

EUGENIA MARÍA DEL PINO VEINTIMILLA

DATE AND PLACE OF BIRTH: April 19 de 1945, Quito, Ecuador

CITIZENSHIP: Ecuador

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EDUCATION:

1967 "Licenciatura en Ciencias de la Educación", Pontificia Universidad Católica del Ecuador, Quito.

1969 M. Sc., Vassar College, Poughkeepsie, New York, U.S.A.

1972 Ph. D., Emory University, Atlanta, Georgia, U.S.A.

PROFESSIONAL HISTORY:

- Emeritus Professor Department of Biological Sciences, Pontificia Universidad Católica del Ecuador, PUCE (since May 2013). She conducts biological research at the laboratory of Developmental Biology PUCE.
- Full Professor, Department of Biological Sciences, Pontificia Universidad Católica del Ecuador, PUCE, (1972- 2013).
- Head of the Department of Biological Sciences, Pontificia Universidad Católica del Ecuador (1972-1974).
- Visiting Scientist, German Cancer Research Center, Heidelberg, Germany (1984-1985).
- Visiting Scientist, Carnegie Institution of Washington, Department of Embryology (1990).

HONORS AND FELLOWSHIPS:

- Scholar of the Latin American Scholarship Program of American Universities (LASPAU), 1967-1971.
- International Fellow of the American Association of University Women, 1971-1972.
- Participant in the V International Course on Techniques in Molecular Biology. Universidad de Chile, Santiago de Chile, July 1977.
- Participant in the International course: Biology of fertilization. Universidad Nacional de Tucumán, Argentina. September 1978.
- Visitor to the Department of Molecular Biophysics and Biochemistry, Yale University, U. S. A. (July-September 1979). Laboratory of Dr. Dieter Söll.
- Visitor to the laboratory of Professor Herbert C. Macgregor, Department of Zoology, University of Leicester, Great Britain. Visit sponsored by the British Council. July-August 1981.

- Fellowship of the Alexander von Humboldt Foundation to conduct research at the German Cancer Research Center, Heidelberg, Germany. Laboratory of Prof. Dr. Michael F. Trendelenburg (July 1984 - July 1985).
- Diploma for the Education and Conservation Efforts in the Galápagos Islands, given by The World Wildlife Fund. Gland, Switzerland, 1986.
- Visitor to the laboratory of Dr. Joseph G. Gall, Carnegie Institution of Washington, Department of Embryology, Baltimore, Maryland, U.S.A. (March to September 1990). Sponsored by the Carnegie Institution of Washington and the Fulbright Commission of Cultural Exchange of the United States of America.
- Medal awarded by the Charles Darwin Foundation for the Galápagos Islands (CDF) in recognition of the work for the Conservation of the Galápagos Islands. It was given as part of the 40th Anniversary of the CDF (1999).
- L'Oréal/UNESCO Prize for Women in Science for Latin America (2000).
- Sheth Distinguished International Emory Alumni Award (2003).
- "Pluma de la Dignidad" Award from the National Association of Journalists (Unión Nacional de Periodistas) from Ecuador (2003).
- The Academy of Sciences for the Developing World (TWAS) Medal (2005).
- The "Eugenio Espejo" Medal on the Sciences given by the Council and the Mayor of the city of Quito (2005).
- Recognition given by the National Women Council (CONAMU), Quito, 2006.
- The "Eugenio Espejo Prize in the Sciences" given by the Government of Ecuador. August 9, 2012.
- The "Eugenio Espejo Medal in the Sciences" given by the Quito Chamber of Commerce (November 2012).
- The 2019 Prize of the Latin American Society of Developmental Biology (LASDB) awarded at the X LASDB Congress, Buenos Aires, Argentina, 29 October, 2019

PROFESSIONAL MEMBERSHIPS:

- Founding Member Sociedad Ecuatoriana de Biología.
- Member of the "Sociedad Iberoamericana de Biología Celular".
- Honorary foreign Member of the American Society of Ichthyologists and Herpetologists (since 1996).
- Member Latin American Society of Developmental Biology.

