2022

Research and Innovation Awards

OHSU

2021 proved to be another year that required us all to creatively adapt in response to the COVID-19 pandemic. We are proud to recognize the OHSU innovators in our community who continued to meet this challenge as well as develop brilliant new technologies, startups and partnerships to address unmet human health and wellbeing needs. Our infrastructure also adapted this year, when multiple groups came together to create OHSU Innovates, a collaborative network focused on supporting the innovation and entrepreneurial community at OHSU. By leveraging our different strengths and resources, OHSU Innovates aims to function as a unified resource to better serve OHSU members as well as external stakeholders in their commercialization and partnership pursuits.

One critical way that OHSU Innovates serves this community is by celebrating those who continue to leverage their ground-breaking research to improve the health and well-being of the global community. This year's awardees exemplify the strength and resilience that makes our innovative ecosystem at OHSU so successful. Congratulations to all of the awardees and thank you for being part of our growing innovation community at OHSU and beyond.

Travis Cook, M.S., M.B.A., CLP

SENIOR DIRECTOR, TECHNOLOGY TRANSFER

Aditi Martin, Ph.D.

SENIOR DIRECTOR, COLLABORATIONS AND ENTREPRENEURSHIP

CREATORS OF LICENSED TECHNOLOGY

Kei Adachi
Connor Barth
Benjamin Bimber
Jessica Castle
Sunghee Chai
Sonja Connor
Christopher Corless
Marcel Curlin
Andrea Dayot
Rozalia Dodean
Stone Doggett
Craig Dorrell
Brian Druker
Bart Duell
Joseph El Youssef
Khashayar Farsad
Jack Ferracane
Tyler Franklin
Klaus Frueh
Leslie Garcia
Summer Gibbs
Joe Gray
Markus Grompe
Scott Hansen
Michael Heinrich
Stephen Heitner
Rosemarie Hemmings
Theodore Hobbs
Erin Hoover Barnett
David Huang
Kimberly Hutchison
Peter Jacobs
Ian Jaquiss
Knight Cancer Biolibrary
David Lahna
Joseph Leitschuh
David Lewinsohn
Deborah Lewinsohn
Bingbing Li
Yan Li
Yuexin Li
Katherine Liebman
Robert Liskay,
James Maylie
Octaviano Merecias-Cuevas
Louise Merkens
Mark Miller
Robb Moses
Hiroyuki Nakai
Christie Naze
Nguyen, Justine
Aaron Nilsen
Oregon Hearing Research Center
Elias Pavlatos
Amy Penkin
Carmem Pfeifer
Louis Picker
Ana Paula Piovezan Fugolin
Sovitj Pou
Sivaraman Prakasam
Jonathan Pruneda
Jacob Raber
Helen Rappe Baggett
Lisa Rhuman
Michael Riscoe
Jonah Sacha
Ravikant Samatham
Daniel Schwartz
Lisa Silbert
Martin Smilkstein
Philip Streeter
Gwendolyn Swarbrick
Kent Thornburg
Ellen Tilden
Lei Wang
Richard Weleber
John Williams
Xiangshu Xiao

