

BCIT Product Quality Initiative  
Expert Advisory Committee Meeting

February 18<sup>th</sup>, 2009  
Vancouver, British Columbia

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**2009 MEETING REPORT**

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Prepared by

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## I. INTRODUCTION

The Expert Advisory Committee (EAC) for BCIT's Lab Proficiency Program was first established as an *ad hoc* committee in 2000 to provide guidance and support to first pilot projects entitled the BC Laboratory Standardization Program and funded by the BC Ministry of Agriculture, Food & Fisheries. When the project continued in 2004 with funding from the BC Science Council and Health Canada, the EAC was formally established. The primary purpose of the new EAC was to establish a priority list of NHPs that would fit the criteria of BCIT's NHP Analytical Laboratory Proficiency Program. All EAC members made a commitment to the following terms;

Members of the EAC will

- a. guide and direct the project to ensure that the project achieves its objectives.
- b. assist in the dissemination of information and the approval of any necessary directional changes that have been submitted by the program director.
- c. review the prioritization listing to ensure that it is relevant with industry needs.

The EAC for the Lab Proficiency Program met in both 2004 and 2006 to meet the objectives of the research program. With funding from Nutrinet Canada, BCIT hosted the third meeting of the EAC on February 18<sup>th</sup>, 2009 at the Four Seasons Hotel in Vancouver, BC.

### In attendance

|                |                                                        |
|----------------|--------------------------------------------------------|
| Paula Brown    | BCIT (Project Manger)                                  |
| Sahail Shariff | BCIT (Facilitator)                                     |
| Hazrah Moothoo | BCIT (Program Coordinator)                             |
| Ann Eastman    | BC MAL & NHPRS (EAC Chair)                             |
| Steve Dentali  | AHPA (EAC Member)                                      |
| Greg Edgelow   | WCFN (EAC Member)                                      |
| Donna Fleury   | Alberta Agriculture Centre (EAC Member)                |
| Gordon Huie    | Natural Factors Nutritional Products Ltd. (EAC Member) |
| Frank Jaksch   | ChromaDex Inc. (EAC Member)                            |
| James Kababick | AOAC Committee K Member (EAC Member)                   |
| Connie Kehler  | NCHSN (EAC Member)                                     |
| Gary Leong     | Jamieson Laboratories (EAC Member)                     |
| Yuan Chu Ma    | Canadian Phytopharmaceuticals Corp. (EAC Member)       |

|                 |                                                  |
|-----------------|--------------------------------------------------|
| Robin Marles    | NHPD, Health Canada (EAC Member)                 |
| Mike Marocchi   | SISU (EAC Member)                                |
| Herbert Strobl  | BC Herb Growers Association (EAC Member)         |
| Anthony Windust | INMS, National Research Council (EAC Member)     |
| Wanda Wolf      | Lone Wolf Herbs; Sask. Herb & Spice (EAC Member) |

### **Regrets**

|             |                                  |
|-------------|----------------------------------|
| Anne Wilkie | Canadian Health Food Association |
|-------------|----------------------------------|

### **Observers**

|                   |                                                                 |
|-------------------|-----------------------------------------------------------------|
| Joseph Betz       | Office of Dietary Supplements, US National Institutes of Health |
| John Cardellina   | Office of Dietary Supplements, US National Institutes of Health |
| Jelena Dragoljic  | BC Institute of Technology                                      |
| Edward Fletcher   | Strategic Sourcing Inc.                                         |
| Ron Graham        | Wildlife Enforcement Division, Environment Canada               |
| De-An Guo         | Shanghai Research Center for TCM Modernization                  |
| Alister Muir      | Agriculture & Agri-Food Canada                                  |
| William Obermeyer | Consumerlabs.com                                                |
| G.N. Qazi         | Hamdard University, India                                       |
| Michael Quilliam  | Institute for Marine Biosciences, National Research Council     |
| Mitzi Rettinger   | Cerilliant                                                      |
| Brian Schaneberg  | MARS Botanical                                                  |
| Sidney Sudberg    | Alkemist Pharmaceuticals Inc.                                   |

## **II. MEETING OBJECTIVES**

Objectives of the meeting were to:

- Provide an overview of the Product Quality Initiative
- Re-prioritize NHP's for future program activity
- Discuss opportunities for partnership and funding

### III. PROGRAM UPDATE

Paula Brown provided a general overview of the Product Quality Initiative which included the historical background, project objectives and work plan. She then presented and discussed the specific objective of the meeting.

