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**BIOGRAPHICAL SKETCH**

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NAME <b>Paola Bovolenta</b>	POSITION TITLE Full Professor and Head of the Biology and Biomedicine Area of the CSIC	BIRTHDATE ( <i>Mo., Day, Yr.</i> ) <b>11, 11, 1957</b>
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EDUCATION (*Begin with baccalaureate or other initial education and include postdoctoral training.*)

INSTITUTION AND LOCATION	DEGREE	YEAR CONFERRED	FIELD OF STUDY
University of Florence, Florence, Italy	BS	1981	Pharmacology
New York University, Sch. Med, New York, USA	M.S.	1984	Dev. Neurobiol
New York University, Sch. Med, New York, USA	Ph.D.	1986	Dev. Neurobiol
New York University, Sch. Med, New York, USA	Postdoc	1986	Dev. Neurobiol
Columbia University, Col. Phys.& Surg, New York, USA	Postdoc	1986-1988	Dev. Neurobiol

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with current position, list, in chronological order, previous employment, experience, and honours. List, in chronological order, the titles and **COMPLETE** references to all publications during the past five years and to representative earlier publications pertinent to this application. **DO NOT EXCEED TWO PAGES.**

**Previous employment**

1989-1993      Research Associate, Instituto Cajal, Consejo Superior de Investigaciones Cientificas (CSIC).  
1993-2002      Staff Scientist, Instituto Cajal, CSIC.  
1995            Visiting Scientist, HSR-DIBIT, Milan, Italy  
2000            Invited Professorship, École Normale Supérieure, Paris, France.  
2002-2004      Associate Professor, Instituto Cajal, CSIC.  
2005-May 2009   Full Professor, Chair of Cell Mol and Developmental Neurobiology Dept.  
2008-present    Head of the Biology and Biomedicine Area of the CSIC

**Experience and honours**

European Editor *Developmental Neurobiology* 2008-present  
Editorial Board *Development*, 2005-present  
Contributing Editor for the *European Journal of Neuroscience* (July 2008- present)  
Editorial Board "*Frontiers in Neuroscience*" (October 2008-present)  
Editorial Board *Journal Neurobiology (now Developmental Neurobiology)*, 2001-2008  
Editorial Board *The Tohoku J Exp. Medicine*, 2002-present  
Guest Editor, *Journal of Neurobiology Special Issue* "Unexpected roles for morphogens in the development and regeneration of the CNS" (15 September, 2005)  
Contributing Faculty Member of the Neurodevelopment Section in the Neuroscience Faculty of the "Faculty of 1000". Section Heads: Andrew Lumsden and Joshua Sane. November 2010.

Head of the Biology and Biomedicine Area of the CSIC , July 2008-present  
Member of the FENS Communication/Publication Committee, 2009-present  
Scientific Committee, Telethon Combatti la Distrofia Muscolare e La Altre Malattie Genetiche, Italy 2006-present  
Co-Manager of the Spanish Nat. Evaluation Agency (ANEP), Cell&Mol. Biol. 2005-2008  
Member of the Evaluation Committee "LS4-Neurosciences" European Research Council (ERC) Starting Grants, 2007-present

Study Section Spanish Ministry Education & Science (Mol. Biology Area), July 2002.  
Study Section FP6-Mobility1 Marie Curie, RTN Program. 2002-2004  
Study Section FP6-2003-LifeSciHealth-1. 2004  
Study Section "Programa Ramón y Cajal", 2004.  
Scientific Committee-Site Visit: "Kondoh Differentiation Signalling Project". Programme: Exploratory Research for Advanced Technology (ERATO) de la Japan Science and Technology Cooperation (JST). Kyoto, September, 2003  
Scientific Committee-Site Visit: Telethon Institute of Genetics and Medicine (TIGEM). Naples; March 2006

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Co-organizer, Juan March Foundation Workshop, Signalling at the Growth Cone, 2001.

