Office of the Vice President for Research

Request for Proposals:

Accelerating Innovations through Interdisciplinary Teaming in Pandemic Disease Resilience and Countermeasure Agility

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SYNOPSIS OF THE PROGRAM

The Office of the Vice President for Research (OVPR) is pleased to announce an internal request for proposals addressing *Accelerating Innovations through Interdisciplinary Teaming in Pandemic Disease Resilience and Countermeasure Agility.* This program will fund up to $1M in projects over 2 years ($150-200k per interdisciplinary team award). This opportunity is supported with generous funding provided by the Anschutz Family Foundation (https://anschutzfamilyfoundation.org/), a private foundation anchored in Denver, Colorado.

Colorado State University's research enterprise has made significant strategic investments in infectious disease research and response prior to the Pandemic including a new Program of Research Scholarly Excellence, Catalyst for Innovative Partnerships program investments, and cluster hires that have positioned CSU to be recognized as a top ten global research university in COVID response.

This work continues to attract sponsor interest and a recent fundraising success has resulted in this new funding opportunity. The OVPR will be selecting interdisciplinary teams that address new opportunities to increase both resilience in preparation for increased infectious disease outbreaks and agility in translating discoveries into practical applications that could be implemented quickly to produce countermeasures that would thwart widespread consequences of an outbreak, and that support the university's priorities in creating and supporting diverse, equitable, and inclusive communities and activities. The interest landscape of this announcement is broad, given the many opportunities to increase resilience and agility in response, and includes but is not limited to the following topics:

- **Enhanced disease surveillance and early warning** - digital tools for enhanced data integration and analysis; multiplexed biological data such as sequence, protein, or other biomarkers; and biosensor signals for enhanced situational awareness
- **Agile and broad-spectrum countermeasures** – host based therapeutic; just-in-time manufacturing; fast and affordable field based diagnostics or sensors; social science or behavioral opportunities to enhance adoption; and practices, understanding, and communication of countermeasures

The OVPR will execute this program using a model similar to the *Catalyst for Innovative Partnerships* program, which has been successful in building strategic teams of high impact. Awarded teams will be provided additional resources through the OVPR to optimize success including support and training in team science and facilitation of team impacts with extramural sponsors and investors.

This request for proposals seeks to invest in established interdisciplinary teams focused on innovations that can be developed for application in infectious disease outbreaks, with anticipated impacts ranging from the local to global scale. Successful projects will clearly result in demonstrable impacts in preparedness, agility in response, or resiliency in future infectious disease outbreaks or pandemics.

This program will prioritize investing in established research teams with demonstrable track records of impact that will address key areas of need and gaps as identified in the COVID-19 response.

PROGRAM DESCRIPTION

This program will fund established interdisciplinary teams that address that address new opportunities to increase both resilience in preparation for increased infectious disease outbreaks and agility in translating discoveries into practical applications that could be implemented quickly to produce countermeasures that would thwart widespread consequences of an outbreak.

It is anticipated that this program will fund 3-6 teams, with awards up to $200K total over a two year period of performance. Awarded teams will be encouraged to participate in the Science of Team Science program at CSU, an ongoing study to assess and optimize the recipient teams' Science & Technology impacts and outcomes.

Awarded teams should anticipate considerable involvement of, engagement with, and accountability to the Office of the Vice President for Research (OVPR) throughout the two-year duration of the award. Teams will meet with OVPR leadership at least twice per year to discuss progress/challenges and receive feedback and advisement. Teams will also report on programmatic metrics annually, and comprehensively at program end. The OVPR will help teams engage with other CSU offices that may add value to underlying research enterprise. All teams should consider and address how they will handle issues associated with the development and management of large, interdisciplinary teams, including leadership structure and approach, committed efforts of team leadership and other members, communication strategies, and project management.

Additional funding for graduate student researcher assistants (GRAs) may be available and teams that propose to support graduate research assistants should note this in their proposal. GRAs funded through this program will be invited to participate in a community of practice with other graduate students supported by the Anschutz Family Foundation. The re-seeding of funds [i.e. use of award funds to fund seed projects] will not be allowed except with prior approval from the OVPR.

