CURRICULUM VITAE

Name: Ana Fernandez-Sesma, PhD

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PERSONAL STATEMENT

Dr. Fernandez-Sesma established her own group as an assistant professor in the department of Microbiology at Icahn School of Medicine at Mount Sinai (ISMMS) in January 2007 and is now a tenured Professor in that department since 2016. She is also very dedicated to graduate education and mentoring and currently serves as co-director of the Microbiology Main Training Area (MTA) of the Graduate School of Biomedical Sciences at ISMMS. Her main research interest is the study of innate immunity evasion by viruses of human health interest, such a dengue virus (DENV), influenza virus and other important human pathogens like HIV. The main focus of her laboratory is DENV and she developed and optimized a human primary cell system in which she can study the interactions of this virus with human primary immune cells, such as monocytes, dendritic cells (DCs) and macrophages and has recently developed a human tonsil system to study DENV infections. Using these primary human cells her group identified the interferon (IFN) antagonist for DENV, namely the NS2B3 protease complex, that is able to inhibit the production of this important antiviral cytokine in primary human dendritic cells by cleaving the adaptor molecule STING. Her group subsequently showed that DENV can degrade the DNA sensor cGAS in infected cells, which is triggered by leakage of mitochondrial DNA during infection.

Her laboratory is currently funded by NIH to perform studies characterizing the mechanisms of immune evasion by DENV in primary human systems and to develop novel model systems to study this virus in more immune competent systems than the ones currently available.

She has participated in a multi-investigator NIH program project to study innate immunity in HIV, in which she will focus on host factors identified to influence HIV replication in vitro and the role of those factors in the ability of human dendritic cells to support HIV replication and to enhance transfer of the virus to T cells.

Additionally, she participated in a project funded by the department of defense (DARPA) together with several other investigators from UCSF, Stanford University, and other institutions to study evolution and fitness of DENV in mosquito and mammalian systems. Her group focuses on the viral elements important for innate immune evasion by DENV in those two hosts as a measurement of fitness in both systems. This was a very competitive grant application (Prophecy), aimed to generate algorithms to predict viral fitness.

Dr. Fernandez-Sesma utilizes human systems to study influenza virus innate immune evasion and participates in one of the Centers of Excellence of Influenza Research and Surveillance (CEIRS). Her group focuses on the contribution of immune cells to the pathogenesis of different influenza virus and the role of the viral antagonists of innate immunity in primary human systems. Additionally, she participates in one of the NIH funded Systems Biology Centers lead by Dr. Stuart Sealfon, at ISMMS, entitled “Modeling Early Immunity to Human Influenza Infection”, in which her group analyzes the kinetics of IAV infection and innate immunity responses in lung epithelial cells.

She was able to gather an impressive team of existing and new collaborators from ISMMS, UC Berkeley, Northwestern University, UCSF, Sanford-Burnham among others to apply for a highly competitive U19 application in response to an RFA for the competitive renewal for the existing Human Immunology Project Consortia (HIPC) of the NIH/NIAID https://www.immuneprofiling.org/hipc/page/showPage?pg=about. This project, named Dengue Human Immunology Project Consortia (DHIPC) was funded in 2015. The project will investigate the human innate immune responses to DENV in infected individuals from a Nicaraguan cohort and DENV vaccinated individuals as well as validations in ex vivo systems. These studies are generating crucial data on early events of DENV infections that can shape the adaptive immunity generated against these viruses and help us understand the complex immune responses generated in humans infected or vaccinated with DENV. The project has also been expanded to study human immune responses to chikungunya (CHIKV) and Zika (ZIKV) viruses. She serves as the Chair of the NIH/NIAID HIPC Steering Committee since 2016.

A. Fernandez-Sesma, November 2018

Dr. Fernandez-Sesma has been invited to numerous academic institutions and national and international scientific meetings to present her work. She has numerous publications in virology related journals of high impact in her field and is also a member of the editorial boards of several journals in the virology field. She currently serves in the advisory committees of more than 20 students in the Microbiology MTA. She has also been very active at participating in study sections at NIH and other agencies as a grant reviewer and has been a permanent member of the NIH/NIAID study section Virology B for 6 years. In 2018 she was elected to the NIH/NIAID DMID Advisory Council. She has established important collaborations with prestigious virologists and immunologists that have allowed her to perform cutting edge viral immunology work and to participate in important multi-investigator productive projects.

EDUCATION

1990. MS in Biological Sciences from the University of Salamanca, Spain

1996. MS in Biomedical Sciences from Mount Sinai Graduate School. The City University of New York (CUNY).

1998. PhD in Biomedical Sciences from Mount Sinai Graduate School, CUNY.

POSITIONS AND HONORS

1991-1993. Research assistant in Dr. Peter Palese's laboratory at Mount Sinai School of Medicine (MSSM), New York, NY.

1993-1997. Graduate student in the department of Microbiology, Mount Sinai Graduate School of Biological Sciences, City University of New York (CUNY), New York, NY.

1998-2004. Postdoctoral fellow in Dr. Thomas Moran's laboratory MSSM, New York, NY.

2001-2004. Postdoctoral NIH training grant (1-T32-AI07605).

2004. Postdoctoral Investigator Award from International Cytokine Society, Cytokines in Cancer and Immunity meeting, San Juan, PR, October 2004.

2005-2006. Assistant Professor (research track) in the department of Microbiology, MSSM, New York, NY.

2007-2012. Assistant Professor (tenure track) in the department of Microbiology, MSSM, New York, NY.

2008-2014. Member of the Steering Committee of the Graduate School of Biomedical Sciences at Icahn School of Medicine at Mount Sinai (ISMMS).

2012-2015. Associate Professor in the department of Microbiology, Icahn School of Medicine at Mount Sinai (ISMMS), New York, NY.

2013. Elected Best Faculty Mentor to postdoctoral fellows at the Graduate School of Biomedical Sciences, ISMMS.

2015. Ranked **#4** and top female NIH funded Investigator in Microbiology in the US by Blue Ridge Institute for Medical Research (BRIMR).
http://www.brimr.org/NIH_Awards/2015/NIH_Awards_2015.htm

2016-present. Professor with tenure in the department of Microbiology at Icahn School of Medicine at Mount Sinai (ISMMS).

2016. Featured in "Just desserts" monthly meeting of Icahn School of Medicine at Mount Sinai (ISMMS) Office for Women's Careers focused on outstanding women scientists.

2016. Ranked **#3** and top female NIH funded Investigator in Microbiology in the US by Blue Ridge Institute for Medical Research (BRIMR).
http://www.brimr.org/NIH_Awards/2016/NIH_Awards_2016.htm

2017. Ranked **#5** and top female NIH funded Investigator in Microbiology in the US by Blue Ridge Institute for Medical Research (BRIMR).
http://www.brimr.org/NIH_Awards/2017/NIH_Awards_2017.htm

2018. Mount Sinai Alumni Award for Achievement in Graduate Education.

2018-2022. Member of the NIH/NIAID/DMID Advisory Council.

2018. Ranked **#4** and top female NIH funded Investigator in Microbiology in the US by Blue Ridge Institute for Medical Research (BRIMR).
http://www.brimr.org/NIH_Awards/2018/NIH_Awards_2018.htm

EDITORIAL BOARDS

2005-present. Ad-hoc reviewer: Nature, Nature Microbiology, PNAS, ASM Journals, Cell Reports, EMBO, PLoS Pathogens, PLoS ONE, PLoS NTD, Journal of Molecular Biology, Journal of Innate Immunity, Journal of General Biology, MBio, eBiomedicine, JExpMed, JBC.

2007-present. Member of the editorial board of the Journal of Virology.

2011-2016. Member of the editorial board of Virus research

2012-2014. Academic Editor for PLoS ONE.

2013-2016. Member of the editorial board of Virology.

2014-2018. Associate Editor for PLoS Pathogens

2017-present. Senior Editor mSphere

2018-present. Section Editor PLoS Pathogens

STUDY SECTIONS

2006. Invited reviewer for the study section "Non pharmaceutical interventions for pandemic Influenza", at the CDC, Atlanta, August 2006.

2007. Invited reviewer for the study section "**"**CDC Grants for Public Health Dissertation Research (R36)**",** at the CDC in Atlanta, GA, July 25-26, 2007.

2010. Ad-hoc reviewer for the NIH study section: "NIH Director's Opportunity for Research in Five Thematic Areas (RC4)". May 25th 2010.

2010. Ad-hoc reviewer of Virology B study section. Washington DC, October 7-8th, 2010.

2011. Ad-hoc reviewer for the NIH/NIAID study section: "Partnerships for Next Generation Biodefense Diagnostics (R01)", February 15th and February 28th, 2011.

2011. Ad-hoc reviewer for the NIH study section "F13 Infectious Diseases and Microbiology Fellowship Review panel", March 24-25th, 2011.

2011-2017. Permanent member of the NIH study section Virology B, (effective July 1st, 2011).

2013. Invited reviewer for dengue (DEN) pre-application peer review panel of the 2013 fiscal year Peer Reviewed Medical Research Program (PRMRP) for the Department of Defense Congressionally Directed Medical Research Programs (CDMRP).

2013. Invited reviewer for the therapeutic development review panel (TDEP) of the clinical trial grant (CTG) of the National Medical Research Council (NMRC), Singapore.

2015. Invited reviewer for dengue (DEN) pre-application peer review panel of the 2015 fiscal year Peer Reviewed Medical Research Program (PRMRP) for the Department of Defense Congressionally Directed Medical Research Programs (CDMRP).

2017. Expert evaluator of the Virology Department at the Institute Pasteur. December 4-6th, 2017. Paris, France.

ACADEMIC ACTIVITIES AND COMMITTEES

1996-1999. Teaching Assistant for the Mount Sinai School of Medicine Immunology course.

2001-present. Laboratory instructor for the Medical Microbiology course at Icahn School of Medicine at Mount Sinai (ISMMS).

2001-present. Lecturer for the Advanced Virology course at the department of Microbiology. The Graduate School of Biomedical Sciences, ISMMS

2003-2006. Lecturer for the New York University Graduate School Advanced Virology course.

