Kejun "Albert" Ying, Ph.D.

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Studying aging at the intersection of biology and AI

Education & Professional Training

Stanford University & University of Washington Stanford, CA & Seattle, WA
Postdoctoral Researcher, Tony Wyss-Coray's Lab & David Baker's Lab (co-mentorship) Jun 2025 – Present
- Co-advised by Dr. Wyss-Coray and Baker under NIH/NIA F99/K00 Fellowship
- Merging aging biology and protein design to tackle neurodegeneration
- Focused on the *de novo* design of disaggregase to act against protein aggregation in neurons
- Building advanced aging clock and the foundation model for proteomic data

Harvard University Cambridge, MA
Ph.D., Biological Science in Public Health July 2019 – May 2025
- Dissertation: "On the Quantification of Aging"
- Advisor: Dr. Vadim Gladyshev, Harvard Medical School, Brigham and Women's Hospital
- Dissertation Advisory Committee: Dr. Brendan Manning, Dr. David Sinclair, Dr. Shamil Sunyaev
- Focused on understanding the mechanism of aging through multi-omic modeling & causal inference
- Built the **first causality-enriched aging clock / current largest biological age database and agentic system (ClockBase Agent, 2M+ samples, 40K analysis) / first foundation model for the DNA methylome (MethylGPT)**

Harvard University Cambridge, MA
M.S., Computational Science Engineering July 2023 – May 2024
- Secondary field during Ph.D. study

University of California, Berkeley Berkeley, CA
Visiting Student, Integrative Biology Aug 2017 – Dec 2017

Sun Yat-Sen University Guangzhou, China
B.S., Life Science Sep 2015 – Jun 2019
- Thesis: Screening for the Interactome of hTERC based on Molecular Fluorescence Complementation System in Living Cells
- Yat-Sen Honor School Program (Top 0.5%)
- National college admissions exam (Top 0.6%)

Research Accomplishments

My research establishes computational frameworks that decode aging mechanisms and engineer therapeutic interventions. My work bridges computational biology, AI, and protein engineering to address fundamental questions in aging.

Pioneering Causal and High-Dimensional Aging Biomarkers. I developed the first causality-enriched aging clocks that distinguish true aging drivers from correlative features **(Ying et al., *Nat Aging*, 2024; Ying, *Nat Rev Genet*, 2024)**. This breakthrough, featured as a cover article in Nat Aging with accompanying commentary and on the front page of the Harvard Gazette, addresses a critical limitation: thousands of correlative changes mask the few

causal drivers of aging. By integrating causal inference with epigenetic clock algorithms, I identify interventions that modify aging trajectories rather than merely alter biomarker readings.

Extending beyond single-score measurements, I developed Ageome, the first high-dimensional aging signature framework that captures aging across multiple functional modules **(Ying et al., *bioRxiv*, Nat Aging 2nd revision)**. Ageome reveals pathway-specific age deceleration patterns and achieves superior disease prediction while maintaining biological interpretability. Complementing this work, I built interpretable models integrating epigenetics with transcriptomics **(Moqri, Ying et al., *Nat Commun*, 2025 in press)**.

I also analyzed centenarian genetics to identify novel longevity-associated genes and their protective effects against aging **(Ying et al., *Nat Commun*, 2024)**. I demonstrated that longevity genetics causally protect against COVID-19 mortality **(Ying et al., *Commun Med*, 2021)**.

Large-Scale Foundation Model for DNA Methylation. Recognizing that traditional aging clocks analyze methylation data in isolation, I created MethylGPT, the first foundation model for the DNA methylome **(Ying et al., *bioRxiv*, Nat Mach Intell submitted)**. This transformer-based model, pretrained on billions of methylation array tokens and highlighted by Eric Topol in Science, provides a universal platform that achieves state-of-the-art performance across diverse tasks while enabling zero-shot learning for novel conditions, fundamentally transforming epigenetic data analysis.

