

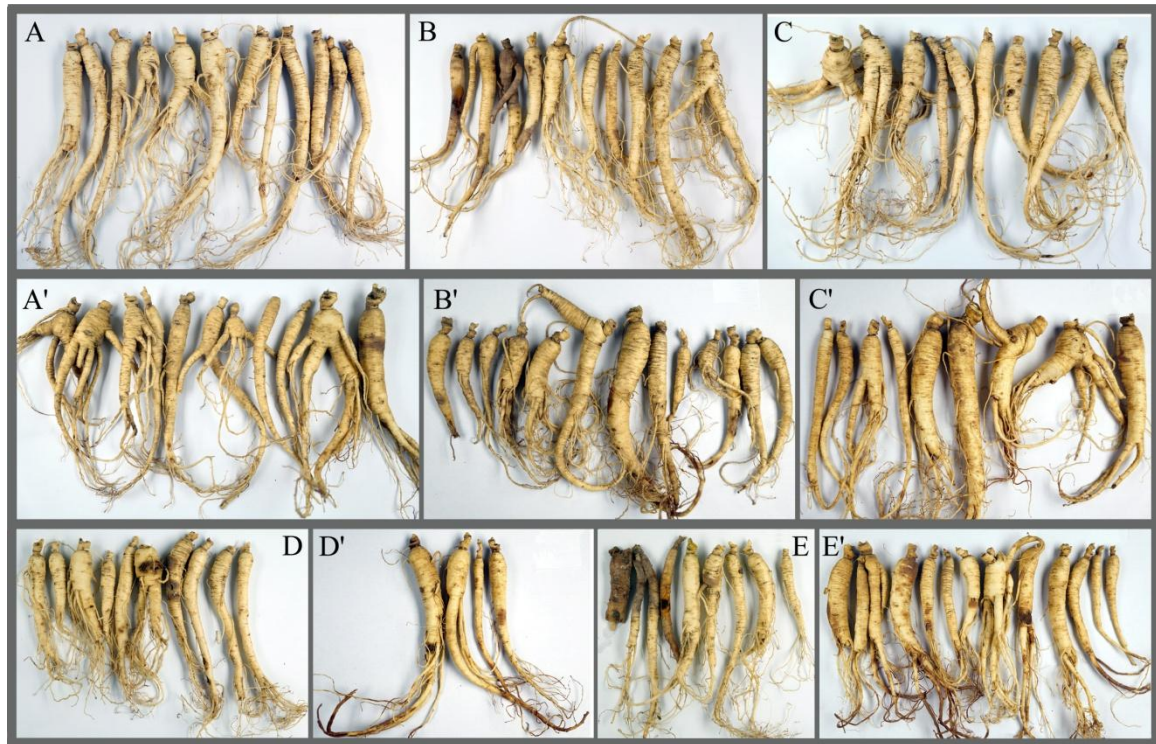
Supplementary Materials for

# Genetic diversity and population structure of *Cylindrocarpon*-like fungi infecting ginseng roots in Northeast China

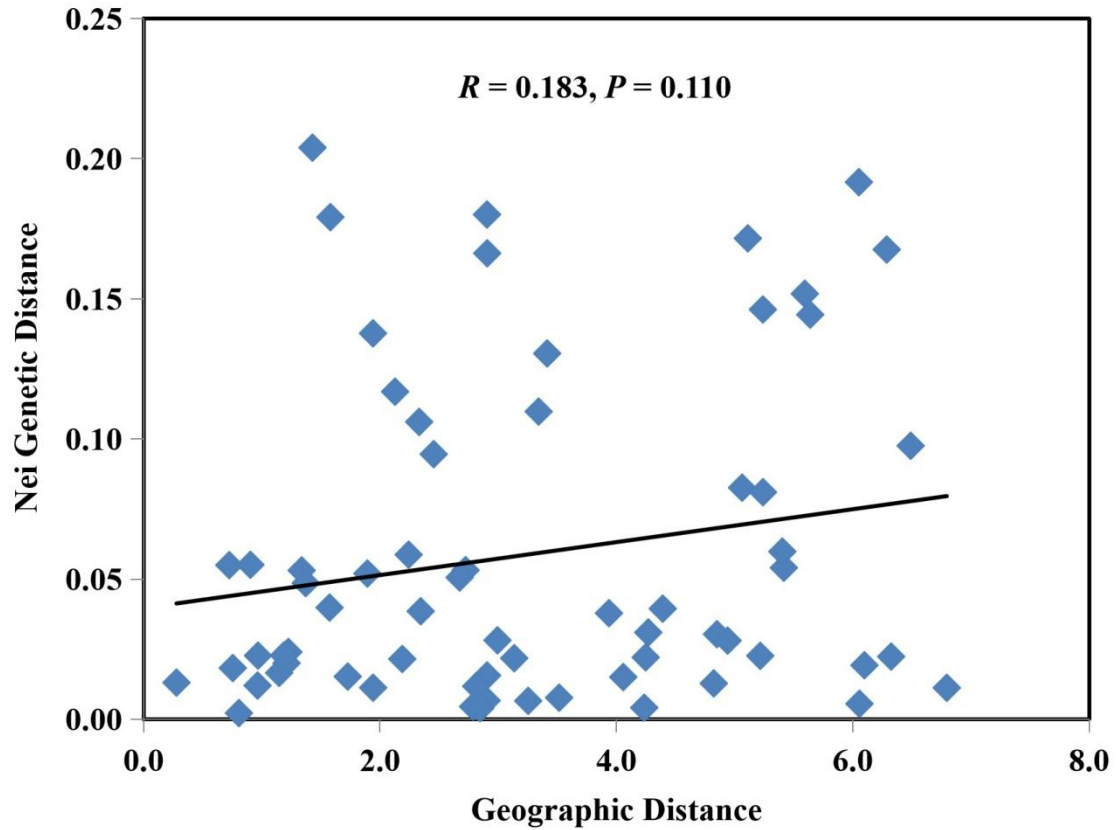
Figure S1 to S8 & Table S1 and S2



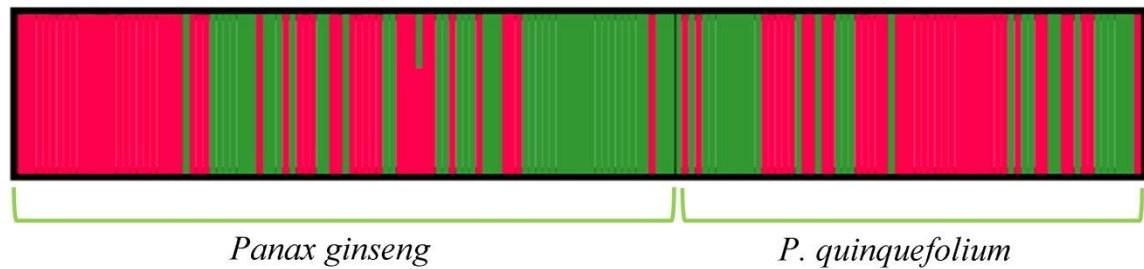
**Figure S1.** Pathogenicity test of CLF isolates obtained from *Panax ginseng* roots. A to H: virulence on *P. ginseng*, A' to H': virulence on *P. quinquefolius*; A & A': mock; B & B': *Dactylonectria