

Animal Disease Diagnostic Laboratory

2020 ANNUAL REPORT

Like everywhere else in the world, this past year brought many unexpected changes to the ADDL. Because the ADDL provides essential services as defined by the USDA, we remained open for business throughout 2020. We implemented many safety precautions, both internally for our employees and in the way we interact with clients during sample drop off. These adaptations allowed us to continue performing our full set of diagnostic tests for our clients throughout 2020.

In addition to providing our usual diagnostic services, the ADDL began performing COVID-19 PCR on human samples in April 2020. More information on this topic is provided on page 4.

The ADDL continued a systematic review of test fees and implemented changes where necessary. These changes have not negatively affected our case numbers, and our budget appears healthy despite the challenges of 2020. Our current fee schedule is available <u>here</u>.

Purdue University instituted a hiring freeze in 2020, which posed a risk to the ADDL's operations. Despite several staff members leaving the ADDL in 2020, we have been consistently successful in acquiring approvals for exceptions to the University hiring freeze. This is a testament to the University's recognition of the importance of the work done at the ADDL.

This report provides a snapshot of the work performed at the ADDL in support of our veterinary partners. We hope you find it informative, and we wish you all the best in 2021 as we continue to work together to promote animal health.

- Kenitra Hendrix

The ADDL accessioned a total of 24,779 animal cases in the US in 2020, with 93.3% originating in Indiana and 6.7% from out of state.

Animal Accessions by Calendar Year

	2018	2019	2020		
WL ADDL	24,377	24,740	22,599		
Heeke	2,411	2,170	2,180		
Total	26,788	26,910	24,779		



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Animal Tests and Accessions by Section (West Lafayette & Heeke)

	Avian	Bacteriology	Histology	Molecular Diagnostics	Parasitology	Pathology	Serology	Toxicology	TSE	Virology	TOTAL
Accessions*	1,570	4,856	6,052	4,075	2,234	8,861	5,389	284	1,268	1,003	35,595
Tests	26,683	16,579	6,263	20,106	5,060	12,679	26,493	323	1,538	4,774	120,498

* Individual accessions may represent multiple animals and have tests assigned in multiple sections.



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NECROPSY TOTALS





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How You Can Help

Help support our work! By giving to our Coronavirus Testing Laboratory or all of our ADDL programs, you will help us meet the most important and urgent needs affecting animal and human health. Having financial flexibility ensures that the ADDL can remain a front-runner in scientific knowledge and discovery as our world evolves. Make a gift today at <u>connect.purdue.edu/s/</u><u>addlgifts</u>. For more information, visit <u>vet.purdue.edu/addl/about-us.php</u>.

Thank you!

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COVID and the ADDL

The ADDL was first approached in mid-March to determine if the infrastructure and skills for performing SARS-CoV-2 PCR were available. A month later, the ADDL had implemented SOPs for the SARS-CoV-2 protocol and obtained CLIA certification for diagnostic testing of human samples. Initially, the approved sample types were nasal swabs and nasopharyngeal swabs. In the fall, the ADDL performed additional validation studies to include saliva as an approved sample type. Our experience with porcine oral fluids was helpful as we navigated PCR inhibitors in human saliva. Pooling of samples is a common protocol for several animal PCR tests, and allows the laboratory to decrease cost and increase capacity. The ADDL performed additional validation studies to allow pooling of anterior nasal swabs for surveillance testing. If a pool is positive, samples are then tested individually. All samples from symptomatic individuals and those identified through contact tracing are tested individually. The preferred sample type at this time is anterior nasal swabs.

The ADDL acquired one extraction instrument and two PCR thermocyclers to increase the laboratory's capacity to meet the needs of campus testing, and the Orchard Sequoia LIMS system to handle test data and reporting to the state. The ADDL staff has gone above and beyond their typical duties by serving on the COVID-19 intake team or performing tests on human samples in the molecular laboratory. We established an intake stream separate from our procedure for animal samples, and this process is executed daily by our intake team made up of technicians from various departments. Our molecular laboratory staff, in addition to a few cross-trained technicians from other sections, are performing PCR tests on human samples seven days per week, in addition to veterinary diagnostics.

The ADDL is an integral part of the Protect Purdue initiative, testing samples from students, staff, faculty, and dependents typically with a turnaround time of less than 24 hours. Additionally, the ADDL performed limited testing for local hospitals, research studies, and private entities as capacity allowed. In total, the ADDL performed 99,344 SARS-CoV-2 PCR tests in 2020.

COVID Testing at ADDL Timeline:

- Mid-March 2020: Purdue leadership reached out to the ADDL regarding the possibility of performing SARS-CoV-2 PCR.
- 4/14/20: CLIA certification was acquired to allow for human testing.
- 4/15/20: The first diagnostic COVID PCR test was performed.
- June 2020: Passed CAP's Sars-CoV-2 proficiency test.
- 8/17/20: The ADDL began testing saliva samples.
- 9/8/20: On-site CLIA audit occurred.
- 9/18/20: Notification from CLIA received. The laboratory passed the audit with no deficiencies.
- September 2020: The ADDL began pooling groups of four anterior nasal swabs.
- December 2020: Passed CAP's Sars-CoV-2 proficiency test.



Angie Chan is the supervisor of the Molecular Diagnostic Section of the Animal Disease Diagnostic Laboratory, which performs the Polymerase Chain Reaction (PCR) tests on samples received in the lab.

(John Underwood/Purdue University photo)

BRAVO AWARDS

The Bravo Award seeks to highlight the excellence found across all areas and job functions at Purdue University by recognizing extraordinary Achievements on every scale. Recognizing employee accomplishments that help Purdue move the world forward is vital to the University's mission and the morale of its faculty and staff. We would like to recognize those individuals here at the ADDL that received the Bravo Award for all of their hard work and dedication to our mission.

CONGRATULATIONS!



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