

SMD RESEARCH Newsletter



Volume 5

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SCHOOL OF MEDICINE AND DENTISTRY UNIVERSITY OF GHANA



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EDITORIAL



Professor G. Obeng Adjei
■ AG. EDITOR-IN-CHIEF

Welcome to the 5th edition of the Research Newsletter. This edition also happens to be the maiden version to be published since the School of Medicine and Dentistry (SMD) was formed from the former UGMS and UGDS. As such, a crisp, exhortatory welcoming message from the Dean sets a befitting pace.

We are especially pleased to feature as opening articles, highlights from two collaborative research projects: i) a clinical trial of a therapeutic intervention against one of the most enduring and distressing causes of suffering in sickle cell disease patients; and ii) a study that aims to establish the burden and risk factors of a common dental condition among diabetes patients.

We pleasantly note that five grant awards were received by SMD faculty from the 8th call for awards announced by the Office of Research Innovation and Development (ORID), University of Ghana. The awards were won in all the three (seed, investigator-led and large multi-disciplinary) categories, and highlights from these awarded projects are featured in this edition. Congratulations to all the awardees, and we especially encourage the Principal Investigators to

offer training opportunities on the projects to younger faculty and students.

Indeed, a brief review of information available on the ORID website shows the following statistics: there was 100% (n=8), 64% (19/30), and 24% (4/17) success rate for the seed, investigator-led, and large multi-disciplinary grant categories, respectively. Narrowing down, the success rate for applications submitted by SMD staff was 100% for both the seed and investigator-led categories, and 50% for applications submitted for the large multi-disciplinary award categories, respectively. These success rates are encouraging and should certainly motivate SMD staff to apply for future ORID grants.

The diversity of ongoing research in the School is also illustrated by a selection of projects approved by the Ethics and Protocol Review Committee (EPRC) over a stated period, and an EPRC-related appreciative event is also featured. Also, in keeping with a still-evolving tradition, we feature the very inspiring profile of a young doctor. This valedictorian of the 2015 class, multiple academic award-winner, and aspiring future surgeon has also declared his intention to pursue a research career. We, thus, renew the earlier call to 'younger' colleagues to consider research as a fulfilling career pathway.

You will also find in this edition, reports from two recently-held research-related training events: a) a grant writing, and b) scientific writing workshop, both of which were held on the Korle Bu campus of the College of Health Sciences. These events were both received with such enthusiasm that a repeat is being considered by organizers.

There is, thus kaleidoscope of articles in this edition that you will find this edition refreshing reading.

Prof. G. Obeng Adjei



DEAN'S MESSAGE

Professor Jennifer E. Welbeck

We resume the publication of the School's Newsletter with a new name – the SMD Research Newsletter; after a period of reorganization following the merger of the clinical programmes of the erstwhile University of Ghana Medical School (UGMS) and University of Ghana Dental School (UGDS).

We resume with great enthusiasm to showcase research activities in the School and I wish to encourage all members of staff to get on board to create awareness of the great work they are doing in their various departments.

Let us all, together raise high the flag of School of Medicine and Dentistry (SMD) and College of Health Sciences (CHS).

Best wishes



ETHICAL AND PROTOCOL REVIEW COMMITTEE SHOWS APPRECIATION TO REV. DR. T. B. DANKWA



Rev. Dr. T.B. Dankwa (holding plaque) in a group photograph with members of the SMD Ethical and Protocol Review Committee. The SMD EPRC has since been re-constituted into a College of Health Science (CHS) EPRC. The CHS EPRC will soon be inaugurated.

The Dean of SMD, Professor Jennifer Welbeck, presented a plaque to Rev. Dr T.B. Dankwa, in appreciation of the dedicated service he rendered to the UGMS, and subsequently, SMD Ethical and Protocol Review Committee (EPRC). Rev. Dr. T.B. Dankwa served as a member of the Committee for more than 10 years, and “retired” voluntarily, at the end of 2014.



PROJECT HIGHLIGHTS

A PHASE 3, DOUBLE-BLIND, RANDOMIZED, EFFICACY AND SAFETY COMPARISON OF PRASUGREL AND PLACEBO IN PAEDIATRIC PATIENTS WITH SICKLE CELL DISEASE

STUDY SPONSOR: Eli Lilly and Company

Every year, almost 300,000 babies with sickle cell disease (SCD) are born globally, with about 80% of these, occurring in sub-Saharan Africa. SCD is an inherited blood disorder in which vaso-occlusive crisis (VOC) is the principal complication. A VOC can result in recurrent hospitalization and cause a variety of serious organ system complications, disabilities, and even death. There is evidence linking platelets to sickle cell pathology, specifically VOC. In addition, some studies have suggested a benefit of antiplatelet therapy in reducing biomarkers of platelet activation as well as the frequency and severity of painful crisis with SCD. Prasugrel hydrochloride, an ADP receptor antagonist, is an inhibitor of platelet activation and aggregation mediated by the P2Y₁₂ ADP receptor. Based on its mechanism of action, prasugrel may serve as an effective agent to reduce the frequency and severity of VOC in patients with SCD. The potential of prasugrel therapy in paediatric patients with VOC is of particular interest because of the paucity of other treatment options in children and the prospect of preventing future irreversible organ dysfunction, which may be related to multiple cycles of vascular occlusion and reperfusion injury.

