Joint Symposium of Osaka University, University of California, Davis, and Kirin Holdings Co. Ltd.

Date; November 10 (Wed), 2021

Time; 9:00 – 12:00 (JST)

Title; Plant Cell Bioprocessing of Human Growth Factors and Other Bioactive Proteins

Venue; On-line system

Research collaborations between the University of California, Davis, Osaka University and Kirin Holdings Co., Ltd., Japan have launched in 2018. Production of pharmaceuticals in plant and examination of plant-made pharmaceuticals will pave feasible and commercially practicable ways.

The regenerative cure industry has made remarkable progress, and some therapies, such as Chimeric Antigen Receptor T cells, CAR-T, have begun to be put to practical use for diseases that were previously difficult to treat, and have produced excellent results. However, cell growth factors, one of the most important raw materials used in culturing cells for these therapies, are very expensive due to the difficulty in manufacturing and ensuring high quality. As a result, these treatment methods cannot be said to be medical care that everyone with the target disease can receive. Therefore, in order to solve these problems, the production of growth factors in plant cells has been studied. In this symposium, the physicochemical properties of growth factors produced in plant cells, their effectiveness in cell culture, and their potential for industrial production will be introduced.

Partnership leaders gathered for
a signing ceremony
at the UC Davis Alumni Center.
(2019.06.21)

10 Nov	Party	Speaker	Content
9:00	Osaka Univ. (MC Rodriguez)	Prof. Genta Kawahara	Opening remark
9:05	UC Davis (MC Fujiyama)	UC Davis Professor Emeritus and Honorary Doctor of Osaka University Raymond Rodriguez	
9:10	Kirin (MC Rodriguez)	Dr. Hiroaki Yajima	
9:15	Osaka Univ. (MC Fujiyama)	Prof. Toshiya Muranaka	Sustainable production of glycyrrhizin and related chemicals by yeast
9:35		Ms. Kim Dua Nguyen	Production of β1,4-Galactosylated Antibody in *Nicotiana benthamiana*
9:50	UC Davis (MC Rodriguez)	Adjunct Prof. Somen Nandi	Critical Considerations for Recombinant Protein Production & Process Development in Rice Cell Culture
10:15		Prof. John Albeck	Live-cell imaging of kinase activity to decode growth factor signaling
10:40		Adjunct. Prof. Ping Zhou	Essential Role of Growth Factors in Stem Cell Research
11:00		Prof. Karen McDonald	Technoeconomic Modeling of Recombinant Protein Production from Rice Cell Culture
11:20	Kirin (MC Fujiyama)	Mr. Hiroshi Okawa	Development of recombinant transferrin production process in rice cell suspension culture at pilot scale
11:40			Discussion
11:55	Osaka Univ.	Prof. Kazuhito Fujiyama	Closing

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