

Division of Natural System	Research field	Environmental Physiology	Lab. ID NS08
Laboratory web site	http://rinkai.w3.kanazawa-u.ac.jp/		
Research subjects			
<p>Our specialized field are fish physiology (particularly, calcium metabolism). Both osteoclast and osteoblasts coexist in fish scales. We believe that the scales are available as a bone model because some calcemic hormones influence osteoblasts and osteoclasts of fish scales as the hormones influence osteoblasts and osteoclasts of human bone. With additional research regarding the response of fish physiology to environmental pollutants and gravity responses etc., we have been able to develop medicine to cure disease of the human bone. We recently have examined endocrinological and toxicological studies of marine invertebrates and are going to study aquatic animals in future.</p>			
Master/Doctor course: Education policy, curriculum, typical activity in the laboratory			
<p>In a seminar, our students introduce an article in English and announce the results of their own research. Once a year, students present their work at a society gathering.</p>			
Daily life in the laboratory, etc.			
<p>Our students research while staying at Noto Marine Laboratory. We often have dinner with researchers, particularly in the summer, when many researchers visit our laboratory.</p>			
Message or comments by the laboratory faculty staffs			
<p>We welcome people who like sea animals. Fishing is the part of the study. For a person considering studying an aquatic animal, we recommend our outstanding laboratory. We also assist students in their search for good jobs.</p>			
Recent Master theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
2017.3	Effect of environmental pollutants on the bone metabolism in teleosts		
2017.3	Functional analysis of CCK/gastrin in the ascidian, <i>Ciona intestinalis</i>		
2017.3	Response of osteoblasts and osteoclasts to low-intensity pulsed ultrasound		
2015.3	Influence of radiation on bone and melatonin's rescue effect on radiation		
2015.3	Gravity response of osteoblasts and osetoclasts		
Recent Doctoral theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
2017.9	Structure and biological activities of calcitonin and procalcitonin amino-terminal cleavage peptide		
2014.3	Effects of environmental pollutants on osteoclasts and osteoblasts of teleost scales		
2013.3	Development of a fish scale <i>in vitro</i> culture apparatus for space biological experiments and gravity response of osteoblasts and osteoclasts in fish scales		
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