

***Epigenetica- la confluența
dintre genom si creier***

Teoria generație spontane

Aristotel-Francesco Redi, 1668

Gregory Mandel,1865

***Walther Flemming,1879 colora-
ția cu anilină a cromatinei,
mitoza la salamandra***

- Walter Sutton, 1902 – teoria cromozomială a eredității

- W. Bateson, 1902- genetică

- Hans Wincler, 1920- genom

**C. Waddington, 1939- epigenotype,
“The total developmental system consisting of interrelated developmental pathways through which the adult form of the an organism is realized.”**

Conrad Waddington, 1942-

Epigenetics to refer to the study of the “causal mechanisms” by which “the genes of the genotype bring about phenotypic effects.”

O. T. Avery, C M MacLeod, M. McCarty, (1944)- ADN

F. Crik și J. D. Watson, 1953- modelul acizilor nucleici

***De la Jan Swmmerdan, 1660 la
Ernst Hadorn E 1960 -imaginal
disc experiment Drosophila -
transdeterminare***

-celula stem, cromozom X

Mecanisme epigenetice

***-metilarea DNA – scăderea
5-metilcitozina - neoplazie***

***-E. Hervouet, P. Hulin, F M
Vallette, P. F. Cartron -Proximity
ligation in situ assay for
monitoring the global DNA
methylation in cells.***

BMC Biotechnology 2011, 11:31

Mecanisme epigenetice

-acetilarea histonei

***- histone deacetylase (HDAC)/
histone acetyltransferase (HAT)***

***J.A. Park et all. Differentiation
and upregulation of heat shock
protein 70 induced by a subset of
histone deacetylase inhibitors in
mouse and human embryonic
stem cells. BMB reports 2010***

**HDAC inhibitors on mouse
embryonic stem (ES) cells.
The HDAC inhibitors trichostatin
A, suberoylanilide hydroxamic
acid, sodium butyrate, and
valproic acid induced early
differentiation of mouse ES cells
and triggered induction of
heatshock protein (HSP)70.**

Factori epigenetici

EPIGENOTIP

Epigenetic and phenotypic changes result from a continuous pre and post natal dietary exposure to phytoestrogens in an experimental population of mice . Carlos M Guerrero-Bosagna, Pablo Sabat, Fernanda S Valdovinos, Luis E Valladares and Susan J Clark *BMC Physiology* 2008

Emerging roles of epigenetic mechanisms in the enduring effects of early-life stress and experience on learning and memory. Shawn McClelland, Aniko Korosi, Jessica Cope, Autumn Ivy, Tallie Z. Baram

Substance-specific and shared transcription and epigenetic changes in the human hippocampus chronically exposed to cocaine and alcohol Zhifeng Zhoua, Qiaoping Yuana, Deborah C. Mashb, and David Goldmana, *Neurobiology of Learning and Memory* 2011

The effects of laughter on post-prandial glucose levels and gene expression in type 2 diabetic patients Takashi Hayashi , Kazuo Murakami. Life Sciences 85 (2009)

