

BIOGRAPHICAL SKETCH

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NAME Lund-Katz, Sissel		POSITION TITLE	
eRA COMMONS USER NAME lundkatz		Professor	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Gothenburg, Tech. Inst., Gothenburg, Sweden	B.S.	1967	Chemical Engineer
Bryn Mawr College, Bryn Mawr, PA 19010	Ph.D.	1979	Organic & Biophys. Chem.
The Medical College of Pennsylvania	Post-doc	1979-81	Biophysical Chemistry

A. Positions and Honors**Positions and Employment**

1981-1983 Instructor of Biochemistry, Medical College of Pennsylvania
 1983-1988 Assistant Professor of Biochemistry, Medical College of Pennsylvania
 1988-1995 Associate Professor of Biochemistry, Medical College of Pennsylvania
 1993-1996 Director of Graduate Training, Dept. of Biochemistry, Medical College of Pennsylvania
 1995-2000 Professor, Department of Biochemistry, MCP Hahnemann University (formerly Medical College of Pennsylvania)
 2000- Adjunct Professor of Biochemistry, MCP Hahnemann University
 2000- Senior Member, Stokes' Research Institute, The Children's Hospital of Philadelphia
 2000- Research Professor of Pediatrics, University of Pennsylvania

Awards and Other Professional Activities:

1979-81 Postdoctoral Fellow, National Research Service Award
 1981-83 Special Investigator, Pennsylvania American Heart Association, "Interaction of Lipoprotein Cholesterol with Cell Membranes"
 1982 Alumnae/i Association of The Medical College of Pennsylvania, Mary DeWitt Pettit Fellowship
 1992 Lindback Award for "Distinguished Teaching" Medical College of Pennsylvania
 2000 Invited speaker, Gordon Research Conference on Lipoprotein Metabolism
 2000-2004 Editorial Board, Journal of Lipid Research

B. Selected peer-reviewed publications (in chronological order)

- Acharya, P., Segall, M., Zaiou, M., Morrow, J. Weisgraber, K., Phillips, M., Lund-Katz, S., Snow, J. "Comparison of the Stabilities and Unfolding Pathways of Human Apolipoprotein E Isoforms by Differential Scanning Calorimetry and Circular Dichroism". *Biochim. Biophys. Acta.* 1584(1): 9-19 (2002).
- Segall, M.L., Dhanasekaran, P., Baldwin, F., Anantharamaiah, G.M., Weisgraber, K.H., Phillips, M.C., Lund-Katz, S. "Influence of apoE Domain Structure and Polymorphism on the Kinetics of Phospholipid Vesicle Solubilization". *J. Lipid Res.* 43(10): 1688-1700 (2002).
- H. Saito, P. Dhanasekaran, D. Nguyen, P. Holvoet, S. Lund-Katz, M.C. Phillips, "Domain Structure and Lipid Interaction in Human Apolipoproteins A-I and E: A General Model," *J. Biol. Chem.*, **278**: 23227-23232 (2003).
- S.T. Thuahnai, S. Lund-Katz, G.M. Anantharamaiah, D.L. Williams, M.C. Phillips, "A Quantitative Analysis of Apolipoprotein Binding to SR-BI: Multiple Binding Sites for Lipid-free and Lipid-associated Apolipoproteins," *J. Lipid Res.*, **44**: 1132-1142 (2003).
- H. Saito, P. Dhanasekaran, D. Nguyen, F. Baldwin, K.H. Weisgraber, S. Wehrli, M.C. Phillips, S. Lund-Katz, "Characterization of the Heparin Binding Sites in Human Apolipoprotein E," *J. Biol. Chem.*, **278**: 14782-14787 (2003).
- H. Saito, P. Dhanasekaran, D. Nguyen, F. Baldwin, K.H. Weisgraber, S. Wehrli, M.C. Phillips, S. Lund-Katz, "Characterization of the Heparin Binding Sites in Human Apolipoprotein E," *J. Biol. Chem.*, **278**: 14782-14787 (2003).

