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*~50 Participants
Thanks Everyone!*

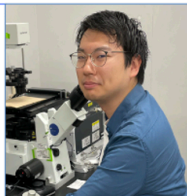
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SERIES 88
Dr. Ren YOSHITOMI
2023-10-20

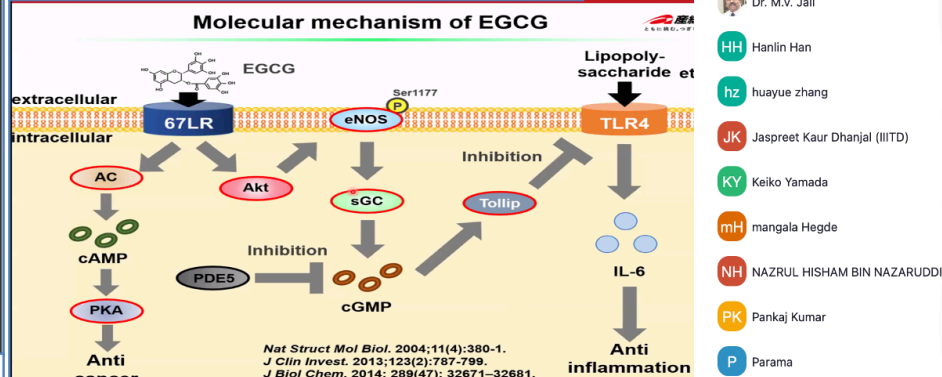
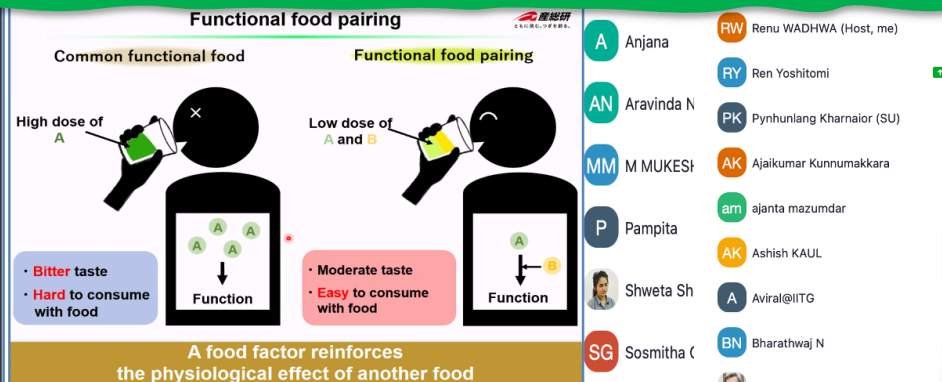
Series – 88

Date and Time - Oct. 20, 2023 (3:30 PM JST)
Venue - Zoom
Speaker – Dr. Ren YOSHITOMI
Affiliation –CMBRI, AIST, Japan



Functional food pairing based on EGCG signaling

Despite numerous studies on the effectiveness of individual food components, the potential benefits of consuming multiple food components in combination (known as functional food pairing) are still largely unknown. The body has a system for detecting ingested food components, which play a critical role in regulating biological functions. (-)-Epigallocatechin-3-O-gallate (EGCG), a bioactive polyphenol in green tea, exerts diverse biological regulatory effects through 67-kDa Laminin Receptor (67LR). This study is focused on the signaling of EGCG and explores the impact of enhancing components on EGCG, notably α -glucosyl hesperidin - a polyphenol compound derived from citrus fruits. EGCG exerts its anti-inflammatory effect by promoting cGMP production via 67LR and increasing Tollip expression. Thus, we investigated the combined effects of EGCG and *gHes* by measuring cGMP levels in mouse plasma. The study findings indicate that EGCG, at a dose of less than one-third (30 mg/kg *b.w.*) of its reported production-promoting capacity, in combination with *gHes*, can promote cGMP production. EGCG. Moreover, incorporating *gHes* and 30 mg/kg *b.w.* EGCG or its equivalent in a green tea extract produced the same Tollip-expressing and cGMP-promoting effects as a green tea extract containing 90 mg/kg *b.w.* Based on the findings, the effectiveness of a functional food combination of EGCG and *gHes* on anti-obesity was confirmed in a clinical study. The participants were administered either placebo barley tea or a combination of EGCG (146 mg/day) and *gHes* (178 mg/day) at doses that lacked any reported anti-obesity effect (green tea containing *gHes*) for a period of 12 weeks. The findings indicated that the surge in body weight, BMI, and visceral fat area observed in the placebo group were curbed by consuming green tea blended with *gHes*. The results suggest that *gHes* improves sensing of EGCG. The combined consumption of green tea and *gHes* is a beneficial food pairing that demonstrates anti-obesity effects in clinical trials involving humans.



M MUKESH KUM...	Sosmitha Girisa	UZINI	Aswani Bs	AIST
BINTEE	Ruchira	Sonam Lama (Silk...	Shweta Shinde	Pampita
Rekha K N		Nati Taba	ALuru Lakshmi Si...	Dhanraj S B

mangala Hegde	Pynhunlang Khar...	Parama	Sayantan Saha	M MUKESH KUM...

- A Anjana
- AN Aravinda N
- MM M MUKESH
- P Pampita
- SG Sosmitha (
- RW Renu WADHWA (Host, me)
- RY Ren Yoshitomi
- PK Pynhunlang Kharnaor (SU)
- AK Ajaikumar Kunnumakkara
- am ajanta mazumdar
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- HH Hanlin Han
- hz huayue zhang
- JK Jaspreet Kaur Dhanjal (IIITD)
- KY Keiko Yamada
- mH mangala Hegde
- NH NAZRUL HISHAM BIN NAZARUDDIN
- PK Pankaj Kumar
- P Parama
- PD PRANAV DEEVI
- SY Shi Yang
- SK SUNIL KAUL
- SC Suravi Chauhan
- A AIST