

PROJET SIDA
KINSHASA, ZAIRE



ANNUAL REPORT
June 1990 - June 1991

TABLE OF CONTENTS

	page
I Preface	1
II Organizational Chart of Projet SIDA	11
III. Program Activities	
A Epidemiology Section	1
B ICAR/Clinical Section	14
C STD Section	22
D. Pathology Section	31
E Laboratory Section	37
Immunology Research Laboratory	38
Support Laboratory	41
F Data Management Section	49
G Administrative Section	56
IV Appendices	
A Projet SIDA Presentations at the VII International . Conference on AIDS - Florence, Italy (June 1991)	
B Projet SIDA Bibliography, 1986 - 1991	

PREFACE

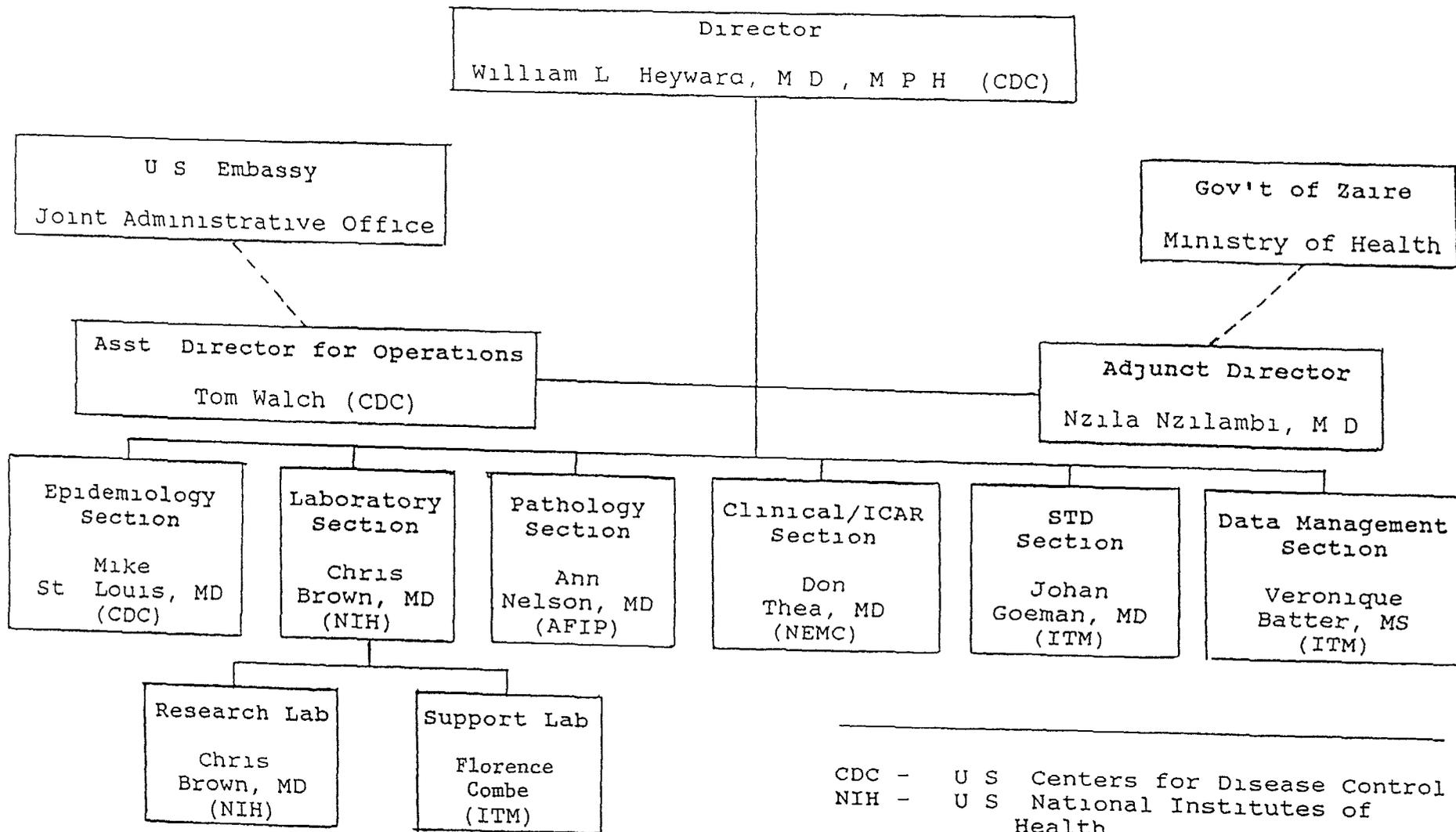
This annual report has been prepared for the Projet SIDA meeting preceding the VII International AIDS Conference in Florence, Italy (June 16-21, 1991). The report summarizes the major accomplishments of Projet SIDA during the last year, and briefly describes some of the activities envisioned for the coming year. The report reflects not only the efforts of the over 200 extremely dedicated Zairians in Projet SIDA, but the collaborations and assistance of many other agencies and institutions such as the American Embassy-Kinshasa, WHO, USAID, the European Economic Community, the World Bank, the Bank of Zaire, UTEXCO, the University of Kinshasa, the staffs of Mama Yemo Hospital and Ngaliema Hospital, and the Tuberculosis Treatment Center in Kinshasa.

Last year may aptly be described as a year of transition with the arrival of new personnel (Project Director, Epidemiology Section Chief, STD Section Chief, and Support Laboratory Chief), the steering of a new course for Projet SIDA towards prevention and interventions, and the formation of new collaborations. This evolution is still in process, and will be for a time to come as Project SIDA prepares for conducting intervention trials in the future.

I would like to especially acknowledge Mr Tom Walch and Mr Dennis Olsen for their untiring support of our continued efforts at Projet SIDA, Mr Jan Vielfont, and Ms. Mary Ann Guerra for their continued valued assistance; Drs Curran, Gayle, Plot, Quinn, and Mullick for their scientific guidance, and Ms Kikombo Kayongo for her secretarial assistance in preparing this report.

William L. Heyward, MD, MPH

Projet SIDA Organizational Chart



-
- CDC - U S Centers for Disease Control
 - NIH - U S National Institutes of Health
 - AFIP- U S Armed Forces Institute of Pathology
 - NEMC- Tufts-New England Medical Center
 - ITM - Institute of Tropical Medicine (Antwerp, Belgium)

THE EPIDEMIOLOGY SECTION

THE EPIDEMIOLOGY SECTION

OVERVIEW

Responsibilities

- 1 Directs longitudinal cohort studies to evaluate
 - a transmission of HIV
 - b progression of HIV disease in HIV-infected persons
- 2 Conducts other clinical-epidemiologic studies (case-control studies, population registries, etc.) to evaluate the association between HIV infection and other diseases (e.g , cervical cancer, bacterial meningitis)
- 3 Directs intervention trials involving both treatment (e.g short-course tuberculosis therapy) and intensive counselling (e g among discordant couples) within the epidemiologic cohorts
- 4 Collaborates with other Sections and outside investigators in studies that involve the Epidemiology cohorts at Projet SIDA

Staffing

The Epidemiology Section comprises 89 individuals in teams at 8 study sites, each with a Team Leader:

<u>Team/Site</u>	<u>Team Leader</u>	<u>MDs</u>	<u>Total Staff</u>
BCZ/UTEXCO	Dr Kaseka Ngungu	5	16
General Epidemiology	Dr Baende Ekungola, Dr Mvula Medi	3	4
Matonge I	Dr Jingu Muana	2	11
Matonge II*	Dr Kivuvu Mayimona	4	25*
Ngaliema Clinic	Dr Manzila Tarande	3	10
Perinatal I - MYH	Dr Nsuami Malanda	2	6
Perinatal II - MYH	Dr Kamenga Mukolenkole	4	11
Tuberculosis	Dr Mukadi Yadiul	1	6
TOTAL		24	89

* principally under the supervision of the STD Section

ACCOMPLISHMENTS**BCZ/UTEXCO**

- 1 Completed the 4th annual longitudinal evaluation of behavioral characteristics and serologic status of 6,013 employees at the UTEXCO textile factory.
- 2 Initiated and mostly completed the fourth round of behavioral and serologic evaluation of approximately 2,800 workers at the Banque Commerciale Zairoise (BCZ).
- 3 Conducted an evaluation of Knowledge, Attitudes, and Practices (KAP) regarding AIDS during the current BCZ study, in order to compare results with a similar study done in 1987 by the School of Public Health (ESP) at University of Kinshasa. Entered into a collaboration with ESP to analyse longitudinal trends in KAP in association with trends in seroincidence.
- 4 In the current BCZ study, carried out a number of substudies in collaboration with other Sections and with outside collaborators:
 - a With the ICAR/Clinical Section, carried out a nutritional evaluation of BCZ employees, including measurement of bioelectric impedance (BEI) and skinfold thickness in more than 2,000 men and women, as well as a detailed dietary history in more than 100 persons
 - b With collaborators from the Centre pour Neuropsychopathologie (CNPP) and the WHO, carried out a WHO-funded study of a neuropsychologic and psychiatric evaluation of 180 HIV-uninfected or asymptotically HIV-infected persons from among the BCZ cohort.
 - c With the Laboratory Section, carried out a study of normal values for lymphocyte phenotype in Kinshasa involving 300 HIV-uninfected adults and using a wide range of phenotyping and activation markers
 - d With the Pathology Section, carried out a second round of Pap smear screening among 1,200 women at the BCZ that will allow a first analysis of the incidence and progression of cervical neoplasia in HIV-infected women.

General Epidemiology

- 1 Established this new unit to supervise the "umbrella studies" that will encompass all or multiple cohorts at Projet SIDA
- 2 Began putting into place the framework for a study of the natural history and progression of HIV disease in Projet SIDA cohorts, involving a systematic approach to clinical and laboratory staging of HIV disease in all adults followed at Projet SIDA (approx 1,200 HIV-infected adults and 1,300 uninfected adults)
- 3 Established an annual, skin-testing regimen with tuberculin and Candida antigen for all adults at Projet SIDA, both to assist in staging HIV disease and to help categorize all adults by Mycobacterium tuberculosis exposure status as a prelude to a tuberculosis chemoprophylaxis trial. Extended this regimen to Perinatal I, Perinatal II, Matonge I, and Matonge II
- 4 Developed new standardized forms for recording of information about deaths and clinical stage of HIV disease, and assisted in developing a new Pap smear report form and data entry software suitable for use throughout Projet SIDA

Matonge I

- 1 Developed a complete patient enrollment list for the study and re-entered enrollment information for all patients at the HIV Counselling Center at Matonge I
- 2 Completed a longitudinal study of cervical shedding of HPV in association with HIV infection in 100 HIV-affected couples, demonstrating the strong impact of HIV infection on the likelihood of detecting HPV DNA in cervicovaginal lavage specimens
- 3 Developed a protocol to evaluate potential infectious cofactors (such as HTLV-1, Mycoplasma fermentans (strain "incognitus", and Hepatitis B and C) for disease progression and for HIV transmission among heterosexual, HIV-discordant couples

Matonge II

- 1 Detected and treated 4 new cases of pulmonary tuberculosis among prostitutes at Matonge II who were also enrolled in the short course TB chemotherapy trial at the CDT

- 2 Began performing lymphocyte phenotyping (T4 and T8 markers) at a minimum of every 6 months on all HIV-infected women followed at Matonge II.
- 3 Began skin-testing for tuberculin and Candida antigens to help better classify the stage and progression of HIV disease

Ngaliema Clinic

(Activities are encompassed in those outlined under Perinatal I and Perinatal II at Mama Yemo Hospital.)

Perinatal I

- 1 Conducted a study of the association between specific antibody to the V3 loop of gp120 in Zairian women and the risk of perinatal HIV transmission to their children. Demonstrated that the prevalence of antibodies to gp120 is low in women in Kinshasa (17% vs approx. 50% in the United States) and that there was no association between high affinity antibodies to the V3 loop and risk of perinatal HIV transmission.
- 2 In a study of the expression of HPV in a sample of 87 mother-child pairs, demonstrated that HPV shedding in women was strongly associated with HIV infection (OR=9.0). The detection of HPV DNA in 14% of children was higher than expected, but there was no association of HPV expression in the child with HIV infection of either the child or the mother. Novel strains of HPV were identified, particularly in children. The lack of concordance for HPV between mothers and children both overall and by specific type of HPV raises doubts about the importance of perinatal transmission of HPV.
- 3 Re-screened previously seronegative mothers for HIV infection to evaluate HIV incidence in this cohort. Tested all initially seropositive women for T4 and T8 counts, since this group of women has had a history of at least 4 years of HIV infection since enrollment in Perinatal I in 1986-7.
- 4 Collaborated with ICAR to enroll 150 women from this cohort into a prospective, 12-month longitudinal study of the development of chronic diarrhea and wasting.
- 5 Developed a plan to analyze the characteristics and early natural history of HIV infection in those children from Perinatal I who went on to become long-term (>3 years) survivors of perinatal HIV infection.

- 6 Detected new cases of pulmonary tuberculosis among mothers to determine the incidence of tuberculosis in this group

Perinatal II

- 1 Completed enrollment of 578 women (324 HIV-seropositive, 254 HIV-seronegative) at Mama Yemo Hospital and Ngaliema Clinic, and completed the first year of follow-up in the large majority of the 602 children. Observed an approximate HIV transmission rate of 28% of children born to HIV-infected women
- 2 Demonstrated that perinatal HIV transmission was highly associated with depressed maternal T4 lymphocyte counts, and that increasing levels of immunosuppression were associated in a dose-response fashion with the likelihood of symptomatic disease in the children and with early death.
- 3 Demonstrated a mean lower birthweight of approx 160 gm in children of HIV-infected women. However, length did not differ and head circumference was slightly greater in the children of HIV-infected women. In contrast to the findings for perinatal transmission of HIV, there was no observable effect of maternal T4 count on birthweight
- 4 Demonstrated that Edmonson-Zagreb measles vaccine given at 6 months of age was free from excess side effects in HIV-infected children. However, lower seroconversion rates to protective antibody titers against measles were associated with HIV infection (79% in HIV-infected children vs. 91% in HIV-uninfected children). Among the HIV-infected children, an elevated T8 lymphocyte count was a strong predictor of lack of seroconversion to EZ measles vaccine
- 5 Quantitated the delayed hypersensitivity reaction after intradermal administration of tuberculin and Candida antigens to 420 HIV-infected and -uninfected children. These data will contribute both to staging of perinatally-acquired HIV infection and to evaluating the diagnosis of tuberculosis in HIV-infected children.

Tuberculosis

- 1 Enrolled 200 HIV-seronegative cases of a planned total of 200 cases of primary pulmonary tuberculosis in a treatment trial of short-course chemotherapy. Completed enrollment of 378 (of the planned 500) HIV-seropositive patients
- 2 Demonstrated that short-course, intensive TB therapy was equally effective in HIV-infected persons as in uninfected persons

3. Presented early data suggesting that maintenance chemotherapy after the initial short course (6-month) treatment was associated (though not significantly) with a lower relapse (late microbiologic failure) or higher death rate in HIV-infected persons with pulmonary tuberculosis
4. Joined with the ICAR/Clinical Section in collaborating with researchers from Dartmouth Medical School in a multi-center, international study of Mycobacterium avium complex. Demonstrated with collaborators at the University of Virginia extremely high numbers of M avium in environmental water specimens

CONSULTATIONS

Margaret Oxtoby, M D -- Chief, Pediatric and Family Studies Section, Epidemiology Branch, DHA/CID/CDC
August 1990, to assist with the perinatal HIV studies

Meade Morgan, PhD -- Chief, Statistics and Data Management Branch, DHA/CID/CDC, and Tom Hutton -- Statistics and Data Management Branch, DHA/CID/CDC
December 1990, to help develop a Project SIDA-wide approach to data management and statistics in the Epidemiology cohorts, to install an E-mail hook-up to CDC Atlanta

Harrison Stetler, M D -- International Activity, DHA/CID/CDC
January 1991, to evaluate transfusion and other nosocomial transmission of HIV in Kinshasa

Meade Morgan, PhD -- Chief, Statistics and Data Management Branch, DHA/CID/CDC
February 1991, to develop software to facilitate the entry and cleaning of data, to teach the use of survival analysis techniques for epidemiologic cohort data, to begin development of a model tracking system for intensive monitoring of prospective studies for use in the current BCZ workplace study, to develop detailed scopes of work for programmers and statisticians from the SDMB to eliminate key bottlenecks in data management and in overall scientific productivity at Project SIDA

Ford von Reyn, M D -- Chief, Department of Infectious Diseases, and Dr Gerry O'Connor, Department of Biostatistics, Dartmouth Medical School
April 1991, to conduct site visit for the multicenter MAC study and establish detailed plan

Fred Ingram, PhD -- Chief, Epidemiology and Surveillance Support Section, SDMB/DHA/CID/CDC
May 1991, to help design the data management system on the new Project SIDA "host" computer that will maintain data from

all studies and be used to create analysis data sets; to create a model data management package for a specific study (Perinatal II), to train project staff in data management practices and software

Helene Gayle, M D , M P H -- Chief, International Activity,
DHA/CID/CDC
May 1990, to conduct a site visit and review epidemiologic studies

TRAINING

1. Sent 4 physicians to the WHO-sponsored CDC/Emory two-week training course in AIDS epidemiology in Abidjan, Cote d'Ivoire (March 1991), which included hands-on training in epidemiologic analysis using EPIINFO
2. Continued to support Dr Nsa Wato to the completion of his MPH degree this year at the University of Oklahoma via a grant from USAID
3. Secured a Fogarty International AIDS Research and Training Program scholarship for Dr Kamenga Mukolenkole to pursue the MPH degree at the University of Washington
4. Developed a dossier for senior physicians (and many junior physicians) in Projet SIDA, including an up-to-date curriculum vitae, and discussed career development and the necessary associated training in the context of the future evolution of Projet SIDA
5. Initiated a scientific seminar series for staff physicians involving practical instruction in clinical and pathologic evaluation of HIV-related disease, laboratory and epidemiologic research methods, and data analysis
6. Collaborated with the Data Management Section in training 12 Projet SIDA physicians in the fundamentals of data analysis by computer

MANUSCRIPTS

Published:

1. Ryder RW, Ndilu M, Hassig SE, Kamenga M, Sequeira D, Kashamuka M, Francis H, Behets F, Colebunders RL, Dopagne A, Kambale R, Heyward WL. Heterosexual transmission of the human immunodeficiency virus type one among employees and their spouses at 2 large businesses in Zaire. AIDS 1990,4 725-732

- 2 Hassig SE, Kinkela N, Nsa W, Kamenga M, Ndilu M, Francis H, Ryder RW. Prevention of perinatal HIV transmission · are there alternatives to pre-pregnancy serological screening in Kinshasa, Zaire AIDS 1990,4:913-916
- 3 Kamenga M, Ryder RW, Jingu M, Mbuyi N, Mbu L, Behets F, Brown C, Heyward WL. Sexual behavior change associated with low HIV-1 seroconversion in 149 married couples with discordant HIV-1 serostatus-experience at an HIV counselling center in Zaire AIDS 1991,5 61-7
- 4 Braun MM, Badi N, Ryder RW, Baende E, Mukadi Y, Nsuami M, Matela B, Williame J, Kaboto M, Heyward WL A retrospective cohort study of the risk of tuberculosis among childbearing women with human immunodeficiency virus infection in Zaire Am Rev Respir Dis 1991,143:501-4
- 5 Schaffer N, Hedberg M, Davachi F et al. Trends in HIV-1 seropositivity in a pediatric emergency ward population, Kinshasa, Zaire AIDS 1990,4 1231-6
- 6 Plot P, Laga M, Ryder RW, Perriens J, Temmerman M, Heyward W, Curran J The global epidemiology of HIV infection Continuity, heterogeneity, and change J Acq Immun Def Synd 1990,3 403-12
- 7 Colebunders R, Heyward W. Surveillance of AIDS and HIV infection Opportunities and challenges Health Policy 1990,15 1-11
- 8 Colebunders R, Francis H, Duma M-M, Van der Groen G, Lebughe I, Kapita B, Quinn TC, Heyward WL, Plot P HIV-1 infection in HIV-1 enzyme linked immunoassay seronegative patients in Kinshasa, Zaire Int J STD and AIDS 1990,1 330-4
- 9 Ryder R, Manzila T, Baende E, Kabagabo U, Behets F, Batter V, Paquot E, Binyingo E, Heyward WL Evidence from Zaire that breastfeeding by HIV-1 seropositive mothers is not a major route for perinatal HIV-1 transmission but does decrease mortality AIDS (in press)
- 10 Irwin K, Bertrand J, Ndilu M, Kashawa M, Chirezi M, Makolo M, Kamenga M, Nzila N, Ngaly B, Ryder R, Peterson H, Lee N, Wingo P, O'Reilly K, Rufo K. Knowledge, attitudes, and beliefs about HIV infection and AIDS among healthy factory workers and their wives, Kinshasa, Zaire Soc Sci Med 1991;32 917-30

In Preparation:

- 11 Ryder RW, et al HIV-1 infection in 327 African families during 36 months of follow-up

- 12 Ryder RW, et al Household transmission of M. Tuberculosis in family contacts of index cases with HIV infection and pulmonary tuberculosis
- 13 Ryder RW, Jingu, et al. Matonge I follow-up.
- 14 Ryder RW, Manzila, Nsuami, et al Morbidity and mortality in the first perinatal study
- 15 Ryder RW, Kaseka, et al UTEXCO/BCZ.
- 16 Ryder RW, et al Response to tetanus vaccine in HIV (+) pregnant women
- 17 Ryder RW, et al. Childhood immunization
- 18 Ryder RW, Badie al. Fertility study
- 19 Braden K, Ryder RW, et al Neurodevelopment in children with perinatally-acquired HIV infection
- 20 Mukadi, et al. The impact of the HIV epidemic on tuberculosis in Kinshasa, Zaire
- 21 Mukadi, Perriens, et al Impact of HIV infection on the clinical presentation of pulmonary tuberculosis in 487 persons in Kinshasa, Zaire
- 22 Perriens, et al Response to short-course therapy for pulmonary tuberculosis in HIV-infected persons in Zaire.
- 23 St. Louis, et al Maternal factors predicting an elevated risk of perinatal HIV-1 transmission
- 24 Hassig, et al Twins in the first perinatal study

PLANS FOR 1991 - 1992

BCZ/UTEXCO

- 1 Conduct a behavioral risk factor and HIV serologic study among adolescents attending the BCZ and UTEXCO Polycliniques to yield the first HIV seroprevalence data from Kinshasa on persons in this vulnerable age group. Link the knowledge, behavioral, and serologic data from these children to their parents, from whom we also have substantial data about AIDS knowledge, behaviors, and actual infection rates.
- 2 Conduct a cross-sectional study of HPV shedding among young children of different ages (1-12) seen at the BCZ Polyclinique

- 3 As part of the multicenter study of Mycobacterium avium complex, conduct a study of skin test reactivity with antigens to M tuberculosis, M avium, and other antigens among employees at UTEXCO
- 4 As part of the multicenter study of M avium complex, perform blood cultures for M avium using a blood lysis-centrifugation-culture system to achieve maximum sensitivity to address questions about the occurrence of M avium disease in Zaire and to evaluate the possibility of disseminated (but undetected) BCG infections.
- 5 In general, transform the BCZ/UTEXCO activity from episodic seroprevalence "phase" studies into a more systematic and targeted approach toward studying and intervening in HIV infection in large populations reflective of the general population of Kinshasa

General Epidemiology (Umbrella Studies)

- 1 Administer a comprehensive, standardized evaluation of stage of HIV disease (clinical stage, lymphocyte typing, delayed hypersensitivity testing) to all adults followed in cohorts at Projet SIDA to serve as the basis of the Natural History Study and the context for intervention studies (such as tuberculosis chemoprophylaxis)
- 2 Complete a retrospective study of the cause of death in all adults (HIV-infected and -uninfected) followed as members of cohorts at Projet SIDA, and extend this study prospectively
- 3 Establish two new studies to evaluate the epidemiology of cervical cancer in Kinshasa.
 - a) a retrospective study of trends in the diagnosis of cervical cancer at the 2 hospitals in Kinshasa with Pathology Departments (Mama Yemo Hospital and the University of Kinshasa)
 - b) a prospective case-control study of cases of cervical cancer in Kinshasa, evaluating especially the association with HIV infection

Matonge I

- 1 Conduct a study of infectious cofactors (including Hepatitis B and C, HTLV-1, Mycoplasma incognitus) among discordant couples for both heterosexual transmission of HIV and progression of HIV disease

2. With the Pathology Section, evaluate the possible rapid progression of cervical dysplasia in HIV-infected women by conducting Pap smears a second time (first done in 1987)

Matonge II

- 1 Collaborate with the STD Section in those "umbrella" activities that include all adults at Projet SIDA

Ngaliema Clinic

(Plans are encompassed in those outlined under Perinatal I and Perinatal II at Mama Yemo Hospital)

Perinatal I

- 1 Perform HIV serology in the women previously classified as seronegative to evaluate HIV incidence in this population in the 3 years since last testing.
- 2 Enter and analyze the HIV screening data from the first and second perinatal studies at Projet SIDA This analysis will link the seroprevalence findings to all the data we have on these two cohorts of women regarding their incidence of HIV infection, their subsequent reproductive histories, and their mortality experience This should be very useful to better understand how to interpret HIV seroprevalence rates in pregnant women (the major HIV surveillance activity recommended by WHO but one that has not been well characterized)
- 3 With the ICAR, conduct a prospective study of the development of diarrhea and wasting among HIV-infected women
- 4 Evaluate the stage of HIV disease (by clinical stage and lymphocyte counts) of HIV-infected mothers from the Perinatal I study (ie who are known to have been infected at least 4 years)
- 5 Analyze the characteristics and early natural history of HIV infected children from Perinatal I who are long-term (>3 years)

Perinatal II

- 1 Complete the second year of follow-up for surviving children in the study
- 2 Conduct a study of infectious cofactors (including Hepatitis B and C, HTLV-1, Mycoplasma incognitus) for perinatal transmission of HIV and for progression of HIV disease in both mothers and children

Tuberculosis

- 1 Complete the enrollment of the planned 500 HIV-seropositive patients into the short-course treatment study
- 2 With Jos Perriens, publish the findings that short-course, intensive TB therapy was highly effective in HIV-infected persons as in uninfected persons
- 3 Collaborate with Dr Françoise Portaels at the Institute of Tropical Medicine in Antwerp to create a library of Mycobacterium tuberculosis strains from the tuberculosis therapy trial and to perform restriction fragment length polymorphism (RFLP) analyses. On the basis of the RFLP analyses, undertake molecular epidemiologic analyses of several important questions in tuberculosis-HIV epidemiology
- 4 Continue to record and analyze the natural history of HIV disease in the tuberculosis treatment cohort, since this group represents the group with the most advanced stage of disease at Projet SIDA (mean CD4+ lymphocyte count 160/mm³). In particular, determine which diseases will be most important to AIDS patients after they have been treated for tuberculosis, the principal and often first major infectious pathogen associated with HIV infection in Zaire
- 5 Conduct within the Epidemiology cohorts two facets of the collaborative research with the ICAR/Clinical Section and researchers from Dartmouth Medical School on Mycobacterium avium complex.
 - 1 Enroll 100 HIV-infected patients from the Epidemiology cohorts with CD4+ lymphocyte counts below 200/mm³ for mycobacterial blood cultures and evaluation of exposure to environmental sources of MAC
 - 2 Skintest a cohort of 400 HIV-uninfected persons (probably from UTEXCO) with antigens to Mycobacterium avium complex to help address the question of whether disseminated MAC usually represents reactivation vs new infection.

