

Develop next-generation controlled release drug formulations

CO-CREATING LONG-ACTING, EFFECTIVE MEDICINES THAT SOLVE PATIENTS' UNMET NEEDS.





Develop next-generation controlled release drug formulations with Corbion

Co-creating long-acting, effective medicines that solve patients' unmet needs.

Whether you're inventing the latest life-changing drug or creating generic pharmaceutical products, ensuring high quality in every component of your formulation is crucial. At Corbion, we're passionate about improving patients' wellbeing through next-generation healthcare solutions, and it shows in the holistic biomaterials solution we have created to match your needs.

Our leading GMP-grade resorbable polymers are the excipients of choice for controlled release drug delivery, enabling the release of pharmaceutical ingredients to be regulated over days, weeks or months with a single dose. They're also backed by more than 45 years of industry experience.

No two formulation strategies are the same, however our extensive experience in polymer technology and the breadth of our portfolio mean we are the right partner to support you in your development efforts. And our approach and understanding of **quality-by-design** helps accelerate your new products' speed to market.

The very best partners offer strengths that perfectly complement your own. If you're looking for a partner to co-develop your innovative pharmaceutical products, we have the experience, enthusiasm and architecture you're looking for. Let's improve patients' health and well-being through next-generation healthcare solutions, together.

A holistic, tailored approach – from idea to market

In every drug formulation – whether designed for immediate or controlled release – accuracy, safety and reliability are paramount. But with so many influencing factors, meeting those requirements can involve challenging complexities.

That's why we take into consideration the patient profile, chemical characteristics of the API, form of the polymer, production process and degradation mechanism when guiding you to the PURASORB® excipient that can meet your specific needs.

In our comprehensive portfolio of GMP-grade high-quality polymers, you will find the right excipients that match your formulation strategy and approach. Plus, if you have exact performance requirements, we offer custom synthesis of our polymer portfolio via PURASORB® R&D.

When you work with Corbion, you are supported by a responsive, multidisciplinary team that can contribute enormous value to expert-to-expert discussions, helping to identify critical material attributes when integrating a quality strategy into your product development process.

Whether you're developing new APIs with the potential to transform medicine, long-acting injectable line extensions or generic products, our polymer range and expertise can help you realize your goals.

Discover PURASORB®

For decades, the cutting-edge, resorbable polymers in our extensive PURASORB® range have been powering drug formulations to great effect.

Based on lactide, glycolide and caprolactone monomers, our polymers are well-suited to numerous drug formulation strategies and with PURASORB® R&D the range can be adjusted and adapted as needed to achieve your exact requirements, regardless of your critical product specifications.

In addition to our portfolio of readily available polymers, Corbion also has quality expertise and 45 years' industry experience, making us the perfect partner to accelerate your drug formulation process, while always ensuring that the highest standards of safety and quality are implemented in your market offering.



Our comprehensive portfolio

Corbion's portfolio of off-the-shelf and readily available bioresorbable PURASORB® polymers is designed for a variety of drug delivery formulations and allows for maximum flexibility with in vivo performance. The diversity of our portfolio also enables a large choice of drug product formats, and it is compatible with a broad range of APIs.

Our portfolio encompasses the following polymer families:

- ▶ Poly(DL-lactide)
- ▶ DL-lactide/Glycolide copolymers
- ▶ Polyethylene Glycol copolymers

Discover full range at corbion.com/biomedical/PURASORB



These options make the following characteristics possible:

- ▶ Ratio DL-lactide/glycolide ranging from 50:50 to 100:0
- ▶ Acid or ester terminated
- ▶ IV from 0.2 to 1.0 (dl/g)
- ▶ Linear or branched structures
- ▶ Degradation time from 0.5 months to years
- ▶ Extra pure versions, low in catalysts and/or monomers

Our portfolio of high-quality polymers brings numerous benefits to your drug delivery formulations:

● Customizable

The chemistry and polymer properties of the PURASORB® range are fully adaptable and customizable to your needs and requirements

● Quality-by-design

The integration of a **quality-by-design** approach in all our ways of working allows us to offer PURASORB® R&D support – so we can accelerate your product development processes

● Compatible

Our GMP-grade polymers are compatible with various injectable formulation technologies and processing techniques, and have numerous material properties – from hydrophilicity to crystallinity

● Available

There are no unnecessary complications with PURASORB® – our polymers are readily available and ready to use, so you can get started straightaway

