In the news

THE EPIGENETICS OF CHILD ABUSE

Experiencing stress early on in life can have long-lasting physiological and behavioural consequences. Previous animal studies by Michael Meaney and colleagues showed that stress-induced methylation of the promoter of the glucocorticoid receptor gene in the hippocampus partially underlies this effect, and a new study by the same group has now confirmed this finding in humans who suffered abuse as children.

This study “...extends the animal work on the regulation of stress to humans in a dramatic way...” says Jaak Panksepp of Washington State University (*NY Times*, 24 February 2009).

The fact that events early in life influence a person’s brain and behaviour for a long time may not be surprising. “If you’re a public health individual or a child psychologist you could say that this shows you nothing you didn’t already know,” says Meaney, who is a professor at the Douglas Mental Health University Institute in Montreal. (*BBC News*, 23 February 2009)

The crucial finding of the study is that, as in animals, epigenetic changes in humans “...may be an important mechanism by which environmental exposures cause long-lasting behaviour change,” says Eric Nestler, a professor at Mount Sinai School of Medicine in New York (*ScienceNOW*, 23 February 2009). And epigenetic changes “...are potentially reversible...” according to Jonathan Mill of the Institute of Psychiatry in London (*BBC News*).

This is important because, as Meaney adds, “...abused individuals are less healthy in adulthood...” (*ScienceNOW*), and understanding why this is so might lead to the development of therapies; these could perhaps involve environmental interventions rather than drugs. Meaney wonders: “A social event got you into it. Could a social event get you back out?” (*NatureNews*, 20 February 2009.)

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