

Division of Natural System	Research field	Chronobiology	Lab. ID NS03
Laboratory web site			
Research subjects			
<p>After the serial discoveries of the mammalian clock genes in 1997, the molecular genetics of circadian rhythms has been finally established. Now our next targets are the experimental identification of novel molecular mechanisms for circadian oscillation, since the circadian cycling cannot be explained by a present standard model without them. We also use differential equations to describe the dynamics of the circadian clocks, and evaluate the novel clock molecules and functions found in our research by numerical simulations.</p>			
Master/Doctor course: Education policy, curriculum, typical activity in the laboratory			
<p>Master course: Students decide individual practical subjects to uncover the molecular mechanisms of mammalian circadian clocks for the Master thesis. All students take two weekly seminars, journal club and progress report, introducing hot topics in chronobiological research, and discussing their own research projects, respectively. Doctor course: Students present and publish their achievements in international conferences and journals, respectively, for the completion of their doctoral dissertation.</p>			
Daily life in the laboratory, etc.			
<p>Entrainment of regular lives to the adequate chronotypes of respective students is highly recommended for the fruitful studies. However, sometimes students stay for more than 24 hrs. in our laboratory for sampling experiments, because the period of circadian rhythms is approximately a day long. All relevant students of undergraduate, master, and doctor share the laboratory rooms, and everyday free discussion on biology or related topics are strongly encouraged. Many laboratory activities are organized like, welcome party for new comers, excursion, workshops, etc.</p>			
Message or comments by the laboratory faculty staffs			
<p>One of our goals is to develop brilliant and worldwide biological scientists promised by abilities to think logically, and plan and execute smart experiments. Stay foolish, work hard, and enjoy science.</p>			
Recent Master theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
2017.3	Analysis of Positive and Negative Regulation of <i>Bmal1</i> Circadian Transcription		
2016.3	Analysis of molecular mechanism to induce a mammalian clock gene, <i>Period1</i> , with novel compounds		
2015.3	Analysis of a novel transcriptional mechanism of a mammalian clock gene, <i>Bmal1</i> .		
2013.3	Determination of experimental conditions for PACHINCO-RT-PCR method.		
Recent Doctoral theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
Laboratory mail address		HajimeTEI <tei *at* kanazawa-u.ac.jp>	