2008-2010. Screener for PhD applications to the Microbiology main training Area (MTA). The Graduate School of Biomedical Sciences, ISMMS.

2009-present. Lecturer for the Medical Microbiology course at ISMMS.

2011-present. Invited lecturer at the Hot Topics in Infectious Diseases course in New York University.

2012-present. Lecturer for the Biomedical Science (BMS) course. The Graduate School of Biomedical Sciences, ISMMS.

2015. Member of the search committee for the Dean of the Graduate School of Biomedical Sciences and the Dean of Research at ISMMS.

2016-present. Member of the ISMMS Center for Excellence in Youth Education (CEYE) Advisory Council.

2016-present. Member of the Faculty Directors of PhD programs and Leadership Team of the Graduate School of Biomedical Sciences at ISMMS.

2016-present. Member of the Biorepository & Pathology Advisory Committee at ISMMS.

MEMBERSHIPS

2004-present. The American Association of Immunologists (AAI).

2004-present. The American Society of Virology (ASV).

2004-present. The Interleukin and Cytokine Society.

2005-present. The New York Academy of Sciences.

2008-present. The American Society of Tropical Medicine and Hygiene (ASTMH).

2009-present. The American Society of Microbiology (ASM).

2009-present. The Infectious Diseases Society of America (IDSA).

2013-2016. Abstract evaluator for the American Society of Virology (ASV) annual meetings.

2013-present. Abstract evaluator for the Pan-American Dengue Research Network Meetings (PANDERM).

ADMINISTRATIVE AND ACADEMIC LEADERSHIP APPOINTMENTS

2007-2013. Co-director of the Mount Sinai Graduate School Advanced Virology course at the department of Microbiology.

2010-present. Co-director of the Microbiology Main Training Area (MTA) of the Graduate School of Biological Sciences at ISMMS.

2016-present. Chair of the NIH/NIAID Human Immunology Project Consortia (HIPC) Steering committee.

PEER REVIEWED PUBLICATIONS (in chronological order)

Research Articles

1993- 1999

1. Piccone, M.E., **Fernandez-Sesma, A.** and P. Palese. 1993. Mutational analysis of the influenza virus vRNA promoter. *Virus Res.,* 28(2):99-112. PMID8317146

***2. Fernandez-Sesma, A.**, Schulman, J.L. and T.M. Moran. 1996. A bispecific antibody recognizing influenza a virus M2 protein redirects effector cells to inhibit virus replication *in*

vitro. *J Virol.,* 70(7):4800-4804. PMC190421 *(Selected as one of the highlights of the ASM News 1996)

3. Moran, T.M., Isobe, H., **Fernandez-Sesma, A.** and J.L. Schulman. 1996. Interleukin-4 causes delayed virus clearance in influenza virus-infected mice. *J Virol.,* 70(8):5230-5235. PMC190479

4. Fernandez-Sesma, A., Peluso, R.W., Bai, X., Schulman, J.L. Levy, D.E. and T.M. Moran. 1998. Superantigen activated T cells redirected by a bispecific antibody inhibit vesicular stomatitis virus replication *in vitro* and *in vivo*. *J Immunol.,* 160:1841-1849.

5. Moran, T.M., Park, H., **Fernandez-Sesma, A.**, and J.L. Schulman. 1998. Th2 responses to inactivated influenza virus can be converted to a Th1 response and induce heterosubtypic immunity. *J Infect Dis.,* 180:579-585. DOI:10.1086/314952

2000-2009

6. Durbin, J.E., **Fernandez-Sesma, A.**, Lee, C-K., Rao, T.D., Frey, A.B., Moran, T.M., Vukmanovic, S., Garcia-sastre, A., and D.E. Levy. 2000. Type I IFN modulates innate and specific antiviral immunity. *J Immunol.,* 164:4220-4228.

****7.** Lopez, C.B., **Fernandez-Sesma, A.**, Czelusniak, S.M., Schulman, J.L., and T.M. Moran. 2000. A mouse model for immunization with ex vivo virus-infected dendritic cells. *Cell Immunol.,* 206:107-115. DOI:10.1006/cimm.2000.1736 **** (**A. Fernandez-Sesma and C.B. Lopez co-first authors)

8. Lopez, C.B., **Fernandez-Sesma, A.**, Schulman, J.L., and T.M. Moran. 2001. Myeloid dendritic cells stimulate both Th1 and Th2 immune responses depending on the nature of the antigen. *J Interferon Cytokine Res* 21: 763-773.

9. Vecino WH, Quanquin NM, Martinez-Sobrido L, **Fernandez-Sesma A.**, García-Sastre A, Jacobs, WR, Jr., and GJ. Fennelly. 2004. Mucosal immunization with attenuated *Shigella flexneri* harboring an influenza hemagglutinin DNA vaccine protects mice against a lethal influenza challenge. *Virology* 325:192-199. DOI:10.1016/j.virol.2004.04.045

10. Falcón, A. M., **Fernandez-Sesma, A.,** Nakaya, Y., Moran, T. M., Ortín, J. and A.García-Sastre. 2005. Attenuation and immunogenicity in mice of temperature-sensitive influenza viruses expressing truncated NS1 proteins. *J Gen Virol. 86(10):2817-21.* DOI:10.1099/vir.0.80991-0

11. Martinez-Sobrido, L., Gitiban, N., **Fernandez-Sesma, A.**, Mertz, SE., Jewell, N., Durbin, RK., García-Sastre, A., and JE. Durbin. 2006. Recombinant Newcastle Disease Virus as a Vaccine Vector for Respiratory Syncytial Virus. *J Virol. 80(3):1130-9.* PMC1346968

12. Fernandez-Sesma, A., Marukian, S., Ebersole, B., Kaminski, D., Park, M-S., Yuen, T., Sealfon, S., Garcia-Sastre, A. and T.M. Moran. 2006. Influenza virus evades innate and adaptive immunity via the NS1 protein. *J Virol. 80(13): 6295-6304.* PMC1488970

13. Hu, J., Sealfon S. C., Hayot, F., Jayaprakash, C., Kumar, M., Pendleton, A.C., Ganee, A. **Fernandez-Sesma, A.**, Moran, T.M. and J. G. Wetmur. 2007. Chromosome-specific and noisy IFNβ1 transcription in individual virus-infected human primary dendritic cells. *Nucleic Acids Research 35: 5232-5241.* PMC1976463

14. Madan R.P., Tan, M., **Fernandez-Sesma, A**., Moran, T.M., Emre, S., Campbell, A., and B. C. Herold. 2008. A Prospective, Comparative Study of the Immune Response to Inactivated Influenza Vaccine in Pediatric Liver Transplant Recipients and their Healthy Siblings. *Clin Infect Dis.*, 46(5):712-8. PMC2884176

15. M.M. Escribese, T. Kraus, E. Rhee, **A. Fernandez-Sesma**, C.B. Lopez, T.M. Moran. 2008. Estrogen Inhibits Dendritic Cell Maturation To dsRNA Viruses. *Blood, Dec 1;112(12):4574-84. Epub 2008 Sep 18.* PMC2597128

16. Borderia-Giner, A.V., Hartman, B., **Fernandez-Sesma, A.**, Moran, T.M. and S.C. Sealfon. 2008. Antiviral activated dendritic cells, a paracrine induced response state. *J Immunol., 181: 6872-6881.* PMC4843808

17. Phipps-Yonas, H., Seto, J., Sealfon, S.C., Moran,T.M. and **A. Fernandez-Sesma**. 2008. Interferon-β Pretreatment of Conventional and Plasmacytoid Human Dendritic Cells Enhances their Activation by Influenza Virus. *PLoS Pathog, Oct;4(10):e1000193.* PMC2568957

18. Haye, K. Bourmakina, S. Moran, T.M., Garcia-Sastre, A. and **A. Fernandez-Sesma**. 2009. The NS1 protein of a human influenza virus inhibits type I interferon production and the induction of antiviral responses in primary human dendritic and respiratory epithelial cells. *J. Virol,* 83*(13), 6849-6862.* PMC2698524

2010-2014

19. Rodriguez-Madoz, J.R., Bernal-Rubio, D., Kaminski, D., Boyd, K. and **A. Fernandez-Sesma.** 2010. Dengue Virus Inhibits the Production of Type I Interferon in Primary Human Dendritic Cells. *J Virol, 84(9), 4845-4850.* PMC2863727.

20. Rodriguez-Madoz, J.R., Belicha-Villanueva, A. Bernal-Rubio, D., ashour, J., Ayllon, J., and **A. Fernandez-Sesma.** 2010. Inhibition of Type I IFN Response in Human Dendritic Cells by Dengue Virus Infection Requires Catalytically Active NS2B3 Complex. *J Virol, Oct;84(19):9760-74.* PMC2937777

.**21.** Ashour J., Morrison J., Laurent-Rolle M., Belicha-Villanueva A., Plumlee C.R., Bernal-Rubio D., Williams K., Harris E., **Fernandez-Sesma A.**, Schindler C., and A. García-Sastre. 2010. Mouse STAT2 is a restriction factor for dengue virus. *Cell Host Microbe, Nov 18;8(5):410-421.* PMC3310429

22. Ramos, I., Bernal-Rubio, D., Durham, N., Belicha-Villanueva, A., Lowen, A.C., Steel, J. and **A. Fernandez-Sesma.** 2011. Effects of receptor binding specificity of avian influenza virus on the human innate immune response. *J Virol,* 85(9):4421-4431. PMC3126224

23. Varga, Z.T., Ramos, I., Hai, R., Schmolke, M., Garcia-Sastre, A., **Fernandez-Sesma, A.** and P. Palese. 2011. The Influenza Virus Protein PB1-F2 Inhibits the Induction of Type I Interferon by Affecting MAVS Function. *PLoS Pathogens,* Jun;7(6):e100206. PMC3111539.

24. Long, C.B., Ramos, I., Rastogi, D., Manwani, D. Janow, G., Del Rio, M., Mayers, M., Herold, B.C., **Fernandez-Sesma, A.**, and R. P. Madan. 2011. Humoral and cell-mediated immune responses to monovalent 2009 influenza A/H1N1 and seasonal trivalent influenza vaccines in high risk children. *Journal of Pediatrics, 160:74-81.* PMC3652684.

