PROF. WOJCIECH CHRZANOWSKI

MSc (medal), PhD, DSc

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"Professor Wojciech Chrzanowski is a nanobiomedical engineer who translates nanoscale science to human applications and transforms medical treatments and disease diagnosis."

CURRENT APPOINTMENTS

2025 – present	Head of Pharmaceutical Sciences, Faculty of Medicine and Health, The University of Sydney, Australia
2024 – 2025	Scientific expert and advisor, Cytiva; Uppsala, Sweden
2024 – present	Affiliate Professor, Karolinska Institute, Department of Laboratory Medicine, Division of Biomolecular and Cellular Medicine, Division of Clinical Immunology; Stockholm, Sweden
2024 – present	Visiting Professor, Uppsala University, Division of Biomedical Engineering, Department of Materials Science and Engineering; Uppsala, Sweden
2021 – present	Professor of Nanomedicine, Faculty of Medicine and Health, The University of Sydney; Sydney, Australia
2019 – present	President of High-Intensity Focused Ultrasound Biomedical Association Inc.
2015 – present	President-elect of the Asian Federation for Pharmaceutical Sciences
2010 – present	Founder and Director of the Nano-Medical Innovations Lab and the Nano-Bio-Characterisation Facility, Sydney Pharmacy School, The University of Sydney; Sydney Australia

PREVIOUS APPOINTMENTS

2016 – 2021	Deputy Director at The University of Sydney Nano Institute (0.2 full-time equivalent); Sydney Australia
2015	Research Fellow in Medicine, Harvard Medical School Harvard University; Boston, USA
2008 – 2009	Research Assistant, School of Mechanical Engineering, University of Glasgow, EU Framework Program 6 Project Grant; Glasgow, UK
2006 – 2008	Marie Curie Research Fellow, Eastman Dental Institute, Division of Biomaterials and Tissue Engineering, University College London; London, UK
2003 – 2006	Lecturer, The Silesian University of Technology; Gliwice, Poland

ACADEMIC QUALIFICATIONS

2006 – 2014	Doctorate of Science in Biomedical Engineering, Polish Academy of Science, Nałęcz Institute of Biocybernetics and Biomedical Engineering, Poland
2013	Graduate Certificate in Educational Studies, The University of Sydney
2000 – 2003	Doctor of Philosophy in Biomedical Engineering, The Silesian University of Technology, Poland
1995 – 2000	Master of Science in Biomedical Engineering, The Silesian University of Technology, Poland.

GRANTS

Since 2006 I have obtained $17.9M in competitive grant funding including: EU Horizon2020 (2×), Australian Research Council Linkage Projects (3×), NHMRC equipment grants (6×), Sydney Catalyst Grant (2×), Medical Advances Without Animals Research Grant (3×), and Harmonia Project Grant, National Science Centre Poland (1×). I was also awarded $850k amount in internal competitive funding including a Sydney Outstanding Academic Researcher (SOAR) Prize ($150k), Sydney Nano Grand Challenge Projects (2×), Sydney Nano Kickstarter Grants (2×) and $160k in partnership and travel grants.

FELLOWSHIPS

Japanese Society for Promotion of Science Invitational Fellowships – Chubu University (2014), Tokyo University (2012)

Marie Curie Intra-European Fellowship (2006), University College London – European Union Framework Program 7

AWARDS

2021	Highly Commended Finalist, Australia Research Awards, Category Frontier
2020	Winner of the Biomedical Shark Tank Competition – Institute for Biomedical Materials and Devices, University of Technology, Sydney
2019	Barry Inglis Medal for Innovation in Nanometrology – National Measurement Institute
2019	Sydney Nano Institute's Publication Award in the field Nanotoxicology
2019	Award for being Outstanding Reviewer for *Nanoscale Horizons* – Royal Society of Chemistry
2018	Winner of the Big Idea Award Competition – Sydney Local Health District
2018	Vice Chancellor's Award for Excellence (Outstanding Teaching and Research) – The University of Sydney
2018	2nd Most Influential Scientific Discovery – The University of Sydney
2018	Outstanding Research Paper Award – Royal Society of Chemistry
2018, 2016	Supervisor of the Year Award – Sydney University Postgraduate Research Association
2017	Deputy Vice Chancellor Research Award for Reduction in the Use of Animals in Research (Magnetically bioprinted three-dimensional scaffold-free liver model for nanotoxicity studies) – The University of Sydney
2015	Endeavor Executive Award in the field of Nanotoxicology – The Department of Industry, Innovation, Science, Research and Tertiary Education of the Australian Government
2014, 2014	Recipient of Australian Institute Nuclear Science and Engineering Research Awards in the field of Biomedical Engineering

