

NSA DADA

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EDUCATION

- 2010-2014 **PhD in Microbiology (Emphasis in Mosquito Ecology, Mosquito and Water Microbiology).** 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 (Medical Entomology and Applied Parasitology) 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.

ACADEMIC & PROFESSIONAL AWARDS

- 2017 ***Future Leader in International Entomology.*** American Committee of Medical Entomology (ACME), American Society of Tropical Medicine and Hygiene (ASTMH)
- 2006 ***Best graduating student.*** National Association of Zoology & Environmental Biology, University of Calabar, Nigeria

EMPLOYMENT

- 2017-present **Research Fellow.** Entomology Branch, Division of Parasitic Diseases and Malaria (DPDM), Center for Global Health, US Centers for Disease Control and Prevention (CDC), Atlanta, GA, USA.
I am developing an independent research program that investigates how disease vector-associated microbes shape disease vector biology and ecology, with a current focus on insecticide resistance in malaria vectors. I actively;
- *Lead and direct research activities in collaboration with international institutions (Currently in Kenya, Benin, Mexico, Guatemala, Thailand and UK)*
 - *Conceptualize, design, supervise and conduct research projects*
 - *Analyze and/or supervise the analysis of complex research data—bioinformatics and biostatistics*
 - *Disseminate research outputs e.g. scientific publications, conferences, lectures and invited talks*
 - *Teach, mentor and supervise students and research staff*
 - *Support activities of the Insecticide Resistance and Vector Control Team, Entomology Branch and DPDM*
- 2015-2017 **Postdoctoral Research Fellow in Infectious Disease and Public Health Microbiology.** This Fellowship was awarded by the CDC & the American Society for Microbiology (ASM) to support my salary, professional development and research project in residence at the Entomology Branch.
- *I led a project that identified, for the first time, links between the mosquito microbiota and insecticide resistance in malaria vectors. This identifies a microbe-mediated mechanism of insecticide resistance in mosquitoes that had never before been considered.*

- 2015 **Postdoctoral Research Associate.** Institut de Recherche pour le Développement (IRD), Department of Health, Montpellier, France. PI: S. Manguin
- *I developed and tested a protocol for determining the ability of mosquitoes to transmit bacterial infections to vertebrates*
- 2015 **Postdoctoral Research Associate.** University of Oslo, Dept. of Community Medicine, Institute of Health and Society, Oslo, Norway.
- *I conducted data analysis for a study aimed at identifying the effect of dietary counseling during pregnancy on infant birthweight in Mangochi, Malawi*
- 2010-2014 **Doctoral Research Fellow.** NMBU, Faculty of Science and Technology, Ås, Norway
- *I led a project that identified positive associations between fecal contamination and *Aedes aegypti* contamination in domestic water storage containers in Thailand and Laos. This demonstrated that domestic water containers are a common denominator that could be targeted for the combined control of both dengue and diarrhea in these settings*
 - *I further demonstrated that while mosquitoes are made up of microbes that are acquired from their breeding habitats, a mechanism—either mosquito or microbe-mediated—exists for modulating the bacterial composition of mosquitoes*
- 2009 **Research Assistant.** Centers for Neglected Tropical Diseases, LSTM, Liverpool, United Kingdom. PI: Moses Bockarie
- *I extracted and purified mosquito nucleic acids to screen for filarial worms as part of a project aimed at elucidating the effect of post-conflict rural-urban migration on the transmission of lymphatic filariasis in Sierra Leone and Liberia*

RESEARCH INTERESTS

Drawing upon a multidisciplinary background in medical entomology, parasitology, and microbiology, along with a strong passion for contributing to our understanding of the transmission dynamics of vector-borne tropical diseases, my research interests lie at the interface of the (micro)biology and control of vector-borne diseases, and encompass both basic and applied research aimed at informing disease control programs. My research to date covers several tropical parasites and disease vectors, initially focusing on the distribution, prevalence, and control of neglected tropical disease parasites and vectors across West Africa (Nigeria, Sierra Leone and Liberia) and Southeast Asia (Thailand and Laos). This has evolved into describing how disease vector associated-microbes shape disease vector biology and ecology. Currently, I am interested in understanding the mechanisms underlying the spread of insecticide resistance in malaria vectors from the novel perspective of the mosquito microbiota. My specific focus is on *Anopheles albimanus* from Peru, Mexico and Guatemala; *An. gambiae* and *An. funsetus* from Kenya and Benin.

