UNIVERSITÀ DEGLI STUDI DI MILANO

TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO **ID CODE __4797__**

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di** _____Scienze Farmaceutiche_____

Scientist- in - charge: __ Prof. Loris Rizzello __

[Laura Broglia]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Broglia
Name	Laura
Date of birth	[23, 04, 1991]

PRESENT OCCUPATION

Appointment	Structure
Post-doc	Max Planck Unit for the Science of Pathogens, Emmanuelle Charpentier's laboratory (Berlin, Germany)

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	Molecular and Industrial Biotechnology	University of Bologna	2015
Specialization	-	-	-
PhD	Biology/ Microbiology	Humboldt-Universität zu Berlin	2020
Master	-	-	-
Degree of medical specialization	-	-	-
Degree of European specialization	-	-	-
Other: Degree	Biotechnology	University of Bologna	2013

REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City

Università degli Studi di Milano – Direzione Risorse Umane
Ufficio Contratti di formazione e Ricerca
Via Sant'Antonio 12 - 20122 Milano, Italia
Assegni.ricerca@unimi.it

01.08.2020	Gesellschaft für Biochemie und Molekularbiologie, GBM (Società di biochimica e biologia molecolare)	Frankfurt /Main (Germany)

FOREIGN LANGUAGES

Languages	level of knowledge
Italian	Mother tongue
English	Advanced

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2017	Best Poster award - ZIBI Graduate School retreat (Berlin, Germany)
2016	Best Master student award - University of Bologna (Italy)
2016	Selected member of the International Max Planck Research School for Infectious Diseases and Immunology (Berlin, Germany)
2015	Research scholarship for Master thesis - University of Bologna (Italy)

TRAINING OR RESEARCH ACTIVITY

I have been always highly interested in understanding how organisms precisely control gene expression. Initially, during my bachelor training, I investigated how mammalian cells re-programmed their gene expression profile in response to stresses. Then, in my master, being awarded a thesis research scholarship, I studied the post-transcriptional mechanisms of **bacterial gene expression** regulation mediated by ribonucleases, at the Helmholtz Centre for Infection Research in Braunschweig, under the supervision of Prof. Emmanuelle Charpentier and Dr. Anaïs Le Rhun. This research path finally led me to elucidate —as a PhD candidate— the role of RNA degradation as a key strategy used by bacteria to rapidly modulate the levels of specific small regulatory RNAs and messenger RNAs, in Emmanuelle Charpentier's group at the newly established Max Planck Unit for the Science of Pathogens in Berlin. During my graduate studies, I have employed a combination of genomic, molecular and biochemical approaches to characterize **RNA degradation** mechanisms in the **human pathogen** ***Streptococcus pyogenes***. While studying RNA degradation, I mastered fundamental RNA methodologies as well as RNA-seq-based approaches and I have gained in-depth skills in **microbiology** and **molecular biology**. As a result of the multidisciplinary environment that characterizes Emmanuelle Charpentier's unit, I expanded my knowledge on numerous topics spanning from CRISPR-Cas9 gene editing technology to **host-pathogen interaction**. I have completed my doctoral studies with a *summa cum laude* in June of the current year. I am currently working as a postdoctoral researcher in Emmanuelle Charpentier's unit, where, to further investigate mechanism of RNA process beyond bacteria, I have joined Dr. Matteo Ugolini, in his research project aiming at identifying, in human immune cells, RNA binding proteins which play a key role in **pathogen sensing** during a bacterial infection.

PROJECT ACTIVITY

Year	Project
2016-2020	Investigation of the functions and roles of ribonulceases in the strict human pathogen *Streptococcus pyogenes*
2020 - present	Identification of interkingdom RNA binding proteins involved in sensing pathogens during infection

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PATENTS

Patent
-

CONGRESSES AND SEMINARS (*Selected*)

Date	Title	Place
5.11.2020	Genome-wide analysis of RNase targets in *Streptococcus pyogenes* by RNA-sequencing	Seminar Instituto de Biotecnologìa - Universidad Nacional Autónoma de México (*Mexico City, Mexico*)
23.01.2020	RNA-mediated regulation in the human pathogen *Streptococcus pyogenes*	RNA club (*Berlin, Germany*)
7.11.2919	Deciphering the role of endoRNase Y in *Streptococcus pyogenes*	Microbiology club (*Berlin, Germany*)
4.09.2019	Concerted action of RNase Y and 3'-to-5' exoRNases in *Streptococcus pyogenes*	The New Microbiology EMBO/FEBS Lecture Course (*Spetses, Greece*)
19.08.2018	New insight into RNase Y regulation of streptococcal pyrogenic exotoxin B	Gordon Research Conference Molecular Mechanisms at the Streptococcal-Host Interface (*Newry, USA*)
18.09.2016	Cooperative work between RNase Y and RNase III on the regulation of gene expression in *Streptococcus pyogenes.*	EMBO practical course "Non-coding RNA in infection" (*Würzburg, Germany*)

PUBLICATIONS

Books
-

Articles in reviews
[An RNA- seq based comparative approach unravels the transcriptome-wide interplay between 3'-to-5' exoRNases and RNase Y in *Streptococcus pyogenes. Nat. Commun.* **11**, 1-12, 2020; doi: 10.1038/s41467-020-15387-6]
[RNase Y-mediated regulation of the streptococcal pyrogenic exotoxin B. *RNA Biol.* **15**, 1336-1347; doi: 10.1080/15476286.2018.1532253]
[Identification of endoribonuclease specific cleavage positions reveals novel targets of RNase III in *Streptococcus pyogenes. Nucleic Acids Res.* **45**, 2329-2340; doi: 10.1093/nar/gkw1316.]

Congress proceedings (*Selected*)
[Concerted action of RNase Y and 3'-to-5' exoRNases in *Streptococcus pyogenes*, EMBO/FEBS Lecture Course-The New Microbiology Spetses, Greece, 2019]
[New insight into RNase Y regulation of streptococcal pyrogenic exotoxin B, Gordon Research Conference Molecular Mechanisms at the Streptococcal-Host Interface, Newry, USA, 2018]
[Transcriptome-wide targets of RNase III in *Streptococcus pyogenes*, 19th International conference on Bacilli & Gram-Positive Bacteria, Berlin, Germany, 2017]
[Determination of transcriptome wide RNase III targets in *Streptococcus pyogenes*, Bavarian Academy of Sciences and Humanities, Munich, 2016]
[Cooperative work between RNase Y and RNase III on the regulation of gene expression in *Streptococcus pyogenes*, EMBO practical course "Non-coding RNA in infection" Würzburg, Germany, 2016

OTHER INFORMATION

The publication record can also be viewed in ORCID at the following link: https://orcid.org/0000-0003-

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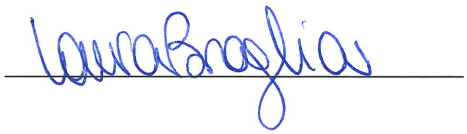
2099-7373
During my doctoral studies I supervised two master students for 8 and 7 months, respectively. In addition, I have been involved in training lab members teaching techniques of bacteriology and RNA biology.

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Place and date: ____Berlin_____, ___29.11.2020_____

SIGNATURE



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