

News Release

World's first computer-connected lab grown human bioprinted skin: CTISKIN™ by CTIBIOTECH™ Sweeps Awards at IFSCC 2025 Congress with Groundbreaking Bioprinted Skin Technology

CTIBIOTECH™, a leading innovator in advanced human tissue engineering, proudly announces its dual triumph at the prestigious International Federation of Societies of Cosmetic Chemists

IFSCC 2025 Congress held in Cannes, France.

Lyon, France, September 23rd, 2025,

The company was recognized with two esteemed awards for its revolutionary presentation titled:



"World's first computer-connected lab grown human bioprinted skin with a sensory nervous system for instantaneous cosmetics and fragrance testing."

Out of a remarkable 1,200 abstracts submitted from around the globe, CTIBIOTECH™'s pioneering work was selected to receive:

(i) Top 10 Posters Award recognition by IFSCC.

(ii) Young Researcher Award by the French Society of Cosmetology (SFC) to Alizé VIALLE, Project Manager at CTIBIOTECH™

This groundbreaking research introduces a paradigm shift in cosmetic and fragrance testing. **For the first time, a lab-grown, bioprinted human skin model, complete with a functional sensory nervous system, can be directly connected to a computer for instantaneous and highly accurate product evaluations. This advancement is part of New approach methodologies (NAMs) and promises to significantly reduce the reliance on animal testing,** enhance the speed and efficacy of product development, and provide unprecedented insights into how skin interacts with various formulations.

Professor Colin McGUCKIN, President and CSO of CTIBIOTECH™, expressed his immense pride in the team's achievement: "We are absolutely thrilled and honored to receive these prestigious awards from the IFSCC and SFC. This recognition is a testament to the dedication, innovation, and scientific rigor of our entire team represented by Alizé VIALLE. Our computer-connected bioprinted skin represents a monumental leap forward, offering a more ethical, efficient, and predictive platform for the cosmetics industry. We believe this technology will not only accelerate the development of safer and more effective products but also inspire a new generation of scientific inquiry into human biology. We are grateful to the juries at the SFC and the IFSCC, chaired by Dr Isabelle CASTIEL-HIGOUNENC for highlighting the innovation in our work".

Dr. Nico FORRAZ, CEO of CTIBIOTECH™, highlighted the broader implications of this innovation: "These awards underscore CTIBIOTECH™'s commitment to pushing the boundaries of what's possible in biotechnology. The ability to instantly test cosmetics and fragrances on a living, sensitive human skin model in a lab setting is a game-changer. It means faster time to market for novel products, reduced development costs, and ultimately, better and safer products for consumers worldwide. This is not just a scientific victory; it's a victory for ethical research and advanced product innovation".

Alizé VIALLE, Project Manager at CTIBIOTECH™ and recipient of the Young Researcher Award, shared her excitement: "Winning the Young Researcher Award is an incredible honor and a truly humbling experience. This project has been a passion for me and the team, and seeing our efforts recognized by such esteemed organizations is incredibly motivating. I am so grateful for the opportunity to contribute to such impactful science and for the support of my mentors at CTIBIOTECH™. I would like to thank Richard LEROUX, President and Stéphane Poigny, Vice President for Science and Technics of the French Society of Cosmetology and the jury for this award."

The IFSCC Congress is yearly event that brings together leading cosmetic scientists and researchers from around the globe to share cutting-edge advancements and foster international collaboration. CTIBIOTECH's success at this year's congress firmly establishes its position at the forefront of cosmetic science and skincare innovation.

About CTIBIOTECH: CTIBIOTECH™ is a biotechnology company specializing in the development of advanced human tissue models for research, drug discovery, and cosmetics testing. Utilizing state-of-the-art bioprinting and tissue engineering techniques, CTIBIOTECH™ creates highly realistic and functional human tissue models that offer superior predictive power and ethical alternatives to traditional testing methods. Website: <https://ctibiotech.com>

About IFSCC: The International Federation of Societies of Cosmetic Chemists (IFSCC) is dedicated to advancing cosmetic science through international cooperation, providing a platform for learning, recognition, and inspiration. Representing 78 countries, 48 societies, and 16,000 members, the IFSCC fosters global collaboration and excellence in cosmetic chemistry. Website: <https://ifsc.org/>

About SFC: The Société Française de Cosmétologie (SFC) or French Society of Cosmetic Chemists, is a professional organization dedicated to promoting and advancing cosmetic science and technology within France. Website: <https://www.sfcosmeto.fr/>

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The innovation: World's first 3D Bioprinted human skin with nervous system connected to a computer chip.

