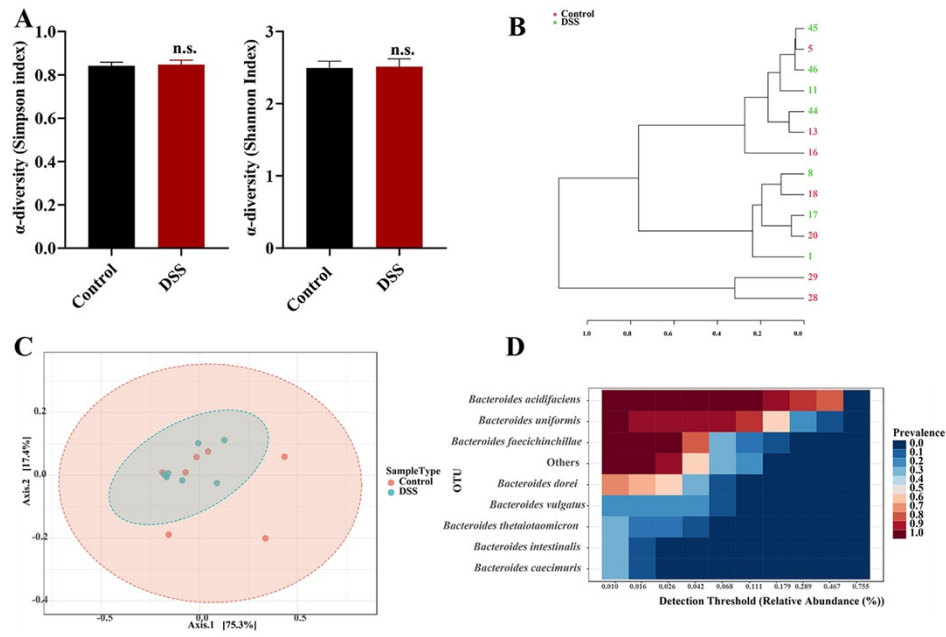


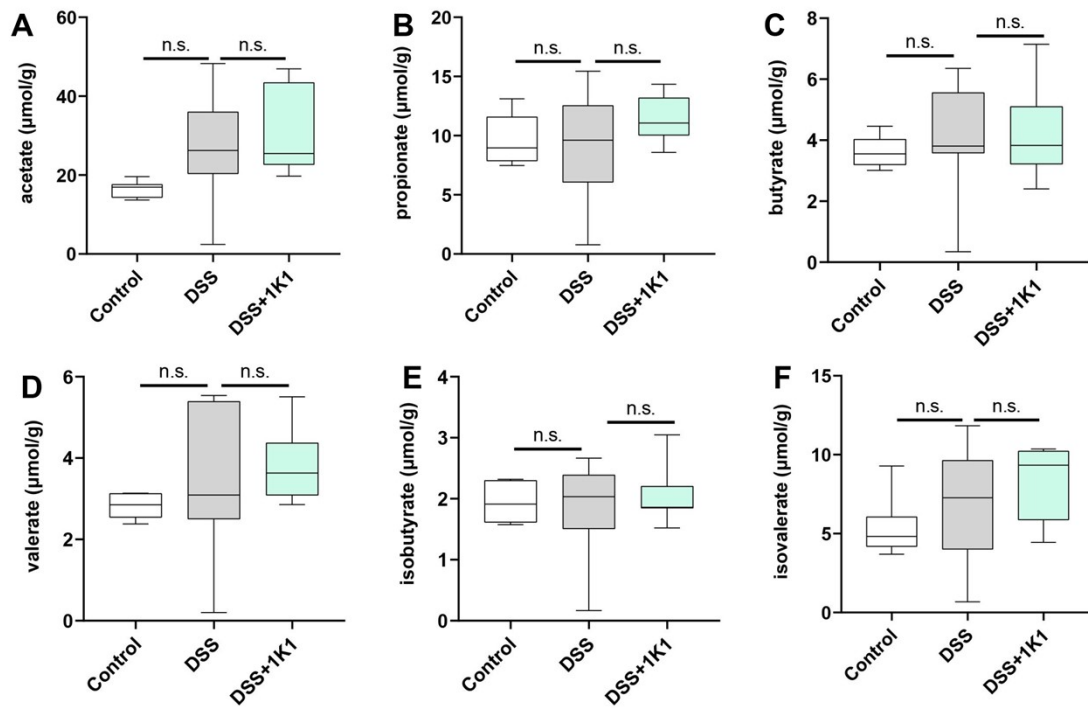
### Supplementary Figure 1 Intestinal microflora structure of mice before experiment

Note: (A) Microbial distribution (phylum level); (B) Alpha-diversity; (C) Principal coordinate analysis; (D) Horizontal structure cluster analysis.

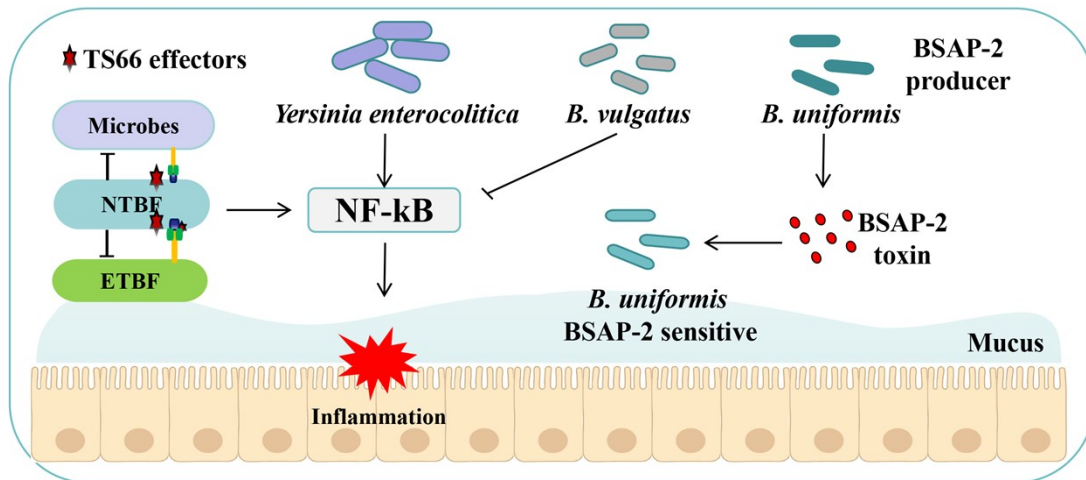


**Supplementary Figure 2 Structure of *Bacteroides* species level of mice before experiment**

Note: (A) Alpha-diversity; (B) Horizontal structure cluster analysis; (C) Principal coordinate analysis; (D) Core *Bacteroides* species.



Supplementary Figure 3. Effects of *B. uniformis* 1K1 on the concentrations of short-chain fatty acids (SCFAs)



#### Supplementary Figure 4. The interaction between *Bacteroides* strains and other microbes

Note: NTBF, non-toxigenic *B. fragilis*; ETBF, enterotoxigenic *B. fragilis*.

*Bacteroides* can affect other *Bacteroides* as well as microorganisms through a variety of complex pathways. Typically, *B. vulgatus* can inhibit the *Y. enterocolitica*-induced NF-kappaB activation and IL-8 production (Frick et al. doi:10.1128/IAI.00119-07). *B. uniformis* can secrete membrane attack complex/perforin toxins (BSAP-2) for intraspecies killing, especially the *B. uniformis* BSAP-2 sensitive strain (García-Bayona and Laurie. doi:10.1126/science.aat2456). Besides, type VI secretion systems (T6SSs) are a type of system that can realize the interspecific killing of *B. fragilis*. TS66 is a multiprotein complex that has been shown to inhibit or kill prokaryotic or eukaryotic cells. The toxic effector enters the target cell directly through the contractile bacteriophage tail T6SS to exert its inhibitory effect (García-Bayona and Laurie. doi:10.1126/science.aat2456). Therefore, the genus of *Bacteroides* is a complex and changeable system, which is easily affected by multiple external and internal factors.

**Supplementary Table1. Information about the origin of the fecal samples**

<b>Sample Number</b>	<b>Region</b>	<b>Sample type</b>	<b>Age</b>	<b>Sex</b>
BJ10	Beijing, China	Faeces	55	Woman
BJ37	Beijing, China	Faeces	61	Woman
BJ16	Beijing, China	Faeces	34	Man
BJ2	Beijing, China	Faeces	55	Woman
BJ20	Beijing, China	Faeces	61	Man
BJ55	Beijing, China	Faeces	47	Woman
BJ56	Beijing, China	Faeces	47	Man
BJ5	Beijing, China	Faeces	44	Man
BJ26	Beijing, China	Faeces	31	Woman
BJ1	Beijing, China	Faeces	52	Man
AHBZ18	Bozhou, Anhui, China	Faeces	63	Woman
AHBZ17	Bozhou, Anhui, China	Faeces	75	Woman
AHBZ32	Bozhou, Anhui, China	Faeces	2	Man
AHBZ34	Bozhou, Anhui, China	Faeces	52	Man
AHBZ33	Bozhou, Anhui, China	Faeces	46	Woman
AHBZ8	Bozhou, Anhui, China	Faeces	56	Woman
AHBZ6	Bozhou, Anhui, China	Faeces	53	Man
FTJS35	Tianjin, China	Faeces	56	Man
FTJS22	Tianjin, China	Faeces	56	Man
FTJS15	Tianjin, China	Faeces	3	Woman
FTJS7	Tianjin, China	Faeces	50	Man
FTJS16	Tianjin, China	Faeces	5	Woman
FTJS25	Tianjin, China	Faeces	56	Woman
FTJS21	Tianjin, China	Faeces	3	Woman
FTJS32	Tianjin, China	Faeces	55	Man
FTJS12	Tianjin, China	Faeces	32	Woman
JSWX101	Wuxi, Jiangsu, China	Faeces	47	Man

