Jonathan Mill – Academic CV – Sept 2012

Date of Birth 7th March 1977

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Research Summary

I am Professor of Epigenetics at The University of Exeter Medical School and also head the Psychiatric Epigenetic research group at the Institute of Psychiatry, King's College London. My group takes an integrated genetic-epigenetic approach to complex disease phenotypes, and I have considerable experience in high-throughput epigenomic profiling. We recently took the lead on the first systematic genome-wide scan for DNA methylation changes associated with schizophrenia and bipolar disorder, and my team are currently funded to perform methylomic studies of schizophrenia, bipolar disorder, autism, alcoholism, and Alzheimer's disorder. My group represents the only research team outside North America solely dedicated to epigenetic studies in psychiatry and has been successful in obtaining funding from the Medical Research Council (MRC), the Royal Society, the National Institutes of Health (NIH), Autism Speaks, the BBSRC, NARSAD, the British Medical Association, the National Institute of Health Research (NIHR), and the Alzheimer's Research Trust. Of note, we were recently funded as part of the NIH Epigenomics Roadmap Initiative, representing the only award made under this scheme outside of North America and putting us at the forefront of complex disease epigenomic research. We use cutting-edge epigenomic technology to perform research into six general areas:

- genome-wide investigations of DNA methylation in post-mortem brain tissue and clinical samples for disorders such as schizophrenia, bipolar disorder, autism and Alzheimer's disorder
- investigating the role of epigenetic variation in mediating phenotypic variation between genetically-identical individuals (i.e. monozygotic twins, inbred animals)
- elucidating how external environmental factors may bring about long-term changes in gene expression via epigenetic alterations
- identifying novel imprinted regions of the genome, and their role in mediating parent-of-origin effects in psychiatric disorders
- exploring interactions between the epigenome and inherited DNA sequence variation
- uncovering the mechanism behind the association between advanced paternal age and risk for neuropsychiatric disorders

Education

1996-1999 BA (Human Sciences). Oxford University. 1st Class Honours. Top of Year. *Dissertation: "Cannibalism – Biological and Cultural Evolution".*

1999-2003 PhD (Molecular Genetics). Institute of Psychiatry, University of London. *Thesis: "Functional Genomics of Complex Psychiatric Disease". Supervisors: Professor Philip Asherson and Professor Ian Craig.*

Postdoctoral Research

2004-2005 MRC SGDP Centre, Institute of Psychiatry, King's College London (Mentors: Professor Avshalom Caspi and Professor Terrie Moffitt). *Involved in functional genetic studies, with a focus on gene-environment interactions in developmental psychopathology.*

2005-2007: Krembil Family Epigenetics Laboratory, University of Toronto, Canada (Mentor: Professor Art Petronis). *Awarded Canadian Institutes of Health Research (CIHR) Postdoctoral Fellowship to train in Epigenetics at the University of Toronto. Developed epigenomic approaches to studying complex disease, leading the first methylomic study of a non-malignant complex disorder.*

Academic Positions

2007-2009	Lecturer, Institute of Psychiatry, King's College, London
2009-	Senior Lecturer, Institute of Psychiatry, King's College London
2012 (from Sep)	Professor, University of Exeter Medical School

Current Teaching & Training (2011-2012)

- Deputy Chair, MSc in Social, Genetic and Developmental Psychiatry, Institute of Psychiatry, King's College London
- Epigenetics Module Coordinator, MSc in Social, Genetic and Developmental Psychiatry, Institute of Psychiatry, King's College London
- MRC SGDP Summer School, Institute of Psychiatry, King's College London
- Epigenetics Module, MSc Neuroscience, Institute of Psychiatry, King's College London
- Cancer Epigenetics Module, MSc Cancer, University College London
- Disease Epigenetics, MSc Biomedical & Molecular Sciences Research, King's College London
- Undergraduate lectures on epigenetics for King's College London and University College London
- Summer School in Epigenetic Epidemiology, Newcastle University
- External Examiner for BA Human Sciences, Oxford Univesrity

Current Research Supervision

- Chloe Wong, Postdoctoral Researcher
- Emma Dempster, Senior Postdoctoral Researcher
- Katie Lunnon, Postdoctoral Researcher
- Rebecca Smith, Postdoctoral Researcher
- Ruth Pidsley, Postdoctoral Researcher
- Joana Viana, MSc Student
- Helen Spiers, PhD Student (primary supervisor)
- Yogen Patel, PhD Student (second supervisor)
- Timothy Powell, PhD Student (second supervisor)
- Daniel Condliffe, MSc Student

