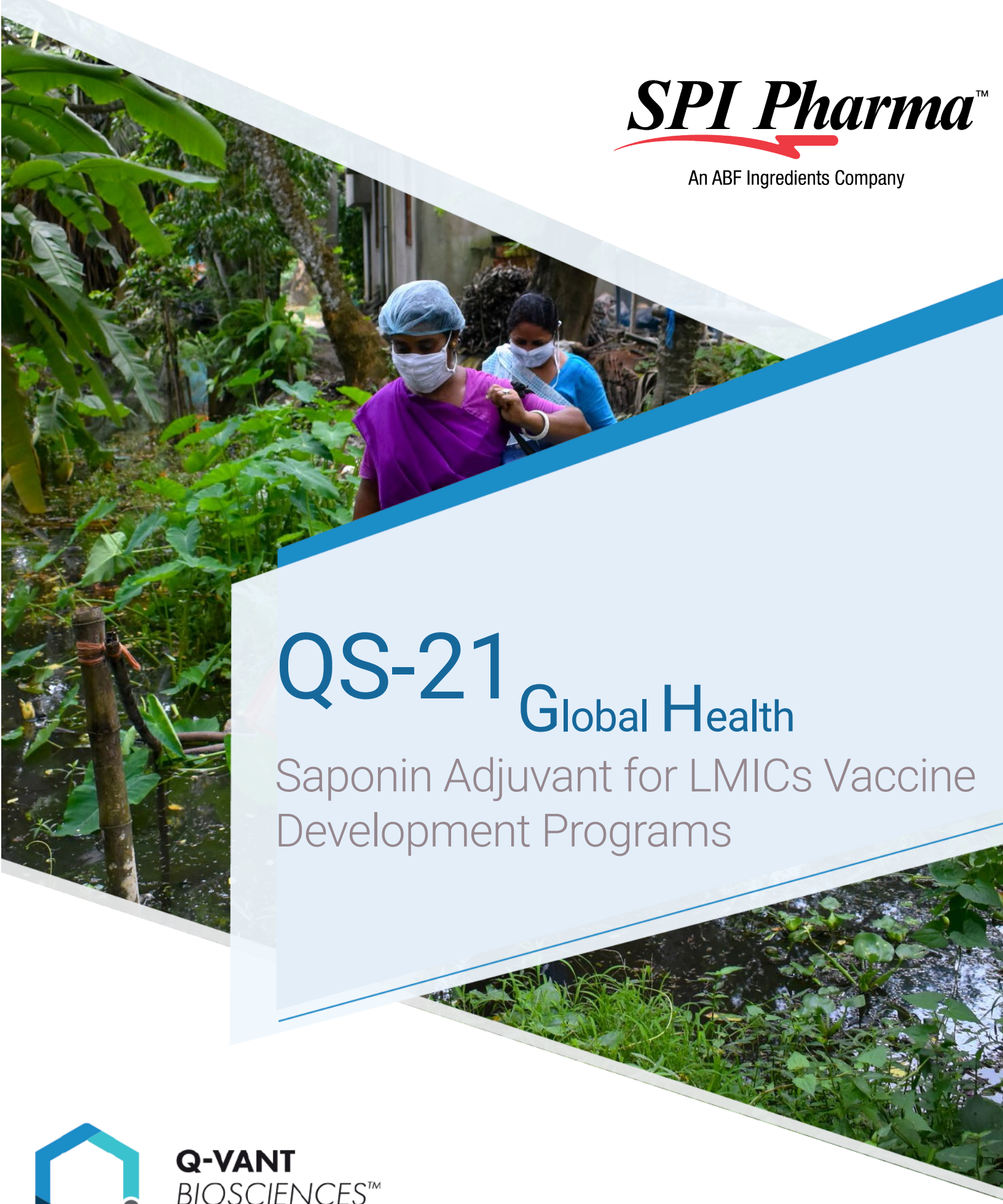
SPI Pharma™

An ABF Ingredients Company



QS-21 Global Health

Saponin Adjuvant for LMICs Vaccine Development Programs

Q-VANT BIOSCIENCES™

QS-21 GH is a purified and affordable QS-21 fraction, derived from a scalable and sustainable Quillaja biomass source. QS-21 remains a critical adjuvant component in three FDA- and WHO-approved vaccines—Mosquirix® (malaria), Shingrix® (varicella-zoster), and Arexvy® (RSV)—as well as in numerous human vaccine candidates targeting tuberculosis, hepatitis B, and influenza.

QS-21 GH is under evaluation in 5 preclinical studies.

Safe

QS-21 GH is safe for use in vaccine formulations and should be combined with lipids to form an adjuvant system that enhances tolerability. Its safety profile is consistent with that of both QS-21 and Fraction C adjuvants.

QS-21 has been studied and tested in over 120 clinical trials since 1999, involving approximately 50,000 patients as both a standalone adjuvant and formulated in adjuvant systems. Vaccines containing QS-21 are used to prevent difficult diseases such as malaria, which it was previously not possible to develop effective vaccines against.

Affordable to LMICs vaccine programs

QS-21 GH has been specifically developed to support vaccine programs targeting global health priorities. It enables the development of vaccines designed to reach patients in low- and middle-income countries (LMICs), with a targeted cost of less than two dollars per dose.

Open access

QS-21 GH is openly accessible to vaccine developers and manufacturers worldwide, supporting a global and equitable access to critical adjuvants.

Potent immune protection

QS-21 is backed by over 35 years of scientific validation and remains a leading candidate for the development of new vaccines. QS-21 possesses a cross-cutting activating effect on key cell populations involved in the immunization process [1-3] resulting in a strong antibody and cell mediated response [4, 5]. This dual adjuvant effect on the adaptive immune response greatly increases the likelihood of vaccine efficacy.

QS-21 enhances the immunogenicity of proteins, glycoproteins, and polysaccharide antigens in several animal models [6]. QS-21 is incorporated in vaccine developments against infectious [2], neurodegenerative [2] and cancer [7] diseases (melanoma, brain, breast, ovarian and lungs) in the form of immunotherapeutic vaccines.

In antigen presenting cells, QS-21 stimulates activation [3], antigen uptake [8], processing [9] and cross-presentation via MHC-I to naive CD8+ T cells enhancing the formation of CTLs [4, 5]. QS-21 activates T cells directly through CD2 receptor stimulation that in turn promotes secretion of Th1 profile cytokines [10].

Scalable and robust supply chain at origin Q-SAP

- Our proprietary Q-SAP™ process enables the production of high-purity, high-quality QS-21, ensuring a sustainable and scalable supply chain with an estimated potential to support more than 20 billion vaccine doses annually.
- QS-21 GH is derived from multiple renewable *Quillaja saponaria* biomass sources, including sustainably pruned trees, guaranteeing both environmental and economic sustainability.
- Q-VANT's supply chain is fully integrated in Chile—from biomass management and saponin extraction to the purification and fractionation of QS-21 GH—ensuring quality control and traceability at every stage.
- Q-VANT's cGMP manufacturing capacity, capable of producing up to 10 million doses of QS-21 GH annually, will be operational in 2026.
- Q-VANT's manufacturing sites are strategically located in Chile, a geopolitically stable and trade-friendly region that benefits from low tariffs, free-trade agreements, and minimal political interference in commerce and logistics.

Availability

QS-21 GH is readily available for vaccine R&D. Request evaluation samples to explore QS-21 GH in your vaccine development pipeline.

References

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