

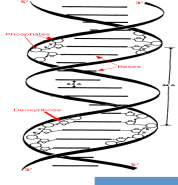
Can we trust microarray data?

Where do the data come from?



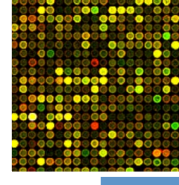
Experimental Conditions

- Cell type
- Treatment used



Sample Prep

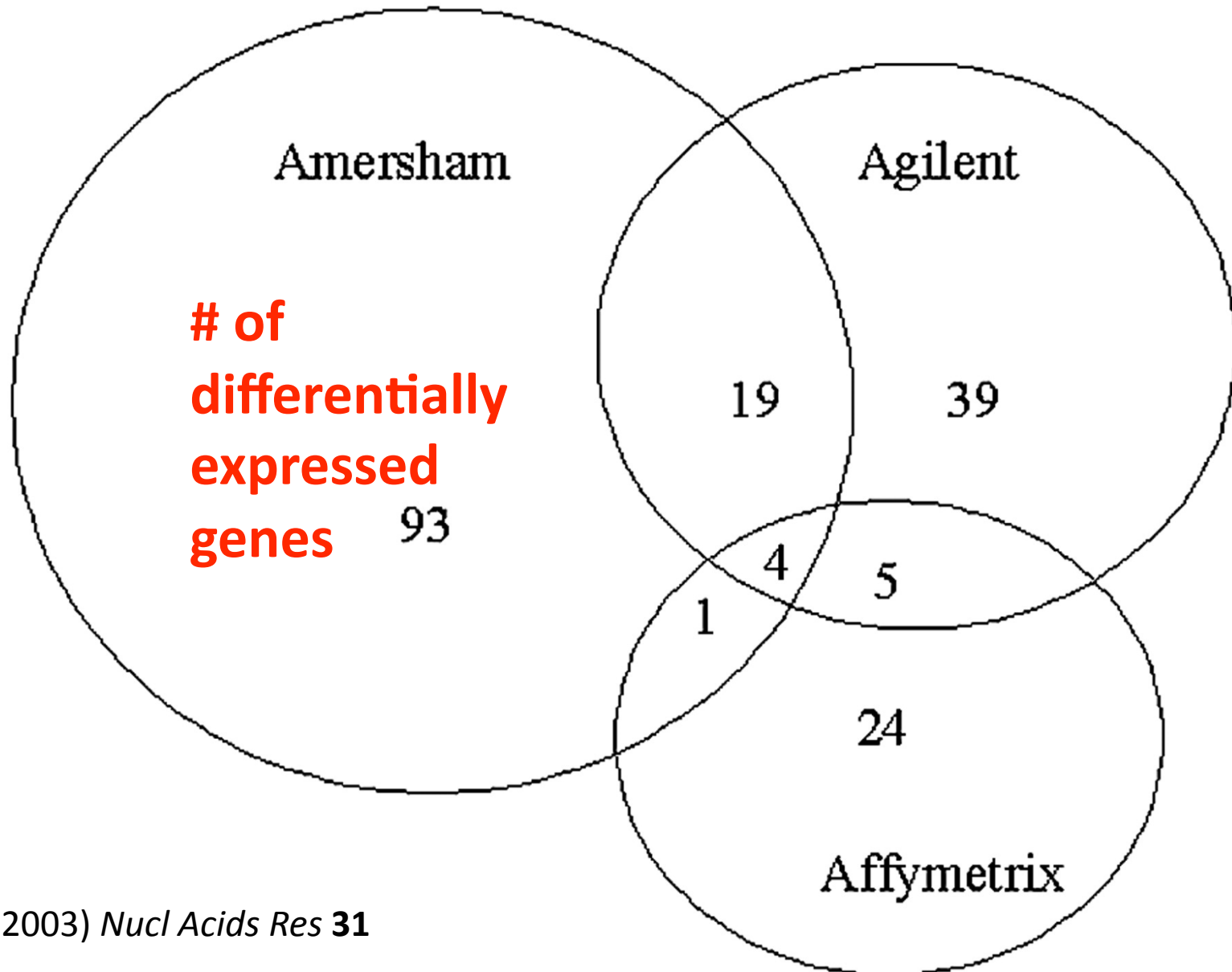