7. C. Maugeais, U.G. Tietge, U.C. Broedl, D. Marchadier, W. Cain, M.G. McCoy, S. Lund-Katz, J.M. Glick, D.J. Rader, "Dose-dependent Acceleration of High-density Lipoprotein Catabolism by Endothelial Lipase," *Circulation* 17: 2121-2126 (2003).
8. L. Liu, A.E. Bortnick, M. Nickel, P. Dhanasekaran, P.V. Subbaiah, S. Lund-Katz, G.H. Rothblat, M.C. Phillips, "Effects of Apolipoprotein A-I on ATP-binding Cassette Transporter Formation of Nascent High Density Lipoprotein Particles," *J. Biol. Chem.*, 278(44): 42976-42984 (2003).
9. H. Saito, P. Dhanasekaran, F. Baldwin, K.H. Weisgraber, M.C. Phillips, S. Lund-Katz, "Effects of Polymorphism on the Lipid Interaction of Human Apolipoprotein E," *J. Biol. Chem.* 278(42) 40723-40729 (2003).
10. Peng, Y, Akmentin, W., Connelly, M.A., Lund-Katz, S., Phillips, M.C., Williams, D.L. "Scavenger Receptor BI (SR-BI) Clustered on Microvillar Extensions Suggests that this Plasma Membrane Domain is a Way Station for Cholesterol Trafficking between Cells and High Density Lipoprotein," *Mol. Biol. Cell* 15: 384-396 (2004).
11. Thuahnai, S.T., Lund-Katz, S., Dhanasekaran, P., de la Llera-Moya, M., Connelly, M.A., Williams, D.L., Rothblat, G.H., Phillips, M.C. "SR-BI-mediated Cholesteryl Ester Selective Uptake and Efflux of Unesterified Cholesterol: Influence of HDL Size and Structure", *J. Biol. Chem.* 279(13): 12448-12455 (2004).
12. Narayanaswami, V., Maiorano, J.N., Dhanasekaran, P., Ryan, R.O., Phillips, M.C., Lund-Katz, S., Davidson, W.S. "Helix Orientation of the Functional Domains in Apolipoprotein E in Discoidal High Density Lipoprotein Particles," *J. Biol. Chem.* 279(14): 14273-14279 (2004).
13. Kothapalli, D., Fuki, I., Ali, K., Stewart, S.A., Zhao, L., Yahil, R., Kwiatkowski, D., Hawthorne, E.A., FitzGerald, G.A., Phillips, M.C., Lund-Katz, S., Pure, E., Rader, D.J. and Assoian, R.K., "Antimitogenic Effects of HDL and ApoE Mediated by Cox-2-dependent IP Activation", *J. Clin. Invest.* 113: 609-618 (2004).
14. Saito, H., Dhanasekaran, P., Nguyen, D., Deridder, E., Holvoet, P., Lund-Katz, S., Phillips, M.C. "Alpha-helix Formation is required for High Affinity Binding of Human Apolipoprotein A-I to Lipids", *J. Biol. Chem.* 279: 20974-20981 (2004)
15. Pearson, K., Saito, H., Woods, S.C., Lund-Katz, S., Tso, P., Phillips, M.C., Davidson, W.S. "Structure of Human Apolipoprotein A-IV: A Distinct Domain Architecture Among Exchangeable Apolipoproteins with Potential Functional Implications", *Biochemistry* 43(33): 10719-10729 (2004)
16. Li, H., Zhang, Z., Blessington, D., Nelson, D.S., Zhou, R., Lund-Katz, S., Chance, B., Glickson, J.D., Zheng, G. "Carbocyanine Labeled LDL for Optical Imaging of Tumors" *Acad. Radiol.* 11(6): 669-677 (2004)
17. Datta, G., Epand, R.F., Epand, R.M., Chaddha, M., Kirksey, M.A., Garber, D.W., Lund-Katz, S., Phillips, M.C., Hama, S., Navab, M., Fogelman, A.M., Palgunachari, M.N., Segrest, J.P., Anantharamaiah, G.M., "Aromatic Residue Position on the Nonpolar Face of Class A Amphipathic Helical Peptides Determines Biological Activity", *J. Biol. Chem.* 279(25): 26509-26517 (2004)
18. Kockx, M., Rye, K.A., Gaus, K., Quinn, C.M. Wright, J., Sloane, T., Sviridov, D., Fu, Y., Sullivan, D., Burnett, J.R., Rust, S., Assmann, G., Anantharamaiah, G.M., Palgunachari, M.N., Lund-Katz, S., Phillips, M.C., Dean, R.T., Jessup, W., Kritharides, L., "Apolipoprotein A-I-stimulated apolipoprotein E secretion from human macrophages is independent of cholesterol efflux", *J. Biol. Chem.* 279(25): 25966-25977 (2004)
19. Vedhachalam, C., Liu, L., Nickel, M., Dhanasekaran, P., Anantharamaiah, G.M., Lund-Katz, S., Rothblat, G.H., Phillips, M.C. "Influence of ApoA-I Structure on the ABCA1-mediated Efflux of Cellular Lipids", *J. Biol. Chem.* 279:49931-49949 (2004)
20. Li, H., Gray, B.D., Corbin, I., Leberherz, C., Choi, H., Lund-Katz, S., Wilson, J.M., Glickson, J.D., Zhou, R. "MR and Fluorescent Imaging of Low-density Lipoprotein Receptors", *Acad. Radiol.* 11: 1251-1259 (2004).
21. Futamura, M., Dhanasekaran, P., Handa, T., Phillips, M.C., Lund-Katz, S., Saito, H. "Two-step Mechanism of Binding of Apolipoprotein E to Heparin: Implications for the Kinetics of Apolipoprotein E-heparan Sulfate Proteoglycans Complex Formation on Cell Surfaces", *J. Biol. Chem.* 280: 5414-5422 (2005)

**C. RESEARCH SUPPORT
(ONGOING)****NIH/NHLBI - HL22633-27****PPG Project 2 – Lund-Katz, S. (Co-PI)**

07/01/03-06/30/08

Interactions of Apo A-I with Lipids and Cell Surfaces

The goal of Project 2 of the Program Project Grant is to understand some of the functions of apo A-I in reverse cholesterol transport by defining the mechanisms by which this protein mediates cholesterol transport at the cell surface.

NIH/NHLBI HL22633-27**PPG - Lipoprotein Core – Lund-Katz, S. (PI)**

07/01/03-06/30/08

Cellular and Molecular Biology of Lipoprotein

The major goal of this project is to provide plasma lipoproteins to Program Project investigators.

COMPLETED

None