JSWX97	Wuxi, Jiangsu, China	Faeces	48	Woman
JSWX106	Wuxi, Jiangsu, China	Faeces	25	Man
JSWX99	Wuxi, Jiangsu, China	Faeces	37	Woman
JSWX104	Wuxi, Jiangsu, China	Faeces	49	Man
JSWX108	Wuxi, Jiangsu, China	Faeces	43	Woman
JSWX103	Wuxi, Jiangsu, China	Faeces	49	Woman
JSWX96	Wuxi, Jiangsu, China	Faeces	47	Woman
JSWX98	Wuxi, Jiangsu, China	Faeces	11	Woman
JSWX100	Wuxi, Jiangsu, China	Faeces	48	Man
GSZY17	Zhangye, Gansu, China	Faeces	9	Man
GSZY28	Zhangye, Gansu, China	Faeces	10	Man
GSZY48	Zhangye, Gansu, China	Faeces	9	Man
GSZY37	Zhangye, Gansu, China	Faeces	10	Woman
GSZY52	Zhangye, Gansu, China	Faeces	13	Woman
GSZY54	Zhangye, Gansu, China	Faeces	13	Man
GSZY43	Zhangye, Gansu, China	Faeces	11	Man
GSZY29	Zhangye, Gansu, China	Faeces	8	Man
GSZY30	Zhangye, Gansu, China	Faeces	8	Man
GSZY49	Zhangye, Gansu, China	Faeces	13	Man
JLHD25	Huadian, Jilin, China	Faeces	61	Man
JLHD33	Huadian, Jilin, China	Faeces	60	Woman
JLHD26	Huadian, Jilin, China	Faeces	53	Man
JLHD51	Huadian, Jilin, China	Faeces	61	Man
JLHD39	Huadian, Jilin, China	Faeces	8	Man
JLHD44	Huadian, Jilin, China	Faeces	63	Woman
JLHD56	Huadian, Jilin, China	Faeces	--	--
GSYC56	Yinchuan, Gansu, China	Faeces	16	Man
GSYC51	Yinchuan, Gansu, China	Faeces	18	Man
GSYC48	Yinchuan, Gansu, China	Faeces	--	--

GSYC89	Yinchuan, Gansu, China	Faeces	17	Woman
GSYC28	Yinchuan, Gansu, China	Faeces	21	Man
GSYC70	Yinchuan, Gansu, China	Faeces	17	Man
GSYC27	Yinchuan, Gansu, China	Faeces	54	Woman
GSYC36	Yinchuan, Gansu, China	Faeces	56	Man
GSYC73	Yinchuan, Gansu, China	Faeces	17	Man
GSYC47	Yinchuan, Gansu, China	Faeces	75	Woman

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**Supplementary Table 2. Information of the CAZy family unique to the 1K1 genome**

Caazy family	Family known-activities
CBM38	The inulin-binding function has been demonstrated in the case of the cycloinulo-oligosaccharide fructanotransferase from <i>Paenibacillus macerans</i> ( <i>Bacillus macerans</i> ).
CBM32	Binding to galactose and lactose has been demonstrated for the module of <i>Micromonospora viridifaciens</i> sialidase. Binding to polygalacturonic acid has been shown for a <i>Yersinia</i> member. Binding to LacNAc ( $\beta$ -D-galactosyl-1,4- $\beta$ -D-N-acetylglucosamine) has been shown for an N-acetylglucosaminidase from <i>Clostridium perfringens</i> .
CE4	Acetyl xylan esterase; chitin deacetylase; chitooligosaccharide deacetylase; peptidoglycan GlcNAc deacetylase; peptidoglycan N-acetylmuramic acid deacetylase.
GH109	$\alpha$ -N-acetylgalactosaminidase; $\beta$ -N-acetylhexosaminidase
GH125	exo- $\alpha$ -1,6-mannosidase
GH13_36	[retaining] $\alpha$ -amylase; [retaining] maltogenic $\alpha$ -amylase; [retaining] neopullulanase; [retaining] cyclomaltodextrinase
GH32	invertase; endo-inulinase; $\beta$ -2,6-fructan 6-levanbiohydrolase; endo-levanase; exo-inulinase; fructan $\beta$ -(2,1)-fructosidase/1-exohydrolase; fructan $\beta$ -(2,6)-fructosidase/6-exohydrolase; sucrose:sucrose 1-fructosyltransferase; fructan:fructan 1-fructosyltransferase; sucrose:fructan 6-fructosyltransferase; fructan:fructan 6G-fructosyltransferase; levan fructosyltransferase; [retaining] sucrose:sucrose 6-fructosyltransferase (6-SST); cycloinulo-oligosaccharide fructanotransferase
GH43_28	$\alpha$ -1,2-L-arabinofuranosidase; $\alpha$ -1,3-L-arabinofuranosidase; exo- $\alpha$ -1,5-L-arabinofuranosidase; exo- $\beta$ -1,3-galactanase; $\beta$ -D-galactofuranosidase; xylan $\beta$ -1,4-xylosidase; $\alpha$ -L-arabinofuranosidase; $\beta$ -1,3-xylosidase; endo- $\beta$ -1,4-xylanase; [invertig] endo- $\alpha$ -1,5-L-arabinanase
GH92	mannosyl-oligosaccharide $\alpha$ -1,2-mannosidase; mannosyl-oligosaccharide $\alpha$ -1,3-mannosidase; mannosyl-oligosaccharide $\alpha$ -1,6-mannosidase; $\alpha$ -mannosidase; $\alpha$ -1,2-mannosidase; $\alpha$ -1,4-mannosidase; mannosyl-1-phosphodiester $\alpha$ -1, P-mannosidase
GT4	sucrose synthase; sucrose-phosphate synthase; $\alpha$ -glucosyltransferase; lipopolysaccharide N-acetylglucosaminyltransferase; phosphatidylinositol $\alpha$ -mannosyltransferase; GDP-Man: Man1GlcNAc2-PP-dolichol $\alpha$ -1,3-mannosyltransferase; GDP-Man: Man3GlcNAc2-PP-dolichol/Man4GlcNAc2-PP-dolichol $\alpha$ -1,2-mannosyltransferase; digalactosyldiacylglycerol synthase; 1,2-diacylglycerol 3-glucosyltransferase; diglucosyl diacylglycerol synthase; trehalose phosphorylase; NDP-Glc: $\alpha$ -glucose $\alpha$ -glucosyltransferase / $\alpha,\alpha$ -trehalose synthase; GDP-Man: Man2GlcNAc2-PP-dolichol $\alpha$ -1,6-mannosyltransferase; UDP-GlcNAc: 2-deoxystreptamine $\alpha$ -N-acetylglucosaminyltransferase; UDP-GlcNAc: ribostamycin $\alpha$ -N-acetylglucosaminyltransferase; UDP-Gal $\alpha$ -galactosyltransferase; UDP-Xyl $\alpha$ -xylosyltransferase; UDP-GlcA $\alpha$ -glucuronyltransferase; UDP-Glc $\alpha$ -glucosyltransferase; UDP-GalNAc: GalNAc-PP-Und $\alpha$ -1,3-N-acetylgalactosaminyltransferase; UDP-GalNAc: N,N'-diacetylbaucillosaminyl-PP-Und $\alpha$ -1,3-N-acetylgalactosaminyltransferase; ADP-dependent $\alpha$ -maltose-1-phosphate synthase; [retaining] UDP-GlcNAc: polypeptide $\alpha$ -N-acetylglucosaminyltransferase; UDP-GlcNAc: $\alpha$ -N-acetylglucosaminyltransferase
GT8	lipopolysaccharide $\alpha$ -1,3-galactosyltransferase; UDP-Glc: (glucosyl)lipopolysaccharide $\alpha$ -1,2-glucosyltransferase; lipopolysaccharide glucosyltransferase 1 glycogenin glucosyltransferase; inositol 1- $\alpha$ -galactosyltransferase (galactinol synthase) ; homogalacturonan $\alpha$ -1,4-galacturonosyltransferase; UDP-GlcA: xylan $\alpha$ -glucuronyltransferase; UDP-Gal:glucoside $\alpha$ -1,3-galactosyltransferase

**Supplementary Table 3. COG categories present in 1K1 only**



<b>COG number</b>	<b>Functional description</b>	<b>Functional class</b>
COG0286	Type I restriction-modification system methyltransferase subunit	[V]
COG0610	Type I site-specific restriction-modification system, R (restriction) subunit and related helicases	[V]
COG0662	Mannose-6-phosphate isomerase	[G]
COG1432	Uncharacterized conserved protein	[S]
COG3344	Retron-type reverse transcriptase	[L]
COG3666	Transposase and inactivated derivatives	[L]
COG4734	Antirestriction protein	[R]
NOG114077	Ragb/Susd domain protein	
NOG114350	Integrase	[S]
NOG115567	Mobilization protein	[S]
NOG39540	Uba/Thif-Type NAD/FAD binding protein	[R]
NOG42453	Protein found in conjugate transposon	[S]
NOG42679	Protein found in conjugate transposon	[S]
NOG43858	Protein found in conjugate transposon	[S]
NOG44942	Protein found in conjugate transposon TraI	[S]
NOG45139	Protein found in conjugate transposon TraK	[S]
NOG87058	Protein found in conjugate transposon	[D]

**Supplementary Table 4. The database of comprehensive research on antibiotics (CARD) of *B. uniformis* 1K1**

ARO_id	ShortName	AMR Gene Family	Drug Class	Resistance Mechanism	FNMHLBE1K1
ARO:3000833	evgS	major facilitator superfamily (MFS) antibiotic efflux pump;resistance-nodulation-cell division (RND) antibiotic efflux pump	fluoroquinolone antibiotic;macrolide antibiotic;penam;tetracycline antibiotic	antibiotic efflux	5
ARO:3003746	optrA	Miscellaneous ABC-F subfamily ATP-binding cassette ribosomal protection proteins	oxazolidinone antibiotic;phenicol antibiotic	antibiotic target protection	2
ARO:3002865	dfrC	trimethoprim resistant dihydrofolate reductase dfr	diaminopyrimidine antibiotic	antibiotic target replacement	1
ARO:3000191	tet(Q)	tetracycline-resistant ribosomal protection protein	tetracycline antibiotic	antibiotic target protection	2
ARO:3005008	TxR	ATP-binding cassette (ABC) antibiotic efflux pump	tetracycline antibiotic	antibiotic efflux	11
ARO:3003066	smeR	resistance-nodulation-cell division (RND) antibiotic efflux pump	aminoglycoside antibiotic;cephalosporin;cephamycin;penam	antibiotic efflux	1
ARO:3002987	bcrA	ATP-binding cassette (ABC) antibiotic efflux pump	peptide antibiotic	antibiotic efflux	3
ARO:3005090	RanB	ATP-binding cassette (ABC) antibiotic efflux pump	aminoglycoside antibiotic;macrolide antibiotic	antibiotic efflux	1
ARO:3005091	RanA	ATP-binding cassette (ABC) antibiotic efflux pump	aminoglycoside antibiotic;macrolide antibiotic	antibiotic efflux	2

