

BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL**BIOSCIENCE FOR AN INTEGRATED UNDERSTANDING OF HEALTH STRATEGY
ADVISORY PANEL****MEETING:** Core Membership – Induction Meeting**DATE:** Tuesday 8th September 2020 (11:00-14:00)**SUBJECT:** Meeting Notes**ATTENDANCE**

Present at the meeting
Core Panel Members <ul style="list-style-type: none">- Prof. Paul Haggarty (University of Aberdeen, The Rowett Institute) – Chair- Prof. Melissa Bateson (Newcastle University)- Prof. Deborah Dunn-Walters (University of Surrey)- Prof. Louise Dye (University of Leeds)- Prof. Zoe Kourtzi (University of Cambridge)- Prof. Richard Oreffo (University of Southampton)- Prof. David Paterson (University of Oxford)- Prof. Mark Woolhouse (University of Edinburgh)
BBSRC Staff: <ul style="list-style-type: none">- Dr Jef Grainger- Dr Louisa Jenkin- Dr Laura Pritchard- Dr Sadhana Sharma- Dr Iain Templeman – Secretariat- Dr Ceri-Wyn Thomas- Ms Elizabeth Treadwell- Dr Luke Williams
Apologies received
None.

AGENDA

Agenda for the induction meeting of the Bioscience for an Integrated Understanding of Health Strategy Advisory Panel; held virtually via Zoom on Tuesday 8th September 2020, starting at 11:00.

Item	Title	Paper ID	Time
1	Welcome and Introductions	Oral	11:05-11:30
2	UKRI-BBSRC and Panel Overview	BIUH 01-20 Oral	11:30-12:10
3	UKRI-BBSRC Activity Briefing	BIUH 02-20 Oral	12:10-13:05
4	Update on COVID-19	BIUH 03-20 Oral	13:05-13:25
5	The Next Big Health Challenges and Opportunities for BBSRC to Address	Oral	13:25-13:55
6	Meeting Close	Oral	13:55-14:00

KEY OUTCOMES AND ACTIONS

Item	Outcomes and Actions	Owner	Due
1	Action 1: All panellists to return completed Conflict of Interest declaration forms to the panel secretariat following the meeting.	Secretariat	Post-Meeting
2	No actions to note.	-	-
3	Action 2: BBSRC staff to plan a discussion item for the BIUH SAP on the approach taken to funding research at the interface between bioscience and other disciplines. Action 3: BBSRC staff to plan a discussion item for the BIUH SAP how to best promote open science initiatives and practices in the biosciences.	Secretariat Secretariat	Future Meeting Future Meeting
4	Action 4: BBSRC staff to consider adopting a leverage model when planning future strategic activities on areas of cross-funder interest.	S Sharma	Cont.
5	Action 5: BBSRC staff to consider strategic areas and topics highlighted when planning discussions for future meetings.	BIUH Team	Next Meeting
6	Action 6: Future meetings of the panel to be scheduled a full day, with sufficient time for panel discussion.	Secretariat	Future Meeting

ITEM 1 WELCOME AND INTRODUCTIONS

1. Professor Paul Haggarty, the Chair of the UKRI–BBSRC Bioscience for an Integrated Understanding of Health (BIUH) Strategy Advisory Panel (SAP), opened proceedings by welcoming everyone to the meeting.
2. The Chair led roundtable introductions from the core membership of the newly constituted BIUH SAP and the BBSRC staff in attendance. In addition to the institutional affiliations outlined above, any additional conflicts of interest were also declared by the panellists and recorded.
3. Panel members were encouraged to highlight any additional conflicts that may arise during the discussion if they become relevant and to return completed Conflict of Interest declaration forms to the panel secretariat following the meeting, if they had not already done so.

