Two ISP depart, and the joy of soy via the Internet

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The recent failures of two companies that have provided free Internet access to millions of consumers is casting an even deeper shadow on the future of dot-coms that are heavily dependent upon on-line advertising revenue, according to Greg Johnson of the Los Angeles Times. San Francisco-based 1stUp.com, which provided free online access for millions of AltaVista users, said in mid-December that it will go out of business early in 2001. 1stUp's decision will also affect Lycos and Excite. Spinway Corp., of Sunnyvale, California, which provided service for Kmart Corp.'s Bluelight.com site, closed its doors on Dec. 1, 2000. So, folks, nothing is free. I suggest that each of my readers search out a stable ISP (Internet service provider), even if you must pay a fee.

Soybean information site
The United Soybean Board and the Soy Protein Partners have launched their revised site (netlink: www.soybean.org). It is an easy-to-use site packed with information. There are four major areas on the home page: Soyfoods Guide, Soy Foods/Health, Nonfood Uses for Soybeans, and Soybean Production. You can download the Soyfoods Guide (if you have Adobe Acrobat Reader) or you can order it online. Under Soy Foods/Health there are 11 links: Frequently Asked Questions, Recipes for Consumers, Health/Nutrition Information, Health/Nutrition Research, Soyfood companies, Free E-mail Soyfoods Newsletter, Information for Food Manufactures, Information for Health/Nutrition Professionals, Information for Food Service Professionals, Information for News Media Professionals, and Speakers list. Under Nonfood uses for soybeans there is one link: Commercially Available Nonfood Soy Products. Under Soybean Production, the links include: Stratsoy, Weather, Soybean Farm Policy, U.S. Soybean Exports, Soybean Statistics, Market Information, and Soybean Resources.

As I said, there is a lot of information available on this site. It is one that should be on everyone's bookmark or favorites list.

EPA clearinghouse
The U.S. Environmental Protection Agency (EPA) has developed a National Compliance Assistance Clearinghouse Web site (netlink: www.epa.gov/clearinghouse). The clearinghouse provides links to compliance assistance resources from around the Internet. This includes links to the EPA and other federal agencies, state and local governments, tribal agencies, and other sources of compliance assistance information. The clearinghouse also provides a discussion forum to promote collaboration and information exchange.

The EPA and many states have compliance incentives policies that waive or reduce penalties for violations discovered through the use of compliance assistance materials, audits, mentoring, or training programs.

The clearinghouse was designed to be easy to use. Information is organized by topic. The topics are at the top of the home page in the form of clickable tabs. Downloading information is fast. If you are looking for a specific piece of compliance information, you can use the search tools to narrow the search parameters within a topic.

This site is recommended for those involved with EPA compliance. I think you will be able to find helpful information.

Thanks to inform editor/writer Catherine Watkins for suggesting that I review the soybean and the EPA Clearinghouse sites. See you next month when I will review a really fabulous e-business site.
Book reviews


This book is from the proceedings of the 72nd Colloid and Surface Science Symposium held at Pennsylvania State University during 1998. It deals with three important interfacial phenomena of emulsions, foams, and thin films. The book contains 27 chapters, which are grouped into the following six sections: Part I, General Overview; Part II, Emulsions; Part III, Foams; Part IV, Thin Films; Part V, Adsorption and Monolayers; and Part VI, General Papers.

Developments in instrumentation, theory, and application spanning more than 30 years are reviewed in Part I. The first chapter reviews interfacial rheology and thin-film phenomena. The second chapter deals with surfactant systems, where the recurring theme is that surfactant properties that are critical in one system (e.g., micellar system) are also critical in many other systems (e.g., emulsions, monolayers, etc.)

Part II presents recent theoretical and experimental results in the study of emulsion stability. Included in these discussions are such phenomena as self-emulsification, spontaneous emulsification, multiple emulsions, and surfactant-protein interactions. These phenomena are critical in various disciplines of important practical applications, such as food emulsions, drug delivery, and agrochemistry.

In Part III, recent results on the stability of aqueous and nonaqueous foams are discussed. This section also includes results from the investigation of the antifoam properties of silcon- and hydrocarbon-based defoamers.

Part IV covers recent theoretical and experimental results on stability of thin liquid films in the presence or absence of amphiphilic components and/or entrapped materials. Also included here are investigations into the factors affecting the thinning and rupture of thin liquid films, which is an important factor in flotation. Other subjects discussed in Part IV include studies on Newton Black Films and the entrapment of small particles in thinning foam films.

In Part V, theoretical and experimental results on the diffusion of amphiphiles from solution and their adsorption at the interface are presented. Results on both synthetic and natural surfactants (such as the physiologically important lung surfactant protein C) are presented. Also included in this section are studies on single as well as mixed amphiphilic systems.

