

Supporting information for:

Lactobacilli profile in faecal samples of Tunisian children diagnosed with Autism Spectrum Disorder

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Table S1 Molecular identification of lactobacilli strains isolated from stools of autistic children (ASD), their siblings (SIB) and children from the general population (GP)

Isolates code	Child code	Origin	Species identification by partial 16S rRNA gene sequencing	Accession number to an identical sequence in GenBank	Percent identity (%)
Lacto A1	A1	ASD	<i>L. salivarius</i>	KP090131.1	99.40%
Lacto A2I1	A2	ASD	<i>L. salivarius</i>	MT611610.1	99.60%
Lacto A2I2	A2	ASD	<i>L. mucosae</i>	MT463485.1	99.80%
Lacto A3	A3	ASD	<i>L. salivarius</i>	KP090131.1	99.39%
Lacto A5	A5	ASD	<i>L. paracasei</i>	MK652788.1	99.59%
Lacto A6I1	A6	ASD	<i>L. rhamnosus</i>	MN966850.1	99.80%
Lacto A6I2	A6	ASD	<i>L. gasseri</i>	MT597618.1	100%
Lacto A10	A10	ASD	<i>L. rhamnosus</i>	OQ117234.1	99.80%
Lacto A11I1	A11	ASD	<i>L. rhamnosus</i>	AY773957.1	99.38%
Lacto A11I2	A11	ASD	<i>L. gasseri</i>	MT597618.1	100%
Lacto A12	A12	ASD	<i>L. salivarius</i>	MT611849.1	100%
Lacto A14I1	A14	ASD	<i>L. rhamnosus</i>	MG515300.1	99.18%
Lacto A14I2	A14	ASD	<i>L. gasseri</i>	ON377140.1	99.39%
Lacto A15	A15	ASD	<i>L. plantarum</i>	MT538537.1	98.55%
Lacto A17	A17	ASD	<i>L. plantarum</i>	MT473388.1	99.80%
Lacto A18	A18	ASD	<i>L. paracasei</i> / <i>L. casei</i>	MH891695.1 (<i>L. paracasei</i>) MN809276.1 (<i>L. casei</i>)	99.59% (<i>L. paracasei</i>) 99.59% (<i>L. casei</i>)
Lacto A20	A20	ASD	<i>L. salivarius</i>	MT613472.1	98.75%
Lacto A21	A21	ASD	<i>L. salivarius</i>	MT611610.1	99.17%
Lacto A23	A23	ASD	<i>L. fermentum</i>	OL455693.1	98.98%
Lacto A25	A25	ASD	<i>L. salivarius</i>	MT611610.1	98.12%

Lacto A27	A27	ASD	<i>L. salivarius</i>	MT613472.1	98.97%
Lacto S1	S1	SIB	<i>L. paracasei</i> / <i>L. casei</i>	MT538897.1 (<i>L. paracasei</i>) MN650243 (<i>L. casei</i>)	98.18% (<i>L. paracasei</i>) 98.18% (<i>L. casei</i>)
Lacto S2	S2	SIB	<i>L. rhamnosus</i>	MT611887.1	99.02%
Lacto S4	S4	SIB	<i>L. rhamnosus</i>	MG461545.1	99.80%
Lacto S6I1	S6	SIB	<i>L. plantarum</i>	MF972523.1	98.57%
Lacto S6I2	S6	SIB	<i>L. gasseri</i>	MT464216.1	99.40%
Lacto S7	S7	SIB	<i>L. plantarum</i>	MT613640.1	98.99%
Lacto S8	S8	SIB	<i>L. plantarum</i> / <i>L. pentosus</i>	MW447608.1 (<i>L. plantarum</i>) MH342629.1 (<i>L. pentosus</i>)	99.59% (<i>L. plantarum</i>) 99.59% (<i>L. pentosus</i>)
Lacto S9	S9	SIB	<i>L. plantarum</i>	MZ208271.1	99.59%
Lacto S13	S13	SIB	<i>L. penstosus</i> / <i>L. plantarum</i>	MT611839.1 (<i>L. plantarum</i>) OM758292.1 (<i>L. pentosus</i>)	99.60% (<i>L. plantarum</i>) 99.60% (<i>L. pentosus</i>)
Lacto S15	S15	SIB	<i>L. rhamnosus</i>	MT611775.1	99.21%
Lacto S17	S17	SIB	<i>L. salivarius</i>	MT611610.1	98.57%
Lacto S18	S18	SIB	<i>L. rhamnosus</i>	MT197200.1	99.79%
Lacto G1I1	G1	GP	<i>L. rhamnosus</i>	MT613449.1	99.20%
Lacto G1I2	G1	GP	<i>L. fermentum</i>	KY435721.1	100%
Lacto G3	G3	GP	<i>L. salivarius</i>	MT613535.1	99.59%
Lacto G7	G7	GP	<i>L. plantarum</i>	MT473388.1	98.82%
Lacto G9	G9	GP	<i>L. salivarius</i>	MT613535.1	99.59%
Lacto G10	G10	GP	<i>L. plantarum</i>	MN746321.1	98.97%
Lacto G12	G12	GP	<i>L. plantarum</i>	MT613640.1	97.01%
Lacto G14	G14	GP	<i>L. paracasei</i>	MT545026.1	99.59%

Lacto G18	G18	GP	<i>L. plantarum</i>	MH249090.1	98.97%
Lacto G20	G20	GP	<i>L. rhamnossus</i>	KY197717.1	99.39%
Lacto G21	G21	GP	<i>L. salivarius</i>	CP029616.1	99.59%
Lacto G22	G22	GP	<i>L. salivarius</i>	EU559602.1	99.19%
Lacto G24	G24	GP	<i>L. fermentum</i>	MT463584.1	98.58%
Lacto G25	G25	GP	<i>L. plantarum</i>	MT611912.1	96.99%
Lacto G26	G26	GP	<i>L. rhamnossus</i>	MT611888.1	99.80%
Lacto G27	G27	GP	<i>L. salivarius</i>	ON000537.1	99.58%
Lacto G28	G28	GP	<i>L. salivarius</i>	EU559602.1	99.39%

A: Children from the ASD group; S: children from the SIB group; G: children from the GP group; I1 and I2 refer to 2 different isolates from the faecal sample of the same child.

Table S2 Number and prevalence of lactobacilli isolates in stools from autistic children (ASD), siblings (SIB) and children from the general population (GP) stratified by age (4-7 years, and 8-10 years) and according to the severity of disease (mild to moderate, and severe). P-values are indicated for statistical comparisons among the three groups of children and between the two ranges of severity of disease for the presence or absence of lactobacilli isolates in stool samples.

		Age						Severity	
		Children aged between 4 and 7 years (N= 35)			Children aged between 8 and 10 years (N = 39)				
		ASD (n = 10)	SIB (n = 11)	GP (n = 14)	ASD (n = 18)	SIB (n = 7)	GP (n = 14)	Children with mild to moderate ASD (n = 11)	Children with severe ASD (n = 17)
Lactobacilli isolation by culture	Positive culture n (%)	5 (50)	6 (54.5)	10 (71.4)	12 (66.7)	5 (71.4)	6 (42.9)	6 (54.5)	11 (64.7)
	Negative culture n (%)	5 (50)	5 (45.5)	4 (28.6)	6 (33.3)	2 (28.6)	8 (57.1)	5 (45.5)	6 (35.3)
	p-value	0.52			0.30			0.70	