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Innovating Drug Delivery to Improve Patient Outcomes

Executive Summary

Most treatments fail because drugs do not reach the tissue and intracellular sites where disease persists. **AtoCap is a patent-protected university spin-out developing a targeted drug delivery technology** that enables high concentrations of therapeutics to reach tissues and cells, overcoming biological barriers that limit the effectiveness of conventional treatments.

CapFuran™, AtoCap's lead program for recurrent urinary tract infections (rUTIs), **has achieved more than 90% bacterial reduction in human bladder organoid models**, compared with less than 40% typically achieved by standard oral antibiotics. In parallel, early oncology data with encapsulated chemotherapy demonstrates increased tumour cell killing and higher local drug concentrations, with reduced exposure to healthy tissue. Together, these data highlight the **broad applicability of AtoCap's delivery platform across multiple therapeutic areas** and support the foundation of a scalable future pipeline.

With **strong preclinical data**, a defensible **intellectual property estate**, and an established **CDMO partnership**, AtoCap is positioned to **advance directly into first-in-human studies**. We are initiating a **Series A** round expected to provide approximately **2.5 years of runway for the completion of a phase I/IIa trial** and advance regulatory execution , while in parallel pursuing UK and European grant funding to support forthcoming clinical stages and strengthen long-term capital efficiency.

This stage represents a **favorable risk-adjusted clinical entry point**, with core biological, technical, manufacturing, and regulatory uncertainties reduced and the company at the threshold of first-in-human validation, a key **catalyst for valuation expansion**.

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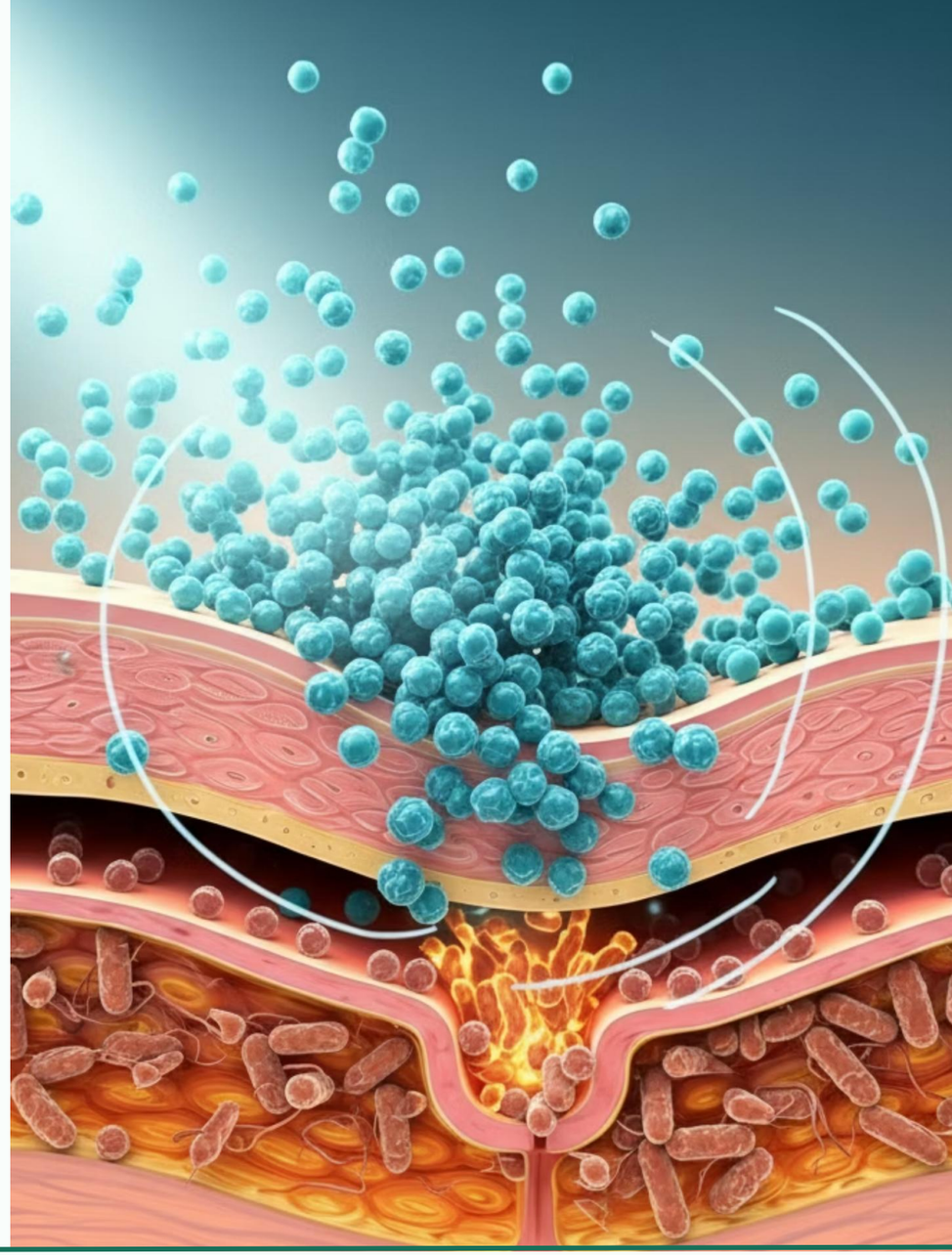
[1].Sun et al. (2022), footnote [2] Maeda & Khatami (2018).

The Efficacy Gap: When Drugs Can’t Reach Their Target

~90% of drug delivery fails due to inadequate tissue and intracellular penetration[1], now recognized as a major root cause.[1,2]

The human body presents multiple biological barriers that limit how much of a drug reaches its target after it is injected or ingested. Instead, much of the drug remains in the bloodstream or is absorbed by healthy tissue.

