



# **CURRICULUM VITAE**

**IOANNIS CHARALAMPOPOULOS**

UNIVERSITY OF CRETE

FACULTY OF MEDICINE      DEPT. of PHARMACOLOGY

**HERAKLION 2017**



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## CURRICULUM VITAE

**Surname :** Charalampopoulos

**Name:** Ioannis

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**Webpage :** <http://regenera-pharm.med.uoc.gr>

**Date of birth:** 28-11-1971

**Marital status:** Married (Dimitra Vassou, RN) – (2) children

## EDUCATION AND ASSIGNMENTS

- 2006-2007: **Post-Doctoral Fellow**, Department of Neuroscience and Center of Excellence in Developmental Biology for Regenerative Medicine (DBRM), Karolinska Institute-Medical School, Stockholm, Sweden
- 2001-2005: **Ph.D. student, “Brain and Mind” Graduate Program**, Department of Pharmacology, Medical School, University of Crete. **Thesis title:** “**Molecular mechanisms of the neuroprotective effects of neurosteroids: regulation of apoptotic factors**”.
- 1998-2000: **M.Sc. in Neuroscience**, (ranked first) Post-Graduate Program of the School of Medicine, University of Crete.
- 1995-1996: Undergraduate trainee in the Department of Molecular Biology and Biotechnology of the National Hellenic Research Institute, Athens Greece.

- 1990-1996: **B.Sc. in Biology**, Department of Biology, University of Patras.

## POSITIONS-FELLOWSHIPS

- 2014-present: **Assistant Professor of Pharmacology**, Medical School, University of Crete.
- 2010-2014: **Lecturer in Pharmacology**, Medical School, University of Crete.
- 2007-2010: **Research Scientist**, Dept. of Pharmacology, Medical School, University of Crete.
- 2006-2007: NIH-funded **postdoctoral researcher** (Grant Number: 1R01MH071624-01A2).
- 2006: **Young Researcher**, Research Training Network (RTN) within the 5th Framework Programme of European Commission (HPRN-CT-2002-00263) entitled: ‘Evolutionary Neurogenomics of Trophic Factors’.
- 2003-2005: **PhD Fellowship**, General Secretariat of Research & Technology, Greek Ministry of Development, Program PENED01-ED258.
- 2003: Fellowship from State Scholarships Foundation (IKY).
- 2001-2003: Manassakis Ph.D. fellowship, University of Crete (highest marks as M.Sc. student).
- 1998-2000: M.Sc. Fellowship, Medical School, University of Crete.

## AWARDS

- 1<sup>st</sup> award for poster presentation in 66<sup>th</sup> Annual Hellenic Conference of the Greek Society for Biochemistry and Molecular Biology, 2015.
- 1<sup>st</sup> award for poster presentation at the 2nd Panhellenic Meeting of the Hellenic Academy of Neuroimmunology, 2014.
- 1<sup>st</sup> award for oral presentation in 6<sup>th</sup> Annual Hellenic Meeting of the Greek Pharmacological Society: “Nerve Growth Factor receptors mediate the neuroprotective effects of Neurosteroid Dehydroepiandrosterone”, 2010.
- 1<sup>st</sup> award for oral presentation in 60<sup>th</sup> Annual Hellenic Conference of the Greek Society for Biochemistry and Molecular Biology, 2009.

- 1<sup>st</sup> award for poster presentation in 56<sup>th</sup> Annual Hellenic Conference of the Greek Society for Biochemistry and Molecular Biology, 2004.

### MEMBERSHIPS

- Federation of European Biochemical Societies (FEBS).
- Federation of European Neuroscience Societies (FENS).
- The American Endocrine Society.
- European Cell Death Organization (ECDO).
- International Brain Research Organization (IBRO).
- Hellenic Society of Molecular Biology and Biochemistry.
- Hellenic Society for Neuroscience.

### Total Publications in Medline (49)

No	JOURNAL	YEAR	FIRST AUTHOR	AUTHORSHIP	IMPACT FACTOR (IF)
1	J Clin Endocrinol Metab	2003	Chatzaki	2 / 8	5,780
2	PNAS	2004	Charalampopoulos	1 / 7	10,452
3	FASEB J	2004	Alexaki	2 / 9	6,820
4	BBRC	2005	Dermitzaki	3 / 5	3,000
5	J Clin Endocrinol Metab	2005	Hatzoglou	2 / 12	6,020
6	FEBS Lett	2005	Tsatsanis	4 / 7	3,415
7	Endocrinology	2005	Charalampopoulos	1 / 7	5,313
8	Exp Cell Res	2005	Kampa	2 / 8	4,148
9	BBRC	2005	Tsatsanis	5 / 8	3,000
10	FASEB J	2006	Charalampopoulos	1 / 10	6,721
11	AM J Pathol	2006	Bamberger	7 / 13	5,917
12	J Immunol	2006	Tsatsanis	4 / 8	6,293
13	Mol Cancer Ther	2006	Kampa	5 / 11	5,137
14	Exp Cell Res	2006	Alexaki	3 / 8	3,777
15	J Steroid Biochem Mol Bio	2006	Charalampopoulos	1 / 7	2,825

16	Neuroendocrinology	2006	Charalampopoulos	1 / 10	2,680
17	Endocrinology	2006	Dermitzaki	5 / 10	5,313
18	Placenta	2007	Bamberger	4 / 7	3,238
19	Exp Cell Res	2008	Papadopoulou	2 / 5	3,695
20	J Neurochem	2008	Charalampopoulos	1 / 3	4,260
21	Mol Cancer	2008	Charalampopoulos	1/9	3,693
22	Neuron	2009	Charalampopoulos	1/15	14,170
23	Exp Cell Res	2009	Alexaki	2/6	3,695
24	J Cell Sci	2009	Vilar	2/14	6,247
25	J Med Chem	2009	Calogeropoulou	6/12	4,898
26	J Alzheimer Disease	2011	Fragkouli	3/5	3,832
27	PLoS Biology	2011	Charalampopoulos	1/9	12,916
28	J Cell Biochem	2011	Kampa	7/10	3,145
29	Neuropharmacology	2012	Kokona	2/5	4,766
30	Exp Eye Res	2012	Kokona	4/6	3,259
31	J of Immunology	2012	Notas	5/12	5,788
32	Cell Reports	2012	Charalampopoulos	1/6	7,870
33	Endocrinology	2013	Anagnostopoulou	8/9*	4,159
34	Endocrinology	2014	Pediaditakis	6/7*	4,159
35	Springerplus	2015	Lisa	4/6	0,982
36	Biomaterials	2015	Simitzi	5/9	8,387
37	Data Brief	2015	Simitzi	5/9	-
38	Translational Psychiatry	2015	Efstathopoulos	7/7*	5,538
39	Microscopy (Oxf)	2016	Vazgiouraki	5/7	1,285
40	Neuropharmacology	2016	Pediaditakis	15/16*	4,936
41	Frontiers in Pharmacology	2016	Pediaditakis	8/9*	4,418
42	Neuropharmacology	2017	Botsakis	7/15	4,936
43	Glia	2017	Bonetto	2/4	5,997
<b>REVIEWS/EDITORIALS</b>					
1	Gynecol Endocrinology	2001	Zoumakis	2 / 7	1,169

2	Ann NY Acad Sci	2006	Charalampopoulos	1 / 11	1,930
3	Ann NY Acad Sci	2006	Tsatsanis	5 / 8	1,930
4	Trends Endocrinol Metabo	2008	Charalampopoulos	1 / 4	7,195
5	Science Signaling	2012	Gravanis	6/6	7,499
6	Oncotarget	2017	Gravanis	3/3	5,008

■ 1<sup>st</sup>, 2<sup>nd</sup> or last Author: 29 papers - After my election as Assistant Professor: 3 papers

Total number of papers after my election as Assistant Professor (10/2013): 12 papers (and 2 submitted papers)

\* As Corresponding Author

Totally: 5 papers - After my election as Assistant Professor: 4 papers

# <i>h</i> index ( <i>h</i> index excluding self citations from all authors)	24 (20)
Citations (Citations excluding self citations from all authors )	1570 (1190)
Average citations per item	22,41 (3 papers >100 citations)

