

# Faculty of Health and Medical Sciences

## Research and Innovation Strategy 2019-2022

### Associate Dean Research and Innovation's Foreword

Welcome to the Faculty of Health and Medical Sciences<sup>1</sup> Research and Innovation Strategy, which sets out what we intend to achieve and signals how we propose to do this.<sup>2</sup> Our areas of expertise include Chronobiology and Sleep, Infection and Immunity, Healthy Ageing and Supporting Long-term Conditions, Nutrition and Food Security, Understanding Relationships with the Social and Physical Environment, and Digital Health and Data Science — and these are incorporated into the Strategy as research themes.

An understanding of the importance of collaboration and co-creation — with colleagues and with those individuals, groups and organisations beyond our Faculty and University who have an interest in our work, and with those who have an interest in their work — drive the Strategy. We will use these interactions to shape what research we do, as well as how it is conducted, disseminated and used; through such knowledge exchange and stakeholder involvement we will foster innovation<sup>3</sup> for the widest possible benefit<sup>4</sup>. Indeed, it is the varied disciplinary knowledge, personal and professional networks, and life experiences and skills of our research and innovation community that will enable us to achieve our Mission — and the Strategy reflects this. The research themes that we will establish and operate will be strengthened by the diversity directed into each one, and by the links between them.

Enabling our episodes of research activity to achieve their optimal impact is often a matter of timing and balance: research with real-world influence can have curiosity-driven beginnings; outcomes can be made available once intellectual property is protected. Whatever the stage in the research journey, the methods we use must be rigorous and reproducible — and the Strategy recognises this.

Our aspirations require us to harness the potential of all our staff, especially those who are at the start of their working lives, or who are transitioning into research and innovation or changing disciplinary direction. We intend to grow our reputation as the place for the next generation of researchers and innovators to develop the confidence and skills they need to launch their future careers. To echo the University's Strategy: 'we will not only support our researchers for today but also prepare them for success tomorrow.'

Professor Monique Raats, 3 October 2019

---

<sup>1</sup> The Faculty of Health and Medical Sciences provides interdisciplinary research and teaching in human and animal health through four schools: School of Biosciences and Medicine; School of Health Sciences; School of Psychology; and School of Veterinary Medicine.

<sup>2</sup> It will inform the development of an Implementation Plan that will detail the specific actions that we as a Faculty will take. It is informed by the University's [Research and Innovation Strategy](#) — which is itself informed by the [corporate strategy](#), [The Surrey Advantage](#) — and it links with the [Global](#), [Education](#), [Human Resources](#) and [Advancement](#) strategies.

<sup>3</sup> To align with the University's Research and Innovation Strategy: Innovation describes the ways in which we derive value and benefit for society from our research endeavour, in the broadest sense. This includes: impact, knowledge transfer, public engagement, training in and practice of, enterprise and entrepreneurship; business, government, community and third-sector partnerships and commercialisation of University-generated IP.

<sup>4</sup> We encourage researchers to build deliberative dialogue into the development of their research ideas and to consult widely to ensure that both the potential negative and positive consequences of the research are explored.

## Vision

To be internationally recognised for delivering high quality research, innovation and impact, resulting in sustainable benefit for the health and wellbeing of humans and animals and the global environment. To be internationally known as a partner of choice and exemplary for developing postgraduate and early career researchers.

## Mission

To sustainably improve the health and wellbeing of humans and animals and their environments through new knowledge and its application to the design, development and delivery of responsible innovation and impact.

## Strategic goals<sup>5</sup>

- 1. Research Scale and Excellence:** Through strategic and effective collaboration and concentration of investment and activity, we will enhance our research excellence and grow our overall scale.
- 2. Research Infrastructure:** We will develop our distinctive research infrastructural elements, enhance the scale and use of existing infrastructure, and ensure support is research-centric and provides the environment for our research and innovation aspirations.
- 3. Postgraduate and Early-career Researcher Scale and Experience:** We will grow and support the Faculty's postgraduate and early-career researcher community, providing the conditions that enable each of them to thrive and launch a rewarding career.
- 4. Innovation Ecosystem:** We will contribute greater economic, environmental, health and social benefit to society, through ensuring impact and innovation are central to our culture.

