

1106-92-1841      **Rebecca A Everett\*** (rarodger@asu.edu), P.O. Box 871804, Tempe, AZ 85287-1804, and **Yang Kuang** (kuang@asu.edu), P.O. Box 871804, Tempe, AZ 85287-1804. *Applications of the Droop Cell Quota Model to Cancer Treatment.*

The phycologist Droop studied vitamin B<sub>12</sub> limitation in the flagellate *Monochrysis lutheri* in chemostats and concluded that the specific growth rate did not depend directly on the medium substrate concentration, but rather depended on the concentration of the vitamin within the cell, or the cell quota. The Droop equation has been used often in mathematical ecology models, such as in ecological stoichiometry. Since cancer cells live in an ecological setting, we apply the idea of a limiting nutrient to cancer modeling, using the Droop equation to model cancers, including prostate cancer and ovarian cancer. (Received September 15, 2014)