*#Based on Scopus and Web of Science data bases*

### Personal Indexes

Scopus Author ID: 55883246200

ORCID ID: [orcid.org/0000-0003-3415-7332](http://orcid.org/0000-0003-3415-7332)

Loop profile: 190967

ResearcherID: I-6319-2012 ( <http://www.researcherid.com/rid/I-6319-2012> )

Google Scholar profile:

<https://scholar.google.gr/citations?user=4V1FeLwAAAAJ&hl=el>

Indexes	All	Since 2012
Citations	2059	1008
<i>h</i> -index	26	20
<i>i10</i> -index	38	32

ResearchGate profile:

[https://www.researchgate.net/profile/Ioannis\\_Charalampopoulos2](https://www.researchgate.net/profile/Ioannis_Charalampopoulos2)

**LinkedIn profile:** [https://www.linkedin.com/profile/public-profile-settings?trk=prof-edit-edit-public\\_profile](https://www.linkedin.com/profile/public-profile-settings?trk=prof-edit-edit-public_profile)

**Academia.Edu profile:** <https://crete.academia.edu/IoannisCharalampopoulos>

### **All publications in PubMed (49)**

1. Bonetto G, **Charalampopoulos I**, Gravanis A, Karagogeos D. The novel synthetic microneurotrophin BNN27 protects mature oligodendrocytes against cuprizone-induced death, through the NGF receptor TrkA. *Glia*, 2017, *in press*.
2. Botsakis K, Mourtzi T, Panagiotakopoulou V, Vreka M, Stathopoulos G, Pediaditakis I, **Charalampopoulos I**, Gravanis A, Delis F, Antoniou K, Zisimopoulos D, Georgiou C, Panagopoulos N, Matsokis N, Angelatou F. BNN20, a synthetic microneurotrophin, strongly protects dopaminergic neurons in the "Weaver" mouse, a genetic model of dopamine-denervation, acting through the TrkB neurotrophin receptor. *Neuropharmacology*, 2017, Apr 28;121:140-157.
3. Gravanis A, Pediaditakis I, **Charalampopoulos I**. Synthetic microneurotrophins in therapeutics of neurodegeneration. *Oncotarget*, 2017, Feb 7;8(6):9005-9006.
4. Pediaditakis I, Kourgiantaki A, Prousis KC, Potamitis C, Xanthopoulos KP, Zervou M, Calogeropoulou T, **Charalampopoulos I**<sup>#</sup>, Gravanis A. BNN27, a 17-Spiroepoxy Steroid Derivative, Interacts With and Activates p75 Neurotrophin Receptor, Rescuing Cerebellar Granule Neurons from Apoptosis. *Front Pharmacol*. 2016, Dec 26;7:512 (# **Corresponding author**)
5. Pediaditakis I, Efstathopoulos P, Prousis KC, Zervou M, Arévalo JC, Alexaki VI, Nikoletopoulou V, Karagianni E, Potamitis C, Tavernarakis N, Chavakis T, Margioris AN, Venihaki M, Calogeropoulou T, **Charalampopoulos I**<sup>#</sup>, Gravanis A. Selective and differential interactions of BNN27, a novel C17-spiroepoxy steroid derivative, with TrkA receptors, regulating neuronal survival and differentiation. *Neuropharmacology*, 2016, Dec;111:266-282 (# **Corresponding author**)



6. Vazgiouraki E, Papadakis VM, Efstathopoulos P, Lazaridis I, **Charalampopoulos I**, Fotakis C, Gravanis A. Application of multispectral imaging detects areas with neuronal myelin loss, without tissue labelling. *Microscopy (Oxf)*, 2016, Apr;65(2):109-18.
7. Efstathopoulos P, Kourgiantaki A, Karali K, Sidiropoulou K, Margioris AN, Gravanis A, **Charalampopoulos I<sup>#</sup>**. Fingolimod induces neurogenesis in adult mouse hippocampus and improves contextual fear memory. *Transl Psychiatr.* 2015, Nov 24;5:e685 (# Corresponding author)
8. Simitzi C, Efstathopoulos P, Kourgiantaki A, Ranella A, **Charalampopoulos I**, Fotakis C, Athanassakis I, Stratakis E, Gravanis A. Data in support on the shape of Schwann cells and sympathetic neurons onto microconically structured silicon surfaces. *Data Brief*, 2015, Jul 31;4:636-40
9. Simitzi C, Efstathopoulos P, Kourgiantaki A, Ranella A, **Charalampopoulos I**, Fotakis C, Athanassakis I, Stratakis E, Gravanis A. Laser fabricated discontinuous anisotropic microconical substrates as a new model scaffold to control the directionality of neuronal network outgrowth. *Biomaterials*, 2015, Oct;67:115-28
10. Lisa S, Iban-Arias R, Kokona D, **Charalampopoulos I**, Gravanis A, Thermos K. Effects of novel synthetic microneurotrophins in diabetic retinopathy. *Springerplus*, 2015, Jun 12;4(Suppl 1):L25
11. Pediaditakis I, Iliopoulos I, Theologidis I, Delivanoglou N, Margioris AN, **Charalampopoulos I<sup>#</sup>**, Gravanis A. Dehydroepiandrosterone: an ancestral ligand of neurotrophin receptors. *Endocrinology*, 2015, Jan;156(1):16-23 (# Corresponding author)
12. Anagnostopoulou V, Pediaditakis I, Alkahtani S, Schmidt E.M, Lang F, Gravanis A, **Charalampopoulos I<sup>#</sup>**, Stournaras C. Differential effects of Dehydroepiandrosterone and Testosterone in prostate and colon cancer cell apoptosis: the role of Nerve Growth Factor (NGF) receptors. *Endocrinology*, 2013, 154(7):2446-56. (# Corresponding author)
13. **Charalampopoulos I**, Vicario A, Pediaditakis I, Gravanis A, Simi A, Ibáñez CF. Genetic Dissection of Neurotrophin Signaling through the p75 Neurotrophin Receptor. *Cell Rep.*, 2012 Dec 27;2(6):1563-70

14. Notas G, Alexaki VI, Kampa M, Pelekanou V, **Charalampopoulos I**, Sabour-Alaoui S, Pediaditakis I, Dessirier V, Gravanis A, Stathopoulos EN, Tsapis A, Castanas E. APRIL binding to BCMA activates a JNK2-FOXO3-GADD45 pathway and induces a G2/M cell growth arrest in liver cells. *J Immunol.* 2012 Nov 15;189(10):4748-58.
15. Kokona D, Mastrodimou N, Pediaditakis I, **Charalampopoulos I**, Schmid HA, Thermos K. Pasireotide (SOM230) protects the retina in animal models of ischemia induced retinopathies. *Exp Eye Res.* 2012 Oct;103:90-8.
16. Kokona D, **Charalampopoulos I**, Pediaditakis I, Gravanis A, Thermos K. The neurosteroid dehydroepiandrosterone (DHEA) protects the retina from AMPA-induced excitotoxicity: NGF TrkA receptor involvement. *Neuropharmacology.* 2012 Apr;62(5-6):2106-17.
17. Gravanis A, Calogeropoulou T, Panoutsakopoulou V, Thermos K, Neophytou C, **Charalampopoulos I**. Neurosteroids and microneurotrophins signal through NGF receptors to induce prosurvival signaling in neuronal cells. *Sci Signal.* 2012 Oct 16;5(246)
18. Kampa M, Pelekanou V, Gallo D, Notas G, Troullinaki M, Pediaditakis I, **Charalampopoulos I**, Jacquot Y, Leclercq G, Castanas E. ER $\alpha$ 17p, an ER $\alpha$  P295 - T311 fragment, modifies the migration of breast cancer cells, through actin cytoskeleton rearrangements. *J Cell Biochem.* 2011 Dec;112(12):3786-96.
19. Lazaridis I.\*, **Charalampopoulos I\***, Alexaki VI, Avlonitis N, Pediaditakis I, Efstathopoulos P, Calogeropoulou T, Castanas E, Gravanis A. Neurosteroids bind with high affinity and activate Nerve Growth Factor (NGF) receptors, preventing neuronal apoptosis. *PLoS Biol., Vol 9(4), April 2011, (\*equal contributors)*
20. Frangkouli A, Tzinia AK, **Charalampopoulos I**, Gravanis A, Tsilibary EC. Matrix metalloproteinase-9 participates in NGF-induced  $\alpha$ -secretase cleavage of amyloid- $\beta$  protein precursor in PC12 cells. *J Alzheimers Dis.* 2011;24(4):705-19.
21. Calogeropoulou T, Avlonitis N\*, Minas V\*, Alexi X, Pantzou A, **Charalampopoulos I**, Zervou M, Vergou V, Katsanou ES, Lazaridis I, Alexis MN, Gravanis A. Novel dehydroepiandrosterone derivatives with antiapoptotic, neuroprotective activity. *J Med Chem.* 2009 Nov 12;52(21):6569-87.

