

● WORK EXPERIENCE

11/2018 – CURRENT – Milan, Italy

MEDICAL FELLOWSHIP PROGRAM – UNIVERSITÀ VITA-SALUTE SAN RAFFAELE

Medical Fellowship Program - Postgraduate School of Endocrinology and Metabolism (Director Professor A. Giustina)

Main activities in Institute of Endocrine and Metabolic Sciences San Raffaele Vita-Salute University IRCCS San Raffaele Hospital, Milan, Italy:

1. Endocrinology Unit (Director Professor A. Giustina)
2. Internal Medicine Unit (Director Professor E. Bosi)
3. Neurosurgery Department (Director Professor P. Mortini)
4. Day Hospital Unit (Director Dr R. Lanzi - Professor E. Bosi)
5. COVID-Biobanking Study Group (Director Professor F. Ciceri - Professor P. Rovere Querini)

Diseases management: internal medicine; thyroid diseases; bone metabolism; osteopenia and osteoporosis; diabetes; pituitary diseases; neuroendocrine tumours

09/2017 – 04/2018 – Milan, Italy

MEDICAL DOCTOR – IRCCS OSPEDALE SAN RAFFAELE

Medical Assistant volunteer - Internal Medicine Unit (Director Professor E. Bosi)

● EDUCATION AND TRAINING

2011 – 2017 – Milan, Italy

MEDICAL DEGREE – Università Vita-Salute San Raffaele

Thyroid diseases and Calcium metabolism (Supervisors: Professor E. Bosi, Professor M. Bussi, Doctor M. Manzoni)

Thesis: Hypocalcemia after Total-Thyroidectomy: a retrospective evaluation of risk factors

110/110 cum laude and honors

2007 – 2011 – Sarno, Italy

HIGH SCHOOL LEAVING QUALIFICATION IN SCIENTIFIC STUDIES – Liceo Statale “Tito Lucrezio Caro”

100/100

● LANGUAGE SKILLS

Mother tongue(s): **ITALIANA**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

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

● DIGITAL SKILLS

Microsoft Office: Word, Excel, Access, Power Point, Outlook. | SPSS Software - Analyst Software (Professional) | Graphpad prism (Version: 7.00, 6.00 & 5.00) | Social media communicator

● PUBLICATIONS

Paper Publications 2021.2 - 2022

- **di Filippo L**, Castellino L, Giustina A. Occurrence and response to treatment of Graves' disease after COVID vaccination in two male patients. *Endocrine*. 2022;75(1):19-21. doi:10.1007/s12020-021-02919-3
- **di Filippo L**, Allora A, Doga M, et al. Vitamin D Levels Are Associated With Blood Glucose and BMI in COVID-19 Patients, Predicting Disease Severity. *J Clin Endocrinol Metab*. 2022;107(1):e348-e360. doi:10.1210/clinem/dgab599
- **di Filippo L**, Allora A, Locatelli M, et al. Hypocalcemia in COVID-19 is associated with low vitamin D levels and impaired compensatory PTH response. *Endocrine*. 2021;74(2):219-225. doi:10.1007/s12020-021-02882-z

