

DUKE UNIVERSITY MEDICAL CENTER

CURRICULUM VITAE

**for
Permanent Record
and the
Appointments and Promotions Committee**

Date Prepared: 12/22/17

Name: Sallie R. Permar, M.D., Ph.D.

Primary Academic Appointment: Professor with tenure

Primary Academic Department: Department of Pediatrics
Division of Infectious Diseases

Secondary Appointment: Department of Immunology
Department of Molecular Microbiology
and Genetics, Center for Virology

Present Academic Rank and Title: Professor with Tenure, Track II

Date and Rank of First Duke Faculty Appointment: Assistant Professor of Pediatrics: 08/01/2011

Medical Licensure: North Carolina License: 2011-00697
Date of License: 05/06/2011

Specialty Certification(s) and Dates: Pediatrics: 07/2008
Pediatric Infectious Diseases: 07/2009

Date of Birth: 05/06/1975 **Place:** Raleigh, NC

Citizen of: United States of America **Visa Status:** N/A

| <u>Education</u> | <u>Institution</u> | <u>Date (Year)</u> | <u>Degree</u> |
|---------------------------------|---|---------------------------|----------------------|
| High School | Needham Broughton High School Raleigh, NC | 1993 | HS diploma |
| College | Davidson College Davidson, NC | 1997 | BS, cum laude |
| Graduate or Professional School | Johns Hopkins University Bloomberg School of Public Health Dept. of Molecular Microbiology & Immunology Baltimore, MD | 2004 | PhD |
| Graduate or Professional School | Harvard Medical School Boston, MA | 2004 | MD, magna cum laude |

Name: Sallie R. Permar, M.D., Ph.D.

Professional Training and Academic Career:

| <u>Institution</u> | <u>Position/Title</u> | <u>Dates</u> |
|---|--|-------------------|
| Children's Hospital Boston Boston Medical Center | Intern/Resident in Pediatrics | 07/2004 – 07/2007 |
| Children's Hospital Boston | Clinical Fellow in Pediatric Infectious Diseases | 07/2007 – 07/2009 |
| Beth Israel Deaconess Medical Center | Research Fellow | 07/2004 – 07/2008 |
| Harvard Medical School | Instructor of Pediatrics | 07/2008 – 03/2010 |
| Harvard Medical School | Assistant Professor of Pediatrics | 03/2010 – 07/2011 |
| Duke University Medical Center | Assistant Professor of Pediatrics, Molecular Genetics and Microbiology, Immunology | 08/2011 – 11/2013 |
| Duke University Medical Center | Associate Professor of Pediatrics | 12/2013 – 8/2015 |
| Duke University Medical Center | Associate Professor with tenure of Pediatrics, Molecular Genetics and Microbiology, Immunology | 8/2015 – 7/2017 |
| Duke University Medical Center, Department of Pediatrics | Director, Children's Discovery Institute Director, Duke Pediatric Research Scholars | 12/2016 – current |
| Duke University Medical Center | Professor with tenure of Pediatrics, Immunology, and Molecular Genetics and Microbiology | 7/2017 - current |

Scholarly Societies:

- 1996 Omicron Delta Kappa; Scholarship and Service
- 2004 Delta Omega Honors Society; Scholarship in Public Health
- 2011 Society for Pediatrics Research
- 2014 Alpha Omega Alpha (AOA) Medical Honors Society
- 2016 American Society of Clinical Investigation
- 2016 American Academy for the Advancement of Science

Leadership training:

Courses:

- 2/2012: Duke University School of Medicine Faculty Development Office LEADER course – selected for participation
- 12/2014: Association of American Medical Colleges Mid-Career Women Faculty Professional Development Seminar – selected for participation. Austin, TX
- 2016-2017: Duke University Medical Center Academic Leadership, Innovation, and Collaborative Engagement (ALICE) Program, Mid-Career Women Faculty leadership training program – selected for participation

Leadership Seminars:

- 5/2014: Mentoring for the Mentor
- 6/2014: Emotional Intelligence (EQ) Workshop
- 3/2015: Negotiation Training for Academic Medical Faculty
- 1/2016: Duke University Medical Center Financial Boot Camp
- 5/2016: Difficult Conversations

Name: Sallie R. Permar, M.D., Ph.D.

Publications: (89 total, 14 first author, 46 senior author)

My name in **bold**; trainees are underlined

Refereed Journals:

1. Polack, F. P., Lee, S., **Permar, S.**, Manyara, E., Nousari, H. G., Mustafa, F., Jeng, Y., Valsamakis, A., Adams, R. J., Robinson, H. and Griffin, D.E. DNA vaccines against measles: Protection in rhesus macaques correlates with neutralizing antibody directed to either HA or F glycoprotein. *Nature Medicine*. 2000 Sept;6(7): 776-781. PMID: 10888926
2. **Permar, SR**, Moss, W.J., Ryon, J.J., Monze, M., Quinn, T.C., Cutts, F., and Griffin, D.E. Prolonged measles virus shedding detected by RT-PCR in HIV-infected Zambian Children. *Journal of Infectious Diseases*; 183(4): 845-849, 2001. PMID: 11170977
3. Zhang, Y, **Permar, S**, and Sun, Z. Conditions that may affect the results of *Mycobacterium tuberculosis* susceptibility testing to pyrazinamide. *Journal of Medical Microbiology*; 51(1):42-49, 2001. PMID: 11800471
4. **Permar, SR**, Klumpp, S.A., Mansfield, K.G., Kim, W.K., Gorgone, D.A., Lifton, M.A., Williams, K.C., Schmitz, J.E., Reimann, K.A., Axthelm, M.K., Polack, F.P., Griffin, D.E., Letvin, N.L. The role of CD4+ T lymphocytes in control and clearance of measles virus infection in rhesus monkeys. *Journal of Virology*; 77(7):4396-4400, 2003. PMID: 12634396
5. **Permar, SR**, Moss, W.J., Ryon, J.J., Douek, D., Griffin, D.E. Increased thymic output during acute measles virus infection. *Journal of Virology*; 77(14): 7872-7879, 2003. PMID: 12829827
6. **Permar, SR**, Klumpp, S.A., Mansfield, K.G., Carville, A., Gorgone, D.A., Lifton, M.A., Schmitz, J.E., Reimann, K.A., Polack, F.P., Griffin, D.E., and Letvin, N.L. Limited contribution of humoral immunity to the clearance of measles viremia in rhesus monkeys. *Journal of Infectious Diseases*; 190(5): 998-1005, 2004. Cover article. PMID: 15295708
7. **Permar, SR**, Griffin, D.E., Letvin, N.L. Immune containment and consequences of measles virus infection in healthy and immunocompromised individuals. *Clinical and Vaccine Immunology*; 13(4): 437-443, 2006. PMID: 16603610
8. Sun, Y., **Permar, SR**, Buzby, A.P., Letvin, N.L., Memory CD4+ T lymphocyte loss and dysfunction during primary simian immunodeficiency virus infection are associated with steady state levels of viral replication. *Journal of Virology*. 81(15):8009-8015, 2007. PMID: 17522197
9. **Permar, SR**, Rao, S.S., Sun, Y., Bao, S., Buzby, A.P., Kang, H.K., Letvin, N.L. Clinical measles after measles virus challenge in simian immunodeficiency virus-infected, measles virus-vaccinated rhesus monkeys. *Journal of Infectious Diseases*. 196 (12):1784-1793, 2007. PMID: 18190259
10. **Permar, SR**, Kang, H.K., Carville, A., Mansfield, K.G., Gelman, R.S., Rao, S.S., Whitney, J.H., Letvin, N.L. Potent SIV-specific cellular immune responses in the breast milk of SIV-infected, lactating rhesus monkeys. *Journal of Immunology*, 181(5): 3643-50, 2008. PMID: 18714039
11. **Permar, SR**, Kang, H.K., Carville, A., Mansfield, K.G., Rao, S.S., Letvin, N.L. Preservation of CD4+ T lymphocytes in breast milk during acute SIV infection of lactating rhesus monkeys. *Journal of Infectious Diseases*, 201(2):301-310, 2010. PMID: 20001855

Name: Sallie R. Permar, M.D., Ph.D.

