Identification of Barley (*Hordeum vulgare* L. subsp. *vulgare*) Root Exudates Allelochemicals, Their Autoallelopathic Activity and Against *Bromus diandrus* Roth. Germination

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Table S1. Physico-chemical proprieties of the growing substrates. Values are means ± SE of four replicates and different letters indicate significant differences at $p \leq 0.05$ (LSD test).

	Sandy substrat	Sandy-clay-loam substrate
Sand (%)	100 ± 0.0[a]	68.51 ± 0.0[b]
Silt (%)	0 ± 0.0[a]	8.08 ± 0.0[b]
Clay (%)	0 ± 0.0[a]	24.61 ± 0.0[b]
pH	7.71 ± 0.05[a]	8.35 ± 0.05[b]
CE (dS m^{-1})	75.20 ± 1.43[a]	275.33 ± 5.00[b]
OM (%)	0.18 ± 0.04[a]	1.29 ± 0.14[b]
C (%)	0.10 ± 0.02[a]	0.75 ± 0.08[b]
N (g kg^{-1})	0.23 ± 0.05[a]	0.57 ± 0.12[b]
P (mg kg^{-1})	3.25 ± 0.25[a]	12.26 ± 0.02[b]
K (mg kg^{-1})	10.00 ± 1.00[a]	30.00 ± 0.01[b]
Ca (mg kg^{-1})	17.00 ± 2.00[a]	285.00 ± 5.00[b]
Na (mg kg^{-1})	13.50 ± 3.5[a]	20.00 ± 5.00[a]

OM: organic matter; EC: electrical conductivity.

Table S2. Inhibition rate of root and shoot length, and root and shoot dry weight of great brome (*B. diandrus*) grown in sandy and sandy-clay-loam substrates in which the six barley genotypes had previously developed for one month before being removed. Values are means of five replicates ± SE and different letters indicate significant differences at $p \leq 0.05$ (LSD test).

	Sandy substrat				Sandy-clay-loam substrate			
	Inhibition rate of root length	**Inhibition rate of shoot length**	**Inhibition rate of root dry weight**	**Inhibition rate of shoot dry weight**	**Inhibition rate of root length**	**Inhibition rate of shoot length**	**Inhibition rate of root dry weight**	**Inhibition rate of shoot dry weight**
Manel	8.73 ± 2.41^{a}	12.51 ± 2.51^{a}	8.65 ± 1.93^{a}	9.59 ± 3.09^{a}	4.97 ± 0.44^{a}	8.06 ± 0.88^{a}	3.85 ± 1.65^{a}	3.54 ± 2.86^{a}
Tej	9.23 ± 0.42^{a}	9.67 ± 1.44^{a}	9.04 ± 0.73^{b}	11.56 ± 3.11^{a}	11.74 ± 1.41^{a}	7.73 ± 3.21^{a}	9.48 ± 2.63^{b}	6.21 ± 1.35^{a}
Rihane	25.21 ± 1.53^{b}	24.87 ± 1.97^{b}	18.98 ± 0.81^{c}	15.42 ± 1.42^{b}	18.41 ± 3.07^{b}	15.03 ± 2.76^{a}	6.70 ± 0.26^{ab}	7.21 ± 1.39^{a}
Arbi	40.17 ± 1.49^{c}	33.37 ± 0.74^{cd}	28.19 ± 2.72^{d}	31.07 ± 1.93^{c}	25.47 ± 1.40^{c}	24.71 ± 2.69^{bc}	23.32 ± 2.48^{c}	17.53 ± 1.44^{b}
Ardhaoui	41.39 ± 1.79^{c}	30.00 ± 1.17^{c}	29.87 ± 1.81^{cd}	26.21 ± 0.41^{c}	22.75 ± 2.45^{c}	27.72 ± 1.29^{b}	20.67 ± 0.70^{c}	9.37 ± 2.94^{a}
Saudi	42.05 ± 1.86^{c}	36.37 ± 1.80^{d}	29.36 ± 2.56^{d}	33.06 ± 1.95^{c}	28.36 ± 1.93^{c}	24.09 ± 1.49^{c}	22.63 ± 0.90^{c}	18.17 ± 2.38^{b}

Table S3. Total phenolic acid content (mg / g soil) according to tested genotypes of barley and type of substrate. Values represent the mean ± SE of five replicates and different letters indicate significant differences at $p \leq 0.05$ (LSD test).

