CURRICULUM VITAE

Name: Edward M. De Robertis

Date and Place of Birth: June 6, 1947, Boston, Massachusetts

Nationality: U.S. Citizen

Address: Department of Biological Chemistry
University of California
David Geffen School of Medicine
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Graduate Degrees:

Doctor in Medicine: School of Medicine, University of Uruguay, 1971

Ph.D. in Chemistry: Faculty of Sciences, Instituto Leloir, Buenos Aires, Argentina, 1974.

Positions Held

- Royal Society postdoctoral fellow, 1975. (Sir John Gurdon, supervisor).
- Jane Coffin Childs Memorial Fund postdoctoral fellow, 1976-1977 (Sir John Gurdon, supervisor).
- Staff Scientist, Medical Research Council, Laboratory of Molecular Biology, Cambridge, England (1978-1980).
- Professor of Cell Biology (Ordinarius), Biocenter, University of Basel, Switzerland (1980-1985).
- Howard Hughes Medical Institute Investigator, University of California, Los Angeles (1994-2019).
- Professor of Biological Chemistry and Norman Sprague Jr. Chair, University of California, Los Angeles (1985-present).

Honors

- Gold Medal to the top student in 1971, School of Medicine, Uruguay.
- Elected Member, European Molecular Biology Organization, 1982.
- Norman Sprague Endowed Chair for Biological Chemistry, UCLA School of Medicine, 1985-present.
- Konex Foundation Award. Buenos Aires, Argentina, 1993.
- Public lecture series and Medal of the Collège de France, Paris, 1997.
- MERIT Award, National Institutes of Health, 1997.
- Fellow, American Academy of Arts and Sciences, 2000.
- Corresponding Member, Latin American Academy of Sciences, 2002.
- Membre D'Honneur, Société de Biologie, Paris, France, 2008.
- Ross Harrison Prize in Developmental Biology, 2009.

- Academician, Pontifical Academy of Sciences, the Vatican, 2009.
- Doctor *Honoris Causa*, Universités Sorbonne, Université Pierre et Marie Curie, Paris, France, 2013.
- Member, National Academy of Sciences, 2013.
- Doctor *Honoris Causa*, Universidad de la República del Uruguay, 2016.
- Honorary Associate Investigator Instituto de Investigaciones Biológicas Clemente Estable, Montevideo, Uruguay, 2017.
- Corresponding Member, Academia Nacional de Ciencias de Buenos Aires, 2019.
- Corresponding Member, Academia Nacional de Ciencias del Uruguay, 2019.
- Alexander Kowalevsky Medal in Evolutionary Developmental Biology, 2020
- Lifetime Achievement Award, Society for Developmental Biology, 2021

Society Memberships

- Society for Developmental Biology (USA)
- Swiss Society of Cell and Molecular Biology
- Latin American Society of Developmental Biology

Editorial Boards

International Journal of Developmental Biology	1989 - present
Development, Growth & Differentiation	2000 - present
Developmental Dynamics	2003 - present
Natural Sciences	2021 - present
Differentiation	2000 - 2021
Open Biology, Royal Society Publishing	2011 - 2016
Mechanisms of Development	1991 - 2016
Experimental Cell Research	1984 - 1992
Genes and Development	1987 - 1994
The EMBO Journal	1991 - 1993
European Journal of Cell Biology	1991 - 1994
Oxford Surveys on Eukaryotic Genes	1988 - 1991
Journal of Developmental Neuroscience	1988 - 1991
Journal of Cellular Biochemistry	1990 - 2002
Developmental Biology	1994 - 2007

Service

- Organizer, Symposium on Molecular Analysis of Developmental Regulatory Genes. 5th International Congress on Cell Biology. Madrid, Spain, 1992.
- Organizer, Symposium on Molecular Biology of Embryonic Development, Santiago, Chile, 1995.
- Organizer, Workshop on "Molecular Nature of the Gastrula Organizer Centre: 75 years after Spemann and Mangold". Fundación Juan March, Spain, 1999.
- Organizer, with S. Aizawa, Head Development Meeting, Osaka, Japan, 1999.
- Organizer, with D. Duboule, Colloquium on "Evolution of Animal Body Plans", Les Treilles, France, Sept. 2002.
- American Cancer Society, California Division, Fellowship Committee, 1987-1990.
- Quinquennial Review for ICRF Developmental Biology Unit, 1991.

- Scientific Review Committee, HFSPO, Strasbourg, France, 1993.
- NIH Study Section on Cell Biology, 1993-1995.
- Review Committee, Wellcome Trust Institute of Developmental Biology, Cambridge, England, 2000.
- Review Committee, Latin American and Canadian Scholars Competition, Howard Hughes Medical Institute, 2001.
- President of ISDB, International Society for Developmental Biology (2002-2006).
- Organizer, Cell Biology and Genetics Workshop, encounter of the Pontifical Academy of Sciences and the Academia de Ciencias de América Latina, the Vatican, 2017.
- UCLA Early Career Nomination Committee, College of Letters and Sciences, 2017.
- Medical School Redesign Committee, 2018.
- Chair, Honors Committee, David Geffen School of Medicine 2017 - present.

Advisory Boards:

- Board of Scientific Counselors, National Institute of Child Health and Human Development, 1995-2000.
- Advisory Board, Fundación Campomar, Buenos Aires, Argentina, 1987-2005.
- Advisory Board of Santiago (Chile) Southern Symposia Series, 1991-1998.
- Advisory Board, CNRS Inst. d'Embryologie, Nogent-sur-Marne, France 1995-1999.
- US Advisory Committee of the National Research Council and Academy of Sciences/Mexican Academy exchange program (1997-2001).
- Advisory Board, Millennium Institute for Advanced Studies in Cell and Biotechnology, Santiago, Chile, 1999-2003.
- Advisory Board, Schlumberger Foundation Scholars Program. Paris, 1999-2005.
- Board Member, Latin American Society of Developmental Biologists (LASDB), 2004-present.
- Scientific Advisory Board, Pew Charitable Trusts, Latin American Fellows program, 1990-present.
- Scientific Council, Academia de Ciencias de América Latina, 2014-present.

Community Leadership

Several initiatives with the goal of promoting Developmental Biology in smaller countries that lack their own National Societies were initiated by ISDB under my presidency (2002-2006):

- Latin American Society of Developmental Biologists.
- Asian Pacific Developmental Biology Network.
- Joint scientific meetings were held between the International SDB and the American SDB (Boston, 2003) and British SDB (Warwick, 2004).
- The International Congress of ISDB organized at Darling Harbor, Sydney, Australia, in September 2005 during my watch.
- Keynote address, Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) 2016 graduation, UCLA.

Special Lectures

- Keynote Lecture, 1992 Symposium of the British Society for Developmental Biology.
- Public lectures at the Collège de France, Paris, January 1993.
- Lucille P. Markey Lecture. Harvard Medical School, 1993.

- Inaugural Lecture, Zoology and Comparative Anatomy Society of Italy, San Benedetto del Tronto, Italy, Sept. 1993.
- Keynote Lecture, Meeting on "Molecular Genetics of Development", Airlie House, Virginia, 1998.
- Inaugural Lecture, Ibero-American Congress on Cell Biology, Montevideo, Uruguay, 1998.
- Distinguished Lecturer, Samuel Lunenfeld Research Institute, Toronto, Feb. 1999.
- Distinguished Visitor Lecture, EMBL, Heidelberg, June 1999.
- Director's Lecture, N.I.H., June 1999.
- Keynote Lecture in honor of Sir John Gurdon, *Xenopus* Conference 2000.
- Keynote Lecture, Organizer Workshop, EMBL, Heidelberg, 2001.
- R. G. Williams Lecture, University of Pennsylvania, 2001.
- Distinguished Lecturer, University of Virginia, 2001.
- Keynote Lecture, Latin American Society of Developmental Biology, Valle Nevado, Chile, 2003.
- Keynote Lecture, Finnish Society of Developmental, Helsinki, 2003.
- The BSDB Lecture, British Soc. Dev. Biol., Warwick, UK, 2004.
- William J. Larsen Lecture, University of Cincinnati, 2004.
- 24th Annual Viktor Hamburger Lecture, Washington University in St. Louis, 2004.
- Science Faculty Research Colloquium Lecture Series. UCLA, 2005.
- Keynote Lecture, TGF-β in Homeostasis and Disease, Keystone Symposia, Santa Fe, New Mexico, 2008.
- "Masters" Lecture, 41st Annual Meeting for the Japanese Society of Developmental Biologists, Tokushima, Japan, 2008.
- Keynote Lecture, 12th International *Xenopus* Conference, Leiwen/Trier, Mosel, Germany, 2008.
- Research lecture at the Nobel Forum, Karolinska Institute. By invitation of the Nobel secretariat, 2009.
- Keynote lecture, International Workshop "The Evolution of Multicellularity: Insights from Hydra and other Basal Metazoans", Tutzing, Germany, 2009.
- President's Lecture, Rockefeller University, 2009.
- Keynote Lecture, Developmental Biology Training Grant Retreat, Deer Valley Resort, Silver Lake Lodge organized by the University of Utah, School of Medicine, 2010.
- Keynote Lecture, Vanderbilt University Program in Developmental Biology Retreat, Joe Wheeler State Park, Alabama, 2010.
- Theodor Boveri Lecture, University of Würzburg, Germany, May 2011.
- Marshall R. Urist Lecture, Lake Tahoe, 2012.
- *Honoris Causa* Lecture. Université Pierre et Marie Curie, Paris, 2013.
- *Dies Academicus* Keynote Lecture, Irapuato, Mexico, 2015
- Federico Leighton Lecture, Pontificia Universidad Católica de Chile, 2015.
- *Honoris Causa* Lecture, Universidad de la República del Uruguay, 2016.
- 121st UCLA Faculty Lecture, 2016.
- 50th Anniversary Lecture of the Japanese Society of Developmental Biology, 2017.
- Lecture celebrating the 90th anniversary of Instituto Clemente Estable, Montevideo, Uruguay, 2017.
  Inaugural Lecture, Academia de Buenos Aires, Argentina, 2019.
- Inaugural Lecture, Academia de Montevideo, Uruguay, 2019.

