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CREATE CHANGE

School of Veterinary Science Research plan 2020-2025

Contents

Research context of the School of Veterinary Science The University of Queensland

- The School is pleased with the positive trend in publication outputs and number of publications in Q1 journals since 2016 with 199 WoS documents published in 2019 and 56.99% documents in Q1 journals (Note that 2019 data include WoS contents indexed through June 30, 2020). This is combined with a progressive decrease in the number of documents on Q2, Q3 and Q4 journals in the last 2 years.

- Research funding decreased from 2015 to 2017 and has been steadily increasing in 2018 and 2019. The research income per academic staff member is still lower compared to other Schools from Faculty of Science. Funding per FTE academic staff member has followed the same trend of the total research income with a positive trajectory observed in 2018 and 2019. Category 3 Industry funding is the predominant source of research income and the major strength in the School research performance. However, statistics from the past 5 years indicate that SVS submits the least Cat.1 grants of all FoS Schools and has the lowest success rate. The number of applications for the ARC and NHMRC schemes has experienced a significant decline in 2018-2019 with a positive trend in 2020. Major limiting factors are the high clinical load of CAs, lack of experience and track record of many academic staff members, very low numbers of research-focused academics and low success rate of Cat.1 grants that discourages application submission.

- Comparing SVS research performance to the other Veterinary Schools across Australia (Adelaide, Melbourne, Sydney, Murdoch, JCU, CSU) in the last five years (2016-2020), the School ranks 5th for number of publications, 3rd for % documents in Q1 journals, 3rd for % documents in Q2 journals, 5th for % documents in Q3 journals and 6th for % documents in Q4 journals. When considering the research area "Veterinary sciences" only, the School ranks 3rd for number of publications, 5th for % documents in Q1 journals, 1st for % documents in Q2 journals, 7th for % documents in Q3 journals and 5th for documents in Q4 journals. Note that with the exception of UQ and the University of Sydney, the other veterinary schools are combined with the disciplines of animal science (Adelaide, CSU), agriculture (Melbourne), life sciences (Murdoch), and public health (JCU).

- In the last four years (2017-2020), T&R academics from the School (N=29) have published 625 UQeSpace documents overall (514 journal articles, 111 others – conference proceedings, book chapters, books), with 16 median number of publications/year (11 median number of research articles only) and 54% of documents in Q1 journals. Over the same period of time, Clinical Academics (N=27) from the School have published 266 UQeSpace documents overall (122 journal articles, 144 others), with 5 median number of publications/year (3 median number of research articles only) and 38.6% of documents in Q1 journals.

- The number of HDR students fell from 2012 to 2013 and has largely plateau since 2013, with a positive trend observed since 2017 (61.46 EFTSL in 2019). The average enrolment duration has increased in 2019 (Doctorate by research: 5.53 years; Master by research: 5.50 years). The average HDR student load (EFTSL) per academic staff member is lower compared to other Schools within the Faculty of Science (1.18 average HDR students/staff member in 2019). The average HDR load per SVS T&R academic and SVS clinical academic is 1.08 (± 1.17) and 0.61 (±0.63), respectively. Few factors need to be considered: 1) total academic staff (FTE) = 51.93 (lowest within FoS); 2) High number of clinical academics/specialists without a PhD qualification.

- SVS has published 2 papers on nature Index journals from 1 July 2019 to 30 June 2020 (Proceedings of the Royal Society B, Science Translational Medicine) with a fractional count (FC) of 0.64. Amongst the Australian Veterinary Schools, SVS is ranked 3rd for article count (AC) and 2nd for FC. Review of the Nature Index of other overseas institution in the Top 10 QS ranking for veterinary science suggests that: 1) almost all topics are multidisciplinary (without a specific veterinary focus); 2) many organisational units have other disciplines affiliated with veterinary science; 3) many papers have large author lists; and 4) different schools have specific research partnership with international institutions.

SVS Research plan 2020-2025

Developing strategies to <u>improve performance metrics</u> and <u>increase opportunities for research collaborations</u> are major priorities in the School operational plan for 2020 and beyond. To enhance research competitiveness at national and international level, the SVS Research Committee has worked on developing a research plan aimed to strengthen several research areas such as publication record, networking and grantsmanship.

