



## THE GENETICS

### of Aging-related Neurodegeneration

#### The Sylvan M. Cohen Annual Retreat & Poster Session

On Tuesday, May 23, 2017, the Institute on Aging (IOA) hosted their annual Sylvan M. Cohen Retreat and Poster Session in collaboration with co-sponsors, the Penn Neurodegeneration Genomics Center (PNGC).

The 2017 retreat focused on the ‘Genetics of Aging-related Neurodegeneration’ and for the second year in a row it began with opening remarks from the Dean of the Perelman School of Medicine, J. Larry Jameson, MD, PhD. “I’m mainly here to thank you for your scientific collaboration,” said Dean Jameson. He used this time to express the importance and impact of these contributions to the field of genetics and aging, especially in trying to solve the very complex puzzle of neurodegeneration.

Lectures were presented by Penn’s Gerard (Jerry) D. Schellenberg, PhD, Director of the PNGC, Adam Naj, PhD, Assistant professor of Epidemiology, and Nancy Zhang, PhD, Assistant professor of Statistics. Also joining them was this year’s keynote speaker, Philip De Jager, MD, PhD, Associate Neurologist at Brigham and Women’s Hospital and Associate Professor of Neurology at Harvard Medical School.

As usual, the event concluded with the annual poster session on aging. Prizes were awarded to the top posters in each of the following categories: Basic Science and Clinical Research/Education & Community. See page 2 for the full list of our 2017 poster winners.

For more information on the 2017 Sylvan M. Cohen Annual Retreat and Poster Session, including video highlights and full lectures, visit:

[www.penninstituteonaging.wordpress.com](http://www.penninstituteonaging.wordpress.com)

#### ► Age at Menopause:

Do chemical exposures play a role?

#### ► Exercise & Aging:

Finding the right program for you

#### ► Mark your Calendars!

Save the dates for the IOA’s future 2017/2018 events (pg 3)

The mission of the Institute on Aging at the University of Pennsylvania is to improve the health of older adults by increasing the quality and quantity of clinical and basic research as well as educational programs focusing on normal aging and aging-related diseases across the entire Penn campus.



[www.med.upenn.edu/aging](http://www.med.upenn.edu/aging)



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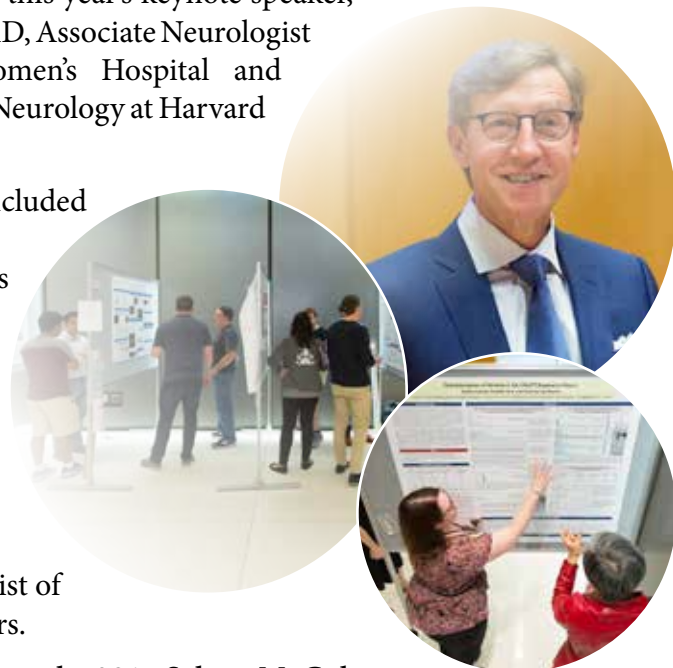
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# POSTER SESSION WINNERS

## Basic Science



### FIRST PLACE:

**“Integrative analysis identifies immune-related enhancers and lncRNAs perturbed by genetic variants associated with Alzheimer’s disease”**

