

David Quan Shih, MD, PhD, FACP joined CDIN from the prestigious Cedars-Sinai Medical Center in Los Angeles. Dr. Shih is an internationally-renowned expert on inflammatory disorders of the gastrointestinal tract, and one of the most widely published physicians in Nevada. He is certified by the American Board of Internal Medicine in both Gastroenterology and Internal Medicine.

Dr. Shih received his Bachelor of Science degree from Massachusetts Institute of Technology, where he graduated valedictorian. This was followed by dual M.D./Ph.D. degrees from Cornell University and Rockefeller University. He went on to complete his Internal Medicine Residency at Stanford University. He subsequently did his Gastroenterology Fellowship at UCLA, and his Inflammatory Bowel Disease advanced training at Cedars-Sinai Medical Center. His expertise in immunology, microbiology, molecular biology and translational medicine has enabled Dr. Shih to manage complex gastrointestinal disorders with an integrative approach.

Dr. Shih is recognized as an exceptional physician by numerous organizations, including Vitals.com (Top 10 Doctor) and Superdoctors.com (Rising Star). As noted above, he has published over 100 articles -and has been a co-investigator in several international and national scaled clinical trials studying novel medications to treat inflammatory gastrointestinal conditions. Many of these clinical studies were supported by the NIH. Dr. Shih is frequently an invited presenter at international medical conferences.

He currently serves as an editor and reviewer for several academic journals, and is on the advisory board of the highest ranked journal "Gastroenterology". In addition, he reviews grants for the American Gastroenterology Association and the Crohns and Colitis Foundation of America.

He also has interest in conditions such as gastroesophageal reflux disease, Barrett's esophagus, stomach cancer screening, peptic ulcer disease, irritable bowel syndrome, abdominal pain, colon cancer screening, celiac disease, obesity management, and chronic liver diseases including viral hepatitis, autoimmune hepatitis, and fatty liver disease.

Dr. Shih is a member of: the American Gastroenterological Association, the Crohn's and Colitis Foundation of America, MENSA International, the Phi Beta Kappa Honor Roll, and is a fellow of the American College of Physicians and the American Federation for Medical Research.

His previous titles and work experiences include:

Associate Director of Basic Research, Cedars Sinai Medical Center

Professor in Residence, UCLA

Externship Director, Tzu Chi (an international humanitarian organization that provides care to underserved communities)

Nutrition Advisory Panelist: California Dry Plum Board

Medical Advisory Committee Member for the Los Angeles Chapter of Crohn's and Colitis Foundation

## **RESEARCH PAPERS**

### **A. Research Papers - Peer-Reviewed**

1. Navas, M. A., E. J. Munoz-Elias, J. Kim, **D. Shih**, and M. Stoffel 1999. Functional characterization of the MODY1 gene mutations HNF4(R127W), HNF4(V255M), and HNF4(E276Q). *Diabetes*. **48**:1459-65. PMID: 10389854.
2. **D. Q. Shih**, M. A. Navas, S. Kuwajima, S. A. Duncan, and M. Stoffel 1999. Impaired glucose homeostasis and neonatal mortality in hepatocyte nuclear factor 3alpha- deficient mice. *Proc Natl Acad Sci U S A*. **96**:10152-7. PMID: 10468578.
3. Gerrish, K., M. Gannon, **D. Shih**, E. Henderson, M. Stoffel, C. V. Wright, and R. Stein 2000. Pancreatic beta cell-specific transcription of the pdx-1 gene. The role of conserved upstream control regions and their hepatic nuclear factor 3beta sites. *J Biol Chem*. **275**:3485-92. PMID: 10652343.
4. **D. Q. Shih**, H. M. Dansky, M. Fleisher, G. Assmann, S. S. Fajans, and M. Stoffel 2000.

