



WORLD SCIENCE LEADERS' SEMINAR



Nuclear Translocation of PKCalpha is Associated with Cell Cycle Arrest and Erythroid Differentiation in Myelodysplastic Syndromes (MDS)



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Date: Friday, 13 October 2017

Time: 15:30 - 16:30

Venue: Room 301 in Health and
Medical Science Innovation
Laboratory

健康医科学イノベーション棟301

Lecture Abstract

PI-PLCbeta1 is involved in cell proliferation, differentiation and MDS pathogenesis. Moreover, the increased activity of PI-PLCbeta1 reduces the expression of PKCalpha that, in turn, delays the cell proliferation and is linked to erythropoiesis. Lenalidomide is currently used in del(5q)low-risk MDS patients, where it can suppress the del(5q)clone and restore a normal erythropoiesis. We studied the effect of Lenalidomide on 16 low-risk del(5q) MDS patients, as well as del(5q) and non-del(5q) hematopoietic cell lines, mainly focusing on erythropoiesis, cell cycle and PI-PLCbeta1/ PKCalpha signalling. Responder patients and del(5q)cells showed a specific induction of erythropoiesis and a nuclear translocation of PKCalpha. Moreover, Lenalidomide could induce a selective G0/G1 arrest of cell cycle in del(5q) cells, slowing down the rate proliferation of these cells.



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