

6月23日~25日

June23 (Thu) - 25 (Sat), 2022 **Hybrid Meeting** (On-site/Online)

会場 ロイトン札幌
Royton Sapporo, Sapporo, Hokkaido Japan

公益財団法人札幌がんセミナー Sapporo Cancer Seminar Foundation 世話人 **村上 善則** 東京大学医科学研究所 **Yoshinori Murakami** (The University of Tokyo)

> **落合 淳志** 東京理科大学・国立がん研究センター **Atsushi Ochiai** (Tokyo University of Science/National Cancer Center)

> 集田 龍弘 東京大学医科学研究所・国立がん研究センター Tatsuhiro Shibata (The University of Tokyo/National Cancer Center)

**舛森 直哉** 札幌医科大学医学部 **Naoya Masumori** (Sapporo Medical University)

Patrick TAN Duke-国立シンガポール大学医科大学 (Duke-NUS Medical School)

**Program & Abstract** 



## June 24 (Fri)

| 9:00-9:10 |                             | Welcome address  |  |
|-----------|-----------------------------|--|--|
|           |                             | Masanori Hatakeyama  |  |
| 9:10-1    | 0:00                        | Keynote Lecture 1  |  |
|           |                             | Chair: Yoshinori Murakami (The University of Tokyo)  |  |
| K1        | Tatsuh                      | rehensive driver landscape of gastric cancer   |  |
| 10:00-    | 12:15                       | Session 1. Genomic evolution   |  |
|           |                             | Chair: Atsushi Ochiai (Tokyo Science University / National Cancer Center)  |  |
| S1-1      | Nobuy                       | l expansion in normal tissues  |  |
|           |                             | 10:30-10:45 Break  |  |
| S1-2      | biolog<br>Chikas<br>Laborat | tic basis of mosaic chromosomal alteration highlights its cellular origin and  gy  |  |
| S1-3      | <b>treatr</b><br>Junko      | er heterogeneity of infant leukemia and its implication for prognosis and ment   |  |
| S1-4      | Yukihi<br>RIKEN             | us heterogeneities about BRCA1 and BRCA2   |  |
| 12:30     | -13:20                      | Luncheon Seminar 1   |  |
|           |                             | Chair: Wataru Obara (Iwate Medical University) Co-sponsored: MSD K.K.  |  |
| LS-1      | Ryuicl                      | rumoral Heterogeneity in renal cell carcinoma and current treatment strategy82 hi Mizuno, Mototsugu Oya nent of Urology, Keio University, School of Medicine |  |
|           |                             | 13:20-13:30 Break  |  |

