Greetings from the Chair
Jonathan Maynes

As you are all aware, the AOCS Annual Meeting is fast approaching. Along with the opportunity to network and renew acquaintances comes the opportunity for continuing personal and professional education. Also it is a wonderful opportunity to get involved and help promote the organizations that matter to you! Any organization requires input and effort from all its members, and the Phospholipid Division is no exception. Division meetings include a roundtable discussion where member input is sought and appreciated. As you attend the meeting this year (or think about attending), if you have suggestions or critiques about what could be done better, please contact any of the division officers.

In this issue you will find several recent references to lecithin and health, an announcement about a German prize for post graduate work in lecithin in honor of Hermann Pardun, and information about the ILPS short course at Ghent. Enjoy.

I look forward to seeing you in Seattle.
—Jonathan

Here are some key division events to take note of:

- Sunday, May 18, 1:00-2:30 p.m.: Board Meeting
- Sunday, May 18, 12:00-1:00 p.m.: Roundtable Discussion
- Monday, May 19, 12:00-2:00 p.m.: Luncheon ($35 early / $45 standard)
  
  **Luncheon Speaker:** Willem van Nieuwenhuyzen, President of ILPS, will speak on "The Past, Present, and Future of Lecithin and Phospholipids."

You may peruse the current draft of the [technical program online]

Hermann Pardun Prize

Deutsche Gesellschaft für Fettwissenschaft e.V

Announcing the German Association of Lipid Science (DGF) Hermann Pardun Prize in celebration of Dr Pardun's 100th birthday on 14 April 2008.

This annual prize will be given for the best master's thesis on lipid chemistry or technology.

The prize will compensate the winner for travelling and lodging costs for visiting the DGF Kaufmann conference.

Entries in English from a non-German university will also be accepted for the
Pardun was inventor of a number of Unilever patents on lecithins in the 1960s. After his retirement he was advisor to Lucas Meyer Company. He published the book *Die Pflanzenlecithine* in 1988.

If you know master's students working on a thesis on phospholipids, please forward them this information.

**Short Course: Lecithin & Phospholipids in Emulsions**

Thursday and Friday 5-6 June 2008, Ghent, Belgium

After the Ghent 2005 and AOCS-Quebec 2007 Lecithin Short Courses, ILPS and Ghent University offer the 2008 short course, to be held in Het Pand, an old Dominican monastery owned by Ghent University, with laboratory demonstrations in the Laboratory of Food Technology.

Who should attend?

Scientists, product developers, QA/QC managers, lab technicians, application technologists, plant supervisors and sales managers working with lecithin, phospholipids, emulsifiers and emulsions in the food, pharmaceutical, and other industries, institutes, or academia.

AOCS Phospholipid Division members are requested to disseminate this information to their business contacts and staff.

**Technical Program**

**Thursday 5 June**

Session I: Lecithin Characterization  
Session II: Emulsion Preparation and Stabilization  
Session III: Laboratory Demonstrations  
**!! Participants may bring own their lecithin sample for testing !!**  
Session IV: Emulsion Characterization

**Friday 6 June**

Session V: Food Applications  
Session VI: Legislation  
Session VII: Applications II
Program details are on the website or ask organizer Willem van Nieuwenhuyzen.

**Short Course Speakers / Instructors / Coordinators**

- Prof. Dr. Koen Dewettinck, Ghent University
- Dr. Reinhard Lange, Cargill Texturant Systems, Germany
- Dr. Jaap Nijssse, Unilever Research, The Netherlands
- Mrs. Saskia Rombaut Van der Looven, Ghent University
- Dr. Michael Schneider, Lecithos, Germany
- Prof. Dr. Paul Van der Meeren, Ghent University
- Ir. Willem van Nieuwenhuyzen, Lecipro Consulting, The Netherlands
- Ir. Judith van Peij-Visser, Kerry Bioscience, The Netherlands

Speaker information is given on the ILPS website.

**Call for Posters: Best ILPS Poster Award**

Under the theme "Students meet Industry" M.Sc. and Ph.D. students are encouraged to submit posters on related topics. The Best Poster Award will be presented at the end of the course.

**Course Homepage**

Program details, registration form, hotel and travel information are available at [http://www.ilps.org](http://www.ilps.org); for further information contact lecithin@lecipro.nl.

**Flanders' Food Emulsion Seminars in Spring 2008**

Flanders Food is a Belgian association which disseminates food science information to medium and small food processing enterprises in the northern part of Belgium, where the mother language is Dutch. The association also intermediates in European Union sponsored research projects, by activating the participation of these medium and small companies. And the staff organizes seminars.

On March 6 the one-day seminar on food emulsions and emulsification was held at Affligem near Brussels. The translated title was: "Find your way in emulsions." The full class of 45 participants followed this seminar. Speakers were Paul van der Meeren and Koen Dewettinck from the University of Ghent, Willem van Nieuwenhuyzen from Lecipro Consulting and Johan Lecluse from Cargill Texturant Systems.

