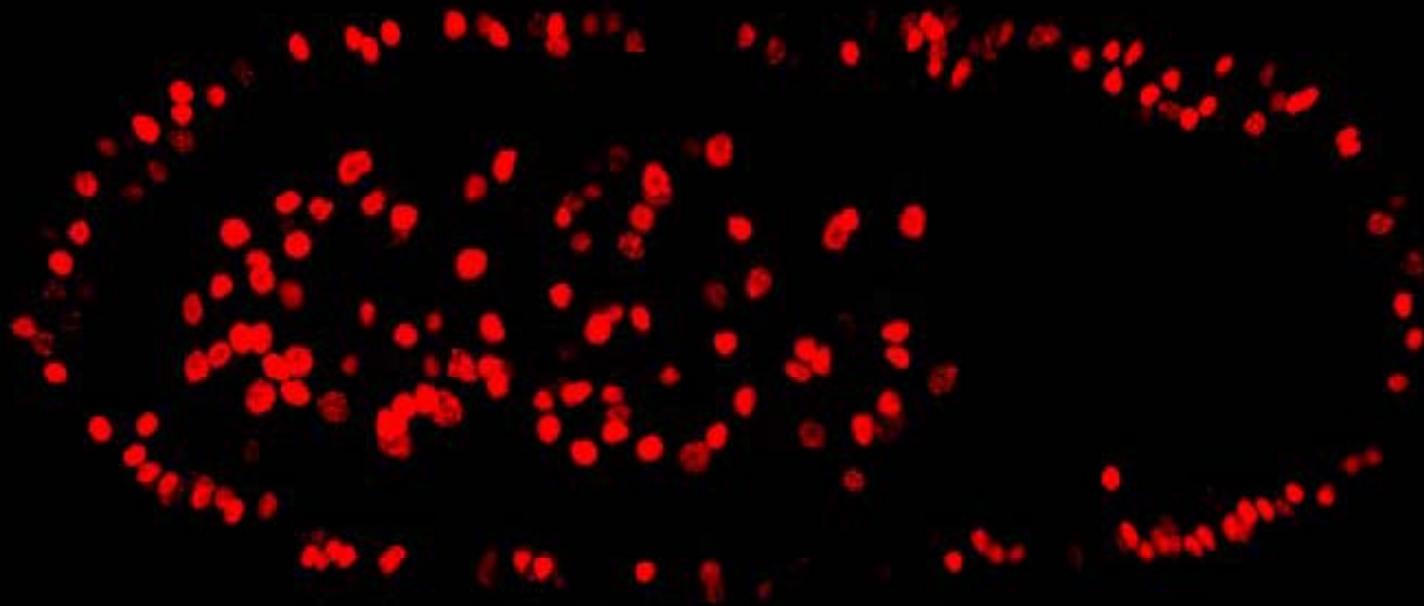
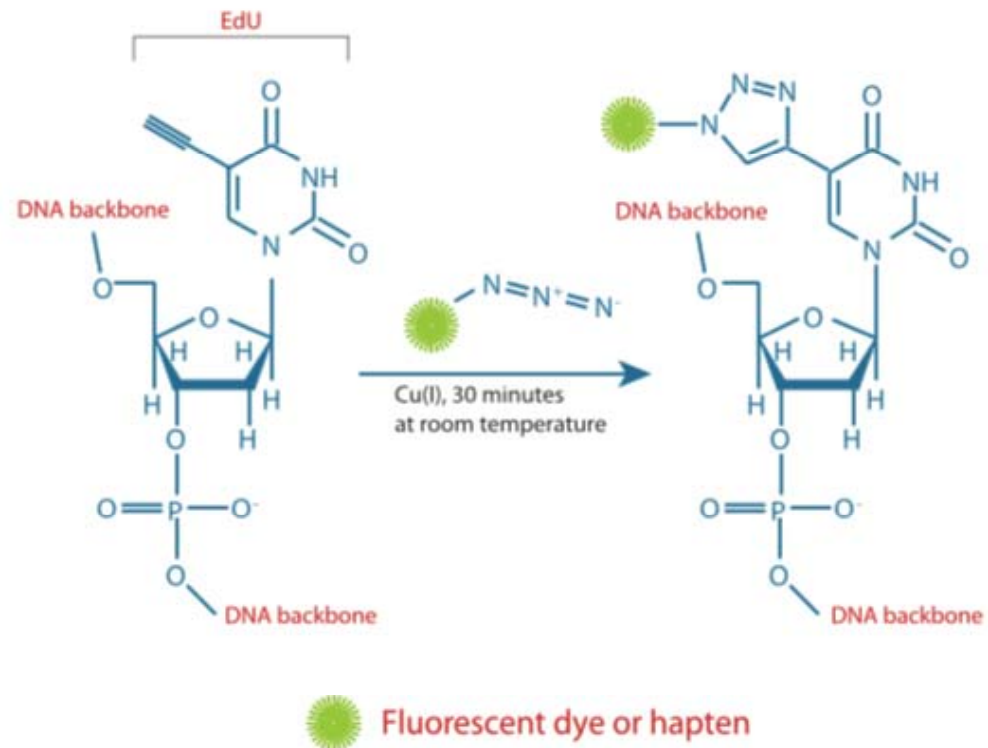


