

Resource Summary Report

Generated by [dkNET](#) on Sep 16, 2026

[microC: A 3D virtual microenvironment for perturbation biology](#)

DOI:10.17504/protocols.io.vx3e7qn

Type: Protocol

Proper Citation

Dimitrios Voukantsis, Kenneth Kahn, Martin Hadley, Rowan Wilson, Francesca M Buffa
2018. microC: A 3D virtual microenvironment for perturbation biology. protocols.io
[dx.doi.org/10.17504/protocols.io.vx3e7qn](https://doi.org/10.17504/protocols.io.vx3e7qn)

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.vx3e7qn>

Authors: Dimitrios Voukantsis, Kenneth Kahn, Martin Hadley, Rowan Wilson, Francesca M Buffa

Summary: microC is a multiscale virtual microenvironment for perturbation biology. It enables experiments that link genotype to phenotype taking into account the surrounding microenvironment. microC has a modular architecture that enables a wide variety of experiment. Furthermore, it offers easy access to advanced computational modelling and supercomputing resources to the wider scientific community. microC combines agent-based and gene network modelling and uses partial differential equations to simulate interactions among cells. The tool itself does not require any installation on the user's machine, as it can be accessed using a web browser. Experimental results and data are also available via a web interface. This protocol describes the process of preparing and submitting an experiment with microC, and interpreting the simulation results

Affiliations: Computational Biology and Integrative Genomics, MRC/CRUK Oxford Institute, University of Oxford, Oxford, Oxfordshire, OX3 7DQ, UK, Academic Information Technology Research Team, University of Oxford, Oxford, Oxfordshire, OX2 6NN, UK, Academic Information Technology Research Team, University of Oxford, Oxford, Oxfordshire, OX2 6NN, UK, Academic Information Technology Research Team, University of Oxford, Oxford, Oxfordshire, OX2 6NN, UK, Computational Biology and Integrative Genomics, MRC/CRUK Oxford Institute, University of Oxford, Oxford, Oxfordshire, OX3 7DQ, UK

External URL: <http://microc.org>

Version: 1

Publication Date: 2018

Proper Citation: Dimitrios Voukantsis, Kenneth Kahn, Martin Hadley, Rowan Wilson, Francesca M Buffa 2018. microC: A 3D virtual microenvironment for perturbation biology. protocols.io dx.doi.org/10.17504/protocols.io.vx3e7qn

Record Creation Time: 20210329T220515+0000

Record Last Update: 20210329T220829+0000

Data and Source Information

Source: