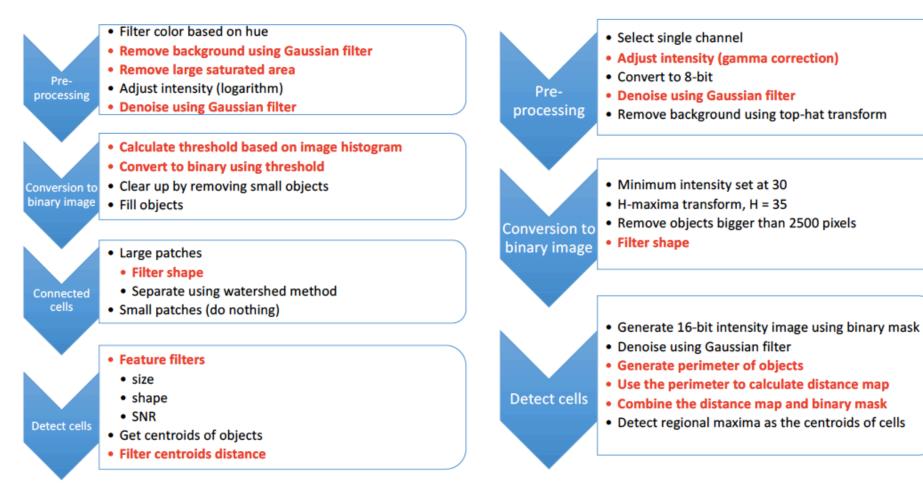
## Bingxing's algorithm



Red steps are to be kept. Other parts are still under discussion/testing.

Keerthi & Sukhandu's algorithm

## Consolidated cell detection strategy

Preprocessing

- Boost single channel intensity relative to other channels
- Remove background using Gaussian filter
- · Remove large saturated area
- Adjust intensity (gamma correction)
- Denoise using Gaussian filter

Conversion to binary image

- Calculate threshold based on image histogram
- Convert to binary using threshold
- Clear up by removing small objects
- Fill objects

Connected cells

- Large patches
  - Filter shape
- Small patches (do nothing)

Generate perimeter of objects

- Use the perimeter to calculate distance map
- Combine the distance map and binary mask
- · Watershed method by converting local maxima to minima
- Feature filters
- · Get centroids of objects
- Filter centroids distance

Detect cells