	Sandy substrat	Sandy-clay-loam substrate
Control	0.21 ± 0.00[a]	0.23 ± 0.01[a]
Manel	0.31 ± 0.01[b]	0.29 ± 0.04[ab]
Tej	0.32 ± 0.01[b]	0.29 ± 0.03[ab]
Rihane	0.29 ± 0.02[ab]	0.29 ± 0.01[ab]
Arbi	0.58 ± 0.04[c]	0.36 ± 0.04[bc]
Ardhaoui	0.36 ± 0.04[b]	0.39 ± 0.00[c]
Saudi	0.58 ±0.04[c]	0.38 ± 0.03[c]

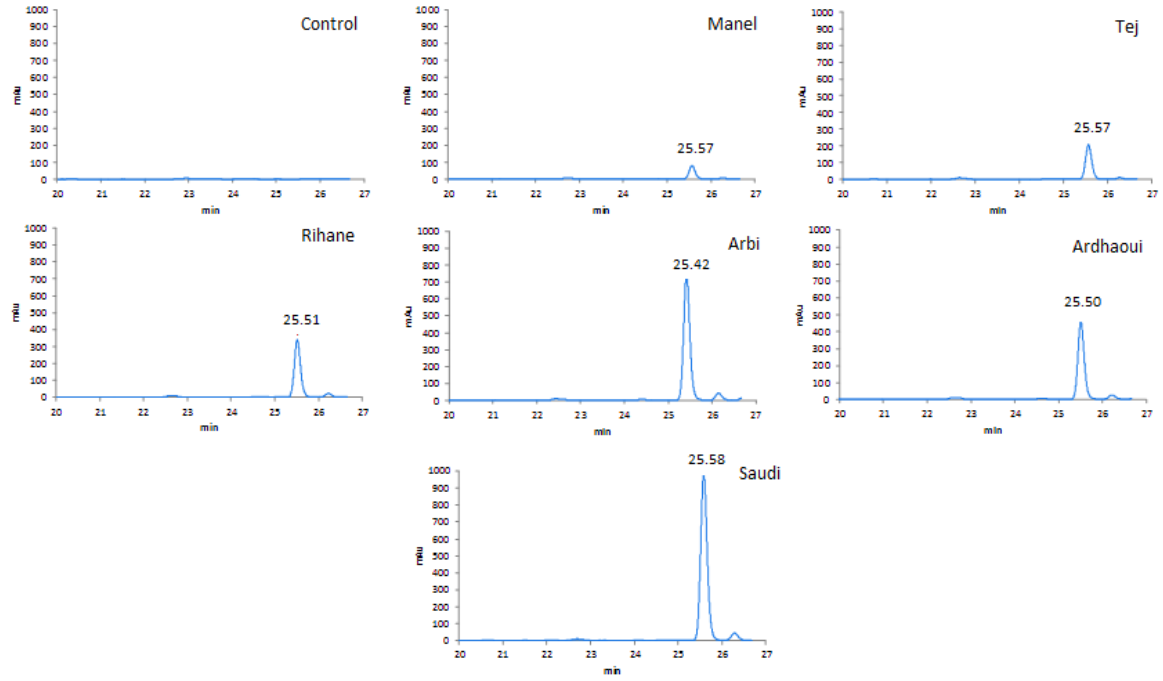

Figure S1. Chromatograms of sandy soil extracts of the control and of those pre-cultivated by the six barley genotypes detected at 330 nm.