As a result, **patients often need repeated treatments, suffer harmful side effects, and face higher risks of relapse or resistance,** while healthcare costs continue to rise.



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[1] AstraZeneca. Intracellular target insights. 2024. [2] Wilhelm S. et al. Analysis of nanoparticle delivery to tumours. Nat Rev Mater. 2016.

Targeted Drug Delivery is Becoming A $25B Industry Priority

The industry is **shifting toward intracellular delivery,** yet current technologies have failed to reach the target, creating **a multibillion-dollar opportunity** for a technology that can achieve **precise delivery** to the intended site of action.

The Industry Shift

" Up to 80% of the targets we are seeking to reach are inside cells[1]." - AstraZeneca, 2024

Pharma recognizes that the challenge is no longer discovering molecules but **delivering them where they act.**

Across oncology, infection, and emerging modalities, efficacy depends on **intracellular access,** crossing biological barriers to reach the true site of disease.

The White Space

Despite decades of nanoparticle research, only **~0.7% of an injected dose reached target tissue,** leaving >99% in systemic circulation (*Wilhelm et al., Nat Rev Mater, 2016*).[2]

This inefficiency limits therapeutic impact, particularly in **infection,** where biofilms and intracellular reservoirs remain unreachable.

The Market Opportunity

The global **targeted drug-delivery market** will reach **~$25 B by 2030 (~16% CAGR)**[3] (*Market Research, 2025*).[3]

Pharma's appetite for delivery-enabled assets is clear: **Pfizer's $43 B Seagen acquisition**[4] shows precision delivery is now a strategic growth driver.[4]

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[1] AstraZeneca. Intracellular target insights. 2024.[2] Wilhelm S et al. Nat Rev Mater. 2016.[3] Market Research Future. Targeted Drug Delivery Market Report. 2025.[4] Pfizer. Seagen Acquisition Press Release. 2023.

Our Mission: Unlock the Full Potential of Treatments Through Targeted Drug Delivery

AtoCap overcomes the core limitation of low intracellular payload delivery through **a technology that enables high local and intracellular drug concentrations and effective entry past cellular barriers**. This scientific capability, combined with a **defined and executable GMP manufacturing route and proprietary formulation expertise**, positions AtoCap at the **forefront of localized precision drug delivery.**

Our **patented electrohydrodynamic (EHD) encapsulation technology** creates biodegradable microcapsules that allow high local concentrations of drugs to be delivered to the site of disease.

Protect

to ensure active ingredients remain protected while traversing biological barriers

Deliver

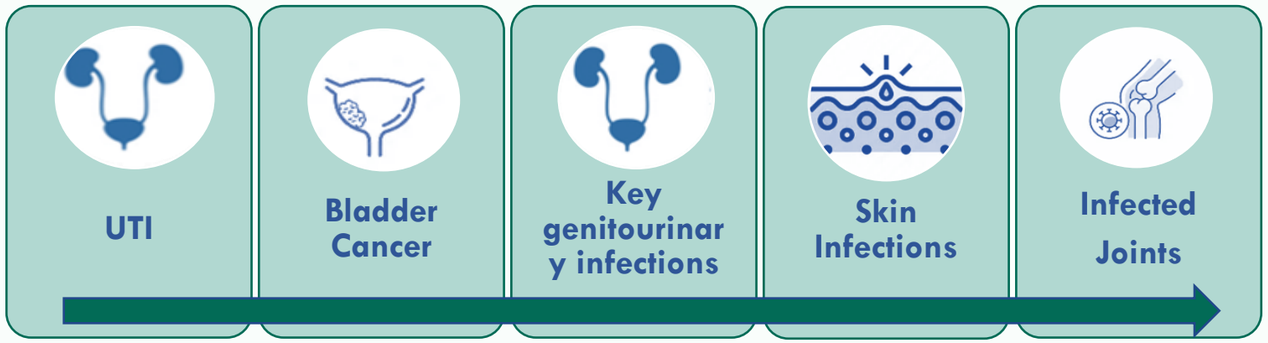
to reach the site of disease precisely where the treatment is needed