hordeicola*; C & C': *Dactylonectria* sp.; D & D': *Ilyonectria changbaiensis*; E & E': *I. communis*; F & F': *I. mors-panacis*; G & G': *I. qitaiheensis*; H & H': *I. robusta*.



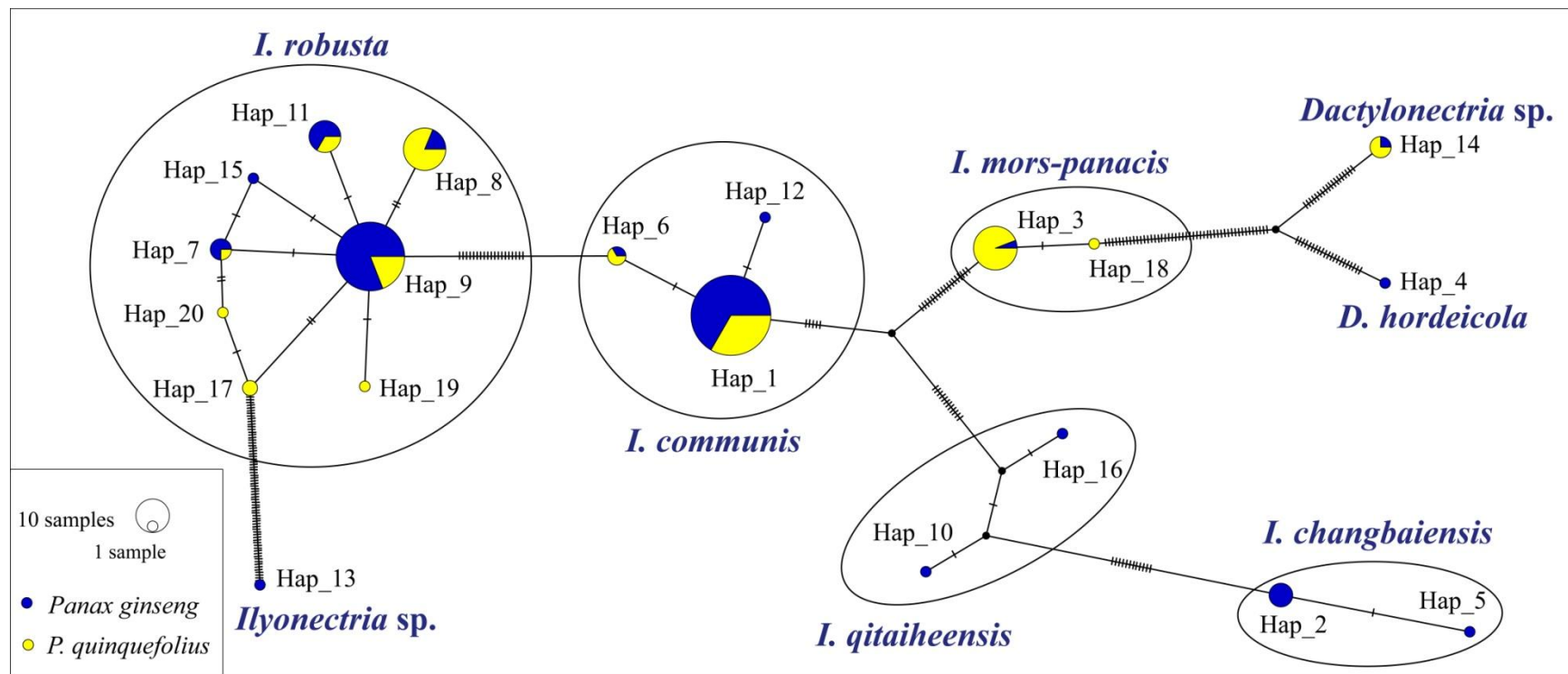
**Figure S2.** Pathogenicity test of CLF isolates obtained from *P. quinquefolius* roots. A to H: virulence on *P. quinquefolius*, A' to H': virulence on *P. ginseng*; A & A': mock; B & B': *Dactylonectria* sp.; C & C': *Ilyonectria communis*; D & D': *I. mors-panacis*; E & E': *I. robusta*.



