Provisional Agenda - v.16.1

4th IABS Controlled Human Infection Model Conference
22nd - 24th May 2023 in Mombasa

Day 1 and Day 2: Disease Specific CHIM and Experience in Africa
Day 3: Utility of CHIM data in Licensure Pathway

This conference builds on the successes and identified challenges from three prior conferences and 1 workshop about human challenge trials also known as human infection studies or controlled human infection models (CHIM). When CHIMs are used to support vaccine development, they can add to what is already known from natural history, epidemiology, and pathogenesis studies to accelerate the vaccine development pathway. However, there are significant safety, ethical, operational, environmental, and scientific issues with intentionally infecting humans with infectious organisms even in the controlled setting of a clinical trial. Nonetheless, these trials have been performed safely and ethically both in non-endemic and endemic regions.

Scientific / Organizing Committee

Co-chairs of the organizing committee:

Melissa Kapulu	KEMRI-Wellcome Trust Research Programme, Kenya
Lucinda Manda-Taylor	Kamuzu University of Health Sciences, Malawi
Meta Roestenberg	Leiden University Medical Center, The Netherlands

Members

Pieter Neels	Chair, IABS Human Vaccine Committee, Brussels
Shobana Balasingam	Wellcome Trust, United Kingdom
Yakubu Nyam Beno	National Agency for Food and Drug Administration and Control, Nigeria
Robert Choy	PATH, U.S.A.
Anna Durbin,	Johns Hopkins Bloomberg School of Public Health, U.S.A.
Mainga Hamaluba	KEMRI-Wellcome Trust Research Programme, Kenya
Diadié Maïga	World Health Organization, Congo
Anastazia Older Aguilar	Bill & Melinda Gates Foundation, U.S.A.
Gary Means	Bill & Melinda Gates Foundation, U.S.A.
Joseph Mfutso-Bengo	Kamuzu University of Health Sciences, Malawi

SUNDAY, MAY 21, 2023

5:30pm – 7:00pm

Meet & Greet Welcome Reception

Venue: *Coco's* – Beachfront Reception Area

DAY 1 - MONDAY, MAY 22, 2023

	8:30	**Registration**
5 min	**9:00-9:05**	**Welcome - IABS** **Pieter Neels,** Chair, IABS Human Vaccine Committee, Belgium
10 min	**9:05-9:15**	**Welcome - KEMRI-Wellcome Trust Research Programme** **Philip Bejon,** KEMRI-Wellcome Trust Research Programme, Kenya
30 min	**9:15-9:45**	**Keynote lecture on history of the pitfalls of CHIM in history** **Wolfram Metzger,** University of Tübingen, Germany
30 min	**9:45-10:15**	**Keynote lecture CHIM trials anno 2020** **Melissa Kapulu,** KEMRI-Wellcome Trust Research Programme, Kenya

Chairpersons:
Melissa Kapulu, KEMRI-Wellcome Trust Research Programme, Kenya
Ingrid de Visser Kamerling, Centre for Human Drug Research, Netherlands

15 min	**10:15-10:30**	**CHIM 1: Malaria** **Nicholas Day**, Mahidol Oxford Tropical Medicine Research Unit (MORU), Thailand
15 min	**10:30-10:45**	**CHIM 2: Shigella** **Kawsar Talaat,** Johns Hopkins Bloomberg School of Public Health, U.S.A.
15 min	**10:45-11:00**	**CHIM 3: Streptococcus pneumoniae** **Kondwani Jambo**, Malawi-Liverpool-Wellcome Trust Clinical Research Programme, Malawi
15 min	**11:00-11:15**	Coffee break
15 min	**11:15-11:30**	**CHIM 4**: **Schistosomiasis** **Moses Egesa,** MRC/UVRI and LSHTM Uganda Research Unit, Uganda
25 min	**11:30-11:55**	Plenary discussion

