

PERSONAL INFORMATION

Federica Saponaro



University of Pisa
Department of Surgical, Medical and Molecular Pathology, and Critical Care Medicine
Via Roma 55, 56126, Pisa, Italy



Enterprise	University	EPR
☐ Management Level	☐ Full professor	☐ Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
☐ Mid-Management Level	☐ Associate Professor	☐ Level III Researcher and Technologist
☐ Employee / worker level	☒ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

26-09-2022

Senior Researcher (RTDB)

Department of Surgical, Medical and Molecular Pathology, and Critical Care Medicine, University of Pisa, Italy

2017 to present

Junior Researcher

Department of Surgical, Medical and Molecular Pathology, and Critical Care Medicine, University of Pisa, Italy

- Research activity in endocrinology, calcium metabolism, vitamin D, thyroid hormones

2017-2021

Member of the Executive Board

-SIOMMMS (Italian Society of Mineral Metabolism and Osteoporosis)

2016-2017

Endocrinology Consultant

Azienda Ospedaliera Universitaria Pisana

-Research and clinical activity

2014-2017

PhD Student

Scuola Superiore Sant'Anna, Pisa

Fondazione Gabriele Monasterio Pisa

-Translational research activity (vitamin D and cardiovascular diseases)

2008-2014

Resident in Endocrinology and Metabolic Diseases

Endocrinology Unit, University of Pisa, Pisa

-Clinical and research activity (calcium metabolism diseases)

Sep.2014-Dec.2014

Research Fellow

Neuroendocrinology Unit, Helmholtz Zentrum, Munich (Germany)

-Research activity: Multiple Endocrine Syndrome type 4 and genetic disorders of CDKN1B gene project

Sep. 2011- Apr. 2011

Visiting Researcher

University of KU Leuven, Belgium

-Research activity: bone biology in animal models

2008

Visiting Researcher

Massachusetts General Hospital- Harvard Medical School- Boston

-Research activity: parathormone disorders in animal models

EDUCATION AND TRAINING

2014-2017

PhD in Translational Medicine (cum laude)

Scuola Superiore Sant'Anna, Pisa, Italy

- Vitamin D metabolites in patients with Heart Failure and in animal model

2008-2014

Fellowship in Endocrinology

Hyperparathyroidism and calcium metabolism

2001-2008

Degree in Medicine (cum laude)

Scuola Superiore Sant'Anna and University of Pisa, Italy

- Clinical and genetic characteristics of parathyroid tumors

WORK ACTIVITIES**Awards and Grants**

2022 Grant: winner of PRA Research Projects (PI), University of Pisa, Pisa, Italy (amount €78.408)
 2022 Grant: participant PNRR Research Group CN3, Spoke 8.2.3 (amount €768.279,22)
 2021 Grant: winner of PRA Research Projects (participant), University of Pisa
 2020 Award: Early Career Forum Grant ENDO 2020 San Francisco, USA (amount €1000)
 2018 Award: SIE- CUEM young edition Grant for best oral communication (amount €1000)
 2018 Grant: winner of PRA Research Projects (participant), University of Pisa, Pisa, Italy
 2017 Award: Young Researcher Grant from SIOMMMS (amount €40.000)
 2015 Award: Novartis Grant for best oral communication (amount €1000)
 2014 Scholarship: EMBO Individual Short Fellowship European Molecular Biology Organization (€8163,00)
 2014 Scholarship: European Grant 3E: Exchange in Endocrinology Expertise (amount €10.000)
 2011 Scholarship: European Grant 3E: Exchange in Endocrinology Expertise (amount €10.000)

Editorial activity

Last 10 years: 7 Chapters Book author.
 2023- ongoing: Associate Editor for our journal Frontiers in Endocrinology
 2022: Guest Editor Frontiers in Endocrinology Special Topic "Rising Stars in Adrenal Diseases"
 2021: Guest Editor Frontiers in Medicine Special Topic "Mineral metabolism: hormonal crosstalk, pathophysiology and disease".
 2020: Director of editorial and web service for SIOMMMS (Italian Society of Mineral Metabolism)
 2019: Member of AME Society Editorial Board
 2018 to present: Reviewer activity for 15 peer reviewed international journals.

