**CURRICULUM VITAE**

Dr Kristen K. Reyher BSc(Hons) DVM PhD FHEA MRCVS

**PERSONAL INFORMATION**

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| **Work Address:**  Bristol Veterinary School  University of Bristol  Langford  BS40 5DU | **Home Address:**  1 Clynder Grove  Clevedon  BS21 7DF  **Marital Status:** Married |
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**PRESENT APPOINTMENT**

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| **2018 – current** | **Reader in Veterinary Epidemiology and Population Health**, Bristol Veterinary School |

**PREVIOUS APPOINTMENTS**

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| **2012 – 2018** | **Senior Lecturer in Farm Animal Science**, Bristol Veterinary School |
| **2009 – 2012**  **2006 – 2011** | **PhD studentship**,University of Prince Edward Island, Canada  **Assistant Professor, Dairy Production Medicine**, University of Prince Edward Island, Canada |
| **2006 – 2009** | Operations Manager, Canadian Bovine Mastitis Research Network (CBMRN), National Cohort of Dairy Farms (NCDF) |
| **2002 – 2006** | **Associate Veterinarian,** *Stock*1st Veterinary and Livestock Services, Surrey and Sussex, UK |

**ACADEMIC QUALIFICATIONS**

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| **2016** | **Fellow of the Higher Education Authority** University of Bristol, UK | **FHEA** |
| **2009-12** | **Doctor of Philosophy**, University of Prince Edward Island, Canada | **PhD** |
| Factors affecting incidence of intramammary infection at quarter & cow levels in Canadian dairy cows | | |
| **1998-2002** | **Doctorate of Veterinary Medicine**  College of Veterinary Medicine, Cornell University, USA | **DVM** |
| **1994-98** | **Bachelor of Science in Zoology** (valedictorian-top of class), University of Florida, USA | **BSc** |

**SPECIAL AWARDS, HONOURS & DISTINCTIONS**

* 2019 UK Diagnostic Summit – Highly Commended Award for Research
* 2019 Veterinary Record Impact Award for publication 7 – publication that makes the most useful contribution to changing veterinary practice
* 2019 Public Health England **Antibiotic Guardian Awards** – winner, Research category for PhD student Lisa Morgans’s work on Farmer Action Groups
* 2019 Selected for UoB **Bristol Senior Leaders** cohort leadership programme
* 2018 Public Health England **Antibiotic Guardian Awards** – winner, Agriculture & Food category (also asked to present submission at the Antibiotic Guardian annual conference)
* 2017 UoB **Strategic Research Fund** – funding for Antimicrobial Resistance (AMR) One Health databank research
* 2017 UoB **University Research Fellowship** – personal research fellowship to concentrate on AMR One Health databank research
* 2016 UoB **Vice-Chancellor’s Impact Award** for Health and Wellbeing, recognising wide-reaching impact of AMR Force group’s research
* 2016 **University Award for Education** in the Faculty of Health Sciences, Bristol Teaching Awards, shortlisted nominee for redesigning evidence-based veterinary medicine teaching
* 2015 UoB School of Veterinary Science **Impact Award**, recognising the impact of my group’s Motivational Interviewing and communications research
* 2014 American Dairy Science Awards, **Journal of Dairy Science Most Cited Award**, Physiology and Management – most cited paper from 2010-2014
* 2013 **South West Crucible Leadership and Development Programme**, 2013 – one of 30 talented early to mid-career researchers selected for personal and professional leadership programme in its inception year in South West England

**TEACHING & RELATED ADMINISTRATION**

I have taken a significant role in providing teaching and assessment in clinical livestock-related areas as well as establishing and growing evidence-based veterinary medicine (EBVM) topics for BVSc and Accelerated Graduate Entry Programme (AGEP) students. This was recognised by my short-listed nomination for a **University of Bristol Teaching Award** in 2016. I also dedicate considerable time to post-graduate mentoring and upskilling the wider veterinary profession as evidenced by my nomination for **Outstanding Supervision** at the **Bristol Teaching Awards** in 2018. I make substantial contributions to teaching in the undergraduate curriculum, covering **all years** of the BVSc, from general lectures to small group sessions, from on-farm practical classes to creating and leading **2 directed self-education** tasks **(DSEs)** addressing EBVM. I am the **Theme Lead** for EBVM across the BVSc and AGEP curricula. I have combined my research interests with teaching to lead a team to create the internationally used eLearning site **EBVMLearning.org**. This open-access, online teaching resource is used in veterinary curricula internationally and has been accessed by more than **24,300 users from over 130 countries** since it was launched in 2015. This example of an innovative teaching resource is used **across all years of the BVSc** as well as by veterinary nurses, clinical scholars and post-graduates, and our team has just been awarded two more grants to update and integrate its content. The latest EBVM DSE I devised also involved staff training, and I delivered 6 **lunchtime lectures to veterinary and veterinary nursing staff** and regularly present in **clinical seminars for clinicians**. I have served as **Bovine Element Lead** for Animal Management 1 and as the **Farm Animal Lead** in generating, reviewing and collating MCQs used for final year examinations. I also incorporate my research activities into teaching by preparing and delivering a ‘Hot topics in veterinary medicine’ lecture on AMR, which I also integrate as a topic for student DSE projects. As part of the UK’s Vet Schools Council, I led mapping of Bristol’s BVSc curriculum for topics relating to AMR and antimicrobial stewardship (AMS), and I am leading part of a team that has built a **massive open online course (MOOC) about AMR and AMS aimed at veterinarians** and **hosted by the British Society for Antimicrobial Chemotherapy** and **FutureLearn**. In the first run of this MOOC in 2019, we had over 1070 learners, 60% of whom were international. I am currently responsible for training **7 post-graduate research students**. I take an active role in communication skills training, again ensuring BVS teaching is research-informed. I contribute to OSCEs for undergraduates, and I write, revise and standard set MCQs yearly. I give vivas for undergraduates and graduates. I currently supervise **5 PhD students, 1 MSc(R) student, 1 clinical training scholar, 7 Pathway 2 staff and one international research fellow**. I have delivered continuing professional development (CPD) **nationally and internationally**, and provide each year information to students, staff, medical and veterinary professionals and the general public about my topics of expertise such as EBVM and AMR.

