

VET CANDY

MARCH 2022

Why 2022 is the
YEAR OF THE
WOMAN

WHAT IS A
DOG'S LIFESPAN?
**YOU MIGHT BE
SURPRISED**

SECRET TO FINDING
HAPPINESS
IS CLOSER THAN
YOU THINK

CLINICAL OUTCOMES
OF THYROID TUMORS
IN DOGS

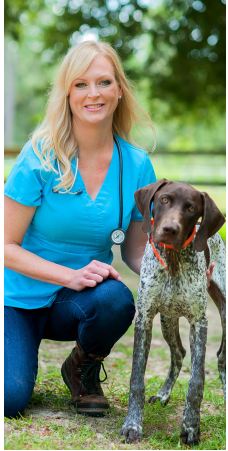
Breaking barriers with

DR CHRISTINE ROYAL

+ much more

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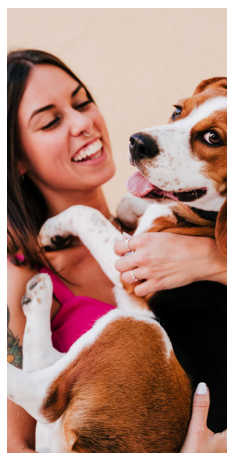
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Chief Executive Officer
Dr. Jill Lopez

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Welcome to the world of
VET CANDY

by Dr. Jill Lopez

Imagine a gender equal world. A world free of bias, stereotypes and discrimination. A world that's diverse, equitable, and inclusive. A world where difference is valued and celebrated. International Women's Day is March 8th and the goal is to raise awareness against bias and take action for equality. That's something that we need a lot of in our profession.

In 2017, for the first time in history, women finally became the majority in the veterinary field. Today, the AVMA says that 2/3 of all veterinarians are exclusively small animal practitioners; of these, 63% are female. Women also make up 85% of all veterinary students, while veterinary technicians are about 90% female. Sadly, although women outnumber men in the veterinary field, they are still underrepresented in higher management roles.

This month, we are celebrating Dr. Christine Royal, the AVP of Companion Animal and Equine Business at Merck Animal Health. Dr. Christine is a woman who has taken the reins and proved her worth in a male dominated industry, shaping the world for the women that will come after her. In this issue, you can read more about her journey and how she wants to use her success to elevate others.



DR. CHRISTINE ROYAL

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BREAKING BARRIERS WITH DR. CHRISTINE ROYAL



by Jenn Boon

150 years ago, there were no women veterinarians in the United States.

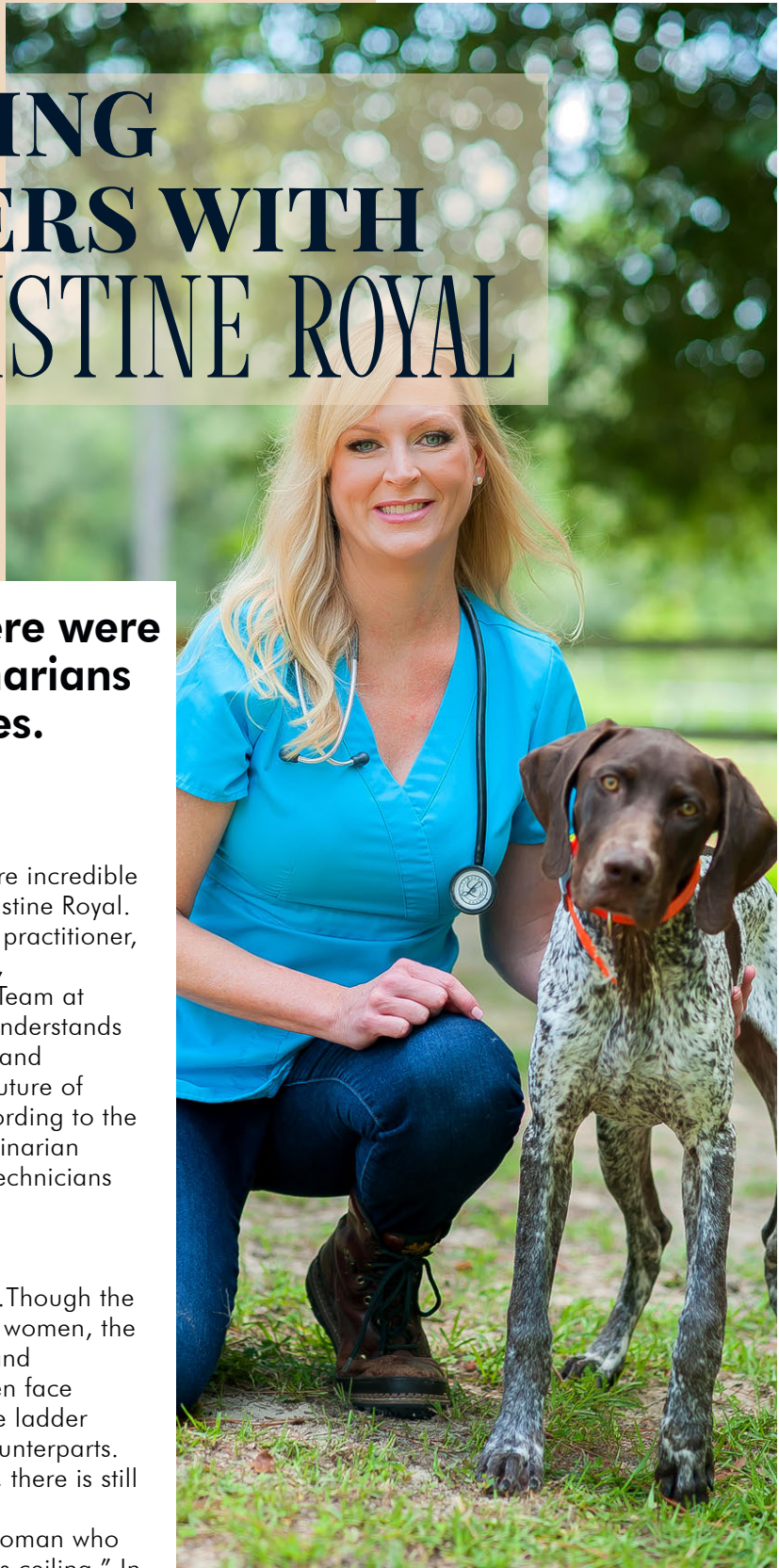
Oh, how times have changed!

At the forefront of this new era are incredible female veterinarians like Dr. Christine Royal. As a mother, former veterinarian practitioner, and now Assistant Vice President, Companion Animal and Equine Team at Merck Animal Health, she truly understands that women play an important – and necessary – role in shaping the future of veterinary medicine. In fact, according to the statistics, a massive 85% of veterinarian students and 90% of veterinary technicians are female.

Yet this wasn't always the case.

And numbers can be deceiving... Though the profession is well represented by women, the reality is that both young grads and established female vets alike often face difficulties climbing the corporate ladder when compared to their male counterparts. As far as we've come historically, there is still more work to do!

Dr. Christine Royal is one such woman who has shattered the so-called "glass ceiling." In the March issue of Vet Candy we learn about her extraordinary journey to becoming a global pet health care company leader and soak up her wisdom regarding how to ensure better inclusion, diversity, and gender balance, at all levels of veterinarian services.



Women in leadership roles: *an exception to the rule*



It may surprise you to know that although women greatly outnumber men in the veterinarian field, a regrettably small number rise to higher management positions. That's not to say there are no female leaders. Nor is it to suggest that women in other roles don't fulfil leadership duties in their day-to-day tasks when dealing with pets, animals, and people.

Not at all.