The following general challenges pertaining to the project were identified:

- Availability of botanical reference materials;
- Availability, cost and purity of Chemical reference materials;
- Participating laboratories' failure to follow protocol;
- Recruitment of laboratories with the capacity to participate;
- Funding requirements for the various grant program necessitates substantial reporting procedures and many programs have funding constraints and priorities which may or may not be in line with Industry objectives; and
- The need for sustainable funding support, including direct support and participation by industry.

The priority list (Appendix 1) compiled by AOAC International was presented to the EAC and reviewed by all the participants. Cumulatively, this list encompassed approximately 88 NHPs. The participants were asked to make suggestions for addition to the current list. The following NHP's were added to the master list:

Rhodiola

St. John's Wort

Devil's Club

Vitamin K

Blueberry

Blue green algae

*Caralluma fimbroides*

## IV. PRIORITIZATION PROCESS

The intended outcome of this process is to identify a list of candidate materials to consider for methods development & validation, reference material verification and laboratory proficiency. The EAC conducted four tiers of ranking of to identify a target list of NHPs.

### *Tier One*

Tier one was conducted in four steps:

1. Brainstorm a list of potential NHPs (utilizing the AOAC list as the starting point);
2. Assess each NHP utilizing a list of three criteria; and
3. For those NHPs meeting all three criteria, place them in three groupings in descending order of priority (the “A” list – high priority, the “B” list – of lesser priority, and the “C” list – of lesser priority than the “B” list);
4. Move the NHPs making the “A” list to Tier 2.

The three criteria utilized for assessment were:

- NHPs that are produced (grown, processed and/or manufactured) in Canada;
- Availability of reliable reference materials (plant material, chemical standards) and analytical methodologies; and
- Demand for testing and analytical support of the NHP.

The complete list of NHPs considered for prioritization are listed in Table 1 below.

**Table 1. Potential NHPs for Evaluation.**

| Complete List of NHPs conserved for Priority Ranking |                           |                               |
|------------------------------------------------------|---------------------------|-------------------------------|
| Acetyl-L-carnitine                                   | Cinnamon                  | Slippery Elm Bark             |
| Acai                                                 | Cocoa                     | Stevia glycosides             |
| Allicin (garlic)                                     | <i>Coleous forskohlii</i> | Taxine alkaloids              |
| Aloe                                                 | Creatine                  | Thujone (of Tansy & Wormwood) |
| Andrographis paniculata                              | Devil's claw              | Tryptophan (Peak E)           |
| Angelica/ Dong Quai                                  | Dragon's blood            | Turmeric (Curcumin)           |

|                                                            |                                                      |                                          |
|------------------------------------------------------------|------------------------------------------------------|------------------------------------------|
| Anthocyanins/ Cranberries                                  | Echinacea                                            | Valerian                                 |
| Ashwaganda ( <i>Withania somnifera</i> )                   | Eleuthero Root                                       | Vitamin D (D2, D3)                       |
| Astragalus                                                 | Elderberry                                           | Vitex                                    |
| Bacopa                                                     | English plantain leaf ( <i>Plantago lanceolata</i> ) | Willow Bark                              |
| Beta Glucans                                               | Epimedium                                            | Yohimbe                                  |
| Bilberry                                                   | <i>Eurycoma longifolia</i> Jack (Tongkat Ali)        | Vitamin K                                |
| Black Cohosh                                               | Fenugreek                                            | Rhodiola                                 |
| Boswellia                                                  | Feverfew                                             | Blueberry                                |
| <i>Cascara sagrada</i>                                     | Flaxseed lignans                                     | Cranberry                                |
| Chlorophyll                                                | <i>Fraximus excelsior</i>                            | St. John's Wort                          |
| Chromium salts (III)                                       | Garlic                                               | Devil's club                             |
| <i>Ganoderma lucidum</i>                                   | Mangosteen                                           | Blue green algae                         |
| <i>Garcinia atroviridis</i> ( <i>G. cambrosia</i> )        | Milk Thistle                                         | <i>Caralluma fimbrioides</i>             |
| Ginger                                                     | Noni                                                 | Slippery Elm Bark ( <i>Ulmus rubra</i> ) |
| Gotu kola                                                  | Olive Leaf                                           | Stevia glycosides                        |
| Grape Seed Extract-<br>Proanthocyanidines<br>(Polyphenols) | Omega-6                                              | Taxine alkaloids                         |
| Goji (wolfberry or <i>Lycium barbarum</i> )                | Oregano oil & caps                                   | Thujone (of Tansy & Wormwood)            |
| Guggul                                                     | Passionflower                                        | Tryptophan (Peak E)                      |
| <i>Gymnema sylvestre</i>                                   | Pau d'arco                                           | Turmeric (Curcumin)                      |

