

BD2K - Workforce Development and Diversity FY17 Concepts

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► BD2K Multi-Council Working Group ► January 11, 2016





Proposed Concepts

- Open Educational Resources (OER R25)
- Programs Designed to Enhance Diversity and Build Capacity (Diversity R25)
- Predoctoral Training Grant (T32)
- Mentored Career Development Award (K01)
- Career Transition Award for Intramural Investigators (K22)
- Curriculum Development (Curr R25)



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Proposed Concepts Map to Goals

BD2K Workforce Development GOALS

Establish biomedical data science as a career path

Foster collaborations between biomedical scientists and data scientists

Develop and improve data science skills in the biomedical workforce

Enhance diversity in the biomedical data science workforce

Ensure training opportunities and resources are more readily discovered and accessed

PROPOSED Concepts

OER R25

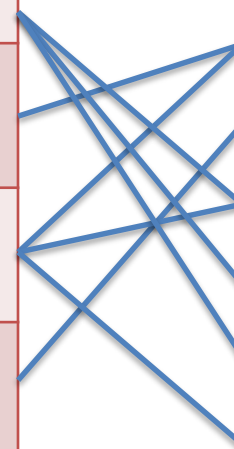
Diversity R25

T32

K01

K22

Curr R25



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Last Goal is Addressed by TCC

BD2K Workforce Development GOALS

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PROPOSED Concepts

OER R25

Diversity R25

T32

K01

K22

Curr R25

Existing Training Coordination Center (TCC)



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Existing Programs Address Varying Audiences

Short Courses (R25) - 11

Open Educational Resources (R25) - 8

Diversity
(R25) - 4

All Biomedical Scientists

Undergrad

Graduate

Postdoc

Junior
Faculty

Senior
Faculty

Biomedical Data Scientists

Training
Programs
(T32/T15) – 6+10

Career Development Awards (K01) - 21



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TCC Addresses Spans All Audiences

Training Coordination Center

Short Courses (R25) - 11

Open Educational Resources (R25) - 8

Diversity
(R25) - 4

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(T32/T15) – 6+10

Career Development Awards (K01) - 21



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FY17 Proposed Programs Consolidate Programs and Fill Gaps

Open Educational Resources and Short Courses (R25)

Curr Dev (R25)

Diversity
(R25)

All Biomedical Scientists

Undergrad

Graduate

Postdoc

Junior
Faculty

Senior
Faculty

Biomedical Data Scientists

Training
Programs
(T32)

Career Development Awards (K01)

Career Transition Awards (K22)



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Open Educational Resources for Skills Development in Biomedical Big Data – (R25) Renewal

Purpose / Rationale:

- To support the development of innovative open educational resources
- Used by a large numbers of learners at all career levels

FY14-16 Portfolio (24 awards under 4 distinct FOAs):

- Topics: data management, data exploration, data representation, computing, data modeling, and data visualization
- Modalities: Short courses, MOOCs, teacher training, modules, infrastructure to incorporate active learning into the classroom

Existing Gaps:

- Using, analyzing and/or integrating mobile health data (quantifiable behaviors, wearable sensors, motion detection) and clinical data
- Open science, management of the data lifecycle, usage of the Commons
- Approaches such as challenges, hackathons and/or Innovation Labs



Enhancing Diversity in Biomedical Data Science - (R25) Renewal

Purpose / Rationale:

- To support educational activities at that enhance the diversity of the biomedical, behavioral and clinical research workforce
- Educational activities at the low-resourced institutions include:
 - Research Experiences for undergraduates and faculty
 - Curriculum Development
- Builds a partnership between a low-resourced institution and a research-intensive university

FY14-16 Portfolio (4 awards):

- Low-resourced institutions: up to \$15M in NIH funds annually, and has a historical mission to train underrepresented minorities
- Research-intensive universities: significant Biomedical Big Data research, expanded beyond BD2K Centers



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Predoctoral Training Grant – (T32) Renewal

Purpose / Rationale:

- To support the training of the next generation of scientists who will develop computational and quantitative approaches and tools needed by the biomedical research community
- There is a continuing need and demand for training programs in big data science

FY14-16 Portfolio:

- 6 awards + approximately 10 new awards, with up to 6 trainees each





Mentored Career Development Award (K01) Renewal

Purpose / Rationale:

- To provide salary and research support for a sustained period of “protected time” (3-4 years) for intensive research career development under the guidance of an experienced mentoring team in biomedical Big Data
- There is a continuing need to support early-stage investigators in big data science as they begin to acquire independence

FY14-16 Portfolio:

- FOA had a strong response, with 74 unique applications submitted
- 21 awards issued: 9 MDs, 12 PhDs



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Transitional Career Award for Intramural Investigators – (K22) New

Purpose / Rationale:

- To provide support to facilitate the transition of intramural investigators to research careers in academic research institutions
- To provide an opportunity for intramural investigators that is similar to the K01 offering, at the request of the NIH Scientific Data Council

Key Points:

- BD2K funds to support recipient after transition to extramural academic research institution
- As BD2K commitment cannot extend past 2020, the length of subsequent extramural support shortens if the intramural investigator does not find a suitable position in the first year





Curriculum Development - New

Purpose / Rationale:

- To support the creation of curriculum in Data Science for graduate students in the biomedical sciences
- To enable institutions to incorporate tailored data science skills into their standard curriculum for biomedical scientists



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Thank You

Questions?

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- ▶ #BD2K, #BigData



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