InVitro Capital Industry Thesis: DTC Prescription Healthcare

Investor Summary

Direct-to-consumer healthcare has matured past its first wave. Platforms like Hims & Hers successfully built businesses by solving **access friction**: providing simple intake, convenience-first prescription issuance, and fulfillment. But access has now fully commoditized across nearly every therapeutic vertical.

The next defensible layer may emerge around **precision drug delivery platforms** that combine dynamic clinical workflows, integrated fulfillment, and adaptive longitudinal care optimization. This model depends on tight integration between software-driven protocol engines and physical drug dispensing operations—allowing for ongoing regimen adjustments, iterative optimization, and data-informed clinical learning loops.

InVitro Capital's ownership of two pharmacies provides unique operational leverage here, but only if fulfillment is treated not as a margin line item, but as a data-capture engine that directly feeds adaptive care protocols. The thesis is not "owning a pharmacy," but rather **owning the drug delivery workflow** itself.

I. Reframing the Industry Structure

Subsegment	Description	Representative Examples
Sexual Health	Erectile dysfunction, premature ejaculation, libido optimization	Hims, Roman
Dermatology	Acne, pigment, aging	Curology, Musely, Apostrophe
Metabolic Health	GLP-1s, metabolic optimization	Ro, Found, Hims & Hers
Women's Hormonal Health	Hormonal acne, PCOS, menopause	Nurx, Hers, Midi, Evernow
Neurology	Migraine, sleep disorders	Cove, Cerebral
Allergy / Immunology	Immunotherapy, at-home desensitization	Wyndly

Note: These categories define *initial condition entry points*. The ultimate customer could include DTC brands, hybrid virtual clinics, payers, and health systems. Our platform sits below the end-user brand, operating the precision delivery infrastructure that powers longitudinal care.

18650 MacArthur Blvd, Suite 450, Irvine, CA 92612
www.invitrocapital.com

II. Studio Filter Assessment

Studio Filter	Assessment	Comment
Structural Inefficiency	High	Protocol adaptation post-initiation remains largely manual or nonexistent.
Build Feasibility	High	Software and pharmacy control enable scalable platform infrastructure.
Defensibility	High (if protocol engine built)	Data feedback loops create learning curves; 3rd party fulfillment competitors cannot replicate easily.
Capital Efficiency	High	No real estate, limited clinical staff; fulfillment scale already owned.
Return Potential	High	Recurring conditions, large addressable populations, high LTV via protocol optimization.

III. Workflow Decomposition for Drug Delivery Platforms

Workflow Stage	Description	Key Workflow Risk Today	InVitro Control Potential
Intake & Assessment	Forms, telehealth intake, medical history	Fully commoditized	Minimal differentiation
Initial Prescription Decision	Basic eligibility scripting	Crude protocols dominate	Baseline table stakes
Fulfillment Dispatch	First shipment via pharmacy	Vendor-dependent for most DTCs	Pharmacy control provides data leverage
Dose Titration & Adjustments	Adjusting dose / combo over time	Rarely done in consumer DTC	Core opportunity: protocol engine
Adherence Monitoring	Track refill behavior, symptom surveys	Under-utilized data	Pharmacy data + digital follow-up integration
Longitudinal Outcomes Tracking	Ongoing labs, biometric trends, symptom patterns	Largely absent	Closed-loop integration possible
Protocol Learning & Optimization	Adapt protocols based on population-level signals	Completely absent	Studio-native clinical IP moat

18650 MacArthur Blvd, Suite 450, Irvine, CA 92612
www.invitrocapital.com

IV. Studio Wedges Anchored to Drug Delivery Workflow

A. Precision Titration Protocol Engine (Cross-Condition Core)

Thesis: Most conditions treated via DTC have large intra-patient response variation. Yet nearly all protocols are static. The opportunity sits in constructing dynamic titration models that adapt treatment based on pharmacy refill patterns, side effect reporting, biomarker monitoring, and lifestyle signals.

Fulfillment Role: Pharmacy control allows real-time detection of adherence failures, dose gaps, and side-effect related non-compliance. This closes the loop into protocol engines.