22. Vilar M, **Charalampopoulos I**, Kenchappa RS, Reversi A, Klos-Applequist JM, Karaca E, Simi A, Spuch C, Choi S, Friedman WJ, Ericson J, Schiavo G, Carter BD, Ibáñez CF. Ligand-independent signaling by disulfide-crosslinked dimers of the p75 neurotrophin receptor. *J Cell Sci.* 2009 Sep 15;122(Pt 18):3351-7.
23. Alexaki VI, **Charalampopoulos I**, Panayotopoulou M, Kampa M, Gravanis A, Castanas E. Dehydroepiandrosterone protects human keratinocytes against apoptosis through membrane binding sites. *Exp Cell Res*, 2009, 315(3): 2275-83
24. Vilar M\*, **Charalampopoulos I\***, Kenchappa RS\*, Simi A\*, Karaca E, Reversi A, Choi S, Bothwell M, Mingarro I, Friedman W, Schiavo G, Bastiaens P, Verveer P, Carter BD, Ibáñez CF. Activation of the p75 neurotrophin receptor through conformational rearrangement of disulphide-linked receptor dimmers. *Neuron*, 2009, 62(1): 72-83 (\* equal contributors)
25. Papadopoulou N, **Charalampopoulos I**, Alevizopoulos K, Gravanis A, Stournaras C. Actin reorganization through Rho/Rock/Limk2 mediates androgen membrane receptor-induced apoptosis of DU145 human prostate cancer cells. *Mol Cancer*, 2008, 7:88
26. **Charalampopoulos I**, Remboutsika E, Margioris AN, Gravanis A. Neurosteroids as endogenous modulators of neurogenesis and neuronal survival. *Trends Endocrinol Metab.* 2008, 19(8):300-7.
27. **Charalampopoulos I**, Margioris AN, Gravanis A. Dehydroepiandrosterone (DHEA) affects neuronal survival via binding to a specific membrane receptor which triggers multiple but integrated genomic and non-genomic pro-survival signaling pathways. *J Neurochem.* 2008, 107(5):1457-69.
28. Papadopoulou N, **Charalampopoulos I**, Alevizopoulos K, Gravanis A, Stournaras C. Actin reorganization through Rho/Rock/Limk2 mediates androgen membrane receptor-induced apoptosis of DU145 human prostate cancer cells. *Exp Cell Res*, 2008
29. Dermitzaki E, Tsatsanis C, Minas V, Chatzaki E, **Charalampopoulos I**, Venihaki M, Androulidaki A, Lambropoulou M, Spiess J, Michalodimitrakis E, Gravanis A, Margioris AN. Corticotropin releasing hormone (CRF) and urocortins differentially regulate catecholamine secretion in human and rat adrenals, in a CRF receptor type specific manner. *Endocrinology.* 2007, 148:1524-38

30. **Charalampopoulos I**, Androulidaki A, Minas V, Chatzaki E, Tsatsanis C, Notas G, Xidakis C, Kolios G, Kouroumalis E, Margioris AN, Gravanis A. Neuropeptide urocortin and its receptors are expressed in rat kupffer cells. *Neuroendocrinology*. 2006, 84:49-57. (Cover story of the Journal)
31. Alexaki VI, Dermitzaki E, **Charalampopoulos I**, Kampa M, Nifli AP, Gravanis A, Margioris AN, Castanas E. Neuronal differentiation of PC12 cells abolishes the expression of membrane androgen receptors. *Exp Cell Res*. 2006, 312:2745-56.
32. Kampa M, Kogia C, Theodoropoulos PA, Anezinis P, **Charalampopoulos I**, Papakonstanti EA, Stathopoulos EN, Hatzoglou A, Stournaras C, Gravanis A, Castanas E. Activation of membrane androgen receptors potentiates the antiproliferative effects of paclitaxel on human prostate cancer cells. *Mol Cancer Ther*. 2006, 5:1342-51.
33. Bamberger CM, Minas V, Bamberger AM, **Charalampopoulos I**, Fragouli Y, Schulte HM, Makrigiannakis A. Expression of urocortin in the extravillous human trophoblast at the implantation site. *Placenta*. 2007, 28:127-32.
34. Tsatsanis C, Androulidaki A, Alissafi T, **Charalampopoulos I**, Dermitzaki E, Roger T, Gravanis A, Margioris AN. Corticotropin-releasing factor and the urocortins induce the expression of TLR4 in macrophages via activation of the transcription factors PU.1 and AP-1. *J Immunol*. 2006, 176:1869-77.
35. Alexaki VI\*, **Charalampopoulos I\***, Kampa M, Nifli AP, Hatzoglou A, Gravanis A, Castanas E. Activation of membrane estrogen receptors induce pro-survival kinases. *J Steroid Biochem Mol Biol*. 2006, 98:97-110. (\* equal contributors)
36. **Charalampopoulos I\***, Alexaki VI\*, Lazaridis I, Dermitzaki E, Avlonitis N, Tsatsanis C, Calogeropoulou T, Margioris AN, Castanas E, Gravanis A. G protein-associated, specific membrane binding sites mediate the neuroprotective effect of dehydroepiandrosterone. *FASEB J*. 2006, 20:577-9. (\* equal contributors)
37. Bamberger AM, Minas V, Kalantaridou SN, Radde J, Sadeghian H, Loning T, **Charalampopoulos I**, Brummer J, Wagener C, Bamberger CM, Schulte HM, Chrousos GP, Makrigiannakis A. Corticotropin-releasing hormone modulates human

trophoblast invasion through carcinoembryonic antigen-related cell adhesion molecule-1 regulation. *Am J Pathol.* 2006, 168:141-50.

38. Charalampopoulos I, Alexaki VI, Tsatsanis C, Minas V, Dermitzaki E, Lasaridis I, Vardouli L, Stournaras C, Margioris AN, Castanas E, Gravanis A. Neurosteroids as endogenous inhibitors of neuronal cell apoptosis in aging. *Ann N Y Acad Sci.* 2006, 1088:139-52.

39. Tsatsanis C, Zacharioudaki V, Androulidaki A, Dermitzaki E, Charalampopoulos I, Minas V, Gravanis A, Margioris AN. Peripheral factors in the metabolic syndrome: the pivotal role of adiponectin. *Ann N Y Acad Sci.* 2006, 1083:185-95.

40. Tsatsanis C, Zacharioudaki V, Androulidaki A, Dermitzaki E, Charalampopoulos I, Minas V, Gravanis A, Margioris AN. Adiponectin induces TNF-alpha and IL-6 in macrophages and promotes tolerance to itself and other pro-inflammatory stimuli. *Biochem Biophys Res Commun.* 2005, 335:1254-63.

41. Tsatsanis C, Androulidaki A, Dermitzaki E, Charalampopoulos I, Spiess J, Gravanis A, Margioris AN. Urocortin 1 and Urocortin 2 induce macrophage apoptosis via CRFR2. *FEBS Lett.* 2005, 579:4259-64.

42. Kampa M, Nifli AP\*, Charalampopoulos I\*, Alexaki VI\*, Theodoropoulos PA, Stathopoulos EN, Gravanis A, Castanas E. Opposing effects of estradiol- and testosterone-membrane binding sites on T47D breast cancer cell apoptosis. *Exp Cell Res.* 2005, 307:41-51. (\* equal contributors)

43. Charalampopoulos I, Dermitzaki E, Vardouli L, Tsatsanis C, Stournaras C, Margioris AN, Gravanis A. Dehydroepiandrosterone sulfate and allopregnanolone directly stimulate catecholamine production via induction of tyrosine hydroxylase and secretion by affecting actin polymerization. *Endocrinology.* 2005, 146:3309-18.

