## Catalyzing Interactions and Integration of Basic, Patient-Oriented, and Population Health Scientists



- Anja Bielinsky, Medical School
- Angela Birnbaum, College of Pharmacy
- Iris Borowsky, Pediatrics, Medical School
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- Steven Fu, VA, Medical School
- Daniel Mueller, Medicine, Medical School
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University of Minnesota

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### Challenge

 Catalyzing Interactions and Integration of Basic, Patient-Oriented, and Population Health Scientists

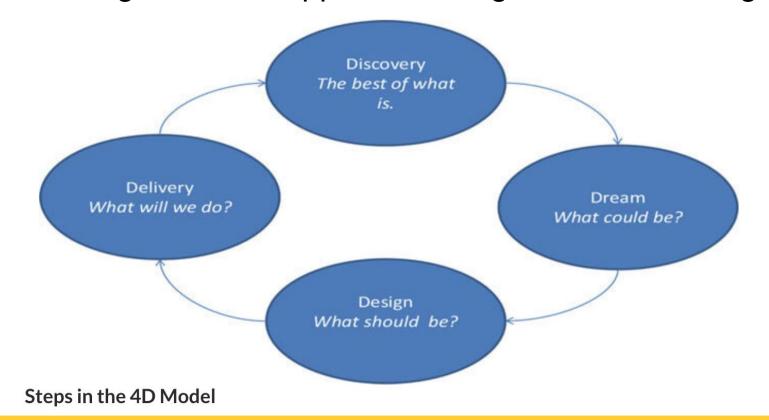
## Charge

- Make actionable recommendations to leadership to enable researchers across the University to leverage their expertise to:
  - create vibrant inter-disciplinary/translational teams
  - create a pipeline that maximizes translational research grants
  - increase ability to continuously scan and respond to current funding landscape





## Appreciative Inquiry: A strengths-based approach to organizational change





## Motivation - How do we compare to our peers in regard to federal research funding?

### NIH Ranking (Medical School Example)

U of MN Medical School NIH ranking is improving but still lags peer institutions

- 13th ranked Medical School among public institutions (30th overall)\*
- Perceptions contribute to challenges in faculty recruitment/retention as well as acquisition of other grants and philanthropy

\*Blue Ridge Institute for Medical Research (2018)



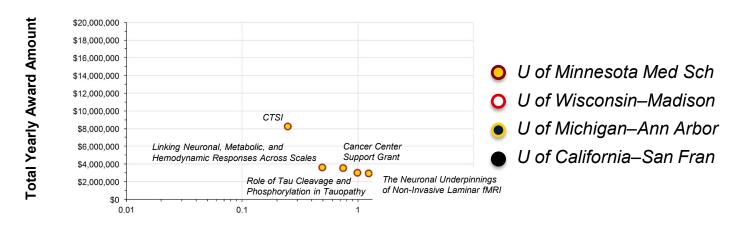
## Motivation – University of Minnesota Medical School: NIH Grants Success Relative to Peers

2018 Rank	Name	Total School of Medicine Award	Change from 2008	Number of Awards	Median Award	Mean
1	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO	\$577,717,908	+46%	1,145	\$356,625	\$504,557
10	UNIVERSITY OF MICHIGAN AT ANN ARBOR	\$372,596,540	+24%	864	\$356,905	\$431,246
24	UNIVERSITY OF WISCONSIN-MADISON	\$210,441,502	+72%	359	\$362,364	\$586,188
30	UNIVERSITY OF MINNESOTA	\$175,149,030	+27%	404	\$353,205	\$433,537

<sup>\*</sup>Blue Ridge Institute for Medical Research (2018)



## Motivation – University of Minnesota Medical School: NIH Grants Success Relative to Peers

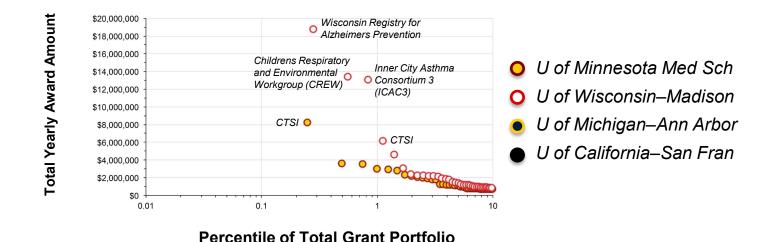


**Percentile of Total Grant Portfolio** 





## Motivation – University of Minnesota Medical School: NIH Grants Success Relative to Peers



\*Blue Ridge Institute for Medical Research (2018)



# A success story – organic process

P30 Minnesota Nutrition & Obesity Research Center Application

#### **Participating Colleges/Centers:**

School of Public Health,
Medicine, Nursing,
College of Biological Sciences
Minnesota Population Center
Healthy Foods Healthy Lives Institute
College of Liberal Arts

#### **Motivation**

- Funding Opportunity
- New Leaders
- Innovation Potential

#### **Essential Elements**

- Funding Opportunity
- Motivation to Innovate
- Social Network Engagement
- Supportive Pre-Award Infrastructure

#### **Approach**

- Small Group Brainstorm
- Identified Center Theme
- Invited Additional Team Members

#### **Implementation**

- Team Meets Throughout
- Brainstorm & Co-mentor Writing Process
- Synthesize Written Sections
- Integrated Unified Center Theme

#### Results

- Successful P30 Submission
- Formation of New Multi-Level Interdisciplinary Team
- Positive Engagement with New Colleagues
- Network Expansion into New Zones of Research



## Discovery – Which critical infrastructure is already in place?

The Strategic Partnerships and Research Collaborative (SPARC)

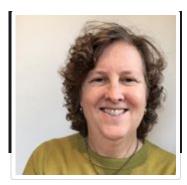


Research Advancement & Development Professionals Network

Helping UMN staff build their capacity to support interdisciplinary research.



