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## testthat

- ▶ A "tests" folder is set up with a collection of test scripts.
- ▶ The hardest part is to make sure your tests does not take too long to run, because BioC enforces 10 minutes check time and 5 minutes build time.

```
context("Test fastRUVIII")
set.seed(12345)
L = ruvSimulate(m = 400, n = 500, nc = 400, nCelltypes = 3, nBatch = 2, lambda = 0.1, sce = FALSE)
Y = L$Y
M = L$M
ctl = L$ctl

old = ruv::RUVIII(Y = Y, M = M, ctl = ctl, k = 20)

improved1 = scMerge::fastRUVIII(Y = Y, M = M, ctl = ctl, k = 20, fast_svd = FALSE)

improved2 = scMerge::fastRUVIII(Y = Y, M = M, ctl = ctl, k = 20, fast_svd = TRUE, rsvd_prop = 0.3)

expect_equal(old, improved1)
expect_equal(improved1, improved2, tol = 0.01)
```

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## scMerge

- ▶ C++ performance issues + speeding up SVD
- ▶ Majority of the functions (exported or otherwise) does not have testthat checks.
- ▶ Documentations of the package, inconsistent naming.
- ▶ Fixing namespaces, especially with R-devel and BioC-devel.
  - ▶ kBET is only a GitHub package.
  - ▶ M3Drop changed their output in the BioC-devel branch.
- ▶ Check time limit and data size issue as required by BioC.