

DUKE UNIVERSITY MEDICAL CENTER

CURRICULUM VITAE

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

Date Prepared: December 20th, 2021

Name (complete with degrees): Guido Ferrari, M.D.

Primary academic appointment (department): Department of Surgery; Division of Surgical Sciences

Primary academic department (not DUAP):

Secondary appointment (if any) (department): Department of Molecular Genetics and Microbiology

Present academic rank and title (if any): Professor of Surgery (Track V)

Date and rank of first Duke faculty appointment: 09/1/2001, Assistant Research Professor in Surgery

<u>Education:</u>	<u>Institution</u>	<u>Date (Year)</u>	<u>Degree</u>
High School	Liceo Scientifico Cassini Genoa, Italy	1974-1979	Diploma
Graduate School	University of Genoa School of Medicine Genoa, Italy	1979-1985	M.D.

Professional training and academic career (chronologically commencing with first postdoctoral position):

<u>Institution</u>	<u>Position/Title</u>	<u>Dates</u>
University of Genoa School of Medicine Genoa, Italy	Resident and Fellow Clinical Microbiology	1985-1990
Duke University Medical Center Durham, NC, USA	Research Associate	08/1990-02/1992
Hospital S. Raffaele Clinical Virology Lab Milan, Italy	Attending	03/1992-06/1994
Duke University Medical Center Durham, NC, USA	Research Associate	06/1993-08/2001

Duke University Medical Center Durham, NC, USA	Assistant Research Professor Department of Surgery Division of Surgical Sciences	09/2001-06/2006
Duke University Medical Center Durham, NC, USA	Assistant Professor Department of Surgery Division of Surgical Sciences	7/2006-9/2013
University of Cape Town Cape Town, South Africa	Adjunct Visiting Professor Department of Immunology	03/2012-04/2019
Duke University Medical Center Durham, NC, USA	Associate Professor Department of Surgery Division of Surgical Sciences	10/2013-12/2020
Duke University Medical Center Durham, NC, USA	Associate Research Professor Department of Molecular Genetics and Microbiology	10/2014-Present
University of Cape Town Cape Town, South Africa	Honorary Professor Department of Immunology	05/2019-Present
Duke University Medical Center Durham, NC, USA	Professor Department of Surgery Division of Surgical Sciences	01/2021-Present

Publications:**1. Refereed journals:****i. Named author**

1. Canessa A, Pantarotto F, Miletich F, Russo A, Gotta C, Bozzuffi PM, **Ferrari G**, Fiorelli A, Terragna A. Antibody prevalence to torch agents in pregnant women and relative risk of congenital infections in Italy (Liguria). *Biol Res Pregnancy Perinatol*, 8(2 2D Half):84-88, 1987.
2. Boeri E, Giri A, Lillo F, **Ferrari G**, Varnier OE, Ferro A, Sabbatani S, Saxinger WC, Franchini G. In vivo genetic variability of the human immunodeficiency virus type 2 V3 region *J Virol*, 66(7): 4546-4550, Jul 1992. [PMC241266]
3. **Ferrari G**, Ottinger J, Place C, Nigida SM, Arthur LO, Weinhold KJ. The impact of HIV-1 infection on phenotypic and functional parameters of cellular immunity in chimpanzees. *AIDS Res Hum Retroviruses*, 9(7):647-656, Jul 1993. [PMC8369169]
4. **Ferrari G**, Place CA, Ahearn PM, Nigida SM, Arthur LO, Bolognesi DP, Weinhold KJ. Comparison of anti-HIV-1 ADCC reactivities in infected humans and chimpanzees. *J Acquir Immune Defic Syndr*, 7(4):325-331, Apr 1994. [PMC8133445]
5. **Ferrari G**, King K, Rathbun K, Place CA, Packard MV, Bartlett JA, Bolognesi DP, Weinhold KJ. IL-7 enhancement of antigen-driven activation/expansion of HIV-1-specific cytotoxic T lymphocyte precursors (CTLp). *Clin Exp Immunol*, 101(2):239-248, Aug 1995. [PMC1553276]

