

## **ALLEGATO B**

UNIVERSITÀ DEGLI STUDI DI MILANO

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## **[Valentina Gandin] CURRICULUM VITAE**

### **INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)**

COGNOME	GANDIN
NOME	VALENTINA
DATA DI NASCITA	[ 19, 06, 1977 ]

### **INSERIRE IL PROPRIO CURRICULUM (non eccedente le 30 pagine)**

#### **Education**

2003 MSc, Faculty of Biology, University of Piemonte Orientale, Alessandria, Italy

2006 PhD in Genetics and Molecular Biology, University of Milan, Italy

2007–2008 Postdoctoral fellow, DIBIT–San Raffaele Scientific Institute, Milan, Italy

2008–2009 Postdoctoral fellow, European Molecular Biology Laboratory (EMBL), Mouse Biology Unit, Italy

2009–2011, Postdoctoral fellow, Goodman Cancer Centre, McGill University, Montreal, Canada

#### **Research Experience**

2000–2002, Undergraduate work, DIBIT–San Raffaele Scientific Institute, Milan, Italy. Principal Investigator: Dr. Stefano Biffo

*Analysis of translation factor's distribution among cytoplasmic and cytoskeletal compartment during adhesion-mediated translation*

2003–2006, PhD student, DIBIT–San Raffaele Scientific Institute, Milan, Italy. Principal Investigator: Dr. Stefano Biffo

*Studying the role of the eukaryotic initiation factor eIF6 in growth and tumorigenesis*

2007–2008, Postdoctoral fellow, DIBIT–San Raffaele Scientific Institute, Milan, Italy. Principal Investigator: Dr. Stefano Biffo

2008–2009, Postdoctoral fellow, European Molecular Biology Laboratory, Monterotondo, Italy. Principal Investigator: Dr. Dónal O’Carroll

*Identifying small non-coding RNAs in mouse development and physiology*

2009–2011, Postdoctoral fellow, Goodman Cancer Centre, McGill University, Montreal, Canada. Principal Investigator: Dr. Nahum Sonenberg

*Dissecting i) mechanisms regulating cap-independent translation and ii) ribosomal complexes involved in the quality control of newly synthesized polypeptides.*

Since 2012, Research Associate, Lady Davis Institute, Montreal, Canada. Principal Investigator: Dr. Ivan Topisirovic *Defining i) a new role for mTOR and CK2 kinases to coordinate initiation of mRNA translation and ii) a new subset of mRNAs differentially regulated at their 5’UTRs to reprogram cell metabolism, proliferation and survival.*

## Grant Support

Cancer Research Society Operating Grant 2014–2016 (CAD \$119,980). *The role of RACK1/JNK/eEF1A2 mediated surveillance of newly synthesized polypeptides in breast cancer.* Co-applicant.

## Fellowships and Awards

Best Publication Award, DIBIT–San Raffaele Scientific Institute, Milan, Italy, 2008

EMBO Long-term fellowship, EU, 2008 (not accepted due to rules barring transfer to foreign institution)

EMBO Long-term fellowship, EU, 2009–2011

Carl Roth/AppliChem travel grant, EMBO | EMBL Symposium Quality Control, Heidelberg, Germany, 2012

Best Presentation Award, 4<sup>th</sup> annual Lady Davis Institute Scientific Retreat, Montreal, Canada, 2013

Careers in Cancer Research Development Program Award supported by IHR-ICR and CSRI, Canadian Cancer Research Conference, Montreal, Canada, 2015

## Breaks Affecting Scientific Productivity

Extended maternity leave (since January 2016)

## Publications

1. Gorrini C, Loreni F, **Gandin V**, Sala LA, Sonenberg N, Marchisio PC, Biffo S. Fibronectin controls cap-dependent translation through beta1 integrin and eukaryotic initiation factors 4 and 2 coordinated pathways. (2005) PNAS. [PMID: 15961545]
2. Donadini A, Giacomelli F, Ravazzolo R, **Gandin V**, Marchisio PC, Biffo S. GABP complex regulates transcription of eIF6 (p27BBP), an essential trans-acting factor in ribosome biogenesis. (2006) FEBS Letters. [PMID: 16530192]
3. **Gandin V**, Miluzio A, Barbieri AM, Beugnet A, Kiyokawa H, Marchisio PC, Biffo S, Eukaryotic initiation factor 6 is rate-limiting for translation, growth and transformation (2008) Nature. [PMID: 18784653]