- Frara S, Loli P, Allora A, Santini C, **di Filippo L**, Mortini P, Fleseriu M, Giustina A. COVID-19 and hypopituitarism. *Rev Endocr Metab Disord*. 2021 Aug 13;1-17. doi: 10.1007/s11154-021-09672-y. Epub ahead of print. PMID: 34387832; PMCID: PMC8363093.
- **Di Filippo L**, De Lorenzo R, Sciorati C, et al. Adiponectin to leptin ratio reflects inflammatory burden and survival in COVID-19. *Diabetes Metab*. 2021;47(6):101268. doi:10.1016/j.diabet.2021.101268
- **di Filippo L**, Frara S, Giustina A. The emerging osteo-metabolic phenotype of COVID-19: clinical and pathophysiological aspects [published online ahead of print, 2021 Jun 2]. *Nat Rev Endocrinol*. 2021;1-2. doi:10.1038/s41574-021-00516-y
- **Di Filippo L**, De Lorenzo R, Cinel E, et al. Weight trajectories and abdominal adiposity in COVID-19 survivors with overweight/obesity [published online ahead of print, 2021 May 17]. *Int J Obes (Lond)*. 2021;1-9. doi:10.1038/s41366-021-00861-y
- Conte C, Esposito A, De Lorenzo R, **Di Filippo L**, Palmisano A, Vignale D, Leone R, Nicoletti V, Ruggeri A, Gallone G, Secchi A, Bosi E, Tresoldi M, Castagna A, Landoni G, Zangrillo A, De Cobelli F, Ciceri F, Camici P, Rovere-Querini P. Epicardial adipose tissue characteristics, obesity and clinical outcomes in COVID-19: A post-hoc analysis of a prospective cohort study. *Nutr Metab Cardiovasc Dis*. 2021 Jun 30;31(7):2156-2164. doi: 10.1016/j.numecd.2021.04.020. Epub 2021 May 3. PMID: 34059384; PMCID: PMC8091800
- Frara S, Allora A, Castellino L, **di Filippo L**, Loli P, Giustina A. COVID-19 and the pituitary. *Pituitary*. 2021;24(3):465-481. doi:10.1007/s11102-021-01148-1
- **di Filippo L**, Doga M, Frara S, Giustina A. Hypocalcemia in COVID-19: Prevalence, clinical significance and therapeutic implications [published online ahead of print, 2021 Apr 13]. *Rev Endocr Metab Disord*. 2021;1-10. doi:10.1007/s11154-021-09655-z
- Frara S, Allora A, **di Filippo L**, et al. Osteopathy in mild adrenal Cushing's syndrome and Cushing disease. *Best Pract Res Clin Endocrinol Metab*. 2021;35(2):101515. doi:10.1016/j.beem.2021.101515
- Formenti AM, Dalla Volta A, **di Filippo L**, Berruti A, Giustina A. Effects of Medical Treatment of Prostate Cancer on Bone Health. *Trends Endocrinol Metab*. 2021;32(3):135-158. doi:10.1016/j.tem.2020.12.004
- **di Filippo L**, Formenti AM, Doga M, et al. Hypocalcemia is a distinctive biochemical feature of hospitalized COVID-19 patients. *Endocrine*. 2021;71(1):9-13. doi:10.1007/s12020-020-02541-9
- **Di Filippo L**, De Lorenzo R, D'Amico M, et al. COVID-19 is associated with clinically significant weight loss and risk of malnutrition, independent of hospitalisation: A post-hoc analysis of a prospective cohort study. *Clin Nutr*. 2021;40(4):2420-2426. doi:10.1016/j.clnu.2020.10.043
- **di Filippo L**, Formenti AM, Doga M, Pedone E, Rovere-Querini P, Giustina A. Radiological Thoracic Vertebral Fractures are Highly Prevalent in COVID-19 and Predict Disease Outcomes. *J Clin Endocrinol Metab*. 2021;106(2):e602-e614. doi:10.1210/clinem/dgaa738

- **Di Filippo L**, Giugliano G, Tagliabue M, et al. Total thyroidectomy versus lobectomy: surgical approach to T1-T2 papillary thyroid cancer. *Acta Otorhinolaryngol Ital.* 2020;40(4):254-261. doi: 10.14639/0392-100X-N0608
- **di Filippo L**, Formenti AM, Giustina A. Hypocalcemia: the quest for the cause of a major biochemical feature of COVID-19. *Endocrine.* 2020;70(3):463-464. doi:10.1007/s12020-020-02525-9
- Rovere-Querini P, Tresoldi C, Conte C, Ruggeri A, Ghezzi S, De Lorenzo R, **Di Filippo L**, Farina N, Ramirez GA, Ripa M, Mancini N, Cantarelli E, Galli L, Poli A, De Cobelli F, Bonini C, Manfredi AA, Franchini S, Spessot M, Carlucci M, Dagna L, Scarpellini P, Ambrosio A, Di Napoli D, Bosi E, Tresoldi M, Lazzarin A, Landoni G, Martino G, Zangrillo A, Poli G, Castagna A, Vicenzi E, Clementi M, Ciceri F; COVID-BioB Study Group. Biobanking for COVID-19 research. *Panminerva Med.* 2020 Oct 19. doi: 10.23736/S0031-0808.20.04168-3. Epub ahead of print. PMID: 33073557.
- Lampasona V, Secchi M, Scavini M, Bazzigaluppi E, Brigatti C, Marzinotto I, Davalli A, Caretto A, Laurenzi A, Martinenghi S, Molinari C, Vitali G, **Di Filippo L**, Mercalli A, Melzi R, Tresoldi C, Rovere-Querini P, Landoni G, Ciceri F, Bosi E, Piemonti L. Antibody response to multiple antigens of SARS-CoV-2 in patients with diabetes: an observational cohort study. *Diabetologia.* 2020 Dec;63(12): 2548-2558. doi: 10.1007/s00125-020-05284-4. Epub 2020 Oct 8. PMID: 33029657; PMCID: PMC7541098.
- Formenti AM, Pedone E, **di Filippo L**, Ulivieri FM, Giustina A. Are women with osteoporosis treated with denosumab at risk of severe COVID-19?. *Endocrine.* 2020;70(2):203-205. doi:10.1007/s12020-020-02500-4
- Farina N, Ramirez GA, De Lorenzo R, **Di Filippo L**, Conte C, Ciceri F, Manfredi AA, Rovere-Querini P. COVID-19: Pharmacology and kinetics of viral clearance. *Pharmacol Res.* 2020 Nov;161:105114. doi: 10.1016/j.phrs.2020.105114. Epub 2020 Aug 3. PMID: 32758635; PMCID: PMC7834389
- **Di Filippo L**, Formenti AM, Rovere-Querini P, et al. Hypocalcemia is highly prevalent and predicts hospitalization in patients with COVID-19. *Endocrine.* 2020;68(3):475-478. doi:10.1007/s12020-020-02383-5
- **di Filippo L**, Doga M, Resmini E, Giustina A. Hyperprolactinemia and bone. *Pituitary.* 2020;23(3): 314-321. doi:10.1007/s11102-020-01041-3
- **Di Filippo L**, Vitali G, Taccagni G, et al. Cervix neuroendocrine carcinoma presenting with severe hypokalemia and Cushing's syndrome. *Endocrine.* 2020;67(2):318-320. doi:10.1007/s12020-020-02202-x
- **Di Filippo L**, Bosi E, Martinenghi S. A complete flaccid quadriplegia as early presentation of Graves' disease. *J Endocrinol Invest.* 2020;43(2):255-256. doi:10.1007/s40618-019-01115-5
- Corsello A*, **Di Filippo L***, Massironi S, et al. Vasostatin-1: A novel circulating biomarker for ileal and pancreatic neuroendocrine neoplasms. *PLoS One.* 2018;13(5):e0196858. Published 2018 May 3. doi: 10.1371/journal.pone.0196858

