

From Research & Discovery

Through Clinical Trials

To Commercialization

Technology Transfer

Liposome Development

R&D Material Production

Dedicated Project Manager

Process Scale-up

Manufacturing of Phase I through III Materials

Further Process Scale-up

Manufacturing of Commercial-scale Pharmaceuticals

At the R&D Stage

The Avanti Formulations Team can help develop a suitable formulation for your liposome or nanoparticle. With the vast library of Avanti lipids and state-of-the-art equipment at their disposal, our experienced team can produce surface-labeled, PEGylated, fluorescent, and other liposome formulations, while working closely with our Lipid Analysts to ensure Avanti quality. The process starts at the R&D stage.

R & D Process:

- Offer liposome expertise, free technical consulting, and assist in the design of liposomes
- Provide the full Avanti lipid catalog for custom formulations as small as 25 mg
- Make custom liposome formulations to meet your specifications, or prepare custom lipid blends for hydration
- Produce 0.1 mL – 1 L liposomes and nanoparticles using:
 - Extrusion
 - Emulsification
 - Sonication

At the Clinical Stage

The clinical process starts with the assignment of a dedicated Project Manager, ensuring that your project is completed within your expected timeline. Your Project Manager works in partnership with you through the following process.

Clinical Process:

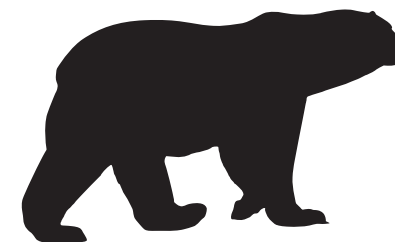
- Transfer our small-scale manufacturing to larger-scale (1 L – 200 L batches) with minimal process changes
- Manufacture materials for clinical trials in our animal product-free, cytotoxin-free cGMP manufacturing area
- Manufacture adjuvant-containing liposomes or nanoparticles by emulsification in our dedicated cGMP adjuvant manufacturing suite
- Assist in the identification and selection of a sterile-filtration facility for parenteral products
- Coordinate inter-departmental efforts including analytical method development, qualification and validation, stability protocol, and drug master file support

At the Commercial Stage

Our Formulations Division offers complete product cycle services that support oral formulations for commercial production.

Commercialization Process:

- Scale up manufacturing to support your product needs
- Promise to give your product the same care that is given to our lipids, still the best in the industry for almost 50 years
- Seamless transition to commercial drug product manufacturing





- **Discovery**
- **Proof of concept**
- **Small scale manufacturing**
- **Process scale-up**
- **Clinical trials**
- **Commercial realization**

The Avanti Formulations Division can help you at each step.

To find out more about how we may assist you with your liposome or nanoparticle needs, please contact us at:

✉ liposomes@avantilipids.com

☎ (205) 663-2494

We look forward to working with you!



Research Products

Highest Purity Lipid Reagents

cGMP Manufacturing

API & Contract Manufacturing

Adjuvants

Immunotherapy & Vaccine Development

Analytical Services

Lipid Analysis

Lipidomics

Mass Spec Standards, Antibodies & Lipid Toolbox

Formulations

Liposomes & Nanoparticles

Equipment

Liposome Production Tools

Custom Services

Synthesis & Beyond

How may we help?

- Toll-Free USA/Canada (800) 227-0651
- Toll-Free USA/Canada (800) 229-1004
- Direct-Dial USA/International (205) 663-2494
- Direct-Dial Fax USA/International (205) 663-0756
- Orders: orders@avantilipids.com
- Inquiries: info@avantilipids.com
- Technical questions: technical@avantilipids.com



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Formulations Division

Liposomes and Nanoparticles



More than Lipids

Solutions for the entire product cycle:
research to commercialization.