The present study is a Phase 3 study of the efficacy and safety of prasugrel in paediatric patients with SCD, as measured by reduction in the rate of VOC, which is a composite endpoint of painful crisis or acute chest syndrome. This is a multicenter study, of which Ghana is one of only two participating African countries. Globally, it is expected that approximately 220 patients will be randomized into the study, with approximately 110 titrating to an appropriate prasugrel dose and approximately 110 mock titrating with placebo. Recruited study subjects include males and females with SCD (homozygous sickle cell [HbSS] and hemoglobin [HbS] β^0 thalassemia genotypes) with ≥ 2 episodes of VOC in the 12 months prior to enrollment, with a body weight ≥ 19 kg, and 2 to <18 years of age.



Dr. Catherine Segbefia
Dept. of Child Health

During the double-blind treatment period, study subjects are titrated to once-daily doses of either placebo or prasugrel for a minimum of 9 months to a maximum of 24 months. There is an optional open-label extension with a minimum duration of 12 months in which all subjects will be titrated to an appropriate prasugrel dose.

Recruitment in Korle Bu Teaching Hospital began in June 2014 and ended in September 2014. Twenty-five children underwent screening procedures and of these, twenty met all inclusion criteria and were enrolled onto the study, and are currently being followed up within the double-blind treatment period. Site Principal Investigator is Dr. Catherine Segbefia and the site study co-ordinator is Mrs. Priscilla Ekpale. Key study team members include paediatricians, a haematologist, clinical pharmacists, nurses, a biomedical scientist and administrative assistants.

THE PREVALENCE OF PERIODONTAL DISEASE AMONG GHANAIAN ADULTS LIVING WITH TYPE II DIABETES



Dr Daniel Tormeti

Dept. of Community and Preventive Dentistry

Periodontal disease is a chronic infection of the tissues that surround and support the tooth with progressive loss of connective tissue attachment and alveolar bone. It often begins as plaque induced inflammation of the gingiva (gingivitis), a reversible condition that when left untreated may progress into destructive periodontal disease and eventual tooth loss. It is the most common dental ailment found in adults. Diabetes mellitus is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. The chronic hyperglycemia of diabetes is associated with long-term damage, dysfunction, and failure of various organs, especially the eyes, kidneys, nerves, heart, and blood vessels. Periodontal disease functions to ignite an exaggerated inflammatory response in the periodontium. This inflammatory response is not isolated in the oral cavity, and has been associated with a low grade

systemic inflammation which may play a major role in insulin sensitivity and glucose dynamics. As a result, there is an increased risk of impaired glycemic control in diabetic patients and conversely, diabetes has a negative effect on periodontal health. There has long been a recognized bi-directional association between type II diabetes mellitus and periodontal disease, as diabetic patients with poor glycemic control have a greater prevalence and severity of periodontitis, while diabetic patients with severe periodontitis have been reported to have increased blood glucose and other serum markers of inflammation. Despite this well-documented relationship between diabetes and periodontal disease, no literature has been found to explore these co-occurring diseases in Ghana, in spite of the increasing incidence of diabetes (6.4% prevalence). According to this estimate, approximately 1.6 million Ghanaians are currently living with diabetes. Reported estimates for the United States fluctuate between 2% and 10% of the population depending on race, *with* markedly greater prevalence among African Americans compared with Caucasians. Higher prevalence rates have been reported in some African countries. Although, there is no published prevalence data on Ghana, anecdotally, there is a high number of periodontal disease patients who present at the University of Ghana School of Medicine and Dentistry (UGSMD) Dental Clinic for therapy.

The study aims to determine the disease prevalence of periodontitis among Ghanaians living with Type II Diabetes. This is particularly relevant to the Ghanaian population because of the high prevalence of diabetes within the country, the strong correlation between diabetes and periodontal disease, and the consequent need for an understanding of the extent of this disease burden. The study is expected to find a high prevalence of periodontal disease among Ghanaians living with diabetes in comparison to periodontitis prevalence rates among non-diabetics in countries of similar size, economic status, and racial/ethnic diversity as Ghana. Additionally, data from this study will provide baseline information that may be useful for future research collaborations and interventions related to periodontal disease.

Over the years, New York University College of Dentistry (NYUCD), University of Ghana School of Medicine and Dentistry (UGSMD), and Diabetes Research and Management Centre at Korle-Bu Teaching Hospital have collaborated to design research projects investigating the relationship between diabetes and oral health, specifically, periodontal disease. To this end, NYUCD had donated a digital panoramic radiograph (worth about \$60,000) to SMD Dental Clinic.



