

## Highlights

- A novel prestalk cell subtype, pstV<sup>A</sup> is defined by reporter expression via the *omt12* promoter
- Vegetative cells show heterogeneous and dynamic activity of the *omt12* promoter
- The pstV<sup>A</sup> cells are lineage-primed as vegetative cells
- The lineage-primed pstV<sup>A</sup> cells are involved in cell aggregation and tip formation