

Heart patients could benefit from venomous lizards

December 3 2010

(PhysOrg.com) -- A new study on venomous lizards has revealed the existence of novel venoms that could potentially be used to treat high blood pressure.

Dr. Bryan Fry of the University of Melbourne led a team of researchers from across the world, including Belgium, the Netherlands, Ireland, Switzerland, Israel and the US, to examine the unexplored group of venomous [lizards](#) called anguimorphs – a group that includes monitor, alligator and legless lizards.

“We only recently discovered that [venom](#) in lizards was not restricted to the gila monster and beaded lizard, but it is in fact much more widespread – so we set out to examine this unique group, and sure enough we discovered completely novel toxins,” Dr. Fry said.

“We showed a great diversity of toxins in anguimorph venoms. The drug design potential of these novel venoms is highlighted by the fact that three of these new toxins act to lower blood pressure.”

The huge-scale study took four years to complete and involved collecting venom from lizards all over the world, followed by complex laboratory studies to analyse the properties of the venom.

“It was a huge undertaking but the result is well worth the effort – we have discovered completely novel venoms, as well as shed light on the evolution of venom systems in animals,” Dr. Fry said.

“The results obtained highlight the importance of utilizing evolution-based search strategies for biodiscovery and emphasize the largely untapped drug design and development potential of lizard venoms,” Dr. Fry said.

Dr. Fry will now focus on transforming the valuable lizard venom into a pharmaceutical product that could ultimately help sufferers of heart disease.

More information: The study was published in the latest edition of the *Journal of Molecular and Cellular Proteomics*.

Provided by University of Melbourne

Citation: Heart patients could benefit from venomous lizards (2010, December 3) retrieved 10 April 2024 from <https://phys.org/news/2010-12-heart-patients-benefit-venomous-lizards.html>

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