



# Draft Genome Sequences of 510 *Listeria monocytogenes* Strains from Food Isolates and Human Listeriosis Cases from Northern Italy

✉ Sara Lomonaco,<sup>a,b</sup> Silvia Gallina,<sup>c</sup> Virginia Filipello,<sup>a,d</sup> Maria Sanchez Leon,<sup>b</sup> George John Kastanis,<sup>b</sup> Marc Allard,<sup>b</sup> Eric Brown,<sup>b</sup> Ettore Amato,<sup>e</sup> Mirella Pontello,<sup>e</sup> Lucia Decastelli<sup>c</sup>

<sup>a</sup>Department of Veterinary Sciences, University of Turin, Grugliasco, Turin, Italy

<sup>b</sup>Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration, College Park, Maryland, USA

<sup>c</sup>Istituto Zooprofilattico Sperimentale del Piemonte Liguria e Valle d'Aosta, Turin, Italy

<sup>d</sup>Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna, Brescia, Italy

<sup>e</sup>Department of Health Sciences, University of Milan, Milan, Italy

**ABSTRACT** Listeriosis outbreaks are frequently multistate/multicountry outbreaks, underlining the importance of molecular typing data for several diverse and well-characterized isolates. Large-scale whole-genome sequencing studies on *Listeria monocytogenes* isolates from non-U.S. locations have been limited. Herein, we describe the draft genome sequences of 510 *L. monocytogenes* isolates from northern Italy from different sources.

*Listeria monocytogenes* is a Gram-positive foodborne bacterial pathogen primarily responsible for listeriosis in humans. Cases of listeriosis, which are caused by the consumption of several different types of contaminated foods, can be sporadic or part of an outbreak (1). Given the frequent multistate or multinational nature of listeriosis outbreaks, it is important to have a large amount of molecular typing data for well-characterized isolates obtained from several different sources and countries (1, 2). In the United States, *L. monocytogenes* isolates from foods and clinical cases have been routinely analyzed with whole-genome sequencing (WGS) since 2013 (2). However, a large part of non-U.S. isolates are those implicated in known international outbreaks, and large-scale WGS data for isolates from non-U.S. locations are currently somewhat limited. Herein, we describe the draft genome sequences of 510 *L. monocytogenes* isolates from northern Italy from different sources.

A total of 416 *L. monocytogenes* isolates were collected from different nonclinical sources (i.e., foods and food-processing environments, feeds, animal tissues, and stools) in Piedmont in northern Italy between 2003 and 2014. Additionally, we included 94 isolates from human clinical cases spanning from 2002 to 2016 and originating from the same geographical area in northern Italy. DNA extraction was performed with the DNeasy blood and tissue kit (Qiagen, Hilden, Germany), according to the manufacturer's instructions. DNA libraries were prepared with the Nextera XT DNA library preparation kit. WGS was carried out on a MiSeq or a NextSeq system using a 2 × 250-bp or a 2 × 150-bp paired-end MiSeq/NextSeq reagent kit, respectively (Illumina, San Diego, CA, USA). *De novo* genome assemblies were created using CLC Genomics Workbench 10 (CLC bio, Aarhus, Denmark), and assembled genomes were annotated using the National Center for Biotechnology Information (NCBI) Prokaryotic Genome Annotation Pipeline ([https://www.ncbi.nlm.nih.gov/genome/annotation\\_prok/](https://www.ncbi.nlm.nih.gov/genome/annotation_prok/)). Multilocus sequence typing (MLST) (<http://bigsd.db.pasteur.fr/listeria/listeria.html>) and multivirulence locus sequence typing (MVLST) (<https://sites.google.com/site/mvlstdatabase/>) were car-

Received 11 October 2017 Accepted 5 December 2017 Published 18 January 2018

**Citation** Lomonaco S, Gallina S, Filipello V, Sanchez Leon M, Kastanis GJ, Allard M, Brown E, Amato E, Pontello M, Decastelli L. 2018. Draft genome sequences of 510 *Listeria monocytogenes* strains from food isolates and human listeriosis cases from northern Italy. Genome Announc 6:e01276-17. <https://doi.org/10.1128/genomeA.01276-17>.

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ried out according to available schemes to assign sequence types (STs) or virulence types (VTs), respectively.

Overall, there were 52 STs and 45 VTs. Some profiles were found in only clinical (9 STs, 6 VTs) or food/environmental (24 STs, 18 VTs) isolates. One profile (VT11, associated with ST9/ST204), was observed across different sources and years and represented ~36% of all sequenced isolates. Interestingly, in 28 food/environmental isolates, the *tet* ( $n = 1$ ) or the *tet(M)* ( $n = 27$ ) gene was detected, representing a prevalence of 5.49%. This appears to be higher than what was recently reported (0.6%) for 1,143 *L. monocytogenes* isolates collected in the European Union from ready-to-eat foods and human clinical cases (3).

The draft genome sequences described herein will be useful in (i) comparative genomic analyses of *L. monocytogenes* from different locations and periods and (ii) supporting epidemiological investigations of outbreaks. A future publication will describe the genomic features of these strains in more detail.

**Accession number(s).** The genome assemblies described in this paper are available in DDBJ/EMBL/GenBank under the accession numbers listed in Table 1.

## ACKNOWLEDGMENTS

S.L. was supported for 6 months at CFSAN by a travel grant from the second edition of the World Wide Style Project (WWS) of the University of Turin (Italy), cofunded by Fondazione CRT. This project was also supported in part by an appointment to the Research Participation Program at the Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration, administered by the Oak Ridge Institute for Science and Education through an interagency agreement between the U.S. Department of Energy and the FDA.

The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the U.S. Food and Drug Administration. The use of trade names and commercial sources is for identification purposes only and does not imply endorsement.

**TABLE 1** Metadata for the 510 *Listeria monocytogenes* strains isolated from different food, animal, and environmental sources in northern Italy between 2002 and 2016