12. **Permar, SR**, Kang, H.K., Wilks, A.B., Mach, L.V., Carville, A, Mansfield, K.G., Learn, G.H., Hahn, B.H., Letvin, N.L. Local replication of simian immunodeficiency virus in the breast milk compartment of chronically-infected, lactating rhesus monkeys. *Retrovirology*, 7:7-12, 2010. PMID: 20122164
13. **Permar, SR**, Wilks, A.B., Ehlinger, E.P., Kang, H.K., Mahlokozera, T., Coffey, R.C., Carville A., Letvin, N.L., Seaman, M.S. Limited contribution of mucosal IgA to SIV-specific neutralizing antibody response and virus Envelope evolution in breast milk of SIV-infected, lactating rhesus monkeys. *Journal of Virology*, 84(16):8209-18, 2010. PMID: 20519381
14. Wilks, A.B., Christian, E.C., Seaman, M.S., Sircar, P., Carville, A., Esteban, M.; Gomez, C.E., Pantaleo, G., Barouch, D.H., Letvin, N.L., and **Permar, SR**. Robust vaccine-elicited cellular immune responses in breast milk following systemic simian immunodeficiency virus DNA prime and live virus vector boost vaccination of lactating rhesus monkeys. *Journal of Immunology*, 185(11): 7097-106, 2010. PMID: 21041730.
15. Salazar-Gonzalez, J.F., Salazar, M.G., Learn, G.H., Kang, H.K., Mahlokozera, T., Lovingood, R.V., Stacey, A., Kalilani, L., Meshnick, S.M., Borrow, P; Denny, T.N., Letvin, N.L., Shaw, G.M., Hahn, B.H., and **Permar, SR**. Origin and evolution of HIV-1 in breast milk determined by single genome amplification and sequencing. *Journal of Virology*, 85(6):2751-2763, 2011. PMID: 21191008.
16. Sun Y, Asmal M, Lane S, **Permar SR**, Schmidt SD, Mascola JR, Letvin NL. Antibody-dependent cell-mediated cytotoxicity in Simian Immunodeficiency Virus-infected rhesus monkeys. *Journal of Virology*, 85(14):6906-12, 2011. PMID: 21593181.
17. Wilks, A.B., Perry, J.R., Ehlinger, E.P., Zahn, R. C., White, R, Gauduin, M.C., Carville, A., Seamn, M.S., Schmitz, J.E., **Permar, SR**. High cell-free virus load and robust autologous humoral immune responses in breast milk of simian immunodeficiency virus (SIV)-infected African green monkeys. *Journal of Virology*, (18):9517-26, 2011. PMID: 21734053
18. Fouda, G.G., Yates, N.L., Pollara, J., Overmann, G., Mahlokozera, T., Wilks, A.B., Kang, H.H., Salazar-Gonzales, J.F., Salazar, M.G., Kalilani, L., Meshnick, S.R., Hahn, B.H., Shaw, G.M., Letvin, N.L., Ferrari, G., Tomaras, G.D., Montefiori, D.C.; **Permar, SR**. HIV-1 neutralization and ADCC activity of breast milk mirrors that of plasma and is mediated by IgG antibodies. *Journal of Virology*, 85(18):9555-9567, 2011. PMID:21734046
**Selected as top 5 manuscript for 2011 by the American Society of Microbiology*
19. Mahlokozera, T; Kang, H.H.; Goonetilleke, N.; Stacey, A.; Lovingood, R.V.; Denny, T.N.; Kalilani, L.; Bunn, J.E.; Meshnick, S. R.; Barrow, P; Letvin, N.L. **Permar, SR**. The magnitude and kinetics of the mucosal HIV-specific CD8+ T lymphocyte response and virus RNA load in breast milk. *PLoS One*, 6(8):e23735, 2011. PMID: 21886819.
20. Ehlinger, E.E., Webster, E.M., Kang, H.H., Cangialose, A., Simmons, A.C., Barbas, K.H., Burchett, S.K., Gregory, M.L., Puopolo, K.P., and **Permar, SR**. Maternal cytomegalovirus-specific immune responses and symptomatic postnatal cytomegalovirus transmission in very low birth weight preterm infants. *Journal of Infectious Diseases*, 204(11): 1672-82. PMID: 21984738.
21. Parrish, N.F., Wilen, C.B., Banks, L.B., Shilpa, S.I., Pfaff, J.M., Salazar-Gonzalez, J.F., Salazar, M., Decker, J.M., Parrish, E., H., Berg, A., Hopper, J., Hora, B., Kumar, K., Mahlokozera, T., Yuan, S., Coleman, C., Vermeulen, M., Oshsenbauer, C.O., Tilton, J.C., **Permar, SR**, Kappes, J.C., Betts, M.R., Busch, M.P., Gao, F., Montefiori, D., Haynes, B.F, Shaw, G. M., Hahn, B.H., Doms, R. W. Transmitted/founder and chronic subtype C HIV-1 use of CD4 CCR5 receptors with equal efficiency and are not inhibited by blocking the integrin $\alpha 4\beta 7$. *PLoS Pathogens*, 2012 May;8(5):e1002686. PMID: 22693444

Name: Sallie R. Permar, M.D., Ph.D.

22. Friedman, J., Alam, S.M., Shen, X., Xia, S., Stewart, S., Anasti, K., Pollara, J., Fouda, G.G., Yang, G., Kelsoe, G., Ferrari, G., Tomaras, G.D., Haynes, B.F., Liao, H.X., Moody, M.A, **Permar, SR**. Isolation of HIV-1-neutralizing mucosal monoclonal antibodies from human colostrum. *PLoS One*, 2012;7(5):e37648. PMID: 22624058
23. Schmitz, J.E., Ma, Z.M., Hagan, E.A., Wilks, A.B., Furr, K., Linde, C.H., Zahn, R.C., Brenchley, J.M., Miller, C.J., **Permar, SR**. Memory CD4+ T lymphocytes in the gastrointestinal tract are a major source of cell-associated simian immunodeficiency virus in chronic nonpathogenic infection of African green monkeys. *Journal of Virology*, Oct;86(20):11380-5. PMID: 22896600
24. Handley, S; Thackray, L.B.; Zhao, G.; Presti, R.; Miller, A.; Droit, L.; Abbink, P.; Maxfield; L. F., Kambal, A.; Duan, E.; Stanley, K.; Kramer, J.; Macri, S.C.; **Permar, SR**; Schmitz, J.E.; Mansfield, K.; Brenchley, J.; Veazey, R.S.; Stappenbeck, T.S.; Wang, D.; Barouch, D.H., Virgin, H.W. Pathogenic simian immunodeficiency virus infection is associated with significant expansion of the enteric virome. *Cell*, 2012 Oct 12;151(2):253-66. PMID: 23063120
25. Russell ES, Ojeda S, Fouda G, Meshnick SR, Montefiori D, **Permar SR**, Swanstrom R. HIV-1 subtype C variants transmitted through the bottleneck of breastfeeding are sensitive to new generation broadly-neutralizing antibodies directed against quaternary and CD4-binding site epitopes. *AIDS Res Hum Retroviruses*. 2013 Mar;29(3):511-5 PMID: 23075434
26. Fouda, G.G., Mahlokozera, T., Salazar-Gonzalez, J., Salazar, M., Learn, G., Kumar, S., Dennison, S.M., Russell, E., Rizzolo, K., Jaeger, F., Cai, F., Vandergrift, N.A., Gao, F., Hahn, B., Shaw, G.M., Swanstrom, R., Meshnick, S., Mwapasa, V., Kalilani, L., Fiscus, S., Montefiori, D., Haynes, B.F., Kwiek, J., Alam, S.M., and **Permar, SR**. Postnatally-transmitted HIV-1 Envelope variants have similar neutralization-sensitivity and phenotype to that of nontransmitted breast milk variants. *Retrovirology*. 2013 Jan 10;10:3. PMID: 23305422
27. Fouda, G.G., Amos, J., Wilks, A.B., Pollara, J, Ray, C., Chand, A., Kunz, E., Liebl, B., Whitaker, K, Carville, A., Smith, S., Colvin, L., Pickup, D., Staats, H, Overman, R., Lloyd, K.E., Chen, H., Parks, R., LaBranche, C., Barnett, S., Tomaras, G., Ferrari, G., Montefiori, D., Liao, H.X., Letvin, N.L., Haynes, B.F., and **Permar, SR**. Mucosal immunization of lactating female rhesus monkeys with a transmitted/founder HIV-1 Envelope induces robust Env-specific IgA antibody responses in breast milk. *Journal of Virology*. 2013 Jun;87(12):6986-99. PMID: 23596289
28. Amos, JD, Wilks, AB, Fouda, GG, Smith, S, Colvin, L, Mahlokozera, T, Ho, C, Beck, K, Overman, R, DeMarco, C,, Hodge, T, LaBranche, C, Montefiori, D, Denny, T, Liao, H-X, Tomaras, G.D., Moody, MA, and **Permar, SR**. Lack of B cell dysfunction is associated with functional, gp120-dominant antibody responses in breast milk of simian immunodeficiency virus-infected African green monkeys. *Journal of Virology*. 2013 Oct;87(20):11121-34. PMID: 23926338
29. Ho, C., Wu, S, Amos, JD, Colvin, L., Smith, S, Wilks, A.B., DeMarco, C., Brinkley, C., Denny, T, Schmitz, JE, Rodrigo, A, and **Permar, SR**. Transient compartmentalization of SIV variants in the breast milk of African green monkeys. *Journal of Virology*, Oct;87(20):11292-9. PMID: 23926337
30. **Permar SR**, Salazar MG, Gao F, Cai F, Learn GH, Kalilani L, Hahn BH, Shaw GM, Salazar-Gonzalez JF. Clonal amplification and maternal-infant transmission of nevirapine-resistant HIV-1 variants in breast milk following single-dose nevirapine prophylaxis. *Retrovirology*. 2013 Aug 14;10:88. PMID: 23941304
31. Fouda, G.G., Jaeger, F.H., Amos, J.D., Ho, C., Kunz, E., Anasti, K., Stamper, L.W., Liebl, B.E.; Barbas, K.H., Ohashi, T, Moseley, A.M., Liao, HX, Erickson, H.E., Alam, S.M., and Permar, SR "Tenascin-C is an innate broad-spectrum, HIV-1-neutralizing protein in breast milk". *Proceedings of the National Academy of Sciences*, 2013 Nov 5;110(45):18220-5. PMID: 24145401

Name: Sallie R. Permar, M.D., Ph.D.

