

NOVELLA TEDESCO

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WORK EXPERIENCE:

JULY 2019- PRESENT: Ingénieur de recherche

Immunology and Liver Gene Transfer Unit, GENETHON Évry, Paris, France

Lab Chief: Dr. Giuseppe Ronzitti

Supervisor: Dr. Giuseppe Ronzitti and Dr. Federico Mingozzi

Responsibility and Research activity (data generation, interpretation, reporting and presentation) conducted in the context of the following projects:

- WADA (World Anti-Doping Agency) project: analysis of the anti-AAV humoral response for the development of a method for the detection of AAV-based gene doping
- 2CAPS project: analysis of the seroprevalence and biodistribution of novel AAV capsids for the development of new AAV vectors with higher tropism and less immunogenicity (HD, mouse and NHP)
- Chamaleon Bioscience project: evaluation of umoral immuno response and immuno infiltration
- Immunomonitoring of preclinical studies in large (Non-Human Primates and Pigs) and small animal models (Rats and Mice) in settings requiring good laboratory/clinical practice (GLP/GCP) compliance
- Immunomonitoring of clinical studies (EU funded: Cure CN, MPSVI, UshTher; Go8, MDYF) in settings requiring good laboratory/clinical practice (GLP/GCP) compliance

AUGUST 2018- JUNE 2019 Ingeieur d'etude

Laboratory of Clinical Immunology (CLIM), GENETHON Évry, Paris, France

Lab Chief: Dr. Giuseppe Ronzitti

Supervisor: Dr. Federico Mingozzi, Dr. Philippe Veron

- Immunomonitoring of preclinical studies in large (Non-Human Primates) and small animal models (Rats and Mice) and clinical studies (Cure CN, MPSVI, UshTher, Go8) in settings requiring good laboratory/clinical practice (GLP/GCP) compliance. Responsibility included data generation, interpretation, reporting and presentation during meetings.

MAY 2016- OCTOBER 2017: Research Fellow

Laboratory of Molecular Therapy, Telethon Institute of Genetics and Medicine (TIGEM), Pozzuoli, Naples, Italy

Lab Chief: Dr. Alessandro Fraldi

Responsibility and Research activity (data generation, interpretation, reporting and presentation) conducted in the context of the following projects:

- Development of AAV-mediated gene transfer approaches to treat the Central Nervous System (CNS) in Lysosomal Storage Disorders (LSDs) with minimal invasiveness and high CNS targeting efficiency
- Preparation of enhanced versions of human Sulfamidase (hSGSH) and testing for efficacy of large (WT pigs) and small animal models (MPS-IIIa mice).

EDUCATION:

MAY 2016 MSc Molecular Biology, UNIVERSISTY OF NAPLES “FEDERICO II”, Naples, Italy

Modules: Human Molecular Genetics, Advanced Genetics, Molecular Biology and Bioinformatics, Applied Biochemistry and Protein Engineering, Advanced Biochemistry, Molecular Microbiology and Immunology.

MSc LABORATORY PROJECT (January 2014- April 2016)

TITLE: “Treating the central nervous system in Mucopolysaccharidosis type IIIA by intrathecal gene therapy”

SUPERVISORS:

Dr Alessandro Fraldi, Assistant Professor of Medical Genetics, University of Naples “Federico II” and Principal Investigator at TIGEM;

MAY 2011 BSc (Hons) at UNIVERSITY OF PALERMO, Palermo, Italy

Relevant modules: Molecular Biology, Genetics, Cytology and Histology, Physiology, Microbiology, Comparative Anatomy, Immunology, Biochemistry, Inorganic Chemistry, Organic Chemistry.