25. Pica N, Iyer A, Ramos I, Bouvier NM, **Fernandez-Sesma, A**, García-Sastre A, Lowen AC, Palese P, Steel J. 2011. The DBA.2 mouse is susceptible to disease following infection with a broad, but limited, range of influenza A and B viruses. *J Virol., 2011 Dec;85(23):12825-9.* PMC3209355.

26. Berger, A., Sommer , A.F.R. Zwarg, J., Hamdorf, M., Welzel, K., Esly, N., Panitz, S., Reuter, A., Ramos, I., Jatiani, A., Mulder, L.C.F., **Fernandez-Sesma, A.** Rutsch, F., Simon, V., König, R., and E. Flory. 2011. SAMHD1-deficient CD14+ cells from individuals with Aicardi-Goutières syndrome are highly susceptible to HIV-1 infection. *PLoS Pathogens, Dec;7(12):e1002425.* PMC3234228

27. Krause JC, Tsibane T, Tumpey TM, Huffman CJ, Albrecht R, Blum D, Ramos I, **Fernandez-Sesma A,** Edwards KM, García-Sastre A, Basler CF, Crowe JE Jr. 2012. Human monoclonal antibodies to pandemic 1957 H2N2 influenza virus target the receptor-binding domain. *J Virol, Jun;86(11):6334-40.* PMC3372199.

28 Belicha-Villanueva, A., Rodriguez-Madoz, J.R., Maamary, J., Bernal-Rubio, D., Minguito de la Escalera, M., **Fernandez-Sesma, A.** and A. García-Sastre. 2012. Recombinant influenza A viruses with enhanced PB1 and PA viral 1 protein expression. *J Virol,* May;86(10):5926-30. PMC3347261

29. Chiang CY, Engel A, Opaluch AM, Ramos I, Maestre AM, Secundino I, De Jesus PD, Nguyen QT, Welch G, Bonamy GM, Miraglia LJ, Orth AP, Nizet V, **Fernandez-Sesma A,** Zhou Y, Barton GM, Chanda SK. 2012. Cofactors required for TLR7- and TLR9-dependent innate immune responses. *Cell Host and Microbe Mar 15;11(3):306-18.* PMC3310399

30. Aguirre, S., Maestre, AM., Pagni, S., Patel, J., Savage, T., Gutman, D., Maringer, K., Bernal-Rubio, D., Shabman, R.S., Simon, V. Rodriguez-Madoz, JR., Mulder, LCF., Barber, GN, and **A. Fernandez-Sesma.** 2012. DENV inhibits type I IFN production in infected cells by cleaving human STING. *PLoS Pathogens 2012 Oct; 8(10): e1002934.* PMC3464218.

31. Stefanidou, M., Ramos, I., Mas Casullo, V., Trepanier, J., Rosenbaum, S., **Fernandez-Sesma, A.** and B. Herold. 2013. HSV-2 Prevents Dendritic Cell Maturation, Induces Apoptosis and Triggers Release of Pro-inflammatory Cytokines: Potential Links to HSV-HIV Synergy. *J Virol, Feb;87(3):1443-53.* PMC3554174

32. Ramos, I., Carnero, E., Bernal-Rubio, D., Seibert, C.W., Westera, L., García-Sastre, A. and **A. Fernandez-Sesma**. 2013. Contribution of dsRNA and CPSF30 Binding Domains of Influenza Virus NS1 to the Inhibition of Type I IFN Production and Activation of Human Dendritic Cells. *J Virol. Mar;87(5):2430-40.* PMC3571370.

33. Versteeg, G.A., Rajsbaum R., Sánchez-Aparicio, M.T., Maestre A.M., Valdiviezo, J., Shi, M., **Fernandez-Sesma, A.**, Inn, K-S, Jung J. and A. García-Sastre. 2013. TRIM proteins regulate the innate immune response. *Immunity. 2013 Feb 21;38(2):384-98.* PMC3584420

34. Morrison, J., Laurent-Rolle, M., Maestre, A. M., Pisanelli, G., Mulder, L.C.F., Simon, V., **Fernandez-Sesma, A.**, and Adolfo García-Sastre. 2013. Dengue virus co-opts UBR4 to degrade STAT2 and antagonize type I IFN signaling. *PLoS Pathog. 2013 Mar;9(3):e1003265*. PMC3610674

35. Ramos, I., Krammer F., Hai R., Aguilera, D., Bernal-Rubio D., García-Sastre, A. and **A. Fernandez-Sesma**. 2013. H7N9 influenza viruses interact preferentially with α2,3-linked sialic acids and bind weakly to α2,6-linked sialic acids**.** *J Gen Virol, 2013 Nov;94(Pt 11):2417-23.* PMC3809111

36. Opaluch AM, Schneider M, Chiang CY, Nguyen QT, Maestre AM, Mulder LC, Secundino I, De Jesus PD, König R, Simon V, Nizet V, Macleod G, Varmuza S, **Fernandez-Sesma** A,

Chanda SK. 2014. Positive Regulation of TRAF6-Dependent Innate Immune Responses by Protein Phosphatase PP1-γ. *PLoS One. 2014 Feb 20;9(2):e89284.* PMC3930702

37. Brinzevich D, Young GR, Sebra R, Ayllon J, Maio SM, Deikus G, Chen BK, **Fernandez-Sesma A**, Simon V, Mulder LC. 2014. HIV-1 interacts with HERV-K (HML-2) Envelopes derived from human primary lymphocytes. *J Virol, 2014 Jun;88(11):6213-23.* PMC4093866

38. Rajsbaum, R., Versteeg, G. A., Schmid, S., Maestre, A.M., Belicha-Villanueva, A., **Fernandez-Sesma, A.**, tenOever, B.R., and A. García-Sastre. 2014. Unanchored K48-linked polyubiquitin synthesized by the E3-ubiquitin ligase TRIM6 stimulates the interferon-IKKε kinase-mediated antiviral response. *Immunity, Jun 19;40(6):880-95.* PMC4114019

39. Manganaro L, Pache L, Herrmann T, Marlett J, Hwang Y, Murry J, Miorin L, Ting AT, König R, García-Sastre A, Bushman FD, Chanda SK, Young JA, **Fernandez-Sesma** A, Simon V. 2014. Tumor suppressor cylindromatosis (CYLD) controls HIV transcription in an NF-κB-dependent manner. *J Virol. 2014 Jul;88(13):7528-40.* PMC4054419

2015-present

40. Goff, P., Hayashi, T., Martinez-Gil, L., Corr, M., Crain, B., Yao, S., Cottam, H., Chan, M., Ramos, I., Eggink, D., Heshmati, M., Krammer, F., Messer, K., Pu, M., **Fernandez-Sesma, A.**, Palese, P., and D. Carson. 2015. Synthetic TLR4 and TLR7 ligands as influenza virus vaccine adjuvants induce rapid, sustained and broadly protective responses. *J Virol, Mar;89(6):3221-35.* PMC4337541

41. Miller MS, Rialdi A, Ho JS, Tilove M, Martinez-Gil L, Moshkina NP, Peralta Z, Noel J, Melegari C, Maestre AM, Mitsopoulos P, Madrenas J, Heinz S, Benner C, Young JA, Feagins AR, Basler CF, **Fernandez-Sesma A**, Becherel OJ, Lavin MF, van Bakel H, Marazzi I. 2015. Senataxin suppresses the antiviral transcriptional response and controls viral biogenesis. *Nat Immunol, 2015 May;16(5):485-94.* PMC4406851

42. Ramos, I, Mansour M, Wohlbold TJ, Ermler ME, Hirsh A, Runstadler JA, **Fernandez-Sesma, A.** and F. Krammer. 2015. Hemagglutinin receptor binding of a human isolate of influenza A (H10N8) virus. *Emerg Infect Dis. 2015 Jul;21(7):1197-201*. PMC4480385

43. Manganaro L, de Castro E, Maestre AM, Olivieri K, García-Sastre A, **Fernandez-Sesma** A, Simon V. 2015. HIV Vpu interferes with NF-κB activity but not with Interferon Regulatory Factor 3. *J Virol. 2015 Oct;89(19):9781-90.* PMC4577919

44. Pache, L., Dutra, M.S., Spivak, A.M., Marlett, J.M., Murry, J.P., Hwang, Y., Maestre, A.M., Manganaro, L., Vamos, M., Teriete, P., Martins, L.J., König, R., Simon, V., Bosque, A., **Fernandez-Sesma, A.**, Cosford, N.D. P., Bushman, F.D., Young, J.A. T., Planelles V. and S. K. Chanda. 2015. BIRC2/cIAP1 is a negative regulator of HIV-1 transcription and can be targeted by Smac mimetics to promote reversal of viral latency. *Cell Host and Microbe, Sep 9;18(3):345-53.* PMC4617541

45. Taguwa, S., Maringer, K., Li., X., Bernal-Rubio, D., Rauch, J.N., Gestwicki, J.E., Andino, R., **Fernandez-Sesma, A.** and J. Frydman. 2015. Defining Host Hsp70 Subnetworks in Dengue Virus Replication Reveal Key Vulnerability in Flavivirus Infection. *Cell. Nov 19;163(5):1108-1123.* PMC4869517

46. Heaton, N.S., Moshkina, N., Fenouil, R., Gardner, T.J., Aguirre, S., Shah, P.S., Zhao, N., Manganaro, L., Hultquist, J., Noel, J., Sachs, D., Hamilton, J., Leon, P.E., Chawdury, A., Tripathy, S., Melegari, C., Campisi, L., Hai, R., Metreveli, G., Gamarnik, A.V., García-Sastre, A., Greenbaum, B., Simon, V., **Fernandez-Sesma, A**., Krogan, N., Mulder, L.C.F., van Bakel, H., Tortorella, D., Taunton, J., Palese, P., and I.Marazzi. 2016. Limiting influenza virus, HIV, and dengue virus infection by targeting viral proteostasis. *Immunity, 44(2):46-58.* PMC4878455