**PRESENTED BY:** Alexandre Amlie-Wolf

**AUTHORS:** Alexandre Amlie-Wolf, Mitchell Tang, Jessica King, Beth Dombroski, Elizabeth Mlynarski, Yi-Fan Chou, Gerard D. Schellenberg, Li-San Wang



### SECOND PLACE:

**“Differential Vulnerability to  $\alpha$ -synuclein Pathology Among Neuronal Subpopulations”**

**PRESENTED BY:** Luna Esteban

**AUTHORS:** Luna Esteban, Dawn M. Riddle, Virginia M.Y. Lee, Kelvin C. Luk

## Clinical Research/Education & Community



### FIRST PLACE:

**“Correlates of Sleep Indices Among Community Dwelling Older Adults Enrolled in a Collaborative Care Management Program”**

**PRESENTED BY:** Ashik Ansar

**AUTHORS:** Ashik Ansar, MD, PhD, Shahrzad Mavandadi, PhD, Kristin Foust, Suzanne DiFilippo, RN, Joel E. Streim, MD, David W. Oslin, MD



### SECOND PLACE:

**“The Impact of Cognitive Reserve and Brain Atrophy on Survival in Neurodegenerative Diseases”**

**PRESENTED BY:** Carrie Caswell

**AUTHORS:** Carrie Caswell, MS, Sharon X. Xie, PhD, Murray Grossman, MD, EdD, Corey T. McMillan, PhD, Lauren M. Massimo, PhD, CRNP

## Through the Eyes of the Caregiver:

Frontotemporal Degeneration (FTD) and the Penn FTD Center

Frontotemporal degeneration (FTD) is the second most common neurodegenerative disease. It can affect a patient’s behavior, personality, or communication and language.

Each year, the Penn FTD Center, directed by Murray Grossman, MD, EdD, hosts an annual FTD Caregivers Conference. This year’s conference, held on Friday, May 12, 2017, welcomed 150 attendees and consisted of a series of lectures covering various topics around the latest research advances on FTD and its related disorders such as Amyotrophic lateral sclerosis (ALS) and Corticobasal degeneration (CBD). It also covers practical caregiving issues such as symptom management, genetic testing options, and respite and support services just to name a few. The conference is a valuable resource for caregivers and family members of those with FTD and provides an outlet for caregivers to connect with other caregivers.

A special highlight at this year’s conference was the premiere of “Through the Eyes of the Caregiver,” a short film sharing the stories of three FTD caregivers whose loved ones are patients at the Penn FTD Center. The goal of this video is to show caregivers and family members of those with FTD that they are not alone in this life-altering process and that there are many support groups and community and medical resources available to them – including many at the Penn FTD Center – to help them every step of the way.

To watch “Through the Eyes of the Caregiver” or to learn more about the Penn FTD Center’s Caregiver Conference, visit: [www.penninstituteonaging.wordpress.com](http://www.penninstituteonaging.wordpress.com) and search “FTD”

## meet the caregivers



### DIANE FEHON

*“The staff at the Penn FTD Center are so kind, understanding and helpful. And they’ve helped me navigate this uncharted territory and I’m just grateful that they’re there. It’s a lifeline for me.”*



### JAMIE ARKING

*“Dr. Grossman and his entire team has been a resource of knowledge and comfort for me and for my family as we battle this disease.”*



### SANDY KARGER

*“If I look back to the first conference I went to 8-9 years ago compared with the last conference, there is a world of difference in the knowledge. That’s not happening everywhere. We are just so lucky that it is here.”*

Watch their full stories at: [www.youtube.com/penninstituteonaging](http://www.youtube.com/penninstituteonaging)

## The 14th Annual Jane Wright Symposium on Parkinson’s Disease

Similarly, Penn Medicine’s Parkinson’s Disease & Movement Disorders Center (PD&MDC) and Udall Center for Parkinson’s Research recently hosted their 14th annual Jane Wright Symposium on Parkinson’s Disease (PD) for patients and caregivers. This conference brings together the local Parkinson’s community to learn about the latest research advances and to make Parkinson’s patients and their loved ones aware of available resources.

