

TEAM SCIENCE DEVELOPMENT PROGRAM

PURPOSE

The University of Colorado Cancer Center seeks to expand its portfolio of nationally competitive team science grants by creating a structured pathway that develops multidisciplinary research teams from early scientific collaboration through submission of complex externally funded grants.

The Cancer Center and its partner institutions offer numerous pilot funding mechanisms that support hypothesis-driven research; however, fewer opportunities exist to cultivate the relationships, scientific integration, leadership structure, and Shared Resources required for successful multi-investigator grants such as P01s, SPORes, U54s, and similar sized grants.

The proposed **Team Science Development Program** addresses this gap by providing staged support that complements—not duplicates—existing institutional funding opportunities.

STRATEGIC VISION

The objective of this program is not simply to provide additional pilot funding. Rather, it is to establish a framework for identifying, developing, and managing a portfolio of emerging team science initiatives that align with the Cancer Center's strategic priorities and have the potential to become nationally recognized research programs.

Successful team science programs rarely emerge from a single funding opportunity. Instead, they evolve over several years through intentional relationship building, iterative scientific planning, pilot studies, research resource development (e.g. biospecimen collections, animal models, analytical models, patient cohorts, etc.), and engagement with Cancer Center Shared Resources.

This program provides the organizational support needed to accelerate that process.

TEAM SCIENCE DEVELOPMENT PATHWAY

The proposed program fills specific gaps within the existing research development ecosystem.

Development Stage	Primary Objective	Existing Proposed Support (in bold)
Concept Development and Assessment of Potential	Bring investigators together around an emerging area of science to identify potential collaborators, resources, strengths, and scientific gaps	Early Development Award
Preliminary Science	Generate proof-of-concept data	Existing Pilot Funding (GAC, Wings, CLC, AB Nexus, CCTSI, Program Pilots, IIT Funding, Translational Pilots, etc.)
Program Planning	Develop integrated scientific vision, leadership structure, and grant architecture	Planning Grant
Advanced Development	Refine projects and obtain external input Bridge gaps in research resources	ASPIRE Cancer Center Resource Development Awards
National Submission	Submit P01, SPORes, U54, MPI R01, or similar mechanisms	External Sponsor



Rather than replacing existing pilot programs, the Team Science Development Program serves as the connective tissue that helps investigators move successfully from one stage of development to the next.

GOVERNANCE

The Team Science Development Program will be managed as a strategic portfolio of developing research initiatives rather than as a traditional pilot funding program. The Team Science Development Committee (TSDC) will oversee the program.

TSDC Membership

- Cancer Center Director (or designee)
- Deputy Director(s)
- Associate Director for Basic Science
- Associate Director for Translational Science
- Associate Director for Clinical Research
- Associate Director for Population Science

Based on the scientific area under consideration, additional members may be requested to participate.

TSDC Responsibilities/Functions

- Identify emerging scientific opportunities aligned with Cancer Center priorities.
- Evaluate proposals for strategic alignment and potential impact.
- Identify overlap with existing initiatives.
- Recommend funding.
- Connect investigators with existing Cancer Center infrastructure and expertise.
- Monitor progress of funded initiatives.
- Recommend progression to subsequent stages of development.
- Provide Cancer Center leadership with visibility into the evolving team science portfolio.

The Director will make final funding decisions after considering recommendations from the Committee and, as appropriate, input from the Cancer Center's Executive Committee.

PROGRAM COMPONENTS

1. Early Development Award

Purpose

Support exploratory scientific planning by bringing together investigators with complementary expertise to evaluate the potential for developing a coordinated multidisciplinary research program. The focus is on identifying scientific opportunities, institutional strengths, collaborative potential, and future directions rather than generating preliminary research data.

