

## Luca Fava, short CV

Name, Surname: Luca Fava  
Place of birth:  
Date of birth:  
Nationality:  
Contact: Armenise-Harvard Laboratory of Cell Division,  
Centre of Integrative Biology (CIBIO),  
University of Trento.

### Main research interests

Cell division cycle, cell death, centrosome biology, and cancer biology.

### Positions held to date

2017 – present Assistant professor of applied biology (tenure track) and research group leader, Armenise-Harvard Laboratory of Cell Division, Centre of Integrative Biology (CIBIO), University of Trento, Italy

2012 – 2017 Postdoctoral fellow. Laboratory of Prof. Andreas Villunger, Division of Developmental Immunology, Innsbruck Medical University, Innsbruck, Austria

2009 – 2011 PhD student, Laboratory of Prof. Erich Nigg, Growth & Development, Biozentrum, University of Basel, Switzerland

2007 – 2009 PhD student, Laboratory of Prof. Erich Nigg, Department of Cell Biology, Max Planck Institute of Biochemistry, Martinsried, Germany

2006 – 2007 MSc student, Laboratory of Prof. Elmar Schiebel, ZMBH – University of Heidelberg, Germany

### Academic degrees

2017 Habilitation in applied biology (national qualification to cover the position of associate professor in Italian Universities)

2007-2011 Ph.D. in Cell Biology: Max Planck Institute of Biochemistry, Germany & University of Basel, Switzerland. Dr. Phil. Awarded by the University of Basel in October 2011. Grade “Magna cum Laude”.

2005 –2007 Master in Molecular Biology: (Laurea Magistrale) completed with First Class Honours, University of Padua, Italy. Grade 110/110, with distinction.

2002 – 2005 Bachelor in Molecular Biology: (Laurea Triennale) completed with First Class Honours, University of Padua, Italy. Grade 110/110, with distinction.

### **Funding history as principal investigator**

2017-2020/22 (3+2 years) Armenise-Harvard foundation, (600.000 + 400.000 USD). Awarded with the Centre for Integrative Biology, University of Trento as hosting institution.

2017-2020 South Tyrol/Alto Adige government, (268.000 €, declined). Awarded with Innsbruck Medical University as hosting institution.

2015-2017 Tiroler Krebshilfe -Tyrolean Cancer Aid (20.000 € consumables). Awarded with Innsbruck Medical University as hosting institution.

2014-2016 MUI-Start of the Innsbruck Medical University (15.000 € consumables). Awarded with Innsbruck Medical University as hosting institution.

2012-2014 Tiroler Wissenschaftsfonds- Tyrolean Science Fund (19.800 € consumables). Awarded with Innsbruck Medical University as hosting institution.

2012-2014 Tiroler Krebshilfe -Tyrolean Cancer Aid (35.000 € consumables). Awarded with Innsbruck Medical University as hosting institution.

2012-2014 EMBO long term postdoctoral fellowship. Awarded with Innsbruck Medical University as hosting institution.

2012-2014 FEBS long term postdoctoral fellowship (declined). Awarded with Innsbruck Medical University as hosting institution.

### **Luca Fava, selected publications**

**Fava Luca\***, Schuler Fabian, Sladky Valentina, Haschka Manuel D., Soratroi Claudia, Eiterer Lisa, Demetz Egon, Weiss Guenter, Geley Stephan, Nigg Erich A., Villunger Andreas\* (2017). The PIDosome activates p53 in response to supernumerary centrosomes. **GENES & DEVELOPMENT**, vol. 31, p. 34-45, ISSN: 0890-9369, doi: 10.1101/gad.289728.116

Haschka, Manuel D., Soratroi, Claudia, Kirschnek, Susanne, Haecker, Georg, Hilbe, Richard, Geley, Stephan, Villunger, Andreas\*, **Fava, Luca\*** (2015). The NOXA-MCL1-BIM axis defines lifespan on extended mitotic arrest. **NATURE COMMUNICATIONS**, vol. 6, ISSN: 2041-1723, doi: 10.1038/ncomms7891

**Fava, Luca\***, Rainer, Johannes, Haschka, Manuel D., Geley, Stephan, Villunger, Andreas (2015). Beclin 1 is dispensable for chromosome congression and proper outer kinetochore assembly. **EMBO REPORTS**, vol. 16, p. 1233-1236, ISSN: 1469-221X, doi: 10.15252/embr.201540731

**Fava, Luca**, Kaulich, Manuel, Nigg, Erich A, Santamaria, Anna (2011). Probing the in vivo function of Mad1:C-Mad2 in the spindle assembly checkpoint. **EMBO JOURNAL**, vol. 30, p. 3322-3336, ISSN: 0261-4189, doi: 10.1038/emboj.2011.239

\* corresponding author(s)

## CURRICULUM VITAE

**Name:** Veronica  
**Surname:** De Sanctis  
**Place of birth:**  
**Date of birth:**  
**Professional address:** CIBIO Centre for Integrative Biology c/o LaBSSAH Via  
**Contact nos.(Professional):**  
**Residential address:**  
**Contact nos. (Residential):**  
**E-mail:**