THE ICAR/CLINICAL SECTION

ICAR/CLINICAL SECTION

INTRODUCTION

The ICAR/Clinical Section of Projet SIDA is primarily concerned with conducting clinical and basic research on the pathophysiology of the chronic diarrhea and wasting syndromes of AIDS in Zaire. Having assumed responsibility for the Projet SIDA related clinical research activities at Mama Yemo Hospital, our interests are in investigating opportunistic infections affecting other organ systems as well.

Currently the ICAR/Clinical Section team consists of the following staff:

Chief	DONALD M. THEA, MD
Team Leader	KHONDI NGIMBI, MD
Laboratory Supervisor	UVOYA ATIDO
Clinical Study Nurses	
Pavillon 5	MWAMBA MABLUKU
	KITIY NGASAKA
	LABIEM MBERE
	BIYELA KEMBO
Pavillon 11	MVUMBI KIENZO
Pavillon 17	
Laboratory Technologists	MBALA MATONDO
	TSHIMPAKA TSHIAMALA
Nutritional Interviewer	INKIALA SENGIL
Laboratory Assistant	NSEKI MAKUMBA
Chauffeur	DIMBU MVEMBA

OVERVIEW

During its second year at Projet SIDA, the ICAR section has intensified its efforts to investigate the etiology of AIDS-associated chronic diarrhea and wasting. A prospective study of persistent and recurrent diarrhea in children with perinatally-acquired HIV infection (begun in May 1990) has continued and will end in May 1992. Also, since December 1990 three prospective adult studies have been initiated and a fourth, collaborative study, will begin this August.

The microbiology and intestinal function facilities of the ICAR laboratory are fully operational and supportive of all five currently ongoing studies.

On-site diagnostic capabilities include:

Stool

- *All major bacterial pathogens (except *C. difficile*) with full antibiogram
- *All pathogenic stool parasites

Blood

*All routine bacterial and mycobacterial pathogens

Sputum

*All routine pulmonary pathogens

*Pneumocystis carinii

Sterile Sites

*All routine bacterial and mycobacterial pathogens

For Analysis of Bacterial Overgrowth

*Fasting breath hydrogen production

*Quantitative aerobic and anaerobic culture of small intestinal fluid

For Analysis of Gastric Acid Production

*Gastric Ph measurement

*Pentagastrin stimulation test

For Analysis of Malabsorption

*Qualitative stool fat

*Serum carotene

*Serum albumin

For Analysis of Gut Permeability

*Alpha-1-antitrypsin stool assay

*Mannitol/Lactulose differential absorption

To Determine the Presence of Helicobacter pylori

*Giemsa stained touch preparation of gastric biopsies

*Urease production of organisms in biopsy tissue

In the spirit of 'Prise en Charge' (patient care) with which the ICAR section was integrated into Projet SIDA, microbiological diagnostic services have been made available to the physicians of the other sections of Projet SIDA and the staff of Mama Yemo Hospital. A total of 92 organisms have been isolated from 253 cultures submitted to date. A full panel of antibiotic sensitivities have been performed on 35 of these isolates.

In addition, due to the untimely suspension of the Belgian Cooperants involvement at Mama Yemo Hospital, responsibility for the Clinical Study Unit (Pavillion 5) and the endoscopy suite was passed to the ICAR Section at the October, 1990 Projet SIDA executive committee meeting in Kinshasa. In keeping with this responsibility, we have thusfar made over \$6,000 worth of structural improvements, have restocked the satellite pharmacy and are funding all custodial supplies for the maintenance of the physical plant as well as providing all consumable supplies for both routine clinical and research endoscopic procedures.

RESEARCH ACTIVITIES

1 Persistent and Recurrent Diarrhea in Infants with Perinatally Acquired HIV Infection

Persistent diarrhea accounted for approximately 28% of the deaths

in the first Projet SIDA perinatal cohort and was the second most common cause of death among children in this population. On May 13, 1990 we began a longitudinal study of persistent diarrhea within the second Projet SIDA perinatal study. Our study is designed to evaluate mortality and environmental, social and pathogen-specific risk factors of children who develop chronic diarrhea within this cohort. All children presenting with diarrhea are evaluated with an enrollment questionnaire, physical exam including anthropometry and bioelectric impedance analysis of body composition and stool analysis for enteric pathogens and qualitative fat content. Results of direct examination for parasites and coproculture are made immediately available to the study physicians to allow optimal treatment of enteric infections. If the diarrheal episode persists for 15 days, the child is worked up as before and followed until death or the episode abates.

During the first year we have observed 464 episodes of acute and 23 episodes of persistent diarrhea among the 442 children enrolled at the Mama Yemo site. Analysis done after 6 months of observation showed that progression of acute to persistent diarrhea was 6 times more common in HIV(+) compared with HIV(-) infected infants. Moreover, HIV(-) babies born to HIV(+) mothers were at 2-3 times greater risk of progressing from an acute to persistent episode. Fifty percent of deaths during this period of observation (mean age from 8 to 12 months) were due to acute or persistent diarrhea and were strongly associated with HIV infection. Recurrent episodes of acute diarrhea (>1 episode) were also associated with increased risk of progression to persistent diarrhea and were independently associated with mortality. This cohort will be followed until they reach 2 years of age (May 1992). Two posters are being presented in Florence from this study.

2 Chronic Diarrhea and Wasting in Adult AIDS Patients

This study began in January 1991. It is designed to comprehensively study the etiology, and pathophysiologic mechanisms of chronic diarrhea and wasting in adult AIDS patients at the 'end stage' of their disease. One hundred ambulatory AIDS patients with chronic diarrhea (> 1 month) and 15 'control' AIDS patients without diarrhea will be enrolled and followed every 2 months for 1 year or until death. Information regarding the evolution and environmental risk factors associated with the onset of the chronic diarrhea or wasting episode is obtained from each patient at enrollment. A detailed dietary history to determine total nutrient intake is recorded by a member of the ICAR team specially trained by a nutritional consultant from the FDA Institute for Human Nutrition in Boston (see below).

A physical exam with anthropometry and bioelectric impedance is performed at enrollment and at each followup visit. Blood is

collected and examined for HIV serology, T cell subtypes, albumin, carotene and cytokine (IL-1, IL-6, TNF) levels. At each visit a fresh stool sample is evaluated for fat, alpha-1-antitrypsin, enteric bacterial, parasitic and viral pathogens. Gastroduodenoscopy with stomach and small intestinal biopsies are performed when possible on all patients at enrollment, 6 and 12 months. In addition, breath hydrogen analysis and quantitative culture of small intestinal fluid to document small bowel overgrowth is done at each visit.

To date, we have enrolled a total of 85 adults, 77 with chronic diarrhea and 8 non-diarrheic controls. Endoscopy was performed on 66 of these patients. Of the total number of patients with chronic diarrhea 85% are HIV(+) and 75% have a T cell count below 20%.

Very preliminary results indicate that severe esophageal candidiasis accompanies chronic diarrhea 44% of the time and may have an important role in wasting. In 20% of cases the diarrhea has a malabsorptive component with patients having evidence of excess fat in their stool. Further tests currently underway (stool alpha-1-antitrypsin and Lactulose/Mannitol absorption) will help clarify the role of mucosal damage in this malabsorption.

Bacterial overgrowth of the small intestine, a well established cause of chronic diarrhea in non-AIDS patients, is present in 32% of the 30 patients sampled to date. This bacterial overgrowth appears to be highly correlated with achlorhydria ($p = .02$, $RR = 2.63$) and probably results from a diminished gastric acid barrier to bacterial colonization of the small intestine. Furthermore, *Helicobacter pylori* infection of the stomach, considered by some to be a cause of achlorhydria, was present in 11% of cases, and was associated with achlorhydria in every case. Achlorhydria may also predispose to colonization by routine enteric bacterial pathogens. Surprisingly, in contrast to other investigators, little *Cryptosporidium* (2%) and no *Isospora* has yet been identified but fully 19% of patients at enrollment had *Shigella* (15%) or *Salmonella* (4%) in their stool. Although not yet significant, there is a trend towards an association of infection with these two bacterial pathogens and achlorhydria. Other bacterial pathogens, such as pathogenic *E. coli*, are being sought by gene probe analysis in Boston this summer and may bring out an association between achlorhydria and enteric bacterial infection.

3 Early Changes in AIDS Associated Diarrhea and Wasting

To complement the above study of the late stages of wasting and chronic diarrhea in AIDS patients we have initiated a similar, although less comprehensive study, of the presymptomatic mothers from the first Project SIDA perinatal cohort. These individuals have now been followed for up to 5 years and should be in the

latter stages of their HIV infection

We will be able to determine the incidence of chronic diarrhea and wasting as well as follow the microbiological and pathophysiologic events preceding and accompanying the onset of these conditions. On May 28th we began enrolling 133 asymptomatic HIV + mothers and 10 randomly selected HIV - control mothers from this cohort. An abbreviated questionnaire, physical exam with anthropometry, gut function tests, BEI and blood studies similar to the above study (#2) will be done every 3 months for one year or until death on these women. Individual episodes of acute diarrhea occurring in these women will be evaluated for the presence of all the routine microbial causes mentioned above. Endoscopy will be considered on an individual basis for each case of chronic diarrhea that develops.

4 Normal Nutritional and Anthropometric Values of Healthy Zairian Adults

To validate the BEI determined body composition measurements being obtained in the above studies and establish the typical nutritional intake of healthy Zairians of differing socioeconomic strata, we studied a small sample of Bank of Zaire (BCZ) employees. During the months of April and May, 100 healthy adult employees from the 1500 undergoing their yearly health physical at the BCZ health clinic were chosen at random. They were given a questionnaire to determine if there are any chronic or recent acute illnesses and the routine annual physical examination was augmented by the addition of skin fold thickness measurements at 4 sites. Using an RJL portable bioelectric impedance meter their total body conductance and reactance was measured. As a standard and objective measure of relative nutritional status, approximately 15 ml of blood was obtained for albumin, carotene and serum B₁₂ measurements. The same nutritional questionnaire applied to the other ICAR studies was done on each these patient. These data will provide us with local Zairian nutritional standards with which we will be able to compare our results obtained from sick individuals.

5 Mycobacterial-avium-intracellulare (MAI) Bacteremia in Advanced Zairian AIDS patients

In collaboration with Dr. Ford von Reyn, Chief of Infectious Diseases Mary-Hitchcock Medical Center, Dartmouth University and the Epidemiology Section of Projet SIDA, we have begun a multicenter study on the prevalence and environmental risk factors of MAI bacteremia in advanced AIDS patients. Random cultures of various water sources throughout Kinshasa have shown that MAI is highly prevalent in the local environment, often in high numbers and thus presents a substantial exposure risk to immunocompromised individuals. The design of this study is to choose 200 AIDS patients with CD4 counts less than 200, elicit a

thorough exposure history and culture blood, stool and sputum for mycobacteria. In addition, skin tests using specifically derived MAI antigens will be given to all AIDS enrolled patients and to 100 HIV(-) controls to determine the background rate of MAI exposure

CONSULTANTS

To adequately assess the causes of AIDS associated wasting in adults an accurate knowledge of nutritional intake in both health and disease is essential. Initial investigations have revealed that very little information exists on the nutritional content of the typical Zairian diet. To collect this type of nutritional information Dr. Alayne Ronnenberg, a clinical research nutritionist from the FDA Institute for Human Nutrition in Boston, was brought to Kinshasa in November, 1990 to develop questionnaire methodology appropriate to Zaire. A 24-hour recall and food frequency data collection instrument was specifically developed for indigenous Zairian foods and eating habits. A member of the ICAR staff was intensively trained to administer this questionnaire. We are employing the Nutricalc-HD PC software whose foods database was customized for locally found foods using a Food Composition Table for Use in Africa compiled by the US Public Health Service as a reference. During the months of April and May of this year this nutritional information collection system was employed as part of the BCZ normal values study to establish the normal caloric, foodgroup and vitamin intake of employees of the different socioeconomic groups employed at the bank. A report of the final analysis of this information will be provided to the Zairian Department of Nutritional Research (CEPLANUT).

In December of 1990 Dr. Tamsin Knox, Assistant Professor of Gastroenterology at New England Medical Center, made a second visit to Kinshasa to refine the previously established gut physiology methodology.

TRAINING

Extensive nutritional training was given to Inkiala Sengil by visiting consultant Dr. Alayne Ronnenberg.

MANUSCRIPTS

Accepted for Publication

Persistent Diarrhea Associated with AIDS GT Keusch, DM
Thea, M Kamenga, K Kakanda, M Mbala, C Brown, F
Davachi Scan J Inf Dis

In Preparation:

Prevalence of Enteric Viruses among Hospitalized AIDS Patients in Kinshasa, Zaire DM Thea, R Glass, G Grohmann, J Perriens, M Ngoy, B Kapita, A Uvoya, G Mwamba, GT Keusch

Fecal Mycobacteria in AIDS Patients in Zaire DM Thea, J Perriens, M Ngoy, B Kapita, A Uvoya, G Mwamba, GT Keusch

Differing Patterns of Changes in Body Composition Between Men and Women AIDS Patients with Wasting Syndrome in Zaire
DM Thea, J Perriens, M Ngoy, B Kapita, A Uvoya, G. Mwamba, GT Keusch

PLANS FOR 1991-1992

Currently, we have no additional study initiatives planned for the coming year. The ICAR funding will end in October, 1992 and continuation of NIH support of all ICAR programs is currently under consideration. Clearly, there are a very large number of important clinical research questions that remain to be studied in this population. It is our strong belief that an active clinical research presence at Mama Yemo is essential for the patients, the hospital, and Projet SIDA and should continue.

THE STD SECTION

THE STD SECTION

I Introduction

The STD Section was created in February, 1991 and is based at the Matonge II prostitute clinic. The clinic is located in the Kalamu zone of Kinshasa, which is a public transportation hub and center for night life in the city.

Its staff is directed by Dr. Johan Goeman, a Belgian physician who has previously worked on STDs in Africa and at the Department of Microbiology of the Institute of Tropical Medicine (ITM) in Antwerp. Before his arrival in Kinshasa on February 11, 1991, Dr. Nzila Nzilambi provided supervision of the Matonge II studies. He has continued to provide assistance during the months following the arrival of Dr. Goeman. Four Zairian physicians are in charge of the prostitute cohorts followed in Matonge II. Dr. Manoka Abib Thiam and Dr. Tuliza Mulivanda are responsible for the HIV-seronegative cohort, Dr. Malele Bazola takes care of the HIV-seropositive cohort while Dr. Kivuvu Mayimona is in charge of the syphilis study. Its support staff consists of eight nurses and one sociologist. On-site assistance for preparation of laboratory specimens is provided by technicians of the Support Lab. Four assistants of the Ministry of Health Hygiene Service are responsible for recuperation of prostitutes not attending their monthly visit at the centre.

The Department of Microbiology of the ITM in Antwerp is responsible for the scientific supervision of the work in Matonge II.

II Accomplishments

A Activities

1 Ongoing studies

1.1 HIV seronegative study

Dr. Manoka Abib Thiam and Dr. Tuliza Mulivanda are responsible for the follow-up of this cohort. As of June 1990, 396 women are under active follow-up at the centre for monthly check-ups. During the year, 21 additional prostitutes became HIV seropositive. Two women died and 37 were lost to follow-up after they did not attend the clinic for more than 8 months. In May 1991, 336 women still participated, with a monthly follow up rate of 76%.

Overall, the incidence of STDs and HIV infection is declining in this cohort. Dr. Tuliza Mulivanda will present results on this during the Seventh International Conference on AIDS.

1 2 HIV seropositive study

This cohort, for which Dr Malele Bazola is responsible, consists of two subcohorts

1.2 1. Subcohort of HIV seropositive women at recruitment.

The number of women in this cohort declined from 145 in June 1990 to 111 in May 1991. Thirteen women died and 21 were lost to follow-up after they did not come to the centre for a period of more than 6 months

1 2 2 Subcohort of seroconvertors

There were 21 seroconversions during the past year. At this moment, a total of 87 women seroconverted for HIV. One woman died and 76 women are still seen each month for a follow-up rate of 80%. Dr Malele Bazola will present the incidence of STDs in this cohort during the Seventh International Conference on AIDS

1 3 Syphilis study

This study was set up to investigate the efficacy of syphilis treatment in HIV seropositive women. Both HIV (+) and HIV (-) women have been followed every three months. Currently 101 women are being followed. 62 HIV (-) and 39 HIV (+). Dr. Kivuvu Mayimona presented results of this study during the Fifth International Conference on AIDS in Africa (Kinshasa, 1990)

1 4 Study on genital ulcer disease (GUD)

In this study 60 cases of GUD were evaluated by Dr. Malele Bazola during the period June 1990 - May 1991. Haemophilus ducreyi was isolated in three cases (5%). None of the ulcers was caused by syphilis

1 5 Study of HIV infection and sexual behavior in stable partners of prostitutes

Two hundred stable partners of prostitutes were included in this study, which started in August 1988. HIV infection was found in 32 (16%) of 200 such partners. Of these 32 couples, 17 (53.1%) were concordantly HIV-positive. Further recruitment has been stopped temporarily because of lack of space due to the new recruitment of prostitutes

1 6 Human Papilloma Virus Study

This study, which started in March, 1990, is being conducted to determine the relationship between HIV infection, HPV infection, and cervical cancer

1.7 HIV infection in women lost to follow-up

Since October, 1990, seronegative women at recruitment and lost to follow-up are recuperated during the normal recuperation activities. The aim is to determine the incidence of HIV infection and syphilis in these women, who are different from the seronegative cohort because they did not receive regular counseling in the Matonge II centre. As of May 1991, 40 women have been found. None had seroconverted for syphilis but 8 (20%) had become HIV seropositive during the lost to follow-up period.

1.8. Study on the socioeconomic situation of prostitutes in Kinshasa Focus group

This pilot study started in October 1990 and ended in December 1990. It was conducted together with investigators of the Centre de Recherches en Sciences Humaines de Kinshasa. The purpose was to determine behavioral and socioeconomic factors in the Matonge II cohort. As of January 1991, this study was followed by a biography of some prostitutes of the cohort to obtain more specific information on the factors contributing to prostitution.

1.9 Recruitment of 200 new prostitutes

Recruitment of new prostitutes began in March, 1991 to bring the size of the Matonge II cohort up to the level needed for further planned studies. A second objective is to determine the prevalence of HIV infection and other STDs and to describe the knowledge of and behavior towards AIDS among the newly recruited prostitutes. This recruitment is being done by Dr. Kivuvu and three nurses. At the end of April, 100 new prostitutes had been recruited.

Table Prevalence (%) of HIV infection and other STDs in 100 newly recruited prostitutes compared to results in 1988.

<u>Infection</u>	1988 (N=696)	1991 (N=100)	P-value
Active syphilis	14	6	<0.05
<u>C trachomatis</u>	14	25	<0.01
<u>N gonorrhoeae</u>	29	22	0.20
<u>T vaginalis</u>	22	13	<0.05
HIV infection	37	26	<0.05

2 "Umbrella" studies

The STD Section participates in a number of Projet SIDA studies which are conducted by the Epidemiology Section, the Pathology Section and the Laboratory Section

2 1 Information on the causes of death in the cohort

Dr Kivuvu Mayimona and a nurse are responsible for this study

2 2. Skin testing

Asekolenga Anahendo, a nurse of the STD Section, was trained for this study, which started in April 1991 Annual skin testing for tuberculin and Candida antigens is performed. However, due to lack of space at the Matonge II site, this study is actually limited to two days a week

2 3 Staging of HIV infection

This is done by Dr. Malele Bazola during the consultations for the HIV seropositive cohort This study can be developed to include more information on the natural history of HIV infection in an African population and to compare different staging systems

2 4 Serotyping

Serotyping is performed every three months in the cohort.

3 Participation in International Conferences

3 1 Kivuvu Mayimona, Malele B, Nzila N, Manoka AT, Tshebuye, Samu M, Tshimpaka, Laga M, Ryder R Syphilis among HIV(+) and HIV(-) prostitutes in Kinshasa prevalence and serologic response to treatment Fifth International Conference on AIDS in Africa, October 10-12, 1990, Kinshasa, Zaire

3 2 Malele Bazola, Kivuvu M, Nzila N, Mokwa K, Way Way, Van Dyck E, Ryder R, Laga M. Genital ulcer disease (GUD) among HIV(+) and HIV(-) prostitutes in Kinshasa prevalence, incidence and etiology Fifth International Conference on AIDS in Africa, October 10-12, 1990, Kinshasa, Zaire

3 3 Manoka Abib Thiam, Nzila N, Tuliza M, Edidi B, Behets F, Piot P, Ryder RW, Laga M Non-ulcerative sexually transmitted diseases (STD) as risk factors for HIV infection. Fifth International Conference on AIDS in Africa, October 10-12, 1990, Kinshasa, Zaire

3 4 Tuliza Mulivanda, Manoka AT, Malele B, Kivuvu M, Kilesi M, Lufungula, Laga M, Nzila N Condom use among Kinshasa prostitutes a K A P study Fifth International Conference on AIDS in Africa, October 10-12, 1990, Kinshasa, Zaire

3 5 Malele Bazola, Manoka T, Kivuvu M, Tuliza M, Edidi B, Behets F, Heyward WL, Piot P, Laga M The impact of HIV infection on the incidence of STD in high risk women Seventh International Conference on AIDS, June 16-21, 1991, Florence, Italy

3 6 Nzila Nzilambi, Laga M, Brown C, Jingu M, Kivuvu M, St.Louis M Does pregnancy in HIV(+) women accelerate progression to AIDS? Seventh International Conference on AIDS, June 16-21, 1991, Florence, Italy

3.7 Tuliza Mulivanda, Manoka AT, Nzila N, Way Way, St Louis M, Piot P, Laga M The impact of STD control and condom promotion on the incidence of HIV in Kinshasa prostitutes Seventh International Conference on AIDS, June 16-21, 1991, Florence, Italy

B Consultations

1 Outside consultants visiting the STD Section

1 1 Dr Marie Laga (Institute of Tropical Medicine, Antwerp, Belgium)

1 1 1 October, 1990 Fifth International Conference on AIDS and Associated Cancers in Africa

1 1 2 December 10-21, 1991 Preparation of abstracts for the Seventh International Conference on AIDS, Florence, Italy.

1 1 3 March 4-11, 1991 Review of ongoing STD Section activities.

1 2 Prof Peter Piot (Institute of Tropical Medicine, Antwerp, Belgium)

1 2 1 October, 1990. Fifth International Conference on AIDS and Associated Cancers in Africa

1 2 2 February 11-14, 1991 To review ongoing Projet SIDA activities

2 Consultative visits of STD Section personnel to other institutions

2 1 Dr Johan Goeman

2 1 1 Supervision of WHO/Bralima demonstration project on health promotion in the workplace, Kinshasa, Zaire.

2 2 Dr. Nzila Nzilambi

2 2 1 December 3-6, 1990 Temporary advisor Informal consultation on priorities on research into more active approaches to STD interventions, GPA/WHO, Geneva, Switzerland

2 2 2 January 6-12, 1991 Invitational travel. Participation in meeting with US government officials concerning child survival strategies and AIDS prevention programs, Abidjan, Ivory Coast

2 2 3 March 17-20, 1991 Participation in the Seventh African Union against Venereal Diseases and Treponematoses (AUVDT) Regional Conference, Lusaka, Zambia

2 2 4 March 21-22, 1991. Temporary consultant Workshop on surveillance of STDs in Africa, GPA/WHO, Lusaka, Zambia.

2 2 5 Dr Nzila has been appointed as a member of GPA Steering Committee on Epidemiological Research Surveillance in March, 1991 for a period of three years The first meeting of this committee will be held in Geneva, May 28-29, 1991 The purpose of this committee is to discuss and review proposals funded or to be funded by GPA

C Training

1 Dr. Manoka Abib Thiam Abidjan, Ivory Coast, March 25-April 6, 1991 International Course on Epidemiology

2 Luila Kialanda. ASSIST, Kinshasa, April 15-May 7, 1991. Training in WordPerfect 5 1

3 Secured NIH support for Dr Nzila Nzilambi to go to the Johns Hopkins Hospital Vaccine Evaluation Center, September 1991 - April 1992

D Manuscripts

1. Papers in press

1 1 Laga M, Manoka AT, Nzila N, Ryder R, Behets F, Van Dyck E, Piot P. Genital chlamydial infection among prostitutes in Kinshasa prevalence, incidence, risk factors and interaction with HIV Human Chlamydial Infections (Ed Bowie WR et al) Cambridge University Press, Cambridge, UK

2 Papers submitted

2 1 Laga M, Icenogle JP, Marsella R, Manoka AT, Nzila N, Ryder RW, Vermund SH, Heyward WL, Nelson A. Genital Papillomavirus and cervical dysplasia - opportunistic complications of HIV infection

2 2 Nzila N, Laga M, Manoka AT, Hassig S, Nelson A, Mokwa K, Ashley RL, Piot P, Ryder RW. HIV and other sexual transmitted diseases among female prostitutes in Kinshasa

2.3 Van Dyck E, Rosseau R, Duhamel M, Behets F, Laga M, Nzila N, Bygdeman S, Van Heuverswijn H, Piot P Antimicrobial sensitivity of Neisseria gonorrhoeae in Zaire. high level plasmid-mediated tetracycline resistance in Africa

3 Papers in preparation

Dr Marie Laga is preparing papers on the interaction of STDs and HIV infection and on the serologic response to treatment of syphilis among HIV(+) and HIV(-) prostitutes.

III Plans for 1991 - 1992

A The effect of frequent insertion of NeoSampoon

NeoSampoon is a spermicidal vaginal tablet, each containing 60 mg of the surfactant menfegol. Menfegol has been designated safe and effective for vaginal contraceptive use as determined by an expert panel in the USA (FDA 1982). However, there are few data on the safety of frequent insertion of this spermicide. Both systemic effects and local effects are of importance.

The World Health Organization will provide support to evaluate the short-term effects of NeoSampoon at various frequencies of use in 225 prostitutes at Matonge II. The objectives of this double-blind Phase II toxicity study are

1. To measure the incidence of colposcopically detectable cervical and vaginal lesions following different frequencies of insertion of NeoSampoon
2. To determine whether there is a dose-response relationship between frequency of insertion of NeoSampoon and the incidence of cervical and vaginal lesions
3. To compare the incidence of colposcopically detectable cervical and vaginal lesions in women using NeoSampoon at a high frequency with the incidence among women using a placebo at the same frequency

4 To assess hepatic, renal and other metabolic changes following different insertion frequencies

B Intervention study in Kinshasa prostitutes, 1991 - 1992

The purpose of this study is to evaluate interventions based on screening and periodical treatment of STDs in the Matonge II cohort of prostitutes

The objectives of this study are

- 1 To compare the validity of three different approaches in screening for STDs using three different levels of diagnostic capabilities
- 2 To determine the efficacy and the feasibility of these approaches in reducing the prevalence of STDs
- 3 To assess the cost of these interventions

THE PATHOLOGY SECTION

THE PATHOLOGY SECTION

The Pathology Section of Projet SIDA is now in its 5th year. The specific goals are to define the pathology of HIV infection in Zaire through diagnostic and research activities and to train local physicians and laboratory personnel in AIDS and infectious disease pathology and in appropriate techniques.

Most activities are in collaboration with other sections of Projet SIDA. Diagnostic tests on patients in various studies as well as histopathology and cytopathology sub-studies function to broaden the understanding of HIV related disease in this population.

There are currently 8 full-time employees: 1 physician, 1 histotechnician, 2 pathology technicians for autopsies and biopsies, 2 lab assistants, a secretary and a data entry person. In addition there are 3 physician consultants - 2 for biopsies (a dermatologist and a hematologist) and a pathologist for PAP smears, a part-time histotechnician for placenta work, and a cytotechnician for screening PAP smears.

