

# LUCIANA GIARDINO

## CURRICULUM VITAE

### INFORMAZIONI PERSONALI

Nome	LUCIANA GIARDINO
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Posizione Attuale	Professore Associato, Università di Bologna
Nazionalità	Italiana
Data di nascita	19/05/1957

### FORMAZIONE

1982	Laurea in Medicina e Chirurgia, Università di Napoli, II Policlinico, <i>summa cum laude</i>
1985	Diploma di Specializzazione in Endocrinologia, Università di Modena, <i>summa cum laude</i>

### INCARICHI RICOPERTI (AD OGGI)

Dal 2006	Presidente della Fondazione IRET – L’Occhio della Conoscenza sul Cervello ONLUS
2011-2016	Responsabile Unità Operativa di Medicina Traslazionale del Centro Interdipartimentale di Ricerca Industriale (CIRI SDV), Università di Bologna
Dal 2013	Socio Fondatore della start-up innovativa TransMed Research srl
Dal 2014	Direttore di studi del Centro di Saggio di Transmed Research (certificazione Buone Pratiche di Laboratorio 2014/25 del Ministero della Salute)

### ESPERIENZA LAVORATIVA

1988-1992	Funzionario Tecnico di VIII livello, Istituto di Fisiopatologia e Terapia del Dolore, Università di Milano
1992-1995	Funzionario Tecnico di VIII livello, Clinica Otorinolaringoiatrica II, Università di Milano
1995-1999	Coordinatore Tecnico di IX Livello, Clinica Otorinolaringoiatrica II, Università di Milano
1999-2001	Coordinatore Tecnico di IX Livello, Dipartimento di Scienze Mediche

	Veterinarie, Università di Bologna
2001-2014	Ricercatore confermato, Dipartimento di Scienze Mediche Veterinarie, Università di Bologna
2014-ad oggi	Professore Associato, Dipartimento di Scienze Mediche Veterinarie, Università di Bologna
2014 e rinnovata nel 2016	Ha conseguito l'abilitazione nazionale come Professore Ordinario nel SSD H1 (Anatomia e Fisiologia Veterinaria)

## DIDATTICA

attualmente	Cellule staminali in medicina rigenerativa, Laurea Magistrale in Biotecnologie animali, Università di Bologna
attualmente	Neurobiologia e modelli animali di malattie neurologiche, Laurea Magistrale in Biotecnologie animali, Università di Bologna
attualmente	Scienza dell'animale da laboratorio e modelli animali per medicina traslazionale, Laurea Magistrale a ciclo unico in Medicina veterinaria, Università di Bologna

## CAPACITA' E COMPETENZE PERSONALI

Madrelingua	Italiano
Altre Lingue	Inglese con buona capacità di scrittura, lettura, espressione orale

Dal 1987 ha gestito autonomamente le attività di ricerca come PI di progetti locali e nazionali anche attraverso numerose collaborazioni (Dr. Luigi ALOE, CNR, Roma; Prof.ssa Rita LEVI MONTALCINI; Prof. Thomas HOKFELT Karolinska Institutet, Stoccolma). Conseguentemente ha consolidata capacità di coordinamento con i collaboratori e gli interlocutori esterni con buona attitudine all'ascolto e avanzata nel prendere decisioni sia tecnico scientifiche che gestionali.

In aggiunta alle attività istituzionali (organizzative, scientifiche e didattiche), ha fondato la Fondazione IRET-ONLUS, che ha costruito un autonomo laboratorio di ricerca (550mq). Gestisce la fondazione, i suoi contatti, i suoi contratti e progetti.

Ha organizzato numerosi corsi teorico-pratico di Metodi in Neuroscienze e partecipato all'organizzazione di workshop internazionali (Technical Workshop: Image Anakysis in Neurobiology, 12th ENA meeting, Torino; 7th International Congress on NGF and related molecules, Modena, Italy). Ad aprile 2016 ha diretto la segreteria scientifica del *The First International Rita Levi-Montalcini's Scientific Meeting. Nerve Growth Factor (NGF): Neuroscience and Therapy*, Bologna. Dal 2015 a marzo di ogni anno organizza per le scuole superiori di Bologna e Provincia UNISTEM Day.

