

Annual Report 2023

CEND ASPIRES TO HELP PREVENT AND TREAT DISEASES, THROUGH
STUDENT TRAINING, PUBLIC HEALTH INITIATIVES AND
TRANSLATIONAL RESEARCH.



**Henry Wheeler Center for
Emerging and Neglected Diseases**

Dear CEND supporters,

It is with sincere gratitude that I write to express my appreciation for your commitment to supporting the Center for Emerging and Neglected Diseases. Thanks to you, we have been contributing to new approaches to tackle emerging and neglected diseases, translating lessons from the pandemic into actionable policies, and training the next generation of students. We are committed to scientific excellence and to making a meaningful difference for the most neglected populations. None of this would be possible without your support.

Sincerely,



Julia Schaletzky, PhD

CEND Executive Director



Jeff Cox, PhD

CEND Faculty Director

Our Capabilities

Innovation



Problem identification, collaboration, drug discovery, entrepreneurship infrastructure

Analytics, Advising, Advocacy



Analyze issues using deep expertise and data science capabilities, advise decision-makers and journalists on current issues, advocate on behalf of patients

Education



Develop a community of innovators through symposia and training



Innovation

At CEND, we're passionate about innovation. We collaborate broadly in our core areas of expertise around drug discovery, translational science, and entrepreneurship to conduct original research on emerging and neglected diseases. We are not content just talking about problems and raising awareness; we aim to actively contribute to a solution.



Progress in 2023:

- **Two** CEND Drug Discovery Center patents
- **Four** papers published in peer-reviewed journals on new avenues to treat disease
- **Compounds licensed** by SF Bay biotech startup Kainomyx to develop as antimalarials
- CEND Executive Director joins new division of Molecular Therapeutics within UCB's Department of Molecular and Cell Biology to better connect and collaborate with other researchers on therapeutics development, including for neglected diseases

Published Papers

1. MyosinA is a druggable target in the widespread protozoan parasite *Toxoplasma gondii*
2. Mechanism of small molecule inhibition of *Plasmodium falciparum* myosin A informs antimalarial drug design

Analytics, Advising, and Advocacy

We help focus energy on tractable problems that are impactful but neglected. We aim to build collaborations to devote thought and resources towards problems that could be solved but fall by the wayside in public discussion. We research and advocate against the increasing politicization and the undermining of the scientific method, which wastes funds and—in the worst case—results in pseudoscience and scientific Lysenkoism. These developments hit funding for neglected diseases the hardest, as a budget challenged by wasteful spending tends to be balanced by cutting funds for diseases that affect the Global South. The more funding is politicized along party lines, the less is available for global health.



Dr. Schaletzky (far left and other members of the Bay Area Global Health Alliance with U.S. House of Representatives Speaker Emerita Nancy Pelosi (fourth from right), who was presented the Bay Area Global Health Alliance Leadership Award for her work on PEPFAR / HIV prevention

Progress in 2023:

- Received two grants to study governmental funding distribution and hopes to generate results on this topic later this year.
- Participation and advisory for the [California Council of Science and Technology](#) during several weeks-long sessions, generating policy papers for the California government on pandemic preparedness, electronic health records / AI, surveillance diagnostic testing
- Participation in the development of NIH DEI/Global Health report and recommendations
- Participation in the [Bay Area Alliance for Global Health](#), advocating broadly and building community around important global health issues
- Continuing to advocate for free inquiry and the scientific method, which are foundational to science.

Education

Within the UC Berkeley environment, we use multiplier effects to educate students and alert faculty to issues around emerging and neglected diseases.

Many stakeholders have never heard of tropical neglected diseases because they have never encountered someone impacted by them. Thus, we aim to develop interest in these areas among Berkeley faculty, staff, and students.

Progress in 2023:

- Reached 200+ deans and provosts via panel discussions and nationwide conference on “How Innovation Supports Resilience in Higher Ed” and “We Need New Antibiotics – Why Do We Have So Few?”
- Helped secure >2 million USD for proof-of-concept funding for emerging technologies by serving on the President’s Entrepreneurship Network Council at UC
- Wrote the foreword to Brandon Brown’s book “Sharing our Science: How to Write and Speak STEM.”
- Developed curriculum for UCB’s Master of Biotechnology program, which will start in 2024
- Dr. Schaletzky continues to teach at the Haas School of Business for the Robinson Life Sciences Business and Entrepreneurship program, focusing on translational science, access to medicines, and drug development for emerging and neglected diseases



With the Minister Counselor and Head of the Science and Technology Section at the German Embassy in Washington, D.C., René Haak, CEND co-hosted an event on science integrity and communication, featuring Berkeley faculty, including Nobel Laureate Prof. Randy Schekman.

Fellowships

PREP@Berkeley

CEND runs a post-baccalaureate program to prepare five underserved scholars each year for graduate school; the first year was a resounding success, with all five scholars getting accepted into prestigious programs. A new cohort is currently interviewing for Ph.D. positions – fingers crossed!



“Initially feeling somewhat adrift and plagued by self-doubt, the **guidance and encouragement from mentors proved transformative** in altering my perception of my capabilities. In alignment with the sentiment expressed by Bob Proctor in his book *You Were Born Rich*, I came to understand that a mentor is someone who identifies untapped talents and abilities within an individual, fostering their development. This mentorship not only **instilled [in me] the confidence to envision [myself] pursuing a Ph.D.**, but also **reinforced [that I] possess...tenacity, resilience, and a genuine passion for my work.**”

–Juliana Alexandra Diaz Tirado, 2023 PREP Scholar

“I came to the PREP program with a **goal of diversifying my research experience** before grad school, and I feel that I have been able to do so in many ways while at Berkeley. My experience here has **challenged me to think about neuroscience research in new ways** and has **enhanced my critical thinking skills**. The opportunity to work in a lab full time has been especially beneficial, as I am **able to be involved in all stages of our projects** and have **more hands-on experience** than I was able to gain as an undergraduate student.”