DIAGNOSTIC PATHOLOGY

The service accepts biopsy specimens from patients in the Projet SIDA cohorts and from physicians at Mama Yemo, University and several rural hospitals. It also performs autopsies on cases of suspected HIV related deaths at Mama Yemo and University Hospitals and cases from the Projet SIDA cohorts. The number of autopsies and biopsies referred from the hospitals decreased significantly due to closure of the female ward at Mama Yemo Hospital and the recurrent strikes of medical and paramedical personnel.

In the past, the number of biopsies from the Projet SIDA cohorts has been limited by the fact no one within the project was qualified in biopsy techniques. In order to overcome this limitation, the pathology unit now provides consultant service to obtain biopsies as clinically indicated on patients in all Projet SIDA cohorts (pediatric, tuberculosis, discordant couples and prostitutes). This will increase the diagnostic specificity in the cohort patients and help in defining the natural history of HIV in these groups as well as in evaluating response to therapy.

Lymph node biopsies are being obtained from all patients with lymphadenopathy in the tuberculosis cohort, results are compared with the T4 counts, the PPD reaction and the clinical stage of the patient. Of the first 20 biopsies, 2 had tuberculosis and both patients had %T4 <15 and negative PPD reactions, although both were on anti-tuberculous therapy.

An increased effort has been made this year to obtain autopsies on patients from Projet SIDA cohorts. Autopsies were requested on the majority of deaths in the perinatal and tuberculosis cohorts. The acceptance rate is less than 50%, but 8 autopsies have been performed in the past 6 months. In addition we have 12 autopsies from project patients in 89-90 (1 adult, 1 pediatric and 10 perinatal)

WHO and CDC criteria of AIDS are being compared in the series of 82 adult autopsies completed in the service. Frequency of major and minor symptoms and correlation of clinical diagnoses and histopathology findings are also being tabulated. The results were presented at the AIDS in Africa Conference in Kinshasa and are the subject of a manuscript in preparation. Pulmonary pathology findings were presented as a poster by Dr Okonda at the same conference. Disseminated hypo-reactive or anergic tuberculosis is the most frequent cause of death in this population.

A review of infectious complications and the histologic spectrum of tuberculosis are being presented as poster sessions at the Florence meeting.

Diagnostic Biopsies Performed

Projet SIDA patients	72
Referral from hospitals	62
	134

Autopsies Performed

Mama Yemo Hospital		(Projet SIDA Patients)
Adults	4	(4)
Pediatric	4	(4)
Perinatal	1	
 University Hospital		
Adults	5	
Pediatric	1	
Perinatal	4	
 (Combined total)	19	(8)

RESEARCH ACTIVITIES.

1 Placenta Pathology

A Perinatal 1 The major finding was the correlation of

histologic chorioamnionitis with symptomatic maternal HIV infection and HIV transmission to the infant.

B Perinatal 2 Histologic chorioamnionitis was again shown to be significantly associated with symptomatic HIV infection. The rate of chorioamnionitis varied inversely with the percent T4. Women with %T4 of <10 tended to have a depressed inflammatory response (see chart)

In addition, frozen tissue was collected for immuno-histochemistry studies. Funds are being sought to do look at co-infection in a sub-group of placentas from both study groups to determine if there is a correlation between the presence of other infections with infant outcome and HIV transmission (eg mycoplasma, chlamydia, syphilis)

C Low Birth Weight Placentas were collected from the low-birth weight study. No microbiology was done on these, nor frozen tissue collected. Routine histopathology was done as in the other specimens.

D Kimpese-placenta malaria/HIV A rural mission hospital in Bas-Zaire has been sending placenta samples for evaluation. There is a high prevalence of chronic malaria during pregnancy in these women, which is associated with HIV transmission to the infant.

2 HIV/HPV cytopathology A study to evaluate the relationship between HIV infection and the prevalence of cervical PAP smear abnormalities, specifically squamous intraepithelial and invasive neoplasias has been underway since 1987. Pending completion of the data sets on risk factors, a manuscript will be prepared for publication.

PAP smears are being collected from women in the BCZ cohort and from the new recruits in the prostitute study.

3 AIDS MORTALITY STUDY Data has been collected on all deaths (pediatric and adults) at Mama Yemo Hospital between January 1980 and December 1989. The impact of AIDS on adult deaths at Mama Yemo Hospital will be studied when the data has been entered and analyzed. USAID has expressed an interest in funding the analysis, publication and dissemination of this information.

TRAINING OF ZAIRIAN PERSONNEL

Project personnel There is ongoing training in autopsy and histology techniques by Dr. Nelson and the various consultants who come.

Three members of the pathology unit participated in a total of 5 computer courses: 2 DOS, 1 introduction to Dbase, 1 Dbase.

programming and 1 Word Perfect.

Residents from the Department of Pathology at the medical school receive on-going training in the pathology of AIDS and infectious disease in Dr. Nelson's service.

PRESENTATIONS AND PUBLICATIONS:

1 Nelson AM Clinical Pathological Correlation of HIV Infection in Zaire Implications for definition and treatment of AIDS in Africa Vth International Conference on AIDS in Africa Kinshasa, October 1990

2 Nelson AM, Okonda L, Tuur S, Nyst M, Lusamuno N, Angritt P, Mullick FG Pulmonary Pathology of HIV Infection in Zairians. Vth International Conference on AIDS in Africa. Kinshasa, October 1990

3 Nelson AM, Firpo A, Kamenga et al. HIV Infection and Chorioamnionitis A Case-Control Study, Kinshasa, Zaire USCAP, Chicago, March 1991 Oral presentation

4. Nelson AM, Okonda L, Mukadi Y et al Histologic Patterns of Tuberculosis in HIV-1 Infected Zairians 7th International Conference on AIDS, Florence, 1991 poster

5 Kanda B, Nelson AM, Kayembe M et al Comparison of Clinical and Epidemiological Aspects of Endemic and AIDS-associated Kaposi's Sarcoma, Kinshasa, Zaire 7th International Conference on AIDS, Florence, 1991 poster

6 Okonda L, Nelson AM, Kayembe M et al Infections Found at Autopsy in Zairian AIDS Patients 7th International Conference on AIDS, Florence, 1991 poster.

7 St. Louis ME, Kabagabo U, Brown C, Kamenga M, Davachi F, Behets F, Batter V, Nelson AM et al Maternal Factors Associated with Perinatal HIV Transmission 7th International Conference on AIDS, Florence, 1991

8 Kamenga M, Manzila T, Behets F, Oxtoby M, Brown C, Sulu M, Nelson AM et al Maternal HIV Infection and Other Sexually Transmitted Diseases and Low Birth Weight in Zairian Children 7th International Conference on AIDS, Florence, 1991.

9 Lubaki N, Brown C, Kasali M, Behets F, Mussey L, Manzila T, Davachi F, Ou C, St. Louis ME, Nelson AM, Firpo A et al. Laboratory Diagnosis of Perinatal HIV Infection Experience with a Cohort of 350 HIV Seropositive Mother-Infant Pairs from Birth to Age 1 Year 7th International Conference on AIDS, Florence, 1991

- 10 Nelson AM, Firpo A, Kamenga M, Angritt P, Mullick FG
Pediatric AIDS and Perinatal HIV-1 Infection in Zaire
Epidemiological and Pathological Findings in Greco, et al (eds)
Pediatric AIDS Progress in AIDS Pathology, Vol 3, (in press).
- 11 Nelson AM, Hassig S, Kayembe M et al. HIV-1 Seroprevalence
and Mortality at University Hospital, Kinshasa, Zaire. AIDS (in
press).
- 12 Nyst MJ, Perriens JH, Lusakumumu K, Musongela L, Nelson AM
and Piot P Open Randomized Trial of Gentian Violet, Ketoconazole
and Nystantine in Oropharyngeal and Esophageal Candidiasis in
Zairian AIDS Patients (submitted for publication, AIDS)
- 13 Chirimwami B, Okonda L et Nelson AM Lymphome et
Schistosomiase a Schistosoma mansoni: compte rendu d'une
observation Archives d'anatomie et de cytologie pathologiques
1991, 39 (1-2) 59-61
- 14 Nelson AM, Kapita B, Okonda L et al Comparison of WHO and
CDC criteria of AIDS an autopsy study, Kinshasa, Zaire.
(manuscript in preparation)
15. Nelson AM, Perriens J, Kanda B et al Cutaneous
Manifestations of HIV-1 infection in Zairians. (manuscript in
preparation)
- 16 Okonda L, Nelson AM et al. Infectious Complication of HIV-1
Infection in an urban population, Zaire (manuscript in
preparation)
- 17 Nelson AM, Firpo A, Brown C et al Chorioamnionitis: a model
for evaluating the inflammatory response in HIV-1 infected women
(manuscript in preparation)

THE LABORATORY SECTION

THE IMMUNOLOGY RESEARCH LABORATORY

I INTRODUCTION

The Immunology Research Laboratory serves both support and research functions. With regard to support, the laboratory performs the hematologic testing for the Project, including white blood count, differential count, hemoglobin and hematocrit. T-cell and other subset phenotyping is also performed in the immunology lab for all studies requiring such laboratory backup. In addition to its support functions, the Section conducts studies into HIV pathogenesis, with specific attention to the immunopathogenesis of perinatal HIV infection.

The laboratory is staffed by 8 technicians, one Zairian physician, one data entry technician and the laboratory director.

II ACCOMPLISHMENTS

A ACTIVITIES

In addition to basic hematology and standard t-cell phenotyping, cell separation for PCR testing, viral culture, and other in vitro tests is performed in the section. Storage of frozen cell samples is maintained in liquid nitrogen tanks in the laboratory.

More basic assays include viral culture, in vitro antibody production, antibody-dependant cellular cytotoxicity, neutralizing antibody, CTL, three-color t-cell phenotyping and cytokine assays are also within the scope of the laboratory.

The section has sent five abstracts to the Florence meetings. Two presentations were presented for oral and three for poster presentation. The two oral presentations deal with the new perinatal study.

The oral presentation on immunopathogenesis puts forth unique information as to why perinatal HIV disease may be more rapid than adult HIV disease. First, newborn children contain much smaller numbers of certain t-cell subsets thought to be important in adult HIV disease. In some subsets, even in infected children, the increase in these subsets through the first year does not approach adult levels.

Second, there exists an impressive TNF-alpha burst sometime in the first two weeks of life, regardless of serostatus or vaccination status of the infant. The well-known upregulation of HIV replication by TNF suggests that this early burst of TNF may play a role in the pathogenesis of perinatal HIV infection, particularly since we have also shown that plasma samples from

the first week of life lead to marked upregulation of reverse transcriptase expression in constitutively infected cell lines

The other posters deal with unique changes in the memory(+) CD4 HIV target population which may help to explain some of the defects seen in CD4 cells. One poster also uses three-color analysis to identify a subset of CD8 cells which high predictive value for HIV infection. The subset carries phenotypic characteristics similar to that described for CTL cells. The final poster describes deficient B-cell numbers in HIV-infected children

B CONSULTATIONS

Dr Ann Jackson, a noted expert on immunocytometry and cellular immunology visited our Section for two months in December in order to help us establish the capacity to do three-color t-cell phenotyping. This work resulted in two of the posters for Florence as well as work for at least one publication in progress

C TRAINING

Training is a continual process in the laboratory. We now have four individuals competent in viral culture and in vitro antibody production as well as three technicians schooled in the use of the Facscan and analysis of T-cell subset data. Our physician, Dr Luwy Musey, has, since his tenure in the section, learned viral culture, in vitro antibody production, cell culture techniques and neutralizing antibody determination. He has established a neutralizing antibody assay/facility in our section and is beginning to evaluate differences in functional neutralizing antibody in populations of interest.

D. MANUSCRIPTS

Published.

Prevalence of HIV-1 p24 antigenemia in Africa and North American populations and correlation with clinical status AIDS, 1991,5 89-92

Submitted

Infection of CD34 bone marrow progenitor cells in infection with human immunodeficiency virus infection.

In preparation

Development of humoral immune response including antibody dependant cellular cytotoxicity ,neutralizing antibody and antibody reactivity to gag and envelope viral proteins in transfusion-associated human immunodeficiency virus infection

Neurologic dysfunction in Zairian AIDS patients: immunological correlates in blood and cerebrospinal fluid

The use and interpretation of hematologic and T-cell phenotyping data in central Africa as it pertains to infection with human immunodeficiency virus (HIV)

Gamma delta T-cell receptor T-lymphocyte subset changes in human immunodeficiency virus infection. a three color phenotyping analysis

III PLANS FOR 1991-1992

The focus of our activities this following year will be on questions of immunopathogenesis of perinatal HIV infection We will be doing in vitro work to more fully explore the role of the early cytokine burst in the first few weeks of life. In addition, we will be evaluating the role of changes in viral burden during the first six months of life We would also like to look at the immunology of discordant partners, concentrating on HIV-specific immune responses in the positive partner

THE SUPPORT LABORATORY

THE SUPPORT LABORATORY

1. Introduction

The Support Laboratory provides the different research sections of Projet SIDA with HIV serology (ELISA, Western blot and rapid assays), STD microbiology (cultures for identification of Neisseria gonorrhoeae and Haemophilus ducreyi, Chlamydia serology, RPR and TPHA for diagnosis of syphilis), and acid fast stain and culture for Mycobacteria

Upon request of the Zairian National AIDS Control Program (BCC), the Projet SIDA Laboratory also serves as the National reference laboratory for HIV. In this capacity, technical guidelines and/or formal training are provided to health workers as well as assistance in quality control of HIV screening.

As the National HIV reference laboratory and a WHO Collaborating Center on AIDS, the Support Laboratory has initiated and conducted several applied research studies in the past years. In 1991 a study was started to evaluate 3 different diagnostic assays for detection of anti-HIV IgG antibodies in urine.

A total of 17 laboratory technicians currently work in the Support Laboratory of whom three are permanently based at Matonge 2 (specimen collection and immediate processing, direct microscopic exams), and one at the TB center (HIV screening with a rapid assay for enrollment, Mycobacteria microbiology).

2. Accomplishments

Total number of samples processed in the Support Laboratory

Study	Serology		
	<u>HIV ELISA</u>	<u>HIV-1 Western blot</u>	<u>Rapid</u>
Diagnostic Service	7,000	75	300
Perinatal I Studies	300	25	
Perinatal II Study	1,450	500	
TB Study	200	100	880
UTEXCO Study	830	24	
BCZ Study	1,000	40	
Matonge I Study	1,350	130	
Matonge II Study	240	240	13
Autopsy Study	25	25	
Diarrhea Study	170	85	
STD Pregnant Women	412	25	

Quality Control	20	180	
Filter paper Study	135	54	
Neurology Study	10	8	
Urine Study	300		
TOTAL	13,442	1,511	1,193

Microbiology

<u>Study</u>	<u>Mycobacterium Culture</u>	<u>Acid Fast Stain</u>
TB Study	1,200	1,950
# positives	153 (12.7%)	203 (10.4%)

<u>Study Serol.</u>	<u>GC Culture</u>	<u>H. ducreyi Cult.</u>	<u>Chlamydia</u>
Matonge II	5,364	20	4,280
Matonge I	53	-	30
Pregnant women	412	-	412
TOTAL	5,829	20	4,722
# positives	457 (7.8%)	2 (10%)	345 (7.3%)

Syphilis serology

<u>Study</u>	<u>PR</u>	<u>TITER RPR*</u>	<u>TPHA</u>	<u>TITER TPHA**</u>
Matonge II Study	1,999	317	1,952	560
Matonge I Study	287	10	289	35
STD Pregnant Women	412	14	412	13
Neurology Study	113	3	113	3
TOTAL	2,811	344	2,766	611

*RPR titer is determined on all RPR positive sera

**TPHA titer is determined on all positive TPHA sera

Laboratory study

Evaluation of HIV antibody detection in urine

Background

HIV antibodies can be detected in urine with commercially available assays. Varying sensitivities and specificities have been reported and further studies are necessary before this technique can be used as a practical screening method. Furthermore no data are available on the appearance of HIV antibodies in urine in the course of seroconversion.

Objectives

To determine sensitivity and specificity of HIV antibody detection in urine of persons at various risks of HIV infection compared to HIV diagnosis using serum. To evaluate the practicality of this alternative testing technique compared to blood screening.

Methods

During the pilot phase, a total of 200 paired serum and urine samples of newly enrolled prostitutes at the Matonge II clinic will be evaluated. If at least one evaluated assay shows a sensitivity greater than 95%, the study will be continued and a total of 300 prostitutes will be evaluated as well as 300 individuals from the discordant couples cohort (Matonge I) and 100 mothers of the perinatal study.

Upon informed consent, blood and urine samples are collected concurrently from all study individuals. Blood samples are tested following routine procedures, the urine specimens are tested with Genetic Systems LAV EIA, Calypte Urine HIV-1 Antibody ELISA following the instructions of the manufacturers, and Organon Vironostika anti-HIV ELISA using a modified testing procedure (using undiluted urine and increased sample volume). ELISA results obtained with the 3 evaluated kits will be compared with serum results.

Preliminary results

	<u>Genetic Syst</u>	<u>Organon</u>	<u>Calypte</u>
# Samples	113	118	78
Sensitivity	100 %	96.8%	100%
Specificity	98.8%	98.8%	89.3%

Conclusion

These preliminary results suggest that the study should be continued. Sensitivity of urine testing for HIV antibodies should be evaluated in the course of seroconversion.

Manuscripts

Published:

Behets F, Bertozzi S, Kasali M, Kashamuka M, Atikala L, Brown C, Ryder R, Quinn T Successful use of pooled sera to determine HIV-1 seroprevalence in Zaire with development of cost-efficiency models. AIDS 1990, 4 737-741

Behets F, Edidi B, Quinn T, Atikala L, Bishagara K, Nzila N, Laga M, Plot P, Ryder RW, Brown C Detection of salivary HIV-1 specific antibodies in high-risk populations in Zaire. Journal of AIDS 1991, 4 183-187

Laga M, Manoka A, Nzila N, Ryder RW, Behets F, Van Dijck E, Plot P Genital chlamydial infection among prostitutes in Kinshasa prevalence, incidence, risk factors and interaction with HIV pp 584-587, Chlamydial Infections Ed W.R Bowie et al Cambridge University Press, Cambridge 1990

In press

Van Dijck E, Rossau R, Duhamel M, Behets F, Laga M, Nzila N, Bygdeman S, Van Heuverswijn H, Plot P Antimicrobial sensitivity of Neisseria gonorrhoeae in Zaire high level plasmid-mediated teracycline resistance in Africa J Gen Urin Infect

Submitted

Behets F, Disasi A, Ryder R, Bishagara K, Plot P, Kashamuka M, Kamenga M, Nzila N, Laga M, Batter V, Brown C, Quinn T: HIV Antibody Detection in Central African Sera Comparing Five Commercial Enzyme-Linked Immunosorbent Assays and Western blot

In preparation

Pappaioanou M, Kashamuka M, Behets F, Mbala S, Biyela K, Davachi F, George JR, Dondero T, Heyward W, Ryder R Accurate detection of maternal antibodies to Human Immunodeficiency Virus in newborn whole blood dried on filter paper

Behets F, Kashamuka M, Pappaioanou M, Greene T, Batter V, George JR, Hannon H, Ryder R Stability of antibodies to Human Immunodeficiency Virus in whole blood dried on filter paper and stored under varying environmental conditions in Kinshasa, Zaire

Behets F, Bishagara K, Disasi M, Likin S, Ryder RW, Brown C, Quinn T Diagnosis of HIV Infection with Instrument-free Assays as an alternative to the ELISA and Western Blot Testing Strategy An Evaluation in Central Africa

3. Plans for 1991-1992

Further improvement of the laboratory data management system is highly recommended

A Introduction of bar codes for labeling of samples and automatic entry of sample ID numbers into the support laboratory reception program and into the laboratory study files

Rationale an important source of errors is the manual labeling of blood or other biologic samples at the various study sites, particularly during the follow-up of cohorts such as prostitutes, discordant couples and children enrolled in the perinatal studies. A program enabling automatic generation of bar code labels respecting the existing numbering system and based upon the dates of the visits would greatly reduce this source of errors. Furthermore, automatic entry of sample ID numbers into the support laboratory reception program as well as into the various study files would save time and provide a virtually error-proof entry process.

B Computerisation of banking of sera and other biologic samples.

Rationale an estimated minimum of 60,000 sera are currently being stored in 16 freezers at the Support Laboratory. Management of all stored samples is being done manually. Sample ID numbers are recorded in log books where the sample location is noted by freezer, cryobox number and location of the sample in the box.

When samples do not enter the lab in sequential order, it is extremely time consuming to find selected samples. Manual recording of 9-digit sample ID numbers is obviously not error-proof. Using automatic reading of bar codes, the management of stored samples would greatly improve through the introduction of a double data entry program including error checking for entry of sample location and quantities. The program would also assure automatic updating upon entry of quantity modification.

C Development of a user-friendly data entry and management program for the microbiology activities.

Rationale all ID numbers, dates, as well as results of GC and Hemophilus ducreyi cultures, RPR, TPHA, Chlamydia serology and direct exams are being recorded in lab books followed by manual entry into a DBase III plus study file. Checking for data entry errors is currently being done manually.

Using automatic reading of bar codes, a user-friendly data entry and management program including error checking would also greatly improve accuracy and efficiency.

D Improvement of the existing HIV serology program written in DBase IIIplus

Rationale several attempts to compile the program in Foxbase in order to increase the speed have resulted in unsatisfactory results Other means should be explored as the speed continues to decrease with the expansion of the data base Archiving of results could further be refined

THE DATA MANAGEMENT SECTION

THE DATA MANAGEMENT SECTION

1. Introduction

As of June 1, 1991, the Data Management (DM) Section includes 6 Zairians employees (3 informaticians) supervised by Ms V. Batter. As a support section, we have a lot of interaction with the other sections which also have their informaticians and computer users. Since the arrival in September of Dr. St Louis, the Epidemiology Section has taken a more active role in the data management than before. Several physicians are receiving special training and work assignments in data management to serve as a bridge between the two sections.

With the departure of Dr. Ryder in December 1990, the principal activities of the Section from June 90 through December 1990 was to finalize the data entry and cleaning of the most important studies supervised by Dr. Ryder. Because of the minimal quality control of data done in the last four years, and the considerable amount of data not yet entered, much remains to be done.

Since December 1990, we have received considerable help from the Data Management and Statistical Branch at CDC, HIV/AIDS Division supervised by Dr. Meade Morgan. Development of quality control and data entry tools as well as the improvement of the technical computer facilities at Projet SIDA were the major goals. In December 90, Projet SIDA has been included in their electronic mail network and this was a remarkable improvement of the communications between the participating agencies in the U.S. and Europe and Projet SIDA.

The main activities of the DM Section are:

1. Management of all the epidemiological data of Projet SIDA (except the prostitute study which has on-site data management). This comprises, most importantly, development of quality control procedures followed by data collection and data entry into the computer and data analysis.
2. Technical support for the current 35 computers at Projet SIDA, including hardware and software implementation, updating and maintenance, and supplies.
3. Assistance and training of the approximately 65 computer users in Projet SIDA.
4. Production of the slides for the presentations.

2. Accomplishments from June 1990 through June 1991

2.1 Data Management:

2.1.1 Decentralization in the study sites

Of the 7 different epidemiology study sites, the prostitute study at Matonge II and the TB study had been the only sites having data entry performed on-site. Three more sites now have their own data entry computer and personnel. However, because of the lack of infrastructure, little quality control is performed on-site.

Table 1 New sites with local data entry

Study site	Date	# computers and users		
		DM section	Study team	Total
BCZ	Feb 91	1	2	3
Perinatal II	March 91	1	—	1
Matonge 1	May 91	1	—	1

2.1.2 Standard Quality Control Procedures

It is important to realize that 70% of the work in data management consists of data quality control compared to 10% for data entry and 10% for data analysis.

Since January 1991, quality control procedures are being developed. Standard programs are being generated to check the internal consistency and the interaction of the data files. Emphasis was on the new phase of the BCZ study started in early March 1991: a tracking system has been developed to register each of the 2500 employees and spouses. The objectives are, first, to supervise the progress of the third year follow-up of the cohort, second, to record each different examination of study participants, third, to perform daily and weekly verifications of the concordance of the data between the 8 different sources of data and finally compare the register with the first three years of the study.

This system has immediately proven itself by detecting a variety of data errors and improving overall quality control. However, we don't have the required equipment and programming skills to start similar quality control procedures on the other study sites at this time.

2 1 3 Data Entry and Editing

A total of 24,513 records with an average of 85 variables have been double entered for the six different epidemiologic studies listed below. This is more than 2-fold increase compared to last year. However a lot of data still need to be entered.

Table 2 : Study data entered for the June 90-May 91 period

Projet SIDA study	# records	# variables
1 Old Perinatal		
Orphans	100	68
Immunization [**]	1086	151
Infants follow-up (F/U) [*/@@]	337	152
	1032	93
	464	46
Screening at the delivery [@@]	6091	14
2 New Immunology Perinatal		
Seronefotification	365	81
Mothers enrollment [**]	297	147
Infants enrollment [**]	147	51
Infants 1st semester F/U [@]	2183	91
Screening at the delivery [@@]	5315	13
3 UTEXCO/BCZ cohorts(1989-90) [**]	300	77
BCZ cohort (3rd F/U - 1991) [@]		
Annual medical visit	750	154
KAP	769	205
Tracking system	1622	17
4 Discordant couples (Matonge 1)		
Enrollment [*/@@]	139	145
Follow-up [@]	2496	56
5 Skintest [@]	811	32
6 Death inquiry [@]	209	30

[*] Because of the extensive editing and cleaning of these data, the decision was taken to reenter all the data with the current quality control procedures. For the Perinatal study, large F/U summaries have been extracted from the original data.

[**] Data cleaning and updating. Due to the considerable effort needed for the UTEXCO/BCZ data (1988-89), the task remains uncompleted.

[@] Ongoing studies

[@@] Ongoing data entry depending on the priorities of the project

2 1 4 Central "Stockage" (data storage and file preparation) Computer:

A computer of large storage capacity (COMPAQ 386 with 620 MB of harddisk) was set up in April 91 for the master central storage of all the data collected at the project including epidemiologic, laboratory and pathology data. Major programs in SAS are being developed for reception of the data from each project site, performance of major data verification and cleaning, and creation of main master data sets. The process is ongoing for the perinatal study since May 4, 1991 with an outside consultant from CDC.

This computer will be the "heart" of a new backup system for the considerable amount of data from Projeet SIDA. By June 1991, a backup tape will be stored at different sites in and outside Kinshasa.

2 1 5 Data Analyses

Data analyses have been performed on the old perinatal study for the publications on fertility, immunization and the global perinatal study. Preliminary analyses have been done on UTEXCO/BCZ incidence and prevalence risk factors, sexual behavior and family planning, new Perinatal study (prevalence of MST, counselling evaluation) and the diarrhea study.

2.2 Technical computer support:

2 2 1 Hardware

Although the quality and quantity of the computers remains inferior to the project needs, a big effort has been done to improve the quality of the existing equipment. Since January 1991, all the computers have been equipped with 3 5" drives. Based on the most important needs, we have increased hard disk capacities and the memory and the speed of some of the computers.

Seven new COMPAQ computers have arrived during the interval of January-April 1991. One is the central stockage computer. Another 486 (320 MB) is used as the main statistical and data management computer by the Section Chief. Each one contains a tape backup drive for backup facilities. Two of the computers were for the Administrative Section, two for the Laboratory Section and one for the electronic mail system.

A new slide recorder of extremely high quality is in place since May 1991. The local IBM company has assisted the DM Section to help us fixing technical problems, as part of the general maintenance contract. Outside the contract, they have implemented all the new hardware pieces.

