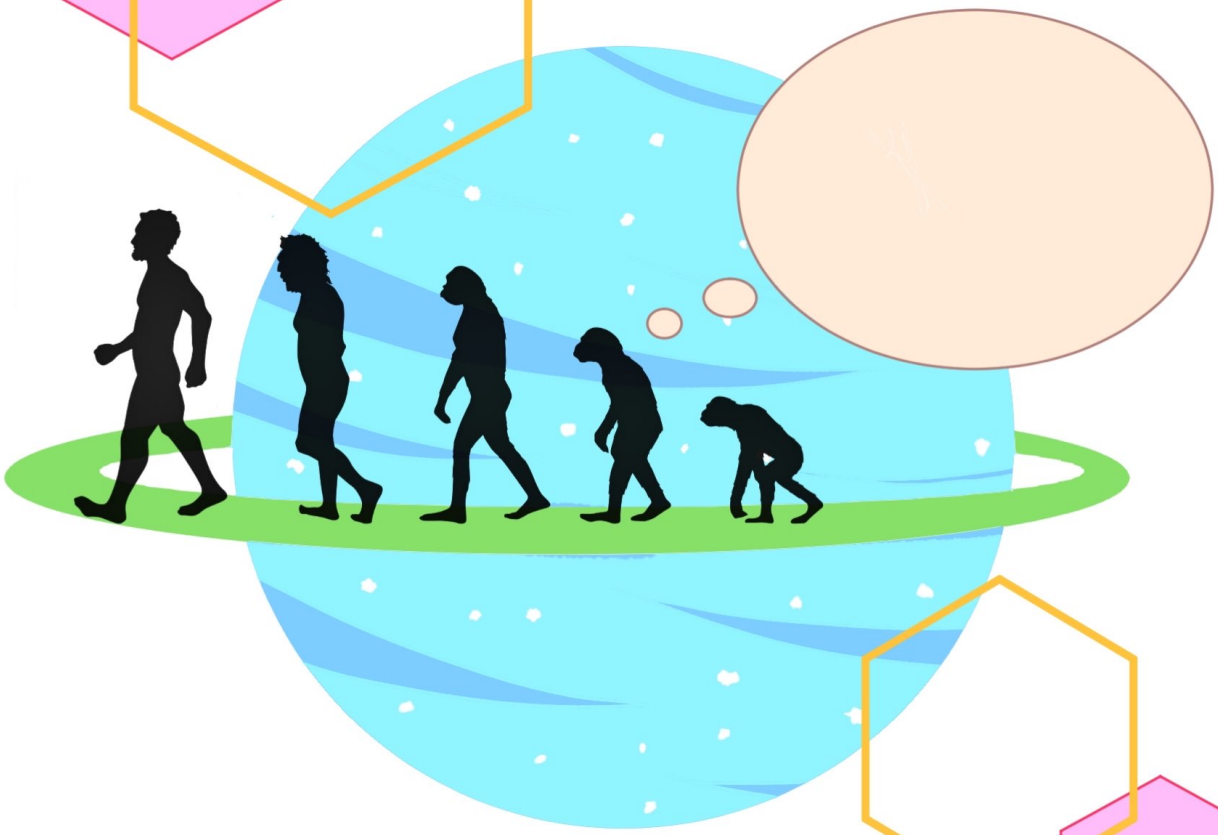
第163回
東北大学加齢医学研究所
163rd IDAC Biannual Meeting

集談会



日時：令和7年2月7日(金)13:00～
February 7, 2025, 13:00~

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

AGENDA

13:00-13:05 Opening remarks [Kozo Tanaka]

13:05-14:05 PI Session Presentations 1-2 [Chair : Akiko Satoh]

14:05-14:15 Break

14:15-14:20 Introduction into Student session [Shinpei Kawaoka]

14:20-15:05 Student Session Presentations 3-5 [Chairs : Hardiani Alexandra Shinpei Kawaoka]

15:05-15:15 Break

15:15-16:00 Student Session Presentations 6-8 [Chairs : Hardiani Alexandra Shinpei Kawaoka]

16:00-16:10 Break

16:10-16:20 Ceremony [Kozo Tanaka]

16:20-17:00 Award Lectures [Chair : DU YILIN]

17:00-17:05 Closing remarks [Fan-Yan Wei]

13:00-13:05 Opening remarks [Kozo Tanaka]

13:05-14:05 PI Session Presentations 1-2 [Chairs : Akiko Satoh]

20 min talk and 10 min Q&A

1. **Dementia prevention**

   Yasuyuki Taki

   Department of Aging Research and Geriatric Medicine, Institute of Development, Aging and Cancer, Tohoku University

   Smart Ageing International Research Center, Tohoku University

2. **Why do cancer cells have abnormal numbers of chromosomes?**

   Kozo Tanaka

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

14:05-14:15 Break

14:15-14:20 Introduction into Student session [Shinpei Kawaoka]

Starting this year, the award criteria for the Student Sessions will change significantly!
We have four categories.
1. The best presentation award
2. The number of questions that a presenter received
3. The best response to questions
4. The question from an interesting point of view

The voting system will be used to award up to four of the above-mentioned prizes. Since the fourth prize will be awarded to the audience, we would like to encourage active participation by the audience.

