BNITM
Bernhard Nocht Institute for Tropical Medicine

BERNHARD NOCHT INSTITUTE FOR TROPICAL MEDICINE

SCIENTIFIC REPORT 2014 / 2015

BERNHARD NOCHT INSTITUTE FOR TROPICAL MEDICINE

SCIENTIFIC REPORT 2014/2015

BERNHARD NOCHT INSTITUTE FOR TROPICAL MEDICINE | BERNHARD-NOCHT-STR. 74 | 20359 HAMBURG | GERMANY
WWW.BNITM.DE
ISSN 1616-4504

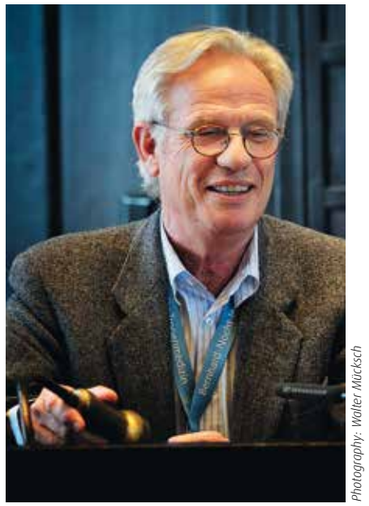
Member of the Leibniz Association

Hamburg | Ministry of Science, Research and Equalities

Supported by: Federal Ministry of Health
on the basis of a decision by the German Bundestag

CONTENTS

Preface



Photography: Walter Mücksch

Rolf Horstmann

The years 2014 and 2015 were marked by the latest Ebola outbreak, which for the first time struck West Africa and grew into a devastating epidemic. Owing to preparatory work by Prof. Günther, BNITM found itself in a prominent position. Some years ago, Stephan Günther had set out to coordinate a European consortium that, on behalf of the European Commission, developed portable laboratory devices to safely diagnose Ebola and other highly pathogenic viruses. It turned out to be a fortunate coincidence that the first prototypes of this "European Mobile Laboratory" (EMLab) had been finalised by the end of 2013 and could be employed right from the beginning of the outbreak. In addition, the Guinean Minister of Health remembered the Institute favourably and trusted us. He had known Thomas Kruppa and colleagues who, in the mid-1990s, established the African laboratories of BNITM in Guéckédou and Macenta, the exact areas in Guinea where Ebola now broke out. At the time, Jan ter Meulen of the Institute had intensely studied Lassa fever in the region. On March 25, 2014, Stephan Günther and a team left to install the first EMLab in Guinea. The mission is expected to last for more than two years.

Causing alarm in early August 2014, the numbers increased dramatically and a Liberian lawyer travelled to Nigeria and appeared to do all he could to spread Ebola in Africa's most populated country. Fortunately, our virologists had worked for years on Lassa fever in Nigeria, where they had firmly established the necessary diagnostic devices in a hospital in the city of Irrua. Immediately, they shifted their focus to Ebola. It was likely that these circumstances together with the relentless radio propaganda and vigorous outbreak management of the Nigerian government enabled infection to be traced within a few weeks in order to prevent further spreading.

Subsequently, Ebola became a major focus of the Institute. Initially, this work was funded internally. Virology was fully engaged with the EMLabs – every four weeks there was a change of personnel, which meant recruiting volunteers and organising their job replacements, visas, health insurances, etc. At first these were mainly colleagues from BNITM, but later also Italians, Frenchmen, and Romanians.

An important unresolved issue was the return of staff to Europe in case of an infection. This is a public employer's legal duty and could be realised only when the patient-transport „Robert Koch" airbus had been equipped and was ready to operate. I dare not even think about such an event occurring and a court having to state that no civil service personnel was allowed to be sent to the crisis area. In an attempt to counteract later allegations and to demonstrate that we tried all options, we signed a high-priced contract with an international backhaul service knowing full well that the company could by no means guarantee a return transport of an Ebola patient. Apparently, the „Robert Koch" airplane has meanwhile been dismantled – difficult to understand in light of the several hundred millions Euros that have been made available by the Federal Government for better preparedness in the future.

Following our engagement in the crisis, hundreds of samples of suspected cases arrived at our Institute in Hamburg from all over Germany but also from many other countries from as far away as Myanmar. All colleagues involved took this responsibility very seriously. A single misdiagnosis – be it a false positive or worse, a false negative – would have had very serious consequences and, in addition, would have resulted in a severe punishment by the media.

Likewise, public relations work grew steadily, with more Ebola cases every day, dubious forecasts and drastic scenarios, hospital infections in Spain and the US, terminally-ill patients transferred to Germany and even to Hamburg. To cope with the numerous enquiries, responses had to be delegated and harmonised among several colleagues, always searching to strike the balance between underplaying the risks and inciting panic.

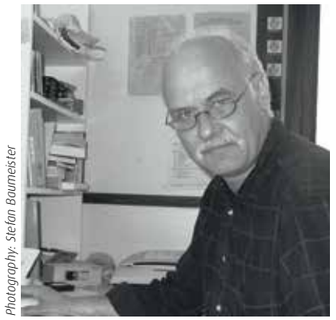
While Stephan Günther commuted between West Africa, Brussels and Geneva and was only rarely able to attend press conferences. Jonas Schmidt-Chanasit mostly represented the Institute in the media. After his TV appearance in a talk show, one third of all clicks to the BNITM homepage were in search of his name. Although advertising professionals might prefer the Institute to be represented in the media by only one face, we will stick to our habit of leaving it to the individual experts to speak and present themselves.

I was granted the honour to advise high-level politicians, even the chancellor herself in a small circle in September 2014. My subsequent statement on public TV was not broadcasted, however. Perhaps it was not appreciated that I did not join in the general criticism that German politicians had reacted too late to the epidemic. I think many commentators overlooked that a single country – be it from the Minister of Health himself – is not authorized to announce any news about outbreaks in other countries. Communications of this kind, which could do serious economic harm to a country, are reserved for the World Health Organisation and should continue to be so.

Time for a particular word of gratitude. Great thanks and admiration go to all colleagues who volunteered to work in the EMLabs under such extremely challenging physical and psychological conditions. We are also grateful to those at home who resisted infection by the, at times, hysterical fear of returnees from West Africa. One may remember, among others, the house arrest in New York City. Our EMLab personnel sometimes had to face similar experiences with some party invitations being cancelled. Furthermore, our gratitude extends to all colleagues who contributed to the stellar diagnostic work in Hamburg. Significantly, Martin Gabriel who coordinated personnel and material logistics for the EMLabs efficiently and calmly.

The day the first Ebola team left for Guinea, the new homepage of the Institute was unveiled. The real challenge will now be to continuously update the content.

A few weeks later, the first joint W3 professorship with the Faculty for Mathematics, Informatics and Natural Sciences (MIN) of the University of Hamburg was conferred to Prof. Tim Gilberger. This was long overdue because 80-90% of our doctoral students graduate in this faculty. It's a special professorship for us, since it is the first one jointly run by the University and the Institute.



Photography: Stefan Baumeister

Prof. Dr. Klaus Lingelbach

With great sadness, the members of the Scientific Advisory Board (SAB), the Board and all staff of the Institute have reacted to the unexpected death of Prof. Klaus Lingelbach, who as the chairman of the SAB did an eminent service for the Institute. Particularly sad are those of us who enjoyed his day-to-day extraordinarily kind personality when he worked as a group leader at the Institute in 1990s.

Like him, the Institute owes many thanks to all members of the SAB, who spent their valuable time to familiarise themselves with our scientific and structural challenges and provided us with competent advice.

The Board of Directors would like to thank the staff of the Hamburg Ministry of Science, Research and Equalities (BWFG) and the Federal Ministry of Health (BMG), who are responsible for the supervision of the Institute, for their support. We are particularly grateful to the State Secretaries Dr. Horst-Michael Pelikahn and Dr. Eva Gümbel, who as Chairpersons of the Board of Trustees represented the interests of the Institute with empathy and great engagement.

Not least, we thank our supporters from the Vereinigung der Freunde des Tropeninstituts (Association of Friends of the Institute). Manfred Schüller and Dr. Lothar Dittmer as chairpersons proved prudence and skills when redesigning the aims of the association and renewing its appearance.

Once again, the Board of Directors owes all staff members the greatest gratitude for their constant and extraordinary loyalty and identification with the Institute. Their enormous engagement was of particular value during the Ebola crisis. And once again we would like to highlight the additional work of those colleagues who have participated as representatives in the Institute's staff council and numerous other committees.

Rolf Horstmann

Board of Directors, Board of Trustees & Scientific Advisory Board

BOARD OF DIRECTORS, BOARD OF TRUSTEES & SCIENTIFIC ADVISORY BOARD

Board of Directors

Prof. Dr. med. Rolf Horstmann
(Chair)

Prof. Dr. med. Bernhard Fleischer
(Deputy Chair)

Prof. Dr. med. Egbert Tannich

Udo Gawenda
(Business Managing Director)

Members of the Board of Directors (from left):
Egbert Tannich, Bernhard Fleischer, Udo Gawenda, Rolf Horstmann

BOARD OF TRUSTEES

State Secretary Dr. Eva Gümbel
(Chair)
State Ministry of Science and Research,
Free and Hanseatic City of Hamburg

Dr. Antina Ziegelmann
(Deputy Chair)
Federal Ministry of Health,
Berlin

Jana Holland
Federal Ministry of Health,
Bonn

Dr. Kathrin Adlkofer
mei:do concepts GmbH,
Hamburg

Prof. Dr. Iris Bruchhaus
Bernhard Nocht Institute
for Tropical Medicine,
Hamburg

Julia Düring
State Ministry of Science and Research,
Free and Hanseatic City of Hamburg

Dr. Matthias Gruhl
(since 2012)
State Ministry of
Health and Consumer Protection,
Free and Hanseatic City of Hamburg

Dr. Joachim Klein
(since 2013)
Federal Ministry of Education and Research,
Berlin

Prof. Dr. Klaus Lingenbach (deceased 2015)
Philipps University Marburg,
Marburg

Priv.-Doz. Dr. Thomas Jacobs
Bernhard Nocht Institute
for Tropical Medicine,
Hamburg

Hellmuth Weisser
Marquard & Bahls AG,
Hamburg

SCIENTIFIC ADVISORY BOARD

Prof. Dr. Klaus Lingelbach (deceased 2015)
(Chair)
Philipps University Marburg,
Marburg

Prof. Dr. med. Thomas Löscher
(Deputy Chair)
Department of Infectious Diseases
& Tropical Medicine,
Ludwig Maximilians University of Munich,
Munich

Prof. Dr. Britta Engelhardt
University of Bern,
Bern, Switzerland

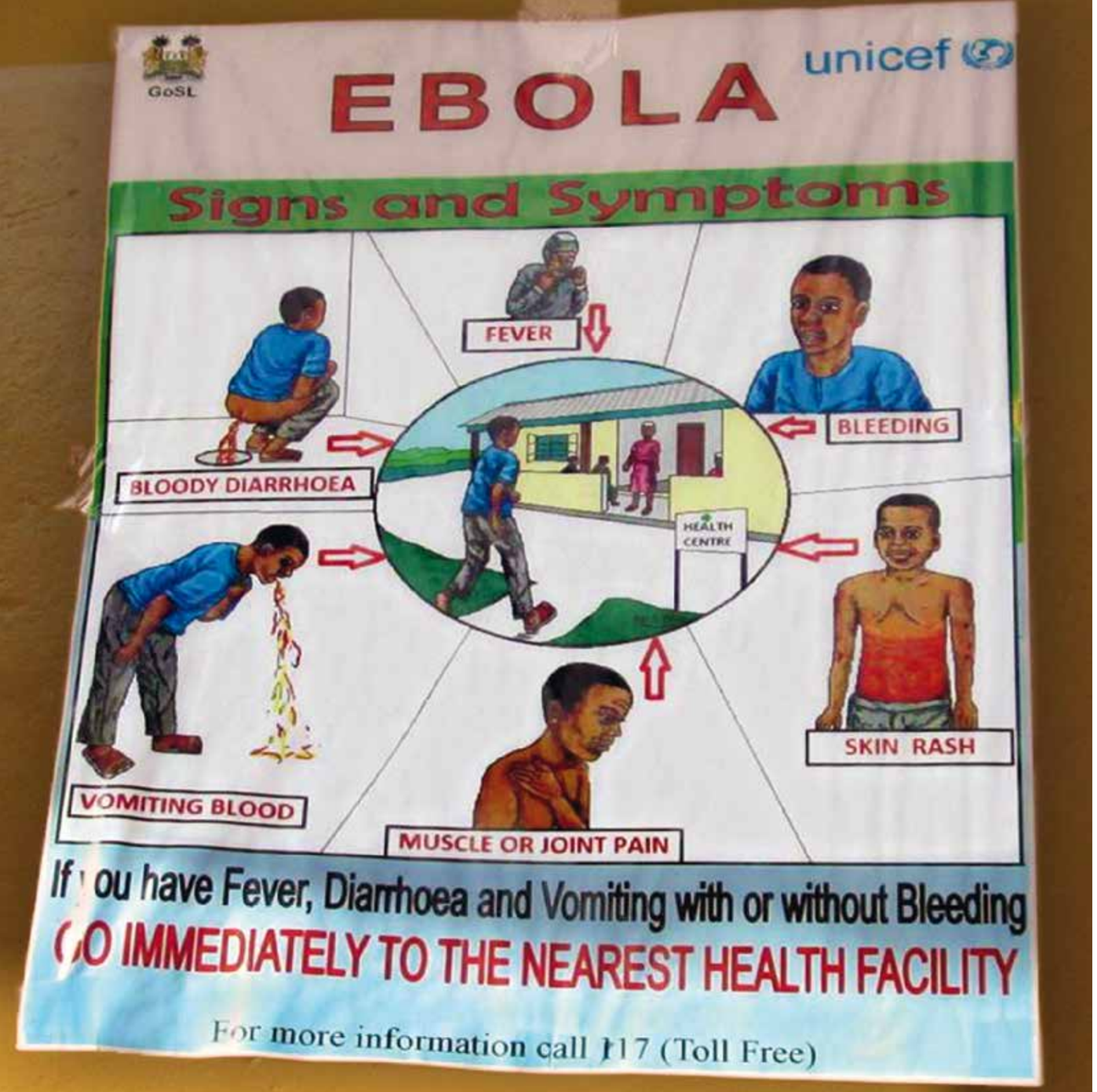
Prof. Dr. Franz X. Heinz
Medical University of Vienna,
Vienna, Austria

Prof. Dr. med. Gérard Krause
Helmholtz Centre for Infection Research,
Braunschweig

Prof. Dr. med. Bertram Müller-Myhsok
Max Planck Institute of Psychiatry,
Munich
and
University of Liverpool,
Liverpool, UK

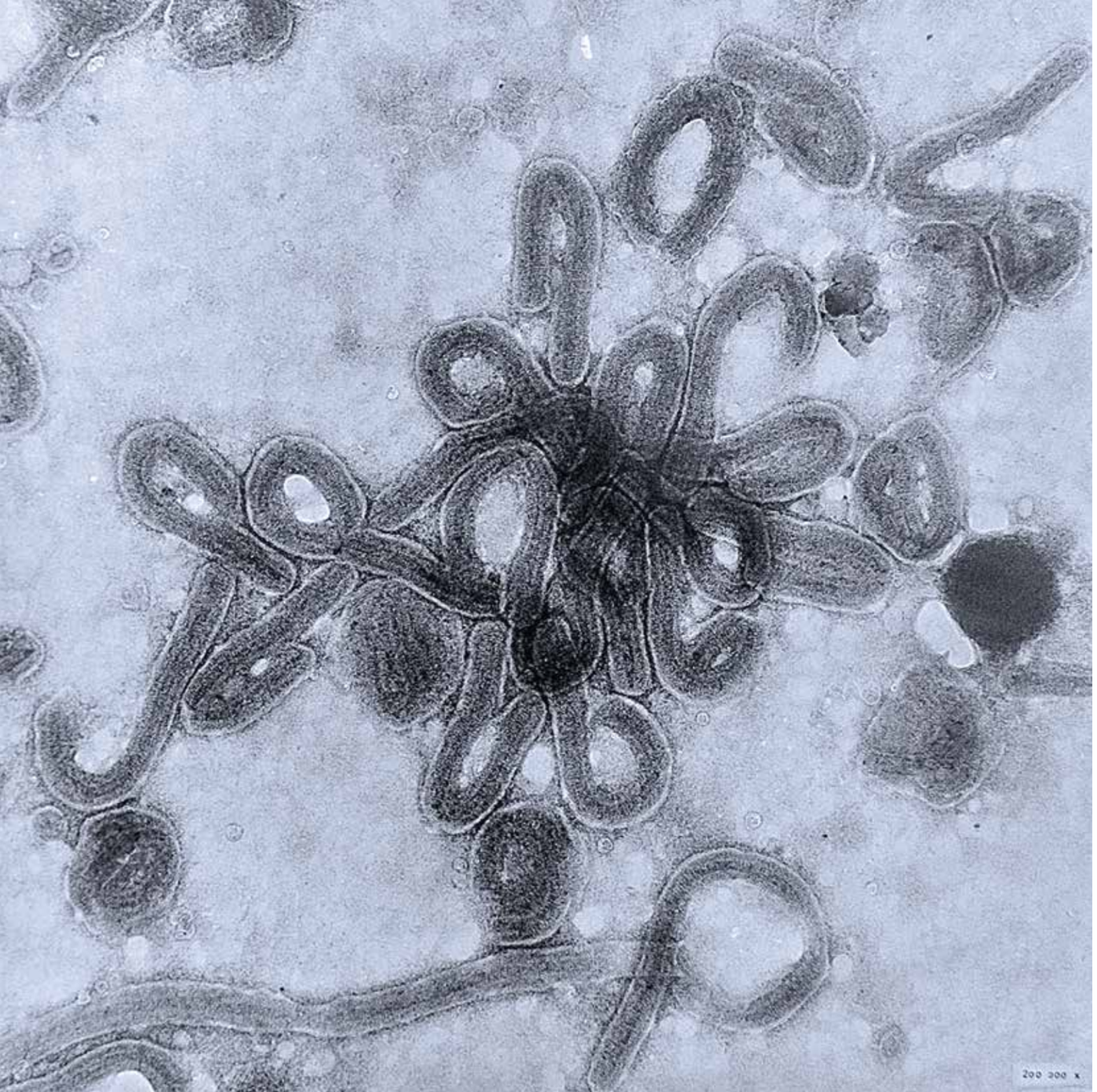
Prof. Dr. med. Martin Zeitz
University Medical Center Hamburg-Eppendorf,
Hamburg

Research



EBOLA

As we near the end of 2015, the largest Ebola epidemic of modern times seems to have subsided. More than 28,000 people have been affected and more than 11,000 have died. The question remains: why did this outbreak spread so widely in comparison to all others that had arisen in Central and East Africa previously? Interestingly, a few Ebola and Marburg outbreaks have been recorded in Uganda in the past several years but they remained locally contained and therefore were not noticed by the rest of the world *(Am J Trop Med Hyg 2014; 90:790)*. Certainly, it is of great interest to understand why the recent West African epidemic was so different. It appears not to be due to a difference between the viruses, and therefore, it would not be surprising if social anthropology played an important role.



ORIGIN OF THE EBOLA EPIDEMIC

In March 2014, an outbreak of a febrile illness with vomiting, severe diarrhoea, and high fatality was reported to the World Health Organisation (WHO) from Guinea, West Africa. Virological examination indicated that it was an Ebola outbreak. An international consortium led by our virologists found that it was a new Ebola strain, a cross of viruses from previous outbreaks in the Congo and in Gabon, which emerged unexpectedly far to the west, possibly carried by migration of bat colonies. Apparently, the epidemic arose from a two-year-old child who had died in December 2013 in the area of Guéckédou in Northeast Guinea. As the clinical syndromes were dominated by organ failure rather than the classical sign of bleeding, the term Ebola Haemorrhagic Fever was replaced by *Ebola Virus Disease* (EBVD).

Baize S et al., N Engl J Med. 2014, 371:1418-25

Lisa Oestereich, Toni Rieger, Daniel Cadar,
Martin Gabriel, Dennis Tappe,
Jonas Schmidt-Chanasit, Stephan Günther and
external co-operation partners (see publication)

Figure: A group of Ebola viruses under the electron microscope. In the blood of infected persons, the number of viruses may exceed 100 million per millilitre.

Tracking

GENETIC TRACE OF THE EBOLA EPIDEMIC

As the EMLabs performed diagnostics from the beginning of the Ebola outbreak, we collected patient samples at various sites throughout the epidemic. By sequencing large parts of the genomes of 179 virus isolates sampled between March 2014 and January 2015, we were able to follow mutations over time. Thereby, we reconstructed the formation of various viral lineages and traced the spread of the epidemic. The results confirmed observations that the virus passed the border from Guinea to Sierra Leone between the end of April and beginning of May 2014. The lineages of the two countries crossed paths in the summer of 2014 as progeny of the early Guinean lineage was later found again in Guinea. In addition, the data show that the Ebola virus did not have an unusually high mutation rate indicating that the risk of emerging viral mutants that could escape vaccine protection was small.

Carroll MW et al., Nature 2015, 524:97-101

Marlis Badusche, Beate Becker-Ziaja, Britta Liedigk, Lisa Oestereich, Romy Kerber, Martin Gabriel, Stephan Günther and external co-operation partners (see publication)

Figure: Working in the "European Mobile Laboratory" at the onset of the Ebola epidemic in Guinea.

A complicated case

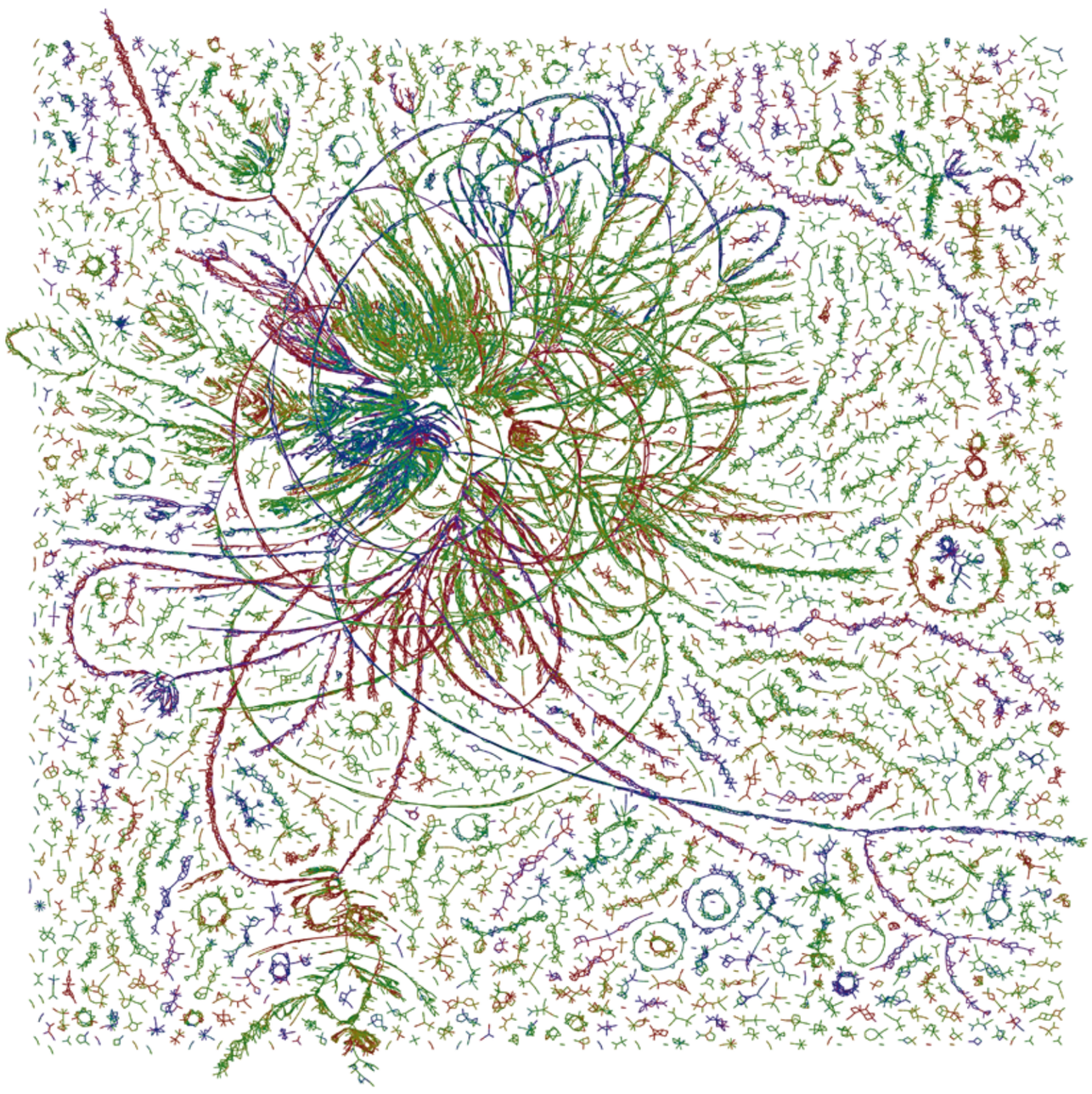
AN EBOLA PATIENT IN HAMBURG

On August 27, 2014, a special aircraft arrived at Hamburg airport, carrying an Ebola patient from Sierra Leone to be treated at the University Medical Center Hamburg-Eppendorf (UKE). The patient's samples were closely followed for viral load and infectivity by polymerase chain reaction (PCR) and by viral cultures in Vero cells, respectively. In the course of his disease, the patient experienced several complications including bacterial septicaemia, respiratory failure and brain involvement. Intensive care including forced intravenous fluid substitution of up to ten litres per day, broad-spectrum antibiotic treatment and temporary non-invasive artificial respiration resulted in complete recovery without applying experimental treatment. Discharge of the patient was delayed by persistent detection of viral RNA in sweat and urine for four and six weeks although viruses could be cultured only for 2 and 3.5 weeks, respectively. The case shows that even severe Ebola disease can be treated successfully by conventional intensive care.

Kreuels B et al., N Engl J Med. 2014, 371:2394-401

Benno Kreuels, Petra Emmerich,
Jonas Schmidt-Chanasit, Stephan Günther and
external co-operation partners (see publication)

Figure: Training inside the containment ward (Photography: Tom Hildebrandt, UKE).



EMERGING INFECTIONS

On one of the following pages, the identification of a new virus that can infect humans will be described. A straightforward method was applied that has become feasible only by exploiting sophisticated bioinformatics. Simply, all genes of an infected animal were sequenced and the sequences were searched for genes not belonging to the animal. Thus, genes of a virus were found. It is foreseeable that this approach of DNA sequencing of biological samples containing more than one organism – called “metagenomics” – will reveal many more new viral infections in the future.

Figure: Graphic depiction of metagenomics of bacteria, archaea, and viruses (Design by Vaughn Iverson, metagenome, CC BY-NC 4.0).

Not only in China or in the Congo

SQUIRREL VIRUS KILLS THREE BREEDERS

It started with a failure of our diagnostics department to find the cause of a fatal brain infection of a man from Saxony-Anhalt. Inquiries revealed that the man was a breeder of South American coloured squirrels and that two of his breeder colleagues had also died from unclassified brain infections one and one and a half years ago, respectively. All re-examinations for known pathogens again were negative, also in the squirrels. Finally, colleagues from the Friedrich Loeffler Institute sequenced all RNA genetic material from the brain of a squirrel and were successful. In addition to the squirrel's mammalian genes, sequences were found that clearly originated from a virus. Virus-specific tests, designed based on these sequences, revealed the presence of the new virus in several squirrels and, notably, in the brains and cerebrospinal fluids of the deceased breeders. The new virus, a Borna virus, clearly differs from all Borna viruses identified so far, most of which cause encephalitis in horses. The new virus had presumably been transmitted to the breeders by bites or scratches of the squirrels.

Hoffmann B et al., N Engl J Med. 2015, 373:154-62

Dennis Tappe, Daniel Cadar,
Jonas Schmidt-Chanasit and external co-operation partners (see publication)

Figure: Variegated squirrel *(Sciurus variegatoides atrirufus)*, carrier of a new Borna virus causing fatal encephalitis in humans (Photography: Hans Hillewaert, CC BY-SA 3.0).

ZIKA VIRUS ON THE RISE

It was in BNITM's National Reference Centre for Tropical Pathogens where the first case of a Zika infection imported into Europe was diagnosed in 2013. By the end of 2015, there were four. Travellers had been infected in Tahiti, Borneo and more recently, in Brazil. They came down with mild fever, skin eruptions, conjunctivitis, muscle and joint pain, ankle oedema, and swollen lymph nodes. Temporary hearing impairment was found in one case, apparently due to involvement of the central nervous system. Most recently, a co-incidence of prenatal deformations and Zika infections during pregnancy was observed in Brazil. The virus was first identified in Uganda in 1947 and later spread to tourist places in the Western Pacific and Southeast Asia, and more recently Senegal and Latin America.

Similar to the related Dengue virus, Zika is transmitted by *Aedes* mosquitoes, and therefore, outbreaks might occur in large parts of Southern Europe where the tiger mosquito *Aedes albopictus* is firmly established.

Tappe D et al., Euro Surveill. 2014, 19:pii: 20685;
Tappe D et al., Emerg Infect Dis. 2015, 21:911-3;
Zammarchi L et al., Euro Surveill. 2015, 20 pii: 21153;
Zammarchi L et al., J Clin Virol 2015, 63:32-5

Dennis Tappe, Stephan Günther, Lisa Oestereich, Daniel Cadar, Jonas Schmidt-Chanasit and external co-operation partners (see publication)

Figure: Original Zika biotope

NEW WORM INFECTIONS IN GERMANY

Using DNA tests, we traced three unusual worm infections. One of them was a dirofilariasis. Dirofilaria are transmitted by mosquitoes and normally affect dogs. If humans are infected, the worms develop in the skin and form visible nodules. Now for the first time, a person has been infected inside Germany with the worms presumably having been imported with dogs from Southern Europe. Likewise, humans are rarely affected by canine onchocerciasis. We have found DNA of this worm in a sample extracted from the eye of a traveller returning from Turkey. Apparently, Southern Germany was the site where a man acquired a fatal infection with the horse worm *Halicephalobus gingivalis*. He must have had a skin lesion that came into contact with forest soil. Fortunately, the infection is very rare in humans. It was the first of its kind recorded in Europe.

Monoranu CM et al., Open Forum Infect Dis. 2015, 2:ofv061;
Bergua A et al., Euro Surveill. 2015, 20:pii: 21099;
Tappe D et al., Euro Surveill. 2014, 19:2-4

Dennis Tappe, Birgit Muntau, Egbert Tannich and external co-operation partners (see publication)

Figure: Tissue section through a skin nodule of a patient with *Dirofilaria repens* infection.

CHANGES OF MOSQUITO POPULATIONS IN HAMBURG

At over a hundred sites in metropolitan Hamburg, we have collected more than ten thousand mosquitoes and mosquito larvae. For the first time, *Culex modestus* was among them, which originates from the Mediterranean basin and has never been found this far north. Likewise of Mediterranean origin is *Anopheles algeriensis*, which after half a century now pops up again in Northern Germany. In particular, the northern spreading of *Cx. modestus* may possibly relate to climate change. Of note, *Cx. modestus* is in Europe one of the most important vectors of West Nile virus, which – emerging from Africa – spread at a tearing pace all over North America between 2000 and 2003. *Cx. modestus* preferably breeds in mineral wetlands like the North German marsh. All the more interesting is the disappearance of *Anopheles atroparvus*, which was the prime malaria vector here before World War II and prefers similar breeding sites. Two more mosquitoes also found for the first time in Hamburg favour floodplains for breeding as well. In addition, the classical „floodplain mosquito“ *Aedes vexans* was found significantly more often than in 1970, obviously as a result of the systematic restoration of floodplains in Hamburg. The good news was that even after directed searches in the port and airport, no Asian tiger mosquitoes or bush mosquitoes were found, which transmit dreaded viruses like the Dengue and West Nile virus, respectively.

Krüger A et al., Parasitol Res. 2014, 113:2907-14

Andreas Krüger*, Jessica Börstler, Marlis Badusche, Renke Lühken, Rolf Garms, Egbert Tannich and external co-operation partners (see publication)
** in house Tropical Medicine Department of the Bundeswehr*

Figure: Prof. Rolf Garms and Prof. Egbert Tannich collect mosquitoes in a Hamburg biotope.

Protection required?

MALARIA MOSQUITO IS AN ENDANGERED SPECIES IN GERMANY

It was not before 1953 that the WHO declared Germany officially malaria-free. In the past decade, the mosquito *Anopheles atroparvus* was essential for malaria transmission in Germany. As it prefers salty breeding waters, it was particularly widespread in Northern Germany and constituted a large proportion of the mosquito population there. In our last assessment in 2011-2013, we found *An. atroparvus* much less frequently – both in distribution and in numbers. It was restricted to the coastal areas of Lower Saxony and Schleswig-Holstein. A similar development has been observed in the Netherlands. The cause for its disappearance remains speculative. Possibly, modern, closed buildings may have reduced the mosquitoes' hibernation retreats. Dutch researchers have also proposed that *An. atroparvus* might be particularly sensitive to the pollution of stagnant waters, which could damage their breeding sites and thus impair their reproduction.

Lühken R et al., Med Vet Entomol. 2016, 30:144-54

Renke Lühken, Hanna Jöst, Jonas Schmidt-Chanasit, Egbert Tannich and external co-operation partners (see publication)

Figure: The malaria vector female *Anopheles atroparvus* taking a blood meal.

G7 GERMANY

2015 | Schloss Elmau

NEGLECTED TROPICAL DISEASES

Neglected Tropical Diseases (NTDs) belong to poverty-related infectious diseases. They affect the poorest populations in third world countries and are often severe and long lasting. The causative agents of NTDs include helminths, protozoa, bacteria and viruses. Even if the disease outcome is not fatal, NTDs can put a lot of strain on patients, their relatives and the economies of whole countries. For example, a massive outbreak can turn farmland into uninhabitable areas.

Worldwide, NTDs affect 1.4 billion people in 149 countries with a further two billion people at risk. Each year, about half a million people die directly or indirectly thereof. The WHO lists 17 NTDs as particularly relevant. In the near future, containment of NTDs may be possible, but it will require intense research, effective control measures, improvement of health systems and the development of simple diagnostic tests. At the BNITM, several NTDs are studied, e.g. helminth infections, Leishmaniasis, and Chagas disease.

CONFUSING BACTEREMIAS AND SEVERE MALARIA

In sub-Saharan Africa, it is common practice to treat all children with fever for malaria. If they don't get better within a few days, other causes for the disease are considered. In the past years, we have found that many children diagnosed with severe malaria have bacteria in their blood. As they are only treated for malaria, bacteremias progress rapidly and 50% of these cases are fatal. Diagnosing bacteremias requires blood cultures and these are too laborious and expensive for most settings in malaria-endemic countries. Hence, we searched for simple methods to differentiate severe malaria from bacterial blood infections. In rural Ghana, we have found that among 1915 children with high fever and malaria parasites in their blood, 46 (6%) had bacteremias, mostly salmonellae and streptococci. Unfortunately, we did not identify any simple clinical signs that in practice could help to identify the latter group for antibiotic treatment. Because of the great clinical relevance of bacteremias, we continue our work by searching for serum markers.

Nielsen MV et al., PLoS One 2015, 10:e0122139

Maja Nielsen, Solomon Amemasor, Alex Agyekum, Wibke Loag, Nimako Sarpong, Denise Dekker, Jürgen May and external co-operation partners (see publication)

Figure: Infant with severe malaria in a tertiary referral hospital in Africa (Photography: Mika Väisänen).

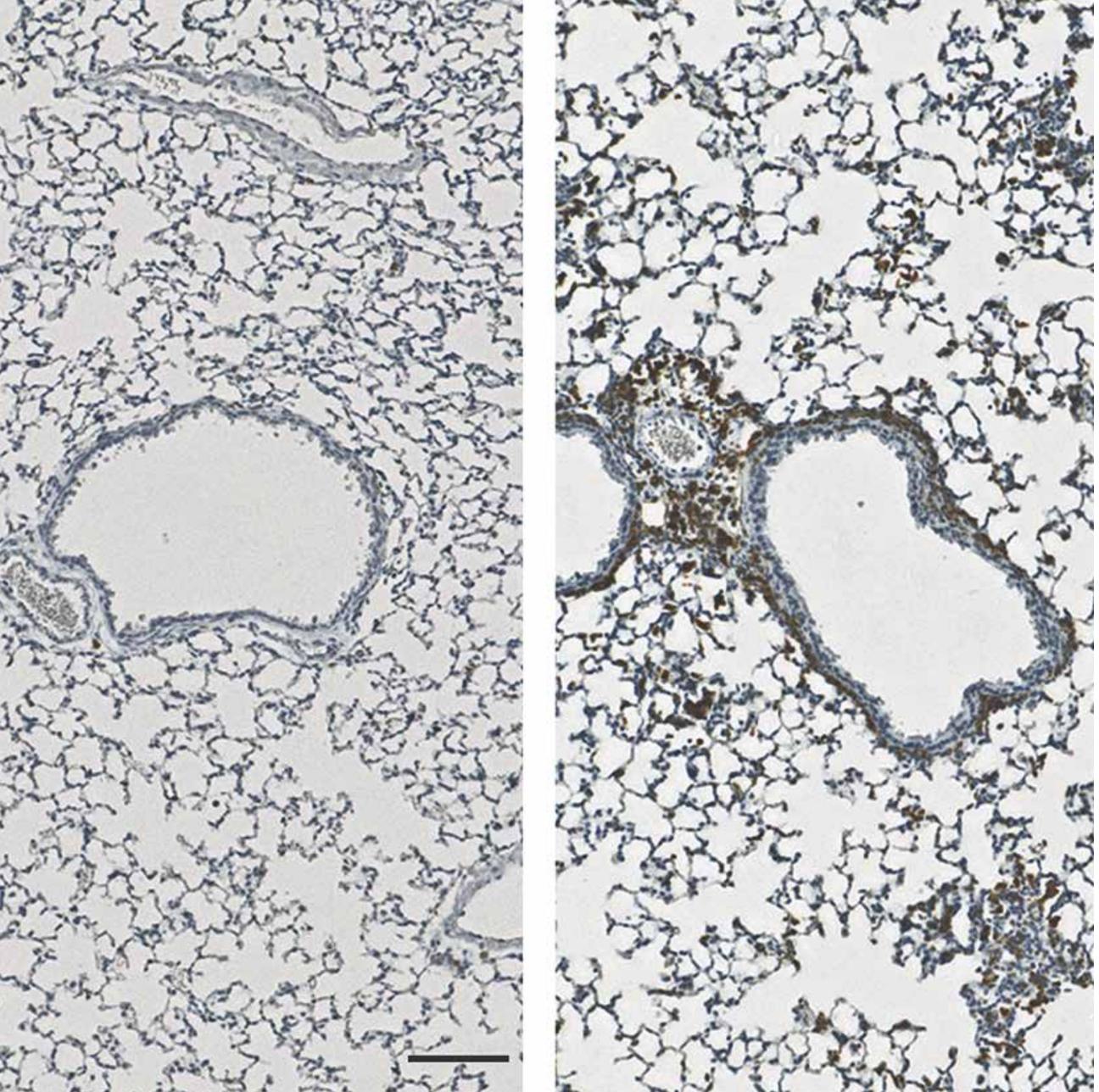
EFFECTIVE SHORT-TERM TREATMENT OF ACTINOMYCOSIS

A 30-year-old farmer from Savannakhet Province in Laos had developed on his right foot a large, brownish-coloured, painless swelling from which oozed a discharge containing bacteria of the *Nocardia aobensis* species. It was a case of actinomycosis, often called mycetoma. Mycetoma is described as a chronic infection of the skin, soft tissues or bones caused by either bacteria or fungi, which presumably enter by small skin lesions, mostly of the feet. Wearing shoes or flip-flops would probably prevent most cases. Antibiotic treatment was initiated according to international guidelines, but after two weeks, the patient left the hospital to go to work and thereby terminated treatment, although guidelines recommend continuation for several months. Several months later, the patient reported that without further antibiotics the lesion spontaneously had improved after approximately 20-25 weeks. This case suggests that short-term antibiotic treatment might be sufficient.