## Objectives

Overarching Strategic Goals	Objectives
<b>1: Research Scale and Excellence</b> <i>Through strategic and effective collaboration and concentration of investment and activity, we will enhance our research excellence and grow our overall scale</i>	<b>1.1 Research Themes<sup>6</sup>:</b> We will establish and operate Faculty Research Themes based on leadership and critical mass, disciplinary breadth, strength of partnerships, global priorities and income achieved. Through them we will provide focus on capabilities across the Faculty and attract investment. We will also provide leadership for and otherwise contribute to the University Research Themes.

<sup>5</sup> See Appendix for an overview of the underlying principles of Academic Freedom, Knowledge Exchange, National and International Collaboration, Research Excellence, Research Integrity, Support the Career Development of Researchers and Support the Career Development of Technical and Professional Services Staff.

<sup>6</sup> See Foreword for theme titles.

Overarching Strategic Goals	Objectives
	<p><b>1.2 Excellence and Talented Researchers:</b> We will develop the careers of our existing researchers and pursue a programme of strategic appointments to ensure we have a pool of researchers of the highest quality to enable us to achieve our research, innovation and impact aspirations.</p>
	<p><b>1.3 Sector-leading:</b> We will ensure we are known as a sector-leading place to undertake research and innovation and a provider of an ideal environment for developing ECRs.</p>
	<p><b>1.4 High Quality Outputs:</b> We will enable our researchers to optimise the quality of their outputs, based on transparent and reproducible science. We will increase the proportion of our research judged to be internationally leading and contributing to sustainable global development.</p>
	<p><b>1.5 Strategic Relationships:</b> We will ensure that relationships are in place with private, public and third sector research establishments and research funders to enable us to shape and capitalise on our existing and emerging USPs<sup>7</sup>.</p>
<p><b>2: Research Infrastructure</b></p> <p><i>We will develop our distinctive research infrastructural elements, enhance the scale and use of existing infrastructure, and ensure support is research-centric and provides the environment for our research and innovation aspirations</i></p>	<p><b>2.1 Distinctive Capabilities and Infrastructure:</b> We will source internal (University) and external investment for distinctive facilities and capabilities that differentiate the Faculty and/or which build a distinctive competence.</p> <p><b>2.2 Efficient and effective use of facilities:</b> We will ensure existing and future Faculty research facilities are run efficiently and effectively through enhancing visibility, access, associated training and governance.</p> <p><b>2.3 Efficient and effective research support:</b> We will ensure that research, impact and innovation support provided by technical and professional services staff is efficient and effective, and that we co-create those processes that need to be managed centrally by the University.</p>

---

<sup>7</sup> Unique selling proposition

Overarching Strategic Goals	Objectives
	<p><b>2.4 Research and innovation centric community:</b> We will develop the careers of technical and professional services staff working within the Faculty to ensure we have a pool of staff of the highest quality to enable us to achieve our research and innovation aspirations.</p>
<p><b>3: Postgraduate and Early-career Researcher Scale and Experience</b></p> <p><i>We will grow and support the Faculty's postgraduate and early-career researcher community, providing the conditions that enable each of them to thrive and launch a rewarding career</i></p>	<p><b>3.1 Postgraduate Researcher Scale:</b> We will substantially increase the number of postgraduate researchers in the Faculty, using our strategic relationships.</p> <p><b>3.2 Postgraduate and Early-career Researcher Experience:</b> We will ensure the experience we give our postgraduate and early-career researchers is opportunity-rich, supports growth to independence, keeps pace with recent developments and enables their contribution to knowledge exchange and the development of local and global networks of collaboration.</p>
<p><b>4: Innovation Ecosystem</b></p> <p><i>We will contribute greater economic, environmental, health and social benefit to society, through ensuring impact and innovation are central to our culture</i></p>	<p><b>4.1: Responsible Innovation as Core Business:</b> We will ensure that the principles of Responsible Research and Innovation<sup>8</sup> are embedded in our culture, including through training. Recognising impact and entrepreneurship as components of innovation, we will ensure that we plan and perform research with an awareness of all prospective routes of translation to end users<sup>9</sup>.</p> <p><b>4.2 Accessibility of our Partnership Offering:</b> To support partnership growth, we will make it easier for partners to engage with us in focused partnerships that deliver impact for society, ensuring that they are managed efficiently and effectively.</p>

<sup>8</sup> Responsible Research and innovation is a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society). From von Schomberg R (2011) 'Prospects for Technology Assessment in a framework of responsible research and innovation' in: Technikfolgen abschätzen lehren: Bildungspotenziale transdisziplinärer Methode, P.39-61, Wiesbaden: Springer VS.

