



# PMHW

*Stanford Center for Precision Mental Health & Wellness Newsletter*



## 3rd Annual Precision Mental Health and Wellness Symposium

October 24, 2023

*Precision Psychiatry, Personalized Neuroscience & the Future of Mental Health Treatment*

The Stanford Center for Precision Mental Health and Wellness and Stanford's Major Laboratories and Clinical Translational Neuroscience Incubator presented the 3rd Annual Precision Mental Health & Wellness Symposium on Tuesday, October 24.

We had over 180 attendees and a widely attended Happy Hour Poster Session with over 25 poster presentations. The symposium explored a precision approach to psychiatry in which neuroscience insights about the human brain are translated into real world clinical care enabling clinicians to help improve the quality of individual lives.

Topics addressed fell under three strategic themes of research: Translational and Novel Therapeutics, Novel Approaches to Stratified/Precision Mental Health, and Precision Mental Health & Clinical Translational Neuroscience.

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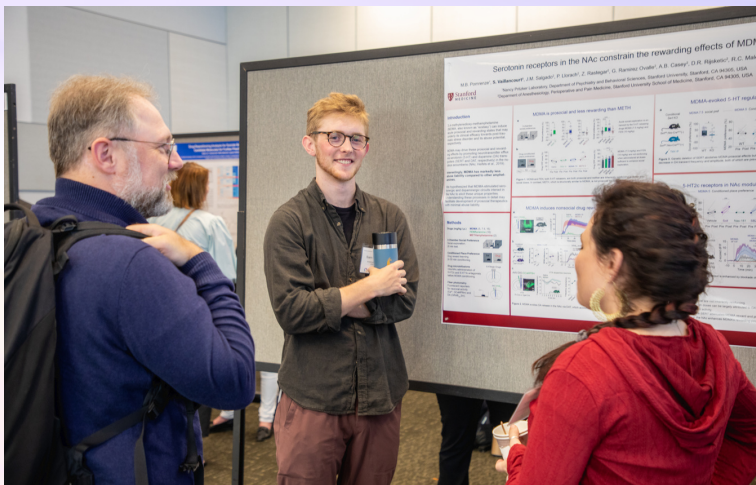


We would like to personally thank our expert speakers, poster presenters, attendees and affiliates for joining us for a day of lively discussions and captivating advancements in precision mental health research. The success of this event would not have been possible without the participation, engagement, thoughtful questions and inspiring conversations of all those who joined.

Attendees heard how mental health is being reconceptualized as brain health, leveraging novel insights from neuroscience. Learning about new approaches to understanding individual experiences of disorders such as depression by understanding the brain, how we are starting to personalize treatments and exciting new directions in rapid acting therapeutics.

These new discoveries provide hope for the future of mental health treatment.

See [pages 3-4](#) for links to the recordings. To see more photos of our event, visit our website [here](#).



# RECORDINGS



## OPENING PLENARY

Helen Mayberg, M.D.

Professor, Neurology,  
Neurosurgery, Psychiatry  
*Mount Sinai, Icahn School of Medicine*

‘The Evolution of Imaging Biomarkers  
to Guide Major Depression Treatment’



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## DEANS' REMARKS

Lloyd Minor, M.D.

Dean, School of Medicine  
*Stanford University*

Remarks



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## KEYNOTE

Carolyn Rodriguez, M.D., Ph.D.

Professor, Psychiatry &  
Behavioral Sciences  
*Stanford University*

‘Future of Translational Therapeutics  
Novel Mechanisms’



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## RISING STAR

Xue Zhang, Ph.D.

Postdoctoral Scholar, Psychiatry &  
Behavioral Sciences  
*Stanford University*

'Personalized Imaging with Novel  
Therapeutics'



## RISING STAR

Leonardo Tozzi, M.D., Ph.D.

Director of Computational  
Neuroscience & Neuroimaging Program  
*Stanford PMHW*

'Personalized Brain Circuit Scores  
Linking Biotypes, Symptoms, Behavior  
and Treatment Outcomes'



## DIRECTORS PANEL

Leanne Williams, Ph.D.

Director  
*Stanford Center for  
Precision Mental Health & Wellness*

'Vision for the Future'



## PANEL DISCUSSION

Ruth O'Hara, Ph.D.

