

UW Dairy Innovation Hub
Request for Proposals for Postdoctoral Fellowships
UW-Madison College of Agricultural and Life Sciences
Fall 2019

The new UW Dairy Innovation Hub is a \$7.8 million per year investment by the State of Wisconsin to build a world-class talent pool and enable bold discoveries to ensure that Wisconsin's dairy farmers, processors, and related agribusinesses will be at the global forefront in producing nutritious dairy products in an economically, environmentally, and socially sustainable manner. The hub will enhance scholarship and advance innovation in four priority areas needed to insure the future success and resiliency of the dairy industry in the state of Wisconsin. These four priority areas are:

This RFP is for postdoctoral fellowships for high-impact projects that will fit within one of the four priority areas of the Hub (see Appendix A for more details on priority areas):

1. Steward Land and Water Resources
2. Enrich Human Health and Nutrition
3. Ensure Animal health and Welfare
4. Grow Farm Businesses and Communities

Our current fiscal year (FY20, which is July 1, 2019 – June 30, 2020) is the inaugural year of the UW Dairy Innovation Hub. In FY20, a significant portion of the \$520,000 available from the hub to CALS will fund post-doctoral fellowships to support talented young scientists in high-impact projects. To get research off the ground quickly in this inaugural year, we require that successful candidates will be available to begin work on or around April 1, 2020. We intend to release similar RFPs in successive years, so candidates who become available at later dates should apply to subsequent RFPs.

FY2020 Postdoctoral Fellowship Overview, Deadline and Funding:

As the goal is to both attract top young researchers to Wisconsin and fund novel research projects that will benefit Wisconsin's dairy industry, the proposals should be prepared jointly by the prospective post-doctoral fellow and the CALS faculty mentor, and the proposed project should contribute to at least one of the four priority areas note above (see Appendix A for more details on priority areas). We anticipate funding 6 postdoctoral fellowships in this call, including at least one in each of the four priority areas. Fellowships will start on or prior to April 1, 2020 and include postdoctoral salary and fringe benefits, as well as a \$20,000 annual supply and expenses budget (see budget section for more details). Fellows will be funded for a period of 2 years. **Proposals are due December 15, 2019** and award decisions will be made by January 31, 2020.

Submission Deadline and Mechanism

Proposals are due to the WAES office via WISPER by 4:30pm (CDT) on the submission deadline date noted above. Requests for time extensions will not be granted, and proposals received after the deadline will not be accepted.

For more information

On submission process, contact Casey Hillmer (262-2397), casey.hillmer@wisc.edu

On scope of research, contact Heather White (263-7786), heather.white@wisc.edu

Eligibility Information

Dairy Innovation Hub funding is available to CALS faculty and staff with PI status. An individual can be lead PI on only one proposal or project at a time. Faculty members outside of CALS may serve as collaborators on Dairy Innovation Hub projects. Eligible candidates for fellowships should be available for a start date on or about April 1st, 2020, and have completed a Ph.D. in an area related to the proposed research area by the start date of the fellowship. A Curriculum Vitae should be included for both the faculty mentor and the prospective postdoctoral fellow. Applicants are not required to be U.S. citizens or permanent residents.

Proposal Review Process

Proposals will be reviewed by a RAC subcommittee which includes representation from the UW Dairy Innovation Hub Advisory Committee. Every proposal will be reviewed by two committee members (primary and secondary reviewers) and discussed by the full committee.

Proposals will be evaluated according to the following criteria:

1. Quality of proposed research and potential for positive impact on the Wisconsin's Dairy Industry
2. Fit of the research project in one or more of the Dairy Innovation Hub priority areas
3. Strength of the postdoctoral fellowship applicant and their potential as a research scientist
4. Plan for productive and interactive mentoring and career development and training

Proposals will be ranked for funding and prioritized within each priority area, and the exact number of proposals funded will depend on the quality of the fellowship applicants and the proposed research projects.

Proposal Submission

Proposals must be submitted via WISPER. To be accepted, proposals must have all approvals (Chair/Administrator/Co-PIs) and include the full proposal with budget justification. The Short Title (WISPER) must be "UW Dairy Innovation Hub: Postdoctoral Fellowships" and be routed to Casey Hillmer.

