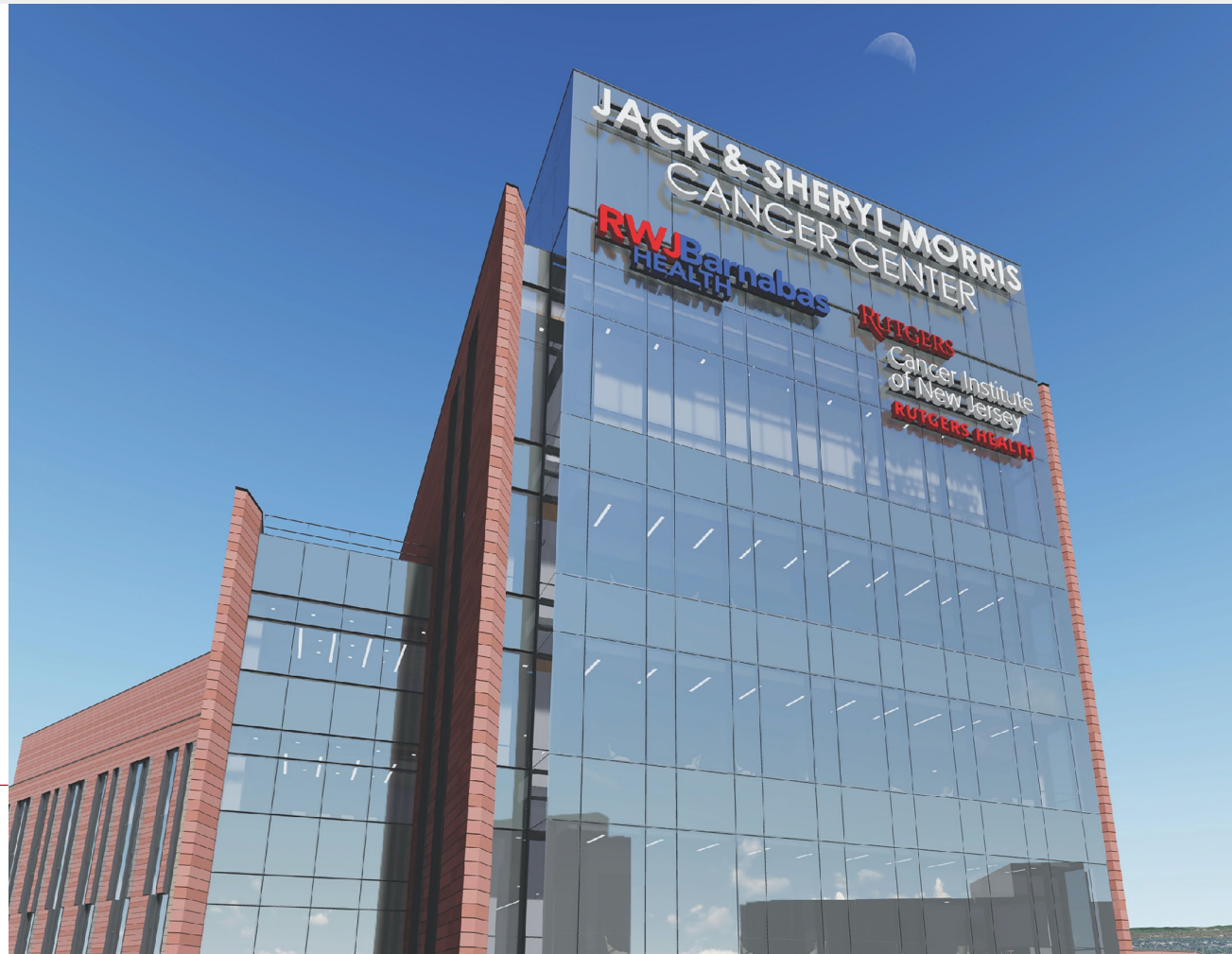


Shared Resource Management

Adam C. Berger, MD, FACS

April 26, 2023



RUTGERS
Cancer Institute
of New Jersey
RUTGERS HEALTH

NCI Comprehensive
Cancer Center
A Cancer Center Designated by the
National Cancer Institute



Leadership



Adam C. Berger, MD, FACS

Associate Director
for Shared Resources
Joined CINJ August 2019



Ioannis Stasinopoulos, PhD

Assistant Director
for Shared Resources
Joined CINJ May 2020

Mission

Maintain and enhance Shared Resources, instrumentation, and services that provide researchers with access to technology, centralized intellectual and technical resources, and essential technical support that will drive innovative cancer research

Shared Resources: Management & Decision-Making

CINJ Director

Research Leadership Council

Reviews major changes, productivity, and alignment with strategic goals

CINJ Finance and Administration

Reviews finances, staffing, and business planning

New Investment in this Grant Period:

- \$2.0 M equipment
- \$600 K new FTE support

Shared Resource Management

- SR Faculty Directors lead each SR and report to the ADSR
- SRM tracks and supports SRAC recommendations, productivity, service development, outreach, and member satisfaction and needs assessments

Shared Resource Advisory Committees (SRACs)

