Minister's Approval for Australian Laureate Fellowships for Funding Commencing in 2021 Schedule

Approved Organisation, Leader of Approved Research Program	Approved Research Program	Estimated and Approved Expenditure ($)			Indicative Funding ($)		Total ($)
(Columns 1 and 2)	(Column 3)	2021-22 (Column 4)	2022-23 (Column 5)	2023-24 (Column 6)	2024-25* (Column 7)	2025-26* (Column 8)	(Column 9)
Australian Capital Territory							
The Australian National University							
FL210100017	**Nanoscale-interactions making future functional materials more powerful**	621,000.00	631,000.00	621,000.00	621,000.00	621,000.00	3,115,000.00
Liu, Prof Yun	Traditional crystal chemistry can no longer meet the demands for development of new functional materials - the foundation of modern industry. The program aims to overcome this challenge by introducing a new strategy into experimental and theoretical research to transform our understanding and application of nanoscale structural and chemical features in materials. The program expects to build new crystal chemistry that includes nanoscale-interaction information and deep machine-learning to improve the predictability of material properties. Potential outcomes of the program include enhanced capacity for revolutionary materials development thus keeping Australia's leading position in innovative technology, benefiting academia and industry.						
	National Interest Test Statement						
	New materials drive creativity and are the catalyst for innovation. Yet crystal chemistry —now 100 years old— no longer satisfies demand for precise analysis and prediction of new materials. This limits creativity and wastes national research and development resources. This program aligns with the Modern Manufacturing Strategy by making science and technology work for industry. The new crystal chemistry platform will provide a powerful tool to design the next generation of functional materials. The high-performance materials developed through this program will benefit Australian industry including in energy industry. This will deliver opportunities for advanced manufacturing, and commercialisation via networks of established and new partners. The project will improve Australia's innovation capital and enhance our position as world leaders in emerging science and technology such as material informatics and quantum computing. Australian researchers will gain career opportunities through state of the art training in materials science, innovative technology and leadership.						
FL210100039	**Illuminating Magnetic Fields as the Scaffold of Gas in Galaxies**	632,230.00	668,336.00	638,336.00	668,991.00	613,885.00	3,221,778.00
McClure-Griffiths, Prof Naomi M	This program aims to reveal how gas and magnetic fields interact to set the fate of galaxies. The question of how galaxies evolve is one of the most fundamental in all of astronomy. Magnetism, alongside gravity, is one of the most influential forces in determining the evolution of galaxies, and yet one of the least understood. Using the Fellow's expertise and Australia's newest radio telescope, the Australian Square Kilometre Array Pathfinder, this program will explore the inner workings of our own Milky Way and its galactic neighbours, the Magellanic Clouds. Using new observations and a new international research network, this program expects to position Australia at the centre of international efforts to understand how galaxies work.						
	National Interest Test Statement						
	Understanding how galaxies like our own Milky Way form and evolve is fundamental to understanding humanity's place in the Universe. After gravity, magnetism is the most influential force determining the evolution of galaxies, yet the least understood. This Laureate Fellowship will use the Australian Square Kilometre Array Pathfinder (ASKAP) radio telescope to map the gas and magnetic fields in the Milky Way and its nearest galactic neighbours. This will reveal how magnetic fields interact with gas to shape galaxies, form nurseries for new stars and set the ultimate fate of galaxies. By exploiting the unique capabilities of ASKAP, this program will propel Australian researchers to the forefront of international astronomy research. The program will add direct benefit to Australia's infrastructure investment in radio astronomy through the creation of data-rich jobs, training the next generation of data scientists, and developing the expertise to ensure that we not only host the Square Kilometre Array (SKA) infrastructure, but also lead its key scientific projects.						