CFSAN no.	Accession no.	Contig $N_{50}$ (bp)	Contig $L_{50}$	Assembly length (bp)	No. of contigs	Assembly level
CFSAN044729	NYET00000000	193,121	5	2,974,910	49	Contig
CFSAN044730	NYES00000000	191,511	5	2,998,457	39	Contig
CFSAN044731	NYER00000000	277,904	4	2,910,202	55	Contig
CFSAN044732	NYEQ00000000	221,694	5	2,924,495	29	Contig
CFSAN044733	NYEP00000000	165,039	5	3,001,819	30	Contig
CFSAN044734	NYEO00000000	562,272	3	3,025,865	20	Contig
CFSAN044735	NYEN00000000	277,906	5	3,005,074	48	Contig
CFSAN044736	NYEM00000000	503,592	3	2,956,837	24	Contig
CFSAN044737	NYEL00000000	326,837	4	2,866,017	20	Contig
CFSAN044738	NYEK00000000	324,997	4	3,026,330	22	Contig
CFSAN044739	NYEJ00000000	341,695	4	3,106,980	130	Contig
CFSAN044740	NYEI00000000	449,021	3	2,973,157	19	Scaffold
CFSAN044741	NYEH00000000	449,378	3	2,980,234	28	Contig
CFSAN044742	NYEG00000000	358,755	4	3,022,803	26	Scaffold
CFSAN044743	NYEF00000000	484,614	3	2,948,780	16	Contig
CFSAN044744	NYEE00000000	324,687	4	2,925,791	63	Contig
CFSAN044746	NYED00000000	277,935	4	3,023,924	26	Contig
CFSAN044747	NYEC00000000	449,565	3	2,949,029	20	Contig
CFSAN044748	NYEB00000000	435,624	3	3,059,844	22	Contig
CFSAN044749	NYEA00000000	277,906	4	2,950,417	31	Contig
CFSAN044751	NYDZ00000000	181,710	6	3,102,917	53	Scaffold
CFSAN044752	NYDY00000000	223,875	5	2,948,833	30	Scaffold
CFSAN044753	NYDX00000000	325,060	4	3,006,295	28	Contig

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TABLE 1 (Continued)

CFSAN no.	Accession no.	Contig $N_{50}$ (bp)	Contig $L_{50}$	Assembly length (bp)	No. of contigs	Assembly level
CFSAN044754	NYDW00000000	324,690	4	3,058,869	34	Contig
CFSAN044755	NYDV00000000	210,346	5	2,950,492	28	Scaffold
CFSAN044757	NYDU00000000	205,427	4	2,983,359	79	Contig
CFSAN044758	NYDT00000000	278,124	5	2,998,699	34	Scaffold
CFSAN044759	NYDS00000000	261,660	4	2,968,063	47	Contig
CFSAN044760	NYDR00000000	211,140	5	2,979,355	30	Contig
CFSAN044761	NYDQ00000000	193,004	5	3,014,755	32	Contig
CFSAN044763	NYDP00000000	267,979	4	2,963,330	22	Scaffold
CFSAN044765	NYDO00000000	155,869	6	3,061,414	89	Scaffold
CFSAN044766	NYDN00000000	192,932	5	3,059,490	92	Contig
CFSAN044767	NYDM00000000	278,606	4	2,933,729	61	Contig
CFSAN044768	NYDL00000000	189,790	5	3,091,956	42	Contig
CFSAN044770	NYDK00000000	310,150	4	2,976,629	20	Scaffold
CFSAN044771	NYDJ00000000	449,426	3	2,978,399	91	Contig
CFSAN044772	NYDI00000000	525,917	3	2,826,749	15	Scaffold
CFSAN044773	NYDH00000000	242,508	5	2,905,486	26	Scaffold
CFSAN044774	NYDG00000000	220,126	6	2,911,262	38	Scaffold
CFSAN044775	NYDF00000000	516,083	3	2,988,961	28	Scaffold
CFSAN044776	NYDE00000000	243,782	4	3,021,536	31	Scaffold
CFSAN044777	NYDD00000000	479,826	3	2,898,467	27	Scaffold
CFSAN044778	NYDC00000000	423,674	3	2,926,743	24	Scaffold
CFSAN044779	NYDB00000000	377,671	4	3,048,747	39	Scaffold
CFSAN044780	NYDA00000000	481,934	3	3,092,650	55	Scaffold
CFSAN044781	NYCZ00000000	201,336	4	3,080,790	38	Scaffold
CFSAN044782	NYCY00000000	225,651	5	3,176,714	31	Scaffold
CFSAN044783	NYCX00000000	411,052	3	3,036,239	58	Scaffold
CFSAN044784	NYCW00000000	224,805	5	3,001,312	32	Scaffold
CFSAN044785	NYCV00000000	221,736	4	2,991,867	37	Scaffold
CFSAN044786	NYCU00000000	552,601	3	2,900,756	25	Scaffold
CFSAN044787	NYCT00000000	221,783	4	2,993,526	43	Scaffold
CFSAN044788	NYCS00000000	221,388	4	3,062,490	49	Scaffold
CFSAN044789	NYCR00000000	420,080	4	3,028,953	39	Scaffold
CFSAN044790	NYCQ00000000	476,427	3	2,929,716	22	Scaffold
CFSAN044791	NYCP00000000	564,904	2	2,898,513	20	Scaffold
CFSAN044792	NYCO00000000	225,727	4	2,959,892	28	Scaffold
CFSAN044793	NYCN00000000	237,984	5	2,955,268	30	Scaffold
CFSAN044794	NYCM00000000	361,221	4	3,044,485	26	Scaffold
CFSAN044795	NYCL00000000	176,610	6	2,955,921	33	Scaffold
CFSAN044796	NYCK00000000	482,359	3	3,081,016	40	Scaffold
CFSAN044797	NYCJ00000000	464,432	4	3,269,505	279	Contig
CFSAN044798	NYCI00000000	155,814	5	3,083,063	46	Scaffold
CFSAN044799	NYCH00000000	170,119	4	3,082,391	51	Scaffold
CFSAN044800	NYCG00000000	172,798	6	2,964,615	41	Scaffold
CFSAN044801	NYCF00000000	149,150	7	2,953,529	40	Scaffold
CFSAN044802	NYCE00000000	232,208	5	3,061,394	29	Scaffold
CFSAN044803	NYCD00000000	330,105	4	3,011,108	32	Scaffold
CFSAN044804	NYCC00000000	204,915	6	3,063,588	35	Scaffold
CFSAN044805	NYCB00000000	236,587	4	2,993,472	42	Scaffold
CFSAN044806	NYCA00000000	297,126	4	3,017,311	28	Scaffold
CFSAN044807	NYBZ00000000	241,977	4	2,997,569	45	Scaffold
CFSAN044808	NYBY00000000	309,414	4	3,067,480	47	Scaffold
CFSAN044809	NYBX00000000	308,869	4	3,054,621	46	Scaffold
CFSAN044810	NYBW00000000	308,749	4	3,046,455	32	Scaffold
CFSAN044811	NYBV00000000	314,471	4	3,020,125	37	Scaffold
CFSAN044812	NYBU00000000	295,369	4	3,087,619	68	Scaffold
CFSAN044813	NYBT00000000	308,818	4	3,067,037	44	Scaffold
CFSAN044814	NYBS00000000	306,891	4	3,092,616	85	Scaffold
CFSAN044815	NYBR00000000	418,034	3	2,966,469	43	Scaffold
CFSAN044816	NYBQ00000000	340,458	3	3,019,019	31	Scaffold
CFSAN044818	NYBP00000000	347,179	4	3,089,504	46	Scaffold
CFSAN044821	NYBO00000000	477,213	3	2,962,421	26	Scaffold
CFSAN044822	NYBN00000000	428,890	4	2,967,891	37	Contig
CFSAN044823	NYBM00000000	390,778	3	2,904,559	24	Scaffold