47. Maringer, K., Yousuf, A., Heesom, K.J., Fan, J., Lee, D., **Fernandez-Sesma, A**., Bessant, C., Matthews, D.A., and A. Davidson. 2017. Proteomics informed by transcriptomics for characterising active transposable elements and genome annotation in *Aedes aegypti*. *BMC Genomics (2017) 18:101.* PMC5248466

48. Alvarez, R.A., Maestre, A.M., Law, K., Durham, N.D., Barria, M.I., Ishii-Watabe, A., Tada, M., Kapoor, M., Hotta, M.T., Rodriguez-Caprio, G., Fierer, D.S., **Fernandez-Sesma, A.**, Simon, V. and B. K. Chen. 2017. Enhanced FCGR2A and FCGR3A signaling by HIV viremic controller IgG. *JCI Insight.* 2017 Feb 23;2(4):e88226. doi: 10.1172/jci.insight.88226. PMC5313073

49. Filomatori, C.V., Carballeda, J.M., Villordo, S.M., Aguirre, S., Pallares, H., Maestre, A.M., Sánchez-Vargas, I., Blair, C., Fabri, C., Morales, M.A., **Fernandez-Sesma, A.** and A.V. Gamarnik. 2017. Dengue Virus Genetic Variation Associated to Mosquito Adaptation Defines the Pattern of Viral No-Coding RNAs and Fitness in Human Cells. *PLoS Pathog 13(3):e1006265. doi:10.1371/ journal.ppat.1006265.* PMC5354447

50. Tripathi, S., Balasubramaniam, V., Brown, J.A., Mena, I., Grant, A., Bardina, S.V., Maringer, K., Maestre, A.M., Sourisseau, M., Albrecht, R.A., Krammer, F., Evans M.J., **Fernandez-Sesma A.**, Lim J.K., and A. García-Sastre. 2017. A novel Zika virus mouse model reveals strain specific differences in virus pathogenesis and host inflammatory

immune responses. *PLoS Pathogens, Mar 9;13(3):e1006258. doi: 10.1371/journal.ppat.1006258.* PMC5373643

51. Aguirre, S., Luthra, P., Sanchez, M.T., Maestre, A.M., Patel, J., Lamothe, F. Fredericks, A., Tripathi, S., Zhu, T., Pintado-Silva, J., Webb, L.G., Bernal-Rubio, Solovyov, A., Greenbaum, B., Simon, V., Basler, C.F., D., Mulder, L., Garcia-Sastre, A. and **A. Fernandez-Sesma**. 2017. Dengue virus NS2B protein targets cGAS for degradation preventing mtDNA sensing during infection. *Nature Microbiology, Mar 27;2:17037. doi: 10.1038/nmicrobiol.2017.37.* PMC28346446

52. Luthra, P., Aguirre, S., Yen, B.C., Pietzsch C.A., Sanchez-Aparicio, M.T., Tigabu, B., Morlock, L.K., Garcia-Sastre, A., Leung, D.W., Williams, N.S., **Fernandez-Sesma, A.**, Bukreyev, A. and C.F. Basler. 2017. Topoisomerase II inhibitors induce DNA damage-dependent interferon responses circumventing Ebola virus immune evasion. *MBio, Apr 4;8(2). pii: e00368-17. doi: 10.1128/mBio.00368-17*. PMC5380843

53. Hamlin, R., Rahman, A., Pak, T., Maringer, K., Mena, I., Bernal, D., Potla, U., Maestre, A., Fredericks, A., El-AD, A., Kasarskis, A., Ramos, I., Merad, M., and **A. Fernandez-Sesma.** 2017. CyTOF reveals phenotypic differences between dengue viruses during infection of human dendritic cells*. JCI Insight.* 2017 Jul 6;2(13). DOI:10.1172/jci.insight.92424 [Epub ahead of print] *PMCID:* PMC5499363

54. Young, G.R., Terry, S.N., Manganaro, L., Cuesta-Dominguez A., Deikus G., Bernal-Rubio, D., Campisi, L., **Fernandez-Sesma, A.**, Sebra, R., Simon, V., and L. C. F. Mulder. (2017). HIV-1 infection of primary CD4+ T cells regulates the expression of specific HERV-K (HML-2) elements*. Journal of Virology,* Dec 14;92(1). pii: e01507-17. doi: 10.1128/JVI.01507-17. PMC5730760

55. Hartmann, B.M., Albrecht, R.A., Zaslavsky, E., Nudelman, G., Pincas, H., Marjanovic, N., Schotsaert, M., Martinez-Romero, C., Fenutria, R., Ingram, J.P., Ramos, I., **Fernandez-Sesma, A.**, Balachandran, S., García-Sastre, A.,, and S.C. Sealfon. 2017. Pandemic H1N1 influenza A viruses suppress immunogenic RIPK3-driven dendritic cell death. *Nat Commun*, Dec 5;8(1):1931. doi: 10.1038/s41467-017-02035-9. PMC5715119

56. Manganaro, L., Hong, P., Hernandez, M.M., Argyle, D., Mulder, L.C.F., Potla, U., Diaz-Griffero, F., Lee, BH, **Fernandez-Sesma A.**, and V. Simon. IL-15 modulates $CD4^+$ T cells susceptibility to HIV infection. *Proc Natl Acad Sci USA Oct 9;115(41):E9659-E9667.* PMC6187195.

57. Tome, J., Ramos, I. **Fernandez-Sesma, A.** and J. Ashour. 2018. Anti-NP nanobodies define the early steps of influenza virus infection and identify nuclear import as a strategy

used by ribonucleoproteins to evade innate immune sensors. *J Virol* Oct 10. pii: JVI.01046-18. doi: 10.1128/JVI.01046-18. [Epub ahead of print]. PMC6288324

58. Shah, P.S., Link, N., Jang, G., Sharp, P.P., Zhu, T., Swaney, D.L., Johnson, J.R., Von Dollen, J., Ramage, H., Satkamp, L., Newton, B., Aguirre, S., Huttenhain, R., Petit, M.J., Baum, T., Everitt, A., Laufman, O., Tassetto, M., Shales, M., Stevenson, E., Iglesias, G., Shokat, L., Tripathi, S., Balaubramaniam, V., Webb, L.G., Willsey, A.J., Garcia-Sastre, A., Pollard, K., Cherry, S., Gamarnik, A.V., Marazzi, I., Taunton, J., **Fernandez-Sesma, A.**, Bellen, H.J., Andino, R. and N.J. Krogan. 2018. Comparative flavivirus-host protein-protein interaction mapping reveals novel mechanisms of Dengue and Zika virus pathogenesis. *Cell. 2018 Dec 13;175(7):1931-1945.e18. doi: 10.1016/j.cell.2018.11.028.* PMCID pending.

Invited peer reviewed Review Articles

1. Lopez C.B., Moran T.M., Schulman, J.L., and **A. Fernandez-Sesma**. 2002. Antiviral immunity and the role of dendritic cells. *Int Rev of Immunol.,* 21(4-5), 339-353.

2. Fernandez-Sesma, A. and T.M. Moran. 2007. The role of the influenza virus NS1 protein on evasion of immunity. *Future Virology, 2(4): 389-399.*

3. Fernandez-Sesma, A. 2007. The influenza virus NS1 protein: inhibitor of innate and adaptive immunity. *Infect disord drug targets, 2007 Dec; 7(4):336-43.*

4. Ramos, I and **A. Fernandez-Sesma.** 2012. Cell Receptors for Influenza A Viruses and the Innate Immune Response. *Frontiers in Virology, 3:117. Epub 2012 Mar 28.* PMC3332393

5. Pagni, S.and **A. Fernandez-Sesma**. 2012. Evasion of the Human Innate Immune System by Dengue Virus. *Immunol Res. Dec;54(1-3):152-9.May 9.* PMC4020710

6. Morrison, J., Aguirre, S. and **A. Fernandez-Sesma**. 2012. Innate immunity evasion by dengue virus. *Viruses, Mar;4(3):397-413. Epub 2012 Mar 15.* PMC3347034

7. Ramos, I. and **A. Fernandez-Sesma**. 2012. Innate Immunity to H5N1 Influenza Viruses in Humans. *Viruses, Dec;4(12):3363-3388.* PMC3528270

8. Suthar, M., Aguirre, S. and **A. Fernandez-Sesma**. 2013. Innate Immune Sensing of Flaviviruses. PLoS Pathogens, Pearls review, *Sep;9(9):e1003541.* PMC3771895

9. Maringer, K., **Fernandez-Sesma, A.** 2014. Message in a bottle: Lessons learned from Antagonism of STING signaling during RNA virus infection. *Cytokine Growth Factor Rev.*

2014 Dec;25(6):669-79. doi: 10.1016/j.cytogfr.2014.08.004. Epub 2014 Aug 24. PMC4330990

10. Fredericks, A., and **A. Fernandez-Sesma.** 2014. The burden of dengue and chikungunya worldwide and in the Southern United States. ***Annals of Global Health****, Nov-Dec;80(6):466-475. doi: 10.1016/j.aogh.2015.02.006. Review.* PMC4427842*.*

11. Ramos, I. and **A. Fernandez-Sesma.** 2015. Modulating the innate immune response to influenza A virus: potential therapeutic use of anti-inflammatory drugs. *Frontiers in Immunology Jul 20;6:361. doi: 10.3389/fimmu.2015.00361.* PMC4507467

12. Maestre, A.M., Caplivski, D. and **A. Fernandez-Sesma**. 2016. Zika virus: More questions than answers. *eBioMedicine, (5), March 2016, 2–3. doi:10.1016/j.ebiom.2016.03.014.* PMC4816852

13. Aguirre , S., and **A. Fernandez-Sesma.** 2017. Collateral damage in dengue virus infection triggers innate immune responses*. Journal of Virology, (Gem),* 2017 Jun 26;91(14)*..* PMC5487551

14. Miorin, L., Maestre, A., **Fernandez-Sesma, A.** and Garcia-Sastre, A.. 2017. Evasion of Innate Immunity by Dengue Virus. *BBRC,* Oct 28;492(4):587-596. PMCID: PMC5626595

