

NSA DADA

ASSISTANT PROFESSOR • ARIZONA STATE UNIVERSITY • SCHOOL OF LIFE SCIENCES

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EDUCATION

- 2010-2014 **PhD in Microbiology (Emphasis in mosquito-microbe interactions)** Norwegian University of Life Sciences (NMBU), Faculty of Science and Technology, Ås, Norway.
- 2008-2009 **MSc in Biology and Control of Parasites and Disease Vectors with *Distinction (Summa cum laude)***. Liverpool School of Tropical Medicine (LSTM), Faculty of Health and Life Sciences, University of Liverpool, United Kingdom.
- 2002-2006 **BSc. in Zoology, *Magna cum laude***. University of Calabar, Calabar, Nigeria.

RESEARCH INTERESTS

I am a vector biologist and microbial ecologist broadly interested in disease vector-microbe interactions with a specific focus on how microbes shape disease vector biology as a function of biotic and abiotic factors. Our lab currently focuses on elucidating how microbes shape the evolution of insecticide resistance in mosquitoes. We use a combination of molecular, 'omics, and classical (micro)biology tools, as well as bioinformatics, to explore this in wild mosquito populations and/or their progeny in laboratory settings.

RESEARCH & LEADERSHIP POSITIONS

- 2022-present **Assistant Professor**. Arizona State University (ASU), Tempe, AZ, USA
School of Life Sciences (SOLS)
Center for Fundamental and applied Microbiomics (CFAM), The Biodesign Institute
- 2017-present **Founder and Lead**. Mosquito Microbiome Consortium (www.mosquito-microbiome.org)
- 2019-2020 **Research Scientist**. Faculty of Science and Technology, NMBU
- 2017-2019 **Research Fellow**. Entomology Branch, Division of Parasitic Diseases and Malaria (DPDM), Center for Global Health, CDC, Atlanta, GA, USA.
- 2015-2017 **CDC & American Society for Microbiology (ASM) Postdoctoral Fellow**. Entomology Branch, CDC, Atlanta, GA, USA
- 2015 **Postdoctoral Research Associate**. Institut de Recherche pour le Développement (IRD), Department of Health, Montpellier, France.
- 2015 **Postdoctoral Research Associate**. University of Oslo, Dept. of Community Medicine, Institute of Health and Society, Oslo, Norway.
- 2010-2014 **Doctoral Research Fellow**. NMBU, Faculty of Science and Technology, Ås, Norway

ADVISORY ROLES, CONSULTANCY, & SECONDARY APPOINTMENTS

- 2020-present **Honorary Research Fellow**. Tropical Infectious Diseases Research Center, University of Abomey-Calavi, Abomey-Calavi, Benin
- 2017-present **Adjunct Lecturer**. Prince of Songkla University (PSU), Hat Yai, Thailand.
- 2021-2023 **Consultant Research Scientist**. Pan-African Mosquito Control Association, Nairobi, Kenya

- 2021-2023 **Expert Assessor.** World Health Organization (WHO) Vector Control Product Prequalification, Geneva, Switzerland
- 2021-2022 **Global Health Consultant.** KPMG (Norway) International Development Advisory Service
- 2019-2021 **Adjunct Research Fellow.** Nigerian Institute of Medical Research, Lagos, Nigeria

OTHER RESEARCH EXPERIENCE

- 2018-2019 **Visiting Researcher.** Kenya Medical Research Institute (KEMRI), Center for Global Health Research (CGHR), Entomology Section, Kisumu, Kenya
- 2016-2017 **Guest Researcher.** Universidad del Valle de Guatemala (UVG), Centro de Estudios en Salud, Grupo de Biología y Control de Vectores, Guatemala, Guatemala.
- 2016 **Visiting Researcher.** Universidad Autonoma de Yucatan, Departamento de Zoología, Campus de Ciencias Biologicas y Agropecuarias, Merida, Mexico.
- 2013 **Guest Researcher.** IRD, Montpellier and University of Montpellier (UM), Bacteriology unit, Faculty of Pharmacy, Montpellier, France.
- 2010-2012 **Guest Researcher.** Khon Kaen Provincial Health office, Khon Kaen, Thailand
- 2011 **Visiting Researcher.** Salavan Health Department, Salavan, Laos Peoples Democratic Republic.
- 2010 **Visiting Researcher.** Mukdahan Provincial Health Office, Mukdahan, and Ubon Ratchathani Provincial Health Office, Ubon Ratchathani, Thailand
- 2010-2011 **Guest Researcher.** Kasetsart University, Entomology Department, Bangkok, Thailand
- 2009 **Guest Researcher.** Helen Keller International, Freetown, Fourah Bay College, Freetown, and Njala University, Bo, Sierra Leone.

