



Giovanni Bernardini
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Biography

Giovanni Bernardini, born in Milano on August 28, 1955, is a professor of the Department of Biotechnology and Molecular Sciences in the University of Insubria. After obtaining his Doctorate degree in Biology in 1979 at the University of Milan, he was a Postdoctoral Research Associate in the Department of Physiology of the University of Rochester, N.Y. until 1983 where he studied intercellular junctions.

In the Department of Biology in the University of Milan he worked on gamete biology using as a model the anuran *Xenopus laevis*. He studied sperm motility, sperm ultrastructure and biochemistry as well as the last phases of the spermiogenesis. He approached fertilization by means of electrophysiological and morphological techniques. For this research, presented at different Gordon Conferences, he collaborated with Marie Paule Cosson of the CNRS di Villefranche sM and with Jerry Hedrick of the University of California at Davis where he has been an Associate in the Experimental Station in 1987.

Research interests

Lately, *Xenopus* embryos have been used for the development of a bioassay for evaluating the teratogenic risk. In 2000, he was invited by the Department of Health and Human Services to serve as a member of an Expert Panel "to assess the current validation status of FETAX". He is also collaborating with ECVAM of the Joint Research Centre (Ispra) to study gene expression modifications induced by metals.

Recently, molecular biology techniques were used to follow a gene during vertebrate evolution and to search for genes whose expression is modified by metals. Stress-related genes in fishes are also studied.

Teaching experience and appointments

He teaches Cell Biology, Histology, and Developmental Biology in different courses. He has been Director of the Department of Structural and Functional Biology and he is Coordinator of the Ph.D. in Cell and Molecular Biology.

Representative publications

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.

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MONETTI C., VIGETTI D., PRATI M., GORNATI R., FORTANER S., SABBIONI E., BERNARDINI G. (2003). Platinum toxicity and gene expression in *Xenopus* embryos: analysis by FETAX and differential display. ATLA. ALTERNATIVES TO LABORATORY ANIMALS. vol. 31, pp. 401-408 ISSN: 0261-1929.

VIGETTI C., BINELLI G., MONETTI C., PRATI M., BERNARDINI G., GORNATI R. (2003). Selective pressure on the allantoicase gene during vertebrate evolution. JOURNAL OF MOLECULAR EVOLUTION. vol. 57, pp. 650-658 ISSN: 0022-2844.

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LUCA G., BERNARDINI G. (2003). Molecular cloning, genomic organization and developmental expression of the *Xenopus laevis* hyaluronan synthase 3. *MATRIX BIOLOGY*. vol. 22, pp. 511-517 ISSN: 0945-053X.

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