

# Preliminary Understanding of Clinical Major and Basic Medicine Major's Education and Innovation of Their Combination

Li Ruiyu<sup>1,a</sup>, Ma Xueyu<sup>2,b</sup> and Hou Shuying<sup>3,c</sup>

<sup>1</sup>Second Affiliated Hospital of Xingtai Medical College 054000, China

<sup>2</sup>Department of Education Science Teaching of Xingtai University, 054001, China

<sup>3</sup>Hebei Province Xingtai Guangzong County Second Middle School 054699, China

Corresponding author: Li Ruiyu, Professor, chief physician,

<sup>a</sup> email: Li Ruiyu651021@163.com, <sup>b</sup> email: xyma77@163.com, <sup>c</sup> email:

**Keywords:** preclinical medicine; clinical medicine; creative education; preliminary understanding

**Abstract.** With the continuous deepening of China's reform of education, how to improve the quality of graduate's education has become an important topic in the current graduate education. Training goal of medical graduate students is the same, but the clinical major training and basic medicine major training are the different directions. Therefore, this paper discusses the preliminary understanding of the major and employment, the state and education etc.

## 1 Introduction

This article is based on the fact that our country's medical university graduates should not take the study of the medical basis as employment orientation, and the author has carried on the preliminary analysis, putting forward own views and opinions; at the same time, the author talks about some personal ideas related to science of human body systems which can provide a broad platform for basic medicine, and people engaged in clinical medicine should be based on the actual clinical problem solving ability for direction. Finally, the article illustrates both the basic medicine and clinical medicine, should closely cooperate with medical education, medical practice; the advancement of medical technology, with innovative thinking as the precondition, relies on exerting and improving the ability of creation.

## 2 Basic Medicine Major Should Not Regard Employment As Educational Goal

2.1 Medicine is life science, which is the study of life phenomenon, life characteristic, life occurrence, life development law, and relationship between the various organisms inside, and between various organisms and environment. Professional medical university postgraduates, should not take the basis for the study as employment guidance, especially research-based universities, which should run them better so as to accomplish better employment. Therefore, the research-based universities should not take the employment as the ultimate purpose. Employment is an economic problem, which is related to Chinese economic level, national regulatory policy is that employment and economy should be proportional, having nothing to do with the medical university training direction. Research-based universities are cradles to cultivate the basic research talents. However, in the recent research, graduate students' biggest desire is to find companies in which they can earn more money, which is a common phenomenon. Thus, how can graduates from research-based universities establish connections between their majors and interests, and between their specialties and national fate?

We know that the medical Nobel Prize primarily reward fundamental subjects or physical discipline to research major new discoveries, even though it can not represent everything, nor the pursuit of medical purposes, but the medical Nobel Prize has now become one of the most influential international scientific awards. Although winning prize is not the ultimate goal, but if it may represent the most advanced scientific research, generally accepted by the scientific

community, the value is infinite. Achievements transformation is usually advocated by the country, but why so many Chinese Medical University Master, doctor, and basic research to produce results, including the so-called postdoctoral high technology can not change productivity, or itself is not the existence of these new results, new and high technology? We have own reasons? The social reason? Educational reasons? Or the basic research value difference? Or the lack of transformation? Or there are no conversion can be turned into something. Therefore, these problems arise, whether on the issue from the education essence, truly people-oriented, the basic medical research that should do regression based medical research of people's hands, to solve practical problems they should be resolved, not only the country issued corresponding policy but also synchronized with the solution of the corresponding treatment policy, playing a basic medical guide medical function of science and technology. The construction of innovative country, need more innovative environment, innovative ideas, innovative talent, innovation policy, the state actively to create all possible factors, encourage to strive for to get Nobel prize, of course, winning Nobel prize is not the purpose, but the goal of our wisdom, ability, working results is to promote the culture of the Chinese nation, contribute the spirit to the mankind, love the motherland, dedicate themselves to science, with national pride and sense of historical responsibility.

## 2.2 Human System Science Provides A Broad Platform For Basic Medicine

The system of human body science, aiming to establish a scientific system of taking human as the center, will offer the basis for human science, biological science of thinking and behavior science. It should not only provide the guidance of philosophy as the science of specific disciplines, including scientific problems are refined, but also provide a set of theory and method for refining scientific problems and the application of scientific achievement[1]. In the construction of the scientific theory of human body system, including the above functions, which is a complete complicated thought system of Qian Xuesen. Epistemological philosophy, basic science theory, science and technology, idea of engineering practice's consistent system are necessary and inevitable for human science of complex systems. Because the knowledge about human itself is not optimal and ultimate, and it does not have the truth on the meaning of traditional natural science machinery. The system of human body science is always in the process of interpretation stage of humanity. Therefore, its effectiveness must be examined by practice. In the meanwhile, because of the diversity of the crowd, the society and the culture, the specific rules of body movement should change with the basic parameters, and for the practice of specific population's practice, to construct specific rules and develop technology, which is an inevitable for a complex system science. The scope of the study of human science was defined by Qian Xuesen as: "the study of human function, how to protect the function of the human body, and further development of human potential functions, fulfill one's potential."

