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Exposure to aflatoxin B₁ *in utero* is associated with DNA methylation in white blood cells of infants in The Gambia

A new study, led jointly by the International Agency for Research on Cancer (IARC), the University of Leeds, the London School of Hygiene & Tropical Medicine, the University of Cambridge, and Queen's University Belfast, looks at the impact of aflatoxin exposure during pregnancy on the methylome. The study, published online in the *International Journal of Epidemiology*, was carried out in newborns in The Gambia, where aflatoxin is a common food contaminant, linked to impaired childhood growth and increased risk of liver cancer. The analysis by the Epigenetics Group at IARC of the genome-wide methylation of the DNA from blood samples of infants in The Gambia revealed an association between the mother's exposure to aflatoxin during early pregnancy and the methylation of a discrete number of gene loci in the offspring. Some of these sites corresponded to genes related to growth and immune function. Because DNA methylation changes may have long-term consequences on gene expression and cellular phenotype, these results reinforce the need for interventions to reduce aflatoxin exposure, especially during critical periods of fetal and infant development.

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