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FL210100044	**Governance for Planetary Health Equity**	685,000.00	705,000.00	710,000.00	685,000.00	680,000.00	3,465,000.00
Friel, Prof Sharon	The Laureate Fellowship will use the novel lens of Planetary Health Equity to expose the importance of addressing planetary as well as human systems in achieving global health equity, and investigate the role of governance in realizing that aim. Using international and multi-sectoral comparative analysis, it intends to elucidate how institutions and actors can enable the development of coherent policy and business practices that advance planetary health equity. Expected outcomes include the design of policies and business practices that promote planetary health equity and a governance framework that enables coherent action. The Laureate has the potential to reduce health inequities and climate change, and relieve pressure on health systems.						
	National Interest Test Statement Preventable diseases, widening social inequalities and environmental pressures on wellbeing are interconnected and putting a major strain on global health systems and economies. This Laureate Fellowship will create new knowledge in governance for Planetary Health Equity, a new field of public health relating to institutions, policies, business practices and norms, and their impact on climate change-related health inequities. The project will identify coherent multi-sector policies and business practices in the food and energy sectors that can deliver simultaneous benefits for human health, society and the environment. The Fellowship will design a governance framework that enables the inclusion of health and environmental goals in policy and business decision-making processes. Uptake of this framework by governments will help reduce health inequities and environmental harms. Through this Laureate, Australia will build cutting-edge expertise in a new field of public health crucial to improving disease prevention, relieving pressure on the health system, and helping to create economic prosperity.						
	The Australian National University	1,938,230.00	2,004,336.00	1,969,336.00	1,974,991.00	1,914,885.00	9,801,778.00
	Australian Capital Territory	1,938,230.00	2,004,336.00	1,969,336.00	1,974,991.00	1,914,885.00	9,801,778.00

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New South Wales							
The University of Sydney							
FL210100054	**A calculable approach to securing Australia's soil**	674,180.00	703,863.00	667,823.00	667,823.00	563,961.00	3,277,650.00
McBratney, Prof Alexander B	Much of our productive land is currently degraded, severely impacting the ability of soils to contribute to planetary health. The aim of this program is to deliver a comprehensive systematic soil monitoring system within a world-first soil security framework. The research will create a detailed reference of the Australian landscape to elucidate impacts on our soil cover. Soil security indicators will be created from which ameliorative actions can be prioritised, while early warning systems will offer predictive capability around emerging threats to soil condition, feeding into best-management practices for regeneration. Outcomes will see soil secured for future generations and Australia at the forefront of soil assessment and restoration.						
	National Interest Test Statement						
	This program will make a major new addition to the national research priority on Soil and Water by addressing squarely the need for prescriptive efforts to mitigate soil degradation. The soil monitoring system produced through the Fellowship will be able to predict land condition and prevent threatening processes, particularly losses of soil material, soil structural integrity and soil biodiversity. The program-developed framework for assessing soil security can be used by Australian landholders to improve soil health, creating more resilient landscapes. For farmers this means improved yields, reduced drought risk, value-added products, and potential new income streams e.g. carbon and biodiversity markets. For rural communities assailed by an increasingly erratic climate, this program brings potential inter-generational sustainability. An ambition is to see soil security recognised in Australian and global policy. With such policy settings, metrics of soil security constructed via this program will improve over time, with consequent benefits to Australian ecosystem functioning and Australian productivity.						
FL210100071	**“L-form” bacteria: basic science, antibiotics, evolution and biotechnology**	694,000.00	640,000.00	650,000.00	640,000.00	622,000.00	3,246,000.00
Errington, Prof Jeffery	This Fellowship addresses key gaps in knowledge about cell wall deficient bacteria called L-forms: an altered state of bacteria with intriguing properties both structurally and functionally. The main aims of the research program are to improve our understanding of the basic biology of L-forms and employ them as tools in several important ways: for understanding the mechanisms of cell wall synthesis and how antibiotics work, as models for early steps in the evolution of cellular life, and as a significant new platform for the production of proteins and fine chemicals. Outcomes and benefits include improved understanding of how to generate new antibiotics, and the development of new platforms for Australian biotechnology and biocommerce.						
	National Interest Test Statement						
	The project concerns an important but poorly understood form of bacteria called L-forms. L-forms are potentially important as a source of antibiotic resistance but our studies will help understand how crucial antibiotics such as penicillins work, helping us to develop new and better antibiotics in the future. L-forms are also of considerable interest as a model for the origins of life, one of the deepest and most profound questions in science. The high quality basic science, embedded in a vibrant new training environment, will help position Australia at the intellectual forefront of a dynamic and challenging field. Bacteria are also important in industries from food and agriculture to biotechnology, critical players in the green revolution as we move on from petroleum dominated economics. We will explore the potential of L-forms as a new platform for commercial production of a range of high value proteins and chemicals. The applicant's strong background in commercialisation of basic science will position the new group to impact positively on Australia’s important industrial biotechnology sector.						

