

#### PRESENTS:



A FREE ALZHEIMER'S RESEARCH FORUM

#### SAIzheimer's | SAN DIEGO

## Welcome!



Eugenia Welch President & CEO















### Thank you!



Keck School of Medicine of USC

Alzheimer's Therapeutic Research Institute









VITALZ: Volunteers in Touch

Virtual Support Groups

Respite ALZ Companions



CA Alzheimer's SAN DIEGO

FREE services and support!

www.alzsd.org | 858.492.4400

Online Education & Training

Local Research



Social Activities & Outings



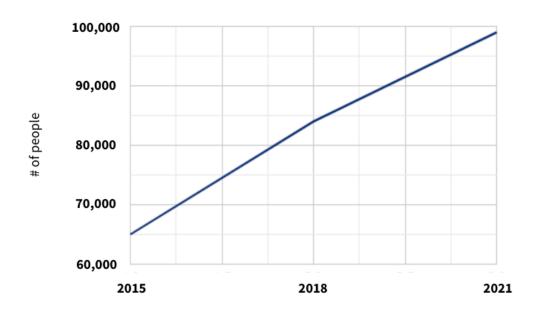
Volunteer Tech Team



#### CAlzheimer's | SAN DIEGO



## people in San Diego County living with dementia



#### Join us!



MOTORCYCLE RIDE TO BENEFIT
SAN DIEGO

July 10, 2021



Alzheimer's | SAN DIEGO

October 16, 2021

#### SAlzheimer's | SAN DIEGO



**Darlene Marcos Shiley** 





#### PRESENTS:

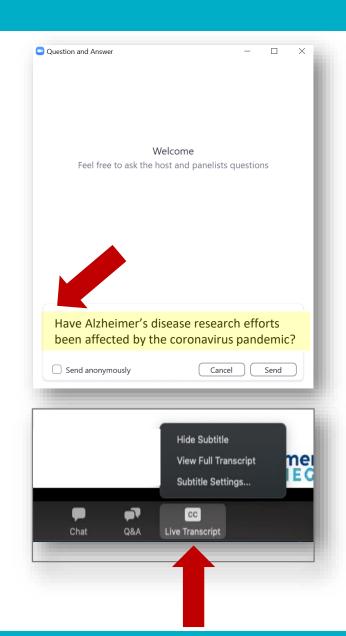


A FREE ALZHEIMER'S RESEARCH FORUM

#### SAlzheimer's | SAN DIEGO

#### About the program

- All attendees have been muted
- This program is being recorded
- Program materials will be emailed
- Use "Q&A" to submit questions
- A live "closed caption" transcript of this program is available



#### SAlzheimer's | SAN DIEGO



Alzheimer's San Diego's Volunteer Tech
Team is here to help! Call our office
(858-492-4400) or send a message in the
webinar "chat" if you need technical
assistance during the program.



Amy Abrams, MSW/MPH Moderator Director of Education Alzheimer's San Diego



Dr. Paul S. Aisen

Director

USC Alzheimer's Therapeutic

Research Institute



Dr. Jim Brewer

Director

UCSD's Shiley-Marcos

Alzheimer's Disease

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Dr. Jerold Chun
Senior Vice President,
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**Dr. Brent Mausbach** *Clinical Psychologist*UC San Diego Health



**Dr. Michael Plopper** *Medical Director*Sharp Clinical Research
Center



Dr. Robert Rissman
Associate Professor of
Neurosciences
UCSD Center for
Neurodegeneration &
Experimental
Neuropathology



**Dr. Sherry Soefje**COO and Medical Director
Excell Research

#### Lake Elsinore Anaheim Wine Country Temecula Valley Mission Viejo Fallbrook Bonsall COUNTY To Orange County & Los Angeles Valley Center COUNTY Escondido Marcos **Encinitas** Rancho Santa Fe Ramona Solana Beach Poway Ranch Tierrasanta Pacific Beach Old Town U.S.A.

## Dementia's impact in San Diego County

**≈100,000** residents of San Diego County 55+ are living with dementia.

3<sup>rd</sup> leading cause of death

By 2030, there will be over **115,000** San Diegans living with dementia, requiring nearly 300,000 caregivers to provide over 333 million hours of unpaid care annually.

Source: County of San Diego Health and Human Services Agency

#### Dementia is not a specific disease

Between 60-80% of dementias are believed to be caused by Alzheimer's disease

#### Non-Alzheimer's dementias:

- Lewy Body dementia
- Vascular cognitive impairment
- Frontotemporal disorders
- Other dementias

#### Risk factors for dementia

Age

Genetics and family history

Sex

Education level

Ethnic disparities in the U.S.

