



University College Dublin  
An Coláiste Ollscoile, Baile Átha Cliath

# NovaUCD

## IDEAS<sub>TO</sub> IMPACT

SINCE 2003





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# FOREWORD

BY PROFESSOR  
HELEN ROCHE

As highlighted in *Shaping the Future*, the University's strategy for research, innovation and impact, our focus is delivering real impact in areas such as, culture, society, the economy, public policy, health and the environment, the development of a talent pipeline, and through the output of our research and innovation activities, and at a scale to make a difference nationally and internationally.

**AS SUCH UNIVERSITY COLLEGE DUBLIN** is committed to its key role in Ireland's innovation and knowledge exchange ecosystem as an enabler of economic growth and as a contributor to economic, cultural and social development. One way we support this commitment is through NovaUCD which is focused on the commercialisation of our research outputs, creating new ventures, supporting and scaling start-ups and established companies with global reach, and creating jobs.

Twenty years ago, the University created a world-class, purpose-built facility based around one of its historic Georgian buildings, then known as Merville House, subsequently renamed NovaUCD.

Since 2003 NovaUCD has developed an excellent infrastructure, which has expanded to incorporate NexusUCD, the Industry Partnership Centre, the AgTechUCD Innovation Centre at UCD Lyons Farm, and ConsultUCD, the University's managed consultancy services.

NovaUCD has also developed a suite of comprehensive business support programmes and dedicated accelerator programmes, and an ecosystem of mentors and investors, that help to nurture an enthusiastic and dynamic community of entrepreneurs, start-ups and established companies, to grow and scale on the global stage.

NovaUCD was originally funded through a unique public-private partnership and was the brainchild of its

founding director Dr Pat Frain. His foresight and vision for NovaUCD was supported by the founding sponsors; AIB, AMD, Arthur Cox, Deloitte, Enterprise Ireland, Ericsson, Goodbody and UCD.

I would like to take this opportunity of sincerely thanking our sponsors for their unwavering support and guidance since 2003. In addition we are very appreciative of the ongoing support provided by Enterprise Ireland especially through the Technology Transfer Strengthening Initiative and KT Boost programmes.

NovaUCD's achievements to date are shown, in part, by the impressive 20-year metrics featured in this publication.

Finally, I would like to thank the community of researchers, innovators and entrepreneurs across UCD who have been supported through NovaUCD over the last 20 years, your research outputs, expertise, hard work and commitment provides the raw material without which none of NovaUCD's results would happen. This success is also due in no small part to the highly talented and dedicated staff who currently work and who have worked at NovaUCD over the last 20 years.

**Professor Helen Roche**  
**Interim UCD Vice-President for Research,**  
**Innovation and Impact**





## NovaUCD 20-YEAR METRICS – HIGHLIGHTS



**550+**

companies and early-stage ventures supported



**€1.3bn+**

equity funding raised by NovaUCD entrepreneurial community



**1,165+**

inventions disclosed



**320+**

licence agreements concluded

# LOOKING TO THE FUTURE

BY TOM FLANAGAN

NovaUCD is an example of sustainability in action. Twenty years since opening the Centre is still creating and supporting great companies with global ambitions, many of which have already made an impact or have significant potential to do so in the future.



## SUCH COMPANIES INCLUDE,

- **Aer Therapeutics**, the first joint UCD and University of California, San Francisco spin-out, which is developing novel inhaled treatments for muco-obstructive lung diseases such as chronic obstructive pulmonary disease;
- **Go Eve**, the first joint UCD and Imperial College London spin-out, which is developing pioneering charging technology which promises lower cost and scalable rapid charging for electric vehicles;
- **Equal1**, Ireland's first quantum computing company, which is dedicated to making quantum computing, which offers unprecedented potential to unlock societal advancements in multiple industry sectors, affordable and accessible;
- **Manna**, Ireland's first drone delivery company, which has already concluded over 100,000 drone deliveries in multiple locations in Ireland and has plans to commence a US trial and launch in 25 new locations during 2024;
- **SuperNode**, Ireland's first superconducting company, which is developing revolutionary superconducting transmission technology to enable the renewable energy transition; and
- **Wayflyer**, Ireland's 6th tech 'unicorn', which has developed a financing and growth platform used by global eCommerce businesses.

In recent years we have considerably expanded our facilities to support innovators and entrepreneurs with the opening of the NovaUCD East Courtyard.

The €6.7 million project to develop and extend the east courtyard resulted in 800m<sup>2</sup> of additional licensable space at NovaUCD and has enabled us to significantly increase our capacity to house start-up companies by over 50%. This extra space is enabling our community of entrepreneurs, who want to start, grow and scale companies with global market potential, to flourish.

In addition construction of our new AgTechUCD Innovation Centre at UCD Lyons Farm has just finished. Through the AgTechUCD Innovation Centre we are offering a unique on-farm workspace hub to entrepreneurs who want to promote and accelerate their agri-businesses and start-ups with disruptive innovations.

**The €6.7 million project to develop and extend the east courtyard resulted in 800m<sup>2</sup> of additional licensable space at NovaUCD and has enabled us to significantly increase our capacity to house start-up companies by over 50%.**

We have also considerably expanded the number of accelerator programmes we offer including our dedicated AgTechUCD Agccelerator Programme for AgTech and Agri-food start-ups, now in its third year; an Enterprise Ireland funded New Frontiers programme in partnership with IADT Media Cube, and the European Space Agency funded Space Solutions Centre Ireland programme in partnership with Tyndall National Institute, Maynooth University and the Technological University of the Shannon.

Looking to the future there will be many opportunities for NovaUCD to build on its successes to date, in areas such as Agrifood, Space, Cybersecurity, AI, Edge Computing, Manufacturing, Advanced Diagnostics, Novel Therapeutics and Sustainability, as we continue to make a real difference in the innovation landscape and ecosystem in Ireland and further afield.

For example, we are currently working with CeADAR, Ireland's National Centre for Applied AI, to develop a new AI Digital Advance accelerator programme and we are developing a new 5G Edge accelerator programme in partnership with Dell, Ericsson and Vodafone.

In addition, and as highlighted in this Report, our currently supported companies have significant expansion plans as collectively they plan to raise over €290 million and create over 1,100 jobs in the next 2-years alone.

So here's to the next 20 years and beyond for NovaUCD.

**Tom Flanagan**  
**UCD Director of Enterprise  
and Commercialisation**







# NovaUCD – THE HUB OF INNOVATION

## AT UNIVERSITY COLLEGE DUBLIN

NovaUCD, located in a magnificent mid-18th-century house, formerly known as Merville House, has been the hub of innovation and start-up activities at University College Dublin since 2003.

**THE ORIGINAL CONCEPT** for NovaUCD, designed by Kavanagh Tuite Architects, was to restore the original house as the centrepiece of a complex of subsidiary buildings that surround it. The buildings are bright, airy and open with high-quality shared and circulation spaces that encourage the formal and informal interactions necessary for the development of a community of entrepreneurs.

The conversion to a modern centre for new ventures and entrepreneurs was funded by a unique public-private partnership which was established by Dr Pat Frain, the founding Director of NovaUCD.

Six private sector sponsors; AIB, AMD, Arthur Cox, Deloitte, Ericsson, and Goodbody contributed 75% of the €10 million raised to develop the first two phases of the NovaUCD complex. These sponsors were chosen to bring an appropriate mix of expertise and experience to the support programmes offered at NovaUCD. The balance of funds for the first two phases was contributed by Enterprise Ireland and the University.

Additional funding of €1.3 million was provided by Enterprise Ireland and UCD for bio-incubation facilities and equipment to accommodate biotechnology start-up companies.





Pictured (l-r) at the official opening of NovaUCD in 2003 are; John Kelly, AIB; Fergal Ó'Móráin, Enterprise Ireland; Dr Art Cosgrove, President, UCD; Mark O'Donovan, Goodbody; An Tánaiste, Mary Harney TD; Pádraig Ó'Riordáin, Arthur Cox; Ian Cahill, Ericsson; Paul McCambridge, AMD; Pat Kenny, Deloitte and Dr Pat Frain, founding Director, NovaUCD.

