

CURRICULUM VITAE

Raffaella Giavazzi

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SEX Female

CITIZENSHIP Italian

EDUCATION

1979 BA, Biol. Sci. Doctor. Degree, University of Milan, Italy.

1981 Italian Government Qualification for the Practice of Biologist.

1983 Ph.D. in Pharmacology, Post-graduate School of Professional Education in Pharmacology "Mario Negri" Institute for Pharmacological Research, Milan, Italy. (Accredited: *Span Tran n. 6425-1046, Houston, Texas, September 1984*).

1994 Specialist in Pharmacology, University of Milan, Italy.

APPOINTMENT HISTORY

Since 1993 Head, Laboratory of Biology and Treatment of Metastasis, "Mario Negri" Institute for Pharmacological Research, Milano, Italy.

2007 - 2010 Adjutant Professor in Oncology (*Professore a Contratto*), Medical School, University of Brescia, Italy.

1999 - 2006 Adjutant Professor (*Professore a Contratto*), Department of Pathology, Medical School, University of Pisa, Italy.

1986 - 1993 Cancer Metastasis Unit Chief, "Mario Negri" Institute for Pharmacological Research, Bergamo, Italy.

1983 - 1985 Assistant Professor, Department of Cell Biology, M.D. Anderson Hospital and Tumour Institute, The University of Texas System Cancer Centre, Houston, Texas.

1981 - 1983 Post-doctoral Fellow, Cancer Metastasis and Treatment Laboratory, NCI-Frederick Cancer Research Facility, Frederick, Maryland.

1979 - 1981 Research Fellow, Department of Oncology and Immunology, "Mario Negri" Institute for Pharmacological Research, Milan, Italy.

1976 - 1979 Graduate Student, Department of Oncology and Immunology, "Mario Negri" Institute for Pharmacological Research, Milan, Italy.

HONORARY APPOINTMENTS

1985 - 1989 Adjunct Professor, Department of Cell Biology, M.D. Anderson Hospital and Tumour Institute, The University of Texas System Cancer Centre,

Houston, TX.

- 1996 - 1997 Honorary Research Fellow and Visiting Professor, Division of Oncology, Richard Dimbleby Department of Cancer/ICRF, UMDS, St Thomas's, London, UK.
- 1998 - 2004 Consulting Scientist, Developmental Therapeutics Program, Division of Cancer Treatment, NCI, Frederick, MD.
- 2004 - 2010 Member of the Teaching Committee for the PhD course of Fisiology, Pharmacology, Molecular and Cellular Tossicology, University of Siena, Italy.

FELLOWSHIPS AND AWARDS

- 1981 Fellowship for Advanced Professional Training from the Italian Labor Department and the European Economic Community.
- 1996 American Cancer Society International fellowship (UICC).
- 2003 Researcher Career Award, "Lega Italiana per la lotta contro i tumori".
- 2012 "Giorgio Prodi" Lecture, Italian Cancer Society.

PROFESSIONAL ACTIVITIES

- 1990 - 2005 Coordinator "Invasion and Metastasis" study group, Italian Cancer Society.
- 1993 - Member EORTC-Screening and Pharmacology Group.
- 1993 Advanced Course in Molecular Biology and Biotechnology, New England BioLabs, Smith College, North Hampton, MA.
- 1994 - 2004 Board of Directors Italian Cancer Society (SIC).
- 1997 - 2003 Coordinator FIRC Research Unit "Development of New Antineoplastic Drug", Consorzio Mario Negri Sud, S. Maria Imbaro (Ch), Italy.
- 1998 - 2008 Decisional Network, South European Drug Organisation (SENDO), Milan, Italy.
- 2000 – 2004 Board of Directors of the International Metastasis Research Society (MRS).
- 2004 - 2007 Coordinator Integrated Project "STROMA" # 503233, 6th FP – European Union, (*EUR 6.000.000*)
- 2005 - 2007 President of the Italian Cancer Society (SIC).
- 2008 - Member of the Pezcoller Foundation Scientific Committee.
- 2006 - 2010 Member of the European Association for Cancer Research (EACR) Council.
- 2007 - 2008 External Scientific Committee for the Angiotargeting Consortium (Integrated Project EU-FP6)
- 2008-2011 Coordinator Collaborative Project "ADAMANT" # 201342, 7th FP – European Union (*Consortium EUR 3.000.000*) 7th FP – European Union,
- 2010-2011 Consultant ROL (*Rete Oncologica Lombarda*) at Nerviano Medical Science.

2008 - 2012	Member Executive Board, South European Drug Organisation (SENDO)
2008 - 2012	Member of the European Association for Cancer Research (EACR) Executive Committee.
2010 -2011	Member of the European Cancer Organization (ECCO) Advisory Council

PROFESSIONAL SOCIETY MEMBERSHIPS

- since 1983 American Association for Cancer Research (AACR).
- since 1985 International Metastasis Research Society (MRS).
- since 1984 Cancer Italian Society (SIC).
- since 2002 European Association for Cancer Research (EACR).

