

Sharks' immune system proteins may help treat and diagnose cancer

Sharks and humans last shared a common fishy ancestor about 500 million years ago. Ever since, the two lineages have been making life difficult for one another. There has been an unhappy history of killing and eating. Recently humans have been doing most of the harm. Yet sharks are now lending us a helping hand, aiding in the design of proteins that help us fight disease.

Those proteins are called therapeutic antibodies, which are emerging as potent tools for cancer diagnosis and treatment. The trouble has been that human antibodies are rather delicate: When drug companies try and make them, a lot break apart.

Shark antibodies, in contrast, are robust. Now chemists have figured out the sources of that strength—some extra features in the proteins that work like Super Glue to keep them together. Building upon our shared and ancient evolutionary heritage, scientists have engineered those shark features into human antibodies and made cells produce them. More intact antibodies come out of these cells, and those antibodies withstand more damage.

Read the full, original story: [Human Antibodies Given Sharklike Armor to Fight Disease](#)