

CURRICULUM VITAE



PERSONAL INFORMATION

Name: Antonio Simeone
 Nationality: Italian
 Date of Birth: 21 May 1959, Benevento, Italy

ADDRESS

Institute of Genetics and Biophysics "A. Buzzati-Traverso", CNR
 Via Pietro Castellino 111, Naples, Italy
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EDUCATION

1989 Ph.D in Cellular and Molecular Genetics, University of Naples.
 1981 Graduated in Biological Sciences, University of Naples.

HONOURS AND PRIZES

2013 Prize "Science Award Stadt Freising" for German-Italy interactive studies on Dopaminergic neurons.
 2009 Prize "Stella di Tabor" for studies on neurodegeneration awarded by Archidiocesan Curia and Municipality of Amalfi.
 2003 Special Prize "Il Gladiatore d'Oro" awarded to the career by Province of Benevento.
 2000 The LILIANE BETTENCOURT LIFE SCIENCES Award for studies on the evolution of the mammalian brain.
 1998 Italian Society of Biophysics and Molecular Biology (SIBBM) Prize in memory of "Dr. M. Chiara D'Onofrio" for studies on brain development.
 1988 ARFACID prize in memory of Prof. Eduardo Scarano.
 1986 Italian Association of Medical Genetics (AIGM) Prize.

APPOINTMENTS

2019 - Director of the Institute of Genetics and Biophysics "Adriano Buzzati-Traverso", CNR, Naples
 2018 - 2019 Acting Director of the Institute of Genetics and Biophysics "Adriano Buzzati-Traverso", CNR, Naples
 2014 - 2018 Director of the Institute of Genetics and Biophysics "Adriano Buzzati-Traverso", CNR, Naples
 2014 -2016 CNR Representative of the "Comitato di Indirizzo Strategico" related to "Accordo Quadro CNR/Regione Molise"
 2013 - 2014 Acting Director of the Institute of Genetics and Biophysics "Adriano Buzzati-Traverso", CNR, Naples
 2004 - 2012 Professor of the Scuola Superiore Europea di Medicina Molecolare (SEMM)
 2005 - 2012 Group leader at the CEINGE Biotecnologie Avanzate, Naples
 2001 CNR "Dirigente di Ricerca" at the Institute of Genetics and Biophysics "Adriano Buzzati-Traverso", CNR, Naples.
 2000 - 2006 Group leader at the MRC Centre for Developmental Neurobiology (London).
 2000 - 2005 Full Professor of Developmental Genetics at the King's College London.
 1997 - 2001 CNR "Primo Ricercatore" at the Institute of Genetics and Biophysics "Adriano Buzzati-Traverso", CNR, Naples.
 1992 - 2004 Group leader at the Institute of Genetics and Biophysics "Adriano Buzzati-Traverso", CNR, Naples.

1988 - 1997 CNR "Ricercatore" at the Institute of Genetics and Biophysics "Adriano Buzzati-Traverso", CNR, Naples.

EDITORIAL ACTIVITIES

- Member of the editorial board of, and International Journal of Developmental Biology and Development
- Previously member of the editorial board of Human Reproduction, Molecular Reproduction and Development, and Genes and Function.
- Reviewer for Nature Neuroscience, Nature Genetics, Developmental Cell, Genes and Development, Neuron, Developmental Biology, Mechanisms of Development, The Journal of Neuroscience, Stem Cell Reports, PLoS Genetics.

PROFESSIONAL BODY MEMBERSHIP

- Scientific Advisory Board of the Max Planck Institute for Biophysical Chemistry (Gottingen)
- European Molecular Biology Organization (EMBO)
- European Society of Human Reproduction and Embryology (ESHRE)
- Italian Society of Biophysics and Molecular Biology (SIBBM)
- Fellowships committee of Human Frontier Science Program Organization (HFSP)
- Armenise-Harvard Italian Scholarship Advisory Committee (ISAC)
- Member of the Scientific Committee of the Foundation Cariplo

