

Curriculum vitae

Nome		Posizione/Titolo	
Manolo Carta		Full Professor of Physiology, Dipartimento di Scienze Biomediche, Università di Cagliari	
Education			
Institution			
Cagliari University	Bachelor's degree	03/2000	Biology
Cagliari University	Specialization	12/2004	Science of Nutrition

Post-graduate training and positions

- *May/September 2002* - Short term Marie Curie Fellowship for PhD students at the University of Lund, Sweden. Supervisor Prof. Patrik Brundin
- *July/December 2003* - Short term Marie Curie Fellowship for PhD students at the University of Lund, Sweden. Supervisor Prof. Angela Cenci-Nilsson
- *January 2005/January 2007* - Post doctoral position, Wallenberg Neuroscience Center, University of Lund, Sweden. Supervisor Prof. Anders Björklund
- *January 2007/December 2009* - Research position in Prof. Björklund's laboratory, Wallenberg Neuroscience Center, University of Lund, Sweden. Supervisor of one post doc.
- *January 2010* - Assistant Professorship position at Lund University, Sweden
- *October 2010 – December 2014* - Permanent research (PI) position at Cagliari University, Italy, Department of Biomedical Sciences
- *December 2014 –* Associate Professor of Physiology, Department of Biomedical Sciences, Cagliari University
- *March 2021* - Full Professor of Physiology, Department of Biomedical Sciences, Cagliari University

Grants and Awards

- *2006* - *Parkinson's Disease Foundation IRGP grant* for the project "*The role of serotonin neurons in the induction and maintenance of dyskinesias in grafted and L-DOPA-primed animals*". Role: PI
- *2007* - *Parkinsonfonden* (Swedish Parkinson Disease Foundation) funding support for investigating the role of the serotonin neurons in L-DOPA-induced dyskinesia. Role: PI
- *2007* - *Parkinson's Disease Foundation IRGP grant* for the project "*5-HT1A and 5-HT1B receptors as potential target for anti-dyskinetic therapy*". Role: PI
- *2007* - *Parkinsonfonden* (Swedish Parkinson Disease Foundation) funding support for investigating the effect of 5-HT1A and 5-HT1B on L-DOPA-induced dyskinesias in MPTP-lesioned monkeys. Role: PI
- *2008* - *Michael J Fox Foundation "Therapeutic Development Initiative"* grant for the project "*Pre-clinical characterization of 5-HT1A and 5-HT1B receptor agonists for the treatment of L-DOPA-induced dyskinesia*". Role: PI
- *2008* - *Parkinsonfonden* (Swedish Parkinson Disease Foundation) funding support for investigating the role of BDNF in L-DOPA-induced dyskinesias. Role: PI
- *2010* - *Crafoord Grant* for the project "*SSRI effect of L-DOPA-induced dyskinesia*". Role: PI

- 2010 - *Parkinsonfonden* (Swedish Parkinson Disease Foundation) grant 2010. 1 Role: PI
- 2012 - Research grant from the Sardinian regional government for investigating a combined 5-HT1/A2A receptors treatment for dyskinesia. Role: PI
- 2012 - *Michael J Fox Foundation* research grant for the project “*Pharmacological targeting of the 5-HT1, A2A and NMDA receptors: an integrative approach to dyskinesia*”. Role: PI
- 2012 – *Banco di Sardegna Foundation* grant for the project “*SSRI as a risk factor for L-DOPA-induced dyskinesia*”. Role: PI
- 2012 – *PRIN research grant from the Italian Ministry of Education and Research* for the project “*L-DOPA-induced dyskinesia in Parkinson's disease: new mechanisms and molecular targets*”. Role: coPI
- 2013 - *Michael J Fox Foundation* research grant for the project “*5-Hydroxy-Tryptophan and eltoprazine for the treatment of L-DOPA-induced dyskinesia*”. Role: PI
- 2014 - *Michael J Fox Foundation* research grant for the project “*5-alpha-reductase inhibition for the treatment of L-DOPA-induced dyskinesia*”. Role: PI
- 2017 – *Fondazione di Sardegna* grant for the project “*Neurosteroids as a novel predictive biomarker associated with sleep disorders in PD*”. Role: coPI
- 2018 - Research grant from the Sardinian regional government for the project “*Terapie farmacologiche innovative e approcci nutrizionali per la neuroinfiammazione in malattie psichiatriche e neurodegenerative*”. Role: PI
- 2020 - *Michael J Fox Foundation* research grant for the project “*Pregnenolone for the treatment of L-DOPA-induced dyskinesia in Parkinson's disease*”. Ruolo: PI
- 2021 – *Fondazione di Sardegna* grant for the project “*Targeting neurosteroids for neuroprotection in Parkinson's disease*”. Role: PI
- 2022 - *Michael J Fox Foundation* research grant for the project “*Pregnenolone for established dyskinesia in Parkinson's disease*”. Role: PI
- 2024 – Finanziamento da parte dello Spoke 2 del consorzio MNESYS nell'ambito dei bandi a cascata relativi al progetto “*A multiscale integrated approach to the study of the nervous system in health and disease*”. Titolo della ricerca finanziata: “*Targeting NMDA receptors through D-serine supplementation to potentiate synaptic plasticity and connectivity and counteract motor and non-motor symptoms in an alpha-synuclein over-expression rat model of Parkinson's Disease*”. Role: PI

