Deadliest Life Savers
February 8, 2018 | Thursday 10:15 a.m. Mesa, AZ
Zoltan Takacs | Scientist-Explorer

What if the world's most deadly animals could save our lives? From the Amazon rain forest to the coral reefs of the Pacific, biomedical scientist and explorer Zoltan Takacs collects and researches the deadliest snake, scorpion, and jellyfish venoms, harnessing their unique power as blueprints for new lifesaving medications. Zoltan, an inventor, aircraft pilot, and scuba diver shares his vision with students on both the risks and the incredible benefits for mankind that come from working with venomous animals.

Meet Zoltan Tacacs - Herpetologist/Toxinologist
http://www.nationalgeographic.com/explorers/bios/zoltan-takacs/
National Geographic's biography as an Emerging Explorer

Zoltan Takacs Exploration
Scientific and special images of herpetology, toxinology, & biosphere.
http://zoltantakacs.com/zt/te/index.shtml
Pictures Dr. Takacs has taken and labeled.
Also accessed from this site:

- Research - Drug discovery from venoms
- Expeditions - from a young age
- Videos
- Designer Toxins

Article from Science*Life*, University of Chicago Medicine & Biological Sciences
From the Rain Forest to the Laboratory | May 18, 2010
https://sciencelife.uchospitals.edu/2010/05/18/from-the-rain-forest-to-the-laboratory/
Biochemistry, biology and adventure combine to create new compounds potentially more useful in the lab and clinic than the natural counterparts.

Zoltan Takacs's venomous vision - Toxin researcher mines snake DNA for potential medicines
Public lecture at the Explorers Club in NYC, (Vimeo, about 50 min)
https://vimeo.com/139878313
Nature's deadliest animals — snakes, scorpions, spiders — take 100,000 human lives a year, 6 times more than landmines. Yet the very same creatures are also the biggest lifesavers of the Animal Kingdom. Taken by 40+ million people, 20 medicines are derived from animal venoms for heart attack, high blood pressure, heart failure, diabetes, and cancer and HIV pain, etc. — including 2 of the top 3 heart attack medicines, as well as the #5 most-prescribed medicine in the U.S.

Ask a Biologist (ASU Life Sciences educator site)
If you are not familiar with this site, please explore it. Enormous level of resources for teachers of the life sciences. And all free, on line. Two for this event are:
https://askabiologist.asu.edu/venom/antivenom
How venom works on the body. Game: Do battle with the venom from a scorpion before it is too late.
https://askabiologist.asu.edu/explore/Animal-use-in-Research
Two headed snake and research at ASU.

Some universities doing venom research
National Natural Toxins Research Center - Texas A&M
http://www.tamuk.edu/nntrc/
The National Natural Toxins Research Center (NNTRC) is an internationally renowned biomedical research center concentrating on the discovery of snake venoms that can be used in medical applications.
Australian Venom Research Unit - University of Melbourne
http://biomedicalsciences.unimelb.edu.au/sbs-research-groups/pharmacology-and-therapeutics-research/AVRU-Australian-venom-research-unit
The Australian Venom Research Unit (AVRU) in the Department of Pharmacology and Therapeutics at the University of Melbourne focuses on research relating to injuries and deaths caused by venomous snakes, spiders, marine creatures and other organisms.

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