PRINCIPAL INVESTIGATORS OF NON-CLINICAL INDUSTRY SPONSORED RESEARCH

Anna Bar

John Brigande

Jonathan Brody

Benjamin Burwitz

John Carter

Jessica Castle

Justin Cetas

Aaron Cohen

Christopher Corless

Lisa Coussens

Verginia Cuzon Carlson

Blair Darney

Monika Davare

Brian Druker

Robert Eil

Guang Fan

David Farrell

Khashayar Farsad

Maros Ferencik

Jack Ferracane

Summer Gibbs

Jeremy Goecks

Jeffrey Gold

Markus Grompe

Donna Hansel

Scott Hansen

Ann Hessell

Monica Hinds

Fay Horak

Peter Jacobs

Brian Johnstone

Andrew Kaempf

John Kaufman

Paul Kievit

Sushil Kumar

Evan Lind

R. Stephen Lloyd

Kelvin MacDonald

Martina Mancini

Daniel Marks

Richard Maziarz

Amanda McCullough

Matthias Merkel

Hiroyuki Nakai

Babak Nazer

Martha Neuringer

Edward Neuwelt

Byung Park

Carmem Pfeifer

Rick Press

Cristina Puy Garcia

Phil Raess

Maria Rodriguez

Renee Ryals

David Sheridan

Rebecca Silbermann

Mark Slifka

Stephen Spurgeon

Elie Traer

Jeffrey Tyner

Arthur Vandenbark

Tania Vu

Hidehiko Watanabe

Brandon Wilder

David Wilson

Hui Wu

Hua Xie

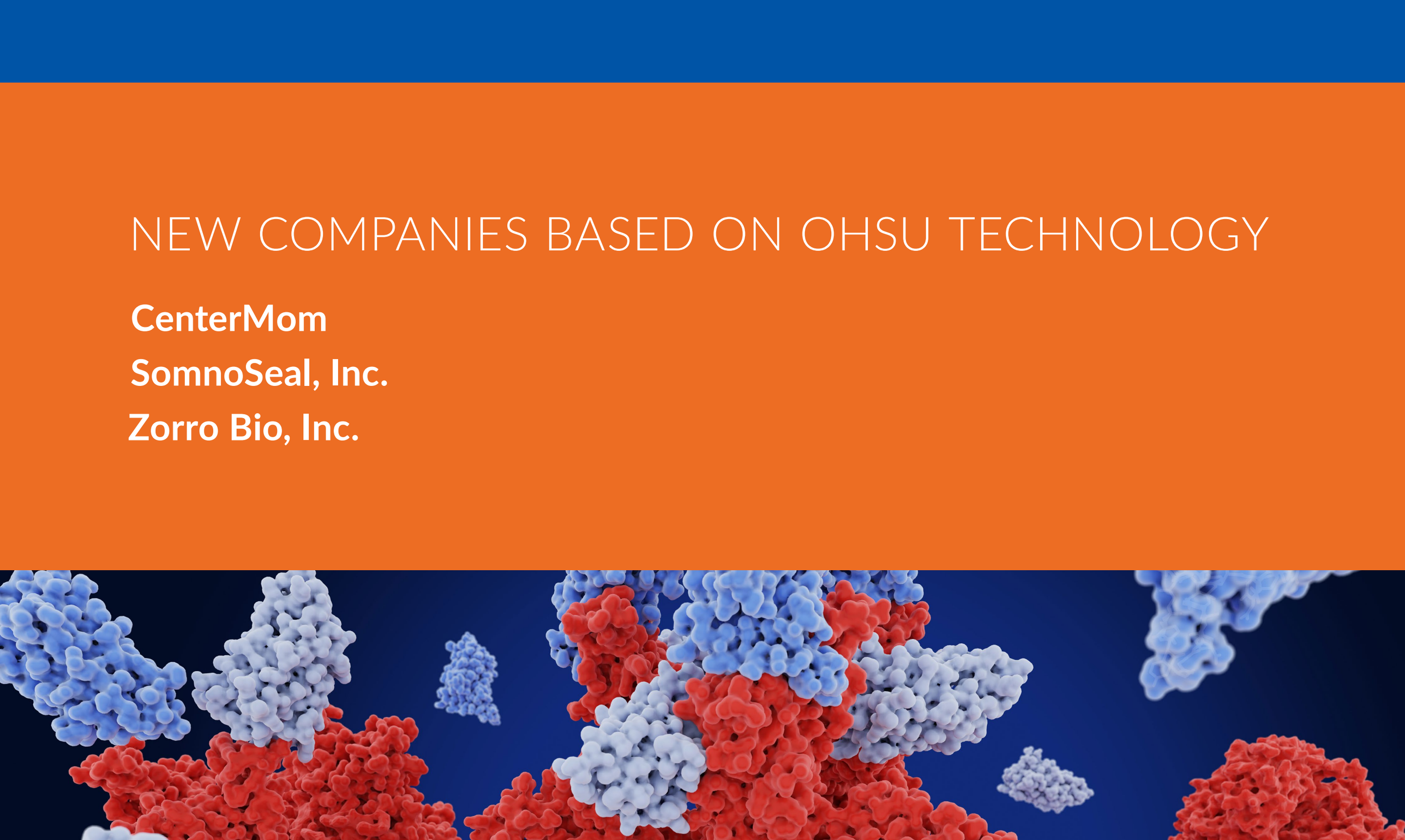
Wassana Yantasee

INVENTORS OF ISSUED U.S. PATENTS

Nabil Alkayed
Amira Al-Uzri
Sudarshan Anand
Tapasree Banerji
Lisa Bleyle
Patrizia Caposio
David Castro
Andrew Chitty
Michael Cohen
Brian Druker
Skylar Ferrara
Klaus Frueh
Summer Gibbs
Joe Gray
Scott Hansen
David Huang
Thomas Jacob
Yali Jia
Dennis Koop
David Lahna
Daniel Malouli
Richard Maziarz
Rory Morgan
Xiaolin Nan
Jay Nelson
Louis Picker
Shushan Rana
Jonah Sacha
Thomas Scanlan
Daniel Schwartz
Lisa Silbert
Philip Streeter
V. Liana Tsikitis