PUBLICATIONS

- 196 peer-reviewed publications, 3 books, 6 book chapters and inventor of 6 patents; ORCID: https://orcid.org/0000-0001-8050-8821
- H-index: **46**; i10-index: 132. My h-index increase 2.5× in the last 5 years.
- Field Weighted Citation from the last 3 years is 5.29 – 4.1× the Australian average and 5.2× the global average for the field of Medical and Health Sciences.
- 48% of my papers have been published in journals classified in the top 10% (Scientific Journal Rankings – SJR) in the field: **Nature Biotechnology** 2021 – 2nd in Biotechnology, **ACS Nano** 2021 – 1st in Nanotechnology, **Analytical Chemistry** 2019, 2016 – 1st in Analytical Chemistry, 7th Most Influential Journal Across the Board according to Innovation Index; **Nature Protocols** 2019 – in the top 1% of journals in biochemistry; **Advanced Functional Materials** 2014 – 2nd in Biomaterials; **Biomaterials** 2017, 2016, 2014 – 4th in Biomaterials.
- I am the first or senior author on over 69% of my publications.

SEMINARS

- 74 invited seminar/conference/workshop presentations in total, 46 of which were international.
- 34 invited conference presentations in the last 5 years.

OUTREACH

- International TV, Radio, and newspaper interviews viewed over 700M times, *e.g.*, The Guardian, Project, Ch9 News (Exclusive), Ch7 News, ABC News, ABC Radio National, Sydney Morning Herald, The Age, Engineers Australia).
- VIVID Sydney 2014 – I exhibited my work at the Australian Museum of Contemporary Arts.

SERVICE TO THE DISCIPLINE

- *Editor in Chief* – Artificial Cells, Nanomedicine and Biotechnology.
- *Associate Editor* – Nanomaterials, Journal of Tissue Engineering, EVCNA.

CURRENT INDUSTRY COLLABORATIONS/ENGAGEMENT

Cytiva (Sweden/global), Danaher (global), BiomeCentric (AUS), MedLab Clinical (AUS), Aspect Biosystems (Canada), Probiotics Australia (AUS), Nano Medical Technologies (AUS), Kinaltec (AUS), TheraKii (AUS), IZON (NZ), BCAL (AUS), SynThera (India).

Research Mentoring – narrative

My exceptional research mentoring is evident in my 2 Best Supervisor Awards from the Sydney University Postgraduate Representative Association (2016, 2018; 2022 Finalist), and my 2018 University of Sydney Vice Chancellor's Award (Outstanding Research & Teaching). Since the inception of my career, I have supervised 19 higher degree research (HDR) students to successful completion (12 as Primary Supervisor, 7 of these since 2014). I have also been associate supervisor/mentor for 38 additional staff/students beyond my own group since 2010. As Founder and Director of the Nano-Bio-Characterisation Facility at the University of Sydney, I am able to attract top students from around the world and mentor them to exceptional outcomes. Indeed, 6 of the 7 completed HDR students for which I was primary supervisor in the last 5 years received a total of 9 inter/national prizes/awards (e.g., S Kim, 2018 Harsanyi Medal and 2018 Euro Resp Soc Fellowship; K Divakarla, 2018 Best Presentation Award from the Euro Soc for Artificial Organs Congress; K Reczynska, 2017 Best Presentation Award from the Euro Soc for Biomat Conference). Since 2017 I have supervised 3 students from the University of Sydney's Talented Student Program (top 1% of undergraduates). I am currently the primary supervisor for 6 research staff (4 HDR students, 2 research affiliates). Further, 1 Research Fellow will join my team in late 2021.

