VETBIONET

Veterinary Bio-contained facility Network for excellence in animal infectiology research and experimentation

Deliverable D5.3

Organization of 1 Summer Course at EAAP premises

Due date of deliverable: M8

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Organisation name: EAAP

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Classified, as referred to in Commission Decision 2001/844/EC	

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°731014

Summary

Objectives

The objective of the Summer School course was to develop an online short course programme that focused on the training needs of inexperienced and Early Career Research who conduct research directly in animal infectious disease or associated fields but who do not have in-depth knowledge and notable experience in developing their own research programmes. The course specifically focused on experimental design, 3Rs and research ethics as important aspects of good research practice in the field of animal infectious disease. This event was also conducted to develop and review this training as a post-COVID model for online training that could be used in the future to support inexperienced and Early Career Researcher Training in the field of animal infectious disease, and beyond.

Rationale

The Summer School remit and rationale was to create a course that set out good practice approaches, principles of good experimental design and ethical standards and encourage reflection on these, as well as setting out ways in which the 3Rs can be embedded in research projects by design. This course responds to and complements current policy emphasis on responsible research conduct that has been championed by the European Commission and organizations such as All European Academies (ALLEA). The course was designed to raise awareness, provide new knowledge as well as building on existing knowledge, to develop skills and to act as a space to support reflective discussion between researchers demonstrating the value of collaboration and open science approaches. The focus of the Summer School was to highlight the value of doing research in the area of infectious disease through the lens of sound experimental design and ethics as means of supporting good practice standards, but also to support inexperienced and Early Career Researchers as they develop their own research ideas and research applications. The opportunity to develop new research projects was also directly linked during the course to opportunities available through VetBioNet's TNA provision.

The audience for this training were inexperienced and early career researchers who were conducting research within the field and who were, at this stage of their careers, developing their own research projects, being responsible for project experimental design and applying for funding to conduct further work. The format of the workshop was set up to allow interaction and exchange between the tutors and the participants and across the participants. This required limiting the number of participants enabling case studies to be discussed and group exercises to be conducted, so that participants could not only improve their knowledge, but apply that knowledge in dialogue with their peers to develop important skills of ethical analysis and experimental design.

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Outcomes

Feedback from the participants highlighted the value of the event as well as highlighting ways in which this Training Model could be further developed. The organisers and tutors identified notable value in developing and delivering this type of training using a remote online platform. The level of overall interest in the Summer School, with the School being fully booked within 48 hours of the announcement, highlights the significant demand for this type of training. This work has provided a model for further inexperienced and Early Career Researcher Training and the UNOTT Summer School organisers will seek further opportunities to run this format of 'Summer School'

Team involved

Summer School Organisers and Training Coordinators:

- Kate Millar and Michelle Hudson-Shore, University of Nottingham (UNOTT);
- Federico Liguori and other Staff, the European Federation of Animal Science (EAAP)

Tutors and Presenters:

- Kate Millar and Michelle Hudson-Shore, University of Nottingham (UNOTT)
- Federico Liguori and other Staff at EAAP
- Hugh Simmons, Animal and Plant Health Agency (APHA)
- Frederic Lantier and Maria-Isabel Thoulouze, Institut National de Recherche en Agriculture, Alimentation et Environnement (INRAE)
- Norbert Stockhofe-Zurwieden, Wageningen University & Research and Wageningen Bioveterinary Research (WBVR).
- Dr Derek Fry, University of Manchester, UK
- Dr Adrian Smith, Norecopa, Norway

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Deliverable D5.3: Organization of 1 Summer Course at EAAP premises

VETBIONET SUMMER SCHOOL: ANIMAL INFECTIOUS DISEASE RESEARCH - GOOD PRACTICE APPROACHES, ETHICS & 3RS BY DESIGN

12-14 July 2021

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°731014

1.1 Course Introduction

This report sets out the overall aim and format of the VetBioNet 2021 Summer School, "Animal Infectious Disease Research – Good Practice Approaches, Ethics, and 3Rs by Design" organised in collaboration by the University of Nottingham and the European Federation of Animal Science (EAAP). This report sets out details of the remit of the training, provides details of the programme and collates the daily and overall feedback received from participants. This feedback provides useful insights from participants' perspective on their experience of the training. Participant feedback was collected in order to review this model of training, and to further develop and improve future training, and to demonstrate the potential value this type of event has in the programme of VetBioNet training for early career scientists.

The VetBioNet Summer School was delivered in association with University of Nottingham and the European Federation of Animal Science (EAAP) and held online between 12-14 July 2021. The course was attended by 13 participants from the UK, Spain, Ethiopia, France, Belgium, Libya and Sweden. There were also a variety of nationalities represented. The course was run over three days and comprised of 19 sessions with a mixture of lectures, interactive sessions which included polling, case studies group working and group exercises. This structure provided a mixture of teaching methods to support different learning approaches. Lecture PowerPoint slides, case study material and exercise material were provided to all participants via an online file-sharing folder so the materials could be used for in-course activities and for participants future learning.

This report first provides a summary of the background and aims of the Summer School structure and then present the overall structure of the training. This is then followed by a presentation of the feedback received from participants on the course, including the daily surveys and the overall course feedback, as well as reflections on the role and value of Summer School Training in the field of Animal Infectious Disease Research.

