The root of life science research

Hiroshi Shimoda

The studies touching the roles of certain biological molecules have been in the hub of the universe of Life Sciences since big waves of Molecular Biology occurred in the 90’s. Most of the recent researchers and/or academic rookies go over to the field of Life Sciences from Molecular Biology, and therefore no small one is unfamiliar with strict Anatomy and Pathophysiology, which are established as the essences of current basic and clinical medicine. A lot of them incline to attain admirations and research grants by disparately scrambling so-called impact factors, and then strike a victory pose. However, many ones will someday note hollow of their victory pose and missing matters on the way to questing for Life Science as a practical science for humans. This tendency seems to be emphasized especially in the case of continuing the studies on the cells cultured in vitro condition.

Needless to mention, it is principal ideology for Life Science as a scientific discipline to contribute to the improvement of human health, and its origin is plainly found in Anatomy (structure) and Physiology (function), because the human is the living thing, which is accorded the distinctive structure and function by inestimable benefits of nature. Considering the relationship between structure and function in the living things, it arrives at the idea of Johan Wolfgang von Goethe, German great poet advancing Morphology (Morphologie), who advocated that function follows structure. The living things develop their peculiar morphology with life. The cells assemble to form tissues and then organize various organs to produce their own bodies practically by numerous functional biomolecules. In order to evaluate the effects of certain molecules on morphogenesis of organisms, various transgenic animals have been recently developed. It is indisputable that those are effective and attractive means for exploration of those roles in individuals. However, morphology of the living things involves enormous history of life evolution, and peculiar functions occur on them. Furthermore, the individual morphology also provides its exercise and quality of life. Every functional molecule accurately plays the role through the harmonized cooperation on the amazingly elaborated figures to live one’s health. When the beautiful configuration is damaged, various disorders and/or diseases arise in our bodies. This certainly provides the root of Life Science research subjects.

Indeed, in recent years, the occasions of my received consultation on Anatomy and Morphology of certain organs and/or regions from eminent molecular biologists and biotechnologists have markedly increased. The observation of a notable molecular biologist that all we now need are sound anatomist and physiologist implies that profound understanding and veneration for the root are required as the foundation for exquisite maturation of Life Science.

The cells and tissues organize using means of molecules to develop their best capacities (individual creation), and further build their particular morphology as a living body (general creation). I long for this launching journal with a flag of cell and molecule not only to be a fruitful space for exchanging fresh ideas and hot information, but also to develop as a unique one based on tradition of Life Science and Medical Biology.