EdU labeling



EdU (5-ethynyl-2'-deoxyuridine) assay: indirect measuring of cell proliferation

- **EdU** is a nucleoside analog of **thymidine**; it can be incorporated into DNA during DNA synthesis.
- "**Click reaction**": EdU detection via Cu(I)-catalyzed alkyne-azide cycloaddition (CuAAC)
- measures the **S-phase** synthesis of the cell cycle

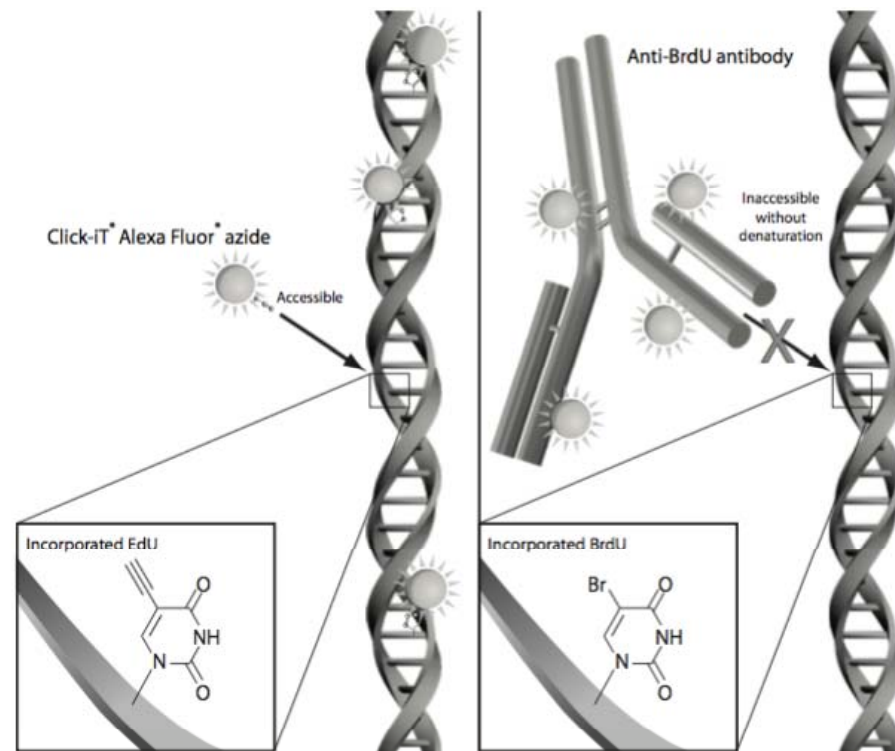


EdU vs. BrdU (bromo-deoxyuridine) labeling

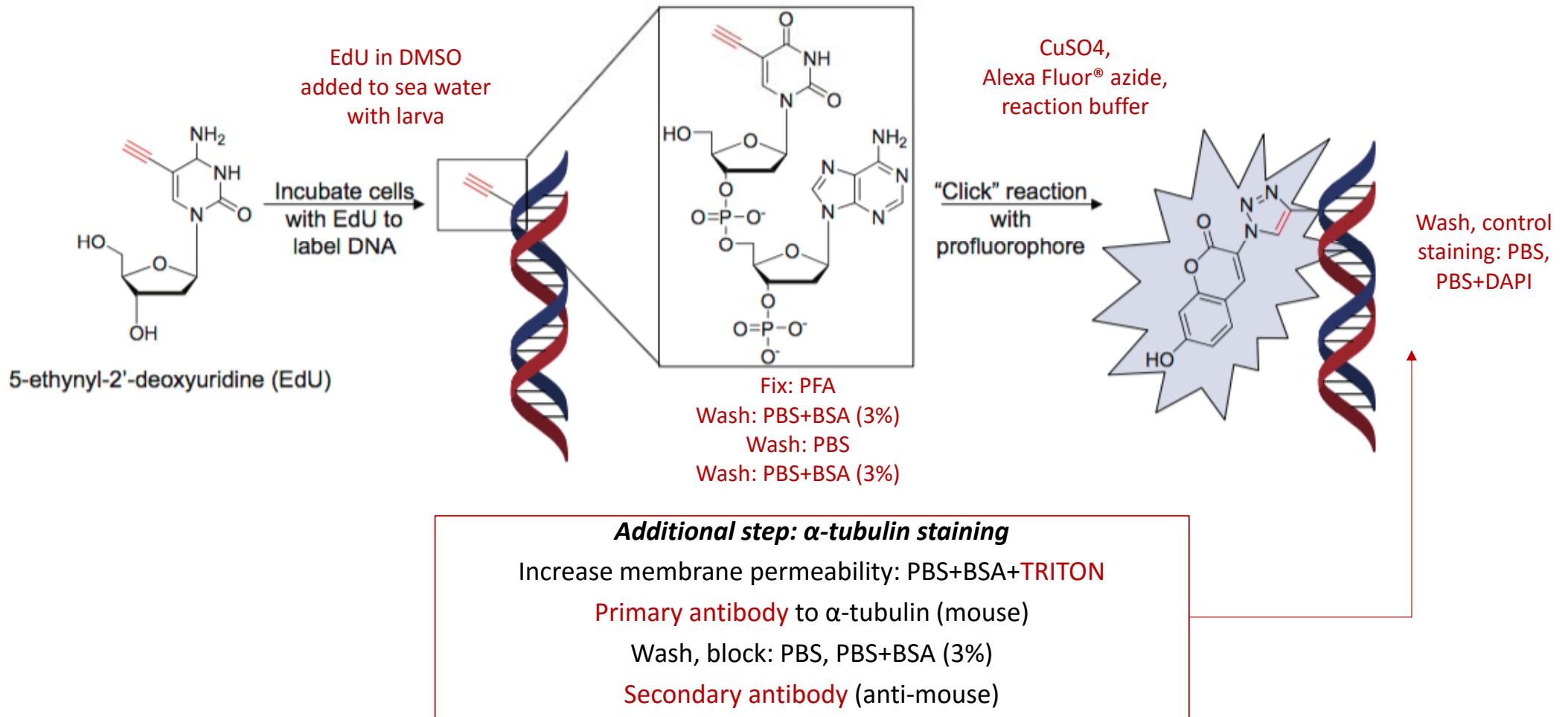
- **BrdU** is also a nucleoside analog
- Antibody-based detection : **anti-BrdU**
- Additional step required: **DNA denaturation** to expose the BrdU to the antibody