50 min	**12:00-12:50**	Lunch
30 min	**12:50–13:20**	**Community and public engagement in Challenge Trials** **Noni Mumba**, KEMRI-Wellcome Trust Research Programme, Kenya
15 min	**13:20-13:35**	**CHIM ethical guidelines on conduct of controlled human infection studies in India** **Roli Mathur**, ICMR Bioethics Unit, Indian Council of Medical Research, India
15 min	**13:35-13:50**	**CHIM 6: COVID-19** **Chris Chiu,** Imperial College London, United Kingdom
15 min	**13:50-14:05**	**CHIM 7: Zika** **Anna Durbin**, Johns Hopkins Bloomberg School of Public Health, U.S.A.
15 min	**14:05-14:20**	**CHIM 8: Dengue** **Bridget Wills,** Nuffield Department of Medicine, United Kingdom
25 min	**14:20-14:45**	Plenary discussion
15 min	**14:45-15:00**	Introduction to group work dividing in groups: Anna Durbin
60 min	**15:00-16:00**	First group work on CHIM protocol outline Preparation of the questions for the workshop: Malaria Shigella Streptococcus pneumoniae Schistosomiasis
60 min	**16:00-17:00**	**Chairpersons**: **Kawsar Talaat,** Johns Hopkins Bloomberg School of Public Health, U.S.A. Plenary discussion: Feed-back from working groups - All
30 min	**17:00-17:30**	**Keynote: history of science in Africa, challenges of clinical trials** **Ally Olotu**, Ifakara Health Institute, Tanzania
30 min	**17:30-18:00**	Keynote: Ethical aspects of CHIM trials in Africa **Dorcas Kamuya**, KEMRI-Wellcome Trust Research Programme, Kenya **Primus Chi**, KEMRI-Wellcome Trust Research Programme, Kenya
15 min	**18:00-18:15**	Plenary discussion
	18:15	End of Day 1
	19:30	Dinner

DAY 2 – TUESDAY, MAY 23, 2023

Chairpersons:
Anna Durbin, , Johns Hopkins Bloomberg School of Public Health, U.S.A.
Lucinda Manda-Taylor, Kamuzu University of Health Sciences, Malawi

10 min	**8:30-8:40**	Welcome back **Pieter Neels,** IABS, Belgium
60 min	**8:40- 09:40**	Second group work on CHIM protocol outline Salmonella COVID-19 Zika Dengue
20 min	**09:40-10:00**	Coffee break
60 min	**10:00- 11:00**	**Chairperson** **Pieter Neels,** IABS, Belgium **Yakubu Nyam Beno,** National Agency for Food and Drug Administration and Control, Nigeria Plenary discussion: Feed-back from working groups
20 min	**11:00-11:20**	**Experience with hookworm challenge trials in Brazil** **Rodrigo Correa-Oliveira**, Fiocruz, Brazil
20 min	**11:20- 11:40**	**Experience with TB challenge trials** **Elizabeth Chandler Church,** Fred Hutchison Cancer Center**,** Seattle, U.S.A.
30 min	**11:40-12:10**	**Discussion**
60 min	**12:10-13:10**	**Lunch**
20 min	**12:30-12:50**	Lunchtime Talk Guiding Principles for Funders of Human Challenge Studies**,** **Claudia Emerson,** McMaster University, Canada **Shobana Balasingam,** Wellcome Trust, United Kingdom **Gary Means**, Bill & Melinda Gates Foundation, U.S.A.
20 min	**13:10-13:30**	**Regulatory experience on CHIM from Malawi** **Frank Sinyiza,** National Health Sciences and Ethics, Malawi
20 min	**13:30-13:50**	**Regulatory experience on CHIM from Kenya** **Mikal Ayiro**, Pharmacy and Poisons Board, Kenya
20 min	**13:50-14:10**	**Regulatory experience on CHIM from Uganda** **Winfred Nazziwa,** National Council for Science & Technology, Uganda
30 min	**14:10-14:40**	Plenary discussion with the audience

20 min	**14:40-15:00**	Tea break
15 min	**15:00-15:15**	**AVAREF: Joint review of multi-country clinical trials, parallel regulatory and ethics review – Discussion included** **Jacqueline Rodgers,** AVAREF
15 min	**15:15-15:30**	Discussion
30 min	**15:30-16:00**	**Conclusions from a Young African Scientist** **Ronald Kiyemba**, UVRI, Uganda
15 min	**16:00-16:15**	Discussion
	16:15	End of Day 2

