

**Cathay June 2024**

[www.cathayradio.org](http://www.cathayradio.org)

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**Mission:** The Cathay Amateur Radio Club is basically an active social club of Ham Radio Operators and their spouses. We support local community requests for HAM emergency communications. Several of us are trained in CPR/ First Aid and are involved with community disaster preparedness.

**Monday Night Net Time:** 9 PM Local Time/PST, As of 8/21/2023 we are switching over from using Repeater: WB6TCS to **Nick Carsion's Repeater: WA6GEL UHF 444.80000 Mhz, Offset +5Mhz, CTCSS/Tone PL 179.9 Hz on Monument Peak, Milpitas.**

**If you cannot reach the fore-mentioned machine, please use WA6GEL UHF 4448.8 Mhz Offset +5Mhz, CTCSS/Tone PL173.8 which is on Mt. San Bruno.**

The CARC Monday night net is the best way to find out the latest club news. All check-in are welcome.

**Message from the President:** Leonard Tom, *NX6E*

Hello CARC Members and Friends;

Many thanks to Nick Cassarino for the use of repeater – WA6GEL for our CARC Monday Night Net.

**Additional folks are needed to help out with conducting the CARC radio net on Monday nights. Please contact Ed Fong ([edison\\_fong@hotmail.com](mailto:edison_fong@hotmail.com)) if you are interested.**

I wish to thank our CARC members that set aside their valuable time to participate in our Monday night's nets.

## **Introduction of ARRL CARC/SARES Field Day**

**Save the date: Saturday June 22, 2024 at 2pm.**

Please join us for a FREE DINNER, raffle, and making distant radio contacts at the annual ARRL CARC/SARES Field Day with our host Ed Fong, *WB6/QN*.

Ed Fong has managed to secure for us, the field day location at the exclusive: Fairbrae Swim & Racquet Club - 696 Sheraton Dr, Sunnyvale, CA 94087

For additional details, please refer to the ARRL Field Day details toward the bottom of this newsletter.

## **Introduction Tech Article:**

A new potential means of preventing Alzheimer's Disease has been discovered by researchers at the Columbia University Irving Medical Center.

### **According the CDC:**

**Alzheimer's disease** is the most common type of dementia. It is a progressive disease beginning with mild memory loss and possibly leading to loss of the ability to carry on a conversation and respond to the environment. Alzheimer's disease involves parts of the brain that control thought, memory, and language.

#### **What is the burden of Alzheimer's disease in the United States?**

- Alzheimer's disease is one of the top 10 leading causes of death in the United States.
- The 6th leading cause of death among US adults.
- The 5th leading cause of death among adults aged 65 years or older.

In 2020, an estimated 5.8 million Americans aged 65 years or older had Alzheimer's disease.<sup>1</sup> This number is projected to nearly triple to 14 million people by 2060.

In 2010, the costs of treating Alzheimer's disease were projected to fall between \$159 and \$215 billion.<sup>4</sup> By 2040, these costs are projected to jump to between \$379 and more than \$500 billion annually.

Death rates for Alzheimer's disease are increasing, unlike heart disease and cancer death rates that are on the decline.<sup>5</sup> Dementia, including Alzheimer's disease, has been shown to be under-reported in death certificates and therefore the proportion of older people who die from Alzheimer's may be considerably higher.

According to Time magazine, folks reaching past 80 years old have a 50% chance of developing Alzheimer's. So, this potential break through is big deal!

See Tech Article for further information.

### **CARC Final News Wrap Up**

Chat sub s'em to all you CARC members! - Leonard Tom, *NX6E*

## **Public Service Announcements**

### **HAM CRAM / HAM Licensing**

For upcoming HAM Licensing locations please refer to:

<http://www.arrl.org/find-an-amateur-radio-license-exam-session>

### **Auxiliary Communications Service (ACS)**

The Auxiliary Communications Service (ACS) is a unit of trained professionals who supply communications support to the agencies of the City and County of San Francisco, particularly during major events/incidents. ACS goals are the support of gathering and distribution of information necessary to respond to and recover from a disaster.

