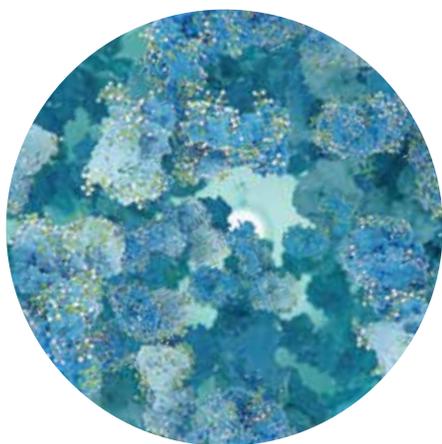


## Large molecules. Small volume. Big impact.

There has never been a way to concentrate and deliver easily and efficiently high dose biologic medicines. Until now.



### **EXCELSSE™ formulation technology: It's a matter of concentration**

The groundbreaking EXCELSSE™ high-concentration formulation technology uses customized blends of amino acids to highly stabilize and concentrate delicate biotechnology medicines. This is achieved by using a proprietary blend of amino acids that coats key regions of the molecule, allowing them to be concentrated together without clumping or becoming unstable.

For each target molecule, the blend is optimized for concentration, aggregation, syringeability, and stability. Upon injection, the amino acids disperse allowing the undamaged drug to quickly enter the blood stream.

### **Easy flowing**

One typical challenge of concentrated protein formulations is increased viscosity. Formulations can be so thick that they require special syringes or pumps to cope with the problem.

EXCELSSE™ technology addresses this with blends of amino acids that block sites that cause viscosity. Medicines the consistency of paste or syrup, through viscosity reduction, can be changed into free-flowing liquids that can be used in standard syringes and small pumps.

# Less time medicating. More time living.

A quantum leap forward for patients



**Imagine the difference in quality of life for the patient whose previous 8-hour IV treatment in a hospital could now be administered via a single subcutaneous injection at home.**

The EXCELSE™ formulation technology represents that breakthrough in lifecycle management, patient care and the delivery of biotechnology drugs. 25% of biologic drugs require a lengthy IV administration, while 50% require use of a lyophilized formulation to stabilize.

Both these solutions are highly inconvenient to patients, and costly for payers. Now, these same therapies can be administered via a single, simple injection when formulated with EXCELSE™ technology. Volume and times savings of 10X or more have been achieved in the delivery of biotechnology medicines formulated with EXCELSE™. For patients managing chronic illnesses such as diabetes, oncology, primary immune deficiency, hemophilia, the potential for improved patient experience is tremendous.

## Your medicine, transformed

Explore the benefits of the latest formulation platform

In today's patient-centered care environment, manufacturers cannot afford to miss out on opportunities to improve quality of life for their customers. Imagine the advantage in brand loyalty and patient satisfaction to companies that utilize this breakthrough technology in the formulation of their therapies, versus their competitors who do not.

### **Quick to market, competitively positioned**

Successful feasibility studies have been conducted for over ten leading therapies, and existing licensing deals with large biotechnology and biopharmaceutical companies are validating the technology.

Because amino acids are naturally occurring, the regulatory path may be more straightforward than competitive technologies such as Halozyme's Enhance™, which utilizes an active additive to open space under the skin for large quantities of drug delivery.

Broad pending patents will provide a barrier to entry in the market by competition. And a simple development path means you can get your EXCELSE™-formulated therapies to market quickly.

**Contact us to see if we can help improve your marketed drug, biosimilar candidate, or new biologic.**



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