

## Strategic Networks and Initiatives Program (SNIP) 2023/2024 Request for Proposals

### Overview

The College of Agricultural Sciences (CAS) Office for Research and Graduate Education invites proposals for **Strategic Networks and Initiatives Program (SNIP)** grants to be awarded at three levels in 2023/2024. SNIP provides support for faculty-driven, interdisciplinary initiatives at the vanguard of agricultural and natural resources research. At all levels, funding will be awarded to collaborative interdisciplinary teams seeking to investigate focused research problems in **pursuit of large-scale extramural grant opportunities**.

The goal of SNIP is to offer ambitious CAS faculty members the opportunity to explore novel research problems. The primary aims of the program are to help faculty to ***build a network of colleagues*** and ***form an area of strength in the college*** for transformative research. The three SNIP levels are tailored to assist teams at different points in the process of pursuing large-scale extramural grant opportunities.

SNIP provides funds for network-building activities and preliminary work that are typically during the discovery phase of a project and often not allowable on extramural grants, including (but not exclusively) exploring the potential of a research problem, engaging in team-building activities, and collecting preliminary data.

SNIP is intended to encourage faculty-driven ideas. However, we understand that sometimes it is hard to know what may or may not be competitive in the current funding landscape. With that in mind, we have compiled additional information as a part of this RFP release (posted separately online) to provide overviews of college and federal agency priorities so that applicants may use these as inspiration to frame their proposed initiative in the context of these identified challenges. Contact Dr. Gretta Tritch Roman ([gst118@psu.edu](mailto:gst118@psu.edu)), Director of Research Development and Initiatives, for assistance with the development of proposals and questions related to the program.

### Awards Structure

#### **Level I Launch Grants**

Up to **\$10,000** for one year to support the initial development of an innovative research question and the formation of an interdisciplinary collaborative team required to address it.

#### **Level II Pursuit Grants**

Up to **\$25,000** for two years to strengthen established interdisciplinary research initiatives to be competitive for large-scale extramural grant submissions.

#### **Level III Cohort Grants**

Support for **3-5 new Ph.D. students** for up to two years to provide established interdisciplinary research initiatives with the opportunity to build interactive graduate student-faculty teams who will pursue extramural funding.

## Eligibility

1. For **all levels**, the PI must be a faculty member with an appointment in the College of Agricultural Sciences (tenured, tenure-track, or non-tenure-track).
2. For **all levels**, projects must seek to address a critical research need and opportunity beyond the scope of a single laboratory or investigator's focused area of research. All proposed research projects must require the participation of interdisciplinary collaborators with complementary fields of expertise. All ideas for multidisciplinary topics are encouraged.
3. For **Level I** grants, a plan for engaging multiple departments is required, but all team participants do not have to be identified in the proposal. The primary investigator (PI) must have a faculty research appointment in CAS.
4. For **Level II** and **Level III** grants, teams must include at least three persons with faculty appointments and across different departments. Team members should be from at least two different departments in CAS. See specific proposal requirements below. Faculty from any college at Penn State may be included as participants; however, SNIP funds cannot be used to support any non-CAS personnel or students. The primary investigator (PI) must have a faculty appointment in CAS.
5. For **Level III** grants, the PI must have a *research* appointment in CAS and be a lead on a Hatch project.

## Two-Phase Application Process

### ***Phase 1 Concept Note Submission: Level I (strongly encouraged); Levels II and III (required)***

Submit a short concept note for proposals (max 300 words) using the online submission portal in InfoReady: <https://psu.infoready4.com/#freeformCompetitionDetail/1910459>. Concept notes may be submitted at any time after July 18, 2023, and will be reviewed on a rolling basis until **August 18, 2023**. Concept notes submitted after this deadline will not be accepted as the pre-requisite for Levels II and III full proposals.

