

CURRICULUM VITAE

Lorella Maria Teresa Canzoniero, MD PhD

FIRST NAME: **Lorella Maria Teresa**

LAST NAME: **Canzoniero**

CURRENT POSITION: Full Professor in Pharmacology (BIO/14)

ADDRESS: Department of Science and Technology
University of Sannio
Via F deSanctis snc , Benevento (Italy)

EDUCATION

October 1986: Medical Degree (110/110) School of Medicine, University of Naples, Federico II Italy

1993 PhD in Endocrinology and Metabolic Sciences , University of L'Aquila-Chieti , Italy

ACADEMIC APPOINTMENTS

1991-1996 Research Associate in Neurology Dept. of Neurology, School of Medicine, Washington University, St. Louis, MO, USA

1997-1998 Research Instructor in Neurology, Department of Neurology, CSNSI, Washington University, St Louis, USA

1998-2001 Research Assistant Professor in Neurology, Department of Neurology, CSNSI, Washington University, St Louis, USA

2001-2016 Associate Professor in Pharmacology, University of Sannio, Benevento, Italy

Dec 2016 -... Full Professor in Pharmacology, University of Sannio, Benevento, Italy

June-Sept 2002 Visiting Professor, Washington University St Louis, MO (Lab Dr DW Choi)

Aug-Oct 2003 Visiting Professor, Washington University St Louis, MO (Lab Dr Laura L Dugan)

Feb 2009 Teaching Staff Mobility , Programma LLP Erasmus , University of Coimbra, Portugal

Oct 2009 Teaching Staff Mobility , Programma LLP Erasmus, University of Coimbra, Portugal

Feb 2011 Teaching Staff Mobility, Programma LLP Erasmus, University of Coimbra, Portugal

Sept 2012 Teaching Staff Mobility , Programma LLP Erasmus, University of Coimbra, Portugal

SERVICE at UNIVERSITY of SANNIO

- 2006-... Coordinatore del Dottorato di Ricerca in Scienze della Terra e della Vita , Università degli Studi del Sannio
- 2007- 2010 Presidente del Corso di Laurea Specialistica in Biologia, Università degli Studi del Sannio, Benevento
- 2009- 2013 Delegato del Rettore per le Relazioni Internazionali , Università degli Studi del Sannio, Benevento
- 2014-..... Delegato del Rettore per la Cooperazione Internazionale , Università degli Studi del Sannio, Benevento
- 2013-.... Componente della Commissione di Ateneo per le Relazioni internazionali
- 2009- ... Coordinatore della Doppia Laurea Internazionale LM in Biologia –MS Program in Cell and Molecular Biology , University of Sannio- University of Coimbra, Portugal
- 2006- Delegato Erasmus della Facoltà di Scienze MMFFNN e del Dipartimento DST , University of Sannio
- 2013-... Membro del Collegio dei Docenti del Dottorato STAS (Scienze e Tecnologie per l'Ambiente e la Salute) , University of Sannio

RESEARCH

INTERNATIONAL and NATIONAL RESEARCH GRANTS

- NINDS -P01 (2000)** Cell-Cell interaction and hypoxic brain injury- PROJECT I- ZINC AND ISCHEMIC BRAIN INJURY. Co-Investigator
- Regione Campania** Fondi Legge 5/200 (**2007**). Zinco e ischemia. Principal Investigator of the Project
- Ministero della Salute (2008)**. Ricerca sui farmaci, sulle sostanze e sulle pratiche mediche sul doping e per la tutela della salute nelle attività sportive utilizzabili a fini doping nelle attività sportive -Caratterizzazione degli effetti neurotossici dell'associazione steroidi anabolizzanti- inibitori dell'aromatasi. Principal Investigator of Unit University of Sannio
- PRIN (call 2015)**. Monitoraggio dei livelli periferici di un pool di microRNA, mediante lo sviluppo di un device multiprobe basato su nano-sensori in fibra ottica, per la diagnosi e la prognosi di ischemia cerebrale (36 months). Principal Investigator of Unit University of Sannio (BIO14) (from 02/ 2017)

RESEARCH ACTIVITY

Lorella MT Canzoniero spent ten years at Washington University in St Louis, USA in the laboratory of Dr Dennis W Choi. Since 2002, she has been the PI of the laboratory of Pharmacology and Toxicology at University of Sannio. Her research focuses on the ionic mechanisms involved in neurological diseases such as brain ischemia using a combined approach by means of biochemistry, microfluorimetry and molecular techniques in cellular and animal models.

The work of her laboratory is focused on:

- The study of molecular and cellular pathways involved in neuronal and glial death, in order to identify possible novel pharmacological targets for treating neurological diseases
- The study of the physiological and pathological role of intracellular calcium and zinc in cellular and animal models of neurological diseases
- The study of the alteration of ionic and molecular mechanisms in neurons and glia in response to environmental toxicants and heavy metals to address the possible link between exposure to environmental agents and susceptibility to neurological diseases

PUBLICATIONS on INTERNATIONAL JOURNALS

H index : **32** (2019)

Total number of citations: **>4000** (Scopus, 2019)

PUBLICATIONS

DI RENZO G, AMOROSO S, TAGLIALATELA M, CANZONIERO LM, MAIDA P, LOMBARDI G, ANNUNZIATO L. Pure uptake blockers of dopamine can reduce prolactin secretion: studies with diclofenac. **LIFE SCI**. 42(21):2161-9, **1988**

DI RENZO G, AMOROSO S, MAIDA P, CANZONIERO L, NAPPI C, TAGLIALATELA M, ANNUNZIATO L. Effect of different Ca^{2+} entry blockers on dopamine-induced inhibition of in vitro prolactin secretion. **EUR J PHARMACOL** 9;146(2-3):201-6, **1988**

TAGLIALATELA M., AMOROSO S., CANZONIERO L.M.T., DI RENZO G.F., ANNUNZIATO L. Membrane events and ionic processes involved in dopamine release from tuberoinfundibular neurons. II. Effect of the inhibition of the $\text{Na}^+ - \text{Ca}^{++}$ exchange by amiloride. **J PHARMACOL EXP THER** 246(2):689-94, **1988**

TAGLIALATELA M, CANZONIERO LMT, AMOROSO S, FATATIS A, DI RENZO GF, ANNUNZIATO L. Cobalt-sensitive and dihydropyridine-insensitive stimulation of dopamine release from tuberoinfundibular neurons by high extracellular concentrations of barium ions. **BRAIN RES** 488 (1-2):114-20, **1989**

AMOROSO S, TAGLIALATELA M, CANZONIERO LMT, CRAGOE EJ JR, DI RENZO G, ANNUNZIATO L. Possible involvement of Ca^{2+} ions, protein kinase C and $\text{Na}^{(+)}\text{-H}^{+}$ antiporter in insulin-induced endogenous dopamine release from tuberoinfundibular neurons. **LIFE SCI** 46 (12):885-94, **1990**

TAGLIALATELA M, CANZONIERO LMT, FATATIS A, DI RENZO G, YASUMOTO T, ANNUNZIATO L. Effect of maitotoxin on cytosolic Ca^{2+} levels and membrane potential in purified rat brain synaptosomes. **BIOCHIM BIOPHYS ACTA BIOMEMBRANES** 1026(1):126-32, **1990**

TAGLIALATELA M, CANZONIERO LMT, CRAGOE EJ JR, DI RENZO G, ANNUNZIATO L. $\text{Na}^{(+)}\text{-Ca}^{2+}$ exchange activity in central nerve endings. II. Relationship between pharmacological blockade by amiloride analogues and dopamine release from tuberoinfundibular hypothalamic neurons. **MOL PHARMACOL** 38(3):393-400, **1990**

AMOROSO S, DI RENZO G, TAGLIALATELA M, CANZONIERO LMT, CRAGOE EJ JR, ANNUNZIATO L. Cytoplasmic alkalinization induced by insulin through an activation of $\text{Na}^{(+)}\text{-H}^{+}$ antiporter inhibits tyrosine hydroxylase activity in striatal synaptosomes. **BIOCHEM PHARMACOL** 1;41(9):1279-82, **1991**

CANZONIERO LMT, ROSSI AM, TAGLIALATELA M, ANNUNZIATO L, DI RENZO GF. The $\text{Na}^{+}\text{-Ca}^{+}$ exchanger activity in cerebrocortical nerve endings is reduced in old compared to young and mature rats when it operates as a Ca^{2+} influx or efflux pathway. **BIOCHIM BIOPHYS ACTA BIOMEMBRANES** 1107 : 175-178, **1992**

CANZONIERO LMT, TAGLIALATELA M, DI RENZO GF, ANNUNZIATO L. Gadolinium and neomycin block voltage -sensitive Ca^{2+} channels without interfering with the $\text{Na}^{+}\text{-Ca}^{++}$ antiporter in brain nerve endings. **EUR J PHARMACOL** 245: 97-103, **1993**

CSERNANSKY CA, CANZONIERO LMT, SENSI SL, YU SP and CHOI DW. Delayed application of Aurintricarboxylic acid reduced glutamate neurotoxicity. **JNEUROSCI RES** 38 :101-108, **1994**

TURETSKY D, CANZONIERO LMT, SENSI SL, WEISS JH, GOLDBERG MP and CHOI DW. Cortical neurons exhibiting kainate-activated Co^{++} uptake are selectively vulnerable to AMPA receptor-mediated toxicity. **NEUROBIOL DIS** 1:101-110, **1994**

