

**PATENTED MEDICINE PRICES REVIEW BOARD**

**IN THE MATTER OF the Patent Act,  
R.S.C., 1985, c. P-4, As Amended**

**AND IN THE MATTER OF  
Horizon Pharma (the “Respondent”)  
and the medicine Cysteamine Bitartrate sold by the Respondent under the trade  
name PROCYSBI**

**ADDENDUM TO EXPERT REPORT OF DR. JOEL HAY, PH.D.**

I, Joel W. Hay, PhD, of the City of Los Angeles in the State of California in the United States of America, provide the following addendum to my report dated September 9, 2019.<sup>1</sup>

**I. MANDATE AND SUMMARY OF OPINION**

1. In my September 2019 Report, I analyzed the alternative pricing models put forward by Board Staff (the “Proposed Prices”). I concluded that, at Board Staff’s Proposed Prices,

[REDACTED]

2. In conducting that analysis, I allocated [REDACTED]

[REDACTED]

3. I have been asked by counsel for Horizon to conduct the same analysis using [REDACTED]

[REDACTED]

[REDACTED]. **Figure 1**, below, shows Canada’s share of total PROCYSBI unit sales worldwide in 2019Q4. This is the last full quarter of information available from Horizon.<sup>4</sup>

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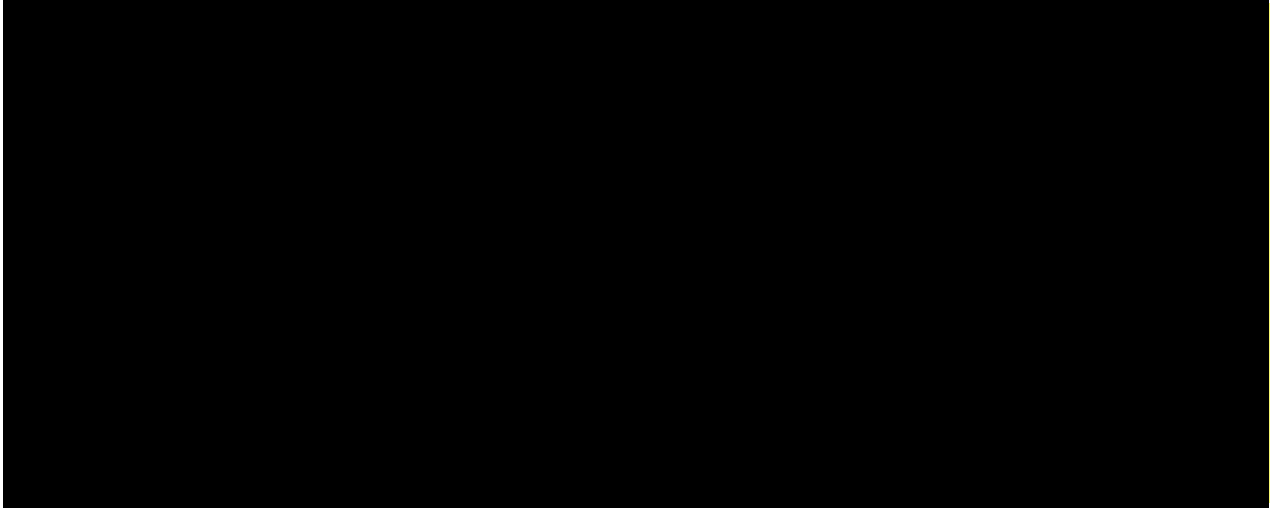
<sup>1</sup> I rely on the CV and Expert Witness Declaration attached to my September 2019 Report. A complete list of the additional information relied on in preparing this addendum is listed in Appendix A. For ease of reference, I have adopted the same terms and abbreviations that I used in my September 2019 Report.

<sup>2</sup> September 2019 Report, Appendix F ¶¶22-23.

<sup>3</sup> September 2019 Report, Appendix F ¶¶22-23.

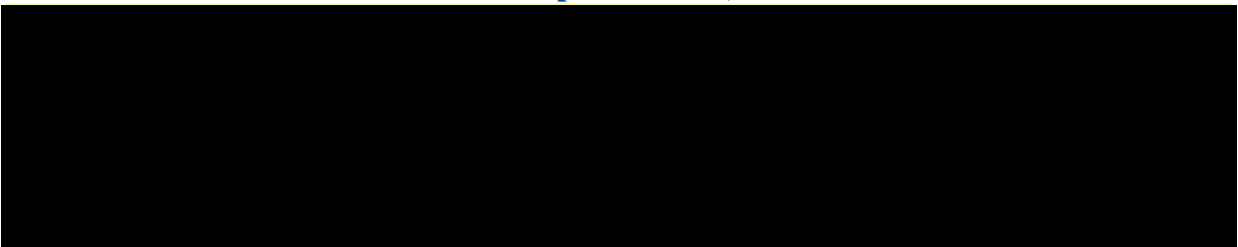
<sup>4</sup> The columns labeled “Units (Bottles)” show the actual unit sales of PROCYSBI 25MG and PROCYSBI 75MG in terms of bottles. The columns labeled “Milligram Equivalent” convert these bottles into milligrams of PROCYSBI so that I am comparing PROCYSBI 25MG (which is available in bottles of 60 tablets) and 75MG bottles (which is available in bottles of 250 tablets) on an apples to apples basis. This information was provided to Board Staff in early 2020.

**Figure 1: Canada's Share of Total PROCYSBI Unit Sales for 2019Q4**



4. These results are consistent with those contained in my September 2019 Report. Under this approach, at Board Staff's Proposed Prices, [REDACTED]  
[REDACTED]  
[REDACTED] The results are summarized in Figure 2 below.<sup>5</sup>

**Figure 2: Summary of Horizon Financial Results from PROCYSBI in Canada  
At Board Staff's Proposed Prices, USD\$ Millions**



Notes: [1] Amounts for Premium Comparison, Market Share Comparison and Same Medicine Test based on Expert Report of Dr. Joel Hay, dated September 9, 2019.

[2] Amounts based on financial model from Expert Report of Dr. Joel Hay, dated September 9, 2019, but with cost of acquiring PROCYSBI from Raptor and ongoing R&D costs thereafter allocated to [REDACTED]  
[REDACTED]

Signed this 30<sup>th</sup> of July, 2020



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Joel W. Hay

<sup>5</sup> The details of my calculations are shown in Schedules 1S to 3S appended to this report.

**Appendix A: Scope of Review**

In addition to the information and documents set out in Appendix D of my September 2019 Report, I have reviewed and relied on the documents listed below. These documents, which I understand were produced in response to a request from Board Staff, were provided to me after I completed my September 2019 Report:

- A. Horizon Canada PROCSYBI Revenue I\_29249739\_1.XLSX
- B. US LatAm Volume-Q4 2019 Q1 2020.xlsx
- C. Chiesi Price Volume Summary by Quarter (GM).xlsx

**Appendix B: Schedule to Financial Economic Analysis**