2.2.2 Software

During several months, we have explored the softwares used at the project and compare them to other softwares used at CDC to identify the optimal data entry and statistical software. In January 1991, SAS has been introduced as the main data management and statistical software in the project. However, because of the poor equipment, only a few computers have the required capacities for loading this software. Therefore EpiInfo is now used on site also because it was found to be the easiest software to use. It is mainly for quality control and preliminary analyses and has replaced SPSS. The current data entry software IQ was compared to EpiInfo and dBaseIII+ and remained the best choice mainly because of the real-time double entry verification feature. Several utilities were custom written for us by Dr Meade Morgan that have greatly facilitated the use of IQ to make the data entry screens and to translate IQ files into other softwares like EpiInfo and SAS. In addition, we hope to collaborate with the IQ's authors at Tulane university for improving the software.

FOXPRO is similar to dBase but with much more powerful features and has been used for the BCZ tracking system. The future of this package is still to be analyzed.

Since January 1991, all the computer softwares and DOS operating system versions as well as internal organisation of the files on the harddisk have been standardized. All the softwares have been updated from September 1990 through April 1991. The manuals and required licenses have been bought and have arrived by April 1991. New utilities have been implemented as regular hardware control tool, including virus detection.

2.3 Slide preparations:

At the V International Conference on AIDS in Africa in Kinshasa, October 12-14, the Data Management Section was responsible for making slides for the 50 participants at the pre-workshop, October 9-11, 1990. This resulted in a total of 300 slides for the pre-workshop in addition to 200 for Projet SIDA presentations.

3. Consultations

Consultants from the Statistics and Data Management Branch, CDC, HIV/AIDS Division, have spend a total of 2 months at Projet SIDA

From December 02-08, 1990, Dr. Meade Morgan, Ph.D , Branch Chief and Mr Tom Hutton, Computer Specialist overviewed the project data management infrastructure, developed recommendations (available on request) and planned the future assistance of their Branch for the project

From December 08-15, 1990, Mr Tom Hutton, did some basic programming, set up the electronic mail connection with Atlanta and fixed some equipment

From February 17 to March 2, 1991, Dr. Meade Morgan developed three major utilities for our data entry software IQ (program and documentation available on request), some more utilities for general data management facilities, started the tracking system for the BCZ study, as well as the required programming for quality control of that study (cf 2 1 2)

From May 04 to June 02, 1991, Mr Fred Ingram, Epidemiology and Surveillance Support Section Chief of M. Morgan's Branch is developing model programs for managing the considerable amount of data needed to be centralized on our Central Stockage Computer This mainly includes the quality control and management programs in SAS for the Perinatal immunology study. (cf 2 1 4)

4. Training

From December 1990 to February 1991, twelve physicians of the Project have received basic training in DOS, dBase, IQ and EpiInfo given by the team leader of the DM section, Mr Nanlele Kinkeka.

From March 8 to March 31, the three senior informaticians of the DM team and three other informaticians from Projet SIDA followed courses in dBase III+ programming and advanced DOS operating system The class was conducted at NADASYs in Kinshasa for a total of 30 hours

The local IBM computer specialist attached with our Section gave general hardware and computer use training and assistance to the main responsible computer users of each section and study team This included virus detection and prevention.

From April 15 to April 26, the DM Section Chief visited the CDC in Atlanta, to be trained in statistics and management of follow-up data, to discuss network implementation and other programming, hardware and software features

5. Plan for 1991 - 1992

1 Increase the skills of the current staff in programming and data management A precise training plan is being developed for the DM team and other employees of the project [*]

2 Ongoing effort will be pursued for the adjustment of the salary of the DM Section employees to the other employees of the Project

3. Depending on the resources available, a big effort will be done in the next few months for increasing and improving all the computer equipment at the project [*]

4 Decentralisation of data entry, quality control and backup systems on the study sites This includes the improvement and increase of the current infrastructure but also two new sites (Ngaliema, Mama Yemo P17) [*]

5 Ongoing development of the management of all the project data, including the organization of central stockage computer and improvement of quality control procedures [*]

6 Continue the technical and programming support from the Statistics and Data Management Branch of CDC [*]

7 Ongoing improvement of our main data base software IQ and continue investigation of the optimal software to be used at the Project

8 A Network system for Mama Yemo site will be installed by fall 1991

[*] Dependent on resources available

THE ADMINISTRATIVE SECTION

THE ADMINISTRATIVE SECTION

OVERVIEW

The Administrative Section provides administrative and fiscal support to the program activities conducted by Project SIDA. This support includes requisition of laboratory, clinic, and office supplies, maintenance and coordination of 18 vehicles, tracking expenditures by study and section, managing payroll and benefits for 200+ Project employees, and maintaining Project facilities. The Project SIDA administrative staff has a close working relationship with the U S Embassy's Joint Administrative Office (JAO) which provides the fiscal and procurement support for the Project.

STAFF

There are six members in the Administrative Section including the Project Administrator. By member, their duties and functions are:

Project Administrator Thomas F Walch

Directly supervises administrative staff and oversees all activities of the Administration Section, assures fiscal responsibility in purchasing and expenditures, and provides direct administrative liaison with JAO.

Cashier, Senior Secretary Bieme Afasole

Manages all petty cash disbursements to sub-cashiers in each section/study area, maintains time and attendance records for contract employees, prepares monthly payroll for non-contract employees, prepares and distributes bi-weekly payroll, prepares purchase orders for processing and signature.

Office Manager Kabakabu Mukambu (Claud)

Provides daily assistance in purchasing by obtaining price bids for disposable supplies, supervises the dispatcher and the inventory control clerk, assists cashier with payroll, assures maintenance of project structures and equipment.

Dispatcher Busangu Musezi (Ceasar)

Directs and coordinates the daily use of Project vehicles to support personnel and patient transport, provides security measures to prevent theft of vehicles, and tracks each vehicle to assure proper maintenance.

Secretary Walo Olangi

Provides secretarial assistance to the Administrator and the cashier, serves as alternate cashier during the cashiers absence for leave or illness

Procurement and Supply Clerk Leya Kafunda Mpası

Receives and inventories all supplies received at Projeı SIDA Tracks telex/cable notification of shipments of perishable laboratory supplies and other materials through the JAO's Shipping and Receiving Section

CONSULTATION

During the week of December 3 - 7, 1990, a Management Review Team consisting of CPT Douglas Dudevoir (AFIP), Ms Mary Ann Guerra (NIAID), Mr Dennis Olsen and Mr Michael Melneck (CDC), and Mr Jan Vielfont (ITM) conducted an on-site review at Projeı SIDA The purpose of the review was to assess current and proposed procedures for budget management at Projeı SIDA and to provide recommendations for Fiscal Year 1991 Action steps taken during the period January - May to adopt these recommendations are addressed in the Accomplishments section of this narrative

ACCOMPLISHMENTS**1 Management Costs**

Projeı SIDA staff recommended to the Management Review Team that certain costs be borne by each contributing agency on the basis of each agency's financial participation in Project activities These costs were defined as All direct operating expenses of the Data Management Section, the Support Laboratory, and all direct operating expenses of the Administration Section exclusive of costs for housing, international travel, and expenses related to maintenance of housing for the Administrator and the Project Director

In addition to this recommendation, it was also suggested that certain costs, such as authorized international travel for family members, expatriate rent, residential security, utilities, residential maintenance, and waste disposal be classified as fixed costs and charged against each agency's budget at the beginning of the fiscal year for each expatriate assigned by agency

Both of these proposals received the concurrence of the Management Review Team and were implemented and reported in the first quarter budget for FY 1991

Funding from WHO was received for two new activities for the fiscal year, the Neurological Study and the gP-120 study. Because there are certain restrictions in the use of these funds, all reimbursable costs must be treated as direct operations expenses. However, management costs for the ICAR have been negotiated at the same rate as CDC, NIH, and the AFIP. For the fiscal year these costs have been estimated at \$4,730. The ICAR has paid these costs as part of their first quarter reimbursement to Projet SIDA.

2 Cost Savings

The hiring freeze in place at the start of the fiscal year has continued with no staff replacements except for absolutely essential positions. At the beginning of the fiscal year, there was a total of 182 full-time and 24 temporary employees employed by the project. By June, 1991, that number has been reduced through attrition to 169 full-time personnel and 24 temporaries.

With closure of the UTEXCO Study and the TB Household Transmission Study, excess staff have been reorganized to support the Neurological and gP-120 studies and to provide much needed additional assistance to the Data Management Section.

Project policy is to continue to reduce staff through attrition, replacing individuals only in those positions deemed absolutely essential and after agency(s) concurrence, and shifting personnel from study to study as workload demands change.

3 Personnel

Dr. Heyward and Mr. Walch have pursued the issue of the severe economic impact of the rapid devaluation of the Zairian currency on Project employees with the Administrative Counselor and the Personnel Officer of the JAO. Possible alternatives proposed to ease the situation included (1) Dollarizing the payroll whereby each payday the amount of Zaires paid would be based on the current value of the Zaire against the dollar instead of a fixed amount of Zaires being paid with infrequent adjustments for inflation, (2) paying all employees in dollars, or (3) dropping out of the Embassy payroll system and establishing a Projet SIDA specific pay scale for all employees.

All three alternatives were vetoed by the JAO management. Dollarizing the payroll is against regulations established for the worldwide FSN payroll system and may violate United States Treasury laws. Unless the local currency collapses to the point where it is no longer used for trade or retail,

the JAO or any other official American Government agency is not permitted to pay in U S dollars Finally, dropping out of the Embassy system was considered to be against State Department policy for U S agencies employing foreign nationals

The JAO has authorized further steps in an attempt to keep salaries abreast of inflation in Zaire For Fiscal Year 1991, they will conduct at least six wage and benefit surveys in Kinshasa and will adjust personnel salaries and allowances accordingly There have been three such pay/benefit increases so far this fiscal year but the rate of inflation has been so high as to make the benefit of these increases negligible when converted to actual dollars

Job descriptions have been reviewed with employees assisting by submitting line item descriptions of daily duties and responsibilities These descriptions are being compared to the official position descriptions currently in use If an employees actual duties and responsibilities have increased since submission of the official position description, a request for position upgrade will be made

Twelve non-contract employees have been recommended by their supervisors to receive contracts These applications are currently being processed by the JAO Personnel Office.

Two requests for Merit Pay Increases were submitted to the JAO Personnel Office These requests are pending

TRAINING

Introductory and advanced computer training is being provided for key administrative staff The cashier, Bieme Afasole's receiving introductory instruction in Lotus and dBase III+ to assist the administrator in data entry and management of the budget documents The secretary, Walo Olangi's also receiving training in Lotus and dBase III+ and the office manager, Kabakabu Mukambu's receiving training in dBase III+ to assist in building and maintaining a complete inventory system

TRANSPORTATION

The vehicle fleet for Projet SIDA has been upgraded to include 11 long-bed Toyota Land Cruisers and 7 station wagons for patient and employee transport Three vehicles (Land Rover, Nissan Patrol, and Peugeot Station Wagon) were retired from service because of age and poor mechanical condition

BUDGET

Total expenditures for the first 6 months of the fiscal year were \$1,104,659 Funds available for this period were \$2,353,030 leaving a mid-year balance of \$851,629 Anticipated needs for the balance of the fiscal year include \$1,506,650 for current operations and \$353,456 in unobligated financial needs (See Attachment 1)

ATTACHMENT 1

PROJET SIDA
Unobligated Financial Requirements for
Fiscal Year 1991

Renovation		
CDT	\$6,387	
Office Space	85,000	
Prostitute Center	44,000	
Total renovation		\$135,387
Transportation		
3 Land Cruisers	100,000	
Total Transportation		\$100,000
Computer Hardware		
12 Compaq 386 computers (Includes computers, UPS stabilizers, printers)	78,000	
Two internal tape drives	1,200	
Hardware/software purchased by the CDC for Projet SIDA	12,569	
2 Compaq 286 computer with printer	4,600	
Total computer hardware		\$96,369
Computer consultancy visits		
Fred Ingram	12,000	
Tom Hutton	12,000	
Total consultancy visits		\$24,000
		=====
		355,756

SCIENCE
challenging
AIDS



ABSTRACT
FORM

-1-

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

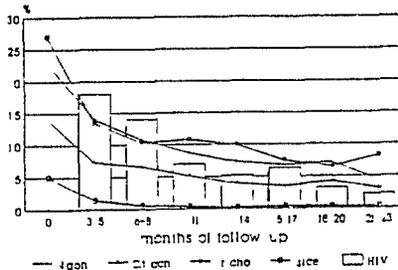
Abstracts must be prepared on the form and accompanied by 10 photocopies

THE IMPACT OF STD CONTROL AND CONDOM PROMOTION ON THE INCIDENCE OF HIV IN KINSHASA PROSTITUTES
Tuliza Mulivanda* Manoka AT* Nzila N* Way Way* St Louis M**/** Piot P*** Laga M***
* Projet SIDA Kinshasa Zaire, **C D C Atlanta US ***Institute of Tropical Medicine Antwerp Belgium

Objectives To determine the impact of an intervention programme including condom distribution and treatment for STD on the incidence of HIV and other STD among female prostitutes in Kinshasa

Methods Prostitutes were asked to return monthly to a "women's clinic" where they were interviewed about their sexual exposure examined and treated for STD and where condoms were freely distributed Every 3 months blood was drawn for HIV serology Trends in incidence of HIV and other STD as well as trends in sexual exposure were monitored over time

Results Until November 1990 434 initially HIV(-) women have been followed for a total duration of 22 months The mean follow up rate per month was 76 % ranging from 72 % to 89 % Sixty one (14 %) women seroconverted during the follow up period The incidence of HIV has been declining significantly (see figure) ranging from 18 %/year at the beginning of the intervention to 2 %/year in the last 3 months of the study Concurrently all other STD showed a declining trend in incidence



(Figure bars represent adjusted yearly incidence of HIV per 3 months period point 0 indicates prevalence of the STD at recruitment, all other points are monthly STD incidence rates STD monitored N gonorrhoeae by culture C trachomatis by antigen detection T vaginalis by direct microscopic exam and genital ulcer as a clinical diagnosis) Regular use of condoms with clients increased initially from 4 % at the start of the study to 55 % after 6 months and remained stable afterwards ranging from 48-62 % per month All except 4 women who seroconverted, admitted having used condoms irregularly Condom use with stable partners remained low throughout the study (<10 %) for all women The mean number of clients per week reported ranged from 5.5 to 6.8 and there was no significant trend during the follow-up period

Conclusions The intervention programme with condom promotion and STD treatment led to a significant decrease of HIV incidence in this population The incidence of STD declined as well but is still high Promotion of safer sex practices should therefore continue and be reinforced among this women and their sex partners

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) C12 Choice 2 Track/Category (letter and number) C1

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author Signature Tuliza Mulivanda
Print Presenting Author - Full Name Tuliza Mulivanda

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self-addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
COMMENTS _____



ABSTRACT FORM

SCIENCE
challenging
AIDS

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

W _____ T _____ C _____ I _____

THE IMPACT OF HIV INFECTION ON THE INCIDENCE OF STD IN HIGH RISK WOMEN

Malele Bazola* Manoka T Kivuvu M* Tuliza M* Edidi B* Behets F Heyward WL** Piot P***, Laga M***
* Projet SIDA Kinshasa Zaire ** CDC Atlanta USA *** Institute of Tropical Medicine Antwerp Belgium

Objectives To compare the incidence of STD in HIV(+) and HIV(-) prostitutes, as controlled for their sexual behavior

Methods A cohort of 430 HIV(-) and 180 HIV(+) prostitutes were followed monthly for a duration of 2 years with monthly STD check ups (N gonorrhoeae by culture C trachomatis by antigen detection T vaginalis by direct microscopic exam and genital ulcer genital warts and pelvic inflammatory disease as clinical syndromes) The comparison of STD incidence was stratified by sexual exposure (number of reported clients and level of reported condom use)

Results Both in the crude analysis and stratified analysis the incidence of gonorrhoea chlamydial infection pelvic inflammatory disease (with and without concurrent gonococcal and chlamydial infection) and trichomoniasis was similar in HIV(+) and HIV(-) women However HIV(+) women had a significantly higher incidence of genital ulcers and genital warts

	Monthly incidence of STD in		p
	HIV(-) women	HIV(+) women	
N gonorrhoeae	10.1%	12%	0.05
C trachomatis	6.4%	6.4%	0.9
T vaginalis	11%	12%	0.2
Genital ulcer disease	0.5%	2.3%	<0.001
Pelvic inflammatory disease	6%	5%	0.09
Genital warts	0.7%	3.1%	<0.001

Among HIV(+) women the incidence or recurrence of genital ulcer disease and genital warts was strongly associated with low T4 counts 30% of the HIV(+) women with at least one genital ulcer had T4 counts < 250 vs 11% of HIV(+) who never had an ulcer (p < 0.01) and 65% of those with an ulcer had a T4 count below 500 compared to 26% of those without an ulcer (p < 0.001) We observed a 10% failure rate to a 2 day treatment with TMP/SXT for genital ulcers but there was no difference between HIV(+) women (10.3% failure rate) versus HIV(-) women (10.0% failure rate)

Conclusion HIV infection increases the rate of recurrence and/or the susceptibility for genital ulcer disease and genital warts especially when immunity gets comprised Gonorrhoea chlamydial infection trichomoniasis and pelvic inflammatory disease seem to occur at similar rates in HIV(+) and HIV(-) women independent of their sexual behavior.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 (ABSTRACTS NOT CONSIDERED)

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) <u>C12</u>	Choice 2 Track/Category (letter and number) <u>C2</u>
---	--

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature Malele Bazola
Print Presenting Author's Full Name Malele Bazola

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
COMMENTS _____

bef

SCIENCE
challenging
AIDS



ABSTRACT
FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

to accompany the 10 photocopies

MATERNAL HIV INFECTION AND OTHER SEXUALLY TRANSMITTED DISEASES AND LOW BIRTH WEIGHT IN ZAIRIAN CHILDREN.
Kamenga Munkolenkole*, Manzila T*, Behets T*, Oxtoby M**, Brown C*, Sulu M, Nelson AM*,§, Edidi B*, Batter V*, Davachi F¶, Quinn TC, St Louis ME*,** *Projet SIDA, Kinshasa, Zaire, **CDC, Atlanta GA, USA, NIAID, Washington DC, Ngaliema Clinic, Kinshasa, §AFIP, Washington DC, ¶Mama Yemo Hospital, Kinshasa

Objectives To evaluate the effects of maternal HIV infection, STDs, and other factors on low birth weight (LBW)
Methods 350 HIV-infected and 280 uninfected women from Kinshasa in a study of perinatal HIV infection were examined for clinical HIV disease, culture, serology, and Chlamydiazyme for STDs, placental culture and histopathology, and lymphocyte phenotyping were performed
Results: The prevalence of LBW was nearly doubled among children of HIV-infected women (21% vs 11%, odds ratio 2.1, 95% CI 1.3-3.5) and mothers with other STDs (OR 1.9, 95% CI 1.0-3.8) In a multivariate model, HIV infection was a stronger correlate of LBW (P< .01) than other STDs (P= .06) There was no trend towards lower birth weight with lower maternal T4 levels In children of HIV+ women, the mean decrease in birth weight was 160gm (95% CI 102-218gm, P< .001), however, there was no difference in gestational age, length, or head circumference
Conclusions: Maternal HIV infection is an important risk factor for LBW, but does not affect other indices of fetal growth Maternal T4 lymphocyte levels, the best predictor of perinatal HIV transmission in this population, are not associated with LBW

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) <u>C13</u>	Choice 2 Track/Category (letter and number) <u>C2</u>
---	--

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature _____
 Print Presenting Author's Full Name KAMENGA MUNKOLENKOLE

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____

65

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

10 copies, 10 copies

MATERNAL FACTORS ASSOCIATED WITH PERINATAL HIV TRANSMISSION

St Louis, ME **, Kabagabo Uwa*, Brown C*, ***, Kamenga M*,
Davachi F****, Behets F*, Batter V*, Nelson AM*, *****,
Manzila T*, Quinn TC***, Oxtoby M**, Heyward WL*, ** *Projet SIDA,
Kinshasa, Zaire, **CDC, Atlanta, Georgia USA, ***NIAID, Washington DC,
Mama Yemo Hospital, Kinshasa; *AFIP, Washington

Objective: To evaluate characteristics of HIV-infected women associated with increased risk of perinatal HIV transmission in Kinshasa, Zaire
Methods. From 9/89 to 4/90, 350 HIV-infected and 280 uninfected pregnant women were evaluated by history, exam, lymphocyte phenotyping, tests for STDs, and placental histopathology HIV infection in children was assessed by serology, culture, clinical evaluation, and pathology in children who died HIV infection status was determined to date for 146 children born to HIV-infected women

Results: Risk of perinatal HIV transmission varied with maternal T4

Maternal Percent T4 lymphocytes	Perinatal HIV Transmission (%)	Positive HIV culture in child (%)	Infant Death (%)
<10%	77	60	31
10-19%	63	48	15
20-29%	49	45	12
>30%	23	19	6

There was no association between maternal STDs and perinatal transmission, no other maternal factor remained important in a multivariate model that include maternal %T4

Conclusion: Low maternal T4 lymphocyte levels are strongly associated with perinatal HIV transmission and death in children of HIV-infected women Other risk factors may emerge as transmission outcomes in additional children become known

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- Presentation Preference (check one) Oral Presentation Poster Presentation _____
- Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) C1 Choice 2 Track/Category (letter and number) C13

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature _____

Print Presenting Author's Full Name KABAGABO UWA

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
COMMENTS _____

66

SCIENCE
challenging
AIDS



FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

Abstracts must be submitted on this form and accompanied by 10 photocopies

INCIDENCE AND SOCIOECONOMIC CONSEQUENCES OF AIDS ORPHANS IN 422 FAMILIES WITH HIV-1(+) MOTHERS IN KINSHASA, ZAIRE

Kamenga, M*, Muniaka, Nkusu*, Batter, V*, DaSilva, M*, Ryder RW**/***, *Projet SIDA, Kinshasa Zaire, **CDC, Atlanta, GA, ***Mt Sinai School of Medicine, NY, NY

OBJECTIVES To calculate the yearly incidence, health and social consequences of becoming an AIDS orphan in Kinshasa (population = 4 million, HIV-1 seroprevalence=6%) METHODS From 1986 to 1990 422 newborn infants with HIV(+) mothers (case children) and their siblings who became AIDS orphans were compared with similarly aged children (control I) and their siblings of HIV(+) mothers who remained alive and age-matched children (control II) and their siblings of living HIV(-) mothers RESULTS AIDS orphan incidence for newborn children with HIV(+) mothers was 2.8/100 child years of follow-up (F/U) Each year 515.3 children per million Kinshasa population became AIDS orphans

Morbidity in uninfected child during F/U	Case(n=26)		Control I	Control II
	BMD	AMD	(n=26)	(N=26)
Acute Diarrhea*/Persistent Diar *	194/9	229/0	192/22	195/4
Acute Fever*/Pulmonary Infection*	300/9	326/23	336/26	413/5
Purulent Otitis Media*/Yrs Observation	0/22	40/18	12/60	8/76

BMD=Before Maternal Death, AMD=After Maternal Death, *No cases/100 Yrs Observation Socioeconomic status of Case parents (BMD), Case guardians (AMD) and Control I and II parents was similar Child care (clothes/shoes, school attendance, purchase of school books, nutritional status, morbidity) was similar during F/U in all 3 groups CONCLUSION Because all AIDS orphans (cases and siblings) was adopted by concerned extended families, no differences in the quality of child care and morbidity could be detected in the 3 groups of children during the 3 years of F/U Previous studies may have over-estimated the AIDS orphan incidence

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) C 13 Choice 2 Track/Category (letter and number) D 18

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature Nkusu Muniaka
Print Presenting Author's Full Name NKUSU MUNIAKA

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue-corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
COMMENTS _____

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

Abstract accompanied by 10 photocopies

LOW PREVALENCE IN HIV-INFECTED ZAIRIAN MOTHERS OF ANTIBODIES AGAINST GP120 NEUTRALIZING EPITOPES OF THE MN HIV-1 ISOLATE AND LACK OF ASSOCIATION WITH PERINATAL HIV TRANSMISSION.

Nsuami Malanda*, St Louis M*,**, George JR**, Brown C*,***, Ryder RW*, Behets F*, Mussey L*, Kamenga M*, Davachi, F****, Quinn TC***, Heyward WL**,** *Projet SIDA, Kinshasa, Zaire, **CDC, Atlanta, Georgia USA, ***NIAID, Washington DC, ****Mama Yemo Hospital, Kinshasa, Zaire

Objective: To evaluate whether antibodies directed against principal neutralizing domains (PND) of gp120 from the MN HIV-1 isolate are associated with lower risk of perinatal HIV transmission in Kinshasa

Methods: Cord blood sera from 235 children born to HIV-infected women in Kinshasa were tested for reactivity against the c53 peptide of an MN HIV-1 isolate by EIA. The child's HIV infection status was determined by a combination of viral culture, serologic, and clinical criteria. Results of peptide assays corresponding to DNA sequences of HIV-1 isolates from Kinshasa are pending.

Results: Overall, 30 (13%) of 235 Zairian women were reactive to the c53 peptide of gp120, compared to 30-50% of North American women. Serum from only 11 (5%) Zairian women yielded high-affinity antibody against the c53 peptide, 4 of the 9 women with both high affinity antibody and a known HIV infection outcome in the child had a child infected by HIV.

Conclusion: The low prevalence of antibody against gp120 isotopes of MN in HIV-infected women in Kinshasa and apparent lack of association with decreased perinatal infection suggests that any protective effect of these antibodies is a type-specific rather than group-specific effect.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

1. Presentation Preference (check one) Oral Presentation Poster Presentation _____
2. Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) C1 Choice 2 Track/Category (letter and number) A14

3. I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature _____
Print Presenting Author's Full Name NSUAMI MALANDA

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self-addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
COMMENTS _____

22-01-91



ABSTRACT FORM

SCIENCE
challenging
AIDS



SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE ITALY
16 21 JUNE 1991

Secretariat Sponsor RA _____ Date Received _____ Abstract # _____

DOES PREGNANCY IN HIV(+) WOMEN ACCELERATE PROGRESSION TO AIDS?
Nzila Nzilambi*, Laga M.**, Brown C*, Jingu M.*, Kivuvu M.*,
St Louis M.*, *Projet SIDA, Kinshasa, Zaïre, **IMT, Antwerp,
Belgium.

Objective To evaluate the contribution of pregnancy and of repeated STDs to accelerated progression to AIDS in HIV(+) women
Methods We reviewed clinical and immunological parameters in 3 groups of HIV(+) women. Group I=13 HIV(+) prostitutes who delivered between 10/89 and 10/90, Group II=13 non-pregnant HIV(+) prostitutes matched by percent T4 lymphocytes with women of group I, Group III=10 HIV(+) married women who delivered in the same period. The WHO clinical staging system for HIV infection was applied. Lymphocyte phenotyping was performed. Women were evaluated over a mean interval of 15 months that included the entire pregnancy and delivery.