44. Dermitzaki E, Tsatsanis C, Charalampopoulos I, Androulidaki A, Alexaki VI, Castanas E, Gravanis A, Margioris AN. Corticotropin-releasing hormone activates protein kinase C in an isoenzyme-specific manner. *Biochem Biophys Res Commun.* 2005, 327:828-36.

45. Hatzoglou A\*, Kampa M\*, Kogia C\*, Charalampopoulos I, Theodoropoulos PA, Anezinis P, Dambaki C, Papakonstanti EA, Stathopoulos EN,

Stournaras C, Gravanis A, Castanas E. Membrane androgen receptor activation induces apoptotic regression of human prostate cancer cells in vitro and in vivo. *J Clin Endocrinol Metab.* 2005, 90:893-903. (\* equal contributors)

46. Alexaki VI, **Charalampopoulos I**, Kampa M, Vassalou H, Theodoropoulos P, Stathopoulos EN, Hatzoglou A, Gravanis A, Castanas E. Estrogen exerts neuroprotective effects via membrane estrogen receptors and rapid Akt/NOS activation. *FASEB J.* 2004, 18:1594-6.

47. **Charalampopoulos I**, Tsatsanis C, Dermitzaki E, Alexaki VI, Castanas E, Margioris AN, Gravanis A. Dehydroepiandrosterone and allopregnanolone protect sympathoadrenal medulla cells against apoptosis via antiapoptotic Bcl-2 proteins. *Proc Natl Acad Sci U S A.* 2004, 101:8209-14.

48. Chatzaki E, **Charalampopoulos I**, Leontidis C, Mouzas IA, Tzardi M, Tsatsanis C, Margioris AN, Gravanis A. Urocortin in human gastric mucosa: relationship to inflammatory activity. *J Clin Endocrinol Metab.* 2003, 88:478-83.

49. Zoumakis E, Chatzaki E, **Charalampopoulos I**, Margioris AN, Angelakis E, Koumantakis E, Gravanis A. Cycle and age-related changes in corticotropin-releasing hormone levels in human endometrium and ovaries. *Gynecol Endocrinol.* 2001, 15:98-102.

#### SUBMITTED PAPERS

1. Vasileia-Ismini Alexaki, Georgia Fodelianaki, Ales Neuwirth, Christine Mund, Mirko Peitsch, Eleftheria Ieronimaki, Konstantina Lyroni, Maria Troullinaki, Chika Fujii, Waldemar Kanczkowski, Athanasios Ziogas, Sylvia Grossklaus, Birte Sonnichsen, Achille Gravanis, Stefan R. Bornstein, **Ioannis Charalampopoulos**, Christos Tsatsanis, Triantafyllos Chavakis. DHEA inhibits acute microglia-mediated inflammation through activation of the TrkA-Akt1/2-CREB-Jmjd3 pathway. *Mol Psychiatry* (resubmitted)

2. Lisa S, Iban-Arias R, Mastrodimou N, Koulakis E, Kokona D, Iordanisou P, Kouvarakis A, katerinopoulos H, Gravanis A, **Charalampopoulos I**, Thermos, K. The Synthetic Microneurotrophin BNN27 affects retinal function in streptozotocin-induced diabetic rats. *Diabetes* (under revisions)

IN PREPARATION

❖ Alexandra Kourgiantaki, Dimitrios S. Tzeranis, Kanelina Karali, Kyriaki Sidiropoulou, Ioannis V. Yannas, Emmanuel Stratakis, **Ioannis Charalampopoulos**, Achille Gravanis. Differentiation and Integration of Neural Stem Cells inside Porous Collagen-Based Scaffolds, transplanted in mice with experimental Spinal Cord Injury.

❖ Tsika C, Tzatzarakis MN, Tsoka PA, Efstathopoulos P, **Charalampopoulos I**, Gravanis A, Tsilimbaris MK. Quantification of a novel anti-apoptotic 17-spiroepoxy steroid derivative in the blood and retina of rodents after intraperitoneal injection.

NON MEDLINE PAPERS

1) Mastrodimou Niki, Ferrer Silvia Lisa, Arias Ruth Iban, Kokona Despina, **Charalampopoulos Ioannis**, Gravanis Achilleas, Thermos Kyriaki. "The novel microneurotrophin BNN27 protects retinal neurons in the in vivo STZ-model of Diabetic Retinopathy by activating NGF TrkA receptor", *Investigative Ophthalmology & Visual Science*, Jun 2015

2) **Charalampopoulos I.**, Kourgiantaki A., Tzeranis D., Efstathopoulos P., Mylopotamitaki K., Pediaditakis I., Yannas I., Gravanis A. "3D collagen scaffolds hosting neural stem cells: developing neuroimplants for spinal cord injury (SCI) repair", *FEBS J.*, Sep 2014

3) **Charalampopoulos I.**, Pediaditakis I., Efstathopoulos P., Zervou M., Arevalo J. C., Nikolettou V., Kourgiantaki A., Calogeropoulou T., Gravanis A. "Molecular pharmacology of synthetic neurosteroidal agonists of Nerve Growth Factor (NGF) receptors: differential neurotrophin receptors signaling", *FEBS J.*, Sep 2014

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9) Giannogonas P., Pothoulakis G., Theoharis S., **Charalampopoulos I.**, Gravanis A., Karalis K. Proinflammatory Effects of the Enteric Nervous System in Experimental Inflammatory Bowel Disease (IBD). *Neuroimmunomodulation, Vol. 18(6): 375-375, 2011.*

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28) **Charalampopoulos I**, Dermitzaki E, Vardouli L, Tsatsanis C, Stournaras C, Margioris AN, Gravanis A. Neurosteroids stimulate catecholamine secretion and synthesis in adrenomedullary cells. *Newsletter of The 56th Meeting of Hellenic Society of Biochemistry and Molecular Biology, 2004.*

29) **Charalampopoulos I**, Androulidaki A, Chatzaki E, Minas V, Tsatsanis C, Notas G, Xidakis C, Kollios G, Kouroumalis E, Margioris AN, Gravanis A. Rat Kupffer cells express neuropeptide Urocortin (UCN) and its receptors: autocrine

effects on inflammatory cytokines. *Newsletter of The 56th Meeting of Hellenic Society of Biochemistry and Molecular Biology, 2004*

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33) **Charalampopoulos I**, Tsatsanis C, Margioris AN, Gravanis A. Neurosteroids protect neuroendocrine and neuronal cells against serum-deprivation-induced Apoptosis. *Newsletter-Proceedings of the 54th Meeting of Hellenic Society of Biochemistry and Molecular Biology, 2002.*

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## REVIEWER IN PEER REVIEW JOURNALS

### - Member of the Editorial Boards of:

1. *Pharmacology Research & Perspectives* [in collaboration with American Society for Pharmacology and Experimental Therapeutics (ASPET), the British Pharmacological Society (BPS) and Wiley Publishing Group]

*Manuscripts by Decision Status for Pharmacology Research & Perspectives: 3 accomplished reviews of original manuscripts as Editor (PRP2-2014-10-0101, PRP2-2016-01-0008, PRP2-2016-04-0032).*

2. *Journal of Pharmacology & Clinical Research*

3. *Clinical Pharmacology & Translational Medicine*

- Review Editor in *Frontiers in Pharmacology*.

3 Reviewed Publications (<http://loop.frontiersin.org/people/190967/editorial>)

1 in progress

- Reviewer in:

Medicinal Research Reviews

Cell Death & Differentiation

Scientific Reports

CNS Neuroscience and Therapeutics

Current Neuropharmacology

Brain Research

International Journal of Developmental Neuroscience

Journal of Cellular Biochemistry

Journal of Steroid Biochemistry and Molecular Biology

Medical Hypotheses

## BOOK CHAPTERS

1) Co-editing of the Greek translation for the book entitled “Neuroanatomy and Neuroscience at a glance” (ISBN: 978-0-470-657683).

2) Translation of 2 chapters (Peptides and Proteins as mediators & Cellular Mechanisms: Host defence) for the book ‘Pharmacology’ by Rang and Dale (7<sup>th</sup> English Edition/2<sup>nd</sup> Greek Edition), 2015.