UG ORID - LARGE MULTIDISCIPLINARY GRANT AWARD



Dr. Charlotte Osafo
Dept. of Medicine & Therapeutics

VALIDATION OF CREATININE AND CYSTATIN C-BASED PREDICTION EQUATIONS IN ESTIMATING GLOMERULAR FILTRATION RATE IN ADULT GHANAISANS

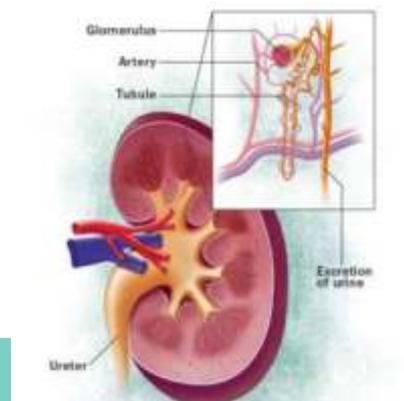
To diagnose chronic kidney disease (CKD), current guidelines recommend the use of prediction equations or estimated glomerular filtration rate (eGFR). The prediction equations are based on endogenous markers which include Serum Creatinine (S-Cr) and Cystatin C. These prediction equations need to be validated to ensure that it is applicable to the population for which it is being used. Currently, eGFR equations have been validated only in Caucasians and African Americans and is not applicable to people of other races or ethnicities. This has clearly been demonstrated in studies conducted in two Asian populations: Chinese and Japanese patients. These two studies showed that the commonly used four variable Modification of Diet in Renal Disease (4-v-MDRD) based formula underestimated GFR in Chinese patients by 23% and overestimated GFR in Japanese patients by 12%. When the four variable Modification of Diet in Renal Disease (4-v MDRD) equation was validated in black South

Africans, the equation performed better without the ethnicity factor initially determined in African Americans.

In recent times, many laboratories in Ghana are using these prediction equations to diagnose CKD. The applicability of these equations in the Ghanaian population is unknown. To ensure these prediction equations are applicable to adult Ghanaians, it is imperative that we validate them by measuring the actual GFR in individuals and compare with the estimated GFR. The aim of the study is to validate 4-v-MDRD and the Cystatin C based prediction equations in the local Ghanaian population. The study will provide important information on whether the 4-v-MDRD and S-Cystatin C equations for estimating GFR are applicable to Ghanaians. If the study determines that the MDRD equation is not applicable to Ghanaians, the study will be able to establish the appropriate ethnicity factor to make the equation appropriate for use as a tool in the diagnosis of chronic kidney disease in Ghanaians. This multi-disciplinary project is being done in collaboration with faculty from several departments and institutions within the University and other partners. The other investigators are, Dr George A. Asare (School of Biomedical and Allied Health Sciences), Dr Felix O. Mettle (School of Mathematical and Physical Sciences), and Dr K. Isaac Wilson (National Centre for Radiotherapy and Nuclear Medicine, Korle Bu).

Estimated Glomerular Filtration Rate (GFR)
Cockcroft-Gault

$$eCr = \frac{(140 - \text{age}) * \text{Mass (kg)} * 0.85 \text{ if Female}}{72 * \text{Serum Creatinine (mg/dL)}}$$
$$eCr = \frac{(140 - \text{age}) * \text{Mass (kg)} * [1.04 \text{ if Female}] [1.23 \text{ if Male}]}{\text{Serum Creatinine } (\mu\text{mol/L)}}$$



UG ORID - LARGE MULTIDISCIPLINARY GRANT AWARD

ESTABLISHING A PROSPECTIVE COHORT OF PREGNANT WOMEN WITH SICKLE CELL DISEASE.

Sickle cell disease (SCD) is one of the most common genetic diseases in the world. Africans are disproportionately affected with this disease. Up to 30% of Ghanaians are estimated to carry the sickle cell trait and up to 2% of babies are born with the disease every year.

Advances in technology and improvement in medical care have significantly increased the survival of individuals with SCD, and thus more women are reaching reproductive age. Consequently there is substantial increase in the total number and proportion of women with SCD that are achieving pregnancy. In particular, these women are more likely to develop potentially life-threatening infections and are more susceptible to devastating pregnancy related and SCD specific complications. Pregnancy related morbidities include higher rates of pre-eclampsia (75 per 1000 in SCD compared with 10 per 1000 in women without SCD), eclampsia (67 per 1000 in SCD compared with 28 per 1000 in women without SCD) and placental abruption (111 per 1000 in SCD compared with 14 per 1000 in women without SCD). SCD related complications that may occur during pregnancy include vaso-occlusive pain episodes and acute chest syndrome which can be life threatening.



Dr Samuel Antwi Oppong
Dept. of Obstetrics & Gynaecology



Dr Edeghonghon Olayemi
Dept. of Haematology

With the improvement in medical care for children and adolescents with SCD, young women with SCD are facing a new life threatening challenge, which is pregnancy. In sub-Saharan Africa, the diagnosis of SCD increases the risk of maternal mortality 29 fold when compared to women without SCD. Studies from sub-Saharan Africa report maternal mortality in the range of 7 to 12% among SCD patients. SCD alone is the leading indirect cause of maternal mortality at the Korle-Bu Teaching hospital. Little is known about modifiable risk factors for severe pregnancy related complication or maternal death among pregnant women with SCD in sub-Saharan Africa. In addition, unpublished data from the department of obstetrics and gynaecology at KBTH shows that nearly half of the maternal deaths in women with SCD at Korle Bu Teaching Hospital are associated with pulmonary disease.