The ACS Net begins at 1930 hours (7:30 p.m. PT) local time each Thursday evening, on the WA6GG repeater at 442.050 MHz, positive offset, tone 127.3 Hz. The purpose of this net is to practice Net Control skills, practice checking in with deployment status in a formal net, and to share information regarding upcoming ACS events. Guests are welcome to check in. ACS members perform Net Control duty on a regular basis. On the second Thursday of each month, the net is conducted in simplex mode on the output frequency of the WA6GG repeater, 442.050 MHz no offset, tone 127.3 Hz.

ACS holds its General Meetings on the third Tuesday of each month from 1900 hours to 2100 hours local time. Currently meetings are exclusively conducted over Zoom during the COVID-19 pandemic, ACS looks forward to meeting in person again as soon as possible.

Upcoming meeting dates in 2024 are:

- May 21, 2024
- June 18, 2024
- July 16, 2024
- Aug 20, 2024

Location of in person future ACS meetings are yet to be determined as the regular location is under reconstruction. All interested persons are welcome to attend. For further information contact Corey Siegel KJ6LDJ <kj6ldj@gmail.com>.

For more information, please attend an ACS meeting, check in on the ACS radio net, or call 415-558-2717.

### **Free Disaster Preparedness Classes In San Francisco – NERT Taught by San Francisco Fire Department (SFFD).**

<https://sf-fire.org/nert/nert-calendar-meetings-trainings-events>

Training Classes  
TBD

**+ Recertifications**  
TBD

**\*SFFD DOT** is the Fire Department Division of Training. All participants walking, biking or driving **enter through the driveway gate on 19th St.** between Folsom and Shotwell. Parking is allowed along the back toward the cinderblock wall.

Visit [www.sfgov.org/sffdnert](http://www.sfgov.org/sffdnert) to learn more about the training, other locations, and register on line. Upcoming Special NERT Events.

### **San Francisco Police Department: Auxiliary Law Enforcement Response Team (ALERT)**

The Auxiliary Law Enforcement Response Team (ALERT) is a citizen disaster preparedness program designed. The ALERT program is for volunteers 16 years of age or older, who live, work, or attend high school in San Francisco.

Graduates of the San Francisco Police Activities League (P.A.L) Law Enforcement Cadet Academy are also eligible to join.

ALERT volunteers will no longer need to complete the Fire Department's Neighborhood Emergency Response Team (NERT) ([www.sfgov.org/sfnert](http://www.sfgov.org/sfnert)) training and then graduate into two 8 hour Police Department course specifically designed for ALERT team members.

ALERT members will work closely with full-time and/or Reserve Police Officers in the event they are deployed after a disaster. The Basic ALERT volunteer will have no law enforcement powers other than those available to all citizens.

### **SFPD ALERT Training (New Members)**

The next SFPD ALERT training class has been scheduled for: TBD

\*Class date indicated are only for new members

IMPORTANT- All participants must complete the background interview process in order to be eligible to attend the ALERT training class.

Eligible ALERT participants may register for a training class by contacting the ALERT Program Coordinator, [marina.chacon@sfgov.org](mailto:marina.chacon@sfgov.org), or by telephone at 415-401-4615.

### **SFPD ALERT Practice/Training Drill**

All active/trained ALERT members are asked to join us for our next training drill, via scheduled for on TBD

For more information on the San Francisco Police Department ALERT Program, email us at [sfpdalert@sfgov.org](mailto:sfpdalert@sfgov.org), or call Lt. Marina Chacon (SFPD Ret.), SFPD ALERT Program Coordinator, at (415) 401-4615.

For additional information on the web please refer to:  
<https://sfgov.org/policecommission/alert>

## **ARRL CARC/SARES Field Day**

### **The 2024 Annual CARC / SARES Picnic - ARRL Field Day**

**By Ed Fong - WB6IQN**

**Date :** Saturday June 22, 2024 – starting at 2 PM - dinner is at 4PM

**Where:** Fairbrae Swim & Racquet Club - 696 Sheraton Dr, Sunnyvale, CA 94087

**Cost:** Free to all CARC / SARES Members, family and friends - we ask you to bring a dessert and / or drinks

**Raffle tickets:** - \$5 each or 3 tickets for \$10

**RSVP:** [edison\\_fong@hotmail.com](mailto:edison_fong@hotmail.com)

ARRL Field Day is coming up this year. It will take place Saturday June 22, 2024. Mark your calendars. This is the Field Day to be at. Last year we had 85 registered attendees.

