

COULD THIS DRAGON SAVE YOUR LIFE?

Scientists looking for life-saving medicines have found a surprising helper: the killer Komodo dragon.

BY TOD OLSON



VOCABULARY

prey: an animal that is hunted or killed by another animal for food

bacteria: very small living things that may cause disease

infected: containing germs that cause disease

resistant: not affected or harmed by something

mold: a substance that grows on the surface of damp or rotting things

Interested in an amazing vacation in a beautiful place with thick, tropical rainforests and peaceful, sandy beaches? Then head to Indonesia! This country is made up of a large group of islands located north of Australia.

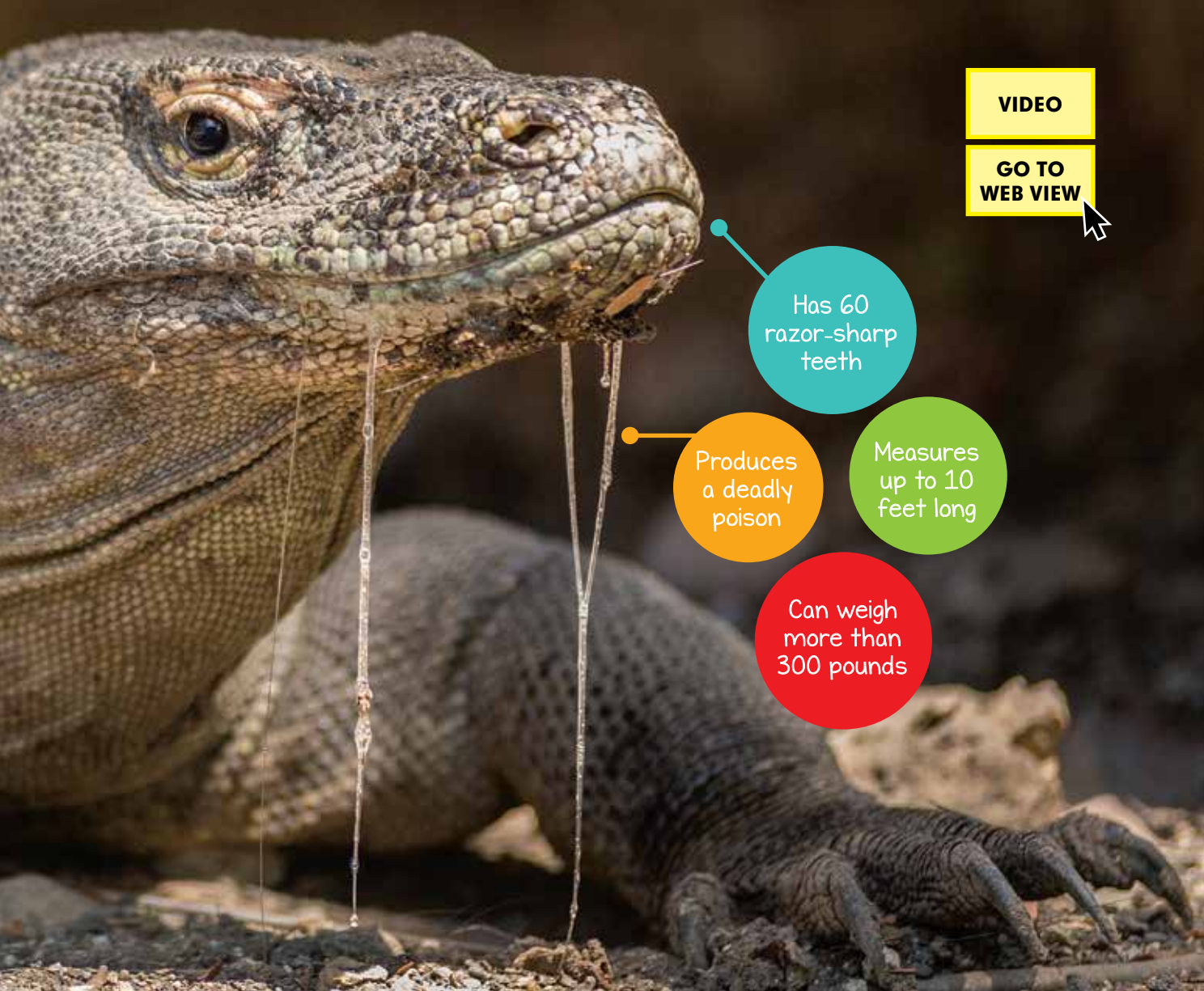
Just beware of the 10-foot-long dragons that can kill you with one bite.

Dragons? Yes, Komodo dragons. They are the largest lizards on Earth, and they can

be deadly. They attack pigs, deer, cows—and sometimes humans. As they rip huge wounds in their **prey** with their sharp teeth, they deliver a poison that makes their victims gush blood.

But scientists say that, in addition to being ferocious killers, Komodo dragons may also have a very special power.

