



جامعة قطر
QATAR UNIVERSITY

الصحة
HEALTH

Research Network Groups (RNG) at QU Health

Neurological Disorders and Cardiovascular Diseases (NC RNG)

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NC's Mission statement

Our research mission to support basic, translational, and clinical research related to cardiovascular and neuroscience related research with the goal of developing novel and effective therapeutic strategies to enhance patient care.

NC's Main Research Interests: Neurological Disorders

Multi-omic biomarker characterization of Alzheimer's Disease and Glioblastoma:

Dr. Shona Pedersen

- Serum metabolic and lipoprotein signatures in Alzheimer's Disease through integrative NMR
- Blood-Derived Extracellular Vesicle-Based Biomarkers in Alzheimer's Disease by Proximity Extension Assay
- Shotgun-based proteomics of Extracellular vesicles in Alzheimer's disease
- Validation of protein damage markers as biochemical indicators of cognitive impairment in Alzheimer's disease
- Exploring the microRNA and protein signatures in Glioma Progression, Prognosis and Therapeutic Strategies

The Potential Use of Golgi Staining Method to Study Neurological Disorders:

Dr. Sami Zaquot

Non-invasive imaging of a small % of neurons to analyze their structure, including axons and dendrites.

Interleukin 17 in tumor immune microenvironment of Brain cancer:

Dr. Ajith Sominanda

Mapping the expression of IL17 in histopathological samples of patients diagnosed with brain cancer.

NC's Main Research Interests: Neurological Disorders

AI in Neuroscience: Dr. Muhammad Chowdhury and Dr. Shona Pedersen

- A Deep Learning Model for Predicting Neurodegenerative Diseases from Gait Patterns
- AI in stroke-related partial and total locked-in syndrome

Advancing the development of new therapeutic options for patients with Parkinson's disease:

Dr. Hanan Khalil

- The development and evaluation of a remote self-management intervention to promote engagement in physical activity for people with Parkinson's disease (PD)
- Non-Pharmological intervention for Gait and balance disturbances in PD

Nano medicine and Smart drug delivery systems to treat neurological disorders: Dr. Alaaldin Alkilany

- Gold nanoparticles as probes to understand Nano-Bio Interface
- Polymeric and lipidic drug delivery systems
- Gold nanorods for synthesis and surface functionalization

Plant bioactives for mitigation of oxidative stress and mitochondrial dysfunction in Traumatic Brain Injury:

Dr. Abdullah Shaito

NC'S Main Research Interests: Cardiovascular Diseases

MLIP in Diabetic Cardiomyopathy and congenital muscular dystrophy:

Dr. Patrick Burgon

- Exploring Muscle-enriched A-type Lamin Interacting Protein (MLIP) as a Key Regulator in Metabolic Pathways as a Novel Approach to Counteract Diabetic Cardiomyopathy
- Elucidation of MLIP mediated metabolic remodeling associated congenital muscular dystrophy

In vitro and In vivo Zebrafish and Chick embryo models in cardiovascular diseases:

Dr. Huseyin Yalcin

Investigating the mechanobiology of congenital heart disease, atherosclerosis, aortic valve calcification, aortic aneurysms in clinical settings and experimentally via in vitro and in vivo Zebrafish and Chick embryo models.

Structure and Function of proteins in cardiomyocytes signalling: A Multidisciplinary approach:

Dr. Michail Nomikos

- Studying how proteins regulate heart health and how their mutations cause severe cardiac diseases like arrhythmias.
- Investigating cell signaling and metabolism in early fertilization and embryo development to explore causes of infertility.

NC'S Main Research Interests: Cardiovascular Diseases

Understanding Cardiovascular function through Murine Model experimentation:

Dr. Hassaan Rathore

- Neurohumoral control of cardiovascular functions in health and disease.
- To investigate the Hydrogen Sulphide and Nitric Oxide in vascular diseases

Drug discovery and Molecular Pharmacology in Raynaud's disease:

Dr. Ali Eid

- Characterization of a novel compound to improve vasospastic attacks
- Investigating the potential of drug repurposing for disease management
- Role of estrogen receptors in the pathogenesis of Raynaud's phenomenon
- Molecular regulation of alpha 2C adrenoceptors

Nano medicine and Smart drug delivery systems to treat CVD diseases:

Dr. Alaaldin Alkilany

- Gold nanoparticles as probes to understand Nano-Bio Interface
- Polymeric and lipidic drug delivery systems
- Gold nanorods for synthesis and surface functionalization

NC active Faculty members

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