ACADEMIC/PROFESSIONAL AWARDS & HONORS

- 2023 **Scialog Fellow • Mitigating Zoonotic Threats theme.** Research Corporation for Science and Advancement.
- 2020 **Nominee • Charles C. Shepard Award for excellence in science.** Entomology Branch, CDC.
- 2019 **Nominee • Charles C. Shepard Award for excellence in science.** US Centers for Disease Control and Prevention and Agency for Toxic Substances and Disease Registry (CDC/ATSDR).
- 2017 **Recipient • Future Leader in International Medical Entomology (inaugural) Award.** American Committee of Medical Entomology (ACME), American Society of Tropical Medicine and Hygiene (ASTMH)
- 2015 **Recipient • ASM-CDC Postdoctoral Research Fellowship in Infectious Diseases & Public Health**
- 2010 **Recipient • Doctoral Research Fellowship.** NMBU, Ås, Norway
- 2006 **Best graduating student.** National Association of Zoology & Environmental Biology, University of Calabar, Nigeria

FUNDING, RESEARCH SUPPORT & FELLOWSHIPS (> 2.8 million USD awarded)

RESEARCH GRANTS

- 2023-2025 **Principal Investigator (Multi-PI project)** “Novel insecticide delivery and formulation for resistance management in zoonotic disease vectors”
Funder: Research Corporation for Scientific Advancement (RCSA) & United States Department of Agriculture (USDA): **117,750 USD**

- 2021-2025 **Principal Investigator (Multi-PI project)** “Establishing genomics and bioinformatics hubs for vector-borne disease research in Africa” A Pan-African Mosquito Control Association (PAMCA) initiative. Funder: Bill and Melinda Gates Foundation (BMGF), USA—**1,445,665 USD**
- 2023-2024 **Co-Investigator** “International mosquito microbiome research exchange and its application for vector-borne disease control”
Funder: French National Center for Scientific Research (CNRS): 30,000 EUR (**~32,000 USD**)
- 2019-2024 **Co-Investigator** “Genomics for management of insecticide resistance in African malaria vectors”
Funder: BMGF, USA—**909,988 USD**
- 2021-2023 **Co-Investigator** “Impact of climate change on tropical blood-sucking insect pests: behavior and pesticide susceptibility”
Funder: Fundamental Fund, Thailand Science Research and Innovation (TSRI) — 1,000,000 THB (**~31,900 USD**)
- 2021-2022 **Co-Principal Investigator** “International research exchange on the mosquito microbiome and its application for vector-borne disease control”
Funder: CNRS: 19,500 EUR (**~22,500 USD**)
- 2021-2022 **Project partner** “Genetic diversity and maternal transmission of Microsporidia MB strains in field populations of *Anopheles gambiae* s.l. in Cameroon”
Funder: ANTI-VeC— 39,200 GBP (**54,219 USD**)
- 2020-2021 **Principal Investigator** “Role of the mosquito microbiota in insecticide resistance. A seminal study of invasive *Aedes* populations in Italy”
Funder: European Corporation in Science and Technology (Action CA17108) Short Term Scientific Mission Grant—1,950 EUR; **~2300 USD** [declined due to COVID]
- 2015-2019 **Fellowship.** CDC-ASM Postdoctoral Research Fellowship in Infectious Disease and Public Health Microbiology (2015-2017) and CDC Associate Service Fellowship (2017-2019). “Role of mosquito microbiota in insecticide resistance in malaria mosquitoes”.
Funder: CDC— **>226,500 USD** (laboratory space and consumables provided in addition)
- 2013-2013 **Doctoral overseas research grant** “Microbial composition of *Ae. aegypti* and water from their breeding containers”.
Funder: Research Council of Norway (RCN)—51,000 NOK; **~6,000 USD**
- 2010-2013 **Doctoral Research Fellowship** “Links between *Aedes aegypti* infestation and fecal contamination in domestic water containers in Thailand and Laos”.
Funder: RCN—948,417 NOK; **~103,621 USD**

TRAVEL GRANTS, OTHER RESEARCH SUPPORT AND MONETARY VALUE OF AWARDS

- 2019 **Travel grant** 1st European workshop on testing procedures for monitoring and managing insecticide resistance in invasive mosquitoes. Supported by the World Health Organization (WHO) & The Worldwide Insecticide Resistance Network (WIN).
- 2019 **Travel grant** ANTI-VeC (Application of Novel Transgenic technology & Inherited symbionts to Vector Control) International Conference Bursary—1,075 GBP; **~1,400 USD**
- 2017-2019 **Co-Investigator** “The role of agricultural pesticide usage in the development of resistance to public health insecticides in mosquitoes”. Supported by: Thailand Research Fund and PSU.
- 2017 **Award monetary value (Future Leader in International Medical Entomology).** ACME-ASTMH—**2,000 USD**
- 2009-2009 **Postgraduate (MSc) thesis project support** “Prevalence of Soil-transmitted Helminths (STHs) in Sierra Leone: A survey of school children aged 9-14 years in six

districts". Funded by: LSTM & UK Department for International Development (DFID)–1,800 GBP; ~2,300 USD

SCIENTIFIC PUBLICATIONS (25 total: 7 first authorships; 9 corresponding/last authorships)

^uundergraduate mentee; ^ggraduate mentee; ^ppostdoctoral mentee; ^ttechnician/other mentee; †co-first authors; ‡co-last authors; § significant recognition/award; *corresponding author