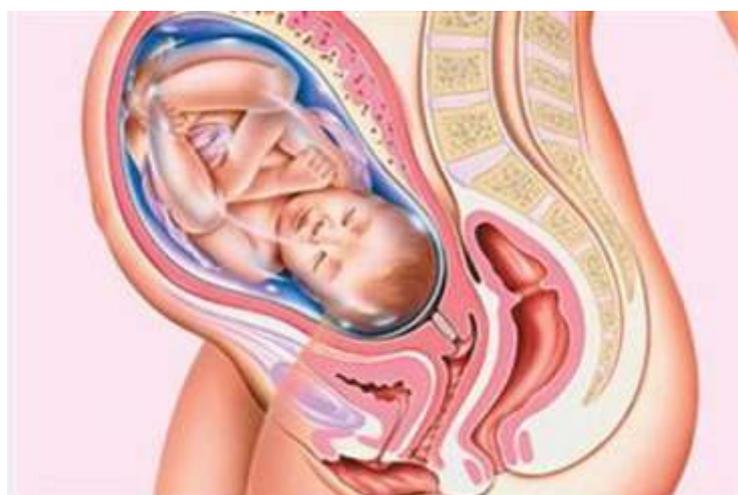
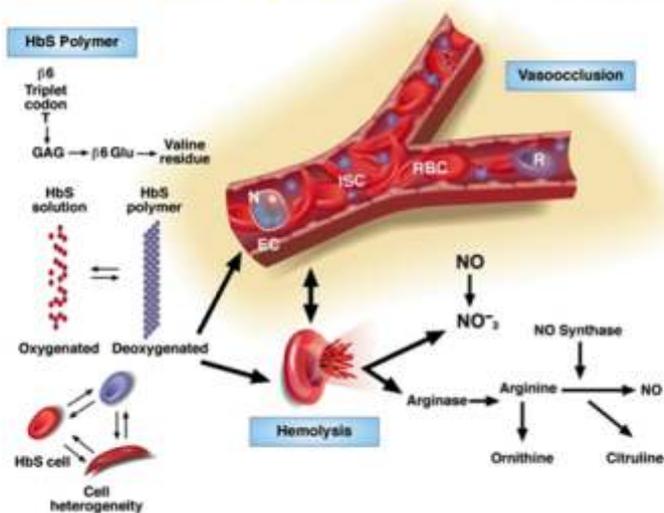
We propose to establish a prospective cohort of pregnant women with and without SCD. Data from this study will form the basis of determining the feasibility of addressing potential modifiable risk factors for morbidity and mortality in pregnant women with SCD.

The overall goal of the project is to identify modifiable risk factors for severe adverse maternal and perinatal outcome among pregnant women with SCD.

In this project we seek to identify specific clinical, haematological, and biochemical risk factors and use these variables to predict sickle cell vaso-occlusive crisis and infectious morbidity in pregnant women with SCD. Lung function assessment by the use of ATS/DLD questionnaire and spirometry will be used to measure forced vital capacity (FVC), forced expiratory volume in 1 second (FEV₁) and the ratio FEV₁/FVC. Values of FEV₁/FVC, FVC and FEV₁ will be used to categorize lung function patterns as normal, obstructive, restrictive or mixed obstructive and restrictive based on American Thoracic Society/European Respiratory Society (ATS/ERS) guidelines according to modified algorithm based on Pellegrino et al.. Identification of SCD lung function or pregnancy

specific factors or a combination of these factors that adequately predict adverse pregnancy event will provide an opportunity to institute intervention that is likely to help reduce severe morbidity and mortality in pregnancy with SCD. In the next phase of this project, we will show how specific critical intervention such as improving FEV₁/FVC in a clinical trial can help reduce the frequency and severity of ACS and other pulmonary morbidity in pregnant women with SCD.

This multi-disciplinary project is being undertaken by a multi-disciplinary team of obstetricians, haematologists, respiratory physiologists and paediatricians. The project also provides a platform for fellowship training and dissertation for the West African and Ghana College of Physicians and Surgeons as well as MPhil in Haematology and Physiology. It is funded in part by an ORID large multi-disciplinary grant.

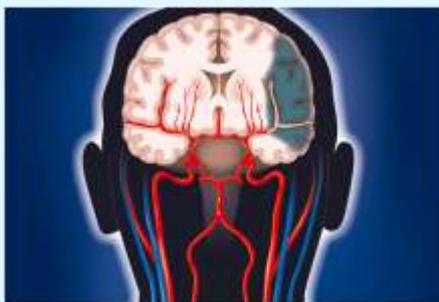


UG ORID - Investigator-Led GRANT AWARD DESCRIPTIVE SUMMARY



Dr. Josephine Akpalu
Dept. of Medicine & Therapeutics

Stroke remains one of the most devastating neurological diseases, often causing death or gross physical disability. Diabetes mellitus (DM) is a well-established independent risk factor for stroke and its prevalence has been estimated to rise by 180% in the sub Saharan African region. Although some studies have found DM to be predictive of poor stroke outcome, the association between DM and poor stroke outcome still remains debatable. In Ghana, diabetes and stroke are major public health problems, however, data on the prevalence of DM among stroke patients and its impact on patient outcomes are lacking. This study aims at determining the association between diabetes and stroke



THE EFFECT OF DIABETES ON STROKE PATTERN AND OUTCOMES AT THE KORLE BU TEACHING HOSPITAL

pattern and outcome among hospitalized patients at the Korle Bu Teaching Hospital.

This will be a prospective study among stroke patients with and without diabetes. Consecutive patients with first-time stroke (confirmed by CT scan or MRI) will be recruited into the study after obtaining informed consent. Baseline demographic and clinical data will be obtained by administering a questionnaire and reviewing patients case notes. Cardiovascular risk factors such as hypertension, dyslipidaemia, alcohol intake and cigarette smoking will be documented. A full physical examination including an assessment of the severity of neurological impairment will be performed within 24 hours of admission using the Glasgow coma scale and National Institutes of Health Stroke Scale (NIHSS).

