CURRICULUM VITAE CESARE INDIVERI

NAME:
Cesare Indiveri

EDUCATION:
1981: Graduation in Pharmacy, Summa cum laude, Università di Bari Facoltà di Farmacia
1988: Ph.D. in Biochemical Sciences, Università di Napoli and Bari

PROFESSIONAL EMPLOYMENT:
1988: CNR researcher Centro Studi Mitocondri e Metabolismo Energetico, Bari
2000: Associate Professor in Biochemistry (E05A) Dip. Farmaco-Biologico Facoltà di Farmacia Università della Calabria.
2001: Full Professor in Biochemistry (BIO/10) Dip. di Biologia Cellulare, Facoltà di SS.MM.FF.NN. Università della Calabria.
2004: Confirmation as full professor in Biochemistry (BIO/10) Dip. di Biologia Cellulare, Facoltà di SS.MM.FF.NN. Università della Calabria.
2013: Full professor in Biochemistry (BIO/10), Dipartimento DiBEST (Biologia, Ecologia e Scienze della Terra) Università della Calabria.
2005-2010 President of Graduation Courses of Biology and Biotechnology of University of Calabria.
2011-2012 Director of Dipartimento Biologia Cellulare Università of Calabria
Currently,
Director of Dipartimento DiBEST (Biologia, Ecologia e Scienze della Terra; 72 teaching/research full time staff and 30 administrative/technical permanent position staff) Università della Calabria.
Group leader of Unit of Biochemistry and Molecular Biotechnology.
"Senator" at University of Calabria.

Member of University of Calabria Committee for new regulations following the University Reform of 2010 in Italy.

Member of SIB (Società Italiana di Biochimica), GIBB (Gruppo Italiano di Biomembrane e Bioenergetica), ACS (American Chemical Society) ITTS (International Transmembrane Transporter Society).

TEACHING AND STUDENT SUPERVISION:
Teacher of university courses of
- Biochemistry
- Molecular Biology
- Molecular Biotechnology
- Applied Biochemistry and Molecular Biology
-Human Applied Biochemistry

Since 2000 supervisor of 9 PhD students (8 completed), 5 graduated students 2 full researchers and more than 100 undergraduated students doing research projects.

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 Sgma-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- to date: Responsabile 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"

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 with transport systems by biochemical assay and bioinformatics and implications for human health.

h-index 34 (Google Scholar December 2017)
tot. citations: 3645 (Google Scholar December 2017)
Top Italian Scientist according to Via-Academy List**:**
(http://www.topitalianscientists.org/top_italian_scientists_VIA-Academy.aspx?Cerca=cesare%20indiveri)

COLLABORATIONS:
IARC/CIRC, WHO/OMS Lyon, with Infection Cancer Biology group (led by Dr. Massimo Tommasino); University of Canberra, Australia (Prof. Stefan Broer); University of Goteborg, Sweden (Dr. Kristina Hedfalk); Reyerson University, Canada (Prof. Imogen Coe); Samuel Lunenfeld Research Institute Mount Sinai Hospital, Canada (Prof. Katherine A. Siminovitch); Institute of General Pathology, Catholic University Medical School, Rome (Prof. Giovambattista Pani). Institute of Molecular Biosciences, Goethe-University Frankfurt am Main (Prof. E. Boles), "Laboratorio di Biochimica e Biofisica Computazionale", University of Milan (Dr. I. Eberini). Dep. of Molecular and Clinical Medicine, University of Gothenburg (Prof. S. Romeo). Laboratory of Regenerative Biomedicine, University of Manchester (Prof. G. Terenghi). Dep. of Biosciences, Biotechnology and Biopharmaceutics, University of Bari (Prof. Barile). Dep. of Chemistry, University of Cyprus (Prof. P. Koutentis). Dep. of Pharm. Chemistry, University of Bari (Prof. Carotti). Dep. DISMA, University of Milan (Prof. F. Bonomi). CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences, 1090 Vienna, Austria (Prof. Giulio Superti-Furga). Institute of Science and Technology (IST) Austria, Klosterneuburg, Austria (Dr. Gaia Novarino). Laboratory of Genetics, Department of Biotechnology, Agricultural University of Athens, Athens, Greece (Prof. Eleni Douni). Department of Structural Biology, University of Regensburg, Germany (Dr. Christine Ziegler).

PEER REVIEW ACTIVITIES:
Reviewer of several articles from: Biochimica et Biophysica Acta, 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.

Associate editor of Frontiers in Cellular Biochemistry. Member of Editorial Board of Frontiers in Physiology - Mitochondrial Research. Journal of Molecular Biology.

CONGRESS ORGANIZATION:

- Scientific Committe of "4th International Workshop on Expression, Structure and Function of Membrane Proteins". Firenze 28 June-2 July 2015.
- Scientific Committe of Meeting of Gruppo Italiano di Biomembrane e Bioenergetica "GIBB 2013" 20-22 Jun, Padova.
- Scientific Committe of "3nd International Workshop on Expression, Structure and Function of Membrane Proteins". Firenze 23-27 Sep 2012.
- President Committe of Meeting of Gruppo Italiano di Biomembrane e Bioenergetica "GIBB 2012" 21-23 Jun, Arcavacata di Rende.
- Organizing Committe Symposyum "Bioenergetics from mechanisms and structures to molecular pathology" 10 May 2001 Bari.
- Scientific Committe of "2nd International Workshop on Expression, Structure and Function of Membrane Proteins". Firenze 20-24 Sep 2009.
- Scientific Committe of EBEC 2004 (indirizzo web http://www.incordgmp.it/ebec2004/)
- 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, Italy 25-29 May, 2002

BOOKS

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 overwiev. 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

6. C. Indiveri, A. Tonazzi, L. Palmieri and F. Palmieri. The purified and reconstituted ornithine

carrier from rat liver mitochondria catlyzes three different transport mode. In "Progress in Cell Research" (F. Palmieri et al. eds.) Elsevier Science B.V. 1995 Vol. 5 pp. 101-106

7. C. Indiveri. Studying amino acid transport using liposomes. Methods Mol Biol 606 (2010)55-68.

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

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=un

CONGRESSES

More than 130 participations to National and International Congresses.