Invited presentations (last 5 yrs)

32 invited talks at National and International Conferences

Supervision activities

N= 1 Postdoc, N=4 students thesis Advisor (N=2 Biology applied to Medicine, N=1 SMO Course, N=1 Nutrition Course) University of Pisa N= 2 PhD students supervisor PhD in Biochemistry and Molecular Biology BiBiM 2.0, Pegaso

Teaching activities

2017-present Holder of the course of Clinical Biochemistry – School of Specialization in Endocrinology, Pathology, Oncology (40 hours), University of Pisa
 2018 -present Holder of the course "Biochemistry" SMO, University of Pisa (24 hours)
 2022-present Co-teacher of Biochemistry and Molecular Biology, Medicine, University of Pisa (25 hours)

Institutional responsibilities

2021-present: Member of the Board of PhD in Biochemistry and Molecular Biology - BiBiM 2.0, Pegaso, University of Siena
 2021-present: Member of CISUP, University of Pisa, Pisa
 2020: Member of the Committee for a research fellowship, Department of Surgical, Medical and Molecular Pathology, and Critical Care Medicine; University of Pisa; Pisa
 2018-present Member of PARAT-ESE Expert Panel (International Workshop on Parathyroid Disorders)
 2018 – 2021: Executive Board Member of SIOMMMS Scientific Society

ADDITIONAL INFORMATION**Publications**

H index = 20, n. citations=1024, total number of publications n=54 (Sources SCOPUS, WOS)

RELEVANT PAPERS

45 Dettori C, Ronca F, Scalese M, Saponaro F. Parathyroid Hormone (PTH)-Related Peptides Family: An Intriguing Role in the Central Nervous System. *J Pers Med*. 2023 Apr 24;13(5):714. doi: 10.3390/jpm13050714.

44 Polini B, Ricardi C, Bertolini A, Carnicelli V, Rutigliano G, Saponaro F, Zucchi R, Chiellini G. T1AM/TAAR1 System Reduces Inflammatory Response and β -Amyloid Toxicity in Human Microglial HMC3 Cell Line. *Int J Mol Sci*. 2023 Jul 17;24(14):11569. doi: 10.3390/jms241411569.

43 Vergaro G, Del Franco A, Aimo A, Gentile F, Castiglione V, Saponaro F, Masotti S, Prontera C, Fusari N, Emdin M, Passino C. Intact fibroblast growth factor 23 in heart failure with reduced and mildly reduced ejection fraction. *BMC Cardiovasc Disord*. 2023 Sep 1;23(1):433. doi: 10.1186/s12872-023-03441-2.

42 Dettori C, Ronca F, Di Buono G, Saba A, Di Lupo F, Polini B, Ricardi C, Frascarelli S, Cetani F, Marcocci C, Zucchi R, Chiellini G, Scalese M, Saponaro F. J Performance in Behavioral Testing in an Animal Model of Post-Surgical Hypoparathyroidism. *Pers Med*. 2024 Feb 17;14(2):215. doi: 10.3390/jpm14020215.

41 Vescini F, Borretta G, Chiodini I, Boniardi M, Carotti M, Castellano E, Cipriani C, Eller-Vainicher C, Giannini S, Iacobone M, Salcuni AS, Saponaro F, Spiezia S, Versari A, Zavatta G, Mitrova Z, Saulle R, Vecchi S, Antonini D, Basile M, Giovanazzi A, Paoletta A, Papini E, Persichetti A, Samperi I, Scoppola A, Novizio R, Calò PG, Cetani F, Cianferotti L, Corbetta S, De Rimini ML, Falchetti A, Iannetti G, Laureti S, Lombardi CP, Madeo B, Marcocci C, Mazzaferro S, Miele V, Minisola S, Palermo A, Pepe J, Scillitani A, Tonzar L, Grimaldi F, Cozzi R, Attanasio R. Italian Guidelines for the Management of Sporadic Primary Hyperparathyroidism. *Endocr Metab Immune Disord Drug Targets*. 2023 Dec 23:e141223224531. doi: 10.2174/0118715303260423231122111705. Online ahead of print.

