**BIOGRAPHICAL SKETCH**

**María-Trinidad Herrero Ezquerro**
**(MD, MPhil, BJ, BSAdv, PhD)**

***Professor. Human Anatomy (Neuroanatomy). School of Medicine.***
***Clinical & Experimental Neuroscience Group (NiCE)***
***Biomedical Research Institute of Murcia (IMIB). Institute for Aging Research (IUIE).***
***University of Murcia. Spain***

Born in: Calahorra (Spain) - July 12th, 1961 // Passport Nº: PAC 471803 // D.N.I.: 16529839S
Personal Address: Paseo Escultor Juan Glez. Moreno 1A, 1ºA. Edificio Virgen Peligros. 30002 Murcia (Spain)
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**EDUCATION**

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|---|---|---|---|
| Teresa de Jesús College - Spain | Baccalaureate | 1975-79 | Sciences + History + Philosophy + Spanish |
| **University of Navarra - Spain** | **MD Degree** | **1979-85** | **Medicine & Surgery degree** |
| **University of Navarra - Spain** | **PhD Degree** | **1985-87** | **Medicine & Surgery** |
| University Pierre et Marie Curie - France | University Diploma | 1991-92 | Neuroanatomie |
| University of Murcia - Spain | University Diploma | 1996 | Paleo-Anthropology |
| University of Cambridge - United Kingdom | MPhil Degree | 1997 | Biology. Science & Experimental Psychology |
| University Pierre et Marie Curie - France | University Diploma | 2005-06 | Mouvement Anormaux |
| University College London - UK | Master Certificate | 2008-09 | Clinical Neurology |
| **University of Murcia** | **Bachelor of Arts** | **2006-11** | **Journalism degree** |
| **University of Murcia** | **Bachelor of Arts** | **2009-14** | **Advertising & Public Relations degree** |
| Complutense University | Master Certificate | 2012 | Aesthetic Medicine & Aging |
| University of Cambridge - United Kingdom | Univ. Diploma | 2019 | Science Communication |

**6 quinquenia (university teaching) + 5 sexenia of research.**

**POSITIONS**

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| 2019 – to date | Head of the Chair on Health Communication. University of Murcia. |
| 2017 - to date | Director. PhD Program on Aging and Frailty. University of Murcia. |
| 2017 - to date | President. Association for Women in Science (Murcia): Lyceum for Science. |
| 2015 - to date | Director. Institute for Aging Research. University of Murcia. |
| 2015 - 2017 | President. Neurotoxicity Society (NTS). |
| 2012 - 2017 | Director. PhD Program Nursery Sciences. Universitat Jaume I. |
| 2012 - 2013 | Vicedean for Medicine. Health Sciences School. Universitat Jaume I. |
| 2011- to date | Director. Master of Movement Disorders (in Spanish) |
| 2005, 2006 & 2007 | Visiting Professor. Neurology Dept. Pitié-Salpêtrière Hôpital (France) (several months / year). |
| **2006 (to date)** | **Full Professor. Human Anatomy. School of Medicine. University of Murcia (Spain).** |
| 2004 - 2008 | President. Commission on Quality of Research & Teaching. Senate of the University of Murcia. |
| 2000 - 2006 | Vice-Dean for International & Institutional Affairs. School of Medicine. Univ. of Murcia. |
| 1993 | Senior Research. Centre de Recherche Pierre Fabre. Castres (France). |
| 1990 – 1993 | Post-doctoral Fellow (INSERM U289). Pité-Salpêtrière Hospital. (France). |
| 1989 - 1993 | Associate Professor of Neuroanatomy. School of Medicine. University of Navarra (Spain). |
| 1985 - 1989 | Assistant Professor of Human Anatomy. School of Medicine. University of Navarra. |

María Trinidad Herrero is Full Professor at the School of Medicine of the University of Murcia.
She is Vice-Director of the Institute for Aging Research of Murcia and director of the PhD Program on Aging and Frailty (since 2017). She is in charge of the Frailty group of the European Innovation Coalition for Active and Healthy Ageing (EIP on AHA) in Murcia Region.
She is the co-director, with Prof. José Obeso, of the Master on Movement Disorders in Spanish (on-line Master for Spanish-speaking Neurologists, since 2011) with students from several countries.

