



NCVP
National Center for Veterinary Parasitology

News from the NCVP

FALL 2022

SPECIAL POINTS OF INTEREST:

- Resident Updates
- Highlights from NCVP at AAEP 2022
- NCVP Annual Fall Meeting

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People

Our Residents Continue to Amaze!

Dr. Caroline Sobotytk Joins the Faculty at University of Pennsylvania



Congratulations are due to **Caroline Sobotytk, DVM, MSc, PhD**, the former **Merck Resident at Texas A&M University**. After finishing her veterinary degree and graduate training at Universidade Federal de Santa Maria in Brazil, Dr. Sobotytk completed a two-year veterinary parasitology residency program under the direction of Dr. Gui Verocai, NCVP board member, ACVM Diplomate, and parasitology extraordinaire. Throughout her residency training Caroline continued in her research endeavors, publishing several important papers from her work at TAMU. This summer she embarked on a new role

as **Assistant Professor of Clinical Parasitology** at University of Pennsylvania's School of Veterinary Medicine in Philadelphia.

At Penn we ... love parasites! Kudos Caroline — and best of luck!



Welcome Dr. Sarah Myers, BI Resident in Veterinary Parasitology

We are excited to share that **Dr. Sarah Myers** (KSU DVM, 2022) has been named the **BI Resident in Veterinary Parasitology**. Dr. Myers is completing her PhD and clinical training in parasitology at **Oklahoma State University** under the direction of Dr. Susan Little and Dr. Ruth Scimeca, current Diplomates of the ACVM. Before joining the OSU team, Sarah worked with veterinary parasitologists Dr. Brian Herrin, Dr. Kathryn Reif, and Dr. Jeba Jesudoss Chelladurai at KSU...

(continued on
next page)



**Boehringer
Ingelheim**



(Introduction to Dr. Sarah Myers, new BI Resident, continued...)

...Her research interests center on ticks and tick-borne infections, and she has already become an integral part of the teaching and research efforts at OSU. In addition to clinical training and PhD research, her program will include parasitology experience at other veterinary colleges in North America and the opportunity to collaborate with veterinary parasitologists throughout the animal health field.

Welcome Sarah — we are so glad to have you as our newest NCVP resident!

Dr. Megan Lineberry Joins Zoetis Animal Health

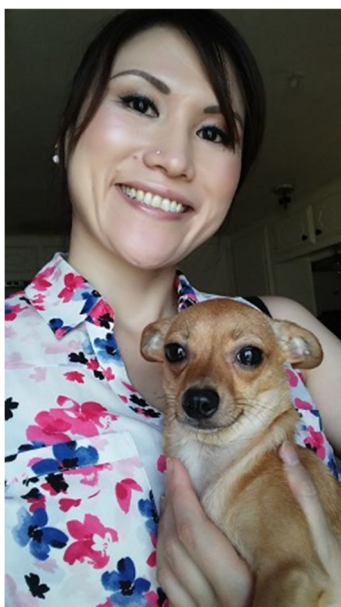
Congratulations are in high order for **Dr. Megan Lineberry**, who recently accepted a Senior Scientist position with Zoetis. In addition to her new position, in summer 2022 Megan received the AAVP-CAPC Graduate Student Award in Zoonotic Disease, won first-place for best oral presentation at the AAVP meeting (see page 4) and successfully defended her PhD. During her time at Oklahoma State, Megan wore many hats including graduate student, lab manager, and NCVP Project Coordinator. As evidenced by the multitude of roles she fulfilled, Megan is a talented person capable of expertly managing a diversity of tasks simultaneously. We are extremely grateful for all Megan did for NCVP and OSU. She left an indelible mark and simply cannot be replaced. We wish her the best and look forward to collaborating with her for many years to come.

Congratulations Dr. Lineberry!



Above: Dr. Megan Lineberry (R) and Tiana Sanders (L) with AAVP presentation awards. Megan won first-place for best oral presentation and Tiana won second place for her poster presentation. Congratulations Megan and Tiana!

