

# Curriculum Vitae of Valerio Fulci

## Personal data:

Date of birth: 20/05/1978

Nationality: Italian

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## Education

1996/2002 University of Rome "La Sapienza". Degree in Molecular Biology. Final score: 110/110 cum laude

2002/2005: University of Rome "La Sapienza" PhD in Human Biology, Molecular and Cellular bases.

## Working experiences in Scientific Research:

2000-2002. Degree thesis in the lab of Prof Giuseppe Macino, "role of Protein Kinase C in Neurospora crassa light signal transduction". I got familiar with Neurospora crassa cultures, Northern blot, Western blot, Molecular cloning, Genetics.

2002-2005. PhD Student in the lab of Professor Giuseppe Macino. Further investigating the role of PKC in light signal transduction, I got familiar with Southern blot, qPCR, Proteins immunoprecipitation, kinase assays.

2005-2006 Supported by a Scholarship awarded by Fondazione Cenci Bolognetti I investigated miRNA expression profiles in Chronic Lymphocytic Leukemia. I spent a period in the lab of Thomas Tuschl at Rockefeller University, New York (USA) learning the miRNA cloning technique. (Landgraf et al, Cell 2007)

2007-2008 Post-doctoral fellow in the lab of Giuseppe Macino, I set up one of the first qPCR approaches to miRNA quantification (Fulci et al, Blood 2007).

2008-present. Researcher (permanent position) at University of Rome "La Sapienza". At first, (2008-2011) I focussed my research interests on the role of miRNAs in Leukemias and in T-Lymphocyte activation. While attempting to identify miRNA targets by biochemical purification of RISC complexes, I also became interested in characterizing nuclear RISC complexes in human cell lines. Since 2012, my research is mainly focussed on the nuclear functions of AGO2 bound short RNAs and on the epigenetic functions of AGO2 in cancer cells. To this end I am currently employing state of the art biochemical and biomolecular high-throughput approaches (SILAC, NGS) and molecular approaches (CRISPR-CAS, reverse genetics) in cell lines. During the last 4 years I gained a quite extensive knowledge of state of the art biocomputational methods to analyze high-throughput data-sets obtained by NGS techniques (ChIP-seq, RNA-seq, GRO-seq, RRBS) attending courses at high reputation Institutions such as EMBL (Heidelberg, Germany) and CINECA (Bologna, Italy).

## Technical skills:

Wet Lab: Northern Blot, Southern Blot, Western blot, protein immunoprecipitation, PCR, qRT-PCR, molecular cloning, microarray, Small RNA library cloning, mammalian cell cultures, Neurospora crassa cultures, recombinant proteins expression and purification, luciferase assays, cloning, packaging and use of lentiviral expression vectors, CRISPR-CAS.

Informatics: Microsoft Word, Excel e PowerPoint. Internet and E-mail. Linux Operating system, bash scripting, PERL.

Bioinformatics: Usage of biological databases (ENSEMBL, Pubmed, arrayexpress, SRA). R statistical analysis software (affymetrix microarray analysis, Deseq, CummeRbund, plotting packages). Alignment and analysis of deep sequencing data (Bowtie, MACS, CuffLinks, bedtools, NGSplot.). SQLite basics.

## Languages:

Italian mother tongue.

Excellent written and spoken english

## Abroad experiences:

2000: Erasmus program in Gent, Belgium.

2005: Rockefeller University, New York NY, USA.