Include the following in the note:

- A brief summary of the research problem and why an interdisciplinary team is required to address it;
- Expected outcomes and duration of the grant (within the limitations outlined in the summaries on the first page of this RFP).

### ***Phase 2 Full Proposal Submission***

Full proposals must be submitted through InfoReady before midnight on **September 29, 2023**, to the Office of Research and Graduate Education. The competition portal will be opened for full proposal submissions on August 21, 2023.

- Guidelines for each level are provided within this RFP. Applicants are advised to adhere to the provided template for proposals as the evaluations are based on the questions provided for each level.
- The Director of Research Development and Initiatives will set up a meeting with any team who submits a concept note to advise on the proposal development and alignment with the aims of the competition.

## College Research Priorities

The Office for Research and Graduate Education has identified five topic areas to promote and help guide faculty efforts toward a competitive extramural proposal. To identify these, we take a comprehensive look at the college's portfolio and examine the strengths in the context of the current funding landscape. Across these five areas of existing and aspirational strengths of the college, we anticipate that there will be opportunities for funding large-scale proposals in the near future. Below is an abbreviated list; please visit [the online repository](#) for additional guidance on each priority. **Note that these topic areas are only provided to help generate ideas. Proposals across ALL topics will be considered equally.**

### Applied Evolution

In the 2023/2024 SNIP competition, Level I and II proposals focused on the topic of “applied evolution” will be considered **as a part of a companion competition from additional allocated funds**. Proposals under this topic area for Level III will be considered as a part of the primary SNIP competition.

### Climate-Smart

As a part of the **primary SNIP competition (all levels)** we encourage proposals focused on developing “climate-smart” solutions. In the past few years, the USDA has adopted this term to help drive research and other efforts toward solutions that will mitigate greenhouse gas emissions, adapt to be more resilient against the impacts of climate change, and continue to feed a growing global population.

### Emerging and Advanced Technology

As a part of the **primary SNIP competition (all levels)** we encourage proposals focused on developing innovative adaptations and customizations of emerging and advanced technologies that will lead toward more efficient, productive, and profitable operations, especially at the scale of small- and medium-sized operations. Areas of discovery may include applications of artificial intelligence or AI (including machine learning, simulation modeling, and precision automation through sensors and robotics), development of decision support tools, efficiency of biologicals (biofertilizers, biopesticides, biostimulants), and advances in bio-based technologies that enhance plant and animal performance and health.

### Industry Engagement

As a part of the **primary SNIP competition (all levels)** we encourage proposals that proactively engage with industry partners to build relationships for future extramurally-funded collaborations, to provide professional and workforce development for graduate students, and to leverage the private sector in advancing innovation and technology development.

### Emerging Contaminants

As a part of the **primary SNIP competition (all levels)** we encourage proposals focused on the growing concerns around emerging contaminants, and in particular per- and polyfluoroalkyl substances (PFAS). As state and federal regulations are being updated, there is a need for research to help guide both future policy as well as how to assist those impacted by these regulations.

## Federal Research Priorities

The strategic plans of both the USDA and NSF are [posted online](#) along with overviews that provide some additional context and link to the College Research Priorities listed above.

## **Level I Launch Grants**

### **Up to \$10,000 for 1 year of support**

Launch Grants will provide support for the initial development of an innovative research question and the formation of an interdisciplinary collaborative team required to address it. Funds will be awarded to support team-building activities aiming to establish research trajectory, refining research goals and objectives, promoting networks across departments in the College of Agricultural Sciences and the University, defining leadership, structuring the collaboration, and identifying potential extramural funding sources. The activities could include group meetings, seminar series, small workshops, grant writing workshops, and others. The majority of SNIP grants awarded in FY 2023/2024 will be Launch Grants.

### **Specific proposal requirements for Launch Grants (concept notes encouraged)**

PROPOSALS MUST BE SUBMITTED AS A SINGLE PDF AND FOLLOW THE FORMAT BELOW

#### **A. Title and Primary Investigator**

- a. Designate only one PI who will serve as the primary contact for the project (PI must be a faculty member in the College of Agricultural Sciences).

