

THE APPLICATION OF NEGATIVE AND POSITIVE ION ELECTROSPRAY MASS SPECTROMETRY TO IDENTIFY HOST-DEFENCE PEPTIDES FROM DIFFERENT POPULATIONS OF THE AUSTRALIAN FROG *LITORIA EWINGI*.

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Profiling of the host defence peptides of frogs has enabled us to differentiate between different species of frogs,¹ different populations of the same species of frog¹ and, more recently, to identify a hybrid animal formed from two different species of Australian tree frog.² The tree frog *Litoria ewingi* is found in south eastern South Australia, south western Victoria and Tasmania, and morphological considerations have suggested that there may be more than one discrete population of this animal.³ Peptide profiling of animals collected in the Adelaide Hills and from the banks of the Murray river south of Adelaide confirm that the host-defence peptide profiles of these animals are different. The application of positive and negative ion electrospray mass spectrometry to sequence these peptides will be demonstrated.

- 1 T.L.Pukala, V.M.Maselli, J.H.Bowie, I.F.Musgrave and M.J.Tyler, *Nat. Prod. Rep.* (Chemical Society, London), 2006, **23**, 368-393.
- 2 T.L.Pukala, T.Bertozzi, S.C.Donnellan, J.H.Bowie, K.H.Surinya-Johnson, Y.Liu, R.J.Jackway, J.R.Doyle, L.E.Llewellyn and M.J.Tyler. *FEBS J*, 2006, **273**, 3511-3519.
- 3 M.J.Tyler, personal observations.