SELECTED RESEARCH PROJECTS SINCE 1993

- H2020-MSCA-COFUND Programme (2014-2019) (coordinator): Innovative Life Science PhD Programme in South of Italy (INCIPIT).
- PRIN Project (2017-2020): Regolazione e funzione dei fattori trascrizionali modificatori epigenetici che intervengono nel differenziamento delle cellule staminali embrionali e epiblasti.
- PON MISE Project (2015-2018) (scientific coordinator): Realizzazione di strumenti diagnostici per l'analisi precoce del morbo di Parkinson attraverso l'identificazione di profili genetici di rischio
- PON03 Project (2013-2018): Preclinical development of new therapies and innovative strategies for the production of molecules with pharmacological activity.
- AIRC Project (2013-2016): The Otx2 regulatory network controlling pluripotent stem cell states and their susceptibility to tumorigenesis
- POR MOVIE Project (2012-2015) (research unit): Modelli in vivo models of human pathologies.
- FP7 EU Project (2009-2011): Molecular coding and subset specification of dopamine neurons generating the meso-limbic and nigro-striatal system.
- AIRC Project (2008-2012): Otx genes in medulloblastoma: a genetic study to unravel their role in tumorigenesis of cerebellar progenitors.
- FP6 EU Project (2007-2011): European Transcriptome, Regulome & Cellular Commitment.
- Fondazione Cassa di Risparmio di Roma Project (2007-2010): Ruolo dei geni Otx nel differenziamento e nella proliferazione dei progenitori neurali e delle cellule staminali.
- PRIN Project (2008-2010): Ruolo del gene Otx2 nel differenziamento telencefalico mediante l'uso di modelli murini e cellule ES geneticamente modificati.
- AIRC Project (2005-2007): Otx2 in proliferation and differentiation of neural progenitors: implications for a tumor-suppressor activity.
- FIRB Genotopo Project (2003-2005).
- Wellcome Trust Programme Grant (2001-2005): The role of Otx2 in the evolution of complexity in the vertebrate brain.
- FP5 EU Project (2001-2004): Comparative approach to the analysis of molecular pathways underlying cell communication mechanisms in forebrain patterning
- Medical Research Council (MRC) Programme Grant (2000-2004): Functional Properties of *Otx1* and *Otx2* in Brain and Sense Organ Development.
- AIRC (1998-2001): Role of Otx and Otp genes in specification of the brain and development of neuroendocrine hypothalamus.
- Telethon Project (1997-2000): Role of Otx1 and Otx2 genes in brain morphogenesis and their involvement in generating epilepsy and otocephaly".
- Progetto Finalizzato Biotecnologie (1997-1999): Ruoli e proprietà dei geni Otx nella definizione e evoluzione del cervello e di Otp (Orthopedia) nel differenziamento e funzionalità dell'ipotalamo neuroendocrino.
- AIRC Project (1994-1996): Studio dell'effetto dei fattori di crescita nel differenziamento e nella proliferazione cellulare durante l'embriogenesi e l'emopoiesi.

- AIRC (1993-1994): Ruolo dei geni umani contenenti l'homeobox nel differenziamento e nella trasformazione cellulare.
- Telethon Project (1993-1995): Production of null mutations in the Otx1 and Otx2 homeobox-containing genes: involvement in brain morphogenesis.
- Progetto AIRC (1991-1994): Ruolo dei geni umani contenenti l'homeobox nel differenziamento e nella trasformazione cellulare.

RELEVANT TEACHING ACTIVITY

2004 - 2011: Professor of the Scuola Superiore Europea di Medicina Molecolare (SEMM) at CEINGE Biotecnologie Avanzate site of Naples

2000 - 2005: Professor of Developmental Genetics at the King's College London.

INTERNATIONAL CONGRESSES AND SEMINARS

He has participated as speaker in more than 70 International Congresses and also held 200 seminars.

REFERRAL ACTIVITIES OF RESEARCH PROJECTS

He was referee for National and International Projects in different Organizations as the Medical Research Council (MRC), the Wellcome Trust, the French National Research Agency (ANR), the Cariplo Foundation, the Banco San Paolo Foundation, the Max Planck and occasionally the ERC.

SCIENTIFIC INTERESTS

1980 - 1984:

- Role of unequal crossing-over in the evolution of ribosomal genes.
- Molecular and structural organization of the non-transcribed spacer (NTS) of ribosomal DNA of *D. melanogaster*.
- Identification of transcription and processing signals of ribosomal genes of *D. melanogaster*.
- Isolation and characterization of alternative messenger RNAs coding class I HLA genes.