- Extract mRNA
- Make cDNA
- Label cDNA



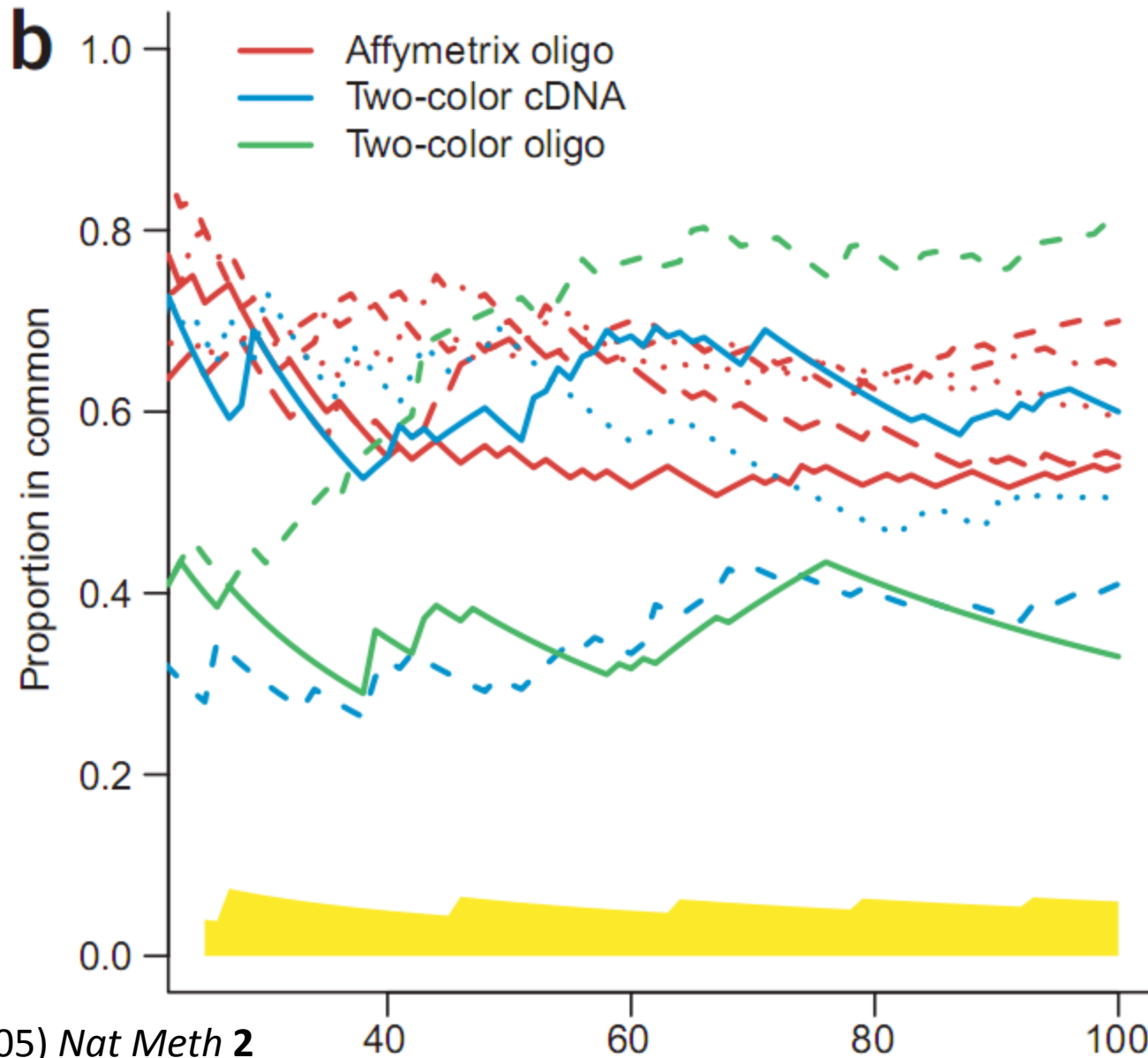
Microarray Itself

- Short or long cDNA spots?
- Probe sequences

Anecdotaly, microarrays are often considered unreliable
This is validated by some studies...