ARO:3004361	sul4	sulfonamide resistant sul	sulfonamide antibiotic	antibiotic target replacement	1
ARO:3000535	macB	ATP-binding cassette (ABC) antibiotic efflux pump	macrolide antibiotic	antibiotic efflux	9
ARO:3004253	vanU_in_vanG_cl	glycopeptide resistance gene cluster;vanU	glycopeptide antibiotic	antibiotic target alteration	
ARO:3007050	mreA	major facilitator superfamily (MFS) antibiotic efflux pump	macrolide antibiotic	antibiotic efflux	1
ARO:3000326	ErmE	Erm 23S ribosomal RNA methyltransferase	lincosamide antibiotic;macrolide antibiotic;streptogramin A antibiotic;streptogramin B antibiotic;streptogramin antibiotic	antibiotic target alteration	1
ARO:3002844	vatE	streptogramin vat acetyltransferase	streptogramin A antibiotic;streptogramin antibiotic	antibiotic inactivation	1
ARO:3002941	vanS_in_vanO_cl	glycopeptide resistance gene cluster;vanS	glycopeptide antibiotic	antibiotic target alteration	1
ARO:3000838	arlR	major facilitator superfamily (MFS) antibiotic efflux pump	disinfecting agents and antiseptics;fluoroquinolone antibiotic	antibiotic efflux	2
ARO:3005040	YajC	resistance-nodulation-cell division (RND) antibiotic efflux pump	cephalosporin;disinfecting agents and antiseptics;fluoroquinolone antibiotic;glycopeptide antibiotic;glycylcycline;oxazolidinone antibiotic;penam;phenicol antibiotic;rifamycin antibiotic;tetracycline antibiotic	antibiotic efflux	1
ARO:3003060	tsnR	non-erm 23S ribosomal RNA methyltransferase (A1067)	peptide antibiotic	antibiotic target alteration	1

ARO:3003744	vatF	streptogramin vat acetyltransferase	streptogramin A antibiotic;streptogramin antibiotic	antibiotic inactivation	1
ARO:3004649	cfr(B)	Cfr 23S ribosomal RNA methyltransferase	lincosamide antibiotic;oxazolidinone antibiotic;phenicol antibiotic;streptogramin antibiotic	antibiotic target alteration	1
ARO:3003577	ugd	pmr phosphoethanolamine transferase	peptide antibiotic	antibiotic target alteration	1
ARO:3002999	CblA-1	CblA beta-lactamase	cephalosporin	antibiotic inactivation	1
ARO:3000804	MexF	resistance-nodulation-cell division (RND) antibiotic efflux pump	diaminopyrimidine antibiotic;fluoroquinolone antibiotic;phenicol antibiotic	antibiotic efflux	1
ARO:3000789	mdsA	resistance-nodulation-cell division (RND) antibiotic efflux pump	carbapenem;cephalosporin;cephamycin;monobactam;penam;penem;phenicol antibiotic	antibiotic efflux	1
ARO:3000521	Saur_mup A_MUP	antibiotic-resistant isoleucyl-tRNA synthetase (ileS)	mupirocin-like antibiotic	antibiotic target alteration	1
ARO:3002881	lmrC	Miscellaneous ABC-F subfamily ATP-binding cassette ribosomal protection proteins	lincosamide antibiotic	antibiotic target protection	1
ARO:3000746	mepR	multidrug and toxic compound extrusion (MATE) transporter	glycylcycline;tetracycline antibiotic	antibiotic efflux	1
ARO:3003048	rosA	major facilitator superfamily (MFS) antibiotic efflux pump	peptide antibiotic	antibiotic efflux	1
ARO:3003920	pgpB	lipid A phosphatase	peptide antibiotic	antibiotic target	1

				alteration	
ARO:3002925	vanR_in_v anF_cl	glycopeptide resistance gene cluster;vanR	glycopeptide antibiotic	antibiotic target alteration	2
ARO:3002522	novA	ATP-binding cassette (ABC) antibiotic efflux pump	aminocoumarin antibiotic	antibiotic efflux	1
ARO:3002840	vatA	streptogramin vat acetyltransferase	streptogramin A antibiotic;streptogramin antibiotic	antibiotic inactivation	
ARO:3000783	cmeA	resistance-nodulation-cell division (RND) antibiotic efflux pump	cephalosporin;fluoroquinolone antibiotic;fusidane antibiotic;macrolide antibiotic	antibiotic efflux	4
ARO:3000784	cmeB	resistance-nodulation-cell division (RND) antibiotic efflux pump	cephalosporin;fluoroquinolone antibiotic;fusidane antibiotic;macrolide antibiotic	antibiotic efflux	4
ARO:3000379	OprM	resistance-nodulation-cell division (RND) antibiotic efflux pump	aminocoumarin antibiotic;aminoglycoside antibiotic;carbapenem;cephalosporin;cephamycin;diaminopyrimidine antibiotic;disinfecting agents and antiseptics;fluoroquinolone antibiotic;macrolide antibiotic;monobactam;penam;penem;peptide antibiotic;phenicol antibiotic;sulfonamide antibiotic;tetracycline antibiotic	antibiotic efflux	5
ARO:3007104	nimA	nitroimidazole reductase	nitroimidazole antibiotic	antibiotic inactivation	1
ARO:3003005	CfxA4	CfxA beta-lactamase	cephamycin	antibiotic inactivation	
ARO:3000839	arlS	major facilitator superfamily (MFS) antibiotic efflux pump	disinfecting agents and antiseptics;fluoroquinolone antibiotic	antibiotic efflux	
ARO:3000533	macA	ATP-binding cassette (ABC) antibiotic efflux pump	macrolide antibiotic	antibiotic efflux	1
ARO:3003986	TacA	ATP-binding cassette (ABC) antibiotic	pleuromutilin antibiotic	antibiotic	2

		efflux pump		efflux	
ARO:3002841	vatB	streptogramin vat acetyltransferase	streptogramin A antibiotic;streptogramin antibiotic	antibiotic inactivation	1
ARO:3004047	kdpD	kdpDE	aminoglycoside antibiotic	antibiotic efflux	1
ARO:3002907	vanE	Van ligase;glycopeptide resistance gene cluster	glycopeptide antibiotic	antibiotic target alteration	1
ARO:3003055	smeD	resistance-nodulation-cell division (RND) antibiotic efflux pump	fluoroquinolone antibiotic;macrolide antibiotic;phenicol antibiotic;tetracycline antibiotic	antibiotic efflux	1
ARO:3003980	tetA(58)	major facilitator superfamily (MFS) antibiotic efflux pump	tetracycline antibiotic	antibiotic efflux	2
ARO:3002947	vanH_in_vanM_cl	glycopeptide resistance gene cluster;vanH	glycopeptide antibiotic	antibiotic target alteration	1
ARO:3000795	mdtE	resistance-nodulation-cell division (RND) antibiotic efflux pump	fluoroquinolone antibiotic;macrolide antibiotic;penam	antibiotic efflux	1
ARO:3000790	mdsB	resistance-nodulation-cell division (RND) antibiotic efflux pump	carbapenem;cephalosporin;cephamycin;monobactam;penam;penem;phenicol antibiotic	antibiotic efflux	1
ARO:3002929	vanR_in_vanN_cl	glycopeptide resistance gene cluster;vanR	glycopeptide antibiotic	antibiotic target alteration	1
ARO:3002845	vatH	streptogramin vat acetyltransferase	streptogramin A antibiotic;streptogramin antibiotic	antibiotic inactivation	1
ARO:3002700	cmlv	chloramphenicol phosphotransferase	phenicol antibiotic	antibiotic inactivation	1

ARO:3002942	vanH_in_ vanA_cl	glycopeptide resistance gene cluster;vanH	glycopeptide antibiotic	antibiotic target alteration	2
ARO:3003031	MexW	resistance-nodulation-cell division (RND) antibiotic efflux pump	disinfecting agents and antiseptics;fluoroquinolone antibiotic;macrolide antibiotic;phenicol antibiotic;tetracycline antibiotic	antibiotic efflux	1
ARO:3002986	bacA	undecaprenyl pyrophosphate related proteins	peptide antibiotic	antibiotic target alteration	1
ARO:3003578	PmrF	pmr phosphoethanolamine transferase	peptide antibiotic	antibiotic target alteration	1
ARO:3000498	ErmF	Erm 23S ribosomal RNA methyltransferase	lincosamide antibiotic;macrolide antibiotic;streptogramin A antibiotic;streptogramin B antibiotic;streptogramin antibiotic	antibiotic target alteration	2
ARO:3004451	Afab_AC T_CHL	chloramphenicol acetyltransferase (CAT)	phenicol antibiotic	antibiotic inactivation	1
ARO:3003835	cdeA	multidrug and toxic compound extrusion (MATE) transporter	disinfecting agents and antiseptics;fluoroquinolone antibiotic	antibiotic efflux	2
ARO:3004077	PmpM	multidrug and toxic compound extrusion (MATE) transporter	aminoglycoside antibiotic;disinfecting agents and antiseptics;fluoroquinolone antibiotic	antibiotic efflux	
ARO:3002680	catB8	chloramphenicol acetyltransferase (CAT)	phenicol antibiotic	antibiotic inactivation	
ARO:3002928	vanR_in_v anM_cl	glycopeptide resistance gene cluster;vanR	glycopeptide antibiotic	antibiotic target alteration	1
ARO:3002683	catA1	chloramphenicol acetyltransferase (CAT)	phenicol antibiotic	antibiotic	

				inactivation	
ARO:3004085	InuG	lincosamide nucleotidyltransferase (LNU)	lincosamide antibiotic	antibiotic inactivation	1
ARO:3000378	MexB	resistance-nodulation-cell division (RND) antibiotic efflux pump	aminocoumarin antibiotic;carbapenem;cephalosporin;cephamycin;diaminopyrimidine antibiotic;fluoroquinolone antibiotic;macrolide antibiotic;monobactam;penam;penem;peptide antibiotic;phenicol antibiotic;sulfonamide antibiotic;tetracycline antibiotic	antibiotic efflux	1
ARO:3001777	OXA-347	OXA beta-lactamase	carbapenem;cephalosporin;penam	antibiotic inactivation	1
ARO:3005044	OmpA	General Bacterial Porin with reduced permeability to peptide antibiotics	peptide antibiotic	reduced permeability to antibiotic	1
ARO:3002972	vanT_in_v anG_cl	glycopeptide resistance gene cluster;vanT	glycopeptide antibiotic	antibiotic target alteration	0



