

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on the Sample Form.
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NAME Emmanuel Thomas	POSITION TITLE Assistant Professor
eRA COMMONS USER NAME thomasem	

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
Florida International University, Miami, FL	B.S. w Honors	1994-1998	Biology-Magna Cum Laude
Florida International University, Miami, FL	B.A.	1994-1998	Chemistry-Magna Cum Laude
University of Miami School Of Medicine, Miami, FL	Ph.D.	2000-2004	Microbiology/Immunology
University of Miami School Of Medicine, Miami, FL	M.D.	1998-2007	Medicine
UNC at Chapel Hill School of Medicine, Chapel Hill, NC	Doris Duke Clinical Research Fellowship	2006-2007	HCV Related Clinical Research
Liver Diseases Branch, NIDDK, NIH, Bethesda, MD	Postdoctoral Training	2008-2011	Viral Hepatitis

A. Personal Statement

Currently, I am in my second year as an assistant professor (non-tenure track) in the Department of Cell Biology in the Miller School of Medicine. In addition, I am a member of the Sylvester Comprehensive Cancer Center (Viral Oncology Program) and Co-Director of the Hepatology Research Laboratory in the Schiff Center for Liver Diseases and a House Physician at the Miller School of Medicine. I was recruited back to the University of Miami to establish a clinical research laboratory focused on viral hepatitis, hepatocellular carcinoma and innate immunity/host defense against viral pathogens. Since I was raised in Miami and obtained my early research training here, I am committed to improving the treatment of viral illnesses and associated cancers in the South Florida area. Over the course of my career, I have endeavored to make steady improvements to my skill set through the support of rigorous training programs. I began working in a molecular biology laboratory during my first year of undergraduate study and subsequently obtained my MD and PhD degrees with a focus on antiviral innate immunity. During medical school, I completed my PhD and published my thesis work in the prestigious journal NATURE. In addition, I was a Doris Duke Clinical Research Fellow at UNC-Chapel Hill with Michael Fried M.D., during my last year of medical school, to build on my basic science background by working with patients infected with HCV. I subsequently expanded my initial training during my postdoctoral work in the liver diseases branch of the NIH, with T. Jake Liang, M.D., that offered training in an integrated clinical and basic science research environment. While at the NIH, I developed a novel and exciting *in-vitro* model to study HCV that utilizes primary human hepatocytes. By using this system, we have been able to more accurately study the antiviral responses that occur in infected patients that drive liver pathology.

B. Positions and Honors

Positions and Employment

2012-	Assistant Professor (Non-Tenure Track), Department of Cell Biology; House Physician-UMMSM, Co-Director, Hepatology Laboratory, Schiff Center for Liver Diseases; Viral Oncology Program, Sylvester Comprehensive Cancer Center, University of Miami Miller School Of Medicine, Miami, FL; Research Service, Miami VA Medical Center.
2008-2011	Research Fellow, Liver Diseases Branch, NIDDK, National Institutes Health, Bethesda, MD, <i>T. Jake Liang, MD, Advisor</i>
2006-2007	Doris Duke Clinical Research Fellowship, University of North Carolina at Chapel Hill, Chapel Hill, NC, <i>Michael W. Fried, MD, Advisor</i>
1997	SMART/Glenn Foundation Fellow, Baylor College of Medicine, Houston, TX <i>Olivia Pereira-Smith, PhD, Advisor</i>
1995-1998	MBRS/NIH Research Fellow, Florida International University, Miami, FL, Rene J. Herrera, PhD, Advisor

Licenses

Florida House Physician License (University of Miami Miller School of Medicine) #19517

Awards & Honors

2013	NIH Loan Repayment Program Awardee (NIAID)
2013	University of Miami Medical School Stanley J. Glaser Award
2013	University of Miami Nominee, Burroughs Wellcome Award in Medical Science
2012	International Cytokine Society Young Investigator Award
2011, 10, 09	International Symposium on HCV & Related Viruses Travel Award
2011, 10, 09, 08	International Society-Interferon/Cytokine Research Travel Award
2009	NIH FARE Travel Award
2008	NIDDK Nossal Fellowship Award
2007	NIH Loan Repayment Program Awardee (NIDDK)
1998-2002	Rotary Club of Miami, McClelland Trust Scholar
1996-1998	State University System of Florida Minority Scholar
1995-1998	Columbia/HCA Foundation Scholar

