FUTURE OPPORTUNITIES STATEMENT

MAY 2021

ARC Centre of Excellence for
Electromaterials Science

The demonstration of impact and tangible legacies enables the ACES team to take advantage of new opportunities.

Members of the team are working towards future funding opportunities that will enable research to continue while keeping the collegiate critical mass of human capital working together.

Fit-for-purpose funding can be sought through well identified sources, including opportunities that are coming online with the multiple spin-outs and collaborating companies. There are also opportunities to retain highly promising and key talent from the cohorts within the Centre. To these ends appropriate avenues for collaborations, contracts, consultancies, grants and employment opportunities will be sought.

The sources can be categorised into support for fundamental research and translation to industry or business, and will include targeted and non-targeted initiatives and proceeds from licensed technologies.

A combinatorial approach will be vital to ensure we continue to deliver high level impact. The research foci of ACES are still areas of national priority and internationally relevant. we must also ensure a focus on research infrastructure to maintain capabilities.

Fundamental Research

Current Grants

ACES has leveraged additional funding for both translation of research into commercial outcomes and continuation of fundamental research programs. These grants will continue funding past the end date of the Centre.

Future Grants

The ACES team will continue to pursue new and current funding opportunities, which will leverage the ACES legacy in all of its forms: knowledge, networks, training, facilities, and translated research.

A number of proposals are pending, and new proposals will be pursued into the future, with consideration given to the inevitable ever-changing post-COVID-19 global landscape.

The ACES plan is to be in a state of readiness to make application to any new sources as they are announced.

Translation of Discoveries

ACES discoveries have led to a number of spin-out opportunities with additional opportunities in the pipeline at various stages of development.

The research conducted within ACES is ready for and /or being translated from research to industry, and is moving towards technological readiness. The ACES team should be able to leverage any sold or licensed IP, and potential additional spin-outs for future research development projects. The overall goal is to obtain additional revenue and to be part of building strong national industries.

Specific opportunities include but are not limited to engagement in the establishment of the following new entities:

- **iFix Medical** - 3D printing for eye wounds;
- **Axcelda** - 3D printing for cartilage regeneration;
- **EFGX** - A new form of graphene, water processable and highly conducting, has been discovered and patented;
- **3D Printed Prosthetic**s;
- **3D REDI** - Commercialisation of a 3D bioprinter for research and training;
- **Jupiter Ionics Pty Ltd** - New Electrosynthesis Technology.

The strong industrial linkages that have been formed with the ACES team open opportunities for business-based funding, which is only available to consortia containing both companies and research providers.

The most notable of these schemes in the Australian context is the CRC scheme. Engagement in the recently established CRC - Batteries is providing opportunity for engagement of ACES researchers. However, there are also noteworthy international schemes that can be pursued under appropriate circumstances.

Successes have already been obtained by ACES team members through the Battery Technology Research and Innovation Hub (BatTRI-Hub), Translational Research Initiative for Cellular Engineering and Printing (TRICEP), and Australian National Fabrication Facility (ANFF).

There is strong potential for future developments with industry linkages.

Other IP

- **Wireless Electrical Stimulation of Biological Systems** - for neural stimulation;
- **PANC Localised Controlled Drug Delivery** - for treatment of pancreatic cancer.

Training Next Generation

ACES is currently widely engaged in multiple training centres and hubs providing inspiration and global connections for the next generation. It is clear there is continued benefit from engagement in both the current and future training initiatives.

Leveraging Networks Formed

Medical Research Future Fund: Funding for projects that "transform health and medical research and innovation to improve lives, build the economy and contribute to health system sustainability."

Australian Renewable Energy Agency (ARENA or replacement): Funding for projects that can help accelerate renewable energy in Australia.

ARC Industrial Transformation Training Centres: Funding to create Centres, which form close partnerships between university-based researchers and end-users to provide innovative training, for end-user focused research

industries that are vital to Australia's future.

IPRI researchers along with colleagues from IHMRI will join forces with colleagues at St Vincent's Hospital in Melbourne, Chris O'Brien Lifehouse Hospital, and other collaborators to explore the development of a program in the field of electroceuticals.

Led by Deakin researchers, the ARC Training Centre in Fuuture Energy Storage Technologies (StorEnergy) will provide skills and training in advanced manufacturing across the energy storage supply chain - from materials through to devices and into integrated commercial products - to facilitate the next-generation of energy storage technologies.