Paul gave an in-depth introduction in principles of emulsion formation, stabilization and characterization by various methods and apparatus. Koen had to delegate the presentation of his papers on emulsion preparation and rheology of emulsions to Ph.D. student Eveline Fredrick. Willem presented the vast range of food grade low molecular weight emulsifiers (lecithin, monodiglycerides esters and others) and emulsifying proteins, showing the synergy but also the competition of surface active agents at the interface between oil and water. Yellow fat spreads and baked good were two presented sectors of food use. Johan presented the thickening stability of hydrocolloids with a focus on ice cream. This illustration was resonant, since everybody could
imagine positive attributes.

The successful event will be repeated on April 22 with a second fully booked class. Information (in Dutch language): www.flandersfood.com

Various Lecithin Papers


The effect of phospholipid formulation and choice of surfactant on skin permeation of selected hydrophilic drugs from elastic liposomes across human epidermal membrane has been studied. Sodium cholate and various concentrations of phosphatidylcholine were used for the preparation of liposomes namely hydrogenated phosphatidylcholine 90% (Phospholipon 90H), phosphatidylcholine 95% (Phospholipon 90G), phosphatidylcholine 78.6% (Phospholipon 80), and phosphatidylcholine 50% (Phosal PG). To investigate the effect of the surfactant, liposomes were prepared from 95% phosphatidylcholine (Phospholipon 90G) and various surfactants (sodium cholate, sodium deoxycholate, Span 20 (sorbitan monolaurate), Span 40 (sorbitan monopalmitate), Span 60 (sorbitan stearate) and Span 80 (sorbitan monooleate)). The vesicles were prepared by the conventional rotary evaporation technique. The film was hydrated with phosphate-buffered saline (10 mL) containing 9, 2 and 2.5 mg mL\(^{-1}\) of methotrexate, idoxuridine and aciclovir, respectively. All formulations contained 7% ethanol. Homogenously-sized liposomes were produced following extrusion through 100-nm polycarbonate filters using Lipex Extruder. Particle size was characterized by transmission electron microscopy. Vertical Franz diffusion cells were used for the study of drug delivery through human epidermal membrane. For the three drugs, the highest transcutaneous fluxes were from elastic liposomes containing 95% phosphatidylcholine. In general, a higher flux value was obtained for liposomes containing sodium cholate compared with sodium deoxycholate. For the liposomes containing sorbitan monoesters, there was no clearly defined trend between alkyl chain length and flux values. Overall, transcutaneous fluxes of liposomal preparations of hydrophilic drugs were comparable with those from saturated aqueous solutions (\(P > 0.05\)).

Sorbitan monolaurate; Sorbitan monopalmitate; Sorbitan monostearate; Sorbitan monooleate; Lecithin; Acyclovir


OBJECTIVE: To investigate the clinical curative effect of soybean lecithin on cerebral infarction. METHODS: 542 patients with cerebral infarction within 48 h after the onset with the nervous function defect scores of 31-35 were divided into 3 groups: basic treatment group, 60 cases, with conventional treatment; citicoline group, 122 patients, with conventional treatment and citicoline; and soybean lecithin group, 360 patients, with conventional treatment and soybean lecithin 10 g tid. For all patients, treatment
began sometime within 48 hours after the onset. The treatment course lasted 28 days.

RESULTS: When the course was over, the infarct volumes in basic group citicoline group, and soybean lecithin group, were 7.6 cm$^3$ ± 2.9 cm$^3$, 7.3 cm$^3$ ± 3.1 cm$^3$, and 6.4 cm$^3$ ± 2.7 cm$^3$, respectively ($F = 7.371$, $P = 0.0007$). The basic group and citicoline group being compared with the soybean group by Dunnett test, $t = 4.387$ and 3.969 respectively, $P < 0.01$. The nervous function defect integral in the three groups decreased 14.2 ± 10.93, 15.0 ± 9.0, and 18.5 ±10.9, respectively. Two-way analysis of variance of drug kind and beginning time of treatment showed the value of $F$ in drugs as 6.250, $P = 0.0021$, and value of $F$ in times as 0.9417, $P = 0.4201$. In the order of death, deterioration, nonimprovement, improvement, significant improvement, and recovery, the ridit values for the comprehensive curative effect in the 3 groups were 0.4003, 0.4118, and 0.54 5 respectively; $\chi^2 = 27.89$, $P < 0.001$. CONCLUSION: Soybean lecithin is effective in treatment of acute cerebral infarction. The mechanism may be that soybean lecithin lowers the decrease of brain phospholipid content in brain ischemia.


Liposomes are structures composed by phospholipids as soy phosphatidylcholine (PC) and hydrogenated soy phosphatidylcholine (PCH). Among the methods used to prove liposomes' stability, turbidity method is widely used. The objective of this work was to study the stability of liposomes containing PC or PCH with and without cholesterol (CHOL) by turbidity method. Liposomes were stored a 30°C during 90 days and periodically absorbance readings at 410 nm were made to verify possible turbidity alterations. Increases in the turbidity with time occurred for PC liposomes. In the presence of CHOL higher turbidity was obtained probably reflecting the increase in the size of liposomes. For PCH liposomes the presence of CHOL did not affect the turbidity suggesting higher physical stability of the structures.

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