Dr. Yoko Nagamori: Head of Parasitology, Zoetis Reference Labs



Congratulations to Dr. Nagamori are again in order! This fall, **Dr. Yoko Nagamori**, DVM, MS, DACVM (Parasit.), NCVP Resident Alum, accepted a position as **Head of Parasitology** with **Zoetis Reference Laboratories, Global Diagnostics**. After completing her MS degree and residency training at Oklahoma State University, Yoko led the parasitology laboratory at the Oklahoma Animal Disease Diagnostic Laboratory, the state diagnostic lab, as Section Head and Clinical Assistant Professor for four years. In 2020 she joined Zoetis as a Veterinary Specialist in Parasitology, rounding out the parasitology dream team of Dr. Chris Adolph (DVM, MS OSU 2013, and NCVP Board Member), Dr. Jessica Rodriguez (DVM, PhD TAMU 2017, former Merial Resident in Veterinary Parasitology), and Dr. Pablo Jimenez Castro (DVM, PhD UGA 2021). Yoko is widely recognized as a phenomenal diagnostic parasitologist and outstanding scientist, and we are so pleased she has taken on this new role.

We couldn't be happier for you Yoko — way to go!



Above, left to right: Drs. Adolph, Nagamori, Rodriguez, and Castro, Parasitology Specialists, Veterinary Professional Services, Zoetis

Events

NCVP at AAVP 2022—the Joy of Parasites!

The **67th Annual Meeting of the American Association of Veterinary Parasitologists** was held June 25–28, 2022, in beautiful Snowbird, Utah. Appropriately themed “Veterinary Parasitology: Reaching New Heights,” the meeting was an overwhelming success complete with beautiful vistas and picturesque mountains.

The conference program was chock-full of concurrent scientific sessions, symposia, meetings, fellowship, and a plenary session highlighting AAVP award recipients for their hard-earned success.



Above: So many parasitologists enjoyed the interactions (and sweet treats—parasite M&Ms!) at the NCVP table.

NCVP had an illuminating presence sponsoring an information table, ice cream social, and clinical case discussions (see next page). Throughout it all, the NCVP table was a fulcrum of activity and served as a constant source of parasite-themed M&Ms, parasite stickers, NCVP notepads, previews of the 2022 parasite specimen sets, and smiling faces. We have already started making plans for AAVP 2023 which will be June 10–13 in Lexington, Kentucky.

Please plan to stop by the NCVP table in Lexington to discover the parasite treats and swag we have planned!

NCVP Supported Presentations at AAVP 2022

When the AAVP meeting was held in Snowbird, Utah, in June 2022, NCVP was thrilled to be there. By supporting research grants to AAVP members, NCVP-funded efforts also contributed to several presentations, including:



- Dr. Caroline Sobotytk (Dr. Gui Verocai): Characterizing circulating *Onchocerca lupi*-derived microRNA in naturally infected dogs and assessing their potential as diagnostic markers (Abstract 26)
- Dr. Jennifer Cain: Girl power: The microbiome of *Parascaris* spp. female gonads (Abstract 30)
- Dr. Constance Finnerty: Probing a population problem by prospecting the parameters of *Parascaris* spp. (Abstract 31)
- Dr. Vishnu Manikantan (Dr. Sriveny Dangoudoubiyam): A preliminary proteomic analysis of *Baylisascaris procyonis* larval excretory-secretory products (Abstract 37)
- Dr. Jeba Jesudoss Chelladurai: The complete mitochondrial genomes of *Dermacentor albipictus* variants: phylogeny and diagnostic insights (Abstract 85)

An impressive array of research accomplishments – congratulations everyone!

Interested in applying for an NCVP grant to support your research? Proposals are due September 1 each year, and more details are available [here](#).

Keep on Clicking!

Expertly moderated by **Dr. Gui Verocai (Texas A&M, NCVP board member)** and **Dr. Mani Lejeune (Cornell University)**, the NCVP-sponsored clinical case session at AAVP 2022 closed the AAVP conference in fine fashion.



Pictured above: AAVP attendees enjoying interactive NCVP parasite case session.

Events continued...

