

Reexamination of T. rex verifies disputed biochemical remains

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A new analysis of the remains of a T. rex has confirmed traces of protein from blood and bone, tendons, or cartilage. Credit: Wikimedia Commons

A new analysis of the remains of a *Tyrannosaurus rex* (T. rex) that roamed Earth 68 million years ago has confirmed traces of protein from blood and bone, tendons, or cartilage. The findings, scheduled for publication in the Sept. 4 issue of ACS' monthly *Journal of Proteome Research*, is the latest addition to an ongoing controversy over which biochemical remnants can be detected in the dino.

In the study, Marshall Bern, Brett S. Phinney and David Goldberg point out that the first analysis in 2007 of a well-preserved, fossilized T. rex [bone](#) identified traces of seven distinct protein fragments, or peptides, from collagen. That material is one of the primary components of bone, tendons and other connective tissue. However, later studies disputed that finding, suggesting that it was a statistical fluke or the result of contamination from another laboratory sample.

The scientists describe reanalysis of the T. rex data and also report finding evidence of substances found in collagen. "In summary, we find nothing obviously wrong with the *Tyrannosaurus rex* [analysis from 2007]," the

report states. "The identified peptides seem consistent with a sample containing old, quite possibly very ancient, bird-like bone, contaminated with only fairly explicable proteins. [Hemoglobin](#) and collagen are plausible proteins to find in fossil bone, because they are two of the most abundant proteins in bone and bone marrow."

More information: "Reanalysis of [Tyrannosaurus Rex](#) Mass Spectra"; [Journal of Proteome Research](#)

Source: American Chemical Society ([news](#) : [web](#))

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