

Manojkumar Gunasekaran, Ph.D.

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US Permanent Resident

Summary

- Creative and accomplished Cell Biologist and Immunologist with +10 years of research experience in both industry and academic settings with strong background in fundamental and translational immunology.
- Results driven team player with technical experience leading to 2 industry collaborations and exceptional research output of 10 peer-reviewed research publications and 12 conference presentations.
- Active communicator and problem solver with project management experience and the ability to work in intercultural and international environments as demonstrated by collaborations and +6 years of experience in leadership, mentoring and teaching in international laboratories.

Work Experience

Research Scientist

Oct 2019 – Present

SetPoint Medical

Manhasset – NY

- Investigated vagus nerve neuromodulation to treat neurodegenerative diseases using animal disease model such as chronic EAE and acute LPC induced lesion.
- Established neuromodulation parameters to stimulate vagus nerve in implanted Lewis rats – EAE multiple sclerosis model.
- Validated the therapeutic effects of vagus nerve modulation in EAE multiple sclerosis disease model by classifying and quantifying the infiltrated immune cells in the CNS (spinal cord) by flow cytometry and immunohistochemistry.

Research Scientist

2014 - 2019

Feinstein Institute for Medical Research

Manhasset – NY

- Applied strong analytical skills by planning and executing the research project to determine the role of peripheral sensory neurons in regulating inflammation and adaptive immunity by using DRG RNAseq, adoptive transfer and transgenic mice, which has led to \$1,495,000 lab research fund from GE global research center.
- Implemented problem-solving skills through spearheading project on studying the role of NaV1.8⁺ sensory vagus neurons in dendritic cell activation and proliferation for antigen presentation by using optogenetics technique and GPCR agonist mediated silencing and activation leading to 4 scientific publications and 6 conference presentations.

- Exhibited strong leadership and management skills by mentoring and training 5 graduate and 10 high school students.

Research Assistant

2010 - 2014

DeTROI INSERM U1188

Reunion Island

- Conceptualized and implemented excellent scientific and analytical skills with a passion for novel research that led to the discovery of HMGB1 as a biomarker for adipose tissue inflammation resulting in 4 peer-reviewed journals and EMBL travel grant worth € 2000 for scientific presentations.
- Incorporated project management and scientific writing skills that enabled industry collaboration on human adipose derived pluripotent stem cells for tissue regeneration with STEM CIS company and secured research grants worth € 50,000.
- Implemented effective scientific communication with an excellent academic profile that led to the award of International PhD fellowship worth € 80,000 for doctoral research.

Research Scientist

2009 - 2010

Biobase Biological Databases – Qiagen Bioinformatics

India

Education

Ph.D. in Biochemistry and Cell Biology

2015

PG Diploma in Biotechniques

2009

MSc Marine Biotechnology

2008

Techniques, Software & Instrumentation

Neuromodulation	Electrophysiology	Flow cytometry
Small molecule screening	Cell based assays	Animal surgery
Animal disease models	Dosing (IV, IP and SC)	Microscopy
SDS-PAGE/Western blot	RT-PCR/PCR/qPCR	ELISA/ELISpot
Von Frey test	Multiplex immunoassays	ImageJ
GraphPad PRISM	Immunohistochemistry	FlowJo
Scientific writing	Record keeping	Multi-tasking

Awards, affiliations & Hobbies

- International PhD fellowship from Conseil Regional de La Reunion (2010 - 2014).
- The New York Academy of Science | Shock | Society for Neuroscience.
- Hiking and photography enthusiast.