Invited oral presentations at international meetings

- 2006 - 17th NECTAR meeting, Freiburg, Germany, 30 Nov-02 Dec
- 2007 - DA 50 years meeting, Goteborg, Sweden, 30 May-02 June
- 2007 - IBAGS IX meeting, Egmond aan Zee, the Netherlands, September 02-06
- 2007 - LIMPE seminars, Alghero, Italy, September 23-25
- 2008 - 10th International Transplantation meeting, Freiburg, Germany, September 10-13
- 2010 - Serotonin Club meeting, Montreal, Canada, July 9-11
- 2010 - World Parkinson Congress, Glasgow, Scotland, 29 Sept-01 Oct
- 2011 - Italian Society for Pharmacology meeting- Bologna, September 14-17
- 2011 - Italian Society for Physiology meeting, Sorrento, Italy, September 26-27
- 2012 - Italian Society for Neuroscience meeting, Catania, Italy, April 19-22
- 2013 - Dopamine 2013 meeting, Alghero, Italy, May 24-28
- 2013 - Open issues in Parkinson's disease, Cuglieri, Italy, May 30-31
- 2013 – LIMPE meeting, Rome, Italy, October 9-11
- 2014 - Italian Society for Physiology meeting, Anacapri, Italy, September 28-30
- 2015 - Italian Society for Neuroscience meeting, Cagliari, Italy, October 8-11

- 2006 - World Parkinson Congress, Portland, Oregon, USA, September 21-23
- 2017 - Italian Society for Neuroscience meeting, Lacco Ameno, Ischia, Italy October 1-4
- 2017 - Movement Disorder Society meeting, Vancouver, Canada, June 4-8
- 2018 - LIMPE meeting, Rome, Italy, May 23-26

Editorial work

- 2018 - Guest Editor for the special issue “Dyskinesia and other side effect of L-DOPA therapy in Parkinson’s disease” on Journal of Neural Transmission. Chief Editor Etienne Hirsch