Reduce

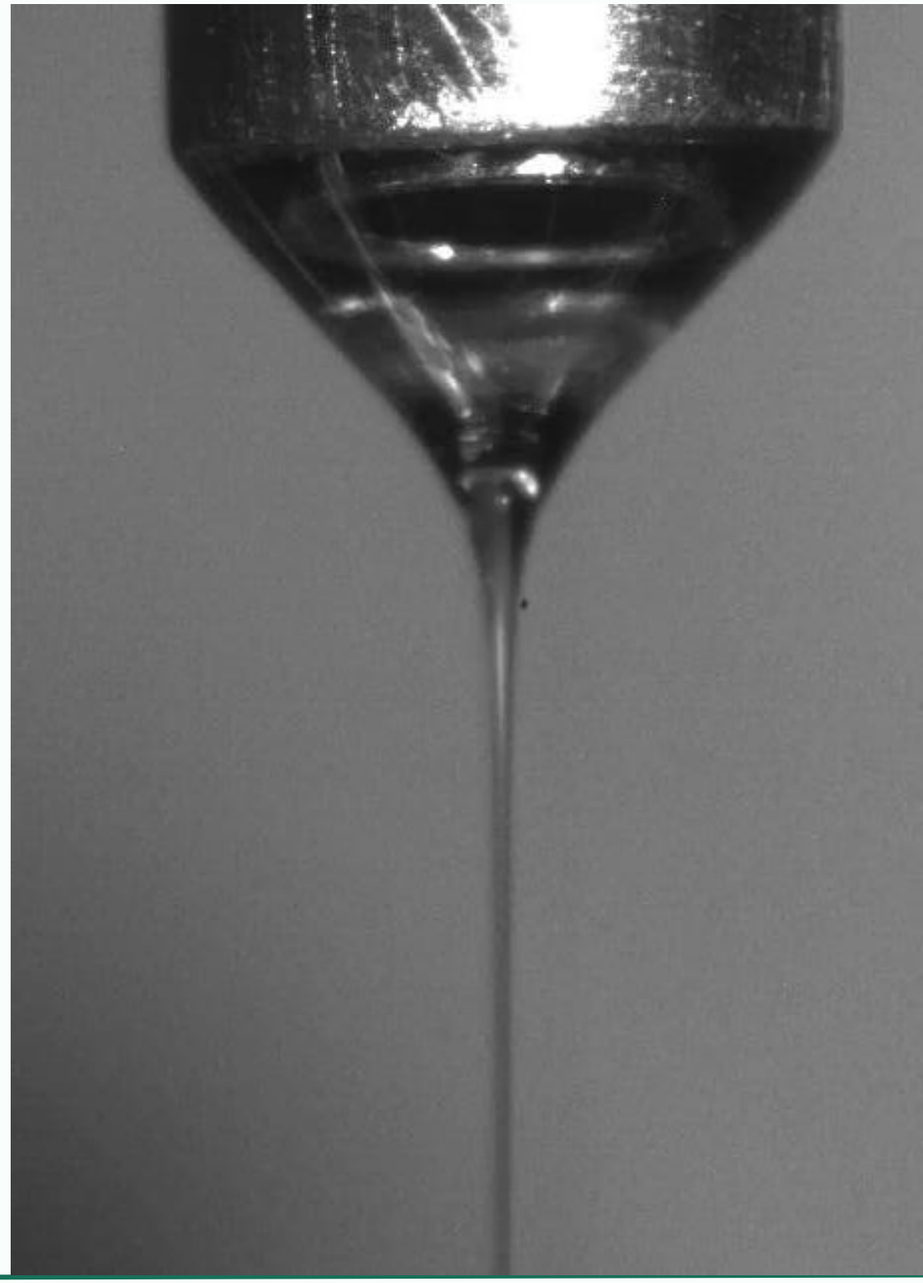
to minimize systemic exposure and enhance long-term safety and efficacy

A Technology Designed to Transform Drug Delivery in High-Impact Diseases

AtoCap's encapsulation technology is designed to **create value across multiple therapeutic areas,** by **enhancing treatment performance** in multiple high-impact fields such as oncology and hard-to-treat infections.



Our **lead program** focuses on recurrent **urinary tract infections (rUTIs)**, a highly prevalent condition that strains healthcare systems and, most importantly, profoundly affects the lives of patients living with chronic illness.



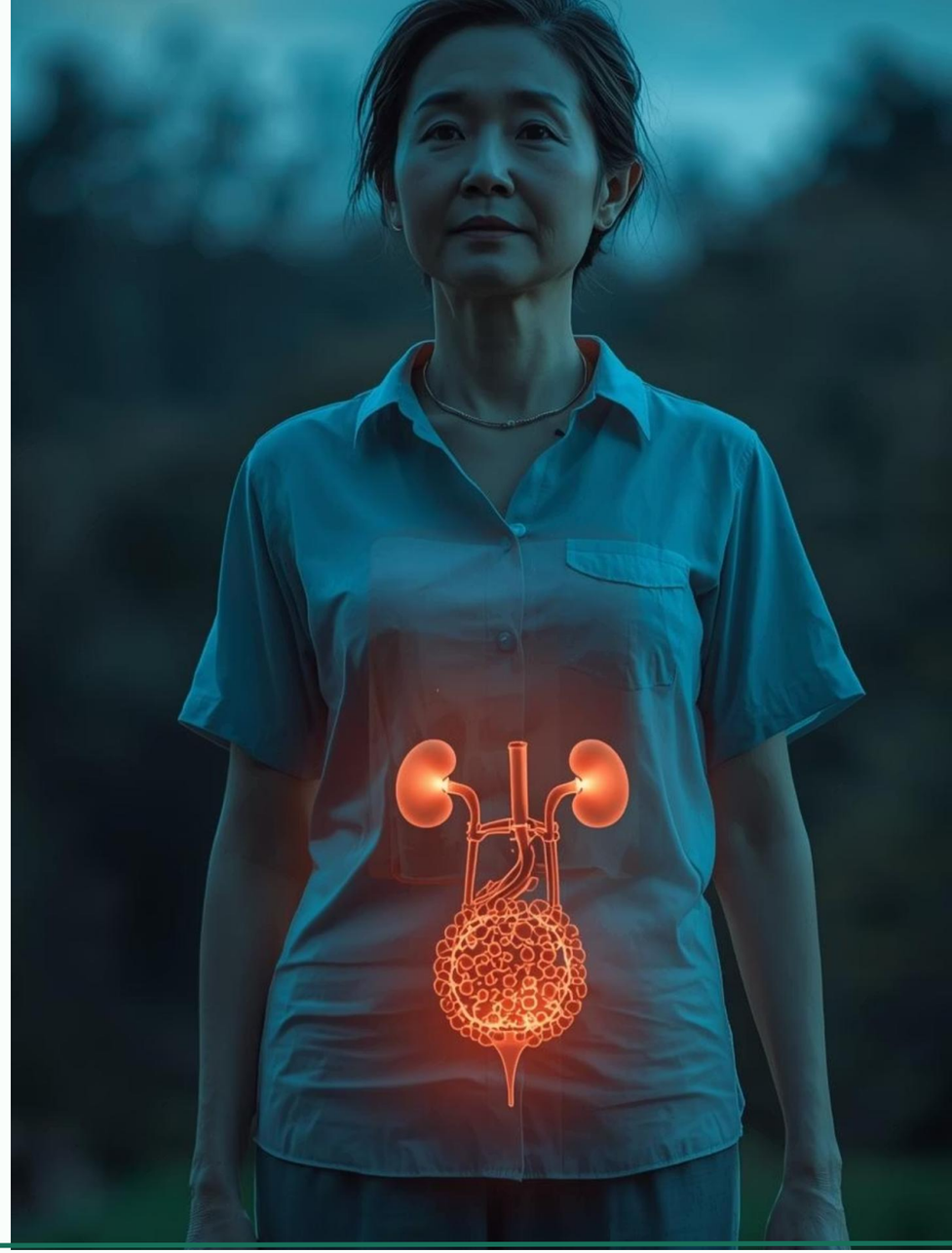
UTIs: When a Common Infection Becomes a Lifelong Struggle