Abstract Publications

- **Luigi Di Filippo**, Agnese Allora, Anna Maria Formenti, Laura Castellino, Francesca Perticone, Massimo Locatelli, Stefano Frara, Andrea Giustina. Vitamin D deficiency is a key element in COVID-19 hypocalcemia. 23rd European Congress of Endocrinology 2021. Endocrine Abstracts. Bioscientifica 73. 2021/5
- **Luigi di Filippo**, Agnese Allora, Mauro Doga, Patrizia Rovere Querini, Massimo Locatelli, Stefano Frara, Andrea Giustina. Low Levels of Vitamin D Are Associated With Markers of Immuno-Inflammatory Response and Clinical Outcome in Covid-19. ENDO 2021 Endocrine Society's Annual Meeting. Journal of the Endocrine Society A278-A278. 2021/4
- Stefano Frara, Riccardo Pasquali, **Di Filippo Luigi**, Querini Patrizia Rovere, Andrea Giustina. COVID-19 and hypopituitarism. Experience from an endocrine center in a high-impact area. 22nd European Congress of Endocrinology. BioScientifica 70. 2020/8/21
- Stefano Frara, **Di Filippo Luigi**, Mauro Doga, Formenti Anna Maria, Marco Losa, Eugenia Resmini, Francesco Tecilazich, Pietro Mortini, Andrea Giustina. Morphometric vertebral fractures are highly prevalent in patients with non-functioning pituitary adenoma and related to older age and hypopituitarism. 22nd European Congress of Endocrinology. BioScientifica 70. 2020/8/21
- **Luigi Di Filippo**, Anna Maria Formenti, Patrizia Rovere-Querini, Carlucci Michele, Caterina Conte, Fabio Ciceri, Alberto Zangrillo, Mauro Doga, Andrea Giustina. Hypocalcemia is highly prevalent and predicts hospitalization in patients with COVID-19. 22nd European Congress of Endocrinology. Endocrine Abstracts 70. 2020/8/21
- Anna Maria Formenti, Erika Pedone, **Luigi Di Filippo**, Ulivieri Fabio Massimo, Andrea Giustina. Are women with osteoporosis treated with denosumab at risk of severe COVID-19?. 22nd European Congress of Endocrinology. Endocrine Abstracts 70. 2020/8/21
- Anna Maria Formenti, **Luigi Di Filippo**, Agnese Allora, Raffaele Giubbini, Andrea Giustina. Clinical and Biochemical Characterization of Risk Factors for Vertebral Fractures in Patients with Hypoparathyroidism. ENDO 2020 Endocrine Society's Annual Meeting. Journal of the Endocrine Society. Oxford University Press. 2020/04
- L Moiola, A Nozzolillo, **L Di Filippo**, C Zanetta, M Manzoni, C Lapucci, A Laroni, M Mirabella, A Bianco, V Morra, R Lanzillo, CV Russo, M Margoni, F Rinaldi, M Zaffaroni, F Patti, CG Chisari, P Cavalla, M Vercellino, E Cocco, J Frau, M Capobianco, A Bertolotto, S Malucchi, AR Pia, G Comi, M Filippi. Alemtuzumab-induced thyroid disease: observational data from an Italian cohort of patients. Multiple Sclerosis Journal. 25 879-880. 2019/9/1.

