



NABIHEAL'S SYMPOSIUM & PARTICIPATION RECAP AT ESB2026

**7 – 11 SEPTEMBER 2026
ANTWERP**



Authors: Johanna K. Scheper¹, Nora Ventosa^{2,3}, Elba Guasch², Fiorenza Rancan⁴, Marta Alcaina-Hernando³, Paula Pleguezuelos⁵, Juan Antonio Marchal⁵, Olga Conde⁶, Selestina Gorgieva⁷

¹ BioNanoNet Forschungsgesellschaft mbH (Austria)

² ICMAB-CSIC / CIBER (Spain)

³ Nanomol Technologies S.L (Spain)

⁴ Charité – Universitätsmedizin Berlin (Germany)

⁵ University of Granada (Spain)

⁶ University of Cantabria/CIBER (Spain)

⁷ University of Maribor (Slovenia)

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This recap report of the participation of NABIHEAL at the ESB2026 Conference. For any question you can contact info@nabiheal.eu

From the 7th to the 11th of September 2026 the 35th Annual Conference of the European Society of Biomaterials (ESB) took place in Antwerp, Belgium. With over 1000 participants from across Europe and participation of distinguished experts invited from around the world, the [ESB2026](#) provided a premier scientific event, reaching and engaging with an outstanding [scientific program](#) the entire European Biomaterials and Regenerative Medicine scientific community.

The conference counted with participants of all types of stakeholders, fostering successful interactions between basic researchers, applied scientists, clinicians and industry, enabling the development of innovative solutions for clinical applications.

The event venue was the Flanders Meeting and Convention Center (FMCCA) – “Room in a zoo!”. This space is located in the city center of the nice city of Antwerp, and next to the country’s oldest animal park, which is also one of the oldest in the world. A really unique site!

With this inspiring and welcoming event, NABIHEAL had the great pleasure to organize one of the different Symposiums, part of the conference, as well as some of its partners provided key note lectures, short presentations and posters.



***“Bridging sectors to advance regenerative medicine
– catch NABIHEAL at ESB2026!”***



Symposium on „Biomaterials for Wound Healing Opportunities and Challenges to Solve Clinical Needs

On the early morning session of the 8th of September, from 8:15 to 9:45, NABIHEAL had the pleasure to organize one of the Symposium, part of the ESB2026 conference. Session “S22 – Biomaterials for wound healing opportunities and challenges to solve clinical needs” was chaired by Nora Ventosa (Coordinator of the NABIHEAL project) and Judit Tomsen-Melero, and counted with 88 attendees.

The session brought together cutting-edge research spanning nanomedicine, biofabrication, sustainable biomaterials, and smart drug delivery systems designed to overcome the hostile environments of chronic and complex wounds.

The session opened with an inspiring talk of Fiorenza Rancan, from [Charité](#) – Universitätsmedizin Berlin (Germany). She is one of NABIHEAL’s partners, and is the lead of the work related to *in vitro*, *ex vivo* and *in vivo* tests for the efficacy evaluation within the project.

She provided the perfect introductory talk of the session, presenting and describing the different stages of the wound healing process, current type of treatments and their drawbacks as well as the current medical needs to fight complex wound treatment and healing.

The talk presented some of the current multimodal wound dressings that combine antioxidants, antimicrobials and wound healing molecules and presented the NABIHEAL strategy that is also based on a multimodal strategy based on the combination of different type of biomaterials and wound healing molecules.



Fiorenza Rancan (Charité)

The Symposium continued with other seven short talks directly related with the topic of wound healing of complex wounds. Three out of the seven talks presented results directly related to work performed within the NABIHEAL project and its partners.



M. Alcaina-Hernando
(Nanomol Technologies)

Marta Alcaina-Hernando, from [Nanomol Technologies S.L.](#), also part of NABIHEAL presented a plant-based nanovesicular platform composed by β -sitosterol and alkyl polyglucosides formulated via the green [DELOS technology](#). DELOS is a formulation platform that allows the production of nanomedicines and new delivery systems with tailored and improved properties. It is a green and sustainable platform, also used within the NABIHEAL project to produce Quatsomes, one of the biomaterials the project is developing.

