

Twists and Turns

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As serious shell collectors know well, almost all snails are right-handed, meaning that when the shell is held upright and faces the collector, the opening (i.e., aperture) is on the right. A few marine shells, and a goodly number of freshwater and terrestrial shells, are left-handed. While there is on-going debate as to why, scientists continue to work on the issues involved.

Now on the May 14 website associated with the journal *Development*, scientists have reported that a single gene (with the fancy name *Lsdia2*), is responsible for direction of coiling. Working with freshwater pond snails (*Lymnaea stagnalis*) scientists used gene editing techniques to alter the gene and cause pond snails to coil in the opposite direction. The gene's effect occurs while the infant snail is a single cell. In turn, the *Lsdia2* gene causes two other genes to direct the developing animal to place its internal organs in the proper location for the direction of coil.

A brief account of this research can be found in the journal *Science News* (June 8, 2019, p. 8). [Note: For anyone interested in a digest of science from across the disciplines, I highly recommend *Science News*.]