| 13:30- | 14.20               | Keynote Lecture 2  |
|--------|---------------------|--|
| 13.50  | 14.20               | Chair: Atsushi Ochiai (Tokyo Science University / National Cancer Center)  |
| V2     | Costu               |  |
| K2     |                     | ic Cancer beyond Gene Mutations : Single-cells and Epigenomes16 k Tan <sup>1,2,3</sup>   |
|        | 1) Duke-            | NUS Medical School   |
|        |                     | ne Institute of Singapore<br>rr Science Institute of Singapore, NUS  |
|        |                     | 14:20-14:30 Break  |
|        |                     | 14.20-14.30 Bleak  |
|        |                     |  |
| 14:30- | 15:30               | Poster Session 1   |
|        |                     | Chair: Tatsuhiro Shibata (The University of Tokyo, National Cancer Center)   |
| D1 1   | Ueter               | regenerate impact of governing natherenic variants on lymphoma rick  |
| P1-1   |                     | rogeneous impact of germline pathogenic variants on lymphoma risk56 aki Usui <sup>1</sup> , Yusuke Iwasaki <sup>1</sup> , Keitaro Matsuo <sup>3</sup> , Mikiko Endo <sup>1</sup> , Yoichiro Kamatani <sup>4</sup> , Makoto |
|        | Hirata              | <sup>5</sup> , Kokichi Sugano <sup>5</sup> , Teruhiko Yoshida <sup>5</sup> , Koichi Matsuda <sup>4</sup> , Yoshinori Murakami <sup>4</sup> , Yoshinobu   |
|        |                     | a <sup>2</sup> , Hidewaki Nakagawa <sup>1</sup> , Yukihide Momozawa <sup>1</sup>   |
|        | 1) RIKE<br>2) Okaya | N<br>ama University  |
|        | 3) Aichi            | Cancer Center iniversity of Tokyo  |
|        |                     | nal Cancer Center Hospital   |
| P1-2   | Prima               | te-specific gene X is a novel prognostic factor in malignant pancreatic cancer57   |
|        |                     | hiro Tange <sup>1</sup> , Tomomi Hirano <sup>1</sup> , Asae Okuyama <sup>1</sup> , Masashi Idogawa <sup>1</sup> , Eishu Hirata <sup>2</sup> , Issei  |
|        |                     | <sup>3</sup> , Takashi Tokino <sup>1</sup><br>Genome Sci., Inst. Frontier Med., Sappor Med. Univ.  |
|        | 2) Kanaz            | zawa Univ. Cancer Res. Inst. Div. Tumor Cell Biol.   |
| D4 3   |                     | Cancer Ctr. Res. Inst.   |
| P1-3   |                     | cular profiling of cancer-related gene alterations in Japanese patients with ple myeloma58   |
|        |                     | hi Sasaki <sup>1,2</sup> , Hisayo Fukushima <sup>2,3</sup> , Hiroshi Ikeda <sup>4</sup> , Kazuya Ishiguro <sup>5</sup> , Asami Matsuda <sup>1</sup> ,  |
|        |                     | hiro Tange², Masashi Idogawa², Akihiro Sakurai³, Takashi Tokino²   |
|        |                     | gy Division, Department of Liberal Arts and Sciences, Center for Medical Education, Sapporo Medical University tment of Medical Genome Sciences, Research Institute for Frontier Medicine, Sapporo Medical University      |
|        | 3) Depar            | tment of Medical Genetics, Sapporo Medical University  |
|        |                     | tment of Hematology, Sapporo Medical University<br>tment of Gastroenterology, Sapporo Medical University   |
| P1-4   | Assoc               | ciation of mosaic chromosomal alterations with the development of various  |
|        |                     | of cancer and body mass index59  |
|        |                     | Hikino, Chikashi Terao   |
|        |                     | Center for Integrative Medical Sciences  |
| P1-5   |                     | acterization of OASEP1 as a biomarker and therapeutic target for oral cancer60   |
|        |                     | hi Takano <sup>1,2,3</sup> , Yoshihiro Yoshitake <sup>4</sup> , Masanori Shinohara <sup>4</sup> , Yataro Daigo <sup>1,2,3</sup> r for Antibody and Vaccine Therapy, Institute of Medical Science, The University of Tokyo  |
|        | 2) Depar            | tment of Medical Oncology and Cancer Center, Shiga University of Medical Science<br>r for Advanced Medicine against Cancer, Shiga University of Medical Science  |
|        |                     | tment of Oral and Maxillofacial Surgery, Kumamoto University   |
| P1-6   | Subst               | trate charge regulates stemness of cancer and pluripotent stem cells via   |
|        | meta                | bolic control of pluripotency factors61  |
|        |                     | michi Imajo <sup>1</sup> , Akira Hirota <sup>1</sup> , Ryosuke Miyazaki <sup>2</sup> , Jian-Ping Gong <sup>3</sup> , Shinya Tanaka <sup>1,2</sup>  |
|        |                     | ate for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido University  Tuent of Cancer Pathology, Faculty of Medicine, Hokkaido University  |
|        |                     | ratory of Soft & Wet Matter, Faculty of Advanced Life Science, Hokkaido University   |

| P1-/        | Therapeutic potential of cancer vaccine based on MHC class I cryptic peptides derived from non-coding regions              |
|-------------|--|
| P1-8        | Identification and functional analysis of HLA class II neoantigens in HLA class II negative colorectal cancer tissues      |
| P1-9        | A IncRNA associated with chronic gastritis and gastric cancer inhibits apoptosis through stress granule formation          |
| P1-10       | Helicobacter pylori CagA causes transient BRCAness to induce genome instability in gastric epithelial cells                |
| P1-11       | Intratumoral heterogeneity in colorectal cancer -Increasing malignancy of cancer cells by M\$\phi\$s in tumor budding area |
| 15:40-      | 3 ,  |
|             | Chair: Yoshinori Murakami (The University of Tokyo)  |
| S2-1        | Epigenetic remodelling of tumor microenvironment to overcome immunotherapy resistance                                      |
| S2-2        | The landscape of HLA-presenting antigenic peptides and their immunogenic heterogeneity                                     |
| <b>S2-3</b> | Gastrointestinal cancer evolution and its implications for therapeutics and biomarker development                          |

| <b>S2-4</b> | Applications of Spatial Transcriptome Analysis to elucidate the cancer heterogeneity |
|-------------|--|
| S2-5        | Cancer heterogeneity from the perspective of stromal fibroblasts                     |