PEER-REVIEWED PUBLICATIONS

1. **Nsa Dada***, Victoria J. Simpson, Lucas N. Amenga-Etego, Eniyu Oriero, Olivo Miotto, Mili Estee Torok, Elijah O. Juma, Nana Aba Williams, Shavanthi Rajatileka, Cristina V. Ariani, Jaishree Raman, Deus S. Ishengoma*. **2024**. Towards integrated malaria molecular surveillance in Africa. *Trends in Parasitology*, 40:11, p964-969 [\[Link\]](#)
2. Cynthia Awuor Odhiambo*, Dieunel Derilus, Lucy Mackenzie Impoinvil, Diana Omoke, Helga Saizonou, Stephen Okeyo, **Nsa Dada**, Nicola Mulder, Dorothy Nyamai, Steven Nyanjom, Audrey Lenhart, Luc Djogbénou, Eric Ochomo. **2024**. Key gene modules and hub genes associated with pyrethroid and organophosphate resistance in Anopheles mosquitoes: A systems biology approach. *BMC Genomics*, 25:665 [\[Link\]](#)
3. Maxime Girard, Edwige Martin, Laurent Vallon, Van Tran Van, Camille Da Silva Carvalho, Justine Sacks, Zélia Bontemps, Julie Balteneck, Florence Colin, Pénélope Duval, Simon Malassigné, James Swanson, Ian Hennessee, Stephanie Jiang, Lucrecia Vizcaino, Yamila Romer, **Nsa Dada**, et. al. **2024**. Human-aided dispersal facilitates parasitism escape in the most invasive mosquito species. *PNAS Nexus*, 3:5 [\[Link\]](#)
4. Helga Saizonou*, Lucy Mackenzie Impoinvil, Dieunel Derilus, Diana Omoke, Stephen Okeyo, **Nsa Dada**, Filémon Tokponon, Nicola Mulder, Audrey Lenhart, Eric Ochomo, Luc S. Djogbénou*. **2024**. Transcriptomic analysis of *Anopheles gambiae* from Benin reveals overexpression of salivary and cuticular proteins associated with cross-resistance to pyrethroids and organophosphates. *BMC Genomics*, 25:348 [\[Link\]](#)
5. Diana Omoke*, Lucy Impoinvil, Dieunel Derilus, Stephen Okeyo, Helga Saizonou, Nicola Mulder, **Nsa Dada**, Audrey Lenhart, Luc Djogbénou, Eric Ochomo*. **2024**. Whole transcriptomic analysis reveals overexpression of salivary gland and cuticular proteins genes in insecticide-resistant *Anopheles arabiensis* from Western Kenya. *BMC Genomics*, 25:313 [\[Link\]](#)
6. Deleegn Woyessa*, Evangelia Morou, Nadja Wipf, **Nsa Dada**, Konstantinos Mavridis, John Vontas, Delenasaw Yewhalaw. **2023**. Species composition, infection rate and detection of resistant alleles in *Anopheles funestus* (Diptera: Culicidae) from malaria hotspot areas of Ethiopia. *Malaria Journal*, 22:233 [\[Link\]](#)
7. **Editorial**: Diana M Proctor, **Nsa Dada**, Anna K Serquiña, Julia Willett*. **2023** Problems with peer review shine a light on gaps in scientific training. *mBio*; e03183-22 [\[Link\]](#)
8. Warin Klakankhai, Sunaiyana Sathantriphop, Ratchadawan Ngoenklan, **Nsa Dada**, Vithee Muenworn, Tassanee Khawniam, Krajana Tainchum*. **2023** Chemical Profiles and Lethal Toxicities of Native Botanical Insecticides for the Control of *Musca domestica* Linnaeus and *Stomoxys indicus* Picard (Diptera: Muscidae) in Songkhla Province, Thailand. *Journal of Economic Entomology*; toac202, [\[Link\]](#)
9. Maurice Marcel Sandeu^p*, Claudine Grâce Tatsinkou Maffo, **Nsa Dada**, Flobert Njiokou, Grant L. Hughes, Charles S. Wondji. **2022** Seasonal variation of microbiota composition in *Anopheles gambiae* and *Anopheles coluzzii* in two different eco-geographical localities in Cameroon. *Medical and veterinary entomology*, 36 (3), 269-282 [\[Link\]](#)
10. **Dada, N.***, Benedict, A.C. ^u, López, F.J. ^u, Lol, J.C. ^t, Sheth, M., Padilla, N. and Lenhart, A. **2021** Comparative characterization of internal and cuticle surface microbiota of laboratory-reared F₁ *Anopheles albimanus* originating from different sites. *Malaria Journal*, 20:414 [\[Link\]](#)
11. Pelloquin, B. ^g, Kristan, M., Edi, C., Meiwald, A., Clark, E., Jeffries, C. L., Walker, T., **Dada, N.‡**, Messenger, L. A. [‡]*. **2021** Overabundance of *Asaia* and *Serratia* bacteria is associated with

