

Appel's Bulletin



Vol. 2

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News

Seminars on Diversity, Equity, and Inclusions



Mr. Marshall - Director of Upward Bound Math Science at the University of Pennsylvania, Equity and Access Programs



Dr. Louise Hainline - Administrator, Faculty Member and Program Director committed to fostering STEM diversity

As part of the Appel Institute's ongoing efforts to increase and support diversity, equity, and inclusion, the Gan lab recently invited Dr. Louise Hainline from Brooklyn College and Edward H. Marshall from the University of Pennsylvania.

Dr. Hainline has served for many years as the Brooklyn College's Dean for Research and Graduate Studies and currently leads several federally funded grants to provide opportunities for under-represented students to pursue research careers in STEM. She gave an overview of these programs in her talk titled "Maximizing Access to Research Careers (MARC) to increase URM in the sciences." We also discussed ways for Appel labs to get involved with these programs, such as hosting students in these programs and holding events such as "Meet a Scientist" so students can picture themselves in research careers.

Mr. Marshall is the Director of Upward Bound Math Science at the University of Pennsylvania, Equity and Access Programs. Through Upward Bound Math Science, he strives to strengthen the scientific foundations of motivated high school students to matriculate and succeed in college. His seminar covered the problems of the leaky STEM pipeline starting early in the education system. He also addressed our questions on how to best mentor students by starting with the key knowledge such as how to read a scientific paper and the need for resources to make these programs successful.

Our discussions tackled a challenging topic, and we thank both of our guests for sharing their expertise! We look forward to continuing conversations with Dr. Hainline and Mr. Marshall and implementing their advice in how we shape our intern program.

If you would like to be informed of future diversity, equity, and inclusion events, please contact Eileen Ruth Torres (est4003@med.cornell.edu).

News

New Developments in Dementia Research Symposium



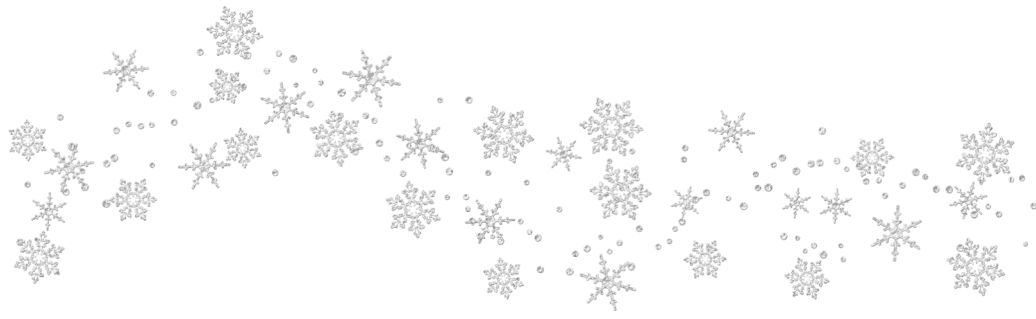
Participants in Eighth Annual Appel Alzheimer's Disease Research Institute Symposium. Top, left to right: Dr. Matthew Fink, Dr. Bruce Miller, Dr. Anna Orr. Bottom, left to right: Dr. Jonathan Kipnis, Dr. Manu Sharma, Dr. Li Gan.

This year's program featured Dr. Jonathan Kipnis, director of the Center for Brain Immunology and Glia (BIG), the Alan A. and Edith L. Wolff Distinguished Professor of Pathology and Immunology, and a professor of neurology, neuroscience and neurosurgery at Washington University School of Medicine in St. Louis; Dr. Anna G. Orr and Dr. Manu Sharma, both assistant professors of neuroscience in Weill Cornell Medicine's Feil Family Brain and Mind Research Institute and members of the Appel Institute; and Dr. Bruce L. Miller, the A.W. and Mary Margaret Clausen Distinguished Professor in Neurology and director of the Memory and Aging Center in the Weill Institute for Neurosciences at the University of California, San Francisco, and co-director of the Global Brain Health Institute.

We thank you for your attendance and we are looking forward for your participation in 2021.

News

Burré's Lab



Aniv Brukner received the Hebrew University scholarship for female postdocs

Aniv received the Oasis and Taube Schlomiuk award for excellent PhD work

Dr. Joseph Chiaro, Pediatrics & Pediatric Neurology Resident, New York Presbyterian/Weill Cornell Medicine, has joined the lab to work on developing mouse models of STXBP1 encephalopathies and testing therapeutics strategies in vivo.

