One Health Grand Challenge:

Major Themes for Transformative*, Collaborative Research

September 26, 2013

* High socioeconomic impact on state/national/global scale, that would attract funding (public, private, not-for-profit)
Faculty Engagement

- Regular calls & meetings with Campus Council, representing diverse TAMU colleges

- All-faculty survey for major focus areas (~500 responses)

- Faculty focus-group meetings

- Collaboration forums (November)

- Grand Challenge section on OH webpage – regular updates planned
What is One Health?

The collaborative effort of multiple disciplines working locally, nationally, and globally to attain sustainable optimal health for the ecosystem.
Major Thematic Research Areas

- Chronic Diseases & Conditions
- Global Health & Security
- Accessible & Affordable Quality Health Care
- Safe and Available Food & Water
Research Criteria

- One Health related (human, animal, plant, environmental health)
- High socioeconomic impact on state/national/global scale, that would attract funding - public, private, not-for-profit (“transformative”) 
- Leverage TAMU strengths in multiple colleges and university entities (“transdisciplinary”)
Major Thematic Research Areas

Chronic Diseases & Conditions

Examples of research topics, to stimulate collaborative thinking

- Prevention and treatment of obesity in human and animals
- Cardio-vascular disease
- Diabetes
- Genetic diseases and conditions
- Impact of exercise & nutrition
- Healthy aging
- Reproduction/developmental origins of health & disease
- Genomics & metagenomics
- BioEngineering
Major Thematic Research Areas

**Global Health & Security**

Examples of research topics, to stimulate collaborative thinking:

- Development, delivery and social acceptance of vaccines
- Emerging infectious diseases
- Pharmaceutical, biological, and medical device discoveries and deliveries in safe, efficacious ways
- Health security, records, etc.
- Environmental health risks for humans, animals, plants, and the environment
- Biodefense & bioterrorism
- Zoonotic diseases
- Bioinformatics
## Major Thematic Research Areas

### Accessible & Affordable Healthcare

<table>
<thead>
<tr>
<th>Examples of research topics, to stimulate collaborative thinking</th>
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<tbody>
<tr>
<td>• Access to quality healthcare in under-served communities</td>
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<td>• Healthcare for humans &amp; animals</td>
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<tr>
<td>• Policy issues relating to human, animal, plant, &amp; environmental health</td>
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<td>• Health management systems, costs, quality, economics, etc.</td>
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<td>• Remote healthcare &amp; delivery</td>
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<td>• Development &amp; implementation of healthcare technology, devices etc.</td>
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<td>• Education of healthcare, wellness and prevention professionals</td>
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<td>• Prevention of medical mistakes</td>
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Major Thematic Research Areas

Examples of research topics, to stimulate collaborative thinking

- Pre-natal under-nutrition
- Food insecurity
- Food safety, accessibility, and sustainability for population growth
- Environmental contamination
- Water availability and sustainability
- Water quality and resources
- Poverty and hunger
- Microbiology
- Biodefense and bioterrorism in relationship to food and water
- Urban agriculture
## Planning Process 2013/14

<table>
<thead>
<tr>
<th>Timing</th>
<th>Activity</th>
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<tr>
<td>September-October</td>
<td>College faculty consider their participation in and contribution to One Health thematic areas</td>
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<tr>
<td>Mid-November</td>
<td>Collaborative, interactive forums; 4x half-day meetings for faculty to meet researchers from other colleges</td>
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<td>Mid-January</td>
<td>Faculty submit collaborative research proposals (1-page)</td>
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<td>January – March 2014</td>
<td>Proposals reviewed by One Health Campus Council</td>
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<td>One Health Grand Challenge Plan presented to Deans’ Council</td>
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<td>One Health Plan presented to Provost</td>
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Information Access & Contacts

One Health website: onehealth.tamu.edu

Online proposal template and personal video format: onehealth.tamu.edu/grandchallenge

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