Baseline laboratory investigations including random plasma glucose, serum uric acid, fasting lipids and glycated haemoglobin will be performed and findings from brain CT Scan (or MRI) will be documented. Strokes will be divided broadly into ischaemic or haemorrhagic and the specific areas of the brain involved will be noted.

Stroke outcome assessment will be performed upon admission, at discharge, and at 3 and 6 months after stroke onset. The 11-item NIHSS version, which will be used to document severity of neurological impairment, has scores ranging from 0 to 42. The neurological severity of the stroke will be classified as minor (1-4), moderate (5-15), moderately-severe (16-20), severe (21-42) with a score of zero indicating no stroke symptoms.

The modified Rankin Scale (mRS) will be used to measure the degree of disability and thus dependence in daily activities. It is scored on a hierarchical ordinal scale from 0 to 6, a score 0 to 2 will be defined as good outcome and mRS score 3 to 6 will define poor outcome. A detailed assessment of participant's ability to perform the Activities of Daily Living will be done using the 10-item Barthel Index (BI). It will be scored from 0 to 100, and dependence in activities of daily living will be defined as BI <60 with total scores of 0 and 100 indicating total dependence and independence respectively. In addition stroke recurrence, complications and mortality during the study period will also be documented.

Findings from this study will highlight the burden of diabetes among Ghanaian stroke patients and assist in the institution of appropriate interventional strategies to improve stroke outcomes, particularly among patients with DM. In the absence of a comprehensive stroke surveillance data, research on this subject matter remains relevant and of utmost importance.

UG ORID - Seed GRANT AWARD

PUBLIC PERCEPTION OF ORGAN DONATION AND TRANSPLANTATION IN GHANA

Organ and tissue transplantation has become literally a lifesaving hope for many people. However, the organ donation rate, both living and cadaveric, has not followed the advance of medicine. The number of recipients on waiting lists for heart, kidneys, and other organs continue to expand. The burden of end organ failures especially kidney is more in blacks compared to Caucasians and this burden continues to increase annually. While transplantation is the ultimate treatment for most end organ failures, transplantation for End stage Renal Disease patients for instance are almost non-existent in most African countries. Kidney transplant rate in Africa is about 4 per million population (pmp) and 9.2pmp in South Africa and is carried out in few African countries: South Africa, Nigeria, Mauritius and recently in Ghana.

In United States, even though the gap between organ donors and recipients is widening, the number of organ donors annually is increasing unlike Africa where there is paucity of organ donation.

It is not clear as to what factors influence Africans' decisions concerning transplantation and donation; nevertheless the following factors may influence the decision of Africans concerning issues of organ donation and transplantation; cultural factors, negative attitudes toward donation, lack of awareness of the need for transplantable organs in the African community, and mistrust of the health care system. In Asian countries for instance, it is more difficult to obtain cadaver kidneys for transplantation because of certain socio-cultural beliefs and customs.

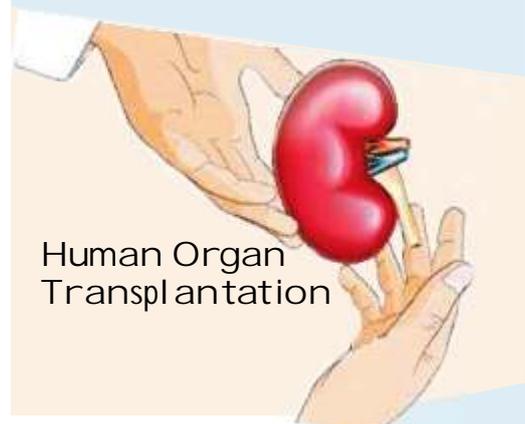
In Ghana where the burden of kidney disease is seemingly rising rapidly, the establishment of sustainable transplant program is the most suitable option for majority of affected individuals, mostly young who form the workforce of society. Nonetheless establishment of such a program may be negatively influenced by number of factors including perception of the people and knowledge base of the people concerning organ donation and transplantation. Others such as traditional and religious beliefs, low socio-economic status and low level of education may also hamper this process.

People of all ages, races, and ethnicities can save and enhance lives by donating their organs and tissues. Organ and tissue transplants are needed by people from all over the world. In Africa, organ donation and transplantation rates are low and non-existent in some African countries. Nevertheless few African countries have transplant programs, yet little is known about people's perception of organ transplantation and donation in Africa and it is non-existent in Ghana. Since kidney transplantation is a budding field in Ghana, it will be informative to determine whether this new treatment is acceptable by most Ghanaians taking cognizance of



the factors enumerated above which may hinder the success of this new treatment in the country, especially the beliefs of indigenous Ghanaians.

This study therefore seeks to determine the knowledge base and perception of Ghanaians concerning organ donation. It is expected that, Ghanaians will have a poor perception and low level of knowledge concerning organ donation and transplantation. Additionally their decision to receive or donate an organ may be influenced by traditional cultural beliefs, low socio-economic status, low level of education and lack of awareness. Based on these findings, we will be equipped with information to help educate the public on the importance and value of kidney transplantation. This is particularly important because kidney transplantation offers better long-term survival and good quality of life compared to dialysis. Comparing it to long-term dialysis, it is more cost effective.