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TABLE 1 (Continued)

CFSAN no.	Accession no.	Contig <i>N</i> <sub>50</sub> (bp)	Contig <i>L</i> <sub>50</sub>	Assembly length (bp)	No. of contigs	Assembly level
CFSAN044826	NYBL00000000	449,031	3	2,935,159	19	Scaffold
CFSAN044827	NYBK00000000	492,998	2	2,930,843	26	Scaffold
CFSAN044831	NYBJ00000000	143,011	7	2,939,570	41	Scaffold
CFSAN044840	NYBI00000000	309,113	4	3,066,562	48	Scaffold
CFSAN044841	NYBH00000000	334,668	4	3,019,223	28	Scaffold
CFSAN044843	NYBG00000000	422,676	3	3,051,305	29	Scaffold
CFSAN044844	NYBF00000000	329,936	4	3,045,939	30	Scaffold
CFSAN044845	NYBE00000000	424,908	4	2,930,254	23	Scaffold
CFSAN044846	NYBD00000000	389,294	4	2,999,712	32	Scaffold
CFSAN044847	NYBC00000000	482,568	3	3,055,219	37	Scaffold
CFSAN044848	NYBB00000000	476,243	3	2,996,751	27	Scaffold
CFSAN044849	NYBA00000000	330,131	4	3,047,161	28	Scaffold
CFSAN044851	NYAZ00000000	212,939	5	3,070,521	61	Contig
CFSAN044852	NYAY00000000	292,070	5	3,044,722	42	Scaffold
CFSAN044853	NYAX00000000	327,205	3	3,013,961	31	Scaffold
CFSAN044854	NYAW00000000	194,803	6	2,871,732	35	Scaffold
CFSAN044855	NYAV00000000	254,897	4	3,008,521	39	Scaffold
CFSAN044856	NYAU00000000	309,888	4	3,017,786	35	Scaffold
CFSAN044857	NYAT00000000	190,489	6	3,066,681	41	Contig
CFSAN044859	NYAS00000000	256,673	4	2,782,418	26	Contig
CFSAN044860	NYAR00000000	510,053	3	2,896,318	44	Contig
CFSAN044861	NYAQ00000000	230,428	5	3,067,505	41	Scaffold
CFSAN045765	NYAP00000000	154,830	6	2,944,592	51	Scaffold
CFSAN045766	NYAO00000000	241,025	4	3,049,710	33	Scaffold
CFSAN045769	NYAN00000000	131,732	7	3,033,755	45	Scaffold
CFSAN045770	NYAM00000000	189,536	6	2,914,612	36	Scaffold
CFSAN045771	NYAL00000000	181,768	5	3,059,473	37	Scaffold
CFSAN045772	NYAK00000000	184,562	6	3,031,711	35	Scaffold
CFSAN045774	NYAJ00000000	69,732	16	3,100,680	143	Scaffold
CFSAN045775	NYAI00000000	196,184	6	3,032,357	28	Scaffold
CFSAN045776	NYAH00000000	227,198	4	2,824,050	25	Scaffold
CFSAN045777	NYAG00000000	101,455	9	3,034,120	93	Scaffold
CFSAN045778	NYAF00000000	37,624	21	2,894,446	177	Contig
CFSAN045779	NYAE00000000	123,939	9	3,031,307	60	Scaffold
CFSAN045780	NYAD00000000	172,385	7	3,047,785	52	Scaffold
CFSAN045781	NYAC00000000	423,768	4	3,066,918	53	Contig
CFSAN045782	NYAB00000000	185,008	5	3,078,139	92	Contig
CFSAN045783	NYAA00000000	330,074	4	3,052,837	30	Scaffold
CFSAN045784	NXZZ00000000	240,831	5	2,945,391	43	Scaffold
CFSAN045785	NXZY00000000	193,644	5	2,942,257	43	Contig
CFSAN045786	NXZX00000000	524,046	2	2,826,031	21	Scaffold
CFSAN045787	NXZW00000000	435,097	3	2,982,543	25	Scaffold
CFSAN045788	NXZV00000000	216,582	5	3,033,282	33	Scaffold
CFSAN045789	NXZU00000000	525,723	3	2,661,611	21	Scaffold
CFSAN045790	NXZT00000000	525,627	2	2,827,831	15	Scaffold
CFSAN045791	NXZS00000000	324,979	4	3,057,160	26	Scaffold
CFSAN045792	NXZR00000000	176,042	6	3,033,811	52	Scaffold
CFSAN045793	NXZQ00000000	334,179	4	3,051,068	30	Scaffold
CFSAN045794	NXZP00000000	333,715	4	2,941,394	42	Scaffold
CFSAN045795	NXZO00000000	224,081	4	2,942,860	38	Scaffold
CFSAN045796	NXZN00000000	435,624	3	2,997,925	22	Scaffold
CFSAN045797	NXZM00000000	130,867	5	3,038,410	48	Scaffold
CFSAN045798	NXZL00000000	216,971	5	3,004,242	31	Scaffold
CFSAN045799	NXZK00000000	476,776	3	2,986,969	32	Scaffold
CFSAN045800	NXZJ00000000	136,861	6	2,942,904	54	Scaffold
CFSAN045801	NXZI00000000	141,381	7	2,908,872	52	Scaffold
CFSAN045802	NXZH00000000	194,368	5	2,910,061	43	Scaffold
CFSAN045803	NXZG00000000	225,719	4	2,955,338	29	Scaffold
CFSAN045804	NXZF00000000	182,350	7	3,034,255	39	Scaffold
CFSAN045805	NXZE00000000	526,270	3	2,852,014	12	Contig
CFSAN045806	NXZD00000000	156,763	6	2,869,537	36	Scaffold
CFSAN045807	NXZC00000000	111,179	10	2,923,224	68	Scaffold
CFSAN045808	NXZB00000000	88,147	12	3,089,355	105	Scaffold
CFSAN045809	NXZA00000000	266,878	3	2,163,535	22	Scaffold

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TABLE 1 (Continued)

