Purpose
This request for abstracts solicits investigator-led projects to comprise the High Plains Intermountain Center for Agricultural Health and Safety (HICAHS) research core from 2021-2026. These projects should help expand and advance the understanding of worker health and safety as it pertains to agricultural workers and their families in the Rocky Mountain/High Plains region.

Background
Established in 1991, HICAHS is one of 11 regional Agricultural Health and Safety Centers funded by the National Institute for Occupational Safety and Health (NIOSH) to conduct research, education, and prevention/intervention programs to improve the health and safety of those working in agriculture, forestry, and fishing (AgFF) in the United States. We focus our efforts on the states of Colorado, Wyoming, Montana, Utah, North Dakota, and South Dakota.

Our work building partnerships and being responsive to the occupational safety and health needs of producers and producer-organizations in the region is the foundation of our success. Furthermore, we follow a systems approach, utilizing research and practice paradigms such as One Health, Total Worker Health™, and Social Responsibility/Sustainability, etc. These approaches pave the way for research translation and interventions that move occupational health and safety further towards effective practice. We encourage projects that align with these paradigms.

To prepare for a competitive renewal (estimated due date December 2020), we have initiated a strategic planning process that included a regional needs assessment and input from our external advisory board. We are soliciting abstracts for projects that will contribute to the overarching framework of the HICAHS center renewal and in particular facilitate synergism within HICAHS from 2021-2026. HICAHS leadership and administration is located at Colorado State University; however, investigators from institutions across the region are invited to submit an abstract.

Center Proposal Development Timeline
HICAHS leadership will utilize a three-tiered process to build the research core:

1. Solicit abstracts (1 page), October – November 2019
2. Request pre-proposals from within abstract pool (~3 pages), December 2019 – January 2020
3. Select and prepare final proposals, February – November 2020

Project Details
Projects should respond to a clear burden, fill a specific need, and have measurable impact on injuries and illnesses in the agriculture, forestry, and fishing industries in the HICAHS region.

The project start date would be September 15, 2021. Several types of research, prevention, intervention, education, translation or evaluation projects are encouraged:

- comprehensive projects (R01); 3-5 years at <$300K direct costs per year
• small projects (R03); 1-2 years up to $50K direct costs per year
• exploratory or developmental projects (R21); 1-2 years at $50-150K direct costs per year
• translation projects (R18); 2-4 years at <$200,000 direct costs in any single year

Projects should address the regional burdens, needs, or industries identified by HICAHS stakeholders and advisory board members (listed below). Projects may also provide synergy to current and past HICAHS projects.

• Cannabis and/or hemp production, including industry of recreational use
• Climate change, specifically the following impacts:
  o Abundance, change, spread, and consequences of agriculturally-relevant zoonoses
  o Preparedness for extreme weather events
  o Water quality and quantity (e.g. drought)
  o Wildfires
• Dairy worker safety and health, including occupational safety and health training
• Logging and forestry
• Mental health and substance abuse, including access to treatment for foreign-born and migrant workers
• Musculoskeletal disorders and interventions
• Pesticide-related health outcomes, particularly (but not exclusively) related to fruit production
• Role of the agricultural workforce in food safety and security
• Role of the microbiome in mediating worker health
• Safety consequences of increased mechanization, automation, and robotics use in agricultural production
• Safety consequences of a reduced workforce (overburden, fatigue, etc.)
• Youth in agriculture

Abstract Guidelines
Abstract submissions have a limit of one-page and should include the following sections:
1. Explanation of the Burden, Need, and Impact (reference this commentary on the BNI method)
2. Overall project goals, including alignment with the AFF National Occupational Research Agenda
3. Hypotheses (bullets okay)
4. List of investigators and collaborators and their institutions
5. An optional second page is allowed for citations

Abstracts should use the following formatting guidelines:
• Arial font
• 12pt size
• Single (1.0) line spacing
• 0.75” margins

An example abstract submission is included as the last page of this document.

Submit abstracts as a single PDF file by 11:59pm MST on Sunday, November 10, 2019 to hicahs@colostate.edu.
**Contact Information**

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**IMPORTANT ADDITIONAL INFORMATION**

Initial acceptance of an abstract does not guarantee inclusion in the final center submission. The HICAHS leadership anticipates working closely with the principal investigators of selected projects in the development of pre-proposals and eventually the full research proposals and project budgets. Further, once the [NIOSH Program Announcement Request (PAR)](https://www.cdc.gov/niosh/pubs.kb) is released (anticipated September 2020), additional changes may be requested to meet PAR requirements. Investigators whose proposals are selected for submission will agree to comply with all deadlines and with requested budgetary and PAR-required changes and responses to reviews and revised drafts. Failure to do so may result in the exclusion of the project from the final center submission.
EXAMPLE ABSTRACT:

OCCUPATIONAL SAFETY MANAGEMENT AND LEADERSHIP ON LARGE-HEARD DAIRY FARMS

Explanation of the Burden, Need, and Impact

Burden: The trend towards larger herd sizes with increased technology in dairy farms has led to increased risks of fatal and non-fatal injuries on dairy farms. Dairy workers have the second highest prevalence of injuries among all U.S. farm workers. Previous ergonomics research has identified forces, postures and repetitive motions that can cause a high prevalence of musculoskeletal symptoms. Elevated levels of respirable dust particle can lead to respiratory issues in these workers.

Need: There is a need for an integrated safety leadership and management approach to improve the culture of health and safety on dairy farms. To date, there have been no studies that address this increasing need for better management and safety training in dairy operations. Smaller, non-corporate operations lack the resources to develop formal safety policies and practices. Furthermore, front-line supervisors have little or no training in safety management. These individuals are most likely promoted to front-line supervisor for their animal handling skills and have little to no experience managing people.

Impact: The project has the potential to greatly reduce the number of musculoskeletal disorders and other injuries in dairy workers by establishing better safety management policies.

Project Goals

The objective of this project is to develop, deliver and evaluate a safety leadership and management training intervention for dairy supervisors who are directly involved in worker supervision. The goal of this project is to reduce or eliminate injuries and fatalities among vulnerable workers on dairy farms.

This project addresses the following goals of the AFF National Occupational Research Agenda: Goal 2: Reduce deleterious health and safety outcomes in workers susceptible to injury due to circumstances limiting options for safeguarding their own safety and health; Goal 3: Move proven health and safety strategies in AFF workplaces through the development of partnerships and collaborative efforts; and Goal 4: Reduce the number, rate, and severity of traumatic injuries and deaths involving hazards of production agriculture and support activities.

Hypotheses

- A targeted safety leadership and management training intervention will yield improved safety climate and behavior among workers.
- Improved safety climate and behavior will lead to a reduction in injuries and fatalities among workers.

List of investigators and collaborators and their institutions.

David Douphrate, PI, UT Health School of Public Health, San Antonio
Noa Roman-Muniz, Co-I, Colorado State University
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Luis Mendonca, Co-I, Kansas State University
Stephen Reynolds, Co-I, Colorado State University
David Gimeno, UTHealth School of Public Health, San Antonio