

Euglenaphycin: Role in cancer treatment?

Paul V. Zimba

Texas A&M University-Corpus Christi, USA

In 2010, the identification of a new to science toxin was described from one clone of *Euglena sanguinea* Ehrenberg. During 2004-2011, additional clones of this species (n=7 total) were obtained from four continents – all produced the euglenophycin toxin in unialgal cultures. Strain specific differences in growth form in culture (motile versus cyst stages) were more variable than toxin production per cell or per chlorophyll a. Strain production of toxin varied by >50-fold when normalized to algal biomass (cell number or chlorophyll a). At least 8 other euglenoid species also produce euglenophycin. The ability of this taxon to rapidly form resting temporary cysts (that are non-distinct round balls) when physically stressed may account for the recent discovery of toxin production within this division taxa in both freshwater and marine systems.

paul.zimba@tamucc.edu