Vongphoumy I et al., PLoS Negl Trop Dis. 2015, 9: e0003729

Jörg Blessmann and external co-operation partners (see publication)

Figure: Foot of a patient with characteristic signs of a mycetoma at hospital admission (left) and ten months after a 14-day course of antibiotics (right).



Mouse pneumonia

ANIMAL MODEL FOR SCRUB TYPHUS

Scrub typhus is prevalent in large areas of Asia and Oceania. It is caused by particularly small bacteria *(Orientia tsutsugamushi)*, which are transmitted by the bites of mites. High fever, headache, lymph node swelling, and rashes are the most frequent signs of disease. Occasionally the brain and the heart can be affected, and in recent years, dangerous lung involvements have been reported. There is no vaccine, but a simple antibiotic treatment is very effective, if given early. We have infected laboratory mice by pinprick and followed the course of infection, first from the skin to the regional lymph nodes and later into the liver, heart, lungs and the brain. Most of the bacteria were found in the lungs, accompanied by severe signs of inflammation. We hope this animal model will facilitate a better understanding of this widely-spread but also widely-neglected tropical disease.

Keller CA et al., PLoS Negl Trop Dis. 2014, 8:e3064

Christian Keller, Matthias Hauptmann, Julia Kolbaum, Mohammad Gharaibeh, Bernhard Fleischer and external co-operation partners (see publication)

Figure: Right: Histology of the lungs in a mouse infection with *Orientia tsutsugamushi* shows a strong inflammatory reaction (brownish coloured phagocytes [macrophages]). Left: Normal lung.

For gourmets: raw snake meat

INTO THE EYE

In a survey in Central Africa, ophthalmologists found a series of eye infections by parasites. After surgical removal of suspicious material, DNA tests identified parasites of the genus *Armillifer*, also called pentastomes. These are worm-like parasites phylogenetically related to shellfish. Their larvae normally infect inner organs, but also the eyes. Further examinations in Central Africa revealed that several patients were multiply infected, often in the abdomen, sometimes by various parasite species. Patients appear to have been infected by ingestion of raw snakes contaminated with pentastome eggs.

Sulyok M et al., PLoS Negl Trop Dis. 2014, 24:8:e3041

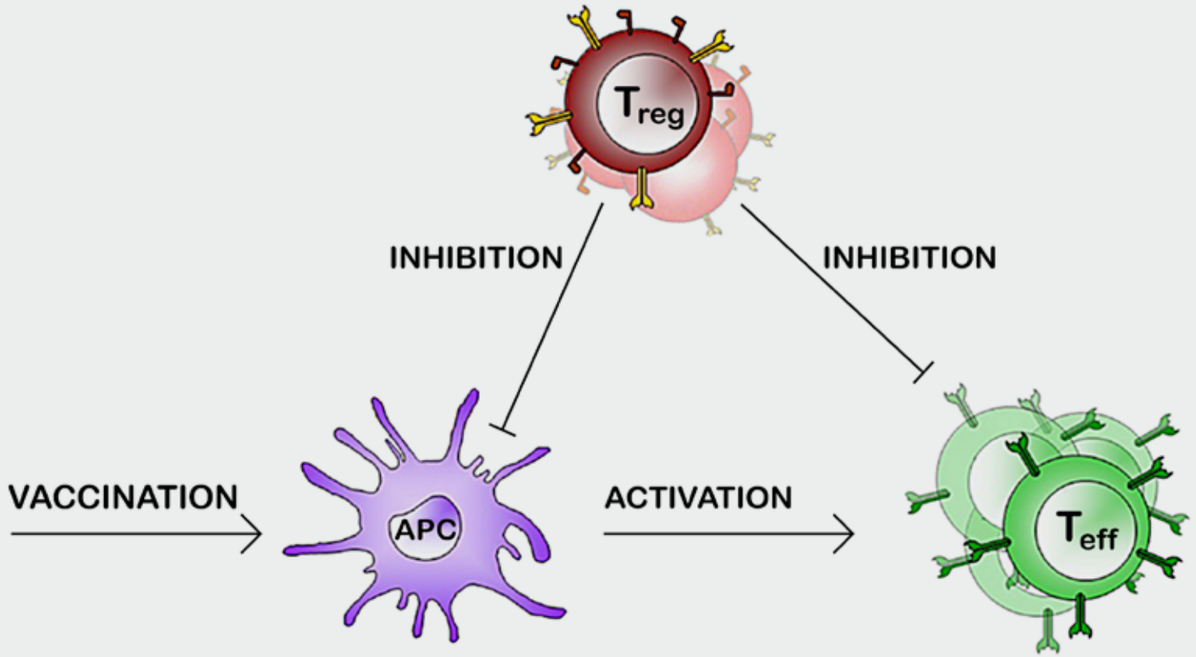
Dennis Tappe, Birgit Muntau and external co-operation partners (see publication)

Figure: Eye infection with larvae of the pentastome *Armillifer grandis* in a woman in the Democratic Republic of Congo (Photography: Richard Hardi).

Malaria-Vaccine RTS,S (Mosquirix™)		
Observation period	Protection rate	Reference
6 months	65%	*N Engl J Med 2008; 359:2533*
8 months	56%	*N Engl J Med 2008; 359:2521*
12 months	56%	*N Engl J Med 2011; 365:1863*
12 months	31%	*N Engl J Med 2012; 367:2284*
48 months	16%	*N Engl J Med 2013; 368:1111*

IMMUNITY

The efficiency of the recently licensed malaria vaccine RTS,S (Mosquirix™) has decreased considerably over time and, after four years, has been reduced to 16%. The WHO discusses at present whether it should recommend to countries in malaria regions to include the vaccine in national vaccination campaigns.



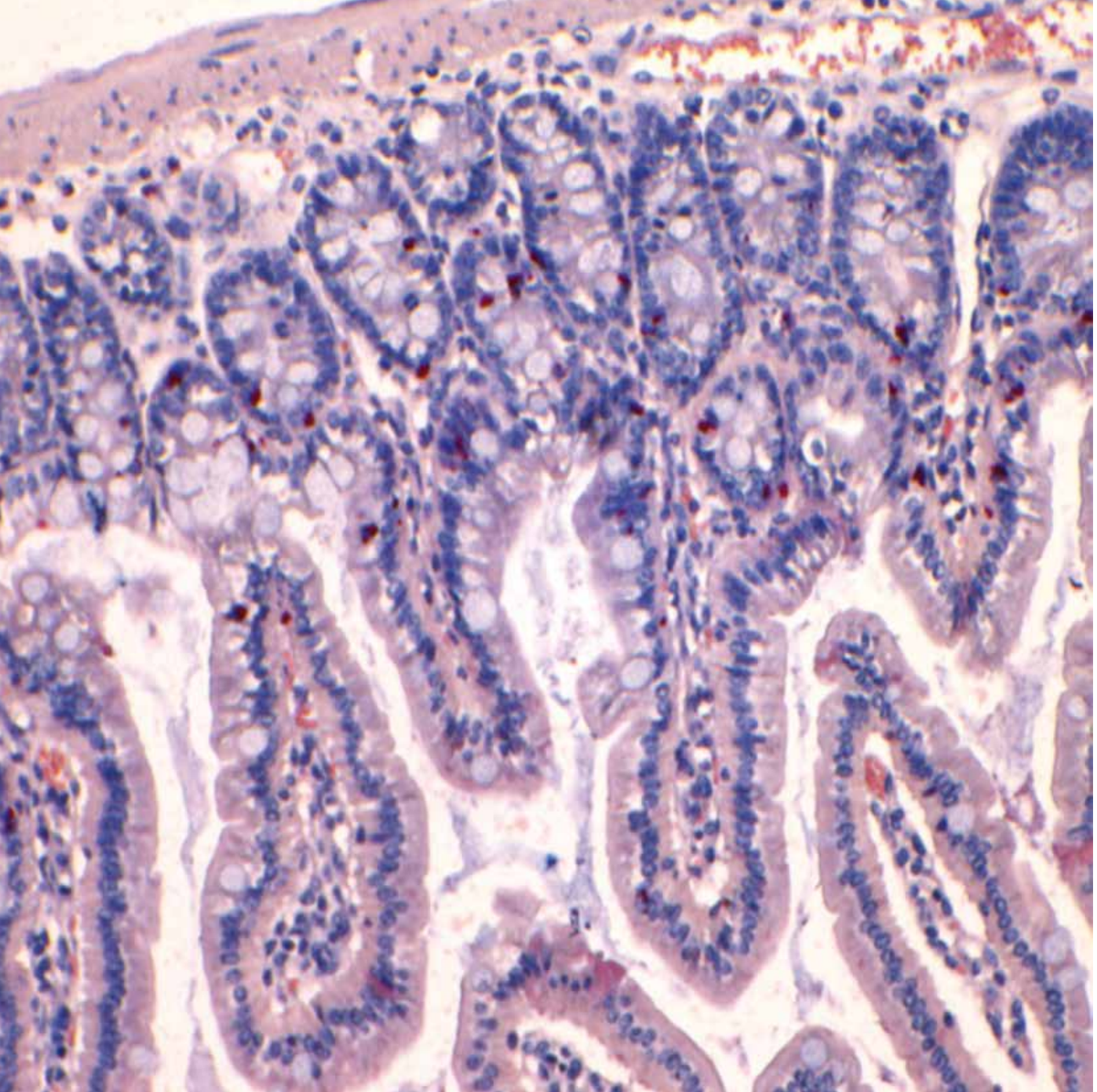
REMOVAL OF INHIBITORY IMMUNE CELLS TEMPORARILY INCREASES EFFICIENCY, BUT NOT DURATION, OF VACCINE PROTECTION

As the efficiency of the malaria vaccine RTS,S (Mosquirix™) has decreased considerably over time, we have looked for a means to prolong the protective effect by manipulating the immune response in a mouse model. We looked at animals genetically-deficient in so-called regulatory T lymphocytes, a group of cells that inhibit other immune cells. These animals showed a temporarily stronger reaction to both the first and second vaccinations but no development of so-called memory cells, which mediate long-term protection. Immunological memory therefore appears to be regulated by other, yet unknown mechanisms.

Espinoza Mora MR et al., PLoS One 2014, 9:e104627

Maria del Rosario Espinoza Mora, Christiane Steeg, Susanne Tartz, Volker Heussler, Bernhard Fleischer, Thomas Jacobs and external co-operation partners (see publication)

Figure: In the course of the immune response, antigen-presenting cells (APC) take up antigens and present them to activate effector T lymphocytes (T_{eff}). Consequently, T_{eff} multiply and produce messenger molecules mediating the destruction of pathogens. However, APC as well as T_{eff} can be inhibited by so-called regulatory T lymphocytes (T_{reg}).



MULTIPLE MECHANISMS OF IMMUNOSUPPRESSION BY INTESTINAL WORMS

Apparently, worms play it safe with respect to immunosuppression. At least the intestinal roundworm *Strongyloides* does so in an experimental infection of mice. On one hand, the worms directly inhibit central helper cells of the immune system (CD4+T lymphocytes) by increasing the numbers of inhibitory receptors (BTLA) on their surfaces. On the other hand, they cause a proliferation of regulatory T lymphocytes (T_{reg}), which inhibit other immune cells including T helper lymphocytes. Deletion of either the inhibitory molecules on T helper cells or the regulatory T cells themselves increased the ability of mice to expel the worms from their intestines. In this experimental model, interleukin 9 played a pivotal role as a messenger molecule. It stimulated so-called mast cells, specialised immune cells in the intestinal mucosa which enhance bowel movements and mucous production to wash out the worms. Mast cells also greatly contribute to allergy-type immune reactions.

Blankenhaus B et al., PLoS Pathog. 2014, 10:e1003913;
Breloer M et al. J Immunol. 2015, 194:1413-6

Birte Blankenhaus, Wiebke Hartmann, Marie-Luise Eschbach, Martina Reitz, Yannick Brenz, Irma Haben, Thomas Jacobs, Minka Breloer and external co-operation partners (see publications)

Figure: Microscopic image of the host intestinal mucosa during a worm infection. Cross-section of invaginations of the mucosa, which serve to enlarge the bowel surface area for efficient absorption of nutrients. Cells stained in dark red are mast cells which enhance mucous production and peristalsis to expulse worms (Photography: Anja Kühl, Charité, Berlin).

Cattle vaccine

VACCINE AGAINST ONCHOCERCIASIS

The tissue worm disease onchocerciasis is spread over many African countries. The worms dwell in nodules underneath the skin und produce numerous larvae, which fan out all over the skin including the eye where they ultimately cause blindness. Therefore, and because of the breeding sites of the transmitting insects, the disease is called river blindness. Based on an analysis of serum samples from persons who appear naturally immune to onchocerciasis, we have assembled a cocktail of worm proteins that, in a mouse model, function as a vaccine. We now construct a vaccine from the genes coding for these proteins. It will be initially tested in a pilot experiment performed at the University of Veterinary Medicine Hannover and later in a field trial in African cattle, because in Africa cattle suffer from onchocerciasis as well.

Steisslinger V et al., Vaccine 2015, 33:5861-7

Vera Steisslinger, Simone Korten, Norbert Brattig and Klaus Erttmann

Figure: In cattle with onchocerciasis, the worms – like in humans – lie in palpable nodules underneath the skin (Photography: Alfons Renz, University of Tübingen).

Something good

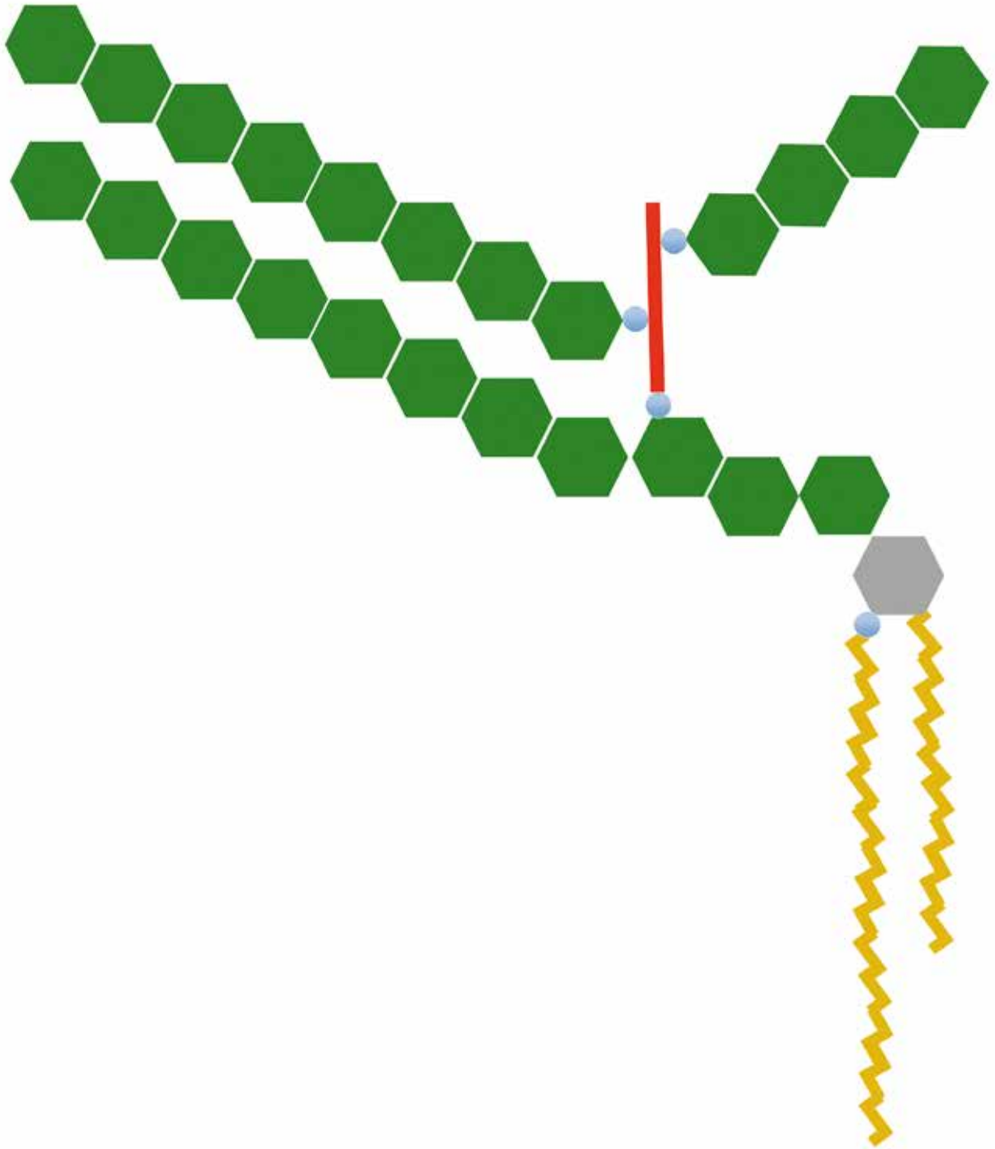
STOMACH BACTERIA DELAY IMMUNODEFICIENCY IN HIV INFECTIONS

Until the 1980s, it was not known that the bacterium *Helicobacter pylori* colonized the human stomach and was a major cause of stomach ulcers and cancer. When the AIDS pandemic was recognized, it was found that persons with HIV and concomitant *H. pylori* infection had relatively low HIV loads in the blood and relatively high numbers of helper T cells (CD4+ T lymphocytes). CD4+ T cells are the immune cells that are normally destroyed by HIV and whose loss primarily contributes to the characteristic immunodeficiencies of AIDS. Comparing HIV-positive persons with and without *H. pylori* infections, we now found that CD4+ T lymphocytes from persons with *H. pylori* are less activated and *in vitro*, show lower proliferation rates and fewer signs of exhaustion than CD4+ T cells from persons without *H. pylori*. As HIV preferentially infects activated and proliferating CD4+ T cells, these findings may help to explain why *H. pylori* infections may delay the progression of HIV infections towards AIDS.

Eberhardt KA et al., Clin Infect Dis. 2015, 61:1615-23.

Kirsten Eberhardt, Gerd Burchard and external co-operation partners (see publication)

Figure: Outpatient department in a Ghanaian hospital.



AMOEBA COMPOUND

Amoebas causing amoebic dysentery carry on their surfaces a substance that significantly enhances a specific immune reaction in the host. The substance is composed of an interesting combination of carbohydrates, peptides, phosphate residues and lipid chains. It causes a release of messengers that attract and activate certain immune cells and thereby could trigger or increase the pathogenic effect of these amoebas. In what regard this helps the amoebas to survive in humans remains elusive. Possibly the immunostimulatory activity – or indeed the amoeba pathogenicity itself – is merely an accident. It is clear, however, that the immunostimulatory activity of this amoeba product can be used to enhance our immune reaction against other pathogens such as *Leishmania* or *Mycobacterium tuberculosis* or to modulate our immune response to vaccines.

European Patent Application: EP14186723.4; International Patent Application: PCT/EP2015/072292

Hanna Lotter, Hannah Bernin, Egbert Tannich and external co-operation partners (see publication)

Figure: Schematic sketch of the structure of a highly specific immunostimulatory product of pathogenic amoebae.

CSSB
Centre for Structural
Systems Biology

BNITM Bernhard-Nocht-Institut für Tropenmedizin
DESY
EMBL
HELMHOLTZ ZENTRUM FÜR INFEKTIONSFORSCHUNG
HPI
JÜLICH FORSCHUNGSZENTRUM
MHH Medizinische Hochschule Hannover
Universitätsklinikum Hamburg-Eppendorf
UH Universität Hamburg DER FORSCHUNG | DER LEHRE | DER BILDUNG

CELLULAR BIOLOGY

At present, the Centre for Structural Systems Biology (CSSB), which may be considered unique worldwide, is being built on the campus of the German Electron Synchrotron (DESY), and nine research institutions are filling it with life, among them our institute. CSSB will combine DESY's outstanding competence and infrastructure in radiation sources with state-of-the-art experimental designs in infection research and will offer exceptional structural investigations into the molecular biology and, in particular, the cellular biology of infection.

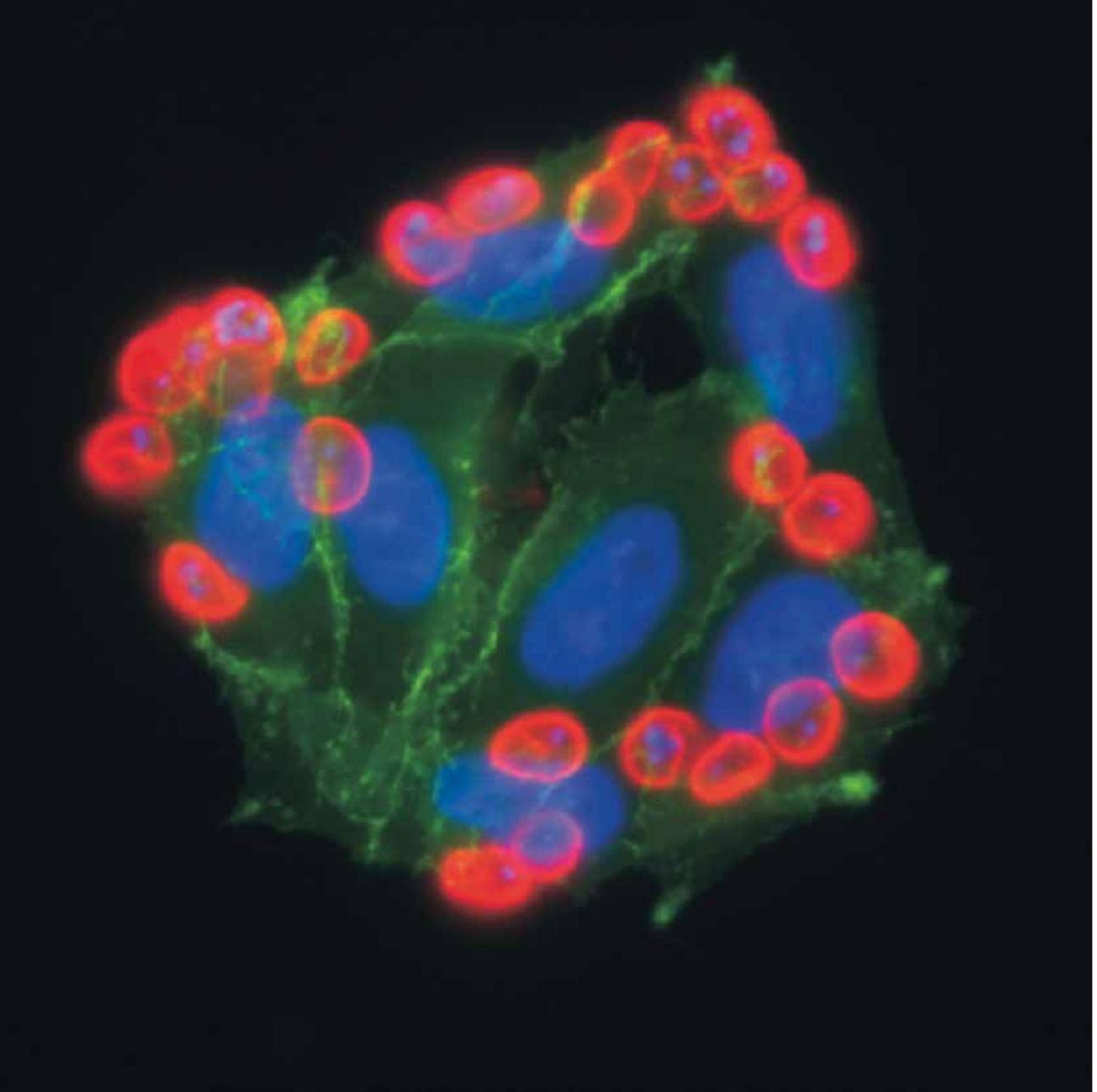
IN VITRO GROWTH CONDITIONS CHANGE MALARIA PARASITES

These are the boring and unloved results that no scientific journal likes to publish, yet are very important. Nearly all biological and immunological studies use pathogens that are artificially grown in incubators. The culture conditions under which each pathogen survives and multiplies best in the test tube have been explored at some point. Subsequently, it is rarely studied how the artificial conditions influence other pathogen properties. Malaria parasites are cultured in red blood cells suspended in growth media. We now find that simply replacing human serum by a frequently-used serum-like mixture significantly altered relevant properties of the parasites. These results should remind researchers to repeatedly check whether laboratory conditions still reflect real life.

Tilly AK et al., Sci Rep. 2015, 5:16766

Ann-Kathrin Tilly, Jenny Thiede, Nahla Metwally, Pedro Lubiana, Anna Bachmann, Stephan Lorenzen, Egbert Tannich, Iris Bruchhaus and external co-operation partners (see publication)

Figure: Petri dishes for the cultivation of malaria parasites (Photography: NeoLab catalogue).



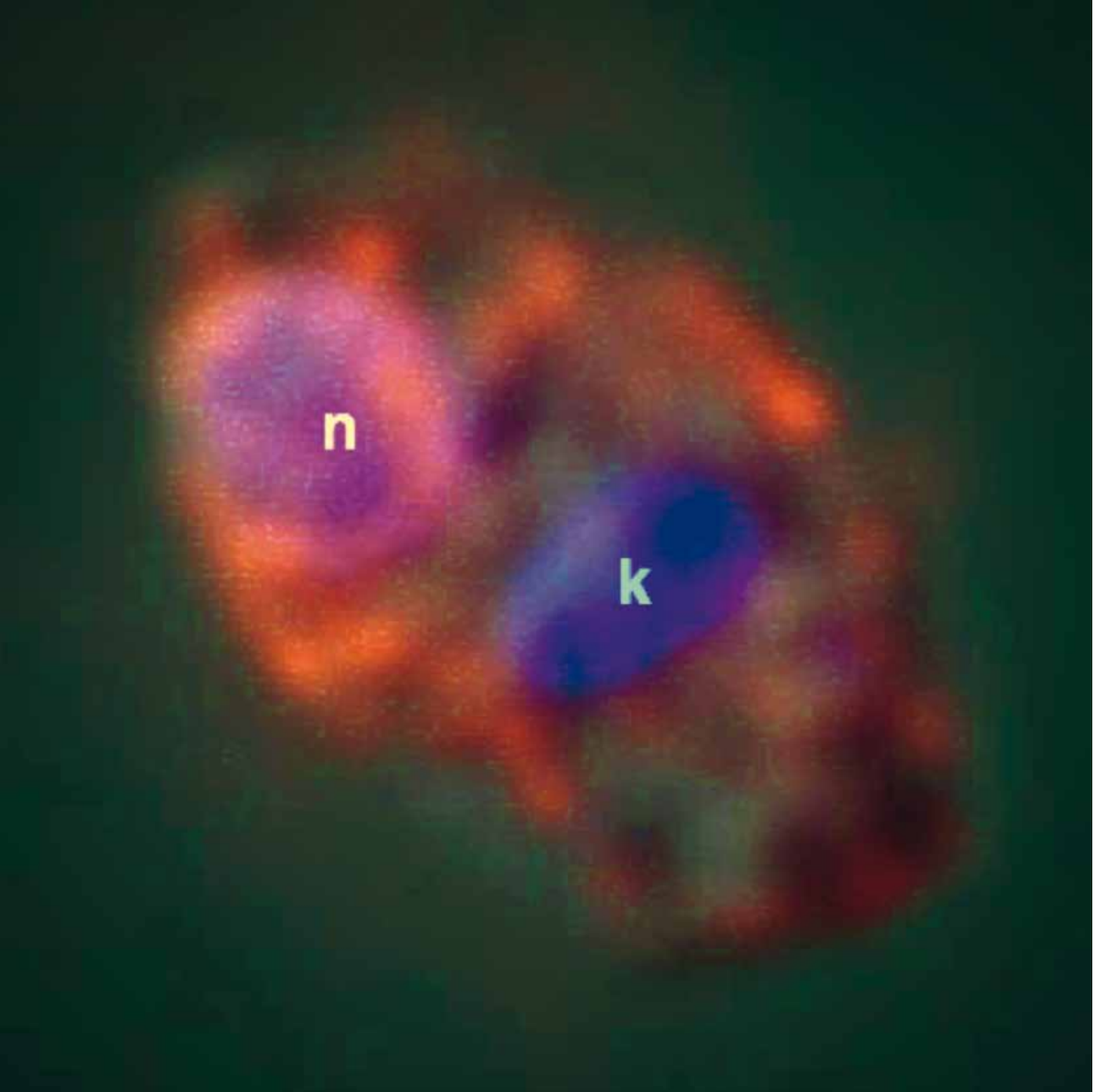
NUMEROUS ATTACHMENT SITES FOR MALARIA-INFECTED RED BLOOD CELLS ON THE WALLS OF SMALL BLOOD VESSELS

Red blood cells that are infected by malaria parasites adhere to the walls of our small blood vessels thereby causing alterations of the microcirculation and organ damage. When this occurs in the brain, it's known as cerebral malaria. Since this mechanism was discovered some thirty years ago, there have been 15 different molecules identified that serve as attachment sites for these infected red blood cells, among them a prominent receptor on the vessel walls inside the brain. At present, there are attempts to design a vaccine that inhibits adherence to this receptor in order to combat life-threatening cerebral malaria. In most of those studies, commonly-used laboratory-grown strains of malaria parasites have been used. Using a mixture of malaria parasites recently obtained from Ghanaian children, we have examined ten additional molecules expressed on human brain vessel walls and found that seven of them may likewise serve as attachment sites for infected red blood cells. It appears that malaria-infected red blood cells are rather promiscuous in their attachment to human vessel walls and different parasite isolates may use different adherence molecules. These findings suggest that it may be difficult to develop a vaccine that can prevent all variants of adherence of malaria-infected red blood cells to the vessel walls inside the brain.

Esser C et al., Cell Microbiol. 2014, 16:701-708

Claudia Esser, Anna Bachmann, Daniela Kuhn, Kathrin Schuldt, Birgit Förster, Meike Thiel, Jürgen May, Iris Bruchhaus, Rolf Horstmann and external co-operation partners (see publication)

Figure: Adherence of red blood cells (red) infected by malaria parasites (cell nuclei as small blue spots) to animal cells (large blue ovals) carrying on their surface proteins from human brain blood vessel walls (small green spots).



Little helper

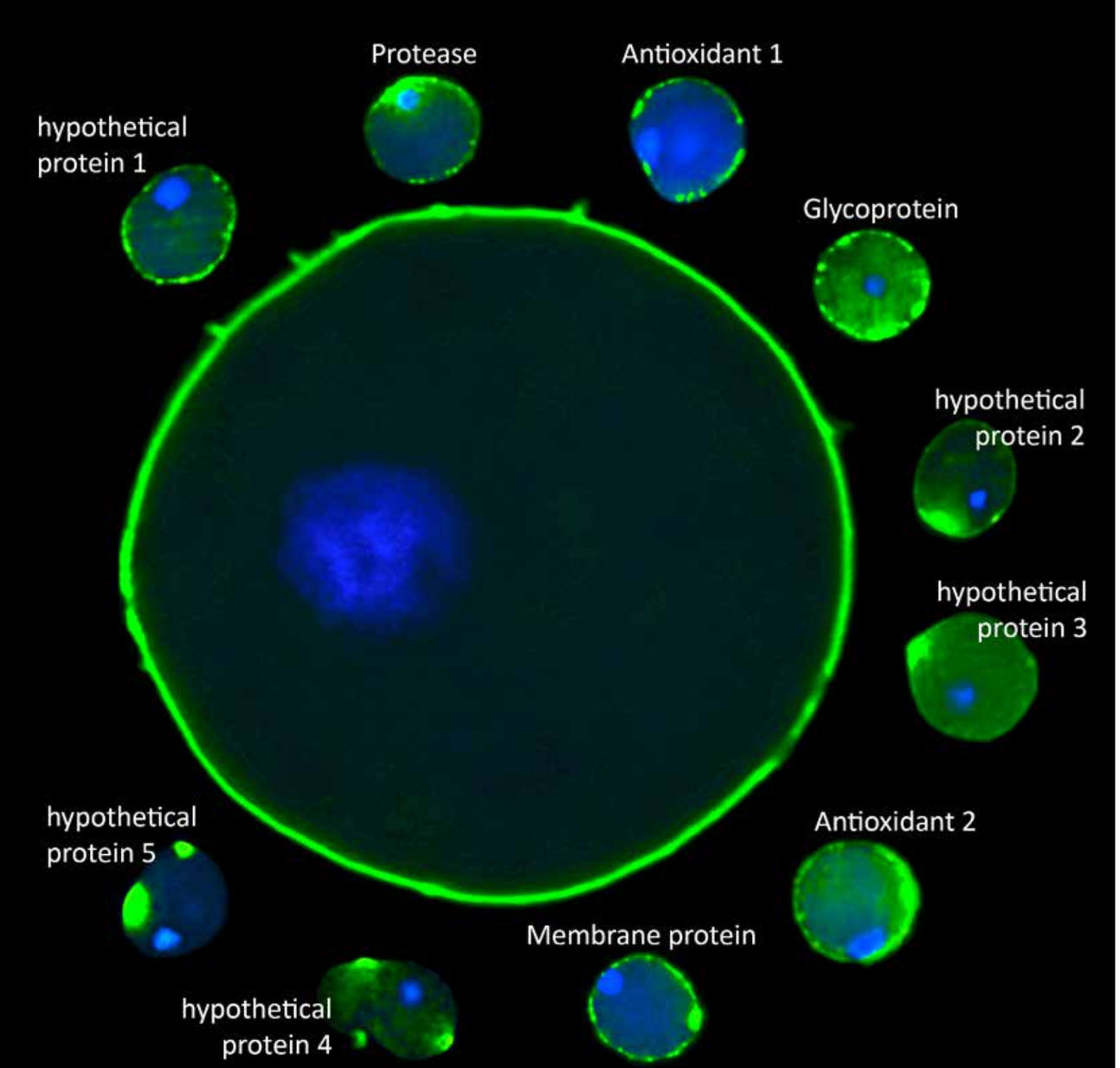
CHAPERONE SAFEGUARDS LEISHMANIA'S SURVIVAL

Although it is usually very hot in their homelands, parasites that are transmitted by insects must survive a heat shock when they encounter humans or other warm-blooded organisms. With temperatures exceeding 40°C, our bodies are much hotter than the insects' or the tropics. A „heat shock" is well known from experimental research – it is a standard method to subject living cells to stress. The cells then produce an entire range of proteins known as chaperones, which prevent other proteins from clumping and the cell from dying. The heat shock encountered by the transmission from insects to humans helps *Leishmania* parasites to survive an additional gross change in their living conditions: while they can move freely in the sandfly insects, in humans they prefer to live inside cells, namely phagocytic cells of the immune system. We have now found that a small chaperone called HSP23 is essential for the survival of *Leishmania* in human cells. If it is eliminated by gene knock-out, the parasites die at body temperature and when re-introduced, the gene enables them to survive again. Accordingly, the chaperone protects the nucleus of the parasite from heat damage and is therefore a promising target for new anti-parasitic drugs.

Hombach A et al., J Cell Sci. 2014, 127:4762-73

Antje Hombach, Gabi Ommen, Andrea MacDonald and Joachim Clos

Figure: Leishmania at body temperature. Its nucleus (n) and a DNA-containing organelle (k) is marked in blue and chaperone HSP23 labelled in red. HSP23 is concentrated around the nucleus.



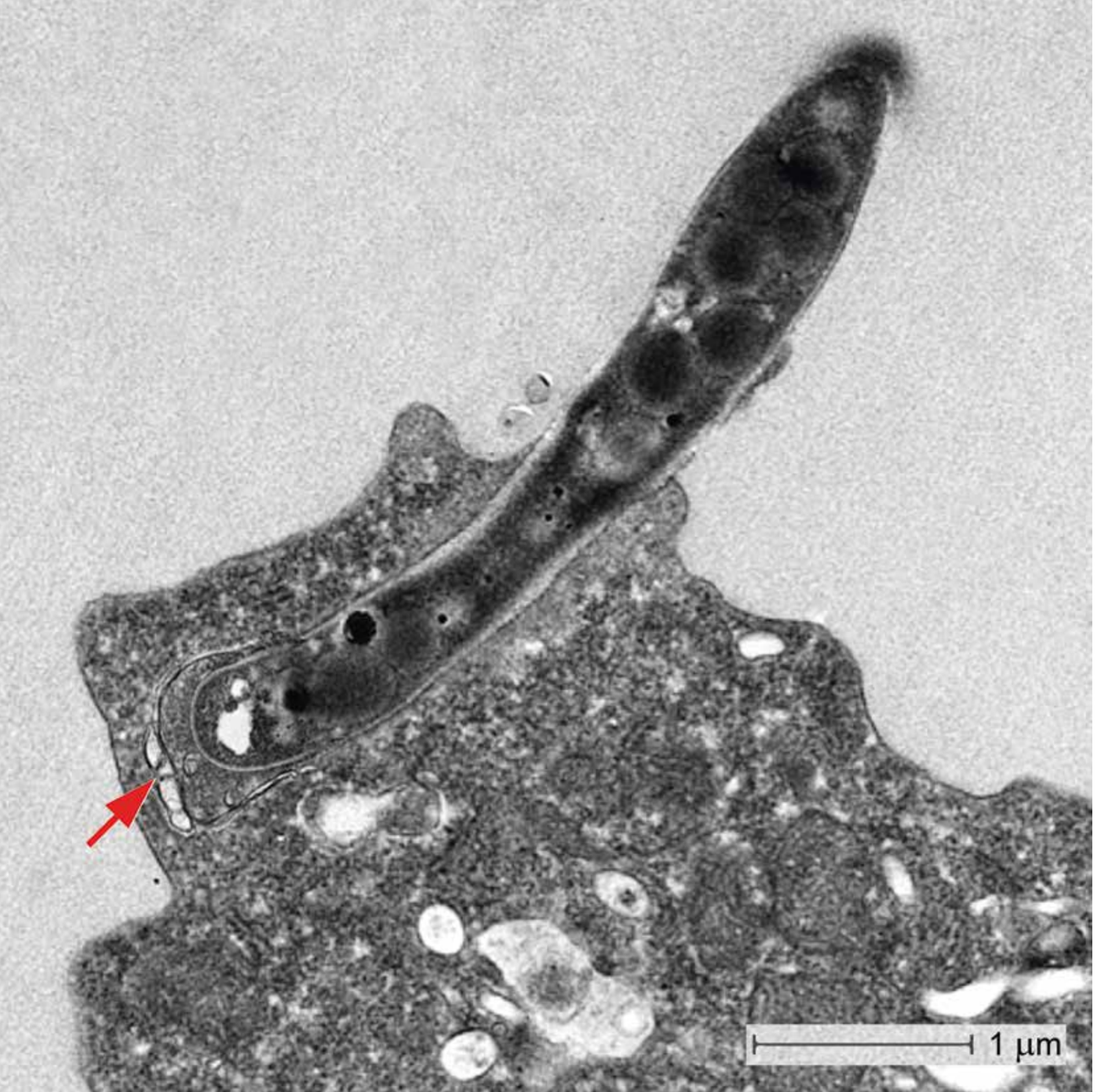
NUMEROUS ATYPICAL PROTEINS AT THE SURFACE OF AMOEBAS

Molecules that are located at the surface of pathogens are of particular interest for the infection process. In pathogenic amoebas *(Entamoeba histolytica)*, they influence the migration from the intestinal cavity into the tissues and the development of intestinal ulcers and organ abscesses. Therefore, we have studied the „surface proteome“ of *E. histolytica*, i.e. the entirety of proteins the amoebas carry on their surface. We have labelled live amoebas with a substance that spontaneously binds to all accessible proteins, isolated the labelled proteins and subjected them to mass spectrometry. Bioinformatic analysis of the protein fragments revealed in about half of the nearly 700 proteins, no evidence of structures that commonly anchor proteins to a cell surface. We selected 23 of them at random, labelled these with a fluorescent marker and found that 20 of them indeed fluoresce at the amoeba surface. Apparently, the rapid turnover of the amoeba cell membrane temporarily flushes many intracellular proteins onto the surface.