Invited peer reviewed <u>Commentaries</u>

1. Maestre, A. M., and **A. Fernandez-Sesma**. Finding Clues for Congenital Zika Syndrome: Zika Virus Selective Infection of Immature Neurons. EBioMedicine. 2016 Aug;10:7-8. doi: 10.1016/j.ebiom.2016.07.026. PMC5006724

2. Maestre, A. M., and **A. Fernandez-Sesma**. 2016. ZIKV strains' different phenotypes in human neural cells could be a hint for the emergence of the new clinical neurological outcomes. *EBioMedicine. 2016 Nov;13:35-36. doi: 10.1016/j.ebiom.2016.10.021.* PMC5264277

3. Imperiale MJ, Blader I, Bradford P, D'Orazio S, Duprex WP, Ellermeier CD, **Fernandez-Sesma A**, McMahon K, Mitchell A, Pasetti MF, Tringe S. Completion of an Experiment. *mSphere. 2018 Dec 19;3(6). pii: e00678-18. doi: 10.1128/mSphere.00678-18.* PMC6300690

<u>Book Chapters</u>:

- Medina R.A., Ramos I., and **A. Fernandez-Sesma**. The Epidemiology and Immunology of Influenza Viruses. S. H. E. Kaufmann, B. T. Rouse, and D. L. Sacks, Editors. 2011. *ASM Press, Washington, DC, US. Chapter 51:The Immune Response to Infection, 643-652.*

-Diamond, M., Garcia-Sastre, A. and **A. Fernandez-Sesma.** Dengue and Dengue Hemorrhagic Fever, 2nd Edition. Gubler, D.J., Ooi, E.E., Vasudevan, S. and Farrar, J. (eds). 2014. *CAB International, Wallingford, UK. Chapter 14: Innate Immunity to dengue virus, 268-283.*

Complete List of Published Work in NCBI/Pubmed

http://www.ncbi.nlm.nih.gov/pubmed/?term=fernandez-Sesma%2C+A

Educational online talks

Fernandez-Sesma, A. (2018, January 31). Dengue, Zika and Chickungunya viruses [Video file]. In The Biomedical & Life Sciences Collection, Henry Stewart Talks. Retrieved February 2, 2018, from https://hstalks.com/bs/3660/

Manuscripts submitted and under revision

Wang, G., Borges, LG., Stadlbauer, D., Ramos, I., Bermúdez González, MC., He, J., Ding, Y., Wei, Z., Ouyang, K., Huang, W., Simon, V., Fernandez-Sesma, A., Krammer, F., Nelson, MI., Chen,[Y.,] and A. García-Sastre. 2019. Characterization of newly emerged and novel reassortant H1N1 canine influenza viruses. *Submitted*

Manuscripts in preparation

- Fredericks, A.C., Wallace, L.E., Russell, T.A., Davidson, A.D., **Fernandez-Sesma, A.,** and K. Maringer. *Aedes aegypti* (Aag2)-derived clonal mosquito cell lines reveal impact of pre-existing persistent infection with the insect-specific bunyavirus Phasi Charoen-like virus on arbovirus replication. *Manuscript in preparation*.

- Hamlin, R.E., Fenutria, R. Potla, U. Bernal-Rubio, D., Parsons, A. Ramos, I and **A. Fernandez-Sesma.** Human tonsil histocultures as a novel *ex vivo* model for dengue virus infections. *Manuscript in preparation.*

- Ramos, I., Smith, G., Hartmann, B., Freiburg, M., Garcia-Sastre, A., Sealfon, S. and **A. Fernandez-Sesma.** Single-cell transcriptome analysis reveals a paracrine amplification of type III IFN response during influenza virus infection in human epithelial cells. *Manuscript in preparation.*

- Lopez-Monteagudo, P., Munoz, R., Potla, U., Mena, I., Aydillo, T., Ayllon, J., Garcia-Sastre, A., J. Fribourg, M., Ramos, I and **A. Fernandez-Sesma**. Innate immune antagonist function and cellular localization dynamics of human and avian IAV NS1 proteins in human Dendritic Cells. *Manuscript in preparation.*

- Webb, L.G., Pintado-Silva, J. Zhu, Mutetwa, T., Rangel, M., Bernal-Rubio, D., Potla, U., Reid, St.P, Stapleford, K., Aguirre, S., and **A. Fernandez-Sesma**. Chikungunya virus non-structural proteins disrupt cGAS-STING dependent innate immune signaling. *Manuscript in preparation*.

- Fenutria, R., Bernal-Rubio, D., Montoya, M., Harris, E., **Fernandez-Sesma A.** and I., Ramos. Immune Phenotyping of dengue and Zika viruses in primary human cells demonstrates distinct signatures. *Manuscript in preparation.*

INVITED LECTURES/PRESENTATIONS

1995-2006

1. Selected speaker at the Fourth International Conference on Bispecific Antibodies and Targeted Cellular Cytotoxicity, Hawk's Cay, Florida, USA. 1995.
2. Selected speaker at the 9th International Congress of Immunology, San Francisco, California, USA. 1995.
3. Speaker at the 2nd Symposium on Virus-Host interactions. New York Academy of Sciences, New York, NY, USA. 2000.
4. Speaker at the 5th Symposium on Virus-Host interactions. New York Academy of Sciences, New York, NY, USA. 2002.
5. Selected Speaker at the ASV meeting 2004, Montreal, Canada, July 10-14, 2004.

6. Selected speaker at the International Congress of Immunology, Montreal, Canada, July 18-23, 2004.
7. Selected speaker at the Cytokines in Cancer and Immunity meeting 2004, San Juan, Puerto Rico, October 21-25, 2004.
8. Guest speaker at the Dengue Branch of the CDC, San Juan, Puerto Rico, October 25, 2004.
9. Selected speaker at the 3rd Research Conference on Orthomyxoviruses, Cambridge UK, July, 2005.
10. Invited speaker in the department of Microbiology at UTMB, Galveston, TX, March 2006.
11. Invited speaker in the department of Immunobiology, Mount Sinai School of Medicine, New York, NY, May 2006.
12. Invited speaker at the 41st Annual American Society for Microbiology (ASM) Regional Meeting. Albany November 1st 2006.

2007-2015

13. Invited speaker in the Department of Microbiology at the Instituto de Salud Carlos III, Madrid, Spain, July 12, 2007.
14. Invited speaker in the department of Medicine, Division of Infectious Diseases, Mount Sinai School of Medicine. September 2007.
15. Invited speaker at Gilead sciences Inc, Foster City Ca. September 24th, 2007.
16. Invited speaker at the University of Maryland, department of Veterinary Medicine, College Park, MD. September 26th, 2007.
17. Co-Chair and guest speaker at the 3rd annual CIVIA symposium, Mount Sinai School of Medicine, New York. October 22nd, 2007.
18. Chair and guest speaker at the 14th Symposium of Virus –Host interactions. New York, January 14th, 2008.
19. Selected speaker at the XIV International Congress of Virology, Istanbul, Turkey. August 10-15 2008.
20. Invited speaker at the Thomas Jefferson University Vaccine Center. September 26th, 2008.
21. Co-chair and selected speaker at the 57th American Society of Tropical Medicine and Hygiene (ASMTH) meeting, New Orleans, LA, December 7-11th, 2008.
22. Invited speaker at the department of Microbiology, University of Chicago. Chicago IL, February 26th, 2009.
23. Moderator of the Dengue Virus: Epidemiology, Pathogenesis and Prevention session. IDSA 47th Annual Meeting, Philadelphia, PA, November 1, 2009.

24. Invited speaker at the School of Public Health, Weill Cornell Medical College, New York, NY, December 2nd, 2009.

25. Invited speaker at the CEPORTED retreat, Mount Sinai School of Medicine, New York, NY, January 23rd, 2010.

26. Invited speaker at the Mount Sinai Graduate School Revisit 2010. Mount Sinai School of Medicine, New York, NY, March 26th, 2010.

27. Invited lecturer at the Symposium:"Epidemic Emergencies: The Role of Preventive Medicine", at the Istituto Zooprofilattico Sperimentale del Mezzogiorno, Naples, Italy, July 7th, 2010.

28. Invited speaker at the NIAID Workshop on Dengue Virus Infection & Immunity. Portland Oregon, August 24-25, 2010.

29. Invited Speaker to the 2nd Pan American Dengue Research Network Meeting. Cancun, Mexico, November 16-19, 2010.

30. Invited speaker at the department of Medicine, Division of Infectious Diseases, Mount Sinai School of Medicine, December, 8th, 2010.

31. Invited speaker in the MARC U-STAR sponsored "Frontiers in Science" seminar series at Queens College, Queens, New York, February 9th, 2011.

32. Invited speaker at the Eight Dengue Vaccine Initiative Research Network Meeting. Sterling, VA, June 9th-12th, 2011.

33. Invited Speaker at the X Argentinean Congress of Virology, (CAV). Buenos Aires, Argentina, September 26-29, 2011.

34. Invited Speaker at the Brazilian Congress of Microbiology (CBM). Foz do Iguacu, Brazil, October 2-6, 2011.

35. Invited speaker at VGTI, Port St. Lucie, Florida, February 21st, 2012.

36. Invited speaker at the 3rd Panamerican Dengue Research Network Meeting. Cartagena, Colombia September 12-15, 2012.

37. Invited Speaker at the Novartis Institute for Tropical Diseases (NITD) Conference on Dengue. Sao Paulo, Brazil, September 16th-19th, 2012.

38. Guest Speaker at the Research Triangle Immunology and Virology group seminar series. North Carolina State University (NCU), Raleigh, NC. November 7th, 2012.

39. Invited speaker at the University of Minnesota, Veterinary School. Minneapolis, MN, January 22nd, 2013.

40. Invited Speaker at the University of Illinois, Urbana-Champaign, Department of Microbiology. April 4th, 2013.

41. Selected speaker at the Keystone Symposium on Positive Strand RNA Viruses. Boston MA, April 28-May3rd, 2013.

42. Invited Speaker at the College of Veterinary Medicine, University of Illinois, Urbana-Champaign, September 24th, 2013.