Rather, what the statistics show is that companies and corporations lack diverse representation at the very top levels. From CEOs, board members and advisory panels to academia and practice ownership, seats are going unfilled.

For Dr. Christine Royal, this simply wasn't good enough.

After graduating with a bachelor's degree in microbiology from Auburn University, she later went on to obtain a Doctorate of Veterinary Medicine from the Auburn University College of Veterinary Medicine. Dr. Royal worked in a private practice in Alabama for four years. Soon, she saw opportunities to engage in clinical research, marketing, management, and new product development.

Eventually, she even became a corporate trainer! With every step, she pushed the boundaries of what was possible for a female veterinarian to achieve until today, where her job title is the impressive AVP, Companion Animal and Equine Team at Merck Animal Health.

Glass ceiling, you say?
Totally shattered.

Practical ways everyone can support inclusion, diversity, and gender balance

Dr. Christine Royal is living proof of what can be accomplished through hard work, determination, and of course a deep love for animals.

Today, she asks the question, "Is the mental health and wellbeing of female veterinarians being supported in the profession?" And furthermore, what can we – people of all backgrounds and genders – do to make absolutely sure leadership roles are equally accessible to everyone?

One of Dr. Royal's ideas is to support new grads through professional mentorship. Specifically, female to female mentorship opportunities. Imposter syndrome, self-doubt, and a fear of making mistakes can be debilitating. But established veterinarians make excellent role models. By cultivating a network of mutual trust, respect, and compassion for each other, Dr. Royal believes everyone has the power to improve gender balance in the field.

"I want to leave this profession better than when I came into it," Dr. Christine Royal says with a smile.

Surely, she is doing just that!

Thanks to astounding leaders like Dr. Royal, a new era of female veterinarian leaders is being ushered in with open arms.



Highlighting woman's achievements makes them want to be the boss

Highlighting female achievements in the workplace makes capable women significantly more likely to want to be the boss, a study shows. Public feedback about a woman's performance can significantly increase her willingness to lead, even in male-dominated environments, according to the research. The teams led by these women are subsequently more likely to perform well. The research, by Dr Jingnan Chen from the University of Exeter Business School, found increasing the number of men in mixed-gender teams negatively impacts women's willingness to lead, especially on tasks seen as stereotypically male. Publicly acknowledging women's abilities and achievements, however, helps to alleviate this effect.

In male-stereotyped industries, women in both mixed and single gender groups are twice as likely to shy away from leadership roles. Men also shy away from leadership positions in female-stereotyped industries, but only when they are in mixed-gender groups.

Dr Chen said: "There are so many capable women but many do not feel encouraged in their workplace, and this leaves them feeling they shouldn't put themselves forward for leadership positions. There is not enough attention paid to the efforts of high-achieving women, partly because they are less likely than men to self-promote their abilities, but it is very important that their work is equally recognized.

"If we have more acknowledgement of women's achievements, so their colleagues know what they are doing well, women will be more likely to step up and utilize their leadership skills.

Recognizing women's abilities should be done by pointing out their quantitative achievements - specific, objective and measurable work such as sales figures or number of projects successfully completed.

"Of course this research does not suggest anyone should downplay male achievements, but it shows companies should make a commitment to making sure female achievements are not overlooked or ignored. This is especially important in male-dominated industries."

The research shows making people's achievements public increases the chance that men in all-male groups will prefer to take the lead. This has the opposite effect for women in all-female groups - capable women are deterred from leading due to women wishing to signal fairness and a sense of cooperation. In mixed gender groups, however, public feedback significantly encourages the best female performers to lead.

Academics conducted an experiment using 248 University of Exeter students in groups of four, where they were asked to complete tasks such as answering quiz-style questions, and how likely they were to lead their group on a particular task. They were also asked if women or men would be more likely to know more about that subject area, and how likely it was that their answer was right.

Dr Chen said:

"We have shown highlighting achievements is both highly beneficial and often straightforward for companies. The most capable female and male leaders emerge and consequently, the best group outcomes are obtained when public performance feedback is given."

Fostering a Future of Strong Females Begins with Wellbeing

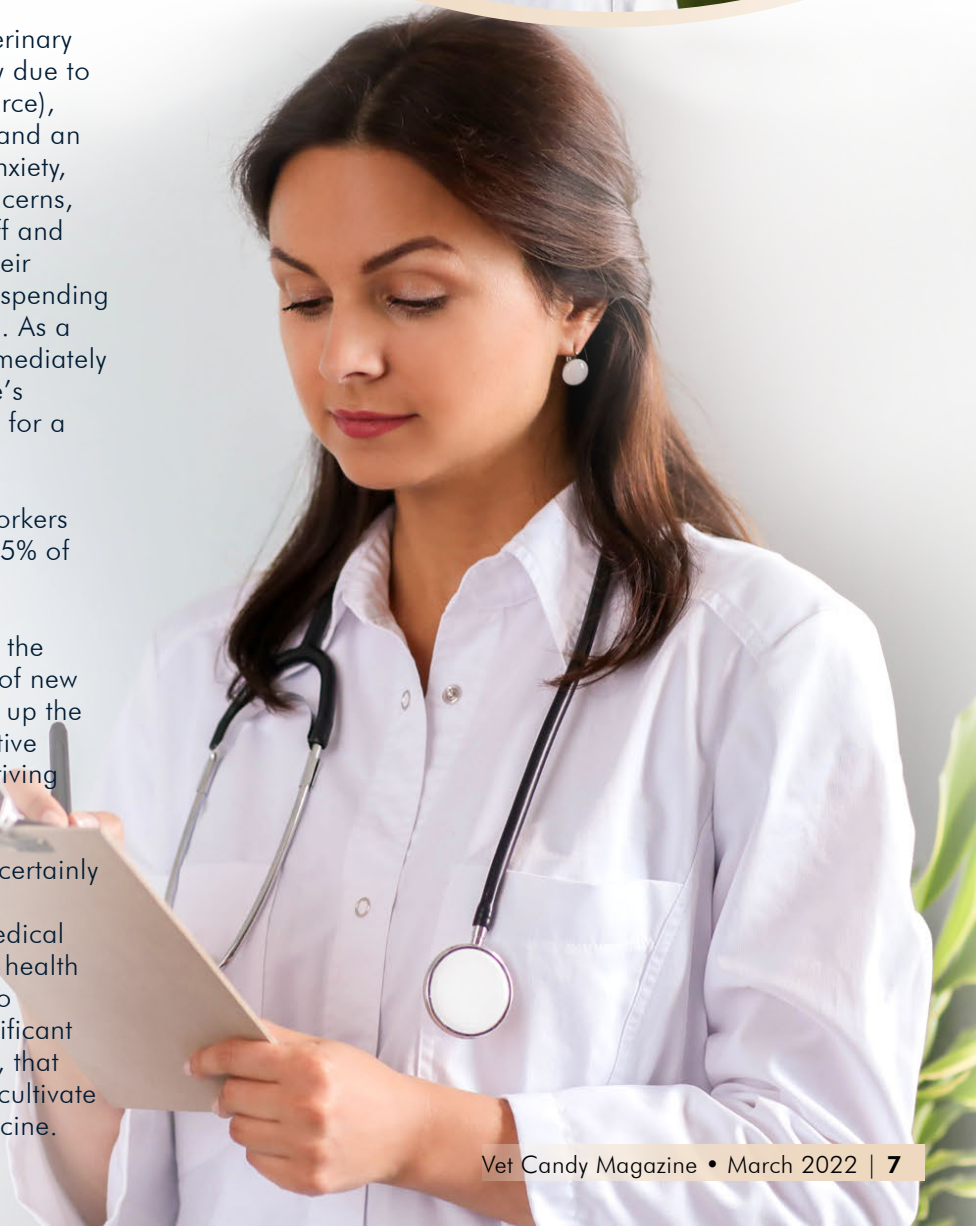
By Dr. Christine Royal

Looking back as a veterinarian starting my career nearly 17 years ago, I can say I was fortunate to have been surrounded by strong leaders and mentors in this rewarding profession. However, as we take a deeper look at Merck Animal Health's recent **Veterinarian Wellbeing Study** in partnership with the AVMA, we are learning that stress and burnout levels have grown even higher among young veterinarians, with the transition to practice being particularly challenging.