BEHRENS MI, KOH J, CANZONIERO LMT, SENSI SL, CSERNANSKY CA, CHOI DW. 3-Nitropropionic acid induces apoptosis in cultured striatal and cortical neurons. **NeuroReport** 6,3: 532-53, **1995**

LYNCH III JJ, YU SP, CANZONIERO LM., SENSI SL, and CHOI DW. Sodium channel blockers reduce oxygen-glucose deprivation-induced cortical neuronal injury when combined with glutamate receptor antagonists. **J PHARMACOL EXP THER** 273:554-560, **1995**

DUGAN LL, SENSI SL, CANZONIERO LMT, HANDRAN SH, ROTHMAN SM, GOLDBERG MP and CHOI DW Mitochondrial production of reactive oxygen species in cortical neurons following exposure to N-methyl-D aspartate. **J NEUROSCI** 15: 6377-6388, **1995**

KOH J, WIE MB, GWAG BJ, SENSI SL, CANZONIERO LMT, CSERNANSKY CA and CHOI DW. Staurosporine induces apoptosis in cultured cortical neurons. **EXP NEUROL** 135: 153-159, **1995**

CANZONIERO LMT, SENSI SL and CHOI DW. Recovery from NMDA-induced intracellular acidification is slow and dependent on extracellular bicarbonate. **AM J PHYSIOL** 270: C593-C599, **1996**

CANZONIERO LMT, SENSI SL, TURETSKY DM, FINLEY MFA, CHOI DW and HUETTNER JE. Glutamate receptor mediated calcium entry in neurons derived from P19 embryonal carcinoma cells. **J NEUROSCI RES.** 45: 226-236, **1996**

YU SP, SENSI SL, CANZONIERO, LM, BUISSON A and CHOI DW Membrane-delimited modulation of NMDA receptor currents by metabotropic glutamate receptor subtypes 1/5 in mouse cortical neurons. **J PHYSIOL** 499 (Pt 3), 721-732, **1997**

YU SP, YEH CH, SENSI SL, GWAG B J, CANZONIERO LMT, FARHANGRAZI ZS, YING H S, TIAN M, DUGAN LL and CHOI DW Neuronal apoptosis is mediated by enhancement of outward potassium current and potassium efflux. **SCIENCE** 278:114-117, **1997**

CANZONIERO LMT, SENSI SL, CHOI DW. Measurement of intracellular free zinc in living neurons. **NEUROBIOL DIS** 4:275-279, **1997**

YING HS, WEISHPAUPT JH, GRABB M, CANZONIERO LMT, SENSI SL, SHELINE CT, MONYER H, CHOI DW Sublethal oxygen-glucose deprivation alters hippocampal neuronal AMPA receptor expression and vulnerability to kainate-induced death. **J NEUROSCI** 17:9536-9544, **1997**

SENSI SL , CANZONIERO LMT^{*}, YU SP, YING HS, KOH JY, KERCHNER GA, CHOI DW. Measurement of intracellular free zinc in living cortical neurons: routes of entry. **J NEUROSCI** 17: 9554-9564, **1997**.(*co-first author)

XU J, CHEN S, YEH CH, HE L, SENSI S, CANZONIERO LMT, CHOI DW HSU CY. Involvement of de novo ceramide biosynthesis in TNF- α /cycloheximide-induced cerebral endothelial cell death. **J BIOL CHEM** 273:16521-6, **1998**

McDONALD JW, BHATTACHARYA T, SENSI SL, LOBNER D, YING HS, CANZONIERO LMT and CHOI DW. Extracellular acidity potentiates AMPA receptor-mediated cortical neuronal death. **J NEUROSCI** 8:6290-9, **1998**

STRASSER U, LOBNER D, BEHRENS MM, CANZONIERO LM, CHOI DW. Antagonists for group I mGluRs attenuate excitotoxic neuronal death in cortical cultures. **EUR J NEUROSCI** 10(9):2848-55, **1998**

GWAG BJ, CANZONIERO LMT, SENSI SL, DE MARO JA, KOH JY, GOLDBERG MP, JACQUIN M, CHOI DW. Calcium ionophores can induce either apoptosis or necrosis in cultured cortical neurons. **NEUROSCIENCE** 90:1339-48, **1999**

CHOI WS, CANZONIERO LMT, SENSI SL, O'MALLEY KL, GWAG BJ, SOHN S, KIM JE, OH TH, LEE EB, OH YJ. Characterization of MPP⁺-induced cell death in a dopaminergic neuronal cell line: role of macromolecule synthesis, cytosolic calcium, caspase, and Bcl-2-related proteins. **EXP NEUROL** 159: 274-282, **1999**