3) **Ioannis Charalampopoulos**, Iakovos Lazaridis, Achille Gravanis. Neuroprotective and Neurogenic properties of Dehydroepiandrosterone and its synthetic analogs.

In “**Hormones in Neurodegeneration, Neuroprotection, Neurogenesis**“.

Editors: Gravanis A, Mellon S, Wiley-Blackwell Publishers Sept 2010

4) **Charalampopoulos I**, Tsatsanis C, Margioris AN, Castanas E, Gravanis A. ‘Dehydroepiandrosterone, as endogenous inhibitor of neuronal cell apoptosis: potential therapeutic implications in neurodegenerative diseases’.

In “**Neuroactive Steroids in Brain Function, Behavioral and Neuropsychiatric Disorders: Novel Strategies for Research and Treatment**”. Editors: Michael S. Ritsner, Abraham Weizman, Springer Science, 2008

## INTERNATIONAL PATENTS

Patent Application:

**PCT (International Publication Number): WO 2008/155534 A2**

**EPO-UK 711948,0: Neuroprotective synthetic spiro-neurosteroids.**

Inventors: Gravanis Achilleas, Calogeropoulou Theodora, Charalampopoulos Ioannis, Avlonitis Nicolaos, Castanas Elias, Margioris Andreas, Tsatsanis Christos,

Minas Vassilios, Alexaki Vasiliki-Ismini, Alexis Michail N., Remboutsika Eumorphia, Neophytou Constantinos.

Applicant: Bionature EA Ltd, Nicosia, Cyprus

## INTERNATIONAL CONFERENCES

*Total number of oral and poster presentations: 68 (Invited speaker: 8)*

- **47<sup>th</sup> SfN Annual Meeting, 11-15 November 2017, Washington DC, USA.** ‘The synthetic microneurotrophin BNN27 protects mature oligodendrocytes against cuprizone-induced death through the NGF receptor TrkA.’ G. Bonetto, I. Charalampopoulos, A. Gravanis, D. Karagogeos
- **EMBO Conference “Imaging the Brain”, 2016, Warsaw, Poland.** ‘The novel Dehydroepiandrosterone spiro-epoxy derivative, BNN27, contributes to oligodendrocytes survival and proliferation in the cuprizone model of de- and remyelination’. G. Bonetto, I. Charalampopoulos, A. Gravanis and D. Karagogeos.
- **EFMC-ISMIC 2016, XXIV EFMC International Symposium on Medicinal Chemistry, Manchester, UK, 2016.** ‘17-Spiro-Dehydroepiandrosterone

Derivatives as Small Molecule Mimetics of Neurotrophins.’ Kyriakos C. Prousis, Marileta Grozi, Maria Zervou, Costas Potamitis, Iosif Padiaditakis, Ioannis Charalampopoulos, Achille Gravanis, Theodora Calogeropoulou.

- **XXXIX Congreso de la SEBBM, Salamanca, 2016.** ‘Effects of a novel synthetic neurotrophins DHEA-derivative BNN27 in the neurodegenerative and inflammatory component of diabetic retinopathy.’ S. Lisa , R. Ibán-Arias, N. Mastrodimou, D. Kokona, P. Iordanidou, M. Boumpouli, A. Gravanis, I. Charalampopoulos, K. Thermos
- **Invited Speaker at FENS Regional Meeting, Thessaloniki, 2015.** ‘Novel synthetic microneurotrophins as neuroprotective and neurogenic agents.’
- **European Society for Neurochemistry Biannual Conference: Molecular Mechanisms of Regulation in the Nervous System Tartu, Estonia. 14-17 June 2015.** ‘Effects of novel synthetic microneurotrophins in diabetic retinopathy.’ Lisa S, Iban-Arias R, Kokona D, Charalampopoulos I, Gravanis A, Thermos K.
- **XII European Meeting on Glial Cells in Health and Disease, Bilbao, 2015.** “The synthetic microneurotrophin BNN27 in demyelination: the role of glia in neuroprotection” G. Bonetto, I. Charalampopoulos, A. Gravanis and D. Karagogeos.
- **ARVO Meeting, Colorado Denver, USA, 2015.** ‘The novel microneurotrophin BNN27 protects retinal neurons in the *in vivo* STZ-model of Diabetic Retinopathy by activating NGF TrkA receptor.’ N. Mastrodimou, S. Lisa Ferrer, R. Ibán Arias, D. Kokona, I. Charalampopoulos, A. Gravanis, K. Thermos
- **Invited lecture at 8<sup>th</sup> Conference of the Greek Society of Basic and Clinical Pharmacology, Athens 2014.** ‘Novel synthetic microneurotrophins: potential therapeutic applications in nervous system.’
- **Keystone symposia : Adult neurogenesis meeting, Stockholm, Sweden, 2014.** ‘Neurogenic effects of fingolimod in the hippocampus, affecting fear memory’. Paschalis Efstathopoulos, Alexandra Kourgiantaki, Kiki Sidiropoulou, Despoina Kortesisidou, Ioannis Charalampopoulos, Achille Gravanis.
- **FEBS EMBO Conference, Paris, 2014.**

- “Molecular pharmacology of synthetic neurosteroidal agonists of Nerve Growth Factor (NGF) receptors: differential neurotrophin receptors signaling”, Ioannis Charalampopoulos, Iosif Pediaditakis, Paschalis Efstathopoulos, Maria Zervou, Juan Carlos Arevalo, Vassiliki Nikolettou, Alexandra Kourgiantaki, Theodora Calogeropoulou, Achilleas Gravanis.
- “3D collagen scaffolds hosting neural stem cells: developing neuroimplants for spinal cord injury (SCI)”, Charalampopoulos I, Kourgiantaki A, Tzeranis D, Efstathopoulos P, Mylopotamitaki K, Pediaditakis J, Yannas IV, Gravanis A.
- **DENDRITES 2014, EMBO Workshop, Heraklion, 2014.**
  - «Neurogenic effects of fingolimod in the hippocampus, affecting fear memory», Paschalis Efstathopoulos, Alexandra Kourgiantaki, Kiki Sidiropoulou, Despoina Kortessidou, IoannisCharalampopoulos, Achille Gravanis
  - «Neural Stem Cells (NSCs) in 3D Collagen Scaffolds: developing pharmacologically monitored neuroimplants for Spinal Cord Injury (SCI)», A. Kourgiantaki, D. Tzeranis, P. Efstathopoulos, J. Pediaditakis, K. Mylopotamitaki, I.V. Yannas, I. Charalampopoulos, A. Gravanis.
- **2nd Summer School 'Photonics meets Biology', Heraklion, 2014.** “Neural Stem Cells (NSCs) in 3D Collagen Scaffolds: developing neuroimplants for Spinal Cord Injury”, Kourgiantaki A., Tzeranis D., Efstathopoulos P., Mylopotamitaki K., Pediaditakis J., Giannas I.V., Charalampopoulos I, Gravanis A.
- **Welcome Trust Scientific Conference, 30 October-1 November 2013. Regenerative Medicine: From Biology to Therapy, Hinxton, Cambridge, UK.** ‘Neural Stem Cells (NSCs) in 3D Collagen Scaffolds: developing pharmacologically monitored neuroimplants for Spinal Cord Injury (SCI).’ Kourgiantaki A., Tzeranis D., Efstathopoulos P., Mylopotamitaki K., Pediaditakis J., Giannas I.V., Charalampopoulos I., Gravanis A.
- **SfN Annual Meeting, San Diego, USA, 2013.** ‘Neurosteroidal Agonists of NGF receptors: neuroprotective properties and neurogenic actions in 2D/3D neural stem cells cultures.’ Pediaditakis, I., Efstathopoulos, P., Kourgiantaki, A., Tzeranis D., Yannas I., Arévalo, JC, Calogeropoulou T., Charalampopoulos, I. and Gravanis, A.

