

## CURRICULUM VITAE

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Date and Place of Birth: December 2, 1966 Waukegan, IL

Marital Status: Married

Education: B.S. Biochemistry  
B.S. Genetics and Development  
The University of Illinois (Champaign-Urbana, IL)  
8/1984 - 5/1989

Ph.D. Biochemistry  
Vann Bennett, mentor  
Duke University (Durham, NC)  
8/1989-5/1995

Post-Graduate Positions: Post-doctoral Fellow, Vann Bennett, PI  
Duke University (Durham, NC)  
5/1995-2/1996

Post-doctoral Fellow, Richard Anderson, PI  
The University of Texas Southwestern Medical Center  
2/1996-8/2002

Instructor, Department of Cell Biology  
The University of Texas Southwestern Medical Center  
8/2002-8/2005

Assistant Professor, Department of Cell Biology  
The University of Texas Southwestern Medical Center  
8/2005-present

Assistant Dean for Undergraduate Medical Education  
The University of Texas Southwestern Medical Center

1/2018-present

Current Extramural Support:	AHA-17GRNT33650076 (PI) AHA Grant-in-Aid Differential sorting of the LDLR by ARH and dab2	\$70,000/yr Direct 2017-2019
Prior Extramural Support:	R01-HL085218 (PI) NIH/NHLBI Characterization of the role of ARH on LDLR function	\$150,000/yr Direct 2007-2017
	0665106Y (PI) AHA Beginning Grant-in-Aid Characterization of VLDL uptake by the LDLR	2006
	1004523 (PI) NSF Development of ANK-repeat proteins as nanosprings	\$88,243/yr Direct 2010-2013
	P01 CA130821 (Lopa Mishra, PI) NIH/NCI	\$45,000/yr Direct 2011-2013
Research Fellows Supervised:	Zhenze Zhao Siriya Thammachat	2006-2011 2010-2011
Prior Students Supervised:	Shakena Cobb Drake LeBrun Anandini Rao Julia Fritz Benjamin Elberson Alexander Justin Herenia Espitia Armenta Zixiao Li	Summer 2009 Summer 2009 Summer 2010 Summer 2010 Summer 2011 Summer 2012 Summer 2013 Summer 2013
Qualifying Exam Committees:	Hyeilin Ham Austin Potts (Chair)	2010 2011
Thesis Committees:	Yair Peres (Chair)	2011-2015
Recruitment:	UTSW med student interviews UTSW graduate students	2009-present 2010-present
Scientific Associations:	AHA ASBMB	
Study Section Membership:	Ad Hoc Nano Biomaterial Panel BMAT/NSF, 2010	

NIH Panel ZHL1 CSR-P 2011-present

Plenary Talks:

Red Cell Gordon Conference, 1995  
Red Cell Gordon Conference, 2001  
Lipoprotein Gordon Conference, 2010  
ASCB Annual Meeting, 2012

Invited Talks:

Cleveland Clinic, Dept of Cell Biology, 2009  
MD Anderson, Dept of Gastroenterology, Hepatology  
and Nutrition, 2011  
CHORI, Center for Prevention of Obesity,  
Cardiovascular Disease and Diabetes, 2012

Teaching:

UTSW Medical School  
Lecturer, MS1: Biology of Cells & Tissues  
(Medical Histology) 2008-2015  
Director and lecturer, PC1: Cells 2015-present  
Director and lecturer, PC1: Microanatomy  
(Medical Histology) 2015-present  
Lecturer, PC1: Organisms and Hosts 2016-present  
Lecturer, PC2: Musculoskeletal-skin 2016-present  
Lecturer, PC2: Hematopoietic System 2016-present  
Lecturer, PC2: Pulmonary 2016-present  
Lecturer, PC2: Renal/GU 2017-present  
Lecturer, PC3: GI/Nutrition 2016-present  
UTSW Graduate School, Biological Chemistry  
Journal Club 2010, 2015  
UTSW Graduate School, Core Course  
Ethics 2010, 2012  
Awards:  
Outstanding Teacher award 2012  
Outstanding Teacher award 2016  
Outstanding Teacher award (4) 2017

Institutional Committees:

UTSW Curriculum Reform Committee  
BSF subsection 2014-2015  
FBS subsection 2014-2015  
UTSW Student Promotions Committee 2015-present  
UTSW Pre-clerkship Committee 2015-present

Published Research Publications:

- 1: Tompkins MB, Pang VF, **Michaely PA**, Feinmehl RI, Basgall EJ, Baszler TV, Zachary JF, Tompkins WA. Feline cytotoxic large granular lymphocytes induced by recombinant human IL-2. J Immunol. 1989 143: 749-54. PMID: 2544649.