32. Madani N, Princiotta AM, Schön A, Lalonde J, Feng Y, Freire E, Park J, Courter JR, Jones DM, Robinson J, Liao HX, Moody MA, **Permar SR**, Haynes B, Smith AB 3rd, Wyatt R, Sodroski J. "CD4-mimetic Small Molecules Sensitize Human Immunodeficiency Virus (HIV-1) to Vaccine-elicited Antibodies". *J Virol*. 2014 Apr 2 PMID: 24696475
33. Chahroudi A, Cartwright E, Lee ST, Mavigner M, Carnathan DG, Lawson B, Carnathan PM, Hashempoor T, Murphy MK, Meeker T, Ehnert S, Souder C, Else JG, Cohen J, Collman RG, Vanderford TH, **Permar SR**, Derdeyn CA, Villinger F, Silvestri G. "Target cell availability, rather than breast milk factors, dictates mother-to-infant transmission of SIV in sooty mangabeys and rhesus macaques" *PLoS Pathog*. 2014 Mar 6;10(3). PMID: 24604066
34. Meyer, S., Westreich, DJ, Patel E, Ehlinger, EP; Kalilani, L, Lovingood, RL, Denny, TN, Swamy, GK, **Permar, SR** "Postnatal cytomegalovirus exposure in infants of antiretroviral-treated and untreated HIV-infected mothers" *Infectious Diseases Obstetrics and Gynecology*. 2014:989721. PMID: 24723745
35. Smith, SD, Amos, JD, Beck, KN, Colvin, LN, Franke, KS, Liebl, BE, and **Permar, SR**. "Refinement of a hormone induction of lactation protocol in non-pregnant nonhuman primates by using exogenous hormone treatment." *Journal of the American Association for Laboratory Animal Science*. 2014 Nov; 53:700-07. PMID: 25650978
36. Fouda, G.G.; **Permar, SR**. "Immune-based interventions to prevent postnatal HIV-1 transmission." *Trends in Microbiology*. 2014 Aug;22(8):425-7 PMID: 25086471
37. Fouda, GG, Cunningham, CK, McFarland, EJ, Borkowsky, W, Muresan, P, Pollara, J, Song, LY, Liebl, BE, Whitaker, K, Shen, X, Vandergrift, N, Overman, RG, Yates, NL, Moody, MA, Fry, C, Kim, JH, Michael, NL, Robb, M, Pitisuttihum, P, Kaewkungwal, J, Nitayaphan, S, Rerks-Ngarm, S, Liao, HX, Haynes, B, Montefiori, DC, Ferrari, G, Tomaras, GD and **Permar, SR**. Infant HIV-1 gp120 vaccination elicits robust and durable anti-V1V2 IgG responses and only rare Envelope-specific IgA responses. *Journal of Infectious Diseases*. 2015 Feb 15; 211:508-517 PMID: 25170104
- Accompanying editorial:
Gray GE, Corey L. Reevaluating HIV Vaccine Clinical Trials Policy for Infants. *J Infect Dis*. 2014 Aug 27. PMID: 25170103
38. Sacha, C.R, Vandergrift, N, Jeffries, TL., McGuire, E, Fouda, G.G., Liebl, BE, Marshall, DJ, Gurley, TC, Stiegel, LC, Whitesides, JF, Friedman, J, Badiabo, A, Foulger, A, Yates, NL, Tomaras, GD, Kepler, TB, Liao, HX, Haynes, BF, Moody, MA, and **Permar, SR**. Restricted isotype, distinct variable gene usage, and high rate of gp120-specificity of HIV-1 Envelope-specific B cells in colostrum compared to those in blood of HIV-1-infected, lactating African women. *Mucosal Immunol*. 2015 Mar 8: 316-26. PMID: 25100291
39. Bialas, K, Swamy, GK, **Permar, SR**. Perinatal cytomegalovirus and varicella zoster virus infections: epidemiology, prevention, and treatment. *Clinics in Perinatology*. 2015 Mar; 42:61-75 PMID: 25677997
40. Fong Y, Di C, **Permar SR**. Change Point Testing in Logistic Regression Models with Interaction Term. *Statistics in Medicine*. *Stat Med*. 2015 Apr 30;34(9):1483-94. PMID: 25612253
41. Fouda, G.G.; Moody, M.A.; **Permar, SR**. Antibodies for Prevention of mother to child transmission of HIV-1. *Current Opinions in HIV and AIDS*. 2015 May; 10:177-82. PM2. PMID: 25700205
42. Fouda, GG, Cunningham CK, **Permar SR**. Infant HIV-1 vaccines: supplementing strategies to reduce maternal-child transmission. *JAMA* 2015 Apr; 313: 1513-4. PMID: 25898044

Name: Sallie R. Permar, M.D., Ph.D.

43. Richard J, Veillette M, Brassard N, Iyer SS, Roger M, Martin L, Pazgier M, Schon A, Freire E, Routy JP, Smith Ab 3rd, Park J, Jones DM, Courter JR, Melillo BN, Kaufman De, Hahn, BH, **Permar SR**, Haynes BF, Madani N, Sodroski JG, Finzi A. CD4 mimetics sensitize HIV-1-infected cells to ADCC. Proc Natl Acad Sci USA 2015 May; 112: E2687-94. PMID: 25941367
44. Shen X, Duffy R, Howington R, Cope A, Sadagopal S, Park H, Pal R, Kwa S, Ding S, Yang OO, Fouda GG, Le Grand R, Bolton D, Esteban M, Phogat S, Roederer M, Amara R, Picker LJ, Seder Ra, McElrath MJ, Barnett S, **Permar SR**, Shattock R, DeVico AL, Felber BK, Pavlakis GN, Pantaleo G, Korber BT, Montefiori DC, Tomaras, GD. Vaccine Induced Epitope Specific Antibodies to SIVmac239 Envelope Are Distinct from Those Induced to the HIV-1 Envelope in Non-Human Primates. Journal of Virology 2015 May; PMID: 26018159
45. **Permar SR**, Fong, Y, Vandergrift N, Fouda GG, Gilbert P, Parks R, Jaeger FH, Pollara J, Martelli A, Liebl BE, Lloyd K, Yates NL, Overman RG, Shen X, Whitaker K, Chen H, Pritchett J, Solomon E, Friberg E, Marshall DJ, Whitesides JF, Gurley Tc, Von Holle T, Martinez Dr, Cai F, Kumar A, Xia SM, Lu X, Louzao R, Wilkes S, Datta S, Sarzotti-Kelsoe M, Liao HX, Ferrari G, Alam SM, Montefiori DC, Denny TN, Moody MA, Tomaras GD, Gao F, Haynes BF. Maternal HIV-1 envelope-specific antibody responses and reduced risk of perinatal transmission. J Clin Invest 2015 June; PMID: 26053661
46. Amos JD, Himes JE, Armand L, Gurley TC, Martinez DR, Colvin, L, Beck K, Overman RG, Liao HX, Moody, MA, **Permar SR**. Rapid development of gp120 –focused, neutralizing B cell responses during acute simian immunodeficiency virus infection of African green monkeys. J Virol. 2015 Sep 15;89(18):9485-98; PMID: 26157116
47. Pollara, J, McGuire, E, Fouda, G, Rountree, W, Eudailey, J, Overman, G.R., Seaton,K, Deal, A, Edwards, R, Tegha G, Kamwendo, D, Kumwenda, J, Nelson, J, Liao, H.X., Brinkley, C, Denny, T.N., Ochsenbauer, C, Ellington, S, King, C, Jamieson, D, van der Horst, C, Kourtis, A, Tomaras, G, Ferrari, G, and **Permar, SR**. Association of HIV-1 Envelope-Specific Breast Milk IgA Responses with Reduced Risk of Postnatal Mother-to-Child Transmission of HIV-1. Journal of Virology, Oct 1;89(19):9952-61; PMID: 26202232
48. Jeffries TJ, Sacha, C.R., Pollara, J, Himes, J, Jaeger, FJ, Dennison, SM, McGuire E, Kunz E, Eudailey J, Trama, AM, LaBranche, C, Fouda, GG, Wiehe, K, Montefiori, D, Haynes, BF, Liao, HX, Ferrari, G, Alam, SM, Moody, MA and **Permar, SR**. The function and affinity maturation of HIV-1 gp120-specific monoclonal antibodies derived from colostral B cells. Mucosal Immunology, 2015 Aug 5; PMID: 26242599
49. Wahl, A, Baker, C, Spagnuolo, RA, Stamper, L, Fouda, G, **Permar, SR**, Hinde, K, Kuhn, L, Bode, L, Aldrovandi, G, and Garcia, V.J. Breast milk of HIV-positive mothers has potent and species-specific in vivo HIV inhibitory activity. Journal of Virology, 2015 Nov 1;89(21):10868-78; PMID: 26292320
50. Bialas KM, Tanaka T, Tran D, Varner, V, Cisneros De La Rosa E, Chiuppesi F, Wussow F, Kattenhorn L, Macri S, Kunz E, Estroff J, Kirchherr J, Yue Y, Fan Q, Lauck M, O'Connor DH, Hall A, Xavier A, Diamond DJ, Barry PA, Kaur A, **Permar, SR**. Maternal CD4+ T cells protect against severe congenital cytomegalovirus disease in a novel nonhuman primate model of placental cytomegalovirus transmission. Proceedings of the National Academy of Sciences, 2015 Nov 3;112(44):13645-50; PMID: 26483473
51. Kelly MS, Benjamin DK, Puopolo KM, Laughon MM, Clark RH, Mukhopadhyay S, Benjamin Jr DK, Smith PB, **Permar SR**. Postnatal cytomegalovirus infection and the risk of bronchopulmonary dysplasia. JAMA Pediatrics. 2015; 169(12):e153785. PMID: 26642118

