

PERSONAL INFORMATION

Cesare Indiveri



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https://www.unical.it/portale/strutture/dipartimenti_240/dibest/docenti/ordinari/indiveri/<https://loop.frontiersin.org/people/313872/overview>https://www.researchgate.net/profile/Cesare_Indiveri

POSITION

Full Professor in Biochemistry at the Department DiBEST (Biology Ecology and Earth Sciences) of the University of Calabria

WORK EXPERIENCE

1988 **CNR Researcher**

Centro Studi Mitocondri e Metabolismo Energetico, Bari (Italy)

2000 **Associate Professor in Biochemistry**

Dep. Farmaco-Biologico, Faculty of Pharmacy, University of Calabria, Arcavacata di Rende (Italy)

2001 **Full Professor in Biochemistry**

Dep. of Cell Biology, Faculty of SS.MM.FF.NN. University of Calabria

2004 **Confirmation as full Professor in Biochemistry**

Dep. of Cell Biology, Faculty of SS.MM.FF.NN. University of Calabria, Arcavacata di Rende (Italy)

2005–2010 **President of Graduation Courses of Biology and Biotechnology of University of Calabria.**

University of Calabria, Arcavacata di Rende (Italy)

2010 **Vice- Head of Department of Cell Biology**

University of Calabria, Arcavacata di Rende (Italy)

2011–2012 **Head of Department of Cell Biology**

University of Calabria, Arcavacata di Rende (Italy)

2013 **Full Professor in Biochemistry**

Department DiBEST (Biologia, Ecologia e Scienze della Terra) University of Calabria, Arcavacata di Rende (Italy)

2013–31/10/2019 **Head of Department DiBEST (Biologia, Ecologia, Scienze della Terra)**

University of Calabria, Arcavacata di Rende (Italy)

01/11/2019-now President of Graduation Courses of Biology and Biotechnology of University of Calabria.
University of Calabria, Arcavacata di Rende (Italy)

Teacher of university courses:

- Biochemistry
- Molecular Biology
- Molecular Biotechnology
- Applied Biochemistry and Molecular Biology
- Human Applied Biochemistry
- Enzymology
- Applied Biology
- Bioinformatics

Present Editorial activity

- **Associate editor** of the section Cellular Biochemistry of the journals Frontiers in Cell and Developmental Biology; Frontiers in Molecular Biosciences;
- **Member of the Editorial Board** of the journals: Frontiers in Physiology; Frontiers in Oncology;
- **Member of the Editorial Board** of the journal International Journal of Molecular Sciences (section of Molecular and Cellular Biology).

2017–Present Guest Editor

2017 Research Topic in Frontiers: Membrane Transporters and Channels as Targets for Drugs. Participating journals: Frontiers in Chemistry (section of Chemical Biology), Frontiers in Molecular Biosciences (section of Cellular Biochemistry), Frontiers in Cell and Developmental Biology (section of Cellular Biochemistry and Membrane Physiology and Membrane Biophysics), Frontiers in Physiology (Membrane Physiology and Membrane Biophysics).

2018 Special Issues: "Amino Acids Transport and Metabolism" and "Amino Acids Transport and Metabolism 2.0". In the MDPI Journal: International Journal of Molecular Sciences (section "Biochemistry, Molecular and Cellular Biology").

2019 Special Issue: "Carnitine: An Interesting Molecule in Metabolism, Pathophysiology and Nutrition" . Journal: Molecules.

2004–Present PROJECT AND RESEARCH EVALUATION ACTIVITIES:

2004-2006 PRIN- Italy

2004-2006 CIVR- Italy

2010 Committe autonomous region Sardegna

2013 National Science Centre- Poland.

2014 University of Lyon- France

2016 Agence Nationale de la Recherche- France

2017 Fondation Maladies Rares- France

2017 WELBIO RESEARCH GRANT APPLICATION (FRFS-WELBIO CALL 2017) - France

2017 National Science Center - Poland

2018 National Science Center - Poland

2018 CALL GRANTS AND FELLOWSHIPS F.R.S.-FNRS 2018 - France

2018 Breast Cancer Now - UK

2019 CALL GRANTS AND FELLOWSHIPS F.R.S.-FNRS 2019 - France

2002–2019

EVALUATION ACTIVITIES IN ACADEMIC COMMITTEE FOR DOCTORATE AND TECHNICAL PERSONNELS/RESEARCHERS/PROFESSORS RECRUITMENTS:

2002 University of Calabria- President of Committee "Concorso pubblico per titoli ed esami per 3 borse di studio di perfezionamento all'estero".

