

**Alessandra Gambacurta** was born in Rome on 06.22.1960. She joined the Department of Experimental Medicine and Biochemical Sciences University of Rome "Tor Vergata" as Researcher on December 28, 1994, in the scientific field E05B – Molecular Biology. Since 1997 she is researcher at the same Department. Since 2002, she is Adjunct Professor.

**February '86** -She graduated cum laude in Biological Sciences, discussing a thesis entitled: "Effect of hyperthermia on electron transport in mitochondria isolated from Ehrlich ascites tumor."

**December '87** -she started to carry out research in the Department of Experimental Medicine and Biochemical Sciences, University of Rome "Tor Vergata", where she initially helped to create the new Laboratory of Molecular Biology.

**January '88** -She received a scholarship for a period of nine months at the Max Planck Institut für Molekulare Genetik in Berlin, where she worked on the site-specific mutagenesis of the initiation factor of protein synthesis in *E. coli* IF1

In **November '88** –She was admitted to the course of doctoral studies in Biochemistry at the University of Rome "Tor Vergata" (Department of Experimental Medicine and Biochemical Sciences) doing a thesis entitled "Study of the transcriptional and translational control in' expression of two genes coding for bovine pancreatic trypsin inhibitor (BPTI) and for its isoform (SI) ". Concurrently, she began to work the isolation and characterization of genes of the bivalve mollusk *Scapharca hemoglobin inaequalis*. In the same year she became qualified to practice as a biologist.

**June '92** -She received his PhD in Biochemistry

From December 1994 to date she is a researcher, (confirmed in 1997) BIO/11 scientific field, in the Department of Experimental Medicine and Biochemical Sciences.

In **December 2001** she has got the requisite qualifications for the chair of Associate Professor.

**Since 2001** -she is Adjunct Professor for the Chair of Molecular Biology in the Diploma Course in Biomedical Laboratory Diagnostic Techniques

Owner of Molecular Biology Course C.I. of Biological Chemistry in the degree in Medical Engineering Course of Recombinant DNA Techniques at the School of Specialization in Clinical Microbiology and Virology Research Interests.

1 - Since 1988, Study and expression of eukaryotic genes in heterologous systems by means of Molecular Biology and Genetic Engineering, with particular regard to the isolation and characterization of genes of the two hemoglobins of the mollusk *Scapharca inaequalis* and proteolytic enzyme trypsin gene;

2 - Study and expression by recombinant human peroxidase (hEPO);

3 - Study and expression by recombinant aspartoacylase - cyclase in relation to the disease Canavan;

**Since 2003** she is interested in hematopoietic stem cells and their therapeutic use in veterinary and human. Has developed a method for their isolation from peripheral blood and their characterization "in vitro". Since 2004, is applying these cells in veterinary medicine, locally and generally, in several diseases primarily in the treatment of tendon injuries, muscle and bone in animals with particular reference to horses and dogs. This study has produced two international patents.

**Since 2009**, she became interested in cancer stem cells.