

Press release

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Basic information

Name: Christina Valbirk Konrad

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Department of: Clinical Medicine

Main supervisor: Professor Martin Tolstrup

Title of dissertation: "RoVER: Redirector of Vaccine-induced Effector Responses for potent and specific killing of cellular targets"

Date for defence: 27.06.2022 at (time of day): 11:00 Place: Auditorium G206-142, G206, Entrance G6, Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N

Press release (Danish)

Immunterapiteknologi for omdirigering af vaccine-induceret cytotoxisk immunrespons for eliminering af kræft eller HIV-1-inficerede målceller

Hos personer med fremskreden kræft eller kronisk HIV-1-infektion er immunsystemet ofte ude af stand til at eliminere sygdommen på grund af de omfattende undvigemanøvrer, der tillader kræften eller de HIV-1-inficerede celler at skjule sig fra immunsystemet. Dette understreger behovet for innovative immunterapistrategier til at inducere effektiv immunrespons sygdomsbekæmpelse. Imidlertid er den kliniske anvendelse af eksisterende immunterapistrategier ofte begrænset af kravet om transplantation af et stort antal genetisk modificerede immunceller ind i patienten. For at overvinde begrænsningerne ved eksisterende immunterapistrategier var formålet med dette ph.d.-studie at udvikle en ny immunterapiteknologi, hvor et potent respons af cytotoxiske immunceller genereres i patienten via vaccination. Dette vaccine-inducerede immunrespons omdirigeres efterfølgende til eliminering af kræft eller HIV-1-inficerede målceller ved hjælp af vores bispecifikke RoVER (Redirector of Vaccine-induced Effector Responses). Denne RoVER immunterapiteknologi fjerner således behovet for transplantation af genetisk modificerede immunceller ved at udnytte patientens eget immunsystem. RoVER-teknologien har desuden den fordel, at den er yderst specifik samt kan tilpasses til at genkende forskellige cellulære overfladeantigener og kan dermed rettes mod forskellige cellulære sygdomsmål. Resultaterne er sammenfattet i et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Christina Valbirk Konrad, der forsvare det d. 27/06-2022.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 27/06 kl. 11.00 i Auditorium G206-142, G206, Indgang G6, Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N.

Titlen på projektet er "RoVER: Redirector of Vaccine-induced Effector Responses for potent and specific killing of cellular targets". Yderligere oplysninger: Ph.d.-studerende Christina Valbirk Konrad, e-mail: cvk@clin.au.dk, tlf.: +45 42221927.

Bedømmelsesudvalg:

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Press release (English)

Immunotherapy technology for redirection of vaccine-induced cytotoxic immune responses to eliminate cancer or HIV-1-infected target cells

In individuals with progressed cancer or chronic HIV-1 infection, the immune system is often unable to eliminate the disease due to extensive escape mechanisms that allow the cancer or HIV-1-infected cells to hide from immune-mediated elimination. Consequently, this emphasizes the need for innovative immunotherapy strategies to enable effective immune-mediated disease clearance. However, the clinical application of existing immunotherapy strategies is often limited by the requirement for transplantation of vast numbers of genetically modified immune effector cells into the patient. To overcome the limitations of existing immunotherapy strategies, the aim of this PhD project was to develop a novel immunotherapy technology in which a potent response of cytotoxic immune cells is generated in the patient by vaccination. This vaccine-induced immune response is subsequently redirected to eliminate the cancer or HIV-1-infected target cells by our bispecific RoVER (Redirector of Vaccine-induced Effector Responses). This RoVER technology obviates the need for transplantation of genetically modified immune cells by exploiting the patient's own immune system. Importantly, this technology is highly specific and can be adapted to recognize various cell surface antigens to eliminate a disease target of choice. The project was carried out by Christina Valbirk Konrad, who is defending her dissertation on June 27, 2022.

The defence is public and takes place on 27/06/2022 at 11.00 in Auditorium G206-142, G206, Entrance G6, Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N.

The title of the project is "RoVER: Redirector of Vaccine-induced Effector Responses for potent and specific killing of cellular targets". For more information, please contact PhD student Christina Valbirk Konrad, email: cvk@clin.au.dk, phone: +45 42221927.

Assessment committee:

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