2002 University of Calabria- Member of Academic Committee for Examination of Guidelines for institution and functioning of Post-lauream Academic Masters (D.R. n.96 del 19/11/02).

2003 University of Calabria – Member of the Committee for recruitment of post-doc fellowship SSD BIO/10.

2004 University of Calabria – Member of the Committee for Ph.D. in "Biologia Animale XVI ciclo".

2005 University of Calabria – Member of the Committee for recruitment of post-doc fellowship SSD BIO/10.

2006 University of Molise- Member of the Committee for Ph.D. in "Biochimica e Chimica Applicate".

2006 University of Calabria – Member of the Committee for Ph.D. in "Biologia Animale XIX ciclo".

2006 University of Calabria – Member of the Committee for recruitment of a full time Researcher SSD BIO/10.

2007 University of Calabria – Member of the Committee for recruitment of post-doc fellowship SSD BIO/10.

2008 University of Calabria- President of Committee " Concorso pubblico per titoli ed esami per il reclutamento di una unità di personale di categoria C, posizione economica C1".

2008 University of Calabria - Member of the Committee for recruitment of one full time researcher SSD BIO/10.

2008 Università di Naples- Member of the Committee for Ph.D. in "Biochimica Cellulare- XX e XXI ciclo".

2009 University of Salento- Member of the Committee for Ph.D. in "Biologia e Biotecnologie- XXI ciclo".

2009 University of Basilicata-Potenza- Member of the Committee for Ph.D. in "Scienze Chimiche XXI ciclo".

2010 University of Calabria- Member of Committee " Concorso pubblico per titoli ed esami per il reclutamento di un'unità di personale di categoria C, posizione economica C1".

2010 University of Basilicata-Potenza - Member of the Committee for Ph.D. in "Ricerca in Scienze Chimiche XXIII ciclo".

2010 University of Bari - Member of the Committee for Ph.D. in "Scienze Biochimiche e Farmacologiche- XXII ciclo".

2010 Expert as support for the Committee of evaluation of research projects- regione Autonoma Sardegna.

2011 University of Bari- Member of the Committee for Ph.D. in "Biochimica, Biologia Molecolare e Bioinformatica- XXIII ciclo".

2011 University of Bari- Member of the Committee for Ph.D. in "Scienze del Mare- XXIII ciclo".

2011 University of Rome -La Sapienza- Member of the Committee for Ph.D. in "Biochimica- XXIII ciclo".

2011 University of Ferrara- Member of the Committee for recruitment of full time Researchers.

2011 University of Calabria- Member of the Committee for recruitment of one Full Professor SSD BIO/10.

2012 University of Catania- Member of the Committee for Ph.D. in "Scienze Biochimiche e Biomolecolari-XXIV ciclo".

2012 University of Bari- Member of the Committee for Ph.D. in "Biologia e Biochimica Medica XXIII-XXIV ciclo".

2013 University of Milan- Member of the Committee for Ph.D. in "Ricerca in Biochimica XXV ciclo".

2015 University of Bari- Member of the Committee for Ph.D. in “Genomica e Proteomica Funzionale e Applicata- Indirizzo in Biochimica, Biologia Molecolare e Bioinformatica- XXVII ciclo”.

2015 University of Bari - President of the Committee for recruitment of an Associate Professor (Dip di Bioscienze, Biotecnologie e Biofarmaceutica), SSD BIO/10.

2015 University of Padua- Member of the Committee for recruitment of a fixed term position for one Researcher, SSD BIO/10.

2016 University of Catania. Evaluator of Ph.D. thesis in “Scienze Geologiche, Biologiche ed Ambientali-XXIX ciclo”.

2017 University of Roma- La Sapienza- Evaluator Ph.D. thesis in “Biochimica-XXX ciclo”.

2017 University of Foggia- Evaluator Ph.D. thesis in “Medicina Sperimentale e Rigenerativa XXIX ciclo”.

2018 University of Bari- Member of the Committee for Ph.D. in “Genomica e Proteomica Funzionale e Applicata- XXIX ciclo”.

