

Copner Biotech and Jellagen Ltd awarded Innovate UK funding to develop game-changing 3D Inkjet Bioprinting Platform

- *Copner Biotech and Jellagen have been awarded Innovate UK funding totaling £431,142 to develop a next generation 3D Inkjet bioprinting system and software platform, complete with a novel Collagen Type 0 BioINK*
- *This 19-month project plays a key role in phase 2 of Copner Biotech's roadmap to establish a bioprinting centre of excellence in Wales, UK*

Cardiff, Wales, 1st November 2022 – Copner Biotech (Lead) and Jellagen have successfully secured funding from Innovate UK to enable the start of their innovative project to develop a next-generation, 3D Inkjet bioprinting platform.

Bioprinting is a process that aims to build fully functioning tissues and organs using biomimetic (man-made) materials and living cells. Current state-of-the-art technology for 3D Inkjet bioprinting lacks the high precision and batch-to-batch consistency needed to develop physiologically relevant tissue models, capable of replacing animal testing. Animal testing signifies an ethically challenging and incredibly expensive barrier to disease modelling in the life science research/pharmaceutical sectors. Copner Biotech's 3D Inkjet bioprinting platform offers one of the highest resolutions while also retaining relatively fast print speeds.

This project will see the development of a novel 3D Inkjet bioprinting system with a bespoke software operating system, as well as a next-generation Collagen Type 0 BioINK formulation derived from jellyfish. Jellagen's BioINK technology will be formulated to ensure correct rheological properties enabling the creation of complex 3D tissue architectures.

Copner Biotech's 3D Inkjet Bio Printer will be developed following their blueprint disclosed in patent 'Additive Manufacturing using Low Viscosity Materials' UK Intellectual Property Office application GB2206780.5 together with international application PCT/GB2022/000051.

In line with Copner Biotech's family of 3D Bio Printers; this 3D Inkjet Bio Printer will employ the GRAPE UK® data format and printing control algorithms.

Jordan Copner, Founder and CEO of Copner Biotech comments, *“It is incredibly exciting to be awarded funding for this innovative, game changing project. Inkjet technology has the potential to break down the biggest barriers to entry for bioprinting in clinical and pharmaceutical applications. It is fantastic that Copner Biotech and Jellagen are now playing a key role in this journey.”*

Professor Andrew Mearns Spragg, Founder and Chief Scientific Officer of Jellagen added; *“The Jellagen team is excited to be working again with Copner Biotech with the support of Innovate UK funding. This project will accelerate the development of our BioINK technologies using a game-changing 3D printing platform and will also enable Jellagen to develop new ways to innovate in next-generation medical device design.”*



Copner Biotech's GRAPE-S1 bioprinting scaffolds in a 24-well format.

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About Copner Biotech

[Copner Biotech Ltd](#) was founded in 2020 with the vision to disrupt the 3D cell culture market with innovative technologies. The 3D cell culture space has the potential to further important medical research with real world benefits, such as cancer research and tissue engineering. Copner Biotech's goal is to design, create and utilise new software platforms to manufacture competitive products for the 3D cell culture market.

As a company we have celebrated several successes to date, including the development of a novel software operating platform for the design of cell culture scaffolds that encourage oxygen and nutrient gradients and the presentation of the GHP International Life Sciences Award for Innovation 2021. Our mission now is to develop further upon what we have already created and commercialise it via the mass manufacture of polymer cell scaffolds and bioprinting products.

About Jellagen

[Jellagen Ltd](#) is a medical biotechnology company manufacturing next-generation Collagen Type 0 for medical and scientific research applications. Our strategic mission is to commercialize marine-sourced collagen based upon its many advantages over mammalian sources, while also exploring new therapeutic opportunities which arise from the unique qualities of Collagen Type 0 as a biomaterial. The Jellagen business model is based upon our deep belief in building sustainable sources for critical biomaterials which do not carry the environmental and human health risks of traditional collagen sources. Our research and development strategy focuses on establishing partnerships with medical institutions of the highest reputation to investigate the use of Collagen Type 0 as a treatment for skin diseases and as a biomaterial for tissue reconstruction.

Founded in Cardiff, Wales in 2015, Jellagen is already marketing a range of next-generation Collagen Type 0 products for research use, while also developing clinical-grade formulations for therapeutic and medical device applications. Based on the pioneering research of Professor Andrew Mearns Spragg, collagen in Jellagen's products is extracted from *Rhizostoma pulmo*, an ancient species of large jellyfish common to the Irish Sea. Peer-reviewed published research as well as the company's own application-specific advisory papers demonstrate the significant advantages of Collagen Type 0 over mammalian collagen for both research and medical uses.