To support reflections on the experience of the Summer School the full set of feedback is provided in Annex 2 - 5

1.2 Aim and format of the Summer School Course

The overarching aim of the Summer School course was to develop an online short course programme that focused on the training needs of inexperienced and Early Career Research who conduct research directly in animal infectious disease or associated fields but who do not have in-depth knowledge and notable experience in developing their own research programmes. The course specifically focused on experimental design, 3Rs and research ethics as important aspects of good research practice in the field of animal infectious disease.

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This event was also conducted to develop and review this type of training approach as a post-COVID model for online training that could be used in the future to support inexperienced and Early Career Researcher Training in the field of animal infectious disease, and beyond.

The Summer School remit and rationale was to create a course that set out good practice approaches, principles of good experimental design and ethical standards and encourage reflection on these, as well as setting out ways in which the 3Rs can be embedded in research projects by design. This course responds to and complements current policy emphasis on responsible research conduct that has been championed by the European Commission and organizations such as All European Academies (ALLEA). The course was designed to raise awareness, provide new knowledge as well as building on existing knowledge, to develop skills and to act as a space to support reflective discussion between researchers, demonstrating the value of collaboration and open science approaches. The focus of the Summer School was to highlight the value of doing research in the area of animal infectious disease through the lens of sound experimental design and ethics as means of supporting good practice standards, but also to support inexperienced and Early Career Researchers as they develop their own research ideas and research applications. This opportunity to develop new research projects was also directly linked during the course to opportunities available through VetBioNet's TNA provision.

The audience for this training were inexperienced and early career researchers who were conducting research within the field and who were, at this stage of their careers, developing their own research projects, being responsible for project experimental design and applying for funding to conduct further work.

1.3 Course Timing, Programme, Advertising and Participants

Course Timing

This course was originally planned earlier in the VetBioNet project (M8) and as an in-person Summer School. Originally the University of Nottingham were not involved in the Summer School as they already had defined responsibilities to other WP5 tasks, specifically to deliver Professional Accredited training in the 3Rs and Experimental Design which was delivered in January 2019 (See Deliverable 5.4).

The Summer School was originally delayed by EAAP in order to define a clear remit for the Course and to find a suitable venue and partner who could develop the content of the training. However, the planning for the delivery of the Summer School in 2020 was affected by the COVID-19 pandemic and so the Course was forced to be postponed and further scheduling was undermined due to the need to wait for an improvement and stabilization of the COVID epidemiological situation.

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Recognising that the travel restrictions would not improve quickly enough to run the event in person, the EAAP discussed other Summer School options with INRAE and UNOTT partners. UNOTT offered their additional support to VetBioNet training activities and proposed a new online Summer School that would focus on ""Animal Infectious Disease Research – Good Practice Approaches, Ethics, and 3Rs by Design" as both VetBioNet partners and experience with other training activities indicated this was an important set of topics for researchers working within the animal infectious disease fields. UNOTT were also keen to examine the value of the use of online training approaches and see if the development of this course could be a model for other training. Therefore, due to COVID-19 conditions still present in 2021, the course was reformulated and developed in 2021 as a new collaboration between EAAP and UNOTT with support from INRAE.

The Course was planned for an appropriate time for potential students and tutors, therefore the date was confirmed as July 2021. The course was delivered on Zoom as it provides a good platform for interaction due to the breakout group facility. On this occasion the number of participants needed to be smaller than a face-to-face meeting to allow for group work and discussion with tutors. Therefore, the number of participants was set at 18 participants and the format of the workshop was designed to allow interaction and exchange between the tutors and the participants as well as across the participants.

Course Programme

The agenda is included below and the details of the joining instructions are set out in Annex 7. All of these materials were sent to the attendees one week before the start of the course. It is important that there is a clear academic / teaching flow between the sessions as such there needs to be a least one, preferably two, tutors who have a clear overview of the course and can ensure the overarching objectives are being delivered. This role was delivered by Michelle Hudson-Shore and Kate Millar. The details of the full team and tutees involved in the Course are include below:

Teams involved

Summer School Organisers and Training Coordinators:

- Prof Kate Millar and Dr Michelle Hudson-Shore, University of Nottingham (UNOTT);
- Federico Liguori and other Staff the European Federation of Animal Science (EAAP)