### Educational and Scientific Background

- 2012 February – March** Visiting Scientist at **University of California, Los Angeles** in Prof. Matteo Pellegrini's laboratory
- 2011-now** Staff Scientist, CIBIO, **University of Trento, Italy**. Next Generation Sequencing Core Facility Manager.
- 2009-2010** Postdoctoral researcher, CIBIO, in Dr Alberto Inga's laboratory. (Scientific interests: Histone post-transcriptional modifications and their role in DNA replication; Transcription regulation mediated by the interplay between transcription factors and chromatin structure. p53 network; miRNAs and p53 circuits).  
**Pezcoller Foundation Fellowship**
- 2005-2008** Postdoctoral researcher, **University of California, Los Angeles** in Prof. Michael Grunstein's laboratory (Scientific interests: Histone post-transcriptional modifications, Chromatin structure and their role in the major cellular functions of the genome.)
- 2003-2005** Postdoctoral researcher, **University of Rome "La Sapienza"** in Prof. Rodolfo Negri's laboratory. (Scientific interests: Transcription regulation mediated by the interplay between transcription factors and chromatin structure.). **University of Rome Fellowship** (Assegno di Ricerca)
- 2000-2003 Ph.D. in Genetic and Molecular Biology**. Title of the thesis: "The functional relevance of the transcriptional activator Rap1p during stringent response of *S. cerevisiae*" Tutor Prof. Ernesto Di Mauro
- 1999-2000** Trainee in a Molecular Biology Laboratory, CNR with Dr. Rodolfo Negri, University of Rome "La Sapienza".
- 1999 Degree in Biological sciences at University of Rome "La Sapienza" (110/110 cum laude)** with an experimental thesis in Molecular Biology with title: "Manganese water soluble porphyrin senses DNA conformation. A potential tool to analyse DNA structure *in vitro* and *in vivo*"; Tutor Prof. Ernesto Di Mauro
- 1998** Participation on **NATO Advanced Research Workshop** "Structural Biology and Functional Genomics" organized by International Centre for Genetic Engineering and Biotechnology ICGEB – Trieste.
- 1992** Secondary high school diploma at Classical Lyceum "Anco Marzio", Roma, Italy (60/60)

### Teaching Experience

- 2014-2015 Adjunct Professor** in High Throughput Methodologies I
- 2011-2012 Teaching Assistant in practical exercitations** in System Biology
- 2009-2010 Teaching Assistant in practical exercitations** in Developmental Biology and in Genetic
- 1999 – 2005 Graduating student advisor** for the faculty of Biological Sciences at University of Rome "La Sapienza"
- 2005 Lectures in "Chromatin Structure and Histone Modifications"** for the Master of Biotechnology at University of Rome "La Sapienza"
- 2004-2005 Member of the Examination Board** for the course of "Molecular Genetic" in the faculty of Biotechnology (Dott.ssa Sabrina Venditti)

- 2004-2005 Member of the Examination Board** for the course of “Structure and Function of the Eukaryotic Chromosome” in the faculty of Biological Sciences (Dott.ssa Sabrina Venditti)
- 2001-2004 Lecturer in Molecular Biology in the Master of Applied Genetic** for Prof. Giorgio Camilloni “Chromatin structure and function”, “Nucleosome Positioning” and “Nuclear Matrix”
- 2001-2002 Lecturer and Teaching Assistant in practical exercises** in the faculty of Biological Science in Embryogenesis and Developmental Biology.

#### **Organizing committee for NGS-related workshop**

- 4th International Winter School on Nano and Biotechnology ANIS4 "RNAome.0 functions, methodologies and diagnostics" 27-31 January 2014 Sterzing, Italy
- 3rd International Winter School on Nano and Biotechnology ANIS3 "Next generation technology systems and life sciences interface research: an integrative approach" 23-27 January 2012 Sterzing, Italy

