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»Malaria and Neocolonialism«

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MALARIA AND NEOCOLONIALISM Introduction

Malaria is one of the oldest diseases known to humanity, and one of the deadliest. And probably the disease with the most dollars in its belly,[1] considering research and development funding, especially when military investments over the centuries are included.[2] So how is it possible that as late as 2023 malaria parasites still killed some 580'000 people, mostly children, in Africa?[3] Over the next decade, this number is likely to rise sharply as Artemisinin, the drug on which the World Health Organization (WHO), the Gates Foundation and the U.S.-Global Fund have relied on for the past twenty years, becomes less effective due to increasing resistance across the continent. Like all previous antimalarial drugs, Artemisinin has an expiry date of around thirty years, after which the malaria parasite has usually developed resistance to the active ingredient. After the mass deaths caused by chloroquine resistance in the 1990s, this disaster was as predictable as the previous ones.

This time, the drug in question was isolated from the antimalarial plant Artemisia annua: Artemisinin proved to be the most effective chemical agent against malaria, a discovery made in China already in the 1970s. But when malariologist Tu Youyou presented her findings at the first international Artemisinin conference in Beijing in 1981, the Western scientific community found it hard to believe that "backward" communist China had succeeded in extracting a potent antimalarial from a weed. A drug, moreover, based on an ancient recipe from Traditional Chinese Medicine (TCM), while US researchers, after testing 150'000 substances, could only come up with Mefloquine, a known neurotoxin that was responsible for U.S. soldiers running amok in Afghanistan, among other things.[4]

Before Novartis started selling antimalarial drugs in the form of Artemisinin Combination Therapies (ACTs), the WHO had argued for twenty years that this active ingredient did not meet safety standards or that Chinese production conditions – despite a brand new factory – were not good enough for export to African countries. At the time, the WHO was simply not interested in Artemisinin. According to malariologist Tu Youyou, one likely explanation for this lack of interest was the patent law in the West: a single compound could not be patented by the pharmaceutical industry (Interview with Katharina Weingartner, Beijing, February 2013). The situation changed, when Novartis, in collaboration with the Chinese Institute of Military Medicine, developed a combination preparation of Artemether, an Artemisinin derivative, and Lumefantrine. The resulting drug was finally approved in 2001 and initially sold as Riamet to travellers at a high price. When Novartis received a ten-year exclusive distribution contract from the WHO to sell it as Coartem throughout the African continent, it became the best-selling tablet for many years.[5]

In 2019, Tu Youyou, now a Nobel laureate for her discovery forty years earlier, and her team demonstrated that the way ACTs such as Coartem are administered was responsible for the development of parasite resistance, rather than the use of Artemisia annua as a herbal tea, as the WHO had previously promoted.[6] This occurred because the drug was administered for only three days, allowing the parasite to survive. Since the release of our film *The Fever*, two vaccines Mosquirix and R21/Matrix-M have been recommended by the WHO. The Gates Foundation had been developing Mosquirix since 2000, with GlaxoSmith Kline as a major shareholder. The vaccine was initially reported as around 70% effective, but this has since been significantly downgraded to rates as low as 30%. With four initial doses and booster shots every four years, the vaccine is difficult to administer in African countries and has shown serious side effects in trials, especially in girls.[7] More recently, Oxford University/Serum Institute of India/Novavax have released R21/Matrix-M with similar optimism, public health experts, however, caution against seeing this latest vaccine as another magic bullet.[8]

MALARIA AND NEOCOLONIALISM The Fever

In 2019, we released the documentary *The Fever*, which deals with the question why the many victims of malaria in sub-Saharan Africa must be understood as a product of (neo-)colonialism, racism, and profit interests.



