α-Amanitin from *Amanita phalloides*

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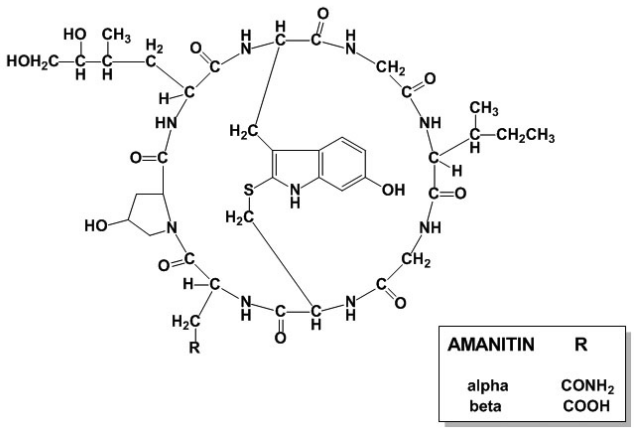
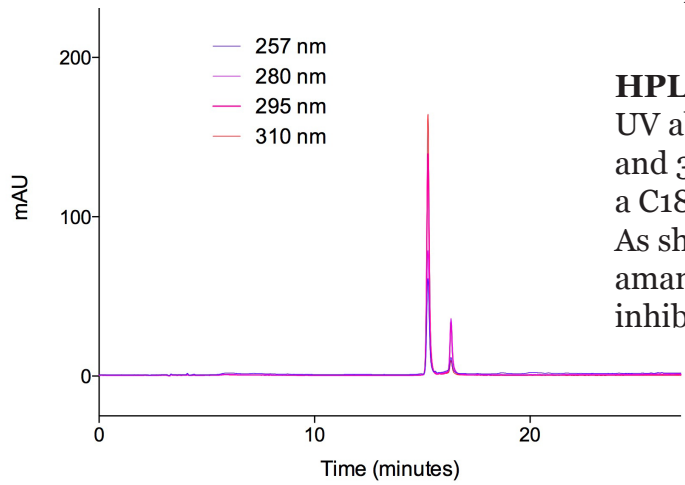
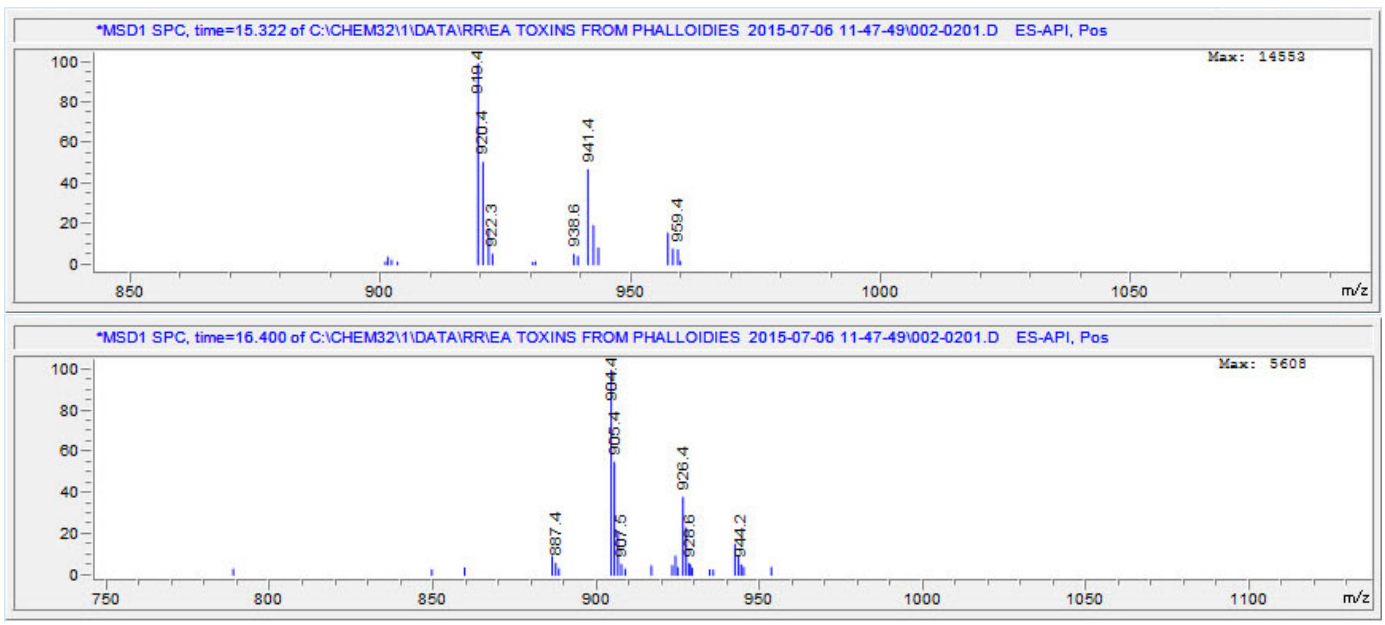


Structure of α-Amanitin, a bicyclic octapeptide with unique tryptathionine crossbridge. Potent inhibitor of eukaryotic RNA polymerases II and III.
Purity ~ 95%
Molecular weight = 918.4



HPLC separation of of α-Amanitin. Shown is the UV absorbance at multiple wavelengths (230, 254, 280, and 310 nm) of a separation of purified α–amanitin on a C18 column. By peak areas, α–amanitin is ~95% pure. As shown below, the contaminant peak is composed of amanin, another amatoxin with RNA polymerase inhibitory activity.



Mass spectroscopy of α-Amanitin. Shown are mass specroscopic peaks and associated masses for the α–amanitin peak eluting at 15.3 min, consistent with the mass of β–amanitin ($M+H^+$ = 919.4) and adducts ($M+Na^+$ = 941.4, $M+K^+$ = 957.4). The lower panel shows the MS of the minor contaminant peak, consistent with amanin ($M+H^+$ = 904.4, $M+Na^+$ = 926.4, $M+K^+$ = 942.2).

structure figure from http://www.fda.gov/Food/FoodborneIllnessContaminants/CausesOfIllnessBadBugBook/ucm070514.htm