## June 25 (Sat)

| 9:00-1      | 0:00 Session 3. Tumor heterogeneity and plasticity   |
|-------------|--|
|             | Chair: Yoshinori Murakami (The University of Tokyo)  |
| S3-1        | MYC drives small cell lung cancer (SCLC) subtype plasticity  |
| <b>S3-2</b> | The impact of vascular endothelial cell heterogeneity in tumor microenvironment. $38$                                      |
|             | Kyoko Hida<br>Vascular Biology and Molecular Biology, Graduate school of Dental Medicine, Hokkaido University              |
|             |  |
| 10:00-      | 12:15 Session 4. Technological advances  |
|             | Chair: Yutaka Suzuki (The University of Tokyo)   |
| S4-1        | Cell-type specific post-transcriptional regulation is pervasive  |
|             | Department of Biomedical Data Science and of Biochemistry, Stanford University   |
|             | 10:30-10:45 Break  |
| <b>S4-2</b> | Dynamics and colocalization of deep learning-based cell states behind single cell and spatial transcriptome observation    |
| \$4-3       | Pan-cancer pervasive upregulation of 3' UTR splicing drives tumourigenesis   |
| 54-4        | Immunosuppression by regulatory T cells in the tumor microenvironment  |
| 42.20       |  |
| 12:30-      |  |
|             | Chair: Atsushi Mizokami (Kanazawa University Graduate School of Medical Science) Co-sponsored: Janssen Pharmaceutical K.K. |
| LS-2        | Spatial and temporal heterogeneity of prostate cancer, basics to clinical implications                                     |
|             | 13·20-13·30 Break  |

| 12.20       | 14.50   | Postov Cossion 2   |
|-------------|---|--|
| 13:30-      | 14:50   | Poster Session 2   |
|             |   | Chair: Yoshinori Murakami (The University of Tokyo)  |
| <b>P2-1</b> | Jun Su<br>Ohno <sup>1</sup><br>NEXT<br><sup>2)</sup> Project<br><sup>3)</sup> Breast<br><sup>4)</sup> Dept. | rences of the molecular mechanisims in dedifferentiation potential of breast er cells using hydrogels  |
| P2-2        | Takesl  | rsis of novel long non-coding RNA in head and neck cancer  |
| P2-3        | in lun<br>Reo M<br>Ono <sup>2,3</sup><br><sup>1)</sup> Projecc<br><sup>2)</sup> NEXT                        | 2 motif is associated with intratumor heterogeneity of cis-regulatory elements ninal breast cancer   |
| P2-4        | Akira<br>Kazuf<br>Hirom<br><sup>1)</sup> Dept.<br><sup>2)</sup> Dept.<br><sup>3)</sup> Dept.                | ced stromal expressioCXCL12 is associated with the aggressiveness of tongue equamous cell carcinoma  |
| P2-5        | Analy   | rsis of characteristics of synovial sarcoma stem cells induced by synthetic  |
|             | Yuki T<br>Gong <sup>3</sup> <sup>1)</sup> Sch. o <sup>2)</sup> Dep. o <sup>3)</sup> WPI-I                   | ner hydrogels  |
| P2-6        | <b>targe</b><br>Bayar   | t for oral cancer contains the takeno <sup>1,2,3</sup> , Ming Zhu <sup>1,2</sup> , Yoshihiro Yoshitake <sup>4</sup> , Masanori   |
|             | 1) Depar<br>2) Center<br>3) Center  | hara <sup>4</sup> , Yataro Daigo <sup>1,2,3</sup> tment of Medical Oncology and Cancer Center, Shiga University of Medical Science  r for Advanced Medicine against Cancer, Shiga University of Medical Science  r for Antibody and Vaccine Therapy, Institute of Medical Science, The University of Tokyo  tment of Oral and Maxillofacial Surgery, Kumamoto University |
| P2-7        | Tumo  | r-infiltrating CD8+ T cells recognize a heterogeneously expressed neoantigen in  |

Toshihiko Torigoe<sup>2</sup>

clear cell renal cell carcinoma......74 Masahiro Matsuki<sup>1,2,5</sup>, Yoshihiko Hirohashi<sup>2</sup>, Munehide Nakatsugawa<sup>2,3</sup>, Aiko Murai<sup>2</sup>, Terufumi Kubo<sup>2</sup>, Takayuki Kanaseki<sup>2</sup>, Tomohide Tsukahara<sup>2</sup>, Shinichi Hashimoto<sup>4</sup>, Naoya Masumori<sup>5</sup>,

<sup>&</sup>lt;sup>1)</sup>Hakodate Goryoukaku Hospital <sup>2)</sup>Department of Pathology, Sapporo Medical University School of Medicine