#### **Participation to NGS related meetings and workshops**

- 3rd International Winter School on Nano and Biotechnology ANIS3 "Next generation technology systems and life sciences interface research: an integrative approach" 23-27 January 2012 Sterzing, Italy.
- Golden Helix Symposium 2012 "Genomic Medicine: translating Genes into Health" 18-21 April 2012 Torino, Italy.
- ILLUMINA Scientific Summit "Advances in Genome Science" 18-20 May 2012, Sitges, Spain.
- Ion Torrent User Experience Tour 9 October 2012, Bologna, Italy.
- ILLUMINA Scientific Summit "Advances in Genome Science" 21-23 May 2013, Berlin, Germany
- ILLUMINA User Group Meeting 18-19 November 2013, Rome, Italy.
- 4th International Winter School on Nano and Biotechnology ANIS4 "RNAome.0 functions, methodologies and diagnostics" 27-31 January 2014, Sterzing, Italy.
- ILLUMINA Scientific Summit "Advances in Genome Science" 13-15 May 2014, Prague, Czech Republic.
- Core Technologies for Life Science Congress (CTLS 2014) 2-5 June 2014, Paris, France.
- Ion Torrent User Experience Tour 30 September 2014, Bologna, Italy
- SIGU “Il sequenziamento di nuova generazione in Genetica Umana e Medica”, 30-31 October 2014, Bologna, Italy
- ILLUMINA User Group Meeting 12 November 2014, Milan, Italy
- Ion Torrent User Experience Tour 07 October 2015, Florence, Italy
- ILLUMINA User Group Meeting 02 November 2015, Catania, Italy
- ILLUMINA European Genomic Technology Forum, 23 February 2016, Milan, Italy
- NGS e le sue applicazioni. Strategie di analisi e gestione del risultato. Isolati genetici, NGS e tratti complessi 9-10 June 2016, Istituto Mendel, Rome Italy
- Affidabilità analitica, validità ed utilità clinica nei test genetici di vecchia e nuova generazione. Il calcolo del rischio e la gestione del paziente. Indicatori, CQI e VEQ, 23-24 June 2016, Istituto Mendel, Rome Italy
- ILLUMINA User Group Meeting 2-3 March 2017, Malaga, Spain
- Nanopore Sequencing day, 28 September 2017, Mario Negri Institute, Milan, Italy

#### **Invited Speaker in Meeting and Congresses**

- **Il Microbioma. Interazione tra microrganismi e corpo umano.** 15 February 2014 Povo, Trento, Italy “LaBSSAH: le nuove tecnologie per il sequenziamento applicate alla salute umana.”
- **Neuromuscular Trentino Alto Adige Network – In honour of Claudio Castellan.** 10 October 2014 Ospedale Centrale Bolzano. “Introduzione al sequenziamento massivo e parallelo e sue applicazioni diagnostiche”.

## **Publications**

E. Di Mauro, R. Saladino, P. Tagliatesta, **V. De Sanctis** and R. Negri: "Manganese water soluble porphyrin senses DNA conformation" **1998** *Journal of Molecular Biology* **282**, 43-57.

**V. De Sanctis**, C. Bertozzi, G. Costanzo, E. Di Mauro and R. Negri "Cell cycle arrest determines the intensity of the global transcriptional response of *Saccharomyces cerevisiae* to ionizing radiation" **2001** *Radiation Research*. **156** (4), 379-87.

**V. De Sanctis**, S. La Terra, D. Shore, L. Burderi, E. Di Mauro and R. Negri "In vivo topography of Rap1p-DNA complex at *S. cerevisiae* TEF2 UASRPG during transcriptional regulation" **2002** *Journal of Molecular Biology* **318**, 333-349.

M.A. Meloni, G. Galleri, S. Carta, R. Negri, G. Costanzo, **V. De Sanctis**, A. Cogoli and P. Pippia "Preliminary study of gene expression levels in human T-cells exposed to cosmic radiations." **2002** *Journal Gravit Physiol*. **9**, 291-2.

V. Del Vescovo, **V. De Sanctis**, D. Shore, A. Bianchi, E. Di Mauro and R. Negri. "Distinct DNA elements contribute to Rap1p affinity to its binding sites" **2004** *Journal of Molecular Biology*, **338**, 877-93.

A. Del Signore, **V. De Sanctis**, E. Di Mauro, R. Negri, C. Perrone-Capano and P. Paggi. "Gene expression pathways induced by axotomy and decentralization of rat superior cervical ganglion neurons" **2006** *European Journal of Neuroscience* **23** (1), 65-74.

C. Potrich, G. C. Santini, L. Lunelli, L. Pasquardini, R. Bertorelli, **V. De Sanctis**, A. Quattrone, C. Pederzoli "The Making of "on-Chip PCR in Real-Time" for Food Quality Control" **2013** *BioNanoScience* (DOI 10.1007/s12668-013-0080-y)

M. Lion, A. Bisio, T. Tebaldi, **V. De Sanctis**, D. Menendez, M. A. Resnick, Y. Ciribilli and A. Inga "Interaction between p53 and estradiol pathways in transcriptional responses to chemotherapeutics." **2013** *Cell cycle* **12** (8), 1211-1222.

A. Bisio, **V. De Sanctis**, V. Del Vescovo, M. A. Denti, A. G. Jegga, A. Inga and Y. Ciribilli "Identification of new p53 target microRNAs by bioinformatics and functional analysis" **2013** *BMC Cancer* **13**, 552.

E. Dassi, A. Ballarini, G. Covello; HTM-CMB2013, A. Quattrone, J. Jousson, **V. De Sanctis**, R. Bertorelli, M.A. Denti, N. Segata. "Enhanced microbial diversity in the saliva microbiome induced by short-term probiotic intake revealed by 16S rRNA sequencing on the IonTorrent PGM platform" **2014** *Journal of Biotechnology* <http://dx.doi.org/10.1016/j.jbiotec.2014.03.024>

Tortoli E., Fedrizzi T., Pecorari M., Giacobazzi E., **De Sanctis V.**, Bertorelli R., Grottola A., Fabio A., Ferretti P., Di Leva F., Fregni Serpini G., Tagliazucchi S., Rumpianesi F., Jousson O., Segata N. "The new phylogenesis of the genus *Mycobacterium*" *International Journal of Mycobacteriology* 2014 Nov; 4.

