

Abstract Submitted
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Digital holographic PTV analysis of the motile performance of the red-tides alga “*Cochlodinium polykrikoides*”¹ M. SOHN, S. LEE, Y. CHOI, G. SEO, POSTECH, Y. KANG, Y. KANG, NFRDI, BIOFLUID AND BIOMIMIC RESEARCH CENTER, POSTECH COLLABORATION, MARINE ECOLOGY RESEARCH DIVISION, NFRDI COLLABORATION — The outbreaks of *Cochlodinium polykrikoides* causes severe damages to fisheries in Korea and Japan. *C. polykrikoides* actively makes chains in its exponential and stationary growth phase. The role of the chain formation has not been clearly known yet. In the present study, the motility characteristics of *C. polykrikoides* was investigated using 3D digital holographic PTV technique. The moving trajectories and average velocities of the single and multi-chained *C. polykrikoides* were compared to investigate the effect of the chain formation on the motile performance. Most of the multi-chained *C. polykrikoides* exhibited zigzag or helical trajectory and the translational velocity of the 4-chained *C. polykrikoides* was at least two-times larger than the single one.

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M. Sohn
POSTECH

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