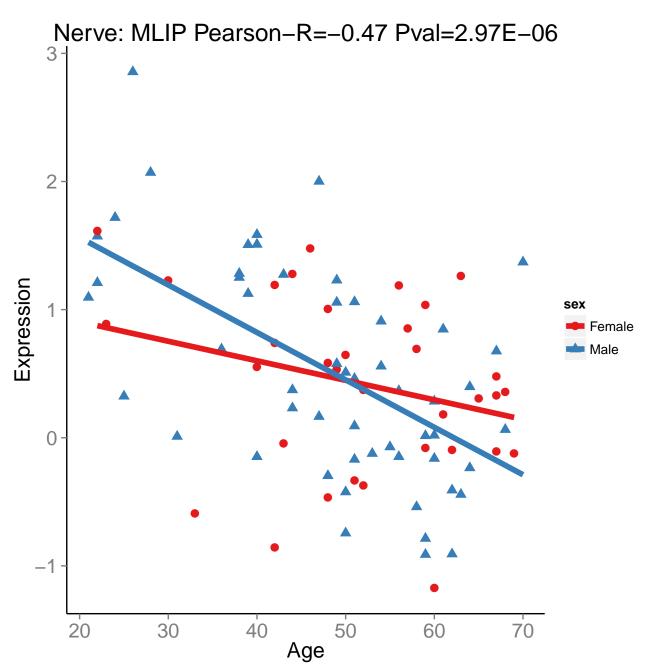


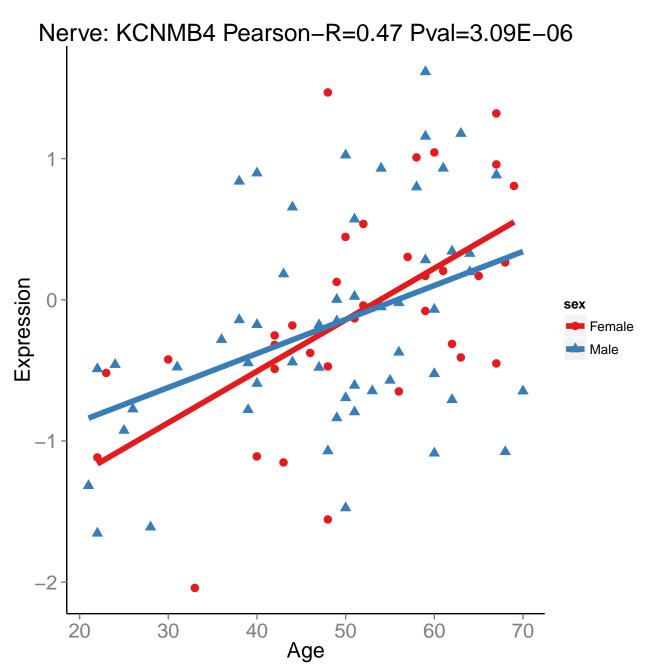


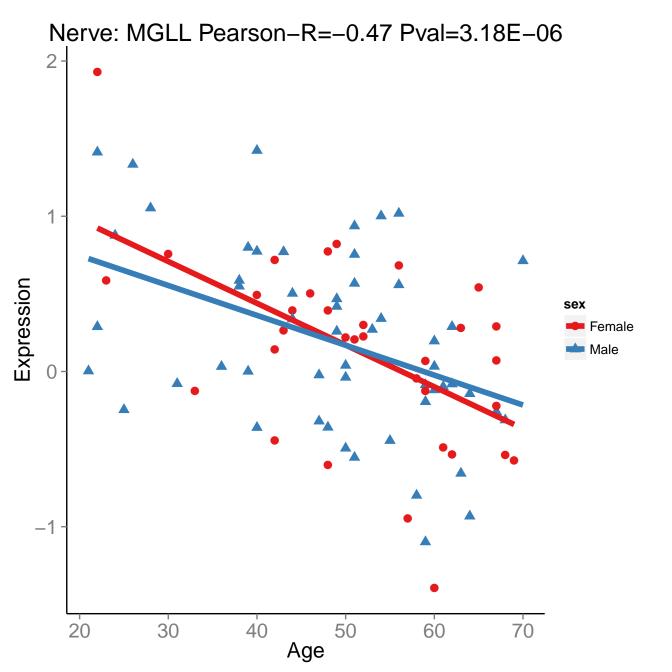


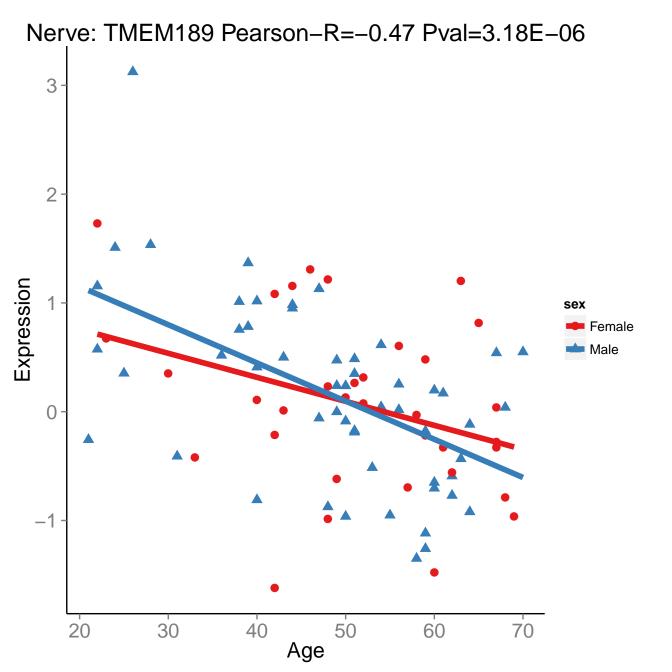


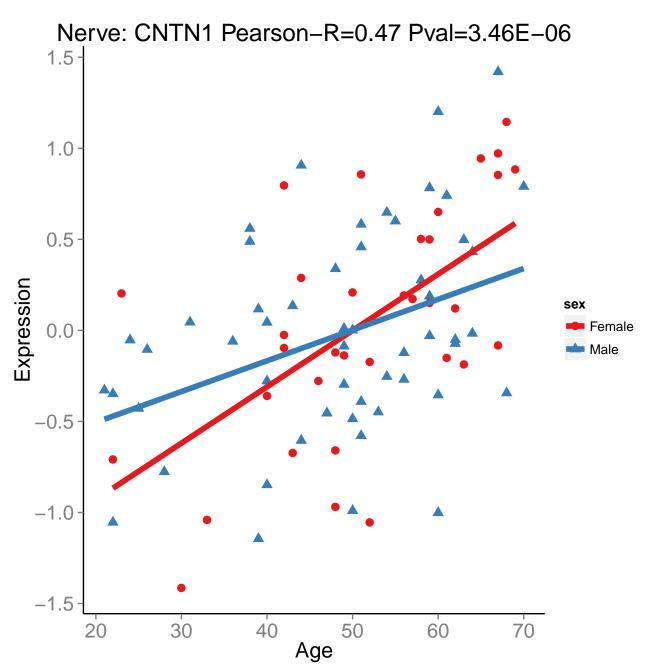


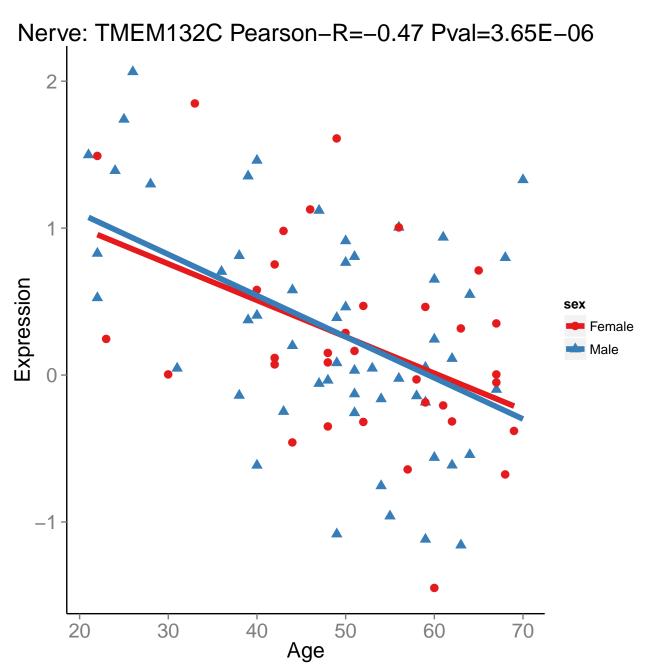


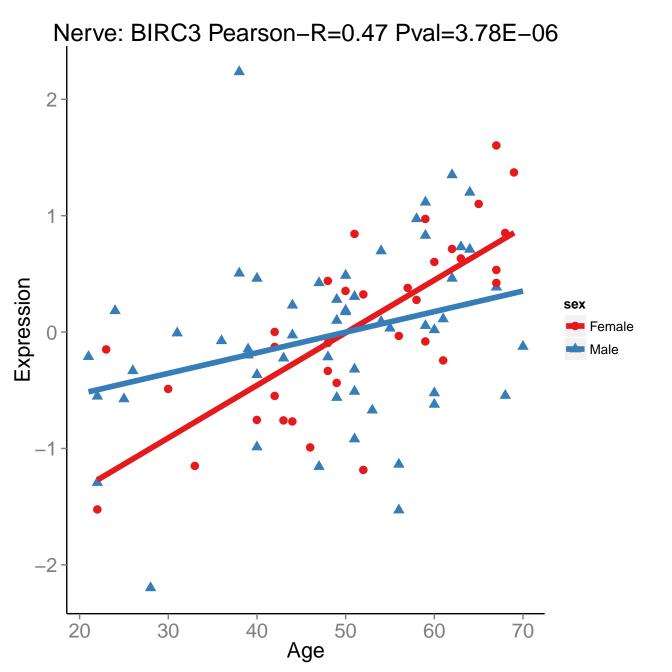


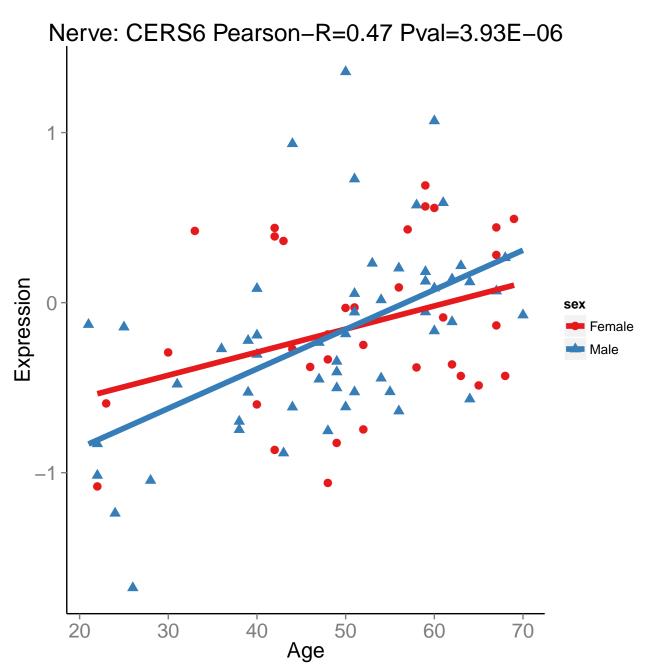


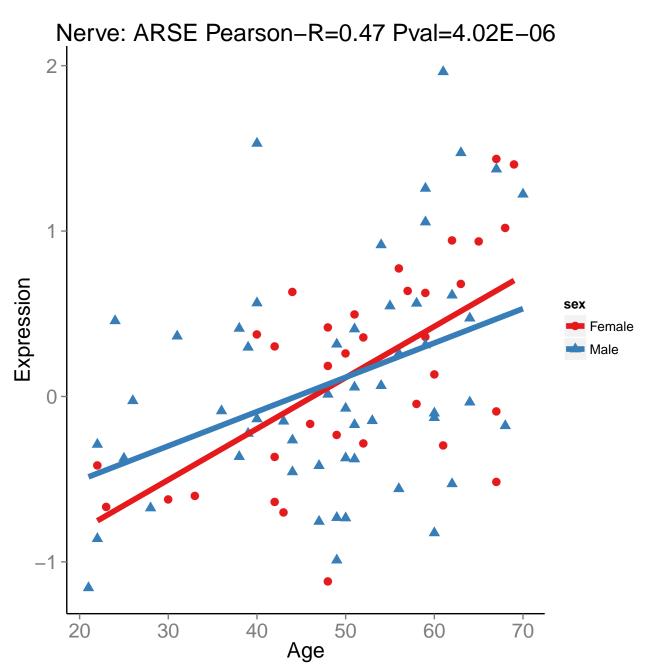


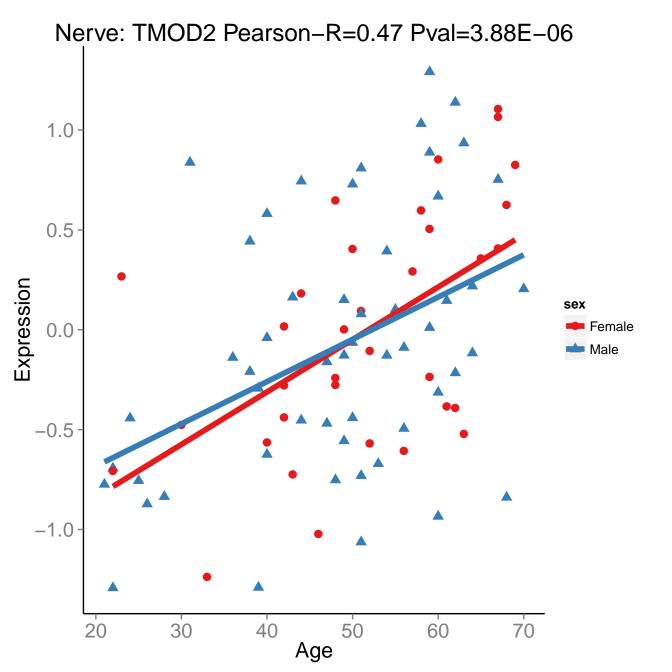


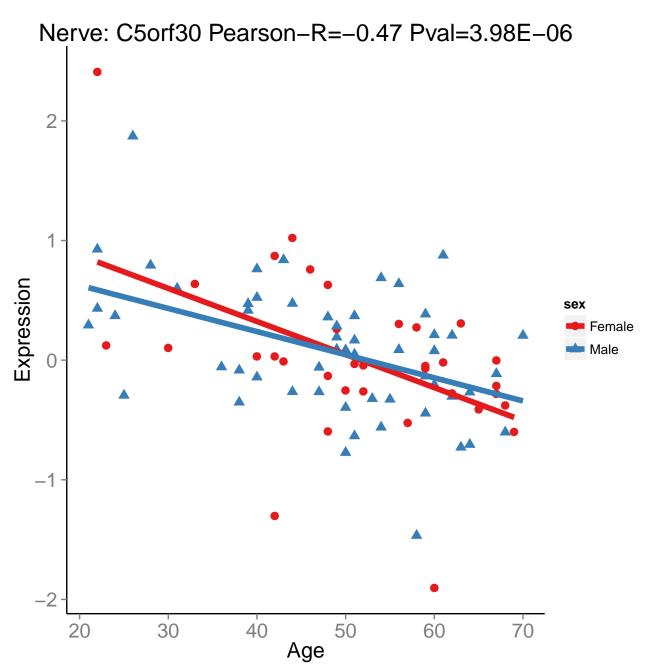


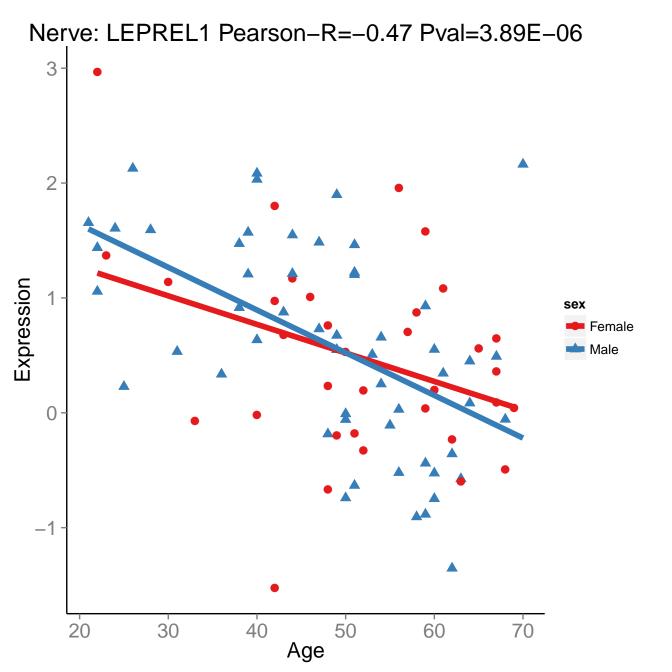


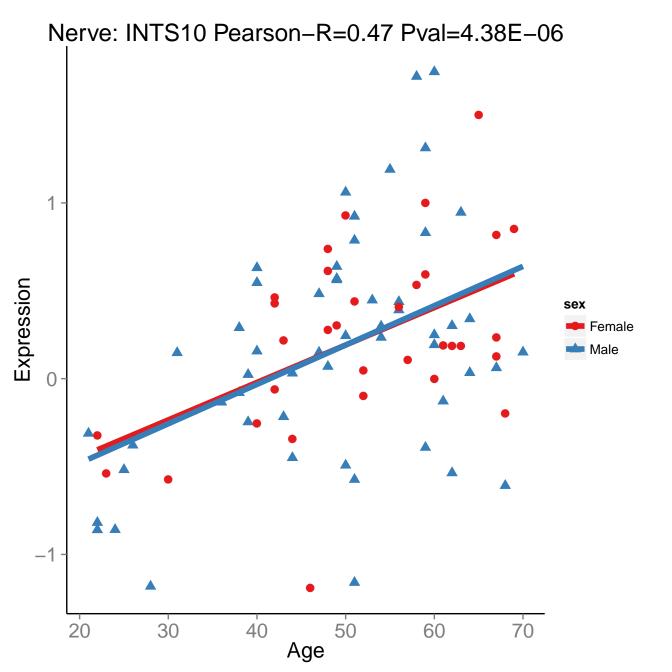


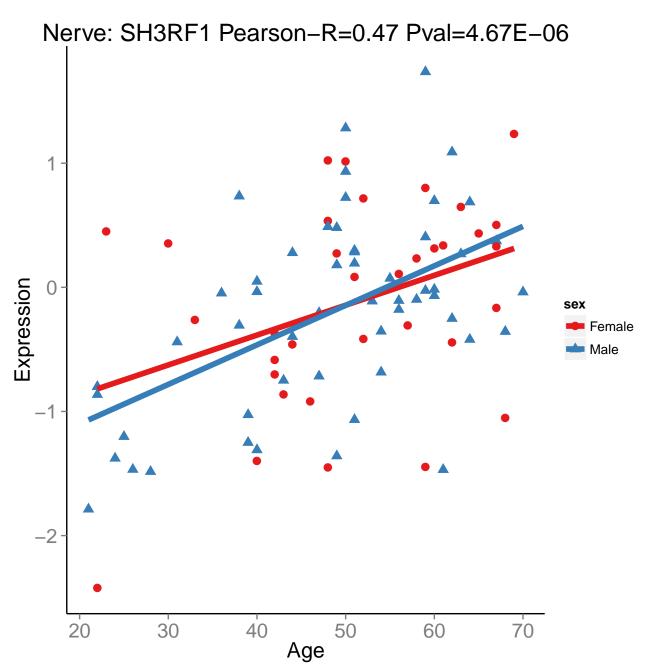