ITEM 2 UKRI–BBSRC AND PANEL OVERVIEW

4. Dr Sadhana Sharma provided an organisational overview of UKRI and BBSRC, including a summary of BBSRC’s core objectives, key strategic documents ([UKRI Strategic Prospectus](#), [Forward Look for UK Bioscience](#), [BBSRC Delivery Plan 2019](#)) and thematic areas. This was followed by an overview of the Terms of Reference for the BIUH SAP and the code of conduct for panel members, which was delivered by the panel Secretariat.
5. With reference to the BIUH strategic challenge area, it was highlighted that the overarching aim is to develop a deep, integrated understanding of the healthy system at multiple levels, as well as of the factors that maintain health and wellness under stress and biological or environmental challenge. Focal areas at present are Lifelong Health, Nutrition and Health, One Health and Biotechnology for Health, which have been described in detail across a series of strategic documents published by BBSRC in recent years, several of which are due to be refreshed:
 - [Bioscience for Health: Strategic Research Framework: 2015–2020](#)
 - [BBSRC Research in Food, Nutrition and Health: Strategic Framework 2015–2020](#)
 - [A Cross-Council Vision for Food, Nutrition and Health Research](#)
 - [BBSRC Veterinary Vaccinology Strategy: 2015–2020](#)
6. Underpinned by a portfolio of investment in immunology, neuroscience, microbiology and physiology, it was noted that BBSRC is uniquely placed to support research, training and innovation across the following areas:
 - One health;
 - Integrative science of food, nutrition, health and agriculture;
 - Model organisms and comparative approaches to biology;
 - Fundamental mechanistic research; and
 - Basic understanding of ‘normal’ function and disease prevention.
7. Comprehensive Spending Review (CSR) – Office Update: Current plans across UKRI are framed around how the CSR would support the delivery of ambitions set out by the Government in the [UK Research and Development Roadmap](#). This document was published in July 2020 and commits to increasing investment in the research and development sector. There are three main elements to the current bid:

- Building Strong Foundations – increasing core level of funding across research councils to enhance support for scientific disciplines across UKRI.
 - Collaboration – working in a top-down fashion to align programmes with government priorities, whilst also working with research and innovation communities to deliver against their needs.
 - Infrastructure – developing the international partnerships, capabilities and research culture needed for research and innovation to thrive.
8. Within BBSRC, current planning for the CSR is based around the following areas:
- continuing commitment to world-class, curiosity-driven research which will deliver ground-breaking discoveries and underpin future impacts;
 - supporting the translation of bioscience discoveries to facilitate continued growth in the bioeconomy;
 - ensuring the continuation of a bioscience skills pipeline through BBSRC's studentship and fellowship initiatives;
 - increased investment in tools, technologies and resources for the biosciences;
 - supporting bioscience research and innovation within strategically relevant areas, such as engineering biology, zoonotic diseases and sustainable food systems.
9. It was clarified that the budget for the BIUH challenge area is not ringfenced and that the ongoing CSR gives UKRI and BBSRC the opportunity to bid for larger programmes. These have been difficult to establish in recent years owing to the maintenance of baseline spending following the last review cycle in 2016.
10. Discussions are ongoing to put plans in place to address potential shortfalls in funding that may arise if the UK is no longer involved in European Research Council programmes.
11. The commitment by the Government to increase UK investment in research and development to 2.4% of GDP by 2027 is split between public and private sector investment, with the ambition being to maintain the current balance in the context of a cumulative increase in spending.
12. The agility of UKRI's response to emerging needs was discussed, with reference to the COVID-19 pandemic. UKRI has provided direct support for universities, salary support for post-doctoral researchers and has maintained usual funding services. This has been delivered in parallel to a dedicated, rapid response funding mechanism that has enabled a strategic package of research focused on COVID-19.

ITEM 3 UKRI-BBSRC ACTIVITY BRIEFING

13. BBSRC office staff briefed the panellists on a series of ongoing activities within the BIUH strategic challenge area. Briefings were provided on the following activities:
- Ageing Working Group
 - Neuroscience and Behaviour Working Group
 - International Coordination of Research on Infectious Animal Diseases (ICRAD)
 - One Health and Zoonoses
 - Healthy Diet for a Healthy Life Joint Programming Initiative (JPI-HDHL)

- Agri-Food-Nutrition-Health Working Group
- Use of Models in Research Survey
- Non-Animal Technologies

14. Following the presentations, several clarifications were provided in response to questions from the panel:

- Deep phenotyping refers to a more comprehensive approach to analysing the different components of phenotypes to identify what is the most appropriate model for a biological question, as well as making this in-depth analysis more accessible to the research community.
- Scoping activities pertaining to co-infection can be broadened to include infection and comorbidities through working with MRC as part of a cross-council activity.
- BBSRC intends to work with colleagues across UKRI, including EPSRC, to support research and innovation relating to non-animal technologies, with current activities focused on establishing BBSRC's interests in the area with a view to adopting a leadership role in the future.

15. The panel stressed the importance of maintaining BBSRC's presence in Europe following the UK's withdrawal from the European Union. The Healthy Diet for a Healthy Life Joint Programming Initiative was cited as an exemplar platform for achieving this.