UG ORID DESCRIPTIVE SUMMARY

Plasma Leptin Concentration In Obese And Non-obese Pregnant Ghanaian Women And Its Relationship With Gestational Outcome In Terms Of Maternal Wellbeing And Fetal Outcome.



Dr. Mercy A. Nuamah
Dept. of Obstetrics & Gynaecology

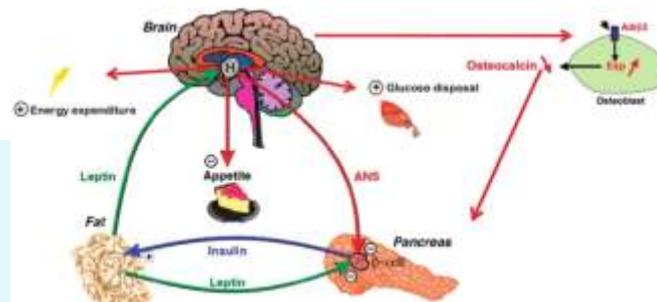
Leptin is a peptide hormone produced abundantly in adipose tissue, therefore, obese people have high leptin concentration. It acts as a local mediator for glucose and lipid metabolism and decreases body weight by suppressing appetite and increasing energy expenditure. Leptin is also produced in human placenta and a positive umbilical venous-arterial difference of leptin levels suggests a possible effect of placental leptin production on fetal metabolism. Oxidative stress and excessive weight gain in pregnancy are associated with high leptin concentration.

In Ghana, women are more likely to be obese than men and obesity is prevalent among pregnant women as well. Some factors responsible for excessive weight gain in pregnancy include misconception that

pregnancy requires double portion size of meals, poor dietary habits, reduced physical activity, binge and emotional eating. Pregnant women who are obese are at an increased risk for certain complications during pregnancy, labour and delivery and in the post-partum period in comparison with non-obese women. Obesity prior to pregnancy and excessive gestational weight gain have been found to be independent risk factors for both adverse foetal and maternal outcomes. For the mother, there is the risk of gestational hypertension, pre-eclampsia, gestational diabetes (GDM), cesarean section and other morbidities, while congenital anomalies, including neural defects are the main risk to the foetus and neonates. Excessive weight gain is also accompanied by macrosomia, decreased ultrasound visualization of foetal anatomy, lower Apgar scores and pH-value. There is also a strong relationship between higher gestational weight gain and increased risk of large for gestational age births, which leads to obesity and related metabolic disorders later in life.

The study aims to compare plasma leptin concentration of obese and non-obese pregnant Ghanaian women and to match it with pregnancy outcome in terms of maternal and fetal wellbeing, peripartum outcome and neonatal wellbeing. This will be a prospective study from the time of antenatal booking until the birth of the baby. Patients' demographic information will be taken and blood samples taken for measurement of plasma leptin concentration after informed consent has been given. Fetal outcome will be monitored until birth, neonatal weight and Apgar scores will also be recorded.

We expect that obese pregnant Ghanaian women will have higher leptin concentration than non-obese pregnant women and very low or very high than average maternal leptin concentration will correlate with adverse pregnancy outcome. This will be the bases for strategies and intervention for guided weight gain before and during pregnancy.



Grant Writing and Management Workshop Report

Report written by Isabella Rockson, Grants Administrator, H3 Africa Kidney Research Office, SMD



Isabella Rockson
H3 Africa Kidney Research Office,
SMD

135 participants from the constituent institutions under the College of Health Sciences took part in a Grant writing Development and Management workshop organized for Faculty and Research Staff and held from February 9 – 11, 2015 at the Obstetrics and Gynaecology Conference Room.

The 3-Day programme was sponsored by the National Institutes for Health through the H3Africa Project.

Facilitators from the United States, Nigeria and Ghana led the participants through topics such as Importance of Research in a University Setting, Research Administration, sources of funding for Research and interacting with the NIH electronically.

Other topics were; *a successful grant proposal, proposal budget development and research administration support for proposal development.* Procedures for NIH Grant application submissions were also tackled.

On the final day, participants were taken through intellectual property issues in research, award management cost issues, research reports, the differences between contract, subcontracts and consortium.

At the end of the training, the facilitators expressed the hope that this exercise with all the enthusiasm shown by the participants, would serve as a turning point in enhancing research capacity and research career development for faculty, research personnel and research administrators at the College of Health Sciences and beyond which would move the research agenda in the College forward.



Group photograph of participants with Facilitators at the end of the workshop.



SCIENTIFIC WRITING AND COMMUNICATION COURSE

Report written by Professor G. Obeng Adjei, CTCPT

The Scientific Writing and Communication workshop was organized under the Building Stronger Universities Initiative (BSU II). The workshop took place at the Medical and Surgical Skills Institute of the Korle Bu campus of the College of Health Sciences, UG from 6th to 8th May, 2015.

The workshop sought among others, to provide knowledge that would enhance the skills of younger academics and researchers to effectively and efficiently communicate research findings in academic journals and other scholarly outlets. All applicants were required to submit early drafts of their manuscripts as one of the conditions for participation.

