Francesco Bettariga, PhD

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PROFILE

Exercise Oncology researcher specializing in the role of exercise as medicine in cancer care. I completed my PhD at Edith Cowan University and am now a Postdoctoral Research Fellow at the Exercise Medicine Research Institute (ECU, Australia). My research investigates how exercise suppresses cancer progression and the underlying biological mechanisms, with the goal of developing precise exercise prescription. I explore how these mechanisms contribute to reducing recurrence and mortality while enhancing quality of life. Through my work, I aim to advance exercise oncology research and education to improve patient outcomes.

EDUCATION

Aug 2022 — Jul 2025

Doctor of Philosophy in Exercise Medicine, Edith Cowan University - Exercise Medicine Research Institute

Perth (Australia)

Sep 2020 — Sep 2021

Master's Degree in Strength and Conditioning, Middlesex University

London (UK)

Graduated with High Honors

Sep 2014 — Nov 2017

Bachelor's Degree in Physiotherapy, University of Brescia

Brescia (Italy)

Graduated Cum Laude

EMPLOYMENT HISTORY

Oct 2025 — Present

Postdoctoral Research Fellow in Exercise Medicine, Edith Cowan University - Exercise Medicine Research Institute

Perth (Australia)

- Research Leadership: Independently designed and led exercise-oncology studies, from conceptualisation and protocol development through to implementation and dissemination.
- Advanced Data Integration: Applied complex statistical modelling and longitudinal analyses in R and SPSS, integrating clinical outcomes with molecular biology and human performance data.
- Mechanistic Focus: Investigated underlying biological pathways (e.g., myokines, immune modulation, tumour cell suppression) linking exercise with cancer outcomes, advancing precise exercise prescription.
- Manuscript & Grant Leadership: First- and senior-authored publications in high-impact journals; led major components of competitive grant applications (conceptual framing, innovation, methodology).
- Supervision & Mentorship: Supervised Honours and postgraduate students, guiding projects in exercise oncology, cancer biology, and biomedical research.
- Collaboration & Translation: Coordinated multidisciplinary teams of clinicians, cancer biologists, and exercise physiologists; contributed to translation of research into clinical practice and community engagement.
- Strategic Alignment: Advanced the integration of tumour biology, exercise medicine, and human performance to build a unique translational research profile aligned with institutional and national research priorities.
- Ethical & Regulatory Oversight: Contributed to ethics submissions, ensured compliance with human research ethics and biosafety requirements.

Jul 2025 — Sep 2025

Senior Research Assistant in Exercise Medicine, Edith Cowan University - Exercise Medicine Research Institute

Perth (Australia)

- Data Collection: Designed and conducted data collection procedures, including patient recruitment and laboratory-based assessments.
- Statistical Analysis: Performed advanced statistical analyses using SPSS or R.
- Manuscript Preparation & Literature Review: Drafting clinical trials, systematic and narrative review, and meta-analysis.
- Grant Drafting & Funding Applications: Contributed to the preparation of competitive grant proposals, including literature synthesis, methodological design, and drafting of significance and innovation sections.
- Specialist Expertise: Bridged tumour biology, exercise physiology, and human performance research, uniquely integrating molecular/biological mechanisms (e.g., myokines, immune responses) with clinical and functional outcomes.

- Collaboration: Worked closely with multidisciplinary research teams, including clinicians, exercise physiologist, cancer biologists, and statisticians.
- Ethical Compliance: Ensured research adhered to ethical guidelines.

Jul 2025 — Present

Lecturer in Exercise Medicine, Edith Cowan University

Perth (Australia)

- Lecturing & Teaching: Delivered lectures and tutorials in Exercise Medicine to undergraduate students.
- Curriculum Development: Contributed to the design and delivery of course content, ensuring alignment with current research evidence and professional standards.
- Student Supervision: Supervised postgraduate research projects, providing mentorship in study design, data analysis, and scientific writing.
- Assessment: Designed and marked assignments and examinations, offering constructive feedback to support student learning.
- Knowledge Translation: Integrated current research findings into teaching, bridging laboratory discoveries with clinical application in patients with chronic diseases.

