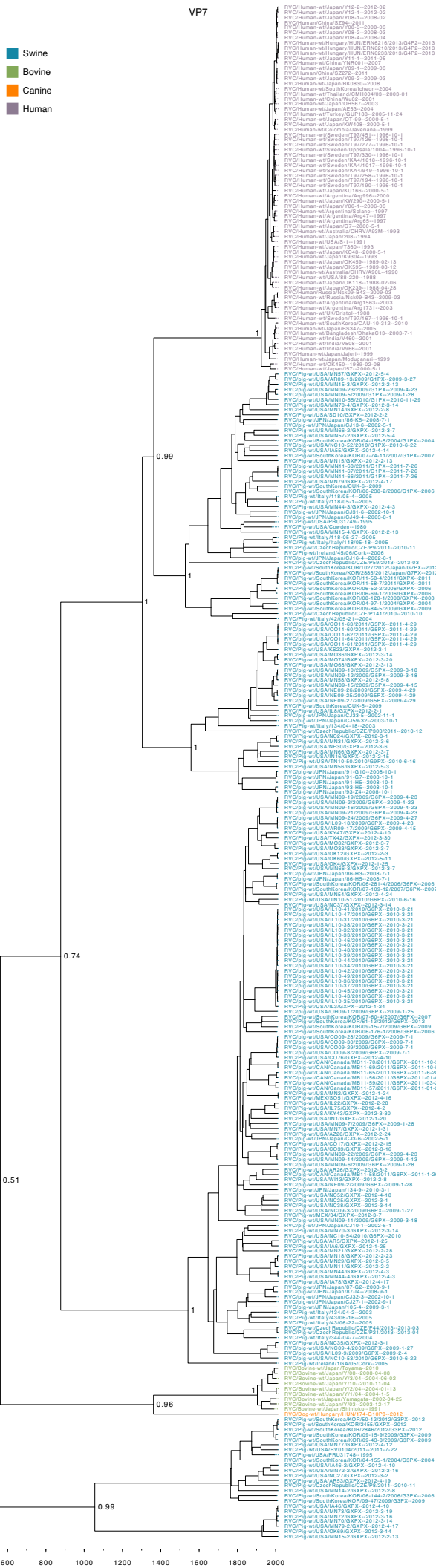


VP7

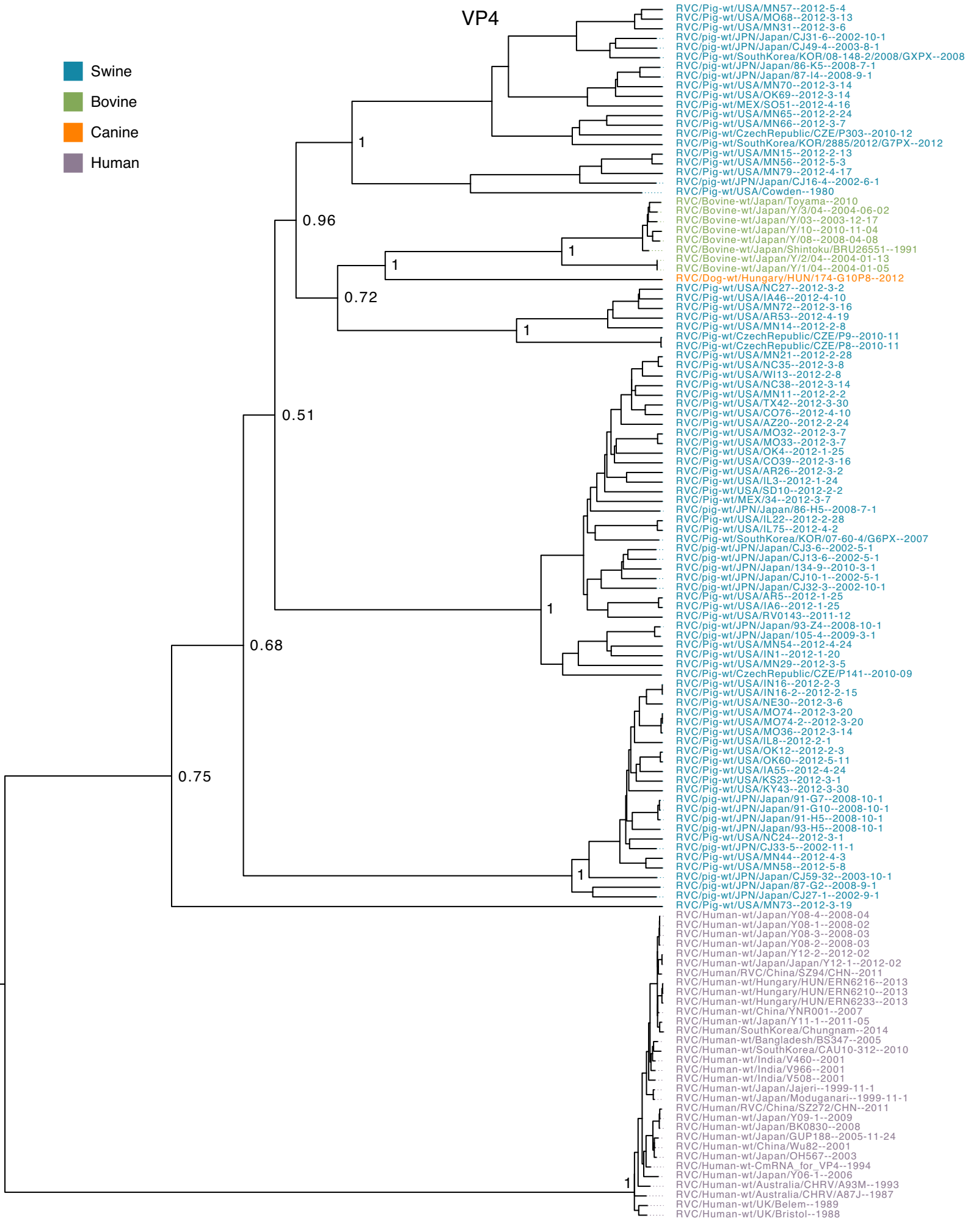
- Swine
- Bovine
- Canine
- Human



400 600 800 1000 1200 1400 1600 1800 2000

# VP4

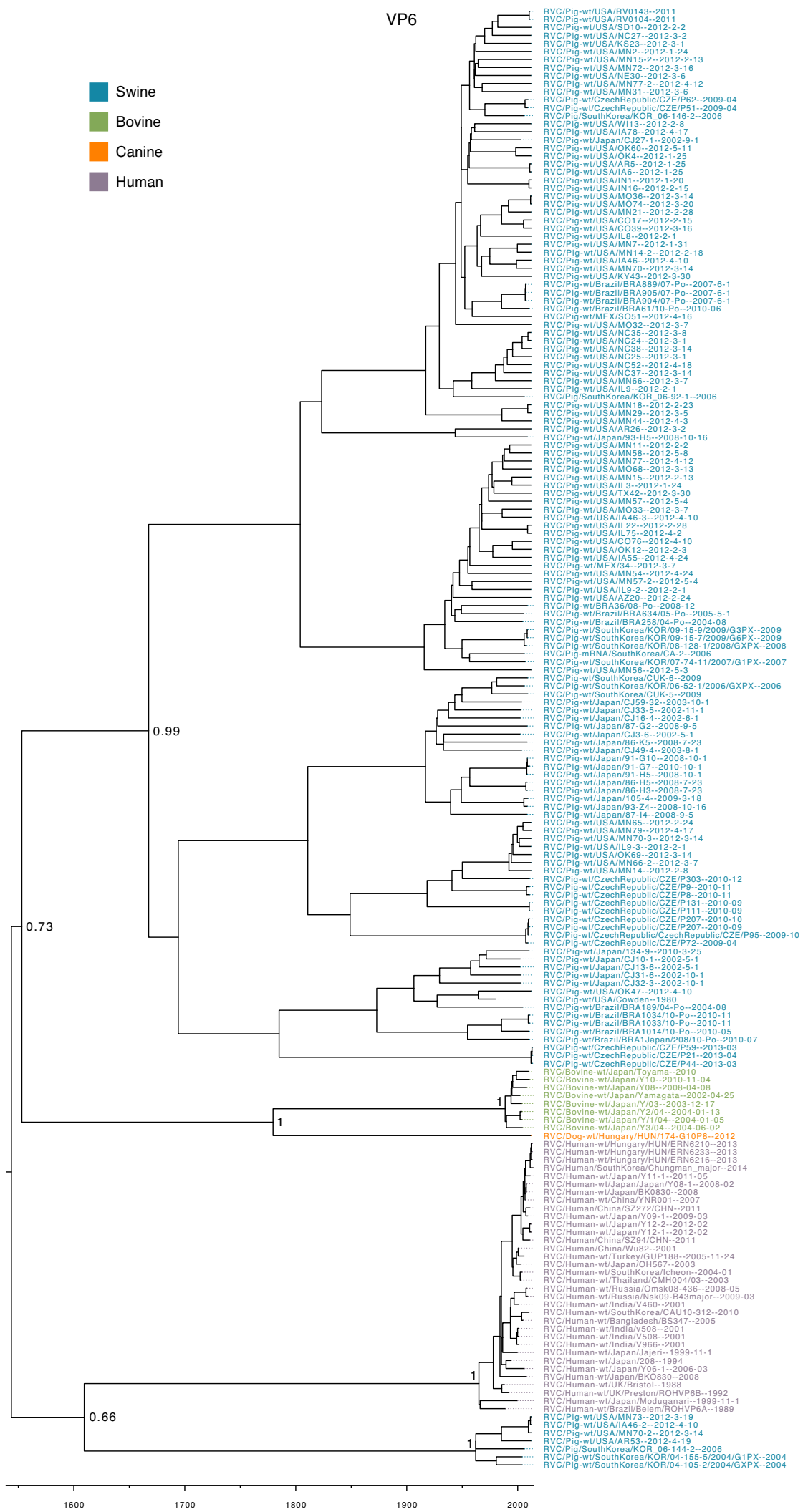
- Swine
- Bovine
- Canine
- Human



1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000

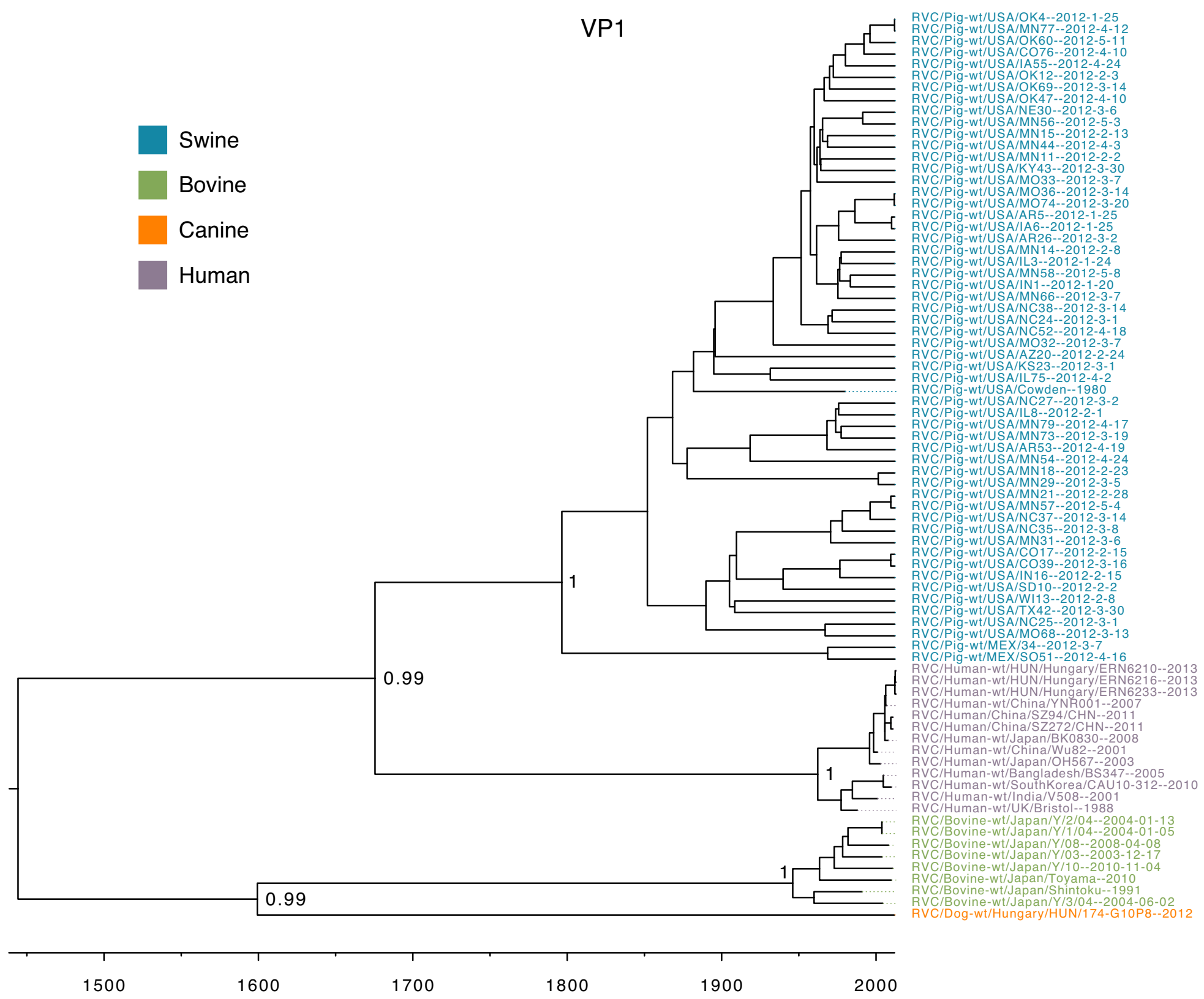
VP6

- Swine
- Bovine
- Canine
- Human



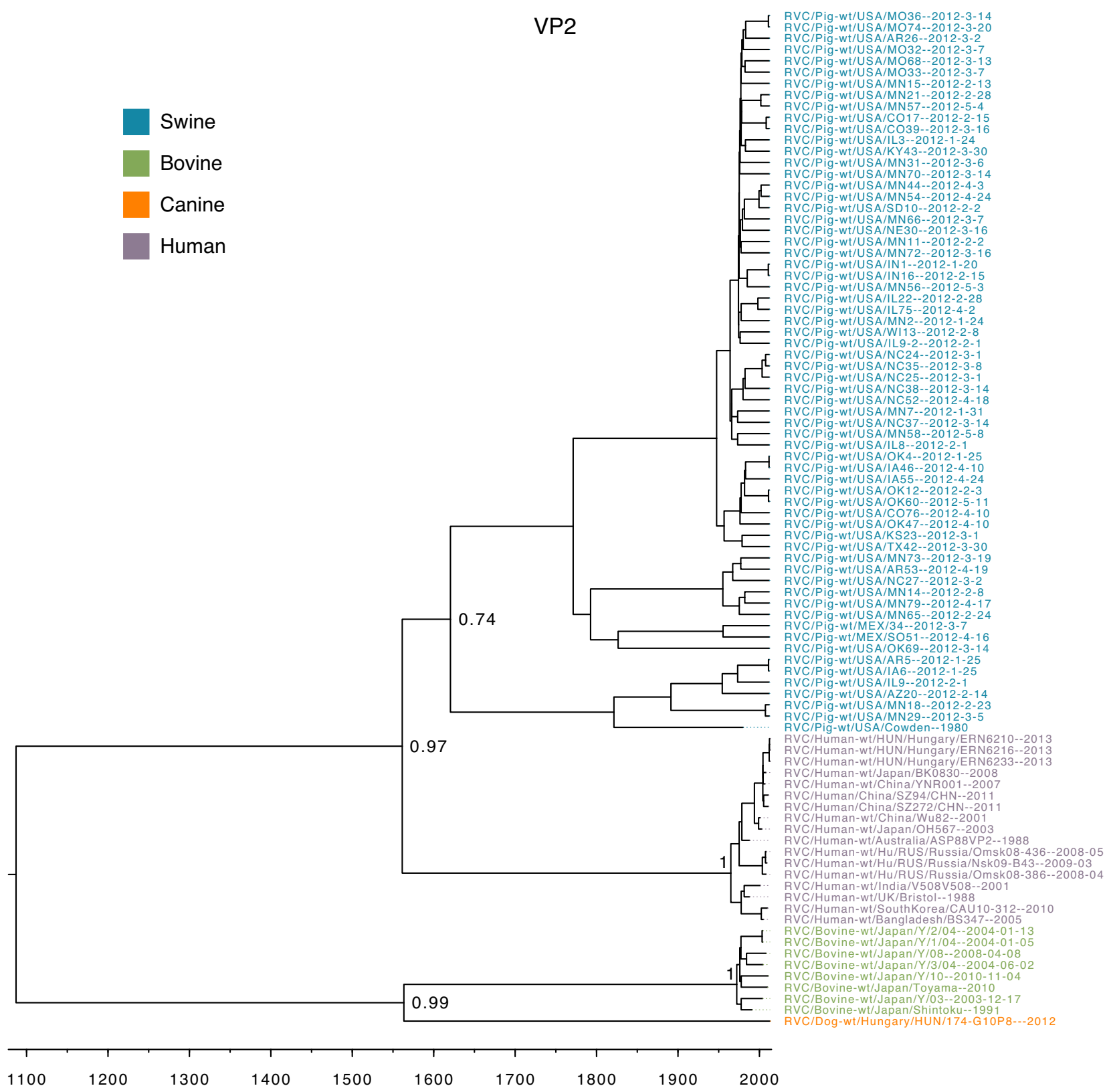
