Partnership for Assessment and Accreditation of Scientific Practice

Workshop for Young Scientists

”Designing, executing and reporting robust preclinical research”

Goal of the Workshop
This workshop creates awareness about the “reproducibility crisis” and the impact on drug discovery. It teaches key elements about recognizing published work with high probability of not being reproducible and how to generate robust data by designing, executing and reporting according to best practices.

The workshop includes

- An expert with academic and industry background
- Training materials to read before the workshop
- Handouts and learning material during the workshop
- Licenses/copyrights for the training materials
- Breakout sessions in smaller groups to enhance discussions and improve learning
- A short examination about the main topics
- A certificate to confirm active participation

Group size
The workshop should consist of a maximum of 15 students / researchers.

Language
The workshop will be held in English.

Venue & Date
To be discussed

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AGENDA

Time	Topic
Day 1	**Why are we talking about research rigor?**
	Introductions, Agenda, Workshop objectives
	Origins of poor data robustness in study design • Poorly designed and powered studies • Positive predictive value • Poor control over experimental conditions • Poor generalizability of research findings
	Beyond study design: Broad assessment of Risks of Bias • Identification of factors influencing quality of research data (e.g. personal, organizational or financial level)
	The impact of the reproducibility crisis on drug discovery and beyond
	Open discussion: Who is in the greatest need of higher research quality standards – industry, academia, CROs, young scientists or mature researchers?
	What do we need to do to enhance research rigor?
	Journal Club: Examples of drug discovery papers illustrating poor research quality • Break out sessions in smaller groups • Identifying poor research quality • Working out details to facilitate higher standards in research • Reports from the breakout sessions
Day 2	From pre-specified endpoints to data analysis: Common mistakes and how this affects data robustness
	The value of negative results: From stakeholders to real-life examples and implications
	Study design: The nucleus for robust data and challenges of implementation: (blinding, randomization, exploratory vs confirmatory research)
	Open discussion: Use of lab journals – what they are and why are they important?
	Publication standards: existing and emerging guidelines (e.g. ARRIVE, PRISMA, Nature, IUPHAR)
	How do we introduce the changes needed to enhance research rigor?
	Presenting data in publications
	Tools that an individual scientist can use (guidelines, recommendations, online repositories of information, software, training materials from journals including Nature Methods and Br J Pharmacol, etc.)
	Guided Brainstorming: How to cope with the “negative” consequences of higher research quality standards (e.g. less positive data, lower chances to get published in a high IF journal, etc.)?
	What will I change in my research practice after this Workshop?
	Short test
	Closing remarks & Adjourn

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