PublisherInfo		
PublisherName	:	BioMed Central
PublisherLocation	:	London
PublisherImprintName	:	BioMed Central

Imprinted by Eed

ArticleInfo		
ArticleID	:	4721
ArticleDOI	:	10.1186/gb-spotlight-20030312-01
ArticleCitationID	:	spotlight-20030312-01
ArticleSequenceNumber	:	73
ArticleCategory	:	Research news
ArticleFirstPage	:	1
ArticleLastPage	:	2
ArticleHistory	:	RegistrationDate : 2003–3–12 OnlineDate : 2003–3–12
ArticleCopyright	:	BioMed Central Ltd2003
ArticleGrants	:	
ArticleContext	:	130594411

Jonathan B Weitzman
Email: jonathanweitzman@hotmail.com

Imprinted genes are subject to epigenetic regulation and undergo parent-of-origin-specific allelic silencing. Many imprinted genes have been shown to contain a differentially methylated region (DMR). In an Advanced Online Publication in Nature Genetics Jesse Mager and colleagues at the University of North Carolina at Chapel Hill report a role for the Polycomb-group protein Eed (for 'embryonic ectoderm development'), a histone methyltransferase, in epigenetic regulation at imprinted loci (*Nature Genetics,* 10 March 2003, DOI:10.1038/ng1125). *Eed*$^{-/-}$ knockout embryos showed upregulation of a subset of paternally-repressed imprinted genes. Loss of imprinting may account in part for the lethality of *Eed*-knockout embryos. *Eed* mutation did not affect parent-of-origin methylation, but it did cause changes in the methylation of certain CpG dinucleotides in the DMR of imprinted genes. These data provide the first link between mammalian Polycomb-group proteins and genome imprinting.

References

1. Epigenetic reprogramming in mammalian development.

2. Methylation-induced repression - belts, braces, and chromatin.

3. *Nature Genetics*, [http://www.nature.com/naturegenetics]

4. University of North Carolina at Chapel Hill , [http://www.unc.edu]