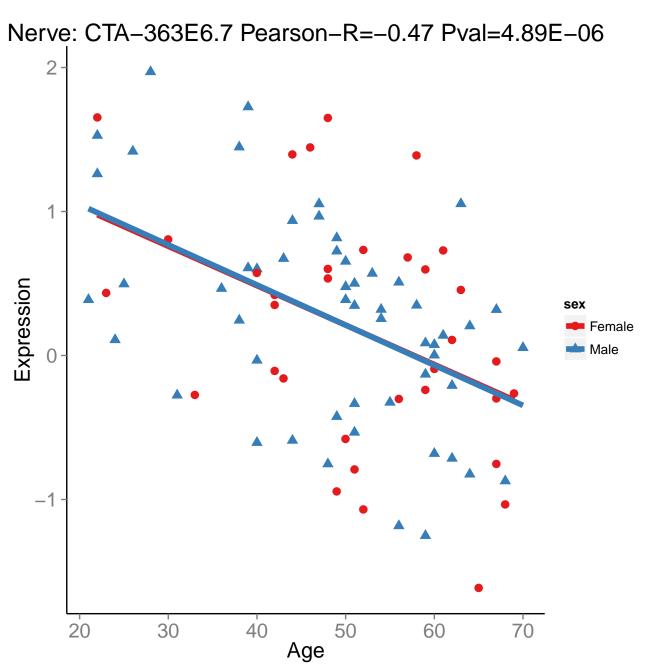


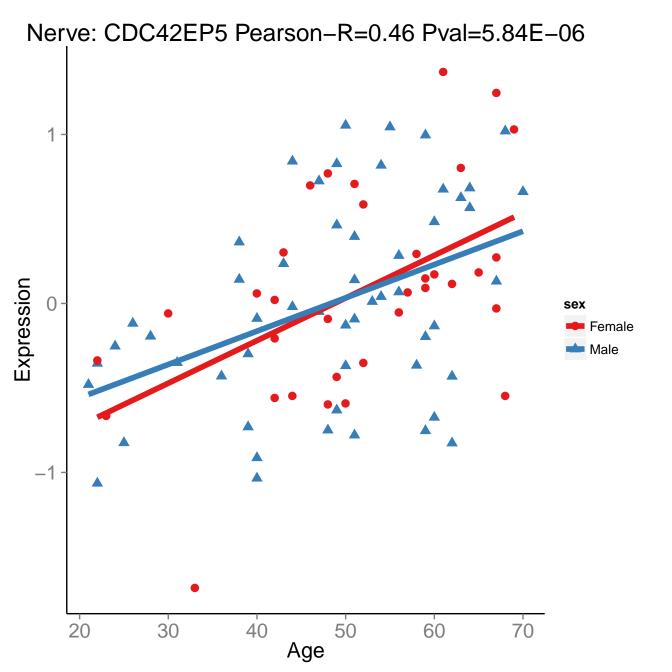


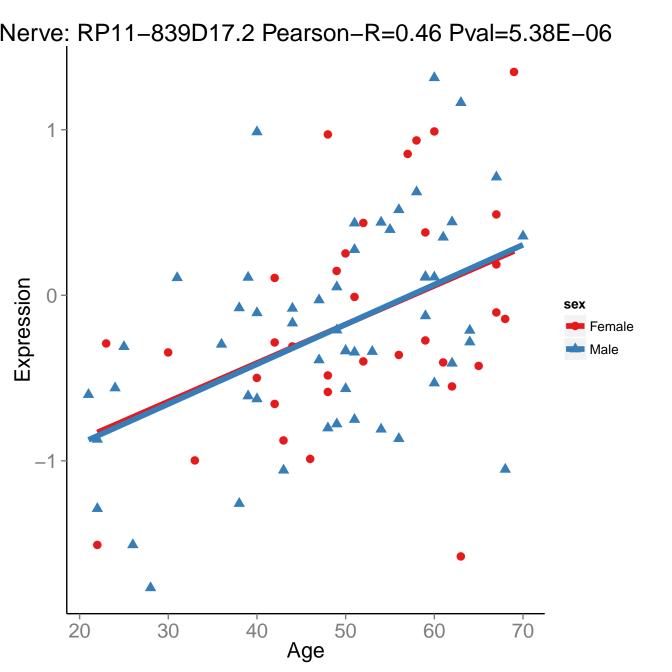


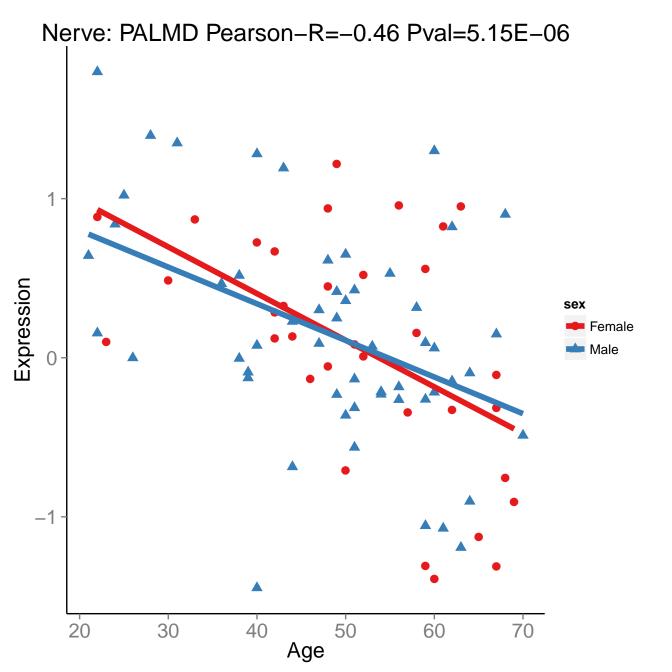


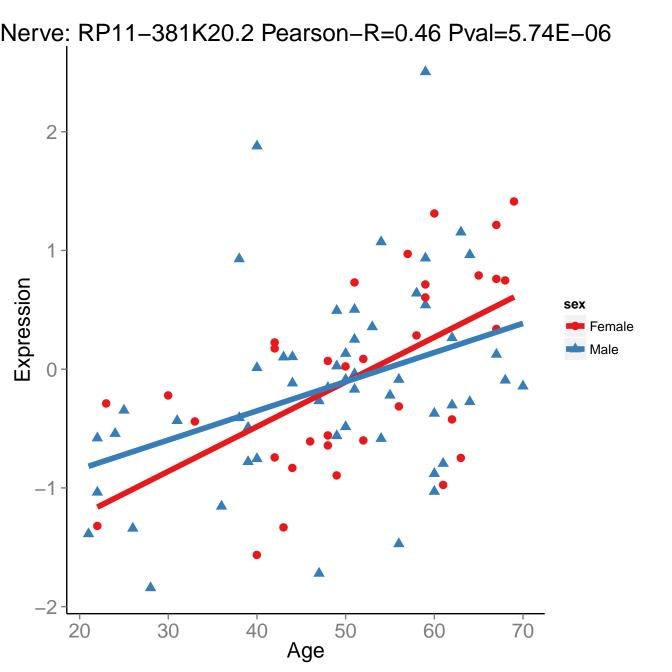


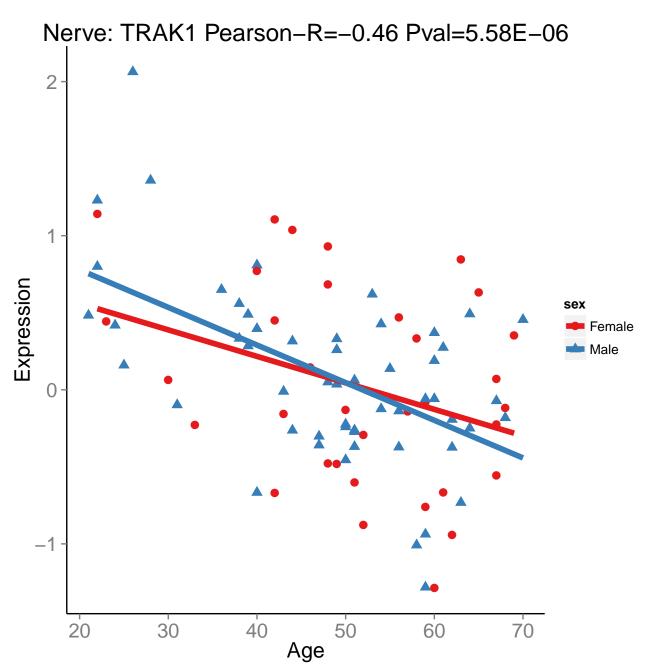


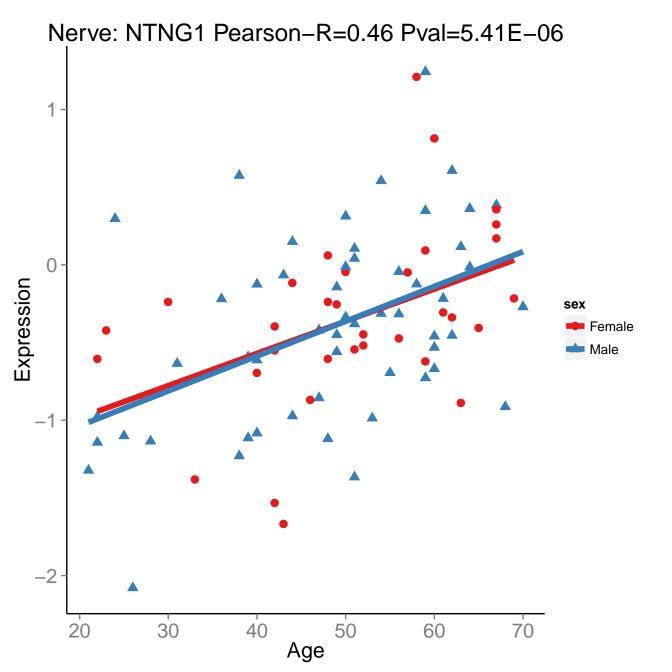


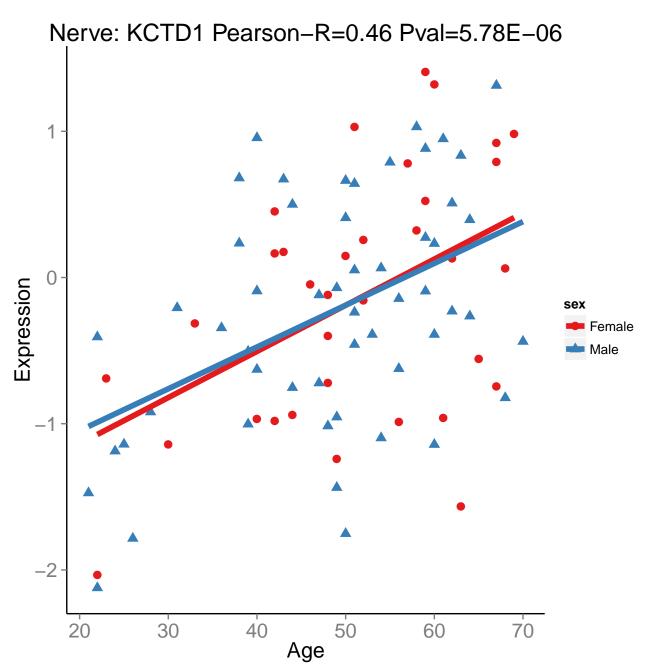


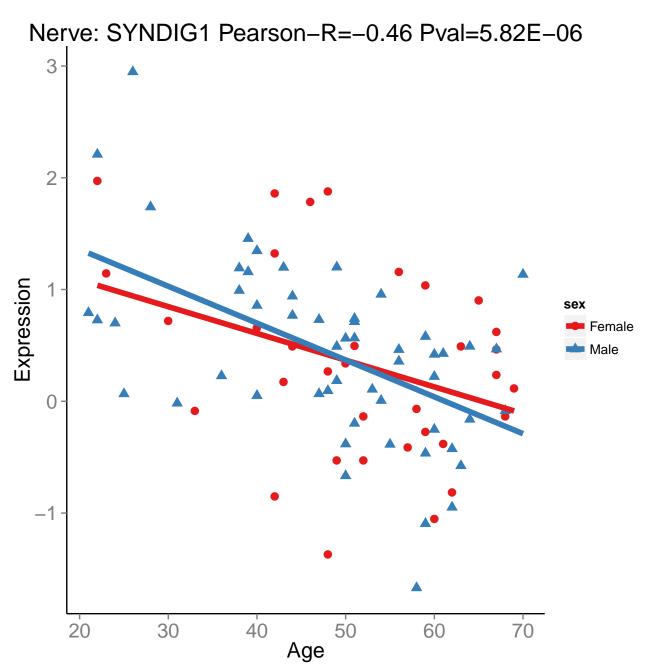


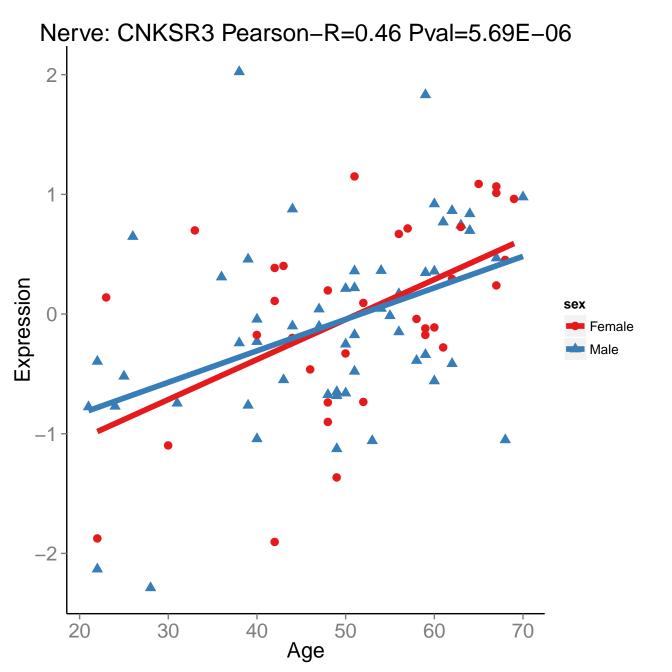


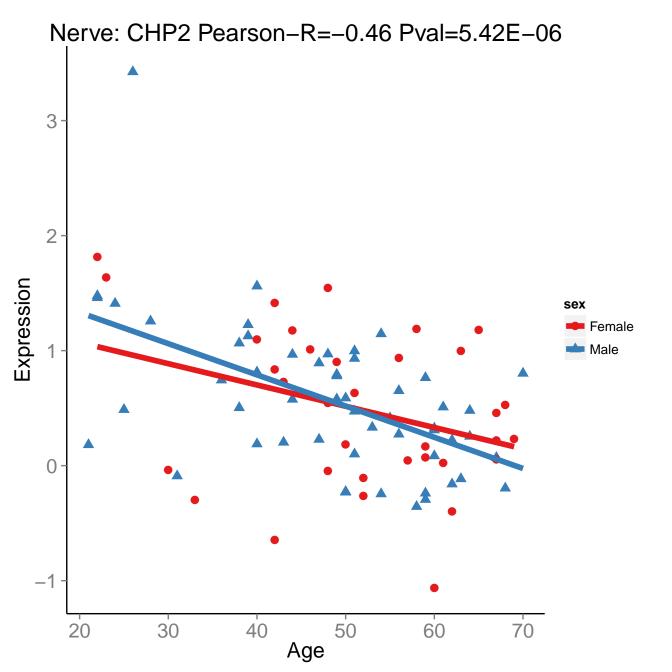


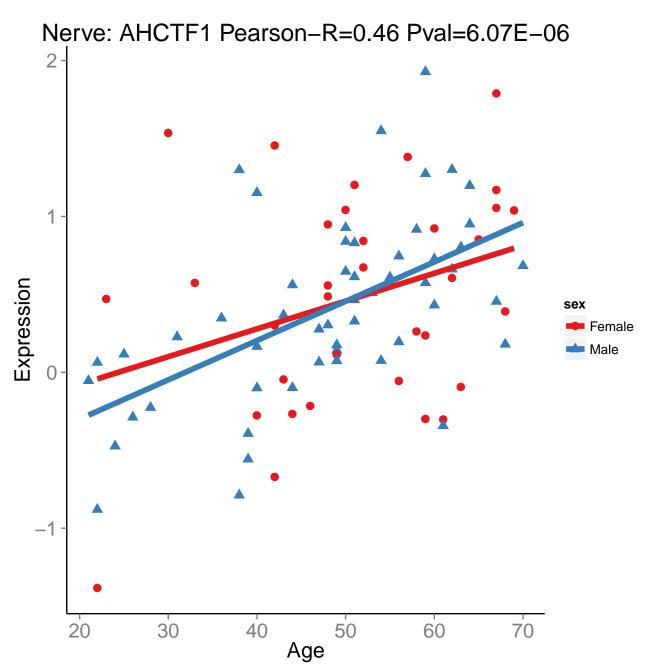


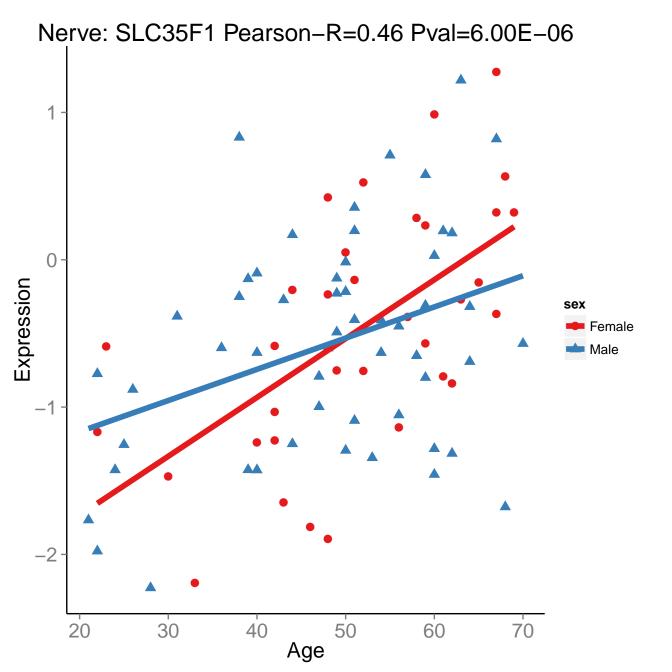


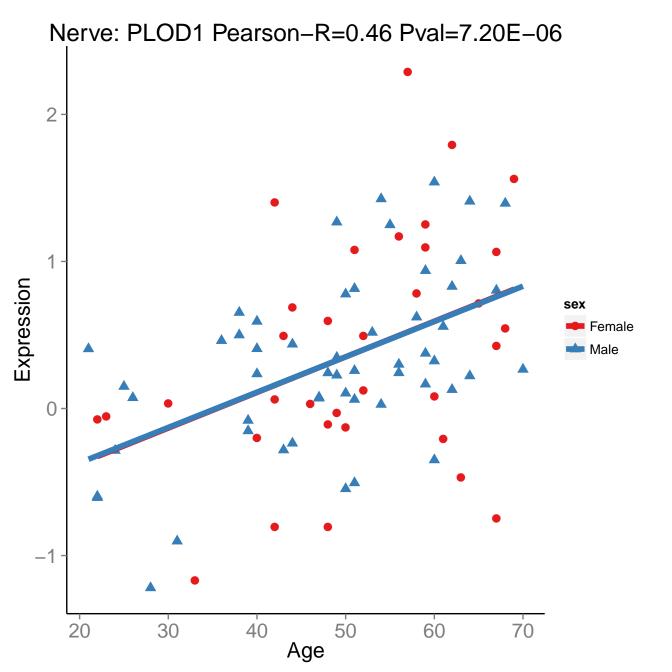


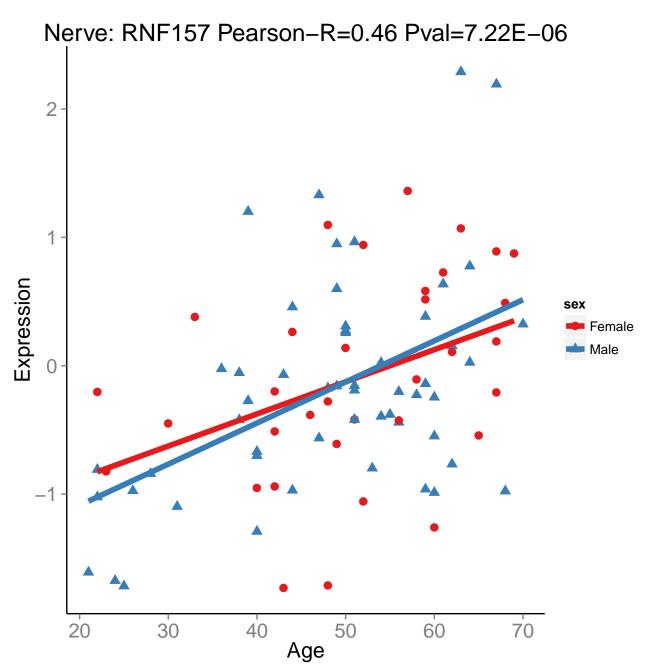