2018 University of Palermo- Member of the Committee for recruitment of one Associate Professor SSD BIO/10.

2018 University of Padua- Member of the Committee for recruitment of one Associate Professor SSD BIO/10.

2018 University of Catania- Member of the Committee for recruitment of one full Professor SSD BIO/10.

2019 University of Calabria- President of the Committee for recruitment of one Researcher type B SSD BIO/10.

Peer review activities for the following journals:

- Biochimica et Biophysica Acta (Biomembrane-Molecular Cell Research-Bioenergetics-Proteomics- Lipids and Lipid Metabolism),
- Journal of Biochemical and Biophysical Methods,
- Medical Science Monitor,
- IEEE Sensors Journal,
- Advances in Experimental Biology,
- Biotechnology Progress,
- Journal of Biological Chemistry,
- Molecular Biotechnology,
- Molecular Pharmaceutics,
- Applied Microbiology and Biotechnology,
- PlosONE,
- Cell Biology and Toxicology,
- Food Chemical Toxicology,
- Journal of Pharmacy and Pharmacology,
- Kidney International,
- MDPI- Marine Drugs,
- Molecular Genetics and Metabolism,
- Open Biotechnology Journal,
- Science Open Research,
- Toxicology Reports,
- Biochemical Pharmacology,
- Biological Trace element Research,
- Frontiers in Chemistry,
- Frontiers in oncology,
- British Journal of Pharmacology,

- Chemico-Biological Interactions,
- FEBS Journal, Journal of Molecular Biology,
- Journal of Molecular Neuroscience,
- Scientific Reports,
- Trends in Biochemical Sciences,
- Diabetologia,
- FEBS-OpenBio,
- International Journal of Molecular Sciences,
- SLAS Discovery,
- Life Science,
- Pharmaceutics,
- Toxicology Reports,
- Plant Science,
- Frontiers in Pharmacology,
- Expert Opinion On Therapeutic Targets,
- Cellular Physiology and Biochemistry.

EDUCATION AND TRAINING

- 1981 **Graduation in Pharmacy, Summa cum laude**
University of Bari, Bari (Italy)
- 1984 **Research Fellowship**
Institut fur Physikalische Biochemie, University of Munich, Monaco (Germany)
- 1988 **Research Fellowship**
Institut fur Biotechnologie" of "Kernforschungsanlage", Julich (Germany)
- 1988 **Ph.D. in Biochemical Sciences**
University of Naples and Bari, Napoli e Bari (Italy)

PERSONAL SKILLS

Mother tongue(s) Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills

Invited speaker and oral communications to the following seminars, congresses and public engagement activities:

1. C. Indiveri, L. Capobianco e F. Palmieri. Cinetica del carrier mitocondriale degli acidi dicarbossilici nei liposomi. Riunione della Sezione Campania-Puglia-Calabria della SIB, Trani, 10-11 Marzo, 1988, Riassunti. **Communication**
2. C. Indiveri, L. Capobianco, A. Motta e F. Palmieri. Studio cinetico del carrier mitocondriale degli

acidi dicarbossilici purificato e ricostituito in liposomi. 34° Congresso Nazionale SIB, Padova, 2-4 Ottobre, 1988, Riassunti p. 337 C VII 31. **Communication**

3. C. Indiveri and F. Palmieri. Purification and reconstitution of the carnitine carrier from rat liver mitochondria. 16° Congresso Nazionale del Gruppo Italiano di Bioenergetica e Biomembrane, Parma, 4-6 Maggio 1989, Abstracts pp. 23-24 **Communication**

4. C. Indiveri, F. Marinò, T. Dierks, R. Kramer and F. Palmieri. Reaction mechanism of the purified and reconstituted 2- oxoglutarate carrier from bovine heart mitochondria. 17° Congresso Nazionale del Gruppo Italiano di Bioenergetica e Biomembrane, Marciana Marina, isola d' Elba, 16-18 Maggio 1990, Riassunti. **Communication**

