

THE USE OF MASS SPECTROMETRY TO IDENTIFY THE HOST DEFENCE PEPTIDES OF A HYBRID PRODUCED FROM THE AUSTRALIAN TREE FROGS *LITORIA CAERULEA* AND *LITORIA SPLENDIDA*.

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Electrospray mass spectrometry has been used to identify the bioactive peptides from the glandular secretion of a hybrid produced from the Australian Green Tree Frog *Litoria caerulea* and the Australian Magnificent Tree Frog *Litoria splendida*. The secretion contains some peptides from each species together with some not expressed by either parent. The new peptides have the following sequences:-

Caerin 1.20	GLFGILGSVAKHVLPHVIPVVAEHL-NH ₂
Caerin 2.6	GLVSSIGKVLGLLADVVKSKGQPA-OH
Caerin 2.7	GLVSSIGKALGLLVDVVKSKGQPA-OH
Caerin 3.5	GLWEKVKEKANELVSGIVEGVK-NH ₂
Caerin 5.1	AEILFGDVRPPWMPPPIFPEMP-OH

Caerin 1.20 is a wide spectrum antibiotic, while caerins 2.6 and 2.7 inhibit the formation of NO from neuronal nitric oxide synthase. The roles of caerins 3.5 and 5.1 are not known. The production of the named peptides, which are not expressed by either parent, is unusual.