Results

	Group I (n=13)		Group II (n=13)		Group III (n=10)	
	Before	After	Before	After	Before	After
% Women with STD		92		77		10
% T4 lymphocyte	25.4	23.3	26.1	25.2	24.7	25.5
% Clinical stage 1	77	38	92	77	80	80
% Clinical stage 2	8	54	8	15	20	20
% Clinical stage 3	15	8	0	8	0	0

Conclusions Both pregnancy and frequent STDs may contribute to accelerate progression of clinical HIV disease in this cohort. However, there was no observed trend to more rapid immunologic deterioration. Continued observation in this ongoing study will increase the statistical power to detect an effect.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

1. Presentation Preference (check one) Oral Presentation Poster Presentation
2. Important: Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) C2 Choice 2 Track/Category (letter and number) C13

3. I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature _____
Print Presenting Author's Full Name Nzila Nzilambi

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self-addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
COMMENTS _____

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16 21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

HIV SERONOTIFICATION AND COUNSELLING OF CHILDBEARING WOMEN IN KINSHASA, ZAIRE
 Batter, V **/, Malulu Makizayi*, Mbuyi, K *, Mbu, L *, Kamenga, M *, St Louis, M **/*** *Projet Sida, Kinshasa,, **Institute of Tropical Medicine, Antwerp, Belgium, ***CDC, Atlanta, GA, USA,

Objective To evaluate AIDS knowledge of childbearing women in Kinshasa, Zaire and the impact of HIV seronotification and counselling on their behaviour, planning of future pregnancies, and family life

Methods Of 432 women enrolled in a study on perinatal HIV transmission, 365 accepted being informed of their serostatus During a counselling session with a female physician a questionnaire was used for evaluation of AIDS knowledge (prior to notification) and response to seronotification

Results AIDS knowledge questions correctly answered (%)

Transmission modes	HIV(+) (n=187)	HIV(-) (n=178)
sexual	97	95
needles/transfusions	85	89
perinatal	68	72
Asymptomatic HIV-infection	62	35 (p< 001)

Response to seronotification 30% of the HIV(+) women did not want to inform their partner, 68% declared that their HIV infection and known entailed risks will not change their plans for future pregnancies

Conclusion These findings suggest that ongoing information campaigns have resulted in a good knowledge of HIV transmission modes However, specific, socio-culturally appropriate intervention programs for prevention of perinatally acquired HIV infection should be intensified.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) _____	C6	Choice 2 Track/Category (letter and number) _____	D22
--	----	--	-----

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature _____
 Print Presenting Author's Full Name MALULU MAKIZAYI

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____

SCIENCE
challenging
AIDS



ABSTRACT
FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16 21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abstr # _____

EDMONSTON-ZAGREB MEASLES VACCINATION IN HIV-INFECTED CHILDREN
 Mandala Kol*, Mayala B*, Cutts F**, Brown C*, †Davachi F‡,
 Deforest A§, Behets F*, Kamenga M‡, Quinn TC†, Markowitz L**,
 Oxtoby M** St Louis ME* *Projet SIDA, Kinshasa, Zaire, **CDC,
 Atlanta, GA, †NIAID, Washington DC, ‡Mama Yemo Hospital, Kinshasa,
 §Temple University, Philadelphia

Objective: To evaluate the safety and efficacy of Edmonston-Zagreb (EZ) vaccine in HIV-infected children at 6 months of age in Kinshasa, Zaire

Methods 187 children of HIV-seropositive (HIV+) mothers and 171 children of HIV-seronegative (HIV-) mothers received high-dose (5.0 log₁₀ IU) EZ vaccine 6 months of age and were seen at 7- and 14-day post-vaccination visits. Seroconversion was assessed by EIA in pre- and 3 months post-vaccination sera. HIV infection in some children was determined by viral culture.

Results: Following vaccination, there was no difference between 187 children of HIV+ and 171 HIV- women in cough (23 vs 22%), fever (10 vs 11%), diarrhea (24 vs 19%), or rash (1 vs 0%). No serious complications or deaths were attributable to vaccine. Seroconversion rates in were similar in children of HIV-seropositive (87%) and HIV-seronegative (90%) women. However, seroconversion rates (76 vs 89%) and mean titres were lower in a sample of 21 children known to be HIV-infected than in children not infected by HIV. In the HIV-infected children, lower T4 lymphocyte levels were associated with lower seroconversion rates and lower mean antibody titers (P<0.05). However, there have been no cases of measles after 7 days post-vaccination.

Conclusion: EZ vaccine appears equally safe in HIV-infected children. Seroconversion rates and antibody titers were lower in HIV-infected children, but clinical measles has not been observed.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 _____ Choice 2 _____
 Track/Category (letter and number) B7 Track/Category (letter and number) C13

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature _____
 Print Presenting Author's Full Name MANDALA KOL

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self-addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____

72

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

... and accompanied by 10 photocopies

BIRTH CONTROL METHODS (BCM) AND CONDOM USE IN 2 LARGE WORK FORCES IN KINSHASA, ZAIRE

Batter, Veronique*/**, Kaseka, N.*, Kashamuka M*, Ndilu, M *, Nanlele, K *, Walombua, M *, Doppagne, A.**, Ryder, R *** *Projet SIDA, Kinshasa, Zaire, *Institute of Tropical Medicine, Antwerp, Belgium, **BCZ, Kinshasa, Zaire, ***The Mount Sinai Medical Center, NY, USA

Objective To evaluate general use of BCM and the impact of HIV information campaigns on BCM in 2 population groups of different socioeconomic status (SES) in Kinshasa, during a 3 year period

Methods 6845 employees and spouses at business A (low SES) and 2313 at business B (high SES) were tested for HIV infection during their annual medical visit in 1987, sexual behavior and use of BCM were evaluated Individuals found HIV(+) and their partners were enrolled in a separate study Changes in behavior and use of BCM were followed each year in the HIV(-) cohort through 1989

Results Oral contraceptives and spermicides accounted overall for less than 10% of BCM

	Business A			Business B		
	<1987	1988	1989	<1987	1988	1989
BCM use in stable relations (%)	61	55	62	70	63	69
% Condom use	2	3	5	5	5	15
Sex with irregular partners (%)	42	11	15	18	17	17
% Systematic condom use	1	3	17	3	5	15

Conclusion Condom use has slightly increased as a BCM in stable relations, particularly in the highest SES group However, in 1989 more than 80% of all occasional sexual contacts were still unprotected

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) _____ D12 _____	Choice 2 Track/Category (letter and number) _____ D14 _____
---	---

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature _____
Print Presenting Author's Full Name **BATTER VERONIQUE**

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____

B

SCIENCE
challenging
AIDS



FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

Abstracts must be submitted on this form and accompanied by 10 photocopies

INCIDENCE OF EXTRA-MARITAL SEX, STD'S, HIV-1 INFECTION AND TUBERCULOSIS (TB) IN 10,325 INDIVIDUALS FOLLOWED FOR 2 YEARS IN KINSHASA, ZAIRE
Kaseka, Ngungu*, Batter, V*, Eleka, M*, Ryder R**/***, *Projet SIDA, Zaire, **CDC, Atlanta, GA, ***Mt Sinai School of Medicine, N Y , NY

OBJECTIVE To determine sexual behavioral practices and resultant health consequences among 6037 male workers, their 3925 spouses, and 364 female workers followed for 20,140 person-years of observation (PYO)

METHODS Between 1988 and 1990 all workers and the wives of male workers at 2 Kinshasa factories underwent annual HIV-1 serology testing, physical exams and questionnaire inquiry into their medical and sexual history

RESULTS The HIV-1 seroprevalence was 3.0% in 1988. During the 2-year study period the incidence of HIV-1 infection was 49/100 PYO for male workers, 42 for female workers and 48 for wives. The incidence of genital ulcer disease (GUD) was 3.1/100 PYO in the 98 individuals who seroconverted (seroincident cases-SC), 3.2 in the 9921 individuals who remained HIV(-) throughout the study (seronegative cases-SN) and 8.0 in the 307 individuals HIV(+) at enrollment (seroprevalent cases-SP) (P<0.01 SC + SN vs SP). The incidence of penile discharge was 1.8 for SC, 2.0 for SN and 1.8 for SP. SC reported 19.8 episodes of extra marital sex/100 PYO and SP had 14.6 episodes (P<0.05). SC men reported 9.1 episodes of sex with a prostitute/100 PYO while SN and SP men each reported 13.0 episodes (P<0.01 SC vs SN + SP). The incidence of TB in SN was 0.42 cases per 100 PYO and 2.7 in SP (P<0.05).

CONCLUSIONS The HIV seroincidence in a large group quite representative of the general population of Kinshasa was 48/100 PYO. SC were more promiscuous than SN. SP had 2-fold higher rates of GUD than SC or SN. The threshold for acquiring GUD may be lower in SP. TB incidence was 7-fold higher in SP than SN.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) C12 Choice 2 Track/Category (letter and number) C1

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature Ngungu Kaseka
 Print Presenting Author's Full Name NGUNGU KASEKA

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____



Secretariat Space RA _____ Date Received _____ Abst# _____

This abstract is accompanied by 10 photocopies

CHARACTERIZATION OF TRANSMITTERS OF M TUBERCULOSIS (M Tb) IN ZAIRE BY HIV-1 SEROSTATUS, LEVEL OF IMMUNOSUPPRESSION AND CLINICAL STATUS
Baende, Ekungola*, Klausner J**, Lelo U*, Willame J***, Kaboto M***, Ryder R*/****, *Projet SIDA, Kinshasa, Zaire, **Cornell University School of Med, N Y, NY, ***TB Center, Kinshasa, ****Mt Sinai School of Medicine, N Y, NY

OBJECTIVE To better define transmission dynamics of M Tb and HIV-1 in household contacts(HC) of index cases(IC) with pulmonary TB and HIV-1 infection

METHODS IC with TB (transmitters) and with HC with sputum cultures (+) for M Tb were compared with IC with TB (non-transmitters) and with HC who were sputum culture (-) for M Tb HC of HIV(+) IC were also compared with HC of HIV(-) IC

RESULTS

	<u>IC Transmitters(n=33)</u>		<u>IC Non-Transmitters(n=136)</u>	
	<u>HIV(+)[n=15]</u>	<u>HIV(-)[n=18]</u>	<u>HIV(+)[n=59]</u>	<u>HIV(-)[n=77]</u>
Index Cases				
Mean Age/% Male	28/20	28/28	33/45	32/45
% AIDS	33	--	5	--
% with chest cavity	55	86	51	62
Mean T4 count	383	998	204	990
<u>Household Contacts</u>	<u>With HIV(+) IC</u>		<u>With HIV(-) IC</u>	
Mean Age/Number/% Male	18/533/51		17/708/45	
% TB culture(+)/% HIV(+)	4 7/6 1*		3 8/2 1	

* p<0.005 HIV-1 prevalence in HC of HIV(+) IC vs prev in HC of HIV(-) IC, HC ever transfused, spouses of IC and children aged ≤ 4 years excluded

CONCLUSIONS HC of HIV(+) IC and HC of HIV(-) IC had similar rates of pulmonary M Tb HIV-1 prevalence was significantly greater in HC of HIV(+) IC compared to HC of HIV(-) IC HIV(-) IC who transmitted M Tb had higher pulmonary cavitation rates than HIV(-) IC who did not transmit

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) C 1 Choice 2 Track/Category (letter and number) C 12

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature Ekungola Baende
 Print Presenting Author's Full Name EKUNGOLA BAENDE

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanità Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____

15

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

... 10 photocopies

TUBERCULIN SKIN TEST REACTIVITY IN HIV-INFECTED ZAIRIAN CHILDREN AFTER BCG IMMUNIZATION
 Mayala, Mabasi*, Matadi N*, Zola B*, Mvula M*, Kabagabo U*, Kamenga M*, Brown C**, Manzila*, Davachi F§, Sulu M†, St Louis ME*, ¶
 *Projet SIDA, Kinshasa, Zaire, **NIAID, Washington, DC, §Mama Yemo Hospital, Kinshasa, †Ngaliema Clinic, Kinshasa, ¶CDC, Atlanta GA, USA

Objectives: To evaluate cell-mediated immunity in HIV-infected children by tuberculin and Candida skin test reactivity after BCG immunization
Methods: 350 children born to HIV-seropositive (HIV+) mothers and 282 children of HIV- mothers were vaccinated at birth with BCG At 12 months, children received Candida antigen and 2 TU tuberculin (RT-23) intradermally The transverse diameter of induration was recorded Using viral culture and serology, 176 children could be classified as being infected by HIV (n=21) or not infected by HIV (n=155)
Results:

	<u>Any Skin Reaction</u>			<u>Zone of Induration</u>	
	<u>HIV+</u>	<u>HIV-</u>	<u>P-value</u>	<u>HIV+</u>	<u>HIV-</u>
PPD	26%	50%	05	11mm	12mm
Candida	39%	22%	10	9mm	7mm

The BCG scar was noted in all children In HIV-infected children, a higher percent T8 lymphocytes better predicted anergy to both antigens (P< 02) than did a low percent T4 lymphocytes (P= 10)
Conclusions: Skin test reactivity to PPD is generally low despite uniform exposure to BCG Among the HIV-infected children, there is a trend toward lower reactivity to PPD but higher reactivity to Candida

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) B7 Choice 2 Track/Category (letter and number) C2

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature [Signature]
 Print Presenting Author's Full Name MAYALA MABASI

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____



SCIENCE
challenging
AIDS

ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16 21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

PERSISTENT DIARRHEA AND PERINATAL HIV INFECTION IN ZAIRE
 Thea, DM*/**, Kakanda k*, Kamenga M*, St Louis M*/***, Davachi F**** *Mbala M keusch GT** *Projet SIDA Kinshasa, Zaire, **Tufts-New England Medical Ctr, Boston, MA, USA, ***CDC Atlanta, GA, USA **** Mama Yemo Hospital, Kinshasa, Zaire

Objective To determine the incidence of persistent diarrhea (PD) (> 15 days), its environmental, pathogen specific risk factors and its relation to immunosuppression and mortality in perinatal AIDS infection

Methods 402 infants of 240 HIV+ and 192 HIV- mothers followed from birth were observed for 6 months for the development of diarrhea Acute diarrhea (AD) was evaluated with a questionnaire, physical and stool exam and T cell subset determination Infants with PD were reassessed on day 15 as before Bacterial and parasitic enteropathogens were sought by standard techniques With 12 month serology and HIV culture infants were grouped Gp1=mother+/infant+ Gp2=mother+/infant-, Gp3=mother-/infant-

Results 269 episodes of acute diarrhea and 16 episodes of PD were observed Incidence of PD among GP1 infants was 19/100 child-years (CY) compared with 3/100 CY in GP3 (p= 02) Mean age of infants with PD was 8 2 vs 7 2 of infants with AD (p= 03) 25% of all deaths were due to AD and 25% were due to PD Infants in GP1 (p= 003) but not GP3 were more likely to die if they had PD Data available to date is insufficient to demonstrate an association between PD and depressed T cell subsets, feeding behavior or specific enteropathogens

Conclusion PD was 6 times more common in HIV+ infants than HIV- controls and with acute diarrhea was the most common cause of death

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation _____ Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) _____	Choice 2 Track/Category (letter and number) _____
--	--

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature _____
 Print Presenting Author's Full Name _____

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____

ABSTRACT FORM

SCIENCE
challenging
AIDS



SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16 21 JUNE 1991

Secretarial Space RA _____ Date Received _____ Abst # _____

RECURRENT DIARRHEA AND PERINATAL HIV INFECTION IN ZAIRE
 Thea, DM*/**, Kakanda K*, Kamenga M*, St Louis M*/***, Davachi F**** *Mbala M, Keusch GT** *Projet SIDA Kinshasa, Zaire
 Tufts-New England Medical Ctr, Boston MA, USA, *CDC, Atlanta, GA, USA, **** Mama Yemo Hospital Kinshasa, Zaire

Objective To determine the incidence of repeated (>2) episodes of acute diarrhea (RD), their relation to persistent diarrhea (> 15 days) (PD), morbidity and mortality in perinatal AIDS infection

Methods 402 infants of 240 HIV+ and 192 HIV- mothers followed from birth were observed for 6 months for the development of diarrhea Acute diarrhea (AD) was evaluated with a questionnaire physical and stool exam and T cell subset determination Infants with PD were reassessed on day 15 as before Bacterial and parasitic enteropathogens were sought by standard techniques With 12 month serology and HIV culture infants were grouped Gp1=mother-/infant- Gp2=mother+/infant- Gp3=mothei-/infant-

Results 269 episodes of AD occurred, 122 in clusters of 2 or more The incidence of RD in Gp1 was higher with 116 episodes/100 child-years (CY) vs 49 episodes/100 CY than in Gp3 (p= 01) Incidence of RD in Gp2 and Gp3 was similar Overall, the relative risk was 8.47 for developing PD if RD was present (p< 001) Data available to date was insufficient to show an association between RD and immunosuppression or increased mortality

Conclusion RD (>2 episodes) was significantly more common in HIV+ infants than HIV- controls RD precedes PD significantly more often than single episodes and may itself contribute to hastening clinical decline

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation _____ Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) _____	Choice 2 Track/Category (letter and number) _____
--	--

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature _____
 Print Presenting Author's Full Name _____

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanità Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____

SCIENCE
challenging
AIDS



ABSTRACT
FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

Abstracts must be submitted on this form and accompanied by 10 photocopies

PHENOTYPIC ANALYSIS OF CD4+45RO+ T-CELLS IN ZAIRIAN WOMEN.
 Jeanne, Kasali-Mwamba *; Brown, C. *,**; Musey, L*; Manzila, T*;
 Davachi, F***; Atibu, L *; St. Louis, M*, ****; Lubaki, N*; Quinn, T**;
 Jackson, A***** *Projet SIDA, Kinshasa, Zaire; **NIAID, Washington DC;
 Mama Yemo Hospital, Kinshasa; *CDC, Atlanta, Georgia; *****Becton
 Dickinson Immunocytometry, San Jose, Ca

Objective: To study the CD4+CD45RO+ Memory or target T cells in HIV.
 Methods: Peripheral blood from 70 HIV+ and HIV- Zairian women was
 labelled with CD4(Leu3a) conjugated to peridinin chlorophyll
 protein(PerCP) and CD45RO(UCHL1) conjugated to FITC or Phycoerythrin (PE).
 For three color analysis, CD45RA(Leu-18)FITC, CD25(IL2R)PE or Leu8 (LeCAM-
 1) FITC were added Five parameter list mode data were collected on a
 FACScan flow cytometer and the results analyzed by LYSYS software.
 Results: "Memory" or "Target" T cells (CD45+,45RO+) averaged 67% of
 lymphocytes in HIV negative and 61% in confirmed positives, while an
 inverse was seen in the CD45RA+ population(26% and 31%) Cells "in
 transition" with low levels of both CD45 RA and RO antigens were reduced
 in HIV+ women CD4 T-cells with IL2R expression are decreased in HIV while
 the subset which bears all three antigens is increased. Absence of the
 homing associated Leu 8 marker (LeCAM-1) has been associated with CD4 T
 helper cells, although Leu-8 splits the CD45RO+CD4+ population, there was
 no change in that subset.
 Conclusion: The CD45RO negative CD4 cell bearing Leu 8 are increased in
 infected women, thus showing that multiple subsets of CD4 "memory" or
 "target" cells are involved in HIV.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation _____ Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) _____	Choice 2 Track/Category (letter and number) _____
--	--

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature _____

Print Presenting Author's Full Name _____

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanità Viale Regina Elena 299, 00161 Rome

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

Abstracts must be submitted on this form and accompanied by 10 photocopies

DECREASED LEVELS IN MEMORY (UCHL1) AND ACTIVATION (HLADR) SUBSETS OF T-CELLS IN INFANTS MAY INFLUENCE THE RAPID COURSE OF PERINATAL HIV INFECTION.

Brown, Christopher*, **; Kasali, M**; Musey, L**, Kamenga, M**; Manzila, T**, Davachi, F***; St. Louis, M**, ***; Lubaki, N**; Quinn, T*. *NIAID, Bethesda, MD, **Projet SIDA, Kinshasa, Zaire; ***Mama Yemo Hospital, Kinshasa, Zaire, ****CDC, Atlanta, GA.

Objective: To determine whether mean T-cell subset values unique to infants might predispose them to the more rapid course of perinatal HIV infection.

Methods: T-cell subsets in infected (+) and uninfected (-) maternal (M), cord (C), and infant (I) blood at 3, 6, 9 and 12 months were determined by dual color flow cytometry using leu3, leu2, leu4, TCR-1, UCHL1, CD45R, HLA DR, IL-2, leu11+19 labelling of whole blood in a mother-child cohort of 350 HIV+ and 200 HIV- mothers.

Results: While mean values of %T4 and %T8 did not differ significantly between M(-) and C(-), the mean % of T4 or T8 which expressed memory (T4+UCHL1+, T8+UCHL1+) or activation (T4+HLADR+, T8+HLADR+) were significantly lower in cord blood and in infants compared to their mothers regardless of serologic status (*p < 0.001).

	%T4	%T8	%T4+UCHL1+	%T8+UCHL1+	%T4+HLADR+	%T8+HLADR+
M(-)	41	32	55	21	72	28
C(-)	39	27	5.2*	3.5*	1.6*	4.8*

Conclusions: Memory and activation T4 and T8 subsets considered critical for host defense to HIV are significantly decreased in infants compared to adults. This difference may reflect the infants' level of immunologic immaturity and help explain their predisposition to a more rapid course of HIV disease. Correlative cytokines (TNF, IL-6) and T-cell subset values will be presented for (+) as well as (-) M, C, and I.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g., A5, D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) _____ <u>A13</u> _____	Choice 2 Track/Category (letter and number) _____ <u>A16</u> _____
---	---

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting, and 2) this is the only abstract I have submitted to the International Conference on AIDS on which I am the presenting author. Presenting Author's Signature Chris Brown
Print Presenting Author's Full Name Christopher Brown, M.D.

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat, Laboratory of Virology, Istituto Superiore di Sanità Viale Regina Elena 299, 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____

SCIENCE
challenging
AIDSABSTRACT
FORMSEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

Abstracts must be submitted on this form and accompanied by 10 photocopies

CHANGES IN B-CELL NUMBERS IN PERINATAL HIV INFECTION: EVIDENCE FOR
RESPONSE TO INFECTION AS EARLY AS BIRTH.

Mussey, Kavuka*, Brown, C*, **; Kasali, M*; Kamenga, M*; Tundru, A*; Davachi, F***; St. Louis, M****; Lubaki, N*; Quinn, T**. *Projet SIDA, Kinshasa, Zaire; **NIAID, Bethesda, MD; ***Mama Yemo Hospital, Kinshasa, Zaire; ****CDC, Atlanta, GA.

Objective: Due to the high frequency of bacterial infections in HIV infected children, we prospectively evaluated the timing and degree of B-cell changes in HIV infected (+) infants compared to uninfected (-) infants

Methods: B-cell percentages (% B-cells) were determined by flow cytometry using leu16 labelling of whole blood in a mother-child cohort of 350 HIV+ and 200 HIV- mothers (% B-cells) were compared for (-) and (+) who died (D+) before or were still alive (A+) at 1 year of age.

Results: Significant decreases in % B-cells, particularly in (D+), were seen at all sampled timepoints when (-), (A+) and (D+) were compared. In contrast, % B cells for (A+) in cord blood were significantly higher than (-) in cord blood, while cord blood values for (D+) and (-) did not differ.

	(-)	(+A)	(+D)	p value
cord blood % B-cells	10.4%	14%	9.8%	(-) vs (A+); p=.02
6 months % B-cells	28%	25%	22%	(-) vs (A+); p=.02
1 year % B cells	24%	17%	-	(-) vs (A+); p=.05

Conclusions: Differences in % B-cells in perinatal HIV infection occur as early as birth and persist to one year of age, with more marked changes seen in (D+) compared to (A+). The differences in cord % B-cells among (A+), (-) and (D+) suggest that some infants (A+) may have become infected prenatally. These data, in addition to early B-cell reactivity may relate to the overall level of B-cell dysfunction observed in HIV+ children as evidenced by their increased frequency of bacterial infections.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

1. Presentation Preference (check one) Oral Presentation Poster Presentation _____
 2. Important Indicate below the Track and Category code (e.g., A5, D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1
Track/Category (letter and number) A13

Choice 2
Track/Category (letter and number) A16

3. I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting; and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature Kavuka Mussey

Print Presenting Author's Full Name Kavuka Mussey

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to: 7th International Conference on AIDS, General Secretariat, Laboratory of Virology, Istituto Superiore di Sanità, Viale Regina Elena 299, 00161 Rome

SCIENCE
challenging
AIDS



ABSTRACT
FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

Abstracts must be submitted on this form and accompanied by 10 photocopies

HIV SPECIFIC IgG PROFILES IN ZAIRIAN CHILDREN WITH PERINATALLY ACQUIRED HIV INFECTION.
 Behets, Frieda*, **, Mbala, S*; Mama, A*, Mbisha, K*; Batter, V*, **, Mandala, M*; St. Louis, M*; Brown, C*, ***, Davachi, F****; Quinn, T***. *Projet SIDA, Kinshasa, Zaire; **ITM, Antwerp, Belgium; ***NIAID, Bethesda, MD, ****Mama Yemo Hospital, Kinshasa, Zaire.

Objective: To compare the presence and titers of HIV IgG antibodies in children born to HIV seropositive mothers at the age of 9, 12 and 15 months with results of HIV culture and clinical outcome.

Methods: A total of 324 HIV (+) pregnant women were enrolled in a prospective study. Sera were obtained from their children every 3 months since birth and analyzed by EIA and Western blot (WB). Consistent with previous findings in Kinshasa, children with ELISA (+) & WB (+) sera at 12 months were defined as HIV-infected. Paired 9 and 12 months sera were diluted to determine endpoint reactivity by ELISA.

Results:	9 Months	12 Months		
		HIV (+)	HIV (-)	Indeterminate
	HIV (+)	15	10	2
	HIV (-)	0	57	0

Preliminary data from 84 children demonstrated that of the 12 HIV-uninfected children who were seropositive at 9 months, no serum remained positive when diluted 1:25. In contrast, 14 of the 15 nine month sera from HIV-infected children remained positive at a 1:25 dilution. At 12 months, all of the infected children remained seropositive at 1:25 dilution and 12 had positive HIV cultures. Results will be completed on the remaining children and correlated with HIV IgG at 15 months and clinical outcome.

Conclusions: Our preliminary results suggest a high positive predictive value (100%) for 9 months sera that remain positive at a 1:25 dilution, however, even with a negative predictive value of 93.3%, low HIV antibody titer at 9 months does not necessarily exclude perinatally acquired HIV infection.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

1. Presentation Preference (check one) Oral Presentation Poster Presentation _____
2. Important Indicate below the Track and Category code (e.g., A5, D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) B7 Choice 2 Track/Category (letter and number) A3

3. I certify that: 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to the International Conference on AIDS on which I am the presenting author. Presenting Author's Signature Frieda Behets
 Print Presenting Author's Full Name Frieda Behets

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat, Laboratory of Virology, Istituto Superiore di Sanità, Viale Regina Elena 299, 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

Abstracts must be submitted on this form and accompanied by 10 photocopies

ANTIBODIES TO HIV p27 NEF PROTEIN IN 63 ZAIRIAN HIV SEROCONVERTERS
Edidi, Bazepeyo*; Behets, F*, **; Kambembo, L*; Tshebuye, M*; Kayigamba, K*; Brown, C*,
; Quinn, T. *Projet SIDA, Kinshasa, Zaïre; **Institute of Tropical Medicine, Antwerp, Belgium;
***National Institutes of Allergy and Infectious Diseases, Bethesda, MD.

Objective: To determine if antibodies to p27 nef can be detected before and at the time of seroconversion in a cohort of Zairian prostitutes.

Methods: A cohort of 575 initially HIV seronegative prostitutes was enrolled in a counseling and STD treatment program. Blood samples were obtained from each patient every three months. Seroconversion was monitored by ELISA (Vironostika, Organon) and Western blot (DuPont) and was documented by reactivity to both gag (p24) and env (gp41, gp120/160) reactivity. The Western blot patterns of all available sequential sera of seroconverters were screened for reactivity in the p27 region.

Results: Sera were available from 63 prostitutes who had seroconverted. Reactivity to p27 was observed in 11 (17.5%) of 63 sera at the time seroconversion was detected, 15 (23.8%) additional sera showed weak reactivity. Only 3 (4.3%) of the 69 samples collected up to 1 year before seroconversion demonstrated a weak reactivity in the p27 region.