Invited speaker and oral communication to the following congresses:

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. 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**

24. Cesare Indiveri. EBEC 2016, Riva del Garda. Glutamine transport. From energy supply to sensing ... and beyond. **Invited plenary lecture**

Pubblications on Pubmed (https://www.ncbi.nlm.nih.gov/pubmed/?term=indiveri+c):

1: Napolitano L, Galluccio M, Scalise M, Parravicini C, Palazzolo L, Eberini I, Indiveri C. Novel Insights into the Transport Mechanism of the human amino acid transporter LAT1 (SLC7A5). Probing critical residues for substrate translocation. Biochim Biophys Acta. 2017 Jan 11. pii: S0304-4165(17)30013-2.

2: Bonomini M, Di Silvestre S, Di Tomo P, Di Pietro N, Mandatori D, Di Liberato L, Sirolli V, Chiarelli F, Indiveri C, Pandolfi A, Arduini A. Effect of peritoneal dialysis fluid containing osmo-metabolic agents on human endothelial cells. Drug Des Devel Ther. 2016 Nov 28;10:3925-3932.

3: Tărlungeanu DC, Deliu E, Dotter CP, Kara M, Janiesch PC, Scalise M, Galluccio M, Tesulov M, Morelli E, Sonmez FM, Bilguvar K, Ohgaki R, Kanai Y, Johansen A, Esharif S, Ben-Omran T, Topcu M, Schlessinger A, Indiveri C, Duncan KE, Caglayan AO, Gunel M, Gleeson JG, Novarino G. Impaired Amino Acid Transport at the Blood Brain Barrier Is a Cause of Autism Spectrum Disorder. Cell. 2016 Dec 1;167(6):1481-1494.e18.

4: Giangregorio N, Tonazzi A, Console L, Indiveri C. Post-translational modification by acetylation regulates the mitochondrial carnitine/acylcarnitine transport protein. Mol Cell Biochem. 2016 Nov 18. [Epub ahead of print] PubMed PMID: 27864727.

5: Scalise M, Pochini L, Galluccio M, Indiveri C. Glutamine transport. From energy supply to sensing and beyond. Biochim Biophys Acta. 2016 Aug;1857(8):1147-57. doi: 10.1016/j.bbabio.2016.03.006. PubMed PMID: 26951943.

6: Barile M, Giancaspero TA, Leone P, Galluccio M, Indiveri C. Riboflavin transport and metabolism in humans. J Inherit Metab Dis. 2016 Jul;39(4):545-57.doi: 10.1007/s10545-016-9950-0. PubMed PMID: 27271694.

7: Pochini L, Scalise M, Di Silvestre S, Belviso S, Pandolfi A, Arduini A, Bonomini M, Indiveri C. Acetylcholine and acetylcarnitine transport in peritoneum: Role of the SLC22A4 (OCTN1) transporter. Biochim Biophys Acta. 2016 Apr;1858(4):653-60. doi: 10.1016/j.bbamem.2015.12.026. PubMed PMID: 26724204.

8: Nigro A, Mauro L, Giordano F, Panza S, Iannacone R, Liuzzi GM, Aquila S, De Amicis F, Cellini F, Indiveri C, Panno ML. Recombinant Arabidopsis HSP70 Sustains Cell Survival and Metastatic Potential of Breast Cancer Cells. Mol Cancer Ther.2016 May;15(5):1063-73. doi: 10.1158/1535-7163.MCT-15-0830. PubMed PMID:26939699.

9: Giangregorio N, Tonazzi A, Console L, Lorusso I, De Palma A, Indiveri C. The mitochondrial carnitine/acylcarnitine carrier is regulated by hydrogen sulfide via interaction with C136 and C155. Biochim Biophys Acta. 2016 Jan;1860(1 Pt A):20-7. doi: 10.1016/j.bbagen.2015.10.005. PubMed PMID: 26459002.

10: Pochini L, Scalise M, Indiveri C. Immuno-detection of OCTN1 (SLC22A4) in HeLa cells and characterization of transport function. Int Immunopharmacol. 2015 Nov;29(1):21-6. doi: 10.1016/j.intimp.2015.04.040. PubMed PMID: 25937167.

11: Napolitano L, Scalise M, Galluccio M, Pochini L, Albanese LM, Indiveri C. LAT1is the transport competent unit of the LAT1/CD98 heterodimeric amino acid transporter. Int J Biochem Cell Biol. 2015 Oct;67:25-33. doi:10.1016/j.biocel.2015.08.004. PubMed PMID: 26256001.

12: Scalise M, Pochini L, Pingitore P, Hedfalk K, Indiveri C. Cysteine is not a substrate but a specific modulator of human ASCT2 (SLC1A5) transporter. FEBS Lett. 2015 Nov 30;589(23):3617-23. doi: 10.1016/j.febslet.2015.10.011. PubMed PMID: 26492990.

13: Giancaspero TA, Galluccio M, Miccolis A, Leone P, Eberini I, Iametti S, Indiveri C, Barile M. Human FAD synthase is a bi-functional enzyme with a FAD hydrolase activity in the molybdopterin binding domain. Biochem Biophys Res Commun. 2015 Sep 25;465(3):443-9. doi: 10.1016/j.bbrc.2015.08.035. PubMed PMID: 26277395.

