

BRAIN WAVES



ROSKAMP INSTITUTE & CLINIC NEWS | AUGUST 2021

ROSKAMP RED TIDE STUDY UPDATE

An Active Outbreak Brings a Timely Research Opportunity



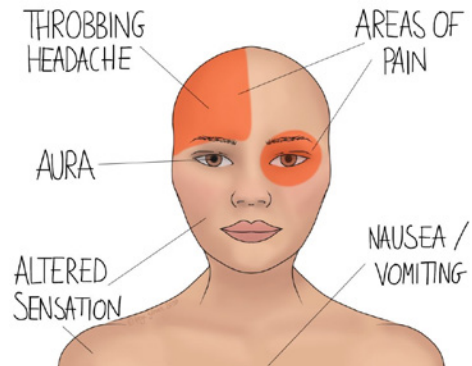
Michael Mullan, M.D., Ph.D.
Executive Director, Co-Founder

The Roskamp Institute Red Tide Study started in 2020 and is currently made up of 250 volunteers from our local community. Fortunately, for purposes of the study, we were able to begin collecting samples of blood and saliva from these participants outside of an active red tide bloom. Now that we're involved in a rolling outbreak up and down the Florida gulf coast, we are again taking biological samples of blood and urine and measuring antibody levels – that is, the level of antibodies produced to fight the neurotoxin specific to red tide called *brevetoxin*.

We know there are two types of antibodies: antibodies that are neutralizing, which is what most most antibodies do, but then there are other antibodies that can actually cause disease, including central nervous system disease and brain diseases. The driver of our red tide study was a previous study by a group of scientists from the Department of Health, the Department of Environmental Protection, and

universities in Florida that showed there was an excess of ER admissions for neurological disorders such as migraine headaches when the red tide algae blooms. Our study seeks to answer the question, *do higher levels of antibody correlate with worsening of neurological symptoms or the remission of neurological signs and symptoms?* In other words, if we have high levels of antibodies, do they protect us against the neurological complications of red tide or do they actually precipitate them?

To date, we have made significant progress in sample collection and analysis, but are still in the very early stages of the study. One surprising discovery has been that some participants had high *brevetoxin* antibody levels, even though they hadn't been around a red tide outbreak for six months, while all the others had very low levels. So this is one new aspect we are now interested in, specifically the



Increased Migraine Diagnoses During Blooms

drop off in antibodies in some and not others. Because of this difference, we need to bring into the study people who have been living farther inland and not exposed to red tide as a control group.

Seeking Florida Red Tide Study Volunteers

The Roskamp Institute is conducting a clinical research study which involves one visit where a participant will complete several questionnaires, memory testing and provide a blood sample for research purposes only.

Call David @ 941-256-8018 ext 3008

We are inviting those who have never been exposed to contact us about participating in the study. We are also asking those who provided their samples earlier in the study to please contact us to schedule a post-exposure sample collection at 941-256-8018, ext 3008.

OEA Supplementation Shows Promise in Roskamp Institute Gulf War Illness Laboratory Study – New Clinical Study Now Underway.

For over 30 years now, 250,000 veterans from the 1990-1991 Gulf War have suffered from a chronic and debilitating multi-symptom illness called Gulf War Illness or GWI. Veterans with GWI report heterogeneous symptoms consisting of chronic pain, fatigue, and memory problems. Researchers at The Roskamp Institute have recently shown that disturbances in fat (lipid) breakdown may be a feature of GWI and is present in both animal models of GWI and in blood from veterans with GWI. We are now looking for ways to better understand whether changing the body's lipid composition can help improve the general health and well-being of veterans with GWI. Our researchers have determined that oral administration of OEA for 6-months improved learning and memory and reduced fatigue-like behavior, as well as restoring normal processing of dietary fats and reduced brain inflammation in a GWI mouse model.



Currently, we are testing this strategy in a pilot clinical study to examine how OEA affects blood lipids and if this can be beneficial for brain function and general health of veterans with GWI. **You can read more about this trial online at www.RoskampInstitute.org or contact Grace Bartenfelder at (941) 256-8019 ext. 3046.**



Ariane Menden
Ph.D. Graduate

Congratulations to Ariane Menden, Roskamp Institute's 15th Ph.D. Program Graduate

The Roskamp Institute, jointly with The Open University UK, offers a doctoral degree in Neuroscience and is pleased to announce the program's 15th graduate Ariane Menden.

Ariane joined the Institute as a Ph.D. student in October 2017. While she worked on a number of projects throughout her time at the Institute, her research primarily investigated the role of the gut microbiome in the progression of Alzheimer's Disease. Owing to

Covid-19, this was our second virtual *viva voce* examination, conducted on GoToMeeting with participants in Sarasota, and her examiners located in Ireland and Germany.

Ariane's research into the gut microbiome and its interaction with Alzheimer's Disease and related research was recently published in articles in the *Journal of Enzyme Inhibition and Medicinal Chemistry*, *Journal of Biomedicine and Pharmacotherapy*, and *Journal of Bioorganic Chemistry*.

Read more about Ariane's background and research at www.roskampinstitute.org/news/ariane-menden.



Your Generous Support Makes A World Of Difference.



As a 501c3 nonprofit organization, The Roskamp Institute depends on philanthropic support to continue its life-changing work. Please show your support now by visiting the link to our website below and making your gift securely online today.

www.RoskampInstitute.org/donate

