

Innovations: Manuscript Plans

<p>Preliminary Outline</p> <ol style="list-style-type: none"> 1. Rational for workgroup 2. Survey results/desired deliverables 3. Applying Innovation concepts 4. Lessons from non-CNS development 5. Lessons from other industries 6. Components to incorporate 7. Minimum viable protocol (MVP) 8. Methods and statistical issues 9. Discovery vs delivery thinking 10. Developing innovation 11. Management/business structure 12. Discussion and Conclusions 	<p>Negative/Failed Trials FDA Approval Rate Novel Target Failures/Placebo CNS Development Dropout Neuroscience Advancements Innovation to Invigorate</p>	<p>Workgroup ISCTM Survey Results Desired Improvements Infusing Innovation</p>	<p>Lean Start-Up Adjacent Possible Disruptive Innovation Prospect Theory Validated Learning Minimum Viable Product Innovative Accounting Team Building</p>	
	<p>Designate Authors 3/1/14</p>	<p>Cancer (Genetics) Neurology (Devices) Immunology (Vaccines) Primary Care (Prevention)</p>	<p>Aerospace (Obstacles) Biotech (\$ - Delivery) Oil (Going Green) Agriculture (Environ-Gene) Sports (Safety)</p>	<p>Author Sections Due 7/1/14</p>
	<p>Poll Consumer and Prescribers Item Specific Rating Endpoints Objective Target Endpoints Decrease Develop Costs Predicting Failure Early Choosing Patient Population Answer = MVP</p>	<p>MVP for Sensitivity Quick Answers Low Cost Adaptive Design Indication Finding Safety and Dose? Too Specific?</p>	<p>Smaller Trials Power Issues False Positives/Negatives Use Selective Endpoints Decrease Variance FDA Count Negative Trial?</p>	
<p>Abandon Dogma Neuroscience Endpoint Fit Drugs to Endpoint Delivery Quicker Need FDA Buy-in Fuels R&D Discovery</p>	<p>Risk to Changing Models Cost \$ to Change Unknown Success Fear of Change Will Changes = Market</p>	<p>Stop Big Initiative \$ Design Small Group Team Pilots Multidisciplinary Open Discussions Evaluate Viability Early Change Course Measurable Predictors</p>	<p>Implementing Innovation Industry-Acad-Gov-Health Market Share Meld Science-Business Iterative Design Trials Objective Endpoint FDA Change/Approval</p>	<p>Final Manuscript Review 9/1/14</p>

Presentation 1: Better Novel CNS Target Validation: Reducing Wasteful and Minimally Informative Studies

Bill Potter, NIMH

- Develop full dose response understanding based on RO/PD measures before making late stage investment
 - Be prepared to stop development in absence of such data even if there is some early positive clinical data which requires some “hand waving” to explain
 - Accept risk of Type 2 Errors reasoning that resources saved by not pursuing Type 1 Errors will allow for potentially better alternatives
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Presentation 2: The patient voice in clinical trial design; an experiment

Jeremy Gilbert, Patients Like Me

- There are significant **downstream economic consequences** when patients are not well understood
 - Patient understanding in advance could avoid mistakes
 - Cost typically in the form of protocol amendments and recruiting challenges
 - Any successful patient listening tool must operate **quickly and seamlessly** inside the lifecycle of a clinical development program
 - While advocacy interviews and focus groups can be helpful, trial designers have an unmet need for **objective, quantified patient insight**
 - Protocol assumptions must be **unpacked and tested** in order for patient voice to be most helpful
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