Amid the pandemic, staffing shortages at veterinary clinics have collided with decreased efficiency due to changing safety protocols and workflows (source), which creates an overwhelming environment and an overextended workforce in an already high-anxiety, high-intensity profession. Adding to these concerns, the Wellbeing Study revealed that 81% of staff and 67% of veterinarians faced challenges with their clinics being short-handed due to employees spending time away from work for illness or family care. As a mother and former full-time practitioner, I immediately think of the impact and stress that has on one's work-life balance when simultaneously caring for a family, your patients, and the practice.

To set the stage today, many animal health workers are female, including 62% of veterinarians, 95% of veterinary technicians, and 84% of veterinary assistants and laboratory workers (source). In addition, women are increasingly dominating the profession, and currently over three-quarters of new graduates are female (source). Which brings up the question: how do we instill and promote positive wellbeing practices to keep our profession thriving and healthy for females in the future?

Over the past several years, our industry has certainly been more intentional and deliberate about addressing wellbeing across the veterinary medical profession. With new information and mental health resources more widely available, we must also recognize that wellbeing has distinct and significant impacts on female veterinarians, in particular, that should be addressed early in their careers to cultivate strong professional women in veterinary medicine.



Promoting Diversity & Reducing Discrimination

Lack of diversity as well as discrimination continue to be barriers in veterinary medicine that we need to break down. In fact, the third Merck Animal Health Veterinary Wellbeing Study revealed that lack of diversity was viewed as a significant issue among BIPOC veterinarians. Discrimination can compound stress for veterinarians in an already inherently stressful profession and is also associated with poor wellbeing, depression, anxiety, and psychological distress. Because of this, it is vital that we create clear anti-discrimination policies in our practices as well as cultivate inclusion in the workplace (source). In addition, there continues to be a greater proportion of male practice ownership despite higher numbers of women entering the profession (source). We must empower and encourage female veterinarians to pursue practice ownership to shift this statistic.

Addressing Self-Sufficiency and Self-Doubt

As emerging veterinarians enter private practice; they are faced with transitioning from having an “army of people” supporting them to being more self-sufficient. According to a recent report on the Trials, Tribulations, and Professional Skills Vital for New Veterinary Graduate Success (source), this sudden expectation of self-sufficiency was often accompanied with a sense of self-doubt and fear of making mistakes. This can often lead to imposter syndrome, or the tendency to doubt one’s abilities despite positive evidence. In general, we are seeing that there is a high prevalence of imposter syndrome among young, female graduates.

Establishing Mentorships That Matter

Another common theme we are seeing study after study is that good social relationships are the strongest, most consistent predictor of a happy and fulfilling life in veterinary practice. We must recognize that work-life balance looks different for everyone. However, having a good social life and being part of a mentor program, such as MentorVet, where established and emerging professionals can empathize with each other about the challenges of being a veterinarian is an imperative need within our profession and should remain a focus.



So, as we think about wellbeing across our profession, how are we to make a strong foundation for our future female veterinarians? We should be proud and energized by the advances we have made as a profession to create resources and support groups to reduce stress and anxiety. Amidst the challenges and evolving industry landscape, we can remain optimistic about our profession because we are developing a plan and have more wellbeing resources than ever to improve veterinary medicine for the future. Nonetheless, this continued conversation around veterinary wellbeing and positive mentorship must continue so veterinary professionals can surround themselves with a network of support built on mutual trust, respect, and compassion for each other.



A close-up photograph of a young woman with a nose ring, smiling broadly while holding a brown and white dog. The dog is looking up at her with its mouth slightly open. The background is a soft, out-of-focus light color.

WHAT IS A DOG LIFESPAN?

You might be surprised

How old is a dog in human years? What factors contribute to a long and healthy life?

For years, it's been generally accepted that "dog years" are roughly human years times seven — that a 1-year-old puppy is like a 7-year-old child, and an 11-year-old elderly dog is like a 77-year-old senior citizen. But it's actually much more complicated, say experts.

Part of the problem is that while humans have clear metrics for healthy aging, little is known about "normal aging" for our four-legged friends. Big dogs tend to age the fastest — maybe 10 times faster than humans — while little breeds may live to be 20 years old, with "dog years" about five times human years.

The Dog Aging Project, founded in 2018, is by far the most ambitious project tackling the question of canine longevity, enrolling and studying tens of thousands of dogs of all sizes, breeds and backgrounds to develop a thorough understanding of canine aging. Their open-source dataset will give veterinarians and scientists the tools to assess how well a specific dog is aging and will set the stage for further research into healthy aging — in both dogs and people.

The researchers detailed their project and its potential implications for both human and veterinary medicine in an article published in the current issue of the journal *Nature*. One of their most intriguing avenues of inquiry will analyze the DNA of exceptionally long-lived dogs, the "super-centenarians" of the dog world.



"This is a very large, ambitious, wildly interdisciplinary project that has the potential to be a powerful resource for the broader scientific community," said Joshua Akey, a professor in Princeton's Lewis-Sigler Institute for Integrative Genomics and a member of the Dog Aging Project's research team. "Personally, I find this project exciting because I think it will improve dog, and ultimately, human health."

Akey, a dog lover with a 5-year-old rescue dog named Abby and a 1-year-old purebred lab named Zoey, co-leads the genetics analyses with Elinor Karlsson at the Broad Institute.

"We are sequencing the genomes of 10,000 dogs," Akey said. "This will be one of the largest genetics data sets ever produced for dogs, and it will be a powerful resource not only to understand the role of genetics in aging, but also to answer more fundamental questions about the evolutionary history and domestication of dogs."

The Dog Aging Project (DAP) expects to run for at least 10 years. To date, more than 32,000 dogs have joined the "DAP Pack," as the researchers call their canine citizen scientists.

"We are still recruiting dogs of all ages, all breeds — purebred or mixed breeds, all sizes, all across the United States," said William Thistlethwaite, a graduate student who works with Akey in the Lewis-Sigler Institute. "Especially puppies and young dogs up to 3 years old."

When a dog joins the Pack, their owners agree to fill out annual surveys and take measurements of their dogs for the duration of the project; some may be asked to collect cheek swabs for DNA sampling. In addition, the DAP team works with veterinarians across the country who assist by submitting fur, fecal, urine and blood samples of select Pack members.



The researchers hope to identify specific biomarkers of canine aging. They anticipate that their findings will translate to human aging, for several reasons: Dogs experience nearly every functional decline and disease of aging that people do; the extent of veterinary care parallels human healthcare in many ways; and our dogs share our lived environments, a major determinant of aging and one that cannot be replicated in any lab setting.

“Given that dogs share the human environment and have a sophisticated health care system but are much shorter-lived than people, they offer a unique opportunity to identify the genetic, environmental and lifestyle factors associated with healthy lifespan,” said Dr. Daniel Promislow, the principal investigator for the National Institute on Aging grant that funds the project and a professor of biology at the University of Washington (UW) College of Arts and Sciences and of laboratory medicine and pathology at the UW School of Medicine.