Biller, L et al., Mol Cell Prot., 2014, 13 :132-44

Laura Biller, Jenny Matthiesen, Vera Kühne, Hanna Lotter, Ghassan Handal, Egbert Tannich, Iris Bruchhaus and external co-operation partners (see publication

Figure: Immunofluorescence microscopy to show surface localisation of several amoeba proteins *(Entamoeba histolytica)*. The nucleus of the amoeba is stained in blue, proteins as indicated in green. In the centre, an enlarged amoeba with all the surface proteins studied labelled.



Patch

HOW MYCOBACTERIA LEAVE CELLS AFTER INFECTION

Mycobacteria like *Mycobacterium tuberculosis* reside and multiply inside our cells. While their invasion and survival are under intense investigation, it is largely unknown how they leave the cells – something they need to do to spread the infection. During their exit, the cells mostly remain intact. We investigated how intracellular pathogens perforate the membranes of their host cells so gently. The host cells, like many other cells, can form intracellular inclusion bodies („autophagosomes“), which are surrounded by a membrane and digest non-functional metabolic compounds and recycle the degradation products back into the cell. We have found that these inclusion bodies move at the rear pole of mycobacteria to the site of exit and close the membrane gap the bacteria leave behind. This observation raises the question whether such inclusion bodies also fix holes in cellular membranes caused by other kinds of injuries.

Gerstenmaier L et al., Proc Natl Acad Sci U S A. 2015, 112:E687-92

Lilli Gerstenmaier, Rachel Pilla, Lydia Herrmann, Hendrik Herrmann, Monica Prado, Margot Kolonko, Monica Hagedorn and external co-operation partners (see publication)

Figure: Transmission electron microscopy image of a mycobacterium during its exit from a cell („egress“). Marked is an inclusion body (autophagosome) at the rear pole of the bacterium, which will close the membrane gap after egress has been completed.

SICKLE CELL DISEASE IN HAMBURG

Sickle cell disease is an inherited disorder prevalent only in populations from malaria endemic areas. Affected children may suffer from pneumonias and other life-threatening complications early in life. Therefore, in many countries of the world including France, Belgium, the Netherlands and Great Britain – not in Germany, however – newborns are routinely tested for the condition in screening programmes. Thus, they can be protected by antibiotic treatments and vaccinations right from birth and all affected children in these countries nowadays reach adulthood. Together with colleagues from the University Medical Center Hamburg-Eppendorf, we have found that, in Hamburg, 1 out of 2400 children is born with sickle cell disease, which is more frequent than any disease included in the German newborn screening programme. Most affected are children of the largest Ghanaian community in Germany comprising an estimated 20,000 members.

Together with the Intercultural Migration Integration Centre (IMIC), we inform the Ghanaian community in Hamburg about inheritance and consequences of sickle cell disease in order to reach as many carriers of the sickle cell trait as possible. First results indicate that every fifth citizen of African descent carries the trait. If both parents are carriers, statistically one out of four children will be born with the disease. Our study is supported by the „Association of Friends of the Institute for Tropical Medicine, Hamburg“.

Grosse R et al., Pediatr Blood Cancer. 2015, 63:168-70

Christian Timmann, Christa Ehmen,
Birgit Muntau, Bernd Noack and external
co-operation partners (see publication)

Figure: A project partner distributes information material on sickle cell disease during a service of an African religious community in Hamburg.

PROJECT "TROPICAL DIAGNOSTICS"

From 1.11.2011 to 31.12.2015, the institute took an important first step towards applying its competence in the diagnostics of tropical and emerging infections to commercial product development. In a public-private partnership with the Hamburg company Altona Diagnostics (ADT), which was generously supported by the European Regional Development Fund (ERDF), we established a platform to develop marketable diagnostic test kits. While ADT broadened its portfolio of PCR-based tests, the institute complementarily focused on serological assays to be applied later in the course of an infection. Thus, the partners can jointly offer a set for a continuous infection diagnostics. In the project, tests have been developed for West Nile fever, Crimean Congo haemorrhagic fever and various serotypes of Dengue fever. The serological assays are based on a novel method for detecting antigen-antibody complexes freshly formed in the test tube, which is substantially more sensitive and specific than established systems. As for quality management, well-defined reference samples are indispensable, and therefore, controlled storage capacities and an electronic sample administration were installed. Samples previously collected in the institute were registered and, through missions to Asia, Africa and South America, complemented by samples required for on-going test development. At present, BNITM has a collection of more than 300,000 reference samples at its disposal.

Figure: First draft of a package for diagnostic test kits of BNITM.

BNITM
Bernhard Nocht Institute for Tropical Medicine

altona DIAGNOSTICS

EUROPEAN UNION
European Regional Development Fund

KCCR

KUMASI CENTRE FOR COLLABORATIVE RESEARCH (KCCR)

Since its establishment as a biomedical research platform some 18 years ago, the Kumasi Centre for Collaborative Research (KCCR) has operated in this capacity and has since 2008 been established as the research arm of the College of Health Sciences at Kwame Nkrumah University of Science and Technology (KNUST) in Kumasi, Ghana. KCCR has an excellent track record in the conduct of biomedical research in tropical medicine as evidenced by over three hundred publications, many of them in high impact journals. KCCR laboratories are well equipped with state-of-the-art equipment with support from BNITM for cutting-edge biomedical research. The existing biosafety level three (BSL3) laboratory has recently been upgraded to handle training of scientists within the West African subregion with funding from the German Ministry of Foreign affairs. There are currently six research groups actively conducting cutting edge research in diverse biomedical fields addressing non-communicable diseases in the tropics, tuberculosis, Buruli ulcer, ageing, lymphatic filariasis, onchocerciasis, paediatric fevers as well as viral zoonoses.

Projects on Buruli ulcer seek to identify biomarkers that predict early response to treatment and to understand oedematous disease and the influence of *Mansonella perstans* co-infection and doxycycline treatment on host immunity against mycobacterial disease and disease susceptibility in children and adolescents. The haematology group funded by the University of Pittsburgh examines the progressive deterioration in organ function with age and to identify genetic markers of specific organ dysfunction and end-organ damage in sickle cell disease patients at the Komfo Anokye Teaching Hospital. Medicine in the Tropics group examines cohort of hypertensive and diabetes mellitus patients for clinical outcomes over a period five years. Others include assessing the burden of drug resistant tuberculosis (MDR/XDR TB) and immunological assays to diagnose tuberculosis in children. Studies on the genotypic prevalence of HPV infection among women in Kumasi and use of electronic health information and surveillance system to develop and evaluate a basic, symptom-oriented clinical algorithm at the Agogo Presbyterian Hospital, have been completed. This group recently hosted the dissemination of findings of a multicentre project on obesity and type 2 diabetes mellitus (T2D) among migrant Ghanaian populations in Europe and their counterparts in rural and urban Ghana (RODAM) in Accra with major stakeholders from across Africa and Europe. Projects on filariasis examine a combination of ivermectin plus albendazole compared to ivermectin alone. Other studies examine the use of SNPs as biomarkers for identifying persons at greater risk of developing pathology. The virology and zoonoses group examines the biology and ecology of bats and human determinants as possible factors for disease transmission. The paediatric fevers group examines different causes of fever in children with unknown causes of fever in selected populations in the Ashanti region of Ghana.

During the year, the centre commenced accreditation for Ebola Virus Disease (EVD) diagnostics and is spearheading training of scientists in some selected francophone countries within West Africa. Having plans to build a critical mass of Scientists, the centre has recently cut sod for the construction of state-of-the-art cool house for the creation of biorepository for teaching and research with funding from the Volkswagen (VW) foundation. Three PhD and MPhil students have completed their thesis work while eleven others (seven PhDs and four MSc/Mphils) have been enrolled in the current year. KCCR hosted several skills training programs for scientists and students such as Basic and advance statistics, Certificate Course in Tropical Medicine and Bioinformatics. KCCR works with the Office of Grants and Research at KNUST to organize skills and training to several young scientists in scientific writing and scientific proposal writing. Several life-science students have done their National Service and internships at KCCR from various institutions within and outside of Ghana.

The centre is grateful to the current and past funders such as Brauns-Foundation; German Research Foundation (DFG); European Union, German Federal Ministry of Research and Education (BMBF), BNITM; GIZ, Gesellschaft für internationale Zusammenarbeit; German Center for Infection Research (DZIF); Gilead Sciences, National Institutes of Health (NIH); LOYOLA University USA; Deutsche Lepra-und Tuberkulosehife (DAHW); Canadian Institute of Health Research (CIHR); Bill and Melinda Gates Foundation, VW Foundation; Federal Ministry of Foreign Affairs Germany; and the University of Pittsburgh.

Report of the Bundeswehr Department of Tropical Medicine

Wir sind Humanitäre Hilfe Westafrika!

The year 2014 was marked by the Ebola epidemic in West Africa and the resulting challenges. Our soldiers had to be protected against a potential outbreak of disease, particularly in the Mali theatre of operations. Capabilities for transporting and treating patients in Germany and abroad had to be developed. The Department of Tropical Medicine was involved in one way or another in all scenarios. In August, the Department of Tropical Medicine assisted its cooperation partner, the University Medical Centre Hamburg-Eppendorf, in the treatment of the first patient diagnosed with Ebola fever in Germany. It contributed to the medical care of this patient, which required a large number of personnel. A few weeks later, a Medical Service officer was dispatched to the University Hospital Frankfurt to also assist in the treatment of an Ebola patient.

The Department provided German volunteers with specialist and practical training for the mission to deliver humanitarian aid to West Africa (HumHiWA). At the NCO school in Appen, 129 participants were trained, 70 of whom were eventually deployed to Monrovia in Liberia. From the advance party in October 2014 up to the completion of the mission in early March 2015, personnel of the Department were involved. At the end of the year, Department Head Dr. Hinrich Sudeck (Lieutenant Colonel, Medical Corps) left the Department, the Bundeswehr and his active medical work for a well-deserved retirement.

Special diagnosis of tropical diseases and infection epidemiology

In 2014 the special research project „New development and evaluation of molecular diagnostic processes for detecting pathogens and for symptom-oriented clarification of infectious tropical diseases“ was completed. The focus was on evaluating 16S rRNA gene sequencing procedures for blood culture testing in the tropics using samples retained from blood cultures in Ghana, on testing commercial beta-lactamase polymerase chain reactions (PCRs) using swabs from Malagasy volunteers, and on supplementing the molecular gastroenteritis panel used in the Department with in-house real-time PCRs for soil-transmitted helminths and African schistosomes. As a result, the faeces of children from the highlands of Madagascar showed rates of schistosomiasis higher than 70%. A comparative study of serological test methods for the diagnosis of schistosomiasis was carried out to meet the growing demand for screening tests for soldiers returning from the tropics which fulfilled quality control criteria.

Entomology

Since 2013, this subunit has been a cooperation partner in a project that is part of the Program for Excellence in Biological and Health Security, which is financed by the German Federal Foreign Office. Various public institutions in Kosovo act as partner organisations. The main focus of the project is on the diagnosis and surveillance of Crimean-Congo haemorrhagic fever in Kosovo. The virus causing the infection is spread by the bite of ticks of the genus Hyalomma. Their geographic distribution, frequency of infestation and phylogeography of isolated virus strains were examined. Of more than 1000 ticks, 3.6% tested positive for the virus. The virus isolates belong to two genetic lines. Outside of the pathogenic line, an isolate has been identified in Kosovo for the first time. This isolate is related to supposedly apathogenic lines in Greece and Turkey.

Barrier Nursing Ausbildung in Appen

Multinationale Zusammenarbeit in Monrovia/Liberia

Courses

„At a glance“

- Daily lectures from 9.00 am to 5.00 pm
- Approximately 300 lessons
- Approximately 30 hours of practical exercises, predominantly microscopic parasitology teaching
- Seminars with a multi-disciplinary team of experts
- German reference library for literature on tropical medicine
- Certified by the German Medical Association to be part of the official training programme for physicians to specialize in tropical medicine
- Accredited by the American Society of Tropical Medicine and Hygiene (ASTMH)
- Education credits points by the General Medical Council Hamburg: 586 (2014) / 366 (2015)

Historical photograph of the course hall

Course for Physicians – 01.04. to 26.06.2014 and 30.03. to 26.06.2015

DIPLOMA COURSE ON TROPICAL MEDICINE

The objective of the Diploma Course is to prepare physicians for professional missions in tropical and subtropical countries, to teach them the skills to diagnose and to treat tropical diseases in travellers and migrants and to enable them to provide pre-travel health advice.

The central topics of the Diploma Course are human diseases that are especially prevalent in tropical and developing countries. Teaching focuses on the pathogenesis, diagnosis, clinical presentation, treatment, epidemiology and prophylaxis of parasitic, bacterial, viral and non-communicable diseases in tropical environments. In addition, the biology, epidemiology and control of pathogens as well as their vectors and reservoirs are addressed. Further topics include the particular features of the various clinical disciplines in tropical environments, aspects of community health in low-income countries, structures of medical developmental cooperation, and health in emergencies.

The curriculum is divided into twelve sections of one week each. Differential diagnosis is the major guideline for the curriculum. Taxonomy is an additional criterion in order to facilitate systematic learning. Entomology is considered in its relation to the etiology and transmission of disease. Malaria, tuberculosis and HIV/Aids, because of their outstanding relevance, are regarded as separate topics.

Scientific coordinator:
Prof. Dr. Christian G. Meyer

Participants of the Diploma Course 2015

Week 1: **Introduction and Basics**
Bacteriology, Virology, Parasitology, Entomology, Immunology

Week 2: **Systemic Infections – Malaria**
including Entomology, Epidemiology, Laboratory Diagnostics

Week 3: **Sytemic Infections – Viral and Bacterial Infections**

Week 4: **Systemic Infections – Protozoal Infections, Systemic Mycoses**

Week 5: **Intestinal Infections**

Week 6: **Mycobacteriology, Hygiene, Worm Diseases, Trypanosomiases**

Week 7: **Worm and Dermatological Diseases**

Week 8: **Maternal and Child Health, Ophthalmology in the Tropics**

Week 9: **HIV/Aids, Opportunistic Infections, Travel Medicine, Occupational Health, Venomous Animals**

Week 10: **Public Health, Neurology, Surgery, Psychiatry, Cardiology, Radiology in the Tropics**

Week 11: **Epidemiology and Disease Control**
Planning, Financing, Organisation and Implementation of Health Programmes;
Medical Development Co-operation; Vaccination Programmes

Week 12: **Differential Diagnoses and Review**

Week 13: **Review and Examinations**

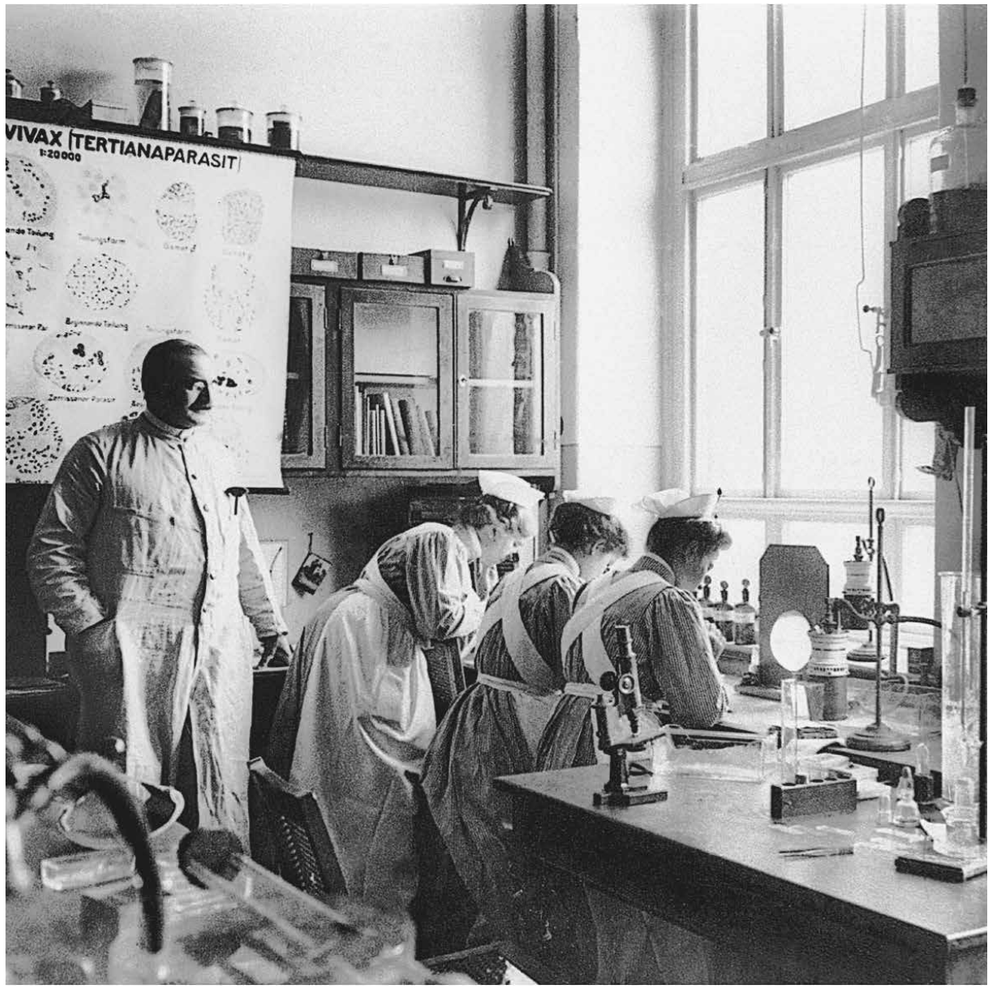
LECTURERS OF THE DIPLOMA COURSE ON TROPICAL MEDICINE

INSTITUTE LECTURERS

PD Dr. Norbert Brattig; PD Dr. Minka Breloer; Prof. Dr. Iris Bruchhaus; PD Dr. Joachim Clos; Dr. Jakob Cramer; Dr. Torsten Feldt; Prof. Dr. Bernhard Fleischer; Dr. Martin Gabriel; Prof. Dr. Rolf Garms; Prof. Dr. Stephan Günther; Prof. Dr. Rolf Horstmann; Dr. Christian Keller; Dr. Ralf Krumkamp; Prof. Dr. Jürgen May; Prof. Dr. Christian G. Meyer; Dr. Bernd Noack; Prof. Dr. Paul Racz; PD Dr. Jonas Schmidt-Chanasit; Prof. Dr. Herbert Schmitz; Dr. Michael Schreiber; Prof. Dr. Egbert Tannich; PD Dr. Dennis Tappe; Dr. Klara Tenner-Racz; Dr. Christian Timmann

EXTERNAL LECTURERS

Prof. Dr. Marylyn Addo University Medical Center Hamburg-Eppendorf, Hamburg; **Dr. John Amuasi** University of Minnesota, USA; **PD Dr. Keikawus Arastéh** Vivantes Auguste-Viktoria-Klinikum, Berlin; **Dr. Mary Asiyo-Vogel** Ophthalmologist, Lübeck; **Dr. Michael Bahrdt** Gynaecologist, Hamburg; **Dr. Matthias Brockstedt** Paediatrician Berlin; **Dr. Christoph Dehnert U**lm University Medical Center; **Dr. M. Hanafi Dolu** Anaesthesiologist, Hamburg; D**r. Karl-Peter Faesecke** Diving Medical Examination Office, Hamburg; **Dr. Thomas Fenner** Labor Dr. Fenner und Kollegen, Hamburg; **Dr. Marcellus Fischer** Bundeswehr Hospital, Hamburg; **Hanna Fleischmann** Medical Mission Institute, Würzburg; **Dr. Antje Fuß** Medical Mission Institute, Würzburg; **Dr. dent. Roland Garve** Danube Private University, Krems; **Bernd Göken** Cap Anamur, Cologne; **Dr. Matthias Grade** Christian Hospital Quakenbrück, Quakenbrück; **Prof. Dr. Wolfgang Graninger** University Hospital, Vienna General Hospital, Vienna; **Dr. Johannes Grüntzig** Ophthalmologist, Düsseldorf; **Dr. Gunar Günther** Research Center Borstel, Borstel; **Prof. Dr. Volker Heussler** Institute of Cell Biology, Bern; **Prof. Dr. Klaus Hoffmann** Centre for Psychiatry, Reichenau; **Dr. Frank Hünger** Dortmund Hospital, Dortmund; **Dr. Elizabeth Joekes** Consultant Radiologist, Liverpool; **Dr. Klaus Käthner** Carl Zeiss Microscopy GmbH, Göttingen; **Prof. Dr. Volker Klauß** Ophthalmologist, Munich; **Prof. Dr. Michael Krawinkel** Institute for Nutrition, University of Gießen; **Dr. Benno Kreuels** University Medical Center Hamburg-Eppendorf, Hamburg; **PD Dr. Andreas Krüger** Bundeswehr Hospital, Hamburg; **Dr. Gunther von Laer** Federal Foreign Office / Medical Service (retired), Berlin; **Prof. Dr. Christoph Lange** Research Center Borstel, Borstel; **Dr. Ute Lippert** Occupational Health Officer, Hamburg; **Prof. Dr. Thomas Löscher** Department of Infectious Diseases & Tropical Medicine at the University of Munich, Munich; **PD Dr. Stefan Lüth** University Medical Center Hamburg-Eppendorf, Hamburg; **Prof. Dr. Dieter Mebs** Institute of Forensic Medicine, Frankfurt/Main; **Dr. Carlos E. Medina de la Garza** CIDCS, Monterrey, Mexico; **PD Dr. Peter Meißner** Department of Paediatrics and Adolescent Medicine, Ulm University Medical Center; **Dr. Andreas Meyer** General Practitioner, Hamburg; **Dr. Henning Mothes** Jena University Hospital, Jena; **Dr. Matthias von Mülmann** Medical Service Lufthansa AG, Lensahn; **Dr. Ellis Owusu-Dabo U**niversity of Kumasi, Ghana; **Prof. Dr. Utz Reichard** National Reference Center for Systemic Mycoses, Göttingen; **Dr. Dieter Reinel** Dermatologist, Hamburg; **Dr. Mathias von Rotenhan** Gynaecologist, Bremen; **Dr. Camilla Rothe** University Medical Center Hamburg-Eppendorf, Hamburg; **Dr. Sabine Rüsch-Gerdes** Research Center Borstel, Borstel; **Dr. Johannes Schäfer** Clinic for Tropical Diseases, Paul-Lechler-Hospital, Tübingen; **Dr. Salvatore Schmidt** Bundeswehr Medical Service, Munich; **Dr. Peter Schmitz** Institute for Hygiene and Public Health, University of Bonn; **Prof. Dr. Erich Schmutzhard** University Hospital for Neurology, Innsbruck; **Prof. Dr. Walter Sigge** Paediatric Surgery, University Medical Center Schleswig-Holstein, Campus Lübeck; **Dr. Michael Stachow** Capio Elbe-Jeetzel-Klinik, Dannenberg; **Prof. Dr. August Stich** Medical Mission Hospital, Würzburg; **Dr. Tankred Stöbe** Médecins sans Frontières, Berlin; **Dr. Günther Tiersch** Meteorologist, ZDF Mainz; **Lars Timm** Regio-Klinikum, Elmshorn; **Dr. med. Klaus J. Volkmer** Centrum für Reisemedizin (CRM), Düsseldorf; **Waltraut Wernhart** Medical Mission Institute, Würzburg; **Dr. Dominic Wichmann** University Medical Center Hamburg-Eppendorf, Hamburg; **Dr. Urs Wiget** Uitikon, Switzerland; **Dr. Heinz-Andreas Willberg** Cardiologist, Potsdam; **Dr. Michael Zölffel** Carl Zeiss MicroImaging, Göttingen



Historical photograph

MEDICINE IN THE TROPICS

The course provides basic knowledge and skills in tropical medicine and explicitly addresses the topics of public health and health care management in the tropics. The courses in the years 2014 and 2015 were both held in February.

TARGET GROUPS:

Medical staff (nurses, technical assistants, midwives, health economists, etc.) preparing for professional assignments in tropical low-income countries.

Participants of the Course for Medical Support Staff 2015

Contents:

- Tropical infectious diseases: malaria, leprosy, tuberculosis, schistosomiasis and other helminth diseases, viral infections
- Arthropods as vectors
- Malnutrition
- Update on global epidemics, basic epidemiology
- General aspects: obstetrics, family planning, paediatrics, venereal diseases, dermatology, HIV/Aids, travel medicine etc.
- Physical examination of patients, laboratory techniques, microscopy
- Socio-cultural comparison of health systems
- Intercultural competence
- Hygiene, drinking water
- Nursing practice in the tropics
- Presentation of organisations for international cooperation
- Information systems, literature and internet search
- Teamwork

Scientific coordinator:
Prof. Dr. Christian G. Meyer

Refresher for Physicians – 18./19.10.2014

LATEST INFORMATION ON TROPICAL MEDICINE

The course provides latest knowledge in tropical medicine. It addresses recent disease outbreaks incl. possible disease control, emerging infections, healthcare management in low-income countries as well as topics of travel and migration medicine.

Scientific coordinator:
Prof. Dr. Christian G. Meyer

Course for Physicians – 27./28.06. and 31.10./01.11.2015

REFRESHER TROPICAL MEDICINE

The course is intended for physicians interested in tropical medicine, in particular former participants of the "Diploma Course on Tropical Medicine" at BNITM. It addresses recent advances in tropical medicine, including new results from basic research and new recommendations based on clinical guidelines and epidemiological studies.

Training of microscopic examinations for parasites was offered one preceding Friday afternoon (30 October).

Scientific coordinator:
Prof. Dr. Gerd Burchard

Course for Physicians – 28./29.11. and 12./13.12.2015

COURSE – "REFUGEE HEALTH"

The curriculum provides a comprehensive approach for providing health services to refugees – against the background of an increasing number of refugees and asylum seekers in Germany. The course is intended for general practitioners, physicians in public health departments and others involved in the care for these patients. Main topics are: health care delivery for refugees in Germany, social aspects of migration, intercultural competence, implications of violence and trauma, geographical distribution of infectious diseases and important differential diagnoses, non-communicable diseases in refugees, children and unaccompanied minors, screening of migrants.

Scientific coordinator:
Prof. Dr. Gerd Burchard

Facts and Figures

STAFF

261, including 107 scientists (2015)

FUNDING

	2014	2015
	mil. EUR	mil. EUR
Public Core Funding from Federal and State Sources	**13.5**	**13.4**
Public Funding for Investments	**1.6**	**1.4**
Third-Party Funding	**9.6**	**9.3**
Forwarded to Co-operation Partners	*3.0*	*1.1*
Retained in BNITM	*6.6*	*8.2*
Additional Revenue	**1.6**	**1.5**

Third-party funding has been received from the following organisations:

(public funding from DFG, federal, state, and EU sources; funding from foundations, private donors, and other research funding sources, as well as income from services and licencing fees)

Alexander von Humboldt Foundation, Becton Dickinson GmbH, BioLegend GmbH, Bio-X-Charge, Medical University of Vienna Department of Virology, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Else Kröner Fresenius Foundation, Euroimmun AG, European Union (EU), European and Developing Countries Clinical Trials Partnership (EDCTP), European Federation of Immunological Societies (EFIS), Federal Ministry of Health (BMG) Federal Ministry of Food and Agriculture (BMEL), Foundation for the National Institutes of Health, GeoSentinel-Netzwerk, Gilead Sciences GmbH, German Academic Exchange Service (DAAD), German National Academy of Sciences Leopoldina, German Federal Environment Agency (UBA), German Federal Foreign Office, German Federal Ministry of Education and Research (BMBF) / DLR, German Leprosy and Tuberculosis Relief Association (DAHW), German Research Foundation (DFG), Hamburg State Office of Science and Research (BWF), Helmholtz Centre for Infection Research (HZI/DZIF) GmbH, INSTAND e.V., International Union of Immunological Societies (IUIS) Education Committee, International Vaccine Institute, IUIS Education Committee, Joachim Herz Stiftung, Jürgen Manchot Stiftung, Kirmser-Stiftung, Leibniz Association, Robert Koch Institute (RKI), Stiftung Diagnostik Hilft, The Rockefeller University, Vereinigung der Freunde des Tropeninstituts Hamburg e. V., Volkswagen Foundation, Werner Otto Foundation, and Wiley-Blackwell Publishers.

Performance Indicators	2014	2015
Publications	**112**	**148**
Peer-reviewed	104	134
Average Impact Factor	*5.25*	*6.36*
Other	8	14
Qualifications		
Diplomas / Bachelor's and Master's Theses	8	13
Dissertations	9	17
Habilitations	0	1
Teaching and Training[1]		
University Teaching (SWS*)	124	158
Continuing Education (Days)	98	126
Technology Transfer (Ongoing)		
Patents and Licenses	18	10
Inventions	3	2
Laboratory Diagnostics[2]		
Number of Cases	26.920	26.477
Number of Tests	74.722	71.972
Library[3]		
Inventory	46.715	46.916
Journals	106	96
Inter-Library Loans	2.347	2.294
KCCR[4]		
Projects at KCCR	21	19
External Projects	9	9

*Lessons per semester week

1 **Teaching and Training**
Knowledge transfer comprises university teaching.

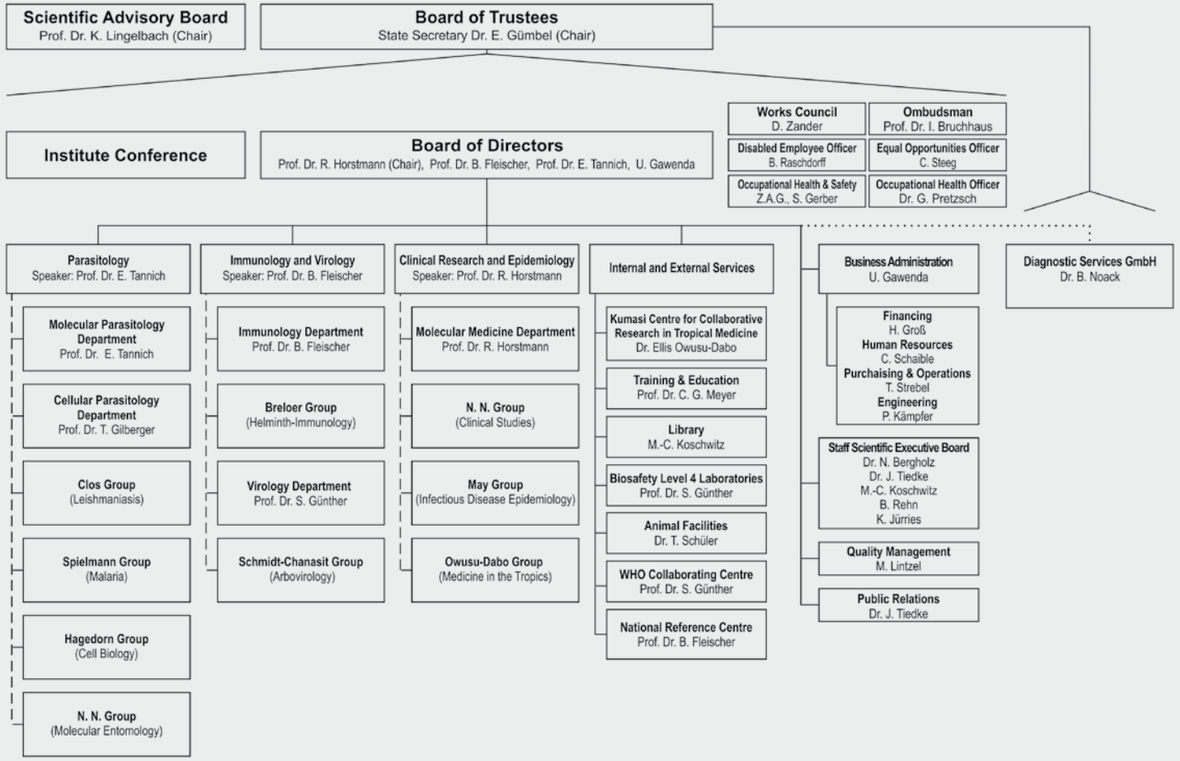
2 **Laboratory Diagnostics of the Diagnostics Services GmbH**
Number of Cases:
Number of recorded submissions of samples.
Number of Tests:
Number of performed tests.

3 **Reference Library for Tropical Medicine**
The library participates in a nationwide loan process. Inventory and usage are recorded.

4 **KCCR**
Kumasi Centre for Collaborative Research in Tropical Medicine: Number of projects administered and number of external projects not involving BNITM, respectively.

