

Principal Investigator/Program Director (Last, first, middle): \_\_\_\_\_

### BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.  
Follow the sample format on preceding page for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Van Rie, Annelies		POSITION TITLE Assistant Professor of Epidemiology	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Catholic University Leuven, Belgium	MD	1991	Pediatrics
Catholic University Leuven, Belgium		1996	Hospital Policy and Management
University of London, School of tropical Medicine and Hygiene		1998	Epidemiology and medical statistics
Stellenbosch University, South Africa	Ph.D.	2000	Molecular epidemiology of multidrug resistant TB

#### A. Positions and Honors.

##### Employment

1991-1996 Pediatric resident, University Hospital, Leuven, Belgium  
1996 Fellow in Pediatric Infectious and Respiratory Diseases, University Hospital, Leuven, Belgium  
2000-2001 Medical Epidemiologist, Aventis Pasteur, Lyon, France  
2001-Present Assistant Professor, Department of Epidemiology, University of North Carolina at Chapel Hill

##### Honors

1997-1999 D. Collen Research Foundation Scholarship  
1998 F. Van Zyl medal, Stellenbosch University, South Africa  
2002, 2005 CFAR Core Development Award

#### B. Selected peer-reviewed publications (in chronological order).

1. Beyers AD, Van Rie A, Adams J, Fenhalls G, Gie R, Beyers N. Signals that regulate the host response to Mycobacterium tuberculosis. Novartis Found Symp. 1998;217:145-57.
2. Van Rie A, Beyers N, Gie RP, Kunneke M, Zietsman L, Donald PR. Demographic and socio-economic risk factors for childhood tuberculosis in a South African suburban area. Archives of Disease in Childhood 1999; 80:433-437.
3. Van Rie A, Warren R, Richardson M, Victor TC, Gie RP, Enarson DA, Beyers N, Van Helden PD. Exogenous reinfection as a cause of recurrent tuberculosis after curative treatment. New England Journal of Medicine 1999; 341:1174-1179.
4. Van Rie A, Warren R, Beyers N, Gie RP, Classen C, Richardson M, Sampson S, Victor T, Van Helden P. Transmission of a multi-drug resistant Mycobacterium tuberculosis strain resembling "strain W" among non-institutional, HIV seronegative patients. Journal of Infectious Diseases 1999;180:1608-1615.