#### **B. Summary (200 words maximum)**

- a. Summarize the research problem and the proposed activities aiming to build the team and/or the collaborative network.

#### **C. Proposal Narrative (3 pages maximum)**

- a. Refining the Problem
  - i. State the research problem and the significance of the work for the future of agricultural and natural resources research.
  - ii. Describe the proposed activities that will help to formulate the research problem more clearly as an initiative and position it as an area of strength in the college.
- b. Plan for Building the Team
  - i. Why does this problem require the collaboration of an interdisciplinary team to address it?
  - ii. What are the proposed team-building activities that will promote networking across departments in the College of Agricultural Sciences, and (if applicable) across colleges at Penn State?
  - iii. Which disciplines do you anticipate being integral to the initiative and how do you propose to engage current and new participants?
  - iv. Describe the proposed structure of the initiative's leadership and collaboration.
- c. Sustainability Plan
  - i. Provide benchmarks that will be used to identify the progress in launching the initiative during the funding period.
  - ii. Provide a plan for continued collaboration including, potential grant programs your team may target in the next year or two or when appropriate, how the proposed activities would lead to a Level II proposal.

#### D. Budget and Justification

- a. Include a budget outline (as a table) and detailed justification, providing a brief description and explanation of need for costs associated with Launch Grant activities. Use the following budget sections as a guide:
  - i. *Personnel* (fringe benefits ARE REQUIRED in personnel costs)
  - ii. *Travel* (for invited guests)
  - iii. *Meeting expenses and meals*
  - iv. *Honoraria* (Honorarium payments are limited by the University to \$1,000 or less. If payment to a visiting faculty member or other individual for speaking will exceed \$1,000, payment can still be made, but must be identified as a Personal/Professional Service, and the [University Scholar Agreement](#) must be completed.)
  - v. *Purchased Services* (e.g., AV for conferences, analysis of samples)
- b. All other project costs typically allowed by federal extramural sponsors are allowed in this program.
- c. SNIP funds cannot be used for:
  - i. Faculty salaries (including supplemental) or standing appointment salaries
  - ii. Travel to professional meetings
  - iii. Support of personnel NOT in the College of Agricultural Sciences
- d. Budgets can be constructed for **a maximum of 1 year**.
- e. Please note that submissions to this internal competition do not require the budget to be created through the College's Grants and Contracts Office.
- f. Funds from this program must be expended within one year of the award date.

## **Level II Pursuit Grants**

### **Up to \$25,000 for 2 years of support**

Pursuit Grants will provide support for strategic research initiatives that are competitive for **large-scale extramural grants**. Eligible interdisciplinary teams should be able to demonstrate ongoing research, clear research goals, and established partnerships. The funding could be used to collect preliminary data to strengthen the proposal(s) or for other activities aimed at submitting a proposal for significant extramural grants by the end of the SNIP grant term.

## **Specific proposal requirements for Pursuit Grants (concept notes required)**

PROPOSALS MUST BE SUBMITTED AS A SINGLE PDF AND FOLLOW THE FORMAT BELOW

### **A. Title and Primary Investigator**

- a. Designate only one PI who will serve as the primary contact for the project. (PI must be a faculty member in the College of Agricultural Sciences.)
  - i. Note: Include list of co-PIs and other participants in section D (described below).

### **B. Summary (200 words maximum)**

- a. Summarize the established research initiative or collaborative project and the proposed plan to develop and submit a proposal for large-scale extramural funding.