My passion for building research capacity through human resources is evidenced by the advanced Nano-Bio-Characterization training program that I developed, which has led to 25 expenses-paid invitations to provide training for research groups around the world, as well as an invited webinar hosted by the world-leading manufacturer of atomic force microscopes (AnasysInstruments, USA) which was watched by over 400 specialist scientists. My multinational academic & industry collaborations provide valuable international internship opportunities for my students.

Research Policy and Professional Leadership – narrative

To ensure scientific rigour in nanomedicine research, I am an Editor-in-Chief of the journal Artificial Cells, Nanomedicine and Biotechnology, and Associate Editor for 3 leading journals in the field (J Tissue Eng; Front Bioeng & Biotech; Nanomat). I peer review >20 articles annually for journals in the top 10% in their field, e.g. Nature Nanotech #1 in nanoscience, Adv Funct Materials, #2 in biomaterials. For my service to peer review, I received The Outstanding Reviewer 2019 Award from the Royal Soc Chem (RSC) and I was invited by RSC to edit 3 books.

I am a member of NHMRC Investigator and Ideas Grant review panels. I am also sought out for peer review of international grants. Since 2011 I have reviewed a total of 162 grants, e.g. NHMRC Investigator Grants (69x), Ideas Grants (24x), NHMRC Project Grants (5x), ARC (8x), A*Star Singapore (22x), EPSRC, UK (1x), INSERM, France (2x), EU H2020 (1x).

Since 2011 I led the organisation and chairing of symposia at 18 major international conferences, including the Tissue Eng Reg Med World Congress, Kyoto 2018, where my symposium attracted an exceptionally large audience (n=250).

My professional leadership extends to strengthen global partnership and science reach for sustainable future. In 2020 I was the Australia-based lead on a successful EU Horizon2020 grant ($1,54M) with 8 international partners for a program: Shaping Innovative Products for Sustainable Tissue Engineering Strategies (grant score 93/100). Since 2016 I have been Vice-President for the Asian Federation for Pharma Sci, a role in which I co-chair biannual conferences.

In Sept 2019 I was appointed as the only scientific panel member from the southern hemisphere to EU-OPENSCREEN-DRIVE, the world's largest consortium for small-molecule screening, to oversee screening of new drug leads. In 2020 I initiated and jointly with Waterloo Institute for Nanotechnology, MESA+, UCLA, and Japan Science and Technology Agency, I established the International Network 4 Sustainable Nanotechnology, the world only organisation working towards achieving UN sustainability goals through nanotechnology.

Institutional Leadership– narrative

In 2017 I was elected as the Health and Medicine Theme Leader at Sydney Nano Institute, a role in which I lead over 150 members from academia and industry. As a result of my major contributions to building local and international research capacity in nanomedicine and health, in January 2019 I was offered the role of Deputy Director at Sydney Nano Institute. In this role I initiated, co-led the team, and obtained philanthropic funding for a project officer (3 years) to establish the Nano Health initiative at the University of Sydney, which now consists of 12 research clusters, of which I lead one.

In my Deputy Director role, I also collaborated with the Director, Prof Eggleton, to establish the COVID-19 Sensors Taskforce to implement biosensor strategy to control the outbreak. We organised a co-design workshop with >100 academics, industry representatives, clinicians, and patients to prioritize technologies needed to reduce the impact oCOVID-19. This work led to a publication in Nature Biotechnology. I was one of four lead facilitators and my collaborator Prof Tong (epidemiologist) was lead author.

With my proven track record in sourcing funding for and establishing major nanobiotechnology hubs, I was invited to be an advisor to the Sydney Core Facility, which provides research facilities for >3,000 researchers. Moreover, with inception of the University of Sydney's Drug Discovery Initiative (DDI) in 2018, a network of over 120 researchers, I was invited to lead a DDI division focusing on nanotechnology in drug testing and delivery.