Organizing committee, ESF Workshops, Investigation of the genetic aetiology of the developmental eye defects-microphthalmia, anophthalmia and coloboma (MAC). 2000-2003

Session co-chair and abstract selection. "Axon guidance and neuronal plasticity". Cold Spring Harbour Laboratory Mtg. Cold Spring Harbour, NY. USA September, 2006

Discussion Leader and Speaker selection. "Gordon Research Conference: "Visual System Development", New Port, RI. USA August, 2008

FENS Forum. July 3-7, 2010 Amsterdam, NL. Symposium Organizer. Morphogens in neural circuit formation

### Selected publications last 5 years

Martinez-Morales, J.R, Del Bene, F., Nica G., Hammerschmidt M., **Bovolenta P.\*** and Wittbrodt, J.\* (2005) Differentiation of the vertebrate retina is coordinated by an FGF signaling center. *Dev Cell* 8, 565-574. \*co-senior authors (Selected in Faculty of 1000)

**Bovolenta P.** (2005) Morphogen signalling at the vertebrate growth cone: a few cases or a general strategy? *J. Neurobiol.* 64, 405-416 (cover).

Conte, I., Morcillo, J., and Bovolenta P. (2005) Comparative analysis of the distribution of *Six3* and *Six6* in the developing and adult mouse brain. *Dev. Dyn.* 234, 718-25.

Rodríguez, J., Esteve, P., Weinl, C., Ruiz, J.M., Fermin Y., Trousse, F., Dwivedy A, Holt C.E. and **Bovolenta P.** (2005) SFRP1 regulates the growth of retinal ganglion cell axons through the Fz2 receptor. *Nat Neurosci.* 8, 1301-1309. (News and Views 8, 1281-1282)

Martí E., García-Campmany, L. and **Bovolenta P.** (2006) Dorso-ventral patterning of the vertebrate nervous system. En: "Cell signalling and growth factors in development "K.Unsicker and K. Kriegstein (Eds). Wiley-VCH. Growth Fact 2Vol, ISBN 3-527-31034-7 pp. 361-394

Esteve P and **Bovolenta P.** (2006) Secreted inducers in vertebrate eye development: more functions for old morphogens. *Curr. Opin. Neurobiol.* 16, 1-7. R

Morcillo J., Martinez-Morales, J.R, Trousse, F., Fermin Y., Sowden J. and **Bovolenta P.** (2006). Proper patterning of the optic fissure requires the sequential activity of Bmp7 and Shh. *Development* 133, 3179-3190. (Highlights in "In this issue Development" and in *Nat. Rev. Neurosc.* 2006, 7, 684; Selected for Faculty of 1000)

**Bovolenta P.** Rodríguez, J., Esteve, P. (2006) Frizzled/Ryk mediated signalling in axon guidance. *Development* 133, 4399-4408.

Conte I. and **Bovolenta P.** (2007) Comprehensive characterization of the *cis*-regulatory code responsible for the spatio-temporal expression of *oSix3.2* in the developing medaka forebrain. *Genome Biol.* 8: R137, 1-17.

**Bovolenta P.**, Esteve P., Ruiz J.M., Cisneros E. and Lopez-Rios, J. (2008) Beyond Wnt inhibition: new functions of secreted Frizzled-related proteins in development and disease. *J. Cell Sci.* 121: 737-746.

Lopez-Rios, J\* Esteve, P\*, Ruiz JM and **Bovolenta P.** (2008) The netrin-related domain of Sfrp1 interacts with Wnt ligands and antagonises their activity in the anterior neural plate. *Neural Development*, 3: 19.

Sánchez-Camacho C. and **Bovolenta P.** (2008) Autonomous and non autonomous Shh signalling mediate the in vivo growth and guidance of mouse retina ganglion cell axons. *Development*, 135, 3531-3540 (cover caption and Highlights "In this issue")

**Bovolenta P.** and Cisneros, E. (2009). Retinitis Pigmentosa: cone photoreceptors starving to death. *Nat. Neurosci.* 12, 5-7 (N&V)

Sánchez-Camacho C. and **Bovolenta P.** (2009) Emerging mechanisms in morphogen-mediated axon guidance. *BioEssays* 31, 1013-1025.

