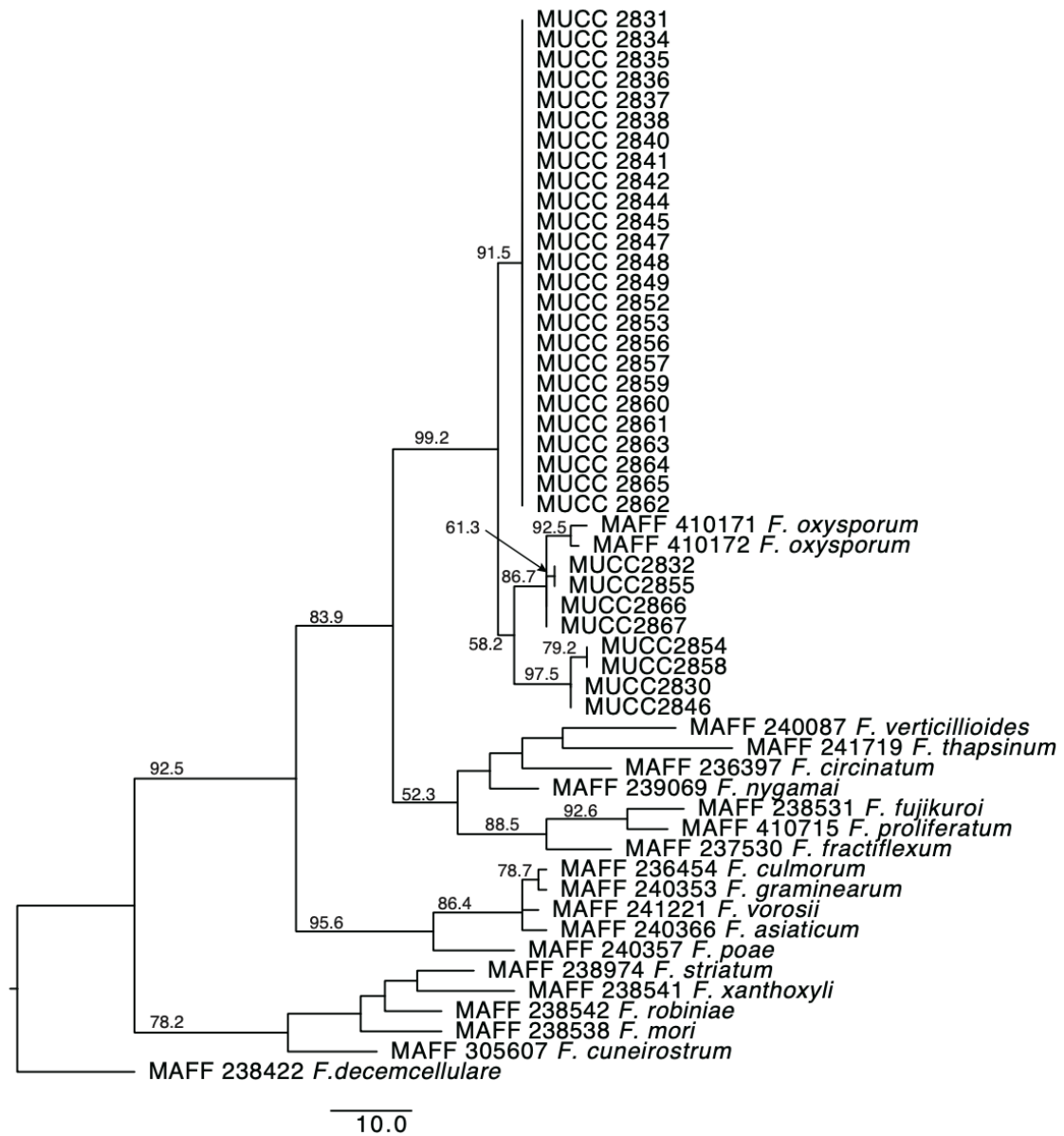
