GENETICS

TIME BOMB – REVISITED

11.08.2006

I revisited a 2005 paper on "Folic acid – vitamin and panacea or genetic genetic time bomb". From the abstract: "We live in a health-conscious age â€" many of us supplement our diet with essential micronutrients ... so-called 'functional foods' ... We examine this issue in relation to the B-group vitamin folic acid, and ask whether supplementation with this vitamin could introduce a strong genetic selection pressure..." As I found this paper highly interesting, here is my analysis, how the story goes on:

1. Martinez-Frias, ML. Folic acid: a public-health challenge. LANCET.
2. Kafadar, AM. C677T gene polymorphism of methylenetetrahydrofolate reductase (MTHFR) in meningiomas and high-grade gliomas. ANTICANCER RESEARCH.
3. Kelemen, LE. The role of folate receptor alpha in cancer development, progression and treatment: Cause, consequence or innocent bystander?. INTERNATIONAL JOURNAL OF CANCER.
4. Nazarenko, MS. Frequencies of C677T and A1298C polymorphisms of methylenetetrahydrofolate reductase gene at the early stage of human development. RUSSIAN JOURNAL OF GENETICS.
5. Ferguson, LR. Nutrigenomics – Integrating genomic approaches into nutrition research. MOLECULAR DIAGNOSIS & THERAPY.
6. Soloway, PD. Gene nutrient interactions and evolution. NUTRITION REVIEWS.
7. Eichholzer, M.. Folic acid: a public-health challenge. LANCET.
8. Houghton, LA. [6S]-5-Methyltetrahydrofolate is at least as effective as folic acid in preventing a decline in blood folate concentrations during lactation. AMERICAN JOURNAL OF CLINICAL NUTRITION.
9. Ejarque, I. A bioinformatic approach to epigenetic susceptibility in non-disjunctional diseases. BIOLOGICAL AND MEDICAL DATA ANALYSIS, PROCEEDINGS.
10. Sweeney, MR. Evidence of unmetabolised folic acid in cord blood of newborn and serum of 4-day-old infants. BRITISH JOURNAL OF NUTRITION.
11. Lucock, MD. The antifolate activity of tea catechins. CANCER RESEARCH.
12. Kelemen, LE. Multivitamin and alcohol intake and folate receptor alpha expression in ovarian cancer. CANCER EPIDEMIOLOGY BIOMARKERS & PREVENTION.
13. Allegrucci, C. Human embryonic stem cells as a model for nutritional programming: An evaluation. REPRODUCTIVE TOXICOLOGY.