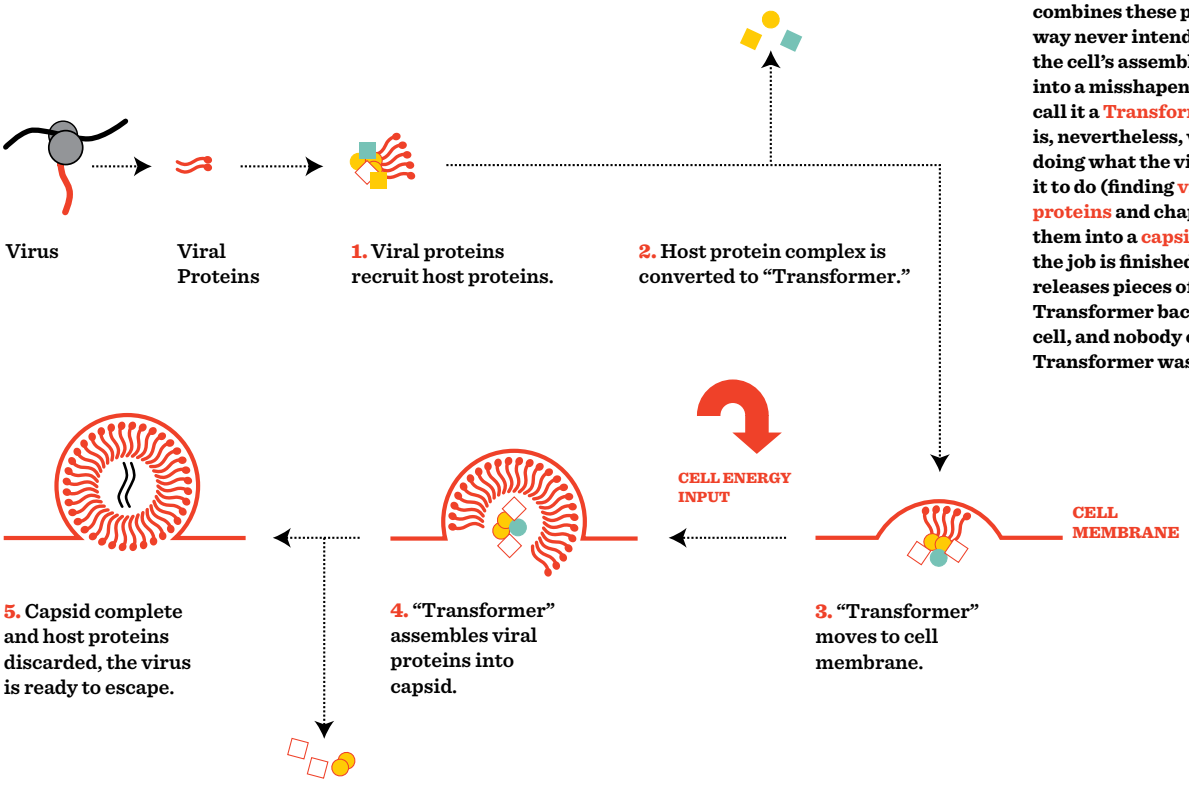
Central Hypotheses of Prosetta's Work

1 Viral capsid assembly is facilitated by critical viral-host interactions.

The virus enters the cell and combines these parts in a way never intended. It turns the cell's assembly machine into a misshapen creature—call it a Transformer—that is, nevertheless, very good at doing what the virus wants it to do (finding viral proteins and chaperoning them into a capsid). When the job is finished, the virus releases pieces of the Transformer back into the cell, and nobody can tell the Transformer was ever there.



2 Targeting these viral-host interactions will yield inhibitors of virus assembly.

Why does it matter that capsid assembly is energy-dependent and chaperone-dependent? It means that if you can create a drug that latches on to the Transformer during the brief period when it is active, you can stop the viral assembly in its tracks. The drug won't have side effects on healthy cells, because when the assembly machines are in their normal (non-Transformer) shape the drug won't bind to them.