

Accepted Manuscript

Title: SYSTEM BIOLOGY APPROACH INTERSECTING DIET AND CELL METABOLISM WITH PATHOGENESIS OF BRAIN DISORDERS

Authors: Fernando Gomez-Pinilla, Xia Yang

PII: S0301-0082(17)30125-9
DOI: <https://doi.org/10.1016/j.pneurobio.2018.07.001>
Reference: PRONEU 1569

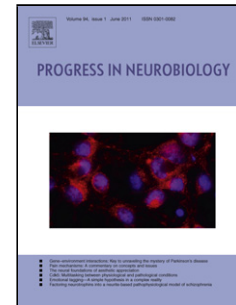
To appear in: *Progress in Neurobiology*

Received date: 18-7-2017

Accepted date: 15-7-2018

Please cite this article as: Gomez-Pinilla F, Yang X, SYSTEM BIOLOGY APPROACH INTERSECTING DIET AND CELL METABOLISM WITH PATHOGENESIS OF BRAIN DISORDERS, *Progress in Neurobiology* (2018), <https://doi.org/10.1016/j.pneurobio.2018.07.001>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



SYSTEM BIOLOGY APPROACH INTERSECTING DIET AND CELL METABOLISM WITH PATHOGENESIS OF BRAIN DISORDERS

Short title: diet and brain pathogenesis

Fernando Gomez-Pinilla^{1,2*} and Xia Yang¹

¹Department of Integrative Biology and Physiology, University of California, Los Angeles, Los Angeles, California 90095, USA

²Department of Neurosurgery, UCLA Brain Injury Research Center, University of California, Los Angeles, Los Angeles, California 90095, USA

*Correspondence:

Fernando Gomez-Pinilla, Ph.D.
 Department of Neurosurgery and Department of Integrative Biology and Physiology
 University of California, Los Angeles
 Los Angeles, CA 90095, USA
 Phone: +1-310-206-9693
 Email: fgomezpi@ucla.edu

Number of words: 8,900

Table of Contents

ABSTRACT	3
1. INTRODUCTION	4
2. THE THREAT OF THE NEW EPIDEMIC OF METABOLIC DISORDERS	5
2.1 Obesity and Type-2 diabetes	5
2.2 Metabolic Perturbations Increase Risk of Neurological and Psychiatric Disorders	6
2.3 Diet as an Escalator of MetS and Brain Dysfunction	7
2.4 Cell Metabolic dysfunction Affects Molecular Substrates of Brain Plasticity	8
3. EPIGENETICS BRIDGING DIET AND LONG-TERM BRAIN PLASTICITY	10
3.1 Interaction between Diet and Epigenetics	10
3.2 Mechanisms of epigenetics	10
3.3 Epigenetic Regulation of <i>Bdnf</i> Transcription, and Implications for Brain Disorders	11
3.4 Diet and Epigenetic Alterations	12

Download English Version:

<https://daneshyari.com/en/article/8959223>

Download Persian Version:

<https://daneshyari.com/article/8959223>

[Daneshyari.com](https://daneshyari.com)