Staff

BERNHARD NOCHT INSTITUTE FOR TROPICAL MEDICINE (BNITM)



2015

A) SCIENTIFIC STAFF

(*= end of employment during the reporting period;
in brackets = partial or full third-party funding)

Molecular Parasitology Department

Molecular Parasitology Department
Prof. Dr. Egbert Tannich; Prof. Dr. Iris Bruchhaus; Dr. Anna Bachmann*; Dr. Hannah Bernin (DZIF); Dr. Thomas Kruppa*; PD Dr. Hannelore Lotter; Dr. Jenny Matthiesen; Dr. Christina Czajka* (DZIF); Dr. Tatiana Sulesco* (EU, COST)

Doctoral and Graduate Students
Toshiko Aiba* (Keio University); Elena Baron*; Hannah Bernin (Werner-Otto-Stiftung); Jannika Brandt* (NIH); Siew Ling Choy (LCI); Michael Dörpinghaus*; Ellen Drews*; Helena Fehling (DFG); Steve Giesler; Sven-Hendri Hagen (LCI); Karolin Hildebrandt*; Mayke Leggewie (SAW); Corinna Lender*; Pedro Lubiana (DFG); Renke Lühken* (UBA); Nahla Metwally (DAAD); Martin Meyer (Jürgen-Manchot-Stiftung); Melina Mühlenpfordt; Jill Noll (DFG); Eugenia Reit*; Lisa Roth (Helmholtz); Martin Rudolf* (DFG, AA); Marius Schmitt; Judith Scholz (UHH); Sarah Steinfurt*; Ann-Kathrin Tilly* (LCI)

Technical Staff
Claudia Marggraff (DFG); Susann Ofori; Heidrun von Thien

Student Trainees
Marie Krebs*; Jesco Schröder*; Gesa Schumann*

Visiting Scientists
Toshiko Aiba* (Keio University), University of Tokyo, Japan; Nahla Metwally (DAAD), Suez Canal University, Ismaelia, Egypt; Dr. Tatiana Sulesco* (EU, COST), Institute of Zoology, Acadamy of Sciences, Chissinau, Moldova

Associated Scientists in the Molecular Parasitology Department

Scientific Staff
Dr. Erin Boyle* (Re-entry); Prof. Dr. Rolf D. Garms; Dr. Thomas Kruppa; Dr. Susanne Witt (Re-entry)

Technical Staff
Silke van Hoorn

Cellular Parasitology Department

Scientific Staff
Prof. Dr. Tim Gilberger; Dr. S. Erkelenz; Dr. Maja Kono*; Dr. J. Rambow

Doctoral and Graduate Students
Arne Alder; Michael Geiger; Dorothee Heincke (UHH)*; Viola Ladenburger*; Dipto Sinha (DAAD)*; Johanna Wetzel (McMaster); Louisa Wilcke (UHH); Benthe Winckelmann*; Tatianna Wong (McMaster)*

Technical Staff
Monja Paasche

Clos Group (Leishmaniasis)

Scientific Staff
PD Dr. Joachim Clos; Eugenia Bifeld (EU); Ifhem Chelbi*; Dr. Antje Hombach-Barrigah* (DFG)

Doctoral and Graduate Students
Katharina Bartsch (DFG); Janika Bartsch* (DFG); Julia Eick (EU); Paloma Tejera Nevado (EU); Victoria Sattler*; Henner Zirpel

Technical Staff
Marlis Badusche; Andrea Macdonald; Dorothea Zander

Student Trainees
Michaela Bockelmann*; Linus Frahm*; Laura Jade Lee* (DFG); Kristina Rumler*

Visiting Scientists
Lucie Colineau*, MSc, University of British Columbia, Vancouver, Canada; Frank Dumetz*, MSc, Flemish Organisation for Science, Institute of Tropical Medicine, Antwerp, Belgium; Prof. Elyes Zhioua*, (DFG), Pasteur Institute, Tunis, Tunisia

Hagedorn Group (Cell Biology)

Scientific Staff
Dr. Monica Hagedorn; Dr. Rachel Pilla* (CsF); Dr. Monica Prado* (DFG)

Doctoral and Graduate Students
Yannick Brenz (DFG); Lilli Gerstenmaier (DFG)

Technical Staff
Ulrike Fröhlke

Student Trainees
Hannah Behrens*; Anja Djokic*; Denise Ohnzeit*; Geno Villafano*

Spielmann Group (Malaria)

Scientific Staff
Dr. Tobias Spielmann

Doctoral and Graduate Students
Johanna Becker; Alexandra Blancke-Soares (LCI GradSchool); Jakob Birnbaum; Sven Flemming* (GRK / DFG); Florian Kruse* (DFG / SP1209/1-2); Leonie Hecht (Altona Diagnostics); Ernst Jonscher (GRK / DFG); Melissa Khosh (DFG / SP1209/3-1); Paolo Mesén-Ramírez (DAAD); Nick Reichard*; Ferdinand Reinsch* (GRK / DFG); Jana Schulze* (SP1209/2-1 / Zoological Institute, Hamburg); Sandra Specht*; Ann-Katrin Ullrich

Technical Staff
Bärbel Bergmann

Student Trainees
Nick Reichard*; Maria Söderberg*

Becker Group
(Molecular Entomology, *until May 2014))

Scientific Staff
Dr. Stefanie Becker (SAW/Leibniz)

Doctoral and Graduate Students
Stephanie Jansen (SAW/Leibniz); Martin Georg Rudolf (DFG); Katrin Huber (UBA); Mayke Leggewie (SAW/Leibniz)

Technical Staff
Marlies Badusche

Visiting Scientists
Manuel Schmidt, Ruhr University Bochum

Immunology Department

Scientific Staff
Prof. Dr. Bernhard Fleischer; Dr. Matthias Hauptmann (DZIF); PD Dr. Thomas Jacobs (partially EFRE); Dr. Christian Keller (partially EFRE); Dr. Kathrin Kuhlmann (Volkswagen Foundation); Dr. Maria Mackroth* (DZIF); Dr. Anke Osterloh; Dr. Jessica Rauch (partially EFRE); Dr. Melanie Uhde* (Volkswagen Foundation)

Doctoral and Graduate Students
Annemieke Abel (DFG); Jessica Barton*; Fabian Bergemann*; Moritz Berker* (DFG, Integrated Graduate School "Inflammation and Regeneration" of the SFB841); Jannike Blank (LCI)*; Sarah Elbaz*; Julia Forisch* (DZIF); Catherine Fuentes Alvarado*; Rosela Isela Grote-Galvéz*; Stefan Hoenow; Melissa Kosch*; Jannike Krause*; Nina Lapke* (DFG, SFB 841); Stefanie Lilla*; Kristin Moderzynski (Volkswagen Foundation); Franziska Muscate (DFG); Stefanie Papp; Michael Petermann*; Yanina Policarpo Arana (DAAD); Jakob Schwemmler*; Julie Sellau (DFG); Mustafa Shiri*; Yvonne Siebken*; Irina Strauch*; Federico Tenedini*; Wiebke Thees* (UKE); David Wozniak*; Malte Wunderlich* (Volkswagen Foundation)

Technical Staff
Birgit Hüsing; Svenja Kuehl; Ulricke Richardt; Claudia Sander-Jülch*; Christiane Steeg (partially EFRE)

Student Trainees
Shoaib Azizi*; Tasja Lempertz*; Verena Pianka*; Laura Roy*

Breloer Group (Helminth Immunology)

Scientific Staff
PD Dr. Minka Breloer; Dr. Wiebke Hartmann (DFG); Dr. Nils Kruse (DFG)

Doctoral and Graduate Students
Irma Haben* (DFG); Lara Linnemann*; Lisa Norkus*; Martina Reitz (DFG); Nikolas Rüdiger (LCI-Graduate School); Anna Stubbe (LCI-Graduate School)

Technical Staff
Marie-Luise Brunn

Virology Department

Scientific Staff
Prof. Dr. Stephan Günther; Dr. Sophia Reindl; Dr. Michael Schreiber; Prof. Dr. emer. Herbert Schmitz; Dr. Petra Emmerich-Paloh; Dr. Elisabeth Fichet-Calvet (DFG); Dr. Martin Gabriel (EU); Dr. Meike Pahlmann; Dr. Patrick Heinemann*; Dr. Romy Kerber; Dr. Maria Rosenthal (DFG); Dr. Lisa Oestereich (DFG/DZIF); Dr. Toni Rieger; Dr. Benedikt Funke* (DFG); Dr. Hanna Jérôme* (LEXI/DFG); Dr. Martin Rudolf (EU); Dr. Sophie Duraffour (EU); Ronald von Possel, née Müller (Federal Foreign Office*, EUROIMMUN); Dr. Deborah Ehichioya (Humboldt Fellow)

Doctoral and Graduate Students
Heidi Auerswald; Leonard Klepsch; Denize Lehnard*; Anja Lüdtke (LCI); Kati Franzke*; Tobias Holm (DFG); Franziska Meusel; Paula Ruibal; Birco Schwalbe; Dominik Vogel (DFG); David Wozniak (DFG)

Technical Staff
Beate Becker-Ziaja; Sabrina Bockholt (DZIF); Elisa Pallasch (DZIF); Stephanie Wurr; Nadja Gogrefe (EU); Carola Busch; Marzenna Domagalski (partially EFRE); Birgit Hüsing; Kerstin Krausz; Corinna Thomé-Bolduan (Federal Foreign Office); Neele Neddersen (BMG); Alexander Schlaphof; Mathias Hartmann (Translationsfond)

Student Trainees
Bianka Gorzel*(EU); Silke Olschewski*, University of Lübeck, Germany; Beatrice Strohbücker*, Wageningen University, Wageningen, Netherlands; Pawel Kassatov*, University of Lübeck, Germany; Sina Tanke, University of Hamburg, Germany; Inga Ziemer*; Isaac Schadi*

Visiting Scientists
Deborah Ehichioya (DFG), Redeemer's University, Ogun State, Nigeria; Mimi Moyen*, University Marseille, France; Dr. Cesar Munoz-Fontela, HPI, Hamburg, Germany, Dr. Anita McElroy, CDC, Atlanta, USA; Dr. Jazmina Gonzales-Cruz, HPI, Hamburg, Deutschland; Yaiza Fernandez-Garcia; Dr. Misa Korva, University of Ljubljana, Slovenia; Angelika Lander, RKI, Berlin, Germany, Dr. Claudia Kohl, RKI, Berlin; Ayo Olayemi (NTD fellow), Natural History Museum, Obafemi Awolowo University, Ile Ife, Nigeria; Prof. Leaungwutiwong Pornsawan*, Mahidol University, Bangkok, Thailand; Prof. Kurtesh Sherifi, Vetrinary Medicine, Pristhina, Kosovo*

Visiting Scientists (Ebola virus outbreak response; EMLab)
Romy Weller*, Twincore, Hannover, Germany; Anja Thorenz*, Hannover Medical School, Hannover, Germany; Maria del Mar Cabeza Cabrerizo ; Dr. Amadou Bah, Swiss Tropical and Public Health Institute, Switzerland; Dr. Rahel Kasonta*, UK; Dr. Katrin Maria Singethan*, Technical University Munich, Munich, Germany; Lisa Louise Carter*, The Foundation for New and Innovative Diagnostics, Geneva, Switzerland; Dr. Katja Nitzsche*; Jonathan Hans Josef Baum*; Jan Baumann*, Free University of Berlin, Berlin, Germany; Dr. Christopher Daniel Johannes Intemann*; Dr. Juliane Anna Dörrbecker*, Twincore, Hannover, Germany; Dr. Jochen Herbert Trautner*, Thünen Institute; Dr. Kristina Luise Schierhorn, Humboldt University Berlin, Berlin, Germany*; Rahel Lemma Yemanaberhan*, Max Planck Institute for Marine Microbiology, Bremen, Germany; Rupert Stefan Bliem, Austrian Armed Forces, Office of Armaments and Defence Technology, Vienna, Austria*

Schmidt-Chanasit Group (Arbovirology)

Scientific Staff
PD Dr. Jonas Schmidt-Chanasit (partially EFRE), Dr. Daniel Cadar, Dr. Stephanie Jansen (BMBF); Dr. Hanna Jöst (DZIF, BMBF), Dr. Renke Lühken (BML)

Doctoral and Graduate Students
Jessica Börstler; Johannes Friedrich (BMBF); Linda Jaworski (BML); Nariman Shahhosseini (Leibniz Graduate School); Alexandru Tomazatos

Technical Staff
Alexandra Bialonski; Mathis Petersen (Federal Foreign Office); Claudia Poggensee

Visiting Scientists
Prof. Renata de Mendonca Campos*, Federal University of Rio de Janeiro , Brazil; Dr. Mutien Garigliany* (Federal Foreign Office), University of Liège, Faculty of Veterinary Medicine, Department of Pathology, Liege, Belgium; Dr. Anges Yadouleton* (DFG), Centre de Recherche Entomologique de Cotonou, Benin

Molecular Medicine Department

Scientific Staff
Prof. Dr. Rolf Horstmann; Prof. Dr. Christian Meyer*; Dr. Kathrin Schuldt; Dr. Thorsten Thye; Dr. Christian Timmann (partially EFRE)

Doctoral and Graduate Students
Christina Strauß (DFG); Susanne Müller-Using*

Technical Staff
Christa Ehmen; Birgit Förster; Britta Liedigk; Birgit Muntau*; Gerd Ruge; Jürgen Sievertsen

Visiting Scientists
Chunyan Hu*, State Key Laboratory of Pathogen and Biosecurity, Beijing Institute of Microbiology and Epidemiology, Beijing, China

Associated Scientists in the Molecular Medicine Department

Scientific Staff
PD Dr. Klaus Erttmann; PD Dr. Norbert W. Brattig*

Doctoral and Graduate Students
Emmanuela Anandarajah; Dana Ditgen; Ngwasiri Nancy Ngwafu* (DFG), Inga Toborg*; Henning Wiegmann*

Technical Staff
Silke van Hoorn

Student Trainees
Lena Feige*; Clemens Rumkowski*

Visiting Scientists
Dr. Carlos Medina-De la Garza*, Center for Research & Development in Health Sciences, Autonomous University of Nuevo León, Monterrey, Mexico; Prof. Dr. Abbas Jolodar*, Shahid Chamram University, Ahvaz, Iran; Dr. Dr. E. Sentongo* (DAAD), Makarere University Kampala, Uganda; Dr. Abuelhassan Younis*, University of Aswan, Arab Republic of Egypt; Lena Feige* BSc, University of Münster

Diagnostics Development Laboratory

Scientific Staff
Dr. Angela Mika (EFRE); Dr. Christina Deschermeier (EFRE); Sandra Arriens (EFRE); Dr. Jörg Blessmann (EFRE); Dr. Matthias Hauptmann* (EFRE); Dr. Simone Kann* (EFRE); Dr. Yang Liu (EFRE); Dr. Stephan Lorenzen (EFRE); Dr. Dennis Tappe (EFRE)

Finance
Christiane Melzer (EFRE)

Doctoral and Graduate Students
Sarah Steinfurt (EFRE); Anne Rackow (EFRE)

Technical Staff
Petra Allartz (EFRE); Nassim Behjat-Mohammadi (EFRE); Petra Eggert (EFRE); Frank Geisinger (EFRE); Yvonne Gross (EFRE); Jessica Hansen (EFRE); Christina Herrde (EFRE), Anna Jaeger (EFRE); Sabine Kleuckling, née Köhler (EFRE); Wibke Loag (EFRE); Birgit Muntau (EFRE); Jasmin Oehlmann (EFRE)*; Anna-Maria Werner (EFRE)

Student Trainees
Cilia Jaeger*; Patrick Simmons*

N.N. (Clincal Studies)

Scientific Staff
Dr. Jakob Cramer; Dr. Kirsten A. Eberhardt; Dr. Stefanie Schoppen

Doctoral and Graduate Students
Johanna Dehnerdt*

Technical Staff
Haruna Abdul-Malik (GIZ)

Student Trainees
Lena Schleiter* (Gilead Sciences); Sara Steinfurth* (DFG)

Visiting Scientists
Dr. N'Goran Mathurin Koffi* (DFG), Jean Lorougnon Guédé University, Daloa, Ivory Coast; Kouakou Laurent Yao* (DFG), Jean Lorougnon Guédé University, Daloa, Ivory Coast

May Group (Infectious Disease Epidemiology)

Scientific Staff
Prof. Dr. Jürgen May (partially EFRE); Dr. Oumou Maiga Ascofaré (BMBF/DZIF, KCCR, Federal Foreign Office); Dr. Denise Dekker (BMBF/DZIF); Dr. Daniel Eibach; Dr. Nicole Sunaina Gilberger; Andreas Hahn (BMBF/DZIF)*; Dr. Benedikt Hogan (BMBF/DZIF/ Federal Foreign Office); Dr. Anne Caroline Krefis (BMBF)*; Dr. Benno Kreuels (UKE); Ralf Krumkamp (BMBF/DZIF); Dr. Eva Mertens (EBOKON); Nimako Sarpong (BMBF/DZIF, KCCR); PD Dr. Norbert Schwarz (Federal Foreign Office)

Doctoral and Graduate Students
Hassan Al-Emran (BMBF/DZIF); Luise Ammer; Lutz Ehlkes (BMBF/DZIF/ Federal Foreign Office)*; Elina Fechtner; Clemens Frank; Konstantin Franke; Wiebke Herr; Vinzent Levermann; Kolja Nolte; Bismark Sarfo; Peter Sothmann*; Stephanie Steierberg

Technical Staff
Clinton Azuure (BMBF/DZIF, KCCR); Emmanuel Baah (BMBF/DZIF, KCCR); Kennedy Gyau Boahen (BMBF/DZIF, KCCR); Geoffrey Foli (BMBF/DZIF, KCCR); Henry Hanson (BMBF/DZIF, KCCR); Josephine Nana Hill (Federal Foreign Office, BMBF)*; Maike Lamshöft (BMBF/DZIF); Wibke Loag*; Berchie Agyeman Nti (BMBF/DZIF, KCCR); Grace Owusu (BMBF/DZIF, KCCR); Lisa Reigl (BMBF/DZIF); Thalea Tamminga (BMBF/DZIF)*; Doris Winter (DZIF)

Student Trainees
Sara Steinfurth*

Visiting Scientists
Matilda Ayim-Akonor (DAAD), Ghana Animal Research Institute, Ghana, Africa

Owusu-Dabo Group (Tropical Medicine)

Scientific Staff
Dr. Ellis Owusu-Dabo; Dr. Michael Nagel; Dr. Sampson Pandam Salifu; Dr. Augustina A. Sylverken (KCCR); Dr. Denis Yar

Doctoral and Graduate Students
Alexander Kwarteng; Jubin Ossei Mensah; Sandra Baffour Awuah; Daniel Antwi Berko; Dorcas Ohui Owusu; Nanaa Yaa Awuah Boateng; Aliyu Mohamed; Samuel Nkansah Darko; Nicholas Adoffoh; Philip El Duah; Vitus Burimuah; Kennedy Gyau Boahen; Esimebia Amegashie; Aloisius Loglo; Mabel Sarpong Duah; Clinton Azure; Vera Opoku; Wellington Owusu; Yusif Mubarak; Bernadette Agbavor; Jones Lampety

Technical Staff
Godfred Acheampong; Richard Larbi

Körber Laboratory for HIC Research and Pathology

Scientific Staff
Prof. Dr. Paul Racz; Dr. Klara Tenner-Racz (NIH)

Doctoral and Graduate Students
Christine Stempell

Technical Staff
Petra Allartz*; Petra Eggert*; Gudrun Großschupff*; Birgit Raschdorff*

Student Trainees
Alexandra Haeupler*

Visiting Scientists
Prof. Dr. Mika Popovic*, Institute of Human Virology, University of Maryland, Baltimore, USA

Electron Microscopy

Scientific Staff
Hendrik Hermann*; Dr. Katharina Höhn

Central Diagnostic Unit / National Reference Centre

Scientific Staff
Prof. Dr. Bernhard Fleischer; Prof. Dr. Stephan Günther; Prof. Dr. Egbert Tannich; PD Dr. Jonas Schmidt-Chanasit (partially EFRE); Dr. Petra Emmerich; Dr. Bernd Noack

Technical Staff
Inga Bandholz*; Insa Bonow; Marzenna Domagalski (RKI); Nicolas Fazenda Morais (Bundeswehr); Cumali Kurt*; Britta Liedigk; René Löschke (Bundeswehr); Sonja Maersmann*;Ute Mehlhoop (partially EFRE); Maria Suzanna Pinto de Jesus*; Robert Otte (Bundeswehr); Angela Parczany-Hartmann; Monika Picker; Simone Priesnitz (Bundeswehr); Britta Rieckmann*; Alexander Schlapphof*; Anja Schörle; Babara Tietze (Bundeswehr); Heidrun von Thien (partially EFRE); Christine Wegner; Iris Zielke

Visiting Scientists
Amera Moges*, University of Addis Abeba, Egypt

Clinical Laboratory

Scientific Staff
Prof. Dr. Egbert Tannich

Technical Staff
Melanie Eichler*; Birgit Raschdorff; Katja Reither*; Doris von Schassen; Christine Wegner; Iris Zielke

Student Trainees
David Baas*; Meike Böttcher*; Janina Breuer*; Nele Marie Hamborg*; Johannes Hell*; Manmeet Kaur*; Christian Knaak*; Hannes Kiwitt*; Theresa Lange*; Nadine Mosow*; Maximilian Niehues*; Jan Nollenberg*; Matthias Riedel*; Stefanie Winkler*

Visiting Scientists
Amera Moges Gebeyehu*, German Primate Centre (DPZ), Department of Zoological Sciences, College of Natural Sciences, Addis Abeba University, Ethopia

Animal Facilities

Dr. Thomas Schüler (Head)

Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR), Ghana

Scientific Staff
Dr. Ellis Owusu-Dabo; Dr. Michael Nagel; Dr. Sampson Pandam Salifu; Dr. Augustina A. Sylverken (KCCR); Dr. Denis Yar

Doctoral and Graduate Students
Nicholas Adoffoh; Bernadette Agbavor; Esimebia Amegashie; Daniel Antwi Berko; Kennedy Gyau Boahen; Nana Yaa Awua-Boateng; Clinton Azuure; Sandra Baffour Awuah; Vitus Burimuah; Samuel Nkansah Darko; Aloysius Dzigbordi Loglo; Philip El Duah; Michael Frimpong*; Henry Hanson; Alexander Kwarteng; Jones Lampety; Aliyu Mohamed; Yusif Mubarik; Vera Opoku; Yaw Oppong Frimpong; Jubin Osei Mensah; Dorcas Ohui Owusu; Wellington Owusu; Mabel Sarpong Duah

Technical Staff
Godfred Acheampong; Richard Larbi

B) SUPPORT STAFFL

(*= end of employment during the reporting period;
partial or full third-party funding and additional information)

Administration

Business Management
Udo Gawenda (partially EFRE); Business Managing Director

Finance
Herbert Groß, Head (partially EFRE); Susanne Crohn; Simone Gülk; Dörte Kröhnert; Ruth Petersen; Regina Senet; Anja Strebel; Maik Wortmann

Personnel
Heinrich Peters* (Head until 31.03.2016); Carsten Schaible (Head from 01.04.2016); Katja Bünger (partially EFRE); Melanie Fuchs (trainee); Anja Göttsche (partially EFRE); Ulrich Kretschmer; Jeannette Meurer

Purchasing and Operation
Thomas Strebel, Head (partially EFRE); Werner Bormann; David Campbell; Stephan Gadow; Riza Güven; Käthe Haack*; Alexander Henkel; Katrin Himstedt; Rainer van Hoorn; Irmela van Kempen; Önder Kücük; Stefanie Meftah; Heidi Ruge*; Susanne Scherlitz; Karin Schröder; Yasin Sugök*; Sylvie Szagarus; Jens-Peter Voß; Christine Zwickert*

Technical Service
Michael Jacobs* (Head until 28.02.2015); Paul-Gerhardt Kämpfer (Head from 01.03.2015); Torben Adam; Claus Ahrens; Peter Beutler*; Rainer Fromm; Andreas Lange; René Loose; Joachim Zietzschmann

Cleaning
Grace Asare-Bediako; Sandy Chaimanatzis-Mohr; Maria Collado*; Bianka Dehus; Serpil Demir; Monika Dreessen; Fatma Gül; Cevahir Güven; Petra Hartmann; Naima Helbig (partially EFRE); Güler Kanak; Melanie Lux*; Birgit Mohr-Flügge; Ayse Özcan; Claudia Scharloh; Annette Schwarzbach; Corinna Stallbaum; Kudret Sügök; Meral Tezcan; Serpil Tosun; Gülbahar Ulucan; Türkan Ulucan; Kadriye Yesilkaya; Sylvia Zanner

Scientific Services and Secretarial Staff

Library
Martina-Christine Koschwitz; Irene Michael

Photography
Klaus Jürries

Scientific Services, Public Relations
Dr. Andreas Gundelwein, Assistance to the Board* (until 28.02.2014);
Dr. Heide Niesalla, Assistance to the Board*(until 31.12.2014);
Dr. Natalie Bergholz, Assistance to the Board (from 16.04.2015);
Dr. Eleonora Schönherr and Dr. Jessica Tiedke, Science Representative / Public Relations; Martina-Christine Koschwitz

Occupational Safety
Sven Gerber, external expert (Centre for Occupational Safety, Health and Environmental Protection)

Quality Management
Maren Lintzel (partially EFRE)

Secretarial Staff
Dr. Christiane Fluche*, Board, Section Clinical Research and Epidemiology
Daniela Krüger, Board, Section Clinical Research and Epidemiology (until 30.06.2015)
Daniela Krüger, Section Immunology and Virology (from 01.07.2015)
Elfriede Musil*, Courses
Britta Rehn, Board, Section Clinical Research and Epidemiology
Ute Scherner*, Clinical Research
Elke Werner, Section Parasitology (until 30.09.2015), German Society of Tropical Medicine and International Health (DFG)
Elke Werner, Courses (from 01.10.2015), German Society of Tropical Medicine and International Health
Elke Wrage*, Section Immunology and Virology, Association of Friends of the Tropical Institute Hamburg e.V. (VdF)

Staff Committee

Works Council until 31.05.2015
Werner Bormann, Chair; Meral Araz; Beate Becker-Ziaja; Önder Kücük; Maren Lintzel; Dr. Toni Rieger; Dr. Norbert Schwarz

Works Council from 01.06.2015
Dorothea Zander-Dinse, Chair; Beate Becker-Ziaja; Andreas Lange; Mathis Petersen; Constantin Pretnar; Dr. Maria Rosenthal; Dr. Norbert Schwarz

C) OTHER PERSONNEL, KCCR, GHANA

(*= end of employment during the reporting period)

Management
Dr. Ellis Owusu-Dabo (Scientific Director); Mrs. Ingrid Sobel (Head of Administration)

Administration
Henrietta Addai (Principal Admin. Secretary); Jeffrey Agyeman (Systems Operator); Francis Dorman (Senior Accounting Assistant); Sebastian Kankam (Senior Accountant); Foster Boateng (Logistician); Nicholas Adoffoh (Data Manager)

Transport
Senyo Dompey (car mechanic and driver); Robert Acheampong (driver); Paul Marfo Bekyir (senior driver); Philip Frimpong (senior driver); Joseph Teye (car mechanic and driver); Seth Wiredu (car electrician and driver)

Security
Dominic Adongo (Head); Andrews Baka (security); Francis Ayerakwa (security); Yaw Dankwa (security); Fidalis Atingatulikiy (security); Simon Ayomah (security)

Field / Cleaning
Helina F. K. Amaning (caretaker/Head); Immaculate Kudimaya (cleaner); Comfort Yamson (cleaner); Rita Gyekye (cleaner); Mariam Issufu (cleaner); Eric Baba Amotichaab (gardener); Christopher Tan (gardener)

Appendix

PUBLICATIONS 2014 / 2015

Peer-reviewed arcicles

(BNITM staff members in bold)

Afum-Adjei Awuah, B. Ueberberg, E. **Owusu-Dabo**, M. Frempong, and M. Jacobsen, 'Dynamics of T-Cell Ifn-Gamma and Mir-29a Expression During Active Pulmonary Tuberculosis', *Int Immunol,* 26 (2014), 579-82.

S. T. Agnandji, A. Huttner, M. E. Zinser, P. Njuguna, C. Dahlke, J. F. Fernandes, S. Yerly, J. A. Dayer, V. Kraehling, R. Kasonta, A. A. Adegnika, M. Altfeld, F. Auderset, E. B. Bache, N. Biedenkopf, S. Borregaard, J. S. Brosnahan, R. Burrow, C. Combescure, J. Desmeules, M. Eickmann, S. K. Fehling, A. Finckh, A. R. Goncalves, M. P. Grobusch, J. Hooper, A. Jambrecina, A. L. Kabwende, G. Kaya, D. Kimani, B. Lell, B. Lemaitre, A. W. Lohse, M. Massinga-Loembe, A. Matthey, B. Mordmuller, A. Nolting, C. Ogwang, M. Ramharter, J. **Schmidt-Chanasit**, S. Schmiedel, P. Silvera, F. R. Stahl, H. M. Staines, T. Strecker, H. C. Stubbe, B. Tsofa, S. Zaki, P. Fast, V. Moorthy, L. Kaiser, S. Krishna, S. Becker, M. P. Kieny, P. Bejon, P. G. Kremsner, M. M. Addo, and C. A. Siegrist, 'Phase 1 Trials of Rvsv Ebola Vaccine in Africa and Europe - Preliminary Report', *N Engl J Med (2015).*

C. Agyemang, E. Beune, K. Meeks, E. **Owusu-Dabo**, P. Agyei-Baffour, Ad Aikins, F. Dodoo, L. Smeeth, J. Addo, F. P. Mockenhaupt, S. K. Amoah, M. B. Schulze, I. Danquah, J. Spranger, M. Nicolaou, K. Klipstein-Grobusch, T. Burr, P. Henneman, M. M. Mannens, J. P. van Straalen, S. Bahendeka, A. H. Zwinderman, A. E. Kunst, and K. Stronks, 'Rationale and Cross-Sectional Study Design of the Research on Obesity and Type 2 Diabetes among African Migrants: The Rodam Study', *BMJ Open, 4 (2014),* e004877.

M. Alberer, G. **Burchard**, T. Jelinek, E. Reisinger, J. Beran, L. C. Hlavata, E. Forleo-Neto, A. F. Dagnew, and A. K. Arora, 'Safety and Immunogenicity of Typhoid Fever and Yellow Fever Vaccines When Administered Concomitantly with Quadrivalent Meningococcal Acwy Glycoconjugate Vaccine in Healthy Adults', *J Travel Med, 22 (2015),* 48-56.

M. Alberer, G. **Burchard**, T. Jelinek, E. C. Reisinger, S. Meyer, E. Forleo-Neto, A. F. Dagnew, and A. K. Arora, 'Immunogenicity and Safety of Concomitant Administration of a Combined Hepatitis A/B Vaccine and a Quadrivalent Meningococcal Conjugate Vaccine in Healthy Adults', *J Travel Med,* 22 (2015), 105-14.

F. Amaro, L. Ze-Ze, M. J. Alves, J. **Borstler**, J. **Clos**, S. **Lorenzen**, S. C. Becker, J. **Schmidt-Chanasit**, and D. **Cadar**, 'Co-Circulation of a Novel Phlebovirus and Massilia Virus in Sandflies, Portugal', *Virol J,* 12 (2015), 174.

K. G. Andersen, B. J. Shapiro, C. B. Matranga, R. Sealfon, A. E. Lin, L. M. Moses, O. A. Folarin, A. Goba, I. Odia, P. E. Ehiane, M. Momoh, E. M. England, S. Winnicki, L. M. Branco, S. K. Gire, E. Phelan, R. Tariyal, R. Tewhey, O. Omoniwa, M. Fullah, R. Fonnie, M. Fonnie, L. Kanneh, S. Jalloh, M. Gbakie, S. Saffa, K. Karbo, A. D. Gladden, J. Qu, M. Stremlau, M. Nekoui, H. K. Finucane, S. Tabrizi, J. J. Vitti, B. Birren, M. Fitzgerald, C. McCowan, A. Ireland, A. M. Berlin, J. Bochicchio, B. Tazon-Vega, N. J. Lennon, E. M. Ryan, Z. Bjornson, D. A. Milner, Jr., A. K. Lukens, N. Broodie, M. Rowland, M. Heinrich, M. Akdag, J. S. Schieffelin, D. Levy, H. Akpan, D. G. Bausch, K. Rubins, J. B. McCormick, E. S. Lander, S. **Gunther**, L. Hensley, S. Okogbenin, S. F. Schaffner, P. O. Okokhere, S. H. Khan, D. S. Grant, G. O. Akpede, D. A. Asogun, A. Gnirke, J. Z. Levin, C. T. Happi, R. F. Garry, and P. C. Sabeti, 'Clinical Sequencing Uncovers Origins and Evolution of Lassa Virus', *Cell,* 162 (2015), 738-50.

A. Annan, M. Owusu, K. S. Marfo, R. Larbi, F. N. Sarpong, Y. Adu-Sarkodie, J. Amankwa, S. Fiafemetsi, C. Drosten, E. **Owusu-Dabo**, and I. Eckerle, '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,* 20 (2015), 807-12.

A. Annan, T. F. **Kruppa**, O. Adjei, and R. **Garms**, 'Palp Ratio as a Field Identification Tool for Two Members of the Anopheles Gambiae Complex in Ghana (A. Melas and A. Gambiae)', *Parasit Vectors,* 8 (2015), 295.

J. S. Antony, O. Ojurongbe, C. G. **Meyer**, K. Thangaraj, A. Mishra, P. G. Kremsner, and T. P. Velavan, 'Correlation of Interleukin-6 Levels and Lectins During Schistosoma Haematobium Infection', *Cytokine,* 76 (2015), 152-5.

A. **Bachmann**, J. A. **Scholz**, M. **Janssen**, M. Q. Klinkert, E. **Tannich**, I. **Bruchhaus**, and M. **Petter**, 'A Comparative Study of the Localization and Membrane Topology of Members of the Rifin, Stevor and Pfmc-2tm Protein Families in Plasmodium Falciparum-Infected Erythrocytes', *Malar J,* 14 (2015), 274.

K. Badu, B. Gyan, M. Appawu, D. Mensah, D. Dodoo, G. Yan, C. Drakeley, G. Zhou, E. **Owusu-Dabo**, and K. A. Koram, 'Serological Evidence of Vector and Parasite Exposure in Southern Ghana: The Dynamics of Malaria Transmission Intensity', *Parasit Vectors,* 8 (2015), 251.

F. M. Baggi, A. Taybi, A. Kurth, M. Van Herp, A. Di Caro, R. Wolfel, S. **Gunther**, T. Decroo, H. Declerck, and S. Jonckheere, 'Management of Pregnant Women Infected with Ebola Virus in a Treatment Centre in Guinea, June 2014', *Euro Surveill,* 19 (2014).

S. Baize, D. Pannetier, L. **Oestereich**, T. **Rieger**, L. Koivogui, N. Magassouba, B. Soropogui, M. S. Sow, S. Keita, H. De Clerck, A. Tiffany, G. Dominguez, M. Loua, A. Traore, M. Kolie, E. R. Malano, E. Heleze, A. Bocquin, S. Mely, H. Raoul, V. Caro, D. **Cadar**, M. **Gabriel**, M. **Pahlmann**, D. **Tappe**, J. **Schmidt-Chanasit**, B. Impouma, A. K. Diallo, P. Formenty, M. Van Herp, and S. **Gunther**, 'Emergence of Zaire Ebola Virus Disease in Guinea', *N Engl J Med,* 371 (2014), 1418-25.

Y. Balabanova, V. Nikolayevskyy, O. Ignatyeva, I. Kontsevaya, S. Mironova, A. Kovalyov, A. Kritsky, Y. Rodionova, I. Fedorin, N. Casali, R. Hooper, R. D. **Horstmann**, S. Nejentsev, S. Hoffner, P. Nuernberg, and F. Drobniewski, 'Beijing Clades of Mycobacterium Tuberculosis Are Associated with Differential Survival in Hiv-Negative Russian Patients', *Infect Genet Evol,* 36 (2015), 517-23.

C. Barisch, P. Paschke, M. **Hagedorn**, M. Maniak, and T. Soldati, 'Lipid Droplet Dynamics at Early Stages of Mycobacterium Marinum Infection in Dictyostelium', *Cell Microbiol,* 17 (2015), 1332-49.

D. **Barthel**, C. Barkmann, S. **Ehrhardt**, and C. Bindt, 'Psychometric Properties of the 7-Item Generalized Anxiety Disorder Scale in Antepartum Women from Ghana and Cote D'ivoire', *J Affect Disord,* 169 (2014), 203-11.

D. **Barthel**, C. Barkmann, S. **Ehrhardt**, S. **Schoppen**, C. Bindt, and ... E. **Tannich**, 'Screening for Depression in Pregnant Women from Cote Divoire and Ghana: Psychometric Properties of the Patient Health Questionnaire-9', *J Affect Disord,* 187 (2015), 232-40.

N. Becker, A. Kruger, C. **Kuhn**, A. Plenge-Bonig, S. M. Thomas, J. Schmidt-Chanasit, and E. **Tannich**, ‚[Mosquitoes as Vectors for Exotic Pathogens in Germany]', *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz,* 57 (2014), 531-40.

R. H. Behrens, J. P. **Cramer**, T. Jelinek, H. Shaw, F. von Sonnenburg, D. Wilbraham, T. Weinke, D. J. Bell, E. Asturias, H. L. Pauwells, R. Maxwell, M. Paredes-Paredes, G. M. Glenn, S. Dewasthaly, D. M. Stablein, Z. D. Jiang, and H. L. DuPont, 'Efficacy and Safety of a Patch Vaccine Containing Heat-Labile Toxin from Escherichia Coli against Travellers' Diarrhoea: A Phase 3, Randomised, Double-Blind, Placebo-Controlled Field Trial in Travellers from Europe to Mexico and Guatemala', *Lancet Infect Dis,* 14 (2014), 197-204.

A. Bergua, B. Hohberger, J. Held, B. **Muntau**, E. **Tannich**, and D. **Tappe**, 'Human Case of Onchocerca Lupi Infection, Germany, August 2014', *Euro Surveill,* 20 (2015).

H. **Bernin**, and H. **Lotter**, 'Sex Bias in the Outcome of Human Tropical Infectious Diseases: Influence of Steroid Hormones', *J Infect Dis,* 209 Suppl 3 (2014), S107-13.

H. **Bernin**, C. **Marggraff**, T. **Jacobs**, N. **Brattig**, L. An, J. **Blessmann**, and H. **Lotter**, 'Immune Markers Characteristic for Asymptomatically Infected and Diseased Entamoeba Histolytica Individuals and Their Relation to Sex', *BMC Infect Dis,* 14 (2014), 621.

E. **Bifeld**, M. **Chrobak**, D. **Zander**, U. Schleicher, G. Schonian, and J. **Clos**, 'Geographical Sequence Variation in the Leishmania Major Virulence Factor P46', *Infect Genet Evol,* 30 (2015), 195-205.

E. **Bifeld**, and J. **Clos**, 'The Genetics of Leishmania Virulence', *Med Microbiol Immunol,* 204 (2015), 619-34.

L. **Biller**[*], J. **Matthiesen**[*], V. **Kuhne**, H. **Lotter**, G. **Handal**, T. Nozaki, Y. Saito-Nakano, M. Schumann, T. Roeder, E. **Tannich**, E. Krause, I. **Bruchhaus** [*]contributed equally, 'The Cell Surface Proteome of Entamoeba Histolytica', *Mol Cell Proteomics,* 13 (2014), 132-44.

B. **Blankenhaus**, M. **Reitz**, Y. **Brenz**, M. L. **Eschbach**, W. **Hartmann**, I. **Haben**, T. Sparwasser, J. **Huehn**, A. Kuhl, T. B. Feyerabend, H. R. Rodewald, and M. **Breloer**, 'Foxp3(+) Regulatory T Cells Delay Expulsion of Intestinal Nematodes by Suppression of Il-9-Driven Mast Cell Activation in Balb/C but Not in C57bl/6 Mice', *PLoS Pathog,* 10 (2014), e1003913.

A. K. Boggild, D. H. Esposito, P. E. Kozarsky, V. Ansdell, N. J. Beeching, D. Campion, F. Castelli, E. Caumes, F. Chappuis, J. P. **Cramer**, E. Gkrania-Klotsas, M. P. Grobusch, S. H. Hagmann, N. A. Hynes, P. L. Lim, R. Lopez-Velez, D. J. Malvy, M. Mendelson, P. Parola, M. J. Sotir, H. M. Wu, and D. H. Hamer, 'Differential Diagnosis of Illness in Travelers Arriving from Sierra Leone, Liberia, or Guinea: A Cross-Sectional Study from the Geosentinel Surveillance Network', *Ann Intern Med,* 162 (2015), 757-64.

J. Borner, C. Pick, J. Thiede, O. M. Kolawole, M. T. Kingsley, J. Schulze, V. M. Cottontail, N. Wellinghausen, J. **Schmidt-Chanasit**, I. **Bruchhaus**, and T. Burmester, 'Phylogeny of Haemosporidian Blood Parasites Revealed by a Multi-Gene Approach', *Mol Phylogenet Evol,* 94 (2015), 221-31.

B. Borremans, R. Vossen, B. **Becker-Ziaja**, S. Gryseels, N. Hughes, M. Van Gestel, N. Van Houtte, S. **Gunther**, and H. Leirs, 'Shedding Dynamics of Morogoro Virus, an African Arenavirus Closely Related to Lassa Virus, in Its Natural Reservoir Host Mastomys Natalensis', *Sci Rep,* 5 (2015), 10445.

J. **Borstler**, R. **Luhken**, M. **Rudolf**, S. Steinke, C. Melaun, S. **Becker**, R. **Garms**, and A. Kruger, 'The Use of Morphometric Wing Characters to Discriminate Female Culex Pipiens and Culex Torrentium', *J Vector Ecol,* 39 (2014), 204-12.

M. **Breloer**, W. **Hartmann**, B. **Blankenhaus**, M. L. **Eschbach**, K. Pfeffer, and T. **Jacobs**, 'Cutting Edge: The Btla-Hvem Regulatory Pathway Interferes with Protective Immunity to Intestinal Helminth Infection', *J Immunol,* 194 (2015), 1413-6.

J. Brinkel, A. Kramer, R. **Krumkamp**, J. **May**, and J. Fobil, 'Mobile Phone-Based Mhealth Approaches for Public Health Surveillance in Sub-Saharan Africa: A Systematic Review', *Int J Environ Res Public Health,* 11 (2014), 11559-82.

R. Brokamp, B. **Bergmann**, I. B. **Muller**, and S. Bienz, 'Stereoselective Preparation of Pyridoxal 1,2,3,4-Tetrahydro-Beta-Carboline Derivatives and the Influence of Their Absolute and Relative Configuration on the Proliferation of the Malaria Parasite Plasmodium Falciparum', *Bioorg Med Chem,* 22 (2014), 1832-7.

H. Brown, A. H. Kelly, A. Mari Saez, E. **Fichet-Calvet**, R. Ansumana, J. Bonwitt, N. Magassouba, F. Sahr, and M. Borchert, 'Extending the "Social": Anthropological Contributions to the Study of Viral Haemorrhagic Fevers', *PLoS Negl Trop Dis,* 9 (2015), e0003651.

G. **Burchard**, ‚Behandlung von auf Fernreisen erworbenen Erkrankungen', *Internist (Berl),* 55 (2014),1100-7.

G. **Burchard**, ‚Importierte Erkrankungen', *Dtsch Med Wochenschr,* 140 (2015), 797-804.

G. **Burchard**, '[Importation of Rare but Life-Threatening and Highly Contagious Diseases : Current Situation and Outlook]', *Internist (Berl),* 56 (2015), 1149-63.

G. **Burchard**, ‚Tuberkulose-Screening Bei Asylbewerbern.', *Flugmedizin, Reisemedizin, Tropenmedizin,* 22 (2015), 122-5.

P. B. Burger, M. Williams, J. Sprenger, S. B. Reeksting, M. Botha, I. B. **Muller**, F. Joubert, L. M. Birkholtz, and A. I. Louw, 'A Novel Inhibitor of Plasmodium Falciparum Spermidine Synthase: A Twist in the Tail', *Malar J,* 14 (2015), 54.

