Katerina Petropoulou, PhD

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Home – Dr Katerina Petropoulou

Highly motivated and proactive professional with vast experience in nutrition research and excellent management and communication skills. Specifically, I am experienced in writing and submitting grant applications and coordinating communications between industrial and academic partners, stakeholders, and civil society. Experienced in designing, conducting, and managing clinical trials focused on human nutrition, health and disease, and a comprehensive understanding of applied research methodologies (collecting, reviewing, and analyzing clinical trial data). Equipped with refined research and project management skills (PRINCE2 Project Management) to meticulously execute time-sensitive investigations and experiments within competitive environments. Recognized for strategic planning and working successfully with inter-disciplinary teams. Skilled at fostering relationships with regional and international industry professionals and academics. Proactive in teaching, training, and mentoring undergraduate, postgraduate, PhD students and staff. Aptitude for engaging with specialist and non-specialist (industry) audiences and utilizing my skills to convey complex information and disseminate information. Passionate about communicating science to lay audiences and excellent in public engagement.

SELECTED ACHIEVEMENTS

- First author of a ground-breaking paper (published in the Journal *Nature Food*) involving a series of state-of-the-art inter-disciplinary studies, which used a novel food crop to investigate how resistant starches affect blood glucose control.
- Patent inventor, CRESTAR Project *"Foodstuffs having improved properties"* Date: 8 September 2021- PC931497GB.
- Developed long-lasting relationships with inter-disciplinary key opinion leaders in the food industry to design new food products.
- Received funding from BBSRC Super Follow-on Fund and Imperial College London, in collaboration with industrial partners, aiming at developing prototype food products that lower postprandial glucose and improve health (BBSRC Super Follow-on Fund 2023, Accelerator Account Award (ICL, May 2021)).
- Received funding to run a "Food Hackathon" at Imperial College London aiming to bring together academics and entrepreneurs to explore the different stages of developing new food products to improve health for the general population (Diet and Health Seeding Award, January 2020) (*Food Hackathon 2020*).
- Winner of the STEM for BRITAIN Physiological Society Award for best scientific communicator at the House of Commons for my PhD Research, (House of Commons, STEM for Britain 2019).
- FOM 25th Staff Anniversary Award winner for Good Governance as part of the GDPR, Data Protection Team (2023).
- Developed standard operation procedures for a research group of 40+ people, supervised PhD/Master students, set up trials at Imperial College and conducted clinical trials, in isolation and simultaneously, from start to finish.

PROFESIONAL EXPERIENCE

Imperial College London, UK –*Research Fellow and Innovation Hub Manager*

May 2018 – present
(October 2021- September 2022 Maternity Leave)

Leading & Management: I have been involved in setting up the RIPEN Innovation Hub (BBSRC OIRC) and I am currently responsible for managing and running the hub. The hub's aim is to uncover the complex relationship between food components and human physiology and translate these results working with academic and industrial partners. PRINCE2 Project Management qualified.

Research: Directed end-to-end process of clinical trials, from running patient and public involvement (PPI) groups prior to the start of the study to recruitment, data collection and analysis. Drafting research papers and grant applications. Currently working on 3 projects: a) assessing the effect of propionate on weight maintenance in 250 young adults (*iPREVENT TRIAL*), b) exploring how three dietary assessment technologies can contribute to the measurement of nutritional intake compared to known meal plan (*SoDiat Trial*) and c) working on the commercialization of my PhD research via running further experiments with support from the BBSRC Super Follow On Fund *CRESTAR*).

***Education, Teaching and Learning*:** Supporting the MRes Clinical Research Programme (Postgraduate), MRes Diabetes and Obesity (Postgraduate), MRes Human Nutrition and Dietetics (Postgraduate) and Undergraduate Medicine Programme-BSc Endocrinology requirements. Research project supervisor for undergraduate and postgraduate students. My responsibilities include project design, day to day lab/clinical supervision, thesis drafting/results analysis supervision, preparation for submission/defense. Additionally, I supervise PhD students and junior members of staff. Currently under my supervision (2022-2023): 2 final-year PhD students, 2 MRes students.

Data Protection Advisor

November 2020 – Present
(October 2021- September 2022 on Maternity Leave)

Provide special support and advice to Information Asset Owners (IAOs) in relation to data protection regulations, associated policies, codes of practice and guidance and of how these can or must be implemented in the Faculty of Medicine within an identified area of expertise (research, student, administration, and marketing).

