

PROJECT FINAL REPORT

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Project acronym: APARET

Project title: African Programme for Advanced Research Epidemiology Training

Funding Scheme: Coordination and support actions (Coordinating)

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A reference to the APARET project can be found on the AFENET Homepage:

http://afenet.net/new/index.php/?option=com_content&view=article&id=268

Name of scientific representative of the Coordinator: Norbert Schwarz



Date: 04 / 04 / 2015

¹ Usually the contact person of the coordinator as specified in Art. 8.1. of the Grant Agreement.

² The home page of the website should contain the generic European flag and the FP7 logo which are available in electronic format at the Europa website (logo of the European flag: http://europa.eu/abc/symbols/emblem/index_en.htm logo of the 7th FP: http://ec.europa.eu/research/fp7/index_en.cfm?pg=logos). The area of activity of the project should also be mentioned.

4.1 Final publishable summary report

Executive summary

APARET (African Programme for Advanced Research Epidemiology Training)

Aim: APARET supported African researchers to initiate and implement their own research initiatives with own funding.

Target group: Graduates of Field Epidemiology (and Laboratory) Training Programmes - FE(L)TP- in Africa.

Training structure: APARET workshops were a two-week initiation workshop on research funding, proposal writing, ethical issues; a one-week project management workshop and a final seminar, attached to an international conference. Mentors from European African and American institutions supported the APARET fellows.

Core objectives for the fellow: A core part of the fellowship was the development of an epidemiological research project assessed and funded by APARET (with around 5000 USD) and the application for a major research grant.

Outcome: EU-funding covered 3 successive cohorts of 8 fellows. Of 24 fellows, 23 successfully completed APARET and were awarded a certificate. While APARET funded projects were all implemented, most major grant applications were rejected. Smaller external funding was e.g. acquired for research on bovine tuberculosis or cervix cancer. One fellow acquired a grant of >70.000 € for a project on rotavirus vaccination and was later appointed principal investigator for a National rotavirus vaccination assessment project. Other fellows became FETP programme leader or epidemic preparedness trainers.

Conclusions from our experience: APARET fellows work on their own projects and thus identify with activities of the learning process, more than in an artificial exercise. As an individualised postgraduate-level training programme APARET needs high resources. For a successful fellowship the selection of good fellows, strong mentorship and strong support of the host institute are crucial.

A description of the coordination and networking activities

For each APARET cohort consisting of 8 fellows from Ghana, Tanzania, Zimbabwe, Uganda, Nigeria and Burkina Faso, their mentors from international epidemiologist networks and supervisors from the APARET fellow's institute, APARET organised a 2-week introductory workshops, a 1 week project management course and a 1 week Final seminar attached to a pertinent conference.

Initiation workshop at the start of the programme for APARET cohort 1

The 2-week Initiation workshop for the first APARET cohort took place from the 09-20.01.2012 in Kampala, Uganda with all mentors and fellows present. However the supervisors were not present at this workshop, something we perceived as a lost opportunity for mentor, fellow and supervisor to meet. We decided to invite mentors and supervisors for the second week of the Initiation workshop of cohort 2.

Table 1a: Schedule of the cohort 1 Initiation Workshop from the 09-20.01.2012 in Kampala, Uganda
Week One

Time	Mon Jan 9th	Tue Jan 10th	Wed Jan 11th	Thu Jan 12th	Fri Jan 13th
9.00 – 11.00 am	Welcome (AFENET)	Introduction to international research funding (BNITM)	Welcome and introduction, presentation of agenda (VSCR)	Creating a project task network and schedule (VSCR)	Managing the project team (VSCR)
			What is project management? (VSCR)		Tracking project progress (VSCR)
11.00 – 11.30 am	B	R	E	A	K
11.30 – 1.00 pm	Introduction to APARET (BNITM, AFENET)	Finding the right call (STPH, BNITM)	Project definition (VSCR)	Determining resource requirements (VSCR)	Managing change (VSCR)
1.00 – 2.00 pm	L	U	N	C	H
2.00 – 3.00 pm	Presentation of research topics	Fellows and mentors meet to discuss potential donors	Planning a project – initial steps (VSCR)	Creating a project budget (VSCR)	Managing change (VSCR)
					Project close out (VSCR)
3.30 – 4.00 pm	B	R	E	A	K
4.00 – 5.30 pm	Presentation of research topics	Fellows and mentors meet to discuss potential donors	Developing skills and responsibility matrices (VSCR)	Risk management (VSCR)	Examination (VSCR)
					Wrap up ceremony (VSCR)

Table 1b: Schedule of the cohort 1 Initiation Workshop from the 09-20.01.2012 in Kampala, Uganda

Week Two

Time	Mon Jan 16th	Tue Jan 17th	Wed Jan 18th	Thu Jan 19th	Fri Jan 20th
9.00 – 11.00 am	Good clinical and good epidemiological practice (VSCR)	Ethical aspects of clinical and epidemiological research (VSCR)	Fellows work on concept for small grants	Sample size calculations (CDC)	Data analysis (CDC)
11.00 – 11.30 am	B	R	E	A	K
11.30 – 1.00 pm	Good clinical and good epidemiological practice (VSCR)	Ethical aspects of clinical and epidemiological research (VSCR)	Fellows work on concept for small grants	Sample size calculations (CDC)	Report writing (CDC)
1.00 – 2.00 pm	L	U	N	C	H
2.00 – 3.00 pm	Good clinical and good epidemiological practice (VSCR)	Introduction to APARET small grant concept (AFENET)	Presentation of concepts	Data collection and management (CDC)	Closing ceremony and departure (AFENET)
3.30 – 4.00 pm	B	R	E	A	K
4.00 – 5.30 pm	Good clinical and good epidemiological practice (VSCR)	Introduction to APARET small grant concept (AFENET)	Presentation of concepts	Data collection and management (CDC)	

Picture 1: Participants of the Initiation Workshop in January 2012 in Kampala, Uganda



Proposal writing & project planning workshop for APARET cohort 1

The proposal-writing workshop took place in Accra Ghana from the 23.4. to the 27.4. and was organized by the Swiss Tropical and Public Health Institute (see below the agenda). For cohorts 2 and 3 proposal writing was integrated into the Initiation workshops, while the second workshop was dedicated to project planning and project management.

Introduction to Proposal Writing (Swiss TPH)

Day 1 - 23 April 2012

- 9:00 - 9:30 1. **Welcome and Introduction**
Presentation of Agenda
Introduction of Course Participants
- 9:30 - 10:30 2. **What Makes a Good Proposal?**
Questions to ask yourself before starting
Coffee break
- 10:30 - 10:45
- 10:45 - 12:15 3. **General Structure of Proposals**
Part 1: Title, Abstract, Specific Aims
Lunch
- 12:15 - 13:15
- 13:15 - 15:30 4. **General Structure of Proposals**
Part 2: The Research Plan
Background and significance, preliminary studies,
study design and methods
Coffee break
- 15:30 - 15:45
- 15:45 - 17:30 5. **General Structure of Proposals**
Part 3: Collaborators and Cores, Appendix

Day 2 – 24 April 2012

- 9:00 - 9:30 1. **Opening Session**
Review of Day 1
Presentation of Day 2 Agenda
- 9:30 - 10:30 2. **General Structure of Proposals**
Part 4: The Budget
Coffee break
- 10:30 - 10:45
- 10:45 - 12:15 3. **Proposal Eligibility and Evaluation Criteria**
Lunch
- 12:25 - 13:15
- 13:15 - 15:30 4. **Proposal Writing Tips**
Part 1: Writing to your audience
Clear and persuasive writing
Coffee Break
- 15:30 - 15:45
- 15:45 - 17:30 5. **Proposal Writing Tips**
Part 2: More writing and editing techniques

Day 3 – 25 April 2012

- 9:00 - 9:30 1. **Opening Session**
Review of Day 2
- 9:30 - 10:30 2. **Top Reasons Why Projects Don't Get Funded**
Coffee break
- 10:30 - 10:45
- 10:45 - 12:15 3. **Case Study Presentation and Critique**
Lunch
- 12:25 - 13:15
- 13:15 - 15:30 4. **One-on-one Proposal Consultation**
Coffee Break
- 15:30 - 15:45
- 15:45 - 17:30 5. **One-on-one Proposal Consultation**