NovaUCD was officially opened by Tánaiste and Minister for Enterprise, Trade and Employment, Mary Harney TD, in October 2003.

In 2018 UCD announced that it was expanding NovaUCD's capacity to house start-ups by over 50% with a €6.7 million development project, led by Kavanagh Tuite Architects, to renovate and extend the NovaUCD East

Courtyard. The NovaUCD East Courtyard expansion was completed at the end of 2019 and was officially opened by Taoiseach Micheál Martin TD in October 2021.

In addition to the NovaUCD facility, the UCD Research and Innovation team based at NovaUCD, also manages NexusUCD, the Industry Partnership Centre and the AgTechUCD Innovation Centre at UCD Lyons Farm.

Appendix 1 outlines a timeline (1985 to 2023) of key milestones of UCD's support for commercialisation, entrepreneurship and innovation since the establishment of the University Industry Centre, the forerunner of NovaUCD, in 1985.

# €10m

was contributed by **six private sector sponsors** to develop the first two phases of the NovaUCD complex



Pictured at the official opening of the NovaUCD East Courtyard in 2021 are, Professor Orla Feely, UCD Vice-President for Research, Innovation and Impact, Taoiseach Micheál Martin TD and Tom Flanagan, UCD Director of Enterprise and Commercialisation.

# IDEAS TO IMPACT



Since 2003, UCD has provided support to **550+ companies and early-stage ventures** through the services and supports provided across UCD, through NovaUCD, and through business support programmes run and managed by NovaUCD. In addition the NovaUCD entrepreneurial community has raised **€1.3+ billion in equity funding and created thousands of jobs** over the last 20 years.

UCD's knowledge transfer team, which is responsible for the commercialisation of the intellectual property emerging from UCD's world-class research programmes, is also based at NovaUCD.

Since 2003 70 new UCD spin-out companies have been incorporated; 1,165+ inventions have been disclosed by UCD researchers; 370+ priority patent applications have been filed and 320+ licensing deals have been concluded with a range of indigenous and international businesses. In addition over 1,300 research agreements have been finalised with industry since 2014.

Since it was established in 2017 ConsultUCD, UCD's managed consultancy service which is also based at NovaUCD, has undertaken 220+ consultancy projects valued at over €2.5 million.



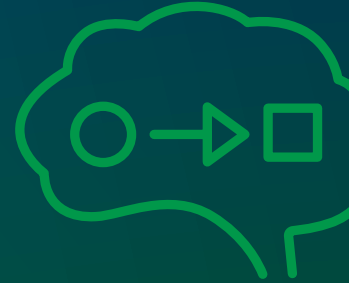
## Companies and New Ventures

# 550+

Companies and early-stage ventures supported

# 70

UCD spin-out companies incorporated



## Equity Funding and Exits

# €1.3bn+

Equity funding raised by NovaUCD entrepreneurial community

# €250m+

Value of major exits

## Research Collaborations with Industry

# 1,300+

Research agreements (since 2014)

## Consultancy Activities

# 220+

Consultancy projects undertaken (since 2017)

## Commercialisation Activities

# 1,165+

Inventions disclosed

# 370+

Priority patents filed

# 320+

Licence agreements concluded

In addition NovaUCD supported companies have created **thousands of direct and indirect jobs over the last 20 years.**





### Future Job and Funding Plans

NovaUCD is currently supporting 70+ start-ups and established companies to grow and scale on the national and global stage. These companies include those based at NovaUCD, at NexusUCD and elsewhere on the UCD campus and UCD spin-out companies located off campus.

Below are key highlights of a short economic survey (> 85% response rate) of these companies.

**€70m+**

Current Annual Turnover

**885+**

Number of employees (FTE)

**650+**

Number of employees in Ireland (FTE)

**1,100+**

New jobs to be created within next 24-months (FTE)

**655+**

New jobs to be created within next 24-months in Ireland (FTE)

**€315m+**

Equity funding raised to date

**€290m+**

New equity funding to be raised within next 24-months

### Spotlight: Manna

Manna, a drone delivery company founded by serial entrepreneur Bobby Healy, is headquartered at NexusUCD and was formerly based at NovaUCD. The company designs, builds and operates unmanned aerial vehicles, which perform high-speed deliveries of up to 3.5 kgs (~8lbs) in high-density suburban last-mile settings.

The company, which currently employs 100 people, has to date secured over €40 million in funding from investors such as Molten Ventures, Tapestry VC, Dynamo Ventures, Atlantic Bridge, ffVC, Elkstone Ventures and most recently Coca-Cola HBC.

The company has concluded over 100,000 drone deliveries in multiple locations in Ireland including in Balbriggan, Co. Dublin, Oranmore, Co. Galway and Moneygall, Co. Offaly. A new drone delivery trial is planned for Blanchardstown, Co. Dublin, which aims to reach up to 1.5 million people. The company also plans to commence a US trial in the Dallas-Fort Worth area of Texas and launch in 25 new locations in 2024, 15 of them in Ireland and in at least two other European countries.



Bobby Healy, CEO and Founder, Manna Drone Delivery.

# FACILITIES AND SUPPORT PROGRAMMES

University College Dublin has now developed a proven and exceptional track record in supporting entrepreneurs, early-stage ventures, start-ups and more established innovative companies, from the early feasibility stage, through to business development, investment, growth and scaling on the national and global stage.

## **NovaUCD, the Centre for New Ventures and Entrepreneurs**

At NovaUCD we nurture and support high-tech and knowledge-intensive spin-in and spin-out companies through our purpose-built and state-of-the-art facilities and our comprehensive business support programme and ecosystem.

At NovaUCD a wide range of flexible occupancy options are provided to entrepreneurs including; co-working space, offices, laboratories and virtual client status. At NovaUCD

we provide an environment and supports to develop new ventures and to grow and scale start-ups.

At NovaUCD a highly networked community of entrepreneurs provides an environment for start-up founders to share their experiences to assist other start-ups to develop and grow. This innovative and entrepreneurial community, along with the wider NovaUCD network, creates an invaluable support for client companies.



### Spotlight: Output Sports

Output Sports, a sports technology company, was co-founded in 2018 by Dr Martin O'Reilly, Dr Darragh Whelan, Julian Eberle and Professor Brian Caulfield as a spin-out from the Insight SFI Research Centre for Data Analytics and the UCD School of Public Health, Physiotherapy and Sports Science.



English Premier League, La Liga, Major League Baseball, Six Nations Rugby and the NFL, in addition to clients in performance centres, clinics, gyms, universities and high schools.

The company, headquartered at NovaUCD, currently has a staff of 25+ and has raised in excess of €3 million in funding.

The company's products enable strength and conditioning coaches, sport scientists and rehab professionals, to fully understand and optimise their athletes' performance using a single wearable sensor system.

Output Sports' technology is currently used by sports practitioners across 30+ countries and sports. Their client base includes teams competing in the GAA Championship,

# 30+

countries and sports use Output Sports technology

# €3m+

in funding raised

Pictured (l-r) are; Dr Darragh Whelan and Dr Martin O'Reilly, co-founders, Output Sports; investors and Irish rugby players, Dan Leavy and Adam Byrne; and Julian Eberle, co-founder, Output Sports.





## NexusUCD, the Industry Partnership Centre

At NexusUCD we offer high-quality modern office space, with short, medium or long-term occupancy arrangements, and associated services to established innovation-led companies who are collaborating, or wish to collaborate, with UCD’s world-class research base.

NexusUCD is located in the Founders District, part of the Belfield Office Park in Clonskeagh, adjoining the main UCD Belfield campus. By locating at NexusUCD companies benefit from close proximity to and interaction with UCD academics and researchers. Collaboration is fostered by the NovaUCD team who, working as part of UCD Research and Innovation, facilitate engagement between industry and the University.



