105 Ta-You Wu Memorial Award - Winners' Comments

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Special Issue

I received my B.S degree at National Chung Hsing University, M.S. degree at National Taiwan University and Ph.D. degree at Emory University, USA. I majored in Animal Science and Genetic & Molecular Biology. During my Ph.D and postdoctoral training, I focused on a rare neurodegenerative disease, Huntington's disease (HD), and have established a non-human primate model which was published in Nature, 2008. Using this unique model, we not only provided a better animal model highly mimicking HD patients, but also identified several novel mechanisms of gene regulation and neuropathogenesis. With this achievement, this model provides a better platform for further investigation, and facilitates the development of therapy.

I have developed my own research career in Department of Physiology, College of Medicine at National Cheng Kung University (NCKU) since 2009. My research interests focus on the regulation of microRNAs on HD, and try to understand these regulatory mechanisms and potentially therapeutic directions for this neurodegenerative disease. Furthermore, I also attempt to expand my research fields to other neurodegenerative diseases, and wish to demonstrate the relationship between specific microRNAs and neurodegenerative diseases. Several important achievements have been reported, including (1) establishment of one simple and efficient method to generate transgenic mice using lentiviral transgenesis, (2) generation of one unique HD transgenic mouse model, (3) discovery of that the suppression of HD pathological characteristics via microRNAs in different models, (4) identification of that the impairment of protein clearance pathways in HD, (5) determination of that the neuroprotective functions of microRNAs through enhancement of cytoskeletons…etc. These results have been published in The American Journal of Human Genetics, Human Molecular Genetics, Brain Structure and Function, Brain Patholog...etc, showing the novelty and importance of our research in these related fields.

Since I was a graduate student, I have received lots of critical and tough experience/training in different scientific fields. Especially, it was a huge challenge when I started to develop my own research career at NCKU. Although I had not been at NCKU before 2009 and felt unfamiliar with everything at that time, I fortunately have known several excellent colleagues. With their friendly help, it facilitates my development of different aspects at NCKU, including research, teaching and service. I really appreciate this awesome environment of NCKU, and believe this would be a critical factor to promote the well-development of research career. Under delightful atmosphere, I believe we could enjoy our research and generate fruitful outcomes.

Recently, it is more challenged to apply grants and recruit research students in the modern society of Taiwan. As a result, how to manage our own laboratories or how to let these laboratories functional would be more complicated. I remember several senior faculty members in our department told me that we have to be happy no matter what we encounter. It is the only way to enjoy our career and further pass the positive attitude to our students. I believe with the recognition and encouragement of Ta-You Wu Memorial Award, I could use more positive attitude to enjoy and develop my career, generate more solid outcomes and contribute more for biomedical fields.