Principal Researcher	Norio Wake	Number of Researchers	6
Research Institution・Department・Title	Professor Medical Institute of Bioregulation Kyushu University	Location of Institution	Beppu, Oita

Title of Project	Molecular mechanisms of cell senescence and its application of molecular targeted therapy for cancer.
Abstract of Research Project	Normal cell are mortal and are regulated by the surveillance system composed of telomere length-dependent and -independent signals. Cancer cells are immortal by disrupting this regulation. We are interested in the molecular mechanism involved in the telomere length-independent cell senescence induction particularly p53stabilization signalling. We try to develop new types of molecular targeted therapy for human cancers by recruiting the cell senescence program. In this research project, We examine A. isolation of human cell senescence genes and their functional analyses, B. involvement of Ras/ER/p53 signal transduction pathway in cell senescence and its application for molecular targeted therapy, C. identification of p21 functional domain involved in cell senescence and its downstream signalling, and D. molecular mechanism of cell senescence induced by HDAC inhibitors.
References	1 Kato K, Horiuchi S, Takahashi T, Ueoka Y, Arima T, Matsuda T, Kato H, Nishida J, Nakabeppu Y, Wake N：Contribution of estrogen receptora （ERa）to oncogenic K-Ras-mediated NIH3T3 cell transformation and its implication for escape from senescence by modulating the p53 pathway. J. Biol. Chem., 277, 13, 11217-11224（2002） 2 Terao Y, Nishida J, Horiuchi S, Rong F, Ueoka Y, Matsuda T, Kato H, Furugen Y, Yoshida K, Kato K and Wake N：Sodium butyrate induces growth arrest and senescence-like phenotypes in gynecological cancer cells.：International Journal of cancer 94, 257-267（2001） 3 Murakami A, Yamayoshi A, Iwase R, Nishida J, Yamaoka T, Wake N：Photodynamic antisense regulation （PDAR） of human cervical carcinoma cell growth using psoralen-conjugated oligo （nucleoside phosphorothioate）.： European Journal of Pharmaceutical Science 13, 25-34（2001）
Term of Project	Fiscal years 2002-2006（5years）

Budget Allocation (in thousand of yen)	FY2002	FY2003	FY2004	FY2005	FY2006	Total
	18,300	17,200	17,200	17,200	17,200	87,100