Challenging, novel, and interesting parasite clinical cases were presented by residents and other students of veterinary parasitology for the entertainment and edification of all. With approximately 100 members of AAVP in attendance, the crowd worked through each of the cases with the presenters while enjoying a boxed lunch before they departed for home.

Such fun—thanks AAVP!



Pictured left to right, top row: Drs. Gui Verocai, Kamilyah Miller (Resident at Kansas State University), Sarah Myers (Boehringer Ingelheim Resident at Oklahoma State University), Tiana Sanders (4th-year veterinary student at Oklahoma State University), and Mani Lejeune. Bottom row: Drs. Timi Wu (IDEXX Resident at Cornell University), Vishnu Manikantan (Resident at Purdue University), Nicole Szafranski (Zoetis Resident at University of Tennessee), and Ranju Manoj (Merck Resident at Cornell University). Not present but contributing cases was Dr. Katy Martin (Elanco Resident, Iowa State University).

NCVP-ers Receive Presentation Awards from AAVP!



There were so many incredible student presentations at AAVP this year! We were delighted when two NCVP-ers, **Dr. Megan Lineberry**, former NCVP Project Coordinator and PhD student, Oklahoma State University, and **Dr. Nicole Szafranski**, Zoetis Resident in Veterinary Parasitology at University of Tennessee, were recognized with outstanding presentation awards.

Way to represent, Nicole and Megan!

Left: Dr. Lineberry receives 1st Place for her oral presentation at AAVP. Awards were presented by Bradley Hayes, Elanco Animal Health.



Above: Dr. Szafranski receives Honorable Mention for her oral presentation at AAVP.

Events continued...



NCVP Advisory Board and Residents Enjoy Meeting in Stillwater

October in Stillwater means lovely weather, beautiful colors, and a gathering of amazing veterinary parasitologists focused on securing the future of our profession. As is (back to, finally!) our tradition each fall, NCVP Residents and Advisory Board members gathered at Oklahoma State University to share updates on residency training progress, celebrate milestones, and plan for the coming years.



Above: NCVP Fall board meeting attendees. First row, left to right: Drs. Sarah Myers (OSU), Timothy Wu (Cornell), Ranju Manoj (Cornell), Nicole Szafranski (UT). Second row, Drs. Susan Little (OSU), Melissa Beall (IDEXX), Lindsay Starkey (Auburn), Gui Verocai (TAMU), Mason Reichard (OSU). Third row, Drs. Jenifer Edmonds (Johnson Research, LLC), Lisa Young (Elanco), Doug Carithers (BI), Frank Guerino (Merck), Chris Adolph (Zoetis). Not pictured: Drs. Dwight Bowman (Cornell), Andrew Peregrine (Guelph), and Ruth Scimeca (OSU).

Residents enjoyed advanced training on scientific presentations from [PowerPresentations](#) (see next page) while the advisory board had the unenviable task of determining how best to distribute NCVP grant funding among the many strong applications received.

Our welcome event at Stilly Axe Pit – the premier axe throwing venue in Stillwater, OK – allowed us to break the ice after a long time apart.

And on the second evening, Dr. Gui Verocai, NCVP Board Member, and each of the residents in attendance, treated us to an overview of their most interesting parasitology cases. The presentations were enjoyed by an enthusiastic group of veterinary students, graduate students, residents, faculty members, and board members.

Thanks to everyone for such a productive, fun, and joyous meeting! NCVP is very grateful for your support.



Above: NCVP Board members and residents after an enjoyable evening of camaraderie and axe throwing.

Powerful Presentation Skills, and More!



Examples of resources reviewed by residents at the annual NCVP meeting. For a full list, please see acvm.us



What great opportunities for our residents as they embark on their careers in veterinary parasitology!

At the Fall 2022 NCVP Advisory Board and Resident meeting in Stillwater, Oklahoma, residents were given opportunities to learn from one another and from outside consultants. Time was reserved for a **roundtable discussion of examination study resources** led by Dr. Chris Adolph, ACVM-boarded parasitologist at Zoetis and NCVP board member.

