TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO **COD. ID: 6037**

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 Biotecnologie Mediche e Medicina Traslazionale**

Scientist- in – charge: Prof. Massimo Aureli

Dorina Dobi

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Dobi
Name	Dorina

PRESENT OCCUPATION

Appointment	Structure
Ph.D. student	L.I.T.A- University of Milan

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	LM- 41 – Medical School	University of Debrecen	2019

FOREIGN LANGUAGES

Languages	level of knowledge
Hungarian	C2 – mother tongue
Italian	C1 – advanced level
English	C1 – advanced level

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
01/11/2020 – 31/01/2024	Winner of a scholarship for a three-year doctoral course in Translational Medicine at the University of Milan
9-14 July 2022	Travel award for the Biochemistry Global Unit, 46th FEBS congress.
8-12 July 2023	Travel award for the 47th FEBS congress.

TRAINING OR RESEARCH ACTIVITY

My research activity covers both neurodegenerative disorders and Cystic Fibrosis. In particular, during my PhD studies I was fully employed in the study of the role of sphingolipids in the regulation of membrane properties and protein functions. To be specific, from the side of the Cystic Fibrosis, I studied the involvement of the ganglioside GM1 and of cholesterol in the maintenance and stabilization of CFTR at the cell surface of bronchial epithelial cells. In addition, I verified the efficacy of these lipids as adjuvants to Kaftrio, a CFTR modulator, in the rescue of the CFTR carrying the mutation F508del, which is the most common one. From the side of neurodegeneration, using cutting edge models, such as dopaminergic neurons and mid brain organoids derived from human induced pluripotent stem cells, I studied the role of the sphingolipids and of their metabolism in the establishment of the neuronal degeneration occurring upon lysosomal impairment.

During my training, I acquired great experience in the application of several analytical techniques and methodologies commonly used in cell biochemistry and molecular biology laboratories, in particular:
- In vitro cell cultures (tumor and bronchial epithelial cells of different origins; induced pluripotent stem cells and their differentiation into dopaminergic neurons and mid brain organoids)
- Electrophoretic and immunoelectrophoretic techniques for the evaluation of the protein expression and possible post translational modification
- Isolation of plasma membrane fractions and of detergent resistant membrane fractions
- Immunofluorescence techniques
- Methods for the characterization of the lipid pattern based on thin layer chromatography
- Methods for analysing the ganglioside content of cells in culture
- Metabolic radiolabeling techniques of the evaluation of the sphingolipid metabolism
- Enzymatic assays of the enzymes involved in the sphingolipid metabolism based on the use of fluorogenic and natural substrates
- Assays for the assessment of cell viability.

PROJECT ACTIVITY

Year	Project
2020-23	PhD project: Lipid based approaches to optimize the effectiveness of innovative drug modulators in Cystic Fibrosis
2020-22	Lipid based therapeutic strategies to optimize the effectiveness of innovative drugs to rescue F508del CFTR (participant, project ID: FFC#02/2020)

2021-22	Multiomics exploration of the CF primary bronchial epithelium lipidome and its role on CFTR rescue (participant, project ID: FFC#01/2021)
2022-24	A lipid-based therapeutic approach to rescue CFTR with orphan mutations and implications in host-pathogen interactions in cystic fibrosis (participant, project ID: FFC#01/2022)
2022-24	Evaluation of phage interactions with host immune system in models of cystic fibrosis: one step toward phage therapy application (participant, project ID: FFC#12/2022)
2023-24	Investigation of an off-target effect of Kaftrio: the modulation of de-novo sphingolipid synthesis (participant, project ID: FFC#01/2023)

CONGRESSES AND SEMINARS

Date	Title	Place
20-21 May 2021	WebPro- Proteins of the web	1st online meeting of the Group "Proteine" of the Italian Society for Biochemistry and Molecular Biology
13-16 Sept 2021	32nd National Meeting "A. Castellani" of PhD students in biochemical sciences	Brallo di Pregola, Pavia, Italy
27 Sept 2021	5th Workshop BioMeTra	University of Milan, LITA Segrate
23-24 Sept 2021	61° SIB 2021 Congress	Virtual Edition
5 October 2021	Short talk about the Data Management Plan	SEMM University, Milano
25-26 November 2021	XIX Convention of Investigators in cystic fibrosis	Virtual Edition
30 March - 2 April 2022	17th ECFS Basic Science Conference	Albufeira, Portugal,
6-9 June 2022	33rd National Meeting "A. Castellani" of PhD students in biochemical sciences	Brallo di Pregola, Pavia, Italy
20 June 2022	Meeting of young biochemists in Lombardy	Milano
9-14 July 2022	Biochemistry Global Unit, 46th FEBS congress	Lisbon, Portugal
20 Sept 2022	6th Workshop BioMeTra	University of Milan, LITA Segrate
24-26 Nov 2022	XX Convention of Investigators in Cystic Fibrosis	Verona, Italy
30 November 2022	Short talk about the Data Management Plan	SEMM University, Milano
5-9 June 2023	34th National Meeting "A. Castellani" of PhD students in biochemical sciences	Brallo di Pregola, Pavia, Italy