The **denaturation step** in the BrdU protocol can disrupt dsDNA integrity. Possible consequences:

- affect on nuclear counterstaining
- can destroy cell morphology and antigen recognition sites



EdU labeling procedure

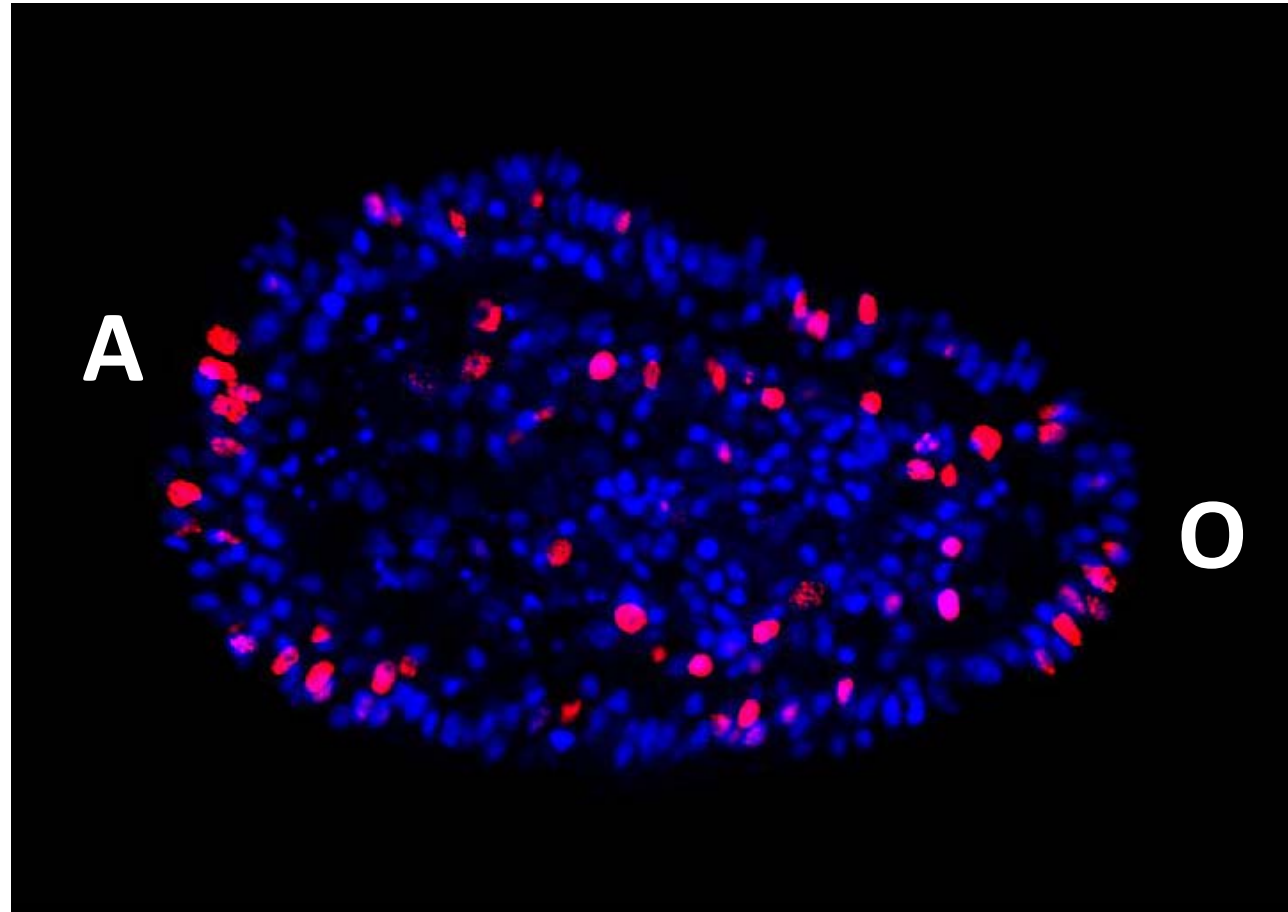
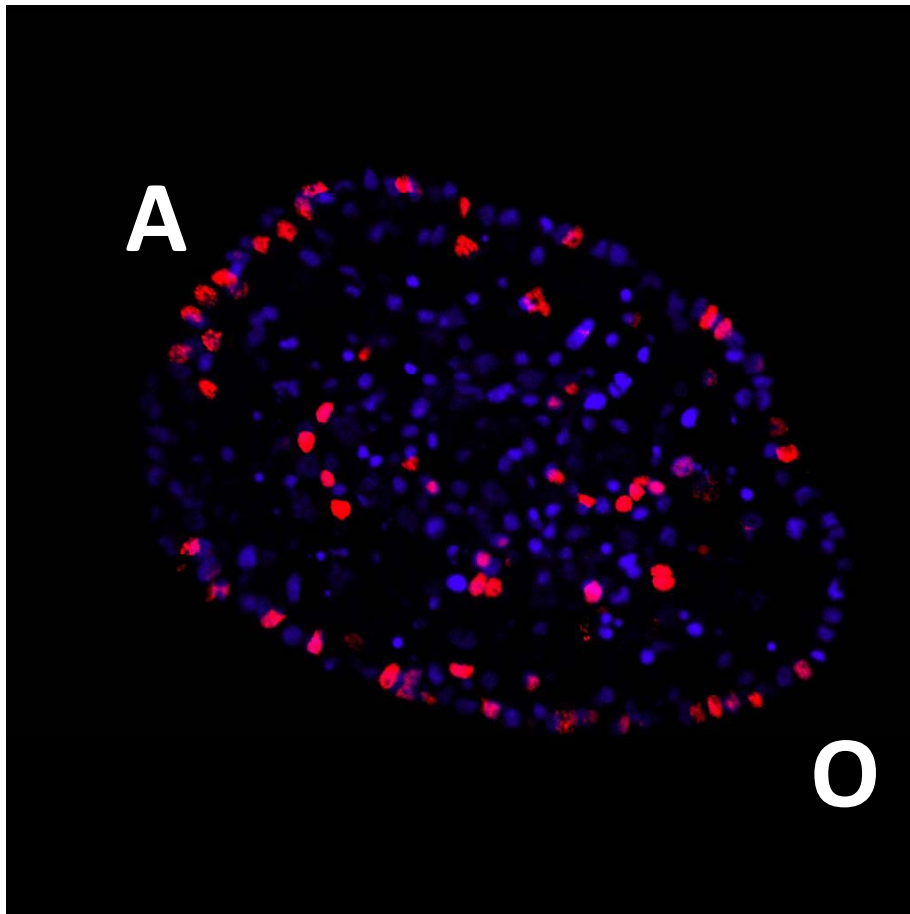


