第１５１回

東北大学加齢医学研究所

集談会

プログラム

151th IDAC Biannual Meeting Program

日時：平成 31 年 1 月 25 日（金曜日）13:00～

場所：加齢医学研究所

スマート・エイジング研究棟１階　国際会議室

January 25, 2019,13:00~ Center for Smart Aging Research 1F, IDAC

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－　Opening remarks　Dr. Ryuta Kawashima

第 26 回加齢医学研究所研究奨励賞授与式・受賞記念講演

26th IDAC Young Investigator Award Ceremony and Lecture

13:00－13:15　Ceremony　Dr. Ryuta Kawashima

13:15－13:35　Lecture　Chair: Dr. Koetsu Ogasawara

Dynamic regulation of supramolecular complex kinetochore during cell division and its roles in the maintenance of chromosomal stability

Department of Molecular Oncology, Institute of Development, Aging and Cancer, Tohoku University

Masanori Ikeda

Most solid tumors contain abnormal number of chromosomes (aneuploidy), which is caused by the high rate of unequal chromosome distribution during cell division. This phenomenon is called chromosomal instability, and is associated with poor prognosis, metastasis and therapeutic resistance against anti-cancer drugs. For the precise chromosome distribution, duplicated sister chromatids require the proper establishment of the stable interaction with microtubules extending from two opposite centrosomes via kinetochore, which is a supramolecular protein complex assembled on the specific chromatid region (centromere). In contrast, in early stage of cell division, sister chromatids form unstable kinetochore-microtubule interaction. It is poorly understood how and why kinetochores differentially use these two types of interaction with microtubules. To address these questions, we classified early stage of cell division according to the changes in chromosome dynamics, and analyzed kinetochore architecture and dynamics in detail using high-resolution microscopy techniques. We found that kinetochore architecture alters dynamically, in accordance with the conversion from unstable to stable kinetochore-microtubule interaction, and the unstable interaction plays crucial roles in the establishment of the stable

interaction. The defects in the stable interaction eventually results in cell death, while the impairment in the unstable interaction allows cell to survive. Therefore, deficiency in unstable kinetochore-microtubule interaction during cell division may cause chromosomal instability in cancer cells. In this presentation, I would like to talk about the relationship between dysfunction of kinetochore regulation and chromosomal instability, based on our recent findings.

13:35－13:40 *break*

13:40－14:40 Sessions 1～4 Chair: Shota Endo

1、*De Novo* Enhancer Formation at the *NOTCH3* Locus Licenses NRF2 for the Promotion of a Stem-like Phenotype in Non-Small Cell Lung Cancers

Keito Okazaki[1], Hayato Anzawa[2,3], Hiroshi Kitamura[1], Yoshiaki Onodera[4], Md. Morshedul Alam[1], Daisuke Matsumaru[1], Fumiki Katsuoka[3], Nao Ota[1], Masayuki Yamamoto[3,5], Takashi Suzuki[4], Kengo Kinoshita[2,3], Hiroki Sekine[1], Hozumi Motohashi[1]

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[2]Tohoku Univ. Grad. Sch. of Inf. Sci.
[3]Tohoku Univ. Grad. Sch. of Dep. of Int. Gen.
[4]Tohoku Univ. Grad. Sch. of Dep. of Ana. Pat.
[5]Tohoku Univ. Grad. Sch. of Med. Bio.

2、CAMP, an intellectual disability-associated protein, is involved in the maintenance of long term memory

Masayoshi Nagai[1], Kenji Iemura[1], Takako Kikkawa[2], Satoko Hattori[3], Tsuyoshi Miyakawa[3], Noriko Osumi[2] and Kozo Tanaka[1]

[1]Department of Molecular Oncology, Institute of Development, Aging and Cancer, Tohoku University
[2]Department of Developmental Neuroscience, Graduate School of Medicine, Tohoku University
[3]Division of Systems Medical Science, Institute for Comprehensive Medical Science, Fujita Health University

3、**Glycoprotein 49B (gp49B) as a pathogenic marker for antibody-secreting cells in lupus-prone mice**