Jan 2024 — Dec 2024

Internship in Oncology Rehabilitation

Perth (Australia)

Completed a six-month internship in the Department of Oncology at St John of God Subiaco Hospital under the supervision of Dr. Tim Clay, gaining hands-on clinical experience in cancer treatment and rehabilitation.

Jan 2018 — Jul 2022

Postgraduate Lecturer in Musculoskeletal and Sports Rehabilitation, and Exercise Medicine, University of Brescia

Brescia (Italy)

- Delivered lectures on Exercise Medicine, focusing on mechanisms underlying benefits of exercise in people with chronic disease, including cancer, and clinical applications of exercise principles.
- Supervised and mentored students in research projects related to Exercise Medicine for chronic diseases and musculoskeletal rehabilitation.
- Developed and updated teaching materials to integrate the latest evidence-based research in Exercise Medicine.
- Conducted workshops on assessments, prescription, intervention, and periodization of Exercise Medicine.
- Collaborated with research teams on projects related to exercise in chronic diseases, musculoskeletal, and sports rehabilitation.

Jan 2018 — Jul 2022

Physiotherapist: Orthopaedics, Sports Rehabilitation, Exercise Medicine

Studio Erre, Brescia (Italy)

- Assessed, diagnosed, and treated musculoskeletal conditions, developing individualized rehabilitation plans for patients.
- Designed and implemented exercise-based rehabilitation programs for sports injuries to optimize return to play and improve physical performance in athletes.
- Designed and implemented exercise-based rehabilitation programs for chronic diseases to improve quality of life.
- Educated patients on pain management, injury prevention, and return to play strategies.
- Worked closely with multidisciplinary teams, including sports physicians, surgeons, oncologists, psychologists, exercise scientists, and dietitians, to ensure a comprehensive treatment approach.

INTERNATIONAL INVITED SPEAKER AND WORKSHOP PRESENTER

2024 — 2025

Invited Guest Lecture: Mechanisms Underlying the Benefits of Exercise in People with Cancer

Delivered guest lectures on the benefits and mechanisms underlying the association between Exercise Medicine and improved survival in people with cancer for international broadcasts, including 9NEWS and ABC (Australia), Fox News and The Washington Post (USA), Cancer Rehabilitation (Italy), Trustme-Ed (Netherlands), Oncology Revolution (Portugal)

2023 — 2025

Invited Speaker: Mechanisms Underlying the Benefits of Exercise in People with Cancer

Delivered invited *Lectio Magistralis* on the mechanisms underlying the benefits of Exercise Medicine in people with cancer at various universities and clinical institutes: Australia (BSW regional oncology rehabilitation network), Brazil (University Caxias do Sul), Italy (University of Brescia, University of Molise), Switzerland (SUPSI University)

2023 — Present

Workshop: Benefits of Exercise Medicine in People with Chronic Diseases

Delivered multiple invited two-day workshops on Exercise Medicine for people with chronic diseases in various locations: Italy (Bergamo, Bologna, Brescia, Conegliano, Florence, Milan)

2022 — Present

Workshop: Benefits of Exercise Medicine in People with Cancer

Delivered multiple invited two-day workshops on Exercise Medicine for people with cancer in various locations: Italy (Bergamo, Brescia, Conegliano, Florence, Milan, Molise), Switzerland (Lugano, Zurig)

2021 — Present

Workshop: Restoring Strength, Power, and Condititioning During Rehabilitation and Optimizing Patient Physical Performance

Delivered multiple invited two-day workshops on restoring functional capacity and optimizing patient physical performance in various locations: Italy (Bergamo, Bologna, Brescia)

MOST IMPACTFUL PUBLICATIONS

Jan 2025

Bettariga F, Galvão DA, Taaffe DR, Bishop C, Lopez P, Maestroni L, Quinto G, Crainich U, Verdini E, Bandini E, Natalucci V, Newton RU. Association of muscle strength and cardiorespiratory fitness with all-cause and cancer-specific mortality in patients diagnosed with cancer: a systematic review with meta-analysis., British Journal of Sports Medicine 2025. DOI: 10.1136/bjsports-2024-108671.