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FL210100110	**New Approaches to Understand How Form and Function Shape Complex Systems**	578,216.00	624,821.00	624,821.00	624,821.00	568,609.00	3,021,288.00
Byrne, Prof Helen M	As biology and medicine transform into quantitative sciences, existing mathematical methods are often inadequate to explain the data they generate. This project aims to unlock the potential of such biomedical data through the development of new mathematical approaches that combine concepts from pure and applied mathematics, statistics and data science, and then to investigate their ability to generate mechanistic insight into fundamental biomedical processes. In this way, the project expects to affect a paradigm shift in mathematical biology while strengthening Australia's reputation as a world-leader in mathematical biology. An outcome from this project could be new mathematical models that guide decision making in the clinic.						
	National Interest Test Statement						
	This project will lead fundamental research in mathematical biology that could result in new mathematical methods to analyse and interpret biomedical data in modern healthcare. It will unlock the potential of these data by combining key concepts from pure and applied mathematics, statistics and data science, and investigate their ability to generate insights into fundamental biomedical processes such as the behaviour of tissues. This project expects to bring about a paradigm shift in mathematical biology that will position Australia as the leader in this field. The insights into biological systems and health this research can provide will play a growing role in the future of healthcare in Australia and will be critical across a wide a range of medical applications, from informing clinical decision-making to the design of emerging technologies for tissue engineering.						
	The University of Sydney	1,946,396.00	1,968,684.00	1,942,644.00	1,932,644.00	1,754,570.00	9,544,938.00
University of Technology Sydney							
FL210100180	**Upconversion nanophotonic systems**	562,000.00	561,000.00	552,000.00	552,000.00	554,000.00	2,781,000.00
Jin, Prof Dayong	The photon upconversion process can produce visible light from lower-energy near-infrared incident light. This Laureate Program aims to address major bottlenecks in upconversion nanotechnology – the efficiency, stability and absorption bandwidth. Expected outcomes include new knowledge in the interface design of hybrid materials, a world-leading single-particle spectroscopy system, a new family of molecular probes, and novel super-resolution microscopy for functional imaging of subcellular organelles. This research offers exciting opportunities for single-molecule tracking, quantitative diagnostics, non-invasive imaging, bio-mechanical force measurement and thermometry; tools to observe the nanoscale world inside live cells.						
	National Interest Test Statement						
	This project will create more efficient and stable hybrid materials to convert infrared photons into intense visible light, giving rise to a new family of molecular probes and a range of analytical, diagnostic and imaging devices for the rapid detection of cells and molecules in the field. Such single-molecule detection will allow point-of-care testing of diseases and infections in clinics, airports, and nursing homes. The new methods are also expected to enable healthcare advances, e.g. super-resolution imaging and precise drug release by using less harmful infrared light through deep tissue. Environmental benefits include more efficient solar energy use for photovoltaics and photocatalysis of wastewater. By leveraging existing investment from Australian SMEs, universities and medical institutes, this project will drive Australian innovation and support economic recovery by producing highly novel reagents for the Australian analytical instrument and biomedical imaging industry and will train our next generation of job-ready graduates in nano/biotechnologies, photonics and advanced manufacturing.						
	University of Technology Sydney	562,000.00	561,000.00	552,000.00	552,000.00	554,000.00	2,781,000.00