Sarah, 55, is a mother of two living in London, and a former marketing executive. What 9 years ago began as a simple urinary tract infection, has become a chronic, untreatable condition that has taken over her life.

> ***"I was diagnosed with a UTI in 2016, 9 years later, and after being treated with 11 different antibiotics, I still have the same infection.***
>
> ***I cannot work. I cannot travel. I cannot walk far. Every single facet of my life I once took for granted has been taken away."***

For millions of patients like Sarah, **UTIs** are not isolated events. They have been **part of their lives for over 10 years**, with many experiencing **more than 6 infections each year**, bringing the same cycle of pain, new antibiotics, temporary relief, and the **growing fear of when the next treatment will no longer work.**[1]

Behind every prescription are urologists and GPs doing their best, knowing that **each new course of antibiotics carries its own cost to the patient's broader health.**



Based on the real testimony of a patient living with chronic recurrent UTIs. 1. AtoCap UTI Patient Market Research Report, 2024.

UTIs- A Global and Persistent Health Burden with over 400 Million Infections Each Year

400M+

People Affected

UTIs are among the most common bacterial infections worldwide, with over 400 million cases annually.[1]

1 in 3

Recurrence Rate

Up to one in three women experience a recurrent UTI within six months of their first infection.[2]

50%

Antimicrobial Resistance

More than half of UTI pathogens are resistant to first line antibiotics.[3]

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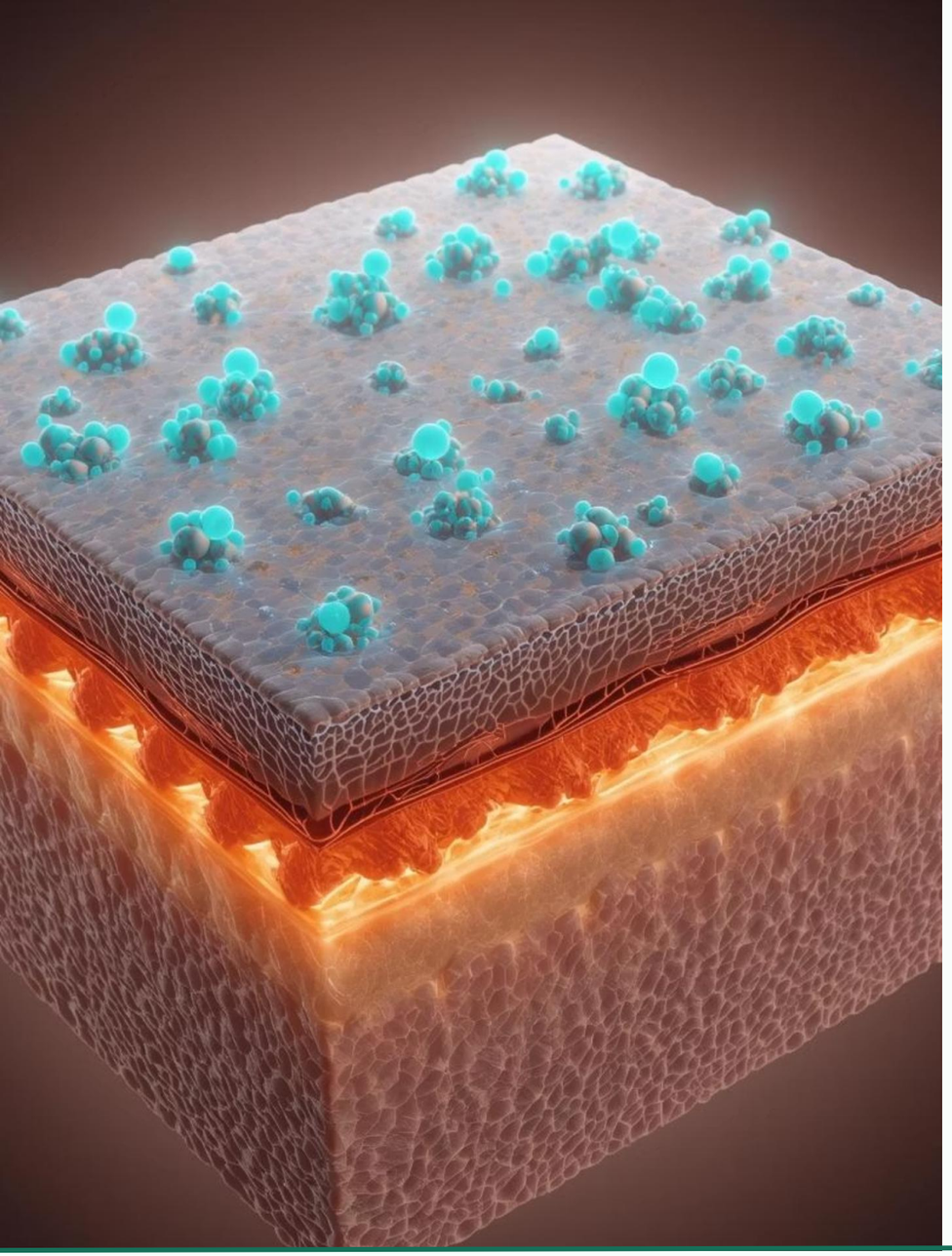
[1] Foxman B. 2014.[2] WHO. AMR Global Report. 2020.[3] Rees J. 2021.