# VP1

- Swine
- Bovine
- Canine
- Human



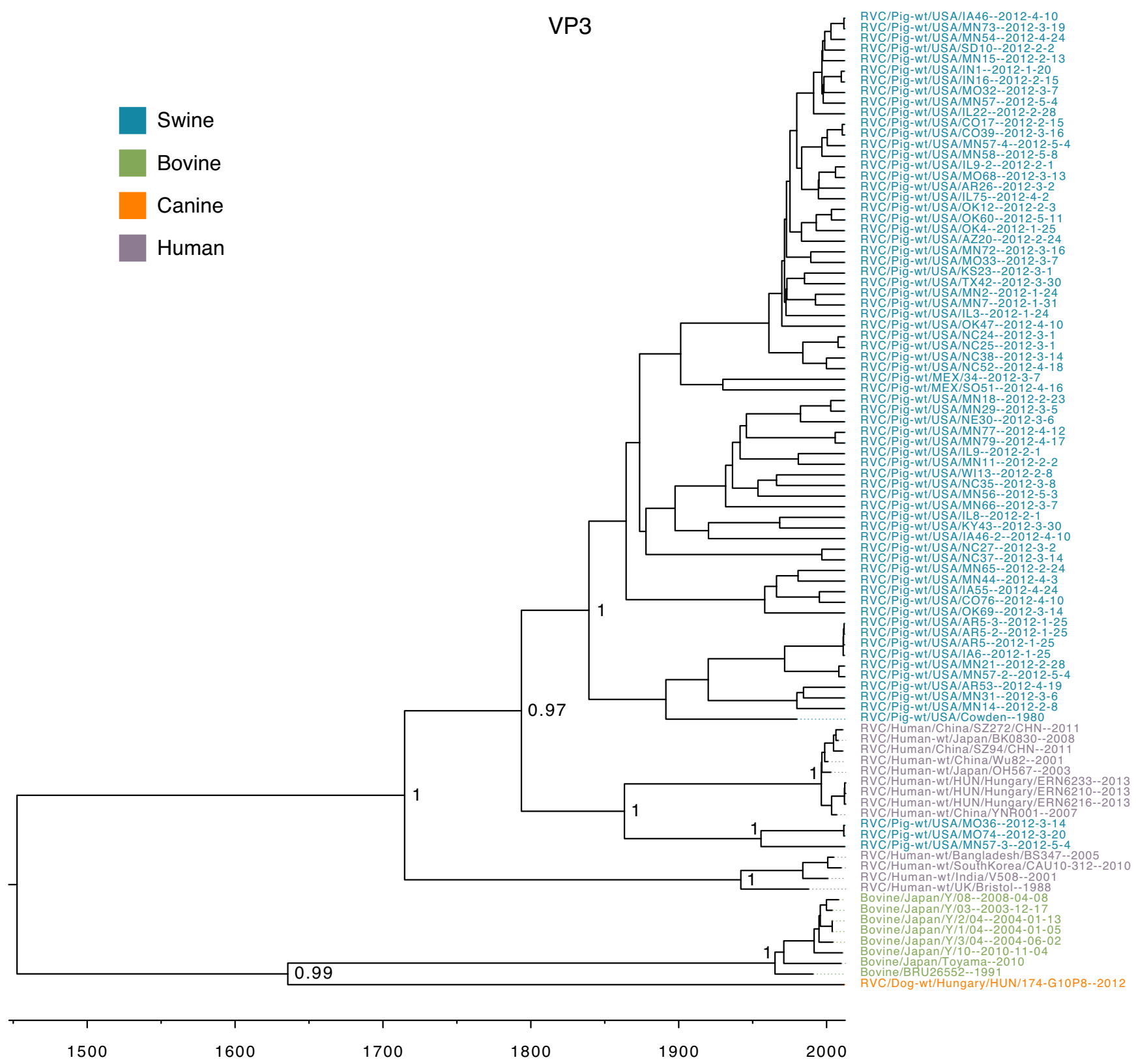
# VP2

- Swine
- Bovine
- Canine
- Human



# VP3

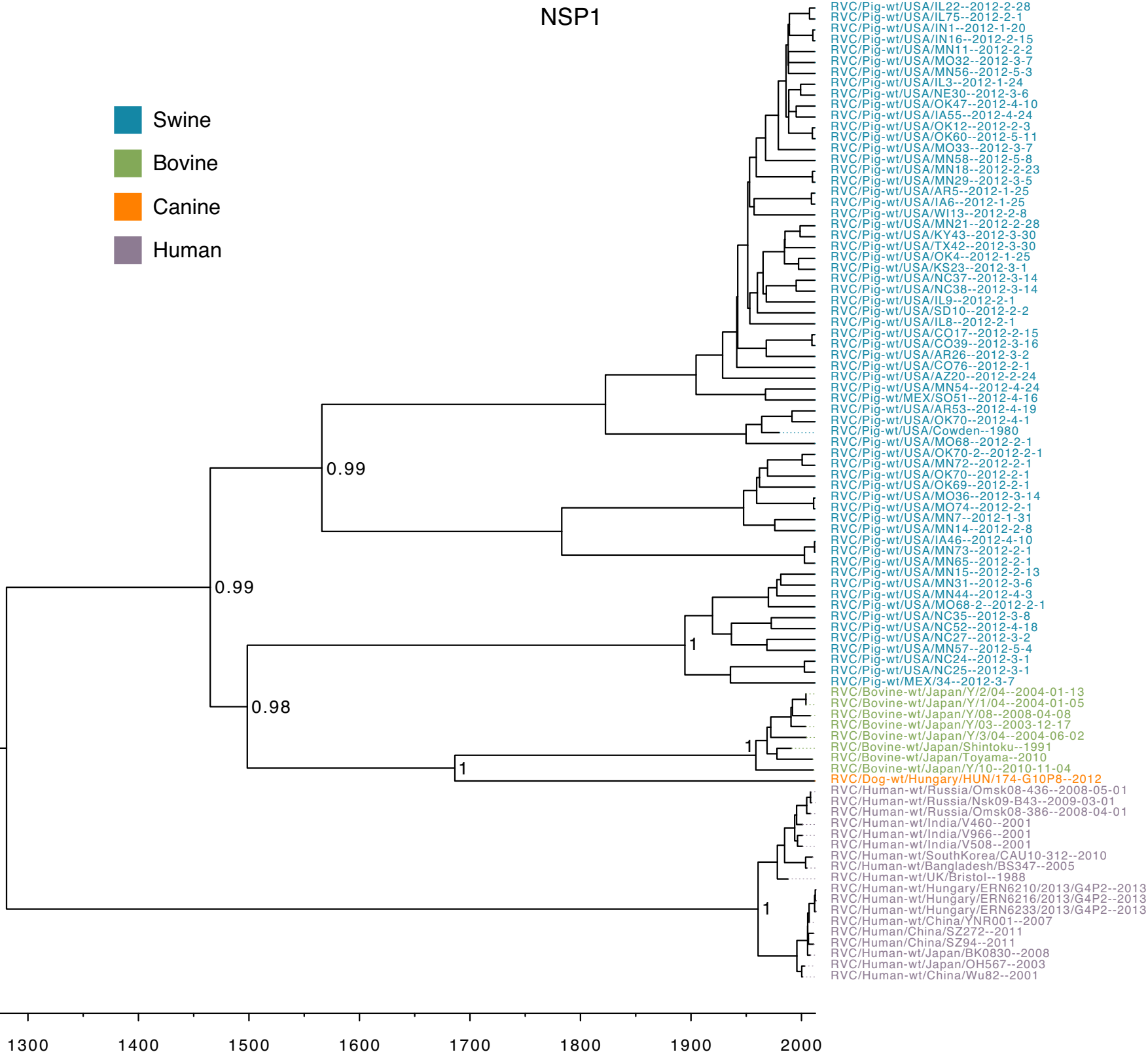
- Swine
- Bovine
- Canine
- Human





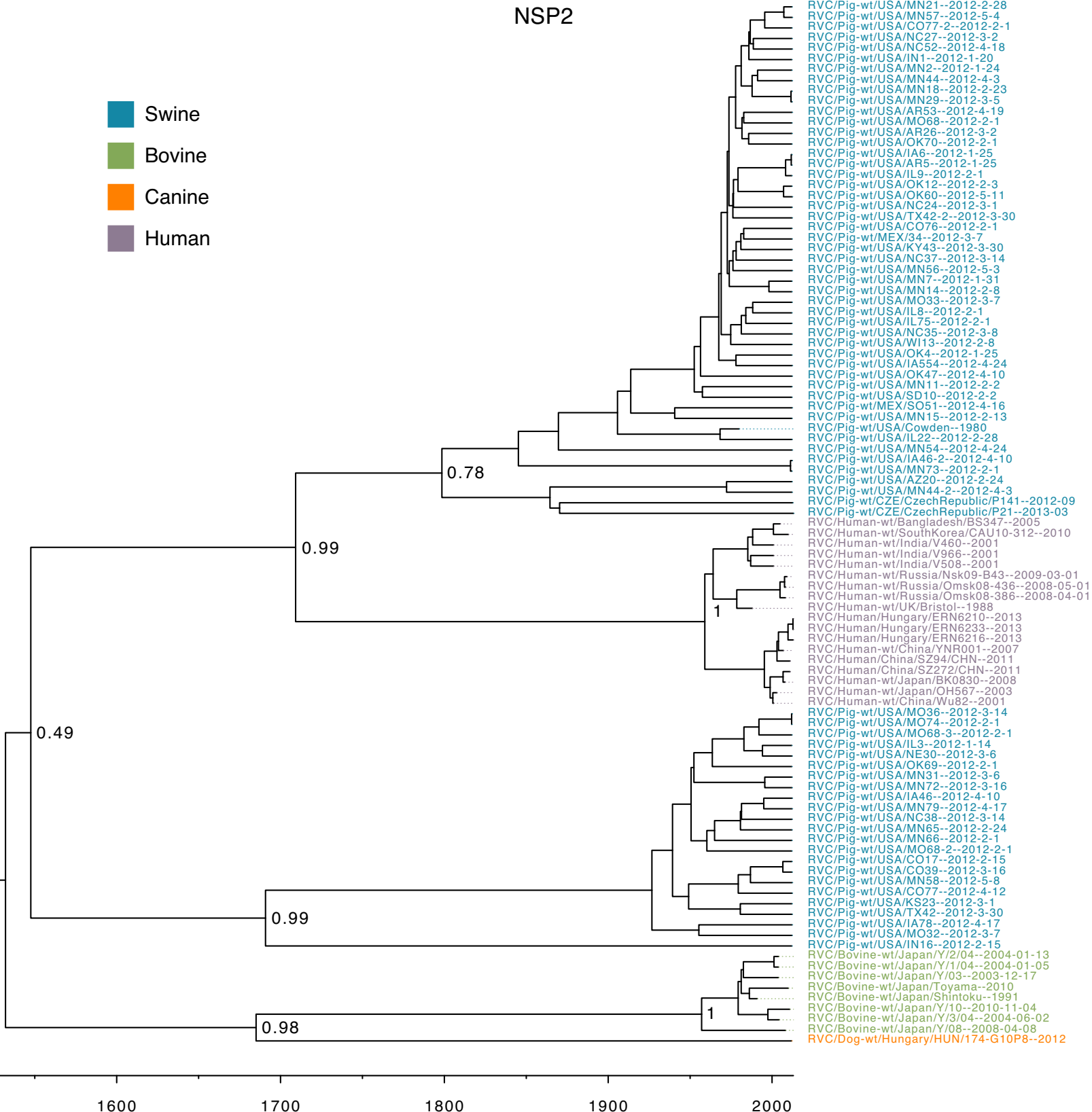
# NSP1

- Swine
- Bovine
- Canine
- Human



# NSP2

- Swine
- Bovine
- Canine
- Human



1600

1700

1800

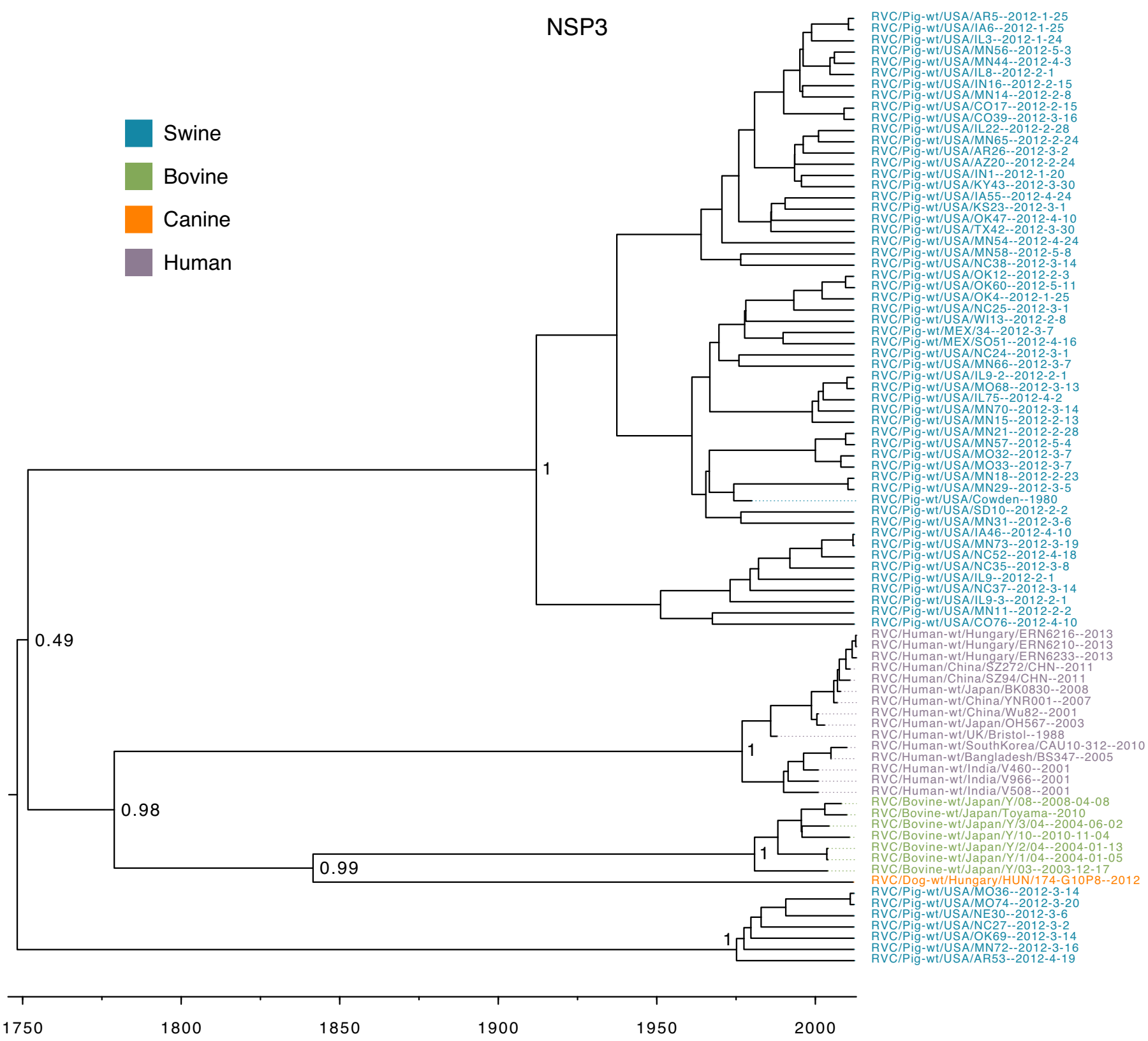
1900

2000



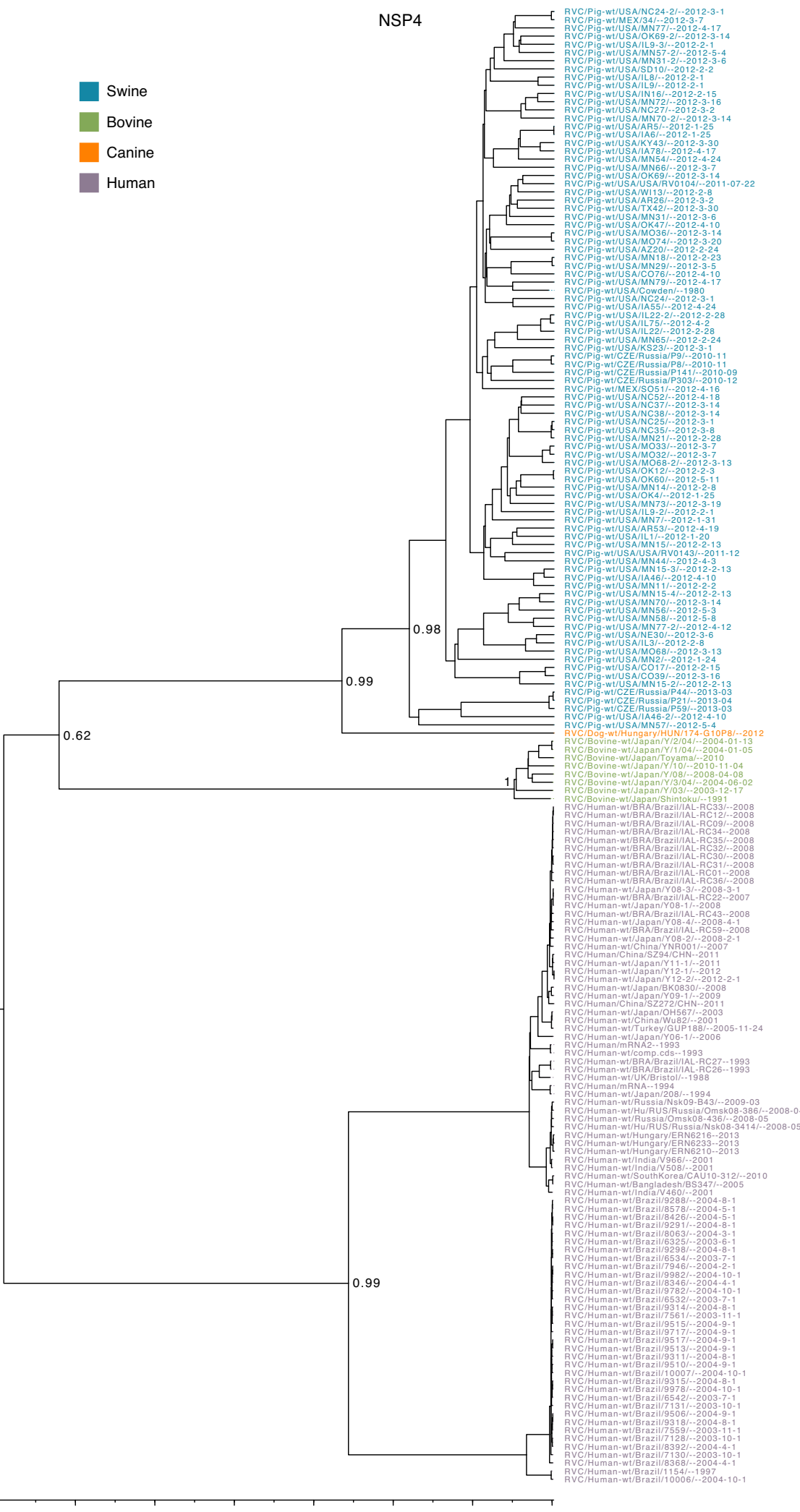