6. Toso JF, Chen CH, Mohr JR, Piglia L, Dei C, **Ferrari G**, Greenberg ML, Weinhold KJ. Oligoclonal CD8 Lymphocytes from Persons with Asymptomatic Human Immunodeficiency Virus (HIV) Type 1 Infection Inhibit DIV-1 Replication. *Journal of Infectious Diseases*, 172(4):964-973 Oct 1995.
7. **Ferrari G**, Humphrey W, McElrath MJ, Excler JL, Duliege AM, Clements ML, Corey LC, Bolognesi DP, Weinhold KJ. Clade B-based HIV-1 vaccines elicit cross-clade cytotoxic T lymphocyte reactivities in uninfected volunteers. *Proc Natl Acad Sci USA*, 94(4):1396-1401, Feb 1997. [PMC19802]
8. **Ferrari G**, Berend C, Ottinger J, Dodge R, Bartlett J, Toso J, Moody D, Tartaglia J, Cox WI, Paoletti E, Weinhold KJ. Replication-defective canarypox (ALVAC) vectors effectively activate anti-human immunodeficiency virus-1 cytotoxic T lymphocytes present in infected patients: implications for antigen-specific immunotherapy. *Blood*, 90(6):2406-2416, Sep 1997. [PMC9310492]
9. Stranford SA, Skurnick J, Louria D, Osmond D, Chang SY, Sninsky J, **Ferrari G**, Weinhold K, Lindquist C, Levy JA. Lack of infection in HIV-exposed individuals is associated with a strong CD8(+) cell noncytotoxic anti-HIV response. *Proc Natl Acad Sci USA*, 96(3):1030-1035, Feb 1999. [PMC15345]
10. Falk LA, Goldenthal KL, Esparza J, Aguado MT, Osmanov S, Ballou WR, Beddows S, Bhamaraprabhat N, Biberfeld G, **Ferrari G**, Hoft D, Honda M, Jackson A, Lu Y, Marchal G, McKinney J, Yamazaki S. Recombinant bacillus Calmette-Guérin as a potential vector for preventive HIV type 1 vaccines. *AIDS Res Hum Retroviruses*, 16(2):91-98, Feb 2000.
11. Markert ML, Hicks CB, Bartlett JA, Harmon JL, Hale LP, Greenberg ML, **Ferrari G**, Ottinger J, Boeck A, Kloster AL, McLaughlin TM, Bleich KB, Ungerleider RM, Lyerly HK, Wilkinson WE, Rousseau FS, Heath-Chiozzi ME, Leonard JM, Haase AT, Shaw GM, Bucy RP, Douek DC, Koup RA, Haynes BF, Bolognesi DP, Weinhold KJ. Effect of highly active antiretroviral therapy and thymic transplantation on immunoreconstitution in HIV infection. *AIDS Res Hum Retroviruses*, 16(5):403-413, Mar 2000. [PMC 10659047]
12. Tomaras GD, Lacey SF, McDanal CB, **Ferrari G**, Weinhold KJ, Greenberg ML. CD8+ T cell-mediated suppressive activity inhibits HIV-1 after virus entry with kinetics indicating effects on virus gene expression. *Proc Natl Acad Sci USA*, 97(7):3503-3508, Mar 2000. [PMC16269]
13. **Ferrari G**, Kostyu DD, Cox J, Dawson DV, Flores J, Weinhold KJ, Osmanov S. Identification of highly conserved and broadly cross-reactive HIV type 1 cytotoxic T lymphocyte epitopes as candidate immunogens for inclusion in *Mycobacterium bovis* BCG-vectored HIV vaccines, *AIDS Res Hum Retroviruses*, 16(14):1433-1443, Sep 2000. [PMC 10772526]
14. **Ferrari G**, Neal W, Jones A, Olander N, Ottinger J, Ha R, McElrath MJ, Goepfert P, Weinhold KJ. CD8 CTL responses in vaccines: emerging patterns of HLA restriction and epitope recognition. *Immunol Lett*, 79(1-2):37-45, Nov 2001. [PMC 11595288]
15. Currier JR, Kuta EG, Turk E, Earhart LB, Loomis-Price L, Janetzki S, **Ferrari G**, Birx DL, Cox JH. A panel of MHC class I restricted viral peptides for use as a quality control for vaccine trial ELISPOT assays. *J Immunol Methods*, 260(1-2):157-172, Feb 2002. [PMC 11792386]
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 20. Cox JH, **Ferrari G**, Kalams SA, Lopaczynski W, Oden N, D'souza MP, Elispot Collaborative Study Group. Results of an ELISPOT proficiency panel conducted in 11 laboratories participating in international human immunodeficiency virus type 1 vaccine trials. *AIDS Res Hum Retroviruses*, 21(1):68-81, Jan 2005. [PMC15665646]
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- Diseases HIV Vaccine Trials Network. Phase 2 study of an HIV-1 canarypox vaccine (vCP1452) alone and in combination with rgp120: negative results fail to trigger a phase 3 correlates trial. *J Acquir Immune Defic Syndr*, 44(2):203-212, Feb 2007. [PMC2362395]
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44. Weinberg A, Song LY, Wilkening CL, Fenton T, Hural J, Louzao R, **Ferrari G**, Etter PE, Berrong M, Canniff JD, Carter D, Defawe OD, Garcia A, Garrelts TL, Gelman R, Lambrecht LK, Pahwa S, Pilakka-Kanthikeel S, Shugarts DL, Tustin NB. Optimization of storage and shipment of cryopreserved peripheral blood mononuclear cells from HIV-infected and uninfected individuals for ELISPOT assays. *J Immunol Methods*, 363(1):42-50, Dec 2010. [PMC3068047]
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47. Frahm M, Goswami ND, Owzar K, Hecker E, Mosher A, Cadogan E, Nahid P, **Ferrari G***, Stout JE*. Discriminating between latent and active tuberculosis with multiple biomarker responses. *Tuberculosis (Edinburgh, Scotland)*, 91(May 2011):250-256, Mar 2011. [PMC3090479] *These authors equally contributed to this manuscript.
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- immunodeficiency virus vaccine. *J Infect Dis*, 204(1):164-173, Jul 2011. [PMC3143670]
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213. Mitchell JL, Pollara J, Dietze K, Edwards RW, Nohara J, N'guessan KF, Zemil M, Buranapraditkun S, Takata H, Li Y, Muir R, Kroon E, Pinyakorn S, Jha S, Manasnayakorn S, Chottanapund S, Thantiworasit P, Prueksakaew P, Ratnaratorn N, Nuntapinit B, Fox L, Tovanabutra S, Paquin-Proulx D, Wieczorek L, Polonis VR, Maldarelli F, Haddad EK, Phanuphak P, Sacdalan CP, Rolland M, Phanuphak N, Ananworanich J, Vasan S, ***Ferrari G**, *Trautmann L. Anti-HIV antibody development up to one year after antiretroviral therapy initiation in acute HIV infection. *J Clin Invest.* 2021 Nov 11:e150937. doi: 10.1172/JCI150937. Epub ahead of print. [PMC not yet available] *These authors equally contributed to this manuscript.
214. Mielke D, Bandawe G, Zheng J, Jones J, Abrahams MR, Bekker V, Ochsenbauer C, Garrett N, Abdool Karim S, Moore PL, Morris L, Montefiori D, Anthony C, **Ferrari G**, Williamson C. ADCC-mediating non-neutralizing antibodies can exert immune pressure in early HIV-1 infection. *PLoS Pathog.* 2021 Nov 17;17(11):e1010046. doi: 10.1371/journal.ppat.1010046. [PMC8598021]