Existing UTI treatments cannot reach embedded infections

Current UTI therapies, including antibiotics and vaccines, **cannot penetrate sufficiently into the bladder wall to kill bacteria if they have become embedded inside cells or produced a biofilm.**[1,2]

As a result, symptoms may temporarily subside, **but the infection persists within the bladder wall.** Embedded bacteria survive and later multiply, leading to recurrent flare-ups. The patient appears symptom-free for a time, but **the underlying infection is never truly resolved.** [1,2]

Therapy	Limitation	Result
Oral antibiotics	Free bacteria only	Relapse
IV treatments	Poor tissue penetration	Resistance
Vaccines	Do not eliminate intracellular reservoirs	Clinical efficacy remains inconsistent

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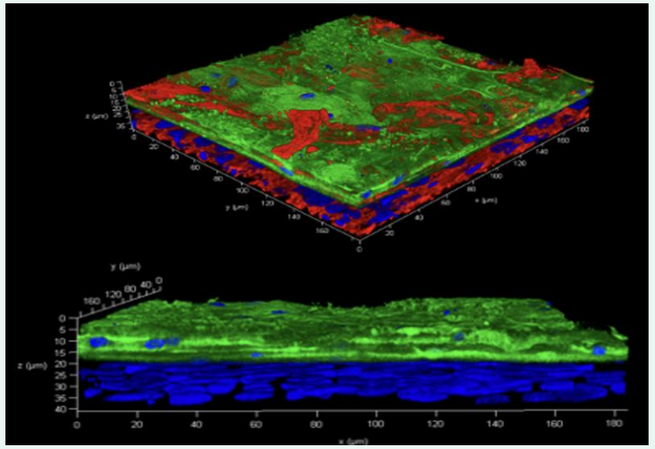
1, Hannan TJ. Nat Rev Microbiol. 2012. 2. Mulvey MA. Science. 2001.

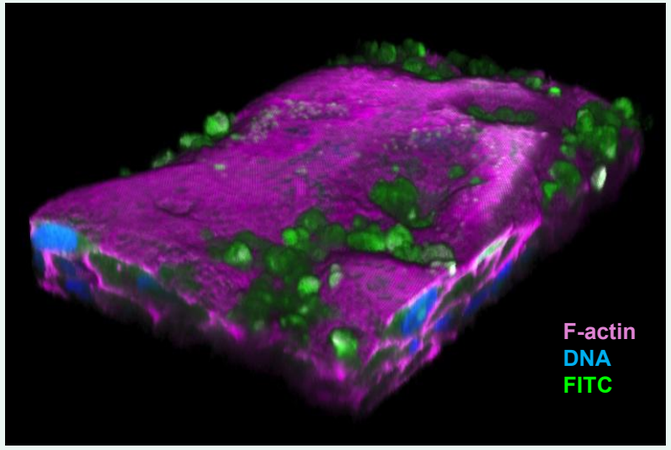
Redefining Infection Treatment Through Precision Delivery

CapFuran™ AtoCap's lead program, reformulates nitrofurantoin into a targeted, localised therapy that reaches even embedded infections. Administered through a short intra-vesicular instillation, each capsule delivers a highly concentrated antibiotic locally, strong enough to kill bacteria that may reside inside cells or within biofilms.

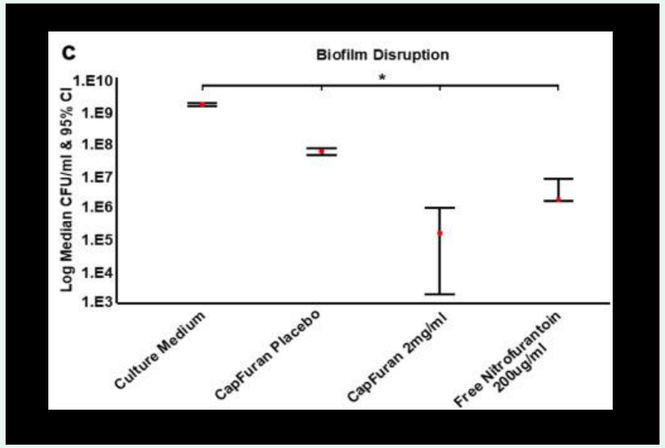
Penetrates deep tissue layers where persistent bacteria remain



Reaches intracellular reservoirs that oral antibiotics cannot access



Acts directly within biofilms that contribute to persistence/recurrence



By reaching infection where others cannot, **CapFuran**™ **helps break the cycle of relapse, and reduces the need for repeated antibiotic use.**

