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 the Exercise Medicine Research Institute (Edith Cowan University, Australia) and am currently a Postdoctoral Research Fellow within the Human Performance Research Centre, University of Technology Sydney (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)

Sept 2020 — Sept 2021

Master's Degree in Strength and Conditioning, Middlesex University — London (UK)

Graduated with High Honors

Sept 2014 — Nov 2017

Bachelor's Degree in Physiotherapy, University of Brescia — Brescia (Italy)

Graduated Cum Laude

EMPLOYMENT HISTORY

Feb 2026 — Present

Postdoctoral Research Fellow in Exercise Medicine, University of Technology Sydney - Human Performance Research Centre — Sydney (Australia)

- Lead and coordinate exercise oncology research programs investigating the mechanistic and clinical impact of exercise in cancer care, with expanding focus on cancer suppressive effects.
- Develop precision-based exercise prescription frameworks integrating tumour biology, immune biomarkers, and skeletal health outcomes.
- Establish and strengthen national and international research collaborations across oncology, tumour biology, and translational exercise science.
- Apply advanced longitudinal and multilevel statistical modelling (R) to analyse complex clinical and biological datasets.
- Contribute to the development and leadership of competitive national and international grant applications.
- Supervise Honours and postgraduate research students and contribute to higher degree research training within the School.
- Support ethics governance, research integrity, and regulatory compliance across clinical and laboratory-based projects

Oct 2025 — Feb 2026

Postdoctoral Research Fellow in Exercise Medicine, Edith Cowan University - Exercise Medicine Research Institute — Perth (Australia)

- Designed and led exercise oncology studies from protocol development to implementation and dissemination.
- Conducted advanced statistical modelling and longitudinal analyses (R), integrating clinical, physiological, and molecular outcomes.
- Investigated biological mechanisms underpinning exercise-induced cancer suppression, including myokines, immune modulation, and tumour cell responses.
- First- and senior-authored peer-reviewed publications; contributed to competitive grant development (concept, innovation, methodology).
- Supervised Honours and postgraduate students in exercise oncology and cancer biology projects.
- Collaborated within multidisciplinary teams (clinicians, cancer biologists, exercise physiologists) to support translational research initiatives.
- Contributed to human research ethics applications and regulatory compliance.

Jul 2025 — Dec 2025

Lecturer in Exercise Medicine, Edith Cowan University

Perth (Australia)

- Delivered lectures and tutorials in Exercise Medicine to undergraduate students.
- Contributed to curriculum design and course development, aligning content with current research evidence and professional standards.
- Supervised postgraduate research projects, mentoring students in study design, data analysis, and scientific writing.
- Designed and marked assessments, integrating contemporary research to bridge theory and clinical application.

Jul 2025 — Sept 2025

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

Perth (Australia)

- Supported clinical and laboratory-based exercise oncology studies, including participant recruitment and data collection.
- Conducted statistical analyses using SPSS and R.
- Contributed to manuscript preparation, including clinical trials, systematic reviews, and meta-analyses.
- Assisted in competitive grant applications through literature synthesis and methodological input.
- Worked within multidisciplinary teams (clinicians, exercise physiologists, cancer biologists, statisticians).
- Ensured compliance with human research ethics and institutional guidelines.

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 in Exercise Medicine, focusing on mechanistic foundations and clinical application in chronic disease, including cancer.
- Supervised and mentored student research projects in exercise medicine and musculoskeletal rehabilitation.
- Developed and updated teaching materials to reflect current evidence-based practice.
- Conducted practical workshops on assessment, exercise prescription, intervention design, and periodisation.

Jan 2018 — Jul 2022

Physiotherapist: Orthopaedics, Sports Rehabilitation, Exercise Medicine

Studio Erre, Brescia (Italy)

- Assessed, diagnosed, and treated musculoskeletal conditions, developing individualised rehabilitation plans.
- Designed and implemented exercise-based rehabilitation programs for sports injuries and chronic diseases to optimise return to play, physical performance, and quality of life.
- Educated patients on pain management, injury prevention, and return-to-activity strategies.
- Collaborated within multidisciplinary teams (sports physicians, surgeons, oncologists, psychologists, exercise scientists, dietitians) to deliver comprehensive care.

INTERNATIONAL INVITED SPEAKER AND WORKSHOP PRESENTER

2024 — 2026

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

Provided expert commentary and guest lectures on the mechanisms linking Exercise Medicine and cancer survival across national and international media platforms, including 9News, ABC (Australia), Fox News (USA), The Washington Post (USA), The Daily Mail (UK), The West Australian (Australia), and professional education platforms such as Cancer Rehabilitation (Italy), Trustme-Ed (Netherlands), and Oncology Revolution (Portugal).

2023 — 2026

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 international universities and professional bodies, including ESSA (Australia), University of Caxias do Sul (Brazil), SUPSI (Switzerland), University of Brescia, and University of Molise (Italy).

2023 — Present

Workshop: Clinical Exercise Medicine for Chronic Conditions

Delivered multiple invited 1–3 day workshops on clinical exercise medicine for chronic conditions across Italy (Bergamo, Bologna, Brescia, Cesena, Conegliano, Florence, Milan, Turin).

2022 — Present

Workshop: Precision Exercise Oncology for Patients with Cancer

Delivered multiple invited 1–3 day workshops on precision exercise oncology for people with cancer across Italy (Bergamo, Brescia, Conegliano, Florence, Milan, Molise) and Switzerland (Lugano, Zurich).

2021 — Present

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

Delivered multiple invited invited 1–3 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.

Sept 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

Oct 2025 — Present

Appointed as Co-Investigator B (CIB) – Movember Foundation Grant, AUD 2,000,000

Edith Cowan University, Perth (Australia)

Exercise intervention and survival outcomes in metastatic prostate cancer: INTERVAL-GAP4 Study – A multicentre, phase III randomised controlled trial designed to determine whether supervised exercise increases overall survival in men with metastatic castrate-resistant prostate cancer, with secondary outcomes including disease progression, skeletal events, quality of life, and biomarker changes

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 a variety of sports, including snowboarding and scuba diving. I am passionate about traveling and exploring new places. I have a deep appreciation for wildlife and enjoy 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. Nicolas Hart from University of Technology Sydney

nicolas.hart@uts.edu.au

Prof. Daniel Galvao from Edith Cowan University

d.galvao@ecu.edu.au