



New Zealand Controlled Release Society (NZCRS) Symposium 2022

21 and 22 November 2022

Author: Svenja Meissner, PhD candidate, School of Pharmacy, University of Auckland

The 2022 New Zealand Controlled Release Society Symposium was held at the School of Pharmacy, the University of Auckland in Auckland, New Zealand, on the 21st and 22nd of November. The event was organised by the New Zealand Chapter of the Controlled Release Society (NZCRS) and was attended by 60 participants. Attendees included local students, academic and industry scientists and representatives, as well as international academic presenters. There were opportunities to connect with other chapters through Dr Kara Perrow (President of the Australian local chapter), and Associate Professor Shiow-Fern Ng (outgoing president of the Malaysian local chapter). The focus of the symposium was "Controlled Release for Localised Delivery."



21st and 22nd November 2022

Grafton Campus, University of Auckland, New Zealand

Theme: Controlled release for localised delivery

Registrations are now open, click [here](#).

Abstract submissions close Friday the 4th Nov.

Invited Speakers

Dr Kara Perrow University of Wollongong, Australia	Prof Maria Asplund Chalmers University, Sweden
Prof. Dr. Cornelia M. Keck University of Marburg, Germany	A/Prof Shiow-Fern Ng University Kebangsaan, Malaysia
Dr Nick Gaddum CSO DEC International	Dr Haruna Suzuki-Kerr University of Auckland
Dr Peter Surman CSO Douglas Pharmaceuticals	Dr Allan Gamble University of Otago
Dr David Gill CSO Cannasouth Bioscience Ltd	Dr Jess Fairhall University of Otago
Dr Travis Badenhorst GM Snowberry New Zealand & Procter & Gamble Discovery Centre	A/Prof Shyamal Das University of Otago

Major Sponsor:



INTERNATIONAL

Also supported by:



The symposium chair Associate Professor Darren Svirskis (President of NZCRS local chapter) started the meeting, and a karakia and mihi whakatau was given by Associate Professor Shane Scahill (Head of the School of Pharmacy, University of Auckland). All attendees were warmly welcomed with a special mention of the international attendees, including the invited guest speakers Dr. Kara Perrow (University of Wollongong, Australia), Associate Professor Shioh-Fern Ng (National University of Malaysia), Professor Maria Asplund (Chalmer University of Technology, Sweden), and Professor Cornelia M. Keck (Philipps-Universität Marburg, Germany) for their time and distance travelled. Other special thanks were directed at the main sponsor, DEC International (Hamilton, New Zealand), and the other sponsor Douglas Pharmaceuticals (Auckland, New Zealand) for financial support, the University of Auckland for providing the symposium venue, and the organising team (Drs Manisha Sharma, Sachin Thakur, Priyanka Agarwal and A/Prof Greg Walker).

The first session began with an invited talk by Dr. Kara Perrow titled “Implantable device for targeting the tumour microenvironment.” In her talk, she presented her fascinating work around polymeric implants containing a combination of chemoimmunotherapy and their potential to achieve localised delivery of immune priming agents in addition to immunotherapy and chemotherapy. Her talk was followed up by the second invited talk by Associate Professor Shioh-Fern Ng about “Autologous platelet-rich plasma loaded in chitosan-nanocrystalline cellulose hydrogel dressings for full-thickness wound healing.” She presented her work around the kenaf-based nanocrystalline cellulose (NCC) hydrogel and its ability to achieve controlled localised release of platelet lysate to aid with wound therapy. Professor Natalie Medicott then presented her recent work on Pharmacokinetic modelling for local drug delivery. Contributed talks occurred throughout the two-day event.



(Left) Dr. Kara Perrow (University of Wollongong, Australia) presenting her work around polymeric implants for the localised delivery of chemoimmunotherapy to tackle cancer. (Right) Associate Professor Shioh-Fern Ng talking about her work on wound healing.

After a morning tea break, Dr. Nick Gaddum (CSO of DEC) gave a brief talk about DEC Pharmaceuticals and gave an introduction to its history, facilities, values, and goals. This talk was followed by an industry roundtable which Associate Professor Darren Svirskis led. The panellists, Dr Nick Gaddum, Dr Peter Suman (CSO of Douglas Pharmaceuticals), David Gill (CSO of Cannasouth) and Dr Travis Badenhorst (GM of Snowberry New Zealand & Procter & Gamble Discovery Centre) were asked to give a brief introduction about themselves, followed by questions from the other attendees. A focus was placed on the potential for research and development in New Zealand and career opportunities and progression for early career researchers.