Completed PhD Students

- Sophia Docherty, awarded 2011 (second supervisor)
- Chloe Wong, awarded 2012 (primary supervisor)
- Rachel Kember, awarded 2012 (second supervisor)
- Rebecca Smith, awarded 2012 (primary supervisor)
- Ruth Pidsley, awarded 2012 (primary supervisor)

Awards and Honours

1999	Oxford University Beilby Exhibition in Human Sciences for thesis on cannibalism
1999	MRC 4-year PhD Studentship
2001	Young Investigator Award, World Congress of Psychiatric Genetics (St. Louis)
2003	Young Investigator Award, World Congress of Psychiatric Genetics (Quebec City)
2005	Young Investigator Award, World Congress of Psychiatric Genetics (Boston)
2005	Canadian Institutes of Health Research Postdoctoral Fellowship (Canada)
2007	Young Investigator Award, World Congress of Psychiatric Genetics (New York)
2007	NARSAD Young Investigator Award
2008	British Medical Association (BMA) Margaret Temple Award
2009	King's Award – Young Researcher of the Year across King's College London
2010	King's College London Innovation Fellow
2012	Appointed to membership of the Emerging Science and Bioethics Committee (UK Department of Health)

Current Research Funding (selected)

Methylomic profiling in schizophrenia: towards an integrated genetic-epigenetic approach
Role: PI
Agency: MRC
Amount: £1,033,159
Aims: To undertake the first integrated epigenetic-genetic analysis of schizophrenia using clinical samples, discordant MZ twins, and post-mortem brain tissue
Dates: Just awarded – tentative start date Jan 2013.

Psychobiological sequelae of cumulative exposure to violence: The Environmental Risk Longitudinal Twin Study
Role: co-investigator (PI: Louise Arsenault)
Agency: MRC
Amount: £2,738,755
Aims: To follow-up members of the E-Risk cohort at age 18 and assess psychobiological consequences of early-life risk factors.
Dates: 1st July 2011 – 30th June 2016

Longitudinal epigenomic profiling in monozygotic twins discordant for asthma
Role: PI
Agency: American Asthma Foundation
Amount: $750,000
Aims: To examine epigenetic variation associated with asthma, using methods and approaches that we have successfully applied to the analysis of complex neuropsychiatric disease.
Dates: 1st July 2012 – 31st June 2015

Epigenetic Pathways to Conduct Problem Trajectories: the Role of Prenatal and Postnatal Environmental Risk Exposures
Role: co-PI (with Ted Barker)
Agency: NIH (NICHD)
Amount: £1,300,000
Aims: Longitudinal epigenetic profiling from birth in samples obtained from the ALSPAC birth cohort
Dates: 1st January 2012 (estimated) – 31st December 2015 (estimated)

Epigenetic and Transcriptional Dysregulation in Autism Spectrum Disorder
Role: co-investigator (PI: Dan Geschwind, UCLA)
Agency: NIH (NIMH)
Amount: $2,500,000
Aims: To undertake an integrated –omics analysis across brain regions in autism
Dates: 25th August 2011 – 30th June 2015

Suicidality: Treatment Occurring In Paediatrics (STOP)
Role: co-investigator (PI: Kathy Aitchison)
Agency: EU
Amount: £71,498
Aims: We are involved in a methodological work=package examining the utility of peripheral sources of biological material for genomic methodologies
Dates: 1st November 2010 – 30th April 2014

DNA methylation and adolescent depression: an MZ differences study
Role: co-investigator (PI: Thalia Eley)
Agency: Psychiatry Research Trust
Amount: £47,800
Aims: To assess genome-wide patterns of epigenetic differences between monozygotic twins discordant for adolescent depression.
Dates: 1st September 2011 – 31st August 2013

A multifaceted approach to epigenomic dysfunction in Alzheimer's Disorder
Role: PI
Agency: NIH
Grant Number: 1R01AG036039-01
Amount: $1,779,829 (direct costs)
Aims: As part of the NIH Epigenomics Roadmap Initiative, we plan to map epigenetic changes associated with Alzheimer's disorder in post-mortem brain tissue, examining the degree to which these are reflected in peripheral blood samples from the same individuals.
Dates: 30th September 2009 – 31st August 2013

Epigenetic mechanisms of memory storage
Role: Co-investigator (PI Ted Abel, University of Pennsylvania)
Agency: NIH
Amount: $118,610 (first year direct costs to KCL)
Grant Number: 1R01MH087463-01A1
Aims: The aim of our subcontract is to profile DNA methylation across key loci in the hippocampus in a rodent model of learning and memory.
Dates: 16th July 2010 – 30th April 2014