Apr 2025

Bettariga F, Taaffe DR, Borsati A, Avancini A, Pilotto S, Lazzarini SG, Lopez P, Maestroni L, Crainich U, Campbell JP, Clay TD, Galvão DA, Newton RU. Effects of exercise on inflammation in female survivors of non-metastatic breast cancer: a systematic review and meta-analysis., Journal of National Cancer Institute 2025. DOI: 10.1093/jnci/djaf062.

Jun 2025

Bettariga F, Taaffe DR, Crespo-Garcia C, Clay TD, Galvão DA, Newton RU. A single bout of resistance or high-intensity interval training increases anti-cancer myokines and suppresses cancer cell growth in vitro in survivors of breast cancer., Breast Cancer Research and Treatment 2025. DOI: 10.1007/s10549-025-07772-w.

Sep 2025

Bettariga F, Taaffe DR, Crespo-Garcia C, Clay T, De Santi M, Baldelli G, Adhikari S, Gray E, Galvão DA, Newton RU. Effects of resistance vs high intensity interval training on myokines and cancer cell suppression in breast cancer survivors: a randomized trial., Medicine and Science in Sports and Exercise 2025. DOI: 10.1249/MSS.0000000000003848.

Oct 2024

Bettariga F, Taaffe DR, Crespo-Garcia C, Clay TD, Galvão DA, Newton RU. Effects of resistance training vs high intensity interval training on body composition, muscle strength, cardiorespiratory fitness, and quality of life in survivors of breast cancer: a randomized trial., Breast Cancer Research and Treatment 2024. DOI: 10.1007/s10549-024-07559-5.

Bettariga F, Taaffe DR, Galvão DA, Bishop C, Kim JS, Newton RU. Suppressive effects of exercise-conditioned serum on cancer cells: A narrative review of the influence of exercise mode, volume, and intensity., Journal of Sport and Health Science 2023. DOI: 10.1016/j.jshs.2023.12.001.

Nov 2024

Bettariga F, Taaffe DR, Galvão DA, Newton RU. Effects of short- and long-term exercise training on cancer cells in vitro: Insights into the mechanistic associations., Journal of Sport and Health Science 2024. DOI: 10.1016/j.jshs.2024.100994.

AWARDS

Jul 2025 — Present

Appointed as Chief Investigator (CIA) – Cancer Council Western Australia (CCWA) Early Career Investigator Grant, AUD 34,500

Edith Cowan University, Perth (Australia)

Cancer suppression, cytokine levels and body composition variation across prostate cancer stage and treatments: The CYTOCOMP Study

Jul 2025 — Present

Appointed as Co-Investigator (CIB) – World Cancer Research Fund (WCRF) Feasibility Grant, AUD 120,000

Edith Cowan University, Perth (Australia)

Enhancing circulatory myokines and extracellular vesicle uptake with targeted exercise in patients with Prostate Cancer: The MYEX Trial

May 2025 — Present

Awarded as Co-Investigator (CIB) – Italian National Grant, AUD 5,000,000

University of Brescia (Italy)

Enhancing the Role of Exercise Medicine in Cancer Management

2023 — Jul 2025

Awarded a Higher Degree by Research PhD scholarship from Edith Cowan University to conduct doctoral research

Edith Cowan University, Perth (Australia)

2022 — 2023

Awarded a PhD scholarship from the Exercise Medicine Research Institute to conduct doctoral research

Edith Cowan University, Perth (Australia)

2022

Awarded for being the best Postgraduate student in Sports Medicine

Middlesex University London (UK)

2017

Awarded for outstanding academic performance during the Bachelor's degree

University of Brescia Brescia (Italy)

SKILLS

- Leadership
- Problem Solving
- Perseverance
- Collaboration & Teamwork
- Empathy
- Reliability
- Adaptability
- Sensitivity

LANGUAGES

English C1

Italian Native speaker

HOBBIES

In my free time, I enjoy various sports, including snowboarding and scuba diving, and I especially play football at a competitive level. I am passionate about traveling and exploring unknown places. I have a deep appreciation for wildlife and love spending time in natural environments, observing and connecting with nature and animals.

REFERENCES

Prof. Robert Newton from Edith Cowan University

r.newton@ecu.edu.au

Prof. Daniel Galvao from Edith Cowan University

d.galvao@ecu.edu.au

Prof. Nicolas Hart from University of Technology Sydney

Nicolas.Hart@uts.edu.au