

The Department of Biological Sciences

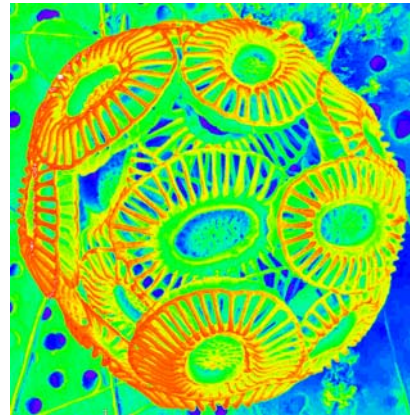
presents

“Berry stone viruses: 30-years of climate control and face cream”

Dr. Willie Wilson

Senior Scientist, Bigelow Laboratory of Ocean Sciences

The virus genus Coccolithovirus (Cocco: derived from Greek kokkis, meaning "berry" or "grain" referring to their shape and Lith: from Greek Lithos, meaning "stone") is a group of large, double stranded DNA viruses that infect the globally important marine coccolithophorid *Emiliana huxleyi*. The first observation of virus-like particles in *E. huxleyi* was reported back in 1974, although they are now known to be one of the causative agents of *E. huxleyi* bloom demise.



We have developed diagnostic molecular tools to analyse the dynamics of coccolithoviruses and their hosts during natural blooms. Virus infection of *E. huxleyi* increases production of the biogenic gas dimethyl sulphide (DMS), which has implications for climate feedback mechanisms. We have recently sequenced the 407,339 bp genome of one coccolithovirus and revealed that only 14% of the predicted genes have any significant database homology. The genome encodes a range of unexpected genes never previously observed in a virus. Most notably are those involved in biosynthesis of ceramide, a sphingolipid better known for its role in face cream. Microarray analysis of genes on the virus genome have greatly enhanced our understanding of the propagation of this unusual virus and may help us understand why algal viruses have such large genomes.

Room 112 Life Sciences Building
3 pm, Friday, November 16th, 2007

*Please contact Dr. Moss (4-9257; mossant@auburn.edu)
if you wish to visit with Dr. Wilson*