4. **Gandin V**, Brina D, Marchisio PC, Biffo S. JNK inhibition arrests cotranslational degradation (2010) *Biochim Biophys Acta*. [PMID: 20359507]
5. Carnevalli LS, Masuda K, Frigerio F, Le Bacquer O, Um SH, **Gandin V**, Topisirovic I, Sonenberg N, Thomas G, Kozma SC. S6K1 plays a critical role in early adipocyte differentiation (2010) *Dev Cell*. [PMID: 20493810]
6. Hernández G, Han H\*, **Gandin V\***, Fabian L, Ferreira T, Zuberek J, Sonenberg N, Brill JA, Lasko P. Eukaryotic initiation factor 4E-3 is essential for meiotic chromosome segregation, cytokinesis and male fertility in *Drosophila* (2012) *Development*. [PMID: 22833128] (\* Equal contribution)
7. Alain T, Morita M, Fonseca BD, Yanagiya A, Siddiqui N, Bhat M, Zammit D, Marcus V, Metrakos P, Voyer LA, **Gandin V**, Liu Y, Topisirovic I, Sonenberg N. eIF4E/4E-BP ratio predicts the efficacy of mTOR targeted therapies (2012) *Cancer Res*. [PMID: 23100465]
8. Bjur E, Larsson O, Yurchenko E, Zheng L, **Gandin V**, Topisirovic I, Li S, Wagner CR, Sonenberg N, Piccirillo CA. Distinct Translational Control in CD4(+) T Cell Subsets. (2013) *PLOS Genetics*. [PMID: 23658533]
9. **Gandin V**, Gutierrez GJ, Brill, LM, Varsano T, Feng Y, Aza-Blanc P, Au Q, McLaughlan S, Ferreira AT, Alain T, Sonenberg N, Topisirovic I, Ronai ZA. Degradation of newly synthesized polypeptides by ribosome-associated RACK1/c-Jun N-terminal kinase/eukaryotic elongation factor 1A2 complex. (2013) *Mol Cell Biol*. [PMID: 23608534] (Highlighted in DOI: 10.1128/MCB.00581-13)
10. **Gandin V\*\***, Topisirovic I\*\*. Trans-HSF1 express. (2013) *Science*. [PMID: 23869008] (Highlight article for Santagata et al., 2013, PMID: 23869022) (\*\* co-corresponding authors)
11. Morita M, Gravel S, Chénard V, Sikström K, Zheng L, Alain T, **Gandin V**, Avizonis D, Arguello M, Zakaria C, McLaughlan S, Nouet Y, Pause A, Pollak M, Gottlieb E, Larsson O, St-Pierre J, Topisirovic I, Sonenberg N. mTORC1 Controls Mitochondrial Activity and Biogenesis through 4E-BP-Dependent Translational Regulation. (2013) *Cell Metabolism*. [PMID: 24206664]
12. **Gandin V\***, Senft D\*, Topisirovic I, Ronai Z. RACK1 Function in Cell Motility and Protein Synthesis. (2013) *Genes & Cancer*. (\* Equal contribution) [PMID: 24349634]
13. **Gandin V**, Sikström K, Alain T, Morita M, McLaughlan S, Larsson O, Topisirovic I. Polysome fractionation and analysis of mammalian translatoemes on a genome-wide scale. (2014) *JoVE*. [PMID: 24893926]
14. Miloslavski R, Cohen E, Avraham A, Iluz Y, Hayouka Z, Kasir J, Mudhasani R, Jones SN, Cybulski N, Rüegg MA, Larsson O, Rajakumar A, **Gandin V**, Topisirovic I, Meyuhas O. Oxygen sufficiency controls TOP mRNA translation via the TSC-Rheb-mTOR pathway in a 4E-BP- independent manner. (2014) *J Mol Cell Biol*. [PMID: 24627160]
15. Zhu S, Rousseau P, Lauzon C, **Gandin V**, Topisirovic I, Autexier C. Inactive C-terminal Telomerase Reverse Transcriptase Insertion Splicing Variants are Dominant-negative Inhibitors of Telomerase. (2014) *Biochimie*. [PMID: 24412622]
16. Yamamoto K, **Gandin V**, Sasaki M, McCracken S, Li W, Silvester JL, Elia AJ, Wang F, Wakutani Y, Alexandrova R, Oo YD, Mullen P, Inoue S, Isumi M, Lapin V, Haight J, Wakeham A, Shahinian A, Ikura M, Topisirovic I, Sonenberg N and Mak TW. Largen: A Molecular Regulator of Mammalian Cell Size Control (2014), *Molecular Cell*. [PMID: 24656129]
17. **Gandin V\***, Topisirovic I\*. Co-translational mechanisms of quality control of newly synthesized polypeptides. (2014) *Translation*. (\* Co-corresponding author)
18. Cook D, Nuro E, Jones EV, Altimimi HF, Farmer WT, **Gandin V**, Hanna E, Zong R, Barbon A, Nelson DL, Topisirovic I, Rochford J, Stellwagen D, Béique JC, Murai KK. FXR1P Limits Long- Term

