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A summary of tracking avian influenza A(H5N1) specimens and viruses shared with WHO from 2003 to 2007

Between 2003 and 2007, Member States shared 8763 human and animal specimens from avian influenza A(H5N1) suspected/confirmed cases with WHO (Data provided in the table below). From these specimens, 734 viruses were isolated and maintained in WHO laboratories. Based on these viruses, 13 viruses have been selected for further development into A(H5N1) vaccine viruses. So far, 8 reverse genetics engineered vaccine viruses, suitable for vaccine development and production, are available for distribution. 292 institutions have received one or more of the 8 WHO selected and developed vaccine viruses, and 46 institutions have received wild type vaccine viruses.

Specimen providing country, area or territory	Year	Provided to WHO laboratory	Number of specimens (samples and isolates) received in WHO Labs directly from countries	Number of virus isolates present (not including those received from other WHO labs)	Vaccine viruses			Number of recipients of other wild type viruses
					Number of viruses selected for vaccine virus development	Number of recipients of RG vaccine viruses	Number of recipients of wild type viruses	
China	2006	WHO CC Atlanta	24	20	1	0	1	0
	2007	WHO CC Atlanta	2	2	0	45	1	0
India	2007	WHO CC Atlanta	4	2	0	0	0	1
Indonesia	2005	WHO CC Atlanta	128	16	1	0	4	2
	2006	WHO CC Atlanta	368	52	0	20	3	0
	2007	WHO CC Atlanta	62	13	0	8	0	0
Iraq	2007	WHO CC Atlanta	0	0	0	0	0	1
Mongolia	2005	WHO CC Atlanta	5	0	0	0	0	1
	2007	WHO CC Atlanta	0	0	0	0	0	1
Nigeria	2006	WHO CC Atlanta	5	2	0	0	0	1
	2007	WHO CC Atlanta	14	1	0	0	0	0
Panama	2002	WHO CC Atlanta	2	0	0	0	0	0
Republic of Korea	2001	WHO CC Atlanta	1	1	0	0	0	0
	2003	WHO CC Atlanta	1	1	0	0	0	0
	2006	WHO CC Atlanta	1	1	0	0	0	0
	2007	WHO CC Atlanta	0	0	0	0	0	2
Singapore	1997	WHO CC Atlanta	1	1	0	0	0	0
Thailand	2004	WHO CC Atlanta	35	6	0	0	0	2
	2005	WHO CC Atlanta	18	6	0	0	0	0
	2006	WHO CC Atlanta	5	1	0	0	0	0
Viet Nam	2004	WHO CC Atlanta	239	66	1	0	9	6
	2005	WHO CC Atlanta	171	98	0	3	3	4
	2006	WHO CC Atlanta	11	7	0	18	5	1
	2007	WHO CC Atlanta	89	74	0	20	2	0
Azerbaijan	2006	WHO CC London	79	10	0	0	0	0
Egypt	2006	WHO CC London	10	5	0	0	0	3
West Bank and Gaza Strip	2006	WHO CC London	5	0	0	0	0	0
Iraq	2006	WHO CC London	30	2	0	0	0	2
Israel	2006	WHO CC London	11	0	0	0	0	0
Serbia	2006	WHO CC London	8	0	0	0	0	0
Turkey	2006	WHO CC London	335	6	0	0	0	6
Nigeria	2006	WHO CC London	4	0	0	0	0	0
	2007	WHO CC London	52	2	0	0	0	0
Pakistan	2007	WHO CC London	10	2	0	0	0	0
Poland	2008	WHO CC London	2	0	0	0	0	0
Thailand	2006	WHO CC Melbourne	2	0	0	0	0	0
Viet Nam	2004	WHO CC Tokyo	57	8	0	1	0	6
	2005	WHO CC Tokyo	304	13	0	1	0	4
Lao People's Democratic Republic	2004	WHO CC Tokyo	9	0	0	0	0	0
	2005	WHO CC Tokyo	6	0	0	0	0	0
	2006	WHO CC Tokyo	31	0	0	0	0	0
Myanmar	2006	WHO CC Tokyo	18	3	0	0	0	2
	2007	WHO CC Tokyo	7	0	0	0	0	0
Indonesia	2006	WHO CC Tokyo	15	1	0	0	0	0
	2007	WHO CC Tokyo	27	7	0	0	0	0
Indonesia	2006	WHO CC Tokyo	3	0	0	0	0	0
	2007	WHO CC Tokyo	5	0	0	0	0	0
Cambodia	2004	WHO CC Tokyo	5	0	0	0	0	0

