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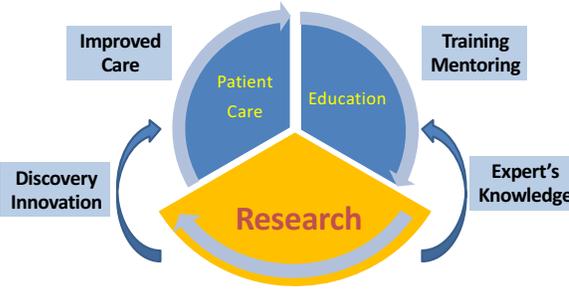
Success in Translation

-- Building A Research Portfolio in A Clinical Department



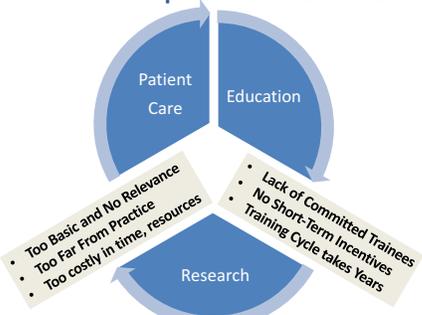
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Contribution of Research Excellence



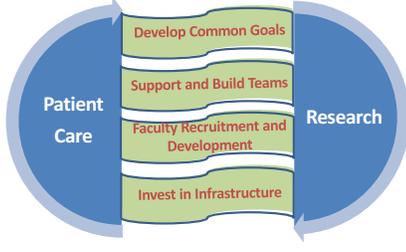
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Mind the Gap: Lost in Translation



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Building Bridges b/w Research and Patient Care



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Building Bridges b/w Research and Education



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- **Research Focused Initiatives**
 - Build outstanding infrastructure and strong leadership team
 - Support translational research projects across Department
 - Partner with Research Theme initiatives at SOM/Campus
 - Mission focused recruitment of faculty and fellows
 - Develop a culture of excellence and mutual appreciation

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- **Build outstanding infrastructure and strong leadership team**
 - State-of-the-art research Cores from imaging, cell and organ physiology to molecular biology and genomics.
 - Long-term support of admin team dedicated to research activities
 - Empower researchers with leadership and mentorship roles, and protected time

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- **Support translational research projects across Department**
 - Dedicated resources for Translational Research Committee
 - Promote cross-disciplinary translational projects
 - Aortic aneurysm development: Cardiac anesthesia and cardiac researchers
 - Neuraxial modulation of arrhythmia: Chronic Pain and cardiac researchers
 - Periop genomics: Preop team and Genomics researchers
 - Bupivacaine/LA toxicity: Regional Anes and I/R injury lab
 - Neurocognition: Neuro anesth and Neuroscience lab
 - Others

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- **Partner with research Theme initiatives at SOM/Campus**
 - Lead and support UCLA Cardiovascular Theme
 - Lead and support UCLA precision health initiative (Perioperative Outcomes)
 - Close collaborations and joint faculty appointments with Cardiology, Pulmonary, GI, Radiology, Pathology, Bio-engineering, Physiology, College of Life Sciences et al.

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- **Translational Research Portfolio:**
 - Cardiac Arrhythmia and Sudden Death
 - Mechanisms of Heart Failure and Coronary Heart Diseases.
 - Novel Mechanism and Treatment of Vascular Diseases
 - Pulmonary Diseases and PAH
 - Cognition and Anesthesia
 - Metabolic Disorders

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- **Basic Science Portfolio:**
 - Membrane and Channel Biology
 - Cell and Molecular Imaging
 - Molecular Signaling and Gene Regulation
 - Cellular Metabolism and ROS Regulation
 - Genomics, genetics and epigenetics

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- **Mission focused recruitment of faculty and fellows**
 - High goals: Promote research excellence and translational impact
 - Build depth: Emphasize on synergy and collaboration
 - Incentive and Rewards: Incentivize academic career development among fellows/Faculty
 - Recruit Talent: Collective efforts in recruitment process

Faculty: Traits for Success

CHARACTERISTIC	DESCRIPTION
Socialization	Understands the values, norms, expectations, and sanctions affecting established faculty (e.g., beneficence, academic freedom).
Motivation	Driven to explore, understand, and follow one's own ideas, and to advance and contribute to society through innovation, discovery, and creative works.
Content knowledge	Familiar - within one's research area - with all major published works, projects being conducted, differing theories, key researchers, and predominant funding sources.
Basic and advanced research skills	Comfortable with statistics, study design, data collection methods, and advanced methods commonly used in one's area.
Orientation	Committed to both external activities (e.g., regional and national meetings, collaborating with colleagues) and activities within one's own organization (e.g., curriculum planning, institutional governance).
Autonomy and commitment	Has academic freedom, plans one's own time and sets one's own goals, but is also committed to and plays a meaningful role within the larger organization.
Work habits	Has established productive scholarly habits early on in one's career.