- Genotype/phenotype relationships in HNF-4alpha/MODY1: haploinsufficiency is associated with reduced apolipoprotein (AII), apolipoprotein (CIII), lipoprotein(a), and triglyceride levels. *Diabetes*. **49**:832-7. PMID: 10905494.
5. **D. Q. Shih**, S. Screenan, K. N. Munoz, L. Philipson, M. Pontoglio, M. Yaniv, K. S. Polonsky, and M. Stoffel 2001. Loss of HNF-1alpha function in mice leads to abnormal expression of genes involved in pancreatic islet development and metabolism. *Diabetes*. **50**:2472-80. PMID: 11679424.
  6. **D. Q. Shih**, M. Bussen, E. Sehayek, M. Ananthanarayanan, B. L. Shneider, F. J. Suchy, S. Shefer, J. S. Bollileni, F. J. Gonzalez, J. L. Breslow, and M. Stoffel 2001. Hepatocyte nuclear factor-1a is an essential regulator of bile acid and plasma cholesterol metabolism. *Nat Genet*. **27**:375-82. PMID: 11279518.
  7. Kulkarni, R. N., M. Holzenberger, **D. Q. Shih**, U. Ozcan, M. Stoffel, M. A. Magnuson, and C. R. Kahn 2002. beta-cell-specific deletion of the Igf1 receptor leads to hyperinsulinemia and glucose intolerance but does not alter beta-cell mass. *Nat Genet*. **31**:111-5. PMID: 11923875.
  8. **D. Q. Shih**, M. Heimesaat, S. Kuwajima, R. Stein, C. V. Wright, and M. Stoffel 2002. Profound defects in pancreatic beta-cell function in mice with combined heterozygous mutations in Pdx-1, Hnf-1alpha, and Hnf-3beta. *Proc Natl Acad Sci U S A*. **99**:3818-23. PMID: 11904435.
  9. P. Broulieu, C. Wolfrum, **D. Q. Shih**, T.A.Y. Shih, A. W. Wolkoff, and M. Stoffel. 2002. Decreased glibenclamide uptake in hepatocyte nuclear factor-1 alpha deficient mice: a mechanism for hypersensitivity to sulfonylurea therapy in patients with maturity-onset diabetes of the young, type 3 (MODY3) *Diabetes*. **51**:Suppl 3: S343-8. PMID: 12475773.
  10. C. Wolfrum, **D.Q. Shih**, S. Kuwajima, A. W. Norris, C. R. Kahn, and M. Stoffel. 2003. Role of Foxa-2 in adipocyte metabolism and differentiation. *J Clin Invest*. **112**(3): 345-356. PMID: 12865419.
  11. S. Richter, **D. Q. Shih**, E. R. Pearson, C. Wolfrum, S. S. Fajans, A. T. Hattersley, M. Stoffel. 2003. Regulation of apolipoprotein M gene expression by MODY 3 gene hepatocyte nuclear factor-1 alpha: haploinsufficiency is associated with reduced serum apolipoprotein M levels. *Diabetes*. **52**(12): 2989-95. PMID: 14633861.
  12. R. N. Kulkarni, M. G. Roper, G. Dahlgren, **D. Q. Shih**, L. M. Kauri, M. Stoffel, R. T. Kennedy. 2004. Islet secretory defect in IRS-1 null mice is linked with reduced calcium signaling and expression of SERCA-2b and -3. *Diabetes*. **53**(6): 1517-25. PMID: 15161756.
  13. **D. Q. Shih**, L. Y. Kwan, et. al. 2009. Induction of inflammatory bowel disease associated gene TL1A (TNFSF15) by microbes in antigen presenting cells. *European Journal of Immunology*. **39**(11): 3239-3250. PMID:15161756.
  14. H. W. Koon, **D. Q. Shih**, et. al. 2010. Substance P modulates colitis-associated fibrosis. *American Journal of Pathology*. **177**(5):2300-9. PMID: 20889569. [PubMed - indexed for MEDLINE].