Potrich C, Vaghi V, Lunelli L, Pasquardini L, Santini GC, Ottone C, Quaglio M, Cocuzza M, Pirri CF, Ferracin M, Negrini M, Tiberio P, **De Sanctis V**, Bertorelli R, Pederzoli C. "OncomiR detection in circulating body fluids: a PDMS microdevice perspective." *Lab Chip*. 2014 Oct 21;14(20):4067-75.

Fusco da Costa AR, Fedrizzi T, Lopes ML, Pecorari M, Oliveira da Costa WL, Giacobazzi E, da Costa Bahia JR, **De Sanctis V**, Batista Lima KV, Bertorelli R, Grottola A, Fabio A, Mariottini A, Ferretti P, Di Leva F, Fregni Serpini G, Tagliazucchi S, Rumpianesi F, Jousson O, Segata N, Tortoli E. "Characterization of 17 strains belonging to the *Mycobacterium simiae* complex and description of *Mycobacterium paraense* sp. nov." *Int J Syst Evol Microbiol*. 2015 Feb;65(Pt 2):656-62.

Stanghellini I, Dassi E, Bertorelli R, **De Sanctis V**, Caleffi A, Landi A, Percesepe A. "Exome sequencing in a patient with Catel - Manzke - like syndrome excludes the involvement of the known genes and reveals a possible candidate." *Eur J Med Genet*. 2015 Sep 26.

Rosa A, Chande A, Ziglio S, **De Sanctis V**, Bertorelli R, Goh SL, McCauley SM, Nowosielska A, Antonarakis SE, Luban J, Santoni FA, Pizzato M. "HIV-1 Nef promotes infection by excluding SERINC5 from virion incorporation." *Nature*. 2015 Sep 30.

Andreotti V, Bisio A, Bressac-de Paillerets B, Harland M, Cabaret O, Newton-Bishop J, Pastorino L, Bruno W, Bertorelli R, **De Sanctis V**, Provenzani A, Menin C, Fronza G, Queirolo P, Spitale RC, Bianchi-Scarrà G, Inga A,

Ghiorzo P. The CDKN2A/p16(INK) (4a) 5'UTR sequence and translational regulation: impact of novel variants predisposing to melanoma, *Pigment Cell Melanoma Res.* 2016 Mar;29(2):210-21. doi: 10.1111/pcmr.12444. Epub 2015 Dec 17.

Fedrizzi T, Meehan CJ, Grottola A, Giacobazzi E, Fregni Serpini G, Tagliazucchi S, Fabio A, Bettua C, Bertorelli R, **De Sanctis V**, Rumpianesi F, Pecorari M, Jousson O, Tortoli E, Segata N. Genomic characterization of Nontuberculous Mycobacteria *Sci Rep.* 2017 Mar 27;7:45258. doi: 10.1038/srep45258.

Tett A, Pasolli E, Farina S, Truong DT, Asnicar F, Zolfo M, Beghini F, Armanini F, Jousson O, **De Sanctis V**, Bertorelli R, Girolomoni G, Cristofolini M, Segata N. Unexplored diversity and strain-level structure of the skin microbiome associated with psoriasis. *NPJ Biofilms Microbiomes.* 2017 Jun 22;3:14.

Tortoli E, Fedrizzi T, Meehan CJ, Trovato A, Grottola A, Giacobazzi E, Serpini GF, Tagliazucchi S, Fabio A, Bettua C, Bertorelli R, Frascaro F, **De Sanctis V**, Pecorari M, Jousson O, Segata N, Cirillo DM. The new phylogeny of the genus Mycobacterium: The old and the news. *Infect Genet Evol.* 2017 Dec;56:19-25. doi:10.1016/j.meegid.2017.10.013.

### **Congresses and Meetings (Authorship in abstracts or Oral Communications)**

**September 1997** Montesilvano Lido (PE), Italy, Convegno congiunto SIBBM-ABCD- SIMGBM V. De Sanctis, M. Buttinelli, G. Costanzo, V. De Arcangeli, R. Negri e E. Di Mauro - "Definizione di determinanti traslazionali per il posizionamento di nucleosomi in vitro".

**October 1998** Montesilvano Lido (PE), Italy, Convegno congiunto SIBBM-ABCD-AGI-SIMGBM V. De Sanctis, P. Carlucci, G. Costanzo, E. Di Mauro, R. Saladino, P. Tagliatesta e R. Negri "Caratterizzazione dell'interazione di una metallo-porfirina idrosolubile con il DNA".

**October 1999** Riva del Garda (TN), Italy, 1° Convegno FISV (Federazione Italiana Scienze della Vita) C. Bertozzi, G. Costanzo, V. De Sanctis, S. Venditti, R. Negri e E. Di Mauro "Ricerca di geni la cui espressione sia modulata dall'interazione tra proteine SIR ed istoni".

