NEWS



Lucy participates in COVID-19 detection trials at the University of Pennsylvania Veterinary school.

## Scent-detection dogs train to sniff out coronavirus cases

University of Pennsylvania launches COVID-19 Canine Scent Detection Study; dogs may begin screening people in July

## **Martin Hackett**

University of Pennsylvania

PHILADELPHIA – A pilot training program using scent detection dogs to discriminate between samples from COVID-19 positive and COVID-19 negative patients is the focus of a new research initiative at the University of Pennsylvania's School of Veterinary Medicine.

With up to 300 million smell receptors compared to six million in humans – dogs are uniquely positioned to aid in disease detection.

This pioneering study sets the stage for dogs to be a force multiplier in the

mission to detect COVID-19, particularly among asymptomatic patients, or hospital or business environments where testing is most challenging. Preliminary screening of live humans by trained dogs could begin as early as July. The study is backed

in part by the new Penn Vet COVID-19 Research Innovation Fund.

The fund, provided with critical start-up support through a generous gift from Vernon and Shirley Hill, will bolster Penn Vet's rapidly expanding research and response program to fight the novel coronavirus.

Penn Vet will initially begin the study with eight

dogs to perform this precise detection work.

Over the course of three weeks through a process called odor imprinting, the dogs will be exposed to COVID-19 positive saliva and urine samples in a laboratory setting.

Once the dogs learn the odor, the investigators will document that the dogs can discriminate between COVID-19 positive and COVID-19 negative samples in a laboratory setting, establishing the platform for testing to determine if the dogs can identify COVID-19 infected people.

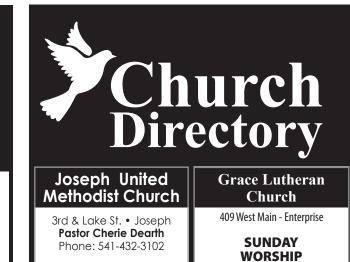
The U.S. Army Combat Capabilities Development Command Chemical Biological Center will be lending their expertise during the study as well.

Scent detection dogs

can accurately detect low concentrations of volatile organic compounds, otherwise known as VOCs, associated with various diseases such as ovarian cancer, bacterial infections, and nasal tumors.

"These VOCs are present in human blood, saliva, urine or breath,' said Cynthia Otto, DVM, PhD, professor of Working Dog Sciences and Sports Medicine and director of Penn Vet's Working Dog Center.

"The potential impact of these dogs and their detect capacity to COVID-19 could be substantial," Otto said. "This study will harness the dog's extraordinary ability to support the nation's COVID-19 surveillance systems, with the goal of reducing community spread."



**Parenting amid** pandemic requires some ingenuity

On March 16th, I woke up and realized I would soon become a completely different parent than the one I was the day before

5 years old and 2 years

old, I have held a full time

position, in an office, sur-

rounded by sharp thinkers with unmatched wit.

"working mom" a busy

mom that has a lot on her

plate and feels competent

in balancing the challenge

of work life and home life.

I like to dress for work. I

enjoy the intellectual com-

plexities work has to offer.

drive home from work,

as I listen to my music

before I jump in to that

infamous phone booth to

emerge in my suit of wife,

mother, and "Chief Family

new identity creeping in

to view? An identity that

was muddy, murky, with

no well-defined pin stripes

and block heeled pumps.

An identity that might

wreak havoc with my

steadfast routines and par-

enting strategies. My head

and drove home and parked

in front of my garage, I

thought "this isn't going

to be so bad, I'm always

As I packed up my office

was spinning.

But, what was this? A

Officer."

In addition, I enjoy the

I defined myself as a



Since my children were longing for more time at home, I have a great relationship with my kids.... why am I so anxious?'

Then, the morning came. "Mom, I can't get on the WiFi." "Mom, would you make me breakfast?" (it was 9:45 a.m.). "Mom, want to see this game I just made up?" "Mom, we don't have any kale to feed my lizard." "Mom, mom, mom.....'

The requests, the questions, the knocking, the talking, just kept coming and coming and coming. It was at this point that I realized my husband and my children were the exact same person.

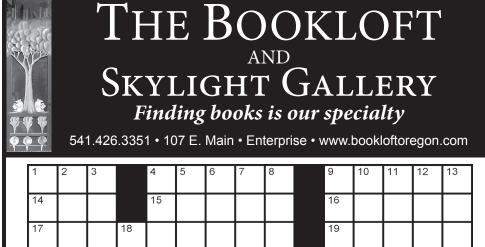
A week, or maybe 10 days evaporated from my life. As I was trying to focus on work tasks for the day, I found myself tapping my fingers and looking out the window. I turned and caught a glance at my disheveled self in the mirror, no makeup on, black sweats and a hoodie; this had become my "new normal" and I was grumpy.

At that very moment I decided I would no longer be held hostage to these invaders of my workday! I would do what I do best, mange my way out of a challenging situation. I would take back control.

That control started with myself. No more sleeping in and blowing off my work out to a later time in the day. No more excuses for not following my daily work/life routine. No more interruptions.

I was going to have to don a teacher's cap and educate my children about the etiquette of work life and give them support in navigating their online distant learning life.

I made a sign on the door for office hours with a caveat at the bottom that read, "Please do not knock, if you truly need something that can't wait, please text or message me.' Shortly after the sign was hung, I discovered dogs can't read but, they surely figured out how to demand my attention and pull me away momentarily. We posted their school hours and discussed how all of us need to get up, stretch, take a walk outside around the house, anything to break up our day of endless screen time. We talked about selfcare and the importance of routine, good food, and lots of water. The best laid plans of mice and men often go awry or in our case, transitioned into some intense arguments. What I realized is that we had some decent plans but no rules to go with those plans. What was I thinking? Wasn't that Management 101? Rules of engagement, we needed to devise some boundaries that we could all agree to, where we all had a little bit of control. What I also realized is that although the package looks different I still work full time, in an office, surrounded by sharp thinkers with unmatched wit. COVID-19 has taught me to slow down and be grateful for what is in front of me. My normal may not look like your normal, each of us needs to find out what works best for you and yours and be confident that whatever it looks like, it's ok Sometimes the path of least resistance is the right path to take. Now that is Management 101.



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