CTISKIN™ human skin 3D Bioprinting: building on 10 years of R&D by CTIBIOTECH™

3D bioprinting is a biofabrication method enabling the industrialization of human tissue bioassay production, a faster, more precise and highly automated process. To print human tissues in 3 dimensions, CTIBIOTECH uses bio-plotting or bio-extrusion techniques, which consist in extruding a bio-ink (a mixture of human skin cells suspended in a biocompatible gel) using pneumatic or mechanical bio-extrusion printers.

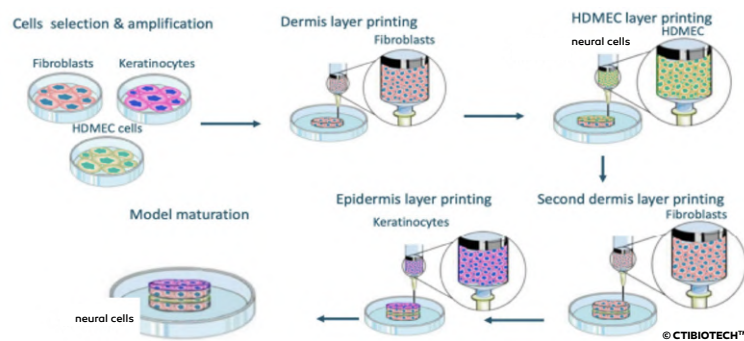
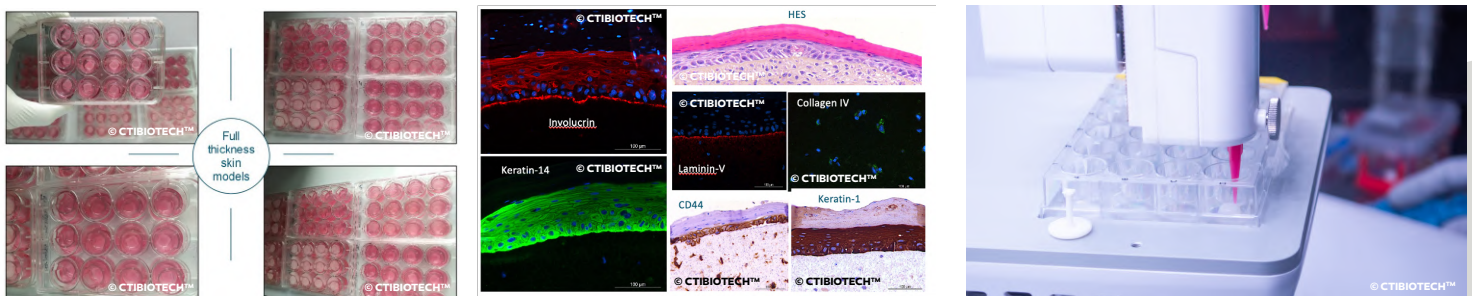


Figure 1: Human skin models produced by 3D bioprinting at CTIBIOTECH™

This research findings presented at IFSCC Congress 2025 demonstrate a significant breakthrough: **the creation of the world's first computer-connected, lab-grown, bioprinted human skin with a functional sensory nervous system.** This innovation has profound importance and will have a transformative impact on both biomedical and cosmetics research:

Importance of the Work:

- 1. Ethical Testing Alternative:** It offers a highly advanced, non-animal alternative for product testing. This is crucial for ethical reasons, addressing growing public and regulatory pressure to reduce or eliminate animal testing in cosmetics and beyond.