43. Invited speaker at the Global Health and Emerging Pathogens seminar series. Icahn School of Medicine at Mount Sinai. October 2nd, 2013.
44. Invited Speaker at the Department of Microbiology, Molecular Genetics and Immunology, University of Kansas Medical Center (KUMC). December 5th, 2013.
45. Invited Speaker at the Department of Molecular Microbiology and Immunology and the Division of Infectious Diseases at Johns Hopkins. March, 13th, 2014.
46. Invited speaker at NIH/NIAID laboratory of Viral Diseases (LVD) and laboratory of Immunological Diseases (LID). April 8th, 2014.
47. Invited Lecturer at the EMBO/ICGEB Workshop on Human RNA viruses, Istanbul, Turkey, October 2014.
48. Convener and speaker at the symposium: "Evolution, Adaptation, and RNA Viral Scape to Insect and Human Sensing" at the American Society of Microbiology annual meeting, 2015. New Orleans, LA.
49. Invited speaker at the Centro Nacional de Diagnostico y Referencia (CNDR)and Sustainable Sciences Institute (SSI), Managua, Nicaragua, September 10, 2015.
50. Invited speaker at NIH/NHLBI, Cell Biology and Physiology Center, Laboratory of Host-Pathogens Dynamics. September 17th, 2015.
51. Invited speaker at the Global Health and Emerging Pathogens seminar series. Icahn School of Medicine at Mount Sinai (ISMMS). September 30th, 2015.
52. Invited Speaker at the Virginia Tech Faculty of Health Sciences. Virginia-Maryland Regional College of Veterinary Medicine, October 2nd, 2015.
53. Invited Speaker at the University of Naples Federico II, Veterinary School. Naples, Italy, November 3rd, 2015.
54. Invited panelist at the Science Career Panel for the Research Mentoring Consortium at the American Museum of Natural History. New York, NY, November 11th, 2015.

2016-2017

55. Invited Speaker at Sanford-Burnham-Prebys Medical Discovery Institute, San Diego, CA. February 23rd, 2016.
56. Invited panelist at Panel discussion on Zika Virus. City University of New York (CUNY) Graduate Center, New York, NY. March 9th, 2016.
57. Invited speaker at The Columbia University Seminars on Population Biology: From Ebola to Zika: Present and Emerging Infectious Diseases. Columbia University Faculty House. New York, NY, April 19th, 2016.
58. Invited Speaker at the 5th Pan American Dengue Research Network meeting, Panama, Panama. April 20th-23rd, 2016.

59. Invited speaker at the 2016 Keystone Symposia on *Positive-Strand RNA Viruses.* Austin, Texas, May 1-6, 2016.
60. Invited speaker at the Human Immune Monitoring Core and Cancer Immunology Institute Seminar Series. Icahn School of Medicine at Mount Sinai. May 8th, 2016.
61. Invited lecturer at the International school of Immunological Biotherapies. Icahn School of Medicine at Mount Sinai, University of La Sorbonne and University of Sao Paulo. ISMMS May 9th, 2016.
62. Invited speaker at the II FAMERP-UTMB meeting. Sao Jose do Rio Preto, Brazil. June 1-4th, 2016.
63. Invited plenary speaker at the American Society of Virology (ASV) meeting, Virginia Tech, Blacksburg, VA, June 2016.
64. Invited speaker at the University of Texas, Austin. Department of Molecular Biosciences, College of Natural Sciences. Austin, TX, September 14th, 2016.
65. Invited participant at the "Emerging Infectious Diseases from A to Z (EIDA2Z): Emerging Challenges and Opportunities symposium". The National Emerging Diseases laboratory Inaugural Symposium. Boston University, Boston MA, September 18-20, 2016.
66. Invited speaker at the Grand Rounds of the Department of OBGYN, at Icahn School of Medicine at Mount Sinai, New York, September 21st, 2016.
67. Invited speaker at the Grand Rounds of the Department of OBGYN, at Mount Sinai Beth Israel, New York, October 5th, 2016
68. Invited plenary speaker at the Molecular Aspects of Viral Disease Symposium (MAVS). Mexico City, Mexico, October 19-21, 2016.
69. Invited speaker at the department of Cellular and Molecular Pharmacology of the University of California, San Francisco (UCSF). San Francisco, CA, October 26th, 2016.
70. Invited speaker at the Center for Emerging and Neglected Diseases (CEND), University of California, Berkeley (UCB). Berkeley, CA, October 28th, 2016.
71. Invited speaker at the Department of Medicine Research Conference series, Icahn School of Medicine at Mount Sinai, New York. November 7th, 2016
72. Invited plenary speaker at the "Colloquium on Emerging Viruses" Pontificia Universidad Católica de Valparaíso, Chile. November 18-19, 2016.
73. Invited speaker at the Annual Meeting for the Microbiology Society of Chile. Valdivia, Chile, November 22-25, 2016.
74. Invited speaker at the Keystone Hemorrhagic fever Viruses Symposia. Santa Fe, NM. December 4-9, 2016.
75. Invited speaker at the V ICEGB Workshop on Human RNA Viruses, San Jose, Costa Rica. December 12-14, 2016.
76. Invited keynote speaker at the Life Sciences Symposium at Florida State University. Tallahassee, FL, February 9-10, 2017.

77. Guest speaker at La Jolla Institute for Allergy and Immunology, La Jolla, CA. February 28th, 2017.
78. Invited speaker at the Centro Nacional de Biotecnologia. Canto Blanco (Madrid), Spain. March 10th, 2017.
79. Invited speaker at the Keystone Meeting: "Type I Interferon: Friend and Foe Alike" in Banff, Alberta, Canada. March 19-24th, 2017
80. Invited speaker at the Department of Microbiology and Immunology at University of Illinois, Chicago (UIC). Chicago, IL, May 1st, 2017.
81. Invited speaker at the Viruses and Cells Gordon research Conference, Il Ciocco, (Lucca), Italy, May14-19, 2017.
82. Invited lecturer at the Sao Paolo School of Arbovirology, Sao Jose do Rio Preto, Sao Paolo, Brazil. May 29th -June 4th, 2017.
83. Invited panelist at the II Encuentro de Científicos Españoles en EEUU (ECUSA), Boston, MA, June 4th, 2017
84. Invited Plenary speaker at the XIV Congreso Nacional de Virologia, Cadiz, Spain, June 10-14th, 2017.
85. Invited speaker at the International Meeting on Arboviruses and their Vectors" (IMAV), 2017. University of Glasgow, Glasgow, UK, September 6-7, 2017.
86. Invited Speaker at the Oxford Glycobiology Institute, Dept of Biochemistry, University of Oxford, Oxford, UK. September 11th, 2017.
87. Invited speaker at the Department of Microbial Sciences, Faculty of Health and Medical Sciences. University of Surrey, Guilford, Surrey, UK. September 12th, 2017.
88. Invited Plenary Speaker at the XIV Congreso Argentino de Virologia. Buenos Aires, Argentina. September 26-29, 2017
89. Invited speaker at the Department of Virology at Harvard Medical School. Boston MA, October 11th, 2017.
90. Invited speaker at the Teacher's College of Columbia University. New York, NY. November 16th, 2017
91. Invited speaker at the Department of Microbiology at the Washington University in St Louis. St Louis, MO, November 21st, 2017.

2018-present
92. Invited speaker at the Immunology Institute seminar series. Icahn School of Medicine at Mount Sinai (ISMMS), New York. January 23rd, 2018.
93. Invited speaker at the Department of Surgery Grand Rounds, UCSF, San Francisco, CA. March1st, 2018.
94. Invited Speaker at the 2017-18 Infectious Diseases & Immunity Colloquium, UTMB, Galveston, TX. March 19-20th, 2018.

95. Invited Keynote Speaker at the 30th Annual Buffalo Conference on Microbial Pathogenesis. Department of Microbiology and Immunology at SUNY University at Buffalo. Buffalo, NY, May 16th, 2018.
96. Invited plenary speaker at the Nature Conference VIIR2018: "Viral Infection and Immune Response 2018". Shanghai, China, October 12-14th, 2018
97. Invited speaker at the Emerging Infectious Diseases seminar series at DUKE-NUS medical school. Singapore, October 15th, 2018
98. Invited speaker at the International Forum on Infection and Immunology at the First Affiliated Hospital, Zhejiang University School of Medicine. Hangzhou, China, October 17th, 2018.
99. Invited speaker at the Microbiology and Immunology department seminar series at Albert Einstein College of Medicine, New York. October 22nd, 2018.
100. Invited speaker at the *"100 years since the 1918 Spanish influenza: are we prepared against the next emerging virus pandemic?"* Symposium. Pontificia Universidad Catolica de Chile, Facultad de Medicina. Santiago, Chile, November 12th, 2018.
101. Invited Plenary speaker at the XXIV Congreso de la Asociacion Latinoamericana de Microbiologia (ALAM. Santiago, Chile, November 14th, 2018.
102. Invited Speaker at the 4th International Conference on Mitigation Strategies for Emerging Infectious Diseases. Cali, Colombia, November 15th, 2018.
103. Invited speaker 5th Annual Host-Pathogen Interactions: Circuits to Systems Symposium. Sanford Consortium for Regenerative Medicine. San Diego, CA, February 20th, 2019.
104. Invited speaker at the Department of Pathobiological Sciences, School of Veterinary Medicine Virology Seminar Series. University of Wisconsin Madison, February 28th, 2019.

