





BSAVA has been supporting clinical research since 1974, initially through the Clinical Studies Trust Fund, which was later brought in-house and renamed PetSavers. This grant-awarding body has provided over £2 million to fund more than 300 projects in veterinary clinical medicine.

BSAVA PetSavers funds clinically relevant research specifically designed to advance understanding of disorders which have a negative impact on the health and welfare of UK pet animals. In so doing, it assists the prevention, clinical management or cure of these problems. Projects are selected for funding in the hope that study results will have a tangible and positive impact within a reasonable time frame on the way diseases are diagnosed and treated in general practice, as well as at a specialist level. BSAVA PetSavers is a UK charity and so funds research undertaken in the UK for the benefit of UK pets.

There are currently four types of BSAVA PetSavers' grant.

Clinical Research Projects (CRPs)

These grants enable small-scale research projects to be undertaken that are clinically relevant to small animals kept as pets.

Applications from practitioners or academics as well as joint applications between practice and academia are all welcome, and applicants do not need to be qualified veterinary professionals. Applications for CRP grants open on 1 October and close on 31 January, and a decision on whether to award funding will be made in the autumn of that year. Funding is available for up to £20,000 to cover a project lasting 1–3 years. BSAVA PetSavers also partners with BSAVA affiliates and other like-minded organisations to offer joint-funded CRP grants in specialist areas of companion animal science such as cardiovascular health, canine and feline medicine and pain relief.

Master's Degrees by Research (MDRs)

BSAVA PetSavers' MDRs fund a postgraduate student to work full-time on a specific research project, with possible attendance of scientific training courses.

Applicants do not need to be qualified veterinary professionals. Supervisors are welcome to apply for funding with the name of a prospective research student or before advertising for a student and should consider whether their project is more suited to a vet or non-vet student and price accordingly. Applications for MDR grants open on 1st April and close on 31st August, and a decision on whether to award funding will be made in the following spring.

BSAVA PetSavers funds the following costs for a period of one year, which will increase annually to reflect BBSRC rates:

- Postgraduate student stipend pegged to BBSRC standard rates, with the possibility of requesting a veterinary stipend.
- Payment of university fees.
- Equipment and consumables (up to £10,000 including VAT) depending on the nature of the project.

Student Research Projects (SRPs)

These grants support undergraduate vets or vet nurses to carry out a short project lasting 6–10 weeks. They are awarded on a rolling basis, with three annual deadlines of 31st January, 30th April and 31st August, giving the flexibility to fit in with curriculum timings at different institutions. They will be considered for funding within 6 weeks of the closing date.

Recipients receive:

- A student stipend of £200 per week for 6–10 weeks.
- Up to £1200 for consumables.
- The opportunity to present an abstract at the BSAVA PetSavers' student research stream at BSAVA Congress.
- A student ticket to BSAVA Congress for their presentation and a travel bursary of up to £100 to attend.

Research Fellowship

The BSAVA PetSavers' Research Fellowship funds veterinary academics in the early stages of their research career by targeting the period immediately after gaining a postgraduate research qualification. It helps individuals establish themselves as independent researchers and/or prepare for a research council fellowship application. It requires active mentorship from a senior scientist and guaranteed research time from the recipient's institution. Applications open on 1st December and close on 28th February, and funding decisions are made in early May of the same year. Funding of up to £70,000 is available for up to 2 years for research costs and travel, but not for salary or stipend costs.

Applicant suitability can be demonstrated by the following:

- Possession of a veterinary qualification (veterinary surgeon or registered vet nurse)
- Completion of a postgraduate research degree (PhD, MRes or MPhil)
- Being in the early stages of a research career (within 10 years of starting a research post)
- Having received less than £250,000 of funding from external sources.

N.B. Grant awards correct for 2022; see https://www.petsavers.org.uk/Apply-forfunding for latest values.