**Teaching profile: 2016–2019 (last 3 years – selected, 3 more entries in Appendix)**

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| **Students** | **Year** | **Responsibility** | **Nature & methods of teaching** | **Unit prep/ contact hours (% contribution)** | **Assessments** |
| ~6-9 vet residents | 1 | Lecturer within Residents Research Skills Week | 1 lecture, ½ day project presentations | 1/5 hours (10%) | None |
| 40 AGEP | 1 | EBVM element lead | 1 lecture, 3 self-directed sessions | 1/1+6 (100%) | Written exam; MCQ |
| 40 AGEP | 1 | Infectious reproductive diseases of farm animals | 1 lecture | 3/1 (10%) | Written exam; MCQ |
| 150 BVSc | 1 | Lecturer, Cattle Element Animal Management 1 unit – *Element organiser* | 6 lectures + host for guest lecturer | 12/7 hours (90%) | Written exam; MCQ |
| 150 BVSc | 1 | EBVM element: Professional Studies 1 unit | 1 lecture, 2-hour group tutorials x 5 | 4/10 hours (100%) | Written exam; MCQ |
| 150 BVSc | 2 | Lecturer, Epidemiology & statistics element; Animal Management 2 unit; *Element & DSE lead* | 1-hour problem-based learning tutorials x 4 | 8/4 hours (100%); 16 prep hours devising/supporting new DSE (10% overall mark) | Written exam; MCQ; lead and marking of DSE |
| 150 BVSc | 2 | Epidemiology & statistics element: Animal Management 2 unit | 2-hour group tutorials x 5 | 3/10 hours introducing new tutorial (100%) | Written exam; MCQ |
| 150 BVSc | 2 | EBVM element: Professional Studies 2 unit | 2-hour group tutorials x 5 | 2/10 hours introducing new tutorial (100%) | Written exam; MCQ |
| 150 BVSc | 3 | Communication element: Professional Studies 2 unit | 3.5-hour group tutorials x 2 | 2/7 hours (67%) | Written exam; MCQ |
| 150 BVSc | 3 | EBVM element: Professional Studies 3 unit | 2-hour group tutorials x 4 | 2/8 hours introducing new tutorial (100%) | Written exam; MCQ |
| 150 BVSc | 3 | Lecturer, Clinical Veterinary Sciences 1 unit (bovine mastitis) | 4 lectures, 1 2-hour tutorial | 3/6 hours (10% of Reproduction element) | Written exam; MCQ |
| 4 BVSc | 3 | Project supervisor within Basic Clinical Sciences Research Methods unit x 1-3 groups | Supervisor for mock research grant writing; small groups | 1/4 hours/group; 1-3 groups (10%) | Marking of written projects |
| 150 BVSc | 4 | Communication element, Professional Studies 2 unit | 3.5-hour group tutorials x 2 | 2/7 hours (67%) | Written exam; MCQ |
| 120 BVSc | 4 | Lecturer and DSE lead within Professional Studies 4 (Knowledge Summaries for EBVM) | 1 lecture, support for DSE | 1/1; >40 hours prep & staff support/4 hours/ group teaching (20% unit mark) | Lead and marking of DSE |

Other teaching related duties (more details in Appendix)

Marking, examining OSCEs, lead for Farm Animal MCQs for final year exams (~43 contact hours)

Impact of teaching

I have worked tirelessly to offer excellent training to veterinary undergraduates, graduates and to upskill the wider veterinary profession in areas such as communication, EBVM and AMR. The EBVMLearning.org website my team designed is used worldwide and has substantially increased the visibility of EBVM internationally. Its use as an innovative technology supports effective student learning across all courses at BVS and other veterinary schools internationally. Similarly, the AMR MOOC I helped to design had learners from around the world, and my clear teaching about topics related to AMR and communication has been sought after internationally for CPD events.

**ii) Major teaching responsibilities in previous years**

**2012-2014: Population medicine and EBVM rotation** (Year 5 BVSc Farm Animal Science) 65 hours/year small group seminars during this clinical rotation; marked presentations & reports

Administration roles for teaching (selected – last 3 years; 2 more in Appendix)

**2019-present: EBVM Helical Theme lead – Accelerated Graduate Entry Programme (AGEP)**

**2014-present: EBVM Embedded Theme – designer and lead, BVSc curriculum**

**2015-2017: Bovine element lead for BVSc1 Animal Management Unit.** This teaching element involves a lecture series, practical teaching and assessment by MCQ, written examination and OSCEs. I organised the other academics teaching about cattle in this unit, including lectures, practical classes, assessments and external lectures.

**2016: Responsibility for developing the database of farm animal MCQs for examination of 5th year BVSc:** There is the requirement to build a very large database of clinical questions; I was responsible for building the farm animal database which requires co-ordinating question writing with 10 team members, rigorous checking of the quality of the questions and standard setting.

Pastoral teaching roles

**2019-present: Personal tutor** for 1 AGEP student, w/ involvement in Reflective Accounts

**2012-present: Personal tutor** for 7 BVSc students (Years 3, 4 & 5) every year, with associated involvement in Professional Studies units

**iii) Innovatory units or teaching methods I have introduced**

**2019** Designed EBVM Helical Theme for AGEP programme

**2016** Introduced new EBVM DSE for BVSc4 in Professional Studies

**2015** Led a team to develop and introduce an open-source, on-line eLearning resource for EBVM (EBVMLearning.org) – Rees et al., *J Vet Med Ed*, In preparation

**2014** Redesigned Animal Management 2 Epidemiology and Statistics DSE for BVSc2

**2014** Mapped and integrated EBVM embedded theme into the curriculum, to provide horizontal and vertical integration of knowledge of crucial concepts

**iv) Contribution to life-long learning & CPD courses**

Regularly invited to deliver lectures for veterinarians at local, national and international levels for physicians, veterinarians and farmers including **Federation of Infection Societies**, **Society for Applied Microbiology**; Dairy Health Management Continuing Education Program annual meeting, Guelph, Canada; British Cattle Veterinary Association (BCVA); Association of Veterinary Surgeons Practising in Northern Ireland; Langford Vets/UoB; **31 lectures or evening meetings**, including annual World Antimicrobial (AM) Awareness Week seminars annually

**v) Collaborative teaching with colleagues in other departments or faculties or institutions**

**2018/19:** Co-led (with 2 other academics) an update to the EBVMLearning project (below), in collaboration with 27 international academics

**2015:** Led a team to develop and introduce an open-source, on-line eLearning resource for EBVM (**EBVMLearning.org**) as a project funded by the Royal College of Veterinary Surgeons Trust (RCVS Knowledge) in collaboration with 27 academics from all the UK as well as European and North American veterinary schools

**vi) Postgraduate advising**

Current postgraduate students enrolled for PhD:

**2019-present: Beatriz Llamazares BSc(Vet Med) MSc MRCVS**

Funded by **Medical Research Foundation AMR Cohort**. Co-supervisor (40%)

**2019-present: Jodie Cleave BVSc BSc MRCVS**

Funded by **Medical Research Foundation AMR Cohort**. Co-supervisor (40%)

**2018-present: Jordan Sealey BSc(Hons) MSc(R)**

Funded by **Medical Research Foundation AMR Cohort**. Co-supervisor (40%)

**2018-present: Lucy Vass BSc MSc -** Funded by **UoB**. Co-supervisor (40%)

**2017-present: Jon Massey MSc(R)** -Funded by **UoB**. Co-supervisor (40%)

Previous postgraduate students (PhD):

**2016-2019: Lisa Morgans BVSc MRCVS**

Funded by the **Agricultural and Horticultural Development Board (AHDB) Dairy**. Primary supervisor (60%)

**2016-2019: Gwen Rees BVSc MRCVS**

Funded by **The Langford Trust**. Primary supervisor (60%)

**2015-2018: Lisa van Dijk BSc PhD** - Self-funded. Primary supervisor for 1 project (15%)

**2014-2018: Alison Bard BSc PhD**

Funded by **BVA Animal Welfare Foundation Norman Hayward Fund**. Primary supervisor (60%)

Current postgraduate students enrolled for MSc(R):