Professional Development and Other Training

2014	Liver Society (AASLD) Academic Skills Workshop Scholarship, San Diego, CA
2013	AAMC Grant Writing Course Scholarship, New Orleans, LA
2012	Associate Director, Univ. of Miami FOCIS Center of Excellence
2011	Editorial Board- <i>Journal of Translational Medicine</i>
2011	Ad-hoc Manuscript Reviewer- <i>J. of Infectious Diseases</i> , <i>J. of Antimicrobial Chemotherapy, Gastroenterology</i>
2011	Research Funding Advocacy-Congressional Visit, Joint Advocacy Coalition (JAC) Capitol Hill Translational Research Advocacy Day
2010	Ad-hoc Manuscript Reviewer- <i>P.N.A.S., Immunological Investigations</i>
2009	Ad-hoc Manuscript Reviewer- <i>Hepatology</i>
2008	NIDDK/NIH Grant Writing Workshop/Mock Study Section
2006	Technology Development Boot Camp, Chapel Hill, NC
2006	Member of Bell Tower Toastmasters, Chapel Hill, NC

Professional Societies

2011	Member-American Gastroenterological Association
2011	Member-American Association of Immunologists
2011	Member-American Society for Microbiology
2010	Member-American Physician Scientists Association
2008	Member-Society for Clinical and Translational Science
2007	Member-American Association for the Study of Liver Diseases
2004	Member-International Society for Interferon and Cytokine Research

IRB Preparation/Co-investigator

- 2013 Performance Evaluation of Elecsys Anti-HCV II Immunoassay and PreciControls on the Cobas E601 Analyzer, Study No. CIM RD001453. UM-IRB #20130498.
- 2013 GS-US-337-0123- A Phase 2, Multicenter, Open-Label Study to Investigate the Safety and Efficacy of Sofosbuvir/Ledipasvir Fixed-Dose Combination + Ribavirin Administered in Subjects Infected with Chronic HCV who have Advanced Liver Disease or are Post-Liver Transplant. UM-IRB #20130470.
- 2013 Assessing Infection Prevalence and Molecular Determinants of Health Disparities in Hepatitis C Virus infected African Americans, Haitians, and Latinos for the Prevention of Hepatocellular Carcinoma. UM-IRB #20130272.
- 2012 Prospective and Retrospective Screening for Hepatitis B, Hepatitis C and HIV in South Florida Community. UM-IRB #20120528.
- 2012 Elucidation of the Role of Statins in Prevention of Hepatocellular Carcinoma. UM-IRB #20120983.
- 2012 Effects of Asunaprevir and Daclatasvir versus the combination of peginterferon and ribavirin with Asunaprevir and Daclatasvir on Interferon Stimulated Gene Expression in Null and Partial Responders with Chronic Hepatitis C. *In Preparation.*
- 2008 Viral kinetics and liver gene expression in response to ribavirin and peginterferon for chronic hepatitis C. NIH Protocol 08-DK-0182.
- 2007 Effect of Pretreatment Ribavirin on Response to Standard Hepatitis C Antiviral Therapy. Study #: 07-2582. UNC Biomedical IRB.
- 2007 Immunohistochemical Analysis of Patient Liver Biopsies Obtained During the AACT. Study #: 07-0202. UNC Biomedical IRB.
- 2007 Molecular Analysis of Liver Biopsies Obtained in Germany Under IRB Approved Protocol. Study #: 07-0151. UNC Biomedical IRB.

Invited Seminars

- 2014 Grand Rounds, University of Colorado Medical School, Denver, CO
- 2013 AIDS Malignancy Consortium Fall Meeting, Bethesda, MD
- 2012 Life Technologies Hepatocyte Expert Program, San Diego, CA
- 2011 Viral Hepatitis Interest Group, NIH, Bethesda, MD
- 2010 The Hamner Institutes for Health Sciences, Institute for Drug Safety Sciences, Research Triangle Park, NC. *Host: Paul Watkins*

Conference Oral Presentations

- 2011 Recent Advances in Interferon Biology, NIH, Bethesda, MD
- 2011 The Liver Meeting (AASLD), San Francisco, CA
- 2011 18th International Symposium on Hepatitis C Virus and Related Viruses, Seattle, WA
- 2010 International Society for Interferon and Cytokine Research, Chicago, USA
- 2010 17th International Symposium on Hepatitis C Virus and Related Viruses, Two Oral Presentations, Yokohama, Japan
- 2009 The Liver Meeting (AASLD), Boston, MA
- 2009 16th International Symposium on Hepatitis C Virus and Related Viruses Nice, France
- 2009 Inter. Soc. of Viral Hepatitis and Liver Diseases, Washington, DCC. Peer Reviewed Publications (*Search "Emmanuel Thomas" in Pubmed*) (*Denotes Co-1st Author)

C. Publications

Original peer reviewed publications:

Rotman Y, Fujita K, Koh C, Maeder D, Nestlerode C, **Thomas E**, Kleiner DE, Zmuda JM, O'Brien TR, Sanyal AJ, Liang TJ and the NASH-CRN: HSD17B13 and RORA are Novel Genes Contributing to the Histological Severity of Non-Alcoholic Fatty Liver Disease. *Submitted to **Journal of Clinical Investigation.***