- Alexander Mauro Lecture, FASEB Research Conference on Muscle Stem Cells, 2022.

U. S. Patents

- DNA Molecules Encoding Human Chordin. Patent #: 5,846,770. Awarded: 11/16/1999.
- DNA Molecules Encoding Mammalian Cerberus-like Proteins. Patent #: 5,935,852. Awarded: 08/10/1999.
- Chordin Compositions (with Edward R. La Salle and Lisa A. Racle). Patent #: 5,986,056. Awarded: 11/16/1999.
- Endoderm, Cardiac and Neural Inducing Factors (with Dr. Antonius Bouwmeester). Patent #: 6,133,232. Awarded: 10/17/2000.
- DNA Encoding a Tissue Differentiation Affecting Factor. (with Dr. Yoshiki Sasai). Patent #: 5,679,783. Awarded: 10/21/1997.

ADDITIONAL ONLINE INFORMATION

A Questions and Answers interview for Current Biology can be found at
http://www.hhmi.ucla.edu/derobertis/Q&A.html

A Profile of Edward M. De Robertis by journalist Jennifer Viegas for PNAS can be found at
http://www.pnas.org/content/110/51/20349.full.pdf

Pontifical Academy of Sciences website:
http://www.casinapioiv.va/content/accademia/en/academicians/ordinary/derobertis.html

Interview by Christof Niehrs 2021
http://www.ijdb.ehu.es/web/paper/190298cn/lessons-from-the-organizer-an-interview-with-edward-eddy-m-de-robertis

List of Publications

1. Narbaitz, R. and De Robertis, E.M. (1968). Postnatal Evolution of Steroidogenic Cells in the Chick Ovary. Histochemie *15*, 187-193.

2. Narbaitz, R. and De Robertis, E.M. (1970). Steroid producing Cells in Chick Intersexual Gonads. J. General and Comparative Endocrinol. *14*, 164-169.

3. De Robertis, E.M., Ezcurra, P., Judewicz, N., Pucci, P. and Torres, H.N. (1972). Inhibition of *E. coli* RNA Polymerase by Polyadenylic Acid. FEBS Letters *25*, 175-178.

4. Judewicz, N.D., De Robertis, E.M. and Torres, H.N. (1973). Inhibition of *Escherichia coli* Growth by Cyclic Adenosine 3', 5'-Monophosphate. Biochem. Biophys. Res. Commun. *52*, 758-764.

5. De Robertis, E.M., Judewicz, N.D. and Torres, H.N. (1973). On the Control Mechanism of Bacterial Growth by Cyclic Adenosine 3', 5'-Monophosphate. Biochem. Biophys. Res. Commun. *55*, 758-764.

6. Judewicz, N.D., De Robertis, E.M., and Torres, H.N. (1974). Control of Uracil Transport by Cyclic AMP in *E. coli*. FEBS Letters *45*, 155-158.

7. De Robertis, E.M. (1974). Regulación de la Multiplicación Celular en *Escherichia coli* por el AMP cíclico. DOCTORAL THESIS. Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires.

8. De Robertis, E.M., Judewicz, N.D. and Torres, H.N. (1976). Regulation of Uracil uptake in *Escherichia coli* by Adenosine 3', 5'-Monophosphate. Biochem. Biophys. Acta *426*, 451-463.

9. Gurdon, J.B., De Robertis, E.M. and Partington, G. (1976). Injected nuclei in frog oocytes provide a living cell system for the study of transcriptional control. Nature *260*, 116-120.

10. Gurdon, J.B., Partington, G. and De Robertis, E.M. (1976). Injected nuclei in frog oocytes: RNA synthesis and protein exchange. J. Embryol. Exp. Morph. *36*, 541-553.

11. Wyllie, A.H. and De Robertis, E.M. (1976). High Tyrosinase activity in albino *Xenopus laevis* oocytes. J. Embryol. Exp. Morph. *36*, 555-559.

12. De Robertis, E.M., Gurdon, J.B., Partington, G.A., Mertz, J.E. and Laskey, R.A. (1977). Injected Amphibian oocytes: A Living Test Tube for the study of Eukaryotic Gene Transcription? Biochem. Soc. Symp. (London) *42*, 181-191.

13. Gurdon, J.B., De Robertis, E.M., Partington, G.A., Mertz, J.E. and Laskey, R.A. (1977). Nucleocytoplasmic interactions in amphibian oocytes. p 439-443. In: B.R. Brinkley and K.R. Porter (Eds.) International Cell Biology 1976-77. New York, The Rockefeller University Press.

14. De Robertis, E.M., Partington, G.A., Longthorne, R. and Gurdon, J.B. (1977). Somatic nuclei in amphibian oocytes: evidence for selective gene expression. J. Embryol. Exp. Morph. *40*, 199-214.

15. De Robertis, E.M. and Gurdon, J.B. (1977). Gene Activation in somatic nuclei after injection into amphibian oocytes. Proc. Natl. Acad. Sci. USA *74*, 2470-2474.

16. Gurdon, J.B., De Robertis, E.M., Laskey, R.A., Partington, G.A. and Wyllie, A.D. (1977). Cytoplasmic Control of Gene Expression in Oogenesis. pp. 413-418. In: "Cell Differentiation and Neoplasia", G.F. Saunders (Ed.) Raven Press.

17. De Robertis, E.M. and Mertz, J.E. (1977). Coupled Transcription - Translation of DNA injected into *Xenopus* oocytes. Cell *12*, 175-182.

18. Laskey, R.A., Honda, B., Mills, A.D., Morris, N.R., Wyllie, A.H., Mertz, J.E., De Robertis, E.M. and Gurdon, J.B. (1977). Chromatin Assembly and Transcription in Eggs and Oocytes of *Xenopus laevis*. Cold Spring Harbor Symp. Quant. Biol. *42*, 171-178.

19. De Robertis, E.M., Laskey, R.A. and Gurdon, J.B. (1977). Injected living cells as a biochemical test tube. Trends in Biochem. Sci. *2*, 250-253.

20. De Robertis, E.M., Longthorne, R.F. and Gurdon, J.B. (1978). Intracellular migration of nuclear proteins in *Xenopus* oocytes. Nature *272*, 254-256.

21. Gurdon, J.B., Wyllie, A.H. and De Robertis, E.M. (1978). The transcription and translation of DNA injected into oocytes. Phil. Trans. R. Soc. Lond. B. *283*, 367-372.

22. De Robertis, E.M., Partington, G.A. and Gurdon, J.B. (1978). Selective gene expression by somatic nuclei injected into amphibian oocytes. Phil. Trans. R. Soc. Lond. B. *283*, 375-377.

23. Gurdon, J.B., De Robertis, E.M., Laskey, R.A. and Wyllie, H., (1978). Nuclear transplantation and gene injection in the analysis of amphibian development. Miami Winter Symposia *15*, 457-466.

24. De Robertis, E.M. (1979). Probing the program of gene expression utilized in early development. Arch. Med. Biol. Exp. *12*, 325-330.

25. Gurdon, J.B., Melton, D.A. and De Robertis, E.M. (1979). Genetics in an oocyte. Human Genetics: possibilities and realities. Ciba-Foundation Symposium series *66*, 63-80.

26. Gurdon, J.B. and De Robertis, E.M. (1979). Oocytes and the beginning of development in Amphibia. Differentiation *13*, 19-20.

27. De Robertis, E.M. and Black, P. (1979). Hybrids of *Xenopus laevis* and *Xenopus borealis* express proteins from both parents. Dev. Biol. *68*, 334-339.

28. Melton, D.A., Cortese, R., De Robertis, E.M., Trendelenburg, M.F. and Gurdon, J.B. (1979). Gene injections into amphibian oocytes. Results and Problems in Cell Differentiation *11*, 8-14.

29. Gurdon, J.B., Laskey, R.A., De Robertis, E.M. and Partington, G.A. (1979). Reprogramming of transplanted nuclei in Amphibia. Int. Rev. of Cytol. Supplement *9*, 161-178.

30. De Robertis, E.M. and Olson, M.V. (1979). Transcription and processing of cloned yeast tyrosine tRNA genes microinjected into frog oocytes. Nature *278*, 137-143.

31. De Robertis, E.M. and Gurdon, J.B. (1979). Gene transplantation and the analysis of development. Scientific American *241*, 74-82.

32. Mills, A.D., Laskey, R.A., Black, P. and De Robertis, E.M., (1980). An acidic protein which assembles nucleosomes *in vitro* is the most abundant protein in *Xenopus* oocyte nuclei. J. Mol. Biol. *139*, 561-568.

33. Melton, D.A., De Robertis, E.M. and Cortese, R. (1980). RNA processing: order and intracellular location of the events involved in the maturation of a spliced tRNA. Nature *284*, 143-148.

34. De Robertis, E.M. and Black, P. (1981). Frog oocyte nuclear proteins and the analysis of developmental determinants. In Symposium "Progress in Developmental Biology", H.W. Sauer, Ed., Gustav Fischer Verlag, Stuttgart, vol. 26, pp. 49-58.

35. Nishikura, K. and De Robertis, E.M. (1981). RNA processing in microinjected *Xenopus* oocytes: Sequential base modifications in a spliced transfer RNA. J. Mol. Biol. *145*, 405-420.

36. De Robertis, E.M. and Nishikura, K. (1981). RNA processing in frog oocytes microinjected with cloned genes. In: Cell Biology 1980, H.G. Schweiger, Ed., Springer Verlag Heidelberg, pp 60-65.

37. De Robertis, E.M., Black, P. and Nishikura, K. (1981). Intranuclear location of the tRNA splicing enzymes. Cell *23*, 89-94.

38. Nishikura, K. and De Robertis, E.M. (1981). Processing of yeast tRNA tyr genes in *Xenopus* oocytes microinjected with cloned genes. ICN-UCLA Symposia series, D.D. Brown, Ed., Dev. Biol. Using purified genes, 483-492.