- deltamethrin insecticide susceptibility in *Anopheles coluzzii* from Agboville, Côte d'Ivoire. *Microbiology Spectrum*, 9(2): e00157-21 [[Link](#)]
12. Overgaard, H. J.* **Dada, N.**, Lenhart, A., Stenstrom, T-A, & Alexander, N., **2021** Integrated management of Aedes-borne arboviral diseases and diarrheal diseases. *Bulletin of the World Health Organization*, 99:583-592 [[Link](#)]
 13. Omoke, D.^g, Kipsum, M., Otieno, S., Esalimba, E., Sheth, M., Lenhart, A., Njeru, EM., Ochomo, E., **Dada, N.***, **2021**. Western Kenyan *Anopheles gambiae* s.s. showing intense permethrin resistance harbor distinct microbiota. *Malaria Journal*, 20:77 [[Link](#)]
 14. **Dada N***, Jupatanakul N, Minard G, Short SM, Akorli J, and Villegas LM, **2021**. Considerations for mosquito microbiome research from the Mosquito Microbiome Consortium. *Microbiome*, 9:36 [[Link](#)]
 15. Ratisupakorn, S.^g, Lorn, S., **Dada, N.**, Ngampongsai, A., Chaivisit, P., Ritthison, W., & Tainchum, K.* **2021**. *Aedes albopictus* (Skuse) susceptibility status to agrochemical-insecticides used in durian planting systems in southern Thailand. *Journal of Medical Entomology*, 58:3 [[Link](#)]
 16. **Dada, N.***, Lol, J. C.[†], Benedict, A. C.^u, López, F.^u, Sheth, M., Dzuris, N., Padilla, N., & Lenhart, A. **2019** Pyrethroid exposure alters internal and cuticle surface bacterial communities in *Anopheles albimanus*. *The ISME Journal*, 13:2447-2464 [[Link](#)]
 ⚡ **2020 Charles C. Shepard Award for excellence in science (nominated)**
 17. Nanthasane Vannavong^{g*}, Razak Seidu, Thor-Axel Stenström, **Nsa Dada**, & Hans Jorgen Overgaard (**2019**) Dengue-like illness surveillance: a two-year longitudinal survey in suburban and rural communities in Laos and Thailand. *WHO Western Pacific Surveillance and Response Journal*, **10** (1) [[Link](#)]
 18. **Nsa Dada**, Mili Sheth, Kelly Liebman, Jesus Pinto & Audrey Lenhart* (**2018**) Whole metagenome sequencing reveals links between mosquito microbiota and insecticide resistance in malaria vectors. *Scientific Reports*, 8 (2084) [[Link](#)]
 ⚡ **2020 Scientific Reports Editor's choice: vector-borne diseases** [[Link](#)]
 ⚡ **2019 Charles C. Shepard Award for excellence in science (nominated)** [[Link](#)]
 ⚡ **2018 Scientific Reports top 100 (#27) Microbiology articles** [[Link](#)]
 19. Nanthasane Vannavong^{g*}, Hans Jorgen Overgaard, Chareyonviriyaphap Theeraphap, **Nsa Dada**, Ram Rangsin, Archawongs Sibounhom, Thor-Axel Stenström, & Razak Seidu (**2017**) Assessing factors associated with *E. coli* contamination of household drinking water in suburban and rural Thailand and Laos. *Journal of Water Science & Technology: Water Supply*, 18(3) [[Link](#)]
 20. Nanthasane Vannavong^{g*}, Razak Seidu, Thor-Axel Stenstrom, **Nsa Dada**, Hans J. Overgaard (**2017**) Effects of socio-demographic characteristics and household water management on dengue vector production in suburban and rural villages in Thailand and Laos. *Parasites & Vectors*, 10 (170) [[Link](#)]
 21. **Nsa Dada***, Estelle Jumas-Bilak, Sylvie Manguin, Razak Seidu, Thor-Axel Stenström, & Hans Jorgen Overgaard (**2014**) Comparative assessment of the bacterial communities associated with *Aedes aegypti* larvae and water from domestic water storage containers. *Parasites & Vectors*, 7(391) [[Link](#)]
 22. **Nsa Dada***, Nanthasane Vannavong, Razak Seidu, Audrey Lenhart, Thor-Axel Stenström, Theeraphap Chareonviriyaphap, & Hans J. Overgaard (**2013**) Relationship between *Aedes aegypti* production and occurrence of Escherichia coli in domestic water storage containers in rural and sub-urban villages in Thailand and Laos. *Acta Tropica*, 126(3):177-185 [[Link](#)]
 23. Hodges, M.* **Dada, N.**, Wamsley, A., Paye[†], J., Bangura, M., Nyorkor, E., Sonnie, M. & Zhang, Y. **2012**. Mass drug administration significantly reduces infection of *Schistosoma mansoni* and hookworm in school children in the national control program in Sierra Leone. *BMC Infectious Diseases*, 12, 16. [[Link](#)]
 24. Hodges, M.* **Dada, N.**, Wamsley, A., Paye[†], J., Nyorkor, E., Sonnie, M., Barnish, G., Bockarie, M. & Zhang, Y. **2011**. Improved mapping strategy to better inform policy on the control of schistosomiasis and soil-transmitted helminthiasis in Sierra Leone. *Parasites & Vectors*, 4, 97. [[Link](#)]

25. Ene E. Oku, Donald A. Ukeh* and **Nsa Dada**, 2011. Prevalence and Seasonal Distribution of Daytime Biting Diptera in Rhoko Forest in Akamkpa, Cross River State, Nigeria. *International Journal of Zoological Research*, 7: 279-285. [[Link](#)]

COMPLETED MANUSCRIPTS PREPRINTED OR UNDER JOURNAL CONSIDERATION

26. Sonja Savic^g, **Nsa Dada***. Insect microbiomes extend host metabolic functions for insecticide degradation: Lessons from agricultural entomology for vector biology.