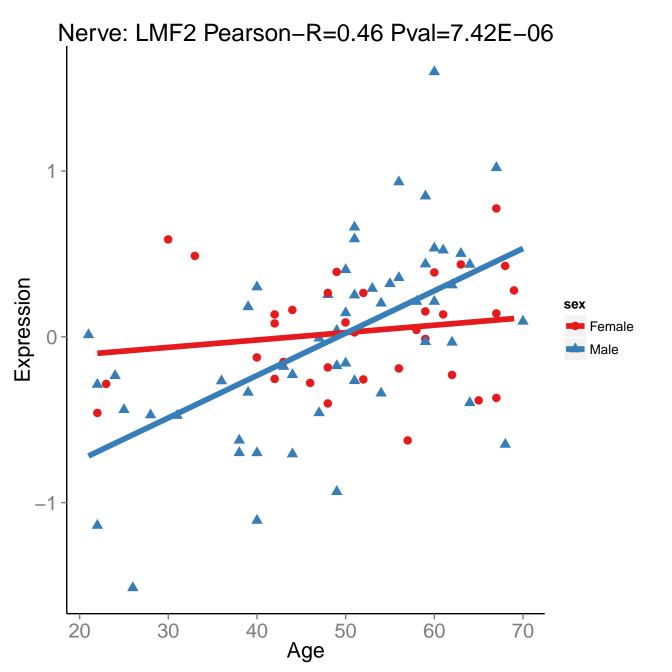


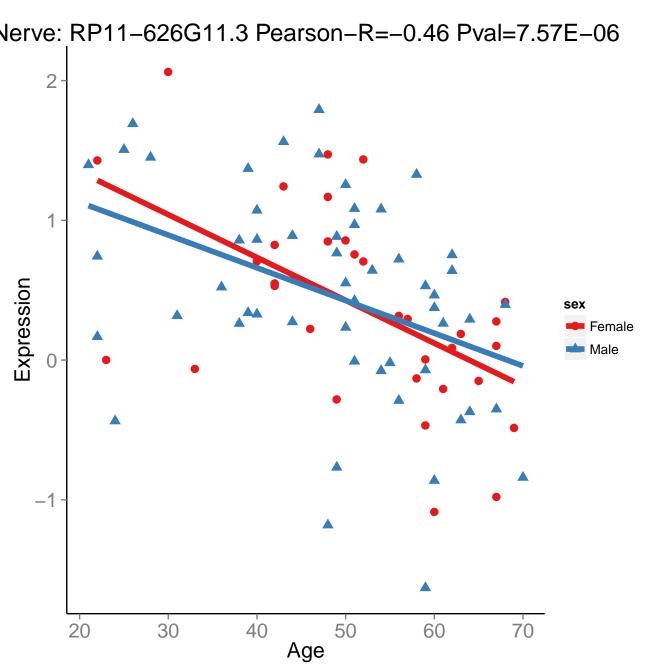




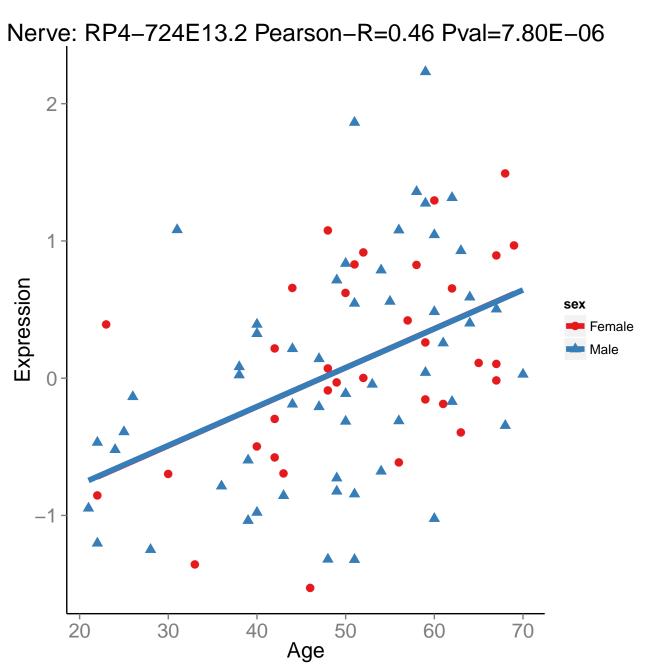


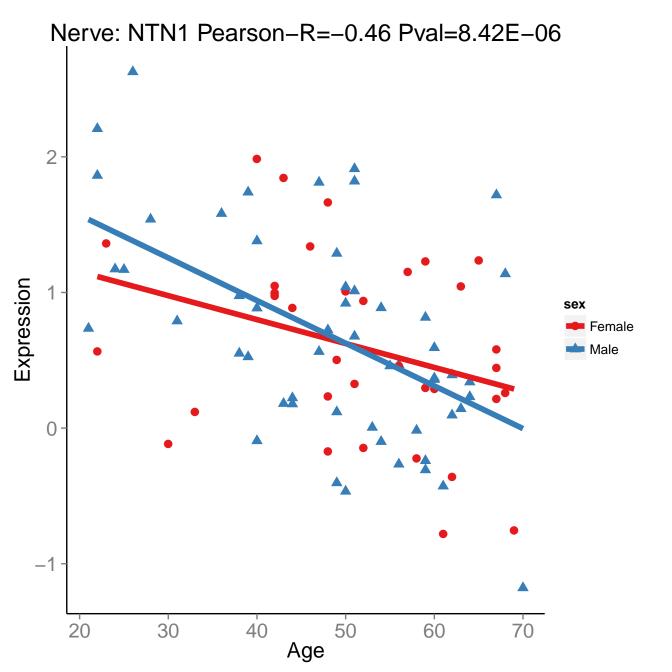


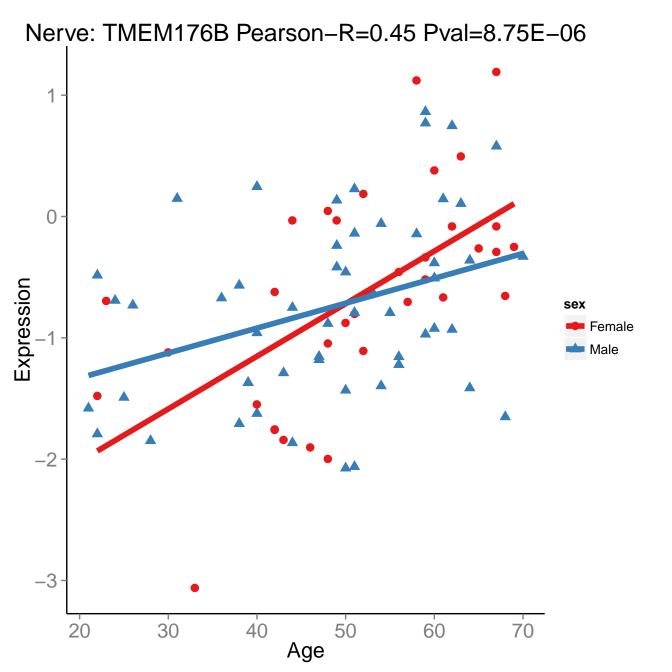


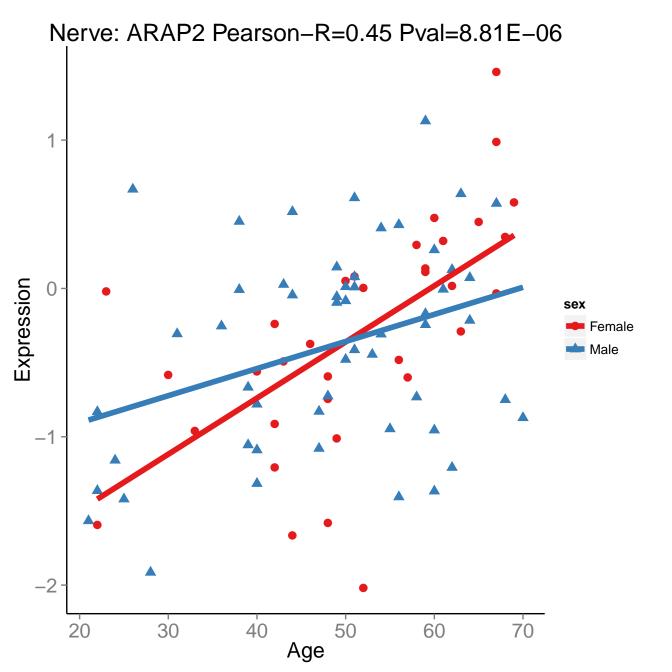


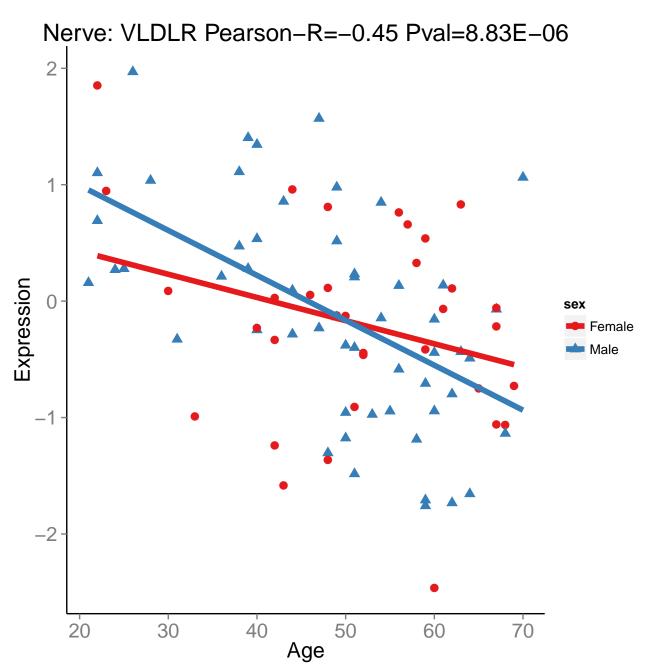




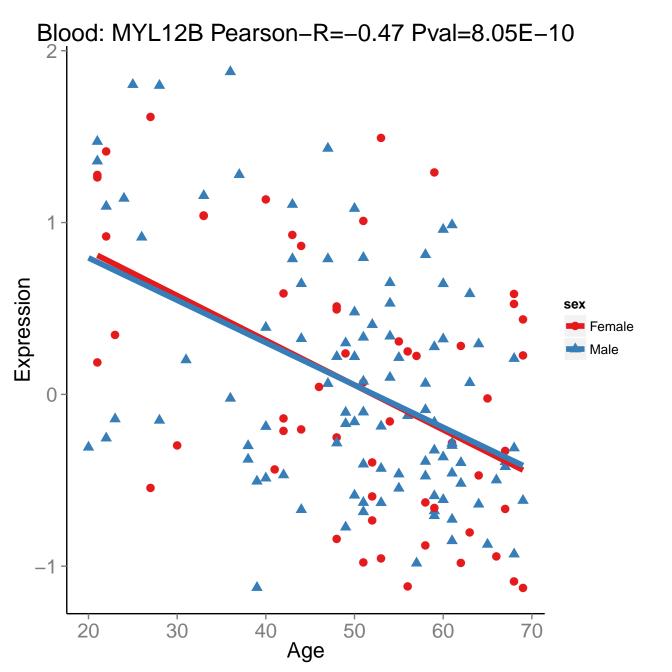


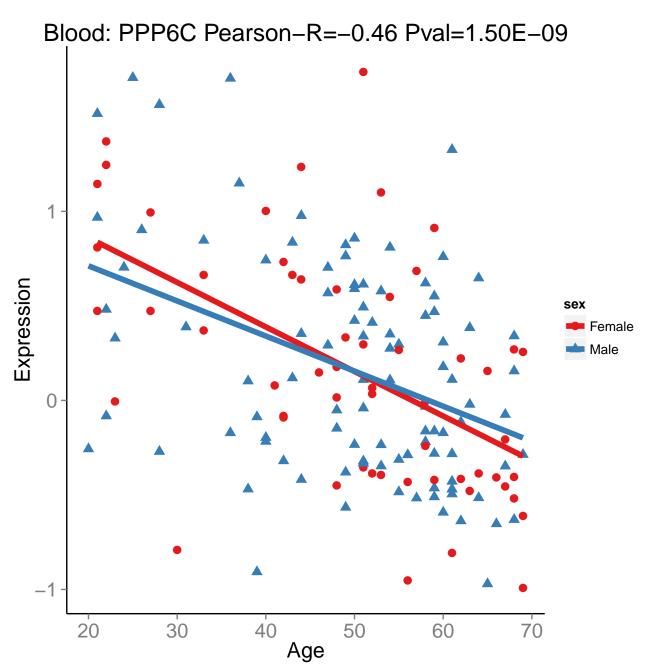


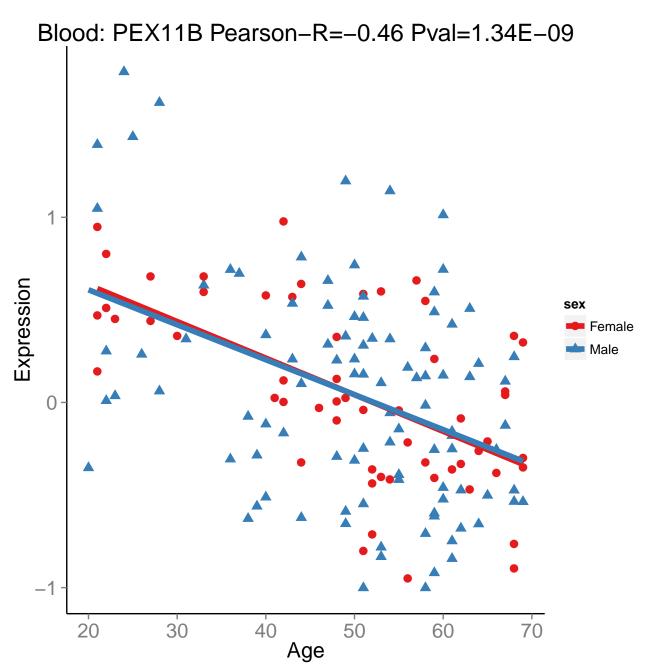


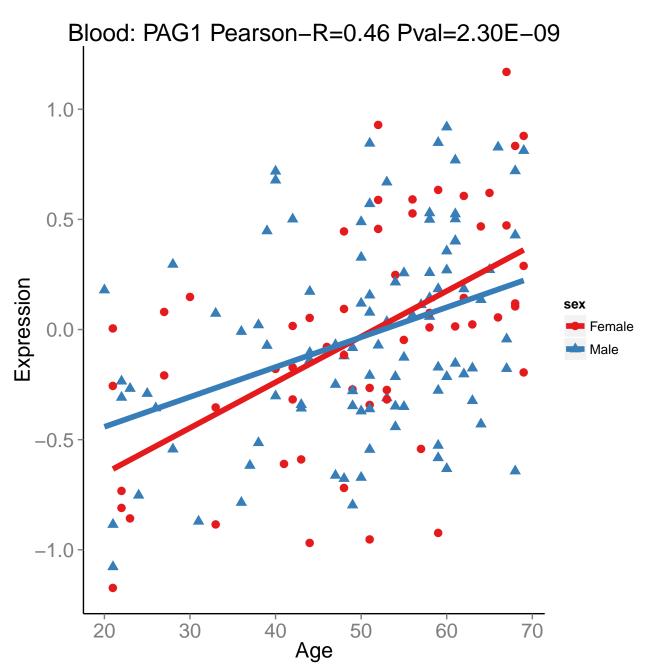


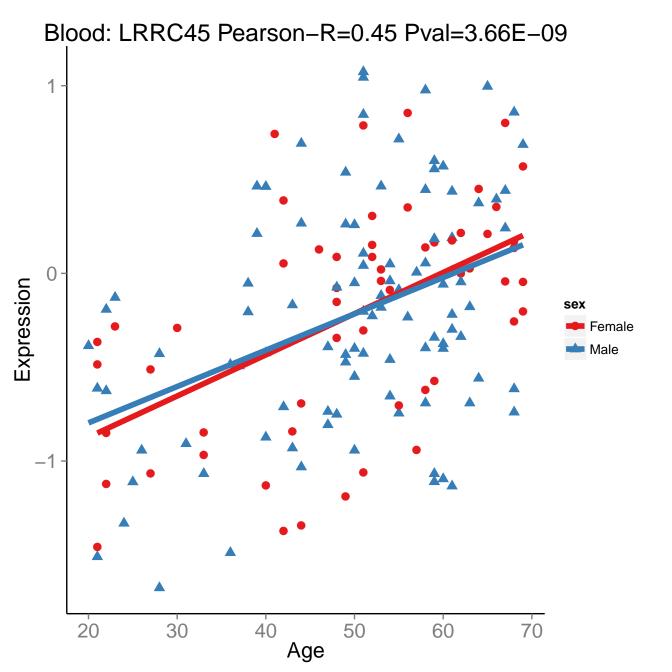


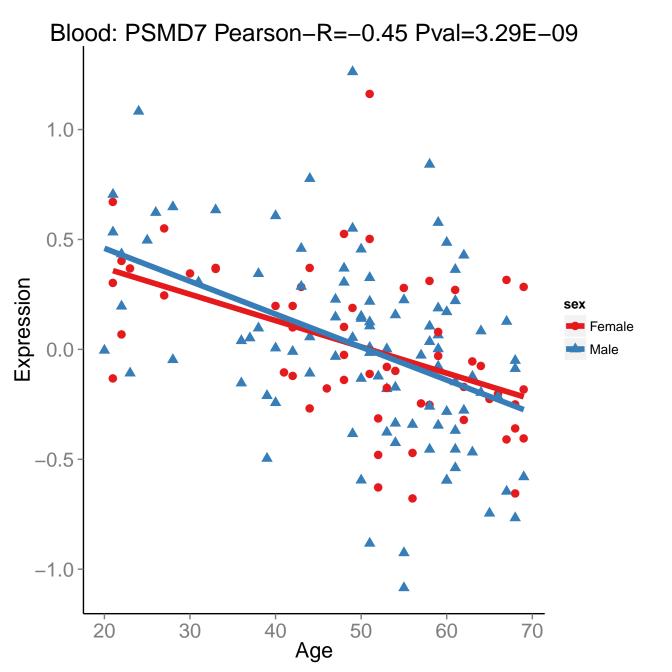


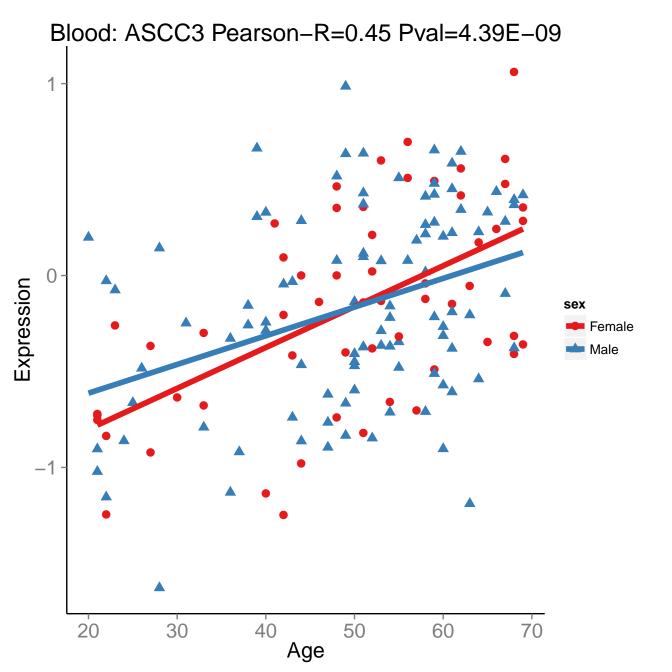


