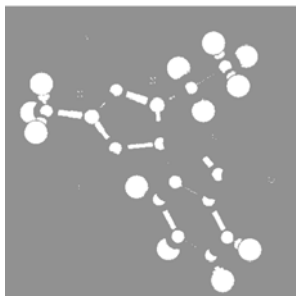


**W0188**

**Structure-Activity Studies on Small Molecules Having Anti-convulsant Activity.** Miriam Rossi, Christine Phillips, Caitie Conant, Ralph Stephani<sup>1</sup>, Francesco Caruso<sup>2</sup>, Dept. of Chemistry, Vassar College, Poughkeepsie, NY 12604, USA, <sup>1</sup>Dept. of Medicinal Chemistry, St. John's Univ., Queens, NY, <sup>2</sup>Istituto di Chimica Biomolecolare, CNR, Rome, Italy.



Drug development for seizure control has evolved although the mechanisms involved in curbing anti-convulsant activity are not yet well known. This area of medicinal chemistry appears to have lagged behind the search for an effective treatment. Typical anti-seizure drugs include barbiturates, hydantoins and oxazolinediones that are effective against seizures but have strong and undesirable side effects. For example, phenytoin is suspected to be a human carcinogen. We present the structures of several compounds, one of which is shown below, whose anti-convulsant activity is known and whose molecular structure was determined incorrectly from spectroscopic data. We

describe differences in the attributed molecular structures with those determined using single-crystal crystallographic methods and our results of structure-activity studies.