

The 50th Anniversary of the Laboratory of Embryology

DOI: 10.1134/S1063074023080059

June 1, 2023 marked the 50th anniversary of the Laboratory of Embryology established by the initiative of Alexei Zhirmunsky, the first director of the Institute of Marine Biology (IMB) currently referred to as the A.V. Zhirmunsky National Research Center of Marine Biology, Far Eastern Branch, Russian Academy of Sciences, Vladivostok, Russia. Vladimir Kasyanov, a professor, an academician, and a director of the IMB, became the head of the Laboratory and the founder of a new field of scientific research in the Russian Far East: reproduction and development of marine organisms.

Laboratory's activities began with a large-scale study of reproduction in most common species of marine bivalves and echinoderms from the Sea of Japan (Kasyanov et al., 1980). The subsequent steps resulted in a detailed description of the larval structure, development and metamorphosis with an analysis of reproductive strategies in mollusks and echinoderms (Kasyanov et al., 1998; Kasyanov, 2001). The research field of the Laboratory has expanded year by year. Studies of life cycles of marine organisms inhabiting the Sea of Japan are accompanied by comparative and evolutionary analyses of their ontogenesis, germ and stem cells, gametogenesis, ecology of reproduction and development, and also nonlinear processes in the morphogenesis.

The vast range of investigations conducted by the Laboratory covers a variety of marine organisms: algae, coelenterates, flatworms, roundworms, annelids, nemerteans, mollusks, crustaceans, echinoderms, lophophorates, hemichordates, tunicates, bony fish, and even whales. The range of research methods applied is also characteristic of the Laboratory: marine expeditions, scuba diving, hydrobiology, histology, light and electron-microscopy, immunohistochemistry, molecular phylogeny, etc.

Over the half-century history of the Laboratory, its members defended 28 Candidate of Sciences dissertations and six Doctoral dissertations, five scientists became professors, and two became members of the Russian Academy of Sciences. Laboratory's researchers published more than 800 articles in peer-reviewed journals and 35 monographs on marine organisms from the Sea of Japan and the North Pacific. Studies conducted by the Laboratory were supported by more than 50 grants from scientific foundations, and the researchers were awarded prizes, medals, grants and scholarships from various foundations and organizations. A new-to-science species of the lophophorate invertebrates, *Phoronis embryolabi*, an inhabitant of Vostok Bay, Sea of Japan, was named to honor the

Laboratory of Embryology (Temereva, Chichvarkhin, 2017).

The Laboratory currently represents a dynamic research team that continues its successful progress in studying reproduction and ontogenesis of marine organisms. Each member of the Laboratory is a creative person having expertise in certain area of marine research. This constitutes the basement for comprehensive knowledge of reproduction in a wide range of marine organisms, including most common and commercially valuable species from the Far Eastern seas.

This Special Issue is composed of papers that were written by the scientists of the Laboratory of Embryology and their colleagues and were dedicated to the Laboratory's 50th anniversary.

FUNDING

This work was supported by ongoing institutional funding. No additional grants to carry out or direct this particular work were obtained.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This work does not contain any studies involving human and animal subjects.

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

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