CURRICULUM VITAE ET STUDIORUM
Georgiana Pamfil

EDUCATION
December 2019: Bachelor's Degree in Biological Sciences, Sapienza University of Rome (110/110). Supervisor Dr Giulia Guarguaglini, Institute of Molecular Biology and Pathology - IBPM CNR (Rome, Italy). Thesis title: "Non-canonical roles of Aurora A in cancer"

TRAINING
March 2022 to present: Intern for Master degree, Institute of Molecular Biology and Pathology - IBPM CNR (Rome, Italy), supervisor Dr Giulia Guarguaglini. Thesis defense due on 18 January 2023, with a thesis entitled "Effects of the Aurora A kinase inhibitor PHA-680626 on MYCN-amplified neuroblastoma cell lines"

RESEARCH INTEREST AND ACTIVITY
During my Master thesis I investigated the effects of the Aurora A conformation disruptive (CD) inhibitor PHA-680626 in neuroblastoma cells. I had previously studied the non-canonical roles of Aurora A in cancer, among which the stabilization of the N-Myc oncoprotein in neuroblastoma, in a literature review project for my Bachelors' thesis, which resulted in the publication of a review paper in Oncogene (Naso et al., 2021). Indeed, in MYCN-amplified neuroblastoma cell lines it was shown that the Aurora A mitotic kinase prevents N-Myc degradation, thus sustaining high levels of the oncoprotein which promote cell transformation. This activity is carried out by a kinase-independent mechanism of Aurora A that still requires it to be in its active conformation in order to bind N-Myc and preventing its ubiquitination. CD Aurora A kinase inhibitors are able to induce a conformational change in the position of the activation loop of Aurora A that prevents N-Myc binding and its stabilization; indeed, it was shown that some Aurora A CD inhibitors, such as MLN8054, are able to reduce N-Myc protein levels and cell growth in MYCN-amplified neuroblastoma cell lines. On my Master thesis I studied the effects of the newly identified CD Aurora A kinase inhibitor, PHA-680626, on MYCN-amplified vs MYCN non-amplified neuroblastoma cells. Using different cellular and biochemical assays obtained results indicate that PHA-680626 is therefore a promising and selective candidate drug for this highly aggressive pediatric tumor.

TECHNICAL SKILLS AND COMPETENCES
Biochemical methodologies: protein gel electrophoresis, western blot, Immunoprecipitation.
Cellular biology methodologies: mammalian cell cultures, in situ proximity ligation assays, immunofluorescence, RNA interference, MTT, Protein stability assays, IncuCyte analyses.
Microscopy: image acquisition with widefield and Spinning Disk Confocal microscopes, manual and automated qualitative and quantitative image analysis.
Data analysis: graphical representation of data (Excel, Prism), basic statistical analyses (Prism), image analysis (Photoshop, Nis Elements).

PUBLICATIONS
F. D. Naso, D. Boi, C. Ascanelli, **G. Pamfil**, C. Lindon, A. Paiardini & G. Guarguaglini. Nuclear localisation of Aurora-A: its regulation and significance for Aurora-A functions in cancer. 2021. Oncogene, 40: 3917–3928.

PARTECIPATION IN COURSES

July 2022. Course "Cellular microscopy and image analysis" (organized by IBPM-CNR, in collaboration with the PhD program in Genetics and Molecular Biology of Sapienza University)

LANGUAGE SKILLS

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
B2	B2	B2	B2	B2

Curriculum per la destinazione "ai fini della pubblicazione in ottemperanza dell'art.15 del D.Lgs. 33/2013".

Rome   12/01/2023

Georgiana Pamfil