ACADEMIC APPOINTMENTS

2017-present **Adjunct Lecturer.** Prince of Songkla University (PSU), Hat Yai, Thailand.

RESEARCH COLLABORATIONS

- 2018-present **Guest Researcher.** Kenya Medical Research Institute (KEMRI), Center for Global Health Research (CGHR), Entomology Section, Kisumu, Kenya
- *I lead research activities focused on identifying the mechanisms of insecticide resistance in East African malaria vectors, particularly from the perspective of mosquito-associated microbes*
 - *I provide technical support to the Entomology Section on malaria vector control projects*
 - *I train and supervise staff on appropriate data collection and management*

- 2016-2017 **Guest Researcher.** Universidad del Valle de Guatemala (UVG), Centro de Estudios en Salud, Grupo de Biología y Control de Vectores, Guatemala, Guatemala.
- *I led research activities focused on identifying the mechanisms of pyrethroid resistance in Guatemalan malaria vectors, particularly from the perspective of mosquito-associated microbes*
 - *I provided training to laboratory technicians, and staff of local ministry of health, on laboratory colonization of field-collected mosquitoes and insecticide resistance assays*
- 2016 **Guest Researcher.** Universidad Autonoma de Yucatan, Departamento de Zoologia, Campus de Ciencias Biologicas y Agropecuarias, Merida, Mexico.
- *I led research activities focused on identifying the mechanisms of insecticide resistance in Mexican malaria vectors, particularly from the perspective of mosquito-associated microbes*
- 2013 **Guest Researcher.** IRD, Montpellier and University of Montpellier (UM), Bacteriology unit, Faculty of Pharmacy, Montpellier, France.
- *I received training on the molecular characterization of mosquito microbiota using the temporal temperature gradient gel electrophoresis and sequencing technique*
- 2010-2012 **Guest Researcher.** Khon Kaen Provincial Health office, Khon Kaen, Thailand
- *I led research on the relationship between fecal contamination and dengue mosquito production in domestic water containers (DIADEN)*
 - *I established a field research laboratory*
 - *I recruited and trained field assistants*
 - *I provided training to staff of the Provincial Health Office on dengue vector surveillance*
 - *I provided evidence-based recommendations for dengue vector surveillance and control*
- 2011 **Guest Researcher.** Salavan Health Department, Salavan, Laos Peoples Democratic Republic.
- *I performed the same activities outlined above for Khon Kaen Provincial Health Office*
- 2010 **Visiting Researcher.** Mukdahan Provincial Health Office, Mukdahan, and Ubon Ratchathani Provincial Health Office, Ubon Ratchathani, Thailand
- *Working closely with staff of each provincial health office, I examined available data on dengue incidence for the preceding five years, and performed site visits to observe domestic water container usage. These were done in order to select appropriate sites for my doctoral research*
- 2010-2011 **Guest Researcher.** Kasetsart University, Entomology Department, Bangkok, Thailand
- *I designed the DIADEN project while based at Kasetsart University*
 - *I developed study protocols and obtained ethical clearance from IRBs in both Thailand and Laos*
 - *I visited several villages across three provinces in Thailand and four in Laos, and finally selected two villages in one province per country for the DIADEN project*
 - *I procured required field and laboratory equipment and supplies*
- 2009 **Guest Researcher.** Helen Keller International, Freetown, Fourah Bay College, Freetown, and Njala University, Bo, Sierra Leone.
- *I provided training on the biology, control and identification of schistosomes and soil transmitted helminths (STH)*
 - *Based at Njala University, I processed and examined stool samples for the presence of STH eggs as part of a country-wide survey of the effects of mass administration of praziquantel and mebendazole for the control of STH and schistosomiasis*

