

Acknowledgements

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Author Contributions

S.R. and M.F.A. conceived the project. M.F.A. performed the experiments with ribosomes. M.F.A. performed the experiments with SARS-CoV-2 segments. J.A. performed the experiments with other coronavirus segments. J.S.P. performed the experiments with TGEV-infected ST cells. M.F.A. wrote SEISMIC-RNA with contributions from S.L.G., Y.J.M.T., A.A.L., and J.A. M.F.A. benchmarked SEISMIC-RNA. M.F.A. analyzed the data with contributions from J.A. M.F.A. drafted the manuscript. All authors reviewed the manuscript and provided comments.

Ethics Declarations

The authors declare no competing interests.

Data Availability

All sequencing data generated in this study have been deposited into the NCBI Short Read Archive under accession code PRJNA1103196.

Code Availability

Documentation for SEISMIC-RNA, including instructions for installation, is hosted on GitHub Pages: <https://rouskinlab.github.io/seismic-rna>. Source code for SEISMIC-RNA is available from GitHub: <https://github.com/rouskinlab/seismic-rna>. Shell scripts for running SEISMIC-RNA, auxiliary scripts for data analysis, supplementary files, and LaTeX source code for this manuscript are also available from GitHub: <https://github.com/rouskinlab/search-map>.