SNIDER BJ, CHOI J, TURETSKY DM, CANZONIERO LMT, SENSI SL, SHELINE C.T., WANG X., YU S.P., CHOI D.W. Nitric oxide reduces Ca²⁺ and Zn²⁺ influx through voltage-gated Ca²⁺ channels and reduces Zn²⁺ neurotoxicity. **NEUROSCIENCE** 100: 651-661, **2000**

CANZONIERO LMT, TURETSKY DM, CHOI DW. Measurement of intracellular free zinc concentrations accompanying zinc-induced neuronal death. **J NEUROSCI** 19: 31, **1999**

LOBNER D, CANZONIERO LM, MANZERRA P, GOTTRON F, YING H, KNUDSON M, TIAN M, DUGAN LL, KERCHNER GA, SHELINE CT, KORSMEYER SJ, CHOI DW. Zinc-induced neuronal death in cortical neurons. **CELL MOL BIOL (Noisy-le-grand)** 46(4):797-806, **2000**

KERCHNER GA, CANZONIERO LMT, YU SP, LING C, CHOI DW. Zn²⁺ current is mediated by voltage-gated Ca²⁺ channels and enhanced by extracellular acidity in mouse cortical neurones. **J. PHYSIOL** 528: 39-52, **2000**

MANZERRA P, BEHRENS MM, CANZONIERO LMT, WANG XQ, HEIDINGER V, ICHINOSE T, YU SP, CHOI DW. Zinc induces a Src family kinase-mediated upregulation of NMDA receptor activity and excitotoxicity. **Proc Natl Acad Sci USA** 98(20): 11055-11061, **2001**

YU SP, CANZONIERO LMT, CHOI DW. Ion homeostasis and apoptosis. **CURR OPINION CELL BIOL** 13(4): 405-411, **2001**

SNIDER BJ, TEE LY, CANZONIERO LMT, BABCOCK DJ, CHOI DW. NMDA antagonists exacerbate neuronal death caused by proteasome inhibition in cultured cortical and striatal neurons. **EUR J NEUROSCI** 15: 419-428, **2002**

SHELINE CT, YING HS, LING CS, CANZONIERO LMT, CHOI DW. Depolarization-induced zinc influx into cultured cortical neurons. **NEUROBIOL DIS** 10 (1): 41-53, **2002**

CANZONIERO LMT, MANZERRA P, SHELINE CT, CHOI DW. Membrane-permeant chelators can attenuate Zn²⁺-induced cortical neuronal death. **NEUROPHARMACOLOGY** 45:420-428, **2003**

CANZONIERO LMT, BABCOCK DJ, GOTTRON FJ, GRABB MC, MANZERRA P, SNIDER BJ, CHOI DW. Raising intracellular calcium attenuates neuronal apoptosis triggered by staurosporine or oxygen-glucose deprivation in the presence of glutamate receptor blockade. **NEUROBIOL DIS** 15: 520-528, **2004**

SCORZIELLO A, PELLEGRINI C, SECONDO A, SIRABELLA R, FORMISANO L, SIBAUD L, AMOROSO S, CANZONIERO LMT, ANNUNZIATO L, DI RENZO GF. Neuronal NOS activation during oxygen and glucose deprivation triggers cerebellar granule cell death in the later reoxygenation phase. **J NEUROSCI RES.** 76 : 812-821, **2004**

SHELINE CT, TAKATA T, YING H, CANZONIERO LMT, YANG A, YU SP, CHOI DW Potassium attenuates zinc-induced death of cultured cortical astrocytes. **GLIA** 46: 18-27, **2004**

CANZONIERO LMT, SNIDER BJ Calcium in Alzheimer's disease pathogenesis: too much, too little or in the wrong place? **J ALZHEIMERS DIS.** (2):147-54; discussion 209-15, **2005**

CANZONIERO LMT, ADORNETTO A, SECONDO A, MAGI S, DELL'AVERSANO C, SCORZIELLO A, AMOROSO S, DI RENZO G Involvement of the nitric oxide/protein kinase G pathway in polychlorinated biphenyl-induced cell death in SH-SY 5Y neuroblastoma cells. **J NEUROSCI RES** 84(3): 692-7, **2006**

SENSI SL, ROCKABRAND E, CANZONIERO LMT Acidosis enhances toxicity induced by kainate and zinc exposure in aged cultured astrocytes. **BIOGERONTOLOGY** 7:367-374, **2006**

SECONDO A , STAIANO RI, SCORZIELLO A, SIRABELLA R, BOSCIA F, ADORNETTO A, VALSECCHI V, MOLINARO P, CANZONIERO LMT, DI RENZO GF, ANNUNZIATO L BHK cells transfected with NCX3 are more resistant to hypoxia followed by reoxygenation than those transfected with NCX1 and NCX2: Possible relationship with mitochondrial membrane potential. **CELL CALCIUM** , 42(6):521-35, **2007**