Co-Director  
*Stanford Center for  
Precision Mental Health & Wellness*

Panel Discussion Including All Speakers





# RESEARCH NEWS



## Stanford Medicine study reveals why we value things more when they cost us more

*It may not be smart, but we value something more if we've put a lot of sweat into it. Neuroscientists may have figured out the biochemical basis of why.*

By Bruce Goldman, senior science writer in the Stanford Medicine Office of Communications

Highlighting the findings in a recent publication, 'Striatal dopamine integrates cost, benefit, and motivation,' the Stanford article describes the connection between what economists call "sunk costs" and its affects on our behavior in ways that can be irrational.

"We make fallacious decisions based on what we've invested in something, even if the probability of actually gaining an objective advantage from it is zero," said assistant professor of psychiatry and behavioral science Neir Eshel, MD, PhD. "And it's not just us. This has been shown in animals across the animal kingdom."

A few years ago, Eshel, his then-postdoctoral adviser Rob Malenka, MD, PhD, the Nancy Friend Pritzker Professor in Psychiatry and Behavioral Sciences, and some Stanford Medicine colleagues began conducting experiments to learn more about wanting versus liking and what, if any, role dopamine secretion in the brain plays in each of these states.

To learn more about the possible neural mechanism for the longstanding psychological observation that we value rewards more if we worked harder for them, click the link [here](#).

## Novel Screening Tool and Recovery Program May Help Reduce Mental Health Problems After Trauma

*Two new studies address an American College of Surgeons guideline for trauma centers to screen and address mental health.*

By Dan Hamilton and Sheila Lai

Key Takeaways:

- A new mental health screening tool accurately predicts mental health outcomes for hospitalized trauma patients.
- To be sustainable, mental health screening and recovery programs should be tailored to each trauma center, with the engagement of all stakeholders, a related study finds.
- Studies shed light on the need for trauma centers to provide injured patients with mental health resources, such as online education, support, and referrals to mental healthcare providers when needed.

A novel screening tool helps to identify hospitalized trauma patients at high risk for later mental health problems, and an emotional recovery program for trauma patients is feasible, according to two studies published in the *Journal of the American College of Surgeons (JACS)*.

At least one in five Americans hospitalized after traumatic injury develops posttraumatic stress disorder (PTSD), depression, and/or other psychiatric disorders. However, most U.S. trauma centers report not routinely screening trauma patients for mental health problems, a 2022 survey found. Last year, the American College of Surgeons Committee on Trauma began requiring ACS-verified trauma centers to routinely screen trauma patients for mental health risks and to refer affected patients to mental healthcare practitioners.

"Early responses to trauma do not accurately predict who will develop mental health problems," said Eve Carlson, PhD, a clinical psychologist researcher with the National Center for PTSD and lead author of a study published in *JACS* that described the development and initial performance of a novel mental health risk screen for hospitalized patients.

Click [here](#) to read more.

# The Academy of Consultation-Liaison Psychiatry Announces Three of the Top Awards for 2023

## Dr. Gen Shinozaki receives the Wayne Katon Research Award

Gen Shinozaki, MD, FACLP, Associate Professor of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, is the recipient of the Academy of Consultation-Liaison Psychiatry (ACLP) Wayne Katon Research Award. Dr. Shinozaki was selected by the Academy's Research and Evidence-Based Practice Committee. He was presented with his award by Chris Celano, MD, FACLP (pictured right).

In addition to the award, Dr. Shinozaki gave his award plenary lecture at the ACLP Annual Meeting in Austin, Texas last month (pictured below). The talk was widely attended, reaching record-breaking attendance with over 1,400 in the audience. Shinozaki shared his work on EEG detection of delirium and epigenetic investigations. He acknowledged the contributions of his mentees in addition to thanking his mentors that have helped guide him through his research career.



Dr. Shinozaki expressed his excitement and drive to continue his research endeavors, helping patients with delirium. Click below to learn more.

**CLICK HERE**





# Research.com Best Female Scientists in the United States 2023 Ranking

The 2nd edition of *Research.com ranking of top female scientists in the United States* is based on metrics acquired from a wide range of bibliometric sources including OpenAlex and CrossRef on 21-12-2022. Position in the ranking is based on a scientist's general H-index.