This year we have been very fortunate to reserve the very exclusive Fairbrae Swim and Tennis Club in Sunnyvale, CA for our CARC and Sunnyvale Amateur Radio Emergency Service (SARES) 2024 ARRL Field Day.

This venue was brought back by popular demand having previously hosted CARC/SARES Field Day events. This is a beautiful well-maintained private facility in the heart of Silicon Valley with easy driving access and plenty of parking. It has a half Olympic size swimming pool, two full size tennis courts, large picnic area, industrial kitchen and full-size dining hall, clean restrooms, and showers for use of both members and guests.

We have reserved the facility from 2 PM Saturday, June 22<sup>th</sup> through Sunday (at least till noon) for our CARC/SARES ARRL 2024 Field Day.

A **FREE** catered Italian dinner will be served at 4 PM. Food will be catered by the Pasta Market at 460 E El Camino Real, Sunnyvale, CA 94087. Pizza will from Costco



Menu - Meat lasagna, eggplant parmesan, various pizzas, garlic bread with their famous cheese spread, and mix salad with a variety of dressings.

The restaurant owner has promised an Italian feast to be enjoyed by all. It would be appreciated that attendees bring a dessert to share with our group. The club will provide for plain water, sparkling water, coca cola and diet coke. Optional cash donations or

additional purchases of raffle tickets would be accepted to help defray the cost and go toward future club events.

Bring your entire family (or extended family) to have a great day of socialization, great food, swimming, tennis, and of course HAM Radio.

Radios and antennas will be set up for HF and VHF the day before. Bring your own radio and feel free to plug it in and operate. This is a great opportunity to operate other radios and experience the look and feel of various manufacturers.

There will also be the traditional raffle, which will include but not limited to – the uSDX+ HF all mode transceiver, quad band mobile radio, antennas, etc.

Raffle tickets are \$5 each => 3 for \$10

A partial sample of raffle prizes are shown below:



**uSDX+** - QRP HF transceiver - Covers 80-6 meters – SSB, CW, digital QRP transceiver. 5 watts CW – 10 watt SSB. Built in CW decoder, full DSP noise reduction. Complete with 4000 mAh Li-ion battery, AC adapter/charger, Speaker/microphone.





**Radioddity QB25** ( Quad Mobile 25 watt transceiver) 2 meters, 1.25 meter, 70cm

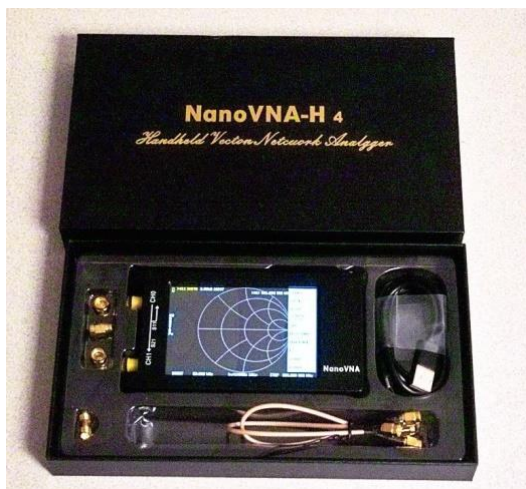
This radio boasts 200 memories, full software programmability, great bullet proof front end with 0.25 uV sensitivity, full FM broadcast radio, direct microphone key pad entry, and absolutely the best color display out there and more.

If you have been looking to get on 220 MHz, this is the latest and greatest. You will be a proud owner of one of this radio.





**DSO03D12** 120 MHz dual trace scope with probes - features a built in DVM and signal generator. Every bench should have one.



**Nano VNA - H4** - 4 inch 1.5 GHz VNA - Tuned antennas, duplexers, filters etc. Full touch screen. Latest version includes functions for TDR – time domain reflectometer.

Includes cables and full calibration kit.



**Baofeng UV5R** dual -band handie talkie

Drop in Lion smart charge, 1800 mAh Lion, battery, belt clip, antenna

Frequency coverage:

- 65-108 MHz – FM broadcast – receive only
- 136-174 MHz – VHF – TX/RX
- 420- 520 - MHz - TX/RX



**2AH Lion USB Backup pack** - great to have, USB charging with solar backup - has a built in LED Flashlight. Complete with USB charging cable and compass.