Pictured at UCD are TestReach co-founders, Sheena Bailey and Louella Morton.

### Spotlight: TestReach

TestReach, headquartered at NexusUCD, which was founded by Sheena Bailey and Louella Morton in 2014, provides leading computer-based assessment solutions used by professional associations, public agencies, universities, and corporations to run secure, online examinations. TestReach covers all areas of exam creation and rollout including question development and exam paper assembly, computer-based exam delivery (with or without online supervision), detailed marking, moderation and exam results analysis.



The Covid-19 pandemic led to a surge in global demand for the company’s technology. The company is now working

in partnership with over 100 examining bodies, examining candidates in over 150+ countries, delivering in excess of 4 million exams annually and employs a staff of 90.

The company was ranked in 15th place in the 2022 Deloitte Technology Fast 50 Awards which highlight Ireland’s fastest growing technology organisations. The company co-founders have been shortlisted for 2023 EY Entrepreneur Of The Year™ Ireland Awards.

**4m+**

exams delivered annually in over 150 countries

**90**

staff employed



Pictured at UCD Lyons Farm are, Fiona Kelleher, co-founder and COO, MyGug and Gary Gallagher, co-founder, OptaHaul, winners of the second AgTechUCD Accelerator Programme.

### AgTechUCD Innovation Centre

AgTechUCD, based at UCD Lyons Farm, Celbridge, Co. Kildare, is specifically focused on promoting and accelerating early-stage start-ups and SMEs with disruptive innovations in the AgTech, agrifood and veterinary sectors, as they build their innovative businesses into leading enterprises creating jobs in Ireland and on the global stage.

To support this focus the development of the AgTechUCD Innovation Centre (ca. 890 sq.m.), a new state-of-the-art facility, funded by UCD and Enterprise Ireland, at UCD Lyons Farm was completed in September. The new facility incorporates flexible lab spaces, meeting rooms, offices and an exhibition and seminar area.

AgTechUCD also runs an annual accelerator programme dedicated to agtech and agri-food start-ups. The objective of the AgTechUCD Accelerator Programme is to fast track the business development and leadership skills of participants and to provide them with the support and guidance needed to accelerate their start-ups in Ireland and internationally.

# 70+

innovative start-ups are currently being supported through NovaUCD

### Client Companies

Some 70+ innovative start-ups are currently being supported through NovaUCD and many of these are spin-outs which are commercialising research specifically undertaken at UCD. The remaining are spin-in companies which have located on campus, at NovaUCD or NexusUCD in order to interact more closely with UCD, or UCD spin-outs located off campus. See Appendix 2.

It is an important element of our strategy to continuously refresh the community of entrepreneurs and to have the capacity at all times to take on new start-ups. Examples of companies which have graduated from the NovaUCD ecosystem are included in Appendix 3.

**A new state-of-the-art facility, funded by UCD and Enterprise Ireland, at UCD Lyons Farm was completed in September. The new facility incorporates flexible lab spaces, meeting rooms, offices and an exhibition and seminar area**

# DEVELOPMENT AND SCALE PROGRAMMES

A comprehensive business support programme is offered to founders and senior company management of client companies at NovaUCD, NexusUCD and the AgTechUCD Innovation Centre. This programme comprises advice, seminars, workshops, access to dedicated accelerator programmes, as well as facilitated access to the NovaUCD network of sponsors, university researchers, business mentors and partners, investors and alumni.

A **SPECIALIST FOUNDER'S CLUB** also convenes monthly which generates interaction and group discussion around key issues and assists client companies

in establishing new networks as part of the UCD entrepreneurial community.

## Spotlight: Conjura/Wayflyer

Conjura, a NexusUCD-headquartered company, was co-founded by Aidan Corbett and Fran Quilty in 2018. The company has developed a platform which provides customer analytics to drive business performance and growth. In September 2019 Aidan established Wayflyer, a revenue-based financing and growth platform for eCommerce businesses, as a spin-out from Conjura with Jack Pierse, a former venture capitalist.

By 2021 Wayflyer had raised over \$85 million in funding, grew staff numbers to over 200 and expanded into new markets including Spain, the Netherlands, and the US. In February 2022 Wayflyer, now a trusted partner to over 1,000 businesses worldwide, secured \$150 million in a Series B funding round, with a post-investment valuation of \$1.6 billion, making the company Ireland's sixth tech 'unicorn'.

In 2023 Wayflyer agreed a \$1 billion financing deal with Neuberger Berman to boost Wayflyer's growth plans, especially in the US.



Pictured at UCD is Aidan Corbett, co-founder, Conjura and Wayflyer.

In April 2022 Conjura itself raised €15 million in a Series A funding round to enhance its e-commerce solutions.

**\$1.6bn** **1,000+**  
post-investment valuation      trusted partner to worldwide businesses





Pictured are participants in a New Frontiers Programme run by NovaUCD in partnership with IADT Media Cube.

### Specialists Programmes through NovaUCD

NovaUCD is a member of the ESA Space Solutions Centre Ireland consortium. This national consortium, led by the Tyndall National Institute and funded by ESA and Enterprise Ireland, focuses on a wide range of sectors such as agri-tech, data analytics, bee husbandry, architecture and planning, and med-tech, in addition to the space industry. As a member of consortium, NovaUCD, is designated as an of ESA BIC Ireland location.

Eligible start-ups which successfully apply to locate at NovaUCD through ESA Space Solutions Centre Ireland consortium can avail of supports provided through the ESA BIC network alongside the NovaUCD support programmes. These companies also receive €50,000 in funding to support the development of their enterprises.

NovaUCD is also partnering with the IADT Media Cube to deliver a New Frontiers Programme with funding from Enterprise Ireland. This entrepreneurship programme is aimed at the growing number of emerging entrepreneurs based in the greater South Dublin area, incorporating South Dublin, Dún Laoghaire-Rathdown and North Wicklow.

The programme provides participating entrepreneurs with access to a comprehensive package of supports including mentorship from some of Ireland's leading business people, funding support from Enterprise Ireland and access to resources including hot-desk facilities at IADT Media Cube and NovaUCD.

New accelerator programmes currently being developed by NovaUCD include an AI Digital Advance programme,

in collaboration with CeADAR, Ireland's Centre for Applied AI, and a 5G Edge programme in partnership with Dell, Ericsson and Vodafone.

The AI Digital Advance programme, funded by European Digital Innovation Hub, aims to support start-ups who are interested in exploring the potential of AI, machine learning and data analytics for their businesses. The 5G Edge Accelerator programme, aims to support the development of cutting-edge start-ups leveraging the power of Vodafone/Ericsson's 5G capabilities and Dell's Multi-Access Edge Computing (MEC) technologies, to drive digital transformation.

### NovaUCD Mentors and Business Partners Panel

NovaUCD's Mentors and Business Partners Panel, which has now grown to over 150 members, aims to attract experienced business leaders and professionals, provide mentoring and advice to researchers and students who are seeking to develop start-up ideas at the early stage. In several cases such collaboration develops into partnerships with members becoming investors and executives in the start-up businesses as they mature.

#### Spotlight: EpiCapture

EpiCapture, UCD spin-out, is developing a novel urine DNA test to detect aggressive prostate cancer.



The company, based on research carried out by Associate Professor Antoinette Perry in the UCD School of Biology and Environmental Science, was co-founded by Dr Perry and Edward Simons, who was originally introduced to the company through the NovaUCD Mentors and Business Partners Panel.



Pictured are Edward Simons and Associate Professor Antoinette Perry, co-founders, EpiCapture.

### Atlantic Bridge University Bridge Fund

The Atlantic Bridge University Bridge Fund was launched in 2016 following a joint leadership collaboration by NovaUCD and Trinity College Dublin. The fund was established to invest in research outputs generated by both universities and all Irish third level institutions and universities.