RESEARCH SUPPORT

ACTIVE

1U19AI117873 (Sealfon, PI) **05/08/15-04/30/20**
NIH/NIAID **Fernandez-Sesma (Co-PI, project 1)**
"Modeling Early Immunity to Human Influenza Infection". Dr. Fernandez-Sesma is the Co-PI of project 1 with Dr. Adolfo Garcia-Sastre, entitled: "Immunity to Influenza in Primary Lung Epithelial Cells" and will quantify the responses of fully differentiated primary HTBE to IAV infection.
Role: Co-Investigator

1U19AI118610 Fernandez-Sesma (PI) Harris Co-PI 06/24/15-05/31/20

NIH/NIAID
This application, “Dengue Human Immunology Project Consortium (DHIPC)” is in response to RFA RFA-AI-14-007, Human Immunology Project Consortium (HIPC). DHIPC is a multi-investigator proposal to study innate and adaptive immune responses induced by dengue virus in natural human infections, human vaccinations and ex vivo infections and uses systems biology approaches for Genomics, Proteomics, Immune Monitoring and Modeling by several Cores. Dr. Fernandez-Sesma and Harris are the overall co-PIs of the project and co-Leaders of the administrative Core. **Dr. Fernandez-Sesma is also the PI of Project 3 (Ex vivo analysis of human responses to dengue virus infection and vaccination.**
Role: Co-PI

3U19AI118610-04S1 (Fernandez-Sesma, PI) 07/10/18-05/31/19
NIH/NIAID
Research Supplements to Promote Diversity in Health-Related Research Program for Jessica Pintado Silva (PhD student in the Fernandez-Sesma laboratory).
Role: PI

3U19AI118610 Fernandez-Sesma (PI) 06/01/18-05/31/19
NIH/NIAID
Administrative supplement: “Profiling of innate and adaptive immune responses to influenza virus infection and vaccination in human tonsillar histocultures”. This one year supplement will analyze immune responses elicited by influenza virus candidates for Universal Influenza vaccines in human tonsil histocultures using Aurora flow Cytometry and RNA seq.
Role: PI

HHSN272201400008C (García-Sastre, PI) **04/01/14-03/31/21**
NIH/NIAID **Fernandez-Sesma (sub-component PI)**
“Center for Research on Influenza Pathogenesis **(CRIP)”**, as part of the Centers of Excellence for Influenza Research and Surveillance, **(CEIRS)**.
Dr. Fernandez-Sesma’s component will study the contribution of different virulence factors, such as NS1, PB1F2 and receptor binding by the HA, to the influenza virus pathogenesis using primary human systems such as dendritic cells and macrophages.
Role: Co-Investigator

PENDING

R21 07/1/2019-06/30/2021
NIH/NIAID (Fernandez-Sesma, PI)
"Characterization of RIG-I and cGAS ligands in dengue virus (DENV) infections". This application will study RNA and DNA generated during DENV infections from host and viral origin and their ability to be bound by the immune sensors cGAS and RIGI. It will also validate molecular features of innate immune modulation found in different DENV strains in primary cells.
Role: PI

Mount Sinai (MS) Vaccine and Treatment Evaluation Units (VTEU) 12/1/2019-11/30/2025
NIH/NIAID (Aberg, J. PI)
(Fernandez-Sesma, Subcomponent PI)
The MS VTEU Research laboratory is part of the MS VTEU proposal in response to RFA-AI-18-046, and will provide scientific expertise in respiratory viruses (e.g. Influenza viruses), flaviviruses (e.g., Dengue and Zika viruses) and emerging pathogens (e.g., Hantaviruses) to aid in the diagnosis of infectious diseases and develop new methods to diagnosis infectious diseases as well as laboratory assays to monitor response to therapies and vaccines. Dr. Fernandez-Sesma will act as the Research laboratory PI for this VTEU.
Role: PI

COMPLETED

5R01AI073450 Fernandez-Sesma (PI) 08/01/14-07/31/18
NIH/NIAID
"Modulation of innate and adaptive immunity by dengue virus"
This project is focused on the host and viral intrinsic factors important for dengue virus infection and the development of improved models to study dengue disease.

1R21AI116022 Fernandez-Sesma (PI) 12/01/14-11/30/16
NIH/NIAID
"Human tonsil explants as a novel model for studying dengue virus infection". R21 to explore the use of human tonsils as a potential model for dengue virus infection.

1P01AI090935 (Chanda, PI) 8/15/10-07/31/15
NIH/NIAID Fernandez-Sesma (PI, project 4)
The HIV Immunology Network Team (HINT) studies the interactions between HIV and innate immunity. It combines systems biology, molecular virology, innate immunity and viral immunology components. Project 4 focuses on the interactions between HIV and primary immune cells (DCs, macrophages and T cells).

HR0011-11-C-0094 (Andino, PI) 10/15/11-3/14/15

DOD/DARPA Fernandez-Sesma, (sub-component PI)
HR0011-11-C-0094 (PROPHECY)
"Linking Virus Population Genetic Structure to Infectivity and Adaptation" This is the final phase (Phase III) of a multi-investigator proposal in response to DARPA-BAA-10-93 (PROPHECY) that studies the evolution fitness and adaptation of dengue virus in mosquito and mammalian systems. Dr. Fernandez-Sesma leads the innate immunity component. (NCE until 11/15)

1R01AI073450 Fernandez-Sesma (PI) 8/1/2008-7/31/13
NIH/NIAID
"Modulation of innate and adaptive immunity by dengue virus"
This project will analyze the contribution of different cells from human blood to the evasion of immunity by dengue virus. Mosquito and human cell derived DENV will be compared and also recombinant Newcastle Disease Viruses (NDV) expressing individual DENV proteins will be generated by reverse genetics. The ability of DENV to evade initiation of immunity in primary human blood cells will be analyzed by several methods.

1R01AI073450 Fernandez-Sesma (PI) 9/1/10-8/31/11
NIH/NIAID (ARRA)
Administrative supplement to concurrent R01 to purchase qRT-PCR machine and to retain a technician in the laboratory of Dr. Fernandez-Sesma.

1P01AI082325 Schnell (PI) 8/1/09-8/31/11
NIH/NIAID (ARRA) Fernandez-Sesma (Project 2 CoPI)
"Interferon inducing Newcastle disease viruses as HIV-1 vaccines"
Analysis of the immunogenic properties of different recombinant NDV and NDV viral vectors expressing HIV epitopes in primary human systems.

Panthera Foundation Grant Fernandez-Sesma (PI), 7/1/09-6/31/11
"Prevalence of mosquito-borne viruses in the area of Pantanal (Brazil)". This is an international multi-investigator project to investigate the prevalence of mosquito-borne viruses, such as dengue and West Nile Virus in a remote national preserve area of Brazil.

MSSM CTSA-Pilot Grant Simon (PI) 5/1/10-4/30/11
Mt Sinai Institutes of Clinical and Translational Sciences (CTS)
Fernandez-Sesma, (CoPI)
"Kinetics of innate immune responses control HIV/AIDS disease". Mt Sinai Institutes of Clinical and Translational Sciences awarded one-year pilot grants to translational pilot projects. The goal of this study is to define the spectrum of innate immune responses to dengue, Newcastle Disease virus and other TLR ligands in primary cells from HIV controllers and normal progressors.

HHSN266200700010C García-Sastre (PI) 4/1/08-3/31/10
NIH/NIAID Fernandez-Sesma (PI) Pilot project

Center for Research on Influenza Pathogenesis (CRIP) as part of the Centers of Excellence for Influenza Research and Surveillance (CEIRS).
Pilot Project: "Activation of human dendritic cells by influenza virus with different receptor specificities: a new viral recognition strategy by immune cells?". This pilot project analyzed several recombinant influenza viruses with different receptor binding specificities for their ability to induce inflammatory responses in primary human DCs.

U19 AI62623 Moran (PI) 9/1/04-8/31/09
NIH/NIAID Fernandez-Sesma (Subcomponent CoPI).
Center for Investigating Viral Immunity and Antagonism (CIVIA)
Multi-investigator project to study the initiation of Immunity by viruses using human systems. Dr. Fernandez-Sesma was overseeing the development and optimization of new technologies to study human dendritic cell maturation. Dr. Fernandez-Sesma contributed pertinent data for the application of this project.

U19 AI62623 Moran (PI) 9/1/04-8/31/06
NIH /NIAID Fernandez-Sesma (PI) Developmental project
Center for Investigating Viral Immunity and Antagonism (CIVIA)
"Dengue virus interactions with human dendritic cells". This developmental project comprised in CIVIA allowed Dr. Fernández- Sesma to obtain preliminary data about the interactions of dengue virus with human dendritic cells.

1-T32-AI07605 7/1/01-6/30/04
NIH /NIAID Fernandez-Sesma (PI) Postdoctoral training grant.
Post-doctoral fellowship awarded to Dr. Fernandez-Sesma as part of a training grant to study antiviral immunity to influenza viruses in mouse systems.

TRAINING RECORD

(Names in bold are current members of the Fernandez-Sesma laboratory)

Technicians and volunteers: 8

-Svetlana Marukian, technician (2003-2004). Currently Study Director at HemoShear LLC, Charlottesville, VA.
-Dorothy Kaminski, technician (2004-2005). Currently pediatric resident
-Kelley (Boyd) Kruze, lab coordinator (2005-2006). Currently Registered Nurse in San Francisco, Ca.
-Dabeiba Bernal-Rubio, lab coordinator (2006-present)
-Teiko Nartey, technician (2010-2011). Currently research technician at the department of Oncological Sciences at ISMMS.
-Francise Lamothe: volunteer (January 2013-January 2014). Currently medical student at Howard University College of Medicine.

-Uma Potla, lab technician (September 2015-present)
-Veronica DeJesus: volunteer, (March-2017-present). Accepted into PhD program, 2018-2020 at the University of Leeds, UK.

