

COVID-19 translational research status update

brisbane diamantina health partners



Brisbane Diamantina Health Partners provides a platform for greater integration and collaboration between clinicians, educators, researchers and academics

April 2020 – Update #1

This one page summarises some of the multiple research initiatives currently underway in South East Queensland striving to address the current COVID-19 pandemic

1 Fast-tracking multi-arm interventional trials for promising drug candidates



Four armed trial (Target N = 2400)

- Standard of care ('baseline')
- HIV drug – Kaletra (lopinavir and ritonavir)
- Malaria drug – Chloroquine
- Combination of two

Hospital-based trial

- Aim: To determine whether any of three drug regimens are associated with avoidance of intensive care admission, requirement for mechanical ventilation, mortality rates

In discussion with potential pharmaceutical partners

- E.g. partners to provide IV administration

Intended to set platform for further research

- Potential access to samples – 5 requests already

Funding

- Royal Brisbane Foundation (funding Auswide)
 - Opportunity to learn from Singapore
 - SARS response – platform fund
 - Coronavirus Action Fund
 - \$1m in first 24 hours
 - Current \$2.1m with more in discussion
 - MRF funding also being pursued



Nation-wide study management committee

- Looking at how to prioritise those requests (and links to e.g. Biobanking initiative – see initiative #5)

2 Designing behavioural programs to avoid preventable mass healthcare worker sick leave

\$2m allocation (through Apprise)

- Call for innovative projects in nursing home setting
- \$250k allocation: Partnership with two small companies of behavioural psychologists – how can hygiene behaviours be gamified in this environment
- Aim: Healthcare workers come to work when well, stay home when sick and practice safe behaviours



3 Creating tools to aid infection control and public health

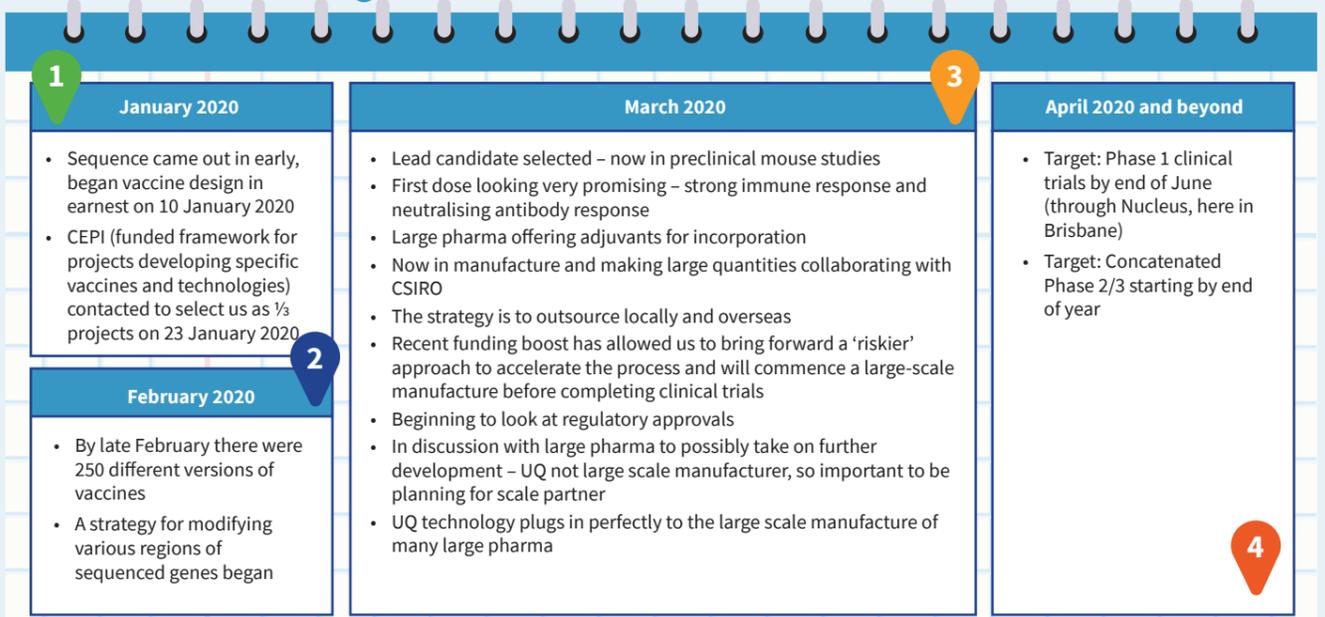


Brief update

- Scott Beatson (through Queensland Genomics) developed time/place virtual 'YouTube video' showing outbreak patterns so infection control experts can visualise current areas of need
- Adapting for nursing home setting
- Tracking staff and resident movements



4 Accelerating vaccine development



5 Establishing a Queensland COVID-19 Biobank



Background

- Statewide biobanking initiative has been in progress for several years (MSHHS/MNHHS/HSQ)
- Samples collected by HSQ not necessarily fully consented
- Dynamic consent and self-registration of consent – patient education component here
- Purpose of the biobank is to increase understanding of the virus, develop, trial and test treatments to better manage patient and health service outcomes

Aims of the Biobank

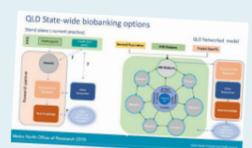
- Enables a patient-centred approach
- Manage and potentially minimise demand on HHS and HSQ services
- Link biospecimen with consent and health data
- Increase community reach (particularly vulnerable populations)
- Position QLD to contribute to national and international research
- Accelerate capability, knowledge generation and transfer
- Build effective partnerships, networks and collaborations
- Measure critical time-points (Evolution of immunity and viral diversity)

Contents of biobank

- Primary data – HSQ swab (virology)
- Secondary data – Sera, PBMC, cells and pax gene, NEC

Progress and current state

- Standalone biobanks where participants might be recruited from individual health services (not necessarily linked to health data)
- Goes into biobank held by research partner



Potential biobank model

Other initiatives:

- COVID19 infection during pregnancy** – Observational study planned at the Royal Brisbane and Women's Hospital (Professor Karin Lust, Victoria Eley and Leonie Callaway)
- MIDI is commencing a Chloroquine trial** (Steven Wooley) and other trials – see <https://clinicaltrials.gov/ct2/show/NCT04308668>
- Collecting patient data and serum** from COVID patients with and without diabetes to understand the role of diabetes in disease severity and assess antibody longevity in this patient group (Dr Kirsty Short, UQ)
- A Digital Health CRC proposal is being finalized**, entitled: The Pandemic Imperative: Clinical Data and Analytics Platform to improve clinical outcomes through point-of-care decision support – with partners QUT, Used, Monash, Qld Health and NSW Health (Professor Matthew Bellgard, QUT)
- Undergoing drug repurposing work in PC3 facility** as well as vaccine and diagnostic development in the Institute for Glycomics (Professor Mark von Itzstein, Griffith University)
- EMCO care study** – international clinical observational cohort, 37 countries and 200 hospitals involved. Characteristics, clinical features, course of disease, type of respiratory failure and ECMO data collected (John Fraser's Critical Care Research Group, Karin Wildi)
- National ASCOT trial** (N=2440) with a dosing and pharmacokinetic sub-study. Including a HCQ TDM trial at RBWH ICU. We're also looking at supporting other approaches to optimise dosing of proposed antivirals in covid-19 disease (Professor Jason Roberst, UQ)
- Establishing coronavirus work in the UQ PC3 facilities** with various projects including sample testing for virus neutralizing antibodies once we get access to the samples (A/Professor Alexander Khromykh)

Our network partners



Our top five priority areas to foster even greater collaboration:

