



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

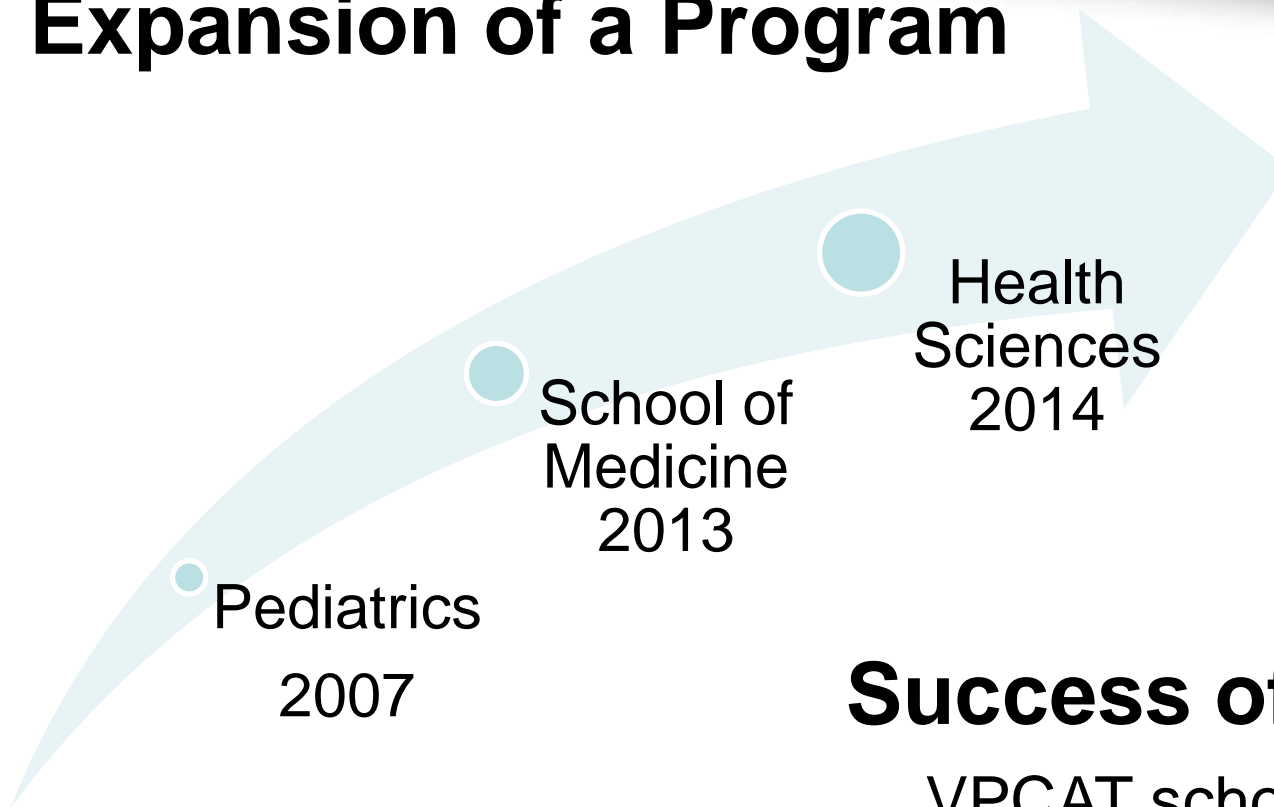


What's a VPCAT?

- Emerging Researcher/Junior Faculty
 - Assistant Professor/Instructor
- Doctoral-level Health Sciences degree
- $\geq 30\%$ 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

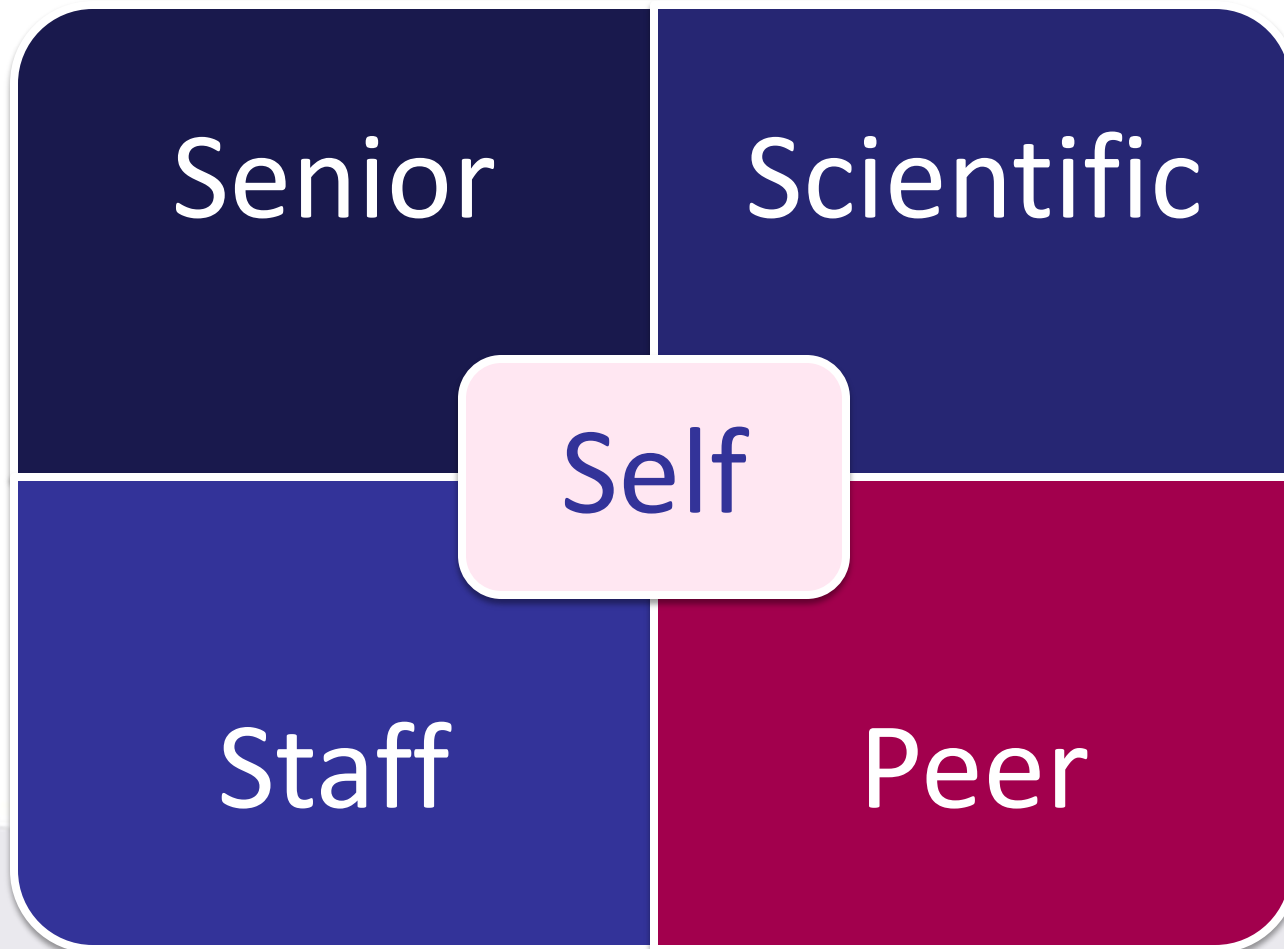


Guiding Principles

- 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

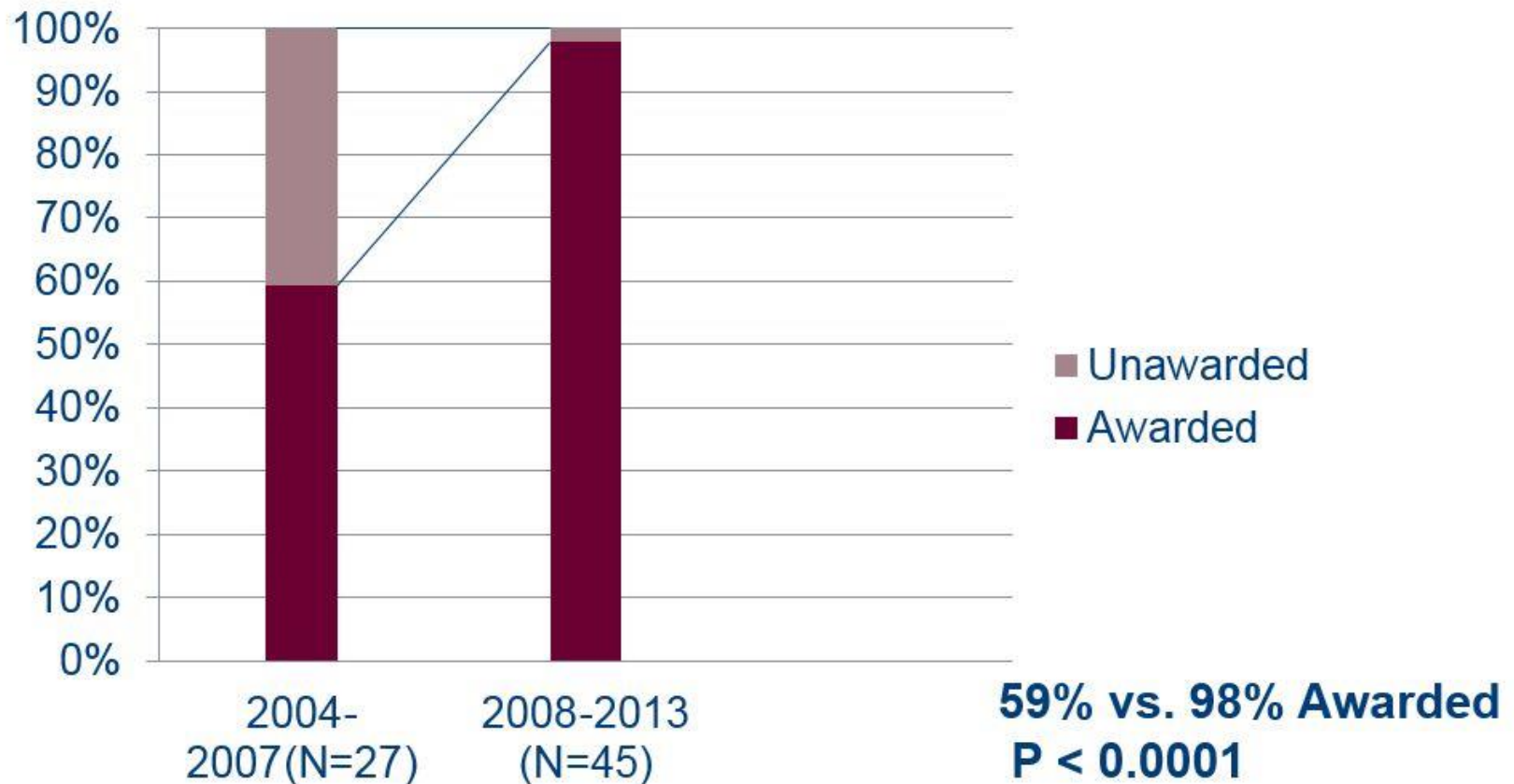


Matrix Mentoring Model





Career Development Awards Before and After Structured Mentoring PCAT Program





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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Research Development is Faculty Development: Programmatic Integration toward Earlier Success

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.



Contact Information



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<http://rgw.arizona.edu/development/seminars-and-workshops/nsf-career-grant-preparation-program#PhaseI>

RESEARCH DEVELOPMENT IS FACULTY DEVELOPMENT: PROGRAMMA TIC INTEGRATION TOWARD EARLIER SUCCESSES

Alicia J. Knoedler, CRA, PhD
*Associate Vice President for Research
Director, Center for Research Program
Development and Enrichment*



TWO QUESTIONS...

- 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?

FOUR QUESTIONS...

