Deba Dutta
Provost and
Executive Vice President for Academic Affairs
November 3, 2014
A PROVOST’S INITIATIVE

CLUSTER HIRING

• Natural outgrowth of current interdisciplinary agenda

• Goals:
  1. Develop existing research areas
  2. Attract faculty, students, staff who define emerging areas of significance
  3. Attract faculty who will train future interdisciplinary faculty scholars

• FY11-12: Announced a 3-yr plan
A VISION OF THE FACULTY

CLUSTER HIRING

• Multiple disciplines
• Jointly appointed by at least two colleges or disciplines
• Contribute to national or global leadership
• Create “Clusters of Distinction”
• Internally competitive process
• Interdisciplinary proposals
• 35 faculty hired
  – 2 FY13; 17 FY14
  – 15 FY15; 1 FY16
• 36 recruitments
  – 18 active; 18 planned
• **71 positions in 13 approved clusters**
13 CLUSTERS AWARDED

- Epigenetics
- Health
- Integrated Imaging
- Computational and Systems Biology
- Animal Welfare Science
- Nanotechnology
- AMO Physics

- iSTEM
- Next Generation Manufacturing
- Predictive Science
- Big Data
- Sustainable Communities
- Autism
FUNDING MODEL

MATCHING PLAN

- Salaries and benefits: 50% from Provost’s Office
- Start-up: 50% (up to $1 Million per Cluster) from Provost’s Office
- Balance from hiring Colleges
- Salaries funded from a 1% “hold back”
  - 1% funds held centrally until used
  - Savings generated provided Provost’s contribution to start-up funding
- Specific funding plans developed for each Cluster
## COMMITTED RESOURCES

### TO DATE: SALARIES

<table>
<thead>
<tr>
<th>Unit</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Provost’s Office</td>
<td>$4.3M</td>
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<tr>
<td>Participating Units</td>
<td>$4.1M</td>
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### TO DATE: START-UP

<table>
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<tr>
<td>Participating Units</td>
<td>$14.1M</td>
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• 35 hires so far; 19 women (54%)
• Overall, hiring for 13-14 was 57% female; (in the College of Science 54%)
• 8/35 (23%) minority; 1/35 (3%) URM
• Overall, 27 % minority, 7% URM in 13-14
• Reflective of our overall hiring in terms of gender (we are an ADVANCE institution); a bit worse in terms of race/ethnicity
• We should be able to do better in cluster hiring!
LESSONS LEARNED

Weaknesses
• Difficult to sustain commitments – infrastructure by discipline vs. interdisciplinary goals

Opportunities
• Work with EVP Research & Partnerships for support through Discovery Park
• Build on Faculty interests

Challenges
• Nurturing/growing interdisciplinary initiatives harder if resources perceived to be scarce
Thank you!
The Chancellor’s Faculty Excellence Program: Cluster Hiring at NC State

Dr. Laura Severin, Special Assistant to the Provost
November 3, 2014
“Few have approached the challenges of interdisciplinary hiring as deliberately as NC State”

The Chronicle of Higher Education
February 24, 2014
Goals of Chancellor’s Faculty Excellence Program

- Hire outstanding faculty
- Expand interdisciplinary research opportunities
- Increase federal funding
- Create new academic programs to meet student demand
- Meet the needs of constituents as a land-grant institution
- Diversify the faculty
Round One (2011 - 2014): 42 Positions in 12 Clusters

- Bioinformatics
- Data-driven Science
- Digital Transformation of Education
- Environmental Health Science
- Forensic Sciences
- Genetic Engineering and Society
- Geospatial Analytics
- Global Environmental Change and Human Well-Being
- Innovation + Design
- Personalized Medicine
- Synthetic and Systems Biology
- Translational Regenerative Medicine
Original Goal: Hire 38 New Faculty

- 29 original lines filled
- 4 opportunity hires
- 9 original lines unfilled
- 2011-12: 2 hires (includes 1 opportunity hire)
- 2012-13: 22 hires (includes 3 opportunity hires)
- 2013-14: 9 hires, 2 pending hires (includes 1 opportunity hire)
# How We Measure Success: Chancellor’s Faculty Excellence Program

**Original goal:**
Hire 38 new faculty in 12 strategic clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Hires planned</th>
<th>Hires to date</th>
<th>Hiring completed</th>
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</thead>
<tbody>
<tr>
<td>Bioinformatics</td>
<td>4</td>
<td>4</td>
<td>✓</td>
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<tr>
<td>Data-Driven Science</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Digital Transformation of Education</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Environmental Health Science</td>
<td>4</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>Forensic Sciences</td>
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<td>1</td>
<td></td>
</tr>
<tr>
<td>Genetic Engineering and Society</td>
<td>3</td>
<td>3</td>
<td>✓</td>
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<tr>
<td>Geospatial Analytics</td>
<td>3</td>
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<tr>
<td>Global Environmental Change and Human Well-Being</td>
<td>3</td>
<td>3</td>
<td>✓</td>
</tr>
<tr>
<td>Innovation + Design</td>
<td>2</td>
<td>2</td>
<td>✓</td>
</tr>
<tr>
<td>Personalized Medicine</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Synthetic and Systems Biology</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Translational Regenerative Medicine</td>
<td>3</td>
<td>3</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Total Faculty Cluster Hires**