- 2. Enhanced Predictive Power:** Unlike simpler 2D cell cultures or existing skin models, the inclusion of a sensory nervous system makes this bioprinted skin much more physiologically relevant to in vivo human skin. This means it can more accurately predict how real human skin will react to ingredients, irritants, allergens, and fragrances, including sensations like itching, burning, or comfort.
- 3. Real-time, Instantaneous Testing:** The "computer-connected" aspect allows for instantaneous data acquisition and analysis. This significantly speeds up the testing process, providing immediate feedback on how the skin model responds to applied substances, a major advantage over traditional, time-consuming methods.
- 4. Personalized Medicine Potential:** In the future, this technology could pave the way for creating patient-specific skin models, allowing for personalized testing of dermatological treatments or cosmetics, optimizing efficacy and minimizing adverse reactions for individual patients.
- 5. Understanding Skin Biology:** Beyond testing, this advanced model provides an unprecedented platform for fundamental research into skin biology, neuro-cutaneous interactions, wound healing, disease mechanisms, and the effects of aging or environmental factors on skin.

Impact on Biomedical Research:

- 1. Drug Discovery & Development:** This model can be used to test new dermatological drugs, assess their penetration, efficacy, and potential side effects on a more realistic human skin model before clinical trials. This could accelerate drug discovery for conditions like eczema, psoriasis, or neuropathic pain affecting the skin.
- 2. Toxicology and Safety Assessment:** It provides a superior tool for evaluating the toxicity and safety of chemicals, environmental pollutants, and various compounds that come into contact with skin.
- 3. Disease Modeling:** Researchers can potentially introduce disease-specific cells or genetic modifications into the bioprinted skin to model skin diseases more accurately, leading to better understanding and targeted therapeutic development.
- 4. Wound Healing Studies:** The presence of a nervous system allows for more complex studies on pain signaling during wound healing and the effectiveness of wound care products.

Impact on Cosmetics Research:

- 1. Faster Product Development:** The instantaneous feedback mechanism will dramatically shorten development cycles for new cosmetic and fragrance products, allowing formulators to quickly iterate and optimize their formulations.
- 2. Improved Product Safety and Efficacy:** By providing more accurate predictions of skin reactions, companies can develop safer, less irritating, and more effective products, reducing the risk of consumer adverse reactions.
- 3. Advanced Ingredient Screening:** It allows for high-throughput screening of novel cosmetic ingredients,

identifying beneficial compounds and discarding potentially harmful ones early in the development process.

4. **Fragrance Evaluation:** The sensory nervous system is particularly crucial for fragrance testing, enabling the assessment of sensory perceptions beyond just irritation, such as how a fragrance interacts with skin to produce a perceived scent profile over time.
5. **Reduced Costs:** While initial investment in such technology may be high, the long-term efficiency gains, reduced need for extensive in vivo studies, and faster time-to-market can lead to significant cost savings.

In essence, this work represents a leap towards truly predictive in vitro human models, offering a powerful, ethical, and efficient tool that will accelerate innovation and enhance safety across the biomedical and cosmetics industries.

CTIBIOTECH™'s ambition is to reduce both the cost and time of drug development through innovation in the automation of the cell-based bioassay development and production process.

CTIBIOTECH™'s human skin bioprinting successfully and reproducibly mass-produce human skin equivalents (production of several hundred models in less than one hour) with skin cells from the epidermis (keratinocytes, melanocytes), dermis (fibroblasts, immune cells, sebocytes, vascular cells). The team was the first in the world to produce skin immunized by 3D bioprinting to measure the anti-inflammatory effects of active ingredients (collaboration with BASF), or skin containing artificial sebaceous glands (collaboration with Beiersdorf), skin with a vascular network (static, collaboration with Clariant), with melanocytes producing melanin and even by integrating hair follicles "). CTIBIOTECH's immunized skin models are used in a national consortium (NOVOPLASM) supported by the Direction Générale des Armées (French Army) for development of burns treatments. CTIBIOTECH™ also has an active collaboration with SANOFI, to develop a groundbreaking human full skin injection simulation platform to support the development of new mRNA vaccines mimicking reactogenicity for subcutaneous and intramuscular injections

