



	410	420	430	440	450	460	470	480	490	500	
Scytalidium CATPO	DFTE <span style="background-color: black; color: white;">D</span> PL <span style="background-color: black; color: white;">L</span> L <span style="background-color: black; color: white;">L</span> Q <span style="background-color: black; color: white;">Q</span>	RLFS <span style="background-color: black; color: white;">Y</span> LD <span style="background-color: black; color: white;">T</span> Q <span style="background-color: black; color: white;">L</span>	NR <span style="background-color: black; color: white;">N</span> GG <span style="background-color: black; color: white;">P</span> NF <span style="background-color: black; color: white;">E</span> Q <span style="background-color: black; color: white;">Q</span>	LPIN <span style="background-color: black; color: white;">M</span> PR <span style="background-color: black; color: white;">V</span> PI	HNN <span style="background-color: black; color: white;">N</span> RD <span style="background-color: black; color: white;">G</span> AG <span style="background-color: black; color: white;">Q</span>	MF <span style="background-color: black; color: white;">I</span> HR <span style="background-color: black; color: white;">N</span> K <span style="background-color: black; color: white;">M</span> Y <span style="background-color: black; color: white;">F</span>	LPNT <span style="background-color: black; color: white;">L</span> NS <span style="background-color: black; color: white;">G</span> YP	RQAN <span style="background-color: black; color: white;">Q</span> N <span style="background-color: black; color: white;">A</span> GR <span style="background-color: black; color: white;">G</span>	FFT <span style="background-color: black; color: white;">A</span> P <span style="background-color: black; color: white;">G</span> RT <span style="background-color: black; color: white;">A</span> S	GA <span style="background-color: black; color: white;">L</span> V <span style="background-color: black; color: white;">R</span> EV <span style="background-color: black; color: white;">S</span> PT	
Penicillium Vitale	DFTE <span style="background-color: black; color: white;">D</span> PL <span style="background-color: black; color: white;">L</span> Q <span style="background-color: black; color: white;">Q</span>	RLFS <span style="background-color: black; color: white;">Y</span> LD <span style="background-color: black; color: white;">T</span> Q <span style="background-color: black; color: white;">L</span>	NR <span style="background-color: black; color: white;">H</span> GG <span style="background-color: black; color: white;">P</span> NF <span style="background-color: black; color: white;">E</span> Q <span style="background-color: black; color: white;">Q</span>	LPIN <span style="background-color: black; color: white;">R</span> PR <span style="background-color: black; color: white;">A</span> PI	HNN <span style="background-color: black; color: white;">N</span> RD <span style="background-color: black; color: white;">G</span> AG <span style="background-color: black; color: white;">Q</span>	MF <span style="background-color: black; color: white;">I</span> PL <span style="background-color: black; color: white;">D</span> PN <span style="background-color: black; color: white;">A</span> Y	SPNT <span style="background-color: black; color: white;">E</span> N <span style="background-color: black; color: white;">K</span> GS <span style="background-color: black; color: white;">P</span>	KQAN <span style="background-color: black; color: white;">E</span> TV <span style="background-color: black; color: white;">G</span> K <span style="background-color: black; color: white;">G</span>	FFT <span style="background-color: black; color: white;">A</span> P <span style="background-color: black; color: white;">E</span> RT <span style="background-color: black; color: white;">A</span> S	GK <span style="background-color: black; color: white;">L</span> Q <span style="background-color: black; color: white;">R</span> IL <span style="background-color: black; color: white;">S</span> IT	
E.coli HPII	DFTE <span style="background-color: black; color: white;">D</span> PL <span style="background-color: black; color: white;">L</span> Q <span style="background-color: black; color: white;">Q</span>	RLFS <span style="background-color: black; color: white;">Y</span> LD <span style="background-color: black; color: white;">T</span> Q <span style="background-color: black; color: white;">L</span>	SR <span style="background-color: black; color: white;">L</span> GG <span style="background-color: black; color: white;">P</span> NF <span style="background-color: black; color: white;">E</span> Q <span style="background-color: black; color: white;">Q</span>	LPIN <span style="background-color: black; color: white;">R</span> ET <span style="background-color: black; color: white;">C</span> PY	HN <span style="background-color: black; color: white;">F</span> Q <span