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Session	Time (CEST)	Session Title and Content	Lead Tutor	Supporting Tutor
Monday 12 July 2021		**Applying Good Practice**		
1	10.15- 11.00	• Welcome and Introductions • Why good practice in research planning is important	KM / MT	MHS
2	11.00- 12.00	The value of infectious disease research – What does VetBioNet have to offer?	FL	KM
		5 minute Comfort Break		
3	12.05- 13.00	Infectious Disease Research Case Study	ML	KM
	13.00- 13.45	Lunch (social space available)		
4	13.45- 14.45	Good Practice in Research Planning and 3Rs application – What does it mean to be a Responsible Researcher?	KM	MHS
		5 minute Comfort Break		
5	14.50- 15.50	Defining and Implementing the 3Rs	MHS	KM
6	15.50- 16.00	Summary of Day 1	KM	MHS
Tuesday 13 July 2021		**Approaches to Research**		
7	09.15- 09.30	Welcome	KM	MHS
8	09.30- 11.00	Biosecurity and Biosafety in Containment Animal Facilities and Laboratories	HS	KM/MHS
	11.00- 11.15	Break		
9	11.15- 12.45	Principles of Experimental Design Part 1	DF	KM/MHS
	12.45- 13.30	Lunch (social space available)		
10	13.30- 15.00	Principles of Experimental Design Part 2	DF	MHS
	15.00- 15.15	Break		
11	15.15- 16.15	Principles of Experimental Design Part 3	DF	KM
12	16.15- 16.30	Summary of Day 2	KM	MHS
Wednesday 14 July		**Design and Ethics in Project and Grant Proposals**		
13	09.15- 09.30	Welcome	KM	MHS
14	09.30- 10.00	Ethics in Research Proposals	KM	MHS
15	10.00- 11.00	Can we improve both our scientific output and animal welfare? The PREPARE guidelines for planning animal studies.	AS	MHS/KM
	11.00- 11.15	Break		
16	11.15- 12.15	Ethics by Design	KM	MHS
	12.15- 13.00	Lunch (social space available)		
17	13.00- 13.30	3Rs Tools and Resources: Resources from VetBioNet	MHS	KM
		5 minute Comfort Break		
18	13.35- 14.35	How to make the most of Access to Animal Infectious Disease Research Infrastructure (TNA opportunities in VetBioNet)	NSZ	KM
19	14.35- 14.50	Summary and Close	KM	MHS

Tutors: Prof. Kate Millar **[KM]**, University of Nottingham; Dr Michelle Hudson-Shore **[MHS]**, University of Nottingham; Dr Frederic Lantier **[FL]**, INRAE; Dr Maria-Isabel Thoulouze **[MT]**, INRAE; Dr Hugh Simmons **[HS]**, APHA; Dr Derek Fry **[DF]**, University of Manchester; Prof. Adrian Smith **[AS]**, norecopa; Dr Norbert Stockhofe-Zurwieden **[NSZ]**, Wageningen University & Research and Wageningen Bioveterinary Research (WBVR).

Tutors and Presenters:

- Prof Kate Millar and Dr Michelle Hudson-Shore, University of Nottingham (UNOTT)
- Federico Liguori and other Staff at EAAP

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- Dr Hugh Simmons, ANIMAL AND PLANT HEALTH AGENCY (APHA)
- Dr Frederic Lantier and Dr Maria-Isabel Thoulouze, INSTITUT NATIONAL DE RECHERCHE EN AGRICULTURE, ALIMENTATION ET ENVIRONNEMENT (INRAE)
- Dr Norbert Stockhofe-Zurwieden, Wageningen University & Research and Wageningen Bioveterinary Research (WBVR).
- Dr Derek Fry, University of Manchester, UK
- Dr Adrian Smith, Norecopa, Norway

This group of tutors represent important expertise in research ethics, 3Rs, experimental design and the development and use of research planning tools. All of these core topics were also discussed in the context of VetBioNet research activities to inspire the participants. Developing research plans and proposals was also directly related to the provision of VetBioNet TNA access, so these researchers could see the opportunities within VetBioNet at present and in the future.

Advertising and Participants

The course was advertised by EAAP across the VetBioNet network and more widely. Although the organizers believed there would be interest in the Course, all of the VetBioNet partners were pleasantly surprise by the demand for places. The course was offered through a first come first serve basis. The 18 places were filled within two days of the launch of the course and a waiting list was established that was closed within a week with 35 registered names listed.

However, the course was offered free of charge and although the registered participants had reconfirmed and joining instructions were sent out, several participants were not present when the course started. In the end 13 participants took part across the three day course. Some of the missing participants explained that they had internet access issues and attempted to join but did not take part in full.

1.4 Participant Participation and Feedback

All feedback was collected online using MS Forms. This system worked very well and made it easy for participants to respond as well as making collation of the results much more efficient. Therefore, this method will be considered for future courses whether they are online or in-person. The response rates for the feedback overall were reasonable, ranging from 38% to 62% for the daily survey and 54% for the overall feedback. It is worth noting that some of the committed participants experienced

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connection issues at various stages of the course, and this may have affected the level of feedback responses.

Participants were asked to complete an online daily feedback form. The aim of this was to collect more specific feedback about which sessions and topics participants found useful or difficult, to enable us to adapt and develop any future training syllabus if necessary. Participants seemed willing to complete the daily survey as it only took a couple of minutes. The daily feedback was very positive (everyday received an average rating of over 4 out of 5 – between Satisfied and Totally Satisfied) and provide some very constructive indications of aspects that could be further improved and those elements that worked particularly well.

In addition to the daily surveys, overall course feedback was collected at the end of the summer school. Again, this was very positive with all respondents saying they would recommend the course to others. Together this feedback will be used by the Training Team to further evaluate the effectiveness of the components of the course and to refine and improve any online (and to some extent in person) delivery of similar courses in the future. For detailed summaries of each of the daily surveys and the overall feedback please see the Annex 2- 5.