De novo epigenetic changes and paternal age in schizophrenia
Role: co-PI (with Dr Avi Reichenberg)

Agency: British Medical Association Research Award
Direct Costs: £40,000
Aims: To examine the hypothesis that epigenetic changes occurring in the sperm of older fathers, subsequently transmitted to their offspring, explain the increased rate of schizophrenia observed in the offspring of older fathers.
Dates: 1st September 2008 – 31st August 2011

Identical twins discordant for autism: Epigenetic (DNA methylation) biomarkers of non-shared environmental influences
Role: Co-investigator (PI Robert Plomin)
Agency: Autism Speaks
Direct Costs: $300,000
Grant Number: 4743
Aims: To identify epigenetic differences between monozygotic twins discordant for autism.
Dates: 1st April 2009 – 31st March 2012

The role of epigenetic processes in mediating the molecular and behavioural responses to stress in the dentate gyrus
Role: Co-investigator (PI Hans Reul, University of Bristol)
Agency: BBSRC
Direct Costs: £890,436
Grant Number: BB/G02507X/1
Aims: To explore DNA methylation and histone mofication changes in neuronal cells in the dentate gyrus in response to stress
Dates: 1st October 2009 – 30th April 2013

Equipment Grant: Pyrosequencer for DNA methylation analysis
Role: PI
Agency: Alzheimer's Research Trust
Direct costs: £20,000
Aims: Equipment grant enabling us to add a Pyrosequencer to our lab for methylation analysis
Dates: 1st March 2010 – 28th February 2011

MRC Studentship for Ruth Pidsley
Amount: £83,720.00
Dates: 25th September 2008 – 24th September 2012

MRC Studentship for Chloe Wong
Amount: £81,735.00
Dates: 25th September 2007 to 24th August 2011

Bibliometrics (Scopus, September 2012)
Publications: 71 (since 2001)
H-index: 28
Citations: 6637 Average citation/paper: 103.7
ResearcherID: **http://www.researcherid.com/rid/B-3276-2010**

Journal Publications

1. Pidsley R, Fernandes C, Viana J, Paya-Cano JL, Liu L, Smith RG, Schalkwyk LC, Mill J. DNA methylation at the Igf2/H19 imprinting control region is associated with cerebellum mass in outbred mice. Mol Brain. 2012 Dec 6;5(1):42.
2. Dempster E, Viana J, Pidsley R, Mill J. Epigenetic Studies of Schizophrenia: Progress,

