

Publications and conference presentations 2003

SAAVI Directorate

Publications

1. Tucker T, Slack C. Not if but how? Caring for HIV-1 vaccine trial participants in South Africa. *The Lancet* 2003; **362** (9388): 995.
2. Tim Tucker – Director of the South African AIDS Vaccine Initiative – interviewed by Pam Das. *Lancet Infect Dis* 2003; March **3** (3): 173 – 175.
3. Galloway M. Two HIV/AIDS candidate vaccines enter human trials in South Africa. *Southern African Journal of HIV Medicine* 2003; **13**: 43.
4. Galloway MR. Medicines Control Council approves first HIV vaccine trial in South Africa. *Southern African Journal of HIV Medicine* 2003; **12**: 37 – 38.
5. Galloway MR, Schorn D. Laying the groundwork for HIV vaccine trials. SAAVI progress during 2002. *Southern African Journal of HIV Medicine* 2003; **10**: 22 – 23.
6. Millions of dollars versus millions of lives – investing in the people of South Africa. *Opportunity* 4th issue, 2003: 50.
7. First HIV vaccine trials underway. *Informer* 2003; **1** (7): 2.
8. Galloway MR. Progress in HIV vaccine research in South Africa. *Informer* 2003; **1** (6): 3.
9. Galloway MR. An HIV vaccine for South Africa. *Informer* 2003; **1** (5): 1.

University of Stellenbosch

Publications

1. Gordon M, De Oliveira T, Bishop K, Coovadia HM, Madurai L, Engelbrecht S, Janse van Rensburg E, Mosam A, Smith A, Cassol S. Molecular Characteristics of HIV-1 Subtype C Viruses from KwaZulu-Natal, South Africa: Implications for Vaccine and Antiretroviral Control Strategies. *J Virol* 2003; **77**: 2587 – 2599.
2. De Oliveira T, Engelbrecht S, Janse van Rensburg E, Gordon M, Bishop K, zur Megede J, Barnett SW, Cassol S. Variability at HIV-1 Subtype C protease Cleavage Sites: An Indication of Viral Fitness? *J Virol* 2003; **77**: 9422 – 9430.
3. Donniger H, Cashmore TJ, Scriba T, Petersen DC, Janse van Rensburg E, Hayes VM. Functional analysis of novel SLC11A1 (NRAMP1) promoter variants in HIV-1 risk. *Journal of Medical Genetics* (in press).