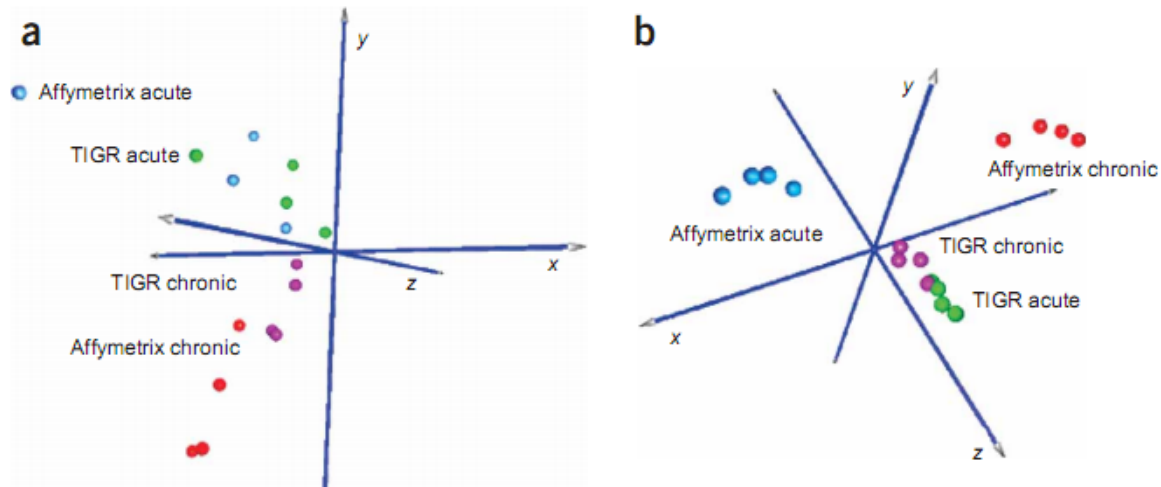


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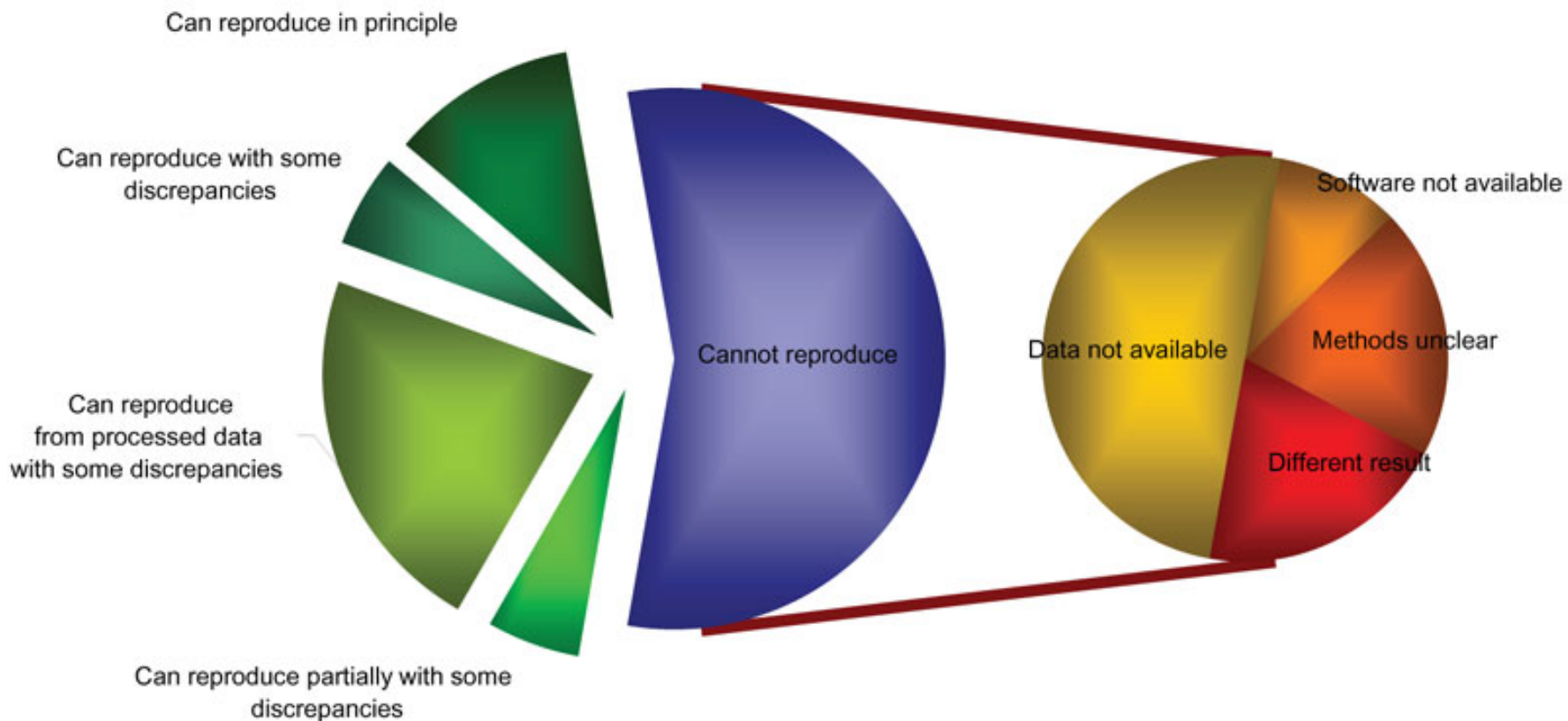
Anecdotaly, microarrays are often considered unreliable
...but not by others

on measured expression and found that biological treatment had a far greater impact on measured expression than did platform for more than 90% of genes, a result validated by qRT-PCR. In the small number of cases in which platforms



Larkin+ (2005) *Nat Meth* 2

...and a lot of the time, we don't know if repeated experiments will yield similar data



In science (and especially in
microarrays)

Every step counts!