Predicaments, and Promises for the Future. Schizophr Bull. 2012 Dec 4.
3. Jeffries AR, Perfect LW, Ledderose J, Schalkwyk LC, Bray NJ, Mill J, Price J. Stochastic Choice of Allelic Expression in Human Neural Stem Cells. Stem Cells. Stem Cells. 2012 Sep;30(9):1938-47.
4. Kember RL, Dempster EL, Lee TH, Schalkwyk LC, Mill J, Fernandes C. Maternal separation is associated with strain-specific responses to stress and epigenetic alterations to Nr3c1, Avp, and Nr4a1 in mouse. Brain Behav. 2012 Jul;2(4):455-67.
5. Natália Silva P, Furuya TK, Sampaio Braga I, Rasmussen LT, de Labio RW, Bertolucci PH, Chen ES, Turecki G, Mechawar N, Payão SL, Mill J, Cardoso Smith M. CNP and DPYSL2 mRNA Expression and Promoter Methylation Levels in Brain of Alzheimer's Disease Patients. J Alzheimers Dis. 2012 Sep 6.
6. Davies M, Volta M, Pidsley P, Lunnon K, Dixit A, Lovestone S, Coarfa C, Harris RA, Milosavljevic A, Troakes C, Al-Sarraj S, Dobson R, Schalkwyk L, Mill J. Functional annotation of the human brain methylome identifies tissue-specific epigenetic variation across brain and blood. Genome Biology. 13(6):R43.
7. Smith R, Reichenberg A, Kember R, Buxbaum J, Schalkwyk L, Fernandes C, Mill J. Advanced paternal age is associated with altered DNA methylation at brain-expressed imprinted loci in inbred mice: implications for neuropsychiatric disease. Molecular Psychiatry, in press.
8. Mizuno K, Dempster E, Mill J, Giese KP. Long-lasting regulation of hippocampal Bdnf gene transcription after contextual fear conditioning. Genes Brain Behav. 2012 Aug;11(6):651-9.
9. Bell JT, Tsai P-C, Yang T-P, Pidsley R, Nisbet J, Glass D, Zhai G, Mangino M, Zhai G, Zhang F, Valdes A, Shin S-Y, Dempster EL, Murray RM, Grundberg E, Hedman AK, Nica A, Small KS, The MuTHER Consortium, Dermitzakis ET, McCarthy MI, Mill J, Spector TD, Deloukas P. 2012. Epigenome-wide scans identify differentially methylated regions for age and age- related phenotypes in a healthy ageing population. PLoS Genetics. 8(4) 189-200.
10. Pidsley R, Dempster E, Troakes C, Al-Sarraj S, Mill J. Epigenetic and genetic variation at the IGF2/H19 imprinting control region on 11p15.5 is associated with cerebellum weight. Epigenetics. 2012 Feb 1;7(2):155-63.
11. Heijmans BT, Mill J.Commentary: The seven plagues of epigenetic epidemiology. Int J Epidemiol. 2012 Feb;41(1):74-8
12. Boks MP, de Jong NM, Kas MJ, Vinkers CH, Fernandes C, Kahn RS, Mill J, Ophoff RA. Current status and future prospects for epigenetic psychopharmacology. Epigenetics. 2012 Jan 1;7(1)
13. Pidsley R, Mill J. Research Highlights: epigenetic changes to serotonin receptor gene expression in schizophrenia and bipolar disorder. Epigenomics. 2011 Oct;3(5):537-8.
14. Barros M, Dempster EL, Illott N, Chabrawi S, Maior RS, Tomaz C, De Souza Silva MA, Huston JP, Mill J, Müller CP. Decreased methylation of the NK3 receptor coding gene (TACR3) after cocaine-induced place preference in marmoset monkeys. Addict Biol. 2011 Nov 9. doi: 10.1111/j.1369-1600.2011.00409.x.
15. Dempster EL, Pidsley R, Schalkwyk LC, Owens S, Georgiades A, Kane F, Kalidindi S, Picchioni M, Kravariti E, Toulopoulou T, Murray RM, Mill J. Disease-associated epigenetic changes in monozygotic twins discordant for schizophrenia and bipolar disorder. Hum Mol Genet. 2011 Sep 9.
16. Voineagu I, Wang X, Johnston P, Lowe JK, Tian Y, Horvath S, Mill J, Cantor RM, Blencowe BJ, Geschwind DH. Transcriptomic analysis of autistic brain reveals convergent molecular pathology. Nature. 474(7351):380-4.
17. Engmann O, Hortobágyi T, Pidsley R, Troakes C, Bernstein HG, Kreutz MR, Mill J, Nikolic M, Giese KP. Schizophrenia is associated with dysregulation of the Cdk5 activator p35 resulting in deficits of synaptic protein expression and cognition. Brain. 134(Pt 8):2408-21.
18. Kaminsky Z, Tochigi M, Jia P, Mill J, Kwan A, Ioshikhes I, Vincent J, Kennedy J, Strauss J,