## Bibliometric data (Web of Science, May 2016)

Results found: 20

Sum of the Times Cited: 3316

Sum of Times Cited without self-citations: 3305

Citing Articles: 3235

Citing Articles without self-citations: 3227

Average Citations per Item: 165.80

h-index: 11

## Publications:

- 1: Carissimi C, Colombo T, Azzalin G, Cipolletta E, Laudadio I, Macino G, **Fulci V**. Comprehensive RNA dataset of AGO2 associated RNAs in Jurkat cells following miR-21 over-expression. *Data Brief*. 2016 Feb 24;7:604-6.
- 2: Krell J, Stebbing J, Carissimi C, Dabrowska AF, de Giorgio A, Frampton AE, Harding V, **Fulci V**, Macino G, Colombo T, Castellano L. TP53 regulates miRNA association with AGO2 to remodel the miRNA-mRNA interaction network. *Genome Res*. 2016 Mar;26(3):331-41.
- 3: Tavolaro S, Colombo T, Chiaretti S, Peragine N, **Fulci V**, Ricciardi MR, Messina M, Bonina S, Brugnoletti F, Marinelli M, Di Maio V, Mauro FR, Del Giudice I, Macino G, Foà R, Guarini A. Increased chronic lymphocytic leukemia proliferation upon IgM stimulation is sustained by the upregulation of miR-132 and miR-212. *Genes Chromosomes Cancer*. 2015 Apr;54(4):222-34.
- 4: Verduci L, Azzalin G, Gioiosa S, Carissimi C, Laudadio I, **Fulci V**, Macino G. microRNA-181a enhances cell proliferation in acute lymphoblastic leukemia by targeting EGR1. *Leuk Res*. 2015 Apr;39(4):479-85.
- 5: Krell J, Stebbing J, Frampton AE, Carissimi C, Harding V, De Giorgio A, **Fulci V**, Macino G, Colombo T, Castellano L. The role of TP53 in miRNA loading onto AGO2 and in remodelling the miRNA-mRNA interaction network. *Lancet*. 2015 Feb 26;385 Suppl 1:S15.
- 6: Carissimi C, Laudadio I, Cipolletta E, Gioiosa S, Mihailovich M, Bonaldi T, Macino G, **Fulci V**. ARGONAUTE2 cooperates with SWI/SNF complex to determine nucleosome occupancy at human Transcription Start Sites. *Nucleic Acids Res*. 2015 Feb 18;43(3):1498-512.
- 7: Carissimi C, Carucci N, Colombo T, Piconese S, Azzalin G, Cipolletta E, Citarella F, Barnaba V, Macino G, **Fulci V**. miR-21 is a negative modulator of T-cell activation. *Biochimie*. 2014 Dec;107 Pt B:319-26.
- 8: Montalban E, Mattugini N, Ciarapica R, Provenzano C, Savino M, Scagnoli F, Prosperini G, Carissimi C, **Fulci V**, Matrone C, Calissano P, Nasi S. MiR-21 is an Ngf-modulated microRNA that supports Ngf signaling and regulates neuronal degeneration in PC12 cells. *Neuromolecular Med*. 2014 Jun;16(2):415-30.
- 9: Frampton AE, Castellano L, Colombo T, Giovannetti E, Krell J, Jacob J, Pellegrino L, Roca-Alonso L, Funel N, Gall TM, De Giorgio A, Pinho FG, **Fulci V**, Britton DJ, Ahmad R, Habib NA, Coombes RC, Harding V, Knösel T, Stebbing J, Jiao LR. MicroRNAs cooperatively inhibit a network of tumor suppressor genes to promote pancreatic tumor growth and progression. *Gastroenterology*. 2014 Jan;146(1):268-77.e18.
- 10: Lucherini OM, Obici L, Ferracin M, **Fulci V**, McDermott MF, Merlini G, Muscari I, Magnotti F, Dickie LJ, Galeazzi M, Negrini M, Baldari CT, Cimaz R, Cantarini L. First report of circulating microRNAs in tumour necrosis factor receptor-associated periodic syndrome (TRAPS). *PLoS One*. 2013 Sep 16;8(9):e73443.
- 11: Sebastiani GD, **Fulci V**, Niccolini S, Giannitti C, Bugatti S, Minisola G, Barnaba V, Scappucci G, Macino G, Galeazzi M. Over-expression of miR-223 in T-lymphocytes of early rheumatoid arthritis patients. *Clin Exp Rheumatol*. 2011 Nov-Dec;29(6):1058-9. Epub 2011 Dec 22. PubMed PMID: 22032299.
- 12: Cocco E, Paladini F, Macino G, **Fulci V**, Fiorillo MT, Sorrentino R. The expression of vasoactive intestinal peptide receptor 1 is negatively modulated by microRNA 525-5p. *PLoS One*. 2010 Aug 10;5(8):e12067.
- 13: **Fulci V**, Scappucci G, Sebastiani GD, Giannitti C, Franceschini D, Meloni F, Colombo T, Citarella F, Barnaba V, Minisola G, Galeazzi M, Macino G. miR-223 is overexpressed in T-lymphocytes of patients affected by rheumatoid arthritis. *Hum Immunol*. 2010 Feb;71(2):206-11.
- 14: Curtale G, Citarella F, Carissimi C, Goldoni M, Carucci N, **Fulci V**, Franceschini D, Meloni F, Barnaba V, Macino

G.

An emerging player in the adaptive immune response: microRNA-146a is a modulator of IL-2 expression and activation-induced cell death in T lymphocytes. *Blood*. 2010 Jan 14;115(2):265-73.

15: **Fulci V**, Colombo T, Chiaretti S, Messina M, Citarella F, Tavolaro S, Guarini A, Foà R, Macino G. Characterization of B- and T-lineage acute lymphoblastic leukemia by integrated analysis of MicroRNA and mRNA expression profiles. *Genes Chromosomes Cancer*. 2009 Dec;48(12):1069-82.

16: Carissimi C, **Fulci V**, Macino G. MicroRNAs: novel regulators of immunity. *Autoimmun Rev*. 2009 May;8(6):520-4.

17: Landgraf P, Rusu M, Sheridan R, Sewer A, Iovino N, Aravin A, Pfeffer S, Rice A, Kamphorst AO, Landthaler M, Lin C, Socci ND, Hermida L, **Fulci V**, Chiaretti S, Foà R, Schliwka J, Fuchs U, Novosel A, Müller RU, Schermer B, Bissels U, Inman J, Phan Q, Chien M, Weir DB, Choksi R, De Vita G, Frezzetti D, Trompeter HI, Hornung V, Teng G, Hartmann G, Palkovits M, Di Lauro R, Wernet P, Macino G, Rogler CE, Nagle JW, Ju J, Papavasiliou FN, Benzing T, Lichter P, Tam W, Brownstein MJ, Bosio A, Borkhardt A, Russo JJ, Sander C, Zavolan M, Tuschl T. A mammalian microRNA expression atlas based on small RNA library sequencing. *Cell*. 2007 Jun 29;129(7):1401-14.

18: **Fulci V**, Chiaretti S, Goldoni M, Azzalin G, Carucci N, Tavolaro S, Castellano L, Magrelli A, Citarella F, Messina M, Maggio R, Peragine N, Santangelo S, Mauro FR, Landgraf P, Tuschl T, Weir DB, Chien M, Russo JJ, Ju J, Sheridan R, Sander C, Zavolan M, Guarini A, Foà R, Macino G. Quantitative technologies establish a novel microRNA profile of chronic lymphocytic leukemia. *Blood*. 2007 Jun 1;109(11):4944-51.

19: **Fulci V**, Macino G. Quelling: post-transcriptional gene silencing guided by small RNAs in *Neurospora crassa*. *Curr Opin Microbiol*. 2007 Apr;10(2):199-203.

20: Franchi L, **Fulci V**, Macino G. Protein kinase C modulates light responses in *Neurospora* by regulating the blue light photoreceptor WC-1. *Mol Microbiol*. 2005 Apr;56(2):334-45.