DAY 3 – Wednesday, MAY 24, 2024

Wellcome and CHIMICURRI – A Hybrid Meeting

8:30-8:40: **Welcome & introduction Inno4Vac**
Pieter Neels, IABS Human Vaccine Committee

Chairpersons:
David Kaslow, US-FDA; Marco Cavaleri, EMA

8:40 – 9:40

Session 1: Approval of CHIM trials, and what about children in CHIM's
Round table discussion (Eric Boateng, Melisa Kapulu, Ally Olutu, Brigit Wills, Rodrigo Oliveira)

- Practicalities of the ethical review process
- How does the route of administration impact the review of the protocol?
- Ethical aspects from the IRB
  - Presence or absence of escape/rescue medication (e.g. COVID-19, dengue, influenza,…)
  - Challenges with mucosal immunity (Rota, OPV, C. Difficile, …)
  - Naïve versus non-naïve or primary versus booster (e.g. Pertussis, influenza, COVID-19, …)

9:40:10:40

Session 2: Use of CHIM in Children
Round table:
Kawsar Talaat, Johns Hopkins Bloomberg School of Public Health, U.S.A.
Michelo Simuyandi, Centre for Infectious Disease Research, Zambia
Melba Katindi, Advocate of the High Court of Kenya

- Is a CHIM trial in children acceptable?
  - Disease burden is sometimes higher in children than in adults
  - Mortality figures in children is sometimes much higher than in adults
  - Community gain of a CHIM in children might be much higher than in adults
  - Input from LMICs' regulators on using children in CHIM.

Coffee break 10:40-11:00

11:00-12:15

Session 3: What is the regulatory value of data from CHIM?
Example:
Vaxchora: Wilbur Chen, Center for Vaccine Development, University of Maryland School of Medicine
Salmonella type B; iNTS (invasive Non Typhoidal Salmonella): Malick Gibani, Imperial College London, United Kingdom

- What is the risk of false positive or false negative outcomes of CHIM's
  - Extrapolation from CHIM to clinical efficacy
    - mimicking of real life
  - Inference of CHIM: is the CHIM stringent enough, or too stringent
- Proof of concept
- Correlate of protection

- Registration purpose
- Is the Vaxchora model acceptable for other examples for registration?
- Is there a place for CHIM data in a pandemic situation?

(Examples: malaria, cholera, pertussis etc.)

Lunch break 12:15-13:15

13:15-14:15

Session 4 CHIM Models are disease specific, can we learn lessons from one disease for another?
Example:
Dengue model, Anna Durbin, Johns Hopkins Bloomberg School of Public Health, U.S.A.
Robert Choy, PATH, U.S.A.
Charlie Weller, Wellcome Trust, United Kingdom

Can we group mucosal, respiratory, gastro-intestinal to feed into harmonization, data/sample sharing etc. Is there a definition of best practice criteria or a framework of data needed to get better (easier) access to licensure?
Viewpoint of the regulators: David & Marco.

Tea break 14:15 -14:35

14:35-15:35

Session 5: CHIM Models are feasible for tropical disease like Schistosomiasis, Leishmaniosis, Hookworm, Dengue, etc. but what challenges/opportunities are there with these being conducted in an endemic setting? What are the community benefits for executing CHIM's regionally in LMIC settings?
Schistosomiasis, Moses Egesa, MRC/UVRI and LSHTM Uganda Research Unit

- the CHIM studies in endemic settings are more relevant for the population but also not quite the target, being children
- there is a risk of that pre-existing immunity could result in unfavourable results for the vaccine efficacy studies
- some of these diseases have several serotypes so can CHIM be used to produce data that would enable a multivalent vaccine which shows efficacy for 2 of the 4 serotypes for the licensure package
- Input from LMIC's' regulators

15:35-17:00

Session 6 Hurdles for CHIM for RSV, influenza & C; Difficile
Bruno Speder, hVIVO, United Kingdom
Christopher Chiu, Imperial College London, United Kingdom

- CHIM's are set up to see mild symptoms upper respiratory tract disease, but the prevention is for severe disease in lower tract, is extrapolation feasible?
- How to deal with the lack of effective treatment for some organisms.
- How to deal with unintended consequences?

17:00 Close of the meeting.