5. C. Indiveri, A. Tonazzi e F. Palmieri. Caratterizzazione funzionale del carrier mitocondriale della carnitina purificato e ricostituito in liposomi. Riunione annuale delle sezioni regionali Basilicata, Calabria, Campania, Puglia e Sicilia della S.I.B., Campobasso, 30 maggio - 1 giugno 1991. Riassunti pg. 21. **Communication**

6. C. Indiveri, T. Dierks, R. Kramer and F. Palmieri. Transport mechanism of the oxoglutarate carrier reconstituted into liposomes. 36° Congresso Nazionale S.I.B., Ferrara, 10-13 Settembre 1991. Mini-Papers p. 126. **Communication**

7. C. Indiveri, A. Tonazzi and F. Palmieri. Characterization of -SH reactivity of the mitochondrial carnitine carrier: atypical transport activity induced by mercurial reagents. XIX Congresso Nazionale del Gruppo Italiano di Bioenergetica e Biomembrane. Roma, 21-23 Maggio 1992. Riassunti pp.13-14. **Communication**

8. C. Indiveri, A. Tonazzi and F. Palmieri. Purification of the ornithine carrier from rat liver mitochondria. 37° Congresso S.I.B., Perugia, 23-26 settembre 1992. Italian Biochemical Society Transaction (IBST) Vol. 3 - 1992 p 229. **Communication**

9. C. Indiveri and F. Palmieri. The mitochondrial dicarboxylate carrier: a four-binding-site sequential transport system. Riunione Congiunta: Gruppo di Biochimica Marina e dell'Ambiente Sezione Campania Puglia Calabria Molise Basilicata della Società Italiana di Biochimica, Taranto 7-8 Maggio 1993, Capo S. Vito (Taranto), Riassunti. **Communication**

10. C. Indiveri, A. Tonazzi e F. Palmieri. Il carrier mitocondriale della carnitina: caratterizzazione funzionale della proteina purificata e ricostituita in liposomi. Riunione del Gruppo Membrane e Bioenergetica della SIB. Perugia 4-5 giugno 1993. Riassunti p. 45. **Communication**

11. C. Indiveri, F. Bisaccia e F. Palmieri. Meccanismo delle reazioni di scambio catalizzate da carrier mitocondriali purificati e ricostituiti nei liposomi. Riunione del Gruppo Membrane e Bioenergetica della SIB. Perugia 4-5 giugno 1993. Riassunti p. 49. **Communication**

12. C. Indiveri, A. Tonazzi and F. Palmieri. The mitochondrial carnitine carrier: function and transport mechanism. 2nd IUBMB Conference on Biochemistry of Cell Membranes. Bari 29 sett.-3 ott. 1993 Abstracts p.327 **Invited Speaker**

13. Indiveri, A. Tonazzi and F. Palmieri. Three different transport modes catalyzed by the mitochondrial ornithine carrier. International Symposium on "Thirty years of Progress in Mitochondrial Bioenergetics and Molecular Biology". Bari (Selva di Fasano), 7-10 October, 1994. Abstracts pg. 43 **Invited lecture**

14. Indiveri, A. Tonazzi and F. Palmieri. Transport mechanism of the mitochondrial carnitine carrier. 39° Congresso Nazionale della SIB, Pavia, 14-17 settembre 1994. Italian Biochemical Society Transactions Vol. 5 (1994) pg. 198 **Communication**

15. Indiveri, V. Iacobazzi, N. Giangregorio, e F. Palmieri. Struttura primaria del carrier mitocondriale della carnitina. Congresso Congiunto Gruppo Italiano di Bioenergetica e Biomembrane e Gruppo Membrane e Bioenergetica della SIB, Riccia (CB) 17-19 giugno 1997. Riassunti pg. 12. **Communication**

16. C. Indiveri, A. Tonazzi, N. Giangregorio, V. Iacobazzi, and F. Palmieri. The mitochondrial carnitine/acylcarnitine carrier: function and structure. V Convegno Nazionale della Divisione di Chimica dei Sistemi e dei Processi Biologici della Società Chimica Italiana, Parma, 15-17 dicembre 1997. Abstract 53-54. **Invited lecture**