Ha capacità di attrarre fondi per la ricerca e per il trasferimento tecnologico e di interlocuzione con soggetti terzi (clinici, imprenditori, funzionari comunali, regionali e ministeriali).

Ha capacità gestionali anche amministrative e nella stesura di budget di progetti.

Ha buone conoscenze del fund raising nel campo no-profit.

Ha capacità relazionali con associazioni di malati.

## CAPACITA' E COMPETENZE TECNICHE

- Neuroanatomia Chimica
- Modelli animali (da lesione e transgenici) per malattie neurodegenerative: Alzheimer, sclerosi multipla, Parkinson, atassia
- Ormoni tiroidei e fenotipo neurale e gliale
- Cellule staminali embrionali e neurali adulte per drug discovery e medicina rigenerativa
- Biomarcatori nei fluidi biologici in studi di fase clinica
- Tecnologie high throughput per drug discovery

E' autore di oltre **309 pubblicazioni scientifiche** di cui:

**134** rivista internazionale

**30** libro internazionale

**15** rivista nazionale

**15** libro nazionale

Oltre **160 partecipazioni a congressi** nazionali e internazionali

## ULTERIORI INFORMAZIONI

**Responsabilità scientifica per progetti di ricerca internazionali e nazionali, ammessi al finanziamento sulla base di bandi competitivi che prevedano la revisione tra pari**

- PRIN 2002: Studio dell'interazione tra campi elettromagnetici e cellule Nervose, 24 mesi, Responsabile Unità
- PRIN 2008: Terapie farmacologiche precoci per correggere le alterazioni dello sviluppo cerebrale nel topo Ts65Dn, un modello murino di sindrome di Down, 24 mesi, Responsabile Unità
- Fondazione Ital. Sclerosi Multipla, 2004-05, Impiego dell'ormone tiroideo per favorire la rimielinizzazione nell'encefalomielite allergica sperimentale nel marmoset (*Callithrix jacchus*), 24 mesi, Ricercatore principale
- Fondazione Ital. Sclerosi Multipla, 2010-11, Insuccesso della rimielinizzazione in sclerosi multipla: un caso di ipotiroidismo tissutale indotto dall'infiammazione? 24 mesi, Ricercatore principale
- Progetto Distretti, Regione Emilia Romagna, 2010-12 Tecnologie innovative per la terapia causale delle malattie neurodegenerative, NeuroBioTech, 24 mesi, Responsabile Unità
- Progetto POR-FESR Regione Emilia Romagna 2014-2020: Step by step – Approccio integrato per il paziente con lesioni neurologiche acute, Referente scientifico della Fondazione IRET partner di progetto.

Conseguimento di premi e riconoscimenti per l'attività scientifica

- 1997: Fondazione Steven Newburgh, su segnalazione di Rita Levi-Montalcini

Risultati ottenuti nel trasferimento tecnologico in termini di partecipazione alla creazione di nuove imprese (spin off), sviluppo, impiego e commercializzazione di brevetti Inventor nei seguenti brevetti:

- Nicergoline and its metabolites in the treatment of neurodegenerative disorders of the retina and optic nerve, D001069, 2002
- AlgoDelta, RMG, 2004

A handwritten signature in black ink, appearing to read "Giardino L". The signature is fluid and cursive, with a large, stylized initial 'L' on the left.