Day 4 – 26 April 2012

- 9:00 - 10:30 1. **Opening Session**
Review of Day 3
Introduction of Mentors
Coffee break
- 10:30 - 10:45
- 10:45 - 12:15 2. **Work Session with Mentors**
Lunch
- 12:15 - 13:15
- 13:15 - 15:30 3. **Work Session with Mentors**
Coffee Break
- 15:30 - 15:45
- 15:45 - 17:30 4. **Work Session with Mentors/ Presentation of Progress**

Day 5 – 27 April 2012

- 9:00 - 9:30 1. **Opening Session**
- 9:30 - 10:30 2. **Work Session with Mentors**
Coffee break
- 10:30 - 10:45
- 10:45 - 12:15 3. **Work Session with Mentors**
Lunch
- 12:25 - 13:15
- 13:15 - 15:30 4. **Presentation of Progress**
Coffee Break
- 15:30 - 15:45
- 15:45 - 17:30 5. **Conclusion/Feedback Session**

Picture 2: Participants of the Proposal Writing Workshop in March 2012 in Accra, Ghana



Closing seminar at the end of the first APARET year of cohort 1

The closing seminar was attached to the European Scientific Conference on Applied Infectious Disease Epidemiology Training, ESCAIDE that took place from the 24-26. October in Edinburgh, Scotland. On the ESCAIDE conference we had a 1-day internal workshop before the start of the conference. On this day the project progress of all fellows was reviewed. In the morning we reviewed the progress on the small grant projects and in the afternoon on the big grant proposals. We stressed to the fellows that their fellowship continues for another years, although there will be no more APARET seminars.

During the conference we held a one-day APARET session that was open to the Public. The 8 APARET fellows presented their work on diverse topics such as low cost computers for the diagnosis of malaria, molecular epidemiology of antimicrobial resistance of *Staphylococcus aureus*, diabetes and hypertonus, determinants of sustained use of bed nets, febrile diseases in newborns and infants, cervical cancer screening uptake and rotavirus disease burden and introduction of a vaccination. Prof Elizeus Rutebemberwa, the programme manager of APARET from the Makerere University in Kampala, Uganda presented the APARET concept. Dr Sheba Gitta presented the African Field Epidemiology Network, AFENET for which she is the deputy director. The session was crowned by a plenary discussion with 3 European and 3 African epidemiologists on the topic African European cooperation in epidemiological research: where are we and where do we go?



Picture 3: APARET at ESCAIDE, back row: Axel Hoffmann, Christian Winter, Ralf Krumkamp, Sven Poppert, Andreas Jansen, Mammadou Sawadogo, Sheba Gitta, Ellis Owusu-Dabo, Jan Hattendorf, Elia John Mmbaga. Front row: Norbert Schwarz, Stella Ekallam, Michael Owusu, Joseph Opare, Aisha Abubakar, Notion Gombe, Azma Simba Ayoub, Isidore Bounkougou, Nykiconia Preacely, Bernard Sawadogo, Elizeus Rutebemberwa (Photo Christian Winter)

Initiation workshop at the start of APARET cohort 2

The 2-week Initiation workshop for the second APARET cohort took place from the 14-25.01.2012 in Kampala, Uganda with mentors fellows and supervisors present. During the first cohort we perceived the absence of the supervisors at the initiation workshop as a lost opportunity for mentor, fellow and supervisor to meet. As we are aware that it may be difficult for supervisors and mentors to sacrifice two weeks, we decided to invite mentors and supervisors for the second week off the Initiation workshop of cohort 2. Furthermore we integrated proposal writing into the Initiation workshop and shifted the programme management part into the second workshop.

Table 2a: Schedule of the Initiation Workshop from the 14-25.01.2012 in Kampala, Uganda. The schedule for cohort 3 in January 2014 was similar

Week One

Time	Mon Jan 13th	Tue Jan 14th	Wed Jan 15th	Thu Jan 16th	Fri Jan 17th
9.00 – 11.00 am	Welcome (AFENET)	International research funding (BNITM, AFENET,)	Presentation of agenda (SwissTPH) What is proposal writing?	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)
11.00 – 11.30 am	B	R	E	A	K
11.30 – 1.00 pm	Introduction to APARET (BNITM, AFENET)	Finding a call (SwissTPH, BNITM)	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)
1.00 – 2.00 pm	L	U	N	C	H
2.00 – 3.00 pm	Presentation of research topics	Fellows prepare presentation of concept	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)	Proposal writing (STPH) Proposal writing (STPH)
3.30 – 4.00 pm	B	R	E	A	K
4.00 – 5.30 pm	Presentation of research topics	Fellows prepare presentation of concept	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)

Table 2b: Schedule of the Initiation Workshop from the 14-25.01.2012 in Kampala, Uganda. The schedule for cohort 3 in January 2014 was similar

Week Two (Core week with mentors and supervisors present & steering committee meeting)

Time	Mon Jan 20th	Tue Jan 21th	Wed Jan 22th	Thu Jan 23rd	Fri Jan 24th
9.00 – 11.00 am	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)	Presentation of concepts for small grants	Analysis plan (CDC)	Analysis plan (CDC)
11.00 – 11.30 am	B	R	E	A	K
11.30 – 1.00 pm	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)	Presentation of concepts for small grants	Analysis plan (CDC)	Analysis plan (CDC)
1.00 – 2.00 pm	L	U	N	C	H
2.00 – 3.00 pm	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)	Presentation of concepts for big grants	Analysis plan (CDC)	Closing ceremony and departure (AFENET)
3.30 – 4.00 pm	B	R	E	A	K
4.00 – 5.30 pm	Proposal writing (SwissTPH)	Proposal writing (SwissTPH)	Presentation of concepts for big grants	Analysis plan (CDC)	

Picture 4: Participants of the APARET cohort 2 - Initiation Workshop in January 2013 in Kampala, Uganda



Project Management workshop for APARET cohort 2

The Project Management workshop for APARET cohort 2 took place in Ouagadougou, Burkina Faso from the 25.3. to the 29.3. 2013. Thus for the second (and third) cohort we integrated proposal writing into the Initiation workshop and shifted the programme management part into the second workshop.

Picture 5: Representatives of the Burkina Faso Public Health authorities and the APARET networks after the opening ceremony of the Project Management workshop in March 2013 in Ouagadougou, Burkina Faso



Closing seminar at the end of the first APARET year of cohort 2

The closing seminar was attached to the 2-yearly conference of the African Field Epidemiology Network, AFENET in Addis Ababa, Ethiopia, that took place from the 17 – 21 November 2013 together with the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). On the AFENET conference we had a 1-day internal workshop before the start of the conference. On this day the project progress of all fellows was reviewed. In the morning we reviewed the progress on the small grant projects and in the afternoon on the big grant proposals. We stressed to the fellows that their fellowship continues for another years, although there will be no more APARET seminars. During the conference we held a one-day APARET session that was open to the public.

Project Management workshop for APARET cohort 3

The Project Management workshop for APARET cohort 2 took place on Sansibar, Tanzania from the 31.3. to the 04.04 2014. Thus for the second and third cohort we integrated proposal writing into the Initiation workshop and shifted the programme management part into the second workshop.

Closing seminar at the end of the first APARET year of cohort 3

The closing seminar was attached to the conference of the Public Health Associations of South Africa (PHASA) in Polokwane, South Africa, that took place from the 2 – 6 September 2014. On the conference we had a 1-day internal workshop before the start of the conference. On this day the project progress of all fellows was reviewed. In the morning we reviewed the progress on the small grant projects and in the afternoon on the big grant proposals. We stressed to the fellows that their fellowship continues for another years, although there will be no more APARET seminars.

Follow up after the APARET core year

Although there were no more APARET meetings after the core year the fellowship was not finished yet and finishing the small project and submitting a big grant proposal was a prerequisite to gain the APARET certificate. All fellows were asked submit a timeplan for the coming year including a timeplan for the small grant APARET project and for the big grant proposal including the chosen funding body /call and the corresponding deadline. The fellow mentor supervisor triangles were crucial for this follow up year.

“On the job” training in epidemiological research

All cohort APARET fellows were embedded into their host institutes and received the “on the job training” with on-site support from their supervisors and distance support from their mentor. For the first cohort we realized that it to be useful for mentors and supervisors to know each other: An early meeting during the course of a cohort of all three persons, the fellow-mentor-supervisor triangle is desirable. From the second cohort onwards we reached this by attaching the steering committee meeting to the Initiation workshop so that all host institute supervisors were present.