style="background-color: black; color: white;">R</span> D <span style="background-color: black; color: white;">G</span> M <span style="background-color: black; color: white;">R</span>	MG <span style="background-color: black; color: white;">I</span> D <span style="background-color: black; color: white;">T</span> NP <span style="background-color: black; color: white;">A</span> NY	EPNS <span style="background-color: black; color: white;">I</span> ND <span style="background-color: black; color: white;">N</span> WP	RET <span style="background-color: black; color: white;">P</span> PG <span style="background-color: black; color: white;">F</span> K <span style="background-color: black; color: white;">R</span> G	GF <span style="background-color: black; color: white;">E</span> S <span style="background-color: black; color: white;">Y</span> Q <span style="background-color: black; color: white;">E</span> R <span style="background-color: black; color: white;">V</span> E	GN <span style="background-color: black; color: white;">K</span> V <span style="background-color: black; color: white;">R</span> ES <span style="background-color: black; color: white;">P</span> SPS	
Neurospora Crassa	DFTE <span style="background-color: black; color: white;">D</span> PL <span style="background-color: black; color: white;">L</span> Q <span style="background-color: black; color: white;">Q</span>	RL <span style="background-color: black; color: white;">M</span> SY <span style="background-color: black; color: white;">L</span> DT <span style="background-color: black; color: white;">Q</span> L	NR <span style="background-color: black; color: white;">H</span> R <span style="background-color: black; color: white;">G</span> PN <span style="background-color: black; color: white;">F</span> EQ <span style="background-color: black; color: white;">Q</span>	LPIN <span style="background-color: black; color: white;">R</span> EV <span style="background-color: black; color: white;">S</span> GV	HNN <span style="background-color: black; color: white;">N</span> RD <span style="background-color: black; color: white;">G</span> AG <span style="background-color: black; color: white;">Q</span>	AW <span style="background-color: black; color: white;">I</span> H <span style="background-color: black; color: white;">K</span> NI <span style="background-color: black; color: white;">H</span> HY	SPSY <span style="background-color: black; color: white;">L</span> N <span style="background-color: black; color: white;">K</span> GYP	AQAN <span style="background-color: black; color: white;">Q</span> TV <span style="background-color: black; color: white;">G</span> RG	FFT <span style="background-color: black; color: white;">T</span> P <span style="background-color: black; color: white;">G</span> RT <span style="background-color: black; color: white;">A</span> S	GV <span style="background-color: black; color: white;">L</span> NR <span style="background-color: black; color: white;">E</span> LS <span style="background-color: black; color: white;">A</span> T	
	510	520	530	540	550	560	570	580	590	600	
Scytalidium CATPO	FND <span style="background-color: black; color: white;">H</span> WS <span style="background-color: black; color: white;">Q</span> PR <span style="background-color: black; color: white;">L</span>	FFNS <span style="background-color: black; color: white;">L</span> TP <span style="background-color: black; color: white;">V</span> EQ <span style="background-color: black; color: white;">Q</span>	QF <span style="background-color: black; color: white;">L</span> V <span style="background-color: black; color: white;">N</span> AM <span style="background-color: black; color: white;">R</span> FE	IS <span style="background-color: black; color: white;">L</span> V <span style="background-color: black; color: white;">R</span> SE <span style="background-color: black; color: white;">E</span> VR	KN <span style="background-color: black; color: white;">V</span> L <span style="background-color: black; color: white;">I</span> Q <span style="background-color: black; color: white;">L</span> NR <span style="background-color: black; color: white;">V</span>	SD <span style="background-color: black; color: white;">V</span> AV <span style="background-color: black; color: white;">R</span> V <span style="background-color: black; color: white;">A</span> A	AIG <span style="background-color: black; color: white;">L</span> S <span style="background-color: black; color: white;">A</span> PD <span style="background-color: black; color: white;">A</span> D	D <span style="background-color: black; color: white;">T</span> YY <span style="background-color: black; color: white;">H</span> NN <span style="background-color: black; color: white;">K</span> T <span style="background-color: black; color: white;">A</span>	GV <span style="background-color: black; color: white;">S</span> IV <span style="background-color: black; color: white;">G</span> SG <span style="background-color: black; color: white;">P</span> L	PT <span style="background-color: black; color: white;">I</span> K <span style="background-color: black; color: white;">T</span> LR <span style="background-color: black; color: white;">V</span> GI	