Some general comments that exemplify the participants' experiences:

> "*Insightful lectures from experienced professionals. Overall, the day-one activities were awesome!"*
>
> "*Mabel's talk on how translating basic science question into applications and test validation in animal models*" and "*engaging to think about the ethics and how to make the moral decision easier to take by implementing the 3Rs*"
>
> "*Sessions 14 to 16. They introduced me to PREPARE and ARRIVE guidelines which I had not previously known before, yet they would greatly improve my research work if applied. I plan to understand them more in-depth and frequently utilize them. I have realized that designing research projects while considering the ethical implications from the start will greatly help in getting the work approved faster, as well as helping me maintain credibility as a scientist, besides upholding the responsibility I have to the research participants and other stakeholders."*
>
> "*. I loved the fact that we had very experienced people sharing about their work. It was inspiring!*"
>
> "*Recommend that you do more courses like this course with other languages*"

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Feedback is essential to developing and improving the training such as this and we thank those that took the time to provide it.

1.5 Discussion and Outcomes

The Course was provided through a very structured approach with a detailed time plan and coordinated activities. The event was very well subscribed and based on feedback participants were very satisfied with their training experience. Feedback from the participants highlighted the value of the event as well as indicating ways in which this Training Model could be further developed. The organisers and tutors identified notable value in developing and delivering this type of training using a remote online platform. Running an event like this online does require considerable pre-event planning and organizing particularly from the core organisers and the coordinators of the programme content. It is important that there is a clear academic / teaching flow between the sessions as such there needs to be a least one, preferably two, lead tutors who ensure the overarching objectives are being delivered. Reviewing the feedback and the overall experience of the tutors, the need for and the role of lead course tutors was felt to be further supported. This is noted for future courses.

The level of overall interest in the Summer School, with the School being fully booked within 48 hours of the announcement, highlights the significant demand for this type of training. There was not full participation of all registered participants, which was disappointing, but this is not a unique experience across current 'free of charge' online events at this time. As there is no financial commitment some participants appear to be less motivated to participate during COVID-19 times. However, approaches to encourage commitment will be explored for future events.

Overall, this work has provided a model for further inexperienced and Early Career Researcher Training and the UNOTT Summer School organisers will seek further opportunities to run this format of 'Summer School'.

Although delivery of the VetBioNet "*Organization of 1 Summer Course at EAAP premises*" has been notably delayed, this online Summer School course has provided a very valuable learning experience for the partners across VetBioNet who are committed to training. It has also provided the opportunity to work with UNOTT (not originally named for this task) as a partner who is keen to learn from these experiences and develop further future training. Finally, this online course has provided the opportunity to connect new researchers who may not have been able to travel to VetBioNet and has also provided an opportunity to work with excellent external tutors and partner organization, such as Norecopa. These partnerships will undoubtedly help build further Professional Training opportunities, supporting the next generation of scientists, which are key activities that support the long-term sustainability of VetBioNet as an important network.

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Annex 1: Participant List

18 registered to attend on a first come first serve basis (not all participated during the course – 13 of 18 registered individuals participated across the three day Course)

Position	Institution
Student	University Institute of Pharmaceutical Sciences, India
Student	Universitat Autonoma de Barcelona, Spain
Erasmus Student	University of Tours, France and Autonomous University of Bacrcelona, Spain
Student	Panjab University, India
Lecturer	Bahir Dar University, Ethiopia
Student	University of Tours, France
Researcher	Universita de Verona, Italy
Assistant Professor	University of the Philippines Los Baños, The Philippines
Research Student	Institute of Tropical Medicine, Antwerp, The Netherlands
Associate Consultant	Fleming fund, Islamabad
Manager of Technical Department	National centre for animal health
Virologist	Animal and Plant Health Agency, UK
Senior researcher	Animal and Plant Health Agency (APHA), UK
EO	APHA, UK
Pathologist	APHA, UK
PhD student	Zoonosis Center, Uppsala University, Sweden
PhD fellow	Uppsala University, Sweden

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Webinar-registration-waitlist:

35 registered on the Waitlist which closed 7 days after the first Announcement

Position	Institution
PhD Student	Faculty of Veterinary Medicin, Merelbeke, Ghent University/ Higher Institut of Agricultral Science, Sousse Univesity
PhD student	Ghent University
Pharmacist	Ministry of health
Veterinarian	Usmanu danfodiyo university sokoto
PhD graduate	University of Copenhagen
PhD student	Gent University
PhD-student	ILVO / UGent / ULiege
PhD Student	Leiden University Medical Center
HBLB Research Fellow	Roslin Institute
Epidemiologist	World Health Organization, TransVIHMI, Geomatys
Postdoctoral Scientist	VUB, Belgium
Masters student	Universitat Autonoma de Barcelona
Master Student	Université de Tours
Researcher Swine	Schothorst Feed Research
Research scholar	University of veterinary and animal sciences Lahore
Doctoral Student	Medizinische Hochschule Hannover
Microbiologist for animal house	Sun Pharma Advanced Research Company Limited
Veterinary Diagnostician	Zygosis Nigeria Limited