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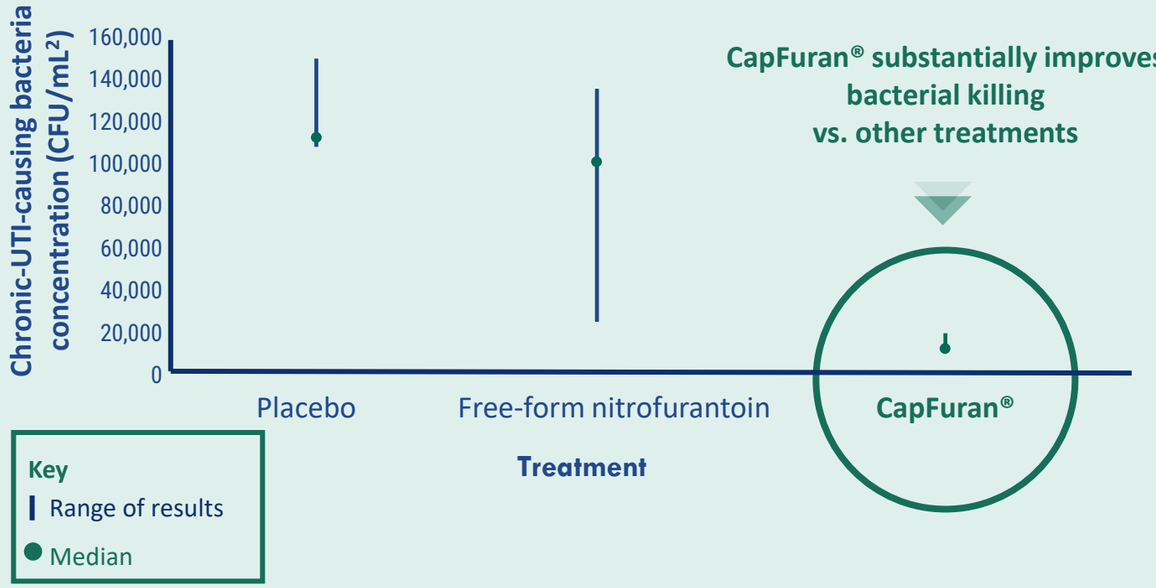
Lau W, Rohn J, Dharmasena D, Horsley H, Jafari N, Malone-Lee J, Stride E, Edirisinghe M.

Proven Human-Tissue Efficacy: Reaching Where Oral Antibiotics Fail

CapFuran™ has been shown to eliminate embedded bacteria that oral antibiotics leave behind.

In human organoid models, CapFuran™ achieved deep tissue penetration, eliminating bacteria hidden inside bladder cells and biofilms, **reducing infection by over 90%** compared with <40% using oral antibiotics.

Concentration of a key bacteria that causes recurrent UTI after different treatments (based on 3D model of human bladder)



Published Evidence

Results published in the *Journal of Controlled Release (2020)*, confirming efficacy and safety, with no observed toxicity in human organoid models.

Regulatory Progress

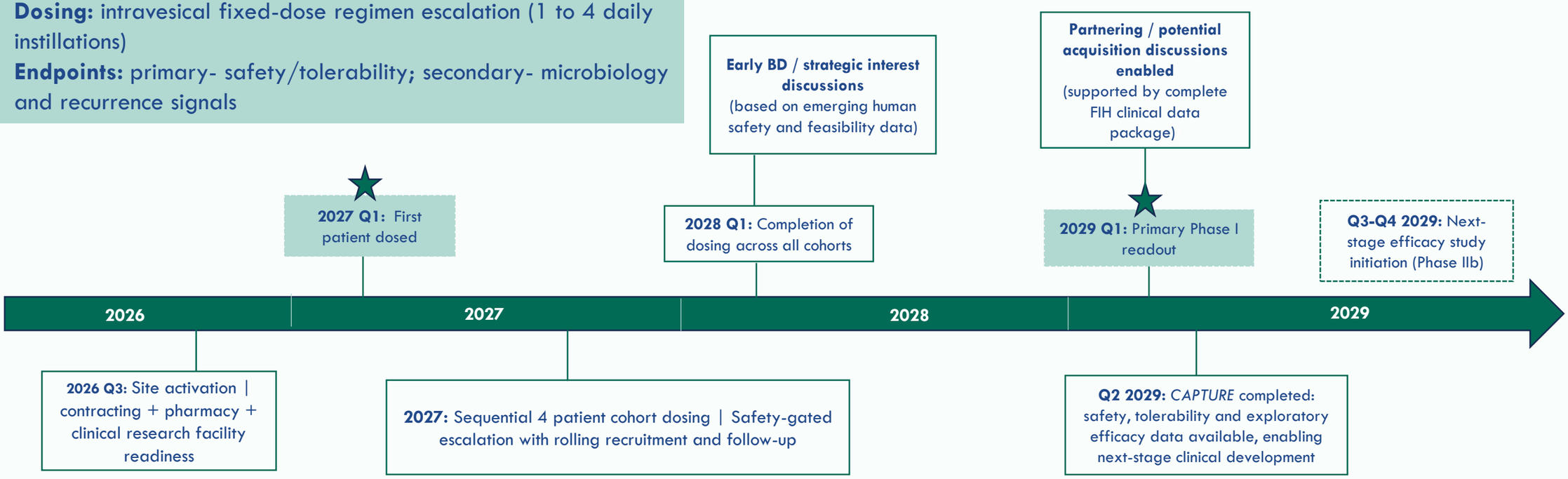
Following positive MHRA feedback, CapFuran™is advancing toward first-in-human evaluation once GLP toxicology studies are complete.

Lau W, Rohn J, Dharmasena D, Horsley H, Jafari N, Malone-Lee J, Stride E, Edirisinghe M.

Entering First-in-Human (FIH) Via An Accelerated Phase I/IIa Clinical Trial

CAPTURE is a **Phase I/IIa study** designed to generate **decision-grade safety data and early efficacy signals,** unlocking **early partnering discussions** and a clear path into **registration-enabling clinical development.**

- **Indication:** recurrent UTI (3/year or 2 in 6 months)
- **Site:** University College London Hospital (UCLH)
- **Size:** 20 patients, 4 sequential cohorts
- **Dosing:** intravesical fixed-dose regimen escalation (1 to 4 daily instillations)
- **Endpoints:** primary- safety/tolerability; secondary- microbiology and recurrence signals



* Timelines and trial design based on internal planning assumptions and standard Phase I/IIa clinical development practices.

Validated Delivery Technology, Protected IP, and Ready to Scale

AtoCap combines **robust intellectual property protection** with a **validated industrial partnership,** providing sustainable market positioning and ensuring high-quality production and readiness to scale.

