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# Accelerated Innovation Pilot

Disruptive Research and Development – Human  
Health and Performance  
“Exploring Space – Enhancing Life”

November 15, 2012



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- Why? Disruptive research & technology development for sustainable benefits in human health and performance themes
- What?
  - Space: use pull of exploration class missions to accelerate to exploration capabilities
  - Earth: address global concerns – human health and environmental health (water, air)
  - Identify: candidate examples for breakthroughs
    - Example: eliminate refrigeration for health care
    - Example: portable water purification, external monitoring
    - Example: eliminate antibiotics



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- Opportunities
  - Engage NASA team (examples)
    - Research and technology calls – provide suggestions to AES, HRP, OCT
    - Use NASA@Work to solicit other ideas; (possibly before R+D calls)
  - Stimulate collaboration (examples)
    - NHHPC
    - Wharton Mack Center for Technological Innovation (Feb 2013)
    - International - DLR - :envihab (July 2013)
    - Accelerated research models – NSF, Myelin Repair Foundation
  - Engage public
    - Prizes (open platform: InnoCentive, yet2.com, NTL; Rice Business Plan, etc.)
  - Use same methods to engage STEM



# Specific Opportunities

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- External near-term opportunities:
  - Rice Business Plan prize winners (student teams)
    - 2010 – LyoGo (received NASA prize, now has series A funding for development, credits NASA for success) – a unique container to fly medications without refrigeration
    - 2011 – Diagenetix – has USDA grant – DNA probe to give yes/no answer to bacterial pathogens, could be used for ISS surface samples, originally developed for agriculture
  - InnoCentive, yet2.com competitions for non-invasive intracranial pressure monitoring
  - NTL challenges
  - Education challenges



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- How?
  - Cycles of technology calls starting in 2013 with short development timelines (1-2 years)
  - Some selected technologies may fly on ISS as technology demonstrations
  - Develop timelines/plan
    - Project plan
    - Project team



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- When?
  - Seek HQ approval November 15<sup>th</sup>
  - NHHPC June 2013 workshop to promote concept
    - 1784 ready for submission
    - Cost <\$20,000
  - Assign team and actions – December