CFSAN no.	Accession no.	Contig $N_{50}$ (bp)	Contig $L_{50}$	Assembly length (bp)	No. of contigs	Assembly level
CFSAN045810	NXYZ00000000	449,022	3	2,998,880	23	Scaffold
CFSAN045811	NXY000000000	106,750	10	3,079,346	88	Scaffold
CFSAN045812	NXYX00000000	58,435	13	2,989,685	104	Scaffold
CFSAN045813	NXYW00000000	257,069	4	3,021,388	34	Scaffold
CFSAN045814	NXYV00000000	113,435	10	2,866,505	75	Scaffold
CFSAN045815	NXYU00000000	258,079	4	3,107,922	63	Scaffold
CFSAN045816	NXYT00000000	367,008	3	2,896,641	20	Scaffold
CFSAN045817	NXYS00000000	294,910	4	2,922,229	22	Contig
CFSAN045818	NXYR00000000	262,471	4	2,848,431	21	Scaffold
CFSAN045819	NXYQ00000000	347,468	4	2,991,005	31	Scaffold
CFSAN045820	NXYP00000000	260,550	4	3,080,061	49	Scaffold
CFSAN045821	NXYO00000000	75,165	11	2,979,961	78	Scaffold
CFSAN045822	NXYN00000000	163,423	7	3,002,503	40	Scaffold
CFSAN045823	NXYM00000000	152,029	5	3,027,919	71	Scaffold
CFSAN045824	NXYL00000000	251,447	4	2,951,788	40	Scaffold
CFSAN045825	NXYK00000000	85,633	12	3,077,662	73	Scaffold
CFSAN045826	NXYJ00000000	201,252	5	3,032,660	33	Scaffold
CFSAN045827	NXYI00000000	125,247	7	3,041,976	66	Scaffold
CFSAN045828	NXYH00000000	474,568	3	2,993,195	22	Scaffold
CFSAN045829	NXYG00000000	181,765	5	2,999,974	47	Scaffold
CFSAN045830	NXYF00000000	93,917	11	3,077,201	94	Scaffold
CFSAN045831	NXYE00000000	46,226	19	2,988,369	122	Scaffold
CFSAN045832	NXYD00000000	111,996	7	2,944,159	58	Scaffold
CFSAN045833	NXYC00000000	52,612	16	2,956,138	119	Contig
CFSAN045834	NXYB00000000	98,894	9	2,907,024	61	Scaffold
CFSAN045835	NXYA00000000	93,532	11	2,815,072	79	Scaffold
CFSAN045836	NXXZ00000000	84,858	11	3,108,759	96	Scaffold
CFSAN045837	NXXY00000000	260,712	4	2,876,367	36	Scaffold
CFSAN045838	NXX000000000	185,440	6	2,920,283	29	Scaffold
CFSAN045839	NXXW00000000	201,707	5	3,080,940	52	Scaffold
CFSAN045840	NXXV00000000	213,506	5	3,002,297	38	Scaffold
CFSAN045841	NXXU00000000	423,138	3	2,952,753	29	Scaffold
CFSAN045842	NXXT00000000	174,936	7	3,002,050	38	Scaffold
CFSAN045843	NXXS00000000	277,439	4	2,994,707	28	Scaffold
CFSAN045844	NXXR00000000	146,945	7	2,923,248	94	Contig
CFSAN045845	NXXQ00000000	137,240	9	3,031,826	49	Scaffold
CFSAN045846	NXXP00000000	154,817	7	3,030,524	53	Scaffold
CFSAN045847	NXXO00000000	192,183	4	2,853,677	26	Scaffold
CFSAN045848	NXXN00000000	105,521	9	2,992,082	56	Scaffold
CFSAN045849	NXXM00000000	422,359	3	2,952,220	29	Scaffold
CFSAN045850	NXXL00000000	136,972	7	3,060,389	55	Scaffold
CFSAN045851	NXXK00000000	112,597	10	2,904,394	58	Scaffold
CFSAN045852	NXXJ00000000	46,394	20	2,864,055	149	Scaffold
CFSAN045853	NXXI00000000	236,416	4	3,057,598	39	Scaffold
CFSAN045854	NXXH00000000	176,813	5	3,084,459	44	Scaffold
CFSAN045855	NXXG00000000	161,650	6	2,794,890	33	Scaffold
CFSAN045856	NXXF00000000	237,838	4	2,876,044	36	Scaffold
CFSAN045857	NXXE00000000	164,987	5	2,997,105	34	Scaffold
CFSAN045858	NXXD00000000	448,747	3	2,957,477	18	Scaffold
CFSAN045859	NXXC00000000	155,509	6	3,085,460	36	Scaffold
CFSAN045860	NXXB00000000	114,413	8	3,077,390	76	Scaffold
CFSAN045861	NXXA00000000	243,674	4	2,952,083	31	Scaffold
CFSAN045862	NXWZ00000000	363,120	4	3,125,532	51	Scaffold
CFSAN045863	NXWY00000000	160,623	5	3,086,865	42	Scaffold
CFSAN045864	NXWX00000000	246,249	4	2,844,732	26	Scaffold
CFSAN045866	NXWW00000000	334,496	3	2,982,321	43	Scaffold
CFSAN045867	NXWV00000000	334,655	4	2,992,511	29	Scaffold
CFSAN045868	NXWU00000000	389,400	3	2,929,772	27	Scaffold
CFSAN045869	NXWT00000000	399,485	2	2,924,017	16	Contig
CFSAN045924	NXWS00000000	236,544	4	2,689,547	29	Scaffold
CFSAN045925	NXWR00000000	199,614	5	2,832,133	29	Scaffold
CFSAN045926	NXWQ00000000	165,356	6	2,879,643	37	Scaffold
CFSAN045927	NXWP00000000	164,480	6	3,057,647	39	Scaffold
CFSAN045928	NXWO00000000	99,566	10	2,992,441	59	Scaffold

(Continued on next page)

TABLE 1 (Continued)