Jeffrey Tyner
Tania Vu
Jie Wang
Wassana Yantasee

NEW COMPANIES BASED ON OHSU TECHNOLOGY

CenterMom
SomnoSeal, Inc.
Zorro Bio, Inc.



EARLY CAREER INNOVATOR

Dhanir Tailor, Ph.D.

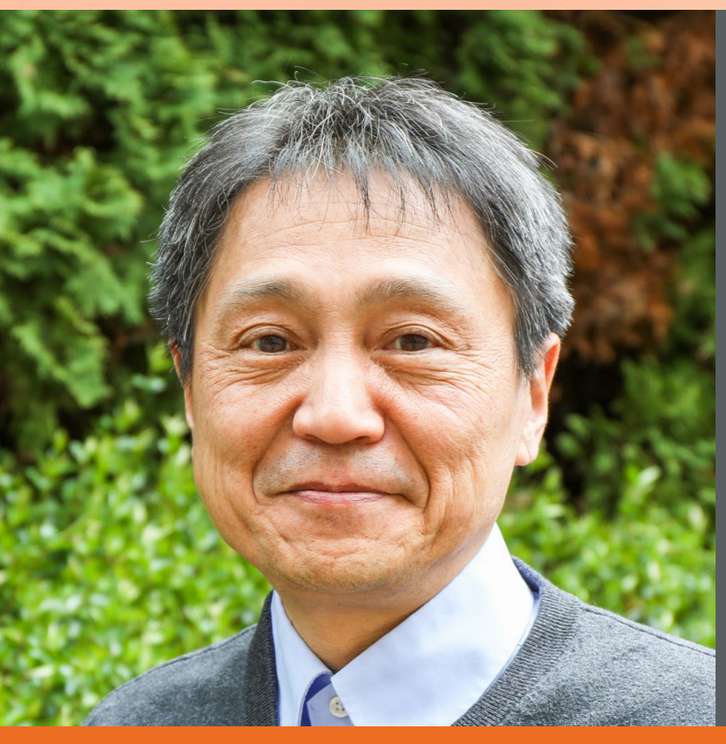
POSTDOCTORAL RESEARCH FELLOW, MALHOTRA LABORATORY, CENTER FOR EXPERIMENTAL THERAPEUTICS, KNIGHT CANCER INSTITUTE; DEPARTMENT OF CELL, DEVELOPMENTAL AND CANCER BIOLOGY, SCHOOL OF MEDICINE

The Early Career Innovator Award is presented to an OHSU employee such as a student, post-doctoral fellow, medical resident or someone else early in their professional career who possesses a passion for innovation and developing technologies to solve real-world problems. They work closely with the innovation ecosystems within and outside of OHSU to prepare their innovations for commercial success.

As a postdoctoral fellow in the laboratory of Sanjay Malhotra, Ph.D. in the OHSU Knight Cancer Institute, Tailor is working on the development of new cancer therapeutics and screening assays. Tailor received his Ph.D. in cancer biology from the Central University of Gujarat, India, and went on to complete a three-year postdoctoral position at Stanford University.

Since joining OHSU in 2020, Tailor's research into novel cancer therapeutics has garnered significant industry interest, and one of these therapeutics is close to entering clinical trials to potentially address real-world needs in cancer treatments. Tailor has the distinction of having more new technology disclosures during 2021 than any other OHSU early career member.

CAREER INNOVATION EXCELLENCE



Hiroyuki Nakai, M.D., Ph.D.