The presentation set the perfect scene for the next talk, done by Elba Guasch, from [ICMAB-CSIC/CIBER](#), and part of the coordination team of NABIHEAL. The talk focused on the development of a versatile platform for protected biomolecules delivery. This innovative delivery systems called Quatsomes are cholesterol-surfactant nanovesicles loaded with recombinant human epidermal growth factor (rhEGF).

These nanoconjugates protect rhEGF from enzymatic breakdown in chronic wound fluids and have demonstrated full re-epithelialization in clinical trials diabetic foot ulcer patients. The results showed the versatile nature of the Quatsomes, opening new therapeutic possibilities acting as a modular and synergistic system for a protected delivery of biomolecules.



Elba Guasch (ICMAB-CSIC/CIBER)



Paula Pleguezuelos (Univ. Granada)

The third NABIHEAL-related short talk of the Symposium was given by Paula Pleguezuelos Beltran from the [University of Granada](#).

The talk focused on a bioactive three-layered ECM-based hydrogel for enhanced wound healing and skin regeneration. This three-layered bioactive hydrogel replicates the native extracellular matrix across the epidermal, dermal and hypodermal layers using agarose-collagen hydrogels supplemented with layer-specific cells and biomolecules, restoring barrier integrity faster than autografting in animal models. Additionally, this three-layered skin may serve as a versatile in vitro platform for skin biology studies, drug testing and disease monitoring.

The session followed with other four talks related to biomaterials for wound healing, but not directly related to NABIHEAL. These talks focused on:

- ➔ Personalized 3D-Printed bioinks: the system presented is designed for 3D printing custom dressings that eradicate polymicrobial films and promote tissue closure,
- ➔ Smart & responsive wound management: by combining glucose-responsive poly(ether urethane) polymers with AI algorithms and Extended Reality design tools, 3D-extrude patient-personalized patches can be produced, that release therapeutic payloads in response to local glucose levels in diabetic foot ulcers,
- ➔ SCOPY nanocellulose scaffolds: a technology that use low-cost bacterial nanocellulose derived from fermented tea SCOPY cultures, enriched with dipeptides. The highly porous scaffold is able to absorb 60 times its weight in exudate, driving and supporting the wound closure,

- ➔ Cannabidiol-loaded PLGA nanoparticles that deliver combined antibacterial, anti-inflammatory, and pro-angiogenic actions to accelerate burn wound repair.

As a take home message, it can be highlighted that the research presented at ESB Session S22 emphasized a major paradigm shift: combining biological mimicry, eco-friendly manufacturing, and digital design permits to create personalized, multifunctional biomaterials capable of overcoming the complex pathology of non-healing wounds.



NABIHEAL Team at ESB2026 (from left to right): Paula Pleguezuelos, Judit Tomsen-Melero, Olga Conde, Selestina Gorgieva, Elba Guasch, Johanna K. Scheper, Nora Ventosa, Fiorenza Rancan, Juna Antonio Marchal and Marta Alcaina-Hernando.

NABIHEAL participation in the ESB2026 poster Session!!

On the 10th of September, during the poster session, four different posters were presented by different members of the NABIHEAL team. The posters presented results of the project focusing on different materials developed within the project, as well as specific characterization methods and the approach of the project to develop safer and more sustainable alternative wound dressings.

- **Optical Coherence Tomography Characterization of Bacterial Cellulose Films**, presented by Olga Conde from the [University of Cantabria/CIBER](#).

The poster presented optical coherence tomography as a non-destructive, label-free imaging method for assessing the internal micro-architecture and optical properties of bacterial cellulose membranes in their native state.

- **Novel hyaluronic acid-based matrix containing sulphated GACs and Collagen as an active ingredient for wound healing**, presented by Juan Antonio Marchal from the [University of Granada](#) and Patricia Galvez from [Bioiberica](#).

The work presents a novel matrix able to promote key cellular events required for skin repair – enhancing fibroblast proliferation, cell migration, matrix synthesis, wound closure and neovascularization. The findings of the work highlights its strong potential as an active ingredient or bioactive scaffold for advanced wound dressings and regenerative medicine applications.

- **Nanostructured bacterial cellulose membranes as carriers for antibiotic loaded chitosan nanoparticles in wound infection control**, presented by Selestina Gorgieva from the [University of Maribor](#).