Conclusions: Antibody reactivity for nef protein at 3 month intervals up to 1 year before seroconversion was a rare event in this cohort of sexually transmitted HIV seroconverters.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one), Oral Presentation _____ Poster Presentation _____
2 Important Indicate below the Track and Category code (e.g., A5, D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1
Track/Category (letter and number) A4a Choice 2
Track/Category (letter and number) A4

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting, and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature Edidi Bazepeyo

Print Presenting Author's Full Name Edidi, Bazepeyo

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self-addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat, Laboratory of Virology, Istituto Superiore di Sanita, Viale Regina Elena 299, 00161 Rome

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

Abstracts must be submitted on this form and accompanied by 10 photocopies

PREVALENCE OF SEXUALLY TRANSMITTED DISEASES (STD) IN CHILDBEARING WOMEN IN KINSHASA, ZAIRE, ASSOCIATED WITH HIV INFECTION

Mokwa, Kapia*; Batter, V*, **; Behets, F*, **; Laga, M**; Edidi, M*; Lebughe, J*, St Louis, M*, ***; Brown, C*, ***; Hayward, W***; Quinn T****. *Projet SIDA, Kinshasa, Zaire; **ITM, Antwerp, Belgium; ***CDC, Atlanta, GA; ****NIAID, Bethesda, MD.

Objective: To evaluate the prevalence of STD in childbearing women of different socioeconomic status (SES) in Kinshasa, Zaire

Methods: Of 8,521 pregnant women tested for HIV, a subset of 1,857 were screened for STDs at 6 geographically dispersed medical centers using RPR and TPHA for syphilis, EIA of endocervical swabs for chlamydia, culture for *N. gonorrhoeae* and *H. ducreyi*, and direct microscopy for trichomonas. Presence of ulcers was recorded. HIV was diagnosed with EIA and Western Blot.

Results: HIV prevalences were 4.7% among women attending peripheral health centers, 6.5% among women of low SES at a central hospital and 3.5% among women of high SES. STD prevalence was lowest in the high SES group. Overall prevalences (%) of STD by HIV-serostatus:

STD	HIV (+)	HIV (-)	p
Trichomonas	20.4	15.6	.04
Chlamydia	7.7	4.7	NS
TPHA (+)	6.2	2.1	<.001
Active syphilis	2.8	1.3	.04
Gonorrhoea	1.4	1.4	NS
Ulcer	1.8	2.1	NS

Conclusions: The prevalence of STD among pregnant women is lower in Kinshasa than in several other cities in Africa and does not vary greatly by SES. This may contribute to the relatively stable HIV prevalence among these women.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
 2 Important Indicate below the Track and Category code (e.g., A5, D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1

Track/Category (letter and number) C13

Choice 2

Track/Category (letter and number) C3

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting, and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature Kapia Mokwa

Print Presenting Author's Full Name Kapia Mokwa

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self-addressed blue-corner envelope provided to 7th International Conference on AIDS General Secretariat, Laboratory of Virology, Istituto Superiore di Sanità, Viale Regina Elena 299, 00161 Rome

ABSTRACT FORM

-24-

SCIENCE challenging AIDS



SEVENTH INTERNATIONAL CONFERENCE ON AIDS FLORENCE, ITALY 16-21 JUNE 1991

Secretariat Space RA

Date Received

Abstr #

Abstracts must be submitted on this form and accompanied by 10 photocopies

LABORATORY DIAGNOSIS OF PERINATAL HIV INFECTION: EXPERIENCE WITH A COHORT OF 350 HIV SEROPOSITIVE MOTHER-INFANT PAIRS FROM BIRTH TO AGE ONE YEAR.

Lubaki, Ndongala*, Brown, C**, Kasaali, M*, Bahets, F*, Munsey, L*, Manzila, T*, Davachi, F***, Cu, C****; St. Louis, M****; Nelson, A*, *****; Firpo, A*****; Saisun, J*****; Quinn, T*. *Projet SIDA, Kinshasa, Zaire; **NIAID, Bethesda, MD; ***Mama Yemo Hospital, Kinshasa, Zaire; ****CDC, Atlanta, GA; *****AFIP, Washington, DC; *****INRB, Kinshasa, Zaire

Objective: To determine the utility of varied laboratory tests, singly or in combination, to diagnose perinatal HIV infection at the earliest possible age in children born (CB+) to HIV (+) mothers

Methods: In 350 (CB+) and 250 children born (CB-) to HIV- mothers, we examined Western blot (WB), in vitro antibody production (IVAP), viral culture (VC), T-cell subsets, PCR, IgA and anti-p24 reactivity in tissues for evidence of perinatal HIV infection.

Results: Percent positive VC, IVAP, WB results are given for (CB-). Percent difference between values for CB- and VC+ are given for various T-cell subsets. T4, T8, T8+HLADR+(8DR) and T4+HIADR+(A1) and T8+TICHI1+(811)

	VC	IVAP	IgGWB	%T4	%T8	%8DR	%4DR	%8U
6 months	19	24	-	33	44	50	33	53
12 months	17	19	39	42	38	33	66	55

Conclusions: Used alone, no single test appears to be both sensitive and specific. Use of novel T-cell subsets in combination with other tests, may be useful for diagnosis as early as birth. Utility of various combinations will be examined based on PCR and viral culture results.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation
- 2 Important Indicate below the Track and Category code (e.g., A5, D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) B7 Choice 2 Track/Category (letter and number) C13

I certify that: 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting, and 2) this is the only abstract I have submitted to an international conference on AIDS on which I am the presenting author. Presenting Author's Signature Ndongala Lubaki
Print Presenting Author's Full Name Ndongala Lubaki

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS, General Secretariat, La Biodivita di Viubovy, Istituto Superiore di Sanita' Viale Regina Elena 293, 00101 Roma

FOR REVIEWERS USE A R Score Oral Poster Rejected
COMMENTS _____

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abat# _____

Abstracts must be submitted on this form and accompanied by 10 photocopies.

ELEVATION OF A HIGH-DENSITY HLADR+UCHL1+CD8+ T-CELL SUBSET IS SPECIFIC FOR HIV INFECTION: A 3-COLOR PHENOTYPING STUDY IN 197

ZAIRIAN ADULT PATIENTS.

Kasali, Myamba*; Jackson, A**; Brown, C*, ***; Musey, L*; St. Louis, M*,****; Lubaki, N*, Mwingura, G*; Quinn, T***. *Projet SIDA, Kinshasa, Zaire; **Becton-Dickinson, San Jose, CA; *** NIAID, Bethesda, MD; ****CDC, Atlanta, GA.

Objective: To evaluate the specificity of various CD8+ T-cell subsets in HIV infected (I+) and uninfected (I-) individuals.

Methods: Mean % values of CD3, CD4, CD8, HLADR(DR), high-density D(Dh) and UCHL1(U) were determined in peripheral blood by 3-color flow cytometry using FITC, PE and PerCP. To compare subset specificities, the cutoff for the % positive cells of a subset was set at the value which excluded the maximal number of I- while including 90% of I+.

Results: Elevations of the 8+Dh+U subset were more specific to HIV infection than changes in other subsets.

	CD4	CD8	CD3+DR+	CD8+DR+	CD8+DR+U±	CD8+Dh+U+
I+	55/61(90%)	55/61(90%)	56/61(92%)	55/61(90%)	55/61(90%)	55/61(90%)
I-	22/59(37%)	46/59(78%)	31/59(52%)	40/59(68%)	19/38(50%)	4/38(10%)

Conclusions: The 8+Dh+U+ subset appears to be very specific (90.5%) and high predictive (93.3%) for HIV infection. This specificity may be due to inclusion of HIV-specific CD8+ cytolytic cells. The distribution of this subset and its predictive value are being examined in different clinical stages of adult HIV infection.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation Poster Presentation _____
- 2 Important Indicate below the Track and Category code (e.g., A5, D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) B4 Choice 2 Track/Category (letter and number) A13

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting, and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature Myamba Kasali
Print Presenting Author's Full Name Myamba Kasali

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self-addressed blue corner envelope provided to 7th International Conference on AIDS, General Secretariat, Laboratory of Virology Istituto Superiore di Sanità, Viale Regina Elena 299, 00161 Rome

FOR REVIEWERS USE A B Score _____ Oral _____ Poster _____ Rejected _____

BY

04/10/13 02:187

003

SCIENCE
challenging
AIDS



ABSTRACT
FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

Abstracts must be submitted on this form and accompanied by 10 photocopies

HIV INFECTION OF CD34⁺ PROGENITOR CELLS IN VIVO
Stanley Sharilyn K*, Justement JB*, Kessler B**, Schnitman SM*, Greenhouse W*, Brown C*,
Muehling L***, Kapitz B***, Fauci AG*

*LIR, NIH, Bethesda, MD, USA, **NRM, Bethesda, MD, USA, ***Mama Yemo Hospital, Kinshasa, Zaire.

Objective: To evaluate whether CD34⁺ bone marrow progenitor cells are infected in HIV infected individuals at varying stages of disease

Methods: Seropositive patients from the NIH Clinical Center and the Mama Yemo Hospital in Kinshasa, Zaire at varying clinical stages of HIV infection underwent bone marrow aspiration and venipuncture. Bone marrow and peripheral blood mononuclear cells (BMMC and PBMC) were obtained and CD34⁺ progenitor cells were further purified from BMMC using a positive antibody-magnetic bead selection process. PBMC, BMMC and CD34⁺ cell subsets for each patient were studied by PCR, PBMC and monocyte coculture and methylcellulose colony forming cultures, according to standard techniques

Results: 8 out of 25 HIV culture positive Zairian patients had infection of the CD34⁺ progenitor cell subset. Of the 34 Zairian patients who were studied by PCR, 21 had a positive signal in the CD34⁺ subset, with the signal in 11 of these being equal to or greater than the signal from the CD34⁺ BMMC. The most significant laboratory differences in patients with CD34⁺ cell infection compared to those without infection of this subset were a lower average absolute T4 count (50 vs. 185), a lower average T4/T8 ratio (0.09 vs. 0.20) and a higher frequency of AIDS. Of 13 American patients who were asymptomatic or had KS only, none had evidence of infection of the CD34⁺ progenitor cells by either coculture or PCR. Three out of six American patients selected for low T4 counts (average <50) had infection of the CD34⁺ progenitor subset as assessed by strong signals on PCR analysis. Two of these patients have pancytopenia and clinically advanced AIDS. Surprisingly, the third patient is completely asymptomatic but has had a total T4 count of less than 20 for approximately one year. Methylcellulose cultures revealed decreased hematopoietic function in all HIV infected Zairian individuals when compared to seronegative Zairians, and the presence of infection in the CD34⁺ progenitor cell subset appeared to further modestly decrease total hematopoiesis

Discussion and Conclusion: A subset of HIV infected individuals have infection of the CD34⁺ bone marrow progenitor cells. These patients appear to have lower absolute T4 counts and a tendency to more advanced disease. These findings are important in the understanding of the hematopathology of HIV infection.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

1. Presentation Preference (check one) Oral Presentation Poster Presentation _____
2. Important Indicate below the Track and Category code (e.g., A5, D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1, Track/Category (letter and number) A16 Choice 2, Track/Category (letter and number) A5

3. I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature _____
Print Presenting Author's Full Name Sharilyn K. Stanley

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self-addressed blue-corner envelope provided to 7th International Conference on AIDS, General Secretariat, Laboratory of Virology, Istituto Superiore di Sanita' Viale Regina Elena 299, 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

filled in form and accompanied by 10 photocopies

HISTOLOGIC PATTERNS OF TUBERCULOSIS IN HIV-1 INFECTED ZAIRIANS
 Nelson, Ann Marie*/**, Okonda, Longengo*, Mukadi, Yaduil*, Moran, Cesar**,
 Mbuyamba, Lumanda***, Kabongo, Bowa*, Brown, Chris*/****, Mullick, Florabel**

*Projet SIDA, Kinshasa, Zaire, **Armed Forces Institute of Pathology, Wash DC,
 University Clinics, Zaire, *NIAID, Bethesda

OBJECTIVE To describe the histologic patterns of tuberculosis associated with clinical and immunologic stages of HIV infection in Zaire

METHODS Biopsy and autopsy specimens from HIV-1 seropositive patients with a histologic pattern consistent with tuberculosis and presence of acid fast bacilli (AFB) on the tissue were evaluated for the following pattern of lesions, type of necrosis (caseating (CN) vs suppurative (SN)), number of Langhans giant cells (LGH), granuloma formation and number of AFB. Histologic findings were correlated with WHO clinical stage and, if available, T-cell phenotyping, interdermal reaction (PPD, candida) and treatment history

RESULTS Preliminary results from 20 biopsies and 25 autopsies showed the following

WHO Stage	Pattern	Necrosis	#LGH	Granuloma	#AFB
2	WC	CN	+++	WF	+
3	C	CN/SN	++/+	WF/PF	+ / ++
4	C, M, A	SN/-	+/-	PF/-	++ / +++

(WC=well circumscribed, C=confluent, M=Miliary, A=Anergic, WF=well formed, PF=poorly formed)
 Histologic evidence of impaired cellular immune reaction and large numbers of AFB correlated with low %T4 and cutaneous anergy. Treatment did not affect findings in stage 4 disease

CONCLUSIONS Tuberculosis in this population of HIV-1 infected Zairians is associated with histologic and clinical evidence of progressive loss of cellular immune reaction. Anergic and miliary tuberculosis were the most common forms seen in WHO Clinical Stage 4 disease

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- Presentation Preference (check one) Oral Presentation Poster Presentation
- Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) B12 Choice 2 Track/Category (letter and number) C2

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature [Signature]
 Print Presenting Author's Full Name Ann Marie Nelson

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____

SCIENCE
challenging
AIDS



ABSTRACT FORM

SEVENTH INTERNATIONAL CONFERENCE
ON AIDS
FLORENCE, ITALY
16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst# _____

JUN 1991

INFECTIONS FOUND AT AUTOPSY IN ZAIRIAN AIDS PATIENTS
 Okonda, Lengengo*/**, Nelson, Ann Marie*/***, Kayembe, Mukendi**, Lusamuno, Nkembo*/****, Libakali, M'pendo*, Likofu, Bangala*, Angritt, Peter***
 *Projet SIDA, Kinshasa, **University Clinics, Kinshasa, ***Armed Forces Institute of Pathology, Wash DC ****Mama Yemo Hospital, Kinshasa

OBJECTIVE To describe the types and frequency of infections found at autopsy in HIV-1 infected Zairians with AIDS

METHODS Autopsies from suspected AIDS cases at University and Mama Yemo Hospitals, Kinshasa and Karawa hospital in rural Zaire were studied HIV-1 serology was performed on sera obtained by post-mortem cardiac puncture Routine and special stains for microorganisms were done on all cases

RESULTS	Males (n=26)	Females (n=36)	Total (n=62)
Tuberculosis	54%	36%	44%
Bacterial Pneumonia	46%	36%	40%
Candida	8%	31%	21%
CMV	8%	14%	11%
Cryptococcus	8%	14%	11%
Toxoplasma	0	14%	8%
Schistosoma	4%	8%	6%
Other	12%	19%	15%

Only 1 case (<2%) of pneumocystis was found 50% of patients had more than one infection, 20% had 3 or more 80% of infections were disseminated

CONCLUSIONS The predominate infections in Zaire differ from those reported in the US and Europe Factors include endemic disease prevalence and accessibility to adequate diagnosis and treatment

Tuberculosis was the most common infection, the sex distribution reflects that of tb in the general population

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- Presentation Preference (check one) Oral Presentation Poster Presentation _____
- Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) B6 Choice 2 Track/Category (letter and number) B12

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author Presenting Author's Signature OKONDA
 Print Presenting Author's Full Name OKONDA LENGENGE

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____



ABSTRACT FORM

-29-

SCIENCE challenging AIDS

SEVENTH INTERNATIONAL CONFERENCE ON AIDS FLORENCE, ITALY 16-21 JUNE 1991

Secretariat Space RA _____ Date Received _____ Abst # _____

COMPARISON OF CLINICAL AND EPIDEMIOLOGICAL ASPECTS OF ENDEMIC AND AIDS-ASSOCIATED KAPOSI'S SARCOMA, KINSHASA, ZAIRE
 Kanda, Bangabiau*, Nelson, Ann Marie**/***, Kayembe, Mukendi*, Okonda, Lengengo*/**, Mazebo, Paku, *Angritt, Peter***, Kalengayi, Mbowa*
 *University Clinics, Kinshasa, Zaire, **Projet SIDA, Kinshasa, ***Armed Forces Institute of Pathology, Wash DC

OBJECTIVE To describe the change in the prevalence and clinical presentation of Kaposi's sarcoma (KS) in a University dermatology service since the onset of the AIDS epidemic in Zaire

METHODS Consultation records (1985-1989) of patients with known or suspected HIV-1 infection and KS were reviewed for age, sex, clinical status and location of lesion(s). The results were compared with the same parameters for cases seen in the service prior to 1983. Case follow-up for incidence in sexual partners is being done

RESULTS 57/391 (16%) consultations seen had Kaposi's sarcoma, compared to 75/60,522 (0.12%) in the earlier series

	1961-1983	1985-1989
Male	5	2
Female	1	1
Average Age	40 yrs	35 yrs
Location		
Distal Extremities	77%	35%
Other	23%	65%
General Health	good	all AIDS

Preliminary follow-up identified KS in sexual partners of 3 index cases

CONCLUSIONS Kaposi's sarcoma has increased dramatically in our service since the onset of AIDS. Females are affected almost as frequently as males in our population. KS occurs at a younger age. Lesions were more likely to be disseminated and to occur in atypical sites than the endemic form. Preliminary data suggest the possibility of sexual transmission.

ABSTRACTS RECEIVED AFTER 28 JANUARY 1991 CANNOT BE CONSIDERED

- 1 Presentation Preference (check one) Oral Presentation _____ Poster Presentation
- 2 Important Indicate below the Track and Category code (e.g. A5 D12) in which you believe your abstract should be programmed (see track/Category list on reverse side for codes)

Choice 1 Track/Category (letter and number) B6 Choice 2 Track/Category (letter and number) C3

3 I certify that 1) this abstract has not been published elsewhere or submitted for presentation at another national or international meeting and 2) this is the only abstract I have submitted to 7th International Conference on AIDS on which I am the presenting author. Presenting Author's Signature _____
 Print Presenting Author's Full Name Kanda Bangabiau

Airmail or Express this original Abstract Form plus 10 photocopies (along with one copy of the Abstract Information Form plus four photocopies) in the self-addressed blue corner envelope provided to 7th International Conference on AIDS General Secretariat Laboratory of Virology Istituto Superiore di Sanita Viale Regina Elena 299 00161 Rome

FOR REVIEWERS USE A _____ R _____ Score _____ Oral _____ Poster _____ Rejected _____
 COMMENTS _____

91

PROJET SIDA PUBLICATIONS· 1986 - 1991

- 1 Colebunders R, Mann JM, Francis H et al La Clinique du SIDA en Afrique Med Mal Inf 1986 5:350-5
- 2 Mann JM, Francis H, Kashamuka M, et al ELISA Readers and HIV Antibody Testing in Developing Countries Lancet 1986, June 28:1504. (letter)
- 3 Mann JM, Snider DE, Francis H et al. Association Between HTLV-III/LAV Infection and Tuberculosis in Zaire JAMA 1986,3:346. (letter)
- 4 Mann JM, Colebunders RL, Francis H et al. Natural History of Human Immunodeficiency Virus Infection in Zaire. Lancet 1986; 11 707-10
- 5 Mann JM, Francis H, Davachi F et al. Risk Factors for Human Immunodeficiency Virus Seropositivity Among Children 1-24 Months Old in Kinshasa, Zaire Lancet 1986;11 654-7
- 6 Mann JM, Francis H, Quinn TC et al HIV Seroprevalence Among Hospital Workers in Kinshasa, Zaire. JAMA 1986;256 3099-3102.
- 7 Mann JM, Francis H, Davachi F et al Human Immunodeficiency Virus Seroprevalence in Pediatric Patients 2 to 14 Years of Age at Mama Yemo Hospital, Kinshasa, Zaire Pediatrics 1986; 78 673-7
8. Mann JM, Francis H, Quinn TC et al. HIV Seroincidence in a Hospital Worker Population Kinshasa, Zaire. Ann Soc Belge Med Trop 1986, 66 245-50
- 9 Quinn TC, Mann JM, Curran J et al AIDS in Africa An Epidemiologic Paradigm, Science 1986, 234 955-63.
- 10 Mann JM, Quinn TC, Francis H et al Prevalence of HTLV-III LAV in Household Contacts of Patients with Confirmed AIDS and Controls in Kinshasa, Zaire JAMA 1986, 256.721-4.
- 11 Mann JM, Francis H, Quinn TC, et al Surveillance for AIDS in a Central African City, JAMA 1986; 255:3255-59
- 12 Piot P, Colebunders R, et al Clinical Manifestations and Natural History of HIV Infection in Adults Western J Med 1987, 147:709-712
- 13 Mann JM, Quinn TC, Piot P et al Condom Use and HIV Infection Among Prostitutes in Zaire. N Eng Journal of Med 1987, 316 345 (letter)

92

- 14 Colebunders RL, Mann JM, Francis H et al. Evaluation of a Clinical Case Definition of AIDS in Africa. Lancet 1987; 1:492-4
- 15 Colebunders R, Francis H, Mann JM et al. Slow Progression of Illness Occasionally Occurs in HIV Infected Africans. AIDS 1987;1:65 (letter)
- 16 Colebunders R, Mann JM, Francis H et al. Generalized Papular Pruritic Eruption in African Patients with Human Immunodeficiency Virus Infection. AIDS 1987; 2:117-21.
- 17 Colebunders R, Francis H, Mann JM et al Persistent Diarrhea Strongly Associated with HIV Infection in Kinshasa, Zaire. Am J of Gastro 1987, 82 859-64.
- 18 N'Galy B, Mann JM, Colebunders RL et al Seroprevalence HIV au sein d'une population de patients neuro-psychiatriques a Kinshasa, Zaire Annales de la Soc Belge de Medecine Tropicale 1987, 67 291-4
- 19 Colebunders R, Greenberg AE, Nguyen-Dinh P et al. Evaluation of a Clinical Case Definition of AIDS in African Children AIDS 1987, 1:151-3.
- 20 Nguyen-Dinh P, Greenberg AE, Mann JM, Ndoko K et al. Absence of Association Between Plasmodium falciparum Malaria and Human Immunodeficiency Virus Infection in Children in Kinshasa, Zaire Bull WHO 1987; 65:607-13.
- 21 Colebunders R, Lebughe I, Kapita B et al Cutaneous Reactions to Trimethoprim-sulfamethoxazole in African Patients with the Acquired Immunodeficiency Syndrome Ann Int Med 1987; 107 599-600 (letter)
22. Colebunders R, Greenberg AE, Francis H et al Acute HIV Illness Following Blood Transfusion in Three African Children. AIDS 1987, 2:125-127.
- 23 Colebunders R, Mann JM, Francis H et al Herpes Zoster in African Patients: A Clinical Predictor of Human Immunodeficiency Virus Infection J Infect Dis 1988; 157:3314-8
- 24 Colebunders R, Francis H, Mann JM et al. Parotid Swelling and HIV Infection. Archives of Otolaryngology, Head and Neck Surgery 1988; 114 330-2
- 25 Greenberg AE, Nguyen-Dinh P, Mann JM, Ndoko et al. The Association between Malaria, Blood Transfusions, and HIV Seropositivity in a Pediatric Population in Kinshasa, Zaire. JAMA 1988; 259.545-9

- 26 Colebunders R, Lebughe I, Muepu M et al BCG Vaccine Abscesses are Unrelated to HIV Infection JAMA 1988; 259:352 (letter).
- 27 Nzila N, De Cock K, Forthal D, Ryder RW et al. The Prevalence of Infection with Human Immunodeficiency Virus Over a 10-year Period in Rural Zaire. N Eng J Med 1988,318;276-279
28. N'Galy B, Ryder RW. Epidemiology of HIV Infection in Africa. J Acq Immun Def Syndr. 1988,1.551-558.
29. Ryder RW, Hassig SE The Epidemiology of Perinatal Transmission of the Human Immunodeficiency Virus AIDS, 1988,2:S83-S90.
- 30 N'Galy B, Ryder RW, Kapita B et al. Human Immunodeficiency Virus Infection Among Employees in an African Hospital N Eng J Med 1988;319 1123-1127.
- 31 Mhalu SM, Ryder RW. Blood Transfusion and AIDS in the Tropics. Bailliere's Clinical Tropical Medicine and Communicable Diseases 1988, 3 (1) 157-166
- 32 DeCock KM, Colebunders R, Francis H, Nzilambi N, Laga M, Ryder RW, Bondjoko M, McCormick JB, Piot P. Evaluation of the WHO Clinical Case Definition for AIDS in Rural Zaire. AIDS 1988,2:219-221.
- 33 Ryder RW, Piot P Epidemiology of HIV infection in Africa. Bailliere's Clinical Tropical Medicine and Communicable Diseases 1988, 3(1) 106-126
- 34 Nguyen-Dinh P, Greenberg AE, Kabote N et al. Plasmodium falciparum in Kinshasa, Zaire in Vitro Drug Susceptibility Studies. Am J Trop Med Hyg 1987; 38 217-219
35. Francis H, Mann JM, Colebunders RL et al. Serodiagnosis of the Acquired Immune Deficiency Syndrome by Enzyme Linked Immunosorbent Assay Compared to Cellular Immunologic Parameters in African AIDS Patients and Controls Am J Trop Med and Hyg. 1988; 39:641-6
- 36 Colebunders R, Lusakumunu K, Nelson AM et al. Persistent Diarrhoea in Zairian AIDS Patients: An Endoscopical and Histological Study. GUT 1988; 29:1687-91.
- 37 Mann JM, Nzila N, Piot P, N'Galy B et al HIV Infection and Associated Risk Factors in Female Prostitutes in Kinshasa, Zaire AIDS 1988; 2 249-54.
38. Colebunders R, Kapita B, Nekwei W et al. Breast-feeding and Transmission of Human Immunodeficiency Virus Type 1 Infection (letter) Lancet 1988, 11 1487.

39. Colebunders RL, Braun M, Nzila N, Dikilu K, Ryder RW
Evaluation of the World Health Organization Clinical Case
Definition of AIDS Among Tuberculosis Patients in Kinshasa,
Zaire J Infect Dis 1989;5,902-3.
40. Ryder RW, Nsa W, Hassig SE, Behets F, Rayfield M, Bayende E.
et al. Perinatal Transmission of the Human Immunodeficiency
Virus. One Year Follow-up of 475 Infants Born to
Seropositive Women in Zaire. N Eng J Med 1989;320:1637-1642.
41. Colebunders RL, Ryder RW, Nzila N et al. HIV Infection in
Patients with Tuberculosis in Kinshasa, Zaire. Am Review
Respir Dis 1989,139:1082-1085
42. Piot P, Laga M, Ryder RW, Chamberland ME Epidemiology of
Heterosexual Spread of HIV. Current Topics in AIDS
1989;2 11-31
43. Colebunders RL, Lebughe I, Nzila N, Kalunga D, Francis H,
Ryder RW, Piot P. Cutaneous Delayed-type Hypersensitivity in
Patients with Human Immunodeficiency Virus Infection in
Zaire J Acq Immun Def Syndr 1989;2 576-578
44. Spielberg F, Mulanga KC, Ryder RW, Kifuani NK, Harris J,
Bender TR, Heyward WL, Quinn TC Field Testing and
Comparative Evaluation of Rapid, Visually Read Screening
Assays for Antibody to Human Immunodeficiency Virus. Lancet
1989,1:580-584.
45. Greenberg AE, Ntumbanzondo M, Ntula N, Howell J, Davachi F.
Hospital-based Surveillance of Malaria-related Paediatric
Morbidity and Mortality in Kinshasa, Zaire. Bull WHO 1989;
67 189-96.
46. Greenberg AE, Nguyen-Dinh P, Davachi F et al Intravenous
Quinine Therapy of Hospitalized Children with Plasmodium
falciparum Malaria in Kinshasa, Zaire. Am J Trop Med Hyg
1989; 40 360-4
47. Hassig SE, Perriens J, Baende E et al An Analysis of the
Economic Impact of HIV Infection Among Patients at Mama Yemo
Hospital, Kinshasa, Zaire. AIDS 1990, 4 883-887
48. Colebunders R, Francis H, Duma M, et al. HIV-1 infection in
HIV-1 Enzyme-linked Immunoassay Seronegative Patients in
Kinshasa, Zaire. Int J STD and AIDS 1990, 1:330-334.
49. N'Galy B, Bertozzi S, Ryder RW Obstacles in the Optimal
Management of HIV Infection/AIDS in Africa. J Acq Immun Def
Syndr 1990;3 430-437

95

1990 3:403-412.

