

CURRICULUM VITAE – DR MIA BURLEIGH PhD, CSci, FHEA

EDUCATION & QUALIFICATIONS

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| PgCAP | Post Graduate Certificate in Academic Practice |
| Ph.D. | Interactions between diet and oral bacteria in human health - April (2020) |
| BSc (Hons): | First Class Honours Sport and Exercise Science - June (2016) |

PROFESSIONAL ACCREDITATIONS – Current

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| Accredited Sport and Exercise Scientist | British Association of Sport and Exercise Sciences (BASES) - (2020) |
| Chartered Scientist | The Science Council (2020) |
| Fellow | Higher Education Academy (2021) |

CURRENT ROLES

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| October 2021 – Present | Senior Lecturer – Division of Sport, Exercise and Health |
| June 2022 – Present | Laboratory Director – BASES Accredited Physiology Laboratory |
| February 2022 – Present | External Endorsement Lead (BASES and CIMSPA) |
| June 2023 – Present | QAA Advisory Board Member – Health Studies |
| January 2024 – Present | Advisory Board Member - Chartered Institute for the Management of Sport and Physical Activity |

RESEARCH NARRATIVE - My research focuses on the oral microbiome and health in various populations including athletes, examining how exercise and diet shape microbial composition and influence systemic health outcomes. Recent findings from my work reveal that physically active individuals generally display healthier oral microbiome profiles compared to elite athletes and sedentary people. By investigating host-microbiome interactions, such as nitrate-reducing bacteria and their role in nitric oxide bioavailability, my research has contributed to updated guidelines on periodontal care, highlighting preventative strategies that integrate oral health into athlete performance and recovery protocols.

RECENT & RELEVANT PEER-REVIEWED PUBLICATIONS

Simpson, A. Johnston, W., Carda-Dieguez, M., Mira, A., Easton, C., Henriquez, F., Culshaw, S., Rosier, B., **Burleigh, M.C.**, (2024) Periodontal treatment causes a longitudinal increase in nitrite-producing bacteria, *Molecular Oral Microbiology*. <https://doi.org/10.1111/omi.12479>

Moran, S.P., Rosier, B.T., Henriquez, F.L., **Burleigh, M.C.**, (2024) The effects of nitrate on the oral microbiome: a systematic review investigating prebiotic potential, *Journal of Oral Microbiology* 16 2322228. <https://doi.org/10.1080/20002297.2024.2322228>

Rosier, B.T., Johnston, W., Carda-Diéguez, M., Simpson, A., Cabello-Yeves, E., Piela, K., Reilly, R., Artacho, A., Easton, C., **Burleigh, M.**, Culshaw, S., Mira, A., (2024) Nitrate reduction capacity of the oral microbiota is impaired in periodontitis: potential implications for systemic nitric oxide availability, *International Journal of Oral Science*. 16, 1–10. <https://doi.org/10.1038/s41368-023-00266-9>.

Burleigh, M.C., Rosier, B.T., Simpson, A., Sculthorpe, N., Henriquez, F., Easton, C., (2023) The Probiotic *Streptococcus salivarius* M18 Increases Plasma Nitrite but Does Not Alter Blood Pressure: A Pilot Randomised Controlled Trial, *Applied Microbiology*. 3, 774–785. <https://doi.org/10.3390/applmicrobiol3030054>

Liddle, L., Monaghan, C., **Burleigh, M.C.**, Baczynska, K.A., Muggeridge, D.J., Easton, C., (2022). Reduced nitric oxide synthesis in winter: A potential contributing factor to increased cardiovascular risk. *Nitric Oxide* 127, 1–9. <https://doi.org/10.1016/j.niox.2022.06.007>

Bryan, N.S., **Burleigh, M.C.**, Easton, C., 2022. The oral microbiome, nitric oxide and exercise performance. *Nitric Oxide Biol. Chem.* 125–126, 23–30. <https://doi.org/10.1016/j.niox.2022.05.004>