- Thomas JM, Pos Z, Wang RY, Wang E, Reinboth J, Frank GM, Lusso P, Trinchieri G, Alter HJ, Marincola FM and **Thomas E**: Differential Responses of Plasmacytoid Dendritic Cells to Distinct Viral Pathogens. *Submitted to European Journal of Immunology*.
- Brownell J, Bruckner J, Wagoner J, **Thomas E**, Liang TJ and Polyak S: Direct, Interferon-Independent Activation of the CXCL10 Promoter by NF- κ B and IRF3 During Hepatitis C Virus Infection. *Journal of Virology*. 2013 Nov 20. [Epub ahead of print].
- Noureddin M, Wright EC, Zhao X, Clark S, **Thomas E**, Chen R, Alter H, Kleiner D, Hoofnagle JH, Liang TJ and Ghany MG. Association of IL28B Genotype with Fibrosis Progression and Clinical Outcomes in Patients with Chronic Hepatitis C: A Longitudinal Analysis. *Hepatology*. May 23, 2013.
- Rotman Y, Noureddin M, Feld JJ, Guedj J, Witthaus M, Han H, Park YJ, Park SH, Heller T, Ghany MG, Doo E, Koh C, Abdalla A, Gara N, Sarkar S, **Thomas E**, Ahlenstiel G, Edlich B, Titerence R, Hogdal L, Rehmann B, Dahari H, Perelson A, Hoofnagle JH and Liang TJ: Effect of Ribavirin on Viral Kinetics and Liver Gene Expression in Chronic Hepatitis C. *GUT*. Feb 8, 2013.
- Thomas E**, Gonzalez VD, Modi AA, Chen W, Noureddin M, Rotman Y, Liang TJ: Robust Induction of Type III Interferons and other Cytokines Defines a Unique Pattern of Innate Immunity to HCV Infection. *Gastroenterology* 2012 Apr;142(4):978-88.
- Thomas E**, Feld JJ, Li Q, Hu Z, Fried MW, Liang, TJ: Ribavirin Potentiates Interferon Action by Augmenting Interferon-Stimulated Gene Induction in HCV Cell Culture Models. *Hepatology*. 2011 Jan;53(1):32-41.
- Feld JJ, Modi AA, El-Diwani R, Rotman Y, **Thomas E**, Koh C, Cherepanov V, Heller T, Ghany MG, Park Y, Hoofnagle JH, Liang TJ: S-adenosyl methionine improves early viral kinetics and interferon stimulated gene induction by the combination of peginterferon and ribavirin in previous hepatitis C genotype 1 non-responders. *Gastroenterology*. 2011 Mar;140(3):830-9.
- Kremer M, **Thomas E**, Milton RJ, Perry AW, van Rooijen N, Wheeler MD, Zacks S, Fried MW, Rippe RA, and Hines IN: Kupffer cell and interleukin-12-dependent loss of natural killer T cells in hepatosteatosis. *Hepatology*. Volume 51, Issue 1, January 2010, Pages: 130-141.
- Balachandran S*, **Thomas E*** and Barber GN: A FADD-Dependent Innate Immune Mechanism in Mammalian Cells. *Nature*. 2004 Nov 18; 432 (7015).
- Thomas E** and Herrera RJ: Multiplex Polymerase Chain Reaction of Alu Polymorphic Insertions. *Electrophoresis*. 1998 Oct; 19(14):2373-9.
- Gallo JC*, **Thomas E*** and Novick GE and Herrera RJ: Effects of Subpopulation Structure on Probability Calculations of DNA Profiles from Forensic PCR Analysis. *Genetica*. 1997; 101:1-12.
- Duncan G, **Thomas E**, Gallo JC, Baird LS, Garrison G and Herrera RJ: Human Phylogenetic Relationships According to the D1S80 locus. *Genetica*. 1996-97;98(3):277-87.