39. Nishikura, K., Kurjan, J., Hall, B.D. and De Robertis, E.M. (1982). Genetic analysis of the processing of a spliced tRNA. EMBO J. *1*, 263-268.

40. De Robertis, E.M., Lienhard, S. and Parisot, R.F. (1982). Intracellular transport of microinjected 5S and small nuclear RNAs. Nature *295*, 572-577.

41. Matter, L., Schopfer, K., Wilhelm, J.A., Nyffenegger, T., Parisot, R.F. and De Robertis, E.M. (1982). Molecular characterization of ribonucleoprotein antigens bound by antinuclear antibodies; a diagnostic evaluation. Arthritis and Rheumatism *25*, 1278-1283.

42. Zeller, R., Nyffenegger, T. and De Robertis, E.M. (1983). Nucleocytoplasmic distribution of snRNPs and stockpiled snRNA-binding proteins during oogenesis and early development in *Xenopus laevis*. Cell *32*, 425-434.

43. De Robertis, E.M., Zeller, R., Carrasco, A. and Mattaj, I. (1983). Nucleocytoplasmic transport of macromolecules in frog oocytes and embryos. Symp. of BSDB, Current problems of germ cells, A. McLaren and C. Wylie, Eds. Cambridge University Press 377-390.

44. De Robertis, E.M. (1983). Nucleocytoplasmic segregation of proteins and RNAs. Cell *32*, 1022-1026.

45. Gafner, J., De Robertis, E.M. and Philippsen, P. (1983). Delta sequences in the 5' non-coding region of yeast tRNA genes. EMBO J. *2*, 583-591.

46. Bartnik, E. and De Robertis, E.M. (1983). Mitochondrial tRNA genes from fungi (Aspergillus nidulans) and plants (Lipinus luteus) are transcribed in *Xenopus laevis* oocyte nuclei. J. Mol. Biol. *168*, 439-444.

47. Mattaj, I., Lienhard, S., Zeller, R. and De Robertis, E.M. (1983). Nuclear exclusion of TFIIIA and the 42S particle tRNA binding protein in *Xenopus* oocytes: a possible mechanism for gene control? J. Cell Biol. *97*, 1261-1265.

48. Zeller, R., Carri, M.T., Mattaj, I.W. and De Robertis, E.M. (1984). *Xenopus laevis* U1 snRNA genes: characterization of transcriptionally active genes reveals major and minor repeated gene families. EMBO J. *3*, 1075-1081.

49. Fritz, A., Parisot, R., Newmeyer, D. and De Robertis, E.M. (1984). Small nuclear U-RNPs in *Xenopus laevis* development: Uncoupled accumulation of the protein and RNA components. J. Mol. Biol. *178*, 273-285.

50. Carrasco, A.E., McGinnis, W., Gehring, W.J. and De Robertis, E.M. (1984). Cloning of a *Xenopus laevis* gene expressed during early embryogenesis that codes for a peptide region homologous to *Drosophila* homeotic genes: implications for vertebrate development. Cell *37*, 409-414.

51. Shepherd, J.C.W., McGinnis, W., Carrasco, A.E., De Robertis, E.M. and Gehring, W.J. (1984). Fly and frog homeo domains show homologies with yeast mating type regulatory proteins. Nature *310*, 70-71.

52. Muller, M., Carrasco, A.E. and De Robertis, E.M., (1984). Isolation of a maternally expressed *Xenopus* homeotic-like gene. Cell *39*, 157-162.

53. Mattaj, I.W. and De Robertis, E.M. (1985). Nuclear segregation of U2 snRNA requires binding of specific snRNP proteins. Cell *40*, 111-118.

54. Mattaj, I.W., Zeller, R., Carrasco, A.E., Jamrich, M., Lienhard, S. and De Robertis, E.M. (1985). U snRNA Gene Families in *Xenopus laevis*. Oxford Surveys on Eukaryotic Genes, Vol. 2, 121-140.

55. Mattaj, I.W., Lienhard, S., Jiricny, J. and De Robertis, E.M. (1985). An enhancer-like sequence within the *Xenopus* U2 gene promoter facilitates the formation of stable transcription complexes. Nature *316*, 163-167.

56. De Robertis, E.M., Fritz, A., Goetz, J., Martin, G., Mattaj, I.W., Salo, E., Smith, G.D., Wright, C. and Zeller, R. (1985). The *Xenopus* homeoboxes. Cold Spring Harbor Symp. of Quant. Biol. *50*, 271-275.

Arrival to UCLA

57. Newmeyer, D.D., Lucocq, J.M., Bürglin T.R. and De Robertis, E.M. (1986). Assembly *in vitro* of nuclei active in nuclear protein transport ATP: is required for nucleoplasmin accumulation. EMBO J. *5*, 501-510.

58. Bürglin, T.R., Mattaj, I.W., Newmeyer, D., Zeller, R. and De Robertis, E.M. (1987). Cloning of nucleoplasmin from *Xenopus laevis* oocytes and analysis of its developmental expression. Genes Dev. *1*, 97-107.

59. Bürglin, T. and De Robertis, E.M. (1987). The nuclear migration signal of nucleoplasmin. EMBO J. *6*, 2617-2625.

60. Sharpe, C.R., Fritz, A., De Robertis, E.M. and Gurdon, J.B. (1987). A homeobox-containing marker of posterior neural differentiation shows the importance of predetermination in neural induction. Cell *50*, 749-758.

61. Mattaj, I., Coppard, N., Brown, R.S., Clark, B.F.C. and De Robertis, E.M. (1987). 42S p48 - the most abundant protein in previtellogenic *Xenopus* oocytes - resembles elongation factor 1α structurally and functionally. EMBO J. *6*, 2409-2413.

62. Wright, C.V.E., Cho, K.Y., Fritz, A., Bürglin, T.R. and De Robertis, E.M. (1987). A *Xenopus laevis* gene encodes both homeobox-containing and homeobox-less transcripts. EMBO J. *6*, 4083-4094.

63. Bürglin, T., Wright, C.V.E. and De Robertis, E.M. (1987). Translational control in homeobox mRNAs? Nature *330*, 701-702.

64. Fritz, A. and De Robertis, E.M. (1988). *Xenopus laevis* homeobox-containing cDNAs expressed during early development. Nucleic Acids Res. *16*, 1453-1469.

65. Cho, K.W.Y., Goetz, J., Wright, C.V.E., Fritz, A., Hardwicke, J. and De Robertis, E.M. (1988). Differential utilization of the same reading frame in a *Xenopus* homeobox gene encodes two related proteins sharing the same DNA-binding specificity. EMBO J. *7*, 2139-2149.

66. Oliver, G., Wright, C.V.E., Hardwicke, J. and De Robertis, E.M. (1988). Differential antero-posterior expression of two proteins encoded by a homeobox gene in *Xenopus* and mouse embryos. EMBO J. *7*, 3199-3209.

67. De Robertis, E.M., Bürglin, T.R., Fritz, A., Wright, C.V.E., Jegalian, B., Schnegelsberg, P., Bittner, D., Morita, E., Oliver, G. and Cho, K.W.Y. (1988). Families of vertebrate homeodomain proteins. In: DNA Protein interactions in Transcription. J. Gralla, Ed. UCLA Symposia *95*, 107-115.

68. Fritz, A.F., Martin, G., Wright, C.V.E. and De Robertis, E.M. (1988). Site-specific inversions in repeated Xenopus laevis homeobox gene 2 sequences. Nucleic Acids Res. *16*, 9058.

69. De Robertis, E.M., Bürglin, T.R., Fritz, A., Oliver, G., Cho, K. and Wright, C.V.E. (1988). Sequence conservations in vertebrate homeobox mRNAs. Arch Biol. Med. Exp. *21*, 443-447.

70. Oliver, G., Wright, C.V.E., Hardwicke, J. and De Robertis, E.M. (1988). A gradient of homeodomain protein in developing forelimbs of *Xenopus* and mouse embryos. Cell *55*, 1017-1024.

71. Fritz, A.F., Cho, K.W.Y., Wright, C.V.E., Jegalian, B.G., and De Robertis, E.M. (1989). Duplicated Homeobox Genes in *Xenopus*. Dev. Biol. *131*, 584-588.

72. Wright, C.V.E, Schnegelsberg, P., and De Robertis, E.M. (1988). XlHbox 8: A novel *Xenopus* homeo protein restricted to a narrow band of endoderm. Development *104*, 787-794.

73. Wright, C.V.E, Cho, K.W.Y., Oliver, G. and De Robertis E.M. (1989). Vertebrate homeodomain proteins: families of region-specific transcription factors. Trends in Biochem. Sci. *14*, 52-56.

74. De Robertis, E.M., Oliver, G. and Wright C.V.E. (1989). Determination of axial polarity in the vertebrate embryo: homeodomain proteins and homeogenetic induction. Cell *57*, 189-191.

75. Oliver, G., Sidell, N., Fiske, W., Haenzmann, C., Mohandas, T., Sparkes, R.S. and De Robertis, E.M. (1989). Complementary homeoprotein gradients in developing limb buds. Genes Dev. *3*, 641-650.

76. Wright, C.V.E., Cho, K.W.Y., Hardwicke, J., Collins, R.H. and De Robertis, E.M. (1989). Interference with function of a homeobox gene in *Xenopus* embryos causes malformations of the anterior cervical spinal cord. Cell *59*, 81-93.

77. De Robertis, E.M., Oliver, G. and Wright, C.V.E. (1990). Homeobox genes and the vertebrate body plan. Scientific American *263*, 46-52.

78. Wright, C.V.E., Morita, E.A., Wilkin, D.J. and De Robertis, E.M. (1990). The XlHbox 6 homeoprotein, a marker for posterior neural induction in *Xenopus*, is expressed in proliferating neuroblasts. Development *109*, 225-234.

79. Molven, A., Wright, C.V.E., Bremiller, R., De Robertis, E.M. and Kimmel, C.B. (1990). Expression of a homeobox gene product in normal and mutant zebrafish embryos: evolution of the tetrapod body plan. Development *109*, 279-288.