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Student	National institute of technology Rourkela
Undergrad Student	Kumaraguru College of Technology
Student	Universitat Autonoma de Barcelona
Research fellow	GCUF
Research assistant	Wilfrid Laurier University
MSc student	Universite de Tours
Intern Student	Chattogram Veterinary & Animal Sciences University
Veterinary intern student	Himalayan College of Agricultural Science and Technology
Master's student Infectious Diseases and One Health	Universite de Tours
Student	UAB
Research Fellow	Queen's University Belfast
Senior Registrar, Infectious Diseases	University of Calabar Teaching Hospital, Calabar, Nigeria
PhD student	University of Liege
Student	IPB University
PhD Year 1	Université de Tours/INRAE
Postdoctoral	SSI
Student	Universitat Autonoma de Barcelona

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Annex 2: Participant Assessment: Day 1 Feedback Summary

Total Number of Responses = 5 (38%)

Question	Response	Number of Responses
1. Which session(s) did you find most useful [Can choose more than 1]	1. Introduction 2. The Value of Infectious Disease Research 3. Infectious Disease Case Study 4. Good Practice in Research Planning 3Rs Application 5. Defining and Implementing the 3Rs 6. Summary of Day 1	0 2 1 2 2 0
2. Where there any sessions (1-6) that you found difficult and why? [Short answer response]	1. No/None [3 Responses] 2. The first lecture on " the value of infectious disease research" looks tedious and difficult to follow	
3. Where there any sessions (1-6) that you particularly liked and why? [Short answer response]	1. No 2. 2- very interesting and insightful, to see real world applications 3. 4- engaging to think about the ethics and how to make the moral decision easier to take by implementing the 3Rs 4. The Quiz. That helped me to memorize the 3R principles 5. Mabel's talk on how translating basic science question into applications and test validation in animal models	
4. Did the group session(s) help you to understand the lecture session(s) content?	1. Definitely 2. Partly 3. Undecided 4. Not at all	4 1 0 0
5. Any other comments about day 1?	1. Insightful lectures from experienced professionals. Overall, the day-one activities were awesome! 2. Wonderful	
5. Overall how satisfied are you with the training delivered today? [1=Unsatisfied, 5=Totally satisfied]	1 2 3 4 5	0 0 0 2 3
Average Rating	**4.6 / 5**	

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Annex 3: Participant Assessment: Day 2 Feedback Summary

Total Number of Responses = 8 (62%)

Question	Response	Number of Responses
1. Which session(s) did you find most useful [Can choose more than 1]	7. Welcome 8. Biosecurity and Biosafety 9. Principles of Experimental Design Part 1 10. Principles of Experimental Design Part 2 11. Principles of Experimental Design Part 3 12. Summary of Day 2	1 4 8 7 5 2
2. Where there any sessions (7-12) that you found difficult and why? [Short answer response]	1. No/None [3 Responses] 2. The third part of the "principles of experimental design" majorly down to poor network and fatigue. 3. The use of statistics in experimental design (still don't know what p-test of 0.05 mean). 4. None was difficult, but it was quite hard for me to keep up with the first session (biosecurity and biocontainment) because I could not picture some of the aspects they were talking about. 5. The session 10: there were some complicated designs such as a cross-over experiment design or factorial approach with more than two levels 6. Some unfamiliar technical concepts that needed time to process	
3. Where there any sessions (7-12) that you particularly liked and why? [Short answer response]	1. The principles of experimental design. Because they clarified how we can effectively reduce the number of animals needed and ameliorate the efficacy of our experimental designs 2. The whole sessions were interactive and interesting. Insightful as well 3. 9-10-11, difficult topics explained and taught well, understood at the end, very useful information 4. 9-11. I liked the breakout sessions as it made the learning experience more interactive. I like to learn how different people think too. 5. Everything on experimental design (10-12) because they were very interactive and engaging. I loved the questions, they helped with knowledge retention. 6. The session 11: We could discuss questions in a group and received clear instruction to get right answers from the facilitator. 7. All the sessions were well thought out, nice and practical 8. Interactive sessions with Derek	
4. Did the group session(s) help you to understand the lecture session(s) content?	1. Definitely 2. Partly 3. Undecided 4. Not at all	7 1 0 0
5. Any other comments about day 1?	1. So many new things were learned. 2. With the interactive topics, having someone pop into the breakout group to check all's going well, might help just with the tech side of things 3. Was really good. Thank you. 4. I wished we could have more time to learn more today 5. I wish it was broken down into two days	
5. Overall how satisfied are you with the training delivered today? [1=Unsatisfied, 5=Totally satisfied]	1 2 3 4 5	0 0 0 3 5
Average Rating	**4.63**	

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Annex 4: Participant Assessment: Day 3 Feedback Summary

Total Number of Responses = 6 (46%)

