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organization,
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<http://stemd.org>

Foundation for Science and Disability Newsletter

<https://www.facebook.com/groups/360413492800/>

http://www.linkedin.com/groups?gid=4116054&trk=hb_side_g

Student Grant Awardees since 1990

1990	Wendy Pava, Birgit Wolz, Elaine Hall
1991	Kevin Wilkins, Shan Ming Lee
1992	Meghal Antani, Lynn Hanninen, Mara Frohlinger
1993	David Fass, William Hylton
1995	Chris Tromborg
1996	Anne-Michelle Singleton
1997	Leslie Harper
1998	Maura O'Modhrain
1999	Joseph Barbera, Byunggyoo Kim
2000	Jennifer Last
2001	Cassandra Quave
2002	My Lien Nguyen
2003	Mark Woods
2004	Jessica Mahood
2005	Cheryl Fogle
2007	Melodi King
2008	Ryan McKindles
2009	Emma Sacks
2010	Shaun Kane
2011	Lisa Dunning
2012	Kim Yeoman
2013	Naomi Delventhal
2014	Amy Nichols
2015	Rosemarie Figueroa
2016	Heather Page
2017	Rachel Wiley
2018	Cynthia Bennett
2019	Helen Rottier

President's Corner

-Richard Mankin

The ongoing Coronavirus pandemic seems destined to overshadow activities of FSD last year and this year as well. The virus causes physical and economic harm especially to persons who are poor, elderly, and/or disabled, partly due to the stay-at-home isolation that is recommended to reduce the rate of Covid-19 spread (e. g,

<https://www.ars.usda.gov/ARSUserFiles/3559/Banskowta-appselderadults-wjemergmed-20-21-3-g.pdf>.

Several of last year's activities, however, are worth noting in this column. Colleagues with disabilities have been active in developing digital technology to improve the human-computer interface, for example (see Cynthia Bennett's article below and

<https://www.ars.usda.gov/ARSUserFiles/3559/insidehighered-digitalaccessibility-disabled-20200310-g.pdf>). Also, several researchers from a "sister" organization (<http://deafearscientists.org/>) published an article in the Spring 2019 issue of Acoustics Today

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FSD is an affiliate of the American Association for Advancement of Science (AAAS)

The next FSD annual meeting will be in Phoenix, AZ during the AAAS annual meeting, Feb. 11-14, 2021

President's Corner continued:

(<https://acousticstoday.org/scientists-with-hearing-loss-changing-perspectives-in-stemm-henry-j-adler/>). Those of you who live in San Diego may know of Salk Institute's Uri Manor, who was featured in a recent news article:

<https://www.sandiegouniontribune.com/lifestyle/people/story/2020-03-27/someone-san-diego-should-know-uri-manor>).

Students with disabilities have been in the public eye recently too, including

<https://www.sciencenewsforstudents.org/article/an-accident-didnt-stop-this-geologist-from-doing-field-work>, and

<https://blogs.scientificamerican.com/voices/our-disabilities-have-made-us-better-scientists/>.

In 2019, FSD participated in a National Institute of General Medical Sciences, Institutional Research and Academic Career Development awards (IRACDA) grant proposal submission: *NIH T32 Predoctoral Training Program in Environmental Health Sciences* (T32 ES007059-41) with Dr. Hess at UC Davis. The objective of is to train the next generation of environmental health scientists through interdisciplinary research and coursework that address issues of public concern. Training will be conducted by 53 active researchers with substantial experience in mentoring predoctoral students in interdisciplinary approaches to studying the impact of environmental factors on human biology and disease. Trainees receive training in responsible conduct of research and obtain instruction and practice in scientific writing and in communicating scientific findings. This training program builds on an established program with a strong track record of training the next generation of scientists to protect public health by connecting scientific advances to environmental exposures and consequent disease processes. Every effort will be made to recruit under-represented minority (URM) candidates, including physically challenged and economically disadvantaged in consultation with a Diversity Advisor, Dr. Richard Mankin of FSD. Since it is well-documented that the URM population is more financially disadvantaged than the majority population, recruitment of URM candidates should also effectively reach this group. During the past 5 years (2014-19) 25% of postdoctoral fellows recruited into the laboratories of Research Mentors were members of groups underrepresented in the sciences, and eligible for IRACDA support.

And there's much more in the remainder of the newsletter including a guest editorial from Hal Frost, reminiscing after several years of retirement. So, I'm hard at work to finish it up this afternoon as I sit at the laptop on my dining room table, looking out periodically at the birds and lizards visiting the deck outside, wishing for an end to Florida's Stay at Home lockdown.

Be safe, everyone and remember, lip reading is difficult if you are wearing a mask.

