Joint RUNX1 Research Program – National Institutes of Health RiSE
(RUNX1 Team Science Excellence)
Grant Program

Background
The National Cancer Institute (NCI), the National Institute of Allergy and Infectious Diseases (NIAID), the National Human Genome Research Institute (NHGRI), and the National Heart, Lung and Blood Institute (NHLBI) are all components of the National Institutes of Health (NIH) within the Department of Health and Human Services of the United States Government.

The RUNX1 Research Program (RRP) is a non-profit organization with the mission to improve the quality of life and prevent cancer in patients with RUNX1 familial platelet disorder (RUNX1-FPD). RUNX1-FPD patients have a 35-50% higher lifetime risk of developing hematologic malignancies, with over 80% of those malignancies represented by myelodysplastic syndrome (MDS) and acute myeloid leukemia (AML). RRP pursues its mission through funding world-class, collaborative research, and building an empowered patient network integrated within the medical research community.

The NCI, NIAID, NHGRI, NHLBI, and RRP have a shared interest in advancing biomedical research that expands the understanding of and supports the discovery of cancer prevention treatments for RUNX1-FPD.

RiSE Grant Program Description
NCI, NIAID, NHGRI, NHLBI, and RRP are jointly launching the RUNX1 Team Science Excellence (RiSE) Grant Program to promote team-based research into RUNX1 malignancies. The goal of RiSE is to develop novel cancer prevention interventions for RUNX1-FPD.

Areas of interest for RiSE grants include but are not limited to:
- Determine the precise downstream targets of mutant RUNX1 that confer hematologic malignancy risk.
- Evaluate whether there are shared, potentially druggable mechanisms that drive clonal hematopoiesis, clonal expansion, and ultimately malignant transformation in the general population and in RUNX1-FPD patients.
● Develop drug screening programs aimed at raising normal RUNX1 activity.
● Determine whether there are differing cellular and clinical consequences of a RUNX1 dominant negative mutation versus a loss of function mutation.
● Determine the mechanisms by which altered DNA repair promotes clonal hematopoiesis in RUNX1-FPD patients.
● Define the effects of RUNX1 deficiency on the immune compartment and determine the potential role in initiation and propagation of hematologic malignancy.
● Determine whether the microbiome or macro-environmental exposures influence clonal evolution towards malignant transformation in the bone marrow.
● Develop high-throughput diagnostic assays to inform on the pathogenicity of RUNX1 variants.

Grant Terms
● To be eligible for the RiSE Grant Program, applicants must establish a research team composed of one extramural non-NIH PI and one intramural PI from NCI, NIAID, NHGRI or NHLBI. Intramural PIs must secure approval from their Scientific Director before joining on to an application for the RiSE Grant Program.
● Applicants may request funding of up to $125,000 per PI/year for a period of 24 months. For extramural PIs, funds will not be permitted to cover indirect costs. The budget and duration requested must be realistic and reflect the estimated cost and timeline for the proposed study.
● A maximum of 2 projects will be funded.
● NHGRI and NHLBI PI are only eligible to participate as unfunded collaborators.

Application Process
● Applicants must first submit a letter of intent (LOI), which will be reviewed by an independent panel of expert scientific investigators who will determine eligibility for a full application.
● The LOI must include the following content:
   1. Project Summary - Summary of the main objectives of the proposed study and how potential findings would support the development of cancer prevention for RUNX1-FPD. [one-page limit]
   2. Project Plan Description – A brief communication articulating the experimental strategy proposed to achieve the main objectives outlined in the Project Summary. [one-page limit]
   3. References – Provide citations of cited references in the Project Summary and Project Plan Description. [no page limit]
   4. NIH-style Biosketch for all key personnel (i.e. Extramural Principal Investigator (PI), and Intramural Co-PI, as well as essential collaborators). [no page limit]
● All LOIs must be submitted in electronic form, as a single pdf, by email to:
  info@runx1-fpd.org.
**Applicant Eligibility**
- Extramural applicants must be established independent investigators in a tenure-track or tenured position at the Assistant Professor level (or equivalent), or higher, at a recognized 501(c)(3) university or non-profit institution.
- Intramural applicants must be established independent investigators from NCI, NIAID, NHGRI, or NHLBI.

**Key Dates**
- LOI submission deadline – January 26, 2022
- Anticipated notification of accepted LOIs – February 25, 2022
- Full applications deadline – April 6, 2022
- Anticipated grant award notification – May 6, 2022

For any questions, please contact the **RUNX1** Research Program at info@runx1-fpd.org.