Selected articles

1. **Carta M**, Lindgren H, Lundbland M, Stancampiano R, Fadda F, Cenci MA. Role of striatal L-DOPA in the production of dyskinesia in 6-hydroxydopamine lesioned rats. **Journal of Neurochemistry**, 2006 March;96(6):1718–1727
2. **Carta M**, Carlsson T, Kirik D and Bjorklund A. Dopamine released from 5-HT terminals is the cause of L-DOPA-induced dyskinesia in parkinsonian rats. **Brain**, 2007 Jul;130(Pt 7):1819-33
3. Muñoz A, Lin Q, Gardoni F, Marcello E, Qin C, Carlsson T, Kirik D, Di Luca M, Björklund A, Bezard E and **Carta M**. Combined 5-HT1A and 5-HT1B receptor agonists for the treatment of L-DOPA-induced dyskinesia. **Brain**, 2008 Dec;131(Pt 12):3380-94
4. Muñoz A, Carlsson T, Tronci E, Kirik D, Björklund A, and **Carta M**. Serotonin neuron-dependent and -independent reduction of dyskinesia by 5-HT1A and 5-HT1B receptor agonists in the rat Parkinson model. **Experimental Neurology**, 2009 Sep;219(1):298-307
5. **Carta M**, Bezard E. Contribution of pre-synaptic mechanisms to l-DOPA-induced dyskinesia. **Neuroscience**, 2011 Dec 15;198:245-51
6. Shin E, Garcia J, Winkler C, Bjorklund A, **Carta M**. Serotonergic and dopaminergic mechanisms in graft-induced dyskinesia in a rat model of Parkinson’s disease. **Neurobiology of Disease**, 2012 Sep;47(3):393-406
7. Bezard E, Tronci E, Pioli EY, Li Q, Porras G, Bjorklund A, **Carta M**. Study of the antidyskinetic effect of eltopazine in animal models of levodopa-induced dyskinesia. **Movement Disorders**, 2013 Jul;28(8):1088-96
8. Tronci E, Lisci C, Stancampiano R, Fidalgo C, Devoto D, **Carta M**. 5-Hydroxy-tryptophan for the treatment of l-DOPA-induced dyskinesia in the rat Parkinson's disease model. **Neurobiology of Disease**, 2013 Dec;60C:108-114
9. Shin E, Lisci C, Tronci E, Fidalgo C, Stancampiano R, Bjorklund A, **Carta M**. The anti-dyskinetic effect of dopamine receptor blockade is enhanced in parkinsonian rats following dopamine neuron transplantation. **Neurobiology of Disease**, 2014 Feb;62:233-40
10. Shin E, Rogers JR, Devoto P, Björklund A, **Carta M**. Noradrenaline neuron degeneration contributes to motor impairments and development of L-DOPA-induced dyskinesia in a rat model of Parkinson's disease. **Experimental Neurology** 2014; 257:25-38
11. Bezard E, **Carta M**. Could the serotonin theory give rise to a treatment for levodopa-induced dyskinesia in Parkinson's disease? **Brain** , 2015, 138, 4: 829-831 (Commentary)
12. Frau R, Savoia P, Fanni S, Fiorentini C, Fidalgo C, Tronci E, Stancampiano R, Meloni M, Cannas A, Marrosu F, Bortolato M, Devoto P, Missale C, **Carta M**. The 5-alpha reductase inhibitor

- finasteride reduces dyskinesia in a rat model of Parkinson's disease. **Experimental Neurology** 2017; 291:1-7.
13. Tronci E, Napolitano F, Muñoz A, Fidalgo C, Rossi F, Björklund A, Usiello A, **Carta M**. BDNF over-expression induces striatal serotonin fiber sprouting and increases the susceptibility to L-DOPA-induced dyskinesia in 6-OHDA-lesioned rats. **Experimental Neurology** 2017; 297:73-81
 14. Fanni S, Scheggi S, Rossi F, Tronci E, Traccis F, Stancampiano R, De Montis MG, Devoto P, Gambarana C, Bortolato M, Frau R, **Carta M**. 5alpha-reductase inhibitors dampen L-DOPA-induced dyskinesia via normalization of dopamine D1-receptor signaling pathway and D1-D3 receptor interaction. **Neurobiology of Disease** 2019 Jan;121:120-130
 15. Scheggi S, Rossi F, Corsi S,Björklund A, **Carta M**. BDNF Overexpression Increases Striatal D3Receptor Level at Striatal Neurons and Exacerbates D1-Receptor Agonist-Induced Dyskinesia. **Journal of Parkinson's Disease**, 2020, 10(4), pp. 1503–1514
 16. Meloni, M., Puligheddu, M., Sanna, F., ...Defazio, G., **Carta, M**. Efficacy and safety of 5-Hydroxytryptophan on levodopa-induced motor complications in Parkinson's disease: **A preliminary finding**. **Journal of the Neurological Sciences**, 2020, 415, 116869
 17. Corsi S, Scheggi S, Pardu A, Braccagni G, Caruso D, Cioffi L, Diviccaro S, Gentile M, Fanni S, Stancampiano R, Gambarana C, Melcangi RC, Frau R, **Carta M**. Pregnenolone for the treatment of L-DOPA-induced dyskinesia in Parkinson's disease. **Experimental Neurology**, 2023 May;363:114370

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