**Supplementary Table 5. The database of fungal virulence factors (DFVF) of *B. uniformis* 1K1**

Gene Function	FNMHLBE1K1	Pathogen species	Pathogen strain	Host description	Tissue
c-di-GMP phosphodiesterase	1	<i>Pseudomonas syringae</i>	pv. tomato strain DC3000	eudicots	leaf
polyphosphate kinase	1	<i>Proteus mirabilis</i>	HI4320	rodents	bladder
phosphorelay protein	4	<i>Vibrio parahaemolyticus</i>	RIMD 2210633	nematodes	
effector (plant avirulence determinant)	3	<i>Legionella pneumophila</i>	130b	rodents	lung
RNA polymerase sigma factor	1	<i>Pseudomonas savastanoi</i>	pv. glycinea strain Psg	eudicots	leaf
cardiolipin	4	<i>Staphylococcus aureus</i>	RN4220	rodents	
dihydrofolate reductase	1	<i>Candida albicans</i>	BWP17	rodents	kidney
ATP-dependent 6-phosphofructokinase	3	<i>Erwinia amylovora</i>	HKN06P1	eudicots	fruit
ketol-acid reductoisomerase, mitochondrial	1	<i>Metarhizium robertsii</i>	ARSEF 2575	moths	larva
acetolactate synthases	2	<i>Magnaporthe oryzae</i>	Guy11	monocots	leaf
dihydroxyacid dehydratase	2	<i>Aspergillus fumigatus</i>	CEA10	rodents	kidney
chorismate synthase	1	<i>Aspergillus fumigatus</i>	AfS35	rodents	lung
effector protein	1	<i>Francisella tularensis</i>	subsp. novicida strain U112	moths	
lysine-tRNA synthetase	1	<i>Beauveria bassiana</i>	ARSEF 2860	moths	larva
pyruvate dehydrogenase	3	<i>Streptococcus suis</i>	ZY05719	rodents	blood; brain; liver; spleen; kidney; lung
HAD-like hydrolase	2	<i>Cryptococcus neoformans</i>	H99	rodents	lung; brain
					lung; blood;

					nasopharynx
virulence factor	2	<i>Serratia marcescens</i>	2170	moths	
conserved outer membrane lipoprotein	3	<i>Riemerella anatipestifer</i>	RA-CH-1	birds	blood
tyrosine phosphatase	2	<i>Porphyromonas gingivalis</i>	ATCC 33277	rodents	bone
lactose negativity	5	<i>Salmonella enterica</i>	subsp. enterica serovar Typhimurium strain ATCC 14028	rodents	liver; spleen
exopolysaccharide synthesis enzyme [UDP-N-acetylglucosamine 2-epimerase]	4	<i>Streptococcus mutans</i>	UA159	rodents	blood
regulators of systemic infection		<i>Salmonella enterica</i>	subsp. enterica serovar Typhimurium strain ATCC 14028s	rodents	spleen; liver
resistance to a wall teichoic acid (WTA)-binding bacteriophage	1	<i>Listeria monocytogenes</i>	F6214-1	rodents	spleen; liver
N-acetylmuramoyl-L-alanine amidase	1	<i>Yersinia pestis</i>	Kim53	rodents	
DNA-binding transcriptional regulator	4	<i>Pseudomonas aeruginosa</i>	LESB58	rodents	lung; nasal cavity
flavoalbumin	2	<i>Magnaporthe oryzae</i>	Guy11	monocots	leaf
AphB and OhrR monitor redox-potential changes and respond with different kinetics	2	<i>Vibrio cholerae</i>		rodents	small intestine
DNA-binding response regulator	2	<i>Acinetobacter baumannii</i>	AB5075	moths	larva
β-galactosidase	2	<i>Streptococcus suis</i>	serotype 2 strain 05ZYH33	rodents	
β-galactosidase	5	<i>Escherichia coli</i>	UTI89	rodents	urinary bladder
nudix hydrolase domain-containing protein	1	<i>Pseudomonas aeruginosa</i>	PAO1161	nematodes	larva
D-ribulose-phosphate 3-epimerase	1	<i>Francisella tularensis</i>	subsp. novicida strain U112	flies	adult

formyl methionyl transferase	1	Staphylococcus aureus	WCUH29	rodents	kidney
conserved hypothetical protein	7	Xanthomonas oryzae	pv. oryzae strain PXO99A	monocots	leaf
alanine/glycine transport protein	2	Klebsiella pneumoniae	ATCC 43816; MKP203	rodents	lung
DNA repair	2	Bacillus cereus	ATCC 14579	rodents	
redox balance	2	Enterococcus faecalis	V583	rodents	liver; kidney
branched-chain-amino-acid aminotransferase	1	Bipolaris zeicola	164R10	monocots	
alpha-1,2-mannosidase, putative	6	Streptococcus suis	ZY05719	rodents	brain; blood; spleen; kidney
2C-methyl-D-erythritol 2,4-cyclodiphosphate synthase	1	Xanthomonas citri	subsp. citri	eudicots	leaf
putative hydrolase	1	Bordetella bronchiseptica	RB50	rodents	trachea
redox-sensing transcriptional repressor	8	Listeria monocytogenes	10403S	primates	CACO-2 cell
transcription factor	1	Fusarium graminearum	GZ3639	monocots	
DNA mismatch repair protein	1	Cryptococcus neoformans	KN99 $\alpha$	rodents	lung; brain
inosine-5'-monophosphate dehydrogenase	1	Streptococcus suis	ZY05719	even-toed ungulates	
part of proteolytic complex	2	Staphylococcus aureus	NCTC 8325-4	rodents	skin
cysteine ATP binding protein	2	Neisseria meningitidis	NIID84 $\Delta$ cps	primates	brain microvascula r endothelial cell line
putative phospho--glucosidase	2	Streptococcus pyogenes	5448	rodents	soft-tissue
required for the synthesis of the Pseudomonas quinolone signal, a quorum sensing signal molecule that contributes to slow killing and the red death phenotype in C. elegans.	1	Pseudomonas aeruginosa	PAO1	nematodes	gastrointestin al tract

phenylacetic acid catabolism	1	Burkholderia cenocepacia	K56-2	nematodes	gastrointestinal tract
acetate kinase	2	Vibrio cholerae	SIO	flies	gastrointestinal tract
phosphate acetyltransferase	1	Streptococcus pneumoniae	TIGR4	rodents	
TldD protein, DNA gyrase control?	1	Xanthomonas campestris	pv. campestris strain 8004	eudicots	leaf
diadenylate cyclase	1	Streptococcus pneumoniae	serotype 2 strain D39	lethal pathogen phenotype	
dihydropteroate synthase	1	Xanthomonas albilineans	FS12	monocots	leaf
peptidyl-prolyl cis-trans isomerase	2	Pseudomonas aeruginosa	PAO1	rodents	lung
involved in gallidermin and daptomycin resistance	3	Staphylococcus aureus	JE2	moths	larva
N-acetylmuramic acid-6-phosphate etherase	1	Staphylococcus aureus	JE2	bony fishes	embryo
L-fucose isomerase, C-terminal domain protein		Klebsiella pneumoniae	KPPR1	rodents	lung; spleen
transketolase I	1	Francisella tularensis	subsp. novicida strain U112	flies	adult
arabinose 5-phosphate isomerase		Salmonella enterica	subsp. enterica serovar Typhimurium strain 14028s	eudicots	leaf
manganese homeostasis	1	Streptococcus pyogenes	5448	rodents	
transcriptional regulator	3	Staphylococcus aureus	MW2	primates	neutrophil
ribosomal RNA small subunit methyltransferase H	1	Staphylococcus aureus	RN4220	moths	
UDP-N-acetylmuramoylalanine--D-glutamate ligase	2	Pseudomonas aeruginosa	PAO1	rodents	lung
2,3-bisphosphoglycerate-independent phosphoglycerate mutase	5	Yersinia pestis	CO92	rodents	liver; spleen; bone marrow-derived macrophage
			subsp. enterica serovar		

			Typhimurium strain 14028s		
bifunctional riboflavin kinase/FMN adenylyltransferase	2	<i>Listeria monocytogenes</i>	10403S	rodents	liver; spleen
calcium transporting ATPase	1	<i>Beauveria bassiana</i>	ARSEF 2860	moths	larva
histidine kinase	5	<i>Paracidovorax citrulli</i>	Aac5	eudicots	seedling
anaerobic nitric oxide reductase flavorubredoxin	2	<i>Aeromonas hydrophila</i>	NJ-35	bony fishes	
Na <sup>+</sup> /phosphate symporter	3	<i>Staphylococcus aureus</i>	Newman	rodents	liver; heart; kidney
alternative sigma factor	4	<i>Ralstonia solanacearum</i>	GMI1000	eudicots	leaf
phosphoribosylaminoimidazole carboxylase	1	<i>Candida albicans</i>	CAI-7	rodents	
lone S41 family C-terminal processing protease	4	<i>Staphylococcus aureus</i>	USA300 HOU	rodents	brain; heart; lung; liver; kidney; spleen
an essential gene for the T3SS gene expression	1	<i>Pseudomonas aeruginosa</i>	PAK	rodents	bronchoalveolar lavage fluid
nudix hydrolase domain-containing protein	1	<i>Pseudomonas aeruginosa</i>	PAO1161	nematodes	larva
histone-like protein	1	<i>Xanthomonas citri</i>	subsp. citri strain 306	eudicots	leaf
endo-beta-1,4 xylanase		<i>Magnaporthe oryzae</i>	Br48	monocots	leaf
phosphoenolpyruvate carboxykinase	1	<i>Cryptococcus neoformans</i>	H99	rodents	
putative GTPase	3	<i>Yersinia pestis</i>	CO92	rodents	lung; spleen
acyl-CoA ligase	1	<i>Aspergillus fumigatus</i>	ATCC 46645	rodents	lung
quorum sensing	1	<i>Enterococcus faecalis</i>	Symbioflor 1	rodents	gut
<i>Borrelia</i> glycosaminoglycan binding protein	4	<i>Borrelia burgdorferi</i>	B31 5A18	primates	epithelial cell

pyruvate kinase I	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain 14028s	eudicots	leaf
outer membrane lipoprotein which acts as a sensor of YfiBNR system	1	Klebsiella pneumoniae	LM21	nematodes	
sensor protein	2	Staphylococcus lugdunensis	DSM 4804	nematodes	
3-dehydroquinate synthase	3	Burkholderia glumae	411gr-6	monocots	panicle
HTH-type transcriptional regulator	1	Klebsiella pneumoniae	ATCC 43816; MKP203	rodents	lung
CT production	2	Vibrio cholerae	O395	rodents	intestine
possible role in chromosome segregation	3	Mycobacterium tuberculosis	H37Rv	rodents	
ATP-dependent zinc metalloprotease	1	Corynebacterium diphtheriae	NCTC 13129	nematodes	
ribosomal RNA small subunit methyltransferase A	2	Pseudomonas amygdali	pv. phaseolicola strain 1448A	eudicots	pod; leaf
multi-subunit Na <sup>+</sup> /H <sup>+</sup> (Mnh) antiporter	1	Staphylococcus aureus	Newman	rodents	kidney
NADH-quinone oxidoreductase	6	Pseudomonas aeruginosa	PAO1	moths	larva
ubiquinone oxidoreductase	2	Fusarium graminearum	PH-1	monocots	
formate hydrogenlyase complex iron-sulfur subunit	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain 14028s	eudicots	leaf
Sec-independent protein translocase	2	Salmonella enterica	subsp. enterica serovar Typhimurium strain SL1344	rodents	cecum; mesenteric lymph node; spleen
lipoic acid synthetase	2	Staphylococcus aureus	USA300 LAC	rodents	bone marrow-derived macrophage
dipeptidyl peptidase IV	1	Porphyromonas gingivalis	ATCC 33277	rodents	skin
			subsp. enterica serovar		

