The cornerstone of entrepreneurial activity on the White City Campus

August 2019 - July 2020
Based in the Translation & Innovation Hub at Imperial College London’s White City Campus, the Imperial White City Incubator is a space dedicated to high potential, early-stage technology businesses.

The Incubator provides companies with state-of-the-art facilities, training, support, and access to professional networks in order to help them grow and scale-up.
Foreword

Graham Hewson, Head of Incubation

I take heart that despite the crisis that has blighted much of 2020, support of our businesses within the incubator, new innovations, overcoming challenges as a community and companies growing have all been positive notes in an uncertain year. We were once again finalists in the best Incubation category at the West London Business awards and have successfully graduated two clients and welcomed four new businesses to the Incubator.

In March, when the rest of the UK moved into Lockdown, the Incubator remained open, and despite their individual struggles, a lot of our businesses have remained positive with several pivoting to COVID-19-related activity.

The continued growth of services and facilities across the White City Campus has added new collaboration opportunities between companies, the university and local startups. The Sir Michael Uren Hub is an exciting new development at the heart of the campus. The 13-storey building features state-of-the-art laboratory and office facilities for the next generation of biomedical engineering. Scale Space has opened up on the other side of the campus, providing an innovation community along with office and lab space. These latest developments strengthen our offer. An idea now has a home with Imperial from its conception, through incubation, growth and now scaling.

I am also encouraged by how we have moved our events and network sessions online by leading on White City’s Deep Tech Network among other events we have delivered – further details of which are included later in this report.

Our team and our clients continue to deliver to a high standard during such a difficult time and I am very pleased to showcase so many achievements in this report.

Anca Mandruleanu, Entrepreneurial Programmes Manager

The Imperial White City Incubator is a fantastic workplace.

Who wouldn’t like learning about breakthrough innovations, hearing great ideas and interacting with bold, ambitious and driven entrepreneurs who want to make a change in the world? It is an inspiring place where ideas become reality.

The last months have been very unusual and have changed the way we work together to support our community of entrepreneurs. It has also affected our startups and how they operate. We have learned how to do our jobs differently and, despite the challenges, we have managed to be efficient and keep up the good work.

I am truly impressed by the positivity I see around me and inspired by the adaptability and flexibility of my colleagues and clients during these uncertain times.
While the way we interact with each other has drastically changed over the last few months, I am pleased the Incubator community still feels connected and supportive.

Through uncertainty, members of the Incubator community have supported one another, despite in some cases being busier than ever, having pivoted to new and greater challenges as successful entrepreneurs tend to do.

Reacting promptly to the ‘new normal’, we moved our portfolio of successful events online - including Incubator community events, the Innovation Academy, and the collaborative Deep Tech Network. We will continue to deliver high quality online events throughout the rest of the year and beyond.

The team has launched the Path to Growth membership as well as working hard on new initiatives for 2021, including an innovative venture development programme for lab-based teams and a new community programme which I am excited to be part of.

The I-HUB continues to be a thriving epicentre of innovation in London, with a huge welcome to H2Go Power, RFC Power, PearBio, Multus Media and Halo all joining the community.
By the numbers 2019-20*

- Over £100m raised by Incubator companies since 2016
- 120+ people employed by Incubator companies
- 90% occupancy rate
- £7.6m grants awarded to Incubator companies
- Two company graduations
- Five companies extended their footprint

*August 2019 to July 2020
Imperial White City Incubator companies pivot in response to COVID-19

The COVID-19 pandemic has required everyone to change the way they work, but some companies at the Imperial White City Incubator are also adapting their products in response to the pandemic.

Life sciences company MediSieve, chemical startup FreshCheck and biochemistry enterprise Affinity Biomarker Labs have identified opportunities to pivot their technologies in this challenging time to help treat COVID-19 patients and keep people safe.

Treating the cytokine storm

MediSieve is developing a magnetic filtration system as a precision tool for doctors to extract harmful substances from blood. The company joined the Incubator in 2018 and last year received funding from Innovate UK to develop its platform to treat sepsis through the removal of pathogens and damaging cytokines from the blood.

