

Genomic Medicine

PhD block course for the PhD Program Molecular and Translational Biomedicine
November 27 – December 1 2017 in Zurich

Student Exercise 1

Munafò, M.R., Nosek, B.A., Bishop, D.V.M., Button, K.S., Chambers, C.D., Percie du Sert, N., Simonsohn, U., Wagenmakers, E., Ware, J.J. and Ioannidis, J.P.A. 2017. A manifesto for reproducible science. Nature human behaviour 1(1), p. 0021.

DOI: [10.1038/s41562-016-0021](https://doi.org/10.1038/s41562-016-0021)

Ioannidis, J.P.A. 2005. Why most published research findings are false. PLoS Medicine 2(8), p. e124.

DOI: [10.1371/journal.pmed.0020124](https://doi.org/10.1371/journal.pmed.0020124)

Assignment:

1. Read the paper and discuss it in your group.
2. Prepare a 10 min presentation of the paper – keep especially focus on the manifesto, i.e., what are the steps to enable reproducible science.
3. Has there been a shift in problems or are we still fighting the same battle as 12 years ago?
 - a. Compare the 2017 manifesto to the famous 2005 publication of Ioannidis. Have we improved?
 - b. Which of the challenges are the most dangerous for genomic medicine research and development?
 - c. In what way could good tools, such as IDEs, version control, and literate programming aide in enabling reproducible research? Are they the only thing? Are they the easiest thing?

After your presentation, there will be a discussion of 10-15 min.

Note: All time limits are sharp – we will interrupt you.