# President's Club and Honor Roll

*The members listed here have qualified for either the AOCS President's Club or President's Honor Roll. All current members who successfully recruit at least one new member qualify for Club membership. Successful recruitment of at least three new members is the qualification for the more prestigious Honor Roll. All Club and Honor Roll members will receive further recognition and the opportunity to participate in other special programs and activities. Special forms for use in recruiting new members are available from AOCS headquarters.*

**Fifteen**

Stephen S. Chang

**Five**

Ralph T. Holman

**Four**

Syamal K. Bhattacharya



**Three**

Arnold M. Gavin
Robert W. Johnson
Ragnar Ohlson

**Two**

Manuchehr Eijadi
David R. Erickson
H.P. Gormley
Robert C. Hastert
Joyce C. Kern
Richard V. Madrigal
Gerhard Maerker
Francis B. White
James O. Wheeler
Richard F. Wilson

**One**

Toshimi Akiya
Fred O. Barrett
Irvin C. Bentz
Douglas M. Bisset
John E. Blum
Sherman A. Boring
Dean K. Bredeson
Elmer C. Brinkley
Walter M. Budde
Arno Cahn
Rashid A. Choudry
Ronald L. Christenson
James C. Clouse
Robert L. Edwards
Joseph G. Endres
Giles S. Farmer
Marvin W. Formo
Wilfred J. Frech
Earle Fritz
William H. Garner
Lawrence Gildenberg
Frank C. Haas
John M. Hasman
Charles W. Hoerr
Ernest K. Holt
Kenneth Holt
Ray Hough
Eric Jungermann
Jon J. Kabara
Karl P. Kammann
Akio Kato
Frank R. Kincs
William H. Koester
David J. Kriege
R.G. Krishnamurthy
Fred A. Kummerow
Gabriel P. Lensack
William E. Link
John W. Lohr

Francis E. Luddy
Theodore K. Mag
William V. Magee
William W. Marion
Arthur C. McConnel'
Raymond J. McGowan
Stephen E. McGuire
James F. Mead
Salvatore N. Milazzo
Guy D. Moulton
Ahmad M. Moustafa
Frank Naughton
W.W. Nawar
John D. Neighbors
Olav Notevarp
Samuel E. Pack
Ignacio F. Palencia
Emory T. Payne
Andrew Peng
Robert E. Pitas
Joseph Pominski
Richard Purdy
Herbert L. Rice
Ulo Riiner
Howard F. Robinson
Henry G. Salomon
Sydney H. Shapiro
Alan J. Sheppard
Norman O.V. Sonntag
Dale V. Stingley
Bernard F. Szuhaj
G. Edward Thomas
Yoshiyuki Toyama
William H. Walker
Benjamin F. Ward, Jr.
Jospeh F. Weiss
James W. White
Lars H. Wiedermann
Gerald G. Wilson

*The individuals listed below have applied for membership in AOCS between January 1 and February 1, 1974.*

Gary Lee Craig, dev. chem., Union Camp Corp., 875 Hager St., Dover, Ohio 44622.

James Max Domer, qual. con. super., Union Camp Corp., 875 Hager St., Dover, Ohio, 44622.

Robert J. Hasiak, asst. prof., Iowa State University, Department of Animal Science, Kildee Hall, Ames, Iowa 50010.

William L. Hendricksen, pres., Hendricksen Co., P.O. Box 55565, Houston, Tex. 77055.

Donald Coldren Heckman, sales and dev., Activated Metals and Chemicals, P.O. Box 32, Serierville, Tenn. 37862.

Perry Alden Higgins, grad. stu., The Ohio State University, 2001 Fyffe Ct., no. 325, Columbus, Ohio 43210.

Barry Edwin Hunt, qual. con. mgr., Hunt-Wesson Foods, 4421 W. 31st St., Chicago, Ill. 60623.

John A. Gust, purchasing eng., Tennessee Eastman Co., P.O. Box 511, Kingsport, Tenn. 37662.

Antony Lees James, lab. mgr., Humko Products, Westinghouse Rd., Trafford Park, Manchester M17 1DR, England.

Morris Arthur Johnson, res. chem., Continental Oil Co., P.O. Box 1267, Ponca City, Okla. 74601.

Terrence George Kenny, sect. chief, Lever Brothers, 45 River Rd., Edgewater, N.J. 07020.

Robert L. Moison, pres. and consl., Robert L. Moison and Associates, 112 S. Surrey Trail, Apple Valley, Minn. 55124.

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4.3% acetyl groups. It is found to contain two components, one precipitable by cetylpyridinium chloride (42%) and the other not precipitable (58%).