As the pandemic progressed, data showed that one concerning symptom in COVID-19 patients was the high level of the inflammatory cytokine interleukin 6 (IL-6) in the blood. Although part of the immune system’s response to the virus, high levels of cytokines can cause organ failure or death. This is commonly known as a cytokine storm. As MediSieve was working on the technology to remove cytokines for sepsis treatment it decided to pivot its technology as a potential way to remove IL-6 from the blood of COVID-19 patients.

“The current treatment for excess levels of IL-6 in COVID-19 patients involves drugs that suppress or block the immune system,” explained Dr Cristina Blanco-Andujar, Chief Technology Officer at MediSieve. “But it’s not ideal to give someone who is trying to fight an infection a drug that subdues the immune system and remains in the body. We want to use our technology to tune that approach so we can remove IL-6 at the time it is causing harm but then stop this process as soon as cytokine levels are manageable so the patient’s immune system can continue to function.”

MediSieve has quickly refocussed towards treating this aspect of COVID-19 and anticipates conducting pre-clinical safety trials in animals later this year with clinical trials following next year. As well as adapting its technology, the company has changed the way it works. “The Incubator team have been really helpful and supportive during this time,” commented Dr Blanco-Andujar. “So that we can continue our research and even accelerate to respond to the pandemic while still working under safe conditions.”

MediSieve has adapted its precision filtration system to remove cytokines from the blood
Spray protection

FreshCheck has developed an innovative spray that provides a cheap and rapid method to identify and prevent bacterial and chemical contamination by simply changing colour when applied to a surface. Originally targeted at the food industry, the FreshCheck spray is now receiving interest from a broader range of industries looking to ensure hygiene during the pandemic.

Although the FreshCheck spray doesn’t directly detect COVID-19, it does verify that a surface is clean and without contamination which, by proxy, is a good indication that it is virus-free. It is also much cheaper and easier to implement than current tests to directly detect the presence of COVID-19.

“Our mission has always been to make a hygiene test that is more affordable,” said Dr John Simpson, Co-founder and Chief Technology Officer at FreshCheck. “Allowing more people to access a scientific gold standard to demonstrate cleanliness. With the arrival of COVID-19, the issue of surface contamination became a priority for everyone making access and affordability even more important.”

As its customer base broadens, FreshCheck is now iterating their product for more functionality in the non-food industry. By reducing its sensitivity to chemicals, whilst maintaining its ability to detect bacteria, the spray avoids needlessly flagging high levels of chemical cleaning products, something that would be a concern in food preparation but is not in office or transport locations. The FreshCheck team is also planning to accelerate the development of a handwipe product which they believe will have universal appeal as a means to check cleanliness and hygiene.

“It’s a matter of tuning the chemistry and getting the metrics right for these new products,” commented Dr Simpson. “We want to make FreshCheck more specialised for different industries and develop alternative ways for it to be applied, making it as available as possible to those who need it.” FreshCheck believes that agility has been built into the company from an early stage. All three co-founders studied for PhDs in the Chemical Biology of Health and Disease from Imperial College London and were encouraged to take up opportunities for entrepreneurship and innovation during their degrees. The company took part in the Enterprise Lab Venture Catalyst Challenge in 2015, received support from the Imperial Advanced Hackspace and since then has gone from strength to strength, moving into the Incubator at the beginning of 2018.

“Location is key for a small company like us,” explained Alex Bond, Co-founder and CEO. “By their very nature, startups can be agile and think on their feet but they also need the right environment and space to be able do this. Since we’ve been at the Incubator we’ve managed to get the support, flexibility and networking opportunities when and where we need it which has been very helpful.”
Antibody Testing

Affinity Biomarker Labs are experts in qualifying, validating and testing blood-based proteins that can be used as indicators of a disease or condition to aid clinical decision making.

Based at the Imperial White City Incubator since 2018, the company’s mission is to assist in the discovery, verification, validation and analysis of novel biomarkers, particularly in areas of high unmet need. With the outbreak of COVID-19, they have directed this mission towards testing for antibodies in the blood that are produced as part of the immune response following COVID-19 infection. At the end of February, the company launched SARS-CoV-2 serology testing which uses fully automated platforms to test for the levels of two antibodies - IgM and IgG - in whole blood, serum or plasma.