			Typhimurium strain 14028s		
GlcN-6-phosphate deaminase	1	Magnaporthe oryzae	KJ201	monocots	leaf
gliding motility lipoprotein GldK	2	Riemerella anatipestifer	Yb2	birds	blood
multifunctional fusion protein	1	Acinetobacter baumannii	ATCC 19606	primates	neutrophil
UDP-3-O-acyl-N-acetylglucosamine deacetylase	2	Acinetobacter baumannii	ATCC 19606	primates	neutrophil
acyltransferases	1	Pseudomonas aeruginosa	PAO1	beetles	larva
peptide chain release factor 1	1	Listeria monocytogenes	EGD-e	primates	colorectal adenocarcinoma cell
shikimate dehydrogenase	2	Staphylococcus aureus	ATCC 29213	primates	HeLa cell
ubiquinone biosynthesis methyltransferase	1	Staphylococcus aureus	ATCC 29213	primates	HeLa cell
LytM family regulator		Xanthomonas campestris	pv. campestris strain 8004	eudicots	leaf
D-xylose-proton symporter	3	Coxiella burnetii	RSA 439	moths	larva
6,7-dimethyl-8-ribityllumazine synthase	2	Magnaporthe oryzae	KV1	monocots	leaf
glyceraldehyde-3-phosphate dehydrogenase	1	Staphylococcus aureus	USA300 JE2	moths	larva
large-conductance mechanosensitive channel	1	Verticillium dahliae	V991	eudicots	seedling
GMP synthase	4	Cryptococcus neoformans	H99	rodents	brain; lung
pantothenate-beta-alanine ligase	1	Parastagonospora nodorum	SN15	monocots	seedling; leaf
aspartate alpha-decarboxylase	1	Xanthomonas campestris	pv. campestris strain 8004	eudicots	leaf
peptidoglycan DD-endopeptidase/peptidoglycan LD-carboxypeptidase	1	Escherichia coli	UTI89	rodents	bladder; kidney
formate acetyltransferase	1	Streptococcus pneumoniae	TIGR4	rodents	
tomatinase	2	Septoria lycopersici	NEV	eudicots	
cysteine protease	1	Staphylococcus aureus	RN4220	birds	embryo
			subsp. enterica serovar		

			Typhimurium strain ATCC 14028s		
hemin import ATP-binding protein	2	<i>Yersinia pseudotuberculosis</i>	IP2666	even-toed ungulates	blood
hemin import ATP-binding protein	2	<i>Yersinia pseudotuberculosis</i>	IP2666	even-toed ungulates	blood
peroxiredoxin peroxidase	1	<i>Magnaporthe oryzae</i>	KJ201	monocots	leaf
DNA strand exchange and recombination protein	2	<i>Acinetobacter baumannii</i>	ATCC 17978	nematodes	larva
putative LysR family transcriptional regulator	2	<i>Salmonella enterica</i>	subsp. enterica serovar Typhimurium strain HA420	rodents	cecum; large intestine
chaperone protein	4	<i>Pectobacterium carotovorum</i>	subsp. carotovorum strain PccS1	eudicots	petiole
translocase	4	<i>Streptococcus pneumoniae</i>	serotype 2 strain D39	rodents	nasopharynx; pleural cavity; lung; blood
bifunctional enzyme implicated in the imidazoleglycerol-phosphate dehydratase activity	1	<i>Xanthomonas oryzae</i>	pv. oryzicola strain RS105	monocots	leaf
histidinol dehydrogenase	1	<i>Xanthomonas oryzae</i>	pv. oryzae strain PXO99A	monocots	leaf
OAg biosynthesis	1	<i>Salmonella enterica</i>	subsp. enterica serovar Enteritidis strain P125109	rodents	spleen; liver; cecum
RNA-binding protein	2	<i>Listeria monocytogenes</i>	EGD-e	moths	larva
MATE efflux family protein		<i>Streptococcus pneumoniae</i>	serotype 2 strain D39	rodents	blood; lung
lysine-dependent acid resistance (LDAR) system protein		<i>Edwardsiella tarda</i>	TX01	primates	HeLa cell
flagellar motility	1	<i>Xanthomonas oryzae</i>	pv. oryzae strain PXO99A	monocots	leaf
iron utilization	1	<i>Acinetobacter baumannii</i>	ATCC 19606	moths	larva
sigma factor	1	<i>Pseudomonas aeruginosa</i>	PAO1	rodents	lung
thioredoxin oxidoreductase, a target of MoAP1					



transcription factor governing oxidative response					
carbon monoxide resistance gene	1	<i>Mycobacterium tuberculosis</i>	H37Rv	rodents	Lung; liver
fusaric acid biosynthesis	2	<i>Fusarium verticillioides</i>	M-3125	monocots	leaf
resuscitation-promoting factor	1	<i>Vibrio harveyi</i>	SF-1	bony fishes	peritoneum
UDP-N-acetylglucosamine 1-carboxyvinyltransferase	2	<i>Pseudomonas aeruginosa</i>	PAO1	rodents	lung
UDP-glucose-4,6-dehydratase	4	<i>Botrytis cinerea</i>	B05.10	eudicots	leaf
glucose-1-phosphate thymidyltransferase	2	<i>Pseudomonas aeruginosa</i>	PAO1	rodents	lung
	4	<i>Xylella fastidiosa</i>	Temecula	eudicots	stem; petiole
UDP-N-acetylglucosamine transaminase	6	<i>Campylobacter jejuni</i>	NCTC 11168	primates	intestinal epithelial cell
lipopolysaccharide biosynthesis and pathogenicity	1	<i>Riemerella anatipestifer</i>	Yb2	birds	
asparagine synthase B	1	<i>Erwinia amylovora</i>	HKN06P1	eudicots	fruit
glucosamine-fructose-6-phosphateaminotransferase	1	<i>Erwinia amylovora</i>	HKN06P1	eudicots	fruit
carbamoyl-phosphate synthase subunit arginine-specific small	2	<i>Magnaporthe oryzae</i>	Guy11	monocots	leaf
encodes a putative TCS response regulator	3	<i>Xanthomonas campestris</i>	pv. campestris strain 8004	eudicots	leaf
ABC-type efflux pump	6	<i>Salmonella enterica</i>	subsp. enterica serovar Typhimurium strain ATCC 14028	rodents	spleen; liver
beta-glucoside permease	3	<i>Streptococcus pyogenes</i>	5448	rodents	soft-tissue
(P)ppGpp synthetase	2	<i>Staphylococcus aureus</i>	USA300	primates	endothelial cell
formate-dependent phosphoribosylglycinamide formyltransferase	6	<i>Escherichia coli</i>	UTI89	primates	J-82 cell

DNA gyrase (bacterial topoisomerase II)		<i>Burkholderia glumae</i>	Pg-7	monocots	seedling
heat shock protein 90 chaperone	2	<i>Escherichia coli</i>	SP15	rodents	
TetR type regulator	1	<i>Acinetobacter baumannii</i>	ATCC 17978	moths	larva
multidrug efflux RND transporter	4	<i>Pseudomonas syringae</i>	pv. tabaci strain 6605	eudicots	leaf
efflux pump membrane transporter	1	<i>Pseudomonas aeruginosa</i>	PAO1	rodents	lung
capsule	1	<i>Burkholderia pseudomallei</i>	DD503	rodents	lung; liver; spleen
quorum-sensing regulator	1	<i>Vibrio cholerae</i>	El Tor	rodents	
TCS sensor kinase	1	<i>Xanthomonas campestris</i>	pv. campestris strain 8004	eudicots	leaf
ATP-dependent protease	2	<i>Salmonella enterica</i>	subsp. enterica serovar Typhimurium strain 14028s	rodents	ileum
phosphoserine phosphatase SerB:haloacid dehalogenase-like hydrolase:HAD-superfamily hydrolase, subfamily IB	3	<i>Brucella melitensis</i>	2308	rodents	spleen
RNA helicase	4	<i>Listeria monocytogenes</i>	EGD-e	rodents	macrophage
UDP-glucose dehydrogenase	1	<i>Cryptococcus neoformans</i>	serotype D strain JEC21	rodents	
trehalose-6-phosphate synthase	1	<i>Magnaporthe oryzae</i>	Guy11	monocots	
possible dehydrogenase	1	<i>Mycobacterium tuberculosis</i>	H37Rv	rodents	
RNA polymerase-binding protein	2	<i>Pseudomonas aeruginosa</i>	PAO1	rodents	
malonyl CoA-acyl carrier protein transacylase	2	<i>Staphylococcus aureus</i>	F-182	moths	larva
thiamine-phosphate synthase	2	<i>Pseudomonas syringae</i>	pv. tomato strain DC3000	eudicots	leaf
thiazole synthase	2	<i>Pseudomonas syringae</i>	pv. tomato strain DC3000	eudicots	leaf
SUMOylation-associated protein	2	<i>Magnaporthe oryzae</i>	KJ201	monocots	leaf
phosphomethylpyrimidine kinase	1	<i>Verticillium dahliae</i>	991	eudicots	root; leaf
glycogen branching enzyme	2	<i>Fusarium oxysporum</i>	f. sp. lycopersici strain 4287	eudicots	leaf