**2019-present: Fiona MacGillivray BVetMed MRCVS**

Funded by University of Nottingham. Co-supervisor (40%)

Previous postgraduate students (MSc(R)):

**2017-2019: Kezia Wareham BSc MSc(R)** - Self-funded. Primary supervisor (60%)

Postgraduate students enrolled for Specialist European Diplomas:

**2017-present: Lucy Jerram BVetMed BSc MRCVS**

Resident (alternative in-practice route) in Bovine Health Management; I am primary research supervisor (30%); due to sit European Diploma in Bovine Health Management in 2021

Previous postgraduate students enrolled for Specialist European Diplomas:

**2014-2019**, awarded **European Diploma in Bovine Health Management 2019: Andrea Turner VetMB MRCVS.** Primary research supervisor (30%); **Ian Glover BVSc MRCVS.** Alternative in-practice route. Research co-supervisor (25%)

**2014-2018**, awarded **European Diploma in Small Ruminant Health Management: Emily Gascoigne VetMB Dip.SRHM MRCVS.** Research co-supervisor (10%)

**2010–2014**, awarded **European Diploma in Bovine Health Management 2015: Sarah Wood BVSc Dip.ECBHM MRCVS.** Research co-supervisor (15%)

**Other postgraduate/undergraduate advising** (more details in Appendix):

* 3 Summer Studentships for veterinary undergraduate students, 1 UoB Research Committee Interdisciplinary Research Internship, 3 AWB undergraduate projects

**vii) Major achievements in teaching administration**

* Completed University of Bristol CREATE Level 2 - Experienced course; awarded FHEA 2016
* Regular internal examiner/advisor for PhD students and Senior Clinical Training Scholars
* Administration associated with numerous units across all years of the BVSc
* Assistance in development of new BVSc curriculum, specifically standardising, overseeing and creating a new embedded theme, EBVM
* Oversaw embedded theme of EBVM in BVS’s Accelerated Graduate Entry Programme

**RESEARCH & RELATED ADMINISTRATION**

* **BVS Population Health Research Theme Lead; 1/3 of BVS Research Leadership Team**
* **Total grant income since 2013 £9.96M; £1.74M as principal investigator**
* **Evidence of conducting large, externally funded, collaborative projects and formation of strong alliances with industry leaders**
* **Research group since 2013 has comprised 9 post-docs and fellows; 3 PhD, 1 MSc & 4 residents successfully completed**
* **Running projects in Argentina and Thailand with leading veterinary teams**
* **Premiere BVS REF Impact Case for REF 2021**

As a clinical veterinarian heavily focussed on combining clinical expertise with the best in veterinary evidence, my research career combines quantitative and qualitative research across the basic sciences, epidemiology and applied clinical practice. I was asked to lead the **Population Health Theme** of BVS and to **conceive and enable a visionary strategy** for the School. I have made a significant contribution to the running of and strategic direction of research in the School, contributing to our **School Executive Group** and broadening BVS horizons by actively contributing to the **Steering Group for the University’s Population Health Specialist Research Institute**. I am a key member of **Bristol AMR,** the **Elizabeth Blackwell AMR Theme**, where my funding and projects have made Bristol the **most well-funded UK university in AMR research**, developing the discipline within and outside the University. I established the **AMR Force** research group, the **leading AMR veterinary research group in the UK** and **one of the largest research groups in BVS**. My interdisciplinary work involves close collaboration with livestock industry bodies such as cooperatives, retailers, milk buyers,large veterinary practices and government agencies, focussing on real, ‘on the ground’ questions and providing evidence for policy. Our work is a strong **REF Impact Case Study for BVS**. My communications research has generated impact throughout the profession, and the **Motivational Interviewing methodology** we have tailored for use by veterinary practitioners has secured international funding as well as support from numerous leading organisations. My work with **EBVM** has been grant funded and is used across the international veterinary community. More than 20 evidence syntheses based on the EBVM methodology presented in EBVMLearning have been published in peer-reviewed journals by UoB students and staff. I am regularly invited as a speaker at **international conferences** and have been part of awarded bids totalling almost **£10M**, **£3M** as Primary Investigator (PI). My work has **impact**, evidenced by one of my senior-author papers having won the **Veterinary Record’s Impact Award** in 2019, a **Most Cited Award** in the premier journal in my field as well as the 2016 **Vice Chancellor’s Impact Award** for Health and Wellbeing. I actively **mentor** academic colleagues, providing career and research support and encouragement, both informally and as part of a formal mentoring process for women in STEM subjects. I currently supervise **7 postgraduate students** and **8 post-doctoral researchers** as well as working closely with international veterinary teams on **2 GCRF-funded projects**. Since promotion to Reader, I have guided **3 PhD students** and **3 European diploma holders** to completion. I contribute regularly to Twitter, harnessing this medium to increase visibility of our research and have over 1160 followers, including **Chief Veterinary Officers** and internationally recognised scientific leaders.

**Key research achievements** (paper number in publication list)

- **Leading the UK in AM stewardship** – as evidenced by being the first group to demonstrate that ceasing the use of critically important AMs in livestock practice does not result in decrease in animal health and welfare parameters (*Vet Rec* Impact Award paper 7)

- **Impacting UK national policy** on antimicrobial use in the livestock sectors using research (4, 6-11, Defra report)

- Communications research – international projects and training package developed; research **featured in international and national CPD** by BVA, BCVA, AHDB Dairy, Boehringer Ingelheim, Zoetis, MSD Animal Health, Merial, The Webinar Vet, XL Vets VetSkills, Dairy UK (1-3, 13)

- First application of Participatory Policy Making to the livestock sectors (15)

- Collaborative work with private veterinary practitioners, encouraging EBVM (5, 12, 16)

- Evidence syntheses as contributions to EBVM over various subjects (14; Other 1, 2, 3, 4)

- Successfully managing **Canada’s largest livestock research effort**, the National Cohort of Dairy Farms, over 2 years and with numerous impactful research outputs (18, 20-26)

i) Publications

Academic Journal Papers (refereed; **32 total** – papers prior to 2011 listed in Appendix)

Contributions: Lead Author (LA; designed & led study, oversaw/carried out data collection, led data analysis, wrote draft paper), Senior Author (SA; designed & led study/analysis, supervised data collection/analysis, detailed comments on drafts), Major Co-Author (MCA; Co-I on grant/employed to undertake work, supervised/conducted elements of data collection/ analysis, detailed comments on drafts), Co-Author (CA; Co-I on grant, comments on drafts);\*\*\*\*=scored 4 star in internal REF evaluations

International co-authors *in italics*; co-authors from non-academic organisations underlined

1. Alzayn M, Findlay J, Schubert H, Mounsey O, Gould VC, Heesom KJ, Turner KM, Barrett DC,

**Reyher KK**, Avison MB. Characterisation of AmpC hyper-producing *Escherichia coli* from

humans and dairy farms collected in parallel in the same geographical region. *J Antimicrob*

*Chemother.* 2020. MCA

*Svensson C, Forsberg L, Emanuelson U*, **Reyher KK**, Bard AM, *Betnér S, von Brömssen C,*