Papers that do not fit any of the above categories are included in Part VI. Several of the Part VI papers discuss recent results on the study of the interactions and rheology of colloidal dispersions. Also discussed in this section is the attachment of bubbles to hydrophobic solid particles (a subject of interest to flotation); synthesis and characterization of thin metal oxides, and the synthesis and characterization oleic acid-based polysoaps.

This book is a useful reference to all researchers in the areas of emulsions, foams, and thin films. Its chapters are well-written, well-illustrated, and well-referenced. The review chapters will provide a good starting point for those entering these fields, while the chapters dealing with current topics will be of interest to those already active in these areas of research. Several topics discussed in the book have important practical application in food emulsion, drug delivery, flotation, agrochemicals, defoaming, coatings, etc. This should make the book a good reference material for those engaged in practical as well as basic research.

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The first 20 chapters, which could be considered as one book, are well-written with experts in each area.

De Man does an excellent job on the physical and chemical properties without overkill on detail.

Ackman describes his special efforts on separation and analysis by gas-liquid chromatography. He presents isotopic method updates with new stable isotopes for better fatty isotopic analysis. This chapter is a tutorial describing the method and its use as a tool in metabolic studies.

Rhee covers the fatty acid composition of meats and has an excellent grasp of the topic; this is an overlooked area for nutrition impact. Jensen’s chapter deals with milk and dairy, a well-documented area that is an update from 1992.

Cantor et al. discuss poultry and eggs in this major avian species. With the increased ingestion of poultry...
today, this information is useful to the nutritional impact of their fatty acids.

Eggs have a high variability of composition and have been reviewed by several authors in Chapter 7. The tables are misplaced relative to the text and it takes considerable flipping of pages to get the information.

Fish and shellfish fatty acid composition is well organized by Ackman. This is an honest appraisal and update on the control and composition of a variety of fish and shellfish.

Peng does a good job of tackling the fatty acids of vegetables that might be included in the average diet, from potatoes in the Solanaceae group to cabbage within the crucifers to cucurbits as pickles and cucumbers.

Oils seeds are well covered by White, who considers 13 major oilseed crops for vegetable oils.

Like vegetables, fruits have a very low fatty acid effect on the diet except for some varieties such as the date palm. The date palm fruit pulp contains little fat, but the seeds are rich sources of fatty acids. The chapter by Kamel and Kakuda provides an extraordinary compilation of fatty acid compositions for dozens of fruit seeds, selected spices, and condiments.

Becker does a quick review of food cereal grains and grass products, and Boosalis has a thorough compilation of commercial foods from soups to nuts to cookies to crackers. Even though taken from the U.S. Department of Agriculture's nutrition database, the tables give you what you need to estimate today's fat intake.

Fatty acid isomers are covered in a chapter by Craig-Schmidt and Holzer on how these isomers are formed and their compositions in foods. Hammond explains genetic alterations of food fats and oils while Akoh details fat-based substitutes and Jandacek reviews the commercial applications of fatty acid-derived foods.

Effects of processing and storage and factors affecting stability and nutritional values end this 20-chapter review on composition, physical chemical properties, and uses of fatty acids and their derivatives.

The remaining 25 chapters easily could be a second book. They deal with nutritional aspects of fatty acids, including absorption, transport, metabolism, and interaction with carbohydrates and minerals.

Essential fatty acids are reappraised by Chapkin. Berdanier looks at membrane function. Ntambi and Sessler cover fatty acid regulation of gene expression and fat cell differentiation. One important topic mentioned by Bruckner is the involvement of phospholipid fatty acids in cell signaling and their membrane function. Wood and Hunter review biological effects of palm oil and isomers. Oxidized fatty acids are covered by Chow.

An interesting chapter on satiating effects was written by Warwick and McGuire.

The remaining ten chapters review the effect of fatty acids on growth and development, aging, immunity and inflammatory disease, liver, visual, cardiovascular, cancer, renal, diabetes, neuromuscular, and psychiatric disorders.

The book is well organized and clearly written. References are up to date with the top scientists in this field of research.

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Noteworthy articles


Mutations in certain genes (ABCG8 and ABCG5) encoding for the ATP-binding cassette (ABC) transporter family result in increased intestinal absorption and decreased biliary excretion of dietary sterols resulting in hypercholesterolemia and premature coronary atherosclerosis.


Dietary conjugated linoleic acid (CLA) may reduce body fat mass in humans although a dose relationship does not appear to exist at doses greater than 3.4 g/day.


Application of combined silver-ion high-performance liquid chromatography and gas chromatography in the analysis of CLA isomers.