80. Duboule, D., Boncinelli, E., De Robertis, E.M., Featherstone, M., Lonai, P., Oliver, G. and Ruddle, F.H. (1990). An update of mouse on human Hox gene nomenclature. Genomics *7*, 458-459.

81. Cho, K.W.Y. and De Robertis, E.M. (1990). Differential activation of *Xenopus* homeobox genes by mesoderm-inducing growth factors and retinoic acid. Genes Dev. *4*, 1910-1916.

82. Oliver, G., De Robertis, E.M., Wolpert, L. and Tickle, C. (1990). Expression of a homeobox gene in the chick wing bud following application of retinoic acid and grafts of polarizing region tissue. EMBO J. *9*, 3093-3099.

83. Chuong, C.M., Oliver, G., Ting, S.A. and De Robertis, E.M. (1990). Gradients of homeoproteins in developing feather buds. Development *110*, 1021-1030.

84. Livingston, B., De Robertis, E.M. and Paulson, J.C. (1990). Expression of *β*-galactoside *α*2,6 sialyltransferase blocks expression of polysialic acid in *Xenopus* embryos. Glycobiology *1*, 39-44.

85. Jegalian, B.G. and De Robertis, E.M. (1990). The *Xenopus laevis* Hox 2.1 homeodomain Protein is expressed in a narrow band of the hindbrain. Int. J. Devel. Biol. *34*, 453-456.

86. Cho, K.W.Y., Morita, E.A., Wright, C.V.E. and De Robertis, E.M. (1991). Overexpression of a homeodomain protein confers axis-forming activity to uncommitted Xenopus embryonic cells. Cell *65*, 55-64.

87. De Robertis, E.M., Morita, E. and Cho, K.W.Y. (1991). Gradient-fields and homeobox genes. Development *112*, 669-678.

88. Blumberg, B., Wright, C.V.E., De Robertis, E.M. and Cho, K.W.Y. (1991). Organizer-specific homeobox genes from *Xenopus* embryos. Science *253*, 194-196.

89. Niehrs, C. and De Robertis, E.M. (1991). Ectopic expression of a homeobox gene changes cell fate in *Xenopus* embryos in a position-specific manner. EMBO J. *12*, 3621-3629.

90. Cho, K.W.Y, Blumberg, B., Steinbeisser, H. and De Robertis, E.M. (1991). Molecular Nature of Spemann's Organizer: the Role of the *Xenopus* Homeobox Gene *goosecoid*. Cell *67*, 1111-1120.

91. Cho, K.W.Y., Blumberg, B. and De Robertis, E.M. (1991). Cooperation between mesoderm-inducing growth factors and retinoic acid in *Xenopus* axis formation. Seminars in Dev. Biol. *2*, 393-403.

92. Jones, F.S., Prediger, E.A., Bittner, D.A., De Robertis, E.M. and Edelman, G.M. (1992). Cell Adhesion Molecules as Targets for Hox Genes: N-CAM Promoter Activity Is Modulated by Co-transfection with Hox 2.5 and 2.4. Proc. Natl. Acad. Sci. USA *89*, 2086-2090.

93. Storey, K.G., Crossley, J.M., De Robertis, E.M., Norris, W.E., and Stern, C.D. (1992). Neural induction and regionalisation in the chick embryo. Development *114*, 729-741.

94. Blumberg, B., Mangelsdorf, D.J., Dyck, J., Bittner, D.A., Jegalian, K., Evans, R.M. and De Robertis, E.M. (1992). Retinoid-responsive receptors in *Xenopus* eggs. Proc. Natl. Acad. Sci. USA *89*, 2321-2325.

95. Westerfield, M., Wegner, J., Jegalian, B.G., De Robertis, E.M. and Püschel, A.W. (1992). Specific activation of mammalian *Hox* promoters in mosaic transgenic zebrafish. Genes Dev. *6*, 591-598.

96. Blum, M., Gaunt, S.J., Cho, K.W.Y., Steinbeisser, H., Blumberg, B., Bittner, D. and De Robertis, E.M. (1992). Gastrulation in the mouse: the role of the homeobox *goosecoid*. Cell *69*, 1097-1106.

97. Niehrs, C. and De Robertis, E.M. (1992). Vertebrate axis formation. Curr. Op. Genet. Dev. *2*, 550-555.

98. Leroy, P. and De Robertis, E.M. (1992). Colinearity in the expression of genes from the *Xenopus laevis* Hox 2 complex: effects of lithium chloride and retinoic acid. Dev. Dyn. *194*, 21-32.

99. De Robertis, E.M., Blum, M., Niehrs, C. and Steinbeisser, H. (1992). *Goosecoid* and the Organizer. Development Suppl. 167-171.

100. Jegalian, B.C. and De Robertis, E.M. (1992). Homeotic transformations in the mouse induced by overexpression of a human *Hox 3.3* transgene. Cell *71*, 901-910.

101. Jegalian, B.C., Miller, R.W., Wright, C.V.E., Blum, M. and De Robertis, E.M. (1992). A *Hox 3.3*-lacZ Transgene expressed in developing mouse limbs. Mech. Dev. *39*, 171-180.

102. Gaunt, S.J., Blum, M. and De Robertis, E.M. (1993). Expression of the mouse *goosecoid* gene during mid-embryogenesis may mark mesenchymal cell lineages in the developing head, limbs and body wall. Development 117, 769-778.

103. De Robertis, E.M. (1994). The Homeobox in cell differentiation and evolution. In: *Guidebook of homeobox genes*. D. Duboule, Ed., IRL press, Oxford, pp. 11-23.

104. Niehrs, C., Keller, R., Cho, K.W.Y. and De Robertis, E.M. (1993). The homeobox gene *goosecoid* controls cell migration in Xenopus embryos. Cell *72*, 491-503.

105. Steinbeisser, H., De Robertis, E.M., Ku, M., Kessler, D.S. and Melton, D.A. (1993). *Xenopus* axis formation: induction of *goosecoid* by injected *Xwnt-8* and activin mRNA. Development *118*, 499-507.

106. Bittner, D., De Robertis, E.M. and Cho, K.W.Y. (1993). Characterization of the *Xenopus Hox 2.4* gene and identification of control elements in its intron. Dev. Dyn. *196*, 11-24.

107. Jones, F.S., Holst, B.O., Minowa, O., De Robertis, E.M. and Edelman, G.M. (1993). Binding and transcriptional activation of the N-CAM promoter by *Hox*C6 (*Hox 3.3*). Proc. Natl. Acad. Sci. USA *90*, 6557-6561.

108. Izpisúa-Belmonte, J.C., De Robertis, E.M., Storey, K.G. and Stern, C.D. (1993). The homeobox gene *goosecoid* and the origin of organizer cells in the early chick blastoderm. Cell *74*, 645-659.

109. Steinbeisser, H. and De Robertis, E.M. (1993). *Xenopus goosecoid*: a gene expressed in the prechordal plate that has dorsalizing activity. Compt. Rend. Acad. Sci., Paris, *316*, 966-971.

110. Gont, L.K., Steinbeisser, H., Blumberg, B. and De Robertis, E.M. (1993). Tail formation as a continuation of gastrulation: the multiple cell populations of the *Xenopus* tailbud derive from the late blastopore lip. Development *119*, 991-1004.

111. Pfeffer, P. and De Robertis, E.M. (1994). Regional specificity of RARγ isoforms in *Xenopus* development. Mech. Dev. *45*, 147-153.

112. Schulte-Merker, S., Hammerschmidt, M., Beuchle, D., Cho, K.W., De Robertis, E.M. and Nüsslein-Volhard, C. (1994). Expression of the zebrafish *goosecoid* and *no tail* products in wild-type and mutant *no tail* embryos. Development *120*, 843-852.

113. Niehrs, C., Steinbeisser, H. and De Robertis, E.M. (1994). Mesodermal patterning by a gradient of the vertebrate homeobox gene *goosecoid*. Science *263*, 817-820.

114. Blum, M., De Robertis, E.M., Kojis, T., Heinzmann, C., Klisak, I., Geissert, D. and Sparkes, R.S. (1994). Molecular cloning of the human homeobox gene *goosecoid (gsc)* and mapping of the gene to human chromosome 14q32.1. Genomics *21*, 388-393.

115. Fainsod, A., Steinbeisser, H. and De Robertis, E.M. (1994). On the function of BMP-4 in patterning the marginal zone of the *Xenopus* embryo. EMBO J., *13*, 5015-5025.

116. De Robertis, E.M., Fainsod, A., Gont, L.K. and Steinbeisser, H. (1994). The evolution of vertebrate gastrulation. Development Suppl., 117-124.

117. Sasai, Y., Lu, B., Steinbeisser, H., Geissert, D., Gont, L.K. and De Robertis, E.M. (1994). Xenopus *chordin*: a novel dorsalizing factor activated by organizer-specific homeobox genes. Cell *79*, 779-790.

118. De Robertis, E.M. (1995). Homeotic genes and the evolution of body plans. In: *Evolution and the Molecular Revolution*. C.R. Marshall and J.W. Schopf, Eds. Jones & Bartlett, Boston, pp. 109-124.

119. De Robertis, E.M. (1995). Dismantling the organizer. Nature *374*, 407-408 (News & Views).

120. Holley, S.A., Jackson, P.D., Sasai, Y., Lu, B., De Robertis, E.M., Hoffman, F.M. and Ferguson, E.L. (1995). A conserved system for dorsal-ventral patterning in insects and vertebrates involving short gastrulation and chordin. Nature *376*, 249-253.

121. De Robertis, E.M. and Sasai, Y. (1995). A signaling molecule secreted by Spemann's Organizer. The J. of NIH Res. *7*, 52-53 (review/afterword).

122. Sasai, Y., Lu, B., Steinbeisser, H. and De Robertis, E.M. (1995). Regulation of neural induction by the Chd and BMP-4 antagonistic patterning signals in *Xenopus*. Nature *376*, 333-336.

