

# Mathematics or Physics-Majored Students on the Biomedical Fields, Insiders or Outsiders?

Lu DY<sup>1\*</sup> and Lu TR<sup>2</sup>

<sup>1</sup>School of Life Sciences, Shanghai University, Shanghai200444, PR China

<sup>2</sup>College of Science, Shanghai University, Shanghai200444, PR China

## Abstract

Mathematics- or physics-majored students are disciplinary, sensitive to numbers and mathematical imagination. They play unique roles in biomedical science now. This editorial offers new insights in this matter and possible future perspectives.

**Keywords:** Mathematics; Physics; Systems biology; Human genome; Biology; Medicine

## Introduction

### Background

It is well-known that mathematics- or physics-majored students are different from biological or medical majored students. The former types of students are disciplinary, sensitive to numbers and mathematical imaginations. Biological- or medical students are, however, advantageous at experimenting and operations. These two types of students were previously trained for various purposes and utilities. Yet, mathematics- or physics-majored students are versatile now. Formerly, long-term trained medical courses can be quickly understood by mathematics- or physics-majored students from modern educational systems, such as web- or TV educational channels. Similarly, biomedical-majored students are required to handle a great numbers of mathematic data owing to growing numbers of biomedical information in every parameter of pathogenesis pathways and therapeutic efficacy or toxicities quantifications.

### New insights

Facing this situation, mathematics- or physics-majored students may be more suitable than biomedical-majored students in large-sized genetic or bioinformatics analysis and pinpointing. Currently, we may no longer call mathematics- or physics-majored student “layman” in biomedical studies. Previously, we speculated that mathematics- or physics-majored students can be the major-forces in genomic studies in both DNA drafting and post-genome analysis [1,2]. Similarly, in systems biology studies, theoretic physic-majored students or scholars are proposed to be one of the commonest participants in scientific investigations of modern biology [3].

Recently, a lot of mathematicians are seeking opportunity in industrial, especially in Pacific areas [4]. Whether positive or negative, this type of activities is an inevitable pathway and fate for mathematical or theoretical physics-majored students. Their capabilities are admirable. If growing quality of cooperation between mathematical/physical scholars and biomedical scholars is realized, dramatic changes in life science are foreseeable.

The authors of this editorial are one of biomedical-major and one of theoretic physics major. With the time goes by, we are more satisfactory with our cooperation. We have published more coauthored articles than separated articles.

## Conclusion

It is a good sign that a lot of researchers with mathematics- or physics- backgrounds are coming onto biomedical fields. Hopefully, increasing milestone work can be expected, such as the wonderful cooperation between Watson and Crick (a biologist and a physicist).

## References

1. Lu DY, Lu TR, Che JY, Wu HY, Xu B (2014) New perspectives of HIV/AIDS therapy study. *Recent Pat Antiinfect Drug Discov* 9: 112-120.
2. Lu DY, Lu TR, Che JY, Zhu PP (2014) Genetics and bioinformatics studies of antidepressant drug therapeutic efficacies and toxicities, a current overview. *Recent Pat CNS Drug Discov* 9:193-199.
3. Pennisi E (2003) Tracing life's circuitry. *Science* 302: 1646-1649.
4. Normile D (2015) Pacific rim mathematicians coaxed from their ivory towers. *Science* 350: 616.

**\*Corresponding author:** Lu DY, School of Life Sciences, Shanghai University, Shanghai200444, PR China, Tel: +862166163545; Fax: +862166132177; E-mail: [ludayong@shu.edu.cn](mailto:ludayong@shu.edu.cn)

**Received** November 27, 2015; **Accepted** December 02, 2015; **Published** December 04, 2015

**Citation:** Lu DY, Lu TR (2015) Mathematics or Physics-Majored Students on the Biomedical Fields, Insiders or Outsiders? *Metabolomics* 6: e142. doi:10.4172/2153-0769.1000e142

**Copyright:** © 2015 Lu DY, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.