- 13 Huber W, von Heydebreck A, Sultmann H, Poustka A, Vingron M. Variance stabilization applied to microarray data calibration and to the quantification of differential expression. *Bioinformatics* 2002; 18: S96–104.
- 14 Aryee MJ, Jaffe AE, Corrada-Bravo H, Ladd-Acosta C, Feinberg AP, Hansen KD, et al. Minfi: a flexible and comprehensive Bioconductor package for the analysis of Infinium DNA methylation microarrays. *Bioinformatics* 2014; 30: 1363–9.
- 15 Mehta D, Klengel T, Conneely KN, Smith AK, Altmann A, Pace TW, et al. Childhood maltreatment is associated with distinct genomic and epigenetic profiles in posttraumatic stress disorder. *Proc Natl Acad Sci U S A* 2013; 110: 8302–7.
- 16 Liu W, Li K, Bai D, Yin J, Tang Y, Chi F, et al. Dosage effects of ZP2 and ZP3 heterozygous mutations cause human infertility. Hum Genet 2017; 136: 975–85.
- 17 Knowles EE, Kent Jr JW, McKay DR, Sprooten E, Mathias SR, Curran JE, et al. Genome-wide linkage on chromosome 10q26 for a dimensional scale of major depression. J Affect Disord 2016; 191: 123–31.
- 18 Cui L, Gong X, Tang Y, Kong L, Chang M, Geng H, et al. Relationship between the LHPP Gene Polymorphism and Resting-State Brain Activity in Major Depressive Disorder. Neural Plast 2016; 2016: 9162590.

- 19 Strum JC, Shehee R, Virley D, Richardson J, Mattie M, Selley P, et al. Rosiglitazone induces mitochondrial biogenesis in mouse brain. J Alzheimers Dis 2007; 11: 45–51.
- 20 Arloth J, Bogdan R, Weber P, Frishman G, Menke A, Wagner KV, et al. Genetic Differences in the Immediate Transcriptome Response to Stress Predict Risk-Related Brain Function and Psychiatric Disorders. Neuron 2015; 86: 1189–202.
- 21 Mehta D, Quast C, Fasching PA, Seifert A, Voigt F, Beckmann MW, et al. The 5-HTTLPR polymorphism modulates the influence on environmental stressors on peripartum depression symptoms. J Affect Disord 2012; 136: 1192–7.
- 22 Klengel T, Pape J, Binder EB, Mehta D. The role of DNA methylation in stressrelated psychiatric disorders. *Neuropharmacology* 2014; **80**: 115–32.
- 23 Sacher J, Wilson AA, Houle S, Rusjan P, Hassan S, Bloomfield PM, et al. Elevated brain monoamine oxidase A binding in the early postpartum period. Arch Gen Psychiatry 2010; 67: 468–74.
- 24 Molyneaux E, Howard LM, McGeown HR, Karia AM, Trevillion K. Antidepressant treatment for postnatal depression. Cochrane Database Syst Rev 2014: CD002018.



Psychiatry in history

Ishaq Ibn Imran ... Constantine the African, *De Melancholia* ... *De Coitu* and Chaucer

Greg Wilkinson

Ishaq Ibn Imran, a physician in the city of Kairouan, in what is now Tunisia, produced a treatise on melancholy around AD 900. Omrani $et\ al^1$ say it is the oldest-known surviving manuscript dedicated entirely to melancholia that includes manic-depressive illness; it claims that melancholy could be due to hereditary and environmental influences and that 'Melancholy affects the soul through fear and sadness – the worst thing that can befall it. Sadness is defined by the loss of what one loves; fear is the expectation of misfortune'. They conclude that 'in many ways, our current views differ little from our medieval forebears'. Treatments comprise over half of the material

Constantinus Africanus (AD 1015–1098) is one of the most influential medical scholars of the Middle Ages and a key figure in the revival of scientific medicine. In 1077, he arrived in Salerno, southeast of Naples, where he was linked with the *Schola Medica Salernitana*, the first European medical school. From Tunis, he brought manuscripts of the masters of Arabic medicine, which as a monk at Monte Cassino he translated and modified into an opus of Latin texts cited under his name. These circulated throughout Europe to the 17th century, laying the foundations for medical curricula. As an example of his reach, *De Melancholia* was copied at the priory of Kirkham, Yorkshire, in the mid-12th century. All that aside, Constantine is accused of plagiarism, and *De Melancholia* comprises parts of Ishaq Ibn Imran's treatise.

Constantine wrote *De Melancholia* because it was a malady prevalent 'in these regions': those intent on study and books of philosophy are especially liable to melancholy because of their scientific investigations, their tired memories and the failure of their minds, as are those who lose their beloved possessions, such as their children and dearest friends or some precious thing which cannot be restored. Many religious persons fall into this disease from their fear of God and contemplation of the Last Judgement: they become drunk, as it were, with excessive anxiety and vanity.

Treatments of contemporary charm include a magnetic mountain on the shore of the Indian Ocean that draws all the iron nails out of passing ships. Constantine recounts that Rufus of Ephesus says the magnet comforts those afflicted with melancholy and removes their fears and suspicions. Today, so it is claimed, transcranial magnetic stimulation uses magnetic fields to stimulate nerve cells in the brain to improve symptoms of depression.

Chaucer names Constantine in his *Prologue* to *The Canterbury Tales* (1387–1400) and in *The Merchant's Tale* as a source of aphrodisiacs:

'For he had many potions, drugs as fine As those that monk, accursed Constantine, Has numbered in his book *De Coitu*. He drank them all; not one did he eschew'

De Coitu is Constantine's translation of a treatise on sexual intercourse and fertility by Ibn al-Jazzar.

Reference

1 Omrani A, Holtzman NS, Akiskal HS, Nassir Ghaemi S. Ibn Imran's 10th century Treatise on Melancholy. J Affect Disord 2012; 141: 116–119.

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