<sup>&</sup>lt;sup>3)</sup> Department of Diagnostic Pathology, Tokyo Medical University Hachioji Medical Center <sup>4)</sup> Department of Molecular Pathophysiology, Institute of Advanced Medicine, Wakayama Medical University <sup>5)</sup> Department of Urology, Sapporo Medical University School of Medicine

| P2-8  | Identification of new targets for pancreatic cancer stem cells using hydroge I and development of therapeutic methods  |
|-------|--|
|       | Lei Wang88 <sup>1,2</sup> , Yuma Aoki <sup>3</sup> , Masumi Tsuda <sup>1,2</sup> , Shinya Tanaka <sup>1,2</sup> <sup>1)</sup> Institute for Chemical Reaction Design and Discovery Hokkaido University   |
|       | Department of Cancer Pathology, Facutly of Medicine, Hokkaido University  Department of Gastroenterological Surgery II, Facutly of Medicine, Hokkaido  Facutly of Medicine, Hokkaido   |
| P2-9  | Stromal AEBP1 promotes development of head and neck squamous cell carcinoma76 Shohei Sekiguchi <sup>1</sup> , Akira Yorozu <sup>2,3</sup> , Fumika Okazaki <sup>1,2</sup> , Eiichiro Yamamoto <sup>2,4</sup> , Takeshi Niinuma <sup>2</sup> , Akira Takasawa <sup>5</sup> , Gota Sudo <sup>4</sup> , Yui Hatanaka <sup>1,2</sup> , Ayano Yoshido <sup>2</sup> , Hiroshi Kitajima <sup>2</sup> , Masahiro Kai <sup>2</sup> , Makoto Osanai <sup>5</sup> , Yoshihiko Hirohashi <sup>6</sup> , Takashi Kojima <sup>7</sup> , Akihiro Miyazaki <sup>1</sup> , Hiromu Suzuki <sup>2</sup> <sup>1)</sup> Department of Oral Surgery., Sapporo Medical University School of Medicine <sup>2)</sup> Department of Molecular Biology., Sapporo Medical University School of Medicine <sup>3)</sup> Dept. Otolaryngol., Sapporo Med. Univ. Sch. Med. <sup>4)</sup> Dept. Gastroenterol Hepatol., Sapporo Med. Univ. Sch. Med. <sup>5)</sup> 2nd Dept. Path., Sapporo Med. Univ. Sch. Med. <sup>6)</sup> 1st Dept. Path., Sapporo Med. Univ. Sch. Med. <sup>7)</sup> Dept. Cell Sci., Inst. Frontier Med., Sapporo Med. Univ. Sch. Med. |
| P2-10 | Genetic analysis of postmortem tissue samples for patient with castration-resistant  |
|       | prostate cancer: A case study  |
| P2-11 | Comprehensive association analysis between clustered microRNA and cancer:  |
|       | a machine learning study with large-scale data   |
| P2-12 | Novel drug formulation for potentiation of therapeutic response using the lymphatic drug delivery system79   |
|       | Radhika Mishra, Ariunbuyan Sukhbaatar, Maya Sakamoto, Shiro Mori, Tetsuya Kodama<br>Laboratory of Biomedical Engineering for Cancer, Graduate School of Biomedical Engineering, Tohoku University  |
| P2-13 | Targeting lymph node metastasis through lymphatic drug delivery system by administration of docetaxel80  |
|       | Ariunbuyan Sukhbaatar <sup>1,2</sup> , Shiro Mori <sup>1,2</sup> , Tetsuya Kodama <sup>1,2</sup> Daboratory of Biomedical Engineering for Cancer, Graduate School of Biomedical Engineering, Tohoku University  Biomedical Engineering Cancer Research Center, Graduate School of Biomedical Engineering, Tohoku University  |
| P2-14 | Identification of URST7 as a prognostic biomarker and therapeutic target for breast  |
|       | Regina Mbugua <sup>1,2</sup> , Takano Atsushi <sup>1,2,3</sup> , Tsevegjav Bayarbat <sup>1,2</sup> , Mihagi Yohei <sup>4</sup> , Daigo Yataro <sup>1,2,3</sup>   |

| 15:00- | 17:00                | Session 5. Clinical impact and drig resistance  |
|--------|----------------------|---|
|        |                      | Chair: Naoya Masumori (Sapporo Medical University)  |
| S5-1   | <b>mech</b><br>Koshi | osatellite instability-high CRC acquires frequent sub-clonal immune escape<br>anisms by Darwinian evolution |
| S5-2   | Yoshil               | I treatment approach for targeting RAS Q61 mutant cancers   |
| S5-3   | Naoya                | nt treatment strategy for muscle invasive and metastatic bladder cancer5<br>Masumori<br>Medical University  |
| S5-4   | Oncog<br>Yoshin      | ontext-dependent roles of a cell adhesion molecule, CADM1, in human genesis                                 |
| 17:00- | -17:10               | Closing remark  |
|        |                      | Yoshinori Murakami  |