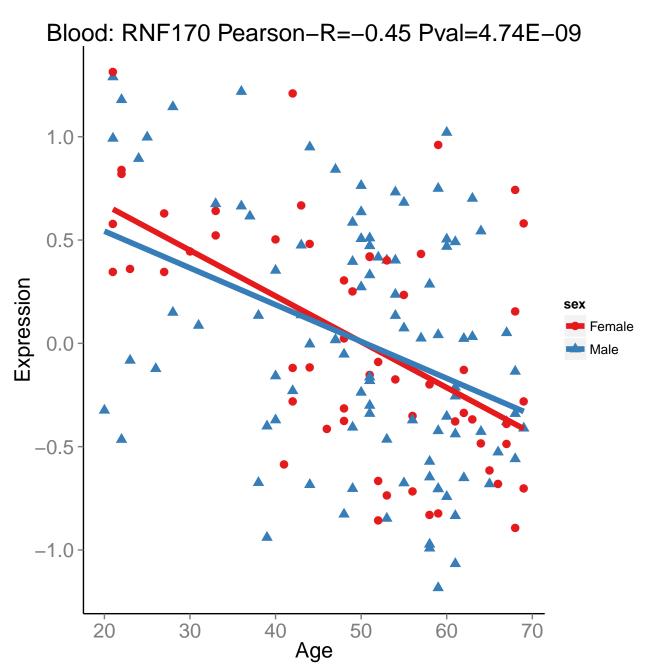


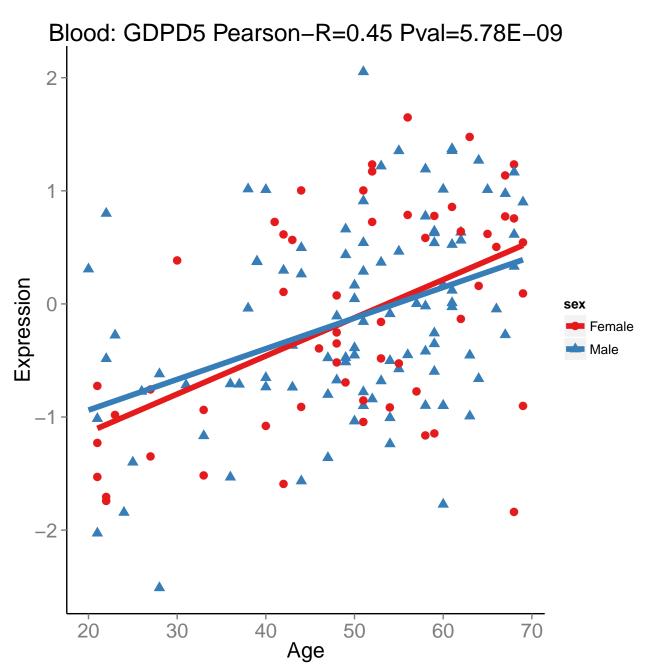


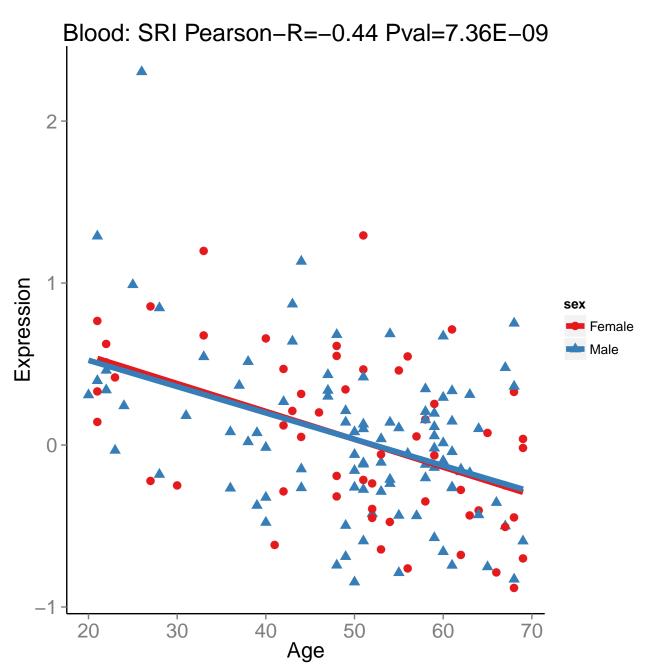


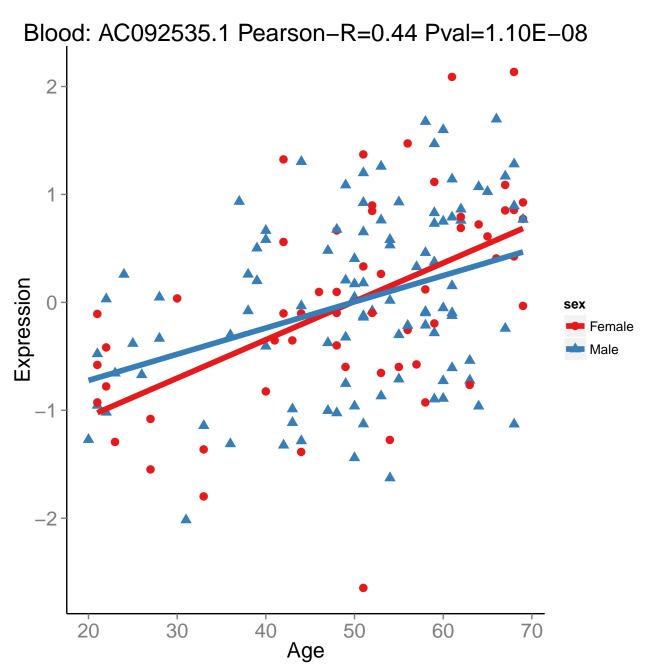




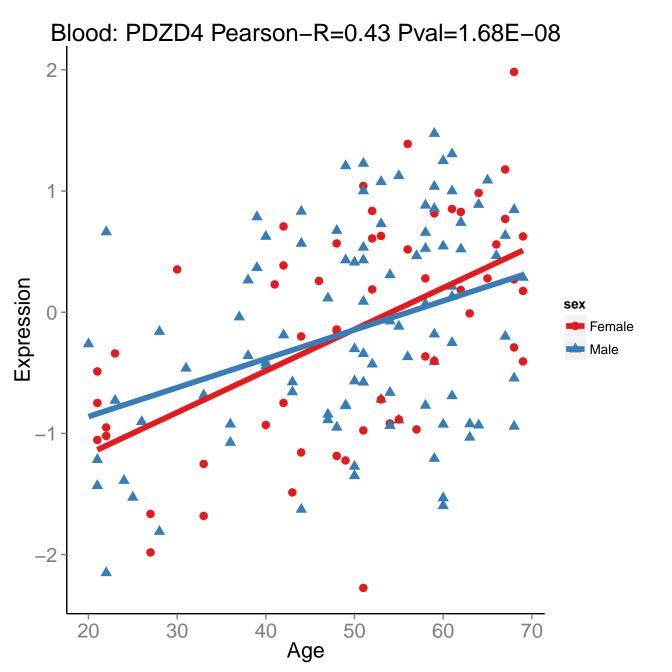


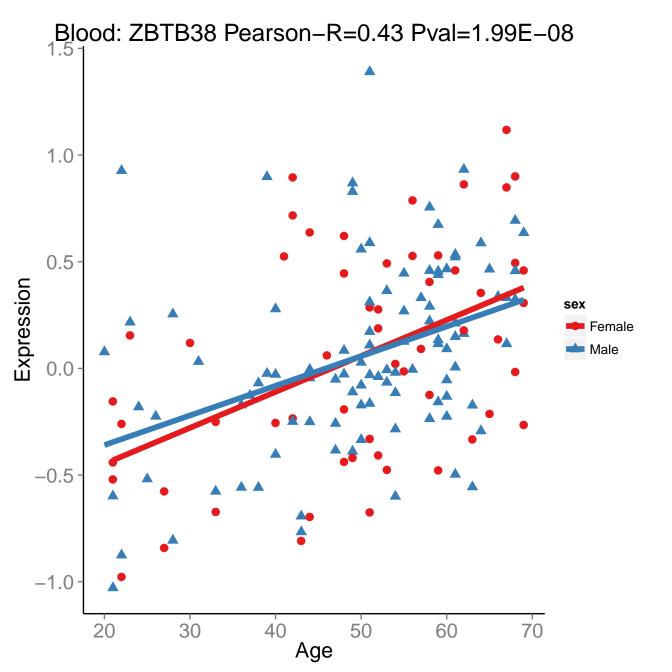






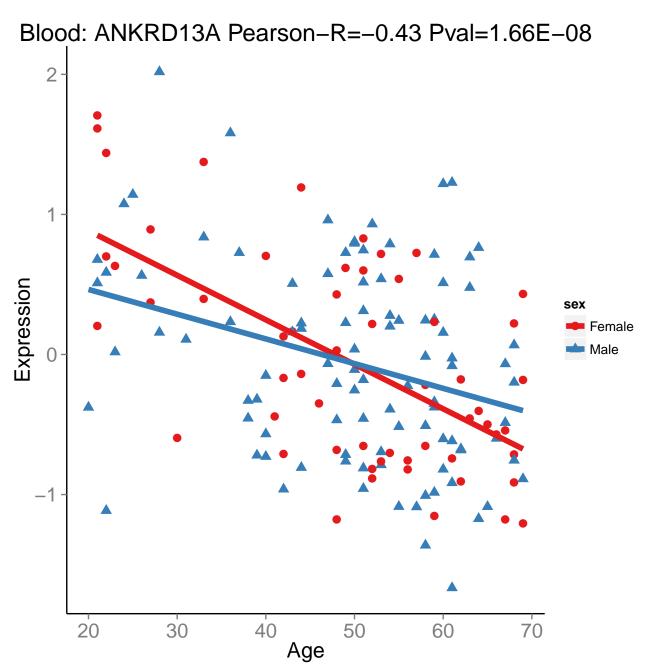
Blood: CDK7 Pearson-R=-0.44 Pval=1.17E-08 1.5 1.0 0.5 Expression sex Female 0.0 Male -0.5-1.0 30 40 60 70 50 20 Age



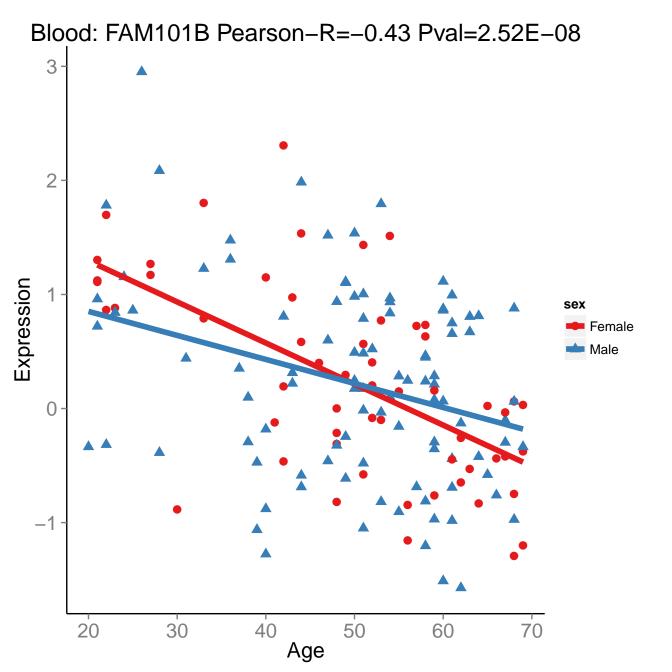


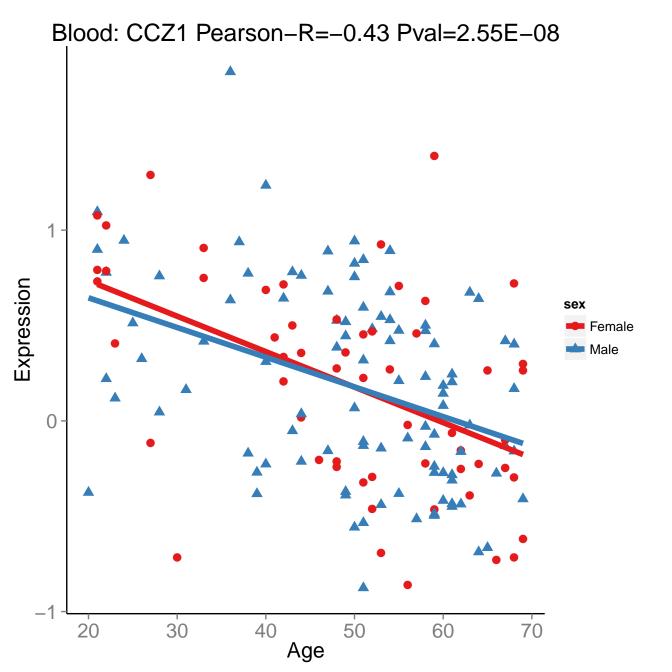
Blood: PSMC1 Pearson-R=-0.43 Pval=1.99E-08 2 Expression sex Female Male 20 40 70 30 50 60 Age