CFSAN no.	Accession no.	Contig <i>N</i> <sub>50</sub> (bp)	Contig <i>L</i> <sub>50</sub>	Assembly length (bp)	No. of contigs	Assembly level
CFSAN045929	<a href="#">NXWN00000000</a>	155,629	7	2,994,561	47	Scaffold
CFSAN045930	<a href="#">NXWM00000000</a>	115,168	11	3,057,575	53	Scaffold
CFSAN045931	<a href="#">NXWL00000000</a>	144,664	7	3,057,166	41	Scaffold
CFSAN045932	<a href="#">NXWK00000000</a>	225,723	4	2,992,960	29	Scaffold
CFSAN045933	<a href="#">NXWJ00000000</a>	258,417	4	3,100,457	42	Scaffold
CFSAN045934	<a href="#">NXWI00000000</a>	442,453	3	3,016,433	66	Contig
CFSAN045935	<a href="#">NXWH00000000</a>	476,854	3	2,992,888	27	Scaffold
CFSAN045936	<a href="#">NXWG00000000</a>	202,374	4	2,808,180	44	Scaffold
CFSAN045937	<a href="#">NXWF00000000</a>	202,242	5	3,003,248	32	Scaffold
CFSAN045938	<a href="#">NXWE00000000</a>	193,696	6	3,085,625	63	Scaffold
CFSAN045939	<a href="#">NXWD00000000</a>	330,220	4	2,993,823	23	Scaffold
CFSAN045940	<a href="#">NXWC00000000</a>	167,118	6	2,992,233	49	Scaffold
CFSAN045941	<a href="#">NXWB00000000</a>	296,214	4	3,111,845	49	Contig
CFSAN045942	<a href="#">NXWA00000000</a>	329,977	4	2,993,062	28	Scaffold
CFSAN045943	<a href="#">NXVZ00000000</a>	186,245	5	2,993,341	45	Scaffold
CFSAN045944	<a href="#">NXVY00000000</a>	330,065	4	2,955,838	28	Scaffold
CFSAN045945	<a href="#">NXVX00000000</a>	389,036	4	2,992,946	23	Scaffold
CFSAN045946	<a href="#">NXVW00000000</a>	334,501	4	2,999,091	32	Scaffold
CFSAN045947	<a href="#">NXVV00000000</a>	165,440	6	3,099,985	46	Scaffold
CFSAN045948	<a href="#">NXVU00000000</a>	193,485	5	2,989,780	39	Scaffold
CFSAN045949	<a href="#">NXVT00000000</a>	284,764	4	2,994,394	28	Scaffold
CFSAN045950	<a href="#">NXVS00000000</a>	137,012	8	3,103,231	111	Scaffold
CFSAN045951	<a href="#">NXVR00000000</a>	72,236	15	3,077,301	133	Scaffold
CFSAN045952	<a href="#">NXVQ00000000</a>	111,413	9	2,994,296	54	Scaffold
CFSAN045953	<a href="#">NXVP00000000</a>	176,762	5	3,050,954	37	Scaffold
CFSAN045954	<a href="#">NXVO00000000</a>	83,900	13	2,991,066	79	Scaffold
CFSAN045955	<a href="#">NXVN00000000</a>	238,030	6	2,996,799	32	Scaffold
CFSAN045956	<a href="#">NXVM00000000</a>	1,456,619	1	2,832,487	12	Scaffold
CFSAN045957	<a href="#">NXVL00000000</a>	102,220	10	2,942,178	52	Scaffold
CFSAN045958	<a href="#">NXVK00000000</a>	225,641	4	2,990,640	30	Scaffold
CFSAN045959	<a href="#">NXVJ00000000</a>	107,888	7	2,943,957	47	Scaffold
CFSAN045960	<a href="#">NXVI00000000</a>	85,036	10	2,942,053	74	Scaffold
CFSAN045961	<a href="#">NXVH00000000</a>	100,532	11	2,940,454	67	Scaffold
CFSAN045962	<a href="#">NXVG00000000</a>	100,315	11	2,941,772	78	Scaffold
CFSAN045963	<a href="#">NXVF00000000</a>	169,817	6	2,827,124	39	Scaffold
CFSAN045964	<a href="#">NXVE00000000</a>	154,726	6	2,941,382	41	Scaffold
CFSAN045965	<a href="#">NXVD00000000</a>	127,810	8	2,938,994	50	Scaffold
CFSAN045966	<a href="#">NXVC00000000</a>	454,612	3	2,824,413	29	Scaffold
CFSAN045967	<a href="#">NXVB00000000</a>	329,528	4	2,824,258	23	Scaffold
CFSAN045968	<a href="#">NXVA00000000</a>	154,726	7	2,941,587	38	Scaffold
CFSAN045969	<a href="#">NXUZ00000000</a>	326,621	3	2,793,757	20	Scaffold
CFSAN045970	<a href="#">NXUY00000000</a>	525,350	2	2,822,561	21	Scaffold
CFSAN045971	<a href="#">NXUX00000000</a>	164,845	5	2,987,084	49	Scaffold
CFSAN045972	<a href="#">NXUW00000000</a>	330,099	3	2,991,904	29	Scaffold
CFSAN045973	<a href="#">NXUV00000000</a>	208,888	5	2,947,215	43	Scaffold
CFSAN045974	<a href="#">NXUU00000000</a>	115,371	9	3,065,166	68	Scaffold
CFSAN045975	<a href="#">NXUT00000000</a>	142,222	6	2,948,579	43	Scaffold
CFSAN045976	<a href="#">NXUS00000000</a>	101,049	8	2,992,217	71	Scaffold
CFSAN045977	<a href="#">NXUR00000000</a>	84,845	14	3,059,955	98	Contig
CFSAN045978	<a href="#">NXUQ00000000</a>	188,911	5	3,079,724	46	Scaffold
CFSAN045979	<a href="#">NXUP00000000</a>	153,592	6	3,080,822	49	Scaffold
CFSAN045980	<a href="#">NXUO00000000</a>	180,630	5	2,991,985	37	Scaffold
CFSAN045981	<a href="#">NXUN00000000</a>	169,154	5	2,929,263	34	Scaffold
CFSAN045982	<a href="#">NXUM00000000</a>	229,191	4	2,852,073	19	Scaffold
CFSAN045983	<a href="#">NXUL00000000</a>	128,950	8	2,942,503	45	Scaffold
CFSAN045984	<a href="#">NXUK00000000</a>	139,237	7	2,923,162	41	Scaffold
CFSAN045985	<a href="#">NXUJ00000000</a>	173,887	6	2,944,032	42	Scaffold
CFSAN045986	<a href="#">NXUI00000000</a>	637,010	2	2,920,366	48	Contig
CFSAN045987	<a href="#">NXUH00000000</a>	200,483	4	2,941,798	39	Scaffold
CFSAN045988	<a href="#">NXUG00000000</a>	185,716	6	2,951,050	121	Contig
CFSAN045989	<a href="#">NXUF00000000</a>	205,808	4	3,039,981	46	Scaffold
CFSAN045990	<a href="#">NXUE00000000</a>	111,743	9	2,940,762	50	Scaffold
CFSAN045991	<a href="#">NXUD00000000</a>	307,609	4	3,070,310	172	Scaffold
CFSAN045992	<a href="#">NXUC00000000</a>	200,638	6	3,006,246	40	Scaffold
CFSAN045993	<a href="#">NXUB00000000</a>	150,023	7	2,944,036	43	Scaffold

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TABLE 1 (Continued)