<sup>9</sup> Including, for example, through commercialisation or through using Open Access publication and Open Data repositories to make outcomes available sooner than would be possible via commercialisation, in order to foster the widest and speediest knowledge exchange.

Overarching Strategic Goals	Objectives
	<p><b>4.3 Deepen and Broaden Partnerships:</b> We will actively identify and nurture Theme-enriching community, business, government, and third-sector partners and partnerships locally, regionally, nationally and internationally.</p> <p><b>4.4 Technology Transfer Model:</b> We will align our approach to innovation with the University's Technology Transfer Model, feeding back to co-create dynamic processes that are responsive to the changing innovation landscape.</p>

**Key performance indicators that address the objectives and will be monitored through annual action plans**

- average Field-Weighted Citation Index (FWCI) of outputs (and proportion by country and partner)
- number of 4\* rated impact case studies in REF
- number of people supported by research-only contracts
- number of PGRs (and proportion at least funded by international country and by sector)
- research income (and collaborative proportion by country and partner)
- number of internationally excellent PGR outputs
- satisfaction of staff and PGRs

An annual audit of impact and enterprise activity will be developed to report on the breadth and depth of the innovation ecosystem.

## Appendix: Underlying principles, all of which interrelate

<p><b>Academic Freedom</b></p>	<ul style="list-style-type: none"> <li>• <a href="#">Education Reform Act 1988</a> sets out the legal right of academics in the UK ‘to question and test received wisdom and to put forward new ideas and controversial or unpopular opinions without placing themselves in jeopardy of losing their jobs or the privileges they may have’.</li> <li>• Equality and Human Rights Commission: <a href="#">Freedom of expression: a guide for higher education providers and students’ unions in England and Wales</a></li> <li>• <a href="#">University of Surrey Ordinances March 2017</a></li> <li>• University of Surrey’s <a href="#">Code of Practice on Freedom of Speech</a></li> <li>• University of Surrey’s <a href="#">Prevent Policy</a></li> </ul>
<p><b><a href="#">Knowledge Exchange</a></b></p>	<ul style="list-style-type: none"> <li>• Research partnerships</li> <li>• Working with business</li> <li>• Working with the public and third sector</li> <li>• Skills, enterprise and entrepreneurship</li> <li>• Local growth and regeneration</li> <li>• IP and commercialisation</li> <li>• Public and community engagement</li> </ul>
<p><b>National and International Collaboration</b></p>	<ul style="list-style-type: none"> <li>• Department for International Development: <a href="#">DFID ethics principles for research and evaluation</a></li> <li>• InterAcademy Partnership: <a href="#">Improving Scientific Input to Global Policymaking with a focus on the UN Sustainable Development Goals</a></li> <li>• Medical Research Council: <a href="#">MRC Ethics Guide: Research involving human participants in developing societies</a> ()</li> <li>• Nuffield Council on Bioethics: <a href="#">The Ethics of Research Related to Healthcare in Developing Countries</a></li> <li>• UK Research and Innovation: <a href="#">UKRI’s Framework of Principles</a></li> <li>• U.S. Department of Health &amp; Human Services:             <ul style="list-style-type: none"> <li>○ <a href="#">Compilation of Guidances on the EU General Data Protection Regulation</a></li> <li>○ <a href="#">International Compilation of Human Research Standards</a> <a href="https://www.hhs.gov/ohrp/international/compilation-on-human-research-standards/index.html">https://www.hhs.gov/ohrp/international/compilation-on-human-research-standards/index.html</a></li> <li>○ <a href="#">Listing of Social-Behavioral Research Standards</a></li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Wellcome: “<a href="#">Research involving people in low- and middle-income countries</a>”</li> <li>• World Conferences on Research Integrity: <ul style="list-style-type: none"> <li>○ <a href="#">Montreal Statement on Research Integrity in Cross-Boundary Research Collaborations</a></li> </ul> </li> <li>• <a href="#">Singapore Statement on Research Integrity</a></li> </ul>
<a href="#">Research Excellence</a>	<ul style="list-style-type: none"> <li>• Quality of outputs (e.g. publications, performances, exhibitions)</li> <li>• Impact of outputs beyond academia</li> <li>• Environment that supports research</li> </ul>
<a href="#">Research Integrity</a>	<ul style="list-style-type: none"> <li>• Maintaining the highest standards of rigour and integrity in all aspects of research</li> <li>• Ensuring that research is conducted according to appropriate ethical, legal and professional frameworks, obligations and standards</li> <li>• Supporting a research environment that is underpinned by a culture of integrity and based on good governance, best practice and support for the development of researchers</li> <li>• Using transparent, robust and fair processes to deal with allegations of research misconduct should they arise</li> <li>• Working together to strengthen the integrity of research and to reviewing progress regularly and openly</li> </ul>
<a href="#">Support the Career Development of Researchers</a>	<ul style="list-style-type: none"> <li>• Recognition of the importance of recruiting, selecting and retaining researchers with the highest potential to achieve excellence in research.</li> <li>• Researchers are recognised and valued by their employing organisation as an essential part of their organisation’s human resources and a key component of their overall strategy to develop and deliver world-class research.</li> <li>• Researchers are equipped and supported to be adaptable and flexible in an increasingly diverse, mobile, global research environment.</li> <li>• The importance of researchers’ personal and career development, and lifelong learning, is clearly recognised and promoted at all stages of their career.</li> <li>• Individual researchers share the responsibility for and need to pro-actively engage in their own personal and career development, and lifelong learning.</li> <li>• Diversity and equality must be promoted in all aspects of the recruitment and career management of researchers.</li> <li>• The sector and all stakeholders will undertake regular and collective review of their progress in strengthening the</li> </ul>