17. C. Indiveri, V. Iacobazzi, N. Giangregorio e F. Palmieri. Over-espressione, purificazione e ricostituzione del carrier mitocondriale della carnitina/acilcarnitina. Congresso Congiunto Gruppo Italiano di Bioenergetica e Biomembrane e Gruppo Membrane e Bioenergetica della SIB, Bari 26-27 settembre 1998. Riassunti pg. 26. **Communication**

18. C. Indiveri, V. Iacobazzi, N. Giangregorio and F. Palmieri. The carnitine/acylcarnitine carrier from rat liver mitochondria: primary structure, over-expression and analysis of cysteine mutants. International Symposium on Molecular Basis of Biomembrane Transport. Monopoli - Italy, 12-14 giugno 1999. Abstract pg. 21 **Invited lecture**

19. C. Indiveri, V. Iacobazzi, N. Giangregorio and F. Palmieri. Localization of Cys-136 of the mitochondrial carnitine/acylcarnitine carrier in the substrate binding site by site-directed mutagenesis. Riunione annuale del Gruppo Italiano di Bioenergetica e Biomembrane. Cividale del Friuli 29 giugno-1 luglio 2000. Abstracts pg. 8 **Communication**
20. C. Indiveri, N. Giangregorio, A. Tonazzi and F. Palmieri. Site-directed mutagenesis of mitochondrial carnitine/acylcarnitine carrier: localization of Cys residues in the tertiary structure of the protein. Riunione annuale del Gruppo Italiano di Bioenergetica e Biomembrane, Roma 2-4 maggio 2002. Abstracts. **Communication**
21. C. Indiveri, A. Tonazzi, N. Giangregorio and F. Palmieri. Identification of four vicinal cysteines in the structure of the mitochondrial carnitine/acylcarnitine carrier by site-directed mutagenesis. Riunione annuale del Gruppo Italiano di Bioenergetica e Biomembrane, S. Daniele del Friuli 29-31 maggio 2003. Abstracts pg. 19 **Communication**
22. Cesare Indiveri, The human organic cation transporter OCTN1. Physiological and pathological implications in the non neuronal cholinergic system. 1st Annual Symposium of LOEWE Focus NNCS 10.11.2012, Giessen. **Invited opening lecture**
23. Cesare Indiveri. Faculty of Science, Ryerson University. Toronto-Canada, 16-22 October, 2013. "The special amino acid glutamine and its transporters". **Invited Seminar**
24. L. Pochini, S. Belviso, M. Bonomini, S. Di silvestre, P. Cerasoli, L. Di Liberato, A. Arduini, D. Mandatori, A. Pandolfi, C. Indiveri. 4th International Symposium on Non-neuronal Acetylcholine. Giessen, August, 28-30, 2014 Justus-Liebig-University. **Communication**
25. Cesare Indiveri. Università degli studi di Padova. 22 January 2015 " Organic Cation transporters of cell membrane: Novel functions and relevance to human health". **Invited keynote seminar to the doctorate in Bioscience.**
26. Cesare Indiveri. EBEC 2016, Riva del Garda. Glutamine transport. From energy supply to sensing ... and beyond. **Invited plenary lecture**
27. Cesare Indiveri. Rotary Club-Cosenza. " L'inatteso legame tra Autismo ed Amminoacidi", 23 February 2017. **Invited keynote seminar (Public Engagement Activity).**
28. Cesare Indiveri. Munster Transporttage. "Regulation of mitochondrial transporters by post translational modifications" 21-22 October, 2017. Munster. **Invited keynote lecture.**
29. Cesare Indiveri. University of Bern. "An intriguing example of amino acid transporter, LAT1. The "LATest" findings on structure/function relationships and relevance to human health." 23 October, 2017. Bern. **Invited seminar.**
30. Cesare Indiveri, Dip. Scienze Biochimiche- Dottorato di Ricerca in Biochimica. "A window on the world of membrane transporters". University La Sapienza- Rome. 2 March 2018. **Invited seminar.**
31. Cesare Indiveri, 60th Congresso SIB. The glutamine traffic in cells: old fashion and new releases. 2019 Lecce 18-20 September. **Invited lecture.**