Proposal format

1. Cover page and 250-word non-technical summary (Excel tab “cover page”)
The proposal cover page must provide the following information: informative title, UW Dairy Innovation Hub Priority area, names of participating faculty, specification of pre or postdoctoral application, name of prospective postdoctoral fellow, and a 250-word summary of the proposed research. The non-technical summary should address the importance of the project, major objectives, the basic methods used to collect and produce data, and the ultimate goals and impacts the project endeavors to achieve.
2. Budget justification
This RFP includes a fixed salary rate for postdoctoral fellows (\$50,000 + fringe benefits) and a \$20,000 per year supply and expense budget. In lieu of a budget worksheet, provide a budget justification that includes a description of anticipated research supplies and travel expenses. If the total project costs exceed those allowable under the budget guidelines, an explanation regarding the source of complementary funding must be included.
3. Research timeline including anticipated dates for the major activities of the project.
4. Future Research Goals (one page, single spaced, size 12-point font):
The PI should clearly describe the future goals of the proposal. This may include expected publications and related products, planned or submitted extramural proposals, and benefits to the postdoctoral fellow. If supplemental or matching funds are available to support the proposal, this should also be noted. A description of how this project will positively impact the Wisconsin Dairy Industry must also be provided. The burden of convincing the reviewers that the proposed project fits the priority area(s) is on the PI and postdoctoral applicant.
5. Mentoring and management plan (one page, single spaced, size 12-point font):
The mentoring plan for the postdoctoral fellow should include, but not be limited to: plan for productive and interactive mentoring, appropriate and impactful training and career development activities, a description of how the fellowship will aid the applicant in reaching his/her career goals, and a plan for evaluation.
6. Project narrative
Note: Project narratives should be prepared in a 12-point font, single-spaced, with standard 1-inch margins, and not exceed 5 pages, exclusive of references.
 - a. Background and justification: Provide sufficient literature review to explain the proposed research (what is known; what is not known), describe why it is relevant, and specify the fit of the proposed work to one of the UW Dairy Innovation Hub priority areas. The PIs bear the responsibility for convincing reviewers that their project should be funded. Explain how the research will advance scientific knowledge and public welfare, as well as how the goals will produce an outcome, defined as a measurable change of state in knowledge, action or condition.
 - b. Objectives/hypotheses: Provide clear, complete, and logically organized statements of the specific objectives to be pursued, or hypotheses to be tested.
 - c. Experimental/Methodological approach: Describe the working plans and methods to be used in pursuing each of the stated objectives. Methods should correspond

to specific objectives and follow the same order. As appropriate to the discipline, provide clear methodological approaches, experimental designs and appropriate statistical analyses for the data to be collected. This section should be written in language clear to a scientifically literate reviewer whose expertise is other than the proposed work. Location of the work and the facilities and equipment required should be indicated. Methods to avoid obvious pitfalls should also be noted. An explanation should be provided detailing how the appropriate audience will be informed of results, and, whether that audience is other scholars, extension agents, farmers, etc.

- d. References: Provide a complete citation for each of the references cited in the proposal.
- e. Curriculum Vitae: A two-page CV for each investigator, and the prospective postdoctoral fellow, focusing on employment history, professional training, honors, awards, and key publications, should be provided.

APPENDIX A.

UW Dairy Innovation Hub

Wisconsin became America's Dairyland because Governor W.D. Hoard asked daring questions and enlisted University of Wisconsin scientists to develop technologies and practices that would make Wisconsin's dairy industry the envy of the world. We must enable our farmers to stay one step ahead by asking daring questions and combining talent with technology to develop innovative solutions that will meet tomorrow's marketplace demands, both locally and globally.

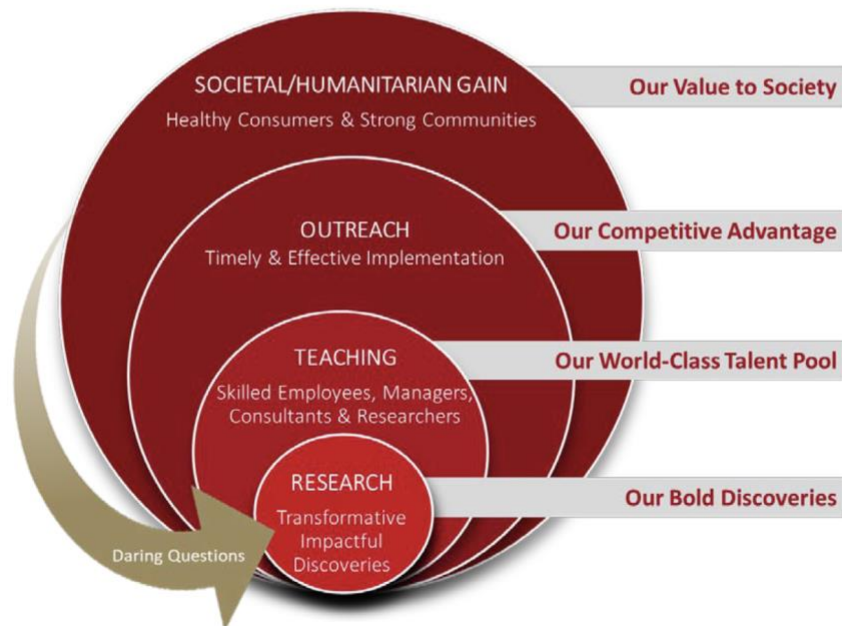
Research allows us discover solutions that keep us ahead of our challenges, and we need the best minds and facilities to carry out research that will drive Wisconsin's dairy industry for another century.

