

## RESEARCH PLAN

**a. Specific Aims**

**Aim:** Establish a “state of the art” breast tissue procurement core facility for the Center for Interdisciplinary Health Disparities Research (CIHDR) at the University of Chicago (UC).

The specific aims of the Breast Tissue Core (BTC) are to:

- Collect molecular biology grade fresh frozen tissues from *human and animal* (rat and mouse) mammary cancer (in situ and invasive) together with adjacent benign/normal mammary tissues from which RNA, DNA and proteins can be extracted for molecular research. To achieve this aim, we intend to:
  - Prospectively identify and approach *human* patients with breast disease undergoing surgical procedures at the University of Chicago Hospitals for informed consent in compliance with a protocol approved by the Institutional Review Board (IRB) and collect surplus breast tissue specimens linked with clinical information.
  - Obtain *human* breast tissue samples from histologically confirmed breast cancers from the University College Hospital (Ibadan, Nigeria).
  - Obtain *rat and mouse* mammary tissue specimens collected at the Animal Facilities under supervision of tissue bank personnel at the UC.
- Collect *human and animal* formalin-fixed, paraffin embedded "mirror-image" tissue blocks that correspond to frozen tissue samples for histologic study and DNA extraction.
- Maintain facilities for tissue storage, processing and distribution of pathologically characterized *human and animal* (rat and mouse) tissue samples linked with:
  - clinical information to investigators for IRB approved research programs for *human* tissues and
  - information regarding animal housing, care and treatment for *animal* tissues.
- Develop and maintain database systems to manage and track:
  - *human* patient general and specific clinical information, including treatment and follow-up combined with pathologic data and
  - information related to *animal* models of mammary cancer, including general husbandry, pathological data, and additional information related to specific research experiments.
- Assign and use unique identifiers (bar-codes) in a database in order to protect *human* patient confidentiality, eliminate error during ID entry and decrease the time of sample retrieval for molecular analysis.
- Complement tissue banking efforts with laser microdissection and tissue microarray facility service.