Supplementary Table 2| Association between methylation of the GR-encoding gene, early-life adversity and suicidal behaviour

Study	*Phenotype*	*Subjects*	*Tissue*	*Major findings*
Direct Early-Life Adversity				
McGowan et al. 2009[1]	Abused suicides	12 abused suicides 12 non-abused suicides 12 controls	Hippocampus	Increased GR gene exon 1_F methylation in abused suicides
Perroud et al. 2011[2]	Sexually abused + BPD, MDD or MDD and PTSD	101 subjects with BPD 52 sexual abuse 54 physical abuse 48 physical neglect 86 emotional abuse 83 emotional neglect 5 no adversity 99 MDD subjects with low rates of abuse 50 emotional neglect 49 no adversity 15 MDD subjects with PTSD 4 sexual abuse 6 physical abuse 5 physical neglect 9 emotional abuse 8 emotional neglect 0 no adversity	Peripheral blood leukocytes	Increased GR gene exon 1_F methylation with sexual abuse, physical abuse and neglect, and emotional abuse and neglect Increased methylation level with increased severity of abuse, with increased frequency of abuse, and with increasing number of abuse types
Tyrka et al. 2012[3]	Childhood maltreatment	99 subjects 16 with childhood adversity	Whole blood	Increased GR gene exon 1_F methylation, near NGFI-A binding site, associated with parental loss, decreased parental care and maltreatment
Labonte et al. 2012[4]	Suicide + childhood abuse	56 subjects 21 suicide with abuse 21 suicide; no abuse 14 controls 50 Brodmann areas 22 suicide with abuse 14 suicide no abuse 14 controls	Hippocampus Anterior cingulate gyrus (BA 24)	Increased GR gene exon 1_B, 1_C methylation, and decreased GR gene exon 1_H methylation in the hippocampus, but not in BA24

Steiger et al. 2013[5]	Bulimia nervosa (BN) + childhood abuse	32 women with weekly binging episodes and childhood abuse 32 women weekly binging episodes but no childhood abuse 32 women without eating disorders, BPD or childhood abuse	Whole blood	Increased GR gene exon 1_C methylation in BN + BPD subjects but not in non-eating disorder subjects or BN without BPD Decreased exon 1_H methylation in BN+BPD subjects but not in non-eating disorder subjects or BN without BPD
Melas et al. 2013[6]	Depressed + childhood adversity/ early parental death (EPD)	93 depressed 28 no childhood adversities 65 with childhood adversities 83 control 31 no childhood adversities 52 with childhood adversities	Saliva	Increased GR gene exon 1_F methylation near NGFI-A binding site in subjects with EPD (n=12) vs. no EPD (n=164)
Perroud et al. 2014[7]	Bipolar disorder + childhood trauma	99 subjects with bipolar disorder Emotional abuse 48% Emotional neglect 56% Physical abuse 33% Physical neglect 29% Sexual abuse 30%	Peripheral blood leukocytes	Increased GR gene exon 1_F methylation; correlated with increased alcohol abuse
Van der Knaap et al. 2014[8]	Adolescents with childhood abuse/trauma	468 subjects 437 subjects characterized: 84.8% with no, 4.6% with single, and 2.5% with repeated sexual abuse; 53.2% with no, 35.8% with single, and 2.9% with repeated physical abuse; 67.2% with no, 18.9% with single, 5.9% with repeated other trauma	Whole blood	Increased GR gene exon 1_F methylation in subjects with a history of repeated childhood abuse/trauma Increased exon 1_H methylation in subjects with a history of single childhood sexual abuse Decreased exon 1_D methylation in subjects with repeated other (non-physical, non-sexual) childhood trauma

Indirect Adversity – Maternal Stress				
Oberlander et al. 2008[9]	Maternal gestational stress	82 pregnant women 33 depressed and SRI-treated 13 depressed not medicated 36 not depressed	Cord blood	Increased GR gene methylation at NGFI-A binding site in offspring of women with depression/anxiety; correlated to salivary cortisol levels
Radtke et al. 2011[10]	Intimate partner violence during gestation	29 mother-infant pairs	Whole blood	Increased GR gene exon 1_F methylation in offspring of women with intimate partner violence during pregnancy
Mulligan et al. 2012[11]	Maternal gestational stress	25 women from a war zone (Democratic Republic of Congo; 2010)	Cord blood	Increased GR gene methylation with three different types of maternal stress (material deprivation, mundane stress, war stress)
El Hajj et al. 2013[12]	Maternal gestational diabetes (GDM)	88 dietetically-treated GDM 98 insulin-dependent GDM 65 control (no GDM)	Cord blood and chorionic villi	Decreased GR gene exon 1_F methylation with GDM
Hompes et al. 2013[13]	Maternal gestational stress	83 pregnant women	Cord blood	Increased GR gene exon 1_F methylation in certain loci
Conradt et al. 2013[14]	Maternal depression during pregnancy	482 women included 398 without depression or anxiety 39 with both depression and anxiety 27 with depression only 18 with anxiety only	Placenta	Increased GR gene methylation in infants whose mothers reported depression during pregnancy
Perroud et al. 2014[15]	Tutsi Rwanda genocide survivors *in utero* during conflict	25 offspring of pregnant Tutsi war widows (aged 17-18) 25 controls	Peripheral blood leukocytes	Increased GR gene exon 1_F methylation in conflict survivors and their offspring; increased PTSD and depression severity in conflict survivors and their offspring

BA: Brodmann area; **BN:** Bulimia nervosa; **BPD:** Borderline personality disorder; **EPD:** Early parental death; **GDM:** Gestational diabetes mellitus; **GR:** Glucocorticoid receptor; **MDD:** Major depressive disorder; **NGFI-A:** Nerve growth factor inducible protein A; **PTSD:** Post-traumatic stress disorder

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