MANCIN LAURA

WEBSITE:

http://hit.psy.unipd.it/laura-mancin

https://www.researchgate.net/profile/Laura_Mancin

CURRENTLY POSITION:

- **Ph.D student** at **Human Inspired Technology Research Center** and Nutrition and Exercise Physiology Laboratory, **University of Padova.**
  Curricula: Neuroscience, Technology and Society

ITALIAN SUPERVISOR:

- **Supervisor:** prof. Antonio Paoli, Nutrition and Exercise Physiology Laboratory (*NUTEX*), Department of Biomedical Sciences, **University of Padova.**

  https://scholar.google.com/citations?user=HbqR8GEAAAAJ&hl=it&authuser=3&oi=ao
  https://www.scopus.com/authid/detail.uri?authorId=24081140700

EUROPEAN SUPERVISOR:

- **European Co-Supervisor:** Ian Rollo, Ph.D, Principal Scientist. GSSI, PepsiCo Life Sciences, UK
  https://www.gssiweb.org/en/about/Our-Team/ian-rollo-phd

- **European Co-Supervisor:** Joao Felipe Mota, Ph.D
  https://scholar.google.com.br/citations?user=9GQc7NoAAAAJ&hl=pt-BR

My research aims to investigate the close inter-relationship between sport science, sport nutrition and sport technology in order to enhance elite athletes' health, performance and recovery.

My research focuses on identifying mini-invasive measurements (i.e.: sensors and wearable devices) to monitor health status of athletes and developing data-mining principles to understand the functional mechanisms between exercise and elite athlete's physiology.

This approach may close the methodological gap between system biology and translational medicine. The integration of biology, sport sciences, nutrition, metabolism and computational technology may represent a powerful approach to research with the potential to lead to medical and technological breakthroughs.

DISCIPLINES:

Nutrition Science, Metabolism, Physiology, Sport Science Nutrition, Technology

RESEARCH AND WORK EXPERIENCE:

Visiting Fellow (March 2019-May 2019)

IRCCS, Laboratory of Cardiovascular Endocrinology, San Raffaele Pisana Research Institute, Rome. Biomolecular biology

Learning new laboratory practical skills (biochemical assays, RNA isolation and qPCR analysis)

Researcher for the Nutritional Area of IMP (March 2019 - currently)

Italian Microbiome Project (IMP), Biotechnology Company, (http://progettomicrobiomaitaliano.org) Padova.

M.Sc Internship (January 2018-January 2019)

Dr. Nicola Sponsiello, Specialist in Nutrition and Dietetic Sciences, Padova.

Master Thesis Internship (September 2018 – February 2019)

- BMR Genomic Lab, Molecular Biology Research Institute, Spin off University of Padova

-Learning and applying molecular diagnostic techniques: PCR: polymerase chain reaction, NGS: next generation sequencing of 16S rRNA, analysis and interpretation of data, bioinformatic programs to interpret microbiota data (microbiome data mining)

- Department of Biomedical Sciences, Nutrition and Exercise Physiology Lab, University of Padova

-Applying laboratory methods of estimation of body composition (DEXA: dual X-ray Absorptiometry, BIA: bioelectrical impedance analysis).

-Applying laboratory methods of Indirect calorimetry to investigate the type and rate of substrate utilization, energy metabolism and oxygen consumption of athletes (from gas exchange measurements: carbon dioxide production and oxygen consumption during rest)

-Assessment of body composition by skinfolds anthropometry and circumferences (ISAK protocols).

- Preparation and examination daily dietary plan for athletes (reading and interpreting the relevant literature and researching the best products and ways to deliver the needed nutrients)

<u>To the field:</u>
-Learning and conducting CMJ test (counter movement jump) to measure leg power
-Learning and conducting Yo-Yo Intermitted Test to evaluate physical performance

WORKING WITH SOCCER TEAMS as Ph.D STUDENT and THE HEAD SPORT NUTRITIONIST:

-Genoa C.F.C., Italy, SERIE A (1 year). https://genoacfc.it/en/

GRADUATIONS:

Currently: **Ph.D program**

- Brain Mind & Computer Science: Neuroscience, Technology and Society
  http://hit.psy.unipd.it/BMCS

