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). Up to three 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, 2015. See attached description of the MIND Institute IDDRC. Applications are due no later than April 1, 2015.

Projects are being solicited in two categories:

1. Projects 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, that focus on one or more of the IDDRC substantive themes: Integrated Biobehavioral Characterization of IDD, Environmental Contributions to IDD, and Treatments for IDD. These projects should represent new or emerging lines of research, use services of one or more IDDRC cores, and increase competitiveness of the PI for future extramural funding.

2. Projects led by scientists of any rank with a full-time position at UC Davis who are eligible to submit applications to external funding sources as a PI, that focus on the development of new measures, technologies, or resources that have a clear potential for integration into one or more of the funded IDDRC cores and thus, to become useful to multiple MIND Institute IDDRC projects.

Applications that involve interdisciplinary collaboration are especially encouraged for both types of projects.

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, 2015. Maximum project budgets are limited to $30,000. No project period extensions are available without strong justification.
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. 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. The description should indicate whether the application falls into category 1 or category 2 as described above.

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 or lead to a measure, technology, or resource that can be incorporated into the services of a specific IDDRC core or cores.

d. Preliminary Observations (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 or, in the case of development projects, relevance to the services of a specific IDDRC core or cores 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. Applicants can choose to use the 2014 or 2015 NIH biosketch format.

h. Budget (not included in 5 page limit). A one-page detailed budget (PHS 398, Rev 6/09, Form Page 4: Detailed budget for initial budget period, or equivalent) and a budget justification are required.

NOTE: Budgets should include an 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 Rebecca Shilts, MIND Institute IDDRC Administrative Core Coordinator, at Rebecca.shilts@ucdmc.ucdavis.edu, on or before April 1, 2015.

Review Process. Members of the MIND Institute IDDRC Executive Committee and the
IDDRC External Advisory Committee will review applications, with assistance from ad hoc reviewers as needed. Applicants will be notified of funding decisions by June 1, 2015. No written feedback will be provided.

**Questions.** For questions or additional information about this program, please contact Leonard Abbeduto, PhD, IDDRC Director (leonard.abbeduto@ucdmc.ucdavis.edu), Tony J. Simon, PhD, IDDRC Associate Director (tjsimon@ucdavis.edu), or Judy Van de Water, PhD, IDDRC Associate Director (javandewater@ucdavis.edu). Applicants are strongly encouraged to contact one of the IDDRC directors/co-directors well in advance of their submission to discuss the appropriateness of the proposed project and their eligibility.
The MIND Institute Intellectual and Developmental Disabilities Research Center (IDDRC) was launched in September of 2013. The MIND Institute IDDRC is one of 15 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 (leonard.abbeduto@ucdmc.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;
- **Environmental Contributions to IDD**, i.e., studies of environmental sources of risk for IDD, including environment x gene interactions; and
- **Treatments 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 (sally.ozonoff@ucdmc.ucdavis.edu). CTC co-directors are Robin Hansen, MD (robin.hansen@ucdmc.ucdavis.edu), and Julie Schweitzer, PhD (julie.schweitzer@ucdmc.ucdavis.edu).

**The Biological Analysis Core (BAC)** 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 and molecular biology and imaging and in immunology. 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), and co-directed by Pamela Lein, PhD (pjlein@ucdavis.edu).

**The Neurobehavioral Analysis Core (NBAC)** provides expertise in designing and implementing measures of complex human behavior, particularly in regard to establishing endophenotypes. Services include (1) consultation and guidance regarding design, selection,
or creation of neurobehavioral phenotyping measures; (2) access to specialized laboratory facilities, including the NBAC ERP laboratory; (3) training and supervision in conducting neurobehavioral tests; and (4) administration of a battery of assays by core staff. Combinations of 1-4 will be designed to match the needs of each user The NBAC is directed by Tony J. Simon, PhD (tjsimon@ucdavis.edu). NBAC co-directors are David Hessl, PhD (david.hessl@ucdmc.ucdavis.edu), and Steven Luck, PhD (sjluck@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 (jacqueline.crawley@ucdmc.ucdavis.edu), and co-directed by Rob Berman, PhD (rfberman@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. (3) The Core also will provide assistance with database design using RedCap. The BBRDC is directed by Irva Hertz-Picciotto, PhD, MPH (ihp@phs.ucdavis.edu), and co-directed by Kyoungmi Kim, PhD (kmkim@ucdavis.edu).