In particular, the researchers want to look at the 300 oldest dogs in the Pack to see if they can identify the keys to their longevity. “One part of the project that I am super excited about is a ‘super-centenarian’ study, comparing the DNA of exceptionally long-lived dogs to dogs that live to the average age for their breed,” said Akey, the Princeton geneticist. “This is the first study of its kind in dogs (to my knowledge), and I think it’s a clever way of trying to find genetic differences that contribute to exceptional longevity.”

Within a few months, the team plans to open their enormous dataset — fully anonymized — to share with scientists around the world. Researchers from many different fields will have the opportunity to contribute to the study in countless different ways, based on their interests.



5 THINGS to know about egg freezing



Egg freezing, or oocyte cryopreservation, is a process in which a woman's eggs are extracted, frozen and stored to preserve for later use.

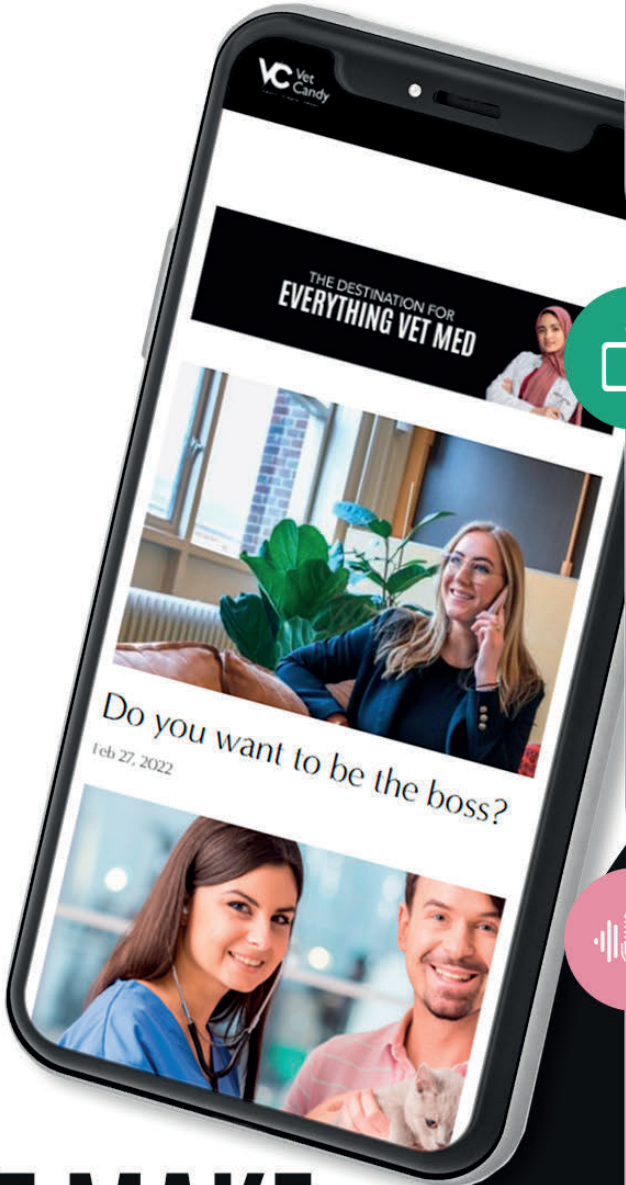
A patient survey conducted by NYU to determine why women freeze their eggs found that 80% of respondents said the primary reason they hadn't started a family yet was because they didn't have a partner. But, that's not the only reason why women freeze their eggs.

The study also found that about a fifth of women surveyed stated that workplace inflexibility contributed to their "reproductive dilemma"

Here are five things you need to know about egg freezing

1. Elective egg freezing is a way to help patients increase their chance of pregnancy at a later age.
2. Patients aged 35 or younger with normal ovarian reserve have the best chance of success, although future live birth is not guaranteed.
3. The treatment process usually takes 10-14 days.
4. The costs vary, but average around \$5,000. Most insurances do not cover egg freezing.
5. Frozen eggs do not expire, but many clinics have age limits after which they will not proceed with transfer of embryos created from the frozen eggs.

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VC Continuing
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FDA **approves first** **transdermal** **buprenorphine** **for cats**

The U.S. Food and Drug Administration approved Zorbium (buprenorphine transdermal solution), the first transdermal buprenorphine animal drug intended to control pain in cats after surgery.



Buprenorphine is an opioid pain medication that works by acting on pain receptors in the central nervous system. Zorbium is a solution that is applied to the skin at the base of the neck of the cat and is rapidly absorbed into the layers of the skin. It provides pain relief within 1 to 2 hours following administration and continually releases buprenorphine into the body over a period of days. A single application provides pain relief to the cat for four days. Because Zorbium is a long-acting transdermal solution applied in the veterinary hospital, it may eliminate or reduce the need for cat owners to administer additional pain medications.

This approval gives veterinarians an additional option for controlling postoperative pain in cats. The FDA previously approved Simbadol, an injectable buprenorphine, for use in cats. The FDA also previously approved a nonsteroidal anti-inflammatory drug, Onsior, as a tablet and injection for use in cats for postoperative pain. Zorbium is the first buprenorphine product the FDA has approved that is applied to the cat topically.

Zorbium is a DEA Schedule III opioid and was approved with a boxed warning, which is the strictest warning that can be issued for a drug. The label for Zorbium highlights important human safety warnings regarding the abuse potential, human exposure risks, and additional information about drug misuse, abuse, and addiction. The label also includes detailed information regarding how to safely handle and administer Zorbium and what to do if you are accidentally exposed to the drug. Zorbium should only be administered in a veterinary hospital by veterinarians or veterinary technicians who are trained in the handling of potent opioids. It is not to be dispensed for administration at home by the pet owner.

A clinical study was conducted in client-owned cats to evaluate the effectiveness of the drug to control pain after an elective surgery. The cats were of various breeds and between 4 months and 5 years of age. The cats received either Zorbium or a placebo solution without buprenorphine 1 to 2 hours before surgery. All cats received a short-acting pain medication and a local anesthetic as well.

Each cat was assessed for pain before surgery and at multiple timepoints after surgery, starting from the time the cat entered recovery from anesthesia to 4 days post-surgery. If the cat's pain was not adequately controlled, it was given a different pain medication and considered a treatment failure. More cats in the treatment group were determined to have adequate pain control for 4 days following surgery compared to the control group. The adverse reactions observed from the time the cats were anesthetized until the cats were in recovery after surgery included high or low body temperature, high or low blood pressure, fast heartbeat, and sedation. These reactions were seen in both the treatment and control groups and are commonly seen in cats after general anesthesia and surgery. The adverse reactions noted after the cats were awake from anesthesia and surgery included high or low body temperature, high or low blood pressure, sedation, and increased breathing rate. During the days after surgery, the most common adverse reaction in cats administered Zorbium was increased body temperature. Additional findings observed in cats administered Zorbium in safety studies included dilated pupils, constipation, and abnormal behavior such as hyperactivity, agitation, restlessness, and aggression.

If you aren't working with a recruiter, you could be missing out!

Dr. Jill Lopez

The US Bureau of Labor Statistics predicts that veterinary occupations will add 51,700 new jobs to the economy and will grow at a rate of 19% over the 2016–26 decade—almost three times faster than the 7% average for all occupations.¹ Right now, there are more than 7,500 jobs for veterinarians listed on Indeed.com. You could say it's a sellers' market. Veterinary professionals can afford to be picky and choose the jobs they want because there are more openings than there are applicants. Going at this alone could be tough, though—there are thousands of jobs in thousands of locations to consider, not to mention benefits, salary, opportunities to advance, and the list goes on and on.

So, how can you find your dream job and make smart choices without stressing yourself out? Choose a great recruiter!