**September 2000** Riva del Garda (TN), Italy, 2° Convegno FISV (Federazione Italiana Scienze della Vita) S. La Terra, V. De Sanctis, E. Di Mauro e R. Negri "Effetto della proteina sir3 sulla risposta stringente in *S.cerevisiae*"

**June 2001** Cortona (AR), Italy, 3° riunione annuale del gruppo italiano di cooperazione sul lievito (YCGI) S. La Terra, V. De Sanctis, E. Di Mauro e R. Negri "Analisi della struttura del complesso Rap1p-UASrpg sul promotore del gene TEF2"

**September 2001** Riva del Garda (TN), Italy, 3° Convegno FISV (Federazione Italiana Scienze della Vita) V. Del Vescovo, V. De Sanctis, S. La Terra, R. Negri e E. Di Mauro "Analisi della struttura del complesso RAP1p-UASrpg sul promotore del gene TEF2"

**May 2002** Castelveccchio Pascoli (LU) Italy, Euresco Conference "Gene Transcription in Yeast " V. De Sanctis, S. La Terra, A. Bianchi, D. Shore, L. Burderi, E. Di Mauro and R. Negri "Structure of Rap1p-DNA complex in vivo"

**September 2002** Riva del Garda (TN), Italy, 4° Convegno FISV (Federazione Italiana Scienze della Vita) V. Del Vescovo, V. De Sanctis, E. Di Mauro e R. Negri "Ruolo dell'attivatore trascrizionale Rap1p nella risposta stringente di *S. cerevisiae*"

**September 2003** Cortona (AR), Italy, Yeast 2003 G. Iacovella, V. De Sanctis, V. Del Vescovo, E. Di Mauro e R. Negri "Ruolo dell'attivatore trascrizionale RAP1 nella risposta stringente di *S.cerevisiae*"

**September 2003** Riva del Garda (TN), Italy, 6° Convegno FISV (Federazione Italiana Scienze della Vita) M. G. Iacovella, V. De Sanctis, V. Del Vescovo, A. Bianchi, D. Shore, E. Di Mauro and R. Negri Distinct DNA elements contribute to Rap1p affinity for its binding sites.

**May 2004** San Feliu de Guixol (Barcelona) Spain, Euresco Conference "Gene Transcription in Yeast " V. De Sanctis, V. Del Vescovo, M. G. Iacovella, D. Shore, A. Bianchi, E. Di Mauro and R. Negri. "Distinct DNA elements contribute to Rap1p affinity to its binding sites"

**June 2009** Trento, Italy. 21st Pezcoller Symposium "Unconventional Therapeutic Targets in Cancer". Francesca Sparapani, Alessandra Bisio, Valerio Del Vescovo, Claudia Tonelli, Yari Ciribilli, Veronica De Sanctis, Anil G. Jegga, Michela A. Denti and Alberto Inga. "MicroRNA-based, p53 dependent post-transcriptional circuits: mechanisms, targets and inter-individual variation."

**April 2010**, St Andrews, UK. AICR Meeting. Y. Ciribilli, V. Andreotti, D. Menendez, A. Bisio, V. De Sanctis, G. Schoenfelder, M.A. Resnick and A. Inga "The Coordinated P53 And Estrogen Receptor Cis-Regulation At An Ftl1 Promoter SNP Is Specific To Genotoxic Stress And Estrogenic Compound"

**June 2010** Padua, Italy SIBBM Seminar “Frontiers in Molecular Biology” A. Bisio, V. Del Vescovo, C. Tonelli, Y. Ciribilli, V. De Sanctis, A. G. Jegga, M. A. Denti and A. Inga. “MicroRNA-based, p53 dependent post-transcriptional circuits: mechanisms, targets and inter-individual variation.”

**June 2010**, Trento, Italy. 22st Pezcoller Symposium “RNA Biology and Cancer” A. Bisio, V. Del Vescovo, C. Tonelli, Y. Ciribilli, V. De Sanctis, A. G. Jegga, M. A. Denti and A. Inga. “MicroRNA-based, p53 dependent post-transcriptional circuits: mechanisms, targets and inter-individual variation.”

**October 2010** Philadelphia, USA. 15th International p53 Workshop Alessandra Bisio, Yari Ciribilli, Veronica De Sanctis, Valerio Del Vescovo, Claudia Tonelli, Sivakumar Gowrisankar, Anil G. Jegga, Michela A. Denti and Alberto Inga “MicroRNA-based, p53 dependent post-transcriptional circuits: mechanisms, targets and inter-individual variation.”

**November 2010** Ein Gedi, Israel. RNA Dynamics Workshop, Ciribilli Y, Lion M., Bisio A., De Sanctis V., Inga A. "Transcriptional and post-transcriptional control of the FLT1 gene by p53 and estrogen receptor".

**September 2011** Wien, Austria. The 3rd EMBO Meeting Mattia Lion, Alessandra Bisio, Veronica De Sanctis, Yari Ciribilli and Alberto Inga "p53 and estrogen receptors can interact in a synergistic transcriptional cooperation".