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University of Wollongong							
FL210100050	**Interfacial design and engineering for high-performance batteries**	620,000.00	666,000.00	676,000.00	676,000.00	625,000.00	3,263,000.00
Guo, Prof Zaiping	This Fellowship aims to design the next generation of batteries - for use in portable devices, electric vehicles and smart grids - that will overcome the energy density, cycle life, and safety issues, and will contribute to a more sustainable future. This comprehensive and ground-breaking research program combines experiment and theory of electrode/electrolyte interfacial behaviour with materials engineering, to develop a toolkit of new battery design principles. The program expects to deliver high energy-density batteries with outstanding safety profiles and extended cycle lives. These outcomes would revolutionise battery technologies and position Australia as a global leader in the critical transition to a decarbonised economy.						
	National Interest Test Statement Australia will benefit enormously from this Laureate program through economic, commercial and environmental impact, by becoming a global leader in rechargeable battery technologies, and facilitating our transition to a cleaner and more sustainable future. The Fellowship addresses a critical bottleneck in rechargeable battery technology that has constrained the practical uptake of high performance materials. Principal benefits of the research program include the development of innovative energy storage systems with high energy/power densities, long cycle lives, fast charging capability and safety. Industries that rely on efficient energy storage will benefit in the long-term. Importantly, the environment will benefit through a swifter transition to renewable energy sources backed up by reliable battery technology, which will lead to reduced greenhouse gas emissions.						
	University of Wollongong	620,000.00	666,000.00	676,000.00	676,000.00	625,000.00	3,263,000.00
	New South Wales	3,128,396.00	3,195,684.00	3,170,644.00	3,160,644.00	2,933,570.00	15,588,938.00

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Queensland							
Queensland University of Technology							
FL210100051	**Dynamics of Partisanship and Polarisation in Online Public Debate**	716,113.00	716,113.00	720,740.00	722,925.00	642,189.00	3,518,080.00
Bruns, Prof Axel	Rapidly increasing partisanship and polarisation, especially online, poses an urgent threat to societal cohesion in Australia and other established western democracies; polarisation is also a critical cybersecurity concern when actively promoted by bad-faith actors to undermine citizens' trust in democratic institutions. By introducing an analytical framework that distinguishes four key dimensions of polarisation, the Fellowship aims to conduct the first-ever assessment of the extent and dynamics of polarisation in the contemporary online and social media environments of six nations, including Australia. The evidence is expected to enable an urgently needed, robust defence of our society and democracy against the challenges of polarisation.						
	National Interest Test Statement						
	Polarisation presents an urgent challenge. It intensifies social conflicts, threatens economic prosperity, undermines public trust, and ultimately destabilises societies. Such instability can be exploited by domestic extremists or foreign influence campaigns to weaken sovereign states. Distracted by polarisation at home, nations also lose their influence in the international community. While Australia has been less affected, so far, than other leading democracies, our society is not immune to creeping polarisation, and we must understand the threats we face. This project addresses the urgent need for a clear and robust assessment of polarisation in Australia and other mature democratic systems, with particular focus on the role of online and social media as environments for polarising debate. By developing the evidence base for the dynamics of polarisation in news coverage, audience engagement, public discourse, and social networks, it will identify avenues for avoiding and reducing polarisation in Australian society, safeguarding national cohesion and defending Australia against destabilisation.						
FL210100156	**Re-Evolving Nature's Best Positioning Systems for People and Their Machines**	592,762.00	521,599.00	559,771.00	523,101.00	518,808.00	2,716,041.00
Milford, Prof Michael J	The aim is to develop next-generation positioning capabilities that reduce Australia's increasingly risky strategic reliance on vulnerable GPS satellites owned by other countries, and that enable transformation of Australia's most important sectors through enhanced automation and robotics. Our approach re-evolves, re-engineers, and re-combines the best performing and best understood components of nature's best positioning systems with new technological advances in sensing and computation. The expected outcomes are high-performance positioning systems that improve the competitiveness of Australia's leading industries and provide the positioning reliability required by the defence sector to keep Australia secure.						
	National Interest Test Statement						
	Positioning is a critical capability for every sector of Australian industry, government, and society. Accurate and trustworthy positional knowledge is used to navigate by everything that moves with intent, and could shape life-and-death decisions in defence, tracking global pandemics, and even how social media networks function. In an increasingly chaotic geopolitical climate, Australia's critical reliance on positioning technologies like satellite-based GPS is a sovereign risk because we do not own the satellites, and access could degrade in any major conflict. Current positioning technologies cannot enable the sweeping robotic and automation-driven transformations of Australian industry required to enhance competitiveness and thereby employ and retain a highly skilled workforce. By re-evolving the best positioning systems found in the natural kingdom, the Fellowship will develop next-generation positioning technologies that will enable these transformations, keep Australian society secure, and enhance the prospects for a robust workforce and living standards in the coming decades.						
	Queensland University of Technology	1,308,875.00	1,237,712.00	1,280,511.00	1,246,026.00	1,160,997.00	6,234,121.00