In addition, [Power Presentations](#), a **professional communication skills** agency, joined the residents to provide in-depth training in developing and delivering successful scientific presentations. To prepare for the in-person training, residents used templates and recommendations to draft their slide decks, participated in a pre-work webinar to review the content, and worked with interactive [communication practice software](#) that provides immediate individualized coaching on communication style and delivery. Once in Stillwater, the residents shared their presentations live with the group. Presentations were videorecorded and each resident received one-on-one feedback from the program consultant.

USDA Visits NCVP and OSU for the Full Tick Experience

In August 2022, NCVP had the pleasure of hosting eighteen veterinarians, livestock inspectors, and entomologists from the United States Department of Agriculture stationed in Colorado, Louisiana, Oklahoma, Tennessee, and Texas for tick training and experience. The group visited Oklahoma State University for a 2-day refresher course on ticks and other ectoparasites of veterinary medical importance.

Co-hosted by NCVP and Dr. Justin Talley, Department Head, Entomology (OSU), these animal disease specialists received continuing education on carbon dioxide trapping methods, dragging and flagging for ticks, morphological identification of ticks and flies, large animal examination for ticks, and tick-borne pathogens of veterinary medical importance.

We love hosting short courses—let us know if you are interested!

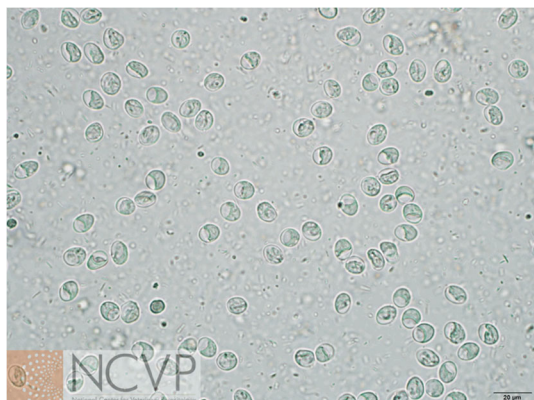


Above: USDA field team members in the teaching laboratory at Oklahoma State University identifying tick specimens.

#Parasite_images

Be sure to take a look at the NCVP website (www.ncvetp.org) with new parasite images available as a resource for teaching and outreach.

Recently uploaded images include *Haemaphysalis longicornis* (right) and *Giardia* sp. cysts (below), along with many, many more.



The website is continuously updated with diverse parasite images along with the case of the month, which is also accompanied by new images. Please use the NCVP images freely in research, teaching, and continuing education presentations – and **enjoy!**

About the National Center for Veterinary Parasitology

Veterinary parasites impact human health and society in many ways. With the generous support of our sponsors, the National Center for Veterinary Parasitology works to promote greater understanding and control of parasitic diseases in animals through innovative partnerships between academia and industry. Housed in the College of Veterinary Medicine at Oklahoma State University, the Center strives to create future generations of veterinary parasitologists, conduct targeted research, and provide diagnostic and consulting services worldwide. To learn more, please visit ncvetp.org.



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COLLEGE OF
VETERINARY MEDICINE

People, Parasites, and Publications

Check out the diverse research contributions the current [NCVP residents^a](#) and current and former [grant recipients^b](#) are making! The following list is a highlight of their publications. If you cannot access the full text, please email ncvp@okstate.edu with your request. Enjoy!