*Wickström H*. Dairy veterinarians’ skills in motivational interviewing are linked to client verbal

behaviour. *Animal*. 2020. doi: 10.1017/S175173112000107X. MCA

*Svensson C, Wickström H, Emanuelson U*, Bard AM, **Reyher KK**, *Forsberg L*. Training

veterinarians involved in veterinary herd health management in Motivational Interviewing

skills. *Vet Rec.* 2020. doi: 10.1136/vr.105646. MCA

Phythian C, Glover M, Cripps P, **Reyher KK**. Field trials and tribulations: mortality, morbidity

and liveweight following multivalent clostridial and Pasteurella vaccination of lambs on six

English commercial sheep flocks. *Vet Evidence*. 2020. 5(1). doi: 10.18849/ve.v5i1.244. MCA

*Svensson C, Emanuelson U*, Bard A, *Wickström H, Forsberg L*, **Reyher KK**. Communication

styles of Swedish veterinarians involved in dairy herd health management: A Motivational

Interviewing perspective. *J Dairy Sci*. 2019. 102:10173-85. SA

2. *Svensson C, Lind N,* **Reyher KK**, *Bard AM, Emanuelson U*. Trust, feasibility and priorities

influence Swedish dairy farmers’ adherence and non-adherence to veterinary advice. *J Dairy*

*Sci*. 2019. 102:10360-68. MCA

3. Bard A, Main DCJ, Roe E, Haase A, Whay H, **Reyher KK**. To change or not to change? Factors

influencing farmers’ enactment of veterinary advice on UK dairy farms. *J Dairy Sci*. 2019.

102:10379-94. SA

4. Schubert S, Wood S, **Reyher KK**,Mills H. Data-driven approach to using individual cattle

weights to estimate mean adult cattle weight. *Vet Rec.* 2019. 185:540. MCA

5. Glover ID, Barrett DC, **Reyher KK**. Little association between birthweight and health of pre

weaned dairy calves. *Vet Rec.* 2019. 184:477. SA

6. Rees G, Barrett DC, Buller H, Mills HL, **Reyher KK**. Storage of prescription veterinary

medicines on UK dairy farms: cross-sectional study. *Vet Rec.* 2018. 184:153. SA

7. Turner A, Tisdall DA, Barrett DC, Wood S, Dowsey A, **Reyher KK**. Ceasing the use of the

highest priority critically important antimicrobials does not adversely affect production, health

or welfare parameters in dairy cows. *Vet Rec.* 2018. 183:67. SA

8. Mills H, Turner A, Morgans L, Massey J, Schubert H, Rees G, Barrett DC, Dowsey A,

**Reyher KK.** Evaluation of metrics for benchmarking antimicrobial use in the United Kingdom

dairy industry. *Vet Rec.* 2018. 182:379. SA

9. Hockenhull J, Turner J, **Reyher KK**, Barrett DC, Jones L, Hinchliffe S, Buller HJ. Antimicrobial

use in food-producing animals: a Rapid Evidence Assessment of stakeholder practices and

beliefs. *Vet Rec.* 2017. 181:510. MCA

10. **Reyher KK**, Barrett DC, Tisdall D. Achieving responsible medicines use on farms -

communicating with famers. *Vet Rec In Practice.* 2017. 39:63-71. LA

11. Tisdall D, **Reyher KK**, Barrett DC. Achieving responsible medicines use at practice and farm

level. *Vet Rec In Practice*. 2017. 39(3):119-127. MCA

12. Gascoigne E, Williams D, **Reyher KK.** An investigation into the prevalence, predictors and

Rose Bengal staining patterns of the split upper eyelid defect in multi-horned Hebridean

sheep. *Vet. Rec.* 2017. 181:67. SA

13. Bard A, Main DCJ, Haase A, Whay HR, Roe E, **Reyher KK**. The future of veterinary communication: Partnership or persuasion? A qualitative investigation of veterinary communication in the pursuit of client behaviour change. *PLOSOne.* 2017. doi: 10.1371/journal.pone.0171380. SA\*\*\*\* / *PLOSOne* top 10% most cited papers of 2017

14. Phypers C, van Oostrum H, Place E, **Reyher KK**. Spaying of cats and dogs by

laparoscopic ovariectomy may offer a more positive recovery than traditional open surgical

methods. *Vet Evidence*. 2017. doi: 10.18849/ve.v2i2.59. SA

15. van Dijk L, Hayton A, Main DCJ, Barrett DC, Buller HJ, **Reyher KK**. Participatory Policy

Making by dairy producers to reduce antimicrobial use on farms. *Zoo. Pub. Health.* 2016.

64:476-84. SA\*\*\*\*

16. Bazeley K, Barrett DC, Williams P, **Reyher KK.** Measuring the growth rate of UK dairy heifers

to improve their welfare and future productivity. *Vet J.* 2016. 212:9-14. SA

17. Wood S, **Reyher KK**, Barrett DC. Comparison of visual assessment and heart girth tape

measurement for estimating the weight of cattle in clinical practice. *The Vet J.* 2015.

203:337-38. CA

18. *Eglahagulf A, Dufour S, Dohoo IR*, **Reyher KK**, *Stryhn H*. Survival analysis of clinical mastitis

data using a nested frailty Cox model fitted as a mixed-effects Poisson model. *Prev Vet Med.*

2014. 117):456-68. CA

19. Steele M, Crabb NP, Moore LJ, **Reyher KK**, Baillie S, Eisler MC. Online tools for teaching

evidence-based veterinary medicine. *J Vet Med Ed.* 2013. 40:272-77. MCA

20. **Reyher KK**, *Dohoo IR, Muckle CA*. Evaluation of clustering of new intramammary infections

in the bovine udder, including the impact of location of previous infections, herd prevalence

and somatic cell count on their development” *J Dairy Sci.* 2013. 96:219-33. LA

21. **Reyher KK**, *Haine D, Dohoo IR, Revie CW*. Examining the impact of intramammary

Infections with minor mastitis pathogens on the acquisition of new intramammary infections

with major mastitis pathogens – a systematic review and meta-analysis. *J Dairy Sci.* 2012.

95:6483-502. LA

22. **Reyher KK**, *Dohoo IR, Scholl DT, Keefe GP*. Evaluation of minor pathogen intramammary

infection, susceptibility parameters and somatic cell counts on the development of new

intramammary infections with major mastitis pathogens. *J Dairy Sci.* 2012. 95:3766-80. LA

23. *Dufour S, Dohoo IR, Barkema HW, DesCôteaux L, DeVries TJ*, **Reyher KK**, *Roy J-P, Stryhn H,*

*Scholl DT*. Manageable risk factors associated with the lactational incidence, elimination and

prevalence of *Staphylococcus aureus* intramammary infections in dairy cows. *J Dairy Sci*. 2012.

95:1283-1300. MCA

24. *Dufour S, Dohoo IR, Barkema HW, DesCôteaux L, DeVries TJ*, **Reyher KK**, *Roy J-P, Scholl DT*.