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The University of Queensland							
FL210100045	**Energy-efficient artificial intelligence using quantum technologies**	632,189.00	660,295.00	660,295.00	660,295.00	632,189.00	3,245,263.00
White, Prof Andrew G	Artificial intelligence (AI) is transforming society but standard technologies come with significant hidden costs: training even a single, common, learning model can emit 5 times more carbon dioxide than the lifetime emissions of the average car. This Fellowship aims to develop artificial intelligence platforms using Australia's significant investment in quantum technologies to bypass traditional approaches to AI. The expected outcomes are neuromorphic computers that operate efficiently—with low-energy cost—and rapidly—achieving speeds impossible with conventional electronic approaches. The anticipated benefits are transformative technologies for AI, new applications across society, and new tools for exploring brain function and cognition.						
	National Interest Test Statement						
	Artificial intelligence is transforming every sector of Australian society, with the public face ranging from smart assistants in our phones, through credit ratings in finance, to medical technologies. Current artificial intelligence comes with an extraordinary energy cost due to the electronic technology used, which is far short of the energy efficiency of biological systems such as the human brain. This Fellowship aims to change this by using quantum technologies to develop energy-efficient artificial intelligence systems, where the neurons communicate millions of times faster than in biology and so provide a new scientific tool for exploring and understanding cognition. Systems will be able to be built and applied at a scale well beyond the current limits, substantially reducing the costs to install and run systems. Australia will gain a competitive edge globally, and be placed at the forefront of the artificial intelligence sector. It will enable delivery of faster, smarter services at affordable costs, providing new infrastructure that can be delivered equitably to all parts of Australian society.						
FL210100107	**Tracking nanoparticles: from cell culture to in vivo delivery**	582,000.00	596,000.00	594,000.00	594,000.00	594,000.00	2,960,000.00
Parton, Prof Robert G	Understanding how cells function in the 'real-time' context of a living organism is a key challenge in the new era of cell biology. Using super-resolution light microscopy and state-of-the-art correlative electron microscopy together with model systems, this Fellowship aims to deliver new understandings of cells in their natural environment. Significantly, the project will elucidate how proteins or nanoparticles pass from the bloodstream into tissues and then into cells, and in doing so deliver much-needed knowledge of protein and particle trafficking in situ. Outcomes and benefits include leading-edge fundamental science into the function of cells, education, outreach and building of Australian capacity in high-demand skill sets.						
	National Interest Test Statement						
	The planned research will expand Australia's knowledge base and leading research capability through the development of a new field of in vivo cell biology and the implementation of advanced technologies, systems and standards in the understanding of cell biology in a whole animal system. In addition, the planned research will have more general benefits for Australian researchers by advancing tools to understand how nanoparticles can be engineered to reach their site of action within the cell, and by establishing new methods to optimise targeting of nanoparticles to precise intracellular targets for future applications. This will have immediate benefits for Australian scientists striving to optimise their nano-therapeutics, and deliver long-term economic benefits for Australia. The project will provide an excellent research training environment to nurture early-career researchers and will forge strong links with international leaders in the field.						
	The University of Queensland	1,214,189.00	1,256,295.00	1,254,295.00	1,254,295.00	1,226,189.00	6,205,263.00
	Queensland	2,523,064.00	2,494,007.00	2,534,806.00	2,500,321.00	2,387,186.00	12,439,384.00