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Build vs. Buy

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Build (Train your Own) vs. Buy (Recruit)

	Train your Own	Targeted Recruitment
Time to "success"	Faster	Slower
Investment of resources	Lower and spread over time	Higher if new infrastructure needs to be built
Laboratory Space- wet labs, dry labs, offices	Part of existing cluster or group	Significant, esp if moving large number of post-doc/students
Training and mentorship needs	None or minimal	Significant
Integration into department	Organic, more seamless	Can be difficult and take longer
Likelihood of success	Less predictable	Higher

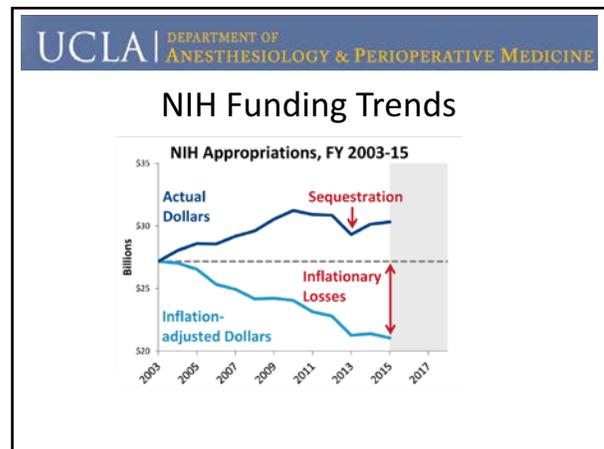
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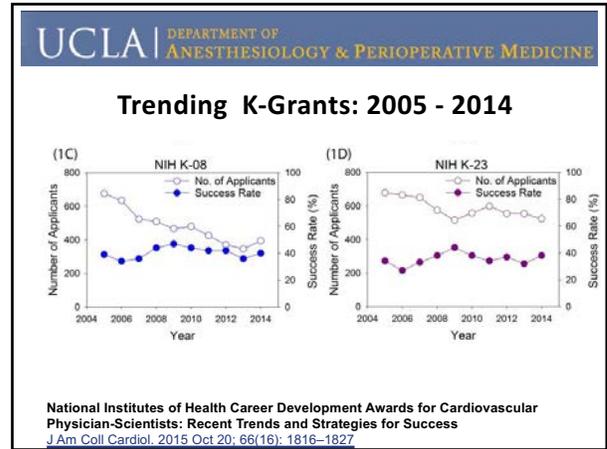
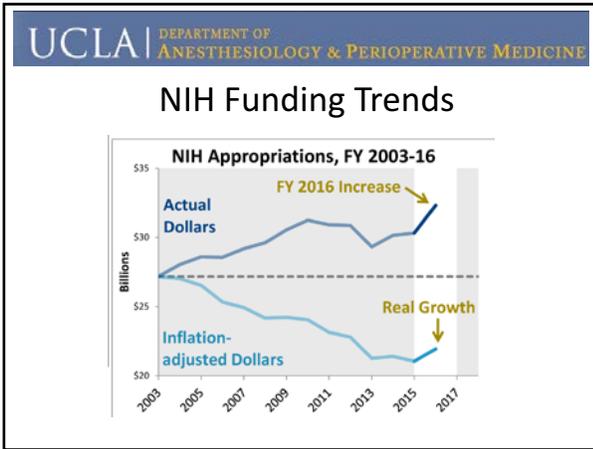
Timeline for the progression of basic science funding over a career

	Year		Approximate support
Trainee	-10	Undergraduate, medical school research fellowships	~\$5,000/y
	-5	T32 research fellowship, advanced degree work (PhD)	~\$30,000/y
Faculty	0	Unfunded experimentation of first independent research question	~\$30,000/y
	2	Intramural/foundation grants	~\$30,000-\$50,000/y
	5	Career development "K" award (K08, K12, K30)	~\$50,000-\$75,000/y
	10	Independent investigator grant (R01)	> \$100,000/y

