**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 (MTH-FR) 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 methylenetetrahy-drofolate 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.