



Curriculum Vitae Professor Dr Gian-Paolo Dotto

Name: Gian-Paolo Dotto

Born: 18 March 1956

Research Priorities: squamous cell carcinoma, differentiation, Notch signalling pathway, field cancerisation, prevention

Gian-Paolo Dotto is an Italian doctor and geneticist whose research focuses on the pathogenesis of skin tumours, in particular of squamous cell carcinoma. He managed to show that the same signalling pathways can transmit both a tumour-causing and tumour-inhibiting effect. He also researches what is known as field cancerisation, which paves the way for malignant tumours, and from this derives possible forms of prevention.

Academic and Professional Career

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| 2016 | Founder and Director, International Cancer Prevention Institute (ICPI), Lausanne, Switzerland |
| since 2002 | Professor, Department of Biochemistry (now: Department of Immunobiology), University of Lausanne, Lausanne, Switzerland |
| since 2000 | Biologist, Massachusetts General Hospital, Boston, USA |
| 2000 - 2001 | Professor, Harvard Medical School, Harvard University, Boston, USA |
| 1992 - 2000 | Adjunct Professor of Dermatology, Cutaneous Biology Research Center, Massachusetts General Hospital, Harvard University, Boston, USA |
| 1992 | Adjunct Professor of Pathology, School of Medicine, Yale University, New Haven, USA |
| 1987 | Assistant Professor of Pathology, School of Medicine, Yale University, New Haven, USA |
| 1984 - 1987 | Postdoctoral Fellow, Whitehead Institute for Biomedical Research and Massachusetts Institute of Technology (MIT), Cambridge, USA |

- 1983 Research Fellow, Rockefeller University, New York City, USA
- 1983 PhD in Genetics, Rockefeller University, New York City, USA
- 1979 PhD in Medicine, Department of Medical Sciences, University of Turin, Italy

Functions in Scientific Societies and Committees

- since 2009 Member, Editorial Board, Genes and Cancer
- 1999 - 2004 Co-Editor, Cancer Research
- 1998 - 2004 Member, Editorial Staff, Cell Growth and Differentiation
- 1998 - 2004 Member, Editorial Staff, Laboratory Investigation
- 1997 - 2002 Co-Editor, Journal of Investigative Dermatology
- Member, Board of Scientific Counselors, National Institute of Health (NIH), Bethesda, USA

Project Coordination, Membership in Collaborative Research Projects

- 2014 - 2020 Coordinator, Project, "Genetic/epigenetic basis of ethnic differences in cancer predisposition", European Union (EU)
- 2014 - 2017 Coordinator, Project "Cancer stromal cell genetic control" Swiss National Science Foundation (SNSF), Switzerland
- 2014 - 2017 Coordinator, Project "Role of cancer-associated fibroblasts in head and neck cancer invasion and local recurrence", SNSF, Switzerland
- 2014 - 2019 Coordinator, Project "Dermal Fibroblast/ATF3 Control of Skin Homeostasis", National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), National Institute of Health (NIH), Bethesda, USA
- 2014 - 2020 Principal Investigator, Advanced Grant "Genetic/epigenetic basis of ethnic differences in cancer predisposition", European Research Council (ERC)
- 2011 - 2014 Coordinator, Project "Control of Notch1 Gene Transcription in skin homeostasis and carcinogenesis", SNSF, Switzerland
- 2011 - 2014 Coordinator, Project "TLR4 as a negative regulator of keratinocyte proliferation", SNSF, Switzerland
- 2010 - 2013 Co-Coordinator, Project "miRNAs as integrative determinants of the keratinocyte response to UVB", SNSF, Switzerland
- 2008 - 2011 Coordinator, Project "Notch signaling as a key determinant of Epithelial-Mesenchymal interactions in the skin", SNSF, Switzerland

- 2006 - 2009 Participating Scientist, Project "Role of p63 and related pathways in epithelial stem cell proliferation and differentiation and in rare EEC-related syndromes", EU
- 2003 - 2008 Coordinator, Project "Calcineurin in Epithelial Growth-Differentiation Control", SNSF, Switzerland

Honours and Awarded Memberships

- 2015 Jurg Tschopp Award for Excellence in Biological Sciences, Faculty of Biology and Medicine, University of Lausanne, Switzerland
- since 2013 Member, German National Academy of Sciences Leopoldina, Germany
- 2012 Member, Academia Europaea
- 2012 Lifetime Achievement Award, American Skin Association, USA
- since 2011 Member, European Molecular Biology Organization (EMBO)
- 2001 Honorary Master's degree, Harvard University, Cambridge, USA
- 1988 Swebilius Cancer Research Award, Yale School of Medicine (YSM), New Haven, USA
- 1987 Hull Cancer Research Award, University of Hull, Hull, UK
- 1984 Fellow, Jane Coffin Childs Memorial Fund, New Haven, USA

Research Priorities

Gian-Paolo Dotto is an Italian doctor and geneticist whose research focuses on the pathogenesis of skin tumours, in particular of squamous cell carcinoma. He managed to show that the same signalling pathways can transmit both a tumour-causing and tumour-inhibiting effect. He also researches what is known as field cancerisation, which paves the way for malignant tumours, and from this derives possible forms of prevention.

In healthy tissue, pluripotent stem cells differentiate themselves into organ-specific cells with certain functions. This differentiation process is usually irreversible. With cancerous diseases, however, cell identity appears to become lost and many processes become unbalanced. Inhibiting signals are either no longer transmitted or recognised, which leads to the unrestricted spread of more or less strongly dedifferentiated tumour cells.

Gian-Paolo Dotto researches these links, in particular with respect to squamous cell carcinomas of the skin and lungs, in which squamous cell carcinoma is derived from keratin-producing cells known as keratinocytes. His laboratory focuses on the role of intra- and extra-cellular communication in early stages of cancer. The research group investigates how changes in basic developmental and hormonal signalling pathways influence the cancer cells and fibroblasts associated with cancer. A

particular emphasis is on the Notch signalling pathway, which plays a key role in cell-cell communication.

An additional focus of Gotto's research is the pathology of field cancerisation, in which large areas of cells at a tissue surface or within an organ are affected by carcinogenic alterations and individual lesions are extremely difficult to differentiate from one another.

Gian-Paolo Dotto works at various levels to help ensure that insights from molecular biology are used to prevent cancerous diseases from arising in the first place.