



Mariangela Prati
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Biography

March 1977 Doctorate Degree in Biology at the Università degli Studi di Milano (Italy).

From 1978 to 1980 fellowship grant recipient from Regione Lombardia, on the teratogenic effects of the dioxin.

From April 1981 Researcher of the Faculty of Sciences of the University of Milano where she developed her own scientific and didactic activity in the Department of Biology.

From July 1998 Researcher of the III School of Sciences of Milano in Varese, now School of Sciences of the University of the Insubria.

From March 2001 Associated Professor of the same University.

Research interests

Lately: Experimental embryology and developmental biology: tests of teratogenesis in vivo in Mammals (rat, mouse and rabbit) on pesticides, fungicides, drugs, solvents, etc.; teratogenicity testing in vitro: post-implantation whole-embryo culture

Recently: Evaluation of xenobiotic embryotoxic activity on *Xenopus* embryos obtained by the test FETAX (Frog Embryo Teratogenesis Assay-Xenopus). Analysis of gene expression to obtain new insights on the mechanisms of embryotoxicity and teratogenesis or simply to obtain molecular markers of exposure useful in the early diagnosis of environmental stresses.

Teaching experience and appointments

She teaches Comparative Anatomy, and Developmental Biology in different courses.

Representative publications

1. GIA VINI E., BROCCIA, ML., PRATI M., BELLOMO, D. & MENEGOLA, E. EFFECTS OF ETHANOL AND ACETALDEHYDE ON RAT EMBRYOS DEVELOPING IN VITRO. *In Vitro Cell. Dev. Biol.*, 28, 205-210, 1992.

2. PRATI, M., GIA VINI, E. & MENEGOLA, E. ALTERNATIVES TO IN VIVO TESTS FOR TERATOLOGIC SCREENING. *Ann.Ist.Super.Sanità*, 29, 41-46, 1993.

3. GIA VINI E., BROCCIA, ML., MENEGOLA, E. & PRATI M. COMPARATIVE IN VITRO STUDY OF THE EMBRYOTOXIC EFFECTS OF THREE GLYCOL ETHERS AND THEIR METABOLITES, THE ALKOXY ACIDS. *Toxic. In Vitro*, 7, 777-784, 1993.
4. ORNAGHI F. FERRIN S., PRATI M, & GIA VINI E. THE RIPRODUCTIVE EFFECTS OF N-ACETYL L-CYSTEINE AGAINST METHYL MERCURY EMBRYOTOXICITY IN MICE. *Fund. Appl Toxicol*, 20, 437-445, 1993.
5. MENEGOLA, E., PRATI, M., RICOLFI, R. & GIAVINI, E. DEVELOPMENT OF RAT EMBRYOS CULTURED IN NORMAL AND DIABETIC SERA SUPPLEMENTED WITH EXCESS GLUCOSE. In R. Argano, C. Cirotto, E. Grassi Milano & L. Mastrolia (Eds.), *Contributions to Animal Biology, Halocynthia Association*, 299-303, 1994.
6. MENEGOLA, E., PRATI, M, BROCCIA, M.L., RICOLFI, R. & GIA VINI, E. IN VITRO DEVELOPMENT OF RAT EMBRYOS OBTAINED FROM DIABETIC MOTHERS. *Experientia*, 21, 394-397, 1995.
7. MENEGOLA, E., BROCCIA, ML., PRATI, M., RICOLFI, R. & GIA VINI, E. GLUTATHIONE AND N-ACETYLCYSTEINE PROTECTION AGAINST ACETALDEHYDE EMBRYOTOXICITY IN RAT EMBRYOS DEVELOPING IN VITRO. *Toxic. In Vitro*, 9, 633-641, 1995.
8. MENEGOLA, E., BROCCIA, ML., PRATI, M, RICOLFI, R. & GIAVINI, E. GLUTATHIONE STATUS IN DIABETES-INDUCED EMBRYOPATHIES. *Biol. Neonate*, 69, 293-297, 1996.
9. MENEGOLA, E., BROCCIA, ML., NAU, H, PRATI, M, RICOLFI, R. & GIAVINI, E. TERATOGENIC EFFECTS OF SODIUM VALPROATE IN MICE AND RATS AT MIDGESTATION AND AT TERM. *Terat. Carcinog. Mutag.*, 16, 97-108, 1996.
10. MENEGOLA, E., BROCCIA, ML., PRATI, M, RICOLFI, R. & GIAVINI, E. COMPARATIVE EMBRYOTOXICITY OF FOUR ANTRACYCLINES: IN VITRO STUDY ON THEIR EFFECTS ON GLUTATHIONE STATUS. *Toxic. In Vitro*, 11, 33-41, 1997.
11. MENEGOLA, E., BROCCIA, ML., PRATI M & GIA VINI E. STAGE-DEPENDENT SKELETAL MALFORMATIONS INDUCED BY VALPROIC ACID IN RAT. *Int. J. Dev. Biol.*, 42, 99-102, 1998.
12. MENEGOLA, E., BROCCIA, M.L., PRATI, M & GIA VINI, E. POSTCOITAL ANTIFERTILITY ACTIVITY OF AMINOALCOHOLS. *Reprod. Toxicol.*, 12(3), 371-374, 1998.
13. MENEGOLA, E., BROCCIA, ML., PRATI M & GIA VINI E. DEVELOPMENT OF RAT EMBRYOS CULTURED IN SERUM FROM DIABETIC RATS. *Biol. Neonate*, 75, 65-72, 1999.
14. MENEGOLA, E., BROCCIA, ML., PRATI, M & GIA VINI, E. MORPHOLOGICAL ALTERATIONS INDUCED BY SODIUM

VALPROATE ON SOMITES AND SPINAL NERVES IN RAT EMBRYOS. *Teratology*, 59, 110-119, 1999.