## Congratulations to This Year's Named Stanford Female Scientists!



Zhenan Bao, PhD  
Chemical Engineering



Helena C. Kraemer, PhD  
Psychiatry & Behavioral Sciences



Daphne Koller, PhD  
Computer Science



Carolyn R. Bertozzi, PhD  
Chemistry



Cornelia Weyand, MD, PhD  
Med-Immunology & Rheumatology



Carol Dweck, PhD  
Psychology



Uta Franke, MD  
Genetics and Pediatrics



Risa Wechsler, PhD  
Physics



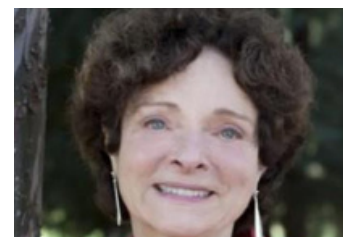
Fei-Fei Li, PhD  
Computer Science



Edith Sullivan, PhD  
Psychiatry & Behavioral Sciences



Marcia Stefanick, PhD  
Med-Stanford Prevention Res. Ctr



Helen Blau, PhD  
Microbiology & Immunology



Alice Whittemore, PhD  
*Epidemiology & Population Health*



Abby King, PhD  
*Epidemiology & Population Health*



Leonore Herzenberg, D.Sc  
*Genetics Flow Cytometry*



Renata Kallosh, PhD  
*Physics*



Linda Darling-Hammond, EdD  
*Graduate School of Education*



Gretchen C. Daily, PhD  
*Biology*



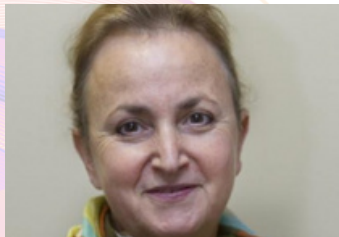
Leanne Williams, PhD  
*Psychiatry & Behavioral Sciences*



Jennifer Widom, PhD  
*Computer Science*



Maria Grazia Roncarolo, MD  
*Pediatrics - Stem Cell Transplantation*



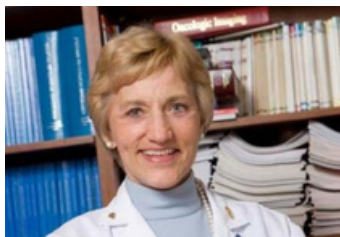
Daria Mochly-Rosen, PhD  
*Chemical and Systems Biology*



Hazel Markus, PhD  
*Psychology*



Esther John, PhD  
*Epidemiology & Population Health*



Sarah Donaldson, MD  
*Radiation Oncology - Rad. Therapy*



Katherine M. Flegal, PhD  
*Stanford Prevention Research Ctr*



Sharon Hunt, MD  
*Med - Cardiovascular Medicine*



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 **Stanford Center for Precision  
Mental Health and Wellness**



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# Scholarly Publications

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## [Prenatal and childhood exposure to organophosphate pesticides and functional brain imaging in young adults.](#)

Sagiv SK, Baker JM, Rauch S, Gao Y, Gunier RB, Mora AM, Kogut K, Bradman A, Eskenazi B, Reiss AL. Environ Res. 2023 Nov 26;117756. doi: 10.1016/j.envres.2023.117756. PMID: 38016496

## [Striatal dopamine integrates cost, benefit, and motivation.](#)

Eshel N, Toupponse GC, Wang AR, Osterman AK, Shank AN, Groome AM, Taniguchi L, Cardozo Pinto DF, Tucciarone J, Bentzley BS, Malenka RC. Neuron. 2023 Nov 16;S0896-6273(23)00843-7. doi: 10.1016/j.neuron.2023.10.038. PMID: 38016471

## [Addressing Access to Care in Diverse Older Adult Populations Using Information and Communication Technologies.](#)

Gould CE, Hicken BL, Freytag JJ. Clin Gerontol. 2024 Jan-Dec;47(1):1-3. doi: 10.1080/07317115.2023.2262887. Epub 2023 Nov 26. PMID: 38007623

## [Prevalence and associations of poor mental health in the third year of COVID-19: U.S. population-based analysis from 2020 to 2022.](#)