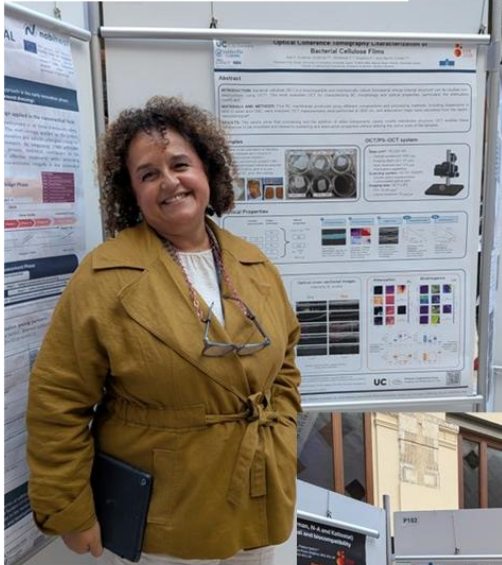
The goal and concept presented in the poster is the development of a localized, bioactive wound dressing by impregnating bacterial nanocellulose hydrogel membrane with gentamicin-loaded chitosan nanoparticles to prevent wound infections without systemic antibiotic toxicity.

- **Safe-and-Sustainable-by-Design approach for alternative metal-free wound dressings**, presented by Johanna K. Scheper from [BNN](#).

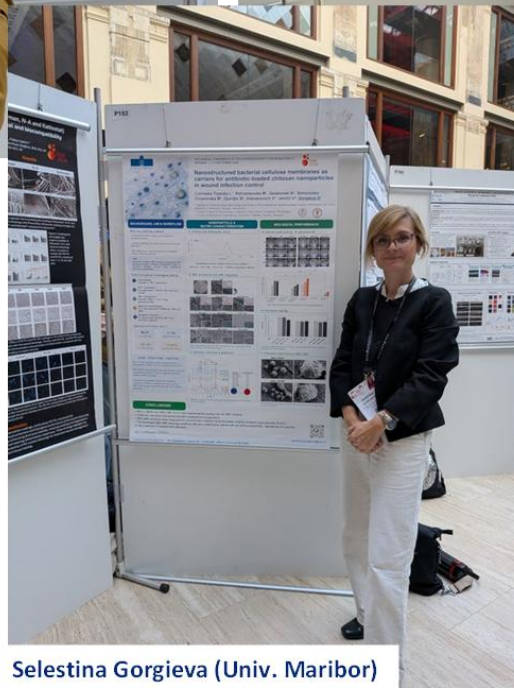
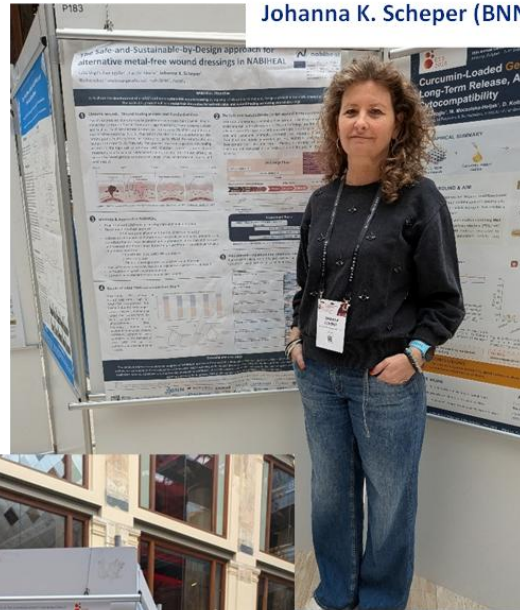
The methodology presented in the poster is based on the Safe-and-Sustainable-by-Design framework published by the EC - Joint Research Centre, employing a structured and tiered evaluation strategy, utilizing tailored questionnaires and on-

site visits to production facilities to collect material data and monitor the different development stages of the biomaterials developed within NABIHEAL. The work includes a hotspot identification and iterative guidance providing targeted recommendations to optimize material safety, minimize environmental footprint and enhance regulatory readiness early in the innovation process.

Olga Conde (Univ. Cantabria/CIBER)



Johanna K. Scheper (BNN)



Selestina Gorgieva (Univ. Maribor)

The poster session closed the participation of the NABIHEAL project at the ESB20206 Conference! The entire team has been delighted to participate and exchange knowledge with the rest of attendees, and to celebrate this year's special edition of the conference: the 50th Anniversary!!!



Get in Touch!!!

Contact: info@nabiheal.eu



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