

Replication and Reproducibility in Science

- Ionnidis (2005), *PLOS Medicine*, most published research findings are false.
- Prinz et al. (2011), *Nature Reviews Drug Discovery*, around 65% of cancer biology studies do not replicate.
- Button et al. (2013), *Nature Reviews Neuroscience*, small sample size undermines the reliability of neuroscience.
- MacLeod et al. (2014), *Lancet*, 85% of biomedical research resources are wasted.
- Baker (2015), *Nature*, 90% of scientists recognise a 'reproducibility crisis'.
- Nosek & Errington (2017), *eLife*, out of first 5 replication attempts of preclinical cancer biology work, only 2 have replicated.

Note, I have uploaded a bunch of papers on the replication crisis to Blackboard.

A man in a blue plaid shirt is walking away from a woman in a red dress on a city street. He is looking back over his shoulder at her. The woman is smiling. The background is a blurred city street with other people.

**Novel and
exciting
results**

**Journal
editor**

**Solid but
incremental
research**