Accompanying editorial:

Kimblerin, DW. Sequelae Following Postnatally-acquired Cytomegalovirus Infection in Very Low Birth Weight Preterm Infants. JAMA Pediatr. Dec 7th, 2015 PMID: 26642119

Name: Sallie R. Permar, M.D., Ph.D.

52. Lantos P, **Permar SR**, Hoffman K, Swamy G. The excess burden of cytomegalovirus in African-American communities: a geospatial analysis. *Open Forum Infect Dis*. Online November 20, 2015. PMID: 26716106
53. Becker-Dreps S, Choi WS, Stamper L, Vilchez S, Velasquez DE, Moon SS, Hudgens MG, Jiang B, **Permar SR**. Innate Immune Factors in Mothers' Breast Milk and Their Lack of Association With Rotavirus Vaccine Immunogenicity in Nicaraguan Infants. *J Pediatric Infect Dis Soc*. 2015 Nov 17. PMID: 26582774
54. Bialas KM, **Permar SR**. The March Towards a Vaccine for Congenital CMV: Rationale and Models. *PLoS Pathogens*. Online Feb 11, 2016. PMID: 26866914
55. Martinez D, **Permar SR**, Fouda G. Contrasting adult and infant immune responses to HIV infection and vaccination. *Clin Vaccine Immunol*. 2015 Dec 9;23(2):84-94. PMID: 26656117
56. Mukhopadhyay S, Meyer S, **Permar SR**, Puopolo K. Symptomatic Postnatal Cytomegalovirus Testing Among Very Low-Birth-Weight Infants: Indications and Outcomes. *Am J of Perinatol*. 2016 Apr 8. PMID: 27057771
57. Fouda GG, Eudailey J, Kunz EL, Amos JD, Liebl BE, Himes J, Boakye-Agyeman F, Beck K, Michaels AJ, Cohen-Wolkowicz M, Haynes BF, Reimann KA, **Permar SR**. Systemic administration of an HIV-1 broadly neutralizing dimeric IgA yields mucosal secretory IgA and virus neutralization. *Mucosal Immunol*. 2016 Apr 13. PMID: 27072605
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59. Mansour R, Stamper L, Jaeger F, McGuire E, Fouda GG, Amos J, Barbas K, Ohashi T, Alam M, Erickson, H. **Permar SR**. The presence and anti-HIV-1 function of Tenascin C in breast milk and genital fluids. *PLoS ONE*. 2016 May 16;11(5):e0155261. PMID: 27182834
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Name: Sallie R. Permar, M.D., Ph.D.

65. Aliota MT, Dudley DM, Newman CM, Mohr EL, Gellerup DD, Breitbach ME, Buechler CR, Rasheed MN, Mohns MS, Weiler AM, Barry GL, Weisgrau KL, Eudailey JA, Rakasz EG, Vosler LJ, Post J, Apuano S 3rd, Golos TG, **Permar SR**, Osorio JE, Friedrich TC, O'Connor SL, O'Connor DH. Heterologous protection against Asian Zika virus challenge in rhesus macaques. *PLOS Negl Trop Dis*. 2016 Dec 2;10(12)e0005168. PMID: 27911897
66. Nguyen QN, Himes JE, Martinez DR, **Permar SR**. The Impact of the Gut Microbiota on Humoral Immunity to Pathogens and Vaccination in Early Infancy. *PLoS Pathog*. 2016 Dec 22;12(12):e105997. PMID: 28006021
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70. Itell HL, Nelson CS, Martinez DR, **Permar SR**. Maternal immune correlates of protection against placental transmission of cytomegalovirus. *Placenta*. 2017 Apr 20. Epub ahead of print. PMID: 28456432
71. Fan Q, Nelson CS, Bialas KM, Chiuppesi F, Amos J, Jones-Marshall D, Eudailey J, Heimsath H, Himes J, Deshpande A, Walter M, Wussow F, Diamond DJ, Barry PA, Moody MA, Kaur A, **Permar SR**. Plasmablast Response to Primary Rhesus Cytomegalovirus Infection in a Monkey Model of Congenital CMV Transmission. *Clin Vaccine Immunol*. 2017 May 5;24(5)e00510-16. PMID: 28298291
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Name: Sallie R. Permar, M.D., Ph.D.

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78. Lantos PM, Hoffman K, **Permar SR**, Jackson P, Hughes BL, Kind A, Swamy G. Neighborhood disadvantage is associated with high cytomegalovirus seroprevalence in pregnancy. *J Racial Ethn Health Disparities*. 2017 Aug 24. PMID: 28840519
79. Douglas AO, Martinez DR, **Permar SR**. The role of maternal HIV-envelope specific antibodies and mother to child transmission risk. *Front Immunol*. 2017 Sept 4. PMID: 28928750
80. Itell HL, Kaur A, Deere JD, Barry PA, **Permar SR**. Rhesus Monkey for a Nonhuman Primate Model of Cytomegalovirus Infections. *Curr Opin Vir*. 2017 Sept 6. PMID: 28888133
81. McGuire E, Fong Y, Toote C, Cunningham C, McFarland E, Borkowsky W, Barnett S, Itell H, Kumar A, Gray G, McElrath J, Tomaras G, **Permar SR***, Fouda G*. HIV exposed infants vaccinated with a MF59/rgp120 vaccine have higher magnitude anti-V1V2 IgG responses than adults immunized with the same vaccine. *J Virol*. 11 Oct 2017 epub ahead of print. *Shared senior author publication. PMID: 29021402
82. Kumar A, Smith CEP, Giorgi EE, Eudailey J, Martinez DR, Yusim K, Douglas AO, Stamper I, McGuire E, LaBranche CC, Montefiori DC, Amouou GGF, Gao F, **Permar SR**. Infant Transmitted/Founder HIV-1 Viruses from Peripartum Transmission are Neutralization Resistant to Paired Maternal Plasma. *Biorxiv*. Eprint 29 Sept 2017.
83. Fong Y, Huang Y, Gilbert PB, **Permar SR**. chngpt: threshold regression model estimation and inference. *BMC Bioinformatics*. 2017 Oct 16. PMID: 29037149
84. Schleiss MR, **Permar SR**, Plotkin SA. Progress Toward Development of a Vaccine Against Congenital Cytomegalovirus Infection. *Clin Vaccine Immunol*. 2017 Dec 5. PMID: 29046308
85. Permar SR, Veronin, et al. Recent progress in immune-based interventions to prevent HIV-1 transmission to children. *J Int AIDS Soc*. In press.
86. Jegaskanda S, Mason R, Andrews S, Wheatley A, Zhang R, Reynoso G, Ambrozak D, Santos C, Luke C, Matsuoka Y, Brenchley J, Hickman H, Talaat K, **Permar SR**, Liao H-X, Yewdell J, Loup R, Roederer M, McDermott A, Subbarao K. Intranasal live influenza vaccine priming elicits localised B cell responses in mediastinal lymph nodes. *J Virol*. In press.
87. **Permar SR**, et al. Maternal HIV-1 Env vaccination for systemic and breast milk immunity to prevent oral SHIV acquisition in infant macaques. *mSphere*. In press.
88. Premkumar L, Collins M, Graham S, Liou G-J A, Lopez CA, Jadi R, Balmaseda A, Brackbill J, Dietze R, Camacho E, de Silva AD, Giuberti C, Lucia Dos Reis H, Singh T, Heimsath H, Weiskopf D, Sette A, Osorio JE, **Permar SR**, Miley MJ, Lazear H, Harris E, de Silva AM. Development of envelope protein antigens to serologically differentiate Zika from dengue virus infection. *J Clin Microbiol*. 20 Dec 2018 online.
89. Kazimbaya K, Garcia M, Laban N, Chisenga C, **Permar SR**, Bosomprah S, Simuyandi M, Munsaka S, Chilengi R. Effect of innate antiviral glycoproteins in breast milk on seroconversion to rotavirus vaccine (Rotarix) in children in Lusaka, Zambia. *PLOS ONE*. In press.

