Dear Alumni and Friends of the Department of Veterinary Biosciences,

We are happy to announce the return of the Department of Veterinary Bioscience’s bi-annual BIOS Newsletter. This edition contains our accomplishments, awards, and growth from January 2021 through September 2022. For nearly two years we have navigated the COVID-19 terrain with resilience, innovation, and creativity and are excited to share the results with you. We hope you enjoy!

**New Faculty Spotlight**

**Dr. Haichang Li** joins us as an Assistant Professor in Oncology, beginning in August 2022. Dr. Li comes from “across the river” at OSU, where he was a Research Assistant Professor, Division of Cardiac Surgery in the College of Medicine. He received his PhD in Molecular Biology and Genetics at Gifu University in Japan.

**Dr. Cody Warren** joins us as an Assistant Professor in Viral Pathogens, beginning in August 2022. Dr. Warren comes from the University of Colorado, Department of Molecular, Cellular and Developmental Biology where he was a Postdoctoral Research Fellow at the BioFrontiers Institute. He received his PhD in Microbiology at the University of Colorado–Denver.

**Dr. Kai Xu** joined us as an Assistant Professor in Immunology, beginning in May 2021. Dr. Xu earned his PhD in Neuroscience and Structural Biology at Cornell University. His latest research experience has been as a Project Team Leader at the Vaccine Research Center at the National Institutes of Health in Bethesda, Maryland.
**Awards and Contributions**

Steven Weisbrode, VMD, MS, PhD, DACVP received the College of Veterinary Medicine's 2021 Distinguished Alumni Award. This award is given to Ohio State graduates who have made exceptional contributions to the veterinary profession through scholarly work, teaching, research, education, mentorship, service, and outreach in the community. You can read more about Dr. Weisbrode's remarkable accomplishments and contributions [here](#).

Dr. Ian Davis was the first-place winner for the category Faculty and Research Scientists at the 8th Annual CCTS Scientific Meeting.

Dr. Amit Sharma gave the Science Spotlight presentation at the virtual 2021 Conference on Retroviruses and Opportunistic Infections (CROI): “Novel Treatments for SARS-CoV-2: Starting at the Bench” Session.

Dr. Steven Weisbrode, VMD, MS, PhD, DACVP received the College of Veterinary Medicine's 2021 Distinguished Alumni Award. This award is given to Ohio State graduates who have made exceptional contributions to the veterinary profession through scholarly work, teaching, research, education, mentorship, service, and outreach in the community. You can read more about Dr. Weisbrode's remarkable accomplishments and contributions [here](#).

Dr. Ian Davis was the first-place winner for the category Faculty and Research Scientists at the 8th Annual CCTS Scientific Meeting.

Dr. Amit Sharma gave the Science Spotlight presentation at the virtual 2021 Conference on Retroviruses and Opportunistic Infections (CROI): “Novel Treatments for SARS-CoV-2: Starting at the Bench” Session.

**VBS Trainees**

**2021 ACVP Diplomates**

The following trainees passed the American College of Veterinarian Pathology Board Exams: Kelsey Brakel, Cecilia Cuitino, Mallory DiVincenzo, Tim Helms, Josh Lorbach, Michael Martinez, Ching Yang, and Samantha Sommer.

In addition, we would like to congratulate the trainees who graduated in 2021: Drs. Kelsey Brakel, Mallory DiVincenzo, Ching Yang, Timothy Helms, Joshua Lorbach, and Michael Martinez.

**Dr. Kara Corps** was elected President of the Phi Zeta, Delta chapter and **Dr. Nongnuch Inpanbutr**, after 16 years as president, will serve as secretary.

**Dr. Jianrong Li** and **Dr. Stefan Niewiesk** were finalists for the OSU Innovators of the Year 2020 Award, nominated for their development of a new COVID-19 vaccine technology. The NIH published an article on their work [here](#).

**Dr. Amit Sharma** became review editor on the editorial board of Viral Immunology for *Frontiers in Immunology*. He was also elected to the editorial board of *Zoonoses* journal.

**Dr. Samantha Evans** wrote an article, included in the Ohio Veterinary Medical Association newsletter, about OSU’s cytometry flow and hemodialysis services. The CVM cytometry flow service has opened to receiving samples from practitioners in the community.

**Dr. Nongnuch Inpanbutr** is one of 14 faculty across campus to be invited to participate in the pilot program, “Drake Institute’s New IR-on-Demand Asynchronous Short Course Initiative.”

**Dr. Kara Corps** has been invited to co-lead the ACVP Trainee Mental Health Wellness Initiative.

**Dr. Michael Oglesbee** is now director of the Pathology Residency/PhD Program. **Dr. Ryan Jennings** is the associate director.

**Dr. Maxey Wellman**, DVM, MS, PhD, DACVP received the ASVCP 2021 Lifetime Achievement Award. This award honors members who have made a strong contribution over many years to veterinary clinical pathology. A [short bio](#) on the ASVCP web page illustrates why Dr. Wellman was chosen for this distinguished award.