D. **Cadar**, N. Becker, M. Campos Rde, J. **Borstler**, H. **Jost**, and J. **Schmidt-Chanasit**, 'Usutu Virus in Bats, Germany, 2013', *Emerg Infect Dis,* 20 (2014), 1771-3.

D. **Cadar**, S. Bosch, H. **Jost**, J. Borstler, M. M. Garigliany, N. Becker, and J. **Schmidt-Chanasit**, 'Putative Lineage of Novel African Usutu Virus, Central Europe', *Emerg Infect Dis,* 21 (2015).

M. W. Carroll, D. A. Matthews, J. A. Hiscox, M. J. Elmore, G. Pollakis, A. Rambaut, R. Hewson, I. Garcia-Dorival, J. A. Bore, R. Koundouno, S. Abdellati, B. Afrough, J. Aiyepada, P. Akhilomen, D. Asogun, B. Atkinson, M. Badusche, A. Bah, S. Bate, J. Baumann, D. Becker, B. **Becker-Ziaja**, A. Bocquin, B. Borremans, A. Bosworth, J. P. Boettcher, A. Cannas, F. Carletti, C. Castilletti, S. Clark, F. Colavita, S. Diederich, A. Donatus, S. Duraffour, D. Ehichioya, H. Ellerbrok, M. D. Fernandez-Garcia, A. Fizet, E. Fleischmann, S. Gryseels, A. Hermelink, J. Hinzmann, U. Hopf-Guevara, Y. Ighodalo, L. Jameson, A. Kelterbaum, Z. Kis, S. Kloth, C. Kohl, M. Korva, A. Kraus, E. Kuisma, A. Kurth, B. **Liedigk**, C. H. Logue, A. Ludtke, P. Maes, J. McCowen, S. Mely, M. Mertens, S. Meschi, B. Meyer, J. Michel, P. Molkenthin, C. **Munoz-Fontela**, D. Muth, E. N. Newman, D. Ngabo, L. **Oestereich**, J. Okosun, T. Olokor, R. Omiunu, E. Omomoh, E. Pallasch, B. Palyi, J. Portmann, T. Pottage, C. Pratt, S. Priesnitz, S. Quartu, J. Rappe, J. Repits, M. Richter, M. Rudolf, A. Sachse, K. M. Schmidt, G. Schudt, T. Strecker, R. Thom, S. Thomas, E. Tobin, H. Tolley, J. Trautner, T. Vermoesen, I. Vitoriano, M. Wagner, S. Wolff, C. Yue, M. R. Capobianchi, B. Kretschmer, Y. Hall, J. G. Kenny, N. Y. Rickett, G. Dudas, C. E. Coltart, R. **Kerber**, D. Steer, C. Wright, F. Senyah, S. Keita, P. Drury, B. Diallo, H. de Clerck, M. Van Herp, A. Sprecher, A. Traore, M. Diakite, M. K. Konde, L. Koivogui, N. Magassouba, T. Avsic-Zupanc, A. Nitsche, M. Strasser, G. Ippolito, S. Becker, K. Stoecker, M. **Gabriel**, H. Raoul, A. Di Caro, R. Wolfel, P. Formenty, and S. **Gunther**, 'Temporal and Spatial Analysis of the 2014-2015 Ebola Virus Outbreak in West Africa', *Nature,* 524 (2015), 97-101.

N. Casali, V. Nikolayevskyy, Y. Balabanova, S. R. Harris, O. Ignatyeva, I. Kontsevaya, J. Corander, J. Bryant, J. Parkhill, S. Nejentsev, R. D. **Horstmann**, T. Brown, and F. Drobniewski, 'Evolution and Transmission of Drug-Resistant Tuberculosis in a Russian Population', *Nat Genet,* 46 (2014), 279-86.

R. A. Cheke, M. G. Basanez, M. Perry, M. T. White, R. **Garms**, E. Obuobie, P. H. Lamberton, S. Young, M. Y. Osei-Atweneboana, J. Intsiful, M. Shen, D. A. Boakye, and M. D. Wilson, 'Potential Effects of Warmer Worms and Vectors on Onchocerciasis Transmission in West Africa', *Philos Trans R Soc Lond B Biol Sci,* 370 (2015). 1665.

O. Chen, L. Riedemann, F. Etoc, H. **Herrmann**, M. Coppey, M. Barch, C. T. Farrar, J. Zhao, O. T. Bruns, H. Wei, P. Guo, J. Cui, R. Jensen, Y. Chen, D. K. Harris, J. M. Cordero, Z. Wang, A. Jasanoff, D. Fukumura, R. Reimer, M. Dahan, R. K. Jain, and M. G. Bawendi, 'Magneto-Fluorescent Core-Shell Supernanoparticles', *Nat Commun,* 5 (2014), 5093.

N. G. Conger, K. M. Paolino, E. C. Osborn, J. M. Rusnak, S. **Gunther**, J. Pool, P. E. Rollin, P. F. Allan, J. **Schmidt-Chanasit**, T. **Rieger**, and M. G. Kortepeter, 'Health Care Response to Cchf in Us Soldier and Nosocomial Transmission to Health Care Providers, Germany, 2009', *Emerg Infect Dis,* 21 (2015), 23-31.

J. P. **Cramer**, 'Plasmodium Knowlesi Malaria: Overview Focussing on Travel-Associated Infections', *Curr Infect Dis Rep,* 17 (2015), 469.

J. P. **Cramer**, and J. **Schmidt-Chanasit**, '[Dengue Virus & Co: Are Mosquito-Borne Viral Diseases on the Rise?]', *Dtsch Med Wochenschr,* 139 (2014), 247-50.

J. Curtis, Y. Luo, H. L. Zenner, D. Cuchet-Lourenco, C. Wu, K. Lo, M. Maes, A. Alisaac, E. Stebbings, J. Z. Liu, L. Kopanitsa, O. Ignatyeva, Y. Balabanova, V. Nikolayevskyy, I. Baessmann, T. Thye, C. G. **Meyer**, P. Nurnberg, R. D. **Horstmann**, F. Drobniewski, V. Plagnol, J. C. Barrett, and S. Nejentsev, 'Susceptibility to Tuberculosis Is Associated with Variants in the Asap1 Gene Encoding a Regulator of Dendritic Cell Migration', *Nat Genet,* 47 (2015), 523-7.

C. **Czajka**, N. Becker, H. **Jost**, S. Poppert, J. **Schmidt-Chanasit**, A. Kruger, and E. **Tannich**, 'Stable Transmission of Dirofilaria Repens Nematodes, Northern Germany', *Emerg Infect Dis,* 20 (2014), 328-31.

S. Dahlstrom, A. Aubouy, O. **Maiga-Ascofare**, J. F. Faucher, A. Wakpo, S. Ezinmegnon, A. Massougbodji, P. Houze, E. Kendjo, P. Deloron, J. Le Bras, and S. Houze, 'Plasmodium Falciparum Polymorphisms Associated with Ex Vivo Drug Susceptibility and Clinical Effectiveness of Artemisinin-Based Combination Therapies in Benin', *Antimicrob Agents Chemother,* 58 (2014), 1-10.

S. N. Darko, D. D. Yar, E. **Owusu-Dabo**, A. A. Awuah, W. Dapaah, N. Addofoh, S. P. Salifu, N. Y. Awua-Boateng, and F. Adomako-Boateng, 'Variations in Levels of Il-6 and Tnf-Alpha in Type 2 Diabetes Mellitus between Rural and Urban Ashanti Region of Ghana', *BMC Endocr Disord,* 15 (2015), 50.

M. De Niz, S. Helm, S. Horstmann, T. Annoura, H. A. Del Portillo, S. M. Khan, and V. T. **Heussler**, 'In Vivo and in Vitro Characterization of a Plasmodium Liver Stage-Specific Promoter', *PLoS ONE,* 10 (2015), e0123473.

D. M. **Dekker**, R. **Krumkamp**, N. Sarpong, H. Frickmann, K. G. Boahen, M. Frimpong, R. Asare, R. Larbi, R. M. Hagen, S. Poppert, W. Rabsch, F. Marks, Y. Adu-Sarkodie, and J. **May**, 'Drinking Water from Dug Wells in Rural Ghana - Salmonella Contamination, Environmental Factors, and Genotypes', *Int J Environ Res Public Health,* 12 (2015), 3535-46.

A. P. Deogratias, M. F. Mushi, L. Paterno, D. **Tappe**, J. Seni, R. Kabymera, B. R. Kidenya, and S. E. Mshana, 'Prevalence and Determinants of Campylobacter Infection among under Five Children with Acute Watery Diarrhea in Mwanza, North Tanzania', *Arch Public Health,* 72 (2014), 17.

D. Ditgen, E. M. Anandarajah, K. A. Meissner, N. **Brattig**, C. Wrenger, and E. Liebau, 'Harnessing the Helminth Secretome for Therapeutic Immunomodulators', *Biomed Res Int,* 2014 (2014), 964350.

M. L. Doherty, E. **Owusu-Dabo**, O. S. Kantanka, R. O. Brawer, and J. D. Plumb, 'Type 2 Diabetes in a Rapidly Urbanizing Region of Ghana, West Africa: A Qualitative Study of Dietary Preferences, Knowledge and Practices', *BMC Public Health, 1*4 (2014), 1069.

J. F. Drexler, V. M. Corman, A. N. Lukashev, J. M. van den Brand, A. P. Gmyl, S. Brunink, A. Rasche, N. Seggewibeta, H. Feng, L. M. Leijten, P. Vallo, T. Kuiken, A. Dotzauer, R. G. Ulrich, S. M. Lemon, C. Drosten, and J. **Schmidt-Chanasit**, 'Evolutionary Origins of Hepatitis a Virus in Small Mammals', *Proc Natl Acad Sci U S A,* 112 (2015), 15190-5.

J. F. Drexler, V. M. Corman, M. A. Muller, G. D. Maganga, P. Vallo, T. Binger, F. Gloza-Rausch, V. M. Cottontail, A. Rasche, S. Yordanov, A. Seebens, M. Knornschild, S. Oppong, Y. A. Sarkodie, C. Pongombo, A. N. Lukashev, J. **Schmidt-Chanasit**, A. Stocker, A. J. Carneiro, S. Erbar, A. Maisner, F. Fronhoffs, R. Buettner, E. K. Kalko, T. **Kruppa**, C. R. Franke, R. Kallies, E. R. Yandoko, G. Herrler, C. Reusken, A. Hassanin, D. H. Kruger, S. Matthee, R. G. Ulrich, E. M. Leroy, and C. Drosten, 'Corrigendum: Bats Host Major Mammalian Paramyxoviruses', *Nat Commun,* 5 (2014), 3032.

K. A. **Eberhardt**, F. S. Sarfo, A. Dompreh, E. O. Kuffour, C. Geldmacher, M. Soltau, M. Schachscheider, J. F. Drexler, A. M. Eis-Hubinger, D. Haussinger, G. Bedu-Addo, R. O. Phillips, B. Norman, G. D. **Burchard**, and T. **Feldt**, 'Helicobacter Pylori Coinfection Is Associated with Decreased Markers of Immune Activation in Art-Naive Hiv-Positive and in Hiv-Negative Individuals in Ghana', *Clin Infect Dis,* 61 (2015), 1615-23.

R. Eberle, N. W. **Brattig**, M. Trusch, H. Schluter, M. D. Achukwi, A. Eisenbarth, A. Renz, E. Liebau, M. Perbandt, and C. Betzel, 'Isolation, Identification and Functional Profile of Excretory-Secretory Peptides from Onchocerca Ochengi', *Acta Trop,* 142 (2015), 156-66.
U. Ehehalt, M. Schunk, M. Jensenius, P. J. van Genderen, E. Gkrania-Klotsas, F. Chappuis, P. Schlagenhauf, F. Castelli, R. Lopez-Velez, P. Parola, G. D. **Burchard**, and J. P. **Cramer**, 'Leishmaniasis Acquired by Travellers to Endemic Regions in Europe: A Eurotravnet Multi-Centre Study', *Travel Med Infect Dis,* 12 (2014), 167-72.
L. **Ehlkes**, A. C. **Krefis**, B. Kreuels, R. **Krumkamp**, O. Adjei, M. Ayim-Akonor, R. Kobbe, A. **Hahn**, C. **Vinnemeier**, W. **Loag**, U. Schickhoff, and J. **May**, 'Geographically Weighted Regression of Land Cover Determinants of Plasmodium Falciparum Transmission in the Ashanti Region of Ghana', *Int J Health Geogr,* 13 (2014), 35.

L. **Ehlkes**, B. Kreuels, N. G. **Schwarz**, and J. **May**, ‚Epidemiologie Des Ebolafiebers Und Anderer, in Deutschland Seltener Hochkontagiöser, Lebensbedrohlicher Erkrankungen', *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz,* 58 (2015), 705-13.

D. **Eibach**, R. **Krumkamp**, H. M. **Al-Emran**, N. Sarpong, R. M. Hagen, Y. Adu-Sarkodie, E. **Tannich**, and J. **May**, 'Molecular Characterization of Cryptosporidium Spp. Among Children in Rural Ghana', *PLoS Negl Trop Dis,* 9 (2015), e0003551.

D. **Eibach**, R. **Krumkamp**, A. **Hahn**, N. Sarpong, Y. Adu-Sarkodie, A. Leva, J. Adlkofer, M. Panning, J. **May**, and E. **Tannich**, 'Application of the Luminex Xtag Gastrointestinal Pathogen Panel for the Detection of Gastrointestinal Pathogens in a Rural African Setting', *Tropical Medicine & International Health,* 20 (2015), 117-17.

M. Eiden, U. Ziegler, M. Keller, K. Muller, H. Granzow, H. **Jost**, J. **Schmidt-Chanasit**, and M. H. Groschup, 'Isolation of Sindbis Virus from a Hooded Crow in Germany', *Vector Borne Zoonotic Dis,* 14 (2014), 220-2.

P. **Emmerich**, N. Muller, P. **Heinemann**, E. Rother, X. Jakupi, S. **Gunther**, D. **Cadar**, and J. **Schmidt-Chanasit**, 'Human Dobrava-Belgrade Hantavirus Infection, Kosovo', *J Clin Virol,* 61 (2014), 439-41.

T. M. Ernst, H. Fehling, H. **Bernin**, M. D. Zaruba, I. **Bruchhaus**, G. Adam, H. Ittrich, and H. **Lotter**, 'Magnetic Resonance Imaging of Pathogenic Protozoan Parasite Entamoeba Histolytica Labeled with Superparamagnetic Iron Oxide Nanoparticles', *Invest Radiol,* 50 (2015), 709-18.

R. **Espinoza Mora Mdel**, C. **Steeg**, S. **Tartz**, V. **Heussler**, T. Sparwasser, A. Link, B. **Fleischer**, and T. **Jacobs**, 'Depletion of Regulatory T Cells Augments a Vaccine-Induced T Effector Cell Response against the Liver-Stage of Malaria but Fails to Increase Memory', *PLoS ONE,* 9 (2014), e104627.

D. H. Esposito, B. M. Rosenthal, G. Slesak, D. **Tappe**, R. Fayer, E. Bottieau, C. Brown, M. P. Grobusch, D. Malvy, F. von Sonnenburg, M. J. Sotir, F. Steiner, P. Zanger, and P. E. Kozarsky, 'Reply to Italiano Et Al', *Clin Infect Dis,* 60 (2015), 1135-6.

D. H. Esposito, A. Stich, L. Epelboin, D. Malvy, P. V. Han, E. Bottieau, A. da Silva, P. Zanger, G. Slesak, P. J. van Genderen, B. M. Rosenthal, J. P. **Cramer**, L. G. Visser, J. Munoz, C. P. Drew, C. S. Goldsmith, F. Steiner, N. Wagner, M. P. Grobusch, D. A. Plier, D. **Tappe**, M. J. Sotir, C. Brown, G. W. Brunette, R. Fayer, F. von Sonnenburg, A. Neumayr, and P. E. Kozarsky, 'Acute Muscular Sarcocystosis: An International Investigation among Ill Travelers Returning from Tioman Island, Malaysia, 2011-2012', *Clin Infect Dis,* 59 (2014), 1401-10.

C. **Esser**[*], A. **Bachmann**[*], D. **Kuhn**, K. **Schuldt**, B. **Forster**, M. Thiel, J. **May**, F. Koch-Nolte, M. Yanez-Mo, F. Sanchez-Madrid, A. H. Schinkel, S. Jalkanen, A. G. Craig, I. **Bruchhaus**, R. D. **Horstmann**, and [*]contributed equally, 'Evidence of Promiscuous Endothelial Binding by Plasmodium Falciparum-Infected Erythrocytes', *Cell Microbiol,* 16 (2014), 701-8.

C. Fahnrich, K. Denecke, O. O. Adeoye, J. Benzler, H. Claus, G. Kirchner, S. Mall, R. Richter, M. P. Schapranow, N. **Schwarz**, D. Tom-Aba, M. Uflacker, G. Poggensee, and G. Krause, 'Surveillance and Outbreak Response Management System (Sormas) to Support the Control of the Ebola Virus Disease Outbreak in West Africa', *Euro Surveill,* 20 (2015).

M. N. Faisal, J. Hoffmann, S. El-Kholy, K. Kallsen, C. Wagner, I. **Bruchhaus**, C. Fink, and T. Roeder, 'Transcriptional Regionalization of the Fruit Fly's Airway Epithelium', *PLoS ONE,* 9 (2014), e102534.

T. **Feldt**, J. N. Fobil, J. Wittsiepe, M. Wilhelm, H. Till, A. Zoufaly, G. **Burchard**, and T. Goen, 'High Levels of Pah-Metabolites in Urine of E-Waste Recycling Workers from Agbogbloshie, Ghana', *Sci Total Environ,* 466-467 (2014), 369-76.

M. D. Fernandez-Garcia, A. Negredo, A. Papa, O. Donoso-Mantke, M. Niedrig, H. Zeller, A. Tenorio, and L. Franco, ... J. **Schmidt-Chanasit** 'European Survey on Laboratory Preparedness, Response and Diagnostic Capacity for Crimean-Congo Haemorrhagic Fever, 2012', *Euro Surveill,* 19 (2014).

E. **Fichet-Calvet**, B. **Becker-Ziaja**, L. Koivogui, and S. **Gunther**, 'Lassa Serology in Natural Populations of Rodents and Horizontal Transmission', *Vector Borne Zoonotic Dis,* 14 (2014), 665-74.

H. Frickmann, D. **Dekker**, N. G. **Schwarz**, A. **Hahn**, K. Boahen, N. Sarpong, Y. Adu-Sarkodie, E. Halbgewachs, F. Marks, V. von Kalckreuth, S. Poppert, U. Loderstaedt, J. **May**, and R. M. Hagen, '16s Rrna Gene Sequence-Based Identification of Bacteria in Automatically Incubated Blood Culture Materials from Tropical Sub-Saharan Africa', *PLoS ONE,* 10 (2015), e0135923.

H. Frickmann, A. Essig, and S. **Poppert**, 'Identification of Lymphogranuloma Venereum-Associated Chlamydia Trachomatis Serovars by Fluorescence in Situ Hybridisation--a Proof-of-Principle Analysis', *Trop Med Int Health,* 19 (2014), 427-30.

H. Frickmann, U. Loderstaedt, P. **Racz**, K. **Tenner-Racz**, P. **Eggert**, A. Haeupler, R. Bialek, and R. M. Hagen, 'Detection of Tropical Fungi in Formalin-Fixed, Paraffin-Embedded Tissue: Still an Indication for Microscopy in Times of Sequence-Based Diagnosis?', *Biomed Res Int,* 2015 (2015), 938721.

H. Frickmann, A. Podbielski, A. Essig, N. G. **Schwarz**, and A. E. Zautner, 'Difficulties in Species Identification within the Genus Haemophilus - a Pilot Study Addressing a Significant Problem for Routine Diagnostics', *Eur J Microbiol Immunol (Bp),* 4 (2014), 99-105.

H. Frickmann, N. G. **Schwarz**, R. Rakotozandrindrainy, J. **May**, and R. M. Hagen, 'Pcr for Enteric Pathogens in High-Prevalence Settings. What Does a Positive Signal Tell Us?', *Infect Dis (Lond),* 47 (2015), 491-8.

R. E. Friedrich, M. Heiland, G. **Burchard**, P. **Racz**, J. Zustin, and C. Hagel, 'Human Dirofilaria Repens Infection of the Zygomatico-Temporal Region', *J Craniomaxillofac Surg,* 42 (2014), 612-5.

B. Friedrich-Janicke[*], P. **Emmerich**[*], D. **Tappe**[*], S. **Gunther**, D. **Cadar**, J. **Schmidt-Chanasit**, and [*]equal contribution, 'Genome Analysis of Mayaro Virus Imported to Germany from French Guiana', *Emerg Infect Dis,* 20 (2014), 1255-7.

J. J. Gabor, N. G. **Schwarz**, M. Esen, P. G. Kremsner, and M. P. Grobusch, 'Influenza a and Parvovirus B19 Seropositivity Rates in Gabonese Infants', *Am J Trop Med Hyg,* 93 (2015), 407-9.

O. Gal-Mor, E. C. **Boyle**, and G. A. Grassl, 'Same Species, Different Diseases: How and Why Typhoidal and Non-Typhoidal Salmonella Enterica Serovars Differ', *Front Microbiol,* 5 (2014), 391.

M. Garcia-Hernandez, M. A. Castro-Corona, J. C. Segoviano-Ramirez, N. W. **Brattig**, and C. E. Medina-De la Garza, 'Immunomodulatory Effect of Diethylcarbamazine in Mice Infected with Nocardia Brasiliensis', *Int Immunopharmacol,* 23 (2014), 113-20.

M. M. Garigliany, J. **Borstler**, H. **Jost**, M. **Badusche**, D. Desmecht, J. **Schmidt-Chanasit**, and D. **Cadar**, 'Characterization of a Novel Circo-Like Virus in Aedes Vexans Mosquitoes from Germany: Evidence for a New Genus within the Family Circoviridae', *J Gen Virol,* 96 (2015), 915-20.

M. M. Garigliany, R. M. Hagen, H. Frickmann, J. **May**, N. G. **Schwarz**, A. Perse, H. **Jost**, J. **Borstler**, N. Shahhosseini, D. Desmecht, H. A. Mbunkah, A. M. Daniel, M. T. Kingsley, R. de Mendonca Campos, V. S. de Paula, N. Randriamampionona, S. Poppert, E. **Tannich**, R. Rakotozandrindrainy, D. **Cadar**, and J. **Schmidt-Chanasit**, 'Cyclovirus Cycv-Vn Species Distribution Is Not Limited to Vietnam and Extends to Africa', *Sci Rep,* 4 (2014), 7552.

M. M. Garigliany, D. Marlier, K. **Tenner-Racz**, M. Eiden, D. Cassart, F. Gandar, M. Beer, J. **Schmidt-Chanasit**, and D. Desmecht, 'Detection of Usutu Virus in a Bullfinch (Pyrrhula Pyrrhula) and a Great Spotted Woodpecker (Dendrocopos Major) in North-West Europe', *Vet J,* 199 (2014), 191-3.

R. **Garms**, K. Badu, E. **Owusu-Dabo**, S. Baffour-Awuah, O. Adjei, A. Y. Debrah, M. Nagel, N. K. Biritwum, L. Gankpala, R. J. Post, and T. F. **Kruppa**, '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,* 114 (2015), 1129-37.

L. **Gerstenmaier**, R. **Pilla**, L. **Herrmann**, H. **Herrmann**, M. **Prado**, G. J. Villafano, M. Kolonko, R. Reimer, T. Soldati, J. S. King, and M. **Hagedorn**, 'The Autophagic Machinery Ensures Nonlytic Transmission of Mycobacteria', *Proc Natl Acad Sci U S A,* 112 (2015), E687-92.

M. Gertler, M. Durr, P. Renner, S. Poppert, M. Askar, J. Breidenbach, C. Frank, K. Preussel, A. Schielke, D. Werber, R. Chalmers, G. Robinson, I. Feuerpfeil, E. **Tannich**, C. Groger, K. Stark, and H. Wilking, 'Outbreak of Cryptosporidium Hominis Following River Flooding in the City of Halle (Saale), Germany, August 2013', *BMC Infect Dis,* 15 (2015), 88.

A. Ghansah, L. Amenga-Etego, A. Amambua-Ngwa, B. Andagalu, T. Apinjoh, M. Bouyou-Akotet, V. Cornelius, L. Golassa, V. H. Andrianaranjaka, D. Ishengoma, K. Johnson, E. Kamau, O. **Maiga-Ascofare**, D. Mumba, P. Tindana, A. Tshefu-Kitoto, M. Randrianarivelojosia, Y. William, D. P. Kwiatkowski, and A. A. Djimde, 'Monitoring Parasite Diversity for Malaria Elimination in Sub-Saharan Africa', *Science,* 345 (2014), 1297-8.

S. Gryseels, T. **Rieger**, L. **Oestereich**, B. Cuypers, B. Borremans, R. Makundi, H. Leirs, S. **Gunther**, and J. Gouy de Bellocq, 'Gairo Virus, a Novel Arenavirus of the Widespread Mastomys Natalensis: Genetically Divergent, but Ecologically Similar to Lassa and Morogoro Viruses', *Virology,* 476C (2015), 249-56.
N. Guo, C. Bindt, M. Te Bonle, J. Appiah-Poku, C. Tomori, R. **Hinz**, D. **Barthel**, S. **Schoppen**, T. **Feldt**, C. Barkmann, M. Koffi, W. **Loag**, S. B. Nguah, K. A. **Eberhardt**, H. Tagbor, J. K. Bass, E. N'Goran, and S. **Ehrhardt**, 'Mental Health Related Determinants of Parenting Stress among Urban Mothers of Young Children--Results from a Birth-Cohort Study in Ghana and Cote D'ivoire', *BMC Psychiatry,* 14 (2014), 156.

A. A. Gyimah, E. K. Nakua, E. **Owusu-Dabo**, and E. Otupiri, 'Fertility Preferences of Women Living with Hiv in the Kumasi Metropolis, Ghana', *Afr J Reprod Health,* 19 (2015), 125-33.

I. **Haben**, W. **Hartmann**, and M. **Breloer**, 'Nematode-Induced Interference with Vaccination Efficacy Targets Follicular T Helper Cell Induction and Is Preserved after Termination of Infection', *PLoS Negl Trop Dis,* 8 (2014), e3170.

R. M. Hagen, R. Hinz, E. Tannich, and H. Frickmann, 'Comparison of Two Real-Time Pcr Assays for the Detection of Malaria Parasites from Hemolytic Blood Samples - Short Communication', *Eur J Microbiol Immunol (Bp),* 5 (2015), 159-63.

G. Harter, H. Frickmann, S. Zenk, D. Wichmann, B. Ammann, P. Kern, B. **Fleischer**, E. **Tannich**, and S. Poppert, 'Diagnosis of Neuroschistosomiasis by Antibody Specificity Index and Semi-Quantitative Real-Time Pcr from Cerebrospinal Fluid and Serum', *J Med Microbiol,* 63 (2014), 309-12.

W. **Hartmann**, C. Schramm, and M. **Breloer**, 'Litomosoides Sigmodontis Induces Tgf-Beta Receptor Responsive, Il-10-Producing T Cells That Suppress Bystander T-Cell Proliferation in Mice', *Eur J Immunol,* 45 (2015), 2568-81.

W. **Hartmann**, N. Singh, S. Rathaur, Y. **Brenz**, E. Liebau, B. **Fleischer**, and M. **Breloer**, 'Immunization with Brugia Malayi Hsp70 Protects Mice against Litomosoides Sigmodontis Challenge Infection', *Parasite Immunol,* 36 (2014), 141-9.

A. **Heiber**, S. **Retzlaff**, and T. **Spielmann**, 'Immuno-Em Analysis of Pf13_0191-Gfp Expressing Parasites', *Bio-protocols,* 4 (2014), e1137.

A. **Heiber**, and T. **Spielmann**, 'Preparation of Parasite Protein Extracts and Western Blot Analysis', *Bio-protocols,* 4 (2014), e1136.

A. M. Henao-Restrepo, I. M. Longini, M. Egger, N. E. Dean, W. J. Edmunds, A. Camacho, M. W. Carroll, M. Doumbia, B. Draguez, S. Duraffour, G. Enwere, R. Grais, S. **Gunther**, S. Hossmann, M. K. Konde, S. Kone, E. Kuisma, M. M. Levine, S. Mandal, G. Norheim, X. Riveros, A. Soumah, S. Trelle, A. S. Vicari, C. H. Watson, S. Keita, M. P. Kieny, and J. A. Rottingen, 'Efficacy and Effectiveness of an Rvsv-Vectored Vaccine Expressing Ebola Surface Glycoprotein: Interim Results from the Guinea Ring Vaccination Cluster-Randomised Trial', *Lancet,* 386 (2015), 857-66.

T. Hoenen, A. Groseth, F. Feldmann, A. Marzi, H. Ebihara, G. Kobinger, S. **Gunther**, and H. Feldmann, 'Complete Genome Sequences of Three Ebola Virus Isolates from the 2014 Outbreak in West Africa', *Genome Announc,* 2 (2014).

J. Hoffmann, A. Otte, S. Thiele, H. **Lotter**, Y. Shu, and G. Gabriel, 'Sex Differences in H7n9 Influenza a Virus Pathogenesis', *Vaccine,* 33 (2015), 6949-54.

B. Hoffmann*, D. **Tappe***, D. Hoper, C. Herden, A. Boldt, C. Mawrin, O. Niederstrasser, T. Muller, M. Jenckel, E. van der Grinten, C. Lutter, B. Abendroth, J. P. Teifke, D. **Cadar**, J. **Schmidt-Chanasit**, R. G. Ulrich, M. Beer, and *contributed equally, 'A Variegated Squirrel Bornavirus Associated with Fatal Human Encephalitis', *N Engl J Med,* 373 (2015), 154-62.

M. Hofmann, A. Wietholter, I. Blaha, H. **Jost**, P. **Heinemann**, M. **Lehmann**, T. Miller, D. **Cadar**, T. Yanase, N. Kley, M. Eiden, M. Groschup, and J. **Schmidt-Chanasit**, 'Batai Virus Surveillance in Bovines, Germany', *Clin Vaccine Immunol,* 22 (2015), 672-3.

B. **Hogan**, N. Sarpong, D. **Eibach**, R. **Krumkamp**, D. **Dekker**, B. Kreuels, O. **Maiga-Ascofare**, A. **Jaeger**, Y. Adu-Sarkodie, E. **Owusu-Dabo**, and J. **May**, 'Causes of Fever without Source in Ghana', *Tropical Medicine & International Health,* 20 (2015), 417-17.

A. **Hombach**, and J. **Clos**, 'No Stress--Hsp90 and Signal Transduction in Leishmania', *Parasitology,* 141 (2014), 1156-66.

A. **Hombach**, G. **Ommen**, A. **MacDonald**, and J. **Clos**, 'A Small Heat Shock Protein Is Essential for Thermotolerance and Intracellular Survival of Leishmania Donovani', *J Cell Sci,* 127 (2014), 4762-73.

A. **Hombach**, G. **Ommen**, V. Sattler, and J. **Clos**, 'Leishmania Donovani P23 Protects Parasites against Hsp90 Inhibitor-Mediated Growth Arrest', *Cell Stress Chaperones,* 20 (2015), 673-85.
A. Hornyak, P. Malik, S. Marton, R. Doro, D. **Cadar**, and K. Banyai, 'Emergence of Multireassortant Bluetongue Virus Serotype 4 in Hungary', *Infect Genet Evol,* 33 (2015), 6-10.

C. Y. Hu, X. A. Zhang, C. G. **Meyer**, T. Thye, W. Liu, and W. C. Cao, 'Polymorphism of X-Linked Cd40 Ligand Gene Associated with Pulmonary Tuberculosis in the Han Chinese Population', *Genes Immun,* 16 (2015), 399-404.

K. **Huber**, S. **Jansen**, M. **Leggewie**, M. **Badusche**, J. **Schmidt-Chanasit,** N. Becker, E. **Tannich**, and S. C. **Becker**, 'Aedes Japonicus Japonicus (Diptera: Culicidae) from Germany Have Vector Competence for Japan Encephalitis Virus but Are Refractory to Infection with West Nile Virus', *Parasitol Res,* 113 (2014), 3195-9.

K. **Huber**, K. **Schuldt**, M. **Rudolf**, M. Marklewitz, D. M. Fonseca, C. Kaufmann, Y. Tsuda, S. Junglen, A. Kruger, N. Becker, E. **Tannich**, and S. C. **Becker**, 'Distribution and Genetic Structure of Aedes Japonicus Japonicus Populations (Diptera: Culicidae) in Germany', *Parasitol Res,* 113 (2014), 3201-10.

M. Jannasch, F. Groeber, N. W. **Brattig**, C. Unger, H. Walles, and J. Hansmann, 'Development and Application of Three-Dimensional Skin Equivalents for the Investigation of Percutaneous Worm Invasion', *Exp Parasitol,* 150 (2015), 22-30.

N. Janssen, I. Fernandez-Salas, E. E. Diaz Gonzalez, A. Gaytan-Burns, C. E. Medina-de la Garza, R. M. Sanchez-Casas, J. **Borstler**, D. **Cadar**, J. **Schmidt-Chanasit**, and H. **Jost**, 'Mammalophilic Feeding Behaviour of Culex Quinquefasciatus Mosquitoes Collected in the Cities of Chetumal and Cancun, Yucatan Peninsula, Mexico', *Trop Med Int Health,* 20 (2015), 1488-91.

T. Jelinek, G. D. **Burchard**, S. Dieckmann, S. Buhler, M. Paulke-Korinek, H. D. Nothdurft, E. Reisinger, K. Ahmed, D. Bosse, S. Meyer, M. Costantini, and M. Pellegrini, 'Short-Term Immunogenicity and Safety of an Accelerated Pre-Exposure Prophylaxis Regimen with Japanese Encephalitis Vaccine in Combination with a Rabies Vaccine: A Phase Iii, Multicenter, Observer-Blind Study', *J Travel Med,* 22 (2015), 225-31.

T. Jelinek, J. P. **Cramer**, S. Dieckmann, C. Hatz, M. Paulke-Korinek, M. Alberer, E. C. Reisinger, M. Costantini, D. Gniel, D. Bosse, and M. Lattanzi, 'Evaluation of Rabies Immunogenicity and Tolerability Following a Purified Chick Embryo Cell Rabies Vaccine Administered Concomitantly with a Japanese Encephalitis Vaccine', *Travel Med Infect Dis,* 13 (2015), 241-50.

C. Jungbauer, M. K. Hourfar, K. Stiasny, S. W. Aberle, D. **Cadar**, J. **Schmidt-Chanasit**, and W. R. Mayr, 'West Nile Virus Lineage 2 Infection in a Blood Donor from Vienna, Austria, August 2014', *J Clin Virol,* 64 (2015), 16-9.

A. Jurke, N. Bannert, K. Brehm, V. Fingerle, V. A. Kempf, D. Kompf, M. Lunemann, A. Mayer-Scholl, M. Niedrig, K. Nockler, H. Scholz, W. Splettstoesser, D. **Tappe**, and S. F. Fischer, 'Serological Survey of Bartonella Spp., Borrelia Burgdorferi, Brucella Spp., Coxiella Burnetii, Francisella Tularensis, Leptospira Spp., Echinococcus, Hanta-, Tbe- and Xmr-Virus Infection in Employees of Two Forestry Enterprises in North Rhine-Westphalia, Germany, 2011-2013', *Int J Med Microbiol,* 305 (2015), 652-62.

E. Kamau, S. Campino, L. Amenga-Etego, E. Drury, D. Ishengoma, K. Johnson, D. Mumba, M. Kekre, Y. William, D. Mead, B. A. Marielle, T. Apinjoh, L. Golassa, M. Randrianarivelojosia, B. Andagalu, O. **Maiga-Ascofare**, A. Amambua-Ngwa, P. Tindana, A. Ghansah, B. MacInnis, D. Kwiatkowski, and A. Djimde, 'K13-Propeller Polymorphisms in Plasmodium Falciparum Parasites from Sub-Saharan Africa', *J Infect Dis 211 (2015),* 1352-5.

A. Karch, R. **Krumkamp**, and B. Kreuels, 'Randomized, Placebo-Controlled Trial or Post Hoc Subgroup Analysis: The Importance of Standardized and Comprehensive Reporting', *J Infect Dis,* 210 (2014), 158-9.

C. **Keller**, A. Kruger, N. G. **Schwarz**, R. Rakotozandrindrainy, J. P. Rakotondrainiarivelo, T. Razafindrabe, H. Derschum, C. Silaghi, D. Pothmann, A. **Veit**, B. **Hogan**, J. **May**, M. **Girmann**, S. Kramme, B. **Fleischer**, and S. Poppert, 'High Detection Rate of Rickettsia Africae in Amblyomma Variegatum but Low Prevalence of Anti-Rickettsial Antibodies in Healthy Pregnant Women in Madagascar', *Ticks Tick Borne Dis,* 7 (2015), 60-5.

C. A. **Keller**, M. **Hauptmann**, J. **Kolbaum**, M. **Gharaibeh**, M. Neumann, M. Glatzel, and B. **Fleischer**, 'Dissemination of Orientia Tsutsugamushi and Inflammatory Responses in a Murine Model of Scrub Typhus', *PLoS Negl Trop Dis,* 8 (2014), e3064.

R. **Kerber**, S. **Reindl**, V. Romanowski, R. M. Gomez, E. Ogbaini-Emovon, S. **Gunther**, and J. Ter Meulen, 'Research Efforts to Control Highly Pathogenic Arenaviruses: A Summary of the Progress and Gaps', *J Clin Virol 64* (2015), 120-7.

T. Kiss, D. **Cadar**, F. A. Krupaci, A. D. Bordeanu, and M. Spinu, 'Prevalence of Anaplasma Phagocytophilum Infection in European Wild Boar (Sus Scrofa) Populations from Transylvania, Romania', *Epidemiol Infect,* 142 (2014), 246-50.

M. **Kolonko**, A. C. Geffken, T. Blumer, K. Hagens, U. E. Schaible, and M. **Hagedorn**, 'Wash-Driven Actin Polymerization Is Required for Efficient Mycobacterial Phagosome Maturation Arrest', *Cell Microbiol,* 16 (2014), 232-46.

K. Kramer, T. **Thye**, A. Treszl, S. Peine, M. Koch, M. Sterneck, B. Nashan, and H. Thude, 'Polymorphism in Nfkbia Gene Is Associated with Recurrent Acute Rejections in Liver Transplant Recipients', *Tissue Antigens,* 84 (2014), 370-7.

B. **Kretschmer**, J. Weber, A. Hutloff, B. **Fleischer**, M. **Breloer**, and A. **Osterloh**, 'Anti-CD83 Promotes Igg1 Isotype Switch in Marginal Zone B Cells in Response to Ti-2 Antigen', *Immunobiology,* 220 (2015), 964-75.