Kim J, Linos E, Rodriguez CI, Chen ML, Dove MS, Keegan TH. Psychiatry Res. 2023 Nov 20;330:115622. doi: 10.1016/j.psychres.2023.115622. PMID: 38006717

## [The Development of a Novel Suicide Postvention Healing Model for Muslim Communities in the United States of America.](#)

Awaad R, Hussein A, Durrani Z, Shareef S. J Relig Health. 2023 Nov 25. doi: 10.1007/s10943-023-01949-7. PMID: 38006521

## [Prospective association of occupational and leisure-time physical activity with orthostatic blood pressure changes in older adults.](#)

Kujawska A, Kujawski S, Dani M, Miglis MG, Hallman DM, Fudim M, Soysal P, Husejko J, Hajec W, Skierkowska-Kruszyńska N, Kwiatkowska M, Newton JL, Zalewski P, Kędziora-Kornatowska K. Sci Rep. 2023 Nov 24;13(1):20704. doi: 10.1038/s41598-023-46947-7. PMID: 38001151

## [Dorsomedial and preoptic hypothalamic circuits control torpor.](#)

Yamaguchi H, Murphy KR, Fukatsu N, Sato K, Yamanaka A, de Lecea L. Curr Biol. 2023 Nov 14;S0960-9822(23)01514-2. doi: 10.1016/j.cub.2023.10.076. PMID: 37992720

## [Adjunctive tonic motor activation enables opioid reduction for refractory restless legs syndrome: a prospective, open-label, single-arm clinical trial.](#)

Buchfuhrer MJ, Roy A, Rodriguez S, Charlesworth JD. BMC Neurol. 2023 Nov 21;23(1):415. doi: 10.1186/s12883-023-03462-6. PMID: 37990163

## [Genomic data resources of the Brain Somatic Mosaicism Network for neuropsychiatric diseases.](#)

Garrison MA, Jang Y, Bae T, Cherskov A, Emery SB, Fasching L, Jones A, Moldovan JB, Molitor C, Pochareddy S, Peters MA, Shin JH, Wang Y, Yang X, Akbarian S, Chess A, Gage FH, Gleeson JG, Kidd JM, McConnell M, Mills RE, Moran JV, Park PJ, Sestan N, Urban AE, Vaccarino FM, Walsh CA, Weinberger DR, Wheelan SJ, Abyzov A; BSMN Consortium. Sci Data. 2023 Nov 20;10(1):813. doi: 10.1038/s41597-023-02645-7. PMID: 37985666

## [The murine meninges acquire lymphoid tissue properties and harbour autoreactive B cells during chronic Trypanosoma brucei infection.](#)

Quintana JF, Sinton MC, Chandrasegaran P, Kumar Dubey L, Ogunsoola J, Al Samman M, Haley M, McConnell G, Kuispond Swar NR, Ngoyi DM, Bending D, de Lecea L, MacLeod A, Mabbott NA. PLoS Biol. 2023 Nov 20;21(11):e3002389. doi: 10.1371/journal.pbio.3002389. PMID: 37983289



**[An Explainable Geometric-Weighted Graph Attention Network for Identifying Functional Networks Associated with Gait Impairment.](#)**

Nerrise F, Zhao Q, Poston KL, Pohl KM, Adeli E. Med Image Comput Comput Assist Interv. 2023 Oct;14221:723-733. doi: 10.1007/978-3-031-43895-0\_68. Epub 2023 Oct 1. PMID: 37982132

**[Association between self-reported falling risk and risk of hospitalization for patients with chronic obstructive pulmonary disease.](#)**

Ritchev KC, Yohannes AM, Locke ER, Chen S, Simpson T, Battaglia C, Trivedi RB, Swenson ER, Edelman J, Fan VS. Respir Med. 2023 Nov 18;220:107466. doi: 10.1016/j.rmed.2023.107466. PMID: 37981244

**[The Negative Effects of Travel on Student Athletes Through Sleep and Circadian Disruption.](#)**

Heller HC, Herzog E, Brager A, Poe G, Allada R, Scheer F, Carskadon M, de la Iglesia HO, Jang R, Montero A, Wright K, Mouraine P, Walker MP, Goel N, Hogenesch J, Van Gelder RN, Kriegsfeld L, Mah C, Colwell C, Zeitzer J, Grandner M, Jackson CL, Roxanne Prichard J, Kay SA, Paul K. J Biol Rhythms. 2023 Nov 18:7487304231207330. doi: 10.1177/07487304231207330. PMID: 37978840

