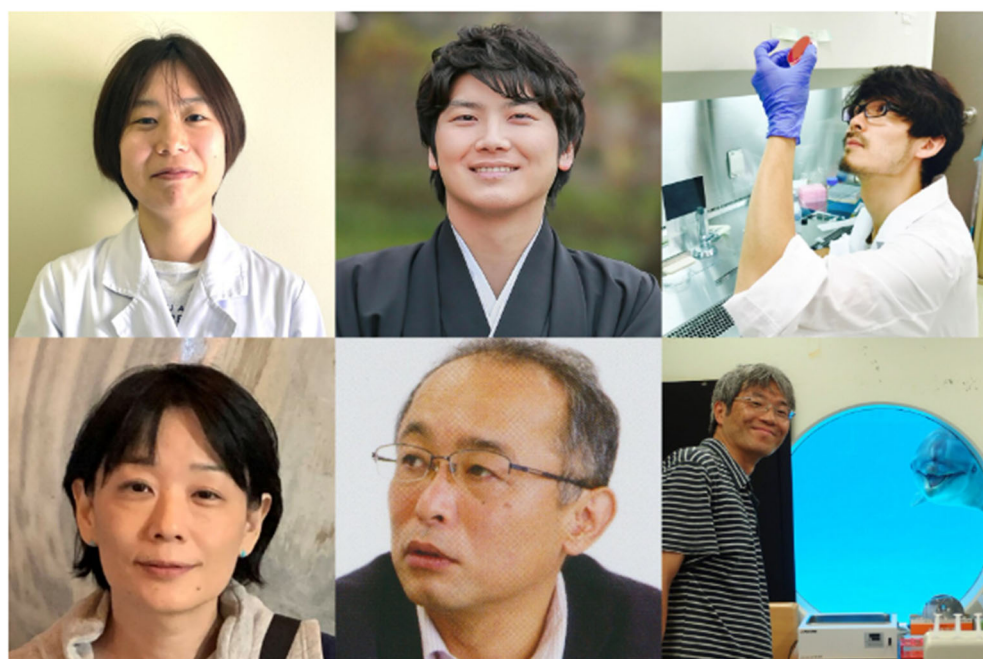




JOURNAL HIGHLIGHTS

ESTABLISHMENT AND CHARACTERIZATION OF A NOVEL LUNG CELL LINE DERIVED FROM THE COMMON BOTTLENOSE DOLPHIN



Left to right: Top: Kaede Tashiro, Kyosuke Hikobe and Takao Segawa; Bottom: Miwa Suzuki, Ken Maeda, and Takuya Itou

In a previous study published in this journal (DOI: <https://doi.org/10.1007/s11626-023-00786-y>), we reported on an infinite kidney cell line derived from bottlenose dolphin, and most of the long-term cultured cetacean cells reported are either skin- or kidney-derived. Additionally, cetaceans are often affected by respiratory diseases, which highlights the need for lung cell lines to study their unique respiratory physiology and pathogenesis of respiratory diseases. This paper introduced a novel lung cell line derived from the common bottlenose dolphin (*Tursiops truncatus*), named dLu. dLu is the first cetacean lung cell line that can be cultured for a long period, recording about 80 cell divisions by transfecting the simian virus 40 large T antigen. More importantly, this cell line showed altered cytokine gene expression upon immune stimulation with poly(I:C), making it a useful *in vitro* tool for studying immune responses in cetaceans. The results of this study may support the future expansion of cultured cetacean cells and develop cetacean research through the introduction of *in vitro* tools.

Kaede Tashiro, Kyosuke Hikobe, Takao Segawa, Miwa Suzuki, Ken Maeda, and Takuya Itou. Establishment and characterization of a novel lung cell line derived from the common bottlenose dolphin. *In Vitro Cell. Dev. Biol.-Animal*, 60, 98-105, (2024).