Name: Sallie R. Permar, M.D., Ph.D.

a. Other Published Commentary

1. **Permar SR**, Staats HF. "Which comes first: the antigen or the adjuvant?" J. of Clin Invest. 2014 May 16:1-2. PMID: 24837429
2. Wright, CJ. **Permar, SR**. Preventing postnatal cytomegalovirus infection in the preterm infant: should it be done, can it be done, and at what cost? Journal of Pediatrics Apr 2015; 166: 795-8. PMID: 25662832

b. Book Chapters

1. Natural hosts of SIV: Implications in AIDS. Chapter 13. SIV Transmission in Natural Hosts. Ann Chahroudi, **Sallie Permar**, and Ivona Pandrea. 2014 Elsevier Inc.
2. Manual of Neonatal Care, 7th edition 2017. Chapter 48. Viral Infections. **Sallie R. Permar**
3. Cloherty and Stark's Manual of Neonatal Care, 8th edition by Anne R. Hansen, 2016. Chapter 48 entitled "Neonatal Viral Infections." **Sallie R. Permar**.

c. Selected Recent Abstracts:

1. Bialis, K, Takayuki Tanaka, Dollnovan Tran, Erika L Kunz, Valerie Varner, Eduardo Cisneros De La Ros¹, Flavia Chiappesi, Felix Wussow, Lisa Kattenhorn, Judy Estroff, Jennifer Kirchherr, Yujuan Yue, Don Diamond³ Peter Barry, Amitinder Kaur, **Sallie Permar**. Maternal CD4+ T cell depletion enhances congenital rhesus CMV disease. Platform presentation. International CMV meeting, Brisbane, Australia, April, 2015.
2. Fouda, G Josh Eudailey, Erika Kunz, Josh Amos, Jonathan Himes, Krista Beck, Xinyue Wang, Barton Haynes, Keith Reimann and **Sallie Permar**. Kinetics of B12 IgG/IgA in milk following passive immunization of lactating monkeys. CROI 2015, Seattle, WA
3. Fouda, G. Coleen Cunningham, Elizabeth J. McFarland, William Borkowsky, Nicole Yates, Erika Kunz, Erin McGuire, Hua-Xin Liao, Barton Haynes, Georgia Tomaras and **Sallie Permar**. Broad, highly avid vaccine-elicited anti-V1V2 IgG responses in HIV-exposed infants. CROI 2015, Seattle, WA
4. Bialas, K, Nelson, C, Cisneros, E, Westreich, D, Carfi, A, **Permar, S**. Humoral immune correlates of protection against secondary congenital CMV infection. Oral presentation EDDI 2016, Venice, Italy.
5. CS Nelson, KM Bialas, D Tran, F Chiappesi, F Wussow, DJ Diamond, PA Barry, A Kaur, **SR Permar**. Neutralizing antibodies induce cytomegalovirus genetic bottleneck and protect against severe congenital disease in a novel rhesus monkey model. Oral presentation. IHW 2016, Madison, WI.

Invited lectureships

Duke and associated institution

9/2011 – Duke Center for AIDS Research Annual Meeting – "Protection against postnatal SIV transmission in natural SIV hosts"

10/2011 – DUMC Employee Health Seminar – "Occupational exposure to SIV and other nonhuman primate viruses"

10/2011 – Department of Molecular Microbiology and Genomics Seminar – "Protection against postnatal virus transmission"

2/2012 – Neonatal Grand Rounds – "Evaluation and treatment of perinatal CMV infection"

4/2012 – Katz-Wiliford Update – "Passing the TORCH – Update on Congenital Infections"

4/2012 – Immunology Department Seminar – "Immune protection against SIV transmission"

Name: Sallie R. Permar, M.D., Ph.D.

4/2012 – Pediatric resident core lecture series – “Congenital infections”

5/2012 – Pediatric Research Retreat: “High efficiency dendritic cell-mediated transfer of postnatally-transmitted HIV-1 variants”

7/2012-2015 – Pediatric ID fellows core lecture series – “Congenital infections”

10/2012 – MD-PhD program research talk “Novel HIV-neutralizing protein isolated from breast milk”

1/2013 – Duke Human Vaccine Institute Journal Club: “Novel HIV-neutralizing protein isolated from breast milk”

2/2013 – Durham Regional Hospital Pediatric Grand Rounds – “Perinatal CMV transmission”

3/2013 – Duke University Medical Center Department of Pediatrics Grand Rounds – “Congenital CMV transmission: advances in diagnosis and treatment”

4/2013, 2014, 2015 – Pediatric resident core lecture series – “Vaccine Preventable Diseases”

10/2013 – Wake Medical Center Pediatrics Grand Rounds – “Perinatal CMV transmission: diagnosis and treatment”

2/2014, 10/2014, 2/2015, 10/2015 – Graduate Medical Education retreat for DUMC residents/fellows – “How to start a research career”

10/2014 – Osher Lifelong Learning Institute at Duke (OLLI) – “Vaccine prevention of neonatal infections”

4/2015 – Southeastern Medical Centers Women’s MD-PhD Symposium – “Getting the motivation and experiences needed for a successful career as a physician scientist”

9/2016 – Duke University Medical Scientist Training Program Retreat, Faculty speaker

9/2016 – Duke’s Forum for Scholars and Public, guest speaker

10/2016 – Duke Health Board of Visitors meeting – “Developing the Discovery Science Story” session

12/2016 – Global Duke meeting – “Zika virus prevention and diagnostics research at Duke”

12/2016 – UNC-Duke Viral Oncology and AIDS Malignancy Symposium – “Maternal antibody protection against congenital cytomegalovirus infection”

4/2017 – Davidson College – “The Physician Scientist Career Path”

5/2017 – Cincinnati Children’s Hospital Medical Center – “Maternal antibody protection against congenital CMV infection”

6/2017 – Duke-NUS Medical School – “Maternal Immune Protection Against Congenital Cytomegalovirus and Zika Infections in Rhesus Monkeys”

9/2017 – Duke CFAR PrEP Summit –

Name: Sallie R. Permar, M.D., Ph.D.

11/2017 – Duke Human Vaccine Institute (DHVI) Scientific Symposium - "The window of opportunity: maternal and childhood vaccination"

12/2017 – Duke Health Policy and Global Health short course – "Vaccine Development in Global Health"

Regional/National/International Meetings

11/2011 – Wake Forest University Department of Microbiology "Protection against perinatal SIV transmission in natural SIV hosts"

9/2012 – AIDS Vaccine Meeting, Boston, MA: Session co-Chair

2/2013 – University of Pittsburgh Richard Mellon Foundation Pediatric Scholars Seminar "Immune protection against postnatal SIV/HIV transmission"

2/2013 – HIV Vaccine Keystone Meeting, Keystone, CO: "Immune protection against postnatal HIV.SIV transmission"

5/2013 – Pediatric Academic Society Meeting, Washington, D.C. "Mother-to-Child Transmission of HIV/SIV: Advances in Animal Models and Recent Clinical Trials" – Speaker and Session Co-chair

11/2013 – University of North Carolina Department of Microbiology Seminar "The antibody repertoire following maternal HIV/SIV infection and vaccination"

11/2013 – NIH Vaccine Research Center Research Seminar "The antibody repertoire elicited in breast milk following HIV/SIV infection and vaccination"

4/2014 – University of Wisconsin Department of Pathology Research Seminar "B cell responses and protection against mother to child HIV/SIV transmission"

4/2014 – South Eastern Regional Virology Conference (SERVC) "Immune protection against congenital cytomegalovirus transmission"

6/2014 – Department of Microbiology, University of Washington Research Seminar "The antibody repertoire in breast milk following HIV-infection and vaccination."

