

Highlights in 2024

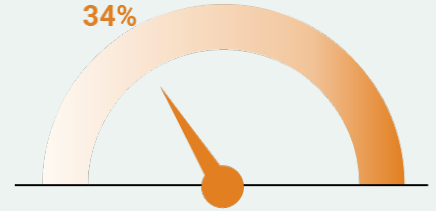
Achievements

To date, a total of 14 deliverables have been submitted, and 10 milestones have been achieved. In 2024, GENEGUT has achieved significant results across all work packages and RP1 has been approved.

Deliverables & Milestones

Completed deliverables & achieved milestones (over total)

34%



WP1

- ✓ Libraries of novel biocompatible materials
- ✓ Quantification of formulation stability in vitro
- ✓ Development of RNA NP formulations to withstand simulated intestinal fluids

WP2

- ✓ Development & characterisation of an intestinal 3D organoid model
- ✓ Assessment of initial delivery and efficacy of siRNA/mRNA in various cell models

WP3

- ✓ In vitro biorelevant media simulating IBD's conditions
- ✓ Demonstration of ileocaecal release with capsule technology
- ✓ In vivo pig study to define the maximum capsule size

WP4

- ✓ Submission of pig study to UCC ethics committee
- ✓ Establishment of CD ileal 3D model under static conditions

WP5

- ✓ Literature review on regulatory & HTA context, pathways & requirements for RNA therapeutics

WP6

- ✓ Interim Impact Report I
- ✓ Conference participation

WP7

- ✓ Continuous project monitoring
- ✓ RP1 approved

Collaboration



The close collaboration within the GENEGUT consortium continued throughout 2024, during which it gathered for three General Assembly (GA) meetings, one of which was hosted in person in [Porto, PO](#) in June 2024. Shortly after, a very successful RP1 review meeting with the EC took place.



The Scientific Advisory Board was present at the 6th and latest GA meeting in December 2024 and provided very positive and encouraging feedback.

In addition, GENEGUT's MST+PI board met four times during the year to monitor the project's progress and foster WP collaboration.

GENEGUT consortium in Porto (Portugal) in June 2024

Communications

Publications

Three GENEGUT related articles were published in peer-reviewed journals:

[Trends in 3D models of inflammatory bowel disease](#)

[State-of-the-art and future perspectives in ingestible remotely controlled smart capsules for drug delivery: A GENEGUT review](#)

[Establishment of a 3D multi-layered in vitro model of inflammatory bowel disease](#)

Training

With the successful completion of Deliverable D6.5, GENEGUT provided initial training materials created to empower Inflammatory Bowel Disease (IBD) patients with knowledge of advanced therapies and RNA-based medicines. The pilot training lecture was delivered by the GENEGUT coordinator, Prof. Caitriona O’Driscoll (UCC), and recorded by the EFCCA Academy.

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Training materials I

Basics of advanced therapies and RNA-based medicines as used in the GENEGUT Research & Innovation project

Part 3: The GENEGUT project

GENEGUT

Crohn's disease (CD) is a non-communicable, global disease with an accelerating incidence (up to 23 per 100,000 persons/year) and annual health costs in excess of 5 billion euro in Europe. CD drastically impacts the quality of life of affected patients - and that of their families, friends, and caregivers.

The burden of IBD across Europe

- 13 million people affected by IBD
- €5 billion euro annual average cost of IBD
- 50% CD patients hospitalized at least once within the last 5 years
- 9.3 days of work missed by CD patients each year due to medical reasons

Impact on Quality of Life: EU study on people living with IBD reports

- 48% are impacted by IBD symptoms even between flare-ups
- 40% make adjustments to work-life balance on IBD
- 35% prevented from pursuing intimate relationship by IBD

Digital channels

855

Users on genegut.eu in 2025

76%

Engagement rate on genegut.eu

610

Followers on [@GENEGUT LinkedIn](#)

Coming soon

12 Deliverables & 10 Milestones in 2025

1 in-person GA meeting in June 2025 at Uppsala University

Additional publications in preparation

Webinar organisation