# NSP3

- Swine
- Bovine
- Canine
- Human



NSP4

- Swine
- Bovine
- Canine
- Human



-1000      -500      0      500      1000      1500      2000

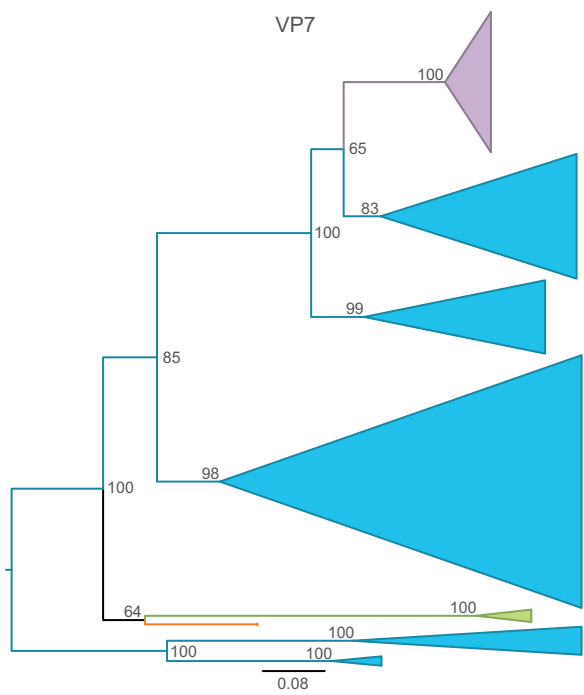
# NSP5

- Swine
- Bovine
- Canine
- Human

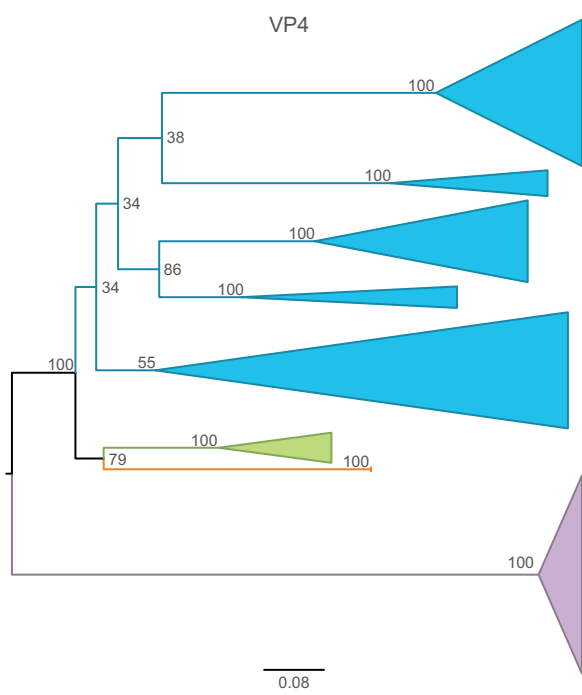


1600 1700 1800 1900 2000

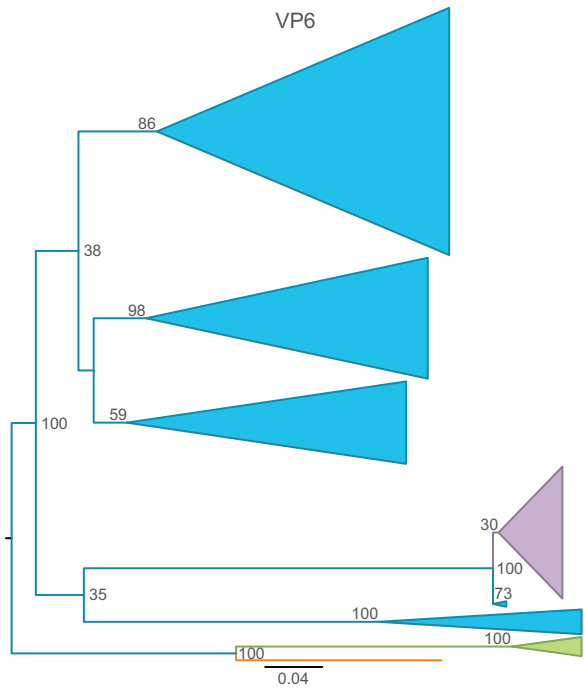
VP7



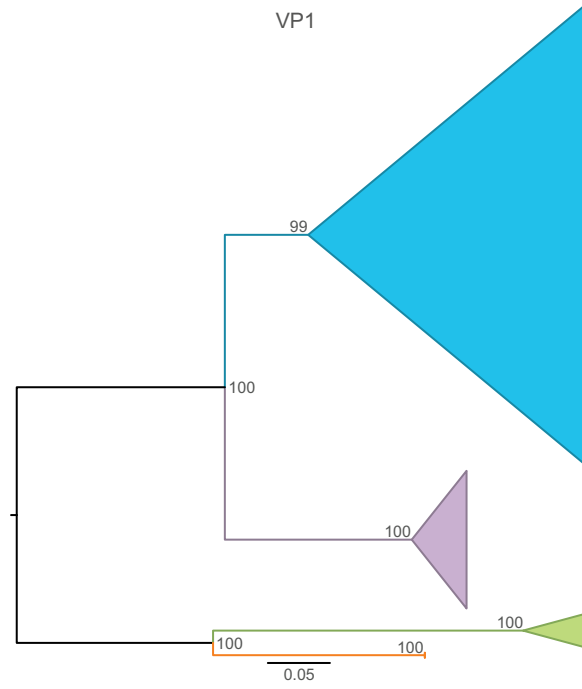
VP4



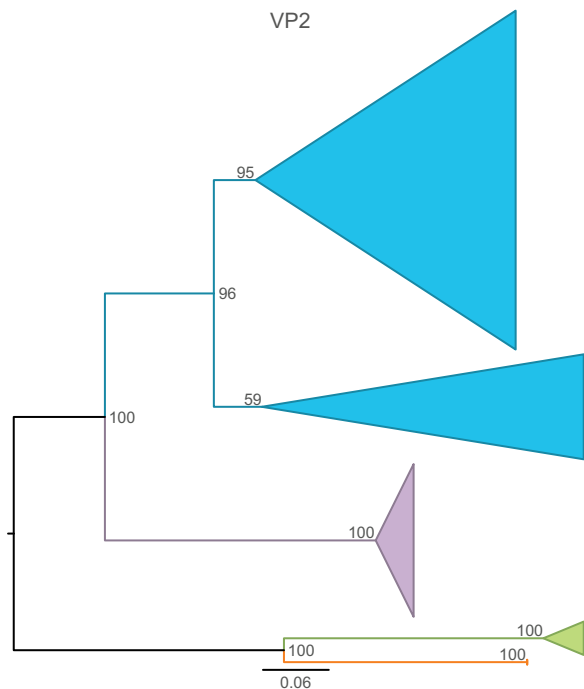