GENERAL INFORMATION

Eligibility:

- All full-time, regular, and special appointment CSU faculty are eligible to serve as PIs.
- Proposals must involve an established inter/transdisciplinary collaboration between three or more faculty members from two or more distinct disciplines with a demonstrable track record of impact and success.

Applications that include collaboration between multiple colleges are highly encouraged, as are proposals including collaborations with external partners. Collaboration with faculty and staff across the Colorado School of Public Health are highly encouraged.

Teams may collaborate with colleagues at other institutions and organizations; however, funding from OVPR may only be used to support CSU and Colorado School of Public Health personnel and activities.

TIMELINE AND EVALUATION MEASURES

The following evaluation measures and timeline are based on the already-proven CSU Catalyst for Innovative Partnerships (CIP) program model and also conform to the intent of this investment to leverage interdisciplinary team impacts.

Teams will be required to engage with the OVPR closely in the execution of their programs to allow for alignment and optimization of outcomes. Teams will be required to attend regular meetings with the Research Acceleration Office and Vice President for Research Advancement team. Additional metrics that will be monitored and updated and reported semi-annually every six months are found in Appendix A.

This program and associated funding period will run for 24 months, from October 1, 2021, through September 30, 2023. Awarded teams will be funded in amounts up to $200,000 per team. Funds will be issued at the beginning of each program year. We anticipate that 3-5 awards will be made program-wide. The OVPR may issue these or additional funds for project teams that align with strategic research priorities, outside of this RFP process.

To facilitate interdisciplinary teaming, interested proposers are invited to participate in a virtual Proposers Day, to be held the week of July 19th. Proposers will be invited to share a 3-minute summary of their project idea, need, or expertise offered. To participate in this virtual Proposers Day, please sign up at the following: https://forms.office.com/r/KZk7iECJSg

DATE	EVENT
July 9, 2021	Request for Proposals released through InfoReady Review to all Colorado School of Public Health and CCTSI partner universities
Week of July 19, 2021	Proposer's Day
August 31, 2021	Deadline for receipt of proposals
September 30, 2021	Anticipated awardee notification
October 1, 2021	Estimated program & funding start date
October 2021	First program review; teams' status update to Anschutz Foundation on selected team awards and impact timelines for follow on semi-annual meetings
Biannually, Dates TBD	Program review meetings with OVPR & RAO; metrics reporting

September 30, 2023	Program End
October 1, 2023	Final report/metrics due

PROPOSAL FORMAT

Formatting, all sections: Single spaced, 12-point Times New Roman font with 1" margins.

Proposals should include the following elements, uploaded as separate PDFs:

1. Cover Page (1 page max):
   Include the title of the proposal; the PI name, department, college, and contact information; and a list of team members, with associated department and college affiliations.
2. Project Description (5 pages max):
   a. *Project Summary*: Clearly but briefly, articulate the problem to be addressed by the proposed work. Summarize the overarching research question(s), objectives/aims, rationale, general approach, anticipated findings, and potential pitfalls.
   b. *Diversity, Equity, and Inclusion:* Describe how the proposed work with consider – and contribute to –diversity, equity, and inclusion goals of the university.
   c. *Team Composition and Experience*: Briefly describe the team composition and leadership structure (note: biosketches should be provided for each team member as an Appendix – see below). Discuss how postdoctoral researchers, graduate students, and undergraduate students will be engaged, as applicable. Provide a brief project management plan. Describe the interdisciplinary nature of the team, including a brief summary of the team's past collaborative efforts together. Provide a summary of how the team's efforts will be supported following completion of this funding.
   d. *Expected Impacts*: Describe how completion of the proposed project will result in demonstrable impacts in preparedness, agility in response, or resiliency in future infectious disease outbreaks or pandemics.
   e. *Value Creating Milestones:* Provide a project plan and timeline for the 2 years of funding. Include anticipated major activities and key milestones over the project period that will move the proposed idea into practice.
   f. *Anticipated Use of Funds and Timeline of Required Resources:* Provide a brief summary of the anticipated costs and a timeline for when and how funds will be utilized. Provide a description of how these funds will accelerate the

proposed impact, and why other sources of external support (e.g., federal, private, etc.) are not available for this effort.

g. *Sustainability Plan:* Summarize how the project will identify, pursue, and secure follow on financial support, including a brief plan addressing the transition to the next investor

3. Budget (1 page max):
   Provide a line item budget allocation by project year. Please use budget template provided as a downloadable file in InfoReady Review and convert to PDF.
4. References (no page limit)
5. Appendix (no page limit):
   - Include an NIH or NSF formatted biosketch, preferably from SciENcv (https://www.ncbi.nlm.nih.gov/sciencv/) for the project PI, Co-PIs, and key personnel.
   - Include letters of support from Departments, Colleges, Facilities, or other key project partners (if applicable).