I have productively managed large multicollaborative research programs that bridge the gaps between nanomedicine, bioengineering, biology, and social science, through which I have developed excellent managerial/leadership skills. For example, I was Australian lead for a program that was awarded $2.5M in 2019 from the Korean Minister of Health and Welfare to develop the USyd-Pusan National University BioMedical Global Training Program.

Research Programs Team Leadership – narrative

A key to my success as a research team leader is that I spend time getting to know the unique motives and talents of each person in my team, enabling me to match each person with the most suitable project. I then gradually challenge each member within the entrepreneurial culture of my team to develop new skillsets and ways of thinking, which translates to my team's exceptional outcomes.

In recognition of my research leadership, since 2010 I personally received 7 inter/national prizes/awards and led my team to win 9 additional awards plus 6 prestigious fellowships/scholarships. Since 2010 I have received 11 personal invitations to speak at inter/national conferences, e.g. the 2017 Eur Resp Soc Congress (>10k delegates), and >50 invitations for institutional seminars.

My proven ability to lead a translational research program to fruitful completion is evident in an award of a place in the 2019 SPARK entrepreneurial program to commercialise my team's EV technology. With my leadership skills and mentoring from Prof Wallach (Director of SPARK), I obtained funding for, and in 2021 became a director of the SPARK program at USyd to fast-track clinical translation of 4 technologies developed within Nano Health Initiative.

In addition to academia, I successfully established research programs with six industry partners. For example, with Aspect Bioscience (CAN) I lead the development of multi-organ models using bioprinting; with ExoPharm (AUS) I co-lead a quality control program for EV-based therapeutics; with HAIFU Medical (China), I lead the program on nanoenhanced HIFU.

Based on my success in leading international research programs, in 2013 Dankook University, South Korea, gave me a Visiting Professorship, a role in which I mentored the team in funding bid that was awarded $10M. In addition, I led the Sydney arm of the EU/AUS Biomedical Engineering Masters program (BEAM; $640k) with Minho, Martin-Luther & Trento universities, resulting in 38 student/staff exchanges since 2012

Selected Grants

Title			
Funding agency / number	**CI(s)**	**Amount funded**	**Years**
Title: eEVs for AONs – gene editing for treating Parkinson's disease.			

Kickstarter Grant, Sydney Nano	Ryan Davis, Wojciech Chrzanowski, Christopher Ridge	A$ 35,000	2025-2025

Antisense oligonucleotides can address splice-altering variants but face challenges in tissue targeting and delivery. With the rise of genome sequencing, there is a growing need for optimized AON delivery. We aim to enhance AON delivery using extracellular vesicles to develop the first disease-modifying therapy for early-onset Parkinson's disease and advance personalised nanomedicine.

Title: Mitochondrial transplantation as a next-generation therapeutic for COPD

National Health and Medical Research Council, Ideas Grant	Wojciech Chrzanowski, Lauren Finley, Elenor Hortle, Reinoud Gosens.	A$ 885,000	2025-2028

AMT is emerging as a highly effective therapeutic strategy for a range of diseases. By refining and combining these two cutting-edge fields of medical research (AMT and EVs), we have developed a highly innovative and novel therapy for the treatment of mitochondrial dysfunction in lung disease.

Title: Precision biomanufacturing of postbiotics: the next-generation functional materials for pharmaceutical, nutraceutical, food, and agriculture applications.

National Industry PhD Program. Australian Government, Department of Education	Wojciech Chrzanowski, BiomeCenrtic PTY.	A$ 120,000	2023-2025

This project will provide fundamental understanding of how the microenvironment of probiotics regulates the production and function of postbiotics. Understanding this relationship will enable a paradigm shift from pro- to postbiotics, key to unlocking the full potential of these important functional molecules. The project outcomes will be (i) the commercialisation of Australian-made, sustainably derived functional materials, (ii) a highly-skilled workforce and biotechnology experts, and (iii) the establishment of a resilient academia-industry biomanufacturing ecosystem.

Title: Integrated Assessment and Advanced Characterization of Neuro-Nanotoxicity

Horizon 2020 Framework Programme, Call: HE-01-35	Ernesto Alfaro-Moreno, Wojciech Chrzanowski, Gianni Ciofani, James Baker, Sean Kelly, Alberto Katsumiti, Isabel Rodríguez, Adrián García, pus five industry partners.	A$ 5 210,000	2022-2025

This program establishes the world's first integrated approach for the neuro-nanotoxicity assessment that understands the interconnected in vivo–in vitro relationship holistically.