Bouganvillia superciliaris (Agassiz, 1849)



planula

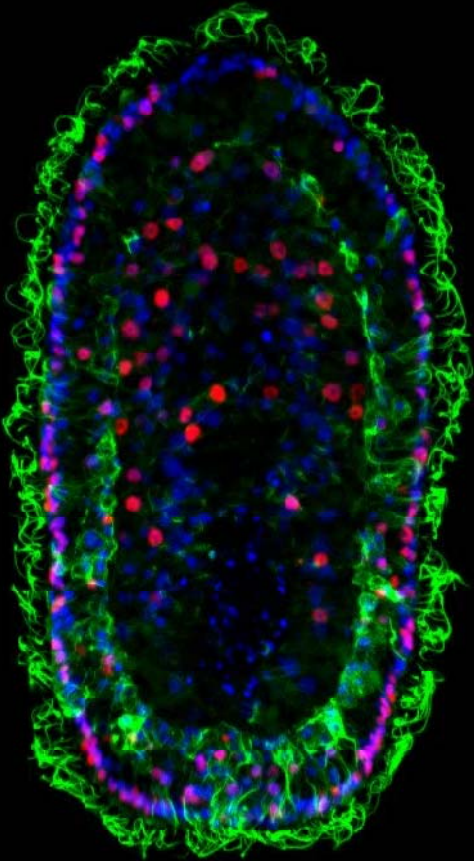
Early planula (preplanula)