6/2014 – Doris Duke Clinical Mentorship Program Annual Meeting, Keynote Speaker – "What motivates you?: Getting the experiences that will shape and drive your career"

9/2014 – Johns Hopkins Bloomberg School of Public Health, Alumni Day 2014. "The public health of a basic science career"

9/2014 – Davidson College Biology Department Seminar and Davidson X Course Kick Off "Can we reach the goal of an HIV-free generation?"

10/2014 – American Academy of Pediatrics National Conference & Exhibition, San Diego, CA "Diagnosis and treatment of CMV infection during pregnancy"

2/2015 – Conference on Retrovirology and Opportunistic Infections, Platform speaker – "Translating immunologic correlates of protection against HIV-1 transmission"

Name: Sallie R. Permar, M.D., Ph.D.

4/2015 – W. Harry Feinstone Department of Molecular Microbiology and Immunology and the Division of Infectious Diseases at the Johns Hopkins Medical Institution 2014-2015 joint seminar series “Immune protection against perinatal HIV-1 and cytomegalovirus”

5/2015 – Pediatric Academic Society meeting, San Diego, CA , Platform speaker – “Prevention of Postnatal CMV infection”

5/2015 – University of Alabama Children’s Hospital Pediatric Grand Rounds – “Immune protection against perinatal CMV infection”

10/2015 – NIH Office of AIDS Research Council – “Immune interventions to eliminate pediatric HIV”

1/2016 – Indiana University Medical Center Department of Pediatrics Grand Rounds – "What Will it Take to Eliminate Pediatric HIV-1 Infections?"

3/2016 – Palm Springs Symposium on HIV/AIDS – “Elimination of pediatric HIV-1 transmission”

3/2016 – Emory University Microbiology and Molecular Genetics Program Seminar – “Maternal antibody-mediated protection against congenital cytomegalovirus”

3/2016 – Wake Forest University Symposium – “Nonhuman primate models of congenital cytomegalovirus and perinatal HIV-1 transmission”

4/2016 – Indiana University Department of Pediatrics – “Maternal and infant immunity: protecting our next generation”

4/2016 – American Society of Clinical Investigation (ASCI) New Member Speaker – “Protecting the next generation: maternal immunization to prevent perinatal infections”

5/2016 – University of San Diego Medical Center Department of Pediatrics Grand Rounds – “Maternal immune protection against perinatal HIV-1 and cytomegalovirus infection”

8/2016 – Baylor University School of Medicine – “Maternal antibody protection against congenital cytomegalovirus transmission”

9/2016 – Oregon Health and Science University Vaccine and Gene Therapy Institute – “Maternal antibody protection against congenital cytomegalovirus infection”

9/2016 – Oregon Health and Science University Doernbecher Children’s Hospital – “Maternal antibody protection against congenital cytomegalovirus infection”

9/2016 – International Federation of Placenta Associations – “Immune protection against placental cytomegalovirus transmission in Non-human primate models”

9/2016 – CMV Vaccine & Monoclonal Antibody Scientific Input Engagement, Merck – “Immune correlates of protection to HCMV against maternal re-infection and against maternal-fetal transmission” and “Link between perinatal CMV and bronchopulmonary dysplasia?”

Name: Sallie R. Permar, M.D., Ph.D.

10/2016 – HIV Research for Prevention Workshop, Moderator and Speaker, Chicago, IL – “The fine specificity and autologous virus neutralization potency of maternal antibodies that predict reduced HIV-1 mother to child transmission”

11/2016 – NIH Microbiome Workshop – The “window of opportunity”: harnessing the pediatric immune landscape for life-long vaccine-elicited protection

11/2016 – NIH conference Exploring Opportunities for Arbovirus Research Collaboration, Havana, Cuba. Vertical transmission, Session moderator.

1/2017 – Department of Microbiology, University of Washington. “Immune protection against congenital CMV: the fetal neuropathogen already in our backyard”

1/2017 – International Conference on Infant HIV vaccination, HIV Vaccine Enterprise, Maputo, Mozambique. Invited lecturer and conference organizer “Previous and planned infant HIV vaccine trials”

5/2017 – Pediatric Academic Societies (PAS) Meeting, Precision Vaccines Symposium – “Maternal vaccination to protect the mother and the young”

7/2017 – International Herpesvirus Workshop (IHW) Meeting – “Potent maternal antibody protects against congenital CMV transmission” Platform Presentation.

9/2017 – NIAID Zika Virus Therapeutics Workshop – “Immune globulin for CMV and Varicella in pregnant women”

9/2017 – NIH AIDS Vaccine Research Subcommittee Workshop (AVRS) – “High magnitude and durability of HIV-specific antibody responses in HIV vaccinated infants”

9/2017 – 11th Vaccine Congress – “Gut microbiota is associated with the immune response to HIV-1 envelope vaccination in newborn rhesus macaques”

10/2017 – International Society of Exposure Science (ISES 2017) – “Congenital Zika syndrome in humans and non-human primate models”

11/2017 – Ohio State University – “Maternal and infant HIV immunization to eliminate breast milk transmission of HIV-1”

11/2017 – Nationwide Children’s Hospital, Ohio State University – “Maternal antibody-mediated protection against congenital cytomegalovirus infection”

1/2018 – University of Alabama, Birmingham Microbiology Seminar Series – “Next generation vaccines to prevent congenital cytomegalovirus infection”

3/2018 – Frontiers in Science 2018 – “Next generation vaccines to eliminate congenital cytomegalovirus”

Professional Awards and Special Recognitions:

1997 Tom Daggy Biology Award, Davidson College

1997 Cum Laude, Davidson College

1997 Fulbright Fellowship, University Teaching Hospital, Lusaka, Zambia.

1998 Eleanor Bliss Honorary Fellowship, Bloomberg School of Public Health

Name: Sallie R. Permar, M.D., Ph.D.

- 2001 R. Bradley Sack Award, Bloomberg School of Public Health
- 2004 Pasteur Clinical Research Award, Harvard Medical School.
- 2004 Magna Cum Laude, Harvard Medical School
- 2006 Society for Pediatric Research House Officer Research Award
- 2006 American Medical Association Resident Research Award
- 2006 Yale Johnson and Johnson International Physician Scholar
- 2007 Pediatric Infectious Disease Society/St. Jude Children's Hospital Fellowship in Basic Research
- 2008 International Lactation Consultant Association Research Award
- 2009 Society for Pediatric Research Fellow Basic Science Research Award
- 2009 Maxwell Finland Infectious Disease Fellow Research Award
- 2009 Center for HIV/AIDS Vaccine Immunology Young Investigator Award
- 2009 Eleanor and Miles Shore 50th Anniversary Scholars in Medicine, Harvard Medical School
- 2011 Distinguished Scientist Award, Duke University Medical Center
- 2012 Society for Pediatric Research Young Investigator Coaching Award
- 2012 National Institute of Health Director's New Innovator Award
- 2012 Outstanding Postdoctoral Mentor Award Nominee, Duke University Medical Center
- 2013 Center for HIV/AIDS Vaccine Immunology-Immunogen Design Young Investigator Award
- 2013 Presidential Early Career Award for Scientists and Engineers (**PECASE**)
- 2014 Society for Pediatric Research, Young Investigator Award
- 2014 Ruth and A. Morris Williams Duke School of Medicine Faculty Clinical Research Prize
- 2014 Alpha Omega Alpha Honor Medical Society (**AOA**) inductee
- 2015 Triangle Business Journal Health Care Heroes Award: Researcher/Innovator
- 2015 Pediatric Infectious Diseases Society Young Investigator Award
- 2016 American Society of Clinical Investigation inductee and New Member Speaker
- 2017 Duke University School of Medicine Mentoring Award Nominee
- 2017 Davidson College Distinguished Alumna Award

Organizations and Participation:

| | |
|---------------------------------------|---------------------------------|
| Massachusetts Medical Society | Member, 2000 – 2011 |
| American Academy of Pediatrics | Member, 2004 |
| Pediatric Infectious Diseases Society | Member/Research Committee, 2007 |
| North Carolina Pediatric Society | Member, 2011 |
| American Pediatric Society | Member, 2017 |

Journal Editorial Review/Editorial Activities

- Journal of Clinical Investigation, Consulting Editor 2012 – current
- Clinical Vaccine Immunology, Editorial Board Member, 2013 – current
- PloS Pathogen, Guest Editor and reviewer, 2015 – current
- Proceedings of the National Academy of Science, reviewer, 2015 – current
- Journal of Virology, ad hoc reviewer 2009 – current
- Journal of Infectious Diseases, ad hoc reviewer 2010 – current
- PloS One, ad hoc reviewer, 2011 – current
- Journal of AIDS, ad hoc reviewer 2012 – current
- Journal of Pediatric Infectious Diseases, ad hoc reviewer 2013 – current

Grant Review/NIH Study Section Committees:

| | |
|---------|---|
| 7/2012 | Early Career Study Section member – AIDS Vaccine (VACC) |
| 4/2013 | Special emphasis panel AIDS immunopathogenesis (AIP) |
| 12/2013 | Special emphasis panel HIV vaccine innovation |
| 4/2014 | Special emphasis panel HIV glycomics research |

Name: Sallie R. Permar, M.D., Ph.D.

