



FACULTY OF CLINICAL SCIENCES
COLLEGE OF MEDICINE, UNIVERSITY OF LAGOS



13th Annual Scientific Conference & Gathering

THEME

**Environmental Virology,
Exposomics and Epigenetics**

VENUE

Old Great Hall, College of Medicine,
University of Lagos, Idi Araba,
Lagos State

DATE

WEDNESDAY 8TH JUNE 2016

TIME

8.00 am - 5.00pm

• **PROGRAMME & BOOK OF ABSTRACTS** •

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13th Annual Scientific Conference and Gathering

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Environmental Virology, Exposomics and Epigenetics

SUBTHEMES

**Non-communicable diseases: environmental and genetic influences
Public health financing and resource limitation**

CHAIRMAN

Professor Rahamon A. Bello
Vice Chancellor, University of Lagos

SPECIAL GUEST OF HONOUR

Dr. Olajide Idris
Honourable Commissioner for Health, Lagos State

GUEST SPEAKER

Professor Sunday Aremu Omilabu
Professor of Virology
College of Medicine, University of Lagos

VENUE

Old Great Hall, College of Medicine, University of Lagos, Idi Araba

DATE: Wednesday June 8th 2016 **TIME:** 8:00 am – 5:00 pm

Conference website

www.cmulfcconference.com

RELATIONSHIP OF ADMISSION SERUM N-TERMINAL PRO-BRAIN NATRIURETIC PEPTIDE LEVELS TO SEVERITY AND 30 DAY OUTCOME OF ACUTE STROKE AT THE LAGOS UNIVERSITY TEACHING HOSPITAL

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Background: B-type natriuretic peptide (BNP) is a neurohormone secreted by the astrocytes in response to neuronal hypoxia. It is also secreted by the cardiac ventricles in response to volume expansion and pressure overload. The aim of this study was to assess the influence of admission N-terminal pro-Brain Natriuretic Peptide (NT-pro-BNP) levels on the 30-day outcome of acute stroke.

Methods: This was a cross sectional study that recruited patients with first ever ischemic or haemorrhagic stroke admitted within 72 hours of symptom onset and with no history or signs of cardiac disease. Clinical stroke severity was assessed on admission using the National Institute of Health Stroke Scale. Functional outcome was evaluated at 30 days post stroke using the modified Rankin scale (mRS). An age and gender-matched control group was also included. Blood samples were drawn for analysis of NT-proBNP within 2 hours of admission and stored at -80 C for batched analysis using sandwich ELISA.

Results: The study group consisted of 122 (62 men, mean age 54.5±13.1 years and 60 women, mean age 57.1± 12.8 years). 122 controls were age and gender matched to stroke cases. NT-proBNP levels were significantly higher in stroke (log NT-proBNP 5.3±0.7ng/ml) compared to 4.7±0.1ng/ml in controls. There was a strong positive correlation between NT-proBNP and stroke severity ($p < 0.001$) in both stroke subtypes. The case fatality rate (CFR) overall was 27.0%. NT-proBNP levels in patients who died within 30 days of stroke was significantly higher than survivors (5.8 ±0.6 ng/ml vs 4.9±0.3 ng/ml, $p < 0.001$). N-Terminal Pro-BNP in stroke with unfavourable 30-day functional outcome (mRS>3) was significantly higher than in those with favourable functional outcome.

Conclusions: NT-proBNP plasma levels were significantly elevated in both acute ischemic and haemorrhagic strokes than in the controls. Elevated serum N-Terminal-pro-BNP levels were associated with more severe stroke, higher 30 day case fatality and unfavourable functional outcome.

Keywords: NT-proBNP, stroke, outcome, severity, case fatality, short term,