**April 2012** Chicago, USA. 103rd Annual Meeting of the American Association for Cancer Research; Y. Ciribilli, A. Bisio, V. De Sanctis, V. Del Vescovo, A. G. Jegga, M. A. Denti and A. Inga “p53-miR-dependent post-transcriptional circuits: mechanisms, targets and inter-individual variation”.

#### **Research Interest:**

Next Generation Sequencing, Omics Technologies, Global Epigenetic and Transcriptional Regulatory Mechanism, Molecular Genetics, MicroRNAs, Cancer Genetics.

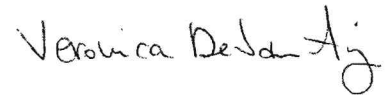
#### **Languages:**

Italian (native language), English (C1)

**Biosketch for a brief description:**

During her PhD Veronica De Sanctis has been actively investigating the world of gene regulation and the molecular basis of gene expression; her main research topic was the influence of chromatin structure on transcription regulation. Later, working in the Laboratory of Functional Genomics and Proteomics of University of Rome, La Sapienza and in California at UCLA, she has been applying DNA microarrays technologies to functional genomics, cooperating to several projects (transcriptomic screenings and ChIP-chip). During the last few years she has been moving from microarray to NGS and now she manages the NGS core facility in University of Trento dealing with all common sequencing applications and developing novel methods.

Signature

A handwritten signature in black ink, reading "Veronica De Sanctis". The signature is written in a cursive style with a large, stylized 'V' and 'S'.

## EMILIO CUSANELLI

### PERSONAL INFORMATION

**Date and place of birth:**

**Citizenship:**

Italian;

**Work Address:**

Department of Cellular, Computational and Integrative Biology - CIBIO

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### EDUCATION AND RESEARCH

**July 2016 – to date**

Senior Researcher/Principal Investigator, Laboratory of Cell Biology and Molecular Genetics, Department of Cellular, Computational and Integrative Biology - CIBIO, University of Trento, Trento, Italy.

**2014 – 2016**

Post-doc, University of Vienna, Department of Chromosome Biology, Max F. Perutz Laboratories - MFPL, Vienna, Austria. (Host laboratory: Prof. Michael Jantsch)

**2009 - 2014**

Post-doc, University of Montreal, Department of Biochemistry and Molecular Medicine, Montreal, Quebec, Canada. (Supervisor: Prof. Pascal Chartrand)

**2005 - 2009**

Ph.D. in Molecular Medicine (curriculum Molecular Oncology), European School of Molecular Medicine - SEMM, University Federico II, CEINGE Research Institute, Naples, Italy. (Supervisor: Prof. Massimo Zollo)

**2006**

Visiting PhD student, Department of Microbiology and Immunology, Albert Einstein College of Medicine, New York, USA. (Supervisor: Prof. Luciano D'Adamio)

**1999 - 2004**

Degree in Biological Sciences (curriculum Molecular Biology), (110/110 cum laude with honors), University of Sannio, Benevento, Italy. (Supervisor: Prof. Pasquale Vito)

### MAIN RESEARCH INTERESTS

Telomere biology, RNA biology, molecular basis of cancer;

### CURRENT RESEARCH

- Understanding the role of the long noncoding RNA TERRA in telomere biology and genome stability.
- Investigating the function and regulation of the noncoding RNA TERRA during cellular stress.

