



To: Yvan Jean Patrick Agbassi and Carolina Morán Jara
Co-Chairs, Global TB Community Advisory Board
on behalf of the Global TB Community Advisory Board

October 15, 2018

RE: Open Letter Re: urgent need to reduce delamanid's pricing

Dear Mr. Yvan Jean Patrick Agbassi, Ms. Carolina Morán Jara, and members of the Global TB Community Advisory Board,

Thank you for your letter dated 11 October, 2018. Otsuka shares the same goal of improving delamanid's affordability and availability for all patients who suffer from drug-resistant tuberculosis and may benefit from the addition of delamanid to their treatment regimen. Otsuka acknowledges that, while representing an approximately 95% price reduction from the European price, the current lowest global price of delamanid (USD \$1700 for a 6-month treatment course via the Global Drug Facility), is not in line with the global TB community's expectations for the total cost of an MDR/RR-TB regimen. As such, we wish to outline for you the various actions Otsuka is taking, alone and in collaboration with other third parties, to reduce the price of delamanid over the coming year including technology transfer, formulation and manufacturing improvements.

First and foremost, we believe it is critically important that further roll-out of delamanid be conducted in a financially sustainable way that encourages more private actors to invest in this neglected disease area. After many private companies have closed down their TB research units over the past few years, Otsuka is proud to be one of a very small minority of pharmaceutical companies with a robust TB research and development (R&D) pipeline. Your letter rightfully acknowledged the "multiple barriers preventing [delamanid's] more widespread accessibility." Indeed, experience in the field has shown that despite the availability of new TB drugs, funding, and technical assistance, the uptake of new TB drugs has been very slow.

Otsuka believes that the foundation to overcoming these barriers is the establishment of clear, supportive national and international policy guidance encouraging the use of all new drugs,

including delamanid, as core components of any MDR/RR-TB regimen. Unfortunately, the weak uptake of delamanid thus far has meant that national treatment programmes, pooled procurement mechanisms and donor agencies are hesitant to assume financial risk by providing fixed forecasts or bulk purchase commitments that would allow Otsuka to streamline manufacturing and offer appropriate pricing concessions. **Rapid scale-up of delamanid use in early 2019 would therefore allow Otsuka to offer an immediate price reduction of several hundred dollars or more, even before the completion of technology transfer.**

In the absence of this, let me provide a status update on the other measures currently underway to reduce the price of delamanid:

- 1) **Technology Transfer.** Since early this year, Otsuka and its alliance partner Mylan have initiated the process of technology transfer so that delamanid may be locally produced in India. We believe that, in addition to potential formulation and product improvements, simply transferring manufacturing capabilities from Japan to India will result in immediate cost reductions. It is estimated that at least primary packaging will be established by mid-2019 with full API transfer coming later based on the time it takes for local regulatory approval.
- 2) **In-House Formulation Improvements.** One of the challenges with the cost of delamanid is the unique manufacturing process including a spray-drying process using organic solvents and double-aluminium blister packaging with nitrogen burst. Our in-house research team is conducting multiple exercises to see if variations in manufacturing may result in lower cost of goods that may result in a price reduction.
- 3) **Third Party Collaborations.** Otsuka is also working with experts in the field outside of the company to conduct paper exercises that may determine if there are other opportunities to reduce manufacturing cost. We believe that by collaborating with external experts, we may increase the probability of finding a solution to these complex manufacturing challenges.



My colleagues and I would be pleased to keep you continuously informed of the status of these activities. Otsuka has appreciated our regular interactions and communication with the Global TB-CAB and would be pleased to meet with you in the near future to discuss delamanid pricing and other important issues.

Kind regards,

A handwritten signature in black ink, appearing to read "M. Destito", with a long, sweeping horizontal line extending to the right.

Marc Destito, Senior Director, Public Affairs & Global Alliance Management
Otsuka Novel Products GmbH