

# Risk Factors for Stroke and Cognitive Decline in a Tri-Ethnic Region

<https://neurodegenerationresearch.eu/survey/risk-factors-for-stroke-and-cognitive-decline-in-a-tri-ethnic-region/>

## Principal Investigators

SACCO, RALPH L.

## Institution

UNIVERSITY OF MIAMI SCHOOL OF MEDICINE

## Contact information of lead PI

### Country

USA

## Title of project or programme

Risk Factors for Stroke and Cognitive Decline in a Tri-Ethnic Region

## Source of funding information

NIH (NIA)

## Total sum awarded (Euro)

€ 7,930,294.50

## Start date of award

07/01/1993

## Total duration of award in years

4

## The project/programme is most relevant to:

Alzheimer's disease & other dementias

## Keywords

Dementia, Impaired cognition, stroke, Caribbean Hispanic, Ischemic Stroke

## Research Abstract

? DESCRIPTION (provided by applicant): Stroke, cognitive impairment and dementia are increasing public health problems with a disproportionate impact on blacks and Hispanics. The National Alzheimer's Project Act and the NIH have recommended more extensive studies on the

risk and determinants of dementia in disparities populations. Elucidation of the relationships between traditional and novel vascular risk factors for stroke, dementia, cognitive impairment, and disability is critical to enhance our ability to modify the risk of these conditions. The Northern Manhattan Study consists of a population-based cohort of 3497 stroke-free adults who have been followed annually for a median of 13.9 years. This collaborative prospective cohort study among whites, blacks, and Caribbean Hispanics living in the same community is an outstanding resource to address health disparities involving faculty across three institutions (Columbia University, University of Miami, and the Icahn School of Medicine at Mount Sinai). The cohort is well characterized and the 1290 subjects among the MRI sub-cohort have had a standardized brain MRI and two neuropsychological assessments over 5 years. The new aims are to determine the relationship between cognitive trajectories and a novel neuro-immune and inflammatory biomarker panel; determine the relationship between brain imaging biomarkers (regional brain volumes, regional white matter lesion burden, hippocampal volumes, cortical thickness, small dilated perivascular spaces, dolichoectasia) and cognitive trajectories and dementia; determine the risk and vascular determinants of dementia; characterize the vascular determinants of functional impairment, disability, and quality of life; and assess the relationship between novel risk factors and specific ischemic stroke subtypes. To accomplish these aims, subjects will continue to be followed annually by telephone to ascertain stroke, MI, death and change in cognitive status, and more extensive functional assessments will be collected. A third expanded in-person neuropsychological assessment will be done among the MRI subcohort and a dementia consensus conference will ascertain and classify dementia. Stored plasma at the time of MRI will be used to measure an innovative inflammatory and immune biomarker panel, and new MRI measures will be analyzed on the already collected brain MRIs. The strengths of this prospective cohort study are the wealth of baseline data already assembled, the tri-ethnic composition residing in the same community, the outstanding follow-up record, the evaluation of novel serum biomarkers and brain imaging biomarkers, and the expanded focus on comprehensive outcomes including cognitive trajectories, dementia, functional impairment, and ischemic stroke subtypes. The results of these studies will be instrumental in the design of intervention programs to prevent stroke and cognitive decline in diverse populations and be a valuable shared data resource.

### **Lay Summary**

**PUBLIC HEALTH RELEVANCE:** Stroke and dementia are increasing public health problems with a larger impact on blacks and Hispanics. Results from studying new blood and brain imaging factors will be instrumental in proposing interventions to prevent stroke and dementia in minority populations.

### **Further information available at:**

#### **Types:**

Investments > €500k

#### **Member States:**

United States of America

#### **Diseases:**

Alzheimer's disease & other dementias

#### **Years:**

2016

**Database Categories:**

N/A

**Database Tags:**

N/A