Navigating the University: Research Advancement

Steven O. Moldin, Ph.D.
DC Office of Research Advancement
Office of the Vice President of Research

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Why a DC Office?

• East coast presence
• Staff with extensive federal funding agency program experience
• Global perspective on building collaborations, research programs
• Navigate complex federal bureaucracy
Where We Are

701 Pennsylvania Avenue, NW, Suite 540
Research Adv - Organization
Research Advancement
Exec Dir - Steven Moldin

- PhD, clinical psychology; postdoc, human genetics
- Faculty, Washington Univ School of Medicine
- Eleven years, senior NIH program official
  - 17 RFAs, PAs; 37 workshops
  - Genetics of mental disorders (e.g., autism, schizophrenia),
    genomic neuroscience
Research Advancement
James Murday

• PhD, solid state physics
• Forty years in chemistry, physics and materials science at DoD’s NRL & ONR
• Architect, US National Nanotechnology Initiative
Research Advancement
New Hire - Allan Olson

- Director for Cyber Initiatives
- 15 years as Lockheed Martin senior executive
- 25 years in senior leadership positions, U.S. government intelligence community
- Focus on intelligence, cyber, new markets
- Extensive experience w/classified S&T
Research Advancement Services

• Strategic planning
• Proposal preparation - scientific
  - Help develop ‘vision’
  - Help build collaborations (within & outside USC)
  - Writing, reviewing, editing
• Proposal preparation – logistic/administrative
  - Conference/video calls, meetings
  - Budgets, budget justifications, PARs
  - Biosketches, letters of support
  - References, figures
• Federal agency connections / advocacy / intel
• Faculty development
DC Office of Research Advancement
Applications Submitted and Awarded

Success Rate = 28%

Submitted
Awarded

Q2 2006
Q3 2006
Q4 2006
Q1 2007
Q2 2007
Q3 2007
Q4 2007
Q1 2008
Q2 2008
Q3 2008
Q4 2008
Q1 2009
Q2 2009
Q3 2009
Q4 2009
Q1 2010
Q2 2010
Q3 2010
Q4 2010
Q1 2011
Q2 2011
Q3 2011
Q4 2011
Q1 2012
Q2 2012
Q3 2012
Q4 2012
Q1 2013
DC Office of Research Advancement
Cumulative Dollars Awarded

$284,402,903
USC Mission Agency Programs (MAPs)

- Currently being Beta-tested. Expected rollout - Fall, 2013
- Goal is to connect USC faculty with funding agency program officers
- 500+ program officer profiles across 8 agencies (DHS, DOC, DOD, DOE, DOED, EPA, NASA, USDA)
- 500+ faculty profiles organized by/linked to keywords
Information Sciences Institute (ISI)

- Cutting edge computer and information science:
  - Medical Informatics
  - Intelligent Systems
  - Computational Systems
  - Advanced Electronics
  - Configurable Robotics
  - Grid Technologies

- Very large scale data management & integration
- $60 million annually from >20 federal agencies / corporations
- DOD, DHS, DOE, NSF & NIH funding (NIGMS, NHGRI, NIMH, NHLBI)
- 350 engineers, research scientists, graduate students, and staff
- EHRs, electronic healthcare systems
- Developed Domain Name System (DNS) and “.com” address system
- **MOSIS** - low-cost prototyping & production volume service for VLSI circuit development
Established by donor gift in 2009
Collaboration between USC School of Public Policy and USC School of Pharmacy
Led by Stanford trained economist Dana Goldman
Recruited Nobel Laureate in Economics (Daniel McFadden)
Strong partnerships with Harvard, Stanford, Dartmouth, Boston University, Brookings Institution and RAND Corporation
>$25 million in NIH grant support
  - Behavioral Economics, Science of Medicare Reform, Health Policy & Simulation
Institute for Creative Technologies (ICT)

- US Army University Affiliated Research Center (UARC)
- Biomedical research projects include:
  - Virtual Reality Augmentation (social skills training for autism)
  - Virtual Iraq/Afghanistan (PTSD assessment and treatment)
  - Virtual Humans (STEM education)
  - MedVR Lab (clinical training)
  - NeuroSim Lab (cognitive assessment)
- Paul Debevec (2009 Scientific and Engineering Academy Award)
School of Cinematic Arts

