

FRIENDS CLUB NEWSLETTER

FALL 2016

Celebrating more than 25 years of serving the Alzheimer's community!

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DO INFECTIONS CAUSE ALZHEIMER'S: A NEW HYPOTHESIS

From the desk of Peter V. Rabins, MD, M.P.H.

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Johns Hopkins Medicine

This originally appeared in the Summer 2016 Issue of *Memory Disorders Bulletin*

Dear Friend,

Is beta-amyloid, the sticky, starch-like protein that is the main component of amyloid plaques, which are believed to cause Alzheimer's disease, in actuality a natural antibiotic for the brain that protects it from invading microbes?

Perhaps.

For decades, an intrepid but small group of researchers from around the world has suggested that infectious agents—viruses, bacteria or fungi—trigger the disease. The evidence points to an infection that may have taken place many years before the disease's first symptoms emerge, but just how an infection could trigger the cascade that eventually causes Alzheimer's disease remains a mystery.

At the same time, neuroscientists have debated about the root cause of Alzheimer's disease, the most prominent theories falling into two major camps: The belief that beta-amyloid plaques cause the dementia, and the belief that tau tangles cause it. Now, provocative research published this spring in *Science Translational Medicine* by two Harvard researchers raises the intriguing possibility that neither is the initiating cause.

The evidence comes from studies in cell culture, fruit flies, worms and mice. It supports the hypothesis that the amyloid plaques found in the brains of people with Alzheimer's result from the action of the body's innate immune system reacting to chronic infection in the brain caused by a virus, bacteria, or yeast.

The innate immune system is the body's first line of defense against infection, and operates in species that have existed for more than 400 million years. The new research suggests that the beta-amyloid protein is a part of this arm of the immune system and that it traps marauding microbes that have somehow invaded the brain but remained hidden because they did not cause obvious symptoms.

The thinking is that the end result of this infection-fighting procedure eventually riddles the brain with damaging debris—plaques—that are difficult to clear from an older brain or become reactivated in the aging brain, perhaps because of the aging-associated changes in the immune system. It's this brain "garbage" that perhaps leads to Alzheimer's and its devastating symptoms.

Robert D. Moir, Ph.D., assistant professor neurology at Harvard Medical School and Massachusetts General Hospital Neurology Research, and Rudy Tanzi, Ph.D., vice-chair of Neurology and director of the Genetics and Aging Research Unit at Massachusetts General Hospital, spearheaded a team that examined this hypothesis in neurons growing in petri dishes, fruit flies, roundworms, and mice. *Continued...*

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In one of their most telling experiments, they injected bacteria into the brains of mice that did not have plaques. Within 48 hours, the hippocampi of the brains were full of lesions in which a single bacterium was entrapped by a web of amyloid. This finding supported the scientists' theory that amyloid depositions form around invading microbes as a defense entrapment mechanism to protect the brain from attack.

While the Moir-Tanzi team did not study humans, other scientists have found evidence of prior infection from the herpes HSV-1, chlamydia, and spirochetes in the brains of people with Alzheimer's disease and raised the possibility that these or other viruses or bacteria may be involved. This new scientific paper strengthens work that the Moir-Tanzi team published in 2010 showing that amyloid might act as an immune system protein. They demonstrate a possible mechanism by which infection could trigger the deposition of beta-amyloid that is characteristic of Alzheimer's.

This new work builds on strong evidence that aging is the strongest risk factor for developing the common forms of Alzheimer's disease. It also supports the idea that as people age and their immune system and blood-brain barrier become increasingly compromised, it becomes easier for dangerous microbes to get into the brain or to be re-activated if they had been there for a long time.

If this intriguing hypothesis about the inflammatory pathways of the innate immune system is validated in humans, it could lead to novel prevention and treatment strategies for Alzheimer's.

And why are people with the 4 form of the apolipoprotein E gene (APOE) at increased risk for Alzheimer's disease?

It may be that they are less able to remove the beta-amyloid from their brain or that the immune function of the amyloid protein is modified by this form of the gene so that it is less effective. Dr. Tanzi believes that these people already produce so much beta-amyloid that clumps form on their own within the brain. They don't need infecting microbes to produce the damaging plaques.

What the future holds. The Tanzi-Moir hypothesis is just the beginning of a long research effort that will eventually involve scientists from the University of Chicago, the Chan School of Public Health at Harvard, Massachusetts General Hospital, and other research centers. In an email to the *Bulletin*, Dr. Tanzi said, "We will use gene sequencing technology to look for microbes in the brains of Alzheimer's patients that may have triggered amyloid deposition as a protective response, later leading to nerve cell death and dementia. If we can eventually identify the offenders—bacteria, viruses, or yeast—we may be able to therapeutically target them for primary prevention of the disease."