14: Pasqua T, Filice E, Mazza R, Quintieri AM, Carmela Cerra M, Iannacone R, Melfi D, Indiveri C, Gattuso A, Angelone T. Cardiac and hepatic role of r-AtHSP70: basal effects and protection against ischemic and sepsis conditions. J Cell Mol Med. 2015 Jul;19(7):1492-503. doi: 10.1111/jcmm.12491. PubMed PMID: 25904190; PubMed Central PMCID: PMC4511348.

15: Console L, Scalise M, Tarmakova Z, Coe IR, Indiveri C. N-linked glycosylation of human SLC1A5 (ASCT2) transporter is critical for trafficking to membrane. Biochim Biophys Acta. 2015 Jul;1853(7):1636-45. doi: 10.1016/j.bbamcr.2015.03.017. PubMed PMID: 25862406.

16: Rebsamen M, Pochini L, Stasyk T, de Araújo ME, Galluccio M, Kandasamy RK,Snijder B, Fauster A, Rudashevskaya EL, Bruckner M, Scorzoni S, Filipek PA, Huber KV, Bigenzahn JW, Heinz LX, Kraft C, Bennett KL, Indiveri C, Huber LA, Superti-Furga G. SLC38A9 is a component of the lysosomal amino acid sensing machinery that controls mTORC1. Nature. 2015 Mar 26;519(7544):477-81. doi: 10.1038/nature14107. PubMed PMID: 25561175; PubMed Central PMCID: PMC4376665.

17: Galluccio M, Pochini L, Peta V, Iannì M, Scalise M, Indiveri C. Functional and molecular effects of mercury compounds on the human OCTN1 cation transporter: C50 and C136 are the targets for potent inhibition. Toxicol Sci. 2015 Mar;144(1):105-13. doi: 10.1093/toxsci/kfu259. PubMed PMID: 25490951.

18: Tonazzi A, Giangregorio N, Console L, Scalise M, La Russa D, Notaristefano C, Brunelli E, Barca D, Indiveri C. Mitochondrial carnitine/acylcarnitine transporter, a novel target of mercury toxicity. Chem Res Toxicol. 2015 May 18;28(5):1015-22. doi: 10.1021/acs.chemrestox.5b00050. PubMed PMID: 25849418.

19: Tonazzi A, Giangregorio N, Console L, Indiveri C. Mitochondrial Carnitine/Acylcarnitine Translocase: Insights in Structure/Function Relationship.Mini Rev Med Chem. 2015 Apr 1. [Epub ahead of print] PubMed PMID: 25828082.

20: Giangregorio N, Console L, Tonazzi A, Palmieri F, Indiveri C. Identification of amino acid residues underlying the antiport mechanism of the mitochondrial carnitine/acylcarnitine carrier by site-directed mutagenesis and chemical labeling. Biochemistry. 2014 Nov 11;53(44):6924-33. doi: 10.1021/bi5009112.PubMed PMID: 25325845.

21: Scalise M, Pochini L, Panni S, Pingitore P, Hedfalk K, Indiveri C. Transport mechanism and regulatory properties of the human amino acid transporter ASCT2 (SLC1A5). Amino Acids. 2014 Nov;46(11):2463-75. doi: 10.1007/s00726-014-1808-x.PubMed PMID: 25052780.

22: Tonazzi A, Giangregorio N, Console L, Indiveri C. Mitochondrial carnitine/acylcarnitine translocase: insights in structure/ function relationships. Basis for drug therapy and side effects prediction. Mini Rev Med Chem. 2015;15(5):396-405. PubMed PMID: 25910653.

23: Miccolis A, Galluccio M, Nitride C, Giancaspero TA, Ferranti P, Iametti S, Indiveri C, Bonomi F, Barile M. Significance of redox-active cysteines in human FAD synthase isoform 2. Biochim Biophys Acta. 2014 Dec;1844(12):2086-95. doi: 10.1016/j.bbapap.2014.08.005. PubMed PMID: 25135855.

24: Console L, Giangregorio N, Indiveri C, Tonazzi A. Carnitine/acylcarnitine translocase and carnitine palmitoyltransferase 2 form a complex in the inner mitochondrial membrane. Mol Cell Biochem. 2014 Sep;394(1-2):307-14. doi: 10.1007/s11010-014-2098-z. Erratum in: Mol Cell Biochem. 2014 Sep;394(1-2):315. PubMed PMID: 24898781.

25: Pochini L, Seidita A, Sensi C, Scalise M, Eberini I, Indiveri C. Nimesulide binding site in the B0AT1 (SLC6A19) amino acid transporter. Mechanism of inhibition revealed by proteoliposome transport assay and molecular modelling. Biochem Pharmacol. 2014 Jun 1;89(3):422-30. doi: 10.1016/j.bcp.2014.03.014. PubMed PMID: 24704252.

26: Pochini L, Scalise M, Galluccio M, Indiveri C. Membrane transporters for the special amino acid glutamine: structure/function relationships and relevance to human health. Front Chem. 2014 Aug 11;2:61. doi: 10.3389/fchem.2014.00061. Review. PubMed PMID: 25157349; PubMed Central PMCID: PMC4127817.

27: Pirazzi C, Valenti L, Motta BM, Pingitore P, Hedfalk K, Mancina RM, Burza MA, Indiveri C, Ferro Y, Montalcini T, Maglio C, Dongiovanni P, Fargion S, Rametta R,Pujia A, Andersson L, Ghosal S, Levin M, Wiklund O, Iacovino M, Borén J, Romeo S.PNPLA3 has retinyl-palmitate

lipase activity in human hepatic stellate cells. Hum Mol Genet. 2014 Aug 1;23(15):4077-85. doi: 10.1093/hmg/ddu121. PubMed PMID: 24670599; PubMed Central PMCID: PMC4082369.

