

## CURRICULUM VITAE of *Alessandra Gambacurta*

PRESENT POSITION: Researcher (since 1994) in Molecular Biology at the Department of Experimental Medicine and Surgery of the University of Rome "Tor Vergata", Rome. Italy.

EDUCATION: Degree in Biological Sciences, Qualified as a Biologist,  
PhD in Biochemistry.

### PREVIOUS WORK:

1987-1988 Fellowship at the Max Planck Institut fur Molekulare Genetik, Berlin

1989-1992 PhD in Biochemistry, University of Rome "Tor Vergata".

1994-today Researcher BIO/11 Faculty of Medicine and Surgery, University of Rome "Tor Vergata".

2001 Obtaining qualification of Associate Professor BIO/11

### EDITORIAL ACTIVITY:

2012 - today Member of the Faculty Board of the PhD in Molecular Biology and Biochemistry

2014- today Referee for MIUR for scientific projects

2005 - today Referee for several international journals

Life Sciences

Biochemical journal

Equine Veterinary Journal

Equine Veterinary Journal and Education

### RESEARCH INTERESTS:

- Study of the molecular and epigenetic mechanisms underlying cell deprogramming
- Study of the mechanisms of stem cells differentiation
- Application of blood stem cells in veterinary medicine (horses, dogs, cats), with particular regard to tendons, muscles and bones
- Reprogramming tumor cells in normal cells with particular attention to the molecular and epigenetic mechanisms responsible for the return of tumor cells to normal cells.
- Role of energy metabolism in reprogramming in differentiated tumor cells, identification of the molecular cascade responsible for metabolic change

### FINANCED RESEARCH PROJECTS AND OTHER RESEARCH FUNDING:

- 2006-2008 Prin Project, protocol 2005052299\_001, Study of lipoxygenase-lipid interaction: spectroscopic analysis of protein conformational changes, of the dynamic properties of lipids and of the elastic properties of the system (participant)
- 2008-2010 Prin Project, protocol 2007KAWXCL\_002, Structural and stability studies of cytochrome c mutants to be used in the biosensoristic area (participant).
- Third-party account 2006-2014 "Development of the protocol to obtain stem cells from peripheral blood"
- 2014 - to date: Responsible "Stem Cell Project" Centro NAST, University of Rome "Tor Vergata".
- 2017: ASI - Project "Serism" - BioMissione VITA (Participant, creator and manager of the experimental model of osteogenesis brought to the ISS)

#### INTERNATIONAL AND EUROPEAN PATENTS:

1. Patent number: 8500712, Kit for collecting blood, preferably peripheral blood, for the production of stem cells. Type: Grant, Filed: March 17, 2009, Date of Patent: August 6, 2013
2. Patent number: 8263400, Method for expanding adult stem cells from blood and compositions. Type: Grant, Filed: 2009, Date of Patent: 2012
3. Publication number: 20120308535, Pharmaceutical Composition Containing Expanded Adult Stem Cells and Methods of Using Same for Treatment, Type: Application, Filed: 2012, Publication date: 2012

#### SELECTED ARTICLES:

1. E Balestrieri, A Argaw-Denboba, A Gambacurta, C. Cipriani, R. Bei, A. Serafino, P. Sinibaldi-Vallebona and C. Matteucci (2018) Human endogenous retrovirus K in the crosstalk between cancer cells microenvironment and plasticity: a new perspective for combination therapy- *Frontiers in Microbiology*, doi.org/10.3389/fmicb.2018.01448
2. A Gambacurta, G Raschellà (2018). Challenging tumor resistance with less toxic, more effective drug combinations: an example from neuroblastoma *Cell Death & Disease* volume 9, Article number: 686
3. Carpentieri A, Cozzoli E., Acri F., Ranalli M., Diedenhofen G., Scimeca M., Bonanno E. Gambacurta A. (2017). Rapid Rapamycin-Only Induced Osteogenic Differentiation of Blood-Derived Stem Cells and Their Adhesion to Natural and Artificial Scaffolds. *Stem Cells International*, 2017, 2976541. <http://doi.org/10.1155/2017/2976541>
4. Argaw-Denboba, A., Balestrieri, E., Serafino, A., Cipriani, C., Bucci, I., Sorrentino, R., Sciamanna I, Gambacurta, A, Sinibaldi-Vallebona P, Matteucci, C. (2017). HERV-K activation is strictly required to sustain CD133+ melanoma cells with stemness features. *Journal of Experimental & Clinical Cancer Research : CR*, 36, 20. doi.org/10.1186/s13046-016-0485-x
5. Carpentieri A, Cozzoli E, Scimeca M, Bonanno E, Sardanelli AM, Gambacurta A. (2016) Differentiation of human neuroblastoma cells towards the osteogenic lineage by mTOR inhibitor. *Cell Death Dis.* 2015 Nov 12;6:e1974. doi: 10.1038/cddis.2015.244.
6. Alaimo G, Cozzoli E, Marfe G, Esposito L, Ranalli M, Hmada D, Giordano A and Gambacurta A. (2013) Blood-Derived Stem Cells (BDSCs) Plasticity: In Vitro Hepatic Differentiation. *J Cell Physiol.* Jun; 228(6):1249-54. doi: 10.1002/jcp.24279.
7. Sarra, M., Cupi, M. L., Bernardini, R., Ronchetti, G., Monteleone, I., Ranalli, M., Franzè, E., Rizzo, A., Colantoni, A., Caprioli, F., Maggioni, M., Gambacurta, A., Mattei, M., Macdonald, T. T., Pallone, F. and Monteleone, G. (2013), IL-25 prevents and cures fulminant hepatitis in mice through a myeloid-derived suppressor cell-dependent mechanism. *Hepatology*, 58: 1436–1450. doi:10.1002/hep.26446
8. Marfe G, Rotta G, De Martino L, Tafani M, Fiorito F, Di Stefano C, Poletini M, Ranalli M, Russo MA, Gambacurta A. (2012) A new clinical approach: use of blood-derived stem cells (BDSCs) for superficial digital flexor tendon injuries in horses. *Life Sci.* Jun 6;90(21-22):825-30. doi: 10.1016/j.lfs.2012.03.004
9. Marfe, G., Massaro-Giordano, M., Ranalli, M., Cozzoli, E., Di Stefano, C., Malafoglia, V., Poletini, M. and Gambacurta, A. (2012), Blood derived stem cells: An ameliorative therapy in veterinary ophthalmology. *J. Cell. Physiol.* 227: 1250–1256. doi:10.1002/jcp.22953
10. Jan Spaas, Gambacurta A., Marco Poletini, Sarah Broeckx, Frank Van Hoeck, Catharina De Schauwer, Gerlinde Van de Walle (2011). Purification and expansion of stem cells from equine peripheral blood, with clinical applications. *VLAAMS DIERGENEESKUNDIG TIJDSCHRIFT*, vol. 80 ; p. 129-135, ISSN: 0303-9021
11. Lucibello M, Gambacurta A., Zonfrillo M, Pierimarchi P, Serafino A, Rasi G, Rubartelli A, Garaci E. (2011) TCTP is a critical survival factor that protects cancer cells from oxidative stress-induced cell-death. *Experimental Cell Research*, vol. 317; p. 2479-2489, ISSN: 0014-4827. doi: 10.1016/j.yexcr.2011.07.012