VP6



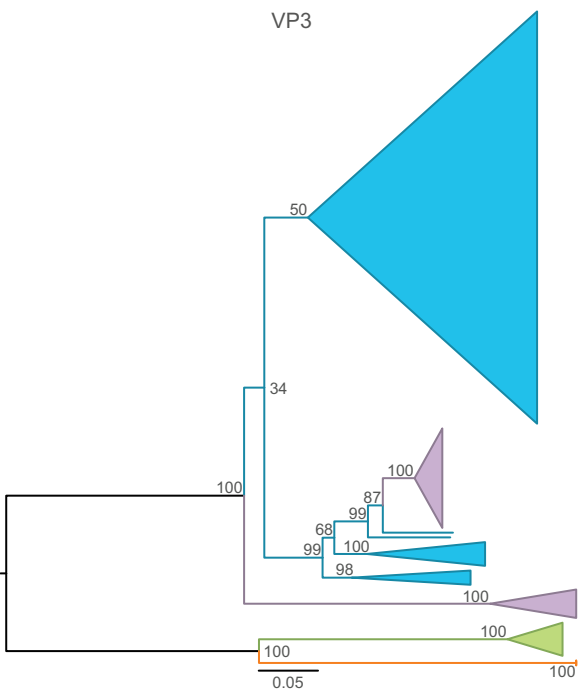
VP1



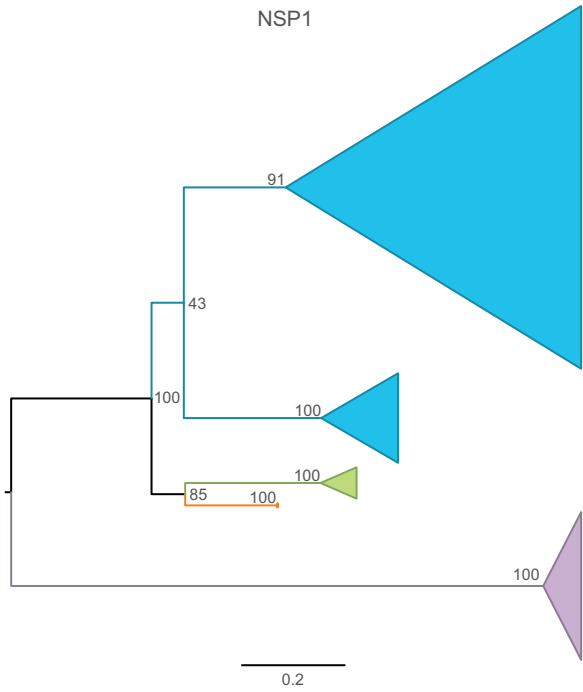
VP2



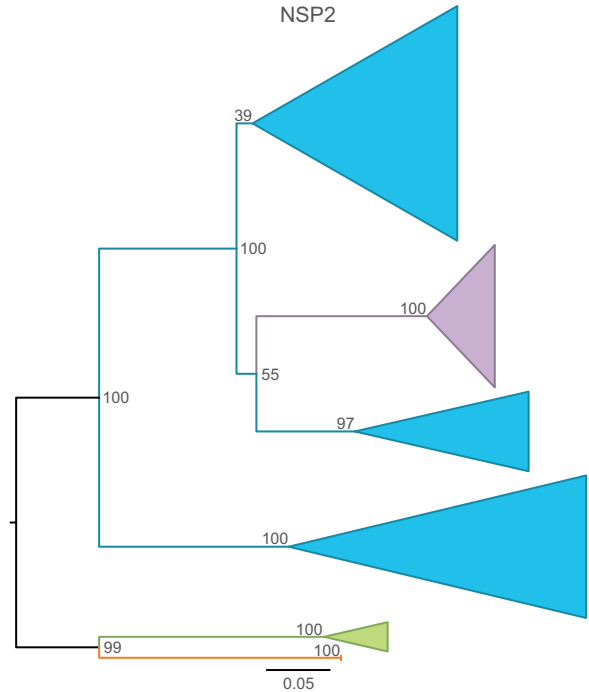
VP3



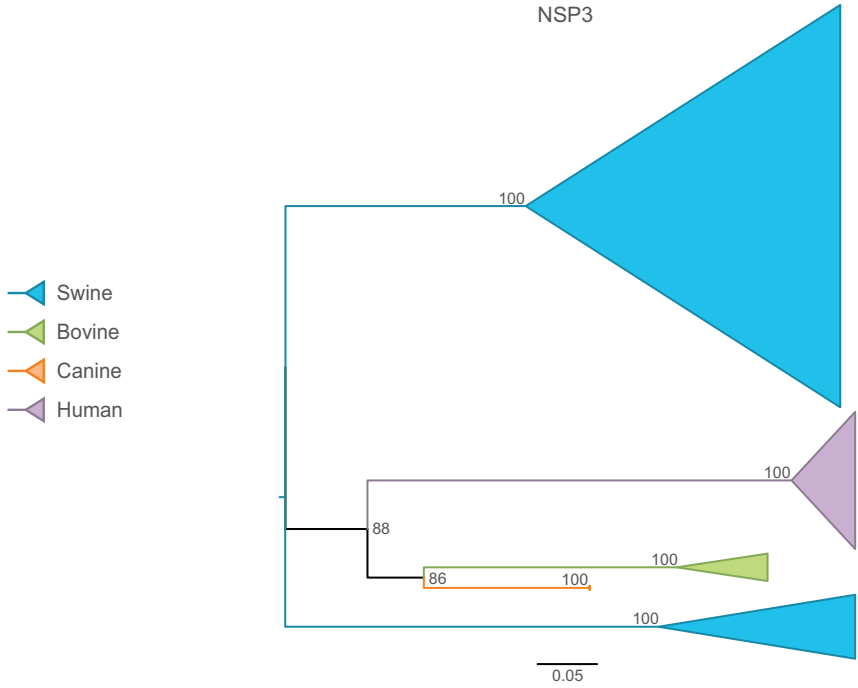
NSP1



NSP2

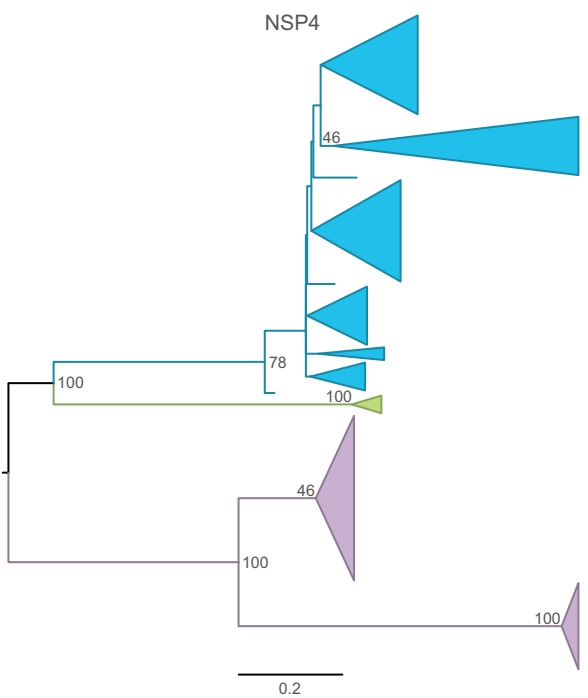


NSP3

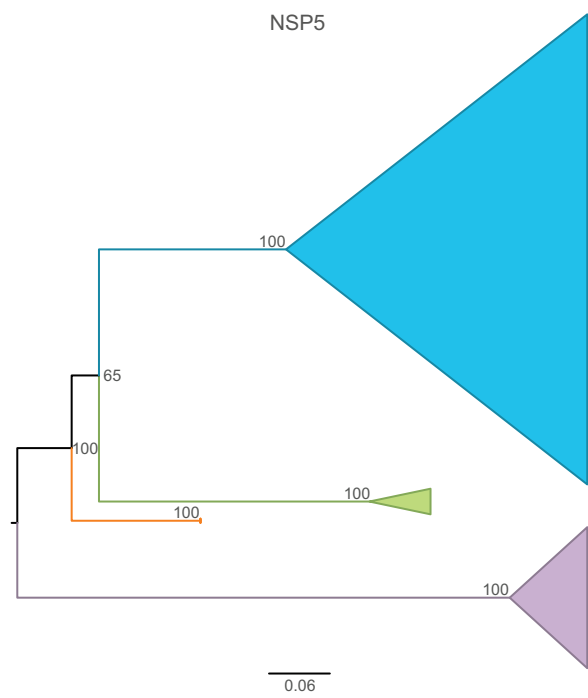


-  Swine
-  Bovine
-  Canine
-  Human

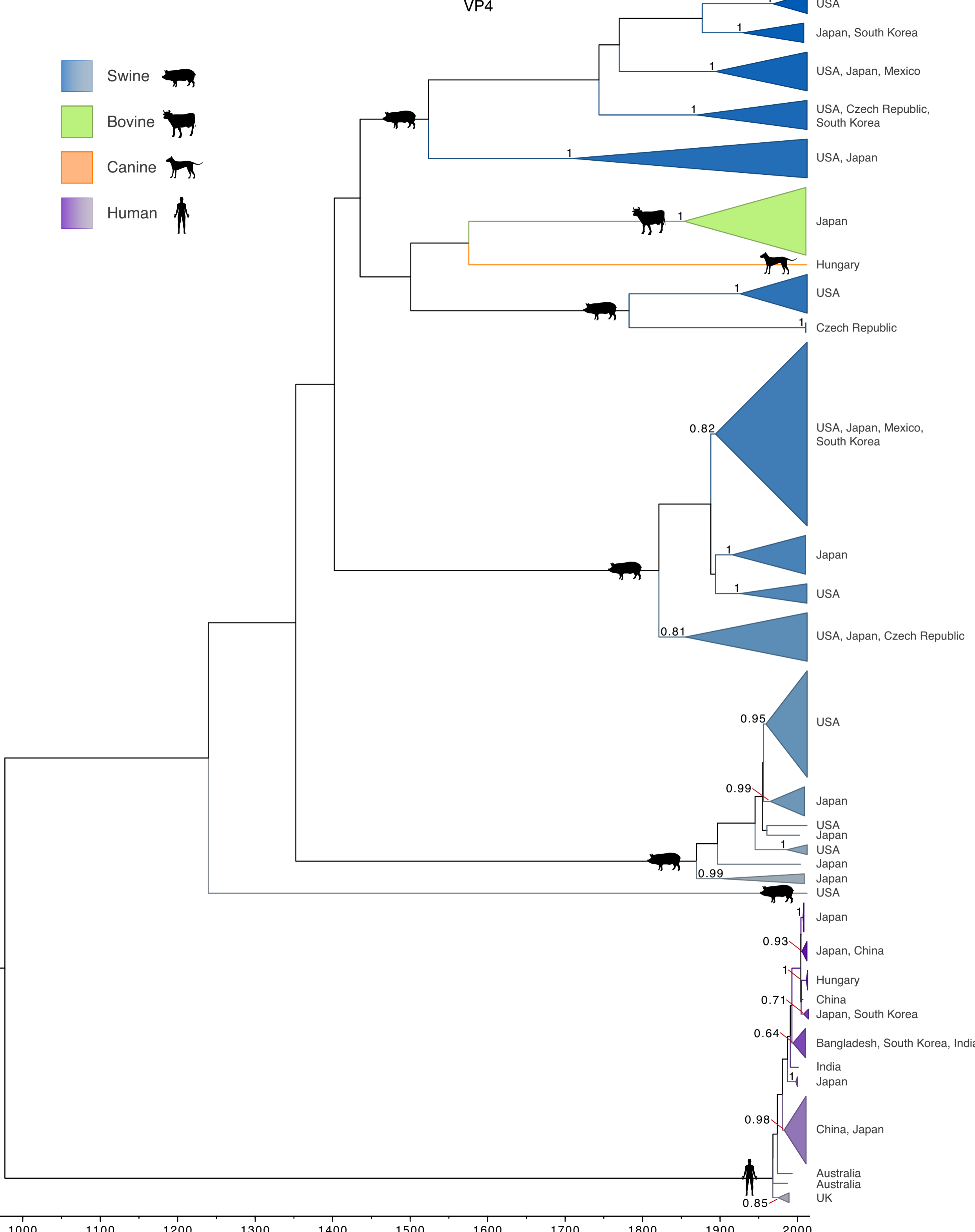
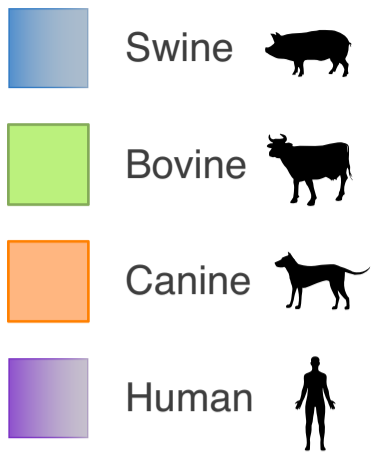
NSP4



