



UNIVERSITÀ  
di VERONA

Scuola di Dottorato  
di SCIENZE NATURALI ED INGEGNERISTICHE

Corso di Dottorato in Biotecnologie

## PhD Course

# “Engineering and biotechnological applications of staphylococcal lipases”

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### Abstract

Lipases (glycerol ester hydrolases EC 3.1.1.3) catalyse the hydrolysis of triacylglycerols and several other substrates containing ester bonds with an astonishing variety in their regio- and stereo-specificity as well as in their selectivity towards the length and saturation degree of the acyl chain. Staphylococcal lipases have attracted attention because of their considerable potentialities to synthesize many molecules with high value added. In fact, these lipases are immobilized to be used in non-aqueous media as biocatalyst to catalyze the esterification, the trans-esterification and the inter-esterification. They have also many applications in the field of biotechnology such as in laundry detergent manufacture, food processing, and in stereo-specific biocatalytic processes. The study of the structure-function relationship of staphylococcal lipases (purification, expression, modelling, direct mutagenesis) can be performed in order to improve the catalytic performance, specificity, stability and penetration power of these enzymes for possible biotechnological uses.

### CLASS MEETING

25.9.2019 – 14.30-16.30 – ROOM B

26.9.2019 – 14.30-16.30 – ROOM B

27.9.2019 – 14.30-16.30 – ROOM B

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For each hour of this course, 1 CFU (provided for the specific activities of PhD Program in Biotechnology) will be recognized to students attending the event.

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