Data Dicembre 2020

FIRMA

**Elenco delle pubblicazioni scientifiche su rivista internazionale**

- 1 Baldassarro VA, Marchesini A, **Giardino L**, Calzà L. Differential effects of glucose deprivation on the survival of fetal versus adult neural stem cells-derived oligodendrocyte precursor cells. *Glia*, **2020**, 68:898-917.
- 2 Fernandez M, Pannella M, Baldassarro VA, Flagelli A, Alastra G, **Giardino L**, Calzà L. Thyroid hormone signaling in embryonic stem cells: crosstalk with the retinoic acid pathway. *Int J Mol Sci*, **2020**, 21:8945.
- 3 Lovecchio J, Pannella M, **Giardino L**, Calzà L, Giordano E. A dynamic culture platform enhances the efficiency of the 3D HUVEC-based tube formation assay. *Biotechnol Bioeng*, **2020**, 117:789-797.
- 4 Lorenzini L, Fernandez M, Baldassarro VA, Bighinati A, Giuliani A, Calzà L, **Giardino L**. White matter and neuroprotection in Alzheimer's dementia. *Molecules*, **2020**, 25:503.
- 5 Gostynska N, Pannella M, Rocco ML, **Giardino L**, Aloe L, Calzà L. The pleiotropic molecule NGF regulates the in vitro properties of fibroblasts, keratinocytes, and endothelial cells: implications for wound healing. *Am J Physiol Cell Physiol*, **2020**, 318:C360-C371.
- 6 Fernandez M, Baldassarro VA, Capirossi R, Monteverchi R, Bonavita J, Cescatti M, Giovannini T, Giovannini G, Uneddu M, Giovanni G, **Giardino L**, Calzà L. Possible strategies to optimize a biomarker discovery approach to correlate with neurological outcome in patients with spinal cord injury: a pilot study. *J Neurotrauma*, **2020**, 37:431-440.
- 7 Bighinati A, Focarete ML, Gualandi C, Pannella M, Giuliani A, Beggiato S, Ferraro L, Lorenzini L, **Giardino L**, Calzà L. Improved functional recovery in rat spinal cord injury induced by a drug combination administered . *J Neurotrauma*, **2020**, 37:1708-1719.
- 8 Giuliani A, Lorenzini L, Baldassarro VA, Pannella M, Cescatti M, Fernandez M, Alastra G, Flagelli A, Villetti G, Imbimbo BP, **Giardino L**, Calzà L. Effects of topical application of CHF6467, a mutated form of human nerve growth factor, on skin wound healing in diabetic mice. *J Pharmacol Exp Ther*, **2020**, 375:317-331.
- 9 Borjini N, Sivilia S, Giuliani A, Fernandez M, **Giardino L**, Facchinetto F, Calzà L. Potential biomarkers for neuroinflammation and neurodegeneration at short and long term after neonatal hypoxic-ischemic insult in rat. *J Neuroinflammation*, **2019**, 16:194.
- 10 Baldassarro VA, Kręzel W, Fernández M, Schuhbaur B, **Giardino L**, Calzà L. The role of nuclear receptors in the differentiation of oligodendrocyte precursor cells derived from fetal and adult neural stem cells. *Stem Cell Res*, **2019**, 37:101443.
- 11 Giuliani A, Sivilia S, Baldassarro VA, Gusciglio M, Lorenzini L, Sannia M, Calzà L, **Giardino L**. Age-Related Changes of the Neurovascular Unit in the Cerebral Cortex of Alzheimer Disease Mouse Models: A Neuroanatomical and Molecular Study. *J Neuropathol Exp Neurol*, **2019**, 78:101-112.
- 12 Pannella M, **Giardino L**, Calzà L, Fernández M. Growth and Neurotrophic Factors in Embryonic Stem Cells. *Meth Mol Biol*, 2018, 1727:275-294.
- 13 Calzà L, Baldassarro VA, Fernandez M, Giuliani A, Lorenzini L, **Giardino L**. Thyroid Hormone and the White Matter of the Central Nervous System: From Development to Repair. *Vitam Horm*, **2018**, 106:253-

281.