CFSAN no.	Accession no.	Contig $N_{50}$ (bp)	Contig $L_{50}$	Assembly length (bp)	No. of contigs	Assembly level
CFSAN045994	NXUA00000000	128,039	7	2,942,591	43	Scaffold
CFSAN045995	NXTZ00000000	221,492	4	3,087,678	60	Scaffold
CFSAN045996	NXTY00000000	142,527	7	2,942,321	45	Scaffold
CFSAN045997	NXTX00000000	139,242	8	2,943,895	43	Scaffold
CFSAN045998	NXTW00000000	109,758	9	2,944,002	42	Scaffold
CFSAN045999	NXTV00000000	211,749	4	3,014,345	49	Scaffold
CFSAN046000	NXTU00000000	199,490	5	3,050,834	45	Scaffold
CFSAN046001	NXTT00000000	444,340	4	3,051,549	36	Scaffold
CFSAN046002	NXTS00000000	185,871	6	2,885,102	32	Scaffold
CFSAN046003	NXTR00000000	325,026	4	2,909,211	22	Scaffold
CFSAN046004	NXTQ00000000	224,424	4	2,906,934	30	Scaffold
CFSAN046005	NXTP00000000	328,494	3	2,936,626	25	Scaffold
CFSAN046006	NXTO00000000	228,284	4	3,065,343	50	Scaffold
CFSAN046007	NXTN00000000	193,548	5	3,061,416	36	Scaffold
CFSAN046008	NXTM00000000	142,221	7	2,939,420	47	Scaffold
CFSAN046009	NXTL00000000	88,891	12	3,082,652	93	Scaffold
CFSAN046010	NXTK00000000	165,482	5	2,867,789	27	Scaffold
CFSAN046012	NXTJ00000000	200,109	6	2,996,148	41	Scaffold
CFSAN046013	NXTI00000000	309,926	2	3,051,734	24	Scaffold
CFSAN046014	NXTH00000000	568,908	2	2,879,751	13	Scaffold
CFSAN046015	NXTG00000000	543,008	2	2,895,373	12	Scaffold
CFSAN046016	NXTF00000000	564,134	2	2,875,106	16	Scaffold
CFSAN046017	NXTE00000000	174,052	6	2,951,544	37	Scaffold
CFSAN046018	NXTD00000000	482,616	3	3,059,635	27	Scaffold
CFSAN046019	NXTC00000000	173,865	6	2,924,609	39	Scaffold
CFSAN046020	NXTB00000000	142,504	7	2,950,869	36	Contig
CFSAN046021	NXTA00000000	600,663	2	2,914,441	14	Scaffold
CFSAN046022	NXSZ00000000	142,431	6	2,951,097	38	Contig
CFSAN046023	NXSY00000000	621,893	2	2,915,958	21	Scaffold
CFSAN046024	NXSX00000000	137,034	7	2,954,038	39	Scaffold
CFSAN046025	NXSW00000000	395,759	4	3,071,691	26	Scaffold
CFSAN046026	NXSV00000000	525,343	3	2,829,887	18	Scaffold
CFSAN046027	NXSU00000000	399,941	3	2,958,833	17	Scaffold
CFSAN046028	NXST00000000	436,477	3	2,949,603	68	Scaffold
CFSAN046029	NXSS00000000	117,670	8	2,959,406	53	Scaffold
CFSAN046030	NXSR00000000	173,869	6	2,948,447	38	Scaffold
CFSAN046031	NXSQ00000000	435,350	4	2,996,415	25	Scaffold
CFSAN046032	NXSP00000000	619,695	2	2,872,206	11	Scaffold
CFSAN046033	NXS000000000	350,435	3	3,069,036	26	Scaffold
CFSAN046034	NXSN00000000	396,089	4	3,020,864	31	Scaffold
CFSAN046035	NXSM00000000	396,208	4	3,089,181	73	Scaffold
CFSAN046036	NXSL00000000	176,629	6	2,952,965	50	Scaffold
CFSAN046037	NXSK00000000	125,414	9	2,995,662	66	Scaffold
CFSAN046038	NXSJ00000000	449,022	3	2,999,398	29	Scaffold
CFSAN046040	NXSI00000000	477,566	3	3,047,395	23	Scaffold
CFSAN046041	NXSH00000000	481,704	3	2,950,104	26	Scaffold
CFSAN046045	NXSG00000000	479,484	3	3,024,882	20	Contig
CFSAN046047	NXSF00000000	117,664	10	2,962,039	69	Scaffold
CFSAN046048	NXSE00000000	234,965	5	2,960,099	30	Scaffold
CFSAN046049	NXSD00000000	567,117	3	2,959,559	13	Scaffold
CFSAN046050	NXSC00000000	435,831	3	2,962,520	23	Contig
CFSAN046051	NXSB00000000	422,848	3	2,960,696	17	Scaffold
CFSAN046052	NXSA00000000	479,921	3	3,004,131	21	Scaffold
CFSAN046053	NXRZ00000000	295,758	4	3,033,300	37	Scaffold
CFSAN046056	NXRY00000000	567,215	3	2,959,885	14	Scaffold
CFSAN046057	NXRX00000000	566,824	3	2,959,216	15	Scaffold
CFSAN046058	NXRW00000000	604,742	2	2,962,005	18	Scaffold
CFSAN046060	NXRV00000000	604,833	2	2,958,814	17	Scaffold
CFSAN046062	NXRU00000000	567,048	3	2,959,232	12	Contig
CFSAN046063	NXRT00000000	604,759	2	3,003,335	20	Scaffold
CFSAN046064	NXRS00000000	477,214	3	2,999,237	18	Scaffold
CFSAN046065	NXRR00000000	566,779	3	2,957,891	14	Scaffold
CFSAN046066	NXRQ00000000	584,221	3	3,100,487	176	Contig
CFSAN046067	NXRP00000000	566,663	3	2,956,915	16	Scaffold
CFSAN046068	NXRO00000000	566,680	3	2,958,609	13	Scaffold

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TABLE 1 (Continued)