Head trauma

No known environmental risk factors or causes

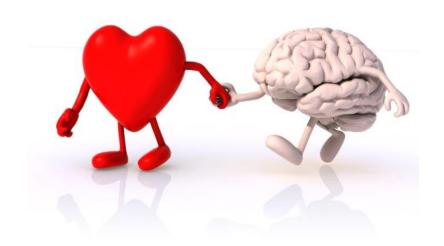
Health factors:
hypertension, heart
disease, diabetes,
hearing loss

Down syndrome

#### Staying healthy

- Diet and nutrition
- Exercise and movement
- Cognitive activity
- Social connection
- Sleep and relaxation

What's good for your heart is good for your brain.



# The needs of people living with dementia, family caregivers, and the community at large

- Information
- Emotional support
- Respite
- Social connection
- Safety resources







- Information and resources
- Printable tip sheets
- Video library

alzsd.org



- Information and referral
- Care consultation
- Emotional support

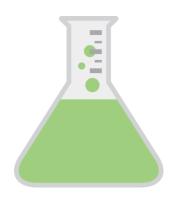
(858) 492-4400 info@alzsd.org



#### SAIzheimer's SAN DIEGO



A groundbreaking local initiative that combines San Diego's resources in order to accelerate research and drug discovery projects to find a cure.



When you join a clinical trial, you contribute to critical research that could change the course of Alzheimer's disease treatment and cure.















## High Throughput Screening Studies for Novel N-Terminal CRFR1 Antagonists for AD

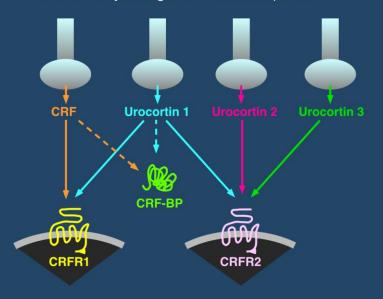
Robert Rissman, PhD
Associate Professor of Neurosciences
Director, ADCS Biomarker Core
Director, ADRC Neuropath & Biomarker Cores
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Director, ATRI Biomarker Unit Director, National Clinical Trial Repository for AD University of Southern California

Principal Investigator and Research Biologist VA San Diego Healthcare System

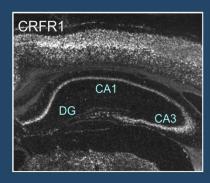
## Corticotropin-Releasing Factor Receptor 1 (CRFR1) as a target for AD

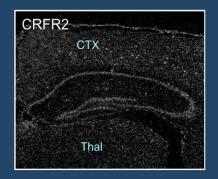
CRF Family of Ligands and Receptors



#### CRF System Involvement in AD?

- CRF-immunoreactivity is reduced eary in AD
- Occurs in areas vulnerable to AD pathology
- Abnormal CRF neurites surround Aβ plaques
- CRF binding upregulated in vulnerable cortical areas



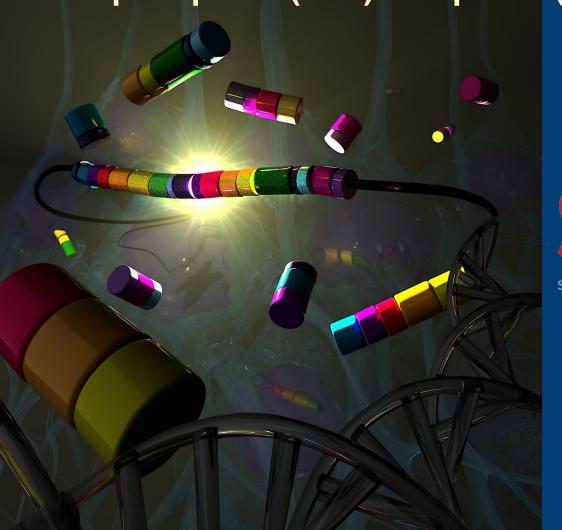


## Stress and CRF Signaling in Alzheimer's Disease: Extension to Mouse Model of AD

- CRF antagonist treatment can retard/limit development of plaque pathology in mouse AD model independent of stress experience
  - also lessen β-amyloid production, cognitive impairment
  - similar, though more subtle effects seen in older animals
- CRFR1 antagonists target both pathological hallmarks of AD
- CRFR1 is a candidate target for intervention in AD
  - Small molecule CRFR1 antagonists have been tested in human trials.
  - Route of administration may be an important determinant of efficacy

#### C4C Update

Reverse transcriptase inhibitors and sphingosine 1-phosphate (S1P) receptor 2 (S1P<sub>2</sub>) antagonists



Jerold Chun, M.D., Ph.D.

