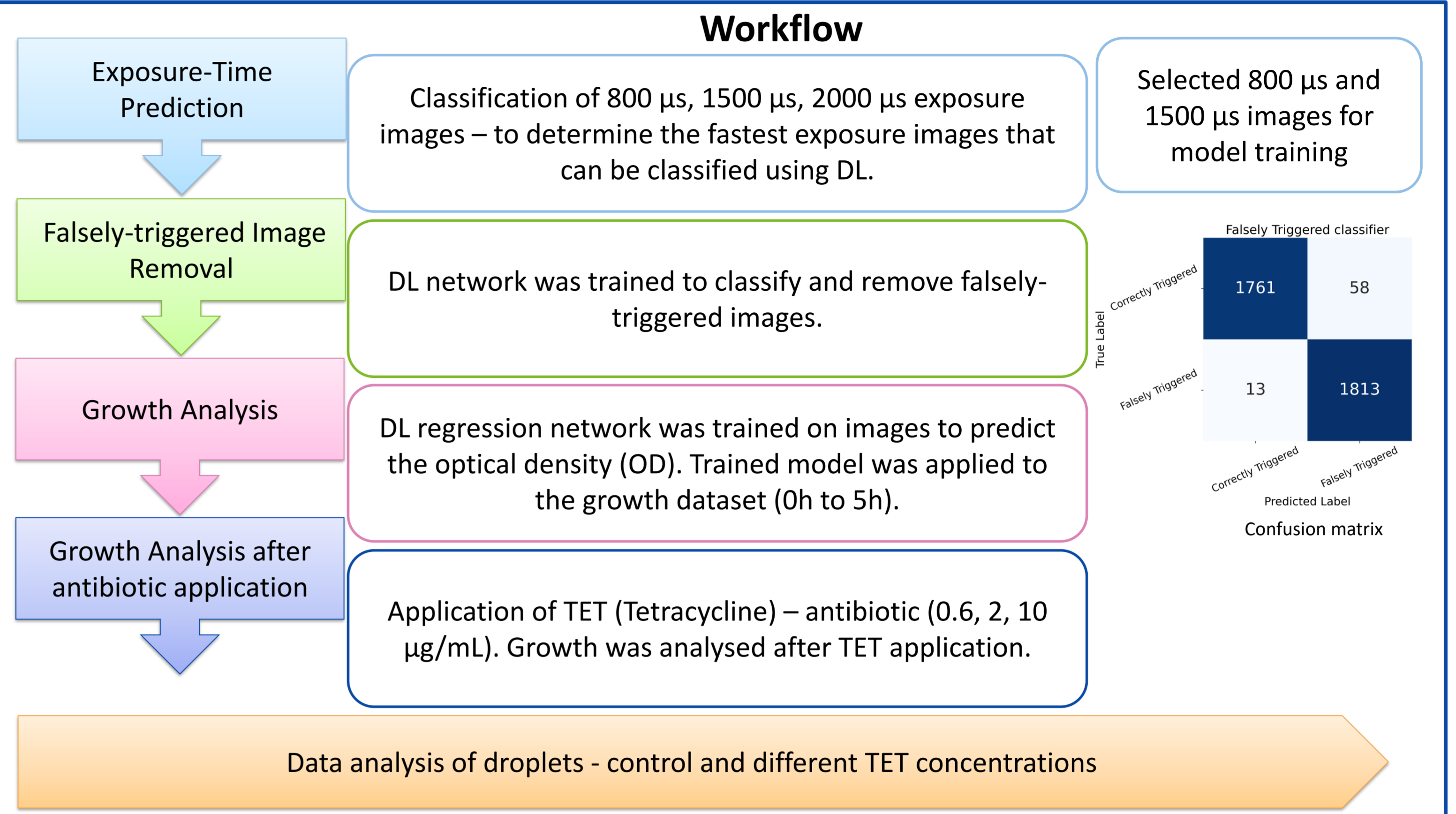
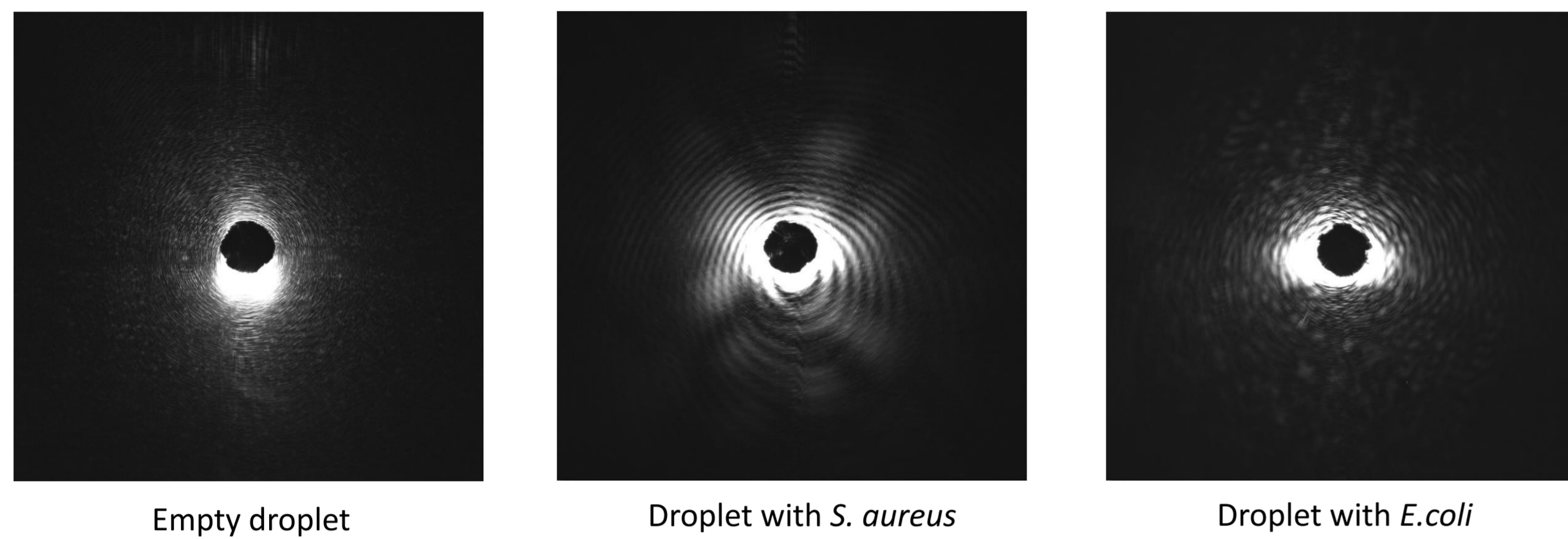


