Davide Gnocchi

ACADEMIC QUALIFICATIONS

- M.Sc. in Biological Sciences
- Ph.D. in “Cellular and Developmental Biology”
- NATIONAL SCIENTIFIC HABILITATION (Associate Professor) in:
  - 06/A2 (GENERAL PATHOLOGY AND CLINICAL PATHOLOGY) obtained 10/03/2025
  - 06/N1 (SCIENCES OF HEALTH PROFESSIONS AND APPLIED MEDICAL TECHNOLOGIES) obtained 14/03/2025

PROFESSIONAL EXPERIENCE

From 01/10/2025	Associate Professor in General Pathology (06/A2, MED/04 – MEDS-02/A) at the University “UniCamillus”
14/06/2024-15/09/2025	Research Fellow - University of Bari "Aldo Moro" - Interdisciplinary Department of Medicine (DIM) - General Pathology (06/A2, MED/04 - MEDS-02/A)
10/01/2023-30/5/2023	Research Fellow - University of Bari "Aldo Moro" - Interdisciplinary Department of Medicine (DIM)
14/12/2020 - 13/12/2023	Fixed-term university researcher (RTDA) (art. 24 c.3-a L. 240/10) – 06/N1, MED/46 Università degli Studi di BARI “Aldo Moro” – Dipartimento Interdisciplinare di Medicina (DIM)
3/01/2019 - 02/01/2020	Research Fellow - University of Bari "Aldo Moro" - Interdisciplinary Department of Medicine (DIM) - General Pathology – 06/N1, MED/46
01/12/2017 - 30/11/2018	Research Fellow - University of Bari "Aldo Moro" - Interdisciplinary Department of Medicine (DIM) - General Pathology – 06/N1, MED/46
10/10/2016 - 05/12/2017	Post-Doctoral Fellow – Weizmann Institute of Science (Israel)
01/09/2013 - 30/09/2016	Post-Doctoral Fellow – KAROLINSKA INSTITUTET – Stockholm (Sweden)

EDUCATION & TRAINING

Date	25/02/2013
Title	Ph.D.
Evaluation	Very Good

Thesis Title	“Primary hepatocytes as a model to investigate non-alcoholic fatty liver disease (NAFLD): potential therapeutic effects of diiodothyronines”
PhD in	“Cellular and Developmental Biology”
University	University of ROME "La Sapienza" – P.zza Aldo Moro, 5 - ROMA
Date	17/07/2008
Title	M.Sc.
M.Sc. course	BIOLOGICAL SCIENCES
Evaluation	110/110 cum laude
Thesis Title	“Effetti non genomici degli ormoni tiroidei in epatociti durante lo sviluppo embrionale” (“Nongenomic effects of thyroid hormones in hepatocytes during embryonic development”)
University	University of ROME "La Sapienza" – P.zza Aldo Moro, 5 - ROMA

PERSONAL SKILLS

Mother tongue **Italian**

Other languages **English**, full professional knowledge
Swedish, basic knowledge

Didactic activity

- Course leader for "Methods and Techniques of Immunohematology" for the Bachelor's Degree in Biomedical Laboratory Techniques (TLB) [2020-2023]
- Thesis advisor for the Bachelor's Degree in Biomedical Laboratory Techniques (TLB) [2023]
- Subject expert for the course of GENERAL PATHOLOGY at the University of Bari "Aldo Moro" (since March 18, 2025)

Communication skills Scientific communication skills in English acquired during periods spent abroad

Organizational, managerial and professional skills Organization of experimental laboratory activities and management of students, interns, and graduate students in the Medicine and Surgery, and Biomedical Laboratory Techniques (BLT) programs. Experimental and teaching skills acquired during work experience in Italy and abroad. Technology transfer expertise.

Digital competence

Information processing	Communication	Content Creation	Safety	Problem solving
Advanced user	Advanced user	Advanced user	Advanced user	Advanced user

- knowledge of office suite tools (word processor, spreadsheet, presentation software) and programs for data processing and digital image processing

ADDITIONAL INFORMATION

Publications

Gnocchi D., Nikolic D., Paparella R.R., Sabbà C., Mazzocca A. (2025). Crithmum maritimum extract exerts broad antitumor activity by reprogramming energy metabolism in cancer cells. FOOD BIOSCIENCE, Volume 72, October 2025, 107443. doi.org/10.1016/j.fbio.2025.107443

Gnocchi D., Nikolic D., Russo S., Matrella M.L., Paparella R.R., Kumar S., Karki S.S., Sabbà C., Cocco T., Lobasso S., Mazzocca A. (2025). Dysfunctional mitochondrial bioenergetics sustains drug resistance in cancer cells. AM J PHYSIOL CELL PHYSIOL. Apr 1;328(4):C1150-C1159. doi: 10.1152/ajpcell.00538.2024. Epub 2025 Jan 24.

Moliterni C., Vari F., Schifano E., Tacconi S., Stanca E., Friuli M., Longo S., Conte M., Salvioli S., **Gnocchi D.**, Mazzocca A., Uccelletti D., Vergara D., Dini L., Giudetti A.M. Lipotoxicity of palmitic acid is associated with DGAT1 downregulation and abolished by PPARα activation in liver cells. (2024). J LIPID RES. Dec; 65(12):100692. doi: 10.1016/j.jlr.2024.100692. Epub 2024 Nov 5.

Gnocchi D., Nikolic D., Paparella R.R., Sabbà C., Mazzocca A. (2024). Crithmum maritimum Extract Restores Lipid Homeostasis and Metabolic Profile of Liver Cancer Cells to a Normal Phenotype. PLANT FOODS FOR HUMAN NUTRITION, vol. 79, p. 417-424, doi: 10.1007/s11130-024-01188-5

Gnocchi D., Nikolic D., Castellaneta F., Paparella R.R., Sabbà C., Mazzocca A. (2023). Microenvironmental stress drives tumor cell maladaptation and malignancy through regulation of mitochondrial and nuclear cytochrome c oxidase subunits. AM J PHYSIOL CELL PHYSIOL 325(6):C1431-C1438. doi: 10.1152/ajpcell.00508.2023

Gnocchi D., Afonso M.B., Cavalluzzi M.M., Lentini G., Ingravallo G., Sabba C., Rodrigues C.M.P., Mazzocca A. (2023). Inhibition of lysophosphatidic acid receptor 6 upregulated by the choline-deficient l-amino acid-defined diet prevents hepatocarcinogenesis in mice. MOLECULAR CARCINOGENESIS, vol. 62, p. 577-582, ISSN: 1098-2744, doi: 10.1002/mc.23516

Gnocchi D., Nikolic D., Paparella R.R., Sabba C., Mazzocca A. (2023). Cellular Adaptation Takes Advantage of Atavistic Regression Programs during Carcinogenesis. CANCERS, vol. 15, ISSN: 2072-6694, doi: 10.3390/cancers15153942

Gnocchi D., Sabba C., Massimi M., Mazzocca A. (2023). Metabolism as a New Avenue for Hepatocellular Carcinoma Therapy. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, vol. 24, ISSN: 1422-0067, doi: 10.3390/ijms24043710

Gnocchi D., Sabba C., Mazzocca A. (2023). Crithmum maritimum Improves Sorafenib Sensitivity by Decreasing Lactic Acid Fermentation and Inducing a Pro-Hepatocyte Marker Profile in Hepatocellular Carcinoma. PLANT FOODS FOR HUMAN NUTRITION, vol. 78, p. 230-232, ISSN: 1573-9104, doi: 10.1007/s11130-022-01037-3

Gnocchi D., Sabba C., Mazzocca A. (2023). Lactic acid fermentation: A maladaptive mechanism and an evolutionary throwback boosting cancer drug resistance. BIOCHIMIE, ISSN: 1638-6183, doi: 10.1016/j.biochi.2023.01.005

Custodero C., Ciavarella A., Panza F., **Gnocchi D.**, Lenato G.M., Lee J., Mazzocca A., Sabbà C., Solfrizzi V. (2022). Role of inflammatory markers in the diagnosis of vascular contributions to cognitive impairment and dementia: a systematic review and meta-analysis. GEROSCIENCE, ISSN: 2509-2723, doi: 10.1007/s11357-022-00556-w