■ EdU
■ DAPI

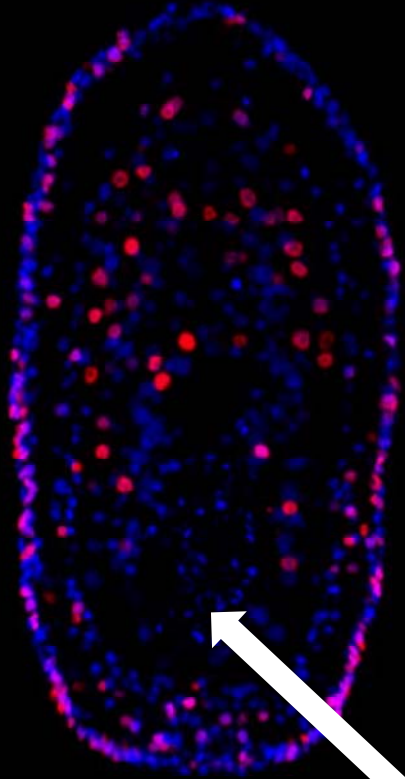
A – aboral
O - oral

O



A

O



A

Middle planula

 α - tubulin

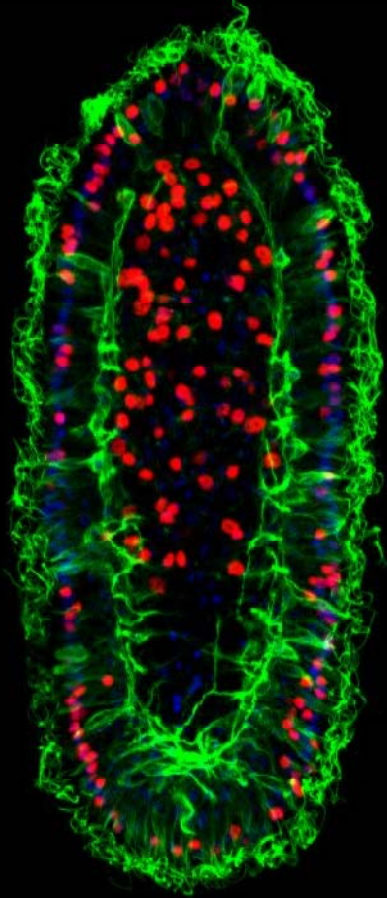
 EdU

 DAPI

A – aboral

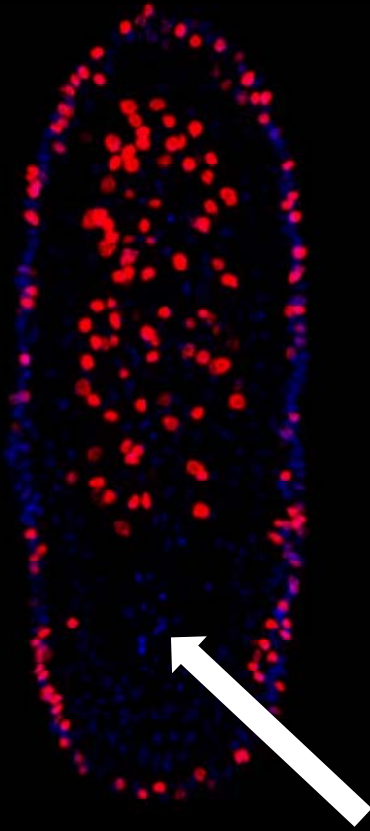
