

Supplementary data

Supplementary Table 1. Grid coordinates used for molecular docking of oxidoreductase enzymes from *Limosilactobacillus fermentum* UAS LAB 6 with AHL ligands

Sl.No.	Protein	Grid center (x, y, z)
1	Short-chain dehydrogenase/reductase SDR	25.4901696964, 14.7939289778, 1.28078884537
2	NAD(P)H-dependent oxidoreductase	16.6815562731, 1.22807975357,- 6.81848918967
3	SDR family NAD(P)-dependent	11.7973561672, 8.19800839203, 14.9431796767
4	SDR family NAD(P)-dependent oxidoreductase	27.8097834897, 14.6085584306, 0.436343500401
5	Aldo/keto reductase	20.6991133132, -8.34983505486, -11.2640619387
6	NAD(P)H-dependent oxidoreductase	5.99505748792, -10.5602559729, -9.96500506827
7	NADPH-dependent F420 reductase	12.9684833496, -0.200349779222, -11.525915761
8	SDR family oxidoreductase	-6.35764918507, 13.422743446, 1.56485636251
9	SDR family NAD(P)-dependent oxidoreductase	5.24095167662, -7.76331023112, -11.6859273709
10	SDR family NAD(P)-dependent oxidoreductase	17.1613236777, -3.47625266253, 5.83068824844
11	NADH-dependent oxidoreductase	12.9309500327, 25.540755583, 6.75347933687

Supplementary Table 2. Molecular docking results of oxidoreductase enzymes from *L. fermentum* UAS LAB 6 with AHLs of *Pseudomonas* sp.

Sl. No.	Protein	ligand	Binding energy ΔG (kcal mol ⁻¹)	Dissociation constant Kd (M) at 25°C
1	Short-chain dehydrogenase/reductase SDR	3-oxo-C6-HSL	-6.5	1.71e-05
		C4-HSL	-5.7	6.60e-05
		C6-HSL	-6.7	1.22e-05
		C8-HSL	-6.8	1.03e-05
		C10-HSL	-6.3	2.39e-05
		3-oxo-C14-HSL	-7.4	3.74e-06
2	NAD(P)H-dependent oxidoreductase	3-oxo-C6-HSL	-5.4	1.09e-04
		C4-HSL	-5.1	1.82e-04
		C6-HSL	-5.5	9.25e-05
		C8-HSL	-5.8	5.57e-05
		C10-HSL	-5.9	4.71e-05
		3-oxo-C14-HSL	-6.0	3.97e-05
3	SDR family NAD(P)-dependent oxidoreductase	3-oxo-C6-HSL	-6.4	2.02e-05
		C4-HSL	-5.7	6.60e-05
		C6-HSL	-6.1	3.36e-05
		C8-HSL	-6.3	2.39e-05
		C10-HSL	-6.3	2.39e-05
		3-oxo-C14-HSL	-6.9	8.69e-06
4	SDR family NAD(P)-dependent oxidoreductase	3-oxo-C6-HSL	-6.6	1.44e-05
		C4-HSL	-5.8	5.57e-05
		C6-HSL	-6.2	2.84e-05
		C8-HSL	-6.1	3.36e-05
		C10-HSL	-6.5	1.71e-05
		3-oxo-C14-HSL	-6.5	1.71e-05
5	Aldo/keto reductase	3-oxo-C6-HSL	-5.5	9.25e-05
		C4-HSL	-4.8	3.02e-04
		C6-HSL	-5.4	1.09e-04
		C8HSL	-5.9	4.71e-05
		C10-HSL	-5.6	7.81e-05
		3-oxo-C14-HSL	-5.5	9.25e-05
6	NAD(P)H-dependent oxidoreductase	3-oxo-C6-HSL	-6.5	1.71e-05
		C4-HSL	-5.8	5.57e-05
		C6-HSL	-5.4	1.09e-04
		C8-HSL	-6.2	2.84e-05
		C10-HSL	-5.5	9.25e-05
		3-oxo-C14-HSL	-6.6	1.44e-05
7	NADPH-dependent F420 reductase	3-oxo-C6-HSL	-5.9	4.71e-05
		C4-HSL	-5.2	1.53e-04

		C6-HSL	-5.4	1.09e-04
		C8-HSL	-5.6	7.81e-05
		C10-HSL	-5.9	4.71e-05
		3-oxo-C14-HSL	-5.5	9.25e-05
8	SDR family oxidoreductase	3-oxo-C6-HSL	-5.3	1.30e-04
		C4-HSL	-4.5	5.01e-04
		C6-HSL	-5.3	1.30e-04
		C8-HSL	-5.5	9.25e-05
		C10-HSL	-5.6	7.81e-05
		3-oxo-C14-HSL	-4.9	2.55e-04
9	SDR family NAD(P)-dependent oxidoreductase	3-oxo-C6-HSL	-4.5	5.01e-04
		C4-HSL	-4.8	3.02e-04
		C6-HSL	-4.2	8.31e-04
		C8-HSL	-4.5	5.01e-04
		C10-HSL	-4.6	4.23e-04
		3-oxo-C14-HSL	-4.8	3.02e-04
10	SDR family NAD(P)-dependent oxidoreductase	3-oxo-C6-HSL	-4.6	4.23e-04
		C4-HSL	-4.4	5.93e-04
		C6-HSL	-4.1	9.84e-04
		C8-HSL	-4.7	3.57e-04
		C10-HSL	-4.6	4.23e-04
		3-oxo-C14-HSL	-4.7	3.57e-04
11	NADH-dependent oxidoreductase	3-oxo-C6-HSL	-5.3	1.30e-04
		C4-HSL	-5.2	1.53e-04
		C6-HSL	-4.7	3.57e-04
		C8-HSL	-5.2	1.53e-04
		C10-HSL	-5.7	6.60e-05
		3-oxo-C14-HSL	-4.9	2.55e-04