

MIND Institute Intellectual and Developmental Disabilities Research Center Pilot Research Grants Program 2020-2021

The UC Davis MIND Institute Intellectual and Developmental Disabilities Research Center (IDDRC) is soliciting applications for its annual competitive program of pilot research grant funding. This program is designed to advance the mission of the IDDRC and promote innovation in the translational science of intellectual and developmental disabilities (IDD). Two pilot grants will be awarded this year. Awards, not to exceed \$30,000, will be made for one year. Funds will become available on July 1, 2020. See attached description of the MIND Institute IDDRC. **Applications are due no later than May 1, 2020.**

Projects must be led by early-career scientists (equivalent to the rank of assistant or associate professor) with a full-time position at UC Davis who are eligible to submit applications to external funding sources as a PI. The project must focus on one or more of the IDDRC substantive themes: Integrated Biobehavioral Characterization of IDD, Genetic and Environmental Contributions to IDD, and Treatment of IDD. The project should represent a new or emerging line of research, propose to use services of one or more IDDRC core, and increase competitiveness of the PI for future extramural funding. Applications that involve interdisciplinary collaboration are especially encouraged.

Additional information and a description of the application process follow:

Eligibility. Applications will be accepted from current IDDRC investigators, as well as from UC Davis faculty members who both meet the project associated criteria described above and express interest in becoming an approved IDDRC core user. Applicants who hold positions other than academic senate positions should include with their application materials a letter from their department chair indicating that they are eligible to serve as PI of an application for extramural research funding.

Funding Period and Budget. Projects will be funded for one year, beginning July 1, 2020. Maximum project budgets are limited to \$30,000. No project period extensions or carry forward of funds will be allowed.

Application. Applications must include a Project Title and Sections a-c and e-h as described below; Section d is optional. Incomplete applications will not be reviewed. Sections b-e of the application should not exceed five (5) pages. This page limit does not apply to sections f-h. Font should be Arial 11 point or larger, margins 0.5 inch or more. Applications that exceed page limitations will not be reviewed. The following sections must be included:

a. Description. In a paragraph of 300 words or less, provide a general summary of the goals of the project and expected outcomes. This description should be comprehensible to a lay audience.

b. Specific Aim(s). Include a list of one or more specific aims for the proposed project. Each specific aim should have a set of hypotheses or expected outcomes.

c. Background and Significance. Provide reviewers with sufficient referenced background information to understand the proposed project and its relevance to the mission of the MIND Institute IDDRC. This section should conclude with a short statement describing how the results will increase the PI's competitiveness for future extramural funding.

d. Preliminary Studies (optional). Any preliminary data that are germane to the proposal may be included in this section.

e. Experimental Procedures. Describe the project procedures in sufficient detail to assure reviewers that the project is feasible within one year with currently available environment and personnel. Use of IDDRC core resources should be described.

f. References (not included in 5 page limit). The literature cited should appear after the experimental procedures.

g. Biographical Sketch(es)/Other Support (not included in 5-page limit). For the project PI and any co-PI(s), provide both an NIH biographical sketch, and an NIH Other Support document.

h. Budget (not included in 5-page limit). A one-page detailed budget (PHS 398 (Revised 01/18) Form Page 4: Detailed Budget for Initial Budget Period, or equivalent) and a budget justification are required.

NOTE: Budgets should include appropriate time/effort commitment and salary/benefits allocation, as required by the home department, for all personnel, including the PI, as well as funding for any project-related costs, including, where appropriate, those associated with IDDRC core use. **No funds for travel are available.**

Submission. Applications should be **submitted electronically** to Michele Ono, IDDRC Administrative Core Manager, at myono@ucdavis.edu, on or before **May 1, 2020**.

Review Process. Members of the MIND Institute IDDRC Executive Committee and the IDDRC External Advisory Committee will review applications. Applicants will be **notified of funding decisions by June 1, 2020**. **No written feedback will be provided.**

Questions. For questions or additional information about this program, please contact Leonard Abbeduto, PhD, IDDRC Director (ljabbeduto@ucdavis.edu), or one of the Associate Directors: Tony J. Simon, PhD (tjsimon@ucdavis.edu), Judy Van de Water, PhD (javandewater@ucdavis.edu), or Melissa Bauman, PhD (mdbauman@ucdavis.edu). Applicants are strongly encouraged to contact one of the IDDRC Core directors/co-directors well in advance of their submission to discuss the appropriateness of the proposed project and their eligibility.