TEACHING EXPERIENCE

- 2024 **Comparative invertebrate zoology (BIO 385)**. ASU, School of Life Sciences, Tempe, AZ, USA
Upper-level undergraduate course on invertebrate diversity, with a focus on their general biology, evolution, and ecological, agricultural, and medical significance.
▪ *Course development and instructor of record*
- 2023 **Host-microbe interactions (BIO 498/598)**. ASU School of Life Sciences, Tempe, AZ, USA
Course-based research experience that covers the fundamentals of symbiosis and guides students through a complete research workflow, including molecular sample processing and bioinformatics analysis using 16S rRNA sequencing and the QIIME 2 platform. [[News article](#)]
▪ *Course development and instructor of record*
- 2022 **Mosquito Microbiome Consortium Summer Program (MSc/PhD level)**. Claude Bernard University Lyon 1, Lyon, France
Hands-on training on the design and implementation of research on mosquito-microbe interactions including; mosquito collections, dissections, nucleic acid extraction, sequencing, and bioinformatics analysis of generated data.
▪ *Funding acquisition and instructor*
- 2020 **Analysis of mosquito-derived 16S rRNA seq data using QIIME2 (MSc/PhD level)**.
Online summer course. [[Course page](#)]
▪ *Course development and instructor*
- 2019 **Mosquito Biology in Malaria Prevention, Control and Treatment Course (PhD level)**. CDC, Atlanta, USA
Class lecture and hands-on lab for CDC's Epidemic Intelligence Officers and Resident Advisors,
▪ *Instructor*
- 2018 **General insect classification, sampling, and curation (BSc and MSc level)**. KEMRI, CGHR, Entomology Branch, Kisumu, Kenya
Class lecture and hands-on lab and field.
▪ *Course development and instructor*
Malaria Prevention, Control and Treatment Course (GH574) (MSc level). Rollins School of Public Health Global Health Program. Emory University, Atlanta, USA
Class lecture and hands-on lab.
▪ *Guest lecture*
- 2017 **Hands-on workshop on Insecticide Resistance (MSc/PhD level)**. Entomology branch, DPDM, Center for Global Health, CDC, Atlanta, GA, USA
▪ *Course development and instructor*
- 2016 **Techniques in mosquito rearing and insecticide resistance. (BSc/MSc level)**. Universidad del Valle de Guatemala (UVG), Guatemala
Hands-on laboratory training on insecticide resistance assays, mosquito oviposition and mass rearing techniques, and sex differentiation of mosquito pupae
▪ *Organizer and Instructor*

- 2011, 2012 **Hands-on field & Laboratory training on *water and mosquito sampling*.**
- Instructor. Khon Kaen Provincial Health office, Khon Kaen, Thailand (2011)
 - Salavan Health Department, Salavan, Laos PDR (2012)
 - *Organizer and Instructor*
- 2009 **Sample handling and identification of soil-transmitted helminths (BSc level).**
Fourah Bay College, Freetown, and Njala University, Bo, Sierra Leone
Hands-on laboratory training on microscopic identification of helminth eggs using WHO Kato-Katz technique.
- *Organizer and Instructor*

STUDENT MENTORING & COMMITTEES

PRIMARY ADVISOR

- 2024-present **Barret College Fellow Undergraduate Research Program mentor.** Mitchell Chin, Barret, The Honors College, ASU
- 2023-present **PhD Primary Advisor.** Sonja Savic. SOLS Environmental Life Science PhD Program, ASU
- ASU Graduate College Travel Award
 - Lead author on one completed manuscript in preparation for journal submission
 - Abstract accepted for presentation at the Entomological Society of America annual conference 2024
- 2023-present **Accelerated BS & MS Program (4+1) Thesis Advisor.** Cindy Woo. SOLS Microbiology BS Program and SOLS Biology MS Program, ASU
- 2023-2024 **Honors Science Research Program mentor.** Shantia Ghaninia. Perry High School
- 2023-2024 **Accelerated BS & MS Program (4+1) Capstone Advisor.** Serenity Jones. SOLS B.S. Genetics, Cell, & Developmental Biology BS Program and SOLS Biology MS Program, ASU
- 2017-2019 **MSc Primary Advisor.** Diana Omoke. Kenyatta University, Nairobi, Kenya
- Inaugural Black In Entomology Research Prize
 - Published one lead author peer-reviewed paper
 - ASTMH/American Committee of Medical Entomology 2019 Young Investigator Award
 - East Africa Consortium for Clinical Research/European and Developing Countries Clinical Trials Partnership Fellowship for Genomics training
 - Committee on Data of the International Council for Science-Research Data Alliance (CODATA-RDA) training Scholarship
 - Biosciences eastern and central Africa-International Livestock research Institute (BecA-ILRI) training Scholarship
 - Co/Author and/or presenter of several conference abstracts
- 2016 **Undergraduate Research Assistants.** Universidad del Valle de Guatemala, Guatemala
1. Juan C. Lol
 2. Ana Cristina Benedict
 3. Francisco Lopez
- They are all co-authors on my research outputs, including two publications and several conference abstracts