And that special power may be the key to saving millions of human lives.



VIDEO

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Has 60
razor-sharp
teeth

Produces
a deadly
poison

Measures
up to 10
feet long

Can weigh
more than
300 pounds

Super Strong

Komodo dragons are incredibly tough creatures. They often eat the rotting bodies of dead animals, which are filled with tiny germs called **bacteria**. Most other animals would catch deadly diseases from eating these bacteria, but Komodo dragons don't get sick.

How do these giant lizards fend off germs? Scientists recently found out: Komodo dragon blood contains special

chemicals that protect it from bacteria. And that might be life-changing news for humans.

Helping Humans

For most of human history, certain bacteria could be deadly. The tiny germs caused diseases like pneumonia and cholera, and there were no cures. Doctors also had no way to treat **infected** wounds. Even a small cut could kill a person.

However, in 1928, scientists

made a major breakthrough in treating disease and infection. They discovered antibiotics—medicines that kill germs. The first antibiotic was called penicillin, and it saved millions of lives.

But over time, some germs changed to become **resistant** to antibiotics. These germs can't be destroyed by antibiotics.

Every year, nearly 700,000 people around the world die because of antibiotic-resistant



germs. Thirty years from now, that number could be as high as 10 million.

Could the Komodo dragon's special blood prevent that from happening? Scientists are optimistic. They want to use the dragon's blood to create new medicines that, they hope, will stop even the toughest infections.

Wonder Drugs

The Komodo dragon isn't the only fierce creature that may have life-saving properties. The taipan is one of the most dangerous snakes in the world, but scientists think its poison might help stop wounds from bleeding. In Mexico, experts have been studying deadly scorpions to determine whether poison from their stingers can fight cancer.

One terrifying snake is already saving people with

heart problems. The Brazilian pit viper has a poison that lowers its victims' blood pressure, so they pass out. Then the viper eats them—head first. A medicine made with that poison helps treat a deadly disease called high blood pressure. The medicine is used by 40 million people a year.

The pit viper medicine might be only the beginning. Bryan Fry, a scientist who studies Komodo dragons, believes that strange creatures like the dragon have a great deal more to offer. That's where the "wonder drugs of tomorrow will be found," he told the *Washington Post* newspaper.

So if you encounter a Komodo dragon or a pit viper, maybe you should say thank you—from a safe distance, of course. •



The surprising story behind penicillin, the medicine that changed the world

BY TOD OLSON

Alexander Fleming wasn't the neatest guy in the world. His lab in London was always a mess. The scientist told his friends he kept it that way on purpose. His job was to study how tiny germs called bacteria grow. Fleming thought keeping the germs around for a while might lead to interesting discoveries.

In the summer of 1928,

PHIL DEGGINGERTY IMAGES (MOLD); UNDERWOOD ARCHIVES/SHUTTERSTOCK (ALEXANDER FLEMING); HISTORIA/SHUTTERSTOCK (PENICILLIN)

Other Scary (But Lifesaving) Creatures



▲ Poison from the taipan—a dangerous snake found in Australia—could stop wounds from bleeding.

▼ Poison from this Mexican scorpion might help fight cancer.



▲ Poison from the Brazilian pit viper is used to treat high blood pressure.

SUSAN SCHMITZ/SHUTTERSTOCK.COM (TAIPAN); AGUSTIN ESKORIK/MINDEN PICTURES (SCORPION); VAMPFLACK/SHUTTERSTOCK.COM (PIT VIPER)

MOLD HAS D MILLIONS



BIG DISCOVERY

Alexander Fleming (left) was a scientist. In 1928, he noticed that a green mold called penicillin could stop germs from spreading.



Fleming returned from vacation to the dishes full of bacteria that he had left piled on his lab bench. He examined each one with his magnifying glass. Fuzzy green **mold** sprouted from the sides of the dishes—they looked like last week's dinner leftovers.

Suddenly, one of the dishes caught his attention. It should have been covered in bacteria,

but the mold had stopped the germs from spreading. "That's funny," Fleming said.

It proved to be more than funny. That disgusting green mold was penicillin—and it would soon be used to save millions of lives.

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A Wartime Weapon

Fleming's discovery wasn't immediately put to use. It took about 13 years for scientists to figure out how to make medicine from the penicillin mold.

But that medicine was ready just in time.

In 1944, World War II was raging around the globe. Doctors struggled to help wounded soldiers, and they often gave up if the wounds became infected. Stopping the bacteria from spreading was nearly impossible. Thus, an infection usually meant death.

That year, a factory in New York started producing penicillin by the gallon. By the war's end, the medicine had saved the lives of more than 100,000 soldiers.

Since then, penicillin has been used to cure tuberculosis, pneumonia, scarlet fever, strep throat, and other diseases—saving the lives of approximately 200 million people.

And we owe it all to the messy habits of Alexander Fleming. •