MIND Institute Intellectual and Developmental Disabilities Research Center

The MIND Institute Intellectual and Developmental Disabilities Research Center (IDDRC) was launched in September of 2013. The MIND Institute IDDRC is one of 14 such centers in the United States. Established in 1963 by Congress as "centers of excellence" for research in intellectual and developmental disabilities, the Eunice Kennedy Shriver Intellectual and Developmental Disabilities Research Centers represent the nation's first and most sustained effort to prevent and treat disabilities through biomedical and behavioral research. The mission of the MIND Institute IDDRC is to support interdisciplinary translational research on autism, fragile X syndrome, Down syndrome, ADHD, and other neurodevelopmental disorders at UC Davis. The MIND Institute IDDRC is funded by the National Institute of Child Health and Human Development (U54 HD079125) and by matching funds from the UC Davis. Leonard Abbeduto, PhD, is the PI/PD of the IDDRC (LJabbeduto@ucdavis.edu).

The IDDRC supports cutting-edge research that addresses three scientific themes:

- **Integrated Biobehavioral Characterization of IDD**, i.e., studies examining relationships among behavior and its biological substrates;
- **Genetic and Environmental Contributions to IDD**, i.e., studies of environmental sources of risk for IDD, including environment x gene interactions; and
- **Treatment of IDD**, i.e., studies of targeted strategies, both biomedical and social in nature, for preventing or treating core symptoms and comorbid conditions.

In support of research in these areas, the IDDRC has established a research infrastructure involving five service cores that provide technical expertise, resources, and support services. A brief description of the cores is provided below. Contact the leadership of each core for more information about services.

The **Clinical Translational Core (CTC)** supports clinical research through participant recruitment and characterization. The CTC provides the following services: (1) recruitment of human participants into IDDRC projects through searchable electronic contact registries of potential participants and (2) through targeted community outreach activities, (3) specialized clinical assessment expertise to confirm participant diagnoses and characterize level of functioning through direct administration of measures for IDDRC projects or through training of and consultation with project staff, and (4) support for recruitment and assessment of diverse samples. The CTC is directed by Sally Ozonoff, PhD (sozonoff@ucdavis.edu).

The **Biological and Molecular Analysis Core (BMAC)** supports an integrated experimental approach to the study of the molecular and cellular mechanisms of neuronal and immune function, through services in the domains of cellular neuroimaging, immunology, and genomics. Four tiers of service for each domain: (1) consultation in model selection and experimental design; (2) training of users on available equipment; (3) training and supervision in conducting assays of interest where applicable; (4) battery of assays conducted by core staff; 5) tailored sets of analyses conducted by core staff. Combinations of 1-4 can be designed to match user needs. Assistance with data interpretation will be provided as needed. The BAC is directed by Judy Van de Water, PhD (javandewater@ucdavis.edu).

The **Rodent Behavior Core (RBC)** provides comprehensive behavioral assays for mouse and rat relevant to the behavioral symptoms of neurodevelopmental disorders, using automated and observer-scored state-of-the-art equipment in dedicated testing rooms. Five tiers of service are offered: (1) consultation; (2) unsupervised use of equipment; (3) training and supervision in conducting behavioral tests using core equipment and in data analysis; (4) battery of assays conducted by the core staff; and (5) tailored constellations of assays conducted by the core staff. Combinations of 1-5 will be designed to match the needs of each User. The RBC is directed by Jacqueline Crawley, PhD (crawley@ucdavis.edu).

The **Biostatistics, Bioinformatics, and Research Design Core (BBRDC)** The BBRDC supports the use of advanced analytic methods by providing access to consulting biostatisticians with a broad range of complementary expertise. Services provided include: (1) consultation with biostatisticians on choice of analytic method and interpretation of resulting analyses and (2) access to a core manager who will work collaboratively

with the biostatisticians and IDDRC investigators to conduct specified analyses. The BBRDC is directed by Kyoungmi Kim, PhD (kmkim@ucdavis.edu).