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GENOME SEQUENCES

Draft Genome Sequences of 30 *Salmonella enterica* Serovar Enteritidis Isolates Associated with Multiple Outbreaks in Brazil

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ABSTRACT *Salmonella enterica* subsp. *enterica* serovar Enteritidis has been the prevalent serovar isolated from gastroenteritis cases in Brazil since the 1990s. Here, we report the draft genomes of 30 *S.* Enteritidis isolates originating from a variety of patients and implicated foods during outbreaks between 1999 and 2006 in Brazil.

Salmonella enterica subsp. *enterica* serovar Enteritidis is a major and long-standing public health concern worldwide and one of the top serovars causing human salmonellosis (1). In South America, *S.* Enteritidis has been associated with epidemic human illnesses since the 1990s (2). In particular, in Brazil, prior to the 1990s, ≤1% of *Salmonella* samples isolated from both human and nonhuman sources were *S.* Enteritidis (2, 3). It became the most prevalent serovar in both human and nonhuman sources in 1994, accounting for 65% of all *Salmonella* isolates in Brazil (2, 3). The 30 selected outbreak-associated *S.* Enteritidis isolates discussed here originated from a variety of foods and patients involved in multiple outbreaks in Brazil during 1999 to 2006 (Table 1). As of 29 November 2019, there were 365 *S.* Enteritidis isolates from Brazil in the Pathogen Detection Isolates Browser (https://www.ncbi.nlm.nih.gov/pathogens/), classified as 22 defined single nucleotide polymorphism (SNP) clusters, including the genomes reported here. The isolates sequenced in the current study will provide genomic information for implicated outbreaks and will contribute to a better understanding of the genomic diversity of *S.* Enteritidis in Brazil.

The 30 *S.* Enteritidis isolates were from the reference collections of epidemic *Salmonella* strains of the Central Laboratory of Paraná State, Brazil, and the State University of Londrina, Paraná State, Brazil (4–6). The genomic DNA was extracted after incubation of the cultures for 16 h at 37°C in Trypticase soy broth (Becton, Dickinson, Franklin Lakes, NJ) using the DNeasy blood and tissue kit (Qiagen, Inc., Valencia, CA). Concentrations of DNA were measured using a Qubit 3.0 fluorometer (Life Technologies, MD). The libraries were prepared according to Nextera XT protocols and sequenced on the NextSeq 500 platform (Illumina, San Diego, CA) using a NextSeq 500/550 high-output kit v2 (300 cycles). The run quality was assessed using the following parameters: cluster density, 170 to 220 k/mm^2; and clusters passing filters, >80%. The raw reads were trimmed using Trimmomatic (7) and assembled *de novo* using SPAdes software v3.8.2 (8) with default settings. Contigs less than 500 bp long were filtered out. Annotations of assemblies were processed using the NCBI Prokaryotic Genome Annotation Pipeline (PGAP) (9) and subsequently deposited at DDBJ/EMBL/GenBank.

Data availability. The genome sequences of the 30 *S.* Enteritidis isolates were deposited in DDBJ/EMBL/GenBank. Detailed information is listed in Table 1.

Citation Cao G, Balkey M, Jin Q, Brown E, Allard M, de Melo ANF, de Oliveira TCRM, Magnani M, Macarisin D. 2020. Draft genome sequences of 30 *Salmonella enterica* serovar Enteritidis isolates associated with multiple outbreaks in Brazil. Microbiol Resour Announc 9:e01580-19. https://doi.org/10.1128/MRA.01580-19.

Editor Catherine Putonti, Loyola University Chicago

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Received 23 December 2019
Accepted 9 February 2020
Published 12 March 2020

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TABLE 1 Summary characteristics of whole-genome sequencing of *Salmonella* Enteritidis isolates