RESEARCH FUNDING/SUPPORT

- 2019-2020 **Co-Investigator** “Building the capacity for the utility of next generation sequencing in insecticide resistance management by African National Malaria Control programs”. Funded by Bill and Melinda Gates Foundation (BMGF), USA – 200,000USD. PIs: E. Ochomo, KEMRI-CDC and L. Djogbenou, University of Abomey Calavi
- 2018-2020 **Co-Investigator** “Entomological evaluation of an attractive targeted sugar bait in western Kenya”. Funded by: BMGF via LSTM and Innovative Vector Control Consortium, Liverpool, UK –137,000USD. PI (field trial): E. Ochomo, KEMRI-CDC
- 2017-2019 **Principal Investigator** “Role of mosquito microbiota in insecticide resistance in East African malaria vectors”. Supported by KEMRI and Kenyatta University, Nairobi, Kenya
- 2017-2019 **Co-Investigator** “The role of agricultural pesticide use in the development of resistance to public health insecticides in mosquitoes”. Supported by: Thailand Research Fund and PSU. PI: K. Tainchum, PSU
- 2013-2017 **Postdoctoral Research Associate** “Effect of Dietary Counseling During Pregnancy on Infant Birthweight in Mangochi, Malawi” Funded by: Program for Global Health and Vaccination Research (GLOBVAC) & Research Council of Norway (RCN)—5.5 million NOK; ~670,000USD. PI: P. Kamudoni, University of Oslo
- 2009-2013 **Co-Investigator (Doctoral Fellowship)** “Link between diarrhea and dengue: fecal contamination and dengue mosquito production in household water containers in SE Asia (DIADEN)”. Funded by: RCN—6 million NOK; ~731,000USD. PI: H. J. Overgaard, NMBU

SCIENTIFIC PUBLICATIONS**Peer-reviewed**

- 2019 1. Nanthasane Vannavong, 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)
- 2018 2. **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)
- 2017 3. Nanthasane Vannavong, 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)
4. Nanthasane Vannavong, 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)
- 2014 5. **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)
- 2013 6. **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 suburban villages in Thailand and Laos**. *Acta Tropica*, **126**(3):177-185

- 2012 7. 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.
- 2011 8. 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.
9. 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.

Preprints

- 2019 10. **Nsa Dada**, Juan C. Lol, Ana Cristina Benedict, Fransisco López, Mili Sheth, Nicole Dzuris, Norma Padilla & Audrey Lenhart. **Pyrethroid exposure alters *Anopheles albimanus* microbiota and resistant mosquitoes harbor more insecticide-metabolizing bacteria.** *Under Review*, *bioRxiv* 2019:537480

In preparation

- 2019 11. **Nsa Dada**, Ana Cristina Benedict, Fransisco López, Juan C. Lol, Mili Sheth, Nicole Dzuris, Norma Padilla & Audrey Lenhart. **Environmentally-acquired bacteria are shed within one generation of mosquito colonization**
12. **Nsa Dada**, Azael Che-Mendoza, Sergio Dzib Florez, Pablo Manrique-Saide & Audrey Lenhart. **The microbiota of *Anopheles albimanus* from pyrethroid-susceptible field populations in Cuba, Quintana Roo, Mexico**