Source: Adapted from Nelson.⁶

2014 Jun; 27(2): 58-64.

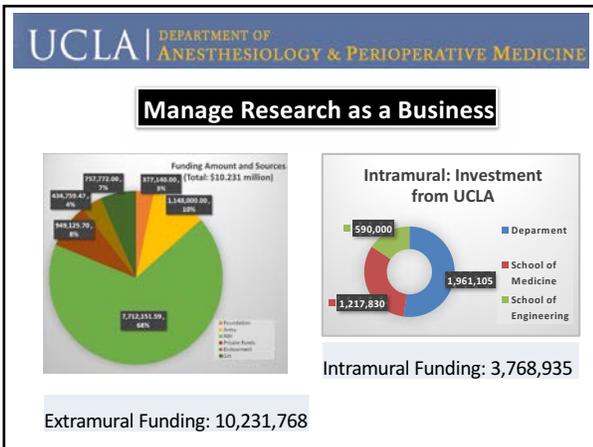
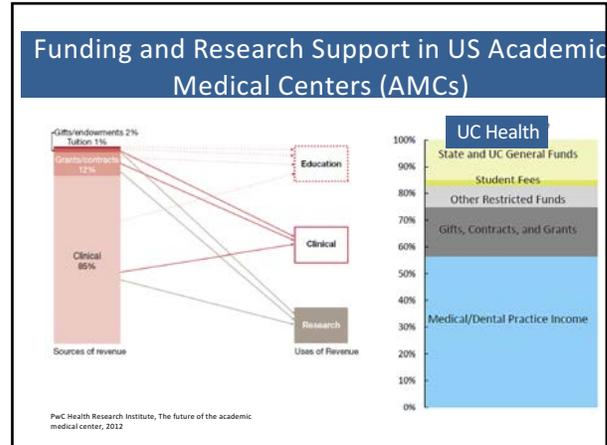




National Institutes of Health Career Development Awards for Cardiovascular Physician-Scientists: Recent Trends and Strategies for Success
J Am Coll Cardiol. 2015 Oct 20; 66(16): 1816-1827

Additional Funding to Complement a K Award

American Heart Association (Grant-in-Aid, Mentored Clinical and Population Research Award, Fellow-to-Faculty Transition Award)	American College of Cardiology Foundation (ACCF/William F. Keating Endowment Career)	Development Award, ACCF/Merck Research Fellowships	VA career development awards and others
Boris Duke Charitable Foundation (Clinical Scientist Development Award)	Burroughs-Wellcome Fund (Career Awards for Medical Scientists)	NIH Investigator Research Supplement	Gilead Sciences Research Scholars Program in Cardiovascular Disease
Institutional pilot awards	Related foundations (American Diabetes Association, Juvenile Diabetes Research Foundation, etc.)	Career Development Award, FAER, SCA, Susan G. Komen Foundation, etc.)	



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- Define your Metrics for Success:
 - Scientific, Programmatic, Financial

- Publications/ with scientific impact
- Training grants, Grants-in-aid, Career Dev grants, RO1, PO1, etc
- NIH, DOD and Foundation Study Sections/Review Panel Members and Chairs
- Prestigious Editorial Membership
- Scientific organization (AHA, FAER, ISHR, etc) representation/leadership
- Scientific Conferences Chairs and Invited Speakers
- Programmatic growth/faculty development

Traits (desired) in Departments for Success in Research

Recruitment and selection	Great effort is expended to recruit and hire members who have the training, goals, commitment, and socialization that match the institution.
Clear coordinating goals	Visible, shared goals coordinate members' work.
Research emphasis	Research has greater or equal priority than other goals.
Culture	Members are bonded by shared, research-related values and practices, have a safe home for testing new ideas.
Mentoring	Beginning and midlevel members are assisted by and collaborate with established scholars.
Communication with professional network	Members have a vibrant network of colleagues with whom they have frequent and substantive (not merely social) research communication, both impromptu and formal, in and outside of the institution.
Resources	Members have access to sufficient resources such as funding, facilities, and especially humans (e.g., local peers for support, research assistants, technical consultants).
Sufficient work time	Members have significant periods of uninterrupted time to devote to scholarly activities.
Size/ experience/ expertise	Members offer different perspectives by virtue of differences in their degree levels, approaches to problems, and varying discipline backgrounds; the group is stable, and its size is at or above a "critical mass."
Communication	Clear and multiple forms of communication such that all members feel informed.
Rewards	Research is rewarded equitably and in accordance with defined benchmarks of achievement; potential rewards include money, promotion, recognition, and new responsibilities.



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