8-amino-7-oxononanoate synthase	2	Riemerella anatipestifer	Yb2	birds	
NADH pyrophosphatase	1	Xanthomonas campestris	pv. campestris strain 8004	eudicots	leaf
phosphoglucomutase	1	Streptococcus parauberis	KSP20	bony fishes	kidney
nitronate monooxygenases	1	Aspergillus fumigatus	CEA10	moths	larva
putative aminotransferase	1	Klebsiella pneumoniae	52.145	moths	larva
transcription factor	2	Fusarium graminearum	GZ3639	monocots	
RNA polymerase sigma factor	2	Pseudomonas aeruginosa	PA14	rodents	lung
protease	1	Glaesserella parasuis	SC1401	rodents	lung
phosphate-specific transport system accessory protein PhoU	3	Salmonella enterica	subsp. enterica serovar Typhimurium strain ATCC 14028s	rodents	macrophage
phosphate import ATP-binding protein	3	Staphylococcus aureus	Newman	rodents	liver; heart; kidney
PstA component of phosphate uptake	1	Mycobacterium tuberculosis	H37Rv	rodents	
phosphate-binding protein/ thioredoxine reductase	3	Staphylococcus aureus	Newman	rodents	liver; heart; kidney
glutamate-tRNA synthetase	1	Aspergillus fumigatus	CEA10	lethal pathogen phenotype	
putative zinc-binding dehydrogenase	1	Pseudomonas aeruginosa	UCBPP-PA14	nematodes	
conserved hypothetical protein	1	Xanthomonas campestris	pv. campestris strain Xc17	eudicots	leaf
pyridoxal phosphate-dependent enzyme	1	Paracidovorax citrulli	XjL12	eudicots	seedling; seed
	1	Francisella tularensis	SCHU S4	rodents	
effector protein	6	Ralstonia solanacearum	OE1-1	eudicots	leaf
ALA synthase	1	Parastagonospora nodorum	SN15	monocots	

diamiopimelate decarboxylase	1	<i>Dickeya dadantii</i>	3937	eudicots	leaf
fusaric acid biosynthesis	1	<i>Fusarium verticillioides</i>	M-3125	monocots	leaf
imidazole glycerol phosphate synthase cyclase subunit	2	<i>Acinetobacter baumannii</i>	ATCC 17978	rodents	lung
N-(5'-phospho-L-ribosyl-formimino)-5-amino-1-(5'-phosphoribosyl)-4-imidazolecarboxamide isomerase	3	<i>Erwinia amylovora</i>	HKN06P1	eudicots	fruit
phosphoribosylglycinamide formyltransferase	2	<i>Staphylococcus aureus</i>	Newman	rodents	
encodes a 16-kDa-crystallin-like protein that is a major antigen		<i>Mycobacterium tuberculosis</i>	H37Rv	rodents	lung; spleen
2-isopropylmalate synthase	1	<i>Dickeya dadantii</i>	3937	eudicots	leaf
3-isopropylmalate dehydratase large subunit	2	<i>Klebsiella pneumoniae</i>	KPPR1	rodents	lung; bronchoalveolar lavage fluid
3-isopropylmalate dehydrogenase	1	<i>Xanthomonas oryzae</i>	pv. <i>oryzae</i> strain PXO99A	monocots	leaf
cystathionine-beta-synthase	2	<i>Aspergillus fumigatus</i>	ATCC 46645	rodents	lung
virulence related two-component system	1	<i>Streptococcus suis</i>	serotype 2 strain 05ZYH33	even-toed ungulates	brain; lung
ferric uptake regulation protein	1	<i>Riemerella anatipestifer</i>	RA-CH-1	birds	spleen; heart; liver; brain
pathogenicity island	2	<i>Salmonella enterica</i>	subsp. <i>enterica</i> serovar Typhimurium strain NCTC S12023	rodents	spleen; liver
folding of newly synthesized proteins, preventing misfolding and aggregation	1	<i>Porphyromonas gingivalis</i>	ATCC 33277	rodents	gingiva
			subsp. <i>enterica</i> serovar Typhimurium strain ATCC		ileum; liver;

			14028		
putative electron transfer protein beta subunit	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain ATCC 14028	rodents	ileum; liver; spleen
phosphoribosylformyl-glycineamide synthetase	1	Dickeya dadantii	3937	eudicots	leaf
dTDP-4-dehydrorhamnose reductas	2	Streptococcus pyogenes	5448	lethal pathogen phenotype	
carboxyl transferase	6	Enterococcus faecalis	JH2-2	moths	larva
Na <sup>+</sup> membrane pump	6	Enterococcus faecalis	JH2-2	moths	larva
multidrug efflux transporter	3	Vibrio cholerae	JB58 (Smr ΔlacZ)	rodents	intestine
beta-galactosidase	3	Streptococcus pneumoniae	serotype 4 strain TIGR4	rodents	
phosphoglycerate kinase 2	2	Toxoplasma gondii	RH	rodents	
transaldolase	1	Francisella tularensis	subsp. novicida strain U112	flies	adult
transcriptional regulators	4	Pseudomonas syringae	pv. actinidiae strain G1	eudicots	leaf
RNase Y	1	Enterococcus faecalis	V19	moths	larva
virulence protein	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain 14028s	rodents	
effector	2	Pseudomonas syringae	pv. tomato strain DC3000	eudicots	leaf
iron ABC transporter substrate-binding protein	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain 14028s	eudicots	leaf
transcription factor	1	Fusarium graminearum	GZ3639	monocots	
encode alpha-(1-6)-mannosyl-transferases	1	Candida glabrata	CBS 138	rodents	
ATP-dependent Clp protease ATP-binding subunit	1	Dickeya dadantii	3937	eudicots	leaf
ATP-dependent Clp protease adapter protein	1	Dickeya dadantii	3937	eudicots	leaf
3-ketoacyl-acyl carrier protein reductase	2	Ralstonia solanacearum	GMI1000	eudicots	

acetylglutamate kinase	1	Staphylococcus aureus	USA300 JE2	rodents	kidney
sulfur mobilization	2	Salmonella enterica	subsp. enterica serovar Typhimurium strain 12023	rodents	spleen
cysteine desulfurase	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain 14028s	eudicots	leaf
polynucleotide phosphorylase, an exoribonuclease involved in RNA processing and degradation	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain X4232	even-toed ungulates	tonsil; lymph node; Peyer's gland; cecum
transcription elongation factor	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain SV5015	rodents	liver; spleen
cyclophilin-type peptidyl-prolyl-cis/trans-isomerase	1	Clostridioides difficile	630Δerm	rodents	fibroblast cell line
protein tyrosine phosphatases	1	Burkholderia cenocepacia	K56-2	moths	larva
involved in bile salt stress and endocarditis pathogenesis		Enterococcus faecium	DO	rodents	heart
aminopeptidase P family protein	1	Campylobacter jejuni	81-176	rodents	stomach; duodenum; ileum; colon; liver; lung; kidney; mesenteric lymph node
elongation factor Tu	2	Staphylococcus aureus	ATCC 29213	primates	HeLa cell
50S ribosomal protein	1	Mycobacterium tuberculosis	CDC1551	primates	monocyte
beta-subunit of the RNA polymerase	1	Acinetobacter baumannii	ATCC 17978	nematodes	
transcription factor	2	Fusarium graminearum	GZ3639	monocots	

50S ribosomal protein	2	<i>Bordetella pertussis</i>	Tohama I	primates	macrophage
protein translocase subunit SecY	2	<i>Listeria monocytogenes</i>	10403S	rodents	spleen; liver
effector protein	2	<i>Citrobacter rodentium</i>	DBS100	rodents	colon; liver; spleen
multidrug efflux protein	3	<i>Acinetobacter baumannii</i>	BM4587	rodents	blood; lung; liver; spleen
RND-type efflux pump membrane transporter	4	<i>Campylobacter jejuni</i>	81-176	eukaryotes	
cytokinin production	2	<i>Claviceps purpurea</i>	20.1	monocots	floret
2-dehydro-3-deoxy-D-gluconate 5-dehydrogenase	1	<i>Pectobacterium carotovorum</i>	subsp. carotovorum strain PccS1	monocots	petiole
peptidoglycan deacetylase	1	<i>Listeria monocytogenes</i>	10403S	rodents	liver; spleen
phosphoribosylamine-glycine ligase	1	<i>Xanthomonas campestris</i>	pv. campestris strain 8004	eudicots	leaf
cystathionine beta-synthase	1	<i>Candida albicans</i>	CAF2-1	rodents	Kidney
cell wall biogenesis protein phosphatase	2	<i>Aspergillus fumigatus</i>	CEA17	rodents	lung
manganese export protein	1	<i>Streptococcus suis</i>	serotype 2 strain SC19	rodents	blood; brain; heart; liver; spleen; lung; kidney
DNA processing protein	2	<i>Streptococcus pneumoniae</i>	serotype 2 strain D39	rodents	nasopharynx; lung; spleen
fumarate reductase	1	<i>Edwardsiella ictaluri</i>	93-146	bony fishes	
DNA repair	1	<i>Streptococcus pneumoniae</i>	serotype 2 strain D39	rodents	blood; lung
putative DNA binding protein	1	<i>Yersinia pestis</i>	CO92	rodents	lymph node; spleen
Fe(3+) dicitrate transport ATP-binding protein	1	<i>Escherichia coli</i>	serotype O32:H37 strain P4	even-toed ungulates	mammary gland
					bladder;