**Figure S3.** Correlation between genetic differentiation based on Nei's genetic distance and geographic distance among 12 populations of CLF isolates by using Mantel test with GenAlEx.

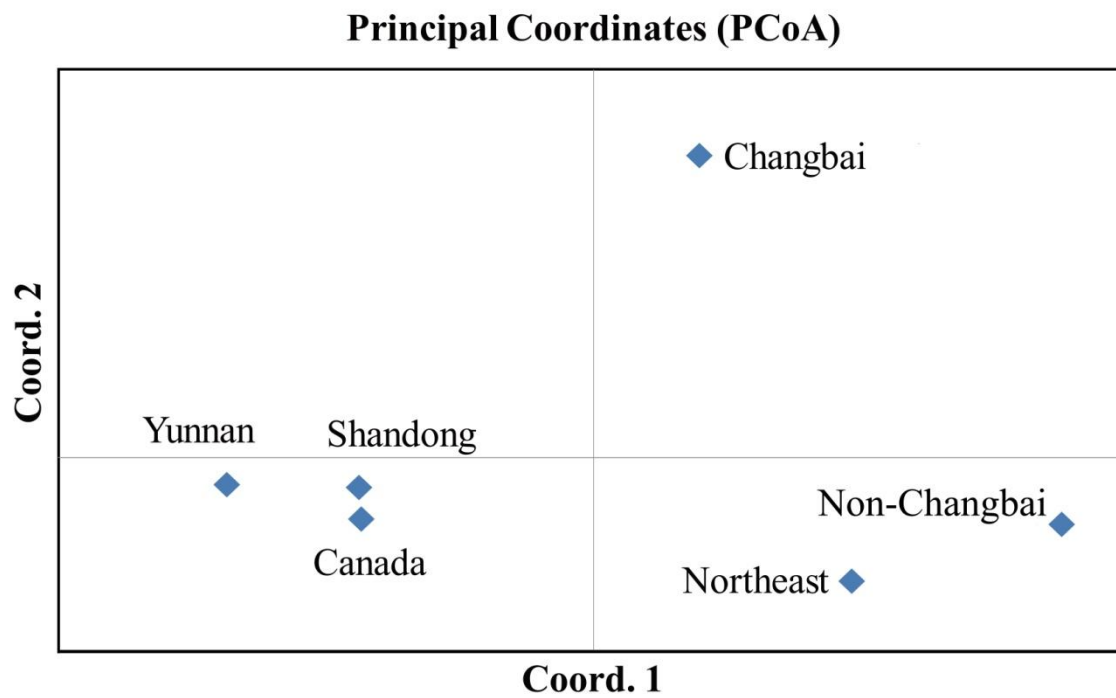


**Figure S4.** Population structure of CLF isolates analyzed by using STRUCTURE program. Two clusters ( $K = 2$ ) were identified from two populations sampled from *Panax ginseng* and *P. quinquefolius* respectively.

