



ELINE LIEVENS

POST DOCTORAL FWO FELLOW & MUSCLE PHYSIOLOGIST

PERSONAL INFORMATION

Date of birth: 2nd of July 1992, Jette
Nationality: Belgian
Contact details: elilieve.lievens@ugent.be

CAREER & EDUCATION

Post-doctoral researcher

Ghent University | 2021- now

Junior FWO Postdoc project: "Every cell counts!
Transforming exercise science through single fiber transcriptomics in human skeletal muscle"
Supervisors: Prof. Wim Derave & Prof. Jo Vandesompele

Doctor of Health Sciences

Ghent University | 2015- 2021

PhD project: "Relevance of the muscle fiber typology in sport"
Supervisors: Prof. Wim Derave & Prof. Erik Witvrouw

Teacher diploma

Volwassenenonderwijs - Kisp | 2017-2019

Bachelor & Master in Physical Education and Movement Sciences- option sport training

Ghent University | 2010-2015

Master thesis: "Oxygenation and blood flow of the forearm muscles in diverse populations during a dynamic handgrip exercise"
Supervisor: Prof. Jan Bourgois

Research minor: "The ergogenic potential of beta-alanine, high-intensity training and endurance performance"
Accompanied with a 5 months stay abroad at Victoria University - Australia
Supervisor: Prof. David Bishop & Prof. Nir Eynon

Graduated with greatest honor

Bachelor of Science in Rehabilitation Sciences and Physiotherapy: first and second year

Ghent University | 2011-2013

ABOUT ME

I am a curious optimist and pragmatic perfectionist, a creative thinker, and I love to inspire and motivate students and team members. I am translational, both fundamental and applied. Muscle fiber types and its importance for performance and disease, keeps me awake at night and gets me out of bed in the morning.

ACHIEVEMENTS

Publications:

I have published a total of 26 research articles since 2020, including 10 papers as first and 2 papers as last author. The quality of my work is evident through publications in high impact journals such as Sports Medicine, The Journal of Physiology and British Journal of Sports Medicine.

3 most important publications:

Lievens, E., Van Vossel, K., Van de Castele, F., Wezenbeek, E., Deprez, D., Matthys, S., De Winne, B., McNally, S., De Graaf, W., Murdoch, J.B., Bourgois, J.G., Witvrouw, E. and Derave, W. (2022). Muscle fibre typology as a novel risk factor for hamstring strain injuries in professional football (soccer): a prospective cohort study. *Sports Medicine*. 52:177–185.
Impact factor: 9.8; altmetric: 70; citations: 8

Lievens, E.*, Bellinger, P.*, Van Vossel, K., Vancompernelle, J., Bex, T., Minahan, C. & Derave, W. (2021). Muscle Typology of World-Class Cyclists across Various Disciplines and Events. *Medicine & Science in Sports & Exercise*. 53(4): 816-824.
Impact factor: 6.23; altmetric: 128; citations: 14

Lievens, E., Klass, M., Bex, T. & Derave, W. (2020). Muscle fiber typology substantially influences time to recover from high-intensity exercise. *Journal of Applied Physiology*. 128(3): 648-659.
Impact factor: 3.53; altmetric: 203; citations: 47

Presentations:

I value disseminating my work to the scientific community as demonstrated by 8 invited talks and 12 oral/poster presentations at (inter)national conferences.

Awarded Grants:

From 2015 onwards, I obtained four personal grants (2 BOF and 2 FWO). In 2023, I secured € 698 000 from various funding agencies, encompassing both fundamental grants (BOF) and more applied funding sources (Sport Vlaanderen, Australian Institute of Sports). This includes € 536 000 as a co-promoter and € 162 000 as a co-applicant, showcasing my ability to secure diverse and substantial funding for my research endeavors.

Awards:

Throughout my career, I have been awarded with a total of 9 awards, with the most notable recognitions being:

- British Journal of Sports Medicine PhD Academy Award - January 11, 2023.
- First Laureate of the Jury and Public Award of the Flemish PhD Cup granted by SciMingo and FWO – Antwerp, October 18, 2022 (€ 5500).
- Multidisciplinary PhD Thesis Award for Scientific Excellence, Multidisciplinary, and Valorization Potential granted by Belgian Industrial Research and Development and FWO – Brussels, May 11, 2022 (€ 5000).
- Equal 5th Laureate of the Young Investigators Award for Oral Presentations granted by the European College of Sport Science – Online, October 28-30, 2020 (€ 500).

These awards gave me the opportunity to network on a worldwide scale.

Teaching experience:

I am lecturer-in-charge of 3 courses:

1. Nutrition and sport nutrition
 - Program: Bachelor of Science in Physical Education and Movement Sciences
 - Institution: Ghent University
2. Sports and physical exercise as medicine
 - Program: Master of Science in Movement and Sports Sciences
 - Institution: Ghent University
3. Sport nutrition
 - Program: Post- academic education - Sports Medicine
 - Institution: Ghent University/ Ghent health academy for lifelong learning

Besides, I give courses in human physiology and exercise physiology, demonstrating range in my educational competences.

Thesis supervision:

I foster academic growth of my colleagues and students, having served as a member of the supervisory committee for one and of the examination committee for three successfully defended PhD's. Currently, I am co-promotor of three ongoing PhD's. Furthermore, I have guided 36 master students as mentor/promotor.

Academic service:

I am board member of Ghent Institute for Functional and Metabolic Imaging (GifMI) and contribute to the audit committee of the Amsterdam Movement Sciences.

Additionally, I hold several institutional responsibilities:

- The executive committee of the department
- Department council
- Faculty committee for social outreach.

Service to community:

I value the importance of science communication to the broad public. Therefore, I actively engage in disseminating science through oral masterclasses, videos, and webinars, as well as in written form via Twitter, articles in layman's terms, and a popular science book.

Links to some of these initiatives:

- Three minute pitch for the Flemish PhD cup:
<https://www.youtube.com/watch?v=K-v1uHApTX8>
- Video for the 'Universiteit van Vlaanderen'
<https://www.universiteitvanvlaanderen.be/college/hoe-weet-je-welke-sport-het-beste-bij-je-past>
- Illustrated summary of my PhD:
<https://www.ugent.be/ge/bsw/nl/onderzoeksgroepen/inspanningsfysiologie/projecten/myotypes>
- Popular science book:
<https://www.lannoo.be/nl/de-beweegreden>

Moreover, I am founder of SPORTSCHUUR, a small fitness barn with the goal of spreading the joy of sports and applying scientific knowledge to guide athletes (www.sportschuur.be).

SKILLS

Research methods:

Physiological Measurements:

- Performance tests: Lode, Cyclus, Biodex
- VO₂, lactate
- EMG, Electrical stimulation

Biochemical measurements:

- Muscle biopsies
- Single fiber dissection
- Muscle mRNA quantification and transcriptomics

MRI:

- Proton magnetic resonance spectroscopy on multiple vendors (Siemens, Canon, Phillips)
- Whole body muscle volume scanning
- JMRUI software

Statistics:

- SPSS
- Basics in R

Additional training:

I have completed several additional courses, including people management at Vlerick, effective scientific communication, graphical displays, popular scientific writing, performance training, interview training, grant writing, technology transfer course and introductory teacher training.

Language skills:

Dutch-Mother tongue | English-Advanced | French-Good

REFERENCES

Prof. Wim Derave, PhD supervisor | wim.derave@ugent.be