FINAL YEAR LABORATORY PROJECT (January 2009-July 2009)

TITLE: “Techniques for studying the effects of bradykinin B2 receptor antagonists on breast cancer adenocarcinoma cells”

SUPERVISOR: Professor Antonio Giordano, Director of the Sbarro Institute for Research on Cancer and Molecular Medicine at Temple University of Philadelphia, USA

RELEVANT EXPERIENCE

June 2004-September 2004: Summer Internship at College of Science and Technology of Temple University under the supervision of Dr. Pier Paolo Claudio and Professor Antonio Giordano

December 2006- February 2007: Experimental Short Course at Sbarro Institute of Temple University under the supervision of Dr. Giuseppe Russo and Professor Antonio Giordano

January 2009- July 2009: Undergraduate training in Human Genetical Medicine at Sbarro Institute of Temple University under the supervision of Dr. Flavio Rizzolio and Professor Antonio Giordano

TECHNICAL SKILLS AND COMPETENCES

In Vivo techniques: anesthesia, intracardiac perfusion, necropsy techniques (e.g. eyes, brain, spinal cord, liver, heart, lungs, spleen, kidney and thyroid) in mice, cerebral and spinal cord dissection in mice and pigs

Ex Vivo techniques: isolation rat's splenocytes, mice genotyping

In Vitro techniques: cell cultures (immortalized cells), PBMC isolation from buffy coats or whole blood, PBMC cryopreservation, primary human fibroblasts isolation and culture, different transfection and infection techniques, selection and expansion of clone post transfection, immunohistochemistry, cloning strategies, cDNA cloning, PCR, RT-PCR, RT-qPCR, PCR cloning, western blot, enzymatic assays, colorimetric assays (XTT), cell sorting, vector plasmids preparations (mini, midi, mega and giga prep), vector AAV preparations, DNA, RNA and protein extractions from cells and tissues

Immunological assays: Enzyme-linked immunoSPOT (ELISpot), with two and four colors, Flow cytometry, Enzyme-linked immunosorbent assay (ELISA), Neutralization antibody assay (Nab), LUMINEX

Bioinformatics skills: nucleotide and amino acid sequence search (NCBI, Genome Browser at Santa Cruz, Ensemble, Pfam, PROSITE, UniProt), sequence alignment programs for DNA or proteins (BLAST, ClustalW, EMBOSS Seqret, Multalin), plasmid editors programs (ApE, Benchling, Serial Cloner), scientific graphing and statistic software (GraphPad Prism), Flowjo

OTHER SKILLS AND COMPETENCES

- Developed good relational skills doing daily research activities
- Enthusiastic participation in data discussion.
- Good ability to adapt to multicultural environments
- Good communication skills gained through active contribution lab meetings and data club
- Good organizational and problem-solving skills acquired during my education and research activity, and during my experience as a volunteer at the Italian Association against Leukemia at "Cervello Hospital" in Palermo, Italy.

LANGUAGES:

Italian fluent (mother tongue).

English (European Language Certificate LNR, B2).

French (beginner)

INFORMATIC SKILLS:

Literate with experience of Microsoft Word, Excel and Power Point

EIPASS 7 MODULES computer certification and L.I.M.

Proficient user of graphic design applications (Adobe PhotoShop and Adobe Illustrator)

Enabled to the profession of biologist **Registered on ONB (National Biologists Registry) (sez.A)** from 27/7/2016, registration number **AA_076120**

POSTERS/ CONGRESS PROCEEDINGS:

Nicolina Cristina Sorrentino, Vincenzo Cacace, Veronica Maffia, Sandra Stollo, **Novella Tedesco**, Edoardo Nusco, Noemi Romagnoli, Francesca Barone, Domenico Ventrella, Maria Laura Bacci, Yan Huang, Nan Liu, Susan Kalled, Vivian Choi, Alessandro Fraldi. *Enhanced version of human Sulfamidase significantly ameliorates CNS pathology when delivered to the MPS-IIIa mice by AAV-mediated intra-CSF injection*. 21st Annual Meeting of the American Society of Gene & Cell Therapy, May 16-19, 2018, Chicago, IL, USA

PEER-REVIEWED

Nicolina Cristina Sorrentino, Vincenzo Cacace, Maria De Risi, Veronica Maffia, Sandra Stollo, **Novella Tedesco**, Edoardo Nusco, Noemi Romagnoli, Domenico Ventrella, Yan Huang, Nan Liu, Susan Kalled, Vivian Choi, Elvira De Leonibus and Alessandro Fraldi. *Enhancing the Therapeutic Potential of Sulfamidase for the Treatment of Mucopolysaccharidosis IIIa*. Mol Ther Methods Clin Dev. 2019 Dec 13

REFEREES

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