Five objectives have been identified:

1. **Increasing opportunities for collaborations and partnership leading to joint research applications and increased research outputs;**

2. **Increasing the number and quality of research outputs;**

3. **Increasing efforts and success rate towards competitive grant schemes, as well as industry funding;**

4. **Attracting and retaining research-focused academics.**

5. **Increasing the HDR load**

*Note: **in red** actions already completed*

Objectives – strategies - actions

OBJECTIVE 1: Increasing opportunities for collaborations and partnership leading to joint research applications and increased research outputs

Objectives	Strategies	Actions
1.1. Increase partnerships and collaborative research in multi-disciplinary projects with a basic science impact, comparative and translational research, OneHealth, wildlife research	<u>Organising research seminars by Zoom and tours at Gatton</u> campus (if possible) with research groups from other schools/institutes or research centres (at least 6 research seminars/year). <u>Organising "Gatton campus research seminars"</u> to strengthen	Research seminars plan for 2020: • Prof. Juha Toyras (Head of UQ Biomedical Engineering) – "Biomedical Engineering in Orthopaedics" –

	the relationship between SAFS, SVS and QAAFI.		Gatton campus, 31/01/2020 • Dr Andy Flies (University of Tasmania) – "Fighting the Tasmanian devil facial tumors one molecule at a time" – Zoom, 08/09/2020 • Dr Tracey Bjorkman (perinatal research centre) – 20/11/2020 • Joint SVS/SAFS/QAAFI research HDR seminar held on 18/11/2019 (to resume with face-to-face teaching).
		Developing partnership with overseas institutions to increase research collaborations (particularly at the level of ECR), joint supervision of HDR students and partnered journal papers	SVS is working with the UQ School of Public Health towards a substantive ongoing partnership between UQ and the University of Edinburgh (Medicine and Veterinary Science)
		Exploring the opportunity to organise combined research days to facilitate translational projects and comparative projects on companion animals-humans (e.g. UQ Centre for Clinical Research, Critical Care Research Group – The Prince Charles Hospital)	TBA
		Facilitating research opportunities with MBRS with a view to expanding the School's research activities at MBRS (virology, parasitology, bacteriology, genetics, conservation and ecology, endocrinology).	Research Committee meeting held at MBRS on 10/02/2020 Research collaborations to be facilitated throughout the year
		Developing the SVS Strategic Research Bid with advice from Faculty (AD-R and ED) and input from multiple SVS researchers and individuals from UQ partners and external partners. This may also potentially increase SVS performance on Nature Index measures.	Under development (Champion: Dr Ricardo Soares-Magalhaes)

OBJECTIVE 2: Increasing the number and quality of research outputs and the research impact

Objectives	Strategies	Actions
2.1. Increase research awareness and strategies to allow SVS researchers to target high impact journals	Organising regular (at least, 2/year) <u>training sessions on Strategic Scholarly publishing and Research impact</u>, for academic staff members and HDR students (UQ library)	First session on strategic scholarly publishing held on the 28th of October 2019. Organisation of Zoom sessions on metrics for grant writing and promotion and research engagement and impact – TBA
	Organising <u>workshops or webinars with high-profile researchers in the veterinary and biomedical field</u>s on publication strategies (e.g. how to effectively target high quality journals, tips for publishing success…).	Prof. Christine Beveridge (ARC Laureate Fellow from the School of Biological Science) delivering a talk on publication strategies (22/04/2020).
	Organising the <u>SVS Research review day</u> as an annual event of the School in order to discuss strengths, weaknesses, issues and plans.	December each year
	<u>Establishing an annual prize for the "SVS papers of the year"</u>– three categories: HDR paper of the year (high impact publication with a HDR student as a first author), SVS paper of the year in Fundamental Research and SVS paper of the year in Clinical Research. Each paper will be ranked based on the following criteria: ranking of the journal within the discipline, impact factor of the journal, Altmetric score, CNCI. SVS will provide an investment in the range of $500/award.	Guidelines approved by the Executive Committee – submission deadline for nominations: November 2020
	Providing <u>financial support to cover part of the publications fees</u> for publishing in high impact journals, particularly Nature index journals or other Q1 journals with high impact factor (greater than 4.0). SVS will provide an investment in the range of $15,000/year for publication fees (funding reimbursement will be available up to $3,000 per application).	Proposal approved by the Executive Committee.
	Circulating a <u>list of Q1 journals/discipline</u> (awareness of the opportunities to publish in high quality journals). Staff members will be strongly encouraged to use online journal selection tools already available on the UQ	List prepared and circulated with regular reminders at the School meetings.