MEMBERSHIP IN ACADEMIES:

- Casa de la Cultura Ecuatoriana, Member of the Biological and Natural Sciences Section since May 1978.
- Member of the Academy of Sciences of Latin America (ACAL) since 1987.
- Fellow of the Academy of Sciences for the Developing World (TWAS) since 1989.
- Honorary Foreign Member of the American Academy of Arts and Sciences, since 2006.
- Foreign Associate of the National Academy of Sciences of the United States of America, since 2006.
- Founding Member of the Academy of Sciences of Ecuador, 2013.

SELECTED PROFESSIONAL ACTIVITIES, LECTURES, AND SYMPOSIA

- 1975, 1977, 1980 Editorial responsibility for three monographic issues dedicated to Biology, Revista de la Universidad Católica, Quito.
- 1980 Organizer of the International Course on Cell and Molecular Biology, sponsored by the UNDP/UNESCO, the International Cell Research Organization ICRO, and the Pontificia Universidad Católica del Ecuador.
- 1985 Co-editor with G. Robinson of the book: *The "El Niño" in the Galápagos Islands: The 1982-1983 Event*. Publication of the Charles Darwin Foundation for the Galápagos Islands, Quito, Ecuador.
- 1986-1996 Council Member of the Charles Darwin Foundation for the Galápagos Islands.
- 1988-1992 Member of the Research Advisory Group, Research Board, National Council of Universities and Polytechnical Institutes ("Consejo Nacional de Universidades y Escuelas Politécnicas").
- 1990 Plenary lecture at the 15th Conference of European Comparative Endocrinologists, Leuven, Belgium.
- 1992-2000 Member of the Board of Directors of the Iberoamerican Society for Cell Biology.
- 1992-1996 Vice President for Ecuador, Charles Darwin Foundation for the Galápagos Islands.
- 1995-1998 Member of the Membership Committee in the field of Biology of the Academy of Sciences for the Developing World (TWAS).
- 1995-1998; 1999-2000; 2001-2003; 2004-2006 Member of the Awards Committee in the field of Biology of the Academy of Sciences for the Developing World.
- 1995 Member of the Editorial Board of the journal **Biological Research**, official organ of the Biological Society of Chile.
- 1996 Honorary Foreign Member of the American Society of Ichthyologists and Herpetologists. This is a lifetime honor.
- 1998 Member of the Editorial Board of the journal **Studies in Neotropical Fauna and Environment**, Federal Republic of Germany.
- 1998-2001 Vice President of the General Assembly, Charles Darwin Foundation for the Galápagos Islands.
- 1998 Invited lecture at the International Symposium on Alternative reproductive strategies. Hayama, Japan.
- 2004-2006; 2007-2009 Council Member of the Academy of Sciences for the Developing World (TWAS).
- 2003-2010: Representative from Ecuador to the Latin American Society of Developmental Biology.
- 2004 Invited speaker in the course "Women and Science: Repercussions in Society" Universidad Complutense de Madrid, Spain.
- 2006 Plenary lecture at the International Workshop "Latest Concepts in Developmental Biology". Los Cocos, Córdoba, Argentina.
- 2009 Plenary lecture 9th Congress of ISMB/ECCB (Intelligent Systems for Molecular Biology/European Conference on Computational Biology). Estocolmo, Sweden.
- 2009 Plenary lecture Symposium "From Darwin to Evo Devo". Haifa, Israel.
- 2010 Plenary lecture 9th International Congress of Vertebrate Morphology, Punta del Este, Uruguay.
- 2013-2016 Vice President of the Academy of Sciences of Ecuador.
- 2014 Rhodes Lecture, Emory University Department of Biology, Atlanta, Ga, USA.

2016 Lecture XII Congreso Nacional de la Sociedad Mexicana de Biología del Desarrollo. Lagos de Moreno, Jalisco, Mexico.

2017 Plenary lecture XI Congreso Latinoamericano de Herpetología. Pontificia Universidad Católica del Ecuador, Quito.

2019 Keynote Prize Lecture, X Congress of The Latin American Society of Developmental Biology (LASDB), Buenos Aires, Argentina

Seminar and lectures in Ecuador, Peru, Colombia, Brasil, Chile, Argentina, Mexico, The United States of America, Canada, Great Britain, France, Belgium, The Netherlands and Germany. Participation in Symposia of the Latin American Society for Developmental Biology (LASDB) in 2003, 2005, 2007, 2019. Attendance and presentation of results at the bi-annual International *Xenopus* Conferences 1986 - 2010.