Protected Innovation

- Exclusive worldwide licence from UCL Business (UCLBproviding full freedom to operate and long-term platform control
- Granted process patents and pending filings for CapFuran™
- Strong IP moat protecting manufacturing and formulation methods

Strategic Industrial Partnership

- GMP partnership with Bionanopharma (Insud Pharma Group), global experts in sterile and nanoparticle-based manufacturing
- Technology transfer successfully completed in Spain
- Validation batches confirming yield, reproducibility, and regulatory compliance

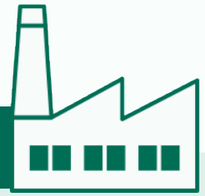
AtoCap is now Facing a Strategic Window for Acceleration

AtoCap stands at a strategic inflection point where scientific validation, manufacturing scalability, and executional readiness align.

Validated Science

- : **>90% bacterial reduction** in human tissue models.
- **Oncology program: superior performance to the unencapsulated drug, sparing healthy tissue** in a human organoid model.

Scalable Manufacturing



- **GMP-scale electrohydrodynamic (EHD) encapsulation** proof-of-concept established with Bionanopharma.
- **Clinical-grade reproducibility achieved,** confirming readiness for translational expansion.

Strategic Leadership

An experienced team, complemented by a newly appointed senior leader with over 15 years of pharmaceutical experience, ensuring the needed **strategic, clinical, and commercial execution expertise** to **advance AtoCap toward clinical translation and commercialization.**

Scientific and Commercial Leadership Driving Strategic Execution

AtoCap brings together a **multidisciplinary leadership team,** ready to translate pioneering science into clinical application, secure strong intellectual property protection, and prepare for commercialization through early strategic engagement.

Prof Eleanor Stride
OBE, FREng, FIET

Founder &
Non-executive Director

Bioengineering & Translational Science
Oxford University

Dr Jennifer Rohn

Chief Scientific Officer

Head of Urological Biology, Division of Medicine UCL

Alex Pitt

Non-executive Director

Founder of Mustardseed Impact

Dr Weng Sie Wong

Non-executive Director

Senior Business Manager UCL Business

Cristina Diaz-Dickson

Non-executive Director

Lead Investor

María José Baixauli

General Manager

Former Novartis and JnJ Commercial Leadership

CapFuran targets a high-volume, high-burden infection aligned with WHO priorities, supporting regulatory momentum and value-based pricing.

A recurring infection cycle that drives repeat antibiotic exposure and high burden associated costs

- **UTIs** account for **~15–20% of antibiotic prescribing in primary care**, making them one of the largest, most recurrent drivers of routine workload in community healthcare.[1]
- Recurrent UTI patients experience **3–6 infections per year**, repeatedly moving through GP appointments, diagnostics, and escalation to emergency and specialist care, creating **high-frequency system touchpoints** that **strain capacity, crowd out other services, and amplify antimicrobial resistance risk.**[2]

AMR creates an approval and adoption tailwind for recurrence-breaking solutions

- **AMR** mortality is projected to rise sharply, with up to **~10 million deaths annually by 2050.**[4,5]
- Reducing repeat antibiotic exposure in high-use populations such as recurrent UTIs **directly aligns with WHO, EMA and MHRA priorities, strengthening regulatory appetite** for interventions that break the recurrence cycle.[5,6,7]

Value-based pricing benchmarked to drug delivery innovation precedents

- CapFuran is positioned as **a technology-enabled intervention**, with **value-based pricing anchored to system-level utilization reduction**, consistent with drug delivery innovations in high-impact chronic diseases.[8]
- Long-acting antipsychotics such as ***aripiprazole*** illustrate **how delivery innovations earn premium reimbursement when pricing is anchored to measurable system impact**, including fewer relapses and hospital bed days.[9]

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[1] McDonnell et al. UTI antibiotic prescribing share in UK primary care. [2] Honda et al. Rising non-susceptibility across successive urinary tract infections and its contribution to antimicrobial resistance.[3] O'Neill AMR Review. Final report and recommendations (2050 mortality projection).[4] World Health Organization. No Time to Wait: Securing the Future from Drug-Resistant Infections.[5] European Medicines Agency. Tackling antimicrobial resistance.[6] ICMRA. Strategic initiatives on antimicrobial resistance (including MHRA participation).[7] OECD; Office of Health Economics. Value-based pricing and system value frameworks.[8] Tempest et al. Cost-effectiveness of long-acting injectable aripiprazole and delivery-led value precedents

AtoCap´s Strategic Exit Scenarios and Potential Partners

AtoCap's validated technology opens multiple strategic pathways, from partnerships to full acquisition, aligning with pharma, biotech, and manufacturing priorities in targeted and intracellular drug delivery.

These routes reflect how AtoCap complements global portfolios focused on infection, precision delivery, and scalable manufacturing.

Exit Scenario	Brief Description	Potential Partners
Early Partnership / Co-Development	Joint projects with pharma to apply AtoCap's delivery platform to existing or new molecules.	gsk, Pfizer, AstraZeneca
Technology or Platform Acquisition	Full acquisition of AtoCap's delivery technology to strengthen targeted and intracellular delivery capabilities.	Roche, Merck, Pfizer, Daiichi-Sankyo, Johnson & Johnson, AstraZeneca
Asset Licensing (Therapeutic-Specific)	Licensing AtoCap's technology for defined indications while retaining core platform IP.	Seagen, Arcturus therapeutics, Halozyme, PORTAL
Manufacturing / CDMO Integration	Partnership or acquisition by manufacturing groups to scale encapsulation and GMP production.	Lonza, Catalent, evotec, Recipharm
Strategic Investor / Biotech-to-Biotech	Investment or acquisition by biotech or specialist funds seeking enabling delivery technologies.	AMR Action Fund, novo holdings, SYNCONA

Michaeli et al., Biotechnology J. 2022. Du & Rosenwald, NYU Stern 2024. PitchBook/DealForma M&A Report Q2 2025.