Organisational / managerial skills

Congress organization: scientific and organizing Committee

- 1992 Organizing Committee of XX GIBB Congress in 1992 (Roma).
- 1994 Organizing Committee of XX GIBB Congress in 1994 (L'Aquila)
- 2001 Organizing Committee Symposium "Bioenergetics from mechanisms and structures to molecular pathology" Bari.
- 2002 Advisory board of VI WORKSHOP ON APOPTOSIS IN BIOLOGY AND MEDICINE: Role of proinflammatory and chemotactic cytokines in normal and pathological brain. Parghelia (VV), Calabria.
- 2004 Scientific Committee of EBEC 2004, Pisa.
- 2009 Scientific Committee of "2nd International Workshop on Expression, Structure and Function of Membrane Proteins". Firenze.
- 2012 President Committee of Meeting of Gruppo Italiano di Biomembrane e Bioenergetica "GIBB 2012" Arcavacata di Rende.
- 2012 Scientific Committee of "3rd International Workshop on Expression, Structure and Function of Membrane Proteins". Firenze.
- 2013 Scientific Committee of Meeting of Gruppo Italiano di Biomembrane e Bioenergetica "GIBB 2013" 20-22 Jun, Padova.
- 2015 Scientific Committee of "4th International Workshop on Expression, Structure and Function of

Membrane Proteins". Firenze 28 June-2 July 2015.

2018 Scientific Committee of the "20th European Bioenergetics Conference" (EBEC) Budapest, August 25-30, 2018.

2019 President of the Organizing Committee of the "Joint Workshop membrane proteins: structure, function and regulation" Rende, 27-28, June 2019.

2019 Member of the Scientific Committee of the 60th congress SIB, Lecce, 18-20 September 2019

2019 National Coordinator of the Membrane Group of the Società Italiana di Biochimica e Biologia Molecolare (SIB).

GOVERNMENT AND MANAGEMENT ACTIVITIES

2010 Member of University of Calabria Committee for new regulations following the University Reform of 2010 in Italy (Legge Gelmini 240/2010).

2012-2018 - "Senator" at the University of Calabria.

SCIENTIFIC LEADERSHIP

Responsible of the Biochemistry, Molecular Biotechnology, Molecular Biology and Microbiology Group at the University of Calabria:

1 full Researcher; 1 Associate Professor; 1 Type B Researcher; 2 post-doc.

Since 2000 supervisor of 11 Ph.D. students (8 completed); 10 graduate students; 8 post-docs; more than 100 under-graduate students for master thesis.

Member of Scientific Societies:

- SIB (Società Italiana di Biochimica),

- ACS (American Chemical Society),

- ITTS (International Transmembrane Transporter Society),

- GIBB (Gruppo Italiano di Biomembrane e Bioenergetica).

For the **GIBB** group: from 1992 to 1995 member of Executive Committee and Secretary of the group. From 2000 to 2004 member of the Executive Committee. From 2009 to 2013 member of the Executive Committee. From 2019 to date, member of the Executive Committee.

Job-related skills

MAIN RESEARCH PROJECTS:

1997-2002 Leadership of CNR research projects.

1990-2001 Collaborator in research projects as: ex 40%, P.R.I.N., Telethon.

2000-2015 Leadership of University research projects (60%)

2002-2003 Leadership of a research contract with Sigma-Tau (Italy) company

2002-2004 Collaborator of CNR research projects

2003-2005 Responsible of the project "Master in Biotecnologie" of the University of Calabria, granted by PON, national operative program for the regions "obiettivo 1", specialistic training.

2003-2005 Responsible of FIRB project n. RBAUO1H33S

2006-2008 National Coordinator P.R.I.N. project 2006054479

2011-2015: Coordinator of the project "Modelli sperimentali biotecnologici integrati per lo sviluppo e la selezione di molecole di interesse per la salute dell'uomo" PON 01_00937 granted by "PON Ricerca e Competitività 2007-2013 - Asse I - Aree scientifico-tecnologiche"

2016-2017 Scientific co-responsible of a consultancy agreement with LeoPharma (Denmark)

2017-2019 Scientific Responsible for a research contract with CEMM (Research Center For Molecular Medicine) of the Austrian Academy of Science.

