SenNet Consortium 2025 Annual Meeting Agenda

Senotype Mapping and Pathways to Translation

September 29-30, 2025

The Johns Hopkins University Bloomberg Center

8th floor, 555 Pennsylvania Avenue, NW, Washington, D.C. 20001

Virtual Attendance for SenNet Members Only: https://pitt.zoom.us/j/98571389113

Day 1 *(September 29, 2025)*

7:30 - 8:30 am	**Registration/Check-in with Catered Full Breakfast**
8:30 - 8:40 am	**Welcome from Johns Hopkins** Intro: Jennifer Elisseeff Denis Wirtz, Vice Provost
8:40 - 8:50 am	**Welcome from NIH** Intro: Ananda Roy Vivian Ota Wang, Common Fund
8:50 - 9:00 am	**Overview of Meeting Goals** Laura Niedernhofer & Marissa Schafer
9:00 - 10:00 am	**Campisi Lecture: Using PROTAC to Develop Safer and Better BCL-XL/2 Targeting Senolytics** Intro: Paul Robbins Daohong Zhou, University of Texas Health Sciences Center San Antonio
10:00 - 10:15 am	**Break**
10:15 - 11:15 am	**Organ Groups 1:** Moderator: Laura Niedernhofer & Peter Adams
10:15 - 10:45 am	CNS / Brain Marissa Schafer, Hemali Phatnani
10:45 - 11:00 am	Pancreas Cristina Aguayo-Mazzucato, Pei-Hsun Wu
11:00 - 11:15 am	Discussion
11:15 am - 12:15 pm	**Organ Groups 2:** Moderator: C Aguayo-Mazzucato & M Schafer
11:15 - 11:30 am	Placenta Paul Robson
11:30 - 11:45 am	Ovary Francesca Duncan, Birgit Schilling
11:45 am - 12:00 pm	Skeletal Vidyani Suryadevara
12:00 - 12:15 pm	Discussion
12:15 - 1:00 pm	**Catered Lunch**
1:00 - 2:00 pm	**Organ Groups 3:** Moderator: Paul Robson & Birgit Schilling
1:00 - 1:30 pm	Lung Melanie Koenigshoff
1:30 - 1:45 pm	Heart Aditi Gurkar, Nadia Rosenthal
1:45 - 2:00 pm	Discussion

2:00 - 3:00 pm **Organ Groups 4:** Moderator: Rong Fan & Peter Adams

2:00 - 2:15 pm Skin Saranya Wyles and Burcin Duan Sahbaz
2:15 - 2:30 pm Colon Andrew Nixon
2:30 - 2:45 pm Immune Wen-hung Chou, Negin Farzad, Anthony Fung
2:45 - 3:00 pm Discussion

3:00 - 3:15 pm **Break**

3:15 - 4:15 pm **Organ Groups 5:** Moderator: Andy Nixon & Ruth Montgomery

3:15 - 3:45 pm Liver Peter Adams
3:45 - 4:00 am Kidney Ron Korstanje, Liangcai Gu
4:00 - 4:15 pm Discussion

4:15 - 5:00 pm **Flash Talks:** Moderator: Vidyani Suryadevara
(Strict 3 Minutes Each - Questions taken at poster session)

Speaker (et al)	Award / (Site)	Poster ID/Abstract Row #. Title
Nicholas Sloan	Columbia TMC	5. Uncovering the signatures of aging and senescence in the human dorsolateral **prefrontal cortex**
James Redden	Mayo Clinic TDA Schafer	6. Single-cell spatial profiling and deep rna sequencing of senescence signatures in the aging mouse **cerebellum**
Alberto Pappalardo	Columbia TDA	3. Characterization of cellular senescence in complex engineered **skin** constructs using spatial transcriptomics
Ana Catarina Franco	Mayo Clinic TDA Passos	12. Spatial multi-omics reveals senescent cell heterogeneity and oncogenic signatures in aged human **skin**
Sadiya Bi Shaikh	U Pittsburgh TMC U Rochester	2. Cellular senescence, senotyping, cellular heterogeneity, and molecular clock in **lung** development
Amalia Sinto	Jackson Laboratory TMC	4. Transcriptomic profiling, spatial distribution and dysregulated crosstalk between senescent and aged cells in the mammalian **heart**
Juliana Alcoforado Diniz	UConn Health TMC Jackson Laboratory	10. Spatial mapping of senescence and disease-associated cell states in the human **kidney** between health and type 2 diabetic donors
Elizabeth Schmidt	U Minnesota TMCs	7. Senescence evolution in metabolic **liver** disease progression
Tianqi Yang	Brown TDA	9. Spatial transcriptomics reveals senescence-associated tissue remodeling in aging mouse **liver**
Lexi Rindone	Johns Hopkins TMC	8. Integrated single cell and spatial transcriptomics analysis reveals distinct senescent cell phenotypes that regulate **fibrosis**
Christina Shi	Sanford Burnham TMC	11. Correcting imaging-based spatial transcriptomics data affected by a prevalent **transcript leakage** problem