40 Saponaro F, Alfì G, Cetani F, Matrone A, Mazoni L, Apicella M, Pardi E, Borsari S, Laurino M, Lai E, Gemignani A, Marcocci C. Serum calcium levels are associated with cognitive function in hypoparathyroidism: a neuropsychological and biochemical study in an Italian cohort of patients with chronic post-surgical hypoparathyroidism. *J Endocrinol Invest*. 2022 Jun 25. doi: 10.1007/s40618-022-01822-6. Online ahead of print.

39 Battafarano G, Chiellini G, Saponaro F. Editorial: Calcium Metabolism: Hormonal Crosstalk, Pathophysiology and Disease. *Front Med (Lausanne)*. 2022 Apr 25;9:899416. doi: 10.3389/fmed.2022.899416. eCollection 2022.

38 Saponaro F, Franzini M, Okoye C, Antognoli R, Campi B, Scalese M, Neri T, Carrozzi L, Monzani F, Zucchi R, Celi A, Paolichchi A, Saba A. Is There a Crucial Link Between Vitamin D Status and Inflammatory Response in Patients With COVID-19? *Front Immunol*. 2022 Jan 24;12:745713. doi: 10.3389/fimmu.2021.745713. eCollection 2021.

37 Bollerslev J, Rejnmark L, Zahn A, Heck A, Appelman-Dijkstra NM, Cardoso L, Hannan FM, Cetani F, Sikjær T, Formenti AM, Björnsdóttir S, Schalin-Jantti C, Belaya Z, Gibb FW, Lapauw B, Amrein K, Wicke C, Grasemann C, Krebs M, Ryhänen EM, Makay O, Minisola S, Gaujoux S, Bertocchio JP, Hassan-Smith ZK, Linglart A, Winter EM, Kollmann M, Zmierzczak HG, Tsourdi E, Pilz S, Siggelkow H, Gittoes NJ, Marcocci C, Kamenicky P; 2021 PARAT Working Group. European Expert Consensus on Practical Management of Specific Aspects of Parathyroid Disorders in Adults and in Pregnancy: Recommendations of the ESE Educational Program of Parathyroid Disorders. *Eur J Endocrinol*. 2022 Jan 13;186(2):R33-R63. doi: 10.1530/EJE-21-1044.

36 Saponaro F, Ferrisi R, Gado F, Polini B, Saba A, Manera C, Chiellini G. The Role of Cannabinoids in Bone Metabolism: A New Perspective for Bone Disorders. *Int J Mol Sci*. 2021 Nov 16;22(22):12374. doi: 10.3390/jms222212374.

35 Saponaro F. Rare Causes of Hypercalcemia. *Endocrinol Metab Clin North Am*. 2021 Dec;50(4):769-779. doi: 10.1016/j.ecl.2021.07.004.

34 Mazoni L, Matrone A, Apicella M, Saponaro F, Borsari S, Pardi E, Cosci B, Biagioni I, Rossi P, Pacciardi F, Scionti A, Elisei R, Marcocci C, Cetani F. Renal complications and quality of life in postsurgical hypoparathyroidism: a case-control study. *J Endocrinol Invest*. 2021 Oct 12. doi: 10.1007/s40618-021-01686-2. Online ahead of print.

33 Saponaro F, Pardi E, Mazoni L, Borsari S, Torregrossa L, Apicella M, Frustaci G, Materazzi G, Miccoli P, Basolo F, Marcocci C, Cetani F. Do Patients With Atypical Parathyroid Adenoma Need Close Follow-up? *J Clin Endocrinol Metab*. 2021 Oct 21;106(11):e4565-e4579. doi: 10.1210/clinem/dgab452.

32 Saponaro F, Kim JH, Chiellini G. Transthyretin Stabilization: An Emerging Strategy for the Treatment of Alzheimer's Disease? *Int J Mol Sci*. 2020 Nov 17;21(22):8672. doi: 10.3390/jms21228672.

31 Saponaro F, Rutigliano G, Sestito S, Bandini L, Storti B, Bizzarri R, Zucchi R. ACE2 in the Era of SARS-CoV-2: Controversies and Novel Perspectives. *Front Mol Biosci*. 2020 Sep 30;7:588618. doi: 10.3389/fmolb.2020.588618. eCollection 2020.

30 Saponaro F, Saba A, Zucchi R. An Update on Vitamin D Metabolism. *Int J Mol Sci*. 2020 Sep 8;21(18):6573. doi: 10.3390/jms21186573.

29 FEDERICA SAPONARO, Simona Sestito, Massimiliano Runfola and Simona Rapposelli and Grazia Chiellini Selective Thyroid Hormone Receptor-Beta (TR β) Agonists: New Perspectives for the Treatment of Metabolic and Neurodegenerative disorders Accepted on 04 June 2020 *Front. Med*. doi: 10.3389/fmed.2020.00331

28 Saponaro F, Marcocci C, Apicella M, Mazoni L, Borsari S, Pardi E, Di Giulio M, Carlucci F, Scalese M, Bilezikian JP, Cetani F. Hypomagnesuria is associated with nephrolithiasis in patients with asymptomatic primary hyperparathyroidism. *J Clin Endocrinol Metab*. 2020 May 5:dga233. doi: 10.1210/clinem/dgaa233.

27 Saponaro F, Cetani F, Mazoni L, Apicella M, Di Giulio M, Carlucci F, Scalese M, Pardi E, Borsari S, Bilezikian JP, Marcocci C. Hypercalciuria: its value as a predictive risk factor for nephrolithiasis in asymptomatic primary hyperparathyroidism? *J Endocrinol Invest.* 2019 Dec 23. doi: 10.1007/s40618-019-01162-y. [Epub ahead of print] PubMed PMID: 31873910.

26: Cetani F, Pardi E, Aretini P, Saponaro F, Borsari S, Mazoni L, Apicella M, Civita P, La Ferla M, Caligo MA, Lessi F, Mazzanti CM, Torregossa L, Oppo A, Marcocci C. Whole exome sequencing in familial isolated primary hyperparathyroidism. *J Endocrinol Invest.* 2020 Feb;43(2):231-245. doi: 10.1007/s40618-019-01107-5. Epub 2019 Sep 5. Erratum in: *J Endocrinol Invest.* 2019 Sep 26;.: PubMed PMID: 31486992.

25 Zucchi R, Rutigliano G, Saponaro F. Novel thyroid hormones. *Endocrine.* 2019 Oct;66(1):95-104. doi: 10.1007/s12020-019-02018-4. Epub 2019 Jul 20. Review. PubMed PMID: 31327156.

24: Bollerslev J, Schalin-Jantti C, Rejnmark L, Siggelkow H, Morreau H, ThakkerRV, Sitges-Serra A, Cetani F, Marcocci C; PARAT Workshop Group. MANAGEMENT OF ENDOCRINE DISEASE: Unmet therapeutic, educational and scientific needs in parathyroid disorders. *Eur J Endocrinol.* 2019 Sep 1;181(3):P1-P19. doi:10.1530/EJE-19-0316. Epub 2019 Jun 1. Review. PubMed PMID: 31176307; PubMed Central PMCID: PMC6598862.

