CURRICULUM VITAE: MARCO FOIANI

PERSONAL DETAILS

Family name, First name: Foiani, Marco

Nationality: Italian

Date of birth: 29-10-1961

MILITARY SERVICE

1985-86 Draft-Italian Army, III Battalion Grenadiers

EDUCATION

1985	Degree in Biological Sciences at the University of Milan, Italy
1988	PhD in Molecular and Cell Biology at University of Milan, Lab of Prof. Paolo Plevani
1988 – 1989	"Buzzati Traverso" postdoctoral fellow, University of Milan, Italy, Lab of Prof. P. Plevani and G. Lucchini
1989 - 1991	"Fogarty" Postdoctoral fellow at NIH-NICHD, Bethesda, (USA), Lab of dr. Alan Hinnebush

ACADEMIC POSITIONS

1990 - 1993	Assistant Professor of Microbiology at the University of Milan, Italy
1994 - 1995	Adjunct Professor of Molecular Genetics at the University of Varese, Italy
1995 - 2001	Associate Professor in Molecular Biology at the University of Milan, Italy
2001-present	Full Professor of Molecular Biology at the Medical School-University of Milan, Italy
2000 - 2023	Head of the "Genome Integrity Laboratory", at IFOM, Milan, Italy
2001 - 2023	Full Professor of Molecular Biology at the University of Milan, Italy
2009 - 2022	Scientific Director of the Istituto Firc di Oncologia Molecolare (IFOM), Milan, Italy
2018 - 2022	Scientific Director of COGENTECH srl Società Benefit
2021 – 23	Visiting professor at University of Tokyo.
2023-24	Professor at the National University of Singapore
2023-24	Senior investigator at the Cancer Science Institute (CSI) of Singapore
2024	Director Istituto di Genetica Molecolare, CNR, Pavia

A molecular biologist by training, Marco Foiani is Director of the *Istituto di Genetica Molecolare, CNR*, Pavia, professor at the *Yong Loo Lin School of Medicine at the National University of Singapore* (NUS) and senior principal investigator at the *Cancer Science Institute* (CSI) of Singapore. Foiani obtained his Ph.D in molecular and cell biology from University of Milan in 1988. In 1989, he moved to the *National Institute of Health (NICHD)* in Bethesda, USA for his post-doctoral studies and remained there till 1991. In 1991, he returned to Italy to continue his research as an assistant professor at the *University of Milan* where he started his independent research career in the field of chromatin dynamics. He became associate professor and subsequently professor of molecular biology at the University of Milan in 1995 and 2001, respectively. He has been also working at the *Institut de la research sur le cancer* in Villejiuf, France, at *LMU university* in Munich, Germany, at the *University of Washington* in Seattle, USA. He was visiting professor at the *Tokyo University* (2020-22).
He was one of the first scientists to join IFOM during its early gestational period. The Genome integrity research lab started functioning in 2000 with the aim of studying the various pathways that safeguard genomic integrity and play a role in oncogenesis. He was the Scientific Director of IFOM (since January 2009 to May 2022). IFOM is an international cancer research center that hosts 30 groups and over 370 scientists. As IFOM director Foiani created outstations operating in Singapore (at the Mechano Biology Institute of NUS), in Bangalore, India, (at inSTEM), in Kyoto, Japan (Kyoto Medical School), in Yokohama, Japan (Riken) (Japan). As the Scientific Director of IFOM, Foiani was responsible of the research strategic planning, the development of programs aimed at translating research discoveries into practice and for the establishment of national and international co-operation programs and joint ventures. He was also responsible for the management and the administration of

the Institute. He is the founder of the European Nanomedicine Foundation (CEN) that aims at supporting multidisciplinary projects/teams in biomedicine. In 2018-2022 he was the scientific director of COGENTECH, a benefit company owned by IFOM specialized in cancer genetics diagnostics.
Foiani has been professionally trained in leadership & management (Coaching & Coaching) and intercultural skills (London School of Economy).

