

**Prof. Mauro Giacca**

**Brief curriculum vitae**

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**Personal data.** Born in Trieste, Italy in 1959. Married with two children.

**Education.** 1984, Degree in Medicine; Faculty of Medicine, University of Trieste, Italy. 1985, Professional License; Admitted to the Medical Doctors and Surgeons Register, University of Bologna Medical School. 1989, Ph.D. in Microbiology and Virology; University of Genoa, Italy.

**Positions.** Since 2004, Director of the Italian Component of the International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste, Italy, an international, intergovernmental organization for advanced research and training in the UN system. Coordination of 15 research groups, over 210 people from more than 25 different countries ([www.icgeb.org](http://www.icgeb.org)). Since 1995, Group Leader of the Molecular Medicine Laboratory at ICGEB Trieste. Founder and Director of the Molecular Biology Laboratory of the Scuola Normale Superiore, one of the leading academic institutions in Italy, in Pisa, from 2000 to 2004. 1990-1994, Staff Scientist, ICGEB Trieste. 1985-1989, PhD student, Istituto di Genetica Biochimica ed Evoluzionistica, National Research Council (CNR), Pavia, Italy.

**Other appointments.** Since 2012, Expert Member in the National Committee for Biotechnology, Biosafety and Life Sciences (CNBBSV), an advisory body to the President of the Council of Ministries of the Republic of Italy. 2005-2010, member of the Scientific Council of the National Center for Genetic Engineering and Biotechnology (BIOTEC) of Bangkok, Thailand. 2001-2005, member of the Executive Committee of NEST (National Enterprise for NanoScience and NanoTechnology) at the Scuola Normale Superiore in Pisa, Italy. Since 1998, member of the Ethical Committee of the University Hospital, Trieste, Italy. Since 1996, Scientific consultant for the Italian Association for the Prevention and Cure of Handicaps (AIRH). 1995-1997, member of the Scientific Board of the Italian Society of Molecular Biology and Biophysics (SIBBM).

**Teaching and mentoring activity.** Since 2005, Full Professor of Molecular Biology at the Faculty of Medicine of the University of Trieste, Italy. 2000-2005, Associate Professor of Molecular Biology at the Scuola Normale Superiore in Pisa, Italy. Member of the PhD School Faculties of several Italian Universities. Over the last 15 years he has directly supervised the research activity of more than 25 post-docs, and more than 30 PhD students. He has served as external examiner of students from numerous European Universities.

**Reviewer activity.** Reviewer for over 30 peer-reviewed international journals in the fields of gene therapy, stem cell research, cardiovascular disorders and HIV infection. Since 1996, member of the evaluation committees for various grant programs, including calls from the European Commission and numerous funding agencies across Europe.

**Scientific interests.** Current research interest focuses on the development of novel biotherapeutics for cardiovascular disorders, with special emphasis on the identification of cytokines and microRNAs able to induce new blood vessel formation and cardiac regeneration in patients with myocardial infarction or heart failure. He also maintains a strong interest in the molecular biology of HIV-1 infection, with particular reference to the

molecular mechanisms governing HIV-1 latency and reactivation.

**Publications, seminars and meetings.** He has published over 250 full papers in peer-reviewed international journals (cumulative IF>1600; Citations: >9400; H index: 51) and 20 reviews or chapters in published books and university text books. He is the author of the book "Gene Therapy", Springer ed., 2010. The journals in which his articles have been published include Nature, Science, Cell, Nature Med, Nature Struct and Mol Biol, Mol Cell, Cell Host Microbe, PLoS Path, EMBO J, J Exp Med, J Clin Invest, PNAS,, and several others. He presents his research activity at meetings and seminars worldwide. He regularly contributes articles to national newspapers and popular science magazines.

**Funding.** He has obtained grants for his research activity from various public and private bodies, including the European Union, the Italian Ministry for Education and Research, the World Antidoping Agency (WADA), Montreal, Canada, the Ataxia UK Charity, UK, the Consiglio Nazionale delle Ricerche (CNR), Italy, the Telethon foundation Italy, the Istituto Superiore di Sanita' Italy, and others, for a total of over 8 million Euro since 2001. Since 2010, he is the recipient of an Advanced Grant from the European Research Council (ERC).