–Jessica Redmond, 2023 PREP Scholar



Donor-Funded Graduate Fellowships

Thanks to the generosity of our donors, we have been able to award nine graduate fellowships this year to enable travel to conferences, to support international collaborations, for professional development, and for global health research projects.



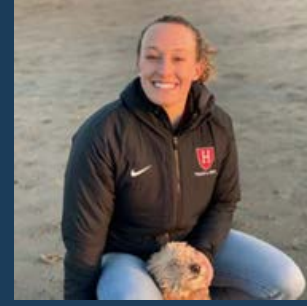
Teena Baja

Kathleen L. Miller Fellow



Nick Coburn

Alber Science and
Engineering Fellow



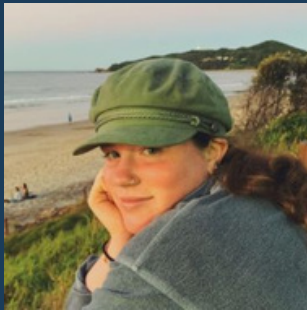
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Global Health

Julia Schaletzky Advances Biomedical Entrepreneurship in Uganda with Mastercard Foundation Faculty Grant

By Paul de Morais

December 11, 2023



Julia Schaletzky is executive director of the Center for Emerging and Neglected Diseases, Drug Discovery Center, at UC Berkeley, which co-founded the Alliance of Global Health and Science several years ago to integrate research at UC Berkeley with Makerere University in Uganda. She is also a lecturer at the HAAS Business School and serves as judge and advisor for the “[Big Ideas](#)” program at the Blum Center for Developing Economies, which trains and funds teams of UC Berkeley students who have innovative and entrepreneurial solutions to real social and environmental problems across the globe. In 2022 Schaletzky and collaboration partner Dr. Emmanuel Nasinghe at Makerere University applied for [seed funding](#) from the Center for African Studies and [Mastercard Foundation Scholars Program](#) at UC Berkeley to continue their bioentrepreneurship workshop and mentoring program (“Building Uganda’s Bioentrepreneurship and Innovation Capacity”), as well as create an online global networking portal for graduate students and faculty. The workshop program and online portal provide some much-needed infrastructure to support translational medicine and bridge “the gap between high-quality, high-impact research and commercialization.” This entrepreneurship initiative promotes interdisciplinary collaboration across a multitude of fields, from tech to intellectual property law, biology, public health, nutrition, and digital health and wellness.

Uganda is no stranger to entrepreneurship, Schaletzky remarks:

“Entrepreneurialism is really not lacking in Africa. In some ways it is more entrepreneurial than here, in the Bay Area. So I was surprised to see that no one really did any training programs or anything for building bioentrepreneurship capacity.”

The workshop, which ran from July 18th to the 22nd last year, involved an intensive one-week project and additional daily assignments for the students. Working with Makerere University also enabled Schaletzky to learn more about the entrepreneurial infrastructure in Africa and its needs, allowing her to tailor the curriculum to the context of Africa. Venture capital may not be as abundant in Africa, but some donors do fund entrepreneurial enterprises there, says Schaletzky. Further, government funding may also provide a possible avenue for obtaining financial investment in Africa. The focus of entrepreneurial initiatives in Uganda also differs in that it primarily targets local needs. The lack of an equivalent to the Food and Drug Administration in Africa also makes the distribution of new and potentially life-saving drugs, therapeutics, and other biomedical products in the market significantly easier. The current prospect of an African medical agency—a regulatory drug agency that would be responsible for the African continent—is particularly exciting for Schaletzky.

We are continuing to mentor and support workshop alumni in Uganda, and share funding opportunities. A delegation of faculty is traveling to Kenya this year to meet with researchers to discuss collaborations for a bigger center grant proposal. In addition, we were featured in the [Berkeley news](#) about the bioentrepreneurship workshop we’ve hosted in Uganda utilizing funding from the Mastercard Foundation.



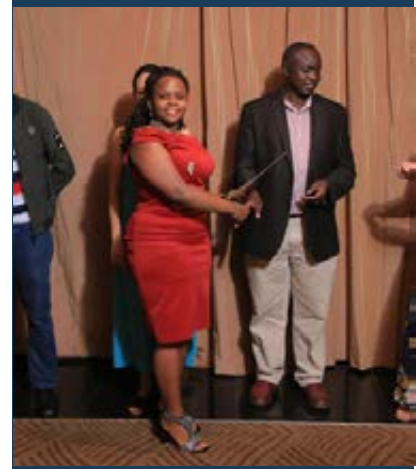
Financials

CEND is 100% dependent on philanthropy and grants. We remain fiscally responsible and have secured our first NIH grant, a ~\$2 million award to support and encourage underrepresented students to continue their academic training and obtain postgraduate degrees. Most of this funding goes towards student support, but it helps us defray CEND staff costs with a 50% position over the next five years. We also submitted more than five proposals for research funding, currently under review. We continue to be fiscally responsible and resourceful, driving innovation and finding creative, optimized solutions. We strive to generate maximum impact for all contributions. Detailed financial reports are available on request.

Please consider supporting us here:



<https://give.berkeley.edu/giftdetails?fund1=FU0927000>



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