SECONDO A, STAIANO IR, SCORZIELLO A, SIRABELLA R, BOSCIA F, ADORNETTO A, CANZONIERO LMT, DI RENZO G, ANNUNZIATO L $\text{Na}^+/\text{Ca}^{2+}$ exchanger isoform 3 (NCX3) but not isoform 2 (NCX2) and 1 (NCX1) singly transfected in BHK cells plays a protective role in a model of in vitro hypoxia. **ANN NY ACAD SCI**, 1099:481-5, **2007**

FRAZZINI V, RAPPOSELLI IR, CORONA C, ROCKABRAND E, CANZONIERO LMT, SENSI SL. Mild Acidosis Enhances AMPA receptor-mediated intracellular zinc mobilization in cortical neurons. **MOL MED** 13(7-8):356-61, **2007**

SCORZIELLO A , SANTILLO M, ADORNETTO A, DELL'AVERSANO C, SIRABELLA R, DAMIANO S, CANZONIERO LMT, DI RENZO GF, ANNUNZIATO L NO -induced neuroprotection in ischemic preconditioning stimulates mitochondrial Mn-SOD activity and expression via RAS/ERK1/2 pathway. **J NEUROCHEM** 103 (4) 1472-80, **2007**

CATALDI M, LA RICCIA V, MARZAIOLI V, CAVACCINI A, CURIA G, VIGGIANO D, CANZONIERO LMT, DI RENZO G, AVOLI M, ANNUNZIATO L. Zn^{2+} slows down $\text{Ca}_v3.3$ gating kinetics: implications for thalamocortical activity. **J NEUROPHYSIOL** 98(4):2274-84, **2007**

BERTONI-FREDDARI C, SENSI SL, GIORGETTI B, BALIETTI M, DI STEFANO G, CANZONIERO LMT, CASOLI T, FATTORETTI P Decreased Presence of Perforated Synapses in a Triple-Transgenic Mouse Model of Alzheimer's Disease. **REJUVENATION RES** 11, 2 , 309-13, **2008**

LUISE R., PANZA E., BARRESE V, IANNOTTI FA, VIGGIANO D, SECONDO A, CANZONIERO L, MARTIRE M, ANNUNZIATO L, TAGLIALATELA M . Activation of Presynaptic M-Type K^+ Channels inhibits $[\text{H}]\text{D}$ -Aspartate release by Reducing Ca^{2+} entry through P/Q-type voltage-gated Ca^{2+} channels. , **J NEUROCHEM** 109(1): 168-181, **2009**

BERNI CANANI R, SECONDO A, PASSARIELLO A, BUCCIGROSSI V, CANZONIERO L.M., RUOTOLO S, PUZONE C, PORCARO F, PENSA M, BRAUCCI A, PEDATA M, ANNUNZIATO L, GUARINO A .Zinc inhibits calcium-mediated and nitric oxide-mediated ion secretion in human enterocytes. **EUR J PHARMACOL** 626: 266-270, **2010**

CIAVARDELLI D, SILVESTRI E, DEL VISCOVO A, BOMBA M, DE GREGORIO D, MORENO M, DI ILIO C, GOGLIA G, CANZONIERO LM*, SENSI S L . Alterations of brain and cerebellar proteomes linked to A beta and tau pathology in a female triple-transgenic murine model of Alzheimer's disease . **CELL DEATH & DISEASE**, 1: e 90, **2010**)* Co-corresponding author

CORONA C, MASCIOPINTO F, SILVESTRI E, DELVISCOVO, LATTANZIO R, LASORDA R, CIAVARDELLI D, GOGLIA F, PIANTELLI M, CANZONIERO L.M., SENSI SL Dietary zinc supplementation of 3xTg-AD mice increases BDNF levels and prevents cognitive deficits as well as mitochondrial dysfunction . **CELL DEATH DIS** 1(10): e 91, **2010**

CORONA C, FRAZZINI V, SILVESTRI E, LATTANZIO R, LA SORDA R, PIANTELLI M, CANZONIERO L.M., CIAVARDELLI D, RIZZARELLI E, SENSI SL . Effects of Dietary Supplementation of Carnosine on Mitochondrial Dysfunction, Amyloid Pathology, and Cognitive Deficits in 3xTg-AD Mice . **PLOS ONE**, vol. 6(3):e17971, **2011**

DI FRANCIA R, BERRETTA M, CATAPANO O, CANZONIERO L, FORMISANO L . Molecular diagnostics for pharmacogenomic testing of fluoropyrimidine based-therapy: costs, methods and applications. **CLIN CHEM LAB MED**, 49 (7) 1105-1111, **2011**