Reviews and Meeting Proceedings

- Thomas E** and Liang TJ: The Role of Interferons in the Treatment of HCV in the Era of Oral Antivirals: **Solicited Review**. *Alimentary Pharmacology & Therapeutics*. *In Preparation*.
- Mansourian PG, Rao MK, Martinez FJ, Thomas E and Schiff ER: Effects of Statins on the Risk of Hepatocellular Carcinoma. *In Preparation*.
- Mansourian PG, Ghany MG and **Thomas E**: Spontaneous Mutations in the HBV Genome and their Clinical Implications. *Current Hepatitis Reports*. 2013 April 21 Vol. 12, Num. 2.
- Thomas E**, Ghany MG, Liang TJ: The Application and Mechanism of Action of Ribavirin in Therapy of HCV. *Antiviral Chemistry and Chemotherapy*. 2012 Sep 25;23(1):1-12.
- Thomas E**: Genome-Wide Association Studies: "SNPing" Away at Liver Disease. *Gastroenterology & Hepatology*. June 2011, Vol. 7, Issue 6, Pages: 407-409.
- Afdhal NH, **Pharmacogenetics and Hepatitis C Meeting Participants**: Hepatitis C pharmacogenetics: state of the art in 2010. *Hepatology*. 2011 Jan; 53 336-45.
- Thomas E** and Fried MW: Hepatitis C: Current Options for Nonresponders to Peginterferon and Ribavirin. *Current Gastroenterology Reports*. 2008 Feb;10(1):53-9.

Book chapters

Thomas E and Schiff ER: *Cold Springs Harbor Monographs: Viral Hepatitis*. Eds. Christoph Seeger and Stephen Locarnini, **Solicited Book Chapter**. *In Preparation*.

Antunez-De-Mayolo A, Antunez-De-Mayolo G, **Thomas E**, Reategui EP, Brown MD and Herrera, RJ: Chapter 15 Worldwide Distribution of a Polymorphic Alu Insertion in the Progesterone Receptor Gene. ***Genomic Diversity Applications in Human Population Genetics***. Eds. Surinder Singh Papiha, Ranjan Deka, Ranajit Chakraborty, 1999.

Letters to Editor

Yoneda M, Thomas E, Sumida Y and Schiff ER: The Influence of Menopause on the Development of Hepatic Fibrosis in Non-obese Women with Nonalcoholic Fatty Liver Disease. *Submitted to Hepatology*.

Yoneda M, Thomas E and Schiff ER: New vistas of comparison of the various elastographic methods which refer transient elastography. *Submitted to Ultrasound in Medicine and Biology*.

D. Funding (Active)

1) University of Miami Institutional Start Up Funds (PI: Thomas E, 100% Effort) **\$1,000,000** (no indirect costs). 4/1/2012-4/1/2017. Funds to support the creation of a new independent laboratory at the University of Miami studying Hepatocellular Carcinoma and Viral Hepatitis.

2) Stanley J. Glaser Award (PI: Thomas E, 5% Effort) **\$40,000** (no indirect costs). 6/1/2013-5/31/2014. Elucidation and Application of the Mechanisms of Action of Ribavirin and Interferon in HCV Antiviral Therapy. This project involves studies on the mechanisms of action of antiviral agents used to treat HCV infection.

3) Howard Hughes Medical Institute Undergraduate/High School Scholars Research Program. (PI: Thomas E, 2% Effort) **\$1,200** (no indirect costs). Summer 2013. Funds to support Zachery Austin, Danielle Turnquest, Miguel Montana, Katrina Montane and Paolo Scalla, summer students, in my laboratory for a summer rotation focused on studying the antiviral response in hepatocytes.

4) Schiff Center for Liver Diseases Award (PI: Thomas E, 5% Effort) **\$80,000** (no indirect costs). 6/1/2013-5/31/2017. Funds provided to support clinical research carried out through the Center for Liver Diseases on viral hepatitis. In addition, further support was provided to pay the salary for one postdoctoral fellow.

5) CFAR Supplement in HIV/AIDS-FY2013 (PI: Thomas E, 15% Effort) **\$153,000** (\$53,000 indirect costs). 8/1/2013-8/1/2014. Modeling the Response in Hepatocytes and Kupffer Cells to HIV/HCV Coinfection. This is an administrative supplement to the parent Miami-CFAR grant to support the initiation of a project on HIV/HCV coinfection. Awarded 8/6/13.

6) NIDA/NHSN R25 Early Career Stage Mentoring Program (PI: Thomas E, 5% Effort) **\$15,000** (no indirect costs). 7/18/2013-8/1/2014. Assessing Infection Prevalence and Molecular Determinants of Health Disparities in Hepatitis C Virus Infected African Americans, Hispanics and Haitian Communities that have a High Incidence of IV Drug Use in South Florida. This is a subcontract from the R25 program to develop a grant on HCV infection that will be submitted to NIDA within one year. Funds are to support grant development and provide funds for pilot studies. Awarded 7/18/13.

7) CFAR Developmental Grant (PI: Thomas E, 10% Effort) **\$40,000** (no indirect costs). 1/1/2014-1/1/2015. Identification of HIV/HCV Coinfected Patients in South Florida for the prevention of Hepatocellular Carcinoma. Money is provided to establish and study a clinical cohort of HIV/HCV coinfecting patients to complement the ongoing laboratory program. Awarded 12/13/13.