2019-present. National Coordinator of the project PRIN 2017 N. 2017PAB8EM: Membrane transporter, the doors of cellular metabolism. Investigation of biochemical features structure/function

relationships, metabolic regulation and physio-pathological aspects by in vitro and in vivo experimental models.

2019-present. Co-founder and Manager of an **Academic Spin-off** (named "UnicalCure"), connected to scientific activities of the Project PON01_00937.

PATENT:

2016: Co-inventor of the patent number: EP 2247621 B1 " Monospecific antibody and method of production using as antigen an isoform of the human fad synthetase".

<https://www.google.com/patents/EP2247621B1?cl=en>

ADDITIONAL INFORMATION

Publications List

[1] N. Singh, M. Scalise, M. Galluccio, M. Wieder, T. Seidel, T. Langer, C. Indiveri, G.F. Ecker, Discovery of potent inhibitors for the large neutral amino acid transporter 1 (LAT1) by structure-based methods, *International Journal of Molecular Sciences*, 20 (2019).

[2] M. Scalise, M. Galluccio, L. Pochini, J. Cosco, M. Trotta, M. Rebsamen, G. Superti-Furga, C. Indiveri, Insights into the transport side of the human SLC38A9 transporter, *Biochimica et Biophysica Acta - Biomembranes*, 1861 (2019) 1558-1567.

[3] M. Scalise, L. Console, M. Galluccio, L. Pochini, A. Tonazzi, N. Giangregorio, C. Indiveri, Exploiting Cysteine Residues of SLC Membrane Transporters as Targets for Drugs, *SLAS Discovery*, (2019).

[4] L. Pochini, M. Galluccio, M. Scalise, L. Console, C. Indiveri, OCTN: A Small Transporter Subfamily with Great Relevance to Human Pathophysiology, Drug Discovery, and Diagnostics, *SLAS Discovery*, 24 (2019) 89-110.

[5] L. Palazzolo, C. Paravicini, T. Laurenzi, S. Adobati, S. Saporiti, U. Guerrini, E. Gianazza, C. Indiveri, C.M.H. Anderson, D.T. Thwaites, I. Eberini, SLC6A14, a Pivotal Actor on Cancer Stage: When Function Meets Structure, *SLAS Discovery*, (2019).

[6] P. Leone, M. Galluccio, C. Brizio, A. Barbiroli, S. Iametti, C. Indiveri, M. Barile, The hidden side of the human FAD synthase 2, *International Journal of Biological Macromolecules*, 138 (2019) 986-995.

[7] N. Giangregorio, A. Tonazzi, L. Console, M. Pistillo, V. Scalera, C. Indiveri, Tryptophan 224 of the rat mitochondrial carnitine/acylcarnitine carrier is crucial for the antiport mechanism, *Biochimica et Biophysica Acta - Bioenergetics*, 1860 (2019) 708-716.

[8] J. Cosco, T.M.R. Regina, M. Scalise, M. Galluccio, C. Indiveri, Regulatory aspects of the vacuolar cat2 arginine transporter of *S. Lycopersicum*: Role of osmotic pressure and cations, *International Journal of Molecular Sciences*, 20 (2019).

[9] L. Console, M. Tolomeo, M. Colella, M. Barile, C. Indiveri, Reconstitution in Proteoliposomes of the Recombinant Human Riboflavin Transporter 2 (SLC52A2) Overexpressed in *E. coli*, *International journal of molecular sciences*, 20 (2019).

[10] L. Console, M. Scalise, C. Indiveri, Exosomes in inflammation and role as biomarkers, *Clinica Chimica Acta*, 488 (2019) 165-171.

[11] W.Y. Wahlgren, E. Dunevall, R.A. North, A. Paz, M. Scalise, P. Bisignano, J. Bengtsson-Palme, P. Goyal, E. Claesson, R. Caing-Carlsson, R. Andersson, K. Beis, U.J. Nilsson, A. Farewell, L. Pochini, C. Indiveri, M. Grabe, R.C.J. Dobson, J. Abramson, S. Ramaswamy, R. Friemann, Substrate-bound outward-open structure of a Na⁺-coupled sialic acid symporter reveals a new Na⁺ site, *Nature Communications*, 9 (2018).