Systematic Discovery of Aging Interventions Through AI Agent. I developed ClockBase Agent, the largest biological age database (2M samples) with the most comprehensive AI agent analysis system that autonomously mines molecular profiles to discover aging interventions **(Ying et al., *bioRxiv*, Nature submitted)**, featured in Nat Biotechnology news. This specialized AI agent generates hypotheses, evaluates intervention effects on biological age across 20+ aging clocks, conducts literature reviews, and writes complete scientific reports. The system discovered thousands of aging insights that original studies missed. We experimentally validated ouabain, the first anti-aging drug discovered by an AI agent, demonstrating reduced frailty progression, decreased neuroinflammation, and improved cardiac function in aged mice. AI agents can now systematically mine population-scale datasets to accelerate therapeutic discovery.

Community Resources and Global Leadership. As a core member of the Biomarkers of Aging Consortium, I lead Biolearn platform development **(Ying et al., *Nat Aging*, 2025 in press)**, providing standardized tools for aging biomarker research to over 1,000 researchers worldwide. I organized international competitions that drove innovation in aging clock development **(Ying et al., *bioRxiv*, 2024)**. Science news covered both initiatives, which establish benchmarks that guide the field.

Protein Design In my postdoctoral work with Tony Wyss-Coray (Stanford) and David Baker (UW), I now translate computational insights into therapeutic proteins targeting age-related neurodegeneration. This includes designing *de novo* disaggregases that actively clear protein aggregates (e.g., Aβ and tau) and developing the first foundation model for proteomic data.

Impact and Recognition. This body of work attracts significant international attention. I received the prestigious NIH F99/K00 early career award with a perfect impact score of 10 and was selected as a Harvard President's Innovation Challenge semi-finalist (2025). Major scientific outlets have featured my research, including Science, Nat Biotechnology, Nat Aging, Harvard Gazette, and the World Economic Forum. I have presented these advances at over 15 international conferences and workshops.

Research Experience

Stanford University & University of Washington   Stanford, CA & Seattle, WA
Protein Design for Aging *Postdoctoral Researcher, Wyss-Coray's Lab & Baker's Lab*   Jun 2025 – Present

Visiting Scholar, Wyss-Coray's Lab & Baker's Lab   Nov 2024 – May 2025

Avinasi Labs   San Francisco, CA
Decentralized longevity data collection *Co-founder*   Jan 2025 – Present

Harvard Medical School, Brigham and Women's Hospital   Boston, MA
Biological Aging *Graduate Researcher, Vadim Gladyshev's Lab*   Mar 2020 – May 2025

Harvard Medical School, Boston Children's Hospital   Boston, MA
RNA Modifications *Graduate Researcher (Rotation), Eric Greer's Lab*   Jan 2020 – Mar 2020

Harvard Medical School   Boston, MA
Cell Reprogramming *Graduate Researcher (Rotation), David Sinclair's Lab*   Oct 2019 – Dec 2019

Harvard T. H. Chan School of Public Health   Boston, MA
mTORC1 *Graduate Researcher (Rotation), Brendan Manning's Lab*   July 2019 – Oct 2019

Undergraduate Research   2015 – 2019

- **Sun Yat-Sen University**, *Telomere & Telomerase*   Zhou Songyang's Lab
- **University of Edinburgh**, *Population genetics*   Xia Shen's Lab
- **University of Washington**, *Acarbose & Rapamycin*   Matt Kaeberlein's Lab
- **Buck Institute for Research on Aging**, *Senolytics*   Judith Campisi's Lab
- **University of California, Berkeley**, *SIRT7*   Danica Chen's Lab
- **Sun Yat-Sen University**, *Telomere & DNA Methylation*   Yikang Rong's Lab

Grants

Koo Post-doctoral Transition Award   NIH/NIA *Using causal aging biomarkers and protein design to develop novel anti-aging interventions,*   2025 – 2028

F99 Transition to Aging Research for Predoctoral Students   NIH/NIA *Using causal aging biomarkers and protein design to develop novel anti-aging interventions,*   2024 – 2025

- Award Document Number: FAG088431A (PI)
- Received a *perfect* Impact Score of **10**