The initial €60 million fund, managed by Atlantic Bridge, brought together significant institutional investment from the European Investment Fund, Enterprise Ireland, AIB and Bank of Ireland, and UCD and TCD.

A follow-on €80 million Fund (University Bridge Fund II) was launched in 2021 with existing investors, European Investment Fund, Enterprise Ireland and AIB, UCD, TCD and new investors, University College Cork and University of Galway.

Several NovaUCD-supported companies including, Equal1, iKey, Latch Medical, Manna, Oblivious AI, Output Sports and Plasma Bound, have received funding to date through this Fund.

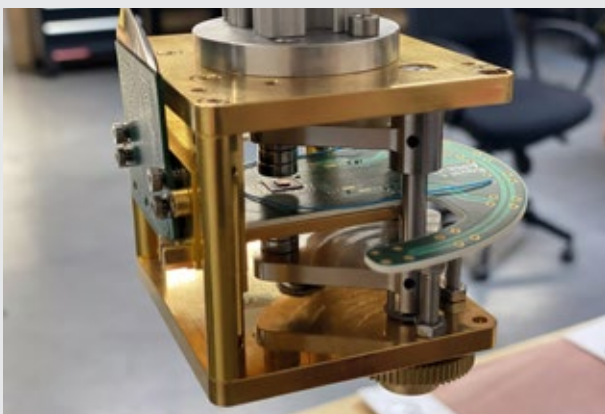
**A follow-on €80 million Fund (University Bridge Fund II) was launched in 2021 with existing investors, European Investment Fund, Enterprise Ireland and AIB, UCD, TCD and new investors, University College Cork and University of Galway**

### Spotlight: Equal1 Laboratories

Equal1 Laboratories headquartered at NexusUCD and formerly based at NovaUCD, was founded by Dr Dirk Leipold, Mike Asker and Professor R. Bogdan Staszewski as a spin-out from the UCD School of Electrical and Electronic Engineering.



Equal1 is a pioneering silicon quantum computing company dedicated to making quantum computing affordable and



Equal1’s pioneering Quantum System-on-a-Chip (QSoC) processors, now in their third generation, integrate entire quantum computing systems onto a single chip.

accessible. Quantum computing offers unprecedented potential to unlock societal advancements in climate modelling, carbon capture, drug discovery, and AI modelling.

Equal1’s pioneering Quantum System-on-a-Chip (QSoC) processors, now in their third generation, integrate entire quantum computing systems onto a single chip, merging millions of qubits, control systems, and real-time error correction capabilities. These QSoCs, built via standard foundry processes, will form the core of the world’s most powerful, compact quantum computers, designed for deployment into standard HPC environments.

The company, which also has a base in Silicon Valley, California, has secured over €15 million in total funding to date, including from the European Innovation Council, venture capital investment and Enterprise Ireland, and employs a staff of 30.

**€15m+** in total funding secured to date

**30** staff employed

# INNOVATION SUPPORT PROGRAMMES

NovaUCD also offers a range of tailored programmes for UCD researchers and students in the areas of entrepreneurship, innovation, creativity and technology commercialisation.

## **UCD Commercialisation Bootcamp**

The objective of the UCD Commercialisation Bootcamp is to help equip UCD researchers, staff and postgraduate research students with the knowledge, skills and understanding of the commercialisation process.

Bootcamps, run regularly over a number of weeks and aim to strengthen the pipeline of commercial opportunities arising from UCD research programmes. On completion of the Bootcamp participants have an understanding of what it takes to build a commercialisation plan.

It is envisaged that researchers who complete Bootcamps, and whose commercialisation strategy includes the establishment of a UCD spin-out company, may progress to participate on the UCD VentureLaunch Accelerator Programme.





## UCD VentureLaunch Accelerator Programme

In 2013 NovaUCD introduced a new accelerator programme, VentureLaunch to replace the NovaUCD Campus Company Development Programme. VentureLaunch, which uses the Business Model Canvas approach, is an accelerator programme supporting the creation and launch of sustainable and profitable new ventures based on UCD intellectual property.

The objective of the programme is to equip UCD researchers with the knowledge, skills and understanding that will be required to work as part of a team leading a new commercial venture. On completion of the programme the expectation is that participating new venture projects will have developed a commercially viable business plan.

Prior to the start of VentureLaunch the NovaUCD Customer Discovery Programme takes place to support

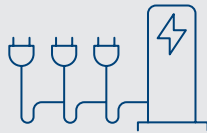
UCD research teams to identify trial partners and customers.

The winners of the UCD VentureLaunch Accelerator Programme from 2013 and the winners of the NovaUCD Campus Company Development Programme from 2004 to 2012 are summarised in Appendix 4.

**VentureLaunch, which uses the Business Model Canvas approach, is an accelerator programme supporting the creation and launch of sustainable and profitable new ventures based on UCD intellectual property**

### Spotlight: GoEve

Go Eve, an electric vehicle (EV) charging start-up, and a joint UCD and Imperial College London spin-out, was the overall winner of the 2021 UCD VentureLaunch Accelerator Programme.



Current EV charging technology only allows for one or two EVs to access a fast-charging station at a time. This creates 'down time', wasted charging potential as vehicles are moved on and off the charger. Go Eve's 'DockChain' technology aims to make high-power DC charging cost-competitive with lower-power AC charging options. DockChain achieves this by extending the reach of single rapid chargers, to a daisy-chain of low-cost charging terminals, to service multiple parking spaces.

Go Eve recently secured €3.5 million in the company's first funding round which will be used to secure supply chains and significantly scale production. Investors include; The Pearl Family Office; Carter Gem; Automotive Ventures Inc.; Kero Development Partners and Cur8 Capital.



Go Eve's DockChain technology aims to make high-power DC charging cost-competitive with lower-power AC charging options.

The company, which was co-founded by Hugh Sheehy, John Goodbody, Professor Robert Shorten, Dr Pietro Ferraro and Andrew Cullen, has offices in NovaUCD and in London.

**€3.5m**  
secured in the company's  
first funding round

## NovaUCD Student Enterprise Competition

A key support offered by NovaUCD for student entrepreneurs is the NovaUCD Student Enterprise Competition (formerly known as the UCD Start-up Stars Programme).

The NovaUCD Student Enterprise Competition, an intensive 4-week mentoring programme, now in its 9th year, is run by NovaUCD each Summer, as a framework to support undergraduate and postgraduate students who want to work together to develop and grow start-up companies.

The aim of the competition is to assist the participating students in refining their start-up ideas through a series

of structured workshops, including taught content from industry experts, interactive workshops, regular pitching sessions and mentoring.

At the final workshop each student venture presents to an external judging panel. Based on evaluation of the presentations winning teams are selected who are awarded cash prizes to help them on their start-up journey.

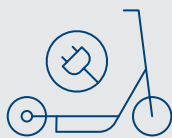
Over 70 early-stage ventures and some 170 students have now completed the NovaUCD Student Enterprise Competition over the last 9 years.



Pictured are Charlie Gleeson, founder and CEO, Zipp Mobility and Ronan Garvey, Chief Product Officer, ZEUS Scooters.

### Spotlight: Zipp Mobility

Zipp Mobility, the Irish micromobility operator, was founded in 2019 by Charlie Gleeson, who completed the NovaUCD Student Enterprise Competition and the UCD VentureLaunch Accelerator Programme that year. Since then Zipp Mobility raised over €8 million in funding and became a significant player in the European micromobility sharing market, having launched e-scooter and e-bike operations in multiple cities in Ireland, the



UK and Poland. In April 2023 Zipp Mobility, which was headquartered at NovaUCD, was acquired by ZEUS Scooters creating Ireland's largest homegrown micromobility company.

**€8m**  
in funding raised  
since 2019





Pictured (l-r) at NovaUCD are members of the 2023 BTYSTE Business Bootcamp winning NutriSoil project team, Erica O'Brien Murray, Julian Lewandowski, Sean Allen, Alanna Hayes and Rosheen Sharma. The NutriSoil project is examining the long-term effects of a more sustainable method of keeping nutrients in the soil as an alternative to an artificially made granule.

