



Forging partnerships to tackle the global health challenges of today and tomorrow

An interview with:



Kristina Orrling, PhD



Remco de Vruet, PhD



Kristina Orrling, PhD

Program Manager at Lygature

“Using collective intelligence is the smartest way to bring better treatments to patients faster.”

In the first in a series of interviews that highlight the added value of Lygature, we shine a spotlight on [our Global Health portfolio](#). Senior program managers, Kristina Orrling and Remco de Vruh, share their vision and goals for global health partnerships and explain what the role of Lygature is in fulfilling this vision.

The Lygature Global Health portfolio: where we are and what lies ahead

It has never been more apparent how truly global health challenges can be. They can impact us all, yet not all of us are lucky enough to benefit from new medical innovations. Indeed, some of the most urgent medical needs around the world receive the least attention and resources. This is precisely where Lygature and its Global Health portfolio come in – with a focus on finding solutions for unmet medical needs in some of the world’s most marginalised and vulnerable communities.

For over a decade, the Global Health team at Lygature has helped to set-up and implement more than 20 partnerships that aim to alleviate the disease burden caused by AIDS, tuberculosis, malaria, neglected tropical diseases (NTDs) and antimicrobial resistance (AMR). Since 2017, Kristina and Remco have been leading the Global Health team, and jointly bring almost 40 years of experience in pharmaceutical Research and Development. We asked them to tell us about how they view Global Health partnerships, what they foresee in the future for the Lygature Global Health portfolio, and what it is that inspires them most about their work in this field.



What do you think the overall challenges are in Global Health?

KRISTINA: Global Health is a very broad concept. We focus on infectious diseases (bacterial, viral, and parasitic diseases, for example) that disproportionately affect low to middle-income countries. There is little economic incentive for commercial companies to spend money on developing new approaches to combat them. So ultimately, funding remains the biggest challenge. Because of this, we have to be very efficient with our resources in Global Health projects, further increasing the need for joining forces. I think the Global Health community has been quite thrifty and clever in this regard, but there is definitely a big need for more support and collaboration. Our challenge at Lygature is to unite this community and connect the right people with each other – both within a certain disease, but perhaps even more importantly, between different disease areas – bringing in relevant experts from outside of the Global Health sphere. Another considerable challenge concerns the many relevant diseases and conditions that are not on the World Health Organisation (WHO) list of NTDs. These are doubly neglected – both in terms of funding, as well as in the clinical setting.

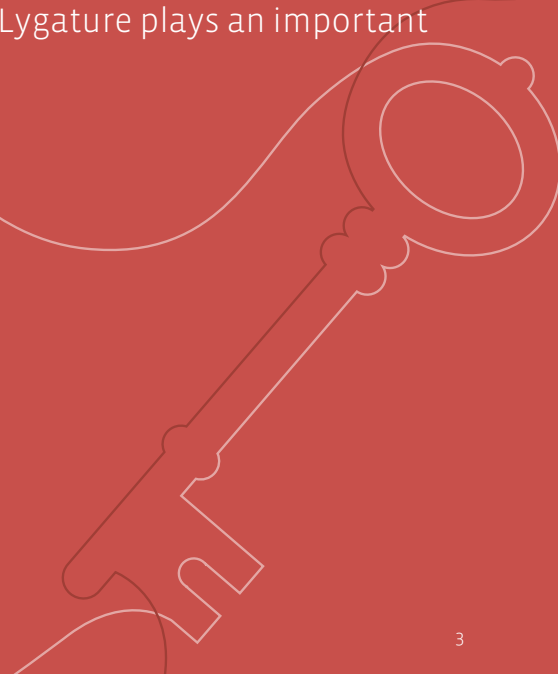
REMCO: While the biggest challenge in Global Health is indeed funding, another, no less important challenge, is that of finding the right partners to work with and managing these partnerships in the best and most appropriate way. In Global Health, we have entered an era where the roles of partners from endemic countries are more pronounced, sometimes even taking more of a lead in projects. This is good and is where we should continue as it ensures full inclusion of endemic country perspectives. A challenge remains, however, in putting things into practice and knowing how to collaborate well. You have to build trust, which takes a long time. This can be especially so in consortia where there are partners from all over the world, which is often the case in Global Health projects of course. There can be cultural differences and differences between functions within a project, e.g., clinical versus manufacturing, or academic versus industry. Everyone needs to come together, and in that regard, strong leadership is key – knowing how to streamline and keep things on track is of crucial importance and is where Lygature plays an important role.



Remco de Vruueh, PhD

Program Manager at Lygature

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How would you describe Lygature's way of working?

KRISTINA: Our focus is where the medical needs lie. In some therapeutic areas, the biggest problem is that there is no treatment at all and in this case, you need everything from early drug discovery onwards. In other areas, there's good treatment but there is no testing capability in the field. Lately, we have observed a welcome attention to treatment access (plans that ensure that new products are accessible and affordable in the markets in which they are needed). Without it, no innovation can reach the patient. As the Global Health portfolio expands, we are interacting with partners who are adding to our knowledge base, certainly in terms of acceptance and access of a new product in the field. While we are working to maintain our current stakeholder relationships and assess what is needed in the future, we are also looking to partner with stakeholders who have experience working in all the different corners of the world as this will greatly enrich us as an organisation.