- 14 Baldassarro VA, Marchesini A, **Giardino L**, Calzà L. PARP activity and inhibition in fetal and adult oligodendrocyte precursor cells: Effect on cell survival and differentiation. *Stem Cell Res*, **2017**, 22:54-60.
- 15 Baldassarro VA, Marchesini A, **Giardino L**, Calzà L. Vulnerability of primary neurons derived from Tg2576 Alzheimer mice to oxygen and glucose deprivation: role of intraneuronal amyloid-β accumulation and astrocytes. *Dis Model Mech*, **2017**, 10:671-678.
- 16 Giunti M, Troia R, Battilani M, **Giardino L**, Dondi F, Andreani G, Fracassi F. Retrospective evaluation of circulating thyroid hormones in critically ill dogs with systemic inflammatory response syndrome. *J Vet Sci*, **2017**, 18:471-477.
- 17 Borjini N, Fernández M, **Giardino L**, Calzà L. Cytokine and chemokine alterations in tissue, CSF, and plasma in early presymptomatic phase of experimental allergic encephalomyelitis (EAE), in a rat model of multiple sclerosis. *J Neuroinflammation*, **2016**, 13:291.
- 18 Baldassarro VA, Dolci LS, Mangano C, **Giardino L**, Gualandi C, Focarete ML, Calzà L. In Vitro Testing of Biomaterials for Neural Repair: Focus on Cellular Systems and High-Content Analysis. *Biores Open Access*, **2016**, 5:201-211.
- 19 Fernandez M, Baldassarro VA, Sivilia S, **Giardino L**, Calzà L. Inflammation severely alters thyroid hormone signaling in the central nervous system during experimental allergic encephalomyelitis in rat: Direct impact on OPCs differentiation failure. *Glia*, **2016**, 64:1573-1589.
- 20 Sivilia S, Mangano C, Beggiato S, Giuliani A, Torricella R, Baldassarre V, Fernandez M, Lorenzini L, **Giardino L**, Borelli A, Ferraro L, Calza L, CDKL5 knockout leads to altered inhibitory transmission in the cerebellum of adult mice. *Genes Brain Behav*. **2016**, 15:491-502.
- 21 Giuliani A, Alessandri M, Torricella R, Baldassarre VA, Lorenzini L, Gallamini M, **Giardino L**, Calzà L, In vitro exposure to very low-level laser modifies expression level of extracellular matrix protein RNAs and mitochondria dynamics in mouse embryonic fibroblasts. *BMC Compl Alt Med*, **2015**, 24;15:78
- 22 Rinaldi S, Calzà L, **Giardino L**, Biella GE, Zippo AG and Fontani V. Radio electric asymmetric conveyer (REAC): A novel neuromodulation technology in Alzheimer's and other neurodegenerative diseases. *Frontiers in Psychiatry* **2015**, 6:22
- 23 Calzà L., Fernandez M., **Giardino L**. Role of the thyroid system in myelination and neural connectivity. *Comprehensive Physiology*, **2015**, 5:1405-21
- 24 Paradisi M, Alviano F, Pirondi S, Lanzoni G, Fernandez M, Lizzo G, **Giardino L**, Giuliani A, Costa R, Marchionni C, Bonsi L, Calzà L. Human mesenchymal stem cells produce bioactive neurotrophic factors: source, individual variability and differentiation issues. *Int J Immunopathol Pharmacol*, **2014**, 27:391-402
- 25 Beggiato S, Giuliani A, Sivilia S, Lorenzini L, Antonelli T, Imbimbo BP, Giardino L, Calzà L, Ferraro L.

CHF5074 and LY450139 sub-acute treatments differently affect cortical extracellular glutamate levels in pre-plaque Tg2576 mice.