Implement human body system science can shorten the distance between preclinical medicine and clinical medicine. As we all know, traditional Chinese medicine is system medicine including the thought of entity concept which shares some similarities and something in common with based biological system. Therefore, researching the theory of Chinese medicine system with based biological system may specify the clinical to theory and produce new theory from clinical experience. Chinese medicine regards treatment based on syndrome differentiation as treatment principle. And the treatment based on syndrome differentiation is similar to the individual therapy of modern medicine in using the thought of human body system science to accelerate the mutual transformation between preclinical medicine and clinical medicine. And the merging of them could promote the development and innovation of the whole medicine area. What's more, applying systematology idea to guide reductionism which could refine traditional Chinese medicine systems science, carry forward the clinical strength of TCM, summarize and affirm therapeutic effect, regulate the standard, elucidate its medicine and inherit, carry forward and develop the product. The system and scientific fundamental and clinical research could industrialize the traditional clinical medicine, which could realize both its social benefit and economic benefit and therefore could play an important role in human health.

### **3 Clinical Major Aims To Have The Ability Of Solving Practical Problems**

Clinical aims at solving the real problems. Clinical is a strongly practical subject. Physicians should find problems in clinical practice and target at solving out the problems according to the reality. They learn medical theory and clinical theory basics, but it is not possible apply what they learn to the patients because of individual differences、environment geography and race differences. Therefore, innovation is based on the real work and needs to find and solve out the problems. And while we finish tackling one thing another new thing comes out, and that is innovation. We can also say that innovation is infinite and closely connect sorrow of patients to our work.. What patients need is what we pursue. Innovation is an important driver of medical development. Hospitalization duration, days of routine treatment can not only improve the quality of patients' life, but also shorten the days of routine treatment? And in what ways? China has three medicines , ie traditional Chinese medicine, western medicine and the integrative medicine. Could we find the combination point which has an effect of 1 plus 1 greater than 2 on the individual therapy? In addition, fever. How should we treat it? A good phenomenon or a bad one? Thermostat rather than just cooling down according to the patients. Through patients achieving the healing purpose they combine their knowledge, skills, and flexible thinking and really face the fact problems at close range and expand combination of thinking to find ways available. That is what we clinical physicians think simple but actual not, and that is what we are supposed to try to do.

### **4 Professional Education Of Medical School Is Based On Creative Thinking.**

CPC Central Committee and the State Council point out that higher education should pay attention to cultivating college students' innovative ability, practical ability and entrepreneurship and generally improve their scientific and humanistic quality in Decision on Deepening Education Reform to Promote Quality Education. Medical innovation should take “advocating the freedom to explore, encouraging academic contention, activating academic atmosphere, and promoting original innovation” as purpose. Science is criticism in nature and communication is doubt at heart[2]. New ideas and new doctrines aim at fully playing the role as one of the original sources of academic innovation and promoting the spirit of seeking innovation, pursuing competition and tolerating failure, which is true of medical science that has basic innovation and practical innovation. But sometimes innovative research projects have both basis and practice, which are closely related. For example, research on diabetes that is currently common and also a major disease is an important issue at home and abroad. When we do research on diabetic patients with hearing loss, we find out that they have kidney deficiency syndrome to some degree. However, Lee et al, from the Department of Medicine at Columbia University, do numerous experiments, finding out that diabetes has close relationship with osteocalcin. According to “Kidneys bone” theory of Chinese medicine, deficiency of the kidney should include “Kidneys bone” dysfunction, whose treatment principle is tonifying kidney. Therefore, they propose that treating diabetes by tonifying kidney includes regulating osteocalcin hypothesis. Rationale: diabetes patients having varying degrees of kidney disease is the result of clinical observation, and achieving better results with traditional Chinese medicine to treat diabetes and kidney is a concrete manifestation of traditional Chinese medicine. Currently Gukang for “Kidneys bone” research more embodies in osteoporosis clinical and basic aspects[3]. However, according to the mechanism of “Kidneys bone” and “different diseases” theory and principle, under the inspiration of the Department of Medicine at Columbia University Lee’s research about the relation between diabetes and osteocalcin, the author proposes kidney medicine treatment of diabetic kidney patients should be including the regulation of its osteocalcin[3-6]. Because kidney medicine can significantly improve secretion function of diabetic patients’ osteoblasts that have insulin receptors which can synthesize and release osteocalcin and the major factor generating diabetes is due to insulin and its receptor changes, the author comes up with increase the regulation of osteoblast osteocalcin secretion prevention by tonifying kidney and improves symptoms of diabetic patients and its complications According to this hypothesis[7-15], this way of thinking combine our clinical practice with experiments abroad, conducting series