PROFESSOR, DEPARTMENT OF MOLECULAR AND MEDICAL GENETICS AND DEPARTMENT OF MOLECULAR MICROBIOLOGY AND IMMUNOLOGY, SCHOOL OF MEDICINE

DISTINGUISHED PROFESSOR IN MOLECULAR MEDICINE, SCHOOL OF MEDICINE

The Career Innovation Excellence Award is presented to an OHSU employee who, over the course of their career, has demonstrated accomplishments as an inventor and entrepreneur and has shown a true passion for innovation. They successfully engage and cultivate partnerships with industry, and work tirelessly to translate their discoveries into solutions for real-world problems and the benefit of society.

Pioneering research from the laboratory of Dr. Nakai is focused on understanding adeno-associated virus (AAV) vectors and developing new AAV vector-mediated gene and cell therapies to treat various human diseases. The laboratory takes an impressively broad multi-disciplinary approach, using molecular, cellular and structural biology techniques, bioinformatics, computational biology, computer simulation, various high-throughput technologies including DNA and RNA barcoding, next-generation sequencing (NGS), and mass spectrometry.

Nakai's research has led to the authorship of over 70 publications, including high impact journals of *Nature* and *Proceedings of the National Academy of Sciences*, and 23 technology disclosures since joining OHSU in 2011. In the past few years, a number of Nakai's technologies were licensed to form the basis of a new startup company, Capsigen. Within their first year of operation, Capsigen secured a large strategic research collaboration with Biogen to engineer novel AAV capsids that have the potential to deliver transformative gene therapies that address the underlying genetic causes of various CNS and neuromuscular disorders.

NEW INNOVATOR OF THE YEAR

Marcel Curlin, M.D.

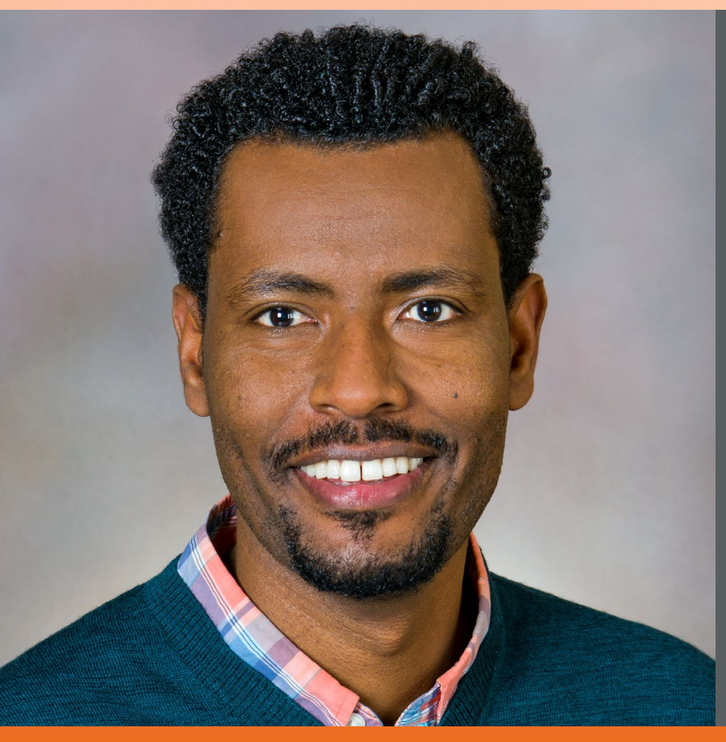
ASSOCIATE PROFESSOR OF MEDICINE, DIVISION OF INFECTIOUS DISEASES, SCHOOL OF MEDICINE

The New Innovator of the Year Award is presented to an employee relatively new to the innovation development process at OHSU, but who demonstrates true passion for advancing technology development and has made great strides and efforts in collaborating with various innovator ecosystems within and outside of OHSU. They demonstrate an eagerness to see their discoveries translate into tangible solutions for societal benefit.

Marcel Curlin, M.D., is a successful physician-scientist, with experience in both clinical and laboratory-based research in HIV and infectious diseases. In the face of the COVID pandemic, Curlin was quick to activate clinical research studies to understand immunity to COVID-19. He has gained national attention on over 200 worldwide news outlets for his work on COVID-19 super immunity with OHSU faculty member Fikadu Tafesse, Ph.D. Both researchers were recently featured on Oregon Public Broadcast's show *Think Out Loud*.