Question	Response	Number of Responses
1. Which session(s) did you find most useful [Can choose more than 1]	13. Welcome 14. Ethics in Research Proposal 15. PREPARE Guidelines 16. Ethics by Design 17. 3Rs Tools and Resources 18. How to make the most of Access to Research Infrastructure 19. Summary and Close	2 5 4 5 5 3 3
2. Where there any sessions (13-19) that you found difficult and why? [Short answer response]	1. No/None [2 Responses] 2. All discussions were clear and well channelled. 3. Informative, not difficult 4. Research infrastructures session. There may be a big ambiguity when it comes to vector-borne diseases as it's not using a classing animal model compared to other animals/viruses 5. The session 16. There are lots of aspects related to ethics but we have had limited time for this session	
3. Where there any sessions (13-19) that you particularly liked and why? [Short answer response]	1. Ethics by research. So insightful and easy to digest 2. The PREPARE guidelines. It was completely new to me and very relevant. lots of good information given at a well-balanced pace, 13 and 17 I found particularly useful 3. Sessions 14 to 16. They introduced me to PREPARE and ARRIVE guidelines which I had not previously known before, yet they would greatly improve my research work if applied. I plan to understand them more in-depth and frequently utilize them. I have realized that designing research projects while considering the ethical implications from the start will greatly help in getting the work approved faster, as well as helping me maintain credibility as a scientist, besides upholding the responsibility I have to the research participants and other stakeholders. 4. The session 17. The session provided several sources for reference that we will be able to explore later 5. Talk on PREPARE and ARRIVE, and Norbert's	
4. Did the group session(s) help you to understand the lecture session(s) content?	1. Definitely 2. Partly 3. Undecided 4. Not at all	6 0 0 0
5. Any other comments about day 1?	1. It was an awesome experience! Thanks to the whole team for their efforts. 2. Very well done. Thank you. it was incredibly helpful to me. 3. Very good with a nice wrap-up to the course, shame it couldn't have been in person 4. I loved the fact that we had very experienced people sharing about their work. It was inspiring! 5. All lectures were great	
5. Overall how satisfied are you with the training delivered today? [1=Unsatisfied, 5=Totally satisfied]	1 2 3 4 5	0 0 0 1 5
Average Rating	**4.83**	

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Annex 5: Participant Assessment: Overall Feedback

Overall Course Feedback

Total Number of Responses = 7 (54%)

Question	Response	Number of Responses
The Design of the Course		
The objectives of the course were clear to you	Agree Neutral Disagree	7 0 0
The course contents met with your expectation	Agree Neutral Disagree	6 1 0
The lecture sequence was well planned	Agree Neutral Disagree	7 0 0
The course exposed you to new knowledge and practices	Agree Neutral Disagree	5 1 1
You would recommend this course to your colleagues	Agree Neutral Disagree	7 0 0
The contents were illustrated with adequate examples	Too low Enough Too many	0 7 0
The academic level of the course was appropriate	Too low Correct Too high	1 6 0
The Delivery of the Course		
The lectures were clear and easy to understand	Agree Neutral Disagree	6 1 0
The course material provided was adequate	Agree Neutral Disagree	7 0 0
The group sessions were clear and easy to understand	Agree Neutral Disagree	6 0 1
The instructors provided helpful assistance	Agree Neutral Disagree	6 1 0
Background Information		
Please rate your confidence in applying the 3Rs when planning your experiments BEFORE attending (1 = No confidence, 10 = Very confident)	1 2 3 4 5 6 7 8 9 10	0 1 3 0 [Average score = 4.43] 0 1 2 0 0

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		0
Please rate your confidence in applying the 3Rs when planning your experiments AFTER attending (1 = No confidence, 10 = Very confident)	1 2 3 4 5 6 7 8 9 10	0 0 0 0 0 1 1 [Average score = 7.86] 3 2 0
How did you hear about the School (choose all that apply)	Internal email Colleague VetBioNet Website Direct Email Social Media Other	1 4 1 0 1 2
Your Comments		
We would greatly value your comments on any aspects of the course you particularly liked or disliked, and any suggestions for future improvements. Thank you	1. **I like the effort you made to share your knowledge and experience with us for free.** 2. I really liked the sessions by Derek fry. Probably because he made us engage in the gp. activities. 3. **I really enjoyed the summer school**. Everyone was very willing to help and answer questions and getting to know those amazing trainers was a great opportunity. The summer school was truly international with people from different backgrounds something I thoroughly enjoyed. I am looking forward to the following events. 4. **Recommend that you do more courses like this course with other languages** 5. **Very good, very well run.** Obviously would've been better in person. But there was a good spread of content delivered by exceptional tutors. Particularly Maribel who's inclusion of personal data made learning easy and engaging. 6. **The course was well organized and the contents were lucid and well explained.** Personally, I felt so much information was given within the three days that makes it difficult to process some of the information at a go. Future participants might benefit from a generous time frame. Overall, it was an exciting and insightful course that I have recommended to my colleagues and I am looking forward to the future edition. 7. **The course was wonderful.** I recommend the organizers will allow the course extends one or two days more for more practice and discussion between lecturers and students regarding good research design, good ethics and good implementation.	