The teaching was organized into, i) didactic lecture-type presentations; ii) one-on-one facilitated sessions; and iii) peer-group exercises. The didactic sessions were sub-organized into, a) theoretical knowledge on scientific writing, and ii) practical tips on the basics of scientific writing. The theoretical sessions included the following topics: "definition of a scientific paper and primary publication"; "detailed descriptions on the components and form of the IMRAD-type scientific paper"; "writing a review article". The practical tips sections included the following topics: "ethics of scientific writing"; "the basics of scientometrics and aspects to consider before starting writing"; "building the scientific paper block-by-block"; "summarizing and presenting data"; "refereeing and publishing process"; "good writing style"; and "research communication and dissemination". There were also two generic sessions, on i) importance of research and ii) the role of research and research priorities in Ghana. The facilitated one-on-one sessions provided the opportunity for facilitators to engage in more thorough discussions on, and apply the knowledge from the lecture-presentations to submitted draft manuscripts. The peer-group sessions also provided the opportunity for participants to discuss relevant concepts and conduct specific exercises (e.g., article reviews) as directed by the facilitators.

The workshop was attended by 21 selected participants from various units of the University. The

workshop was facilitated by faculty members from University of Ghana, as well as a counterpart from the University of Copenhagen, Denmark.

Attendance and perceptions

All the sessions were well attended, and participants participating fully. The summary results of an evaluation done at the end of the workshop indicate among others that, participants found the workshop to be very useful and were satisfied with the details of organization.

Post-workshop evaluation

The content and delivery of all lectures were ranked high. The majority of participants indicated that their knowledge on scientific writing has markedly improved, and writing skills, enhanced.

Suggestions at post-workshop evaluation

Several participants either enquired about the possibility, or suggested that participants be given copies of presentations as soon as possible after each session.

There were also several suggestions about the possibility of organizing such workshops several times in a year (and preferably on the Korle Bu Campus).

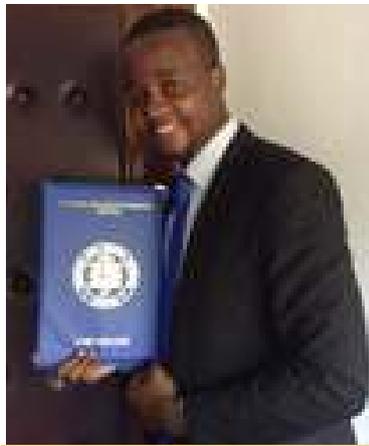
CONCLUSION

The Scientific Writing and Communication Workshop was successfully organized. The objectives of organizing the workshop were achieved. The workshop was well attended. Participants were grateful for the opportunity to participate and suggested that it would be good if similar workshops are organized several times in a year.



Facilitators and Participants at the Scientific Writing & grant Management Workshop

PROFILE



Dr. Dennis Danso Kumi
MB ChB

DR. DENNIS DANSO KUMI was born on 20th March 1989 and hails from Tarkwa in the Western Region. He had his basic education at Happy Home School and was adjudged the best Central Regional student after his BECE in 2004 where he received the presidential special award. He proceeded to Achimota School where he read General Science and came out with flying scores. He also represented Achimota School in the National Science and Maths quiz in 2007.

He was admitted to the Bachelor of Science programme in 2008 and then admitted to the University Of Ghana Medical School with a grade point average of 4.0 in the Biological Sciences. He continued to stand tall in the medical school being awarded 8 out of 9 awards in the basic and paraclinical sciences. These included; best student in Anatomy, Biochemistry, Pharmacology, Haematology, Pathology, Clinical Haematology, Microbiology and Best student in the basic sciences.

He again distinguished himself in the clinical years and graduated with high scores and received 12 academic awards including; best student in Pediatrics, best student in Obstetrics and Gynaecology, Achampong prize for Surgery, Easmon prize for Surgery, Best student in Clinical Pharmacology, Silas Doudou prize for Medicine and Therapeutics, best student in final part 1 exams, best student in final part 2 exams, overall best student throughout the course and others. He enjoys listening to and singing all genre of music.

Currently he is working as a house officer at Korle Bu Teaching Hospital and aspires to be a renowned surgeon and researcher. His areas of research interest are in immunology and human genetics. He aspires to be involved in transplant and cancer surgeries around the world and more so in Ghana.

"The world over outcomes of transplant surgeries has greatly improved and this is strongly hinged on better understanding of genetics and immunomodulations through newer drugs. The same may be said on cancer surgeries. The situations in Ghana has improved but at a slow pace and many patients who otherwise could have had a great life from high level improved procedures are left to be on palliative care."

Senior and Junior Staff News

The under listed staff members retired from service of the school at the end of the 2014/2015 academic year.