  15. P. B. McGovern, M. Jones, K. D. Taylor, K. Marciante, X. Yan, M. Dubinsky, A. Ippoliti, E. Vasiliauskas, D. Berel, C. Derkowski, D. Dutridge, International IBD Genetics Consortium, P. Fleshner, **D. Q. Shih**, et. al. 2010. Fucosyltransferase-2 (Fut2) non-secretor status is associated with Crohn's disease. *Human Molecular Genetics*. **19**(17):3468-76. PMID: 20570966. [PubMed - indexed for MEDLINE].
  16. **D. Q. Shih**, R. Barrett, et. al. 2011. Constitutive TL1A (TNFSF15) expression on lymphoid or myeloid cells leads to mild intestinal inflammation and fibrosis. *PLoS One*. **6**(1): 1-16. PMID: 21264313. [PubMed - in process].
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18. L. Y. Kwan, S. R. Targan, and **D. Q. Shih**. 2011. Small bowel malignancies mimicking as IBD flares. *World J Gastroenterol*. **17**(19):2446-9. PMID: 21633646. [PubMed - in process].
19. T. Haritunians, M. R. Jones, D. P. B. McGovern, **D. Q. Shih**, et. al. 2011. Variants in ZNF365 isoform D are associated with Crohn's Disease. *Gut*. **60**(8):1060-7. PMID: 21257989. [PubMed - in process].
20. H. W. Koon, **D. Q. Shih**, et. al. 2011. Cathelicidin Signaling via the Toll-Like Receptor Protects Against Colitis in Mice. *Gastroenterology*. **141**(5):1852-1863. PMID: 21762664 [PubMed - as supplied by publisher].
21. H. W. Koon, **D. Q. Shih**, et. al. 2011. Substance P induces CCN1 expression via histone deacetylase activity in human colonic epithelial cells. *American Journal of Pathology*. **179**(5):2315-26. PMID: 21945803.
22. O. Cohavy, **D. Q. Shih**, et. al. 2011. CD161 defines effector T cells that express LIGHT and responds to TL1A-DR3 signaling. *European Journal of Medical Microbiology and Immunology*. **1**:70-79. PMID: 22348196.
23. R. Barrett, X. Zhang, H. W. Koon, M. Vu, J. Y. Chang, N. Yeager, M. A. Nguyen, K. S. Michelsen, D. Berel, C. Pothoulakis, S. R. Targan, and **D. Q. Shih**. 2012. Constitutive TL1A Expression under Colitogenic Conditions Modulates the Severity and Location of Gut Mucosal Inflammation and Induces Fibrostenosis. *American Journal of Pathology*. **180**(2):636-49. PMID: 22138299.
24. B. Huang, G. Y. Melmed, **D. Q. Shih**. 2012. Facial ulceration in a patient with Crohn's disease. *Gastroenterology*. **142**(5):1071-258. PMID: 22440954.
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28. L. Zheng, X. Chen, J. Guo, H. Sun, L. Liu, **D. Q. Shih**, X. Zhang. 2012. Differential expression of PTEN in hepatic tissue and hepatic stellate cells during rat liver fibrosis and its reversal. *International Journal of Molecular Medicine*. **30**(6):1424-30. PMID: 23041795.
29. Q. Le, G. Melmed, M. Dubinsky, D. McGovern, E. A. Vasiliauskas, Z. Murrell, A. Ippoliti, **D. Shih**, M. Kaur, S. Targan, P. Fleshner. 2013. Surgical outcome of ileal pouch-anal anastomosis when used intentionally for well-defined Crohn's disease. *Inflamm Bowel Dis*. [Epub ahead of print]. PMID: 22467562.
