

IMPACT REPORT 2022



BSAVA
PetSavers
Funding studies to help pets



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Introduction

Welcome to the BSAVA PetSavers 2022 Impact Report.

The end of a year always provides an opportune moment to reflect on achievements throughout the past year and 2022 was another busy year for PetSavers. We focused particularly on getting the groundwork laid to build up a stronger fundraising base to enable PetSavers' sustainability long into the future.

Dr Sarah Williams became our Fundraising and Grant Awards Manager. PetSavers has been without a manager for some time, so this is a big stride forward. Sarah's experience with grant awarding processes has meant this part of PetSavers remained consistently strong, running smoothly, whilst the fundraising side has started to be realigned and reignited. This process got a further boost towards the end of the year when Shelby Tunstall was appointed PetSavers Fundraising Coordinator. I'm greatly looking forward to working with them both in 2023 and hope you enjoy our review here of 2022.

Rosie Godfrey

BSAVA PetSavers Management Committee Chair



Our purpose and mission

PetSavers is a small wing of BSAVA, which has three main strategic pillars, Education, Science and Community. We sit at the heart of BSAVA's Science pillar and help push scientific boundaries through our mission to fund clinical research into the prevention, diagnosis and treatment of diseases of pets. Our research outputs contribute to evidence-based veterinary medicine, which helps vet professionals improve diagnosis, management, treatment and control of their patients' conditions and enables clinicians and veterinary scientists to have great understanding of those conditions. Our supporters, volunteers and fundraisers also add to BSAVA's strong sense of community.

BSAVA PetSavers' funds are ringfenced and they come solely from charitable donations, fundraising and legacies. **None of the BSAVA membership fee goes to PetSavers.** Though we are small we have big ambitions to fund more much-needed small animal clinical research.

“ It's vital that we keep making progress in small animal practice so that we can deliver the best standard of care to our patients. The research funding and training that is provided by PetSavers makes an important contribution to this progress.

It's also important for it to be feasible for research to be undertaken by first opinion practitioners in general practice and PetSavers facilitates this.”

Dr Sarah Hayes, BVetMed

Postdoctoral researcher in emerging and zoonotic infections at the University of Oxford and BSAVA PetSavers grant awarding committee member

Our grants

We offer several annually awarded grants:

- Student Research Projects (SRPs) (£3,200 + ticket for BSAVA Congress) for undergraduate vets, vet nurses and bioveterinary students,
- Master's Degrees by Research (MDRs) (£40,000) for postgraduate study,
- Clinical Research Projects (CRPs) (£20,000 for 2023) for more established veterinary, research professionals and/or clinicians interested in undertaking some research,
- Fellowship Research Grant (£70,000) for veterinary academics in the early stages of their research career.

Research projects are selected in the hope that the study results will have a rapid and positive impact on the way diseases are diagnosed, managed and treated in general practice as well as at a specialist level.

Match-funded grants

We also support specialist areas of veterinary science by partnering with BSAVA affiliates and other organisations that share our principles.

Our current partners are:

- The Small Animal Medicine Society (SAMSoc)
- Veterinary Cardiovascular Society
- The Debs Foundation
- The British Hen Welfare Trust

We are always keen to have new match-funding partners. If you are interested in this, please contact us at petsaversadmin@bsava.com.



PetSavers provided me with funding to carry out a research study on the efficacy of paracetamol in dogs which is a very timely and relevant study with direct clinical applicability to the veterinary profession. The funding also allowed me to train a Masters Research Student in pain assessment methods and pain research in dogs, providing valuable skills to the student. Without this funding the study could not have taken place.

Dr Jo Murrell

RCVS Specialist in Veterinary Anaesthesia, Highcroft veterinary referrals

Our year in numbers

12 grants funded in 2022, total value £165,691

- 4** Student Research Project grants
- 3** Master's Degree by Research grants
- 5** Clinical Research Project grants

8

publications in peer-reviewed journals

including the Journal of Small Animal Practice (JSAP) and the American Journal of Veterinary Research.

7

clinical abstracts presented at BSAVA Congress 22

and several posters and talks presented at other conferences including the annual congress of the European College of Veterinary Internal Medicine – Companion Animal; the European College of Veterinary Neurology Symposium 2022 in which a presentation by Sam Khan was awarded the prize for best abstract; and the Association of British Neurologists annual meeting 2022 in which Dr Sophie Binks was awarded a prize for being in the top 5 posters.

£17,000 major donation

from Andrew and Wendy Mooney, lifelong owners and breeders of border terriers for research into border terrier health.