Conference presentations

1. Janse van Rensburg E. HIV vaccine development for Southern Africa. *The African AIDS Vaccine Programme (AAVP) on Strategies for the Development of HIV Vaccine Trial Sites in Africa: Challenges and Opportunities 2003*, Addis Ababa, Ethiopia.
2. Barnett SW, Srivastava I, Stamatatos L, zur Megede J, Lian Y, Otten G, Montefiori D, Lewis M, Engelbrecht S, Janse van Rensburg E, Widera G, O'Hagan D, Pol J, Ulmer J, Donnelly J. Next generation HIV DNA prime-protein boost vaccines induce potent and protective immune responses. HIV Vaccine Development: Immunological and Biological Challenges, *Keystone Symposia 2003*, Alberta, Canada.
3. Engelbrecht S, Robson B, Treurnicht F, Sampson C, Laten A, Janse van Rensburg E. Changing dynamics of the South African HIV-1 epidemic: 1984 – 2002. Twenty Years of HIV Research: From Discovery to Understanding. *Keystone Symposia 2003*, Alberta, Canada.
4. Engelbrecht S, Holzmayer V, Bodelle P, Brennan CA, Hackett J, Janse van Rensburg E. The changing face of the HIV-1 epidemic in South Africa: detection of subtypes A, B, C, G and recombinants. *HIV Dynamics & Evolution 10th International Workshop, 2003*, CA, USA.
5. Lian Y, Srivastava I, zur Megede J, Sun Y, Kan E, Hilt S, Leung L, Himathongkham S, Luciw P, Ulmer J, Donnelly J, Engelbrecht S, van Rensburg J, Barnett S. Envelope DNA Vaccines Derived from the South African Subtype C HIV-1 TV1 Isolate Induce Neutralizing Antibody Responses against R5 HIV-1 Strains. *AIDS Vaccine 2003 Annual Conference*, New York, 18 – 21 September 2003.
6. Barnett S.W, Srivastava I, Stamatatos L, Otten G, zur Megede J, Lian Y, Montefiori D, Lewis M, Engelbrecht S, Janse van Rensburg E, Widera G, O'Hagan D, Ulmer J, Pol J, Donnelly J. HIV-1 Vaccines Including Novel Envelope Structures Induce Broad and Potent Anti-Viral Immune Responses. *AIDS Vaccine 2003 Annual Conference*, New York, 18 – 21 September 2003.
7. Hilt S, Lian Y, Kan E, Matsuoka K, Wining M, Engelbrecht S, van Rensburg EJ, Ulmer J, Donnelly J, Srivastava I, Barnett SW. Production and Characterization of Stable CHO Cell Lines Expressing Novel HIV-1 Subtype B and Subtype C Envelope Glycoproteins. *AIDS Vaccine 2003 Annual Conference*, New York, 18 – 21 September 2003.
8. Otten G, zur Megede J, Schaefer M, Doe B, Liu H, Widera G, Engelbrecht S, van Rensburg EJ, Donnelly J, Barnett S, Ulmer J. Induction of Strong, Broad T-Cell Responses to HIV-1 Subtype C Gag and Pol Antigens in Rhesus Macaques Vaccinated with a Plasmid DNA Vaccine Encoding a Novel Gag-pol Fusion Protein. *AIDS Vaccine 2003 Annual Conference*, New York, 18 – 21 September 2003.
9. Glashoff R, Liebrich W, Engelbrecht S, zur Megede J, Singh M, Otten G, Srivastava



- I, Barnett S, Janse van Rensburg E. Detection of Antigen-Specific CD8+ T-lymphocyte Responses in Baboons following Vaccination with HIV-1 Subtype C gag, pol, and gp140dV2 Plasmid DNA Vaccine Constructs. *AIDS Vaccine 2003 Annual Conference*, New York, 18 — 21 September 2003.
10. Engelbrecht S, Loxton AG, Treurnicht FK, Sampson CC, Robson BA, Holzmayer V, Bodelle P, Brennan CA, Hackett J, van Rensburg EJ. The Emergence of HIV-1 Non-subtype C Viruses and Recombinants in South Africa. *AIDS Vaccine 2003 Annual Conference*, New York, 18 — 21 September 2003.

University of Cape Town

Publications

1. Jaffray A, Shephard E, van Harmelen J, Williamson C, Williamson AL, Rybicki EP. HIV-1 subtype C Gag VLP boost substantially improves the immune response to a subtype C Gag DNA vaccine in mice. *J Gen Virol* 2004; **85** (Pt 2): 409 — 413.
2. Van Harmelen JH, Sheppard E, Thomas R, Hanke T, Williamson AL, Williamson C. Construction and characterisation of a candidate HIV-1 subtype C DNA vaccine for South Africa. *Vaccine* 2003 Oct; **21** (27 — 28): 4380 — 4389
3. Williamson C, Morris L, Maughan MF, Ping LH, Dryga SA, Thomas R, Reap EA, Cilliers T, Van Harmelen J, Pascual A, Ramjee G, Gray G, Johnston R, Karim SA, Swanstrom R. Characterization and Selection of HIV-1 Subtype C Isolates for Use in Vaccine Development. *AIDS Res Hum Retroviruses* 2003; **19** (2): 133 — 44.