Imperial College London, UK – *PhD Candidate-Research Associate*

May 2015 - May 2018

Received a PhD scholarship from BBSRC DRINC to study systematically which features of starch structures (and type of food) are important in making it resistant to digestion and in allowing it to improve glucose homeostasis in healthy individuals. This was a joint project consisting of a big inter-disciplinary team and I was the lead researcher (John Innes Centre (JIC) and Quadram Institute Biosciences (QIB)). My tasks consisted in designing and conducting all the human

clinical trial studies and coordinate all the teams who run the experiments using simulated digestion experiments (QIB), developing the pulse crops used in this research (JIC) as well as preparing the food products for the trials in humans (food industry partners). The results of this project have been published in high impact journals and a patent has been filed.

Imperial College London, UK – ***Research Assistant***
October 2013 - April 2015

Managing and running the ‘’my food 24’’ clinical trial (*My food 24*). My duties and responsibilities involved writing ethics applications, >200 participants recruitment and running of the trial, management of study databases and trial master file. I was responsible for training volunteers to use the ‘’my food 24’’ platform and the ‘’Oxford WebQ’’ tool. I drafted protocols to be used by members of the team when conducting mini surveys and 24-hour dietary and physical activity recall interviews. Performed data analysis using dietary coding and communicated the results to senior members of the team.

Imperial College London, UK – ***Dietetic Research Assistant***
September 2012-November 2013

Worked within a big team for a European project (Nutritech) aiming at developing applications of new technologies and methods in nutrition research. My day-to-day tasks included assisting with the needs of the trial, conducting surveys and dietary interviews, collecting and analyzing samples and preparing reports with results.

EDUCATION

Imperial College London, UK – *Doctor of Philosophy in Clinical Medicine (Nutrition)*
May 2015 - May 2018 London, UK

Thesis Title: The role of plant-based foods on gastrointestinal digestion, colonic fermentation, and glucose homeostasis. DOI: *Petropoulou K Thesis*
Journal of Nature Food, 2020 DOI: *A natural mutation in Pisum sativum L. (pea) alters starch assembly and improves glucose homeostasis in humans | Nature Food*
Patent: CRESTAR Project ‘’*Foodstuffs having improved properties*’’ Date: 8 September 2021- PC931497GB

Oxford Brookes University, Oxford – *Bachelor of Science in Human Nutrition*
October 2008 - July 2012

Thesis Title: Assessing the reproducibility and validity of the BOD POD machine (Journal of Human Nutrition and Dietetics, 2014 DOI: *A comparison of body composition measurement techniques*)

GRANTS & FUNDING

- Diet and Health Seeding Award-Food Hackathon, BBSRC (2020) (*Successful*)
- Impact Acceleration Award, BBSRC, (2021) (*Successful*) (PI)
- Super Follow-on Fund, BBSRC, 2022 (*Successful*) (Named Researcher)

TEACHING and LEARNING

May 2015-Present

Course Programmes Support: I am a student research supervisor for undergraduate and postgraduate students studying for the following course programmes:

MRes Clinical Research

MRes Diabetes and Obesity

MRes Human Nutrition and Dietetics

Undergraduate Medicine Programme/BSc Endocrinology

I also train and supervise PhD students and junior staff working in the research projects I lead. My duties and responsibilities include project design, day to day lab/clinical supervision, thesis drafting supervision and results analysis supervision, preparation for submission and defense. My research has been instrumental in informing the actual teaching in some of these programmes and has featured in several taught programmes. Additionally, I have provided support to colleagues teaching these programmes by running workshops, seminars, and journal clubs. I have been managing and running the Journal Club sessions at the Nutrition Research Group.

Overall Supervision: 7 PhD students, 6 MRes students, 2 Undergraduate students.

AWARDS

Faculty of Medicine 25th Anniversary Staff Awards (2023), Award Winner for Good governance as part of the FoM GDPR Working Group and the FoM Data Protection Team

STEM for BRITAIN, House of Commons, March 2019: Winner of the STEM for BRITAIN Physiological Society Award. ‘’Using Wrinkled-seeded peas to prevent Type 2 Diabetes.’’

Royal Society Pairing Scheme *‘’Week in Westminster’’,* March 2021. I was selected by the Royal Society to spend a week in Parliament were policymakers and research scientists experience each other’s work.

Imperial College, Department of Investigative Medicine Divisional Away Day, November 2018: Winner for the lay abstract competition within the division. ‘’A seed trait studied by Gregor Mendel in Pisum sativum L. (pea) offers potential for the prevention of Type 2 diabetes.’’