- Allen KE and **Lineberry MW^b**. *Trypanosoma cruzi* and other vector-borne infections in shelter dogs in two counties of Oklahoma, United States. *Vector Borne Zoonotic Dis.* 2022;22:273–280.
- Bouchard É, Sharma R, Hernández-Ortiz A, Buhler K, Al-Adhami B, Su C, Fenton H, G-Gouin G, Roth JD, Rodrigues CW, Pamak C, Simon A, Bachand N, Leighton P, **Jenkins E^b**. Are foxes (*Vulpes* spp.) good sentinel species for *Toxoplasma gondii* in northern Canada? *Parasit Vectors.* 2022;15:115.
- Bustamante J, Padilla A, White B, Auckland L, Busselman R, Collins S, Malcolm E, Wilson B, Saunders A, **Hamer S^b** and Tarleton R. Prophylactic low-dose, bi-weekly benznidazole treatment fails to prevent *Trypanosoma cruzi* infection in dogs under intense transmission pressure. 2022; *bioRxiv preprint*.
- **Cain JL^b**, Norris JK, Ripley NE, Suri P, Finnerty CA, Gravatte HS, Nielsen MK. The microbial community associated with *Parascaris* spp. infecting juvenile horses. *Parasites Vectors.* 2022;15:408.
- Curry E and **Prichard R^b**. Development of rapid in vitro colorimetric enzymatic activity assay to differentiate macrocyclic lactone susceptible and resistant *Dirofilaria immitis* isolates. *Vet. Parasitol.* 2022;304:109696.
- Dagenais M, Gerlach J, Geary T and **Long T^b**. Sugar coating: utilisation of host serum sialoglycoproteins by *Schistosoma mansoni* as a potential immune evasion mechanism. *Pathogens.* 2022;11:426.
- **Duncan KT^a**, Elshahed MS, Sundstrom KD, Little SE, Youssef NH. Influence of tick sex and geographic region on the microbiome of *Dermacentor variabilis* collected from dogs and cats across the United States. *Ticks Tick Borne Dis.* 2022;13:102002.
- **Duncan KT^a**, Sundstrom KD, Hunt D, Lineberry MW, Grant A, Little SE. Survey on the presence of equine tick-borne rickettsial infections in southcentral United States. *J. Equine Vet. Sci.* 2022;118:104135.
- Hancock TJ, Hickman P, Kazerooni N, Kennedy M, Kania SA, Dennis M, **Szafranski N^a**, Gerhold R, Su C, Masi T, Smith S, Sparer TE. Possible cross-reactivity of feline and white-tailed deer antibodies against the SARS-CoV-2 receptor binding domain. *J. Virol.* 2022;96:e0025022.
- Ida J, **Wu TK^a**. Pathology in Practice: *Paramphistomum cervi* in young Simmental bull calf. *J. Am. Vet. Med. Assoc.* 2022;7:1–3.
- Reynolds S, Hedberg M, Herrin B, **Chelladurai JRJJ^b**. Analysis of the complete mitochondrial genomes of *Dermacentor albipictus* suggests a species complex. *Ticks Tick Borne Dis.* 2022;13:102038.
- Stilwell JM, **Griffin MJ^b**, Waldbieser GC, Stanton JB, Leary JH, Khoo LH, Steadman JM, Ware C, Wise DJ, Camus AC. Myxozoan community composition and diversity in clinical cases of proliferative gill disease in Mississippi catfish aquaculture. *J. Parasitol.* 2022;108:132–140.
- **Szafranski N^a** and Gerhold R. *Heterobilharzia americana* infection & schistosomiasis in dogs. *Clinician's Brief.* 2022. March.
- **Szafranski N^a** and Gerhold R. Just a fluke? Trematode infections of dogs in the United States. *Today's Veterinary Practice.* 2022. May/June.
- Upton KE, **Sobotyk C^a**, Edwards EE, Verocai, GG. *Dirofilaria immitis* in an Asian small-clawed otter (*Aonyx cinereus*) from southeastern Louisiana, United States. *Vet. Parasitol.: Reg. Stud. Rep.* 2022; 29:100703.
- Woodyard ET, Rosser TG, Stilwell JM, Camus AC, Khoo LH, Waldbieser G, Lorenz WW, **Griffin MJ^b**. New data on *Henneguya postexilis* Minchew, 1977, a parasite of channel catfish *Ictalurus punctatus*, with notes on resolution of molecular markers for myxozoan phylogeny. *Syst. Parasitol.* 2022;99:41–62.
- **Wu TK^a** and Bowman DD. *Toxocara canis*. Parasite of the Month. *Trends Parasitol.* 2022;38:709–710.
- **Wu TK^a**, Heidari Z, Makki MS, Yazdi B, Aali A, Stöllner T, Boenke N, Bowman DD, Mowlavi G. First paleoparasitological evidence of *Muellerius* sp. in sheep or goat dated to the Sasanian Empire (500 CE) in ancient Iran. *Vet. Parasitol.: Reg. Stud. Rep.* 2022; 34:1–4.