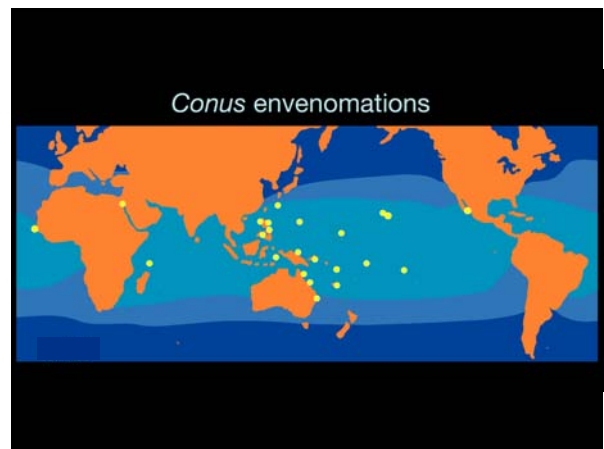
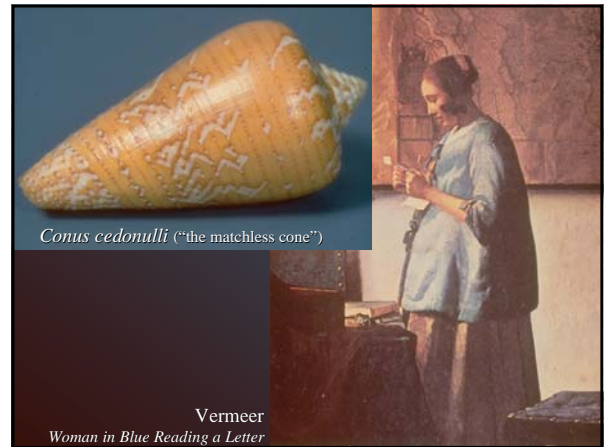
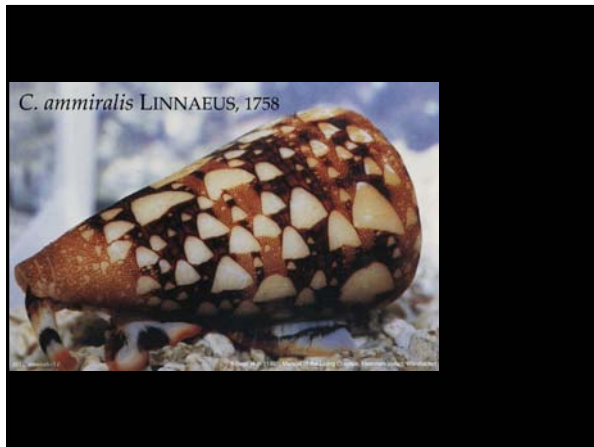


Conus Peptides

Baldomero "Toto" Olivera
Department of Biology, University of Utah

I Historical Background Discovery of a Drug


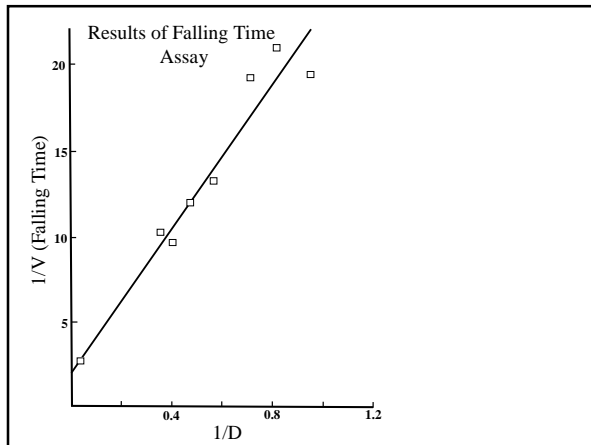
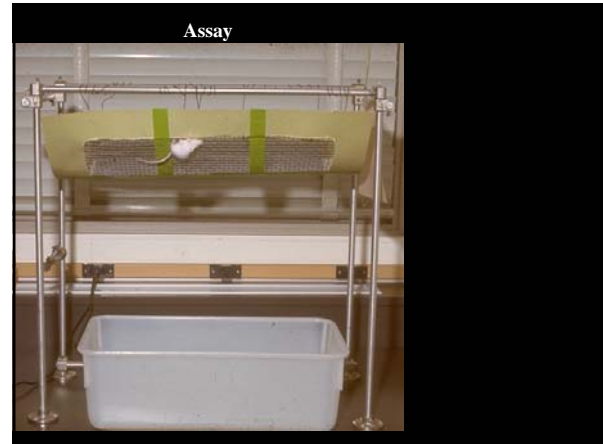


The most dangerous snail

The Geography Cone

Conus geographus

~70% of untreated human stinging cases are fatal


First Conus peptide characterized
(Lourdes Cruz)

α -Conotoxin GI \leftrightarrow **Cobratxin**
(13 amino acids) \leftrightarrow α -Bungarotoxin (60-80 amino acids)

Most biologically active *Conus* venom components:

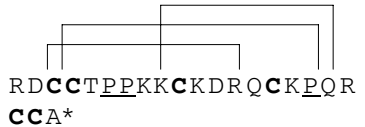
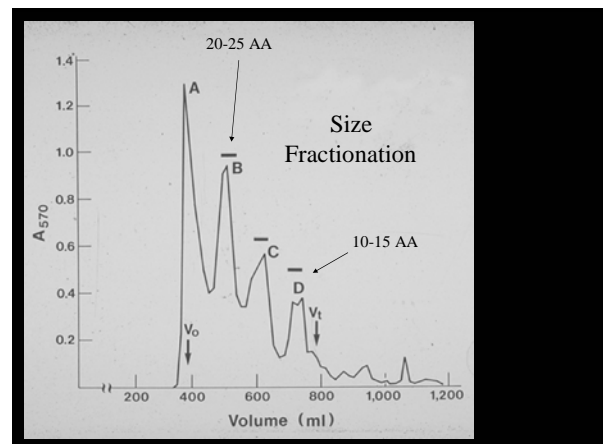
SMALL DISULFIDE-RICH PEPTIDES (10-30 AA)

ECCNPACGRHYS^C*



μ -Conotoxin (22 AA) \leftrightarrow **Tetrodotoxin**
Puffer fish ("fugu") toxin

RDCC^TPPK^KCKDRQCKPQR
CCA^{*}

Fractionation of *C. geographus* venom

HPLC of size fraction B