123. Yamada, G., Mansouri, A., Torres, M., Stuart, E.T., Blum, M., Schultz, M., De Robertis, E.M. and Gruss, P. (1995). Targeted mutation of the murine *goosecoid* gene results in craniofacial defects and neonatal death. Development *121*, 2917-2922.

124. Guénet, J.L., Simon-Chazottes, D., De Robertis, E. and Blum, M. (1995). The mouse goosecoid gene (*Gsc*) maps to the telomeric part of mouse chromosome 12. Mammalian Genome *6*, 816-817.

125. Steinbeisser, H., Fainsod, A., Niehrs, C., Sasai, Y. and De Robertis, E.M. (1995). The role of *gsc* and *BMP-4* in dorsal-ventral patterning of the marginal zone in *Xenopus*: a loss of function study using antisense RNA. EMBO J. *14*, 5230-5243.

126. De Robertis, E.M. and Sasai, Y. (1996). A common plan for dorso-ventral patterning in Bilateria. Nature *380*, 37-40.

127. Gont, L.K., Fainsod, A., Kim, S. and De Robertis, E.M. (1996). Overexpression of the homeobox gene *Xnot-2* leads to notochord formation in *Xenopus*. Dev. Biol. *174*, 174-178.

128. Sasai, Y., Lu, B., Piccolo, S. and De Robertis, E.M. (1996). Endoderm induction by the organizer secreted factors Chordin and Noggin in Xenopus animal caps. EMBO J. *15*, 4547-4555.

129. Bouwmeester, T., Kim, S.H., Sasai, Y., Lu, B. and De Robertis, E.M. (1996). Cerberus is a head-inducing secreted factor expressed in the anterior endoderm of Spemann's Organizer. Nature *382*, 595-601.

130. Catala, M., Teillet, M.A., De Robertis, E.M. and Le Douarin, N.M. (1996). A spinal cord fate map in the avian embryo: while regressing, the Hensen's node lays down the floor plate and notochord thus joining the spinal cord lateral walls. Development *122*, 2599-2610.

131. Piccolo, S., Sasai, Y., Lu, B. and De Robertis, E.M. (1996). Dorsoventral patterning in Xenopus: Inhibition of ventral signals by direct binding of Chordin to BMP-4. Cell *86*, 589-598.

132. Holley, S.A., Neul, J.L., Attisano, L., Wrana, J.L., Sasai, Y., O'Connor, M.B., De Robertis, E.M. and Ferguson, E.L. (1996). The *Xenopus* dorsalizing factor *noggin* ventralizes *Drosophila* embryos by preventing *dpp* from activating its receptor. Cell *86*, 607-617.

133. Sasai, Y. and De Robertis, E.M. (1997). Ectodermal patterning in vertebrate embryos. Dev. Biol. *182*, 5-20.

134. Leyns, L., Bouwmeester, T., Kim, S.H., Piccolo, S. and De Robertis, E.M. (1997). Frzb-1 is a secreted antagonist of Wnt signaling expressed in the Spemann organizer. Cell *88*, 747-756.

135. De Robertis, E.M. (1997). Evolutionary biology: The ancestry of segmentation. Nature *387*, 25-26 (News & Views).

136. Pfeffer, P.L., De Robertis, E.M. and Izpisúa-Belmonte, J.C. (1997). *Crescent*, a novel chick gene encoding a frizzled-like cysteine-rich domain, is expressed in anterior regions during early embryogenesis. Int. J. Dev. Biol. *41*, 449-458.

137. Belo, J.A., Bouwmeester, T., Leyns, L., Kertesz, N., Gallo, M., Follettie, M. and De Robertis, E.M. (1997). *Cerberus*-like is a secreted factor with neuralizing activity expressed in the anterior primitive endoderm of the mouse gastrula. Mech. Dev. *68*, 45-57.

138. Piccolo, S., Agius, E., Lu, B., Goodman, S., Dale, L. and De Robertis, E.M. (1997). Cleavage of Chordin by the Xolloid metalloprotease suggests a role for proteolytic processing in the regulation of Spemann organizer activity. Cell *91*, 407-416.

139. Heanue, T.A., Johnson, R.L., Izpisúa-Belmonte, J.C., Stern, C.D., De Robertis, E.M. and Tabin, C.J. (1997). Goosecoid misexpression alters the morphology and Hox gene expression of the developing chick limb buds. Mech. Dev. *69*, 31-37.

140. De Robertis, E.M., Kim. S.H., Leyns, L., Piccolo, S., Bachiller, D., Agius, E., Belo, J.A., Yamamoto, A., Hainski-Brosseau, A., Brizuela, B., Wessely, O., Lu, B. and Bouwmeester, T. (1997). Patterning by genes expressed in Spemann's organizer. Cold Spring Harbor Symp. Quant. Biol. *62*, 169-175.

141. Pillemer, G., Epstein, M., Blumberg, B., Yisraeli, J.K., De Robertis, E.M., Steinbeisser, H. and Fainsod, A. (1998). Nested expression and sequential downregulation of the *Xenopus caudal* genes along the anterior-posterior axis. Mech. Dev. *71*, 193-196.

142. Belo, J.A., Leyns, L., Yamada, G. and De Robertis, E.M. (1998). The prechordal midline of the chondrocranium is defective in *Goosecoid-1* mouse mutants. Mech. Dev., *72*, 15-26.

143. Blumberg, B., Kang, H., Bolado, J., Chen, H., Craig, A.G., Moreno, T.A., Umesono, K., Perlmann, T., De Robertis, E.M. and Evans, R.M. (1998). BXR, an embryonic orphan nuclear receptor activated by a novel class of endogenous benzoate metabolites. Genes Dev. *12*, 1269-1277.

144. Yamamoto, A., Amacher, S.L., Kim, S.H., Geissert, D., Kimmel, C.B. and De Robertis, E.M. (1998). Zebrafish *paraxial protocadherin* is a downstream target of *spadetail* involved in morphogenesis of gastrula mesoderm. Development *125*, 3389-3397.

145. Kim, S.H., Yamamoto, A., Bouwmeester, T., Agius, E. and De Robertis, E.M. (1998). The role of paraxial protocadherin in selective adhesion and cell movements of the mesodermal mantle during *Xenopus* gastrulation. Development *125*, 4681-4691.

146. Piccolo, S., Agius, E., Leyns, L., Battacharyya, S., Grunz, H., Bouwmeester, T. and De Robertis, E.M. (1999). The head inducer Cerberus is a multifunctional antagonist of Nodal, BMP and Wnt signals. Nature *397*, 707-710.

147. Borello, U., Coletta, M., Tajbakhsh, S., Leyns, L., De Robertis, E.M., Buckingham, M. and Cossu, G. (1999). Transplacental delivery of the Wnt antagonist Frzb1 inhibits development of caudal paraxial mesoderm and skeletal myogenesis in mouse embryos. Development *126*, 4247-4255.

148. Agius, E., Piccolo, S. and De Robertis, E.M. (1999). L'indecteur céphalique Cerberus est un inhibiteur multivalent extracellulaire. Journal de la Société de Biologie, Vol. *193*, 347-354.

149. Duprez, D., Leyns, L., Bonnin, M.A., Lapointe, F., Etchevers, H., De Robertis, E.M. and Le Douarin, N. (1999). Expression of Frzb-1 during chick development. Mech. Dev. *89*, 179-183

150. Zhu, L., Belo, J.A., De Robertis, E.M. and Stern, C.D. (1999). *Goosecoid* regulates the neural inducing strength of the mouse node. Dev. Biol. *216*, 276-281.

151. De Robertis, E.M. (1999). A nose for the embryo: the work of Pieter Nieuwkoop. Int. J. Dev. Biol., *43*, 603-604.

152. Konishi, Y., Tominaga, M., Watanabe, Y., Imamura, F., Goldfarb, A., Maki, R., Blum, M., De Robertis, E.M. and Tominaga, A. (1999). Goosecoid inhibits erythrocyte differentiation by competing with Rb for PU.1 binding in murine cells. Oncogene *18*, 6795-6805.

153. Larraín, J., Bachiller, D., Lu, B., Agius, E., Piccolo, S. and De Robertis, E.M. (2000). BMP-binding modules in Chordin: a model for signalling regulation in the extracellular space. Development *127*, 821-830.

154. Agius, E., Oelgeschläger, M., Wessely, O. and De Robertis, E.M. (2000). Endodermal Nodal-related signals and mesoderm induction in *Xenopus*. Development *127*, 1173-1183.

155. Bachiller, D., Klingensmith, J., Kemp, C., Belo, J.A., Anderson, R.M., May, S.R., McMahon, J.A., McMahon, A.P., Harland, R., Rossant, J. and De Robertis, E.M.

(2000). The organizer secreted factors Chordin and Noggin are required for forebrain development in the mouse. Nature *403*, 658-661.

156. Belo, J.A., Bachiller, D., Agius, E., Kemp, C., Borges, A.C., Marques, S., Piccolo, S. and De Robertis, E. M. (2000). *Cerberus-like* is a secreted BMP and Nodal antagonist not essential for mouse development. Genesis *26*, 265-270.

157. Wessely, O. and De Robertis, E.M. (2000). The *Xenopus* homologue of *Bicaudal-C* is a localized maternal mRNA that regulates endoderm development. Development *127*, 2053-2062.

158. Yamamoto, A., Kemp, C., Bachiller, D., Geissert, D. and De Robertis, E.M. (2000). Mouse paraxial protocadherin is expressed in trunk mesoderm and is not essential for mouse development. Genesis *27*, 49-57.

159. Oelgeschläger, M., Larraín, J., Geissert, D. and De Robertis, E.M. (2000). The evolutionary conserved BMP-binding protein Twisted Gastrulation promotes BMP signalling. Nature *405*, 757-763.

160. Pera, E. and De Robertis, E.M. (2000). A direct screen for secreted proteins in *Xenopus* embryos identifies distinct activities for the Wnt antagonists Crescent and Frzb-1. Mech. Dev. *96*, 183-195.

