Reviewer Report

Title: "A dataset of images and morphological profiles of 30,000 small-molecule treatments using the Cell Painting assay"

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Reviewer name: Marc Bickle

Reviewer Comments to Author:

The manuscript of Bray et al submits the data to their previously published Cell Painting assay. The execution of the assay and the analysis of the assay are described in sufficient details elsewhere that scientists accessing the data should be able to reproduce the data. This is a very important resource for the community, as it represents a benchmark for developing novel analytical tools to profile experimental conditions. The approach of profiling phenotypes to understand function is as old as Mendel's finding and are unquestionably valuable. The Cell Painting assay is continuation of the technique of observation using modern computer and mathematical tools. The analysis of this type of dataset is a very active field and having an extensive dataset for benchmarking is extremely valuable.

I had some problems downloading the files from my Mac using both the Finder and using a Python script. I suspect that the files were uploaded using ASCII instead of binary, which can corrupt the files during download. I did manage in the end to access the files using a Windows machine and FileZilla. Maybe the authors could test the download from different platforms to see whether they can reproduce my issues and if yes, provide instructions as to what solution works. This is my only comment for changes to the text.

Level of Interest

Please indicate how interesting you found the manuscript: An article of importance in its field

Quality of Written English

Please indicate the quality of language in the manuscript: Needs some language corrections before being published

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