Gnocchi D., Sabba C., Mazzocca A. (2022). The Edible Plant Crithmum maritimum Shows Nutraceutical Properties by Targeting Energy Metabolism in Hepatic Cancer. PLANT FOODS FOR HUMAN NUTRITION, vol. 77, p. 481-483, ISSN: 1573-9104, doi: 10.1007/s11130-022-00986-z

Gnocchi D., Kurzyk A., Mintrone A., Lentini G., Sabbà C., Mazzocca A. (2022). Inhibition of LPAR6 overcomes sorafenib resistance by switching glycolysis into oxidative phosphorylation in hepatocellular carcinoma. BIOCHIMIE, vol. 202, p. 180-189, ISSN: 1638-6183, doi: 10.1016/j.biochi.2022.07.016

Incerpi S., Gionfra F., De Luca R., Candelotti E., De Vito P., Percario Z.A., Leone S, **Gnocchi D.**, Rossi M., Caruso F., Scapin S., Davis P.J., Lin H.Y., Affabris E., Pedersen J.Z. (2022). Extranuclear effects of thyroid hormones and analogs during development: An old mechanism with emerging roles. FRONTIERS IN ENDOCRINOLOGY, vol. 13, ISSN: 1664-2392, doi: 10.3389/fendo.2022.961744

Gnocchi D., Castellaneta F., Cesari G., Fiore G., Sabba C., Mazzocca A. (2021). Treatment of liver cancer cells with ethyl acetate extract of Crithmum maritimum permits reducing sorafenib dose and toxicity maintaining its efficacy. JOURNAL OF PHARMACY AND PHARMACOLOGY, vol. 73, p. 1369-1376, ISSN: 2042-7158, doi: 10.1093/jpp/rgab070

Gnocchi D., Cavalluzzi M. M., Mangiatordi G. F., Rizzi R., Tortorella C., Spennacchio M., Lentini G., Altomare A., Sabba C., Mazzocca A. (2021). Xanthenylacetic Acid Derivatives Effectively Target Lysophosphatidic Acid Receptor 6 to Inhibit Hepatocellular Carcinoma Cell Growth. CHEMMEDCHEM, vol. 16, p. 2121-2129, ISSN: 1860-7179, doi: 10.1002/cmdc.202100032

Gnocchi D., Del Coco L., Girelli C.R., Castellaneta F., Cesari G., Sabbà C., Fanizzi F.P., Mazzocca A. (2021). ^{1}H-NMR metabolomics reveals a multitarget action of Crithmum maritimum ethyl acetate extract in inhibiting hepatocellular carcinoma cell growth. SCIENTIFIC REPORTS, vol. 11, ISSN: 2045-2322, doi: 10.1038/s41598-020-78867-1

Ciavarella A., **Gnocchi D.**, Custodero C., Lenato G.M., Fiore G., Sabbà C., Mazzocca A. (2020). Translational insight into prothrombotic state and hypercoagulation in nonalcoholic fatty liver disease. THROMBOSIS RESEARCH, vol. 198, p. 139-150-150, ISSN: 0049-3848, doi: 10.1016/j.thromres.2020.12.002

Gnocchi D., Cesari G., Calabrese G.J., Capone R., Sabba C., Mazzocca A. (2020). Inhibition of Hepatocellular Carcinoma Growth by Ethyl Acetate Extracts of Apulian Brassica oleracea L. and Crithmum maritimum L. PLANT FOODS FOR HUMAN NUTRITION, vol. 75, p. 33-40, ISSN: 0921-9668, doi: 10.1007/s11130-019-00781-3

Gnocchi D., Ellis E. C. S., Johansson H., Eriksson M., Bruscalupi G., Steffensen K. R., Parini P. (2020). Diiodothyronines regulate metabolic homeostasis in primary human hepatocytes by modulating mTORC1 and mTORC2 activity. MOLECULAR AND CELLULAR ENDOCRINOLOGY, vol. 499, ISSN: 0303-7207, doi: 10.1016/j.mce.2019.110604