Launch of our alumni group and alumni mentors

We were delighted to announce the launch of our Alumni Group to bring together experienced researchers with our younger, newer researchers, dedicated BSAVA PetSavers volunteers and supporters. We felt that we could better achieve our aims and aspirations with a community of invested BSAVA PetSavers' ambassadors helping us.

The alumni group is free to join and is open to:

- Any past BSAVA PetSavers (or Clinical Studies Trust Fund) grant holders, coapplicants, or researchers who made a major contribution to the project
- Past BSAVA PetSavers Committee members (from both the PetSavers Management Committee and Grant Awarding Committee)
- BSAVA Trustees, Board members, or past presidents
- BSAVA members who have substantially supported and championed PetSavers

Alumni members receive regular PetSavers alumni newsletters and an invite to a yearly gathering (the first of which is planned for Congress 2023). A networking forum is under development using the LinkedIn platform.

We are keen to encourage and support more practitioners, both first opinion and referral, to undertake research. However, we recognise that practitioners and early-career researchers face challenges in carrying out research, and would benefit from guidance and mentoring through the research process. We have therefore encouraged members of the Alumni Group to become volunteer Research Mentors, and can pair these with less experienced researchers who wish to have research guidance.



On submission of my application, approval was not granted immediately; however, PetSavers was quick to communicate constructive feedback and offer additional guidance on suggested revisions. Support was readily available, and I was fortunate enough to receive a Zoom call from a team member to discuss the committees' comments to move my project forward. I am so thankful to PetSavers for seeing value in my proposal and encouraging me to resubmit a successful application.

Rebecca Verhoven

RVN, recipient of a PetSavers student research project grant

Research case studies

The Old Age Pets Citizen Science Research Project



One of our major research projects, led by Carri Westgarth at the University of Liverpool, aims to help veterinary professionals and owners provide the best care for their senior dogs. Master's student Jodie Jackson has passed her viva and been awarded her master's degree, and has moved on to a role as Operations Trainer at a pet nutrition company. Though delayed by the pandemic, the research publications and the launch of the Ageing Canine Toolkit deriving from the research are expected early in 2023.

Vaccine hesitancy

Professor Gina Pinchbeck, at the University of Liverpool, received partial funding from BSAVA PetSavers for a PhD entitled A mixed methods approach to quantifying and characterising vaccine uptake and vaccine hesitancy in UK companion animals. Initial findings from PhD student Shona Bloodworth of the 659,408 dogs and 311,135 cats in the Small Animal Surveillance Network (SAVSNET) database included:

- Vaccination rates have slowly declined between 2016 and 2021.
- 80% of dogs and 73% of cats have a record of at least one vaccination in their lifetime.
- For both cats and dogs, those that are neutered are more likely to have recorded vaccination compared to entire animals.
- Some owners choosing raw feeding may be more inclined to be vaccine hesitant. Vaccination data for both raw fed dogs and control non-raw fed dogs showed that 85% of dogs where there was no evidence of a raw diet received at least one vaccination in their lifetime, compared to 81% of raw fed dogs.
- Pets of owners living in areas with high deprivation scores are less likely to be vaccinated. Cost could be a barrier, however, other socioeconomic metrics that are used to calculate deprivation scores, such as levels of education, skills and training deprivation, and barriers to services, may also be contributing factors.

The next phase of this project involves interviewing dog and cat owners about their experience and attitude to vaccinating their pets, as well as exploring their approach to general care and the relationships they have with their animals.

It is hoped that the findings of this research will be used to develop strategies that will help owners get their pets vaccinated the appropriate number of times for their particular age and lifestyle. Focus groups with veterinary professionals and owners will be held, to discuss the feasibility and acceptability of any proposed actions, and ultimately help to decide on the best process going forward.

Our researchers, their research and inspiration

The researchers we fund and the research they carry out and produce is at the heart of what we do.

Professor Claire Rusbridge and **Dr Penny Watson** have both been long-time supporters of PetSavers and recipients of many of our grants. Interestingly, both were inspired to start their research by individual patients.



Professor Rusbridge was a PetSavers Resident in Neurology at the Royal Veterinary College when she met a Cavalier King Charles Spaniel called Beau. Whilst Beau walked, he rhythmically scratched towards his right shoulder without making skin contact. This greatly puzzled her and she wanted to know the cause and the anatomy of this maladaptive scratching action. It took a couple more cases and the veterinary profession gaining the ability to perform spinal MRI before she finally had a basic answer of syringomyelia (fluid-filled cavities in the spinal cord) due to canine Chiari malformation (disproportion between the size of the brain and skull resulting in a cerebrospinal fluid pathway obstruction). She says, "I have been researching that disease ever since – now for 25 years. I am still looking for answers to my questions".



