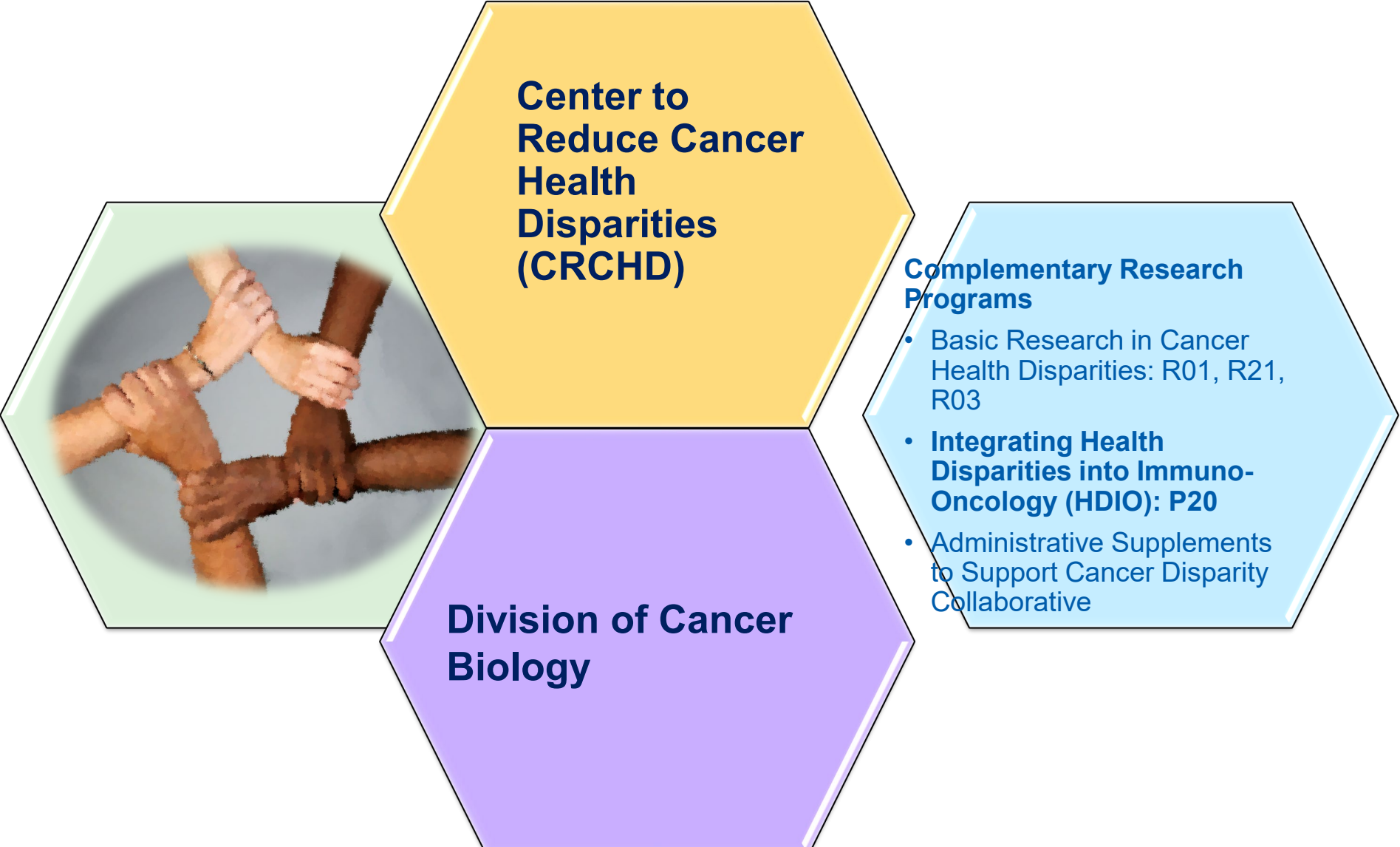


Cancer Health Disparities Research Collaborations Across CRCHD and DCB



Center to Reduce Cancer Health Disparities (CRCHD)

Division of Cancer Biology

Complementary Research Programs

- Basic Research in Cancer Health Disparities: R01, R21, R03
- Integrating Health Disparities into Immuno-Oncology (HDIO): P20
- Administrative Supplements to Support Cancer Disparity Collaborative