SCIENTIFIC JOURNAL EDITORIAL BOARD

- Clinical & Experimental Metastasis
- Current Cancer Therapy Reviews
- European Journal of Cancer
- Journal of Experimental Therapeutics and Oncology
- The International Journal of Biological Markers
- Journal of Chemotherapy
- The Journal of Cancer Microenvironment

AWARD/PROGRAM/GRANT EVALUATION

- Quinquennial Review Committee of the Cancer Research UK groups at the Weatherall Institute of Molecular Medicine and the Churchill Hospital, Oxford, U.K. (2004)
- Member of the Pezcoller Foundation-AACR International Award for Cancer Research Committee (2005)
- Member of the Pezcoller Foundation-ECCO Award Committee (2009).
- Member of the Pezcoller Foundation-EACR Award Committee (2012).

Grant Reviewer for

- UK-Cancer Research
- Duch Cancer Society
- Associazione Italiana Ricerca sul Cancro (AIRC)
- EU - Research Framework Programs
- Swiss League against Cancer
- EU-ERA-Net TRANSCAN 2012

SCIENTIFIC EVENT ORGANIZATION (CHAIRMAN)

- Congress “Progress in Biology and Therapy”, European School of Oncology, Venice, Italy (1992).
- Congress “Biological Basis for Antiangiogenesis Therapy”, European School of Oncology, Milan, Italy (1999)
- XLV Congress of the Italian Cancer Society, Bergamo, Italy (2003)

RESEARCH GRANTS AWARDED (PRINCIPAL INVESTIGATOR)

2001-2003	Italian Association for Cancer Research (AIRC Project) € 341.000,00
2002-2004	CNR- Progetto strategico MIUR (#03.00078.ST97) € 51.646,00
2003-2005	Ministero della Salute (Convenzione n. 152) € 22.000,00
2004-2005	FIRB-Progetti autonomi (#RBAU01BL3K) € 77.000,00
2004-2006	Italian Association for Cancer Research (AIRC Project) € 360.000,00
2004-2006	Fondazione Cassa di Risparmio delle Province Lombarde (Cariplo Foundation) € 70.000,00
2004-2008	EC-6 th Framework Programme (Contract n. 503233) € 986.053,34
2004-2008	EC-6 th Framework Programme (Contract n. 503297) € 220.800,00
2006-2008	Ministero Salute (Convenzione Ricerca Finalizzata n. 58) € 38.000,00
2007-2009	Italian Association for Cancer Research (AIRC Project) € 360.000,00
2007-2010	Ministero della Salute (Convenzione n. Onc. Ord. 25/07) € 113.400,00
2008-2010	Ministero della Salute (Convenzione n.RO Strategici 11/07) € 80.000,00
2008-2011	EC-7 th Framework Programme (Contract n. 201342) € 614.024,82
2009-2011	Fondazione Cassa di Risparmio delle Province Lombarde (Cariplo Foundation) € 90.000,00
2010-2013	Italian Association for Cancer Research (AIRC Project) € 480.000,00
2012-2015	Italian Association for Cancer Research -“AIRC 5 per mille”- € 395.818

PATENTS

- 04735600.1-2107-GB2004002319: Combined use of ecteinascidin-743 and platinum antineoplastic compounds. Assignee: Pharma Mar S.A.U.
Inventors: D’Incalci M., Gianni L., Giavazzi R., Garcia Martin M., Judson I., Jimeno Donaque J.M., Sessa C.

COLLABORATIONS WITH PHARMACEUTICAL COMPANIES

- AstraZeneca, Macclesfield, UK
- Indena, Milan, Italy
- Nerviano Medical Sciences, Italy
- Pharmamar, Madrid, Spain
- Roche, Basel, Switzerland
- Sigma Tau, Rome, Italy
- Oncoethix, Lausanne, Switzerland
- EOS, Milan, Italy
- Centre d’Immunologie Pierre Fabre, St-Julien en Genevois Cedex, France
- Novartis Pharmaceuticals Corporation, NJ, USA

TUTOR /EXAMINER FOR PH.D STUDENTS

- 1993-96: “Tutor” PhD thesis, Medical Science, Catholic University, Nijmegen, The Netherlands; Ph.D student Renato G.S. Chirivi
- 2000-04: Open University, London (UK); Ph.D student Maria Rosa Bani.
- 2000-05: Open University, London (UK); Ph.D student Elitza Naumova
- 9/ 2004: “Examiner”, Magdalen College, Oxford (UK); Ph.D student Steven Suchting
- 3/ 2006: “Examiner”, Open University, London (UK); Ph.D student Federica Marchesi.
- 3/2009: “Tutor” PhD thesis, Swiss Federal Institute of Technology Zurich (ETH Zurich); Ph.D student Beatrice Borgia
- 5/ 2010: “Examiner”, Open University, Milton Keynes (UK); Ph.D student Suzanne Simmons
- 2010- : “Tutor” PhD thesis, Swiss Federal Institute of Technology Zurich (ETH Zurich); Ph.D student Francesca Pretto