Conference presentations

1. Bredell H, Gilfillan J, Seoighe C, Gray C, Williamson C and HIVNET028 Team. Defining HIV-1 gag genetic diversity in southern African and possible impact on proposed cytotoxic T-lymphocyte epitope recognition. *South African AIDS Conference*, ICC Durban, 3 — 6 August 2003.
2. Burgers W, van Harmelen J, Shephard E, Bourn W, Williamson A-L, Williamson C. Assessment of Candidate HIV-1 Subtype C DNA Vaccines Targeted for Clinical Trials in Southern Africa. Abstract number 309. *AIDS Vaccines 2003*. New York Hilton, NY, USA. 18 – 21 September 2003.
3. Chege GK, Williamson A-L, van Harmelen JH, Williamson C, Shephard EG. Pre-Clinical evaluation of a DNA HIV Vaccine using the Baboon Model. *ICASA Conference, 2003*. Nairobi, Kenya, 21 — 26 September 2003.
4. Chin'ombe N, Williamson A-L, Shephard E, Bourn W. Development of recombinant Salmonella vectors for HIV-1 subtype C vaccine for Southern Africa. Oral presentation by Chin'ombe. *Fifth Congress of the Federation of African Immunological Societies (FAIS)*. Victoria Falls, Zimbabwe 27 April — 1 May 2003.
5. Grobler J, Rademeyer C, Gray CM, Ramjee G, Abdool-Karim SS, Morris L, Williamson C. Frequency of Dual Infection with Two Distinct Subtype C Viral Populations in a Female Sex Worker Cohort. Abstract number 221. *Keystone Symposia, 2003*. HIV Vaccine Development: Immunological and Biological Challenges, Banff, Canada, 2003.
6. Grobler J, Rademeyer C, Gray CM, Ramjee G, Abdool-Karim SS, Morris L, Williamson C. Incidence of dual infection in a South African sex worker cohort infected with two distinct HIV-1 subtype C viruses. Abstract number T1-S1-A5. *South African AIDS Conference*, ICC Durban, 3 — 6 August 2003.
7. Heath LE, Tanzer F, Shephard E, Bandawe G, Williamson A-L, Rybicki EP. Immunogenicity Of Hiv-1 Gp120 V3 Loop and various CTL Epitopes expressed on the surface of recombinant tobacco mosaic virus. HIV Vaccine Development and Twenty Years of HIV Research *Keystone meeting*, Banff Canada, 29 March — 4 April 2003.
8. Jaffray A, Shephard E, Williamson C, van Harmelen J, Williamson A-L, Rybicki EP. Investigation Of HIV-1 Subtype C Pr55gag Virus-Like Particles As A Potential Vaccine. HIV Vaccine Development and Twenty Years of HIV Research. *Keystone meeting*, Banff Canada, 29 March — 4 April 2003.
9. Machaba M, Bredell H, Morris L, Tucker T, Williamson C. Genotyping nevirapine and zidovudine resistance in HIV-1 subtype C infections. *South African AIDS Conference*, ICC Durban, 3 — 6 August 2003.
10. Masemola A, Mashishi T, Khoury G, Puren A, Paximadis M, Williamson C, van Harmelen J, Sheppard H, Gray C. Hierarchical targeting of subtype C HIV-1 gene regions by CD8+ T cells in recently infected individuals from southern Africa: correlation with viral control. Poster session: 2003 Fellows and New Investigators Workshop on HIV (Concurrent with *2003 Keystone Symposia*, Twenty Years of HIV Research and HIV Vaccine Development), Keystone, USA, April 2003.
11. Van Harmelen JH, Londt B, Mashishi T, Gray C, Williamson C. Evolution of nef sequences in HIV-1 subtype C infection over time. *South African AIDS Conference*, ICC Durban, 3 — 6 August 2003.
12. Rademeyer C, van Harmelen J, Ramjee G, Abdool-Karim S, Williamson C. An investigation of HIV-1 diversity following heterosexual transmission in recently infected women from a South African sex worker cohort. *South African AIDS Conference*, ICC Durban, 3 — 6 August 2003.
13. Shephard EG. Immunogenicity of candidate DNA HIV subtype C vaccines targeted for Southern Africa. *5th Federation of African Immunological Societies*, Victoria Falls, Zimbabwe, 27 April — 1 May 2003.
14. Shephard EG. Immunogenicity of SAAVI candidate HIV-I Subtype C Vaccines.



MRC In-House Symposium HIV/AIDS Symposium, MRC, 28 July 2003.

