Research Innovations for Scientific Knowledge (RISK) for Musculoskeletal Diseases (R61/R33 Clinical Trial Not 4/19/2019

National Institute of Arthritis and Musculoskeletal and Skin Disease

Research Innovations for Scientific Knowledge (RISK) for Musculoskeletal Diseases (R61/R33) initiative focuses on innovative research within the NIAMS mission by encouraging applicants to pursue unusual observations, test imaginative hypotheses, investigate creative concepts, and build ground-breaking paradigms, all of which deviate significantly from the current prevailing theories or practice. This FOA is particularly designed to encourage the submission of projects that are considered too risky, premature, controversial, or unconventional for other NIH mechanisms. This FOA intends to support disease-focused translational studies. We invite research studies aimed at understanding the mechanisms of diseases or conditions relevant to the NIAMS mission, as well as studies aimed at developing or testing diagnostics, therapeutic agents, or preventive interventions up to, but not including, first in human studies. The RISK R61/R33 FOAs are not intended to support clinical trials.

The RISK program will support the two main scientific areas of NIAMS mission, 1) musculoskeletal diseases and 2) the skin and rheumatic diseases. This R61/R33 application and the companion X02 pre-application (PAR-19-XXX) encourage applications related to musculoskeletal diseases.

The X02 is the highly recommended (not required) first step in the application process for this FOA. Potential applicants should read both FOAs.

Investigators whose X02 pre-applications are evaluated to be highly innovative and most relevant to the RISK program, will be notified of the opportunity to submit an R61/R33 application to this FOA.

The R61/R33 is a two-phase application.

The R61 Phase will provide up to two years of support to perform critical experiments that rigorously test the proposed concept. These critical experiments should unambiguously support or reject the central hypothesis. The outcomes of these critical experiments will be the main determining factor for the activation of the R33 Phase, which will provide up to one additional year of support to further validate and explore the innovative concept.

Sponsor | Name of Program | Deadline | Brief Description | Opportunity ID
---|---|---|---|---
National Institute of Diabetes and Kidney Diseases | New Paradigms in Tissue Communication—from mediators to metabolic function (RC2 Clinical Trials) | 5/30/2019 | NIDDK utilizes High Impact, Interdisciplinary Science (RC2) grants to support projects that will lay the foundation for new fields of investigation within the mission of NIDDK. The RC2 is envisioned to use an interdisciplinary approach to generate a research resource and/or foster discovery-based or hypothesis-generating science that can have a significant impact on the broader scientific community. This targeted FOA specifically seeks to generate scientific advancements that are focused on identifying new signals and regulatory networks that mediate metabolic cross talks within and between organs that play a role in the development of diabetes and obesity. The interdisciplinary approaches proposed should be designed to foster novel synergies that will accelerate conceptual and technical breakthroughs in science related to metabolic tissue communication. | 770

National Institutes of Health | Discovery and Validation of Novel Targets for Safe and Effective Pain Treatment (R21 Clinical Trial Not | 6/11/2019 | This program announcement is intended to encourage new exploratory and developmental research projects to discover and validate novel targets for pain treatment. For example, such projects could assess the feasibility of a means to identify and validate a novel pain target. Another example could include the unique and innovative use of an existing methodology to explore an area of basic biology that could lead to the discovery of a novel pain treatment target. In any scenario, initial experiments to validate a target for pain treatment should be included in the application. These studies may involve considerable risk but may lead to a breakthrough in pain treatment. The focus of this FOA is on the basic science discovery of targets in the peripheral nervous system, central nervous system, immune system or other tissues in the body that can be used to develop treatments that have minimal side effects and little to no abuse/addiction liability. Research supported by this FOA must include rigorous validation studies to demonstrate the robustness of the target as a pain treatment target. This will lower the risk of adopting the target in translational projects to develop small molecules, biologics, natural substances, or devices that interact with this target for new pain treatments. Translational research to develop new medical devices are not the focus of this FOA. Basic science studies of pain and related systems in the body are responsive to this FOA and are encouraged in the context of novel pain therapeutic target discovery. This FOA is not specific for any one or group of pain conditions. Projects to identify novel targets for acute pain, chronic pain, migraine, other headache disorders, osteoarthritis, diabetic neuropathy, chemotherapy-induced neuropathy, sickle-cell pain, orofacial pain, post stroke pain, etc. will be considered. Projects to identify novel targets for a combination of chronic overlapping pain conditions or for specific pathological conditions will be considered. Projects that seek to identify novel targets in specific populations such as women, children, older adults or other underrepresented groups will also be responsive to this FOA. LOI due 10/27/18; application due 11/27/18. | 834