### BTYSTE Business Bootcamp

The BTYSTE Business Bootcamp was established by BT Ireland in 2010 and is delivered annually in partnership with NovaUCD to 30 prize winning secondary school students. The aim of the week-long Bootcamp is to encourage further innovation amongst young scientists and technologists, providing them with commercial skills to carry forward into their future careers. It also aims to help the students gain a practical understanding of what it takes to bring an idea from concept to market while also encouraging interpersonal skills such as teamwork, decision making and leadership.

### Internship Supports for Students

NovaUCD has an ongoing range of internships available to students who are looking to work in start-up companies. These include collaborations with the UCD Quinn School of Business and the UCD Michael Smurfit Graduate Business School, in areas such as business development and marketing. Such internships enable students, who

The aim of the week-long Bootcamp is to **encourage further innovation amongst young scientists and technologists**, providing them with commercial skills to carry forward into their future careers. It also aims to help the students gain a practical understanding of what it takes to bring an idea from concept to market

have an interest in entrepreneurship or an ambition to start their own business, a real experience of working in the start-up sector.



# KNOWLEDGE TRANSFER AND ConsultUCD

The Knowledge Transfer team based at NovaUCD, through its extensive commercial experience and drawing on a network of industry experts, patent agents and legal experts, supports UCD researchers to commercially exploit research outputs for the benefit of the University and the wider community.

**UCD'S KNOWLEDGE TRANSFER** operations are partially supported with funding provided by Enterprise Ireland under the Technology Transfer Strengthening Initiative and KT Boost.

## Identifying, Protecting and Commercialising Intellectual Property

UCD, through the Knowledge Transfer team at NovaUCD, has a structured approach to ensure that intellectual property is identified and appropriately protected.

The team supports the UCD research community, to identify valuable research results and implement protection strategies, to explore commercialisation opportunities through licensing and spin-out formation and to develop productive collaborations with industry.

Members of the Knowledge Transfer team regularly meet with UCD researchers to provide advice on commercial aspects of research proposals and contracts, to monitor the progress of research projects, to provide appropriate assistance to the researchers at the different stages of their research projects, and to remind researchers of UCD's contractual obligations to funding agencies and companies and implement UCD's policy on intellectual property.

The Knowledge Transfer team is also responsible for ensuring that the intellectual property terms on ownership and access rights reflect the objectives of the project,

do not conflict with any other agreements that the University has entered into, comply with State Aid Rules, the requirements of the Funding Agency Guidelines and National Codes of Practice, and importantly preserve wherever possible the researcher's right to publish and use the intellectual property in future research projects.

## NovaUCD Innovation Award

The NovaUCD Innovation Award was established in 2004 and is presented annually to an individual, company or organisation or group in recognition of excellence in innovation or of success achieved in the commercialisation of UCD research or other intellectual activity over several years. Recipients of the NovaUCD Innovation Award since 2004 are summarised in Appendix 5.

**The team supports the UCD research community, to identify valuable research results and implement protection strategies, to explore commercialisation opportunities through licensing and spin-out formation and to develop productive collaborations with industry**



Pictured are Professor Emmeline Hill and Jim Bolger, the renowned Irish trainer and breeder, co-founders, Equinome.

### Spotlight: Equinome

Equinome was co-founded by Professor Emmeline Hill in partnership with Jim Bolger, the renowned Irish trainer and breeder, in 2009 as a spin-out from the UCD School of Agriculture and Food Science. The company was established to commercialise groundbreaking research, funded by Science Foundation Ireland, and led by Professor Hill, which resulted in the identification of what is now referred to as the 'Speed Gene', in Thoroughbred horses.



The company, headquartered at NovaUCD, developed a comprehensive series of athletic performance genomic tests for the Thoroughbred market including the Equinome Speed Gene Test and the Equinome Elite Performance Test. The company achieved global reach and sales and significantly changed breeding techniques in the international, multi-billion euro Thoroughbred horse racing and breeding industry. In 2014 Professor Hill received the NovaUCD Innovation Award and in 2015 the company, which had become a leading global bloodstock genomic testing company, was acquired by Plusvital.

### ConsultUCD

ConsultUCD, the University's managed consultancy service based at NovaUCD, facilitates access and supports engagement between business, industry and the University. Since it was established in 2017 ConsultUCD has supported more than 125 UCD academics and researchers to undertake over 220 consultancy projects valued at over €2.5 million for more than 100 external organisations ranging from international MNCs to local start-ups.

ConsultUCD also actively engages with industry and business to develop consultancy opportunities. Such opportunities will enable UCD expertise deliver economic and societal benefit in Ireland and internationally by enabling the UCD's knowledge and expertise to be more widely and more easily accessible to external stakeholders.

# 125+

UCD academics and researchers were supported by ConsultUCD to undertake over **220 consultancy projects valued at over €2.5 million** for more than 100 external organisations



Dr Sarah Cotterill, UCD School of Civil Engineering and UCD Dooce Centre for Water Resources Research, recipient of the 2022 NovaUCD Consultancy of the Year Award.

**Spotlight: Dr Sarah Cotterill**

Dr Sarah Cotterill, UCD School of Civil Engineering and UCD Dooce Centre for Water Resources Research, completed a consultancy study entitled 'A Framework for Improving Domestic Water Conservation in Ireland', which was commissioned by An Fóram Uisce (the Water Forum) through ConsultUCD.



A key finding of the study, which aimed to explore mechanisms to encourage and facilitate domestic water conservation measures in Ireland, was that almost a fifth of the energy used in Irish homes is used for heating water, and therefore a relatively small reduction in household water use (of say 20%) in all homes in Ireland, could lead to a significant reduction (hundreds of thousands of tonnes) of greenhouse gas emissions a year.

Almost a fifth of the energy used in Irish homes is used for heating water, and therefore a relatively small reduction in household water use (of say 20%) in all homes in Ireland, could **lead to a significant reduction** (hundreds of thousands of tonnes) of greenhouse gas emissions a year



# LINKING WITH BUSINESS AND INDUSTRY

University College Dublin has an international reputation for being at the forefront of innovative research and creative discovery. Bridging the gap between academic research and industry, building relationships and increasing the levels of collaboration with Irish and international industry, are key elements of UCD's strategy.

**THE UNIVERSITY HAS A STRONG** track record of working with industry and seeks strong and strategic engagement with business, social and cultural enterprises; adding value, expanding networks and exploring new opportunities to deliver impact through partnership.

The innovation ecosystem includes large-scale industry collaborative programmes such as; SFI Research Centres and Enterprise Ireland-funded and industry-led technology centres. Companies, ranging from early-stage high-tech start-ups to more established innovation-led companies, also locate on campus to collaborate more closely with UCD and to be located in close proximity to UCD's world-class research base.

## **R&D Collaboration**

NovaUCD assists companies who want to collaborate and benefit from UCD's research expertise by partnering with the University on small or large research projects.

For example, UCD is working with several companies, on a range of R&D projects focused on 'disruptive' technologies, which are being supported by the Government through the Disruptive Technologies Innovation Fund. Companies include; Novus Diagnostics; Poolbeg Pharma; Treemetrics; TechWorks Marine; Deciphex; Dawn Farm Foods; Creme Software; Origin Enterprises Public; Tympany Medical; Amryt Pharma; IBM Research Ireland; IdentiGEN, and Nova Leah.

**The University has a strong track record of working with industry and seeks strong and strategic engagement with business, social and cultural enterprises**

## Licensing Opportunities

Through its Knowledge Transfer team NovaUCD has a growing portfolio of licensing opportunities which will benefit the companies to whom the technology is licensed by making them more competitive, create new

products, scale, generate employment and hopefully, with time, provide financial returns to the University and the inventors.

Pictured at UCD are Associate Professor Siobhán McClean and Dr Jeremy Skillington, CEO, Poolbeg Pharma.