28: Pingitore P, Pirazzi C, Mancina RM, Motta BM, Indiveri C, Pujia A, Montalcini T, Hedfalk K, Romeo S. Recombinant PNPLA3 protein shows triglyceride hydrolase activity and its I148M mutation results in loss of function. Biochim Biophys Acta. 2014 Apr 4;1841(4):574-80. doi: 10.1016/j.bbalip.2013.12.006. PubMed PMID: 24369119.

29: Tonazzi A, Eberini I, Indiveri C. Molecular mechanism of inhibition of the mitochondrial carnitine/acylcarnitine transporter by omeprazole revealed by proteoliposome assay, mutagenesis and bioinformatics. PLoS One. 2013 Dec 9;8(12):e82286. doi: 10.1371/journal.pone.0082286. PubMed PMID: 24349247; PubMed Central PMCID: PMC3857281.

30: Giangregorio N, Palmieri F, Indiveri C. Glutathione controls the redox state of the mitochondrial carnitine/acylcarnitine carrier Cys residues by glutathionylation. Biochim Biophys Acta. 2013 Nov;1830(11):5299-304. doi: 10.1016/j.bbagen.2013.08.003. PubMed PMID: 23948593.

31: Tonazzi A, Mantovani C, Colella M, Terenghi G, Indiveri C. Localization of mitochondrial carnitine/acylcarnitine translocase in sensory neurons from rat dorsal root ganglia. Neurochem Res. 2013 Dec;38(12):2535-41. doi: 10.1007/s11064-013-1168-z. PubMed PMID: 24104610.

32: Pochini L, Scalise M, Galluccio M, Indiveri C. OCTN cation transporters in health and disease: role as drug targets and assay development. J Biomol Screen. 2013 Sep;18(8):851-67. doi: 10.1177/1087057113493006. Review. PubMed PMID:23771822.

33: Scalise M, Pochini L, Giangregorio N, Tonazzi A, Indiveri C. Proteoliposomes as tool for assaying membrane transporter functions and interactions with xenobiotics. Pharmaceutics. 2013 Sep 18;5(3):472-97. doi: 10.3390/pharmaceutics5030472. PubMed PMID: 24300519; PubMed Central PMCID: PMC3836619.

34: Pingitore P, Pochini L, Scalise M, Galluccio M, Hedfalk K, Indiveri C. Large scale production of the active human ASCT2 (SLC1A5) transporter in Pichia pastoris--functional and kinetic asymmetry revealed in proteoliposomes. Biochim Biophys Acta. 2013 Sep;1828(9):2238-46. doi: 10.1016/j.bbamem.2013.05.034. PubMedm PMID: 23756778.

35: Galluccio M, Pingitore P, Scalise M, Indiveri C. Cloning, large scale over-expression in E. coli and purification of the components of the human LAT 1 (SLC7A5) amino acid transporter. Protein J. 2013 Aug;32(6):442-8. doi:10.1007/s10930-013-9503-4. PubMed PMID: 23912240.

36: Tonazzi A, Console L, Indiveri C. Inhibition of mitochondrial carnitine/acylcarnitine transporter by H(2)O(2): molecular mechanism and possible implication in pathophysiology. Chem Biol Interact. 2013 Apr 25;203(2):423-9. doi: 10.1016/j.cbi.2013.01.006. PubMed PMID: 23402788.

37: Indiveri C, Galluccio M, Scalise M, Pochini L. Strategies of bacterial over expression of membrane transporters relevant in human health: the successful case of the three members of OCTN subfamily. Mol Biotechnol. 2013 Jun;54(2):724-36. doi: 10.1007/s12033-012-9586-8. Review. PubMed PMID: 22843325; PubMed Central PMCID: PMC3636443.

38: Barile M, Giancaspero TA, Brizio C, Panebianco C, Indiveri C, Galluccio M, Vergani L, Eberini I, Gianazza E. Biosynthesis of flavin cofactors in man: implications in health and disease. Curr Pharm Des. 2013;19(14):2649-75. Review. PubMed PMID: 23116402.

39: Miccolis A, Galluccio M, Giancaspero TA, Indiveri C, Barile M. Bacterial over-expression and purification of the 3'phosphoadenosine 5'phosphosulfate (PAPS) reductase domain of human FAD synthase: functional characterization and homology modeling. Int J Mol Sci. 2012 Dec 11;13(12):16880-98. doi:10.3390/ijms131216880. PubMed PMID: 23443125; PubMed Central PMCID: PMC3546728.

40: Pochini L, Peta V, Indiveri C. Inhibition of the OCTN2 carnitine transporter by HgCl2 and methylmercury in the proteoliposome experimental model: insights in the mechanism of toxicity. Toxicol Mech Methods. 2013 Feb;23(2):68-76. doi:10.3109/15376516.2012.719166. PubMed PMID: 22900493.

41: Oppedisano F, Catto M, Koutentis PA, Nicolotti O, Pochini L, Koyioni M, Introcaso A, Michaelidou SS, Carotti A, Indiveri C. Inactivation of the glutamine/amino acid transporter ASCT2 by 1,2,3-dithiazoles: proteoliposomes as a tool to gain insights in the molecular mechanism of action and of antitumor activity. Toxicol Appl Pharmacol. 2012 Nov 15;265(1):93-102. doi:10.1016/j.taap.2012.09.011. PubMed PMID: 23010140.