16. The panel highlighted that BBSRC needs to put a system in place to better support multidisciplinary research, including a suitable peer review process. The approach taken to funding research at the interface between disciplines was identified as a topic for future engagement with the BIUH SAP, with training in 'systems' thinking for reviewers being suggested as a potential facilitator.

17. The need to support open science initiatives and practices was recognised by the panel as an important responsibility for BBSRC and was flagged as a topic for further discussion at a future meeting of the BIUH SAP.

ITEM 4 UPDATE ON COVID-19

18. Dr Ceri-Wyn Thomas provided the panel with an overview of the actions taken by UKRI and BBSRC in supporting the research and innovation response to the COVID-19 pandemic. It was highlighted that the response to date has centred upon delivering a series of rapid response funding initiatives, commencing from February 2020 onwards, which have been run in parallel with conventional funding mechanisms (e.g. responsive mode) across UKRI. The principal focus of BBSRC's efforts has been the '*Get Funding for Ideas to Address COVID-19*' call, which seeks to support short-term projects (12-18 months) with the potential to address and mitigate the health, social, economic, cultural and environmental impacts of the COVID-19 outbreak. It was noted that BBSRC is continuing to support the research and innovation response through a combination of these initiatives, whilst ensuring that the projects funded align with the research priorities set out by the Scientific Advisory Group for Emergencies (SAGE). The following areas were identified as

being particularly relevant for BBSRC through consultation with a UKRI–BBSRC COVID-19 Expert Working Group:

- Biological understanding of SARS-CoV-2;
- Animal-human interface;
- Immune resilience across the lifecourse;
- Next generation diagnostics and informatic platforms; and
- Understanding the risk to global food supply systems.

19. With reference to “*long COVID*”, wherein recovery from infection and the associated symptoms can take several weeks or months, the panel encouraged BBSRC to support research on this phenomenon.

20. The Panel encouraged the adoption of a leverage model to funding in the BIUH challenge area, whereby commonalities between funding bodies are identified and resources pooled to deliver a coordinated funding environment that is simpler for research communities to navigate.

ITEM 5 THE NEXT BIG HEALTH CHALLENGES AND OPPORTUNITIES FOR BBSRC TO ADDRESS

21. Panellists were invited to identify prospective challenges and opportunities in research and innovation with relevance to the BIUH challenge area. Time constraints limited the extent of discussions around this topic.

22. Regarding the response to COVID-19 and future epidemics, the panel raised the following points:

- Basic science (e.g. immunology, cell biology, microbiology) has an important role to play in the resolution of the current pandemic, warranting continued investment;
- Funding for projects that inform the development of intervention strategies that can help to optimise the immediate response to such outbreaks is limited (e.g. epidemiology, diagnostics and behavioural sciences).
- There is a need to develop more versatile research infrastructure that enables the rapid repurposing and development of existing facilities in response to an emerging threat.
- BBSRC should support research seeking to reassemble complex systems (i.e. physiology), which is currently a gap that is not being addressed by other funders. At present, the biology of health and disease generally considers a vertical research pathway, without due consideration of how systems interact with one another.

23. Future discussions need to consider the development pipeline for early career researchers supported by BBSRC, setting out a roadmap for PhD students who will emerge from Doctoral Training Partnerships (DTPs) in the coming years. This was highlighted as a growing concern amongst early career researchers at present.

24. Interdisciplinary approaches that combine areas such as behaviour, nutrition, metabolism and biochemistry were cited as a key enabler for research in lifelong

health. Programmes that encourage researchers from different fields to work collaboratively on matters of healthy ageing were identified as critical in unravelling the complex array of interacting factors that shape ageing trajectories.

25. The concept of exercise as medicine was cited as an opportunity for BBSRC to consider going forward, referencing the mortality risk associated with waist circumference compared to that attributed to specific single nucleotide polymorphisms. Understanding the biology behind this and adopting a more integrated approach to these complex problems was proposed as a more efficacious approach than the focus on genetic and cellular mechanisms, which has historically dominated the biological study of ageing.

ITEM 6 MEETING CLOSE

26. Members commented that the items were interesting and informative but that the Agenda was ambitious for the time available and that they would like more time for discussion in future meetings. The secretariat explained that this meeting was not typical in that it was designed mainly to provide an overview for the newly constituted panel and that there would be adequate time for full discussion of the items in future meetings. The Chair recommended that future meetings be held over the course of a full day, ensuring that the agenda allowed sufficient time for panel discussions. It was agreed that the intention was to schedule a full day meeting of the panel before the end of 2020.
27. The Chair closed the meeting by thanking the panellists and office staff for their attendance and contributions to the meeting.