RESEARCH

Research is focused in the comparative study of oogenesis and early development of tropical frogs in comparison with the extensively analyzed frog *Xenopus laevis*. Studies are centered in the study of marsupial frogs, in particular of the frog *Gastrotheca riobambae* (Hemiphractidae), of the dendrobatid frog *Colostethus machalilla*, the foam-nesting frog *Engystomops randi*, and other frogs. Techniques and methodologies of cell and molecular biology are used in this work.

COMPLETE LIST OF PUBLICATIONS OF EUGENIA MARÍA DEL PINO VEINTIMILLA

1. del Pino E. M. Interactions between gametes and environment in the toad *Xenopus laevis* (Daudin) and their relationship to fertilization. *Journal of Experimental Zoology* 185: 121-132 (1973).
2. del Pino Veintimilla E. M. Diez años de la enseñanza de la Biología en la Universidad Católica del Ecuador. *Revista de la Universidad Católica del Ecuador* II (3): 81-107 (1974), Quito.
3. del Pino Veintimilla E. M. Adaptaciones reproductivas para la vida terrestre del sapo marsupial *Gastrotheca riobambae* (Fowler) Anura Hylidae. *Revista de la Universidad Católica* III (8): 119-140 (1975).
4. del Pino Veintimilla E. M. Observaciones sobre la madurez sexual, tamaño y color de la sayapa, *Grapsus grapsus* L. (Brachyura, Grapsidae) de la Isla Santa Cruz, Galápagos. *Revista de la Universidad Católica* III (8): 141-148 (1975).
5. del Pino Veintimilla E. M. Títulos de las tesis de Licenciatura en Ciencias de la Educación con especialidad en Biología a partir de 1973. *Revista de la Universidad Católica* III (8): 227-278 (1975).
6. del Pino E. M., Galarza M. L., de Albuja C. M., Humphries Jr A. A. The maternal pouch and development in the marsupial frog *Gastrotheca riobambae* (Fowler). *Biological Bulletin (Marine Biological Laboratory, Woods Hole, Massachusetts)* 149: 480-491 (1975).
7. del Pino E. M., Sánchez, G. Ovarian structure of the marsupial frog *Gastrotheca riobambae* (Fowler). *Journal of Morphology* 153: 153-162 (1977).
8. del Pino Veintimilla E. M. Núcleos múltiples en el oocito de algunos sapos marsupiales (Hylidae). *Revista de la Universidad Católica*, V (16): 21-30 (1977).
9. Nina H.L.; del Pino Veintimilla E. M. Estructura histológica del ovario del sapo *Eleuterodactylus unistrigatus* y observaciones sobre el desarrollo embrionario. *Revista de la Universidad Católica*, V (16): 31-41 (1977).
10. del Pino E. M., Humphries Jr. A. A. Multinucleate oogenesis in *Flectonotus pygmaeus* and other marsupial frogs. *Biological Bulletin (Marine Biological Laboratory, Woods Hole, Massachusetts)* 154: 198-212 (1978).
11. del Pino E. M. The Biology of an Equatorial Herpetofauna in Amazonian Ecuador. By William E. Duellman. *Copeia* 1979: 372 (1979). (Book Review).
12. del Pino E. M. El mantenimiento y aspectos del comportamiento en cautiverio del sapo marsupial *Gastrotheca riobambae* (Hylidae). *Revista de la Universidad Católica* VIII: 41-49. (1980).
13. del Pino E. M. La Estación Científica Charles Darwin y la Oportunidad de estudio. *Noticias de Galápagos (Fundación Charles Darwin para las Islas Galápagos)* 31: 18-20 (1980).
14. del Pino E. M. Morphology of the pouch and incubatory integument in marsupial frogs (Hylidae). *Copeia* 1980: 10-17 (1980).
15. del Pino E. M., Escobar B. Embryonic stages of *Gastrotheca riobambae* (Fowler) during maternal incubation and comparison of development with that of other egg-brooding hylid frogs. *Journal of Morphology* 167: 277-295 (1981).
16. del Pino, E. M., de Vries, T., Mafla, A. B. Papel del Departamento de Ciencias Biológicas

