

## Scientific Director, Biostatistics & Biomedical Informatics Shared Resource



**Brook Fridley, PhD**

- Recruited from U of Kansas Cancer Center in 2017
- Chair & Senior Member, Biostatistics & Bioinformatics Department
- Collaborative research interests focused on the genomic basis of cancer, pharmacogenomics & precision medicine
- Co-I on multiple grants including a U54
- Co-PI of T32 (pending)
- Currently supporting 6 active clinical trials
- Over 235 peer-reviewed publications
  - 26 1<sup>st</sup> authored, 22 senior authored

## Biostatistics and Bioinformatics Shared Resource (BBSR)

**Brooke L. Fridley, PhD**

Scientific Director

Chair and Senior Member, Department Biostatistics and Bioinformatics (Bio2)

Cancer Epidemiology Program Member



TO CONTRIBUTE TO THE PREVENTION AND CURE OF CANCER

## Benefits to Merging the BC & CIC

- Contemporary science is very **integrated**
- Fosters **multidisciplinary teams** supporting projects through **single entry point**
- Enhances **career development** for faculty and staff through exposure to different types of projects
- Builds on the **model established** in merging the two departments

## Goal of the BBSR

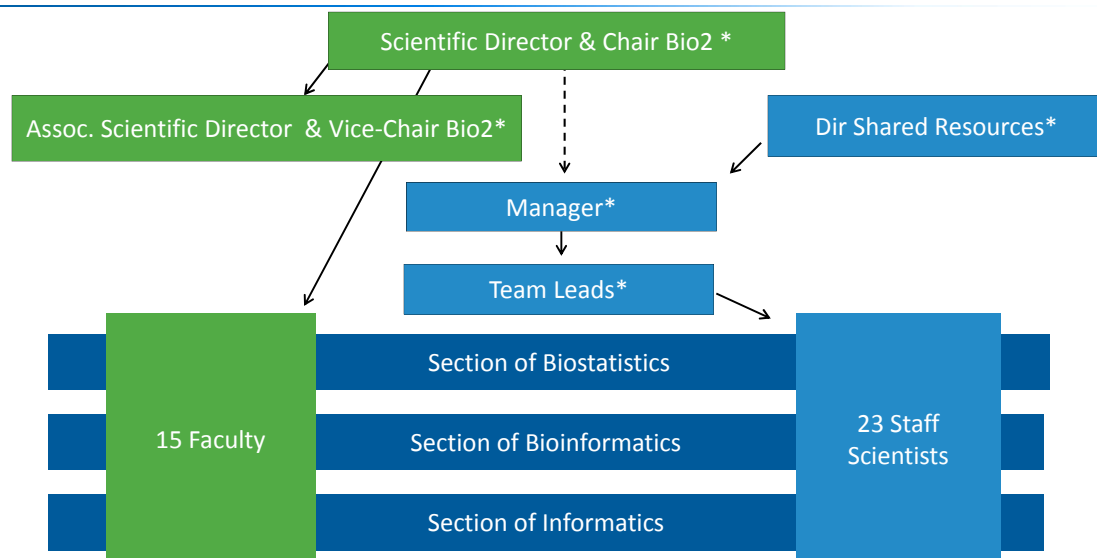
- To provide **exceptional, comprehensive, multidisciplinary and collaborative data science expertise**, with a focus on **reproducible research**.

## CCSG Working Specific Aims

### Aims:

1. To provide **study design**, feasibility assessment, and sample size/power estimation for research projects, protocols, and grant applications
2. To provide biostatistical, bioinformatics, and informatics **analysis expertise** for the completion of research projects and protocols
3. To develop and **support research enabling technologies, pipelines, and computational tools** to facilitate the timely and accurate completion of research projects in a reproducible manner
4. To **educate** students, fellows, and faculty members at Moffitt on study design, data collection, and computational analysis aspects used in the completion of cancer research projects

