Research Development is Faculty Development: Programmatic Integration toward Earlier Success

The Vice President’s Clinical and Translational Research Scholars Program
Institutional Context: Health Sciences

• Health Sciences Faculty
  • Number of junior faculty ~ 975 (out of 1835)
  • Average new junior faculty hires (per year/last 5 years)
    • College of Health ~6
    • College of Nursing ~4
    • College of Pharmacy ~4
    • School of Dentistry ~5 (began 2013)
    • School of Medicine ~92
  • Number of students ~4842 (out of 31,515)

• Annual research expenditures
  • $375 m/average over previous 5 years

• Research Development is: centralized, within colleges, within departments….All of the above!
Vice President's Clinical and Translational (VPCAT) Research Scholars Program

- Health Sciences-wide
- Two year program
  - Formal mentoring
  - Structured curriculum
  - Grant & proposal support
  - NIH-funded CTSA (CCTS) & Statistical Support
  - Expectation of external funding (K(or) award)
- Annual competitive selection process
- Clinical and/or translational research focus
What’s a VPCAT?

- Emerging Researcher/Junior Faculty
  - Assistant Professor/Instructor
- Doctoral-level Health Sciences degree
- ≥ 30% committed time for research & scholarly activity
- Committed to applying for external support during the two years of the program
- 8 Graduates (2013 Cohort)
- 33 Current Scholars (2014 & 2015 Cohorts)
Expansion of a Program

Success of a Program

VPCAT scholar success
~ 71 grant applications
~ 33 awards
~ $4.3 million funding
Guiding Principles

• Support clinical and translational scholars
  – Vital to the US biomedical workforce
  – Decreasing numbers in academic health centers

• Retain promising emerging researchers

• Increase inclusion of women and under represented minorities in the institutional research enterprise

• Provide robust mentoring and infrastructure
  – Matrix Mentoring Model

• Pay it Forward
Matrix Mentoring Model

Senior

Scientific

Self

Staff

Peer
Career Development Awards
Before and After Structured Mentoring
PCAT Program

59% vs. 98% Awarded
P < 0.0001
Lessons Learned

• Pre-application workshops
• Orientation is mandatory
• 3 formal touch points
• Signed & required components at milestones
  • IDP
  • Progress Report
  • Final Report
• Reorganized curriculum
  • Skills
  • Leadership
  • Peer-to-Peer
• Utilization of mock-peer review process
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Research Development is Faculty Development: Programmatic Integration toward Earlier Success

Ann McGuigan, University of Arizona; Jill Jividen, University of Michigan; Jan Abramson, University of Utah; Alicia Knoedler, University of Oklahoma
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University of Arizona: NSF CAREER Program
Institutional Context

- University of Arizona
- Number of Faculty - FTE: 2,591, Tenure Track: 1,510
  - No of Assistant Professors: FTE: 288; Total Personnel: 292
  - New Assistant Professors hires: ~65
- Number of Students – UG: 31,670; Grad: 7,443, Professional: 1,508; Total: 40,621
- Research Expenditures - $672,923
- UA Research Development Structure: New Central Office (Fall 2014, under VPR) and Some College Level Support
Program Overview

- Program: NSF CAREER Proposal Development Program (January – July 2014)
- Participants: Junior Faculty Eligible for NSF CAREER
- Program History: First year of this program in this iteration
- Number of Participants: 110 faculty attended workshops; 23 faculty in Phase II Proposal Development
- Reason for Initiating Program: New Office for Research & Discovery (VPR)/New Research Development Services/Focus on Pipeline, Analysis of Current Funding Levels and Number of Proposals Submitted
- Outreach Process
Program Details

Phase I: Introductory Sessions
- CAREER Program Overview
- CAREER Recipients Panel
- Budget Overview
- Broader Impacts
- Program Officer Panel
- Proposal Development Planning
- Full Day Grant Writing Workshop

Phase II: Commit to Submit, Proposal Development
- Department Head Letter 4/21
- Presentation and Discussion 5/7
- Draft to Coach 5/18
- Discussion Session 5/21
- One-on-One Sessions 6/1
- External Review 6/1
- RDA’s final review/edit 7/1-15
- NSF Deadlines 7/21-23
Research Development Principles