- **7th International Meeting Steroids and Nervous system, Torino - Italy, 2013.**  
**Kokras N.**, ‘Psychoactive properties of BNN27-a novel neurosteroid derivative’  
Dalla C., Dioli C., Mavridis T., Charalampopoulos I., Papadopoulou-Daifoti Z.,  
Gravanis A.
- **International Conference on Biofabrication, Manchester, UK, October 29-31, 2012.** ‘Controlling neuronal cell response via LASER-fabricated, 3D micropatterned silicon surfaces.’ A. Ranella, C. Simitzi, P.Eustathopoulos, I. Pediaditakis, **I. Charalampopoulos**, E. Stratakis, I. Athanassakis, A. Gravanis, C. Fotakis.
- **ECTRIMS, 28<sup>th</sup> Congress of the European Committee for treatment and research in Multiple Sclerosis.** 10-13 October, Lyon, France.
  - ‘BNN27, a neuroprotective neurosteroid derivative, induces IL-10-producing regulatory T cells and treats established experimental autoimmune encephalomyelitis.’ Maria Aggelakopoulou, Evangelia Kourepini, Iakovos Lazarides, Davina C. M. Simoes, Nikos Paschalidis, Dimitra Kalavrizioti, Iosif Pediaditakis, Athanasia Mouzaki, **Ioannis Charalampopoulos**, Achille Gravanis, Vily Panoutsakopoulou.
  - ‘Neurogenic effects of fingolimod in mice.’ Paschalis Efstathopoulos, **Ioannis Charalampopoulos**, Achille Gravanis
- **8<sup>th</sup> FENS Forum of Neuroscience, 14-18 July 2012, Barcelona, Spain.**
  - Synthetic Neurosteroidal Activators Of Nerve Growth Factor (NGF) Receptors With Neuroprotective And Neurogenic Properties. Pediaditakis I., Efstathopoulos P., Latsoudis H., **Charalampopoulos I.**, Gravanis A.
  - DHEA And The Novel Neurosteroid BNN27 Provide Neuroprotection In The Stz-Model Of Diabetic Retinopathy. Koulakis E., Iordanidou P., Mastrodimou N., Poulaki S., **Charalampopoulos I.**, Gravanis A. & Thermos K.
  - Enteric Nervous System In Experimental Inflammatory Bowel Disease (Ibd). Giannogonas P., Theoharis S., **Charalampopoulos I.**, Gravanis A. & Karalis K.
- **Invited Speaker at NGF meeting 2012, June 21-24, 2012 Würzburg, Germany.** **Charalampopoulos I.**, Pediaditakis I<sup>#</sup>, Efstathopoulos P<sup>#</sup>, Latsoudi H.,



Gravanis A. (# equal contributors). ‘Novel synthetic microneurotrophins exert neuroprotective and neurogenic properties.’

➤ **Invited Speaker at 2012 Golden Helix Symposium** ‘Genomic Medicine: Translating Genes into Health’, 18-21 April 2012, Torino Incontra Convention Center, Turin, Italy. **Ioannis Charalampopoulos** ‘Neurotrophins as therapeutic targets for neurodegenerative disorders.’

➤ **ARVO 2012, May 6-10, Fort Lauderdale, Florida, USA.**

- Morphological Differences And Apoptotic Rate In An Experimental Model Of Retinal Detachment After Systemic Submission Of a Dhea-analogue. Pavlina A. Tsoka, **Ioannis Charalampopoulos**, Achilleas Gravanis, Miltiadis K. Tsilimbaris.

- Bioavailability And Pharmacokinetics Of A Synthetic DHEA Analog, A Novel Anti-apoptotic Agent, After IP Injection In Normal Rodents. Chrysanthi Tsika, Pavlina A. Tsoka, Manolis Tzatzarakis, Paschalis Efstathopoulos, Sophia Antimisiaris, **Ioannis Charalampopoulos**, Achilleas Gravanis, Miltiadis K. Tsilimbaris.

➤ **Invited Speaker at NICHe Conference** on ‘Stress Response and Child Health’ May 18-20, 2012 - Heraklio, Crete, Greece. **Ioannis Charalampopoulos** ‘Neurosteroids as regulators of stress’.

➤ **Invited Speaker at MSRM International Meeting**, Heraklion 21-23 October 2011. **Ioannis Charalampopoulos** ‘Role of brain hormonal microenvironment in neurodegeneration and neuroprotection.’

➤ European Association for Vision and Eye Research (EVER), Crete, October 5-8, 2011.

- DHEA-Analogue Neuroprotection In An Experimental Model Of Retinal Detachment. Pavlina A. Tsoka, **Ioannis Charalampopoulos**, Achilleas Gravanis, Miltiadis K. Tsilimbaris.

- Evaluation Of The Retinal Bioavailability After Parenteral Administration Of A DHEA Synthetic Analogue In The Rat Retina. Chrysanthi Tsika, Pavlina A. Tsoka, Manolis Tzatzarakis, **Ioannis Charalampopoulos**, Achilleas Gravanis, Miltiadis K. Tsilimbaris.

- Gordon Conference, Neurotrophic Factors, Boston, USA, 2011. ‘Neurosteroid Dehydroepiandrosterone interacts with Nerve Growth Factor (NGF) receptors, preventing neuronal apoptosis’. Iakovos Lazaridis\*, **Ioannis Charalampopoulos\***, Ismini Alexaki, Nicolaos Avlonitis, Iosif Peditakis, Paschalis Efstathopoulos, Theodora Calogeropoulou, Elias Castanas, Achille Gravanis (\*equal contribution).
- **ARVO 2010, May 2-6, Fort Lauderdale, Florida, USA.**
  - ‘DHEA-Analogue Neuroprotection in an Experimental Model of Retinal Detachment.’ Pavlina A. Tsoka, **Ioannis Charalampopoulos**, Achilleas Gravanis, Miltiadis K. Tsilimbaris.
  - ‘Evaluation of The Retinal Bioavailability After Parenteral Administration Of A DHEA Synthetic Analogue In The Rat Retina.’ Chrysanthi Tsika, Pavlina A. Tsoka, Manolis Tzatzarakis, **Ioannis Charalampopoulos**, Achilleas Gravanis, Miltiadis K. Tsilimbaris.
- ***Invited speaker*** at ENDOCYTOSIS Conference, 22-25 August 2010. **I. Charalampopoulos.** ‘Neurosteroidal agonists of NGF receptors with neuroprotective and neurogenic properties.’
- **European Association for Vision and Eye Research (EVER), Crete, October 6-9, 2010.**
  - ‘Immunohistochemistry and Western blot methodologies to evaluate neuroprotective agents in models of retinopathies.’ Thermos K, Giannogonas P, Koulakis E, Kokona D, Mastrodimou N, Kiagiadaki F, **Charalampopoulos I**, Gravanis A.
  - DHEA protects the retina from AMPA excitotoxicity in vivo: involvement of NGF receptors. Thermos K, Kokona D, **Charalampopoulos I**, Gravanis A.
- **7<sup>th</sup> FENS Forum of European Neurosciences, Amsterdam, The Netherlands, July 3-7, 2010.**
  - Lazaridis I\*, **Charalampopoulos I\***, Vergou V, Avlonitis N, Calogeropoulou T, Gravanis A. Neurosteroid Dehydroepiandrosterone directly binds to Nerve Growth Factor (NGF) receptors, rescuing neuronal cells from apoptosis.