BIOSYNTHESIS OF A MYCOBACTERIAL LIPOPOLYSACCHARIDE. PROPERTIES OF THE POLYSACCHARIDE:ACYL COENZYME A ACYLTRANSFERASE REACTION. Ker-Kong Tung and C.E. Ballou (Dept. of Biochem., Univ. of Cal., Berkeley, Cal. 94720). *J. Biol. Chem.* **248**, 7126–33 (1973). A particulate enzyme preparation was obtained from *Mycobacterium phlei* cells which had the activity of a polysaccharide:acyl coenzyme A acyltransferse. We conclude that the enzyme system is involved in the biosynthesis of the methylglucose-containing lipopolysaccharide (MGLP), since it catalyzed the transfer of acetyl, propionyl, isobutyryl, octanoyl and succinyl groups, all of which are known to be present in the lipopolysaccharide. Moreover, the enzyme preparation used $\alpha$-(1→4)-D-glucooligosaccharides as acceptors, a result consistent with the fact that a major part of the polysaccharide component of the lipopolysaccharide has the same amylose-like structure.

GLUCOCORTICOID-INDUCED ALTERATIONS IN PHOSPHATIDYLCHOLINE METABOLISM IN MOUSE LYMPHOMA CELLS, L5178Y, IN VITRO. M.T. Story, M.M. Standaert and G. Melnykovych (U.S. Veterans Admin. Hosp., Kansas City, Mo. 64128). *Cancer Res.* 33, 2872–7 (1973). Prednisolone inhibited incorporation of choline-methyl-$^{14}$C into the phospholipid fraction of mouse lymphoma L5178Y grown in culture. The inhibition of choline-methyl-$^{14}$C incorporation was dependent on steroid concentration and was limited to the steroids that were active as growth inhibitors of this cell strain. The inhibition of choline incorporation was reflected also in the plasma membrane. No such effects were observed when labeled glucose was used as the source of label.

RETINYL ACETATE: EFFECT ON CELLULAR CONTENT OF RNA IN EPIDERMIS IN CELL CULTURE IN CHEMICALLY DEFINED MEDIUM. M.B. Sporn, N.M. Dunlop and S.H. Yuspa (Lung Cancer Branch, Exptl. Pathol. Branch, Carcinogenesis Program, Natl. Cancer Inst., Bethesda, Md. 20014). *Science* **182**, 722–3 (1973). Cell cultures of epidermis from newborn mice were established in chemically defined medium. Additions of retinyl acetate to these cultures caused a significant increase in cellular RNA content. Addition of insulin and hydrocortisone to the cultures potentiated the effect of retinyl acetate on cellular RNA content.

THE 6-O-METHYLGLUCOSE-CONTAINING LIPOPOLYSACCHARIDES OF MYCOBACTERIUM PHLEI. LOCATIONS OF THE NEUTRAL AND ACIDIC ACYL GROUPS. W.L. Smith and C.E. Ballou (Dept. of Biochem., Univ. of Cal., Berkeley, Cal. 94720). *J. Biol. Chem.* **248**, 7118–25 (1973). The methylglucose-containing lipopolysaccharide (MGLP) of *Mycobacterium phlei* is an acidic molecule with 18 hexose units. Six of these positions are now shown to be acylated specifically with monobasic acids and two others specifically with acidic succinyl groups. In addition, another site of succinylation has been found, which accounts for the nine positions in MGLP-IV. The nonrandom distribution of monobasic versus dibasic acids provides support for the concept that a defined placement of esters is in some way related to the biological function of the lipopolysaccharide.

QUANTITATIVE STUDIES ON FIBRINOGEN AND LOW-DENSITY LIPOPROTEIN IN HUMAN AORTIC INTIMA. E.B. Smith, R.S. Slater and J.A. Hunter (Dept. of Chem. Pathol., Univ. of Aberdeen, Foresterhill, Aberdeen, Great Britain). *Atherosclerosis* **18**, 479–87 (1973). The amounts of soluble, fibrinogen/fibrin related antigens (FRA) and of intact low-density (LD) lipoprotein in human aortic intima have been measured by an immunoelectrophoretic technique. Substantial amounts of FRA and LD lipoprotein were found in normal intima: in early fibrous lesions the concentrations of both antigens showed two- to four-fold increases compared with normal intima from the same aorta. In spite of the increase in concentration, the ratio LD lipoprotein cholesterol/FRA did not differ significantly between normal intima and lesions. There was a significant correlation between lipoprotein and FRA ($r = 0.722$, $P = 0.015$), which suggests that fibrinogen may be entering the intima together with lipoprotein and other plasma constituents. When tissue samples were treated with thrombin about 50% of the antigen was "clotted;" the "clottable" material was presumably fibrinogen since "clottable" fragments are not derived from lysis of a stabilized fibrin clot. The results suggest that substantial amounts of plasma fibrinogen enter the intima; if this is converted to fibrin within the intimal tissue it could be a potent factor in atherogenesis.