B. Kreuels, D. Wichmann, P. **Emmerich**, J. **Schmidt-Chanasit**, G. de Heer, S. Kluge, A. Sow, T. Renne, S. **Gunther**, A. W. Lohse, M. M. Addo, and S. Schmiedel, 'A Case of Severe Ebola Virus Infection Complicated by Gram-Negative Septicemia', *N Engl J Med,* 371 (2014), 2394-401.

A. Kruger, J. **Borstler**, M. **Badusche**, R. Luhken, R. **Garms**, and E. **Tannich**, 'Mosquitoes (Diptera: Culicidae) of Metropolitan Hamburg, Germany', *Parasitol Res,* 113 (2014), 2907-14.

R. **Krumkamp**, N. Sarpong, N. G. **Schwarz**, J. Adlkofer, W. **Loag**, D. **Eibach**, R. M. Hagen, Y. Adu-Sarkodie, E. **Tannich**, and J. **May**, 'Gastrointestinal Infections and Diarrheal Disease in Ghanaian Infants and Children: An Outpatient Case-Control Study', *PLoS Negl Trop Dis,* 9 (2015), e0003568.

P. Kumar, A. Tripathi, R. Ranjan, J. Halbert, T. **Gilberger**, C. Doerig, and P. Sharma, 'Regulation of Plasmodium Falciparum Development by Calcium-Dependent Protein Kinase 7 (Pfcdpk7)', *J Biol Chem,* 289 (2014), 20386-95.

T. L. Lakwo, R. **Garms**, E. Tukahebwa, A. W. Onapa, E. Tukesiga, J. Ngorok, J. Katamanywa, C. Twebaze, P. Habomugisha, D. Oguttu, E. Byamukama, M. Katabarwa, F. Richards, and T. Unnasch, 'Successful Interruption of the Transmission of Onchocerca Volvulus in Mpamba-Nkusi Focus, Kibaale District, Mid-Western Uganda', *East Afr Med J,* 92 (2015), 401-07.

N. **Lapke**, S. **Tartz**, K. H. Lee, and T. **Jacobs**, 'The Application of Anti-Toso Antibody Enhances Cd8 T Cell Responses in Experimental Malaria Vaccination and Disease', *Vaccine,* 33 (2015), 6763-70.

J. Latus, K. **Tenner-Racz**, P. **Racz**, D. Kitterer, D. **Cadar**, G. Ott, M. D. Alscher, J. **Schmidt-Chanasit**, and N. Braun, 'Detection of Puumala Hantavirus Antigen in Human Intestine During Acute Hantavirus Infection', *PLoS ONE,* 9 (2014), e98397.

C. **Lehmann**, A. **Heitmann**, S. Mishra, P. C. Burda, M. Singer, M. **Prado**, L. Niklaus, C. Lacroix, R. Menard, F. Frischknecht, R. Stanway, P. Sinnis, and V. **Heussler**, 'A Cysteine Protease Inhibitor of Plasmodium Berghei Is Essential for Exo-Erythrocytic Development', *PLoS Pathog,* 10 (2014), e1004336.

M. **Lehmann**, M. **Pahlmann**, H. **Jerome**, C. **Busch**, M. **Lelke**, and S. **Gunther**, 'Role of the C Terminus of Lassa Virus L Protein in Viral Mrna Synthesis', *J Virol, 88* (2014), 8713-7.

A. Ludtke, L. **Oestereich**, P. Ruibal, S. **Wurr**, E. **Pallasch**, S. Bockholt, W. H. Ip, T. **Rieger**, S. Gomez-Medina, C. Stocking, E. Rodriguez, S. **Gunther**, and C. Munoz-Fontela, 'Ebola Virus Disease in Mice Transplanted with Human Hematopoietic Stem Cells', *J Virol,* 89 (2015), 4700-4.

R. **Luhken**, E. Kiel, S. Steinke, and R. Fladung, 'Topsoil Conditions Correlate with the Emergence Rates of Culicoides Chiopterus and Culicoides Dewulfi (Diptera: Ceratopogonidae) from Cowpats', *Parasitol Res,* 114 (2015), 1113-7.

R. **Luhken**, W. P. Pfitzner, J. **Borstler**, R. **Garms**, K. Huber, N. Schork, S. Steinke, E. Kiel, N. Becker, E. **Tannich**, and A. Kruger, 'Field Evaluation of Four Widely Used Mosquito Traps in Central Europe', *Parasit Vectors,* 7 (2014), 268.

R. **Luhken**, S. Steinke, N. Hoppe, and E. Kiel, 'Effects of Temperature and Photoperiod on the Development of Overwintering Immature Culicoides Chiopterus and C. Dewulfi', *Vet Parasitol,* 214 (2015), 195-9.

R. **Luhken**, S. Steinke, M. **Leggewie**, E. **Tannich**, A. Kruger, S. Becker, and E. Kiel, 'Physico-Chemical Characteristics of Culex Pipiens Sensu Lato and Culex Torrentium (Diptera: Culicidae) Breeding Sites in Germany', *J Med Entomol,* 52 (2015), 932-6.

V. Madelain, L. **Oestereich**, F. Graw, T. H. Nguyen, X. de Lamballerie, F. Mentre, S. **Gunther**, and J. Guedj, 'Ebola Virus Dynamics in Mice Treated with Favipiravir', *Antiviral Res,* 123 (2015), 70-77.

O. **Maiga-Ascofare**, R. Rakotozandrindrainy, M. **Girmann**, A. **Hahn**, N. Randriamampionona, S. Poppert, J. **May**, and N. G. **Schwarz**, 'Molecular Epidemiology and Seroprevalence in Asymptomatic Plasmodium Falciparum Infections of Malagasy Pregnant Women in the Highlands', *Malar J,* 14 (2015), 188.

T. K. Manchang, I. Ajonina-Ekoti, D. Ndjonka, A. Eisenbarth, M. D. Achukwi, A. Renz, N. W. **Brattig**, E. Liebau, and M. Breloer, 'Immune Recognition of Onchocerca Volvulus Proteins in the Human Host and Animal Models of Onchocerciasis', *J Helminthol* 89 (2015), 375-86.

F. Marks, B. Nyambat, Z. Y. Xu, V. von Kalckreuth, P. E. Kilgore, H. J. Seo, Y. Du, S. E. Park, J. Im, F. Konings, C. G. **Meyer**, T. F. Wierzba, and J. D. Clemens, 'Vaccine Introduction in the Democratic People's Republic of Korea', *Vaccine,* 33 (2015), 2297-300.

A. Marzi, F. Feldmann, P. W. Hanley, D. P. Scott, S. **Gunther**, and H. Feldmann, 'Delayed Disease Progression in Cynomolgus Macaques Infected with Ebola Virus Makona Strain', *Emerg Infect Dis,* 21 (2015), 1777-83.

M. Mendelson, P. V. Han, P. Vincent, F. von Sonnenburg, J. P. **Cramer**, L. Loutan, K. C. Kain, P. Parola, S. Hagmann, E. Gkrania-Klotsas, M. Sotir, and P. Schlagenhauf, 'Regional Variation in Travel-Related Illness Acquired in Africa, March 1997-May 2011', *Emerg Infect Dis,* 20 (2014), 532-41.

C. G. **Meyer**, and T. **Thye**, 'Host Genetic Studies in Adult Pulmonary Tuberculosis', *Semin Immunol,* 26 (2014), 445-53.

V. Micheel, B. **Hogan**, T. Koller, P. Warnke, S. Crusius, R. Hinz, R. M. Hagen, N. G. **Schwarz**, and H. Frickmann, 'Screening Agars for Mrsa: Evaluation of a Stepwise Diagnostic Approach with Two Different Selective Agars for the Screening for Methicillin-Resistant Staphylococcus Aureus (Mrsa)', *Mil Med Res,* 2 (2015), 18.

V. Micheel, B. Hogan, R. A. Rakotoarivelo, R. Rakotozandrindrainy, F. Razafimanatsoa, T. Razafindrabe, J. P. Rakotondrainiarivelo, S. Crusius, S. Poppert, N. G. **Schwarz**, H. Frickmann, and R. M. Hagen, 'Identification of Nasal Colonization with Beta-Lactamase-Producing Enterobacteriaceae in Patients, Health Care Workers and Students in Madagascar', *Eur J Microbiol Immunol (Bp),* 5 (2015), 116-25.

C. M. Monoranu, W. Mullges, M. Keppler, K. Brehm, S. L. Ondrejka, B. **Muntau**, E. **Tannich**, H. K. Muller-Hermelink, and D. **Tappe**, 'Fatal Human Meningoencephalitis Due to Halicephalobus Nematodes, Germany', *Open Forum Infect Dis,* 2 (2015), ofv061.

M. Mora-Rillo, M. Arsuaga, G. Ramirez-Olivencia, F. de la Calle, A. M. Borobia, P. Sanchez-Seco, M. Lago, J. C. Figueira, B. Fernandez-Puntero, A. Viejo, A. Negredo, C. Nunez, E. Flores, A. J. Carcas, V. Jimenez-Yuste, F. Lasala, A. Garcia-de-Lorenzo, F. Arnalich, J. R. Arribas, and J. **Schmidt-Chanasit**, 'Acute Respiratory Distress Syndrome after Convalescent Plasma Use: Treatment of a Patient with Ebola Virus Disease Contracted in Madrid, Spain', *Lancet Respir Med,* 3 (2015), 554-62.

M. Moreau, C. Spencer, J. G. Gozalbes, R. Colebunders, A. Lefevre, S. Gryseels, B. Borremans, S. **Gunther**, D. Becker, J. A. Bore, F. R. Koundouno, A. Di Caro, R. Wolfel, T. Decroo, M. Van Herp, L. Peetermans, and A. M. Camara, 'Lactating Mothers Infected with Ebola Virus: Ebov Rt-Pcr of Blood Only May Be Insufficient', *Euro Surveill,* 20 (2015).

N. Moyen, L. Thirion, P. Emmerich, A. Dzia-Lepfoundzou, H. Richet, Y. Boehmann, Y. Dimi, P. Gallian, E. A. Gould, S. **Gunther**, and X. de Lamballerie, 'Risk Factors Associated with Ebola and Marburg Viruses Seroprevalence in Blood Donors in the Republic of Congo', *PLoS Negl Trop Dis,* 9 (2015), e0003833.

S. **Mueller-Using**, and H. Vöpel, 'The Eu's Migration and Development Policy: New Approaches in Economics for More Effective Public Aid', *Intereconomics,* 49 (2014), 95-101.

E. K. Nakua, E. Otupiri, V. M. Dzomeku, E. **Owusu-Dabo**, P. Agyei-Baffour, A. E. Yawson, G. Folson, and S. Hewlett, 'Gender Disparities of Chronic Musculoskeletal Disorder Burden in the Elderly Ghanaian Population: Study on Global Ageing and Adult Health (Sage Wave 1)', *BMC Musculoskelet Disord,* 16 (2015), 204.

E. K. Nakua, J. T. Sevugu, V. M. Dzomeku, E. Otupiri, H. R. Lipkovich, and E. **Owusu-Dabo**, 'Home Birth without Skilled Attendants Despite Millennium Villages Project Intervention in Ghana: Insight from a Survey of Women's Perceptions of Skilled Obstetric Care', *BMC Pregnancy Childbirth,* 15 (2015), 243.

M. P. Nesnidal, M. Helmkampf, I. **Bruchhaus**, I. Ebersberger, and B. Hausdorf, 'Lophophorata Monophyletic - after All.', in *Deep Metazoan Phylogeny: Backbone of the Tree of Life,* ed. by J. W. Waegele, T. Bartholomaeus, B. Misof and L. Vogt (Berlin: de Gruyter, 2014), pp. 127-42.
Malaria Genomics Epidemiology Network (incl. J. **Evans)**, G. Band, K. A. Rockett, C. C. Spencer, D. P. Kwiatkowski, 'A Novel Locus of Resistance to Severe Malaria in a Region of Ancient Balancing Selection', *Nature,* 526 (2015), 253-7.

Malaria Genomic Epidemiology Network (incl..J, **Evans)**, 'Reappraisal of Known Malaria Resistance Loci in a Large Multicenter Study', *Nat Genet,* 46 (2014), 1197-204.

C. Nichols, L. M. Cruz Espinoza, V. von Kalckreuth, P. Aaby, M. Ahmed El Tayeb, M. Ali, A. Aseffa, M. Bjerregaard-Andersen, R. F. Breiman, L. Cosmas, J. A. Crump, D. M. **Dekker**, A. Gassama Sow, N. Gasmelseed, J. T. Hertz, J. Im, L. P. Kabore, K. H. Keddy, F. Konings, S. Valborg Lofberg, C. G. **Meyer**, J. M. Montgomery, A. Niang, A. Njariharinjakamampionona, B. Olack, G. D. Pak, U. Panzner, J. K. Park, S. E. Park, H. Rabezanahary, J. P. Rakotondrainiarivelo, R. Rakotozandrindrainy, T. M. Raminosoa, M. P. Rubach, M. Teferi, H. J. Seo, A. Sooka, A. Soura, A. Tall, T. Toy, B. Yeshitela, J. D. Clemens, T. F. Wierzba, S. Baker, and F. Marks, 'Bloodstream Infections and Frequency of Pretreatment Associated with Age and Hospitalization Status in Sub-Saharan Africa', *Clin Infect Dis,* 61 Suppl 4 (2015), S372-9.
M. V. Nielsen, S. Amemasor, A. Agyekum, W. **Loag**, F. Marks, N. Sarpong, D. **Dekker**, Y. Adu-Sarkodie, and J. **May**, 'Clinical Indicators for Bacterial Co-Infection in Ghanaian Children with P. Falciparum Infection', *PLoS ONE,* 10 (2015), e0122139.

C. Noelker, L. Morel, A. **Osterloh**, D. Alvarez-Fischer, T. Lescot, M. **Breloer**, M. Gold, W. H. Oertel, C. Henze, P. P. Michel, R. C. Dodel, L. Lu, E. C. Hirsch, S. Hunot, and A. Hartmann, 'Heat Shock Protein 60: An Endogenous Inducer of Dopaminergic Cell Death in Parkinson Disease', *J Neuroinflammation,* 11 (2014), 86.

A. **Nuhs**, C. **Schafer**, D. **Zander**, L. Trube, P. **Tejera Nevado**, S. Schmidt, J. Arevalo, V. Adaui, L. Maes, J. C. Dujardin, and J. **Clos**, 'A Novel Marker, Arm58, Confers Antimony Resistance to Leishmania Spp', *Int J Parasitol Drugs Drug Resist,* 4 (2014), 37-47.

L. **Oestereich**, A. Ludtke, S. **Wurr**, T. **Rieger**, C. Munoz-Fontela, and S. **Gunther**, 'Successful Treatment of Advanced Ebola Virus Infection with T-705 (Favipiravir) in a Small Animal Model', *Antiviral Res,* 105C (2014), 17-21.

L. **Oestereich**, T. **Rieger**, M. Neumann, C. Bernreuther, M. **Lehmann**, S. Krasemann, S. **Wurr**, P. **Emmerich**, X. de Lamballerie, S. **Olschlager**, and S. **Gunther**, 'Evaluation of Antiviral Efficacy of Ribavirin, Arbidol, and T-705 (Favipiravir) in a Mouse Model for Crimean-Congo Hemorrhagic Fever', *PLoS Negl Trop Dis,* 8 (2014), e2804.

A. S. Paul, S. Saha, K. **Engelberg**, R. H. Jiang, B. I. Coleman, A. L. Kosber, C. T. Chen, M. Ganter, N. Espy, T. W. **Gilberger**, M. J. Gubbels, and M. T. Duraisingh, 'Parasite Calcineurin Regulates Host Cell Recognition and Attachment by Apicomplexans', *Cell Host Microbe,* 18 (2015), 49-60.

V. S. Paula, A. P. Silva, D. Michel, J. G. Melgaco, Y. R. Vieira, D. C. Santos, C. C. Araujo, L. F. Pacheco-Moreira, M. Pelajo-Machado, C. M. Nascimento, J. **Schmidt-Chanasit**, and M. A. Pinto, 'Acute Liver Failure in an Immunocompetent Patient', *J Clin Virol,* 60 (2014), 1-3.

A. Perrot, K. R. Schmitt, E. M. Roth, B. Stiller, M. G. Posch, E. N. Browne, C. **Timmann**, R. D. **Horstmann**, F. Berger, and C. Ozcelik, 'Ccn1 Mutation Is Associated with Atrial Septal Defect', *Pediatr Cardiol,* 36 (2015), 295-9.

R. O. Phillips, M. Frimpong, F. S. Sarfo, B. **Kretschmer**, M. Beissner, A. Debrah, Y. Ampem-Amoako, K. M. Abass, W. Thompson, M. S. Duah, J. Abotsi, O. Adjei, B. **Fleischer**, G. Bretzel, M. Wansbrough-Jones, and M. Jacobsen, 'Infection with Mansonella Perstans Nematodes in Buruli Ulcer Patients, Ghana', *Emerg Infect Dis,* 20 (2014), 1000-3.

R. O. Phillips, D. M. Phanzu, M. Beissner, K. Badziklou, E. K. Luzolo, F. S. Sarfo, W. A. Halatoko, Y. Amoako, M. Frimpong, A. M. Kabiru, E. Piten, I. Maman, B. Bidjada, A. Koba, K. S. Awoussi, B. Kobara, J. Nitschke, F. X. Wiedemann, A. B. Kere, O. Adjei, T. Loscher, B. **Fleischer**, G. Bretzel, and K. H. Herbinger, 'Effectiveness of Routine Bcg Vaccination on Buruli Ulcer Disease: A Case-Control Study in the Democratic Republic of Congo, Ghana and Togo', *PLoS Negl Trop Dis,* 9 (2015), e3457.

M. S. Pool, E. Otupiri, E. **Owusu-Dabo**, A. de Jonge, and C. Agyemang, 'Physical Violence During Pregnancy and Pregnancy Outcomes in Ghana', *BMC Pregnancy Childbirth,* 14 (2014), 71.

M. **Prado**, N. **Eickel**, M. De Niz, A. **Heitmann**, C. Agop-Nersesian, R. Wacker, J. Schmuckli-Maurer, R. Caldelari, C. J. Janse, S. M. Khan, J. **May**, C. G. **Meyer**, and V. T. **Heussler**, 'Long-Term Live Imaging Reveals Cytosolic Immune Responses of Host Hepatocytes against Plasmodium Infection and Parasite Escape Mechanisms', *Autophagy,* 11 (2015), 1561-79.

M. Punzel, G. Korukluoglu, D. Y. Caglayik, D. Menemenlioglu, S. C. Bozdag, E. Tekgunduz, F. Altuntas, M. Campos Rde, B. Burde, S. **Gunther**, D. **Tappe**, D. **Cadar**, and J. Schmidt-**Chanasit**, 'Dengue Virus Transmission by Blood Stem Cell Donor after Travel to Sri Lanka; Germany, 2013', *Emerg Infect Dis,* 20 (2014), 1366-9.

C. Reusken, N. Cleton, M. Medonca Melo, C. Visser, C. GeurtsvanKessel, P. Bloembergen, M. Koopmans, J. **Schmidt-Chanasit**, and P. van Genderen, 'Ross River Virus Disease in Two Dutch Travellers Returning from Australia, February to April 2015', *Euro Surveill,* 20 (2015), pii: 21200.

C. Reusken, M. Niedrig, S. Pas, P. Anda, S. Baize, R. Charrel, A. Di Caro, C. Drosten, M. D. Fernandez-Garcia, L. Franco, S. **Gunther**, I. Leparc-Goffart, B. Martina, D. Pannetier, A. Papa, M. P. Sanchez-Seco, O. Vapalahti, and M. Koopmans, 'Identification of Essential Outstanding Questions for an Adequate European Laboratory Response to Ebolavirus Zaire West Africa 2014', *J Clin Virol,* 62 (2015), 124-34.

C. Reusken, I. Zutt, M. Kik, N. Cleton, J. Rijks, J. **Schmidt-Chanasit**, A. Grone, M. Koopmans, and J. Ijzer, '[No Proof for Usutuvirus as Cause of Death in Songbirds in the Netherlands (Fall 2012)]', *Tijdschr Diergeneeskd,* 139 (2014), 28-30.

E. Rico, C. Oliva, K. J. Gutierrez, J. F. Alzate, C. M. Genes, D. Moreno, E. Casanova, A. Gigante, M. J. Perez-Perez, M. J. Camarasa, J. **Clos**, F. Gago, and A. Jimenez-Ruiz, 'Leishmania Infantum Endog Is an Endo/Exo-Nuclease Essential for Parasite Survival', *PLoS One,* 9 (2014), e89526.
C. Roesel, S. Welter, G. Stamatis, D. Theegarten, and D. **Tappe**, 'Management of a Chest-Wall Soft-Tissue Tumor Caused by an Infection with the Larval Tapeworm Pathogen Taenia Crassiceps', *Am J Trop Med Hyg,* 91 (2014), 541-3.

L. **Roggelin**, and J. P. **Cramer**, 'Malaria Prevention in the Pregnant Traveller: A Review', *Travel Med Infect Dis,* 12 (2014), 229-36.

L. **Roggelin**, 'Yellow Fever-Vaccination in Travelers with Drug-Induced Immunosuppression', *Flug-, Reise- und Tropenmedizin,* 21 (2014), 17-23.

L. **Roggelin**, D. Pelletier, J. N. Hill, T. **Feldt**, S. Hoffmann, D. Ansong, J. Sylverken, J. Burhenne, J. **Fischer-Herr**, P. Mehrfar, C. Thiel, G. D. **Burchard**, S. B. Nguah, and J. P. **Cramer**, 'Disease-Associated Qt-Shortage Versus Quinine Associated Qt-Prolongation: Age Dependent Ecg-Effects in Ghanaian Children with Severe Malaria', *Malar J,* 13 (2014), 219.

L. **Roggelin**, C. D. **Vinnemeier**, J. **Fischer-Herr**, B. T. Johnson-Weaver, T. **Rolling**, G. D. **Burchard**, H. F. Staats, and J. P. **Cramer**, 'Serological Response Following Re-Vaccination with Salmonella Typhi Vi-Capsular Polysaccharide Vaccines in Healthy Adult Travellers', *Vaccine,* 33 (2015), 4141-5.

L. **Roggelin**, C. D. **Vinnemeier**, S. Meyer, K. Witte, L. Marx, W. **Theess**, G. D. **Burchard**, T. **Rolling**, and J. P. **Cramer**, 'A 2013/2014 Northern Hemisphere Season Surface Antigen Inactivated Trivalent Influenza Vaccine - Assessing the Immunogenicity and Safety in an Open Label, Uncontrolled Study', *Hum Vaccin Immunother,* 11 (2015), 2370-5.

T. **Rolling**, T. Agbenyega, S. Issifou, A. A. Adegnika, J. Sylverken, D. Spahlinger, D. Ansong, S. J. Lohr, G. D. **Burchard**, J. May, B. Mordmuller, S. Krishna, P. G. Kremsner, and J. P. **Cramer**, 'Delayed Hemolysis after Treatment with Parenteral Artesunate in African Children with Severe Malaria--a Double-Center Prospective Study', *J Infect Dis,* 209 (2014), 1921-8.

T. **Rolling**, T. Agbenyega, S. Krishna, P. G. Kremsner, and J. P. **Cramer**, 'Delayed Haemolysis after Artesunate Treatment of Severe Malaria - Review of the Literature and Perspective', *Travel Med Infect Dis,* 13 (2015), 143-49.

T. **Rolling**, and J. P. **Cramer**, 'Eosinophilia in Returning Travelers - Rational Diagnostics', *Flug-, Reise- und Tropenmedizin,* 21 (2014), 79-83.

C. Rotimi, A. Abayomi, A. Abimiku, V. M. Adabayeri, C. Adebamowo, E. Adebiyi, A. D. Ademola, A. Adeyemo, D. Adu, D. Affolabi, G. Agongo, S. Ajayi, S. Akarolo-Anthony, R. Akinyemi, A. Akpalu, M. Alberts, O. Alonso Betancourt, A. M. Alzohairy, G. Ameni, O. Amodu, G. Anabwani, K. Andersen, F. Arogundade, O. Arulogun, D. Asogun, R. Bakare, N. Balde, M. L. Baniecki, C. Beiswanger, A. Benkahla, L. Bethke, M. Boehnke, V. Boima, J. Brandful, A. I. Brooks, F. C. Brosius, C. Brown, B. Bucheton, D. T. Burke, B. G. Burnett, S. Carrington-Lawrence, N. Carstens, J. Chisi, A. Christoffels, R. Cooper, H. Cordell, N. Crowther, T. Croxton, J. de Vries, L. Derr, P. Donkor, S. Doumbia, A. Duncanson, I. Ekem, A. El Sayed, M. E. Engel, J. C. Enyaru, D. Everett, F. M. Fadlelmola, E. Fakunle, K. H. Fischbeck, A. Fischer, O. Folarin, J. Gamieldien, R. F. Garry, S. Gaseitsiwe, R. Gbadegesin, A. Ghansah, M. Giovanni, P. Goesbeck, F. X. Gomez-Olive, D. S. Grant, R. Grewal, M. Guyer, N. A. Hanchard, C. T. Happi, S. Hazelhurst, B. J. Hennig, C. Hertz, Fowler, W. Hide, F. Hilderbrandt, C. Hugo-Hamman, M. E. Ibrahim, R. James, Y. Jaufeerally-Fakim, C. Jenkins, U. Jentsch, P. P. Jiang, M. Joloba, V. Jongeneel, F. Joubert, M. Kader, K. Kahn, P. Kaleebu, S. H. Kapiga, S. K. Kassim, I. Kasvosve, J. Kayondo, B. Keavney, A. Kekitiinwa, S. H. Khan, P. Kimmel, M. C. King, R. Kleta, M. Koffi, J. Kopp, M. Kretzler, J. Kumuthini, S. Kyobe, C. Kyobutungi, D. T. Lackland, K. A. Lacourciere, G. Landoure, R. Lawlor, T. Lehner, M. Lesosky, N. Levitt, K. Littler, Z. Lombard, J. F. Loring, S. Lyantagaye, A. Macleod, E. B. Madden, C. R. Mahomva, J. Makani, M. Mamven, M. Marape, G. Mardon, P. Marshall, D. P. Martin, D. Masiga, R. Mason, M. Mate-Kole, E. Matovu, M. Mayige, B. M. Mayosi, J. C. Mbanya, S. A. McCurdy, M. I. McCarthy, H. McIlleron, S. O. Mc'Ligeyo, C. Merle, A. O. Mocumbi, C. Mondo, J. V. Moran, A. Motala, M. Moxey-Mims, W. S. Mpoloka, C. L. Msefula, T. Mthiyane, N. Mulder, Gh Mulugeta, D. Mumba, J. Musuku, M. Nagdee, O. Nash, D. Ndiaye, A. Q. Nguyen, M. Nicol, O. Nkomazana, S. Norris, B. Nsangi, A. Nyarko, M. Nyirenda, E. Obe, R. Obiakor, A. Oduro, S. F. Ofori, O. Ogah, S. Ogendo, K. Ohene-Frempong, A. Ojo, T. Olanrewaju, J. Oli, C. Osafo, O. Ouwe Missi Oukem-Boyer, B. Ovbiagele, A. Owen, M. O. Owolabi, L. Owolabi, E. **Owusu-Dabo**, G. Pare, R. Parekh, H. G. Patterton, M. B. Penno, J. Peterson, R. Pieper, J. Plange-Rhule, M. Pollak, J. Puzak, R. S. Ramesar, M. Ramsay, R. Rasooly, S. Reddy, P. C. Sabeti, K. Sagoe, T. Salako, O. Samassekou, M. S. Sandhu, O. Sankoh, F. S. Sarfo, M. Sarr, G. Shaboodien, I. Sidibe, G. Simo, M. Simuunza, L. Smeeth, E. Sobngwi, H. Soodyall, H. Sorgho, O. Sow Bah, S. Srinivasan, D. J. Stein, E. S. Susser, C. Swanepoel, G. Tangwa, A. Tareila, O. Tastan Bishop, B. Tayo, N. Tiffin, H. Tinto, E. Tobin, S. M. Tollman, M. Traore, M. J. Treadwell, J. Troyer, M. Tsimako-Johnstone, V. Tukei, I. Ulasi, N. Ulenga, B. van Rooyen, A. P. Wachinou, S. P. Waddy, A. Wade, M. Wayengera, J. Whitworth, L. Wideroff, C. A. Winkler, S. Winnicki, A. Wonkam, M. Yewondwos, T. sen, N. Yozwiak, and H. Zar, 'Research Capacity. Enabling the Genomic Revolution in Africa', *Science,* 344 (2014), 1346-8.

F. S. Sarfo, K. A. **Eberhardt**, A. Dompreh, E. O. Kuffour, M. Soltau, M. Schachscheider, J. F. Drexler, A. M. Eis-Hubinger, D. Haussinger, E. E. Oteng-Seifah, G. Bedu-Addo, R. O. Phillips, B. Norman, G. **Burchard**, and T. **Feldt**, 'Helicobacter Pylori Infection Is Associated with Higher Cd4 T Cell Counts and Lower Hiv-1 Viral Loads in Art-Naive Hiv-Positive Patients in Ghana', *PLoS ONE,* 10 (2015), e0143388.

N. Sarpong, E. **Owusu-Dabo**, B. Kreuels, J. N. Fobil, S. Segbaya, F. Amoyaw, A. **Hahn**, T. **Kruppa**, and J. **May**, 'Prevalence of Malaria Parasitaemia in School Children from Two Districts of Ghana Earmarked for Indoor Residual Spraying: A Cross-Sectional Study', *Malar J,* 14 (2015), 260.

R. Sassnau, C. **Czajka**, M. Kronefeld, D. Werner, C. Genchi, E. **Tannich**, and H. Kampen, 'Dirofilaria Repens and Dirofilaria Immitis DNA Findings in Mosquitoes in Germany: Temperature Data Allow Autochthonous Extrinsic Development', *Parasitol Res,* 113 (2014), 3057-61.

M. Schachscheider, F.J. Drexler, A. M. Eis-Hubinger, D. Haussinger, G. Bedu-Addo, R. O. Philips, B. Norman, G. D. **Burchard**, and T. **Feldt**, 'Helicobacter Pylori Co-Infection Is Assoicated with Decreased Markers of Immune Activation in Art-Naive Hiv-Positive and in Hiv-Negative Individuals in Ghana', *Clin Infect Dis,* 61 (2015), 1615-23.

C. **Schafer**, P. **Tejera Nevado**, D. **Zander**, and J. **Clos**, 'Reduced Antimony Accumulation in Arm58-Overexpressing Leishmania Infantum', *Antimicrob Agents Chemother,* 58 (2014), 1565-74.

F. Schauer, S. Poppert, K. Technau-Hafsi, M. Mockenhaupt, B. **Muntau**, G. Hacker, D. **Tappe**, and T. Jakob, 'Travel-Acquired Subcutaneous Sparganum Proliferum Infection Diagnosed by Molecular Methods', *Br J Dermatol,* 170 (2014), 741-3.

S. Schmidt, S. S. Essbauer, A. Mayer-Scholl, S. Poppert, J. **Schmidt-Chanasit**, B. Klempa, K. Henning, G. Schares, M. H. Groschup, F. Spitzenberger, D. Richter, G. Heckel, and R. G. Ulrich, 'Multiple Infections of Rodents with Zoonotic Pathogens in Austria', *Vector Borne Zoonotic Dis,* 14 (2014), 467-75.

J. **Schmidt-Chanasit**, P. **Emmerich**, D. **Tappe**, S. **Gunther**, S. Schmidt, D. Wolff, K. Hentschel, D. Sagebiel, I. Schoneberg, K. Stark, and C. Frank, 'Autochthonous Dengue Virus Infection in Japan Imported into Germany, September 2013', *Euro Surveill,* 19 (2014), pii: 20681.

K. **Schuldt**, C. **Ehmen**, J. **Evans**, J. **May**, D. Ansong, J. **Sievertsen**, B. **Muntau**, G. **Ruge**, T. Agbenyega, and R. D. **Horstmann**, 'Endothelial Protein C Receptor Gene Variants Not Associated with Severe Malaria in Ghanaian Children', *PLoS ONE,* 9 (2014), e115770.

J. Schulze, M. Kwiatkowski, J. Borner, H. Schluter, I. **Bruchhaus**, T. Burmester, T. **Spielmann***, C. Pick*, and *equal contributors = shared last authors, 'The Plasmodium Falciparum Exportome Contains Non-Canonical Pexel/Ht Proteins', *Mol Microbiol,* 97 (2015), 301-14.

M. H. Schulze, H. Raschel, H. J. Langen, A. Stich, and D. **Tappe**, 'Severe Leptospira Interrogans Serovar Icterohaemorrhagiae Infection with Hepato-Renal-Pulmonary Involvement Treated with Corticosteroids', *Clin Case Rep,* 2 (2014), 191-6.

B. **Schwalbe**, H. Hauser, and M. **Schreiber**, 'A Virus-Envelope Paired Competitive Assay to Study Entry Efficiency of Human Immunodeficiency Virus Type 1 in Vitro', *J Virol Methods,* 205C (2014), 91-98.

N. **Schwarz**, B. Kreuels, K. Stark, C. Frank, and J. **Schmidt-Chanasit**, 'Authors Reply: Diagnosis of a Single Imported Dengue Case Who Had Travelled to Japan - How Serious Is It for Travellers?', *Euro Surveill,* 19 (2014), 20716.

N. G. **Schwarz**, R. Rakotozandrindrainy, J. N. Heriniaina, N. Randriamampionona, A. **Hahn**, B. **Hogan**, H. Frickmann, D. **Dekker**, S. Poppert, T. Razafindrabe, J. P. Rakotondrainiarivelo, J. **May**, and R. M. Hagen, 'Schistosoma Mansoni in Schoolchildren in a Madagascan Highland School Assessed by Pcr and Sedimentation Microscopy and Bayesian Estimation of Sensitivities and Specificities', *Acta Trop,* 134 (2014), 89-94.

K. Sherifi, D. **Cadar**, S. Muji, A. Robaj, S. Ahmeti, X. Jakupi, P. **Emmerich**, and A. Kruger, 'Crimean-Congo Hemorrhagic Fever Virus Clades V and Vi (Europe 1 and 2) in Ticks in Kosovo, 2012', *PLoS Negl Trop Dis,* 8 (2014), e3168.

A. Singh, E. **Owusu-Dabo**, J. Britton, M. R. Munafo, and L. L. Jones, '"Pictures Don't Lie, Seeing Is Believing": Exploring Attitudes to the Introduction of Pictorial Warnings on Cigarette Packs in Ghana', *Nicotine Tob Res,* 16 (2014), 1613-9.
C. A. Slegers, M. Keuter, S. **Gunther**, J. **Schmidt-Chanasit**, A. J. van der Ven, and Q. de Mast, 'Persisting Arthralgia Due to Mayaro Virus Infection in a Traveler from Brazil: Is There a Risk for Attendants to the 2014 Fifa World Cup?', *J Clin Virol,* 60 (2014), 317-9.

G. Slesak, J. Schafer, A. Langeheinecke, and D. **Tappe**, 'Prolonged Clinical Course of Muscular Sarcocystosis and Effectiveness of Cotrimoxazole among Travelers to Tioman Island, Malaysia, 2011-2014', *Clin Infect Dis,* 60 (2015), 329.
G. Slesak, D. **Tappe**, C. **Keller**, J. **Cramer**, W. Guthoff, P. Zanger, C. Frank, A. Langeheinecke, K. Ernestus, S. Rauthe, A. Stich, and Schäfer, 'Muskuläre Sarkozystose Nach Malaysiareise. Eine Fallserie Aus Deutschland Mit 40 Patienten Von 2011 - 2014.', *Flug- und Reisemedizin,* 22 (2015), 26-32.

G. Slesak, D. **Tappe**, C. **Keller**, J. **Cramer**, W. Guthoff, P. Zanger, M. Frank, K. Ernestus, S. Rauthe, A. Stich, and J. Schäfer, '[Muscular Sarcocystosis after Travel to Malaysia: A Case Series from Germany]', *Dtsch Med Wochenschr,* 139 (2014), 990-5.

P. Sondo, K. Derra, S. Diallo-Nakanabo, Z. Tarnagda, O. Zampa, A. Kazienga, I. Valea, H. Sorgho, E. **Owusu-Dabo**, J. B. Ouedraogo, T. R. Guiguemde, and H. Tinto, 'Effectiveness and Safety of Artemether-Lumefantrine Versus Artesunate-Amodiaquine for Unsupervised Treatment of Uncomplicated Falciparum Malaria in Patients of All Age Groups in Nanoro, Burkina Faso: A Randomized Open Label Trial', *Malar J,* 14 (2015), 325.

P. Sothmann, R. **Krumkamp**, B. Kreuels, N. Sarpong, C. Frank, L. **Ehlkes**, J. Fobil, K. Gyau, A. **Jaeger**, B. Bosu, F. Marks, E. **Owusu-Dabo**, B. Salzberger, and J. **May**, 'Urbanicity and Paediatric Bacteraemia in Ghana-a Case-Control Study within a Rural-Urban Transition Zone', *PLoS ONE,* 10 (2015), e0139433.

T. **Spielmann**, and T. W. **Gilberger**, 'Critical Steps in Protein Export of Plasmodium Falciparum Blood Stages', *Trends Parasitol,* 31 (2015), 514-25.

S. Steinke, R. **Luhken**, and E. Kiel, 'Impact of Freezing on the Emergence of Culicoides Chiopterus and Culicoides Dewulfi from Bovine Dung', *Vet Parasitol,* 209 (2015), 146-9.

V. **Steisslinger**, S. Korten, N. W. **Brattig**, and K. D. **Erttmann**, 'DNA Vaccine Encoding the Moonlighting Protein Onchocerca Volvulus Glyceraldehyde-3-Phosphate Dehydrogenase (Ov-Gapdh) Leads to Partial Protection in a Mouse Model of Human Filariasis', *Vaccine,* 33 (2015), 5861-7.

K. Stijnis, A. C. Dijkmans, A. Bart, L. A. Brosens, B. **Muntau**, C. Schoen, T. F. Barth, T. van Gulik, T. van Gool, M. P. Grobusch, and D. **Tappe**, 'Echinococcus Vogeli in Immigrant from Suriname to the Netherlands', *Emerg Infect Dis,* 21 (2015), 528-30.

M. Sulyok, L. Rozsa, I. Bodo, D. **Tappe**, and R. Hardi, 'Ocular Pentastomiasis in the Democratic Republic of the Congo', *PLoS Negl Trop Dis,* 8 (2014), e3041.

C. Sunderkötter, E. von Stebut, H. Schöfer, M. Mempel, D. Reinel, G. Wolf, V. Meyer, A. Nast, G. **Burchard**, 'S1 guideline diagnosis and therapy of cutaneous larva migrans (creeping disease) ', *J Dtsch Dermatol Ges,* 12 (2014), 86-91.

D. **Tappe**, and D. E. Alquezar-Planas, 'Medical and Molecular Perspectives into a Forgotten Epidemic: Encephalitis Lethargica, Viruses, and High-Throughput Sequencing', *J Clin Virol,* 61 (2014), 189-95.

D. **Tappe**, A. Kapaun, P. **Emmerich**, M. Campos Rde, D. **Cadar**, S. **Gunther**, and J. **Schmidt-Chanasit**, 'O'nyong-Nyong Virus Infection Imported to Europe from Kenya by a Traveler', *Emerg Infect Dis,* 20 (2014), 1766-7.