					kidney; spleen
dihydrodipicolinate synthase		Edwardsiella piscicida	FPC498	bony fishes	larva
sialidase		Clostridium perfringens	F4969	primates	HEp-2 cell
N-acetylneuraminate synthase	1	Vibrio vulnificus	CMCP6	crustaceans	napulii
polysaccharide biosynthesis protein	3	Enterococcus faecium	U0317	rodents	Liver; kidney
CTP synthase	1	Xanthomonas albilineans	FS12	monocots	leaf
Na(+)-translocating NADH-quinone reductase	36	Pseudomonas aeruginosa	PAO1	moths	larva
UDP-glucose 4-epimerase	2	Haemophilus influenzae	NTHi 375	rodents	lung
F1Fo-ATP synthase $\alpha$ subunit	1	Candida albicans	SC5314	moths	larva
F1F0 ATPase	1	Staphylococcus aureus	USA300 LAC	rodents	skin
transcriptional regulatory protein	1	Staphylococcus aureus	ATCC 29213	rodents	tibia
sensor histidine kinase		Staphylococcus aureus	MN8	rabbits and hares	aortic valve
serine hydroxymethyltransferase	1	Edwardsiella ictaluri	93-146	bony fishes	
ribose phosphate pyrophosphokinase	1	Francisella tularensis	SCHU S4	rodents	
ribose 5-phosphate isomerase A	1	Francisella tularensis	subsp. novicida strain U112	flies	adult
phenylacetate-coenzyme A ligase	4	Burkholderia cenocepacia	K56-2	nematodes	
heat shock protein	1	Pseudomonas aeruginosa	PAO1	flies	
GDP-D-mannose dehydratase	3	Helicobacter pylori	26695	primates	gastric epithelium cell line
genes involved in side-chain formation		Streptococcus suis	serotype 2 strain 89/1591	lethal pathogen phenotype	
membrane transporter	1	Burkholderia glumae	BGR1	monocots	panicle
					liver; heart;



					kidney
6-phosphogluconate dehydrogenase	1	<i>Botrytis cinerea</i>	B05.10	eudicots	fruit
phenazine biosynthesis genes	2	<i>Pseudomonas aeruginosa</i>	UCBPP-PA14	nematodes	
putative sensor histidine kinase		<i>Ralstonia solanacearum</i>	OE1-1	eudicots	root
Tol-Pal system protein	2	<i>Acinetobacter baumannii</i>	ATCC 19606	moths	larva
ABC transporter ATP-binding protein-spermidine/putrescine transport	4	<i>Streptococcus pneumoniae</i>	serotype 4 strain TIGR4	rodents	lung
serine 3-dehydrogenase	1	<i>Klebsiella pneumoniae</i>	KPPR1	rodents	lung; spleen
DExD-box RNA-helicase	2	<i>Listeria monocytogenes</i>	EGD-e	primates	CACO-2 cell
virulence factor	1	<i>Cronobacter universalis</i>	LMG 26249	primates	THP-1 cell
ABC transporter, ATP-binding protein	4	<i>Porphyromonas gingivalis</i>	W83	rodents	
glycine dehydrogenase	1	<i>Edwardsiella ictaluri</i>	93-146	bony fishes	
metallo-beta-lactamase superfamily protein	4	<i>Listeria monocytogenes</i>	10403S	rodents	spleen; liver
copper-translocating P-type ATPase	4	<i>Acinetobacter baumannii</i>	AB5075_UW	rodents	nasopharynx epithelium
RND family efflux transporter	1	<i>Klebsiella pneumoniae</i>	NCTC 9633	nematodes	larva
potassium homeostasis and virulence	1	<i>Pseudomonas syringae</i>	MB03	nematodes	gut
transport of small molecules	3	<i>Pseudomonas aeruginosa</i>	PAO1-L	nematodes	
response regulator	3	<i>Xanthomonas oryzae</i>	pv. <i>oryzae</i> strain PXO99A	monocots	leaf
oxidoreductase	1	<i>Xanthomonas campestris</i>	pv. <i>campestris</i> strain 8004	eudicots	leaf
purine salvage pathway	2	<i>Staphylococcus aureus</i>	Newman	primates	macrophage
ABC transporter, permease protein, putative	4	<i>Porphyromonas gingivalis</i>	W83	rodents	
acetaldehyde-CoA/alcohol dehydrogenase		<i>Streptococcus suis</i>	ZY05719	bony fishes	larva
arginine repressor	1	<i>Citrobacter rodentium</i>	DBS770	rodents	cecum; colon
argininosuccinate synthase	1	<i>Erwinia amylovora</i>	HKN06P1	eudicots	fruit

argD gene encodes a predicted N-acetylornithine aminotransferase enzyme	2	Erwinia amylovora	HKN06P1	eudicots	shoot; fruit
argininosuccinate lyase	1	Xanthomonas oryzae	pv. oryzae strain PXO99A	monocots	leaf
N-5-glutamine S-adenosyl-L-methionine-dependent methyltransferase	2	Xanthomonas campestris	pv. campestris strain 8004	eudicots	leaf
gingipain production	1	Porphyromonas gingivalis	W83	rodents	
glutamate racemase	1	Streptococcus iniae	HNM-1	bony fishes	blood
gamma-glutamyl phosphate reductase	3	Legionella pneumophila	Corby	primates	lung
elongation factor	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain 14028s	rodents	macrophage
adenylylsulfate kinase protein required for Ax21 (synonym: AvrXa21) activity	1	Xanthomonas oryzae	pv. oryzae strain PXO99A	monocots	
sulfate adenylyltransferase (ATP) required for Ax21 activity	1	Xanthomonas oryzae	pv. oryzae strain PXO99A	monocots	
adenylyl-sulfate kinase	2	Magnaporthe oryzae	70-15	monocots	leaf
DEAD-box RNA helicase	2	Pseudomonas aeruginosa	PAO1	moths	larva
galactokinase	1	Escherichia coli	UTI89	rodents	urinary bladder
glucose transporter gene	1	Xanthomonas campestris	pv. campestris strain 8008	eudicots	
hydrogen peroxide sensor	1	Staphylococcus aureus	Newman	nematodes	
pyrophosphate--fructose 6-phosphate 1-phosphotransferase	1	Toxoplasma gondii	RH	rodents	
multidrug resistance protein	1	Pseudomonas aeruginosa	PAO1	rodents	lung
acyltransferases	1	Pseudomonas aeruginosa	PAO1	beetles	larva
thioredoxin A	2	Acinetobacter baumannii	CI79	rodents	lung; liver; spleen; blood

redox activity	2	Salmonella enterica	subsp. enterica serovar Typhimurium strain ATCC 14028	nematodes	
transcriptional regulator	1	Staphylococcus aureus	ATCC 29213	primates	HeLa cell
tryptophanase	2	Escherichia coli	EDL933	nematodes	intestine
single-stranded DNA-binding protein	2	Xanthomonas oryzae	pv. oryzae strain RS105	monocots	leaf
endoribonucleases	1	Salmonella enterica	subsp. enterica serovar Typhimurium strain SL1344	moths	larva
oxaloacetate decarboxylase beta subunit	1	Vibrio cholerae	PSU 966	moths	larva
fructose-bisphosphate aldolase	1	Staphylococcus aureus	USA300 JE2	moths	larva
enolase	4	Streptococcus suis	CVCC606	even-toed ungulates	brain microvascular endothelial cell line
transcription factor	3	Streptococcus suis	SS2	rodents	lung; spleen; liver; brain; blood
NADH oxidase	1	Streptococcus suis	SS2	rodents	lung; spleen; liver; brain; blood
regulatory protein	1	Escherichia coli	PCN033	rodents	brain; spleen; Lung
peptidase M13	1	Mycobacterium tuberculosis	H37Rv	rodents	lung
transglycosylase	4	Mycobacterium tuberculosis	H37Rv	rodents	lung; spleen
homoserine O-succinyltransferase	1	Erwinia amylovora	HKN06P1	eudicots	fruit
					gastric

					epithelial cell
threonine synthase	1	<i>Xanthomonas oryzae</i>	pv. <i>oryzae</i> strain PXO99A	monocots	leaf
ribosomal RNA small subunit methyltransferase I	1	<i>Staphylococcus aureus</i>	RN4220	moths	
putative RpiR-family transcriptional regulator	2	<i>Salmonella enterica</i>	subsp. <i>enterica</i> serovar Typhimurium strain 14028s	rodents	liver; spleen
D-glycero-D-manno-heptose-1,7-bisphosphate phosphatase	1	<i>Helicobacter pylori</i>	26695	primates	gastric epithelium cell line
part of cluster involved in lipooligosaccharide synthesis	1	<i>Glaesserella parasuis</i>	SC096	even-toed ungulates	umbilical vein endothelial cell
acyl carrier protein	2	<i>Pseudomonas aeruginosa</i>	PAO1	rodents	lung
polyketide synthase	1	<i>Fusarium graminearum</i>	PH-1	monocots	
RNase III	1	<i>Enterococcus faecalis</i>	V19	moths	larva
phenylacetic acid degradation protein	3	<i>Burkholderia cenocepacia</i>	K56-2	nematodes	
acyltransferases	1	<i>Pseudomonas aeruginosa</i>	PAO1	beetles	larva
methionine sulfoxide reductase catalytic subunit	1	<i>Brucella melitensis</i>	M28	rodents	spleen; bone marrow-derived macrophage
D-arabinose 5-phosphate isomerase	1	<i>Francisella tularensis</i>	SCHU S4	rodents	lung; spleen
DNA protection during starvation protein	2	<i>Agrobacterium tumefaciens</i>	C58	eudicots	leaf
oxidative stress regulatory protein	1	<i>Pseudomonas savastanoi</i>	pv. <i>phaseolicola</i> strain NPS3121	eudicots	pod
			subsp. <i>enterica</i> serovar Typhimurium strain ATCC		

			14028		
thioredoxin reductase	1	<i>Cryptococcus neoformans</i>	H99	lethal pathogen phenotype	
	4	<i>Salmonella enterica</i>	subsp. enterica serovar Typhimurium strain SL1344	rodents	
tRNA uridine 5-carboxymethylaminomethyl modification enzyme	1	<i>Streptococcus suis</i>	SC19	rodents	blood; brain; lung
DNA mismatch repair protein	1	<i>Cryptococcus neoformans</i>	KN99 $\alpha$	rodents	lung; brain
DNA-binding response regulator	1	<i>Aeromonas hydrophila</i>	ZYAH72	bony fishes	
putative subunit of V-ATPase	1	<i>Candida albicans</i>	SN76	rodents	
2-keto-3-deoxy-6-phosphogluconate aldolase	1	<i>Pectobacterium atrosepticum</i>	SCRI1039	eudicots	tuber
uncharacterized glycosyltransferase		<i>Erwinia amylovora</i>	CFBP 1430	eudicots	shoot; fruit
glycosyltransferases	1	<i>Streptococcus suis</i>	SC19	rodents	brain; heart; kidney; spleen
tryptophan synthase	2	<i>Aspergillus fumigatus</i>	CEA10	lethal pathogen phenotype	
indole-3-glycerol phosphate synthase	1	<i>Xanthomonas oryzae</i>	pv. oryzae strain PXO99A	monocots	leaf
anthranilate synthase component II	1	<i>Xanthomonas campestris</i>	pv. campestris strain 8004	eudicots	leaf
anthranilate synthase component I	1	<i>Aspergillus fumigatus</i>	AfS35	rodents	lung
ammonium transporters	1	<i>Colletotrichum gloeosporioides</i>	Cg-14	flowering plants	fruit
N-acetylneuraminase cytidyltransferase	1	<i>Vibrio vulnificus</i>	CMCP6	crustaceans	napulii
phenylacetate-coenzyme A ligase	4	<i>Burkholderia cenocepacia</i>	K56-2	nematodes	
excinuclease ABC, B subunit	1	<i>Streptococcus agalactiae</i>	group B serotype V strain CNCTC 10/84	primates	blood; blood plasma