CO-ADVISOR

- 2019 **MSc Co-Supervisor.** Bethanie Pelloquin. London School of Hygiene and Tropical Medicine, London (LSTMH), United Kingdom
- Published one lead author peer-reviewed paper
 - Co/Author and/or presenter of several conference abstracts

- 2017-2019 **MSc Co-Advisor.** Sakda Ratisupakorn. PSU, Hat Yai, Thailand
- Published one lead author peer-reviewed paper
- 2018-2019 **Pre-doctoral Fellow co-supervisor.** Jonathan Gerhart. CDC
- Awarded the Association of Public Health Laboratories and CDC Bioinformatics Fellowship
- 2015-2017 **PhD Co-Supervisor.** Nanthasane Vannavong. NMBU, Aas, Norway
- Published three lead author peer-reviewed papers
 - Co/Author and/or presenter of several conference abstracts

THESIS COMMITTEE MEMBER

- 2024-present **PhD Thesis Committee.** Neema John. SOLS Environmental Life Science PhD Program, ASU
- 2023 **MS Thesis Committee.** LeAnn Nguyen. SOLS Microbiology MS Program, ASU
- 2021 **MSc Thesis Committee.** Ms. Warin Klakankhai. Prince of Songkla University (PSU), Hat Yai, Thailand
- Published one lead author peer-reviewed paper

INDIVIDUALIZED COURSES

- 2023-present **Research Paper (MIC 401).** SOLS, ASU
Paper of 15 or more pages based on library or lab research in collaboration with a faculty member. Required of all Microbiology majors.
- 4 students
- Undergraduate Research (BIO 498).** SOLS, ASU.
Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.
- 1 student

PROFESSIONAL MENTORING AND COACHING PROGRAMS

- 2022-present **Mentor.** PAMCA Women in Vector Control Mentorship Program, LiftHer2

KEYNOTES & SELECTED INVITED SCIENTIFIC LECTURES (>30 total: 1 Keynote; 5 Conferences; >24 Seminars)

UPCOMING

1. **Seminar.** Department of Biology, Baylor University, Waco, TX, USA. 2025

PREVIOUS

2. **Conference.** Arthropod Genomics Symposium, Nairobi, Kenya. 2024
3. **Conference.** BioMalPar XX conference, EMBL Heidelberg, Germany. 2024
4. **Conference.** World Malaria Day Symposium, Johns Hopkins Malaria Research Institute, Baltimore, MD, USA. 2024
5. **Seminar.** Pathogen and Microbiome Institute, Northern Arizona University, Flagstaff, AZ, USA. 2024
6. **Seminar.** Liverpool School of Tropical Medicine (LSTM) Giants Seminar Series, Liverpool, UK [Cancelled].
7. **Seminar.** Department of Immunobiology, University of Arizona, Tucson, AZ, USA. 2023
8. **Conference.** American Society of Tropical Medicine and Hygiene Annual meeting symposium, Chicago, USA. 2023
9. **Seminar.** Biodesign Center for Fundamental and Applied Microbiomics, Arizona State University, Tempe, Arizona, USA. 2023
10. **Seminar.** Laboratoire d'Écologie Microbienne, Claude Bernard University Lyon 1, Lyon, France. 2022

11. **Seminar.** Institute of Biodiversity, Animal Health & Comparative Medicine, University of Glasgow, UK [Remote]. 2021
12. **Seminar.** BIPOC in Parasitology [Remote]. 2021
13. **Seminar.** Microbiome Centers Consortium Seminar Series [Remote]. 2021
14. **Seminar.** Biology Department, Rutgers University-Camden, New Jersey, USA [Remote]. 2021
15. **Seminar.** Department of Biochemistry and Molecular Biology, University of Nevada, Reno, Nevada, USA [Remote]. 2021
16. **Seminar.** Foundation for the National Institutes of Health: GeneConvene Global collaborative seminar series, USA [Remote]. 2021
17. **Seminar.** Entomology Department, The Ohio State University, Columbus, Ohio, USA [Remote]. 2021
18. **Keynote.** Inaugural Women in Malaria Conference [Remote]. 2021
19. **Seminar.** Biology Department, Emory University, Atlanta, GA, USA [Remote]. 2021
20. **Conference.** 12th Annual Arthropod Genomics Symposium. Manhattan, Kansas. 2019
21. **Seminar.** Division of Parasitic Diseases and Malaria Seminar, Center for Global Health, US Centers for Disease Control and Prevention, Atlanta, GA. 2019
22. **Seminar.** Kenya Medical Research Institute, Center for Global Health Research, Kisumu, Kenya. 2018.
23. **Seminar.** Advanced Molecular Detection Group, Division of Parasitic Diseases and Malaria, US Centers for Disease Control and Prevention, Atlanta, GA, USA. 2017.
24. **Seminar.** Universidad del Valle de Guatemala (UVG), Guatemala. 2016
25. **Seminar.** Department of Environmental Sciences, Emory University, Atlanta GA, USA. 2016
26. **Seminar.** Advanced Molecular Detection Group, Division of Parasitic Diseases and Malaria, US Centers for Disease Control and Prevention, Atlanta, GA, USA. 2016.
27. **Seminar.** Norwegian University of Life Sciences, Ås, Norway. 2014
28. **Seminar.** International Seminar on Integrated Water-Related Disease Control, Ås, Norway. 2014
29. **Seminar.** Institut de Recherche pour le Développement (IRD) & University of Montpellier, Faculty of Pharmacy, Montpellier, France. 2013.
30. **Seminar.** Annual meeting of the District Health Center, Manchakhiri District, Khon Kaen, Thailand. 2011.

