**Supplementary file to “HyDrop enables droplet based single-cell ATAC-seq and single-cell RNA-seq using dissolvable hydrogel beads”**

Florian V. De Rop1,2, Joy N. Ismail1,2, Carmen Bravo González-Blas1,2, Gert J. Hulselmans1,2, Christopher C. Flerin1,2,4, Jasper Janssens1,2, Koen Theunis1,2,4, Valerie M. Christiaens1,2, Jasper Wouters1,2, Gabriele Marcassa1,3, Joris de Wit1,3, Suresh Poovathingal1,#, and Stein Aerts1,2,#

1 VIB-KU Leuven Center for Brain & Disease Research

2 Laboratory of Computational Biology, Department of Human Genetics, KU Leuven

3 Laboratory of Synapse Biology, Department of Neurosciences, KU Leuven

4 Aligning Science Across Parkinson’s (ASAP) Collaborative Research Network, Chevy Chase, MD,= 20815.

# Shared last author; correspondence to [suresh.poovathingal@kuleuven.be](mailto:suresh.poovathingal@kuleuven.be) and [stein.aerts@kuleuven.be](mailto:stein.aerts@kuleuven.be).

**Sequence on the unbarcoded hydrogel bead:**

**/5Acryd//iThioMC6-D/TTTTTTTTAATACGACTCACTATAGGGAAGCAGTGGTATCAACGCAGAGTAC**

**Sequences in red denote one of 96 possible sub-barcodes.**

**Extension 1:**

**/5Acryd//iThioMC6-D/TTTTTTTTAATACGACTCACTATAGGGAAGCAGTGGTATCAACGCAGAGTACTTCCTGTGAGCAGCTACTGC**

**GCGTCTCATGAAGGACACTCGTCGATGACG**

**Extension 2:**

**/5Acryd//iThioMC6-D/TTTTTTTTAATACGACTCACTATAGGGAAGCAGTGGTATCAACGCAGAGTACTTCCTGTGAGCAGCTACTGCTCGGACTTATCGAGTACCCT**

**GTCGATGACGAGCCTGAATAGCTCATGGGA**

**Extension 3 (HyDrop-RNA):**

**/5Acryd//iThioMC6-D/TTTTTTTTAATACGACTCACTATAGGGAAGCAGTGGTATCAACGCAGAGTACTTCCTGTGAGCAGCTACTGCTCGGACTTATCGAGTACCCTGGCTGAATTANNNNNNNNNTTTTTTTTTTTTTTTTTTTTTTTTT**

**GCTCATGGGACCGACTTAATNNNNNNNNNAAAAAAAAAAAAAAAAAAAAAAAAA**

**Final primer sequence on bead for HyDrop-RNA:**

**PCR handle BC1 BC2 BC3**

**/5Acryd//iThioMC6-D/TTTTTTTTAATACGACTCACTATAGGGAAGCAGTGGTATCAACGCAGAGTACTTCCTGTGAGCAGCTACTGCTCGGACTTATCGAGTACCCTGGCTGAATTANNNNNNNNNTTTTTTTTTTTTTTTTTTTTTTTTT 136 bp**

**Extension 3 (HyDrop-ATAC):**

**/5Acryd//iThioMC6-D/TTTTTTTTAATACGACTCACTATAGGGAAGCAGTGGTATCAACGCAGAGTACTTCCTGTGAGCAGCTACTGCTCGGACTTATCGAGTACCCTGGCTGAATTAGTCTCGTGGGCTCGG**

**GCTCATGGGACCGACTTAATCAGAGCACCCGAGCC**

**Final primer sequence on bead for HyDrop-ATAC:**

**PCR handle BC1 BC2 BC3**

**/5Acryd//iThioMC6-D/TTTTTTTTAATACGACTCACTATAGGGAAGCAGTGGTATCAACGCAGAGTACTTCCTGTGAGCAGCTACTGCTCGGACTTATCGAGTACCCTGGCTGAATTAGTCTCGTGGGCTCGG 117 bp**