

SOLUTIONS FOR FASTER RESEARCH
AND DEVELOPMENT, PRE-CLINICAL
AND CLINICAL STAGES

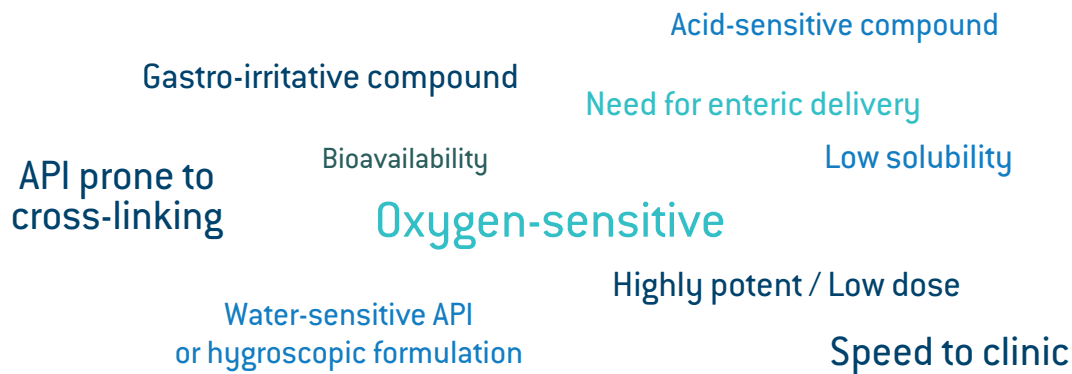
Capsugel®

LONZA

Capsugel® R&D Portfolio

Made better. By science.™

KEY CONCERNS OF R&D DEPARTMENTS



PRODUCTS THAT ADDRESS THOSE R&D CONCERNS

PCcaps®

Very small hard gelatin and Vcaps® Enteric capsules that are ideal for oral delivery of the neat active in pre-clinical animal studies. They have been designed for performing pre-clinical trials such as animal safety and pharmacokinetic studies.

Colorista®*

Single R&D solution for pharmaceutical formulation development. It allows the ability to progress with compatibility and stability testing before deciding on a color for the commercial drug product. Capsugel® Colorista® capsules are the perfect tool for pharmaceutical customers who are looking for flexible and time-efficient development of new products or generics. Available in hard gelatin Coni-Snap® and in Vcaps® Plus.

DBcaps®

Two-piece hard gelatin or Vcaps® Plus capsules, developed with a tamper-evident design to specifically address the challenges of double-blind clinical trials.

Vcaps® Plus

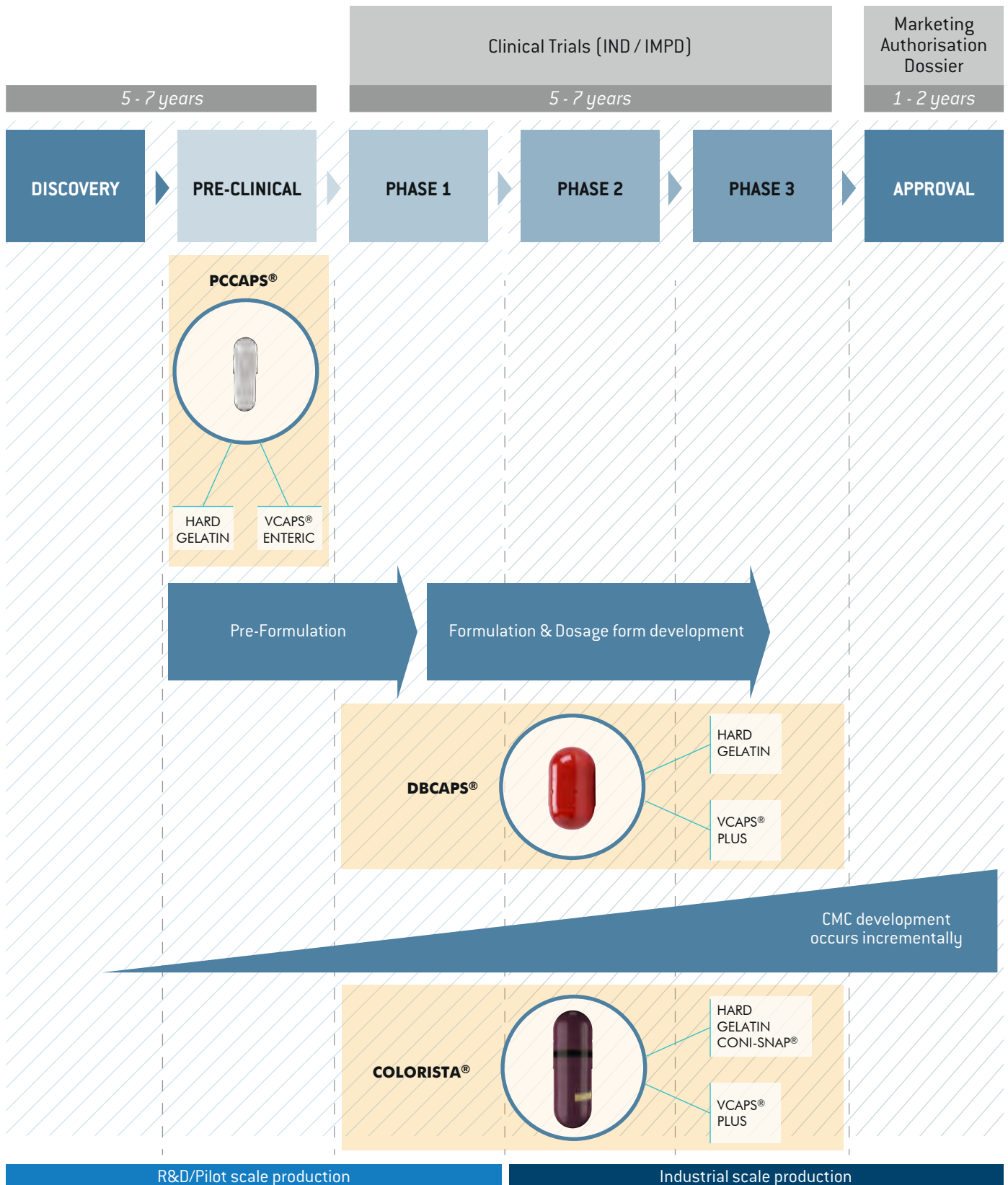
An immediate-release capsule for pharmaceutical products in HPMC only, without gelling agents. Vcaps® Plus capsules offer excellent dissolution profile with pH-independent performance, standard or low moisture content, great machinability and visual quality.