related research, and revealing and confirming the hypothesis from many aspects, which provides practical ideas and methods for prevention and treatment of diabetes through Integrative Medicine. Summarizing and generalizing diabetes research mainly lie in innovating thinking design. Particularly, first, way of thinking: it refers to both new ideas and discoveries of “Diabetes and osteocalcin” and guidance of “Kidneys bone”, reflecting the cross and integration Eastern and Western art and culture. Second, theoretical and experimental grafting: it combines the “Kidneys bone”, “experimental relations of osteocalcin and glucose metabolism ” with “TDS”, reflecting the concept of overall, modern, and dialectical, which provides a reference model for the enrichment and development of Integrative Medicine theory and practice.

## 5 Conclusion

English has vanward and fundamental status in economic and social development as well as national rejuvenation. Education is the foundation of science and technology and science and technology is the first productive force. It's necessary to improve the quality of population and the quality of people's life, but our partial clinical graduate students or college students whose majors are basic medicine or clinical medicine don't develop themselves according to their majors and interests, especially basic medicine in medical university in our country. As problems appear, our government should introduce corresponding policies and keep up with the pace of solving the corresponding policies, making basic medicine play a guiding role in medical science and technology. At the same time, no matter what profession to learn should be based on their positions to play the guiding role of innovation.

## References

- [1] Yu Zhensu, Ni Zhiyong, Human scientific exploration in complex systems [M], Beijing, Science press, 1988,2012: 57
- [2] Wu Kun, Nutrition and food hygiene curriculum system reform and practice [J], Chinese Journal of Medical Education, 2006, 26 (5):17-191
- [3] Li Ruiyu, Li Wenjiang, Song Na. TCM syndrome differentiation and treatment in patients with diabetes with deafness hearing and the influence of blood rheology [J]. Journal of Traditional Chinese Medicine, 1998,39(6)347-248
- [4] Tan Conger, Wang Miqu, Ni Qing, Diabetes family genetic characteristics and the correlation of kidney deficiency [J]. Liaoning Journal of Traditional Chinese Medicine, 2010, 37(7): 1197-1199.
- [5] Li Songlin, Wang Miqu, Yang Yuqi, Type 2 diabetes kidney deficiency syndrome classification study [J]. Zhejiang Journal of Traditional Chinese Medicine 2009 , 19(1):51-52
- [6] Zhang Hui, Niqing, Ren Yan, Low back pain symptoms of weakness and diabetic kidney [J]. Journal of Traditional Chinese Medicine, 2010, 51(5): 409-411
- [7] Wei Shuangping, Guo Kaoshan, Li Ruiyu et al. The related factors of the impact of diabetes on hearing and cochlear morphology structure [J]. Chinese Tissue Engineering Research, 2013, 17(7): 1305—1312
- [8] Yang Yunxia, Li Ruiyu, Jing Jianmei et al. The effects of the prescription of preventing deafness on an animal which is diabetic and hearing loss, journal of otology, 2013, 8(2): 88-90
- [9] Wei Shuangping, Li Meng, Li Ruiyu et al. The effect of traditional Chinese medicine on osteoblast and osteocalcin synthesis[J]. Chinese Tissue Engineering Research, 2013, 17(11): 2003—2090

- [10] Li Ruiyu, Li Meng, Guo Yunling et al. The effects of the prescription of preventing deafness on Different osteocalcin of the diabetic patients with deafness [J].Journal of New Chinese Medicine,2011, 43(2): 32—33.
- [11] Li Ruiyu, Li Wenjiang, Song Na et al. The effect, that the TDBSD of traditional Chinese medicine influence the hearing of diabetic patients with deafness and hemorheology [J]. Journal of Traditional Chinese Medicine,1998,39(6):347
- [12] Li Ruiyu, Zhang Junhui, Wu Liping et al. The primary discussion, about what the relationship between different diabetic patients with deafness and hemorheology is [J]. Journal of Shandong University of Chinese medicine ,2001,25(2): 120;152
- [13] Li Ruiyu, Li Meng, Guo Kaoshan, Hou Jinjie et al. Effect of hypoglycemic anti-deafness capsules on diabetic patients with deafness and toxicological assessment about rats, Journal of Traditional Chinese Medicine, 2013; 33(5): 651-657
- [14] Li Zhenhui, Li Ruiyu, Li Meng et al. A review of maternally inherited diabetes and deafness, Frontiers in Bioscience 19, 777-782, January 1, 2014
- [15] Li Xipeng, Li Ruiyu, Li Meng et al. Effects of diabetes on hearing and cochlear structures, Journal Ofotology, 2013,8(2):82-85