• Programmatic
  • Focus on providing broad overview and training early, and over an extended period of time
  • Provide solid basic program elements

• Mentoring: Hands on engagement with faculty coach and RDA

• Integration with Institution Activities: Integrate Activities with campus-wide initiative in Provost Office to nurture culture of mentoring and integration of faculty development activities

• Result Oriented: PIs finish with a proposal ready to submit
Lessons Learned

• Program was ambitious for Year 1 of a new office.
• Integrated advertising program was key element of outreach.
• Response was great. Faculty were engaged (110/22).
• Set a high bar for next year.
• New session on Proposal Development Planning was a positive surprise.
• Just starting Phase II, but already scaled back from planned version based on faculty progress.
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http://rgw.arizona.edu/development/seminars-and-workshops/nsf-career-grant-preparation-program#Phase1
RESEARCH DEVELOPMENT IS FACULTY DEVELOPMENT: PROGRAMMATIC INTEGRATION TOWARD EARLIER SUCCESSES

Alicia J. Knoedler, CRA, PhD
Associate Vice President for Research
Director, Center for Research Program Development and Enrichment
You are given an assignment by your immediate supervisor
You want to do your best
You want to impress your supervisor
You develop your plan, gather the resources known to you, work as hard as you know how

BUT...

Then you realize you need help
Where do you go for help?
How long did it take you to get help?
You are in a Research Development position
Hopefully you have a clear sense of what your responsibilities are

Do you have a plan for growth within your position?
Does your position allow for a life outside of work?
Do you love what you are able to do within your current position?
What did you come to your institution to do?
Each of the programs featured
- Attendees of the programs are looking to build their research and acquisition of funding skills
- Some soft skill development
- Institutions with cultures that expect their faculty to pursue funding for research and that research is essential for their career success

My first two questions...about you or about faculty?

The 4 questions that followed...about you or about faculty?

In an institution that does not have a history of expecting faculty to pursue funding for research...what do we focus on with research development?
INSTITUTIONAL CONTEXT

- University of Oklahoma, Norman Campus (does not include the Health Science Center Campus)
- Oklahoma is an EPSCoR/IDeA state
- Faculty Profile
  - 1,531 total Full-Time Faculty
    - 241 Tenure-track junior faculty
    - 915 Tenured/tenure track faculty (60%)
    - 314 Researchers
- Number of students = 24,044 (20,078 undergrad)
- Annual research expenditures = $93.4M (FY2014)
- Research Development is: Centralized!
Inspiration, encouragement, support - not proposals in isolation

Information [credible expertise] + Relationships [approachability and sensibility] = service to faculty

Long term view

Allowed to take risks, to innovate

Identify gaps and address challenges

Work across the University to address research barriers and develop research infrastructure
- Program Description = varies
- Audience = all faculty
- Length of time in existence = 5 years
- Data
- How did we get this program started?

Source: Office of the Vice President for Research
*The Norman campus lost $6.3 million to federal sequestration cuts beginning FY 2014.
iRep = Individual Research Plan
Audience = Junior Faculty (but any faculty)
Nearly 80 faculty have participated in iRep, most with follow up on other activities (CAREER, internal seed funding programs, scaling up research, diversifying funding portfolio, broader impacts, collaborations, etc.)
How did we get this program started
Creative Features
You have project ideas, dreams, goals, & other aspirations

Developing Research Plan
- Identify Projects
- Set Goals
- Establish project timelines with benchmarks
- Develop mentoring relationship(s)

Instructional Obligations
- Develop Courses
- Implement Assessment
- Connect Research and Instruction

Research Publications Creative Activities
- Determine Acceptable Number of Publications
- Conference Presentations and/or Grant Awards

Service to OU
- As determined by Dept. Chair / Program Dir. (usu. 10-20%)

Work-Life Balance
- Establish Time Management Schedule that includes:
  Research / Writing / Studio,
  Teaching Prep, Class Time;
  Self or Family Time, working out, etc.;
  Conduct Wheel of Life activity