Title: EV-Phage Biobots

CDIP Fund	Wojciech Chrzanowski, Hien Duong	A$ 69,000	2022-2023

This program pioneers the development of multifunctional biologicals that simultaneously eradicate bacteria and heal wounds.

Title: Shaping Innovative Products for Sustainable Tissue Engineering Strategies – SHIFT

Horizon 2020 Framework Programme, Call: H2020-MSCA-RISE-2020	Antonella Motta, Rui Reis, Alicia El Haj, Anthony Weiss, Wojciech Chrzanowski,	A$ 1 540,000	2021-2024

	Gilson Khang, Natalia Nalves, Rui L. Reis, Sorada Kanokpanont, Turmunkh Gerelchuluun		

This program focuses on the development of new strategies for hard and soft tissue regeneration and wound healing.

Title: *Breathe Easy - Development of the next generation treatment for chronic obstructive pulmonary disease COPD using a COPD-on-chip model that replaces the use of animal models in lung disease and lung injury research including COVID-19*,			
Medical Advances Without Animals (MAWA)/Research Grant	Wojciech Chrzanowski, Thanh Phan	A$ 25,000	2020-2021

This program aims to develops new models mimicking lung pathophysiology for testing new formulation to treat COPD.

Title: *nanoJECT - light-thrusted needleless injections for pain-free cannabinoids delivery*			
Office of Global Engagement/Partnership Collaboration Awards	Chrzanowski W, Oh K, Divakarla S, Hyeonwoo L (International partner: Yonsei University)	A$ 35,000	2019-2020

This program focuses on the development of optic fibre based devices for pain free and needles injections of drugs.

Title: *HIFU n - Nanotechnology-Enhanced High Intensity Focused Ultrasound as the New Generation of Cancer Therapy: advancing HIFU towards mainstream, non-invasive cancer therapy*			
Sydney Catalyst	Wojciech Chrzanowski	A$ 45,000	2019-2020

This program develops nano enhanced ultrasound system for cancer therapy.

Title: *Skin- and skin injury-on-chip-microfluidic platform for Nano toxicity, drug discovery, and precision biology to replace the traditional use of animals in biomedical research and testing*			
Medical Advances Without Animals (MAWA)/Research Grant	Chrzanowski W, Divakarla S,	A$ 25,000	2019-2020

This program develops new models of skin and skin injury for testing toxicity of nanoparticles and drugs.

Title: *Sense-and-Dispense - breaking barriers in cancer pain treatment using iontophoretic tattoo-like cannabinoids delivery systems*			
Office of Global Engagement/Partnership Collaboration Awards	Chrzanowski W, Zhao N, Divakarla S, Vitetta L, Liu J, Chen S, Hall S (International partner: Chinese University of Hong Kong)	A$ 35,000	2018-2020

This program develops ultrasound-based system for transdermal delivery of therapeutics which continuous monitoring of drug concentration in the blood stream.

Title: *Big Idea 2018*			
Sydney Local Health District/Research Support	Wojciech Chrzanowski, Sally Yunsun Kim	A$ 45,000	2018-2020

This program develops new aerosol device for pulmonary delivery of extracellular vesicles.

Title: CannaPatch - microneedle delivery platform for cannabinoids for cancer patients			

NSW Industry and Community Engagement SEED Program BOOST 2018	Wojciech Chrzanowski	A$ 75,000	2018-2020

This program focuses develops microneedle patch for transdermal devilry of cannabinoids.

Title: Novel nano-composite particles for controlled-release drugs via inhalation			
Australian Research Council (ARC)/Linkage Projects (LP)	Chan H, Cipolla D, Chrzanowski W	A$456,000	2018-2021

This program develops innovative nanoparticles which encapsulate single drug crustal and allow for sustained delivery of the drug.