Unlike methods that directly detect the presence of the virus, antibody tests help determine whether the individual being tested was ever infected, even if that person never showed symptoms. As such these serological tests for COVID-19 antibodies play an important role in understanding the virus’s epidemiology in the general population and identifying groups at higher risk for infection.

Adaptable space

The Imperial White City Incubator has always prided itself on its flexibility and ability to meet the changing needs of its residents.

During the COVID-19 pandemic, the incubator has taken its flexibility a step further, adapting to a huge shift in working practices to ensure that its residents can continue the important work they are doing within a safe working environment.

“Flexibility has been key in supporting our clients to continue to work on their essential research during the lockdown,” said Graham Hewson, Head of Incubation at the Imperial White City incubator. “Our companies couldn’t pause and as a result, we couldn’t either. Imperial Thinkspace has supported the incubator to remain open for business and it has been awe-inspiring to see companies such as MediSieve, FreshCheck and Affinity Biomarker Labs successfully pivoting to face the pandemic.”
A place for growth

The Imperial College White City Incubator provides office space, labs, entrepreneurial programmes, events and incubation services. We support entrepreneurs in the deep technology sectors including cleantech, healthtech and robotics. The Incubator hosts companies throughout the journey from startup to Series A-funded scale-up. Incubator startups can grow an idea, test it within our shared laboratory, and develop their business to a stage that allows them to raise funding.

“The Incubator is unique because it brings together such a diversity of companies. The team there run events on subjects that are important to a company’s development, whilst the shared spaces allow residents to meet and exchange experiences with fellow companies.”

Dr Chris Wallis, Vice President of Innovations at Polymateria, Incubator graduate.

Our teams are testament to the success of this model with two teams, PulmoCide and Polymateria graduating from our programme this year and scaling into larger space in the IHUB. Six teams have graduated since 2016. Several of our teams have continued their successful growth trajectories during 2020, which underlines the value of the facilities, community and support available at the Incubator.
Moving on up

Imperial Incubator companies continue their journey at White City

Life sciences company Pulmocide and environmental tech business Polymateria took space in Imperial’s startup incubator in White City during its first years of activity. Now these two science-driven enterprises have transferred up into the second floor of the I-HUB, joining a range of deep tech companies and remaining part of the White City and Imperial entrepreneurial ecosystem.

Polymateria is tackling the global problem of plastic pollution from a redesign perspective, bringing together expertise in chemistry, biology, polymer science and environmental sciences to develop a new standard of biodegradable and compostable plastics.

Because its work is so deeply rooted in science, it is important for the company to be close to research expertise and facilities. Polymateria moved into the Incubator in 2017 to benefit from the potential offered by the White City Campus and become Imperial Incubator companies continue their journey at White City part of the network of academics, scientists, companies and CEOs that was developing in the area. Since this time, the White City Campus has been transformed, and Polymateria has strengthened its connections with Imperial researchers and the wider scientific and commercial community, particularly through the establishment of Imperial’s Molecular Science Research Hub.

“The Incubator is unique because it brings together such a diversity of companies,” said Dr Chris Wallis, Vice President of Innovations at Polymateria. “The team there run events on subjects that are important to a company’s development, while the shared spaces allow residents to meet and exchange experiences with fellow companies. I think this access to people, information and networks all helps in the transition of relatively young startups to professional businesses. Since we’ve been at White City we’ve found the Incubator and the I-HUB very receptive to feedback, which is important in these times when both companies - and the innovation spaces they inhabit - need to be so responsive to change.”

With Polymateria requiring a larger space for people and equipment, the company decided to move within the I-HUB earlier this year. They are now looking to increase their global reach and believe a base at White City provides plenty of opportunity to connect further with international markets and establish global partnerships.

Translational Medicine

Pulmocide is a biopharmaceutical company developing a new range of inhaled medicines for life-threatening and difficult-to-treat lung infections that pose significant global health problems. Their innovative approach aims to provide targeted delivery to the site of the infection, resulting in more effective treatment and minimal side effects.

The company moved into the Imperial White City Incubator from Imperial’s former South Kensington incubator in early 2017, and it was in their brand-new lab space that the team worked on the discovery and development of their novel inhaled medicines to treat lung infections.