|                                   |                                                                         |                              |
|-----------------------------------|-------------------------------------------------------------------------|------------------------------|
| Green Tea                         | Phosphatidylserine/choline                                              | Valerian                     |
| Guarana                           | Phytosterols                                                            | Vitamin D (D2, D3)           |
| Hawthorn (Chinese)                | Pine Bark Extract<br>(Polyphenols; Pycnogenol)                          | Vitex                        |
| Hawthorn (English)                | Podophyllotoxins as well as<br>alpha- and Beta-peltatins of<br>Mayapple | Willow Bark                  |
| Hibiscus                          | Pomegranate                                                             | Yohimbe                      |
| Holy Basil                        | Pulegone of American &<br>European Pennyroyal                           | Vitamin K                    |
| <i>Hoodia gordonii</i> aerial     | Pygeum                                                                  | Rhodiola                     |
| Hops                              | Pyrrolizidine alkaloids                                                 | Blueberry                    |
| Kava                              | Quercetin (onion)                                                       | Cranberry                    |
| L-carnitine                       | Red Clover                                                              | St. John's Wort              |
| Licorice                          | Resveratrol (wine)                                                      | Devil's club                 |
| Congugated Linoleic acid<br>(CLA) | Skullcap (authentication)                                               | Blue green algae             |
| Maca                              | Skullcap/Germander<br>(Teucrin A)                                       | <i>Caralluma fimbrioides</i> |

Based on the expertise and knowledge of the participants, the NHPs not eliminated were broken into three lists (see Table 2 below). The “A” list – of highest priority – was then moved on to the next Tier for assessment.

Table 2. Priority List of Tier One Potential NHPs.

| "A" List                                 | "B" List                            | "C" List                                      |
|------------------------------------------|-------------------------------------|-----------------------------------------------|
| Allicin (garlic)                         | Acai                                | Chlorophyll                                   |
| Angelica/ Dong Quai                      | Aloe                                | Creatine                                      |
| Cranberries (anthocyanins)               | <i>Andrographis paniculata</i>      | Dragon's blood                                |
| Ashwaganda ( <i>Withania somnifera</i> ) | Bacopa                              | <i>Fraximuss-excelsior</i>                    |
| Astragalus                               | Beta-Glucans                        | <i>G. atroviridis</i> ( <i>G. cambrosia</i> ) |
| Bilberry (anthocyanins)                  |                                     | Hibiscus                                      |
| Black Cohosh                             | Boswellia                           | Hops                                          |
| Blueberry (anthocyanins)                 | <i>Cascara-sagrada</i>              | L-carnitine, acetyl carnitine                 |
| Chromium salts (III)                     | <i>Coleous forskohlii</i>           | Maca                                          |
| Cinnamon                                 | Devil's claw                        | Noni                                          |
| PACS (cocoa, grapeseed, cranberry, etc)  | Elderberry                          | Pau-d'arce                                    |
| Echinacea                                | English plantain leaf               | Phosphatidysérine/choline                     |
| Eleuthero Root                           | Epimedium                           | Phytosterols                                  |
| Fenugreek                                | Feverfew                            | Podophyllotoxins                              |
| Flaxseed (lignans)                       | Gotu kola                           | Pennyroyal                                    |
| Ganoderma lucidum                        | Goji                                | Quercetin (onion)                             |
| Ginger                                   | Guggul                              | Tryptophan (Peak E)                           |
| Green Tea                                | <i>Gymnema sylvestre</i>            | Yohimbe                                       |
| Guarana                                  | Holy Basil                          | Tribulus                                      |
| Hawthorn (Chinese/English)               | <i>Hoodia gordonii</i> aerial parts | <i>Caralluma fimbrioides</i>                  |
| Kava                                     | Mangosteen                          | <i>Eurycoma longifolia</i> Jack               |