TEACHING

- 2019 **Lecturer. Vector Biology (lecture), and Mosquito Identification and larval sampling (hands-on) in *Malaria Prevention, Control and Treatment Course 2019 (GH574)*.** Rollins School of Public Health Global Health Program. Emory University, Atlanta, USA
- 2018 **Instructor (Hands-on). Laboratory and field training on *Insect Sampling and Identification*.** KEMRI, CGHR, Entomology Branch, Kisumu, Kenya
- 2018 **Lecturer (lecture and hands-on). Mosquito Biology in *Malaria Prevention, Control and Treatment Course 2018 (GH574)*.** Rollins School of Public Health Global Health Program. Emory University, Atlanta, USA
- 2017 **Organizer and Instructor (Hands-on). Workshop on *Insecticide Resistance*.** Entomology branch, DPDM, Center for Global Health, CDC
- 2016 **Organizer and Instructor (Hands-on). Laboratory training.** Universidad del Valle de Guatemala (UVG), Guatemala
- *Larval and adult assays for insecticide resistance in mosquito populations*
 - *Mosquito oviposition and mass rearing techniques*
 - *Sex differentiation of mosquito pupae*
- 2012 **Organizer and Instructor (Hands-on). Field training on *Water and Mosquito Sampling*.** Salavan Health Department, Salavan, Laos PDR
- 2011 **Organizer and Instructor (Hands-on). Field & Laboratory training.** Khon Kaen Provincial Health office, Khon Kaen, Thailand
- *Water sampling and testing*
 - *Mosquito sampling and identification*
- 2009 **Instructor (lecture). Short course.** HKI, Freetown, Sierra Leone
- *Characteristics of soil transmitted helminths*
 - *Collection and storage of stool samples for the identification of soil transmitted helminth eggs*

2009 **Instructor (Hands-on). Laboratory training on *Microscopic identification of helminth eggs using WHO Kato-Katz technique*.** Fourah Bay College, Freetown, and Njala University, Bo, Sierra Leone

STUDENT SUPERVISION

2018-present **PhD Co-Supervisor.** Jonathan Gerhart. Georgia Institute of Technology (Georgia Tech), Atlanta, USA
 2017-present **MSc Main Supervisor.** Diana Omoke. Kenyatta University, Nairobi, Kenya
 2017-present **MSc Co-Adviser.** Sakda Ratisupakorn. PSU, Hat Yai, Thailand
 2015-2017 **PhD Co-Supervisor.** Nanthasane Vannavong. NMBU, Aas, Norway

SELECTED CERTIFICATIONS

2008-present **Project Management Fundamentals.** [Project Management Institute](#)
 2008-present **Proficiency in Management.** *Nigerian Institute of Management (Chartered)*

PROFESSIONAL MEMBERSHIPS

Consortium

2017-present **Mosquito Microbiome Consortium (Founder)**
 A platform that fosters active interactions and collaborations between researchers with interests in answering pertinent disease vector biology questions from the perspective of disease vector-associated microbes.
 It is currently comprised of six core members from leading research institutions across the globe with plans to launch in 2019 for broader participation.

Professional Societies

2015-present 1. American Society of Tropical Medicine and Hygiene
 2015-present 2. American Society for Microbiology
 ▪ *ASM Microbe Conference 2019 Program Committee (Abstract Reviewer)*
 2015-present 3. American Committee of Medical Entomology
 2017-present 4. Federation of European Microbiological Society
 2019-present 5. Microbiology Society
 2018 6. Entomological Society of America

Other

2009-present Nigerian Institute of Management

INVITED LECTURES

2019 1. **Mosquito microbiota: An undescribed factor in insecticide resistance?** *12th Annual Arthropod Genomics Symposium. Manhattan, Kansas. June 2019*
 2. **Role of mosquito microbiota in insecticide resistance.** *Division of Parasitic Diseases and Malaria Seminar, CGH, CDC, Atlanta, GA. May 2019*
 2018 3. **Differential microbial composition between insecticide resistant and susceptible malaria vectors: Another wrinkle in the insecticide resistance conundrum?** *KEMRI, CGHR, Kisumu, Kenya. May 2018.*
 2017 4. **Differential microbial composition between insecticide resistant and susceptible New World malaria mosquitoes: Another wrinkle in insecticide resistance mechanism?** *Advanced Molecular Detection Group, Division of Parasitic Diseases and Malaria, US Centers for Disease Control and Prevention, Atlanta, GA, USA. January 2017.*