| Total Faculty Cluster Hires | 42 | 33 |

1. Planned hires increased to 44 with opportunity hires and additional position
Hires to Date: 33

By Rank

TT Asst. Professor
11
33.3%

T Professor
6
18.2%

T Assoc. Professor
11
33.3%

By College

Engineering
7
21.2%

Humanities & Social Sciences
2
6.1%

Natural Resources
3
9.1%

Vet Med
1
3.0%

Management
1
3.0%

Textiles
1
3.0%

Education
2
6.1%

Design
1
3.0%

Ag & Life Sciences
4
12.1%

Science
11
33.3%
Costs to Date: $25.05 M

- Continuing costs: $4.88 M
- One-time start-up costs: $13.63 M
- One-time space renovations: $6.54 M
- Total: $25.05 M
Diversity and Cluster Hiring at NC State
ACE Research on Diversity and Large Cluster Hiring Programs

Challenges:

• Hiring often focuses on STEM fields
• Very specific hiring needs
• Shallow applicant pools
• Tenure and promotion concerns
NC State Faculty Diversity

<table>
<thead>
<tr>
<th>Category</th>
<th>Fall 2014 All TT</th>
<th>Fall 2014 New TT Faculty</th>
<th>All CFEP</th>
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<tbody>
<tr>
<td>Female</td>
<td>41%</td>
<td>29%</td>
<td>39%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3%</td>
<td>9%</td>
<td>4%</td>
</tr>
<tr>
<td>Asian</td>
<td>11%</td>
<td>4%</td>
<td>18%</td>
</tr>
<tr>
<td>African-American</td>
<td>4%</td>
<td>4%</td>
<td>3%</td>
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</table>
Round One (2011 - 2014): Promoting Diversity

- 3-part diversity training for search committees
- Added opportunity lines (4)
- Spousal hiring (3 faculty and 4 staff)
- Revision of tenure and promotion guidelines
- Sensitivity to individual needs
The Next Cohort: 2014 - 2017

- 15 to 20 cluster faculty
- 4 to 5 clusters
- Timeline:
  - 2014 - 2015: Call for proposals, vet proposals and create search committees
  - 2015 - 2016: Begin faculty hiring
  - 2016 - 2017: Complete faculty hiring

- Greater focus on creating diverse proposal selection committee and cluster search committees
- Consider a possible cluster focused around a diversity-related topic
“…eternal vigilance is the price of interdisciplinarity”


…and diversity
Additional Slides
Select Cluster Achievements

**Large Grants:** 1.3 million RO1 grant from NIMH and 12.4 million sweet potato grant (Bioinformatics), 15 million to date through LAS (Data-Driven Science), 1.4 million CORE grant (Digital Transformation of Education), Kenan grant to build Regenerative Medicine Innovation hub (Translational Regenerative Medicine)

**Curriculum Development:** MA and PhD in Forensic Sciences and PhD in Geospatial Analytics in development

**New Courses:** GN 427 (Bioinformatics), STC/CSC 495 (Data-Driven Science), GES 506/508 (Genetic Engineering and Society), AEC 400/592, FWCB 595 (Global Environmental Change), PB495/595, ECE 492/592 (Synthetic and Systems Biology), and ID 582 (Innovation+Design)

**Graduate Instruction:** recruitment of new graduate students (Data-Driven Science, Geospatial Analytics and others)

**State, National, and Global Initiatives:** Costa Rican collaboration on pesticide exposure (Environmental Health), Developing partnership with Ecuador re Forensics training, “Governance of Synthetic Biology” (Genetic Engineering and Society), Work with the Nature Conservancy in the Caribbean (Global Environmental Change), Downtown Entrepreneurship Initiative (Innovation + Design), “Exploring Frontiers in Plant Systems Biology” (Synthetic and Systems Biology), Workshop on Agent-Based Modeling (Personalized Medicine)

**Diversity Contributions:** Collaborations with St. Augustine’s and NCCU (Bioinformatics and Environmental Health)
## Average Faculty Dollar for Awarded Research

<table>
<thead>
<tr>
<th>Year</th>
<th>Cluster Hire</th>
<th>Cluster Originators</th>
<th>Non-Cluster Faculty</th>
<th>Amount</th>
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<tbody>
<tr>
<td>2011</td>
<td>$794,549.21</td>
<td>$521,922.94</td>
<td>$497,906.02</td>
<td>$1,812,581.97</td>
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<tr>
<td>2012</td>
<td>$621,283.97</td>
<td>$497,906.02</td>
<td>$507,972.00</td>
<td>$1,627,150.99</td>
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<tr>
<td>2013</td>
<td>$792,474.55</td>
<td>$647,469.80</td>
<td>$647,469.80</td>
<td>$2,142,223.85</td>
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<tr>
<td>2014</td>
<td>$847,012.80</td>
<td>$847,012.80</td>
<td>$753,680.38</td>
<td>$2,447,705.98</td>
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