Title: Nanosafety - safety of nanoparticles and their impact on health and environment			
CDIP Industry & Community Seed Fund 2017	Elizabeth New, Wojciech Chrzanowski	A$50,000	2018-2019

This program established single nanoparticles characterisation capability for testing nanotoxicity.

Title: Delivery of anti-inflammatory extracellular vesicles via aerosolisation for treatment of inflammatory lung diseases			
Office of Global Engagement/Partnership Collaboration Awards	Wojciech Chrzanowski, Marca Wauben	A$30,000	2018-2019

This program developed new approaches for characterisation of single extracellular vesicles and was validated using vesicles derived from milk, human milk and stem cells.

Title: BEAM - Biomedical Engineering - EU Australian cooperation at master level			
ICI-ECP Programme European Commission EACEA and Australian Government, Department of Education	Claudio Migliaresi Rui L. Reis Thomas Groth Dietmar W. Hutmacher Wojciech Chrzanowski Anthony Weiss	197,500 Euro + $325,000 = A$610,000.00	2014-2017
Title: Design clean technologies for the synthesis and purification of biohybrid polymers			
ARC LP LP120200489	Fariba Dehghani, Wojciech CHRZANOWSKI	$336,000	2013-2016
Title: Engineering of intelligent inhalable therapeutics with the capacity for guided accumulation and triggered release of active pharmacological ingredient using external electromagnetic field			
National Science Centre (Poland), Project Grant Harmonia	Elzbieta Pamula Wojciech Chrzanowski Marek Langner	$310,000	2014-2017
Title: 'Firefighters' for smoke inhalation injury			
DVC-R Compact Grant	Wojciech Chrzanowski Kim Chan Yiwei Wang Sally Kim	$25,000	2016
Title: 3D cell explorer – quantitative 3D stain-free, high-resolution imaging of cells and tissues			
NHMRC Equipment Grant	Wojciech Chrzanowski Nicholas King 1Anthony Weiss	$39,500	2016

	Jackob George Alan Body		
Title: ElastoSensTMBio2 – non-destructive & contactless biophysical tests of soft biomaterials and cell cultures			
University of Sydney Equipment Grant	Fariba Dehghani Wojciech Chrzanowski Geraldine O'Neil Robyn McConchie	$55,000	2016
Title: NanoSafety – new generation of 3D scaffold-free tissue models for high throughput nanotoxicity and drug delivery studies			
DVC Research/AINST Accelerator Scheme	Wojciech Chrzanowski Nicholas King Iqbal Ramzan Brian Hawkett Dipesh Khanal	$94,500	2015
Title: Cancer invasion and metastasis: how actin networks control cell movement in 3 dimensional environments			
SPARC-Cancer	Geraldine O'Neill Matheo Biro Fariba Dehghani Wojciech Chrzanowski	$124,000	2015
Title: Focus on Nano-Antibiofilm-Interfaces - Current Approaches to Examine and Combat Infections Associated with Biomedical Devices			
The São Paulo Research Foundation (FAPESP). SPRINT – São Paulo Researchers in International Collaboration FAPESP grant: 2015/50311-8	Carlos Eduardo Vergani (UNESP) Wojciech Chrzanowski (USyd)	$19,500	2015
Title: Kicking, scorching and cooling cells to guide their fate – understanding effects of vibrations and temperatures on a single cell responses using novel micorfuidic devices			
JSPS Invitational Fellowship	Wojciech Chrzanowski	$21,000	2014
Title: Externally activated drug eluting implants/devices			
DVC Research Bridging Support Grant	Wojciech Chrzanowski	$20,000	2014
Title: Nanoparticle drug Carriers for Externally Triggered and Targeted Chemotherapy			
Sydney Catalyst Pilot Funding	David McKenzie Natalka Suchowerska Wojciech Chrzanowski Joanne Toohey Lisa Horwath	$50,000	2014
Title: Cell-based therapy for pulmonary injury			
USyd Faculty of Pharmacy, Innovation Challenge Award Grant	Wojciech Chrzanowski Kim Chan Sally Kim	$30,000	2014
Title: Multifunctional surface for implantable devices			