42: Pochini L, Scalise M, Galluccio M, Indiveri C. Regulation by physiological cations of acetylcholine transport mediated by human OCTN1 (SLC22A4). Implications in the non-neuronal cholinergic system. Life Sci. 2012 Nov 27;91(21-22):1013-6. doi: 10.1016/j.lfs.2012.04.027. PubMed PMID: 22569296.

43: Scalise M, Galluccio M, Pochini L, Indiveri C. Over-expression in Escherichia coli, purification and reconstitution in liposomes of the third member of the OCTN sub-family: the mouse carnitine transporter OCTN3. Biochem Biophys Res Commun. 2012 May 25;422(1):59-63. doi: 10.1016/j.bbrc.2012.04.105. PubMed PMID: 22561016.

44: Scalise M, Galluccio M, Accardi R, Cornet I, Tommasino M, Indiveri C. Human OCTN2 (SLC22A5) is down-regulated in virus- and nonvirus-mediated cancer. Cell Biochem Funct. 2012 Jul;30(5):419-25. doi: 10.1002/cbf.2816. PubMed PMID: 22374795.

45: Pochini L, Scalise M, Galluccio M, Pani G, Siminovitch KA, Indiveri C. The human OCTN1 (SLC22A4) reconstituted in liposomes catalyzes acetylcholine transport which is defective in the mutant L503F associated to the Crohn's disease. Biochim Biophys Acta. 2012 Mar;1818(3):559-65. doi: 10.1016/j.bbamem.2011.12.014. PubMed PMID: 22206629.

46: Tonazzi A, Console L, Giangregorio N, Indiveri C, Palmieri F. Identification by site-directed mutagenesis of a hydrophobic binding site of the mitochondrial carnitine/acylcarnitine carrier involved in the interaction with acyl groups. Biochim Biophys Acta. 2012 May;1817(5):697-704. doi: 10.1016/j.bbabio.2012.02.007. PubMed PMID: 22365929.

47: Torchetti EM, Bonomi F, Galluccio M, Gianazza E, Giancaspero TA, Iametti S, Indiveri C, Barile M. Human FAD synthase (isoform 2): a component of the machinery that delivers FAD to apo-flavoproteins. FEBS J. 2011 Nov;278(22):4434-49. doi: 10.1111/j.1742-4658.2011.08368.x. PubMed PMID: 21951714.

48: Galluccio M, Amelio L, Scalise M, Pochini L, Boles E, Indiveri C. Over-expression in E. coli and purification of the human OCTN2 transport protein. Mol Biotechnol. 2012 Jan;50(1):1-7. doi: 10.1007/s12033-011-9406-6. PubMed PMID: 21487769.

49: Pochini L, Scalise M, Galluccio M, Amelio L, Indiveri C. Reconstitution in liposomes of the functionally active human OCTN1 (SLC22A4) transporter overexpressed in Escherichia coli. Biochem J. 2011 Oct 15;439(2):227-33. doi: 10.1042/BJ20110544. PubMed PMID: 21726197.

50: Oppedisano F, Pochini L, Bröer S, Indiveri C. The B°AT1 amino acid transporter from rat kidney reconstituted in liposomes: kinetics and inactivation by methylmercury. Biochim Biophys Acta. 2011 Oct;1808(10):2551-8. doi: 10.1016/j.bbamem.2011.05.011. PubMed PMID: 21621508.

51: Tonazzi A, Indiveri C. Effects of heavy metal cations on the mitochondrialornithine/citrulline transporter reconstituted in liposomes. Biometals. 2011Dec;24(6):1205-15. doi: 10.1007/s10534-011-9479-5. PubMed PMID: 21769608.

49: Indiveri C, Iacobazzi V, Tonazzi A, Giangregorio N, Infantino V, Convertini P, Console L, Palmieri F. The mitochondrial carnitine/acylcarnitine carrier: function, structure and physiopathology. Mol Aspects Med. 2011 Aug;32(4-6):223-33. doi: 10.1016/j.mam.2011.10.008. Review. PubMed PMID: 22020112.

52: Accardi R, Rubino R, Scalise M, Gheit T, Shahzad N, Thomas M, Banks L, Indiveri C, Sylla BS, Cardone RA, Reshkin SJ, Tommasino M. E6 and E7 from human papillomavirus type 16 cooperate to target the PDZ protein Na/H exchange regulatory factor 1. J Virol. 2011 Aug;85(16):8208-16. doi: 10.1128/JVI.00114-11. PubMed PMID: 21680517; PubMed Central PMCID: PMC3147992.

53: Accardi R, Scalise M, Gheit T, Hussain I, Yue J, Carreira C, Collino A, Indiveri C, Gissmann L, Sylla BS, Tommasino M. IkappaB kinase beta promotes cell survival by antagonizing p53 functions through DeltaNp73alpha phosphorylation and stabilization. Mol Cell Biol. 2011 Jun;31(11):2210-26. doi: 10.1128/MCB.00964-10. PubMed PMID: 21482671; PubMed Central PMCID: PMC3133237.

54: Oppedisano F, Galluccio M, Indiveri C. Inactivation by Hg2+ and methylmercury of the glutamine/amino acid transporter (ASCT2) reconstituted in liposomes: Prediction of the involvement of a CXXC motif by homology modelling. Biochem Pharmacol. 2010 Oct 15;80(8):1266-73. doi: 10.1016/j.bcp.2010.06.032. PubMed PMID: 20599776.

55: Torchetti EM, Brizio C, Colella M, Galluccio M, Giancaspero TA, Indiveri C, Roberti M, Barile M. Mitochondrial localization of human FAD synthetase isoform 1. Mitochondrion. 2010 Apr;10(3):263-73. doi: 10.1016/j.mito.2009.12.149. PubMed PMID: 20060505.