	library website and (https://web.library.uq.edu.au/node/3965/1#1)	
	Creating <u>awareness around the Nature index and encouraging staff members to publish in these journals,</u> if they are appropriate to the researchers' areas. A review of the publications included in the Nature index performance form other vet schools in Australia suggests that almost all papers published in those journals involved topics that appear to be multidisciplinary and often focused on human health applications. A number of organisational units had more than veterinary science in their unit and/or research centres affiliated. In addition, it is not uncommon to have large author lists involving authors from many different organisational units and institutions reinforcing the importance of multi-centre collaborations.	List prepared and circulated with regular reminders at the School meetings, annual appraisals and annual research review day
2.2. Improve the annual review process on research performances	Increasing the <u>focus on staff performance appraisal processes</u> coupled with mentoring and support to actively encourage experienced research staff to work with less experienced staff to develop and implement structured processes to enhance research performance. This involves: • Clarity around performance expectations • Targeting potential funding bodies and projects • Planning a development trajectory that may start with co-investigator status on small grants and lead to principal investigator status on large, nationally competitive grants • Increasing partnerships and engagement activities • Actively seeking leverage opportunities and larger grants with funded research positions. Clinical staff and ECRs in particular may need guidance initially on where to find grant information and they have to work with supervisors to develop research plans. The implementation of the appraisal process will require: (a) meetings with academic	Research expectations have been included in the School's guidelines on the annual appraisal Mentorship: throughout the year – list of "research mentors" in progress

	supervisors to discuss School's strategies and expectations; (b) adequate mentorship – this may involve the identification of "research mentors"; (c) thorough discussion of research performances during the annual appraisal, including the development of individual research plans (proposed funding applications, research publications in draft/preparation, training and development opportunities to be undertaken to improve/expand research and grant application skills).	
	Identifying the <u>lowest 25% academics and the top 25% for each category (T&R, CA)</u> based on research data analysis (number of publications, HDR load, number of grants or attempts to secure grants) and arranging individual meetings to discuss research performance, what can be done to improve productivity/quality (lowest 25%) or what plans can be in place to target higher quality publications or more competitive funding opportunities (top 25%).	January/February each year
2.3. Broaden the influence and impact of SVS research	Developing School-based platforms (Facebook, Twitter) to effectively communicate to a range of audiences and increase the SVS research exposure to both the academic and non-academic communities. These platforms will allow SVS to build a large audience of followers through which the School can increase visibility of its research capabilities. In addition, alternative metrics (Altmetrics) are now expected as ancillary evidence for career-defining stepping stones including academic appraisals and major funding/fellowship applications. This strategy is expected to increase our competitiveness for funding, expand collaboration opportunities, increase opportunities for philanthropic donations and attract high achieving researcher candidates.	Establishment of a Research Communications Subcommittee (Chair: Dr Nicholas Clark) approved by the Executive Committee and launched in September 2020.

OBJECTIVE 3: Increasing efforts and success rate towards competitive grant schemes, as well as industry funding

Increased competitive grant success would amount to an increase in direct research funding, with a proportionate increase in block funding, as well as improving the SVS broad research capacity and making it a more attractive place both for existing researchers to remain and to attract research leaders from outside.