- i. **Study Group publications:** N/A
- ii. **Letters:** N/A
- iii. **Editorials**

1. **Ferrari G.** Tandem bispecific broadly neutralizing antibody - a novel approach to HIV-1 treatment. *J Clin Invest*, 128(6):2189-2191, Jun 2018.

2. **Books:** N/A

3. **Chapters in books:**

- 1. Janetzki S, Cox JH, Oden N, and **Ferrari G.** Standardization and validation issues of the ELISPOT assay. *Methods Mol Biol*, 302:51, 2005.
- 2. Cox JH, deSouza M, Ratto-Kim S, **Ferrari G**, Weinhold K, and Birx DL. Cellular Immune Assays for Evaluation of Vaccine Efficacy in Developing Countries. In: *Manual of Clinical Immunology Laboratory*. N. R. Rose, R. G. Hamilton, and B. Detrick, eds. ASM Press, Washington, DC, p. 301, 2005.
- 3. D'Souza P, Cox JH, **Ferrari G**, Kunwar NT, Polonis V, and Sarzotti-Kelsoe M. Endpoint assay in HIV-1 vaccine trials: functioning in a Good Laboratory Practices environment. In: *Validation of Cell-Based Assay in the GLP Setting (A Practical Guide)*. U. Prabhakar and M. Kelley eds. John Wiley & Sons, Ltd, West Sussex, UK, p. 239, 2008.

4. **Abstracts**

American Association of Immunologists Experimental Biology Meeting, New Orleans, LA, 2002.

#5822 Sempowski G, Hicks C, Edwards L, **Ferrari G**, Eron J, Haynes B. "Naïve T cells are maintained in the periphery during acute HIV infection"

9th Conference on Retroviruses and opportunistic Infections, Seattle, Washington USA, 2002

#499-M S Sufka*, **G Ferrari**, G Sempowski, H Staats, V Gryszowka, V Teaberry, K Weinhold, C Hicks. "Immune Correlates of a Discordant CD4/VL Response to PI-Based HAART"

7th European Conference on Experimental AIDS Research, Genoa, Italy, June 8-11, 2002

#AB56 B Exley, S Sufka, V Teaberry, V Gryszowka, C Hichs, K Weinhold, **G Ferrari**. "Analysis of anti-HIV T Cell Immune Responses in Patients with a Discordant CD4/VL Response to PI-Based HAART"

XIV International AIDS Conference, Barcelona, Spain, 2002

#ThPeA7001 Sufka S, Ferrari G, Tomaras G, Wrin T, Fiscus S, Gryszowka V, Teaberry V, Hellmann N, Weinhold K, Hicks C. Longitudinal follow-up of patients with discordant responses to PI-based HAART.