56: Indiveri C. Studying amino acid transport using liposomes. Methods Mol Biol. 2010;606:55-68. doi: 10.1007/978-1-60761-447-0_5. PubMed PMID: 20013389.

57: Galluccio M, Pochini L, Amelio L, Accardi R, Tommasino M, Indiveri C.Over-expression in E. coli and purification of the human OCTN1 transport protein. Protein Expr Purif. 2009 Dec;68(2):215-20. doi: 10.1016/j.pep.2009.06.015. PubMed PMID: 19567267.

58: Giangregorio N, Tonazzi A, Console L, Indiveri C, Palmieri F. Site-directed mutagenesis of charged amino acids of the human mitochondrial carnitine/acylcarnitine carrier: insight into the

molecular mechanism of transport. Biochim Biophys Acta. 2010 Jun-Jul;1797(6-7):839-45. doi: 10.1016/j.bbabio.2010.03.017. PubMed PMID: 20347717.

59: Tonazzi A, Giangregorio N, Indiveri C, Palmieri F. Site-directed mutagenesis of the His residues of the rat mitochondrial carnitine/acylcarnitine carrier: implications for the role of His-29 in the transport pathway. Biochim Biophys Acta. 2009 Aug;1787(8):1009-15. doi: 10.1016/j.bbabio.2009.02.026. PubMed PMID: 19272353.

60: Pochini L, Scalise M, Indiveri C. Inactivation by omeprazole of the carnitine transporter (OCTN2) reconstituted in liposomes. Chem Biol Interact. 2009 May 15;179(2-3):394-401. doi: 10.1016/j.cbi.2008.10.052. PubMed PMID: 19041296.

61: Oppedisano F, Indiveri C. Reconstitution into liposomes of the B degrees -like glutamine-neutral amino acid transporter from renal cell plasma membrane. Biochim Biophys Acta. 2008 Oct;1778(10):2258-65. doi: 10.1016/j.bbamem.2008.05.011. PubMed PMID: 18572012.

62: Pochini L, Galluccio M, Scumaci D, Giangregorio N, Tonazzi A, Palmieri F, Indiveri C. Interaction of beta-lactam antibiotics with the mitochondrial carnitine/acylcarnitine transporter. Chem Biol Interact. 2008 Jun 17;173(3):187-94. doi: 10.1016/j.cbi.2008.03.003. PubMed PMID: 18452908.

63: De Lucas JR, Indiveri C, Tonazzi A, Perez P, Giangregorio N, Iacobazzi V, Palmieri F. Functional characterization of residues within the carnitine/acylcarnitine translocase RX2PANAAXF distinct motif. Mol Membr Biol. 2008 Feb;25(2):152-63. doi: 10.1080/09687680701697476. PubMed PMID: 18307102.

64: Oppedisano F, Fanello D, Calvani M, Indiveri C. Interaction of mildronate with the mitochondrial carnitine/acylcarnitine transport protein. J Biochem Mol Toxicol. 2008 Feb;22(1):8-14. doi: 10.1002/jbt.20208. PubMed PMID: 18273902.

65: Piermatti O, Fringuelli F, Pochini L, Indiveri C, Palmerini CA. Synthesis and characterization of carnitine nitro-derivatives. Bioorg Med Chem. 2008 Feb 1;16(3):1444-51. PubMed PMID: 17983755.

67: Giangregorio N, Tonazzi A, Indiveri C, Palmieri F. Conformation-dependent accessibility of Cys-136 and Cys-155 of the mitochondrial rat carnitine/acylcarnitine carrier to membrane-impermeable SH reagents. Biochim Biophys Acta. 2007 Nov;1767(11):1331-9. PubMed PMID: 17961500.

68: Oppedisano F, Pochini L, Galluccio M, Indiveri C. The glutamine/amino acid transporter (ASCT2) reconstituted in liposomes: electrical nature of the glutamine/glutamate antiport. Ital J Biochem. 2007 Dec;56(4):275-8. PubMed PMID: 19192626.

69: Galluccio M, Brizio C, Torchetti EM, Ferranti P, Gianazza E, Indiveri C, Barile M. Over-expression in Escherichia coli, purification and characterization of isoform 2 of human FAD synthetase. Protein Expr Purif. 2007 Mar;52(1):175-81. PubMed PMID: 17049878.

70: Mansour M, Touka M, Malena A, Indiveri C, Dong W, Gionfriddo I, Accardi R, Paradiso A, Sylla BS, Gabet AS, Tommasino M. Human papillomavirus type 77 E7 protein is a weak deregulator of cell cycle. Cancer Lett. 2007 Feb 8;246(1-2):274-81. PubMed PMID: 16650526.

71: Oppedisano F, Pochini L, Galluccio M, Indiveri C. The glutamine/amino acid transporter (ASCT2) reconstituted in liposomes: transport mechanism, regulation by ATP and characterization of the glutamine/glutamate antiport. Biochim Biophys Acta. 2007 Feb;1768(2):291-8. PubMed PMID: 17046712.

72: Brizio C, Galluccio M, Wait R, Torchetti EM, Bafunno V, Accardi R, Gianazza E, Indiveri C, Barile M. Over-expression in Escherichia coli and characterization of two recombinant isoforms of human FAD synthetase. Biochem Biophys Res Commun. 2006 Jun 9;344(3):1008-16. PubMed PMID: 16643857.

73: Tonazzi A, Galluccio M, Oppedisano F, Indiveri C. Functional reconstitution into liposomes and characterization of the carnitine transporter from rat liver microsomes. Biochim Biophys Acta. 2006 Jan;1758(1):124-31. PubMed PMID: 16483536.