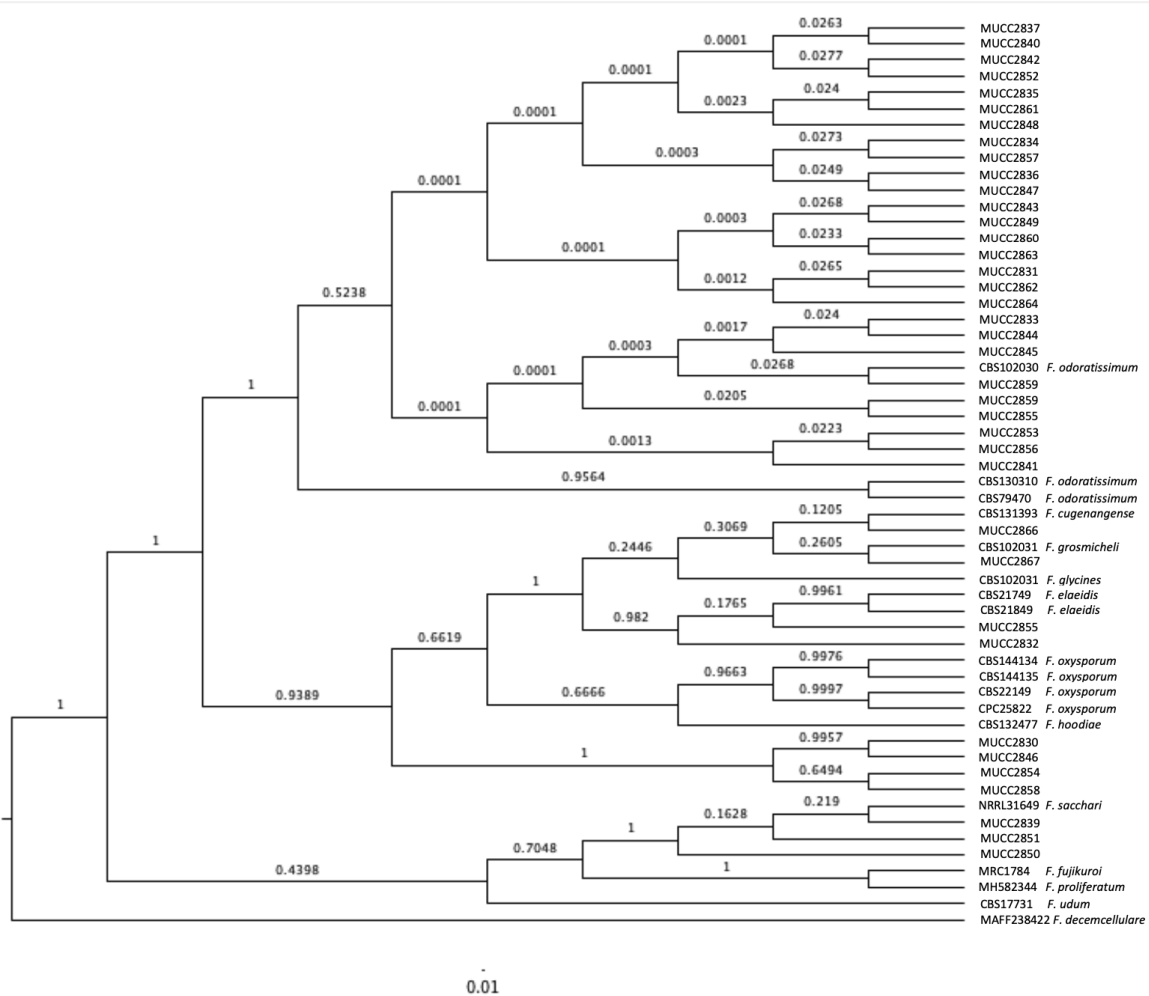