5:00 - 6:30 pm **Poster Session and Networking (End of Day One)**

Day 2: *(September 30, 2025)*

7:30 - 8:30 am	**Check-in/Catered Full Breakfast**
8:30 - 8:45 am	**Introduction & Level Set** (Integrate day 1 & setup day 2) Marissa Schafer & Peter Adams
<u>8:45 - 10:00 am</u>	**Working Group Updates:** Moderator: Peter Adams
8:45 - 8:52 am	Senescence Biomarkers - Nicola Neretti
8:52 - 8:57 am	Omics/Imaging - Sheng Li & Joao Passos
8:57 - 9:09 am	Data Coordination - Richard Morgan & Jonathan Silverstein
9:09 - 9:14 am	Senescence Mapping - Jonathan Silverstein & Paul Robson
9:14 - 9:28 am	Human Reference Atlas (HRA) - Katy Börner
9:28 - 9:36 am	Publications - Rong Fan & Paul Robbins
9:36 - 9:41 am	Early Career Investigators - Birgit Schilling & Lexi Rindone
9:41 - 9:46 am	Outreach - Joe Bisciotti & Kay Métis
9:46 - 10:00 am	Good Modeling Practices - Constantin Aliferis & Yuval Kluger Benchmarking - Vilas Menon - will present in next session
10:00 - 10:15 am	**Break**
<u>10:15 am - 12:00 pm</u>	**Data Access & Analytics:** Moderator: Jian Shu & Rong Fan
10:15 - 10:30 am	***Data Access*** Jeff Chuang, Sergii Domanskyi, Sam Peters, Max Sibilla
10:30 - 11:45 am	***Analytic tools*** (10 minutes each presenter) *SAKURA: Knowledge-guided data analysis to identify rare SnCs* - Kevin Yip BLADE - Constantin Aliferis & Erich Kummerfeld DeepSAS - Qin Ma Evaluation of statistical differential analysis methods for identification of senescent cells using single-cell transcriptomics - Dongmei Li DIANNE - Sergii Domanskyi SenNetRamanOmics - Ke Zhang
11:45 am - 12:00 pm	***Integrated Analysis*** Cross-Consortium Benchmarking Project - Nicola Neretti, Joao Passos, Vilas Menon, Sheng Li, Jonathan Silverstein
12:00 - 1:00 pm	**Catered Lunch** (External Program Consultants closed meeting)
(End of Day Two) **(1:00 - 6:30 pm**	**SenNet Consortium Industry Workshop)**

SenNet Consortium Industry Workshop

Senescent Cells in Human Tissues: From Discovery to Clinical Impact

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Purpose: to gather, in person only, the consortium and pharmaceutical companies and related biotechnology businesses focused on cellular senescence drug discovery and manufacture. The consortium's interest in meeting in-person in focused areas among awards and outside parties is to engage the corporate ecosystem with shared interest in senescence biology relevant to pharmaceutical development and manufacture.

Questions:
What in SenNet is ready for translation, commercialization, measurement?
What are the barriers in the corporate world to translation in cellular senescence?
What are new opportunities for academic corporate partnerships?