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<td>National Institutes of Health</td>
<td>Discovery and Validation of Novel Targets for Safe and Effective Pain Treatment (R01 Clinical Trial Not Yet Announced)</td>
<td>6/11/2019</td>
<td>The purpose of this Funding Opportunity Announcement (FOA) is to promote the discovery and validation of novel therapeutic targets to facilitate the development of pain therapeutics. Specifically, the focus of this FOA is on the basic science discovery of targets in the peripheral nervous system, central nervous system, immune system or other tissues in the body that can be used to develop treatments that have minimal side effects and little to no abuse/addiction liability. Research supported by this FOA must include rigorous validation studies to demonstrate the robustness of the target as a pain treatment target. This will lower the risk of adopting the target in translational projects to develop small molecules, biologics, natural substances, or devices that interact with this target for new pain treatments. Translational research to develop new medical devices is not the focus of this FOA. Basic science studies of pain and related systems in the body are responsive to this FOA and are encouraged in the context of novel pain therapeutic target discovery. This FOA is not specific for any one or group of pain conditions. Projects to identify novel targets for acute pain, chronic pain, migraine, other headache disorders, osteoarthritis, diabetic neuropathy, chemotherapy-induced neuropathy, sickle-cell pain, post stroke pain, orofacial pain, etc. will be considered. Projects to identify novel targets for a combination of chronic overlapping pain conditions or for specific pathological conditions will be considered. Projects that seek to identify novel targets in specific populations such as women, children, older adults or other underrepresented groups will also be responsive to this FOA. LOI due 10/27/18; application due 11/27/18.</td>
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<td>Promoting Caregiver Health Using Self-Management (R01)</td>
<td>5/8/2020</td>
<td>Research projects of interest include those that seek to: • Design culturally-tailored interventions to help caregivers leverage supports, manage burdens, stress, and other negative outcomes to maximize healthy behaviors and QOL using self-management • Develop culturally-sensitive tools using self-management and technology to improve caregivers’ skills, knowledge, and access to resources, services, and social support to promote caregiver health • Identify biomarkers to help predict when caregivers are at high risk for poor health that can be addressed through self-management • Identify self-management interventions at different transitions in the caregiving that address the challenges, barriers, and unique situations related to caregiver’s age, gender, or socioeconomic status and promote caregiver health • Identify what interventions are efficacious and effective for self-management of caregivers across chronic conditions • Identify mechanism of action of self-management interventions that work to affect caregiver health outcomes</td>
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<td>National Institute of Nursing Research</td>
<td>Symptom Cluster Characterization in Chronic Conditions (R21)</td>
<td>1/8/2021</td>
<td>The purpose of this initiative is to encourage preclinical and clinical research and secondary data analysis on symptom cluster characterization that has potential to inform treatment and interventions that improve functional outcomes and quality of life in patients with chronic conditions. Research objectives include, but are not limited to, the following: Phenotyping symptom clusters: 1) Assess similarities in symptom cluster phenotypes across chronic conditions, including symptom onset and changes over time; 2) Compare the number and types of symptom clusters across chronic conditions; 3) Determine phenotypic predictors for the development of a prespecified symptom cluster in patients with chronic conditions. Mechanisms of symptom clusters: 1) Investigate the underlying genetic and epigenetic mechanisms for symptom clusters in chronic conditions; 2) Investigate the pathophysiology that may contribute to symptom clusters in chronic conditions; 3) Develop or adapt computational models or statistical modeling to predict altered biological pathways within a symptom cluster that occur in a chronic condition. Symptom cluster measurement: 1) Evaluate the use of large data sets and electronic health records to validate measurement or to predict symptom cluster onset in chronic conditions; 2) Evaluate the validity, reliability and responsiveness of PROMIS measures and common data elements (CDEs) in symptom cluster research pertaining to chronic conditions.</td>
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<td>National Institute of Nursing Research</td>
<td>Community Partnerships to Advance Research (CPAR)</td>
<td>1/8/2021</td>
<td>This funding opportunity announcement (FOA) encourages researchers to partner with communities using Community Engaged Research (CEnR) methodologies that will enhance relationships leading to better interventions and positive health outcomes.</td>
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Self-Management for Health in Chronic Conditions (R01 Clinical Trial Optional)

The purpose of this Funding Opportunity Announcement (FOA) is to encourage research that seeks to build the science of self-management for health in chronic conditions. This FOA focuses on self-management as a mainstream science to reduce the burden of chronic illnesses/conditions.

- Examine the influence of quality of life, burden of care, culture, ethnicity, age, family, or socioeconomic status on self-management across chronic conditions
- Determine whether age-, gender-, and ethnically-related motivational factors are associated with improved self-management of chronic conditions in children
- Investigate how the multiple co-morbidities and disabilities associated with aging affect the types of self-management strategies chosen as well as the effectiveness of different approaches
- Studies supporting the use of decision-support and personalized interventions to increase adherence to treatment
- Developing research programs that advance work in genetic outcome assessment for self-management measures and optimal self-management health outcomes
- Designing novel technologies and social media that assist in monitoring symptom status, promoting health behavior modifications, and accessing/imparting health information
- Incorporating community engaged research methodologies to include the use of social media, wireless monitoring, and home evaluations for self-management
- Predictive research on who will benefit from self-management strategies to achieve person-driven, goal-oriented activities and care that facilitate improved outcomes
- Use of pragmatic clinical trial designs
- Studies that incorporate resilience as it relates to self-management such as resilience factors throughout early childhood, adolescence, early adulthood, old age
- Dissemination and implementation research focused on self-management
- Develop behavioral interventions for use in varied clinical and community settings that test the effectiveness of self-management interventions for chronic conditions to reduce burden and disability, improve well-being, strengthen self-determination and participation in health care, and prevent illness and complications
- Strategies that utilize the built environment in improving self-management in chronic conditions
- Investigate intervention strategies that promote self-management across chronic conditions and their combinations in which they have not been adequately or previously tested
- Determine the influence of established approaches to self-management across chronic conditions (examples: improved self-efficacy, cognitive strategies, social support, coping skills)