Particular beneficial effects of supplemental vitamin E in healthy...
Chinese individuals are shown to exist for cell-based immunity and oxidative stress. Racial differences are known to occur.


Consumption of olive oil compared with that of rapeseed or sunflower oils gave 10–20% higher levels of plasma cholesterol, triglycerides, apolipoprotein B, and concentrations of very low density lipoprotein (LDL), intermediate density lipoprotein, and LDL cholesterol. Some of the differences may be attributed to differences in the squalene and phytosterol contents of the oils.


Daily ingestion of 2.1 g of plant sterol from rice bran oil lowered total serum cholesterol by 5% and low-density lipoprotein cholesterol by 9% in normolipemic humans. This effect is probably due to β-sitosterol and other 4-desmethylsterols and not 4,4′-dimethylsterols.


Higher serum levels of docosahexaenoic acid and docosapentaenoic acid were associated with lower risks of acute coronary events. A high mercury content in fish could attenuate this effect. No association appeared to exist with serum eicosapentaenoic acid and coronary events.


Supplement comprising 22 papers is available for purchase from The American Journal of Clinical Nutrition, Production Office, 9650 Rockville Place, Bethesda, Maryland 20814, or can be ordered online. Netlink: www.ajcn.org/misc/supplist.shtml.


Refining of rapeseed oil resulted in losses of tocopherols exceeding 30%, two-thirds of which occurred from distillation during deodorization.


γδ-Mixture at 100 mg/100 g fat provided the best protective action for olive oil; γ alone at the same level was best for linseed oil; α-tocopherol reduced these observed effects.


Tocotrienyl acetate dietary supplements can yield detectable levels of tocotrienols in human plasma, but do not lower cholesterol in hypercholesterolemic subjects on low-fat diets. α-Tocotrienol may be potent in decreasing LDL oxidizability.


An inverse relationship was found between fat intake averaged over four to five years and estradiol levels. Finding contradicts the theory that fat intake predisposes to breast cancer risk by raising endogenous estrogen level.


Guidelines for reducing the risk of cardiovascular disease by dietary and other lifestyle practices. Diet is recommended to include low-fat or nondairy products; fat intake ≤30% of total energy with saturated fat <10% of energy and trans not more than 2 to 3% of energy. Also diet should include two fish servings each week and some of flaxseed, flaxseed oil, canola oil, or soybean oil as a source of n-3 acids. Further recommendations are given regarding fat substitutes, stanol/sterol ester-containing foods, soy protein and isoflavones, fiber supplements, and n-3 acid supplements.

Statins, drugs used to regulate the body formation of cholesterol, may prove to be useful in staving off certain forms of dementia independent of the presence or absence of untreated hyperlipidemia or exposure to nonstatin lipid-lowering agents. The available data could not distinguish between Alzheimer's disease and other forms of dementia.


Both the antiapoptotic effect (prevention of normal cell death) of docosahexaenoic acid (DHA) and Raf-1 translocation are sensitive to DHA-induced phosphatidylserine (PS) accumulation. The protective effect of DHA may be mediated through the promoted accumulation of PS in neuronal membranes.


Results suggest that ingestion of 100 mg androstenedione (ASD), three times per day, does not increase serum total testosterone or prostate-specific antigen even though there were increases in levels of ASD, free testosterone (but not enough to trigger muscle building), estradiol, and dihydrotestosterone (can cause prostate to enlarge). A significant (10%) decrease in serum high-density lipoprotein (HDL) cholesterol concentration can be considered a potential health risk. Serum dihydrotestosterone response to ASD ingestion was related to age.

**Adipocyte symposium**

A symposium on "Adipocyte Function, Differentiation and Metabolism" comprising six papers is available in *J. Nutr.* 130:3109s-3133s (2000).

**New Books**

**Emission Control—Plants for Extracting Vegetable Oils and Fats,** The Association of Engineers and DIN Standards Committee's Commission on Air Pollution Prevention, Beuth Verlag GmbH, Bürgrafenstrasse 6, 10787 Berlin, Germany, $63, 57 pages, 2000.


**Flavourings in Food—A Legal Perspective,** Publications Dept., Leatherhead Food RA, Randalls Road, Leatherhead, Surrey, KT22 7RY, United Kingdom, $200, 200 pages, 2000.


**Advances in research on dietary supplements**

The Consumer Healthcare Products Association (CHPA) announced on Dec. 13, 2000, the availability of the first issue of the *Annual Bibliography of Significant Advances in Dietary Supplement Research*. Among the items covered are selected papers on leading research in the areas of fat-soluble vitamins, fats and fatty acids, androstenedione, and fiber. Copies of the text are available from Donna Edenhart at CHPA (netlink: www.chpa-info.org).