To learn more about the Jane Wright Symposium and Parkinson’s disease research and care taking place here at Penn, visit: [www.med.upenn.edu/udall](http://www.med.upenn.edu/udall)

## AGE AT MENOPAUSE:

### Do Chemical Exposures Play a Role?

A recent article in the journal of Environmental Health Perspectives (EHP) explores the possible relationship between menopause and chemical exposures. In general, it is believed that an older age at menopause represents good overall health while early menopause -- menopause occurring before the age of 40 -- represents poorer health and a greater likelihood for premature mortality.

Research suggests that a later age of natural menopause -- as opposed to menopause caused by surgery or medication -- is linked to lower risks of cardiovascular disease, osteoporosis, and other disorders. Likewise, there is evidence that suggests an earlier age at menopause "heightens risks for these same outcomes."

With this in mind, "experts are taking a closer look at how environmental exposures may influence age at menopause and whether exposure-induced changes in menopausal timing put women at greater risk of associated health problems," according to the article.

The exposure most commonly associated with an earlier age of menopause is smoking. "My view is that former smokers may experience a risk of menopause that is earlier than women who never smoked and likely not as accelerated as active -- especially heavy -- smokers," said Penn Medicine's Samantha Butts, MD, MSCE, an associate professor of obstetrics and gynecology at the University of Pennsylvania, quoted in the EHP article. She also explained that other factors such as genetic background, family history, and other medical co-morbidities interact with smoking history of any duration to influence menopausal timing.

Even if you have never smoked, you may still be at risk of being affected by the link between smoking and age at menopause. According to the article, "a review of data from the Women's Health Initiative observational study estimated that non-smoking women exposed to the highest levels of secondhand smoke reached menopause an average of 13 months sooner than nonsmokers who were not exposed to secondhand smoke."

It is no secret that the chemical exposures caused by smoking can increase the chances of many health related problems such as lung cancer, stroke, blood cancer, and heart disease just to name a few, so the increased risk of early menopause should not be shocking -- but why is it that early menopause increases a woman's risk of other diseases? The answer may be due to the decline of estrogen levels. Ellen Gold, PhD, professor of public health sciences at the University of California, Davis, School of Medicine, also quoted in the EHP article, believes that natural estrogen helps protect premenopausal women against certain conditions such as cardiovascular disease and bone loss. While there is still more research that needs to be done, "this area of study provides a new window on population-level effects from chemical exposures that could have wide-ranging consequences."

For the full EHP article, visit: [www.med.upenn.edu/aging](http://www.med.upenn.edu/aging) or visit EHP directly at: <https://ehp.niehs.nih.gov/> and search "Age at menopause"

## Exercise and Aging: Finding the right program for you

Staying fit and active as you age can be a major challenge for some individuals. Whether it is due to an injury or medical condition or simply the normal changes that occur with aging, at some point our bodies just don't quite function how they used to. With this in mind, the University of Pennsylvania's Division of Human Resources - Quality of Work Life and AREUFIT Health Services, Inc. hosted a workshop on "Exercise and Aging" to discuss safe and effective ways that older adults can work to maintain their function.

"As we age, our muscles tend to work on the "use it or lose it" principle," said Micah Josephson, MS, representative of AREUFIT and leader of the workshop. Older adults often experience a slowing of movement, decreased activity and a decline in function. However, research shows that exercise and physical activity can help slow or reduce the risk of these changes.

