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Shaperon and MMV join forces to advance game-changing, cost-effective nanobody treatments to prevent malaria

- Shaperon Inc. and MMV will collaborate to discover novel nanobody therapeutics – a new generation of medicines that can deliver big benefits via tiny molecules – designed as next-generation agents for seasonal malaria chemoprevention.
- The partnership will leverage Shaperon's NanoMab™ platform to develop nanobodies – antibody fragments much smaller than conventional monoclonal antibodies (mAbs) – enabling superior uptake and more precise targeting.
- Nanobodies have the potential to offer a cost-effective solution for tackling complex malaria thanks to their higher stability and ability to be produced in bacteria.

Seoul, South Korea and Geneva, Switzerland, 26 November 2025 – Shaperon, a South Korean biotechnology company, and Medicines for Malaria Venture (MMV), a Swiss-based product development partnership, are joining forces to discover and evaluate next-generation nanobody approaches to develop affordable, long-acting chemopreventive malaria therapies.

The partnership aims to accelerate the development of next-generation, passive malaria immunization – an essential new tool that delivers target-specific antibodies directly to the body, unlike active vaccines that stimulate the immune system to produce them. This approach offers several advantages over conventional monoclonal antibodies, including better uptake, cost-effectiveness, and both immediate and durable protection against malaria infection – supporting chemoprevention strategies as resistance to current drug therapies continues to rise.

With almost 600,000 deaths and over 260 million cases annually,[1] malaria is not just a public health issue, it is a massive economic strain[2]. The disease primarily affects infants and children, as well as pregnant women and their unborn babies, mainly in sub-Saharan Africa. To stay ahead of the parasite and its growing resistance to current treatments, the discovery and development of next-generation medicines is essential.

The new partnership originated from MMV's recognition of Shaperon's proprietary NanoMab™ platform as a breakthrough innovation. Shaperon will use its unique nanobody

[1] WHO World Malaria Report 2024
[2] As highlighted in the latest *The Price of Retreat – How underinvestment in malaria risks resurgence, lost growth, and a generation's future* report, written and produced by ALMA and Malaria No More UK

libraries and high-throughput screening to quickly identify anti-malarial nanobodies. The collaboration will combine Shaperon's protein engineering expertise with MMV's deep experience in malaria and compound development. It will create special molecules that can either focus on a single parasite protein or act on several proteins to fight the parasite at each stage of its lifecycle. This approach may also boost the immune system leading to immunization against the parasite, similar to the way in which vaccines work.

Brice Campo, MMV's Senior Director, Head of Biology and Novel Technologies, said, "This collaboration marks a significant addition to MMV’s growing portfolio of innovative technology approaches aimed at identifying novel anti-malarial products with the potential to eradicate malaria. We are excited to work with Shaperon on this innovative project.”

Shaperon will work with MMV’s global network and expertise to discover a single-dose mRNA-based NanoMab™ passive immunization that can withstand high temperatures (“thermostable”) and can be easily used in low- and middle-income countries (LMICs).

Professor Seung-Yong Seong, Founder and CEO of Shaperon, commented, “As a spin-off from Seoul National University, support from global health organization MMV provides vital non-dilutive funding that fuels our R&D. This collaboration is a turning point for Shaperon, positioning us as a global leader in nanobody-based solutions for infectious diseases.”

MMV, together with its donor partner, the Korean Ministry of Foreign Affairs, will fund the strategic research partnership to test and develop promising nanobodies, with the goal of turning them into affordable treatments that can be used in vulnerable communities during the malaria season.

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About Shaperon
Shaperon Inc. (KOSDAQ: 378800) is a clinical-stage biotechnology company founded on CEO Dr. Seung-Yong Seong’s pioneering DAMP hypothesis. Leveraging its next-generation NanoMab® platform and GPCR19-based inflammasome-modulation technology, Shaperon develops therapeutics targeting immune, infectious, CNS, and oncology indications. The company operates an integrated discovery and evaluation infrastructure for nano-antibodies, engages in active co-development and licensing discussions with global pharmaceutical partners, and is advancing multiple candidates—including its lead asset, NuGel—through clinical development in the U.S. and Korea. Shaperon aims to become a global leader in immunotherapy through innovative antibody platforms and a growing network of international collaborations.

About MMV
MMV is a Swiss not-for-profit product development partnership working to deliver a portfolio of accessible medicines with the power to treat, prevent and eliminate malaria. Born in 1999, out of a need for greater health equity, we close critical gaps in research, development and access – working “end-to-end” to expand the use of existing antimalarials and innovate new compounds to protect public health. This starts with women and children.

It’s working. Since 1999, over 1.3 billion people have been effectively treated or protected from our co-developed medicines. We cannot stop now.

With over a quarter of a billion malaria cases and nearly 600,000 deaths reported in 2023, progress towards disease elimination has stalled. MMV is part of an ecosystem of partners determined to change this. Bringing public and private sector partners together, we pioneer new solutions that align with local and global health priorities and promote the equitable development of effective and affordable products that work to help end malaria and advance health for all.

For more information, visit www.mmv.org

About Nanobodies

Nanobodies represent a new class of biological drugs (biological scaffold) that have similar efficacy to monoclonal antibodies (mAbs) – large lab-made proteins that target one specific molecule and act like the body's natural antibodies to identify and neutralise specific targets responsible for causing disease, such as antigens on cancer cells, or viruses e.g. respiratory syncytial virus – but are structurally distinct from them.

While maintaining key features of conventional mAbs, such as similar levels of selectivity and safety, nanobodies hold many advantages, including higher precision, durability of response, faster production and lower cost-of-goods. Nanobodies are a fraction of the size of a mAb (approximately 1/10th the size) and allow enhanced target recognition with superior affinity and stability with virtually absent anti-nanobody antibody induction.

Nanobodies are showing success in the treatment of autoimmune diseases and cancer, and more recently as therapeutic options to treat infectious diseases caused by rapidly evolving biological targets such as the SARS-CoV-2 virus. Caplacizumab is the first nanobody therapeutic to reach the market in 2018 when it was approved by the EU for the treatment of acquired thrombotic thrombocytopenic purpura (TTP).

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We ask you not rely unduly on these statements. Such forward-looking statements reflect the current views of Medicines for Malaria Venture (MMV) and its partner(s) regarding future events and involve known and unknown risks and uncertainties.