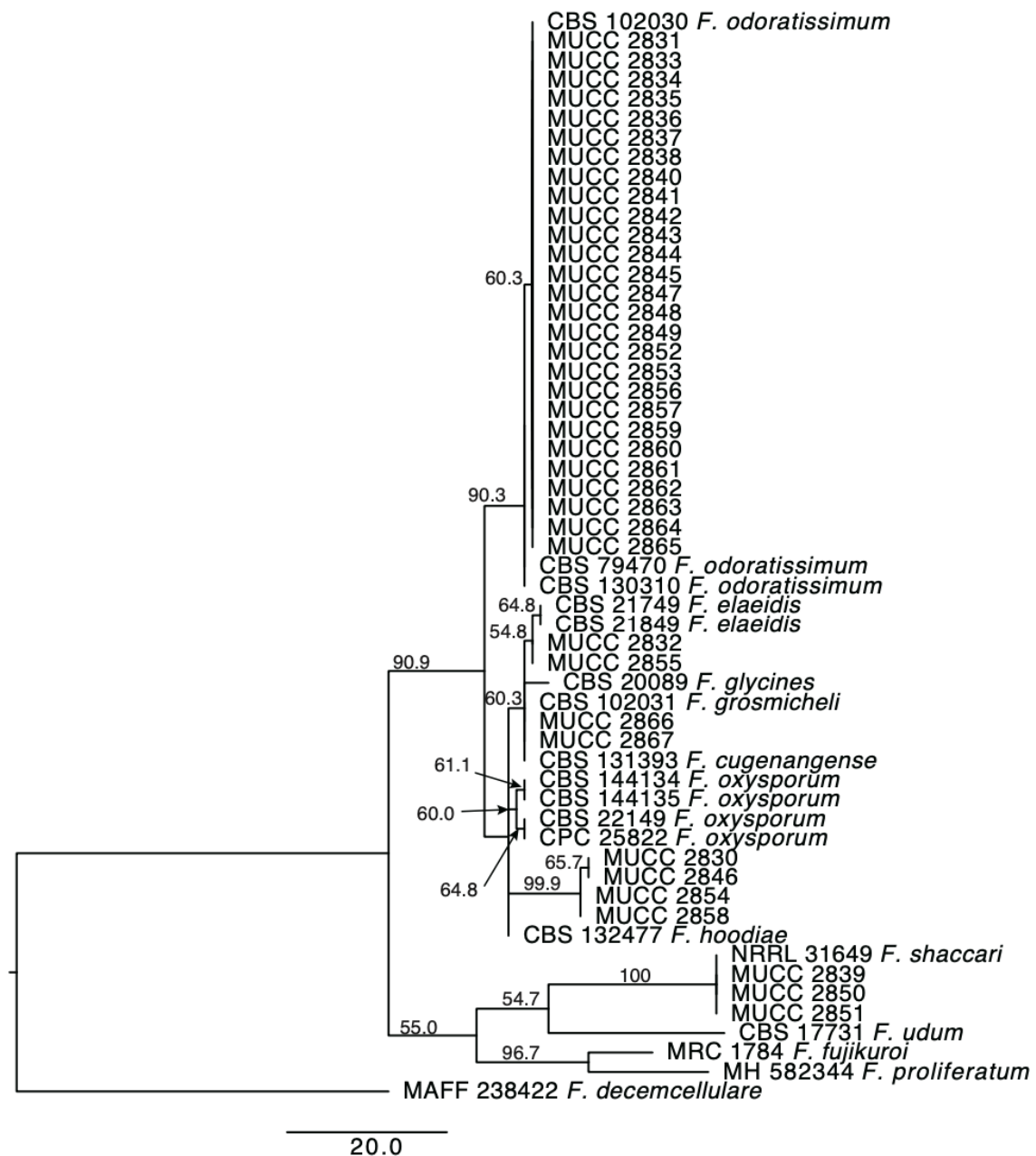
**Figure S1.** His H3 Bayesian tree with posterior probability (PP) with 1,000,000 generation. MCMC chain were sampled at every 1,000 generation. Branch length unit is substitution per site.