Here's a list of the top five reasons to work with a recruiter, courtesy of Gwendolyn Delavar, **VetProCentral.com**, a free veterinary recruiting service for job seekers that helps match veterinary professionals with their ideal jobs.



01. Recruiters can give you access to unpublished job opportunities

Companies don't always post all their openings on listing sites such as Indeed, LinkedIn, or even veterinary-specific sites. Sometimes they post them locally, so you'll see the listings only if you look in the specific geographical area. Such hidden gems are available only to those within the company's network. Luckily, when working with a recruiter, this will be you! Since recruiters often get first access to these jobs, you will be among the first applicants. This is an ideal place to be.

02. Recruiters make job-seeking easier, saving you time and effort

When you work with a recruiter, you speak to them in detail about your skill sets, your particular interests, and your ideal role. The recruiter then uses that information to sift through all the openings that fit your needs and qualifications, helping you attain your dream job. Good recruiters will also share inside information about the culture of the veterinary practices you're considering.

03. A recruiter works with you through the entire process

The recruiter is there to guide you throughout the job application process, acting as your advocate. They will critique your résumé and cover letter and coach you for the interview process. Say goodbye to those pre-interview nerves! You will go into each interview prepared and confident, and after presenting your authentic self, you'll leave feeling accomplished and without regrets. Sounds great, doesn't it.

04. A recruiter assists you with salary negotiations

This can be one of the most stressful parts of the new job search but also one of the most important. In 2018, veterinarians earned an average of \$107,870. The average salary for male vets was \$128,699, and the average for their female peers was only \$96,610.

Also consider that the average student loan debt for veterinarians who graduated in 2019 was \$183,302, according to the American Veterinary Medical Association.³ That average does not include undergraduate loans. A veterinarian who owes \$183,302 would have monthly payments of more than \$2,058 on a standard, 10-year repayment term, assuming a 6.25% interest rate.⁴ Luckily for you, your recruiter will advocate for you during salary and benefit negotiations by working



Five Reasons to work with a recruiter

with the hiring manager to come up with a number that best aligns with you and the practice, taking into account your experience and skill set. No more guesswork or summoning the courage to ask for what you deserve. The recruiter can also connect you with an attorney who specializes in employment law to review your contract before you sign it and also connect you with a relocation expert, if needed. Simply put, it's the recruiter's job to ensure you are happy and satisfied.

05. Your recruiter is your advocate.

In addition to finding, vetting, and presenting jobs that are just right for you, your recruiter will also be your biggest advocate. They will make sure the hiring manager knows exactly why you are uniquely qualified for the role.

When a recruiter presents you as a candidate, you have a leg up on others who simply send their résumé in response to a job posting. Having a personal advocate who can speak to your qualifications is huge in the eyes of a hiring manager—it gives you credibility.

Working with a professional, experienced recruiter gives you an unparalleled advantage in the job market. So, what are you waiting for? Don't go it alone; start working with a recruiter today and begin the search for your dream job!

**Flat-faced dogs are
more likely to suffer from**

CHEERRY EYE



Prolapsed nictitating membrane gland (PNMG), also known as cherry eye, is one of the most common disorders of the eyelid in dogs. Researchers evaluated 1,802 cases of dogs diagnosed with this condition.

- »» The median age at first diagnosis was around a half year of age.
- »» Dogs aged under 1 year had 10.82 times the odds compared with dogs aged from 2 to under 4 years.
- »» Breeds with the highest odds of PNMG compared with crossbred dogs included Neapolitan Mastiff, English Bulldog, Cane Corso, Lhasa Apso, and American Cocker Spaniel.
- »» Purebred dogs had 1.43 times the odds compared with mixed breed dogs.
- »» Breeds with brachycephalic skull conformation had 6.71 times the odds compared with other breeds.

Why *2022* is the Year *of the* Woman

• Dr. Jill Lopez •

In 1903, Dr. Mignon Nicholson graduated from the McKillip Veterinary College in Chicago. Although she goes down in the history books as the first college-trained female veterinarian in the United States, little is known about her following graduation. Sadly, over the next few decades, only a handful of women followed in Nicholson's steps.

Women were discouraged from attending vet school because they were more likely to leave after marriage and having children.



In 1975, more than 70 years later, there were still only about 1200 women practicing veterinary medicine, which represented 5% of the profession. Women were discouraged from attending veterinary school because, they were told, they would more likely to leave after marriage and children. However, at the same time, the 70's ushered in the rebirth of feminism. Only three years earlier, Title IX, a federal law to protect students and education workers based on gender was passed in 1972. This law stated that "no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance." In March of 1972, the same year, the Equal Rights Amendment to the U.S. Constitution was placed before Congress and sent to the States for ratification. Despite many years and bipartisan support, the States failed to ratify the ERA by the deadline. Congress even extended the deadline to 1982; sadly however, despite extension of the deadline, only 35 states ratified the ERA. To this day, this proposed amendment has not been ratified by 15 states: Alabama, Arizona, Arkansas, Florida, Georgia, Illinois, Louisiana, Mississippi, Missouri, Nevada, North Carolina, Oklahoma, South Carolina, Utah, and Virginia (although Virginia seems to be working on it). Now, despite recent ratifications in 2017 and 2018 by two States, it will take an act of Congress to revive it.

Despite the failure to ratify the ERA, veterinary medicine, which had for many years been a male-dominated profession, saw a significant increase in the number of women studying at veterinary colleges. A milestone was reached in 1986, when there was an equal number of male and female students attending veterinary schools in the U.S.



Today, the AVMA says that 2/3 of all veterinarians are exclusively small animal practitioners; of these, 63% are female.

In 2017, for the first time in history, women finally became the majority in the veterinary field. Today, the AVMA says that 2/3 of all veterinarians are exclusively small animal practitioners; of these, 63% are female. Women also make up 85% of all veterinary students, while veterinary technicians are about 90% female.

2022 is the year that we change for the better as a profession.

Everyone seems to agree that we will see female professionals in the field continue to rise. Sadly, although women outnumber men in the veterinary field, they are still underrepresented in higher management roles. Real change in our field will come when female leaders are less of an exception and more the norm across the industry and academia. I encourage you to designate 2022 as the year that we change for the better as a profession. Apply for leadership roles. Negotiate for better pay. Support your female colleagues and promote them. Mentor others. **Let's become stronger...together!**

by AM Kuska

two power poses that every woman should master.



Women in the workplace often struggle to find their way on paths already dominated by men. Getting your thoughts out there takes a certain amount of confidence, and when the odds are already stacked against you, it can be hard to find those words.

Thanks to the hard work of the women who have come before us, it isn't as hard as it once was to reach the top as a woman. Men and women in top positions are more open to listening to the ideas of those below them—but in order to be able to communicate those ideas, you need to have the confidence to speak up, and to value your own ideas first.

If you have a big meeting coming up and need a quick boost to your confidence, here is one quick way you can get that confidence boost: power poses.

Harvard Business School professor Amy Cuddy recommends using body postures to help you adjust your attitude to where you want it to be. The thinking is that your mind can be tricked into having the attitude you want, by posing your body in ways that mimic that attitude.



Superwoman pose

To achieve an attitude of confidence, stand with your legs a little wider than hip width apart, put your hands on your hips, and tilt your chin upwards. This “I can do anything” pose will help you get exactly that attitude.

Hands up in the air

Although men have gotten in trouble for “man spreading” on buses and other areas where space is important, spreading to take up more room is actually a display of power in itself. The more space you take up, the “bigger” you are.

Spreading out and taking up as much space as possible is a great way to make yourself feel more confident, and can help give you the strength to speak up at that next meeting.

The best part of all is, if you're worried about looking silly while striking one of these poses, you don't have to worry. The mental effects are the same whether you're doing it as practice at home.