She is the Principal Investigator of the Clinical and Experimental Neuroscience group (NiCE) belonging to the Biomedical Research Institute of Murcia (IMIB). She has published more than 160 scientific international papers with an H-Index of 49 (50 with own citations). She has got 6 quinquenia and 5 sexenia.
She has been the Principal investigator of more of 20 scientific regional, national and European projects (both basic and clinical research).

Her research is focused on cerebral aging and neurodegenerative diseases with special interest in neuroinflammmation, cognitive impairment and effect's evaluation of different strategies (as natural smartfoods and/or anti-inflammatory agents) for cognitive and emotional improvement.
She is working with different European groups on Aging and Loneliness (European Innovation Coalition for Active and Healthy Aging - EIP on AHA).
She is also deeply interested on Gender, Health & Aging (Being part of the European Project "Going Forward" of the GENDER ERA-NET call).

She is member of the Royal Academy National of Medicine (#31) and Member of the Royal Academy of Medicine of Murcia (RAMC-RM) since 2006, where she is the RAMM President since 2018 to now. (RAMC-RM was founded in 1811). She is also member of Academic and Scientific Societies related to Neuroscience, and member of Medical Academies in LatinAmerica (Mexico, Sao Paulo).
She has been President of the International Neurotoxicity Society (NTS 2015-2018) and she is still member of the International Council.

She has been organizing the Brain Awareness Week (BAW) in Murcia since 2003, in order to teach, to general people, the knowledge about brain activity and functioning (several years with the additional support of DANA Alliance and FENS) (20 editions to date).
She has co-organized the Spanish Basal Club (with Prof F. Grandas) for 18 years (1993-2012).
She organizes the Neuroclub of Murcia (meeting every 2 weeks on Thursday early morning with all clinicians working on nervous system, all specialties) (15 editions to date, since 2007).

She is the President of Women on Science of the Region of Murcia (Lyceum of Science).
She is deeply interested in equity and human rights, and she has collaborated with UN and UNESCO, and participated in activities of both dissemination and cooperation to development in different countries of LatinAmerica.

Additionally to be Bachelor and Doctor in Medicine (University of Navarra, Spain), she is Bachelor of Journalism as well as Bachelor of Advertising & Public Relations (University of Murcia).

She holds MPhil on Science (Experimental Psychology) by the University of Cambridge; Master in Clinical Neurology by University College of London; Master on Aging and Aesthetics by Complutense University of Madrid. She holds two University Diplomas by University of Paris VI (Neuroanatomy and Movement Disorders), the University Diploma of Paleoanthropology by University of Murcia, and University Diploma on Science Communication by University of Cambridge.

She speaks English, French and Italian.

*** EXPERIENCE as Principal Investigator.**

**Public Funding** (only since 2006): 33 national, regional & european projects (≅ 1.900.000 €)

- ➔* Member of the CIBER on Neurodegenerative diseases: CIBERNED. Spanish Ministry of Health.
  2006-2015.
- ➔* Innovative Medicine Initiative (IMI) aiming to improve the prediction of the cognitive properties of new drug candidates for neurodegenerative diseases in early clinical development (IMI-PHARMACOG+EFPIA).
  2010-2015.
- ➔ * Smartfoods, aging and cognitive function. CDTI-Spain (National Center for Tecnological Development)
  2016-2020.
- ➔* Prion-like dissemination of synuclein pathology: a non-human primate study. Michael J Fox Foundation.
  PI = Erwan Bezard
  2013-2015.
- ➔* Aging, lipidic homeostasis and inflammation in experimental Parkinsonism. Effect of fasudil and/or pioglitazone treatment. Spanish Ministry of Science and Innovation.
  2014-2017.

➔*Neurodegeneration and progression in experimental Parkinsonism: effect of aging. Fundacion Seneca (Regional Agency for Science and Technology). Regional Ministry of Universities, Industry and Science. 2015-2017

➔* Smartfoods, aging and cognitive function. CDTI-Spain (National Center for Tecnological Development), Ministry of Science and Innovation.
2016-2020.

➔* Neuroprotection in neurodegenerative processes associated with Parkinsonism and aging. University of Maastricht, The Netherlands.
2018-2019.

➔* Senses4All. Fundacion Seneca (Regional Agency for Science and Technology). Regional Ministry of Universities, Industry and Science.
2018-2019.