NSP5

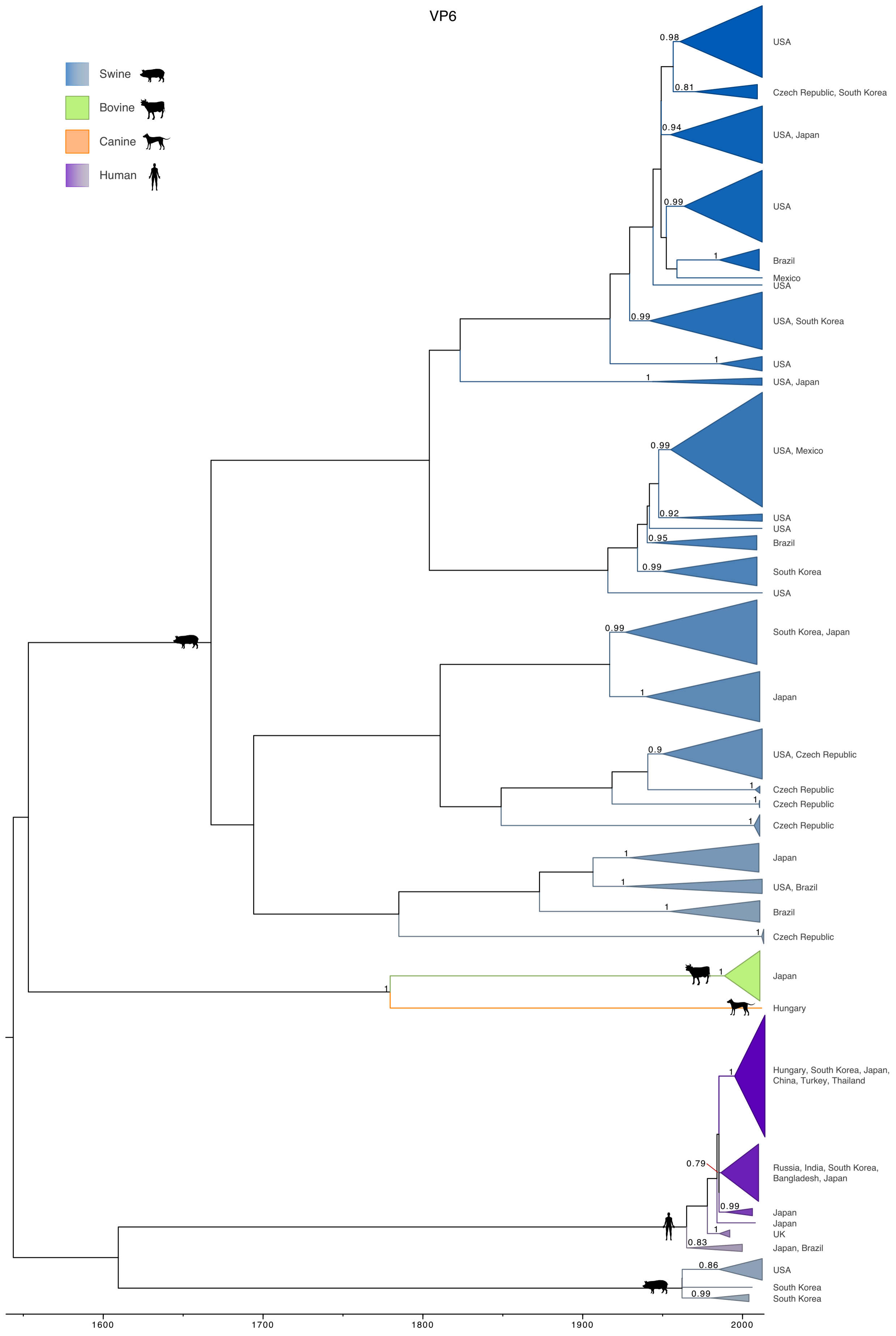
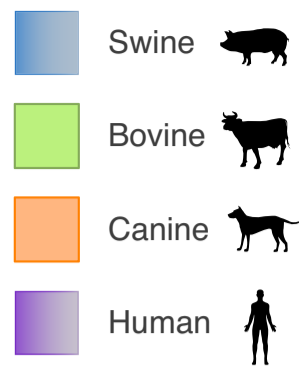


VP4

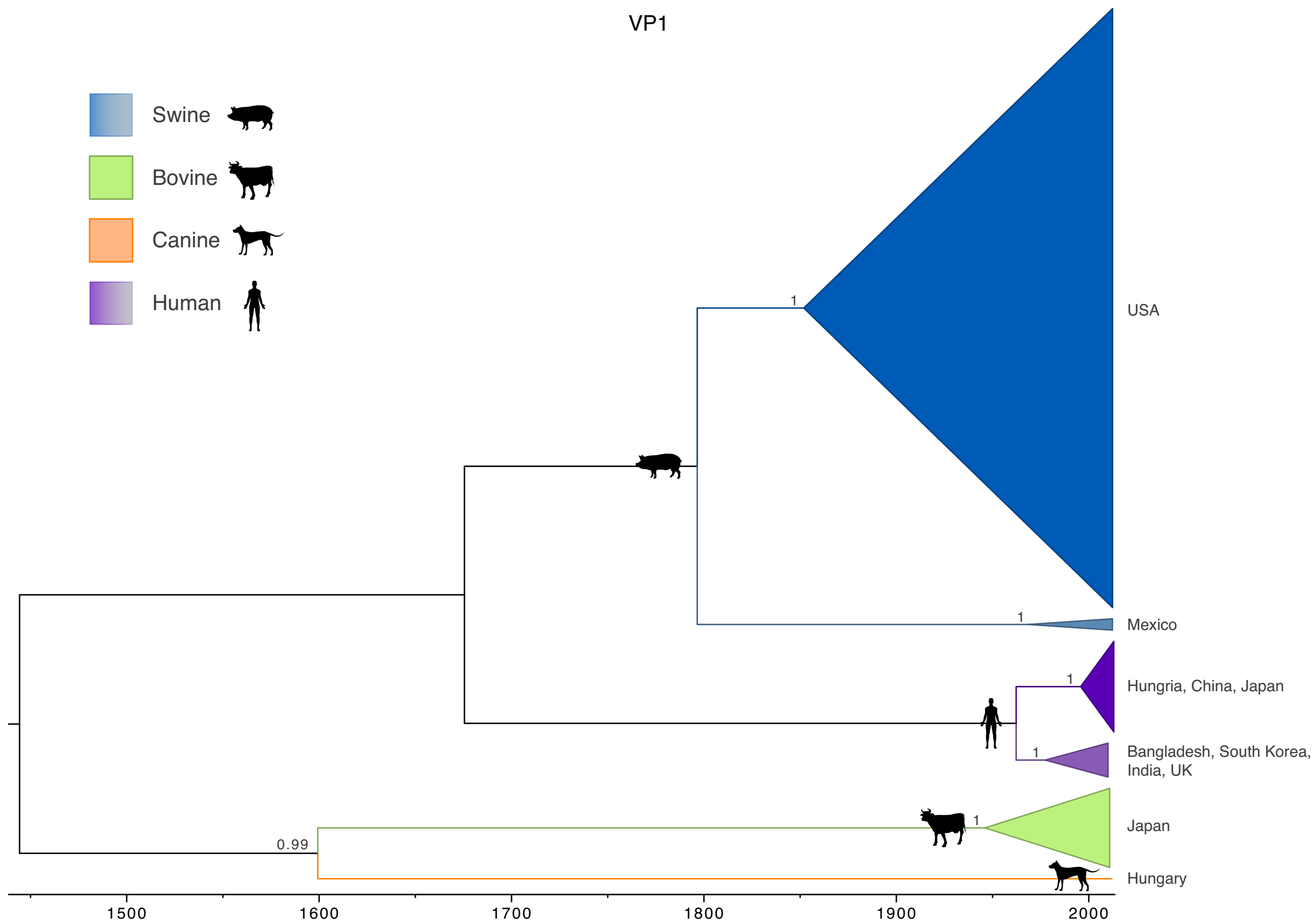
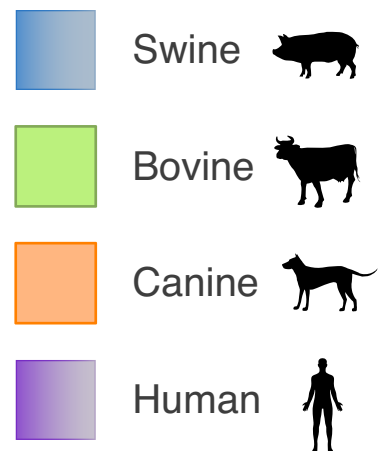