FDA approved novel treatment to control pain in cats *with osteoarthritis*

Today, the U.S. Food and Drug Administration approved Solensia (frunevetmab injection), the first treatment for the control of pain associated with osteoarthritis in cats and the first monoclonal antibody (mAb) new animal drug approved by the FDA for use in any animal species.



Frunevetmab, the active ingredient in Solensia, is a cat-specific monoclonal antibody (a type of protein) designed to recognize and attach to a protein called nerve growth factor (NGF) that is involved in the regulation of pain. When frunevetmab binds to NGF, it prevents the pain signal from reaching the brain.

“Treatment options for cats with osteoarthritis are very limited. Advancements in modern veterinary medicine have been instrumental in extending the lives of many animals, including cats. But with longer lives come chronic diseases, such as osteoarthritis,” said Steven M. Solomon, M.P.H., D.V.M., director of the FDA’s Center for Veterinary Medicine. “Today’s approval marks the first treatment option to help provide relief to cats that are suffering from this condition and may significantly improve their quality of life. We also hope that today’s approval of the first monoclonal antibody by the FDA for any animal species will expand research and development of other monoclonal antibody products to treat animal diseases.”

Osteoarthritis is a degenerative condition of the joints in which the normal cartilage cushion in the joints breaks down. Eventually, the bones in the joint rub against each other, causing pain, decreased joint movement, and sometimes the formation of bone spurs or other changes in and around the joint. Osteoarthritis continues to get worse over time; however, Solensia can help manage the pain associated with the condition to improve the cat’s quality of life.



Because of the difficulty in assessing chronic pain levels in cats, the FDA looked at whether the overall evidence supported the conclusion that Solensia was effective in controlling pain associated with osteoarthritis in cats. The effectiveness of Solensia was evaluated in two effectiveness studies using three clinical assessments that measured different aspects of pain associated with osteoarthritis in cats.

The two clinical trials were both masked, randomized, controlled field studies involving client-owned cats with clinical signs of osteoarthritis. The cats' veterinarians assessed the cats based on orthopedic examinations before and after treatment. The owners of the cats provided baseline scores of their cats' levels of impairment doing certain activities (such as jumping onto furniture, using the litter box or grooming), compared to the cats' level of ability before they developed osteoarthritis.

The owners then assessed their cats' response after receiving treatment. Overall, the cats in the treatment group had better assessment scores than those in the control group.

The most common side effects seen in cats treated with Solensia included vomiting, diarrhea, injection site pain, scabbing on the head and neck, dermatitis and pruritus (itchy skin). These effects were relatively mild and did not require cessation of treatment.

Veterinarians should advise owners about the possible adverse events and side effects before using the drug. The FDA encourages cat owners to work with their veterinary team to report any adverse events or side effects potentially related to the use of any drug, including Solensia.

A quick morning reflection could make you a better leader - even if you're not the boss

Starting your day by thinking about what kind of leader you want to be can make you more effective at work, a new study finds.

"It's as simple as taking a few moments in the morning while you're drinking your coffee to reflect on who you want to be as a leader," said Remy Jennings, a doctoral student in the University of Florida's Warrington College of Business, who authored the study in the journal **Personnel Psychology** with UF management professor Klodiana Lanaj.

When study participants took that step, they were more likely to report helping co-workers and providing strategic vision than on days they didn't do the morning reflection. They also felt more leaderlike on those days, perceiving more power and influence in the office.

The effects also extended to aspiring leaders.

"Leadership is really challenging, so a lot of people are hesitant to tackle leadership roles or assignments," Lanaj said. "Reflecting a few minutes in the morning really makes a difference."

And, unlike being given extra responsibility or leading a team project, a morning reflection is under the employee's control.

"They're not dependent on their organization to provide formal opportunities. They don't have to wait until they have that title that says they're a leader to take on leadership in their work," Jennings said.

Want to try a morning leadership boost? Here are some prompts recommended by the researchers.

- * What are some of your proudest leadership moments?
- * What qualities do you have that make you a good leader, or will in the future?
- * Think about who you aspire to be as a leader, then imagine everything has gone as well as it possibly could in this leader role. What does that look like?

- * What effect do you want to have on your employees? Do you want to motivate them? Inspire them? Identify and develop their talents? What skills or traits do you have that can help with those goals?

Whether you're the boss or on your way up the ladder, "This is a tool to be more effective at work," Lanaj said. "Just a few minutes can entirely change your focus for the rest of your day."



Relationship between dog personality *and* hierarchy

Dogs that are more extroverted, conscientious and open tend to rank higher in the hierarchy, while more friendly dogs tend to rank lower. In addition, older dogs tend to dominate in multi-dog households, according to a recent study from the Department of Ethology at Eötvös Loránd University.

Researchers from the Department of Ethology at Eötvös Loránd University studied the hierarchical relationships of companion dogs. The results show that dogs that are more extroverted, conscientious and open tend to rank higher, while friendliness showed a negative correlation with dominance scores. This score was calculated on the basis of rank-related behaviors and interactions, observed by the dog owners.

The researchers also confirmed the association between dogs' age and their dominance rank: similar to previous studies, we found that older dogs are more likely to be dominant.

"As personality can slowly change with age, we needed to check whether our results still hold regardless of age. We found negative correlations between age and extraversion and age and openness while these traits have positive associations with rank. Agreeableness had a similarly negative correlation with age and a negative association

with the dominance score. "Older dogs are less agreeable, more agreeable dogs rank lower" said **Kata Vékony**.

The researchers also asked the owners about their opinions on which of their dogs is the dominant one and checked if the answer correlated with the calculated dominance score. They found that owners can judge the hierarchy between their dogs with considerable accuracy.

Several different experiences, many of which are not related to competitive situations, are involved in the development of personality traits of dogs. "While our results support the notion that 'dominance' is not a separate personality trait in dogs, we found that the personality of family dogs has a complex relationship with the group hierarchy and the individual dogs' rank within.

Further research is needed to discover, what causal relationships may exist between personality traits and rank" - said **Péter Pongrácz**, associate professor, head of the research team.



Dominance score and the Canine Big Five questionnaire

In a large-scale online questionnaire study of personality traits called the Canine Big Five, researchers analyzed the entries about 1082 dogs. The only criterion of the questionnaire was that the participating owners had to have more than one dog living together. They only included the data of dogs more than one year old, because both personality and social behavior still rapidly change in puppyhood. The Canine Big Five personality questionnaire tests five personality traits, namely Openness/Energetic, Friendliness/Courteousness, Trustworthiness, Neuroticism/Confusion and Openness/Intelligence (the personality traits are described in detail on the project website under the 'Results' menu). Four out of these five personality traits showed significant correlation with the so-called 'dominance score' calculated from interactions between dogs, which indicates the position of each dog in the home ranking.



Dominance from an ethologist's point of view

In case of investigating dog behavior, the definition and usefulness of the terms 'dominance', 'rank' and 'hierarchy' became the subject of intense debate, not only among dog owners and trainers, but also among behavioral researchers. These expressions are most relevant to the person observing a group of dogs living together from the outside, who want to describe the group structure and to infer the factors that are behind the observed behavior. However, the actual driving force behind the competitive interactions of individual dogs are much simpler: their differences in relative strength, motivation levels and previous experiences. The question is if there is justification for using terms that merely make the observer's job easier while they may lack the explanatory power about the mechanisms of social interactions.

To make matters worse, the term 'dominance' has a different meaning in ethology, in human psychology and sociology and it is also a bit different in its everyday use. In humans, 'dominance' is mostly regarded as a personality trait, but in ethology it is only relevant as a qualitative measure of social relationships.