Strain name	Source[a]	Yr	Size (bp)	GC content (%)	No. of genes	No. of RNA genes	No. of reads	Coverage (×)	N_{50} (bp)	No. of contigs	SRA accession no.	GenBank accession no.
CFSAN077700	Homemade cake	1999	4,728,574	52.05	4,732	91	8,286,170	243	327,581	34	SRR10013622	AAJTAW000000000
CFSAN077702	Mayonnaise	1999	4,699,868	52.13	4,640	91	10,890,502	321	478,485	32	SRR10013630	AAJTBE000000000
CFSAN077703	Mayonnaise/chicken risotto	2000	4,681,530	52.09	4,623	92	10,603,928	311	518,087	27	SRR10013634	AAJTBG000000000
CFSAN077706	Handmade cake	2000	4,742,268	52.04	4,714	90	3,130,166	93	305,794	41	SRR10013650	AAJTBZ000000000
CFSAN077708	Filled cake	2001	4,698,102	52.13	4,641	92	5,927,506	183	478,531	31	SRR10013621	AAJTAV000000000
CFSAN077709	Mayonnaise	2001	4,641,825	52.13	4,561	93	7,350,480	230	478,743	28	SRR10013643	AAJTBU000000000
CFSAN077710	Cooked meat	2001	4,700,510	52.13	4,637	90	7,183,184	221	478,743	30	SRR10013629	AAJTBB000000000
CFSAN077711	Chicken/tuna pie	2001	4,735,376	52.16	4,694	93	7,097,848	216	478,531	33	SRR10013627	AAJTBC000000000
CFSAN077712	Birthday cake	2001	4,699,387	52.13	4,639	92	6,535,460	201	327,581	31	SRR10013649	AAJTCD000000000
CFSAN077721	Mayonnaise	2002	4,700,411	52.13	4,632	89	5,357,630	163	288,792	35	SRR10013631	AAJTBJ000000000
CFSAN077723	Ground beef and chicken	2001	4,674,269	52.12	4,615	90	8,643,344	258	327,313	30	SRR10013628	AAJTBA000000000
CFSAN077729	Chicken meat	2001	4,680,860	52.09	4,620	91	7,766,984	242	518,008	28	SRR10013647	AAJTBS000000000
CFSAN077730	Food	2003	4,642,003	52.13	4,561	92	9,041,650	280	478,743	28	SRR10013626	AAJTBD000000000
CFSAN077731	Food	2004	4,695,521	52.13	4,629	80	1,195,192	36	227,730	37	SRR10013653	AAJTCG000000000
CFSAN077738	Food	2005	4,700,465	52.13	4,639	93	10,636,464	315	327,581	32	SRR10013640	AAJTBN000000000
CFSAN077741	Food	2005	4,698,380	52.13	4,633	86	1,732,282	53	327,581	33	SRR10013618	AAJTAQ000000000
CFSAN077744	Food	2005	4,651,918	52.15	4,591	88	10,001,842	302	327,321	32	SRR10013652	AAJTCL000000000
CFSAN077749	Food	2005	4,698,519	52.13	4,637	81	1,294,816	39	283,549	34	SRR10013636	AAJTBI000000000
CFSAN077754	Poultry	2003	4,651,041	52.15	4,578	77	1,733,852	54	327,313	35	SRR10013619	AAJTAT000000000
CFSAN077755	Poultry	2004	4,699,099	52.13	4,640	93	7,152,068	219	327,581	31	SRR10013625	AAJTAX000000000
CFSAN077759	Poultry	2006	4,737,569	52.09	4,692	77	1,445,188	44	460,829	33	SRR10013635	AAJTBM000000000
CFSAN077761	Human feces	1999	4,699,754	52.13	4,636	91	7,796,088	242	327,572	31	SRR10013648	AAJTBX000000000
CFSAN077762	Human feces	1999	4,699,960	52.13	4,638	92	5,873,354	182	478,531	31	SRR10013645	AAJTBR000000000
CFSAN077764	Human feces	2001	4,681,218	52.09	4,622	91	4,228,848	130	518,008	27	SRR10013637	AAJTBK000000000
CFSAN077765	Human feces	1999	4,696,434	52.13	4,624	75	1,417,562	43	333,597	35	SRR10013642	AAJTBQ000000000
CFSAN077767	Human feces	2001	4,641,297	52.13	4,559	90	8,289,524	258	327,581	29	SRR10013641	AAJTBO000000000
CFSAN077768	Human feces	2001	4,698,677	52.13	4,633	79	1,333,710	40	327,581	32	SRR10013638	AAJTBL000000000
CFSAN077769	Human feces	2001	4,659,153	52.14	4,568	79	1,677,616	51	286,977	35	SRR10013646	AAJTBV000000000
CFSAN077771	Human feces	2002	4,737,062	52.04	4,689	92	8,744,200	269	327,581	34	SRR10013644	AAJTBT000000000
CFSAN077776	Human feces	2004	4,699,592	52.13	4,636	88	10,840,152	329	327,313	31	SRR10013651	AAJTBY000000000

[a] All strains were isolated from states in the south of Brazil.

ACKNOWLEDGMENTS

The work was partly funded by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior and the Brazilian National Council for Scientific and Technological Development.

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