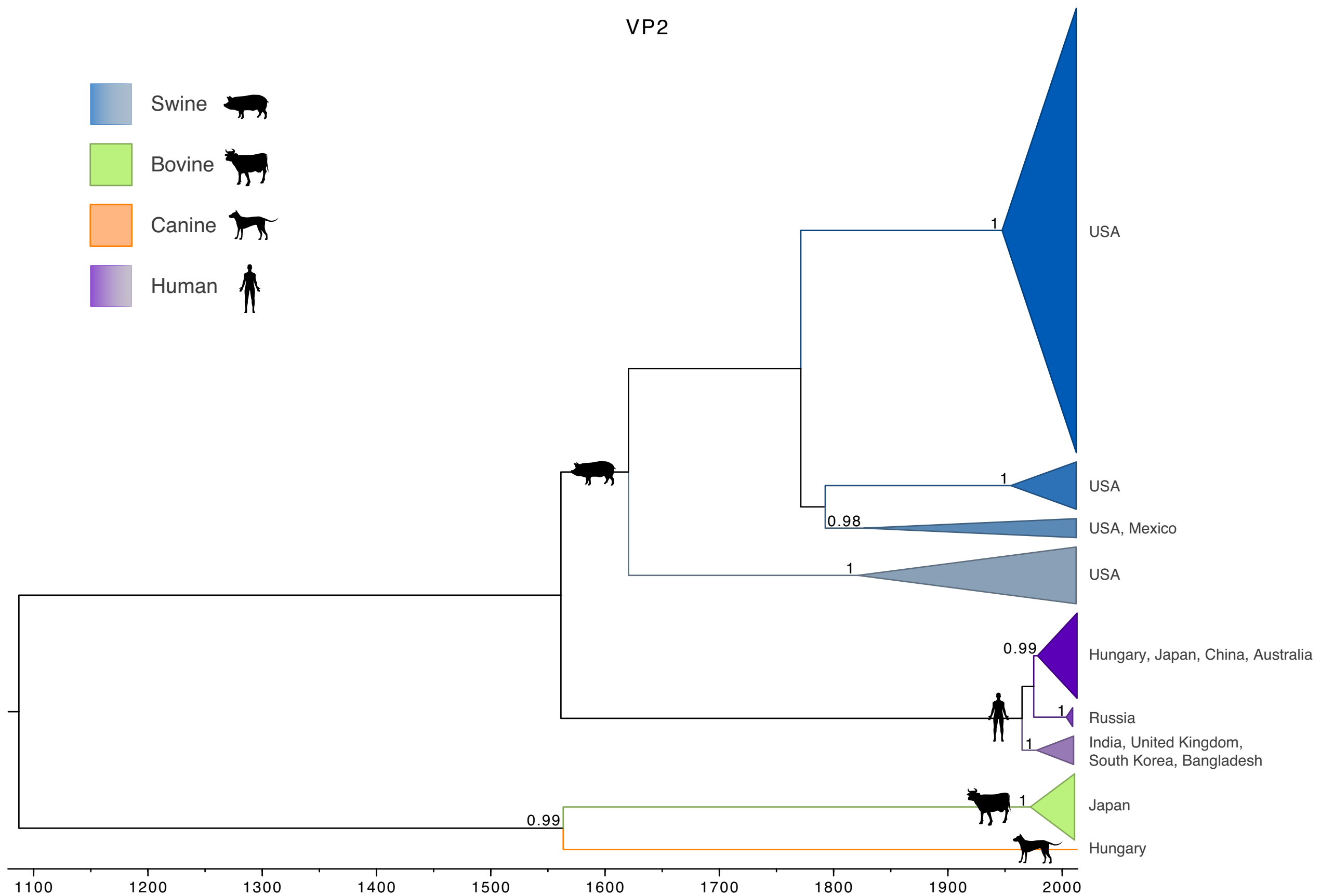
VP6




# VP1





# VP2




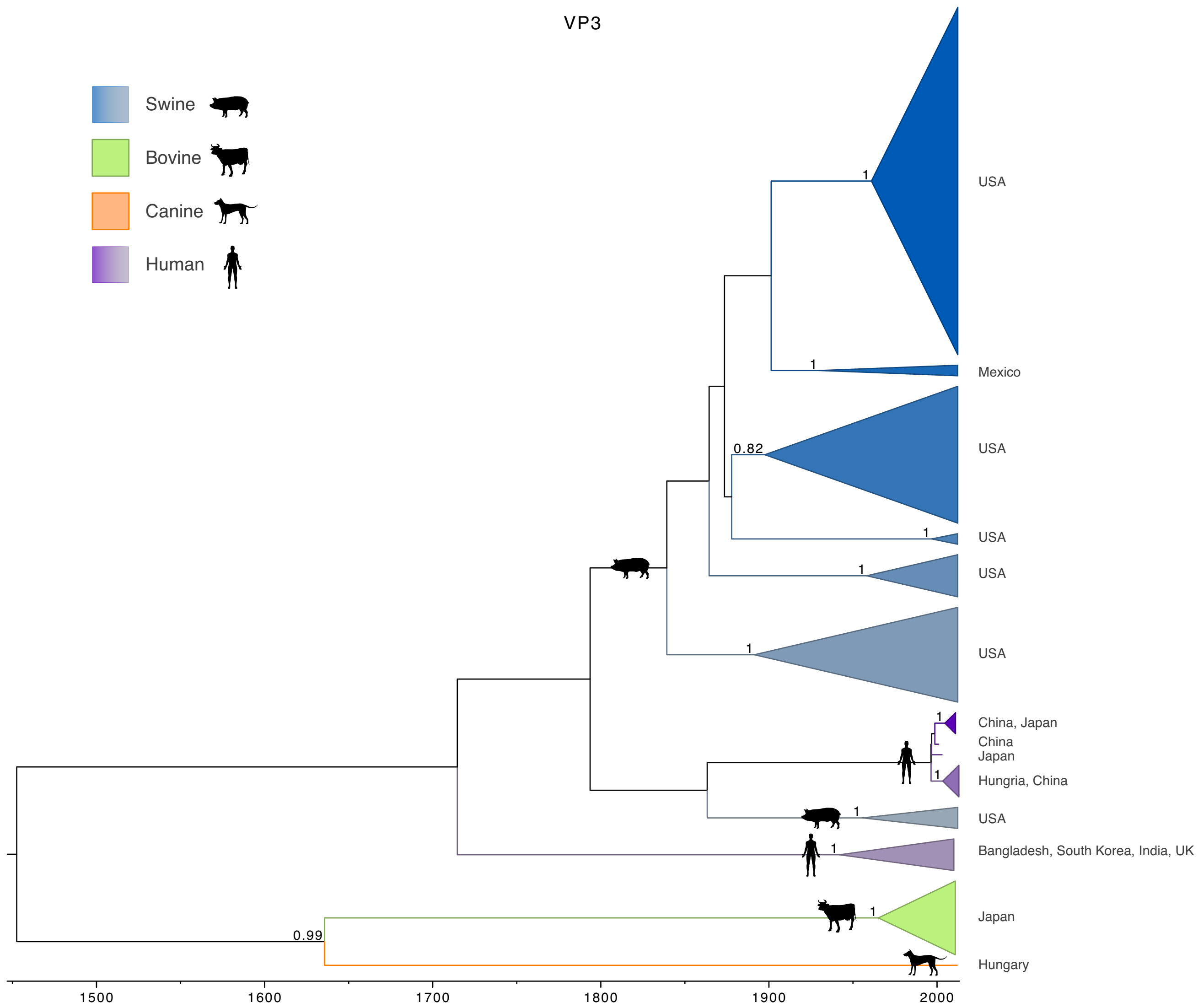
VP3

Swine 

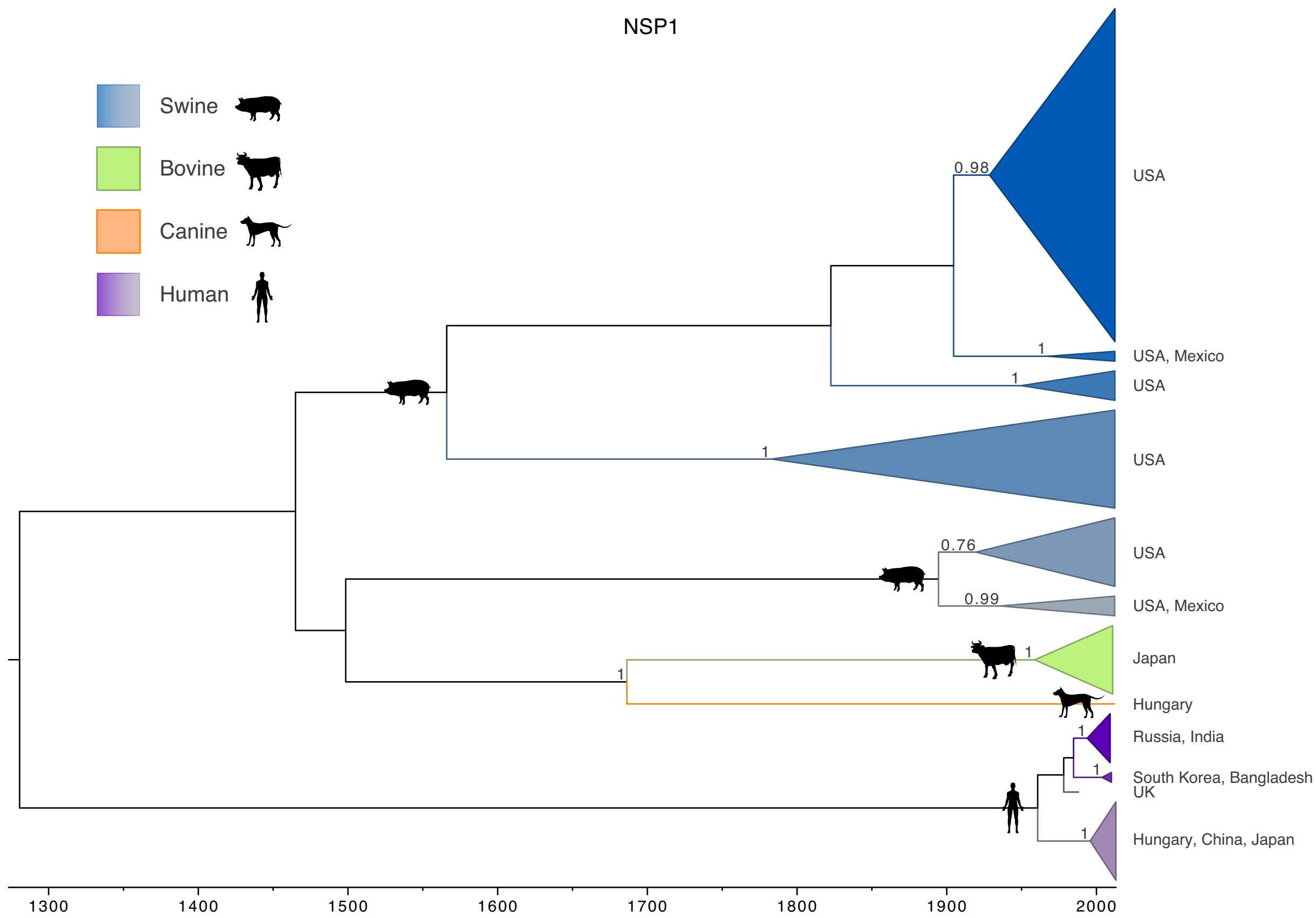
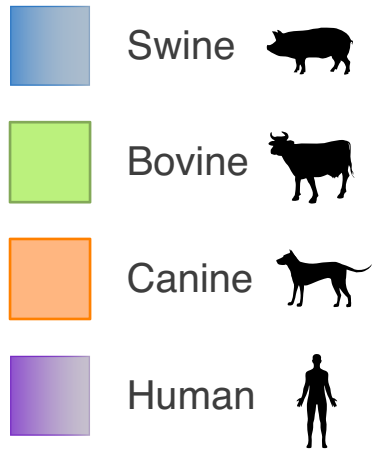
Bovine 

Canine 

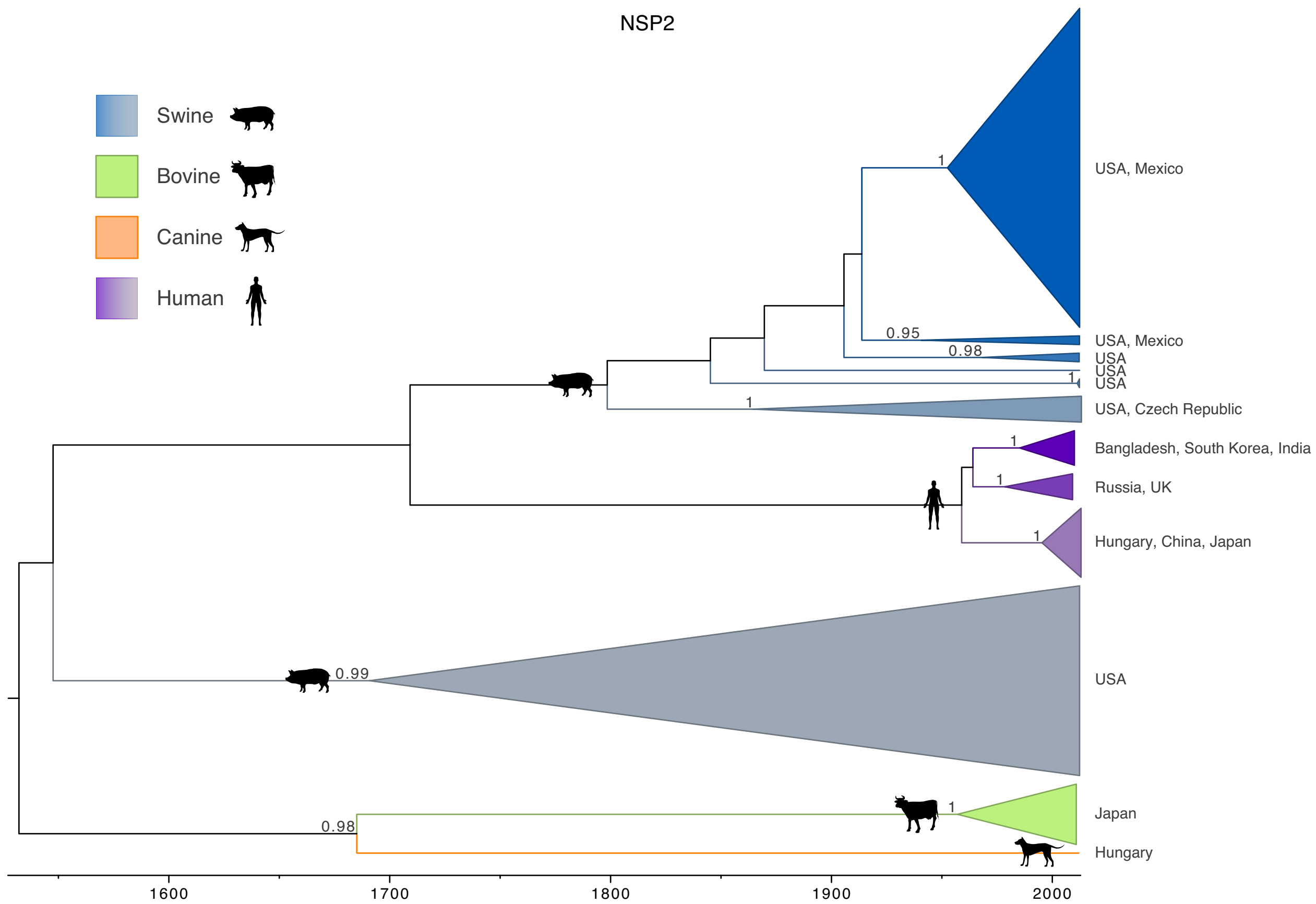
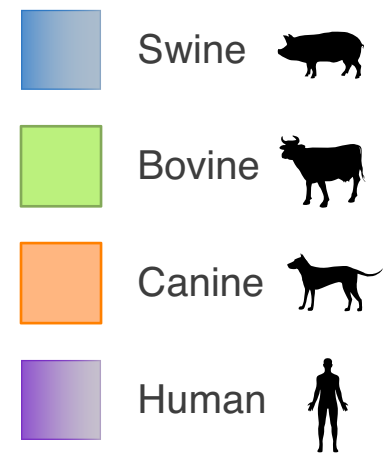
Human 



