Structural Biology Discovery
Call for Protein Target Nominations in Cancer Discovery

Purpose and Overview

The Medical College of Wisconsin Cancer Center (MCWCC) invites basic, translational, and clinical scientists to nominate protein targets that have high-translational potential for structural studies. This program leverages advanced structural biology approaches to determine protein structures and dynamics that could inform development or optimization of anti-cancer drug development.

The Structural Biology Shared Resources (SBSR) core facility, part of the MCWCC, is eager to partner with scientists passionate about making a difference in cancer research. The goal of this opportunity is to delve deeper into the structure and dynamics of a protein that shows promise to play a critical role in cancer development, progression, or resistance. SBSR scientists will express and purify nominated protein targets, with the goal of determining the protein's 3D structure, potentially revolutionizing our understanding of cancer and providing new strategies to prevent and/or treat cancer.

This program's purpose is to defray or partially defray the initial SBSR personnel and instrument time costs associated with investigating (producing, purifying, and solving) the structure of nominated targets.

Eligibility and Evaluation Criteria

Eligibility

- Open to all MCW basic, translational, and clinical faculty. Collaboration between basic/translational and clinical scientists is required; a formalized collaboration including MPIs, joint publication, research grant, and IP development submissions is required. Junior faculty are strongly encouraged to apply, and SBSR staff will provide guidance upon request.
- Nominated proteins must be cancer-relevant. These proteins could be novel or established targets; established targets for consideration should have high-translational impact, either by facilitating the optimization of existing drugs or the characterization of underlying resistance mechanisms
- Submission of follow-up external funding proposals must be submitted through MCW.
- Research is to be conducted and expenditures incurred at MCW, Children's Wisconsin, Froedtert Hospital, Versiti BRI, Children's Research Institute, or the Zablocki VAMC.

Evaluation Criteria

Nominations/submission will be evaluated with the following criteria:

- Potential impact of the target on cancer research: cancer prevention and/or treatment.
- Feasibility of solving the nominated target, including conformational dynamics.
- Likelihood that preliminary results will lead to extramural grant funding.
- Inclusion of a clear description of the target, known or putative roles in cancer, and relevant information of prior attempts to solve its structure.
- When appropriate, describe how the proposed research may ultimately produce IP (intellectual property, like patents).
- Final funding decisions will be made in early 2026. Investigators whose nominated protein targets are selected will be invited to give a 20-minute presentation on their target within three months of SBSR beginning work on the projects.

Budget

- Up to $25,000 for one year for expression, purification, sample vitrification, and structure evaluation utilizing cryoEM.
- A detailed budget is not required. Allocated funds will remain within and be utilized solely at the SBSR facility. Investigators may pursue complementary experiments independently, but no additional program funds will be provided for those activities.
- Supplemental funding may be available after the initial year through alternative pilot funding mechansims.

Submission Instructions

Format: Use standard 11-point font, single space, and half-inch margins.

- **Project Description:** (1-page limit) Describe the role(s) of the nominated protein or complex in cancer, what is known about its structure or prior attempts to solve it, and any other pertinent information that conveys potential impact in cancer research and treatment. Pay particular attention to citations to prior relevant research on the nominated protein as this may help reviewers assess feasibility and impact.
- **Future Impact Plans:** (200-word limit) State how data from this project will be used to support extramural research proposals.
- **Literature Cited:** List only references pertinent to the proposed project. References do not count against the page limit.
- **Letter of Support:** A letter of support from a collaborator/MPI is required.

While the target description (one page) and future impact plan (200 words) have defined limits, applicants are highly encouraged to provide additional relevant details where appropriate.

Timeline

Program announcement release: 9/16/2025. Submissions **will be accepted until January 1, 2026, with targets selected on a rolling basis prior to the final deadline.**. Please email one PDF file of the target nomination to MCWCCResearchPrograms@mcw.edu. Notifications of the award will be made after peer review and Translational Council approval. Please contact MCWCCResearchPrograms@mcw.edu with any questions.

Program Expectations and Outcomes

- Publish or present results in a regional or national forum.
- Submission of an extramural research grant application.
- Submit a progress report after one year, including any grant applications submitted or planned.