UDP-xylose synthase	1	Cryptococcus neoformans	H99	rodents	
glucose/galactose transporter	3	Coxiella burnetii	RSA 439	moths	larva
cytoplasmic superoxide dismutase	2	Salmonella enterica	subsp. enterica serovar Typhimurium strain ATCC 14028	moths	
Na(+)-translocating NADH-quinone reductase	12	Pseudomonas aeruginosa	PAO1	moths	larva
ECF sigma factor	1	Pseudomonas syringae	pv. syringae strain B728a	eudicots	leaf
Holliday junction DNA helicase	1	Klebsiella pneumoniae	NCTC 9633	nematodes	larva
antiporter gene	2	Escherichia coli	536	rodents	intestine
quorum sensing	1	Vibrio harveyi	BB120	crustaceans	larva
catabolite repression control protein	2	Pseudomonas syringae	pv. tomato strain DC3000	eudicots	leaf
divalent metal cation transporter	18	Enterococcus faecalis	OG1RF	moths	larva
fumarate hydratase class I	6	Salmonella enterica	subsp. enterica serovar Typhimurium strain NCTC 12023	rodents	macrophage
BCAA transporter	2	Staphylococcus aureus	USA300	rodents	kidney; heart; liver
multidrug efflux transporter	3	Vibrio cholerae	JB58 (Smr ΔlacZ)	rodents	intestine
pathogenicity island	2	Salmonella enterica	subsp. enterica serovar Typhimurium strain NCTC S12023	rodents	spleen; liver
putative L-aspartate oxidase	2	Coxiella burnetii	Nine Mile phase II	primates	epithelial cell
hypothetical protein	1	Magnaporthe oryzae	KJ201	monocots	
glyoxalase A	4	Listeria monocytogenes	10403S	rodents	spleen; liver
hydroxylamine reductase	2	Escherichia coli	APEC O18	eukaryotes	

central tRNA-modifying GTPase	2	<i>Streptococcus suis</i>	SC19	rodents	brain; lung; spleen; blood
ApbE-family protein	1	<i>Pseudomonas syringae</i>	pv. tomato strain DC3000	eudicots	
leader RNA that functions as a sensor for mn <sup>2+</sup>	1	<i>Xanthomonas oryzae</i>	pv. oryzae strain PXO99A	monocots	leaf
4-amino-4-deoxy-L-arabinose (Ara4N) production	1	<i>Salmonella enterica</i>	subsp. enterica serovar Typhimurium strain JSG210	rodents	Peyer's gland
transcription termination factor Rho	2	<i>Clostridioides difficile</i>	R20291	rodents	
ferrous iron transport protein	2	<i>Pseudomonas aeruginosa</i>	PAO1	rodents	lung
surface-exposed thioredoxin-family lipoprotein	1	<i>Streptococcus pneumoniae</i>	serotype 2 strain D39	rodents	lung; blood; nasopharynx
protein deacetylase	1	<i>Yersinia pestis</i>	201	rodents	
glycosyltransferase	2	<i>Helicobacter pylori</i>	G27	primates	gastric epithelium cell line
UDP-glucose 4-epimerase	1	<i>Burkholderia glumae</i>	BGR1	monocots	panicle
histone methyltransferase	2	<i>Mycobacterium tuberculosis</i>	H37Rv	primates	macrophage
effector (plant avirulence determinant)	7	<i>Pseudomonas cichorii</i>	JBC1	eudicots	leaf
acetyltransferase	1	<i>Xanthomonas oryzae</i>	pv. oryzae strain PXO99A	monocots	leaf
poly-beta-1,6-N-acetyl-D-glucosamine N-deacetylase		<i>Staphylococcus aureus</i>	JE2	rodents	thigh muscle
regulatory protein	1	<i>Pseudomonas aeruginosa</i>	PAO1	rodents	
putative beta-glucosidase		<i>Botrytis cinerea</i>	B05.10	eudicots	leaf
thioredoxin reductase		<i>Fusarium graminearum</i>	PH-1	monocots	inflorescence ; leaf
					spleen; bone marrow-

					derived macrophage
PvdI(2)		<i>Pseudomonas aeruginosa</i>	PAO1	nematodes	larva
global regulator	1	<i>Pseudomonas aeruginosa</i>	PA14	rodents	liver; kidney
virulence factor	1	<i>Cronobacter turicensis</i>	LMG 23827	primates	THP-1 cell
type III secretion	1	<i>Salmonella enterica</i>	subsp. enterica serovar Typhimurium strain SL1344	rodents	
putative arylsulfatase	2	<i>Salmonella enterica</i>	subsp. enterica serovar Typhimurium strain 14028s	bony fishes	embryo
protein-serine/threonine phosphatase	2	<i>Staphylococcus aureus</i>	Newman	rodents	kidney; liver
eukaryotic-type serine/threonine kinases	2	<i>Streptococcus suis</i>	serotype 2	even-toed ungulates	
translation initiation factor eIF3	1	<i>Aspergillus fumigatus</i>	CEA10	lethal pathogen phenotype	
transcriptional regulatory protein		<i>Enterococcus faecalis</i>	V583	rodents	mandible
ferric vibriobactin ABC transporter, ATP-binding protein		<i>Klebsiella pneumoniae</i>	KPPR1	rodents	lung; spleen
O-fucosyltransferase		<i>Toxoplasma gondii</i>	CZ1	rodents	abdomen; brain
DNA gyrase (bacterial topoisomerase II)	3	<i>Burkholderia glumae</i>	Pg-10	monocots	seedling
hybrid protein	1	<i>Xanthomonas oryzae</i>	pv. oryzae strain PXO99A	monocots	leaf
putative transcriptional regulator		<i>Escherichia coli</i>	serotype O157:H7	primates	epithelial cell
a novel ribosome-associated modulation protein	1	<i>Erwinia amylovora</i>	Ea1189	eudicots	shoot
protein tyrosine kinase transcriptional regulator	2	<i>Mycobacterium tuberculosis</i>	H37Ra	rodents	lung
glycosyltransferase family 2 protein	2	<i>Ralstonia solanacearum</i>	GMI1000	eudicots	seedling
phospho-2-dehydro-3-deoxyheptonate aldolase	4	<i>Ralstonia solanacearum</i>	OE1-1	eudicots	leaf



3-oxoacyl-ACP synthase	2	<i>Xanthomonas oryzae</i>	pv. <i>oryzae</i> strain PXO99A	monocots	leaf
acyl carrier protein	1	<i>Xanthomonas oryzae</i>	pv. <i>oryzae</i> strain PXO99A	monocots	leaf
UDP-3-O-[3-hydroxymyristoyl] glucosamine N-acyltransferase	1	<i>Leptospira interrogans</i>	serovar Manilae strain L495	rodents	liver; kidney
3-hydroxybutyryl-CoA dehydrogenase	1	<i>Escherichia coli</i>	F11	rodents	small intestine; stomach
involved in pathogenicity	1	<i>Glaesserella parasuis</i>	LC	rodents	heart; spleen; lung
alpha/beta hydrolase	2	<i>Salmonella enterica</i>	subsp. <i>enterica</i> serovar Typhi strain Ty2	primates	macrophage
siderophores synthesis	2	<i>Klebsiella pneumoniae</i>	KPPR1	rodents	spleen; lung
protein kinase	1	<i>Fusarium graminearum</i>	PH-1	monocots	spike
endonuclease	1	<i>Fusarium pseudograminearum</i>	WZ2-8A	monocots	leaf
putative outer membrane protein H	2	<i>Riemerella anatipestifer</i>	RA-CH-1	birds	blood; liver; brain; spleen; heart
phosphate metabolism	2	<i>Xanthomonas citri</i>	subsp. <i>citri</i> strain 306	eudicots	leaf
chaperone protein	4	<i>Francisella tularensis</i>	subsp. <i>novicida</i> strain U112	rodents	liver; spleen
type IV secretion protein	2	<i>Xanthomonas albilineans</i>	FS25	monocots	leaf
DNA-binding transcriptional regulator NtrC	4	<i>Pseudomonas aeruginosa</i>	LESB58	rodents	
sensor histidine kinase	1	<i>Xanthomonas oryzae</i>	pv. <i>oryzae</i> strain PXO99	monocots	leaf
multidrug resistance protein	1	<i>Pseudomonas aeruginosa</i>	PAO1	rodents	lung
beta-lactamase	3	<i>Pseudomonas aeruginosa</i>	PAO1	moths	
putative ompa family outer membrane protein precursor	1	<i>Xanthomonas albilineans</i>	XaFL07-1	monocots	stem; leaf

3-isopropylmalate dehydrogenase		<i>Klebsiella pneumoniae</i>	KPPR1	rodents	lung; bronchoalveolar lavage fluid
multidrug efflux protein		<i>Acinetobacter baumannii</i>	BM4587	rodents	blood; lung; liver; spleen
nucleotide sugar transaminase		<i>Xanthomonas oryzae</i>	pv. <i>oryzae</i> strain PXO99A	monocots	leaf
peroxisomal-CoA synthetase		<i>Magnaporthe oryzae</i>	Guy11	monocots	leaf
effector protein		<i>Escherichia coli</i>	EDL933	rodents	colon
glucokinase		<i>Mycobacterium tuberculosis</i>	H37Rv	rodents	spleen; lung
two-component system, response regulator		<i>Pseudomonas syringae</i>	pv. tomato strain DC3000	eudicots	leaf
phage-shock protein		<i>Salmonella enterica</i>	subsp. <i>enterica</i> serovar Typhimurium strain ST4/74	rodents	spleen
alanine racemase		<i>Aeromonas hydrophila</i>	HBNUAh01	bony fishes	abdomen
aldo/keto reductase		<i>Beauveria bassiana</i>	Bb0062	moths	larva