- de la Pontificia Universidad Católica del Ecuador en el desarrollo de las Ciencias Biológicas y trascendencia del apoyo gubernamental para el desarrollo de estas Ciencias. Política del Desarrollo Científico y Tecnológico. Primer Seminario Nacional, Vol. 3. pp. 81-86. Editorial Voluntad, Quito, Ecuador (1981).
17. Macgregor H. C., del Pino E. M. Ribosomal gene amplification in multinucleate oocytes of the egg-brooding hylid frog *Flectonotus pygmaeus*. *Chromosoma* 85: 474-488 (1982).
 18. del Pino E. M. Multinucleate oogenesis, embryonic development and other adaptations for reproduction on land in egg-brooding hylid frogs. *Progress in Clinical and Biological Research* 58 PtA pp 397-405. Alan Liss, New York (1982).
 19. del Pino E. M. Progesterone induces incubatory changes in the brooding pouch of the frog *Gastrotheca riobambae* (Fowler). *Journal of Experimental Zoology* 227: 159-163 (1983).
 20. de Albuja C.M., Campos M., del Pino E. M. Role of progesterone in oocyte maturation in the egg-brooding hylid frog *Gastrotheca riobambae* (Fowler). *Journal of Experimental Zoology* 227: 271-276 (1983).
 21. del Pino E. M., Elinson R. P. A novel developmental pattern for frogs: Gastrulation produces an embryonic disc. *Nature* 306: 589-591 (1983).
 22. del Pino E. M. Las reuniones de la Fundación Darwin y El Niño. En: El Niño en las Islas Galápagos: El Evento de 1982-1983 (G. Robinson y E. M. del Pino, editors) pp. 529-534. Publication of the Charles Darwin Foundation for the Galápagos Islands, Quito, Ecuador. (1985).
 23. Elinson R. P., del Pino E. M. Cleavage and gastrulation in the egg-brooding, marsupial frog, *Gastrotheca riobambae*. *Journal of Embryology and experimental Morphology* 90: 223-232 (1985).
 24. del Pino E. M., Steinbeisser, H., Hofmann, A., Dreyer, C., Campos, M., Trendelenburg, M. F. Oogenesis in the egg-brooding frog *Gastrotheca riobambae* produces large oocytes with fewer nucleoli and low RNA content in comparison to *Xenopus laevis*. *Differentiation* 32: 24-33 (1986).
 25. del Pino E. M. Changes in ribosomal gene amplification and buildup of rRNA during oogenesis as adaptations of egg brooding frogs *Gastrotheca* and *Flectonotus* (Hylidae) to terrestrial living. *Archivos de Biología y Medicina Experimentales (Chile)* 21: 449-454 (1988).
 26. del Pino, E. M. Marsupial Frogs. *Scientific American* Volume 260. Number 5. Pages: 110-118 (May 1989). (this article was translated into 10 different languages, for publication in the international editions of this journal).
 27. del Pino, E. M. **Desarrollo embriónico temprano en los animales**. Ediciones de la Pontificia Universidad Católica del Ecuador, Quito (1989). 265 pp. (Textbook)
 28. del Pino, E. M. Modifications of oogenesis and Development in Marsupial frogs. *Development* 107: 169-187 (1989). (Review article, written by invitation).
 29. del Pino, E. M. and Looor-Vela, S. The pattern of early cleavage of the marsupial frog *Gastrotheca riobambae*. *Development* 110: 781-789 (1990).
 30. Elinson, R. P., del Pino, E. M., Townsend, D. S., Cuesta, F. C., Eichhorn, P. A practical guide to the developmental biology of terrestrial-breeding frogs. *Biological Bulletin (Marine Biological Laboratory, Woods Hole, Massachusetts)* 179: 163-177 (1990).
 31. del Pino, E. M. Novel patterns of oogenesis and development, attributes of egg-brooding frogs (Hylidae) of Latin America. In: The role of Women in the Development of Science and Technology in the Third World. (A. M. Faruqui; M. H. A. Hassan; G. Sandri, editors). World Scientific Publishing Co. Pte. Ltd. Singapur. pp. 903-904 (1991).