● Proven

The PURASORB® range is backed by more than 45 years' experience in the market, numerous case studies, real-world performance in marketed products, and the regulatory expertise you need to navigate the market successfully

● Empowering

Crucially, we have a real passion for tangibly improving the lives of patients across the globe. We want to empower scientists and formulators to accelerate their innovations to market – that's why we'll work closely and collaboratively with you, with a co-creative outlook

Quality-minded from the start

At Corbion, we maintain stringent quality controls from the very beginning of our partnership and provide a full risk and data analysis for every project. We guarantee a level of consistency that aligns with your pre-defined standards and work closely with you to integrate a **quality-by-design** strategy across the entire R&D process.



Corbion streamlines scaling up

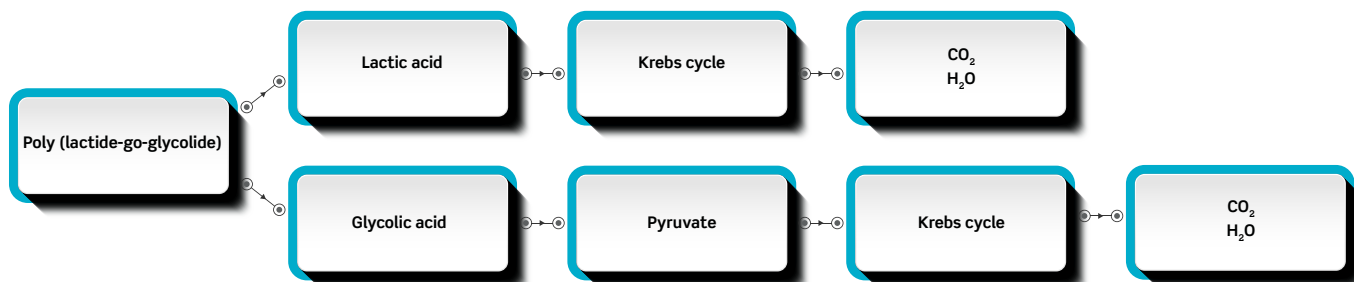
If you have your own polymer-based drug delivery technology, Corbion can help you bring it to market while meeting stringent industry standards. Working together, we can optimize the process of bringing your innovations to patients whose lives they can positively impact.

Our expert team offers in-depth knowledge of the latest industry regulations and requirements, as well as experience with a large variety of chemistries, including PEG copolymers, molecule architectures, and processes to enable the production of oligomers, intermediates or (ultra-)high-density polymers with precision and control.

And with multiple production sites, the supply of our product is both reliable and adaptable. Corbion can help you scale-up your drug delivery technology more efficiently and get it to market faster – together, let's move your products forward.

Biocompatible, with safe degradation

All Corbion's polymers are biocompatible and fully biodegradable into compounds naturally processed by the human body. These properties make the PURASORB® portfolio the excipients of choice for drug delivery. Plus, our polymers have been extensively studied and are recognized as safe by the FDA and other regulatory agencies.



We never compromise on quality

At Corbion, we keep quality in mind at all times. We implement stringent quality controls from the beginning of our partnership and provide a full risk and data analysis for every project. We guarantee a level of consistency that aligns with your pre-defined standards, and we work closely with you to integrate a **quality-by-design** strategy early in the product development process.



Co-creating future innovations

Passionate about creating tomorrow's pharmaceutical products? So are we. At Corbion, we want to work collaboratively and cohesively with our partners to solve unmet needs for both patients and the healthcare systems that support them. Blending our expertise with your ideas and experience, we can develop truly ground-breaking drug formulations for controlled release.

We preserve what matters

We champion preservation in all its forms – preserving food and food production, health, and our planet. Using science, we look for new ways to reduce the burden on healthcare systems – ensuring the long-term health of both patients and the planet they live on. We have adopted a targeted approach to reducing our negative impact on the environment. By focusing on Sustainable Development Goals 2 (Zero hunger), 3 (Good health and wellbeing) and 12 (Responsible consumption and production), we work to make a real, tangible difference to the preservation of our planet. Rest assured that you are partnering with a business that takes sustainability seriously. Together, we can use science and nature's ingenuity to transform patients' lives for the better.