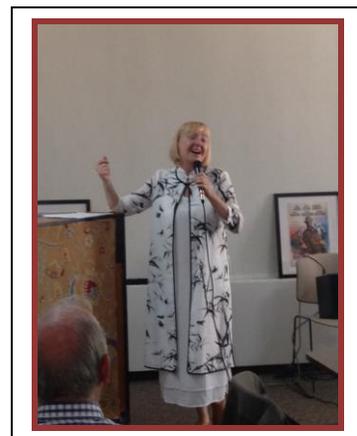
As this project quickly moves forward, I will be sure to keep you informed of all developments.

Activities Update...

In the past few months, Friends Club has been very lucky to have some new and different performances and lectures.

Annabel Hunter gave us a fabulous piano concert on June 16, during which she did some of her favorite songs and took our requests. Among the many wonderful songs she played was the crowd favorite, "Fire and Rain" by James Taylor. Rosa Weinstein from Himmelfarb Mobile University, who used to be an FC regular but now spends much of her time out of state, visited to give us a fascinating lecture on Martha Washington (Pictured left). Robert Solomon showed us a hilarious compilation of comedy videos. Thanks to Elayne Bartner for introducing us! Lastly, Jazz singer Christiana Drapkin (Pictured right) gave a wonderful concert in honor of Father's Day.

If you know someone our members might enjoy, please let us know!



TRANSPORTATION OPTIONS FOR FAMILIES FACING DEMENTIA

Silver Sedans

Cost: \$22.50 per ride

Area Served: Bethesda, Chevy Chase, Friendship Heights, Cleveland Park

Hours: 9 a.m. – 10 p.m. 7 days a week

Benefits: Drivers escort clients inside and back out

Contact: Lisa Bass, 202-810-1018

Website: www.silversedans.com

The Senior Connection

Cost: Free

Area Served: Montgomery County

Hours: Dependent on volunteer availability, 10 a.m.– 3p.m. is the best time, must schedule 2-3 weeks in advance

Benefits: Drivers escort clients inside and back out

Contact: Juanita Jarrett, 301-962-0820

Website: www.seniorconnectionmc.org

Driving Moms & Dads

Cost: \$35 plus 57 cents a mile each way for ambulatory clients

Area Served: Entire Washington, D.C. area

Hours: All day 7 days a week, including evenings and holidays

Benefits: Will transport within 100 mile radius of D.C., drivers escort clients inside and back out

Contact: Mrs. Hart, 240-223-2418

Website: www.drivingmomdad.com

Brenner Escorted Transportation

Cost: Sliding scale depending on income and assets

Area Served: Montgomery County and Northwest Washington, D.C.

Hours: Monday through Friday 8 a.m. to 5 p.m.

Benefits: Drivers escort clients inside and back out, an affordable option if finances are concern

Contact: Diane Hayes Earp, 301-816-2639

Email: dhayesearp@jssa.org

Neighborhood Villages

Cost: Varies, but is usually an annual membership fee of \$250-\$500

Area Served: Montgomery County, Md., but there are villages throughout the D.C. region

Hours: Varies, depends on each village

Benefits: Villages are non-profits designed to help people age in place successfully. Escorted driving is only one of the many services they can provide.

Contact: Please visit www.montgomerycountymd.gov and search “Senior Villages” to see if your neighborhood has a Village program. For additional assistance, you may call Ms. Pazit Aviv, Montgomery County Villages Coordinator, at 240-777-1231

FOR ADDITIONAL RIDE SERVICE REFERRALS, CALL CONNECT-A-RIDE AT 301-738-3252

John Collins

October 5, 1924 – May 4, 2016



Capt. John T. Collins, USN Ret., died peacefully at home on May 4, 2016, surrounded by his beloved family and caregivers. Born in Lexington, Kentucky on Oct. 5, 1924, John grew up in Chevy Chase and subsequently graduated from the U.S. Naval Academy, class of 1946. After a tour of duty at sea, he earned his degree in naval architecture from MIT and served in the Navy for 30 years. Upon retirement from the Navy, he was awarded the Legion of Merit for his exceptional service as project manager overseeing the design and construction of a new and highly innovative class of Navy ships, the Spruance class destroyer. Building on his expertise in managing technological change and conflict management, he worked first with a private technology consulting firm and later as a credentialed

mediator in the D.C. courts. A devoted member of the Disciples of Christ Christian Church, he served as an elder, President of the Board of Trustees, and a long-time member of the choir. His love of music extended to informal group performances in the community. John traveled extensively, including to England, Scotland, Ireland, France, Italy, Australia, India and Hawaii. Some of his best memories were of living in a seaside village for 6 months in Japan. He is survived by Ann, his devoted wife of 67 years, his children William, Wendy, and John, their spouses, his sister Carol, and brother Robert, five grandchildren, and a great-granddaughter. There was never a day in Friends Club that John didn't have a smile on his face. We will miss his gentle, loving manner.