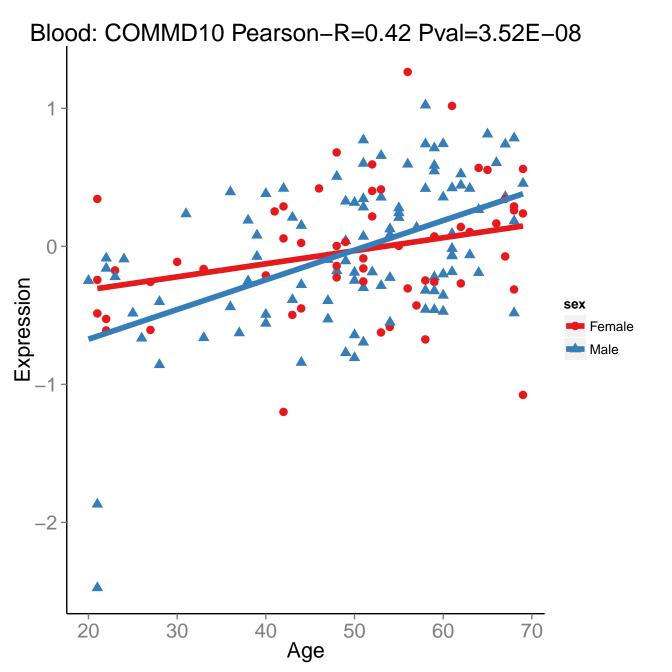


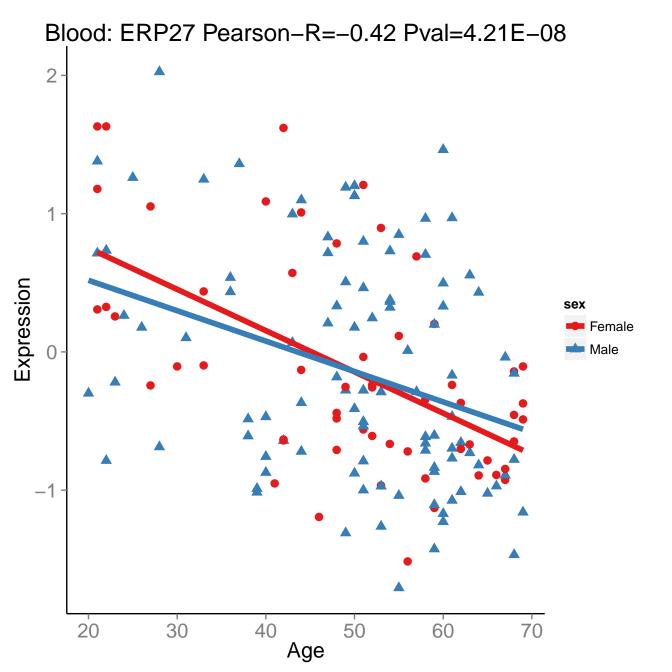


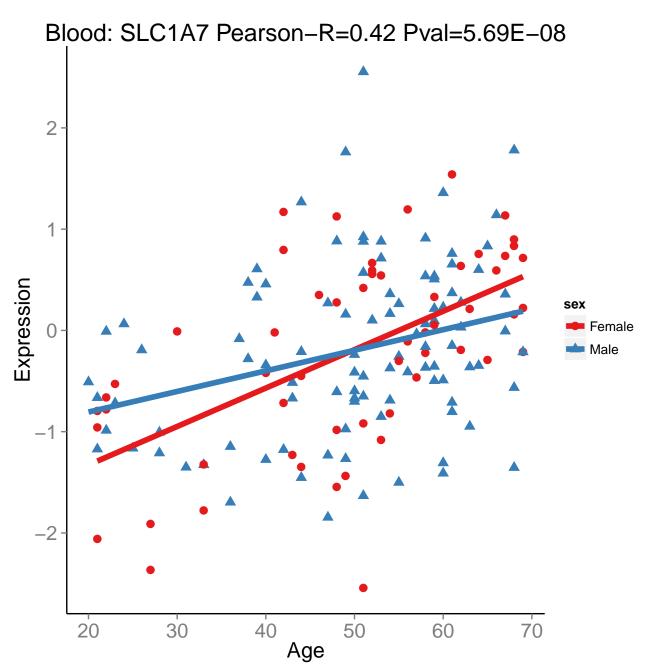


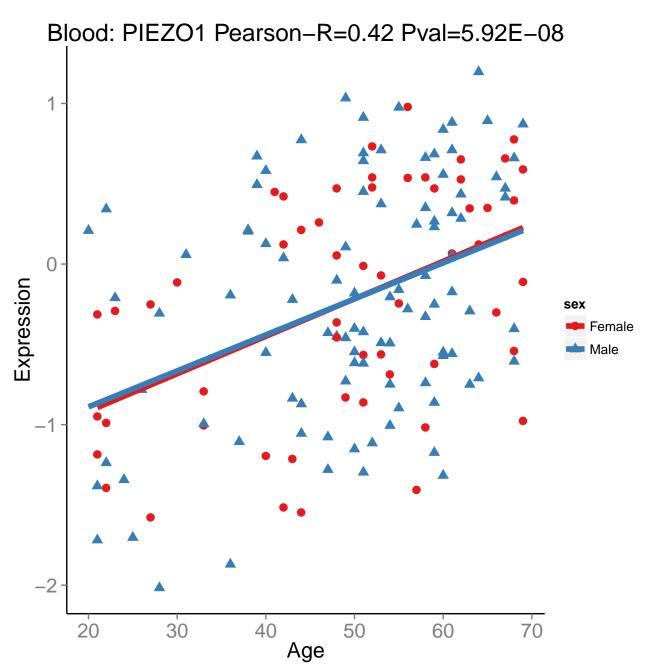


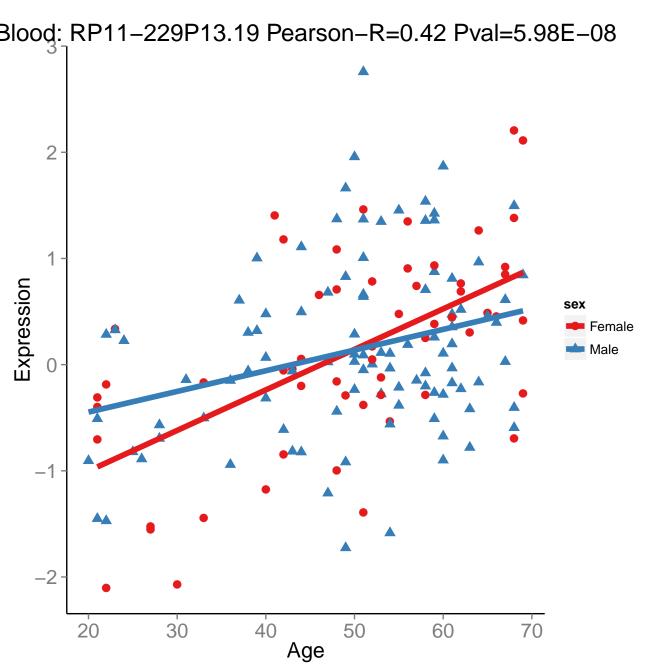
Blood: PSMC1P1 Pearson-R=-0.43 Pval=3.02E-08 2 1 Expression sex Female Male 0 -120 40 70 30 50 60 Age

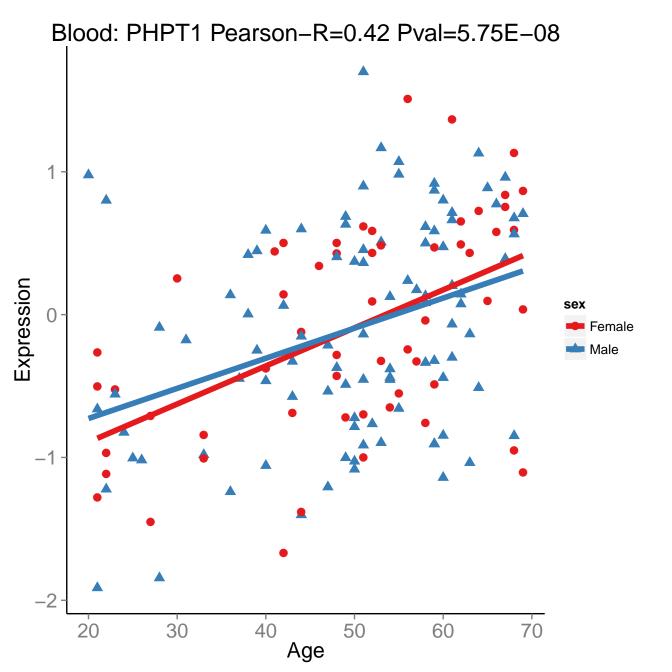


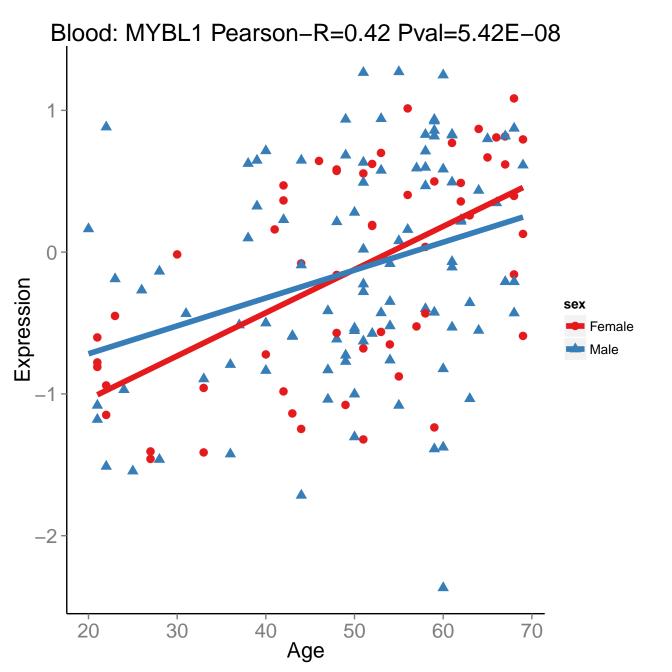


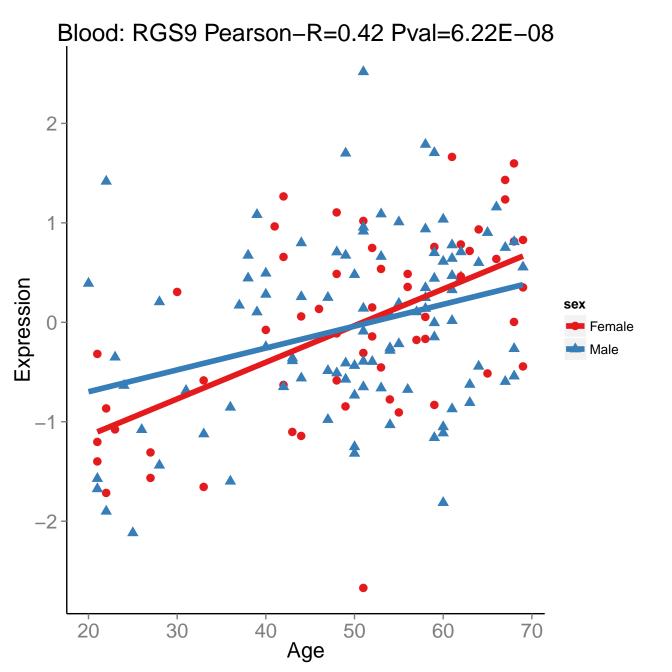




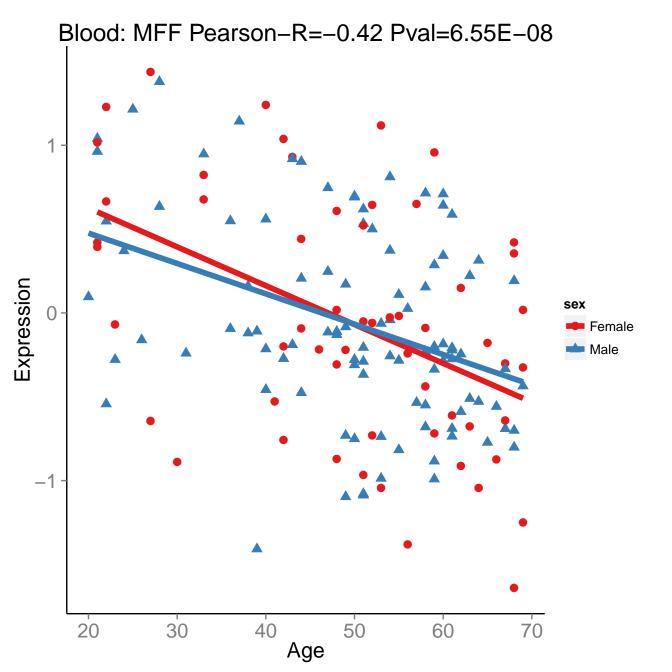




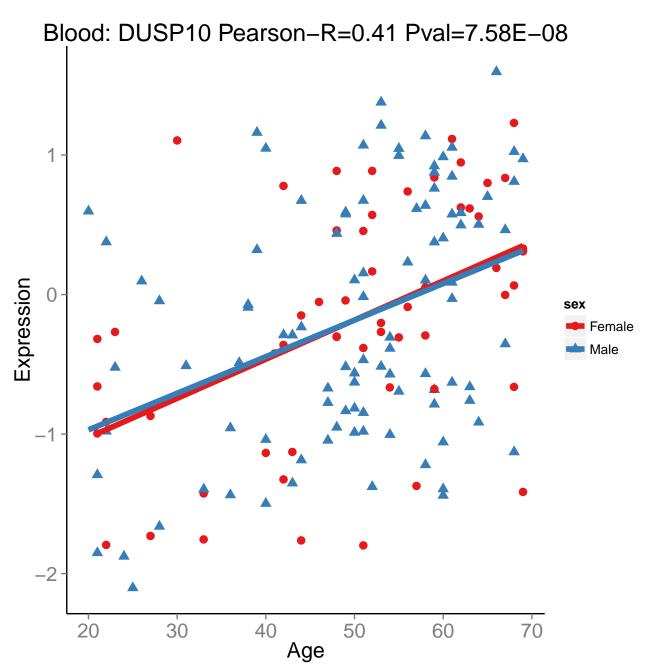




Blood: ARPC3 Pearson-R=-0.42 Pval=6.62E-08 2 1 Expression sex Female Male 20 40 70 30 50 60 Age