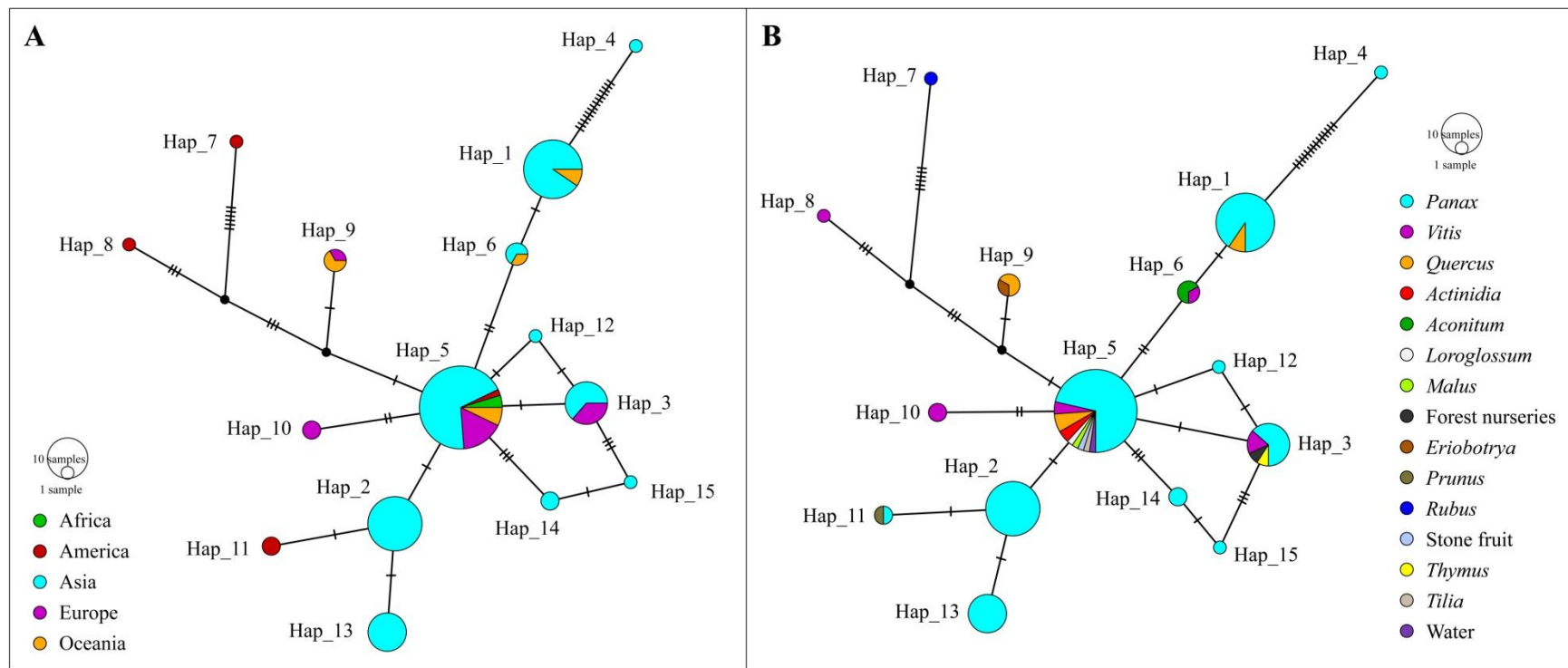


**Figure S5.** TCS haplotype network based on partial sequence of the *his3* gene representing two populations of CLF isolates from *Panax ginseng* (blue) and *P. quinquefolius* (yellow). The size of the circle represents the haplotype frequencies in populations. Hatch marks indicate the number of mutations.

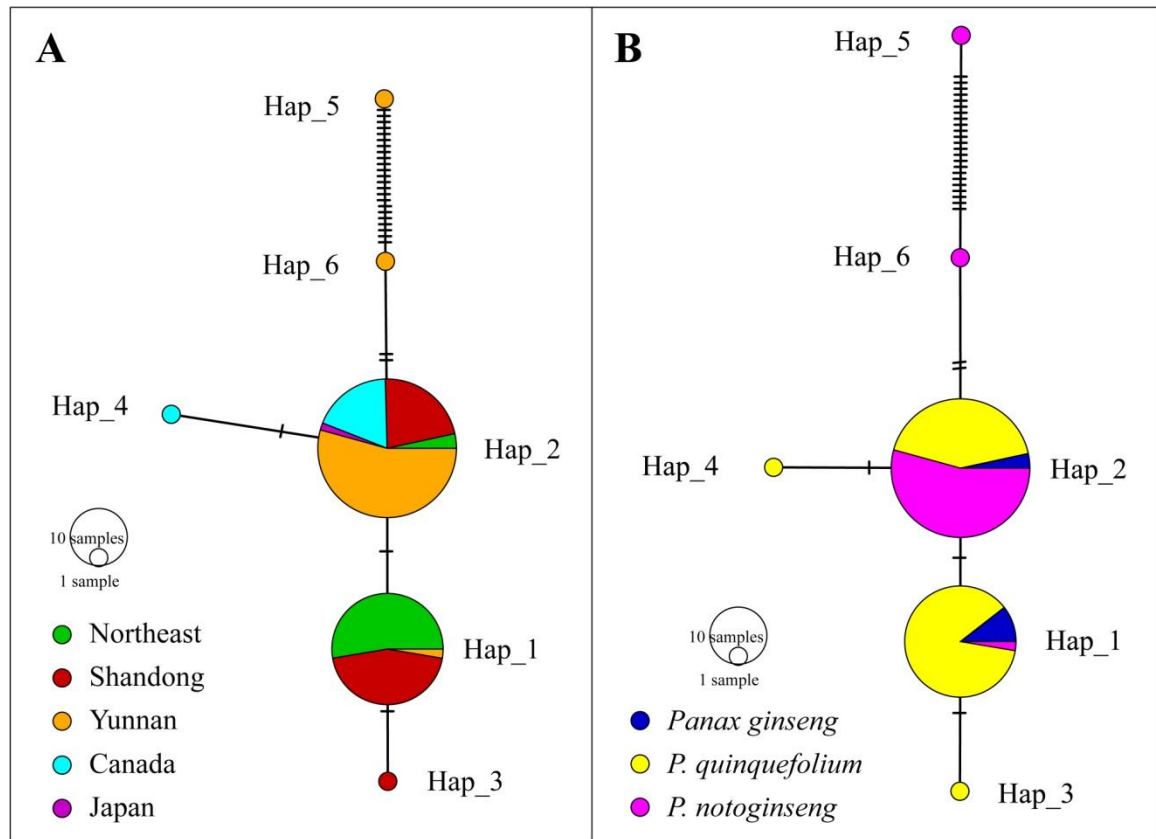




**Figure S6.** Principal coordinate analysis of 6 populations of CLF isolates from *Panax* species worldwide based on Nei's genetic distance by using GenAlEx. Axes 1 and 2 of the PCoA accounted for 83.21% and 11.96% of the total genetic variation.



**Figure S7.** TCS haplotype network based on partial sequence of the *his3* gene representing worldwide *Ilyonectria robusta* isolates. A: geographical populations; B: populations divided based on hosts. The size of the circle represents the haplotype frequencies in populations. Hatch marks indicate the number of mutations.



**Figure S8.** TCS haplotype network generated based on partial sequence of the *his3* gene representing worldwide *Ilyonectria mors-panacis* isolates. A: geographical populations; B: populations divided based on hosts. The size of the circle represents the haplotype frequencies in populations. Hatch marks indicate the number of mutations.