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34. B. Halloran, J. Chang, **D. Q. Shih**, et. al. 2014. Molecular patterns in human ulcerative colitis and correlation with response to infliximab. *Inflammatory Bowel Disease*. **20**(12):2353-63. PMID: 25397893.
35. H. A. Horton, S. Dezfoli, D. Berel, J. Hirsch, A. Ippoliti, D. McGovern, M. Kaur, **D. Shih** et. al. 2014. Antibiotics for the Treatment of Clostridium difficile Infection in Hospitalized Patients with Inflammatory Bowel Disease. *Antimicrob Agents Chemother*. **58**(9):5054-9. PMID: 24913174
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38. **D. Q. Shih**, L. Zheng, X. Zhang, H. Zhang, Y. Kanazawa, R. Ichikawa, K.L. Wallace, J. Chen, C. Pothoulakis, H. W. Koon, S. R. Targan SR. 2014. Inhibition of a novel fibrogenic factor T11a reverses established colonic fibrosis. *Mucosal Immunology*. **7**(6):1492-503. PMID: 24850426.
39. A. Sideri, D. Stavrakis, C. Bowe, **D. Q. Shih**, et. al. 2015. Effects of obesity on severity of colitis and cytokine expression in mouse mesenteric fat. Potential role of adiponectin receptor 1. *Am J Physiol Gastrointest Liver Physiol*. **308**(7):G591-604. PMID: 25591865.
40. A. V. Weizman, B. Huang, S. Targan, M. Dubinsky, P. Fleshner, M. Kaur, A. Ippoliti, D. Panikkath, E. Vasiliauskas, **D. Shih**, D. P. McGovern, G. Y. Melmed. 2015. Pyoderma Gangrenosum among Patients with Inflammatory Bowel Disease: A Descriptive Cohort Study. *J Cutan Med Surg*. **19**(2):125-31. PMID: 25775631.
41. S. Dezfoli, H. A. Horton, N. Thepyasuwan, D. Berel, S. R. Targan, E. A. Vasiliauskas, M. Dubinsky, **D. Q. Shih**, M. Kaur, D. P. McGovern, A. Ippoliti, E. J. Feldman, G. Y. Melmed. 2015. Combined Immunosuppression Impairs Immunogenicity to Tetanus and Pertussis Vaccination Among Patients with Inflammatory Bowel Disease. *Inflamm Bowel Dis*. **21**(8):1754-60. PMID: 25985242.
42. J. H. Yoo, S. Ho, D. H. Tran, M. Cheng, K. BAKirtzi, Y. Kubota, R. Ichikawa, B. Su, D. H. Tran, T. C. Hing, I. Chang, **D. Q. Shih**, et. al. 2015. Anti-fibrogenic effects of the anti-microbial peptide cathelicidin in murine colitis-associated fibrosis. *Cell Mol Gastroenterol Hepatol*. **1**(1):55-74.e1. PMID: 25729764.
43. H. Zhang, H. Wu, L. Liu, H. Li, **D. Q. Shih**, X. Zhang. 2015. 1,25-dihydroxyvitamin D3 regulates the development of chronic colitis by modulating both T helper (Th)1 and Th17 activation. *APMIS*. **123**(6):490-501. PMID: 25907285.
44. A. Sideri, K. Bakirtzi, **D. Q. Shih**, et. al. 2015. Substance P mediates pro-inflammatory cytokine release from mesenteric adipocytes in Inflammatory Bowel Disease patients. *Cell Mol Gastroenterol Hepatol*. **1**(4):420-432. PMID: 26543894
45. S. Ahmed, G. Melmed, D. McGovern, L. A. Robbins, **D. Shih**, et. al. 2016. Nonbloody Diarrhea but Not Significant Weight Loss at Diagnosis Is Associated with the Development of Denovo Crohn's Disease After Ileal Pouch-anal Anastomosis for Ulcerative Colitis. *Inflamm Bowel Dis*. PMID: 26595552.