Pai S, Wang SC, Petronis A. A multi-tissue analysis identifies HLA Complex Group 9 gene methylation differences in bipolar disorder. Molecular Psychiatry. In Press.
19. Mill J. Toward an integrated genetic and epigenetic approach to Alzheimer's disease. Neurobiol Aging. 2011 Jul;32(7):1188-91
20. Barclay NL, Eley TC, Mill J, Wong CC, Zavos HM, Archer SN, Gregory AM. Sleep quality and diurnal preference in a sample of young adults: associations with 5HTTLPR, PER3, and CLOCK 3111. Am J Med Genet B Neuropsychiatr Genet. 2011 Sep;156B(6):681-90.
21. Wong CC, Caspi A, Williams B, Houts R, Craig I, Mill J. A Longitudinal Twin Study of Skewed X Chromosome Inactivation. PloS one. 2011
22. Wong CC, Mill J, Fernandes C. Drugs and addiction: an introduction to epigenetics. Addiction. 2011 Mar;106(3):480-9
23. Campbell IC, Mill J, Uher R, Schmidt U. Eating disorders, gene-environment interactions and epigenetics. Neuroscience and Biobehavioral reviews. 2011 Jan;35(3):784-93.
24. Wong CC, Caspi A, Williams B, Craig IW, Houts R, Ambler A, Moffitt TE, Mill J. A longitudinal study of epigenetic variation in twins. Epigenetics. 2010 Aug 4;5(6).
25. Schalkwyk LC, Meaburn EL, Smith R, Dempster EL, Jeffries AR, Davies MN, Plomin R, Mill J. Allelic skewing of DNA methylation is widespread across the genome. American journal of human genetics. 2010 Feb 12;86(2):196-212.
26. Pidsley R, Mill J. Epigenetic studies of psychosis: current findings, methodological approaches, and implications for postmortem research. Biological psychiatry. 2010 Jan 15;69(2):146-56.
27. Pidsley R, Dempster EL, Mill J. Brain weight in males is correlated with DNA methylation at IGF2. Molecular Psychiatry. 2010 Sep;15(9):880-1.
28. Meaburn EL, Schalkwyk LC, Mill J. Allele-specific methylation in the human genome Implications for genetic studies of complex disease. Epigenetics. 2010 Oct 9;5(7).
29. Lundstrom S, Haworth CM, Carlstrom E, Gillberg C, Mill J, Rastam M, Hultman CM, Ronald A, Anckarsater H, Plomin R, Lichtenstein P, Reichenberg A. Trajectories leading to autism spectrum disorders are affected by paternal age: findings from two nationally representative twin studies. Journal of child psychology and psychiatry, and allied disciplines. 2010 Jul;51(7):850-6.
30. Docherty SJ, Davis OS, Haworth CM, Plomin R, Mill J. DNA methylation profiling using bisulfite-based epityping of pooled genomic DNA. Methods (San Diego, Calif. 2010 Nov;52(3):255-8.
31. Bell CG, Finer S, Lindgren CM, Wilson GA, Rakyan VK, Teschendorff AE, Akan P, Stupka E, Down TA, Prokopenko I, Morison IM, Mill J, Pidsley R, Deloukas P, Frayling TM, Hattersley AT, McCarthy MI, Beck S, Hitman GA. Integrated genetic and epigenetic analysis identifies haplotype-specific methylation in the FTO type 2 diabetes and obesity susceptibility locus. PloS one. 2010;5(11):e14040.
32. Xu X, Mill J, Sun B, Chen CK, Huang YS, Wu YY, Asherson P. Association study of promoter polymorphisms at the dopamine transporter gene in Attention Deficit Hyperactivity Disorder. BMC psychiatry. 2009;9:3.
33. Smith RG, Kember RL, Mill J, Fernandes C, Schalkwyk LC, Buxbaum JD, Reichenberg A. Advancing paternal age is associated with deficits in social and exploratory behaviors in the offspring: a mouse model. PloS one. 2009;4(12):e8456.
34. Rutten BP, Mill J. Epigenetic mediation of environmental influences in major psychotic disorders. Schizophrenia bulletin. 2009 Nov;35(6):1045-56.
35. Reichenberg A, Mill J, MacCabe JH. Epigenetics, genomic mutations and cognitive function. Cognitive neuropsychiatry. 2009;14(4-5):377-90.
36. Mill J, Wigg K, Burcescu I, Vetro A, Kiss E, Kapornai K, Tamas Z, Baji I, Gadoros J, Kennedy JL, Kovacs M, Barr CL. Mutation screen and association analysis of the glucocorticoid receptor gene (NR3C1) in childhood-onset mood disorders (COMD). Am J