161. Kim, S.H., Jen, W.C., De Robertis, E.M. and Kintner, C. (2000). The protocadherin PAPC establishes segmental boundaries during somitogenesis in Xenopus embryos. Curr. Biol. *10*, 821-830.

162. De Robertis, E.M., Larraín, J., Oelgeschläger, M. and Wessely, O. (2000). The establishment of Spemann's Organizer and patterning of the vertebrate embryo. Nat. Rev. Genet. *1*, 171-181.

163. Coffinier, C., Tran, U., Larraín, J. and De Robertis, E.M. (2001). Neuralin is a novel Chordin-related molecule expressed in the mouse neural plate. Mech. Dev. *100*, 119-122.

164. Brizuela, B.J., Wessely, O. and De Robertis, E.M. (2001). Overexpression of the *Xenopus* tight-junction protein Claudin causes randomization of the left-right body axis. Dev. Biol. *230*, 217-229.

165. Wessely, O., Tran, U., Zakin, L. and De Robertis, E.M. (2001). Identification and expression of the mammalian homologue of *Bicaudal-C*. Mech. Dev. *101*, 267-270.

166. De Robertis, E.M., Wessely, O., Oelgeschläger, M., Brizuela, B., Pera, E., Larraín, J., Abreu, J. and Bachiller, D. (2001). Molecular mechanisms of cell-cell signalling by Spemann's organizer. Int. J. Dev. Biol. *45*, 189-197. See also Festschrift Preface, The Spemann-Mangold Organizer 75 years on, by E. De Robertis and J. Aréchaga.

167. Wessely, O., Agius, E., Oelgeschläger, M., Pera, E.M. and De Robertis, E.M. (2001). Neural induction in the absence of mesoderm: β-catenin dependent expression of secreted BMP antagonists at the blastula stage in *Xenopus*. Dev. Biol. *234,* 161-173.

168. De Robertis, E.M. and Bouwmeester, T. (2001). New twists on embryonic patterning. EMBO Reports *21*, 661- 665.

169. Larraín, J., Oelgeschläger, M., Ketpura, N.I., Reversade, B., Zakin, L. and De Robertis, E.M. (2001). Proteolytic cleavage of Chordin as a switch for the dual activities of Twisted gastrulation on BMP. Development *128*, 4439-4447.

170. Pera, E.M., Wessely, O., Li, S.Y. and De Robertis, E.M. (2001). Neural and head induction by Insulin-like Growth Factor signals. Dev. Cell *1*, 655-665.

171. Garcia-Abreu, J., Coffinier, C., Larraín, J., Oelgeschläger, M. and De Robertis, E.M. (2002). Chordin-like CR domains and the regulation of evolutionarily conserved extracellular signaling systems. Gene *287*, 39-47.

172. Wessely, O. and De Robertis, E.M. (2002) Neural plate patterning by secreted signals. Neuron *33*, 489-491.

173. Pera, E.M., Kim, J.I., Martínez, S.L., Brechner, M., Li, S.Y., Wessely, O. and De Robertis, E.M. (2002). *Isthmin* is a novel secreted protein expressed as part of the *Fgf-8* synexpression group in the *Xenopus* midbrain-hindbrain organizer. Mech. Dev. *116*, 169-172.

174. Abreu, J.G., Ketpura, N.I., Reversade, B. and De Robertis, E.M. (2002). Connective tissue growth factor modulates cell signalling by BMP and TGF-β. Nature Cell Biology *4*, 599-604.

175. Coffinier, C., Ketpura, N., Tran, U., Geissert, D. and De Robertis, E.M. (2002). Mouse *Crossveinless-2* is the vertebrate homolog of a *Drosophila* extracellular regulator of BMP signaling. Mech. Dev. *119*, 179-184.

176. Oelgeschläger, M., Kuroda, H., Reversade, B. and De Robertis, E.M. (2003). Chordin is required for the Spemann organizer transplantation phenomenon in *Xenopus* embryos. Dev. Cell *4*, 219-230.

177. Pera, E.M., Martínez, S.L., Flanagan, J.J., Brechner, M., Wessely, O. and De Robertis, E.M. (2003). *Darmin* is a novel secreted protein expressed during endoderm development in *Xenopus*. Mech. Dev. (Gene Exp. Patterns) *3*, 147-152.

178. Bachiller, D., Klingensmith, J., Schneyder, N., Tran, U., Anderson, R., Rossant, J. and De Robertis, E.M. (2003). The role of Chordin/BMP signals in mammalian pharyngeal development and DiGeorge syndrome. Development *130*, 3567-3578.

179. Oelgeschläger, M., Reversade, B., Larraín, J., Little, S., Mullins, M.C. and De Robertis, E.M. (2003). The pro-BMP activity of Twisted gastrulation is independent of BMP binding. Development *130*, 4047-4056.

180. Larraín, J., Brown, C. and De Robertis, E.M. (2003). Integrin-α3 mediates binding of Chordin to the cell surface and promotes its endocytosis. EMBO reports *4*, 813-818.

181. Pera, E.M., Ikeda, A., Eivers, E. and De Robertis, E.M. (2003). Integration of IGF, FGF and anti-BMP signals via Smad1 phosphorylation in neural induction. Genes Dev. *17*, 3023-3028.

182. De Robertis, E.M. and Wessely, O. (2004). The molecular nature of Spemann's organizer. In: *The Vertebrate Organizer*, H. Grunz, Ed., Springer Verlag, Heidelberg, pp. 55-70.

183. Oelgeschläger, M., Tran, U., Grubisic, K. and De Robertis, E.M. (2004). Identification of a second *Xenopus* Twisted gastrulation gene. Int. J. Dev. Biol. *48*, 57-61.

184. Zakin, L. and De Robertis, E.M. (2004). Inactivation of mouse Twisted gastrulation reveals its role in promoting BMP4 activity during forebrain development. Development, *131*, 413-424.

185. De Robertis, E.M. (2004). Goosecoid. In: *Gastrulation*, C. Stern, Ed., Cold Spring Harbor Laboratory Press, New York, pp. 581-589.

186. Wessely, O., Kim, J.I., Geissert, D., Tran, U. and De Robertis, E.M. (2004). Analysis of Spemann Organizer formation in *Xenopus* embryos by cDNA macroarrays. Dev. Biol. *269*, 552-566.

187. Kuroda, H., Wessely, O. and De Robertis, E.M. (2004). Neural induction in *Xenopus*: requirement for ectodermal and endomesoderm signals via Chordin, Noggin, β-Catenin and Cerberus. PLoS Biology *2*, 623-633.

188. De Robertis, E.M. and Kuroda, H. (2004). Dorsal-ventral patterning and neural induction in *Xenopus* embryos. Annu. Rev. Cell Dev. Biol. Vol. *20*, 285-308.

189. Unterseher, F., Hefele, J.A., Giehl, K., De Robertis, E.M., Wedlich, D. and Schambony, A. (2004). Paraxial protocadherin coordinates cell polarity during convergent extension via Rho A and JNK. EMBO J. *23*, 3259-3269.

190. Zakin, L., Reversade, B., Kuroda, H., Lyons, K.M. and De Robertis, E.M. (2005). Sirenomelia in *Bmp7* and *Twisted gastrulation* compound mutant mice: requirement for Bmp signaling in the development of ventral posterior mesoderm. Development *132*, 2489-2499.

191. Kuroda, H., Fuentealba, L., Ikeda, A., Reversade, B. and De Robertis, E.M. (2005). Default neural induction: neuralization of dissociated *Xenopus* cells is mediated by Ras/MAPK activation. Genes Dev. *19*, 1022-1027.

192. Wessely, O., Kim, J.I., Tran, U., Fuentealba, L. and De Robertis, E.M. (2005). *xBtg-x* regulates Wnt/β-Catenin signaling during early *Xenopus* development. Dev. Biol. *283*, 17-28.

193. Reversade, B., Kuroda, H., Lee, H., Mays, A. and De Robertis, E.M. (2005). Depletion of Bmp2, Bmp4, Bmp7 and Spemann organizer signals induces massive brain formation in *Xenopus* embryos. Development *132*, 3381-3392.

194. Pera, E.M., Hou, S., Strate, I., Wessely, O. and De Robertis, E.M. (2005). Exploration of the extracellular space by a large-scale secretion screen in the early *Xenopus* embryo. Int. J. Dev. Biol. *49*, 781-796.

195. Reversade, B. and De Robertis, E.M. (2005). Regulation of ADMP and BMP2/4/7 at opposite embryonic poles generates a self-regulating morphogen field. Cell *123*, 1147-1160.

196. Lee, H.X., Ambrosio, A.L., Reversade, B. and De Robertis, E.M. (2006). Embryonic dorsal-ventral signaling: secreted Frizzled-related proteins as inhibitors of Tolloid proteinases. Cell *124*, 147-159.

197. De Robertis, E.M. (2006). Spemann's organizer and self-regulation in amphibian embryos. Nat. Rev. Mol. Cell Biol. *7*, 296-302.

198. Plouhinec, J.-L. and De Robertis, E.M. (2007). Systems biology of embryonic morphogens. Mol. Biosyst. *3*, 454-457.

199. Sander, V., Reversade, B. and De Robertis, E.M. (2007). The opposing homebox genes *Goosecoid* and *Vent1/2* self-regulate *Xenopus* patterning. EMBO J. *26*, 2955-2965.

200. Hurtado, C. and De Robertis, E.M. (2007). Neural induction in the absence of organizer in salamanders is mediated by MAPK. Dev. Biol. *307*, 282-289.

201. Yasuda, S., Tanaka, H., Sugiura, H., Okamura, K., Sakaguchi, T., Tran, U., Takemiya, T., Mizoguchi, A., Yagita, Y., Sakurai, T., De Robertis, E.M. and Yamagata, K. (2007). Activity-induced protocadherin Arcadlin regulates dendritic spine number by triggering N-Cadherin endocytosis via TAO2β and p38 MAP kinases. Neuron *56*, 456-471.

