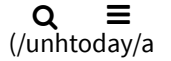




NEWSROOM (//WWW.UNH.EDU/UNHTODAY/NEWS)



New Instrument Allows N.H. Veterinary Diagnostic Lab to Identify Infections in Animals in Minutes

Monday, March 6, 2017

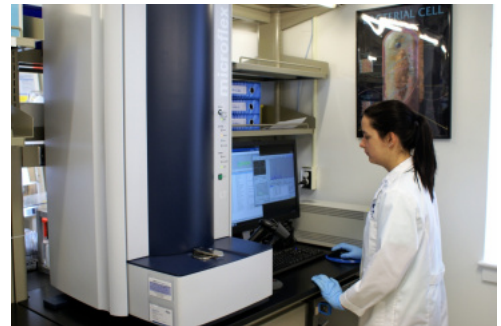
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INSTRUMENTS
ALLOWS
NH- NH- NH-
VETERINARY
DIAGNOSTIC
LAB- LAB- LAB-
IDENTIFY
INFECTIONS

DURHAM, N.H. – Thanks to a new piece of equipment the N.H. Veterinary Diagnostic Lab at the University of New Hampshire can now identify an infectious disease in animals in minutes instead of days, which can have a significant impact on treatment and response time.

The instrument produces a “molecular fingerprint” to quickly identify infectious agents. The fingerprint is matched against a database of known infectious agents. Mass spectrometry, while not a new technology, is new in the application of clinical microbiology and is revolutionizing microbiology labs worldwide.

“Accurately and rapidly identifying infectious agents is critical in safeguarding animal health, public health and New Hampshire agriculture,”

UNH STUDENT EMPLOYEE MONICA MCEVOY USES THE MALDI-TOF INSTRUMENT AT THE NH VETERINARY DIAGNOSTIC LAB AT UNH. CREDIT: ROB GIBSON/UNH



said Robert Gibson,

managing director of the lab. “The majority of infectious diseases in people, including the top bioterrorism agents, are considered zoonotic, which means they can be transferred from animals to humans. The speed at which we will be able to help diagnose contagious and reportable diseases to our clients and regulatory officials will have a significant impact on treatments and outbreak response.”

With a price tag of more than \$200,000, the Matrix Assisted Laser Desorption Ionization Time of Flight Mass Spectrometry (MALDI-TOF) instrumentation was made possible in part by a gift from a private donor. The majority of the cost was paid for by the NH Agricultural Experiment Station.

The diagnostic lab is a key partner with the state commissioner of agriculture and state veterinarian in their efforts to monitor and control animal diseases. The lab also provides diagnostic services to hundreds of veterinarians from around New England who use the lab’s histopathology, microbiology, serology, and necropsy services for the diagnosis of animal diseases in pets, farm animals, wildlife, zoo, and marine animals. It is co-funded and co-managed by the New Hampshire Department of Agriculture, Markets & Food (https://urldefense.proofpoint.com/v2/url?u=http-3A__agriculture.nh.gov_&d=DwMFaQ&c=c6MrceVCY5m5A_KAUkrdoA&r=43nhFYk7Lgb9QdQ_EwZ2RfOaAn9EEDYKO5BGcXFwG0&m=W1f3Ygd5K-

bqfkUGopt3kWJbs8AIRMCnZzP-Tgy3DzU&s=Pwl2k3TCGeoY-ue6-7g8NaOw0Ujk3AnuGjWil2GheYw&e=) and the UNH College of Life Sciences and Agriculture (<http://www.colsa.unh.edu/>). It has served the state and the university since 1970, working at the junction of animal health, public health, environmental health, and economic health.

Founded in 1887, the NH Agricultural Experiment Station (<http://colsa.unh.edu/nhaes>) at the UNH College of Life Sciences and Agriculture (<http://www.colsa.unh.edu/aes>) is UNH's original research center and an elemental component of New Hampshire's land-grant university heritage and mission.

The University of New Hampshire is a flagship research university that inspires innovation and transforms lives in our state, nation and world. More than 16,000 students from all 50 states and 71 countries engage with an award-winning faculty in top ranked programs in business, engineering, law, health and human services, liberal arts and the sciences across more than 200 programs of study. UNH's research portfolio includes partnerships with NASA, NOAA, NSF and NIH, receiving more than \$100 million in competitive external funding every year to further explore and define the frontiers of land, sea and space.

Editor's Notes:

PHOTOS AVAILABLE TO DOWNLOAD

<https://colsa.unh.edu/nhaes/sites/colsa.unh.edu.nhaes/files/media/images/maldistudent.jpg>

(<https://colsa.unh.edu/nhaes/sites/colsa.unh.edu.nhaes/files/media/images/maldistudent.jpg>)

UNH student employee Monica McEvoy uses the MALDI-TOF instrument at the NH Veterinary Diagnostic Lab at UNH. Credit: Rob Gibson/UNH

<https://colsa.unh.edu/nhaes/sites/colsa.unh.edu.nhaes/files/media/images/maldispectra.jpg>

(<https://colsa.unh.edu/nhaes/sites/colsa.unh.edu.nhaes/files/media/images/maldispectra.jpg>)

A computer image of MALDI-TOF spectra. Credit: Rob Gibson/UNH

<https://colsa.unh.edu/nhaes/sites/colsa.unh.edu.nhaes/files/media/images/maldiport.jpg>

(<https://colsa.unh.edu/nhaes/sites/colsa.unh.edu.nhaes/files/media/images/maldiport.jpg>)

MALDI-TOF testing plates can hold up to 95 organisms in a single run. Credit: Rob Gibson/UNH

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