Treatment of Chronic Ulcers of the Leg With Frog Flesh Poultice

Mark Bernhardt, MD

Dr Keng might not have been able to explain the benefit of frog flesh poultice, but I’ll give it a try. Indigenous peoples have long recognized the powers of skin secretions from reptiles and amphibians, especially frogs. The earliest scientific investigations of frog flesh secretions focused on some of their more exotic uses. So it was in the 1970s when J. W. Daly began analyzing the toxic alkaloid from the poison dart frog that the Emberá Indians use to make their famously lethal blow darts. As scientists began to study other frog species, they found hundreds of skin secretions that had toxic, noxious, anesthetic, and antimicrobial activity. Though all of these substances had evolved to protect the frogs from predation, injuries, or infections, it did not take long for humans to explore their more anthropocentric benefits. Stoners praise the natural high from licking a Bufo frog (something I would definitely NOT recommend!). Macho Peruvians enhance their libido with some freshly blended live Titicaca frog juice. The pharmaceutical industry is most interested in antimicrobial peptides produced by frogs.

Frogs of the Rana genus are particularly prolific at producing antimicrobial peptides. Indeed, in Dr Keng’s full report, he specified use of the common edible frog, Rana esculenta. Of the hundreds of amphibian antimicrobial peptides researched so far, it is in fact esculentin-1b that shows the most promise. It has a broad range of activity against gram-positive and gram-negative organisms. Concentrations that are bactericidal do not affect eukaryotic cells, and esculentin-1b retains its activity in the presence of human serum, something many other antimicrobial peptides do not. Especially at a time of increasingly multidrug-resistant super bugs, the potential for this new class of substances to augment or even replace older antibiotics is generating a tremendous amount of research interest. We are not yet at the stage where you can powder your wound with purified frog flesh, but we’re probably a lot closer than Dr Keng could ever have imagined.

Editor’s Note

A Fond Farewell

June K. Robinson, MD; Jeffrey P. Callen, MD

Here, at the place between sorrow and good-bye.

David Mark, Sorrow Bound 2014

Since 1990, our readers have enjoyed the unique perspective of Mark Bernhardt, MD, as he perused the articles published in our journal 100 years ago. Mark’s interests were eclectic and idiosyncratic.¹ He had a knack for finding articles of historical significance, personal relevance, whimsy, or oddity. In his first editorial, Dr Bernhardt stated that “the great lesson of history is humility.”² Mark, thank you for constantly reminding us to remain humble. Our predecessors, warts and all, would expect nothing less.