	<p>attractiveness and sustainability of research careers in the UK.</p> <ul style="list-style-type: none"> <li>• See: <ul style="list-style-type: none"> <li>○ <a href="#">Equality Challenge Unit</a></li> <li>○ <a href="#">Vitae</a> (supports the professional development of researchers, experienced in working with institutions as they strive for research excellence, innovation and impact)</li> </ul> </li> </ul>
<p><b>Support the Career Development of Technical and Professional Services Staff</b></p>	<ul style="list-style-type: none"> <li>• Recognise that the Career Development of Researchers, 2008 recommended “broadening the definition of ‘researchers’ to be inclusive of all staff engaged in research, including technicians who play such a vital part in UK research and innovation”.</li> <li>• Recognise that UK Research and Innovation (UKRI) fully support the Professional Registration program for technicians as a way of demonstrating the level of competency for named technicians on grant applications and as a way of verifying that research funded technical staff have access to appropriate CPD opportunities.</li> <li>• Recognise that, with support of the Science Council and Gatsby Foundation, the Technician Commitment has been launched. The commitment targets areas on which universities and institutions will work to improve to safeguard vital technical skills. The commitment will ensure greater visibility, recognition, career development and sustainability for technicians across all disciplines.</li> <li>• See: <ul style="list-style-type: none"> <li>○ <a href="#">Association of Research Managers and Administrators</a></li> <li>○ <a href="#">Equality Challenge Unit</a></li> <li>○ <a href="#">Institute of Science and Technology</a></li> <li>○ Science Council statement: <a href="https://sciencecouncil.org/employers/technician-commitment/">https://sciencecouncil.org/employers/technician-commitment/</a></li> <li>○ “Technicians Make it Happen” statement: <a href="https://www.technicians.org.uk/technician-commitment">https://www.technicians.org.uk/technician-commitment</a></li> <li>○ UK Research and Innovation: <a href="#">Review of the Concordat to Support the Career Development of Researchers. June 2018</a></li> </ul> </li> </ul>