### **C. Proposal Narrative (3 pages maximum)**

- a. Description of the initiative and future directions:
  - i. Provide a brief description of the initiative/team.
  - ii. State and explain the significance of the research with particular attention to how the research is transformative and addresses a critical research need with potential to be competitive for large-scale extramural funding.
  - iii. Describe past activities that shaped the interdisciplinary collaboration.
  - iv. Describe the current and future research goals of the initiative/team.
  - v. Describe the plan and the target program for external funding (include the following: agency, request for proposals, submission deadline).
  - vi. Describe the proposed activities that will support the submission of (a) proposal(s).
  - vii. Provide benchmarks that will be used to measure the progress of the project during the funding period.
- b. **College readiness**
  - i. What key strengths in the college will contribute to success?
  - ii. What gaps in the college create a need for the initiative?
  - iii. How will the proposed activities address the gaps and capitalize on the strengths?
- c. **Benefits to the College and University:**
  - i. What impact will the project have on the stature and visibility of the college and university?
  - ii. What will be the lasting effects of the network or initiative?
- d. **Sustainability plan:**
  - i. Provide a plan for the future of the initiative or the collaborative research with benchmarks beyond the funding period.

**D. Project team (2-page maximum, individuals can participate in multiple proposals):**

- a. The team must include at least three CAS members: the PI and two or more co-PIs, preferably all from different CAS departments. At a minimum, team members should represent at least two different departments in CAS. Extraordinary exceptions will be considered with a strong justification that three or more distinct disciplines from CAS are represented within the team.
- b. Faculty from any college at Penn State may be included as participants (be sure to note the budget restrictions and commitment requirements outlined below).
- c. List all team members with their departmental affiliations and describe the role and responsibilities of each project team member, including how the expertise of each is required to address the proposed research problem.
- d. Describe a plan to include additional faculty in the network, initiative, or project.

**E. Budget and Justification**

- a. Include a budget outline (as a table) and detailed justification, providing a brief description and explanation of need for costs associated with Pursuit Grant activities. Use the following budget sections as a guide:
  - i. *Personnel* (Fringe benefits ARE REQUIRED in personnel costs.)
  - ii. *Travel* (for invited guests)
  - iii. *Meeting expenses and meals*
  - iv. *Honoraria* (Honorarium payments are limited by the University to \$1,000 or less. If payment to a visiting faculty member or other individual for speaking will exceed \$1,000, payment can still be made, but must be identified as a Personal/Professional Service, and the [University Scholar Agreement](#) must be completed.)
  - v. *Purchased Services* (e.g., AV for conferences, analysis of samples, etc.)
- b. All other project costs typically allowed by federal extramural sponsors are allowed in this program.
- c. SNIP funds cannot be used for:
  - i. Faculty salaries (including supplemental) or standing appointment salaries
  - ii. Travel to professional meetings
  - iii. Support of personnel NOT in the College of Agricultural Sciences
- d. Budgets can be constructed for **a maximum of 2 years**.
- e. Please note that submissions to this internal competition do not require the budget to be created through the College's Grants and Contracts Office.
- f. Funds from this program must be expended within two years of the award date.

## Level III Cohort Grants

### Up to 2 years of support for 3-5 new Ph.D. students

Cohort Grants will provide support to established interdisciplinary research initiatives by sponsoring cohorts of **Ph.D. students** recruited to conduct interconnected and innovative research. This program is intended to build interactive graduate student-faculty teams that will pursue extramural funding. Cohorts may be composed of a minimum of 3 and a maximum of 5 newly enrolled students for their first two years of a CAS or CAS-affiliated doctoral program. **Master's-level students are not funded through this program.**

Cohort Grants awarded in 2023/2024 will support the 3-5 **newly enrolled Ph.D. students** by providing ½-time graduate assistantships (Grade 12) plus GIA for 2 semesters/year, beginning Fall semester 2024 and ending Spring semester 2026. A plan for summer stipend support and continuation of stipend and tuition funding after the two years for these new Ph.D. students is required.