1:00 – 1:05 pm	**Goals in building the SenNet Consortium** Intro: Ajay Pillai Ananda Roy, National Institutes of Health
1:05 – 1:15 pm	**Overview of SenNet Achievements and Challenges** Marissa Schafer & Laura Niedernhofer
1:15 – 1:30 pm	**SenNet Data Products and Integrations with Others** Katy Börner
1:30 - 1:45 pm	**Imaging tool to detect senescent cells in vivo** Vidyani Suryadevara
1:45 – 2:00 pm	**Development of new senotherapeutics** Andrew Haak
2:00 – 2:15 pm	**Clinical trial of senolytics dasatinib plus quercetin** Sundeep Khosla
2:15 - 2:35 pm	**Panel Discussion** Moderators: Marissa Schafer & Peter Adams
2:35 – 2:45 pm	**Break**
2:50 – 3:10 pm	**Targeting senescent cells: challenges for drug development** Heinrich Jasper (Genentech)
3:10 – 3:30 pm	**Bioinformatic perspective on senescence translational challenges** Alex Laslavic (Rubedo Life Sciences)

3:30 – 3:50 pm	**Senolytics for all? Evaluating the promise and the pitfalls** Natalia Mitin (Sapere Bio)
3:50 – 4:10 pm	**Using affinity proteomics to build a protein signature for drug discovery and clinical impact** Chih-Lung (Scott) Fu (Olink)
4:10 – 5:10 pm	**Open Forum Focused on Questions** Moderators: Andrew Nixon & Laura Niedernhofer (All participants: SenNet, NIH, and Industry)
5:10 - 6:30 pm	**Networking Reception and Collaboration Formation** (Hors d'Oeuvres / Bar)

Industry Speaker Bios

Henri Jasper is a Principal Fellow and Director at Genentech Inc. He obtained a diploma in biochemistry from the University of Tübingen (Germany) in 1999 and his PhD from the University of Heidelberg/EMBL in 2002, where he studied transcriptional regulation of developmental processes in Drosophila. Henri assumed his first faculty appointment at the Department of Biomedical Genetics of the University of Rochester Medical Center in 2003, and in 2005 was appointed Assistant Professor and then tenured Associate Professor in 2010 in the Department of Biology of the School of Arts, Sciences, and Engineering at the University of Rochester. He was appointed Professor at the Buck Institute for Research on Aging (Novato, CA) in July of 2012, where he assumed the position of Chief Scientific Officer in 2014. In 2017 he was recruited to Genentech Inc. At Genentech, Henri oversees regenerative medicine efforts and has established a department exploring the use of in vivo reprogramming and cell therapies as strategies to target degenerative diseases of the lung, intestine and eye.

Alex Laslavic is the CTO of Rubedo Life Sciences. He has an extensive background and leadership experience in Software and Systems Engineering, and computational data analysis. Previous to his experience leading the bioinformatic platform development at Rubedo he worked as an engineering lead in Facebook's (now Meta) Infrastructure Engineering department. At Rubedo Alex and his team develop Alembic, Rubedo's bioinformatic analysis and discovery platform, which is focused on single cell and spatial analysis. Alex is passionate about leveraging his computational and leadership skills to help drive advances in aging therapeutics and regenerative medicine.

Natalia Mitin is a CEO and Founder of Sapere Bio. Sapere Bio has led or collaborated on studies to understand the role of aging in the development and progression of various clinical conditions, including natural aging, diabetes, cardiovascular health, oncology, Alzheimer's disease, and sickle cell disease. The company's flagship product, SapereX™, evaluates cellular senescence and immune function to guide health optimization, physical performance, and aging outcomes and has been validated in over 1,000 clients of longevity medicine practices and was launched commercially in March 2025. Initially trained as a chemical engineer, Dr. Mitin later earned a Ph.D. in Molecular Biology and served on the faculty at UNC-Chapel Hill in Pharmacology and at the Lineberger Comprehensive Cancer Center. Dr. Mitin has dedicated her career to understanding aging and our capacity to influence its trajectory.

Scott Fu has supported proteomic projects across dozens of research areas over the last 4 years at Olink, spanning early-stage discovery to pre-clinical and clinical phase trials. He has supported successful projects in biomarker work with translational studies, population health, and multi-omic initiatives and has extensive knowledge of the importance of proteomic biomarker work in disease & therapeutic development.