Neuroscience. **2014**, 266C:13-22

- 26** Baldassarro VA, Lizzo G, Paradisi M, Fernandez M, **Giardino L**, Calzà L.  
Neural stem cells isolated from amyloid precursor protein-mutated mice: a tool for in vitro studies and drug discovery  
World Journal on Stem Cells, **2013**, 5:229-37
- 27** Ross J, Sharma S, Winston J, Nunez M, Bottini G, Franceschi M, Scarpini E, Frigerio E, Fiorentini F, Fernandez M, Sivilia S, **Giardino L**, Calza L, Norris D, Cicirello H, Casula D, Imbimbo BP.  
CHF5074 reduces biomarkers of neuroinflammation in patients with mild cognitive impairment: a 12-week, double-blind, placebo-controlled study.  
Curr Alzheimer Res. **2013**;10(7):742-53.
- 28** Calzà L, Baldassarro VA, Giuliani A, Lorenzini L, Fernandez M, Mangano C, Sivilia S, Alessandri M, Gusciglio M, Torricella R, **Giardino L**.  
From the multifactorial nature of Alzheimer's disease to multitarget therapy: the contribution of the translational approach.  
Curr Top Med Chem. **2013**;13(15):1843-52.
- 29** Sivilia S, Lorenzini L, Giuliani A, Gusciglio M, Fernandez M, Baldassarro VA, Mangano C, Ferraro L, Pietrini V, Baroc MF, Visconti AR, Ottonello S, Villetti G, Imbimbo BP, Calzà L, **Giardino L**.  
Multi-target action of the novel anti-Alzheimer compound CHF5074: in vivo study of long term treatment in Tg2576 mice.  
BMC Neurosci. **2013**;14:44. doi: 10.1186/1471-2202-14-44.
- 30** Giuliani A, Beggiato S, Baldassarro VA, Mangano C, **Giardino L**, Imbimbo BP, Antonelli T, Calzà L, Ferraro L.  
CHF5074 restores visual memory ability and pre-synaptic cortical acetylcholine release in pre-plaque Tg2576 mice.  
J Neurochem. **2013**;124(5):613-20.
- 31** Imbimbo BP, Frigerio E, Breda M, Fiorentini F, Fernandez M, Sivilia S, **Giardino L**, Calzà L, Norris D, Casula D, Shenouda M.  
Pharmacokinetics and pharmacodynamics of CHF5074 after short-term administration in healthy subjects.  
Alzheimer Dis Assoc Disord. **2013**; 27(3):278-86.
- 32** Massella A, D'Intino G, Fernández M, Sivilia S, Lorenzini L, Giatti S, Melcangi RC, Calzà L, **Giardino L**.  
Gender effect on neurodegeneration and myelin markers in an animal model for multiple sclerosis.  
BMC Neurosci. **2012**;13:12. doi: 10.1186/1471-2202-13-12.
- 33** Dell'Acqua ML, Lorenzini L, D'Intino G, Sivilia S, Pasqualetti P, Panetta V, Paradisi M, Filippi MM, Baiguera C, Pizzi M, **Giardino L**, Rossini PM, Calzà L.  
Functional and molecular evidence of myelin- and neuroprotection by thyroid hormone administration in experimental allergic encephalomyelitis.  
Neuropathol Appl Neurobiol. **2012**;38(5):454-70.
- 34** D'Intino G, Lorenzini L, Fernandez M, Taglioni A, Perretta G, Del Vecchio G, Villoslada P, **Giardino L**,

Calzà L.

Triiodothyronine administration ameliorates the demyelination/remyelination ratio in a non-human primate model of multiple sclerosis by correcting tissue hypothyroidism.  
J Neuroendocrinol. 2011;23(9):778-90.

- 35 Balducci C, Mehdawy B, Mare L, Giuliani A, Lorenzini L, Sivilia S, **Giardino L**, Calzà L, Lanzillotta A, Sarnico I, Pizzi M, Usiello A, Visconti AR, Ottonello S, Villetti G, Imbimbo BP, Nisticò G, Forloni G, Nisticò R.  
The gamma-secretase modulator CHF5074 restores memory and hippocampal synaptic plasticity in plaque-free Tg2576 mice.  
J Alzheimers Dis. 2011;24(4):799-816.
- 36 Baratto L, Calzà L, Capra R, Gallamini M, **Giardino L**, Giuliani A, Lorenzini L, Traverso S.  
Ultra-low-level laser therapy.  
Lasers Med Sci. 2011; 26(1):103-12.
- 37 Fernández M, Paradisi M, D'Intino G, Del Vecchio G, Sivilia S, **Giardino L**, Calzà L.  
A single prenatal exposure to the endocrine disruptor 2,3,7,8-tetrachlorodibenzo-p-dioxin alters developmental myelination and remyelination potential in the rat brain.  
J Neurochem. 2010; 115(4):897-909.
- 38 Paradisi M, Fernández M, Del Vecchio G, Lizzo G, Marucci G, Giulioni M, Pozzati E, Antonelli T, Lanzoni G, Bagnara GP, **Giardino L**, Calzà L.  
Ex vivo study of dentate gyrus neurogenesis in human pharmacoresistant temporal lobe epilepsy.  
Neuropathol Appl Neurobiol. 2010; 36(6):535-50.
- 39 Imbimbo BP, **Giardino L**, Sivilia S, Giuliani A, Gusciglio M, Pietrini V, Del Giudice E, D'Arrigo A, Leon A, Villetti G, Calzà L.  
CHF5074, a novel gamma-secretase modulator, restores hippocampal neurogenesis potential and reverses contextual memory deficit in a transgenic mouse model of Alzheimer's disease.  
J Alzheimers Dis. 2010; 20(1):159-73.
- 40 Pirondi S, Giuliani A, Del Vecchio G, **Giardino L**, Hökfelt T, Calzà L.  
The galanin receptor 2/3 agonist Gal2-11 protects the SN56 cells against beta-amyloid 25-35 toxicity.  
J Neurosci Res. 2010; 88(5):1064-73.
- 41 Massella A, Gusciglio M, D'Intino G, Sivilia S, Ferraro L, Calzà L, **Giardino L**.  
Gabapentin treatment improves motor coordination in a mice model of progressive ataxia.  
Brain Res. 2009; 1301:135-42.
- 42 Fernández M, Paradisi M, Del Vecchio G, **Giardino L**, Calzà L.  
Thyroid hormone induces glial lineage of primary neurospheres derived from non-pathological and pathological rat brain: implications for remyelination-enhancing therapies.  
Int J Dev Neurosci. 2009; 27(8):769-78.
- 43 Calzà L, Fernandez M, **Giardino L**.  
Cellular approaches to central nervous system remyelination stimulation: thyroid hormone to promote myelin repair via endogenous stem and precursor cells.  
J Mol Endocrinol. 2010; 44(1):13-23.