1985 - 1991:

- Isolation and identification of the structural organization of the human homeobox gene family (HOX Complex).
- Expression analysis of several Hox genes in human embryos.
- Expression analysis of the human Hox Complex in teratocarcinoma cells (N-tera2/D1) upon treatment with retinoic acid and the definition of temporal colinearity concept.
- Molecular mechanism controlling the expression of the HOX Complex gene family in human teratocarcinoma cells (N-tera2/D1).

1992 - 1998:

- Isolation of the murine homologs of the otd and ems homeobox containing genes and analysis of their expression during brain development.
- Isolation and expression analysis both in invertebrate and vertebrate embryos of a new homeobox containing gene named Orthopedia (Otp).
- Isolation and expression analysis in murine embryos of Dlx5 and Dlx6, two murine homologues of the *Drosophila* Distal-less gene.
- Combined expression analysis of Otx, Emx, Dlx and Otp during development and definition of brain segmentary identities.
- Temporal map during gastrulation of the retinoic acid effect on development and patterning of murine brain.
- Role of Otx2 in the specification of rostral CNS (forebrain, midbrain and anterior hindbrain).
- Role of Otx1 in corticogenesis, pituitary functions and sense organs development.
- Identification of an Otx gene-dosage dependent mechanism required for patterning of developing brain and proper positioning of midbrain-hindbrain isthmic organizer.
- In vivo dissection of Otx1 and Otx2 roles in brain development by using reciprocal knock-in mouse models: definition of extended functional equivalence between OTX1 and OTX2 proteins and the relevance of the Otx1 and Otx2 differential transcriptional control.

1999 - 2005:

- Dissection of Otx2 roles during gastrulation: requirement of Otx2 in the visceral endoderm for specification of anterior identity, and in the early neuroectoderm for maintenance of the anterior identity (forebrain and midbrain).

- Role of Otx1 and Otx2 in brain evolution: functional equivalence between the invertebrate Orthodenticle and the murine OTX1 and OTX2 gene products supports a conserved genetic program of brain development between insects and mammals.
- Role of Orthopedia (Otp) in proliferation, migration and differentiation of the murine neuroendocrine hypothalamus.
- Differential dosage-dependent roles of OTX2 in specifying regional identities and neuronal cell types during brain development.
- Antagonistic role of Otx2 and Gbx2 in regionalization of midbrain and rostral hindbrain.
- Evidence for an Otx2-dependent control of dorso-ventral patterning of the midbrain.
- Role of Otx2 in the control of identity and fate of neuronal precursors in the ventral midbrain.

2006 - 2012

- Otx2 cell-autonomous control of thalamic glutamatergic progenitors.
- Expression complexity of the Otx2 locus: transcriptional, post-transcriptional and translational regulation of Otx2 mRNA isoforms control specification and maintenance of forebrain and midbrain regional identities.
- Role of Otx2 in dopaminergic neurogenesis: dose-dependent, anterior-posterior and dorsal-ventral integrated control by Otx2 regulates proliferation, number and neurotransmitter phenotype of dopaminergic progenitors.
- Role of Otx2 in adult dopaminergic neurons: Otx2 specify post-mitotic neuron subtype identity in ventral tegmental area (VTA) and antagonizes dopaminergic vulnerability to the Parkinsonian neurotoxin MPTP.
- Role of Orthopedia in neurogenesis of diencephalic dopaminergic neurons.
- Role of Orthopedia in migration of diencephalic progenitors fated to populate the telencephalic amygdala.
- Role of Otx1 and Otx2 in initiation and progression of desmoplastic Sonic Hedgehog-dependent medulloblastomas.
- Identification of Otx1 as a selective diagnostic marker of aggressive Lymphomas.