## Biostatistics & Bioinformatics Shared Resource (BBSR)

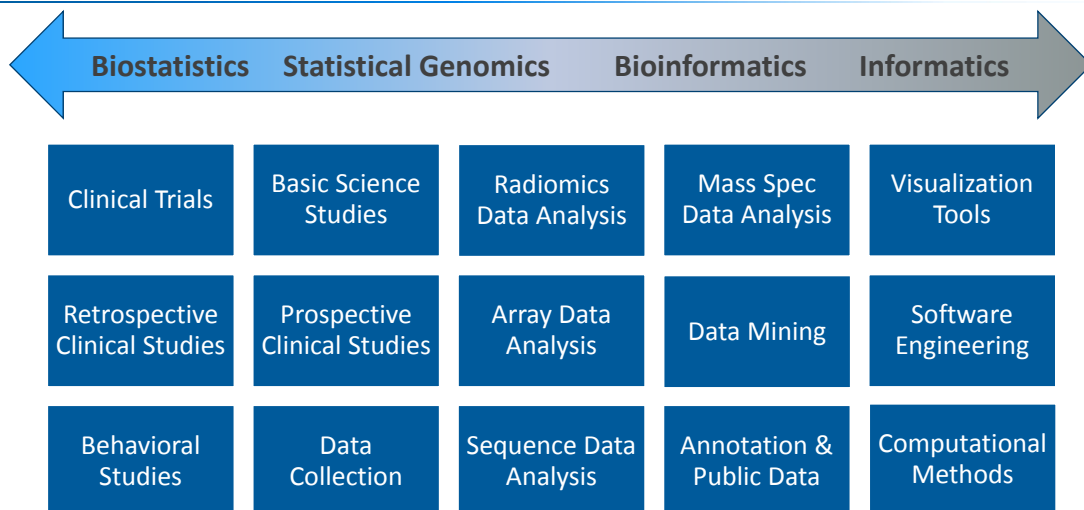


\*BBSR Leadership Team

## BBSR Advisory Committee

- John Koomen, PhD (Chair) (CBMM)
- Rachid Baz, MD (CBMM)
- Jhanelle Gray, MD (CBMM)
- Doug Cress, PhD (CBE)
- Clement Gwede, PhD, MPH, RN (HOB)
- Anna Giuliano, PhD (CE)
- TBN (IMM)

## Current Types of Research Collaborations



## Utilization

Type of Research Project	FY 2018	FY 2019 *	Projected % Change
General Projects	301	258	47%
Project PIs	106	95	54%
Investigator Initiated Clinical Trials (IITs)	33	24	24%
IIT PIs	22	19	50%
GME Fellow Projects	58	47	40%
GME Fellows	33	30	58%
Total # Projects	392	329	44%
Total # of PIs	161	144	53%

\* July 2018 – Jan 2019

## Reproducible Research

Topic	Solution	Status	
		On-going	Completed
Organization	Standardized folder structure on network drive and creation of a BBSR GitLab page		X
Version Control	Git	X	
Documentation	Rmarkdown reports, README files	X	
Pipelines for NGS	RNA-Seq, DNA-Seq, ChIP-Seq	X	X
Standardized Analysis	R functions, SAS Macros	X	X
Visualization Tools for Researchers	R Shiny Apps	X	X
Documentation	2 <sup>nd</sup> Person Code Review	X	

## Educational Activities

- BIOS 101: Introduction to Biostatistics (Spring)
- New BIOS 102: Introductory Biostatistics Workshop with JMP (Spring)
- Genome Data Analysis Course (Fall)
- Bio-Data Club (monthly)
- Informal training and mentoring
- T32 Applications
- Yearly Workshops
- Drop-in consulting center (monthly)



Photo from Computational Reproducible Research Workshop by Keith Baggerly held May 31, 2018

## Service

- CCSG
  - Scientific Review Committee (SRC)
  - Protocol Monitoring Committee (PMC)
- Institutional
  - High performance computing (HPC) Steering Committee
  - TCC and HRI Committees
  - Research Application Domain Council

## Questions

- Thoughts on the proposed Aims?
- What questions might come from CCSG reviewers regarding the creation of BBSR?
- Any issues / areas that we should proactively address prior to the CCSG submission?

## BBSR Team