“I believe the Imperial White City Incubator is the best in London,” says Dr Kaz Ito, Director of Biology at Pulmocide. “It has a fabulous team who have always been helpful, kind, trustworthy and efficient and our laboratory team enjoy being surrounded by startups working on so many different projects in research and technology.”

“Now we are in the clinical stage of development, the I-HUB is a very convenient location to receive and analyse samples from London and Greater London,” says Dr Ito. “Imperial has an excellent track record in clinical trials and we are working with the Royal Brompton & Harefield NHS Foundation Trust...”
who specialise in respiratory problems and is a partner of the Imperial College Academic Health Science Centre. For us it makes complete sense to stay at White City and move to the I-HUB where we can progress with our clinical trial work whilst also continuing with basic science and development."

Head of Incubation at the Imperial White City Incubator, Graham Hewson, said: "Seeing these companies develop and grow over time within our Incubator and its community provides a striking example of the business benefits that co-locating a young startup with a world-leading University, corporates and other businesses with a shared focus can bring.

“We wish Polymateria and Pulmocide the best of luck and are excited to see what the future holds for them and we hope to continue to work with them.”

Dedicated lab space is available to companies at the White City Incubator

As well as state-of-the-art facilities, the Incubator offers a wide range of social and networking programmes to its clients // Community social event, January 2020
Sustainability startups join the Imperial White City Incubator

A cluster of startups has joined the Imperial Incubator community to advance their technologies for renewable energy and sustainable food industries.

Food for the future

Multus Media was founded by a group of Imperial students to develop next-generation growth media to enable the cultivated meat industry to scale production and make more affordable products. The cost of growing muscle and fat cells is currently very expensive, creating a bottleneck in production and limiting the potential of cultivated meat to lessen the environmental impact of livestock agriculture. The team is working on a replacement for blood serum that is completely animal-free and can be scaled to meet the cost requirements of the cultivated meat industry. Having moved into the Incubator this year, they are working towards delivering their first growth medium product – Proliferum M.

“They saw White City as a growing hub of biotech,” says Cai Linton, CEO and Co-Founder of Multus Media. “There is an ecosystem to advance their technologies for renewable energy and sustainable food industries. A cluster of startups has joined the Imperial Incubator community to advance their technologies for renewable energy and sustainable food industries.

Enabling 100% renewable energy

RFC Power is developing a low-cost, long-duration battery with the aim of facilitating the transition to 100% renewable energy. Despite the growth in renewable energy, the variability in renewable generation is still a barrier and there is a need for better forms of storage to enable constant supply.

Most batteries are based on lithium technology, which is expensive and can only store energy for a limited time. RFC Power is developing a flow technology battery based on hydrogen manganese chemistry which is potentially cheaper and can store energy for longer. They moved into the Incubator during the year, with the aim of upscaling their technology from benchtop to a first pilot-scale unit ready for testing with partners.

“We are an Imperial startup and building on technology that was originally developed here,” says Dr Tim von Werne, CEO of RFC Power. “So we were very keen to remain part of the Imperial entrepreneurial ecosystem and make the most of the ongoing access to facilities, networks and the shared passion around working in deep science technology.”

Hydrogen storage

H2GO Power is developing a hydrogen-based energy storage technology with the goal of helping achieve a safe and reliable supply of zero-emissions power for commercial applications.

The technology uses nanomaterials to create a flexible sponge that traps hydrogen atoms in its pores, removing the safety concerns associated with compressed hydrogen use and enabling lightweight and clean energy storage.

Co-founder and CEO Dr Enass Abo-Hamed spent 2.5 years as a Royal Academy of Engineering Enterprise Fellow at Imperial College London under the supervision of Professor Nigel Brandon, Dean of the Faculty of Engineering. For her and the company, it made sense to move into the Incubator for the next stage of development.

“It’s a unique place,” she says. “Not only do we have a new lab built with all the best practices from Imperial laboratories, but we are surrounded by companies at a similar stage of development to us. This allows us to share knowledge about grants and funding, hiring, investments and also exchange experiences.”

Having started their move into the Incubator just before the COVID-19 lockdown, H2GO Power is now fully established there and plans to continue technical development so its products hit the market as soon as possible.

