allylic oxidation afforded D-cyclopentenone. Since many L-nucleosides have shown interesting biological activity, we also synthesized L-cyclopentenone using similar RCM strategy. Our syntheses were found to be superior to those of the previously published syntheses.

[OD-4] [04/20/2001 (Fri) 14:15 - 14:30 / Room 3]

Docking Study of Topoisomerase I - DNA Complex with 3-Arylisoquinolines

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DNA topoisomerase 1 is an essential enzyme for relaxation of DNA during a number of critical cellular processes, including replication, transcription, and repair. Topo I catalyzes change in the linking number of DNA by breaking and resealing phosphodiester bonds. Therefore, the enzyme is a cellular target for anticancer drug development, and the characterized topo I inhibitors are camptothecin and its derivatives. During our study for the finding of new anticancer agents, several isoquinoline derivatives were found to show very potent topo I poison. Docking experiments using Sybyl 6.6 were undertaken with topo I ?DNA complex structure and several isoquinoline compounds. This study provides a three-dimension model for the postulated ternary cleavable complex of topo I, DNA, and the ligand molecules. In this proposed ?drug-stacking model, the compounds are intercalated in the topo I 뿢inked DNA cleavage site and interacts with the thymine 11 and Lys 532.

[OD-5] [04/20/2001 (Fri) 14:30 - 14:45 / Room 3]

Biosynthesis of Ginseng Saponin(1): Determination of Protopanaxadiol and Protopanaxatriol in Panax ginseng hairy roots by ELISA methods

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Protopanaxadiol (PPD) and protopanaxatriol (PPT) were known as aglycones of dammarane type saponin, ginsenosides from *Panax ginseng* C. A. Meyer. As a course of investigating biosynthetic enzymes of dammarane ginsenosides, production of the aglycones was examined in *Panax ginseng* hairy roots by ELISA methods.
For this study we developed ELISA methods for measuring PPT and PPT using polyclonal antibody. In present study, we report: 1) A specific and sensitive ELISA was developed for the determination of PPD, and 2) PPD and PPT contents in *Panax ginseng* hairy roots were measured successfully. The Abs were obtained from rabbits by immunization with IH-901-bovine serum albumin conjugate was used as immunogen. While the Abs were found to be specific to both IH-901 and PPD, they showed minor or even no corss-reactivity to PPT (1.79%) and other ginsenoside tested (G-Rg_1:0.08%; G-Rb_1:0.13%; G-F_1:1.48%). The working range of the assay was from 0.025ng/well to 1.25ng/well. The comparison of ELISA and HPLC showed a good correlation (r=0.986) between the two methods.
In *Panax ginseng* hairy roots cultures (1/2 MS liquid medium; ca. 10 mg inoculum; 50ml/100ml flask; rotated at 100 rpm), both PPD and PPT contents were increased from the day 25. In conclusion, the ELISA methods could be very useful tools for the studies on the biosynthesis of dammarane glycoside.

[OD-6] [04/20/2001 (Fri) 14:45 - 15:00 / Room 3]

Isolation of HIV gp-41 Binding Components from the Stem of Fraxinus sieboldiana