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[\[Medicine\] NTU Establishes Research Center for Developmental Biology and Regeneration Medicine](#)[\[Medicine\] NTU Establishes Research Center for Developmental Biology and Regeneration Medicine \(Chinese Version\)](#)

NTU Newsletter (Issue 1015) National Taiwan University has just approved the institution of the NTU Research Center for Developmental Biology and Regeneration Medicine (trans. temp.) in the administrative meeting on June 22, 2010; Academician Cheng-Ming CHUONG was appointed as the Honorary Chairman while Professor Wei-Shiung YANG was selected to host the center. On July 10, 2010, the opening ceremony of the center was held in National Taiwan University Children's Hospital. More than sixty guests attended the event, including Academician Cheng-Ming CHUNG, Vice President of NTU George Tai-Jan CHEN, Dean of College of Medicine Pan-Chyr YANG, College of BioResources and Agriculture Bao-Ji CHEN, etc. In the ceremony, Pan-Chyr YANG and Bao-Ji YANG addressed congratulatory speeches respectively, and Academician Cheng-Ming CHUONG gave a lecture, entitled "My Interactions with Nature/Science and the Choice of Our Future Research Direction."

In recent years, stem cell research and regeneration medicine research develop vigorously in Taiwan. The results of these studies have great impact on the technological development of tissue reconstruction and artificial organs. Tissue reconstruction basically relies on the studies of developmental biology, while developmental biology and regeneration medicine are two sides of the same coin with regard to tissue reconstruction. Regeneration medicine aims at understanding the multiple interactions among the genes, the transmission of molecular signals and the biomatrix in the process of the formation of an organ. Developmental biology studies morphogenesis, namely, how the genes direct cells to form a structure, a tissue or an organ. Molecular biology studies the content of the genetic functions and how they are carried out. However, the bio-functions are in fact resulted from the morphogenesis of structures. Hence, to understand properly and to utilize stem cells to form structures, tissues or organs, one has to begin with developmental biology, especially with functional morphogenesis.

During last decade, because of the enthusiastic talent cultivation, the research capacity in these fields has been greatly enhanced in Taiwan.

In developmental biology, Taiwan has established several research teams on model organisms (including nematode, drosophila, Brachydanio rerio, mice, etc.) and rising model organisms (including aphid, Branchiostoma lanceolatum, sea urchins, etc.), whose results are successively published in globally recognized journals.

As for regeneration medicine, stem cell research gets more and more popular in Taiwan now, especially with regard to the methods to cultivate stem cells or to obtain somatic cells including nerve cells, chondrocytes, hepatocytes, lung epithelial cells, etc.; the accomplishment in this field in Taiwan has become very fruitful. Meanwhile, Taiwan researchers have also developed the capacity to induce pluripotent stem cells, with which we can have enough supply of the research materials.

Presently, many researchers in NTU have dedicated themselves to stem cell medicine, tissue engineering, developmental biology and regeneration medicine. In order to further integrate these research dynamics, improve the interchanges as well as to make fund raising easier, these researchers have formed a research group, entitled "NTU Developmental Biology and Regeneration Research Group," and scheduled regular meetings for discussion. Now, since the Research Center for Developmental Biology and Regeneration Medicine has been established, the further integration of the research dynamics mentioned above and the further elevation of the developmental biology and regeneration medicine in Taiwan are hopefully anticipated.

Further Information:

[NTU Newsletter Issue 1015](#) (Chinese)

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