

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Supplementary Movie 1 is an image sequence showing the output of the 'attached' Cytosim simulation of melanosome transport in melanocytes see main text and Figure 9 for details. Companion to Figure S11A. Acquisition frame rate 0.5 sec-1. Playback frame rate 5 sec-1.

File Name: Supplementary Movie 2

Description: Supplementary Movie 2 is a high magnification detail from movie 1 showing the melanosome and actin filament movements in a small area of a model cell (melanosomes are shown individually coloured in order to aid tracking of individuals over time). This region corresponds to the red boxed region shown in the overview images in Figure S11B. Companion to Figure S11B. Acquisition frame rate 0.5 sec-1. Playback frame rate 5 sec-1.

File Name: Supplementary Movie 3

Description: Supplementary Movie 3 is an image sequence showing the output of the 'detached' Cytosim simulation of melanosome transport in melanocytes see main text and Figure 9 for details. Companion to Figure S11A. Acquisition frame rate 0.5 sec-1. Playback frame rate 5 sec-1.

File Name: Supplementary Code 1

Description: The melanosim model description document describes the model including a model overview, the properties and parameters used in modelling melanosomes, actin filaments and the myosin-Va motors, the configuration code and references to literature.