In 2021 Curlin added inventor to his list of accomplishments, collaborating with other OHSU members to disclose technologies to improve methods for identifying viral exposure. This research was spurred on by the demonstrated need for such technologies in the face of the COVID-19 pandemic. These new inventions included an absorbent "virus accumulation" material suitable for fixation onto the inner or outer surface of a mask for detecting small numbers of viral particles, such as COVID-19.

PARTNERSHIP AWARD



Fikadu Tafesse, Ph.D.

ASSISTANT PROFESSOR OF MOLECULAR MICROBIOLOGY AND IMMUNOLOGY, SCHOOL OF MEDICINE

The Partnership Award is presented to an OHSU employee who has a demonstrated entrepreneurial spirit and works closely with the OHSU Innovates commercialization network to foster and encourage collaborations. They demonstrate a successful track-record of establishing and developing new partnerships to advance innovative research.

Fikadu Tafesse is a highly collaborative scientist, working in infectious disease, recently concentrating on SARS-CoV-2. The Tafesse lab is focused on identifying and characterizing the host factors that are used by pathogens to secure invasion, persistence and propagation, as these pathways represent potential targets for new drug strategies.

Recent collaborative work between the Tafesse lab and other OHSU investigators has garnered international attention, including over 200 media outlets covering his work with Marcel Curlin on COVID-19 super-immunity, and over 400 media outlets covering his work on cannabinoids and SARS-CoV-2. SARS-CoV-2 research from the Tafesse lab was also included in a May 4 White House press briefing by Anthony Fauci. Tafesse has demonstrated a consistent openness to having new conversations and breaking down barriers to partnering across many fields. In addition, Tafesse is an inventor on multiple technologies, thereby successfully deploying both innovative and collaborative strategies to increase the impact of his infectious disease research. He is also the recipient of a grant to develop potential SARS-CoV-2 therapeutics from the M.J. Murdock Charitable Trust Commercialization Initiation Program.

NAI SENIOR MEMBER

Yali Jai, Ph.D.

JENNIE P. WEEKS PROFESSOR OF OPHTHALMOLOGY, CASEY EYE INSTITUTE

ASSOCIATE PROFESSOR OF BIOMEDICAL ENGINEERING, SCHOOL OF MEDICINE

Senior Members of the National Academy of Inventors are recognized for their remarkable innovative technologies that have brought, or aspire to bring, real impact on the welfare of society. These members have demonstrated success in patents, licensing, and commercialization, and also participate in educating and mentoring the next generation of inventors.

In early 2022 Yali Jia, Ph.D. was elected a Senior Member of the National Academy of Inventors, recognizing her significant contributions as an inventor of new diagnostic techniques in the field of ophthalmology. Jia is a leading pioneer in the field of optical coherence tomography (OCT), a highly efficient, non-invasive eye imaging technology that has been used to diagnose and track age-related macular degeneration, glaucoma and diabetic eye diseases—the three leading causes of blindness.

Inventions from Jia and colleagues have helped pave the way for broader application of OCT angiography in clinical care, potentially improving disease early diagnosis and monitoring for patients with numerous ophthalmic diseases. Jia has published more than 150 peer-reviewed journal articles with over 12,000 citations. Further, she is an inventor on 12 issued patents and 10 pending patent applications, eight of which have been licensed to industry. In 2022, Jia received funding from the Biomedical Innovation Program (BIP), supported by the Oregon Clinical and Translational Research Institute and OHSU Innovates, to develop new OCT methods for diabetic retinopathy.

INDUCTEES IN THE OHSU CHAPTER OF THE NATIONAL ACADEMY OF INVENTORS

Daniel Malouli

Richard Maziarz

Jonah Sacha

Tania Vu

THANK YOU TO OUR SPONSORS

GOLD

Stoel Rives LLP

SILVER

Lee&Hayes

Sterne Kessler
STERNE KESSLER GOLDSTEIN & FOX

BRONZE

KILPATRICK TOWNSEND

Klarquist

Schwabe
WILLIAMSON & WYATT®

OHSU Innovates
3181 S.W. Sam Jackson Park Road
Portland, OR 97239
www.ohsu.edu/innovates

OHSU