- 2: **Michaely P**, Bennett V. The ANK repeat: a ubiquitous motif involved in macromolecular recognition. *Trends Cell Biol.* 1992 2: 127-9. PMID: 14731966. doi: 10.1016/0962-8924(92)90084-Z. (review)
- 3: **Michaely P**, Bennett V. The membrane-binding domain of ankyrin contains four independently folded subdomains, each comprised of six ankyrin repeats. *J Biol Chem.* 1993 268: 22703-9. PMID: 8226780.
- 4: **Michaely P**, Bennett V. The ANK repeats of erythrocyte ankyrin form two distinct but cooperative binding sites for the erythrocyte anion exchanger. *J Biol Chem.* 1995 270: 22050-7. PMID: 7665627. doi: 10.1074/jbc.270.37.22050.
- 5: **Michaely P**, Bennett V. Mechanism for binding site diversity on ankyrin. Comparison of binding sites on ankyrin for neurofascin and the Cl<sup>-</sup>/HCO<sub>3</sub><sup>-</sup> anion exchanger. *J Biol Chem.* 1995 270: 31298-302. PMID: 8537399. doi: 10.1074/jbc.270.52.31298.
- 6: **Michaely P**, Mineo C, Ying YS, Anderson RG. Polarized distribution of endogenous Rac1 and RhoA at the cell surface. *J Biol Chem.* 1999 274: 21430-6. PMID: 10409706. doi: 10.1074/jbc.274.30.21430.
- 7: **Michaely P**, Kamal A, Anderson RG, Bennett V. A requirement for ankyrin binding to clathrin during coated pit budding. *J Biol Chem.* 1999 274: 35908-13. PMID: 10585476. doi: 10.1074/jbc.274.50.35908.
- 8: Liu P, Wang P, **Michaely P**, Zhu M, Anderson RG. Presence of oxidized cholesterol in caveolae uncouples active platelet-derived growth factor receptors from tyrosine kinase substrates. *J Biol Chem.* 2000 275: 31648-54. PMID: 10918056. doi: 10.1074/jbc.M004599200.
- 9: He G, Gupta S, Yi M, **Michaely P**, Hobbs HH, Cohen JC. ARH is a modular adaptor protein that interacts with the LDL receptor, clathrin, and AP-2. *J Biol Chem.* 2002 277: 44044-9. PMID: 12221107. doi: 10.1074/jbc.M208539200.
- 10: **Michaely P**, Tomchick DR, Machius M, Anderson RG. Crystal structure of a 12 ANK repeat stack from human ankyrinR. *EMBO J.* 2002 21: 6387-96. PMID: 12456646. PMCID: PMC136955. doi: 10.1093/emboj/cdf651.
- 11: Mohler PJ, Davis JQ, Davis LH, Hoffman JA, **Michaely P**, Bennett V. Inositol 1,4,5-trisphosphate receptor localization and stability in neonatal cardiomyocytes requires interaction with ankyrin-B. *J Biol Chem.* 2004 279: 12980-7. PMID: 14722080. doi: 10.1074/jbc.M313979200.
- 12: **Michaely P**, Li WP, Anderson RG, Cohen JC, Hobbs HH. The modular adaptor protein ARH is required for LDL binding and internalization, but not for LDL receptor

- clustering in coated pits. *J Biol Chem.* 2004 279: 34023-31. PMID: 15166224. doi: 10.1074/jbc.M405242200.
- 13: Garuti R, Jones C, Li WP, **Michaely P**, Herz J, Gerard RD, Cohen JC, Hobbs HH. The modular adaptor protein ARH promotes LDLR clustering into clathrin-coated pits. *J. Biol. Chem.* 2005 280: 40996-1004. PMID: 16179341. doi: 10.1074/jbc.M509394200.
- 14: Yu L, Bharadwaj S, Brown JM, Ma Y, Du W, Davis MA, **Michaely P**, Liu P, Willingham MC, Rudel LL. Cholesterol-regulated translocation of Niemann-Pick C1-like 1 to the cell surface facilitates free cholesterol uptake. *J. Biol. Chem.* 2006 281: 6616-24. PMID: 16407187. doi: 10.1074/jbc.M511123200.
- 15: Lee G, Abdi K, Jiang Y, **Michaely P**, Bennett V, Marszalek PE. Nanospring behaviour of ankyrin repeats. *Nature* 2006 440: 246-9. PMID: 16415852. doi: 10.1038/nature04437.
- 16: Jones C, Garuti R, **Michaely P**, Li WP, Maeda N, Cohen JC, Herz J, Hobbs HH. Disruption of LDL but not VLDL clearance in autosomal recessive hypercholesterolemia. *J. Clin. Invest.* 2007 117: 165-174. PMID: 17200716. PMCID: PMC1716209. doi: 10.1172/JCI29415.
- 17: **Michaely P**, Zhao Z, Li WP, Garuti R, Huang L, Hobbs HH, Cohen JC. Identification of a VLDL-induced, FDNPVY-independent internalization mechanism for the LDLR. *EMBO J* 2007 26: 3273-82. PMID: 17581630. PMCID: PMC1933400. doi: 10.1038/sj.emboj.7601769.
- 18: Zhao Z, **Michaely P**. The EGF-homology domain of the LDL receptor drives lipoprotein release through an allosteric mechanism involving H190, H562 and H586. *J. Biol. Chem.* 2008 283: 26528-37. PMID: 18677035. PMCID: PMC2546563. doi: 10.1074/jbc.M804624200.
- 19: Davis L, Abdi K, Machius M, Brautigam C, Tomchick D, Bennett V, **Michaely P**. Localization and structure of the Ankyrin-Binding Site on  $\beta$ 2-spectrin. *J Biol Chem.* 2009 284: 6982-7. PMID: 19098307. PMCID: PMC2652297. doi: 10.1074/jbc.M809245200.
- 20: Zhao Z, **Michaely P**. The Role of Calcium in Lipoprotein Release by the Low-Density Lipoprotein Receptor. *Biochemistry.* 2009 48:7313-24. PMID: 19583244. PMCID: PMC2749037. doi: 10.1021/bi900214u.
- 21: Zhao Z, **Michaely P**. Role of an intramolecular contact on lipoprotein uptake by the LDL receptor. *Biochim Biophys Acta.* 2011 1811:397-408 PMID: 21511053. PMCID: PMC3092732. doi: 10.1016/j.bbaliip.2011.04.002.

