

# TB Vaccine Phase III trial site networking

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TB VACSIN

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- Tuberculosis Vaccine Site Network
- Comprises the following sites:
  - Siaya District/Kisumu, Kenya
  - Worcester/ Cape Town, South Africa
  - Iganga/Mayuge/ Kampala Uganda
  - Manhiça / Mozambique (new)

# TBVACSIN meeting: Cape Town April 07

Hussey

Gelderbloem

Hawkrige

Verver

Mahomed

Workman Nduba

Wabwire-Mangen

Mayanja

Moyo Laserson

Musoke



Hanekom

Hanslo

Petersen

van t'Hoog

# Objectives

- To share experiences with respect to TB vaccine trial site development.
- To assist each other with respect with building capacity to conduct TB vaccine clinical trials.
- To work towards developing feasible diagnostic and quality standards for TB vaccine trials in developing countries.
- To strengthen African TB vaccine trial capacity.

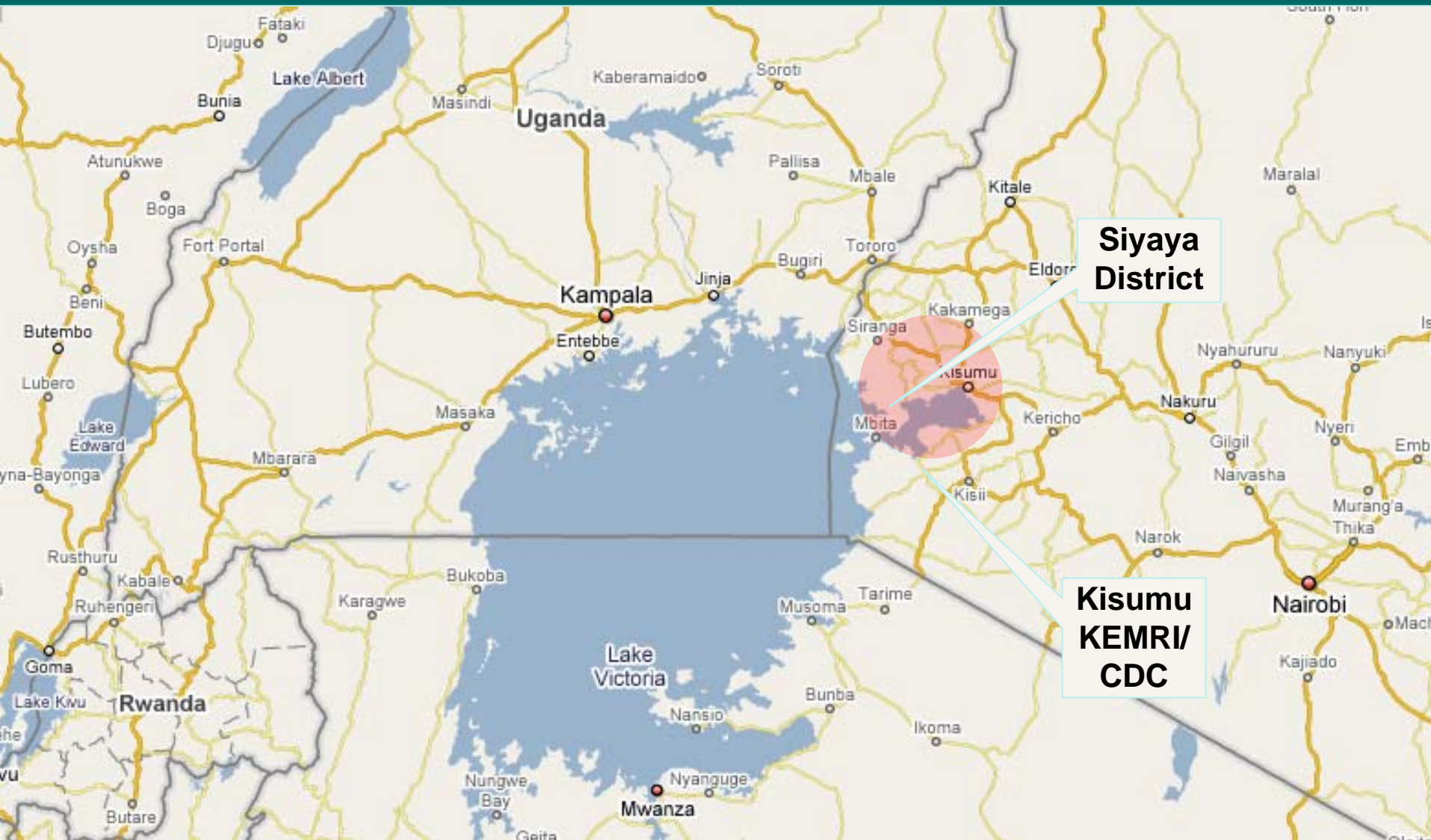
# WHO Global TB report 2007 – 22 high burden countries

