

# Ethical considerations for navigating industry partnerships: Findings from interviews with neurotechnology researchers

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Tristan McIntosh, PhD  
t.mcintosh@wustl.edu  
@TheEthicsDoc

## BACKGROUND

Industry-academia partnerships (IAPs) are critical for commercializing neurotechnology research. But they raise ethical concerns (e.g., bias) that can undermine scientific values.



This study explored neurotechnology researchers' perspectives about IAPs and how IAPs shape research, training, clinical practice, and patient experiences.

## METHODS

In-depth interviews of 14 neurotechnology researchers with IAPs and 16 without IAPs.



Codes captured interview themes: level of industry involvement and influence; challenges and pitfalls emerging from IAPs; benefits and strengths of IAPs; and strategies for responsibly navigating IAPs.

## TOP 4 CHALLENGES AND PITFALLS OF INDUSTRY-ACADEMIC PARTNERSHIPS

1

**Industry is primarily interested in neurotech research that has potential for commercialization.**

"...when research is guided by industry...there is a greater focus on the potential for commercialization...the scope of the research...conducted is constrained." – Researcher with IAP

2

**Industry and academia have conflicting goals and values (e.g., scientific vs. fiduciary obligations).**

"I prefer to be open and sharing about the science...some aspect of that need for IP...is primarily driven by [industry] priority on having patented inventions." – Researcher w/o IAP

3

**Intellectual property (IP) concerns may prevent or delay publishing and data sharing.**

"[IP] is often a bone of contention between companies and academic consultants...a company might want to have control over whether you publish." – Researcher with IAP

4

**Financial incentives can influence research design and data interpretation, even if unintentional.**

"The bias would come from where the money is...[if] somebody...says, 'If you...work on this particular technology...I'll give you some money' you're gonna do it." – Researcher with IAP

## TOP 4 PROPOSED STRATEGIES FOR CULTIVATING RESPONSIBLE INDUSTRY-ACADEMIC PARTNERSHIPS

1

**Greater transparency and collective scrutiny of data are needed (e.g., data safety monitoring board).**

"...registering your trial publicly...ensures that both the company and the PI have to follow the guidelines and cannot change anything in the middle..." – Researcher with IAP

2

**Explicit expectations about conduct and reporting of research should be established early on.**

"Sometimes profit has to be sacrificed in order to make a better product, and vice versa...make sure you have a middle ground where all parties agree to that." – Researcher w/o IAP

3

**Universities can provide guidance and resources to cultivate responsible IA partnerships.**

"A representative of my university, 'Just checking in...Is there anything new to disclose?'...that nudging would have tremendous value." – Researcher with IAP

4

**Provide trainees with quality education about IA partnerships so they understand the critical issues.**

"...increasing educational opportunities, increasing business literacy in science students and increasing scientific literacy in the business partners and the collaborators...[they] really need to understand what is the neural impact..." – Researcher w/o IAP

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