1. David Odonkor
2. Henry D. Kubi
3. Robert E. Dadson
4. Marian Tsiboe
5. Joshua Arthur
6. Thomas Adjei
7. Eric James Gyampo
8. Moses M. Adjetei
9. E.D. Dorleagbenu
10. Michael Ofori-Adjei

APPROVED PROTOCOLS - 2014

1. Active management of the Third Stage of Labour : Uterine Tonus Assessment by Mid-wife vs. Patient self-assessment-Administration- (UTAMP)
Dr. Nelson Damale
2. Correlates of Resistant Hypertension in Two Teaching Hospitals in Ghana and Nigeria.
Dr. Jane Afriyie Mensah
3. Public Perception of Organ Transplantation in Ghana
Dr. Vincent Boima
4. Serum Magnesium Levels in Perioperative and Critically ill patients at the Korle-Bu Teaching Hospital.
Rev. Charles Antwi Boasiako
5. The Acceptability and Feasibility of using Misoprostol as a first line treatment for Uncomplicated Incomplete Abortion in Korle-Bu Teaching Hospital
Dr. Adofo Emmanuel
6. The Effect of Diabetes on Stroke Pattern and Outcome at the Korle-Bu Teaching Hospital.
Dr. Mrs. Josephine Akpalu
7. Screening for Congenital Heart Diseases of Newborns in Korle-Bu Teaching Hospital, Accra, Ghana
Dr. Frank Owusu-Sekyere
8. Study of Haemodynamic Response to Two Different Doses of Oxytocin as used for the management of third State of Labour in Korle-Bu Teaching Hospital
Dr. Vivian Tanyeyo Mensah
9. Comparison of Crystalloid Preloading with Crystalloid Coloadng for Preventing Hypotension in Parturients receiving Spinal Anaesthesia for Elective Caesarean Section at the Korle-Bu Teaching Hospital
Dr. Amanda Sekyiwa Quarshie
10. Oral Hewlett Calibration in Ghana Following the CDC National Health and Nutrition Examination Survey (NHANES) Guidelines.
Dr. Sandra Ama Hewlett
11. Uptake and Continuation Rates of Post Abortion Contraception. Dr. *Kwadwo Asare Owusu-Ansah*
12. Human Heredity and Health in Africa (H3 Africa) : Collaborative Center (U54) J3 Africa Kidney Disease Research Network
Dr. Dwomoa Adu
13. The Effects of Differential Pricing and Health System Strengthening on the Management of Type II Diabetes Mellitus, Hypertension and Cancer in Ghana.
Dr. Fred Stephen Sarfo
14. Assessment of Patients' Satisfaction with Anaesthesia among Adult Surgical Patients in Korle-Bu Teaching Hospital.
Dr. Eugenia Lamptey
15. Assessment of Efficacy of Intranasal Ketamine for Premedication in Children undergoing Elective Surgery in Korle-Bu Teaching Hospital.
Dr. Audrey Oteng- Yeboah
16. Infant Birth Weight and Maternal Retention in Postpartum HIV Care.
Prof. Margaret Lartey
17. Effect of Breastfeeding and Complementary Feeding Practices on Growth and Morbidity of infants in Ledzokuku-Krowor Municipality, Ghana.
Dr. Juliana Oye Ameh
18. Correlation of Pre-operative Echocardiography and Intraoperative Findings in Patients with Congenital Heart Disease at the National Cardiothoracic Centre, Korle-Bu Teaching Hospital.
Dr. Njem M. Josiah
19. Molecular Epidemiology of Ghanaian Colorectal Cancer in Ghana
Dr. Leon Raskin
20. A Bioecological Paediatric HIV Disclosure Intervention in Ghana 'SANKOFA'
Prof. Lorna Awo Renner
21. "Pharmacokinetics of Antiretrovirals in HIV infected Pregnant Women"
Prof. Margaret Lartey
22. Cryptococcal Meningitis in Hospitalized HIV Patients at the Fevers' Unit, Korle- Bu Teaching Hospital
Dr. Japheth A. Opintan
23. Common Mitochondrial DNA (mtDNA) Mutations Associated with Male Infertility in Ghana
Dr. Augustine Ocloo
24. Prevalence and Risk Factors for Streptococcal Pharyngitis in Children attending Princess Marie Louis (PML) Hospital.
Dr. Margaret Neizer
25. Causes and Profile of Adults with Heart Failure in the Department of Medicine and Therapeutics of Korle-Bu Teaching Hospital.
Dr. Francis Agyekum
26. MRS Findings of Non-Traumatic Causes of Paraplegia and Tetraplegia in the Korle- Bu Teaching Hospital
Dr. Hafisatu Gbadamosi
27. Predictors of Quality of Life (QoL) in Patients with Diabetes Mellitus in Ghana and Nigeria
Dr. Nicholas Aperkor

The Standing Committee On Research Exchange (SCORE) is the committee within the International Federation of Medical Students' Associations (IFMSA) responsible for the establishment and management of research exchange programs between IFMSA member schools. There are currently 68 national member organizations participating in research exchange programs of which Ghana has been represented by only the Kwame Nkrumah University of Science and Technology School of Medical Sciences since the year 2011.

Research exchange programs under SCORE involve the international exchange of medical students who then participate in a research project within the host school for a minimum period of 4 weeks. The aim of this program is to enable medical students to enrich their medical education by a research experience and to learn the basic principles of research.

The success of this program in increasing student participation in research and giving a more practical understanding of theoretical knowledge has urged the FGMSA to establish SCORE within the University of Ghana School of Medicine and Dentistry. Currently we are in the process of securing research projects which will be available to receive foreign exchange students. We are also counting on the cooperation the various departments within the Korle Bu Teaching Hospital and UGSMD.

For further information contact:
Sydney Sykes, National Officer on Research Exchange
lore.ugms@gmail.com
<http://www.ifmsa.org/Activities/StandingCommittees/ResearchExchanges>



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