CHESS HWI Researchers unlock key information about Cystic Fibrosis and Tuberculosis

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The structure of a novel protein in the bacterium that is the most persistent pathogen in cystic fibrosis (CF) patients has been solved. Hauptman-Woodward Institute scientists Dr. Andrew Gulick, Eric Drake and Dr. Manish Shah, in collaboration with researchers at SUNY Buffalo and the New York State Center of Excellence in Bioinformatics and Life Sciences have made this significant discovery, which was published in the current issue of the Journal of Biological Chemistry. The study is the first structural characterization of the PA2412 protein, which is needed for the bacterium to obtain iron from its environment. Equivalent proteins are present, and required, in many bacteria including the pathogen that causes tuberculosis. Gulick's work is funded by the National Institutes of Health and by a grant from the Dreamcatcher Foundation in Buffalo, NY. Crystallographic data were collected at beamline F2 of the Cornell High Energy Synchrotron Source (CHESS), which is supported by the National Science Foundation and the National Institutes of Health. (Parts excerpted from Hauptman-Woodward Medical Research Institute news.)

This work was a featured press release on the lightsource.org new site:

http://www.lightsources.org/cms/?pid=1002246

and sourced from the HWI site on July 13<sup>th</sup>, 2007:

http://www.hwi.buffalo.edu/Newsroom/Press\_Releases.html.

The on-line journal article is here (subscription may be required):

http://www.jbc.org/cgi/content/abstract/282/28/20425