"As this conflict in interpretation is primarily between different fields of science, it is not our job as ethologists to do justice to the debate. In our understanding, dominance is not a personality trait. At the same time, it is a logical assumption that personality that has a strong influence on an individual's social behavior could also have an effect on the course and outcome of dog-dog interactions – hence on dominance relationships. More broadly, differences in personality traits of individuals in a group may affect the hierarchy built up by dyadic interactions and the individuals' ranks. These were the main hypotheses behind our current research" said **Kata Vékony**, first author of the study.



Secret to finding happiness is closer than you think

Shannon Gregoire




Back in 2018, the CDC performed a study that looked at over thirty years of records from over eleven thousand veterinarians who passed during that time, and they found that female veterinarians were 3.5 times more likely to commit suicide, and males and 2.1 times more likely.

As a young, soon-to-be-veterinarian, these statistics hurt my heart on many levels and lead to many questions that everyone has but all lead back to – why? Why are veterinarians committing suicide? I think the answer to this, for everyone who passed this way, is different, but the overall themes seem to overlap quite vividly. The biggest overarching cause looks to be from emotional exhaustion and compassion fatigue. How could this be? To the public, being a veterinarian is one of the most respected and trusted professions of all – but it is not always an easy job.

Thousands of pets are seen every day across the country, everything from new puppy exams, yearly check-ups, to traumatic events and euthanasia. Veterinarians are constantly jumping from extreme emotional highs (new puppies) to extreme lows (euthanasia), often within minutes and in the room right next door. It can get draining and exhausting when your weeks are filled with these ups and downs, day after day, week after week, year after year, to the point where some colleagues felt like there was no other way out. Now there are also compounding factors, such as the average high debt load, compiled with salaries that are not even

close to our human physician counterparts, much to the public's disbelief, which makes repaying those loans even heavier. Another factor is the shortage of veterinarians, so we are constantly being asked to work late, work longer weeks, and give more and more of ourselves until there isn't anything left to give.

Now, the reason we become veterinarians is because we obviously love animals, and we love the challenge of being a voice for our voice-less patients. We are people with high capacities for empathy, compassion and great knowledge. We are doctors, advisors, counselors, clinical pathologists, radiologists, surgeons, and more, all wrapped in one white coat. We try our hardest day in and day out to save as many lives as we can, even though some don't make it. We trained for many years to be able to save the furry family members each one of us hold so dear.



I want our colleagues to know that there is always a way and that there are people that can help you. I want them to know that it is okay to not be perfect, even when you try your hardest, sometimes the result we want isn't what we get. I want them to know that it is okay, and more importantly – necessary – to take time off, to recharge. This profession is so near and dear to us because it is the epitome of what we worked for our entire lives – but you don't have to give your life for this profession. You don't have to sacrifice your happiness for this profession,

you are worth more than just your DVM.

As veterinarians, so much value is placed into the letter acronyms listed after our names, with some individuals going on to acquire more letters to provide a plethora of specialized knowledge to their patients. While these accomplishments are extremely meaningful, you are more than your acronyms. You are talented in other areas unrelated to veterinary medicine; you have family and friends who love you. Place value in things other than our profession, such as your mental, physical and spiritual health. Take time to nurture other parts of you that have nothing to do with being a veterinarian and find value and worth in those people and experiences.

Most of all, reach out to someone if you are struggling, we are here for each other, and no other lives need to be lost for the sake of a job. No other lives need to be lost for pride. No other lives need to be lost as you are worth more than that. You are worthy of a life you want to live. You are worthy of being happy – even if leaving the profession is what you need to do, either temporarily or permanently. Your happiness is worth being alive for, whatever that looks like for you, you will always be an amazing veterinarian.





Clinical outcomes of **thyroid tumors in dogs**

Fourteen cases of canine thyroid tumours with concurrent mesenchymal and epithelial neoplastic were evaluated. Histopathologic samples and reports were collected from 10/14 dogs and reviewed by a single board-certified anatomic pathologist.

All 14 dogs had surgery to remove the thyroid neoplasm with the most common performed being a unilateral thyroidectomy (10/14 dogs). Systemic therapy was administered in eight dogs post operatively.

- **Six dogs developed local recurrence with a median time of 53 days.**
- **Ten dogs developed metastatic disease with the most common metastatic site being the lungs, with a median time to metastasis of 93 days.**
- **Ten dogs were euthanised due to progression of their mixed thyroid neoplasm.**
- **The median survival time for dogs treated with adjuvant therapy was 189 days while those without adjuvant therapy had a median survival time of 156 days.**

Mindfulness interventions can change health behaviors

A growing body of evidence supports the effectiveness of mindfulness approaches to promote positive changes in health behaviors. New neurobiologically based models of "mindful self-regulation" help to explain how mindfulness-based interventions (MBIs) work to help people make healthy behavior changes, according to a review in the November/December issue of *Harvard Review of Psychiatry*. The journal is published in the Lippincott portfolio by Wolters Kluwer.

Mindfulness approaches can help patients with a wide range of physical and mental health conditions to initiate and sustain changes in health behaviors, according to the article by Zev Schuman-Olivier, MD, of Harvard Medical School and colleagues. They present an integrated model that "synthesizes the neuroscience of mindfulness and integrates motivation and learning mechanisms within a mindful self-regulation model for understanding the complex effects of mindfulness on behavior change." Dr. Schuman-Olivier is Director of the Center for Mindfulness and Compassion at the Cambridge Health Alliance.

MBIs help patients regulate attention, emotions, and thoughts

Changing unhealthy behaviors can be "exceptionally difficult" - but it's the key to prevention and treatment of many chronic medical and psychiatric illnesses. Mindfulness has been described as "the awareness that arises when paying attention to the present moment non-judgmentally." The process for cultivating mindfulness often includes various approaches to mindfulness meditation - although the authors emphasize that "not all meditation is mindfulness and not all mindfulness is meditation."



In their comprehensive review of the field, Dr. Schuman-Olivier and colleagues seek to "describe and expand existing models of mindful self-regulation based on neurobiological mechanisms of mindfulness, motivation, and learning." Self-regulation refers to the ability to adapt one's attention, emotions, thoughts, and behavior to respond effectively to internal and external demands.

The article gives an updated account of current neuroscientific understanding of the systems involved in healthy self-regulation - including attentional and cognitive control, emotion regulation, and self-related processes - and the way these neural systems interact with those involved in motivation and learning.

In the authors' proposed model, MBIs can help patients regulate their attention, emotions, and thoughts. Mindfulness training increases the capacity for interoceptive awareness: the ability to identify, access, understand, and respond appropriately to the patterns of internal bodily signals. Patients become aware of negative and self-critical thought patterns, and better able to respond kindly to themselves when they are suffering, make mistakes, or have difficulty (self-compassion).

The authors differentiate between a traditional "cool" pathway for teaching mindfulness, focused solely on attention; and an emerging "warm" pathway that may aid in preventing adverse events and increasing accessibility to MBIs for those who have experienced trauma. The "warm" pathway encourages finding a "window of tolerance" and cultivating inner warmth and self-kindness - alongside attentional and interoceptive awareness training. This approach helps patients learn, develop, and integrate key self-regulatory capacities for "warmly being with present-moment experience."

Dr. Schuman-Olivier and colleagues

highlight some key areas of research on mindfulness and behavior change, including alcohol and substance abuse disorders. In addition to general changes in self-regulation, MBIs can address disease-specific issues such as cravings for alcohol and drugs.

Research finds MBIs effective for food-related behaviors and weight loss, including reductions in binge eating and emotional eating. Studies of tobacco smoking suggest that MBIs may provide better outcomes than other accepted treatments. Mindfulness interventions have also led to improvements in self-care for patients with chronic illness and show promise in reducing aggressive behavior, suicide, and self-injury.