Coagulase-negative staphylococci intramammary infection epidemiology in dairy cattle and

impact of bacteriological culture misclassification. *J Dairy Sci.* 2012. 95:3110-24. MCA

25. **Reyher KK**, *Dohoo IR*. Diagnosing Intramammary Infections: Evaluation of composite milk

samples to detect bovine intramammary infections” *J Dairy Sci.* 2011. 94: 3387-96. LA

26. **Reyher KK,** *Dufour S, Barkema HW, DesCôteaux L, DeVries TJ, Dohoo IR, Keefe GP, Roy J-P,*

*Scholl DT*. The National Cohort of Dairy Farms – A data collection platform for mastitis

research in Canada. *J Dairy Sci.* 2011. 94:1616-26. LA

Chapters in Edited Books

Barrett DC, **Reyher KK**, Turner A, Tisdall DA. Responsible and sustainable use of medicines in

dairy herd health. 2017. 533-550. In: Webster, J. (ed.) Achieving sustainable production of milk

Volume 3: Dairy herd management and welfare, Burleigh Dodds Science Publishing,

Cambridge, UK (ISBN: 978 1 78676 052 4; [www.bdspublishing.com)](about:blank)

Official Reports

1. Capper J, **Reyher KK**, Massey JG, Adams R, Barrett DC. Quantifying, benchmarking and

rationalising farm medicines use in the beef industry. *AHDB Report.* 2019.

2. Buller HJ, Hinchcliffe S, Hockenhull J, Barrett DC, **Reyher KK**, Butterworth A, Heath C.

Systematic review and social research to further understanding of current practice in the

context of using antimicrobials in livestock farming and to inform appropriate interventions to

reduce antimicrobial resistance within the livestock sector. *Defra Report*. 2015.

<http://randd.defra.gov.uk/Document.aspx?Document=12817_ReportO00558Final.pdf>

Conference Contributions (refereed)

94 international and national conference contributions (see Appendix for more details)

Academic Journal Papers (not refereed)

Wood S, **Reyher KK**, Barrett DC. Weight estimation in cattle. C*attle Prac.* 2014. 22:88

Conference Contributions (not refereed)

5 international and national conference contributions (see Appendix for more details)

Professional journal papers (refereed)

Tisdall D, **Reyher KK**, Barrett DC. Using medicines audits to monitor and drive responsible

AM use in farm animal veterinary practice” M2 magazine on milk quality, spring edition, 2015

Review Articles

1. Invited editorial – **Reyher KK**, “Mastitis management – increasing the uptake of

veterinary advice” *Vet Rec*. 2016. 178:446-8. doi:10.1136/vr.i2235. LA

2. Biggs AP, Barrett DC, Bradley AJ, Green MJ, **Reyher KK**, Zadoks R. Antibiotic dry cow therapy:

where next? *Vet Rec.* 2016. 178:93-4. MCA

Other Publications (selected, more details in Appendix)

**Evidence syntheses – Critically Appraised Topics (not refereed)**

1. O’Connor L, **Reyher KK**, Place E, Abou-Zahr T. What is an appropriate dose of voriconazole

for treatment of aspergillosis in African grey parrots? *Vet Rec.* 2018. 183:131-32. CA

2. Phypers C, **Reyher KK**, Place E, Barnard N, Foster A. Is treating anal furunculosis with

ciclosporin 5 mg/kg once daily the optimal dosing schedule? *Vet Rec.* 2017. 180:199-202. SA

3. Turner AE, Rees G, Barrett DC, **Reyher KK.** Does inclusion of glutamine in oral rehydration

solutions improve recovery from mild to moderate diarrhoea in pre-weaned calves? *Vet Rec.*

2016. 179:283-84. SA

4. Rees G, Barrett DC, Boocock J, Dickinson M, Johnson C, Mitchell T, Place E, **Reyher KK.**

Surgical management of left displaced abomasum in dairy cattle. *Vet Rec.* 2016. 178:118-19. SA

**Web publications -** EBVMLearning.org-An online learning platform for EBVM

Media Contributions

Quoted as **thought leader on AMR** in **The Guardian**, ‘Superbug hotspots emerging in farms across globe’; September 2019

**BBC Radio 4 Costing the Earth** – coverage of AMR Force research

Channel 4 Dispatches – coverage of AMR Force research

Times Higher Education – special features on FARMS-SAFE AMR grant

**BBC Breakfast** - live television commenting on use of antimicrobials in livestock; October 2017

**BBC Radio 4 Farming Today** - radio interviews discussing: participatory AMR policy making with farmers, January 2017; antimicrobial use in livestock, December 2017

One of 3 expert scientist panel members for **Science Media Centre briefing on AMR** in agriculture – Wellcome Collection, London; January 17, 2017

**BBC Points West** – television appearance commenting on AMR Force research and use of antimicrobials in livestock, December 2017

Wide coverage of AMR Force research, including **Thomson Reuters Foundation**, **Food and Agriculture Organisation** video, various publications featured in farming and veterinary press (Farmers Weekly, Farmers Guardian, Home Farmer, Scotsman) and communications research (Canadian Vet News, American College of Veterinary Internal Medicine)

Impact of research

My group’s communications research has received extensive recognition, having been incorporated into **international and national CPD by 10 organisations**. We were the **first group in the world** to research Motivational Interviewing for its application to the veterinary profession and have been asked to participate in further projects with groups in Sweden and Canada, addressing knowledge gaps about providing succinct methodology for veterinarians to improve communication. Our work has had an impact throughout Europe, North America, Australasia and Africa and the **mention of MI in the veterinary sphere is directly linked to UoB**.

The AMR Force, led by myself, in the 5 years since its inception has become the **foremost veterinary AMR research group** in the UK and is internationally recognized and lauded. Our work has had profound impact, inspiring change in antimicrobial use on farms and in veterinary prescribing practice through intensive collaboration and dialogue with suppliers, retailers, veterinarians, software development companies, livestock farmers and the livestock industry, and government agencies. Our **REF Impact Case** entitled ‘Changing Policy, Behaviour and Practice on Responsible Antimicrobial Use Across the Veterinary Profession and Livestock Industries’ is expected to garner **4 stars**. Specifically, we have made lasting impacts in:

* ***Changing prescribing practice of veterinarians*** - achieving dramatic changes in prescribing and influencing national policies on antimicrobial use;
* ***Changing husbandry practices and medicine use of farmers*** through improved understanding, AMS policy development and developing benchmarking systems for antimicrobial use that **are now national policy and used internationally**;
* ***Increasing attention for AMU/AMR in policy & research;*** I personally advise various policy-making bodies (Defra, Public Health England, RUMA VMD) about ongoing AMR research; and
* ***Increasing understanding and awareness of the use of antimicrobials and AMR on farms*** by continuing and wide-reaching research on associations between antimicrobial use and resistance, transmission routes & engagement with numerous bodies to disseminate this work.

