



Dalila Boi

EDUCATION AND TRAINING

PhD

"Sapienza" University of Rome [11/2018]

Address: Department of Biochemical Sciences "A. Rossi Fanelli" Institute of Molecular Biology and Pathology, CNR National Research Council,

Final grade : Defense on May 2022

Thesis: Synthetic peptides as an innovative approach for Aurora-A/N-Myc complex inhibition in neuroblastoma cell lines

Master Degree in Genetics and Molecular Biology

"Sapienza" University of Rome [09/2016 – 07/2018]

Address: Department of Biochemical Sciences "A. Rossi Fanelli",

Final grade : 110/110 cum laude

Thesis: Purificazione del complesso tra HemA ed HemL, enzimi essenziali nella biosintesi dei composti tetrapirrolici

Bachelor's Degree in Biological Sciences

"Sapienza" University of Rome [09/2013 – 10/2016]

Address: Department of Biochemical Sciences "A. Rossi Fanelli",

Final grade : 110/110 cum laude

Thesis: Messa a punto di una strategia di espressione e purificazione della Glutamil-tRNA reduttasi da *Acinetobacter baumannii*

WORK EXPERIENCE

PhD Fellow

"Sapienza" University of Rome [11/2018 – 11/2021]

Name of unit or department: Dep. Biochemical Sciences "A. Rossi Fanelli"; Institute of Molecular Biology and Pathology (CNR) - **Business or sector:** Professional, scientific and technical activities

Research activity: identification of novel small molecules/ peptide inhibitors able to disrupt the Aurora-A/N-Myc complex in neuroblastoma cell lines. Supervisor: Alessandro Paiardini; tutor: Giulia Guarguaglini.

Internship (Master's thesis)

"Sapienza" University of Rome [04/2016 – 07/2018]

Name of unit or department: Department of Biochemical Sciences "A. Rossi Fanelli" - **Business or sector:** Professional, scientific and technical activities

Research activity: Characterization of the complex between HemA and HemL proteins, enzymes essential for tetrapyrroles biosynthesis, from *Acinetobacter baumannii*. Supervisor: Roberto Contestabile

Internship (Bachelor's thesis)

"Sapienza" University of Rome [03/2016 – 09/2016]

Name of unit or department: Department of Biochemical Sciences "A. Rossi Fanelli" - Business or sector: Professional, scientific and technical activities

Research activity: Development of a protocol for the purification of the Hema protein, involved in the tetrapyrroles biosynthesis, from *Acinetobacter baumannii*. Supervisor: Roberto Contestabile.

PUBLICATIONS

Prediction and Modeling of Protein–Protein Interactions Using “Spotted” Peptides with a Template-Based Approach

[2022]

<https://doi.org/10.3390/biom12020201>

Biomolecules 2022, 12, 201

C. Gasbarri; S. Rosignoli; G. Janson; **D. Boi**; A. Paiardini.

PHA-680626 is an Effective Inhibitor of the Interaction between Aurora-A and N-Myc

[2021]

<https://doi.org/10.3390/ijms222313122>

Int J Mol Sci . 2021 Dec 4;22(23):13122

D. Boi, F. Souvalidou, D. Capelli, F. Polverino, G. Marini, R. Montanari, G. Pochetti, A. Tramonti, R. Contestabile, D. Trisciuglio, P. Carpinelli, C. Ascanelli, C. Lindon, A. De Leo, M. Saviano, R. Di Santo, R. Costi, G. Guarguaglini, A. Paiardini

Cytosolic localization and in vitro assembly of human de novo thymidylate synthesis complex

[2021]

<https://doi.org/10.1111/febs.16248>

The FEBS Journal (2021)

S. Spizzichino, **D. Boi**, G. Boumis, R. Lucchi, F. R. Liberati, D. Capelli, R. Montanari, G. Pochetti, R. Piacentini, G. Parisi, A. Paone, S. Rinaldo, R. Contestabile, A. Tramonti, A. Paiardini, G. Giardina and F. Cutruzzol'a

Nuclear localisation of Aurora-A: its regulation and significance for Aurora-A functions in cancer

[2021]

<https://doi.org/10.1038/s41388-021-01766-w>

Oncogene (2021) 40:3917–3928

F. D. Naso*, **D. Boi***, C. Ascanelli, G. Pamfil, C. Lindon, A. Paiardini, G. Guarguaglini

*These authors contributed equally

Isolation of a Complex Formed Between *Acinetobacter baumannii* Hema and HemL, Key Enzymes of Tetrapyrroles Biosynthesis

[2019]

<https://doi.org/10.3389/fmolb.2019.00006>

Front Mol Biosci. 2019 Feb 26;6:6

C. Nardella, **D. Boi**, M. L. di Salvo, A. Barile, J. Stetefeld, A. Tramonti and R. Contestabile

POSTERS IN NATIONAL AND INTERNATIONAL CONFERENCES

Synthetic peptides as an innovative approach for Aurora-A/N-Myc complex inhibition in neuroblastoma cell lines

D. Boi, F. Souvalidou, F. Polverino, G. Guarguaglini and A. Paiardini. "Systems approaches in cancer", Split, Croatia, September 2021.

TPX2 interaction enhances the oncogenic potential of the Aurora-A kinase and can be exploited for innovative inhibition strategies.

F.D. Naso, I.A. Asteriti, **D. Boi**, A. Tramonti, G. Colotti, A. Paiardini, G. Guarguaglini; "From model system to therapies" IBPM annual meeting (Roma, Italia, Maggio 2019)

ABSTRACT IN NATIONAL AND INTERNATIONAL CONFERENCES

Cytosolic localization and in vitro assembly of human de novo thymidylate synthesis complex

S. Spizzichino; **D. Boi**; G. Boumis; A. Tramonti; A. Paiardini; R. Contestabile; G. Pochetti; S. Rinaldo; A. Paone; G. Giardina; F. Cutruzzola'. Intervent presented at the congress 16th SIBBM Seminar Frontiers in Molecular Biology Frontiers in metabolic research; online; 2021

THECNICAL SKILLS

Competences

Biochemical methodologies: protein purification, bacterial transformation and cultures, adsorption spectroscopy, enzyme assays, affinity chromatography, size exclusion chromatography, gel electrophoresis, western blot, far western blot, immunoprecipitation.

General molecular biology methodologies: plasmid DNA purification, recombinant DNA techniques, site-directed mutagenesis, PCR.

Cellular biology methodologies: cell cultures, cell transfection with plasmid or siRNA, cell cycle synchronization, in situ proximity ligation assay, immunofluorescence.

Microscopy: image acquisition; manual and automated qualitative and quantitative image analysis.

Data analysis: graphical representation of data (excel, prism), basic statistical analyses, image analysis (photoshop, Nis Element).

LANGUAGE SKILLS

Mother tongue(s): **Italian**

Other language(s):

English

LISTENING B1 READING B2 WRITING B2

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

DIGITAL SKILLS

Microsoft Word / Microsoft Excel / Microsoft Powerpoint / Google Drive / Google Docs

ORGANISATIONAL SKILLS

Organisational / managerial skills

Excellent organizational skills. I can organize my work in order to do more activities simultaneously. I never waste my time. I can work well in groups and focus on my role. I can take important decisions about my work.

COMMUNICATION AND INTERPERSONAL SKILLS

Communication skills

Very good communication skills acquired during my studies. I am able to communicate concepts in a simple and clear way. I had the opportunity to be a guide in a museum of comparative anatomy in the university and this activity helped me to improve my communication skills

Job-related skills

Ability to work in a precise, orderly, safe and cooperative way in the laboratory.