

# Safety assessment of strains of *Lactobacillus* isolated from different fermented foods: biogenic amine production.

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## INTRODUCTION

- Biogenic amines (BA) are low molecular weight substance, formed mainly by decarboxylation of amino acids present in food by some microorganisms.
- They are **toxic compounds** that can cause **adverse effects on consumers**.
- Since the accumulation of BA presents a toxicological risk to the health of the consumer, is very important to **control their occurrence and production in food**.
- Lactobacillus* are GRAS (Generally Recognized As Safe) **but they are able to produce BA**.
- Is essential to **evaluate the safety of the strains** to be used for food production.

## RESULTS

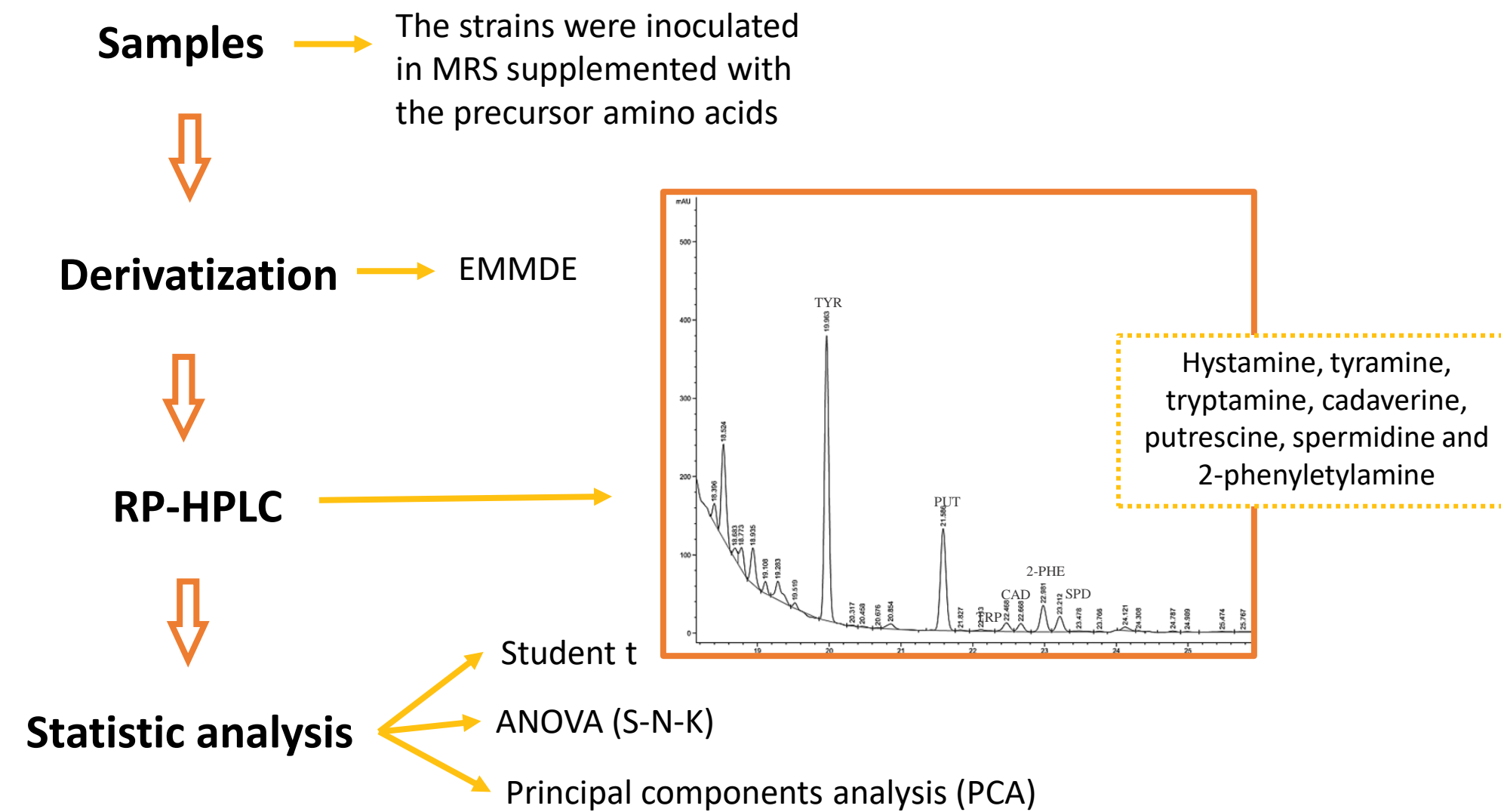
	HIS	TYR	PUT	TRP	CAD	2-PHE	SPD	Total
Max. (mg/L)	nd	383,46	527,85	2,72	852,88	27,99	2,44	1629,75
Min. (mg/L)	nd	nd	nd	nd	nd	nd	nd	nd

Non-producers strains → 17,5%

Strains	Specie
34, 36, 70, 77, 95, 107, 108 y 112	<i>Lb. plantarum</i>
47, 61, 86 y 100	<i>Lb. brevis</i>
91, 104 y 116	<i>Lb. acidophilus</i>
4	<i>Lb. paracasei</i>
8	<i>Lb. curvatus</i>
19	<i>Lb. fermentum</i>