**Table S1. CLF isolates obtained from *Panax ginseng* or *P. quinquefolius* in Northeast China**

Isolate number	Species	Host	Location(province, city, county, town)	Year collected	Haplotype	GenBank accession number	Population code	Latitude, longitude
301	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	MF350433	JBC	41.52N, 127.46E
320	<i>I. changbaiensis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_2	MF350443	JBC	41.52N, 127.46E
408	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
423	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
608	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
610	<i>I. changbaiensis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_5	MT043275	JBC	41.52N, 127.46E
616	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
1506	<i>I. changbaiensis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_2	MF350440	JBC	41.52N, 127.46E
1512	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
1524	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
1606	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
1712	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
1803	<i>I. changbaiensis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_2	MF350441	JBC	41.52N, 127.46E
4404	<i>I. changbaiensis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_2	MF350437	JBC	41.52N, 127.46E
YH12	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YH15	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YH16	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YH17	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YH18	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YH19	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YJ11	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong Beigang	2014	Hap_3	-	JBF	42.42N, 127.54E
YJ12	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong Beigang	2014	Hap_17	-	JBF	42.42N, 127.54E
YJ17	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong Beigang	2014	Hap_18	MT043277	JBF	42.42N, 127.54E
YJ19	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong Beigang	2014	Hap_3	-	JBF	42.42N, 127.54E
YJ23	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong, Lushuihe	2014	Hap_19	MT043274	JBF	42.42N, 127.54E
YJ25	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong, Lushuihe	2014	Hap_17	-	JBF	42.42N, 127.54E
YJ26	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong, Lushuihe	2014	Hap_9	-	JBF	42.42N, 127.54E
YJ28	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong, Lushuihe	2014	Hap_1	-	JBF	42.42N, 127.54E
YJ29	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong, Lushuihe	2014	Hap_1	-	JBF	42.42N, 127.54E
YJ52	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_6	-	JJJ	43.63N, 127.73E
YJ54	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_11	-	JJJ	43.63N, 127.73E
YJ56	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_9	-	JJJ	43.63N, 127.73E
YJ57	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_1	-	JJJ	43.63N, 127.73E



YJ58	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_1	-	JJJ	43.63N, 127.73E
YJ59	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_9	-	JJJ	43.63N, 127.73E
YJ71	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Yanbian, Wangqing, Daxinggou	2014	Hap_8	-	JYW	43.42N, 129.66E
YJ76	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Yanbian, Wangqing, Daxinggou	2014	Hap_9	-	JYW	43.42N, 129.66E
YJ78	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Yanbian, Wangqing, Daxinggou	2014	Hap_9	-	JYW	43.42N, 129.66E
YJ79	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Yanbian, Wangqing, Daxinggou	2014	Hap_9	-	JYW	43.42N, 129.66E
YJ83	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Yanbian, Hunchun, Yangpao	2014	Hap_3	-	JYH	42.90N, 130.50E
11R1	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
11R7	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
11R8-2	<i>I. changbaiensis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_2	MF350439	JBC	41.52N, 127.46E
11R9	<i>I. mors-panacis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_3	MF350450	JBC	41.52N, 127.46E
308-2	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
3S04	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
3S07	<i>D. hordeicola</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_4	MF350455	JBC	41.52N, 127.46E
3S12	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
3S24	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
3S26	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
71R2	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_6	MF350431	JBC	41.52N, 127.46E
71R7	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_7	MT043271	JBC	41.52N, 127.46E
73P1	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
73R4	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
74R2	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Baoquanshan	2012	Hap_1	-	JBC	41.52N, 127.46E
H110	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Harbin, Tonghe, Fengshar	2013	Hap_7	-	HHYT	45.75N, 131.19E
H114	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Harbin, Tonghe, Fengshar	2013	Hap_8	-	HHYT	45.75N, 131.19E
H201	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Heihe, Beian, Tongbei	2013	Hap_9	-	HHB	47.77N, 126.78E
H2022	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Heihe, Beian, Tongbei	2013	Hap_9	-	HHB	47.77N, 126.78E
H203	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Heihe, Beian, Tongbei	2013	Hap_9	-	HHB	47.77N, 126.78E
H2062	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Heihe, Beian, Tongbei	2013	Hap_9	-	HHB	47.77N, 126.78E
H207	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Heihe, Beian, Tongbei	2013	Hap_9	MF350434	HHB	47.77N, 126.78E
H2073	<i>I. communis</i>	<i>P. ginseng</i>	Heilongjiang, Heihe, Beian, Tongbei	2013	Hap_1	MF350434	HHB	47.77N, 126.78E
H209	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Heihe, Beian, Tongbei	2013	Hap_9	-	HHB	47.77N, 126.78E
H301	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Qitaihe, Qiezihe, Tieshan	2013	Hap_9	-	HQQ	45.75N, 131.19E
H302	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Qitaihe, Qiezihe, Tieshan	2013	Hap_9	-	HQQ	45.75N, 131.19E
H310	<i>I. robusta</i>	<i>P. ginseng</i>	Heilongjiang, Qitaihe, Qiezihe, Tieshan	2013	Hap_11	-	HQQ	45.75N, 131.19E
J101	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Beigang	2013	Hap_1	MF350432	JBF	42.42N, 127.54E