10th Conference on Retroviruses and Opportunistic Infections, Boston, MA, 2003

#146 Linden D, Sufka S, **Ferrari G**, Fiscus S, Wrin T, Gryszowka V, Exley B, Weinhold K, Hellman N, Petropoulos C, Hicks C. "Viral and immune correlates of discordant CD4/VL responses to NNRTI-based HAART and comparison to a discordant cohort receiving protease inhibitor-based HAART"

HIV Vaccine Development: Immunological and Biological Challenges, Keystone Symposia, Banff, Alberta, Canada, March 28-April 4, 2003

#117 **G Ferrari**, J Currier, S Florkenstein, A de Oliveira, M Harris, J Cox, S Osmanov, N Reinsmoen, S Maayan. "Pattern of Cell mediated Cross-Clade Immune Reactivity and Immunodominance among Ethiopian Emigrants Infected with Clade C HIV-1"

#210 J Cox, **G Ferrari**, S Kalams, N Oden, MP D'Souza and the ELISPOT Collaborative Study Group. "Results of an ELISPOT Proficiency Panel Conducted in 11 Laboratories Participating in International HIV Vaccine Trials"

HIV Vaccine Development: Progress and Prospects, Keystone Symposia, Whistler, British Columbia Canada, April 12-18, 2004

#205 M Betts, B Exley, V Teaberry, D Price, G Tomaras, D Douek, M Roederer, R Koup, K Weinhold, P Goepfert, **G Ferrari**. "Lack of Protection from HIV-1 Infection by a HLA-B27-restricted Anti-p24 Gag CD8+ T Cell Response Induced by a Recombinant HIV Canarypox Vaccine Vector (vCP205)"

#242 W Lopaczynski, S Gregory, Y Zhang, H Horton, R Koup, J Cox, **G Ferrari**, P D'Souza, and JL Lathey. "The Precision, Linearity, and Robustness of the ELISpot Assay for Use in HIV Clinical Trials"

XV International AIDS Conference, Bangkok, Thailand, July 11-18, 2004

#TuPeB4536 Hicks C, Eron J, Lennox J, Pilcher C, Weintrob A, Del Rio C, **Ferrari G**, Weinhold K, Giner J, Menezes P, Dean B, Kerkau M, Fiscus S. Treatment of primary HIV infection with NNRTI-based HAART: the Duke-UNC-Emory Acute HIV Infection Consortium.

AIDS Vaccine 2004, Lausanne, Switzerland, August 30-September 1, 2004

#54 H Horton, C Beckham, J Stucky, J Hallstrom, D Lee, **G Ferrari**, M Deers, S DeRosa, M Koutsoukos, P Goepfert, MJ McElrath. "Induction of IL-2-secreting CD4+ T cells capable of proliferation in seronegative subjects receiving the HIV-1 gp120/NefTat subunit vaccine"

#86 M Betts, B Exley, V Teaberry, D Price, S West, G Tomaras, F Gao, D Douek, M Roederer, R Koup, K Weinhold, P Goepfert, **G Ferrari**. "Lack of protection from HIV-1 infection by Gag-specific CD4+ and CD8+ T cell responses induced by a recombinant HIV canarypox vaccine vector (vCP205)"

#165 JL Lathey, S Gregory, Y Zhang, H Horton, R Koup, J Cox, **G Ferrari**, R Bailer, P D'Souza, N Oden, W Lopaczynski. "Validation of ELISpot kit for use in HIV vaccine trials"

#167 J Cox, E Kuta, L Galley, **G Ferrari**, M Eller, D Birx, M Marovich. "Determination of range of sensitivity and inter-assay variation of the ELISpot and intracellular cytokine secretion assays in HIV vaccine trials by use of a peptide pool containing CMV, EBV, and flu peptides"

#247 G Tomaras, D Montefiori, **G Ferrari**, K Weinhold, J Hamilton, H Horton, J McElrath, M Deers, L Pedneault, M Koutsoukos, G Voss, T Evans, P Goepfert. “Durable antibody responses elicited by a recombinant protein combination vaccine (NefTat and gp120W61D) formulated with AS02A in HIV uninfected human participants”

Federation of Clinical Immunology Societies, San Francisco, CA (USA), June 1-5, 2006

Sa.133 J Lathey, N Oden, S Gregory, J Cox, **G Ferrari**, S Zimmermann, R Koup, MP D’Souza, I Rodriguez-Chavez. “ELISpot proficiency Testing for International Laboratories Partecipating in HIV Vaccine trials.”

AIDS Vaccine 2007, Seattle, WA (USA), August 20-23, 2007

OA02-02 MC Keefer, M Elizaga, **G Ferrari**, B Metch, D Panicali, M Cardinali, P Goepfert, A Kalichman, D Carter, P Barroso, J McElrath, K Wienhold, and SE Frey. “Safety and immunogenicity of rMVA-HIV and rFowlPox(FPV)-HIV vaccines, alone or in combination, in healthy vaccinia-naïve HIV-1 negative participants.”

