

ALESSIO BALZERANO

Date of birth: 02.07.1989

Address: Via delle ginestre 5, Fabrica di Roma (VT), Italia

Mobile: 339 5340004

E-mails: alessio.balzerano@gmail.com/alessio.balzerano@uniroma1.it

Linkedin: linkedin.com/in/alessio-balzerano-173217227

Skype: alessio.balzerano

WORK EXPERIENCE

January 2023 – date

Post-doctoral fellowship at University of Rome “La Sapienza”

Lab of Molecular Oncology, Department of Molecular Medicine, Rome, 00161, Italy

Research activity: study of non-canonical roles of NBS1 protein; identification of a new role of NBS1 in the control of the primary ciliogenesis, Sonic Hedgehog signaling (SHH) and SHH-medulloblastoma.

October 2022 – December 2022

Fellowship at University of Rome “La Sapienza”, “Istituto Pasteur - Fondazione Cenci Bolognetti”

Research activity: exploring role of the DNA damage response protein NBS1 at the centrosome and BB by biochemical enrichment and immunofluorescence analysis.

June 2022 – September 2022

Fixed-term collaboration contract at University of Tuscia

Department of Biological and Ecological Sciences, Viterbo, 01100, Italy

Research activity: study the role of CSA protein at the centrosome and in the regulation of Cyclin B1.

June 2019 – May 2022

Post-doctoral fellowship at University of Tuscia

Unit of Molecular Genetics of Aging, Department of Biological and Ecological Sciences, Viterbo, 01100, Italy

Research activity: study of the dynamic localization of Akt and CSA proteins during the cell cycle and in response to specific mitogenic signals. Definition of the molecular mechanism through which the CSA protein promotes the activation of the PI3K-Akt pathway in cancer. This work is the topic of a paper under review on PNAS.

OTHER PROFESSIONAL ACTIVITIES

Oral presentation – **A. Balzerano**, F. Fabretti, V. Nicolis Di Robilant, V. La Monica, M. Augusto, D. Battaglini, F. Polonara, S. Di Giulio, F. Belardinilli, M. Moretti, A. Corsi, S. De Panfilis, Z. Wang, L. Sansone, M.T. Viscomi, C. Palazzo, E. De Smaele, M. Petroni, G. Giannini. “A novel regulatory role of NBS1 at the primary cilium impinges on cerebellar development and medulloblastoma insurgence”. BraYn 2024, Verona, Italy

Oral and poster presentation - **A. Balzerano**, F. Fabretti, V. Nicolis Di Robilant, V. La Monica, M. Augusto, D. Battaglini, F. Polonara, S. Di Giulio, F. Belardinilli, M. Moretti, A. Corsi, S. De Panfilis, Z. Wang, L. Sansone, M.T. Viscomi, C. Palazzo, E. De Smaele, M. Petroni, G. Giannini. “The DDR protein NBS1 is involved in the Sonic Hedgehog signaling and medulloblastoma onset through an unpredicted role at the primary cilium”. SIC 2024, Milan, Italy

Poster presentation – **A. Balzerano**, F. Fabretti, V. Nicolis di Robilant, V. La Monica, M. Augusto, D. Battaglini, F. Polonara, S. Di Giulio, M. Petroni, G. Giannini. “DNA damage does affect neither the localization of NBS1 at the centrosome/basal body nor the primary ciliogenesis”. EMBO 2023, Istanbul, Turkey

Nominated “cultore della materia” in Genetica (2021)

Poster presentation - **A. Balzerano**, E. Paccosi, A. Pisani, C. Sugoni, S. Filippi and L. Proietti-De-Santis. “CSA regulates the activation of Akt through its K63-linked ubiquitination”. AGI 2021, online

Translation of several chapters of the book “Genetics: from genes to genomes, 7th edition” (June 2021 – September 2021) of Michael L. Goldberg, Janice Fischer, Leroy Hood, Leland Hartwell. Italian edition edited by Prof. Giorgio Pranterà

Gave several lectures of “Genetics of aging” (2019 – 2022)

University of Tuscia, Department of Biological and Ecological Sciences, Viterbo, 01100, Italy

AWARDS

“Avvio alla Ricerca 2024”, University of Rome “La Sapienza”

Title: Dissecting the role of NBS1 at the centrosome/basal body and its involvement in cancer initiation and progression

“Avvio alla Ricerca 2023”, University of Rome “La Sapienza”

Title: Characterization of the interactome of Nijmegen breakage syndrome (NBS1) protein at the Basal Body of Primary Cilia to dissect its role in SHH-medulloblastoma

FORMATION

November 2015 - May 2019

PhD at University of Tuscia

Unit of Molecular Genetics of Aging, Department of Biological and Ecological Sciences, Viterbo, 01100, Italy

Thesis title: The role of CSA and CSB proteins in protective cell signaling pathways.