23: Saponaro F, Marcocci C, Zucchi R. Vitamin D status and cardiovascular outcome. *J Endocrinol Invest.* 2019 Nov;42(11):1285-1290. doi: 10.1007/s40618-019-01057-y. Epub 2019 Jun 6. Review. PubMed PMID: 31172459.

22: Federica Saponaro, Claudio Marcocci; Come definire lo status della vitamina 25OHD: aspetti metodologici (laboratorio) e clinici (VDBP, free 25OHD, bioavailable 25(OH)D), *L'Endocrinologo* Aprile 2019
<https://doi.org/10.1007/s40619-019-00545-w>

21: Lorenzini, Leonardo; Nguyen, Nhat Minh; Sacripanti, Ginevra; Serni, Enrico; Borsò, Marco; Saponaro, Federica; Cecchi, Elena; Simoncini, Tommaso; Ghelardoni, Sandra; Zucchi, Riccardo; Saba, Alessandro 2019. Assay of endogenous 3,5-diiodo-L-thyronine (3,5-T2) and 3,3'-diiodo-L-thyronine (3,3'-T2) in human serum: a feasibility study. DOI:10.3389/fendo.2019.00088. pp.1-7. In *FRONTIERS IN ENDOCRINOLOGY* - ISSN:1664-2392 vol. 10 (February 2019)

20: Cetani F, Saponaro F, Marcocci C. Non-surgical management of primary hyperparathyroidism. *Best Pract Res Clin Endocrinol Metab.* 2018 Dec;32(6):821-835. doi: 10.1016/j.beem.2018.09.006. Epub 2018 Sep 28. Review. PubMed PMID: 30665549.

19: Cetani F, Saponaro F, Borsari S, Marcocci C. Familial and Hereditary Forms of Primary Hyperparathyroidism. *Front Horm Res.* 2019;51:40-51. doi: 10.1159/000491037. Epub 2018 Nov 19. PubMed PMID: 30641519.

18: Saponaro F, Saba A, Frascarelli S, Frontera C, Clerico A, Scalese M, Sessa MR, Cetani F, Borsari S, Pardi E, Marvelli A, Marcocci C, Passino C, Zucchi R. Vitamin D measurement and effect on outcome in a cohort of patients with heart failure. *Endocr Connect.* 2018 Sep 1;7(9):957-964. doi: 10.1530/EC-18-0207. PubMed PMID: 30300540; PubMed Central PMCID: PMC6176284.

17: Saponaro F, Cetani F, Repaci A, Pagotto U, Cipriani C, Pepe J, Minisola S, Cipri C, Vescini F, Scillitani A, Salcuni A, Palmieri S, Eller-Vainicher C, Chiodini I, Madeo B, Kara E, Castellano E, Borretta G, Gianotti L, Romanelli F, Camozzi V, Faggiano A, Corbetta S, Cianferotti L, Brandi ML, De Feo ML, Palermo A, Vezzoli G, Maino F, Scalese M, Marcocci C. Clinical presentation and management of patients with primary hyperparathyroidism in Italy. *J Endocrinol Invest.* 2018 Nov;41(11):1339-1348. doi: 10.1007/s40618-018-0879-z. Epub 2018 Apr 3. PubMed PMID: 29616419.

16: Pardi E, Borsari S, Saponaro F, Bogazzi F, Urbani C, Mariotti S, Pigliaru F, Satta C, Pani F, Materazzi G, Miccoli P, Grantaliano L, Marcocci C, Cetani F. Mutational and large deletion study of genes implicated in hereditary forms of primary hyperparathyroidism and correlation with clinical features. *PLoS One.* 2017 Oct 16;12(10):e0186485. doi: 10.1371/journal.pone.0186485. eCollection 2017. PubMed PMID: 29036195; PubMed Central PMCID: PMC5643132.