P01-01 N Gasper-Smith, JF Whitesides, N Mensali, JS Ottinger, SG Plonk, **G Ferrari**, KJ Weinhold, CF Reich, DS Pisettski, and BF Haynes. “Plasma FAS ligand, TNFR2, and TRAIL levels are elevated during the time of viral load ramp-up in acute HIV-1 infection.”

P01-02 J Yu, K Owzar, C Hicks, H Maecker, C Gray, J Eron, S Fiscus, KJ Weinhold, and **G Ferrari**. “Impact of HAART treatment during acute infection on HIV-specific T cell responses.”

CROI 2008, Boston, MA (USA), February 2008

#436 J Yu, M Frahm, K Owzar, H Maecker, C Hicks, C Gay, J Eron, S Fiscus, KJ Weinhold, **G Ferrari**. “Long-Term Effects of Early HAART Treatment on HIV-Specific Immune Responses.”

Keystone Symposia HIV Pathogenesis, Banff, Canada, March 26-April 1, 2008

179 M Frahm, J Yu, K Owzar, H Maecker, C Hicks, C Gay, J Eron, S Fiscus, KJ Weinhold, **G Ferrari**. “Long-Term Immune Modulations Associated with HIV Infection Despite Early-HAART Initiation.”

#178 **G Ferrari**, M Lieu, C Marking, J Ottinger, N Goonetileke, M Betts, C Gray, A McMichael, and K Weinhold. “Multifunctional analysis of anti-HIV epitope-specific CD8⁺ memory T cell responses during spontaneous or HAART-induced control of viremia.”

#254 MKP Liu, E Turnbull, **G Ferrari**, M Miotshwa, T Rostron, I Williams, F Treunicht, J Salazar, C DeBoer, A Williams, C Maragret, Clinical teams for CAPRISA and CHAVI 001, B Hahn, G Shaw, BT Korber, C Williamson, C Gray, KWeinhold, P Borrow, AJ McMichael, and N Goonetileke. “T cell epitope Mapping Studies in Subjects Acutely Infected with HIV-1.”

XVII International AIDS Conference 2008, Mexico City, MX, August 3-8, 2008

THPE0082 C Gay, A Johnson, S McCoy, J Kuruc, K McGee, L McNeil, M Kerkau, J Sebastian, C Pilcher, D Margolis, P Leone, S Fiscus, **G Ferrari**, C Hicks, J Eron, The Duke-UNC Acute HIV Infection Consortium. “Efficacy of NNRTI-Based Antiretroviral Therapy Initiated During Acute HIV Infection.”

THPE0086 C Gay, O Dibben, A Stacey, N Gasper-Smith, M Liu, P Norris, N Goonetilleke, G Ferrari, J Eron, C Hicks, A McMichael, B Haynes, P Borrow, M Cohen, on behalf of the Duke-UNC CHAVI 001 Clinical Working Group. “Effect(s) of Antiretroviral Treatment on Acute HIV Infection.”

AIDS Vaccine 2008, Cape Town, South Africa (ZA), October 13-16, 2008

#OA01-06 MK Liu, **G Ferrari**, J Salazar, B Keele, RL Taneer, E Turnbull, M Mlotshwa, F Treurnicht, B Hahn, BT Korber, C DeBoer, A Williamson, C Gray, C Williamson, M Cohen, the Core B University of North Carolina Duke research, P Borrow, K Weinhold, G Shaw, N Goonetilleke, and AJ McMichael. “T cellescape in subject with acute HIV-1 infection.”

#P12-01 MW Sichangi, J Bartlett, **G Ferrari**, J Crump, A Muisyo, J Puleo, T Moody, B Haynes, and J Shao. “Detection of cross-clade T- and B-cell-mediated immune responses among HIV-1 infected individuals in northern Tanzania.”

#P15-18 **G Ferrari**, A Garcia-Louzao, J Cox, A Sambor, P D’Souza, C Gray, M Jaimes, H Maecker, G Levine, R Koup, T Denny. “Establishing PBMC repository for T cell assays optimization and proficiency testing in CTC-VIMC laboratories.”

Keystone Symposia Immunologic Memory and Host Defense, Keystone, CO USA, February 8-13, 2009

#169 **G Ferrari**, E Turnbull, M Liu, N Goonetilleke, M Betts, C Gray, P Borrow, A McMichael, K Weinhold. “Early appearance and longevity of CD8+CD57+IFNg+ anti-Gag responses are associated with spontaneous control of viremia following acute HIV-1 infection”

Keystone Symposia HIV Immunobiology, Keystone, CO USA, March 22-27, 2009

#213 **G Ferrari**, E Turnbull, M Liu, N Goonetilleke, M Betts, C Gray, P Borrow, A McMichael, K Weinhold. “Anti-Gag effector-like CD4+ T cell responses detectable during acute HIV-1 infection are not associated with persistent spontaneous control of virus replication.”