|                               |                                           |  |
|-------------------------------|-------------------------------------------|--|
| Licorice                      | <del>Olive Leaf</del>                     |  |
| Milk Thistle                  | <del>Oregano oil &amp; caps</del>         |  |
| Omega-6                       | <del>Passionflower</del>                  |  |
| Pomegranate                   | <del>Pygeum</del>                         |  |
| Red Clover                    | <del>Pyrrolizidine alkaloids</del>        |  |
| Resveratrol                   | <del>Slippery Elm Bark</del>              |  |
| Stevia glycosides             | <del>Skullcap (authentication)</del>      |  |
| Turmeric (Curcumin)           | <del>Taxine alkaloids</del>               |  |
| Valerian                      | <del>Thujone (Tansy &amp; Wormwood)</del> |  |
| Vitamin D (D2, D3)            | <del>Vitex</del>                          |  |
| Rhodiola                      | <del>Willow Bark</del>                    |  |
| St. John's Wort               | <del>Blue green algae</del>               |  |
| Vitamin K                     | <del>Devil's Club</del>                   |  |
| Congugated Linolic Acid (CLA) |                                           |  |

### ***Tier Two***

The NHPs on the highest priority list from Tier One were then evaluated using the following four criteria:

1. NHP market demand/sales volume
2. Technical ease of analysis and AOAC method available
3. Authenticity, purity and safety concerns
4. Future industry priority and engagement for this NHP
5. Priority for Canada (including growers, manufacturers and government)

Under each criterion, values of 1-4 were assigned where four indicated the highest ranking and one the lowest. The scores were totaled to give an overall Tier Two ranking. NHPs scoring less than 20 were eliminated. Table 3 below provides an overview of the results.

**Table 3. Tier Two Rankings.**

| NHP                                      | 1        | 2        | 3        | 4        | 5        | TOTAL     |
|------------------------------------------|----------|----------|----------|----------|----------|-----------|
| Allicin (garlic)                         | 4        | 2        | 3        | 3        | 3        | 15        |
| Angelica/Dong Quai                       | 2        | 3        | 4        | 2        | 3        | 14        |
| <b>Cranberry (anthocyanins)</b>          | <b>5</b> | <b>2</b> | <b>4</b> | <b>5</b> | <b>5</b> | <b>21</b> |
| Ashwaganda ( <i>Withania somnifera</i> ) | 3        | 2        | 2        | 4        | 2        | 13        |
| Astragalus                               | 3        | 3        | 2        | 2        | 1        | 11        |
| <b>Bilberry</b>                          | <b>4</b> | <b>3</b> | <b>5</b> | <b>4</b> | <b>4</b> | <b>20</b> |
| <b>Black Cohosh</b>                      | <b>4</b> | <b>2</b> | <b>5</b> | <b>5</b> | <b>5</b> | <b>21</b> |
| <b>Blueberry (anthocyanins)</b>          | <b>4</b> | <b>3</b> | <b>4</b> | <b>4</b> | <b>5</b> | <b>20</b> |
| Chromium salts (III)                     | 3        | 2        | 4        | 4        | 3        | 16        |
| Cinnamon                                 | 3        | 2        | 3        | 3        | 2        | 13        |
| <b>PAC (cocoa, grapeseed, etc)</b>       | <b>5</b> | <b>2</b> | <b>3</b> | <b>5</b> | <b>5</b> | <b>20</b> |
| <b>Echinacea (phenolics)</b>             | <b>5</b> | <b>4</b> | <b>3</b> | <b>4</b> | <b>4</b> | <b>20</b> |
| Echinacea (alkylamides)                  | 5        | 2        | 3        | 4        | 4        | 18        |
| Eleuthero Root                           | 2        | 4        | 2        | 3        | 2        | 13        |
| Fenugreek                                | 3        | 4        | 1        | 3        | 3        | 14        |
| <b>Flaxseed (lignans)</b>                | <b>4</b> | <b>4</b> | <b>4</b> | <b>4</b> | <b>5</b> | <b>21</b> |
| <i>Ganoderma lucidum</i>                 | 4        | 1        | 2        | 4        | 4        | 15        |
| Ginger                                   | 3        | 4        | 2        | 3        | 2        | 14        |
| <b>Green Tea</b>                         | <b>5</b> | <b>4</b> | <b>3</b> | <b>4</b> | <b>4</b> | <b>20</b> |
| Guarana                                  | 4        | 3        | 4        | 4        | 3        | 18        |