FORMISANO L, GUIDA N, COCCO S, SECONDO A, SIRABELLA R, ULIANICH L, PATURZO F, DI RENZO G, CANZONIERO L.M. The repressor element 1-silencing transcription factor is a novel molecular target for the neurotoxic effect of the polychlorinated biphenyl mixture aroclor 1254 in neuroblastoma SH-SY5Y cells. **J PHARMACOL EXP THER** 338: 997-1003, **2011**

DEL VISCOVO A, SECONDO A, ESPOSITO A, GOGLIA F, MORENO M, CANZONIERO L.M. Intracellular and plasma membrane-initiated pathways involved in the $[Ca^{2+}]_i$ elevations induced by iodothyronines (T3 and T2) in pituitary GH3 cells. **AM J PHYSIOL : ENDOCRINOL METAB**, vol. 302, p. E1419-E1430, **2012**

DUARTE E.P., CURCIO M, CANZONIERO L.M., DUARTE CB. Neuroprotection by GDNF in the ischemic brain. **GROWTH FACTORS**, vol. 30, p. 242-257, **2012**

MASCIOPINTO F, DI PIETRO N, CORONA C, BOMBA M, PIPINO C, CURCIO M, DI CASTELNUOVO A, CIAVARDELLI D, SILVESTRI E, CANZONIERO LM, SEKLER I, PANDOLFI A, SENSI SL. Effects of long-term treatment with pioglitazone on cognition and glucose metabolism of PS1-KI, 3xTg-AD, and wild-type mice. **CELL DEATH DIS** , 3:e448, **2012**

CALDEIRA MV, CURCIO M, LEAL G, SALAZAR IL, MELE M, SANTOS AR, MELO CV, PEREIRA P, CANZONIERO LM, DUARTE CB. Excitotoxic stimulation downregulates the ubiquitin-proteasome

system through activation of NMDA receptors in cultured hippocampal neurons. **BIOCHIM BIOPHYS ACTA MOL BASIS DIS** 1: 263-274, **2013**

FORMISANO L, GUIDA N, VALSECCHI V, PIGNATARO G, VINCIGUERRA A, PANNACCIONE A, SECONDO A, BOSCIA F, MOLINARO P, SISALLI MJ, SIRABELLA R, CASAMASSA A, CANZONIERO LM, DI RENZO G, ANNUNZIATO L. NCX1 is a new rest target gene: role in cerebral ischemia. **NEUROBIOL DIS** 50:76-85, **2013**

BOMBA M, CIAVARDELLI D, SILVESTRI E, CANZONIERO LMT, LATTANZIO R, CHIAPPINI P, PIANTELLI M, DI ILIO C, CONSOLI A, SENSI SL. Exenatide promotes cognitive enhancement and positive brain metabolic changes in PS1-KI mice but has no effects in 3xTg-AD animals. **CELL DEATH DIS** , 4:e612, **2013**

CANZONIERO LMT, GRANZOTTO A, TURETSKY DM, CHOI DW, DUGAN LL, SENSI SL nNOS(+) striatal neurons, a subpopulation spared in Huntington's Disease, possess functional NMDA receptors but fail to generate mitochondrial ROS in response to an excitotoxic challenge. **FRONT PHYSIOL** 4:112 , **2013**

CALDEIRA MV, SALAZAR IL, CURCIO M, CANZONIERO LM, DUARTE CB. Role of the ubiquitin-proteasome system in brain ischemia: friend or foe? **PROG NEUROBIOL** 50-69, **2014**

MANCINI M, SOLDVIERI MV, GESSNER G, WISSUWA B, BARRESE V, BOSCIA F, SECONDO A, MICELI F, FRANCO C, AMBROSINO P, CANZONIERO LM, BAUER M, HOSHI T, HEINEMANN SH, TAGLIALATELA M. Critical role of large-conductance calcium- and voltage-activated potassium channels in leptin-induced neuroprotection of N-methyl-d-aspartate-exposed cortical neurons. **PHARMACOL RES** 87:80-6, **2014**

GUIDA N, LAUDATI G, GALGANI M, SANTOPAULO M, MONTUORI P, TRIASSI M, DI RENZO G, CANZONIERO LM*, FORMISANO L. Histone deacetylase 4 promotes ubiquitin-dependent proteasomal degradation of Sp3 in SH-SY5Y cells treated with di(2-ethylhexyl)phthalate (DEHP), determining neuronal death. **TOXICOL APPL PHARMACOL** 280(1):190-8, **2014***Co-corresponding author

FORMISANO L, GUIDA N, LAUDATI G, BOSCIA F, ESPOSITO A, SECONDO A, DI RENZO G, CANZONIERO LM. Extracellular signal-related kinase 2/specificity protein1/specificity protein 3/repressor element-1 silencing transcription factor pathway is involved in Aroclor 1254-induced toxicity in SH-SY5Y neuronal cells. **J NEUROSCI RES** 93(1):167-77, **2015**