HIV Acute Infection Meeting, Boston, MA USA, September 22-23, 2009

G Ferrari, E Turnbull, M Liu, N Goonetilleke, M Betts, C Gray, P Borrow, A McMichael, K Weinhold. “CD8+ T Cell Recognition of Gag, Nef and Env Epitopes During Acute HIV-1 Infection Show no Difference in Functional Profile and Highly Polyfunctional Cells are not a Hallmark of an Early Anti-HIV Response”.

Keystone Symposia HIV-1 Biology and Pathogenesis, Santa Fe, NM, February 12-17, 2010

Takuya Yamamoto, DA Price, JP Casazza, **G Ferrari**, DR Ambrozak, BC Chaon, M Nason, PK Chattopadhyay, M Roederer, DC Douek, C Petrovas, RA Koup. “Determinants of T cell exhaustion based on surface expression of potential negative regulators on virus-specific CD8 T cells in HIV+ individuals”.

5. Non-refereed publications:

i. Print

1. Cox J, **Ferrari G**, Bailer R, Koup R. Automating procedures for processing, cryopreservation, storage, and manipulation of human peripheral blood mononuclear cells *Journal of the Association for Laboratory Automation*, 9(1):16-23, Feb 2004.

2. Mimano LN, **Ferrari G**, Kapanda G, Lisasi E, Kulanga A, Nyombi B, Muiruri C, Kessi E, Bartlett J, Ntabaye M. Student perceptions on the introduction of training in diagnostic laboratory techniques in an African school of medicine. *MedEdPublish*, 4(1), Apr 2015.

ii. **Digital:** N/A

6. **Published scientific reviews (for mass distribution)** N/A

7. **Position, and background papers** N/A

8. **Non-authored publications: (Faculty member formally acknowledged in the publication for her/his contributions)** N/A

9. **Other** N/A

Consultant appointments: (Include US government, state, private organizations, etc.)

1998-2005 WHO-UNAIDS Consultant for developing new AIDS vaccine strategy

Scholarly societies (Alpha Omega Alpha, Sigma Xi, Phi Beta Kappa, etc.): N/A

Professional awards and special recognitions:

2018 Highly Cited Researchers List by ISI-Web of Science in Cross-Field for multidisciplinary journals

2019 Highly Cited Researchers List by ISI-Web of Science in Cross-Field for multidisciplinary journals

2021 Research Mentoring Award in Basic/Translational Science, Duke University School of Medicine

Editorial Experience

a. **Editorial Boards**

2015-Present *Current HIV Research*

b. **AdHoc scientific review journals**

1999-Present:

AIDS

AIDS Research and Human Retroviruses

Blood

European Journal of Immunology

Frontiers of Immunology

Immunity

Journal of Clinical Investigation

Journal of Experimental Medicine

Journal of Immunology

Journal of Infectious Diseases
Journal of Virology
PLoS Pathogens
PLoS One
Virology

Organizations and participation: (Offices held, committee assignments, etc.)

2001-Present American Association of Immunologists

2011-2018 Scientific Committee member for INTEREST Workshop

2019-Present International Conference Committee member for INTEREST Conference

Areas of research interests (basic and applied) - list:

- Cellular Immunology
- Humoral Immune Response
- HIV Vaccine
- Antiretroviral Therapy
- Immune Therapy

Mentoring activities

i. Faculty

Dr. Justin Pollara (2013-Present)

ii. Fellows, doctoral, post docs

Dr. Jie Yu (2009-2010)

Dr. Marc Frahm (2009)

Dr. Justin Pollara (2010-2013)

Dr. Marina Tyshime (2017-Present)

Dr. Dieter Mielke (2018-Present)

iii. Residents N/A

iv. Medical students N/A

Education / Teaching activities (Residents, Medical students, CME)

i. Teaching and supporting Learners N/A

ii. Development of courses/educational programs

International WHO-UNAIDS ELISpot Workshop

April 2-7, 2001

Duke University, Durham, USA

Organizer and Instructor

International WHO-UNAIDS ELISpot Workshop

April 29-May 4, 2002

Fernando J. Cruz Foundation Institute

Rio De Janeiro, Brazil

Organizer and Instructor

International WHO-UNAIDS ELISpot Workshop

September 16-21, 2002

National Institute for Communicable Disease

Johannesburg, South Africa

Organizer and Instructor

International WHO-UNAIDS ELISpot Workshop

January 13-18, 2003

Chinese Center for Disease Control

Beijing, China

Organizer and Instructor

Taught the HIV-1 Vaccine development lecture for the IMM291 Comprehensive Immunology Course in the Department of Immunology (2002-2003).