### Spotlight: Poolbeg Pharma

In 2022 Poolbeg Pharma, a clinical stage infectious disease pharmaceutical company, signed an exclusive licence agreement with UCD, through NovaUCD, for a late preclinical stage vaccine candidate for Melioidosis. Melioidosis, with no current approved vaccine available, is an infectious disease caused by the bacterium *Burkholderia pseudomallei*, commonly found in the soil and surface groundwater of many tropical and subtropical regions, with diverse clinical presentations including pneumonia and severe sepsis with multiple organ abscesses.



Incidence of the disease is widespread in South-East Asia, Northern Australia and India, with climate change having

a substantial impact on the spread of the disease to new areas such as Brazil. There are an estimated 165,000 cases of Melioidosis each year and is associated with a fatality rate of up to 45%.

The vaccine candidate, which is being developed by Poolbeg as POLB 003, was invented following many years of research by Associate Professor Siobhán McClean, UCD School of Biomolecular and Biomedical Science, and was a recipient of a Wellcome Trust Award to aid its development. Associate Professor McClean completed some of the original research to identify the antigens associated with the Melioidosis vaccine candidate at TU Dublin.

# STAFF MEMBERS

Professor Helen Roche is interim UCD Vice-President for Research, Innovation and Impact and the members of the NovaUCD team are outlined below.

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 Interim Vice-President for Research, Innovation and Impact  
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 Communications and Media Relations Manager  
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# LOCATION AND CONTACT DETAILS

## Location

NovaUCD is located on UCD's Belfield Campus with the main entrance via Fosters Avenue, approximately 200m from the Stillorgan dual carriageway (N11). A pedestrian and cyclist entrance is also available off the N11.

Information on public transport links to UCD is available via [www.ucdestates.ie/commuting](http://www.ucdestates.ie/commuting)

Limited car parking is available to visitors to NovaUCD. Charges for visitor parking apply from 8:00 am to 5:00 pm, Monday to Friday (excluding bank holidays) during semester times. Outside of these hours and outside of semester time parking is free on a first-come-first-serve basis.

## Contact Details

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## Social Media

**Twitter:** @NovaUCD  
**LinkedIn:** [www.linkedin.com/company/novaucd](http://www.linkedin.com/company/novaucd)  
**YouTube:** [www.youtube.com/ucdinnovation](http://www.youtube.com/ucdinnovation)

## Further information

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# APPENDIX 1: TIMELINE OF KEY MILESTONES







# APPENDIX 2: CLIENT COMPANIES

**CURRENT CLIENT COMPANIES** of NovaUCD include;

AER Therapeutics  
Aficionado Technologies  
Allsorter  
Alvarius  
AquaB  
Attenuate Therapeutics  
Atturos  
ATXA Therapeutics  
Auranta

Berand  
beyondBMI  
Binarii Labs  
Bioplastech  
Biosimulytics  
Biosystems Engineering  
Blafar  
Branca Bunús  
Carbon Harvesters

Conjura  
Corlytics  
CropBiome  
Customs Window Technologies

Dataships  
DOCOSOFT  
Durotimi AI

Eden Pharma  
EPIC Conjoint  
EpiCapture  
EPRI International  
Equal1 Labs  
Equilume

Fire1

GB Innovation  
giyst  
Go Eve

Head Diagnostics  
Healthy Place to Work

iKey

illuminAI Tech  
Infraprint  
Inishtech  
InvoiceFair

La Casa Care  
Latch Medical

Manna  
Melli  
MiNan

NanobOx  
Nova Mentis  
NovoGrid

Oblivious AI  
O.C.E. Technology  
OncoAssure  
One Therapeutics Assets  
Output Sports

PEARlabs  
PicoGlaze  
Plasma Bound  
Proveye

ReaDI-Watch  
recsyslabs



Pictured is Niamh Sterling, Consultant, HBAN and Sean Daly, CEO, CropBiome, a joint UCD – Trinity College Dublin spin-out.

seamlessCare  
 Silicate  
 SiriusXT  
 StrongBó Agritech

Talam Biotech  
 Terra Solar  
 TestReach  
 This is Seaweed

Vivid Edge

WeCrut

xWave Technologies

Zeeko

**Note:** NovaUCD is responsible for supporting the wider UCD entrepreneurial ecosystem of companies which includes those based at NexusUCD, the Industry Partnership Centre; AgTechUCD Innovation Centre and spin-out companies based on and off campus.



**Spotlight: DOCOsoft**

DOCOSoft, an innovative provider of claims management solutions for the global property and casualty (P&C) insurance and reinsurance markets was established by Aidan O’Neill in 2008. Since then the company has become a leading provider of state-of-the-art claims management solutions for the Lloyd’s insurance market in London and the global P&C insurance and reinsurance markets.



At present, around half of all claims processed in the London Market, including Lloyd’s, go through one of DOCOSoft’s claims systems, which manage some £12 billion in premium income and result in up to 50% reduction in claims-handling turnaround time for clients.

The company, which is 100% self-funded, was previously headquartered at NovaUCD and is now headquartered at NexusUCD, and is operating in 8 countries including; UK, Japan, Poland, Portugal and India.

In recent years the company has been scaling rapidly and staff numbers have almost trebled since 2020 with the company currently employing nearly 80 people with turnover growing at an annual rate of over 25%.



Pictured at UCD is Aidan O’Neill, CEO, DOCOSoft.

**£12bn**  
 in premium income managed resulting in up to 50% reduction in claims handling times

**25%**  
 growth rate in annual turnover





# APPENDIX 3: GRADUATE COMPANIES

AMONG THE GRADUATE companies from the NovaUCD ecosystem are;

AccountsIQ

Akkure

Aonta Technologies

Aquens

BiancaMed

BioMerieux

Biosensia

Brace Social

Brightwind

Coalface Capital

Carrick Therapeutics

Cernam

ChangingWorlds

Connectors Marketplace

Duolog Technologies

Empiric Logic

ENBIO

EnvEcon

Enzolve Technologies

Equinome

Evervault

Finalysis

GMI

Hemanua

HiTech Health

HomeInstead

Innovios

Initiative Ireland

Innovation Zed

Ionic

Java Clinical Research

Kinesis Health Technologies

Life Scientific

Lios

Locumotion

Logentrics



Pictured at NovaUCD are Eimear O'Carroll and Rhona Togher, co-founders, Lios (formerly Restored Hearing), winners of the 2023 European Inventor Award, SME category, for SoundBounce™, a composite technology that reduces the negative effects of loud noise.

**Spotlight: Logentries**

Logentries was co-founded by Dr Trevor Parsons and Dr Viliam Holub in 2010 as a spin-out from UCD’s Performance Engineering Laboratory after a decade of joint research with IBM. Logentries developed a SaaS based, log management service for collecting and analyzing big data and making this data easily accessible to improve IT and business operations.



By 2015, Logentries had secured \$11 million in funding, had some 70 employees and was serving more than 3,000 customers in over 65 countries across a diverse set of industries when Rapid7, a leading US provider of security data and analytics solutions, acquired the company for over \$68 million.



Dr Trevor Parsons and Dr Viliam Holub, co-founders, Logentries.

**\$68m**

Rapid7, a leading US provider of security data and analytics solutions, acquires Logentries

MagrowTec

MyWallSt

Neuromod Devices

OncoMark

OxyMem

Plusvital

SuperNode

Wattics

Zipp Mobility

# APPENDIX 4: WINNERS OF THE UCD VENTURELAUNCH ACCELERATOR PROGRAMME



Dr Fiona McGillicuddy (pictured), overall winner of the 2022 UCD VentureLaunch Accelerator Programme, is a member of the MetHealth team, an emerging start-up focused on transforming obesity care. MetHealth is developing a biomarker-based risk-stratification platform and associated digital health solution that can identify patients with complications of obesity, including liver disease. The platform supports clinical decision making and enhanced delivery of personalised care for individual patients.