A description of the big grant projects of the APARET fellows

Table 3: Follow up of big grant application outcomes of cohort 1

Fellow	Grant application	Status
Aisha Ahmed Abubakar (Nigeria)	The effect of low cost interactive computers on the diagnosis and treatment of malaria in trained role model caregivers of under fives in North western Nigeria. Submitted to the Wellcome Trust, applied for 141,516 \$.	The proposal was retained after the first round, but unfortunately was rejected in the second round.
Azma Simba (Tanzania)	Evaluation of the Impact of Different Mechanisms for Long Lasting Insecticidal Nets Distribution on Malaria Control in Tanzania: Durability, Sustainable Use and Reduced Disease Mortality and Morbidity. Submitted to the Swedish International Development Cooperation Agency, Sida, Volume 10,000,000 Tanzanian shillings (Appr. 6000 USD).	Proposal rejected
Azma Simba (Tanzania)	Resubmitted to Research capacity development grant under SIDA SAREC. (MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES) at the end of 2014	Proposal under review
Bernard Sawadogo (Burkina Faso)	Decrease reinfection rate of intestinal helminthiasis in school children through health education coupled with deworming. Submitted to the Grand challenges in Global Health	Proposal rejected
Bernard Sawadogo (Burkina Faso)	Prevalence and determinants of Teenage pregnancy among secondary school going girls in Kongoussi, Burkina Faso. Submitted to the Task Force for Global Health, Inc. / TEPHINET, Volume 5000 USD	Grant of 5000 USD granted
Isidore Bounkougou (Burkina Faso)	Tools to study the effects of rotavirus vaccination in Burkina Faso. Submitted to the Swedish Research Links programme: 2013 International collaborative research grant. Applied for 77.500 €.	Proposal accepted (Volume 77.500 €)
Isidore Bounkougou (Burkina Faso)	ECOLOGICAL quality of West African freshwater ecosystems, the proliferation of cyanobacteria and the occurrence of PATHogens (ECOPATH) Application as a partner (41.384 € of 514.080 € overall volume), Submitted to ERAFRICA_RE-	Proposal rejected

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John Bua (Uganda)	Improving Newborn and Maternal Health Outcomes using mobile phone applications in Mityana District, Uganda (INHOMA Project). Submitted to Grand challenges Canada Round 6 Phase 1, applied for 250.000 USD	Proposal rejected
Jospeph Opare (Ghana)	Acute Flaccid Paralysis Surveillance review- Eastern Region of Ghana, 1997-2012. Applied for 9.350 USD at the Research Capacity Strengthening & Knowledge Management World Health Organization / TDR	Proposal rejected
Jospeph Opare (Ghana)	Blood pressure levels, risk of hypertension and anthropometric indicators in adults, Eastern Region of Ghana. Applied for 11.105 USD at the Research Capacity Strengthening & Knowledge Management World Health Organization / TDR	Proposal rejected
Jospeph Opare (Ghana)	Joint Surveillance for Zoonotic Diseases at the human-animal interface, Eastern Region of Ghana. Applied for 100.000 USD at the Research Capacity Strengthening & Knowledge Management World Health Organization / TDR	Proposal rejected
Michael Owusu (Ghana)	Molecular epidemiology of MRSA among healthy individuals and patients with dermatologic infections. Applied to „Berliner Stiftung für Dermatologie“. Applied for 15.300 €	Grant of 7000 € granted
Notion Gombe (Zimbabwe)	Effectiveness of Community Involvement in the Control and Prevention of Schistosomiasis. Proposal submitted to the Bill and Melinda Gates Foundation (Volume 100.000 USD)	Proposal rejected

Table 4: Follow up of big grant application outcomes of cohort 2

Fellow	Grant application	Status
Carl Stephen Osei, Ghana	Health Information For All- Ghana (HIFAG) Initiative. Submitted to the Grand Challenges Explorations Round 11, applied for 100.000 USD	Proposal rejected
Carl Stephen Osei, Ghana	Piloting a network of cancer diagnostic services to improve cancer diagnosis and surveillance in Ghana, applied to the African Cancer Registry Network (undefined volume)	Proposal rejected
Denis Yelbeogo, Burkina Faso	Evaluation of surveillance systems of yellow fever; Burkina Faso; 2009-2011.	Denis Yelbeogo left his position for a new job and dropped out of the programme after the introduction course
Esimebia Adjovi Amegashie, Ghana	Molecular and sero-epidemiological study on Brucellosis in livestock and exposed group of human population in Ethiopia, Burkina Faso and Ghana. Applied to the German Research Foundation, DFG	Sum not yet specified (two stages), first stage under review.
Estelle Kanyala, Burkina Faso	Prevalence and molecular diagnostic of bovine tuberculosis in Ouagadougou slaughterhouse and Oudalan slaughter areas in Burkina Faso, Applied to the Fondation Merieux for 5000 €	Grant of 5000 € granted
Estelle Kanyala, Burkina Faso	Request to the German National Reference Centre to genotype the samples from the abovementioned project (costs not quantified)	Genotyping was carried out
Estelle Kanyala, Burkina Faso	Prominent role in the Multi country ERA-net project "AMENET" (African Melioidosis Network), (Ouagadougou University is the lead partner)	Grant of 297.248 € for a consortium of 8 partners from 7 countries
Gerald Shambira, Zimbabwe	Role of Community Volunteers in changing behaviours associated with common risk factors of hypertension and blood pressure control in Harare City, Zimbabwe 2013: a randomized cluster trial, applied for 100.000 USD to the International Development Research Centres, Canada	Proposal rejected
James Bagonza,	Does the Family support model improve blood sugar control among diabetic patients in Eastern	Proposal rejected

Uganda	Uganda? Applied for 100.000 USD to the Grand Challenges Canada Explorations	
Mageda Kikulya, Tanzania	Community Based Intervention to Increase Institutional Delivery among Pregnant Women in Rural Tanzania. Proposal submitted to the Tanzanian Governmental Grants, volume not specified	Proposal rejected
Mohammed Sani Ibrahim, Nigeria	Pattern and Predictors of Tobacco Use Among Undergraduates in Tertiary Institutions in Northern Nigeria, applied for 100.000 USD to the Grand Challenges Explorations, resubmitted to the Finland Foundation and the International Development Research Centre	Proposal rejected

Table 5: Follow up of big grant application outcomes of cohort 3 (as of 12 months after cohort start, so one year earlier relative to the start compared to the outcome reports of cohort 1 and 2)

Fellow	Grant application	Status
Boubacar Sawadogo, Burkina Faso	Optimising Schistosomiasis control strategies. A cluster randomised trial in Burkina Faso, grant to be submitted to the Helen Keller Interantional foundation	Proposal still under review
Bashir Sulaiman Saidu, Nigeria	Piloting an active and participatory polio surveillance in nomadic pastoralist in Igabi and Giwa LGAs Northwest, Nigeria. Applied for 253.611 USD	Proposal rejected
Donne Kofi Ameme, Ghana	Situational Analysis: Alcohol control policies in Ghana, applied for 45.000 Canadian Dollars at the International Development Research Centre (IDRC)	Proposal rejected
Gildo Okure Uganda	Improving glycaemic control in Diabetes, applied for 382.425 USD from the World Diabetes Found (WDF)	Proposal rejected
Gloria Gonese, Zimbabwe	Nutrition education and its contribution to fighting malnutrition in rural and urban children in Zimbabwe. Funding body to apply to not yet specified, the DAAD is envisaged.	Proposal not yet submitted
Sandra Baffour-Awuah, Ghana	Specific and Rapid Detection of Tuberculosis in Tissue and Sputum Samples at the Kumasi Abattoir, Ghana by Polymerasis Chain Reaction, submitted to TDR impact grant.	Proposal rejected, to be overworked and resubmitted elsewhere
Sijenunu Aron Mwaikambo, Tanzania	Assessment of the capacity of the Tanzanian primary health care facilities to manage NCDs cases: A case study of hypertension, applied for 35 Mio Tanzanian Shillings at "SIDA/SAREC"	Proposal still under review
Tassebedo Souleymane, Burkina Faso	A community participatory approach to increase and sustain cervical precancer screening uptake in the Sanitary District of Boussé, Burkina Faso, target funding body: Wellcome Trust	Proposal not yet submitted

Potential impact (including socio-economic impact and wider societal implications of the project so far) main dissemination activities and exploitation of results

APARET promoted African health scientists along with their institutions and research networks in order to create a sustainable and attractive research landscape for health research in Africa.