7/2014 Special emphasis panel in HIV/AIDS research: US-South Africa Partnership Grants
7/2015 – current Standing Study Section Member, AIDS Vaccine (VACC)
4/2016 Chair, 1 P01 HD088361-01 “The natural History of Congenital CMV Infection Following Non-Primary Maternal Infection”
10/2016, 5/2017 Rapid Response Zika R21 panel
7/2017 – current March of Dimes Gene Discovery and Translational Research Advisory Committee
10/2017 – current NIAID K23 Career Development Award Committee

National/International Committees:

3/2014 – current. HIV Prevention Committee Member, International Maternal Pediatric Adolescent AIDS Trials (IMPAACT) Network, Vaccine Working Group leader
5/2014 – current. Research Affairs Committee member, Pediatric Infectious Diseases Society
10/2015-2017 – Program Committee, Nonhuman Primate Models of AIDS meeting
6/2016 – current. Society of Pediatric Research Young Investigator Award Selection Committee, Chair
7/2017 – current. Wisconsin National Primate Research Center, External Advisory Board

Patents:

1/2013: A novel HIV-1 neutralizing factor in milk PCT/US2014/011659

Clinical Trials

1. Protocol Chair: IMPAACT 2004 Safety and Immunogenicity of ALVAC-HIV (vCt2438) and Bivalent Subtype Cgp120/MF59 vaccination in breastfeeding African infants
2. Protocol Chair: Natural immune correlates of protection against postnatal CMV infection in preterm infants (Duke University)
3. Investigator: Mirabivir for Refractory CMV in Transplant Patients (Viropharma, NCT01611974)
4. Investigator: RSV vaccination in pregnancy (Novovax)
5. Investigator: CMX001 for treatment of adenovirus infection (CMX001-304)

Teaching Responsibilities Including Continuing Education:

- Residents and clinical fellows in Pediatric Infectious Disease inpatient rotations and clinic sessions 08/2011 – Present
- Pediatric resident core lecture series (annual) – Congenital Infections, Vaccine-preventable diseases
- PhD Thesis Committees:
 - David Martinez, PhD Candidate in Molecular Genetics and Microbiology, Chair, 2015-current
 - Cody Nelson, MD, PhD Candidate in Molecular Genetics and Microbiology, Chair, 2016-current
 - Nezzie Jones, PhD Candidate in Pathology, 2017-current
 - Diana Vera Cruz, PhD Candidate in Biology, 2017-current
- Scholarly Oversight and Tenure Review Committee for clinical fellows/junior faculty:
 - Dr. Genevieve Fouda, Assistant Professor of Pediatrics, Chair, 2014-current
 - Dr. Mehreen Arshad: Assistant Professor of Pediatrics, 2014– current
 - Dr. Ezzeldin Saleh, Pediatric ID Fellow: 2013 – 2017
 - Dr. Matt Kelly, Assistant Professor of Pediatrics, 2016-current
 - Dr. Justin Pollara, Assistant Professor of Surgery, 2016 - current
 - Dr. Noelle Younge, Assistant Professor of Pediatrics, 2017 - current
 - Dr. Stacy Horner, Assistant Professor of Molecular Genetics and Microbiology, 2017-current

Mentee list (Grants awarded in bold):

- Dr. Genevieve Fouda, MD, PhD (2011 – 2014) – began mentee relationship as a senior postdoctoral fellow/research associate, promoted to **Assistant Professor of Pediatrics in Feb, 2014**. Mentorship

Name: Sallie R. Permar, M.D., Ph.D.

resulted in 4 primary authorship manuscripts in Journal of Virology, Retrovirology and PNAS. Grant success includes: **a small Duke CFAR award (2012), Children's Miracle Network grant (2014), CTSA KL2 award, PI of NIH R03 grant (2015), PI of NIH R01 (2017).**

- James Friedman (2011–2012) – Duke 3rd year medical student, co-mentored with Dr. Bart Haynes. Mentorship resulted in primary author publication of manuscript in PloS One in 5/2012, AOA day research award.
- Joshua Amos (2012 – 2015) – Masters degree in the Immunology from NC State University 2015, primary author manuscript publication in Journal of Virology in 2013 and 2015.
- Carrie Ho (2011–2012) – Duke undergraduate, senior thesis in the Department of Biology at Duke University. Mentorship resulted in graduation with Honors in 5/2012 and primary author manuscript published in Journal of Virology in 2013.
- Dr. Shannon Smith (2012 – 2014) – Duke Division of Laboratory Animal Research Veterinary Residency, mentorship resulted in award of a grant from the **American Association for Laboratory Animal Science Grant in 5/2012** and a published primary author manuscript in 2014
- Caitlin Sacha (2012 – 2013) – Duke 3rd year medical student, co-mentor with Dr. Bart Haynes. Caitlin was awarded a **Howard Hughes Medical Institute Medical Research Fellows and Award** for her project in 5/2012, primary author manuscript published in Mucosal Immunology in 2014.
- Trina Arifin (2012 – 2013) – Duke-NUS 3rd year medical student. 2nd author manuscript in Nature Communications in 2016
- Terry Hodge (summer 2012) – NC Central undergraduate, mentored during a 6 week Duke-NC Central University clinical/research experience.
- Kristy Bialas, PhD (2013 – 2016) – Postdoctoral fellow, projects in congenital CMV transmission. Selected for position in **AIDS research T32 in 2013, recipient of Children's Miracle Network grant 2014**, primary author manuscript in PNAS in 2015 and JID in 2016, currently Senior Fellow at FDA
- Robin Mansour (2013 – 2014) – Duke 3rd year medical student, **awarded Doris Duke Charitable Foundation Student Mentorship award in 2013**, primary author manuscript in PlosOne 2015.
- Quang Nguyen (2013 – current) – Duke undergraduate and BioCore program participant, recipient of **FLEX Funding Grant from Greenhouse Scholars (2014), Duke TCAS Undergraduate Research Support Office Travel Grant, Sigma Xi Scientific Research Society Grant-in-Aid of Research (2014), the NIH undergraduate research training program (2015), ASM Undergraduate Research Award 2016**, and primary author manuscript published in PLoS Pathogens in 2016
- David Martinez (2013 – current) – Duke Department of Molecular Genetics and Microbiology graduate student, **Gates Millennium Scholar, American Society of Microbiology Fellowship 2016, Duke University Biosciences Collaborative For Research Engagement Award 2015, NIH NIAID F31 2017**
- Alondra Desantiago (Summer 2014) – Duke Summer Research Opportunity Program (SROP) for URM undergraduates.
- Justin Pollara, PhD (2014 – current) – Duke postdoc and junior faculty. **Elizabeth Glaser Pediatric AIDS Fellowship 2015, NIH K01 awardee 2017 (Primary mentor, grant # 1K01OD024877-01)**
- Claire Powers (2014 – 2015) – Duke 3rd year medical student, received the **Stedman Research Grant**
- Qihua Fan (2014 – 2015) – Duke 3rd year medical student, first author on Clinical and Vaccine Immunology manuscript
- Cody Nelson (2014 – current) Duke MTSP MD-PhD candidate in Molecular Genetics and Microbiology, **awarded TriCEM fellowship 2016, NIH NICHD F30 2017**
- Charmaine Mutucumarrana – (2015 – current) Duke 3rd year medical student, received the **Doris Duke Charitable Foundation Student Mentorship award 2015**, first author manuscript published 2017
- Kristin Weimer, MD, PhD (2015 – current) Duke NICU fellow. Received **Resident Research Award 2015, Children's Miracle Network Grant 2016.**
- Ayo Douglas (2015-current) – Duke Undergraduate, SROP summer research fellow 2016, Graduated with Distinction in Biology for undergraduate honors thesis in Permar lab 2017

Name: Sallie R. Permar, M.D., Ph.D.