Yi Li Wong, Mei-Tzu Su, Akiko Sugahara-Tobinai, Masanori Inui and Toshiyuki Takai

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

4、**Contribution of FcγRIIB to creating a suppressive tumor microenvironment**

Yuki Kasahara, Hidekazu Shirota and Chikashi Ishioka

Department of Clinical Oncology, Tohoku University Hospital

14:40－14:50 *break*

14:50－15:35 Sessions 5～7 Chair: Fang Zhenzhou

5、**S100A10 plays an important role in progression of human lung cancer**

Kimiaki Sato[1,2], Yuriko Saiki[1], Kazumori Arai[3], Kota Ishizawa[1], Shinichi Fukushige[1], Kenko Aoki[1], Jiro Abe[4],Satomi Takahashi[4], Ikuro Sato[5], Akira Sakurada[2], Yoshinori Okada[2], Akira Horii[1]

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[4]Department of Thoracic Surgery, Miyagi Cancer Center, Natori, Miyagi, Japan

[5]Department of Pathology, Miyagi Cancer Center, Natori, Miyagi, Japan

6、**p53 Family Gene, p63- It's 20th Year Anniversary**

Shuntaro Ikawa

Department of Project Programs, Institute of Development, Aging and Cancer, Tohoku University

７、The screening for phytochemical 'Urolithin A' targets: Regulation of Mitochondrial Dynamics by the target for rejuvenation

Ken Matsumoto[1,2], Taisei Yajima[3], Naoki Hayashida[3], Yumi Kawamata[3]
Atsushi Kubo[1], Atsushi Tanaka[4], Toshihiko Ogura[1]
[1]Tohoku University, Institute of Development, Aging and Cancer
[2]Tohoku University, Smart-Aging Research Center
[3]Tohoku University, Graduate School of Life Sciences
[4]Yamagata University, Faculty of Medicine

15:35－15:45 *Coffee break*

15:45－16:30 Sessions 8～10 Chair: Rie Ryoke

８、Inhibitor of Growth 4 (ING4) is a positive regulator of ribosome biogenesis

Duc-Anh Trinh[1,2], Ryutaro Shirakawa[2], Tomohiro Kimura[2],
#, Natsumi Sakata[2], Kota Goto[2], Hisanori Horiuchi[1,2]
[1]Department of Oral Cancer Therapeutics, Graduate School of Dentistry, Tohoku University
[2]Department of Molecular and Cellular Biology, Institute of Development, Aging and Cancer, Tohoku University
#; Present address; Research Center for Molecular Genetics, Institute for Promotion of Medical Science Research, Yamagata University Faculty of Medicine, Yamagata, Yamagata, Japan

９、Vasohibin-2 regulates metastatic potential and orchestrates tumor immune evasion in pancreatic cancer.

Rie Iida[1], Minaho Kawamura[1], EunSeo LEE[1], Yasuhiro Suzuki[1],
Shin Hamada[2], Atsushi Masamune[2], Yasufumi Sato[1]
[1]Department of Vascular Biology, Institute of Development, Aging and Cancer, Tohoku University
[2]Division of Gastroenterology, Tohoku University Graduate School of Medicine

１０、Detecting the features of frailty criteria by comparing with comprehensive geriatric assessment via linking to the International Classification of Functioning, Disability and Health (ICF)

Naoki Tomita MD, PhD[1], Yuki Ohashi PhD, RN[2] , Aiko Ishiki MD, PhD[1], Akiko Ozaki PhD, RN[3], Mitsuyuki　Nakao PhD[4], Hiroyuki Arai MD, PhD[1]
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[4]Laboratory of Biomodeling, Department of Applied Information Sciences, Graduate School of Information Sciences, Tohoku University

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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。

16:30－16:35　Closing remarks　Dr. Hozumi Motohashi

終了後
加齢研実験研究棟 7 階セミナー室（1）におきまして１８時から研究員会主催新年会を開催いたします。皆様、多数ご参加くださいますようご案内いたします。