Penicillium Vitale	FENN <span style="background-color: black; color: white;">W</span> S <span style="background-color: black; color: white;">Q</span> PR <span style="background-color: black; color: white;">L</span>	FWNS <span style="background-color: black; color: white;">L</span> V <span style="background-color: black; color: white;">N</span> A <span style="background-color: black; color: white;">Q</span> K	EF <span style="background-color: black; color: white;">I</span> VD <span style="background-color: black; color: white;">A</span> M <span style="background-color: black; color: white;">R</span> FE	TS <span style="background-color: black; color: white;">N</span> V <span style="background-color: black; color: white;">S</span> SS <span style="background-color: black; color: white;">V</span> VR	DD <span style="background-color: black; color: white;">V</span> LI <span style="background-color: black; color: white;">Q</span> LN <span style="background-color: black; color: white;">R</span> I	SD <span style="background-color: black; color: white;">N</span> L <span style="background-color: black; color: white;">A</span> TR <span style="background-color: black; color: white;">V</span> AS	AIC <span style="background-color: black; color: white;">V</span> E <span style="background-color: black; color: white;">A</span> PK <span style="background-color: black; color: white;">P</span> N	SS <span style="background-color: black; color: white;">F</span> Y <span style="background-color: black; color: white;">H</span> DN <span style="background-color: black; color: white;">T</span> T <span style="background-color: black; color: white;">A</span>	H <span style="background-color: black; color: white;">I</span> CA <span style="background-color: black; color: white;">F</span> G <span style="background-color: black; color: white;">E</span> K <span style="background-color: black; color: white;">-L</span>	AK <span style="background-color: black; color: white;">L</span> D <span style="background-color: black; color: white;">G</span> L <span style="background-color: black; color: white;">K</span> V <span style="background-color: black; color: white;">G</span> L	
E.coli HPII	FG <span style="background-color: black; color: white;">E</span> Y <span style="background-color: black; color: white;">S</span> PR <span style="background-color: black; color: white;">L</span>	FW <span style="background-color: black; color: white;">L</span> S <span style="background-color: black; color: white;">Q</span> TP <span style="background-color: black; color: white;">F</span> EQ <span style="background-color: black; color: white;">Q</span>	RH <span style="background-color: black; color: white;">I</span> VD <span style="background-color: black; color: white;">G</span> FS <span style="background-color: black; color: white;">F</span> E	LS <span style="background-color: black; color: white;">K</span> V <span style="background-color: black; color: white;">R</span> PY <span style="background-color: black; color: white;">I</span> R	ERV <span style="background-color: black; color: white;">V</span> D <span style="background-color: black; color: white;">Q</span> LA <span style="background-color: black; color: white;">H</span> I	DL <span style="background-color: black; color: white;">T</span> LA <span style="background-color: black; color: white;">Q</span> AV <span style="background-color: black; color: white;">A</span> K	NG <span style="background-color: black; color: white;">I</span> EL <span style="background-color: black; color: white;">T</span> D <span style="background-color: black; color: white;">D</span> Q	LN <span style="background-color: black; color: white;">I</span> TP <span style="background-color: black; color: white;">P</span> PD <span style="background-color: black; color: white;">V</span> N	GL <span style="background-color: black; color: white;">K</span> K <span style="background-color: black; color: white;">D</span> ES <span style="background-color: black; color: white;">L</span> SL	YA <span style="background-color: black; color: white;">I</span> PD <span style="background-color: black; color: white;">G</span> D <span style="background-color: black; color: white;">V</span> K <span style="background-color: black; color: white;">G</span>	