46. S. Taleban, D. Li, S. R. Targan, A. Ippoliti, S. R. Brant, J. H. Cho, R. H. Duerr, J. D. Rioux, M. S. Silverberg, E. A. Vasiliauskas, J. I. Rotter, T. Haritunians, **D. Q. Shih**, et. al. 2016. Ocular Manifestations in Inflammatory Bowel Disease Are Associated with Other Extra-intestinal Manifestations, Gender, and Genes Implicated in Other Immune-related Traits. *J. Crohns Colitis*. **10**(1): 43-9. PMID 26449790.
47. J. Ruiz, S. Kanagavelu, C. Flores, L. Romero, R. Riveron, **D. Q. Shih**, M. Fukata. 2016. Systemic Activation of TLR3-Dependent TRIF Signaling Confers Host Defense against Gram-Negative Bacteria in the Intestine. *Front Cell Infect Microbiol*. **5**:105. PMCID: PMC4710052.
48. M. Sidhu-Varma, **D. Q. Shih**, S. R. Targan. 2016. Differential Levels of T11a Affect the Expansion and Function of Regulatory T Cells in Modulating Murine Colitis. *Inflamm Bowel Dis*. **22**(3):548-59. PMID: 26818423.

### Chapters

1. **D. Q. Shih**, K. S. Michelsen, R. J. Barrett, E. Biener-Ramanujan, R. Gonsky, and S. R. Targan. 2011. Insights into TL1A and IBD Pathogenesis. *Adv Exp Med Biol*. Springer Publishing. 691:279-88. PMID: 21153332. [PubMed - indexed for MEDLINE].
2. B. Huang, L. Y. Kwan, **D. Q. Shih**. 2011. Extraintestinal Manifestations of Ulcerative Colitis. *Ulcerative Colitis - Epidemiology, Pathogenesis and Complications*. In Tech Publishing. 9: 131-172. ISBN 978-953-307-880-9.
3. Vora P, **D. Q. Shih**, McGovern DP, Targan SR. 2012 Current concepts on the immunopathogenesis of inflammatory bowel disease. *Frontiers in Bioscience (Elite Ed)*. 4:1451-77. PMID: 22201968.
4. T. C. Hing, **D. Q. Shih**, et. al. 2012. Antimicrobial peptides in intestinal inflammation and infection. *Antimicrobial peptides: Properties, Functions and Role in Immune Response*. Nova Science Publishers, Inc.
5. K. L. Wallace, L. Zheng, Y. Kanazawa, **D. Q. Shih**. 2015. Immunopathology of inflammatory bowel disease. *World Clinical Inflammatory Bowel Disease*. First Edition. Baishideng Publishing Group Inc. ISBN 978-0-9914430-5-5.

### Reviews

1. **D. Q. Shih**, and M. Stoffel 2001. Dissecting the transcriptional network of pancreatic islets during development and differentiation. *Proc Natl Acad Sci U S A*. **98**:14189-91. PMID: 11734636.
2. **D. Q. Shih**, and M. Stoffel 2002. Molecular etiologies of MODY and other early-onset forms of diabetes. *Current Diabetes Reports*. **2**:125-134. PMID: 12643132.
3. **D. Q. Shih** and S. R. Targan. 2008. The immunological basis of inflammatory bowel disease. *World J Gastroenterol*. **14**(3):390-400. PMID: 19006613. [PubMed - indexed for MEDLINE]. PMID: 18200661.

4. **D. Q. Shih** and L. Kwan. 2008. All Roads Lead to Rome: Update on ROME III Criteria and New Treatment Options. *Gastroenterology Report*. Winter;**1**(2):56-65. PMID: 21544252.
5. **D. Q. Shih**, S. R. Targan, D. McGovern. 2008. Recent advances in IBD Pathogenesis: Genetics and Immunobiology. *Current Gastroenterology Reports*. **10**:568-575. PMID: 19006613.
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8. K. Bradford and **D. Q. Shih**. 2011. Optimizing 6-Mercaptopurine and Azathiopurine Therapy in the Management of Inflammatory Bowel Disease. *World J Gastroenterol*. **17**(37):4166-73. PMID: 22072847.
9. B. L. Huang, S. Chandra, and **D. Q. Shih**. 2012. Skin manifestations of inflammatory bowel disease. *Frontiers in Physiology*. **3**(13): 1-13. PMID: 22347192.
10. M. Vu, J. Chang, J. Chen, **D. Q. Shih**. 2012. Inflammatory Bowel Disease Associated Colorectal Neoplasia. *Journal of Gastrointestinal & Digestive System*. **S8**:1-8.
11. H. Zhang, **D. Q. Shih**, X. Zhang. 2013. Mechanisms underlying effects of 1,25-Dihydroxyvitamin D3 on the Th17 cells. **3**(4):237-40. *Eur J Microbiol Immunol*. PMID: 24294492.
12. K. L. Wallace, L. Zheng, Y. Kanazawa, **D. Q. Shih**. 2014. Immunopathology of inflammatory bowel disease. *World J Gastroenterol*. **20**(1): 6-21. PMID: 24415853.
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