Trailer of *The Fever*, https://vimeo.com/572592602 (2019).
VIDEO ▸ cache.ch/1733

We started our work in 2016, at a time when malaria deaths already seemed to be falling. We found co-producers and generous funding from Austrian, Swiss and German government film funds, and public television (ORF, ARD, SRF). With a budget of 1.2 million euros, we began our intensive research around the world, together with Abdallah Salisu, a political scientist and community activist from Ghana, Weina Zhao, a sinologist and filmmaker from Vienna and many others. Researching and filming for the documentary took six years. In the beginning we were more interested in the history of malaria, especially the links between tropical medicine and wars of conquest.

Would the colonisation of Africa have been possible at all without quinine? While European soldiers and missionaries died like flies, the local population above five years was largely immune.

Was the parasite ultimately an important defence against invaders? We conducted well over a hundred interviews with people all over the world, from Kampala to Beijing, Baltimore, Bangkok, and Basel, from Nairobi to Arusha and Daressalaam. We spent countless hours gathering valuable material; talking to mothers and children, nurses, doctors and herbalists, activists and organisers, historians, scientists, teachers, and coffin makers. In the end, in a small editing suite in Vienna, our dedicated team of filmmakers decided to tell the story of the looming malaria catastrophe from the perspective of those most affected by it. This simple, understandable decision was seen as radical and led to the co-producers walking away from the well-funded project; despite enthusiastic media response and screenings at international festivals, only one of the co-funding public television stations, ORF, has ever shown the film. "The film deals with a felt reality, not with facts, the scientists are missing", wrote one of the commissioning editors from the ARD to us in an e-mail. A bold statement, given that two of the protagonists are scientists teaching at major East African universities and one interviewee is a Nobel laureate.
The Fever finally had its sold-out premiere at the DOK Leipzig documentary film festival in November 2019. It follows four protagonists: Ugandan herbalist Rehema Namyalo, Kenyan entomologist Richard Mukabana, Ugandan pharmacologist Patrick Ogwang and Kenyan teacher and community health activist Paul Mwamu. But its central protagonist is Artemisia, a

genus with species such as annua and afra, that was widely used in Traditional African Medicine (TAM),[9] before it was demonised and suppressed in the course of colonization.

MALARIA AND NEOCOLONIALISM
Dropped Interview Snippets

Only a small percentage of the footage made the cut, and the aforementioned decision to tell the story through protagonists from malaria-endemic regions disqualified many great interviews. We also decided to focus on a strong woman as the main character, an herbalist with decades of experience in successfully curing and preventing malaria in and around her rural community. The aim was to create a cinematic, emotionally engaging film that used the disease as a lens on colonialism and its continuing effects. The following interview clips include important voices that were lost in our selection process and have never been published before. Nevertheless, these voices shaped our film by imparting nuanced and complex knowledge within their respective fields of expertise which together informed what would become the essential message of *The Fever*:

Only a systemic, inclusive, decolonial approach will bring about sustainable change.



Interview with Dr. Flora Kessy, *The Fever* (2019).
VIDEO ▸ cache.ch/1726

Dr. Flora Kessy was a Tanzanian economist who sadly passed away in 2020. She was an Associate Professor of Social Policy and Development at Mzumbe University, and Executive Director of the Tanzanian Training Centre for International Health (TTCIH) in Ifakara. Her main research interest was poverty, particularly as it relates to health and access to health care. Kessy explains why malaria cannot be tackled with drugs alone, and that all aspects of people´s circumstances must be taken into account. This in itself is a strong argument for African scientists to be at the forefront of malaria control efforts, as they have the best understanding of the situation.

"If you want to eradicate or eliminate Malaria, you need to look at the peoples livelihood."

Interview with Dr. Flora Kessy, *The Fever* (2019).



Interview with Prof. Dr. Richard Mukabana, *The Fever* (2019).
VIDEO ▸ cache.ch/1727

Prof. Dr. Richard Mukabana of the University of Nairobi is a specialist in applied medical entomology and parasitology. He says he is tired of being employed as a 'field worker' for Western high-tech science institutes instead of focusing on implementing local solutions to vector control. He is also studying the role of community health work in reducing endemic infections around Lake Victoria. As a scientist, he thinks in complex terms. "There is always somebody ready to make a profit from this disease somewhere. It's usually not the ones with the disease". Mukabana describes how difficult it is for African scientists to get funding and to be heard in strategic decisions about disease control because of a strong perceived bias towards prestigious Western institutions. He explains how the exclusion of African scientists is particularly damaging when it comes to malaria.