Neurospora Crassa	FDD <span style="background-color: black; color: white;">H</span> YT <span style="background-color: black; color: white;">Q</span> PR <span style="background-color: black; color: white;">L</span>	FFNS <span style="background-color: black; color: white;">L</span> TP <span style="background-color: black; color: white;">V</span> EQ <span style="background-color: black; color: white;">Q</span>	QF <span style="background-color: black; color: white;">V</span> INA <span style="background-color: black; color: white;">I</span> R <span style="background-color: black; color: white;">F</span> E	ASH <span style="background-color: black; color: white;">V</span> T <span style="background-color: black; color: white;">N</span> E <span style="background-color: black; color: white;">O</span> VR	KN <span style="background-color: black; color: white;">V</span> L <span style="background-color: black; color: white;">I</span> Q <span style="background-color: black; color: white;">L</span> NR <span style="background-color: black; color: white;">I</span>	SD <span style="background-color: black; color: white;">N</span> V <span style="background-color: black; color: white;">A</span> K <span style="background-color: black; color: white;">R</span> V <span style="background-color: black; color: white;">A</span> V	AIG <span style="background-color: black; color: white;">L</span> E <span style="background-color: black; color: white;">A</span> P <span style="background-color: black; color: white;">O</span> PD	PT <span style="background-color: black; color: white;">Y</span> Y <span style="background-color: black; color: white;">H</span> NN <span style="background-color: black; color: white;">V</span> TR	GV <span style="background-color: black; color: white;">S</span> IV <span style="background-color: black; color: white;">N</span> ES <span style="background-color: black; color: white;">-L</span>	PT <span style="background-color: black; color: white;">I</span> K <span style="background-color: black; color: white;">T</span> LR <span style="background-color: black; color: white;">V</span> GV	
	610	620	630	640	650	660	670	680	690	700	
Scytalidium CATPO	LAT <span style="background-color: black; color: white;">T</span> SE <span style="background-color: black; color: white;">S</span> S <span style="background-color: black; color: white;">A</span> L	DOAA <span style="background-color: black; color: white;">Q</span> L <span style="background-color: black; color: white;">R</span> TR <span style="background-color: black; color: white;">L</span>	EK <span style="background-color: black; color: white;">D</span> GL <span style="background-color: black; color: white;">V</span> V <span style="background-color: black; color: white;">T</span> V <span style="background-color: black; color: white;">V</span>	AET <span style="background-color: black; color: white;">L</span> RE <span style="background-color: black; color: white;">G</span> VD <span style="background-color: black; color: white;">Q</span>	TY <span style="background-color: black; color: white;">S</span> T <span style="background-color: black; color: white;">A</span> D <span style="background-color: black; color: white;">A</span> T <span style="background-color: black; color: white;">A</span> E	D <span style="background-color: black; color: white;">G</span> V <span style="background-color: black; color: white;">V</span> V <span style="background-color: black; color: white;">D</span> GA <span style="background-color: black; color: white;">A</span>	AL <span style="background-color: black; color: white;">F</span> -----	--AST <span style="background-color: black; color: white;">-A</span> SS <span style="background-color: black; color: white;">P</span>	LFP <span style="background-color: black; color: white;">T</span> GR <span style="background-color: black; color: white;">P</span> L <span style="background-color: black; color: white;">Q</span> I	FV <span style="background-color: black; color: white;">D</span> AY <span style="background-color: black; color: white;">R</span> WG <span style="background-color: black; color: white;">K</span> P	
Penicillium Vitale	LAS <span style="background-color: black; color: white;">V</span> N <span style="background-color: black; color: white;">K</span> PA <span style="background-color: black; color: white;">S</span> I	AQ <span style="background-color: black; color: white;">G</span> AK <span style="background-color: black; color: white;">L</span> Q <span style="background-color: black; color: white;">V</span> AL	SS <span style="background-color: black; color: white;">V</span> G <span style="background-color: black; color: white;">V</span> D <span style="background-color: black; color: white;">V</span> V <span style="background-color: black; color: white;">V</span>	AER <span style="background-color: black; color: white;">M</span> ANN <span style="background-color: black; color: white;">V</span> DE	TY <span style="background-color: black; color: white;">S</span> AS <span style="background-color: black; color: white;">D</span> AV <span style="background-color: black; color: white;">Q</span> E	DA <span style="background-color: black; color: white;">V</span> V <span style="background-color: black; color: white;">V</span> AD <span style="background-color: black; color: white;">G</span> A <span style="background-color: black; color: white;">E</span>	