EAC Meeting Fall 2013
Research Update

Associate Dean for Research Office
College of Engineering & Applied Science

September 27, 2013
Awards


CU Boulder campus: FY 12: $381M  FY13: $352M
New awards in FY 2013: $71.7M

Funding Portfolio

- NSF 39.1%
- Dept. of Defense 6.4%
- NASA 12.6%
- Dept. of Energy 5.7%
- HHS (NIH) 5.4%
- Industry 11.6%
- Other Federal 6.4%
- Foundation & Other 12.3%
- State & Local Gov't 0.6%

Engineering & Applied Science
UNIVERSITY OF COLORADO BOULDER
Funding Portfolio

Awards by Funding Agency

- Dept of Defense
- Dept of Energy
- NIH
- NASA
- NSF
- Other Federal
- Universities
- Foundation & Other
- Industry
- State & Local Gov't

Funding amounts:
- $5,000,000
- $10,000,000
- $15,000,000
- $20,000,000
- $25,000,000
- $30,000,000

Years:
- FY 09
- FY10
- FY11
- FY12
- FY13
New Projects in 2013

NSF CAREER Awards

Matt Hallowell (CEAE)
*Predictive Modeling of Construction Injuries in Complex Environments*

Mahmoud Hussein (AES)
*Nonlinear, Dissipative Mechanics of Phononic Materials*

Abbie Liel (CEAE)
*A Multi-scale Methodology for Assessing the Reductions in Seismic Risk*
New Projects in 2013

Snapshots:

Qin Lv (CS): NSF - BIGDATA: Condensate Database for Efficient Anomaly Detection … of Massive Cryospheric Data ($750K)

Daven Henze (ME): NASA - Using Remote Sensing and Adjoint Modeling for Integration of Climate Impacts … ($850K)

Dejan Filipovic (ECEE): ONR - Low-Profile HF Antennas for Vehicles on the Move ($910K)


NIBIB: National Institute of Biomedical Imaging and Bioengineering
New Projects in 2013

In the news:

*Al Weimer (ChemE): ARPA-E - Hybrid Solar/Electric Carbothermal Reactor for Magnesium Production ($3.6M)*

*C. Stoldt & S.-H. Lee (ME): ARPA-E - All Solid-State Lithium-Ion Battery ($3.4M to Solid Power LLC)*

*Chris Bowman (ChemE): NIDCR – 2 awards to study photoinitiated reactions that create novel dental composite materials ($4.5M)*

NIDCR: National Institute of Dental and Craniofacial Research
Outlook

### Proposal Submission Data:

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<th>FY 11</th>
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<tr>
<td>Number of proposals</td>
<td>681</td>
<td>669</td>
<td>632</td>
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<td>Total amount requested</td>
<td>$326M</td>
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Reasons:
- canceled or reduced funding
- canceled or delayed solicitations
- faculty “discouraged” to submit proposals

Impact on FY14-16 CEAS awards:
~ $4.5M (6%) less in annual funding
Outlook

CEAS Proposal Development Support:

• Pilot Project for ongoing NSR ERC competition
  Ted Randolph (ChemE):
  *NSF-ERC: The Nanosystems Engineering Research Center for Directed Immune Responses*
  *(Pre-proposal pending, spent so far $13K)*

• New position: Large Proposal Manager (week of 9/29)

• New VCR office: *Office of Industry Collaboration*
  Director: Caroline Himes
Research Subcommittee Meeting
Agenda

1:50-2:00 Additional Updates

2:00-2:30 Breakout 1

2:30-2:45 Report of Breakout 1 & Discussion

2:45-3:15 Breakout 2

3:15-3:30 Report of Breakout 2 & Discussion
Breakout Session

Breakout 1

A1  Graduate Education
A2  CU-System’s Innovation Program

Breakout 2

B1  Federal Relations
B2  “Big Data”
## Breakout Session

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Update on Large Proposal Development

New Pilot Program: Comprehensive Support for Proposal Development of 2013/14 ERC Competition

Goals:
- Better proposals
- Reduced burden on PIs
- Collect and document experience → Best Practice

Approach:
- Proposal development manager
- Professional editor and graphics
- ADR support for interfacing with OCG (CU and partners)
- Internal and external reviews
Update on Large Proposal Development

Case Study NSF Engineering Research Center:

• Up to $40M over 10 years from NSF + matching
• Received 3 white papers (Jan 12)
• Presentation of white papers & feedback from faculty (Feb 22)
• **Selected Topic: “The Nanosystems Engineering Research Center for Directed Immune Responses”**
  • Led by Ted Randolph
  • Partners to date: KU, UNM, UC Denver (AMC)
  • Pre-Proposal reviewed by external experts in ERCs and technical area
• Pre-Proposal submitted 26 July 2013 (Deadline was 30 July 2013) **Whew!**
Update on Large Proposal Development

Next Steps:

• Waiting on full proposal invite from NSF (October)
• Full proposal due: 12 February 2013
• Hiring a Proposal Development Manager (should be on-board for full proposal)

Lessons learned:

• Need clear expectations between PI and ADR Office regarding services offered
• Need contractual agreement between PI and ADR office for Large Proposal Support Services
• Better document and version management on shared Google Website
• Found excellent graphics editor (on contract basis)