Gnocchi D., Kapoor S., Nitti P., Cavalluzzi M.M., Lentini G., Denora N., Sabbà C., Mazzocca A. (2020). Novel lysophosphatidic acid receptor 6 antagonists inhibit hepatocellular carcinoma growth through affecting mitochondrial function. JOURNAL OF MOLECULAR MEDICINE, vol. 98, p. 179-191, ISSN: 0946-2716, doi: 10.1007/s00109-019-01862-1

Lippolis R.*, **Gnocchi D.***, Santacroce L., Siciliano R.A., Mazzeo M.F., Scacco S., Sabbà C., Mazzocca A. (2020). A distinctive protein signature induced by lysophosphatidic acid receptor 6 (LPAR6) expression in hepatocellular carcinoma cells. BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ISSN: 0006-291X, doi: 10.1016/j.bbrc.2020.04.036 ***equal contribution**

Gnocchi D., Custodero C., Sabba C., Mazzocca A. (2019). Circadian rhythms: a possible new player in non-alcoholic fatty liver disease pathophysiology. JOURNAL OF MOLECULAR MEDICINE, vol. 97, p. 741-759, ISSN: 0946-2716, doi: 10.1007/s00109-019-01780-2

Roth L., Srivastava S., Lindzen M., Sas-Chen A., Sheffer M., Lauriola M., Enuka Y., Noronha A., Mancini M., Lavi S., Tarcic G., Pines G., Nevo N., Heyman O., Ziv T., Rueda O. M., **Gnocchi D.**, Pikarski E., Admon A., Caldas C., Yarden Y. (2018). SILAC identifies LAD1 as a filamin-binding regulator of actin dynamics in response to EGF and a marker of aggressive breast tumors. SCIENCE SIGNALING, vol. 11, ISSN: 1937-9145, doi: 10.1126/scisignal.aan0949

Gnocchi D., Bruscalupi G. (2017). Circadian rhythms and hormonal homeostasis: Pathophysiological implications. BIOLOGY, vol. 6, p. 1-20, ISSN: 2079-7737, doi: 10.3390/biology6010010

Gnocchi D., Steffensen K. R., Bruscalupi G., Parini P. (2016). Emerging role of thyroid hormone metabolites. ACTA PHYSIOLOGICA, vol. 217, p. 184-216, ISSN: 1748-1716, doi: 10.1111/apha.12648

Li M., Ellis E., Johansson H., Nowak G., Isaksson B., **Gnocchi D.**, Parini P., Axelsson J. (2016). Changes in gluconeogenesis and intracellular lipid accumulation characterize uremic human hepatocytes ex vivo. AMERICAN JOURNAL OF PHYSIOLOGY. GASTROINTESTINAL AND LIVER PHYSIOLOGY, vol. 310, p. G952-G961, ISSN: 1522-1547, doi: 10.1152/ajpgi.00379.2015

Gnocchi D., Pedrelli M., Hurt-Camejo E., Parini P. (2015). Lipids around the clock: Focus on circadian rhythms and lipid metabolism. BIOLOGY, vol. 4, p. 104-132, ISSN: 2079-7737, doi: 10.3390/biology4010104

Gnocchi D., Massimi M., Alisi A., Incerpi S., Bruscalupi G. (2014). Effect of fructose and 3,5-diiodothyronine on lipid accumulation and insulin signalling in NAFLD-like hepatocytes. HORMONE AND METABOLIC RESEARCH, vol. 46, p. 333-340, ISSN: 0018-5043, doi: 10.1055/s-0034-1371858

Gnocchi D., Massimi M., Alisi A., Incerpi S., Bruscalupi G. (2014). Effect of fructose and 3,5-diiodothyronine (3,5-T(2)) on lipid accumulation and insulin signalling in non-alcoholic fatty liver disease (NAFLD)-like rat primary hepatocytes. HORMONE AND METABOLIC RESEARCH, ISSN: 1439-4286, doi: 10.1055/s-0034-1371858