May 2015 – September 2015

Traineeship at University of Cambridge, UK

Department of Haematology, Blood Donor Centre

February 2015

Master Degree in Cellular and Molecular Biology (110/110 with honours)

Unit of Molecular Genetics of Aging, Department of Biological and Ecological Sciences, Viterbo, 01100, Italy

Thesis title: Overexpression of CSB protein protects to HeLa cells from Endoplasmic Reticulum stress

PUBLICATIONS

- Paccosi Elena, Artemi Giulia, Filippi Silvia, **Balzerano Alessio**, Costanzo Federico, Laghezza-Masci Valentina, Proietti Silvia and Proietti-De-Santis Luca. 2023. “Cockayne syndrome group A protein localizes at centrosomes during mitosis and regulates Cyclin B1 ubiquitination.” *European Journal of Cell Biology*, 151325. <https://doi.org/10.1016/j.ejcb.2023.151325> - **IF: 6.6**
- Paccosi Elena[#], **Balzerano Alessio**[#] and Proietti-De-Santis Luca. 2023. “Interfering with the Ubiquitin-Mediated Regulation of Akt as a Strategy for Cancer Treatment.” *International Journal of Molecular Sciences*, 24(3), 2809. <https://doi.org/10.3390/ijms24032809> (**#first author**) - **IF: 5.6**
- **Balzerano Alessio**^{*}, Gevi Federica, Nisi Stefano, Rinalducci Sara, Lasagni Marzio and Arisi Ivan^{*}. 2022. “Gene expression profiling as a new real-time assay in human biomonitoring of waste-to-energy plants workers.” *Biological Trace Element Research*, 1-9 <https://doi.org/10.1007/s12011-022-03482-2> (***co-corresponding author**) - **IF: 3.9**
- Filippi Silvia, Paccosi Elena, **Balzerano Alessio**, Ferretti Margherita, Poli Giulia, Taborri Juri, Brancorsini Stefano and Proietti-De-Santis Luca. 2022. “CSA antisense targeting enhances anticancer drug sensitivity in breast cancer cells, including the Triple-Negative Subtype.” *Cancers*. 14.7 (1687). <https://doi.org/10.3390/cancers14071687> - **IF: 5.2**
- Paccosi Elena, Costantino Michele, **Balzerano Alessio**, Filippi Silvia, Brancorsini Stefano and Proietti-De-Santis Luca. 2021. “Neuroblastoma cells depend on csb for faithful execution of cytokinesis and survival.” *International Journal of Molecular Sciences*. 22, 10070. <https://doi.org/10.3390/ijms221810070> - **IF: 5.6**
- **Balzerano Alessio**, Paccosi Elena, and Proietti-De-Santis Luca. 2021. “Evolutionary Mechanisms of Cancer Suggest Rational Therapeutic Approaches.” *Cytogenetic and Genome Research*. 1–10. Advance online publication. <https://doi.org/10.1159/000516530> - **IF: 1.7**
- Paccosi Elena, Costanzo Federico, Costantino Michele, **Balzerano Alessio**, Monteonofrio Laura, Soddu Silvia, Prantera Giorgio, Brancorsini Stefano, Egly Jean-Marc, and Proietti-De-Santis Luca. 2020. “CSA and CSB known as DNA repair factors, as part of a Ubiquitin-Proteasome degradation complex regulate cell division.” *Proceedings of the National Academy of Sciences*. 117, 30498–30508. <https://doi.org/10.1073/pnas.2006543117>- **IF: 11.1**
- Proietti-De-Santis Luca, **Balzerano Alessio**, and Prantera Giorgio. 2018. “CSB: An Emerging Actionable Target for Cancer Therapy.” *Trends in Cancer*, 4(3), 172–175. <https://doi.org/10.1016/j.trecan.2018.01.005>. - **IF: 18.4**
- Caputo Manuela, **Balzerano Alessio**, Arisi Ivan, D'Onofrio Mara, Brandi Rossella, Bongiorni Silvia, Brancorsini Stefano, Frontini Mattia, and Proietti-De-Santis Luca. 2017. “CSB Ablation Induced Apoptosis Is Mediated by Increased Endoplasmic Reticulum Stress Response.” *PLoS ONE*, 12(3). <https://doi.org/10.1371/journal.pone.0172399>. - **IF: 3.7**

Roma, 10/01/2025