THE STEROLS OF THE ECHINODERM, ASTERIAS RUBENS. A.G. Smith, I. Rubinstein and L.J. Goad (Dept. of Biochem., Univ. of Liverpool, P.O. Box 147, Liverpool L69 3BX, U.K.). *Biochem. J.* **135**, 443–55 (1973). Twenty-two sterols were identified in the starfish *Asterias rubens* (Phylum, Echinodermata; Class, Asteroidea). The major 4-demethyl sterols had a $\Delta^7$ bond and the $C_{27}$ compound 5$\alpha$-cholest-7-en-3$\beta$-ol predominated over other mono- and di-unsaturated sterols belonging to the $C_{26}$, $C_{27}$, $C_{28}$ and $C_{29}$ series. Small amounts of cholest-5-en-3$\beta$-ol and 5$\alpha$-cholestan-3$\beta$-ol were also present. The minor sterols identified all contained either one or two methyl groups at C-4 and are considered to be potential biosynthetic precursors of 5$\alpha$-cholest-7-en-3$\beta$-ol. Three sterols possessing a 9$\beta$,19-cyclopropane ring were also isolated and were probably derived by the starfish from a dietary source.

PATHWAYS OF TRIGLYCERIDE SYNTHESIS BY BOVINE JEJUNUM DURING ABSORPTION. H.B. Skrdlant, J.W. Young, R.S. Allen and A.D. McGilliard (Dept. of Animal Sci. and Dept. of Biochem. and Biophys., Iowa State Univ., Ames, Iowa 50010). *J. Dairy Sci.* **56**, 1305–11 (1973). Pathways of triglyceride synthesis were investigated in bovine intestine by incubating three different micellar substrates, each containing 1-monoolein and oleic acid with mid-jejunal sections, and by incubating jejunal microsomes with substrate mixtures containing either monoolein or $\alpha$-glycerophosphate. With jejunal sections, apparent participation of monoglyceride pathway in tryglyceride synthesis was approximately 80% when the substrate contained no $\alpha$-glycerophosphate precursors, 50% when the substrate contained glucose, and 30% when both glucose and glycerol were present. With microsomes, triglyceride was synthesized at approximately equal rates for both pathways. Thus, milk-fed calves possess monoglyceride pathway activity, and enzymes for this pathway are retained in older cattle fed hay and grain.

PREPARATION AND ACTIVE-SITE SPECIFIC PROPERTIES OF STURGEON MUSCLE GLYCERALDEHYDE-3-PHOSPHATE DEHYDROGENASE. F. Scydoux, S. Bernhard, O. Pfenninger, M. Payne and O.P. Malhotra (Inst. of Molecular Biol. and the Dept. of Chem., Univ. of Oregon, Eugene, Ore. 97403). *Biochemistry* **12**, 4290–4300 (1973). Sturgeon muscle glyceraldehyde-3-phosphate dehydrogenase has been isolated and purified to maximal activity. The purified enzyme contains four unusually reactive cysteine sulfhydryls per 145,000 daltons. This highly selective reactivity is manifest in the reaction of enzyme with the sulfhydryl reagent, 2,2′-dithiobis(5-nitrobenzoate) ($Nbs_2$). Enzyme activity is directly proportional to the fraction of unreacted sulfhydryls. Enzyme samples of lower specific activity invariably give a proportionately lower stoichiometry of reaction. The highest purity enzyme has a specific activity in excess of any previously reported muscle and the yeast enzyme, the two highly purified enzymes have virtually the same specific activity.

THE SERUM HIGH DENSITY LIPOPROTEINS OF MACACUS RHESUS. I. ISOLATION, COMPOSITION AND PROPERTIES. A.M. Scanu, C. Edelstein, L. Vitello, R. Jones and R. Wissler (Depts. of Med., Biochem., and Pathol., Univ. of Chicago, Pritzker Schl. of Med., and the McLean Memorial Res. Inst., Chicago, Ill. 60637). *J. Biol. Chem.* **248**, 7648 52 (1973). The serum high density lipoproteins, $HDL_2$ ($d$ 1.063 to 1.125 g per ml) and $HDL_3$ ($d$ 1.125 to 1.21 g per ml), of normal *Macacus rhesus* kept on a low fat diet were isolated by ultracentrifugal flotation and their properties compared with those previously reported on human products. Both monkey and human lipoproteins proved very similar, in terms of hydrodynamic, spectroscopic, immunological and morphological criteria. However, the $HDL_2$:$HDL_3$ ratio in *M. rhesus* was 2:1, as compared to the

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