

# Tiny protein has big impact in times of stress

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Ribosomes churn out proteins that carry out all of life's functions, but when missing a key and previously overlooked factor, they can break down in times of stress, Yale University scientists have discovered.

The protein, Lso2/CCDC124, is so tiny—just 92 amino acids—it did not turn up under search parameters used by most scientists studying [cell](#)

[biology](#). But the Yale team, headed by Wendy Gilbert, professor of [molecular biophysics](#) and biochemistry, found that without it ribosomal function in yeast was disrupted in times of stress.

"The protein is crucial in some conditions, but not in others," Gilbert said. The [protein](#) is conserved in all species including humans, but an overabundance in liver cancer patients has been linked to decreased survival time. "The exciting challenge now is to understand how this disturbance in fundamental cell machinery leads to a bad prognosis in cancer," she said.

Yale's Yinuo J. Wang is first author of the research published Sept. 12 in the journal *PLOS Biology*.

**More information:** Yinuo J. Wang et al. Lso2 is a conserved ribosome-bound protein required for translational recovery in yeast, *PLOS Biology* (2018). [DOI: 10.1371/journal.pbio.2005903](https://doi.org/10.1371/journal.pbio.2005903)

Provided by Yale University

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