Master U.S.A. program: Scientific Teaching in Sport Nutrition, Metabolism and Biotechnology

UCSD, University of San Diego, USA
Biological Science, Nutrition, Bioinformatic (4 months)

-Learning and applying molecular diagnostic techniques: PCR: polymerase chain reaction, NGS: next generation sequencing of 16S rRNA, analysis and interpretation of data, bioinformatic programs to interpret microbiota data (microbiome data mining)

M.Sc: Science of Human and Clinical Nutrition
Department of Human Sciences (IT) (2 years)

Final Grade: 110L/110

Thesis title: "Effects of a very low carbohydrate ketogenic diet on body composition, muscle strength, muscle area, metabolism and performance in semi-professional soccer players".

Authors: Mancin L.; Paoli A.; Caprio M.; Monti E.; Cenci L.; Marcolin G.; Piccini F.; Grigoletto D. **Study design:** Experimental study, RCT.

Master Thesis Internship

I carried out my master thesis internships at medical center specialized in nutrition, at the sport center and at Nutrition-Exercise Physiology Laboratory, University of Padova where I learned several laboratories skills (Bioelectrical impedance analysis BIA, Dual energy X ray absorptiometry DEXA, Indirect calorimetry). A fundamental part of the Master thesis internship was dedicated to research to expand my knowledge on different topics and to the realization of personalized dietary plan (especially sport performance purpose).

I developed the ability to present and discuss my results with the laboratory's members.

Master U.S.A. program: Scientific Teaching in Nutrition and sport science (May 2018-September 2018)

UCSD, University of San Diego, USA
Biological Science, Health Science, Social Science (5 months)

-Applying molecular techniques to investigate microbiome of athletes (baseball)

-Attending lessons of sport science, molecular biology, sport nutrition

-Attending "practical camp" learning and playing different sport such volleyball, soccer, baseball. Then, we created proper dietary strategies for each specific sport.

Master Program: Epigenetic, Metagenomic, Exercise Metabolism, Sport Nutrition (October 2017- March 2018)

Molecular Biotechnology Centre, Research Institute, Molinette Hospital, Turin, Italy

I attended 6 months of program as student. The subjects discussed dealt with microbiome, epigenetic re-programming, exercise metabolism, sport nutrition, intermitted fasting and ketogenic diet.

B.Sc: Biology

Department of Medicine (DIMED), University of Padova, Padova, Italy B.Sc Degree course in Biomedical Laboratory Technician (3 years)

Final Grade: 110/110

Scientific High School

Scientific High School, curricula PNI: National Plan of Computer Studies Specialism, Padova

Final Grade: 100/100

PUBLICATIONS:

PUBMED:

- **Mancin L.,** Rollo I., Mota J.F., Piccini F., Carletti M., Susto G., Valle G., Paoli A. Optimizing Microbiota Profiles for Athletes: Dream or Reality? Exerc Sport Sci Rev. 2020 oct 9. DOI: 10.1249/jes.0000000000000236. Epub ahead of print. Pmid: 33044333. **IF:** 4.370

- Paoli A., **Mancin L.,** Bianco A., Thomas E., Mota J.F., Piccini F., Ketogenic Diet and Microbiota: Friends or Enemies? Genes (Basel). 2019 jul 15;10(7):534. DOI: 10.3390/genes10070534. Pmid: 31311141; pmcid: pmc6678592. **IF:** 2.984

- Paoli A., **Mancin L.,** Giacona M.C., Bianco A., Caprio M., Effects of Ketogenic Diet in Overweight Women with Polycystic Ovary Dyndrome. J Transl Med. 2020 feb 27;18(1):104. DOI: 10.1186/s12967-020-02277-0. Pmid: 32103756; pmcid: pmc7045520. **IF:** 4.197

- Paoli A., **Mancin L.,** Saoncella M., Grigoletto D., Pacelli F.Q., Zamparo P., Schoenfeld B.J., Marcolin G., Mind-muscle Connection: Effects of Verbal Instructions on Muscle Activity During Bench Press Exercise. Eur j transl myol. 2019 jun 12;29(2):8250. DOI: 10.4081/ejtm.2019.8250. Pmid: 31354928; pmcid: pmc6615069.