AINSE research award Australian Institute of Nuclear Science and Engineering (AINSE)	Wojciech Chrzanowski	$58,000	2013
Title: nanoIR - nanoscale bioimaging with continuous mapping of chemical and physical properties			
NHMRC Equipment Grant	Wojciech Chrzanowski, Filip Braet Marcela Bilek Kim Chan Sebastian Perrier Geraldine O'Neil Alaina Ammit Fariba Dehghani	$196,151	2013
Title: Naturally good - fibres and particles of natural origin as a new biomaterials for regenerative medicine and drug delivery			
Australian Government Department of Education and Training *Endeavour Executive Award*	Wojciech Chrzanowski	$31,000	2013
Title: Scanning Ion Conductance Microscopy			
The Ramaciotti Establishment and Equipment Grants Ramaciotti Foundation	Iqbal Ramzan Wojciech Chrzanowski	$75,000	2012
Title: Talking to cells - biointerface as a key parameter in communication with cells			
DVC International/IPDF Grant	Wojciech Chrzanowski David Brown Fariba Dehghani Hae-Won Kim	$16,000	2012
Title: Molecular force probe for nanoscale bioimaging – MFP-3D-BIO			
NHMRC Equipment Grant	Wojciech Chrzanowski Filip Braet Marcela Bilek Kim Chan Sebastian Perrier Paul Young Daniela Traini Alexey Kondyurin	$197,555	2012
Title: Bioimprinted implant surfaces with multifunctional properties			
Australia-Korea Early Career S&T Researchers Program The Australian Academy of Science	Wojciech Chrzanowski Hae-Won Kim	$4,800	2011
Title: 'Braille' for cells – functional surfaces that enhance implant integration			
JSPS Invitational Fellowship	Wojciech Chrzanowski Tadashi Kokubo	$18,900	2011
Title: qNano – scanning ion occlusion spectroscopy (SIOS)			

NHMRC Equipment Grant	Wojciech Chrzanowski Mary Bebawy Kim Chan Ramin Rohanizadeh Brian Hawkett	$16,000	2011
Title: The Instron testing material instrument			
NHMRC Equipment Grant	Fariba Dehghani Tony Weiss Marcela Bilek Hala Zreiqat Colin Dunstan Wojciech Chrzanowski Ramin Rohanizadeh	$64,000	2011