### Specific proposal requirements for Cohort Grants (concept notes required)

PROPOSALS MUST BE SUBMITTED AS A SINGLE PDF AND FOLLOW THE FORMAT BELOW

#### A. Title, Primary Investigator (PI), co-PIs

- a. Designate only one PI who will serve as the primary contact for the project. (PI must be a faculty member in the College of Agricultural Sciences.)
- b. List names and affiliations of co-PIs.

#### B. Summary (200 words maximum)

- a. Summarize the research initiative, the training concept, and the activities aiming to build the student-faculty team.

#### C. Proposal Narrative (5 pages maximum, not including letters of support)

- a. Overview of the existing strategic network and/or interdisciplinary team:
  - i. Describe the team research goals.
  - ii. Describe ongoing research activities related to the project.
  - iii. Describe the impact of the work on the stature of CAS research.
- b. Project Team:
  - i. Identify the team members (must involve at least two CAS departments; see Eligibility requirements).
  - ii. Identify proposed major CAS faculty advisors for the students.
  - iii. Identify participating graduate programs (students in IGDP programs with CAS advisors are allowed).
- c. Student cohort recruitment plan for new Ph.D. students (this program provides funding only for **newly recruited** graduate students in a doctoral program and must be applied to their tuition and graduate assistantship stipends during the first two years of their studies):
  - i. Indicate the proposed number of students to be recruited for the cohort.
  - ii. Describe the composition of the cohort, including the training and synergism concept.
  - iii. Describe the approaches to recruit new students.
- d. Proposed activities:
  - i. Describe specific collaborative team activities that will engage students beyond individual laboratory affiliations.



- ii. Describe the proposed student research topics and their integration into the long-term goals of the team.
- iii. Provide benchmarks identifying the progress of the entire project, including specific benchmarks pertaining to individual student projects.
- e. Sustainability plan:
  - i. Identify current sources of funding for summer salary and programmatic needs.
  - ii. Identify specific extramural sources that will be pursued for stipend/tuition support after the two-year funding period (include the agency, request for proposals, submission deadline, etc.).
  - iii. Describe a contingency plan if the extramural funding is not secured.

#### **D. Letters of Support**

- a. Provide appropriate letters of support from department heads or IGDP directors of graduate programs for the proposed activities of the graduate student cohort.
- b. Commitments for additional funding from departments are not necessary *unless* they are part of the contingency plan or to pay summer stipends.
- c. Programmatic assistance with graduate student recruiting efforts would strengthen the proposal.

#### **E. Other Guidelines**

- a. Students must be enrolled and registered full-time in the College of Agricultural Sciences or CAS-affiliated Ph.D. program and be mentored by a CAS faculty member.
- b. Funding will be allocated for enrolled students only during the semesters requested in the proposal. There is no carry-over of funds in this program beyond the two-year period (Fall 2024 through Spring 2026).
- c. Any modifications/deviations from this request will only be given in special circumstances. Requests must be submitted for prior approval in writing and will be dependent on the availability of funds. Cohort Grants cannot be postponed until the student's third year or later. For instance, should a student receive recruitment awards from the University or Graduate School, the SNIP award cannot be applied to the student's tuition or graduate assistantship beyond the student's second year of the Ph.D. program.
- d. Top-ups from other sources to higher grades are permissible. Note that the awarded pay grade may require a top-up to match other assistantships in your program. The source of top-up funds should be explained in the body of the proposal and confirmed in accompanying letters.

## Proposal Review Process

### Level I

- Proposals will be evaluated by program administrators within the CAS Office for Research and Graduate Education and a review committee of college faculty who may or may not have subject expertise. Emphasis will be placed on the potential for a proposed initiative to be competitive.
- Evaluation criteria:
  - Demonstrates the potential for developing an advanced agricultural and natural resources research question.
  - Presents a convincing argument for the requirement of an interdisciplinary team to address the research problem.
  - Outlines specific activities to achieve the following:
    - formulate the research problem more clearly as an initiative (working group meetings, workshops, etc.);
    - promote networking across departments in the College of Agricultural Sciences (may include multi-disciplinary seminars, symposia, etc.) beyond one or two related disciplines.
  - Identifies specific disciplines needed for the collaboration and provides plans for targeting and engaging faculty in the activities.
  - Outlines specific benchmarks to gauge progress in launching the initiative during the one-year funding period.
  - Includes plans for continuing the collaboration beyond the Level I funding as described in the guidelines.