GL <span style="background-color: black; color: white;">F</span> G <span style="background-color: black; color: white;">A</span> D <span style="background-color: black; color: white;">S</span> FT <span style="background-color: black; color: white;">V</span>	EF <span style="background-color: black; color: white;">S</span> AG <span style="background-color: black; color: white;">S</span> CA <span style="background-color: black; color: white;">S</span> T	LY <span style="background-color: black; color: white;">P</span> AG <span style="background-color: black; color: white;">R</span> PL <span style="background-color: black; color: white;">N</span> I	LL <span style="background-color: black; color: white;">D</span> A <span style="background-color: black; color: white;">F</span> R <span style="background-color: black; color: white;">F</span> G <span style="background-color: black; color: white;">K</span> T	
E.coli HPII	RV <span style="background-color: black; color: white;">V</span> A <span style="background-color: black; color: white;">I</span> LL <span style="background-color: black; color: white;">N</span> DE	VR <span style="background-color: black; color: white;">S</span> AD <span style="background-color: black; color: white;">L</span> L <span style="background-color: black; color: white;">A</span> IL	K-- <span style="background-color: black; color: white;">A</span> L <span style="background-color: black; color: white;">K</span> A <span style="background-color: black; color: white;">G</span> V	HA <span style="background-color: black; color: white;">K</span> L <span style="background-color: black; color: white;">L</span> Y <span style="background-color: black; color: white;">S</span> RM <span style="background-color: black; color: white;">G</span>	EV <span style="background-color: black; color: white;">T</span> A <span style="background-color: black; color: white;">D</span> D <span style="background-color: black; color: white;">G</span> T <span style="background-color: black; color: white;">V</span> L	PI <span style="background-color: black; color: white;">A</span> A <span style="background-color: black; color: white;">T</span> F <span style="background-color: black; color: white;">A</span> G <span style="background-color: black; color: white;">A</span> P	SL <span style="background-color: black; color: white;">T</span> ----	VDA <span style="background-color: black; color: white;">V</span> IV <span style="background-color: black; color: white;">P</span> C <span style="background-color: black; color: white;">N</span> I <span style="background-color: black; color: white;">A</span> D	IAD <span style="background-color: black; color: white;">N</span> G <span style="background-color: black; color: white;">D</span> AN <span style="background-color: black; color: white;">Y</span> Y	LM <span style="background-color: black; color: white;">B</span> AY <span style="background-color: black; color: white;">K</span> HL <span style="background-color: black; color: white;">K</span> P	
Neurospora Crassa	LS <span style="background-color: black; color: white;">T</span> TK <span style="background-color: black; color: white;">-G</span> GS <span style="background-color: black; color: white;">L</span>	DK <span style="background-color: black; color: white;">A</span> K <span style="background-color: black; color: white;">A</span> L <span style="background-color: black; color: white;">K</span> EQ <span style="background-color: black; color: white;">L</span>	EK <span style="background-color: black; color: white;">D</span> GL <span style="background-color: black; color: white;">K</span> V <span style="background-color: black; color: white;">T</span> VI	AE <span style="background-color: black; color: white;">Y</span> L <span style="background-color: black; color: white;">A</span> S <span style="background-color: black; color: white;">G</span> VD <span style="background-color: black; color: white;">Q</span>	TY <span style="background-color: black; color: white;">S</span> A <span style="background-color: black; color: white;">A</span> D <span style="background-color: black; color: white;">A</span> T <span style="background-color: black; color: white;">A</span> E	DA <span style="background-color: black; color: white;">V</span> V <span style="background-color: black; color: white;">V</span> A <span style="background-color: black; color: white;">E</span> G <span style="background-color: black; color: white;">A</span> E	R <span style="background-color: black; color: white;">V</span> E-----	-- <span style="background-color: black; color: white;">S</span> G <span style="background-color: black; color: white;">K</span> G <span style="background-color: black; color: white;">A</span> M <span style="background-color: black; color: white;">S</span> P	LFP <span style="background-color: black; color: white;">A</span> GR <span style="background-color: black; color: white;">P</span> S <span style="background-color: black; color: white;">Q</span> I	LT <span style="background-color: black; color: white;">D</span> G <span style="background-color: black; color: white;">Y</span> R <span style="background-color: black; color: white;">W</span> G <span style="background-color: black; color: white;">K</span> P	