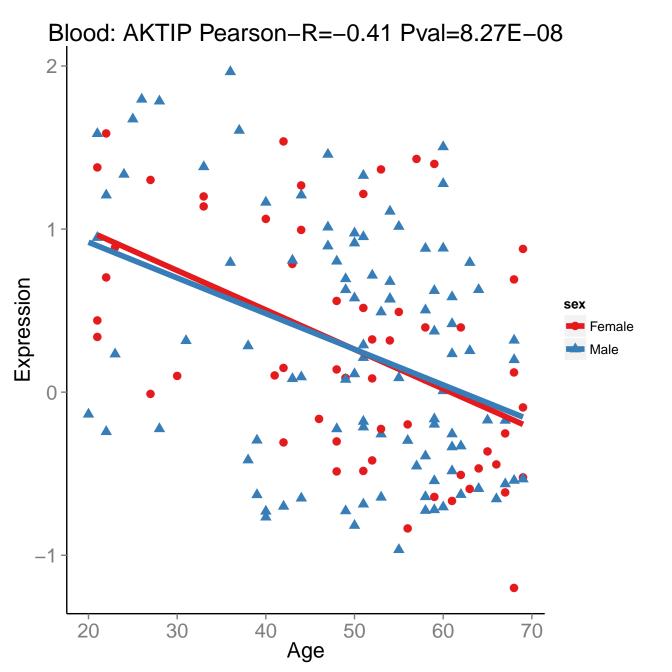


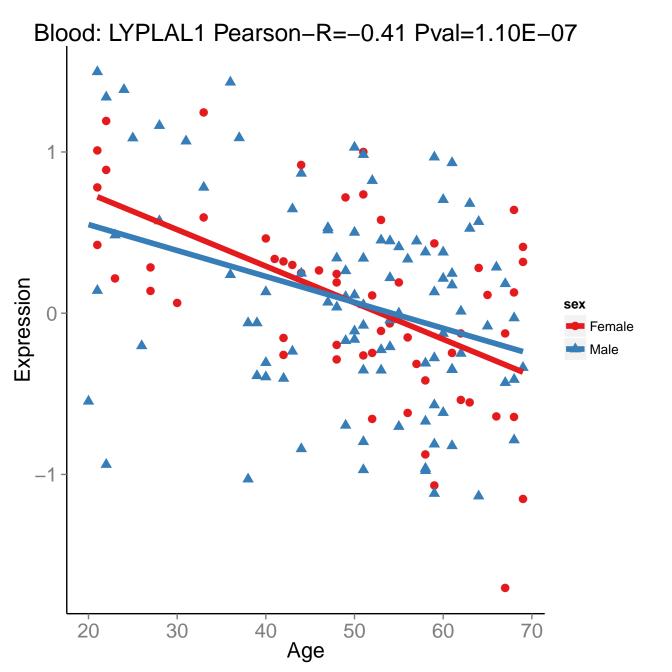


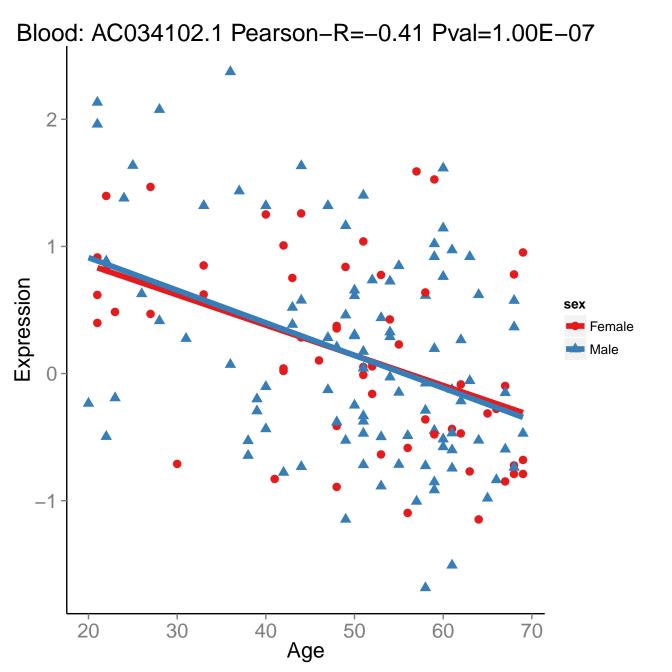


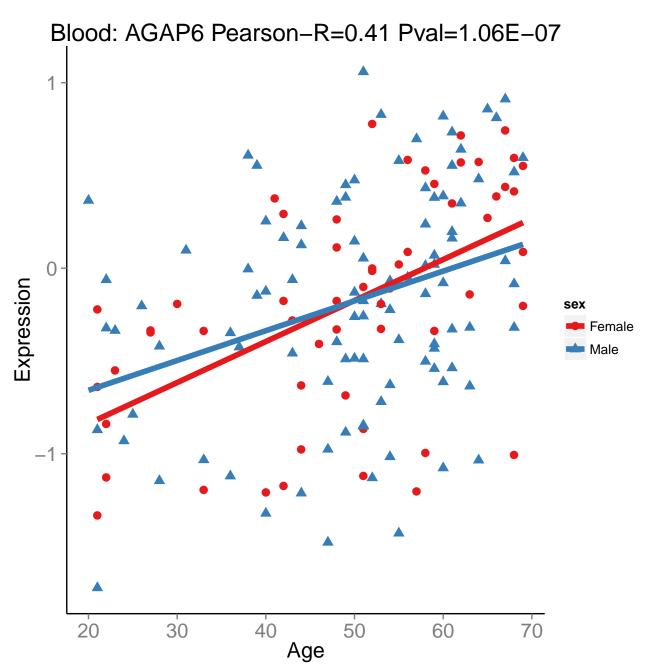


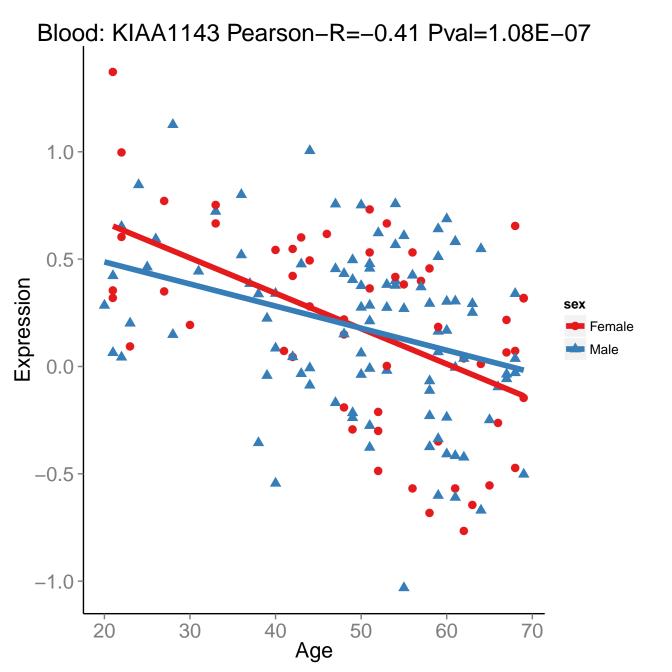


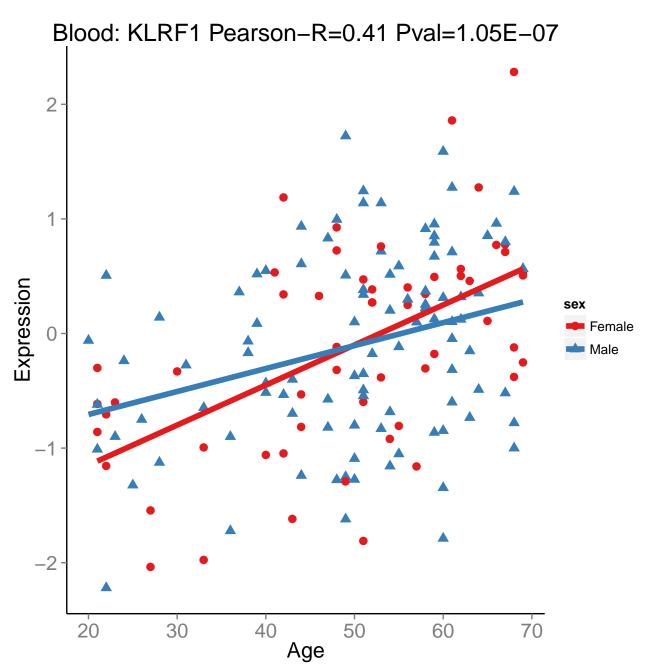


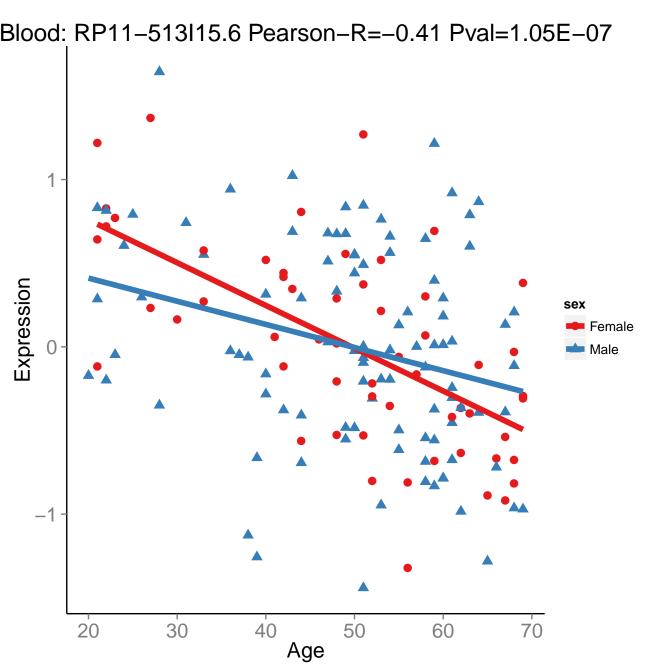




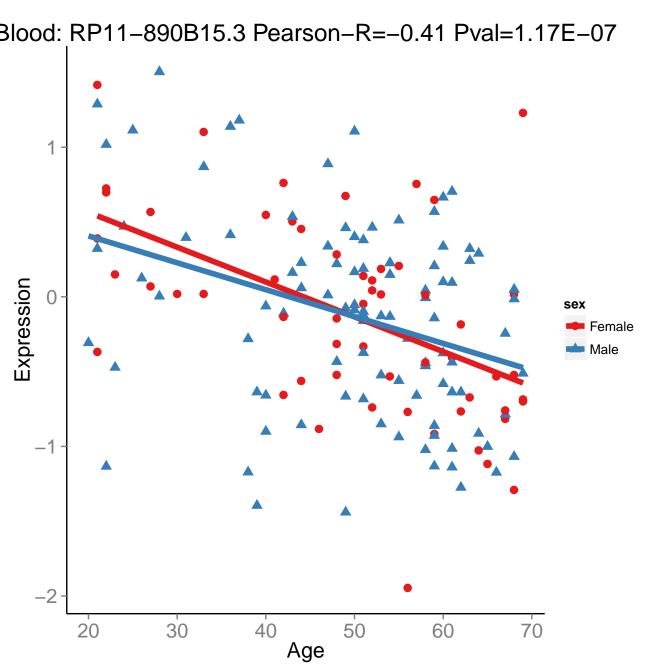


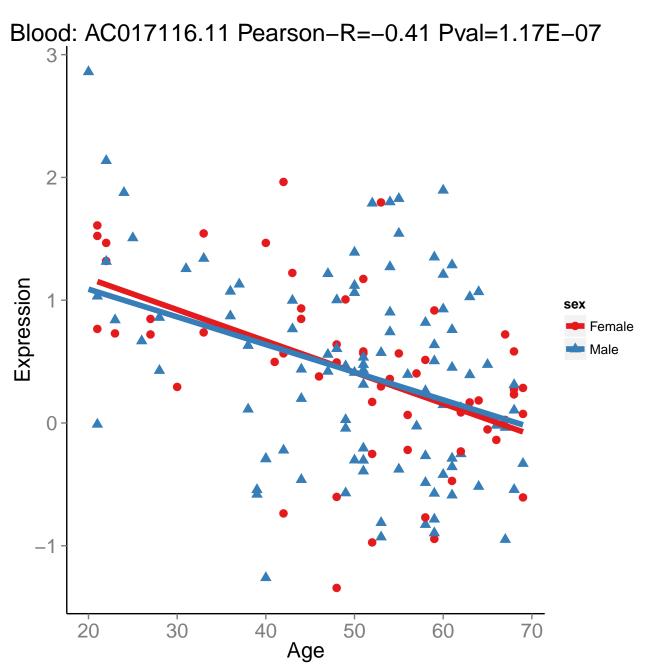


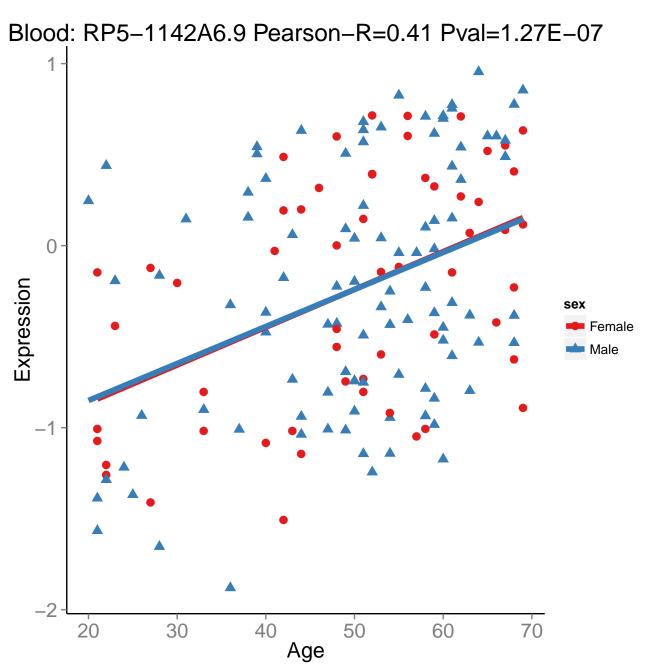


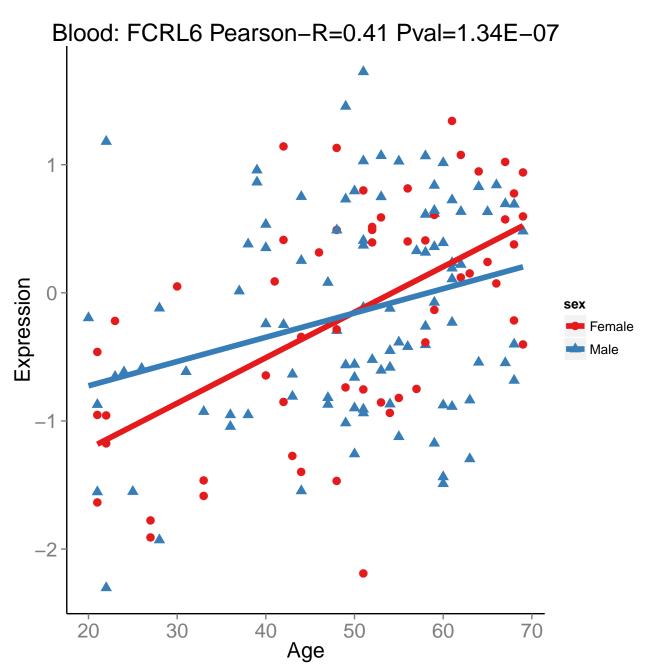


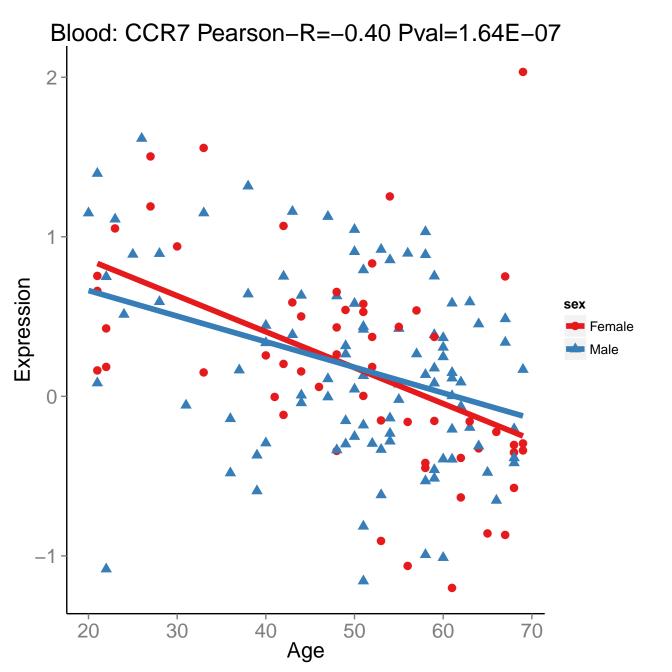


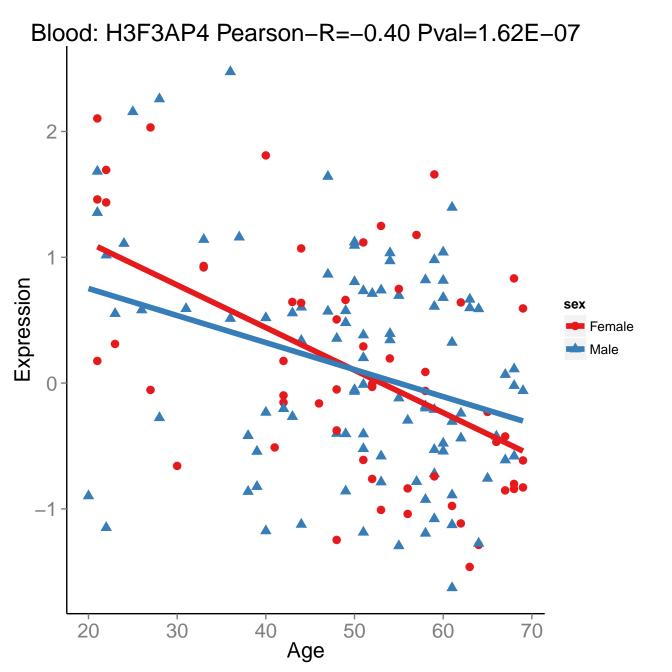


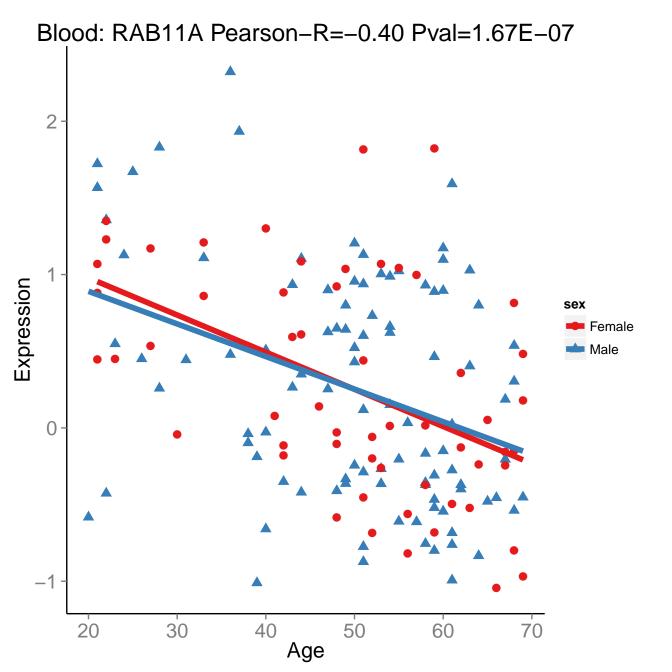


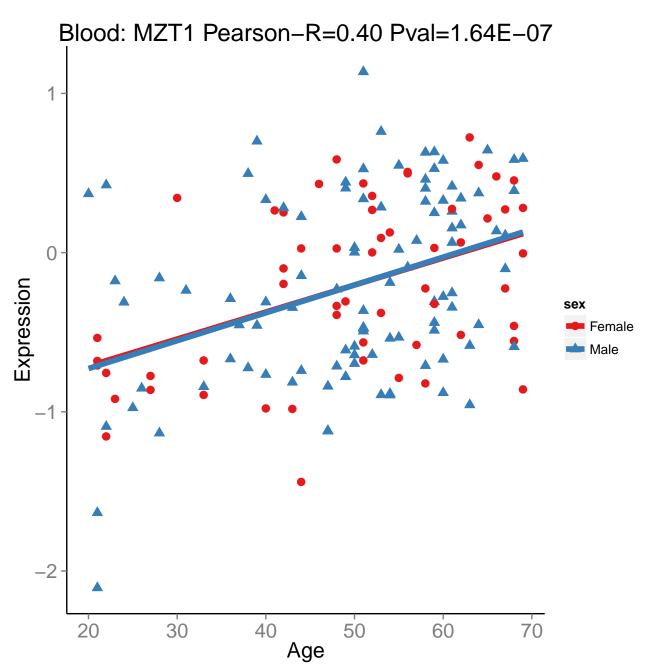


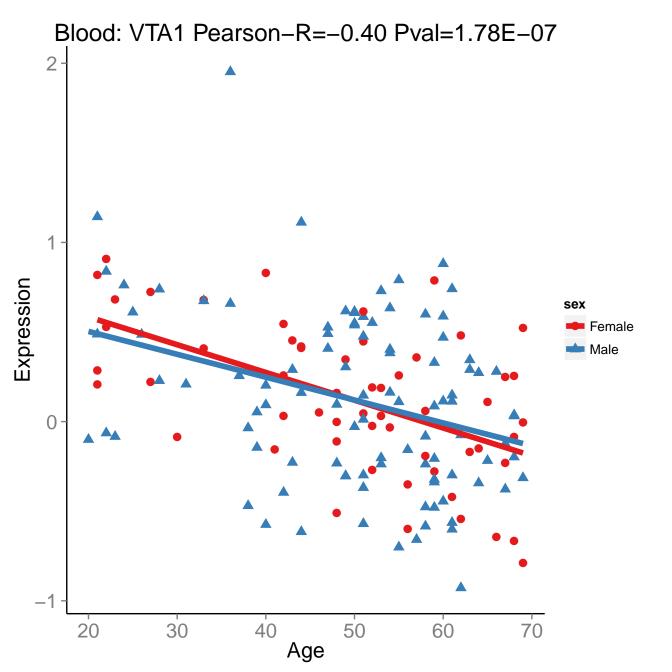