2013 up today

- Role of Otx2 in neurogenesis and regional identity of dorsal midbrain.
- Role of Otx2 in Embryonic Stem Cells (ESCs): Otx2 is an intrinsic determinant required to maintain the ESC metastable state by antagonizing ground state pluripotency and promoting commitment to differentiation.
- Role of Otx2 in Epiblast Stem Cells (EpiSCs): Otx2 stabilizes the primed EpiSC state by suppressing mesendoderm into neural fate switch in cooperation with BMP4 and Fgf2.
- Role of Otx2 in ESC-based induction of telencephalic neurons: Otx2-mediated requirement for specification of dorsal cortical neurons.
- Role of Otx2 in the transition to primed pluripotency: Otx2 controls transition into primed pluripotency by recruiting Oct4 at new enhancers associated to ESC-derived epiblast-like cells (EpiLCs) differentiation.
- Design of a diagnostic kit to predict late onset of sporadic Parkinson's Disease.
- Role of Otx2 in the direct control of the Nanog pluripotency core factor: through binding to the Nanog promoter, Otx2 controls the integrity of specific ESC sub-type compartments and *in vivo* the differentiation of the the epiblast lineage.
- Role of Otx2 in metastability: through mutual antagonism, Otx2 and Nanog specify the heterogeneous identity of metastable ESCs and individually predispose ESCs for optimal response to naïve or formative inducing factors.

HIRSCH (H) INDEX AND LIST OF PUBLICATIONS (RESEARCH ARTICLES AND REVIEWS)

H Index Google Scholar:	80	Citations:	19722
H-index ISI Web:	70	Citations:	14225
H-index Scopus:	68	Citations:	13812

- 170) A. Gialluisi, M. G. Reccia, N. Modugno, T. Nutile, A. Lombardi, L. G. Di Giovannantonio, S. Pietracupa, D. Ruggiero, S. Scala, S. Gambardella, International Parkinson's Disease Genomics Consortium (IPDGC), L. Iacoviello, F. Gianfrancesco, D. Acampora, M. D'Esposito, **A. Simeone**, M. Ciullo and T. Esposito. Identification of sixteen novel candidate genes for late onset Parkinson's disease. *Molecular Neurodegeneration*, 16:35 (2021), doi.org/10.1186/s13024-021-00455-2
- 169) L. G. Di Giovannantonio, D. Acampora, D. Omodei, V. Nigro, P. Barba, E. Barbieri, I. Chambers, **A. Simeone**. Direct repression of Nanog and Oct4 by OTX2 modulates the contribution of epiblast-derived cells to germline and somatic lineage. *Development* 148 (2021), dev199166. doi:10.1242/dev.19916
- 168) Gialluisi, A., Reccia, M.G., Tirozzi, A., Nutile, T., Lombardi, A., De Sanctis, C., Varanese, S., Pietracupa, S., Modugno, N., **Simeone, A.**, Ciullo, M., Esposito, T., International Parkinson's Disease Genomic Consortium (IPDGC). Whole Exome Sequencing Study of Parkinson Disease and Related Endophenotypes in the Italian Population. *Frontiers in Neurology* 2020. 10(1362)