- Thermos K., Giannogonas P., Mastrodinou N., **Charalampopoulos I.** & Gravanis A. ‘Neurosteroids protect the retina in a rat model of chemical ischemia.’
- **16th European Symposium on Organic Chemistry, European Society for Organic Chemistry, 12-16 July 2009, Prague, Czech Republic.** T. Calogeropoulou, N. Avlonitis, A. Pantzou, G. Szaloki, **I. Charalampopoulos**, V. Minas, A. Gravanis. ‘Design and synthesis of new DHEA and pregnenolone derivatives with anti-apoptotic, neuroprotective activity.’
- **Invited speaker in 7th EACPT Summer School in Clinical Pharmacology and Therapeutics**, 19-22 September 2009, Alexander Beach Hotel, Alexandroupolis, Greece. **I. Charalampopoulos**: Novel technologies, moral and financial issues in pharmacogenomics.
- 33<sup>rd</sup> FEBS Congress-11<sup>th</sup> IUBMB Conference, “Biochemistry of cell regulation”, June 28-July 3 2008, Athens, Greece.
- Neurosteroid Dehydroepiandrosterone (DHEA) exerts antiapoptotic effects, interacting with Nerve Growth Factor (NGF) receptors. V. Vergou\*, I. Lazaridis\*, **I. Charalampopoulos**, A. Gravanis. (\*equal contributors)
- Synthetic spiro-neurosteroid analogs exerting plasma membrane receptor mediated and structure-specific neuroprotective effects. V. Minas, B. Vergou, N. Avlonitis, **I. Charalampopoulos**, T. Calogeropoulou, A. Gravanis.
- Hans Selye and Saint Justine hospital Centennial Symposium Stress: Basic mechanisms and clinical implications. July 11-14, 2007, University of Quebec, Montreal (UQAM), Quebec, Canada. ‘CRF peptides and macrophages’ A. N. Margioris, C. Tsatsanis, A. Androulidaki, **I. Charalampopoulos**, A. Gravanis.
- 32<sup>nd</sup> FEBS Congress, ‘Molecular Machines’, July 7-12, 2007, Vienna, Austria. ‘Neurosteroids protect neural-crest derived cells from apoptosis, temporally activating prosurvival kinases’. **I. Charalampopoulos**, C. Tsatsanis, B. Vergou, I. Alexaki, E. Castanas, A. Margioris, A. Gravanis.
- Center of Excellence in Developmental Biology for Regenerative Medicine (DBRM) Seminar Series. “Structure-Function studies of the p75<sup>NTR</sup>”. **I.**

**Charalampopoulos**, Kristian Ekeröth, Carlos F. Ibáñez. Karolinska Institutet, 23 May 2007

- 12th Meeting of the European NeuroEndocrine Association October 21-24, 2006, Athens. Differential effects of corticotropin-releasing factor receptor 1 (CRF1) and 2 (CRF2) in catecholamine secretion and production from adrenomedullary chromaffin cells. E. Dermitzaki, C. Tsatsanis, M. Venihaki, V. Minas, A. Androulidaki, E. Chatzaki, **I. Charalampopoulos**, A. Gravanis, A. Margioris.
- The 6th Athens International Congress of NeuroImmunoModulation, Athens, Greece September 25-27, 2006. “Neurosteroids, as inhibitors of neural cell apoptotic in aging”. **I. Charalampopoulos**, V.I. Alexaki, C.Tsatsanis, E.Dermitzaki, V.Minas, A.N.Margioris, E. Castanas, A.Gravanis.
- Wenner-Gren International Symposium. ”Transcriptional Control of Neural Development”. Wenner-Gren Center, Stockholm, September 13-16 2006
- Annual Meeting of The Swedish Royal Academy-sponsored Research Network “Context, Competence and Combinatorial Signaling”. Sigtuna, September 10-11, 2006
- Cajal Club Symposium, co-hosted by Karolinska Institutet. “A new century of Neuroscience: celebrating the 1906 Nobel Prize”. The Nobel Forum, Stockholm, June 11-13, 2006
- Annual Meeting of Research Training Network (RTN) of European Commission. “Evolutionary Neurogenomics of Trophic Factors”, Kristineberg Marine Research Station, June 1-2, 2006.
- Minisymposium at Nobel Forum, Karolinska Institutet, Stockholm, Sweden, May 29-30, 2006. “Nurturing the Brain of the Child”.
- Minisymposium at Nobel Forum, Karolinska Institutet, Stockholm, Sweden, May 18-19, 2006. Frontiers in Medicine Series “The Active Dendrite”
- 8th International Conference: “Drug and Gene-based Therapeutics” 3-10 Sept 2005, Crete, Greece. ‘Immunomodulatory properties of tumor-derived, stress-related neuropeptides’. C. Tsatsanis, A. Androulidaki, E. Dermitzaki, **I. Charalampopoulos**, A. Gravanis, A.N. Margioris.

- 30th FEBS Congress - 9th IUBMB Conference, Budapest, Hungary 2nd-7th July, 2005 “Neurosteroids directly stimulate neuroprotective catecholamine synthesis and secretion.” **I. Charalampopoulos**, E. Dermitzaki, L. Vardouli, C. Tsatsanis, C. Stournaras, A. Margioris and A. Gravanis
- The Endocrine Society's 87th Annual Meeting “Corticotropin-Releasing Factor (CRF) and the Urocortins Induce the Expression of Toll like Receptor-4 (TLR4) in Macrophages Via Activation of the Transcription Factor PU.1.” E. Dermitzaki, C. Tsatsanis, A. Androulidaki, **I. Charalampopoulos**, T. Alissafi, A. Gravanis, A.N Margioris.
- 39th Annual Scientific Meeting of European Society of Clinical Investigation (ESCI), Athens, Greece, 6-9 April 2005.
  - “Neurosteroids directly affect catecholamine synthesis and secretion.” **I. Charalampopoulos**, E. Dermitzaki, L. Vardouli, C. Tsatsanis, C. Stournaras, A.N. Margioris, and A. Gravanis.
  - “ DHEA actions on adrenal medulla and aging” **I. Charalampopoulos**, C. Tsatsanis, E. Dermitzaki, V.I. Alexaki, E. Castanas, A.N. Margioris, A. Gravanis.
  - “Estrogen act as neuroprotectants in PC12 cells.” V-I Alexaki, **I. Charalampopoulos**, M. Kampa, A-P. Nifli; A. Hatzoglou; A. Gravanis, E. Castanas.
  - “Membrane Androgen Binding sites and prostate cancer.” M. Kampa, **I. Charalampopoulos**, A. Hatzoglou, E. Stathopoulos, E.A. Papakonstanti, P. Theodoropoulos, P. Anezinis, A. Gravanis, C. Stournaras, E. Castanas.
  - “Urocortin is expressed at the implantation site of the human blastocyst.” V. Minas, A.M. Bamberger, **I. Charalampopoulos**, C.M. Bamberger, A. Makrigiannakis.
  - Antioxidant polyphenols and phenolic acids decrease cancer cell growth through multiple cellular mechanisms.” M. Kampa, A.P. Nifli, G. Notas, V.I. Alexaki, **I. Charalampopoulos**, A. Gravanis, E. Castanas.
- 12th Euroconference on Apoptosis, Chania, Crete, Greece, 17-20 September 2004, under the supervision of European Cell Death Organisation (ECDO). “Neurosteroids protect sympathoadrenal cells against apoptosis, regulating multiple

prosurvival factors.” **I. Charalampopoulos**, C. Tsatsanis, E. Dermitzaki, I. Alexaki, E. Castanas, A. N. Margioris, and A. Gravanis.

➤ 8th Annual Meeting of the Neuroendocrinology Section of the DGE, Οκτώβριος 2004. “The Corticotropin-Releasing Factor (CRF) family of neuropeptides via the CRHR2 receptors induces the expression of Toll Like Receptor-4 (TLR4) expression in macrophages through activation of the transcription factor PU.1.” C. Tsatsanis, T. Alissafi, A. Androulidaki, **I. Charalampopoulos**, E. Dermitzaki, A. Gravanis, A.N. Margioris.

➤ The Endocrine Society's 85th Annual Meeting: “Neurosteroids protect adrenal medulla cells against serum - deprivation - induced apoptosis, via the anti-apoptotic BCL-2 proteins. **I. Charalampopoulos**, C. Tsatsanis, E. Dermitzaki, A.N. Margioris and A. Gravanis. Philadelphia, USA, June 19-22, 2003.

➤ The Neuroendocrine Section of the Hellenic Endocrine Society. “Highlights in basic and clinical neuroendocrinology: Twenty years of Corticotropin Releasing Hormone (CRH)”. 27-28 September 2002, Athens, Greece.

#### NATIONAL CONFERENCES

- Member of the organizing and scientific committee of the 63<sup>rd</sup> Annual Meeting of the Greek Society of Biochemistry and Molecular Biology (Heraklion, Crete, 9-11 November 2012).
- Member of the organizing committee of the 6<sup>th</sup> Annual Meeting of the Greek Society of Pharmacology (Heraklion, Crete, 4-6 June 2010).
- Total number of oral presentations and posters: 51 (Annual Meeting of the Greek Society for Gene Therapy and Regenerative Medicine, Annual Meetings of Pharmacology Society, Biochemistry and Molecular Biology Society, Greek Society for Neuroscience, Pharmacogenomics Conference and Pathology meetings).