Discover what's possible

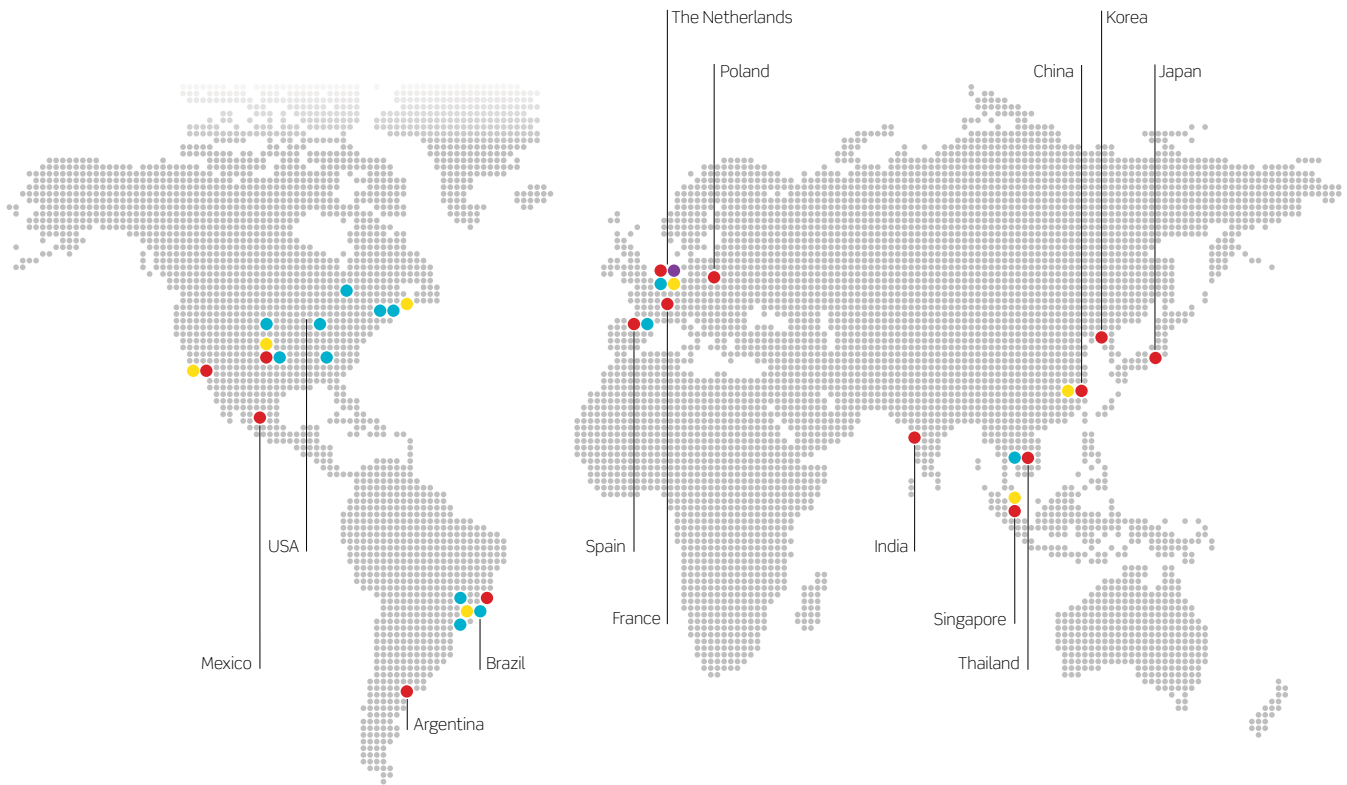
Learn more now about our Corbion's solutions for controlled drug delivery. Get in touch with a member of our expert team today to discuss your goals and requirements, or request a free PURASORB® sample to get started.

corbion.com/biomaterials



Let us know how we can help you

● Corbion Headquarters ● Corbion Production Location ● Corbion Sales Office ● Corbion Innovation Center



corbion.com/contact

About Corbion

Corbion is the global market leader in lactic acid and its derivatives, and a leading supplier of emulsifiers, functional enzyme blends, minerals, vitamins, and algae ingredients. We use our unique expertise in fermentation and other processes to deliver sustainable solutions for the preservation of food and food production, health, and our planet. For over 100 years, we have been uncompromising in our commitment to safety, quality, innovation and performance. Drawing on our deep application and product knowledge, we work side-by-side with customers to make our cutting-edge technologies work for them. Our solutions help differentiate products in markets such as food, home & personal care, animal nutrition, pharmaceuticals, medical devices, and bioplastics.