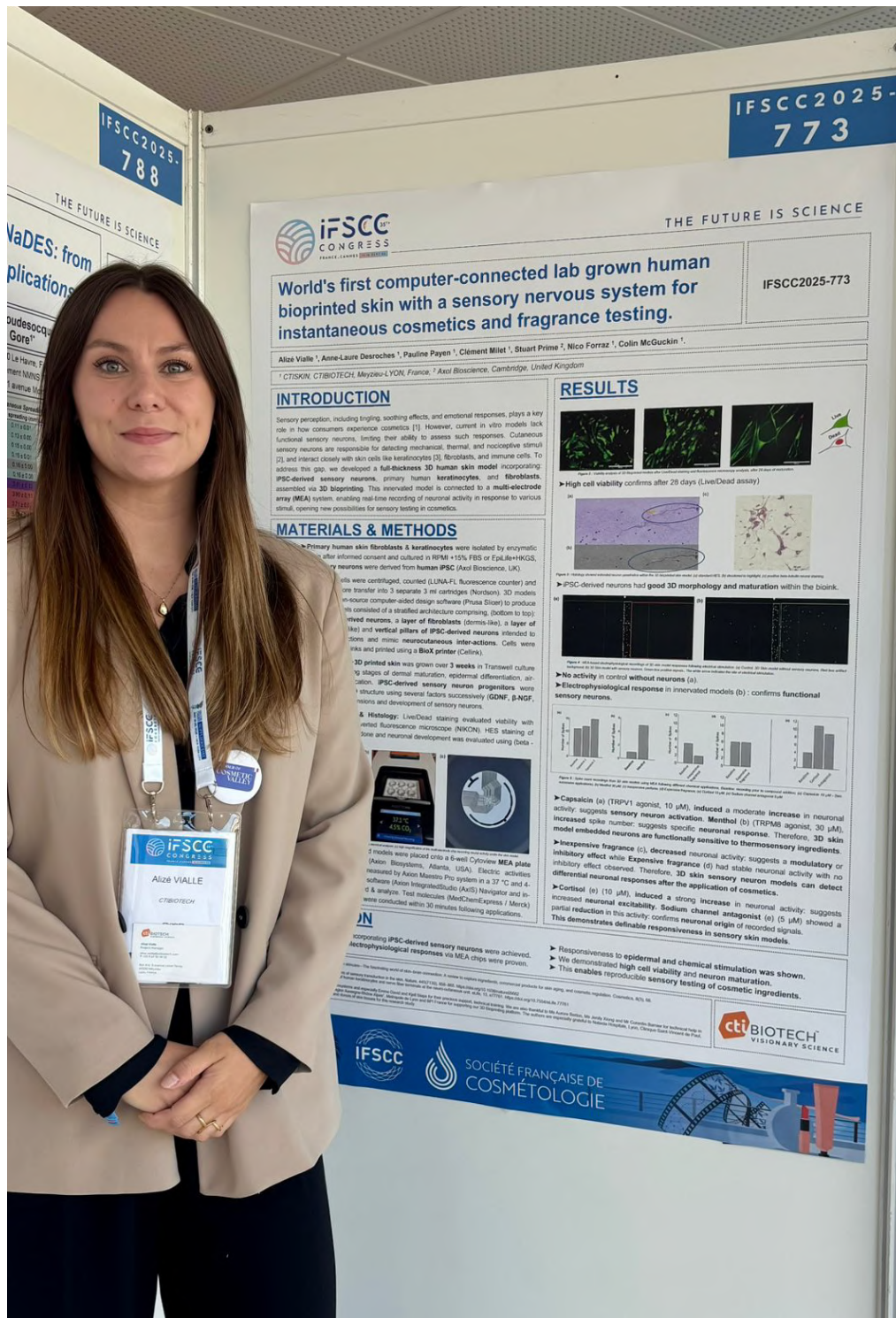


Figure 2: Alizé VIALLE presenting the world first 3DBioprinted human skin connected to a computer at IFSCC Congress in Cannes, France



Figure 3: Alizé VIALLE receiving the 2025 SFC Young Researcher Award at IFSCC Congress Galais held at the Palais des Festivals in Cannes, France.

Left to right: Clément Milet (Laboratory Director, CTIBIOTECHTM), Dr Richard LEROUX (President SFC), Alizé VIALLE (Project Manager, CTIBIOTECHTM), Dr Stéphane POIGNY (Vice President SFC), Prof Colin McGUICKIN (President and Chief Scientific Officer, CTIBIOTECHTM)



Figure 4: CTIBIOTECH™'s World's first computer-connected lab grown human biprinted skin with a sensory nervous system for instantaneous cosmetics and fragrance testing