



Luca Tiano

Date of birth: 10/04/1971 | **Nationality:** Italian | **Phone number:**

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Pretoria, South Africa (Work)

ABOUT ME

Since 1997, my professional journey has revolved around researching oxidative stress and the application of antioxidants in various settings, including cellular models, physiological conditions, as well as pathologies linked to redox imbalance. I commenced my journey as a postdoctoral researcher at the Polytechnic University of Marche Ancona in 2003, later transitioning into a researcher role at the Department of Clinical Sciences, where my efforts were concentrated until 2016. During this period, I was actively engaged in joint research projects with clinical institutions such as the Children's Hospital, Salesi, and the Heart Institute, Lancisi. In 2016, I was appointed as associate Professor in Biochemistry at the Department of Life and Environmental Sciences, overseeing the laboratory of Oxidative Stress and Ageing, which comprises four postdoctoral researchers, several Master's, and Ph.D. students.

Primary research of the laboratory focuses on the health implications of lipophilic cofactors (Coenzyme Q10 and Vitamin K) in both healthy individuals and those experiencing enhanced oxidative stress, particularly in the context of cardiovascular health, muscle function, sarcopenia, skin ageing, and photoaging. My keen interest in the bioavailability and biological effects of vitamins and antioxidants in nutritional supplements and functional foods has paved the way for fruitful collaborations with a variety of industries, including biotechnology, food supplement, food, cosmetic, and pharmaceutical companies. Furthermore, I have been actively involved in academia, teaching courses on Protein Biochemistry, Nutrigenetics, and Oxidative Stress in Biological Systems.

At the present date I have authored 180 papers in international peer-reviewed journals and I served on the boards of the European Society of Comparative Biochemistry and Physiology and the International Coenzyme Q10 Association, among other roles.

As of January 2024, I have been appointed by the Italian Ministry of Foreign Affairs (MAECI) as the Scientific and Technological Attaché at the Italian Embassy in Pretoria, South Africa.

EDUCATION AND TRAINING

1992 – 1996

MASTER DEGREE IN BIOLOGICAL SCIENCES University of Genoa

Website www.unige.it | **Final grade** 110/110 cum laude |

Thesis The aril of *Chamaecytisus proliferus* (L.fil.) Link (Leguminosae): Its structure, histochemistry and role in the dispersal and in water-seed interaction

1997 – 2001

PHD IN BIOCHEMISTRY University of Camerino

Website www.unicam.it |

Thesis Trout erythrocyte as a model for the study of oxidative stress and ROS damage in ageing and environmental pollution

WORK EXPERIENCE

19/01/2024 – CURRENT Italian Embassy in South Africa

SCIENTIFIC AND TECHNOLOGICAL ATTACHÉ ITALIAN MINISTRY OF FOREIGN AFFAIRS AND INTERNATIONAL COOPERATION (MAECI)

- Building bilateral scientific relationships and collaboration.
- Providing expertise on scientific developments.

- Advising on science and technology policy.
- Promoting science education and outreach.

01/11/2021 – CURRENT Ancona, Italy

FULL PROFESSOR IN BIOCHEMISTRY DEPARTMENT OF LIFE AND ENVIRONMENTAL SCIENCES
POLYTECHNIC UNIVERSITY OF MARCHE

01/11/2016 – 31/10/2021 Ancona, Italy

ASSOCIATE PROFESSOR IN BIOCHEMISTRY DEPARTMENT OF LIFE AND ENVIRONMENTAL
SCIENCES POLYTECHNIC UNIVERSITY OF MARCHE

01/11/2011 – 31/10/2016 Ancona, Italy

RESEARCHER DEPARTMENT OF CLINICAL SCIENCES POLYTECHNIC UNIVERSITY OF MARCHE

01/11/2005 – 31/10/2011 Ancona, Italy

CONTRACT RESEARCHER INSTITUTE OF BIOCHEMISTRY POLYTECHNIC UNIVERSITY OF MARCHE

01/11/2004 – 31/10/2005 Ancona, Italy

POSTDOC FELLOWSHIP INSTITUTE OF BIOCHEMISTRY POLYTECHNIC UNIVERSITY OF MARCHE

Role of oxidative stress in endothelial dysfunction, effect of lipophilic antioxidants.

01/11/2003 – 31/10/2004 Ancona, Italy

POSTDOC FELLOWSHIP INSTITUTE OF BIOCHEMISTRY POLYTECHNIC UNIVERSITY OF MARCHE

Modulation of apoptosis in cell cultures, effect of lipophilic antioxidants.