Strategies	Action	Due date
3.1 Provide adequate advice and support for preparing grant applications	Creating an <u>internal readership scheme</u> with SVS staff members willing to be the first point of contact in reviewing applications for research grants, including fellowship and ECR applications. The SVS readership scheme can be used in conjunction with the FoS readership scheme. A list of potential readers is circulated in September each year in preparation for the grant writing. The same internal readers can be approached throughout the year for any type of grants and schemes, including Cat. 2 and Cat. 4 grants, as well as overseas grant opportunities.	List of internal readers already prepared. List to be updated every year.
	Organising an <u>annual grant writing session</u> with high-profile researchers from UQ with a successful track record in category 1, 2, 3 grant schemes. The structure of the writing sessions may change according to the requests and attendance (multiple sessions/year, sequential session over two-three weeks). This may be replaced by a 1-2 days "grant writing workshop or retreat".	TBA
	<u>Seeking assistance from the Faculty of Science</u> with pitching skills and asking industry for funding.	The Chair of the Research Committee will discuss this option with the ADR and the Deputy ADR (Research Partnership)
	Establishing a <u>School support scheme</u> for major grant applications (2-3 applications/year), in particular national or internationally competitive grants of substantial funding. The School may provide an investment in the range of $5,000 to assist preparing each application. Alternatively, in case of budget restrictions, the School will arrange	In progress

	for staff to have clinical service or teaching relief during grant preparation. The support scheme is conditional on submission of a full proposal and a final approval by the HOS.	
3.2. Increase awareness on research funding opportunities	Creating a School's grant calendar: A grants' calendar is already available on the Faculty's Research SharePoint (https://intranet.sharepoint.uq.edu.au/sites/Science/research/_layouts/15/start.aspx#/). A similar grant calendar will be created on the School' sharepoint to target other funding opportunities in the area of "Veterinary Science" and animal health.	School's grant calendar available on the School's sharepoint. Funding opportunities circulated regularly by email and at each School meeting.
	Matching funding opportunities from Science or UQ research mailer to each researcher based on track record and research strengths and facilitate research partnership and application submission.	Anytime during the year (when grant opportunities arise)

OBJECTIVE 4: Attracting and retaining research active CA and T&R academics and increase the number of research-focused academics

Objectives	Strategies	Actions
4.1 Annual plans to identify potential candidates for awards/fellowships	Identifying competitive applicants for DECRA in collaboration with Prof. Steve Chenoweth (Deputy Associate Dean of Research – Researcher Development) and externally through the research network of individual SVS academics.	At least 6 months before the due date of the applications
	Identifying potential candidates for the ARC future fellowship round –	At least 1 year before the due date of the applications

	high quality researchers interested in exploring opportunities at SVS to contribute to strategic research development. The School will provide support to internal candidate to construct the application in terms of clinical service or teaching relief.	
4.2 Strategic plan for recruitment of new academic staff member	<u>Focusing on the research performances of applicants for future job positions</u>, with the aim of targeting academics with significant potential/track record to approach major funding schemes or fellowships – as well as able to provide research mentorship to EMCRs.	During the hiring process

OBJECTIVE 5: Increasing the HDR load

Objectives	Strategies	Actions
5.1. Increase the number of competitive students and the number of HDR scholarships	<u>Increasing the success with Graduate School scholarships through</u>: • Training academic staff member in preparing the matrix document and curriculum vitae used for HDR applications to improve the quality of the application • Encouraging academics to apply a thorough selection process when approached by potential candidates.	The Postgraduate Coordinator will assist in the screening of prospective applications: one-to-one sessions with the postgraduate coordinator
	<u>Encouraging academics to include a specific budget for HDR scholarship in grant applications</u> (in particular, competitive or industry-based funding)	Anytime during the year
	<u>Encouraging academics to investigate external scholarship funding such philanthropy or sponsored scholarships</u>. The PGC, in collaboration with the	Anytime during the year during the School meetings: publicity of alternative sources of funding (Australia Awards, industry partnership,

	Faculty of Science Advancement team, will assist. Anytime during	philanthropy in partnership with Faculty Advancement Team)
	Increasing the awareness of HDR programs at SVS	Presentation of postgraduate research opportunities to 5th yr BVSc students – July 2020.
		Development of a new HDR program (DVClinSc) building on the clinical strength of the School to forester clinical research
		SVS Research project BlackBoard page to advertise undergraduate research projects and increase research awareness in students
		Advertisement of research training programs through the UQVETS Facebook page.
		Collaboration with the Research Communication subcommittee for the project and scholarship publicity.

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