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GUIDA N, LAUDATI G, ANZILOTTI S, SECONDO A, MONTUORI P, DI RENZO G, CANZONIERO LM, FORMISANO L. Resveratrol via sirtuin-1 downregulates RE1-silencing transcription factor (REST) expression preventing PCB-95-induced neuronal cell death. **TOXICOL APPL PHARMACOL.** 288(3):387-98, **2015**

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PERSONAL DATA

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Tel	+39-050-2219589
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E-mail	calderone@farm.unipi.it
Nationality	Italian
Birth date and Country	16/04/1967 , PALERMO (ITALY)
• Present position	- Full Professor of Pharmacology, at the "Department of Pharmacy – University of Pisa" (from 1st January 2016) - Director of the Specialization School of "Hospital Pharmacy", University of Pisa - President of the Master Degree in Pharmacy, University of Pisa - Member of the Italian Society of Pharmacology - Member of the Italian Society of Toxicology - Member of the <Interdepartment Centre of Research in Nutraceutic and Health Food - NUTRAFOOD", University of Pisa - Member of the "<Interdepartment Centre of Research in Biology and Pathology of Aging", University of Pisa

EDUCATION/ PAST POSITIONS

1985 – Degree of Classic Liceum.
1987-1989 Officer of the Italian Navy
1989-1993 Student at the Faculty of Pharmacy (University of Pisa, Italy)
1993 Master Degree In Pharmacy
1993-1996: Fellowship at the "post-lauream" Specialization School in Science and Technologies of Medicinal Plants (Internate fellow in the laboratories of Pharmacology at the Institute of Biological Science, and at the Department of Psychiatry, Neurobiology, Pharmacology and Biotechnologies – University of Pisa)
1996: Degree *cum laude* of Specialization in Science and Technologies of Medicinal Plants
1997: Visiting scientist (february-august) at the "Centre de Recherche de Vitry Altforville – Rhone-Poulenc Rorer" (Paris, France), funded by the Italian Society of Pharmacology
1997-2000: PhD in Medicinal Chemistry, at the Department of Pharmaceutical Sciences, University of Pisa
2000: Degree of PhD in Medicinal Chemistry
2001-2014 Assistant Professor of Pharmacology, at the "Department of Pharmacy – University of Pisa"
Dec 2014-2015 Associate Professor of Pharmacology, at the "Department of Pharmacy – University of Pisa"

ACTIVITY AT ABROAD INSTITUTIONS

February-August 1997: Visiting scientist at the "Centre de Recherche de Vitry Altforville – Rhone-Poulenc Rorer", Paris (France).

May-July 2013: Visiting Professor for the Course of "General Pharmacology" in the PhD in Pharmaceutical Sciences at the Albanian University of Tirana (Albania).

September 2014: Visiting Professor at the Weill Cornell Medical College, New York (U.S.A.)

SCIENTIFIC ACTIVITY

The scientific activity of Prof. Calderone has allowed him to gain extensive experience in several experimental fields, such as medicinal chemistry and cardiovascular pharmacology; he is the author of 143 publications on peer-reviewed international scientific journals, 5 international patents and more than 100 congress communications. The present rating of the citation index (H-index) is 30 (from the database Scopus).

The main research topics are:

- identification of new molecules targeting potassium channels and investigation of their potential pharmacological usefulness and toxicological aspects in the modulation of the cardiovascular function;
- characterization of the physiopharmacological roles of the gasotransmitters nitric oxide (NO) and, more recently, hydrogen sulfide (H₂S) and development of original NO-donors and H₂S-donors for pharmacotherapeutic purposes.

AWARDS FOR SCIENTIFIC ACTIVITIES

In 1997, he was awarded a fellowship funding by the Italian Society of Pharmacology for research experiences abroad, at the "Centre de Recherche de Vitry Alfortville Rhone-Poulenc Rorer" (Paris, France), where he began his studies in the field of potassium channels.

PARTICIPATION TO SCIENTIFIC INTERNATIONAL EDITORIAL BOARDS

- Editorial Board of "Frontiers in pharmacology of ion channels and channelopathies"
- Editorial Board of "Scientifica"
- Editorial Board of "American Journal of Pharmacology and Toxicology"
- Editorial Board of "Cardiovascular & Hematological Agents in Medicinal Chemistry"
- Editorial Board of the "Journal of Research in Cardiology"
- Editorial Board of Medicinal Research Reviews
- Editorial Board of Journal of Clinical Medicine

TEACHING ACTIVITY

From 2001 up to now, Prof. Calderone carried out a continuous and constant didactic activity in pharmacology; presently, the main teaching activity is:

Course of "General Pharmacology" for the Master degree in "Pharmacy", at the Department of Pharmacy, University of Pisa

Course of "Pharmacotherapy" for the Master degree in "Pharmacy", at the Department of Pharmacy, University of Pisa

Course of "Pharmacokinetics and Drug Metabolism" for the post-lauream Specialization School in "Hospital Pharmacy", at the Department of Pharmacy, University of Pisa.