PROPOSAL SUBMISSION

Proposals are due by **5:00 PM MT on August 31, 2021** through the CSU InfoReady Review System.

The system will not accept applications after 5:00pm.

To access the InfoReady System:

1. From the opportunities list found at https://colostate.infoready4.com/, locate the "CSU – Accelerating Innovations in Pandemic Disease" opportunity, and click on the title to open the opportunity page.
2. From the opportunity page, click "Apply".
3. Use your CSU eID and password to log into InfoReady Review.
4. Complete and upload all required components. You can save your application as a draft prior to submission.
5. Be sure to submit your application. Applications left as "draft" will not be reviewed.

Proposals will be reviewed against the criteria identified in Appendix B, by an interdisciplinary team of highly qualified reviewers. Final selection will be made by the VPR.

It is anticipated that awardees will be notified via email on or before September 30, 2021.

Please contact Meghan Suter (Meghan.suter@colostate.edu; 970.491.3998) with questions or for more information.

APPENDIX A

Reporting Metrics

[REPORTING TIMEFRAME]	[TEAM NAME]
Financial Success	
a. Number of Proposal Submissions	*Also submit list of all proposals and details.*
b. Value of Proposal Submissions	
c. Number of Awards Received	*Also submit list of all awards and details.*
d. Value of Awards Received	
Interdisciplinary Success	
a. Team members (*faculty, researchers, staff, graduate students*) per university	*-Provide # of team members per CSPH member universities.* *-Provide # of graduate students per university.* *-Also submit a list of team members, roles, disciplines/units, and organizations.*
b. Number of disciplines/units represented	*Provide # and name of disciplines represented.*
c. Number of new university collaborations	*Provide # of new inter-university partnerships established.*
Operational Success	
a. Number of Publications	*Provide # generated and also a list of items by category.*
b. Citations	
c. Presentations	
d. Invention Disclosures	
e. Patent Applications	
f. Patents Issued	
g. Licenses Generated	
h. Prototypes Tested	
i. Animal/Human Trials	
j. Regulatory Applications	
k. Regulatory Approvals	

APPENDIX B

Review Criteria

1. **Technical Merit.** Does the proposal address elements of resilience or agility in outbreak response? How likely is the proposed project to translate its knowledge and research into practical applications that could be implemented quickly?

2. **Diversity, Equity, and Inclusion.** Does the project develop and expand research activities to address CSU's Race, Bias, and Equity Initiatives? Does the team adequately demonstrate diversity and inclusion within their team?

3. **Team Composition and Experience.** To what extent does the team utilize an interdisciplinary approach? To what degree does the proposed team demonstrate a history and attributes associated with effective teaming, including diversity in leadership, inclusion of postdocs or students, and demonstrated collaborative success?

4. **Vision and Impact.** Vision and plans for follow-on impacts to scale, including: To what degree is the proposed project potentially impactful for preparedness, agility in response, or resiliency, at the regional, national, and/or global scale? How likely is the project to elevate CSU's standing at the national and/or international level? Does the project align with the department/college/university mission & goals?

5. **Project Plan and Feasibility.** How feasible is the proposed project, given the proposed budget, timeline, project goals, major activities, and key milestones ? Does the project/team have the support necessary from key resources, including participating departments, colleges, or other organizations/units both internal and external to the university? Is the justification of funding through this mechanism of financial support clear?

6. **Sustainability and Transition.** What is the proposed project/team's ability to leverage the award and secure additional follow-on funding? How well is the transition plan to the next investor addressed?

7. **Overall Assessment.** Includes assessment of overall strengths and weaknesses.

8. **Funding Priority Tier.** Tiered ranking of the proposal, with respect to all proposals received.