



National Organization of Research Development Professionals

# **Research Development Is Fundamental to Building a Strong Core Facilities Infrastructure**

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# Agenda

- Introduction to core facilities infrastructure
- Characteristics of a strong infrastructure
- Utilizing Research Development principles to building a strong infrastructure
  - Shared and consolidated
  - Funding
- Open Discussion

# Core Facilities Definition (NIH)

“Core facilities are centralized shared research resources that provide access to instruments, technologies, services, as well as expert consultation and other services to scientific and clinical investigators.

The typical core facility is a discrete unit within an institution and may have dedicated personnel, equipment, and space for operations.

In general, core facilities recover their cost, or a portion of their cost, of providing service in the form of user fees that are charged to an investigator's funds, often to NIH or other federal grants.”

# **Strong Core Facilities Infrastructure Facilitates**

- Faculty hiring
- Team-based collaboration
- Application for/Success of external research funding (facilities)
- Competitive applications for center/core/equipment grants



# Strong Core Facilities Infrastructure

- Shared and Consolidated
  - ✓ Departmental/ School/College-based/  
University-wide/ Regional/National
- Funding
  - ✓ External
  - ✓ Internal

# Research Development Principles Shared and Consolidated Cores

- Shared Facilities: Departmental / School/ College-based / University-wide / Regional / National
  - ✓ Strategic planning
  - ✓ Interdisciplinary teams
  - ✓ Collaboration
- Building a strong customer base of internal/external customers
  - ✓ Strategic planning
  - ✓ Interdisciplinary teams
  - ✓ Team science
  - ✓ Industry partnerships
  - ✓ Marketing principles

# NIH Guidelines for Core Facilities

- **Annual Reports** require:
  - ✓ If core facilities/shared resources received NIH funding, outcomes from this investments to be reported
  - ✓ If funding mechanisms involved core(s) (e.g. P50), a separate report on this core needs to be filed
- **New Rigor, Transparency, Validation requirements:**  
New Form-D
  - ✓ Cell line validation
  - ✓ Antibody/other biological/chemical validation

## **NIH: Centralization of Core Facilities**

NIH conducted a pilot that determines increased efficacy and efficiency when core facilities are consolidated and managed centrally.

**Research Development** can assist with

- Pre- and Post- award requirements
- Collaborative efforts between cores and with faculty
- Reporting
- Equipment lists



# **Building a Strong Core Facilities Infrastructure**

## **FUNDING**

# Utilizing **Research Development Principles**

- **External Funding**
  - ✓ Identification and dissemination of funding opportunities
  - ✓ Anticipation of funding opportunities
  - ✓ Liaison with funding agencies
  - ✓ Proposal development
  - ✓ Collaborations
  - ✓ Grant writing workshops
  - ✓ Limited submission
- **Internal Funding**
  - ✓ Seed funding – for research or specific for cores

# Funding Programs

- ✓ Shared Instrumentation
- ✓ Instrumentation/Technology Development
- ✓ User and Core Facilities

# Shared Instrumentation

## Federal Grants and Programs for the Life Sciences

### See Handout

From: Federation of American Societies for Experimental Biology (FASEB) Shared Research Resources Subcommittee Report, March 14, 2016

<http://www.faseb.org/Resources-for-the-Public/News-Room/Article-Detail-View/tabid/1014/ArticleId/1300/FASEB-Releases-Resource-on-Federal-Instrumentation-Programs.aspx>



# Shared Instrumentation Grants

- NSF
  - ✓ MRI
- NIH
  - ✓ Shared Instrumentation Grants (SIG)
  - ✓ High End Instrumentation (HEI)