➔*Chair of Health Communication. ASISA Foundation and University of Murcia.
2019-2024.

➔* Gender, Health and Aging. European Research Area Network (ERA-NET). ERA-NET COFUND GENDERNET ERANET PLUS Project (Canada, Sweden, Austria, Chipre & Spain).
2019-2023.

➔* Sincrotón ALBA (proposal 2020094491). Beamtime at MIRAS for the run 2021-1; for cerebral protein analysis related with the aging process: Sincroton-free use, full stipends + fees for 2 weeks for 2 researchers.
2020-2022

➔* JUNO+: robotics applied to elderly people. Fundacion Seneca (Regional Agency for Science and Technology). Project with UPCT (Polytechnic University of Cartagena) + UMU (University of Murcia).
2022-2023.

*** EXPERIENCE as Director of PhD Thesis**: (Since 2006 only:)

Number of PhD thesis = 26 (some of them Internationald and /or in Co-tutelle); Master thesis = 36.

*** HONORS & AWARDS** (only a selection):

2022.- Correspondant Academic Member of the Academy of Medicine of Sao Paulo. Brazil.
2021.- National Royal Academy of Medicine of Spain. Academic & Number Member (N° XXXI).
2021.- Talent Project. Republic of China
2021.- Hippocrate Award. Official Medical Council of Physicans of Murcia.
2021.- Award on Science and Medicine. La Verdad of Murcia.
2018.- President-elect. Royal Academy of Medicine in Murcia.
2011-2014 - Secretary General. Royal Academy of Medicine in Murcia.
2013.- Honorary Academic Member. Royal Academy of Medicine in Valencia.
2012.- Woman of the Year in Murcia.
2010.- Spanish National Award on Parkinson's disease Research.
2010.- Correspondant Academic Member of the National Academy of Medicine. Republic of Mexico.
2008.- Honorary member of the Argentina Association of Medicine. Republic of Argentina.
2008.- Honorary Citizen. Buenos Aires City Hall. Republic of Argentina.
2006.- Royal Academy of Medicine in Murcia. Academic & Number Member (N° XXVII).

*** PAPERS - Manuscripts in English = 164 (142+22) ; H-Index = 49** (Web of Science) **- 50** (with own citations)

1. Gentelman, S.; Falkai, P.; Bogerts, B.; **Herrero, M.T.**; Polak, J.M.; Roberts, G.W.*Distribution of galanin-like immunoreactivity in the human brain*. Brain Research, 1989; 505: 311-315.

2. **Herrero, M.T**.; Insausti, R.; Gonzalo, L.M. *Cortically projecting cells in the periaqueductal gray matter of the rat. A retrograde fluorescent tracer study.* Brain Research, 1991; 543: 201-212.

3. **Herrero, M.T**.; Insausti, R.; Gonzalo, L.M. *Cortical projections from the laterodorsal and dorsal tegmental nuclei. A fluorescent retrograde tracer study in the rat.* Neuroscience Letters, 1991; 123: 144-147.

4. Pérez-Otaño, I.; **Herrero, M.T**.; Oset, C.; Ceballos, M.; Luquin, M.R.; Obeso, J.A.; del Río, J. *Extensive loss of brain dopamine and serotonin induced by chronic administration of MPTP in the marmoset*. Brain Research, 1991; 567: 127-132.

5. Giaid, A.; Gibson, S.J.; **Herrero, M.T**.; Gentelman, S.; Legon, S.; Yanigasawa, M.; Masaki, T.; Roberts, G.W.; Polak, J.M. *Topographical localisation of endothelin mRNA and peptide immunoreactivity in neurones of the human brain*. Histochemistry, 1991; 95: 303-314.
6. Perez-Otaño, I.; **Herrero, M.T**.; Luquin, M.R.; Obeso, J.A.; del Rio, J. *Chronic MPTP treatment reduces Substance P and Met-enkephalin content in the basal ganglia of the marmoset*. Brain Research, 1992; 585: 156-160.

7. Perez-Otaño, I.; Oset, C.; **Herrero, M.T**.; Luquin, M.R.; Kupsch, A.; Oertel, W.; Obeso, J.A.; del Río J. *Neurotoxic effect of prenatal exposure to MPTP on the dopaminergic systems of the marmoset brain*. European Journal of Pharmacology, 1992; 217: 211-213.