DISSEMINATION EVENTS & PUBLIC ENGAGEMENTS

- All You Can Innovate, Foster Strategic Partnerships with Industry & Funders and Accelerate Societal Benefit of imperial-Led innovation, Invited Speaker (March 2023)
- Nutrition society Conference 2022: Architecture of food: processing, structure and health, Oral Presentation: *Resistant starch structure, food processing, and glycaemic control: investigating how the synergy of starch synthesis variation and processing influences glycaemia.*
- RIPEN Hub Hackathon: Designed and ran an event with 50 delegates aiming to understand the most important areas currently in nutrition research by using a Key Priority Research Exercise (2023). The outcomes will be used for a wider publication and to also set up the Hub priorities for the first year.
- Imperial College London, Metabolism, Digestion and Reproduction Away day invited talk (2023), ‘’Short Chain Fatty Acids to Improve Health; The Pea case.’’
- Mail on Sunday articles related to nutritional misconceptions:
  Is there any such thing as a cure for a hangover (2022).
  Is a banana as bad for type 2 diabetes as SIX spoons of sugar? (2020).
- New Scientist Live (2020): Future of Food and Agriculture event, Invited talk, ‘’Peas, Diabetes and gut health’’.
- Imperial Spark: Pub-less Quiz on Food with Dr Steve Cross, Stand-Up Comedian.
- Imperial Science Festival:
  Great Exhibition Road Festival, A Day in the life of a Scientist (December 2020) Katerina Petropoulou Interview
  Fantastic Fiber (May 2015, May 2017).
  Food of Tomorrow (February 2016).
  Science Museum, London: ‘Messages from Your Gut(September 2016).
- Food Hackathon, 2020. ‘’Using Wrinkled-seeded peas to prevent Type 2 Diabetes.’’
- Agri-Tech East, Powering Pea Productivity, April 2019. ‘’Dietary resistant starch from peas for healthy glucose homeostasis; the potential of rr peas’’
- Diet and Health Research Industry Club Dissemination Event (BBSRC):
  Manchester, October 2017. ‘’An in vivo method to investigate the effects of food structure on digestion and bioaccesibility at different sites of the gastrointestinal tract.’’, Birmingham, February 2017. ‘’ A food product made from pea flour with increased resistant starch content stimulates greater postprandial GLP-1 release’’, Northampton May 2016. ‘’Does the increased resistant starch content of rr mutant peas modulate postprandial glycaemia by altering rates of gastric emptying?’’, Oxford, June 2015. ‘’The effect of dietary resistant starch on glucose homeostasis’’

SELECTED PUBLICATIONS

Petropoulou, K., Salt, L.J., Edwards, C.H., Warren, F.J., Garcia-Perez, I., Chambers, E.S., Alshaalan, R., Khatib, M., Perez-Moral, N., Cross, K.L. and Kellingray, L., 2020. *A natural mutation in Pisum sativum L.(pea) alters starch assembly and improves glucose homeostasis in humans*. Nature Food, 1(11), pp.693-704.

Petropoulou, K., Li, Z., Tashkova, M. and Frost, G., 2023. *Resistant starch structure, food processing, and glycaemic control: investigating how the synergy of starch synthesis variation and processing influences glycaemia.* Proceedings of the Nutrition Society, 82(OCE1), p.E33.

Petropoulou, K., Chambers, E.S., Morrison, D.J., Preston, T., Godsland, I.F., Wilde, P., Narbad, A., Parker, R., Salt, L., Morris, V.J. and Domoney, C., 2016. *Identifying crop variants with high resistant starch content to maintain healthy glucose homeostasis*. Nutrition Bulletin

Greenwood, D.C., Hardie, L.J., Frost, G.S., Alwan, N.A., Bradbury, K.E., Carter, M., Elliott, P., Evans, C.E., Ford, H.E., Hancock, N. and Key, T.J., 2019. *Validation of the Oxford WebQ online 24-hour dietary questionnaire using biomarkers*. American journal of epidemiology, 188(10), pp.1858-1867.

Wark, P.A., Hardie, L.J., Frost, G.S., Alwan, N.A., Carter, M., Elliott, P., Ford, H.E., Hancock, N., Morris, M.A., Mulla, U.Z. and Noorwali, E.A., 2018. *Validity of an online 24-h recall tool (myfood24) for dietary assessment in population studies: comparison with biomarkers and standard interviews*. BMC medicine, 16, pp.1-14.