15. BERNARDINI, G., PRATI, M., BONETTI, E., & SCARI', G. ATLAS OF XENOPUS DEVELOPMENT. Springer, Milan, 1999.

16. MENEGOLA, E., BROCCIA, ML., PRATI, M, & GIA VINI, E. IN VITRO EMBRYOTOXICITY STUDY OF N-N-DIMETHYLACETAMIDE AND ITS MAIN METABOLITE N-MONOMETHYLACETAMIDE. *Toxic. In Vitro*, 13, 409- 415, 1999.

17. MENEGOLA, E., BROCCIA, ML., DI RENZO, F, PRATI, M, & GIA VINI, E. IN VITRO TERATOGENIC POTENTIAL OF TWO ANTIFUNGAL TRIAZOLES: TRIADIMEFON AND TRIADIMENOL. *In Vitro Cell. Dev. Biol.*, 36, 88-95, 2000

18. PRATI M, BIGANZOLI E., BORACCHI P., TESAURO, M, MONETTI C. & BERNARDINI G. ECOTOXICOLOGICAL SOIL EVALUATION BY FETAX. *Chemosphere*, 41, 1621-1628,2000.

19. M. PRATI, M. MOLTENI, F. POMATI, C. ROSSETTI, G. BERNARDINI. BIOLOGICAL EFFECT ON THE PLANKTOTHRIX SP. FP1 CYANOBACTERIAL EXTRACT. *TOXICON*, 40, 267-272, (2002).

20. D. VIGETTI, L. POLLEGIONI, C. MONETTI, M. PRATI, G. BERNARDINI, R. GORNATI. PROPERTY COMPARISON OF RECOMBINANT AMPHIBIAN AND MAMMALIAN ALLANTOICASES. *FEBS LETTERS*, 512, 323-328 (2002).

21. M. PRATI, R. GORNATI, P. BORACCHI, E. BIGANZOLI, S. FORTANER, R. PIETRA, E. SABBIONI AND G. BERNARDINI. A COMPARATIVE STUDY OF THE TOXICITY OF MERCURY DICHLORIDE AND METHYLMERCURY ASSAYED BY THE FROG EMBRYO TERATOGENESIS ASSAY-XENOPUS (FETAX). *ATLA*, 30, 23-32 (2002).

22. R. GORNATI, C. MONETTI, D. VIGETTI, S. BOSISIO, S. FORTANER, E. SABBIONI, G. BERNARDINI AND M. PRATI. ARSENIC TOXICITY AND HSP70 EXPRESSION IN XENOPUS LAEVIS EMBRYOS. *ATLA*, 30, 597-603 (2002).

23. C. MONETTI, D. VIGETTI, R. GORNATI, M. PRATI, G. R. KLINEFELTER, G. BERNARDINI. IDENTIFICATION AND MOLECULAR CLONING OF XENOPUS LAEVIS SP22, A PROTEIN ASSOCIATED WITH FERTILIZATION IN MAMMALS. *COMP. BIOCHEM. PHYSIOL. B. BIOCHEM. MOL. BIOL.*, 132(4), 761-767 (2002).

24. D. VIGETTI, C. MONETTI, PRATI M., R. GORNATI AND G. BERNARDINI. (2002). Genomic organization and chromosome localization of the murine and humane allantoicase gene. *GENE*. vol. 289, pp. 13-17 ISSN: 0378-1119.

25. C. MONETTI, D. VIGETTI, M. PRATI, E. SABBIONI, G.

BERNARDINI, R. GORNATI. GENE EXPRESSION IN XENOPUS EMBRYOS AFTER METHYLMERCURY EXPOSURE: A SEARCH FOR MOLECULAR BIOMARKERS. ENVIRONMENTAL TOXICOLOGY & CHEMISTRY, 21(12) 2731-2736 (2002).

26. D. VIGETTI, G. BINELLI, C. MONETTI, M. PRATI, G. BERNARDINI, R. GORNATI. SELECTIVE PRESSURE ON THE ALLANTOICASE GENE DURING VERTEBRATE EVOLUTION. MOLECULAR BIOLOGY & EVOLUTION (MB & E) 57, 650-658 (2003).

27. C. MONETTI, D. VIGETTI, PRATI M., R. GORNATI, S. FORTANER, E. SABBIONI, AND G. BERNARDINI. (2003). Platinum toxicity and gene expression in xenopus embryos: analysis by FETAX and differential display. ATLA ABSTRACTS ALTERNATIVES TO LABORATORY ANIMALS. vol. 31, pp. 401-408 ISSN: 0306-2465.

28. R. GORNATI, G. TEROVA, D. VIGETTI, M. PRATI, M. SAROGLIA AND G. BERNARDINI. EFFECTS OF POPULATION DENSITY ON SEA BASS (DICENTRARCHUS LABRAX) GENE EXPRESSION. AQUACULTURE, 230, 229-239 (2004).

29. GORNATI, E. PAPIS, S. RIMORDI, V. CHINI, G. TEROVA, M. PRATI, M. SAROGLIA AND G. BERNARDINI. MOLECULAR MARKERS FOR ANIMAL BIOTECHNOLOGY: SEABASS (DICENTRARCHUS LABRAX, L.) HMG-COA REDUCTASE MRNA. Gene, 344, 299-305 (2005).

30. BERNARDINI G., PRATI M., GORNATI R. (2005). FETAX, a versatile tool in toxicology, can be conveniently integrated with molecular biology techniques. APPLIED HERPETOLOGY. vol. 2, pp. 287-295 ISSN: 1570-7539.