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BSI Expanding Production of Plant-Based Vaccine Adjuvant

Botanical Solution Inc. (BSI), a producer of advanced botanical materials, is expanding GMP production of QS-21, a plant-derived adjuvant, used to stimulate the immune system in vaccines for shingles, respiratory syncytial virus (RSV), COVID-19, and malaria.

The company has added two dedicated laboratories in Davis, California, to conduct R&D activities focused on the optimization of a sustainable QS-21 production system. The traditional method of producing QS-21 is through harvesting mature *Quillaja saponaria* trees, native to Chile, and extracting the material from the bark. This method poses supply challenges due to its cost and the tree's limited habitat in Chile and restrictions on deforestation. BSI has developed a proprietary in-lab cultivation, extraction, and purification process that allows for the growth of *Quillaja saponaria* trees within its own facilities and the use of plant tissue culture to produce QS-21.

BSI recently (August 2024) raised an additional \$7 million to fund its expansion, bringing the total amount raised in Series A financing to date to \$23 million.

Last year (2023), BSI [partnered](#) with Croda to supply the market with billions of QS-21 doses and enable the use of the adjuvant in vaccines for low-income countries.