**Dr. Kara Corps** has been named Associate Director for the Comparative Pathology & Digital Imaging Shared Resource.

**Dr. Sue Knoblaugh** is now Faculty Director for Diversity, Equity, Inclusion, and Belonging (DEIB) Program.

**Dr. Megan Schreeg** passed her American College of Veterinary Pathology Board Examination in 2021.
In the News

The Department of Veterinary Biosciences featured heavily in OSU news during 2021 and throughout 2022. Though research and news on SARS-CoV-2 dominated the world, a host of studies and breakthroughs in other research areas were recognized, from food pollutants to cancer treatment complications. Click the headlines below to read the full articles.

Finding a way to stop chemotherapy from damaging the heart
From a study co-authored by Dr. Kara Corps, scientists found that use of another anti-cancer drug, nilotinib, could prevent the transport of doxorubicin to cardiac cells.

Blocking how the malaria parasite suppresses the immune response
A study, co-led by Dr. Kai Xu, uncovered the atomic-level structure of a Plasmodium-infected red blood cell connecting to an immune cell.

A new treatment that might keep COVID-19 patients off the ventilator
A study, by senior author Dr. Ian Davis, found that in mice afflicted with ARDS (acute respiratory distress syndrome), cells were unable to produce surfactant, a substance that enables the lungs to expand and contract.

Evading immune detection
The path from pollutants in food to a heightened allergic response
A study authored by Dr. Prosper Boyaka, co-authored by Dr. Estelle Cormet-Boyaka, found that the heavy metal cadmium, a water, soil, and food pollutant, at low doses causes an allergic response, leading to vitamin D degradation.

A potential role for ibuprofen in older adult’s immunity to RSV
In a study led by Dr. Stefan Niewiesk, ibuprofen administered to elderly mice, ibuprofen prevented RSV re-infection, perhaps because the ibuprofen reduced age-related inflammation.

SARS-CoV-2 goes ‘underground’ to spread from cell to cell
A new study by Dr. Shan-Lu Liu found that the SARS-CoV-2 virus is able to avoid immune system detection through cell-to-cell transmission, as opposed to the more common cell-free transmission. This cell-to-cell method of transmission makes antibodies ineffective at neutralizing the virus.

COVID booster needed for broad protection against omicron variants
In a study by senior author Dr. Shan-Lu Liu and co-author Dr. Kai Xu, researchers tested neutralizing antibodies against the BA.2 and BA.3 omicron variants and deltacron.

Blocking enzyme could hold the key to preventing, treating severe COVID-19
A study, co-authored by Drs. Jianrong Li, Prosper Boyaka, and Estelle Cormet-Boyaka, found that without caspase 11, an analogous enzyme in mice, mice did not develop thrombosis of lung capillaries.

Good news on blocking a virus considered a global threat
Dr. Kai Xu co-led a study in developing a four-antibody cocktail effective in neutralizing a new Hendra variant of the Henipavirus family.

Scientists develop effective intranasal mumps-based COVID-19 vaccine candidate
Lead author Dr. Jianrong Li, along with coauthor Dr. Prosper Boyaka, developed an intranasal mumps-based COVID-19 vaccine candidate. Furthermore, administering the vaccine intranasally provided greater protection from the virus in mucosal antibodies.
**Promotions**

We are pleased to announce the promotion of two department faculty members:

**Dr. Ryan Jennings** (left) was promoted to Associate Professor in 2021.

**Dr. Chris Premanandan** (right) was promoted to Professor in 2022.

---

**Grants**

**Dr. Jianrong Li**, along with a colleague at University of Chicago, has been awarded a supplemental grant of $388,014 from the NIH National Human Genome Research Institute for understanding the dynamics of RNA epitranscriptomes in coronaviruses.

**Dr. Amit Sharma** received MI&I pilot funding for the project, Small molecule and macrocyclic peptide inhibitors for therapeutic targeting of SARS-CoV-2.

**Dr. Estelle Cormet-Boyaka** is an MPI (multiple principle investigator) on an NIH R21 grant for the project, Susceptibility determinants to Legionella pneumophila infection in smokers.

**Dr. Alexander Davies** has been awarded a K01 grant for the project, Targeting ERK-AKT-mediated single-cell drug response heterogeneity in metastatic osteosarcoma.

**Dr. Ian Davis**’ FY21 Department of Defense (DoD) CDMRP PRMRP proposal on the role of impaired phospholipid metabolism in COVID-19 pathogenesis has been approved for submission.

**Dr. Amanda Panfil** received an Ohio Cancer Research Award for, “The Effects of m6A RNA Modifications on the Oncogenic Retrovirus HTLV-1.”

---

**Veterinary Pathology Alumni & Friends Reception 2021**

Though the ACVP 2021 Annual Meeting was virtual, the Veterinary Biosciences Department organized a reception for alumni and friends of OSU’s Veterinary Pathology program. The event, both in-person and on-line, was held on October 29, 2021 on the college’s campus, and allowed faculty, trainees, and alumni to meet in person for the first time in over a year. The 1998 Distinguished Alumni Award recipient, **Sanford Bishop, DVM PhD, DACVP**, pictured below, was recognized at the event for his many contributions to the department.

---

**Publications**

Faculty in the department have published numerous journal articles as authors and co-authors. For a detailed list, please click [here](#).

---

Meeting face-to-face again: The start of Autumn Semester 2022.