Applicable Conditions: GLP-1 weight loss, hormonal acne, menopause HRT, migraine prevention.

Studio Fit: High defensibility; multiplatform applicability; software IP core.

B. Hormonal Cycle-Based Care Platform (Vertical Example)

Thesis: Hormonal fluctuations drive significant variation in acne, PCOS, menopause, and cycle disorders. Current protocols often fail to dynamically adjust to cyclical physiology.

Studio Advantage: Combine lab tracking, pharmacy refill cadence, symptom logs, and digital cycle tracking to enable individualized dosing algorithms that adapt over time.

Pharmacy Control Advantage: Control over refill timing creates optionality for testing and protocol adjustment aligned with hormonal windows.

Competitors: Hers, Nurx, Evernow provide access, but personalization depth is minimal.

C. Migraine Prevention Engine (Vertical Example)

Thesis: Effective prevention requires trigger identification, behavioral reinforcement, wearable integration, and medication optimization. Current offerings emphasize acute treatment.

18650 MacArthur Blvd, Suite 450, Irvine, CA 92612
www.invitrocapital.com

Studio Advantage: Integrate pharmacy refill gaps with trigger exposures and wearable data for prevention personalization.

Competitors: Cove focuses on acute prescriptions without prevention depth.

D. Dermatologic Adaptive Regimen Platform (Vertical Example)

Thesis: Acne, hyperpigmentation, and aging regimens rarely adjust after initial prescribing. Variability in skin response is significant.

Studio Advantage: Combine longitudinal imaging, pharmacy refill patterns, and side effect logs to inform adaptive topical and systemic protocols.

Pharmacy Role: Control of multi-agent inventory enables rapid regimen cycling.

Competitors: Curology, Musely, Apostrophe provide limited ongoing protocol adaptation.

V. Summary: Drug Delivery Workflow as Defensible Moat

Wedge	Current Industry Practice	Studio Advantage
Intake & Access	Fully commoditized	Neutral
Prescription Initiation	Algorithmic forms	Neutral
Fulfillment Dispatch	Third-party drop ship	Controlled pharmacy fulfillment data
Titration	Rarely done	Dynamic protocol learning engine
Adherence Monitoring	Low integration	Pharmacy refill data + digital engagement
Outcome Feedback	Virtually absent	Multi-modal longitudinal tracking

VI. Conclusion: Research Path Forward

The space for precision drug delivery platforms is structurally attractive. Access models have become fully commoditized. Workflow-level integration of drug fulfillment and dynamic protocol optimization could offer a next layer of differentiation.

However, a critical open question remains: **Do consumers demand or value ongoing personalized protocol optimization, or is prescription access alone**

18650 MacArthur Blvd, Suite 450, Irvine, CA 92612
www.invitrocapital.com

sufficient for most use cases? Existing DTC adoption patterns suggest patients value convenience and low-friction access, but longitudinal personalization adoption has not yet been validated at scale.

The studio thesis therefore remains under research:

- The infrastructure to build dynamic care engines is feasible and differentiated.
- Pharmacy integration provides unique data advantage.
- The patient demand signal for longitudinal personalization remains an open area requiring validation.

Next Steps: Research Process Framework

To validate whether longitudinal personalization has sufficient market pull, we will undertake:

1. **Patient Surveys & Panels:** Directly test willingness-to-pay, perceived value, and frustrations with current static DTC models.
2. **Clinician Interviews:** Identify where clinical leaders see meaningful improvement opportunities through dynamic protocols.
3. **Retention Cohort Analysis:** Assess existing DTC retention curves across known providers to estimate real-world churn driven by static protocols.
4. **Pilot Simulation Modeling:** Use pharmacy data assets to simulate how protocol adjustments could have impacted outcomes or adherence in retrospective analysis.
5. **Design Partner Engagement:** Identify potential early clinical partners willing to co-develop first-generation personalization layers inside controlled therapeutic categories.

This research sequence is designed to separate consumer preference from theoretical clinical appeal. The opportunity may be structurally valid but commercially narrow, broad, or segment-dependent. The studio will maintain optionality until validated signal emerges.

18650 MacArthur Blvd, Suite 450, Irvine, CA 92612
www.invitrocapital.com