8. Ibañez, J.; **Herrero, M.T**.; Insausti, R.; Belzunegui, T.; Gonzalo, L.M. S*hort-term ethanol intoxication in the rat. Effect on the entorhinal cortex*. Neuroscience Letters, 1992; 138: 199-201.

9. **Herrero, M.T**.; Hirsch, E.C.; Kastner, A.M.; Luquin, M.R.; Javoy-Agid, F.; Gonzalo, L.M.; Obeso, J.A.; Agid Y. *Neuromelanin accumulation with age in the Macaca fascicularis brainstem.* Developmental Neuroscience, 1993; 18: 133-146.

10. **Herrero M.T**.; Hirsch, E.C.; Kastner, A.M.; Luquin, M.R.; Javoy-Agid, F.; Obeso, J.A.; Agid, Y. *Does neuromelanin participate to the vulnerability of catecholaminergic neurons in MPTP intoxication in primates?* Neuroscience, 1993; 56: 499-511.

11. Kastner, A.M.; Hirsch, E.C.; **Herrero, M.T**.; Javoy-Agid, F.; Agid, Y. *Immunocytochemical quantification of tyrosine hydroxylase at a cellular level in the mesencephalon of control subjects and patients with Parkinson´s and Alzheimer´s disease*. Journal of Neurochemistry, 1993; 56: 1024-1034.

12. **Herrero, M.T**.; Ruberg, M.; Hirsch, E.C.; Mouatt, A.; Tobin, A.J.; Agid, Y.; Obeso, J.A.; Javoy-Agid, F. *GAD mRNA expression in medial pallidal neurons in MPTP-treated monkey and Parkinson´s disease.* Neuroscience Letters, 1993; 157: 57-61.

13. **Herrero, M.T**.; Hirsch, E.C.; Javoy-Agid, F.; Obeso, J.A.; Agid, Y. *Differential effects of the MPTP neurotoxin on dopaminergic and cholinergic mesopontine neurons in the monkey.* Brain Research, 1993; 624: 281-285.

14. **Herrero, M.T**.; Kastner, A.M.; Pérez-Otaño, I.; Hirsch, E.C.; Luquin, M.R.; Obeso, J.A.; del Río, J.; Agid, Y. *Gangliosides and parkinsonism.* Neurology, 1993; 43: 1050-1052.

15. **Herrero, M.T**.; Perez-Otaño, I.; Oset C.; Hirsch, E.C.; Luquin, M.R.; Javoy-Agid, F.; Agid, Y.; Obeso, J.A.; del Rio, J. *GM1 does not protect but promotes functional recovery of surviving dopaminergic neurons in the MPTP-treated monkey.* Neuroscience, 1993; 56: 965-972.

16. Laguna, J.; Luquin, M.R.; **Herrero, M.T**.; Obeso, J.A. *Behavioural tolerance to repeated apomorphine administration in parkinsonian monkeys.* Journal of Neurological Sciences, 1993; 114: 40-44.

17. Kastner, A.M.; **Herrero, M.T**.; Hirsch, E.C.; Javoy-Agid, F.; Obeso, J.A.; Agid, Y. *Decreased tyrosine hydroxylase content in the dopaminergic neurons of MPTP intoxicated monkeys effect of l-DOPA and GM1 ganglioside therapy*. Annals of Neurology, 1994; 36 (2): 206-214.

18. Obeso, J.A.; Grandas, F.; **Herrero, M.T**.; Horowski, R. *The role of pulsatile versus continuous dopamine receptor stimulation for functional recovery in Parkinson´s disease*. European Journal of Neuroscience, 1994; 6: 889-897.

19. Perez-Otaño, I.; Oset, C.; Luquin, M.R.; **Herrero, M.T**.; Obeso, J.A.; del Rio, J. *MPTP-induced parkinsonism in primates: pattern of striatal dopamine loss following acute and chronic administration*. Neuroscience Letters, 1994; 175: 121-125.

20. Guridi, J.; **Herrero, M.T**.; Guillen, J.; Luquin, M.R.; Obeso, J.A. *Subthlamotomy improves MPTP-induced parkinsonism in monkeys.* Stereotact Functional Neurosurgery, 1994; 62: 98-102.