PUBLICATIONS

1. Calder, D.; Oveissi, F.; Maleknia, S.; Huang, T.; Koong, B.; Abrams, T.; Oar, A.; Chrzanowski, W.; Dehghani, F.; Fathi, A. **Universal Hydrogel Carrier Enhances Bone Graft Success: Preclinical and Clinical Evaluation**. *Advanced healthcare materials* **2025**, 2403930.
2. McClements, L.; Richards, C.; Bakrania, B.; Owen, G.; Zhand, S.; Huyen Phan, T.; Lei, Q.; McGrath, K.; Chrzanowski, W. **Bioprinting a placental model to study the effects of current and emerging treatments of preeclampsia**. *Pregnancy Hypertension* **2024**, 36, 5.
3. Liu, J.; Nordin, J. Z.; McLachlan, A. J.; Chrzanowski, W. **Extracellular vesicles as the next-generation modulators of pharmacokinetics and pharmacodynamics of medications and their potential as adjuvant therapeutics**. *Clinical and Translational Medicine* **2024**, 14 (8), e70002.
4. Lei, Q.; Phan, T. H.; Divakarla, S. K.; Kalionis, B.; Chrzanowski, W. **Metals in nanomotion: probing the role of extracellular vesicles in intercellular metal transfer**. *Nanoscale* **2024**, 16 (42), 19730-19742.
5. Lei, Q.; Divakarla, S. K.; Winsley, T.; Roux, S.; Chrzanowski, W. **Bioprocessing strategies for enhanced probiotic extracellular vesicle production: culture condition modulation**. *Frontiers in Bioengineering and Biotechnology* **2024**, 12, 1441552.
6. Jeffcoat, P.; Di Lernia, C.; Hardy, C.; New, E. J.; Chrzanowski, W. **(Re)imagining purpose: A framework for sustainable nanotechnology innovation**. *NanoImpact* **2024**, 35, 100511.
7. Phan, T. H.; Shi, H.; Denes, C. E.; Coles, A. J.; Geervliet, E.; Wang, Y.; Cheng, Y. Y.; Hesselson, D.; Roelofs, S. H.; Neely, G. G.; Chrzanowski W. **Cutting-edge 3D COPD lung mimic**. *European Respiratory Society*: 2024.
8. Zeng, S.; Chen, Y.; Zhou, F.; Zhang, T.; Fan, X.; Chrzanowski, W.; Gillies, M. C.; Zhu, L. **Recent advances and prospects for lipid-based nanoparticles as drug carriers in the treatment of human retinal diseases**. *Advanced Drug Delivery Reviews* **2023**, 199, 114965.
9. Tsai, K. H.; Shi, H.; Parungao, R. J.; Naficy, S.; Ding, X.; Ding, X.; Hew, J. J.; Wang, X.; Chrzanowski, W.; Lavery, G. G. **Skin 11β-hydroxysteroid dehydrogenase type 1 enzyme expression regulates burn wound healing and can be targeted to modify scar characteristics**. *Burns & Trauma* **2023**, 11.
10. Siddiquee, R.; Lo, V.; Johnston, C. L.; Buffier, A. W.; Ball, S. R.; Ciofani, J. L.; Zeng, Y. C.; Mahjoub, M.; Chrzanowski, W.; Rezvani-Baboli, S. **Surface-Induced Hydrophobin Assemblies with Versatile Properties and Distinct Underlying Structures**. *Biomacromolecules* **2023**, 24 (11), 4783-4797.
11. Phan, T. H.; Shi, H.; Denes, C. E.; Cole, A. J.; Wang, Y.; Cheng, Y. Y.; Hesselson, D.; Roelofs, S. H.; Neely, G. G.; Jang, J.-H.; Chrzanowski, W. **Advanced pathophysiology mimicking lung models for accelerated drug discovery**. *Biomaterials Research* **2023**, 27 (1), 35.
12. Osherov, A.; Prasad, R.; Chrzanowski, W.; New, E. J.; Brazaca, L.; Sadik, O.; Haynes, C. L.; Maine, E. **Responsible nanotechnology for a sustainable future.** *One Earth* **2023**, 6 (7), 763-766.

13. Limantoro, C.; Das, T.; He, M.; Dirin, D.; Manos, J.; Kovalenko, M. V.; Chrzanowski, W. **Synthesis of antimicrobial gallium nanoparticles using the hot injection method**. *ACS materials Au* **2023**, 3 (4), 310-320.
14. Jeffcoat, P.; Divakarla, S. K.; New, E. J.; Chrzanowski, W. **Impact of nano-titanium dioxide extracted from food products on Caco-2 cells using three-phase digestion model**. *Environmental Science: Nano* **2023**, 10 (12), 3329-3342.
15. Calder, D.; Fathi, A.; Oveissi, F.; Maleknia, S.; Abrams, T.; Wang, Y.; Maitz, J.; Tsai, K. H.-Y.; Maitz, P.; Chrzanowski, W., **Thermoresponsive and Injectable Hydrogel for Tissue Agnostic Regeneration.** *Advamced Healthcare Materials* **2022,** *11* (23).
16. Divakarla, S. K.; Das, T.; Chatterjee, C.; Ionescu, M.; Pastuovic, Z.; Jang, J.-H.; Al-Khoury, H.; Loppnow, H.; Yamaguchi, S.; Groth, T., **Antimicrobial and Anti-inflammatory Gallium–Defensin Surface Coatings for Implantable Devices**. *ACS Applied Materials & Interfaces* **2022,** *14* (7), 9685-9696.
17. Pokrajac L, Abbas A, Chrzanowski W, Dias G, Eggleton B, Maguire S, Maine E, Malloy TF, Nathwani J, Nazar L: **Nanotechnology for a Sustainable Future: Addressing Global Challenges with the International Network4Sustainable Nanotechnology**. *UCLA School of Law, Public Law Research Paper* 2022(22-03):15.
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