J103	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Beigang	2013	Hap_1	-	JBF	42.42N, 127.54E
J104	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Beigang	2013	Hap_12	MT043276	JBF	42.42N, 127.54E
J105	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Beigang	2013	Hap_9	-	JBF	42.42N, 127.54E
J107	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Beigang	2013	Hap_9	-	JBF	42.42N, 127.54E
J1073	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Beigang	2013	Hap_1	-	JBF	42.42N, 127.54E
J108	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Beigang	2013	Hap_1	-	JBF	42.42N, 127.54E
J108-2	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Beigang	2013	Hap_9	-	JBF	42.42N, 127.54E
J109	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Beigang	2013	Hap_1	-	JBF	42.42N, 127.54E
J2072	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Xigang	2013	Hap_1	-	JBF	42.42N, 127.54E
J2102	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Xigang	2013	Hap_1	-	JBF	42.42N, 127.54E
J214	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Fusong, Xigang	2013	Hap_1	-	JBF	42.42N, 127.54E
J302	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Malugou	2013	Hap_1	-	JBCM	41.44N, 128.21E
J3032	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Malugou	2013	Hap_9	-	JBCM	41.44N, 128.21E
J304	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Malugou	2013	Hap_9	-	JBCM	41.44N, 128.21E
J305	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Malugou	2013	Hap_1	-	JBCM	41.44N, 128.21E
J3093	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Malugou	2013	Hap_1	-	JBCM	41.44N, 128.21E
J3102	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Malugou	2013	Hap_1	-	JBCM	41.44N, 128.21E
J322	<i>Ilyonectria</i> sp.	<i>Panax ginseng</i>	Jilin, Baishan, Changbai, Malugou	2013	Hap_13	MT043270	JBCM	41.44N, 128.21E
J410	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Shisidaogou	2013	Hap_1	MF350430	JBC	41.52N, 127.46E
J421	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Baishan, Changbai, Shisidaogou	2013	Hap_1	-	JBC	41.52N, 127.46E
J5032	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Jilin, Jiaohe, Huangsongdian	2013	Hap_9	-	JJJ	43.63N, 127.73E
J506	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Jilin, Jiaohe, Huangsongdian	2013	Hap_9	-	JJJ	43.63N, 127.73E
H309	<i>I. qitaiheensis</i>	<i>P. ginseng</i>	Heilongjiang, Qitaihe, Qiezihe, Tieshan	2013	Hap_10	MF350445	HQQ	45.75N, 131.19E
J9191	<i>I. qitaiheensis</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_16	MF350446	JTJ	41.51N, 125.88E
J601	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Songjiang	2013	Hap_1	-	JYAD	42.58N, 128.33E
J606	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Songjiang	2013	Hap_11	-	JYAD	42.58N, 128.33E
J608	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Songjiang	2013	Hap_9	-	JYAD	42.58N, 128.33E
J610	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Songjiang	2013	Hap_9	-	JYAD	42.58N, 128.33E
J701	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Xinhexiang	2013	Hap_1	-	JYAD	42.58N, 128.33E
J702	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Xinhexiang	2013	Hap_11	-	JYAD	42.58N, 128.33E
J703	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Xinhexiang	2013	Hap_11	-	JYAD	42.58N, 128.33E
J706	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Xinhexiang	2013	Hap_9	-	JYAD	42.58N, 128.33E
J709	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Xinhexiang	2013	Hap_1	-	JYAD	42.58N, 128.33E
J710	<i>I. communis</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Xinhexiang	2013	Hap_1	MF350435	JYAD	42.58N, 128.33E
J711	<i>Dactylonectria</i> sp.	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Xinhexiang	2013	Hap_14	MF350452	JYAD	42.58N, 128.33E

J713	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Antu, Xinhexiang	2013	Hap_8	-	JYAD	42.58N, 128.33E
J801	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Hunchun, Hadamen	2013	Hap_8	-	JYH	42.93N, 130.49E
J802	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Hunchun, Hadamen	2013	Hap_9	-	JYH	42.93N, 130.49E
J803	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Hunchun, Hadamen	2013	Hap_9	-	JYH	42.93N, 130.49E
J804	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Hunchun, Hadamen	2013	Hap_11	-	JYH	42.93N, 130.49E
J811	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Hunchun, Hadamen	2013	Hap_11	-	JYH	42.93N, 130.49E
J812	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Yanbian, Hunchun, Hadamen	2013	Hap_9	-	JYH	42.93N, 130.49E
J901	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J903	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J904	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J905	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J906	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	KM015299	JTJ	41.51N, 125.88E
J907	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J909	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J913	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_7	-	JTJ	41.51N, 125.88E
J914	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J915	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J917	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_15	MT043272	JTJ	41.51N, 125.88E
J918	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J91933	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J922	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
J923	<i>I. robusta</i>	<i>P. ginseng</i>	Jilin, Tonghua, Jian, Toudao	2013	Hap_9	-	JTJ	41.51N, 125.88E
YH11	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YH1101	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YH1102	<i>I. communis</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_1	-	HHYT	46.32N, 129.56E
YH111	<i>I. communis</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_6	-	HHYT	46.32N, 129.56E
YH112	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YH113	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YH114	<i>I. robusta</i>	<i>P. quinquefolius</i>	Heilongjiang, Harbin, Yilan, Yilan	2014	Hap_8	-	HHYT	46.32N, 129.56E
YJ110	<i>Dactylonectria</i> sp.	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong Beigang	2014	Hap_14	-	JBF	42.42N, 127.54E
YJ112	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong Beigang	2014	Hap_3	-	JBF	42.42N, 127.54E
YJ115	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong Beigang	2014	Hap_3	-	JBF	42.42N, 127.54E
YJ117	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong Beigang	2014	Hap_3	-	JBF	42.42N, 127.54E
YJ210	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong, Lushuihe	2014	Hap_9	-	JBF	42.42N, 127.54E
YJ211	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong, Lushuihe	2014	Hap_1	-	JBF	42.42N, 127.54E