D. **Tappe**, S. Nachtigall, A. Kapaun, P. Schnitzler, S. **Gunther**, and J. **Schmidt-Chanasit**, 'Acute Zika Virus Infection after Travel to Malaysian Borneo, September 2014', *Emerg Infect Dis,* 21 (2015), 911-3.

D. **Tappe**, M. Plauth, T. Bauer, B. **Muntau**, L. Diebel, E. **Tannich**, and P. Herrmann-Trost, 'A Case of Autochthonous Human Dirofilaria Infection, Germany, March 2014', *Euro Surveill,* 19 (2014), 2-4.

D. **Tappe**, J. Rissland, M. **Gabriel**, P. **Emmerich**, S. **Gunther**, G. Held, S. Smola, and J. **Schmidt-Chanasit**, 'First Case of Laboratory-Confirmed Zika Virus Infection Imported into Europe, November 2013', *Euro Surveill,* 19 (2014).
D. **Tappe**, J. **Schmidt-Chanasit**, and M. Beer, 'Bornavirus Associated with Fatal Human Encephalitis', *N Engl J Med,* 373 (2015), 1880-1.

D. **Tappe**, G. Slesak, J. V. Perez-Giron, J. Schafer, A. Langeheinecke, G. Just-Nubling, C. Munoz-Fontela, and K. Pullmann, 'Human Invasive Muscular Sarcocystosis Induces Th2 Cytokine Polarization and Biphasic Cytokine Changes - an Investigation among Returning Travelers from Tioman Island, Malaysia', *Clin Vaccine Immunol,* 22 (2015), 674-7.

D. **Tappe**, A. Stich, A. Langeheinecke, F. von Sonnenburg, B. **Muntau**, J. Schafer, and G. Slesak, 'Suspected New Wave of Muscular Sarcocystosis in Travellers Returning from Tioman Island, Malaysia, May 2014', *Euro Surveill,* 19 (2014).

D. **Tappe**, M. Sulyok, L. Rozsa, B. **Muntau**, A. Haeupler, I. Bodo, and R. Hardi, 'Molecular Diagnosis of Abdominal Armillifer Grandis Pentastomiasis in the Democratic Republic of Congo', *J Clin Microbiol,* 53 (2015), 2362-4.

M. Teschner, W. Wurfel, L. Sedlacek, S. Suerbaum, D. **Tappe**, and M. W. Hornef, 'Outer Ear Canal Infection with Rhabditis Sp. Nematodes in a Human', *J Clin Microbiol,* 52 (2014), 1793-5.

A. K. **Tilly**, J. **Thiede**, N. **Metwally**, P. **Lubiana**, A. Bachmann, T. Roeder, N. Rockliffe, S. **Lorenzen**, E. **Tannich**, T. Gutsmann, and I. **Bruchhaus**, 'Type of in Vitro Cultivation Influences Cytoadhesion, Knob Structure, Protein Localization and Transcriptome Profile of Plasmodium Falciparum', *Sci Rep,* 5 (2015), 16766.

S. Tschudin-Sutter, A. F. Widmer, P. **Emmerich**, J. **Schmidt-Chanasit**, and M. Battegay, 'Ebola Vaccination', *Lancet,* 386 (2015), 2478-80.

A. Ulges, M. Klein, S. Reuter, B. Gerlitzki, M. Hoffmann, N. Grebe, V. Staudt, N. Stergiou, T. Bohn, T. J. Bruhl, S. Muth, H. Yurugi, K. Rajalingam, I. Bellinghausen, A. Tuettenberg, S. Hahn, S. Reissig, I. **Haben**, F. Zipp, A. Waisman, H. C. Probst, A. Beilhack, T. Buchou, O. Filhol-Cochet, B. Boldyreff, M. **Breloer**, H. Jonuleit, H. Schild, E. Schmitt, and T. Bopp, 'Protein Kinase Ck2 Enables Regulatory T Cells to Suppress Excessive T2 Responses in Vivo', *Nat Immunol,* 16 (2015), 267-75.

J. Utzinger, N. W. **Brattig**, L. Leonardo, X. N. Zhou, and R. Bergquist, 'Progress in Research, Control and Elimination of Helminth Infections in Asia', *Acta Trop,* 141 (2014), 135-45.

C. D. **Vinnemeier**, P. **Brust**, E. **Owusu-Dabo**, N. Sarpong, E. Y. Sarfo, Y. Bio, T. Rolling, D. **Dekker**, Y. Adu-Sarkodie, K. A. **Eberhardt**, J. **May**, and J. P. **Cramer**, 'Group B Streptococci Serotype Distribution in Pregnant Women in Ghana: Assessment of Potential Coverage through Future Vaccines', *Trop Med Int Health,* 20 (2015), 1516-24.

C. D. **Vinnemeier**, J. **Fischer-Herr**, S. Meyer, K. Liebig, W. **Theess**, G. D. **Burchard**, and J. P. **Cramer**, 'Immunogenicity and Safety of an Inactivated 2012/2013 Trivalent Influenza Vaccine Produced in Mammalian Cell Culture (Optaflu(R)): An Open Label, Uncontrolled Study', *Hum Vaccin Immunother,* 10 (2014), 441-8.

I. Vongphoumy, D. A. Dance, S. Dittrich, J. Logan, V. Davong, S. Rattanavong, and J. **Blessmann**, 'Case Report: Actinomycetoma Caused by Nocardia Aobensis from Lao Pdr with Favourable Outcome after Short-Term Antibiotic Treatment', *PLoS Negl Trop Dis,* 9 (2015), e0003729.

I. Vongphoumy, P. Phongmany, S. Sydala, N. Prasith, R. Reintjes, and J. **Blessmann**, 'Snakebites in Two Rural Districts in Lao Pdr: Community-Based Surveys Disclose High Incidence of an Invisible Public Health Problem', *PLoS Negl Trop Dis,* 9 (2015), e0003887.

T. Waehre, A. Maagard, D. **Tappe**, D. **Cadar**, and J. **Schmidt-Chanasit**, 'Zika Virus Infection after Travel to Tahiti, December 2013', *Emerg Infect Dis,* 20 (2014), 1412-4.

B. Warne, L. H. Weld, J. P. **Cramer**, V. K. Field, M. P. Grobusch, E. Caumes, M. Jensenius, P. Gautret, P. Schlagenhauf, F. Castelli, D. G. Lalloo, J. Ursing, F. Chappuis, F. von Sonnenburg, R. Lopez-Velez, C. Rapp, K. C. Smith, P. Parola, and E. Gkrania-Klotsas, 'Travel-Related Infection in European Travelers, Eurotravnet 2011', *J Travel Med,* 21 (2014), 248-54.

C. Weber, R. Konig, M. Niedrig, P. **Emmerich**, and B. S. Schnierle, 'A Neutralization Assay for Chikungunya Virus Infections in a Multiplex Format', *J Virol Methods,* 201C (2014), 7-12.

O. Wengert, M. Kopp, E. Siebert, W. Stenzel, G. **Hegasy**, N. Suttorp, A. Stich, and T. Zoller, 'Human African Trypanosomiasis with 7-Year Incubation Period: Clinical, Laboratory and Neuroimaging Findings', *Parasitol Int,* 63 (2014), 557-60.

K. Wernike, H. **Jost**, N. Becker, J. **Schmidt-Chanasit**, and M. Beer, 'Lack of Evidence for the Presence of Schmallenberg Virus in Mosquitoes in Germany, 2011', *Parasit Vectors,* 7 (2014), 402.

J. Wetzel, S. Herrmann, L. S. Swapna, D. Prusty, A. T. Peter, M. Kono, S. Saini, S. Nellimarla, T. W. Wong, L. Wilcke, O. Ramsay, A. Cabrera, L. Biller, D. Heincke, K. Mossman, T. **Spielmann**, C. Ungermann, J. Parkinson, and T. W. **Gilberger**, 'The Role of Palmitoylation for Protein Recruitment to the Inner Membrane Complex of the Malaria Parasite', *J Biol Chem,* 290 (2015), 1712-28.

M. E. Wilson, L. H. Chen, P. V. Han, J. S. Keystone, J. P. **Cramer**, A. Segurado, D. Hale, M. Jensenius, E. Schwartz, F. von Sonnenburg, and K. Leder, 'Illness in Travelers Returned from Brazil: The Geosentinel Experience and Implications for the 2014 Fifa World Cup and the 2016 Summer Olympics', *Clin Infect Dis,* 58 (2014), 1347-56.
J. Wittsiepe, J. N. Fobil, H. Till, G. D. **Burchard**, M. Wilhelm, and T. **Feldt**, 'Levels of Polychlorinated Dibenzo-P-Dioxins, Dibenzofurans (Pcdd/Fs) and Biphenyls (Pcbs) in Blood of Informal E-Waste Recycling Workers from Agbogbloshie, Ghana, and Controls', *Environ Int,* 79 (2015), 65-73.

B. Wu, J. Rambow, S. Bock, J. Holm-Bertelsen, M. Wiechert, A. B. Soares, T. **Spielmann**, and E. Beitz, 'Identity of a Plasmodium Lactate/H(+) Symporter Structurally Unrelated to Human Transporters', *Nat Commun,* 6 (2015), 6284.

W. L. **Yau**, P. Pescher, A. **MacDonald**, S. Hem, D. **Zander**, S. **Retzlaff**, T. Blisnick, B. Rotureau, H. Rosenqvist, M. Wiese, P. Bastin, J. **Clos**, and G. F. Spath, 'The Leishmania Donovani Chaperone Cyclophilin 40 Is Essential for Intracellular Infection Independent of Its Stage-Specific Phosphorylation Status', *Mol Microbiol,* 93 (2014), 80-97.

L. Zammarchi, G. Stella, A. Mantella, D. Bartolozzi, D. **Tappe**, S. **Gunther**, L. **Oestereich**, D. **Cadar**, C. Munoz-Fontela, A. Bartoloni, and J. **Schmidt-Chanasit**, 'Zika Virus Infections Imported to Italy: Clinical, Immunological and Virological Findings, and Public Health Implications', *J Clin Virol,* 63 (2015), 32-5.

L. Zammarchi, D. **Tappe**, C. Fortuna, M. E. Remoli, S. **Gunther**, G. Venturi, A. Bartoloni, and J. **Schmidt-Chanasit**, 'Zika Virus Infection in a Traveller Returning to Europe from Brazil, March 2015', *Euro Surveill,* 20 (2015).

U. Ziegler, H. Jost, K. Muller, D. Fischer, M. Rinder, D. T. Tietze, K. J. Danner, N. Becker, J. Skuballa, H. P. Hamann, S. Bosch, C. Fast, M. Eiden, J. **Schmidt-Chanasit**, and M. H. Groschup, 'Epidemic Spread of Usutu Virus in Southwest Germany in 2011 to 2013 and Monitoring of Wild Birds for Usutu and West Nile Viruses', *Vector Borne Zoonotic Dis,* 15 (2015), 481-8.

A. Zoufaly, R. Hammerl, F. Sunjoh, J. Jochum, N. Nassimi, C. Awasom, G. Tayong, F. Sauter, S. Schmiedel, J. van Lunzen, G. **Burchard**, and T. **Feldt**, 'High Hiv Prevalence among Children Presenting for General Consultation in Rural Cameroon', *Int J STD AIDS,* 25 (2014), 742-4.

A. Zoufaly, J. Jochum, R. Hammerl, N. Nassimi, Y. Raymond, G. D. **Burchard**, S. Schmiedel, J. F. Drexler, C. N. Kay, N. Taka, C. Awasom, K. Metzner, L. Jan v, and T. Feldt, 'Determinants of Hiv-1 Drug Resistance in Treatment-Naive Patients and Its Clinical Implications in an Antiretroviral Treatment Program in Cameroon', *J Int AIDS Soc,* 17 (2014), 19615.

A. Zoufaly, J. Jochum, R. Hammerl, N. Nassimi, Y. Raymond, G. D. **Burchard**, S. Schmiedel, J. F. Drexler, N. K. Campbell, N. Taka, C. Awasom, K. J. Metzner, J. van Lunzen, and T. **Feldt**, 'Virological Failure after 1 Year of First-Line Arti Is Not Associated with Hiv Minority Drug Resistance in Rural Cameroon', *J Antimicrob Chemother,* 70 (2015), 922-5.

Book chapters and monographs

I. **Bruchhaus**, and J. **Matthiesen**, ‚Cysteine Peptidases in Pathogenesis', in *Amebiasis. Biology and Pathogenesis of Entamoeba,* ed. by T. Nozaki and A. Bhattacharya, Springer, (2015).

G. D. **Burchard**, 'Aktinomykose', in *Reisedermatosen,* ed. by E. von Stebut, Springer, (2015), pp. 79-90.

G. **Burchard**, 'Anthrax', in *Reisedermatosen,* ed. by E. von Stebut, Springer, (2015), pp. 75-8.

G. **Burchard**, ‚Nokardiose', in *Reisedermatosen,* ed. by E. von Stebut, Springer, (2015), pp. 81-2.

G. **Burchard**, ‚Südamerikanische Hämorrhagische Fieber', in *Handbuch Der Infektionskrankheiten. Epidemiologie, Diagnostik, Therapie, Prophylaxe, Gesetzliche Grundlagen,* ed. by Hofmann, Ecomed, (2015), pp. 1-13.

G. **Burchard**, ‚Tierpocken', in *Reisedermatosen,* ed. by E. von Stebut, Springer, (2015), pp. 105-10.

G. D. **Burchard**, and T. Schneider, ‚Infektiöse Enterokolitiden', in *Entzündliche Darmerkrankungen. Klinik, Diagnostik Und Therapie,* ed. by E. F. Stange, Schattauer, (2015), pp. 319-38.

J. **Clos**, and A. **Hombach**, 'Heat Shock Proteins of Leishmania: Chaperones in the Driver's Seat.', in *Leishmania - Current Biology and Control,* ed. by S. Adak and R. Datta, Norfolk, U.K.: Caister Academic Press, (2015), pp. 17.36.

J. P. **Cramer**, 'Enterohemorrhagic Escherichia Coli (Ehec): Hemorrhagic Colitis and Haemolytic Uremic Syndrome (Hus)', in *Emerging Infectious Diseases: Clinical Case Studies,* ed. by O. Ergoenuel and F. Can, Academic Press / Elsevier, (2014).

E. **Helk**, H. **Bernin**, and H. **Lotter**, 'Host Immunity and Tissue Destruction During Amebic Liver Abscess Formation', in *Amebiasis. Biology and Pathogenesis of Entamoeba,* ed. by T. Nozaki and A. Bhattacharya, Springer, (2015).

C. A. **Keller**, and B. **Fleischer**, ‚Rickettsiosen', in *Reisedermatosen,* ed. by E. von Stebut, Springer, (2015), pp. 57-62.

Other Publications

M. Beer, P. M. Kinnunen, O. Vapalahti, D. **Tappe**, J. **Schmidt-Chanasit**, and B. Hoffmann, 'A New Bornavirus Strain Detected in the Eu. An Emerging Threat for the Eu?', *eCDC Rapid Risk Assessment Publication,* 25. Feb. 2015 (2015).

G. **Burchard**, ‚Malaria', *MMW Fortschr Med,* 157 (2015), 54-7.

J. P. **Cramer**, ‚Sollte Jeder Hiv-Positive Gegen Meningokokken Geimpft Werden?', *Spektrum der Virologie,* 9 (2014), 3-6.

U. Ehehal, A. Stöhr, P. Buggisch, J. Petersen, T. Lorenzen, G. **Burchard**, A. Plettenberg, ‚Tbc - weltweit verbreitet', *Hamburger Ärzteblatt, 10* (2014), 12-15.

L. **Ehlkes**, and J. **May,** ‚Seuchen - Gestern, Heute, Morgen', *Aus Politik und Zeitgeschichte. Beilage zur Wochenzeitung Das Parlament,* 65 (2015).

E. **Tannich**, ‚Auswirkungen Des Klimawandels Auf Die Verbreitung Krankheitsübertragender Tiere: Importwege Und Etablierung Invasiver Mücken in Deutschland', *Umwelt & Gesundheit,* 9 (2015).

Diploma und Master Theses 2014 / 2015

Michael Dörpinghaus, ‚Development of a system to characterize the binding properties of Plasmodium falciparum erythrocyte membrane protein 1 (Pfemp1) domains to human endothelial receptors' (Masterarbeit, Fachhochschule Aachen, Campus Jülich, 2015).

Ellen Drews, ‚Etablierung lentiviraler Expressionssysteme zur Charakterisierung der Interaktion zwischen Plasmodium falciparum (Welch, 1897) infizierten Erythrozyten und humanen Endothelrezeptoren' (Masterarbeit, Universität Hamburg, 2014).

Rosa Isela Grote-Galvéz, ‚Cd39 Und Cd73 im Verlauf der Malaria' (Masterarbeit, Universität Hamburg, 2014).

Karolin Hildebrandt, ‚Die Rolle des Lipidstoffwechsels bei der Immunaktivierung und der Regeneration des Amöbenleberabszesses' (Masterarbeit, Universität Hamburg, 2014).

Melissa Kosh, Pdcd1 as target gene for tal-effector nucleases' (Masterarbeit, Universität Hamburg, 2014).

Jannika Krause, ‚Knock-out of programmed death ligand 1 in hepa1-6 cells and the role of Pd-L1 in T cell stimulation' (Masterarbeit, Universität Hamburg, 2015).

Viola Ladenburger, ‚Phosphorylierung und Dephosphorylierung von Imc-Proteinen des Malariaerregers' (Masterarbeit, Universität Hamburg, 2015).

Corinna Lender, ‚Immunstimulatorische Eigenschaften des Entamoeba histolytica Lipopeptido-Phosphoglykans und davon abgeleiteten synthetischen Analoga' (Masterarbeit, Universität Hamburg, 2015).

Lara Linnemann, ‚Die Rolle von Mastzellen und basophilen Granulozyten während einer Litomosoides sigmodontis (Chandler, 1931) Infektion der Maus (Mus Musculus, Linnaeus, 1758)' (Diplomarbeit, Universität Hamburg, 2015).

Lisa Norkus, ‚Untersuchung der Rolle von Tgf-ß rezeptorvermittelten Signalen während der protektiven Immunantwort gegen Strongyloides ratti (Sandground, 1925) Infektionen in der Maus (Mus Musculus; Linnaeus, 1758)' (Masterarbeit, Universität Hamburg, 2014).

Nick Reichard, ‚A screen to characterize unknown proteins in the human malaria parasite Plasmodium falciparum' (Masterarbeit, Universität Lübeck, 2015).

Eugenia Reit, ‚Production of transgenic cho cell lines for investigation of interactions of Plasmodium falciparum with the human endothelial receptors Vcam-1, Pecam-1 and Ve-Cadherin' (Masterarbeit, University of Applied Sciences, Bremen, 2015).

Lisa Roth, ‚Characterization of binding characteristics of human endothelial receptors among human erythrocytes infected with malaria parasite Plasmodium falciparum' (Masterarbeit, Universität Hamburg, 2015).

Norbert Georg Schwarz, ‚Analysing clinical studies with composite endpoints: comparing a weighting strategy by Bakal et al. to a non-weighted approach.' (Masterarbeit, Universität Heidelberg, 2015).

Yvonne Siebken, ‚Untersuchungen zur Regulation von humanen T-Zellen durch Pd-L1 auf Hepatomazellen' (Masterarbeit, Universität Braunschweig, 2015).

Sandra Specht, ‚Trafficking in malaria infected red blood cells: Signals mediating export in Plasmodium falciparum proteins' (Masterarbeit, Universität Hamburg, 2015).

Irina Strauch, ‚Regulation der Immunantwort durch den Igm-spezifischen Rezeptor Toso' (Masterarbeit, Universität Hamburg, 2014).

Thalea Tamminga, ‚Quatification of the quality of standard care randomized controlled clinical trials conducted in sub-Saharan Africa in the field of malaria' (Masterarbeit, University of Liverpool, 2015).

Jenny Thiede, ‚Lokalisierung ausgewählter Proteine mit alternativem, putativen Pexel-Motiv des Malariaerregers Plasmodium falciparum (Welch, 1897)' (Masterarbeit, Unversität Hamburg, 2014).

Tatianna Wong, ‚Essential residues in Imc recruitment of Pfgap45 in the malaria parasite' (Masterarbeit, McMaster University, Hamilton, Canada, 2015).

D. Wozniak, ‚Induction of Cd8+ effector T Cell responses: A possible dependence on Cd4+ T Cell help during Orientia tsutsugamushi infection in Balb/C mice' (Masterarbeit, Universität Hamburg, 2014).

Dissertations 2014 / 2015

Hannah Bernin, ‚Evaluierung des immuntherapeutischen Potentials eines Lipopeptiphosphoglykans aus Entamoeba histolytica' (Dissertation, Universität Hamburg, 2015).

Eugenia Bifeld, ‚Die Rolle des Leishmania major Virulenzfaktors P46 in Wirtsanpassung und intrazellulärem Überleben des Parasiten' (Dissertation, Universität Hamburg, 2014).

Jannika Brandt, ‚Lokalisation und Funktion der Mitogen-aktivierten Proteinkinasen (Mapk) aus Plasmodium berghei (Vincke und Lips, 20148) während der Leberphase' (Dissertation, Universität Hamburg, 2015).

Lisa Claußen, ‚Kardiovaskulare Erkrankungen bei HIV-Patienten in Ghana' (Dissertation, Universität Hamburg, 2015).

Helena Fehling, ‚Analyse der Unterschiede pathogener und apathogener Entamoeba histolytica (Schaudinn, 1903) Klone in der Parasit-Wirt-Interaktion' (Dissertation, Universität Hamburg, 2015).

Sven Flemming, ‚Visualization and characterization of endocytic processes in the human malaria parasite P. falciparum (Welch, 1897)' (Dissertation, Universität Hamburg, 2015).

Catherine Fuentes Alvarado, ‚Effect of Il-22 on T Cell-derived cytokine production' (Dissertation, Universität Hamburg, 2015).

Mirko Girmann, ‚Seroprevalence of antibodies against Chikungunya, Dengue and Rift Valley Fever viruses after febrile illness outbreak, Madagascar' (Dissertation, Universität Hamburg, 2014).

Irma Haben, ‚Einfluss einer chronischen Wurminfektion auf die Impfantwort in der Maus (Mus Musculus; Linnaeus, 1758)' (Dissertation, Universität Hamburg, 2014).

Rebecca Hinz, ‚Risikofaktoren einer antibiotika-assoziierten Diarrhoe - Analyse einer multizentrischen klinischen, randomisierten Arzneimittelstudie' (Dissertation, Universität Hamburg, 2015).

Stephanie Jansen, ‚Establishing an in vivo infection model for Rift Valley Fever Virus (Rvfv) in Drosophila melanogaster and investigating the implications of the defense mechanisms against the virus' (Dissertation, Universität Bremen, 2015).

Nele Janssen, ‚Molekulargenetische identifikation der Blutmahlzeiten von Culex quinquefasciatus (Say, 1823) aus dem Bundesstaat Quintana Roo (Mexiko) und deren Assoziation mit dem Arbovirus-Infektionsstatus' (Masterarbeit, Universität Hamburg, 2014).

Florian Kruse, ‚Charakterisierung einer Phosphatidylinositol-4,5- Biphosphat-angereicherten Struktur der Plasmamembrane des humanen Malariaerregers Plasmodium falciparum (Welch, 1897)' (Dissertation, Universität Hamburg, 2014).

Renke Lühken, ‚Mosquitoes and biting midges: Data collection, identification, species distribution, and breeding ecology' (Dissertation, Carl-von-Ossietzky-Universität Oldenburg, 2015).

Tanyi Kingsley Manchang, ‚Onchocerca ochengi derived excretory/secretory products: Immune response and immune modulation' (Dissertation, Universität Münster, 2015).

Maja Verena Nielsen, ‚Klinische Charakterisierung und Differenzierung von Bakteriämie und Malaria als Ursache schwerer fieberhafter Erkrankungen bei Kindern in Ghana' (Dissertation, Universität Hamburg, 2015).

Martin Rudolf, ‚Untersuchung der evolutionären Adaption von Orthobunyaviren an Insekten- und Säugetierzellen' (Dissertation, Universität Bremen, 2015).

Constanze Schmidt-Rohde, ‚Retrospective analysis of the epidemiology of pulmonary tuberculosis in the Western Cape, South Africa from 1991-2008' (Dissertation, Universität Hamburg, 2015).

Julie Sellau, ‚The cytokine Il-22 modulates the immune response during Plasmodium berghei anka infection in mice' (Dissertation, Universität Hamburg, 2015).

Dipto Sinha, ‚Molecular characterization of membrane associated inner membrane complex proteins in Plasmodium falciparum (Welch, 1897)' (Dissertation, Universität Hamburg, 2014).

Mareike Soltau, ‚Prävalenz von Helicobacter pylori in einer Kohorte von HIV-Patienten in Kumasi, Ghana, unter Berücksichtigung gastrointestinaler Symptome, Cd 4 Zellzahl, Who-Stadium und Virustast' (Dissertation, Universität Hamburg, 2015).

E. Terhalle, ‚Genetische Varianten des Cd14 und deren Einfluss auf die Empfänglichkeit für Lungentuberkulose bei einer Studienpopulation aus Ghana, Westafrika' (Dissertation, Universität Hamburg, 2014).

Ann-Kathrin Tilly, ‚Adhäsion von Plasmodium falciparum (Welch, 1897) infizierten Erythrozyten an den humanen Endothelrezeptor P-Selektin' (Dissertation, Universität Hamburg, 2015).

Inga Toborg, ‚Untersuchung zum Einfluss einer Strongyloides ratti-Infektion auf eine Indomethacin-induzierte Jejunoileitis' (Dissertation, Universität Hamburg, 2014).

Christoph David Vinnemeier, ‚Establishment of a clinical algorithm for the diagnosis of P. falciparum malaria in children from an endemic area using a classification and regression tree (Cart) model' (Dissertation, Georg-August-Universität zu Göttingen, 2015).

J. Wetzel, ‚Sequence specific recruitment of proteins to the inner membrane complex of the malaria parasite Plasmodium falciparum (Welch, 1897)' (Dissertation, Universität Hamburg, 2014).

Habilitations 2014 / 2015

Norbert Georg Schwarz, ‚Infektionsepidemiologische Betrachtungen in Entwicklungsländern.' (Habilitation, Universität Hamburg, 2015).

LECTURES AND SEMINARS OF BNITM STAFF AT THE UNIVERSITY OF HAMBURG

Faculty of Medicine	WS	SS
Elective course: Tropical and travel medicine; 12 weeks * *Egbert Tannich, Gerd Burchard / Jakob Cramer*	x	x
Introduction into tropical medicine / Basic knowledge on tropical medicine; seminar, 1 hour *Rolf Horstmann, Christian Timmann, Jürgen May*	x	
Human genetics of infections and other common diseases; seminar, 2 hours *Rolf Horstmann, Christian Meyer, Thorsten Thye, Christian Timmann*		x
Epidemiology and control of tropical diseases; 2 hours *Jürgen May, Norbert Schwarz, Ralf Krumkamp, Daniel Eibach, Christian Timmann Rolf Horstmann*	x	x
Introduction into molecular parasitology; 2 hours *Egbert Tannich, Anna Bachmann, Iris Bruchhaus, Joachim Clos, Monica Hagedorn, Stefanie Becker, Tobias Spielmann*	x	x
Current results of basic research in parasitology; seminar; 2 hours *Egbert Tannich and co-workers*		x
Current problems in parasitology; seminar, 1 hour *Egbert Tannich, Anna Bachmann, Iris Bruchhaus, Joachim Clos, Monica Hagedorn, Stefanie Becker, Tobias Spielmann*	x	
Introduction into immunology for medical students; lecture, 1 hour *Bernhard Fleischer and co-workers*	x	x
Introduction into immunology add-on studytrack molecular biology; seminar, 2 hours *Bernhard Fleischer and co-workers*	x	
Immunological literature; seminar, 1 hour *Bernhard Fleischer and co-workers*	x	
Immunological aspects of host-pathogen interactions in infectious diseases; 2 hours *Paul Racz, Klara Tenner-Racz*		x
Cross-disciplinary subject immunology / infectious diseases; seminar *Bernhard Fleischer and co-workers*		x
Practical vaccination and travel medicine; course, 2 hours *Jacob Cramer*	x	x

Faculty of Biology and Chemistry	WS	SS
Molecular parasitology; lecture, 3 LP *Iris Bruchhaus, Hannelore Lotter, Joachim Clos*	x	
Molecular parasitology; practical course, 9 LP *Iris Bruchhaus, Hannelore Lotter, Joachim Clos*	x	
Special viroloy; 2 hours *Stephan Günther*		x
Immunological course and literature seminar; block seminar, 6 hours, 4 weeks *Minka Breloer, Thomas Jacobs, Bernhard Fleischer und MitarbeiterInnen*	x	
Immunological literature seminar; 1 hour *Bernhard Fleischer and co-workers*		x
Cellular and molecular immunology; lecture, 2 hours *Minka Breloer, Bernhard Fleischer, Thomas Jacobs*		x
Current problems in immunology; seminar, 1 hour *Bernhard Fleischer and co-workers*		x

*** Elective course:**
Tropical and travel medicine
for medical students at the University of Hamburg

Tutors
Prof. Dr. Gerd-Dieter Burchard (SS 2014, WS 2014/2015) and Dr. Jakob Cramer (SS 2015)
(tutor for clinical tropical medicine)

Prof. Dr. Egbert Tannich
(tutor for theoretical tropical medicine)

Elective course:
Tropical and travel medicine

This course provides students who show a special interest in tropical and travel medicine the opportunity to focus their course work. Therefore, this option has been offered for several years in cooperation with the University Medical Center for a maximum of six selected medical students. The subject of tropical and travel medicine is particularly suited for an interdisciplinary lesson because:

- it is not related to one organ; tropical diseases generally affect many organ systems,
- tropical medicine is a typical cross-disciplinary subject, which includes not only internal medicine training but also theoretical, diagnostic, surgical and microbiological aspects.
- it addresses not only aspects of curative medicine but also of public health.

The course runs over 12 weeks and takes place twice a year starting in October and January.

Announcement and registration via websites of the Faculty of Medicine:
www.uke.uni-hamburg.de/studierende

SEMINARS

Dr. Christina Domingo Carrasco
Robert Koch Institute, Berlin, Germany
"Safety profile and immune response of the Yellow fever vaccine"
(14.01.2014)

Dr. Immo Prinz, PD
Institute of Immunology, Hannover Medical School, Hannover, Germany
"Innate and adaptive ÐÐ T cells"
(18.02.2014)

Dr. Juan Reguera Vidaechea
European Molecular Biology Laboratory (EMBL),
Grenoble Outstation, France
"Structural insights on bunyavirus replication and transcription mechanisms. Towards the generation of new antiviral drugs"
(08.04.2014)

Prof. Dr. Jörg Vogel
Institute of Molecular Infection Biology, University of Würzburg,
Würzburg, Germany
"Dual RNA-seq: the RNA complement of pathogen and
host in one go" (29.04.2014)

Prof. Ralf Altmeyer, PhD
Institut Pasteur of Shanghai, Chinese Academy of Sciences, Shanghai, China
„Approved drug repurposing for pediatric viral infections"
(10.06.2014)

Prof. Alan Cowman, PhD
Walter & Eliza Hall Institute, Melbourne, Australia
"Invasion and Transformation of the Red Blood Cells by the Malaria Parasite" (08.09.2014)

Prof. James Wood, PhD
University of Cambridge, Department of Veterinary Medicine, Cambridge, United Kingdom
"Bats in sub-Saharan Africa and emerging infectious diseases: What can we learn from them and what don't we know?"
(30.09.2014)

Dr. Glenn Marsh
CSIRO – Australian Animal, Food and Health Sciences,
Australian Animal Health Laboratory,
Geelong, Australia
"Progress towards an understanding of the pathogenicity of the Henipaviruses" (23.10.2014)

Dr. Clarissa daCosta, PD
Department of Medical Microbiology, Immunology and Hygiene, TUM School of Medicine, Munich, Germany
"Chronic Schistosomiasis: Treg cells and Beyond"
(16.12.2014)

Dr. Klaus Stefan Drese
Fraunhofer ICT-IMM, Mainz, Germany
"Microfluidic systems for the diagnosis of infectious diseases"
(13.01.2015)

Dr. Anton Götz
New York University School of Medicine, Department of Microbiology, New York, USA
"Immune response in malaria: the role of reactive oxygen species"
(24.03.2015)

Prof. Dr. Sabine Wicker
Corporate Medical Services, University Hospital Frankfurt, Frankfurt, Germany
"Arbeitsbedingte Infektionen von Mitarbeitern im Gesundheitswesen – Berufsrisiko oder vermeidbare Infektionsgefährdung"
(28.04.2015)

Dr. Nikolai Siegel
University of Würzburg, Würzburg, Germany
"Deciphering the function of the trypanosome epigenome in gene regulation and immune evasion"
(09.06.2015)

Dr. Michaela Petter
University of Melbourne, Melbourne, Australia
"Novel mechanisms of gene regulation in the malaria parasite Plasmodium falciparum"
(04.08.2015)

Prof. Alessandro Bartoloni, MD
University of Florence, Florence, Italy
"Italian experience on imported infections"
(01.09.2015)

Prof. Dr. Karen Mossmann, PhD
McMaster University, Hamilton, Canada
"How understanding virus pathogenesis leads to curing cancer"
(19.10.2015)

Prof. Wouter de Laat, PhD
Hubrecht Institute, Utrecht, The Netherlands
"Functional significance of the 3D genome"
(27.10.2015)

STAFF ACTIVITIES

Hassan Al-Emran
Clinical Research & Epidemiology Section
Research Group May (Infectious Disease Epidemiology)

Awards
Charles C Shepard Award, Center for Disease Control and Prevention (CDC) (06/2014)

Dr. Anna Bachmann
Molecular Parasitology Department

Invited Speaker
Royal Melbourne Hospital, Melbourne, Australia (05/2014)
Centre for Medical Parasitology, University of Copenhagen, Copenhagen, Denmark (12/2014)

Dr. Jörg Blessmann
Clinical Research & Epidemiology Section

Organizer and Chairman
Chairman, 8th National Health Research Forum, Vientiane, Lao PDR (10/2014)

Invited Speaker
8th National Health Research Forum, Vientiane, Lao PDR (10/2014)
9th National Health Research Forum, Vientiane, Lao PDR (10/2015)
18th World Congress of the International Society of Toxinology, Oxford, UK (09/2015)

Teaching
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
BNITM, Medicine in the Tropics – Course for Medical Support Staff

PD Dr. Norbert Brattig
Clinical Research & Epidemiology Section

Offices and Posts
Editor, Acta Tropica (since 2007)
Editorial Board, The Open Tropical Medicine Journal (since 2007)
Editorial Board, Asian Pacific Journal of Tropical Medicine (since 2007)
Editorial Board, Medicina Universitaria (since 2011)

Organizer and Chairman
Scientific Committee, Follow-up Conference on German African Cooperation Projects in Infectology, Dar es Salam, Tansania (01-02/2014)
Organizer Editor Meeting Elsevier, Swiss Tropical and Public Health Institute (TPH), Basel, Switzerland (03/2014)
Co-Organizer Editor Conference Acta Tropica, Liverpool, UK (04/2015)
Organizer Editor Meeting Acta Tropica, Basel, Switzerland (05/2015)
Organizer Editor Meeting Acta Tropica, Basel, Switzerland (09/2015)

Teaching
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
University of Hamburg, Department of Chemistry/Pharmacy
University of Veterinary Medicine Hannover, Foundation (TiHo)

PD Dr. Minka Breloer
Immunology & Virology Section
Head, Research Group Breloer (Helminth Immunology)

Invited Speaker
DGTM, Düsseldorf (03/2014)
Graduierten-Kolleg 1949 Summerschool, Essen (06/2014)
ZIBI Summerschool, Berlin (06-07/2014)
Research Center Borstel - Leibniz-Center for Medicine and Biosciences, Hamburg (11/2014)
Universitätsklinikum Essen, Institut für Virologie, Essen (07/2015)
German Primate Centre (DPZ), Goettingen (11/2015)
8th Short Course for Young Parasitologists, Hamburg (03/2015)

Teaching
University of Hamburg, Department of Biology and Faculty of Medicine
BNITM, Diploma Course on Tropical Medicine

Prof. Dr. Iris Bruchhaus
Molecular Parasitology Department

Offices and Posts
Board of Trustees, BNITM (since 2008)
Ombudsman BNITM (since 2003)

Invited Speaker
Leibniz Center Infection Symposium, BNITM (01/2014)
Swiss Tropical and Public Health Institute, Basel, Switzerland (03/2014)
Marine Biological Laboratory, Woods Hole, MA, USA (07/2014)
JGBM Winterkolloquium, Hamburg (10/2014)
JGBM Summer Symposium, Hamburg (05/2015)
8th Short Course for Young Parasitologists, Hamburg (03/2015)
13th Malaria Meeting, Hamburg (11/2015)

Teaching
University of Hamburg, Department of Biology/Chemistry
BNITM, Diploma Course on Tropical Medicine
LCI Graduate School

Prof. Dr. Gerd Burchard
Clinical Research & Epidemiology Section

Offices and Posts
Associate Member, Drug Commission of the German Medical Association (since 1994)
Member, Scientific Advisory Board, German Academy for Aviation and Travel Medicine (since 1997)
Head, Committee "Guideline Development" of the German Society for Tropical Medicine and International Health (DTG) (since 2005)
Member, Committee "Travel Medicine" of the German Society for Tropical Medicine and International Health (DTG) (since 2005)
Editorial Board, Journal of Travel Medicine (since 2006)
Member, Panel of Experts "Off-Label Internal Medicine" at the Federal Institute for Drugs and Medical Devices (Bundesinstitut für Arzneimittel und Medizinprodukte, BfArM) (since 2010)
Member, Ethics Committee of General Medical Council Hamburg (since 2013)
Chairman, German Society for Tropical Medicine and International Health (DTG) (since 2014)
Ausschusses für medizinische Ausstattung in der Seeschiffahrt, Hamburg (since 2014)

Invited Speaker
Akademie für Infektionsmedizin e.V., Deutsche Gesellschaft für Infektiologie (01/2014 + 04/2014 + 04/2015)
Nordwestdeutsche Gesellschaft für ärztliche Fortbildung e.V. (05/2014)
69. Tagung der Deutschen Gesellschaft für Gastroenterologie, Verdauungs- und Stoffwechselkrankheiten (09/2014)
Infektiologie-Kurs der Akademie für Infektionsmedizin e.V. (12/ 2014)
Fortbildungsakademie der Ärztekammer Hamburg (12/2014)
Governmental Institute of Public Health of Lower Saxony (Niedersächsisches Landesgesundheitsamt, NLGA), Hannover (06/2015)
19. Jahrestagung der Arbeitsgemeinschaft für Dermatologische Infektiologie und Tropendermatologie e. V. (09/2015)
Clinical Trial Center North, Prüfarztkurs nach AMG, UKE Hamburg (09/2015)
13th Malaria Meeting of PEG/DTG/DGP (11/2015)
Gemeinsame Jahrestagung der Deutschen Gesellschaft für Infektiologie und des Deutschen Zentrums für Infektionsforschung (11/2015)
8. Deutsches Infektiologie-Update (12/2015)