It combined North-South with South-South cooperation with a clear emphasis on the South-South network and the promotion of African researchers and research institutions. At the same time the European partners benefited from contacts to the powerful AFENET network and established new research cooperations with African partners. Because of migration between Africa and Europe the thread of epidemic disease spreading from Africa to Europe may increase which raises the importance for European Public Health professionals to have links to African Public Health professionals.

APARET provided individual promotion of African research scientists who acquired further reaching scientific skills and especially project planning, programme management and organisational skills that are important for leaders in Epidemiological Research. APARET strengthened the African partner institutions hosted an APARET fellow.

Regarding economic frame data Burkina Faso was one of the poorer countries. It is interesting to see that especially fellows from this country performed particularly well and had the best benefit from the programme. The APARET programme, although now finished, strengthened the existing AFENET network. AFENET organised a scientific writing workshop funded by USAID in January 2015 at the same place and at the same time of the APARET introduction workshops of the previous years (that had a strong focus on scientific writing), so at least some APARET elements survived the end of the programme.

The embedment of APARET into existing structures guaranteed that all programme efforts led to sustainable capacities as fellows were not withdrawn from existing research networks to join a parallel structure or to even leave Africa to work abroad, but rather were supported within their context, at their host institute and within the AFENET network.

Through the Small Grants procedure every fellow was able to plan and carry out an Epidemiological Research project on a smaller scale. This “working with the available means” prepared for the every day’s business of a Scientific Epidemiologist, which is the reality of most fellows throughout most of their career. Apart from all directly assessable impacts, the APARET network created personal links between scientists and Public Health professionals from different African countries and from Europe and Africa. These personal acquaintances have to be seen as one of the most precious impacts the programme had.

A directly visible and even quantifiable impact in monetary terms was the external grants acquired by APARET fellows. The majority of fellows who are not successful in getting their grant funded learned how to plan a large research project and to actually write a large research grant. This will enable them to bid for future research calls or act as amplifiers supporting other scientists in their efforts to acquire financial support for science.

Of 24 fellows, 23 successfully completed APARET and were awarded a certificate. While APARET funded projects were all implemented, most major grant applications were rejected. Smaller external funding was e.g. acquired for research on bovine tuberculosis or cervix cancer. One fellow acquired a grant of >70.000 € for a project on rotavirus vaccination and was later appointed principal investigator for a National rotavirus vaccination assessment project. Other fellows became FETP programme leader or epidemic preparedness trainers.

APARET fellows work on their own projects and thus identify with activities of the learning process, more than in an artificial exercise. As an individualised postgraduate-level training programme

APARET needs high resources. For a successful fellowship the selection of good fellows, strong mentorship and strong support of the host institute are crucial.

Relation of APARET to other Epidemiology Training Programmes

APARET was designed as a follow up programme of FETP and FELTP programmes following completion of FETP and FELTP programmes building upon achievements and acquired skill gained in these programmes through providing advanced education in research epidemiology while catalysing independent epidemiological research activities.

AFENET (www.afenet.net): APARET was embedded into the AFENET network, a networking alliance for Field Epidemiology and Laboratory Training Programs in Africa. The APARET Programme Manager and the Administrative Officer were based in the AFENET office in Kampala, Uganda.

TEPHINET: The TEPHINET (Training Programs in Epidemiology and Public Health Interventions Network) network does not stand for a training programme by itself, but is an international networking body linking existing training programmes all over the world including African FETP and FELTP programmes. The Coordinating Office of Global Public Health Capacity and Development at CDC, one of the APARET partners, hosts TEPHINET. APARET held its final workshop for the 2nd APARET cohort on the TEPHINET-AFENET conference in Addis Ababa in 2013.

EPIET (European Programme for Intervention Epidemiology Training): Several APARET mentors were EPIET alumnis. As APARET is closely linked with AFENET this created links of AFENET to European partners.

GIBACHT: A continuation project of APARET partners

AFENET, BNITM and Swiss TPH work in a new biosecurity oriented fellowship programme funded by the German Ministry of Foreign Affairs. The Global Partnership Initiated Academia for the Control of Health Threats (GIBACHT) especially address graduates of field epidemiology training programs (FETP) in Africa and the Middle East and has the following objectives:

GIBACHT Programme objectives

In order to strengthen public health response capacities in Africa, Europe and the Middle East, GIBACHT has the objectives

- To promote further education in the field of disease control and the prevention of and response to biological threats through such as outbreaks of infectious diseases or intentional spread of pathogens (bioterrorism)
- To establish of European, African and Asian cooperation in the field of international epidemic disease prevention.
- To reinforce national and local Competence Centres for the infectious diseases epidemiology, biosafety and disaster prevention.

The programme objectives will be reached by training of epidemiologists, biologists and physicians as multipliers in the field of biosafety and disaster prevention.

GIBACHT Learning objectives

1. To strengthen knowledge and competencies in the field of disease control and the prevention of and response to biological threats through such as outbreaks of infectious diseases or intentional spread of pathogens (bioterrorism)
2. To develop training material on a pertinent topic

The address of the project public website, if applicable as well as relevant contact details.

www.aparet.org (offline as project finished)

Picture 6: The APARET Logo



4.2 Use and dissemination of foreground

APARET had three main project “outcomes” qualified staff, research results from the fellow’s work and external grants acquired by the fellows and his/her associated team. Fellows had a contract that employed for an additional year after the 1-year APARET core period, during which they continued to work for the host institutes. Of 24 fellows, 23 successfully completed APARET and were awarded a certificate.

APARET was laid out to support African health scientists to develop their own intellectual property. **APARET does not claim the intellectual property of the APARET fellows.**

The allocation of resources acquired through a major research grant falls under the responsibility of the donor agency and the group of researchers, who lead by or with the participation the APARET fellow, have applied for this grant. Members of the APARET consortium, supervisors or Mentors could, but do not mandatory had to be part of such a proposal.

Scientific publications

There are no scientific publications about APARET. The programme was presented at the European Scientific Conference on Applied Infectious Diseases Epidemiology (ESCAIDE) in Stockholm in 2011 before te start. The APARET final seminar for all three cohorts was attached to a pertinent scientific conference. Cohort 1 was on the European Scientific Conference on Applied Infectious Diseases Epidemiology 2012 (ESCAIDE) in Edinburgh, cohort 2 on the 2013-conference of the African Field Epidemiology Network (AFENET) in Addis Ababa and cohort 3 on the 2014-conference of the Public Health Association of South Africa (PHASA) in Polokwane, South Africa. On the European Conference on Tropical Medicine and International Health (ECTMIH) in September 2015, we will present our experience that we made with the APARET programme. We have not decided yet, if we will write an article about the APARET concept and its implementation.

Most scientific publications of APARET fellows especially of cohort 2 and 3 are not published yet. APARET fellows acknowledge(d) the role of APARET and the financial contribution of the European Community if a publication is an immediate product of the APARET activities. Fellows could, but did not have to acknowledge APARET in publications that were not immediately a product from the APARET activities, but for which they thought APARET to having been beneficial. APARET publication submissions during the fellowship had to be reported to and approved by the programme manager (Elizeus Rutebemberwa). After the 31.12.2014 the programme manager position does not exist anymore, so an obligation to report publications after December 2014 cannot be mandated. However APARET fellows are still encouraged to inform the programme manager (Elizeus Rutebemberwa, who is still at AFENET) and the coordinator (Norbert Schwarz, who is still at BNITM) about their publications resulting from APARET.

Scientific results were (and will be) presented on workshops, meetings, congresses, and published in international peer-reviewed journals. APARET supports the idea to make scientific findings openly accessible, however legal limitations such as the prohibition to openly publish an article for which the copyrights have been transferred to a publisher, have to be respected.

Project web site

The project website (www.aparet.org) existed throughout the project. It contained a personal profile of each fellow, notifications and information on APARET workshops and pictures from workshops and activities.

It acknowledged European Commission's FP7 support and displayed the EU flag and FP7 logo. The APARET website was generated through a professional programmer and regularly maintained. It

contained links to all participant organisations. External links from Homepages to the APARET homepage needed the approval of the Coordinator and the Programme Manager.