Dr Watson writes, "my lifelong obsession with chronic pancreatitis stemmed from a single challenging case: a wire-haired Fox Terrier with diabetes and unexplained

weight loss. Sadly, she lost so much weight that in the end she was euthanised. A post-mortem examination showed end-stage chronic pancreatitis and suggested she had exocrine pancreatic insufficiency, which at the time we did not recognize in older dogs with diabetes. My motivation to continue is that there is still so much we don't know about the causes and treatment of both chronic pancreatitis and chronic hepatitis in dogs".

Dr Watson's most recent PetSavers grant funded a master's student in a project entitled *An investigation of novel immunohistochemical markers and serum auto-antibodies in cats with chronic biliary tract disease*. Student Jason Beswick achieved his master's in 2022, with Dr Watson commenting, "thank you so much... this has given Jason the opportunity to experience clinically-relevant research and as a result, he has become very motivated to continue to a PhD with the aim of becoming an academic clinician." Jason has now started his PhD at the Royal Veterinary College. Indeed, since 2018, five of our nine master's students have gone on to study for a PhD.



Not all of our researchers are vets or RVNs, and they certainly don't need to be a vet to find inspiration from their animals. **Dr Sophie Binks**, a Neurology Registrar at the Nuffield Department of Clinical Neurosciences, University of Oxford, is currently studying for a PhD, with the goal of establishing herself as a clinician-scientist. A great cat lover, she found inspiration from her own cat Mimi, and received BSAVA PetSavers funding in 2020 for a project entitled *Improving recognition, diagnosis and treatment of cats with seizures due to autoantibodies of the central nervous system, a treatable cause of feline seizures and status epilepticus*.



She writes, "I am drawn to the potential to discover biological insights driving disease in both species, and to deliver improved outcomes for feline and human patients. Unfortunately, it is still sometimes the case that severely affected cats are euthanised if the seizures cannot be brought under control. I hope our research will help improve diagnosis and best medical care for these feline patients".

"Thanks to the continued support of PetSavers, we have just been awarded full funding for a veterinary-qualified individual to join our research team to gain a Master's Degree by Research in a project entitled *Autoimmune encephalitis in cats: beyond the tip of the iceberg*.



Dr Angie Rupp from the University of Glasgow received BSAVA PetSavers funding in 2014 to investigate serological markers (and potential geographic differences for their sero-prevalence) for acute canine polyradiculoneuritis. Her article deriving from this work was published in the February 2022 issue of JSAP. Writing about the study, Professor Rusbridge comments, "canine acute polyradiculoneuritis (like Guillain Barre syndrome) is a challenging diagnosis in

veterinary practice involving referral, electrophysiology and nerve and muscle biopsy. The consequence of PetSavers-funded research was the identification of an antibody biomarker. Soon this could be translated into a blood test that general practitioners could use to avoid referral and expense. In addition, this research has improved our understanding of this immune-mediated disease."

Our undergraduate researchers have also been busy and we held an excellent session at BSAVA Congress 2022, where they presented their clinical abstracts.

Sze Lynn Yuen from Cambridge vet school examined the *Effect of deformed skull base morphology on nasopharyngeal narrowing and BOAS severity in pugs, French bulldogs, and bulldogs*, **Emily Blackwell** from Liverpool vet school explored *Recording of adverse drug reaction reporting in veterinary free-text clinical narratives*, and **Rebecca Verhoven** from Harper Adams investigated *Cotton wool versus non-woven gauze swabs: comparatively which is more efficacious for minimising the preoperative microbial load on the ovariohysterectomy surgical site in bitches?*

You can find out more about the research we fund and meet our researchers in our monthly Companion articles and on our website.