Publications

† Corresponding author; * Co-first author; + Contributed as consortium author

SELECTED PUBLICATIONS & PREPRINTS

Ying, K., Paulson, S., Eames, A., Tyshkovskiy, A., ..., Gladyshev, V. N. (2025). *A Unified Framework for Systematic Curation and Evaluation of Aging Biomarkers*. **Nature Aging (in press)**. https://doi.org/10.1101/2023.12.02.569722

Moqri, M.[*], **Ying, K.**[*], Poganik, J.[*], Herzog, C.[*], Chen, Q., Emamifar, M., ..., Gladyshev, V. N. (2025). Integrative epigenetics and transcriptomics identify aging genes in human blood. **Nature Communications (in press)**. https://doi.org/10.1101/2024.05.30.596713

Wu, X.[*], Liu, H.[*], **Ying, K.**[*†] (2025). Biological Age, Aging Clocks, and the Interplay with Lymphoid Neoplasms: Mechanisms and Clinical Frontiers. **Lymphatics**, *3*(3), 19. https://doi.org/10.3390/lymphatics3030019

Ying, K.[†] (2024). Causal inference for epigenetic ageing. **Nature Reviews Genetics**, 1–1. https://doi.org/10.1038/s41576-024-00799-7

Ying, K., Castro, J. P., Shindyapina, A. V., ..., Gladyshev, V. N. (2024). Depletion of loss-of-function germline mutations in centenarians reveals longevity genes. **Nature Communications**, *15*(1), 5956. https://doi.org/10.1038/s41467-024-50098-2

Ying, K., Liu, H., Tarkhov, A. E., ..., Gladyshev, V. N. (2024). Causality-enriched epigenetic age uncouples damage and adaptation. **Nature Aging (February Cover)**, 1–16. https://doi.org/10.1038/s43587-023-00557-0

Ying, K., Zhai, R., Pyrkov, T. V., ..., Gladyshev, V. N. (2021). Genetic and phenotypic analysis of the causal relationship between aging and COVID-19. **Communications Medicine**, *1*(1), 35. https://doi.org/10.1038/s43856-021-00033-z

Ying, K.,[*†] Tyshkovskiy, A., Moldakozhayev, A., ..., Gladyshev, V. N. (2025). Massive AI agent mining of aging interventions from millions of molecular profiles. **bioRxiv (Updated Version, Nature submitted)**. https://doi.org/10.1101/2023.02.28.530532

Ying, K.[†], Song, J., Cui, H., ..., Gladyshev, V. N[†]. (2024). MethylGPT: a foundation model for the DNA methylome. **bioRxiv (Nature Machine Intelligence submitted)**. https://doi.org/10.1101/2024.10.30.621013

Ying, K., Paulson, S., Reinhard, J., ..., Gladyshev, V. N. (2024). An Open Competition for Biomarkers of Aging. **bioRxiv**. https://doi.org/10.1101/2024.10.29.620782

Ying, K., Tyshkovskiy, A., Chen, Q., ..., Gladyshev, V. N. (2024). High-dimensional Ageome Representations of Biological Aging across Functional Modules. **bioRxiv (Nature Aging 2nd Revision)**. https://doi.org/10.1101/2024.09.21.570935

Ying, K., Tyshkovskiy, A., Trapp, A., ..., Gladyshev, V. N. (2023). ClockBase: A comprehensive platform for biological age profiling in human and mouse. **bioRxiv**. https://doi.org/10.1101/2023.02.28.530532

Other Publications

Zhang, O., Lin, H., Zhang, X., Wang, X., Wu, Z., Ye, Q., Zhao, W., Wang, J., **Ying, K.,**, Kang, Y., Hsieh, C.-Y., Hou, T. (2025). Graph neural networks in modern AI-aided drug discovery. **Chemical Reviews**, 125, 10001–10103. https://doi.org/10.1021/acs.chemrev.5b00254

Zhang, O., ..., **Ying, K.,** Huang, Y., Zhao, H., Kang, Y., Pan, P., Wang, J., Guo, D., Zheng, S., Hsieh, C.-Y., & Hou, T. (2025). ECloudGen: leveraging electron clouds as a latent variable to scale up structure-based molecular design. **Nature Computational Science**. https://doi.org/10.1038/s43588-025-00886-7

