

Supplemental Movie Legends Chapter 5

Supplemental Movie 5.1 | $\text{Ca}^{2+}_{\text{cyto}}$ oscillations during the contact of synergid cells with a pollen tube.

Time series corresponding to **Figure 5.1 B**. Left panel: YFP signal of pMyb98::CerTN-L15 in yellow, signal of LHR pollen tube membrane and sperm nuclei in red. Right panel: corresponding $\text{Ca}^{2+}_{\text{cyto}}$ level in the synergid cells shown as ratiometric images of pMyb98::CerTN-L15. Time interval = 10 sec.

Supplemental Movie 5.2 | Localized $\text{Ca}^{2+}_{\text{cyto}}$ oscillations in synergid cells in contact with the pollen tube apex.

Time series of CerTN-L15 response shown in false color and merged with LHR signals (grey scale). Time interval = 10 sec.

Supplemental Movie 5.3 | Fertilization of a pDD65::CerTN-L15 ovule (yellow central cell).

Time series corresponds to Graph 3 in **Figure S5.3 A**. YFP signal of pDD65::CerTN-L15 shown in yellow, sperm cell nuclei of LHR pollen in red. Time interval = 10 sec.

Supplemental Movie 5.4 | $\text{Ca}^{2+}_{\text{cyto}}$ signature of an egg cell during fertilization.

Time series corresponding to egg cell shown in **Figure 5.3 C** and calcium recording shown in graph 1 in 5.4 C. Left panel: YFP signal of pEC1::CerTN-L15 shown in yellow, sperm nuclei in red. Right panel: Ratiometric image series of CerTN-L15 merged with LHR signal (grey scale). Time interval = 10 sec.

Supplemental Movie 5.5 | Unsuccessful fertilization attempt of the egg cell and one sperm cell nucleus.

Time series corresponding to **Figures S5.4 A, B**. Time interval = 10 sec.