Med Genet B Neuropsychiatr Genet. 2009 Sep 5;150B(6):866-73.
37. Mill J, Petronis A. Profiling DNA methylation from small amounts of genomic DNA starting material: efficient sodium bisulfite conversion and subsequent whole-genome amplification. Methods in molecular biology (Clifton, NJ. 2009;507:371-81.
38. Docherty SJ, Davis OS, Haworth CM, Plomin R, Mill J. Bisulfite-based epityping on pooled genomic DNA provides an accurate estimate of average group DNA methylation. Epigenetics & chromatin. 2009;2(1):3.
39. Mill J, Tang T, Kaminsky Z, Khare T, Yazdanpanah S, Bouchard L, Jia P, Assadzadeh A, Flanagan J, Schumacher A, Wang SC, Petronis A. Epigenomic profiling reveals DNA-methylation changes associated with major psychosis. American journal of human genetics. 2008 Mar;82(3):696-711.
40. Mill J, Petronis A. Pre- and peri-natal environmental risks for attention-deficit hyperactivity disorder (ADHD): the potential role of epigenetic processes in mediating susceptibility. Journal of child psychology and psychiatry, and allied disciplines. 2008 Oct;49(10):1020-30.
41. Mill J, Kiss E, Baji I, Kapornai K, Daroczy G, Vetro A, Kennedy J, Kovacs M, Barr C. Association study of the estrogen receptor alpha gene (ESR1) and childhood-onset mood disorders. Am J Med Genet B Neuropsychiatr Genet. 2008 Oct 5;147B(7):1323-6.
42. Brookes KJ, Neale B, Xu X, Thapar A, Gill M, Langley K, Hawi Z, Mill J, Taylor E, Franke B, Chen W, Ebstein R, Buitelaar J, Banaschewski T, Sonuga-Barke E, Eisenberg J, Manor I, Miranda A, Oades RD, Roeyers H, Rothenberger A, Sergeant J, Steinhausen HC, Faraone SV, Asherson P. Differential dopamine receptor D4 allele association with ADHD dependent of proband season of birth. Am J Med Genet B Neuropsychiatr Genet. 2008 Jan 5;147B(1):94-9.
43. Alkelai A, Baum A, Carless M, Crowley J, Dasbanerjee T, Dempster E, Docherty S, Hare E, Galsworthy MJ, Grover D, Glubb D, Karlsson R, Mill J, Sen S, Quinones MP, Vallender EJ, Verma R, Vijayan NN, Villafuerte S, Voineskos AN, Volk H, Yu L, Zimmermann P, Delisi LE. The XVth World Congress of Psychiatric Genetics, October 7-11, 2007: Rapporteur summaries of oral presentations. Am J Med Genet B Neuropsychiatr Genet. 2008 Mar 5;147B(2):233-77.
44. Xu X, Mill J, Zhou K, Brookes K, Chen CK, Asherson P. Family-based association study between brain-derived neurotrophic factor gene polymorphisms and attention deficit hyperactivity disorder in UK and Taiwanese samples. Am J Med Genet B Neuropsychiatr Genet. 2007 Jan 5;144B(1):83-6.
45. Mill J, Petronis A. Molecular studies of major depressive disorder: the epigenetic perspective. Molecular Psychiatry. 2007 Sep;12(9):799-814.
46. Mill J. Rodent models: utility for candidate gene studies in human attention-deficit hyperactivity disorder (ADHD). Journal of neuroscience methods. 2007 Nov 30;166(2):294-305.
47. Mill J, Yazdanpanah S, Guckel E, Ziegler S, Kaminsky Z, Petronis A. Whole genome amplification of sodium bisulfite-treated DNA allows the accurate estimate of methylated cytosine density in limited DNA resources. BioTechniques. 2006 Nov;41(5):603-7.
48. Mill J, Dempster E, Caspi A, Williams B, Moffitt T, Craig I. Evidence for monozygotic twin (MZ) discordance in methylation level at two CpG sites in the promoter region of the catechol-O-methyltransferase (COMT) gene. Am J Med Genet B Neuropsychiatr Genet. 2006 Jun 5;141B(4):421-5.
49. Mill J, Caspi A, Williams BS, Craig I, Taylor A, Polo-Tomas M, Berridge CW, Poulton R, Moffitt TE. Prediction of heterogeneity in intelligence and adult prognosis by genetic polymorphisms in the dopamine system among children with attention-deficit/hyperactivity disorder: evidence from 2 birth cohorts. Archives of general psychiatry. 2006 Apr;63(4):462-9.
50. Dempster EL, Mill J, Craig IW, Collier DA. The quantification of COMT mRNA in post mortem