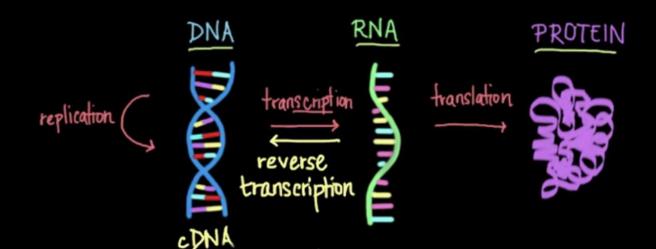


Medical Discovery Institute

La Jolla, CA USA jchun@SBPdiscovery.org

## Reverse transcriptase inhibitors to reduce AD genomic complementary DNAs: gencDNAs

AD gencDNAs are produced by reverse transcriptases (RTs): this C4C goal is to find inhibitors of human brain RTs

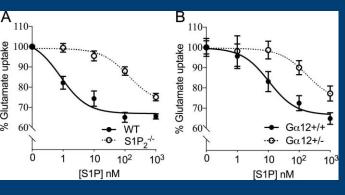


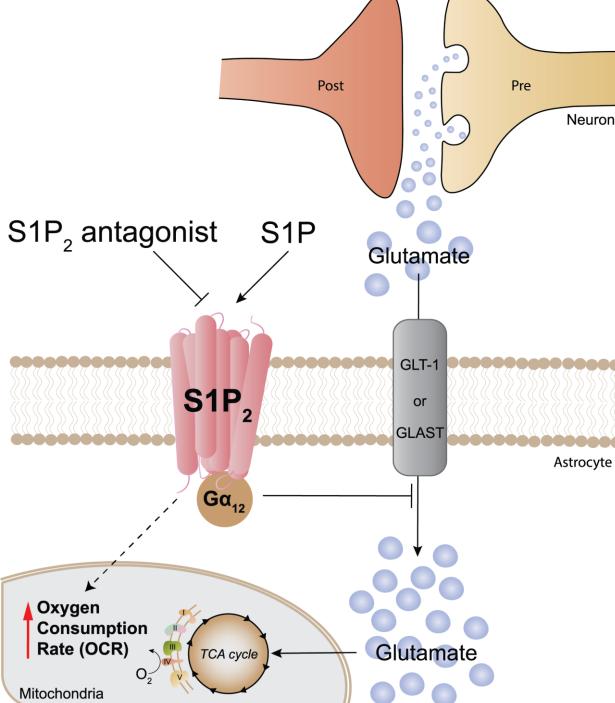
-retroviruses (HIV)
gencDNAs produced by somatic gene recombination

involve myriad normal or pathogenic gene forms in AD

#### S1P<sub>2</sub> antagonists

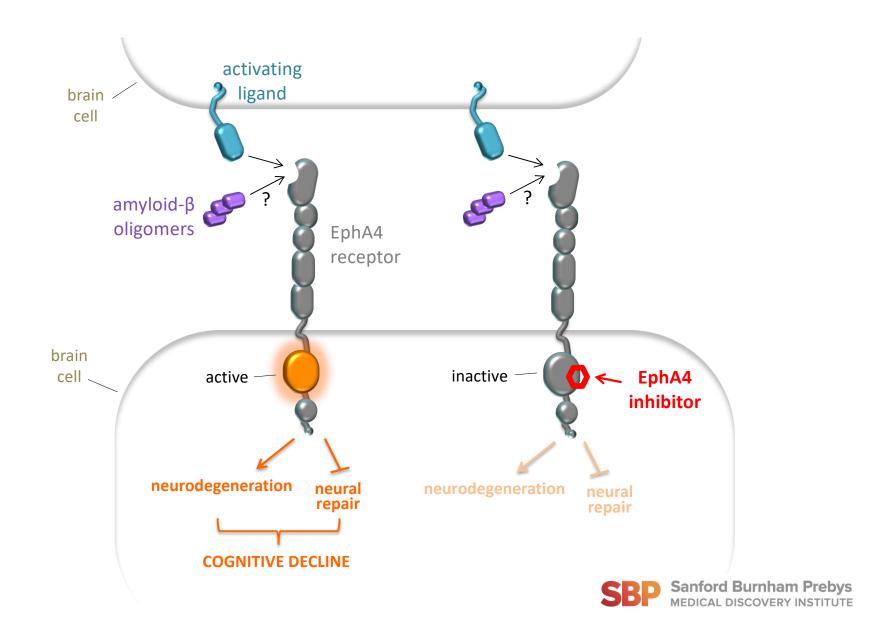
This C4C goal is to reduce neurodegeneration in AD by decreasing glutamate neurotoxicity by inhibiting S1P<sub>2</sub>





eNeuro 2021, in press

#### The EphA4 Receptor as a Novel Target against Alzheimer's



## Ask the experts



Amy Abrams, MSW/MPH



Dr. Paul S. Aisen



Dr. Jim Brewer



Dr. Jerold Chun



Dr. Brent Mausbach



Dr. Michael Plopper



Dr. Robert Rissman



Dr. Sherry Soefje



















#### THANK YOU FOR JOINING US!



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