Teaching
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
BNITM, Medicine in the Tropics – Course for Medical Support Staff
Bundeswehrkrankenhaus Hamburg, Basislehrgang Einsatzvorbereitung

PD Dr. Joachim Clos
Parasitology Section
Head, Research Group Clos (Leishmaniasis)

Offices and Posts
Member, Hamburg Commission for Questions Concerning Genetic Engineering (since 2005)

Invited Speaker
25th National Congress of Parasitology, Lucknow, India (10/2014)
PDE4NPD Meeting, Fraunhofer IME, Hamburg (11/2015)
CNPEM, Campinas, Brazil (04/2015)
COST Action CM1307 Training School, Fraunhofer IME Hamburg (09/2015)

Teaching
University of Hamburg, Department of Biology/Chemistry
BNITM, Diploma Course on Tropical Medicine

PD Dr. Jakob P. Cramer
Clinical Research & Epidemiology Section

Offices and Posts
Deputy Head, Committee "Travel Medicine", German Society for Tropical Medicine and International Health (DTG)
Editorial Board, Flug-, Tropen-, Reisemedizin
Member, Strategic Advisory Group, GeoSentinel, International Surveillance Network

Teaching
BNITM, Diploma Course on Tropical Medicine
University of Hamburg, Faculty of Medicine

Dr. Kirsten A. Eberhardt
Clinical Research & Epidemiology Section

Invited Speaker
Gilead Sciences, Berlin (10/2014)

Dr. Daniel Eibach
Clinical Research & Epidemiology Section
Research Group May (Infectious Disease Epidemiology)

Teaching
University Medical Center Hamburg-Eppendorf (UKE)
GIBACHT

Dr. Petra Emmerich-Paloh
Immunology & Virology Section
Virology Department

Invited Speaker
Zentralinstitut der Bundeswehr, Koblenz (04/2014)
Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand (12/2014)
Joint International Tropical Medicine Meeting (JITMM), Bangkok, Thailand (12/2014)
1st International Conference on CCH Fever Programme, Thessaloniki, Greece (02/2015)
Personalmanagement-Congress, Berlin (06/2015)
Euroimmun, Lübeck (07/2015)
Joint International Tropical Medicine Meeting (JITMM), Bangkok, Thailand (12/2015)

Teaching
Bundeswehrkrankenhaus Hamburg, Basislehrgang Einsatzvorbereitung (06/2015, 11/2015)
University of Rostock, Faculty of Medicine and Medical Biotechnology

Prof. Dr. Bernhard Fleischer
Immunology & Virology Section
Head, Immunology Department
Director, Institute for Immunology, University Medical Centre Hamburg-Eppendorf
Head, National Reference Centre for Tropical Infections

Offices and Posts
Secretary General, German Society for Tropical Medicine and International Health (since 2014)
Chairman, Network for Parasites, Tropical and Vector-borne Infections, Infektionsepidemiologisches Netzwerk des RKI (2009-2014)
Chairman, Selection Committee, Georg Forster Research Fellowship Program, Alexander von Humboldt Foundation (since 2003)
Coordinator, European Foundation Initiative for Neglected Tropical Diseases (EFINTD) Fellowship Programme (since 2009)
Editor-in-Chief, Medical Microbiology and Immunology (since 1990)
Editorial Board, International Journal of Medical Microbiology (since 2000)
Editorial Board, Asian Pacific Journal of Tropical Medicine (since 2008)
Member, Scientific Advisory Board, Provecs GmbH, Hamburg (since 2010)
Member, Scientific Advisory Board, Cellprotect GmbH, Zürich, Switzerland (since 2010)
Member, Selection Committee Africa, DAAD, Bonn (since 2010)
Member, Scientific Advisory Board, Research Center Borstel - Leibniz-Center for Medicine and Biosciences, Hamburg (since 2011)
Member, Scientific Advisory Board, Hans Knöll Institute, Jena (since 2011)
Member, Board of Trustees, Werner Otto Foundation, Hamburg (since 2003)
Member, Board of Trustees, Stiftung Diagnostik hilft (since 2015)

Invited Speaker
Kursus, Deutsche Gesellschaft für Infektiologie, Hamburg (04/2014)
Institute for Tropical Medicine, University of Sao Paulo, Brazil (05/2015)
University of West Hungary, Sopron, Hungary (10/2014)
Academy of Sciences and Humanities, Hamburg (11/2014)
Australian Society for Immunology, Annual Meeting, Canberra, Australia (11/2015)
John Curtin School of Medical Research, Canberra, Australia (12/2015)
Organizer and Chairman
Organizer, EFIS-EJI South East European School of Immunology, Timisoara, Romania (09/2014)
Chairman, Interdisciplinary Workshops on Current Research Projects, Humboldt Foundation, Nairobi, Kenia (03/2014)
Chairman, Discussion on Neglected Tropical Diseases, G7 Outreach Conference, Leopoldina, Berlin (04/2015)
Organizer, EFIS-EJI South East European School of Immunology, Becici, Montenegro (10/2015)

Teaching
University of Hamburg, Faculties of Medicine and Biology
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
BNITM, Medicine in the Tropics – Course for Medical Support Staff
EFIS-EJI South East European School of Immunology, Timisoara, Romania (09/2014)
EFIS-EJI South East European School of Immunology, Becici, Montenegro (09/2015)

Prof. Dr. Rolf Garms
Parasitology Section

Awards
Outstanding Achievement Award, Ministry of Health, Uganda (08/2014)

Offices and Posts
Member, Onchocerciasis Elimination Expert Advisory Committee, Kampala, Uganda (since 2008)

Teaching
BNITM, Diploma Course on Tropical Medicine

Prof. Dr. Tim-Wolf Gilberger
Parasitology Section
Head, Cellular Parasitology Department

Offices and Posts
Executive Board Member, Michael G. DeGroote Institute for Infectious Disease Research, McMaster University, Canada (since 2013)
Chair, Presidential Biosafety Advisory Committee, McMaster University, Canada (2013–2014)
Member, CSSB Directorate, University of Hamburg (since 2014)
Deputy Member, Board of Directors, BNITM (since 2015)

Invited Speaker
Banff Conference Infectious Diseases, Canada (06/2014)
ICOPA, Mexico City, Mexico (08/2014)
PIER Graduate School Symposium, DESY, Hamburg (10/2014)
IIMB, University of Würzburg (01/2015)
CGG Lecture Series, University of Hamburg (04/2015)
MHH Symposium, Hannover (11/2015)

Organizer and Chairman
Chairman, CSSB Symposium, Hamburg (04/2015)
Member, Scientific Committee, Annual Meeting, Paul-Ehrlich-Society for Chemotherapy (PEG)

Teaching
McMaster University, Faculty of Health Science
University of Hamburg, Department of Biology

Dr. Irma Haben
Immunology & Virology Section
Research Group Breloer (Helminth Immunology)

Awards
Doctoral Award of the "Association of Friends of the Hamburg Tropical Institute" (Vereinigung der Freunde des Tropeninstituts Hamburg, VdF) Hamburg (07/2015)
Doctoral Award of the DGHM, Hannover (10/2015)

Dr. Monica Hagedorn
Parasitology Section
Head, Research Group Hagedorn (Cell Biology)
Invited Speaker
Symposium MIC 2015, University of Bern, Switzerland (12/2015)

Teaching
University of Lübeck
University of Hamburg

Dr. Benedikt Hogan
Clinical Research & Epidemiology Section
Research Group May (Infectious Disease Epidemiology)

Teaching
Freie Universität Berlin

Prof. Dr. Rolf Horstmann
Chairman, Board of Directors, Bernhard Nocht Institute
Clinical Research & Epidemiology Section
Head, Molecular Medicine Department

Offices and Posts
Deputy Spokesperson, Section C - Life Sciences, Leibniz Association (since 2013)
Spokesperson, Leibniz Centre Infection (2012-2014)
Member, Task Force, Centre for Structural Systems Biology (CSSB) (until 2014)
Member, Advisory Board (ex officio), Robert Koch Institute (since 2008)
Partner site speaker, German Center for Infection Research (DZIF) (since 2012)
Deputy Chair, Internal Advisory Board, German Center for Infection Research (DZIF) (since 2012)

Invited Speaker
Seattle Biomedical Research Institute (02/2014)
Deutsches Diabetes-Zentrum (03/2014)
Leibniz-Institut für Analytische Wissenschaften (ISAS) (03/2014)
11. Hamburger Studententagung zur Innovativen Medizin und Biotechnologie (05/2014)

PD Dr. Thomas Jacobs
Immunology & Virology Section
Immunology Department

Offices and Posts
Evaluation Committee, Centros de Excelencia, National Agency for Scientific Evaluation (ANEP), Spain (since 2014)
Evaluation Committee, Life & Health call; FCT – Fundacao para a Ciência e a Tecnologia, Lisboa, Portugal (since 2014)
Board of Trustees, BNITM (since 2014)

Invited Speaker
University of Duisburg-Essen (04/2014)
Max Planck Institute of Colloids and Interfaces (12/2014)

Teaching
University of Hamburg, Department of Biology
University of Hamburg, Faculty of Medicine

Dr. Christian Keller
Immunology & Virology Section
Immunology Department

Teaching
University of Hamburg, Faculty of Medicine

Dr. Benno Kreuels
Clinical Research & Epidemiology Section
Research Group May (Infectious Disease Epidemiology)

Offices and Posts
Member, Committee "Young Professionals" of the German Society for Tropical Medicine and International Health (DTG) (since 2014)
Member, Committee "Guideline Development" of the German Society for Tropical Medicine and International Health (DTG) (since 2015)
Invited Speaker
Euroimmun, Stuttgart (11/2015)
ECDC Training Course Ebola and Marburg Diagnostic, Robert Koch Institute, Berlin (02/2015)

Teaching
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
BNITM, Medicine in the Tropics – Course for Medical Support Staff
University Medical Center Hamburg-Eppendorf (UKE)

Ralf Krumkamp
Clinical Research & Epidemiology Section
Research Group May (Infectious Disease Epidemiology)

Offices and Posts
Spokesperson, German Society for Epidemiology (DGEpi) e.V. – Task Force Infectious Disease Epidemiology (since 2014)

Organizer and Chairman
Chairman, Session Infectious Disease Epidemiology, 10th Annual Meeting of the German Society for Epidemiology (DGEpi) e.V. (09/2015)

Teaching
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
BNITM, Medicine in the Tropics – Course for Medical Support Staff

PD Dr. Hanna Lotter
Parasitology Section

Offices and Posts
Deputy Head, Animal Facilities, BNITM (since 2009)
Member, Committee Animal Experiments, Hamburg Authority of Social Affairs, Family, Health and Consumer Protection (since 2014)
Advisory Board on Animal Welfare, Free and Hanseatic City of Hamburg (since 2015)

Invited Speaker
Kölner Infektiologentagung (KIT), Köln (06/2014)
Freie Universität Berlin, Fachbereich für Veterinärmedizin, Institut für Immunologie (04/2015)

Organizer and Chairman
Scientific Committee, Kick-off meeting Horizon 2020, Utrecht, Netherlands (07/2014)

Teaching
University of Hamburg, Department of Biology/Chemistry
LCI Graduate School
SFB 841 Graduate School

Prof. Dr. Jürgen May
Clinical Research & Epidemiology Section
Head, Research Group May (Infectious Disease Epidemiology)

Offices and Posts
Deputy Chairman, Task Force "Malaria Therapy", Section "Anti-Parasite Chemotherapy", Paul-Ehrlich-Society for Chemotherapy (PEG) (since 2003)
Member, Board of Directors, German Society for Tropical Medicine and International Health (DTG) (since 2012)
Editorial Board, Tropical Medicine & International Health (since 2006)
Head, Committee "Research in the Tropics", BNITM (since 2008)
Member, Scientific Advisory Board, Kumasi Centre for Collaborative Research (KCCR) (since 2008)
Member, Committee "External Funding & Foreign Travel", BNITM (since 2006)
Member, Data Safety Monitoring Board (DSMB), VSV Ebola Consortium (2014-2015)
Speaker and Member, German network against neglected tropical diseases (DNTDs) (since 2014)
Invited Speaker
Parlamentarisches Frühstück, Jakob-Kaiser-Haus im Deutschen Bundestag, Berlin (05/2014)
Nogouchi Institute, Accra, Ghana (10/2014)
Vorstand Hanse Merkur, Hamburg (11/2014)
DZIF Annual Meeting, Helmholtz Centre for Infection Research, Braunschweig (11/2014)
German network against neglected tropical diseases (DNTDs) (06/2015)

Organizer and Chairman
Member Organisation Committee, Chairman, 12. Kongress für Infektionskrankheiten und Tropenmedizin (KIT 2014), Köln (06 / 2014)
Chairman, Autumn Meeting of PEG and DTG, Hamburg (11/2015)
Scientific Committee, Organizer, Chairman, Workshop German-African Collaborations in Zoonosis Research, Hamburg (09/2015)

Teaching
University of Hamburg / University Medical Center Hamburg-Eppendorf (UKE)
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
LCI Graduate School
BNITM, Medicine in the Tropics – Course for Medical Support Staff
BNITM, Course Refugee Health
BNITM, 2. Symposium Impf-/Reisemedizin

Prof. Dr. Christian G. Meyer
Clinical Research & Epidemiology Section
Molecular Medicine Department

Offices and Posts
Editor, Tropical Medicine and International Health (since 2011)
Editor, Case Reports in Infectious Diseases (since 2012)

Invited Speaker
Medizin Aktuell 2014, Filderstadt (01/2014)
Day of Travelers' Health 2014, Hamburg (02/2014)
Symposium Molecular Pathophysiology of Infectious Diseases (03/2014)
Berufsverband Deutscher Internisten, Berlin (03/2014)
Österreichische Gesellschaft für Dermatologie, Annual Meeting (05/2014)

Dr. Anke Osterloh
Immunology & Virology Section
Immunology Department

Teaching
University of Hamburg, Department of Biology

Prof. Dr. Jonas Schmidt-Chanasit
Immunology & Virology Section
Head, Research Group Schmidt-Chanasit (Arbovirology)

Awards
Wissenschaftspreis "Klinische Virologie", Gesellschaft für Virologie und Deutsche Vereinigung zur Bekämpfung der Viruskrankheiten (10/2014)

Offices and Posts
Advisory Board, German Research Platform for Zoonoses, Berlin (since 2015)
Advisory Board, European Network for Diagnostics of "Imported" Viral Diseases (ENIVD) (since 2015)
Editorial Board, Asian Pacific Journal of Tropical Medicine (since 2007)

Invited Speaker
Ärzteverein Celle (11/2014)
Institut für Virologie, Bonn (11/2014)
Mahidol University, Bangkok, Thailand (07/2014)
AFRIMS, Bangkok, Thailand (07/2014)
KIT, Köln (06/2014)
Euroimmun, Berlin und Stuttgart (10/2015, 11/2015)
German Research Platform for Zoonoses, Berlin (10/2015)
Leopoldina, Berlin (10/2015)
Universitätsklinikum Essen, Klinik Infektiologie, Essen (09/2015)
Autonomous University of Nuevo León, Monterrey, Mexico (08/2015)
Österreichische Gesellschaft für Gastroenterologie und Hepatologie, Salzburg, Austria (06/2015)
Rotarier Herzogtum Lauenburg, Mölln (02/2015)
Deutsche Gesellschaft für Anästhesiologie und Intensivmedizin e. V. (DGAI), Düsseldorf (05/2015)
Governmental Institute of Public Health of Lower Saxony (Niedersächsisches Landesgesundheitsamt, NLGA), Hannover (05/2015)
Koninklijke Nederlands Vereiniging voor Microbiologie, Arnheim, Netherlands (04/2015)
Chinesische Gesellschaft für Entomologie, Guangzhou, China (05/2015)
Mahidol University, Bangkok, Thailand (12/2015)
Teaching
University of Frankfurt/Main, Faculty of Medicine
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
BNITM, Medicine in the Tropics – Course for Medical Support Staff

Dr. Stefanie Schoppen
Clinical Research & Epidemiology Section

Invited Speaker
Follow-Up Conference German African Cooperation Projects in Infectology, Dar es Salam, Tanzania (01-02/2014)

Dr. Kathrin Schuldt
Clinical Research & Epidemiology Section
Molecular Medicine Department

Invited Speaker
European Congress of Tropical Medicine and International Health, Basel, Switzerland

Teaching
University of Hamburg, Department of Biology

PD Dr. Norbert Schwarz
Clinical Research & Epidemiology Section
Research Group May (Infectious Disease Epidemiology)

Offices and Posts
Member, Staff Council, BNITM (since 2012)
Coordinator, German Partnership Program for Excellence in Biological and Health Security (GIBACHT)

Teaching
Establishment of a computer study platform at BNITM (together with Nicole Gilberger und Vittorio Muth)
University Medical Center Hamburg-Eppendorf (UKE) (UKE)
Introduction to Epidemiology for Master program Public Health, University of Applied Sciences Hamburg (HAW)
BNITM, Diploma Course on Tropical Medicine
BNITM, Medicine in the Tropics – Course for Medical Support Staff
GIBACHT Courses

Dr. Tobias Spielmann
Parasitology Section
Head, Research Group Spielmann (Malaria)

Offices and Posts
Editor, PLoS ONE (since 2011)
Editor, Molecular and Biochemical Parasitology (since 2013)
Deputy Member, CSSB Directorate, University of Hamburg (since 2014)

Invited Speaker
ZIBI Summer Symposium 2014, Frontiers of Parasitology, Berlin (06-07/2014)
Paratrop 2014, Zürich, Switzerland (07/2014)
11th International Coccidiosis Conference 2014, Dresden (09/2014)
Grant evaluation of research focus SPP11580 (04/2014)
Organizer and Chairman
Chairman, Meeting of the SPP1580, Bonn (04/2015)
Chairman, Collaboration Partner-Symposium Malaria Virulence in Mice, Rotberg, Switzerland (03/2015)
Chairman, GRK Retreat, Travemünde (10/2015)

Teaching
University of Hamburg

Prof. Dr. Egbert Tannich
Parasitology Section
Head, Molecular Parasitology Department

Offices and Posts
Editorial Board Member, Molecular and Biochemical Parasitology (since 1994)
Editorial Board Member, Parasitology International (since 1998)
Advisory Board, Commission for Quality Assurance, Area Interlaboratory Comparisons "Parasitology", DGHM (since 2003)
Advisory Board, German Society for Tropical Medicine and International Health (DTG) (since 2005)
Consultant, Society for Promoting Quality Assurance in Medical Laboratories e.V. (Institut für Standardisierung und Dokumentation im Medizinischen Laboratorium, INSTAND) (since 2005)
Head, Interlaboratory Comparisons, Society for Promoting Quality Assurance in Medical Laboratories e.V. (Institut für Standardisierung und Dokumentation im Medizinischen Laboratorium, INSTAND) (since 2005)
Consultant, German Medical Association (Bundesärztekammer) (since 2009)
Consultant, BG Chemie, Heidelberg (since 2011)
Chairman, German Society for Parasitology (DGP) (since 2013)
Consultant, KfW Development Bank (since 2014)
Member, National Expert Commission "Mosquitoes as Vectors of Pathogens" (since 2015)

Invited Speaker
Day of Travellers' Health, BNITM, Hamburg (02/2014, 10/2014)
Annual Meeting, German Society for Tropical Medicine and International Health (DTG), Düsseldorf (03/2014)
ICOPA, Mexico City, Mexico (08/2014)
2nd Münchner POCT-Meeting, Munich (09/2014)
Lions-Club, Hamburg (09/2014)
Institut Pasteur, Paris, France (09/2014)
Annual Meeting, German Society for Medical Microbiology and Hygiene (DGHM), Dresden (10/2014)
42nd Meeting of the Dermatology Society of Mecklenburg-Western Pomerania, Rostock (11/2014)
LCI-Symposium Emerging Infections, Hamburg (01/2015)
Short Course for Young Parasitologists, Hamburg (03/2015)
Refresher Course, BNITM, Hamburg (06/2015, 10/2015)
Course Refugee Health, BNITM, Hamburg (11/2015)
Expert Discussion: Strategy on Invasive Mosquitoes, Federal Ministry of Food and Agriculture, Berlin (09/2015)
Bundeswehrkrankenhaus Hamburg, (02/2014, 06/2014, 09/2014, 06/2015, 11/2015)
International Leopoldina Symposium, Berlin (10/2015)
Berliner Medizinische Gesellschaft, Berlin (12/2015)
Organizer and Chairman
Chairman, LCI-Symposium Pathogenesis of Infection (01/2014)
Chairman, Annual Meeting, German Society for Tropical Medicine and International Health (DTG) (03/2014)
Chairman, Germany and MMV Scientists, Berlin (06/2014)
Scientific Committee, PARATROP, Zurich, Switzerland (07/2014)
Chairman, ICOPA, Mexico City, Mexico (08/2014)
Chairman, LCI-Symposium Emerging Infections, Hamburg (01/2015)
Chairman, Scientific Committee, Arthropod-borne infectious diseases and Arthropods as disease agents in human and animal health, Berlin (10/2015)
Scientific Committee, XVIII International Seminar on Amebiasis, Campeche, Mexico (10/2015)
13th Malaria Meeting, Hamburg (11/2015)

Teaching
University of Hamburg, Faculty of Medicine
BNITM, Diploma Course on Tropical Medicine

PD Dr. Dennis Tappe
Immunology & Virology Section

Offices and Posts
Head, Task Force "Echinococcosis", Paul-Ehrlich-Society for Chemotherapy (PEG), Frankfurt/Main (2010-2014)
Deputy Head, Task Force "Helminth", Paul-Ehrlich-Society for Chemotherapy (PEG), Frankfurt/Main (since 2014)

Invited Speaker
Institut für Medizinische Mikrobiologie, Virologie und Hygiene und Abteilung für Tropenmedizin, Universität Rostock (01/2014)
Hannover Medical School (MHH) (11/2015)
Institut für Medizinische Mikrobiologie und Hygiene, Universität Regensburg (01/2015)
XX. Symposium Reise- und Impfmedizin – Internationale Gesundheit, Auswärtiges Amt, Berlin (04/2015)

Teaching
BNITM, Day of Travellers' Health
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
BNITM, Medicine in the Tropics – Course for Medical Support Staff
University of Würzburg, Faculty of Medicine
University of Hamburg, Faculty of Medicine

Dr. Thorsten Thye
Clinical Research & Epidemiology Section
Molecular Medicine Department

Offices and Posts
Assoc. Editor, Tropical Medicine and International Health

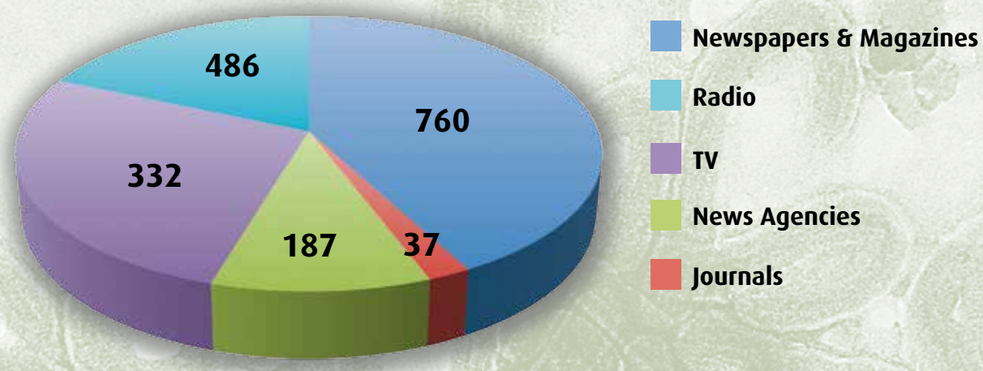
Invited Speaker
Workshop, NIH, Rockville, USA (01/2015)

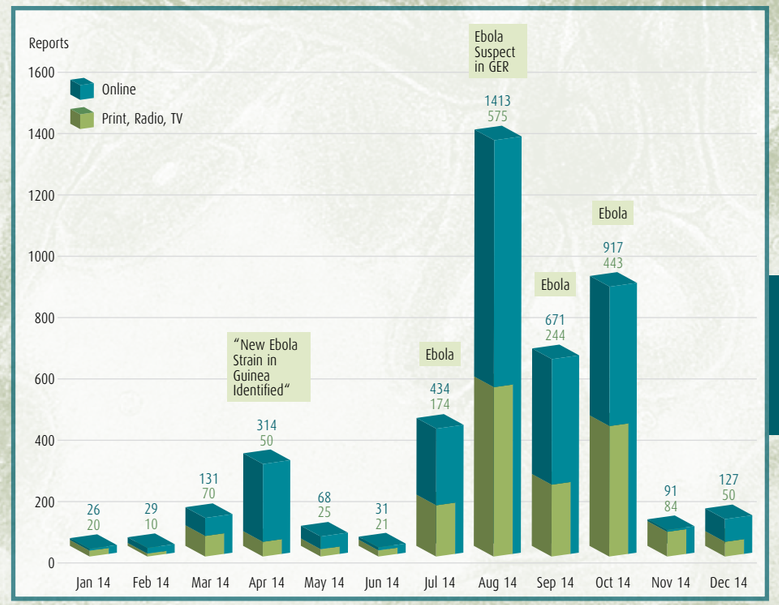
Dr. Christian Timmann
Clinical Research & Epidemiology Section
Molecular Medicine Department

Teaching
BNITM, Diploma Course on Tropical Medicine
BNITM, Refresher Course
BNITM, Medicine in the Tropics – Course for Medical Support Staff
BNITM, Course Refugee Health

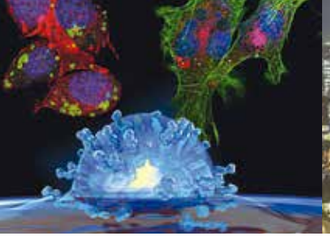
Media Response 2014

Overall >1802 Reports Print, Radio, TV
>4250 Reports Online





BNITM in the Media



30. – 31.01.14 LCI-Symposium 2014 "Pathogenesis of Infection"

1.2.14 PD Dr. Joachim Clos

27.3.14 Impressions from the Girls' and Boys' Day

1.5.14 Dr. Becker

26.6.14 Dr. Maria Fernandes & Dr. Antje Hombach

1.7.14 Prof. Gilberger

7.8.14 Award Prof. Garms

14.8.14 Senator Cornelia Prüfer-Storcks

November 2014 Prof. Günther (middle) coordinates Ebola research

CHRONICLE

30. – 31.01.2014
In the historic lecture hall of the Institute, 150 international scientists meet for the annual LCI-Symposium, which this year has the topic "Pathogenesis of Infection".

01.02.2014
PD Dr. Joachim Clos receives € 675,000 from the European Commission to develop drugs for leishmaniasis, sleeping sickness and Chagas disease. Coordinator of the EU consortium with 13 partners is Prof. Maria Paola Costi from the University of Modena, Italy.

03. – 21.02.2014
In the course "Medicine in the Tropics" for medical support staff, 25 participants receive training in tropical diseases, public health and health care management in low-income countries.

25.03.2014
At the begin of the Ebola outbreak, a European team headed by Prof. Stephan Günther departs on behalf of the WHO with "European Mobile Laboratories" to Guinea. Its aim is to establish reliable diagnostics for Ebola infections to support the national health authorities and "Médecins sans Frontières (MSF)". The mission will last for two years.

27.03.2014 & 23.04.2015
At the nationwide Girls' and Boys' Day, scientists of the Institute provide insights into their work. Around one hundred kids have an enjoyable and interesting time at the Institute and leave with comments like "Very cool, thank you!"

01.04.2014
Prof. Stephan Günther, head of the Virology Department, coordinates a DFG-funded (€ 665,580) project to analyse the epidemiology, pathophysiology and treatment of Lassa fever in Nigeria. Partners are the University Medical Center Hamburg-Eppendorf (UKE) and the section of Tropical Medicine of the Bundeswehr Medical Service.

01.04. – 26.06.2014
The annual Diploma Course on Tropical Medicine is attended by 41 physicians and biologists from Germany and Austria to prepare for work in the tropics.

01.05.2014
Dr. Stefanie Becker, head of Entomology, accepts a position as Institute director at the Friedrich-Loeffler-Institut (FLI).

26.06.2014
The "Association of Friends of the Tropical Institute Hamburg" (VdF) awards Dr. Maria Helena Calixto Fernandes from the May Group and Dr. Antje Hombach from the Clos Group each with its annual Doctoral Award and € 1,000 prize. Dr. Fernandes' doctorate addresses different forms of life-threatening malaria during childhood. Dr. Hombach analysed how targeted mutations affect the reproduction of Leishmania. The awards ceremony is followed by the BNITM staff summer party.

01.07.2014
Prof. Tim Gilberger from McMaster University in Hamilton, Canada, takes up a W3 professorship for cell biology of human parasites, which is jointly established by the Faculty of Mathematics, Informatics and Natural Sciences (MIN) at the University of Hamburg and the BNITM. Prof. Gilberger's department will comprise a group located at the Centre for Structural Systems Biology (CSSB).

29.07.2014
The spread of the Ebola epidemic in West Africa raises huge public interest. In order to meet the needs for information, the Institute organizes a press conference. The virologists Prof. Stephan Günther and Dr. Jonas Schmidt-Chanasit as well as the physician Dr. Stefan Schmiedel from the Bernhard Nocht outpatient clinic of the UKE answer questions from approximately 30 media representatives.

07.08.2014
The Minister of Health of the Republic of Uganda awards Prof. emer. Dr. Rolf Garms with the "Outstanding Achievement Award" for essential contributions to the elimination of river blindness in Uganda.

14.08.2014
Senator Cornelia Prüfer-Storcks, president of the Hamburg Ministry of Health and Consumer Protection (BGV), visits the Institute. With the Board of Directors, she discusses the relevance of the BNITM for the BGV and recent topics of international health research.

29.08.2014
Cornerstone ceremony for the building of the Centre for Structural Systems Biology (CSSB) on the campus of the German Electron Synchrotron (DESY) in Hamburg-Bahrenfeld. Senator Dr. Dorothee Stapelfeldt and State Secretary Andrea Hoops from Hanover welcome representatives from the nine partner institutes of CSSB. The BNITM is involved with a research group of the department of Prof. Gilberger.

20. – 23.10.2014
At a meeting of the "African Research Network on Neglected Tropical Diseases (ARNTD)", representatives from science, donor organisations and industry discuss concepts to combat neglected tropical diseases.

November 2014
Prof. Stephan Günther coordinates the project "EVIDENT", which is funded with € 1.7 million in the EU program HORIZON 2020. Samples from West African patients infected with Ebola will be recorded in a database and used in European laboratories of the highest biosafety level for research projects concerning the immune response to the Ebola virus.

18.11.2014
The company Eppendorf AG supports Ebola diagnostics in West Africa with a material donation worth more than a quarter million Euros. Storage capacities at the Institute are becoming a challenge.

25.11.2014
The diary of a PhD student, published in the German newspaper "Suedeutsche Zeitung", gains high public interest. In her diary, Lisa Oestereich describes her service in a "European Mobile Laboratory" during the peak of the Ebola epidemic in West Africa.

12.01.2015
In the context of "Strategic Networking", the Leibniz Association funds a research network called "Infections'21 – Transmission Control of Infections in the 21st Century" with € 600,000. The network is coordinated by the Research Center Borstel and involves, apart from the BNITM, 13 additional Leibniz institutes and 3 external partners.

20.01.2015
Visit from the Israeli Ministry of Health.

29. – 30.01.2015
At the 6th LCI-Symposium entitled "Emerging Infections", 150 scientist discuss recent disease outbreaks, in particular the Ebola epidemic, the spread of zoonoses and increasing drug resistance of infectious agents.

30.01.2015
The first workshop of the international training programme "GIBACHT" takes place at the BNITM. Individuals responsible for public health in developing countries prepare for epidemics and other health-related emergencies and discuss biosafety as well as legal and ethical standards.

18.11.14 Material donation from Eppendorf AG

25.11.14 Lisa Oestereich

12.1.15 Research network "Infections'21 – Transmission Control of Infections" starts

29. – 30.1.15 LCI-Symposium

"Emerging Infections"

30.1.15 Training programme "GIBACHT"

18.2.15 Variegated squirrel

12.2.15 International Biology Olympiad 2015

23.2.15 Minister of Health Hermann Groehe and Senator Dr. Dorothee Stapelfeldt visit the Institute

30.3. – 26.6.15 Diploma Course on tropical medicine 2015

9.4.15 Kick-off symposium of CSSB

Dr. Eva Gümbel

Photography: Rene Engel

Dr. Maria Lehmann

Dr. Irma Haben

"Association of Friends of the Tropical Institute Hamburg"

02. – 20.02.2015
In the course "Medicine in the Tropics" for medical support staff, 32 participants are trained in public health and health care management in the tropics.

12.02.2015
45 highly motivated participants of the "International Biology Olympiad" and their 10 supervisors dive deep into the world of parasites. Looking at blood smears under the microscope, they explore *Plasmodium falciparum*, the infectious agent that causes malaria.

18.02.2015
The BNITM and the Friedrich-Loeffler-Institut (FLI) succeed in identifying a novel bornavirus that is transmissible from animals to humans if in close contact. Between 2011 and 2013, the virus has caused fatal encephalitis in three breeders of variegated squirrels in Saxony-Anhalt. Alerts are sent out to the Robert Koch Institute and the national veterinary and health authorities.

23.02.2015
Minister of Health Hermann Groehe and Senator Dr. Dorothee Stapelfeldt visit the Institute to personally thank the staff for their service in their 16 missions during the Ebola epidemic and for the reliable diagnostics of samples from all over the world.

30.03. – 26.06.2015
During the Diploma Course on tropical medicine, 50 physicians and other scientists obtain a diploma in tropical medicine. Besides a one-year service at a tropical institute and a clinic in the tropics, this diploma is a prerequisite for the additional title "tropical medicine" on behalf of the German Medical Association.

09. – 11.04.2015
The kick-off symposium "From Molecules to Organisms" of the CSSB takes place in the historic lecture hall of the BNITM. More than 130 international scientists exchange their latest results in systems biology and their role in infection research. Senator Dr. Dorothee Stapelfeldt, Petra Herz from the Joachim Herz Foundation and CSSB director Dr. Matthias Wilmanns open the symposium.

01.05.2015
Head of Arbovirology, Dr. Jonas Schmidt-Chanasit, receives € 437,338 from the Federal Ministry of Food and Agriculture for a subproject called "CuliMo". His team will monitor the geographical and seasonal occurrence of mosquito species in Germany and the diseases they can transmit. The data will be incorporated in the German mosquito database, CULBASE, to facilitate risk assessments.

20.05.2015
Dr. Eva Gümbel, State Secretary of the Ministry of Science, Research and Equalities (BWFG), replaces State Secretary Dr. Horst-Michael Pelikahn as chair of the BNITM Board of Trustees.

23.06.2015
On the occasion of the TV premiere of the German documentary "Mosquitoes – Invasion of a Pest", representatives of the press are invited to the BNITM, where John A. Kantara, author of the film, Dr. Jonas Schmidt-Chanasit and Prof. Egbert Tannich discuss the threat of invasive mosquito species as well as protective measures.

26.06.2015
During the general meeting of the "Association of Friends of the Tropical Institute Hamburg" (VdF), the annual Doctoral Awards are handed over to Dr. Irma Haben (Breloer Group) for her thesis "Influence of a chronic worm infection on the vaccination response in mice" and Dr. Maria Lehmann (Virology Department) for her thesis "Structure and function of the arenaviral L protein".

26.06.2015
The "Association of Friends of the Tropical Institute Hamburg" (VdF) organizes for the first time a summer party in the Institute's garden and invites recent and former graduates of the Diploma Course to recruit alumni members.

27.06.2015
"Now starting, a team from a Hamburg research institute that is well known from the media ...," announces the organizer of "HSH-Nordbank-Run" to send 14 runners of the BNITM on a round tour through the Harbour City of Hamburg. Thus, the BNITM donates € 100 to the society "Kids Help Kids".

27.08.2015
MOPO team relay – despite the bad weather, three highly motivated teams of the Institute run for charity through the municipal park of Hamburg. For each team, € 10 are donated to the society of the municipal park of Hamburg (Stadtpark Verein Hamburg e.V.).

14.09.2015
A delegation of representatives of all parliamentary parties of the Legislative Assembly of Saint Petersburg visits Hamburg and expands its sightseeing to the BNITM. The Hamburg City Parliament has maintained a parliamentary partnership for almost 25 years.

17. – 18.09.2015
The "German-African Cooperations on Infection Research" workshop takes place. The kick-off meeting for the national research platform for zoonoses in association with the German Center for Infection Research (DZIF) takes place at the Institute. Around 80 African and German scientists discuss infectious diseases such as Ebola and avian flu.

05. – 09.10.2015
NATO Centre of Excellence for Military Medicine

19.10.2015
Dr. Jonas Schmidt-Chanasit accepts appointment as a W2 professor for "Arbovirology" at the University of Hamburg and establishes his own research group at the Institute.

07.11.2015
At the Night of Science (Nacht des Wissens), 1,790 visitors attend a programme of short lectures and experiments. "There was a lot to learn and see. There must have been a lot of effort to turn our visit into an exciting experience," writes 12yearold Paul from Flensburg in the guestbook.

13. – 14.11.2015
The German Society for Parasitology (DGP), the German Society for Tropical Medicine and International Health (DTG) and the Paul-Ehrlich-Society for Chemotherapy (PEG) hold the 13th Malaria Meeting with more than 90 international participants. The programme comprises keynote lectures, over 40 short talks and posters about the epidemiology, molecular biology, immunology, diagnostics and treatment of malaria.

28. – 29.11. & 12. – 13.12.2015
In view of the growing number of refugees and asylum seekers in Germany, the BNITM offers two weekend courses on "Refugee Health". The interest was unexpectedly high with 120 participants.

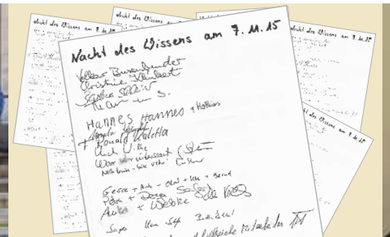
Dezember 2015
The virology department offers all colleagues of the Institute in small groups a tour around the BSL4 laboratory, demonstrating how it works and answering questions.

27.8.15 MOPO team relay

1.5. & 19.10.15
Dr. Jonas Schmidt-Chanasit

5. – 9.10.15 NATO Centre of Excellence for Military Medicine

7.11.15
Night of Science – excerpts of the guestbook



7.11.15 Night of Science – hands-on activities

December 2015
Virology Department offers team building

Imprint

Publisher
Bernhard Nocht Institute for Tropical Medicine
Bernhard-Nocht-Straße 74
20359 Hamburg, Germany
Phone: +49 (0)40 42818-0
Fax: +49 (0)40 42818-265
E-Mail: bni@bnitm.de
www.bnitm.de

Responsible for Content
Prof. Rolf Horstmann

Editing
Dr. Eleonora Schönherr
Laura Zimmermann

Image Editing
Klaus Jürries

Photo Credits
The photographs and illustrations have been provided by the authors and staff of the institute. All further references: Note to images.

Layout and Printing
Druckerei in St. Pauli, Hamburg

Number of Copies
300

ISSN
1616-4504