



# PROTEIN TRANSPORT THROUGH *E. coli* PERIPLASM BY CHAPERONE PROTEINS

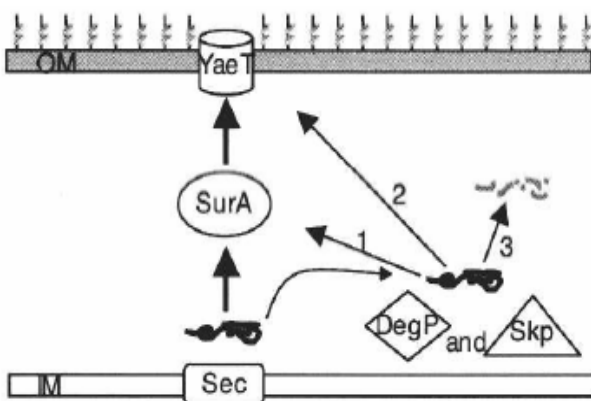


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## INTRODUCTION

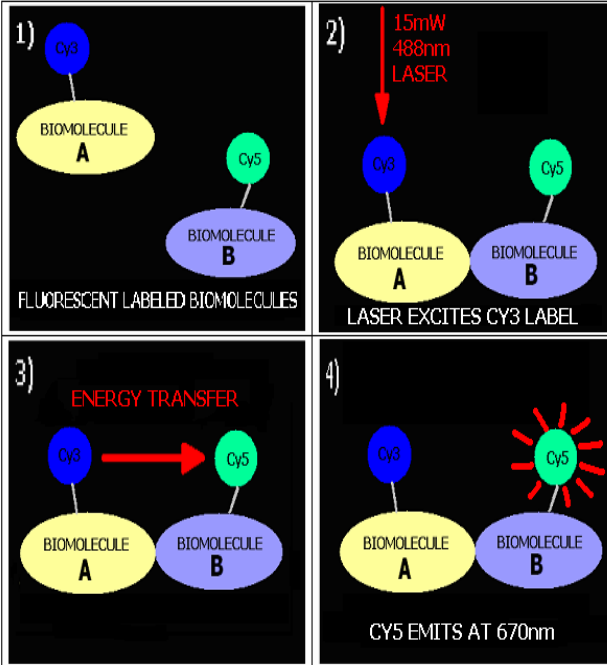
In *E. coli*, chaperone proteins such as SurA, DegP, and Skp aid in the folding and transport of substrate proteins, such as OmpC. SurA has been identified as the main chaperone protein for this process. The diagram below shows some routes that the OmpC substrate protein has been found to take.



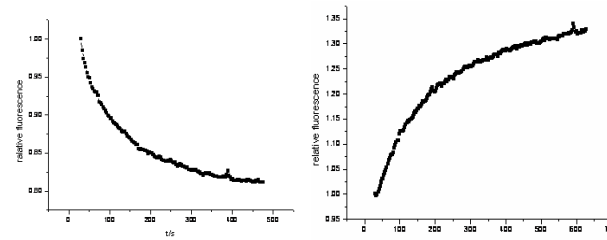
Sklar, J. G.; Wu, T.; Kahne, D.; Silhavy, T. J. *Genes & Dev.* **2007**, *21*, 2476-2484.

## METHODS

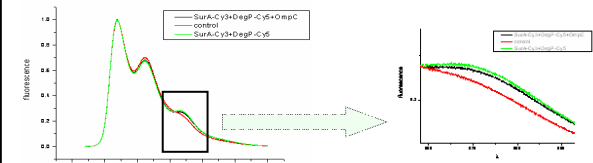
FRET (Fluorescence Resonance Energy Transfer) was used in conjunction with a Raman Spectroscopy machine to characterize protein interactions using measurements of fluorescence intensities.



## RESULTS

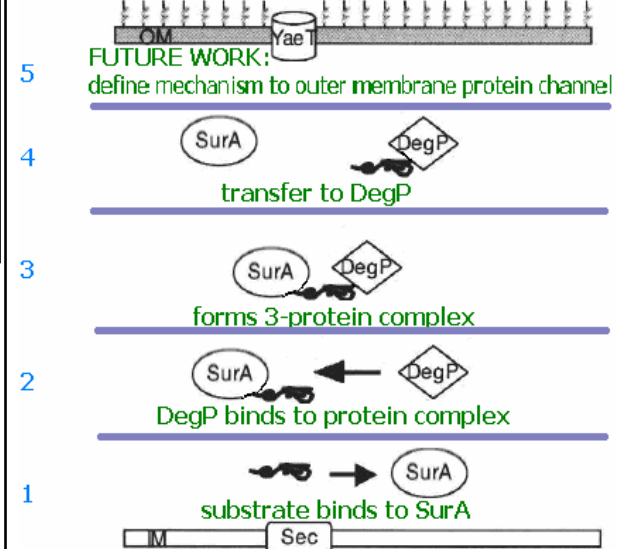


Comparing peak intensity vs. time, it is apparent that OmpC leaves SurA (left) and binds to DegP (right).



This graph shows the formation of a 3-protein complex because the FRET peak exists with and without the presence of the substrate.

## CONCLUSIONS/FUTURE WORK



## ACKNOWLEDGEMENTS