You have a relationship to the world outside of work.
The people who support you are your foundation.
They are also deserving of your time and attention.
WORK LIFE BALANCE

- Instructional Obligations
- Research / Publications / Creative Activities
- Service to OU
- Health / Physical Well-being / Personal Growth
- Significant Other / Romance
- Personal Finances
- Fun & Recreation
- Family & Friends
Mark – mid-career faculty in Engineering, wants to lead a team to do something big and bold; had always worked independently or coordinated, but never truly collaborated

Sue – full professor, fully funded research program, some collaborators and asked by university administrators to lead an effort to pursue large center funding

Larry – mid-career faculty with strong opinions about interdisciplinary research; wants to pursue large team-based interdisciplinary efforts but the approach and direction of the research is not up for negotiation

Megan – full professor, successful research career, wants to do more; wants to work with others on something of significance; finds a funding opportunity and attempts to find new colleagues to join the effort and build the approach collectively (in the context of the solicitation)
Research Development Is Faculty Development: Programmatic Integration toward Earlier Successes

The Long View on Boot Camps: Foundations for Faculty Success

Jill Jividen, PhD
Senior Manager for Research Development Support,
Institutional Context

• University of Michigan Medical School
• Approx. 2300 full-time faculty
  – Approx. 230 Assistant Professors
  – Approx. 41 new hires each year at Asst. Prof rank
  – 644 investigators submitted ~2600 proposals
• FY14 = 726 MD students, 552 PhD students
• Annual research expenditures = $409.8M in FY14
• Research Development at UM is not centralized, not universal (only in some of 19 schools/colleges); it is centralized within the Med School
Mentored Research Academy: R01 Boot Camp

- **Who:** Junior faculty who have not yet secured R01s as PIs, who are ready to submit within 1 year
- **Purpose:** structured mentorship for junior faculty; support for research endeavors; grantwriting & other training; skills/resources to carry forward
- **Pilot program:** Jan 2013-Jan 2014
  - 40 mentees, 11 coaches = 7 teams (26 depts)
- **Developed by Chris Black; funded by Associate Dean for Research/UMMS OoR**
R01 Boot Camp
Program Structure

• Small group meetings (4-8 weeks)
  ▪ Chalk talks, peer reviews, writing deadlines

• Large group activities
  ▪ Grantwriting workshop (full day)
  ▪ Biostats workshops (clinical proposals)
  ▪ Innovation workshop
  ▪ Research Resources presentation

• Other components
  ▪ Internal Subject Matter Experts (ISME)
  ▪ External Subject Matter Experts (ESME)
Data from R01 Boot Camp Pilot April 2015

• 11 new R01 awards
• 28% R01 success within 15 mos of graduation
• 6 other new R awards (e.g., R21, R03)
• 3 other substantial awards >$500K (e.g., NSF, ACS)
• $27M in total funding earned by mentees
Research Development Principles

- Giving faculty long-term skills (and connections!) they need for success in research careers
- Getting them over writing hurdles
- Coaching through proposal processes & development
- Pointing them to available resources
- Increases collegiality, collaboration
Greatest Impact

• Mentees report: mentoring, positive peer support, chalk talks and writing feedback were essential components to success
• Motivated junior faculty started their own post-Boot Camp support group—Early Career Faculty Group—for networking, advice, & interdisciplinary collaboration
• Boot Camp 2.0 was begun in Sept 2014
  ▪ 48 mentees, 17 coaches = 9 teams
  ▪ Interdisciplinary interest = 3 mentees from Nursing; 1 SPH (more to come)
  ▪ Simultaneously, Boot Camp 1.2 for Pilot mentees, for continued support on their R01s
Improving as we go

• Biostats & Innovations workshops were scrapped
• Added events for 2.0:
  • Mock Review (NIH Study Section)
  • Budgeting workshop
  • Time Management workshop
  • Grantwriting: Renewals/Resubmissions workshop (half-day, optional)
• More stringent application process: 2.0 applications were vetted first & discussed with Dept Chairs
• Keeping Chairs in the loop: mid- and post-program activity reports
• Coach concerns: Phase I & Phase II?
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