## Case notifications, 2005

		NEW CASES										% OF NEW PULMONARY CASES SMEAR-POSITIVE <sup>B</sup>			
		NEW AND RELAPSE CASES		SMEAR-POSITIVE		SMEAR-NEGATIVE/ UNKNOWN		EXTRAPULMONARY		RE-TREATMENT CASES EXCLUDING RELAPSE				OTHER <sup>A</sup>	
		DOTS	WHOLE COUNTRY	DOTS	WHOLE COUNTRY	DOTS	WHOLE COUNTRY	DOTS	WHOLE COUNTRY	DOTS	WHOLE COUNTRY	DOTS	WHOLE COUNTRY	DOTS	WHOLE COUNTRY
1	India	1 146 599	1 156 248	506 852	508 890	392 390	399 066	170 948	171 838	148 495	148 580	–	–	56	56
2	China	894 428	–	472 719	–	329 157	–	42 845	–	90 780	–	5 301	–	59	–
3	Indonesia	254 601	–	158 640	–	85 373	–	6 142	–	4 446	–	–	–	65	–
4	Nigeria	62 598	–	35 048	–	22 705	–	2 836	–	2 858	–	1 392	–	61	–
5	Bangladesh	123 118	–	84 848	–	23 076	–	11 318	–	–	–	–	–	79	–
6	Pakistan	137 574	–	47 154	–	65 392	–	22 411	–	2 640	–	–	–	42	–
7	South Africa	260 162	270 178	119 906	125 460	73 551	76 680	38 786	39 739	31 559	32 289	–	–	62	62
8	Ethiopia	124 262	–	38 525	–	39 816	–	43 675	–	873	–	–	–	49	–
9	Philippines	137 100	–	81 647	–	50 347	–	1 149	–	–	–	–	–	62	–
10	Kenya	102 680	–	40 389	–	43 772	–	15 265	–	5 721	–	–	–	48	–
11	DR Congo	97 075	–	65 040	–	9 959	–	18 494	–	1 909	–	574	–	87	–
12	Russian Federation	82 643	127 930	22 690	32 605	47 151	74 301	6 776	12 320	6 433	28 617	–	–	32	30
13	Viet Nam	94 994	–	55 570	–	16 429	–	16 670	–	976	–	–	–	77	–
14	UR Tanzania	61 022	–	25 264	–	20 810	–	13 094	–	3 178	–	–	–	55	–
15	Brazil	51 452	80 209	26 224	42 093	15 898	23 990	7 229	11 037	3 159	6 548	–	466	62	64
16	Uganda	41 040	–	20 559	–	15 040	–	3 780	–	769	–	–	–	58	–
17	Thailand	57 895	–	29 762	–	18 837	–	7 501	–	–	–	–	–	61	–
18	Mozambique	33 231	–	17 877	–	9 184	–	4 771	–	487	–	–	–	66	–
19	Myanmar	107 009	–	36 541	–	35 601	–	30 252	–	982	–	–	–	51	–
20	Zimbabwe	50 454	–	13 155	–	29 074	–	6 721	–	4 437	–	–	–	31	–
21	Cambodia	35 535	–	21 001	–	7 057	–	6 759	–	588	–	–	–	75	–
22	Afghanistan	21 844	–	9 949	–	6 085	–	4 954	–	–	–	–	–	62	–
<b>High-burden countries</b>		<b>3 977 316</b>	<b>4 071 025</b>	<b>1 929 360</b>	<b>1 962 736</b>	<b>1 356 704</b>	<b>1 401 751</b>	<b>482 376</b>	<b>493 571</b>	<b>310 290</b>	<b>336 678</b>	<b>7 267</b>	<b>7 733</b>	<b>59</b>	<b>58</b>

# Kisumu, Kenya

- Kenya Medical Research Institute (Kemri)  
Supported by CDC, Atlanta and AMC, Netherlands.  
Principal Investigator – Videlis Nduba
- Funded by EDCTP from phase III capacity development for TB vaccine trials call of 2005 with significant additional support from Aeras.
- High rates of TB 400/100 000/ HIV (15% prevalence in 15-49 year olds) and Malaria.
- Centred around town of Kisumu near DSS area.  
Karemo division of Siaya district will be the study area.
- Study area population - 84000