**Bovolenta P.** Marco-Ferreres, R and Conte I. (2010) Retinal development: Embryology and early patterning. In: Darlene A. Dartt, editor. *Encyclopedia of the Eye*, Vol 2. Oxford: Academic Press; p.69-75

**Bovolenta P.** Marco-Ferreres, R and Conte I. (2010) Retinal development: Embryology and early patterning. In: Darlene A. Dartt, editor. *Encyclopedia of the Eye*, Vol 2. Oxford: Academic Press; p.69-75

Esteve P. and **Bovolenta P.** (2010) The advantages and disadvantages of Sfrp1 and Sfrp2 expression in pathological events: a mini-review. *Tohoku J. Exp. Med.* 221, 11-17.

Cubelos' B. Sebastián-Serrano' A., Beccari L., Calcagnotto M.E., Cisneros E., Kim S, Dopazo A., Alvarez-Dolado M., Redondo J.M., **Bovolenta P.**, Walsh CA, and Nieto M. (2010) *Cux1* and *Cux2* regulate dendritic branching, spine morphology and synapse formation of the upper layer neurons of the cortex. *Neuron*, 66, 523-535. (Selected in The Faculty of 1000)

Conte I.\* Marco-Ferreres, R.\*, Beccari. L., Cisneros E., Ruiz JM and **Bovolenta P.** (2010) Proper differentiation of photoreceptors and amacrine cells depends on a regulatory loop between NeuroD and Six6. *Development* 137, 2307-2317. \*co-first authors

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- Domanitskaya E, Wacker A, Mauti O, Baeriswyl O, Esteve P., **Bovolenta P.**, and Stoeckli ET (2010). Sonic hedgehog guides post-crossing commissural axons both directly and indirectly by regulating Wnt activity. *J. Neurosci.* 30, 11167–
- Conte, I., Carrella, S., Avellino, R. Karali M., Marco-Ferreres' R., **Bovolenta P.** and Banfi S. (2010) miR-204 is required for lens and retinal development via *Meis2* targeting. *Proc.Nat. Aca.Sci.USA* 107:15491-15496.
- Sánchez-Camacho, C. Cano JA, Ocaña, I, Alcantara S' and **Bovolenta P.** (2010) Appropriate Bmp7 levels are required for the timely differentiation of the guide post cells that support corpus callosum formation. (*Dev Neurobiol.* )
- Esteve, P., Sardonis A.' Malapeira J., Ibañez C. Crespo I, Gonzalez-Garcia S, Marcos S., Cardozo M., Toribio ML, Arribas J., Shimono A., Guerrero I. and **Bovolenta P.** (2010) Secreted Frizzled-Related Proteins act as inhibitors of Adam10 metalloproteinase activity in retinal development (*Nat. Neurosci.* NN-A31212A revising according to referee suggestions).
- Beccari L., Conte I\*, Cisneros E.\*, and **Bovolenta P.** (2010) Differential *Six3.2* activity patterns the forebrain through Sox2-dependent and independent mechanisms *Development* (revising DEVELOP/2010/059089).
- Bailey J., Banham A.H., Becarri, L. et al. **Bovolenta P.** et al. Marco-Ferreres' R., et al. Wasserman, WW (2010) The Transcription Factor Encyclopedia. *Genome Biol.* (submitted)
- Esteve, P., Sardonis A.' Ibañez C., Shimono A., Guerrero I. and Bovolenta P. (2010) Secreted Frizzled-Related Proteins are required for Wnt/ $\beta$ catenin signalling activation in the vertebrate optic cup. *Development* (submitted).
- Sánchez-Arrones' L, Stern' C.D., **Bovolenta, P.** and Puellas, L. (2010) Establishment of the anterior neural boundary in the chick. (submitted)
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