

April 24, 1998

Eli Lilly Canada  
Voluntary Compliance Undertaking

**VOLUNTARY COMPLIANCE UNDERTAKING  
OF  
ELI LILLY CANADA INC.  
TO  
THE PATENTED MEDICINE PRICES REVIEW BOARD**

1. Product Summary

1.1\_ Humalog 100 unit/ml vials (DIN 2229704) and Humalog 100 units/ml cartridges (DIN 2229705) - ("Humalog") are medicines sold in Canada by Eli Lilly Canada Inc. ("Lilly") that are used in the treatment of insulin-dependent diabetics.

1.2\_ Lilly received a Notice of Compliance ("NOC") from the Health Protection Branch of Health Canada for the sale of Humalog in Canada on November 8, 1996.

1.3\_ Eli Lilly & Company U.S.A. ("Lilly US") is the owner of Canadian Patent Application NO. 2,009,579 ("the Application") that pertains to Humalog. It was filed by Lilly US on February 8, 1990 and was laid open for inspection to the public on August 9, 1990. Lilly US requested examination of its claims under the Application on March 4, 1996. The Application is pending.

1.4\_ All maintenance fees payable to the Commissioner of Patents of Canada have been remitted by Lilly US in respect of the Application and it is expected that the patent will be granted for the claims under the Application.

1.5\_ Lilly will become the Canadian patentee of Humalog upon grant of a patent in respect of the Application and/or any patent granted that pertains to the medicine.

1.6\_ Sales of Humalog in Canada were commenced by Lilly on November 11, 1996.

2. Application of the Excessive Price Guidelines of the Patented Medicine Prices Review Board

2.1 More than a year before the introduction of Humalog in Canada, Lilly voluntarily requested advisory assistance from the staff of the Patented Medicine Prices Review Board ("Board") in respect of the price of Humalog.

2.2 Six months prior to the introduction of Humalog in Canada, the Board's Human Drug Advisory Panel ("HDAP") recommended that Humalog be categorized as a category 3 new medicine. The HDAP also concluded that Humulin-R is a valid comparator for purposes of applying the Board's Excessive Price Guidelines ("Guidelines").

2.3 Since introduction, Lilly has been selling Humalog to wholesalers in Canada based on a catalogue price of \$30.00 per vial and per package of cartridges.

2.4 Board staff advised Lilly that, following the procedures outlined in the Guidelines in relation to category 3 new medicines, the price of Humalog was reviewed by conducting a Therapeutic Class Comparison (“TCC”) Test and an International Price Comparison (“IPC”) Test. As a result, the price of Humalog was found to exceed the Guidelines and Board staff commenced an investigation.

3. Additional Considerations

3.1 The average prices of regular insulin (Humulin-R) in Canada are the lowest of the seven countries listed in the Patented Medicines Regulations, 1994 (“Regulations”). Lilly contends that this should be taken into consideration in establishing the maximum non-excessive (“MNE”) price for Humalog.

3.2 Lilly submits that the development of Humalog represents an advancement in the treatment of insulin-dependent diabetic patients, and that this should be recognized in the establishment of MNE prices for Humalog. Lilly is of the view that recent clinical trials and experience demonstrate that Humalog offers patients greater flexibility, improved glucose control and reduced incidence of severe hypoglycemia. In Lilly’s submission, these benefits compared to regular insulin and this additional value, are reflected in the price of Humalog in most foreign markets.

3.3 Lilly has agreed to a reduction to the published wholesale price for Humalog as long as this VCU is accepted by the Board. This revised price of \$23.00 per vial of package of cartridges will represent a 23% reduction from the original Canadian introductory price of \$30.00. This new price is also 26% below the current weighted international median of \$30.9157 for the foreign countries listed in the Regulations and is the next to lowest price in this group of countries.

4. Position of Board Staff

4.1 Without prejudice to its position with respect to the application of the Guidelines, Board staff has advised Lilly that it is prepared to recommend to the Board that it is appropriate in this case to apply an alternate method of calculating the MNE price for Humalog. This alternate method is based on the factors in section 85 of the Patent Act and is set out in Schedule “A”.

4.2 The objective of the alternate method set out in Schedule “A” is to ensure that the ratio of the prices of Humalog and Humulin-R in Canada does not exceed the median ratio of the prices of these drugs in the other countries listed in the Regulations.

- 4.3 Based on the current prevailing prices of Humalog and Humulin-R in the other countries and the price of Humulin-R in Canada, the MNE price for Humalog in Canada in 1998 would be \$22.1072 per unit as calculated in Schedule "A".
- 4.4 Based on information provided voluntarily by Lilly in respect of the price and sales of Humalog in Canada for the period from November 11, 1996 to December 31, 1997, Lilly received excess revenues of \$666,824 from the sale of Humalog at prices higher than the prices calculated in Schedule "A".

5. Position of the Patentee

- 5.1 This Voluntary Compliance Undertaking ("VCU") constitutes no admission by Lilly that the price of Humalog is now, or was at any time since the date of the first sale of the medicine, excessive, or that the Board has jurisdiction over the price at which Lilly sells Humalog until such time as Lilly becomes a patentee with respect to Humalog. In addition, Lilly disagrees with the classification of Humalog as a category 3 New Medicine and feels that the MNE price established does not reflect the clinical benefits and value of Humalog compared to regular insulin. This revised price puts Lilly Canada at a competitive disadvantage versus other Lilly affiliates when competing for global Diabetes research initiatives. Nevertheless, Lilly hereby warrants that it will be bound by the terms and provisions of this VCU.