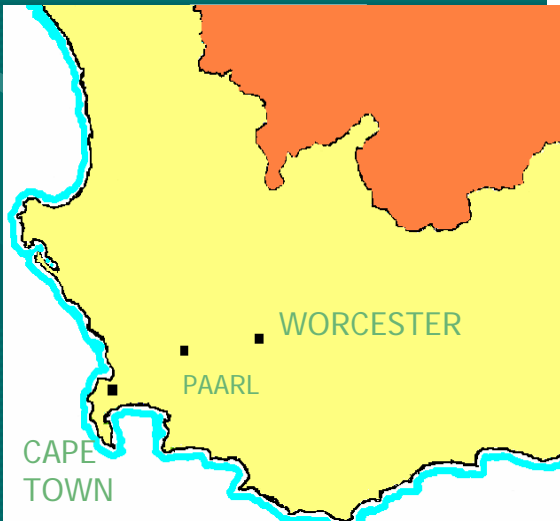
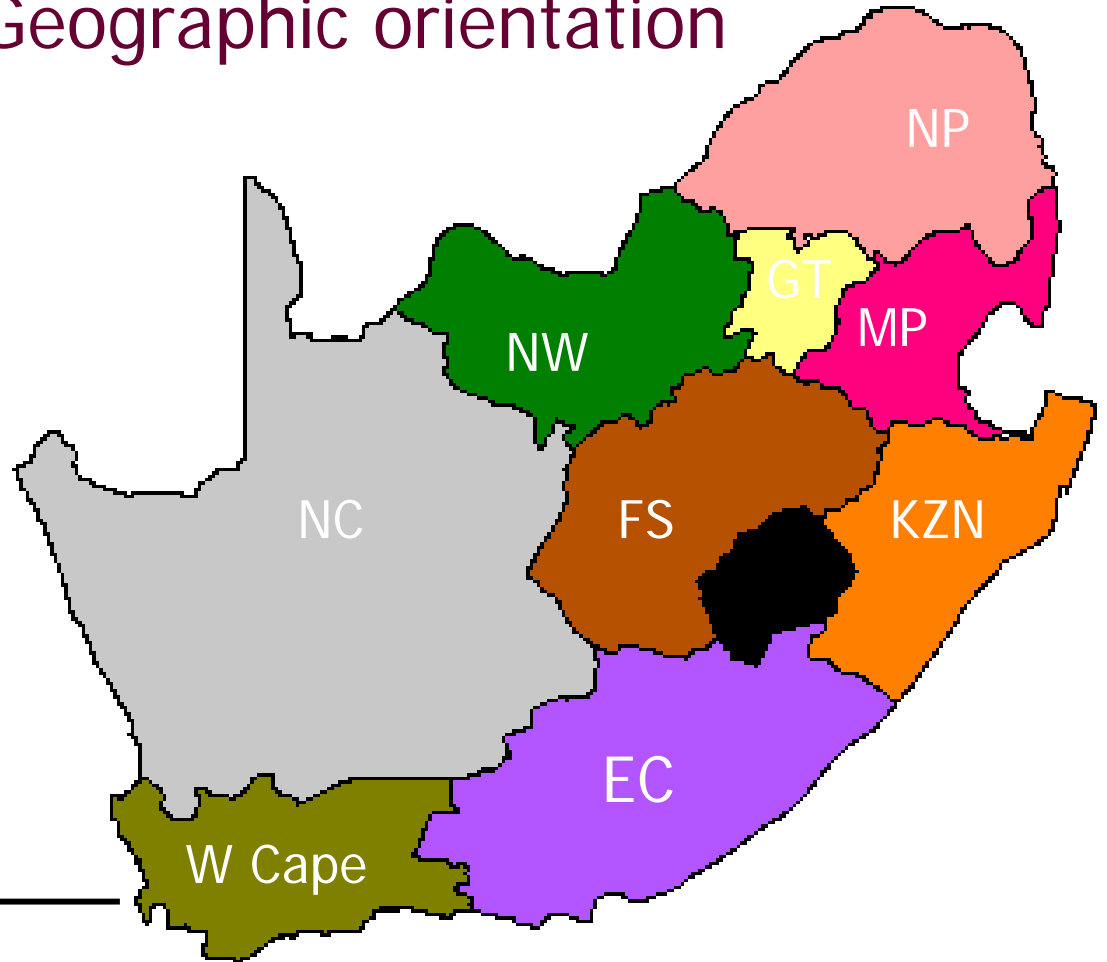
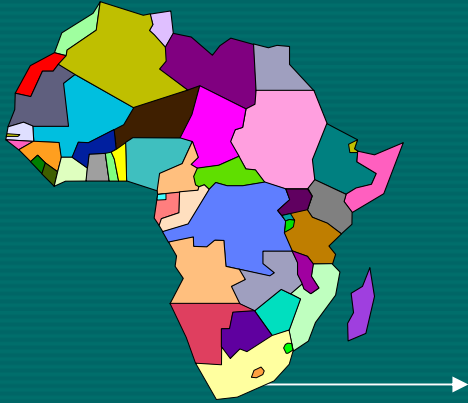
**Siyaya District**