4/13/20 

Notes from students and colleagues

A note from Helen Rottier, a doctoral candidate at the University of Illinois at Chicago, who was the 2019 Foundation for Science and Disability Science Student Grant recipient:

Helen Rottier is working towards a PhD at the University of Illinois at Chicago. Since receiving a Foundation for Science and Disability Grant, Helen has continued her research with autistic and neurodivergent college students in STEM studies in the Chicago area. The Coalition of Autistic and Neurodivergent Students (CANS) meets monthly to check in with students and discuss student experiences. CANS also engages in special events, projects, and workshops to promote inclusion in STEM education and inform the public about neurodiversity and autism acceptance. In addition to coordinating CANS, Helen has participated in the Autistic Self-Advocacy Network Autism Campus Inclusion program and presented at conferences for the American Association on Intellectual and Developmental Disabilities, the American Psychological Association, the Association of Computer Machinery, and the Association of University Centers on Disability. Helen is in the process of writing her thesis and several associated book chapters and publications, and she helped organize Disability Day of Mourning and Neurodiversity Celebration Week, both in March 2020. After finishing her degree, Helen intends to continue her work in academic access and autistic student mentorship.

We also received a note from Cynthia Bennett, a doctoral candidate at the University of Washington, who was the 2018 Foundation for Science and Disability Science Student Grant recipient:

Last year, Cynthia Bennett finished her dissertation and began a joint research position as a postdoc at Carnegie Mellon's Human-Computer Interaction Institute and Apple. Her dissertation examined the ways people with disabilities interact with design thinking, the theory and methods that guide Human-Computer Interaction technology design and development. Her dissertation revealed that many who design resources view people with disabilities solely as users of technology rather than as potential designers, developers, and augmenters of technology themselves. Consequently, such resources often lacked direct engagement with people with disabilities. Her research drew on the lived experiences and creative practices of people with disabilities and her findings contrasted what she found in current designs of resources focused on people with disabilities. For example, she showed how people with disabilities were not just passive users, but regularly adapted and invented procedures in response to pervasive inaccessibility and leveraged many strategies for problem solving, particularly with respect to engineering professions. Bennett's dissertation synthesizes these empirical findings into new theoretical and methodological contributions to Human-Computer Interaction research. Bennett now intends to challenge designers and developers of technology to center, rather than sideline disability access in their workflows and communications, and directly include persons with disabilities in the technology design and development process.

Yoshiko Miya and Erica Penn participated in the 2020 Annual Meetings of both FSD and the AAAS (see next section).

The minutes of the FSD 2019 Annual Meeting in Washington DC are posted at <https://www.ars.usda.gov/ARSUserFiles/3559/Minutes19meeting.pdf>

Here are the minutes of the FSD 2020 Annual meeting in Seattle:

FOUNDATION FOR SCIENCE AND DISABILITY (FSD)

Annual Meeting Minutes

10:00 AM -12:00 PM, Saturday, February 15, 2020

Leschi, Sheraton Grand, Seattle, Washington

●Call to Order/Introductions:

President Richard Mankin called the meeting to order. Erica Penn (Walter Reed Army Institute of Research), Yoshiko Miwa (Ritsumeikan University), and Laureen Summers (EntryPoint Project Coordinator, American Association for the Advancement of Science [AAAS]) were present.

Erica Penn and Yoshiko Miya briefly discussed their poster presentations, respectively: "Use of an in vitro *P. cynomolgi* liver model for anti-hypnozoite drug discovery," and "Source of advantage to neutralize misconduct-based policy making." Yoshiko is finishing her PhD.

Laureen Summers, EntryPoint coordinator at AAAS, presented updates on diversity and inclusion activities in which AAAS is participating. This year, 38 applicants are applying to EntryPoint programs sponsored by the Mayo Clinic, Genentech, Aerospace, and eight universities. There is growing interest for AAAS to advocate for more persons with disabilities to play active roles in projects focused on assistance to the disabled community.

Attendees continued further discussion about networking and how to provide greater value to young persons uncertain about networking and career-development benefits they might receive from FSD membership. Persons who cannot easily attend the FSD annual meeting at the American Association for the Advancement of Science can now phone into the Annual Meeting each year using a code provided at the <http://stemd.org> website, and can join the FaceBook group (<https://www.facebook.com/groups/360413492800/>) which has a growing number of members. Any

additional suggestions that increase the capability of members to develop careers are welcome. The recent pandemic certainly highlights the needs of interested parties to attend such events even when they cannot participate onsite.

- Old Business: Minutes - February 16, 2019 (Washington, DC):

The minutes from the Washington, DC 2019 meeting were approved as posted on the FSD web site (<http://stemd.org>). If anyone finds an error, please alert Richard Mankin (rmankin1@ufl.edu) and it will be corrected.

- Treasurer's Report for 2019- (Richard Mankin for Angela Foreman, Treasurer)

FSD began, January 1, 2019 with a balance of	\$14,321.07
For the year, dues and donations received were	289.95
Expenses were: student grant	-1000.00
Nonprofit fees IRS,	-39.95
Final balance on December 31, 2019 was:	\$13,561.07

- Science Student Grant Committee Report for 2020 – Angela Foreman and Richard Mankin, Chair

Lana Frankle in the Department of Biological Sciences at Kent State University, Ohio, received a \$1000 graduate student grant for "Astrocyte activation under demyelinating stress."

