

Peer Review

Review of: "CSMA: An ImageJ Plugin for the Analysis of Wound Healing Assays"

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The authors present a new tool called CSMA (Cell Scratch Migration Analysis), which they describe as an "ImageJ Plugin for the Analysis of Wound Healing Assays." However, their tool cannot be considered a true ImageJ plugin for several reasons:

Dependency on External Software: The tool requires the installation of Anaconda and Python code to function, which is not typical for an ImageJ plugin. ImageJ plugins should be able to run solely within the ImageJ environment.

Use of Python for UI and Image Processing: The authors utilize Python 3 for image processing and the user interface (UI). However, ImageJ provides robust classes for creating UI elements (e.g., [GenericDialog](#)) and drawing plots (e.g., [Plot](#)). Additionally, ImageJ is specifically designed for image processing, as detailed in the paper "NIH Image to ImageJ: 25 years of image analysis" (DOI: [10.1038/nmeth.2089](https://doi.org/10.1038/nmeth.2089), [Link](#)), which the authors failed to cite.

Installation Complexity: The tool's installation process is likely to be challenging for basic computer users who might be interested in using it. This complexity undermines the accessibility and usability of the tool.

To address these issues, I strongly recommend that the authors convert their Python code into ImageJ-compatible Java code, thereby creating a genuine ImageJ plugin.

Additionally, to ensure transparency and reproducibility, the authors should make their data available in a FAIR (Findable, Accessible, Interoperable, Reusable) deposit. I attempted to download example data from the linked deposit in the following paper:

- [Supplementary Data](#)
- DOI: [10.1098/rsif.2018.0709](https://doi.org/10.1098/rsif.2018.0709)

However, the server was unreachable.

Lastly, in Figures 5, S1, and S3, the authors highlighted the selections obtained from their CSMA tool in pink, but they did not apply the same visual treatment to the HTM and MRI tools. For an honest comparison, the evaluation should be performed consistently across all tools, with identical starting and ending lines.

Declarations

Potential competing interests: No potential competing interests to declare.