

**BREA Meeting Minutes**  
**September 9, 2025 at 1:00 pm**  
**Via Zoom**

Minutes recorded by Laura Miller

Contact Information:

Brookhaven Retired Employees Association BREA

BNL Bldg. 400A

BERA Recreation/ Attention BREA Meeting

Upton, NY 11973

**Present** Helio Takai, presenter, Arnie Moodenburgh, Cheryl Conrad, David Cox, Andy Feldman, Les Fishbone, Louise Hanson, Jim Hurst, Mark Israel, Tom Koetzle, Jim Lemley, Bill Leonhardt, John Miller, Laura Miller Steve Musolino, Alison Rowe, Michael Rowe, Mona Rowe, Don Sievers, Barry Siskind

**Officers 2024-2026:** President: Arnold Moodenbaugh, Vice President: Andy Feldman, Secretary: Laura Miller, Treasurer: Louise Hanson

At the pre-meeting, the BREA Board approved the minutes from BREA's July 8, 2025 meeting. Laura made the change Louise suggested, Andy made a motion to approve, Louise seconded, approved by those in attendance.

1. Call to Order. Arnie Moodenbaugh

Meeting called to order at 1:01 pm.

2. Helio Takai Presentation: "AquaSteady, from sea to farmland - an hydrogel for long drought periods" by Helio Takai. (see abstract and bio below)

3. Treasurer's Report. Louise Hanson.

- Louise shared her report, which was a combined report for July and August.
- Mark made a motion to accept, seconded by Andy, passed unanimously.
- Mark wonders if Tesla has had any issues with the federal funding that was promised to them.
- Tesla received the BREA check for a brick, but they are not yet at the point of putting them out.

4. Membership Report. Betty Elder

- Current members: 203, current with email: 188, Members in arrears: 442, Members since last BREA meeting who sent dues: 3.
- Members in arrears – we don't know the reason these members are in arrears. We can think about this. A suggestion was made to think about a way to keep track of

people. For instance, people who have lifetime memberships could have a 'check-in date' to be sure that their newsletters, etc. are not going into garbage or cyberspace, etc. Note: this would require reformatting newsletters and would also need someone to keep track of it.

- **Action:** Ask HR to take a look at the list and see if they can give us an update.
  - **Suggestion:** Create a subcommittee to look into the 442 in arrears. Andy can convert Access to Excel, and he is willing to do it. Include Betty, Mona, Andy, Laura.
  - **Suggestion:** Maybe once a year, or at election time (held biannually), send a physical newsletter, requesting return service. That would tell us whether people are still around. If we do this, Arnie is willing to print the newsletters himself. Next issue is the Nov/Dec issue and will have elections and on the BNL site snow scenes, so people get a sense of what the lab looks like in the winter season.
  - Mark made a motion to approve, Laura seconded, passed with no opposition.
5. New reporting requirement for all BERA organizations.
- Arnie sent the first quarterly report to Adam, Adam is happy. Next reporting time is in 3 months.
6. BREA election of officers this fall. Consider the future of BREA and your participation. We should have a discussion at this meeting, with the intention of identifying a slate of candidates during September before the October meeting.
- Consider standing for election, including people who are interested in becoming an officer.
  - People who are already officers need to let Arnie know if they will continue.
  - Louise understands the Treasurer's duties and is now willing to capitalize on her knowledge. Mark is willing to be the liaison between TFCU and BREA.
7. Discuss BNL retiree health benefits program and Medicare coverages for retirees.
- If you have questions or comments on these programs, we can try to address them or refer you to a knowledgeable source.
  - Arnie heard that the subsidy to part D drug plans is being removed. There might also be issues with Part B supplements.
  - We are waiting notification that the Lab will continue the BSA Retiree Benefits program as it is – a \$180 monthly allotment.
8. Recruitment of retiring employees to BREA. BREA membership is slowly falling as retiring employees fail to become members. In August, several of us met at BNL to discuss strategies to recruit retiring BNL staff members. Contacting employees prior to retirement and changing terms of membership are some possible strategies to be discussed.

- Arnie spoke to Adam about this issue and Adam is in favor of it. He suggested reaching out to HR to see if they will give us a list of upcoming retirees.
- Adam said he would talk to HR about what they have regarding joining BREA in retirement packages.

9. Future Talks/Presentations

- a. Arnie will look into additional presentations.

10. New business.

- a. Laura spoke to John Searing about a BREA tour of Plum Island. She described the process for access and provided a general agenda. The group is receptive but feels it would be better to wait until spring to organize a tour.
- b. Les: he is getting spam email from social security many times a day, postmaster at optonline.net, etc. He deletes them and has contacted Optimum. He wonders if others have been getting them too.
- c. **Action:** all of us should remember to look very carefully at the email address a suspicious or confusing email is coming from.
- d. Cheryl: she noticed that in the May minutes we mention that the title of BWIS and that they are no longer an official part of the lab. She also asked why the Joanna Fowler Award was suspended: BWIS, Brookhaven Women In Science contains the word "Women" in its title. The motivation for suspending the Joanna Fowler Award is the same. There is no known update on either.

Andy made a motion to adjourn, Cheryl seconded, motion passed with no objection.

Meeting adjourned at 2:37 pm.

Appendix:

On the following pages are the abstract and biography for today's presentation by Helio Takai.

## AquaSteady, from Sea to Farmland - An Hydrogel for Long Drought Periods

Helio Takai

Department of Mathematics and Science

Pratt Institute, Brooklyn, NY

### **Abstract**

Longer stretches of drought and shrinking water supplies are making it harder to grow nutritious food. Even though total rainfall has not changed drastically, the gaps between storms have widened, leaving crops without moisture when they need it most. Meanwhile, snowpack—the main source of irrigation water in the western United States—has declined, and deep well drilling is creating geological risks. To keep pace with a growing population's demand for healthy food, farmers need new ways to hold water in the soil. One longstanding option is the use of hydrogels—water-absorbing materials that have been around since the 1970s California drought. Conventional hydrogels, however, are usually made from petrochemical polyacrylates, essentially adding plastics to farmland.

Our research offers a greener alternative: a biodegradable hydrogel derived from brown seaweed cultivated in Long Island Sound. Produced through an environmentally friendly process, this seaweed-based gel stores large amounts of water and then slowly releases it into plant roots. Field trials in Arizona, New Mexico, and Brazil have been encouraging. The most striking result came in Brazil, where young orange trees survived 45 days without irrigation during a severe dry spell. This presentation outlines the material's development, shares early test data, and explores pathways to scale up production for widespread agricultural use.

### **Helio Takai Biography**

Helio is a nuclear physicist by training with a long career spanning fundamental research, education, and academic leadership. He joined Brookhaven National Laboratory (BNL) in 1989 to contribute to the Relativistic Heavy Ion program and later transitioned to particle physics, working on the Superconducting Super Collider. Following the project's cancellation, he became part of the ATLAS experiment at CERN, where he was actively involved in the construction and early operational phases of the detector. During his tenure at BNL, Helio was deeply committed to education and mentorship, guiding numerous students toward STEM careers and teaching both pre-service and in-service teachers at Stony Brook University. In 2018, he retired from BNL and joined Pratt Institute as Chair of the Department of Mathematics and Science. A year later, he was appointed Dean of the School of Liberal Arts and Sciences, where he advanced interdisciplinary initiatives and research development. Helio currently serves as a Program

Director for Particle Astrophysics at the National Science Foundation. His broad academic interests range from high-energy particle physics to his current research on sustainable materials—specifically, the development of biodegradable seaweed-based hydrogels for agricultural applications.