**Kisumu KEMRI/ CDC**

# Worcester/ Cape Town

- South African TB Vaccine Initiative (SATVI), Institute of Infectious Disease and Molecular Medicine, University of Cape Town (UCT)– Principal Investigator – Greg Hussey.
- Funded mainly by Aeras Global TB Vaccine Foundation.
- Operating since 2000.
- A mainly rural research site with a high rate of TB (1400/100 000) centred around the town of Worcester
- Study area population 350 000.
- Has conducted a large phase 4 study of BCG in which 12000 infants were enrolled.
- Currently busy with phase I/II clinical trials of new TB vaccines and large adolescent and neonatal cohort studies.

# Geographic orientation



# Uganda

- Makerere University – Principal investigators Phillipa Musoke/ Harriet Mayanja
- Funded by EDCTP from phase III capacity development for TB vaccine trials call of 2005 with significant additional support from Aeras.
- High rates of TB/ HIV and Malaria (TB incidence estimated 368/100,000)
- Centred around Iganga/Mayuge which is part of a DSS area.
- Study area population – 65000 to be expanded to 130000.

# Location of Iganga/Mayuge DSS

LOCATION OF IGANGA/MAYUGE DSS, UGANDA.



# New partner- Manhica, Mozambique

- Manhica Health Research Centre (CISM) near Maputo in Mozambique with Spanish partner CRESIB (University of Barcelona) operating since 1996.
- Established malaria vaccine trial site.
- Want to develop TB vaccine trial capabilities.
- Study area with a population of 82 000 under DSS. District population >140 000.
- High rates of TB, HIV and malaria

# Where is Manhica ?



**LOCATION OF MANHICA DSS SITE, MOZAMBIQUE: Monitored Population 36,000**

# Key partners and funders

- Aeras Global TB Vaccine Foundation, USA
- KNCV TB Foundation, Netherlands
- Karolinska Institute, Sweden
- Institute of Tropical Medicine, Antwerp, Belgium
- Substantial co-funding from NACCAP – Netherlands
- Vienna School of Clinical Research, Austria
- San Raffaele Scientific Institute, Milan, Italy.
- Swedish Institute for Infectious Diseases Control
- Institute of Medical Immunology, Brussels, Belgium

# History

- Response to EDCTP 2005 call for proposals for capacity development of phase III TB vaccine trial sites.
- Initially, development of Kenyan and Ugandan proposals occurred separately.
- SATVI, Aeras and KNVCV had links with both groups.
- This led to joint discussions between the two groups.
- SATVI site used as a model to develop both proposals – neonatal and adolescent cohort studies as preparation for TB vaccine trials.

# Cohort studies – disease incidence

	SATVI	KEMRI/ CDC	Makerere
Start date	Started July 2005	Will start 2008	Will start 2008
Sample Sizes – neonates	4800	2900	2500
Sample Size – adolescents	6371	5000	7000
Methods – neonates	Recruitment from health facilities with active and passive FU for 2 years	Recruitment at homes with active FU linked to DSS for 1 year.	Recruitment through health facilities and homes with active FU linked to DSS for 1 year
Methods – Adolescents	Recruitment through schools with active and passive FU for 2 years	Recruitment through schools and homes with active FU linked to DSS for 1 year.	Recruitment through schools and homes with active FU linked to DSS for 1 year.

# Network activities

- Joint telephone conferences and email communications during proposal development process.
- First joint meeting held in Cape Town in April 2007 including visit to SATVI research site.
- Second meeting held in September in Kisumu, Kenya hosted by KEMRI/ CDC.
- Experiences shared on ethics, quality management and GCP. SOP documents shared as well.
- Collaboration on harmonisation of protocols e.g. diagnostic methods and main outcomes but we agree to differ on logistics e.g. site of enrolment.
- Strengthening of microbiological and immunology lab support.

# Future plans

- Meeting at 2007 IUATLD conference in Cape Town
- Training for trainers at SATVI site in October/ November 2007 using the Professional Development Programme (PDP) developed at the SATVI site. (Aeras Indian site also involved in this)
- VSCR training in February 2008
- Implementation of studies planned for next year.
- Joint proposals for further funding to build capacity for conducting vaccine trials.
- Basic website developed on UCT server but this is to be developed further.

# Insights

- South – South - North collaboration – workable.
- Sharing of experiences vital as common epidemiology and infrastructure issues.
- However, diversity in Africa also important to recognise – room for trying out different methods.
- Multicentre trials of TB vaccines will be needed – this network is one way in which we can be prepared for this.

Thank you for your attention