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Annex 6: Summer School Announcement

University of Nottingham
UK | CHINA | MALAYSIA

VETBIONET
Veterinary Biocontained research facility Network

EAAP
European Federation of Animal Science

VetBioNet Summer School

Animal Infectious Disease Research: Good Practice Approaches, Ethics & 3Rs by Design

Free Online Training: 12-14 July 2021

Are you an Early/Mid-Career Infectious Disease Researcher? Would you like some **free training** to develop and improve your skills and awareness relating to good research practice? **Then register now.**

Programme Summary

Monday 12 – Applying Good Practice Principles
Speakers – Dr Frederic Lantier, INRAE; Dr Maria-Isabel Thoulouze INRAE; Prof. Kate Millar and Dr Michelle Hudson-Shore, University of Nottingham.

Tuesday 13 – Biosecurity; Experimental Design
Speakers - Dr Hugh Simmons APHA; Dr Derek Fry University of Manchester.

Wednesday 14 – Ethics and Good Practice by Design; Research Funding & Networks
Speakers - Prof. Adrian Smith Norecopa; Dr Norbert Stockhofe-Zurwieden WBVR; Prof Kate Millar, University of Nottingham

Opportunities to access EU research facilities through VetBioNet's Transnational Access funding will also be discussed:
See: https://www.vetbionet.eu/callsx/open-facilities-available-for-access/

Event capacity is limited to 18 places, allocated on a first come first served basis. **So please register now to avoid disappointment**

Click here for further information and to register:
https://www.vetbionet.eu/vetbionet-summer-school/

Annex 7: Joining Information booklet

The joining instructions were sent to all attendants one week before the starting of the course)

VETBIONET SUMMER SCHOOL: ANIMAL INFECTIOUS DISEASE RESEARCH - GOOD PRACTICE APPROACHES, ETHICS & 3RS BY DESIGN

12-14 July 2021

Joining Information

Welcome to the VetBioNet 2021 Summer School organised in collaboration by the University of Nottingham and the European Federation of Animal Science (EAAP). Enclosed is information on joining the course.

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VetBioNet Summer School: Animal Infectious Disease Research - Good Practice Approaches, Ethics & 3Rs by Design

JOINING INFORMATION

INTRODUCTION

We are delighted that you will be joining us at the VetBioNet Summer School delivered by University of Nottingham in association with the EAAP and held online. Please find below final joining instructions for the event. The following information is provided:

1) Joining the Zoom Meetings
2) Programme and Social Space
3) Emergency Contact Information

Please note that you will be required to attend the whole course in order to receive your attendance certificate.

This Summer School is funded by the Horizon 2020 VetBioNet Project (https://www.vetbionet.eu), which has enabled you to attend free of charge.

1) JOINING THE ZOOM MEETINGS

The Summer School will be delivered using Zoom, therefore you will need access to a computer or tablet, microphone and camera and a reliable internet connection. Please make sure your microphone and camera are operational before the course starts. The event will run from Monday 12 July to Wednesday 14 July. Please see the programme below (Section 2) for full details of timings. **PLEASE NOTE: All times are in Central European Summer Time (CEST).**

Please find below information on, accessing the course (1.1) online etiquette for the course (1.2) and course feedback (1.3).

1.1 Accessing the Course

To access the course, you do not need to have a Zoom account, but you will need to use the link sent to you when you registered to enter the meeting.

You can use the same link to join the meeting each day.

Once you have joined, we recommend staying in the meeting rather than leaving. Therefore, during breaks and lunch turn off your microphone and video rather than leaving the meeting. However, feel free to stay on the meeting if you would like to chat with other participants.

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When you join the meeting, you will be sent to a waiting room and the host or co-host will let you in to the meeting.

For security please do not share the link with anyone else. As a further security precaution, the meetings will be locked once all the participants have joined.

Online meetings can be very fatiguing so please do take advantage of the breaks and step away from your desk/computer for a little while, get some fresh air and stretch your legs etc.

1.2 Online Etiquette

In order to ensure that the Summer School is effective, safe and interactive we ask kindly that you follow a few guidelines while attending:

- **Cameras on** – To facilitate interaction and make presenting more comfortable for the lecturers we ask that you leave your cameras on throughout and particularly during group tasks.
- **Mute** – During lecture sessions we ask that you remain muted except when responding to a tutor question. There will be a few minutes at the end of each presentation to ask questions either in person or via the chat function.
- **Chat** – Please use the chat function if you have any comments or questions during sessions and we will either address them during the session or at the end. Please remember that general chat messages can be seen by all participants and to ensure any comments are professional and respectful.
- **Non-verbal feedback and reactions** – These are enabled for the meeting and can be used to communicate without interrupting the speaker. They are found in the Reactions menu in your toolbar. You can change the emoji skin tone in Settings.
- **No recording** – In order for people to feel comfortable to discuss their research and ask questions the event will not be recorded. Therefore, we ask that you do not record the sessions even if it is only for your personal use.
- **Screenshots** – Please do not take any screenshots that include participants (including tutors) faces or details.

1.3 Course Feedback

In order to help us to evaluate and develop further training of this kind please can we ask you to complete short daily online surveys. The results of these surveys enable us to gather more specific information about the sessions on each day. These forms will be accessible via the links below at the end of each day and will remain open until Friday 23 July 2021. The questions are short and will only take a maximum of 1-2 mins to answer. The links will be placed in the chat each day and a QR code will also be displayed on screen at the end of the day to scan if you prefer.

We greatly value the feedback we receive and thank you for taking the time to complete it.