15: Saponaro F, Marcocci C, Cacciatore F, Miccoli M, Pardi E, Borsari S, Materazzi G, Miccoli P, Cetani F. Clinical profile of juvenile primary hyperparathyroidism: a prospective study. *Endocrine.* 2018 Feb;59(2):344-352. doi: 10.1007/s12020-017-1318-1. Epub 2017 May 20. PubMed PMID: 28527123.

14: Saponaro F, Marcocci C, Zucchi R, Prontera C, Clerico A, Scalese M, Frascarelli S, Saba A, Passino C. Hypovitaminosis D in patients with heart failure: effects on functional capacity and patients' survival. *Endocrine.* 2017 Dec;58(3):574-581. doi: 10.1007/s12020-017-1282-9. Epub 2017 Mar 23. PubMed PMID: 28337657.

13: Accorroni A, Saponaro F, Zucchi R. Tissue thyroid hormones and thyronamines. *Heart Fail Rev.* 2016 Jul;21(4):373-90. doi: 10.1007/s10741-016-9553-8. Review. PubMed PMID: 27115768.

12: Borsari S, Pardi E, Pellegata NS, Lee M, Saponaro F, Torregrossa L, Basolo F, Paltrinieri E, Zatelli MC, Materazzi G, Miccoli P, Marcocci C, Cetani F. Loss of p27 expression is associated with MEN1 gene mutations in sporadic parathyroid adenomas. *Endocrine.* 2017 Feb;55(2):386-397. doi: 10.1007/s12020-016-0941-6. Epub 2016 Apr 2. PubMed PMID: 27038812.

11: Vignali E, Macchia E, Cetani F, Reggiardo G, Cianferotti L, Saponaro F, Marcocci C. Development of an algorithm to predict serum vitamin D levels using a simple questionnaire based on sunlight exposure. *Endocrine.* 2017 Jan;55(1):85-92. doi: 10.1007/s12020-016-0901-1. Epub 2016 Mar 10. PubMed PMID: 26965913.

10: Vignali E, Cetani F, Chiavistelli S, Meola A, Saponaro F, Centoni R, Cianferotti L, Marcocci C. Normocalcemic primary hyperparathyroidism: a survey in a small village of Southern Italy. *Endocr Connect.* 2015 Sep;4(3):172-8. doi: 10.1530/EC-15-0030. PubMed PMID: 26155986; PubMed Central PMCID: PMC4496527.

9: Marcocci C, Saponaro F. Epidemiology, pathogenesis of primary hyperparathyroidism: Current data. *Ann Endocrinol (Paris).* 2015 May;76(2):113-5. doi: 10.1016/j.ando.2015.03.015. Epub 2015 Apr 25. Review. PubMed PMID: 25916761.

8: Pardi E, Mariotti S, Pellegata NS, Benfini K, Borsari S, Saponaro F, Torregrossa L, Cappai A, Satta C, Mastinu M, Marcocci C, Cetani F. Functional characterization of a CDKN1B mutation in a Sardinian kindred with multiple endocrine neoplasia type 4 (MEN4). *Endocr Connect.* 2015 Mar;4(1):1-8. doi: 10.1530/EC-14-0116. Epub 2014 Nov 21. PubMed PMID: 25416039; PubMed Central PMCID: PMC5713151.

7: Cetani F, Banti C, Pardi E, Borsari S, Viacava P, Miccoli P, Torregrossa L, Basolo F, Pelizzo MR, Rugge M, Pennelli G, Gasparri G, Papotti M, Volante M, Vignali E, Saponaro F, Marcocci C. CDC73 mutational status and loss of parafibromin in the outcome of parathyroid cancer. *Endocr Connect.* 2013 Oct 28;2(4):186-95. doi: 10.1530/EC-13-0046. Print 2013. PubMed PMID: 24145611; PubMed Central PMCID: PMC3847926.