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South Australia							
The University of Adelaide							
FL210100099	**The Intelligent Microscope - novel optical imaging at depth**	701,244.00	693,517.00	685,063.00	689,335.00	632,669.00	3,401,828.00
Dholakia, Prof Kishan	While optical methods for imaging are used extensively, achieving wide-field imaging through scattering media with high resolution and depth is a major challenge, due mainly to the limited penetration depth of light. This proposal aims to transform wide-field optical imaging through a new 'intelligent' microscopy able to capture 3D volumetric images. Innovations in shaping light in both space and time will be combined in a holistic way with computational analysis to extract images from deep within the sample at extraordinary levels of detail. Major benefits of the research range from next-generation tools for enhanced discovery of biological and physical materials, to new Australian start-ups for new imaging and microscopy devices.						
	National Interest Test Statement Through this proposal, Australia will benefit from an advanced technological push in imaging to positively impact biological discovery, food security and advanced manufacturing. The Fellowship is seeking to deliver concrete economic benefits through the direct creation of new industries based on the licensing and application of generated IP and the expansion of capability within existing imaging/optics companies delivering into national and international markets. The worldwide optical microscopy market is worth US$4.6B with the endoscopy market worth a further US$32.5B (2015 data). A recent Industry Review (Lighting Economic Growth 2020) stated that the Australian photonics-based industry sector accounts for around A$4.3B of economic activity, similar in size to Australian dairy production, and the mining and construction equipment sector, and employs nearly 10,000 people in 465 companies. A vast range of instruments used in the life sciences depend on lasers, microscopy and optical detection systems. We can be significantly expanded upon this and inspire new cohort of researchers based on this proposal.						
	The University of Adelaide	701,244.00	693,517.00	685,063.00	689,335.00	632,669.00	3,401,828.00
	South Australia	701,244.00	693,517.00	685,063.00	689,335.00	632,669.00	3,401,828.00

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Victoria							
Deakin University							
FL210100147	**Alloy alchemy: New paradigms in alloy science to promote a circular economy**	601,000.00	601,000.00	600,000.00	600,000.00	580,000.00	2,982,000.00
Barnett, Prof Matthew R	Although metals are readily remelted and reused, Australia exports most of its alloy scrap. These exports represent an opportunity for Australia to create value on-shore via a supply source that is secure against disruption. The Laureate will promote new ways to tap into this resource. It will provide the science needed to disrupt the current advanced alloy recycling paradigm and open up new avenues to create high value alloys from intermingled metal stocks that are currently 'down-cycled' because they are too costly to separate. The Laureate will also pioneer a new additive manufacturing technology to convert metal scrap into high value components, saving up to 95% of the production energy used to create the virgin metal.						
	National Interest Test Statement						
	At current rates, Australia exports $130M worth of scrap stainless steel, nickel and titanium each year and more than 500,000 tonnes of metal are sent to landfill. These exports represent an opportunity for Australia to create up to $500M AUD in extra value on-shore with the overall metal recycling potential estimated to be as much as $2B AUD per year. Metal recycling also saves up to 95% of production energy, reducing CO2 emissions. Our end-of-life metals are not just a precious resource; they represent a local supply source of metal that is secure against international disruption. The Laureate will create new capacity to tap this resource by promoting a circular economy in high value advanced alloys. The outcomes will benefit Australia's metal fabrication and scrap metal sectors.						
	Deakin University	601,000.00	601,000.00	600,000.00	600,000.00	580,000.00	2,982,000.00
Monash University							
FL210100258	**Understanding how bacteria adapt and function in the complex gut ecosystem**	681,205.00	681,205.00	681,205.00	681,205.00	606,887.00	3,331,707.00
Lyras, Prof Dena	This project aims to investigate the role of the gut ecosystem in defining the structure and function of microbes. Given that one of the current challenges in microbiology is our inability to study individual microbes directly from complex, multi-microbial niches, this project aims to develop multidisciplinary methods to study microbes in their native state, to understand how they adapt to live in the gut. This understanding should provide fundamental insights into adaptation mechanisms that lead to bacterial proliferation, disease and antibiotic resistance. As well as enhancing interdisciplinary collaborations, this work should provide economic benefits by contributing to improved gut health of animals, and more efficient food production.						
	National Interest Test Statement						
	Gut infections are a serious global human and animal health burden, and antibiotic resistance is now a global issue of critical importance. The gut contains trillions of microbes, with thousands of different types living within this complex ecosystem. These microbes are important to animal and human health and disease. This project will develop the tools required to isolate and study these microbes directly from their natural gut environment. This knowledge will unlock new pathways to tackle the growing antibiotic resistance problem through improved therapeutics and engineered antibiotics. The discoveries have the potential to vastly increase food production through improved gut health for livestock, particularly in the Australian pork industry where gut infections cost >10 million dollars per year through lost productivity.						
	Monash University	681,205.00	681,205.00	681,205.00	681,205.00	606,887.00	3,331,707.00

