

Innovations in Advanced Drug Delivery



- Connectivity, sensors, monitoring
- Customised device development
- Autoinjectors, high volume wearables, inhalers, reconstitution devices, infusion pumps



Next-generation drug delivery devices

Miniaturisation & complex electromechanical design

Ultra-low power electronics, energy harvesting

Simplified reconstitution in a single device

Advanced fluidics for precision & high viscosity applications

Biometric sensing, monitoring & connectivity



Drug delivery trends →

Healthcare providers and patients are seeking ways to deliver drug therapies safely, conveniently and discreetly. Increasingly, new drugs are biologics, with more complex delivery requirements. The issue of low patient adherence to chronic medication remains and new solutions are needed.

Companion diagnostics offer more personalised treatment, identification of non-responders, and improved success rates in clinical trials.

Sagentia in drug delivery →

Advanced drug delivery design & development. We develop devices for our clients, to our clients' specific requirements. Our scientists & engineers have extensive experience in sensors, fluidics, wireless, complex mechanical design, medical software development and data analytics.

Extensive experience of In Vitro Diagnostics and Point of Care diagnostics make us the perfect partner for developing companion diagnostics.

At Sagentia, we work across the development lifecycle:-



initial need and market analysis



concept generation



technology and product development



transfer to manufacture

Development of novel drug delivery devices

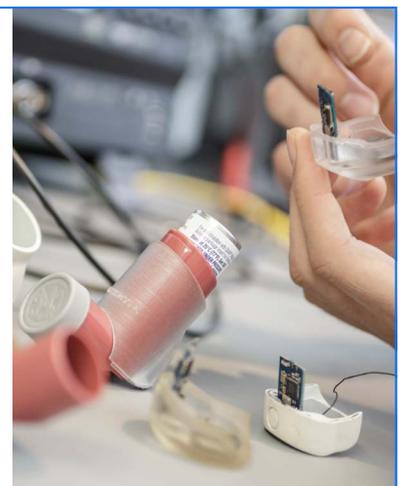


More details overleaf →

Verihaler

Connected health system for monitoring adherence

Full case study overleaf →



Development of novel drug delivery devices

Sagentia has undertaken multiple projects in recent years to develop devices to our clients' specific requirements, using novel designs and technology

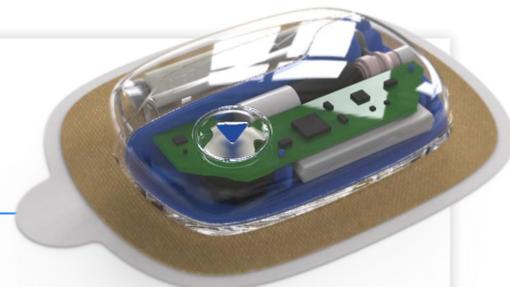
Experience ↪

- Generation of concepts and development of proof of principle demonstrators for very high volume subcutaneous delivery
- Design & development of works-like prototypes for rapid subcutaneous delivery of a high viscosity drug formulation using a novel propulsion mechanism

- Development of a very high efficiency, bespoke pump for a wearable device and then design transfer to CMO
- Full product development of electromechanical, microfluidic patch pump for transdermal delivery

Benefits ↪

- Intellectual property assigned to our clients and design data transferred to our clients



- Detailed understanding of the wider landscape, with suitability for specific therapeutic formulations
- Incorporation of connectivity solutions to clients' specific needs
- Control over device strategy independent from 3rd party device providers



Full product development of electromechanical, microfluidic patch pump for transdermal delivery

Connected health system for monitoring adherence

Verihaler, developed by Sagentia, is a connected health system designed for monitoring adherence in asthma or COPD patients

Approach ↪

- Wireless acoustic monitoring provides feedback to users, clinicians and healthcare providers
- A proprietary algorithm removes unwanted background noise and extracts key information about the use of the device
- IEC 62304 compliant iPhone app communicates with the inhaler via Bluetooth Low Energy

Benefit ↪

- The user is presented with clear, actionable metrics about their compliance
- Any deterioration in their condition can be spotted by the patient early on based on the peak flow meter data
- Logged data is uploaded to a cloud server through which the patient and the clinician can jointly review progress



The user is presented with clear, actionable metrics about their compliance

Contact us

The above are just two examples of our work in drug delivery. For more information, please email us at info@sagentia.com or visit us at www.sagentia.com/patient-care