- Tulika Singh (2016-current) – Duke Molecular Genetics and Microbiology Graduate student, **Viral Oncology T32 2017**
- Christopher Toote (2016-17) – Duke 3rd year medical student, **Doris Duke Charitable Foundation Student Mentorship award 2016**
- Melody Su (2016-current) – Graduated with Distinction in Biology after completing undergraduate honors thesis in Permar lab 2017
- Frances Saccoccio MD, PhD (2017 – current) – Duke Pediatric Infectious Diseases Fellow, **National CMV Foundation/PIDS Fellowship Award 2017**
- Eliza Hompe (2017-2018) – Duke 3rd year medical student, **Doris Duke Charitable Foundation Student Mentorship award 2017**

Areas of Research Interests

- The role of HIV/SIV-specific immune responses in protection against mother to child transmission of HIV
- Evaluation of HIV vaccines to prevent mother/infant transmission in human and nonhuman primate studies
- Vaccine immunology in the altered immune states of pregnancy and infancy
- The role of maternal immune responses in protection of infants from perinatal CMV transmission
- Use of a novel rhesus CMV model of congenital CMV infection to define the immunologic and virologic determinants of placental CMV transmission
- Immune correlations of protection against congenital Zika virus transmission in clinical cohorts and nonhuman primate models

External Support – Gifts, Grants, and Contracts

| | <u>PI</u> | <u>% Effort</u> | <u>Purpose</u> | <u>Amount per year</u> | <u>Dates</u> |
|-----------------|---|-----------------|--|------------------------|------------------------|
| a) Past: | | | | | |
| | Sallie Permar | | Pediatric Infectious Diseases Society-St. Jude’s Children’s Research Hospital Fellowship in Basic Research | 215,000 | 7/1/2008 – 6/30/2011 |
| | Sallie Permar | | Nonhuman Primate Early Stage Investigator Scholar Award, NIH U01 (AI067854) | 250,000 | 7/1/2009 – 6/30/2011 |
| | Sallie Permar | | Children’s Hospital Boston Office of Faculty Development | 100,000 | 7/1/2009 – 6/30/2011 |
| | Sallie Permar | | Harvard Catalyst Grant | 50,000 | 7/1/2010 – 6/30/2011 |
| | Sallie Permar | | BD Biosciences Immunology Grant | 10,000 | 12/1/2011 – 11/30/2012 |
| | Sallie Permar | | NIAID R21: AI100760-01A1 | 275,000 | 3/1/2012 – 2/28/2014 |
| | Sallie Permar | | K08 AI087992-05 | 39,229 | 9/1/2009 – 8/30/2014 |
| | Sallie Permar | | Doris Duke Clinical Scientist Development Award | 303,401 | 8/1/2010 – 12/31/2014 |
| | Barton Haynes | | Gates Foundation CAVD | 100,000 | 9/1/2013 – 4/30/2015 |
| | Sallie Permar | | NIAID R21: AI106494-01 | 275,000 | 2/1/2013 – 1/31/2015 |
| | Sallie Permar (PI) | | NIH R21AI06494-02 Novel HIV-1 neutralizing protein | 125,000 | 2/1/2013 – 1/31/2016 |
| | Sylvia Becker Dreps/ Sallie Permar – (Co-I) | | NIH R56 Simple interventions to Improve Rotavirus Vaccine Effectiveness | 51,489 | 8/1/2014 – 7/31/2016 |
| | Herman Staats / Sallie Permar (Co-I) | | NIH R01AI02747 Mucosal vaccination | 401,130 | 7/1/2012 – 6/30/2017 |

Name: Sallie R. Permar, M.D., Ph.D.

| | <u>PI</u> | <u>% Effort</u> | <u>Purpose</u> | <u>Amount per year</u> | <u>Dates</u> |
|--------------------|--|-----------------|---|-----------------------------------|------------------------|
| | Mary Klotman / Sallie Permar – (Co-I) | | NIH P01 AI110485 Administrative Core HIVRAD | 93,874 | 4/1/2015 – 3/31/2020 |
| | Herman Staats / Sallie Permar – Co Leaders | | NIH P30AI064518 Center for AIDS Research NIH Developmental Core co-leader | 368,552 | 7/1/2010 – 6/30/2020 |
| b) Present: | | | | | |
| | Sallie Permar (PI) | 5% | NIH DP2HD075699 Director’s New Innovator Award | 1,981,072 | 9/30/2012 – 8/31/2018 |
| | Sallie Permar (PI) | 5% | NIH R01AI106380 Transmission-blocking potential of mucosal antibodies | 562,731 | 5/22/2013 – 4/30/2018 |
| | Sallie Permar (Overall PD/PI) | 4% | NIH P01 AI117915 HIVRAD Administrative Core | 107,686 | 4/1/2015 – 3/31/2020 |
| | Sallie Permar (Overall PD/PI) | 16.5% | NIH P01 AI117915 Maternal Infant Immunization HIVRAD, Project 1 | 154,202 (Overall award: 2.18M/yr) | 4/1/2015 – 3/31/2020 |
| | Sallie Permar (Overall PD/PI) | 3% | NIH P01 HIVRAD Supplemental Studies | 296,554 | 2/10/2016-7/31/2017 |
| | Kent Weinhold (PI) | 8.5% | CFAR Developmental Core, Co-leader | | 7/1/2015-6/30/2020 |
| | Sallie Permar (PI) | 15% | NIH DE025444 R01 Innate antiviral factors in breast milk and the oral HIV-1 reservoir | 374,072 | 8/01/2015-7/31/2020 |
| | Sallie Permar/Feng Gao Multi-PI | 11% | NIH R01 Natural and vaccine-elicited HIV-neutralizing antibodies in MTCT | 406,377 | 6/15/2016-5/31/2020 |
| | Sallie Permar | 2.5% | Johns Hopkins LOC-IMPAACT Leadership Group | 26,934 | 4/1/2015 – 11/30/2016 |
| | Sallie Permar (PI) | 4% | UCLA IMPAACT: International Maternal Pediatric Adolescent AIDS Clinical Trial Group | 101,822 | 1/01/2014 – 11/30/2016 |
| | Georgia Tomaras/ Sallie Permar (Co-I’s) | 1% | Statistical methods for HIV-1 Immune Correlates studies | 12,036 | 3/1/2016-2/28/17 |
| | Herman Staats (PI)/Sallie Permar (Co-I) | 1% | NIH; Pregnant rabbits as a model to evaluate the causative role of ZIKV infection in the etiology of congenital malformations | 150,000 | 9/01/16 – 8/31/18 |
| | Sallie Permar (Overall PD/PI) | 15% | NIH P01 AI31276; The origin, predictors, and immune correlates of viral rebound in orally SHIV infected infant monkeys | 1,383,626 | 03/01/2017-02/28/2022 |
| c) Pending: | | | | | |
| | Sallie Permar (Co-I) | 5% | NIH; Neutralizing antibodies in HIV persistence in children | 334,726 | 7/01/16 – 6/30/21 |
| | Sallie Permar (PI) | 4% | NIH; Antibody and viral determinants of protection against CMV infection in a gB/MF59 vaccination cohort | 150,000 | 9/01/16 – 8/31/18 |
| | Sallie Permar (contact MPI/PD) | 25% | NIH; P01 Immunologic and virologic determinants of congenital Cytomegalovirus transmission and disease in rhesus monkeys | 2.27M (overall) | 4/01/17 – 3/31/22 |
| | Sallie Permar (PI) | 5% | NIH; The relationship between maternal ZIKV-specific and ADE antibodies and fetal outcome | 158,200 | 7/01/16 – 6/30/18 |
| | Sallie Permar (Co-I) | 5% | NIH; Geographically-Guided Decision Modeling to Reduce Health Disparities from Congenital Cytomegalovirus | 331,930 | 4/01/17 – 3/31/21 |
| | | | | | |

Name: Sallie R. Permar, M.D., Ph.D.

Clinical Activity:

| <u>Type of Practice</u> | <u>Time Commitment(s)</u> |
|---|---------------------------|
| • Clinical pediatric infectious diseases inpatient consultation | 4 weeks/year |
| • Perinatal viral infections outpatient clinic | 6 weeks/year |

Participation in Academic and Administrative Activities of the University and Medical Center:

- Track Director, Duke Scholars in Molecular Medicine Program, 2012-2013
- Faculty reviewer/mentor for junior faculty “K club”, 2013 - current
- Duke SOM Department of Pediatrics Chair Search Committee, 3/2013 – 12/2013
- Duke School of Medicine MD-PhD program admissions committee, 7/2013 – current
- Developmental Core co-Director, Duke Center for AIDS research, (CFAR) 7/2014 – current
- Director, Duke Pediatric Research Scholars Physician-Scientists Training Program, Department of Pediatrics, 12/2017 – current
- Director, Children’s Discovery Institute, Department of Pediatrics, 1/2017 - current
- Duke SOM Department of Medicine Chair Search Committee, 3/2017 – current
- Duke University Intellectual Property Board, 9/2017 – current
- Chancellor’s Immunology Initiative Advisory Board, 4/2017 – current

Personal Information

Preferred Familiar Name: Sallie Permar

Home Address: 1904 Sturbridge Court
Raleigh, NC 27612

Home Phone #: 919-451-4604

Marital Status: Married

Name of Spouse: Matthew Ferraguto

Children: Sam Robert Ferraguto, 2/12/2009
Elisabeth Kinsey Ferraguto, 1/11/2011