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Public summary of opinion on orphan designation

Allogeneic cultured postnatal thymus-derived tissue for the treatment of DiGeorge syndrome

On 26 February 2019, orphan designation (EU/3/19/2135) was granted by the European Commission to Enzyvant Therapeutics Ireland Limited, Ireland, for allogeneic cultured postnatal thymus-derived tissue (also known as RVT-802) for the treatment of DiGeorge syndrome.

What is DiGeorge syndrome?

DiGeorge syndrome is a condition characterised by heart defects, a small thymus gland (a gland below the breastbone that helps the T cells that fight infections to develop properly), and underactive parathyroid glands (glands at the base of the neck that produces parathyroid hormones). Signs and symptoms vary widely from patient to patient and include a cleft palate (an opening in the roof of the mouth), heart and breathing problems, learning disabilities, infections, and low blood calcium levels which can result in seizures (fits).

DiGeorge syndrome is a long-term debilitating condition that may be life-threatening particularly because of the heart problems and serious infections.

What is the estimated number of patients affected by the condition?

At the time of designation, DiGeorge syndrome affected approximately 3.7 in 10,000 people in the European Union (EU). This was equivalent to a total of around 192,000 people*, and is below the ceiling for orphan designation, which is 5 people in 10,000. This is based on the information provided by the sponsor and the knowledge of the Committee for Orphan Medicinal Products (COMP).

What treatments are available?

At the time of application for orphan designation, there was no satisfactory treatment for DiGeorge syndrome authorised in the EU. Patients generally received supportive treatments to reduce the symptoms, including surgery of the heart and palate, vitamin D and calcium supplements and speech therapy.

*Disclaimer: For the purpose of the designation, the number of patients affected by the condition is estimated and assessed on the basis of data from the European Union (EU 28), Norway, Iceland and Liechtenstein. This represents a population of 518,400,000 (Eurostat 2019).

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How is this medicine expected to work?

The medicine is intended for patients with DiGeorge syndrome who have a non-functional thymus gland and thus very low levels of T cells (a type of white blood cell that fights infections), which makes them prone to infections. The medicine comprises slices of tissue from a donor's thymus gland. The donor tissue is processed in a laboratory so that it is compatible with the patient's body and is then inserted into the patient's body by surgery. This is expected to help patients produce T cells and fight infections.

What is the stage of development of this medicine?

The effects of the medicine have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with the medicine in patients with DiGeorge syndrome who have a non-functional thymus were ongoing.

At the time of submission, the medicine was not authorised anywhere in the EU for DiGeorge syndrome. Orphan designation of the medicine had been granted in the United States for treatment of patients with complete DiGeorge anomaly.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 24 January 2019 recommending the granting of this designation.

Opinions on orphan medicinal product designations are based on the following three criteria:

- the seriousness of the condition;
- the existence of alternative methods of diagnosis, prevention or treatment;
- either the rarity of the condition (affecting not more than 5 in 10,000 people in the EU) or insufficient returns on investment.

Designated orphan medicinal products are products that are still under investigation and are considered for orphan designation on the basis of potential activity. An orphan designation is not a marketing authorisation. As a consequence, demonstration of quality, safety and efficacy is necessary before a product can be granted a marketing authorisation.

For more information

Sponsor's contact details:

Contact details of the current sponsor for this orphan designation can be found on the EMA website.

For contact details of patients' organisations whose activities are targeted at rare diseases see:

- Orphanet, a database containing information on rare diseases, which includes a directory of patients' organisations registered in Europe;
- European Organisation for Rare Diseases (EURORDIS), a non-governmental alliance of patient organisations and individuals active in the field of rare diseases.

Translations of the active ingredient and indication in all official EU languages[1], Norwegian and Icelandic

Language	Active ingredient	Indication
English	Allogeneic cultured postnatal thymus-derived tissue	Treatment of DiGeorge syndrome
Bulgarian	Алогеннна култивирана постнатална тимусна тъкан	Лечение на синдрома на DiGeorge
Croatian	Alogeni proizvod dobiven iz kulture postnatalnog tkiva timusa	Liječenje diGeorgeovog sindroma
Czech	Alogenní kultivovaná postnatální tkáň thymu	Léčba DiGeorgova syndromu
Danish	Allogent dyrket postnatalt præparat deriveret fra thymusvæv	Behandling af DiGeorge-syndrom
Dutch	Weefsel verkregen uit allogeen gekweekt postnatale thymusll	Behandeling van DiGeorge-syndroom
Estonian	Allogeenne kultiveeritud postnataalse tüümuse kude	DiGeorge'i sündroomi ravi
Finnish	Allogeenisesta, viljellystä syntymänjälkeisestä kateenkorvakudoksesta peräisin oleva valmiste	DiGeorgen oireyhtymän hoito
French	Produit dérivé de culture de tissu de thymus postnatal allogénique	Traitement du syndrome de DiGeorge
German	Allogenes Kulturprodukt kultiviert aus postnatalem Thymusgewebe	Behandlung des DiGeorge-Syndroms
Greek	Αλλογενής καλλιεργημένος ιστός από μεταγεννητικό θύμο	Θεραπεία του συνδρόμου DiGeorge
Hungarian	Allogén, tenyésztett, postnatalis csecsemőmirigyből származó szövet	A DiGeorge-szindróma kezelésére
Italian	Prodotto derivato dal tessuto timico postnatale coltivato allogenico	Trattamento della sindrome di DiGeorge
Latvian	Alogēni, kultivēti, postnatāli no aizkrūtes dziedzera iegūti audi	DiDžordža sindroma ārstēšana
Lithuanian	Alogeninis postnataliai iš užkrūčio liaukos išskirtas dirbtinai išaugintas audinys	DiGeorgesindromo gydymas
Maltese	Tessut derivat mit-timus alloġeniku kkultivat, postnatali	Kura tas-Sindrome DiGeorge
Polish	Allogeniczna kultywowana tkanka poporodowej grasicy	Leczenie zespołu DiGeorge'a
Portuguese	Derivado da cultura de tecido tímico pós-natal alogénico	Tratamento da síndrome de DiGeorge
Romanian	Produs derivat din cultură de țesut timic postnatal alogenic	Tratamentul sindromului DiGeorge
Slovak	Alogénny liek kultivovaný v tkanivách postnatálneho týmusu	Liečba DiGeorgeovho syndrómu

[1] At the time of designation

Slovenian	Alogena kultura iz tkiva poporodnega priželjca	Zdravljenje DiGeorgeovega sindroma
Spanish	Producto alogénico derivado tisular de timo postnatal cultivado	Tratamiento del síndrome DiGeorge
Swedish	Odlad allogen postnatal tymusvävnad	Behandling av DiGeorges syndrom
Norwegian	Allogent vev fra thymus dyrket postnatalt	Behandling av DiGeorges syndrom
Icelandic	Ósamgena ræktaður vefur afleiddur úr hóstarkirtli eftir fæðingu	Meðferð við DiGeorge heilkenni