- 22: Lee S, Wang PY, Jeong Y, Mangelsdorf DJ, Anderson RG, **Michaely P**. Sterol-Dependent Nuclear Import of ORP1S Promotes LXR Regulated Trans-Activation of apoE. *Exp Cell Res*. 2012 318:2128-42. PMID: 22728266. PMCID: PMC3867128 doi: 10.1016/j.yexcr.2012.06.012.
- 23: Pompey S, Zhao Z, Phelps K, **Michaely P**. Quantitative fluorescence imaging reveals point of release for lipoproteins during LDLR-dependent uptake. *J Lipid Res*. 2013 54:744-53. PMID: 23296879. PMCID: PMC3617948. doi: 10.1194/jlr.M033548.
- 24: Zhao Z, Pompey S, Dong H, Weng J, Garuti R, **Michaely P**. S-nitrosylation of ARH is required for LDL uptake by the LDL receptor. *J Lipid Res*. 2013 54:1550-9. PMID: 23564733. PMCID: PMC3646456. doi: 10.1194/jlr.M033167.
- 25: Pompey SN, **Michaely P**, Luby-Phelps K. Quantitative Fluorescence Co-localization of Lipoproteins with the LDLR. *Methods Mol Biol*. 2013 1008:439-53. PMID 23729262. doi: 10.1007/978-1-62703-398-5\_16. (review)
- 26: Hernandez V, Weng J, Ly P, Pompey S, Dong H, Mishra L, Schwarz M, Anderson R, **Michaely P**. Cavin-3 dictates the balance between ERK and Akt signaling. *eLIFE* 2013 2:e00905. PMID: 24069528. PMCID: PMC3780650 doi: 10.7554/eLife.00905.001.
- 27: Chen J, Yao ZX, Chen JS, Gi YJ, Muñoz NM, Kundra S, Herlong HF, Jeong YS, Goltsov A, Ohshiro K, Mistry NA, Zhang J, Su X, Choufani S, Mitra A, Li S, Mishra B, White J, Rashid A, Wang AY, Javle M, Davila M, **Michaely P**, Weksberg R, Hofstetter WL, Finegold MJ, Shay JW, Machida K, Tsukamoto H, Mishra L. TGF $\beta$ / $\beta$ 2-spectrin/CTCF-regulated tumor suppression in human stem cell disorder Beckwith-Wiedemann syndrome. *J Clin Invest*. 2016 Feb 1;126(2):527-42. PMID: 26784546 PMCID: PMC4731168 doi: 10.1172/JCI80937.
- 28: Dong H, Zhao Z, LeBrun DG, **Michaely P**. Identification of roles for H264, H306, H439, and H635 in acid-dependent lipoprotein release by the LDLR. *J Lipid Res*. 2017 Feb;58(2):364-374. PMID: 27895090. PMCID: PMC5282952. doi: 10.1194/jlr.M070938.
- 29: Chen J, Shukla V, Farci P, Andricovich J, Jogunoori W, Kwong LN, Katz LH, Shetty K, Rashid A, Su X, White J, Li L, Wang AY, Blechacz B, Raju GS, Davila M, Nguyen BN, Stroehlein JR, Chen J, Kim SS, Levin H, Machida K, Tsukamoto H, **Michaely P**, Tzatsos A, Mishra B, Amdur R, Mishra L. Loss of the transforming growth factor- $\beta$  effector  $\beta$ 2-Spectrin promotes genomic instability. *Hepatology*. 2017 Feb;65(2):678-693. PMID: 28114741. doi: 10.1002/hep.28927.