YJ212	<i>Dactylonectria</i> sp.	<i>P. quinquefolius</i>	Jilin, Baishan, Fusong, Lushuihe	2014	Hap_14	-	JBF	42.42N, 127.54E
YJ310	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Changbai, Malugou	2014	Hap_1	-	JBCM	41.44N, 128.21E
YJ312	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Changbai, Malugou	2014	Hap_1	-	JBCM	41.44N, 128.21E
YJ315	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Changbai, Malugou	2014	Hap_1	-	JBCM	41.44N, 128.21E
YJ322	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Changbai, Malugou	2014	Hap_11	-	JBCM	41.44N, 128.21E
YJ327	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Changbai, Malugou	2014	Hap_3	-	JBCM	41.44N, 128.21E
YJ3281	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Changbai, Malugou	2014	Hap_3	-	JBCM	41.44N, 128.21E
YJ410	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ4113	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ4114	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ4116	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ4117	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ4118	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ413	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_3	-	JBL	41.74N, 127.29E
YJ415	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ417	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ418	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ419	<i>I. communis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_1	-	JBL	41.74N, 127.29E
YJ423	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_3	-	JBL	41.74N, 127.29E
YJ424	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_3	-	JBL	41.74N, 127.29E
YJ4251	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_3	-	JBL	41.74N, 127.29E
YJ4252	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Baishan, Linjiang, Dongbeicha	2014	Hap_3	-	JBL	41.74N, 127.29E
YJ510	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_20	MT043273	JJJ	43.63N, 127.73E
YJ511	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_3	-	JJJ	43.63N, 127.73E
YJ513	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_11	-	JJJ	43.63N, 127.73E
YJ5151	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_9	-	JJJ	43.63N, 127.73E
YJ5152	<i>Dactylonectria</i> sp.	<i>P. quinquefolius</i>	Jilin, Jilin, Jiaohe, Qianjin	2014	Hap_14	-	JJJ	43.63N, 127.73E
YJ612	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Yanbian, Dunhua, Dapuchaihe	2014	Hap_3	-	JYAD	42.88N, 128.03E
YJ6171	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Jilin, Yanbian, Dunhua, Dapuchaihe	2014	Hap_3	-	JYAD	42.88N, 128.03E
YJ710	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Yanbian, Wangqing, Daxinggou	2014	Hap_8	-	JYW	43.42N, 129.66E
YJ711	<i>I. robusta</i>	<i>P. quinquefolius</i>	Jilin, Yanbian, Wangqing, Daxinggou	2014	Hap_7	-	JYW	43.42N, 129.66E

"-" means that the isolate shares the same sequences with other isolates belonging to the same haplotype. Therefore at least one GenBank accession number was provided for each haplotype.

**Table S2. CLF isolates used in worldwide genetic diversity and population structure analyses**

Isolate number	Species	Host	Location	GenBank accession number	Population code
CBS 321.34	<i>Ilyonectria robusta</i>	<i>Loroglossum hircinum</i>	Tunis, Tunisia	JF735517	Africa
CBS 308.35	<i>I. robusta</i>	<i>Panax quinquefolium</i>	Ontario, Canada	JF735518	Ameirica/Canada
CBS 773.83	<i>I. robusta</i>	Water, in aquarium with <i>Anodonta</i>	Utrecht, Netherlands	JF735519	Europe
CBS 605.92	<i>I. robusta</i>	<i>Tilia petiolaris</i>	Hamburg, Germany	JF735520	Europe
CBS 117814	<i>I. robusta</i>	<i>Quercus</i> sp.	Patzmannsdorf, Austria	JF735521	Oceania
CBS 117815	<i>I. robusta</i>	<i>Quercus</i> sp.	Patzmannsdorf, Austria	JF735522	Oceania
CBS 117818	<i>I. robusta</i>	<i>Quercus</i> sp.	Patzmannsdorf, Austria	JF735523	Oceania
CBS 117820	<i>I. robusta</i>	<i>Quercus robur</i>	Niederweiden, Austria	JF735524	Oceania
CBS 117821	<i>I. robusta</i>	<i>Quercus robur</i>	Niederweiden, Austria	JF735525	Oceania
CBS 117822	<i>I. robusta</i>	<i>Quercus robur</i>	Niederweiden, Austria	JF735526	Oceania
CBS 117823	<i>I. robusta</i>	<i>Quercus robur</i>	Niederweiden, Austria	JF735527	Oceania
CD1666	<i>I. robusta</i>	<i>Panax quinquefolium</i>	Nova Scotia, Canada	JF735528	Ameirica/Canada
CPC 13532	<i>I. robusta</i>	<i>Prunus cerasus</i>	Ontario, Canada	JF735529	Ameirica
Cy23	<i>I. robusta</i>	<i>Vitis</i> sp.	Ribatejo e Oeste, Portugal	JF735530	Europe
Cy158	<i>I. robusta</i>	<i>Vitis vinifera</i>	Lamego, Cambres, Portugal	JF735531	Europe
CBS 129084	<i>I. robusta</i>	<i>Vitis vinifera</i>	Mon ção, Portugal	JF735532	Europe
Cy231	<i>I. robusta</i>	<i>Thymus</i> sp.	Lisbon, Portugal	JF735533	Europe
10-K-TR-3	<i>I. robusta</i>	<i>Actinidia chinensis</i>	Turkey	JQ860004	Europe
TRR-2	<i>I. robusta</i>	<i>Actinidia chinensis</i>	Turkey	JQ860005	Europe
Cyl 16	<i>I. robusta</i>	<i>Eriobotrya japonica</i>	Spain	KC514078	Europe
Cy9UFSM	<i>I. robusta</i>	<i>Vitis vinifera</i>	Southern Brazil	KF633172	Ameirica
ACK-10271	<i>I. robusta</i>	<i>Aconitum kongboense</i>	Tibet, China	KJ710516	Asia
ACK-10272	<i>I. robusta</i>	<i>Aconitum kongboense</i>	Tibet, China	KJ710517	Asia
Cyl131	<i>I. robusta</i>	<i>Malus pumila</i>	South Tyrol, Italy	KP823902	Europe
Cy-FO-217	<i>I. robusta</i>	Forest nurseries	Spain	KX709582	Europe
EFA 184	<i>I. robusta</i>	<i>Vitis vinifera</i>	unknown/Spain	MF471467	Europe
UFAH00042	<i>I. robusta</i>	<i>Rubus glaucus</i>	Ecuador	MG852007	Ameirica
BV-816	<i>I. robusta</i>	<i>Vitis vinifera</i>	Spain	MH229866	Europe
GIHF-156	<i>I. robusta</i>	<i>Vitis vinifera</i>	Spain	MH229867	Europe
ICMP14133	<i>I. robusta</i>	<i>Vitis vinifera</i>	unknown/New Zealand	MH553544	Oceania