Please identify yourself (laboratory and name) when you ask questions!

今回から学生セッションの表彰基準が大きく変わります！

1. 発表が最も優秀だった方
2. 受けた質問の数が最も多かった方
3. 質問に対する応答が上手であった方
4. 興味深い視点で質問をされた方

上記の最大 4 名が表彰される投票システムです。4 つ目に関しては評価対象が傍聴者であるため、観覧の方にも積極的に参加していただきたく思います。

ご質問の際は必ず分野とお名前を！

14:20-15:05　Student Session Presentations 3-5

[Chairs : Hardiani Alexandra　Shinpei Kawaoka]

7 min talk and 8 min Q&A

3. **Why do people listen to sad music?: Exploring the brain response to sad music in people who prefer it.**

   なぜ人々は悲しい音楽を聴くのか？：悲しい音楽を好む人々特有の悲しい音楽に対する脳反応を探る

   Momoyo TSUCHIYA2, Ayumi TAKEMOTO[1], Jeyoon CHOI[2], Motoaki SUGIURA[1 3]
   1 Institute of Development, Aging and Cancer, Tohoku University.
   2 Graduate School of Medicine, Tohoku University.
   3 International Research Institute of Disaster Science, Tohoku University.

   発表者：土屋百世（人間脳科学研究分野）

   コメント：発表を通じて、音楽の面白さを伝えることができたら嬉しいです。

4. **Characterization of the pathophysiological role of THUMPD3 in the brain**

   Thumpd3 による tRNA メチルか修飾の分子生理機能と脳機能との関連

   Lin Liu, Raja Norazrieen Raja Ahmand, Yue Xu , Longteng Zhang, Akiko Ogawa, Fan-Yan Wei
   Department of Modomics Biology and Medicine,
   Institute of Development, Aging and Cancer, Tohoku University

   発表者：Liu Lin（モドミクス分野）

   コメント：Ideas are expensive, execution is more expensive.

5. **Analysis of mitotic target inhibitors in patient-derived tumor organoids.**
乳がんオルガノイドを用いた分裂期標的阻害剤の効果の検討

Haruki Machida, Kenji Iemura, Kozo Tanaka
Department of Molecular Oncology, Institute of Development, Aging and Cancer, Tohoku University

発表者：町田春樹（分子腫瘍学分野）
コメント：ゆうしょうめざしてがんばります

15:05-15:15　Break

15:15-16:00　Student Session Presentations 6-8

[Chairs : Hardiani Alexandra　Shinpei Kawaoka]

6. **Impact of Oxygen Concentration on Tumorigenesis**
酸素濃度が腫瘍形成に与える影響

Agatha Yokoi, Keito Okazaki, Hiroki Sekine, Hozumi Motohashi
Department of Gene Expression Regulation, Institute of Development, Aging and Cancer, Tohoku University

発表者：横井あがさ（遺伝子発現制御分野）
コメント：I will focus on speaking loudly and clearly!

7. **The clinical significance of genome-wide DNA methylation status as a prognostic factor in patients with advanced colorectal cancer with TP53 gain-of-function mutations**
TP53 機能獲得変異を有する進行大腸がん患者におけるゲノムワイド DNA メチル化状態の臨床的意義

Shonosuke Wakayama1,2,　Kota Ouchi1,2,　Chikashi Ishioka1,2,3,4,
Hisato Kawakami1,2
1. Department of Medical Oncology, Hospital, Tohoku University
2. Department of Clinical Oncology, Graduate School of Medicine, Tohoku University
3. Department of Clinical Oncology, Institute of Development, Aging and Cancer, Tohoku University,
4. JR Sendai Hospital

発表者：若山祥之介（臨床腫瘍学分野）
コメント：臨床データと基礎の知見を繋げて面白いことが分かるといいなと思っています。

8. Recapitulating Cancer-Hepatocyte Interaction in Culture
がんー肝細胞連関再構成への挑戦

Yilin Du, Mayuko Yoda, Shinpei Kawaoka
Department of Integrative Bioanalytics, Institute of Development, Aging and Cancer, Tohoku University

発表者：杜怡霖（生体情報解析分野）
コメント：Expanding new horizons and broadening life dimensions.