CFSAN no.	Accession no.	Contig $N_{50}$ (bp)	Contig $L_{50}$	Assembly length (bp)	No. of contigs	Assembly level
CFSAN046069	NXRN00000000	606,161	2	2,959,368	14	Contig
CFSAN046070	NXRM00000000	449,028	3	2,957,326	15	Scaffold
CFSAN046071	NXRL00000000	423,673	3	2,958,812	17	Scaffold
CFSAN046072	NXRK00000000	604,761	2	2,999,928	16	Scaffold
CFSAN046073	NXRJ00000000	1,514,543	1	2,999,899	16	Scaffold
CFSAN046074	NXRI00000000	566,857	3	2,957,744	16	Scaffold
CFSAN046075	NXRH00000000	566,854	3	2,957,777	12	Scaffold
CFSAN046076	NXRG00000000	566,857	3	2,966,711	27	Scaffold
CFSAN046077	NXRF00000000	435,623	3	2,957,420	15	Scaffold
CFSAN046078	NXRE00000000	516,043	3	2,999,540	17	Scaffold
CFSAN046079	NXRD00000000	566,830	3	2,958,463	16	Scaffold
CFSAN046080	NXRC00000000	604,831	2	2,961,305	18	Scaffold
CFSAN046081	NXRB00000000	449,021	3	2,962,446	19	Scaffold
CFSAN046082	NXRA00000000	566,674	3	2,959,152	16	Contig
CFSAN046083	NXQZ00000000	564,072	3	2,960,167	18	Scaffold
CFSAN046084	NXQY00000000	566,857	3	2,958,548	14	Scaffold
CFSAN046085	NXQX00000000	422,848	4	3,009,909	29	Scaffold
CFSAN046087	NXQW00000000	435,732	3	2,958,753	16	Scaffold
CFSAN046088	NXQV00000000	566,901	3	2,957,121	17	Scaffold
CFSAN046089	NXQU00000000	604,728	2	2,963,168	19	Scaffold
CFSAN046090	NXQT00000000	566,763	3	3,049,672	126	Scaffold
CFSAN046091	NXQS00000000	566,717	3	2,957,539	15	Scaffold
CFSAN046092	NXQR00000000	572,941	2	2,876,852	15	Scaffold
CFSAN046093	NXQQ00000000	357,301	3	2,877,506	19	Scaffold
CFSAN046094	NXQP00000000	357,301	3	2,877,071	15	Scaffold
CFSAN046095	NXQO00000000	257,183	4	2,912,780	26	Scaffold
CFSAN046097	NXQN00000000	238,217	4	2,947,569	27	Scaffold
CFSAN046098	NXQM00000000	153,774	7	2,880,390	43	Scaffold
CFSAN049182	NXQL00000000	525,681	2	2,512,999	15	Scaffold
CFSAN049183	NXQK00000000	568,075	2	2,900,629	18	Scaffold
CFSAN049184	NXQJ00000000	566,749	2	2,895,313	12	Scaffold
CFSAN049185	NXQI00000000	525,617	2	2,774,967	18	Scaffold
CFSAN049186	NXQH00000000	1,474,759	1	2,889,601	9	Scaffold
CFSAN049187	NXQG00000000	262,331	3	2,910,668	18	Scaffold
CFSAN049188	NXQF00000000	296,125	3	2,911,506	22	Scaffold
CFSAN049189	NXQE00000000	173,873	7	2,956,314	39	Scaffold
CFSAN049190	NXQD00000000	238,098	5	3,104,180	43	Scaffold
CFSAN049191	NXQC00000000	476,504	3	3,002,627	33	Contig
CFSAN049192	NXQB00000000	236,319	5	3,102,214	32	Contig
CFSAN049193	NXQA00000000	183,642	6	3,101,808	41	Scaffold
CFSAN049194	NXPZ00000000	397,838	4	2,989,724	25	Scaffold
CFSAN049195	NXPY00000000	431,364	4	2,990,475	28	Scaffold
CFSAN049196	NXPX00000000	394,029	4	2,989,312	28	Scaffold
CFSAN049197	NXPW00000000	305,726	4	2,995,965	23	Scaffold
CFSAN049198	NXPV00000000	431,350	3	3,069,471	36	Scaffold
CFSAN049199	NXPU00000000	308,868	4	3,066,950	43	Scaffold
CFSAN049200	NXPT00000000	418,594	3	3,066,046	36	Scaffold
CFSAN049201	NXPS00000000	281,533	5	2,896,244	19	Contig
CFSAN049202	NXPR00000000	294,310	4	2,627,087	25	Contig
CFSAN049203	NXPQ00000000	499,653	2	2,894,130	13	Contig
CFSAN049204	NXPP00000000	418,301	3	3,067,295	40	Scaffold
CFSAN049205	NXPO00000000	323,778	4	2,760,003	24	Scaffold
CFSAN049206	NXPN00000000	274,834	4	2,758,568	20	Scaffold
CFSAN049207	NXPM00000000	249,779	5	2,760,562	18	Scaffold
CFSAN049208	NXPL00000000	449,760	3	2,960,212	17	Contig
CFSAN049209	NXPK00000000	438,208	3	2,853,576	15	Scaffold
CFSAN049210	NYIZ00000000	340,357	3	2,899,045	23	Scaffold
CFSAN049211	NYIY00000000	322,783	4	2,908,246	18	Scaffold
CFSAN049212	NYIX00000000	345,517	3	2,887,108	34	Scaffold
CFSAN049213	NYIW00000000	470,627	3	2,865,067	17	Scaffold
CFSAN049214	NYIV00000000	636,288	2	2,855,282	14	Scaffold
CFSAN049215	NYIU00000000	289,577	4	2,875,716	26	Scaffold
CFSAN049216	NYIT00000000	565,792	2	2,892,620	14	Scaffold
CFSAN049218	NYIS00000000	189,965	5	2,885,323	31	Scaffold
CFSAN049219	NYIR00000000	477,550	3	3,043,655	20	Contig

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TABLE 1 (Continued)