- 167) Imbriglio T, Verhaeghe R, Martinello K, Pascarelli MT, Chece G, Bucci D, Notartomaso S, Quattromani M, Mascio G, Scalabri F, **Simeone A**, Maccari S, Del Percio C, Wieloch T, Fucile S, Babiloni C, Battaglia G, Limatola C, Nicoletti F, Cannella M. Developmental abnormalities in cortical GABAergic system in mice lacking mGlu3 metabotropic glutamate receptors. *FASEB J.* 2019 33, 14204-14220
- 166) Rosati J, Ferrari D, Altieri F, Tardivo S, Ricciolini C, Fusilli C, Zalfa C, Profico DC, Pinos F, Bernardini L, Torres B, Manni I, Piaggio G, Binda E, Copetti M, Lamorte G, Mazza T, Carella M, Gelati M, Valente EM, **Simeone A**, Vescovi AL. Establishment of stable iPS-derived human neural stem cell lines suitable for cell therapies. *Cell Death Dis.* 9, 937 (2018)
- 165) J. Zhang, M. Zhang, D. Acampora, D. Yuan, **A. Simeone**, I. Chambers. Otx2 restricts entry to the mouse germline. *Nature* 562, 595-599 (2018)
- 164) D. Acampora, L. G. Di Giovannantonio, A. Garofalo, V. Nigro, D. Omodei, A. Lombardi, J. Zhang, I. Chambers & **A. Simeone**. Functional antagonism between OTX2 and NANOG specifies a spectrum of heterogeneous identities in embryonic stem cells. *Stem Cell Reports.* 9, 1642-1659 (2017)
- 163) H. H. Lee, C. Bernard, Z. Ye, D. Acampora, **A. Simeone**, A. Prochiantz, A. A. Di Nardo & T. K. Hensch. Genetic Otx2 mis-localization delays critical period plasticity across brain regions. *Mol. Psychiatry* 22, 680-688 (2017)
- 162) D. Acampora, D. Omodei, G. Petrosino, A. Garofalo, M. Savarese, V. Nigro, L. G. Di Giovannantonio, V. Mercadante & **A. Simeone**. Loss of Otx2 binding site to the Nanog promoter affects integrity of embryonic stem cell sub-type compartments and differentiation of inner cell mass-derived epiblast. *Cell Reports* 15, 2651-64 (2016)
- 161) H. T. Kim, S. J. Kim, Y. I. Sohn, S. S. Paik, R. Caplette, M. Simonutti, K. H. Moon, E. J. Lee, K. W. Min, M. J. Kim, D. G. Lee, **A. Simeone**, T. Lamonerie, T. Furukawa, J. S. Choi, H. S. Kweon, S. Picaud, I. B. Kim, M. Shong & J. W. Kim. Mitochondrial Protection by Exogenous Otx2 in Mouse Retinal Neurons. *Cell Reports* 13, 990-1002 (2015)
- 160) Y. Fukusumi, F. Meier, S. Götz, F. Matheus, M. Irmeler, R. Beckervordersandforth, T. Faus-Kessler, E. Minina, B. Rauser, J. Zhang, E. Arenas, E. Andersson, C. Niehrs, J. Beckers, **A. Simeone**, W. Wurst & N. Prakash. Dickkopf 3 Promotes the Differentiation of a Rostrolateral Midbrain Dopaminergic Neuronal Subset In Vivo and from Pluripotent Stem Cells In Vitro in the Mouse. *J*