|                          |   |   |   |   |   |    |
|--------------------------|---|---|---|---|---|----|
| Hawthorn                 | 3 | 3 | 4 | 2 | 5 | 17 |
| Kava-kava                | 2 | 4 | 5 | 3 | 3 | 17 |
| Licorice                 | 3 | 2 | 4 | 3 | 3 | 15 |
| Milk Thistle             | 3 | 4 | 2 | 3 | 4 | 16 |
| Omega-6                  | 5 | 4 | 3 | 4 | 5 | 21 |
| Pomegranate              | 4 | 4 | 5 | 4 | 3 | 20 |
| Red Clover               | 3 | 3 | 3 | 3 | 4 | 16 |
| Resveratrol              | 4 | 3 | 2 | 4 | 4 | 17 |
| Stevia glycosides        | 5 | 4 | 3 | 4 | 4 | 20 |
| Turmeric (Curcumin)      | 4 | 4 | 3 | 4 | 4 | 19 |
| Valerian                 | 3 | 3 | 4 | 3 | 3 | 16 |
| Vitamin D (D2, D3)       | 5 | 1 | 4 | 5 | 5 | 20 |
| Rhodiola                 | 3 | 3 | 2 | 3 | 5 | 16 |
| St. John's Wort          | 3 | 2 | 3 | 2 | 3 | 13 |
| Vitamin K                | 5 | 2 | 3 | 5 | 4 | 19 |
| Conjugated Linoleic Acid | 4 | 3 | 4 | 4 | 4 | 19 |

The Top 12 NHPs moved to Tier Three for evaluation were:

- Bilberry (anthocyanins)
- Black Cohosh (quantify triterpene glycosides of *Actaea racemosa*)
- Blueberry (anthocyanins)
- Cranberry (anthocyanins)
- Echinacea (i.e. phenolics)
- Flaxseed (i.e. lignans)

- Green Tea
- Omega fatty acids (unconjugated type)
- PACs (Various Sources)
- Pomegranate
- Stevia glycosides
- Vitamin D (D2, D3)

***Tier Three***

The 12 remaining NHPs were ranked comparatively on a scale of 1 to 4 for each of the Tier Three criteria, where a score of 4 indicated the highest ranking and 1 the lowest. Although the rankings were deemed relatively close, the EAC focused on the top 5 NHPs with the highest ranking.

The Tier Three criteria are listed as follows:

1. Availability of robust analytical methods and difficulty of method
2. Availability of reference material
3. Cost constraints (samples, reference materials, methods, human resources)
4. Challenge for the laboratory (but must be achievable to assess)

Table 4 below provides an overview of the scoring of Tier Three based on the three criteria.

**Table 4. Tier Three Rankings.**

| NHP's                                                  | 1 | 2 | 3 | 4 | TOTAL |
|--------------------------------------------------------|---|---|---|---|-------|
| Bilberry fruit (anthocyanins)                          | 3 | 2 | 2 | 3 | 10    |
| Black Cohosh (quantification of triterpene glycosides) | 3 | 4 | 3 | 3 | 13    |
| Blueberries (anthocyanins)                             | 3 | 2 | 2 | 3 | 10    |
| Cranberries (anthocyanins)                             | 4 | 3 | 3 | 4 | 14    |
| Echinacea (i.e. phenolics)                             | 4 | 4 | 3 | 4 | 15    |
| Flaxseed (i.e. lignans)                                | 4 | 4 | 3 | 4 | 15    |

|                                       |          |          |          |          |           |
|---------------------------------------|----------|----------|----------|----------|-----------|
| <b>Green Tea</b>                      | <b>4</b> | <b>4</b> | <b>3</b> | <b>4</b> | <b>15</b> |
| Omega fatty acids (unconjugated type) | 4        | 2        | 2        | 4        | 12        |
| PAC (Cocoa, grapeseed, etc.)          | 2        | 4        | 2        | 2        | 7         |
| <b>Pomegranate</b>                    | <b>4</b> | <b>4</b> | <b>4</b> | <b>4</b> | <b>16</b> |
| Stevia glycosides                     | 3        | 3        | 2        | 3        | 11        |
| Vitamin D (D2, D3)                    | 4        | 4        | 4        | 2        | 8         |

#### ***Tier Four***

The Ingredients receiving a ranking of under 10 from the Tier 3 ranking were removed from consideration. After this exercise an open round table discussion ensued to try and achieve consensus on the top 5 NHP's to be considered for future methods validation and laboratory proficiency exercises.