- Sorrenti V., Ali S., **Mancin L.,** Davinelli S., Paoli A., Scapagnini G., Cocoa Polyphenols and Gut Microbiota Interplay: Bioavailability, Prebiotic effect, and Impact on Human Health. Nutrients. 2020 jun 27;12(7):1908. DOI: 10.3390/nu12071908. Pmid: 32605083; pmcid: pmc7400387. **IF:** 4.546

- **Laura Mancin**; Fabio Piccini, Antonio Paoli. Brief communcation Ketogenic Diet and Nafld:A Great Therapeutic Opportunity?'.Journal n.42019., Acta Medica Mediterranea,2019.

Submitted:

Effects of a very low carbohydrate ketogenic diet on body composition, muscle strength, muscle area, metabolism and performance in semi-professional soccer players". **Authors: Mancin L.;** Paoli A.; Caprio M.; Monti E.; Cenci L.; Marcolin G.; Piccini F.; Grigoletto D. submitted to JISSN

CERTIFICATIONS:

- 2019 June 13th **Biologist Licensure**, College of Registered Biologist (Specialist Biologist Section B)
- **English Certification** Council of Europe: C1 Level (2018)

AWARDS:

- **1° place award:**

2019 **Young Researcher Award, University of Padova** "Brain meets Digital Enterprises", organized by Research center Human Inspired Technology Reserch Center

"Microbiota, Elite health' athletes and technology"

https://digitalmeet.it/digitalmeet-consegnato-il-primo-award-targato-hit/

- **1° place award:**

2019 year's **ESNS European Sport Nutrition Society**: Best Paper Award, **Milan** (European Sport Nutrition Society & Sanis, Milan (2nd2019-1st2018)

"Effect of a very low carbohydrate ketogenic diet on body composition, muscle strength, muscle area, metabolism and performance in semi-professional soccer players"

CONFERENCE ATTENDED-SPEAKING:

- **International Invited Talks**

Invited speaker: Applicazione clinica della dieta chetogenica: corso teorico-pratico Quarta edizione: focus sulle patologie neurologiche, Università degli studi di Pavia, from 19th to 21st September, Pavia (2018)

Invited speaker: Ketogenic Diet Academy, 24th to 25th February, Sinut, Bologna (2018)

Invited speaker: Ketogenic diets and Implications, Fabio Piccini MD,Ph.D, Padova(2017)

- **Conferences oral presentation**

Mancin L. *Microbiota, Elite health' athletes and technology. Brains meet Digital Enterprises.* Human Inspired Technology Research Center. University of Padova.

Paoli A., **Mancin L.**, Caprio M., Narici M.V., Piccini F., Pincella M., Grigoletto D. and Marcolin G. Ippolito D., Neri M., Bianco A., and Pacelli F. *Effect of a very low carbohydrate ketogenic diet on body composition, muscle strength, muscle area, metabolism and performance in semi-professional soccer players.* Spazio e Nutrizione, European Sport Nutrition Society & Sanis, Milan.

Mancin L. *Best recovery plan for athletes suffering of gastrointestinal distress: a LOWFODMAP approach.* Sport Science Week Barcelona: Sport and Nutrition, From the Lab to the Field; FC Barcelona, Camp Nou.

- **Attended**

Second International Conference ESNS: Sport Nutrition on the Edge of the New Era, RCS Sport, Rome (2018)

First International Conference ESNS: Sport Nutrition on the Edge of the New Era, RCS Sport, Milan (2017)

VLCKD: Utilizzo terapeutico della Dieta Chetogenica, IRCCS, Rome (2018)

Fasting Role and Fasting History, Molecular Biotechnologies Centre, Torino (2016)

PERSONAL INTEREST AND COMPETENCES

- Interdisciplinary research linked to biology, sport nutrition and exercise metabolism - Team working

- Researching on new technologies around gathering, processing, analyzing and modeling of data for a variety of scientific, clinical and healthcare application

- Researching how biological processes work at macro-levels, researching innovative methods to enhance dietary compliance and adherence to athletes (Mobile Application, Digital tools)

-I practiced competitive sports such al 100m running and artistic gymnastic. Now I usually practice CrossFit training and running at recreational level.