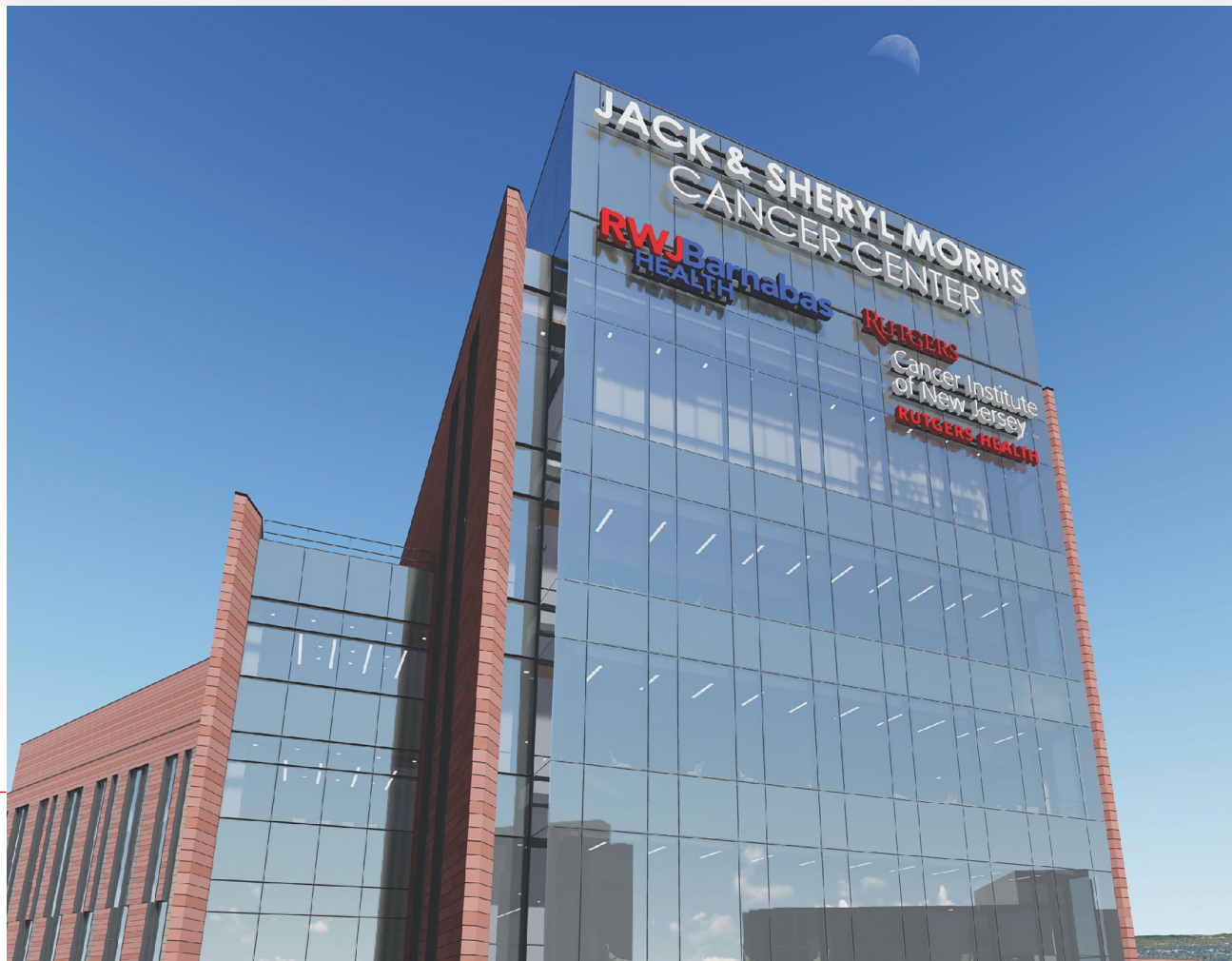


Overview of Consortium Research

Yibin Kang, PhD

April 26, 2023



RUTGERS
Cancer Institute
of New Jersey
RUTGERS HEALTH

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



Associate Director for Consortium Research



Yibin Kang, PhD

- Princeton University
- Warner-Lambert/Parke-Davis Professor of Molecular Biology
- American Cancer Society Research Professor
- Member, Ludwig-Princeton Branch

Mission

To integrate the outstanding researchers at Princeton University into cancer-focused collaborations and provide them with opportunities for translational research made possible within an NCI-Designated Comprehensive Cancer Center

2018 CCSG Summary Statement Highlights

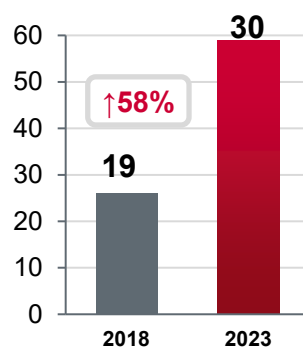
- **Long-standing consortium partnership:** opportunities for scientific collaboration, cooperative development
- Use of state-of-the-art **Shared Resources**
 - Princeton-led: Metabolomics, Genome Editing
 - Multi-campus: Flow Cytometry, Metabolomics
 - Jointly sponsored: Small Molecule Screening
- Collaboration on **training and education**
- Princeton University: tangible **financial commitment to the Cancer Center**



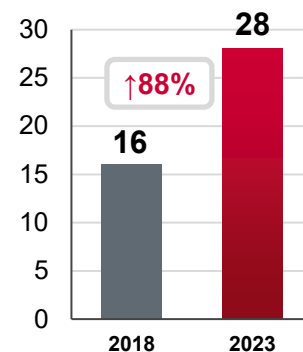
Expansion and Progress of the Consortium since 2018

