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## **Education**

2020-2024	Continual training and teaching in Biosafety Level 3 (BL3) laboratory operating standards
2020	Continuing professional development accreditation as a member and accredited by the Endocrine Society, Royal Society of Biology, Biochemist Society, Physiological Society and American Medical Association. Accreditation areas include: thyroid cancer diagnostic imaging and image guided therapies, treatments for advanced thyroid cancer, cardiovascular disease drug management, obesity/lipids/type 2 diabetes mellitus drug management, managing postmenopausal osteoporosis, defining the pathology hyperinsulinaemia-osteofragilitas, diabetes/CVD associated with COVID-19 in clinical management, SGLT2 inhibitors, therapeutic ketosis in metabolic ketogenic therapy for cancer.
2020	COVID-19 risk analysis and research facility safety in bio-labs.
2020	Associate Fellow of the Higher Education Academy
2019	Human Tissue Act license (legal requirement when collecting/handling and experimenting with human tissues containing genetic material).
2019	PhD researcher, Physiology and Pathology, University of Westminster, Biochemistry. Post-doctoral research in metabolic therapy for glioblastoma, Neuro-oncology, Imperial College and UoW.
2019	First Class Honours Biochemistry BSc, 2019, University of Westminster.  Biochemistry Society Prize for Best Biochemistry Student nationwide, Level 6 (2019). Level 5 achieved 1 <sup>st</sup> Class, winner of: The individual award for Learning and Teaching Award, Team Faculty award for the Learning and Teaching Award and Level 5 Student Excellence Award in Biochemistry, and Dean's List Award. Level 4 achieved 1 <sup>st</sup> Class, winner of the Dean's List Award, and Faculty of Science and Technology Award. Student representative for nutrition biochemistry level 4.
2018	Certified cannulation, venipuncture and phlebotomist.
2018	Certified Professional Training in LCHF/Ketogenic Nutrition and Treatment.
2015-2016	Foundation Degree Human Nutrition and Biochemistry, 1 <sup>st</sup> Class. Winner of the Dean's List Award and Faculty of Science and Technology Award.
2002-2013	Certified Yoga Instructor 700 hours exams, including 200 hours of anatomy studies and exams under registered UK Osteopath.
2000	Foundation Degree from Central Saint Martin's College of Art and Design.
1997	3 A levels: Biology, Chemistry, Art and Design. 10 GCSEs including Maths, English.
1990-1997	Majored all Ballet professional level exams from the Royal Academy of Dance UK.

## **Work**

- 2020-2023 Team lead of clinic and laboratory with 3 full time PhDs, 2 post-graduates and MSc students.
- 2019-2020 Lead author and coordinator in international collaborations between surgeons, clinical pharmacists, and medical physiologists in writing reviews, and designing clinical management algorithms for hospital admitted patients, ICU patients and at home care. Most recent published papers are on pathogenesis of COVID-19 and clinical management algorithm (Cooper et al. 2020), vitamin D and COVID-19, muscle damage response, sarcopenia and ageing (Kyriakidou et al. 2021), phenotypes and biomarkers of hyperinsulinaemia and chronic diseases including cardiovascular disease, type 2 diabetes mellitus, Alzheimer's disease and cancer (Cooper et al. 2021), naming the pathology hyperinsulinaemia-osteofragilitas (Cooper, Brookler, and Crofts 2021), hyperinsulinaemia ketosis in healthspan, ageing and longevity (Cooper et al., 2023: published in 3 days 2023/09/11).
- 2018-2020 Lecturer in metabolic biochemistry and advanced cancer biology and metabolism, medical pathophysiology, physiological networks (neurology, immunology and endocrinology), molecular genetics.
- 2018-2020 Supervisor of undergraduate/masters/medical students final year research projects within human intervention studies, medical students from UCL include patient biopsied sample work from compensated and non-compensated liver failure patients from UCL hospital. Teaching these students how to organise participant laboratory visits, blood sampling and handling, health and safety procedures, data collection and run ELISA's. Teaching higher level medical students how to run participant ex vivo tissue samples for post analysis and tissue co-culture experimentation.
- 2016-2020 Consultant in personalized medical health care using ketogenic metabolic therapy.
- 2018-2019 Raised the funding for a doctoral intervention trial, for a human pilot study. Managed the budget for the project, covering the cost for 4 additional undergraduates and masters students. Supervisor of the project and medical sciences students.
- 2018-2019 Performing venipunctures and cannulations, collecting blood samples from participants in active intervention trial research at University of Westminster and Imperial College.
- 2017-2018 Research biochemistry assistant under Dr. Bradley Elliott, screening participants, running an NHS pre-clinical type II diabetes hypoxia intervention trial during a 6-week intervention. Processing the patient samples in the wet lab, including optimising and running the insulin ELISAs, providing data analysis.
- Developed a live mitochondrial staining and confocal microscopy protocol for the laboratory. Designed and produced equipment to optimize ELISA efficiency.
- 2015-2018 Faculty Yoga Teacher at St Marylebone Girls School.

## References

- Cooper, Isabella D., Kenneth H. Brookler, and Catherine A. P. Crofts. 2021. "Rethinking Fragility Fractures in Type 2 Diabetes: The Link between Hyperinsulinaemia and Osteofragilitas." *Biomedicines* 2021, Vol. 9, Page 1165 9 (9): 1165. <https://doi.org/10.3390/BIOMEDICINES9091165>.
- Cooper, Isabella D., Kenneth H. Brookler, Yvoni Kyriakidou, Bradley T. Elliott, and Catherine A. P. Crofts. 2021. "Metabolic Phenotypes and Step by Step Evolution of Type 2 Diabetes: A New Paradigm." *Biomedicines* 2021, Vol. 9, Page 800 9 (7): 800. <https://doi.org/10.3390/BIOMEDICINES9070800>.
- Cooper, Isabella D, Catherine A P Crofts, James J DiNicolantonio, Aseem Malhotra, Bradley Elliott, Yvoni Kyriakidou, and Kenneth H Brookler. 2020. "Relationships between Hyperinsulinaemia, Magnesium, Vitamin D, Thrombosis and COVID-19: Rationale for Clinical Management." *Open Heart* 7 (2): e001356. <https://doi.org/10.1136/openhrt-2020-001356>.
- Cooper, Isabella D.; Kyriakidou, Yvoni.; Petagine, Lucy.; Edwards, Kurtis.; Elliott, Bradley.T. Bio-Hacking Better Health—Leveraging Metabolic Biochemistry to Maximise Healthspan. *Antioxidants* **2023**, 12, 0. <https://doi.org/10.3390/antiox12090000> (only accessible after 2023/09/11)
- Kyriakidou, Yvoni, Isabella Cooper, Igor Kraev, Sigrun Lange, and Bradley T. Elliott. 2021. "Preliminary Investigations into the Effect of Exercise-Induced Muscle Damage on Systemic Extracellular Vesicle Release in Trained Younger and Older Men." *Frontiers in Physiology* 12 (September): 723931. <https://doi.org/10.3389/FPHYS.2021.723931/FULL>.