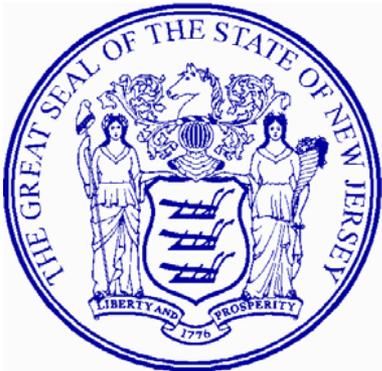


**New Jersey Department of
Agriculture (NJDA)
Division of Animal Health (DAH)
Diagnostic Laboratory (AHDL)
Trenton, NJ 08625**

**Amar Patil BVSc, MVSc, PhD, DACVM
On behalf of
Nancy Halpern DVM, JD
Director, Division of Animal Health
State Veterinarian**



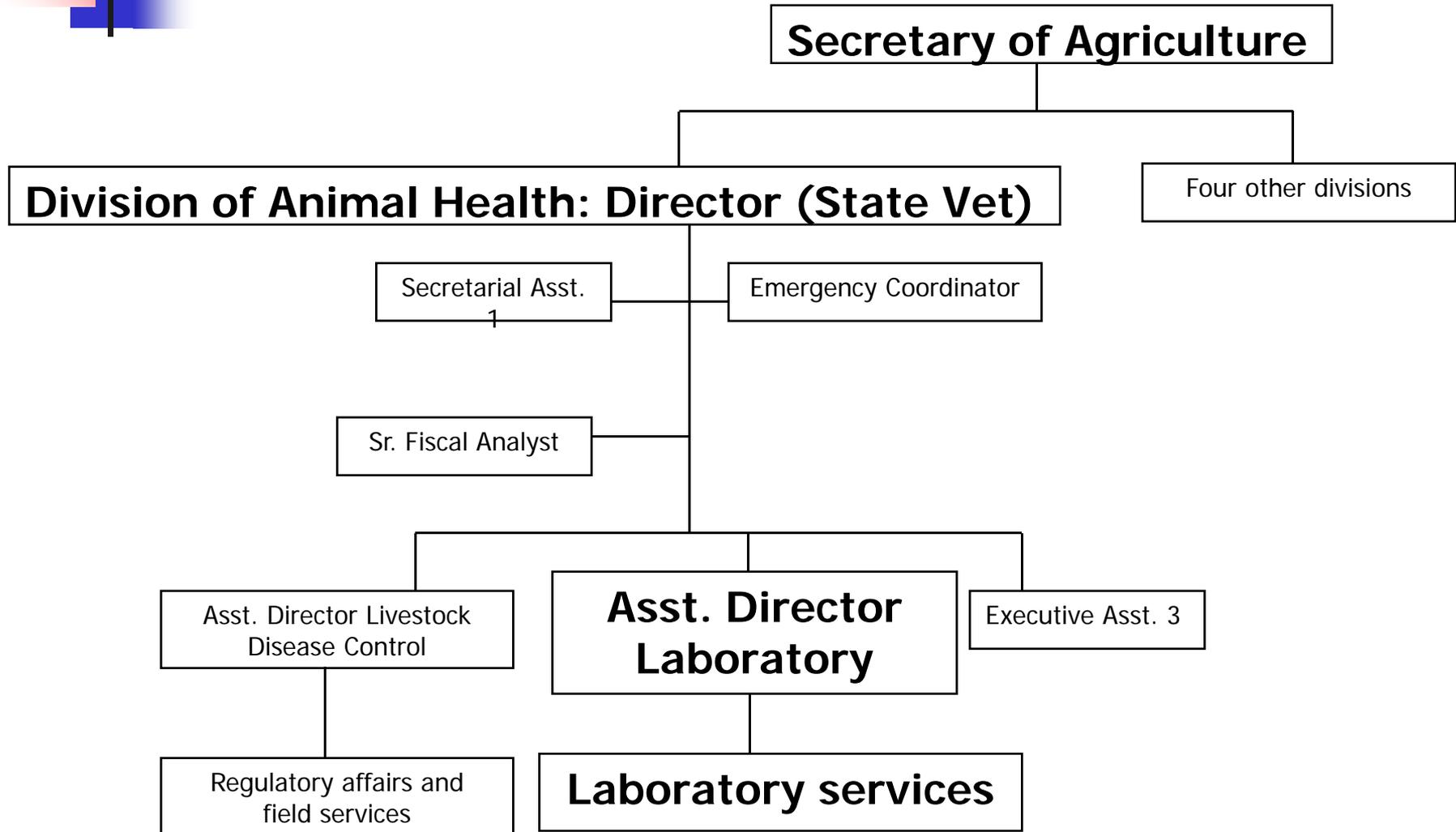


Mission

- **Animal Health Diagnostic Laboratory:**
 - **Diagnostic testing**
 - To protect the health and well being of livestock in the Garden State
 - To protect health and well being of companion animals, wild animals, and exotic species in the Garden State
 - To detect foreign animal diseases, emerging diseases, and zoonotic diseases
 - To contribute to overall health and well being of the State and the Nation