32. del Pino, E. M. Reproducción y desarrollo en las ranas incubadoras (Hylidae) de América Latina. *Acta Zoologica Lilloana*, Tucumán Argentina, 41: 29-39 (1992).
33. Alcocer, I., Santacruz, X., Steinbeisser, H., Thierauch, K.-H., del Pino, E. M. Ureotelism as the prevailing mode of nitrogen excretion in larvae of the marsupial frog *Gastrotheca riobambae* (Fowler) (Anura, Hylidae). *Comparative Biochemistry and Physiology* 101A: 229-231 (1992).
34. del Pino, E. M., Murphy, C., Masson, P., Gall, J. G. The 5S rRNA-encoding genes of the marsupial frog *Gastrotheca riobambae*. *Gene* 111: 235-238 (1992).
35. Gatherer, D. and del Pino, E. M. Somitogenesis in the marsupial frog *Gastrotheca riobambae*. *International Journal of Developmental Biology* 36: 283-291 (1992). (The cover page of this issue shows an embryo of *G. riobambae*).
36. del Pino, E. M., Alcocer, I., Grunz, H. Urea is necessary for the culture of embryos of the marsupial frog *Gastrotheca riobambae*, and is tolerated by embryos of the aquatic frog *Xenopus laevis*. *Development, Growth and Differentiation* 36: 73-80 (1994).
37. del Pino, E. M., Medina, A. Biología. En: *Ciencia y Tecnología Ecuador 1993 -1995*. SENACYT, FUNDACYT, Quito, Ecuador. pp. 3-22 (1996).
38. del Pino, E. M. The expression of Brachyury (T) during gastrulation in the marsupial frog *Gastrotheca riobambae*. *Developmental Biology* 177: 64-72 (1996).
39. del Pino Veintimilla, E. M. Basic research and university training: Developmental Biology in Latin America. In: *Wissenschaftler Austausch und Entwicklungszusammenarbeit vor der Jahrtausendwende*. (editor: Alexander von Humboldt Stiftung.) Baden-Baden: Nomos Verl.-Ges. pp. 211-214. (1998).
40. del Pino, E. M., Medina, A. Neural Development in the marsupial frog *Gastrotheca riobambae*. *International Journal of Developmental Biology* 42: 723-731 (1998). (the cover of this issue shows an embryo of *Gastrotheca riobambae*).
41. del Pino, E. M. Alternative reproductive and developmental mechanisms in marsupial frogs. *Journal of Reproduction and Development* 46 (Supplement): 53-54 (2000).
42. del Pino, E. M., Sáenz, F. E., Pérez, O. D., Brown, F. D., Ávila, M.-E., Barragán, V. A., Haddad, N., Paulin-Levasseur, M., Krohne, G. LAP2 (Lamina-associated polypeptide 2) expression in fish and amphibians. *International Journal of Developmental Biology* 46: 227-234 (2002).
43. Brown, F. D., del Pino, E. M., Krohne, G. The Bidder's organ in the toad *Bufo marinus*: effects of orchidectomy on the morphology and expression of lamina-associated polypeptide 2. *Development Growth and Differentiation* 44: 527-535 (2002). With a cover picture of the Bidder's organ.
44. Benítez, M.-S., del Pino, E. M. The expression of Brachyury during development of the dendrobatid frog *Colostethus machalilla*. *Developmental Dynamics* 225: 592-596 (2002).
45. del Pino, E. M. Teaching developmental biology in Ecuador: A 30-year journey. *International Journal of Developmental Biology* 47: 189-192 (2003).
46. Benítez, M. S., del Pino, E. M. La expresión de Brachyury en ranas con modos divergentes de desarrollo. *Revista de la Pontificia Universidad Católica del Ecuador*. 71: 7-14 (2003).
47. Sáenz, F. E., del Pino, E. M. Modo del desarrollo en el pez vivíparo *Priapichthys panamensis* (Poeciliidae). *Revista de la Pontificia Universidad Católica del Ecuador*. 71: 15-25. (2003).
48. del Pino, E. M., Pérez, O. D., Sáenz, F. E., Brown, F. D., Ávila, M. E., Barragán, V. A. Los polipéptidos asociados a la lámina nuclear 2 (LAP₂) en peces y anfibios. *Revista de la Pontificia Universidad Católica del Ecuador*. 71: 27-35 (2003).

