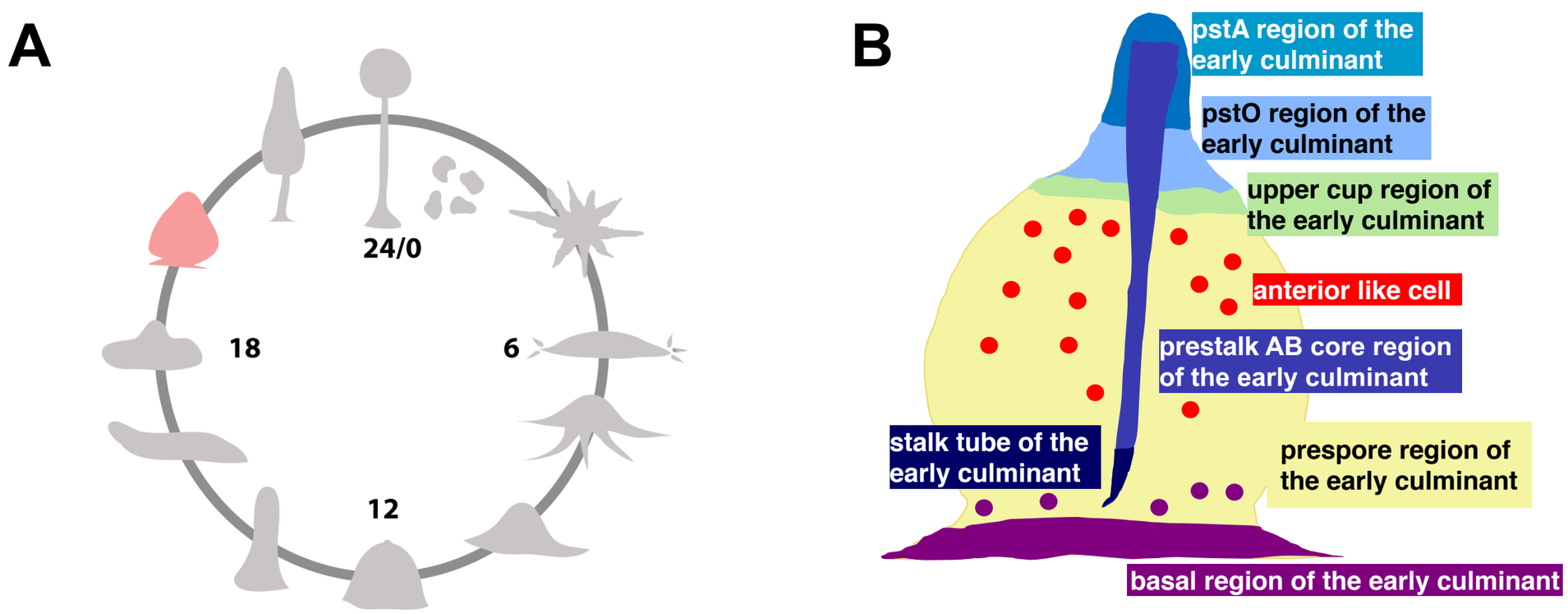
Spatial Expression

Spatial Expression for *png*

pre stalk region of the standing slug	Gosain et. al, 2014	Dicty Life
pre stalk region of the migratory slug	Gosain et. al, 2014	Dicty Life
prestalk AB core region of the early culminant	Gosain et. al, 2014	Dicty Life
basal disc of the late culminant	Gosain et. al, 2014	Dicty Life
stalk cells	Gosain et. al, 2014	Dicty Life

Spatial Expression Annotations. The *Dictyostelium discoideum* anatomy ontology has been available for many years (*Gaudet et. al, BMC Genomics* 9:130, *2008*). We now use this ontology while annotating spatial expression during development from published papers. Anatomy terms with their reference will be listed on the gene page in a new section (see above). Each term will also link to to the term page where all genes annotated to this term are listed allowing all annotations to be easily downloaded. Below are preliminary ideas how we might display this data graphically, termed ‘Dicty Life’.



Graphical View of Spatial Expression – Dicty Life. One possibility to graphically show expression in conjunction with the life cycle is sketched here. **(A)** Upon clicking on the Dicty Life link next to the annotation on the gene page, the life cycle will be displayed highlighting the stage named in the anatomy term (here ‘early culminant’). **(B)** When clicking on the highlighted stage graphics will be displayed showing the specific expression during the life stage in detail. In this example, the graphic A would display when clicking on the link next to the annotation **prestalk AB core region of the early culminant**. In B, all cell types during that stage are marked in different colors for easy identification. We could also envision displaying quantitative data by showing RNA expression superimposed on the life cycle, in addition to the manual annotations. The detailed image of the early culminant was adapted from Fig. 4 of *Gaudet et al. 2008*.