Recent publications in Appel

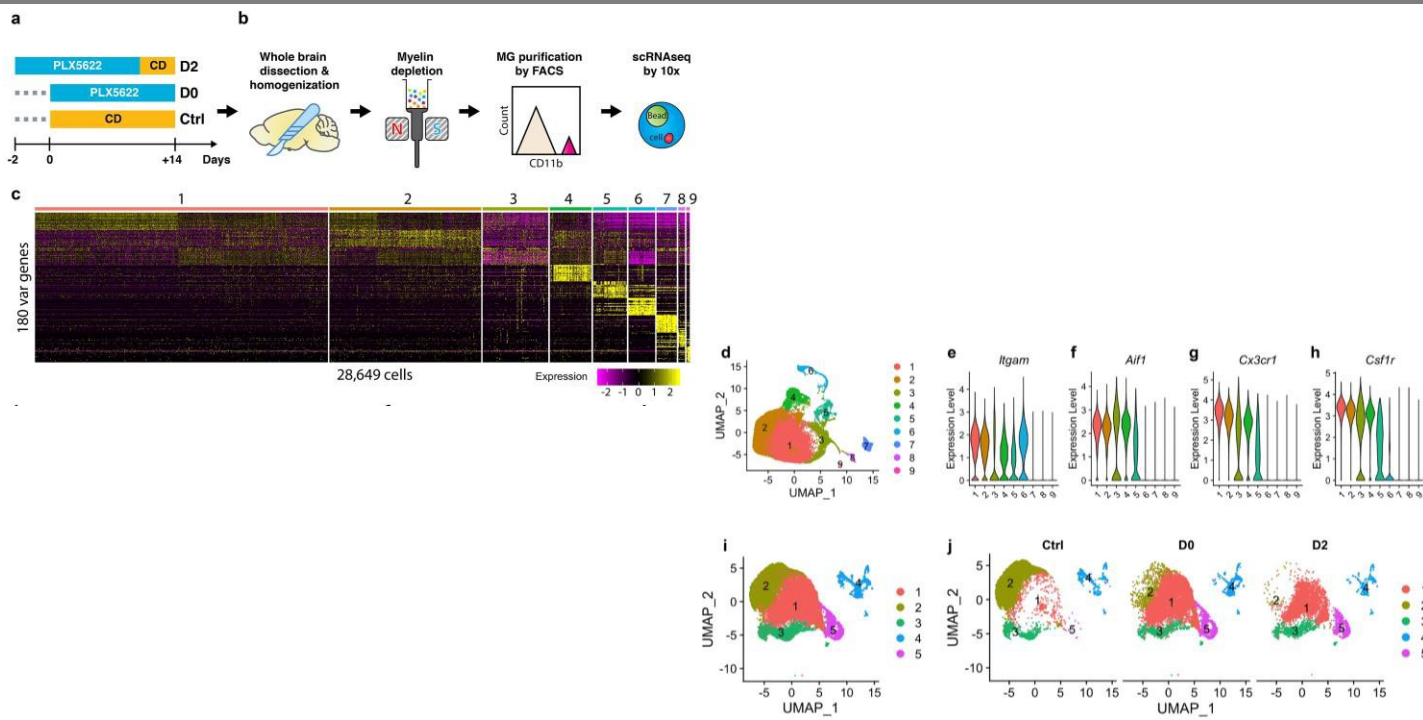
A MAC2-positive progenitor-like microglial population is resistant to CSF1R inhibition in adult mouse brain



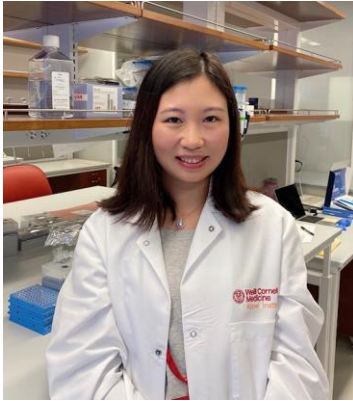
Lihong Zhan, Li Fan, Lay Kodama, Peter Dongmin Sohn, Man Ying Wong, Gergey Alzaem Mousa, Yungui Zhou, Yaqiao Li, Li Gan[✉]
Gladstone Institute of Neurological Diseases, United States; Helen and Robert Appel Alzheimer's Disease Institute, Brain and Mind Research Institute, Weill Cornell Medicine, United States; Neuroscience Graduate Program, University of California, San Francisco, United States; Medical Scientist Training Program, University of California at San Francisco, United States