***Invited Speaker: 4***

## COURSES

- Advanced course on Stem Cells, NEUREKA Workshop, Stockholm, November 2006, Center of Excellence in Developmental Biology for Regenerative Medicine (DBRM).
- Advanced Course on Neurotrophic Factors. Department of Neuroscience, Karolinska Institutet, March 13-17, 2006.
- The Onassis Foundation Science Lectures: The 2005 Lectures in Biology: “Programmed Cell Death and Cell Signaling in Development and Disease”. FORTH, Heraklion, Greece, 4-8 July 2005.
- FEBS International Advanced Lecture Course: “From Differentiation to Death of Nerve Cells” (Σπέτσες, 15-24 Σεπτεμβρίου 2001).

## TEACHING

1. Member of the following Graduate Programs of Medical School:
  - *Neuroscience (member of the Coordination Committee)*
  - *Brain and Mind*
  - *Molecular Medicine*
2. Supervision of 2 PhD students, 2 Master’s students and 2 undergraduate diploma works (active). Previously: undergraduate (7, diploma work), Master (17, rotations and diploma work) and member of the supervision committee of (5) Master’s/ (2) PhD students.
3. Teaching and responsibility for 3 graduate courses (*Methodology in Neuroscience, Molecular Neurobiology and Regenerative Pharmacology*) for Neuroscience and Brain & Mind Graduate Programs. Participation in 4 more courses for 5 Graduate Programs of the Medical School.
4. Responsibility and teaching in Pharmacology I Course (1 semester) for medical students, teaching on Pharmacology II (1 semester).

5. Teaching and responsibility for ‘Cellular Communication and Human Diseases’ course for medical students.

## ADMINISTRATION

- Reviewer for research grants at Hellenic Institute of Research and Innovation (ΕΙΔΕΚ)-General Secretary of Research & Technology (GSRT), Greece
- Member of the: Committee for the collaboration of Medical School (Coordinator, <http://www.med.uoc.gr/?q=sxoli/sxoli-kai-koinonia/episkepseis-deyterovathmias>), Graduate Courses committee, Committee for International Exchanges and Committee for the Safety of Work Environment (2010-present).
- Establishment and organization of the Central Unit for Cancer Drugs Dilution at the University Hospital of Heraklion (2012).
- Elected representative of the Basic Sciences Department for the General Assembly and the Assembly for Graduate Courses of the Medical School (2011-2013).

## FUNDING

- **Active research grants:**
  1. (*As Partner*) European Commission, Horizon 2020 - Research and Innovation Framework Programme, Marie Skłodowska Curie Actions - Innovative Training Networks (ITN). Call: H2020-MSCA-ITN-2017. Title: A European training network for the discovery of neurotrophin small molecule mimetics as potential therapeutic agents for neurodegeneration and neuroinflammation (Proposal Number: 765704, Proposal Acronym: EuroNeurotrophin). Coordinator: Theodora Calogeropoulou. Total Budget: 3.555.000€, Budget for the lab: 455.000€. Duration: 48 months (starting date: 01-02-2018)
  2. (*As Partner*) Funding Source: European Commission (Marie Skłodowska Curie Individual Fellowships). Project Number: 658850. Title: ALS-on-a-chip: A tissue-on-a-chip for platform for systems-level studies of ALS pathology and drug screening. Name of Principal Investigator: Achille Gravanis. Title of Project: ALS-on-a-chip (2015-2017). Total Budget: 180.000€
  3. (*As Principal Investigator*) ‘Archers’ Stavros Niarxos scholarship for PhD studies (PhD student: Maria Kokali).



**Pending:**

1. European Commission, HORIZON 2020, Future and Emerging Technologies (Call: H2020-FETOPEN-1-2016-2017). Draft proposal ID: SEP-210411774. Proposal acronym: ALLEGRO. Title: Photo-stimulation Platforms for NeuroGenesis & Neural Tissue Remodelling (PhotoNeuroGenesis). Coordinating organisation: UNIVERSITA DEGLI STUDI DI MODENA E REGGIO EMILIA, located in MODENA, IT
2. National Funding: Scholarships of the Hellenic Foundation for Research and Innovation/Ministry of Education, Research and Religious Affairs for doctoral candidates (ELIDEK/GSRT).
3. National Funding: Call for Operational Programme 'Competitiveness, Entrepreneurship and Innovation' (GSRT)

• **Archive research grants:**

A) International Grants

1. Novartis, Basel: funding grant for the project 'The effects of FTY720 (Fingolimod) on neurogenesis'. Duration: 09/2011-03/2013. 120,000€ (Collaborative Researcher).
2. Karolinska Institutet, NIH Grant Number: 1R01MH071624-01A2 (2006-2007) 25.000€ (Postdoctoral Researcher)
3. Karolinska Institutet, Research Training Network within the 5th Framework Programme of European Commission, HPRN-CT-2002-00263 (2007) 15.000€ (Postdoctoral Researcher).

B) National Grants:

1. Funding from the General Secretary of Research and Technology, grant of Excellence (collaborative researcher). Duration: 2014-2016, 180.000€
2. Special Research Account of the University of Crete, 2011-2013: 15.000€ (As Principal Investigator)

3. Bodossakis Foundation for Stem Cells Laboratory equipment: 42.400€ (Collaborative Researcher).
4. Funding from the ERC Grant Schemes National Initiative, General Secretary of Research and Technology: Duration: 04/2012-10/2015, 937.000€ (Collaborative Researcher).
5. Special Research Account of the University of Crete, 2010-2012: 15.000€ (Collaborative Researcher).
6. Medical School scholarship (2007-2009, 2005-2006) 58.000€ (Graduate student).
7. General Secretary of Research and Technology: 27.000€, Duration: 2002-2005 (Graduate student)).
8. Foundation of National Scholarships (I.K.Y.) (2002) 600€ (Stipend).

### **Research interests: Regenerative Pharmacology**

We are focusing our recent research interests on the investigation of the molecular mechanisms that growth factors and their receptors are using to induce neuronal survival, as well as to regulate the regenerative capacity of adult nervous system. Such molecules, as Neurotrophins, control brain development and maintenance during adulthood and in aging, while they importantly participate in neuronal survival, differentiation and repair. Our studies are ranging from neurotrophin receptors structure-function experiments to development of novel ligands with specific effects on these receptors (mainly the TrkA, TrkB and p75<sup>NTR</sup>, receptors of the Nerve Growth Factor and Brain Derived Neurotrophic Factor), and their therapeutic potential on animal models of neurodegenerative diseases (Alzheimer's Disease and Spinal Cord Injury). The aim of our work is to decipher the multiple signaling effects of these neurotrophin receptors and thus to design and test novel analogs of their ligands with desired pharmacological properties (small size, lipophilicity etc). In order to explore the aforementioned effects of neurotrophins analogs to their receptors we use a plethora of molecular/cellular biology techniques (site-directed mutagenesis, signaling mechanisms studies, cellular assays to measure proliferation, differentiation and apoptosis) in primary neuronal and glial cultures (neurons, oligodendrocytes and Schwann cells isolated from hippocampus, cortex, cerebellum, Superior Cervical Ganglia and Dorsal Root Ganglia) or embryonic (cortical) and adult

(SVZ and hippocampal) neural stem cells cultures. Finally, we test our compounds for their efficacy –mediated from the neurotrophin receptors- to promote neuroprotection or neurorepair through their ability to induce adult neurogenesis, in *in vivo* animal models of neurodegenerative diseases, like Alzheimer’s Disease (using the 5xFAD mice) or Spinal Cord Injury.

In addition, we are interested in developing 3D biomimetic scaffolds in order to culture and study *ex vivo* neuronal populations and their networking in resemblance to real brain conditions. Using different materials (silicon, collagen scaffolds) we have established 3D neuronal cultures with preferable axonal orientation, in co-culture with glial cells. Moreover, we have specified the biodegradable materials (like collagen) that supports the 3D culture of neuronal precursors and mature neurons and their capacity as neuroimplants in a Spinal Cord Injury mouse model. Finally, we aim to develop specific devices that could host human induced-Pluripotent Stem Cells (hiPSCs), adult neural stem cells or more complex neuronal networks in a 3D pattern, and in combination with optogenetic control and single-cell imaging, to provide new tools and methods for more efficient drug screening and more realistic disease-on-a-dish human models.