SCIENTIFIC INTEREST

Raffaella Giavazzi's research interests are in the field of tumor biology and pharmacology, with a specific interest in the metastatic process and angiogenesis. She is involved in the pre-clinical and clinical development of new therapeutics against cancer.

Raffaella Giavazzi has published 165 articles in international peer-reviewed journals in the field of cancer research and is author of 40 review chapters.

She has been invited as speaker at several national and international congresses and communicated approx. 400 studies.

SELECTED PUBLICATIONS

- Silini A., Ghilardi C., Figini S., Sangalli F., Fruscio R., Dahse R., Pedley R.B., **Giavazzi R.**, Bani MR. Regulator of G-protein signaling 5 (RGS5) protein: a novel marker of cancer vasculature elicited and sustained by the tumor's proangiogenic microenvironment. *Cell Mol Life Sci* 69:1167-78, 2012. *I.F.* 7,047
- Zecchini S., Bombardelli L., Decio A., Bianchi M., Mazzarol G., Sanguineti F., Aletti G., Maddaluno L., Berenzin V., Bock E., Casadio C., Viale G., Colombo N., **Giavazzi R.**, Cavallaro U. The adhesion molecule NCAM promotes ovarian cancer progression via FGFR signaling. *EMBO Molecular Medicine* 3:480-94, 2011. *I.F.* 8,83
- Borgia B., Rösli C., Fugmann T., Schliemann C., Cesca M., Neri D., **Giavazzi R.** A proteomic approach for the identification of vascular markers of liver metastasis. *Cancer Research* 70(1):309-18, 2010. *I.F.* 7.656
- Coltrini D., Ronca R., Belleri M., Zardi L., Indraccolo S., Scarlato V., **Giavazzi R.**, Presta M. Impact of VEGF-dependent tumor micro-environment on EDB fibronectin expression by subcutaneous human tumor xenografts in nude mice. *The Journal of Pathology* 219:455-62, 2009. *I.F.* 5.759
- Bonezzi K., Taraboletti G., Borsotti P., Bellina F., Rossi R., **Giavazzi R.** Vascular disrupting activity of tubulin-binding 1,5-Diaryl-1*H*-imidazoles. *Journal of Medical Chemistry* 52:7906-10, 2009. *I.F.* 5.115
- Cesca M., Frapolli R., Berndt A., Scarlato V., Richter P., Kosmehl H., D'Inclaci M., Ryan A.J., **Giavazzi R.** The effects of vandetanib on paclitaxel tumor distribution and antitumor activity in a xenograft model of human ovarian carcinoma. *Neoplasia* 11(11):1155-64, 2009. *I.F.* 5.4
- Rösli C., Borgia B., Schliemann C., Gunther M., Wunderli-Allenspach H., **Giavazzi R.**, Neri D. Comparative analysis of the membrane proteome of closely related metastatic and non-metastatic tumor cells. *Cancer Research* 69(13):5406-14, 2009. *I.F.* 7.656
- **Giavazzi R.**, Bani M.R., Taraboletti G. Tumor-host interaction in the optimization of paclitaxel based combination therapies with vascular targeting compounds. *Cancer Metastasis Reviews*, 26:481-88, 2007. *I.F.* 7,4
- Naumova E., Ubezio P., Garofalo A., Borsotti P., Cassis L., Riccardi E., Scanziani E., Eccles S.A., Bani M.R., **Giavazzi R.** The vascular targeting property of paclitaxel is enhanced by SU6668, a receptor tyrosine kinase inhibitor, causing apoptosis of endothelial cells and inhibition of angiogenesis. *Clin. Cancer Res.* 12(6): 1839-49, 2006. *I.F.* 5.623
- Manenti L., Riccardi E., Marchini S., Naumova E., Floriani I., Garofalo A., Dossi R., Marrazzo E., Ribatti D., Scanziani E., Bani M.R., Belotti D., Broggini M., **Giavazzi R.** Circulating plasma vascular endothelial growth factor in mice bearing human ovarian carcinoma xenograft correlates with tumor progression and response to therapy. *Mol. Cancer Ther.* 4(5):715-25, 2005. *I.F.* 5.242

