Clinical trial experience from KCCR/KNUST

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, AND
KUMASI CENTRE FOR COLLABORATIVE RESEARCH IN TROPICAL MEDICINE

By
Alex Debrah.
KCCR Research areas

- **Malaria**
  RTS'S Vaccine Trial
  Genetics of host resistance and susceptibility to severe malaria
  Improvement in treatment of severe malaria
- **Tuberculosis**
  Genetics of host resistance and susceptibility to tuberculosis
- **Entomology**
  Insect vectors and parasite transmission in malaria, onchocerciasis and elephantiasis
- **Aflatoxin toxicity**
  Aflatoxin ingestion and health impact in a high ingestion area of Ghana
- **Filariasis**
  Anti-symbiotic chemotherapy for elimination of Wolbachia in elephantiasis and onchocerciasis
- **Buruli Ulcer**
  Multi disciplinary research for improvement of control in Africa.
- **Neglected diseases in African Children**
  Respiratory infections, stool infections and blood related infections
- **Water Quality**
  Presence of bacteria in water
Filariasis clinical trials conducted for the past 19 years

16 trials (n=3200 patients)

- Onchocerciasis Trial (9 trials)
  - ON 2, ON 3, ON4
    - Rifampicin trial, Azithromycin trial
      - AWOL ON Trial, AWOL-Mino trial
        - SCOOTT trial
          - DOLF trial - FDA accredited even though commenced before the Ghana health Act 2012

- LF Trials (7 trials)
  - WB 2, WB 3
    - Rifampicin trial, Azithromycin trial
      - AWOL-LF
        - VW LE study
          - TAKEOFF study - (Ongoing): FDA approved

- MORION - Rifapentine and Moxifloxacin (Ongoing) FDA approved
Three of the studies were approved by G-FDA-Ghana Public Health Act 2012

DOLF

MORION

LEDoxy

CLINICAL TRIAL CERTIFICATE - No. FDAC/181

In pursuance of the Public Health Act, 2012, Act 851, Part II, Sections 150-159, the Food and Drugs Authority hereby grants approval for the conduct of Clinical Trials as per information herein provided.

NAME/manufacturer OF INVESTIGATIONAL PRODUCTS:

1. Diethylcarbamazine (Emboline® 200mg) (manufacturer: Rhone-Mérieux, France)
2. Phosphine (Phos-Side®) (manufacturer: Mycrol, UK)
3. Standard MDA Treatment: Ivermectin 0.2 mg/kg (oral) and albendazole 10 mg/kg once a year

STUDY IDENTIFICATION:

TAKENF-4-0117

APPROVED PROTOCOL:

GH 3/February 24, 2013

APPROVED INFORMED CONSENT/ASSENT FORMS:

a. Patient Information Sheet, Consent and Assent Forms for Screening, Enrolment and Treatment Version 2.0, Dated: October 02, 2017
b. Patient Information Sheet, Consent Form and Assent Forms for Sample Storage, Use and Shipment Version 2.0, Dated: October 02, 2017
c. Patient Information Sheet, Consent and Assent Forms for Screening, Enrolment and Treatment Version 1.0, Dated: Kwaekwama 06, 2017
d. Patient Information Sheet, Consent Form and Assent Forms for Screening, Enrolment and Treatment Version 1.0, Dated: July 6, 2017
e. Patient Information Sheet, Consent Form and Assent Forms for Sample Storage, Use and Shipment Version 1.0, Dated: Kwaekwama 06, 2017
f. Patient Information Sheet, Consent and Assent Forms for Screening, Enrolment and Treatment Version 1.0, Dated: July 30, 2017
g. Patient Information Sheet, Consent and Assent Forms for Screening, Enrolment and Treatment Version 1.0, Dated: July 30, 2017
h. Patient Information Sheet, Consent Form and Assent Forms for Sample Storage, Use and Shipment Version 1.0, Dated: July 30, 2017

INVESTIGATOR'S BROCHURE:

Edition 1, Release date: December 2016

STUDY TITLE:

Diethylcarbamazine 200mg and 400mg given for 14 or 7 days against Onchocerca volvulus – A Randomized, Parallel-Group, Open Label, Phase II Pilot Trial

NAME AND ADDRESS OF SPONSOR:

Kumasi Centre for Collaborative Research (KCCR)
Kumasi, Ghana
1502065551

FDA/MDCCT/ICTA/17/0032

14th June 2017

Dr. Alexander Yaw Debrah
The Dean of Faculty/Project Principal Investigator
Faculty of Allied Health Sciences
College of Health Science
PMB
University Post Office
Kumasi

RE: REQUEST FOR CLINICAL TRIAL APPROVAL – IVERMECTIN ALONE VERSUS ALBENDAZOLE PLUS IVERMECTIN AGAINST ONCHOCERCIASIS

This is in reference to your Clinical Trial Application for the study titled, “Comparison of Ivermectin Alone with Albendazole plus Ivermectin in Their Efficacy against Onchocerciasis.”