- Eight dedicated SRACs meet annually; subcommittees meet as needed

BISR

BRHS

BSR

CGSR

GESR

MSR 

CPODS SR

IMFC SR 

with NJMS

with ROR

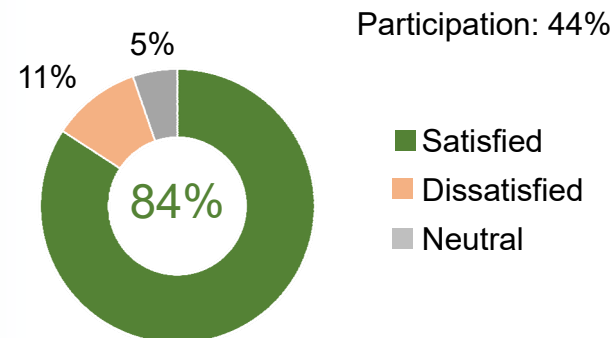
New

Merged

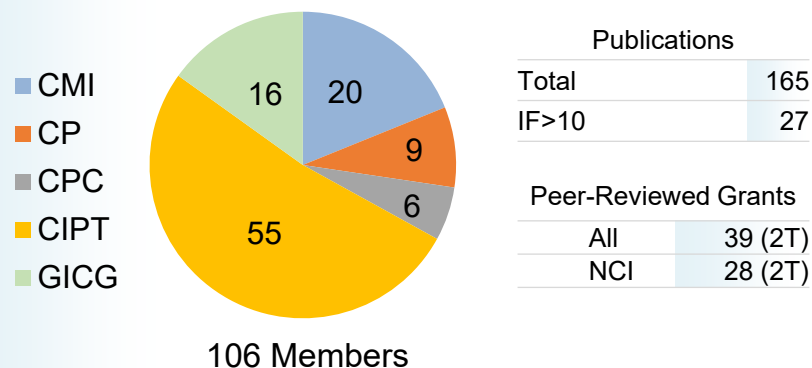
Shared Resources: Operational Improvements

- Annual Quality Satisfaction Surveys
- Research Program Support
 - Assignment of publications
 - Monitoring grant support
 - Utilization tracking
- Improved chargebacks, quarterly monitoring
- Implemented iLab in six Shared Resources

All SRs Quality Satisfaction CY 2022



Biorepository and Histopathology SR Research Program Support (2018–2022)



Strategic Planning and Needs Assessment

Developing Organoid SR

- Ten well-funded members expressed interest
- RLC recommendation to Director approved
- Faculty Director identified
- Managing Director identified
- Instrument purchased

Criteria for advancement

Transdisciplinary Collaboration

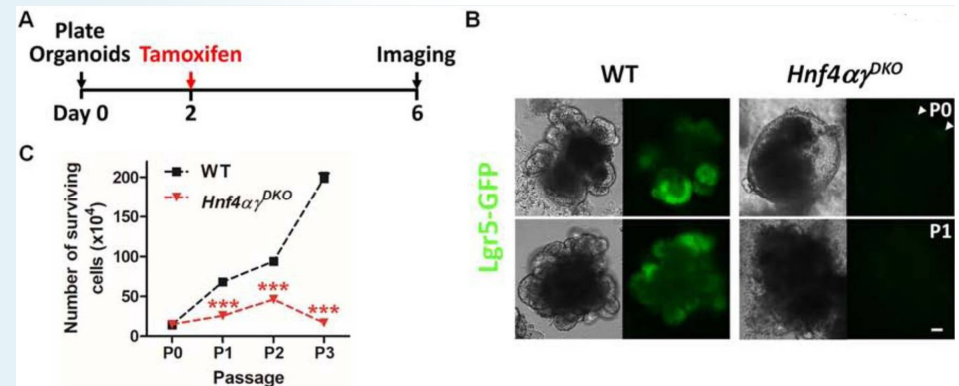
- 10-14 publications from collaborations with human specimens and spheroid work
- Users from 3-4 Research Programs

Productivity

- 10-15 members with peer-reviewed support

Biostatistics SR planning

- Identified areas of expansion through member survey
- Recruitment based on needs assessment and RLC review of strategic plan



Gastroenterology 2020, 158(4): 985–999.e9.

Organoid SR Director Verzi (GICG) and Su (MSR)



Cytation 7 Biospa with Hypoxia Control

Future Plans

1 Recruit Programmer/ Data Manager

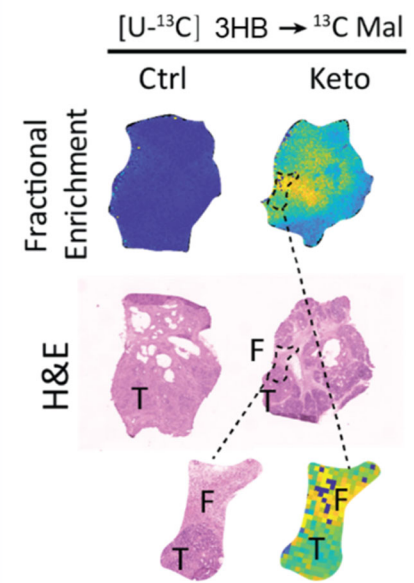
- Improve data collection
- Quality satisfaction survey upon the completion of each project on iLab

2 Individual Shared Resources

- Purchase Orbitrap IQ-X Mass Spectrometer
- Support the scalable, multi-modal data warehouse for use with EPIC, machine-learning algorithms that can combine imaging and genomic marker data sets, and tools to facilitate the interpretation of clinical-grade tumor sequence data

3 Leverage Expertise at Princeton University

- Integrate new technologies e.g., single-cell resolution mass spectrometry imaging (Rabinowitz)
- Collaborate with Lewis-Sigler Institute for Integrative Genomics (e.g., Troyanskaya) and PU Computational Cancer Genomics (e.g., Raphael)



Pancreatic Adenocarcinoma Imaging in Mice

Tumors use 3-Hydroxybutyrate (3-HB) as TCA fuel as imaged by measuring ¹³C-labeled Malate (¹³C Mal) using MALDI imaging mass spectrometry

Med (NY) 2022; 3(2): 119–136.

Thank You

Q&A Segment



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