Infectious Diseases

University of North Carolina, Chapel Hill, NC

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person.

NAME	POSITION TITLE		
Charles M. van der Horst	Professor of Medicine and Infectious Diseases		
eRA COMMONS USER NAME			
VANDERHORST			

EDLICATION/TRAINING (Regin with baccalaureate or other initial professional education, such as pursing, and include postdoctoral training.)

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INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Duke University, Durham, NC	BA	1974	History
Harvard Medical School, Boston, MA	MD	1979	Medicine
Montifiore Medical Center, Bronx, NY	Residency	1982	Medicine

Fellowship

1985

A. Personal Statement: My career encompasses research, mentoring and teaching, and clinical care. I have been conducting randomized clinical trials with a focus on the treatment of opportunistic infections, herpes viruses and HIV since 1984, publishing papers on the treatment of syphilis, infectious mononucleosis, CMV retinitis, mycobacteria avium intracellulare, PJP, candidemia, cryptococcal meningitis, influenza, adenovirus, Hepatitis C, and HIV infection. Under my leadership from 1988-2001 the UNC NIH-funded AIDS Clinical Trials Unit quickly became one of the largest in the US in enrollment and scientific productivity. In 2001 I turned over my grants to junior colleagues and began working in Johannesburg, South Africa and Lilongwe, Malawi focusing on training, clinical trials of prevention of mother to child transmission, cryptococcal meningitis and roll out of prevention programs in Malawi and South Africa. From 2001 until now I have run the Breastfeeding, Antiretrovirals, and Nutrition (BAN) study in Malawi, one of the largest single site intervention trials ever conducted to evaluate strategies to decrease mother to child transmission of HIV. My initial involvement with NIH AIDS clinical research began with a contract from NIAID in 1986-88 to set up and train each of the clinical trials sites awarded the first AIDS Clinical Trials Unit grants. Subsequently as PI of the UNC CTU, I was elected by my peers to the Executive Committee for multiple terms including 1997-2001 and 2007-2010. I also am currently chair of the ACTG scientific Committee on Opportunistic Infections and Malignancies and serve on the overall scientific management committee, the ACTG Scientific Agenda Steering Committee.

In teaching and mentoring, I have been mentoring undergraduates, professional and graduate students, post doctoral fellows, and young investigators since 1985. I am director of the infectious diseases fellowship training program at the University of North Carolina and the Fogarty ICORTA-TB training program in South Africa based at Wits, UCT and Stellenbosch, and the US director of the Malawi FICRS Program. I also serve as a mentor on the NIH HIV/STI Training grant at UNC (Miller PI). Our Fogarty Global Health Fellows Coordinating Center, a consortium grant of Hopkins, UNC (lead), Morehouse, Tulane provides 11 month global health overseas training opportunities to students and post-docs. Besides my mentoring of the 9 current infectious diseases fellows at UNC, there are currently four UNC doctoral students working on my projects in Africa. I supervise 13 Fogarty Fellows and students, and a Fulbright Scholar at our UNC Project Malawi site. I have been director of the CFAR Developmental Core since the origin of the grant which can provide small grants of up to \$20,000 to young investigators. My recent trainees have academic positions at the NIH, Northwestern, East Carolina, Albert Einstein, Family Health International, Ohio State, Duke University, Elizabeth Glaser Pediatric AIDS Foundation, Wits University, University of Malawi, University of Cape Town, and UNC. I have also mentored many of the current leaders of both our CTU (Gay, Hightow, Hosseinipour, Hurt, Patterson, van Dam, Wohl, Eron) as well as at other CTUs (Northwestern-Cohn, Galvin; U Maryland-Edozian, Gilliam; Wits: Firnhaber, Sanne), and NIAID (Alston).

I have been providing care to patients with HIV infection since 1981 in the US and since 2000 in Malawi and South Africa. In 1988 I began implementing HIV care throughout North Carolina setting up clinics in 10 cities and the prison system. In 2001 I implemented the first PMTCT program in Malawi reaching 20,000 women

annually. It now reaches 153,000 women and we provide CD4 counts, combination therapy and early infant diagnosis. We are expanding and enhancing this program in 5 districts of Malawi.

B. Positions and Honors:

Positions and Employment

2006-Pres. Director, ID Fellowship Training Program

2001-Pres. Visiting Professor, Witwatersrand University, South Africa

1988-present Ass't, Assoc(93), Full Prof (98), Division of Infectious Diseases, UNC-CH

1988-2001 Director, AIDS Clinical Trials Unit, UNC-CH

1987-1988 Health Research Physician, Research Triangle Institute 1985-1986 Ass't Prof, Dept Medicine, Duke University Medical Center,

1976 Teaching Fellow, Harvard College, Cambridge

Other Experience and Professional Memberships

Chair NIH ACTG AIDS Malignancy and Coinfections Committee and member Scientific Agenda Steering Committee 2011-present

Ed Board-AIDS 2005-2010

Exec Committee NIH AIDS Clinical Trials Group 97-2001,2007-2010

WHO PMTCT Consultative Committee 2008

Reviewer, FDA(1997, 2002, 2006)