Gene Bechtel

December 31, 1932 – March 19, 2016



Long-time Friends Club member Gene Bechtel passed away in March after a long and courageous battle with Alzheimer's disease. Gene was born in Sterling, IL and grew up in McPerson, KS. Gene's father was a minister and a professor at Church of the Brethren's liberal arts college. He earned his undergraduate degree in Kansas and then went on to earn his law degree from the George Washington University School of Law. Gene practiced communication law in Washington, D.C. for 50 years. He was a partner at Arent Fox and the at Bechtel & Cole.

Gene served in several bar associations over the years and he also held local and national positions in the Church of the Brethren. He was an avid birder and kept copious records on his bird sightings. He enjoyed reading poetry, listening to music and going to the beach. He also loved writing letters and wrote several lovely notes to Friends Club staff over the years. Gene was preceded in death by his son Brian Kenneth and his granddaughter Allean Lila. He is survived by his wife, Susan; his children, Teresa (Thomas) Gray, Kelli (Paul) Gonzales, Amy Bechtel and Gregory (Julie) Bechtel; and his 10 grandchildren and three great-grandchildren. Gene was very open about his struggle with memory loss, and his positive attitude and determination to live well with the disease inspired everyone at Friends Club. Gene's loss is deeply felt by all those who knew and loved him. Rest in peace, Gene.

Dr. John Rasmussen

January 4, 1924 – May 20, 2016



Former Friends Club member, John Rasmussen, passed away peacefully at his home, surrounded by family and caregivers. John had many incredible accomplishments, including graduating from the U.S. Naval Academy in 1948 and earning a graduate degree from MIT in naval architecture and marine engineering. He also received a graduate degree from Harvard University in business management and a doctorate from George Washington University in engineer management. John served in the Navy for 30 years. He worked on building both surface ships and nuclear submarines.

After he retired from the Navy, Pepco hired him to build power plants. When he retired from Pepco, he went on to teach at the graduate school classes at George Washington University and to travel the world working on harbor maintenance and clean power generation.

John had many interests, including tennis, ballroom dancing, crossword puzzles, playing the piano, singing and playing the ukulele.

John is survived by his wife Catharine “Dolly” Rasmussen, their four children and several grandchildren and great-grandchildren. We will always remember his delight in music and his gorgeous, booming voice as he sang along with our entertainers. Rest in peace, John.



Former longtime FC executive director GayLynn Mann with David Lyman at GayLynn’s retirement party in April of 2015.

A FOND FAREWELL TO VOLUNTEER DAVID LYMAN

David Lyman, one of our longest-serving volunteers, retired from Friends Club this summer so he could dedicate more time to his work at the historic Pierce Mill and finally get working on his genealogy.

David first became involved with Friends Club while driving former member Howard Carr to and from meetings. In 2003, he signed on as a volunteer. Through the years, David has served the club in many ways, including giving lectures and sharing pictures from his many amazing travels. David was also extremely involved in our former Tuesday group.

David is a Korean War veteran who spent 28 years working as a systems engineer for IBM. He is active in his church and is an avid gardener. He has a daughter and two sons – one of whom is volunteer Andy Lyman. David is very proud to have Andy continue on his volunteer tradition at Friends Club. We will miss you. Thank you, David!

SPECIAL NOTICES

UPCOMING CLUB CLOSURES

Monday, September 5
Closed for Labor Day

Monday, October 3
Building in use for Rosh Hashanah

Wednesday, October 12
Building in use for Yom Kippur

Thursday, November 24
Closed for Thanksgiving

Friends Club Caregivers Support Group

Meets 9:30-11:00 a.m.

The 1st Monday and 3rd Wednesday of each month in the church library

SEPTEMBER

Wednesday the 21st

No meeting will be held on Monday the 5th

OCTOBER

Wednesday the 19th

No meeting will be held Monday the 3rd

NOVEMBER

Monday the 7th

Wednesday the 16th

Memory Loss Support Group at Iona

What: A group for people diagnosed with memory loss, their families and their friends. Iona offers two groups (one for individuals with memory loss and one for their care partners) that meet simultaneously to provide support, information and resources specific to each one's needs. Iona strongly encourages both the individual with memory loss and their care partners to attend these meetings.

Where: Iona Senior Services, 4125 Albemarle St, NW Washington, DC 20016

When: 10-11:30 a.m. the first Thursday of each month.

Cost: \$15 per person per session. Limited scholarships available.

Contact: 202-895-9448 Pre-registration is required. There may be a waiting list.

NEED INFORMATION? FEELING OVERWHELMED?

CALL FOR FREE HELP

The Alzheimer's Foundation of America offers a toll free helpline staffed with licensed social workers.

Monday – Friday 9 a.m. to 9 p.m.
Saturday, 9 a.m. to 1 p.m.
Eastern Standard Time

866-232-8484

BIRTHDAYS

SEPTEMBER

Jenks M. 6
Bruce M. 23

OCTOBER

NONE!

NOVEMBER

Bill H. 6
Lance G. 9

Happy Birthday