## PUBLICATIONS

- 1) Bettin N, Oss Pegorar C, **Cusanelli E**. The emerging roles of TERRA in telomere maintenance and genome stability. *Cells*, invited submission, *under review*. *Impact Factor: 4.8*
- 2) Avogaro L, Oss Pegorar C, Bettin N, **Cusanelli E**. Generation of cancer cell clones to visualize telomeric repeat-containing RNA TERRA expressed from a single telomere in living cells. *Journal of Visualized Experiments*, **2019**, (143): e58790. *Impact Factor: 1.1*
- 3) Avogaro L, Querido E, Dalachi M, Jantsch M, Chartrand P, **Cusanelli E**. Live-cell imaging reveals the dynamics and function of single-telomere TERRA molecules in cancer cells. *RNA Biology*, **2018**, 15(6):787-796. *Impact Factor: 5.2*
- 4) Perez-Romero CA, Lalonde M, Chartrand P, **Cusanelli E**. Induction and relocalization of telomeric repeat-containing RNAs during diauxic shift in budding yeast. *Current Genetics*, **2018**, 64(5):1117-1127. *Impact Factor: 3.6, Scopus citations: 1*
- 5) Moradi-Fard S, Sarthi J, Tittel-Elmer M, Lalonde M, **Cusanelli E**, Chartrand P, Cobb J. Smc5/6 is a telomere-associated complex that regulates Sir4 binding and TPE. *PLOS Genetics*, **2016**, 12(8): e1006268. *Impact Factor: 5.5, Scopus citations: 7*
- 6) **Cusanelli E\*** and Chartrand P. Telomeric repeat-containing RNA TERRA: a noncoding RNA connecting telomere biology to genome integrity. *Frontiers in Genetics*, **2015**, 6: 143. *Impact Factor: 4.1, Scopus citations: 59. \* Corresponding author.*
- 7) **Cusanelli E** and Chartrand P. Telomeric non-coding RNA TERRA in telomere biology. *Wiley Interd. Rev. RNA*, 2014, 5(3): 407-419. *Impact Factor: 5.8, Scopus citations: 14*
- 8) **Cusanelli E**, Perez Romero CA, Chartrand P. Telomeric non-coding RNA TERRA is induced by telomere shortening to nucleate telomerase molecules at short telomeres. *Molecular Cell*, **2013**, 51(6): 780-791. *Impact Factor: 14.2, Scopus citations: 93. Highlighted by Faculty of 1000*
- 9) Andolfo I, Liguori L, De Antonellis P, **Cusanelli E**, Marinaro F, Pistollato F, Garzia L, De Vita G, Petrosino G, Accordi B, Migliorati R, Basso G, Iolascon A, Cinalli G, Zollo M. The micro-RNA 199b-5p regulatory circuit involves Hes1, CD15, and epigenetic modifications in medulloblastoma. *Neuro-Oncology*, **2012**, (3): 596-61. *Impact Factor: 9.4, Scopus citations: 32*
- 10) Gallardo F\*, Laterreur N\*, **Cusanelli E**, Ouenzar F, Querido E, Wellinger RJ, Chartrand P. Live cell imaging of telomerase RNA dynamics reveals cell cycle-dependent clustering of telomerase at elongating telomeres. *Molecular Cell*, **2011**, 44(5): 819–827. *\* Equally contributed. Impact Factor: 14.2, Scopus citations: 72*
- 11) De Antonellis P\*, Medaglia C, **Cusanelli E,\*** Andolfo I, Liguori L, De Vita G, Carotenuto M, Bello A, Formiggini F, Galeone A, De Rosa G, Virgilio A, Scognamiglio I, Sciro M, Basso G, Schulte JH, Cinalli G, Iolascon A, Zollo M. MiR-34a targeting of Notch ligand Delta-like 1 impairs CD15/CD133 tumor-propagating cells and supports neural differentiation in medulloblastoma. *PLoS One*, **2011**, 6(9): e24584. *\*Equally contributed. Impact Factor: 2.8, Scopus citations: 103*
- 12) Garzia L, Andolfo I, **Cusanelli E**, Marino N, Petrosino G, De Martino D, Esposito V, Galeone A, *et al*, MicroRNA-199b5p impairs cancer stem cells through negative regulation of HES1 in medulloblastoma. *PLoS One*, **2009**, 4(3): e4998. *Impact factor: 2.8, Scopus citations: 190*
- 13) Tammenkoski M, Koivula K, **Cusanelli E**, Zollo M, Steegborn C, Baykov AA, Lahti R. The human metastasis regulator protein h-prune is a short-chain exopolyphosphatase. *Biochemistry*, **2008**, 7(36): 9707-13. *Impact Factor: 3, Scopus citations: 68*

## **FELLOWSHIPS**

**2016 – 2019.** Rita Levi Montalcini Fellowship, Italian Ministry of Education, University and Research “MIUR”

**2014 – 2017.** Post-doctoral fellowship, Marie Curie co-fund Interdisciplinary Cancer Research “INDICAR” program, University of Vienna, Austria

**2005 – 2009.** Ph.D. fellowship, European School of Molecular Medicine “SEMM”, University Federico II, Naples, Italy

## **FUNDING**

**2018 – 2019.** Starting grant for young researchers 2018, University of Trento, Italy. Research grant: 15.000 euro.

**2016 – 2019.** Rita Levi Montalcini program, Italian Ministry of Education, University and Research “MIUR”. Research grant: 42.000 euro.

**2014 – 2017.** Marie Curie co-fund Interdisciplinary Cancer Research “INDICAR” program, University of Vienna, Austria. Research grant: 54.000 euro.

## **SPEAKER AT NATIONAL AND INTERNATIONAL MEETINGS**

**2018.** EMBO Workshop on Telomere Biology in Health and Human Disease, Troia, Portugal.

**2018.** Congresso Nazionale Associazione Italiana di Biologia e Genetica (AIBG), Ferrara, Italy.

**2016.** EMBO Conference on Telomeres, Telomerase & Disease, Liege, Belgium.

**2014.** 2<sup>nd</sup> Canadian Symposium on Telomeres and Genome Integrity, Quebec City, Canada.

**2013.** Telomere & Telomerase meeting 2013, Cold Spring Harbor Laboratory, New York.

**2011.** Telomere & Telomerase meeting 2011, Cold Spring Harbor Laboratory, New York.

## **INVITED ORAL PRESENTATIONS AND LECTURING ACTIVITIES**

**2019.** University of Trieste, Department of Life Sciences, Italy (Scheduled on 21<sup>st</sup> of February).

**2018.** University of Brescia, Department of Molecular and Translational Medicine, Italy.

**2015.** University of Trento, Department - CIBIO, Italy.

**2014.** University of Leeds, School of Molecular and Cellular Biology, United Kingdom.

**2012.** University of Sherbrooke, Department of Microbiology and Infectiology, Canada.

## **REVIEWER ACTIVITY**

Reviewer for the journals: *RNA Biology*, *International Journal of Molecular Sciences*, *Cells*, *Nutrients*, *Acta Biochimica et Biophysica Sinica*, *non-coding RNA*, *Journal of Visualized Experiments*.