Specimen providing country, area or territory	Year	Provided to WHO laboratory	Number of specimens (samples and isolates) received in WHO Labs directly from countries	Number of virus isolates present (not including those received from other WHO labs)	Vaccine viruses			Number of recipients of other wild type viruses
					Number of viruses selected for vaccine virus development	Number of recipients of RG vaccine viruses	Number of recipients of wild type viruses	
China, Hong Kong SAR	2003	CHP HK	32	4	0	0	6	6
	2004	CHP HK	4	0	0	0	0	0
	2005	CHP HK	24	0	0	0	0	0
	2006	CHP HK	264	0	0	0	0	0
	2007	CHP HK	56	0	0	0	0	0
Viet Nam	2004	CHP HK	23	7	0	0	8	8
	2005	CHP HK	10	1	0	0	0	4
Cambodia	2004	IP Paris	79	14	0	0	0	0
	2005	IP Paris	261	8	0	0	0	3
	2006	IP Paris	29	2	0	0	0	0
	2007	IP Paris	64	1	0	0	2	0
Cameroon	2006	IP Paris	5	0	0	0	0	0
Congo	2006	IP Paris	4	0	0	0	0	0
Niger	2006	IP Paris	26	3	0	0	0	0
Afghanistan	2006	NAMRU-3	20	8	0	0	0	0
	2007	NAMRU-3	25	3	0	0	0	0
Azerbaijan	2006	NAMRU-3	23	2	0	0	0	1
Cameroon	2007	NAMRU-3	2	0	0	0	0	0
Djibouti	2006	NAMRU-3	16	0	0	0	0	0
Egypt	2003	NAMRU-3	47	0	0	0	0	0
	2004	NAMRU-3	117	0	0	0	0	0
	2005	NAMRU-3	184	0	0	0	0	0
	2006	NAMRU-3	265	17	0	0	0	0
	2007	NAMRU-3	145	9	0	0	0	0
Iraq	2005	NAMRU-3	36	0	0	0	0	0
	2006	NAMRU-3	129	14	0	0	0	1
Jordan	2006	NAMRU-3	4	1	0	0	0	0
Kazakhstan	2005	NAMRU-3	3	2	0	0	0	0
Kenya	2006	NAMRU-3	2	0	0	0	0	0
Lebanon	2005	NAMRU-3	2	0	0	0	0	0
	2006	NAMRU-3	10	0	0	0	0	0
Saudi Arabia	2006	NAMRU-3	4	0	0	0	0	0
Ukraine	2006	NAMRU-3	120	4	0	0	0	0
Cambodia	2007	NIBSC	0	0	1	0	0	0
China, Hong Kong SAR	2003	NIBSC	0	0	1	23	0	0
Turkey	2005	NIBSC	0	0	1	36	0	0
Viet Nam	2004	NIBSC	0	0	1	79	0	0
China	2005	SJCRH	0	0	1	11	1	0
China, Hong Kong SAR	2003	SJCRH	0	0	1	3	0	0
	2006	SJCRH	0	0	2	1	0	0
Mongolia	2005	SJCRH	0	0	1	9	0	0
Viet Nam	2004	SJCRH	0	0	1	14	1	0
Indonesia	2004	UHK	16	12	0	0	0	13
	2005	UHK	3829	43	0	0	0	20
	2006	UHK	341	28	0	0	0	4
Kuwait	2007	UHK	14	7	0	0	0	0
Malaysia	2004	UHK	2	2	0	0	0	2
	2006	UHK	2	2	0	0	0	1
	2007	UHK	2	2	0	0	0	1
Thailand	2004	UHK	11	8	0	0	0	0
Viet Nam	2004	UHK	68	27	0	0	0	16
	2005	UHK	168	31	0	0	0	6
	2006	UHK	23	10	0	0	0	2
	2007	UHK	36	33	0	0	0	1
SUM			8763	734	13	292	46	134

Abbreviations: lab - laboratory; RG - reverse genetics; WHO CC Atlanta - WHO Collaborating Centre for the Surveillance, Epidemiology and Control of Influenza, Centers for Disease Control and Prevention, Atlanta, Georgia, USA; WHO CC London - WHO Collaborating Centre for Reference and Research on Influenza, National Institute for Medical Research, London, UK; WHO CC Melbourne - WHO Collaborating Centre for Reference and Research on Influenza, Victoria, Australia; WHO CC Tokyo - WHO Collaborating Centre for Reference and Research on Influenza, National Institute of Infectious Diseases, Tokyo, Japan; CHP HK - Centre for Health Protection, Kowloon, Hong Kong (SAR); IP Paris - Unité de Génétique Moléculaire des Virus Respiratoires, Institut Pasteur, Paris, France; NAMRU-3 - Naval Medical Research Unit No.3, Cairo, Egypt; NIBSC - National Institute for Biological Standards and Control, Hertfordshire, UK; SJCRH - St Jude Children's Research Hospital, Memphis, Tennessee, USA; UHK - The University of Hong Kong, Faculty of Medicine, Queen Mary Hospital, Hong Kong (SAR)