

E-COMMERCE PLATFORM PROPOSAL

Building a Trusted Digital Presence for Synthetic Vaccine Adjuvants

A strategic proposal for STR Technologies to establish a world-class e-commerce platform serving the global biotech research community.

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"A Shopify-powered e-commerce platform enabling global researchers to purchase GMP-grade synthetic adjuvants directly from BDSyn Bio via STR Technologies."

Project at a Glance

This proposal outlines the design and development of a professional e-commerce platform for STR Technologies, the Singapore-based international hub for BDSyn Bio's synthetic vaccine adjuvants. The platform will enable direct sales of GMP-grade QS-21-Api, HMLA, and TDB to vaccine researchers and biotech companies worldwide.

Built on Shopify for reliability, speed-to-market, and native inventory/payments integration—enterprise quality, startup timeline.

PLATFORM
Shopify-powered

TIMELINE
12-16 weeks

ENGAGEMENT
End-to-end delivery

Why This Matters Now

The global vaccine adjuvants market presents a compelling opportunity. The shift from natural to synthetic formulations addresses critical supply chain vulnerabilities while meeting increasing demand for batch consistency and regulatory compliance.

\$1.77B+

Global market size (2025)
Precedence Research

~6M doses

Est. global natural QS-21 supply
Supply constraint

2.34% CAGR

Projected growth through 2034
Very conservative forecast

Synthetic adjuvants from BDSyn Bio—QS-21-Api, HMLA, TDB—directly address these supply constraints with GMP-grade, scalable alternatives proven in vaccine development for diseases including herpes zoster, malaria, and tuberculosis.

Key Value Pillars

What the platform delivers for STR Technologies and its customers



Security of Supply

Synthetic, GMP-grade adjuvants eliminate dependency on natural extraction and tree-bark sourcing.



Batch Consistency & Transparency

Chemically defined structures (QS-21-Api, HMLA, TDB) ensure researchers get reproducible, comparable products.



Global Accessibility

Direct-to-researcher model cuts out intermediaries, reducing time-to-delivery and cost.



Regulatory Readiness

GMP-grade production and documentation framework support clinical trial compliance from day one.

Market Context

STR Technologies enters a market with established players but clear differentiation opportunities.

PLAYER	FOCUS	STR DIFFERENTIATION
GSK (AS01)	Proprietary adjuvant system	Component-level access for researchers
Novavax (Matrix-M)	Integrated saponin platform	Standalone synthetic saponins
InvivoGen	Research-grade reagents	GMP-grade with security of supply
Natural QS-21	Tree-bark extraction	Synthetic consistency & scalability

STR Technologies is positioned to capture researchers and Developers seeking GMP-grade synthetic adjuvants with transparent sourcing, chemically defined structures, and reliable security of supply—advantages that natural extraction and proprietary systems cannot match.

STR's unique advantage: researchers get access to component-level APIs + GMP-grade production + security of supply—a rare combination in the market.

Why This Partnership



25 Years UX Expertise

Proven ability to design platforms that convert researchers into paying customers. Deep understanding of enterprise biotech procurement workflows.



Single Point of Accountability

No hand-offs between agencies. One person owns strategy, design, launch, and support. Faster decisions, clearer responsibility.



Biotech-Fluent Design

Design language built for scientists: credibility markers (certifications, GMP badges), trust signals (security, compliance docs), and minimal distraction.



AI-Augmented, Not AI-Dependent

Claude and Gemini accelerate documentation and content; human judgment guides strategy. Enterprise rigor, independent pricing.

What You'll Receive

- ✓ **Product Requirements Document (PRD)**—Complete technical specification
- ✓ **Brand & Design Guidelines**—Token-based design system
- ✓ **Fully Functional E-Commerce Platform**—Shopify-powered, conversion-optimized
- ✓ **Technical Documentation**—Integration specs, admin guides
- ✓ **Post-Launch Support**—Ongoing management and optimization



Engagement Model

Phased delivery (Discovery → Design → Build & Validate) with bi-weekly check-ins and stakeholder alignment sessions. Expected launch: 12–16 weeks from kickoff.

- ✓ **Brand & Design Guidelines** — Token-based design system
- ✓ **Platform Walkthrough** — Shopify implementation approach
- ✓ **Investment Breakdown** — Costs and payment terms
- ✓ **Post-Launch Support Model** — SLAs and optimization cadence
- ✓ **Competitive Case Studies** — Similar biotech/pharma platforms

About the Consultant



Phil Parry

Independent UX Consultant & Digital Product Strategist

With 25 years of experience in user experience design at a leading mobile technology company, I bring enterprise-grade product thinking to specialized consulting engagements. My approach combines deep UX expertise with AI-augmented workflows—leveraging tools like Anthropic's Claude for strategic documentation and Google's Gemini for accelerated development—enabling delivery of comprehensive solutions at a pace and price point typically unavailable from traditional agencies.

This project represents an opportunity to apply that experience to the biotech and pharmaceutical sector, where credibility, precision, and trust are paramount.

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What's in the Full Proposal

- ✓ **Detailed Technical Scope** — 12-16 week timeline breakdown
- ✓ **Product Requirements Document** — User flows, technical specs
- ✓ **Brand & Design Guidelines** — Token-based design system
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