SELECTED CONTRIBUTED CONFERENCE **PODIUM PRESENTATIONS** (only first and presenting author contributions are shown; **9 total**)

1. **Nsa Dada**, Diana Omoke Nyanting'a, Ezekiel Mugendi, Eric Ochomo, Mathew Kipsum, Samson Otieno, Edward Esalimba, Juan C. Lol, Ana Cristina Benedict, Francisco López, Kelly Liebman, Jesus Pinto, Mili Sheth, Nicole Dzuris, Norma Padilla and Audrey Lenhart. The mosquito microbiota and insecticide resistance. *6th Annual Conference of the Pan-African Mosquito Control Association*. Yaoundé, Cameroun. September 2019
2. **Nsa Dada**, Juan Carlos Lol, Ana Cristina Benedict, Francisco López, Mili Sheth, Nicole Dzuris, Norma Padilla and Audrey Lenhart. Location-driven microbial composition in lab reared progeny of wild-caught mosquitoes and its implications for mosquito-microbe translational research. *Joint Annual Meeting of the Entomological Societies of America, Canada and British Columbia*. Vancouver, British Columbia Canada. November 2018
3. **Nsa Dada**, Juan Carlos Lol, Ana Cristina Benedict, Francisco López, Mili Sheth, Nicole Dzuris, Norma Padilla and Audrey Lenhart. Novel microbial candidate markers of pyrethroid resistance in *Anopheles albimanus*, a major Latin American malaria vector. *67th Annual Meeting of the American Society of Tropical Medicine and Hygiene*. New Orleans, Louisiana USA. October 2018.
4. **Nsa Dada**, Mili Sheth, Kelly Liebman, Jesus Pinto & Audrey Lenhart. Functional diversity of the microbiota in *Anopheles albimanus* provides new insights into insecticide resistance

- mechanisms. *66th Annual Meeting of the American Society of Tropical Medicine and Hygiene*. Baltimore, Maryland USA. November 2017.
5. **Nsa Dada**, & Audrey Lenhart. *Anopheles albimanus* microbiota and links to insecticide resistance: A whole metagenome sequencing approach. *American Society for Microbiology, Research in Progress Meeting*. Atlanta GA, USA. April 2017.
 6. **Nsa Dada** & Audrey Lenhart. The role of mosquito microbiota in insecticide resistance: Studies on *Anopheles albimanus* in South and Central America. *American Society for Microbiology Research in Progress Meeting*. Atlanta GA, USA. May 2016.
 7. **Nsa Dada**. Dengue mosquito production and fecal contamination in domestic water containers and Thailand and Laos. *International Seminar on Integrated Water-Related Disease Control*. Ås, Norway. May 2014
 8. **Nsa Dada**, Nanthasanne Vannavong, Razak Seidu, Audrey Lenhart, Thor-Axel Stenström, Theeraphap Chareonviriyaphap & Hans J. Overgaard. *Aedes aegypti* productivity and fecal contamination in domestic water storage containers in two villages in Northeastern Thailand. *XXIV International congress of Entomology*. Daegu, Korea. August 2012
 9. **Nsa Dada**. Stored household water in Thailand and Laos: A possible link between dengue and diarrhea? *First annual meeting for the Thailand Research Fund (senior research scholar)*. Bangkok, Thailand. August 2010

FORMAL SCIENCE ADVOCACY & OUTREACH

- | | |
|--------------|--|
| 2024 | <ol style="list-style-type: none"> 1. American Committee of Medical Entomology (ACME). As Chair of the ACME Young Investigator Travel Awards Committee, I organized the inaugural informational webinar about the travel awards to create awareness about ACME's resources for supporting trainees and particularly to demystify the awards application process and expand our pool of strong applicants. 2. Winged insights: Mosquitoes up close & microbial. I organized an outreach event as part of ASU Open day to create awareness about mosquitoes and their commensal microbes. It involved interactive activities to learn about the diverse species of mosquitoes found in Arizona, discovery of their breeding habitats through an exciting I-Spy game and uncovering the hidden world of their microbial companions through a memory game—games were designed by members of my team at ASU |
| 2021-present | <ol style="list-style-type: none"> 3. American Committee of Medical Entomology (ACME). Visibility taskforce member tasked to create awareness about ACME, its opportunities and resources as well as medical entomology in general |
| 2019-2020 | <ol style="list-style-type: none"> 4. eLife Community Ambassador for responsible science. Worked closely with eLife's Early-Career Advisory Group to promote responsible behavior in science. I focused on rigor and reproducibility; openness; equitable <i>Global North-South</i> collaborations; and diversity/increased representation of minoritized groups in science. |
| 2018 | <ol style="list-style-type: none"> 5. Engage: Global Health. ASTMH 67th Annual Meeting, New Orleans, USA ASTMH's inaugural public health outreach event, I co-led the 'There's DNA everywhere' station, where I demonstrated DNA extraction from strawberries to over 200 visiting high school students, their teachers/chaperones. |