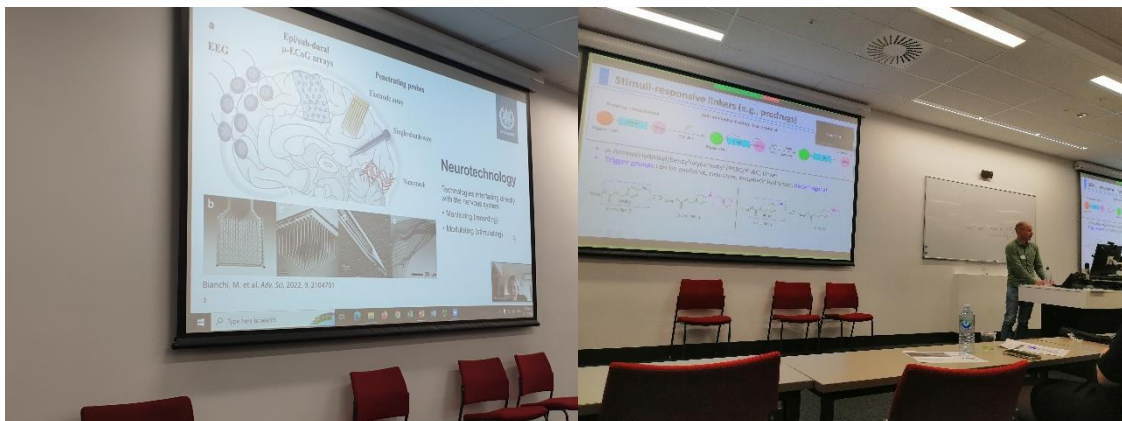


*(Left) Dr Nick Gaddum presenting an overview of DEC Pharmaceuticals.
(Right) Industry roundtable with three panellists from the industry sector.*

A poster session followed, initially with rapid-fire poster highlights with all poster presenters giving a three-minute talk about their posters.

Professor Maria Asplund presented her work around “Bioelectronic drug delivery based on conducting polymers” to start the last session of the first day. In her talk, Professor Asplund summarised the recent developments of her investigation into using electrodes to achieve controlled release of drugs. Following, Dr. Allan Gamble gave a presentation about “Stimuli-responsive polymers, polymeric particles, and hydrogels for drug delivery.” Associate Professor Greg Walker and Dr. Manisha Sharma then presented their recent work on intratumorally and intraarticular drug delivery, respectively. Networking and socialising continued into the evening with dinner at a local restaurant.

(Left) Professor Maria Asplund presenting her work on conducting polymers.



(Right) Dr. Allan Gamble talking about stimuli-responsive polymers, polymeric particles, and hydrogels for drug delivery.

A welcome back from Associate Professor Greg Walker and an invited talk by Professor Cornelia M. Keck from Germany started the next day. She presented an update about her research on dermal drug delivery and some of the principles behind dermal drug delivery. Her talk was followed by Dr. Jess Fairhall’s talk about “A fluorogenic bioorthogonal assay for determining drug uptake and delivery in bacteria.” In her talk, she presented an assay to determine the uptake efficiency and compartment localisation of free and liposome formulated drugs in gram-negative bacteria



Professor Cornelia M. Keck presenting her work on dermal drug delivery.



(Left) Dr. Jess Fairhall talking about a fluorogenic biorthogonal for determining drug delivery in gram-negative bacteria.

(Right) Associate Professor Darren Svirskis leading a session about collaboration.

After a morning tea break, Associate Professor Darren Svirskis led a workshop session about collaborations. In this session, the attendees discussed aspects like why collaborations are essential, difficulties that may arise, and how to maintain collaborations. The importance of collaborations was highlighted during the session, and challenges like cultural differences and different expectations were raised.

This session was followed by Associate Professor Shyamal Das and his students presenting their recent research about pulmonary drug delivery.



Associate Professor Shyamal Das presenting his work around pulmonary delivery of controlled release powder for lung diseases.

After lunch, the last session of the symposium began with a presentation from Dr. Haruna Suzuki-Kerr about “Targeting the round and oval windows for inner ear drug delivery to treat sensorineural hearing loss.” In her talk, she highlighted some of the challenges as well as opportunities around drug delivery into the cochlea. Her talk was followed by presentations from Dr. Priyanka Agarwal and Associate Professor Darren Svirskis about their collaborative work on polymer-based implants for the localised delivery of lidocaine.



(Left) Dr. Haruna Suzuki-Kerr presenting her work on cochlea drug delivery.

(Right) PhD candidates and DEC pharmaceuticals researcher posing in front of the DEC pharmaceuticals stand.

The symposium was then closed by Associate Professor Darren Svirskis, who thanked the speakers, sponsors, co-organisers, and attendees again for their amazing talks and contributions to the successful, long-awaited and in-person symposium.



Attendees to the New Zealand Controlled Release Society (NZCRS) Symposium 2022.