**ii) Forthcoming publications**

**iii) Research grants** – total research income (2013-2019) **£10.14M (£3.56M for BVS)**

**From International and National Funders** (selected – 5 more in Appendix)

|  |  |  |
| --- | --- | --- |
| **Period** | Source; Title of Funded Project;  PI then Co-Is in order (% leadership contribution by KK Reyher) | **Amount**  **awarded** |
| 2020-2024 | **Medical Research Foundation AMR Cohort/Langford Trust;** Hobby farming:  human-animal intimacies, disease management & AMR on smallholder farms  **Reyher KK**, Buller HJ (60%) | £115,700 |
| 2019-2022 | **DoHSC, administered by BBSRC-NERC-CONICET;** FARMS-SAFE: Future-proofing Antibacterial resistance Risk Management: Surveillance and Stewardship in the Argentinian Farming Environment  **Reyher KK**, Avison MB, Escobar MP, Demeritt D (60%) | £1.21M/649,399 for BVS |
| 2018-2022 | **Medical Research Foundation AMR Cohort;** Herd health planning and the management of antimicrobials in livestock systems  Buller HB, **Reyher KK** (40%) | £115,700 |
| 2018-2022 | **Medical Research Foundation AMR Cohort;** Reducing AMR on dairy farms  Avison MB, **Reyher KK** (40%) | £115,700 |
| 2019-2021 | **Welsh Government Rural Development Programme;** Reducing the use of antimicrobials in Welsh agriculture  Welsh Lamb & Beef Producers Ltd, Iechyd Da Ltd, **Reyher KK**, Rees G (10%) | £529,000/£283,465 for BVS |
| 2019-2020 | **RCVS Knowledge;** EBVM Learning Project II & III  Baillie S, **Reyher KK** *et al.* (20 other international collaborators) (5%) | £24,720&£24350 |
| 2018  – 2021 | **MRC AMR Global Development Award**; One Health drivers of antibacterial resistance in Thailand  Avison MB, **Reyher KK,** Buller HJ, Lambert H, Feil E, Turner K, Pitchforth E, Mongkolsuk S, Thamlikitkul V, Singer A, e*t al.* (4 other collaborators) (10%) | £3.3M/ £235,000 for BVS |
| 2018-2022 | **Medical Research Foundation AMR Cohort;** Chasing the transmission of AMR plasmids between farms and local communities  Avison MB, **Reyher KK**, Williams M (40%) | £115,200 |
| 2018 | **Agriculture and Horticulture Development Board (AHDB) Beef & Lamb**; Benchmarking cattle medicine use at farm level  **Reyher KK**, Barrett DC & Capper JL (**PI**-60%) | £46,524 |
| 2017  – 2021 | **ESRC**; Diagnostic innovation & livestock (DIAL): towards more effective and sustainable applications of antibiotics in livestock farming  Buller HJ, **Reyher KK**, Hinchliffe S, Tait J, Bruce A, Barrett DC(**UoB PI**-40%) | £1.75M/ £557,706 for BVS |
| 2017  – 2018 | **MRC AMR Global Development Award**; One Health drivers of antibacterial resistance in Thailand  Avison MB, Mongkolsuk S, MacGowan A, Thamlikitkul V, **Reyher KK,** Buller H, Lambert H, Singer A, e*t al.* (24 other collaborators) (5%) | £87,820/ £1595 for BVS |
| 2016  – 2019 | **NERC/MRC/BBSRC**; Acquisition & selection of antibiotic resistance in companion and farmed animals & implications for transmission  Avison MB, MacGowan A, Barrett DC, **Reyher KK**, Cogan T, Casey R, Tasker S, Turner K, May M (**BVS PI**-40%) | £1.51M/ £651,029 for BVS |
| 2016  – 2019 | Formas (Swedish Funder); Motivational Interviewing as a means to decrease antimicrobial drug use in animal production Svensson C, Emanuelson U, Forsberg L & **Reyher KK** (**UoB PI**-20%) | 2,584,000Sk/ £42,470 for BVS |
| 2016  – 2019 | **AHDB Dairy**; Reducing use of veterinary medicines through farmer learning groups  Main DCJ, **Reyher KK**, Buller HJ & van Dijk L (**Took over as PI**-60%) | £73,577 |
| 2015  – 2018 | Zoetis; Impact of Rispoval RS+PI3 intranasal on long-term productivity in dairy calves Bazeley K, Barrett DC & **Reyher KK** (**UoB PI**-30%) | £105,820/£14,460 for BVS |
| 2015 | Defra; Systematic review & social research to further understanding of current practice in the context of using antimicrobials in livestock farming & inform appropriate interventions to reduce AMR within the livestock sector Buller HJ, Hinchliffe S, Barrett DC, **Reyher KK**, Butterworth A, Hockenhull J & Heath J (**UoB PI**-20%) | £47,700/£10,532 for BVS |
| 2015 | **RCVS Knowledge;** Establishing a Global Teaching and Learning Resource for Evidence-based Veterinary Medicine Teaching  **Reyher KK** *et al.* (19 international collaborators) | £28,500 |
|  |  |  |
| **From Local and Institutional Funders** (selected – 11 more in Appendix) | | |
| 2018-2021 | **BVS;** Answering key questions around One Health antimicrobial resistance using a new livestock research data platform  Dowsey A, **Reyher KK** (50%) | £47,518 |
| 2018-2019 | **Gloucestershire Prevention and Self Care Board;** One Health AMR Communications campaign and competition for Gloucestershire. McConalogue D, Brown C, MacDonald S, Stevens B, Myers B, Eley C, **Reyher KK**, Bucknell L, Powell V (10%) | £20,000 |
| 2018 | **PolicyBristol**; Shaping future UK Agriculture Policy  **Reyher KK**, Mullan S, Main DCJ (40%) | £2,970 |
| 2017- 2018 | **UoB Strategic Research Fund award**; Towards a flexible and multiuse databank for AMR research  **Reyher KK**, Dowsey A, Mills H (40%) | £25,176 |
| 2017- 2020 | BVS; Designing & evaluating multiuse databank for veterinary AMR researchDowsey A, Reyher KK, Bullock S (40%) | £58,251 |

**iv) Indications of external recognition**

Membership of Editorial boards - Editor, **Veterinary Medicine and Surgery** (2015–present); asked to guest edit a special issue of **Animals**

External examiner(PhD): Nottingham University, Harper Adams University (declined due to family commitments); (Masters Vet Med): University of Glasgow (declined due to family commitments)

Grant reviewerfor UKRI Future Leaders Fellows 2020-present; UKRI Strength in Places Fund 2019-present; MRC 2018-present; Dogs Trust 2018-present; AHRC 2017-present; BBSRC 2012–present

- Personal invitation to review - **Bloomsbury Science Economics & Technology** programme (LSHTM, LSE, SOAS, RVC) – Knowledge Exchange Platform (declined)

- Personal invitation to review-**Netherlands Organisation for Health Research and Development**

**-** UoB member of GW4 Management Board, GW4 Strategic Alliance in AMR (2020)

- Personal invitation to National Mastitis Council’s 2020 annual meeting’s Program Committee

- Personal invitation to review **Natural Sciences and Engineering Research Council of Canada**’s Discovery Frontiers Initiative AMR in the Environment (declined as collaborator on a bid)

- Personal invitation to review University of Guelph, Canada $76.7M research, training and innovation initiative funded by **Canada First Research Excellence Fund** (declined)

- Personal invitation to sit on Board of Directors, National Mastitis Council, USA (declined)

- International sponsor for Dr. Clair Firth, visiting scholar working with AMR Force funded through Med-Vet-Net Association & Univ of Vet Med Vienna, **Austria**, February 2018

- Personal invitation from **UK Chief Medical and Veterinary Officers** to speak to key leaders in human and veterinary medicine on the challenges of AMR (May 2017)