# NSP1







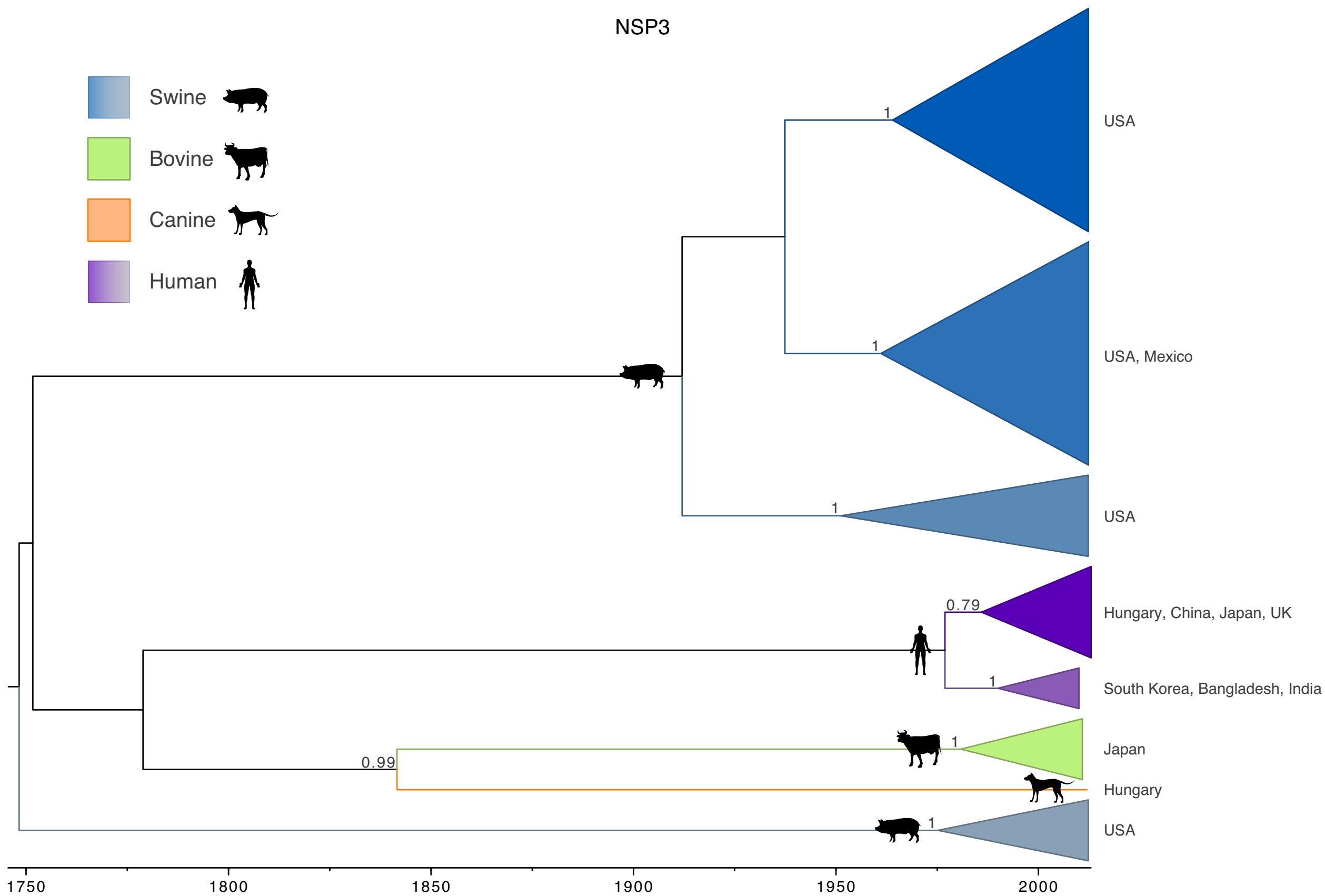
# NSP2



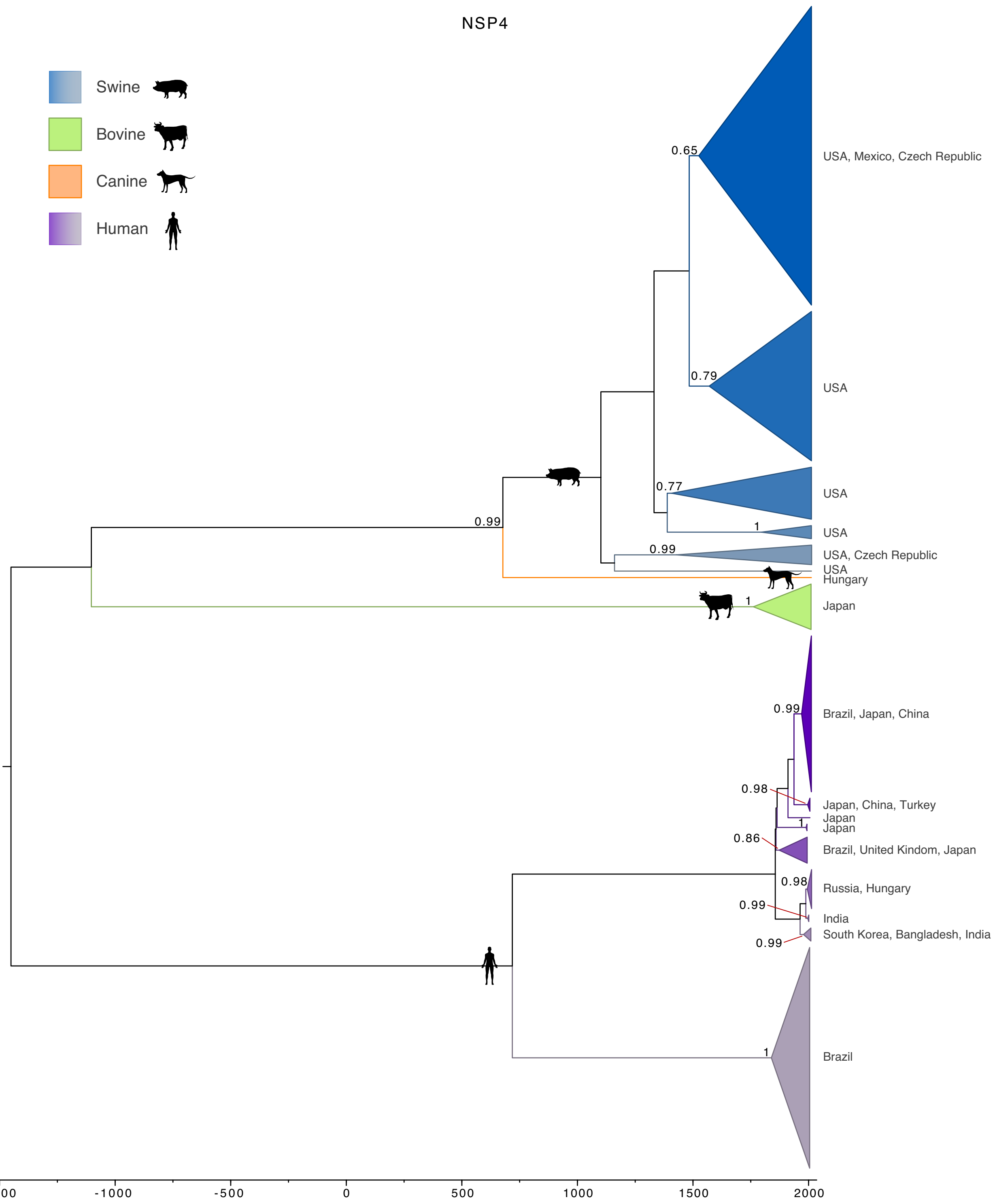
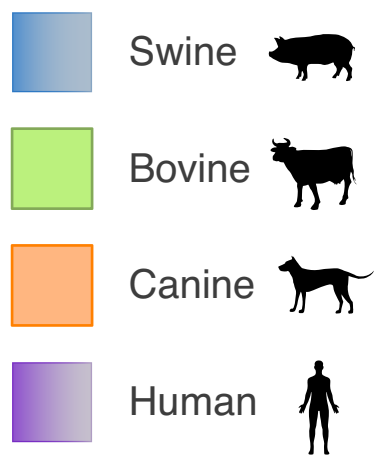


# NSP3

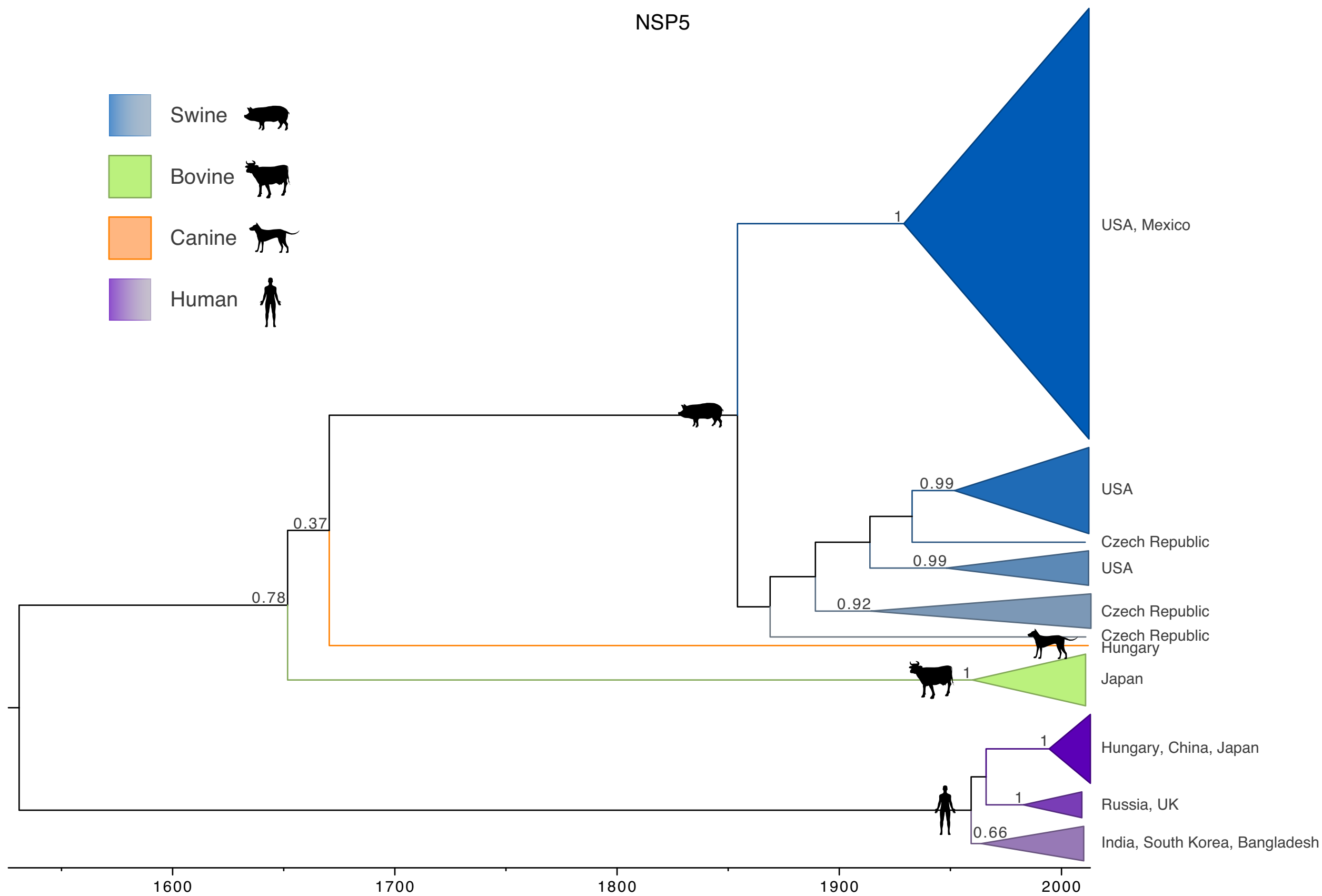
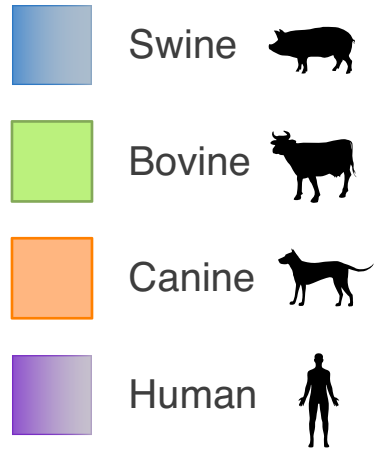
- Swine 
- Bovine 
- Canine 
- Human 