[12] G. Toteda, D. Vizza, S. Lupinacci, A. Perri, M.F. Scalise, C. Indiveri, F. Puoci, O.I. Parisi, D. Lofaro, A. La Russa, P. Gigliotti, F. Leone, L. Pochini, R. Bonofiglio, Olive leaf extract counteracts cell proliferation and cyst growth in an: In vitro model of autosomal dominant polycystic kidney disease, *Food and Function*, 9 (2018) 5925-5935.

[13] M. Scalise, L. Pochini, L. Console, G. Pappacoda, P. Pingitore, K. Hedfalk, C. Indiveri, Cys site-directed mutagenesis of the human SLC1A5 (ASCT2) transporter: Structure/function relationships and crucial role of Cys467 for redox sensing and glutamine transport, *International Journal of Molecular Sciences*, 19 (2018).

[14] M. Scalise, L. Pochini, L. Console, M.A. Losso, C. Indiveri, The Human SLC1A5 (ASCT2) amino acid transporter: From function to structure and role in cell biology, *Frontiers in Cell and Developmental Biology*, 6 (2018).

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BOOK chapters:

1. F. Palmieri, F. Bisaccia, C. Indiveri and A. Rizzo. Isolation of the oxoglutarate carrier and other

transport proteins from pig heart mitochondria. In "Achievements and Perspectives of Mitochondrial Research" Vol. I Bioenergetics, Elsevier North-Holland Amsterdam, 1985, pp. 291-302

2. F. Palmieri, G. Prezioso, F. Bisaccia, C. Indiveri, V. Zara, V. De Pinto and G. Genchi. Isolation and reconstitution of substrate carriers from mitochondria: an overview. In "Advances in myochemistry: 1", (G. Benzi, ed.) John Libbey Eurotext Ltd, 1987, pp.87-104

3. F. Palmieri, F. Bisaccia, G. Genchi, C. Indiveri and V. Zara. Isolation and characterization of substrates carriers from mitochondria. In "Molecular basis of biomembrane transport" (F. Palmieri and E. Quagliariello eds.), Elsevier Science Publishers B.V., Amsterdam 1988, pp. 163-174

4. F. Palmieri, G. Genchi, V. Zara, C. Indiveri and F. Bisaccia. Purification and characterization of three mitochondrial substrate carriers: the phosphate, the 2-oxoglutarate and the dicarboxylate carriers. In "Anion Carriers of Mitochondrial Membranes" (A. Azzi et al. eds) Springer-Verlag Berlin Heidelberg, 1989, pp.3-15

5. F. Palmieri, F. Bisaccia, L. Capobianco, V. Dolce, V. Iacobazzi, C. Indiveri and V. Zara. Structural and functional properties of two mitochondrial transport proteins: the phosphate carrier and the oxoglutarate carrier. In "Molecular Mechanisms of Transport" (E. Quagliariello and F. Palmieri eds.), Elsevier Science Publishers B.V., Amsterdam 1992, pp.151-158

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8. Michele Galluccio, Teresa Giancaspero, Angelica Miccolis, Concita Panebianco, Cesare Indiveri, Maria Barile. Relevance of Cys residues of human FAD synthase (isoform 2) in the protein function/structure as assessed by homology modeling and site directed mutagenesis. Flavin and Flavoproteins 2011, 509-514. Editors: Susan Miller, Russ Hille, Bruce Palley. Lulu.com

RESEARCH INTEREST: Biomembranes and Bioenergetics

Transport proteins of mitochondrial and plasma membranes: Identification, isolation, purification and manipulation; reconstitution in artificial membranes (liposomes); functional and kinetic studies; studies of primary and secondary structure; homology modeling and validation; cloning and overexpression of transport proteins of mitochondrial and plasma membrane in bacteria and yeast; correlated inherited pathologies and site-directed mutagenesis; protein chemical and functional modifications. Human cell cultures and protein-protein interactions; transport assays in intact cells with transient or stable transfected transport proteins. Soluble proteins with enzymatic activity: purification, over-expression, refolding, kinetics. Interactions of xenobiotics and drugs with transport systems by biochemical assay and bioinformatics and implications for human health.

COLLABORATIONS

2016 -2018 Affiliation to CNR-IBIOM Bari for joint projects.

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