A Strong Scientific Foundation with a Clear Path to Value

At this stage, AtoCap represents a clinical-entry drug-delivery platform with demonstrated human-tissue efficacy, confirmed intracellular activity, and regulatory alignment for direct first-in-human studies.

Current Value Drivers

- Demonstrated efficacy in human-relevant models reduces foundational biological uncertainty and supports direct transition to first-in-human evaluation.
- Established GMP manufacturing route provided feasibility and scalability, reinforces the credibility of future clinical translation.
- Delivery platform applicability beyond rUTI, with early validation in oncology models, underpinning platform-level optionality.

Path to Value Expansion

- Initiation of first-in-human clinical studies represents a **major value-defining inflection point,** with early clinical **data generation** expected to materially reduce translational risk and unlock multiple **execution pathways.**

This stage represents a **favorable risk-adjusted clinical entry point,** with core biological, technical, manufacturing, and regulatory uncertainties reduced and the company at the threshold of first-in-human validation, a key **catalyst for valuation expansion.**

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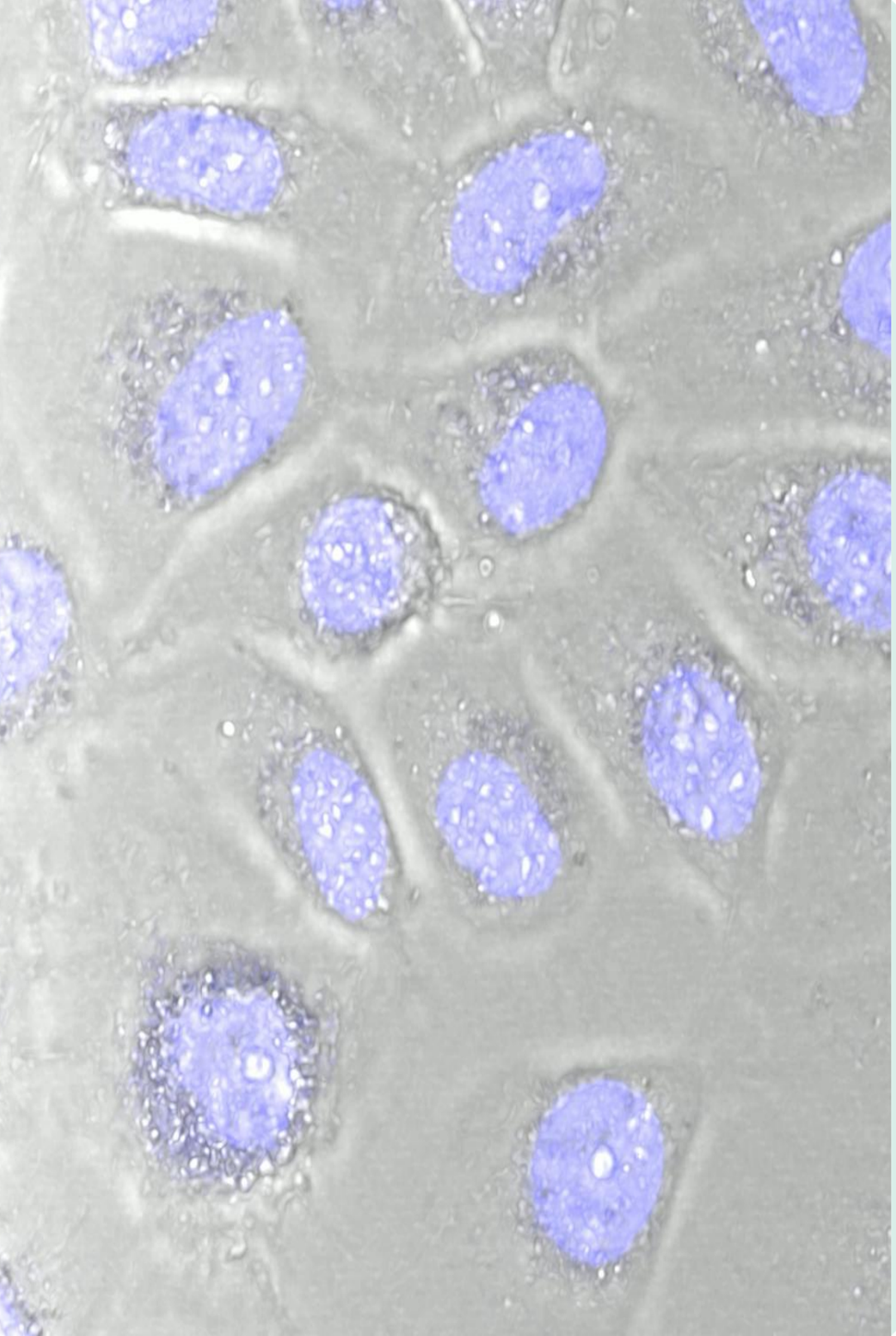
IQVIA Biopharma Valuation Drivers; Excedr Biotech Valuation Methods; Toptal Biotech Valuation Frameworks; DrugPatentWatch Valuation Considerations; PitchBook technology Benchmarks.



The Opportunity Ahead

From One Life to Millions. Redefining How Healthcare Breaks Barriers.

AtoCap's precision delivery technology stands at the forefront of a healthcare transformation. By unlocking access where conventional treatments fail, we open a pipeline of opportunities across infections, oncology, and beyond.

This next phase brings AtoCap closer to patients by unlocking first-in-human validation.
We are inviting partners to join us in advancing the next frontier of localized precision drug delivery.

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