- 51 Jager H, N'Galy B, Perriens J, Nseka K, Davachi F, Kabeya M, Rauhaus G, Peyerl G, Ryder RW, Rehle T. Prevention of Transfusion-associated HIV Transmission in Kinshasa, Zaire: HIV Screening Is Not Enough. AIDS 1990;4 571-574.
- 52 Spielberg F, Mulanga K, Quinn TC, Ryder RW, Kifuanı NK, Harris J, Bender TR, Heyward WL, Tam MR, Auditore-Hargreaves K. Performance and Cost-effectiveness of a Dual-rapid Assay System for Screening and Confirmation of Human Immunodeficiency Virus Type-1 Seropositivity. J Clin Microbiol 1990;28 303-306.
- 53 Ryder RW, Ndilu M, Hassig SE, Kamenga M, Sequeira D, Kashamuka M, Francis H, Behets F, Colebunders RL, Dopagne A, Kambale R, Heyward WL. Heterosexual Transmission of the Human Immunodeficiency Virus Type One Among Employees and Their Spouses at 2 Large Businesses in Zaire. AIDS 1990;4 725-732.
- 54 Behets F, Bertozzi S, Kasali M, Kashamuka M, Atikala L, Brown C, Ryder RW, Quinn TC. Successful Use of Pooled Sera to Determine HIV-1 Seroprevalence in Zaire With Development of Cost-efficiency Models. AIDS 1990;4 737-741.
- 55 Colebunders RL, Bahwe Y, Nekwei W, Ryder RW, Perriens J, Nsimba K, Turner A, Francis H, Lebughe I, Vander Stuyft P, Piot P. Incidence of Malaria and Efficacy of Oral Quinine in Patients Recently Infected with Human Immunodeficiency Virus in Kinshasa, Zaire. J Infect. 1990, 21:167-173.
- 56 Hassig SE, Kinkela N, Nsa W, Kamenga M, Ndilu M, Francis H, Ryder RW. Prevention of Perinatal HIV Transmission: Are There Alternatives to Pre-pregnancy Serological Screening in Kinshasa, Zaire. AIDS 1990; 4:913-916.
- 57 Schaffer N, Hedberg M, Davachi F et al. Trends in HIV-1 Seropositivity in a Pediatric Emergency Ward Population, Kinshasa, Zaire. AIDS 1990; 4:1231-6.
- 58 Colebunders R, Heyward WL. Surveillance of AIDS and HIV Infection: Opportunities and Challenges. Health Policy 1990, 15:1-11.
- 59 Behets F, Edidi B, Quinn T, Atikala L, Bishagara K, Nzila N, Laga M, Piot P, Ryder RW, Brown C. Detection of Salivary HIV-1 Specific Antibodies in High-risk Populations in Zaire. J Acq Immun Def Syndr 1991; 4:183-187.
- 60 Kamenga M, Ryder RW, Jingu M, Mbuyi N, Mbu L, Behets F, Brown C, Heyward WL. Sexual Behavior Change Associated with Low HIV-1 Seroconversion in 149 Married Couples with Discordant HIV-1 Serostatus - Experience at an HIV

- Counselling Center in Zaire AIDS 1991; 5 61-7
- 61 Braun MM, Badı N, Ryder RW, Baende E, Mukadı Y, Nsuamı M A Retrospective Cohort Study of the Risk of Tuberculosis Among Childbearing Women with Human Immunodeficiency Virus Infection in Zaire. Am Rev Respir Dis 1991; 143 501-4.
 - 62 Irwin K, Bertrand J, Ndilu M, Kashawa M, Chirczi M, Makolo M, Kamenga M, Nzila, Ngaly B, Ryder R, Peterson H, Lee N, Winge P, O'Reilly K, Rufo K. Knowledge, Attitudes, and Beliefs About HIV Infection and AIDS Among Healthy Factory Workers and Their Wives, Kinshasa, Zaire. Soc Sci Med 1991, 32.917-30.
 - 63 Chirimmwani B, Okonda L, Nelson AM. Lymphome et Schistosomes a Schistosoma mansoni : Compte rendu d'une observation Archives d'anatomie et de cytologie pathologiques 1991, 39 (1-2) · 59-61.
 - 64 Nelson Am, Firpo A, Kamenga M, Angritt P, Mullick F. Pediatric AIDS and Perinatal HIV-I Infection in Zaire Epidemiological and Pathological Findings. In Greco, et al (eds); Pediatric AIDS Progress in AIDS Pathology, Vol 3 (in press)
 - 65 Ryder R, Manzila T, Baende T, Kabagabo U, Behets F, Batter V, Paguot E, Binyingo E, Heyward WL Evidence from Zaire that Breastfeeding by HIV-I Seropositive Mothers Is Not a Major Route for Perinatal HIV-I Transmission But Does Decrease Mortality AIDS (in press)
 - 66 Keusch GT, Thea DM, Kamenga M, Kakanda K, Mabala M, Brown C, Davachi F Persistent Diarrhea Associated with AIDS. Scan J Inf Dis (in press)
 - 67 Nelson AM, Hassig S, Kayembe M, et al. HIV Seroprevalence and Mortality at University Hospital, Kinshasa, Zaire AIDS (in press)
 - 68 Van Dyck E, Rossan R, Duhamel M, Behets F, Laga M, Nzila N, Bygdeman S, Van Henvens - Wijn H, Piot P Antimicrobial Sensitivity of Neisseria Gonorrhoea in Zaire High Level Plasmid - mediated Tetracycline Resistance in Africa. J Gen Urin Infect (in press)
 - 69 Laga M, Manoka A, Nzila N, Ryder R, Behets F, Van Dyck E, Piot P. Genital Chlamydial Infection Among Prostitutes in Kinshasa. Prevalence, Incidence, Risk Factors and Interaction with HIV Human Chlamydial Infections. Ed. W.R Bowie et al Cambridge University Press, Cambridge, U K (in press)
 - 70 Colebunders R, Nelson A, Lusakumunu K, Lebughe I et al Diarrhea in African Patients with Human Immunodeficiency

Virus Type 1 Infection. German Journal of Gastroenterology
(in press)

PROJET SIDA ABSTRACTS. 1987 - 1991.

- 1 Greenberg AE, Nguyen-Dinh P, Mann JM, Kaboto N, Colebunders RL, Quinn TC et al The Association Between HIV Seropositivity, Blood Transfusions and Malaria in a Pediatric Population of Kinshasa, Zaire. III International Conference on AIDS June 1-5, 1987, Washington, D.C.
- 2 Colebunders RL, Greenberg AE, Nguyen-Dinh P, Ndoko K, Lebughe I, Piot P et al Evaluation of a Clinical Case Definition of Pediatric AIDS in Africa. III International Conference on AIDS June 1-5, 1987, Washington, D.C.
- 3 DeCock MK, Colebunders RL, Nzila N, Francis H, Piot P, McCormick JB et al Evaluation of the WHO Case Definition of AIDS in Rural Zaire III International Conference on AIDS. June 1-5, 1987, Washington, D.C.
4. Nzila N, Colebunders RL, Mann JM, Francis H, Nseka K, Curran JW et al HIV Blood Screening in Africa. Are There No Alternatives? III International Conference on AIDS. June 1-5, 1987, Washington, D C
- 5 N'Galy B, Colebunders RL, Pania MM, Mussa M, Francis H, Mann JM HIV Seroprevalence Among Patients Hospitalized With Neuropsychiatric Illness in Kinshasa, Zaire. III International Conference on AIDS. June 1-5, 1987. Washington, D C
- 6 Colebunders RL, Francis H, Duma M, Quinn TC, Groen VG et al HIV Infected Patients With a Negative HIV ELISA Serology? III International Conference on AIDS. June 1-5, 1987, Washington, D C
- 7 Archibald DW, Essex M, Sank J, Mann JM, Francis H, Quinn TC et al Antibodies to HIV in Cervical and Oral Secretions of Female Prostitutes in Zaire III International Conference on AIDS. June 1-5, 1987, Washington, D.C
- 8 Lubaki N, Rowland J, Francis H, Duma MM, Kasali M, Quinn TC et al. Comparison of 6 ELISA Assays for Detection of HIV antibody in African sera III International Conference on AIDS. June 1-5, 1987, Washington D C.
9. Quinn TC, Francis H, Kline R, Duma MM, Sension M, Riggan C et al Evaluation of a Latex Agglutination Assay Using Recombinant Envelope Polypeptides for Detection of Antibody to HIV III International Conference on AIDS June 1-5,

1987, Washington D C

- 10 Ryder RW, Bertrand W, Colebunders RL, Kapita B, Francis H, Lubaki N. Community Surveillance for HIV Infection in Zaire III International Conference on AIDS. June 1-5, 1987. Washington, D C Abstract No T.7.6
- 11 N'Galy B, Ryder RW, Kapita B, Francis H, Quinn T, Mann JM, et al Continuing Studies on the Natural History of HIV Infection in Zaire. III International Conference on AIDS. June 1-5, 1987, Washington D C Abstract No. M.3.6.
- 12 N'galy B, Kayembe K, Mann JM, Ryder RW, Mbesa H, Francis H HIV Infection in African Children With Sickle Cell Anemia III International Conference on AIDS, June 1-5, 1987, Washington D.C. Abstract No MP 61
- 13 Nguyen-Dihn P, Greenberg AE, Ryder RW, Mann JM, Kabote N, Francis H, et al Absence of Association Between Seropositivity and Plasmodium Falciparum Malaria in Kinshasa, Zaire III International Conference on AIDS June 1-5, 1987, Washington D C; Abstract No MP 73
- 14 Nzilambi N, Ryder RW, Behets F, Francis H, Bayende E, Nelson A, Mann JM et al Perinatal HIV Transmission in Two African Hospitals III International Conference on AIDS. June 1-5, 1987, Washington D C; Abstract No.Th 7 6.
- 15 Francis H, Lubaki N, Duma MP, Ryder RW, Mann JM, Quinn TC et al Immunologic Profiles of Mothers in Perinatal Transmission of HIV Infection III International Conference on AIDS. June 1-5, 1987, Washington D C, Abstract No.Th 9.2
- 16 DeCock KM, Nzilambi N, Forthal D, Ryder RW, Piot P, McCormick JB, et al Stability of HIV Infection Prevalence over 10 Years in a Rural Population in Zaire, Africa III International Conference on AIDS June 1-5, 1987 Washington, D.C, Abstract No WP 43
- 17 Sension MG, Nzila N, Duma MP, Ryder RW, Quinn TC, Linnan M, et al Does Concomitant HIV Infection and Measles Infection in African Children Lead to Increased Morbidity and Mortality? III International Conference on AIDS. June 1-5, 1987 Washington D.C, Abstract No THP 159
- 18 Nguyen-Dinh P, Greenberg AE, Colebunders RL, Schable CA, Sulzer AJ, Kapita B HIV infection, AIDS, and Plasmodium falciparum Malaria in an Adult Emergency Ward Population in Kinshasa, Zaire Presented at the Thirty-Sixth Annual Meeting of the American Society of Tropical Medicine and Hygiene, Los Angeles, California, November 1987 Abstract 165.

- 19 Nsa W, Ryder RW, Francis H et al Congenital HIV Transmission in a Large Urban Hospital in Kinshasa. Second International Conference on AIDS and Associated Cancers in Africa. October 7-8, 1987 Naples, Italy, Abstract No F-1
- 20 Baende E, Ryder R, Behets F et al Congenital HIV Transmission at an Upper-middle Class Hospital in Kinshasa Second International Conference on AIDS and Associated Cancers in Africa, October 7-9, 1987 Naples, Italy; Abstract No F-2
- 21 Nelson A, Anderson V, Ryder RW et al. Placental Pathology in HIV Seropositive Mothers in Kinshasa. Second International Conference on AIDS and Associated Cancers in Africa October 7-9, 1987 Naples, Italy, Abstract No F-3
- 22 Mulanga K, Francis H, Nseka M, Ryder RW Assessment of a Rapid Latex Agglutination Test in Zaire Second International Conference on AIDS and Associated Cancers in Africa, October 7-9, 1987 Naples, Italy, Abstract No. F-49
- 23 Nelson AM, Kayembe M, Okonda L, Mulanga K, Hassig S, Kalengayi M HIV Seroprevalence in 500 Deaths at University Hospital (UH), Kinshasa, Zaire IV International Conference on AIDS. June 12-16, 1988 Stockholm, Sweden
- 24 Stefan Wiktor, Mann J, Nzila N, Francis H, Blattner W, Quinn T Prevalence of HIV-I Antibodies Among Female Prostitutes in Zaire IV International Conference on AIDS. June 12-16, 1988 Stockholm, Sweden
- 25 Brown C, Koenig S, Grove S, Powell D, Viscidi R, Colebunders R, Ryder RW, Fauci A, Quinn T Antibody Dependant Cellular Cytotoxicity (ADCC)-inducing Antibodies Against HIV-1 in Zairian Patients IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No 2180
- 26 Brown C, Colebunders R, Powell D, Koenig S, Viscidi R, Ryder RW, Fauci AS, Quinn T Development of Antibody-dependent Cellular Cytotoxicity (ADCC) in Transfusion Acquired HIV-1 Infection IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No 2182
- 27 Nzila N, Ryder RW, Colebunders R, Ndilu M, Lebughe I, Kamenga M, Kashamuka M, Brown C, Francis H Married Couples in Zaire with Discordant HIV Serology. IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No 4059
- 28 Nsa W, Ryder RW, Baende E, Kashamuka M, Francis H, Behets F, Davachi F Mortality from Perinatally-acquired HIV Infection in African Children IV International Conference on AIDS, June 12- 16, 1988, Stockholm, Sweden, Abstract No. 4126

- 29 Irwin K, Bertrand J, Ndilu M, N'Galy B, Lee N, Rufo K, Peterson B, Wingo P, O'Reilley K, Ryder RW. Attitudes Towards AIDS, HIV Infection and Condom Use in Healthy Textile Workers and Their Wives in Kinshasa, Zaire IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No 5091
- 30 Colebunders R, Kapita B, Nekwei W, Bahwe Y, Baende E, Ryder RW Breast-feeding and Transmission of HIV. IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No. 5103.
31. Mvula M, Ryder RW, Manzila T, Matela B, Da Silva M, Mosengo M, Oxtoby M, Onoratto I. Response to Childhood Vaccinations in African Children with HIV Infection IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No 5107
- 32 Mvula M, Ryder RW, Oxtoby M, Baende E, Nsuami M, Nsa W, Lobengo B, Lelo U, Kashamuka M, Onoratto I Measles and Measles Immunization in African Children with Human Immunodeficiency Virus IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No. 5112
- 33 Hassig S, Ryder RW, Nsa W, Utuchidi M, Francis H, Mudibany N, Paquot E Prevention of Perinatal HIV Transmission in Africa: Are There Alternatives to Antenatal Screening? IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No 5120
- 34 Francis H, Duma M, Colebunders R, Ryder RW, Piot P, Quinn T Evolution of IgG and IgM Antibodies in Early Progressive HIV Infection in Kinshasa, Zaire. IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden; Abstract No. 5134
- 35 Vercauteren G, Lauwereys G, Colebunders R, Nzila N, Duma M, Van der Groen G, Ryder RW, Piot P Absence of HIV2 Infection Among Zairian Tuberculosis Patients IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No. 5535
- 36 Greenberg AE, Nsa W, Ryder RW, Matadi N, Kashamuka M, Hassig S, Davachi F, Nguyen-Dinh P Plasmodium falciparum Malaria in Children with Progressive HIV Infection in Kinshasa, Zaire IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden; Abstract No. 5546
- 37 Bahwe Y, Colebunders R, Nekwei W, Lebughe I, Ryder RW Incidence of Malaria and Efficacy of Antimalarial Treatment for Malaria in Patients Recently Infected With HIV IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No 5548

- 38 Colebunders R, Lebughe I, Kapita B, Nzila N, Ryder RW. Cutaneous Delayed Type Hypersensitivity in Patients with HIV Infection in Zaire IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden; Abstract No. 5555.
39. Kabeya CM, Spielberg F, Kifuanı N, Ryder RW, Heyward W and Quinn T Comparison of Rapid HIV Antibody Screening Assays, Mama Yemo Hospital, Kinshasa, Zaire IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden; Abstract No 5595
- 40 N'Galy B, Ryder RW, Francis H, Hassig S, Lubaki N, Duma M, Nguyen-Dinh P, Colebunders R. HIV Prevalence in Zaire, 1984 to 1988. IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden; Abstract No. 5632.
- 41 Nelson AM, Anderson V, Ryder RW, Francis H, Kashamuka M, Nsa W, Baende E Placental Pathology as a Predictor of Perinatal HIV Infection in Infants Born to HIV Seropositive Women in Kinshasa, Zaire IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden; Abstract No 6585
- 42 Kabagabo U, Ryder RW, Behets F, Binyingo M, Breden K, Francis H Developmental and neurologic abnormalities in African children with perinatally acquired HIV infection IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No. 7662
- 43 Nekwei W, Colebunders R, Bahwe Y, Lebughe I, Francis H, Ryder RW Acute manifestations of HIV infection following blood transfusion IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No. 7701.
- 44 Ndilu M, Sequeira D, Hassig S, Kambale R, Colebunders R, M Kashamuka, Ryder RW Medical, social and economic impact of HIV infection in a large African factory. IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden, Abstract No. 9583
- 45 Ryder RW, Nsa W, Behets F, Vercauteren G Perinatal HIV transmission in two African hospitals One year follow-up IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden; Abstract No. 4128
46. Ryder RW, Rayfield M, Quinn T, Kashamuka M, Francis H, Vercauteren G, Piot P Transplacental HIV transmission in African newborns IV International Conference on AIDS, June 12-16, 1988, Stockholm, Sweden; Abstract No 5123.
- 47 Brown C, Koenig S, Powell D, Ryder RW, Fauci A, Quinn T Neutrophil Mediated Antibody-dependent Cellular Cytotoxicity (ADCC) Against HIV-1, III International Conference on AIDS, September 14-16, 1988, Arusha, Tanzania; Abstract No. PS 3.2.

102

- 48 Nelson A, Perriens J, Colebunders R, Lebughe I, Ndilu M, Nzila N, Marsala R, Ryder RW Cervical Pap Smear Abnormalities and HIV Seropositivity in Kinshasa, Zaire. III International Conference on AIDS, September 14-16, 1988, Arusha, Tanzania, Abstract No PS 2.6.
- 49 Kashamuka M, Lubaki N, Edidi B, Hassig S, Behets F, Kambembo L, Ryder RW. Immunological Profiles of Infants With Suspected Perinatally-acquired HIV Infection. III International Conference on AIDS, September 14-16, 1988, Arusha, Tanzania, Abstract No W 3.6.
- 50 Kapita B, Ryder RW, Milangu M, Perriens J, Nyst M, Musengela M. AZT Treatment of Patients with AIDS at Mama Yemo Hospital, Kinshasa, Zaire III International Conference on AIDS, September 14-16, 1988, Arusha, Tanzania; Abstract No W 4 3.
- 51 Nzila N, Laga M, Bomboko B, Behets F, Hassig S, Ryder RW. STD Prevention Program in a Cohort of Prostitutes, Kinshasa, Zaire III International Conference on AIDS, September 14-16, 1988, Arusha, Tanzania, Abstract No PS 7 4
- 52 Kamenga M, Kashamuka M, Ndilu M, Hassig S, Dopagne A, Irwin K, Ryder RW Impact of HIV infection in two large Kinshasa Businesses III International Conference on AIDS, September 14-16, 1988, Arusha, Tanzania, Abstract No W 6 6
- 53 Colebunders R, Perriens J, Karahunga C, Ryder RW, Dikilu K, Willame T, Nzila N HIV Infection in Patients With Tuberculosis in Kinshasa, Zaire III International Conference on AIDS, September 14-16, 1988, Arusha, Tanzania, Abstract No. TP 46
- 54 Manzila T, Nsa W, Ryder RW, Hassig S, Kashamuka M, Behets F. Perinatal HIV Transmission in Two African Hospitals: One Year follow-up III International Conference on AIDS, September 14-16, 1988, Arusha, Tanzania, Abstract No. FP 2
- 55 Perriens J, Karahunga C, William JC, Kaboto M, Pauwels P, Colebunders R. Mortality, Treatment Results and Relapse Rates of Pulmonary Tuberculosis in African HIV(+) and HIV(-) Patients V International Conference on AIDS, Montreal, Canada. June 4-9, 1989
- 56 Mugaruka Z, Perriens J, N'Galy B, Baende E, Kahotwa J, Kapita B Oral Manifestations of HIV Infection in African patients V International Conference on AIDS, Montreal, Canada June 4-9, 1989
- 57 Kayembe M, Nelson A, Ilunga N, Angritt P, Kalengayi M et al Pathology of HIV infection in Zaire V International Conference on AIDS Montreal, Canada June 4-9, 1989.

- 58 Holland S, Colebunders RL, Francis HL, Khondi M, Kapita B, Quinn TC et al Tumor Necrosis Factor (TNF) in the Plasma of Africans Infected with HIV V International Conference on AIDS, Montreal, Canada June 4-9, 1989
- 59 Perriens J, Mussa M, Luabeya M, Kayembe K, Colebunders RL, Kapita B. A case-definition of AIDS Dementia Complex for Use in African Patients V International Conference on AIDS, Montreal, Canada June 4-9, 1989.
- 60 Brown C, Quinn TC, Lubaki N, Perriens J. Blood and Cerebrospinal fluid (CSF) Lymphocyte Phenotyping and HIV-1 P24 Antigen (AG) Detection in HIV-1 Infected (HIV+) Zairians With and Without Neurologic Symptoms V International Conference on AIDS, Montreal, Canada June 4-9, 1989.
- 61 Brown C, Perriens J, Lubaki N, Fauci A, Quinn T. Antibody Dependent Cellular Cytotoxicity (ADCC) in Blood and Cerebrospinal Fluid (CSF) of HIV-1 Infected Zairian Patients V International Conference on AIDS, Montreal, Canada June 4-9, 1989
- 62 Behets F, Edidi B, Atikala L, Quinn TC, Brown C. Field Evaluation for the Detection of HIV-1 Specific IgG Antibodies (HIV-AB) in Saliva: a Cost-effective and Accurate Alternative to Blood Testing V International Conference on AIDS, Montreal, Canada June 4-9, 1989.
- 63 Gerniers M, Kabeya M, Kasali M, Pauwels P, Perriens J Utilization d'un test rapide au latex pour prevenir la transmission du HIV par transfusion dans les soins de sante primaire V International Conference on AIDS, Montreal, Canada June 4-9, 1989
- 64 Nsiangana Z, Nelson A, Nzila N, Laga M, Edidi B Cervical Lesions and HIV Infection in a Cohort of Prostitutes in Kinshasa, Zaire V International Conference on AIDS, Montreal, Canada June 4-9, 1989.
- 65 N'Galy B, Ryder RW, Kamenga M, Kapita B Suggestion of a Stabilization of HIV Infection in Selected Populations in Zaire Between 1986 and 1989 V International Conference on AIDS, June 4-9, 1989, Montreal, Canada; Abstract No. W G 026
- 66 Ryder RW, Hassig S, Ndilu M, Behets F, Nanlele K, Malele B, Bishagara U, Kashamuka M Extramarital/Prostitute Sex and Genital Ulcer Disease (GUD) are Important HIV Risk Factors in 7068 Male Kinshasa Factory Workers and their 4548 Wives. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No M A O 35
- 67 Kamenga M, Jingu M, Hassig S, Ndilu M, Ryder RW, Behets F, Brown C Condom use and Associated HIV Seroconversion

- Following Intensive HIV Counselling of 122 married Couples in Zaire With Discordant HIV Serology V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No T D O 35
- 68 Manzila T, Baende E, Kabagabo U, Paquot E, Ryder RW, Colebunders R Inability to Demonstrate a Dose-response Effect Between Receipt of Mother's Milk and Perinatally-acquired Infection (PI) in a Cohort of 114 Infants Born to HIV(+) Mothers. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No. W G O 1
- 69 Mposo N, Engele B, Bertozzi S, Hassig S, Ryder RW. Prospective Quantification of the Economic and Morbid Impact of Perinatal HIV Infection (PI) in a Cohort of 245 Zairian Infants Born to HIV(+) Mothers V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No. T H O 8
- 70 Nsa W, Manzila T, Kabagabo U, Mvula M, Ryder RW. Validation of a Case Definition for Perinatally-acquired AIDS in Africa V International Conference on AIDS, June 4-9, 1989, Montreal, Canada; Abstract No Th.G O 34
- 71 Hassig S, Perriens J, Baende E, Bishagara U, Ryder RW, Kapita B The Economic Impact of HIV Infection in Adult Admissions to Internal Medicine at Mama Yemo Hospital V International Conference on AIDS, June 4-9, 1989, Montreal, Canada; Abstract No T H O 9
- 72 Laga M, Nzila N, Manoka A, Kivuvu M, Behets F, Ryder RW, Edidi B, Plot P High Prevalence and Incidence of HIV and Other Sexually Transmitted Diseases (STD) Among 801 Kinshasa Prostitutes. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No Th A O 21
- 73 Kamenga M, Ryder RW, N'Galy B, Behets F, Ngoy T, Liambi A, Ngandu K. An HIV Serosurvey in the General Population of Kinshasa appears Feasible. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada; Abstract No M.G.O.17.
- 74 Behets F, Kasali M, Ndilu M, Brown C, Ryder RW, Quinn T Determination of HIV-1 Seroprevalence in a Cohort of 8000 Individuals in Kinshasa, Zaire Using pooled Sera Compared to Testing of Individual sera V International Conference on AIDS, June 4-9, 1989, Montreal, Canada; Abstract No M G.O 3
75. Plot P, Van Dyck E, Ryder RW, Nzila N, Laga M Serum Antibody to Haemophilus ducreyi as a Risk Factor for HIV Infection in Africa, but not in Europe. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada;

