Australian Government

Department of Health

Office of the Gene Technology Regulator

Gene Technology Technical Advisory Committee

11 May 2021

Communiqué

This Communiqué covers matters considered at the 57th meeting of the Gene Technology Technical Advisory Committee (11 May 2021)

The Gene Technology Technical Advisory Committee (GTTAC) is a statutory advisory committee established under the *Gene Technology Act 2000* (the Act) to provide scientific and technical advice to the Gene Technology Regulator (the Regulator) and the Gene Technology Ministers' Meeting.

The Regulator seeks advice from GTTAC on licence applications to work with Genetically Modified Organisms (GMOs) and on Risk Assessment and Risk Management Plans (RARMPs) prepared for applications. The purpose of this Communiqué is to provide a brief overview of GTTAC's consideration of applications and RARMPs and, in accordance with the Gene Technology Regulations 2001, to publish committee resolutions given to the Regulator. The Communiqué also provides an overview of any other deliberations of the committee. It does not include information which is treated as Confidential Commercial Information in accordance with the Act.

DEALINGS INVOLVING THE INTENTIONAL RELEASE OF A GMO

Dealings involving the Intentional Release (DIR) of a GMO into the environment can involve a limited and controlled release (clinical trial or field trial) or a commercial (general) release.

For commercial releases, the Regulator must seek GTTAC advice twice. The first consultation is on matters to consider when preparing the RARMP and the second is on the RARMP itself. For limited and controlled releases, the Regulator must seek GTTAC advice only once on the RARMP.

The RARMP for every DIR licence application is issued for public consultation. Information on how to obtain copies of DIR applications and RARMPs is provided at the end of this document.

ADVICE ON CONSULTATION RARMPS – LIMITED AND CONTROLLED RELEASE

DIR 181 – Clinical trial of a genetically modified Herpes virus for the treatment of cystic fibrosis

Novotech (Australia) Pty Ltd is seeking approval for a clinical trial of genetically modified (GM) *Herpes simplex virus-1* as a gene therapy treatment for adult patients with cystic fibrosis. The clinical trial is proposed to take place at hospitals within Australia over a period of up to three years. Up to 15 people with cystic fibrosis would receive one of three courses of treatment with the GMO, delivered by inhalation, with the aim of evaluating the safety and efficacy of the treatment.

GTTAC noted the conclusion of the RARMP that risks to the health and safety of people and the environment from the proposed clinical trial are negligible.

The Committee referred to the proposal for a clinical staff member to be in the room with the patient during administration of the GMO and for 60 minutes afterwards. Members considered additional measures that could be used to limit exposure of clinical staff to the GMO.

GTTAC discussed the following matters:

- the extremely low likelihood of harm to people other than the patient expressing the cystic fibrosis transmembrane conductance regulator (CFTR) gene following exposure to the GMO
- the possibility of recombination of the GMO with a wild type herpes simplex virus (HSV-1) restoring replication competency
- the possibility that trial participants may shed the GMO in the weeks after administration.

GTTAC agreed to the following resolutions.

Resolutions

- The Regulator should further consider controls to limit exposure of people other than trial participants.
- The Regulator should consider whether further information about overexpression of the CFTR gene could be included in the RARMP.
- The committee agrees that all plausible risk scenarios have been identified.

DIR 183 – Clinical trial with genetically modified *E. coli* to reduce antibiotic resistance

Licence application DIR 183 from the Westmead Institute for Medical Research is for a clinical trial to evaluate the safety and efficacy of GM *E.coli* to deliver genes that restore sensitivity to antibiotics in gut bacteria.

GTTAC noted the conclusion of the RARMP that risks to the health and safety of people or the environment from the proposed clinical trial are negligible.

The Committee discussed the past use of tetracycline in livestock but did not consider the residual presence of tetracycline in these environments to be a concern.

GTTAC discussed the potential exposure of people or animals to the GMO as a result of the GMO being shed into sewage and waste water, and agreed this did not pose a plausible risk. Members agreed with the uncertainty identified in the RARMP around the transferability of data from non-clinical studies in model species to humans.

GTTAC agreed to the following resolutions.

Resolutions

- The committee agrees all plausible risk scenarios have been identified.
- The committee agrees the proposed limits and controls are appropriate.
- The committee did not identify additional information to be considered.
- The committee agrees with the overall conclusions of the RARMP.

DIR 184 – Clinical trial with a genetically modified human adenovirus COVID-19 vaccine

Avance Clinical Pty Ltd is seeking approval for the clinical trial of a COVID-19 vaccine in Australia. The purpose of this clinical trial is to evaluate the safety and tolerability of a GM vaccine for COVID-19. This clinical trial involves intranasal administration of the GM vaccine, which is different to the intramuscular administration of current COVID-19 vaccines.

GTTAC noted the conclusion of the RARMP that risks to the health and safety of people or the environment from the proposed clinical trial are negligible. Key topics discussed by the Committee included:

- the possibility of the GMO integrating into the human genome, agreeing that this would be an extremely rare event in non-patients
- the potential for dispersal of the GMO through the recipient sneezing or exhaling immediately after administration of the GM vaccine, and the use of personal protective equipment to reduce this
- the possibility of wild type adenoviruses providing the packaging shell needed for the GMO to form viral particles, noting this would be restricted to a single generation
- the proposed use of various facilities for administering the GM vaccine.

GTTAC agreed to the following resolutions.

Resolutions

- The Regulator should further consider whether administration should be limited to dedicated clinical facilities.
- The Regulator should further consider controls to restrict potential spread of the GMO immediately after administration, e.g. appropriate personal protective equipment.
- The committee agrees all plausible risk scenarios have been considered.
- The committee agrees with the overall conclusions of the RARMP.

INFORMATION ITEMS AND REPORTS

OGTR staff provided the Committee with further information on the gene technology regulatory scheme, the role of GTTAC, and the Regulator's approach to risk analysis. The Department of Health updated members on implementation of the recommendations from the Third Review of the National Gene Technology Scheme.

GTTAC received reports on relevant activities undertaken since the previous face-to-face meeting on October 2019 from the cross-member with the Gene Technology Ethics and Community Consultative Committee, the Regulator and the Chair.

ENQUIRIES AND RISK ASSESSMENT AND RISK MANAGEMENT PLANS

For all enquiries and to obtain copies of applications or RARMPs for Dealings involving the Intentional Release (DIR) of GMOs into the environment, please call the OGTR on 1800 181 030 or email ogtr@health.gov.au. DIR RARMPs are also available on the OGTR website.