O - oral

O



A

O



A

Middle planula

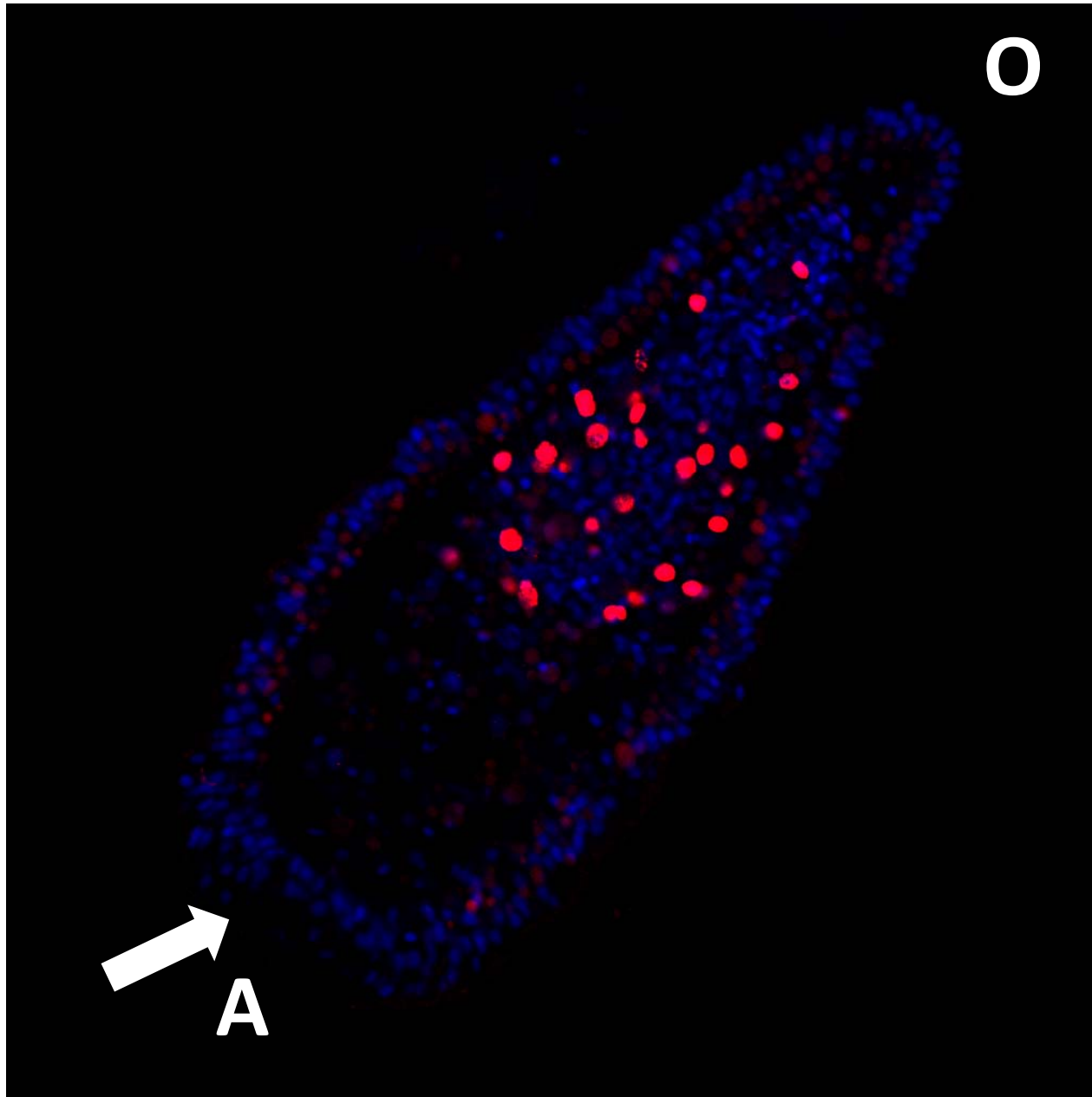
■ α - tubulin

■ EdU

■ DAPI

A – aboral

O - oral



Mature planulae

■ EdU

■ DAPI

A – aboral

O - oral