**[Addressing Access to Care in Diverse Older Adult Populations Using Information and Communication Technologies.](#)**

Gould CE, Hicken BL, Freytag JJ. Clin Gerontol. 2024 Jan-Dec;47(1):1-3. doi: 10.1080/07317115.2023.2262887. Epub 2023 Nov 26. PMID: 38007623

**[Brain Volume in Fetal Alcohol Spectrum Disorders Over a 20-Year Span.](#)**

Pfefferbaum A, Sullivan EV, Pohl KM, Bischoff-Grethe A, Stoner SA, Moore EM, Riley EP. JAMA Netw Open. 2023 Nov 1;6(11):e2343618. doi: 10.1001/jamanetworkopen.2023.43618. PMID: 37976065

**[Effectiveness of Prefrontal Transcranial Magnetic Stimulation for Depression in Older US Military Veterans.](#)**

Walker NC, Philip NS, Kozel FA, Yesavage JA, Madore MR. Am J Geriatr Psychiatry. 2023 Oct 22:S1064-7481(23)00456-6. doi: 10.1016/j.jagp.2023.10.010. PMID: 37973487

**[Patient Engagement and Provider Effectiveness of a Novel Sleep Telehealth Platform and Remote Monitoring Assessment in the US Military: Pilot Study Providing Evidence-Based Sleep Treatment Recommendations.](#)**

Wickwire EM, Collen J, Capaldi VF, Williams SG, Assefa SZ, Adornetti JP, Huang K, Venezia JM, Jones RL, Johnston CW, Thomas C, Thomas MA, Mounts C, Drake CL, Businelle MS, Grandner MA, Manber R, Albrecht JS. JMIR Form Res. 2023 Nov 16;7:e47356. doi: 10.2196/47356. PMID: 37971788

**[Once-nightly sodium oxybate \(FT218\) improved symptoms of disrupted nighttime sleep in people with narcolepsy: a plain language summary.](#)**

Roth T, Thorpy MJ, Kushida CA, Horsnell M, Gudeman J. J Comp Eff Res. 2023 Nov 16:CER. doi: 10.57264/cer-2023-0133. PMID: 37971303

**[The 8th International RASopathies Symposium: Expanding research and care practice through global collaboration and advocacy.](#)**

Pierpont EI, Bennett AM, Schoyer L, Stronach B, Anschutz A, Borrie SC, Briggs B, Burkitt-Wright E, Castel P, Cirstea IC, Draaisma F, Ellis M, Fear VS, Frone MN, Flex E, Gelb BD, Green T, Gripp KW, Khoshkhoo S, Kieran MW, Kleemann K, Klein-Tasman BP, Kontaridis MI, Kruszka P, Leoni C, Liu CZ, Merchant N, Magoulas PL, Moertel C, Prada CE, Rauen KA, Roelofs R, Rossignol R, Sevilla C, Sevilla G, Sheedy R, Stieglitz E, Sun D, Tiemens D, White F, Wingbermuehle E, Wolf C, Zenker M, Andelfinger G. Am J Med Genet A. 2023 Nov 15. doi: 10.1002/ajmg.a.63477. PMID: 37969032

**[Eurycoma longifolia \(Tongkat Ali\) enhances wakefulness during active periods but facilitates sleep during resting periods in C57BL/6 mice.](#)**

Ono T, Nishino N, Iwai Y, Iwai Y, Sakai N, Kuroki Y, Nishino S. Eur J Neurosci. 2023 Nov 15. doi: 10.1111/ejn.16186. PMID: 37968729

**[Cognitive and Emotional Responses to COPD Exacerbations and Patterns of Care Seeking.](#)**

Locke ER, Thomas RM, Simpson TL, Fortney JC, Battaglia C, Trivedi RB, Gylys-Colwell J, Swenson ER, Edelman JD, Fan VS. Ann Am Thorac Soc. 2023 Nov 15. doi: 10.1513/AnnalsATS.202303-287OC. PMID: 37966313