



# Defeating Disease

From modeling microscopic genes and proteins to tracing the progression of an epidemic through a country, mathematics plays an important role in combating disease. For example, the basic model used to analyze the dynamics of infectious disease is a system of differential equations. A new field called “data mining”, involving statistics and pattern recognition, helps locate significant information in the vast amounts of data collected from studies of diseases in populations. Mathematics also plays a key role in connecting changes in the human genome to specific diseases.

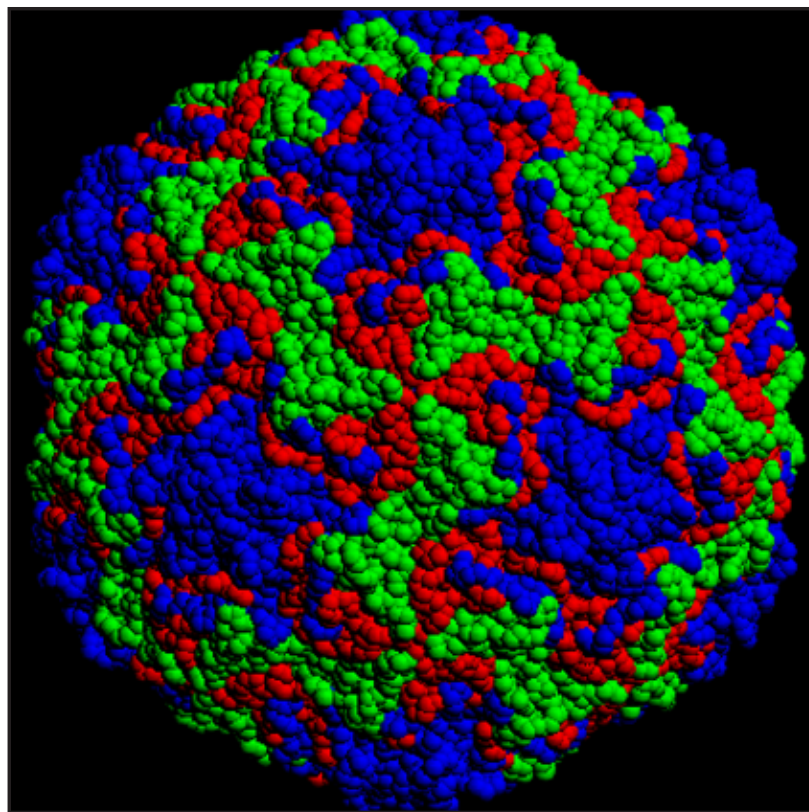


Image courtesy of Jean-Yves Sgro, University of Wisconsin-Madison.  
Rhinovirus color-coded by protein, enhances display of icosahedral symmetry. ©1993