- 2022 **MetHealth**  
Dr Fiona McGillicuddy, UCD School of Medicine
- 2021 **Go Eve**  
Hugh Sheehy, John Goodbody, Professor Robert Shorten, Dr Pietro Ferraro and Andrew Cullen, a joint UCD School of Electrical and Electronic Engineering and Imperial College London spin-out
- 2020 **EpiCapture**  
Dr Antoinette Perry, UCD School of Biology and Environmental Science and Edward Simons

- 2019 **Biosimulytics**  
Peter Doyle, Professor Niall English and Dr Christian Burnham, UCD School of Chemical and Bioprocess Engineering
- 2018 **Naiad**  
Assistant Professor Emmanuel G. Reynaud, UCD School of Biomolecular and Biomedical Science and Professor Brian Rodriguez, UCD School of Physics
- 2017 **Prolego Scientific**  
Professor Andrew Parnell, Dr Belinda Hernández and Dr Mahdi Amina, UCD School of Mathematics and Statistics
- 2016 **AzaCor Therapeutics**  
Associate Professor John Baugh, Dr Nadia Glezeva, Dr Chris Watson, Dr Mark Ledwidge and Professor Ken McDonald, UCD School of Medicine
- 2015 **Phision Therapeutics**  
Professor Breandán Kennedy and Dr Alison Reynolds, UCD School of Biomolecular and Biomedical Science
- 2014 **NovoGrid**  
Professor Andrew Keane, Dr Peter Richardson, and Paul Manning, UCD School of Electrical and Electronic Engineering



- 2013** ○ **Kinesis Health Technologies**  
Dr Barry Greene and Seamus Small, UCD School of Public Health, Physiotherapy and Sports Science
- 2012** ○ **PurOrigin**  
Finbarr Maguire and David Ronan, Masters of Engineering students, UCD School of Mechanical and Materials Engineering
- 2011** ○ **APC**  
Dr Mark Barrett and Professor Brian Glennon, UCD School of Chemical and Bioprocess Engineering
- 2010** ○ **Logentrics**  
Dr Trevor Parsons and Dr Viliam Holub, UCD School of Computer Science
- 2009** ○ **Equinome**  
Professor Emmeline Hill, UCD School of Agriculture and Food Science
- 2008** ○ **RendezVu (ASimil8)**  
Paul Groarke and Garrett Hussey, a UCD spin-in company
- 2007** ○ **EnvEcon**  
Professor Peter Clinch and Dr Andrew Kelly, UCD School of Architecture, Planning and Environmental Policy
- 2006** ○ **FitFone**  
Dr Conor O'Brien, Royal College of Surgeons in Ireland
- 2005** ○ **Vocal Health Screen**  
Rosalyn Moran, PhD student, UCD School of Electrical and Electronic Engineering
- 2004** ○ **Nanosense**  
Dr Margaret Brennan, School of Physics, Trinity College Dublin

### Spotlight: APC

APC was founded in 2011 by Dr Mark Barrett and Professor Brian Glennon, UCD School of Chemical and Bioprocess Engineering and was the overall winner of that year's NovaUCD Campus Company Development Programme.



Since then APC has grown organically to become a global powerhouse in process development, partnering with companies large and small around the world to accelerate how drug and vaccine manufacturing processes are researched and developed to bring medicines to market at unprecedented speed.

The company which has advanced 100s of medicines is based at a 60,000+ sq.ft. state-of-the-art headquarters at Cherrywood, Dublin, and currently employs a staff of 190, 90% of whom are PhD qualified. In 2020 the company spun-out VLE Therapeutics Ltd to focus on the manufacture of vaccines and advanced therapeutics.



Pictured are Professor Brian Glennon and Dr Mark Barrett, co-founders, APC.

**Note:** Programme known as the Campus Company Development Programme (CCDP) from 2004 until 2012.

**Note:** In the early years of the CCDP, projects from other third-level institutions in Dublin participated on this programme.

# APPENDIX 5: RECIPIENTS OF THE NovaUCD INNOVATION AWARD

## Spotlight: Professor Stefan Oscarson and Professor Stephen Carrington

Professor Stefan Oscarson and Professor Stephen Carrington (pictured), received the 2023 NovaUCD Innovation Award in recognition of their successful and longstanding research collaboration with Professor John Fahy, University of California, San Francisco (UCSF). The focus of this collaboration was to understand why mucus in the lungs of people with respiratory diseases is thick, sticky and difficult to cough up and to develop new treatment strategies to help such patients breathe more easily.



The UCD-UCSF research collaboration led to the filing of a patent application for a novel mucolytic drug to address a large unmet need for patients with mucus-associated lung diseases. These diseases include, chronic obstructive pulmonary diseases (COPD), asthma, cystic fibrosis and bronchiectasis.

Aer Therapeutics, the first joint UCD-UCSF spin-out company, was founded by Professor Oscarson and Professor Fahy, and is headquartered in Raleigh, North Carolina. The company licensed the patented novel mucolytic drug in 2022 and closed a \$36 million funding round to enable initial safety studies in patients and a proof-of-concept clinical trial in patients with COPD.



RECIPIENTS OF THE main NovaUCD Innovation Award since 2004 are summarised below.

- 2023** ○ **Professor Stefan Oscarson**  
UCD School of Chemistry **and Professor Stephen Carrington**, UCD School of Veterinary Medicine
- 2022** ○ **Professor Dominic Zerulla**  
UCD School of Physics
- 2021** ○ **Professor Fiona Doohan**  
UCD School of Biology and Environmental Science
- 2019** ○ **Dr Fergal O'Reilly**  
UCD School of Physics
- 2018** ○ **Professor Stephen Pennington**  
UCD School of Medicine
- 2017** ○ **Professor Brian Caulfield**  
UCD School of Public Health, Physiotherapy and Sports Science

- 2016** ○ **Professor Kevin O'Connor**  
UCD School of Biomolecular and Biomedical Science
- 2015** ○ **Professor Eoin Casey and Dr Eoin Syron**  
UCD School of Chemical and Bioprocess Engineering, co-founders, OxyMem
- 2014** ○ **Professor Emmeline Hill**  
UCD School of Agriculture and Food Science, co-founder, Equinome
- 2013** ○ **Dr Trevor Parsons and Dr Viliam Holub**  
UCD School of Computer Science, co-founders, Logentries
- 2012** ○ **Professor Denis Dowling**  
UCD School of Chemical and Bioprocess Engineering and UCD School of Mechanical and Materials Science
- 2011** ○ **Professor William Gallagher**  
UCD School of Biomolecular and Biomedical Science

### Spotlight: Life Scientific

In 2020, Nicola Mitchell, the founder and CEO of Life Scientific was named the overall winner of the prestigious EY Entrepreneur of the Year Award (Ireland). Life Scientific established in 1995 specialises in the development and registration of off-patent agrochemicals. In 2015 InVivo, the French agricultural co-operative group acquired a 50% stake in Life Scientific. Life Scientific currently has a portfolio of more than 60 registered products available in EU agrochemical markets. The company was headquartered at NovaUCD for many years before graduating to NexusUCD. The company, with an annual turnover in the order of €70 million, now has a staff of over 80 people, including 40+ in R&D roles, at its new headquarters in Belfield Office Park, adjacent to UCD.



**€70m+**  
annual turnover

**80+**  
staff



EY Partner Aidan Meagher and Nicola Mitchell, founder and CEO, Life Scientific.



- 2010 ○ **The Fault Analysis Group**  
UCD School of Earth Sciences
- 2009 ○ **Nicola Mitchell**  
Founder, Life Scientific, a UCD spin-in company
- 2008 ○ **Celtic Catalysts**  
A UCD spin-out company
- 2007 ○ **Professor Ciaran Regan**  
UCD School of Biomolecular and Biomedical Science
- 2006 ○ **Professor Conor Heneghan**  
UCD School of Electrical and Electronic Engineering
- 2005 ○ **Professor Barry Smyth**  
UCD School of Computer Science
- 2004 ○ **Professor Mark Rogers**  
Former Acting UCD President

**Note:** In 2020 following a review by NovaUCD the format of the NovaUCD Innovation Awards event was expanded to include a number of additional Award categories along-side the main NovaUCD Innovation Award. These new Awards were established to recognise and celebrate recent commercialisation, consultancy and entrepreneurial achievements and successes made by members of the UCD research, innovation and entrepreneurial communities.