5. Victor TC, Jordaan A, Van Rie A, Richardson M, Van Helden P, Warren R. Rapid detection of mutations in drug resistant genes in *Mycobacterium tuberculosis* by a dot-blot hybridization strategy. *Tubercle and Lung Diseases* 1999; 79:343-348.
6. Van Rie A, Warren R, Richardson M, Gie RP, Beyers N, Victor T, Van Helden PD, Donald PR. The classification of drug resistant tuberculosis in an epidemic area. *The Lancet* 2000; 356:22-25.
7. Schaaf HS, Van Rie A, Gie RP, Beyers N, Victor T, Van Helden PD, Donald PR. Transmission of multi-drug resistant tuberculosis. *Pediatric Infectious Disease Journal* 2000; 19:695-699.
8. Schaaf HS, Gie RP, Van Rie A, Seifart HI, Van Helden PD, Cotton MF. Second episode of tuberculosis in an HIV-infected child: relapse or re-infection? *Journal of Infection* 2000; 41:100-103.
9. Van Rie A, Warren R, Mashanga I, Jordaan AM, Van Der Spuy G, Richardson M, Simpson J, Gie RP, Enarson DA, Van Helden PD, Victor TC. Analysis of a limited number of gene codons can predict the majority of drug resistance of *Mycobacterium tuberculosis* in a high incidence area. *Journal of Clinical Microbiology* 2001; 39:636-641.
10. Victor TC, Van Rie A, Jordaan AM, Richardson M, Van Der Spuy GD, Beyers N, Van Helden PD, Warren R. Sequence polymorphism in the *rrs* gene of *Mycobacterium tuberculosis* is deeply rooted within an evolutionary clade and is not associated with streptomycin resistance. *Journal of Clinical Microbiology* 2001;39:4184-4186.
11. Olin P, Gustafsson L, Barreto L, Hessel L, Mast TC, Van Rie A, Bogaerts H, Storsaeter J. Declining pertussis incidence in Sweden following the introduction of acellular pertussis vaccine. *Vaccine*. 2003;21:2024-30.
12. Van Boven M, Ferguson NM, van Rie A. Unveiling the burden of pertussis. *Trends Microbiol.* 2004;12:116-9.
13. Van Rie A, Hethcote HW. Adolescent and adult pertussis vaccination: computer simulations of five new strategies. *Vaccine*. 2004;22:3154-65.
14. Huspeth J, Venter WDF, Van Rie A, Wing J, Feldman C. Access to and early outcomes of a public South African adult antiretroviral clinic. *The Southern African Journal of Epidemiology and Infection* 2004; 19:48-51.
15. A Guide to monitoring and evaluation for collaborative TB/HIV activities – field test version. WHO/HTM/TB/2004.342; WHO/HIV/2004.09 (writing group: Ayles H, Bloom M, van Cleef M, Eckert E, Giphart A, Loth G, Nelson L, Pray R, Reid A, Van Rie A, Wilson D)
16. Compendium of Indicators for monitoring and evaluating National Tuberculosis Programs. WHO/HTM/TB/2004.344 (writing group: Adama L, Bergstrom K, Bleed D, Colvin C, Eckert E, Hanson C, Mullen S, MacIntyre K, Moore T, Qualls M, Reid A, Sawert H, Trebucq A, van Cleef M, Van Rie A, Vincent C, Weil D.)
17. Van Rie A, Wendelboe AM, Englund JA. Role of maternal pertussis antibodies in infants. *The Pediatric Infectious Disease Journal* *Pediatric Infectious Disease Journal*. 2005; 24:S62-S65.
18. Wendelboe AM, Van Rie A, Salmaso S, Englund JA. Duration of immunity against pertussis after natural infection or vaccination. *Pediatric Infectious Disease Journal*. 2005; 24:S58-S61.
19. Van Rie A, V Zhemkov, Granskaya J, Steklova L, Narvshaya O, Kozlov A, Ryder R, Salfinger M. TB and HIV in St. Petersburg, Russia: a looming catastrophe? *International Journal of Tuberculosis and Lung Diseases*. 2005; 9:740-745.
20. Khan M, Matendo R, Mcclamroch K, Nanele D, Van Rie A. Soins prénatals à Kinshasa, République Démocratique du Congo: croyances, connaissances et obstacles à la programmation appropriée. *Santé* 2005;15(2):93-97
21. Van Rie A, Victor TC, Richardson M, Johnson R, van der Spuy G, Murray E, Beyers N, Gey van Pittius NC, van Helden PD, Warren RM. Reinfection and mixed infection cause changing *Mycobacterium tuberculosis* drug-resistance patterns. *American Journal of Respiratory and Critical Care Medicine* 2005; 172:636-42.
22. Caro J, Coudeville C, Denis G, Van Rie A. Pertussis in adolescents and adults: should we accept the results? *Pediatrics* 2005;116:1263.

23. Callens S, Kitetele F, Lukun P, Lelo P, Van Rie A, Behets F, Colebunders R. Pulmonary *Sporothrix schenckii* infection in a HIV positive child. *Journal of Tropical Pediatrics* 2005; 52:144-6
24. Van Rie A, Madhi S, Heera JR, Meadows-Taylor S, Wendelboe A, Anthony F, Violari A, Tiemessen CT. Influence of intrauterine exposure to Human Immunodeficiency Virus on infant interferon gamma production in response to BCG and Mycobacterium tuberculosis antigens. *Clin Vaccinol Immunol* 2006 ; 13 :246-52
25. Sengupta S, Pungrassami P, Q Balthip, R Strauss, Y Kasetjaroen, S Sengupta, A Corneli, V Chongsuvivatwong, Van Rie A. Social Impact of Tuberculosis in Southern Thailand: Views from Patients, Care Providers, and Community. *International Tuberculosis and Lung Diseases* 2006;10:1008-12.
26. Van Rie A, Enarson D. XDR-tuberculosis: an indicator of public health negligence. *Lancet* 2006; 368(9547):1554-6
27. Behets F, Matendo R, Vaz LME, Kilese N, Nanlele D, Callens S, Van Rie A, Kokolomami J. Preventing Vertical Transmission of HIV in Kinshasa, Democratic Republic of Congo: a Baseline Survey of Antenatal Clinics. *WHO Bulletin* 2006; 84:969-75
28. Wendelboe AM, Van Rie A. Diagnosis of Pertussis: a Historical Review and Recent Developments. *Expert Rev Mol Diagn* 2006; 6:857-64
29. Van Rie A, Harrington P, Dow A, Robertson K. Neurologic and neurodevelopmental manifestations of pediatric HIV/AIDS: implications for Sub-Saharan Africa. *Eur J of Paediatr Neurol* 2007;11:1-9
30. Edwards DJ, Kitetele F, Van Rie A. Agreement between clinical scoring systems used for the diagnosis of pediatric tuberculosis in the HIV era. (*in press*, *International Journal of Tuberculosis and Lung Health*)
31. Van Rie A, Sabue M, Jarrett NM, Westreich D, Behets F, Bahati E. Counseling and testing TB patients for HIV: Evaluation of three implementation models in Kinshasa, Democratic Republic of Congo. (*In press*, *International Journal of Tuberculosis and Lung Health*)
32. Corneli A, Jarrett NM, Sabue M, Duvall S, Bahati E, Behets F, Van Rie A. Patient and Provider Perspectives on Three Implementation Models of HIV Counseling and Testing for Tuberculosis Patients. (*In press*, *International Journal of Tuberculosis and Lung Health*)
33. Westreich D, Eron J, Behets F, van der Horst C, Van Rie A. Survival in women exposed to single-dose nevirapine for prevention of mother to child transmission of HIV: a stochastic model. (*in press*, *Journal Infectious Diseases*)
34. Wendelboe AM, Guiso N, Njamkepo E, Teyssou R, Van Rie A, for the Infant Pertussis Study Group. Transmission of *Bordetella pertussis* to young infants. (*in press*, *Pediatric Infectious Diseases*)