ABIM (1984); ID (1987); IDSA (Fellow); ACP (Fellow)

Honors

CDC Charles C. Shepard Science Award in the category of Prevention and Control 2011 for the BAN Paper

C. Selected recent and ACTG related peer-reviewed publications (in order, most recent, from 133 total):

- 1. Johnson DC, Chasela C, Maliwichi M, Mwafongo A, Akinkuotu A, Moses A, Jamieson DJ, Kourtis AP, King CC, **van der Horst C**, Hosseinipour MC. Tenofovir use and Renal Insufficiency among Pregnant and General Adult Population of HIV-infected, ART-naïve Individuals in Lilongwe, Malawi. PLoS ONE. 2012, 7(7): e41011. doi:10.1371/journal.pone.0041011
- 2. Jamieson DJ, Chasela CS, Hudgens MG, King CC, Kourtis AP, Kayira D, Hosseinipour MC, Kamwendo DD, Ellington SR, Wiener JB, Fiscus SA, Tegha G, Mofolo IA, Sichali DS, Adair LS, Knight RJ, Martinson F, Kacheche Z, Soko A, Hoffman I, and **van der Horst C**. Maternal and infant antiretroviral regimens to prevent postnatal HIV-1 transmission: 48-week follow-up from the Breastfeeding, Antiretrovirals, and Nutrition (BAN) randomized trial. Lancet. 2012; in press.
- 3. Jackson A, Nussbaum J, Phulusa J, Namarika D, Chikasema M, Kenyemba C, Jarvis JN, Jaffar S, Hosseinipour MC, van der Horst C, Harrison TS. A Phase II Randomised Controlled Trial Adding Oral Flucytosine to High Dose Fluconazole, with Short-course Amphotericin B, for Cryptococcal Meningitis in Malawi. AIDS. 2012, Jul 17;26(11):1363-70..
- 4. Stewart P, Cachafeiro A, Napravnik S, Eron JJ, Frank I, van der Horst C, et al. Performance characteristics of the Cavidi ExaVir viral load assay and the ultra-sensitive P24 assay relative to the Roche Monitor HIV-1 RNA assay. J Clin Virol. 2010 49:198-204.
- 5. Chasela C, Hudgens MG, Jamieson DJ, Kayira D, Hosseinipour M, Kourtis AP, Knight R, Ahmed Y, Kamwendo D, Hoffman I, Ellington S, Wiener J, Fiscus SA, Mofolo I, Sichali D, van der Horst C. Maternal Antiretrovirals or Infant Nevirapine to Reduce HIV-1 Transmission. New Engl J Med 2010; 362:2271-81
- Farr SL, Nelson JAE, Ng'ombe TJ, Kourtis AP, Chasela C, Johnson JA, Kashuba ADM, Tegha GL, Wiener J, Eron JJ, Banda HN, Mpaso Mwanagwa, Lipscomb J, Matiki C, Fiscus SA, Jamieson DJ and van der Horst C. Addition of 7 Days of Zidovudine plus Lamivudine to Peripartum Single-Dose Nevirapine Effectively Reduces Nevirapine Resistance Postpartum in HIV-Infected Mothers in Malawi. JAIDS 2010. August 15; 54(5): 515-523. PMC2913302.
- 7. Nussbaum JC, Jackson A, Namarika D, Phulusa J, Kenala J, Kanyemba C, Jarvis JN, Jaffar S, Hosseinipour MC, Kamwendo D, **van der Horst CM**, Harrison TS Combination flucytosine and high dose fluconazole is superior to fluconazole monotherapy for cryptococcal meningitis: a randomized trial in Malawi. Clin. Infect Dis. 2010, Clin Infect Dis. 2010 Feb 1;50(3):338-44. PMC2805957
- 8. Andersen JW, Fass R and **van der Horst C.** Factors associated with early study discontinuation in AACTG Studies, DACS 200. Contemporary Clinical Trials. 2007; 28:583-92.