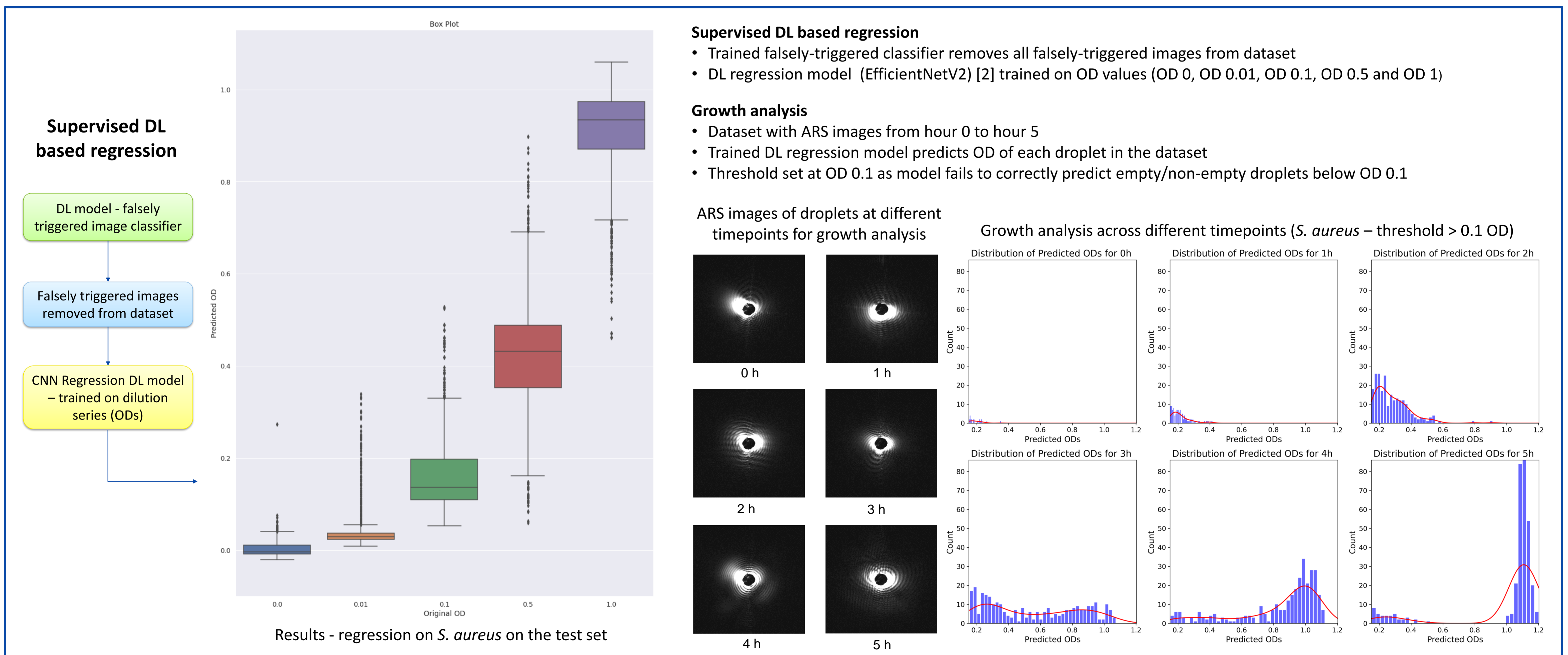
Microfluidic droplets and angle-resolved scatter (ARS) images

- Angle-resolved scattered light imaging (ARS) gives fast and highly resolved information about structures and objects [1]
- ARS applied to picoliter-sized droplets in flow to detect cell growth on a single-cell level
- Two bacteria species - *Staphylococcus aureus* and *Escherichia coli*
- Traditional image analysis and Deep Learning (DL) technique to quantify changes in spectra
- Goal is to detect cell division events for rapid antibiotic susceptibility testing

ARS images of droplet with *S. aureus* and *E. coli*



Training DL regression model and Growth analysis



Growth analysis after antibiotic (TET) application