8916	<i>I. robusta</i>	Stone fruit	South Africa	MK765797	Africa
JBL LJ-3	<i>I. robusta</i>	<i>P. ginseng</i>	Northeast, China	MN101765	Asia/Northeast
JYDDH-1	<i>I. robusta</i>	<i>P. ginseng</i>	Northeast, China	MN101766	Asia/Northeast
JYAED-2	<i>I. robusta</i>	<i>P. ginseng</i>	Northeast, China	MN101767	Asia/Northeast
JJHHD-6	<i>I. robusta</i>	<i>P. ginseng</i>	Northeast, China	MN101768	Asia/Northeast
HSSSL-8	<i>I. robusta</i>	<i>P. ginseng</i>	Northeast, China	MN101769	Asia/Northeast
HYTTL-4	<i>I. robusta</i>	<i>P. ginseng</i>	Northeast, China	MN101770	Asia/Northeast
JYHCH-1	<i>I. robusta</i>	<i>P. ginseng</i>	Northeast, China	MN101771	Asia/Northeast
JBCML-3	<i>I. robusta</i>	<i>P. ginseng</i>	Northeast, China	MN101772	Asia/Northeast
JTJYL-11	<i>I. robusta</i>	<i>P. ginseng</i>	Northeast, China	MN101773	Asia/Northeast
CBS 120359	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735547	Ameirica/Canada
CBS 120361	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735548	Ameirica/Canada
CBS 120364	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735549	Ameirica/Canada
CBS 120365	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735550	Ameirica/Canada
CBS 120366	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735551	Ameirica/Canada
CBS 120367	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735552	Ameirica/Canada
CBS 120368	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735553	Ameirica/Canada
CBS 120369	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735554	Ameirica/Canada
CPC 13535	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735555	Ameirica/Canada
CPC 13537	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735556	Ameirica/Canada
CBS 306.35	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735557	Ameirica/Canada
CBS 307.35	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Ontario, Canada	JF735558	Ameirica/Canada
CBS 124662	<i>I. mors-panacis</i>	<i>P. ginseng</i>	Nagano, Japan	JF735559	Japan
FG003	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270539	Yunnan
FG004	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270540	Yunnan
FG009	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270545	Yunnan
FG010	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270546	Yunnan
FG011	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270547	Yunnan
FG012	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270548	Yunnan
FG013	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270549	Yunnan
FG014	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270550	Yunnan
FG015	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270551	Yunnan



FG016	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270552	Yunnan
FG018	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270554	Yunnan
FG023	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270559	Yunnan
FG024	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270560	Yunnan
FG025	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270561	Yunnan
FG027	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270563	Yunnan
FG028	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270564	Yunnan
FG030	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270566	Yunnan
FG031	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270567	Yunnan
FG032	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270568	Yunnan
FG033	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270569	Yunnan
FG035	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270571	Yunnan
FG036	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	MK270572	Yunnan
JYHHC-6	<i>I. mors-panacis</i>	<i>P. ginseng</i>	Northeast, China	MN101774	Northeast
JTJJA-1	<i>I. mors-panacis</i>	<i>P. ginseng</i>	Northeast, China	MN101775	Northeast
JB MJ-c	<i>I. mors-panacis</i>	<i>P. ginseng</i>	Northeast, China	MN101776	Northeast
JBFQY-4	<i>I. mors-panacis</i>	<i>P. ginseng</i>	Northeast, China	MN101777	Northeast
SQPC-3	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	KU219938	Yunnan
SQPC-4	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China	KU219939	Yunnan
XGD1b1-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZTB7-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZTB8-4	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZT1-1-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZT1-1-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZT1-1-3	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZT1-2-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZT1-2-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZT1-3-4	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZT1-5-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZT1-5-4	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OSC2-1-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OSC2-2-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OSC2-3-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong

OSC2-5-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OSC2-6-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZTB7-3	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OQT11-3	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZTB2-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZTB3-3	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZTB3-4	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
OZT1-3-3	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
1-2-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
1-2-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
2-2-2	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
3-1-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
3-2-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
4-3-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
5-2-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
FOH9-3	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China	MN833110	Shandong
S10-1	<i>I. mors-panacis</i>	<i>P. quinquefolius</i>	Shandong, China		Shandong
12-3-1	<i>I. robusta</i>	<i>P. quinquefolius</i>	Shandong, China	MN833112	Shandong
OZTB1-2	<i>I. robusta</i>	<i>P. quinquefolius</i>	Shandong, China	MN833113	Shandong
SX1	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SX2	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SX4	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SX5	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SZ1	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SZ2	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SZ3	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SZ5	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SS3	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SS4	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan
SS5	<i>I. mors-panacis</i>	<i>P. notoginseng</i>	Yunnan, China		Yunnan