- #1 ranked cinema/film school in US
- Six Divisions
  - Critical Studies, Animation & Digital Arts, Interactive Media, Film & TV Production, Producing, Writing
  - #1 ranked game design program
- Interest in health
  - Health behavior game (RWJF)
  - Obesity prevention game (NIH)
  - Immunology education game (NSF)
  - Autism education project (AHRQ)
- Faculty awards include Oscars, Emmys, Golden Globes, Pulitzer, etc
- **Private donors** - e.g., George Lucas, Steven Spielberg, Jeffrey Katzenberg, Brian Grazer
- **Corporate donors** - e.g., Walt Disney, Microsoft, Electronic Arts, Warner Bros
- **Public & private funding** - AHRQ, NIH, USDA, Dept of State, Gates Foundation
USC Clinical Resources: Highlights

- Rehabilitation Medicine
  - #1 Physical Therapy department (*US News and World Report*)
  - #1 Occupational Therapy department (*US News and World Report*)
- Emergency Medicine Department
  - 150,000 annual visits
  - 28% of all trauma care in LA county
- Department of Urology
  - NCI Physical Sciences Oncology Center (Dr. David Agus)
  - Urology Robotics Center of Excellence (Dr. Inderbir Gil)
- Department of Ophthalmology (retinal prosthesis)
- NIH-funded CTSA (Dr. Thomas Buchanan)
- NIDDK funded Center for Liver Diseases (PI - Neil Kaplowitz)
- Childhood Obesity Research Center (Director - Michael Goran; NICHD, NIDDK, NCI, NCMHD)
- Public health focus (cancer epidemiology, preventive medicine, tobacco control)
Unique Clinical Partners

- LAC+USC Healthcare Network
  - 600 beds
- Keck Medical Center of USC
  - Keck Hospital of USC
  - USC Norris Cancer Hospital/ NIH Comprehensive Cancer Center
- COPE Health Solutions
  - Manages Camino De Salud Network (~250,000 patients; 70% hispanic)
- Children’s Hospital Los Angeles (CHLA)
  - 347 beds
- Doheny Eye Institute
- Kaiser Permanente Northern California
- Kaiser Permanente Southern California
- Geisinger Health System
Unique Outreach & Science Partners

- **California Science Center (CSC)**
  - 1.4 million annual visits (370,000 children)
  - Two-thirds are Hispanic & African-American
  - Admissions-free venue allows for informal science education testbed

- **Natural History Museum of Los Angeles County**
  - > 35 million specimens, dating back 4.5 billion years
  - A basis for biodiversity studies

- **Los Angeles Unified School District (LAUSD)**
  - 2nd largest public school system in the U.S.

- **SETI Institute**
  - Funded by NASA, NSF, DoE, and numerous private donors
  - Potential for astrobiology & other science partnerships
  - Citizen Science outreach program
External Funding from Foundations

- **Burroughs Wellcome Fund - Career Awards for Medical Scientists (CAMS)**
  - Internal Deadline: 8/13/2012          Sponsor Deadline: 10/1/2012
  - Funding amount: $700,000 over 5 years

- **Searle Scholars Program**
  - Internal Deadline: 8/20/2012          Sponsor Deadline: 9/28/2012
  - Funding amount: $300,000 over 3 years
  - Link: [http://www.searlescholars.net/](http://www.searlescholars.net/)

- **Pew Scholars Programs in the Biomedical Sciences**
  - Internal Deadline: 8/20/2012          Sponsor Deadline: 11/1/2012
  - Funding amount: $240,000 over 4 years

- **Beckman Young Investigators**
  - Internal Deadline: 8/20/2012          Sponsor Deadline: 10/3/12 (LOI)
  - Funding amount: $750,000 over 4 years
Source: 1976-1994 figures are from the NSF federal funds survey; remainder is from AAAS R&D reports. FY 2012 figures are latest estimates, FY 2013 is the President’s budget.
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Federal Funding

Junior Investigator, Pre- & Post-Doctoral Support

- DOD Young Investigator Program (DOD YIP)
- NSF Faculty Early Career Development Program (NSF CAREER)
- DOE Early Career Research Program
- NIH individual fellowship and career development awards (pre- and postdoctoral; clinical and basic; mentored and non-mentored)
- NIH Transformative Research Awards (R01)
- NIH Pioneer Award Program (DP1)
- NIH Director’s New Innovator Award Program (DP2)
- NIH & NSF institutional training grants (T32, IGERT)

Lab Infrastructure Support

- NIH Shared Instrumentation Grant Program (S10)
- NSF Major Research Instrumentation Program (MRI)
- DOD Defense University Research Instrumentation Program (DURIP)
Federal S&T Priorities for FY15

• Advanced manufacturing
• Clean energy
• Global climate change
• R&D for informed policy-making & management
• Information technology (incl. ‘Big Data’)
• R&D for national-security missions
• Innovation in biology and neuroscience
• STEM education
• Innovation & commercialization
DC Office for Research Advancement

Additional questions, advice:
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