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The University of Melbourne							
FL210100133	**The Corporate Challenge to Democracy: Harnessing International Law**	599,668.00	685,455.00	664,290.00	608,533.00	634,411.00	3,192,357.00
Pahuja, Prof Sundhya	The rising power of global corporations is a serious challenge to Australian democracy. Corporations have gone global, but the mechanisms to ensure they serve the public interest, pay tax and comply with national laws have not. So far, international law has not been able to help. This project will develop a new theoretical account of the relationship between states and corporations and identify reforms to international law and institutions to remedy the current imbalance. This project, and the new generation of researchers it will train, will enhance Australia's capacity to hold global corporations to democratic standards, legal accountability and taxation, and establish Australia as a world leader in maintaining that balance going forward.						
	National Interest Test Statement Australia, along with other states, is looking for solutions to the problem of holding global corporations to account for taxation, financial integrity, high utility prices, public health and environmental protection. This is difficult because global corporations often have more political and economic power than Australia and their actions may be in tension with national laws and democratic institutions. Unlike existing scholarship on this topic, which focuses on national legal regulation, this research program will investigate how international law allows corporations to function at a global level and will identify ways that international law could be harnessed by Australia and like-minded states to restrain the anti-democratic actions of corporations. The benefits this will bring include more tax revenues, improved integrity in business practice, greater opportunities for small business, policy autonomy, reduced harm from poorly regulated corporate activities and greater social economic and political equity.						
	The University of Melbourne	599,668.00	685,455.00	664,290.00	608,533.00	634,411.00	3,192,357.00
	Victoria	1,881,873.00	1,967,660.00	1,945,495.00	1,889,738.00	1,821,298.00	9,506,064.00

* Note - Indicative funding for approved projects will be made available through a funding variation under section 54 of the ARC Act

Minister's Approval for Australian Laureate Fellowships for Funding Commencing in 2021 Schedule

Approved Organisation, Leader of Approved Research Program	Approved Research Program	Estimated and Approved Expenditure ($)			Indicative Funding ($)		Total ($)
(Columns 1 and 2)	(Column 3)	2021-22 (Column 4)	2022-23 (Column 5)	2023-24 (Column 6)	2024-25* (Column 7)	2025-26* (Column 8)	(Column 9)
Western Australia							
Curtin University							
FL210100103	**Interpreting the molecular record in extraordinarily preserved fossils**	613,759.00	608,214.00	619,009.00	592,099.00	535,637.00	2,968,718.00
Grice, Prof Kliti	This project aims to unlock a hidden record of our planet's past and the life it supported, using a novel approach with benefits for environment and industry. Soft tissues preserved in sedimentary concretion fossils will be analysed, extending the traditional inorganic fossil framework of major evolutionary events. Understanding the biofilm entombment and preservation mechanisms responsible for this unique organic fossil archive will extend our knowledge of microbial functionality. Expected outcomes from this new way of interpreting our planet's past, include improved understanding of extinction events, environmental change and adaptation, with potential benefits in ecosystem management, resource exploration and biofilm uses.						
	National Interest Test Statement Molecular fossils in geological formations provide a wealth of information on the evolution of life, past environments and major climatic and tectonic events in Earth's history. This Fellowship will improve access to and identification of (currently) rare molecular (soft-tissue containing) fossils, providing unprecedented insights into our planet's environmental and evolutionary record. This new knowledge will be used to mitigate the impact of deepening environmental stressors (e.g., climate change, wildfire frequency/intensity, ocean acidification) on modern ecosystems which represent some of humanities greatest challenges. Contributions to these issues will be of high economic and environmental benefit to Australia, as well as well as providing significant scientific outcomes to the international research community.						
	Curtin University	613,759.00	608,214.00	619,009.00	592,099.00	535,637.00	2,968,718.00
	Western Australia	613,759.00	608,214.00	619,009.00	592,099.00	535,637.00	2,968,718.00
		10,786,566.00	**10,963,418.00**	**10,924,353.00**	**10,807,128.00**	**10,225,245.00**	**53,706,710.00**

* Note - Indicative funding for approved projects will be made available through a funding variation under section 54 of the ARC Act