The following factors were discussed with respect to choosing the top 5 NHP's:

- Laboratories are already committed to testing the NHP.
- Technicians have experience with it; it is achievable in a collaborative study; technically feasible in a collaborative study.
- It is important to B.C. and Canada
- The industry requires the method for survival; high impact factor.

The discussions then focused on the above consideration and ingredients were subsequently assigned a value ranging from 1 (low) to 5 (high). The Tier Four rankings were conducted based on consensus that some ingredients had a higher ranking based on scientific interest rather than demand for the method & testing and overall impact to Industry.

**Table 5. Tier Four Rankings.**

| <b>NHP's</b>        | <b>Lab Interest</b> | <b>Feasibility</b> | <b>Importance</b> | <b>Impact</b> | <b>TOTAL</b> |
|---------------------|---------------------|--------------------|-------------------|---------------|--------------|
| <b>Bilberry</b>     | <b>5</b>            | <b>3</b>           | <b>3</b>          | <b>5</b>      | <b>16</b>    |
| <b>Black Cohosh</b> | <b>5</b>            | <b>3</b>           | <b>3</b>          | <b>5</b>      | <b>16</b>    |
| <b>Blueberries</b>  | <b>3</b>            | <b>3</b>           | <b>5</b>          | <b>4</b>      | <b>15</b>    |

|             |   |   |   |   |    |
|-------------|---|---|---|---|----|
| Cranberries | 5 | 4 | 5 | 4 | 18 |
| Echinacea   | 5 | 5 | 5 | 3 | 18 |
| Flaxseed    | 3 | 4 | 5 | 3 | 15 |
| Green Tea   | 5 | 5 | 3 | 3 | 16 |
| Omegas      | 3 | 4 | 5 | 3 | 15 |
| Pomegranate | 4 | 4 | 3 | 2 | 10 |
| Stevia      | 3 | 3 | 4 | 3 | 13 |

### *Tier Five*

Tier 4 prioritization eliminated from consideration Pomegranate and Stevia glycosides. The remaining 8 ranked ingredients fell into three categories as follows:

Rank 1 – Cranberries (anthocyanins), Echinacea (phenolics)

Rank 2 – Bilberry (anthocyanins), Black Cohosh (triterpene glycosides), Green tea (catechins)

Rank 3 – Flaxseed (lignans), Blueberries (anthocyanins), Omega fatty acids (unconjugated)

Rather than eliminate any of the remaining 8 ingredients it was decided that until funding had been secured the list would remain intact. It is recognized that the source of the funding, whether from Industry, Provincial, Federal or even foreign will have an impact on how the remaining ingredients are considered. The Tier 5 Ingredients are listed below along with a summary of the specific considerations given during discussions for each one.

**Bilberry** (anthocyanins) – detection of adulteration, quality control, popular consumer product

**Black Cohosh** (triterpene glycosides) – detection of adulteration, quality control, safety considerations

**Blueberry** (anthocyanins) – Canadian crop, detection of adulteration, quality control, new product development

**Cranberry** (anthocyanins) - quality control, strong research focus, SLV complete

**Echinacea** (phenolics) – Canadian crop, popular product, SLV complete

**Flaxseed** (lignans) – Canadian crop, product differentiation, SLV complete

**Green Tea** (catechins) – Research Focus, popular product, currently SLV

**Omega fatty acids** – Public health interest, Canadian source

## V. NEXT STEPS

After the completion of this NHP re-prioritization exercise, the group discussed potential opportunities for partnership and funding to further this initiative. Some of the possible solutions identified are as follows:

**Issue:** Funding support from industry

**Solution(s):**

Four potential funding options were identified to continue this initiative:

1. ***Leverage fees from contract laboratories:*** In the interest of training, Contract Laboratories may contribute funds as participation fees to support collaborative studies and Laboratory proficiency. Participation fees for the Lab Proficiency/QC testing had previously been identified as a source of funding. The time commitment contributed by each participating laboratory in a collaborative study should be considered as an in-kind contribution.
2. ***The growing forward program:*** The new Canadian policy framework for agriculture and agri-food, **Growing Forward**, includes federal programming for the development of Science Clusters. These industry-lead, national research networks will support applied research to address key industry issues. Programming has not yet been announced; however, information sessions have indicated potentially 8-10 clusters could be funded based on key commodity areas, e.g. oilseeds. Industry and researchers have brought forth the idea of a proposal for a Health and Wellness Science cluster. The evolution of the Product Quality Initiative into a component of a Health and Wellness Science cluster strongly resonated with industry stakeholders and could be key for providing the bridge from government financial support to a largely industry-funded longer term program envisioned in the Product Quality business case.
3. ***Partnering with a standard's company:*** The program could partner with a standards company that would be the distributor and potentially supplier of the requisite reference materials to support the SLV and collaborative study. If the chemical calibrants were not readily available or only as a reagent grade chemical, the process of isolating and/or verifying the material adds value to the material for the partner standards company. The challenge is to align the company needs with the program needs.