15. Shephard EG. SAAVI Pipeline of candidate HIV Vaccines Targeted for Africa. *The African AIDS Vaccine programme (AAVP) Workshop on Strategies for the development of HIV Vaccine trial Sites in Africa: Challenges and Opportunities*. Addis Abbaba, Ethiopia, 16 — 18 June 2003.
16. Thomas R, Shephard E, Bourn W, Jaffray A, Tanzer F, Rybicki E, Williamson A-L. Stability of Recombinant BCG: HIV-1 Gag Vectors and Induction of Interferon-gamma Production in Mice. *AIDS Vaccine 2003 Conference*. New York, USA, 2003.
17. Van Harmelen JH, Londt B, Mashishi T, Gray C, Williamson C. Evolution of nef sequences in HIV-1 subtype C infection over time. *South African AIDS Conference, ICC Durban, RSA*, 3 — 6 August 2003.
18. Williamson AL. The development of HIV-1 subtype C vaccines for Southern Africa. Invited lecture. *Fifth Congress of the Federation of African Immunological Societies (FAIS)*. Victoria Falls, Zimbabwe 27 April — 1 May 2003. Invited Lecture.
19. Williamson AL. Overview of critical issues in the scientific design of HIV vaccines SARETI/HAVEG workshop, Pretoria 7 — 9 November 2003. Invited Lecture.
20. Williamson C. HIV Vaccine Development. *South African AIDS Conference, 2003*. Durban, SA, 3 — 6 August 2003.
21. Williamson C. Implications of HIV diversity in vaccine development and pathogenesis. *WHO/AAVP workshop on research grant application and scientific manuscript writing for African scientist involved in AIDS vaccine research and development /AIDS-related research*. Nelson R. Mandela School of Medicine: University of Natal, 2003. Durban, SA, 22 July 2003.
22. Williamson C. Towards a subtype C vaccine. *International Congress of Chemotherapy, 2003*. Durban, 8 June 2003.
23. Williamson C. Development of HIV subtype C DNA and MVA vaccines. *HIV Pathogenesis Programme Annual Meeting on Immune Control, Translation Research and Treatment Initiative*. Doris Duke Workshop, Nelson R. Mandela School of Medicine, University of Natal, 2 May 2003.
24. Williamson C. Implications of HIV diversity in the development of vaccines for Africa. *Federation of African Immunological Society, 2003*. Victoria Falls, Zimbabwe, 27 April — 1 May 2003.
25. Williamson C. HIV Vaccine development. *The Human Genome and Africa Conference, 2003*. Spier, Stellenbosch, Cape Town, 19 — 22 March, 2003.
26. Williamson C. Development of subtype C DNA and MVA vaccines. *HIV Vaccine Trials Network (HVTN), 2003*. Washington DC, USA, 18 — 21 May 2003.
27. Williamson C. Towards a subtype C vaccine. *International Congress of Chemotherapy (ICC)*, Durban, 8 June 2003. Invited Lecture.
28. Williamson C, van Harmelen J, Burgers W, Shephard E, Burgers W, Jaffray A, Rybicki E, Williamson A-L. The development of HIV-1 subtype C vaccines for southern Africa. Oral presentation by A-L Williamson. *Medical Virology Congress of South Africa*, Berg-en-Dal, South Africa, 2003.

HAVEG

Publications

1. Tucker T, Slack C. Not if, but how? Caring for HIV-1 vaccine trial participants in South Africa. *The Lancet* 2003; **362**, 955.

Conference presentations

1. Slack C, Stobie M, Lindegger G, Milford C, Wassenaar D, Strode A, IJsselmuiden C. Access to treatment for participants who become infected during the course of an HIV vaccine trial. *Paper presented at the NIH Third Bioethics Conference in Africa*. Kampala, Uganda, 21 March 2003.
2. Slack C, Stobie M, Lindegger G, Milford C, Wassenaar D, Strode A., IJsselmuiden C. Ethical considerations in HIV vaccine trials in South Africa: A focus on standard of care. *Paper presented at the 23rd International Congress of Chemotherapy*, Durban, South Africa, 7 — 9 June 2003.
3. Strode A, Slack C, Milford C, Stobie M. A critical evaluation of South Africa's ethical-legal framework. *Paper presented at the First South African AIDS Conference*, Durban, South Africa, 3 — 6 August 2003.
4. Milford C, Wassenaar DR, Slack C, Strode, A, Khan, N. Identifying resources and needs of research ethics committees in Africa in preparation for HIV vaccine trials. *Paper presented at First South African AIDS Conference*, Durban, South Africa, 3 — 6 August 2003.

