



DEC 27, 2022

## OPEN ACCESS

### DOI:

[dx.doi.org/10.17504/protocols.io.kqdg399qeg25/v1](https://dx.doi.org/10.17504/protocols.io.kqdg399qeg25/v1)

**Protocol Citation:** Sarah M Prostack, Edgar M Medina, Erik Kalinka, Lillian Fritz-Laylin 2022. Protocol 3: Growing liquid cultures of *Agrobacterium* prior to transformation day.

protocols.io

<https://dx.doi.org/10.17504/protocols.io.kqdg399qeg25/v1>

**License:** This is an open access protocol distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

**Protocol status:** Working

**Created:** Nov 02, 2022


**Last Modified:** Dec 27, 2022

**PROTOCOL integer ID:**

72192

**Keywords:** *Agrobacterium*, *Spizellomyces*

## Protocol 3: Growing liquid cultures of *Agrobacterium* prior to transformation day

 In 1 collection

Sarah M Prostack<sup>1</sup>, Edgar M Medina<sup>1</sup>, Erik Kalinka<sup>1</sup>, Lillian Fritz-Laylin<sup>1</sup>

<sup>1</sup>University of Massachusetts at Amherst



fritzlaylinlab.umass

### ABSTRACT

Overnight liquid cultures of *Agrobacterium* transformed with the plasmid(s) of interest must be prepared the night before *Spizellomyces* transformation day. Liquid cultures must be inoculated from active plates/colonies. If you would like to use 25% glycerol stocks of previously transformed *Agrobacterium*, streak the desired cells onto the appropriate LB+selection plate, let it grow for 2-4 days at 28°C, then use this plate to inoculate the liquid media at least 12 hours before the intended transformation time. Ensure proper sterile technique throughout the protocol, using either a laminar flow hood or working in the sterile area around an open flame


### ATTACHMENTS

[Spizellomyces transformation steps.pdf](#)


## MATERIALS TEXT

### Materials


- Active plate of wild-type *Agrobacterium tumefaciens* EHA105 (

 EHA105 *Agrobacterium* ElectroCompetent Cells **Gold Biotechnology Catalog # CC-225-5x50**


), grown at 28°C for at least 48 hours.
- Active plate(s) of *Agrobacterium tumefaciens* EHA105 (

 EHA105 *Agrobacterium* ElectroCompetent Cells **Gold Biotechnology Catalog # CC-225-5x50**


) transformed with your plasmid(s) of interest (see Protocol 1), grown at 28°C for at least 48 hours.
- LB liquid media with and without selection antibiotics, sterile (see recipe)
- Culture tubes, sterile (such as 

 VWR® Culture Tubes Plastic with Dual-Position Caps **VWR Avantor Catalog #60818-703**

)
- Inoculation loops (such as 

 Fisherbrand™ Disposable Inoculating Loops and Needles **Fisher Scientific Catalog #22-363-602**

; pipette tips are also an acceptable alternative)
- Laminar flow hood, or open flame to maintain sterility
- 70% (v/v) ethanol for maintaining sterility (if using laminar flow hood)
- Shaking incubator at 

 28 °C

## BEFORE START INSTRUCTIONS

Perform this protocol the night before your intended *Spizellomyces* transformation time.


## ATTACHMENTS

[Spizellomyces transformation steps.pdf](#)

12h

## Steps

- 1 Fill the appropriate amount of culture tubes each with 

 5 mL of LB liquid media.

### Note

Use one culture tube per plasmid or control. Double check you are using the proper selection antibiotic (or lack thereof) for the *Agro* strain to be grown.

2 Using an inoculation loop or pipette tip, gently scrape the surface of the appropriate Agro plate to collect the bacteria or pick the colony of interest.

3 Swirl the loop or tip to dislodge the bacteria into the media of the appropriate culture tube.

4 Incubate at  28 °C , shaking at  225 rpm, 12:00:00 , or  Overnight .

12h