01/11/2002 – 31/10/2003 Camerino, Italy

POSTDOC FELLOWSHIP DEPARTMENT OF BIOLOGY M.C.A. UNIVERSITY OF CAMERINO

Nitroxides radicals as antioxidants in biological systems

01/11/2001 – 31/10/2002 Aberdeen, United Kingdom

EU MARIE CURIE FELLOWSHIP MARINE LABORATORY (MARINE SCOTLAND)/ UNIVERSITY OF
ABERDEEN

Analysis of stress-induced gene expression in fish red blood cells after in vivo exposure to organotin pollutants

● LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
GERMAN	B1	B1	B1	B1	A2
FRENCH	A2	A2	A2	A2	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

Digital Skills - Test Results

 Information and data literacy

ADVANCED Level 6 / 6

 Communication and collaboration	ADVANCED	Level 5 / 6
 Digital content creation	ADVANCED	Level 5 / 6
 Safety	ADVANCED	Level 5 / 6
 Problem solving	ADVANCED	Level 6 / 6

Results from [self-assessment](#) based on [The Digital Competence Framework 2.1](#)

My Digital Skills

Padronanza del Pacchetto Office (Word Excel PowerPoint ecc) | Gestione autonoma della posta e-mail | Utilizzo del browser

TEACHING ACTIVITIES

2017 – 2023

Applied Biochemistry

PhD School Polytechnic University of Marche

2019 – 2022

Protein Biochemistry and Biotechnologies

Polytechnic University of Marche - MSc in Applied Molecular Biology

2017 – 2023

Nutrigenetics

Polytechnic University of Marche - MSc in Applied Molecular Biology

2017 – 2023

Oxidative Stress in Biological Systems

Polytechnic University of Marche - MSc in Applied Molecular Biology

2017 – 2018

Food Biochemistry

Polytechnic University of Marche - MSc in Applied Molecular Biology

2017 – 2019

Biochemical Analysis

Polytechnic University of Marche - MSc in Applied Molecular Biology

2011 – 2017

Biochemistry

Polytechnic University of Marche - MSc in Health Professionals Faculty of Medicine

2003 – 2005

Recombinant DNA Technologies

School of Pharmacy - University of Camerino

ORGANISATIONAL SKILLS

Editorial Activities and scientific events organization

2021 Guest editor *Antioxidants* Special Issue "Health Effects of Coenzyme Q₁₀"

2022 Organizer 10th *International Coenzyme Q10 Association world conference* Hamburg 12-15 May
2018 Organizer 31st *European Society Comparative Physiology and Biochemistry* Congress Porto 9-12 September.
2016 Organizer 30th *European Society Comparative Physiology and Biochemistry* Congress Barcelona 4-7 September.

Link <https://youtu.be/gm27mHFZNVA>

Reviewing and examiner activities

- Grant evaluator and Rating reviewer for National Research Fundation South Africa, Croatian Science Foundation, Research Foundation Flanders, Teagasc (Irish Agriculture and Food Development Authority)
- PhD award commission Molecular and Morpho-Functional Methods applied to Physical Exercise. Università degli studi di Urbino
- PhD award commission Chemical and Pharmaceutical Sciences and Biotechnology" Università di Camerino
- External examiner PhD thesis in Medicine and Health Sciences Stellenbosh University and University of Zululand (South Africa)

Academic responsibilities at the Polytechnic University of Marche

President of MSc in Food and Nutrition at the Polytechnic University of Marche
Quality manager for the Applied and Molecular Biology MSc course
Supervisor of the advanced cytometry laboratory
Responsible for the biocompatibility testing in the interdepartmental structure LabC19
Member of the Department Scientific Council
Member of the Doctorate Board of the PhD school in Life and Environmental Sciences

Supervision of Graduate students and postdoctoral fellows

Supervisor of the Oxidative Stress and Aging Laboratory
(2011 – 2023) 13 Postdocs/ 6 PhD/ 35 Master Students
Faculty of Medicine/ Department of Clinical Sciences /UNIVPM
Department of Life and Environmental Sciences /UNIVPM

Directive committee of Scientific Societies

2014- pres. Board member of the European Society of Comparative Biochemistry and Physiology
2015- pres. Executive Committee Member of the International Coenzyme Q10 Association

Internationalization Activities

PI in the collaborative strategical joint research project among UNIVPM and Medical Research Council South Africa: funds for mobility of researchers from the Italian Ministry of Foreign Affairs 2014-2016

Promoter of PhD international scholarship funded by the French embassy in Italy for mobility of supervised PhD student for 4 months at Sorbonne Paris University, Myology Institute for 4 months june-sept 2015

Visiting scientist grant from the Royal Edinburgh Society and Accademia dei Lincei for giving lectures at Glasgow Caledonian University June 2016

Visiting scientist at Dzemal Bijedic University of Mostar Bosnia and Herzegovina within the frame of the Sunbeam Erasmus project for years 2016-2018

Host for six Erasmus+ Traineeship student from Scotland and Bosnia in the last six years, Supervisor of Dr. Phiwayinkosi Dlodla from MRC South Africa for a 3 years postdoc project 2018/2020

● PUBLICATIONS

**Author of 180 research articles (cit 5095, Hf 37) for reference ORCID 0000-0002-7519-7106
Scopus res ID 6602139720**

Selection of representative publications of the last 3 years

1: Cirilli I, Damiani E, Dlodla PV, Hargreaves I, Marcheggiani F, Millichap LE, Orlando P, Silvestri S, **Tiano L.** *Role of Coenzyme Q₁₀ in Health and Disease: An Update on the Last 10 Years (2010-2020).* Antioxidants. 2021 doi: 10.3390/antiox10081325.