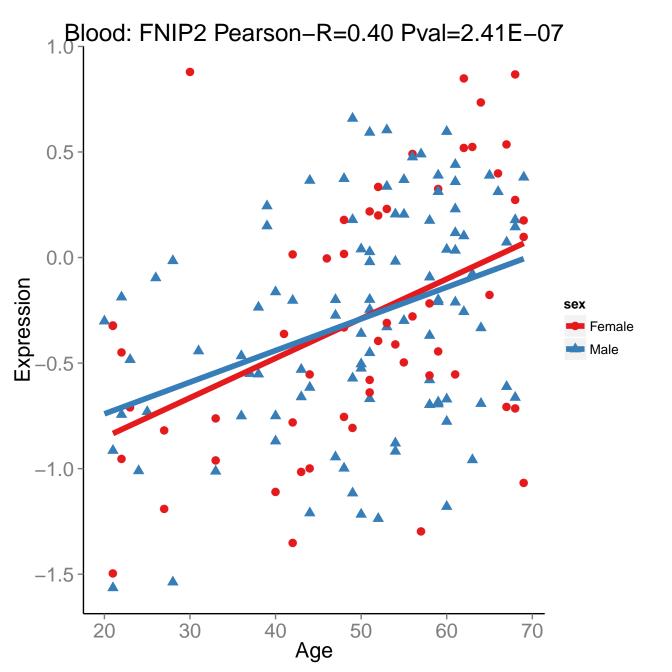




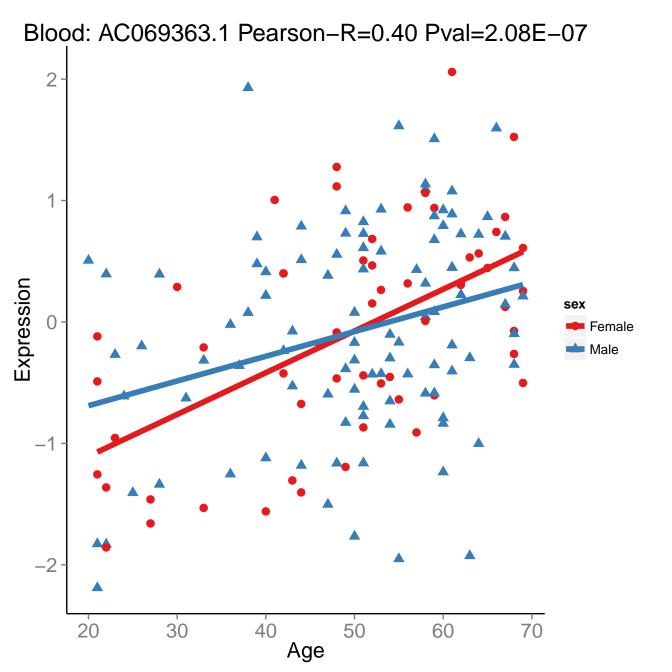


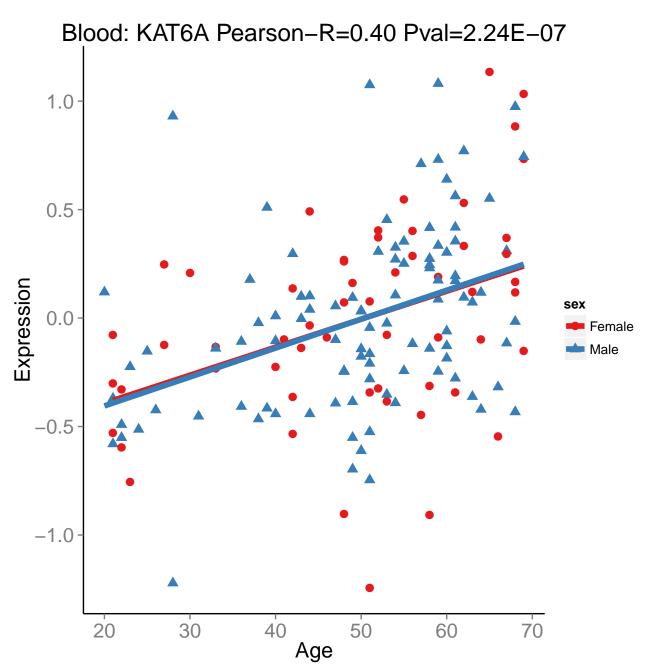


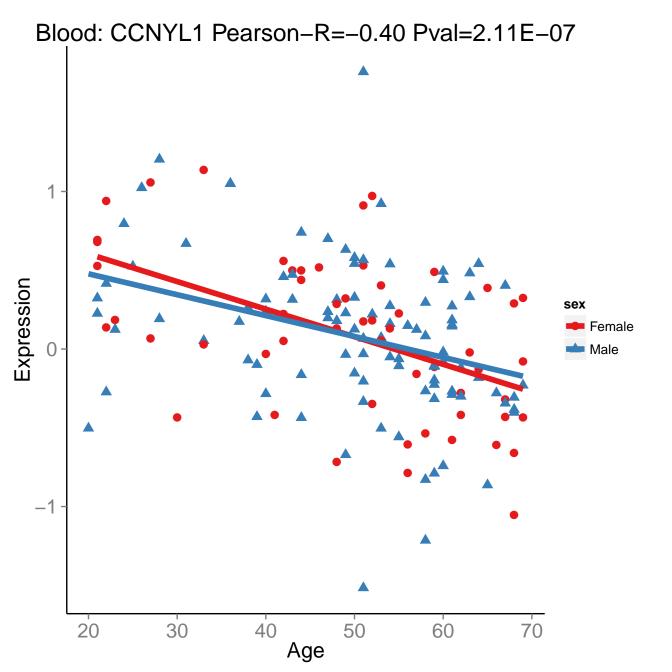


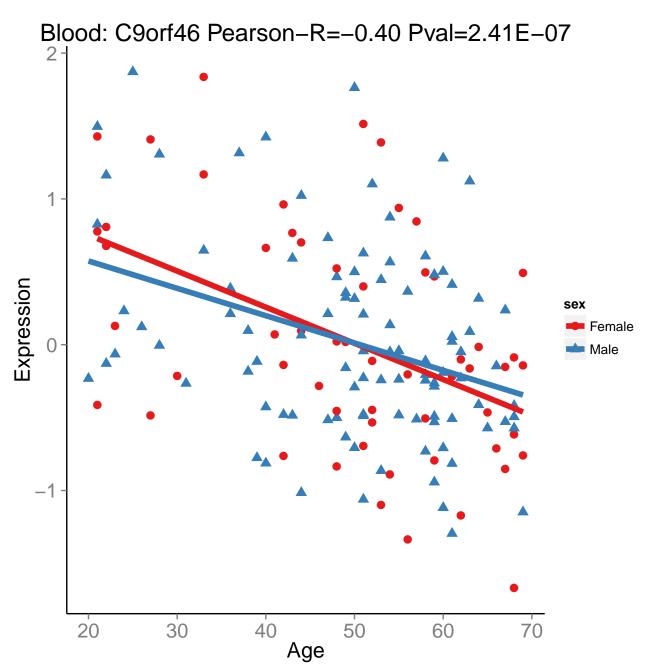


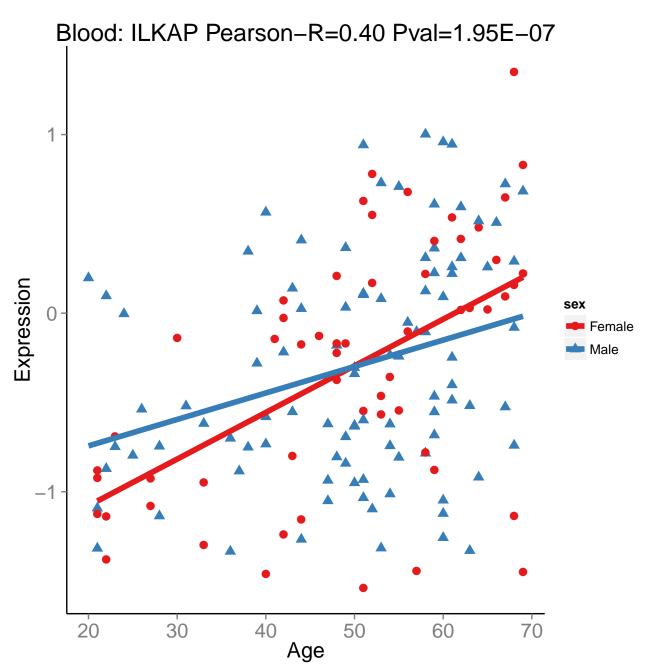


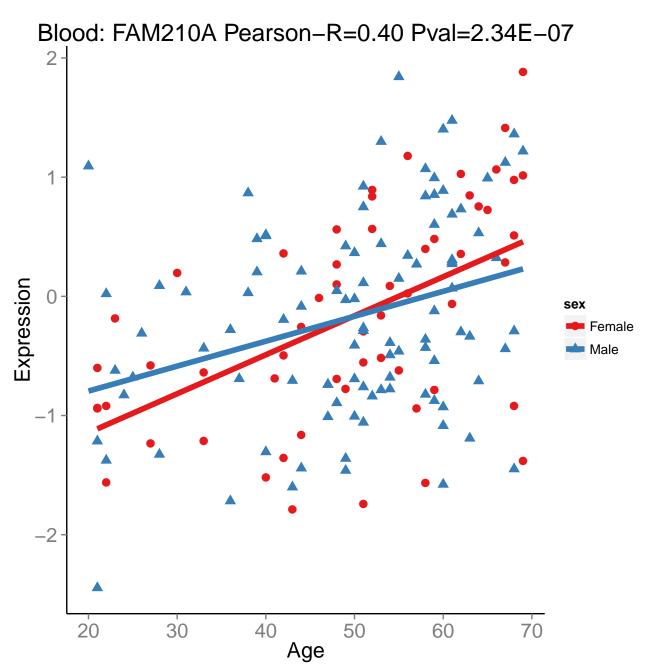


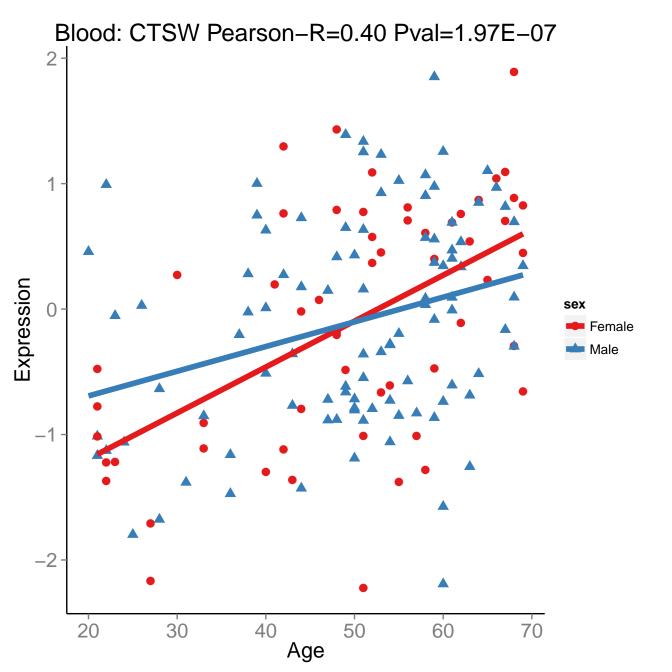


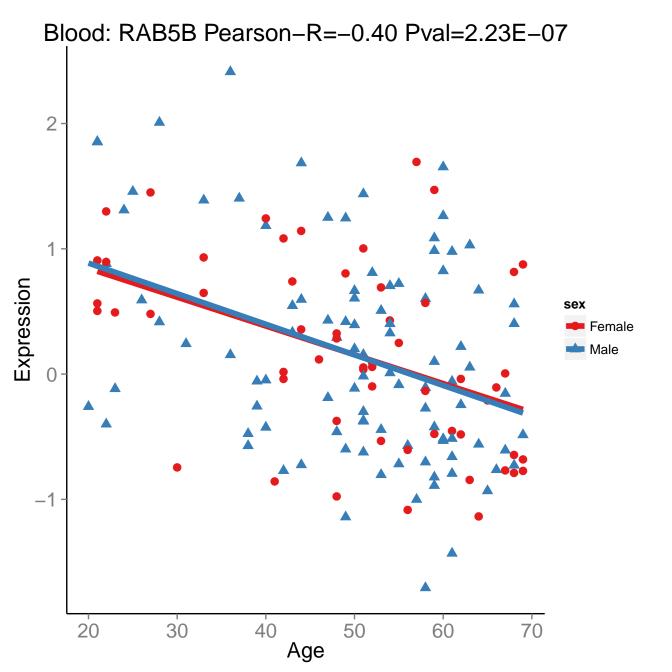




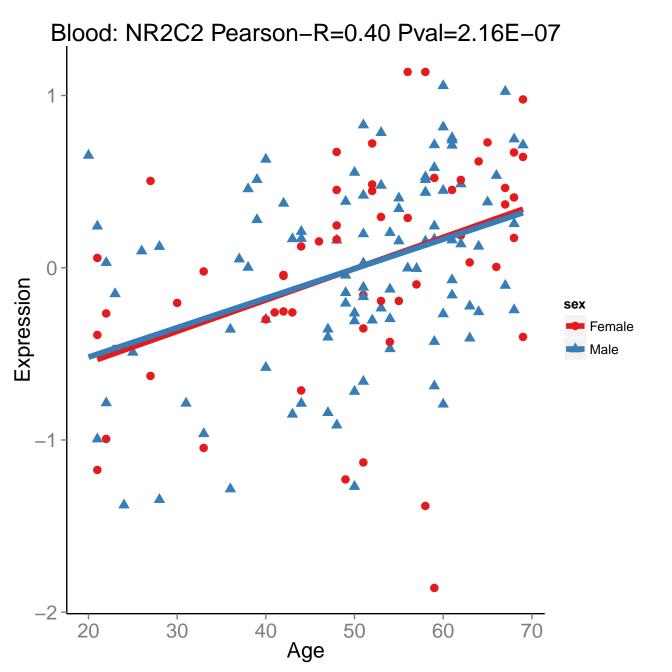




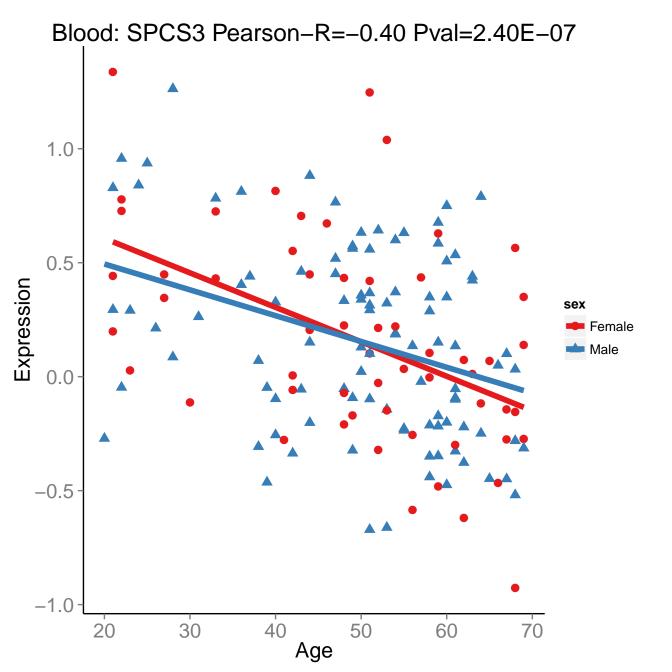


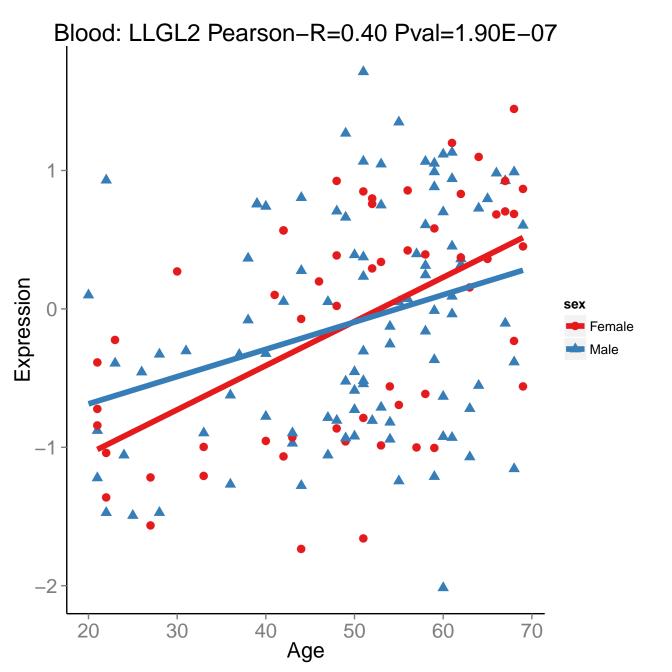


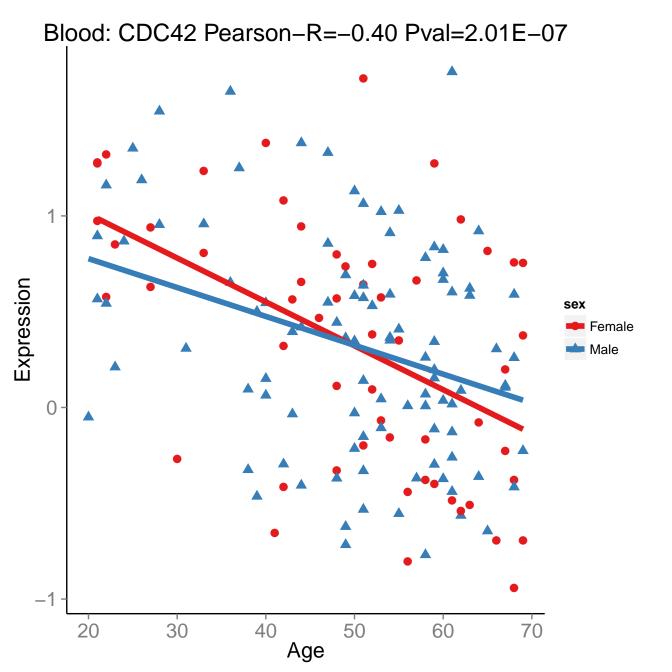
Blood: LGR6 Pearson-R=0.40 Pval=2.18E-07 2 1 Expression sex Female Male -2 20 40 30 50 60 70 Age

