

Mechanism of brevetoxin absorption and clearance
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Brevetoxins are potent secondary metabolites produced during harmful algal blooms by the dinoflagellate *Karenia brevis*. Brevetoxins have been implicated in the morbidity and mortality of diverse organisms, from invertebrates to humans. Although the chemical identity of brevetoxin metabolic compounds has been recently identified, the mechanism of brevetoxin absorption and clearance in mammalian systems has not been extensively studied. This study aims to define the absorption processes of brevetoxins and brevetoxin-cysteine metabolites in the intestine, and to determine chemical and/or molecular mechanisms that may result in a lower overall toxic potency. A differentiated intestinal cell line has been used to calculate in vitro transport rates across this epithelial barrier. Further studies will investigate the specific transport processes that are occurring at this organ level.