21. Ibañez, J.; **Herrero, M.T**.; Insausti, R.; Belzunegui, T.; Tuñon, T.; Garcia-Bragado, F.; Gonzalo, L.M. *Chronic alcoholism decreases nuclear size in the human enthorinal cortex.* Neuroscience Letters, 1994; 183: 71-74.

22. Levy, R.; Ruberg, M.; **Herrero, M.T**.; Villares, J.; Javoy-Agid, F.; Agid, Y.; Hirsch, E.C. A*lterations of GABAergic neurons in the Basal ganglia of patients with Progressive Supranuclear Palsy: an in situ hybridisation study of GAD67 messenger RNA.* Neurology, 1995; 45: 127-134.

23. Perez-Otaño, I.; Oset, C.; Luquin, M.R.; **Herrero, M.T**.; Kupsch, A.; Oertel, W.; Obeso, J.A.; del Rio, J. *Neurotoxicity induced by prenatal exposure to MPTP on the monoaminergic and peptidergic systems of the marmoset brain.* Experimental Neurology, 1995; 131: 108-113.

24. **Herrero, M.T**.; Augood, S.J.; Hirsch, E.C.; Javoy-Agid, F.; Luquin, M.R.; Agid, Y.; Obeso, J.A.; Emson, P.C. *Effects of l-DOPA on pre-proenkephalin and pre-protachykinin gene expression in the MPTP-treated monkey striatum*. Neuroscience, 1995; 68: 1189-1198.

25. Levy, R.; **Herrero, M.T**.; Ruberg, M.; Guillen, J.; Luquin, M.R.; Guridi, J.; Javoy-Agid, F.; Agid, Y.; Obeso, J.A.; Hirsch, E.C. *Consequences of nigrostriatal denervation on the functioning of the basal ganglia in human and non-human primates: An in situ hybridization study of cytochrome oxidase subunit I mRNA.* European Journal Neuroscience, 1995; 7: 1199-1209.

26. Faucheux, B.; **Herrero, M.T**.; Villares, J.; Levy, R.; Javoy-Agid, F.; Obeso, J.A.; Hauw, J.; Agid, Y.; Hirsch, E.C. *[125I]-Ferrotransferrin binding sites in the striatum of control subjects, patients with Parkinson´s disease and monkeys with MPTP-induced parkinsonism.* Brain Research, 1995; 691: 115-124.

27. Levy, R.; Vila, M.; **Herrero, M.T**.; Faucheux, B.; Agid, Y.; Hirsch, E.C. *Striatal expression of substance P and methionin-enkephalin genes in patients with Parkinson´s disease*. Neuroscience Letters, 1995; 199: 220-224.

28. **Herrero, M.T**.; Levy, R.; Ruberg, M.; Javoy-Agid, F.; Agid, Y.; Obeso, J.A.; Hirsch, E.C. *GAD mRNA expression in the internal and external segment of the globus pallidus in parkinsonism.* Advances in Neurology, 1996; 69 (Parkinson´s disease): 209-216.

29. Anglade, P.; Blanchard, V.; Raisman-Vozari, R.; Faucheaux, B.; **Herrero, M.T**.; Obeso, J.A.; Strada, O.; Javoy-Agid, F.; Agid, Y.; Hirsch, E.C. *Is dopaminergic cell death accompanied by concomitant nerve plasticity?*. Advances in Neurology, 1996; 69 (Parkinson´s disease): 195-208.

30. Vila, M.; Levy, R.; **Herrero, M.T**.; Faucheux, B.; Obeso, J.A.; Agid, Y.; Hirsch, E.C. *Metabolic activity of the basal ganglia in parkinsonian syndromes in human and non-human primates: a cytochrome oxidase histochemistry study*. Neuroscience, 1996; 71: 903-912.

31. **Herrero, M.T**.; Augood, S.J.; Asensi, H.; Hirsch, E.C.; Agid, Y.; Obeso, J.A.; Emson, P.C. *Effects of l-DOPA-therapy on D2 receptor mRNA expression in the striatal MPTP-intoxicated parkinsonian monkeys.* Molecular Brain Research, 1996; 42: 149-155.

32. **Herrero, M.T**.; Levy, R.; Ruberg, M.; Luquin, M.R.; Guillen, J.; Guridi, J.; Javoy-Agid, F.; Agid, Y.; Hirsch, E.C.; Obeso, J.A. *GAD mRNA expression in medial pallidal neurons in MPTP-treated monkey and Parkinson´s disease.* Neurology, 1996; 47: 219- 224.