202. Fuentealba, L.C., Eivers, E., Ikeda, A., Hurtado, C., Kuroda, H., Pera, E.M., and De Robertis, E.M. (2007). Integrating patterning signals: Wnt/GSK3 regulates the duration of the BMP/Smad1 signal. Cell *131,* 980-993.

203. Ishibashi, H., Matsumura, N., Hanafusa, H., Matsumoto, K., De Robertis, E.M. and Kuroda, H. (2008). Expression of *Siamois* and *Twin* in the blastula Chordin/Noggin signaling center is required for brain formation in *Xenopus laevis* embryos. Mech. Dev. *125*, 58-66.

204. De Robertis, E.M. (2008). Evo-Devo: Variations on Ancestral themes. Cell *132,* 185-195.

205. Fuentealba, L.C., Eivers, E., Geissert, D., Taelman, V. and De Robertis, E.M. (2008). Asymmetric mitosis: Unequal segregation of proteins destined for degradation. Proc. Natl. Acad. Sci. USA *105*, 7732-7737.

206. Eivers, E., Fuentealba, L.C. and De Robertis, E.M. (2008). Integrating positional information at the level of Smad1/5/8. Curr. Opin. Genet. Dev. *18*, 304-310.

207. Ambrosio, A.L., Taelman, V.F., Lee, H.X., Metzinger, C.A., Coffinier, C. and De Robertis, E.M. (2008). Crossveinless-2 is a BMP feedback inhibitor that binds Chordin/BMP to regulate *Xenopus* embryonic patterning. Dev. Cell *15*, 248-260.

208. Zakin, L., Metzinger, C.A., Chang, E.Y., Coffinier, C. and De Robertis, E.M. (2008). Development of the vertebral morphogenetic field in the mouse: interactions between Crossveinless-2 and Twisted gastrulation. Dev. Biol. *323*, 6-18.

209. De Robertis, E.M. (2008). Evolutionary Biology: The molecular ancestry of segmentation mechanisms. Proc. Natl. Acad. Sci. USA *105*, 16411-16412.

210. Plouhinec, J.L. and De Robertis, E.M. (2009). Systems biology of the self-regulating morphogenetic gradient of the *Xenopus* gastrula. Cold Spring Harb. Perspect. Biol. 1:a001701.

211. Eivers, E., Fuentealba, L.C., Sander, V., Clemens, J., Hartnett, L. and De Robertis, E.M. (2009) Mad is required for Wingless signaling and segment patterning in *Drosophila* and *Xenopus*. PLoS One *4*, e6543.

212. Fuentealba, L.C., Eivers, E., Lee, H.X. and De Robertis, E.M. (2009). Integration of BMP, RTK, and Wnt signaling through Smad 1 phosphorylations. In: Handbook of Cell Signaling, 2nd edition, R. A. Bradshaw and E. A. Dennis, Eds., Academic Press, Oxford, Vol. 2, pages 1989-1994.

213. De Robertis, E.M. (2009). Spemann's organizer and the self-regulation of embryonic fields. Mech. Dev. *126*, 925-941.

214. Lee, H.X., Mendes, F.A., Plouhinec, J.L. and De Robertis, E.M. (2009). Enzymatic regulation of pattern: BMP4 binds CUB domains of Tolloids and inhibits proteinase activity. Genes Dev. *23*, 2551-2562.

215. Eivers, E., Demagny, H. and De Robertis, E.M. (2009). Integration of BMP and Wnt signaling via vertebrate Smad1/5/8 and *Drosophila* Mad. Cytokine Growth Fact. *20*, 357-365.

216. Zakin, L. and De Robertis, E.M. (2010). Extracellular regulation of BMP signaling. Curr. Biol. *20*, R89-R92.

217. Tran, U., Zakin, L., Schweickert, A., Agrawal, R., Döger, R., Blum, M., De Robertis, E.M. and Wessely, O. (2010). The RNA-binding protein bicaudal C regulates polycystin 2 in the kidney by antagonizing *miR-17* activity. Development *137*, 1107-1116.

218. Sander, V., Eivers, E., Choi, R. H. and De Robertis, E.M. (2010). *Drosophila* Smad2 opposes Mad signaling during wing vein development. PLoS One *5*, e10383.

219. De Robertis, E.M. (2010). Wnt signaling in axial patterning and regeneration: Lessons from Planaria. Science Signaling *3,* pe21.

220. Zakin, L., Chang, E.Y. and De Robertis, E.M. (2010). Crossveinless-2 is required for the relocalization of Chordin protein within the vertebral field in mouse embryos. Dev. Biol. *347*, 204-215.

221. Taelman, V.F., Dobrowolski, R., Plouhinec, J.L., Fuentealba, L.C., Vorwald, P.P., Gumper, I., Sabatini, D.D. and De Robertis, E.M. (2010). Wnt signaling requires the sequestration of Glycogen Synthase kinase 3 inside multivesicular endosomes. Cell *143*, 1136-1148.

222. Ploper, D., Lee, H.X. and De Robertis, E.M. (2011). Dorsal-ventral patterning: Crescent is a dorsally secreted Frizzled-related protein that competitively inhibits Tolloid proteases. Dev. Biol. *352*, 317-328.

223. Vorwald-Denholtz, P.P. and De Robertis, E.M. (2011). Temporal pattern of the posterior expression of Wingless in Drosophila blastoderm. Gene Expr. Patterns *11*, 456-463.

224. De Robertis, E.M. (2011). Evo-Devo: the merging of evolutionary and developmental biology. Pontif. Acad. Sci. Acta *21,* 221-235. http://www.casinapioiv.va/content/accademia/en/academicians/ordinary/derobertis.html

225. Plouhinec, J.L., Zakin, L. and De Robertis, E.M. (2011). Systems control of BMP morphogen flow in vertebrate embryos. Curr. Opin. Genet. Dev. *21*, 696-703.

226. Eivers, E., Demagny, H., Choi, R.H. and De Robertis, E.M. (2011). Phosphorylation of Mad controls competition between Wingless and BMP signaling. Science Signaling *4*, ra68.

227. Dobrowolski, R. and De Robertis, E.M. (2012). Endocytic control of growth factor signaling: multivesicular bodies as signaling organelles. Nat. Rev. Mol. Cell Biol. *13*, 53-60.

228. Dobrowolski, R., Vick, P., Ploper, D., Gumper, I., Snitkin, H., Sabatini, D.D. and De Robertis, E.M. (2012). Presenilin deficiency or lysosomal inhibition enhances Wnt signaling through relocalization of GSK3 to the late endosomal compartment. Cell Reports *2*, 1316-1328.

229. De Robertis, E.M. and Colozza, G. (2013). Scaling to size by protease inhibition. Curr. Biol. *23*, R652-R654.

230. Plouhinec, J.L., Zakin, L., Moriyama, Y. and De Robertis, E.M. (2013). Chordin forms a self-organizing morphogen gradient in the extracellular space between ectoderm and mesoderm in the *Xenopus* embryo. Proc. Natl. Acad. Sci. U.S.A. *110*, 20372-20379.

231. Colozza, G. and De Robertis, E.M. (2014). Maternal syntabulin is required for dorsal axis formation and is a germ plasm component in *Xenopus*. Differentiation *88*, 17-26.

232. De Robertis, E.M. (2014). Yoshiki Sasai 1962-2014. Cell *158*, 1233-1235, see also Dev. Cell *30*, 509-511.

233. Demagny, H., Araki, T. and De Robertis, E.M. (2014). The tumor suppressor Smad4/DCP4 is at the crossroads of Wnt, FGF and TGF-β signaling. Cell Reports *9*, 688-700.

234. De Robertis, E.M. and Niehrs, C. (2014). Herbert Steinbeisser: a life with the *Xenopus* embryo. Int. J. Dev. Biol. *58*, 299-302.

235. De Robertis, E.M. (2014). Lessons from a great developmental biologist. Differentiation *88*, 3-8.

236. De Robertis, E.M. (2015). Deciphering Complexity in Biology: Induction of Embryonic Cell Differentiation by Morphogen Gradients. Pontif. Acad. Sci. Acta *22*, 161-184. http://www.pas.va/content/dam/accademia/pdf/acta22/acta22-derobertis.pdf.

237. Ploper, D., Taelman, V.F., Robert, L., Perez, B., Titz, B.,Chen, H.W., Graeber, T.G., von Euw, E., Ribas, A. and De Robertis, E.M. (2015). MITF drives endolysosomal biogenesis and potentiates Wnt signaling in melanoma cells. Proc. Natl. Acad. Sci. U.S.A. *112*, E420-E429.

238. Demagny H. and De Robertis E.M. (2015). Smad4/DPC4: a Barrier against Tumor Progression driven by RTK/Ras/Erk and Wnt/GSK3 signaling. Mol. Cell. Oncol. *3*(2), e989133.

239. Ploper, D. and De Robertis, E.M. (2015). The MITF family of transcription factors: role in endolysosomal biogenesis, Wnt signaling, and oncogenesis. Pharmacol. Res. *99*, 36-43.

240. Kim, H., Vick, P., Hedtke, J., Ploper, D. and De Robertis, E.M. (2015). Wnt signaling translocates Lys48-linked polyubiquitinated proteins to the lysosomal pathway. Cell Reports *11*, 1151-1159.

241. Bier, E. and De Robertis, E.M. (2015). BMP gradients: a paradigm for morphogen-mediated developmental patterning. Science *348*, 1443 and aaa5838.

242. Blum, M., De Robertis, E.M., Wallingford, J.B. and Niehrs, C. (2015). Morpholinos: Anti-Sense and Sensibility. Dev. Cell *35*, 145-149.

243. De Robertis, E.M. and Ploper, D. (2015). Sperm motility requires Wnt/GSK3 stabilization of proteins. Dev. Cell *35*, 401-402.

244. Demagny, H. and De Robertis, E.M. (2015). Point Mutations in the tumor suppressor Smad4/DPC4 enhance its phosphorylation by GSK3 and reversibly inactivate TGF-β signaling. Mol. Cell. Oncol. 3(1), e1025181.

