calcium release following stimulation with glutamate. Glutamate dose dependently decreased cell viability and increased the level of $[Ca^{2+}]_i$. However, the cells pretreated with dantrolene, an inhibitor of calcium release through RyR located in endoplasmic reticulum (ER), substantial lowered glutamate-induced increase of $[Ca^{2+}]_i$ and cell damages in neuronal cells. Moreover, dantrolene also inhibited $[Ca^{2+}]_i$ released through RyR in PC12 cells expressing mutant presenilin-2, which seems to be a modulator of calcium signal in ER. Our data therefore suggest that alternation of $[Ca^{2+}]_i$ through RyR in ER could be significantly important in neuronal cell damages by glutamate.

Poster Presentations - Field A2. Therapeutics

[PA2-1] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

An improved method to determine hydroxyproline in an immortalized rat liver stellate cell line (HSC-T6)

Lee EunSu°, *Kwak Wie-Jong Kwak, **Lee Eung-Seok, Soh Yunjo

Graduate School of East-West Medical Science, Kyung Hee University; *Life Science Center, SK chemicals;**College of Pharmacy, Yeungnam University

Hydroxyproline (HYP) is a post-translational product of proline hydroxylation catalyzed by an enzyme prolyl 4-hydroxylase which plays a crucial role in the synthesis of all collagens, because the 4-hydroxyproline residues are essential for the folding of the newly synthesized collagen polypeptide chains into triple-heical molecules. Considering the role of collagen and its significance in many clinically important diseases such as liver cirrhosis, a great deal of attention has been directed toward the development of an assay at cell-based system.
The numerous assay procedures described for HYP are laborious, time-consuming and not feasible for the massive-screening. Here, we report the cell-based assay of prolyl 4-hydroxylase using HSC-T6 cells. To improve the sensitivity of assay for HYP content, ascorbate in hypoxic condition or lactate were added to the media. HOE 077 or pyridine 2,4 dicarboxylic acid, inhibitors of prolyl 4-hydroxylase, exhibited the 75% and 70% of enzyme activity compared to control, respectively. The assay procedure took only 3 days after treatment with agents, while assays from the primary stellate cells or liver tissues have taken several weeks. Considering the time, expenses and trends in assay design from biochemical method to cell-based method, this assay method could be useful tool to screen the compounds for the inhibitor of prolyl 4-hydroxylase.(Supported by The Center for Biological Modulators, 21C Frontier)

[PA2-2] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

DW1350, a Newly Synthetic Anti-osteoporotic Agent : 1. DW-1350 Inhihited Bone Resorption and Promoted Bone Formation.

Lee JinSoo*, Whang YunHa°* ***, Ahn SeokHoon*, PanSoo*, Jin SangMi, Yi SunShin*, Jung YoungHo*, Suh Hongsuk**, Ryu JeiMan*

*Central Research Laborotories, Dong-Wha Pharm. Ind. Co., Ltd, **Department of Chemistry, Pusan National University, ***Biochemistry Department, Seoul National University