An APARET logo was designed and used, for the APARET programme announcement on the AFENET homepage, APARET communications and workshop invitations and when APARET fellows presented in public, for example for oral or poster presentations on scientific conferences.

Links to policy makers

Ministries of Health (MoH) of AFENET member countries and AFENET associated countries are actively involved in African Field Epidemiology Training Programmes. The APARET Programme Manager was based in the AFENET office and thus benefited from the close links to policy makers in numerous African countries. APARET mainly fostered health related research, therefore the Ministries of Health were the most important addresses on the political side. APARET was included in the annual AFENET reports that also reach the MoHs of countries who had APARET fellows.

Media releases and reports on APARET that were open to the Public

Reports in APARET activities reached the African Epidemiological community via the AFENET homepage and the AFENET newsletter. The kick-off of the programme in Kampala (introduction workshop for cohort 1) was also published in Ugandan newspapers. The programme management workshop for cohort 2 took place in Ougadougou and received high attention from Burkinabe media and health politicians.

Reports on APARET in peer and interest group-newsletters

AFENET reported on APARET activities in its newsletter. A report on the APARET programme was also published in the newsletter of the European Programme for Intervention Epidemiology Training (EPIET) newsletter. The final workshop for all three cohorts was always attached to a pertinent conference allowing for personal exchange with peer epidemiologists and health scientists. Cohort 1 thus attended the European Scientific Conference on Applied Infectious Diseases Epidemiology (ESCAIDE) in Edinburgh in 2012. Cohort 2 attended the conference of TEPHINET (Training Programs in Epidemiology and Public Health Interventions Network) that was held together with AFENET (African Field Epidemiology Network) in Addis Ababa in 2013. Cohort 3 attended the conference of the Public Health Association of South Africa (PHASA) in Polokwane in 2014. During these conferences APARET fellows could also present their project in a dedicated APARET session.

Dataset ownership and scientific responsibility

APARET did not collect its own data as it did not implement its own scientific research projects, but rather was set out to support the fellows' projects. APARET as a consortium thus does not claim any ownership nor take on responsibility for data collected, analysed or published by APARET fellows. The approval of an APARET fellows work through the programme manager or any other member of the APARET consortium does not release the APARET fellow from his/her scientific responsibility regarding ethical considerations or quality criteria such as maintaining good scientific practice.

APARET was an initiative to initiate and strengthen epidemiological research activities rather than a research activity itself, we could only give support to each fellow on developing appropriate communication strategies adapted to the respective scientific activities and findings.

Sustainability

One major obstacle for successful implementation of research activities in Sub-Saharan is the lack of adequately trained staff, so even where the infrastructure is available it is sometimes difficult to find qualified scientists to “fill the institutes”. Training African researchers to fill these staff gaps was therefore more sustainable than building expensive facilities that often run below their capacities due to staff shortages. Young scientists from Africa, Europe and America are often keen to gather international experience. For African researchers going abroad may even be more attractive for economic reasons, but also due to the expectation to receive better training and a more stimulating research environment. African researchers who get their postgraduate training in Europe or America may afterwards feel adequately trained to work, where they were trained and thus never come back to their home country anymore. For countries like Ghana this “brain drain” has been disastrous as qualified people who were leaving the country often were those whose education was most expensive for the country (e.g. medical professionals). APARET created a stimulating international environment on the African continent and opened career paths for African researchers in Africa without having to abstain from international networks.

Non-regarding the fact that APARET ended in December 2014 after the EU funding period, APARET already after 3 cohorts had the sustainable impact of having released 23 (one dropped out after the initiation workshop) well-trained research epidemiologists. After having been taught epidemiology in an FE(L)TP, APARET provided fellows with the practical project planning and project management skills needed to independently plan and perform research activities. APARET graduates who successfully gained external funding act as amplifiers providing possibilities for other scientists and laboratory technicians to work and learn in the respective project.

Section A (public)

**LIST OF SCIENTIFIC (PEER REVIEWED) PUBLICATIONS THAT WERE ACCEPTED OR ALREADY PUBLISHED AS OF MARCH 2015
IN ALPHABETICAL ORDER, NAME OF THE APARET FELOW UNDERLINED**

1. Ameme DK, Afari EA, Nyarko KM, Malm KL, Sackey S, Wurapa F. Direct observation of outpatient management of malaria in a rural Ghanaian district. *Pan Afr Med J* **2014**,19:849-859.
2. Ameme DK, Nyarko KM, Malm KL, Afari E, Wurapa F, Sackey S. Prescribing Practices for Uncomplicated Malaria in a Rural District in Ghana, 2012. *International Journal of Tropical Disease and Health* **2014**,4:849-859.
3. Annan A, Baldwin HJ, Corman VM, Klose SM, Owusu M, Nkrumah EE, Badu EK, Anti P, Agbenyega O, Meyer B, Oppong S, Sarkodie YA, Kalko EK, Lina PH, Godlevska EV, Reusken C, Seebens A, Gloza-Rausch F, Vallo P, Tschapka M, Drosten C, Drexler JF. Human betacoronavirus 2c EMC/2012-related viruses in bats, Ghana and Europe. *Emerg Infect Dis* **2013**,19:456-459.
4. Annan A, Owusu M, Marfo KS, Larbi R, Sarpong FN, Adu-Sarkodie Y, Amankwa J, Fiafemetsi S, Drosten C, Owusu-Dabo E, Eckerle I. High prevalence of common respiratory viruses and no evidence of Middle East Respiratory Syndrome Coronavirus in Hajj pilgrims returning to Ghana, 2013. *Trop Med Int Health* **2015**.
5. Annan A, Owusu-Dabo E, Baffour-Awuah S, Nartey R, Sarpong N, Abonuusum AG, Salifu SP, Amoyaw P, Segbaya S, O.K. B. Insecticide resistance in malaria vector mosquitoes at 5 selected districts in Ghana, West Africa. *East African Medical Journal of Public Health* **2014**,11.
6. Baffour-Awuah S, Owusu-Dabo E, Kruppa T, Annan A, Nartey R, Dogbe J, Pandam S, Becker N, Oppong S, Obri-Danso K. Lysinibacillus sphaericus biolarvicide, an efficacious tool in the control of Anopheles gambiae in Kumasi, Ghana. *East African Medical Journal of Public Health* **2014**,11.
7. Bagonza J, Kibira SP, Rutebemberwa E. Performance of community health workers managing malaria, pneumonia and diarrhoea under the community case management programme in central Uganda: a cross sectional study. *Malar J* **2014**,13:367.
8. Bagonza J, Rutebemberwa E, Bazeyo W. Adherence to anti diabetic medication among patients with diabetes in eastern Uganda; a cross sectional study. Accepted for publication in BMC Health Services Research in March 2015. **2015**.
9. Bagonza J, Rutebemberwa E, Mugaga M, Tumuhamyie N, Makumbi I. Yellow fever vaccination coverage following massive emergency immunization campaigns in rural Uganda, May 2011: a community cluster survey. *BMC Public Health* **2013**,13:202.
10. Caravanos J, Clarke EE, Osei CS, Amoyaw-Osei Y. Exploratory Health Assessment of Chemical Exposures at E-Waste Recycling and Scrapyrd Facility in Ghana. *Blacksmith Institute Journal of Health and Pollution* **2013**,3.
11. Garms R, Badu K, Owusu-Dabo E, Baffour-Awuah S, Adjei O, Debrah AY, Nagel M, Biritwum NK, Gankpala L, Post RJ, Kruppa TF. Assessments of the transmission of Onchocerca volvulus by Simulium sanctipauli in the Upper Denkyira District, Ghana, and the intermittent disappearance of the vector. *Parasitol Res* **2015**,114:1129-1137.
12. Mutocheluh M, Owusu M, Kwofie TB, Akadigo T, Appau E, Narkwa PW. Risk factors associated with hepatitis B exposure and the reliability of five rapid kits commonly used for screening blood donors in Ghana. *BMC Res Notes* **2014**,7:873.
13. Opare JKL, Antobre-Boateng A, Afari E, Wurapa F, Abankwah J, Kyeiwa-Asante D, Tornyeli KD, Amankwa J, Opare OS. Community Knowledge and Perceptions on Malaria and Its Prevention and Control in the Akwapim North Municipality-Ghana. *International Journal of Tropical Disease and Health* **2014**,4:82-93.
14. Opare JKL, Probst-Hensch N, Afari E, Hoffmann A, Schindler C, Wurapa F, Ohuabunwo C, Sackey S, Mensah D, Serwaa O. Prevalence of Hypertension and Associated Risk Factors in Adults from a Semi Urban District in Ghana: A Population Based Survey. *International Journal of*

Tropical Disease and Health **2014**,4:82-93.