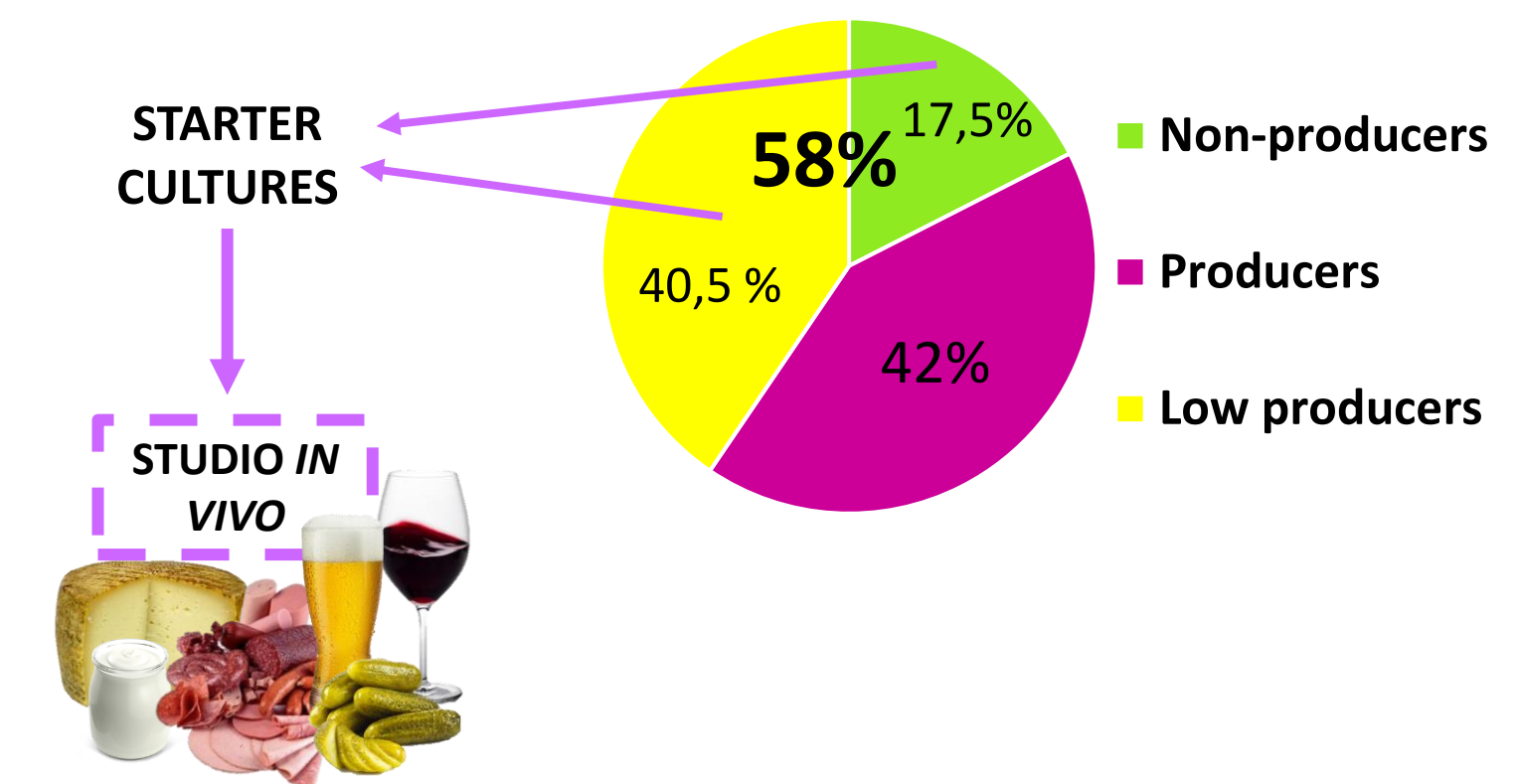
Specie	Origin	Nº of strains
<i>Lb. plantarum</i>	Almagro aubergines	27
	Manchego cheese	4
	Air from a cellar	4
<i>Lb. brevis</i>	Wine	2
	Almagro aubergines	23
	Beer	4
<i>Lb. paracasei</i>	Air from a cellar	1
	Wine	1
	<i>Lb. fermentum</i>	Manchego cheese
<i>Lb. acidophilus</i>	Air from a cellar	1
<i>Lb. fermentum</i>	Almagro aubergines	5
<i>Lb. fermentum</i>	Air from a cellar	1
<i>Lb. fermentum</i>	Almagro aubergines	6
<i>Lb. pentosus</i>	Almagro aubergines	4
<i>Lb. cellobiosus</i>	Manchego cheese	1
<i>Lb. cellobiosus</i>	Wine	1
<i>Lb. curvatus</i>	Manchego cheese	2
<i>Lb. hilgardii</i>	Air from a cellar	1
<i>Lb. hilgardii</i>	Wine	1
<i>Lb. casei</i>	Wine	1
<i>Lb. delbrueckii</i>	Almagro aubergines	1
<i>Lb. rhamnosus</i>	Manchego cheese	1
<i>Lb. spp</i>	Almagro aubergines	1
<b>TOTAL</b>		<b>103</b>

## MATERIAL AND METHODS



## CONCLUSIONS

Most produced BAs: CAD, PUT y TYR  
Less produced BAs : TRP, 2-PHE y SPD



## Biogenic Amine Production