### Sarah Neimeyer





Experts@Minnesota: Find - Connect - Collaborate



Approach: How do we catalyze intentional team formation in response to upcoming funding opportunities?





### **Action Items**

#1: Funding for a "Scout & Connector" possibly within CTSI or OVPR

#2: Support for a Brainstorm Happy Hour

#3: Expand existing pilot funding mechanisms



### Action Item #1: Funding for a Scout & Connector

- Identifies funding notices related to translational research
- Utilizes existing resources (e.g., Experts@Minnesota database)
- Identifies potential team leaders and interested members
- Coordinates initial team meetings





# Action Item #1: Funding for a Scout & Connector Usability of Experts@Minnesota

#### Research Focus

The goal is to support preclinical and clinical research studies that will have high impact and quickly yield the necessary results to advance closer to FDA approval, medications that are safe and effective to prevent and treat OUDs and overdose.

Applications submitted in response to this FOA should focus on studying:

New chemical entities (NCEs)

Medications already marketed for other indications

Biologics (vaccines, monoclonal antibodies)

Combination of medications

Pre-clinical studies

FDA Phase I, II and III clinical trials

Compounds may be developed for indications such as:

- Prevention of initiation of OUDs.
- o Prevention of progression of the severity of OUDs.
- Reduction of the dose of opioids analgesics
- o Improvement OUD treatment adherence
- Facilitation of opioid agonist discontinuation
- Treatment of opioid withdrawal
- Treatment of neonatal opioid withdrawal
- o Reduction of opioid tolerance
- Reduction of lethality of opioid overdose
- Reduction of overdose relapse
- Reduction of the risk of opioid respiratory depression

Applications focusing solely on novel target identification/validation, generation of new animal models, development/testing of new human laboratory models, or mechanistic studies of the neurobiology of addiction are considered not responsive for this FOA and may be withdrawn.



# Action Item #2: Support Brainstorm Happy Hours with an Invited Program Officer





## Action Item #3: Expand Existing Pilot Funding Mechanisms



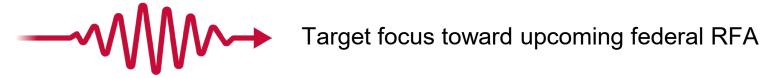
**Tier 1:** Team formation between junior and senior scientists (Biomedical Research Award for Interdisciplinary New Science or BRAINS 75K) <10% funded



**Tier 2:** Form intercollegiate teams (OACA-Faculty Research Development \$200K & OVPR MN Futures \$250K each) <10% funded



**Tier 3:** Support large intercollegiate and/or interdisciplinary collaborations in pursuit of PPG or Center grants (Academic Investment Research Program ~1M) <10% funded



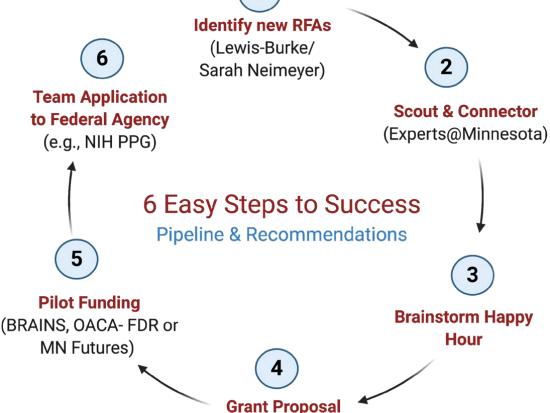


## **Summary of Essential Elements**

Action item #1: Funding for a "Scout & Connector" within CTSI or OVPR

Action item #2: Support for Brainstorm Happy Hour

Action item #3: Expand existing pilot funding mechanisms





## Our Request

Short term investment (<1 year)

- Expand existing pilot funding mechanisms
- Allow one more grant funded in each category
  - \$75K BRAINS, \$200K FRD, \$250K MN Futures Total = \$525K/year
- Brainstorm Happy Hours
  - \$3,000/event speaker travel/lodging, food, event room
  - 4 per year total \$12K/year

Long term investment (>1 year)

- Hire Scout & Connector \$100K/year
- Identify shortcomings of current tools and add improvements

Total package = ~\$637K/year



### Return on Investment

- Instantly increases interdisciplinary teams by three (25%)
- Maximize the utility of our existing infrastructure
  - Enhance our ability to respond to funding announcements
  - Increase faculty expertise in generating team science applications
  - Increase applications for large interdisciplinary grants
  - Establishes a peer mentoring network for translational research & team science
- Easy measure of success (increase in federal funding & # of teams)







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