A project will be considered by BSAVA PetSavers to constitute 'small animal clinical research' if it meets most of the following criteria:

- The study involves only naturally occurring disease in small animals; there must be no experimental or artificial induction of disease, injury or behaviour
- The anticipated results of the study will result in a change in the understanding, diagnosis, management or prevention of small animal disease, injury or behaviour
- The study is supervised by people with sufficient research experience and appropriate veterinary clinical skills and knowledge
- Any interventions on animals (including obtaining samples) would be considered part of normal veterinary practice
- The results will directly benefit cats, dogs or other companion animals. If the benefit is not direct, applicants must suggest how many further steps (and at what cost) they believe it will take before a benefit becomes apparent
- Ethical approval has been obtained or applied for.

Please note BSAVA PetSavers does not fund experimental research requiring licence under the Animals (Scientific Procedures) Act 1986. The Act makes a distinction between experimental procedures and 'recognised veterinary practice' which is defined as 'procedures and techniques performed on animals by veterinary surgeons in the course of their professional duties, which ensure the health and welfare of animals committed to their care'.

The RCVS provides further guidance on the interface between the Veterinary Surgeons Act 1966 and the Animals (Scientific Procedures) Act 1986 (see www.rcvs.org.uk/advice-and-guidance/code-of-professional-conduct-for-veterinary-surgeons/supporting-guidance/recognised-veterinary-practice).

Clinical research

Good clinical research seeks to answer an important question and is performed in such a way that we can be reasonably confident that findings are meaningful.

Research is only useful if people get to hear about it. Ideally this will be through publication in open access peer reviewed journals; however, it is also possible to make people aware of research findings through presentation at veterinary conferences, for example presenting a clinical abstract at BSAVA Congress, or through other publications which may have a wider readership than peer reviewed journals.

Good clinical research concentrates on a single and specific research question.

Select a topic that interests you but try to narrow down your research project to a single question. Try to avoid the desire to collect ancillary data or answer additional or secondary questions as this tends to make the research less focused. The best clinical research addresses a question that has arisen in the clinic and where the answer will help veterinary professionals make better decisions in the diagnosis and management of disease, providing better care to their patients.

The following criteria can be a useful way of thinking about your research project.



FINER criteria for a good research question

Feasible

It is important to consider whether the research will be feasible:

- Will it be possible to recruit sufficient patients or acquire sufficient samples within the projected time frame?
- Do you have the technical expertise and facilities to carry out the research? If not, can you get the help and advice you need before embarking on the project?
- Is the research project affordable in terms of both time and money? Will the research require any special equipment? Do not underestimate how much time it will take to collect and analyse data.
- Manageable in scope be realistic, it is easy to try to do too much.

Interesting

The research question needs to interest you as it will take a great deal of time and effort. BSAVA PetSavers is particularly interested in supporting projects which have potential impact on the way diseases are diagnosed, managed and treated in practice.

Novel

While research aims to produce new knowledge, it is unlikely to be completely novel. It is worth considering how your research relates to current knowledge. For example, does it set out to confirm, refute or extend previous findings?

Ethical

Will the study meet with ethical approval? BSAVA PetSavers does not fund research which involves experimental animals or the artificial induction of disease. Remember that informed consent will be required from the owner regarding any procedure undertaken on the animal or samples collected. Additional approval from an ethics review committee may be needed, for example if the research involves surveys or interviews with clients or veterinary professionals.

Relevant

BSAVA PetSavers is particularly interested in research which addresses common or poorly understood conditions, complications or problems encountered in clinical practice.

Planning your research project

Search the literature

To plan your research project, it is important to find out what is already known about a subject. This should not only include research about the particular disease or condition that you wish to study, but also the methods and equipment you propose to use. If you are looking at applying a technique from another species, you may need to look at more basic research to provide a rationale for this extrapolation. A thorough literature search at this stage will provide essential information for planning your study. If you are not working in an academic environment, you may need to arrange access to a specialist library to read full-text articles. The RCVS Trust Library is a good place to start (https://knowledge.rcvs.org. uk/library-and-information-services).