Supported Activity

The Early Development Award supports a structured scientific retreat (typically a one-half to one full day meeting) designed to bring together investigators with complementary expertise to evaluate the potential for developing a multidisciplinary team science initiative. The retreat should provide an opportunity to:

- Identify investigators with complementary scientific expertise and define potential collaborative opportunities.
- Inventory existing institutional resources, Shared Resources, data, models, and clinical assets relevant to the area of interest.
- Assess the Cancer Center's scientific strengths and identify critical gaps in expertise, research resources (e.g. biospecimens, models, etc.) or Shared Resource services.
- Evaluate the national scientific landscape and competitiveness of the proposed research area.

- Discuss potential team science funding mechanisms and identify logical next steps for continued development of the team science project concept.

Expected Deliverable

At the conclusion of the retreat, lead investigator(s) will present a structured summary describing:

- Project concept
- Existing institutional strengths
- Missing expertise, research resources (e.g. biospecimens, models, etc.) or Shared Resource services
- Potential collaborators

After review, the TSDC may recommend the lead investigator(s):

- Pursue additional pilot funding
- Continue informal development
- Submit a Cancer Center Planning Grant application
- Pursue an ASPIRE award
- Discontinue development if insufficient opportunity exists

2. Planning Grant

Purpose

Planning Grants are intended to support development of a scientific, organizational, and leadership framework for a nationally competitive team science program. They are not intended to support hypothesis-driven research or the generation of preliminary data, which should be pursued through existing pilot funding mechanisms.

Funding may be used for:

- Investigator effort
- Regular planning meetings
- Scientific integration
- Development of program leadership
- Shared Resource planning
- Community engagement planning
- Internal and external advisory meetings

Characteristics of a Mature Team Science Initiative

Planning Grant recipients are expected to develop initiatives demonstrating many of the following characteristics:

- Compelling scientific questions requiring multidisciplinary investigation
- Clearly articulated scientific vision
- Integrated projects rather than independent studies
- Complementary investigator expertise
- Sustainable leadership structure
- Engagement of relevant Cancer Center Shared Resources and other infrastructure
- Alignment with Cancer Center strategic priorities
- A development strategy appropriate for the targeted external funding mechanism

Milestones

Planning Grants will be managed using milestone-based progress reviews.

Months 0–3

- Establish leadership team
- Refine overall scientific vision
- Confirm participating investigators

Months 3–6

- Define scientific projects
- Identify required Shared Resources
- Assess other infrastructure needs

- Identify opportunities for community engagement where appropriate

Months 6–12

- Refine program structure
- Identify external advisors
- Evaluate competitiveness
- Identify remaining scientific gaps

Months 12–18

- Complete overall grant architecture
- Determine readiness for:
 - ASPIRE
 - External planning mechanisms
 - National submission
 - Continued development

Quarterly meetings with the TSDC will focus on removing barriers, strengthening integration with Cancer Center resources, and assessing readiness for progression to the next stage.

PORTFOLIO MANAGEMENT

Rather than evaluating success solely by funded grants, the TSDC will monitor the maturation of initiatives across the development pathway.

Examples include:

Emerging Opportunity

- Investigators identified
- Shared scientific interest established

Organized Team

- Scientific retreat completed
- Leadership identified
- Research strengths and gaps defined

Integrated Program

- Regular planning meetings established
- Shared Resources incorporated
- Pilot funding secured
- Program structure developed

Grant-Ready Initiative

- Scientific projects finalized
- Leadership roles established
- External advisors engaged
- Internal review completed

Nationally Competitive Team Science Program

- Submission of P01, SPORE, U54, MPI R01, or similar mechanism
- Award of external funding
- Establishment of a sustainable multidisciplinary research program

MEASURES OF SUCCESS

Near-term (1–2 years)

- New multidisciplinary publications, grants, IITs, and other documented collaborations
- Increased use of Shared Resources

- New pilot funding obtained

Intermediate (2–4 years)

- New MPI R01s
- ASPIRE awards
- New research resources and/or services in Shared Resources
- Increased philanthropy supporting team science

Long-term (4–6 years)

- Funded P01s, SPORes, U54s, and related mechanisms
- Expansion of nationally recognized areas of research strength
- Growth in externally funded collaborative science
- Sustainable multidisciplinary research programs aligned with Cancer Center strategic priorities