



Biocompatibility and Bioconditionality- A new mirror for current and future medicines

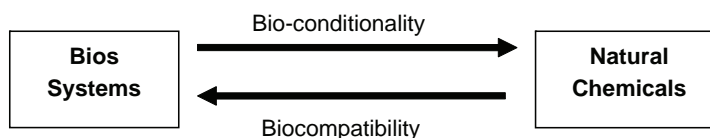
Wanbo Li¹, Jianping Hu² and Lianfeng Zhang³

¹China Beijing KLX Biosciences. Ltd, China

²Shanghai MabStar. Inc., China

³Daqing Fu Rui Bang Biotech Co. Ltd. China

Contemporary knowledge endows the chemists with an unlimited ability to synthesize so many non-natural small molecular compounds as drug candidates, but who thought the unbalancing of the earth chemical systems has being accelerated? As for medicine, biologists or doctors rarely think about the “biocompatibility” and “bio-conditionality” based on the relationship among bios (creatures), nature, and non-natural compounds. Our preliminary experiments on the most commonly-used OTC medicines, BENADRYL and TYLENOL, have been made to investigate the effects on mouse behaviors and physiology by administrating to the pregnant BALB/c mice through drinking water and with the dosage calculated by the body surface area. A significant autism-like ADHD behavior in 2-3 month age F1 BALB/c mice was recorded on the open field test between the groups of Paracetamol (also known as Acetaminophen, Fortolin, Panodol, Snaplets, Sufferin, Tylenol) taking and the control. Another finding is severe fatty liver about 5 months after born in all the F1 off-springs of BALB/c mice whose mothers took diphenhydramine during their pregnancy but not in the controls. These may clue to the nosogenesis searching for some current high-incident disorders. Further studies may be conducted to investigate the epigenetic modifications and the genetic susceptibility in the following generations. The nature is enslaved by bio-conditionality to getting the non-natural compounds from bios, while the bios may follow the law of biocompatibility and limit the synthesis of incompatible compounds in their body (see the sketch map at the end of this abstract). Human might have made an extra power onto bios (including itself) to promote the anagenesis or catagenesis.



This figure shows a hypothetical relationship between bios' and nature's chemical reservoirs.

Biography

Dr. Wanbo Li: A Professor of Institute of Laboratory Animal Science, Chinese Academy of Medical Sciences (CAMS) and Peking Union Medical College (PUMC) Beijing, People's Republic of China.

Dr. Li is also a scientific advisor of China Beijing KLX Biosciences, Ltd., and a VP for R&D in Shanghai MabStar, Inc., a subsidiary of China Daqing Fu Rui Bang Biotech Co., Ltd.

Dr. Li got his doctor degree in Chinese Academy of Medical Sciences in 1991, and in 1991 to 1993, he was trained as a postdoctoral fellow in Beijing University Medical College and engaged in cancer gene therapy research. In 1995-2000, he worked as a visiting scientist in The Texas University MD Anderson Cancer Center in the dept. of Cancer Biology. In 2000-2003, he was a molecular biologist in a subsidiary of U.S. Amgen in San Francisco on drug discovery. From 2006 to now, Dr. Li has been working in Chinese Academy of Medical Sciences, Beijing, China. From then on, his interest focused on the R&D of systematic pharmaceutics and Traditional Chinese Medicine.