- Accessing the Daily Survey Forms:
- Day 1: https://forms.office.com/r/9mSdH5suDy
- Day 2: https://forms.office.com/r/LwqnFR7B6W
- Day 3: https://forms.office.com/r/hHEgsZSb9V

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2) PROGRAMME AND SOCIAL SPACE

2.1 Programme

The training will take place online with the programme timings being Central European Summer Time (CEST), so please bear this in mind if you are accessing the course outside of central Europe.

The programme (appendix 1) will be taught by eight expert tutors:

- Dr Derek Fry
- Dr Michelle Hudson-Shore
- Prof. Kate Millar
- Dr Maria-Isabel Thoulouze
- Dr Hugh Simmons
- Prof. Adrian Smith
- Dr Norbert Stockhofe-Zurwieden
- Dr Frederic Lantier

The format includes lectures and group discussions. The programme is structured to lead you from Applying Good Practice through Approaches to Research to Design and Ethics in Project and Grant Proposals. You will be expected to answer questions and interact with the tutors and fellow participants.

2.2 Social Space

Even though this event is virtual we would still like to give you the opportunity for some social interaction. While attendance in the social space is not a requirement, we encourage you to log in and hopefully have a little fun and relaxed discussion with your fellow participants and the tutors. For these social interaction elements of the course, you will be given a link to an online platform called SpatialChat. This platform lets you mingle with guests using an avatar and you hear each other better the closer you are together, simulating the moving around a room element of an event. You can use live video, a photo of your choosing or just your first initial. The SpatialChat will be available during the lunch breaks to enable you to 'meet up' with other participants informally. For further information on SpatialChat and to give it a try before the Summer School visit: https://spatial.chat.

3) EMERGENCY CONTACT INFORMATION

If you have any further questions (e.g. on the programme or accessing the course) please do not hesitate to contact Michelle Hudson-Shore, University of Nottingham. (michelle.hudson-shore@nottingham.ac.uk) or Federico Liguori, EAAP (liguori@eaap.org).

The emergency contact details during the event (12-14 July 2020) are:

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Appendix 1: VetBioNet Summer School Final Programme

Session	Time (CEST)	Session Title and Content	Lead Tutor	Supporting Tutor
Monday 12 July 2021		**Applying Good Practice**		
1	10.15- 11.00	• Welcome and Introductions • Why good practice in research planning is important	KM / MT	MHS
2	11.00- 12.00	The value of infectious disease research – What does VetBioNet have to offer?	FL	KM
		5 minute Comfort Break		
3	12.05- 13.00	Infectious Disease Research Case Study	ML	KM
	13.00- 13.45	Lunch (social space available)		
4	13.45- 14.45	Good Practice in Research Planning and 3Rs application – What does it mean to be a Responsible Researcher?	KM	MHS
		5 minute Comfort Break		
5	14.50- 15.50	Defining and Implementing the 3Rs	MHS	KM
6	15.50- 16.00	Summary of Day 1	KM	MHS
Tuesday 13 July 2021		**Approaches to Research**		
7	09.15- 09.30	Welcome	KM	MHS
8	09.30- 11.00	Biosecurity and Biosafety in Containment Animal Facilities and Laboratories	HS	KM/MHS
	11.00- 11.15	Break		
9	11.15- 12.45	Principles of Experimental Design Part 1	DF	KM/MHS
	12.45- 13.30	Lunch (social space available)		
10	13.30- 15.00	Principles of Experimental Design Part 2	DF	MHS
	15.00- 15.15	Break		
11	15.15- 16.15	Principles of Experimental Design Part 3	DF	KM
12	16.15- 16.30	Summary of Day 2	KM	MHS
Wednesday 14 July		**Design and Ethics in Project and Grant Proposals**		
13	09.15- 09.30	Welcome	KM	MHS
14	09.30- 10.00	Ethics in Research Proposals	KM	MHS
15	10.00- 11.00	Can we improve both our scientific output and animal welfare? The PREPARE guidelines for planning animal studies.	AS	MHS/KM
	11.00- 11.15	Break		
16	11.15- 12.15	Ethics by Design	KM	MHS
	12.15- 13.00	Lunch (social space available)		
17	13.00- 13.30	3Rs Tools and Resources: Resources from VetBioNet	MHS	KM
		5 minute Comfort Break		
18	13.35- 14.35	How to make the most of Access to Animal Infectious Disease Research Infrastructure (TNA opportunities in VetBioNet)	NSZ	KM
19	14.35- 14.50	Summary and Close	KM	MHS

Tutors: Prof. Kate Millar **[KM]**, University of Nottingham; Dr Michelle Hudson-Shore **[MHS]**, University of Nottingham; Dr Frederic Lantier **[FL]**, INRAE; Dr Maria-Isabel Thoulouze **[MT]**, INRAE; Dr Hugh Simmons **[HS]**, APHA; Dr Derek Fry **[DF]**, University of Manchester; Prof. Adrian Smith **[AS]**, noracopa; Dr Norbert Stockhofe-Zurwieden **[NSZ]**, Wageningen University & Research and Wageningen Bioveterinary Research (WBVR).

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Annex 8: Example Attendance Certificate

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