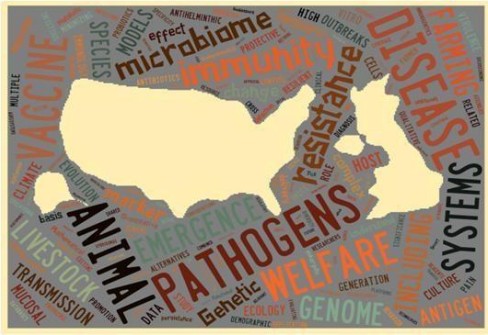
Aligning UK-US Efforts & Resources: Antimicrobial Resistance & Animal Health

SIN worked with the Biotechnology & Biological Sciences Research Council, Research Councils UK in the US, and USDA's National Institute of Food and Agriculture (NIFA), resulting in the identification of mutual research needs, funding announcements to increase collaboration, and enhanced alignment of UK-US priorities in animal vaccinology, alternatives to antimicrobials in livestock, animal pathogens, & animal welfare.



Antimicrobial Resistance (AMR) in Animals

The global emergence and spread of AMR in humans may be linked with AMR found in the environment and in animals. Antimicrobial drugs are being used to treat both food animals and humans and are often added to animal feeds as a growth promoter. Repeated application of the same types of antimicrobial drugs can result in the proliferation of resistant microbial populations. Therefore, there is urgent need to develop sustainable, effective, and safe alternatives for the control of resistant microbe abundance, behaviour, and transmission.

Harnessing International Expertise

SIN and the BBSRC developed a joint bid to support a targeted, high-level workshop in Washington, D.C. involving government and research representatives from the US and UK with NIFA providing USDA co-funding. The event included high-level support and attendance from Dr. Sonny Ramaswamy, Director,NIFA and Jackie Hunter, the (now former) Chief Executive of BBSRC. The workshop considered needs in next generation vaccines, alternatives to antimicrobials in livestock, and other research challenges of shared concern. The immediate outputs were a report with recommendations for joint research needing UK-US support[1], and a second pop-up workshop was catalysed in the UK on Bioinformatics for vaccinology[2].

Outcomes – Maximising Resources

As a result, the BBSRC highlighted Animal Health, Disease and Welfare/Wellbeing as an area of focus in the 2015 US Partnering Awards – issuing over £300,000 to increase joint UK-US research on the topic[3]. Following on a specific recommendation from our workshop report, the NIFA's Agriculture and Food Research Initiative Foundational Animal Health and Disease program has a new priority to solicit proposals to fund the development of a "US Animal Vaccinology Research Coordination Network (RCN)"[4] inspired by the UK Veterinary Vaccinology Research Network. This will lead to stronger existing partnerships & develop new ones that advance critical knowledge and facilitate better coordination between UK and US efforts.

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[1] https://nifa.usda.gov/resource/us-uk-funders-and-researchers-workshop-report
[2] http://www.vetvaccnet.ac.uk/events/vetvaccnet-bioinformatics-workshop
[3] http://www.bbsrc.ac.uk/news/people-skills-training/2016/160323-n-bbsrc-makes-24-new-international-awards/
[4] https://nifa.usda.gov/funding-opportunity/agriculture-and-food-research-initiative-foundational-program