Sponsor

National Institutes of Health

Name of Program

Self-Management for Health in Chronic Conditions (R21 Clinical Trial Optional)

Deadline

1/8/2021

Brief Description

The purpose of this Funding Opportunity Announcement (FOA) is to encourage research that seeks to build the science of self-management for health in chronic conditions. This FOA focuses on self-management as a mainstream science to reduce the burden of chronic illnesses/conditions.

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Mechanism R21

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<td>HHS, NIH</td>
<td>Improving Patient Adherence to Treatment and Prevention Regimens to Promote Health (R21 Clinical Trial)</td>
<td>5/8/2021</td>
<td>This FOA calls for research grant applications that address patient adherence to treatment and prevention regimens to promote health outcomes. Applications may address healthcare regimen initiation, implementation, and/or persistence by patients. Descriptive and intervention research may address adherence determinants at one or more levels of ecological influence, including the patient, caregiver/family, provider and/or healthcare system, and community levels. Attention to scientific rigor in all applications is paramount, with emphasis on appropriate sample sizes, valid outcome measures, and testing intervention mechanisms of action. The specific research interests of participating NIH Institutes and Centers are detailed within. This FOA accepts applications that either propose or do not propose a clinical trial(s).</td>
<td>683</td>
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<td>HHS, NIH</td>
<td>Improving Patient Adherence to Treatment and Prevention Regimens to Promote Health (R01 Clinical Trial)</td>
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<td>This FOA calls for research grant applications that address patient adherence to treatment and prevention regimens to promote health outcomes. Applications may address healthcare regimen initiation, implementation, and/or persistence by patients. Descriptive and intervention research may address adherence determinants at one or more levels of ecological influence, including the patient, caregiver/family, provider and/or healthcare system, and community levels. Attention to scientific rigor in all applications is paramount, with emphasis on appropriate sample sizes, valid outcome measures, and testing intervention mechanisms of action. The specific research interests of participating NIH Institutes and Centers are detailed within.</td>
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<td>National Cancer Institute</td>
<td>Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects on Biomarkers of Prognosis and</td>
<td>9/8/2021</td>
<td>This Funding Opportunity Announcement (FOA) encourages transdisciplinary and translational research that will identify the specific biological or biobehavioral pathways through which physical activity and/or weight control (either weight loss or avoidance of weight gain) may affect cancer prognosis and survival. Research applications should test the effects of physical activity, alone or in combination with weight control (either weight loss or avoidance of weight gain), on biomarkers of cancer prognosis among cancer survivors identified by previous animal or observational research on established biomarkers other than insulin/glucose metabolism, especially those obtained from tumor tissue sourced from repeat biopsies where available. Because many cancer survivor populations will not experience recurrence but will die of comorbid diseases or may experience early effects of aging, inclusion of biomarkers of comorbid diseases (e.g., cardiovascular disease) and of the aging process are also sought. Applications should use experimental designs (e.g., randomized controlled clinical trials (RCTs), fractional factorial designs), and will include transdisciplinary approaches that bring together behavioral intervention expertise, cancer biology, and other basic and clinical science disciplines relevant to the pathways being studied.</td>
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**Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects on Biomarkers of Prognosis and Survival**  
**Mechanism:** R21  
**Deadline:** 9/8/2021

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**Biobehavioral Basis of Chronic Pain (R21 Clinical Trial Optional)**  
**Mechanism:** R21  
**Deadline:** 1/8/2022

The purpose of the Funding Opportunity Announcement is to encourage grant applications from the scientific community on the biobehavioral basis of chronic pain. The focus encompasses the individual phenotype, genotype, and other omic-type assessments and the associated sensory and emotional components that underpin the individual’s chronic pain experience. Research relating biology and behavior is needed to better define the individual-specific burden of chronic pain and to better understand the mechanisms underlying differences in pain experiences among individuals afflicted with the same chronic illness.


**Addressing Caregiver Symptoms through Technological Tools (R01 Clinical Trial Optional)**  
**Mechanism:** R01  
**Deadline:** 1/8/2022

The purpose of the Funding Opportunity announcement is to encourage grant applications from the scientific community that develop and test tools to address symptoms in caregivers. The key to this announcement is the focus on the caregiver, regardless of patient symptoms or conditions. Research is needed to enhance symptom recognition and assessment in caregivers, and to promote technological strategies to alleviate distress in caregiver symptoms. These studies are needed to advance the science related to caregiver experience of symptoms, caregiving contexts that promote these symptoms, and viable tools to address the symptoms experienced by caregivers.

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<td>National Institutes of Health</td>
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Total Number of Opportunities 17