6. Public Consultation Period

- 6.1 A Voluntary Compliance Undertaking dated December 15, 1997 was submitted by Lilly to the Board (the "Original VCU").
- 6.2 The Original VCU contemplated that Lilly return excess revenues by supplying sufficient quantities of Humalog at no charge between January 1 and December 31, 1998 to patients being treated with Humalog. Board staff recommended Board approval of the Original VCU.
- 6.3 The Original VCU was published in the Canada Gazette on March 14, 1998 with notice that the Board would consider written submissions regarding whether the Board should accept the Original VCU. The provincial ministries of health were also invited to provide written submissions. All interested parties were permitted to make written submissions to the Board by April 13, 1998 (the "Public Consultation Period"). This date is approximately 2½ years after Lilly's original submission to the PMPRB in respect of the price of Humalog. Lilly believes that a more efficient process is essential if Canada is to remain competitive internationally in attracting research and development investment.
- 6.4 The Board has advised Lilly that seven written submissions were received during the Public Consultation Period. These submissions, from five provinces (British Columbia, Saskatchewan, Manitoba, Quebec and Prince Edward Island), the Canadian Diabetes Association and Novo Nordisk Canada Inc., all objected to the Original VCU's proposed

April 24, 1998

Eli Lilly Canada  
Voluntary Compliance Undertaking

method to return excess revenues to consumers through the supply of Humalog at no charge to existing Humalog users. With respect to the price of Humalog, 6 of the 7 respondents supported the revised price as not being excessive.

6.5 Staff of the Board have advised Lilly that based on the submissions received (which excluded provincial governments representing 55% of the Canadian population who did not communicate any objections to our Original VCU) they are no longer prepared to recommend acceptance of the method of returning excess revenues as outlined in our Original VCU.

6.6 Upon being advised of the response of the Board staff to the seven submissions received by the Board during the Public Consultation Period, Lilly is submitting this VCU.

7. Terms of the VCU

7.1 Having been advised by Board staff that the price of Humalog may be excessive under the Guidelines, and for purposes of establishing the maximum non-excessive price for Humalog under the Guidelines, Lilly undertakes to:

7.1.1 Reduce the price of Humalog within 30 days of acceptance of this VCU so that the published wholesale price of \$23.00 less applicable discounts and deductions does not exceed \$22.1072 per vial and per package of cartridges during 1998 and, based on the MNE price for 1997 as set out in Schedule "A", ensure that the price of Humalog remains within the Guidelines for all future periods during which it is under the Board's jurisdiction;

7.1.2 Offset all excess revenues which may have been received from November 11, 1996 through December 31, 1997 as noted in 4.4 above by making payment to Her Majesty the Queen in right of Canada no later than 30 days after the price reduction takes effect.

7.1.3 Continue to provide to the Board price and sales information with respect to Humalog in accordance with the Regulations.

7.2 Lilly will not be bound by the undertaking herein unless this VCU is accepted by the Board.

Signature: [Original signed by] Nelson M. Sims

Company Officer: *Nelson M. Sims*

Position: *President*

Date: *April 24, 1998*

April 24, 1998

Eli Lilly Canada  
Voluntary Compliance Undertaking

### **Schedule “A”**

For the purpose of this Voluntary Compliance Undertaking (“VCU”) the maximum non-excessive (“MNE”) price of Humalog has been calculated to ensure that the ratio of the prices of Humalog and Humulin-R in Canada does not exceed the median ratio of the prices of those drugs in the other countries listed in the Patented Medicines Regulations 1994 (“Regulations”).

More specifically, the calculation of the MNE price for Humalog is based on the following methodology:

- 1) using the prices of Humalog and Humulin-R as of November 1, 1997, in local currency, in the foreign countries listed in the Regulations where both products were sold during 1997;
- 2) calculating the mathematical ratios of the prices of Humalog to Humulin-R in each country (“foreign ratios”);
- 3) identifying the median of the foreign ratios;
- 4) using the price of Humulin-R in Canada in 1997 as published in the Ontario Drug Benefit (“ODB”) Formulary;
- 5) multiplying the median of the foreign ratios by the price of Humulin-R; and
- 6) calculating the average MNE price for Humalog by applying the appropriate weights based on the current distribution of sales of vials and cartridges in Canada from November 11, 1996 to November 12, 1997.

**Schedule “A” (continued)**

Lilly sells insulin products to wholesalers in Canada and in the foreign countries. The prices of Humulin-R and Humalog prevailing in the foreign countries as of November 1, 1997 in local currencies, and the respective foreign ratios were:

Country	Vials 100/iu/mL, 10 mL			Cartridges 100/iu/mL, 7.5 mL		
	Humulin-R	Humalog	Ratio	Humulin-R	Humalog	Ratio
Sweden	99.8200	193.8000	94.1495%	89.7025	145.3500	62.0356%
UK	9.6100	13.7500	43.0801%	7.9900	11.7200	46.6834%
Germany	38.0760	55.3040	45.2463%	31.2713	41.7363	33.4652%
U.S.	16.530	21.8400	32.1234%	20.0900	26.2000	30.4131%
Switzerland	26.1100	31.3600	20.1072%	21.8900	26.2800	20.0548%
France	n/a	n/a	—	82.5800	95.5400	15.6939%
Italy	n/a	n/a	—	15 873.0000	21 014,0000	32.3883%

<b><u>Médian Ratios</u></b>	<b><u>43.0801%</u></b>	<b><u>32.3883%</u></b>
1997 ODB Price of Humulin-R	15.51 \$	16.08 \$
Proposed MNE prices for Humalog in 1997	22.1917 \$	21.2880 \$
Sales Ratio between Vials and Cartridges (November 1996 to November 1997)	49.76 %	50.24 %
1997 Weighted MNE price for Humalog		21.7377 \$
1998 CPI: 140.24/137.95*		1.017
1998 MNE Price		22.1072 \$

\* 1997 Forecast CPI figure