Farinas, A., Rutledge, J., Bot, V. A., Western, D., **Ying, K.,** Lawrence, K. A., Oh, H. S. H., ..., Wyss-Coray, T. (2025). Disruption of the cerebrospinal fluid–plasma protein balance in cognitive impairment and aging. **Nature Medicine**, 1–12. https://doi.org/10.1038/s41591-025-03831-3

Rothi, M.H., Sarkar, G.C., Haddad, J.A., Mitchell, W., **Ying, K.,** et al. (2025). The 18S rRNA methyltransferase DIMT-1 regulates lifespan in the germline later in life. **Nature Communications**, 16, 6944. https://doi.org/10.1038/s41467-025-62323-7

Grzeczka, A., Iqbal, S., **Ying, K.,** Kordowitzki, P. (2025). Circular RNAs as regulators and biomarkers of mammalian ovarian ageing. **GeroScience**, 1–19. https://doi.org/10.1007/s11357-025-01798-0

Jacques, E., Herzog, C., **Ying, K.,** ... Gladyshev, V. N. (2025). Invigorating discovery and clinical translation of aging biomarkers. **Nature Aging**, 1–5.

Goeminne, L. J. E., Vladimirova, A., Eames, A., Tyshkovskiy, A., Argentieri, M. A., **Ying, K.,** Moqri, M., & Gladyshev, V. N. (2025). Plasma protein-based organ-specific aging and mortality models unveil diseases as accelerated aging of organismal systems. **Cell Metabolism**, https://doi.org/10.1016/j.cmet.2024.03.007

Gladyshev, V. N., Anderson, B., Barlit, H., ..., **Ying, K.,** Yunes, J., Zhang, B., & Zhavoronkov, A. (2024). Disagreement on foundational principles of biological aging. **PNAS Nexus**, *3*(12), pgae499. https://doi.org/10.1093/pnasnexus/pgae499

Lyu, YX.[*], Fu, Q.[*], Wilczok, D.[*], **Ying, K.**[*], King, A., ..., Bakula, D. (2024). Longevity biotechnology: Bridging AI, biomarkers, geroscience and clinical applications for healthy longevity. **Aging**, *16*(1), 1–25. https://doi.org/10.18632/aging.205397

Biomarkers of Aging Consortium[+], Herzog, C. M. S., Goeminne, L. J. E., Poganik, J. R., ..., Gladyshev, V. N. (2024). Challenges and recommendations for the translation of biomarkers of aging. **Nature Aging**, 1–12. https://doi.org/10.1038/s43587-024-00683-3

Castro, J. P., Shindyapina, A. V., Barbieri, A., **Ying, K.,** ..., Gladyshev, V. N. (2024). Age-associated clonal B cells drive B cell lymphoma in mice. **Nature Aging**, *4*(8), 1–15. https://doi.org/10.1038/s43587-024-00671-7

Moqri, M., ..., de Sena Brandine, G., **Ying, K.,** Tarkhov, A., ..., Sebastiano, V. (2024). PRC2-AgeIndex as a universal biomarker of aging and rejuvenation. **Nature Communications**, *15*(1), 5956. https://doi.org/10.1038/s41467-024-50098-2

Tarkhov, A. E., Lindstrom-Vautrin, T., Zhang, S., **Ying, K.,** Moqri, M., ..., Gladyshev, V. N. (2024). Nature of epigenetic aging from a single-cell perspective. **Nature Aging**, 1–17. https://doi.org/10.1038/s43587-023-00555-2

Moqri, M., Herzog, C., Poganik, J. R., **Ying, K.,,** ... Ferrucci, L. (2024). Validation of biomarkers of aging. **Nature Medicine**, 1–13. https://doi.org/10.1038/s41591-023-02784-9

Griffin, P. T., ..., Kerepesi, C., **Ying, K.,** ..., Sinclair, D. A. (2024). TIME-seq reduces time and cost of DNA methylation measurement for epigenetic clock construction. **Nature Aging**, 1–14. https://doi.org/10.1038/s43587-023-00555-2

