Marco Fumasoni Ph.D

Harvard University – Department of Molecular and Cellular Biology
Phone: +1 (617) 3869731, E-mail: marcofumasoni@fas.harvard.edu

SHOLARLY PROFILE

I'm an HFSP and EMBO/Marie Curie postdoctoral fellow in Andrew Murray lab. I was trained as a molecular biologist/geneticist studying the mechanisms that maintain genome stability during the replication of damaged DNA templates. As postdoc, I'm using experimental evolution combined with genetics and molecular and cellular approaches to study genome evolution.

RESEARCH EXPERIENCE

2015 – **Postdoctoral fellow**, Harvard University, Cambridge, U.S.A
Faculty Advisor: Prof. Andrew W. Murray

EDUCATION

2014 **Ph.D. in Molecular Medicine**, SEMM (European School of Molecular Medicine) / University of Milan, Italy
Faculty Advisor: Dr. Dana Branzei

2008 **M.Sc. in Molecular Biology of the Cell**, University of Milan, Italy
Faculty Advisor: Dr. Marco Foiani

2006 **B.Sc. in Biological Sciences**, University of Milan, Italy

PUBLICATIONS

* indicates corresponding author (1 & 7) or equal contribution (3)

Research articles

1. **Fumasoni, M.***, Murray, A.W. (2020). The evolutionary plasticity of chromosome metabolism allows adaptation to constitutive DNA replication stress. *eLife* 2020;9:e51963.
2. **Fumasoni, M.**, Zwicky, K., Vanoli, F., Lopes, M., Branzei, D. (2015). Error-free DNA damage tolerance and sister chromatid proximity during DNA replication rely on the Pola/primase/Ctf4 complex. *Mol Cell 57*, 812-823.
3. Vanoli, F.*, **Fumasoni, M.***, Szakal, B., Maloisel, L., and Branzei, D. (2010). Replication and recombination factors contributing to recombination-dependent bypass of DNA lesions by template switch. *PLoS Genet 6*, e1001205.
4. Gonzalez-Huici, V., Szakal, B., Urulangodi, M., Psakhye, I., Castellucci, F., Menolfi, D., Rajakumara, E., **Fumasoni, M.**, Bermejo, R., Jentsch, S., and Branzei D. (2014). DNA bending facilitates the error-free DNA damage tolerance pathway and upholds genome integrity. *EMBO J* 33, 327-340.
5. Karras, G.I., **Fumasoni, M**., Sienski, G., Vanoli, F., Branzei, D., and Jentsch, S. (2013). Noncanonical role of the 9-1-1 clamp in the error-free DNA damage tolerance pathway. *Mol Cell* 49, 536-546.
6. Bernstein, K.A., Shor, E., Sunjevaric, I., **Fumasoni, M**., Burgess, R.C., Foiani, M., Branzei, D., and Rothstein, R. (2009). Sgs1 function in the repair of DNA replication intermediates is separable from its role in homologous recombinational repair. *EMBO J* 28, 915-925.

Review articles

7. LaBar T.*, Hsieh Y.P., **Fumasoni M.***, and Murray A.W.* (2020). Evolutionary repair experiments as a window to the molecular diversity of life. (submitted).

PRESENTATIONS

Invited talks

Molecular Joint Meeting, Tufts University, MA, US. March 7, 2019
Yeast Systems Biology Meeting, Broad Institute, MA, US. May 18, 2016

Contributed talks

GRC Molecular Mechanism in Evolution, Stonehill college, MA, US. June 8-14, 2019
ASCB|EMBO Annual meeting, San Diego Conference Center, CA, US. Dec 8-12, 2018
SMBE Annual Meeting, Austin, TX, US. July 2-6, 2017
EMBO USA Fellows' meeting, The Koch Institute, MIT, Cambridge, US. Nov 4-6, 2016
Responses to DNA damage, Egmond aan Zee, NL. April 3-8, 2011

Posters

19th HFSP Awardees Meeting, Tsukuba International Congress Center, JP. July 9-13, 2019
EMBO Fellows' Meeting, EMBL Heidelberg, DE. June 14-18, 2018
17th HFSP Awardees Meeting, Champalimaud Centre for the Unknown, Lisbon, PT. July 10-12, 2017
EMBO conference: Experimental Approaches to Evolution and Ecology Using Yeast and Other Model Systems, EMBL Heidelberg, DE. Oct 19-23, 2016
FASEB SRC: Yeast Chromosome Structure, Replication, and Segregation. Steamboat Springs, CO, USA. July 13-18, 2014
Intl. PhD student cancer conference, Beatson Institute of Cancer Research Glasgow, UK. June 15-17, 2011

TEACHING & ADVISING EXPERIENCE

Teaching Assistant, Department of Molecular & Cellular Biology, Harvard University
Responsibilities included developing and delivering lectures, grading assignments, leading class discussions, designing and supervising laboratory experiments, generating new course materials, and advising students.

- Cellular Biology and Molecular Medicine. Undergraduate course (Fall 2018)
- Model organism jamboree, MCO graduate program (Aug 28-29, 2017)

Mentoring, Department of Systems Biology, Harvard Medical School – Harvard University - IFOM

- Science Communication, SSQBio graduate program (Fall 2019)
- Supervised undergraduates (6), summer interns (3) and graduate school rotation student (1) during research projects at IFOM and Harvard University (2009-19)

Pedagogical Training, Harvard University
Fall Teaching Conference, Derek Bok center for Teaching and Learning. Aug 23-24, 2017

Outreach, Universidad Continental, Lima
Instructor. Clubes de Ciencia Peru. Undergraduate-level theoretical and experimental course (Jul 3–Aug 5, 2018).

AWARDS & GRANTS

Fellowships

HFSP long term post-doctoral fellowship, 2016
AIRC iCare international cancer research post-doctoral fellowship, 2015

EMBO / Marie Curie long term post-doctoral fellowship, 2015
FIRC PhD fellowship for cancer research in Italy, 2009

Awards

Best poster prize, EMBL conference, Heidelberg, 2016
Certificate of excellence in teaching, Harvard University, 2018
SMBE registration award, 2020

PROFESSIONAL SERVICE

Committee Service

Member, Harvard FAS Post-Doctoral Association (FAS-PDA, Career committee), 2017-
Organizer, Yeast Systems Biology Group (YSG), Broad Institute, 2017-18
Member, Harvard Diversity Inclusion and Belonging initiative, 2020-

Peer review service

Springer Nature – Peer review of academic research papers
MIT press – Peer review of scientific divulgation books

Professional Membership

ASCB - The American Society for Cell Biology, 2018 -
SMBE - Society for Molecular Biology and Evolution, 2017 -

REFERENCES

Prof. Andrew Murray (Postdoctoral advisor)
e-mail: awm@mcb.harvard.edu
tel. +1 (617) 496-1350
Harvard University, Department of Molecular and Cellular Biology
52 Oxford street, Cambridge, MA 02138, U.S.A

Dr. Dana Branzei (Ph.D. advisor)
e-mail: dana.branzei@ifom.eu
tel. +39 02 574303 259
IFOM, FIRC Institute of Molecular Oncology
Via Adamello 16, 20139, Milan, Italy

Prof. Marco Foiani (Master thesis advisor, Ph.D. internal committee)
e-mail: marco.foiani@ifom.eu
tel.: +39 02 574303238
IFOM, FIRC Institute of Molecular Oncology
Via Adamello 16, 20139, Milan, Italy