Translational Science: Addressing gaps through cross-training and collaboration

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What does it take?
Building the right team

» Program: Interventional therapy to be delivered to brain in an adult progressive degenerative disorder

» Scientific/Engineering/Medicine
  - Delivery: Device engineers, computational scientists, programmers, materials scientists, vector scientists
  - Neuroimaging/radiology
  - Pharmacology/formulation/GMP
  - Neurobiology/molecular science
  - Neurosurgery
  - Neurology
Building the right team

» Program: Interventional therapy to be delivered to brain in an adult progressive degenerative disorder

» Other disciplinary expertise
  ▪ Bioethics
  ▪ Legal
  ▪ Regulatory
  ▪ Program management

» Extended disciplinary envelope
  ▪ Neuroeconomics
  ▪ Payors
  ▪ Pharma
Sustaining alignment and participation

- Institutional support
- Recognition/attribution for interdisciplinary contributors
- Participant commitment to long term goals rather than funding cycle
- Effective governance mechanism
- Transparency
- Open process for publication
- Underwriting mechanisms that extend program duration
- Shared IP and agreements to effectively out-license
Signs of turbulence

» Institutional assertion of IP primacy
» Loss of consensus/commitment to reach agreement
» Data sequestration
» Participant drop out
» Inability to secure continued underwriting
Recommendations

» Academia
  - Revise promotion/tenure framework
  - Value, incent and reward team science
  - Subordinate IP discussions to program goals
  - Lower barrier to out-licensing
  - Support inter-, multi- and trans-disciplinary trainees

» Federal sponsor(s)
  - Develop mechanisms for sustaining underwriting
  - Augment intramural/extramural collaboration
  - Develop additional training mechanisms for translation

» Pharma
  - Broaden pre-competitive interest
  - Develop framework for early data access: “a look under the hood”
  - Revise mechanism(s) for sponsored program support