Scientific Research Needs Raised by the Community



FINDING CURES TOGETHER®

15th American Association for Cancer Research Conference on the Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved
September 16 – 19, 2022
Philadelphia, Pennsylvania

NCI Listening Session
Embracing Complexity: Understanding Context to Eliminate Cancer Disparities and Achieve Equality

Session Chairs: John D. Carpten, PhD, Keck School of Medicine of USC, Los Angeles, California, Chyke A. Doubeni, MD, MPH, The Ohio State University Wexner Medical Center, Columbus, Ohio

Social Determinants of Cancer Risk and Outcomes, Chanita Hughes-Halbert, PhD, University of Southern California, Los Angeles, California

The Intersection of Social Determinants, Biology, Ancestry, and Environment, Timothy R. Rebbeck, PhD, Harvard T. H. Chan School of Public Health and Dana-Farber Cancer Institute, Boston, Massachusetts

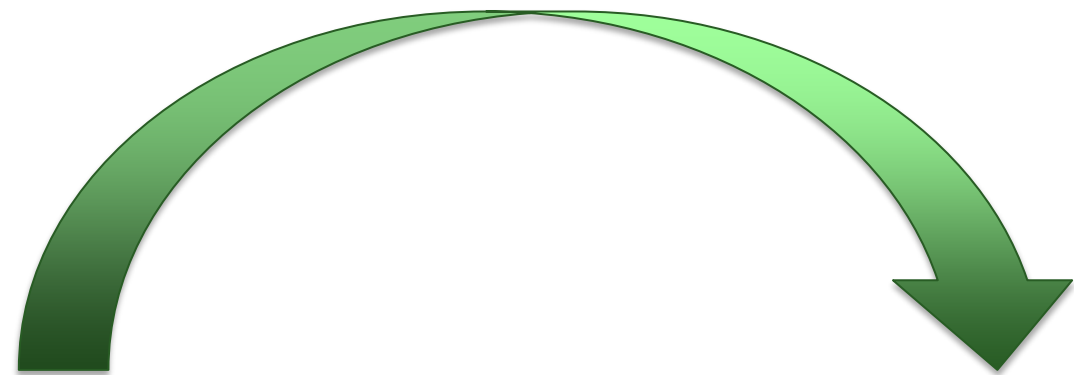
Intersection of Social and Other Environmental Factors, Biology, and Ancestry, Scarlett L. Gomez, MPH, PhD, University of California, San Francisco, San Francisco, California

Closing Remarks, Douglas R. Lowy, MD, National Cancer Institute, Bethesda, Maryland

The National Cancer Institute Cancer Health Equity Visioning Workshops

- 1. VISIONING MINILABS:** The first stage began with a series of three short (1.5 hours) virtual interactive workshops designed to broadly engage a diverse community in small interactive discussions to ideate and share new ideas around research approaches that cut across disciplines. Workshop Dates
 - Session 1: Thursday, August 31, 2023 (11am-12:30pm EST)
 - Session 2: Wednesday, September 6, 2023 (11am-12:30pm EST)
 - Session 3: Friday, September 8, 2023 (11am-12:30pm EST)
- 2. IDEATION MINILABS:** The second stage will build on the ideas from the first stage and will comprise a series of five virtual interactive workshops designed to coalesce, focus, and refine the ideas into strong themes and opportunities that can serve as the foundation for new research directions in the science of CHD.

Integrating Health Disparities Research into Immuno-Oncology



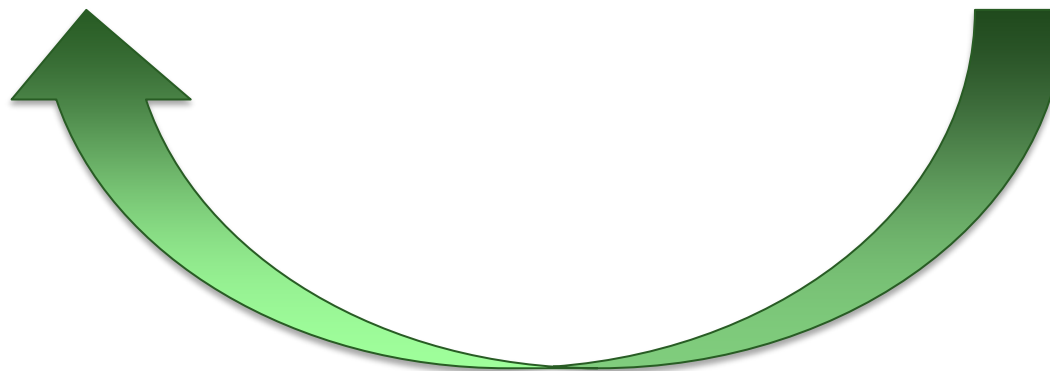
Cancer Health Disparities:

Adverse differences among certain population groups in cancer measures, such as: incidence, prevalence, morbidity, mortality, survivorship, quality of life, the burden of cancer or related health conditions, screening rates, and stage at diagnosis. The causes of cancer disparities are multifactorial and complex with direct influence by structural inequalities and societal injustices.

Integrative Research

Immuno-Oncology:

Cancer immunology, cancer immunotherapy, and/or cancer immunoprevention. This includes basic biological mechanisms underpinning anti-tumor immune responses, immune regulation of the development and spread of tumors, and approaches to improve immune targeting and destruction of cancer cells



Integrating Health Disparities Research into Immuno-Oncology (cont'd)

- **Overarching Scientific Gaps:**
 - Impediments in access to care drive cancer health disparities
 - Multi-layered research and implementation science gaps include racism, socioeconomic and geographic factors
 - Health disparities persist and need to be directly addressed in IO research ecosystem
 - Critical need for complementary basic research focused on the intersection between health disparities and immuno-oncology research.

- **Basic Science Challenges in Cancer Health Disparities Research:**
 - Complex and overlapping biological and immunological factors underlying the disparities
 - Difficult to access sufficiently powered and/or well-curated specimens; lower numbers of under-represented groups recruited into clinical trials

- **Basic Science Objectives:** To integrate health disparities research throughout the NCI immuno-oncology research continuum

Research Gaps in Health Disparities in Immuno-Oncology

- **Broad Integrative Research Needs:**

- Understanding inflammatory, metabolic and immune profiles of immunotherapy treatment response across under-represented populations
- Investigating genetic, immune signatures, immune infiltrates, and/or distinct tumor immune microenvironments that may contribute to cancer health disparities

- **Specific Research Examples Include:**

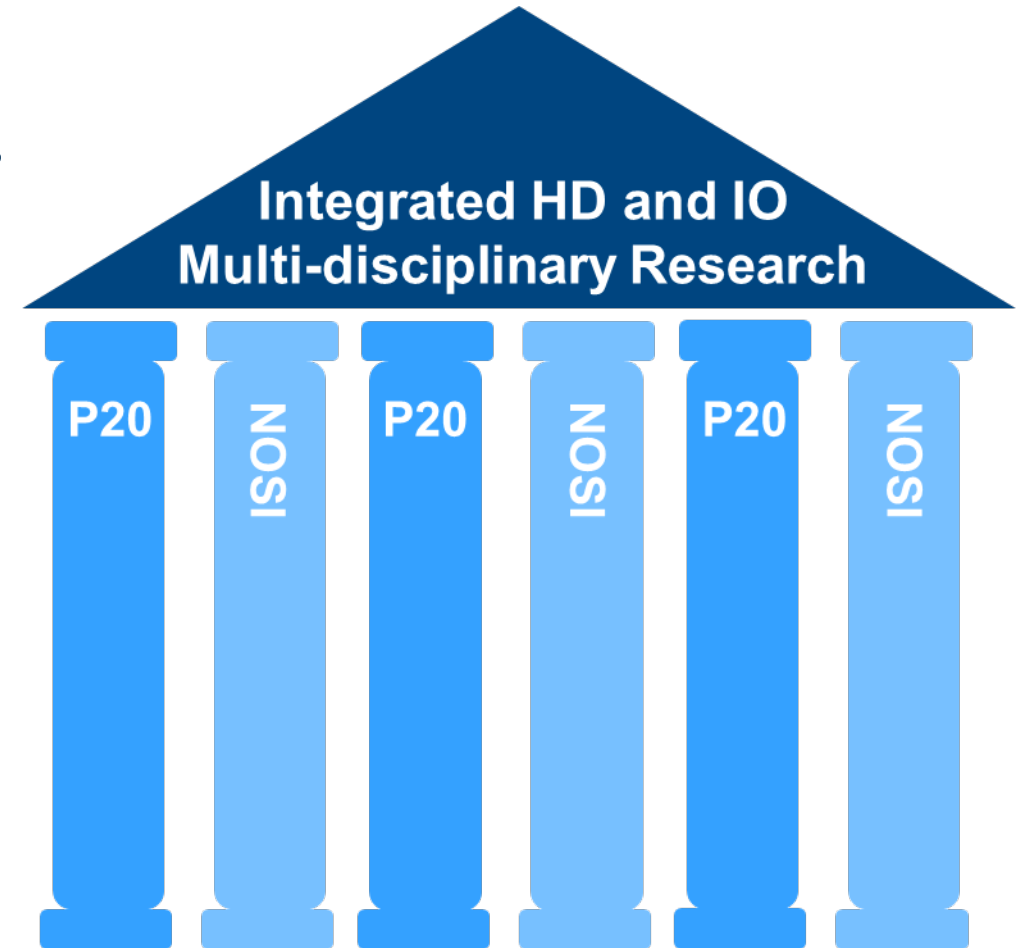
- Characterizing unique pseudogene expression and immune infiltration in breast cancer subtypes across African American and Caucasian patients
- Differential genetic and immune signatures in the tumor microenvironment are associated with colon cancer racial disparities
- Quantifying distinct serum prostate-specific antigen levels and prostate cancer risk in across multi-ethnic populations
- Characterizing disparities in immunotherapy response, resistance and immune-related adverse events
- Developing animal models that recapitulate the breadth of immune responses across under-represented populations