International consultations

1. Slack C, Stobie M, Lindegger G, Milford C, Wassenaar D, Strode A, IJsselmuiden C. Standard of care in international trials of HIV vaccines and Microbicides. *Paper presented at the International Consultation on ethical issues in the clinical testing of Microbicides*, 23 — 24 October 2003.
2. Slack C, Stobie M, Lindegger G, Milford C, Wassenaar D, Strode A, IJsselmuiden C. Access to treatment in HIV vaccine trials. *Paper presented at the WHO-UNAIDS consultation on modalities for treatment for trial participants who become infected during HIV prevention trials*, Geneva, Switzerland, 17 — 18 July 2003.
3. Slack C, Stobie M, Lindegger G, Milford C, Wassenaar D, Strode A, IJsselmuiden



- C. Standard of care in HIV preventive vaccine trials. *Paper presented at the Second Annual Meeting of the African AIDS Vaccine Programme*, Addis Ababa, Ethiopia, 16 — 19 June 2003.
4. Lindegger G, Slack C, Wassenaar D. Culture and informed consent: Implications for HIV vaccine trials. *Paper presented at the Second Annual Meeting of the African AIDS Vaccine Programme*, Addis Ababa, Ethiopia, 16 - 19 June 2003.
 5. Slack C, Stobie M, Lindegger G, Milford C, Wassenaar D, Strode A, IJsselmuiden C. Access to treatment for participants who become infected during the course of an HIV vaccine trial: A report on the South African experience. *Paper presented at Ethics, Law and Human Rights Working group of the African AIDS Vaccine Programme (AAVP)*, Kampala, Uganda, 17 March 2003.
 6. Lindegger G, Slack C. Culture and informed consent: Implications for HIV vaccine trials. *Paper presented at the Full Group Meeting of the HIV Vaccine Trials Network (HVTN)*, Bethesda, Maryland, USA, 19 — 21 May 2003.

National meetings and consultations

1. Lindegger G, Slack C. Quality of care for trial participants who become infected during the course of an HIV vaccine trial. *Paper presented at National Health Research Ethics Committee (NHREC) meeting*; Pretoria, South Africa, 24 February 2003.