# NSP4

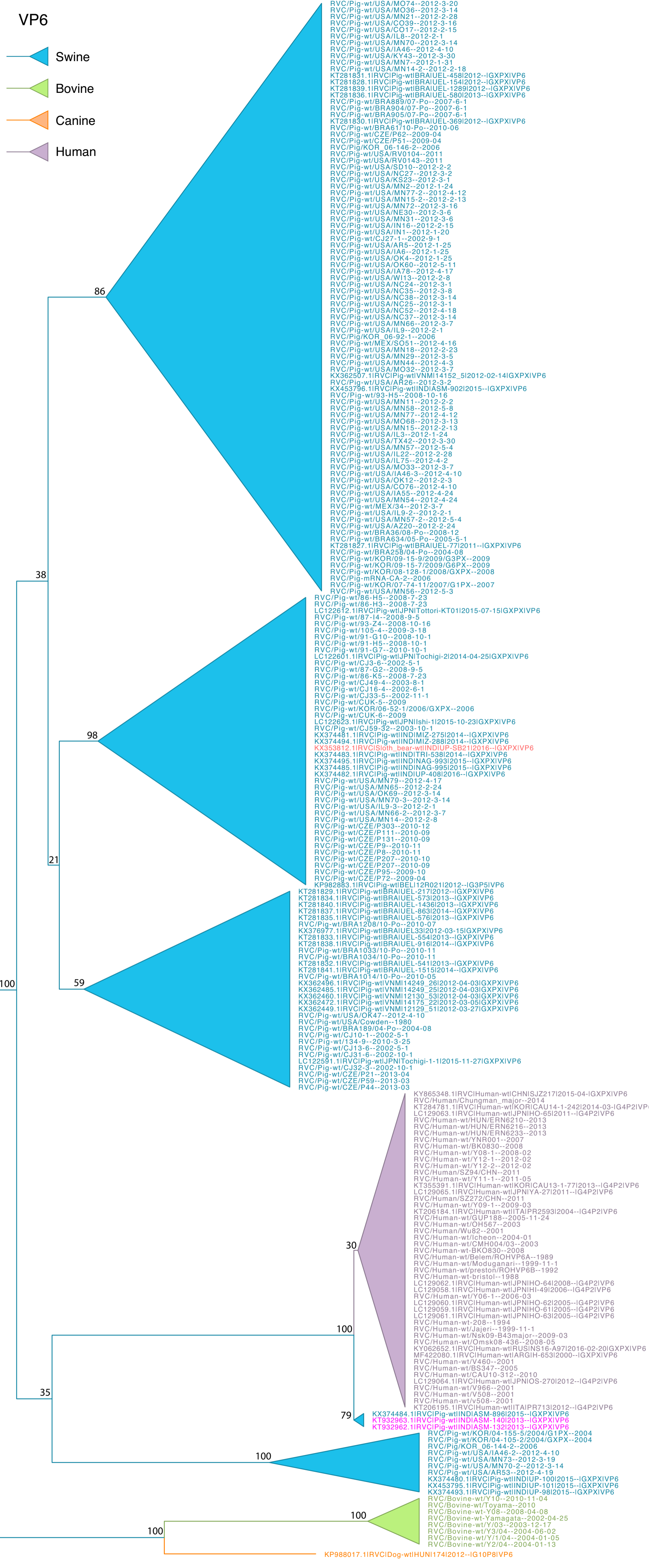


# NSP5



VP6

- Swine
- Bovine
- Canine
- Human



RVC/Pig-wt/USA/MO74--2012-3-20  
RVC/Pig-wt/USA/MO36--2012-3-14  
RVC/Pig-wt/USA/MN21--2012-2-28  
RVC/Pig-wt/USA/CO39--2012-3-16  
RVC/Pig-wt/USA/CO17--2012-2-15  
RVC/Pig-wt/USA/IL8--2012-2-1  
RVC/Pig-wt/USA/MN70--2012-3-14  
RVC/Pig-wt/USA/IA46--2012-4-10  
RVC/Pig-wt/USA/KY43--2012-3-30  
RVC/Pig-wt/USA/MN7--2012-1-31  
RVC/Pig-wt/USA/MN14-2--2012-2-18  
KT281831.1RVCIPig-wtBRAIUUEL-458I2012--IGXPXIVP6  
KT281828.1RVCIPig-wtBRAIUUEL-154I2012--IGXPXIVP6  
KT281839.1RVCIPig-wtBRAIUUEL-1289I2012--IGXPXIVP6  
KT281836.1RVCIPig-wtBRAIUUEL-580I2013--IGXPXIVP6  
RVC/Pig-wt/BRA889/07-Po--2007-6-1  
RVC/Pig-wt/BRA904/07-Po--2007-6-1  
RVC/Pig-wt/BRA905/07-Po--2007-6-1  
KT281830.1RVCIPig-wtBRAIUUEL-369I2012--IGXPXIVP6  
RVC/Pig-wt/BRA617/10-Po--2010-06  
RVC/Pig-wt/CZE/P62--2009-04  
RVC/Pig-wt/CZE/P51--2009-04  
RVC/Pig/KOR\_06-146-2--2006  
RVC/Pig-wt/USA/RV0104--2011  
RVC/Pig-wt/USA/RV0143--2011  
RVC/Pig-wt/USA/SD10--2012-2-2  
RVC/Pig-wt/USA/NC27--2012-3-2  
RVC/Pig-wt/USA/KS23--2012-3-1  
RVC/Pig-wt/USA/MN2--2012-1-24  
RVC/Pig-wt/USA/MN77-2--2012-4-12  
RVC/Pig-wt/USA/MN15-2--2012-2-13  
RVC/Pig-wt/USA/MN72--2012-3-16  
RVC/Pig-wt/USA/NE30--2012-3-6  
RVC/Pig-wt/USA/MN31--2012-3-6  
RVC/Pig-wt/USA/IN16--2012-2-15  
RVC/Pig-wt/USA/IN1--2012-1-20  
RVC/Pig-wt/CJ27-1--2002-9-1  
RVC/Pig-wt/USA/AR5--2012-1-25  
RVC/Pig-wt/USA/IA6--2012-1-25  
RVC/Pig-wt/USA/OK4--2012-1-25  
RVC/Pig-wt/USA/OK60--2012-5-11  
RVC/Pig-wt/USA/IA78--2012-4-17  
RVC/Pig-wt/USA/WI13--2012-2-8  
RVC/Pig-wt/USA/NC24--2012-3-1  
RVC/Pig-wt/USA/NC35--2012-3-8  
RVC/Pig-wt/USA/NC38--2012-3-14  
RVC/Pig-wt/USA/NC25--2012-3-1  
RVC/Pig-wt/USA/NC52--2012-4-18  
RVC/Pig-wt/USA/NC37--2012-3-14  
RVC/Pig-wt/USA/MN66--2012-3-7  
RVC/Pig-wt/USA/IL9--2012-2-1  
RVC/Pig/KOR\_06-92-1--2006  
RVC/Pig-wt/MEX/SO51--2012-4-16  
RVC/Pig-wt/USA/MN18--2012-2-23  
RVC/Pig-wt/USA/MN29--2012-3-5  
RVC/Pig-wt/USA/MN44--2012-4-3  
RVC/Pig-wt/USA/MO32--2012-3-7  
KX362507.1RVCIPig-wtVNM14152\_5I2012-02-14IGXPXIVP6  
RVC/Pig-wt/USA/AR26--2012-3-2  
KX453796.1RVCIPig-wtINDIASM-902I2015--IGXPXIVP6  
RVC/Pig-wt/93-H5--2008-10-16  
RVC/Pig-wt/USA/MN11--2012-2-2  
RVC/Pig-wt/USA/MN58--2012-5-8  
RVC/Pig-wt/USA/MN77--2012-4-12  
RVC/Pig-wt/USA/MO68--2012-3-13  
RVC/Pig-wt/USA/MN15--2012-2-13  
RVC/Pig-wt/USA/IL3--2012-1-24  
RVC/Pig-wt/USA/TX42--2012-3-30  
RVC/Pig-wt/USA/MN57--2012-5-4  
RVC/Pig-wt/USA/IL22--2012-2-28  
RVC/Pig-wt/USA/IL75--2012-4-2  
RVC/Pig-wt/USA/MO33--2012-3-7  
RVC/Pig-wt/USA/IA46-3--2012-4-10  
RVC/Pig-wt/USA/OK12--2012-2-3  
RVC/Pig-wt/USA/CO76--2012-4-10  
RVC/Pig-wt/USA/IA55--2012-4-24  
RVC/Pig-wt/USA/MN54--2012-4-24  
RVC/Pig-wt/MEX/34--2012-3-7  
RVC/Pig-wt/USA/IL9-2--2012-2-1  
RVC/Pig-wt/USA/MN57-2--2012-5-4  
RVC/Pig-wt/USA/AZ20--2012-2-24  
RVC/Pig-wt/BRA36/08-Po--2008-12  
RVC/Pig-wt/BRA634/05-Po--2005-5-1  
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RVC/Pig-wt/BRA258/04-Po--2004-08  
RVC/Pig-wt/KOR/09-15-9/2009/G3PX--2009  
RVC/Pig-wt/KOR/09-15-7/2009/G6PX--2009  
RVC/Pig-wt/KOR/08-128-1/2008/GXPX--2008  
RVC/Pig-mRNA-CA-2--2006  
RVC/Pig-wt/KOR/07-74-11/2007/G1PX--2007  
RVC/Pig-wt/USA/MN56--2012-5-3  
RVC/Pig-wt/86-H5--2008-7-23  
RVC/Pig-wt/86-H3--2008-7-23  
LC122612.1RVCIPig-wtJPNITottori-KT01I2015-07-15IGXPXIVP6  
RVC/Pig-wt/87-14--2008-9-5  
RVC/Pig-wt/93-Z4--2008-10-16  
RVC/Pig-wt/105-4--2009-3-18  
RVC/Pig-wt/91-G10--2008-10-1  
RVC/Pig-wt/91-H5--2008-10-1  
RVC/Pig-wt/91-G7--2010-10-1  
LC122601.1RVCIPig-wtJPNITochigi-2I2014-04-25IGXPXIVP6  
RVC/Pig-wt/CJ3-6--2002-5-1  
RVC/Pig-wt/87-G2--2008-9-5  
RVC/Pig-wt/86-K5--2008-7-23  
RVC/Pig-wt/CJ49-4--2003-8-1  
RVC/Pig-wt/CJ16-4--2002-6-1  
RVC/Pig-wt/CJ33-5--2002-11-1  
RVC/Pig-wt/CUK-5--2009  
RVC/Pig-wt/KOR/06-52-1/2006/GXPX--2006  
RVC/Pig-wt/CUK-6--2009  
LC122623.1RVCIPig-wtJPNIlshi-1I2015-10-23IGXPXIVP6  
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KX374494.1RVCIPig-wtINDIMIZ-288I2014--IGXPXIVP6  
KX353812.1RVCISloth\_bear-wtINDIUP-SB21I2016--IGXPXIVP6  
KX374483.1RVCIPig-wtINDITRI-538I2014--IGXPXIVP6  
KX374495.1RVCIPig-wtINDINAG-993I2015--IGXPXIVP6  
KX374485.1RVCIPig-wtINDINAG-995I2015--IGXPXIVP6  
KX374482.1RVCIPig-wtINDIUP-408I2016--IGXPXIVP6  
RVC/Pig-wt/USA/MN79--2012-4-17  
RVC/Pig-wt/USA/MN65--2012-2-24  
RVC/Pig-wt/USA/OK69--2012-3-14  
RVC/Pig-wt/USA/MN70-3--2012-3-14  
RVC/Pig-wt/USA/IL9-3--2012-2-1  
RVC/Pig-wt/USA/MN66-2--2012-3-7  
RVC/Pig-wt/USA/MN14--2012-2-8  
RVC/Pig-wt/CZE/P303--2010-12  
RVC/Pig-wt/CZE/P111--2010-09  
RVC/Pig-wt/CZE/P131--2010-09  
RVC/Pig-wt/CZE/P9--2010-11  
RVC/Pig-wt/CZE/P8--2010-11  
RVC/Pig-wt/CZE/P207--2010-10  
RVC/Pig-wt/CZE/P207--2010-09  
RVC/Pig-wt/CZE/P95--2009-10  
RVC/Pig-wt/CZE/P72--2009-04  
KP982883.1RVCIPig-wtBELI12R021I2012--IG3P5IVP6  
KT281829.1RVCIPig-wtBRAIUUEL-217I2012--IGXPXIVP6  
KT281834.1RVCIPig-wtBRAIUUEL-573I2013--IGXPXIVP6  
KT281840.1RVCIPig-wtBRAIUUEL-1436I2013--IGXPXIVP6  
KT281837.1RVCIPig-wtBRAIUUEL-863I2014--IGXPXIVP6  
KT281835.1RVCIPig-wtBRAIUUEL-576I2013--IGXPXIVP6  
RVC/Pig-wt/BRA1208/10-Po--2010-07  
KX376977.1RVCIPig-wtBRAIUUEL33I2012-03-15IGXPXIVP6  
KT281833.1RVCIPig-wtBRAIUUEL-554I2013--IGXPXIVP6  
KT281838.1RVCIPig-wtBRAIUUEL-916I2014--IGXPXIVP6  
RVC/Pig-wt/BRA1033/10-Po--2010-11  
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KX362485.1RVCIPig-wtVNM14249\_25I2012-04-03IGXPXIVP6  
KX362460.1RVCIPig-wtVNM12130\_53I2012-04-03IGXPXIVP6  
KX362472.1RVCIPig-wtVNM14175\_22I2012-03-05IGXPXIVP6  
KX362449.1RVCIPig-wtVNM12129\_51I2012-03-27IGXPXIVP6  
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RVC/Pig-wt/USA/Cowden--1980  
RVC/Pig-wt/BRA189/04-Po--2004-08  
RVC/Pig-wt/CJ10-1--2002-5-1  
RVC/Pig-wt/134-9--2010-3-25  
RVC/Pig-wt/CJ13-6--2002-5-1  
RVC/Pig-wt/CJ31-6--2002-10-1  
LC122591.1RVCIPig-wtJPNITochigi-1-1I2015-11-27IGXPXIVP6  
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RVC/Pig-wt/CZE/P21--2013-04  
RVC/Pig-wt/CZE/P59--2013-03  
RVC/Pig-wt/CZE/P44--2013-03  
KY865348.1RVCIIHuman-wtCHNISJZ217I2015-04-IGXPXIVP6  
RVC/Human/Chungman\_major--2014  
KT284781.1RVCIIHuman-wtKORICAU14-1-242I2014-03-IG4P2IVP6  
LC129063.1RVCIIHuman-wtJPNIIHO-65I2011--IG4P2IVP6  
RVC/Human-wt/HUN/ERN6210--2013  
RVC/Human-wt/HUN/ERN6216--2013  
RVC/Human-wt/HUN/ERN6233--2013  
RVC/Human-wt/YNR001--2007  
RVC/Human-wt/BK0830--2008  
RVC/Human-wt/Y08-1--2008-02  
RVC/Human-wt/Y12-1--2012-02  
RVC/Human-wt/Y12-2--2012-02  
RVC/Human/SZ94/CHN--2011  
RVC/Human-wt/Y11-1--2011-05  
KT355391.1RVCIIHuman-wtKORICAU13-1-77I2013--IG4P2IVP6  
LC129065.1RVCIIHuman-wtJPNIIYA-27I2011--IG4P2IVP6  
RVC/Human/SZ272/CHN--2011  
RVC/Human-wt/Y09-1--2009-03  
KT206184.1RVCIIHuman-wtITAIPR2593I2004--IG4P2IVP6  
RVC/Human-wt/GUP188--2005-11-24  
RVC/Human-wt/OH567--2003  
RVC/Human/Wu82--2001  
RVC/Human-wt/lcheon--2004-01  
RVC/Human-wt/CMH004/03--2003  
RVC/Human-wt/BK0830--2008  
RVC/Human-wt/Belem/ROHVP6A--1989  
RVC/Human-wt/Moduganari--1999-11-1  
RVC/Human-wt/preston/ROHVP6B--1992  
RVC/Human-wt/bristol--1988  
LC129062.1RVCIIHuman-wtJPNIIHO-64I2008--IG4P2IVP6  
LC129058.1RVCIIHuman-wtJPNIIHO-49I2006--IG4P2IVP6  
RVC/Human-wt/Y06-1--2006-03  
LC129060.1RVCIIHuman-wtJPNIIHO-62I2005--IG4P2IVP6  
LC129059.1RVCIIHuman-wtJPNIIHO-61I2005--IG4P2IVP6  
LC129061.1RVCIIHuman-wtJPNIIHO-63I2005--IG4P2IVP6  
RVC/Human-wt-208--1994  
RVC/Human-wt/Jajeri--1999-11-1  
RVC/Human-wt/Nsk09-B43major--2009-03  
RVC/Human-wt/Omsk08-436--2008-05  
KY062652.1RVCIIHuman-wtRUSINS16-A97I2016-02-20IGXPXIVP6  
MF422080.1RVCIIHuman-wtARGIH-653I2000--IGXPXIVP6  
RVC/Human-wt/V460--2001  
RVC/Human-wt/BS347--2005  
RVC/Human-wt/CAU10-312--2010  
LC129064.1RVCIIHuman-wtJPNIOS-270I2012--IG4P2IVP6  
RVC/Human-wt/V966--2001  
RVC/Human-wt/V508--2001  
RVC/Human-wt/v508--2001  
KT206195.1RVCIIHuman-wtITAIPR713I2012--IG4P2IVP6  
KX374484.1RVCIPig-wtINDIASM-896I2015--IGXPXIVP6  
KT932963.1RVCIPig-wtINDIASM-140I2013--IGXPXIVP6  
KT932962.1RVCIPig-wtINDIASM-132I2013--IGXPXIVP6  
RVC/Pig-wt/KOR/04-155-5/2004/G1PX--2004  
RVC/Pig-wt/KOR/04-105-2/2004/GXPX--2004  
RVC/Pig/KOR\_06-144-2--2006  
RVC/Pig-wt/USA/IA46-2--2012-4-10  
RVC/Pig-wt/USA/MN73--2012-3-19  
RVC/Pig-wt/USA/MN70-2--2012-3-14  
RVC/Pig-wt/USA/AR53--2012-4-19  
KX374480.1RVCIPig-wtINDIUP-100I2015--IGXPXIVP6  
KX453795.1RVCIPig-wtINDIUP-101I2015--IGXPXIVP6  
KX374493.1RVCIPig-wtINDIUP-98I2015--IGXPXIVP6  
RVC/Bovine-wt/Y10--2010-11-04  
RVC/Bovine-wt/Toyama--2010  
RVC/Bovine-wt/Y08--2008-04-08  
RVC/Bovine-wt/Yamagata--2002-04-25  
RVC/Bovine-wt/Y/03--2003-12-17  
RVC/Bovine-wt/Y3/04--2004-06-02  
RVC/Bovine-wt/Y/1/04--2004-01-05  
RVC/Bovine-wt/Y2/04--2004-01-13  
KP988017.1RVCIDog-wtHUNI174I2012--IG10P8IVP6

0.04