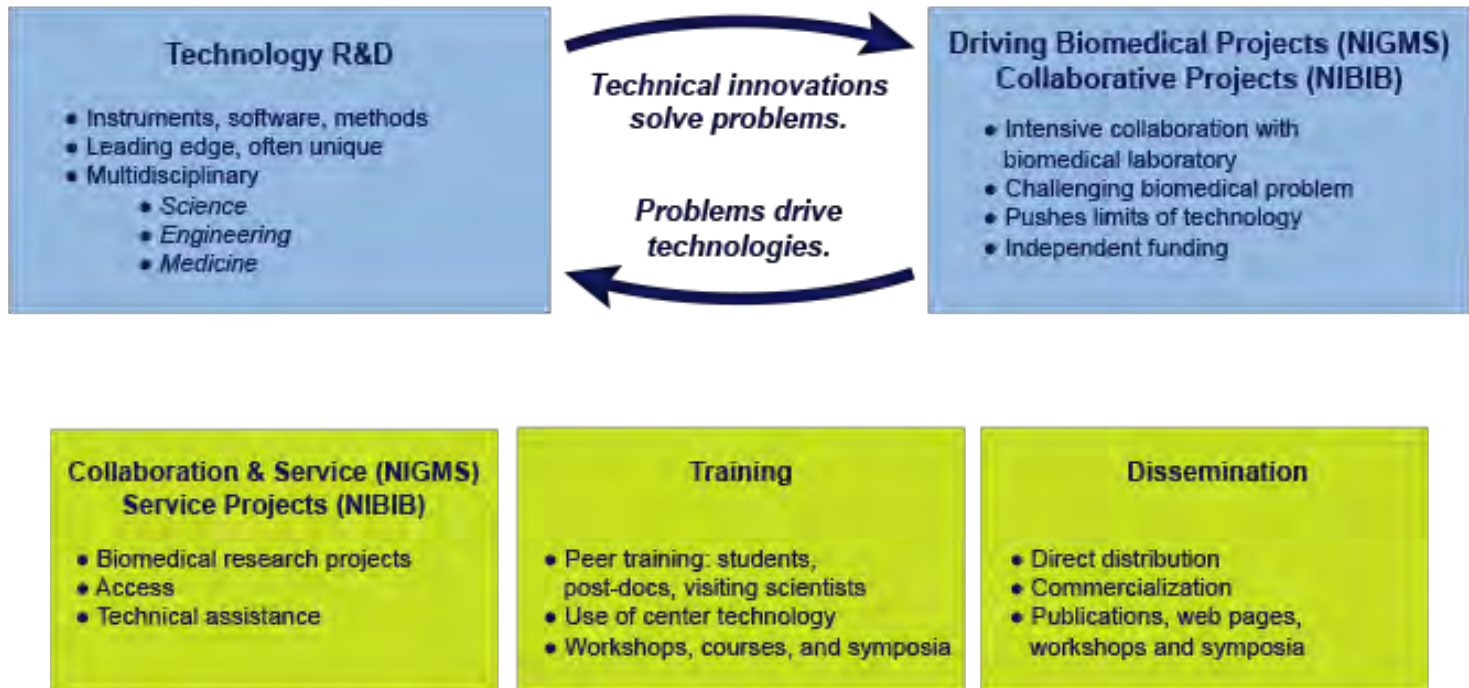
# Research Development Principles

- FOA dissemination
- Limited submission/Quasi Limited submission
- Incentives
- Collaborations/identifying funded, potential users
- Cost-share management
- Institutional letters of support
- Successful proposals

# Instrumentation/Technology Development

- NSF
  - ✓ MRI Development -Track 2
- NIH
  - ✓ Biomedical Technology Research Resources P41 - NIGMS (20) and NIBIB (15) nationally

# NIH P41 – Synergy Between Technology Development and Biomedical Research





# P41 Case Study (Northwestern)

- ✓ Brainstorm with the team
- ✓ Developmental editing
- ✓ Management Plan
- ✓ Institutional support
- ✓ Dissemination Plan- connect with national networks
- ✓ Site visit preparation

# **Non-Federal Instrumentation Development Funding**

- W. M. Keck Foundation
- Gordon and Betty Moore Foundation
- Partnership with Industry

# **User and Core Facilities Regional/National**

## **Federal Grants and Programs for the Life Sciences**

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# NIH P30 Center Core Grants

“To support shared resources and facilities for categorical research by a number of investigators from different disciplines who provide a multidisciplinary approach to a joint research effort or from the same discipline who focus on a common research problem.

The core grant is integrated with the center's component projects or program projects, though funded independently from them. This support, by providing more accessible resources, is expected to assure a greater productivity than from the separate projects and program projects.”



# NIH P30 Center Core Grants

- Unique equipment and/or services for multiple PIs
- Unique resources that individual researchers would not otherwise be able to afford
- Located in a lab (equipment), an office (personnel) or virtual (online support)
- Provides services to federally-funded research projects; specified number of funded investigators and/or institutional Funding Research Base (FRB) may be required

# NIH P30 Center Core Grants

- Most Institutions offer P30 programs (see handout)
- P30 is NOT investigator initiated, need to respond to an RFA
- Integrates existing projects in a specialized area of research or within a central theme (as specified by the FOA)
- Supports shared (core) facilities to enhance quality, productivity, interdisciplinary collaboration, and cost-effectiveness of NIH supported projects
- No funds for research projects - except for new program development (pilots)

# **P30 Case Study (Northwestern )**

- P30 grant writing workshop
- Library of successful proposals
- Limited submission
- Assisted in assembling a team across schools
- Met with the team/reviewed alignment with program
- Developed a strategic plan - skipped a cycle to build the cohort of required R01s
- Institutional seed funding for external review of the R01s
- Seed funding for a 2-day retreat for the team
- ..... Stay tuned

# Research Development Principles Large Center Proposals

- ✓ Collaboration with industry: as users or instrumentation development
- ✓ Collaborations with 2-year colleges and under-represented groups
- ✓ Graduate and Undergraduate education
- ✓ Building relationships with officials in DC
- ✓ NIGMS RFI NOT-GM-16-103: The need for support of research resources for biomedical research



## **Internal Funding (Northwestern)**

- NU Interdisciplinary Seed Funding Program 1-2-3
- Equipment grant program
- ReLODloan program for upgrading equipment
- Voucher program
- CTSA vouchers



## **Take Home Message**

- ✓ Many Research Development principles apply to the development and management of strong core facilities
- ✓ New reporting requirements can be supported by the RD group
- ✓ Equipment and Core grant proposals are typically complex, multidisciplinary and limited submission, as such the proposal development could benefit from the assistance of a professional RD team