## **INSTITUTIONAL RESPONSIBILITIES**

– 20/02/2018. Member of PhD committee and thesis evaluator for the final exam of PhD candidate Antonina Zappone, Doctoral School of Molecular Biomedicine, Department of Life Sciences, University of Trieste, Italy.

– 19/12/2018. Member of committee for Master degree in Cellular and Molecular Biotechnologies, University of Trento, Italy.

– 3/10/2018. Co-chair of session “Cancer Biology and Genomics” for PhD “Work in Progress”, PhD program in Biomolecular Sciences, University of Trento, Italy.

– 24/09/2018. Member of committee for Bachelor degree in Scienze e Tecnologie Molecolari University of Trento, Italy.

– 29/11/2017. Member of committee for Master degree in Cellular and Molecular Biotechnologies, University of Trento, Italy.

– 26-28/10/2016. Referee for PhD “Work in Progress”, PhD program in Biomolecular Sciences, University of Trento, Italy.

– 21/9/2016. Member of committee for Bachelor degree in Scienze e Tecnologie Molecolari University of Trento, Italy.

## MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2016 to date: Member of Associazione Italiana di Biologia e Genetica (AIBG)

2014 to date: Member of RNA society

## MAJOR COLLABORATIONS

- Professor Pascal Chartrand, Department of Biochemistry and Molecular Medicine, University of Montreal, Montreal, Canada.
- Professor Michael F. Jantsch, Centre of Anatomy and Cell Biology, Medical University of Vienna, Vienna, Austria.
- Professor Verena Jantsch, Department of Chromosome Biology, University of Vienna, Max F. Perutz Laboratories (MFPL), Vienna, Austria.
- Professor Maria Caterina Mione, Department of Cellular, Computational and Integrative Biology - CIBIO, University of Trento, Trento, Italy.

## ITALIAN NATIONAL SCIENTIFIC HABILITATIONS

2018 – 2024 “Biologia Molecolare” (05/E2, II fascia)

2018 – 2024 “Biologia Applicata” (05/F1, II fascia)

## SUPERVISION OF STUDENTS AND POSTDOCTORAL FELLOWS

02/2018 – 12/2018: Claudio Oss Pegorar, master student, University of Trento, Italy.

04/2018 – 12/2018: Nicole Bettin, master student, University of Trieste, Italy.

04/2018 – 09/2018: Elisabetta Nale, bachelor student, University of Trento, Italy.

04/2018 – 09/2018: Caterina Manzato, bachelor student, University of Trento, Italy.

07/2016 – 06/2018: Laura Avogaro, postdoc, University of Trento, Italy.

10/2017 – 03/2018: Martina Germanis, bachelor student, University of Trento, Italy.

02/2017 – 07/2017: Lorenzo Povolo, bachelor student, University of Trento, Italy.

## TEACHING ACTIVITIES

- Course of *Cancer Genetics* (course # 145491), University of Trento, academic year: 2018/2019, Master degree in *Cellular and Molecular Biotechnology*.
- Course of *Cancer Biology* (course # 145748), University of Trento, academic year: 2018/2019, Master degree in *Cellular and Molecular Biotechnology*.
- Course of *Introduction to Cell Biology* (course # 14538), University of Trento, academic years: 2016/2017, 2017/2018, 2018/2019, Master degrees in *Mathematics* and *Informatics*.
- Course of *Molecular Biology of the Cell* (course #145550), University of Trento, academic years: 2016/2017 and 2017/2018, Master degree in *Quantitative and Computational Biology*.
- Course of *Biologia degli Organismi* (course #145281), University of Trento, academic year: 2017/2018, Bachelor degree in *Mathematics*.

## OUTREACHING ACTIVITY

- 28/01/2019, Seminar at the High School Institute Brocchi, Bassano del Grappa. Title: “La molecola dell’ereditarietà, come il DNA definisce struttura e funzione delle nostre cellule”.
- 23/01/2019, Seminar at the High School Institute Remondini, Bassano del Grappa. Title: “La molecola dell’ereditarietà, come il DNA definisce struttura e funzione delle nostre cellule”.
- 28/09/2018, Participation to the initiative “La notte dei ricercatori” organized by the University of Trento at the “MUSE” museum of Trento. Activity: “Libri viventi”.

## BIBLIOMETRIC INDEX (13/02/2019)

Number of publications in international peer-reviewed journals: 12

H-Index (Scopus): 8

Total citations: 624 (without self-citations)