Moqri, M., Herzog, C., Poganik, J. R., **Biomarkers of Aging Consortium**[+], ... Gladyshev, V. N. (2023). Biomarkers of aging for the identification and evaluation of longevity interventions. **Cell**, *186*(18), 3758–3775. https://doi.org/10.1016/j.cell.2023.08.003

Liberman, N., Rothi, M. H., Gerashchenko, M. V., Zorbas, C., Boulias, K., MacWhinnie, F. G., **Ying, A. K.,** Flood Taylor, A., ..., Greer, E. L. (2023). 18S rRNA methyltransferases DIMT1 and BUD23 drive intergenerational hormesis. **Molecular Cell**, *83*(18), 3268–3282.e7. https://doi.org/10.1016/j.molcel.2023.08.014

Bitto, A., Grillo, A. S., Ito, T. K., Stanaway, I. B., Nguyen, B. M. G., **Ying, K.,** ... Kaeberlein, M. (2023). Acarbose suppresses symptoms of mitochondrial disease in a mouse model of Leigh syndrome. **Nature Metabolism**, *5*(6), 955–967. https://doi.org/10.1038/s42255-023-00815-w

Emmrich, S., Trapp, A., Tolibzoda Zakusilo, F., Straight, M. E., **Ying, A. K.,** Tyshkovskiy, A., ..., Gorbunova, V. (2022). Characterization of naked mole-rat hematopoiesis reveals unique stem and progenitor cell patterns and neotenic traits. **The EMBO Journal**, *41*(15), e109694. https://doi.org/10.15252/embj.2021109694

Yang, Z., ..., Guo, H., **Ying, K.,** Gustafsson, S., ..., Shen, X. (2022). Genetic Landscape of the ACE2 Coronavirus Receptor. **Circulation**, *145*(18), 1398–1411. https://doi.org/10.1161/CIRCULATIONAHA.121.057888

Li, T., Ning, Z., Yang, Z., Zhai, R., Zheng, C., Xu, W., Wang, Y., **Ying, K.,** Chen, Y., & Shen, X. (2021). Total genetic contribution assessment across the human genome. **Nature Communications**, *12*(1), 2845. https://doi.org/10.1038/s41467-021-23124-w

Zhu, J., Xu, M., Liu, Y., Zhuang, L., **Ying, K.,** Liu, F., ..., Songyang, Z. (2019). Phosphorylation of PLIN3 by AMPK promotes dispersion of lipid droplets during starvation. **Protein & Cell**, *10*(5), 382–387. https://doi.org/10.1007/s13238-018-0593-9

OTHER PREPRINTS

Zhang, O., Zhang, X., Lin, H., Tan, C., Wang, Q., Mo, Y., ..., **Ying, K.,** Li, J., Zeng, Y., Lang, L., Pan, P., Cao, H., Song, Z., Qiang, B., Wang, J., Ji, P., Bai, L., Zhang, J., Hsieh, C.-Y., Heng, P. A., Sun, S., Hou, T., & Zheng, S. (2025). ODesign: A World Model for Biomolecular Interaction Design. **arXiv**. https://odesign1.github.io/

Mavrommatis, C., Belsky, D., **Ying, K.,** Moqri, M., Campbell, A., Richmond, A., ..., Gladyshev, V. N. (2025). *An unbiased comparison of 14 epigenetic clocks in relation to 10-year onset of 174 disease outcomes in 18,859 individuals.* **medRxiv**. https://doi.org/10.1101/2025.07.14.25331494

Galkin, F., ..., Tyshkovskiy, A., **Ying, K.,** Gladyshev, V. N., & Zhavoronkov, A. (2024). Precious3GPT: Multimodal Multi-Species Multi-Omics Multi-Tissue Transformer for Aging Research and Drug Discovery. **bioRxiv**. https://doi.org/10.1101/2024.07.25.605062