- 44** Lorenzini L, Giuliani A, **Giardino L**, Calzà L.  
Laser acupuncture for acute inflammatory, visceral and neuropathic pain relief: An experimental study in the laboratory rat.  
*Res Vet Sci.* **2010**; 88(1):159-65.
- 45** Del Vecchio G, Giuliani A, Fernandez M, Mesirca P, Bersani F, Pinto R, Ardoino L, Lovisolo GA, **Giardino L**, Calzà L.  
Effect of radiofrequency electromagnetic field exposure on in vitro models of neurodegenerative disease.  
*Bioelectromagnetics.* **2009**; 30(7):564-72.
- 46** Sivilia S, Giuliani A, Fernández M, Turba ME, Forni M, Massella A, De Sordi N, **Giardino L**, Calzà L.  
Intravitreal NGF administration counteracts retina degeneration after permanent carotid artery occlusion in rat.  
*BMC Neurosci.* **2009**; 10:52.
- 47** Del Vecchio G, Giuliani A, Fernandez M, Mesirca P, Bersani F, Pinto R, Ardoino L, Lovisolo GA, **Giardino L**, Calzà L.  
Continuous exposure to 900MHz GSM-modulated EMF alters morphological maturation of neural cells.  
*Neurosci Lett.* **2009**; 455(3):173-7.
- 48** Giuliani A, Lorenzini L, Gallamini M, Massella A, **Giardino L**, Calzà L.  
Low infra red laser light irradiation on cultured neural cells: effects on mitochondria and cell viability after oxidative stress.  
*BMC Complement Altern Med.* **2009** Apr 15;9:8.
- 49** Sivilia S, Giuliani A, Del Vecchio G, **Giardino L**, Calzà L.  
Age-dependent impairment of hippocampal neurogenesis in chronic cerebral hypoperfusion.  
*Neuropathol Appl Neurobiol.* **2008**; 34(1):52-61.
- 50** Pirondi S, D'Intino G, Gusciglio M, Massella A, **Giardino L**, Kuteeva E, Ogren SO, Hökfelt T, Calzà L.  
Changes in brain cholinergic markers and spatial learning in old galanin-overexpressing mice.  
*Brain Res.* **2007**; 1138:10-20.
- 51** D'Intino G, Perretta G, Taglioni A, Calistri M, Falzone C, Baroni M, **Giardino L**, Calzà L.  
Endogenous stem and precursor cells for demyelinating diseases: an alternative for transplantation?  
*Neurol Res.* **2006**; 28(5):513-7.
- 52** D'Intino G, Vaccari F, Sivilia S, Scagliarini A, Gandini G, **Giardino L**, Calzà L.  
A molecular study of hippocampus in dogs with convulsion during canine distemper virus encephalitis.  
*Brain Res.* **2006**; 1098(1):186-95.
- 53** Emgård M, Paradisi M, Pirondi S, Fernandez M, **Giardino L**, Calzà L.  
Prenatal glucocorticoid exposure affects learning and vulnerability of cholinergic neurons.  
*Neurobiol Aging.* **2007**; 28(1):112-21.
- 54** Pirondi S, Fernandez M, Schmidt R, Hökfelt T, **Giardino L**, Calzà L.  
The galanin-R2 agonist AR-M1896 reduces glutamate toxicity in primary neural hippocampal cells.  
*J Neurochem.* **2005**; 95(3):821-33.