He has been a member of the editorial board of Cell (2009-2019), and is currently a member of the Academia Europea and EMBO. His major contributions are within the fields of chromosome dynamics and genome integrity. His work has contributed to elucidate the ATR and ATM-dependent checkpoint processes controlling the interfaces between DNA replication, recombination, transcription and DNA topology and preventing abnormal chromosome transitions. In recent years, focus of his research has geared more towards the connections between cell metabolism and genome integrity pathways and between chromosome dynamics and mechano-transduction circuits controlling cell and nuclear plasticity. Foiani published > 120 articles in peer-reviewed journals. He is invited to international conferences in the fields of DNA recombination, genome instability, chromosome replication and chromosome dynamics. Foiani trained over 100 undergraduate and PhD students and some of them have been very successful and continued their careers as postdocs at prestigious universities/research institutes, under the supervisions of world leader scientists.

GENERATION OF KNOWLEDGE

Foiani has studied different cellular processes (translational, chromosome replication, DNA recombination, DNA repair, DNA topology, transcription, autophagy and nuclear envelope dynamics) and regulatory pathways (translational control, cell cycle, checkpoint, sumo and ubiquitin pathways, protein acetylation, gene gating) using a variety of approaches (biochemical, genetic, imaging, genomic, molecular biology). His major contributions are within the fields of chromosome dynamics and genome integrity. His work contributed to elucidate the ATR and ATM-dependent processes controlling the interfaces between DNA replication, recombination, transcription and DNA topology. Recently, focus of his research has geared towards the connections between cell metabolism and genome integrity pathways and between chromosome dynamics and mechano-transduction circuits controlling cell plasticity.

Key findings: **1.** ATR/Mec1-mediated controls the stability of stalled replication forks preventing fork reversal (Lopes et al. ***Nature*** 2001; Sogo et al. ***Science***, 2002 (with cover and preview)); **2.** The identification and characterization of sister chromatid junctions (hemicatenanes) mediating physiological and pathological chromosomal transitions (Lopes et al. ***Mol Cell*** 2003; Cotta-Ramusino et al. ***Mol Cell*** 2005; Liberi et al. ***Genes & Dev*** 2005); **3.** The Cdk1-mediated control of homologous recombination and checkpoint activation (Ira et al. ***Nature*** 2004); **4**. The specialized sumoylation pathways controlling hemicatenane metabolism when cells experience DNA damage in S phase (Branzei et al. ***Cell*** 2006 (with preview); Branzei et al. ***Nature*** 2008); **5.** The identification of genomic clusters undergoing topological transitions to coordinate the clash between replication forks and transcription units (Bermejo et al. ***Genes & Dev*** 2007; Bermejo et al. ***Cell*** 2009; Achar et al. ***Nature*** 2020; Kosar et al. ***Nat Comm***. 2021; Choudhary et al. ***Cell Reports*** 2023 in press); **6**. ATM/Tel1 controls replication forks encountering DNA breaks or short telomeres (Doksani et al. ***Cell*** 2009 (with cover and preview)); **7.** The identification of those fragile genomic loci where replication forks converge (Fachinetti et al. ***Mol Cell*** 2010 (with cover and preview)); **8.** The observation that specialized protein acetylation/deacetylation events couple the DNA damage response to autophagy (Robert et al. ***Nature*** 2011 (highlighted in Cell and Science); **9**. ATR/Mec1 controls the stability of replication forks encountering transcribed genes by controlling the association of the transcribed loci to the nuclear pore (Bermejo et al. ***Cell,*** 2011 (with preview)) . **10** A novel role for ATR in mediating a response to mechanical stress at the nuclear envelope (Kumar et al. ***Cell***, 2014 (highlighted in Nature Reviews in Molecular and Cell Biology)); Kidiyoor et al. ***Nat. Commun***. 2020). **11** Novel links between cell metabolism and genome integrity pathways (Ferrari et al. ***Mol. Cell*** 2017; Bruhn et al. ***Nat.Commun***.2020; Ajazi et al. ***Dev. Cell*** 2021;)

In collaboration with dr. J.Haber (Brandeis University, USA) he has also contributed to elucidate of mechanisms influencing DNA double strand break (DSB) repair (Ira et al. ***Cell*** 2003) and promoting activation and deactivation of the ATR/Mec1 checkpoint in response to DSB formation (Pellicioli et al. ***Mol Cell*** 2001; Vaze et al. ***Mol Cell*** 2002).

PUBLICATIONS

https://pubmed.ncbi.nlm.nih.gov/?term=marco%20foiani

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Foiani
16.07.2025
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