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2. P.L. Ferrarini, C. Mori, M. Badawneh, C. Manera, G. Saccomanni, V. Calderone, R. Scatizzi, P.L. Barili. Stereoselective synthesis and b-blocking activity of substituted (E)- and (Z)- 4 (1H) - [1 - (3 - alkylamino - 2 - hydroxypropyl) oximino] - 2,3 - dihydro - 1,8 - naphthyridine. Potential antihypertensive agents. Part VI. *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*, 32, 955-963, 1997
3. E. Martinotti, V. Calderone, M.C. Breschi, P. Bandini, P.L. Cioni. Pharmacological action of aqueous crude extracts of *Artemisia verlotorum* Lamotte (Compositae). *PHYTOTHERAPY RESEARCH*, 11, 612-614, 1997
4. M. Magnon, V. Calderone, A. Floch, I. Caverio. Influence of vessel depolarization on vasorelaxant potency and efficacy of Ca²⁺ entry blockers, K⁺ channel openers, nitrate derivatives, salbutamol and papaverine, in rat aortic rings. *NAUNY-SCHMIEDEBERG ARCHIVES OF PHARMACOLOGY*, 358, 452-463, 1998
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9. V. Calderone, E. Martinotti. A simplified empirical approach to evaluate the dissociation constant of a full agonist by the irreversible receptor inactivation method. *JOURNAL OF PHARMACOLOGICAL AND TOXICOLOGICAL METHODS*, 40, 57-62, 1998
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31 ottobre 2017

Dal 1 Novembre 2017 Responsabile dell'U.O.C. di Farmacologia e Tossicologia Medica dell'Azienda Ospedaliera Federico II

Membro della Società Italiana di Farmacologia,
Membro della Società Italiana di Tossicologia

Membro della Società Italiana di Neuroscienze,

Membro della Commissione Ricerca e Sviluppo dell'AIFA (2011-2012)

Membro della Commissione per l'HCT della Regione Campania

Membro del Comitato Etico Dell'Università Federico II (2013-)

Membro del Comitato Etico IRCSS "Fondazione Pascale (2014-)

Membro della Commissione per il PTOA (2014-)

Titolare di finanziamenti dal CNR, dal MIUR, Dal Ministero della Salute, Dalla Regione Campania ed in passato dal MURST.

Titolare di Convenzioni con Industrie Farmaceutiche

Coordinatore nazionale di progetto COFIN 2003

Referee di riviste internazionali

Referee del MIUR per progetti di ricerca (PRIN)

Referee del GEV specifico della VQR

Autore di oltre 150 pubblicazioni su riviste a diffusione internazionale ed indicizzate.

RIVISTE IN CUI SONO APPARSE LE PUBBLICAZIONI SCIENTIFICHE:

Pharmacological Reviews, Cancer Research, , Journal Biological Chemistry, Molecular Pharmacology, British Journal Pharmacology, Endocrinology J.Clinical Endocrinology and Metabolism, Neuropharmacology, J. Neurochemistry, Naunyn- Schmiedeberg Arch. Pharmacology, J. Pharmacology Experimental Therapeutics, Journal Neuroscience Research, Neuroscience Letters, Neuroendocrinology, Biochemical Pharmacology, , Biochimica Biophysica Acta, Brain Research, Life Sciences, British Journal Clinical

Pharmacology, European Journal Pharmacology, Journal Neural Transmission, Brain Research, Experientia, European Journal Clinical Pharmacology, Archives Internationales Pharmacodyn. Ther, Neurotoxicologyy Pharmacogenmics J.,Stroke, Clinical Pharmacology and Therapeutics.

Principali pubblicazioni negli ultimi 10 anni

2019

Resveratrol treatment reduces the vulnerability of SH-SY5Y cells and cortical neurons overexpressing SOD1-G93A to Thimerosal toxicity through SIRT1/DREAM/PDYN pathway

By: Laudati, G (Laudati, Giusy)^[1,2]; Mascolo, L (Mascolo, Luigi)^[1]; Guida, N (Guida, Natascia)^[3]; Sirabella, R (Sirabella, Rossana)^[1]; Pizzorusso, V (Pizzorusso, Vincenzo)^[1]; Bruzzaniti, S (Bruzzaniti, Sara)^[1]; Serani, A (Serani, Angelo)^[1]; Di Renzo, G (Di Renzo, Gianfranco)^[1]; Canzoniero, LMT (Canzoniero, Lorella M. T.)^[1,2]; Formisano, L (Formisano, Luigi)^[1,2]

NEUROTOXICOLOGY Volume: 71 Pages: 6-15

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