New insights on how oysters form shells

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Credit: NOAA

Researchers know that several proteins are involved in oyster shell formation, but how expression of these proteins is controlled is not well understood. Now investigators report that they have identified a protein called Pf-POU3F4 that promotes expression of two of these proteins, called Aspein and Prismalin-14.

The work is important for understanding the genetics of biomineralization, the process by which living organisms produce minerals to harden existing tissues.

"These results provide a new perspective, and also suggest that the

mechanism of shell formation in the invertebrate pearl oyster has some unique features in addition to its similarities with bone and teeth formation in mammals," wrote the authors of the *The FEBS Journal* article.

More information: Jing Gao et al, The transcription factor Pf-POU3F4 regulates the expression of the matrix protein genes Aspein and Prismalin-14 in pearl oyster (Pinctada fucata), *FEBS Journal* (2016). DOI: 10.1111/febs.13716

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