Steward Land & Water Resources

- Reduce on-farm water use*
- Protect topsoil & improve soil health*
- Improve air quality & limit greenhouse gas emissions*
- Optimize feed efficiency & use of land resources*
- Develop alternative uses for farm waste*
- Minimize nutrient losses to lakes and rivers*

Enrich Human Health & Nutrition

- Design packaging for convenience & shelf life*
- Limit risk of food-borne illnesses*
- Create lactose-intolerant & allergy-free alternatives*
- Improve the nutritional value of milk & meat*
- Minimize pathogen risks in soil & water*
- Reduce obesity & preventable health problems*



Ensure Animal Health & Welfare

- Find effective alternatives to antibiotics*
- Monitor animal health with sensor technologies*
- Improve reproductive rates & replacement policies*
- Reduce animal stress & enhance consumer trust*
- Minimize risk of disease from animal contact*
- Deploy genomic selection for healthy animals*

Grow Farm Businesses & Communities

- Establish agricultural technology start-ups*
- Use big data to optimize dairy farm operations*
- Market specialty milk & meat products*
- Develop a skilled & tech-savvy rural workforce*
- Improve financial literacy & return on assets*
- Understand global markets & opportunities*

Fueling Wisconsin's Financial Future

Research is the engine that drives the future success of the Wisconsin dairy industry. Dairy, in turn, fuels the economy of our state, contributing \$43.4 billion annually, supporting local farms, allied industries and communities as well as providing tens of thousands of jobs.

This investment will have far-reaching impact. It will generate much-needed new discoveries. It will train current and future industry leaders, who will help transfer the new knowledge to our farms, dairy processing plants, watersheds and more. It will build a world-class team of collaborators best positioned to provide interdisciplinary solutions to complex challenges, by focusing on the four priority areas.

This initiative will support:

Enabling Bold Discoveries. Twenty-five faculty members in four distinct disciplines on all three UW agricultural campuses (Madison, Platteville and River Falls) will make the discoveries and attract external research funding to support those discoveries. The professors will contribute to overall talent development by teaching undergraduates, graduate students and professionals how the latest scientific advances can be applied to Wisconsin farms and supporting industries.

Building a World-Class Talent Pool. Twenty graduate student fellows will become the next generation of scientists and teachers, gaining experience in each of the four priority areas. These students will be tomorrow's industry experts and those who will teach future generations.

Sixteen post-doctoral fellows recruited from the top scientific talent in the world will come to Wisconsin as part of a prestigious cohort, to learn, study and discover at the dairy innovation hub while being immersed in our vibrant dairy landscape. These post-docs, representing priority topical areas and housed at UW-Madison, UW-Platteville and UW-River Falls, will teach current students and make discoveries in labs. They will bring fresh perspectives and energy from around the world. Following this experience, they will be well-positioned for top roles in universities or industry. This idea is modeled after the Howard Hughes Medical Institute's program that develops young medical biologists.

Advancing Our Competitive Advantage. Establishing an Advanced Dairy Management Academy will provide ongoing training and tech transfer to professionals throughout the state, continuing our commitment to the Wisconsin Idea of sharing knowledge for the benefit of mankind. It is important for this program to serve professionals at times and locations convenient to them as well as offer online training tools and platforms.

Maximizing Our Value to Society. Five staff will provide project management, grant writing assistance and other business support services to ensure scientific goals are met and that interdisciplinary teams at all three campuses coordinate their work for greatest impact.

Infrastructure support will ensure that our current students, professionals and dairy hub innovators can conduct research and learn in modern, safe facilities equal to those on Wisconsin farms and in manufacturing facilities so that technology can be transferred easily. Updating the campus infrastructure that has helped position our state as a dairy innovation leader will ensure Wisconsin can continue to attract the best talent and research grants to drive future success.