

Curriculum Vitae of Marco Foiani

Marco Foiani

Nationality: Italian

Date of birth: 29-10-1961

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 Hinnebusch

CURRENT POSITIONS

- 2000 - Present Head of the “Genome Integrity Laboratory”, at IFOM, Milan, Italy
- 2002 - Present Full Professor of Molecular Biology at the University of Milan, Italy
- 2009 – Present Scientific director of the Istituto Firc di Oncologia Molecolare (IFOM), Milan, Italy

Foiani is the Scientific Director of IFOM, an international cancer center that hosts 20 groups and 300 scientists. Two research groups are operating in IFOM outstations located in Singapore (at ASTAR-p53 Laboratory and at the Mechano Biology Institute of NUS) and one in Bangalore, India, (at inSTEM & NCBS). At IFOM, Foiani is responsible for the research strategic planning, the development of programs aimed at the results reduction into practice and for the establishment of national and international co-operation programs and joint ventures. He is the founder of the European Nanomedicine Foundation (CEN) that aims at supporting multidisciplinary projects/teams in biomedicine. He is co-founder of the IFOM-IEO Campus, hosting IFOM, the European Institute of Oncology, the European School of Molecular Medicine, the Italian Institute of Technology and Cogentech. Since 2012 he directs a cancer genetics diagnostic laboratory within Cogentech. Foiani had also in 2009 a one-year professional training in leadership, management and intercultural skills. He has served as member of scientific advisory/reviewing boards for several international institutions including CRUK (London,UK), InSTEM (Bangalore , India), CNRS (Paris, France). He is a member of the editorial board of CELL.

Prof. Foiani was honored with internationally recognized memberships and awards, such as: the European Molecular Biology Organization membership (EMBO); the Academia Europaea membership (since 2010); the American Association for Cancer Research (AACR); the Biotec Award promoted by Amgen and Dompé; the "Chiara D'Onofrio" Prize from the Italian Federation of Life Sciences.

SCIENTIFIC LEADERSHIP PROFILE

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 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.

M.Foiani published > 90 articles in peer-reviewed journals. He is invited to international conferences in the fields of DNA recombination, genome instability, chromosome replication and chromosome dynamics. He trained 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.

Principal scientific collaboration

Danish Cancer Institute, Copenhagen, (Dr. Jiri Bartek)
Brandeis University, Boston, (Dr. James Haber)
Columbia University, New York, (Dr. Rodney Rothstein)
Curie Institute, Paris, (Dr. Mattheu Piel)
NUS-MBI, Singapore (Dr. Mike Sheetz)
University of Tokyo (TODA) Tokyo (Dr. Katsuhiko Shirahige)
Harvard University, Boston (Dr. Nancy Kleckner)

Institutional collaborations (IFOM):

NUS-Singapore
ASTAR-Singapore
INSTEM- Bangalore, India
NCBS- Bangalore, India
KYOTO University Japan

National and international studies

Selected publications (from 2007)

1. Giannattasio M, Zwicky K, Follonier C, Foiani M, Lopes M, Branzei D. (2014) Visualization of recombination-mediated damage bypass by template switching. *Nat Struct Mol Biol*; 21(10): 884-92
2. Kumar A, Mazzanti M, Mistrik M, Kosar M, Beznoussenko G, Mironov A, Garrè M, Parazzoli D, Shivashankar GV, Scita G, Bartek J and Foiani M. (2014) ATR mediates a checkpoint at the nuclear envelope in response to mechanical stress. *Cell*; 158(3): 633-46
3. Foiani M, Bartek J (2014) Golgi Feels DNA's Pain. *Cell*; 156(3):392-3
4. Alzu A, Bermejo R, Begnis M, Lucca C, Piccini D, Carotenuto W, Saponaro M, Brambati A, Cocito A, Foiani M, Liberi G. (2012) Senataxin Associates with Replication Forks to Protect Fork Integrity across RNA-Polymerase-II-Transcribed Genes. *Cell*; 151(4), 835-46.

5. Bermejo R, Kumar A, Foiani M. (2012) Preserving the genome by regulating chromatin association with the nuclear envelope. *Trends Cell Biol.*; 22(9), 465-73.
6. Lai MS, Foiani M. (2012) Dna2 offers support for stalled forks. *Cell*, 149(6), 1181-3
7. Bermejo R, Lai MS, Foiani M. (2012) Preventing Replication Stress to Maintain Genome Stability: Resolving Conflicts between Replication and Transcription. *Mol Cell*; 45(6),710-8.
8. Bermejo R., Capra T., Jossen R., Colosio A., Frattini C., Carotenuto W., Cocito A., Doksani Y., Klein H., Gómez-González B., Aguilera A., Katou Y., Shirahige K., Foiani M. (2011) The replication checkpoint protects fork stability by releasing transcribed genes from nuclear pores. *Cell*; 146(2), 233-46.
9. Robert T., Vanoli F., Chiolo I., Shubassi G., Bernstein K.A., Rothstein R., Botrugno O.A., Parazzoli D., Oldani A., Minucci S., Foiani M. (2011) HDACs link the DNA damage response, processing of double-strand breaks and autophagy. *Nature*; 471(7336), 74-9.
10. Fachinetti D., Bermejo R., Cocito A., Minardi S., Katou Y., Kanoh Y., Shirahige K., Azvolinsky A., Zakian V.A., Foiani M. (2010) Replication termination at eukaryotic chromosomes is mediated by Top2 and occurs at genomic loci containing pausing elements. *Molecular Cell* 39(4), 595-605.
11. Branzei D., Foiani M. (2010) Maintaining genome stability at the replication fork. *Nat Rev Mol Cell Biol.* 11(3), 208-19.
12. Branzei D., Foiani M. (2010), Leaping forks at inverted repeats. *Genes Dev.* 24(1), 5-9.
13. Bermejo R., Capra T., Gonzalez-Huici V., Fachinetti D., Cocito A., Natoli G., Katou Y., Mori H., X Kurokawa, Shirahige K., Foiani M. (2009) Genome-Organizing Factors Top2 and Hmo1 Prevent Chromosome Fragility at Sites of S phase Transcription, *Cell* 138, p870
14. Doksani Y., Bermejo R., Fiorani S., Haber J.E., Foiani M. (2009) Replicon Dynamics, Dormant Origin Firing, and Terminal Fork Integrity after Double-Strand Break Formation. *Cell* 137, 247-58
15. Branzei D., Vanoli F. and Foiani M. (2008) SUMOylation regulates Rad18-mediated template switch. *Nature* 456, 915-20.
16. Bermejo R., Branzei D., Foiani M. (2008) Cohesion by topology: sister chromatids interlocked by DNA. *Genes Dev.*, 22, 2297-301.
17. Branzei D., Foiani M. (2008) Regulation of DNA repair throughout the cell cycle. *Nat Rev Mol Cell Biol.* 9, 297-308.
18. Branzei D., Foiani M. (2007) Template switching: from replication fork repair to genome rearrangements. *Cell*, 131, 1228-30.
19. Branzei D., Foiani M. (2007) RecQ helicases queuing with Srs2 to disrupt Rad51 filaments and suppress recombination. *Genes Dev.* 21, 3019-26.
20. Bermejo R., Doksani Y., Capra T., Katou Y.M., Tanaka H., Shirahige K., Foiani M. (2007) Top1- and Top2-mediated topological transitions at replication forks ensure fork progression and stability and prevent DNA damage checkpoint activation. *Genes Dev.*, 21, 1921-1936.