REMCO: Kristina captured it very well. There are three words that sum-up our work at Lygature: Pioneering, Medicine, Together. Our role, in every project in each of our portfolios, is to optimise the project outcomes. This is our primary agenda. Our position as an honest broker can be very effective in increasing transparency and growing trust among partners. We need to continuously remind our partners and ourselves of the end goal. With that in mind, we will all be motivated to achieve great results.

What is your approach to portfolio management and what have been some of the key milestones?

KRISTINA: At Lygature, our role is to help our stakeholders look ahead and flag what will be needed in the future, beyond a particular project term. Our extensive experience working in this field means that we are aware of the complexities and sensitivities that need to be navigated. We have a good overview of the funders that are out there and the complications involved in securing funding. Several of our projects have been very successful. The [Pediatric Praziquantel Consortium](#) is a good example. Here, a very old drug (praziquantel) has been brought to our millennium – following it all the way

from [development](#) to [access and delivery](#). In the case of the [MMV-PDP](#) collaboration, we were very happy to have a [pre-clinical candidate declared in 2019](#). The project is now organising translational studies to make sure it's safe to be tested in the first humans. This is a very exciting development.

REMCO: Our portfolio approach is in some ways very practical. We focus on what the key opportunities are within certain disease areas, and assess the need for a partnership, the potential impact, as well as the likelihood of success. What I like, is that our work can be very varied. On the one hand, we may focus on malaria and follow a drug discovery project. On the other hand, we may focus on a disease like schistosomiasis and look into the post-registration stage of a project – assessing what operational resources are necessary to move a project from the regulatory approval phase to access and delivery of a medication like the pediatric praziquantel formulation. We can also focus on partnerships that target early-stage diagnostic development or ones that build a platform for phase II or III trials, for example. We may not know the ins and outs of all the diseases we work on as well as the partners who we work with do, but our expertise lies in the fact that we do know how to bring partners together, while making sure everything is in place in terms of infrastructural, logistical and funding resources. Achieving this is always an important milestone in every project.

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– Kristina Orrling



What is your vision for the next five years for the field you are active in?

KRISTINA: We will continue to strive to make a real difference to the field of Global Health through forging collaborations that will lead to getting patients better treatments faster. Over the next five years, it is our ambition to be involved in a wide range of Global Health projects. Right now, we have quite a few drug discovery and development projects, but we would also like to be involved in consortia that address diagnostics and vaccine development. I believe we will evolve to be more holistic in our portfolio approach, bringing together all of the aspects involved in combating a disease (from early discovery to access) and making sure that the best resources available are involved.

REMCO: I foresee three key areas of focus over the next five years. Firstly, I see the new [WHO NTD road map](#) being integrated into future funding programmes and embraced by pharma companies, ensuring a broader scope of funding to cover diagnostics as well as curative and preventive treatments in the field of NTDs. Secondly, with more attention for NTDs and drug development, there is also a need to revisit the way in which we provide access to medicines. I envision some kind of global fund for NTDs being developed, similar to what is done for AIDS, malaria and TB. Right now, NTDs are being treated through donation programmes, for which the sustainability in the long-term could be questioned. I think this will be addressed and corrected over the next 5-10 years. Thirdly, like Kristina, I foresee more multi-sectoral approaches in the field of Global Health, with experts in different areas coming together to address all aspects of the same problem e.g., diagnostics, treatment, prevention, education, and behavioural change for a certain disease.

What is the role of Lygature in realizing this vision?

KRISTINA: Lygature's strength is not within a certain disease or development stage. Our strength is understanding the needs of Global Health partnerships, combined with a strategic mindset and insights in the field. This is the holy trinity that makes Lygature unique. As an illustration: at Lygature, we not only bring partners

together, we also introduce collaborators that no-one else would have thought of to enhance our partnerships. For example, in the MMV-PDP Consortium, where we have focused on [developing a new assay for liver stage malaria](#), we brought in Pivot Park Screening Centre, a professional, commercial screening centre to help our parasitologists develop and run the assay at a higher speed, with higher throughput. This was the first time that high-throughput screening platforms had been applied to malaria research and it has been a pivotal boost to the project. This is what we can apply to the Global Health portfolio and why I feel we should have a holistic approach – a vision to work with many therapeutic areas, many types of health solutions, and many types of development stages. This will ensure that we provide an even better service to our partners.

REMCO: Lygature helps to establish and maintain understanding and collaboration between stakeholders who are not a natural match and who need guidance to work together in an efficient and effective way. In the Pediatric Praziquantel Consortium, for example, a connection is being made with several Ministries of Health from endemic countries who support the Consortium's work together with academic and pharma partners. This is something I have not seen done before and it shows how our scope of partnership support at Lygature has expanded. I don't know where our boundaries lie when it comes to coordinating partnerships in the Global Health portfolio and this is very exciting to me. Where I really consider Lygature as unique, is that we are constantly looking ahead. We not only focus on the partnerships of today, we also consider what partnerships will be needed in the future. This forward-looking approach is where we should increasingly be focusing our attention.