Memory, Long-Lasting Synaptic Potentiation, and De Novo GluA2 Translation. (2014) Cell Rep. [PMID: 25456134]

19. Im YK, La Selva R, **Gandin V**, Ha JR, Sabourin V, Sonenberg N, Pawson T, Topisirovic I, Ursini-Siegel J. The ShcA adaptor activates AKT signaling to potentiate breast tumor angiogenesis by stimulating VEGF mRNA translation in a 4E-BP-dependent manner. (2015) Oncogene. [PMID: 24837366]
20. **Gandin V**<sup>\*</sup>, Liberman N<sup>\*</sup>, Svitkin YV, David M, Virgili G, Jaramillo M, Holcik M, Nagar B, Kimchi A, Sonenberg N. DAP5 associates with eIF2b and eIF4A to promote Internal Ribosome Entry Site driven translation. (2015) Nucleic Acid Res. (\*Equal contribution) [PMID: 25779044]
21. Thandapani P, Song J, **Gandin V**, Cai Y, Rouleau S, Garant JM, Boisvert FM, Yu Z, Perreault JP, Topisirovic I, Richard S. Aven recognition of RNA G-quadruplexes regulates translation of the mixed lineage leukemia proto-oncogenes. (2015) E-Life [PMID: 26267306]
22. **Gandin V**<sup>\*</sup>, Masvidal L<sup>\*</sup>, Cargnello M<sup>\*</sup>, Gyenis L, McLaughlan S, Cai Y, Tenkerian C, Morita M, Balanathan P, Jean-Jean O, Stambolic V, Trost M, Furic L, Larose L, Koromilas A, Asano K, Litchfield D, Larsson O and Topisirovic I. mTORC1 and CK2 coordinate ternary and eIF4F complex assembly. (2016) Nat Commun. (\*Equal contribution) [PMID: 27040916]
23. **Gandin V**<sup>\*</sup>, Masvidal L<sup>\*</sup>, Hulea L<sup>\*</sup>, Gravel SP, Cargnello M, McLaughlan S, Cai Y, Balanathan P, Morita M, Rajakumar A, Furic L, Pollak M, Porco Jr. JA, St-Pierre J, Pelletier J, Larsson O and Topisirovic I. nanoCAGE reveals 5' UTR features that define specific modes of translation of functionally related mTOR-sensitive mRNAs. (2016) Genome Res. (\*Equal contribution) [PMID: 26984228]

## Invited Talks

Stress-induced degradation of newly synthesized polypeptides is mediated by ribosome-associated RACK1/JNK/ eEF1A2 complex, EMBO | EMBL Symposium Quality Control – From Molecules to Organelles, Heidelberg, Germany, Sept. 2012

Degradation of newly synthesized polypeptides by ribosome associated RACK1/JNK/eEF1A2 complex, Lady Davis Institute (LDI) Scientific Retreat, Montreal, Canada, May 2013

Stress-Induced Quality Control Pathway on Translating Ribosomes, University of Turin, Turin, Italy, Dec. 2013

*eIF2B links mTOR and eIF2α signaling*, Translational Control meeting, Cold Spring Harbor Laboratory, Sept. 2014

Molecular underpinnings of mRNA translation promoting tumorigenesis, Vertex Pharmaceuticals, Laval, Canada, Sept. 2016

Mechanisms of mRNA translation and ribosome dysregulation in colorectal cancer, Armenise- Harvard Early Career Development Award, Rome, Italy, Nov. 2016

## Poster Presentations (Recent Major Symposia)

*The role of ribosome-associated RACK1/JNK/eEF1A2 protein surveillance complexes in breast cancer.* Gandin V, Hulea L, Kim H, McLaughlan S, Ronai Z, Topisirovic I. Translational Control meeting, Cold Spring Harbor Laboratory, Sept. 2014

*mTOR coordinates ternary complex and eIF4F assembly.* Gandin V, McLaughlan S, Larose L, Trost M, Topisirovic I. Translation Machinery in Health & Disease, Gordon Research Conference, Feb 2015

**Reviewer**

*Scientific Reports, DNA and Cell Biology* (Invited)

*Cell, Molecular and Cellular Biology, PLoS One, International Journal of Molecular Sciences,*

*Acta Biochimica et Biophysica Sinica* (de facto, as trainee)

Data

3 Gennaio 2017

Luogo

Montreal