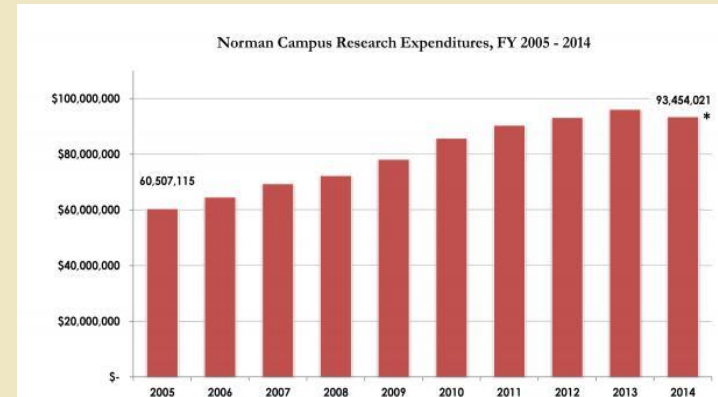
- You are in a Research Development position
- Hopefully you have a clear sense of what your responsibilities are
- Do you have a plan for growth within your position?
- Does your position allow for a life outside of work?
- Do you love what you are able to do within your current position?
- What did you come to your institution to do?

PANEL SO FAR...

- 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!



Source: OU Financial Support Services

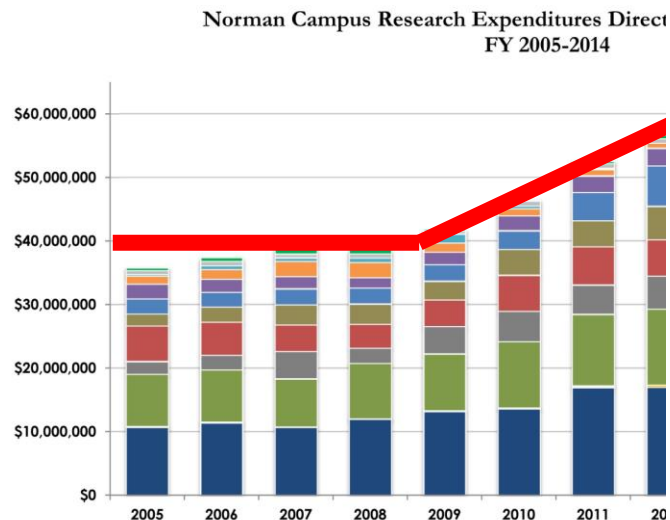
*The Norman campus lost \$6.5 million to federal sequestration cuts beginning FY 2014.

RESEARCH DEVELOPMENT PRINCIPLES

- 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

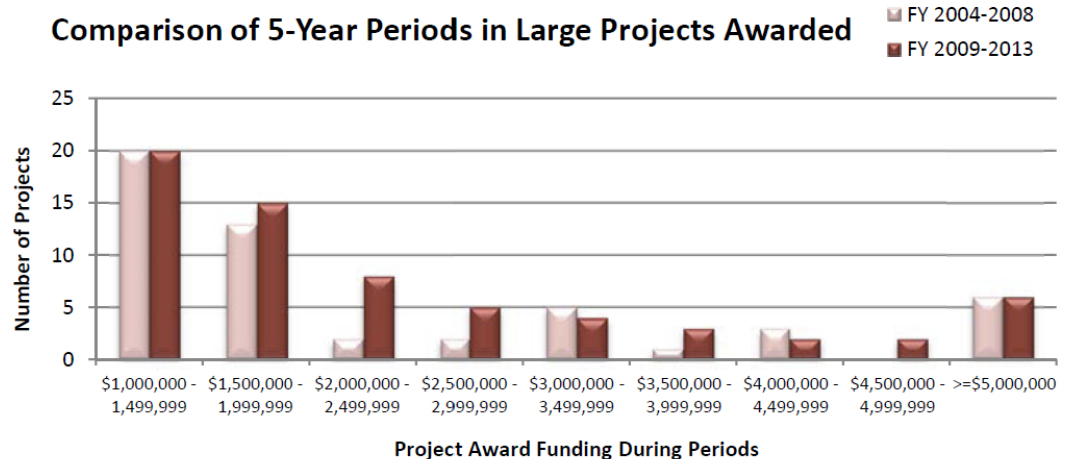
PROGRAM OVERVIEW – FOCUS ON ALL FACULTY

- Program Description = varies
- Audience = all faculty
- Length of time in existence = 5 years
- Data
- How did we get this program started?