Gnocchi D., Leoni S., Incerpi S., Bruscalupi G. (2012). 3,5,3 '-Triiodothyronine (T-3) stimulates cell proliferation through the activation of the PI3K/Akt pathway and reactive oxygen species (ROS) production in chick embryo hepatocytes. STEROIDS, vol. 77, p. 589-595, ISSN: 0039-128X, doi: 10.1016/j.steroids.2012.01.022

Scapin S., Leoni S., Spagnuolo S., **Gnocchi D.**, De Vito P., Luly P., Pedersen J.Z., Incerpi S. (2010). Short-term effects of thyroid hormones during development: Focus on signal transduction. STEROIDS, vol. 75, p. 576-584, ISSN: 0039-128X doi: 10.1016/j.steroids.2009.10.013

***h*-index: 16 Citazioni: 765 (Scopus)**

Congresses

IV Workshop of the "Tumor Biochemistry" group belonging to the Italian Society of Biochemistry (SIB) – **Oral presentation:** "Dysfunctional mitochondrial bioenergetics sustains drug resistance and alterations in the microenvironment in cancer cells" – Catania, 16-17 September 2024

Societé Française de Biochimie et Biologie Moléculaire (SFBBM) – LYON, CONGRÉS ANNUEL 4-5 juillet 2024 – **Invited oral presentation** for the award of the 2022 Best Paper Award, awarded by SFBBM: "Overcoming aerobic glycolysis-sustained drug resistance in hepatocellular carcinoma by inhibiting LPAR6"

Davide Gnocchi, Marta B. Afonso, Maria Cavalluzzi, Giovanni Lentini, Giuseppe Ingravallo, Carlo Sabbà, Cecilia Rodrigues Antonio Mazzocca. **Oral presentation:** "Inhibition of lysophosphatidic acid receptor 6 upregulated by CDAA diet prevents hepatocarcinogenesis in mice." 4th "Metabolism meets Function" meeting – Department of Biosciences, Biotechnologies and Environment of the University of Bari ALDO MORO – July 21st, 2023

Davide Gnocchi, Marta B. Afonso, Maria Cavalluzzi, Giovanni Lentini, Giuseppe Ingravallo, Carlo Sabbà, Cecilia Rodrigues Antonio Mazzocca. "Inhibition of lysophosphatidic acid receptor 6 upregulated by the choline-deficient L-amino acid-defined diet prevents hepatocarcinogenesis in mice". European Association for the Study of the Liver (EASL) – EASL Liver Cancer Summit – Estoril, Portugal 20-22/4/2023.

Davide Gnocchi, Vinicio Carloni, Carlo Sabbà, Antonio Mazzocca. "Promotion of differentiation reduces hepatocellular carcinoma cell growth by boosting respiration". European Association for the Study of the Liver (EASL) – EASL Liver Cancer Summit – Estoril, Portugal 20-22/4/2023.

5th SRP DIABETES-ENDOMET Joint Retreat - Djurönäset Conference Center May 21-22, 2015. Annual congress of the "Strategic Research Programme in Diabetes (SRP Diabetes)" of Karolinska Institutet. Session 1: Nutrition, Hunger and Metabolic Health
Oral presentation: "Diiodothyronines reduce triglyceride content and activate insulin signalling in human primary hepatocytes"

12th INTERNATIONAL FISV CONGRESS (Federazione Italiana Scienze della Vita). "Sapienza" Università di Roma 24-27/09/2012.
Oral presentation: "Effects of 3,5-Diiodothyronine (3,5-T2) on lipid accumulation and insulin signaling in a rat model of Non-Alcoholic Fatty Liver Disease (NAFLD)" [Congress Book pag. 100]

Gnocchi D., Leoni S., Bruscalupi G. (2011). **Oral presentation:** "Oleic acid but not fructose induces steatosis and insulin resistance in primary adult and fetal hepatocytes. 3,5-T2 prevents and reverts these effects differently in adult and fetal cells". In: 62nd Congress of the Italian Physiological Society. Acta Physiologica, ISSN: 1748-1708, Sorrento, 25-27 settembre 2011