The question is, what type of exercise is the right one for you? Because all of our bodies are different, it is extremely important to understand what exercises and activities will best suit your needs or restrictions and help you achieve your goal, but according to his general recommendations, Josephson suggests incorporating:

- ▶ **Aerobic exercise** -- or "cardio" -- (running, swimming, biking) for 75 - 150 minutes per week depending on the intensity of the routine
- ▶ **Strength training** (lifting weights) 2+ times a week, focusing mainly on your number of repetitions
- ▶ **Balance training** for 2-3 days/60 minutes per week. Visit [go4life.nia.nih.gov](http://go4life.nia.nih.gov) for tips!
- ▶ **Power training** (similar to strength training but focusing on high-speed, low-resistance movements) completing 2 sets of 12-15 repetitions two times per week

For more, visit: [www.penninstituteonaging.wordpress.com](http://www.penninstituteonaging.wordpress.com)

OR the National Institute on Aging's Go4Life Campaign at: [go4life.nia.nih.gov](http://go4life.nia.nih.gov)

## mark your calendars for our FUTURE EVENTS

Penn Medicine's 6th Annual  
5K for the IOA & The Memory Mile Walk

- ▶ Sunday, September 24, 2017
- ▶ 8:00am at Penn Park
- ▶ See back for more!

Center for Neurodegenerative Disease  
Research's Annual Research Retreat

- ▶ Thursday, October 19, 2017
- ▶ For more information, visit:  
[www.med.upenn.edu/cndr](http://www.med.upenn.edu/cndr)

IOA Visiting Scholars Series Lecture ft.  
Richard Mayeux, MD, MS

- ▶ Thursday, November 30, 2017
- ▶ 3:00 - 4:00pm

IOA Visiting Scholars Series Lecture ft.  
Anne Newman, MD, MPH

- ▶ Tuesday, January 23, 2018
- ▶ 3:00 - 4:00pm

2018 Vincent J. Cristofalo Lectureship

- ▶ Speaker: Tom Misteli, PhD
- ▶ Tuesday, February 6, 2018

IOA Visiting Scholars Series Lecture ft.  
Edward Huey, MD

- ▶ Tuesday, April 3, 2018
- ▶ 3:00 - 4:00pm

For more information on IOA and related events, visit:  
[www.med.upenn.edu/aging/events.html](http://www.med.upenn.edu/aging/events.html)

## HEALTHY AGING TIPS

### GET ACTIVE

Develop an age-friendly exercise routine.

Exercise has been shown to help improve and maintain physical, mental, and cognitive health.

#### WORK IN AN OFFICE?

Take regular stretch breaks throughout your day & take a walk during your lunch hour!

### MAINTAIN

a healthy diet.

Many health issues associated with aging can be controlled, delayed, and sometimes avoided by making healthier food choices.

TIP: Metabolism slows down as you age. You will often need fewer calories to maintain a healthy weight.

### Focus on:

 ENDURANCE

 STRENGTH

 BALANCE & FLEXIBILITY

### Smart Choices:

 FRUITS & VEGGIES

 LEAN PROTEINS

 WHOLE GRAINS

Institute on Aging  
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Philadelphia, PA 19104-2676



**Penn Medicine**

**PENN'S 5K FOR THE IOA** | The Institute on Aging  
**& THE MEMORY MILE WALK**

6<sup>th</sup> year

**Sunday, September 24, 2017**

**8:00 am @ Penn Park**

**Shoemaker Green Entrance** | On 33rd Street between Walnut & South Streets | Philadelphia, PA

- \$25 Before September 5<sup>th</sup>
- \$30 After September 5<sup>th</sup>
- \$35 Day of Race Sept 24<sup>th</sup>
- \$20 with Penn Student ID
- Dogs on leashes are welcomed for Memory Walk only
- Online registration closes on September 19<sup>th</sup> at midnight
- Walk-up registration available race day at 6:30am - cash only

**Support Alzheimer's and aging-related research and care at Penn's Institute on Aging (IOA)!**



**Register online at**  
[PennMedicine.org/5kIOA](http://PennMedicine.org/5kIOA)



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**Make a Gift**

To support aging-related research and care at Penn's Institute on Aging, contact:

**Aubre Naughton, Penn Medicine Development**  
aubren@upenn.edu or 215-898-9174

**Become an IOA Fellow**

Learn more about becoming an IOA Fellow at:  
[www.med.upenn.edu/aging/fellows.html](http://www.med.upenn.edu/aging/fellows.html)



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