Further information: <http://www.icgeb.org/mauro-giacca.html>

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### Selected publications since 2005

- Lusic, M., Marini, B., Ali, H., Lucic, B., Luzzati, R., Giacca, M. 2013. *Proximity to PML nuclear bodies regulates HIV-1 latency in CD4+ T cells.* **Cell Host Microbe**, in press.
- Macedo, A., Moriggi, M., Vasso, M., De Palma, S., Sturnega, M., Friso, G., Gelfi, C., Giacca, M., Zacchigna, S. 2012. *Enhanced Athletic Performance on Multisite AAV-IGF1 Gene Transfer Coincides with Massive Modification of the Muscle Proteome.* **Hum Gene Ther** 23, 146-57.
- Lovric, J., Mano, M., Zentilin, L., Eulalio, A., Zacchigna, S., Giacca, M. 2012. *Terminal Differentiation of Cardiac and Skeletal Myocytes Induces Permissivity to AAV Transduction by Relieving Inhibition Imposed by DNA Damage Response Proteins.* **Mol Ther** 20, 2087-97.
- Giacca, M., Zacchigna, S. 2012. *VEGF gene therapy: therapeutic angiogenesis in the clinic and beyond.* **Gene Ther** 19, 622-9.
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- Eulalio, A., Mano, M., Ferro, M.D., Zentilin, L., Sinagra, G., Zacchigna, S., Giacca, M. 2012. *Functional screening identifies miRNAs inducing cardiac regeneration.* **Nature** 492, 376-81.
- Carrer, A., Moimas, S., Zacchigna, S., Pattarini, L., Zentilin, L., Ruozi, G., Mano, M., Sinigaglia, M., Maione, F., Serini, G., Giraud, E., Bussolino, F., Giacca, M. 2012. *Neuropilin-1 identifies a subset of bone marrow Gr1- monocytes that can induce tumor vessel normalization and inhibit tumor growth.* **Cancer Res** 72, 6371-81.
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- Allouch, A., Di Primio, C., Alpi, E., Lusic, M., Arosio, D., Giacca, M., Cereseto, A. 2011. *The TRIM Family Protein KAP1 Inhibits HIV-1 Integration.* **Cell Host Microbe** 9, 484-95.
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- Manganaro, L., Lusic, M., Gutierrez, M.I., Cereseto, A., Del Sal, G., Giacca, M. 2010. *Concerted action of cellular JNK and Pin1 restricts HIV-1 genome integration to activated CD4+ T lymphocytes.* **Nature Med** 16, 329-33.
- Giacca, M. 2010. *Non-redundant functions of the protein isoforms arising from alternative splicing*

- of the VEGF-A pre-mRNA. **Transcription** 1, 149-153.
- Tafuro, S., Ayuso, E., Zacchigna, S., Zentilin, L., Moimas, S., Dore, F., Giacca, M. 2009. *Inducible adeno-associated virus vectors promote functional angiogenesis in adult organisms via regulated vascular endothelial growth factor expression.* **Cardiovasc Res** 83, 663-71.
- Paolinelli, R., Mendoza-Maldonado, R., Cereseto, A., Giacca, M. 2009. *Acetylation by GCN5 regulates CDC6 phosphorylation in the S phase of the cell cycle.* **Nature Struct Mol Biol** 16, 412-20.
- Maione, F., Molla, F., Meda, C., Latini, R., Zentilin, L., Giacca, M., Seano, G., Serini, G., Bussolino, F., Giraud, E. 2009. *Semaphorin 3A is an endogenous angiogenesis inhibitor that blocks tumor growth and normalizes tumor vasculature in transgenic mouse models.* **J Clin Invest** 119, 3356-72.
- Vardabasso, C., Manganaro, L., Lusic, M., Marcello, A., Giacca, M. 2008. *The histone chaperone protein Nucleosome Assembly Protein-1 (hNAP-1) binds HIV-1 Tat and promotes viral transcription.* **Retrovirology** 5, 8.
- Sabo, A., Lusic, M., Cereseto, A., Giacca, M. 2008. *Acetylation of conserved lysines in the catalytic core of cyclin-dependent kinase 9 inhibits kinase activity and regulates transcription.* **Mol Cell Biol** 28, 2201-12.
- Perkins, K.J., Lusic, M., Mitar, I., Giacca, M., Proudfoot, N.J. 2008. *Transcription-Dependent Gene Looping of the HIV-1 Provirus Is Dictated by Recognition of Pre-mRNA Processing Signals.* **Mol Cell** 29, 56-68.
- Giacca, M. 2008. *Gene therapy to induce cellular resistance to HIV-1 infection: lessons from clinical trials.* **Adv Pharmacol** 56, 297-325.
- Collesi, C., Zentilin, L., Sinagra, G., Giacca, M. 2008. *Notch1 signaling stimulates proliferation of immature cardiomyocytes.* **J Cell Biol** 183, 117-28.
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