

Epigenetics: Next Generation of Bioinformatics

Unless an explicit, verifiable and replicable tool exists to identify the causes of chronic diseases as a foundation from which prevention and strategies for cost effective treatment can be utilized, the economic burden will continue to escalate in all developed countries.

Epigenetic modeling is the process that enables bioinformatics professionals to use in silico modeling to understand intra and intercellular level activities and mechanisms.

The modeling uses the principles of physical science for antagonistic and agonistic relationships between minerals and elements that includes homeostasis to understand on – off cellular activity.

Caution: Ignorance has allowed economic interests to create cellular chaos by allowing neurotransmitters to be added to the food chain as supplements.

The following slide provides additional key tenets of the discipline.

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- Cytokines have minerals and elements as constituents.
<http://www.mcfip.net/upload/Cell%20Surface%20Signaling%20Molecule%20Formation.pdf>
- Numerous DNA repair mechanisms exist to provide cellular health and wellbeing. All of them utilize homeostasis.
- Biphasic activity establishes a 10/80/10 scenario with the two ends being dysfunctional activities; suppressed and autoimmune.
[http://www.mcfip.net/upload/Biphasic%20\(Yin%20-%20Yang\)%20Cellular%20Activity%20x.pdf](http://www.mcfip.net/upload/Biphasic%20(Yin%20-%20Yang)%20Cellular%20Activity%20x.pdf)

Inadequate but evolving technology prevents the tedious and time consuming retrospective review of thousands of existing studies to create hypothesis that must be validated to be transformed from theory into reality that can then be applied and commercialized.

The next slide addresses hurdles that must still be overcome in order to transition epigenetics into a computerized formulaic process.

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Hurdles to Overcome

- Dalton size calculations (molecular weight of the mass of the molecules) does not provide adequate granularity to differentiate entangled (bound) molecules
- Intracellular visualization has not evolved to identify minerals and elements and their volume that interact in antagonistic relationships
- Estimates of amino acids that constitute activities cannot be used because they can incorporate “entanglement” factors, see below.
- The definition of a “gene” is still lacking:

“New definitions of a gene are needed.”

Professor Thomas Gingeras, Ph.D., Cold Spring Harbor Laboratory (CSHL), leader of the huge collaborative effort called ENCODE (Encyclopedia of DNA Elements), a research team comprised of 441 scientists from 32 institutes in 5 countries that spanned a 5 year period.

http://www.eurekalert.org/pub_releases/2012-09/cshl-img090412.php

The means of overcoming existing hurdles will be discussed with interested parties when the process of understanding epigenetics based on physical science takes place.