- Rybak J.N., Ettore A., Kaissling B., **Giavazzi R.**, Neri D. *In vivo* protein biotinylation for identification of organ-specific antigens accessible from the vasculature. *Nature Methods* 2(4):291-98, 2005. *I.F.* 20,717
- Taraboletti G., Micheletti G., Dossi R., Borsotti P., Martinelli M., Fiordaliso F., Ryan A.J., **Giavazzi R.** Potential Antagonism of Tubulin-Binding Anticancer Agents in Combination Therapies. *Clin. Cancer Res.* 11(7):2720-26, 2005. *I.F.* 7.3
- Kaur G., Belotti D., Burger A.M., Fisher-Nielson K., Borsotti P., Riccardi E., Thillainathan J., Hollingshead M., Sausville E.A., **Giavazzi R.** Antiangiogenic Properties of 17 – (Dimethylaminoethylamino) – 17 – Demethoxygeldanamycin: An Orally Bioavailable Heat Shock Protein 90 Modulator. *Clinical Cancer Res.* 10:4813-21, 2004. *I.F.* 5,623
- Belotti D., Paganoni P., Manenti L., Garofalo A., Marchini S., Taraboletti G., **Giavazzi R.** Matrix Metalloproteinases (MMP9 and MMP2) Induce the Release of Vascular Endothelial Growth Factor (VEGF) by Ovarian Carcinoma Cells: Implications for Ascites Formation. *Cancer Res.* 63:5224-29, 2003. *I.F.* 8,649
- Garofalo A., Naumova E., Manenti L., Ghilardi C., Ghisleni G., Caniatti M., Colombo T., Cherrington J.M., Scanziani E., Nicoletti M.I., **Giavazzi R.** The Combination of the Tyrosine Kinase Receptor Inhibitor SU6668 with Paclitaxel Affects Ascites Formation and Tumor Spread in Ovarian Carcinoma Xenografts Growing Orthotopically. *Clinical Cancer Res.* 9:3476-85, 2003. *I.F.* 6,511
- **Giavazzi R.**, Sennino B., Coltrini D., Garofalo A., Dossi R., Ronca R., Molinari Tosatti M.P., Presta M. Distinct Role of Fibroblast Growth Factor-2 and Vascular Endothelial Growth Factor on Tumor Growth and Angiogenesis. *Am. J. Pathol* 162(6):1913-26, 2003. *I.F.* 6,946
- Micheletti G., Poli M., Borsotti P., Martinelli M., Imberti B., Taraboletti G., **Giavazzi R.** Vascular-targeting Activity of ZD6126, a Novel Tubulin-binding Agent. *Cancer Res.* 63:1534-37, 2003. *I.F.* 8,649
- **Giavazzi R.**, Giuliani R., Coltrini D., Bani M.R., Ferri C., Sennino B., Molinari Tosatti M.P., Stoppacciaro A., Presta M. Modulation of tumor angiogenesis by conditional expression of fibroblast growth factor-2 affects early but not established tumours. *Cancer Res.* 61:309-317, 2001. *I.F.* 8,302
- Nicoletti M.I., Colombo T., Rossi C., Monardo C., Stura S., Zucchetti M., Riva A., Morazzoni P., Donati M.B., Bombardelli E., D’Incalci M., **Giavazzi R.** IDN5190, a taxane with oral bioavailability and potent antitumour activity. *Cancer Res.* 60:842-846, 2000. *I.F.* 8,460
- Chirivi R.G.S., Taraboletti G., Bani M.R., Barra L., Piccinini G., Giacca M., Bussolino F., **Giavazzi R.** Human Immunodeficiency Virus-1 (HIV-1)-Tat Protein Promotes Migration of Acquired Immunodeficiency Syndrome-Related Lymphoma Cells and Enhances Their Adhesion to Endothelial Cells. *Blood* 94:1747-1754, 1999. *I.F.* 8,782
- Taraboletti G., Garofalo A., Belotti D., Drudis T., Borsotti P., Scanziani E., Brown P.D., **Giavazzi R.** Inhibition of angiogenesis and murine hemangioma growth by Batimastat, a synthetic inhibitor of matrix metalloproteinases. *J. Natl. Cancer Inst.* 87:293-298, 1995. *I.F.* 10,165
- Garofalo A., Chirivi R.G.S., Foglieni C., Pigott R., Mortarini R., Martin-Padura I., Anichini A., Gearing A.J., Sanchez-Madrid F., Dejana E., **Giavazzi R.** Involvement of the very late antigen 4 integrin on melanoma in Interleukin 1-augmented experimental metastases. *Cancer Res.* 55:414-419, 1995. *I.F.* 8,206
- **Giavazzi R.**, Foppolo M., Dossi R., Remuzzi A. Rolling and adhesion of human tumor cells on vascular endothelium under physiological flow conditions. *J. Clin. Invest.* 92:3038-3044, 1993. *I.F.* 8,59