Review of the clinical trial documents, the outcome of the site GCP inspection and the subsequent responses has been completed and found to be generally satisfactory.

The Food and Drugs Authority (FDA) has therefore decided to bring the study under its regulation. However, a Clinical Trial Certificate cannot be issued for the conduct of the study since the FDA does not issue a retrospective Clinical Trial Certificate.

You are to note the trial details per FDA’s records:

3. Investigational products used in the study:
   a. Mectizan® (ivermectin) (manufacturer: Merck Sharp & Dohme Inc)
   b. Zentel™ (Albendazole) (manufacturer: Serono Limited)
4. Trial sites:
   a. Kumasi Centre for Collaborative Research (KCCR)
   b. New Ejisuase Government Hospital
   c. Communities in Ashanti South District.

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KCCR research sites
Study site Dunkwa on Offin - lab

Equipped with e.g.:
- running water/electricity + generator as back-up
- microscopes
- biosafety hood
- fridges
- liquid nitrogen tank
- hot air sterilizer
Accommodation facilities:
- 12 bedrooms
- Office
- Store rooms
- Watchmen/security area
- Parking lot
Our Compliance is always high
Operating theater:
- Air conditioned
- Sterile working conditions
- Ward with 12 beds available

Of the 233 patients, only 5 minor infection

Nodulectomies in local anaesthesia
The Kumasi team has rich experience in conducting clinical trials
The TAKeOFF Platform

• With 2012 London declaration on NTDs, it is expected that more clinical trials will take place in Africa

• What is lacking however, is expertise to conduct CT in GCP manner

• In 2017, the German Federal Ministry of Education and Research (BMBF) granted the TAKeOFF consortium over 8 million Euros to build a CT platform for filariasis and podocionosis
Tackling the Obstacles to Fight Filariasis and Podoconiosis

The vision:
To make Africa and the world free of Lymphatic Filariasis and Podoconiosis

The mission:
To offer evidence-based treatment, control and elimination of lymphatic filariasis and podoconiosis in Africa through networking, awareness programs and empowering researchers and local health authorities within the African region.
TAKeOFF Consortium partners
Institutional PIs

Achim Hoerauf

Samuel Wanji

Inge Kroidl

Alex Debrah

Upendo Mwingira
Objectives of the consortium

1. To Establish a multinational Filariasis Clinical Trial Platform (F-Cure) to harmonize procedures to address the specific needs for filariasis control across Africa

2. To create awareness about the diseases
Status and tasks accomplished

Harmonization of clinical trial procedures

• Consortium met in Kumasi, Ghana in May 2017 to discuss and harmonize the procedures

• 72 SOPs for oncho and LF research have been developed

• GCP Training in Ghana by G-FDA for Ghanaians and Cameroonian

• 252 paged protocol in accordance with GCP have been developed and submitted to
  – Local IRB
  – Ministries of Health
  – Local FDAs
Ghana Public Health Act 2012

before

14 pages

after

252 pages
Human Capacity development goals achieved

- The F-CuRE platform has provided clinical trial performance related courses such as GCP/GLP, internal monitoring, data management and statistics
  - Trial clinicians
  - Trial pharmacists
  - Lab technologists
  - Research assistants
  - Nurses
GCP certificates awarded by G-FDA
Infrastructural Capacity development
goal achieved

- **Infrastructural dev’t**
  - Field laboratories are in place
  - 4 minus 80 freezers
  - Lab equipment, etc.
  - Drug storage facility with temp control system
  - Fire proof cabinets for document storage
  - Fleet of cross country vehicles for field work
  - Archived room for document storage
  - Liquid nitrogen tanks
  - Microscopes
  - Etc.
Molecular Biology lab - PCR machines

Safety hood for PCR mastermix

Cobert Machine

Real time PCR to detect *Wolbachia ftsZ* gene in mf from filtered blood
Filariasis team has cross country vehicles for field work
Summary and Conclusion

The TAKeOFF consortium is building a strong F-Cure platform for the conduct of Phase 2-4 clinical trials.
Thank you