15. Owusu M, Annan A, Corman VM, Larbi R, Anti P, Drexler JF, Agbenyega O, Adu-Sarkodie Y, Drosten C. Human coronaviruses associated with upper respiratory tract infections in three rural areas of Ghana. *PLoS One* **2014**,9:e99782.
16. Owusu M, Nguah SB, Boaitey YA, Badu-Boateng E, Abubakr AR, Lartey RA, Adu-Sarkodie Y. Aetiological agents of cerebrospinal meningitis: a retrospective study from a teaching hospital in Ghana. *Ann Clin Microbiol Antimicrob* **2012**,11:28.
17. Sawadogo B, Gitta SN, Rutebemberwa E, Sawadogo M, Meda N. Knowledge and beliefs on cervical cancer and practices on cervical cancer screening among women aged 20 to 50 years in Ouagadougou, Burkina Faso, 2012: a cross-sectional study. *Pan Afr Med J* **2014**,18:175.
18. Tuhebwe D, Bagonza J, Ekirapa-Kiracho E, Yeka A, Elliot AM, Nuwaha F. Uptake of Mass Drug Administration Programme for Schistosomiasis Control in Koome Islands, Central Uganda. Accepted for publication in March 2015. *PLoS One* **2015**.
19. Tumuhanye N, Rutebemberwa E, Kwesiga D, Bagonza J, Makumbi I. Yellow fever vaccination coverage following massive emergency immunization campaign in rural uganda, may 2011: a community cluster survey. *Health* **2013**,5:1889-1898.

**LIST OF SCIENTIFIC (PEER REVIEWED) PUBLICATIONS THAT WERE ALREADY SUBMITTED BUT NOT YET ACCEPTED AS OF MARCH 2015
IN ALPHABETICAL ORDER, NAME OF THE APARET FELOW UNDERLINED**

1. Amegashi EA, Owusu-Dabo E, Salifu SP, Awuah AA, Baffour-Awuah S, Addofoh N, Annan A, C.H. W. Sero-prevalence of and Occupational Risk Factors for Brucella Infection among Slaughterhouse Workers and butchers in Kumasi, Ghana. (Submitted for publication). *Pan African Medical Journal* **2015**.
2. Bagonza J, Rutebemberwa E, Eckmanns T, Ekirapa-Kiracho E. What influences medicine availability for community management of childhood illnesses: implications for scaling up the integrated community case management program. (Submitted for publication). *BMC Public Health Research* **2015**.
3. Bua J, Mukanga D, Lwanga M, Nabiwemba E. Risk factors and practices contributing to newborn sepsis in a rural district of Eastern Uganda, August 2013: a cross sectional study. (Submitted for publication). *BMC Research Journals* **2015**.
4. Kihulya M, Mmbaga EJ. Prevalence and Predictors of Institutional Delivery among Pregnant Mothers in Biharamulo District, Tanzania. Submitted for publication. *Pan African Medical Journal* **2015**.
5. Savadogo B, Adjamia AG, Hattendorf J, Zongo D, Poda JN. Schistosomiasis assessment among school children and malacological factors in Burkina Faso: Case of Daguilma, Koubri and Yamtenga. (Submitted for publication). *Pan African Medical Journal* **2015**.

LIST OF DISSEMINATION ACTIVITIES

1. Press conference on the 30 July at the Kick-off meeting of the project in July 2011 in Kampala, Uganda in the headquarters of the African Field Epidemiology Network, AFENET with David Mukanga (executive director of AFENET, Norbert Schwarz (coordinator of APARET) and Elizabeth Ongom (representative of the European commission). **2011**.
2. APARET LAUNCHED TO DRIVE SCIENTIFIC RESEARCH AGENDA. AFENET newsletter release on the African Programme for Advanced Research Epidemiology Training (APARET) after the Kick-off meeting of the project in July 2011 in Kampala, Uganda. *AFENET News from the African Field Epidemiology Network* **2011**,3.
3. AFENET homepage release on the African Programme for Advanced Research Epidemiology Training (APARET) after the Kick-off meeting of the project in July 2011 in Kampala, Uganda. **2011**.
4. <http://www.aparet.org> (Online from 12/2011-12/2014). **2011**.
5. Schwarz NG, Babirye R, May J, Sheba G, Mukanga D. APARET: The African Programme for Advanced Research Epidemiology Training. Poster presentation on the European Scientific Conference on Applied Infectious Diseases Epidemiology, 6-8- November, Stockholm, Sweden. **2011**.
6. APARET cohort 1. Session of the African Programme for Advanced Research Epidemiology Training (APARET) on the European Scientific Conference on Applied Infectious Disease Epidemiology Training, ESCAIDE, 24-26. October 2012, Edinburgh, Scotland. **2012**.
7. Reports in the Kampala press about the APARET Initiation workshop of the first cohort. **2012**.
8. Schwarz NG. APARET. *EAN newsletter* **2012**, Winter 2012.
9. APARET cohort 2. Session of the African Programme for Advanced Research Epidemiology Training (APARET) on the conference of the African Field Epidemiology Network (AFENET), 17 - 21 November 2013 , Addis Ababa, Ethiopia. **2013**.
10. Official workshop opening of the Project Management Workshop of APARET cohort 2 with health officials from the National Public Health Institute and the Ministry of Health of Burkina Faso. 23. March 2013, Ouagadougou, Burkina Faso. **2013**.
11. APARET cohort 3. Session of the African Programme for Advanced Research Epidemiology Training (APARET) on the conference of the Public Health Associations of South Africa (PHASA), 2 - 6 September 2014, Polokwane, South Africa. **2014**.
12. Abubakar AA, Sabitu K, Jansen A, Preacely N, Idris SH, Sufiyan MB, Ajayi IO. Assessment of Community Case Management of Malaria in Trained Role Model Caregivers of Under Fives in Kaduna State, Northwestern Nigeria presented at the Geneva Health Forum 2014 held at the Conference Internationale Center Geneva, Switzerland from the 15th to the 17th of April 2014. **2014**.
13. Boukougou I. Predominance of G12P[8] and G6P[6] rotavirus genotypes in Burkina Faso prior the introduction of vaccination. Oral presentation on the 6th European Rotavirus Biology Meeting (ERBM) in Dijon, France, Sunday May 17 to Wednesday, May 20, 2015. **2015**.

14. Kihulya M. Magnitude and determinant of anemia in women of reproductive age in Simiyu Region, Tanzania: a cross section study 2013. Food and Nutrition Association of Tanzania (FANUS). 25.-29. May 2015. Arusha, Tanzania. **2015**.
15. Schwarz NG, Gitta S, Hoffmann A, Briet A, Rutebemberwa E. APARET (African Programme for Advanced Research Epidemiology Training). Presentation at the European Conference on Tropical Medicine and International Health (ECTMIH). 6-10 september 2015, Basel, Switzerland. **2015**.

Section B (Confidential³ or public: confidential information to be marked clearly)
Part B1

The applications for patents, trademarks, registered designs, etc. shall be listed according to the template B1 provided hereafter.

The list should, specify at least one unique identifier e.g. European Patent application reference. For patent applications, only if applicable, contributions to standards should be specified. This table is cumulative, which means that it should always show all applications from the beginning until after the end of the project.

TEMPLATE B1: LIST OF APPLICATIONS FOR PATENTS, TRADEMARKS, REGISTERED DESIGNS, ETC.
Not applicable. Even if an APARET's fellows work should lead to a patent, APARET does not claim any intellectual property rights.

³ Note to be confused with the "EU CONFIDENTIAL" classification for some security research projects.

Part B2

Please complete the table hereafter:

Type of Exploitable Foreground ⁴	Description of exploitable foreground	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Exploitable product(s) or measure(s)	Sector(s) of application ⁵	Timetable, commercial or any other use	Patents or other IPR exploitation (licences)	Owner & Other Beneficiary(s) involved
Not applicable. APARET does not claim any intellectual property rights on APARET fellow's work and consequently does not claim to be involved in exploitation activities.								

