

MEDICAL

Unwanted fish scales may help heal wounds



Ben Coxworth | 7 hours ago



Some of the fish scales used in the study (Credit: NTU)

Chances are, you can't think of many uses for fish scales. Neither can the fisheries industry, which is why it disposes of great quantities of the things every year. According to scientists from Singapore's Nanyang Technological University, however, such scales may be able to help heal wounds in humans.

The researchers started by obtaining sea bass, snakehead and tilapia scales from a Singaporean fish farm, then extracting collagen from them. When that collagen was modified and applied to the skins of mice, it promoted the formation of both blood vessels and lymphatic vessels - this suggests that it would be very useful in wound dressings that promote tissue repair and regeneration.

Although collagen *is* already used in wound-healing dressings, it's typically obtained from the skins of cows, pigs or sheep. According to the scientists, there are some drawbacks to using such animals as a source.

"Clinical application of these materials has been limited due to cultural and religious restrictions associated with these mammalian tissue-derived materials," says Assistant Professor Cleo Choong. "In addition, more checks and processing have to be in place due to the risk of diseases that can be transmitted from mammals to humans."

It's also worth noting that fish scales would likely be a much cheaper source of collagen, as they're simply a waste product that would otherwise be thrown away.

What's more, they may simply work better.

In a previous study, the same scientists determined that fish scale-derived collagen induced human umbilical vein endothelial cells to express 2.5 times more of a type of collagen responsible for blood vessel formation, as compared to endothelial cells cultured on cow-derived collagen.

Source: Nanyang Technological University