Grants and publications from 2022

The following grants were awarded:

Master's Degrees by Research

- Investigating the potential of phage therapy to tackle *Pseudomonas aeruginosa* infections in dogs, £37,318, Edinburgh University
- Acute phase protein and micro-RNA signatures for the diagnosis and prognosis of feline infectious peritonitis, £39,865, Edinburgh University
- Autoimmune encephalitis in cats: beyond the tip of the iceberg, £39,961.60, Oxford University

Student Research Projects

- Exploring the dog microbiome for therapeutic potential of skin disease, £3000, Liverpool University
- Investigating the potential therapeutic effects of senolytic drugs in canine myxomatous mitral valve disease (MMVD), £1857, Edinburgh University
- Feasibility of using a point-of-care analyser for faecal calprotectin to differentiate different intestinal disease in cats, £2890, Edinburgh University
- Characterising the virus neutralising antibody response to SARS-CoV-2 in the UK feline population and examining changes in seroprevalence during the different phases of the pandemic, £2771, Glasgow University

Clinical Research Projects

- Evaluation of synovial cytokine concentrations in dogs with degenerative joint disease, immune mediated polyarthritis and septic arthritis, £2000, Vet4Life, Teddington
- Reusable vs disposable drapes: does their use affect post-operative wound complication rates in routine surgeries? £9053, Vet Partners, York
- Assessment of hypercoagulability in dogs with ischaemic cerebrovascular infarcts, £7566, RVC
- Assessing the effect of D-mannose on clinical outcome and microbiota composition in canine chronic inflammatory enteropathy, £9410, Edinburgh University
- Effectiveness of low-level laser therapy for the treatment of osteoarthritis-associated pain in client-owned dogs (jointly funded with The Debs Foundation), £10,000, University of Cambridge

Published research

- **Advances in the pharmaceutical treatment options for canine osteoarthritis.**
JSAP Oct 22
- **Ex vivo evaluation of a novel cell salvage device to recover canine erythrocytes.**
Veterinary Surgery Nov 22
- **Approach to initial management of canine generalised epileptic seizures in primary-care veterinary practices in the United Kingdom.**
JSAP Nov 22
- **Insulin expression in beta cells is reduced within islets before islet loss in diabetic cats.**
JSAP Nov 22
- **Intraoperative cell salvaging: ex vivo evaluation of two swab-washing methods.**
American Journal of Veterinary Research Jul 22
- **Dogs fed raw meat diets are more likely to have a Salmonella and antimicrobial-resistant E. coli faecal carriage.**
JSAP June 22
- **Assessment of the inter-rater agreement of corneal cytology and culture findings in canine ulcerative keratitis.**
JSAP March 22
- **Serum anti-GM2 and anti-GalNAc-GD1a IgG antibodies are biomarkers for acute canine polyradiculoneuritis.**
JSAP Feb 22

PetSavers awards

The BSAVA PetSavers Veterinary Achievement Award is presented to the first author of the most valuable peer-reviewed research paper following a PetSavers' grant, with respect to veterinary practice. The 2022 winner was Professor Ross Bond from the RVC for his paper *Transverse sectioning in the evaluation of skin biopsy specimens from alopecic dogs (JSAP Oct 2020)*.



Our volunteers, fundraisers and supporters

We have two committees of volunteers – the PetSavers Management Committee (PMC) who oversee the running of PetSavers and help develop its strategic direction, and the Grant Awarding Committee (GAC) who assess grant applications and award research funding. These volunteers are vital to the functioning of PetSavers; we just couldn't do it without them!

A dedicated team of volunteers invests a lot of time to ensure that PetSavers funds are well spent on excellent clinical research to improve the health and welfare of pets. Our committee draws from a diverse range of expertise – this is invaluable since we receive applications for studies that cover a broad range of clinical topics. Having sat on GAC for the last 3 years, I have seen 'behind the scenes' of how and why funding decisions are made. I feel very reassured that the process is fair, transparent, and ethically sound.

Dr Nina Rzechorzek

MRC Clinician Scientist Fellow and Postdoctoral Researcher at O'Neill Group, Cambridge.

Our fundraisers and supporters are a diverse group of people, including veterinary professionals, undergraduate students, veterinary practice staff, pet owners, members of the public and other BSAVA members and volunteers. They raise funds for us in lots of different ways, as a practice or group, or in an individual capacity, on a one-off basis or more regularly. It all counts towards allowing us to fund more research.

Being a BSAVA PetSavers alumni, donor, fundraiser, volunteer or legatee is a great opportunity to help the small animal veterinary professions build a stronger evidence-based future to permanently improve pet health and welfare. Please support us.

Rosie Godfrey

PMC Chair



PetSavers funding fills an important niche, given their interest in work of direct relevance to veterinary practice. This study was a total blast to perform, and it is most rewarding that BSAVA PetSavers found it to be of value.

Prof Ross Bond

Looking to the future

2024 is our half century! It will be 50 years since the founding of the Clinical Studies Trust Fund, which is how we were originally known. Planning for this celebration has already started, and we encourage you to keep an eye out for further information in 2023.



Contact us



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