

Divine Dominos

Can “What?” lead us to “Whom?”



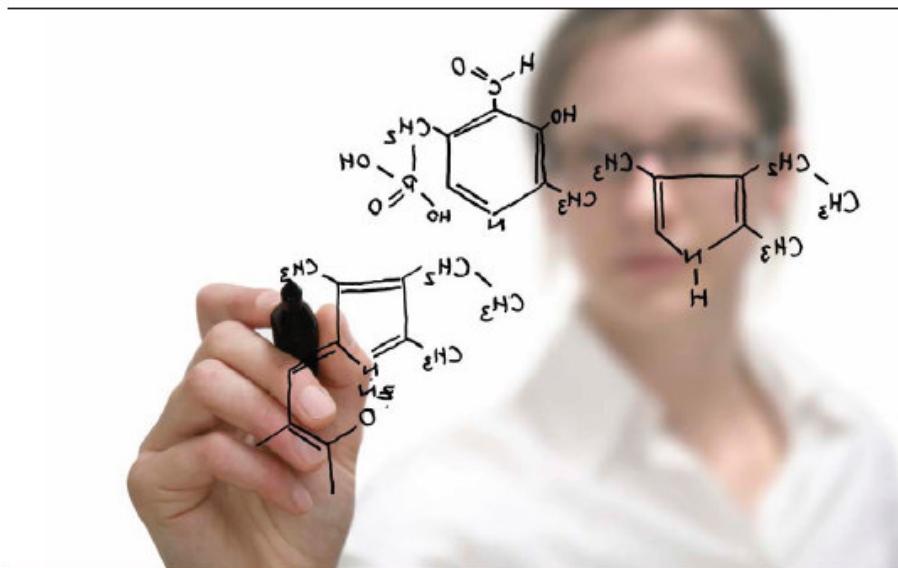
The forecast was for an icy winter blizzard, and the cars needed to be inside rather than outside the garage. The problem was that the garage never cleaned itself. Someone always had to deliberately clean it. Before closing down my garage woodshop, however, I decided to tackle one last project: shelves to organize lumber scraps. But one project often leads to another and, suddenly, there was a whole series of projects to complete before I could even begin to clean the garage. Building the shelves would be easy, but, before that, the outer wall of the garage needed to be insulated. So I cut holes in the sheetrock, rented a blower, purchased insulation and spent 4 hours in a cellulose cloud. The holes had to be closed and sanded smooth. And then the wall needed to be repainted. Only then could I start on the shelves...

This domino-like sequence of cause and effect events that must be completed before an intended event can occur is mirrored at the submicroscopic-scale in a living cell by a process called *signal transduction*. In its most basic form, it is a series of chemical “dominos” where activating one step triggers the next, and the next, so as to carry a chemical signal from the outside of a cell to the inside. The process is somewhat like sensory nerves signaling the brain, except a cell has no brain to interpret the signal. There is, instead, a pre-programmed response, such as turning a gene on or off. In other words, the dominos fall accord-

ing to the pattern in which they were placed, with the result being a pre-set action. This raises the question of what, or who, designed the placement and the programming. After all, the garage had to be cleaned by someone. So who programmed the cell’s signaling process?

There is, I think, evidence of the Divine in the cascading dominos of signal transduction. Each “domino” is actually a specific enzyme whose function is based

response between the molecule that starts the signal on the outside of a cell, the enzymes within the signal pathway, and the eventual response made by the cell. These levels of agreement on how chemicals function do not happen by chance. Choices about design and function are made by intelligent beings—in this case, a Divine being who can organize a microscopic, self-sustaining machine (cell) that can sense and react to its environment.



on strings of amino acids folded into a unique shape. But enzymes alone cannot account for the complicated web-like design of signal pathways. This arrangement is a higher order of organization in which each enzyme occupies a specific and appropriate place in one or more signal pathways. There is also an amazing cor-

One project often does lead to another, like falling dominos. But discovering how cascading cell signal pathways work ought to lead us from simply understanding what has been created and how it works, to worship and serve the One who did the creating.

– Michael G. Windheuser, Ph.D.