Interview with Prof. Dr. Linsey McGoey, *The Fever* (2019).
VIDEO ▸ cache.ch/1729

Prof. Dr. Linsey McGoey is a Canadian sociologist who teaches at the University of Essex and specialises in social theory and economic sociology. She is known for her work on philanthrocapitalist ventures and their role in the global economy. Linsey McGoey further contextualises the struggle that Richard Mukabana has already touched on. Philanthrocapitalist foundations play a huge role when it comes to malaria and are probably the most powerful actors when it comes to making decisions in global efforts against malaria.

"The wearer of the shoe knows where it pinches most."

Interview with Prof. Dr. Richard Mukabana, *The Fever* (2019).

"Change must come from a change in global governance rules, global trade rules. It cannot come from simply increasing the amount of handouts that wealthy nations or their wealthiest people choose to give at their own prerogative."

Interview with Prof. Dr. Linsey McGoey, *The Fever* (2019).



Interview with Dr. Hans Herren, *The Fever* (2019).
VIDEO ▸ cache.ch/1728

Dr. Hans Herren is a Swiss entomologist, the CEO of the Millennium Institute in Washington, DC, and founder of Bio-Vision. Herren calculates the shockingly low amount of money it would take to prevent malaria deaths and shows that malaria control is not a question of possibility. Citing various examples, he explains the different scales by which life is protected in the global North and South. He also questions the way "development work" usually works: the Global North benefits while there is little room for self-determined strategies or local production.

"Our approach to development work also needs to change. We need to not always support our own companies in Europe, North America... but instead support for an alternative in Africa, in the developing countries, that works!"

Interview with Dr. Hans Herren, *The Fever* (2019).



Interview with Dr. Amit Sengupta, *The Fever* (2019).
VIDEO ▸ cache.ch/1730

Dr. Amit Sengupta was a medical doctor and founding member of the People´s Health Movement from India, who tragically died much too young. He talks about the power relations and issues such as drug patent laws that underlie the problems that Flora Kessy, Richard Mukabana, Linsey McGoey and Hans Herren discuss in their clips.

"That's about power. It is not about medicine. It is not about technology. It's about power."

Interview with Dr. Amit Sengupta, *The Fever* (2019).



Interview with Merlin Willcox, *The Fever* (2019).
VIDEO ▸ cache.ch/1731

Dr. Merlin Willcox is a clinical lecturer and medical researcher at the University of Southampton and a general practitioner, who has done extensive work on malaria and traditional herbal treatments. He addresses Western funding agencies´ lack of interest in knowledge that exists outside Western systems and talks about the displacement of Traditional African Medicine by Christian missionaries.

"That's where their strength lies. They have marvelous biodiversity, and not only biodiversity but traditional knowledge going with that biodiversity."

Interview with Merlin Willcox, *The Fever* (2019).



Interview with Prof. Dr. Salim Abdulla, *The Fever* (2019).
VIDEO ▸ cache.ch/1732

Prof. Dr. Salim Abdulla is a clinical epidemiologist in Tanzania and former director of the Ifakara Health Institute. Salim Abdulla calls for the strengthening of indigenous knowledge and the structuring of Traditional African Medicine – the oldest system of medical knowledge on the planet.

"If you compare the, as you say, the rich biodiversity that exist in Africa and the information that is been documented, related to the benefits of this biodiversity, is very very low. And this are the new areas, of what that also the government in Tananzia and North African countries need to improve."

Interview with Prof. Dr. Salim Abdulla, *The Fever* (2019).



