UNIVERSITÀ DEGLI STUDI DI MILANO

TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO **ID CODE 5884**

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 Biomediche e Cliniche dell'Università degli Studi di Milano

Scientist- in - charge: Prof. Pelizzo Gloria

[BONNET Maxime]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Maxime
Name	BONNET

PRESENT OCCUPATION

Appointment	Structure
Post-doctoral fellow	Institute of Movement Sciences

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	Bachelor	Aix-Marseille university	2014
PhD	PhD	Aix-Marseille university	2020
Master	Master	Aix-Marseille university	2016

FOREIGN LANGUAGES

Languages	level of knowledge
English	Academic Level
French	Native language

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2017	Finalist presentation at the 4th International Spinal Cord Repair Meeting in Barcelona
2019	Academic Surgery Prize : 3000 €
2021	ICR scholarships : 20 000€

TRAINING OR RESEARCH ACTIVITY

My research bridges the gap between fundamental and applied research, encompassing multiple interconnected fields such as neurophysiology, cell biology, and neuroscience. My work is primarily focused on understanding the reorganization of the central and peripheral nervous systems following an injury. In neuroscience, a persistent question revolves around the mechanisms underlying the repair of the central and peripheral nervous systems post-trauma. After a nervous system injury occurs, a cascade of events is initiated, resulting in motor and sensory deficits in the case of peripheral nerve injuries. In the context of spinal cord injuries, the impact extends to maintaining balance, controlling breathing, and affecting autonomic, urogenital, and digestive functions.

Belonging predominantly to the realm of applied research, specifically biomedical research, my work was focused on accomplish two main objectives. Firstly, I evaluated the therapeutic potential of various substances (including a synthetic hydrogel, activated fat, and stromal vascular fraction) during both the acute and chronic phases of different spinal cord injury models. Secondly, I assessed the therapeutic potential of olfactory ecto-mesenchymal stem cells (OE-MSCs) and the extracellular vesicles derived from these cells (EVs-OE-MSCs) when transplanted within venous guides immediately or two weeks after a peroneal nerve injury.

PROJECT ACTIVITY

Year	Project
2014-2017	Investigate the biocompatibility and therapeutic potential of a synthetic hydrogel in both acute and chronic models of spinal cord injury.
2017-2019	Assess the therapeutic efficacy of venous guides, transplanted either immediately or two weeks after peroneal nerve injury, with and without the inclusion of olfactory ecto-mesenchymal stem cells (OE-MSCs).
2019-2021	Characterize extracellular vesicles derived from Olfactory Ecto-Mesenchymal Stem Cells (EVs-OE-MSCs).
2021-2023	- Assess the protective and reparative effects of adipose tissue and stromal vascular fraction in rats following spinal cord injuries, both acute and chronic, in conjunction with a rehabilitation program - Assess the regenerative potential of Extracellular Vesicles (EVs-OE-MSCs) in cases of peroneal nerve section with a 7mm loss of substance in rats.

CONGRESSES AND SEMINARS

Date	Title	Place
May 22-24th 2019	NeuroFrance 2019	Marseille
June 1st 2018	Symposium « BCP12 »	Paris
November 3-4th 2017	International Spinal Cord Repair Meeting	Barcelonna
September 15-17th 2016	Congress of Neuroscience INT	Marseille

PUBLICATIONS

Articles in reviews
Efficacy of acute adipose-derived stromal vascular fraction autograft on sensorimotor recovery after spinal contusion in rats. Journal of Controlled Release, in press, 3rd authors, 2023.
Human nasal olfactory stem cells, purified as advanced therapy medicinal products, improve neuronal differentiation ,Frontiers in Neuroscience, 1st author, 2022.
Utilisation des cellules souches olfactives dans la régénération des nerfs périphériques, Académie Nationale de Médecine, 8th author, 2021.
Motor and Sensitive Recovery after Injection of a Physically Cross-Linked PNIPAAm-g-PEG Hydrogel in Rat Hemisectioned Spinal Cord, Materials Science & Engineering C, 1st author, 2020.
Injection of a Physically Cross-Linked PNIPAAm-g-PEG Hydrogel in Rat Contused Spinal Cord, ACS Omega, 1st author, 2020.
Immediate or Delayed Transplantation of a Vein Conduit Filled with Nasal Olfactory Stem Cells Improves Locomotion and Axogenesis in Rats after a Peroneal Nerve Loss of Substance, International Journal of Molecular Sciences, 1st author, 2020.

Congress proceedings
Motor and Sensitive Recovery after Injection of a Physically Cross-Linked PNIPAAm-g-PEG Hydrogel in Rat Hemisectioned Spinal Cord, Congress « NeuroFrance 2019 », 1st author, Marseille, 2019.
Delayed syngeneic transplantation of nasal olfactory stem cells improves locomotion and axogenesis after peroneal nerve injury, Congress « NeuroFrance 2019 », 1st author, Marseille, 2019.
Motor and Sensitive Recovery after Injection of a Physically Cross-Linked PNIPAAm-g-PEG Hydrogel in Rat Hemisectioned Spinal Cord, 4th congress de « International Spinal Cord Repair Meeting », 1st author Barcelona, 2017.
Motor and Sensitive Recovery after Injection of a Physically Cross-Linked PNIPAAm-g-PEG Hydrogel in Rat Hemisectioned Spinal Cord, 3rd congress « Congress of Neuroscience INT », 1st author, Marseille, 2016.

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.

Please DO NOT SIGN this form.

Place and date: Trans en Provence, 09/14/2023

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