The authors draw attention to the need to monitor adverse events and to ensure that mindfulness programs are trauma-informed and accessible to diverse populations. Dr. Schuman-Olivier and colleagues conclude: "While evidence supports the impact of mindfulness on behavior change for key health behaviors related to psychiatric practice, more high-quality research is needed, especially with objective measures, larger samples, replication studies, active controls, and formal monitoring of adverse events."



How to organize your life *with these* easy tips

Dr. Becky Lossing

If you are always looking for your keys or wallet, then today is the day to organize your home entryway. It will help you find what you need quickly so that you can get to work on time and fluster-free.

Organizing your entryway doesn't have to be very involved or time-consuming, and you don't need to go to the Container Store (if you don't want to). It can be as simple as setting out a bowl on a table close to the door for your keys and wallet, and a second for masks and other work-critical items. This will help establish a usual location for them, and keep them visible and physically separated from other clutter that might build up around them.

But, organizing is just part one.

Committing to a new behavior is part two. That means whenever you walk in the door, the first thing you do is put your keys, wallet, and mask back in their right place – even before you sit down or reach for that post-work snack. That way, they'll be in the right place for next time, and you can start off tomorrow's workday smoothly and on a good note.

Treating intractable diarrhea in calves and improving intestinal microflora

Diarrhea is common in calves and causes enormous financial losses to the livestock industry worldwide. Antibiotics have been widely used to treat this enteric disease.

Yet, improper use of antibiotics for industrial animals not only disturbs their indigenous microbiome - the collection of healthy bacteria stored in their bodies - but also leads to antibiotic-resistant bacteria on farms.

A research group led by Jahidul Islam and Tomonori Nochi from Tohoku University's Graduate School of Agricultural Science and by Hidekazu Tanaka from Chiba Prefectural Federation of Agricultural Mutual Aid Association set out to promote an alternative strategy to cultivate robust microflora without using antibiotics.

To do so, they harnessed the efficacy of fecal microbiota transplantation (FMT) to treat intractable diarrhea in calves. FMT involves transplanting healthy donor-derived feces into calves with intractable diarrhea. The group was successful in predicting the fecal microorganisms and metabolites that translated into a more efficient FMT.

Details of their research were published in the journal *Microbiome* on February 21, 2022.

Nochi states the project stemmed from the need to make FMT a more routine veterinary practice to improve the microbial community of calves suffering from infectious diseases. "Veterinarians have struggled to cure calves suffering from intractable diarrhea and often resort to giving animals further inappropriate antibiotics."

The team's research revealed three important factors in treating animals with FMT: *Selenomonas* is a microorganism genus that shows significant donor-recipient compatibility in FMT; low levels of several metabolites in donor and recipients prior to FMT are predicted to facilitate FMT; and genus *Sporobacter* is a potential biomarker in superior donor selection.

finding PURPOSE

by AM KUSKA

in life



Why are you here?

At some point in your life, this question will probably pop into your brain. Most of us want to believe that there is more to life than just existing, and that we came to this Earth for a purpose. Even if you believe you came to be alive by pure chance, giving your life meaning and purpose can help improve your life in a variety of ways. So how do you know what your life purpose is - especially if life hasn't gone the way you planned, and maybe even robbed you of the identity you thought you had? Here's a couple of questions that can help you narrow down what life goals you should aim for.

What do you hate the least?

There is a downside to everything in life. A baby might be the most precious gift on earth, but it comes with its share of dirty diapers. You may be passionate about becoming a doctor, but that also comes with drawing blood or even watching patients fall ill and die.

Everything has a downside, so if you want to choose a life purpose, you can narrow down your choices by picking something with the downsides you mind the least.

What puts you in 'the zone'?

Have you ever worked on a project and gotten so enthralled, you glanced up at the time and were shocked to see how much time has flown by? Moments like this can help you home in on what your purpose is. Whether you can easily hum your way through an hour in the garden, or you want to dive back in for another lap in the pool, things you love to do are a sign you are passionate.

What embarrasses you?

Okay, let's face it. We all have something tucked away in the closet of our mind that we want to try, or maybe dream about doing, but won't because it's too embarrassing. Maybe you secretly think you could write rom-coms or romance novels, but the idea is just too undignified. Maybe you want to run, or dance, or put yourself out there in some other way, but are afraid you'll be mocked for it.

If you avoid these things, chances are you're also avoiding something that could be your big passion. While this on its own won't stop you from finding your true calling, it does narrow your options. If something embarrasses you but you still want to try it, try it anyway. You never know.

Finding a purpose in life doesn't have to be world changing. You could be the very best person in the world at building with Lego, or that mom who packs spectacular bento boxes for your kid's lunch. It doesn't have to please the world to be perfect. It just has to be perfect for you.

Sometimes when we announce that we want to find the cure for cancer or the vaccine for aids, we're not saying these things because we genuinely want to do these things—we're just seeking affirmation. It's okay for your life purpose to mean something only to you. After all, you're the one who has to live it.

French bulldogs have higher risk of 20 common health disorders



French Bulldogs have significantly higher odds of being diagnosed with 20 common disorders compared to other dog breeds, reports a study published in the journal *Canine Medicine and Genetics*. To reduce the risks of breathing disorders associated with the typical shorter muzzle and flat head of French Bulldogs, the authors propose a shift to focus breeding towards more moderate characteristics.

Authors from the Royal Veterinary College (Hertfordshire, England) used records from veterinary practices across the UK from 2016 using the VetCompass database, including 2,781 French Bulldogs and 21,850 other dog breeds.

Dan O'Neill and colleagues compared diagnoses for 43 specific disorders between French Bulldogs and other dog breeds. The authors observed that French bulldogs were at significantly greater risk than other dogs for narrowed nostrils (42.14 times greater risk), obstructive airways syndrome (30.89 times greater risk), ear discharge (14.40 times greater risk), and skin dermatitis (11.18 times greater risk).

Of the French Bulldogs included in the study, the authors found that 1,764 (63.4%) were diagnosed with one or more disorder compared to 14,442 (66.1%) of other dog breeds. This suggests that French Bulldogs may have slightly lower odds of being diagnosed with a disorder in general but could also indicate owners are better at identifying health concerns in other dog breeds.

Despite having a higher risk of developing 20 common disorders,

French Bulldogs had lower odds of being diagnosed with 11 out of the 43 common disorders compared to other dogs, including undesirable behavior, lameness and obesity. This highlights that the breed has the potential to move towards a healthier profile. The authors suggest that selectively breeding away from the extreme high-risk physical features of French Bulldogs that are associated with health disorders, such as shorter muzzles and skin folds, could improve the overall health of the breed.

Dan O'Neill, senior lecturer at the Royal Veterinary College and co-author, said: "Achieving meaningful changes to the typical look of French Bulldogs over time requires buy-in from breeders and kennel clubs who publish breeding standards, but the biggest responsibility lies with owners who can ultimately demand dogs with more moderate features."

“The Kennel Club has recently updated the breed standard for the French Bulldog to move further away from elements of extreme conformation with evidence of health ill-effects. This is a very positive step to prioritize the health of dogs over human desires for how these dogs look and we must now continue this evolution of the breed towards a more moderate conformation.”

The authors caution that their results are reliant on reports from veterinary practices and may not indicate how long each individual dog suffers with a disorder, or its severity. They also caution that owners may not recognize that snoring in French Bulldogs could be indicative of a breathing disorder and may not take their dog to the vets.

The authors conclude that kennel clubs, breeders and the general public need to work together to encourage the breeding and purchasing of French Bulldogs with less extreme features associated with poor health.

