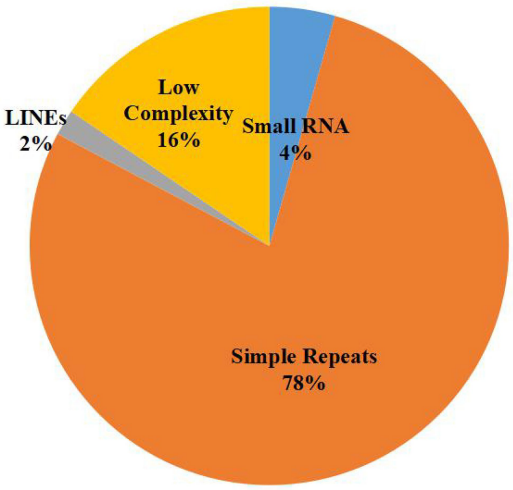

Figure S1. Percentage distribution of different types of repetitive elements in the genome of *T. asperellum* ND-1.

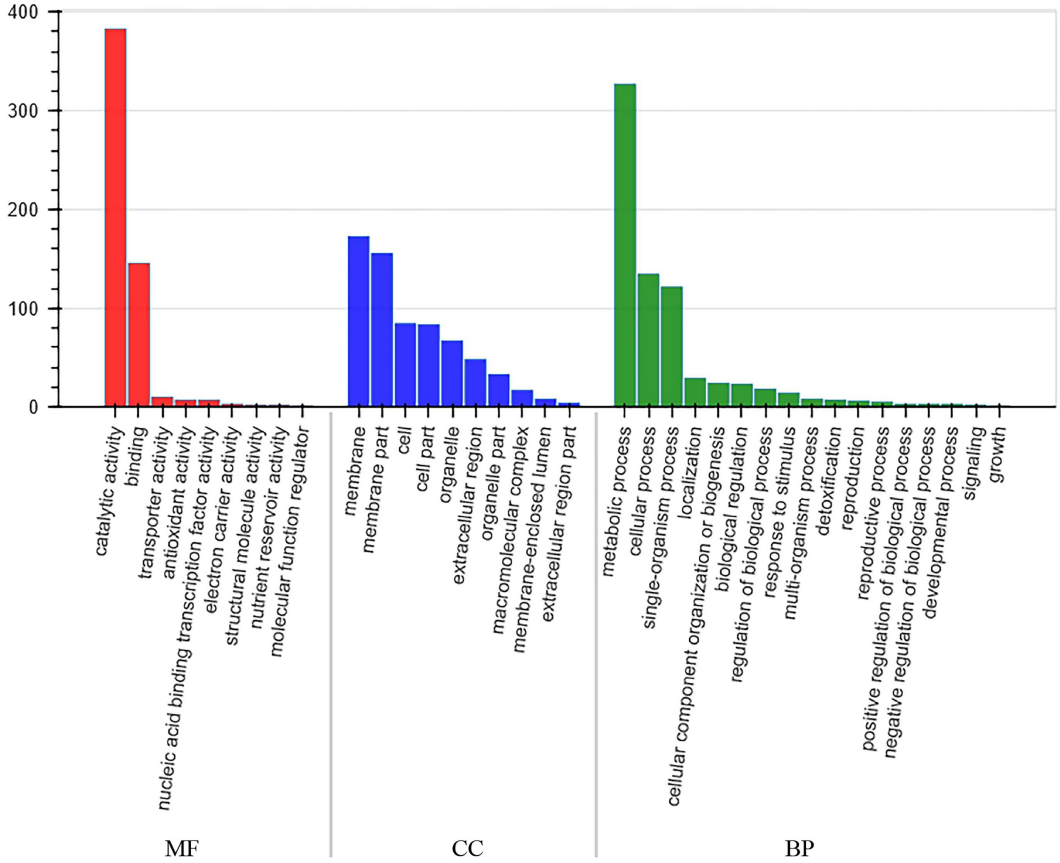

Figure S2. Functional annotation of the *T. asperellum* ND-1 secretome showing top 20 hits of different category.
MF, molecular function; CC, cellular component; BP, biological process.

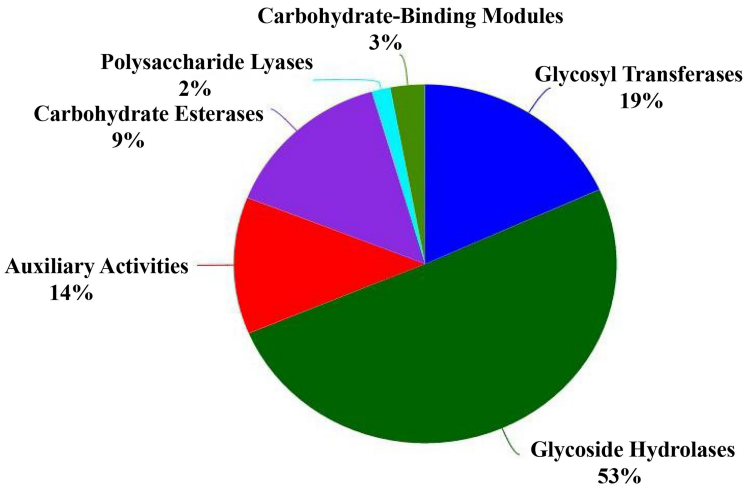

Figure S3. Statistical analysis of CAZymes of *T. asperellum* ND-1 genome. Different colors of the pie chart represent different CAZy classifications, and their areas represent the proportion of genes in the classification.