Source: OU Financial Support Services

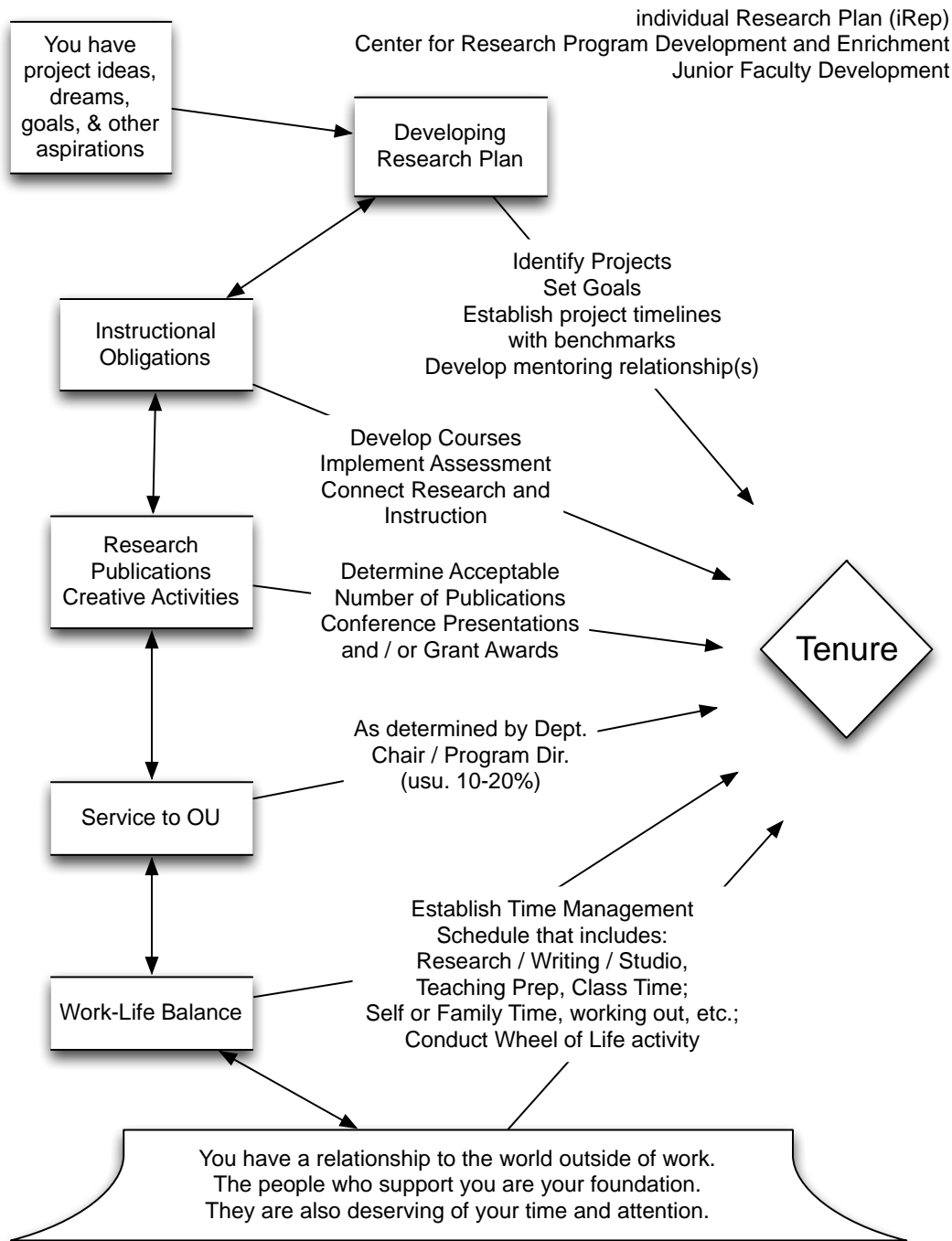
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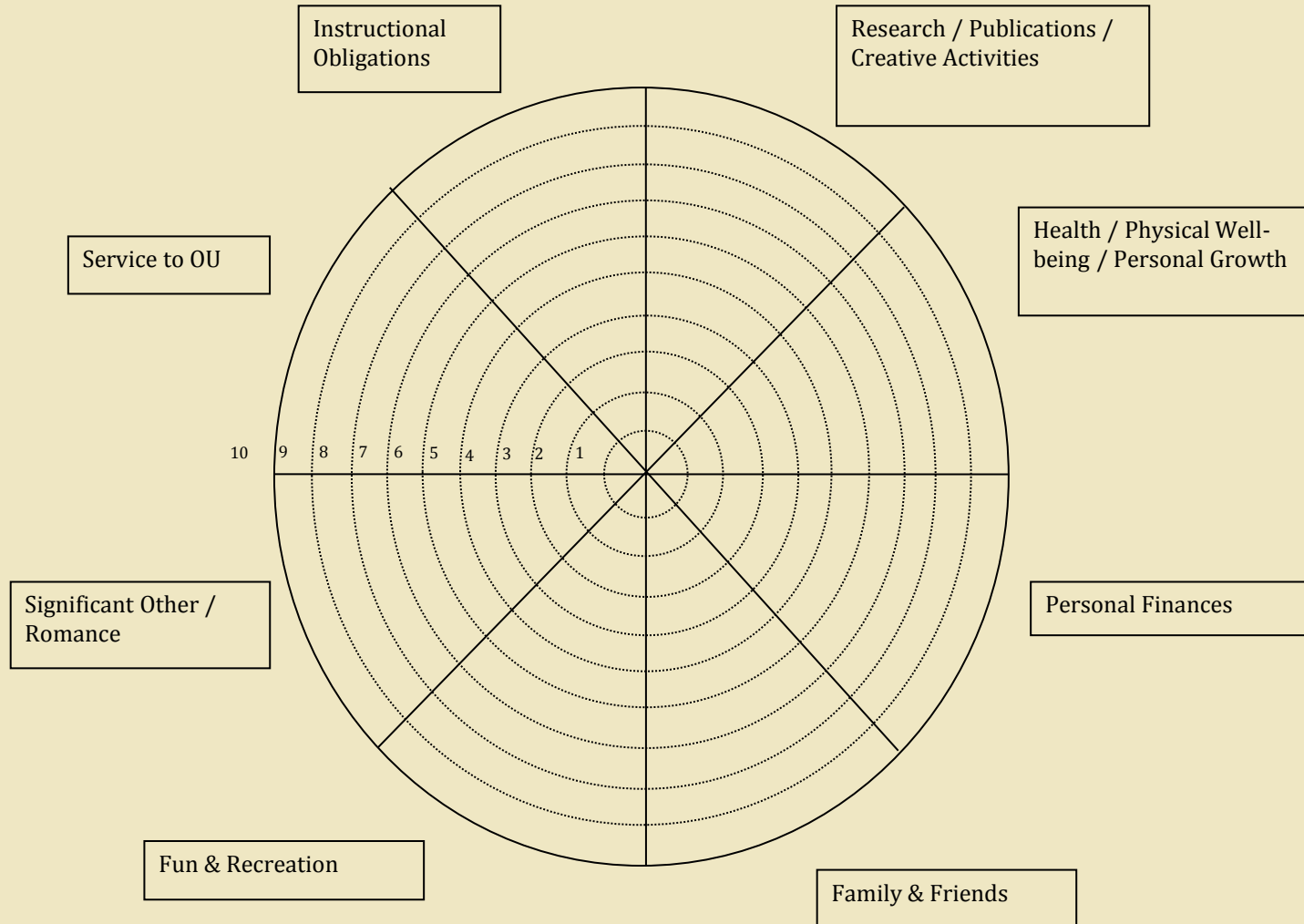
Source: Office of the Vice President for Research

PROGRAM OVERVIEW – FOCUS ON JUNIOR FACULTY

- 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



WORK LIFE BALANCE



OTHER OPPORTUNITIES



THE HOLDOUTS

- 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,



MEDICAL SCHOOL
OFFICE OF RESEARCH
UNIVERSITY OF MICHIGAN

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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