- Personal invitation from PREPARE-VET – **PREscriber Perspectives on Antibiotic use and Resistance Education in Europe – VETerinary medicine** to be the Veterinary School coordinator for BVS for the European Society of Clinical Microbiology and Infectious Diseases (2017)

- Personal invitation to deliver CPD to **Association of Veterinary Surgeons Practising in Northern Ireland** annual meeting (October 2017 – declined due to family commitments)

- Personal invitation to deliver CPD to **Danish Cattle Veterinarians Annual Conference** (KVÆGKONFERENCE) (August 2017 – declined due to family commitments)

Invitations to advise on an international level (since last promotion – 2 more in Appendix)

**2019: Dairy Health Management Continuing Education Programme**, Canada’s premiere training programme for dairy veterinarians; invited headline presenter as expert on AMR

**2018: International Workshop on Antibiotic Use**; invited speaker as UK expert on AMR; Amersfoort, Netherlands

**2017/18: UK-Israel ‘Synergy’ Programme - One Health: AMR from mechanisms to interdisciplinary solutions**; invited keynote on AMR in the veterinary sphere

Invitations to advise on a national level

**2018-present:** Personal invitation to sit on UK’s **Food Industry’s Initiative on Antimicrobials**

**2018:** Invited to advise **Defra AMR Coordination Group** on perceptions of AMU in livestock

**2018:** Contributed to a **Parliamentary Office for Science and Technology** evidence summaries on reduction of AM use in UK agriculture & transmission of AMR between animals and humans

**2018:** Hosted **UK Dairy Science Forum** to advise on AMU, stewardship & resistance in dairy

**2018-present:** Personal invitation to join **UK AMR Diagnostic Collaborative** to consider and respond to issues related to diagnostics as outlined in the O’Neill Review on AMR

**2018: Antibiotics Forum, Co-op Group**, advising on farmer motivation and behaviour across supply chains (declined due to family commitments)

**2017-present: Welsh government and livestock veterinary sector**, advising on AM use, stewardship and AMR for Wales

**2017: National Farmers’ Union Dairy Board**, advising on AMR and industry-centred research

**2016-present: RUMA Scientific Group**, advising the agricultural and food industry alliance promoting responsible use of medicines in farming

**2016-19: Project Advisory Group for AMR Theme 3 grant NE/N019792/1**; Does the potential for AMR selection differ between common UK cattle grazing systems?

**2016:** Personal invitation to sit on the **BCVA Policy on Antimicrobial Usage Working Group**

**2016:** Invited to advise **UK Agriculture Sector Health and Welfare Council, Animal Health and Welfare Board for England** on AMS and AMR in the livestock industries

**2016-present:** Personal invitation to sit on the **UK’s Cattle Health and Welfare Group’s Antimicrobial Usage Data Collection Steering Group**, invited to give regular presentations to the group at quarterly meetings

**2016-present**:Sought after advisor; quarterly research updates for VMD decisions on AM use

**2016-present:** Personal invitation to sit on **AHDB Dairy Mastitis Control Plan Mgmt Group**

**2016: Royal Association of British Dairy Farmers**; personal invitation to assist with survey data collection about farmers’ perceptions of AMR

**2015-present: Veterinary Schools Council AMR Group**; University of Bristol representative

Invited lectures (selected, 18 more in Appendix)

**2020:** Invited keynote on ‘Reservoirs of resistance’, 14th annual **British Society for Antimicrobial Chemotherapy Antimicrobial Resistance Mechanisms** meeting (conference cancelled)

**2020:** Invited keynote on communication, **33rd European Assembly of Establishments for Vet Education Communications pre-meeting workshop** (declined – family commitments)

**2020:** Invited speaker on ‘Interdisciplinary Approaches to Tackling AMR’, **GW4 Crucible** (declined – family commitments)

**2020:** 2-hour keynote session on Motivational Interviewing, 69th annual **National Mastitis Council** meeting, Orlando, Florida

**2019:** Keynote speaker, Communication, **European Bovine Congress**, Netherlands

**2019:** Keynote on antimicrobial prescribing in the UK, **VET19** conference (conference cancelled)

**2019:** Headline presenter, **Dairy Health Management Continuing Education Program** annual meeting, Guelph, Canada; representing leading edge of progressive dairy veterinary medicine

**2019:** Keynote speaker on Social Science of AMR, **International Dairy Federation Mastitis Conference**, Copenhagen, Denmark

**2019:** Invited keynote on Communication, **Bayer Dairy Summit** (declined - family commitments)

**2018:** Invited plenary on AMR, **Journal of Dairy Research/Hannah Dairy Research Foundation** Next Generation Dairying for Scotland (declined due to family commitments)

**2018:** Invited keynote on Women in STEM, **Ada Lovelace Day** event, **University of Birmingham** (declined due to family commitments)

**2018:** Keynote speaker on Social Science of AMR, **Society for Applied Microbiology**

**2018:** Keynote speaker on diagnostic use in animals, **Royal Society of Medicine’s Comparative Medicine Network’s** event on AMR

**2018:** Keynote speaker on AMR in the context of livestock farming systems, **Scottish Environment, Food and Agriculture Research Institutes AMR conference**

**2017:** Invitation from the UK’s Chief Medical and Chief Veterinary Officers to present evidence at a policy meeting on **Promoting One Health & Taking Effective Action to Combat AMR**

**2017:** Keynote speaker on veterinary communication, **British Veterinary Association’s Animal Welfare Foundation’s** annual national Discussion Forum

**2017:** Invited expert speaker about interdisciplinary AMR research, **Interdisciplinary Research & Antimicrobial Resistance Workshop**, hosted by ESRC

**2016: Animal Workshop–Tackling Antimicrobial Resistance**-invited by ESRC as keynote speaker

**2016**: Invited expert speaker by **Food Standards Agency** - Food Retailers, Supply Chains & AMR

**2015: Federation of Infection Societies**-invited talk in specially arranged session at human medical conference on use of antimicrobials in food animal production

**v) Future plans**

I will continue to pursue answers to questions surrounding AMR in the veterinary sphere, particularly around harmonisation and use of data as well as behaviour around responsible use of medicines. I will continue to push back the bounds of interdisciplinary working internationally with the team I have built on **3 different continents** across **industry, academia and government**. I am currently Co-I on a **£200,000 bid to BBSRC** to integrate the AMR work of teams across Argentina. Other specific projects I will pursue are: 1) Expansion of One Health AMR work across international boundaries through GCRF funding sources; 2) Advancing our world-leading AMR database by submitting to **BBSRC/** **Wellcome Trust**, with support already offered by numerous industry and government officials (including **AHDB, the VMD and the Chief Veterinary Officers for the UK, Wales, Scotland and Northern Ireland**); 3) Further advancing veterinary informatics and data analysis to other disease processes, submitting an **Industrial Challenge Strategy Fund** bid alongside the livestock industries especially addressing the ethical and qualitative questions about data ownership and usage, changing the face of data analytics in the veterinary sphere; 4) Continuing to address basic science-related questions around AM usage and AMR, including around the use of AMR data in livestock (Can it be used as a proxy for disease? How is AM use related to vaccination? etc.) to the **BBSRC**. The **REF Impact case** I have developed has been judged the **strongest across BVS**, and I will continue to be involved in national and international efforts to address AMS. Recent projects are just beginning to deliver final results, so my rate of publication will continue to increase; I currently have **7 manuscripts in review** and **6 more in draft phase**. The trajectory of my research will also continue to rise, with publications aimed at Nature Communications, Environmental Microbiology, Journal of Antimicrobial Chemotherapy, etc. I would like to take on increased leadership roles as well, including **Head of Research for BVS,** **Faculty Research Director** or **PVC Research** in coming years.

