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|  | **Supplementary Table S2. Single gene or pathway methylation studies of childhood adversity and possible effects of differentially methylated genes that are studied in asthma** | | | | | | | | |
| Article | | Definition of Child Maltreatment | Sample size | Age at the time of DNA sampling (Mean, Median or range) | Country | Tissue | Studied genes | Significantly differently methylated asthma related genes | Possible outcome for asthma |
| McGowan, 2009 | | Psychiatric diagnosed sucidals | 12 abused suicide  12 non abused suicide 12 controls | 34(10)  33.8(11)  35.8(12) | Canada | Brain | Single gene methylation (NR3C1) | NR3C1 | decreased suppression of inflammation |
| Vijayendran, 2012 | | Questionnaire | 26 cases  136 controls | 45 (7)  46(8) | USA | Blood | Single gene methylation (SLC6A4) | SLC6A4  (SERT) | Possible role on the concentrations of 5-HT |
| Xie, 2012 | | Self reported | 435 cases  1771 controls | Men 38.1(11)  Women 37.2(11) | USA | Blood or saliva | Single gene methylation (CHRNA5) | CHRNA5 | Increased nicotine dependency in men |
| Zhang, 2013 | | Questionnaire | 149 cases  369 controls | 18-54 years | USA | Blood | Selected 82 Candidate genes | CHRNA5  HTR1B  ALDH1A1 | Increased nicotine dependency |
| Ouellrt-Morin, 2013 | | Self reported | 28 monozygotic twins | 12 | UK | Buccal cells | Single gene methylation (SERT) | SLC6A4 (SERT) | Possible role on the concentrations of 5-HT |
| Knaap, 2014 | | Self reported | 468 cases | 16.1 | Netherlands | Blood | Single gene methylation (NR3C1) | NR3C1 | Decreased suppression of inflammation |
| Frodl, 2015 | | Childhood trauma questionnaire | 25 cases  35 controls | 41.6(10.8)  35.6(13) | Ireland | Blood | Single gene methylation (SLC6A4) | SLC6A4 (SERT) | Possible role on the concentrations of 5-HT |
| Tyrka, 2015 | | Record reviews | 69 cases  105 controls | 49.87Months  (8.4Months) | USA | Saliva | Single gene methylation (FKBP5 and NR3C1) | FKBP5 NR3C1 | Increased inflammation in lung epithelium |
| Tyrka, 2016 | | Childhood trauma questionnaire | 133 adversity/disorder  51 no adversity/  disorder  60 adversity/no disorder  96 no adversity/ no disorder | 35.95(12.37)  32.08(11.29)  31.9(10.19)  29.6(10.04) | USA | Blood | Single gene methylation (NR3C1) | NR3C1 | Decreased suppression of inflammation |
| Shields, 2016 | | Questionnaire | 153 cases  142 controls | 52.8  54.9 | USA | Blood | Single gene methylation (NR3C1) | NR3C1 | Decreased suppression of inflammation |
| Smearman, 2016 | | Childhood trauma questionnaire | 89 Severe abused  100 Moderate   200 None or Mild | 42.4(11.3)  40.1(13.2)  41.3(13.2) | USA | Blood | Single gene methylation (OXTR) | OXTR | airway hyper-responsiveness in asthma |
| Cicchetti, 2017 | | Child protective services | 285 maltreated  249 non-maltreated | 9.45(0.92)  9.37(0.85) | USA | Saliva | Single gene methylation(FKBP5)n (NR3C1) | NR3C1 | Decreased suppression of inflammation |
| Beach ,2010 | | Questionnare | 96 men  96 women | Men: 35-69(mean 49)  Women: 35-65 (mean 47) | USA | Blood | Single gene methylation (SLC6A4) | SLC6A4 |  |
| Beach ,2011 | | Questionnare | 15 sexual abused  140 non abused | Not given | USA | Blood | Single gene methylation(5HTT) | 5HTT |  |
| Hecker, 2016 | | Self-reported | 35 High exposure  25 Low exposure | 11.3  11.76 | Tanzania | Saliva  Blood | Single gene methylation(POMC) | POMC |  |
| Fiacco,2019 | | Questionnare | 73 Adversity  30 No adversity | 54(8.86)  51(9.19) | Switzerland | Dried blood spots | Single gene methylation(NR3C1 and ER alpha shore) | ER alpha shore |  |
| Klengel, 2012 | | Self reported | 30 childhood trauma  46 Non trauma | 41.4 (11.67)  40.97(11.86) | USA | Saliva  Whole blood | Single gene methylation(FKBP5) | FKBP5 |  |
| Gouin, 2017 | | Questionnare | 24 high ELA  22 low ELA | 27 | Canada | Blood | Single gene methylation(OXTR) | OXTR |  |
| Romens,2015 | | Self-reported | 18 child maltreatment  38 control | 12.11(0.78) | Finland | Whole blood | Single gene methylation(NR3C1) | NR3C1 |  |
| Perroud, 2011 | | Questionnare | 101 BPD  99 MDD  15 MDD+comorbid PTSD | 30.76(9.74)  41.63(12.81)  37.33(10.48) | Sweden | Blood | Single gene methylation(NR3C1) | NR3C1 |  |
| Houtepen,2016 | | Questionnare | 45 sexually abused  85 control | 28  33 | Netherlands | Blood | Single gene methylation(KITLG) | KITLG |  |

ELA(early life adversities), BPD(borderline personality disorder ), MDD (major depressive disorder), PTSD(post- traumatic stress disorder)

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