● CONFERENCES AND SEMINARS

Conferences Talks - Oral Communications - Seminars

- **Corso di Radioprotezione per laureati in Medicina in Centri che utilizzano un densitometro osseo a raggi X Desenzano del Garda (Bs) 2021:** La diagnosi dell'Osteoporosi: la morfometria vertebrale
- **SICEM 2021 The 9th Seoul International Congress of Endocrinology and Metabolism in conjunction with the 40th Annual Scientific Meeting of the Korean Endocrine Society. Talk:** HOT TOPIC 1: COVID-19 and Endocrine Disease: Hypocalcemia in COVID-19: Prevalence, Clinical Significance and Therapeutic Implications
- **23rd European Congress of Endocrinology 2021. Talk:** Emerging endocrine abnormalities and Covid-19 outcomes: Fractures
- **OSTEOMASTER ALUMNI 1st MEETING 2020 - Osteoporosi e dintorni nell'era del COVID-19:** Ipocalcemia
- **Incontri Italiani di Endocrinologia e Metabolismo 2020. Comunicazioni Orali:** Ipocalcemia nei pazienti COVID-19: elevata incidenza e fattore di rischio per ospedalizzazione
- **22nd European Congress of Endocrinology 2020. Talk:** Emerging aspect of endocrine diseases and COVID-19: Calcium
- **22nd European Congress of Endocrinology 2020. Oral Communication:** Late breaking abstracts: Hypocalcemia is highly prevalent and predicts hospitalization in patients with COVID-19

Abstract Presenting Author

- **23rd European Congress of Endocrinology 2021.** Luigi Di Filippo, Agnese Allora, Anna Maria Formenti, Laura Castellino, Francesca Perticone, Massimo Locatelli, Stefano Frara, Andrea Giustina. Vitamin D deficiency is a key element in COVID-19 hypocalcemia.
- **ENDO 2021 Endocrine Society's Annual Meeting.** Luigi di Filippo, Agnese Allora, Mauro Doga, Patrizia Rovere Querini, Massimo Locatelli, Stefano Frara, Andrea Giustina. Low Levels of Vitamin D Are Associated With Markers of Immuno-Inflammatory Response and Clinical Outcome in Covid-19.
- **22nd European Congress of Endocrinology.** Luigi Di Filippo, Anna Maria Formenti, Patrizia Rovere-Querini, Carlucci Michele, Caterina Conte, Fabio Ciceri, Alberto Zangrillo, Mauro Doga, Andrea Giustina. Hypocalcemia is highly prevalent and predicts hospitalization in patients with COVID-19.

● HONOURS AND AWARDS

Scientific Awards

- 2020 Springer Nature Research Highlights Diabetes & Endocrinology: "Hypocalcemia is highly prevalent and predicts hospitalization in patients with COVID-19" from Endocrine - Authors: Luigi Di Filippo et al.
- 23rd European Congress of Endocrinology 2021 Meeting Grant ePoster "Vitamin D deficiency is a key element in COVID-19 hypocalcemia" - Authors: Luigi Di Filippo et al.

- **HOBBIES AND INTERESTS**

Supervisor and Coach of the women Rugby team UniSR

Università Vita-Salute San Raffaele - Firstly as a student and afterwards as medical resident, I collaborated with commitment and dedication to the implementation of various student activities, between 2015 and 2020. During these years, I covered both the role of supervisor and coach of the women Rugby team UniSR, organising all activities of the team in close contact with the University Live Campus Service.

- **RESPONSABILITÀ**

Declaration

Il/la sottoscritto/a, sotto la propria personale responsabilità e consapevole delle sanzioni previste dall'art.76 del DPR n.445 del 28/12/2000, per le ipotesi di falsità in atti e dichiarazioni mendaci, dichiara che quanto sopra riportato corrisponde al vero.