Integrating Health Disparities Research into IO

- **Problem:** An NIH portfolio analysis indicated there is a potential applicant pool for studying health disparities in immuno-oncology. The integrated, multi-disciplinary application submission impediments are inherent to challenges of this unique, niche area of health disparities research.
- **Solution:** Tackling these complexities will require a multi-pronged programmatic approach to integrate health disparities into IO research:
 1. Ongoing basic and translational research programs supported through CRCHD, DCB, DCP, DCCPS and DCTD.
 2. Support feasibility and planning projects to strengthen studies for P01s

Collaboratively Building Foundational Health Disparities and IO Research

- An aspirational goal is to build a cohort of immuno-oncology (IO) P01s* with **integrated health disparities research**. This is a high bar given requirements for P01 integration and track record of collaborations/publications.
- Successful multi-disciplinary research will require foundational feasibility projects:
 - a) Notice of Special Interest (NOSI): To encourage R01 and P01 submissions
 - b) **P20**: Feasibility and planning studies to build collaborations, appropriate sample sets, and generate preliminary data for subsequent application submissions



*Or other multi-disciplinary research projects

P20: Planning and Feasibility Studies to Integrate Health Disparities in Immuno-Oncology Research

- **Goal:** P20 grants will support planning and feasibility studies to integrate health disparities into multi-disciplinary immuno-oncology research studies. It is expected preliminary studies from the P20 will enable the development of investigator-initiated multi-disciplinary projects (e.g., P01s, multi-disciplinary R01s, et al.).
- **Research Scope:** Tackling these complexities will require a multi-pronged programmatic approach to integrate health disparities into IO research:
 - Initial studies to establish sufficiently powered and/or well-curated specimens from groups under-represented in clinical trials
 - Feasibility/pilot studies to test exploratory or novel hypotheses on immune mechanisms, immune response, and/or treatment response/resistance underlying cancer health disparities
 - Planning studies to build collaborations/teams, generate resources (e.g., tools, reagents), or other collaborative research infrastructure

