

Tony Hunter Talks about New Research on Pancreatic and Liver Cancer at EB 2021

TAIPEI, TAIWAN, April 28, 2021 /EINPresswire.com/ -- Due to the COVID-19 pandemic, the conference of Experimental Biology (EB), the world's largest annual biomedical congregation, was cancelled last year and took place online this year, from April 27 to 30. Dr. Tony Hunter, 2018 Tang Prize winner in Biopharmaceutical Science, presented the Tang Prize Award Lecture on April 27, 1p.m.to 2 p.m. EDT. Besides sharing the stories about the discovery of tyrosine kinases and the development of tyrosine kinase inhibitors, he also talked about two research projects he is working on: pancreatic cancer and histidine phosphorylation. This session was chaired by Dr. Dr. William Coleman, the representative of the Experimental Biology, and Dr. Shu Chien, academician of Academia Sinica and president of Tang Prize Selection Committee.

The formation of most solid tumors can't be attributed to the mutation of one single cell type but rather to the evil alliance between cancer cells and the surrounding normal cells. Therefore, "if we can understand how the different types of cells interact with each other within the tumor microenvironment, then we may uncover a good target to eventually



Tang Prize Award Lecture at 2021 EB



Tony Hunter gives a talk at EB 2021



Dr. William Coleman chairs the Tang Prize Award Lecture.

cure the disease." Dr. Hunter and his team have been trying to map "the communication network between the cancer cells and stellate cells." Some of their findings show that when pancreatic stellate cells are activated, they will "secrete proteins to form a shell around the tumor," which can be resistant to cancer drugs. Moreover, "the activated cells also secrete a signaling protein called LIF, which conveys stimulatory signals to tumor cells to drive pancreatic cancer development and progression." So it is suggested that "LIF may be a useful biomarker to help diagnose pancreatic cancer more easily and efficiently."

Their other research undertaking led to the recognition of "a compound called phosphohistidine—a highly unstable molecule that has been found to play a central role in some forms of cancer, such as liver and breast cancer and neuroblastoma." They recently published this study, detailing how these insights will not only "enable scientists to manipulate the shape and atomic makeup of the antibodies' binding sites in order to design more efficient antibodies in the future" but also "set up the researchers for more advanced studies on phosphohistidine and its potential role in cancer."

Currently a professor of molecular and cell biology at the Salk Institute for Biological Studies, Dr. Hunter is the first scientist to discover tyrosine phosphorylation, as well as the presence and abnormal activities of tyrosine kinases. This seminal discovery allowed people in the biomedical field to gain new knowledge of the regulation of cell signaling and established Dr. Hunter as the trailblazer who paved the road for the study and development of tyrosine kinase inhibitors and whose contribution to the research on targeted therapies cannot be overstated.

The five host societies of EB 2021 are the American Association of Anatomists (AAA), the American Society for Biochemistry and Molecular Biology (ASBMB), the American Physiological Society (APS), the American Society for Investigative Pathology (ASIP), and the American Society for Pharmacology & Experimental Therapeutics (ASPET). To encourage innovative research and exchange of ideas in biopharmaceutical science, the Tang Prize Foundation and EB signed a 10-year cooperation agreement in 2015, with one of the provisions being that a Tang Prize winner would be invited to deliver a speech at each year's EB conference. So far five laureates have helped make good on this agreement, giving more professionals in this field a better understanding of the values and vision the Tang Prize in Biopharmaceutical Science stands for.

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