

Combinatory library of microorganisms in the selection of reductive activity applied to a ketone mixture: highlighting of an enantioselective oxidative activity.

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Table S1. Wet weight of harvested biomass

Figure S1. GC chromatogram of mixture of authentic sample of substrates and their reduction products.

Figure S2. Chromatograms of phenylethanol on chiral column

Table S2. Analysis of biotransformation of ketones by CLMs

Table S1. Wet weight (in g) of harvested and incubated biomass

Strains	Weight of harvested biomass	Weight of incubated biomass
<i>Candida magnolia</i> MUCL27871	2.08	0.347
<i>Cryptococcus humicola</i> MUCL 30305	5.05	0.842
<i>Kluyveromyces dobzanskii</i>	2.01	0.670
<i>Cryptococcus macerans</i> MUCL 30616	0.87	0.145
<i>Rhodotorula buffonii</i> MUCL 29812	3.03	0.505
<i>Pichia guilliermondii</i> MUCL 27758	2.25	0.750
<i>Rhodospirium toruloides</i> MUCL 30328	2.97	0.495
<i>Saccharomyces uvarum</i> NRRL Y969	2.03	0.338
<i>Sporidiobolus johnsonii</i> ATCC 20490	1.89	0.630
<i>Zygosaccharomyces fermentati</i> MUCL 31281	2.22	0.370
<i>Rhodotorula minuta</i> MUCL 30637	3.94	0.657
<i>Rhodotorula mucilaginosa</i>	3.13	1.043
<i>Pichia minuta</i> MUCL 27758	3.25	0.542
<i>Rhodospiridium toruloides</i> MUCL 30010	1.44	0.240
<i>Pichia anomala</i> NRRL Y40	1.99	0.663
<i>Kloeckera magna</i> NRRL Y1611	1.29	0.215
<i>Torulasporea delbruckii</i> MUCL 27816		
<i>Candida pinus</i> MUCL 27856	2.09	0.697
<i>Saccharomyces montanus</i> CBS 6772	1.80	0.300
<i>Saccharomyces sp.</i>	1.87	0.312
<i>Rhodotorula rubra</i> ATCC 4055	1.68	0.560
<i>Rhodotorula pilimanae</i> MUCL 27811	1.57	0.262
<i>Rhodotorula glutinis</i> NRRL 41091	1.55	0.258
<i>Yarrowia lipolytica</i> MUCL 29853		

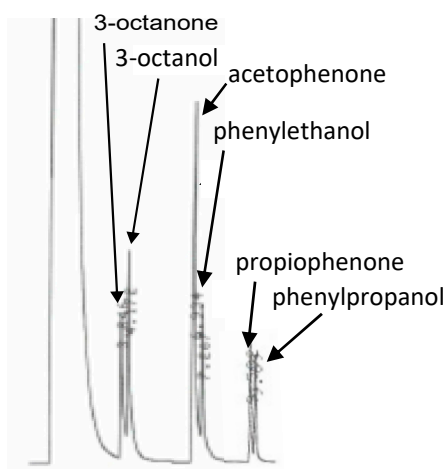
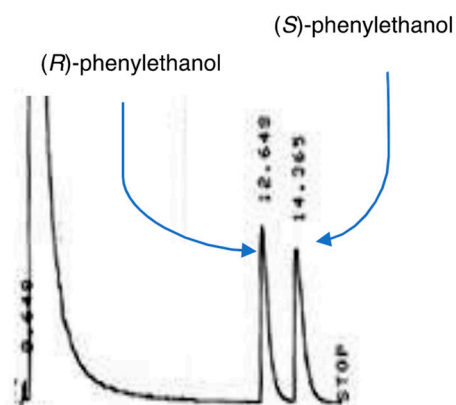
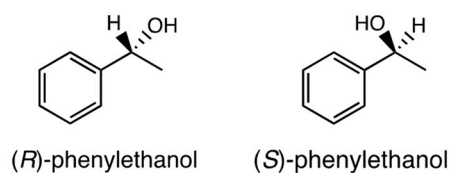


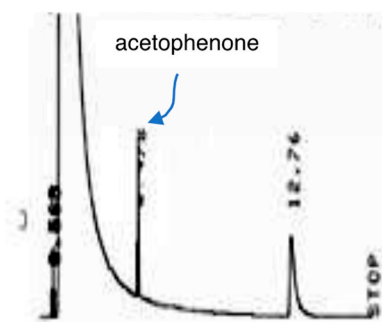
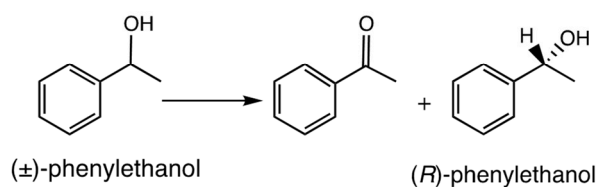
Fig. S1. GC chromatogram of mixture of authentic sample of substrates and their reduction products.

Conditions: Column OV1701 (Pierce, 15 m x 0.20 mm) capillary column, with helium (10 Psi) as a carrier gas, 90°C (5 min) then 90-120°C (5°C/min).

(A)



(B)



(C)

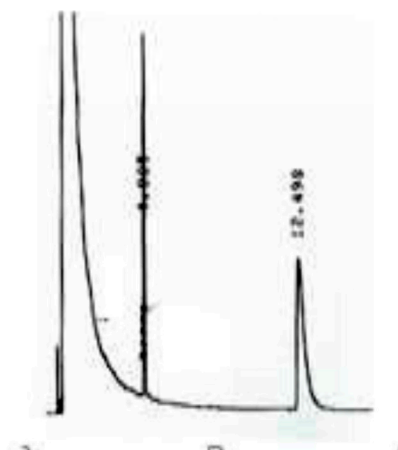
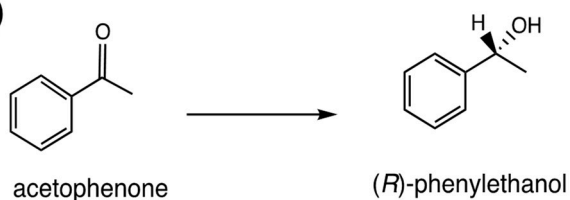


Fig. S2. Chromatograms of phenylethanol on chiral column

A: racemic mixture

B: Residual phenylethanol after 24h of incubation time with *R. buffoni* in aerobic conditions

C: Phenylethanol produced by reduction of acetophenone by *R. buffoni* in aerobic conditions after 24h of incubation time

Conditions: column CP-chirasil-Dex CB 25 m 0.32 mm, 25 μ m, carrier gas He 15 Psi, oven temperature 100°C.

Table S2: Analysis of biotransformation of ketones by CLMs. Colour indicates the progress of the reaction (conversion %): blue: $c < 50\%$, purple: $50 < c < 80$ red: $c > 80\%$

CLM	Time (h)	2-octanone 	3-octanone 	Acetonaphthone 	Propiophenone 	Acetophenone
1	4					
	24					
2	4					
	24					