8-12 July 2023	47th FEBS Congress	Tours, France
19-24 July 2023	International School of Nanomedicine, InnolGly: The glycobiology of cell metabolic processes in human pathology	Erice, Italy
18-19 Sept 2023	7th Workshop BioMeTra	University of Milan, LITA Segrate
22 Sept 2023	Meeting of young biochemists in Lombardy	Brescia
23-25 November 2023	XXI Convention of Investigators in Cystic Fibrosis	Verona, Italy

PUBLICATIONS

Books
Gangliosides and Cell Surface Ganglioside Metabolic Enzymes in the Nervous System, Adv Neurobiol. 2023;29:305-332. Aureli M, Mauri L, Carsana EV, Dobi D, Breviario S, Lunghi G, Sonnino S; doi: 10.1007/978-3-031-12390-0_11. PMID: 36255680.
Publication of the medical thesis to morebooks: Parkinson Disease, Patho-physiological and Therapeutic bases, Dobi D, 2020, https://www.morebooks.shop/store/hu/book/parkinson-k%C3%B3r/isbn/978-620-0-51784-5

Articles in reviews
Cross-talk between CFTR and sphingolipids in cystic fibrosis, FEBS Open Bio, 2023. Dobi, D., Loberto, N., Bassi, R., Pistocchi, A., Lunghi, G., Tamanini, A. and Aureli, M., https://doi.org/10.1002/2211-5463.13660

Congress proceedings
9-14 July 2022, Biochemistry Global Unit, 46th FEBS congress CFTR modulators and ganglioside GM1: a new combination for the treatment of Cystic Fibrosis, D. Dobi, N. Loberto, R. Bassi, L. Mauri, M.C. Dechecchi, E. Tedesco, D. Olioso, G. Cabrini, G. Lippi, N. Pedemonte, A. Tamanini, M. Aureli (2022), Posters. FEBS Open Bio, 12: 67-336. https://doi.org/10.1002/2211-5463.13440
3-5 November 2022, North American Cystic Fibrosis Conference Lipid-based therapeutic strategies in addition to cystic fibrosis transmembrane conductance regulator modulators for cystic fibrosis treatment C. Boni, N. Loberto, D. Dobi, R. Bassi, L. Mauri, D. Olioso, V. Bezzerri, D. Onorato, A. Polimenia, G. Cabrini, G. Lippi, N. Pedemonte, A. Tamanini, M. Aureli (2022.10.01) Journal of Cystic Fibrosis, 10.1016/S1569-1993(22)01378-9
8-12 July 2023, 47th FEBS Congress A lipid-based approach to improve the stability of F508del-CFTR at the plasma membrane level D. Dobi, N. Loberto, R. Bassi, L. Mauri, M.C. Dechecchi, E. Tedesco, D. Olioso, G. Cabrini, G. Lippi, N. Pedemonte, A. Tamanini, M. Aureli (2023), Posters. FEBS Open Bio, 13: 61-258. https://doi.org/10.1002/2211-5463.13646

OTHER INFORMATION

Student's tutoring during biochemical laboratory activities of the bachelor's degree Biotecnologie Mediche (Medical Biotechnology), course of Laboratorio di metodologie cellulari e molecolari (Cell and molecular methodologies) coordinated by Dott. Rosaria Bassi and Prof. Massimo Aureli. Academic year **2023/24.**	
Student's tutoring during biochemical laboratory activities of the master's degree in Medical Biotechnology and Molecular Medicine, Course of Human Biochemistry, coordinated by Prof.ssa Paola Giussani. Year **2021/22** and **2022/23.**	
Tutoring – Michela Facchini. Bachelor's degree thesis in Biotecnologie Mediche; Thesis supervisor: Prof. Massimo Aureli; Thesis advisor: Dott.ssa Dorina Dobi; academic year: **2023/2024**.	
Tutoring – Alice Lipari, "Studio dell'effetto dell'espressione di varianti di CFTR sull'organizzazione di membrana in cellule epiteliali bronchiali umane", Bachelor's degree thesis in Biotecnologie Mediche; Thesis supervisor: Prof. Massimo Aureli; Thesis advisor: Dott.ssa Dorina Dobi; academic year: **2022/2023.**	
Tutoring - Matteo Monachello, "Valutazione dell'effetto del ganglioside GM1 sulla stabilità del canale CFTR in un modello cellulare di Fibrosi Cistica", Bachelor's degree thesis in Biotecnologie Mediche; Thesis supervisor: Prof.ssa Rosaria Bassi; Thesis advisor: Dott.ssa Dorina Dobi; academic year: **2021/2022**.	

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.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

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Place and date: Milano, 22/11/2023