2: Marcheggiani F, Kordes S, Cirilli I, Orlando P, Silvestri S, Vogelsang A, Möller N, Blatt T, Weise JM, Damiani E, **Tiano L.** *Anti-ageing effects of ubiquinone and ubiquinol in a senescence model of human dermal fibroblasts.* Free Radic Biol Med. 2021 doi: 10.1016/j.freeradbiomed.2021.01.032.

3: Dlodla PV, Nkambule BB, Mazibuko-Mbeje SE, Nyambuya TM, Orlando P, Silvestri S, Marcheggiani F, Cirilli I, Ziqubu K, Ndevahoma F, Mxinwa V, Mokgalaboni K, Sabbatinelli J, Louw J, **Tiano L.** *Tea consumption and its effects on primary and secondary prevention of coronary artery disease: Qualitative synthesis of evidence from randomized controlled trials.* Clin Nutr ESPEN. 2021 doi: 10.1016/j.clnesp.2020.11.006.

4: Dlodla PV, Nkambule BB, Mazibuko-Mbeje SE, Nyambuya TM, Mxinwa V, Mokgalaboni K, Ziqubu K, Cirilli I, Marcheggiani F, Louw J, **Tiano L.** *Adipokines as a therapeutic target by metformin to improve metabolic function: A systematic review of randomized controlled trials.* Pharmacol Res. 2021 doi: 10.1016/j.phrs.2020.105219.

5: Cirilli I, Orlando P, Marcheggiani F, Dlodla PV, Silvestri S, Damiani E, **Tiano L.** *The Protective Role of Bioactive Quinones in Stress-induced Senescence Phenotype of Endothelial Cells Exposed to Cigarette Smoke Extract.* Antioxidants. 2020 doi: 10.3390/antiox9101008.

6: Dlodla PV, Silvestri S, Orlando P, Mazibuko-Mbeje SE, Johnson R, Marcheggiani F, Cirilli I, Muller CJF, Louw J, Chellan N, Obonye N, Nkambule BB, **Tiano L.** *Palmitate-induced toxicity is associated with impaired mitochondrial respiration and accelerated oxidative stress in cultured cardiomyocytes: The critical role of coenzyme Q_{9/10}.* Toxicol In Vitro. 2020. doi: 10.1016/j.tiv.2020.104948.

7: Rosati R, Romeo L, Silvestri S, Marcheggiani F, **Tiano L**, Frontoni E. *Faster R-CNN approach for detection and quantification of DNA damage in comet assay images.* Comput Biol Med. 2020. doi: 10.1016/j.compbiomed.2020.103912.

8: Orlando P, Sabbatinelli J, Silvestri S, Marcheggiani F, Cirilli I, Dlodla PV, Molardi A, Nicolini F, **Tiano L.** *Ubiquinol supplementation in elderly patients undergoing aortic valve replacement: biochemical and clinical aspects.* Aging. 2020 doi: 10.18632/aging.103742.

9: Dlodla PV, Orlando P, Silvestri S, Marcheggiani F, Cirilli I, Nyambuya TM, Mxinwa V, Mokgalaboni K, Nkambule BB, Johnson R, Mazibuko-Mbeje SE, Muller CJF, Louw J, **Tiano L.** *Coenzyme Q₁₀ Supplementation Improves Adipokine Levels and Alleviates Inflammation and Lipid Peroxidation in Conditions of Metabolic Syndrome: A Meta-Analysis of Randomized Controlled Trials.* Int J Mol Sci. 2020 . doi: 10.3390/ijms21093247.

● RESEARCH FUND RAISING ACTIVITIES

Industrial Scientific Consultancy

As an expert in Redox Biology and ageing I collaborate as academic consultant for the following companies

Gnosis Lesaffre (Italy/France) Bioactive compounds <https://gnosisbylesaffre.com/>

Jarrow Formulas (U.S.A.) Nutritional supplements <https://jarrow.com/>

Indena (Italy) Botanical Bioactives <https://www.indena.com/>

Kaneka (Japan) Bioactive compounds <https://www.kaneka.co.jp/en/>

Beiersdorf (Germany) Cosmetic and skin care <https://www.beiersdorf.com/>

Industrial support to PhD Scholarships

3 PhD EUREKA supervised by Prof. Tiano with a support of 33% (from industrial Partners (Angelini, Cuore Salus, Fisiofitness) and an equal amount from Regione Marche. A fourth PhD position was supported by 50% from Gnosis S.p.A.

● EXTRACURRICULAR ACTIVITIES

Volunteering and social activities

I have always been active in social and volunteering activities from an early age with the Italian Scouting organization AGESCI, the International Civil Service Organization, and the Italian Union of Muscular Dystrophy where I served during a civil service experience. In 1989 I spent one year in New Zealand conducting social services for the Department of Conservation helping in the management of different natural parks on South Island. Lately, I have been active in the Italian Rugby movement both as an amatorial player in the "OLD" category and in the organization of minirugby activities for children aged 6-12. I find the values of Rugby such as inclusivity, team work, support, solidarity, respect, useful in my everyday work and I strongly believe in their relevance to educate citizens and the young generations.