Interview with Prof. Dr. Dr. Pedro Alonso, *The Fever* (2019).
VIDEO ▸ cache.ch/1734

Prof. Dr. Dr. Pedro Alonso is a Spanish physician and epidemiologist. He led the WHO's global malaria programme from 2014 to 2022 and admits that the WHO has made big mistakes in its malaria strategy in the past. He speaks of a lack of perspective and the importance of taking balanced and sustainable action against malaria in the future, never sporadic or spasmodic.

"We need to retain the lessons. (...) The cost of failure is massive. And therefore, this requires a very balanced, thoughtful, analytical, science based, evidence-based discussion."

Interview with Prof. Dr. Dr. Pedro Alonso, *The Fever* (2019).

However, the picture painted in these interviews shows that exactly these mistakes are currently being repeated. A balanced approach is not possible, as long as a large part of the population (and, moreover, the affected part of the population) is prevented from using their own knowledge and can't get funding for their own scientific projects. If the knowledge of some (mostly white persons, not affected by malaria) is treated as fact and the knowledge of others (affected by malaria in sub-Saharan Africa) is treated as "felt reality", there can be no balance. The continuing massive death toll from malaria shows that profit interests as well as racist and (neo)colonialist hegemonies are not only incompatible with the (long forgotten) WHO approach of "Health for All" but simply inhuman,[10] as Tu Youyou put it rather emotionally in The *Fever*, years before she received her Nobel Prize:

"If profit was the reason for the deaths of so many malaria patients, I find that not only immoral but truly inhuman."

Interview with Tu Youyou, *The Fever* (2019).

Notes

1 Randall M. Packard: *The Making of a Tropical Disease: A Short History of Malaria,* Baltimore: The Johns Hopkins University Press (2007).
2 Karen Masterson: *The Male Project,* London: Penguin (2014).
3 World Malaria Report, https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2023 (2023).
4 Remington L. Nevin: "Idiosyncratic Quinoline Central Nervous System Toxicity: Historical Insights into the Chronic Neurological Sequelae of Mefloquine", in: *International Journal for Parasitology: Drugs and Drug Resistance* 4 (2014), pp. 118–125.
5 Thomas Schwarz: "Der Coartem-Deal – Einem geschenkten Gaul…", in: *Medicus Mundi Schweiz*, https://www.medicusmundi.ch/de/advocacy/publikationen/med-in-switzerland/einem-geschenkten-gaul (2001).
6 Jigang Wang, Chengchao Xu, Fu Long Liao, Tingliang Jiang, Sanjeev Krishna, Youyou Tu: "A Temporizing Solution to 'Artemisinin Resistance'", in: *The New England Journal of Medicine* (2019).
7 Jop de Vrieze: "First Malaria Vaccine Rolled Out in Africa — Despite Limited Efficacy and Nagging Safety Concerns: Mosquirix Faces Real-World Test in Malawi, Kenya, and Ghana", in: *Science.org*, https://www.science.org/content/article/first-malaria-vaccine-rolled-out-africa-despite-limited-efficacy-and-nagging-safety (2019).
8 Sarah Johnson: "Cheaper, More Effective Malaria Vaccine Wins WHO Approval: R21/Matrix-M Vaccine, Developed by the University of Oxford, Is the First Malaria Vaccine to Reach 75% Efficacy Target", in: *The Guardian*, https://www.theguardian.com/global-development/2023/oct/02/new-malaria-vaccine-approved-by-world-health-organization (2 October 2023).
9 "Traditional medicine (TM) is an important and often underestimated part of health services". It is "the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses", World Health Organization: *WHO Traditional Medicine Strategy 2014–2023,* Geneva: WHO Press, https://iris.who.int/bitstream/handle/10665/92455/9789241506090_eng.pdf?sequence=1 (2013), pp. 11, 15.
10 "Health for All" was a principle agreed upon in the Alma-Ata Declaration of 1978, signed by 134 national government members of the WHO. It was a written commitment to health as a human right, based on the principles of equity and community participation. It broadened the concept of health to include social justice, https://www.who.int/teams/social-determinants-of-health/declaration-of-alma-ata.