cerebellum tissue: diagnosis, genotype, methylation and expression. BMC medical genetics. 2006;7:10.
51. Brookes KJ, Mill J, Guindalini C, Curran S, Xu X, Knight J, Chen CK, Huang YS, Sethna V, Taylor E, Chen W, Breen G, Asherson P. A common haplotype of the dopamine transporter gene associated with attention-deficit/hyperactivity disorder and interacting with maternal use of alcohol during pregnancy. Archives of general psychiatry. 2006 Jan;63(1):74-81.
52. Xu X, Mill J, Chen CK, Brookes K, Taylor E, Asherson P. Family-based association study of serotonin transporter gene polymorphisms in attention deficit hyperactivity disorder: no evidence for association in UK and Taiwanese samples. Am J Med Genet B Neuropsychiatr Genet. 2005 Nov 5;139B(1):11-3.
53. Xu X, Knight J, Brookes K, Mill J, Sham P, Craig I, Taylor E, Asherson P. DNA pooling analysis of 21 norepinephrine transporter gene SNPs with attention deficit hyperactivity disorder: no evidence for association. Am J Med Genet B Neuropsychiatr Genet. 2005 Apr 5;134B(1):115-8.
54. Mill J, Xu X, Ronald A, Curran S, Price T, Knight J, Craig I, Sham P, Plomin R, Asherson P. Quantitative trait locus analysis of candidate gene alleles associated with attention deficit hyperactivity disorder (ADHD) in five genes: DRD4, DAT1, DRD5, SNAP-25, and 5HT1B. Am J Med Genet B Neuropsychiatr Genet. 2005 Feb 5;133B(1):68-73.
55. Mill J, Sagvolden T, Asherson P. Sequence analysis of Drd2, Drd4, and Dat1 in SHR and WKY rat strains. Behav Brain Funct. 2005;1:24.
56. Mill J, Asherson P, Craig I, D'Souza UM. Transient expression analysis of allelic variants of a VNTR in the dopamine transporter gene (DAT1). BMC genetics. 2005;6:3.
57. Mill J, Richards S, Knight J, Curran S, Taylor E, Asherson P. Haplotype analysis of SNAP-25 suggests a role in the aetiology of ADHD. Molecular Psychiatry. 2004 Aug;9(8):801-10.
58. Mill J, Curran S, Richards S, Taylor E, Asherson P. Polymorphisms in the dopamine D5 receptor (DRD5) gene and ADHD. Am J Med Genet B Neuropsychiatr Genet. 2004 Feb 15;125B(1):38-42.
59. Lowe N, Kirley A, Hawi Z, Sham P, Wickham H, Kratochvil CJ, Smith SD, Lee SY, Levy F, Kent L, Middle F, Rohde LA, Roman T, Tahir E, Yazgan Y, Asherson P, Mill J, Thapar A, Payton A, Todd RD, Stephens T, Ebstein RP, Manor I, Barr CL, Wigg KG, Sinke RJ, Buitelaar JK, Smalley SL, Nelson SF, Biederman J, Faraone SV, Gill M. Joint analysis of the DRD5 marker concludes association with attention-deficit/hyperactivity disorder confined to the predominantly inattentive and combined subtypes. American journal of human genetics. 2004 Feb;74(2):348-56.
60. D'Souza UM, Russ C, Tahir E, Mill J, McGuffin P, Asherson PJ, Craig IW. Functional effects of a tandem duplication polymorphism in the 5'flanking region of the DRD4 gene. Biological psychiatry. 2004 Nov 1;56(9):691-7.
61. Craig IW, Mill J, Craig GM, Loat C, Schalkwyk LC. Application of microarrays to the analysis of the inactivation status of human X-linked genes expressed in lymphocytes. Eur J Hum Genet. 2004 Aug;12(8):639-46.
62. Mill J, Fisher N, Curran S, Richards S, Taylor E, Asherson P. Polymorphisms in the dopamine D4 receptor gene and attention-deficit hyperactivity disorder. Neuroreport. 2003 Aug 6;14(11):1463-6.
63. Freeman B, Smith N, Curtis C, Huckett L, Mill J, Craig IW. DNA from buccal swabs recruited by mail: evaluation of storage effects on long-term stability and suitability for multiplex polymerase chain reaction genotyping. Behavior genetics. 2003 Jan;33(1):67-72.
64. Chen CK, Chen SL, Mill J, Huang YS, Lin SK, Curran S, Purcell S, Sham P, Asherson P. The dopamine transporter gene is associated with attention deficit hyperactivity disorder in a Taiwanese sample. Molecular Psychiatry. 2003 Apr;8(4):393-6.
65. Caspi A, Sugden K, Moffitt TE, Taylor A, Craig IW, Harrington H, McClay J, Mill J, Martin J, Braithwaite A, Poulton R. Influence of life stress on depression: moderation by a

polymorphism in the 5-HTT gene. Science. 2003 Jul 18;301(5631):386-9.

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67. Mill J, Galsworthy MJ, Paya-Cano JL, Sluyter F, Schalkwyk LC, Plomin R, Asherson P. Home-cage activity in heterogeneous stock (HS) mice as a model of baseline activity. Genes, brain, and behavior. 2002 Aug;1(3):166-73.
68. Mill J, Curran S, Kent L, Gould A, Huckett L, Richards S, Taylor E, Asherson P. Association study of a SNAP-25 microsatellite and attention deficit hyperactivity disorder. American Journal of Medical Genetics. 2002 Apr 8;114(3):269-71.
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Books Edited

Brain, Behavior and Epigenetics. Arturas Petronis & Jonathan Mill (Editors). Springer, June 2011.