Perinatal HIV/AIDS Research Unit

Publications

1. Hunt GM, Papathanasopoulos MA, Gray GE, Tiemessen CT. Characterisation of near-full length genome sequences of three South African Human Immunodeficiency virus type 1 subtype C isolates. *Virus Genes* 2003; **26**: 49.
2. Dunkle KL, Jewkes RK, Brown HC, Gray GE, McIntyre JA, Harlow SD. Gender-based violence, relationship power and risk of prevalent HIV infection among women attending antenatal clinics in Soweto, South Africa. *The Lancet*, In Press.
3. Dunkle KL, Jewkes RK, Brown HC, Yoshihama M, Gray GE, McIntyre JA, Harlow SD. Prevalence and patterns of gender-based violence and revictimization among women attending antenatal clinics in Soweto, South Africa. *Am J Epidemiol*, In Press.
4. Dunkle KL, Jewkes RK, Brown HC, Gray GE, McIntyre JA, Harlow SD. Transactional sex among women in Soweto, South Africa: prevalence, risk factors and association with HIV infection. *Soc Sci Med*. In Press.
5. Gray GE. Conducting HIV Vaccine Trials—Challenges for South Africa. *Southern African J HIV Med*; May 2003: 36 — 38.
6. Williamson C, Morris L, Maughan M, Ping Li-Hua, Dryga SA, Thomas R, Reap E, Cilliers T, Van Harmelen J, Pascual A, Ramjee G, Gray G, Johnston R, Karim SA, Swanstrom R. Characterization and selection of HIV-1 Subtype C Isolates For Use in Vaccine Development. *AIDS Res Human Retroviruses* 2003; **19**: 133 — 144.
7. Fanales-Belasio E, Cafaro A, Cara A, Negri DRM, Fiorelli V, Butto S, Moretti S, Maggiorella MT, Sericola L, Scoglio A, Borsetti A, Ridolfi B, Bona R, Ten Haarft P, Macchia I, Leone P, Pavone-Cossut MR, Nappi F, Vardas E, Magnani M, Laguardia E, Caputo A, Titti F, Ensoli B. HIV-1 Tat based Vaccines: From basic science to clinical trials. *DNA and Cell Biology*, 2002, **21** (9): 599 — 610.
8. Buttò S, Fiorelli V, Tripiciano A, Ruiz-Alvarez MJ, Scoglio A, Ensoli F, Ciccozzi M, Collacchi B, Sabbatucci M, Cafaro A, Guzmán CA, Borsetti A, Caputo A, Vardas E, Colvin M, Lukwiya M, Rezza G, Ensoli B. Sequence Conservation and Antibody Cross-Recognition of the Clade B HIV-1 Tat Protein Vaccine Candidate in HIV-1-Infected Italian, Ugandan and South African Individuals. *J Infectious Dis*, 2003, **188** (8): 1171 - 1180.
9. Nwanegbo E, Vardas E, Gao W, Whittle H, Sun H, Robbins PD, Gambotto A. Prevalence of Neutralizing Antibodies to Adenoviral Serotypes 5 and 35 in the Populations of Gambia, South Africa, and the United States. *Clin Diag Lab Immunol J* (Accepted).
10. Masemola A, Mashishi T, Khoury G, Mokube P, Mogofo P, Vardas E, Colvin M, Zienjenah L, Katzenstein D, Masondo R, Allen S, Kumwenda N, Taha T, Gray G, McIntyre J, Karim S, Sheppard HW, Gray CM. Hierarchical Targeting of HIV-1 Subtype C proteins by CD8+ T cells: Correlation with Viral Load. *J Virol* (Accepted).
11. Coplan PM, Gupta SB, Dubey SA, Pitisuttithum P, Nikas A, Mbewe B, Vardas E, Schecter M, Kallas EG, Freed DC, Fu TM, Mast CT, Puthavathana P, Kublin J, Brown Collins K, Chisi J, Pendame R, Thales SJ, Gray G, McIntyre J, Staus WL, Condra JH, Mehrota DV, Guess HA, Emini EA, Shiver JW. Substantial Cross Reactivity of Anti-HIV-1-Cell Immune Responses Among the Major HIV-1 clades in Infected Individuals from Four Continents. (Submitted).

Conference presentations

1. Gray GE. Conducting clinical trials in South Africa: steps necessary for HIV vaccine related research. *Trezieme Colloque Des Cent Gardes—2003*. Retroviruses of Human AIDS and Related Animal Diseases.



HIV Vaccine Research Unit – Durban

Publications

1. Robinson A, The infrastructure supporting HIV vaccine clinical trials. *Southern African Journal of HIV Medicine* 2003; **11**, May: 39 – 41.

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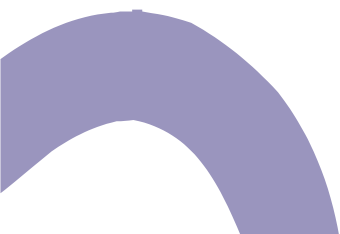
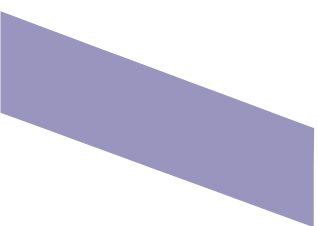
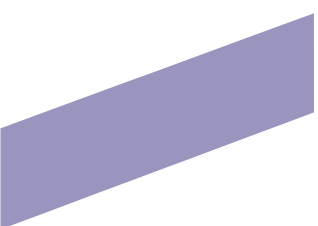
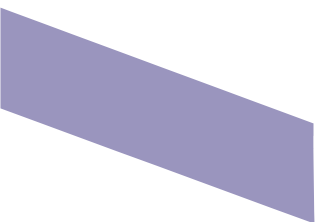
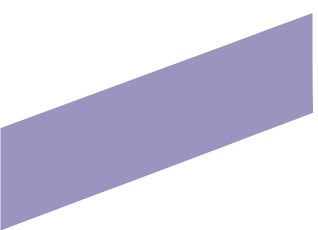
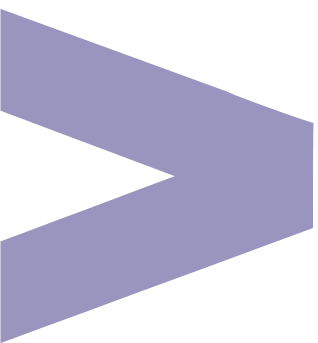
Publications

