

Call the Movers!

Moving animal research findings
to human application

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Translation of Animal Behavioral Research from NIH

- How much animal model research in behavior does NIH support?
- How much of this research has been used to inform human laboratory investigation
- How much has ever seen the light of day in a human application? (i.e., an attempted intervention or application to health behavior)
- What are the obstacles that impede moving animal research findings to the “next step” in a translational process?

One possible barrier to translation: Validation of Animal Findings

- NIDA convened a meeting of nicotine and smoking experts, to discuss an appropriate behavioral test composite for screening putative cessation compounds.
- This is a great opportunity because we HAVE animal behavioral models that mimic essential features of human abuse and addiction.

Validation Issues

- However, the experts argued that cross validation IN HUMANS is needed first. In other words, these are great models – i.e., nicotine is rewarding and animals will take it, they experience withdrawal which is made of subjective, negative effects and somatic symptoms, and they relapse under similar conditions seen human smokers.
- But do manipulations induce the same effects in human smokers???
- Is the anxiety and anhedonia we infer from rodent behavior, equivalent to that reported by human smokers in withdrawal?

What needs to be done to “move” animal findings?

- Start from the question: What *is* translation science at this intersection of animal and human research?
- Specifically, the bidirectional interaction between animal models research and human research (whether basic, laboratory studies in human subjects or intervention pilots).
- Is it a discipline? Is there, or should there be, a very specific set of principles, practices, perspectives that are best or necessary for moving animal findings to inform human research and having a bi-directional exchange?

What can be done?

- WHO trains in this discipline? (Probably NO ONE)
- Remove barriers to interdisciplinary research and training, per the IOM report....barriers being addressed by Roadmap interdisciplinary training initiatives, TTRC, RM consortia,...what else?
- Would targeted funding for training and sabbaticals or didactic components of training help? Example of the K18 OppNet RFA.
- Who are the instructors? Who are the colleagues who can report on “lessons learned”? Successes and failures? Strategies for overcoming barriers?
- Look to successful interdisciplinary teams?

What can NIH do?

- However, MANY research questions being investigated in isolation: Connections are not being made! HOW CAN WE FACILITATE? Think tanks, workshops, fellowships, training, sabbaticals?
- Hold an OppNet workshop of experts studying basic human behavioral and social processes; engage a conversation and discussion with their human subjects research counterparts – experts in the study of human behavior!