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Human Medicines Research and Development Support Division

Public summary of the evaluation of a proposed paediatric investigation plan

Ozanimod for treatment of multiple sclerosis

On 17 July 2015 the Paediatric Committee of the European Medicines Agency agreed a Paediatric Investigation Plan* (PIP) for ozanimod for the treatment of multiple sclerosis (EMA-001710-PIP02-14).

What is ozanimod, and how is it expected to work?

Ozanimod is not authorised in the European Union. Studies in adults are currently on-going. This medicine is proposed in adults for the treatment of patients with relapsing forms of multiple sclerosis to reduce the frequency of clinical exacerbations and delay the accumulation of physical disability.

This medicine is expected to reduce the ability of T cells (a type of white blood cell involved in the immune system) to move from the lymph nodes towards the brain and spinal cord thus limiting the damage they cause in multiple sclerosis. Ozanimod does this by blocking the action of receptors on the T cells called the sphingosine-1-phosphate and sphingosine-5-phosphate receptors, which are involved in regulating the movement of these cells in the body.

What was the proposal from the applicant?

For children, the applicant proposed:

To study the medicine in children from 10 to less than 18 years of age affected by multiple sclerosis, in a paediatric investigation plan*. The future indication proposed for children is: Treatment of relapsing remitting forms of multiple sclerosis in children. The plan included a proposal to show efficacy and safety of the medicine in non-clinical and clinical studies.

The applicant proposed a deferral* for the non-clinical and paediatric clinical studies.

Is there a need to treat children affected by multiple sclerosis?

Taking into account the proposed indication in adults, and the characteristics of the medicine, the Paediatric Committee considered this medicine of potential use for the treatment of multiple sclerosis. This condition occurs also in children, and affects in particular adolescents.

What did the Paediatric Committee conclude on the potential use of this medicine in children?

The Committee agreed with the request of the applicant to be exempt from performing studies in children from birth to less than 10 years of age, because this medicinal product does not seem to have a potential significant benefit as clinical studies are not feasible in this age group.

At present, no treatment is authorised for the treatment of multiple sclerosis in children in the European Union. Therefore, the Committee considered that new data are required to decide whether the use of this medicine will bring a benefit to children from 10 to less than 18 years of age affected by the condition, and to understand any potential risks.

The Committee considered that there is also a need to develop a specific pharmaceutical form* of this medicine, which would allow to use the medicine safely and accurately in children unable to swallow capsules, and whose composition* must only include components that are known to be safe in children.

Because there is a need for more medicines for the treatment of multiple sclerosis in children, and this medicine has a potential interest for children, the Committee considered that non-clinical and clinical studies were necessary.

The Committee considered that it is more prudent to confirm that the medicine is effective and safe in adults, before starting the paediatric studies.

The Committee agreed with the request of the applicant that the development of a specific pharmaceutical form to be used in children and paediatric clinical studies should be deferred to avoid a delay in the availability of the medicine for adults.

What is the content of the Plan after evaluation?

The Paediatric Committee considered that:

- A pharmaceutical form* such as an age-appropriate oral liquid dosage form was needed for children unable to swallow capsules. An age-appropriate oral liquid dosage form will be developed by the applicant.
- Studies in animals need to be performed, to identify any risk before the medicine is used in children.
- Determination of the best dose should be done using a population PK / PD model to support the choice of dose in the safety and efficacy paediatric study.
- It is necessary to study if the medicine is effective to treat the disease in children. This will be done in 1 study comparing the medicine to active control*.
- It is necessary to study the potential side effects of the medicine, to prevent them or to reduce the consequences if they occur. The main concern identified by the PDCO is the potential toxicity of the medicine for immune system.

What happens next?

The applicant has now received the EMA Decision (P/0198/2015)* on this medicine. The Decision itself is necessary for the applicant to request in the future a marketing authorisation* for this medicine in adults and in children.

The Decision* on the agreed Paediatric Investigation Plan means that the applicant is bound to perform the studies and trials with children in the next months or years. In case of difficulties, or a change in current knowledge or availability of new data, the applicant may request changes to the plan at a later stage. This can be done through a modification of the PIP.

The agreed completion of all the studies and trials included in the Paediatric Investigation Plan is October 2022.

Trials in the Paediatric Investigation Plan will be listed in the public EU Clinical Trials Register (<https://www.clinicaltrialsregister.eu/>) as soon as they have been authorised to be started, and their results will have to be listed in the register within 6 months after they have completed.

The results of the studies conducted in accordance with the agreed Paediatric Investigation Plan will be assessed, and any relevant information will be included in the Product Information (summary of product characteristics, package leaflet). If the medicine proves to be effective and safe to use in children, it can be authorised for paediatric use, with appropriate recommendations on the dose and on necessary precautions. The product information will also describe which adverse effects are expected with the medicine, and wherever possible, how to prevent or reduce these effects.

***Definitions:**

Applicant	The pharmaceutical company or person proposing the Paediatric Investigation Plan or requesting the Product-Specific Waiver
Children	All children, from birth to the day of the 18 th birthday.
Paediatric investigation plan (PIP)	Set of studies and measures, usually including clinical studies in children, to evaluate the benefits and the risks of the use of a medicine in children, for a given disease or condition. A PIP may include “partial” waivers (for example, for younger children) and/or a deferral (see below).
Waiver	An exemption from conducting studies in children, for a given disease or condition. This can be granted for all children (product-specific waiver), or in specific subsets (partial waiver): for example, in boys or in children below a given age.
Deferral	The possibility to request marketing authorisation for the use of the medicine in adults, before completing one or more of the studies /measures included in a PIP. The Paediatric Committee may grant a deferral to avoid a delay in the availability of the medicine for adults.
Opinion	The result of the evaluation by the Paediatric Committee of the European Medicines Agency. The opinion may grant a product-specific waiver, or agree a PIP.
Decision	The legal act issued by the European Medicines Agency, which puts into effect the Opinion of the Paediatric Committee.
Pharmaceutical form	The physical aspect of the medicine (the form in which it is presented), for example: a tablet, capsule, powder, solution for injection, etc. A medicine can have more than one pharmaceutical form.
Placebo	A substance that has no therapeutic effect, used as a control in testing new drugs.
Active control	A medicine with therapeutic effect, used as a control in testing new drugs.
Historical control	A group of patients with the same disease, treated in the past and used in a comparison with the patients treated with the new drug.
Route of administration	How a medicine is given to the patient. For example: for oral use, for intramuscular use, for intravenous use, etc. The same medicine, or the same pharmaceutical form, may be given through more than one route of administration.
Patent	A form of protection of intellectual property rights. If a medicinal product is protected by a patent, the patent holder has the sole right to make, use, and sell the product, for a limited period. In certain circumstances, a patent for a medicinal product may be extended for a variable period by a Supplementary Protection Certificate.
Marketing Authorisation	When a Marketing Authorisation is granted, the pharmaceutical company may start selling the medicine in the relevant country (in the whole European Union, if the procedure was a centralised one).