Vcaps® Enteric

Capsule technology that simplifies enteric drug delivery implementation. It offers an enteric-release profile to the upper GI tract that meets the disintegration requirements for delayed-release capsules from the European, US and Japanese Pharmacopoeia.

* Colorista® is a trademark of Lonza or its affiliates registered in US and/or EU.

DEDICATED SOLUTIONS THAT MAKE A DIFFERENCE THE DRUG PRODUCT DEVELOPMENT PROCESS



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R&D SUPPLIES AND SERVICES

Clinical supply for small batches with the standard Capsugel® capsule portfolio:

- Available products: immediate-release capsules, modified-release capsules & Zephyr™ Dry-Powder Inhalation capsule portfolios.
- R&D bottle: the right-sized sample packaging for lab trials.
- CapsuleCaddy™: the big R&D solution in a small package: the perfect size for clinical trial batches, R&D projects or small manufacturing runs.

Capsule customization capabilities to reduce time in the development process:

- Build your own capsule tool: allows for quick color selection and branding based on market segment and region to accelerate the formal color development and get an immediate ready-to-use visual image of your capsule.
- Pre-formulated colors and pre-developed print rolls: allow fast responses for tight development timelines.

Support for Quality By Design (QBD) approach:

- Identification of critical capsule parameters (size, polymer, water content, ...) to address the equation between process design, process performance & product performance.
- Supply of specific samples to support design space investigation.

Customer portal www.mycapsugel.com:

- Document repository for R&D / Regulatory / Quality Assurance / Quality control purposes.
- Regular updates and technical information → Contact us to get access.

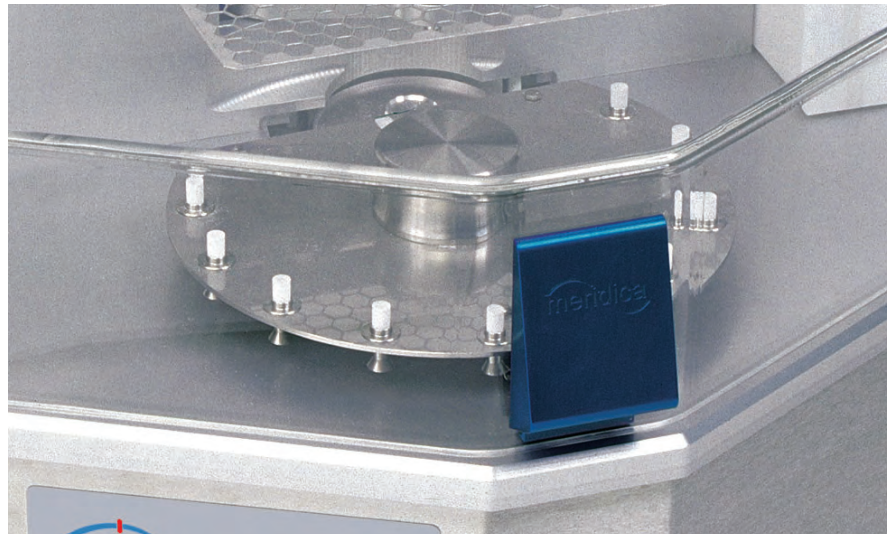


R&D EQUIPMENT

LONZA ENGINE™

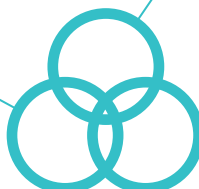
Equipment range and applications:

- Manual fillers for lab bench filling
- Xcelolab®/Xcelodose® for Micro-dosing & Powder-in-Capsule (PIC) evaluations, containment option available
- Semi-automated capsule filling machine Ultra III™ for DBCaps® capsules and small batches manufacturing
- Capsule filling and sealing (CFS) machine for liquid formulations, lab scale to clinical
- Micronization and containment equipment (MC20, MC44, MC50, MC100) – Lab and Pilot lines



SUPPORT FOR YOUR R&D PROJECTS OUR TEAMS

R&D
Research & Development teams
from our Centers of Excellence



COMMERCIAL TEAM

Business Development and Sales representatives

QUALITY ASSURANCE TEAM

Regulatory Affairs department,
Color Labs and Technical Service Engineers

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Call: 800 845 6973

Or contact your Lonza representative

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