allergic response but whose intracellular biochemical function has remained elusive.Recently the solution structure of TCTP from Schizosaccharomyces pombes has been reported. A sequence alignment with human and S. pombes TCTPs shows approximately 49% identity and 65% similarity. We tried homology modeling of human TCTP using the 3D structure of S. pombes TCTP as template by three different computer programs COMPOSER, SWISS-MODEL, and GENO3D.
Three different models were obtained and their structures were superimposed to display the similarities of the structures. The results present distinct similarity in α-helix region whereas the numbers and positions of β-strands vary depending on the program.The refinements of the models are in development taking the function of the protein into consideration to end up with a final conformation.

[PC1-42] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Measurement of Estrogen Receptor Binding Activities of Estradiol and Endocrine Disrupters by Homogeneous Fluorescence Polarization Assay

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A simple homogeneous fluorescence polarization receptor assay (FPRA) was developed to measure the receptor binding activities of various endocrine disrupting chemicals (EDCs) using ethylenediamine fluoresceinthiocarbamyl (EDF)-labeled estrogen and estrogen receptor. EDF-estrogen tracer was synthesized from 6-ketoestradiol-6-(o-carboxymethyl)oxime and EDF using EDC coupling reaction, and cytosolic estrogen receptors were purified from rat uterine.

Calibration curve of FPRA was established using 17β-estradiol (Kd = 1.1 x 10^{-9} M) which can bind with estrogen receptor in the range between 100 nM and 1 mM at the optimized condition. After receptor binding activities of FPRA were characterized with the estrogenic chemicals (diethylstilbesterol and tamoxifen) and androgenic chemicals (methyltestosterone and flutamide), each EDC was compared for the binding activity with estradiol. The detail relative binding activities of various EDCs will be discussed. This homogeneous FPRA system takes 20 minutes for 10 samples using photo check mode of a TDx analyzer. It needs no separation step between free tracer and receptor-bound tracer. Therefore, the system has high potential to test estrogen receptor binding activities for various endocrine disrupters.

[PC1-43] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Platelet Activating Factor Acetylhydrolase Activity in CSF of Children with Acute Systemic or Neurological illness

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Platelet activating factor acetylhydrolase(PAF-AH) is the enzyme that hydrolyzes inflammatory mediator PAF and phospholipids containing oxidized truncated fatty acids. It is distributed widely in tissues and plasma and is thought to be a defense mechanism of protecting the host against the toxic effects from PAF and other biologically active oxidized phospholipids. Higher levels of PAF-AH have been found in plasma and other body fluids in a variety of different diseases, but few studies have been conducted to measure the level of PAF-AH in CSF. Therefore, we measured the PAF-AH activity in cerebrospinal fluid (CSF) to determine if it is involved in CSF defense mechanism against the injury from a varity of neurological conditions including menigitis, seizures, receiving intrathecal chemotheraphy etc. A total 85 patients (55 males and 30 females, mean age 3.8 years) were involved in the study. Subjects studied were 7 patients with menigitis, 24 with acute febril illness, 4 with CNS inflammatory diseases, 24 with