- 2016
5. **Differential microbial composition between insecticide resistant and susceptible New World malaria mosquitoes: Another wrinkle in insecticide resistance mechanism?** *Universidad del Valle de Guatemala (UVG), Guatemala. November 2016*
 6. *Department of Environmental Sciences, Emory University, Atlanta GA, USA. November 2016*
 7. **The role of mosquito microbiota in insecticide resistance.** *Advanced Molecular Detection Group, Division of Parasitic Diseases and Malaria, US Centers for Disease Control and Prevention, Atlanta, GA, USA. February 2016.*
- 2014
8. **How research findings generated over the past few years have influenced the control of Arboviruses: Dengue and Chikungunya.** *Norwegian University of Life Sciences, Ås, Norway. December 2014*
 9. **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*
- 2013
10. **Relationship between *Aedes aegypti* production and fecal contamination in domestic water containers in Thailand and Laos.** *Institut de Recherche pour le Développement (IRD) & University of Montpellier, Faculty of Pharmacy, Montpellier, France. June 2013.*
- 2011
11. **Dengue vector production in domestic containers in Ban Han and Ban Waileum, Khon Kaen, Thailand.** *Annual meeting of the District Health Center, Manchakhiri District, Khon Kaen, Thailand. December 2011.*
- 2010
12. **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*

CONFERENCE PRESENTATIONS

Oral presentations

- 2018
1. **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*
 2. **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.*
- 2017
3. **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.*
 4. **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.*
- 2016
5. **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.
- 2014 6. **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
- 2012 7. **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
- 2010 8. **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

Poster presentations

- 2017 9. **Nsa Dada**, Mili Sheth, Kelly Liebman, Jesus Pinto & Audrey Lenhart. Investigating the role of mosquito microbiome in insecticide resistance using advanced molecular technologies: A roadmap to identifying novel markers of insecticide resistance in malaria vectors. *National Center for Emerging and Zoonotic Infectious Diseases, CDC, Advanced Molecular Detection Day II*. Atlanta GA. September 2017.
10. **Nsa Dada**, Mili Sheth, Kelly Liebman, Jesus Pinto & Audrey Lenhart. Whole metagenome profiles of insecticide resistant and susceptible *Anopheles albimanus* suggest a microbe-mediated insecticide resistance mechanism in mosquitoes. *Keystone Symposium on vectors, pathogens and diseases: Current trends and challenges*. Durban, South Africa. September 2017.
11. **Nsa Dada**, Mili Sheth, Kelly Liebman, Jesus Pinto & Audrey Lenhart. *Anopheles albimanus* microbiota and links to insecticide resistance: A whole metagenomic sequencing approach. *ASM microbe 2017*. New Orleans, USA. June 2017.
12. Nanthasanne Vannavong, Hans J. Overgaard, Theeraphap Chareonviriyaphap, **Nsa Dada**, Ram Rangsin, Archawongs Sibounhom, Thor-Axel Stenström, Razak Seidu. Assessing the factors of *Escherichia coli* contamination of household drinking water in suburban and rural Laos and Thailand. *10th Conference on Global health and Vaccination Research*. Trondheim, Norway. March 2017.
- 2016 13. **Nsa Dada** & Audrey Lenhart. *Anopheles albimanus* microbiota and links to insecticide resistance: A shotgun metagenomic sequencing approach. *65th Annual Meeting of the American Society of Tropical Medicine and Hygiene*. Atlanta GA, USA. November 2016
- 2013 14. **Nsa Dada**, Nanthasanne Vannavong, Razak Seidu, Audrey Lenhart, Thor-Axel Stenström, Theeraphap Chareonviriyaphap & Hans J. Overgaard. Significant *Aedes aegypti* production in fecally contaminated domestic containers in Thailand and Laos: Implications and new insights into dengue vector production. *3rd International Conference on Dengue and Dengue Haemorrhagic Fever*. Bangkok, Thailand. October 2013
15. **Nsa Dada**, Estelle Jumas-Bilak, Sylvie Manguin, Razak Seidu, Thor-Axel Stenström, & Hans Jorgen Overgaard. Are pathogenic bacteria components of *Aedes aegypti* larvae? A survey of *Aedes aegypti* larvae collected from a rural village in Northeastern Thailand. *3rd International Conference on Dengue and Dengue Haemorrhagic Fever*. Bangkok, Thailand. October 2013
- 2012 16. Jacqueline S. Knee, Christine Stauber, **Nsa Dada**, Anan Vannavong, Hans J. Overgaard, Thor-Axel Stenstrom, Mark D. Sobsey. Evaluation of the