Refine the question

Once you have studied the literature you will be in a better position to specify the exact aims and objectives of your research. Does your research have a hypothesis that you are seeking to test? Does it address a significant clinical problem or a clinically relevant knowledge gap? It is important to be clear about the aims of the research considering:

- The population under investigation.
- The hypothesis.
- The outcomes that will be measured.

Methods

Once you are clear about the question you wish to answer, you can start to think about the methods that you will use. The appropriate methods will depend on the question that you are looking to answer, but the clinical research projects preferred by BSAVA PetSavers may be broadly categorised as follows:

- Prospective investigations: usually quantitative studies with finite objectives, often utilising modern science such as epidemiology or molecular biology as research tools.
- Multidisciplinary investigations:
 exploring biological mechanisms that
 underlie disease processes and/or
 the means by which these might be
 manipulated to improve diagnosis and
 management.
- Clinical trials: conducted to assess the efficacy of diagnostic techniques or therapeutic agents.

However, other research methodologies, including qualitative studies, will be considered if they are appropriate to the study and are likely to advance the understanding of the cause and/or management of a clinical disorder.

Ethics

In order to carry out a research project you may need access to clinical cases or samples. It is important to think about the ethics of your research proposal at an early stage, giving consideration to the welfare of the animals involved as well as issues of consent, confidentiality and data for the owners. Those working in academia will be expected to obtain ethical approval from their university or research institute.



review via the RCVS ethical review panel (https://www.rcvs.org.uk/who-we-are/ committees/ethics-review-panel). Where live animals are involved, written informed consent for the procedure in a consent form signed by the owner will be expected. This form should make clear the nature of the study. Where samples or tissues derived from pet animals during normal postmortem examination are collected, explicit written informed consent for their use in research must be obtained. For clinical trials of veterinary medicines, an ATC may be required; please contact the VMD for further details (https://www.gov.uk/quidance/animaltest-certificates)

Recruitment

It is worth giving some consideration to the recruitment of cases as this can be one of the most difficult parts of the research process.

Be realistic about the number of cases that can be recruited and the time that it will take to collect the data. It is important to consider how the cases will be selected, any inclusion and exclusion criteria and how withdrawals will be handled. This is particularly important where some degree of follow-up is intended. It is also important to consider how well the sample represents the type of cases that will normally be presented in veterinary practice.

Sample size

The sample size is almost always a compromise between recruiting a sufficient number to answer the research question, producing a manageable amount of data and the ethical need to limit the potential for a poorer outcome to a larger cohort of patients than absolutely necessary.

To estimate the numbers of subjects or samples needed to answer the research question, it is necessary to have some idea of what will be measured, the expected variability of the parameters to be measured (standard deviation or variance) and the size of effect that the researcher is expecting to detect between the groups. The larger the natural variation and the smaller the effect, the larger the number of subjects or samples that will be required to have sufficient 'power' to answer the question. Some of these numbers will be estimates which may be obtained from the literature or from a pilot study. Be careful extrapolating from the human literature, or from other species, unless there is other evidence to support the idea that the effect is likely to be similar. Whenever possible, it is a good idea to consult a statistician at an early stage of planning a research project.

Further information on sample size calculations can be found in the article:

Statistics: how many? M. Scott, D. Flaherty, J. Currall (2012). Journal of Small Animal Practice 53(7): 372-376.



Data collection and analysis

It is important to be clear about exactly what data will be collected and how they will be recorded. A pilot study can be invaluable in highlighting any problems in the data collection process. It is also important to consider how the data will be analysed to answer the research question, as this may affect the way that data are collected. It is a good idea to consult someone with statistical knowledge at the planning stage.

Pilot study

Providing details of a pilot study can be a useful way of demonstrating the feasibility of the project and ironing out any problems before the study starts. A pilot study will also provide valuable information about any limitations of the study and the time the study is likely to take.