**Figure S2.** His H3 Maximum parsimony (MP) tree with bootstrap value. Tree length (TL) = 343, Consistency Index (CI) = 0.633, Retention Index (RI) = 0.833, Rescaled Consistency (RC) = 0.527.



**Figure S3.** TEF-1 $\alpha$  H3 Bayesian tree with posterior probability (PP) with 1,000,000 generation. MCMC chain were sampled at every 1,000 generation. Branch length unit is substitution per site.



**Figure S4.** TEF-1 $\alpha$  Maximum parsimony (MP) tree with bootstrap value. Tree length (TL) = 235, Consistency Index (CI) = 0.868, Retention Index (RI) = 0.929, Rescaled Consistency (RC) = 0.806.

**Table S1.** GenBank accessions numbers of *Fusarium* reference strains for phylogenetic analyses.

<b>Fungus species</b>	<b>Isolates</b>	<b>TEF-1<math>\alpha</math></b>	<b>H3</b>
<i>F. asiaticum</i>	MAFF 240366	Not available	MAFF*
<i>F. circinatum</i>	MAFF 236397	Not available	MAFF
<i>F. cugenangense</i>	CBS 131393	MH485019	Not available
<i>F. culmorum</i>	MAFF 236454	Not available	MAFF
<i>F. cuneirostrum</i>	MAFF 305607	Not available	MAFF
<i>F. decemcellulare</i>	MAFF 238422	AB674295	MAFF
<i>F. elaeidis</i>	CBS 217.49	MH484961	Not available
<i>F. elaeidis</i>	CBS 218.49	MH484962	Not available
<i>F. fujikuroi</i>	MAFF 238531	Not available	MAFF
<i>F. fujikuroi</i>	MRC 1784	MH582338	Not available
<i>F. germinaerum</i>	MAFF 240353	Not available	MAFF
<i>F. glycines</i>	CBS 200.89	MH484979	Not available
<i>F. grosnicheli</i>	CBS 102031	LS479744	Not available
<i>F. hoodiae</i>	CBS 132477	MH485022	Not available
<i>F. mori</i>	MAFF 238538	Not available	MAFF
<i>F. nygamai</i>	MAFF 239069	Not available	MAFF
<i>F. odoratissimum</i>	CBS 102030	MH484989	Not available
<i>F. odoratissimum</i>	CBS 794.70	MH484969	Not available
<i>F. odoratissimum</i>	CBS 130310	MH485013	Not available
<i>F. oxysporum</i>	MAFF 410171	Not available	MAFF
<i>F. oxysporum</i>	MAFF 410172	Not available	MAFF
<i>F. oxysporum</i>	CBS 221.49	MH484963	Not available
<i>F. oxysporum</i>	CPC 25822	MH485034	Not available
<i>F. oxysporum</i>	CBS 144134	MH485044	Not available
<i>F. oxysporum</i>	CBS 144135	MH485045	Not available
<i>F. poae</i>	MAFF 240357	Not available	MAFF
<i>F. proliferatum</i>	MAFF 410715	Not available	MAFF
<i>F. proliferatum</i>	Not available	MH582344	Not available
<i>F. robiniae</i>	MAFF 238542	Not available	MAFF
<i>F. sacchari</i>	NRRL 31649	FD_01770_EF-1a	Not available
<i>F. striatum</i>	MAFF 238974	Not available	MAFF
<i>F. udum</i>	CBS 177.31	MH484957	Not available
<i>F. verticillioides</i>	MAFF 240087	Not available	MAFF
<i>F. vorosii</i>	MAFF 241211	Not available	MAFF
<i>F. xanthoxyli</i>	MAFF 238541	Not available	MAFF

\*MAFF: Sequences have been published at the Approved Strains Database of *Fusarium* Species, Genebank, the Genetic Resources Center, National Agriculture and Food Research Organization, Japan ([https://www.gene.affrc.go.jp/databases-micro\\_approved\\_fs\\_en.php](https://www.gene.affrc.go.jp/databases-micro_approved_fs_en.php)).