6: Pardi E, Marcocci C, Borsari S, Saponaro F, Torregrossa L, Tancredi M, Raspini B, Basolo F, Cetani F. Aryl hydrocarbon receptor interacting protein (AIP) mutations occur rarely in sporadic parathyroid adenomas. *J Clin Endocrinol Metab.* 2013 Jul;98(7):2800-10. doi: 10.1210/jc.2012-4029. Epub 2013 Apr 30. PubMed PMID: 23633209.

5: Saponaro F, Faggiano A, Grimaldi F, Borretta G, Brandi ML, Minisola S, Frasoldati A, Papini E, Scillitani A, Banti C, Del Prete M, Vescini F, Gianotti L, Cavalli L, Romagnoli E, Colao A, Cetani F, Marcocci C. Cinacalcet in the management of primary hyperparathyroidism: post marketing experience of an Italian multicentre group. *Clin Endocrinol (Oxf).* 2013 Jul;79(1):20-6. doi: 10.1111/cen.12108. Epub 2013 Apr 27. PubMed PMID: 23228121.

4: Cetani F, Saponaro F, Banti C, Cianferotti L, Vignali E, Chiavistelli S, Viccica G, Pinchera A, Marcocci C. Cinacalcet efficacy in patients with moderately severe primary hyperparathyroidism according to the European Medicine Agency prescription labeling. *J Endocrinol Invest.* 2012 Jul;35(7):655-60. doi: 10.3275/7970. Epub 2011 Sep 30. PubMed PMID: 21971564.

3: Donadio E, Giusti L, Cetani F, Da Valle Y, Ciregia F, Giannaccini G, Pardi E, Saponaro F, Torregrossa L, Basolo F, Marcocci C, Lucacchini A. Evaluation of formalin-fixed paraffin-embedded tissues in the proteomic analysis of parathyroid glands. *Proteome Sci.* 2011 Jun 8;9(1):29. doi: 10.1186/1477-5956-9-29. PubMed PMID: 21651755; PubMed Central PMCID: PMC3123619.

2: Giusti L, Cetani F, Ciregia F, Da Valle Y, Donadio E, Giannaccini G, Banti C, Pardi E, Saponaro F, Basolo F, Berti P, Miccoli P, Pinchera A, Marcocci C, Lucacchini A. A proteomic approach to study parathyroid glands. *Mol Biosyst.* 2011 Mar;7(3):687-99. doi: 10.1039/c0mb00191k. Epub 2010 Dec 21. PubMed PMID: 21180715.

1: Cetani F, Pardi E, Banti C, Collecchi P, Viacava P, Borsari S, Fanelli G, Naccarato AG, Saponaro F, Berti P, Miccoli P, Pinchera A, Marcocci C. Beta-catenin activation is not involved in sporadic parathyroid carcinomas and adenomas. *Endocr Relat Cancer.* 2010 Jan 29;17(1):1-6. doi: 10.1677/ERC-09-0147. Print 2010 Mar. PubMed PMID: 19755524.

BOOKS

TH metabolism and active TH metabolites in the heart , Manual: Thyroid and Heart Springer 2020

Hyperparathyroidism when to proceed with surgery (in press)

Familial and Hereditary Forms of Primary Hyperparathyroidism Cetani, F.; Saponaro, F.; Borsari, S.; et al. PARATHYROID DISORDERS: FOCUSING ON UNMET NEEDS Book Series: Frontiers of Hormone Research Volume: 51 Pages: 40-51 Published: 2019 (WOS)

Manuale di Endocrinologia SEZIONE III EDISES 2017

Chapters i) Iperparatiroidismo, ii) Osteomalacia e Rachitismo iii) Osteoporosi iv) Deficit di vitamina D

"Hypercalcemia" Oxford Handbook of Endocrinology and Diabetes (3 ed.) Edited by John Wass and Katharine Owen , Oxford University Press Print Publication Date: Apr 2014, Published online: Mar 2014 DOI: 10.1093/med/9780199644438.001.0001

RELEVANT INVITED SPEAKER

SIOMMMS 2016, Roma: Casi clinici: Approccio al paziente con iperparatiroidismo primario dopo insuccesso della paratiroidectomia.