CFSAN no.	Accession no.	Contig $N_{50}$ (bp)	Contig $L_{50}$	Assembly length (bp)	No. of contigs	Assembly level
CFSAN049220	NYIQ00000000	284,727	2	2,929,319	37	Scaffold
CFSAN049221	NYIP00000000	301,600	3	2,887,189	23	Scaffold
CFSAN049222	NYIO00000000	375,729	3	2,899,121	27	Scaffold
CFSAN049223	NYIN00000000	448,787	2	2,894,623	12	Contig
CFSAN049224	NYIM00000000	298,730	3	2,877,775	22	Scaffold
CFSAN049225	NYIL00000000	425,649	3	2,866,698	22	Scaffold
CFSAN049226	NYIK00000000	526,038	2	2,868,012	20	Contig
CFSAN049227	NYIJ00000000	356,756	2	2,881,753	26	Scaffold
CFSAN049228	NYII00000000	158,358	6	3,005,820	36	Contig
CFSAN049229	NYIH00000000	224,794	5	3,077,760	38	Contig
CFSAN049230	NYIG00000000	327,802	4	2,950,652	26	Scaffold
CFSAN049231	NYIF00000000	245,052	5	2,992,595	131	Scaffold
CFSAN049232	NYIE00000000	476,859	3	2,996,806	23	Scaffold
CFSAN049233	NYID00000000	636,828	2	2,832,958	16	Contig
CFSAN049234	NYIC00000000	338,524	3	2,833,214	15	Scaffold
CFSAN049235	NYIB00000000	481,940	3	3,086,117	43	Scaffold
CFSAN049236	NYIA00000000	237,311	4	2,983,091	24	Contig
CFSAN049237	NYHZ00000000	317,873	3	3,053,071	27	Scaffold
CFSAN049238	NYHY00000000	420,295	3	3,001,695	30	Scaffold
CFSAN049239	NYHX00000000	228,526	6	3,007,997	42	Scaffold
CFSAN049240	NYHW00000000	299,889	4	2,872,066	20	Contig
CFSAN049241	NYHV00000000	685,401	2	2,921,662	16	Contig
CFSAN049242	NYHU00000000	283,443	4	2,981,614	23	Contig
CFSAN049243	NYHT00000000	357,258	3	2,985,849	25	Contig
CFSAN049244	NYHS00000000	600,853	3	3,003,301	18	Contig
CFSAN049245	NYHR00000000	297,368	4	2,967,575	34	Scaffold
CFSAN049246	NYHQ00000000	431,556	3	3,067,022	41	Scaffold
CFSAN049247	NYHP00000000	438,672	3	3,039,534	24	Scaffold
CFSAN049248	NYHO00000000	237,359	5	2,966,274	34	Scaffold
CFSAN049249	NYHN00000000	260,156	4	3,008,901	34	Scaffold
CFSAN049250	NYHM00000000	238,180	4	2,872,499	25	Scaffold
CFSAN049251	NYHL00000000	435,758	3	3,033,340	23	Scaffold
CFSAN049252	NYHK00000000	259,386	4	2,873,717	25	Contig
CFSAN049253	NYHJ00000000	308,959	4	2,996,185	37	Scaffold
CFSAN049254	NYHI00000000	293,963	4	2,917,237	29	Scaffold
CFSAN049255	NYHH00000000	436,674	2	2,926,355	22	Scaffold
CFSAN049256	NYHG00000000	202,671	5	2,959,810	34	Scaffold
CFSAN049257	NYHF00000000	309,002	4	3,091,118	64	Scaffold
CFSAN049258	NYHE00000000	238,010	5	2,873,365	32	Scaffold
CFSAN049259	NYHD00000000	299,145	3	2,917,760	25	Scaffold
CFSAN049260	NYHC00000000	235,670	5	2,959,954	30	Scaffold
CFSAN049261	NYHB00000000	494,215	2	2,954,446	21	Scaffold
CFSAN049262	NYHA00000000	284,858	3	2,941,560	27	Contig
CFSAN049263	NYGZ00000000	399,168	3	2,918,784	23	Scaffold
CFSAN049264	NYGY00000000	154,961	5	2,870,591	30	Scaffold
CFSAN049265	NYGX00000000	155,069	5	2,909,077	26	Scaffold
CFSAN049266	NYGW00000000	565,123	2	2,903,534	16	Scaffold
CFSAN049267	NYGV00000000	453,335	3	3,043,425	44	Scaffold
CFSAN049268	NYGU00000000	507,289	2	2,876,216	21	Scaffold
CFSAN049269	NYGT00000000	601,555	3	3,011,276	17	Scaffold
CFSAN049270	NYGS00000000	294,189	4	3,008,770	34	Contig
CFSAN049271	NYGR00000000	503,073	3	2,858,024	17	Contig
CFSAN049272	NYGQ00000000	525,279	2	2,888,712	21	Scaffold
CFSAN049273	NYGP00000000	565,126	2	2,903,951	18	Scaffold
CFSAN049274	NYGO00000000	469,932	2	2,928,197	113	Scaffold
CFSAN049275	NYGN00000000	295,296	4	2,912,321	29	Contig
CFSAN049276	NYGM00000000	488,751	3	2,924,969	26	Scaffold
CFSAN049277	NYGL00000000	348,850	3	2,972,499	31	Scaffold
CFSAN049278	NYGK00000000	369,725	3	2,903,514	28	Scaffold
CFSAN049279	NYGJ00000000	436,473	3	2,959,539	29	Scaffold
CFSAN049280	NYGI00000000	236,739	5	3,013,777	34	Scaffold
CFSAN049281	NYGH00000000	521,447	3	2,913,907	25	Scaffold
CFSAN049282	NYGG00000000	565,119	3	2,901,662	24	Scaffold
CFSAN049283	NYGF00000000	244,876	5	3,002,649	35	Scaffold

(Continued on next page)

TABLE 1 (Continued)

CFSAN no.	Accession no.	Contig $N_{50}$ (bp)	Contig $L_{50}$	Assembly length (bp)	No. of contigs	Assembly level
CFSAN049284	NYGE00000000	294,227	4	2,938,993	28	Scaffold
CFSAN049285	NYGD00000000	249,272	4	3,004,252	31	Scaffold
CFSAN049286	NYGC00000000	371,331	4	2,853,813	18	Scaffold
CFSAN049287	NYGB00000000	197,775	5	3,064,068	35	Scaffold
CFSAN049288	NYGA00000000	500,903	3	2,893,830	20	Scaffold
CFSAN049289	NYFZ00000000	335,821	3	2,924,707	28	Scaffold
CFSAN049290	NYFY00000000	565,134	2	2,903,924	24	Scaffold
CFSAN049291	NYFX00000000	525,499	2	2,891,665	18	Scaffold
CFSAN049292	NYFW00000000	236,321	5	2,931,385	31	Scaffold
CFSAN049293	NYFV00000000	349,099	4	2,881,439	27	Scaffold
CFSAN049294	NYFU00000000	466,943	3	2,924,576	23	Scaffold
CFSAN049295	NYFT00000000	295,832	4	2,997,056	39	Scaffold
CFSAN049296	NYFS00000000	357,712	3	2,955,181	39	Scaffold
CFSAN049297	NYFR00000000	237,770	4	2,868,480	35	Scaffold
CFSAN049298	NYFQ00000000	525,971	2	2,867,851	17	Scaffold
CFSAN049299	NYFP00000000	338,436	4	2,914,471	25	Scaffold
CFSAN049300	NYFO00000000	175,679	6	2,997,077	36	Scaffold
CFSAN049301	NYFN00000000	600,653	3	2,917,535	21	Scaffold
CFSAN049302	NYFM00000000	572,394	3	3,098,334	250	Contig
CFSAN049303	NYFL00000000	199,660	5	2,870,193	26	Scaffold
CFSAN049304	NYFK00000000	236,463	5	2,960,233	37	Scaffold
CFSAN049305	NYFJ00000000	237,908	5	2,868,722	34	Scaffold
CFSAN049306	NYFI00000000	238,430	5	3,050,112	46	Scaffold
CFSAN049307	NYFH00000000	298,734	4	2,869,742	30	Scaffold
CFSAN049308	NYFG00000000	308,886	4	3,072,557	43	Scaffold
CFSAN049309	NYFF00000000	236,688	4	3,007,432	34	Scaffold
CFSAN049310	NYFE00000000	280,335	3	2,974,593	29	Scaffold
CFSAN049311	NYFD00000000	261,819	4	3,005,305	25	Scaffold
CFSAN049312	NYFC00000000	237,923	5	2,868,960	24	Scaffold
CFSAN049313	NYFB00000000	194,163	5	2,914,306	65	Scaffold
CFSAN049314	NYFA00000000	334,108	4	2,953,158	28	Scaffold
CFSAN049315	NYEZ00000000	638,882	2	2,829,557	20	Scaffold
CFSAN049316	NYEY00000000	237,496	5	2,954,156	36	Scaffold
CFSAN049317	NYEX00000000	488,872	3	2,927,137	19	Scaffold
CFSAN049318	NYEW00000000	263,519	4	2,868,804	25	Scaffold
CFSAN049319	NYEV00000000	194,908	5	2,914,947	32	Scaffold
CFSAN049320	NYEU00000000	309,965	4	3,048,500	37	Scaffold

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