49. Brown, F. D., del Pino, E. M. Oogénesis y el órgano de Bidder en los machos hermafroditas de *Bufo marinus*. Revista de la Pontificia Universidad Católica del Ecuador.71: 37-46. (2003).
50. del Pino, E. M., Elinson, R. P. The organizer in amphibians with large eggs: Problems and perspectives. In: The vertebrate organizer (H. Grunz, editor). Springer Verlag, Berlin, Heidelberg, Germany. Pp. 359-374. (2003).
51. del Pino, E. M., Ávila, M. E., Pérez, O. D., Benítez, M. S., Alarcón, I., Noboa, V., Moya, I. M. Development of the dendrobatid frog *Colostethus machalilla*. International Journal of Developmental Biology. 48: 663-670. (2004).
52. Noboa, V. and del Pino, E. M. Desarrollo neural de la rana *Colostethus machalilla* (ANURA. DENDROBATIDAE). Revista Ecuatoriana de Medicina y Ciencias Biológicas. 27: 15-20. (2005).
53. Alarcón, I. and del Pino, E. M. Estrategia del desarrollo embrionario temprano de *Colostethus machalilla* en comparación con cuatro especies de ranas. Memorias del I Congreso Internacional en Ciencia y Tecnología. Quito (2005). (Electronic publication).
54. E. M. del Pino, Ávila, M. E., Pérez, O. D., Benítez, M.-S., Alarcón, I. Noboa, V., Moya, I. M. (2005). Desarrollo embrionario de *Colostethus machalilla* (Anura: Dendrobatidae). Memorias del I Congreso Internacional en Ciencia y Tecnología. Quito (2005). (Electronic publication).
55. Moya, I. M., and del Pino, E. M. Somitogénesis de *Colostethus machalilla* (Anura: Dendrobatidae). Memorias del I Congreso Internacional en Ciencia y Tecnología. Quito (2005). (Electronic publication).
56. Benítez, M.-S. and del Pino E. M. Expresión de Brachyury durante el desarrollo de la rana dendrobátida *Colostethus machalilla*. Memorias del I Congreso Internacional en Ciencia y Tecnología. Quito (2005). (Electronic publication).
57. Pérez, O. D., and del Pino E. M. Características de la larva a la eclosión del anfibio *Caecilia orientalis* (Gymnophiona, Caeciliidae). Memorias del I Congreso Internacional en Ciencia y Tecnología. Quito (2005). (Electronic publication).
58. Moreano, M. and del Pino, E. M. (2005). Morfología del aparato reproductor masculino de la preñadilla (*Astroblepus ubidiai*, Astroblepidae). Memorias del I Congreso Internacional en Ciencia y Tecnología. Quito (2005). (Electronic publication).
59. Reascos, Y. and del Pino, E. M. (2005). Morfología del aparato reproductor femenino del pez andino conocido como preñadilla (*Astroblepus ubidiai*, Astroblepidae). Memorias del I Congreso Internacional en Ciencia y Tecnología. Quito (2005). (Electronic publication).
60. Moya, I. M., Alarcón, I. and del Pino, E. M. Gastrulation of *Gastrotheca riobambae* in comparison with other frogs. Developmental Biology 304: 467-478. (2007).
61. del Pino, E. M., Venegas-Ferrín, M., Romero-Carvajal A., Montenegro-Larrea P., Sáenz-Ponce N., Moya I. M., Alarcón I., Sudou N., Yamamoto S., Taira, M. A comparative analysis of frog early development. Proceedings of the National Academy of Sciences, U. S. A. 104: 11882-11888. (2007).
62. Pérez, O., Benítez, M.-S., Nath, K., Heasman, J., del Pino, E. M., Elinson R. P. Comparative analysis of *Xenopus VegT*, the meso-endodermal determinant, identifies an unusual conserved sequence. Differentiation, 75: 559-565. (2007).
63. Romero-Carvajal A., Sáenz-Ponce N., Venegas-Ferrín M., Almeida-Reinoso D., Lee C., Bond J., Ryan M. J., Wallingford J. B., del Pino, E.M. Embryogenesis and Laboratory Maintenance of the Foam-Nesting Túngara Frogs, Genus *Engystomops* (= *Physalaemus*). Developmental Dynamics 238:1444–1454 (2009).