- Commitment to CINJ vision
 - Recruitment of cancer immunology/metabolism faculty at PU
- Joint annual symposium and seed grants to promote collaboration
- Multi-institutional multi-PI program grants
 - U24CA211000 (Raphael [GICG] / Yeh)
 - NCI 1OT2CA278609-01/ CRUK CGCATF-2021/100022 (Davidson [CMI] / White, Anthony)
- T32CA257957 training grant in Cancer Metabolism and Tumor-Host Interactions
 - Co-PIs: Zong (CMI) and Kang (CMI)

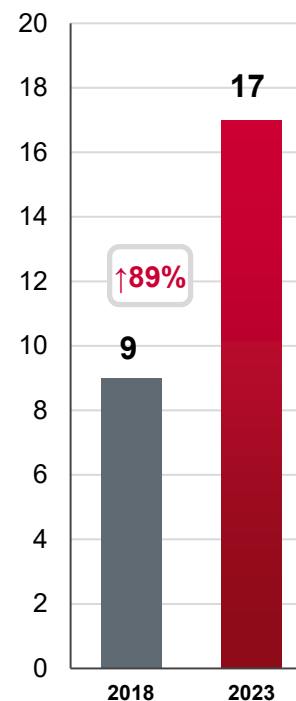
Princeton University Membership



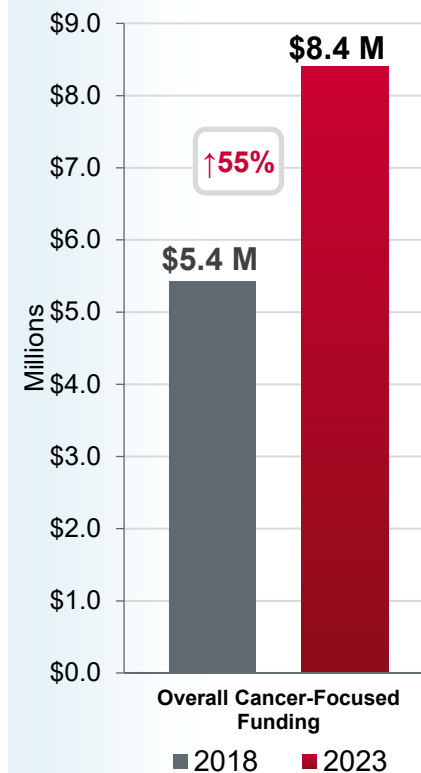
Peer-Reviewed, Cancer-Relevant R01 Equivalents



NIH PIs/PDs





Total Cancer Relevant Funding



Translating Basic Science into Novel Cancer Therapeutics





Zemer Gitai (CMI)

- Identified irresistins (IRS) - novel family of dihydrofolate reductase (DHFR) inhibitors (*Cell*, 2020)
- IRS-17 superior to methotrexate (MTX) with reduced resistance
- Developing IRS-17 as novel anti-folate chemotherapy agent
- Collaboration with H. Kim , Rabinowitz , Herranz, J. Guo



Yibin Kang (CMI)

- Study on metastasis gene MTDH led to identification of small molecular inhibitor C26-A6 (*Nature Cancer*, 2022); licensed to Firebrand Inc. for further clinical development
- Developed dual-specific inhibitors against ALDH1a2/3 to target the immunosuppressive environment induced by RA signaling. IP licensed to KayoThera; expect to file IND later this year
- Collaboration with H. Kim , Rabinowitz , Haffty, Ganesan, Bertino

Shared Resources and other Center-supported Services: Small Molecule Screening, Metabolomics, Flow Cytometry, Genome Editing, Biospecimen Repository, Biostatistics

New Princeton Branch of the Ludwig Cancer Research Institute



Director
Joshua D. Rabinowitz



Member
Yibin Kang



New Member (2023)
Michael Skinnider



PRINCETON
UNIVERSITY

- Established in 2021, \$25 M investment through 2023
- 3 Faculty Recruits
- Equipment
- Ludwig Fellows
- Ludwig Collaborative Research Awards

**LUDWIG
CANCER
RESEARCH**

Princeton



Associate Director
Eileen White

RUTGERS

Cancer Institute
of New Jersey

RUTGERS HEALTH

- Ludwig Fellows
- Ludwig Collaborative Research Awards: J. Guo (CMI), Herranz (CP), Hu (GICG), Valvezan (CMI)
- Equipment

RWJBarnabas
HEALTH

- PDAC clinical trial: Hochster (CIPT), Alexander (CIPT)
- Breast Cancer Clinical Trial; Omene (CIPT), Ganesan (CIPT)

Future Directions

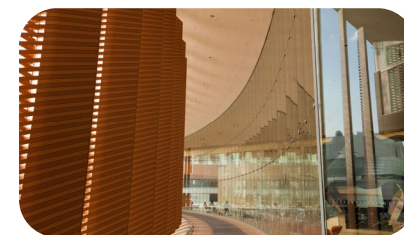
Translational Research and Clinical Trials

- Large collaborative research project focusing on impact of diet on cancer development and treatment response in diverse cancer types
- Metabolic profiling of clinical samples from ongoing clinical trials



Education and Training in Collaboration with CRTEC

- Joint T32 with Princeton University Lewis-Sigler Institute for Integrative Genomics (2023)
- Development of a summer undergraduate student internship program with Ludwig Princeton Branch (2023)



Joint Efforts in Faculty Recruitment

- Focused recruitment efforts in cancer metabolism and immunology

**LUDWIG
CANCER
RESEARCH**

Princeton

Thank You



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