### Level II

- Proposals will be evaluated by subject matter experts who will make funding recommendations to the CAS Associate Dean for Research and Graduate Education.
- Proposals from research teams established through SNIP grants are encouraged, but previous or current SNIP funding is not required.
- Preference will be given to inter-departmental teams.
- Evaluation criteria:
  - Presents an innovative approach to a clear and well-defined research problem.
  - Addresses a critical research need with potential to be competitive for large-scale extramural funding (funding required to robustly support multi-investigator projects).
  - Proposes research that is *transformative with the need for interdisciplinary collaboration* in order to pursue large-scale extramural funding rather than incremental (i.e., building only on one or two team members' research).
  - Demonstrates an already-formed robust interdisciplinary collaboration through past activities.
  - Identifies team members with the expertise required to address the proposed research problem.

- Proposes activities that will realistically support the submission of a proposal for large-scale extramural grants.
  - Provides details for specific funding programs (including the agency, request for proposals deadlines, etc.).
- Demonstrates the potential to have an impact on the stature and visibility of the College of Agricultural Sciences overall and faculty research in particular (i.e., building on existing strengths in the College of Agricultural Sciences or advancing new initiatives).
- Includes adequate benchmarks for gauging progress in achieving the research goals.
- Presents a convincing strategy for leveraging the initial support of this grant to stimulate a lasting impact through continued collaborations and longer-term funding (beyond the Level II funding period).

### Level III

- Proposals will be evaluated by a review panel who will make funding recommendations to the Associate Dean for Research and Graduate Education.
- Proposals from research teams established through SNIP grants are encouraged, but previous or current SNIP funding is not required.
- Evaluation criteria:
  - Presents a clear and advanced agricultural research question within a well-defined research area that spans the collaborative team's areas of expertise.
  - Proposes research that is *transformative with the need for interdisciplinary collaboration* in order to pursue large-scale extramural funding rather than incremental (i.e., building only on one or two team members' research).
  - Proposes a plan for recruiting students (including numbers, composition of team, departmental support, methods or approaches) that is realistic and well-thought out.
  - Proposes activities that integrate graduate education and training with the long-term goals of the research initiative.
  - Outlines a training and advising plan that will engage the recruited students with innovative activities beyond individual laboratory affiliations and demonstrate potential for high-impact synergies among disciplines.
  - Includes adequate benchmarks that mark the progress of the entire project.
  - Provides specific benchmarks or planned approaches for monitoring progress of individual student projects.
  - Addresses funding for summer salary and programmatic needs and, if necessary, identifies sources.
  - Presents a convincing strategy for leveraging the initial support of this grant to stimulate a lasting impact through continued collaborations and longer-term funding (beyond the Level III funding period).

## Reporting

### Level I

- An interim report will be due **six months after the beginning of the awarded performance period**.
- A final report on SNIP-funded Level I projects will be due **one month after the end of the performance period**.
- Submit reports through the InfoReady system. Report reminders and guidance will be provided.

### Level II

- Interim reports on SNIP-funded Level II projects will be due at **six-month intervals** depending upon the duration of the proposed project.
- A final report on SNIP-funded Level II projects will be due **one month after the end of the performance period** (depending on the term funded).
- Submit reports through the InfoReady system. Report reminders and guidance will be provided.

### Level III

- Student recruiting report is due **April 30, 2024**; mid-term report is due **July 1, 2025**.
- A final report is due **July 1, 2026**.
- Submit reports through the InfoReady system. Report reminders and guidance will be provided.