

Welcome to ISWE Trainee starter pack!

TAC Objectives:

- Create career and professional development opportunities
- Create a networking platform that fosters connectivity between trainees
- Facilitate and host trainee events that provide opportunities for information exchange

What we offer:

- Networking and career development opportunities
- Trainee support and platform for problem solving
- Coffee talks and the opportunity to engage with peers and professionals

Contact us:

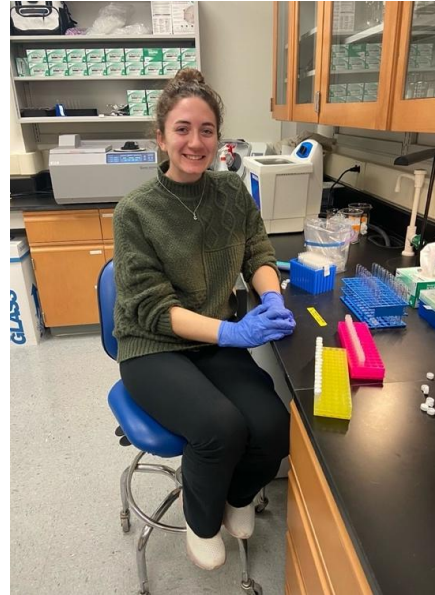
tac.iswe@gmail.com

The Trainee Affairs Committee

Allie Case

MSc Student, George Mason University, Virginia, United States

I graduated from Washington and Lee University in Lexington, Virginia in 2020 with a Bachelor of Science in Biology and Environmental Studies. In between academic years, I was lucky enough to intern in the St. Louis Zoo Endocrinology Lab in Missouri and later in the SeaWorld & Busch Gardens Species Preservation Lab in San Diego, California. My focus during these internships has been on the routine monitoring of zoo or park animals using noninvasive hormone analyses. After graduation I also spent nearly a year in the Smithsonian National Zoological Park Reproductive Sciences Lab investigating the role of proteins in meiotic maturation of felid oocytes. My research interests lie in the interaction between an individual's physiology and their surrounding environment, and how a warming climate may be impacting the physiology of marine mammals. I am now at George Mason University in Virginia



as a Masters student in the Environmental Science & Policy program studying under Dr. Kathleen Hunt. Currently, I am investigating longitudinal hormone patterns in blue and fin whales using baleen as a sample matrix. I can be contacted through tac.iswe@gmail.com for prospective questions from younger members about joining ISWE or those just getting started on their educational path looking for help regarding internship opportunities or graduate school planning.

Andrea Webster

Postdoctoral Fellow, Mammal Research Institute, University of Pretoria, South Africa



While working as a research assistant in the Greater Kruger conservation area I qualified as a commercial guide and wildlife tracker. I moved to the Kalahari region of Botswana to work on large carnivores while completing a Bachelors degree in zoology and physiology. After completing an honours degree in wildlife management at the University of Pretoria, I moved to the Faculty of Veterinary Science for an MSc in behavioural endocrinology and then onto the Mammal Research Institute for a PhD in ecotoxicology. My research integrates an in-depth knowledge of savannah ecosystem function cultivated over 15+ years in the field with non-invasive techniques to assess stress,

environmental pollutants and endocrine disruption in free-ranging terrestrial African mammals. Field expertise has facilitated collaborative efforts with local and international researchers from various institutions in the US, Canada, UK,

Denmark and Spain. I have contributed a substantial and varied faecal dataset to the University of Pretoria's Endocrine Research laboratory and to a faecal nutrient database with the Environmental Change Institute, University of Oxford. I have co-supervised 11 post-graduate degrees (6 Hons; 5 MSc), have attended and presented at numerous local and international conferences and am lead or co-author of 10 peer-reviewed publications and various popular scientific articles. I can be contacted for practical queries related to African mammal behaviour, faecal collection and identification, stress physiology, ecotoxicology and endocrine disruption

Breanne Murray

Ph.D. Candidate, University of Saskatchewan, Western College of Veterinary Medicine, Canada