Research Article · Oct 15, 2020

Microglia are the resident myeloid cells in the central nervous system (CNS). The majority of microglia rely on CSF1R signaling for survival. However, a small subset of microglia in mouse brains can survive without CSF1R signaling and reestablish the microglial homeostatic population after CSF1R signaling returns. Using single-cell transcriptomic analysis, we characterized the heterogeneous microglial populations under CSF1R inhibition, including microglia with reduced homeostatic markers and elevated markers of inflammatory chemokines and proliferation. Importantly, MAC2/*Lgals3* was upregulated under CSF1R inhibition, and shared striking similarities with microglial progenitors in the yolk sac and immature microglia in early embryos. Lineage-tracing studies revealed that these MAC2⁺ cells were of microglial origin. MAC2⁺ microglia were also present in non-treated adult mouse brains and exhibited immature transcriptomic signatures indistinguishable from those that survived CSF1R inhibition, supporting the notion that MAC2⁺ progenitor-like cells are present among adult microglia.



Welcome to Appel



Pearly Ye
Research Specialist
Gan's Lab

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My name is Pearly Ye, and I have been working in the scientific research field for over fifteen years. Working in this field has always been very interesting and fulfilling to me. Prior to joining Dr Gan's lab, I worked at The Rockefeller University in Dr Jeffrey Ravetch's immunology lab as a Research Technician. Dr Ravetch's Lab investigates the complex biology of antibody-Fc receptor interactions and their roles in normal immune function and disease. I also worked in Dr Nathaniel Heintz's Gene Expression Nervous System Atlas project. My goal in Gan lab is to assist the Scientists in successfully completing their research and contribute to finding novel cures. When I'm not in the lab, I can be found volunteering at elementary school or exploring local hiking trails.

Welcome to Appel



Dr. Sadaf Amin
Postdoc
Gan's Lab

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I completed my BS and MS at the University of Tehran and received my PhD from Weill Cornell Medical College where I worked on disease modeling and drug discovery in diabetes using human pluripotent stem cells. My thesis work got me interested in the role of cellular stress pathways in aging and age-related diseases, and I moved to UPenn to study the molecular mechanisms of chronic inflammation in senescence and aging. In the Gan lab, I'm focused on studying the contribution of these pathways to the pathogenesis of neurodegenerative disease. When not in lab, I enjoy cooking and gardening and cheering for my favorite soccer team.

Welcome to Appel



Dr. Ravi Kumar Nagiri

Postdoc

Sinha's Lab BB-1669

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I am a synthetic medicinal chemist at the Helen and Robert Appel Alzheimer's Disease Research Institute, Brain and Mind Research Institute, Weill Cornell Medicine. I have completed my post-graduation in univ. college of science, Osmania University, Hyderabad, India. I received my doctorate in Organic and Medicinal Chemistry in 2019 from CSIR-Indian Institute of Chemical Technology, Hyderabad, India. My Ph.D. thesis entitled "Synthetic and Mechanistic Studies of Novel Pyrazolo[3,4-b]Pyridine Annulated Heterocycles and Their Biological Activity".

During my Ph.D. program, my research focused mainly on synthesis of trifluoromethyl substituted pyridine derivatives which have great importance towards the medicinal properties and is active pharmacophore in many drugs. I have prepared a library of annulated CF₃-pyridine compounds and were screened for biological activity, and the results are published in internationally reputed journals. I also worked on the development of novel fluorination methodologies and published in good journals (EJOC). I have gained extensive research experience in various fields of Organic and Medicinal Chemistry.

Goal: As a Med Chem lab, we focus small molecules that interact with neurodegenerative disease targets of interest. I will be synthesizing novel compounds and prodrugs and evaluate these compounds by performing in vitro assays in collaboration with other members of the Sinha and Gan laboratories.