Do you think there will always be dependency on governmental funding for Global Health projects?

KRISTINA: I think there will always be a need for government or state funding for Global Health projects for which there is very little commercial interest. However, Global Health is a moving field and we'll definitely see shifts in terms of funding over the next five years with, for example, a shift towards co-funding instead of donation programmes for NTDs. If we are to



take more of a [One Health](#) approach, one of the key issues we will need to address is that different funders focus on different aspects of a project. There is not one funder who will finance everything and it will require a large amount of investment to align the different funding partners.

REMCO: I agree that there will always be a need for governmental support, but I think we will see increased involvement and ownership of endemic countries. For example, the [Gavi Alliance](#), which is focused on providing vaccines to children in the poorest countries, follows the model of leveraging economies of scale. While all countries pay a share of the cost to procure vaccines, as a country's national income grows, its co-financing responsibilities gradually increase to cover the full cost of vaccines. I believe these types of models are something to consider for NTD drug access in the future.

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-- Remco de Vrueth

How do you think the portfolio will look in five years?

KRISTINA: I think we will have a very global and holistic approach to our portfolio management, involving even more partners from more parts of the world. I think it would be really interesting to engage more researchers in endemic countries, not only from sub-Saharan Africa but also South & Central America and Southeast Asia. I strongly believe that AMR is going to be key. It's one of the biggest threats to health globally. Lygature is involved in two projects in the field and it's fantastic that

we can contribute to this important area of research. Any acceleration that can be offered in terms of raising awareness of AMR, and producing better drugs and treatments for patients, will prove so important for saving lives. What is needed is to bring more people together as the field is still quite dispersed. This is where Lygature can make a real difference. If we can help to establish the right connections and collaborations, we can achieve better health outcomes faster, bringing health innovations to the most vulnerable on earth.

REMCO: I would say it's going to include a diversity of projects, ranging from drug discovery all the way through to operational research, or at least the implementation of that. It will focus on multiple diseases, so the big three (malaria, TB and HIV), but also a number of NTDs. AMR will of course also play a big part. I would like to see that we are broadening our portfolio in what's fashionably called 'One Health'. In line with this, we need to look beyond what's needed from a curative or care perspective, to what the needs are within a specific country of operation. This means taking everything into account: water, food, animals, veterinary medicine, local culture etc. This is quite ambitious, but it's where we would gain the most rewards. The challenges here, from a practical point of view, are whether or not we'll get the funding to carry out these types of projects. Because of our current funding environment, funders often tend to have a specific focus; the challenge will be to get them interested in more holistic projects. This is going to be exciting to see over the next five years.

Who will be your main partners in tackling the Global Health challenges of the future?

KRISTINA: There are several key players. You have to have the scientists on board (the parasitologists and the microbiologists), but you also need experienced pharmaceutical companies on board as they are the ones who truly know how to bring a new drug to the market. There has to be political will to make a change, as well as insights and commitment from medical care field workers. We also need philanthropists who are willing to invest money. We see, for example, the importance of the Bill and Melinda Gates Foundation and what they have accomplished over the past few decades. You need all of this on both a national and international level.



REMC0: If you look at how public-private partnerships have evolved over the years, there was previously mostly bilateral interaction between academics and pharmaceutical companies. It's now becoming a multi-lateral, multi-stakeholder environment, without which you will not be able to succeed. As such, it's no longer just about getting academics and companies together, it's also about involving patient organisations, regulators, and financial institutions. Funders are becoming increasingly involved in driving public-private partnerships forward. We've also seen, from the likes of the [Access to Medicines Index](#), how pharma companies have increasingly taken up the challenge to contribute. This illustrates the importance of maintaining governmental funding policies that stimulate investment by pharma companies. In line with this, we will have to broaden the scope of our stakeholder relationships. This is where we will need to focus our attention if we really want to be successful and make a difference in the Global Health arena.

And finally, what does it take to build effective partnerships and how will our partnerships of the future look?

KRISTINA: I think you need both big projects and specialised initiatives. You need to combine as many

stakeholders as possible to get traction but for action, you need more focused groups that look at how to solve specific problems. The Global Health field is very broad, but I believe Lygature can help fill the gaps. We're interested in being involved in everything from early drug discovery to product access. One cannot do without the other. To be successful you need to build trust. A clear governance structure, reliant infrastructure, and good communication help to achieve this trust.

REMC0: Access is indeed pivotal. If this doesn't happen, everything before access has no impact. We could learn from what is happening in other areas that focus on diagnostic, vaccine and drug development, and think about what could be used for Global Health. While we do need more government funding, we also need government policy to stimulate investment by pharma companies. We will continue to work with our existing stakeholders like the WHO, funders, procurers, academics, pharma companies and regulators, and we will make them aware of how a partnership of the future might look. I think we're moving in this direction by attracting a broader diversity of partners. The building blocks are in place, but we should get started now in establishing these partnerships of the future.



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