	710	720	730	740	750	760					
Scytalidium CATPO	VG <span style="background-color: black; color: white;">V</span> CG <span style="background-color: black; color: white;">K</span> SS <span style="background-color: black; color: white;">E</span>	VL <span style="background-color: black; color: white;">D</span> AA <span style="background-color: black; color: white;">D</span> V <span style="background-color: black; color: white;">P</span> ED	-GD <span style="background-color: black; color: white;">V</span> Y <span style="background-color: black; color: white;">S</span> EE-	SVD <span style="background-color: black; color: white;">M</span> E <span style="background-color: black; color: white;">V</span> EE <span style="background-color: black; color: white;">E</span> E	KGL <span style="background-color: black; color: white;">A</span> TR <span style="background-color: black; color: white;">F</span> FD	RF <span style="background-color: black; color: white;">A</span> LD <span style="background-color: black; color: white;">S</span> ----					
Penicillium Vitale	VG <span style="background-color: black; color: white;">A</span> L <span style="background-color: black; color: white;">G</span> -S <span style="background-color: black; color: white;">S</span> D	AT <span style="background-color: black; color: white;">E</span> SC <span style="background-color: black; color: white;">Q</span> IS <span style="background-color: black; color: white;">S</span> E	-RO <span style="background-color: black; color: white;">G</span> V <span style="background-color: black; color: white;">Y</span> T <span style="background-color: black; color: white;">G</span> K <span style="background-color: black; color: white;">N</span>	AG <span style="background-color: black; color: white;">D</span> A <span style="background-color: black; color: white;">F</span> AK <span style="background-color: black; color: white;">D</span> IK	SGL <span style="background-color: black; color: white;">S</span> T <span style="background-color: black; color: white;">F</span> K <span style="background-color: black; color: white;">F</span> LD	RF <span style="background-color: black; color: white;">A</span> V <span style="background-color: black; color: white;">D</span> ----					
E.coli HPII	I <span style="background-color: black; color: white;">A</span> L <span style="background-color: black; color: white;">A</span> G <span style="background-color: black; color: white;">-D</span> ARK	FK <span style="background-color: black; color: white;">A</span> T <span style="background-color: black; color: white;">I</span> K <span style="background-color: black; color: white;">I</span> AD <span style="background-color: black; color: white;">Q</span>	GE <span style="background-color: black; color: white;">E</span> GI <span style="background-color: black; color: white;">V</span> E <span style="background-color: black; color: white;">A</span> DS	AD <span style="background-color: black; color: white;">G</span> SE <span style="background-color: black; color: white;">M</span> DE <span style="background-color: black; color: white;">L</span> L	TL <span style="background-color: black; color: white;">M</span> A <span style="background-color: black; color: white;">A</span> HR <span style="background-color: black; color: white;">V</span> WS	RIP <span style="background-color: black; color: white;">K</span> ID <span style="background-color: black; color: white;">K</span> IP <span style="background-color: black; color: white;">A</span>					
Neurospora Crassa	VAA <span style="background-color: black; color: white;">V</span> G <span style="background-color: black; color: white;">-S</span> AK <span style="background-color: black; color: white;">K</span>	AL <span style="background-color: black; color: white;">Q</span> SI <span style="background-color: black; color: white;">S</span> VE <span style="background-color: black; color: white;">E</span> K	-EA <span style="background-color: black; color: white;">G</span> V <span style="background-color: black; color: white;">Y</span> AG--	AQ <span style="background-color: black; color: white;">D</span> EV <span style="background-color: black; color: white;">I</span> K <span style="background-color: black; color: white;">G</span> VE	EGL <span style="background-color: black; color: white;">K</span> V <span style="background-color: black; color: white;">E</span> K <span style="background-color: black; color: white;">F</span> LE	RF <span style="background-color: black; color: white;">A</span> V <span style="background-color: black; color: white;">D</span> GD <span style="background-color: black; color: white;">D</span> EE					