Tyshkovskiy, A., Kholdina, D., **Ying, K.,** Davitadze, M., ..., Gladyshev, V. N. (2024). Transcriptomic Hallmarks of Mortality Reveal Universal and Specific Mechanisms of Aging, Chronic Disease, and Rejuvenation. **bioRxiv**. https://doi.org/10.1101/2024.07.04.601982

Moqri, M., Poganik, J. R., Herzog, C., **Ying, K.,** Chen, Q., ..., Gladyshev, V. N. (2024). Integrative epigenetics and transcriptomics identify aging genes in human blood. **bioRxiv**. https://doi.org/10.1101/2024.05.30.596713

Rothi, M. H., Sarkar, G. C., Al Haddad, J., Mitchell, W., **Ying, K.,** Pohl, N., ..., Greer, E. L. (2024). The 18S rRNA Methyltransferase DIMT-1 Regulates Lifespan in the Germline Later in Life. **bioRxiv**. https://doi.org/10.1101/2024.05.15.570935

Zhang, B., Tarkhov, A. E., Ratzan, W., **Ying, K.,** Moqri, M., ..., Gladyshev, V. N. (2022). *Epigenetic profiling and incidence of disrupted development point to gastrulation as aging ground zero in Xenopus laevis.* **bioRxiv**. https://doi.org/10.1101/2022.08.02.502559

Patents

V. N. Gladyshev, **K. Ying**, "High-dimensional measurement of biological age" (2024). *Provisional Patent Application*

V. N. Gladyshev, **K. Ying**, "Mapping CpG sites to quantify aging traits" (2024). *WO2024039905A2*

Software and Database

MethylGPT (2024)	https://github.com/MethylGPT/MethylGPT
Biolearn (2024)	https://bio-learn.github.io/
ClockBase (2023)	https://www.clockbase.org/

Presentations

ORAL PRESENTATIONS

Biomarkers of Aging Symposium 2025	Boston, MA
Massive AI agent mining of aging-modifying interventions from millions of molecular profile	2025

ASHG 2025 Annual Meeting
Decoding the Aging Methylome: From Causal Inference to Foundation Models
Boston, MA
2025

6th TimePie Longevity Forum
Massive AI agent mining of aging-modifying interventions from millions of molecular profile
Shanghai, China
2025

CSH-Asia Conference: Stem cell, Aging and Rejuvenation
Massive AI agent mining of aging-modifying interventions from millions of molecular profile
Suzhou, China
2025

Keystone Symposia: Aging: New Frontiers in Rejuvenation and Gerotherapeutics
MethylGPT: A Foundation Model for the DNA Methylome
Breckenridge, CO
2025

Biomarkers of Aging Symposium
Standardization of aging biomarkers and BoA challenge
Boston, MA
2024

Harvard GRIP Presentations
Causal Aging Biomarker empowers Unbiased Anti-Aging Therapy Screening
Boston, MA
2024

4th TimePie Longevity Forum
Causal Aging Biomarker as a Tool for Unbiased Anti-Aging Therapy Screening
Shanghai, China
2023

Global Congress on Aesthetic and Anti-Aging (GCAA2023)
Causal Aging Biomarker as a Tool for Unbiased Anti-Aging Therapy Screening
Singapore
2023

10th Aging Research and Drug Discovery conference (ARDD2023)
Causal Epigenetic Age Uncouples Damage and Adaptation
Copenhagen, Denmark
2023

AGE 2023 51st Annual Meeting
Causal Epigenetic Age Uncouples Damage and Adaptation
Oklahoma City, OK
2023

Broad Institute MPG Retreat
Causal Epigenetic Age Uncouples Damage and Adaptation
Cambridge, MA
2023

Harvard GRIP Presentations
Causal Epigenetic Age Uncouples Damage and Adaptation
Boston, MA
2022

Targeting Metabesity 2022, 'Honorable Mention'
Causal Epigenetic Age Uncouples Damage and Adaptation
Virtual Conference
2022

GSA 2021 Annual Scientific Meeting
Genetic and phenotypic evidence for causal relationships between aging and COVID-19
Virtual Conference
2021

Invited Talks

St. Jude Children's Research Hospital, hosted by Dr. Zhaoming Wang
MethylGPT and Causality-enriched Epigenetic Clock
Memphis, TN
2025