“What is so valuable about the Incubator is that so much of the administration is handled by the team,” says Dr Abo-Hamed. “And at a time when there are additional regulations in place, this makes it much easier for us to really focus on our work and our research.”
Entrepreneurial programmes review

The Incubator runs events that bring together our community of entrepreneurs and facilitate the flow of information and knowledge between internal and external stakeholders.

2020 started strong for events and programmes, opening with a Deep Tech Networking drinks attended by over 80 stakeholders from startups, industry, academia and the local community. We hosted the Imperial Consultants team, and Industry Partnerships and Commercialisation to present on how to partner with Imperial and our Incubator companies got together to discuss their goals for year.

And then the world went into lockdown.

As the pandemic reduced physical interactions, the Incubator team found new ways of supporting our community both on site and online.

The Innovation Academy, our suite of modules dedicated to the Imperial entrepreneurial community, has successfully delivered its first online module, attended by more than 30 participants and our community socials migrated to Zoom.

Our support for our teams moved from interactive workshops for the whole incubator, to targeted and tailored one-on-ones with companies to support them navigating the challenges of a global pandemic.

With lots in the pipeline for the remainder of 2020 and into 2021, the Incubator and our companies continue from strength to strength. You can keep up to date with the Incubator by signing up for email updates.

A new Path to Growth for Imperial Entrepreneurs

We have recently launched a new membership to support entrepreneurial teams across the Imperial ecosystem.

The Imperial Enterprise Path to Growth membership provides Imperial teams and programme alumni access to a suite of Incubator support and services as well as meeting rooms and communal working space.

The membership will be provided at three levels, to allow for teams at all stages of growth to take advantage of the Incubator community.

Interested teams should contact us to express their interest.

Benefits of the membership:

- Access to Incubator online support via Incubator team, mentors, and experts in residence; mental health and wellbeing support through targeted events, mindfulness sessions etc
- Access to the Incubator space for meetings
- Access to Supplier Network and Translation and Innovation Hub co-location services
- Access to Incubator communal working spaces
- Membership of a founders’ community sharing experiences including access to the White City Incubator Slack community
Deeptech Network-ing

The Deep Tech Network’s first virtual event brought together over 50 people from startups, industry and academia in a new online networking format.

The event, held at the beginning of June 2020, attracted attendees involved in the development of technologies based in science and engineering, including researchers, entrepreneurs and investors.

Organised by Imperial’s Chemistry department, Imperial White City Incubator and Upstream (a partnership between Imperial College London and Hammersmith and Fulham Council), the Deep Tech Network encourages interaction between business and Imperial’s researchers to enable the growth of a deep tech innovation community around the White City Campus.

This was the sixth event organised by the Deep Tech Network since its launch in May 2019 and, due to the COVID-19 pandemic and the measures in place to prevent the spread of the virus, it adopted a virtual format with the aim of recreating the energy of a traditional networking event.

Using the online chat as a means for people to introduce themselves and comment throughout, the event included two rounds of quickfire 60 second pitches from individuals involved in deep tech who were looking for collaborators.

Abhishek Srivastava, Executive Director of Teknobuilt, who attended the event said: “I thoroughly enjoyed pitching at the Deep Tech Network-ing event and the opportunity to meet many like-minded individuals. I was surprised at how easily I was able to form close connections in the networking rooms. Through the event, I have since found potential collaborators and had positive engagement with others I spoke to. Thanks to the Deep Tech Network organising team for a really useful event!”

Between the rounds of pitches attendees moved into breakout rooms, as a means to replicate the usual grouping and discussion that occurs at a traditional face-to-face networking event. 60 per cent of attendees reported that they had made a valuable connection after attending the first two breakout rooms.

Imperial College London White City Incubator Startup Programmes Co-ordinator, Richelle McNae said: “It’s a challenge to run an online event that makes participants feel part of a community but it also has advantages in terms of allowing people to participate who may otherwise have been unable to attend in person.

“The pitches ran very smoothly and gave these organisations some great exposure. From the feedback we received attendees felt that being in a breakout room with limited time allowed them to maximise the conversation whereas in person they might not have moved around the room as effectively.”
Our companies

Shared lab teams

Graduated

Cytera

Puraffinity

SMART PEAKFLOW

PULMOCIDE

MiNA Therapeutics
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