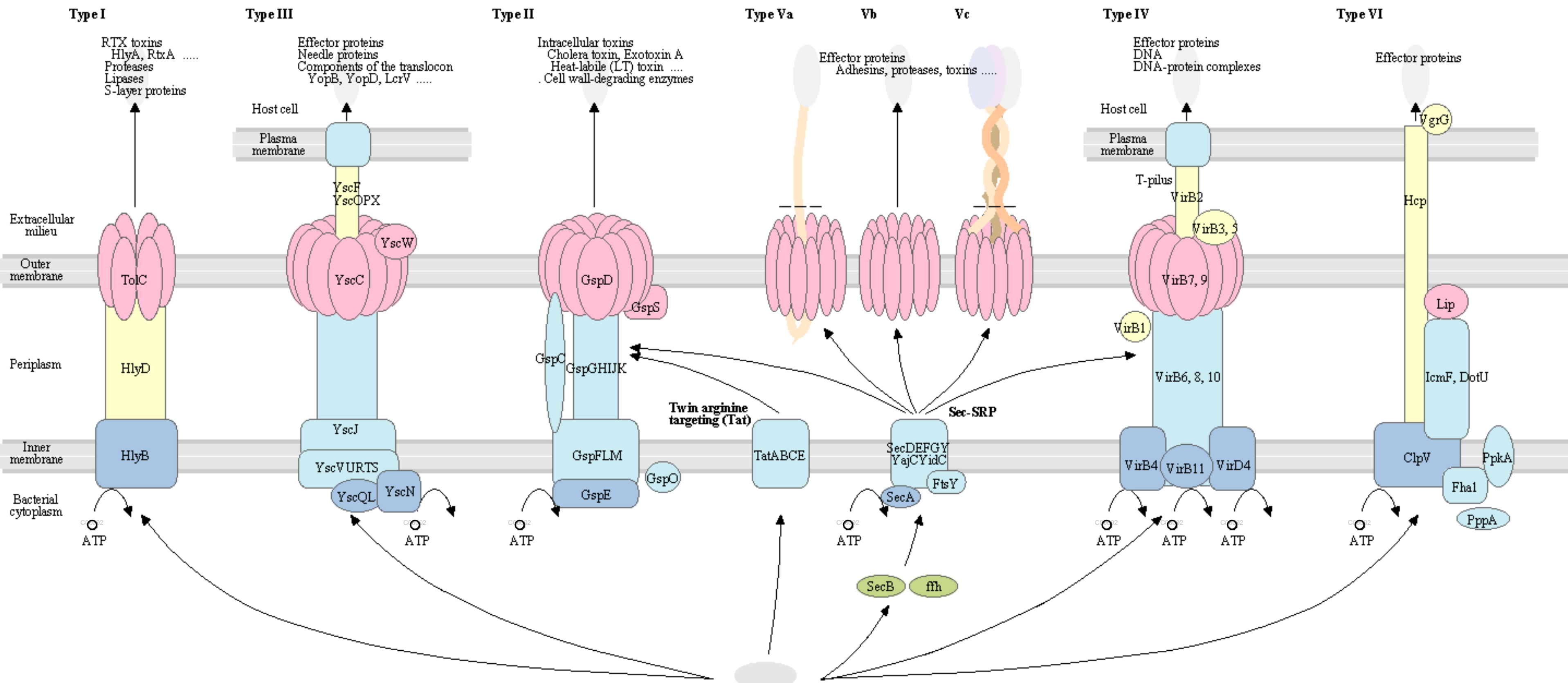


# BACTERIAL SECRETION SYSTEM



**Type I**

Outer membrane protein (OMP)	TolC
Membrane fusion protein	HlyD
ABC transporter	HlyB

**Type III**

Needle	YscF	YscOPX	YscW
Secretin	YscC		
OMP	YscJ	YscVURTS	YscQL
Inner membrane protein (IMP)	YscN		
ATPase	YscQL	YscN	
ATPase-associated protein	YscQ	YscL	

**Type II**

Secretin	GspD		
OMP	GspS		
IMP	GspC	GspGHIJK	GspO
	GspFLM		
ATPase	GspE		
Leaderpeptidase	GspO		

**Sec-SRP**

IMP	SecA	SecB	SecE
	SecY	SecZ	SecF
ATPase	SecA		
Secretion monitor	SecA		
SRP receptor	SecA		
Targeting protein	SecB	ffh	

**Type Va, Vb, Vc**

OMP	VirB2	VirB3	VirB5
	VirB7	VirB9	VirB10
	VirB6	VirB8	VirB11
	VirB4	VirB1	VirD4

**Type IV**

Periplasmic protein	VirB6	VirB8	VirB10
Surface/pilus protein	VirB2	VirB3	VirB5
OMP	VirB7	VirB9	VirB11
IMP	VirB6	VirB8	VirB10
ATPase	VirB4	VirB1	VirD4

**Type VI**

Secreted substrate	YgrG
OMP	Lip
IMP	IcmF
ATPase	ClpV
Regulatory protein	PpkA