**Note:** The 2019 NovaUCD Innovation Award was due to be presented in late March 2020 but was postponed to an online event in June 2020. The following year (2021) it was decided to name the Award the year in which it was Awarded rather than the previous year which had been the convention until then.



Pictured are Dr Tom Manzocchi, Dr Conrad Childs and Professor John Walsh, Fault Analysis Group, recipients of the 2010 NovaUCD Innovation Award.

# APPENDIX 6: UCD SPIN-OUT COMPANIES ACQUIRED

## Spotlight: OxyMem

OxyMem, a cleantech company, was co-founded by Wayne Byrne, Professor Eoin Casey and Dr Eoin Syron in 2013 as a spin-out from the UCD School of Chemical and Bioprocess Engineering.



The company's Membrane-Aerated Biofilm Reactor (MABR) technology, a breakthrough technology that focuses on wastewater aeration, makes the wastewater treatment process 75% more energy efficient than conventional treatment technology.

By 2019 the company had grown significantly, employing over 60 people, with a manufacturing site in Athlone, Co. Westmeath and had secured significant investment and major clients around the world when, DuPont, a global innovation leader, acquired the company.



Pictured are OxyMem co-founders, Professor Eoin Casey and Dr Eoin Syron.

A NUMBER OF UCD spin-out companies have been acquired since 2008 including;

- 2022** ○ **Kinesis Health Technologies**  
 Founded by Dr Barry Greene and Seamus Small, UCD School of Public Health, Physiotherapy and Sports Science, acquired by Linus Health
- 2022** ○ **Wattics**  
 Founded by Dr Antonio Ruzzelli, UCD School of Computer Science, acquired by EnergyCAP
- 2021** ○ **OncoMark**  
 Founded by Professor William Gallagher, UCD School of Biomolecular and Biomedical Science and Steve Penney, acquired by Cepheid Inc
- 2020** ○ **Cylon Controls**  
 Founded by Seán Giblin, UCD School of Electrical and Electronic Engineering, acquired by ABB
- 2019** ○ **OxyMem**  
 Founded by Wayne Byrne, Professor Eoin Casey and Dr Eoin Syron, UCD School of Chemical and Bioprocess Engineering, acquired by DuPont
- 2015** ○ **Logentrics (RevelOps)**  
 Dr Trevor Parsons and Dr Viliam Holub, UCD School of Computer Science, acquired by Rapid7

- 2015** ○ **Equinome**  
 Founded by Professor Emmeline Hill, UCD School of Agriculture and Food Science, and Jim Bolger, acquired by Plusvital
- 2011** ○ **BiancaMed**  
 Founded by Professor Conor Heneghan, Dr Philip de Chazal and Dr Conor Hanley, UCD School of Electrical and Electronic Engineering, acquired by ResMed Inc
- 2008** ○ **ChangingWorlds**  
 Founded by Professor Barry Smyth and Paul Cotter, UCD School of Computer Science, acquired by Amdocs.

**Spotlight: BiancaMed**

BiancaMed was co-founded by Dr Conor Heneghan, Dr Philip de Chazal and Dr Conor Hanley in 2003 as a UCD spin-out company, and became one of NovaUCD's first client companies.



BiancaMed developed a pioneering product that radically changed how sleep disordered-breathing is diagnosed. At the heart of the company's technology was a highly sensitive, radio frequency motion sensor that detected respiration and movement without being connected to the body.

By 2011 the company had raised over €11 million in funding and grown to a staff of nearly 30 people when it was acquired by ResMed Inc, one of BiancaMed's early investors. ResMed Inc, headquartered in California, are pioneers in innovative medtech solutions to transform care for people with sleep apnoea, COPD and other chronic diseases.

BiancaMed was renamed ResMed Sensor Technologies and relocated to NexusUCD, and as a division of ResMed Inc it developed or enhanced many of ResMed's digital innovations. In 2022 the company moved from NexusUCD to a new €30 million technology R&D facility in Sandyford, Co. Dublin and announced plans to add 70 jobs over the next four years.



Pictured at NexusUCD is Dr Conor Hanley.

**€30m**

technology R&D facility in Sandyford

**70**

jobs to be added over the next four years

# APPENDIX 7: AWARD WINNING COMPANIES

SEVERAL NovaUCD ECOSYSTEM companies have been recognised for their successes to date, or their future impact potential, by winning prestigious Awards.

Examples of such Awards in recent years include;

- |      |   |      |   |
|------|---|------|---|
| 2023 | <p><b>EpiCapture</b><br/>Winner, eHealth Embark Programme, Dundalk Institute of Technology</p>  | 2022 | <p><b>NanobOx</b><br/>Winner One to Watch Award, Enterprise Ireland's Big Ideas Showcase</p>      |
| 2023 | <p><b>Equal1</b><br/>Winner, Start-Up Award, Tech Excellence Awards</p>   | 2022 | <p><b>seamlessCARE</b><br/>Winner, Best Application of AI in a Start-up Award, AI Awards</p>      |
| 2023 | <p><b>Output Sports</b><br/>Winner, Best New Sports Business of the Year Award, Irish Sports Industry Awards</p>  | 2022 | <p><b>Vivid Edge</b><br/>Winner, ESG Finance Award, Business and Finance ESG Awards</p>           |
| 2022 | <p><b>Plasma Bound</b><br/>Winner, Future Forward Impact Award, KTI Impact Awards</p>   | 2021 | <p><b>PEARlabs</b><br/>Winner, Viewers' Choice Award, Enterprise Ireland's Big Ideas Showcase</p> |
| 2022 | <p><b>ByoWave</b><br/>Overall Winner, InterTradelreland Seedcorn Investor Readiness Competition</p>   | 2021 | <p><b>NovoGrid</b><br/>International Technology Innovation Award, Wind Investment Awards</p>      |
| 2022 | <p><b>EpiCapture</b><br/>Winner, Best Venture Stemming from a University Spin-out or Support Programme, InterTradelreland Seedcorn Investor Readiness Competition</p> | 2020 | <p><b>Manna</b><br/>Winner, Grand Prix – Start-Up of the Year Award, National Start-Up Awards</p> |
| 2022 | <p><b>TestReach</b><br/>Ranked 15th, Deloitte Technology Fast 50 Awards</p>   | 2020 | <p><b>AquaB</b><br/>Winner Water Award, Institution of Chemical Engineers Global Awards</p>       |
|      |   | 2020 | <p><b>Life Scientific</b><br/>Overall Winner, EY Entrepreneur of the Year Award (Ireland)</p>     |



### Spotlight: ByoWave

ByoWave, which was founded in 2020 by Brandon Blacoe and Eibhlin O’Riordan was named overall winner of the 2022 InterTradelreland Seedcorn Investor Readiness Competition and a €100k prize. ByoWave makes modular, accessible and customisable video game controllers for people with disabilities enabling users to build their own controllers based on their own physical needs. In early 2023 the company secured €2.4 million in funding from several investors, including HBAN, Enterprise Ireland and Irrus Investment. ByoWave completed the 2020 NovaUCD Student Enterprise Competition.



Pictured (l-r) are, Margaret Hearty, CEO, InterTradelreland, Richard Kennedy, Chairman, InterTradelreland with Eibhlin O’Riordan, co-founder, ByoWave.



- 2020 **Vivid Edge**  
Winner, Sustainability Award, SFA National Small Business Awards
- 2020 **Equal1**  
Winner, One to Watch Award, Nature Research, inaugural Spinoff Prize in collaboration with Merck.



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