Book Chapter Contributions

1. Smith R, Mill J. Epigenetics and Chronic Diseases: An Overview. In Epigenetic Aspects of Chronic Diseases (eds Roach, Bronner, Oreffo). Springer. April 2011.
2. Mill J. Epigenetic Effects on Gene Function and their Role in Mediating Gene-Environment Interactions. In The Dynamic Genome and Mental Health (eds Kendler, Jaffee, Romer). Oxford University Press. April 2011.
3. Mill J, Petronis A. The relevance of epigenetics to major psychosis. In Epigenomics (eds Ferguson-Smith, Greally, Martienssen). Springer. 2009.

Review Activities (selected)

Grant Reviews	Medical Research Council, Welcome Trust, National Institutes of Health, BBSRC, Canadian Institutes of Health Research (CIHR), Swiss National Science Foundation, Swedish Research Council

Journals	Nature, Science, Molecular Psychiatry, Archives of General Psychiatry, Neuron, Genome Research, Biological Psychiatry, American Journal of Human Genetics, American Journal of Medical Genetics, PLoS One, PLoS Genetics, American Journal of Psychiatry

Editorial memberships (Current)
Associate Editor, BMC Psychiatry
Editorial Board, American Journal of Medical Genetics, Neuropsychiatric Genetics
Editorial Advisory Board, Journal of Child Psychology & Psychiatry
Associate Editor, Frontiers in Child and Neurodevelopmental Psychiatry

Invited Talks and Seminars (Selected)
2005 International Neurobiology of ADHD Meeting, Dunedin, New Zealand
2006 Plenary Talk at Annual Meeting of the Japanese Society of Biological Psychiatry, Nagoya, Japan
2006 Eli Lilly Invited Lecture, American Psychiatric Association, San Diego, USA
2008 "The Sparkling Genome: Epigenetic Mechanisms in Brain Function", Alicante, Spain
2009 GRIP, Universite de Montreal, Montreal, Canada.
2009 "Early Influences Shaping Mental Disorders", Royal Society of Medicine, London, UK.
2009 "Genes, Environments, and Adolescent Mental Health", Annenberg Public Policy Center, Philadelphia, USA.
2010 "Epigenetics of Brain Development", CHU Sainte-Justine, Montreal, Canada.
2010 "An Integrated Epigenetic-Genetic Approach to Alzheimer's Disease", National Institute of Aging (NIH), Bethesda, USA
2010 Harvard NeuroDiscovery Center Annual Meeting, Harvard Medical School, USA.
2011 "Cellular & Integrative Neuroscience", Physiological Society Themed Meeting, London, UK.
2011 Epigenetics and Developmental Programming Meeting, Invited Speaker, Newcastle, UK.
2012 Congress of the International Society for Twin Studies, Florence, Italy
2012 British Society of Psychopharmacology, Harrogate, UK
2012 British Society of Human Genetics, Warwick, UK
2012 Cambridge Epigenetics Club, University of Cambridge

Selected Media Coverage of My Group's Work
2012 New Scientist. 21st February. "Linking genes, cerebellums and schizophrenia" http://www.newscientist.com/issue/2852

2011 New Scientist. 30th September. "Epigenetic clue to schizophrenia and bipolar disorder" http://www.newscientist.com/issue/2832

2011 BBC Radio 4. 17th, 24th, and 31st August. "The First 1000 Days: A Legacy for Life" http://www.bbc.co.uk/programmes/b013q28r

2010 BBC Radio 4 Frontiers. "Epigenetics" http://www.bbc.co.uk/programmes/b00wdjgl

2010 New Scientist. 3rd November. "Genes marked by stress make grandchildren mentally ill" http://www.newscientist.com/issue/2785

2010 Daily Mail. 30th March. "Don't blame your genes…change them!"

www.dailymail.co.uk/health/article-1262154/Dont-blame-genes--change-them.html

2008 New Scientist. 9th July. “Rewriting Darwin: The New Non-Genetic Inheritance” http://www.newscientist.com/issue/2664

2008 Sunday Times. 20th July. “How your behaviour can change your children’s DNA” www.timesonline.co.uk/tol/life_and_style/health/article4364054.ece

2008 Toronto Globe & Mail. 12th March. “Scientists solve a psychiatric mystery” http://www.theglobeandmail.com/news/technology/science/scientists-solve-a-psychiatric-mystery/article26436/

2008 CBC News. 12th March. “2nd genetic code could provide clues to schizophrenia, bipolar disorder” http://www.cbc.ca/news/health/story/2008/03/12/brain-epigenetic.html

References

Available on request.