Burleigh, M.C., Sculthorpe, N., Henriquez, F.L., Easton, C., 2020. Nitrate-rich beetroot juice offsets salivary acidity following carbohydrate ingestion before and after endurance exercise in healthy male runners. *PLoS One* 15, e0243755. <https://doi.org/10.1371/journal.pone.0243755>

Bescos, R., Ashworth, A., Cutler, C., Brookes, Z.L., Belfield, L., Rodiles, A., Casas-Agustench, P., Farnham, G., Liddle, L., **Burleigh, M.C.**, White, D., Easton, C., Hickson, M., 2020. Effects of Chlorhexidine mouthwash on the oral microbiome. *Sci. Rep.* 10, 5254. <https://doi.org/10.1038/s41598-020-61912-4>

Burleigh, M.C., Liddle, L., Muggeridge, D.J., Monaghan, C., Sculthorpe, N., Butcher, J., Henriquez, F., Easton, C., 2019. Dietary nitrate supplementation alters the oral microbiome but does not improve the vascular responses to an acute nitrate dose. *Nitric Oxide* 89, 54–63. <https://doi.org/10.1016/j.niox.2019.04.010>

Liddle, L., **Burleigh, M.C.**, Monaghan, C., Muggeridge, D.J., Sculthorpe, N., Pedlar, C.R., Butcher, J., Henriquez, F.L., Easton, C., 2019. Variability in nitrate-reducing oral bacteria and nitric oxide metabolites in biological fluids following dietary nitrate administration: An assessment of the critical difference. *Nitric Oxide Biol. Chem.* 83, 1–10. <https://doi.org/10.1016/j.niox.2018.12.003>

Ashworth, A., Cutler, C., Farnham, G., Liddle, L., **Burleigh, M.C.**, Rodiles, A., Sillitti, C., Kiernan, M., Moore, M., Hickson, M., Easton, C., Bescos, R., 2019. Dietary intake of inorganic nitrate in vegetarians and omnivores and its impact on blood pressure, resting metabolic rate and the oral microbiome. *Free Radic Biol. Med.* 138, 63–72. <https://doi.org/10.1016/j.freeradbiomed.2019.05.010>

Burleigh, M.C., Liddle, L., Monaghan, C., Muggeridge, D.J., Sculthorpe, N., Butcher, J.P., Henriquez, F.L., Allen, J.D., Easton, C., 2018. Salivary nitrite production is elevated in individuals with a higher abundance of oral nitrate-reducing bacteria. *Free Radic. Biol. Med.* 120, 80–88. <https://doi.org/10.1016/j.freeradbiomed.2018.03.023>

CURRENT GRANTS AS PRINCIPAL INVESTIGATOR

Royal Society of Edinburgh - Principal Investigator – *The effect of Exercise on the Oral Microbiome (£5000)*

University of the West of Scotland – Principal Investigator – *Vice Chancellors Studentship Competition - BEET Periodontitis: The effect of nitrate on oral health and the microbiome (£65,000)*

University of the West of Scotland – Principal Investigator – *Vice Chancellors Studentship Competition – Nitrate supplementation as an oral health prebiotic and a method to reduce the burden of antimicrobial resistance (£65,000)*

RELEVANT AWARDS

ePoster Competition Award - Winner (2020) – *Future Physiology Conference, Presented nitrate and oral/cardiovascular work, The Physiological Society*

Research Output Award - Winner (2019) - *Learning, Teaching, and Research Conference, The University of the West of Scotland*

Sir Rodger Wadsworth Award - Finalist (2019) – *Presented my nitrate and cardiovascular health work in the prestigious Sir Rodger Wadsworth Prize competition, Scottish Cardiovascular Forum*

Gatorade Nutrition Award - Finalist (2018) - *Gatorade Nutrition Award. Presentation on nitrate and oral health. This is an international award recognising outstanding research in the field of nutrition, The European College of Sport Science.*

Integrating Research into Teaching Practice Award - Winner (2018) - *Learning, Teaching, and Research Conference. Topic - Novel approach integrating research into teaching practice, The University of the West of Scotland*