### **C. Research Support.**

#### **Ongoing**

Measure and evaluation of TB programs      Curtis (PI)      4/01/02 – 07/31/07

MEASURE/USAID

The aim of the project is to develop a guide for Monitoring and Evaluation of USAID TB Programs

Role: Co-Investigator

CDC U62-CCU422 - Behets (PI)      11/01/02 – 31/03/07

Technical Assistance for HIV, STD and TB treatment and care in the Democratic Republic of Congo. The aims of the projects is 3-fold: Prevention of Mother to Child Transmission of HIV, primary care of HIV/AIDS, ARV treatment of HIV infected adults and children and integration of TB and HIV control programs.

Role: Lead investigator of technical assistance for TB/HIV programs. Co-investigator in the projects "Prevention of mother to child transmission of HIV" and "Sustainable antiretroviral access".

NIH/NAID R21 TW006347-01- Van Rie (PI) 06/01/03 – 05/31/07  
Stigma and Global Health: The social stigma of the new TB. The aim of this project is to investigate the impact of the HIV epidemic on TB stigma.  
Role: principal investigator

NIH/NICHHD R01 HD053216-01 – Van Rie (PI) 08/01/06 – 07/31/11  
Pediatric HIV-encephalopathy in DRC: effect of ART & role of compartmentalization. The aims of the study are to determine the incidence of encephalopathy in HIV exposed and HIV infected children, the impact of antiretroviral medication on the progression of neurological manifestations and the role of HIV compartmentalization.  
Role: principal investigator

NIH/NAID CFAR core development award – Van Rie (PI) 9/01/06 – 8/31/07  
The Immune Reconstitution Inflammatory Syndrome (IRIS) in Patients with HIV Infection Who Receive antiretroviral treatment (ART). The aim of the project is to determine the incidence of IRIS in a cohort of patients initiating ART in Johannesburg, South Africa, and to perform a case control study of immunological response patterns.  
Role: PI

**Completed**

NIH/NAID 9-P30 AI50510-04 - Ryder (PI) 9/30/01 – 4/30/03  
CFAR supplement. The aim of the project is to determine the prevalence and characteristics of HIV and TB co-infections in St Petersburg, Russia.  
Role: Co-Investigator

NIH/NAID CFAR core development award – Van Rie (PI) 9/01/02 – 8/31/03  
The aim of the project is to study the cellular immune response to BCG vaccine in infants born to HIV infected mothers.  
Role: PI

Aventis-Pasteur Van Rie (PI) 03/01/03 – 03/31/06  
Household transmission study of Pertussis: Who infects young infants? The aim of the study is to determine the relative importance of parents and siblings in the transmission of *Bordetella pertussis* to young unvaccinated or partially vaccinated infants.

NIH/NICHHD 1 U01 HD043475-01 - Ryder (PI) 08/01/03 – 02/31/05  
Global Network for Women & Child Health Research: Safe pregnancy by infectious disease control, Kinshasa, Democratic Republic of Congo.  
Role: co- investigator.

NIH/FIC 1D71TW06906-01 – Feldman (PI) 08/01/04 – 07/31/05  
Establishment of AIDS and TB research expertise. The aim of this planning grant is to create a plan for comprehensive and multidisciplinary training and capacity building in TB/HIV at the Witwatersrand University, Johannesburg, South Africa.  
Role: collaborating investigator

NIH/FIC/NIMH R21 TW06682-01 – Van Rie (PI) 09/01/03- 08/31/06  
Neurodevelopment and HIV/AIDS. The aim of the study is to build capacity for neurodevelopmental research in Kinshasa, DRC and to determine the neurological deficit in children affected by AIDS.  
Role: principal investigator