QuBBD Program Innovation Lab and FOA

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NIH/NSF QuBBD Program

- Goal: to nurture new interdisciplinary teams (biomed from NIH and math/stats/cs from NSF) to address data science roadblocks
- Components:
 - Series of Innovation Labs to build new teams
 - Follow up meetings to nurture new teams
 - Planning grants to support the collaborative research by new teams
- Purpose of Today's Presentation:
 - Update on pilot within QuBBD program
 - Proposed next steps







Rationale for the QuBBD Program

- It can be challenging to develop interdisciplinary collaborations between biomedical and quantitative researchers, especially at early stage of career
- New teams can lead to innovative science that couldn't be solved otherwise
- Innovation Labs can break through initial barriers, and subsequent seed funding can support the groundwork that can lead to initiation of a research program to successfully compete for continued funding





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Innovation Lab

- One week, facilitated, interactive workshop
 - For generation of new interdisciplinary teams
 - For ideation of an innovative research program
 - Through nurturing from mentors who are experts in their respective fields
- New teams form of early-stage biomedical and quantitative researchers
 - Biomed come with problems (high-need, high-impact data science)
 - Quant brings methods and the desire to develop innovative solutions





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FY15 Innovation Lab

- Addressed data science roadblocks in Precision Medicine
- Catalyzed new interdisciplinary teams
 - Teams formed around biomedical scientist with a partially-formulated problem
 - Data scientists brought knowledge of many tools, and the ability to adapt/extend
- Teams wrote applications for small planning grants
 - Applications received from Innovation lab teams and public
 - 10 applications funded after NSF review
 - NIH/BD2K and NSF partnered to fund these projects







Lessons Learned from FY15 Lab





SUMMARY: Innovation Lab Successful

Proposal:

Hold annual Innovation Labs in FY16-18, with the first Lab having an mHealth focus, and issue a multi-year FOA for planning grants





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FOA Concept

- Joint NSF/NIH FOA/solicitation that provides a funding opportunity open to Innovation Lab participants and the general public
- Goal: To foster new interdisciplinary teams
 - Early stage investigators from biomedical science and data science
 - To address data science roadblocks that are impeding progress in a biomedical research problem
- Science: Projects to develop novel or significantly adapted computational and quantitative approaches, methods, or tools





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Timeline of Key Steps







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Data Science at NIH

- https://datascience.nih.gov/adds
- bd2k@nih.gov
- ▶ @NIH_BD2K
- #BD2K, #BigData





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