ENZYMATIC PREPARATION AND PURIFICATION OF PROSTAGLANDIN E_2. M. Lapius, N. H. Grant, and H. E. Alburn (Res. Div., Wyeth Labs., Philadelphia, Pennsylvania 19101). *J. Lipid Res.* 9, 371–3 (1968). An enzymatic system has been developed for the production of prostaglandin E_2 (PGE_2) from arachidonic acid by extracts of sheep seminal vesicular glands. The presence of glutathione insures high yields. A new procedure for the purification of PGE_2 was also developed, based on the dialysis of the biosynthesized product at pH 8 and extraction of the dialysate at pH 3 with chloroform. This procedure routinely gives yields of PGE_2 of 25–37% (from arachidonic acid) with a purity of 90 to 100%. Additional analytical proof of the identity of PGE_2 was provided by physicochemical characteristics of the crystalline thiosemicarbazide derivative, which can be readily prepared under mild conditions.

PROPERTIES OF HUMAN SERUM LOW DENSITY LIPOPROTEINS AFTER MODIFICATION BY SUCCINIC ANHYDRIDE. A. Scanu, H. Pollard and W. Reader (Depts. of Med. and Biochem., Univ. of Chicago and Argonne Cancer Res. Hosp., Chicago, Ill. 60637). *J. Lipid Res.* 9, 342–9 (1968). Human serum low density lipoprotein of d 1.019–1.063 (LDL_2) treated with succinic anhydride at pH 7.5–8.0 showed the same properties (flotation and sedimentation coefficients, intrinsic viscosity) and optical properties (circular dichroism) as untreated LDL_2. However, in contrast to LDL_2, the succinylated product ($sLDL_2$) failed to react with rabbit anti-LDL_2 antisera. Extraction with ethanol-ether (3:1) yielded the succinylated apoprotein which was also immunologically unreactive and appeared to differ in structure from s-LDL_2, as assessed by the parameters of intrinsic viscosity and circular dichroism. The molecular weights of both LDL_2 and s-LDL_2 obtained by the technique of sedimentation equilibrium were $2.1–2.3 \times 10^6$. By the same method, s-apo-LDL_2 gave an uncorrected figure of $3.95–4.15 \times 10^4$ and, after correction for succinyl functions, of $3.60–3.80 \times 10^4$. Because of the assumptions made in the computations, the latter figure was considered approximate.

THE PLASMA LECITHIN: CHOLESTEROL ACYLTRANSFERASE REACTION. J. A. Glomset (Dept. of Med. and Regional Primate Res. Center, Univ. of Washington, Seattle, Wash. 98105). *J. Lipid Res.* 9, 155–67 (1968). Evidence for the existence of a plasma lecithin: cholesterol acyltransferase is reviewed with emphasis not only on the lipid reactants, but also on the lipoprotein "substrates" and "products." The cholesteryl esters of all major lipoprotein classes become labeled when plasma is incubated with cholesterol-^{14}C. However, the smaller, lecithin-rich high density lipoproteins appear to be preferred substrates. Most studies of factors that influence the acyltransferase reaction have not adequately distinguished between effects on the enzyme and effects on the lipoprotein substrates. However, the fact that cholesterol esterification is diminished in plasma from eviscerated animals or from patients with reduced liver function suggests that the liver may regulate both the level of the enzyme and that of the substrates. Several indications exist that the acyltransferase reaction is the major source of plasma esterified cholesterol in man. Furthermore, the reaction may have a broader, extracellular function. One possibility is that it plays a role in the transport of cholesterol from peripheral tissues to the liver.

BIOSYNTHESIS OF β-GLUCURONIDES OF RETINOL AND OF RETINOIC ACID IN VIVO AND IN VITRO. K. Lippel and J. A. Olson (Dept. Biochem., Univ. of Florida College of Med., Gainesville, Florida 32601). *J. Lipid Res.* 9, 168–75 (1968). After the intraportal injection of retinol-6,7-^{14}C to rats, the O-ether derivative of retinol, retinyl β-glucosiduronate, appears in the bile. Both retinoyl β-glucuronide and retinyl β-glucosiduronate are also synthesized *in vitro* when washed rat liver microsomes are incubated with uridine diphosphoglucuronic acid (UDPGA) and either retinoic acid or retinol, respectively. The synthesis of retinoyl β-glucuronide was also demonstrated in microsomes of the kidney and in particulate fractions of the intestinal mucosa. The glucuronides were characterized by their UV absorption spectra, by their quenching of UV light or fluorescence under it, by their thin-layer chromatographic behavior in two solvent systems, and by the identification of products released during their hydrolysis by β-glucuronidase. The conversion of retinal to retinoic acid and the synthesis of retinoyl β-glucuronide

(Continued on page 668A)

How to Kill an Association in Thirteen Easy Steps

1. Stay away from meetings.
2. If you do come, find fault.
3. Decline office or appointment to a committee.
4. Get sore if you aren't nominated or appointed.
5. After you are named, don't attend board or committee meetings.
6. If you get to one, despite your better judgment, clam up until it's over. Then sound off on how things really should be done.
7. Do no work if you can help it. When the Old Reliables pitch in, accuse them of being a clique.
8. Oppose all banquets, parties and shindigs as being a waste of the members' money.
9. If everything is strictly business, complain that the meetings are dull and the officers a bunch of old sticks.
10. Never accept a place at the head table.
11. If you aren't asked to sit there, threaten to resign because you are not appreciated.
12. Don't rush to pay your dues. Let the directors sweat; after all, they wrote the budget.
13. Read mail from headquarters only now and then; don't reply if you can help it.

[From "The Monthly Mailer," American Institute of Laundering, 2, No. 5 (1968).]

• *Industry Items*

Gordon S. Ziegler, President of Ziegler Chemical & Mineral Corporation, Great Neck, N.Y. and George R. Jackson, President, Dolton Manufacturing Company, Dolton, Illinois, a subsidiary of Sucrest Corporation, announced the acquisition by Dolton of the Tall Oil Products Department of Ziegler's Fatty Acid Division in Chicago. This is another step into chemical diversification for Sucrest. Dolton's interests up to now have been in edible fatty derivatives. Ralph Hagberg, who was Vice President in charge of Ziegler's Chicago operation, joins Dolton as Vice President of their newly-formed Chemical Division. Mr. Hagsberg has spent thirty years in the Oils and Fats Industry.

A contract to build a new oil and fat processing plant has been given to BUSS LTD., Basel, Switzerland, by CAPSA, Compania Algodonera Paraguaya S.A., Asuncion, Paraguay. The plant consists of a number of different operation units, such as hydrogenation, splitting, extraction, etc. BUSS will supply know-how and engineering services as well as the main part of the equipment involved. The value of this new contract is estimated at approximately sFr. 3 million. Delivery will be in spring-summer 1969 and plant start-up is planned for the second half of 1969.

ELLIOTT COMPANY one of the pioneers in the ejector field in 1917, was the first in the United States in the development and application of vacuum degassing, a pioneer in the development of vacuum distillation, and among the first to adapt ejectors to the large flow requirements of industrial service. Elliott has now computerized their system to better serve companies in system designs, from enormous units to applications using small standardized, off-the-shelf ejectors. For more information write Elliott Co., Division of Carrier Corp., Jeannette, Pennsylvania 15644.