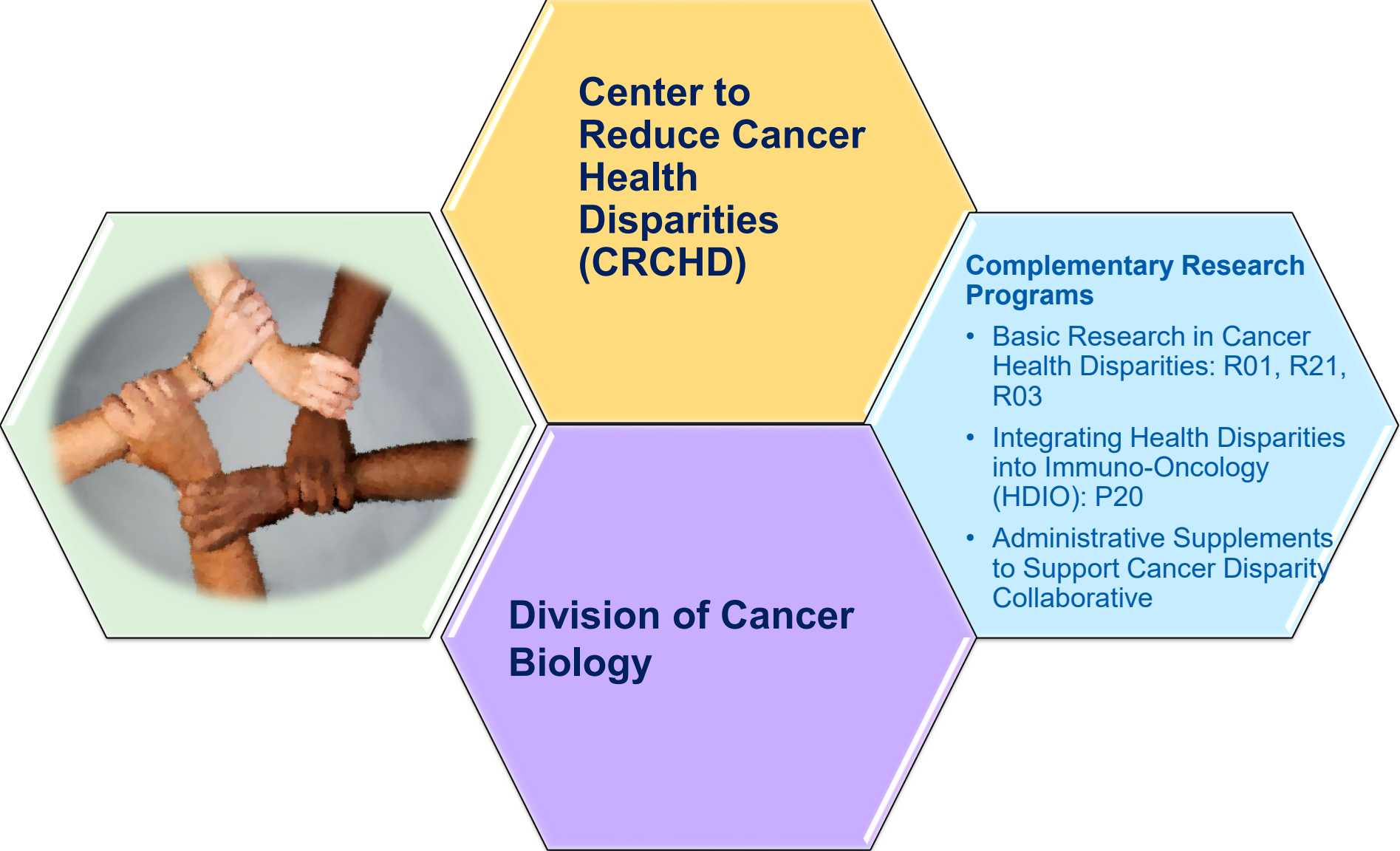
RFA-CA-23-038: Integrating Health Disparities into Immuno-Oncology (HDIO) (P20, No Clinical Trials)

Scientific Objectives:

- To support planning and feasibility studies to integrate cancer health disparities into immuno-oncology research studies.
- This RFA is expected to enable complementary, multi-disciplinary research teams to address interdisciplinary research to integrate cancer health disparities into immuno-oncology research.
- It is anticipated these feasibility or pilot studies will support the exploration of novel or high-risk research hypotheses.



Summary: Cancer Health Disparities Research Collaborations Across CRCHD and DCB



P20: Planning and Feasibility Grant Structure and Requirements

Overall

Introduces how the administrative core and research aims will be integrated, and describe the overall specific aims toward integrating health disparities research into immuno-oncology research

Admin Core

Provides organizational, administrative, and scientific management of the P20 project; coordinates data sharing and data interpretation to ensure the research will address the intersectionality of the many, multi-layered biological factors and social determinants of health, contributing toward health disparities, and future planning

Research Project

Research must be focused and align with the cross-cutting theme of addressing cancer health disparities and be focused on immuno-oncology research

Two-year project,
\$250,000 direct
cost max per year

Non-Responsive: Applications not focused on cancer health disparities research and immuno-oncology; and do not have a multi-disciplinary team with complementary expertise in both cancer health disparities research and immuno-oncology research.