Rotation high school students: 5

-Pablo Vazquez. Bronx Sciences High school Intell program, Bronx, NY (2011-2013, Sebastian Aguirre supervisor).
-Aida Alazar. High School for Math, Sciences and Engineering, NY, NY (2012, Dabeiba Bernal supervisor).
-Sadichchha Adhikari. High School for Math, Sciences and Engineering, NY, NY (2012, Dabeiba Bernal supervisor).
-Michael James: Don Bosco Preparatory High School, New York, NY (Summer 2017, Laurence G. Webb supervisor).
-**Allison Lee**: Rising Junior at The Brearley School, 610 East 83rd Street, New York, NY. Class of 2020. (Summer 2018-present, Paula Lopez-Monteagudo supervisor)

Rotation Medical Students: 2

-Shawn Jia (MD student, summer 2010 rotation).
-Timothy Savage (MD student, summer 2011 rotation)

Rotation MDPhD students: 10

-Dailia Francis (MD/PhD) (2008 rotation) (2009- 2010). Transferred to another laboratory.
-Christopher Seibert (MD/PhD) (summer 2008 rotation)
-Benjamin Goldman-Israelow (MD/PhD) (summer 2008 rotation)
-Noa Simchoni (MDPhD) (summer 2010 rotation)
-Tobias Cohen (MDPhD student) (summer 2010 rotation)
-Rebecca Hamlin (MDPhD student) (summer rotation 2011)
-Matthew Chambers (MDPhD student) (summer rotation 2013)
-William Zao (MDPhD student) (summer rotation 2014)
-Connor Gruber (MDPhD student) (summer rotation 2015)
-Jessica Tan (MDPhD student) (summer rotation 2016)

Rotation PhD students: 17

-Peter Giannakas (2007 rotation)
-Won-Keun Kim (2007 rotation)
-Sheila Borges (2008 rotation)
-Sarah Pagni (Spring 2009 rotation)
-Scott Justus (Fall 2009 rotation)
-Natasha Durham (Fall 2009 rotation)
-Scott Speer (Fall 2010 rotation)

-Alisha Grant (Spring rotation 2011)
-Anand Matani (Fall rotation 2011)
-Amzie Pavlinsin (Spring rotation 2012).
-Justine Noel (Fall rotation 2015)
-Ericka Kirkpatrick (Fall rotation 2015)
-Kathryn Stein (Winter rotation 2016)
-Tongtong Zhu (Spring rotation 2016)
-Laurence (Gabe) Webb (Spring rotation 2016)
-Angela Choi (Fall rotation 2016).
-Andrea Parsons (Spring-Fall 2017)

Post Baccalaureate Research Program (PREP) students: 2

-Edwin Carbajal (September 2015-present)
-Jessica Pintado-Silva (February 2016-2017). Accepted into the PhD program of The Graduate School of Biomedical Sciences at ISMMS in 2017.

Visiting students (3-6 months): 5

-Liset Westera (Masters student University of.Utrecht, Netherlands) (Fall 2008 rotation). Currently Postdoctoral Researcher at Academic Medical Center (AMC), Amsterdam, Netherlands.
-Alvaro Ingles Prieto (PhD student from Spain) (summer 2010, 3 month rotation). Currently Postdoctoral Fellow at IST, Vienna, Austria.
-Miriam Pascual: Visiting Masters student Universidad Francisco de Vitoria, Madrid, Spain (February 2013-June 2013).
-Domingo Aguilera: Visiting Masters student Universidad Francisco de Vitoria, Spain (February 2013-June 2013). Currently Master Student at Vrije Universiteit of Amsterdam, Netherlands.
-Ezekiel Tabet: Visiting Master student Queens College, New York, NY (summer 2013)

Masters in Biomedical Sciences (MSBS) students: 5 (3 graduated)

- Timothy Savage (MSBS, 2008-2010, Ana Fernandez-Sesma supervisor). ***Awarded Best Master's Thesis Award in 2010.*** Graduated with MD degree from Icahn School of Medicine at Mount Sinai (2010-2014). Currently Attending Physician at Boston Children's hospital, Boston MA.
- Phoenix Bell (MSBS, 2010-2012, Dabeiba Bernal supervisor). Currently Pathology Resident at University of Rochester Medical Center, Rochester, NY.
- Anthony Fredericks (MSBS, 2013-2015, Irene Ramos and Kevin Maringer supervisors). ***Awarded Best Master's Thesis Award in 2015***. Currently, medical student (Y4) at Keck School of Medicine at USC. Los Angeles, CA.

-Shahtaz Sruty (MSBS, 2014-2015, Dabeiba Bernal supervisor). Transferred to another laboratory in 2015 and graduated with MSBS in June 2016.
- **Tinaye Mutetwa** (MSBS, 2017-present). Performing his Master's thesis research in the Fernandez-Sesma laboratory (Irene Ramos supervisor).

Summer Undergraduate Research Program (SURP) Students: 2

- Roland Smith (Summer 2015)
- Andalus Ayaz (Summer 2015)

PhD students: 5 (2 graduated)

- Hannah Phipps-Yonas (2005-2007). Graduated May 2007 (Co-mentor). Currently Adjunt Biology Faculty at Paradise Valley Community College and Mesa Community College, University of Arizona Chandler AZ.
- Sarah Pagni (2009-2013). Graduated June 2013. Currently Research Analyst at Tufts University School of Dental Medicine, Boston MA.
-Tong-tong Zhu (June 2016-present). Current PhD student in the Fernandez-Sesma lab.
-Laurence (Gabe) Webb (June 2016-present). Current PhD student in the Fernandez-Sesma lab.
-Jessica Pintado-Silva (June 2018-present). Current PhD student in the Fernandez-Sesma lab.

MD/PhD students: 2 (2 graduated)

- Kester Haye (PhD training 2005-2007) Co-mentor. Graduated from MDPhD program in 2009. Currently GI-Hepatobiliary Pathology Fellow at UCSF, San Francisco, CA.
- Rebecca Hamlin (PhD training 2012-2016). Awarded F30 fellowship by NIH/NIAID (score of 14). Graduated in May 2016 with her PhD. Currently Resident in Internal Medicine at University of Pennsylvania Medical School, Philadelphia, PA.

Post-doctoral Fellows: 9

-Maria Escribese (2006-2007) Co-mentor. Currently Researcher and Faculty at Universidad Fundacion San Pablo CEU, Madrid, Spain.
-Antonio Borderia (2006-2007) Co-mentor. Currently Project manager for the International Network at the Institute Pasteur, Paris, France.
-Juan R. Rodriguez-Madoz (Nov 2007- Nov 2010). Currently Assistant Professor at CIMA, Universidad de Navarra, Pamplona, Spain.
-Irene Ramos (March 2009-2014). Currently Research Assistant Professor in the department of Microbiology at ISMMS, New York, NY.
-Ana Maestre (August 2010- December 2017). Currently Medical Affairs Fellow at Novocure. New York, NY, USA.

-Sebastian Aguirre (Sept 2010-2016). Research Assistant Professor in the department of Microbiology at ISMMS, New York, NY. Currently, Scientific director of discovery at Generation Bio. Boston MA.
-Kevin Maringer. Visiting Sir Wellcome Trust Fellow, U. of Bristol (March 2012- September 2016). Currently Lecturer at the University of Surrey. Surrey, UK.
-Rafael Fenutria (March 2016-present)
-Paula Lopez-Monteagudo (October 2016-present).

Clinical fellows: 3

- Caroline Long, MD (January - June 2010).Visiting Fellow from Pediatric Infectious Diseases, Children's Hospital at Montefiore, Bronx, NY.
- Sasha Davidson, MD (September 2014- April 2016). Visiting Fellow from Visiting Fellow from Pediatric Infectious Diseases, Children's Hospital at Montefiore, Bronx, NY.
- Erick Mayer Arispe, MD. (June 2016 - June 2017). Visiting Fellow from Visiting Fellow from Pediatric Infectious Diseases, Children's Hospital at Montefiore, Bronx, NY. Currently, attending physician in Pediatric Infectious Diseases, at Kings County Hospital. Brooklyn, NY.

Junior faculty: 2

- Sebastian Aguirre, PhD (July 2016- May 2018). Currently Research Assistant Professor in the department of Microbiology at ISMMS, New York, NY. Currently, Scientific director of discovery at Generation Bio. Boston MA.
- Irene Ramos, PhD (July-2014-2018). Research Assistant Professor in the department of Microbiology at ISMMS, New York, NY. Currently Research Assistant Professor in the department of Neurology at ISMMS, New York, NY (pending promotion to tenure track Assistant Professor).

Current advisory committee member (PhD students): 22

- Jalish Riyad (PhD)
- Emma DeGrace (PhD)
- Christian Stevens (MDPhD)
- Madhusudan (Madhu) Rajendran (PhD)
- Joshua Aklin (PhD)
- Kasopefoluwa (Sope) Oguntuyo (MDPhD)
- Jessica Tan (MDPhD)
- Allen Zheng (MDPhD)
- Phillip Cohen (MDPhD)
- Alec Freyn (PhD)
- Denise Jurczyszak (PhD)
- Emma McGregor(PhD)
- Jennie Altman (PhD)
- Justin Taft (PhD)

- Ericka Kirkpatrick (PhD)
- Kathryn Stein (PhD)
- Philip Meade (PhD)
- Julia Brown (PhD)
- James Duehr (PhD)
- Mark Bailey (MDPhD)
- Zony Chati-Lum (MDPhD)
- Natasha Moshkina (PhD)

Past advisory committee member (PhD and MSBS students): 44

- Grant Beyleveld (PhD)
- Justine Noel (PhD)
- Matthew Hernandez (MDPhD)
- Kevin Hoffman (MDPhD)
- Mitchell McGinty (MSBS)
- Alexander Rialdi (PhD)
- Jennifer Hamilton (PhD)
- Hongru Li (PhD)
- Roland Pene (MSBS)
- Lauren Aguado (PhD)
- Teddy Wohlbold (MDPhD)
- Paul Leon (PhD)
- Wenqian He (PhD)
- Shannon Beaty (PhD)
- Tobias Cohen (MDPhD)
- Susana Bardina (PhD)
- Rosmel Hernandez (MSBS)
- Angela Choi (MSBS)
- Benjamin Yen (PhD)
- Asiel Benitez (PhD)
- Michael Letko (PhD)
- Leighland Feinman (PhD)
- Nicole Glennon (PhD)
- Scott Justus (PhD)
- Natasha Durham (PhD)
- Megan Edwards (PhD)
- Benjamin Glodman-Israelow (PhD)
- Christopher Seibert (PhD)
- Irina Margine (PhD)
- Maria Michta (PhD)
- Alissa Pham (PhD)
- Amanda Micsenyi (PhD)
- Andrew Varble (PhD)
- Jad Maamary (PhD)

- Jenish Patel (PhD)
- Jill Shapiro (PhD)
- Mark Chua (PhD)
- Jasmine Perez (PhD)
- Maudry Laurent-Rolle (PhD)
- Mawuena Binka (PhD)
- Mila Brum Ortigoza (PhD)
- Taia Wang (PhD)
- Rebecca Lee (MSBS)
- Susan Madjak (MSBS)

A. Fernandez-Sesma, November 2018