microbiologic safety of stored rainwater as an improved drinking water source for communities in Khon Kaen, Thailand. *62nd Annual Meeting of the American Society of Tropical Medicine and Hygiene.* Atlanta GA, USA. November 2012.

- 2010 17. Hans J. Overgaard, Thor-Axel Stenström, **Nsa Dada**, & Nanthasanne Vannavong. **Diarrhea and dengue in Southeast Asia: what are the relationships?** *Global Health and Vaccination (GLOBVAC) 5th Annual conference*, Tromsø, Norway. June 2010

PROFESSIONAL SERVICE

- 2015-present **Peer reviewer for scientific journals**
1. PLOS Neglected Tropical Disease
 2. Scientific Reports
 3. Parasites and Vectors
 4. Epidemiology & Infection
 5. Malaria Journal
 6. PeerJ
 7. FEMS Microbiology Ecology
 8. Journal of Insect Science
 9. Microbial Ecology
 10. Cellular & Molecular Biology
 11. International Journal of Molecular Sciences
 12. African Journal of Bacteriology Research

PROFESSIONAL SKILLS

Laboratory

- Mosquito handling; mass rearing, colonization of field-collected animals, creation of axenic (without bacteria) and gnotobiotic (with known bacteria) colonies
- Mosquito dissections; alimentary canal and reproductive organs
- Insecticide (resistance) assays; CDC bottle bioassays, WHO tube and cone assays, larval time-mortality assays
- Basic (molecular) biology skills including; nucleic acid extraction and purification, PCR, electrophoresis e.g. temporal temperature gradient gel electrophoresis, microscopy, bacterial cell cultures
- Stool sample handling, processing and testing; WHO Keto-Katz test
- Water sample collection, handling, processing and testing; Colilert & Colisure tests—tests for *E. coli* and coliform contamination in resource-poor settings
- Next generation sequencing; 16S rRNA gene sequencing, whole metagenome sequencing

Field

- Mosquito trapping and collections; ovitraps, larval and adult collections
- Other insect collection; malaise, UV light traps, Pan/tray traps, sweep nets
- Insect pinning and preservation

Research methods and data analysis

- Quantitative research design with a decade of experience in building and training teams of research support staff
- Microbial ecology (metagenomics)
- Biostatistics: R, EpiInfo, SPSS
- Bioinformatics: Linux, Qiime, Qiime2, MEGAN, STAMP, Anvi'o, etc

PUBLIC ENGAGEMENT

Outreach

- 2018 Engage: Global Health. *ASTMH 67th Annual Meeting, New Orleans, USA*
- ASTMH's inaugural public health outreach event comprising fifteen stations showcasing different elements of the work we do as scientists and healthcare professionals in the field of tropical medicine.
 - I co-led the '*There's DNA everywhere*' station, where i demonstrated the process of extracting DNA from strawberries to over 200 visiting high school students, their teachers and chaperones

MEDIA APPEARANCES

- 2019 1. ***The Atlantic*. A new way to keep mosquitoes from biting**
<https://www.theatlantic.com/science/archive/2019/02/how-to-stop-mosquito-bites/582190/>
- 2016 2. ***CNN*. Zika: Is the US ready for the fight?**
<https://www.cnn.com/2016/05/17/health/zika-is-us-prepared/index.html>

LANGUAGE SKILLS

1. English – Native speaker
2. West African Pidgin English (Creole) – Native Speaker
3. Efik/Ibibio – Native Speaker
4. Norwegian – Limited working proficiency
5. Thai/Lao – Limited working proficiency
6. Spanish – Elementary proficiency