Detection of Antigen Specific T Cells By Intracellular Cytokine Staining

March 6-12, 2005

National Institute for Communicable Disease

Johannesburg, South Africa

Organizer and Instructor

2nd African Workshop on Detection of Antigen Specific T Cells By Intracellular Cytokine Staining

November 12-17, 2007

National Institute for Communicable Disease

Johannesburg, South Africa

Organizer and Instructor

3rd African Workshop on Detection of Antigen Specific T Cells By Intracellular Cytokine Staining

November 16-21, 2009

National Institute for Communicable Disease

Johannesburg, South Africa

Organizer and Instructor

4th African Workshop on Detection of Antigen Specific T Cells By Intracellular Cytokine Staining

November 14-18, 2011

University of Cape Town

Cape Town, South Africa

Organizer and Instructor

4th Symposium on Infectious Diseases in Africa and 5th African Workshop on Detection of Antigen Specific T Cells By Intracellular Cytokine Staining

August 27 - September 8, 2013

University of Cape Town

Cape Town, South Africa
Organizer and Instructor

5th Symposium on Infectious Diseases in Africa and 5th African Workshop on Detection of Antigen Specific T Cells By Intracellular Cytokine Staining

October 20-26, 2014

University of Cape Town
Cape Town, South Africa
Organizer and Instructor

6th Symposium on Infectious Diseases in Africa: BioMarkers of Immune Control in TB, Malaria and HIV and Correlates of Protection

October 20-24, 2015

University of Cape Town
Cape Town, South Africa
Organizer and Instructor

7th Symposium on Infectious Diseases in Africa: Immune Escape and HIV Vaccines

September 1-9, 2017

University of Cape Town
Cape Town, South Africa
Organizer and Instructor

8th Symposium on Infectious Diseases in Africa: Measurement of Immune Responses

November 12-16, 2018

University of Cape Town
Cape Town, South Africa
Organizer and Instructor

9th Symposium on Infectious Diseases in Africa: Vaccine Development for HIV, TB and Malaria

October 7-12, 2019

University of Cape Town
Cape Town, South Africa
Organizer and Instructor

10th Symposium on Infectious Diseases in Africa: Vaccine Research in the Time of the COVID-19 Pandemic

October 11-14, 2021

Virtual Event Hosted by Duke University
Organizer and Instructor

- iii. Development of assessment tools and methods N/A
- iv. Education management/ Leadership N/A

Invited Lectures and Presentations

- i. Named Lectures N/A

- ii. Visiting Professorships N/A

iii. International Meetings

1. Oral Presentation at the 5th Congress of the Federation of African Immunological Societies (FAIS), Victoria Falls, Zimbabwe, South Africa; April 27-May 2, 2003.
“CTL responses in individuals participating in HIV Vaccine trials”
2. Oral Presentation at the XV International AIDS Conference on “HIV CTL in Natural Infection vs Vaccination”, Bangkok, Thailand; July 11-16, 2003.
“Lack of protection from HIV-1 infection by a HLA-B27-restricted anti-p24 Gag CD8+ T cell response induced by a recombinant HIV canarypox vaccine vector”
3. Oral Presentation at the 4th International Symposium on “Immunological Correlates of Protection from HIV Infection and Disease”, Mont Pelerin, Switzerland; August 27-29, 2004.
“Function and phenotype of vaccine-induced Gag-specific T cell responses before and after infection”
4. Oral Presentation at the Abstract Section ‘Immunology III’ of the AIDS Vaccine 2004, Lausanne, Switzerland; August 30-September 1, 2004.
“Lack of protection from HIV-1 infection by Gag-specific CD4+ and CD8+ T cell responses induced by a recombinant HIV canarypox vaccine vector (vCP205)”
5. Oral Presentation at the 1st Uganda AIDS Conference, Kampala, Uganda; December 7-8, 2006.
“Impact of Assay Validation and GCLP Compliance on Vaccine Evaluation”
6. Oral Presentation at the 2nd Uganda AIDS Conference, Kampala, Uganda; September 25-26, 2008.
“Profiles of memory and functional T cell responses in the early stages of subtype B HIV-1 acute infection”
7. Oral Presentation at the AIDS Vaccine 2008 Conference, Cape Town, South Africa; October 13-16, 2008.
“Lack of highly poly-functional epitope-specific CD8+ memory T cell responses during spontaneous control of viremia”
8. Oral Presentation at the 3rd INTEREST Workshop, Lusaka, Zambia; May 26-29, 2009.
“Flow Cytometry in HIV Research”
9. Oral Presentation at the AIDS Vaccine 2010 Conference, Atlanta, GA, USA; September 28-October 1, 2010.
“High magnitude and multifunctionality epitope-specific CD8+ T-cell responses are associated with selection of escape mutants in acute HIV infection”
10. Oral Presentation at the AIDS Vaccine 2010 Conference, Atlanta, GA, USA; September 28-October 1, 2010.
“Early appearance of ADCC- and ADCVI-mediating antibody responses against autologous HIV-1 transmitted/founder virus.”
11. Oral Presentation at the 4th INTEREST Workshop, Dar es Salaam, Tanzania; May 11-12, 2011.
“Flow Cytometry in Acute HIV Infection Research”