33. Guridi, J.; **Herrero, M.T**.; Ruberg, M.; Levy, R.; Vila, M.; Luquin, M.R.; Javoy-Agid, F.; Agid, Y.; Hirsch, E.C.; Obeso, J.A. *Subthalamotomy in parkinsonian monkeys: behavioural and biochemical.* Brain, 1996; 119: 1717-1727.

34. Vila, M.; **Herrero, M.T**.; Levy, R.; Faucheux, B.; Ruberg, M.; Guillen, J.; Luquin, R.; Guridi, J.; Javoy-Agid, F.; Obeso, J.A.; Agid, Y.; Hirsch, E.C. *Consequences of nigrostriatal denervation on the GABAergic neurons of the substantia nigra pars reticulata and superior colliculus in parkinsonian syndromes.* Neurology, 1996; 46: 1-8.

35. Vyas, S.h.; Javoy-Agid, F.; **Herrero, M.T**.; Strada, O.; Boissiere, F.; Hibner, U.; Agid, Y. *Expression of Bcl-2 in adult human brain regions with special reference to neurodegenerative disorders.* Journal Neurochemistry, 1997; 69: 223-231.

36. Insausti, R.; **Herrero, M.T**.; Witter, M.P. *Entorhinal cortex of the rat: cytoarchitectonic subdivisions and the origin and distribution of cortical efferents.* Hippocampus, 1997; 7: 146-183.

37. Anglade, P.; Vyas, Sh.; Javoy-Agid, F.; **Herrero, M.T**.; Michel, P.P.; Mouatt-Prigent, A.; Ruberg, M.; Hirsch, E.C.; Agid Y. *Apoptosis and autophagy in nigral neurons of patients with Parkinson´s disease*. Histology and Histopathology, 1997; 12: 25-31.

38. Vila, M.; Levy, R.; **Herrero, M.T**.; Ruberg, M.; Faucheux, B.; Obeso, J.A.; Agid, Y.; Hirsch, E.C. *Consequences of nigrostriatal denervation on the functioning of the basal ganglia in human and non-human primates: An in situ hybridization study of cytochrome oxidase subunit I mRNA.* Journal Neuroscience, 1997; 15: 765-772.

39. Hirsch, E.C.; **Herrero, M.T**. *Neurochemical correlates of parkinsonism. Role of dopaminergic lesions.* In: The Basal Ganglia and New surgical approaches for PD (Ed: J Obeso and CD Marsden). 1997; Pp 117-124.

40. Amoureux, M.C.; Van Gool, D.; **Herrero, M.T**.; Dom, R.; Colpaert, F.C.; Pauwels, P.J. *Regulation of metallothionein-III (GIF) mRNA in the brains of patients with Alzheimer´s Disease is not impaired.* Molecular and Chemical Neuropathology, 1997; 32: 102-121.

41. Levy, R.; Hazrati, L.N.; **Herrero, M.T**.; Vila, M.; Hassani, O.K.; Guridi, J.; Ruberg, M.; Agid, Y.; Feger, J.; Obeso, J.A.; Parent, A.; Hirsch, E.C. *Reevaluation of the functional anatomy of the basal ganglia in normal and parkinsonian states.* Neuroscience, 1997; 76: 335-343.

42. Villares, J.; Faucheux, B.; **Herrero, M.T**.; Obeso, J.A.; Duyckaerts, C.; Hauw, J.J.; Agid, Y.; Hirsch, E.C. [*125I] EGF binding in basal ganglia of patients with Parkinson´s disease & progressive supranuclear palsy and MPTP monkeys*. Exp Neurol, 1998; 154: 146-156.

43. Almirall, H.; Pigarev, I.; de la Calzada, M.D.; Pigareva, M.; **Herrero, M.T**.; Sagales, T *Nocturnal sleep structure and temperature slope in MPTP-treated monkeys.* J. Neural Transmission, 1999; 106: 1125-1134.

44. Hirsch, E.C.; Perier, C.; Orieux, G.; François, C.; Yelnik, J.; Vila, M.; Levy, R.; Tolosa, E.; Marín, C.; **Herrero, M.T**.; Obeso, J.; Agid, Y. *Metabolic changes following nigrostriatal denervation*. Trends in Neuroscience, 2000; 23, 10[268 Suppl]: S78-S86.