Neurosci. 35,13385-401 (2015)

- 159) J. Zhang, S. Götz, D. M. Vogt Weisenhorn, **A. Simeone**, W. Wurst, & N. Prakash. A WNT1-regulated developmental gene cascade prevents dopaminergic neurodegeneration in adult *En1*(+/-) mice. *Neurobiol Dis.* 82, 32-45. (2015)
- 158) N. Kim, D. Acampora, F. Dingli, D. Loew, **A. Simeone**, A. Prochiantz & A. Di Nardo. Immunoprecipitation and mass spectrometry identify non-cell autonomous *Otx2* homeoprotein in the granular and supragranular layers of mouse visual cortex. *F1000 Res.* 3,178 (2014)
- 157) L. Panman, M. Papathanou, A. Laguna, T. Oosterveen, N. Volakakis, D. Acampora, I. Kurtsdotter, T. Yoshitake, J. Kehr, E. Joodmardi, J. Muhr, **A. Simeone**, J. Ericson & T. Perlmann. *Sox6* and *Otx2* control the specification of substantia nigra and ventral tegmental area dopamine neurons. *Cell Reports* 8,1018-1025 (2014)
- 156) F. Meier, F. Giesert, S. Delic, T. Faus-Kessler, F. Matheus, **A. Simeone**, S. M. Hölter, R. Kühn, D. M. Weisenhorn, W. Wurst & N. Prakash. FGF/FGFR2 signaling regulates the generation and correct positioning of Bergmann glia cells in the developing mouse cerebellum. *PLoS One.* 9:e101124 (2014)
- 155) C. Buecker, R. Srinivasan, Z. Wu, E. Calo, D. Acampora, T. Faial, **A. Simeone**, M. Tan, T. Swigut & J. Wysocka. Reorganization of enhancer patterns in transition from naïve to primed pluripotency. *Cell Stem Cell.* 14, 838-853 (2014)
- 154) Y. Bozzi & **A. Simeone**. *Otx* genes and seizure susceptibility. *Molecular & Cellular Epilepsy*, vol 1, n. 3, doi: 10.14800/mce.74 (2014)
- 153) PP. Tripathi, LG. Di Giovannantonio, E. Sanguinetti, D. Acampora, M. Allegra, M. Caleo, W. Wurst, **A. Simeone** & Y. Bozzi. Increased dopaminergic innervation in the brain of conditional mutant mice overexpressing *Otx2*: Effects on locomotor behavior and seizure susceptibility. *Neuroscience* 261,173-183 (2014)
- 152) L.G. Di Giovannantonio, M. Di Salvio, D. Omodei, N. Prakash, W. Wurst, A. Pierani, D. Acampora & **A. Simeone**. *Otx2* cell-autonomously determines dorsal mesencephalon versus cerebellum fate independently of isthmic organizing activity. *Development.* 14, 1377-1388 (2014)
- 151) C. Bernard, H.T. Kim, Ibad R. Torero, E.J. Lee, M. Simonutti, S. Picaud, D. Acampora, **A. Simeone**, A.A. Di Nardo, A. Prochiantz, K.L. Moya & J.W. Kim. Graded *Otx2* activities demonstrate dose-sensitive eye and retina phenotypes. *Hum Mol Genet.* 23,1742-1753 (2014)
- 150) H. Meziane, V. Fraulob, F. Riet, W. Krezel, M. Selloum, M. Geffarth, D. Acampora, Y. Héroult, **A. Simeone**, M. Brand, P. Dollé & M. Rhinn. The homeodomain factor *Gbx1* is required for locomotion and cell specification in the dorsal spinal cord. *Peer J.* 1:e142 (2013)
- 149) P. A. Johansson, M. Irmeler, D. Acampora, J. Beckers, **A. Simeone** & M. Götz. The transcription factor *Otx2* regulates choroid plexus development and function. *Development.* 140, 1055-66 (2013)
- 148) L. G. Di Giovannantonio, M. Di Salvio, D. Acampora, N. Prakash, W. Wurst & **A. Simeone**. *Otx2* selectively controls the neurogenesis of specific neuronal subtypes of the ventral tegmental area and compensates *En1*-dependent neuronal loss and MPTP vulnerability. *Dev. Biol.* 373, 176-183 (2013)
- 147) D. Acampora, L. G. Di Giovannantonio & **A. Simeone**. *Otx2* is an intrinsic determinant of the Embryonic Stem Cell state and is required for transition to a stable Epiblast Stem Cell condition. *Development.* 140, 43-55 (2013)
- 146) T. Valentino, D. Palmieri, M. Vitiello, **A. Simeone**, G. Palma, C. Arra, P. Chieffi, L. Chiariotti, A. Fusco & M. Fedele. Embryonic defects and growth alteration in mice with homozygous disruption of the *Patz1* gene. *J. Cell Physiol.* 228, 646-53 (2013)
- 145) T. Burgold, N. Voituren, M. Caganova, P. P. Tripathi, C. Menuet, B. K. Tusi, F. Spreafico, M. Bèvengut, C. Gestreau, S. Buontempo, **A. Simeone**, L. Kruidenier, G. Natoli, S. Casola, G. Hilaire & G. Testa. The H3K27 Demethylase JMJD3 Is Required for Maintenance of the Embryonic

