

## Microbial Fermentation

From strain development to large scale production of biobased materials.



## One-stop-shop for your development and manufacturing needs

- Over 40 years of experience in fermentation and bioconversion
- Expertise in biomaterials, bio-polymers, cosmetics, collagens, proteins, APIs, amino acid derivatives and advanced food ingredients
- Western-centric fermentation asset footprint
- 4000 m<sup>3</sup> global CDMO fermentation capacity with fermentors of up to 250 m<sup>3</sup> with expansion possibilities

### North and South America



● Research & Development sites

● Microbial fermentation/DSP production sites

### Europe



### Lafayette, IN, USA

#### Tippecanoe Labs

- 2500 m<sup>3</sup> fermentation capacity
- 70 m<sup>3</sup>, 140 m<sup>3</sup>, 250 m<sup>3</sup> reactors
- cGMP
- Dedicated DSP

#### Slovenská L'upča, Slovakia

#### Evonik Fermas

- 1200 m<sup>3</sup> fermentation capacity
- 2 L, 40 L, 5 m<sup>3</sup>, 50 m<sup>3</sup> reactors
- GMP, FSSC 22000, FAMI QS, ISO, Kosher, Halal, Food Certified
- Flexible DSP, including protein purification

## Wide range of organisms used in strain development and fermentation

1

Bacteria

2

Yeast

3

Algae

4

Fungi



- Evonik offers services along the whole value chain: starting from the product idea to large-scale commercial manufacturing
- Deep understanding of "Time-to-Market"
- Competence and capabilities of a global player with the agility of a start-up
- High-throughput screening for strain development
- Unique combination of fermentation and chemical modifications up to HPAPI
- Flexible business models: CDMO, joint-venture, joint-development, distribution
- Prioritizing sustainability through process improvements, energy-efficient technologies, and green utilities, such as hydropower

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