Creativity in Appel

Photography

By Wenjie Luo

wel2009@med.cornell.edu

***2020 Spring:
the world surrounding us suddenly lost its color.***



Creativity in Appel

Photography

By Wenjie Luo

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***2020 Summer:
we were waiting, with patience, love and hope.***



Creativity in Appel

Photography

By Wenjie Luo

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***2020 Fall:
we have a color nature with joy.***



Creativity in Appel

Poem

by Guillermo Coronas
guc9014@med.cornell.edu
December 2014



New Haven, CT. 2014

Delirio invernal (Spanish)

Nevaba en aquella mañana,
nevaba en mi taciturno corazón,
la neblina acuchillaba mis entrañas,
cual puñaladas taurinas,
salpicando lágrimas de amor.

Copos de nieve atizando mis sentidos,
Lentejuelas albinas agrietando mi piel,
Mis labios hipotérmicos reclamaban
consuelo,
En aquella esquina en donde te
encontré.

Avon y Foster fueron los testigos,
Tus pupilas de fuego derritiendo mis
heridas,
Rizos dorados meciéndose en tu cuello.
Calentando poco a poco mi tormenta
invernal.

Cuánto deseo con fundirme en tus labios,
beberme el mezcal de tu boca delirante,
y embriagarme beso a beso hasta
volverme adicto a ti.

Wintry delirium

It was snowing on that morning,
It was snowing in my saturnine heart,
The fog stabbed me in my soul,
Like bull stabs,
Dropping tears of love.

Snowflakes burning my mind,
White sequins cracking my skin,
My hypothermic lips reclaimed
consolation,
On that corner which I found
you.

Avon and Foster were our witnesses,
Your pupils of fire melting my
wounds,
Golden curls swinging around your neck,
Little by little warming my winter
storm.

I really want to kiss your lips,
And drink the mezcal of your mouth,
And kiss by kiss get drunk until be
addicted to you.

Creativity in Appel

Poem

by Guillermo Coronas
guc9014@med.cornell.edu
December 2014

Mis manos nerviosas lloran tu desaire,
Huesos temblorosos sacuden mi ser,
Sálvame del dolor en esta vida
vagabunda,
Cura con tus brazos mipordiosera
soledad.

Segundo a segundo te vas de mi lado,
El autobús de la vida llega por ti,
Sueños enteros se desvanecen con la
escharcha,
Y mi cuerpo congelado estalla en mil
pedazos.

My nervous hands crying your
indifference,
My shaking bones shake my soul,
Save me from pain in this homeless life,
Save me with your arms from loneliness.

Every second you go farther away from
me,
The bus of life arrives punctual for you,
Whole dreams vanish with the frost,
And my frozen body explodes in
thousand pieces.

Comment: I wrote this poem while waiting for the Yale shuttle at the corner of Avon St. and Foster St. in New Haven, CT. It was snowing heavily, and the shuttle was delayed. This poem was written originally in Spanish and was published in "La Madrugada" Yale's magazine in 2014.

Happy Birthday



December
6th Gloria
15th Sadaf

January
23rd Katie



Puzzle

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D | I | T | R | C | O | J | T | G | P | A | D |
| N | N | A | B | F | W | T | W | X | P | E | S |
| M | S | L | X | L | V | N | H | O | N | E | E |
| U | U | T | Y | T | O | R | P | D | R | T | N |
| L | L | I | D | T | X | T | R | O | S | E | I |
| L | A | G | M | R | O | I | T | E | U | L | L |
| E | N | S | W | S | T | O | K | S | M | O | A |
| B | X | V | I | E | N | L | Z | O | A | M | N |
| E | E | S | S | I | B | E | J | C | L | E | E |
| R | G | C | N | B | V | L | Y | U | A | R | R |
| E | M | Q | R | N | K | J | X | L | H | E | D |
| C | A | O | S | Z | P | O | G | G | T | F | A |

10 WORDS:

ADRENALINE, CEREBELLUM,
GLUCOSE, SEROTONIN, THALAMUS,
APOPTOSIS, DENDRITES, INSULA,
TELOMERE, ULTRASOUND

Safety recommendations

Clean your hands often

Put distance between yourself and other people (at least 6 feet)

Cover your mouth and nose with a mask when around others

Clean and disinfect frequently touched objects and surfaces daily

Collaborations

Would you like to recommend a book, a movie, an inspiring quote?

You can participate! This bulletin is for you.

Please contact: guc9014@med.cornell.edu