12. Oral Presentation at the 6th INTEREST Workshop, Dakar, Senegal; May 14-17, 2013.
“Antibody-dependent cellular cytotoxicity in HIV protection”

13. Oral presentation IBC’s 26th Annual Antibody Engineering & Therapeutics
San Diego, CA; December 14, 2016.
“DART® molecules for treatment of HIV-1 infection”

14. 11th INTEREST Workshop – Lilongwe, Malawi; May 17, 2017.
“Update on HIV Vaccine Strategies Cure and Acute Infection”

15. 19th Annual International Meeting of the Institute of Human Virology – Baltimore, MD, USA;
October 23, 2017.
“Antibody binding to HIV-1 Infected Cells as Mechanism for Treatment of HIV-1 Infection”

16. 12th INTEREST Workshop – Kigali, Rwanda; May 30, 2018;
“Update on HIV Vaccine and the Promise of a Cure”

17. Oral presentation at the HIV Research for Prevention Meeting, Madrid, Spain; October 21-25, 2018.
“Influence of Vaccine Composition on Envelope Recognition by HIV-1 Vaccine-induced Antibody-Dependent Cellular-mediated Cytotoxic Responses”

18. Oral presentation at the 2018 Annual Congress of the International Society for Vaccines, Atlanta, GA, USA; October 28-30, 2018.
“Humoral responses to HIV-1: building the paths to a protective vaccine”

iv. **National Scientific Meetings (invited)** N/A
v. **Instructional Courses, workshops, symposiums (National)**

 1. Oral Presentation at the 8th Annual Meeting of the Cancer Vaccine Consortium, Bethesda MD; March 25-28, 2009. “Acceptance criteria for cellular immune assay performance”

 2. Oral presentation at AIDS Research for Prevention, Chicago, IL, USA; Workshop on “Beyond neutralizing Ab responses” October 21, 2016.
“Targeting of HIV-1 life cycle by polyclonal and monoclonal ADCC-mediating antibodies”

 3. Oral presentation at the HIV Vaccine Trial Network Full Group Meeting, Seattle, WA, USA; November 18, 2016. “Cross-protocol analyses of ADCC responses”

 4. HIV Cure Seminar – University of North Carolina-Chapel Hill, Chapel Hill, NC, USA; March 23, 2017;
“Antibody binding to HIV-1 infected cells as mechanism to protection from and treatment of HIV infection”

5. Oral presentation at the HIV Vaccine Trial Network Full Group Meeting, Seattle, WA, USA; October 25, 2017;
“Optimized Detection of ADCC activities and Cross-Protocol Analyses”
6. Oral presentation at the NIAID Strategies for an HIV CURE Meeting, Bethesda, MD, USA; October 10-12, 2018; “How many monoclonal antibodies do we need to clear the latent reservoir?”
7. Oral presentation at the HIV Vaccine Trial Network Principal Investigator Meeting, Seattle, WA, USA; November 6-8, 2018;
“Vaccine-induced ADCC Activities in South African Recipients: Comparative analysis of HVTN 097 vs. HVTN 100”
 - vi. **Posters (National meetings)** N/A
 - vii. **Regional presentations and posters** N/A
 - viii. **Institutional Presentations**

1. Seminar University of Wyoming, Laramie; January 28, 2016 – Spring Seminar Series
“A tango in immunology: when Antibodies Date Cytotoxic Cells!”
2. Seminar University of Cape Town, Cape Town, South Africa; December 1, 2016;
“Understanding ADCC responses for vaccine and therapeutic designs”
3. Seminar University of Drexel, Philadelphia –USA; January 23, 2017;
“Learning from Antibody Dependent Cellular Cytotoxicity to prevent and treat HIV-1 infection”
4. Research Lecture Series – Department of Medicine – University of Massachusetts Medical School, Worcester – USA; March 22, 2017;
“Antibody Recognition of HIV-1 Envelope for Prevention and treatment”

Clinical activity - type of practice and estimate of time commitment: N/A

Participation in academic and administrative activities of the University and Medical Center:

Ninty-five percent (95%) of my current effort is dedicated to research; the remaining 5% is dedicated to departmental and institutional activities.

- i. **Administrative positions** N/A
- ii. **Committees**
School of Medicine Admissions Committee, Application Screener 2015, 2018, 2019, 2020

Thesis Committee for the following with graduation date:

Nohara, Junsuke - Current
Mosaheb, Mohammad (Mubeen) - December 2019
Moreno, Angelo - December 2018
Mefferd, Adam - May 2018
Nelson, Cody - April 2018
John (Payne), Tamika - December 2014

Whisnant, Adam - December 2014

iii. Leadership positions N/A