

1 Introduction

2 Installation and Setup

2.1 MitoCellPhe Analyzer

To use MitoCellPhe Analyzer, you will need the following software on your PC:

Fiji: imagej.net/Fiji/Downloads

- Fiji can be installed anywhere on your local machine. Please keep the install folder handy for use with MitoCellPhe, as you must link to this folder when setting up your batch processing.
- Your Fiji install must include Jython.jar so it can process the Python script that performs batch processing. To do this, open Fiji, go to Plugins → Macros → Run..., and open any Python (.py) file. If Jython is not installed, this will open a prompt that allows you to download and install the correct .jar file. Once the .jar is installed, you can close Fiji.

Java JDK: www.oracle.com/java/technologies/javase/javase-jdk8-downloads.html

- Download and run the installer for your OS.
- For Windows 10, after completing the install, you will need to edit some environment variables to make sure the software runs (see bit.ly/34D1tDW).
 - Add JAVA_HOME to system variables, with the path C:\Program Files\Java\jdk1.8.0_261 (version number may vary, as long as it starts with “jdk”).
 - Edit PATH system variable and add to the end: C:\Program Files\Java\jdk1.8.0_261\bin (version number may vary).
 - Add PYJNIUS_JAR to system variables, with the path (install folder)\jnius\pyjnius.jar (replace install folder with where MitoCellPhe is located).
- For Linux...

2.2 MitoCellPhe Skeletonizer

To use MitoCellPhe Skeletonizer, you will need the following software on your PC:

CellProfiler: <https://cellprofiler.org/previous-releases>

- In order to generate the best possible skeletons for the mitochondrial analysis, we recommend using our skeletonizer pipeline for CellProfiler. The pipeline is currently designed for version 3.1.9.
- Once CellProfiler 3.1.9 is installed, you will need to install the required modules to run the pipeline. This is discussed in a later section.