**Cambridge Sounds Works speaker.**

Mark your calendars – : Saturday June 22, 2024 – starting at 2 PM - dinner is at 4PM, this is going to be fun!!!!

See the following pages for pictures of the exclusive and well maintained Fairbrae Swim & Racquet Club in Sunnyvale, CA.



Lounge Area



Overhead shot of Tennis courts and Swimming Pool

**73' Ed Fong**

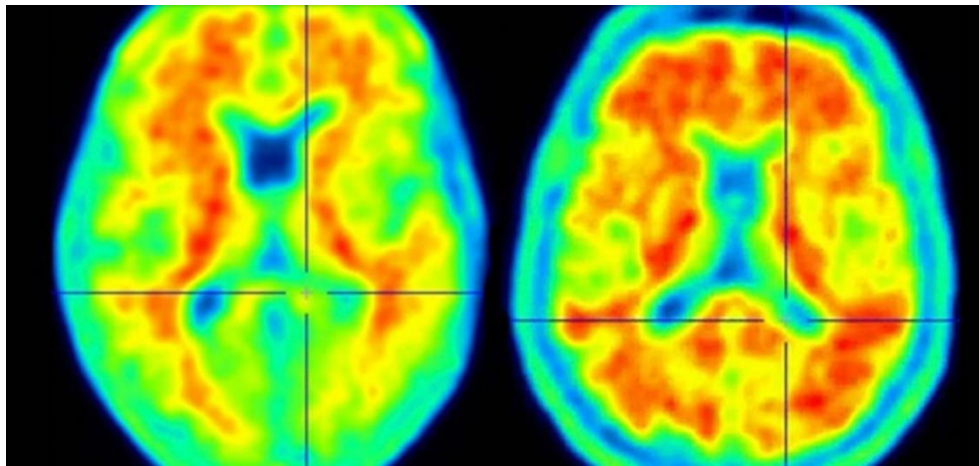
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## **Tech Article**



**COLUMBIA** | COLUMBIA UNIVERSITY  
IRVING MEDICAL CENTER

<https://www.cuimc.columbia.edu/news/newly-found-genetic-variant-defends-against-alzheimers-disease>



# **Newly Found Genetic Variant Defends Against Alzheimer's Disease**

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**Discovery could launch new types of  
drugs to prevent, treat the disease**

Date: April 9, 2024



Columbia researchers have discovered a genetic variant that reduces the odds of developing Alzheimer's disease by up to 70% and may be protecting thousands of people in the United States from the disease.

The discovery of the protective variant, which appears to allow toxic forms of amyloid out of the brain and through the blood-brain barrier, supports emerging evidence that the brain's blood vessels play a large role in Alzheimer's disease and could herald a new direction in therapeutic development.

"Alzheimer's disease may get started with amyloid deposits in the brain, but the disease manifestations are the result of changes that happen after the deposits appear," says [Caghan Kizil, PhD](#), a co-leader of the [study](#)([link is external and opens in a new window](#)) that identified the variant and associate professor of neurological sciences (in neurology and in the Taub Institute) at Columbia University Vagelos College of Physicians and Surgeons.

"Our findings suggest that some of these changes occur in the brain's vasculature and that we may be able to develop new types of therapies that mimic the gene's protective effect to prevent or treat the disease."

## An attractive drug target?

The protective variant identified by the study occurs in a gene that makes fibronectin, a component of the blood-brain barrier, a lining surrounding the brain's blood vessels that controls the movement of substances in and out of the brain.

Fibronectin is usually present in the blood-brain barrier in very minute amounts, but it is increased in large amounts in people with Alzheimer's disease. The variant identified in the fibronectin gene seems to protect against Alzheimer's disease by preventing the buildup of excess fibronectin at the blood-brain barrier.

"It's a classic case of too much of a good thing," Kizil says. "It made us think that excess fibronectin could be preventing the clearance of amyloid deposits from the brain."

The researchers confirmed that hypothesis in a zebrafish model of Alzheimer's disease and have additional studies in mice underway. They also found that reducing fibronectin in the animals increased amyloid clearance and improved other damage caused by Alzheimer's disease.

"These results gave us the idea that a therapy targeting fibronectin and mimicking the protective variant could provide a strong defense against the disease in people," says study co-leader [Richard Mayeux, MD](#), chair of neurology and the Gertrude H. Sergievsky Professor of Neurology, Psychiatry, and Epidemiology.

The newest treatments for Alzheimer's disease target the amyloid deposits directly and are very efficient at removing the deposits via the immune system. However, simply removing the deposits this way doesn't improve symptoms or repair other damage.

"We may need to start clearing amyloid much earlier and we think that can be done through the bloodstream," Mayeux adds. "That's why we are excited about the discovery of this variant in fibronectin, which may be a good target for drug development."

Protective gene was found in people resilient to Alzheimer's disease

The researchers discovered the protective variant in people who never developed symptoms but who had inherited the e4 form of the APOE gene, which significantly increases the risk of developing Alzheimer's disease.

"These resilient people can tell us a lot about the disease and what genetic and non-genetic factors might provide protection," says study co-leader [Badri N. Vardarajan, PhD](#), assistant professor of neurological science (in neurology, the Gertrude H. Sergievsky Center, and the Taub Institute), who is an expert in using computational approaches to discover Alzheimer's disease genes.

"We hypothesized that these resilient people may have genetic variants that protect them from APOEε4."

To find protective mutations, the Columbia researchers sequenced the genomes of several hundred APOEε4 carriers over age 70 of various ethnic backgrounds, including those with and without Alzheimer's disease. Many participants were residents of Northern Manhattan who were enrolled in the Washington Heights/Inwood Columbia Aging Project, an ongoing study that has been conducted by Columbia University's Department of Neurology for more than 30 years.

The study identified the fibronectin variant, and the Columbia team publicized their results in a preprint for other researchers to view. Based on the Columbia team's observations, another group from Stanford and Washington universities replicated the study in an independent cohort of APOEε4 carriers, mostly of European origin.

"They found the same fibronectin variant, which confirmed our finding and gave us even more confidence in our result," Vardarajan says.

The two groups combined the data on their 11,000 participants, which allowed them to calculate that the mutation reduces the odds of developing Alzheimer's in APOE4 carriers by 71% and forestalls the disease by roughly four years in those who eventually develop the disease.

The researchers estimate that 1% to 3% of APOEε4 carriers in the United States—roughly 200,000 to 620,000 people—may also carry the protective fibronectin mutation.



# Wide therapeutic potential

The fibronectin variant, though discovered in APOEε4 carriers, could protect against Alzheimer's disease in people with other forms of APOE.

"There's a significant difference in fibronectin levels in the blood-brain barrier between cognitively healthy individuals and those with Alzheimer's disease, independent of their APOEε4 status," Kizil says.

"Anything that reduces excess fibronectin should provide some protection, and a drug that does this could be a significant step forward in the fight against this debilitating condition."

## More information

The study, "[Rare genetic variation in Fibronectin 1 \(FN1\) protects against APOEε4 in Alzheimer's disease](#)(link is external and opens in a new window)," was published online April 10 in the journal *Acta Neuropathologica*.

The research and researchers were supported by the Carol and Gene Ludwig Family Foundation, the Agouron Institute, the U.S. National Institutes of Health (grants R01AG067501, RF1AG066107, R01AG072474, R35GM148348, R01AG061796, U19AG074879, U01AG066752, U01AG046139, R01AG060747, P50AG047366, and R00AG075238), a Schaefer Research Scholars Award, Taub Institute Grant for Emerging Research (TIGER), the Thompson Family Foundation Program for Accelerated Medicine Exploration in Alzheimer's Disease and Related Disorders of the Nervous System, and an Alzheimer's Association Zenith Fellows Award.

Richard Mayeux, MD, is also director of the Gertrude H. Sergievsky Center and co-director of the Taub Institute for Research on Alzheimer's Disease and the Aging Brain at Columbia University Vagelos College of Physicians and Surgeons and neurologist-in-chief at NewYork-Presbyterian/Columbia University Irving Medical Center.

Other contributors and funding sources are listed in the paper.