1127-92-165 **Tracy Stepien*** (stepien@math.arizona.edu), Department of Mathematics, University of Arizona, Tucson, AZ, **Erica Rutter** (erutter@ncsu.edu), Department of Mathematics, North Carolina State University, Raleigh, NC , and **Yang Kuang** (kuang@asu.edu), School of Mathematical & Statistical Sciences, Arizona State University, Tempe, AZ. *Traveling Wave Solutions of a Glioma Tumor Growth Model.* Preliminary report.

Glioblastoma multiforme is an aggressive brain tumor that is extremely fatal. Gliomas are characterized by both high amounts of cell proliferation as well as diffusivity, which make them impossible to remove with surgery alone. To gain insight on the mechanisms most responsible for tumor growth and the difficult task of forecasting future tumor behavior, we investigate a mathematical model in which tumor cell motility and cell proliferation are considered as separate processes. We explore the existence of traveling wave solutions and determine conditions for various wave front forms. We also examine the model's efficacy in fitting in vitro experimental data. (Received February 02, 2017)