- 9. Hosseinipour MC, Corbett AH, Kanyama C, Mshali I, Phakati S, Rezk NL, van der Horst C and Kashuba ADM. Pharmacokinetic comparison of generic and trade formulations of lamivudine, stavudine and nevirapine in HIV infection in Malawi. AIDS. 2007, 20: 1-6.
- 10. Wohl DA, Zeng D, Stewart P, Glomb N, Alcorn T, Jones S, Handy J, Fiscus S, Weinberg A, Gowda D and C van der Horst. Cytomegalovirus viremia, mortality, and end-organ disease among patients with AIDS receiving potent antiretroviral therapies. J Acquir Immune Defic Syndr 2005;38:538-44..
- 11. Chung RT, Andersen J, Volberding P, Robbins GK, Liu T, Sherman KE, Peters MG, Koziel MJ, Alston B, Colquhoun D, Nevin T, Harb G and **van der Horst C.** A randomized, controlled trial of peg-interferon alfa-2A plus ribavirin vs. interferon alfa-2A plus ribavirin for chronic hepatitis C virus infection in HIV-co-infected persons: The US AIDS Clinical Trials Group A5071 Study Team. NEJM 2004: 2004;351:451-9.
- 12. Robbins GK, DeGruttola V,Shafer RW, Smeaton LM, Snyder SW, Pettinelli C, Dube MP, Fischl MA, Pollard RB, Delapenha R, Gedeon L, **van der Horst C** et al. Comparison of sequential three-drug regimens as initial therapy for HIV-1 infection. NEJM 2003;349:2293-2303.
- 13. van der Horst CM, Saag M, Cloud GA, Hamill RJ et al. Treatment of AIDS-Associated Acute Cryptococcal, Meningitis: New Engl. J. Med.1997;Vol. 337:15-21
- 14. El-Sadr W, Murphy R, Yurik T, Luskin-Hawk R, Cheung T, Balfour HH, Eng R, Hooten TM, Kerkering TM, Schutz M, van der Horst CM, et al. A Randomized Comparative Trial of Atovaquone and Dapsone for the Prevention of Pneumocystis carinii Pneumonia in Patients with HIV Infection who are Inrolerant to Trimethoprim and/or Sulfonamides. New Engl. J. Med. 1998; 339:1889-95..
- 15. Fichtenbaum CJ. Koletar S. Yiannoutsos C. Holland F. Pottage J. Cohn SE. Walawander A. Frame P. Feinberg J. Saag M. van der Horst C. Powderly WG. Refractory mucosal candidiasis in advanced human immunodeficiency virus infection. Clin Infect Dis.2000; 30:749-56.

D. Research Support:

Fogarty Global Health Fellows Coordinating Center (van der Horst)

4/2012-4/2017

NIH FIC

This is a consortium of UNC, Hopkins, Tulane, and Morehouse to train 12-13 post doctoral fellows in global health each year at 17 international sites including South Africa. Dr. Martinson's trainees can apply for salary funding as well as \$15,000 for research projects upon completion of their training.

P30-AI50410 (Swanstrom)

08/01/01-05/31/16

NIH/NIAID UNC Center for AIDS Research Core B - Developmental

The CFAR has as its goal the support of AIDS-related research and outreach. The Developmental Core provides mentoring and small research grants to junior investigators, particularly targeting young women and minorities.

Role: Director, Core B

1R01DA032061-01 (Wechsberg)

7/15/11-4/30/16

NIDA

Combination Prevention for Vulnerable Women in South Africa

This is a trial using innovative techniques to reach vulnerable women in urban South Africa and retain them on treatment in a PEPFAR program.

Role: Dr. van der Horst serves as a consultant.

Cooperative Agreement 674-A-00-11-00005-00 (Mofolo/van der Horst)

11/1/10-2/28/14

USAID

Safeguard the Family

Addressing the US-Malawi Partnership Framework Goals in the Dedza, Dowa, Lilongwe, Mchinje and Ntcheu Districts of Malawi focusing on 153,000 pregnant women annually and their children to implement cost effective, innovative, simple and comprehensive interventions in HIV treatment and prevention, reproductive health, TB and malaria control. This provides a great vehicle for trainees to carve out research projects and identify potential research participants.

Role: Dr. van der Horst serves as Senior Technical Advisor.

1 U01 Al69423-01 (Eron)

04/01/05-12/31/14

NIH/NIAID

UNC AIDS Clinical Trials Unit

Originally Funded 09/01/87. The major goals of this project are to provide an effective and efficient system to evaluate the safety and efficacy of the therapeutic interventions against HIV infection, AIDS, and its associated conditions.

Role: Dr. van der Horst served as PI from 1988-2001 and now is an investigator as well as liaison to our sister site in Johannesburg at Wits.

SIP 09-221U48DP001944 (van der Horst)

10/01/01-09/30/14

CDC

Breastfeeding, Antiretroviral, and Nutrition Study Follow-up

The purpose of this grant is to prospectively follow up mother and infants who participated on the BAN Study which examined interventions to disrupt HIV transmission and to examine methods of weaning and weaning foods. We enrolled 2,670 breast feeding mothers and their babies and are now doing data analysis and lab studies. This was originally SIP 13-01 then SIP 26-04 and now SIP 09-22 Role: PI

NIH ACTG UM1-AI-068636-06 (Kuritzkes)

6/1/11-5/31/14

NIAID

AIDS Clinical Trials Group

I serve as Chair of the ACTG Co-infections and Malignancies Subcommittee of the Transformative Science Group and member of the Scientific Agenda Steering Committee of the ACTG mentoring younger investigators on developing new ideas and implementing them as protocols.

5 U2R TW007373-03 (van der Horst)

7/1/07-5/31/12

NIH Fogarty center

ICORTA-TB-AIDS

This is a TB training program carried out at University of the Witwatersrand, Stellenbosch University and the University of Cape Town in South Africa as well as UNC and Johns Hopkins. I am currently mentoring 5 young faculty members in South Africa, Jabulani Ncayiyani, MSc, Francesca Conradie, MBBCh, Eefje Jonge, MD, PhD, Sarala Naicker, MBBCh.

Role: Pl.