**vi) Related Administration**

As PI on **multiple grants**, I **manage resources,** including **recruiting and managing personnel**, **authorising finances**, **managing budgets** and completing interim and final **grant reports**. I manage **ethics applications** and **mentor** members of staff (including clinical colleagues) to maximise their research output and career direction. Since joining UoB, I have worked with industry (MSD Ruminant Research Bursaries) to **advise practicing vets conducting research**, championing EBVM and research. I have actively and successfully pursued collaboration with external bodies, many of which have been extremely fruitful and have improved the impact of our work. I am proud to have **brought the concept of a novel, collaborative research meeting (European Mastitis Research Workers)** across from North America, welcoming delegates from **11 countries** to share in intimate discussions about early, collaborative research ideas and shaping the face of farm animal epidemiological research internationally.

**ACADEMIC LEADERSHIP & CITIZENSHIP**

**i) Academic leadership in the discipline**

My 3 strands of expertise – veterinary epidemiology arising from applied clinical research (especially in AMR and veterinary communications) and held together by strong leadership in the field of EBVM – have allowed me to **lead the way internationally in the veterinary and One Health sciences**. I am regularly invited to speak at national and international fora about these 3 strands. The AMR Force group I conceived in 2014 and lead has won **4 national and local awards**, recognising the enormous impact our research has already had across the discipline. My communications research group continues to grow and is increasingly incorporated into veterinary CPD internationally, being sought after and presented in Australia, Finland, Germany, the Netherlands, New Zealand, Rwanda, the USA and across the UK.I have lectured at **41 international and national veterinary conferences**, being invited to deliver work in Australia, Belgium, Canada, Denmark, Ireland, Japan, New Zealand and the USA, and my collaborative work has also been presented by colleagues at conferences in Croatia, Germany, Greece, Spain, the Netherlands and the USA. I have authored texts (*e.g.* professional journal papers, review articles, policy research documents and online learning tools), often stewarding internationally recognised projects with large, diverse teams. I have established an AMR Force website (<https://www.bristol.ac.uk/vetscience/research/main/>), which not only provides information for members of our team but is also outward-facing, providing information to external potential collaborators, funders and students. I am passionate about encouraging women in STEM subjects and for 5 years have continuously mentored and learned from a group of women more junior than myself as well as those who have progressed in their careers at UoB.

**ii) Academic leadership in the University**

School/Faculty/University committees & working groups (selected, 5 more in Appendix)

2018–present: **Elizabeth Blackwell AMR Theme** Steering Group member

2017–present: **Population Health Strategic Institute** Steering Group member

2016–2017: **Faculty Promotions Committee** Reserve non-Professorial member

Positions of responsibility within the School

2017–present: **BVS Population Health Theme Lead**, one of two research themes for BVS

2014–present: **AMR Force Group Lead**

2014–present: **BVS Population Health Research Group Lead**

2012–present: **Theme Lead, Epidemiology, Statistics and Evidence-based Veterinary Medicine Embedded Theme, BVSc Years 1-5**

Mentoring and Staff Development Activity

2014–present: **UoB Women’s STEM Mentoring Scheme** mentor to Lecturers, Research Fellows; 2014–2018: **UoB Women’s STEM Mentoring Scheme** mentee in Professorial Group

2012-present: **Research Mentor** for BVS, perform **Staff Review & Development**

2012-present: **BVS Undergraduate tutor** for BVSc 3, 4 and 5 and AGEP students

Other Roles (more details in Appendix)

**iii) Professional activities outside the university**

Consultancies - 2012-2018 - annual consultancy, **MSD Animal Health** pharmaceuticals, advising on/assisting with **practitioner-led clinical research**, **Ruminant Research Bursary** programme

## Current memberships of prestigious/professional Societies

Evidence-based Veterinary Medical Association since 2015; National Mastitis Council 2014; Society for Vet Epidemiology and Preventive Medicine, since 2014; British Cattle Veterinary Association 2002-2006, since 2012; RCVS, American Veterinary Medical Association since 2002

Organisation of major conferences

**2015–present:** **Co-coordinator of the European Mastitis Research Workers Conference**.Organisation of scientific programme, social events, point of contact for invited speakers

**2015:** **Co-coordinator of the South West Epidemiology, Ecology and Evolution Team Meeting** ‘Zoonosis and Antimicrobial Resistance: Interactions between humans, animals & environment’

## Regular reviewing for journals

Ad hoc refereeing of the following journals: Animals, BMC Microbiology, BMC Veterinary Research, Canadian Journal of Microbiology, Canadian Journal of Veterinary Research, Canadian Veterinary Journal, In Practice, Journal of Animal Science, Journal of Antimicrobial Chemotherapy, Journal of Dairy Research, Journal of Dairy Science, Livestock Science, Microbial Drug Resistance, Preventive Veterinary Medicine, New Zealand Veterinary Journal, PlosONE, Transboundary and Emerging Diseases, The Veterinary Journal, The Veterinary Record, Vaccines

Industrial liaison

I work extremely closely with a number of industrial bodies, communicating results of research regularly and helping them shape policy across a number of fronts (see Impact of Research).

**iv) Contributions to Society**

-Active member of **Clevedon Baptist Church** since 2013, including Mosaic church leadership group, Welcome team lead, worship team, leadership mentor, and new members coordinator

-Founding member of **Clevedon Churches Refugee Support Group**

-Involved with **local school** activities, workshops and talks (see public engagement above)

**vi) Good citizenship**

I try to model a **well-rounded, passionate and driven** member of staff for my colleagues, collaborators and students. I have shown myself to be a **good, willing and enthusiastic citizen** for the University, and play an integral part in the drive the BVS has to be the leading UK veterinary school with an outstanding reputation for research, teaching and clinical activities. My ability to build a **strong and effective interdisciplinary team** shows I am a **true collaborator** and **team player**. I regularly participate in committee and staff meetings and help with outward-facing events (*e.g.* Open Days, VetQuest, hosting a variety of visitors – government, industry, funders, etc.). I ensure that teaching and pastoral care of my students is the done to my utmost, and spearhead a cross-disciplinary weekly ‘Farm Animal Discussion Group’ bringing together researchers, clinicians and. Sensing that we needed more overlap between the different sections of our group, I organise regular meetings between our Farm Animal Research, Teaching and Clinical leads, and I have personally organised a Farm Animal Away Day for our team for the last 6 years, contributing substantially to the feeling of collegiality and cohesion making our group an oft-cited exemplar for good practice and collaboration. I was selected as a ‘Wellbeing Wonder’ in BVS in 2019. I also encourage EBVM by regularly supervising undergraduate students (both BVSc and AWB BSc) for clinical research and research-related projects; in the last 5 years I have supervised **12 undergraduate clinical research and research-related projects**.