



Department of Biotechnology
Ministry of Science and Technology
Government of India
DBT



National Institute of
Advanced Industrial Science
and Technology
AIST

**DBT - AIST International Laboratory
for Advanced Biomedicine**

DAI LAB

**Classroom for Advanced & Frontier Education
CAFE**

CAFE - PLUS

Presentation-Learning for Young Scholars

DAILAB-CAFÉ PLUS – 2017 (Series - 01)

Presentation Learning for Young Scholars

- DAILAB will hold a **CAFÉ-PLUS (Series - 01)** on **Friday, March 31, 2017 (3:30 PM JST)**
- Aim of the CAFÉ-PLUS is to offer chance to Young Scholars to present their work and train them for “Clear/Crisp/Careful/Concise/Conclusive” presentations.
- 4 candidates will be selected based on their submitted abstracts from DAILAB-Tsukuba and Satellite CAFEs – *IIT-Delhi, Hanyang University, Peking Medical University, Brawijaya University, USJP Sri Lanka and Manipal University*. We will be connected by Skype as always.
- Each presenter will be given 13 mins (10 min presentation + 3 min QA).
- Experts from the team of DAILAB mentors will evaluate the presentations and give comments on how to improve it further from various aspects.
- **Best Presenter of DAILAB-CAFÉ PLUS** will be selected and issued a certificate and a memento.
- Winners of four CAFÉ-PLUS series (I-IV) will compete in **CAFÉ-EXPRESS (EXtraordinary PREsenter Selection Series)** and awarded an international academic trip.
 - **Deadline of Application = March 20, 2017 (5 PM JST)**
 - **Please apply by sending Abstract (format shown here)**

Anticancer activity in honeybee propolis: functional insights to the bioactive, bioactivities and bioavailability
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Koji Terao⁴, Sunil C. Kaul⁵ and Renu Wadhwa⁶

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Keywords: Propolis, CAFÉ, Antiproliferative, p53, anticancer, anti-metastasis

Besides honey, honeybees make sticky substance (called propolis) by mixing saliva with pine tree resin and other botanical sources. It is known to be rich in bioactivities of which the anticancer activity is most studied. Caffeic Acid Phenethyl Ester (CAPE) is a key anticancer component in New Zealand propolis. We investigated the molecular mechanism of anticancer activity of CAPE. cDNA array performed on the control and CAPE-treated breast cancer cells revealed an activation of DNA damage signaling, involving upregulation of GADD45a and p53 tumor suppressor proteins. Bioinformatics and molecular docking analyses revealed that CAPE is capable of disrupting metalloproteinase complexes. We provide experimental evidence and demonstrate that CAPE induced disruption of metalloproteinase and led to nuclear translocation and activation of p53 resulting in growth arrest in cancer cells. Furthermore, CAPE-treated cells exhibited downregulation of metastasis and several other key regulators of cell migration accountable for its anti-metastasis activity. Of note, we found that whereas CAPE was unstable in the culture medium (as it gets degraded into caffeic acid by ascorbic acid), its complex with gamma-cyclodextrin (γ-CD) showed high efficacy in anti-tumor and anti-metastasis assays in vitro and in vivo. Furthermore, γ-CD increased the anticancer potential of supercritical extracts of Brazilian propolis that is rich in Apigenin (in contrast to the New Zealand propolis that contains CAPE as a major bioactive compound). The data proposes that γ-CD significantly enhances the anticancer activity of honeybee propolis.

CAFÉ-PLUS

Presentation-Learning for Young Scholars

- **CAFÉ-PLUS 2017 Series 01** on March. 31, 2017 (3:30 to 4:45 PM)

CAFÉ-PLUS			Presenter	Affiliation	Topic
2017/03/31 3:30 ~ 4:45 PM	1	3:30- 3:45	Manik Vohra	Manipal University, India	Implications of CpG-SNPs of Folate Pathway Gene in Type 2 Diabetes
	2	3:45-4:00	Melissa Andrade	Manipal University, India	Characterisation of IGF-I Signalling in Cellular Responses to UV
	3	4:00-4:15	Nadya Anyndita	Brawijaya University, Indonesia	A Single Epitope of Epstein-Barr Virus Stimulates IgG Production in Mice
	4	4:15-4:30	Anjani Kumari	IIT-Delhi, India	Intervention of hypoxic response pathway: In silico insights to target the oxygen sensors FIH-1 and HPH-2
	5	4:30- 4:45	Vidhi Malik	IIT-Delhi, India	Anticancer activity of Withaferin-A: Bioinformatics Insight into NFκB Inactivation Mechanism



Winner



Melissa Andrade
MU, Manipal, India



Brawijaya University, Indonesia



Manipal University, India

University of Sri Jayewardenepura, Sri Lanka



IIT-Delhi, India



Peking Medical University, China

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CAFÉ-PLUS		Presenter	Affiliation	Topic	Score
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	2 3:45-4:00	Melissa Andrade	Manipal University, India	Characterisation of IGF-I Signalling in Cellular Responses to UV	84.8 ***
	3 4:15-4:30	Anjani Kumari	IIT-Delhi, India	Intervention of hypoxic response pathway: In silico insights to target the oxygen sensors FIH-1 and HPH-2	77.9 *
	4 4:30- 4:45	Vidhi Malik	IIT-Delhi, India	Anticancer activity of Withaferin-A: Bioinformatics Insight into NFκB Inactivation Mechanism	78.7 *

AIST, Japan

Score Board

Congratulations to Melissa !!!
Well done All !!

Thanks Everyone for participation !



Hanyang University, South Korea

