The main aim of the CCTS Biobank is to collect and share big data. Continued aims of the CCTS Biobank are to increase the number of contributors, fulfill requests, and to expand the amount of available data.

Background

The UT Health Center for Clinical and Translational Sciences (CCTS) Biobank consists of two different components of data: biological material and a database, which includes associated genomic, demographic, and clinical data. Here we present a description of the CCTS Biobank, which serves as a big data resource available to qualified UTHealth researchers. More than 14,800 biological samples have been distributed to 53 researchers since 2002.

Aim

The main aim of the CCTS Biobank is to collect and share big data. Continued aims of the CCTS Biobank are to increase the number of contributors, fulfill requests, and to expand the amount of available data.

Methods

The CCTS Biobank uses a federated model of sharing in which the contributor maintains ownership of the donated data. The contributor has agreed to share the data based upon scientific merit, inventory availability, and correlation with their studies. Interested researchers can search and request data using the Sample Location and Enhanced Distribution online search web application through the CCTS Biobank website https://biobank.uth.tmc.edu/BBCIS/

Results

The CCTS Biobank has collected over 200,000 human samples and related demographic and clinical data and includes the genetic data of over 7,000 participants that have undergone whole exome sequencing. The primary disease categories are cardiovascular disease, cancer, inflammatory diseases, stroke, aortic aneurysms, and diabetes mellitus. The CCTS Biobank strives to be representative of Texas, which has a large Hispanic population, representing the changing landscape of the United States. We are currently recruiting contributors primarily working with Hispanic populations, which currently represent 20% of the CCTS Biobank participant population.

Conclusions

Our key to big data research success is the implementation of administrative policies and procedures that guard and respect the quality and quantity of the data collected while enabling big data sharing among our UTHealth community. The ultimate goal is to promote research via the sharing of big data to interested and qualified researchers.

Each data request is reviewed for

- quality of the research aim
- impact of research on specific human disorders
- availability and rarity of data

Applicants must provide

- application form
- IRB approval number
- brief abstract with specific aims
- CV or NIH biosketch
- verification of training in human subjects
- signed CCTS Biobank Receiving Investigator Agreement

Contact us at: UTHealth_CCTS_Biobank@uth.tmc.edu

or http://www.uthouston.edu/biobank/index.htm

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