¹⁹ A drop down list allows choosing the type of foreground: General advancement of knowledge, Commercial exploitation of R&D results, Exploitation of R&D results via standards, exploitation of results through EU policies, exploitation of results through (social) innovation.

⁵ A drop down list allows choosing the type sector (NACE nomenclature) : http://ec.europa.eu/competition/mergers/cases/index/nace_all.html

4.1 Report on societal implications

Replies to the following questions will assist the Commission to obtain statistics and indicators on societal and socio-economic issues addressed by projects. The questions are arranged in a number of key themes. As well as producing certain statistics, the replies will also help identify those projects that have shown a real engagement with wider societal issues, and thereby identify interesting approaches to these issues and best practices. The replies for individual projects will not be made public.

A General Information *(completed automatically when Grant Agreement number is entered.*

Grant Agreement Number:

265411

Title of Project:

African Programme for Advanced Research Epidemiology
Training (APARET)

Name and Title of Coordinator:

Dr. Norbert Georg Schwarz, Msc Epi

B Ethics

14. Did your project undergo an Ethics Review (and/or Screening)?

- If Yes: have you described the progress of compliance with the relevant Ethics Review/Screening Requirements in the frame of the periodic/final project reports?

Special Reminder: the progress of compliance with the Ethics Review/Screening Requirements should be described in the Period/Final Project Reports under the Section 3.2.2 'Work Progress and Achievements'

*0No
(apart
from the
explanatio
ns on
ethics in
the
proposal
not
needed)*

2. Please indicate whether your project involved any of the following issues (tick box) :

YES

RESEARCH ON HUMANS

- | | |
|---|----|
| • Did the project involve children? | No |
| • Did the project involve patients? | No |
| • Did the project involve persons not able to give consent? | No |
| • Did the project involve adult healthy volunteers? | No |
| • Did the project involve Human genetic material? | No |
| • Did the project involve Human biological samples? | No |
| • Did the project involve Human data collection? | No |

RESEARCH ON HUMAN EMBRYO/FOETUS

- | | |
|---|----|
| • Did the project involve Human Embryos? | No |
| • Did the project involve Human Foetal Tissue / Cells? | No |
| • Did the project involve Human Embryonic Stem Cells (hESCs)? | No |
| • Did the project on human Embryonic Stem Cells involve cells in culture? | No |
| • Did the project on human Embryonic Stem Cells involve the derivation of cells from Embryos? | No |

PRIVACY

- | | |
|---|----|
| • Did the project involve processing of genetic information or personal data (eg. Health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)? | No |
| • Did the project involve tracking the location or observation of people? | No |

RESEARCH ON ANIMALS	
• Did the project involve research on animals?	No
• Were those animals transgenic small laboratory animals?	No
• Were those animals transgenic farm animals?	No
• Were those animals cloned farm animals?	No
• Were those animals non-human primates?	No
RESEARCH INVOLVING DEVELOPING COUNTRIES	
• Did the project involve the use of local resources (genetic, animal, plant etc)?	No
• Was the project of benefit to local community (capacity building, access to healthcare, education etc)?	Yes
DUAL USE	
• Research having direct military use	No
• Research having the potential for terrorist abuse	No

C Workforce Statistics

3. Workforce statistics for the project: Please indicate in the table below the number of people who worked on the project (on a headcount basis).

Type of Position	Number of Women	Number of Men
APARET coordination & Management	3	3
APARET mentors	5	8
APARET supervisors	1	7
APARET fellows	7	16
Others (e.g. teachers)	2	2

D Gender Aspects

5. Did you carry out specific Gender Equality Actions under the project?

x

Yes
No

We disapprove any discrimination on gender, race, ethnic group, sexual orientation, religion or disability.

6. Which of the following actions did you carry out and how effective were they?

- | | Not at all effective | Very effective |
|---|---|-----------------------|
| <input type="checkbox"/> Design and implement an equal opportunity policy | <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> Set targets to achieve a gender balance in the workforce | <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> Organise conferences and workshops on gender | <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> Actions to improve work-life balance | <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> | <input type="radio"/> |
| <input type="radio"/> Other: | | |

Within the same employer every individual working for APARET or being a fellow of the programme was treated following the principle of equal pay for the same work and work of equal value non-regarding gender, race, ethnic group, sexual orientation, religion or disability. The same applied for the equal opportunities principle, which was especially important during the recruitment process. Due to the fact that the host institutes provided salaries, the pay scale classification of the host institute of a fellow was effective. This inevitably led to different salaries between fellows based in different countries at different institutions.

As many applicants were current or former AFENET associated FETP or FELTP fellows it was not possible to carry out a blinded recruitment process. As a matter of fact AFENET associated fellows usually had an advantage compared to external applicants. For AFENET fellows and their host institute, the APARET programme meant continuity of their work, something that we considered being advantageous. We therefore accepted the disadvantage external applicants had. However applications of external applicants underwent the same objective assessment as those of current or former AFENET associated FETPs or FELTPs.

7. Was there a gender dimension associated with the research content – i.e. wherever people were the focus of the research as, for example, consumers, users, patients or in trials, was the issue of gender considered and addressed?

We disapprove any discrimination on gender, race, ethnic group, sexual orientation, religion or disability.

Yes- please specify

x No

E Synergies with Science Education

8. Did your project involve working with students and/or school pupils (e.g. open days, participation in science festivals and events, prizes/competitions or joint projects)?

Yes- please specify

<input checked="" type="checkbox"/> No		
9. Did the project generate any science education material (e.g. kits, websites, explanatory booklets, DVDs)?		
<input type="checkbox"/> Yes- please specify <input type="text"/>		
<input checked="" type="checkbox"/> No		
F Interdisciplinarity		
10. Which disciplines (see list below) are involved in your project?		
<input checked="" type="checkbox"/> Main discipline ¹ : Epidemiology, Public Health		
<input checked="" type="checkbox"/> Associated discipline ¹ : Microbiology	<input checked="" type="checkbox"/>	<input type="checkbox"/> Associated discipline ¹ : Statistics
G Engaging with Civil society and policy makers		
11a Did your project engage with societal actors beyond the research community? (if 'No', go to Question 14)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
11b If yes, did you engage with citizens (citizens' panels / juries) or organised civil society (NGOs, patients' groups etc.)?		
<input checked="" type="checkbox"/> No		
<input type="checkbox"/> Yes- in determining what research should be performed		
<input type="checkbox"/> Yes – in implementing the research		
<input type="checkbox"/> Yes, in communicating /disseminating / using the results of the project		
11c In doing so, did your project involve actors whose role is mainly to organise the dialogue with citizens and organised civil society (e.g. professional mediator; communication company, science museums)?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
12. Did you engage with government / public bodies or policy makers (including international organisations)		
<input type="checkbox"/> No		
<input checked="" type="checkbox"/> Yes- in supporting APARET fellows in implementing their projects (research agenda from the base)		
<input type="checkbox"/> Yes – in implementing the research agenda		
<input type="checkbox"/> Yes, in communicating /disseminating / using the results of the project		
13a Will the project generate outputs (expertise or scientific advice) which could be used by policy makers?		
<input type="checkbox"/> Yes – as a primary objective (please indicate areas below- multiple answers possible)		
<input checked="" type="checkbox"/> Yes – as a secondary objective (please indicate areas below – multiple answer possible)		
<input type="checkbox"/> No		
13b If Yes, in which fields? Epidemiology, Public Health, Microbiology		

¹ Insert number from list below (Frascati Manual).