Publication

Good research will fail to achieve its aims if it is not made public. Publication is an essential part of the process so that the knowledge you have created can have a broader impact. All publications directly arising from grant support by BSAVA PetSavers should be discussed with the editor of the Journal of Small Animal Practice (JSAP) to determine their suitability (jsapeditor@bsava.com). The submission of a

clinical abstract for presentation at BSAVA Congress in the form of a short talk or poster is strongly encouraged, and is a requirement for undergraduate students funded by SRPs. Applicants will also be asked to write an article for the BSAVA Companion magazine during the period of their grant, may be asked to supply materials for BSAVA PetSavers' publicity and promotional purposes and could be asked to spend time on BSAVA PetSavers' stand at BSAVA Congress.

Get other people to read it

What may seem obvious to you may not be clear to someone else.

Clinical Research Assessment and Guidance (CRAG) panel.

JSAP offers the CRAG panel as an initiative to provide assistance in designing, running and analysing clinical research projects. The concept is that an individual or group can come up with the idea for a clinical study and then work with the CRAG panel to refine the methodology so that the project will be feasible and likely to come up with reliable answers. Upon approval of the study design and analysis plan there will be an assumption that, if the study is carried out according to the approved protocol, the finished article will be accepted for publication (following an accelerated peer-review process). The panel also welcomes enquiries from practitioners who are interested in initiating or collaborating on research projects. If you would like to discuss ideas or submit a protocol to the CRAG panel, please contact the JSAP editor (jsapeditor@bsava.com).

The application process

Before submitting your proposal, read the application form carefully, take note of the word limits and plan how you will provide the maximum information in the space and format required.

The application form

The form needs to be signed by the Head of Department or Practice Principal to indicate that they support the research proposal. Practice Principals should indicate their position in the practice so that the BSAVA PetSavers Grant Awarding Committee is clear that this requirement has been met. In the case of the Research Fellowship application form, a senior scientist who will act as a research mentor should complete the form in association with the main applicant.

Lay summary

Applicants are asked to answer three short questions about why they want to carry out the study, what results they expect and the likely impact of their findings. The answers should be at the level of understanding of a first year (veterinary) undergraduate or educated lay audience.

Background

This section should give information on why the subject is worthy of research and how the knowledge gained from the research project will fit into what is already known about the topic. A full literature review is not required, but reference to salient publications should be included.

Research question

This may or may not be the same as the project title, but should be closely linked with it.

Hypothesis

This should be stated clearly; up to three hypotheses can be provided.

Objectives

This section should briefly state the aims of the study, distinguishing between primary and secondary objectives if applicable.

Study design

This section should provide sufficient detail to enable members of the Grant Awarding Committee and external reviewers to judge the likelihood that the study will produce meaningful results. It should include details of recruitment, inclusion and exclusion criteria and steps to reduce potential bias. Details of sample size calculations, power analysis and how numbers were reached should also be provided. Where cases are to be recruited to the study, some indication that the recruitment is feasible by reference to past caseload is needed. The use of graphics or schematics is strongly encouraged, to improve understanding.

Analysis of results

This section should include details of the statistical analyses to be used and time points of any assessments.

Potential risks and benefits to pets

Applicants must state potential risks and how these will be minimised. A statement of how the results will directly benefit cats, dogs or other companion animals now and in the future is also required. If the benefit is not direct, the number of further steps (and cost) before a benefit becomes apparent should be stated.

Funding status

These sections should indicate whether additional or alternative funding sources are required or have been applied for. The funding history of the applicants and the resubmission status of the proposal are also requested. Proposals that were previously shortlisted but ultimately unsuccessful can be resubmitted once more in a subsequent grant call. Revised proposals should explain how they differ from the original.

Research experience and career development

Research Fellowship applicants are required to summarise previous research experience, training and outputs, outline examples of prior or proposed public engagement work and specify how the award will enable them to support their career development plan. They should also summarise current and proposed time commitments.

Reviewers

Applicants are asked to provide the names of three potential reviewers who must have no conflicts of interest with any of the applicants. The Grant Awarding Committee reserves the right to seek the opinion of other experts in reviewing the application. This section is not required for SRP applications.

Analysis of costs

A detailed breakdown of the costs of the project is requested, with an estimated expenditure over time for projects lasting more than 1 year. Before completing this section, applicants should check the terms and conditions about what BSAVA PetSavers does and does not fund.