MEDIA APPEARANCE

- | | |
|------|---|
| 2024 | <ol style="list-style-type: none"> 1. Science. Bacteria found in mosquito guts could help scientists fight dengue, Zika. [Link] |
| 2023 | <ol style="list-style-type: none"> 2. ASU News. Mosquito research course gives students cutting-edge experience, skills. [Link] |

3. **ASU News.** New course sheds light on safe, responsible arthropod research practices. [\[Link\]](#)
4. **Malaria Genomic Epidemiology Network (MalariaGEN). World Malaria Day 2023:** Investing, innovating, and implementing genomic surveillance. [\[Link\]](#)
5. **Cohort Sistas podcast.** Ep. 206. On pursuing postgraduate studies and building a career around the world. [\[Link\]](#)
- 2022 6. **ScienceWorld Scholastic.** No more mosquitoes? Biology article for students. [\[Link\]](#)
- 2019 7. **The Atlantic.** A new way to keep mosquitoes from biting. [\[Link\]](#)
8. **Science News.** A fungus weaponized with a spider toxin can kill malaria mosquitoes. [\[Link\]](#)
9. **Science News Explores.** A fungus plus a spider toxin equals a weapon to kill mosquitoes. [\[Link\]](#)
10. **CDC Bulletin.** Cutting-Edge Malaria Intervention Research. [\[Link\]](#)
11. **Chemical & Engineering News.** Computationally designed enzyme inhibitors overcome pesticide resistance. [\[Link\]](#)
- 2016 12. **CNN.** Zika: Is the US ready for the fight? [\[Link\]](#)

PROFESSIONAL SERVICE, LEADERSHIP & MEMBERSHIP

ASU

- 2024 **Committee member.** Reimagining SOLS: Mentoring committee taskforce
- 2023 **Working group member.** Reimagining SOLS: Promoting research interactions
- 2022-present **Advisory board.** Ask a Biologist
- 2022-2023 **Search committee, ASU SOLS & Biodesign Center for Fundamental and Applied Microbiomics.** Open rank faculty search and recruitment

EDITORIAL BOARD

- 2023-present **Academic Editor.** PLOS Global Public Health
- 2022-2023 **Editorial Board** (Early Career). mBio

GRANTS REVIEWER

- 2024 The European & Developing Countries Clinical Trials Partnership (EDCTP)
- 2024 Wellcome Career Development Award
- 2021, 2022 The African Academy of Sciences (AAS)
- 2021, 2024 South African National Research Foundation (NRF)
- 2021 UK Research and Innovation (UKRI)
- 2021, 2022 French National Research Agency
- 2019-2021 Royal Society of Tropical Medicine and Hygiene (RSTMH) Global Assessor

CONFERENCE ABSTRACT/AWARDS REVIEWER

- 2021-present ACME Travel Awards
- 2019-present ASTMH Annual Meeting Travel Awards
- 2019 ASM Microbe Conference abstracts

AD HOC PEER REVIEWER FOR SCIENTIFIC JOURNALS, 2015-PRESENT (>100 reviews: see [ORCID](#) tracking)

- | | | |
|------------------------------------|-------------------------------|----------------------------------|
| 1. Microbiome | 8. Parasites and Vectors | 15. Journal of Vector Ecology |
| 2. mBio | 9. Scientific Reports | 16. Int. J. Mol. Sci. |
| 3. The ISME Journal | 10. PeerJ | 17. Journal Bacteriol. Res. |
| 4. ISME Communications | 11. Malaria Journal | 18. Cellular & Molecular Biology |
| 5. Microbial Ecology | 12. Epidemiology & Infection | 19. Frontiers in Microbiology |
| 6. FEMS Microbiology Ecology | 13. Acta Tropica | |
| 7. PLOS Neglected Tropical Disease | 14. Journal of Insect Science | |

PROFESSIONAL MEMBERSHIPS & LEADERSHIP ROLES

2023-present **Secretary-Treasurer elect**, ACME
2022-present **Chair**, ACME Travel Awards Committee
2021-present **Executive Council Member**, ACME
2020-present Member, International Society for Viruses of Microbes
2019-present Member, Pan-African Mosquito Control Association
2019-present Associate Member, Microbiology Society, London, UK
2017-present Affiliate Member, Federation of European Microbiological Societies
2015-present Member, American Committee of Medical Entomology (ACME)
2015-present Member, American Society of Tropical Medicine and Hygiene (ASTMH)
2020-2021 Member, Norwegian Entomological Association
2018-2019 Member, Entomological Society of America
2015-2020 Member, American Society for Microbiology (ASM)
2015-2020 Member, American Committee of Molecular, Cellular and Immunoparasitology
2015-2020 Member, American Committee on Global Health