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INTERNATIONAL SOCIETY FOR PATHOPHYSIOLOGY (ISP)

With reference to:

- *enhanced advances in the field of pathobiology and related subjects, methodologies and concepts that bring a new light into the nature of diseases*
- *emerging theoretical concepts and practical perspectives that form a new frame of reference related to molecular biology and medicine*
- *the rapidly changing lifestyles in the developed world and the overexposure of its increasingly sedentary population to a growing burden of chemicals due to over prescription of drugs as well as the ever more frequent use of electromagnetic and ionising radiation for diagnosis and treatment.*
- *the growing pressure of contemporary society and public demands for reconsideration of the scope, quantity and quality of medical education*
- *the necessity of providing pathophysiologically relevant information which will help academic policy makers in redesigning and upgrading curricular structures and guidelines*
- *the specific mission of biomedical education system to advance and restore health, and to secure a better quality of life for the chronically ill and disabled*

The ISP during its Fifth International Congress of Pathophysiology ISP 2006 held at Beijing, China (June 28 - July 1 2006) adopted the following

ISP DECLARATION CONCERNING THE ROLE AND POSITION OF PATHOPHYSIOLOGICAL TEACHING/LEARNING IN BIOMEDICAL CURRICULA

1. The sequencing of the human genome and related molecular frontline research (proteomics, metabolomics, pharmacogenomics etc) and progress in biophysics as well as in computing has underlined the importance of horizontal and vertical teaching/learning in health sciences. Integrative pathophysiology is a powerful tool in the quest to comprehend the pathobiological nature as foundation of clinical reasoning and a proper appreciation of disease.
2. Pathophysiological analysis, the integration of regulatory homeostasis and homeodynamics of body processes and the interconnectivity between them lays



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down a solid approach towards a comprehensive vision and a more complete understanding of the etiology and pathogenesis of disease. Emerging important biomedical principles bring together both clinical and preclinical knowledge and, directly guide students along the path of evidence based medicine.

3. The rapid expansion of a scientific knowledge related to multiple facets of a complex pathobiological phenomenon increasingly enables a quantitative estimation of relevant processes within an integral body system. Recognition of primary, secondary and less immediate pathogenic mechanisms leads towards internal consistency of the natural course of disease.

4. Integrative pathophysiological teaching/learning increases the student's drive to obtain and retain theoretical, practical and usable knowledge/competence. Integration leads to a better understanding, retention of knowledge, as well as an appreciation of the hierarchy of disease mechanisms (molecular, biophysical, subcellular, cellular, organ, systemic, epidemiological), and a synthetic view of morphological, biochemical, genetic, and clinical knowledge.

5. Sustainable reforms of biomedical curricula should observe and implement proper pathophysiological teaching/learning strategies. The ISP recommends that 8% or more of the total teaching/learning hours should be dedicated to the pathophysiological consideration of disease and predisease states and conditions. Optimally, a half of these hours should consist of general pathophysiology, dealing with common concepts, principles and patterns of etiology and pathogenesis.

6. The understanding of complex phenomena involves synthesis of information derived from many sources (maximal insight). Further understanding is achieved by doing, reinforcement, repetition and continuing referral to diverse sources, thus leading to an increasing refinement and depth of perception (consensual validation). In pathophysiology this refinement of insight involves recognition of both feedback and feed-forward loops in the processes of etiopathogenesis.

7. The methods used in the teaching/learning of pathophysiology should not ignore parallel and contextual mechanisms and potential etiopathogenetic points of branching within consideration of a basic/dominant pathogenetic mechanism. Implementation of such etiopathogenetic reasoning is an essential and reliable foundation for diagnostic and therapeutic interventions as well as prevention.



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8. Adoption of an integrative approach to thinking and acquiring knowledge makes it possible to synthesise coherent structures from heterogeneous data. This approach is equally relevant to the study of general and specialized pathophysiology (nosology), and should be applied within various teaching/learning forms, such as classical seminars, problem-based-learning modules, practicals, clinical rounds etc.

Qide Han

President, International Society for Pathophysiology