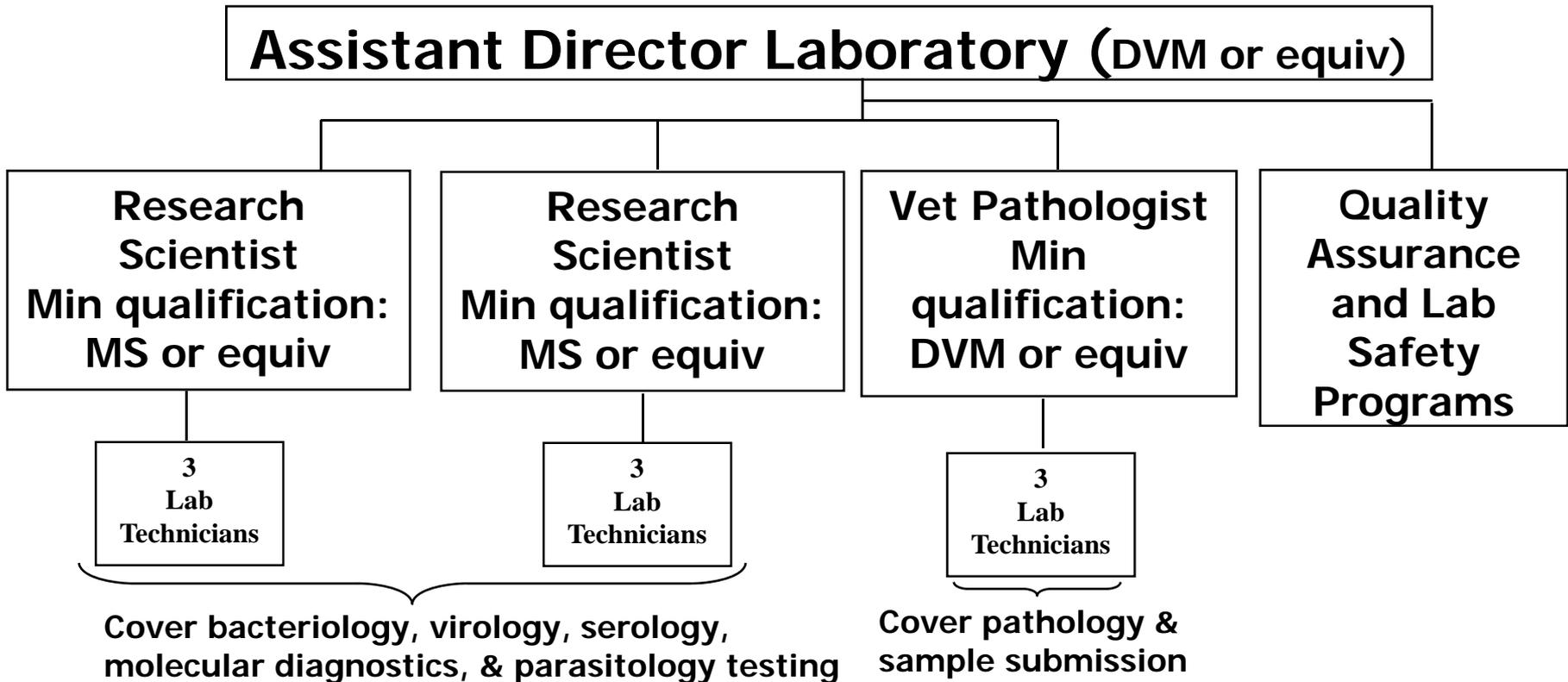


Laboratory is part of NJDA





Laboratory Staff



- Regulatory vets assist lab in necropsy and lab safety



Laboratory Facility

- **Currently housed in downtown Trenton in Health and Agriculture building**
- **Co-located with other NJDA laboratories and NJ Dept of Health-public health laboratories**
- **Moving to a new-expanded facility in mid-summer 2011**
- **Located outside of Trenton**



New Laboratory Facility

- **Co-location with other NJDA laboratories and public health laboratories in the new facility**
- **Total square footage of the new facility is 200,000**
- **NJDA has 40,000 square footage**
- **“State of the art” necropsy suite and BSL-3 suite**
- **Dead as well as live animal diagnostic pathology capability**



New Laboratory Facility







Laboratory Information Management System (LIMS)

- **Current LIMS does not have HL-7 messaging capability**
- **Configuring custom LIMS solution**
 - **Expected to go live in Fall 2011**
- **Electronic messaging capability (HL-7)**
 - **Bidirectional messaging**



Custom LIMS

- Custom sample submission, tracking, audit trails, and result reporting
- Special modules: Approval manager, instrument manager, standards & reagent manager, storage manager
- Communication of approved results: email, fax, or electronic messaging (HL7)
- Web based login for laboratory staff as well as outside entities (clients, co-operators etc)



Laboratory Testing

- **Bacteriology, Virology, Serology, Molecular Diagnostics, and Parasitology**
- **Pathology (necropsy, histopathology, and biopsy)**
- **Small Laboratory:**
 - **Highly cross-trained staff**
 - **Flexibility**
- **Total specimens received in 2010: 60,276**
- **A member laboratory of the National Animal Health Laboratory Network (NAHLN)**



Laboratory Testing

- **Chemical testing performed by NJDA**

laboratories:

- **Testing of feed for Mycotoxins**
- **Testing of fertilizers and animal feed to check if they conform to label**



NAHLN Testing

- **Avian influenza: Live bird markets, backyard flocks, and wild birds**
- **New Castle Disease: Sick poultry testing**
- **Swine influenza**
- **Classical Swine Fever and Foot and Mouth Disease**
- **Lab follows OIE/ISO 17025 QA standards for the competence of testing and calibration laboratories**



Major Equipment

- **Real time PCR machines: ABI 7500 and Smart Cyclers**
- **Automated nucleic acid extraction: Qiacube and Kingfisher**
- **Addition of new equipment to the new laboratory**
 - **Sensititer: Antibiotic sensitivity determination (MIC)**
 - **Kingfisher, Qiacube, ABI 7500, and Smart Cyler**
- **NJDA Division of Plant Industry Laboratory**
 - **Ion trap LC/MS system**
 - **Gas chromatography system**
 - **Optical emission spectrometer**



How could our laboratory support Vet-LRN?

- **Microbiological Testing of Feed: Culture, PCR or Serologic methods to identify microbes or their antigen**
- **Chemical Testing of Feed: Heavy metals, toxins etc**
- **Provide staff to other labs within the network**



How could our laboratory support Vet-LRN?

- **Acceptance of samples from laboratories within network if they are overwhelmed**
- **Assistance in testing method development and validation**
- **Assistance in creating and implementing training modules (online, wet lab etc)**
- **Assistance in coordinating and facilitating proficiency testing modules**



What would our lab need from Vet-LRN?

- **Funding to buy equipment and hire staff**
 - **Depending on number of tests (100s vs 1000s)**
- **Feed testing methods development and validation**
- **Uniform Standard Operating Procedures (SOPs)**
- **Effective training**
- **Proficiency testing**
- **Quality assurance standards: OIE/ISO 17025**
- **Electronic message development (HL-7)**



Thank you !