245. De Robertis, E.M. (2016). The role of gene loss in animal evolution from an ancestral genetic toolkit. Pontif. Acad. Sci. Acta 23. http://www.pas.va/content/accademia/en/publications/acta/acta23/derobertis.html

246. De Robertis, E.M. (2016). A short history of bone and embryonic induction. In: Induction of Bone Formation in Primates: the Transforming Growth Factor-β3. U. Ripamonti, Ed., CRC Press, pp. 9-12.

247. De Robertis, E.M. and Moriyama, Y. (2016). The chordin morphogenetic pathway. Curr. Top. Dev. Biol. *116*, 231-245.

248. Ding, Y., Colozza, G., Zhang, K., Moriyama, Y., Ploper, D., Sosa, E.A., Benitez, M.D.J. and De Robertis, E.M. (2017). Genome-wide analysis of dorsal and ventral transcriptomes of the *Xenopus laevis* gastrula. Dev. Biol. *426*, 176-178.

249. Ding, Y., Ploper, D., Sosa, E.A., Colozza, G., Moriyama, Y., Benitez, M.D.J., Zhang, K., Merkurjev, D. and De Robertis, E.M. (2017). Spemann organizer transcriptome induction by early b-Catenin, Wnt, Nodal and Siamois signals in *Xenopus laevis*. Proc. Natl. Acad. Sci. USA *114*, E3081-E3090.

250. De Robertis, E.M., Moriyama, Y. and Colozza, G. (2017). Generation of animal form by the Chordin/Tolloid/BMP gradient: 100 years after D'Arcy Thompson. Dev. Growth Differ. *59*, 580-592.

251. Kirsch, N., Chang, L.S., Koch, S., Glinka, A., Dolde, C., Colozza, G., Benitez, M.D.J., De Robertis, E.M. and Niehrs, C. (2017). Angiopoietin-like 4 is a Wnt signaling antagonist that promotes LRP6 turnover. Dev. Cell *43*, 71-82.

252. Moriyama, Y. and De Robertis, E.M. (2018). Embryonic regeneration by relocalization of the Spemann organizer during twinning in *Xenopus*. Proc. Natl. Acad. Sci. USA, *115*, E4815-E4822. doi: 10.1073/pnas.1802749115 PMID: 29686106

253. Albrecht, L., Ploper, D., Tejeda-Munoz, N. and De Robertis, E.M. (2018). Arginine methylation is required for canonical Wnt signaling and endolysosomal trafficking. Proc. Natl. Acad. Sci. USA, *115,* E5317-E5325. PMID: 29773710 PMCID: PMC6003351 doi: 10.1073/pnas.1804091115

254. De Robertis, E.M. and Sánchez Sorondo, M., Eds. (2018). Cell Biology and Genetics. *Pontificiae Academiae Scientiarum Scripta Varia* Vol. 137, Libreria Editrice Vaticana, Rome, 330 pp.

255. De Robertis, E.M. (2018). Regulation of protein degradation by Wnt signaling. Pontif. Acad. Sci. Scripta Varia *137*, 177-186. http://www.pas.va/content/dam/accademia/pdf/sv137/sv137pas.pdf

256. Ding. Y., Colozza, G., Sosa, E.A., Moriyama, Y., Rundle, S., Salwinski, L. and De Robertis, E.M. (2018). Bighead is a novel Wnt antagonist secreted by the *Xenopus* Spemann organizer that promotes Lrp6 endocytosis. Proc. Natl. Acad. Sci. USA, *115*, E9135-E9144. PMID: 30209221 PMCID: PMC6166843 doi: 10.1073/pnas.1812117115

257. Albrecht, L.V., Bui, M.H. and De Robertis, E.M. (2019). Canonical Wnt is inhibited by targeting one-carbon metabolism through methotrexate or methionine deprivation. Proc. Natl. Acad. Sci. USA *116*, 2987-2995. PMID: 30679275 PMCID: PMC6386671 doi: 10.1073/pnas.1820161116

258. Tejeda-Muñoz, N., Albrecht, L.V., Bui, M.H. and De Robertis, E.M. (2019). Wnt canonical pathway activates macropinocytosis and lysosomal degradation of extracellular proteins. Proc. Natl. Acad. Sci. *116*, 10402-10411. PMID: 31061124 PMCID: PMC6534993 doi: 10.1073/pnas.1903506116

259. Sosa, E.A., Moriyama, Y., Ding, Y., Tejeda-Muñoz, N., Colozza, G. and De Robertis, E. (2019). Transcriptome analysis of regeneration during *Xenopus laevis*

experimental twinning. Int. J. Dev. Biol. *63*, 301-309. PMID: 31250914 PMCID: PMC7032064 doi: 10.1387/ijdb.190006ed

260. De Robertis, E.M. (2020). New Knowledge on the Causes of Human Birth Defects: Impact on Society. Pontif. Acad. Sci. Acta 24, 197-202. http://www.casinapioiv.va/content/dam/accademia/pdf/pas_acta24.pdf

261. Albrecht, L.V., Tejeda-Muñoz, N., Bui, M.H., Cicchetto, A., Azzolin, L., Colozza, G., Schmid, E., Piccolo, S., Christofk, H.R. and De Robertis, E. M. (2020). GSK3 inhibits macropinocytosis and lysosomal activity through the Wnt destruction complex machinery. Cell Reports *32*, 107973. PMID: 32726636 PMCID: PMC7666578 doi: 10.1016/j.celrep.2020.107973

262. Albrecht, L.V., Tejeda-Muñoz N and De Robertis E.M. (2020). Protocol for probing regulated lysosomal activity and function in living cells. STAR Protocols 1, 1001132 doi: http://doi.org/10.1016/j.xpro.2020.100132 PMCID: PMC7757114 PMID: 33377026

263. Colozza, G. and De Robertis E.M. (2020) Dact-4 is a Xenopus laevis Spemann organizer gene related to the Dapper/Frodo antagonist of beta-catenin family of proteins. Gene Expr. Patterns 38, 119153 doi: https://doi.org/10.1016/j.gep.2020.119153 PMID: 33186756

264. De Robertis, E.M., Tejeda-Muñoz, N. and Albrecht, L. (2020). Wnt signaling as a regulator of cellular endocytosis and protein stability. Pontif. Acad. Sci. Acta 25, 227-238. http://www.casinapioiv.va/content/dam/accademia/pdf/pas_acta25.pdf

265. Colozza, G., Jami-Alahmadi, Y., Dsouza, A., Tejeda-Muñoz, N., Albrecht, L.V., Sosa, E., Wohlschlegel, J.A. and De Robertis E.M. (2020). Wnt-inducible Lrp6-APEX2 interactive proteins identify ESCRT machinery and Trk-fused gene as components of the Wnt signaling pathway. Sci. Rep. 10, 21555. doi: https://doi.org/10.1038/s41598-020-78019-5 PMID:33299006 PMICD: PMC7726150

266. De Robertis, E.M. and Gurdon, J.B. (2021). A brief history of *Xenopus* in biology. Cold Spring Harbor Protocols. PMID: 33785561 doi: 10.1101/pdb.top107615

267. Zhang, F., Zhu, X., Wang, P., He, Q., Huang, H., Zheng, T., Li, Y., Jia, H., Xu, L., Zhao, H., Colozza, G., Tao, Q.*, De Robertis, E.M.*, and Ding, Y.* (2021). The Cytokine FAM3B/PANDER is an FGFR Ligand that Promotes Posterior Development in *Xenopus*. Proc. Natl. Acad. Sci. U.S.A. 118, e210034218 *Corresponding authors. doi: https://doi.org/10.1073/pnas.2100342118 PMID: 33975953 PMCID: PMC8158011

268. Albrecht, L.V, Tejeda-Muñoz, N. and De Robertis, E.M. (2021). Cell biology of canonical Wnt signaling. Annu. Rev. Cell Dev. Biol., 37, 369-389 https://doi.org/10.1146/annurev-cellbio-120319-023657 PMID: 34196570

269. De Robertis, E.M. and Tejeda-Muñoz N. (2022). Signaling components in dorsal-ventral patterning and the organizer in *Xenopus*. In: *Xenopus, from basic biology to disease models in the genomic era*. S. A. Moody and A. Fainsod, Eds. Boca Raton: CRC Press, pp. 43-50. ISBN 978-0367505271

270. Tejeda-Muñoz, N., Morselli, M., Moriyama, Y., Sheladiya, P. Pellegrini, M., and De Robertis, E.M. (2022). Canonical Wnt signaling induces focal adhesion and Integrin beta-1 endocytosis. iScience 25, 104123. https://doi.org/10.1016/j.isci.2022.104123

271. Tejeda-Muñoz, N., Monka, J., De Robertis, E.M. (2022). Protocol for culturing ectodermal cells for studies on focal adhesions, migration, lysosomes and cell signaling in Xenopus. STAR Protocols, 3, 101455. doi: 10.1016/j.xpro.2022.101455. PMID: 35839770

272. Tejeda-Muñoz, N. and De Robertis E.M. (2022). Wnt, GSK3 and Macropinocytosis. Subcell. Biochem. 98, 169-187. https://doi.org/10.1007/978-3-030-94004-1_9

273. Tejeda-Muñoz, N. and De Robertis E.M. (2022). Lysosomes are required for early dorsal signaling in the Xenopus embryo. Proc. Natl. Acad. Sci. U.S.A., 119, e2201008119. PMID: 35446621 doi: 10.1073/pnas.2201008119

274. De Robertis, E.M. and Tejeda-Muñoz N. (2022). Evo-Devo of Urbilateria and its larval forms. Dev. Biol., 487, 10-20. PMID: 35443190 https://doi.org/10.1016/j.ydbio.2022.04.003

275. De Robertis E.M. (2022). The impact of Developmental Biology in the last 100 years. Dev. Biol., 489, 118-121. PMID: 35716718 https://doi.org/10.1016/j.ydbio.2022.06.007

276. Eddy De Robertis Interview: Celebrating Spemann Mangold at 100 (2023) Cells and Development, 7, 203828. https://doi.org/10.1016/j.cdev.2023.203828