Maui Nonprofit Launches Canine Covid-19 Detection Study

Nov. 13, 2020 - Assistance Dogs of Hawaii, (ADH), a Maui-based nonprofit, is participating in a research study to teach dogs to detect people with the coronavirus and help prevent the spread of infection.

Once trained, medical detection dogs can be deployed in ports of entry and public gatherings, to provide rapid non-invasive screening for COVID-19. This work may prove integral in the fight against Covid-19 and be a method of screening large numbers of individuals very quickly.

Four Assistance Dogs in training are being evaluated for participation in the study, which begins this month on the ADH campus. These are ADH dogs who will eventually become Assistance Dogs for children and adults with physical disabilities.

“The ultimate goal, for me, is the practical application of this research to help screen people, even those who may be asymptomatic, at places like airports, schools, hospitals and other gathering places to prevent the spread of disease,” said ADH Executive Director Maureen Maurer. “It’s encouraging to have man’s best friend join in the fight against man’s worst enemy.”

It’s not the first time ADH has participated in a study on the extraordinary olfactory capacity of dogs to detect disease. Maurer was the principal investigator in a groundbreaking research study in 2016 that proved that dogs could be trained to detect life-threatening bacterial infections in humans with an accuracy rate close to 99 percent.

“As soon as the pandemic hit, it occurred to me that dogs could be taught to detect COVID-19, based on our previous research and other study outcomes,” Maurer said. “I believe they will be able to help us fight this disease and am
excited for the opportunity to contribute to the growing body of knowledge in this field.”

The COVID-19 dogs in training are Labradors or Golden Retrievers and have been evaluated for their aptitude in medical scent detection and they include Sadie, Samson, Tess, and Yuki. Phase 1 of the study, which begins this month, involves teaching the dogs to discern the presence of Covid-19 in the sweat of infected people. Coronavirus samples will be collected from a sweat sample and is not transmissible to dogs or people.

Maurer, who has a Master’s of Science in Canine Studies, said that the research will be conducted in partnership with Medical Detection Dogs UK, the London School of Hygiene and Tropical Medicine, and The Queens Medical Center in Hawaii, where residents will be recruited to participate in the study.

When it comes to smell, dogs’ olfactory acuity is over 100,000 times stronger than humans, and they are able to detect odors in parts per trillion, according to researchers. The key to harnessing their ability is accomplished by teaching dogs to accurately discern one scent over another, and let humans know when they find it. ADNW begins training by teaching the dogs to detect a target scent by having them “go find” an item – a tea bag, for example -- hidden in boxes and rewarding them with food for accomplishing the task.

“We are looking for dogs who are not just scent-oriented, but have a high degree of drive and determination. We want dogs who are eager to search for items and enjoy this type of work,” says Maurer.

Assistance Dogs Northwest is a 501(c)(3) charitable organization (EIN: 99-0353694) that provides children and adults with disabilities and other special needs, professionally trained dogs that will increase their independence and enhance the quality of their lives. The agency is committed to serving people through Community Outreach Programs and developing the potential dogs have to assist people in need through our Research Programs. ADH is supported by donations from individuals, foundations and businesses. To give, visit: www.assistancedogshawaii.org

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