- New Business – There is recent news about a proposal by the federal government to change the age at which persons with disabilities can use age as a factor in qualifying for disability income. About 20% of all disabled persons below retirement age are now working, compared to 87% of persons without disability and 60% of disabled persons who hold bachelor's degrees. The criterion age would increase from 50 to 55, affecting about a quarter of the persons that qualify for disability income under the current rules. Disability community advocates are concerned that changing the criterion in this way would disproportionately penalize persons with limited education and experience who may have dropped out of the workforce for medical reasons and have few backup resources. FSD resources to address this issue are financially limited but concerned members may wish to write letters to their congressmen and senators.

- Adjournment:

The meeting adjourned at 10:50 AM – Respectfully submitted by Richard Mankin, February 15, 2020.

Here are some closing comments from Harold Frost, a frequent FSD contributor, formerly a physicist at Los Alamos:

I retired as a research physicist from Los Alamos in 2008, traveling a much different path over my career than I imagined after graduating as an 18-year-old from high school in N.H. and scoring a success in the Westinghouse National Search for Science Talent contest. As in my youth on overnight hikes over the Long Trail through the mountainous spine of Vermont, today I have a summit-to-summit view. Back then I took little notice that wandering the trails through the deep valleys between peaks was necessary to reach other peaks. In my younger years I could go downhill and make easy progress, but a point came where I had to cross a stream and then start climbing. Over time, the continuing effort to make progress on the uphill slopes became harder, and likewise the temptation became greater to regret mistakes which any human being, being imperfect, makes. But eventually one learns and moves on, accepting whatever impediments that show up along the way, not just those of aging but of disability too, like white blazes on maple and pine trees and rocks that define different regions of the trail.

There was no guidebook for my career path, and even now it is difficult to retrace its steps on a map. But three enduring processes stand out in the moral topography of my long-term journey towards discovery of new knowledge and applications development for societal benefit. First and foremost was passion for what I was doing. Doing science or engineering is not a job as much as a sacred vocation of serving others through use of the scientific method, hard-won knowledge acquired in graduate school, the help of others, and wisdom developed through years of experience. Second was courage to be oneself. When young, one has freedom of trying out one's imagined identity through numerous cycles. The understanding of who one is

becoming runs the gauntlet of one's failures as well as successes. But eventually a crossing point comes when one really does encounter oneself in an interior experience of the meaning of what one had done so far, and then acts out in one's relationships with others that new understanding in terms of decisions taken, such as what to investigate now in one's STEM-related research, or what to teach if in academia, and so on. Finally, third, was the willingness and independent spirit to integrate knowledge so that one's scientific eyesight crossed over disciplinary boundaries into multidisciplinary areas with unknown perils, such as risks to one's career, as well as unknown locations where treasure is yet to be discovered and investigated.

Looking back now, the passion, courage, and integrative efforts seem more important than the milestones of salary increases, promotions, awards and honors. In my case, practice of passion, courage and integrative synthesis in various ways over my 77 years led to deeper awareness of my inner identity — as an exploratory researcher in the mode, finally, of a mathematical physicist definitely passing on a legacy of new ideas in nuclear magnetic resonance of solids and continuum-mechanics analysis of the risks vs. benefits of use of ultrasound in medicine, both of which have biomedical imaging applications for diagnosis and therapy.

As a budding scientist in the pre-Sputnik 1950's when I had a full chemistry lab in the basement of my parents' house in Vermont, built with help from my Dad and supplied and operated with proceeds from my daily newspaper route, those three facets of my eventual career were not on my mind nor was there any sense of leaving a legacy for others. My initial motivation was an inner passion to do things in a lab or field setting, and simply see what physical drama might unfold. So, for example, I learned how to make solid fuel for a rocket engine made from an expended toy-CO₂ cartridge, and did ignition and test firings from a self-built launcher at a vacant local sand and gravel pit near our house. Only later, from my science coursework in high school and college, did I learn what had happened. Likewise, the results of exploratory research only later circled back to help me move forward towards development of societal benefit.

Thanks, Hal. Persons with or without disabilities, young or old, who wish to establish legacy despite this pandemic interlude may take a different path than you did, but we all have inner strengths that we can employ to discover and apply new knowledge for societal benefit.

Take care, everyone!

**Foundation for Science
and Disability**

<http://stemd.org>

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FSD

The Foundation for Science and Disability (<http://stemd.org>) was founded in 1978 to promote the integration of persons with disabilities into the mainstream of the scientific community. A major focus of FSD has been the removal of barriers that restrict opportunities to develop careers and conduct scientific research. The Foundation also provides grants to students with disabilities who are conducting research in the fields of Science, Technology, Engineering, or Mathematics.

President: Richard Mankin (rmankin1@ufl.edu)

Treasurer: Angela Lee Foreman (angelaleeforeman@yahoo.com)

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http://www.linkedin.com/groups?gid=4116054&trk=hb_side_g

**Foundation for Science and Disability 2020 Dues Notice
Membership Application / Renewal Form**

Dues Schedule:

Student \$5.00
Regular \$25.00

Contribution _____

Total _____

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Please send a change of address, if any, and / or list any comments to the President or Treasurer. Also, please forward us your email address if you would like to receive pdfs of future Newsletters.