74: Tonazzi A, Giangregorio N, Palmieri F, Indiveri C. Relationships of Cysteine and Lysine residues with the substrate binding site of the mitochondrial ornithine/citrulline carrier: an inhibition kinetic approach combined with the analysis of the homology structural model. Biochim Biophys Acta. 2005 Dec 10;1718(1-2):53-60. PubMed PMID: 16321608.

75: Tonazzi A, Giangregorio N, Indiveri C, Palmieri F. Identification by site-directed mutagenesis and chemical modification of three vicinal cysteine residues in rat mitochondrial carnitine/acylcarnitine transporter. J Biol Chem. 2005 May 20;280(20):19607-12. PubMed PMID: 15757911.

76: Oppedisano F, Pochini L, Galluccio M, Cavarelli M, Indiveri C. Reconstitution into liposomes of the glutamine/amino acid transporter from renal cell plasma membrane: functional characterization, kinetics and activation by nucleotides. Biochim Biophys Acta. 2004 Dec 15;1667(2):122-31. PubMed PMID: 15581847.

77: Brizio C, Brandsch R, Bufano D, Pochini L, Indiveri C, Barile M. Over-expression in Escherichia coli, functional characterization and refolding of rat dimethylglycine dehydrogenase. Protein Expr Purif. 2004 Oct;37(2):434-42. PubMed PMID: 15358367.

78: Pochini L, Oppedisano F, Indiveri C. Reconstitution into liposomes and functional characterization of the carnitine transporter from renal cell plasma membrane. Biochim Biophys Acta. 2004 Feb 10;1661(1):78-86. PubMed PMID: 14967477.

79: Tonazzi A, Indiveri C. Chemical modification of the mitochondrial ornithine/citrulline carrier by SH reagents: effects on the transport activity and transition from carrier to pore-like function. Biochim Biophys Acta. 2003 Apr 1;1611(1-2):123-30. PubMed PMID: 12659953.

80: Indiveri C, Giangregorio N, Iacobazzi V, Palmieri F. Site-directed mutagenesis and chemical modification of the six native cysteine residues of the rat mitochondrial carnitine carrier: implications for the role of cysteine-136. Biochemistry. 2002 Jul 9;41(27):8649-56. PubMed PMID: 12093282.

81: Peluso G, Petillo O, Margarucci S, Mingrone G, Greco AV, Indiveri C, Palmieri F, Melone MA, Reda E, Calvani M. Decreased mitochondrial carnitine translocase in skeletal muscles impairs utilization of fatty acids in insulin-resistant patients. Front Biosci. 2002 May 1;7:a109-16. PubMed PMID: 11991847.

82: Indiveri C, Tonazzi A, De Palma A, Palmieri F. Kinetic mechanism of antiports catalyzed by reconstituted ornithine/citrulline carrier from rat liver mitochondria. Biochim Biophys Acta. 2001 Jan 19;1503(3):303-13. PubMed PMID: 11115642.

83: Indiveri C, Tonazzi A, Stipani I, Palmieri F. The purified and reconstituted ornithine/citrulline carrier from rat liver mitochondria catalyses a second transport mode: ornithine+/H+ exchange. Biochem J. 1999 Aug 1;341 (Pt 3):705-11. PubMed PMID: 10417335; PubMed Central PMCID: PMC1220409.

84: Indiveri C, Abruzzo G, Stipani I, Palmieri F. Identification and purification of the reconstitutively active glutamine carrier from rat kidney mitochondria. Biochem J. 1998 Jul 15;333 (Pt 2):285-90. PubMed PMID: 9657967; PubMed Central PMCID: PMC1219584.

85: Indiveri C, Iacobazzi V, Giangregorio N, Palmieri F. Bacterial overexpression, purification, and reconstitution of the carnitine/acylcarnitine carrier from rat liver mitochondria. Biochem Biophys Res Commun. 1998 Aug 28;249(3):589-94. PubMed PMID: 9731180.

86: Huizing M, Iacobazzi V, Ijlst L, Savelkoul P, Ruitenbeek W, van den Heuvel L, Indiveri C, Smeitink J, Trijbels F, Wanders R, Palmieri F. Cloning of the human carnitine-acylcarnitine carrier cDNA and identification of the molecular defect in a patient. Am J Hum Genet. 1997 Dec;61(6):1239-45. PubMed PMID: 9399886; PubMed Central PMCID: PMC1716087.

87: Indiveri C, Tonazzi A, Stipani I, Palmieri F. The purified and reconstituted ornithine/citrulline carrier from rat liver mitochondria: electrical nature and coupling of the exchange reaction with H+ translocation. Biochem J. 1997 Oct 15;327 (Pt 2):349-55. PubMed PMID: 9359400; PubMed Central PMCID: PMC1218800.

88: Indiveri C, Iacobazzi V, Giangregorio N, Palmieri F. The mitochondrial carnitine carrier protein: cDNA cloning, primary structure and comparison with other mitochondrial transport proteins. Biochem J. 1997 Feb 1;321 (Pt 3):713-9. PubMed PMID: 9032458; PubMed Central PMCID: PMC1218127.

89: Palmieri F, Bisaccia F, Capobianco L, Dolce V, Fiermonte G, Iacobazzi V, Indiveri C, Palmieri L. Mitochondrial metabolite transporters. Biochim Biophys Acta. 1996 Jul 18;1275(1-2):127-32. Review. PubMed PMID: 8688445.

90: Indiveri C, Tonazzi A, Giangregorio N, Palmieri F. Probing the active site of the reconstituted carnitine carrier from rat liver mitochondria with sulfhydryl reagents. A cysteine residue is localized in or near the substrate binding site. Eur J Biochem. 1995 Mar 1;228(2):271-8. PubMed PMID: 7705339.