Gnocchi D., Incerpi S., Bruscalupi G., Leoni S. (2010). 3,5,3'-Triiodothyronine (T3) stimulates cell growth through reactive oxygen species (ROS) and PI3K/Akt pathway. In: Acta Physiologica. vol. 200 (suppl. 681), Varese, 16-17 settembre 2010

Gnocchi D., Incerpi S., Bruscalupi G., Spagnuolo S., Leoni S. (2009). "Proliferative non genomic effects of thyroid hormones are mediated by PI3Kinase/Akt activation and ROS production". In: Acta Physiologica. vol. 197 (suppl. 672), Siena, settembre 2009

Gnocchi D., Bruscalupi G., Spagnuolo S., Leoni S. (2007). “Membrane receptors and T3 mitogenic effects in hepatocytes during prenatal life”. In: Acta Physiologica. vol. 191 (suppl. 657), Lecce, 19-21 settembre 2007

AWARDS

NATIONAL SCIENTIFIC HABILITATION (Associate Professor) in:

- 06/A2 (GENERAL PATHOLOGY AND CLINICAL PATHOLOGY) obtained 10/03/2025
- 06/N1 (SCIENCES OF HEALTH PROFESSIONS AND APPLIED MEDICAL TECHNOLOGIES) obtained 14/03/2025

Awards and recognitions for scientific activity
2022 Best Paper Award, awarded by SFBBM (Societé Française de Biochimie et Biologie Moléculaire (SFBBM) –Società Francese di Biochimica e Biologia Molecolare)) for the following paper:
Gnocchi D., Kurzyk A., Mintrone A., Lentini G., Sabbà C., Mazzocca A. (2022). Inhibition of LPAR6 overcomes sorafenib resistance by switching glycolysis into oxidative phosphorylation in hepatocellular carcinoma. BIOCHIMIE, vol. 202, p. 180-189, ISSN: 1638-6183, doi 10.1016/j.biochi.2022.07.016

SUBJECT EXPERT for the teaching of GENERAL PATHOLOGY at the University of Bari (from 18/03/2025)

ASSOCIATE EDITOR for **“*Frontiers in Endocrinology*”** and **REVIEW EDITOR** for **“*Frontiers in Oncology*”**

Management or participation in the activities of a research group characterized by national or international collaborations
As part of the REFIN (Research for Innovation) program funded by the Puglia Region with European Funds (POR PUGLIA ERDF-ESF 2014/2020 European Social Fund approved with Decision C(2015)5854 of 13/08/2015 "Research for Innovation (REFIN)" Subject: POR Puglia 2014/2020 – Axis X – Action 10.4. Research for Innovation – REFIN), I served as a Type A Fixed-Term Researcher (RTDA), and was responsible for the experimental part, including execution of the experiments, data processing, and preparation of the resulting scientific publications. The project involved Italian and European universities. Scientific evaluator of the project: Professor Tina Garofalo. Overall assessment of the work carried out: "Excellent."

Technology Transfer achievements
- Australian Innovation Patent (AIP) obtained on October 13, 2021, for the protection of intellectual property regarding production and use of novel lysophosphatidic acid receptor 6 (LPAR6) antagonists as therapeutic molecules against hepatocellular carcinoma. Australian Innovation Patent No. 202110424. Names of patentees: Mazzocca A, Gnocchi D, Cavalluzzi MM, Lentini G. Title of invention: "A process for developing lysophosphatidic acid receptor 6 (LPAR6) antagonists that inhibit hepatocellular carcinoma growth." The Australian Innovation Patent (AIP) can be easily converted into a European Patent.
- German Patent (German Utility Model) obtained on July 18, 2024. Title: "Ein System zur Herstellung von Ethylacetat-Extrakt der essbaren Pflanze Crithmum Maritimum" - "A system for producing ethyl acetate extract from the edible plant Crithmum maritimum." The German Patent (German Utility Model) obtained protects the intellectual property rights for production and biomedical use of the cold-dried extract of the edible plant Crithmum maritimum. The German Patent (German Utility Model) can be easily converted into a European Patent.

Roma, 03/10/2025

Davide Gnocchi