Abstract No M A O 32

- 76 Badi N, Ryder RW, Nsuami M, Matela B, Nsa W High HIV-associated Infant Mortality Correlates With Poor Post-partum Maternal Health. 18 Months Follow-up of 477 Children Born to HIV(+) Mothers in Zaire V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No T B P 205
- 77 Mbuyi K, Jingu M, Mbu L, Nzila N, Ryder RW Intensive HIV Counselling Following Serostatus Notification is Associated With a low Divorce Rate in 122 Serodiscordant Zairian Married couples. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No. W.D.P.2.
- 78 Baende E, Ryder RW, Halsey N, Donnenberg A, Quinn T Equally Poor Response to Tetanus Vaccine in HIV Seropositive and Seronegative Mothers in Zaire V International Conference on AIDS, June 4-9, 1989, Montreal, Canada; Abstract No M B.P.31
- 79 Kabagabo U, Breden K, Binyingo M, Elonga S, Ryder RW. Developmental Abnormalities may occur Before Other Clinical Manifestations of perinatally-acquired HIV infection a Cohort Study of 119 Zairian Children Born to Seropositive Mothers. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No T B P 181
- 80 Hassig S, Manzila T, Nsa W, Kashamuka M, Ryder RW Anthropometric Measures in a Cohort of Children Born to HIV(+) Women in Kinshasa, Zaire V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No. T B P 204
- 81 Hassig S, Nsa W, Manzila T, Kashamuka M, Ryder RW The Natural History of HIV Infection in Twin Pairs Born to HIV(+) Women in Kinshasa, Zaire V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No. W.G.P.8.
- 82 Nzila N, Laga M, Kivuvu M, Manoka A, Mwangura G, Ryder RW HIV Risk Factors in Steady Male Sex Partners of Kinshasa Prostitutes V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No T A P 90
- 83 Nzila N, Laga M, Kivuvu M, Mokwa K, Manoka A, Ryder RW. Evaluation of Condom Utilization and Acceptability of Spermicides Among Prostitutes in Kinshasa, Zaire. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No W A.P 96
- 84 Ryder RW, Nsa W, Francis H, Hassig S, Behets F, Vercauteren G, Piot P, Quinn T HIV IgG Antibody at the Age 12 or 18 Months but not HIV IgM Antibody at Birth or Age 3 Months

- Correlates With Clinical Evidence of Perinatally-acquired HIV Infection V International Conference on AIDS, June 4-9, 1989, Montreal, Canada; Abstract No. TH B 625.
- 85 Brown C, Atibu L, Kline R, Ryder RW, Nelson A, Quinn T. Prevalence of HIV-1 p24 Antigen in Different Populations at Risk for HIV-1 Infection in Zaire a Comparison of three Commercial assays V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No Th B P 186.
- 86 Brown C, Nzila N, Atikala L, Behets F, Ryder RW, Quinn T HTLV-1 Antibody Prevalence in Patient Populations in Zaire. Analysis of Western Blot Patterns V International Conference on AIDS, June 4-9, 1989, Montreal, Canada; Abstract No T B P 107.
- 87 Oxtoby M, Ryder RW, Manzila T, Hassig S, Behets F Correlation of Hypergammaglobulinemia with HIV Infection in a Large Cohort of African Infants V International Conference on AIDS, June 4-9, 1989, Montreal, Canada; Abstract No W G P 9
- 88 Kapita B, Milangu M, Nyst M, Musongela K, Chalhoub E, Ryder RW An Open Trial of Zidovudine (AZT) in 17 Zairian Patients With AIDS V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No W B P 359
- 89 Vercauteren G, Colebunders R, Ryder RW, Laga M, Piot P, Vander Groen G HIV-1 and HTLV-1 Prevalence in African and European populations a Comparison of 3 HTLV Antibody Assays V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No T B P 108.
90. Nsa W, Manzila T, Mvula M, Matela B, Hassig S, Ryder RW Cause-specific Morbidity in the First 18 Months of Life in 477 Infants Born to Seropositive Mothers in Zaire. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No W G O 4
- 91 Jaeger H, Nseka K, Perriens J, Kabeya C, Rauhaus G, Peyer G, Ryder RW, Rehle T Prevention of Transfusion Associated HIV Transmission in Kinshasa, Zaire V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No. Th H P.27.
- 92 Spielberg F, Auditore-Hargreaves K, Heyward W, Ryder RW, Quinn T, Tam M Rapid, Instrument-free Assays can be used in Tandem for Screening and Confirmation of HIV Infection. V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No TH.E.719
- 93 Ryder RW Risk Factors for Maternal Infant Transmission in Zaire V International Conference on AIDS, June 4-9, 1989, Montreal, Canada, Abstract No M.G.O 21

- 94 Kivuvu M, Manoka HT, Tuliza M, Nzila N, Laga M, Ryder RW. HIV Prevalence and Incidence and Sexual Transmitted Disease (STD) as a Risk Factor for HIV Acquisition in Kinshasa Prostitutes. IV International Conference on AIDS and Associated Cancers in Africa, Marseille, France. October 18-20, 1989; Abstract No. 60.
- 95 Matela B, Nsa W, Nsuami M, Badi N, Manzila T, Mvula M, Ryder RW. Morbidity and Mortality in a Cohort of 475 Children Born to HIV(+) Mothers in Zaire Follow-up of the First 24 Months of Life. IV International Conference on AIDS and Associated Cancers in Africa, Marseille, France. October 18-20, 1989, Abstract No 241
- 96 Jingu M, Kamenga M, Hassig S, Ndilu M, Behets F, Brown C, Ryder RW. Condom Use and Associated HIV Seroconversion Following Intensive HIV Counselling of 144 Married Couples in Zaire with Discordant HIV Serology. IV International Conference on AIDS and Associated Cancers in Africa, Marseille, France. October 18-20, 1989, Abstract No 003
- 97 Nelson A, Ngoy T, Angritt P, Perriens J, Kanda B, Kapita B. Cutaneous Manifestations of HIV Infection in Zairian Patients. VI International Conference on AIDS, San Francisco, CA June 20-24, 1990, Abstract No S B 31.
- 98 Bishagara K, Benets F, Disasi A, Kazadi C, Brown C, Quinn T. Comparative Evaluation of 2 First Generation, 2 Second and Third Generation anti-HIV Elisa Kits in 3 Zairian Population Groups. VI International Conference on AIDS, San Francisco, CA June 20-24, 1990, Abstract No. S C. 606.
- 99 Nyst M, Perriens J, Lusakumunu K, Kapita B, Piot P. Prospective Comparative Study of Gentian Violet, Ketoconazole and Nystatine to Treat Oral and Oesophageal Candidiasis in AIDS Patients. VI International Conference on AIDS, San Francisco, CA June 20-24, 1990; Abstract No Th B 465
- 100 Mukadi Y, Perriens J, Willame JC, Kaboto M, Roscigno G, Prignot J, Portaels F, Piot P. Short Course Antituberculosis Therapy for Pulmonary Tuberculosis in HIV Seropositive Patients a Prospective Controlled Study. VI International Conference on AIDS, San Francisco, CA June 20-24, 1990; Abstract No. Th B 507
- 101 Behets F, Bishagara K, Mama A, Heyward W, Brown C, Quinn T. Diagnosis of HIV Infection With a Dual Rapid Assay System as an alternative to Elisa and Western blot Testing: an Evaluation in HIV Symptomatic and Asymptomatic African Population Groups. VI International Conference on AIDS, San Francisco, CA June 20-24, 1990, Abstract No S C 605

- 102 Kapita B, Nyst M, Liambi A, Behets F, Perriens J. Prevalence and Impact of AIDS Among Hospitalized Internal Medicine Patients of a General Hospital in Kinshasa, Zaire: Clinical Surveillance Data VI International Conference on AIDS, San Francisco, CA June 20-24, 1990, Abstract No. Th.C. 749.
- 103 Kamenga M, DaSilva M, Muniaka K, Matela B, Batter V, Ryder RW AIDS Orphans in Kinshasa, Zaire. VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No Th D 127.
- 104 Badi N, Nsuami M, Mundele L, Matela B, Ryder RW. Poor Sustainability of Birth Control Utilization and Consequent High Fertility Rates in a Cohort of 249 HIV(+) Zairian Women Aware of their Serostatus and Followed for 30 Months Post-partum VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No Th.D.121
- 105 Manoka A, Laga M, Kivuvu M, Tuliza M, Nzila N, Van Dyck E, Edidi B, Mokwa K, Piot P, Ryder RW Syphilis Among HIV(+) and HIV(-) Prostitutes in Kinshasa, Prevalence and Serologic Response to Treatment VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No Th B 303
- 106 Laga M, Nzila N, Piot P, Ryder RW. Non Ulcerative Sexually Transmitted Diseases (STD) as Risk Factors for HIV Infection VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No. Th C 105
- 107 Brown C, Lubaki N, Davachi F, Ryder RW, Quinn T, Fauci AS. T-cell Subsets in Cord Blood of Infants Born to HIV Seropositive Mothers and Infants Born to HIV Seronegative Mothers; Relationship to Maternal T-cell Subsets and HIV Clinical Status A Prospective Study. VI International Conference on AIDS, San Francisco, California, June 20-24, 1990; Abstract No Th D 103.
- 108 Kabagabo U, Manzila T, Zola B, Binyingo M, Braden K, Ryder RW Development Patterns of Infants With Perinatally-Acquired HIV Infection VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No. Th D 304
- 109 Mposo N, Bertozzi S, Kamenga M, Doppagne A, Engele B, Ryder RW Increase in Health Care Utilization by HIV Infected Employees at a Large Commercial Bank in Kinshasa, Zaire. VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No Th D 218.
- 110 Kashamuka M, Pappaioanou M, Behets F, Ilunga M, Heyward W, Ryder RW Detection of HIV Antibodies Using Dried Blood Spots Collected on Filter Paper from Neonates is Accurate

- Under Tropical Conditions in Zaire VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No Th.D.232.
- 111 Bertozzi S, Mposo N, Walker D, Ryder RW. Increased Hospital Revenue Associated With Admitting HIV-positive Patients to a Rural Zairian Hospital VI International Conference on AIDS, San Francisco, California, June 20-24, 1990; Abstract No F D 806.
- 112 Badi N, Braun M, Ryder RW, Nsa W, Willame JC, Kaboto M, Heyward WL. A Retrospective Cohort Study of the Risk of Tuberculosis Among Child-bearing Women With HIV Infection in Zaire VI International Conference on AIDS, San Francisco, California, June 20-24, 1990; Abstract No Th D 121.
- 113 Mukadi Y, Perriens J, Willame JC, Kaboto M, Roscigno G, Prignot J, Portaels F, Piot P, Ryder RW. HIV Seroprevalence Among New Cases of Pulmonary Tuberculosis Stable Between 1987 and 1989 in Kinshasa, Zaire. VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No F C 608
- 114 Nzila N, Kivuvu M, Manoka AT, Edidi B, Ryder RW, Laga M. HIV Risk Factors in Steady Male Partners of Kinshasa Prostitutes. VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No. Th.C.579
- 115 Batter V, Badi N, Nsuami M, Matadi N, Tshala B, Ryder RW. Fertility Rates in HIV(+) Women in Zaire VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No Th C 583.
- 116 Nsuami M, Badi N, Mundele L, Nzobwo B, Kashamuka M, Ryder RW. Morbidity and Mortality in Successive Birth Cohorts of Children and Their HIV(+) Mothers in Zaire. VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No Th C 658
- 117 Baende E, Lelo U, Kaboto M, Willame J, Ngamboli K, Ryder RW. Household Contacts of HIV(+) Patients in Zaire With Active Pulmonary Tuberculosis are not at Increased Risk of Secondary M Tuberculosis Infection VI International Conference on AIDS, San Francisco, California, June 20-24, 1990, Abstract No Th B 496
- 118 Kaseka N, Batter V, Ndilu M, Kamenga M, Safi E, Kambale R, Doppagne A, Ryder RW. Incidence and Mortality from HIV Infection in Workers and Their Spouses at 2 Large Kinshasa, Zaire Businesses VI International Conference on AIDS, San Francisco, California, June 20-24, 1990; Abstract No Th C 750.

- 119 Jingu M, Assina Y, Doppagne A, Mbuyi K, Mbu L, Mokwa K, Ryder RW High Condom Utilization and Low Seroconversion Rates Successfully Sustained in 175 Married Couples in Zaire With Discordant HIV Serology; Observation After 2 Years of Follow-up. VI International Conference on AIDS, San Francisco, California, June 20-24, 1990; Abstract No. S C 695
- 120 Manzila T, Nsa W, Kabagabo U, Mosengo M, Binyingo M, Ryder RW. Morbidity and Mortality in the First 30 Months of Life in 477 Infants Born to Seropositive Mothers in Zaire. VI International Conference on AIDS, San Francisco, California, June 20-24, 1990; Abstract No. S.C 657
- 121 Ryder RW, Batter V, Badi C Fertility Rates in HIV(+) Women in Zaire VIIIth International Congress of Virology, Berlin, Germany, August 26-31, 1990, Abstract No P58-21
- 122 Ryder RW, Kamenga M The Economic and Social Implications of AIDS Orphans in Kinshasa, Zaire VIIIth International Congress of Virology, Germany, August 26-31, 1990, Abstract No P58-20
- 123 Ryder RW, Nsa W, Manzila T. Morbidity and Mortality in the First 36 Months of Life in 477 Infants Born to HIV-1 Seropositive Mothers in Zaire. VIIIth International Congress of Virology, Germany, August 26-31, 1990, Abstract No W 58-2.
- 124 Manoka AT, Nzila N, Tuliza M, Edidi B, Behets F, Plot P, Ryder RW, Laga M Non-ulcerative Sexually Transmitted Diseases (STD) as Risk Factors for HIV Infection V International Conference on AIDS in Africa, Kinshasa, Zaire, October 10-12, 1990, Abstract No F O A 1
- 125 Malele B, Kivuvu M, Nzila N, Mokwa K, Way Way P, Van Dyck E, Ryder RW, Laga M, Plot P. Genital Ulcer Disease (GUD) Among HIV(+) and HIV(-) Prostitutes in Kinshasa Prevalence, Incidence and Etiology V International Conference on AIDS in Africa, Kinshasa, Zaire, October 10-12, 1990; Abstract No F O.A 4
- 126 Kaseka N, Batter V, Kamenga M, Ndakala D, Eleka M, Kambale, Doppagne A, Ryder RW HIV-1 Infection in Workers and Their Spouses at 2 Large Kinshasa, Zaire Businesses V International Conference on AIDS in Africa, Kinshasa, Zaire, October 10-12, 1990, Abstract No T O B.7.
- 127 Mayala M, Manzila T, Kabagabo U, Matela B, Zola B, Binyingo E, Ryder RW Morbidite et mortalite au cours des 3 premieres annees de vie chez 464 enfants nes des meres seropositives au Zaire V International Conference on AIDS in Africa, Kinshasa, Zaire, October 10-12, 1990; Abstract No T O D 1

- 128 Kivuvu M, Malele B, Nzila N, Manoka AT, Tshebuye, Samu M, Tshimpaka, Laga M, Ryder RW Syphilis Among HIV(+) and HIV(-) Prostitutes in Kinshasa Prevalence and Serologic Response to Treatment. V International Conference on AIDS in Africa, Kinshasa, Zaire, October 10-12, 1990, Abstract No. T.P C 7
- 129 Kashamuka M, Behets F, Pappaioanou M, Batter V, Greene T, Ryder RW Stability of HIV Antibody Detection in Dried Whole Blood Spots Collected on Filter Paper and Stored Under Varying Tropical Conditions V International Conference on AIDS in Africa, Kinshasa, Zaire, October 10-12, 1990, Abstract No. W O.B.4.
- 130 Badi N, Batter V, Mundele L, Nsuami M, Matela B, Ryder RW Taux de fertilité eleve chez les femmes VIH(+) et VIH(-) suivies pour une periode de 36 mois apres l'accouchement en depot du programme de planning familial V International Conference on AIDS in Africa, Kinshasa, Zaire, October 10-12, 1990; Abstract No. W.O.C 7.
- 131 Kamenga M, Muniaka K, Dasilva M, Matela B, Batter V, Ryder RW Les orphelins du SIDA a Kinshasa incidence et consequences socio-economiques. V International Conference on AIDS in Africa, Kinshasa, Zaire, October 10-12, 1990; Abstract No W O C 8
- 132 Musey KL, Brown C, Quinn TC et al Association of Neurological Abnormalities, T4 and T8 Count and Antibody or Antigen Detection in the Blood and CSF in HIV-1 Infected Patients V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990, Abstract Nno. F.O.D.5
- 133 Musongela L, Musey L, Stanley S et al Hematologic disorders in African Patients With HIV-1 Infection V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990, Abstract No F.O D 7
- 134 Atibu L, Lubaki N, Tundru A et al P24 antigen detection in Central African Populations After Treatment With Acid Hydrolysis V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990. Kinshasa No. F.P.C.1
- 135 Musey K, Lubaki N, Tundru A et al Expansion of Gamma-delta Positive T-cell Subsets in HIV-1 Infected Individuals in Central Africa V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990, Abstract No. T O A 1
- 136 Lubaki N, Atibu L, Kasali M et al Use of HIV-1 viral Culture and in Vitro Antibody Production (IVAP) for Diagnosis of HIV-1 in Children Born to Seropositive Mothers (SPM) V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990, Abstract No. T.O.D.8

- 137 Luyeye M, Gerniers M, Lebughe I et al Prevalence et Facteurs de risque pour les MST chez les femmes enceintes dans les soins de sante primaires a Kinshasa V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990 Abstract No. T.P.C.8.
- 138 Tuliza M, Manoka AT, Malele B et al. Condom Use Among Kinshasa Prostitutes V International Conference on AIDS in Africa, Kinshasa, Zaire. October 10-12, 1990; Abstract No T.O.C.5
- 139 Laga M Risk Factors for Heterosexual Transmission of HIV. V International Conference on AIDS in Africa, Kinshasa, Zaire. October 10-12, 1990, Abstract No T.RT.D.1.
- 140 Nelson A, Okonda L, Tuurs et al. Pulmonary Pathology of HIV Infection in Zaireans V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990. Abstract No. F P.B. 29.
- 141 Nelson A. Clinical Pathologic Correlations of HIV Infection in Zaire Implications for Definition and Treatment of African AIDS V Intrnational Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990; Abstract No T RT A 3.
- 142 Kapita B, Nyst M, Liambi A et al. Evaluation of a Clinical Surveillance System for AIDS Among Internal Medicine inpatients in Kinshasa, Zaire. V International Conference on AIDS in Africa, Kinshasa, Zaire. October 10-12, 1990, Abstract No T.O.B.1
- 143 Nyst M, Lusakumunu K, Kapita B et al. Comparative Study of Gentian Violet, Ketoconazole and Nystatin to Treat Oral and Oesophagial Candidiasis in AIDS Patients. V International Conference in AIDS in Africa, Kinshasa, Zaire October 10-12, 1990; Abstract No T.P.B 5
- 144 Thea DM, Perriens J, Ngoy N et al Fecal Mycobacteria and HIV Infection in Zaire V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990, Abstract No W O.D.1
- 145 Thea DM, Glass R, Perriens J et al Lack of Significant Enteric Viral Shedding Among African AIDS Patients V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990, Abstract No. F P B 42
- 146 Mukadi Y, Williame JC, Kaboto M et al Short Course Anti Tuberculosis Therapy for Pulmonary Tuberculosis in HIV Seropositive Patients V International Conference on AIDS in Africa, Kinshasa, Zaire October 10-12, 1990, Abstrct No F RT F 4
147. Brown C, Kasali M, Musey L, Kamenga M, Manzila T, Davachi F,

- St.Louis M, Lubaki N, Quina T Decreased Levels in Memory (UCHLI) and Activation (HLADR) Subsets of T-Cells in HIV Infection VII International Conference on AIDS. June 16-21, 1991, Florence, Italy.
- 148 Kamenga M, Muniaka N, Batter V, Dasilua M, Ryder R. Incidence and Socioeconomic Consequences of AIDS Orphans in 422 Families With HIV-I (+) Mothers in Kinshasa, Zaire VII International Conference on AIDS June 16-21, 1991, Florence, Italy
- 149 Bishagara T, Kasali M, Tuliza M, Mulanga K, Grand-Pierre J, Piri Piri L. Mobilization of Women in the Struggle Against AIDS in Urban Areas : Action Among Young People. VII International Conference on AIDS June 16-21, 1991, Florence, Italy
- 150 Tuliza M, Manoka A, Nzila N, Way W, St Louis M, Piot P, Laga M. The Impact of STD Control and Condom Promotion on the Incidence of HIV in Kinshasa Prostitutes. VII International Conference on AIDS. June 16-21, 1991, Florence, Italy.
- 151 Malele B , Manoka T, Kivuvu M, Tuliza M, Edidi B, Behets F, Heyward WL, Piot P The Impact of HIV Infection on the Incidence of STD in High Risk Women. VII International Conference on AIDS June 16-21, 1991, Florence, Italy.
- 152 Lubaki N, Brown C, Kasali M, Behets F, Musey L, Manzila T, Davachi F, OU CY, St Louis M, Nelson A, Firpo A, Salaun J., Quinn T Laboratory Diagnosis of Perinatal HIV Infection - Experience with a Cohort of 350 HIV Seropositive Mother - Infant Pairs from Birth to Age One Year. VII International Conference on AIDS June 16-21, 1991, Florence, Italy.
- 153 Kaseka N, Batter V, Eleka M, Ryder R Incidence of Extra-marital Sex, STD's HIV-I Infection and Tuberculosis (TB) in 10,325 Individuals Followed for 2 Years in Kinshasa, Zaire VII International Conference on AIDS. June 16-21, 1991, Florence, Italy
- 154 Batter V, Kaseka N, Kashamuka M, Ndilu M, Manlele K, Walombua M, Doppagne A, Ryder R Birth Control Methods and Condom Use in 2 Large Work Forces in Kinshasa, Zaire VII International Conference on AIDS June 16-21, 1991, Florence, Italy.
- 155 Stanley S, Justement J, Kessler S, Schnittman S, Greenhouse J, Brown C, Musongela L, Kapita B, Fanci A HIV Infection of CD34 + Progenitor Cells in Vivo. VII International Conference on AIDS. June 16-21, 1991, Florence, Italy.
- 156 Nelson A, Okonda L, Mukadi 4, Moran C, Mbuyamba L, Kabongo B, Brown C, Mullick F. Histologic Patterns of Tuberculosis in HIV-I Infected Zairians. VII International Conference on

AIDS June 16-21, 1991, Florence, Italy

- 157 Behets F, Mbala S, Mama A, Mbisha K, Batter V, Mandala M, St.Louis M, Brown C, Davachi F, Quinn T. HIV Specific IgG Profiles in Zairian Children With Perinatally Acquired HIV Infection VII International Conference on AIDS June 16-21, 1991, Florence, Italy.
- 158 Thea D, Kakanda K, Kamenga M, St Louis M, Davachi F, Mbala M, Keusch G Persistent Diarrhea and Perinatl HIV Infection in Zaire VII International Conference on AIDS June 16-21, 1991, Florence, Italy.
- 159 Baende E, Klausner J, Lelo U, Williame J, Kaboto M, Ryder R Characterization of Transmitters of M. Tuberculosis in Zaire by HIV-1 Serostatus, Level of Immunosuppression and Clinical Status VII International Conference on AIDS June 16-21, 1991, Florence, Italy
- 160 Mandala K, Mayala B, Cutts F, Brown C, Davachi F, Deforest A, Behets F, Kamenga M, Quinn T, Markowitz L, Oxtoby M, St.Louis M Edmonston - Zagrab Measles Vaccination in HIV Infected Children. VII International Conference on AIDS. June 16-21, 1991, Florence, Italy
- 161 Thea D, Kakanda K, Kamenga M, St Louis M, Davachi F, Mbala M, Keusch G Recurrent Diarrhea and Perinatal HIV Infection in Zaire VII International Conference on AIDS. June 16-21, 1991, Florence, Italy
- 162 Manzila T, Icenogle J, St.Louis M, Sulu M, Behets F, Ryder R, Heyward W, Reeves W. HPV Detection in HIV-infected Women and Children in Zaire VII International Conference on AIDS June 16-21, 1991, Florence, Italy
- 163 Batter V, Malulu M, Mbuyi K, Mbu L, Kamenga M, St.Louis M. HIV Seronotification and Counselling of Childbearing Women in Kinshasa, Zaire VII International Conference on AIDS. June 16-21, 1991, Florence, Italy.
- 164 Kamenga M, Manzila T, Behets F, Oxtoby M, Brown C, Sulu M, Nelson A, Edidi B, Batter V, Davachi F, Quinn T, St.Louis M Maternal HIV Infection and Other Sexually Transmitted Diseases and Low Birth Weight in Zairian Children. VII International Conference on AIDS June 16-21, 1991, Florence, Italy
- 165 St. Louis M, Kabagabo U, Brown C, Kamenga M, Davachi F, Behets F, Batter V, Nelson A, Manzila T, Quinn T, Oxtoby M, Heyward W. Maternal Factors Associated With Perinatal HIV Transmission VII International Conference on AIDS June 16-21, 1991, Florence, Italy
- 166 Mukadi Y, Perriens J, Kaboto M, Roscigno G, Prignot J,

- Portaels F, Ngamboli K, Willame J, Plot P, St Louis M. Prolonged Chemotherapy for Tuberculosis Following Standard Short Course Treatment Among HIV Infected Persons in Zaire. VII International Conference on AIDS. June 16-21, 1991, Florence, Italy.
- 167 Kanda B, Nelson A, Kayembe M, Okonda L, Mazebo P, Angritt P, Kalengayi M. Comparison of Clinical and Epidemiological Aspects of Endemic and AIDS-associated Kaposi's Sarcoma, Kinshasa, Zaire VII International Conference on AIDS. June 16-21, 1991, Florence, Italy.
- 168 Okonda L, Nelson A, Kayembe M, Lusamuno N, Libakali M, Likoto B, Angritt P. Infections Found at Autopsy in Zairian AIDS Patients VII International Conference on AIDS. June 16-21, 1991, Florence, Italy
- 169 Nzila N, Laga M, Brown C, Jingu M, Kivuvu M, St.Louis M. Does Pregnancy in HIV + Women Accelerate Progression to AIDS? VII International Conference on AIDS. June 16-21, 1991, Florence, Italy.
- 170 Nsuami M, St Louis M, George JR, Brown C, Ryder R, Behets F, Musey L, Kamenga M, Davachi F, Quinn T, Heyward W. Low Prevalence in HIV-Infected Zairian Mothers of Antibodies Against GP120 Neutralizing Epitopes of the MN HIV-I Isolate and Lack of Association With Perinatal HIV Transmission. VII International Conference on AIDS June 16-21, 1991, Florence, Italy
- 171 Musey K, Brown C, Kasali M, Kamenga M, Tundru A, Davachi F, St Louis M, Lubaki N, Quinn T Changes in B-cell Numbers in Perinatal HIV Infection . Evidence for Response to Infection as Early as Birth VII International Conference on AIDS June 16-21, 1991, Florence, Italy
- 172 Edidi B, Behets F, Kambembo L, Tschebuye M, Kayigamba K, Brown C, Quinn T. Antibodies to HIV p27 NEF Protein in 63 Zairian HIV Seroconverters. VII International Conference on AIDS June 16-21, 1991, Florence, Italy
- 173 Mokwa K, Batter V, Behets F, Laga M, Edidi M, Lebughe J, St Louis M, Brown C, Heyward W, Quinn T. Prevalence of Sexually Transmitted Diseases in Childbearing Women in Kinshasa, Zaire, Associated With HIV Infection VII International Conference on AIDS June 16-21, 1991, Florence, Italy.
- 174 Mayala M, Matadi N, Zola B, Mvula M, Kabagabo U, Kamenga M, Brown C, Manzila T, Davachi F, Sulu M, St. Louis M. Tuberculin Skin Test Reactivity in HIV-Infected Zairian Children After BCG Immunization VII International Conference on AIDS June 16-21, 1991, Florence, Italy.

- 175 Kasali M, Jackson A, Brown C, Musey L, St. Louis M, Lubaki N, Mwangura G, Quinn T Elevation of a High-Density HLADR +UCHL1+CD8+T-Cell Subset is Specific for HIV Infection A 3-color Phenotyping Study in 197 Zairian Adult Patients VII International Conference on AIDS. June 16-21, 1991, Florence, Italy.
- 176 Kasali M, Brown C, Musey L, Manzila T, Atibu L, St. Louis M, Lubaki N, Quinn T, Jackson A Phenotypic Analysis of CD4+ 45RO+T-Cells in Zairian Women VII International Conference on AIDS June 16-21, 1991, Florence, Italy