91: Palmieri F, Indiveri C, Bisaccia F, Iacobazzi V. Mitochondrial metabolite carrier proteins: purification, reconstitution, and transport studies. Methods Enzymol. 1995;260:349-69. PubMed PMID: 8592459.

92: Indiveri C, Palmieri L, Palmieri F. Kinetic characterization of the reconstituted ornithine carrier from rat liver mitochondria. Biochim Biophys Acta. 1994 Dec 30;1188(3):293-301. PubMed PMID: 7803446.

93: Indiveri C, Tonazzi A, Palmieri F. The reconstituted carnitine carrier from rat liver mitochondria: evidence for a transport mechanism different from that of the other mitochondrial translocators. Biochim Biophys Acta. 1994 Jan 3;1189(1):65-73. PubMed PMID: 8305461.

94: Palmieri F, Indiveri C, Bisaccia F, Krämer R. Functional properties of purified and reconstituted mitochondrial metabolite carriers. J Bioenerg Biomembr. 1993 Oct;25(5):525-35. Review. PubMed PMID: 8132492.

95: Indiveri C, Prezioso G, Dierks T, Krämer R, Palmieri F. Kinetic characterization of the reconstituted dicarboxylate carrier from mitochondria: a four-binding-site sequential transport system. Biochim Biophys Acta. 1993 Jul 26;1143(3):310-8. PubMed PMID: 8329439.

96: Indiveri C, Tonazzi A, Dierks T, Krämer R, Palmieri F. The mitochondrial carnitine carrier: characterization of SH-groups relevant for its transport function. Biochim Biophys Acta. 1992 Nov 16;1140(1):53-8. PubMed PMID: 1420325.

97: Palmieri F, Bisaccia F, Iacobazzi V, Indiveri C, Zara V. Mitochondrial substrate carriers. Biochim Biophys Acta. 1992 Jul 17;1101(2):223-7. Review. PubMed PMID: 1633189.

98: Indiveri C, Tonazzi A, Palmieri F. Identification and purification of the ornithine/citrulline carrier from rat liver mitochondria. Eur J Biochem. 1992 Jul 15;207(2):449-54. PubMed PMID: 1633803.

99: Indiveri C, Tonazzi A, Palmieri F. Characterization of the unidirectional transport of carnitine catalyzed by the reconstituted carnitine carrier from rat liver mitochondria. Biochim Biophys Acta. 1991 Oct 14;1069(1):110-6. PubMed PMID:1932043.

100: Palmieri F, Bisaccia F, Capobianco L, Iacobazzi V, Indiveri C, Zara V. Structural and functional properties of mitochondrial anion carriers. Biochim Biophys Acta. 1990 Jul 25;1018(2-3):147-50. PubMed PMID: 2393655.

101: Indiveri C, Palmieri F. Purification and reconstitution of the carnitine carrier from rat liver mitochondria. Ital J Biochem. 1990 May-Jun;39(3):165A-167A. PubMed PMID: 2391223.

102: Indiveri C, Capobianco L, Krämer R, Palmieri F. Kinetics of the reconstituted dicarboxylate carrier from rat liver mitochondria. Biochim Biophys Acta. 1989 Nov 23;977(2):187-93. PubMed PMID: 2804097.

103: Indiveri C, Palmieri F. Purification of the mitochondrial carnitine carrier by chromatography on hydroxyapatite and celite. FEBS Lett. 1989 Aug 14;253(1-2):217-20. PubMed PMID: 2547656.

104: Indiveri C, Krämer R, Palmieri F. Reconstitution of the malate/aspartate shuttle from mitochondria. J Biol Chem. 1987 Nov 25;262(33):15979-83. PubMed PMID: 3680239.

105: Indiveri C, Palmieri F, Bisaccia F, Krämer R. Kinetics of the reconstituted 2-oxoglutarate carrier from bovine heart mitochondria. Biochim Biophys Acta. 1987 Mar 4;890(3):310-8. PubMed PMID: 3814587.

106: Indiveri C, Tonazzi A, Prezioso G, Palmieri F. Kinetic characterization of the reconstituted carnitine carrier from rat liver mitochondria. Biochim Biophys Acta. 1991 Jun 18;1065(2):231-8. PubMed PMID: 2059655.

107: Indiveri C, Dierks T, Krämer R, Palmieri F. Reaction mechanism of the reconstituted oxoglutarate carrier from bovine heart mitochondria. Eur J Biochem.1991 Jun 1;198(2):339-47. PubMed PMID: 2040299.

108: Indiveri C, Tonazzi A, Palmieri F. Identification and purification of the carnitine carrier from rat liver mitochondria. Biochim Biophys Acta. 1990 Oct 24;1020(1):81-6. PubMed PMID: 2223786.

109: Indiveri C, Dierks T, Krämer R, Palmieri F. Kinetic discrimination of two substrate binding sites of the reconstituted dicarboxylate carrier from rat liver mitochondria. Biochim Biophys Acta. 1989 Nov 23;977(2):194-9. PubMed PMID: 2804098.

110: Bisaccia F, Indiveri C, Palmieri F. Purification and reconstitution of two anion carriers from rat liver mitochondria: the dicarboxylate and the 2-oxoglutarate carrier. Biochim Biophys Acta. 1988 Apr 22;933(2):229-40. PubMed PMID: 3355813.

111: Bisaccia F, Indiveri C, Palmieri F. Purification of reconstitutively active alpha-oxoglutarate carrier from pig heart mitochondria. Biochim Biophys Acta.1985 Dec 16;810(3):362-9. PubMed PMID: 4063354.