45. Almirall, H.; Bautista, V.; Sanchez Bahillo, A.; **Herrero, M.T**. *Ultradian and circadian body temperature and activity rhythms in chronic MPTP treated monkeys.* Clinical Neurophysiology/Neurophysiologie Clinique, 2001; 31: 161-170.

46. Barcia, C.; Sanchez-Bahillo, A.; Bautista, V.; Navarro-Ruiz, J.; Fernandez-Villalba, E.; Faucheux, B.; Hirsch, E.C.; **Herrero, M.T**. *Blood Vessels and Neurodegeneration in Parkinson's Disease. Study in Chronic MPTP-treated monkeys.* VII IBAGS, Nicholson L and Faull R, Eds. 2002; pp 341-347. ISBN 0-306-47284-8253-1 pp 1-26.

47. François, F.; Orieux, G.; Jan, C.; Tande, D.; Feger, J.; Yelnik, J.; Faucheux, B.; **Herrero M.T**.; Hirsch EC. *Anatomo-chemical organization of the basal ganglia circuitry in the normal and parkinsonian states.* VII IBAGS, Nicholson L and Faull R, Eds. 2002; pp 341-347. ISBN 0-306-47284-8253-1 Pp 521-533.

48. Barcia, C.; Bautista, V.; Sanchez-Bahillo, A.; Fernandez-Villalba, E.; Navarro, J.; Fernandez-Barreiro, A.; Poza, M.; **Herrero, M.T**. *Circadian determinations of cortisol, prolactin and melatonin in chronic methyl-phenyl-tetrahydropyridine-treated monkeys.* Neuroendocrinology, 2003; 78:118-128.

49. Barcia, C.; **Herrero, M.T**. *Differential density of blood vessels in the mesencephalon of Macaque brain stem*. Eur J Anatomy, 2003; 8: 121-126.

50. Aguilar, R.; Sanchez de las Matas, M.J.; Arriagada, C.; Barcia, C.; Caviedes, P.; **Herrero, M.T**.; Segura-Aguilar, J. *MPP+ induced degeneration is potentiated by dicoumarol in cultures of RCSN dopaminergic cell line. Implications of neuromelanin in oxidative metabolism of dopamine neurotoxicity.* Neurotoxicity Research, 2003; 5 (6):407-410.

51. Barcia, C.; de Pablos, V.; Bautista, V.; Fernandez Barreiro, A.; Poza y Poza, M.; **Herrero, M.T**. *Measurement of motor dissability in MPTP-treated macaques using a telemetry system for estimating circadian motor activity*. J. Neuroci Methods, 2004; 134: 59-64.

52. Barcia, C.; Fernandez-Villalba, E.; Sanchez-Bahillo, A.; Bautista, V.; Fernandez Barreiro, A.; Hirsch, E.C.; **Herrero, M.T**. *Evidence of active microglia in Substantia Nigra pars compacta of parkinsonian monkeys exposure.* Glia, 2004; 46: 402-409.

53. Arraigada, C.; París, I.; Sanchez de las Matas, M.J.; Martinez-Alvarado, P.; Cardenas, A.; Castaneda, P.; Graumann, R.; Olea-Azar, C.; Couve, E.; **Herrero, M.T**.; Caviedes, P.; Segura-Aguilar, J. *On the neurotoxicity mechanism of leukoaminochrome o-semiquinone radical derived from dopamine oxidation: mitochondria damage, necrosis and hydroxyl radical formation.* Neurobiol Dis., 2004; 16: 468-477.

54. Barcia, C.; Bautista, V.; Sanchez-Bahillo, A.; Fernandez-Villalba, E.; Faucheux, B.; Hirsch, E.C.; **Herrero, M.T**. *Changes in vascularization in Substantia Nigra pars compacta of chronic MPTP-treated monkeys*. J Neural Transm., 2005; 112: 1237-1248.

55. Cuenca, N.; **Herrero, M.T**.; Angulo, A.; Martinez-Navarrete, G.C.; Lopez, S.; Barcia, C.; Martín-Nieto, J. *Impairment of retinal neurons of the scotopic visual pathway in a monkey model of Parkinson´s disease.* Journal Comparative Neurology, 2005; 493: 261-273.

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