1. Williamson C, Morris L, Maughan MF, Ping L-H, Dryga SA, Thomas R, Reap EA, Cilliers T, van Harmelen J, Pascual A, Ramjee G, Gray G, Johnston R, Abdool-Karim S, Swanstrom R. Characterization and selection of HIV-1 subtype C isolates for use in vaccine development. *AIDS Res Hum Retro* 2003, **19**: 133 – 144.
2. Cilliers T, Nhlapo J, Coetzer M, Orlovic D, Ketas T, Olson WC, Moore JP, Trkola A, Morris L. The CCR5 and CXCR4 coreceptors are both used by human immunodeficiency virus type 1 primary isolates from subtype C. *J Virol* 2003, **77**: 4449 – 4456.
3. Papathanasopoulos MA, Patience T, Meyers TM, McCutchan FE, Morris L. Full-length genome characterization of HIV-1 subtype C isolates from two slow progressing perinatally infected siblings in South Africa. *AIDS Res Hum Retro* 2003; **19**: 1033 – 1037.
4. Grobler J, Gray CM, Rademeyer C, Seoighe C, Ramjee G, Karim SA, Morris L, Williamson C. The incidence of HIV-1 dual infection and its association with increased viral load set point in a cohort of subtype C infected female sex-workers. *J Inf Dis*. In Press.

Conference presentations

1. Gray E, Taylor N, Patience T, Papathanasopoulos M, Morris L. Establishing a subtype C TCLA strain-based neutralization assay. *Keystone Symposia*, Banff, Canada, March – April 2003 (poster).
2. Morris L. Neutralizing antibody responses in HIV-1 infected South Africans. *Fifth Congress of the Federation of African Immunological Societies (FAIS)*, Victoria Falls, Zimbabwe, April – May 2003 (invited speaker).
3. Gray E, Taylor N, Morris L. Evaluation of an HIV-1 subtype C neutralization by flow cytometric quantitation of intracellular p24 antigen in single round infection of primary cells. *2nd IAS Conference on HIV Pathogenesis and Treatment*, Paris, France, July 2003 (poster).
4. Nhlapo J, Gray E, Meyers T, Karim SA, Robinson J, Morris L. Generation of anti-HIV-1 env monoclonal antibodies using B cells from HIV-1 subtype C infected individuals with high levels of neutralizing antibodies. *South African AIDS Conference*. Durban August 2003 (poster).
5. Taylor N, Phoswa M, Montefiori D, Hanson C, Vardas E, Colvin M, Karim SA, Musonda R, Allen S, Zijenah L, Mbizo M, Katzenstein D, Kumwenda N, Taha Taha, Gray G, McIntyre J, Sheppard HW, Gray C, Morris L. Neutralization-sensitivity of HIV-1 subtype C and B viruses to subtype C serum antibodies. *South African AIDS Conference*, Durban 2003.
6. Choge I, Taylor N, Gray E, Meyers T, Papathanasopoulos MA, Morris L. The use of a gp120 V1/V2 heteroduplex tracking assay for identifying antibody neutralization sensitive viral quasi-species. *South African AIDS Conference*. Durban August 2003 (poster).
7. Choge I, Meyers T, Papathanasopoulos MA, Morris L. Use of a gp120 V1/V2 heteroduplex mobility assay for genetic analysis of HIV-1 subtype C isolates from children with slow and rapid disease progression. *International Conference of AIDS in Africa*, Nairobi, Kenya, September 2003.







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