

第 1 5 5 回
東 北 大 学 加 齢 医 学 研 究 所

集談会

プログラム

**155th IDAC Biannual Meeting
Program**



日時：令和 3 年 1 月 29 日（金曜日）13:00～
January 29, 2021, 13:00~ at Web conference
所内で Web にて開催をいたします。

共催：東北大学加齢医学研究所

Institute of Development, Aging and Cancer, Tohoku University

東北大学加齢医学研究所研究会同窓会

Society of Institute of Development, Aging and Cancer, Tohoku University

13:00 – 13:05 Opening remarks Dr. Ryuta Kawashima

第 28 回加齢医学研究所研究奨励賞受賞記念講演

28th IDAC Young Investigator Award Lecture

13:05 – 13:25 Lecture Chair: Dr. Fan-Yan Wei

"Ramokines" as emerging endogenous signaling molecules derived from RNA catabolism

Department of Modomics Biology and Medicine, Institute of Development, Aging and Cancer, Tohoku University

Akiko Ogawa

About 150 post-transcriptional RNA modifications have been identified in all kingdoms of life. During RNA catabolism, most modified nucleosides are resistant to degradation and are released into the extracellular space. In this study, we explored the physiological role of these extracellular modified nucleosides and found that *N*⁶-methyladenosine (m⁶A), widely recognized as an epigenetic mark in RNA, acts as a ligand for the human adenosine A3 receptor, for which it has greater affinity than unmodified adenosine. We used structural modeling to define the amino acids required for specific binding of m⁶A to the human A3 receptor. We also demonstrated that m⁶A was dynamically released in response to cytotoxic stimuli and facilitated type I allergy in vivo. Our findings implicate m⁶A as a signaling molecule capable of activating GPCRs and triggering pathophysiological responses, a previously unreported property of RNA modifications (Mol Cell, *in press*). We named these extracellular modified nucleosides 'Ramokines (RNA associated modified nucleosides + -kines)'.
Finally, I would like to introduce a new Ramokine project on which we are currently working.

13:25 – 13:35 *break*

13:35 – 14:20 Session 1 Presentations 1-3

Chairs: Ayano Yagi, Yukiko Tando

1 、 Role of extracellular vesicles in the regulation of immunometabolism in obesity

Takahisa Nakamura

Department of Metabolic Bioregulation, Institute of Development, Aging and Cancer, Tohoku University

2 、 Downregulation of Ral GTPase-activating protein promotes tumor progression via enhancing autocrine TGF- β 1 signaling

Mingxin Cao, Hisanori Horiuchi

Department of Molecular and Cellular Biology, Institute of Development, Aging and Cancer Tohoku University

3 、 Analyzing of transcription factors regulating skeletal muscle fiber types

Takahiro Kondo¹, Atsushi Kubo¹, Genta Sahara², Akihiro Yamada², Yusuke Inoue³, Toshihiko Ogura¹

¹Department of Developmental Neurobiology, Institute of Development, Aging and Cancer, Tohoku University

²Department of Medical Engineering and Cardiology, Institute of Development, Aging and Cancer, Tohoku University

³Advanced Medical Engineering Research Center, Asahikawa Medical University

14:20 – 14:30 *break*

14:30 – 15:15 Session 2 Presentations 4-6

Chairs: Browne Ryan, Shino endo

4 、 Herpes simplex virus thymidine kinase/ganciclovir-mediated apoptosis of tumor cells induces anti-tumor immunity

Sho Umegaki, Hidekazu Shirota, Yuki Kasahara and Chikashi Ishioka

Department of Clinical Oncology, Tohoku University Hospital, Sendai, Japan

5 、 An inhibitory immune checkpoint molecule LILRB4/gp49B and its novel ligand fibronectin: A potential in the therapy of the immune-related diseases.

Shota Endo¹, Mei-Tzu Su¹, Masanori Inui^{1,2} and Toshiyuki Takai¹

¹ Department of Experimental Immunology, Institute of Development, Aging and Cancer, Tohoku University

² Department of Microbiology and Immunology, Aichi Medical University School of Medicine

6 、 Quantitative control of anti-apoptotic molecules by a mitotic regulator, CAMP

Maho Hino, Kenji Iemura, Masanori Ikeda, Kozo Tanaka

Dept. of Mol. Oncol., Inst. of Dev., Aging and Cancer (IDAC), Tohoku Univ.

15:15 – 15:25 *break*

15:25 – 15:55 Session 3 Presentations 7-8

Chairs: Shigeru Matsuda, Kiyoko Okamoto

7 、 Establishment of a transgenic mouse line for monitoring exposure history to electrophilic stress

Hiroshi Kitamura¹, Tetsuya Oishi^{1,2}, Shohei Murakami¹, Yukio Katori², Hozumi Motohashi¹

¹ Department of Gene Expression Regulation, Institute of Development, Aging and Cancer, Tohoku University

² Department of Otolaryngology-Head and Neck Surgery, Tohoku University Graduate School of Medicine, Tohoku university

8 、 B7-1 and PD-L1 in primary and lymph node metastasis lesions of non-small cell lung carcinoma

Takehiro Yamada^{1,2}, Yasuhiro Miki², Ryoko Saito², Katsuhiko Ono², Yoshinori Okada¹, Hironobu Sasano²

¹ Department of Thoracic Surgery, Institute of Development, Aging and Cancer

² Department of Pathology, Tohoku University Graduate School of Medicine

一般口演について

発表時間 12分，討論 3分とします。時間厳守にてお願いします。

座長は研究員会委員の集談会コンテスト係が行ないます。

15:55－16:00 Closing remarks Dr. Hozumi Motohashi

集談会終了後の研究員会主催新年会は中止です。