Student training

Information about the training programme is requested for MDR applications, and details of staff supervision for MDR and SRP projects.

Grant ethics

Applicants should provide information on:

recruitment and informed consent, including the right to withdraw from the study; animal welfare; risks to animals and humans and how these will be managed; participation incentives such as discounts; data protection and anonymity; and conflicts of interest. This section is in addition to the requirement for ethical approval, which should be in place or have been applied for at the time of submitting the grant application. Supporting documents and/or a reference number from the ethical committee are also required.

CVs

These are requested to help the Grant Awarding Committee decide if the applicants have the skills to carry out the research. They can be very brief and do not need to include a full list of all publications.





Sending your application

Application forms together with signed terms and conditions, supporting documents for ethical approval and a letter of support from the head of department or practice principal (not required for SRP applications) should be emailed to petsaversadmin@bsava. com. Please make sure that applications are received by midnight on the deadline date as there is then a long process of consideration for each grant proposal.

Where large numbers of applications are received, the Grant Awarding Committee will produce a shortlist by voting on the applications before they are sent out for external review. Shortlisted applications are sent to at least two external reviewers for comment.

The shortlisted applications and preliminary and external reviews are then considered and voted on at a meeting of the Grant Awarding Committee. Members of the Grant Awarding Committee are required to reveal any potential conflicts of interest (such as knowing an applicant or working in the same organisation). Members of the Grant Awarding Committee are not allowed to vote on any application in which they are an applicant/co-applicant or that is from the institution in which they work.

Common problems with applications

While there will always be an element of competition in the grant application process, a proportion of applications fail to achieve funding because of problems with the application itself. The list below illustrates some of the common ones:

- Not filling in all sections of the form. Make sure the form includes the appropriate signatures and is accompanied by the appropriate letters of support. If anything is left blank, tell us why rather than leaving us to guess!
- Not providing the information requested on the application form.
 This is a common problem where the information has been cut and pasted from other applications
- Not explaining how a resubmitted proposal differs from the original
- Undertaking procedures that would not be considered recognised veterinary practice. This can even include taking blood samples from healthy animals as controls or performing repeat radiographs more frequently

- than would be considered normal in practice. Remember that ethical approval and informed consent apply equally to control groups
- Lack of clarity in the research question. It may be obvious to you but remember that the form is all we have to go on – make sure it is clear to people who do not know about your area of research
- Failure to accurately outline the size of the problem
- Poorly referenced statements in the background section and failure to mention pertinent papers in the field that have already investigated the area in question (reviewers will check this)
- Reliance on a single assay which has not yet been validated without any pilot data in the species of interest
- Failure to comply with the requirements of the prescribing cascade without clear justification
- Failing to justify the sample size. The sample size may appear too small to produce meaningful results or the power calculations may seem to be based on unjustified assumptions, e.g. extrapolation from other species without further supporting evidence

- Over-ambitious recruitment targets/ timelines
- Failure to explain clearly how the research will benefit pets or to provide details of the time and costs for future research required to produce those benefits
- Failure to break down/justify costs in detail such as non-specific requests for consumables or lack of detail in jointly funded research projects
- Failure to explain how randomisation will be achieved
- A lack of detail about patient followup. This is more important for vets in referral practice than for those in first opinion practice
- Limited information about how standardisation will be achieved if several different people will be involved in procedures or data collection

A lack of clarity over the planned use of BSAVA PetSavers' funds where the grant application relates to a larger project which already has funding from other sources. It must also be stated if there are any conflicts of interest or conditions in place that would make it difficult to comply with any of the BSAVA PetSavers terms and conditions, particularly regarding publication and ethical considerations.

Other sources of information you may find useful

- BSAVA guidance on clinical veterinary research, including helpful JSAP and RCVS links: https://www.bsavalibrary.com/researchers
- The JSAP statistics virtual issue: https://onlinelibrary.wiley.com/ page/journal/17485827/homepage/statistics_virtual_issue.htm

References

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