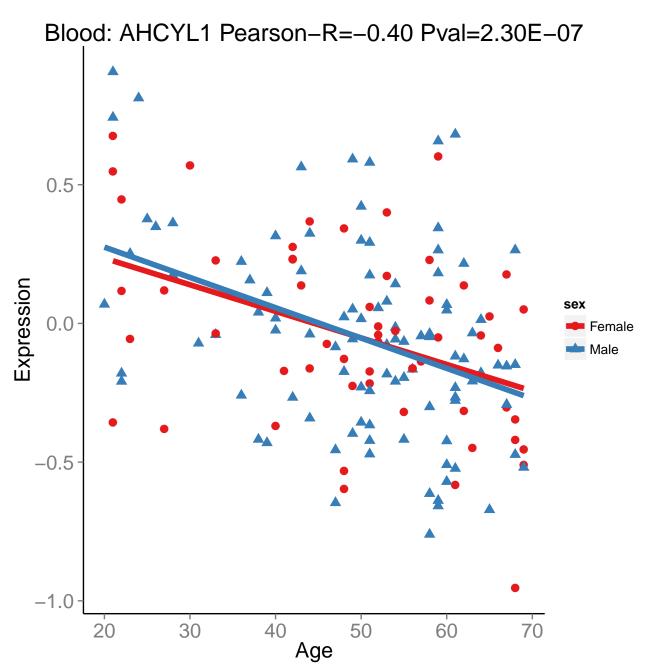








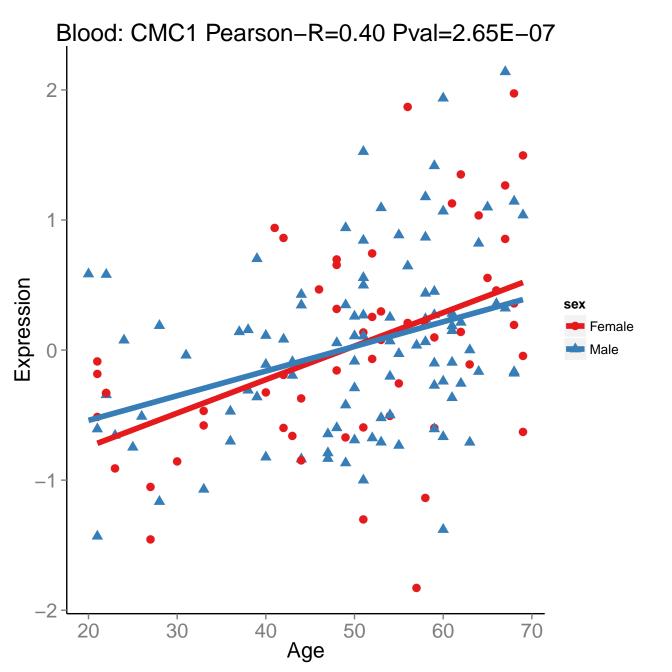


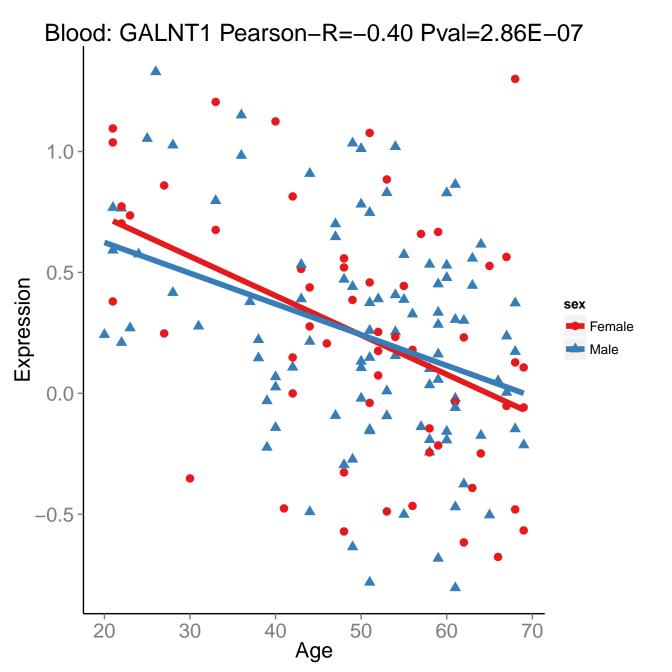




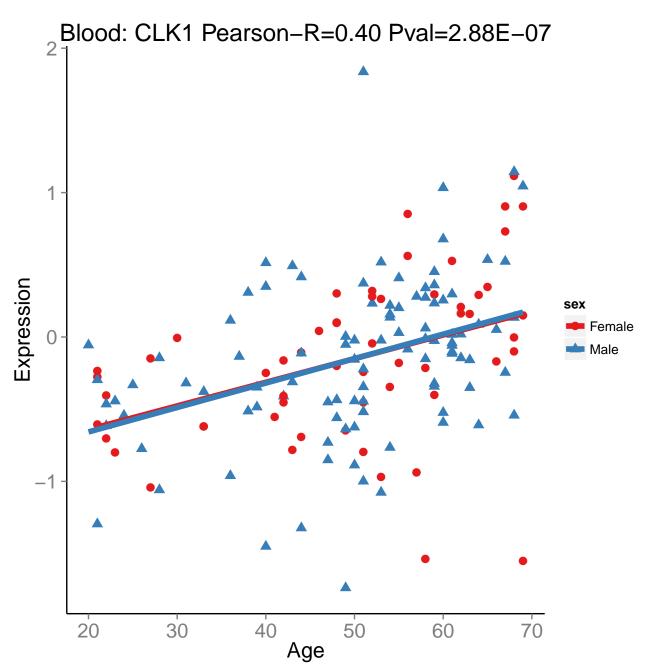




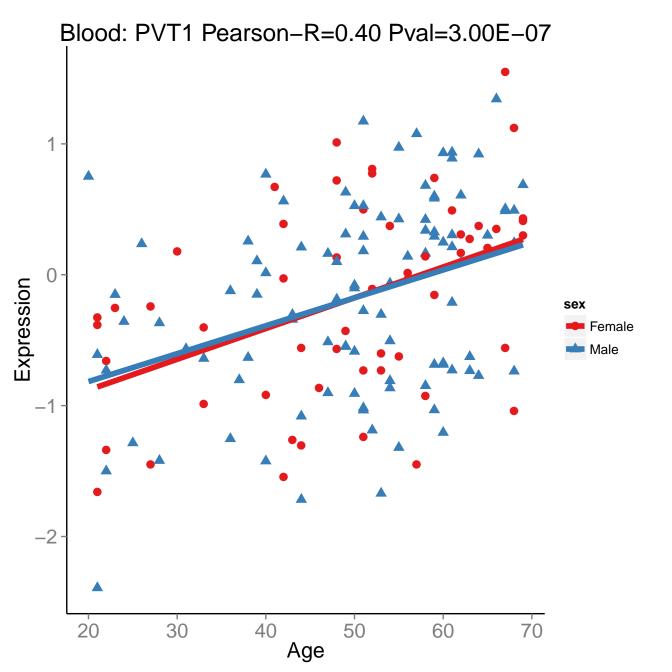


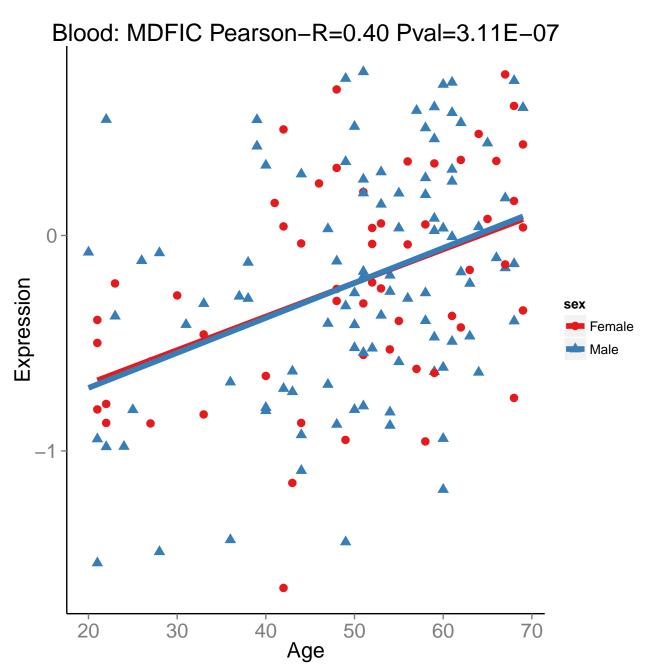


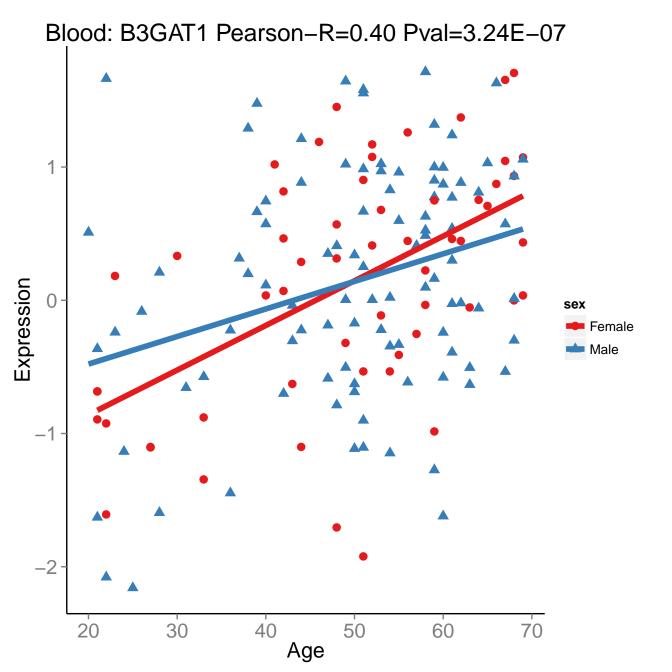
Blood: ENOPH1 Pearson-R=0.40 Pval=2.83E-07 1.0 0.5 Expression -0.5 0.0 sex Female Male -1.0-1.5 30 40 50 60 70 20 Age

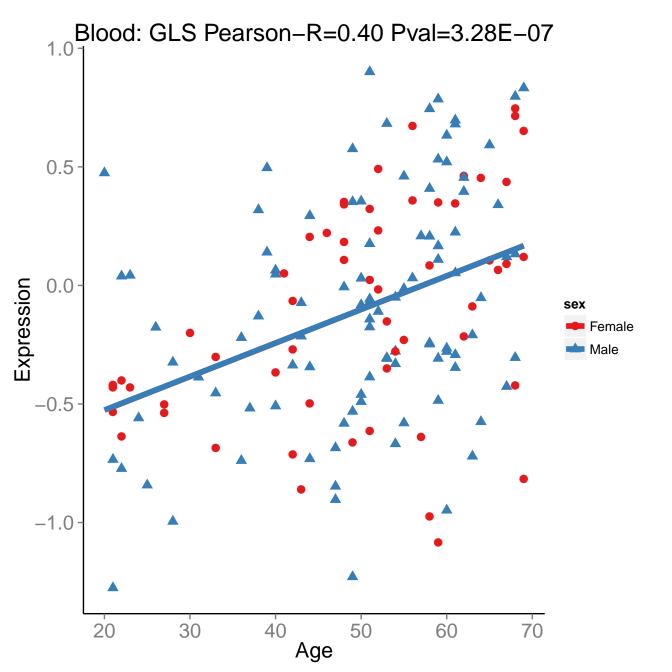


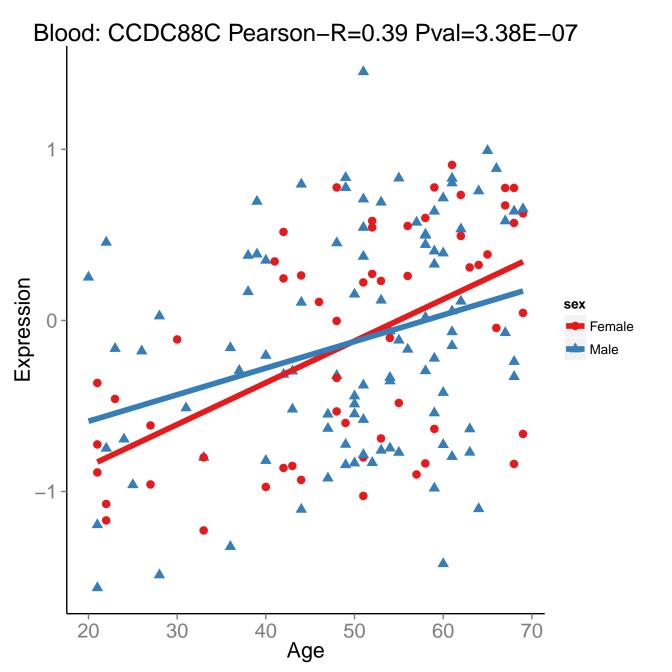


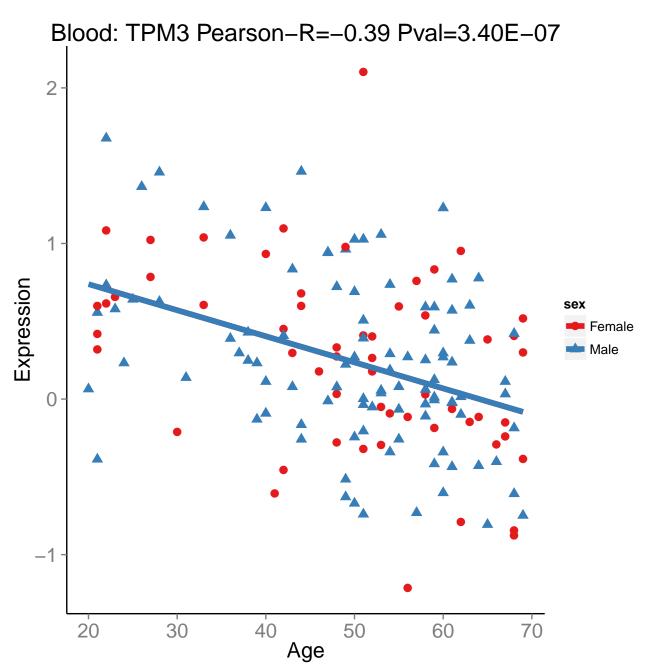


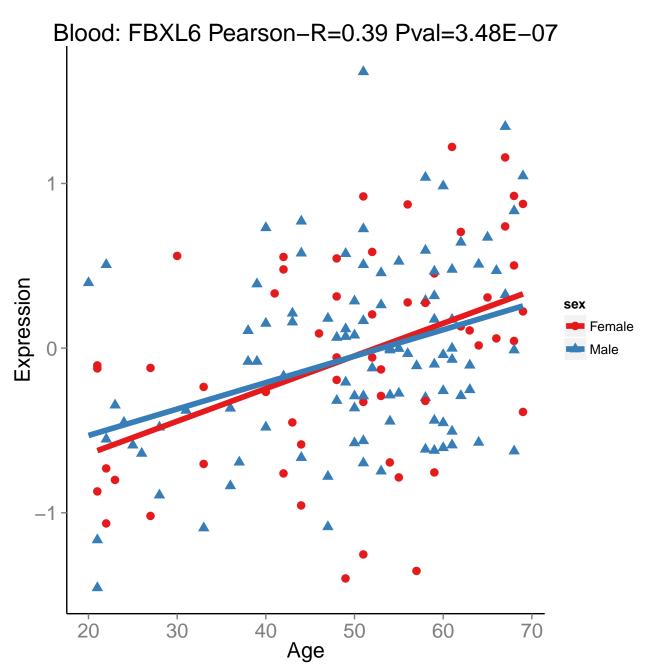


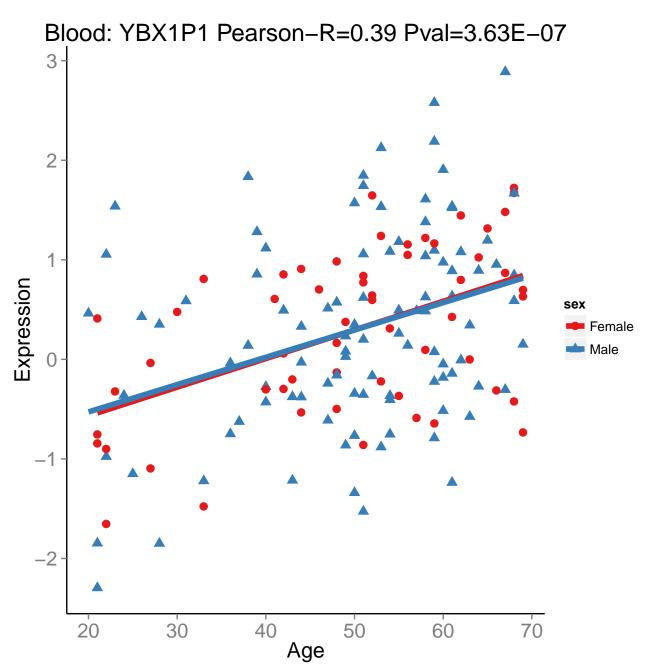


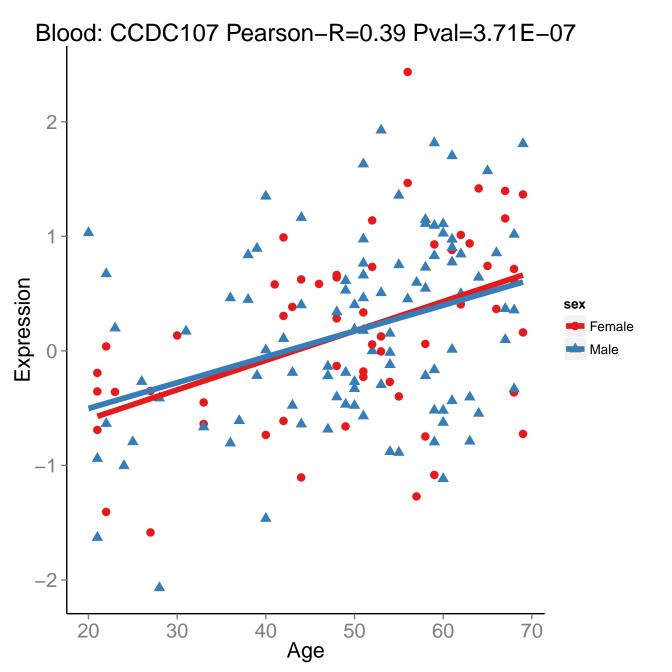














Blood: POP4 Pearson-R=-0.39 Pval=3.80E-07 1.0 0.5 Expression sex 0.0 Female ■ Male -0.5-1.040 50 30 70 20 60 Age

