Flow analysis

The flow analysis was performed using Matlab and Mathematica.

1. List of files
   1. List sequence of images
   2. Create movies
   3. Isolate First and Last image to check rapidly the consistence of the movie

Matlab code : AMF\_Transport\_ListFiles.m

1. Define and make kymographs
   1. Define kymographs manually by picking 2 points over a straight part of the hypha
   2. Make kymographs automatically of size 20 µm

Matlab code: AMF\_Transport\_DefineKymographs.m

1. Run KymoButler – automatic detection of trajectories from a kymograph
   1. Donwload KymoButler package - <https://github.com/elifesciences-publications/KymoButler>
   2. Run KymoButler on Mathematica

Mathematica code: AMF\_Transport\_AnalyzeKymographs.nb

1. Extract Velocities from trajectories
   1. Extract trajectories from KymoButler analysis
   2. Compute velocities
   3. Plot trajectories on kymographs
   4. Plot velocities over time (Fig 5A)

Matlab code: AMF\_Transport\_ExtractTrajectories.m