I am a Ph.D. candidate in the Department of Veterinary Biomedical Sciences at the University of Saskatchewan. I studied wildlife biology at The Warnell School of Forestry and Natural Resources at the University of Georgia and earned a Bachelor of Science in Forest Resources. While at Warnell, I enjoyed courses in ecology, physiology, habitat management, wildlife health, which piqued my interest in pursuing a career in wildlife conservation. I started at the University of Saskatchewan as an MSc student in the fall of 2017 and transferred to the Ph.D. program in April 2019. My master's project focused on stress, behaviour and physiology in waterfowl. During my MSc program, I investigated the effects of pre-hatching elevated corticosterone and post-hatching unpredictable food availability on Mallard ducks (*Anas platyrhynchos*) physiology and behaviour. This project

enabled me to develop skills in waterfowl monitoring, handling, sample collection, and hormone assay techniques. My Ph.D. project focuses on maternal stress and a multimodal approach to monitoring stress in waterfowl. I am using hormone assays (blood, feather, and feces) and metabolomics to broaden our understanding of the metabolic responses to stress to enhance our understanding of the physiological consequences of stress. I can be contacted through the trainee page for any questions regarding sample analysis in birds and stress.

Emily Bach

MSc Student, University of Florida, Florida, United States



Emily Bach graduated from the University of Cincinnati with a Bachelor of Science in Biology. She started her career at Omaha's Henry Doorly Zoo and Aquarium and the Cincinnati Zoo and Botanical Garden working as an Animal Care and Behavioral Research Intern. While at the Cincinnati Zoo, she completed a shared internship opportunity between the 'Rhino Reserve' department and the Center for Conservation and Research of

Endangered Wildlife (CREW) endocrine lab. Upon completion, Emily was hired as the Endocrine Research Assistant focusing on African black rhino reproduction and behavior research supported by a multi-year IMLS National Leadership Grant. Throughout the past three years, Emily served as the Animal Endocrinology Laboratory Technician at Disney's Animal Kingdom® where she analyzed hormones in a variety of exotic animal species to assess physiology such as pregnancy, effective contraception and positive welfare as part of Disney's animals' comprehensive wellness program. Most recently, she accepted a role as a Master's student attending the University of Florida working on a multi-institutional rhino health, reproduction and welfare grant through the Institution of Museum and Library Sciences. Emily's graduate research will focus on the intersection of physical fitness and reproduction in African rhinos. Contact Information: e.bach@ufl.edu

Madeline Winans

PhD Student & Research and Administrative Coordinator, One Welfare and Sustainability Center, The Ohio State University, USA

Madeline Winans received her B.S. in Zoology and M.S. in Animal Science from The Ohio State University. During her master's, her research focused on assessing the welfare of zoo-housed marine mammals, specifically California sea lions (*Zalophus californianus*), throughout a long-term relocation process. This work aimed to monitor the animals' welfare throughout relocation between facilities, by measurement of behavioral and physiological parameters, including endocrine



markers such as cortisol concentrations in saliva and hair. This project was the first to evaluate the effects of a long-term relocation process on California sea lion welfare, including some of the first documented ranges for cortisol in the

species saliva and hair. In addition to serving on ISWE's Trainee Affairs Committee, she also serves on the Zoological Association of America (ZAA)'s Animal Welfare Committee. In her current position as Research and Administrative Coordinator for the One Welfare and Sustainability Center at OSU, Madeline facilitates collaborative research and outreach while also pursuing her PhD. Madeline's PhD research will be focused on both the welfare and conservation of American alligators. I can be contacted by reaching out to the TAC email: tac.iswe@gmail.com.

Tshepiso Lesedi Majelantle

PhD student, University of Pretoria, South Africa



For as long as I can remember, I spent every school holiday in the bush. During those times, I was surrounded by incredible animals, both wild and domestic. I would spend the whole day watching them wondering about their behaviour. That kind of curiosity threw me into the field of zoology and inadvertently, the wonderful field of behavioural endocrinology. For my masters, I measured the cortisol levels (as a measure of stress) for African clawless otters (*Aonyx capensis*) occurring in an urban area and natural areas. What I found the most interesting, was that the otters in the urban area not only had higher cortisol levels, but

behaved completely differently from the otters in the natural areas. And now currently my PhD project focuses on behavioural endocrinology, specifically, how endocrine correlates are linked to social hierarchy, and animal personality in the spectacular naked mole-rat (*Heterophalus galber*). Thus, my research interest lies in using endocrinology as a measure of animal welfare in conjunction with behavioural correlates. If you have any comments, suggestions, requests, or ideas please contact me at tac.iswe@gmail.com.

Valentina Melica

Postdoc, Fisheries and Oceans Canada, Canada



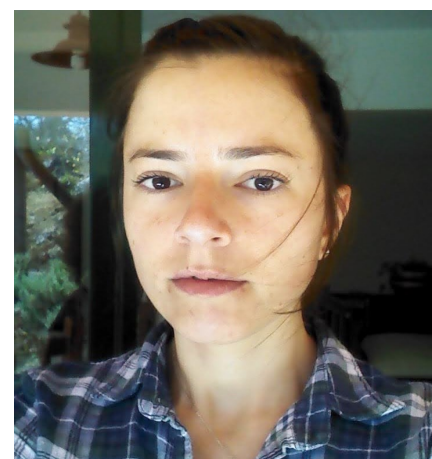
I am a whale biologist, specialized in endocrine analysis. I grew up in Italy, and I currently live in North Vancouver, Canada. Before moving to Canada, I lived in Juneau Alaska working on my PhD degree at University of Alaska Fairbanks. My research focused on reproductive and stress-related endocrinology in the eastern North Pacific populations of blue and gray whales. Previous to that, I worked as an aquarist and snorkel guide in the northeast of Italy and graduated with a master degree from the University of Trieste, with a research project on moon jellyfish. Currently, I am a research scientist with the Dept of Fisheries and Oceans Canada, in the Marine Mammal Conservation Physiology program. In this position I am working on existing as well as newly developed projects. Specifically, I have been complementing an existing project on metabolic markers in feces

of resident killer whales with additional hormone and lipid analysis. Additionally, I am co-PI on a project focused on humpback whale diet compositions and metabolic needs, using stable isotopes, hormones and metabolic parameters. In the endocrine field, I have experience with hormone extracts from blubber, skin, feces and blow of cetaceans. Mainly on blubber I have run enzyme and radio immunoassay, from validation to data analysis. Most recently I have learned to extract lipid and to perform GC for fatty acid analysis in fecal samples. In my free time, I enjoy hiking, running and climbing.

Verónica Cantarelli

Biologist. Postdoc, National University of Córdoba, Argentina.

In the past 8 years I have been working at the Reproductive and Endocrinology Laboratory of the Physiology Institute, Faculty of Medical Sciences, National University of Cordoba in Argentina. I'm about to finish my PhD thesis and I am also teaching classes to medicine students in the Human Physiology course as Assistant Professor. Our laboratory has a long history of research in the area of reproductive physiology and endocrinology. I specifically work and develop research projects in the endocrinology lab where I perform enzyme immunoassays for endocrine monitoring of glucocorticoids and reproductive hormones in a variety of samples such as urine, feces, egg yolk and plasma of laboratory, domestic and wild animals. My first experience with wild animals' endocrinology was during my graduation thesis where I recorded behavioral data and collected fecal samples from Black and Gold Howler monkeys (*Alouatta caraya*) in the native forest, and compared cortisol metabolite levels in caraya populations inhabiting disturbed and non-disturbed areas. Today I develop my PhD project in *Chinchilla lanigera*,



an endemic and very endangered rodent from South America. Specifically, I'm testing different ovulation induction protocols and evaluating the activation of the HHQ axis through the use of non-invasive monitoring of reproductive hormones in urine. My contact information is veronica.cantarelli@gmail.com.

Vinod Kumar

Wildlife researcher and Technical officer, Laboratory for the Conservation of Endangered Species (LaCONES), CSIR-Centre for Cellular and Molecular Biology, Hyderabad, India



My research mainly focuses on Conservation Physiology/ Wildlife Endocrinology/ Chemical Ecology to assess the reproductive biology and stress physiology of endangered animals including in situ and ex situ conservation using non-invasive methods. In addition, I am also studying pheromone dependent regulation of reproduction in ungulates. I have been predominantly involved in the development and validation of various techniques including Enzyme immunoassays, HPLC, GC-MS, LC-MS, etc. using biological matrix such as faeces, urine, saliva, hair etc. since more than 10 years. I have led and co-authored 19 peer reviewed publications. Currently, I am

pursuing a PhD in “Long term monitoring of reproductive biology and conservation physiology of Endangered Mouse Deer (*Moschiola indica*) using non-invasive methods”. I would be happy to address any enquiry and discuss work related to reproductive and stress hormones analysis and development of enzyme immunoassays. I can be contacted through TAC email and “contact tab” on the trainee page of ISWE. Please contact me at tac.iswe@gmail.com