- 55** Fernandez M, Pirondi S, Antonelli T, Ferraro L, **Giardino L**, Calzà L.  
Role of c-Fos protein on glutamate toxicity in primary neural hippocampal cells.  
*J Neurosci Res.* **2005**; 82(1):115-25.
- 56** Pirondi S, Kuteeva E, **Giardino L**, Ferraro L, Antonelli T, Bartfai T, Ogren SO, Hökfelt T, Calzà L.  
Behavioral and neurochemical studies on brain aging in galanin overexpressing mice.  
*Neuropeptides.* **2005**; 39(3):305-12.
- 57** Calzà L, Fernandez M, Giuliani A, D'Intino G, Pirondi S, Sivilia S, Paradisi M, Desordi N, **Giardino L**.  
Thyroid hormone and remyelination in adult central nervous system: a lesson from an inflammatory-demyelinating disease.  
*Brain Res Brain Res Rev.* **2005**; 48(2):339-46.
- 58** D'Intino G, Paradisi M, Fernandez M, Giuliani A, Aloe L, **Giardino L**, Calzà L.  
Cognitive deficit associated with cholinergic and nerve growth factor down-regulation in experimental allergic encephalomyelitis in rats.  
*Proc Natl Acad Sci U S A.* **2005**; 102(8):3070-5.
- 59** Giuliani A, D'Intino G, Paradisi M, **Giardino L**, Calzà L.  
p75(NTR)-immunoreactivity in the subventricular zone of adult male rats: expression by cycling cells.  
*J Mol Histol.* **2004**; 35(8-9):749-58.
- 60** Giuliani A, Fernandez M, Farinelli M, Baratto L, Capra R, Rovetta G, Monteforte P, **Giardino L**, Calzà L.  
Very low level laser therapy attenuates edema and pain in experimental models.  
*Int J Tissue React.* **2004**; 26(1-2):29-37.
- 61** Fernandez M, Giuliani A, Pirondi S, D'Intino G, **Giardino L**, Aloe L, Levi-Montalcini R, Calzà L.  
Thyroid hormone administration enhances remyelination in chronic demyelinating inflammatory disease.  
*Proc Natl Acad Sci U S A.* **2004**; 101(46):16363-8.
- 62** **Giardino L**, Giuliani A, Fernandez M, Calzà L.  
Spinal motoneurone distress during experimental allergic encephalomyelitis.  
*Neuropathol Appl Neurobiol.* **2004**; 30(5):522-31.
- 63** Fernandez M, Pirondi S, Manservigi M, **Giardino L**, Calzà L.  
Thyroid hormone participates in the regulation of neural stem cells and oligodendrocyte precursor cells in the central nervous system of adult rat.  
*Eur J Neurosci.* **2004**; 20(8):2059-70.
- 64** Fernandez M, Pirondi S, Manservigi M, **Giardino L**, Calzà L.  
Thyroid hormone participates in the regulation of neural stem cells and oligodendrocyte precursor cells in the central nervous system of adult rat.  
*Eur J Neurosci.* **2004**; 20(8):2059-70.
- 65** Calzà L, Fernandez M, Giuliani A, Pirondi S, D'Intino G, Manservigi M, De Sordi N, **Giardino L**.  
Stem cells and nervous tissue repair: from in vitro to in vivo.  
*Prog Brain Res.* **2004**; 146:75-91.

- 66** Calzà L, Fernandez M, Giuliani A, Pirondi S, D'Intino G, **Giardino L**.  
Nerve growth factor in the central nervous system: more than neuron survival.  
*Arch Ital Biol.* **2003**; 141(2-3):93-102.
- 67** Calza L, Giuliani A, Fernandez M, Pirondi S, D'Intino G, Aloe L, **Giardino L**.  
Neural stem cells and cholinergic neurons: regulation by immunolesion and treatment with mitogens, retinoic acid, and nerve growth factor.  
*Proc Natl Acad Sci U S A.* **2003**; 100(12):7325-30.
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