Agriculture Audiovisual and Media Budget Competition Consumers Culture Customs Development Economic and Monetary Affairs Education, Training, Youth Employment and Social Affairs		Energy Enlargement Enterprise Environment External Relations External Trade Fisheries and Maritime Affairs Food Safety Foreign and Security Policy Fraud Humanitarian aid		Human rights Information Society Institutional affairs Internal Market Justice, freedom and security Public Health Regional Policy Research and Innovation Space Taxation Transport	
---	--	---	--	---	--

13c If Yes, at which level? <input checked="" type="checkbox"/> Local / regional levels <input checked="" type="checkbox"/> National level (e.g. Rotavirus vaccine policy in Burkina Faso) <input type="checkbox"/> European level <input type="checkbox"/> International level		
H Use and dissemination		
14. How many Articles were published/accepted for publication in peer-reviewed journals? *APARET was not a research action but a coordination action that supported fellow's research activities. APARET does not claim intellectual property for the fellow's work There were conference presentations about APARET at the start of the programme and there will be a presentation on it in September on the European Scientific conference on Tropical Medicine and International Health (ECTMIH). If we will write an article about the APARET programme is not yet decided.		Not applicable* (Fellows published 19 articles as of March 2015)
To how many of these is open access² provided?		Not applicable*
How many of these are published in open access journals?		Not applicable*
How many of these are published in open repositories?		Not applicable*
To how many of these is open access not provided?		Not applicable*
Please check all applicable reasons for not providing open access:		Not applicable*
<input type="checkbox"/> publisher's licensing agreement would not permit publishing in a repository <input type="checkbox"/> no suitable repository available <input type="checkbox"/> no suitable open access journal available <input type="checkbox"/> no funds available to publish in an open access journal <input type="checkbox"/> lack of time and resources <input type="checkbox"/> lack of information on open access <input type="checkbox"/> other ³ :		
15. How many new patent applications ('priority filings') have been made? <i>("Technologically unique": multiple applications for the same invention in different jurisdictions should be counted as just one application of grant).</i>		Not applicable*
16. Indicate how many of the following Intellectual Property Rights were applied for (give number in each box).	Trademark	Not applicable*
	Registered design	Not applicable*
	Other	Not applicable*
17. How many spin-off companies were created / are planned as a direct result of the project? <i>Indicate the approximate number of additional jobs in these companies:</i>		Not applicable* Not applicable*

² Open Access is defined as free of charge access for anyone via Internet.

³ For instance: classification for security project.

18. Please indicate whether your project has a potential impact on employment, in comparison with the situation before your project:		
<input type="checkbox"/> Increase in employment, or <input type="checkbox"/> Safeguard employment, or <input type="checkbox"/> Decrease in employment, <input checked="" type="checkbox"/> Difficult to estimate / not possible to quantify	<input type="checkbox"/> In small & medium-sized enterprises <input type="checkbox"/> In large companies <input type="checkbox"/> None of the above / not relevant to the project	
19. For your project partnership please estimate the employment effect resulting directly from your participation in Full Time Equivalent (FTE = one person working fulltime for a year) jobs:		<i>Indicate figure:</i> <input checked="" type="checkbox"/>
Difficult to estimate / not possible to quantify		
I Media and Communication to the general public		
20. As part of the project, were any of the beneficiaries professionals in communication or media relations? <input type="radio"/> Yes <input checked="" type="radio"/> No		
21. As part of the project, have any beneficiaries received professional media / communication training / advice to improve communication with the general public? <input checked="" type="radio"/> Yes <input type="radio"/> No		
22 Which of the following have been used to communicate information about your project to the general public, or have resulted from your project?		
<input checked="" type="checkbox"/> Press Release <input checked="" type="checkbox"/> Media briefing <input checked="" type="checkbox"/> TV coverage / report <input checked="" type="checkbox"/> Radio coverage / report <input type="checkbox"/> Brochures /posters / flyers <input type="checkbox"/> DVD /Film /Multimedia	<input checked="" type="checkbox"/> Coverage in specialist press <input checked="" type="checkbox"/> Coverage in general (non-specialist) press <input checked="" type="checkbox"/> Coverage in national press <input type="checkbox"/> Coverage in international press <input checked="" type="checkbox"/> Website for the general public / internet <input type="checkbox"/> Event targeting general public (festival, conference, exhibition, science café)	
23 In which languages were the information products for the general public produced?		
<input type="checkbox"/> Language of the coordinator <input type="checkbox"/> Other language(s)	<input checked="" type="checkbox"/> English	

Question F-10: Classification of Scientific Disciplines according to the Frascati Manual 2002 (Proposed Standard Practice for Surveys on Research and Experimental Development, OECD 2002):

FIELDS OF SCIENCE AND TECHNOLOGY

1. NATURAL SCIENCES

- 1.1 Mathematics and computer sciences [mathematics and other allied fields: computer sciences and other allied subjects (software development only; hardware development should be classified in the engineering fields)]
- 1.2 Physical sciences (astronomy and space sciences, physics and other allied subjects)
- 1.3 Chemical sciences (chemistry, other allied subjects)

- 1.4 Earth and related environmental sciences (geology, geophysics, mineralogy, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, oceanography, vulcanology, palaeoecology, other allied sciences)
- 1.5 Biological sciences (biology, botany, bacteriology, microbiology, zoology, entomology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences)

2. ENGINEERING AND TECHNOLOGY

- 2.1 Civil engineering (architecture engineering, building science and engineering, construction engineering, municipal and structural engineering and other allied subjects)
- 2.2 Electrical engineering, electronics [electrical engineering, electronics, communication engineering and systems, computer engineering (hardware only) and other allied subjects]
- 2.3. Other engineering sciences (such as chemical, aeronautical and space, mechanical, metallurgical and materials engineering, and their specialised subdivisions; forest products; applied sciences such as geodesy, industrial chemistry, etc.; the science and technology of food production; specialised technologies of interdisciplinary fields, e.g. systems analysis, metallurgy, mining, textile technology and other applied subjects)

3. MEDICAL SCIENCES

- 3.1 Basic medicine (anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and immuno-haematology, clinical chemistry, clinical microbiology, pathology)
- 3.2 Clinical medicine (anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, dentistry, neurology, psychiatry, radiology, therapeutics, otorhinolaryngology, ophthalmology)
- 3.3 Health sciences (public health services, social medicine, hygiene, nursing, epidemiology)

4. AGRICULTURAL SCIENCES

- 4.1 Agriculture, forestry, fisheries and allied sciences (agronomy, animal husbandry, fisheries, forestry, horticulture, other allied subjects)
- 4.2 Veterinary medicine

5. SOCIAL SCIENCES

- 5.1 Psychology
- 5.2 Economics
- 5.3 Educational sciences (education and training and other allied subjects)
- 5.4 Other social sciences [anthropology (social and cultural) and ethnology, demography, geography (human, economic and social), town and country planning, management, law, linguistics, political sciences, sociology, organisation and methods, miscellaneous social sciences and interdisciplinary, methodological and historical SIT activities relating to subjects in this group. Physical anthropology, physical geography and psychophysiology should normally be classified with the natural sciences].

6. HUMANITIES

- 6.1 History (history, prehistory and history, together with auxiliary historical disciplines such as archaeology, numismatics, palaeography, genealogy, etc.)
- 6.2 Languages and literature (ancient and modern)
- 6.3 Other humanities [philosophy (including the history of science and technology) arts, history of art, art criticism, painting, sculpture, musicology, dramatic art excluding artistic "research" of any kind, religion, theology, other fields and subjects pertaining to the humanities, methodological, historical and other SIT activities relating to the subjects in this group]

2. REPORT ON EUROPEAN UNION FINANCIAL CONTRIBUTION AS REPORTED IN FORM CS AT THE END OF THE PROJECT

European Union requested financial contribution between beneficiaries

	Name of beneficiary	Requested EU contribution per beneficiary in Euros as reported in Form Cs
1.	Bernhard Nocht Institute for Tropical Medicine	499.329,58 €
2.	African Field Epidemiology Network (AFENET)	345.246,65 €
3.	WHO Multi Disease Surveillance Centre (MDSC) in Ougadougou / Genf	72.147,80 €
4.	Ghana School of Public Health, Accra (GSPH)	97.701,20 €
5.	KNUST, Centre for Collaborative Research in Tropical Medicine, Kumasi (KCCR)	90.900,25 €
6.	Makerere University, School of Public Health, Kampala (MUSPH)	73.399,09 €
7.	University of Ouagadougou (UO)	88.505,05 €
8.	University of Zimbabwe (UZ)	54.812,38 €
9.	Muhimbili College of Health Sciences (MUHAS)	85.562,42 €
10.	Ahmadu Bello University (ABU), Zaria, Nigeria	86.103,47 €
11.	Swiss Tropical and Public Health Institute (STI)	197.133,90 €
12.	Vienna School of Clinical Research (VSCR), Vienna, Austria	42.115,95 €
13.	Centers for Disease Control and Prevention foundation (CDC), Atlanta	23.725,49 €
	Total	1.756.683,23 €