The Alliance for Longevity Initiatives Scientist Spotlight,
Episode 14: Albert Ying
Online Podcast
2024

BioAge Seminar, hosted by Dr. Robert Hughes & Dr. Paul Timmers
Ageome: Biological age with higher-dimensionality
Boston, MA
2024

MRC Integrative Epidemiology Unit Seminar
Epigenetic Clocks and Mendelian Randomization
Bristol, UK
2024

NIA EL Projects Joint Meeting, National Institute on Aging — Online Webinar
Aging Clocks — 2024

Biomarkers of Aging Challenge, Foresight Institute — Online Webinar
Update Webinar with Foresight — 2024

Everything Epigenetics, podcast hosted by Hannah Went — Online Podcast
Causal Epigenetic Age Uncouples Damage and Adaptation — 2024

Chinese University of Hong Kong, hosted by Dr. Xin Wang — Hong Kong, China
Causal Aging Biomarker as a Tool for Systemic Anti-Aging Therapy Screening — 2024

Everything Epigenetics, podcast hosted by Hannah Went — Online Podcast
Causal Epigenetic Age Uncouples Damage and Adaptation — 2023

Chinese University of Hong Kong, hosted by Dr. Xin Wang — Hong Kong, China
Causal Aging Biomarker as a Tool for Systemic Anti-Aging Therapy Screening — 2023

Peking University, hosted by Dr. Jingdong Han — Beijing, China
Causal Aging Biomarker and ClockBase — 2023

Chinese Academy of Sciences, hosted by Dr. Xuming Zhou — Beijing, China
Causal Epigenetic Age Uncouples Damage and Adaptation — 2022

Foresight Institute, hosted by Allison Duettmann — Online Seminar
Genetic Variation, Aging & Relationship to COVID-19 | Joris Deelen, Albert Ying — 2020

Honors

Semifinalist, Harvard President's Innovation Challenge, Health Care and Life Sciences Track — 2025

Best Poster Award, Inaugural Biomarker of Aging Symposium — 2023

Best Poster Award, Gordon Research Conference, Systems Aging — 2022

Hackathon Winner, Longevity Hackathon, VitaDAO — 2021

Yat-Sen Honor School Program, Sun Yat-Sen University — 2016 – 2019

Yat-Sen Scholarship, Sun Yat-Sen University — 2016 – 2019

Professional Experience

Service & Leadership

Board Member, Lifeboat Foundation — 2025 – Present

Member, Norn Longevity Nexus — 2025 – Present

Jury and Mentor, Agentic AI Against Aging Hackathon — 2025

Core Member, Biomarkers of Aging Consortium — 2024 – Present

Organizer, Biomarker of Aging Challenge — 2024 – Present

President, Harvard Interdisciplinary Discussion on Disease and Health — 2024 – 2025

Agenda Contributor, World Economic Forum — 2024

Organizing Committee Member, Biomarker of Aging Symposium 2024   2024

Organizing Committee Member, Biomarker of Aging Symposium 2023   2023

Teaching & Mentoring

Mentor, Yuanpei Young Scholars Program   2023 – 2024

Instructor, Harvard Public Health Symposium For Young Generation   2023

Students Supervised

Predoctoral Students: Ali Doga Yucel, Siyuan Li, Hanna Liu, Donghyun Lee, Yikun Zhang

Journals Reviewed

Nature Aging, Nature Communications, Communications Medicine, Genome Medicine, BMC Nephrology, Lipids in Health and Disease, Clinical Proteomics, Evidence-Based Complementary and Alternative Medicine, Scientific Reports

References

Dr. Tony Wyss-Coray, Postdoctoral Co-Advisor   twc@stanford.edu
D.H. Chen Distinguished Professor of Neurology and Neurological Sciences, Stanford University

Dr. David Baker, Postdoctoral Co-Advisor   dbaker@uw.edu
Professor of Biochemistry, University of Washington

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Professor of Human Genetics, UCLA

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Professor of Genetics, Harvard Medical School

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Professor of Pathology, University of Washington