16:00-16:10　Break
16:10-16:20　Ceremony　[Kozo Tanaka]
16:20-17:00　Award Lectures　[Chair : DU YILIN]

第 32 回加齢医学研究所研究奨励賞　受賞記念講演

Aging exacerbates murine lung ischemia-reperfusion injury by excessive inflammation and impaired tissue repair response

Kazuki Hayasaka
Department of Thoracic Surgery, Institute of Development, Aging and Cancer, Tohoku University

Donor shortage is a major problem in lung transplantation (LTx), and the use of lungs from elderly donors is one of the possible solutions in a rapidly aging population. However, the utilization of organs from donors aged >65 years has remained infrequent and may be related to a poor outcome. To investigate the molecular events in grafts from elderly donors early after LTx, the left lungs of young and old mice were subjected to 1 hour of ischemia and subsequent reperfusion. The left lungs were collected at 1 hour, 1 day, and 3 days after reperfusion and subjected to wet-to-dry weight ratio measurement, histological analysis, and molecular biological analysis, including RNA sequencing. The lungs in old mice exhibited more severe and prolonged pulmonary edema than those in young mice after ischemia reperfusion, which was accompanied by upregulation of the genes associated with inflammation and impaired expression of cell cycle-related genes. Apoptotic cells increased and proliferating type 2 alveolar epithelial cells decreased in the lungs of old mice compared with young mice. These factors could become conceptual targets for developing interventions to ameliorate lung ischemia-reperfusion injury after LTx from elderly donors, which may serve to expand the old donor pool.

早坂一希（呼吸器外科学分野）

Rethinking L2 Vocabulary Learning: Insights from an fMRI Study on the Impact of Emotional Contexts

Chunlin Liu1, Takumi Uchihara1,2, Motoaki Sugiura1,3,4, Ping Li5, Hyeonjeong Jeong 1,2,3

1.Cognitive Neuroscience Application Center, Tohoku University, Sendai, Japan

2.Graduate School of International Cultural Studies, Tohoku University, Sendai, Japan

3.Institute of Development, Aging and Cancer, Tohoku University, Sendai, Japan

4.International Research Institute for Disaster Science, Tohoku University, Sendai, Japan

5.Faculty of Humanities, the Hong Kong Polytechnic University, Hong Kong, China

How do emotional contexts influence both initial learning and long-term retention in second language (L2) vocabulary learning? This study examines how emotional contexts, particularly expressive facial expressions, enhance the acquisition and retention of L2 emotional vocabulary, focusing on both initial and delayed memory performance.

Thirty-four native Japanese speakers with no prior knowledge of Chinese learned Chinese positive and negative vocabulary over three days. They watched videos of either emotional (videos with expressive faces) or neutral contexts (videos with neutral faces). On the fourth day, participants completed memory tasks, including a lexical decision task during MRI scanning and a translation task. One month later, delayed translation task was conducted to assess long-term retention.

Results revealed a significant emotional context effect in both initial and delayed translation accuracy, with words learned in emotional contexts outperforming those learned in neutral contexts. Additionally, words learned in emotional contexts activated emotional memory regions, such as the amygdala and hippocampus, more strongly than vocabulary learned in neutral contexts. Neural data also showed a significant negative correlation between hippocampal activation and delayed translation accuracy for positive words learned in emotional contexts, while positive words learned in neutral contexts exhibited a marginally positive correlation. These distinct patterns suggest that emotionally enriched learning contexts facilitate more efficient processing of L2 positive words, requiring fewer cognitive resources. These findings highlight the critical role of emotional contexts in enhancing both the formation and retention of L2 vocabulary, offering new insights into the role of affective processing in language learning.

劉 淳琳（応用認知神経科学センター）

17:00-17:05　Closing remarks　[Fan-Yan Wei]

集談会終了後、17:45~研究員会主催新年会を加齢研実験研究棟 7 階セミナー室 1 で開催致します。

We will have a new year party at 実験研究棟 7 階セミナー室 1 from 17:45. Join us!

東北大学加齢医学研究所集談会に関するガイドライン

【趣旨】

定期開催される東北大学加齢医学研究所集談会(以下、「集談会」という)において、加齢医学研究所同窓会メンバー(以下、メンバーという。)向けに、所属研究者等の日頃の成果を発表いただいておりますが、その中にはメンバー向けのため、公知となっていない研究データ等を発表いただける場合もございます。

ご存じのとおり、研究者のマナーとしまして、不用意に口外しないことを前提に発表いただいておりますが、昨今、ウェブ等で開催することもあり、ＵＲＬをご存じの方は、メンバー以外でもご参会いただけるため、発表者に不利益が生じないよう、守秘義務を講じて開催いただきますようお願いいたします。

注意事項「本集談会を聴講するにあたり、同会において提供又は開示され、若しくは同発表会を通じて知得した一切の情報について秘密に保持すること。

但し、聴講を受ける前に公知であったこと又は自ら正当に保有していたことを証明できる情報、若しくは聴講を受けた後、貴学が公開したことを証明できる情報についてはこの限りではないものとします。」