64. Oscar D. Pérez, Ngan Betty Lai, David Buckley, Eugenia M. del Pino and Marvaley H. Wake. The Morphology of Prehatching Embryos of *Caecilia orientalis* (Amphibia: Gymnophiona: Caeciliidae). *Journal of Morphology* 270: 1492-1502 (2009).
65. Santillana Ortiz, J. D. y del Pino E.M. Características morfológicas de la gástrula en *Ceratophrys stolzmanni* (Anura: Ceratophryidae). *Revista Ecuatoriana de Medicina y Ciencias Biológicas*. Casa de la Cultura Ecuatoriana Benjamin Carrión, Quito, Ecuador. 30: 50-56 (2009).
66. del Pino, E.M. El viaje del H. M. S. Beagle. *Revista Ecuatoriana de Medicina y Ciencias Biológicas*. Casa de la Cultura Ecuatoriana Benjamin Carrión, Quito, Ecuador. 30: 101-103 (2009).
67. Venegas-Ferrín, M., Sudou, N., Taira, M. and del Pino, E.M. Comparison of Lim1 expression in embryos of frogs with different modes of reproduction. *International Journal Developmental Biology* 54: 195-202 (2010).
68. del Pino, E.M. The early development of *Gastrotheca riobambae* and *Colostethus machalilla*, frogs with terrestrial reproductive modes. BiosciEdNet (BEN) Digital Library Portal for Teaching and Learning in the Biological Sciences. (2010).
<http://www.bioscienet.org/portal/>
69. del Pino, E.M. La gastrulación en ranas con diversos modos de reproducción. *Revista Ecuatoriana de Medicina y Ciencias Biológicas*, Casa de la Cultura Ecuatoriana, Quito. 31:94-105 (2010).
70. Montenegro Larrea P. and del Pino, E.M. La gastrulación de *Epipedobates anthonyi* (Anura: Dendrobatidae). *Revista Ecuatoriana de Medicina y Ciencias Biológicas*, Casa de la Cultura Ecuatoriana, Quito 32: 24-32 (2011).
71. Sáenz-Ponce, N., Santillana-Ortiz, J.-D., del Pino, E. M. The gastrocoel roof plate in embryos of different frogs. *Differentiation* 83: S62-S66 (2012).
72. Sáenz Ponce, N., Arias Contreras M., del Pino, E. M. La placa del techo del gastrocele de *Epipedobates tricolor* (Anura: Dendrobatidae). *Revista Ecuatoriana de Medicina y Ciencias Biológicas*, Casa de la Cultura Ecuatoriana, Quito 33: 11-19 (2012).
73. Sáenz-Ponce, N., Mitgutsch, C., del Pino, E. M. Variation in the schedules of somite and neural development in frogs. *Proceedings of the National Academy of Sciences, U. S. A.* 109: 20503-20507. (2012).
74. Elinson, R.P. and del Pino, E.M. Developmental diversity of amphibians. *WIREs Developmental Biology* 1: 345-369 (2012).
75. Schmid, M.; Steinlein, C.; Bogart, J.P. ; Feichtinger, W.; Haaf, T.; Nanda, I.; del Pino, E.M.; Duellman, W.E.; Hedges S.B. The Hemiphractid Frogs Phylogeny, Embryology, Life History, and Cytogenetics. *Cytogenetic and Genome Research* Vol. 138,

- No. 2–4, pages 69-384. (2012).
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- b. Year V. No. 16. July de 1977. 232 pp.
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