- Respiratory Neuronal Network, Neonatal Breathing, and Survival. *Cell Reports* 2, 1244-1258 (2012)
- 144) M. Y. Turco, L. Furia, A. Dietze, L. Fernandez Diaz, S. Ronzoni, A. Sciallo, **A. Simeone**, D. Constam, M. Faretta & L. Lanfranccone. Cellular Heterogeneity During Embryonic Stem Cell Differentiation to Epiblast Stem Cells is Revealed by the ShcD/RaLP Adaptor Protein. *Stem Cells*. 30, 2423-36 (2012)
- 143) **A. Simeone**, E. Puelles, D. Omodei, D. Acampora, L. G. Di Giovannantonio, M. Di Salvio, P. Mancuso & C. Tomasetti. Otx genes in neurogenesis of mesencephalic dopaminergic neurons. *Dev. Neurobiol.* 71, 665-679 (2011)
- 142) T. Fischer, T. Faus-Kessler, G. Welzl, **A. Simeone**, W. Wurst & N. Prakash. Fgf15-mediated control of neurogenic and proneural gene expression regulates dorsal midbrain neurogenesis. *Dev. Biol.* 350, 496-510 (2011)
- 141) **A. Simeone**, M. Di Salvio, L. G. Di Giovannantonio, D. Acampora, D. Omodei & C. Tomasetti. The Role of Otx2 in Adult Mesencephalic-Diencephalic Dopaminergic Neurons. *Mol. Neurobiol.* 43, 107-113 (2011)
- 140) M. Di Salvio, L. G. Di Giovannantonio, D. Acampora, R. Prospero, D. Omodei, N. Prakash, W. Wurst & **A. Simeone**. Otx2 controls neuron subtype identity in ventral tegmental area and antagonizes vulnerability to MPTP. *Nature Neurosci.* 13, 1481-1488 (2010)
- 139) H. Tilleman, V. Hakim, O. Novikov, K. Liser, L. Nashelsky, M. Di Salvio, M. Krauthammer, O. Scheffner, I. Maor, O. Maysel, I. Meir, G. Kayam, D. Sela-Donenfeld, **A. Simeone** & C. Brodski. Bmp5/7 in concert with the mid-hindbrain organizer control development of noradrenergic locus coeruleus neurons. *Mol Cell Neurosci.* 45, 1-11 (2010)
- 138) F. García-Moreno, M. Pedraza, L. G. Di Giovannantonio, M. Di Salvio, L. López-Masaraque, **A. Simeone** & J.A. De Carlos. A neuronal migratory pathway crossing from diencephalon to telencephalon populates amygdala nuclei. *Nature Neurosci.* 13, 680-689 (2010)
- 137) C. Y. Chung, P. Licznarski, K.N. Alavian, **A. Simeone**, Z. Lin, E. Martin, J. Vance & O. Isacson. The transcription factor orthodenticle homeobox 2 influences axonal projections and vulnerability of midbrain dopaminergic neurons. *Brain*. 133, 2022-2031 (2010)
- 136) M. Di Salvio, L. G. Di Giovannantonio, D. Omodei, D. Acampora & **A. Simeone**. Otx2 expression is restricted to dopaminergic neurons of the ventral tegmental area in the adult brain. *Int. J. Dev. Biol.* 54, 939-945 (2010)
- 135) **A. Simeone**, E. Puelles, D. Acampora, D. Omodei, P. Mancuso & L. G. Di Giovannantonio. The role of Otx genes in progenitor domains of ventral midbrain. *Adv Exp Med Biol.* 651, 36-46 (2009)
- 134) N. Prakash, E. Puelles, K. Freude, D. Trümbach, D. Omodei, M. Di Salvio, L. Sussel, J. Ericson, M. Sander, **A. Simeone*** & W. Wurst. Nkx6-1 controls the identity and fate of red nucleus and oculomotor neurons in the mouse midbrain. *Development* 136, 2545-2555 (2009)
- 133) D. Omodei, D. Acampora, F. Russo, R. De Filippi, V. Severino, R. Di Francia, F. Frigeri, P. Mancuso, A. De Chiara, A. Pinto, S. Casola & **A. Simeone**. Expression of the brain transcription factor OTX1 occurs in a subset of normal germinal-center B cells and in aggressive Non-Hodgkin Lymphoma. *Am. J. Pathol.* 175, 2609-2617 (2009)
- 132) C. H. Hwang, **A. Simeone**, E. Lai & D. K. Wu. Foxg1 is required for proper separation and formation of sensory cristae during inner ear development. *Dev. Dyn.* 238, 2725-2734 (2009)
- 131) D. Acampora, L. G. Di Giovannantonio, M. Di Salvio, P. Mancuso & **A. Simeone**. Selective inactivation of Otx2 mRNA isoforms reveals isoform-specific requirement for visceral endoderm anteriorization and head morphogenesis and highlights cell diversity in the visceral endoderm. *Mech. Dev.* 126, 882-897 (2009)
- 130) P. P. Tripathi, L. G. Di Giovannantonio, A. Viegli, W. Wurst, **A. Simeone*** & Y. Bozzi. Serotonin Hyperinnervation Abolishes Seizure Susceptibility in Otx2 Conditional Mutant Mice. *The Journal of Neuroscience* 28, 9271-9276 (2008)

- 129) D. Omodei, D. Acampora, P. Mancuso, N. Prakash, L. G. Di Giovannantonio, W. Wurst & **A. Simeone**. Anterior-posterior graded response to Otx2 controls proliferation and differentiation of dopaminergic progenitors in the ventral mesencephalon. *Development* 135, 3459-3470 (2008)
- 128) T. Heimbucher, C. Murko, B. Bajoghli, N. Aghaallaei, A. Huber, R. Stebegg, D. Eberhard, M. Fink, **A. Simeone** & T. Czerny. Gbx2 and Otx2 interact with the WD40 domain of Groucho/Tle corepressors. *Mol Cell Biol.* 27, 340-51 (2007)
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