SIE 2015, Taormina: HPLC-MS-MS 25OHvitaminD levels are associated with prognosis markers of Heart Failure.

2015 Congresso D-Day III Edizione, Padova: Aspetti fisiologici del sistema endocrino della vitamina D.

FELLOW-DAY 2015 -SIOMMMS 2015: CDKN1B gene involvement in sporadic parathyroid adenomas and functional characterization in vitro of the novel CDKN1B c.-80C>T mutation - F. Saponaro, E. Pardi, S. Borsari, C. Banti, A. Meola, E. Vignali, C. Marcocci, F. Cetani - U.O. ENDOCRINE 2, UNIVERSITY OF PISA. Relazione

SIE 2015 – SIMPOSIO ENGIOI - CDKN1B gene involvement in sporadic parathyroid adenomas and functional characterization in vitro of the novel CDKN1B c.-80C>T mutation. F. Saponaro et

FELLOW-DAY 2014 – SIOMMMS 2014 "Genetic analysis of CDKN1B gene in Familial Primary Hyperparathyroidism". Federica Saponaro, Elena Pardi, Claudio Marcocci, Filomena Cetani. Department of Endocrinology, University of Pisa

SIOMMMS 2014 STUDIO PROSPETTICO SU UNA POPOLAZIONE DI PAZIENTI CON IPERPARATIROIDISMO PRIMARIO GIOVANILE Federica Saponaro, Federica Cacciatore, Elena Pardi, Simona Borsari, Claudio Marcocci, Filomena Cetani. U.O. Endocrinologia 2, Università di Pisa

ECE 2013 COPENAGHEN Relazione - Genetic analysis of CDKN1B gene in Familial Primary Hyperparathyroidism F. Saponaro, E. Pardi, S. Borsari, C. Banti, E. Vignali, L. Cianferotti, 1M. Mastinu, 1S. Mariotti, C. Marcocci, F. Cetani Department of Endocrinology, University of Pisa

RELEVANT ABSTRACTS AND POSTERS:

- - 2019 MASTER SCHOOL EXERCISE MUSCLE IN HEALTH AND DISEASE (III) (PISA - LUGLIO 2019): Biochemical and metabolic response to contraction
- - 2019 60th Congress of SIB (Italian Society of Biochemistry and Molecular Biology (LECCE- SETTEMBRE 2019): 3-iodothyronamine (T1AM) IS TAKEN UP AND RAPIDLY METABOLIZED IN CELL CULTURE MEDIUM ONLY AT LOW CONCENTRATION.
- 2019 IPEM (PISA APRILE 2019) Biochimica e metabolismo minerale dopo chirurgia bariatrica
- 2019 29° CORSO NAZIONALE SULLE MALATTIE METABOLICHE DELL'OSSO (ALBA - GIUGNO 2019): Effetti extrascheletrici della vitamina D
- 2019 SIOMMMS (CONGRESSO ITALIANO MALATTIE METABOLICHE DELL'OSSO): (BOLOGNA - OTTOBRE 2019): URINARY MAGNESIUM AS PREDICTOR OF NEPHROLITHIASIS IN PATIENTS WITH ASYMPTOMATIC PRIMARY HYPERPARATHYROIDISM
- 2019 FORISIE WINTER SCHOOL IN CLINICAL ENDOCRINOLOGY (ROMA- GENNAIO 2019): Metabolismo minerale: introduzione ad un caso clinico di Iperparatiroidismo
- 2019 EUROPEAN CONGRESS OF ENDOCRINOLOGY (LIONE - MAGGIO 2019): Urinary magnesium as predictor of nephrolithiasis in patients with asymptomatic primary hyperparathyroidism

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