Table S1. Genome features of *T. asperellum* ND-1, *T. asperellum* IC-1 and *T. asperellum* CBS 433.97.

Featuers	*T. asperellum* IC-1	*T. asperellum* ND-1	*T. asperellum* CBS 433.97
Genome Size (Mb)	36.07	35.75	37.46
Scaffolds	72	32	419
Contigs	201	32	419
N_{50} (bp)	2,555,590	2032888	2128412
%(G+C) content	48.3	48.65	47.3
Number of predicted genes	8,803	10,541	12802

Table S2. Repetitive elements identified in the *T. asperellum* ND-1 genome.

Repetitive elements	Number of elements	length of sequence	Percentage
SINEs	25	1469 bp	0.00%
LINEs：	137	10278 bp	0.03%
LINE1	9	550 bp	0.00%
LINE2	37	3023 bp	0.01%
L3/CR1	41	2991 bp	0.01%
LTR elements:	5	301 bp	0.00%
ERVL-MaLRs	1	71 bp	0.00%
ERV-classl	4	230 bp	0.00%
DNA elements:	23	2225 bp	0.01%
hAT-Charlie	4	214 bp	0.00%
TcMar-Tigger	2	115 bp	0.00%
Total interspersed repeats	—	14273 bp	0.04%
Small RNA	161	26047 bp	0.07%
Satellites	2	83 bp	0.00%
Simple repeats	11997	460870 bp	1.29%
Low complexity	1871	91186 bp	0.26%

Table S3. Glycoside hydrolases (GHs) identified in the genome of *T. atroviride* IMI 206040, *T. virens* Gv-298, *T. reesei* QM6a and *T. asperellum* ND-1.

***T. reesei* QM6a**		***T. asperellum* ND-1**		***T. atroviride* IMI 206040**		***T. virens* Gv-298**	
GH Families	No.	GH Families	No.	GH Families	No.	GH Families	No.
GH1	2	GH1	3	GH1	4	GH1	2
GH10	1	GH10	3	GH10	1	GH10	2
GH105	2	GH105	2	GH105	2	GH105	2
GH106	1	GH11	4	GH106	1	GH11	4
GH11	3	GH114	1	GH11	4	GH114	1
GH115	1	GH115	1	GH114	1	GH115	1
GH12	2	GH12	3	GH115	1	GH12	4
GH125	2	GH125	3	GH12	3	GH125	3
GH128	4	GH127	1	GH125	2	GH128	5
GH13	5	GH128	5	GH127	1	GH13	6
GH132	2	GH13	6	GH128	5	GH132	2
GH15	2	GH132	2	GH13	5	GH15	2
GH152	1	GH142	1	GH132	2	GH152	1
GH154	1	GH15	3	GH142	1	GH154	2
GH16	16	GH152	1	GH15	3	GH16	16
GH17	1	GH154	2	GH152	1	GH17	1
GH18	19	GH16	15	GH154	2	GH18	32
GH2	7	GH17	3	GH16	16	GH2	11
GH20	3	GH18	26	GH17	2	GH20	3
GH24	1	GH2	9	GH18	27	GH24	1
GH25	1	GH20	3	GH2	10	GH25	1
GH27	2	GH25	1	GH20	3	GH26	2
GH28	4	GH27	3	GH25	1	GH27	3
GH3	13	GH28	5	GH27	3	GH28	6
GH30	5	GH3	16	GH28	6	GH3	17
GH31	4	GH30	4	GH3	15	GH30	6
GH35	1	GH31	8	GH30	5	GH31	5
GH36	1	GH32	2	GH31	7	GH32	1
GH37	2	GH35	1	GH32	1	GH35	1
GH38	1	GH36	1	GH35	1	GH36	1
GH39	1	GH37	2	GH36	1	GH37	2
GH43	2	GH38	1	GH37	2	GH38	2
GH47	8	GH43	5	GH38	1	GH39	1
GH5	8	GH47	8	GH43	6	GH43	3
GH54	2	GH5	11	GH47	8	GH47	8
GH55	6	GH51	1	GH5	11	GH49	1

Table S3 (continued)							
GH6	1	GH54	2	GH51	1	GH5	12
GH62	1	GH55	9	GH54	2	GH54	2
GH63	1	GH6	1	GH55	7	GH55	10
GH64	3	GH62	2	GH6	1	GH6	1
GH65	2	GH63	2	GH62	2	GH62	3
GH67	1	GH64	3	GH63	2	GH63	1
GH7	2	GH65	2	GH64	3	GH64	3
GH71	4	GH67	2	GH65	2	GH65	2
GH72	5	GH7	2	GH67	2	GH67	2
GH74	1	GH71	4	GH7	2	GH7	2
GH75	3	GH72	4	GH71	4	GH71	5
GH76	8	GH75	4	GH72	5	GH72	6
GH78	1	GH76	7	GH74	1	GH74	1
GH79	4	GH78	3	GH75	6	GH75	5
GH81	2	GH79	3	GH76	9	GH76	9
GH89	2	GH81	2	GH78	3	GH78	3
GH92	7	GH88	1	GH79	4	GH79	4
GH95	4	GH89	1	GH81	2	GH81	2
Total	189	GH92	8	GH88	2	GH88	3
		GH93	2	GH89	1	GH89	1
		GH95	4	GH92	8	GH92	7
		Total	234	GH93	3	GH93	1
				GH95	4	GH95	4
				GH99	1	**Total**	250
				Total	242		