4. ***Methods training course:*** Consider running a methods training course to generate revenue as an educational component of the program. Various Industry Associations are currently offering webinars and training workshops, so the educational product would have to be differentiated from existing offerings. Possible Industry groups would be interested in partnering to support course development if content of great value to members.
5. ***Central repository of information:*** A central repository of information is considered a huge benefit to Industry who is unlikely to have access to scientific journals. A few of the Associations present suggested they would be interested in creating a place for the information on their web-site. It is unclear how this would generate revenue. One suggested model would be to create a central repository and have access limited to paying customers/partners.

**The discussion concluded on the following points:**

- The EAC agreed on the need and value of such a program to the NHP sector;
- Members agreed to look into possible funding and partnership opportunities for the program and report back to the committee.

## Product Quality Initiative Workshop

February 18, 2009

Vancouver, British Columbia, Canada

**Please complete this evaluation form to help us improve future events.**

1. I represent (Please select the category that best describes your area):

- |                                                       |                                                                          |
|-------------------------------------------------------|--------------------------------------------------------------------------|
| <input type="checkbox"/> Research and development     | <input type="checkbox"/> Technology development                          |
| <input type="checkbox"/> Manufacturer of ingredients  | <input type="checkbox"/> Manufacturer of consumer ready products         |
| <input type="checkbox"/> Wholesaler/distributor       | <input type="checkbox"/> Service provider – e.g. contract manufacturing, |
| <input type="checkbox"/> Industry associations        | <input type="checkbox"/> Government agency                               |
| <input type="checkbox"/> Other (please specify) _____ |                                                                          |

2. Please check the appropriate boxes:

| Evaluation Key              | Poor | Average | Good | Very Good | Comments |
|-----------------------------|------|---------|------|-----------|----------|
| Program Content             |      |         |      |           |          |
| Structure & Length          |      |         |      |           |          |
| Relevance to your work      |      |         |      |           |          |
| Met Expectations            |      |         |      |           |          |
| Seminar Facilities/Location |      |         |      |           |          |

3. Did you see value in this meeting? (Please circle one) YES NO NEUTRAL

4. If there was one thing you would do to improve this event – what would it be?

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(To continue comments, please use on the other side)

**Product Quality Initiative Workshop – Evaluation Summary**  
**February 18, 2009, Vancouver, British Columbia, Canada**

1. I represent (Please select the category that best describes your area):

- 4 Research and development**
- 1 Manufacturer of ingredients**
- 1 Wholesaler/distributor**
- 2 Industry associations**
- 3 Manufacturer of consumer ready products**
- 1 Service provider**
- 4 Government agency**

2. Please check the appropriate boxes:

| <b>Evaluation Key</b>       | <b>Poor</b> | <b>Average</b> | <b>Good</b> | <b>Very Good</b> | <b>Comments</b>               |
|-----------------------------|-------------|----------------|-------------|------------------|-------------------------------|
| Program Content             |             | <b>1</b>       | <b>9</b>    | <b>6</b>         | -some not applicable          |
| Structure & Length          | <b>1</b>    | <b>3</b>       | <b>7</b>    | <b>5</b>         | -too long<br>-not on schedule |
| Relevance to your work      | <b>1</b>    | <b>3</b>       | <b>3</b>    | <b>9</b>         | -very relevant                |
| Met Expectations            |             | <b>1</b>       | <b>10</b>   | <b>5</b>         |                               |
| Seminar Facilities/Location |             |                | <b>4</b>    | <b>12</b>        | -excellent                    |

3. Did you see value in this meeting? **15/16-YES**                      **0/16-NO**                      **1/16-NEUTRAL**

4. If there was one thing you would do to improve this event – what would it be?

- Focus on one meeting objective for clarity
- More active facilitation to keep timelines
- Better moderation of time
- Provide background information in advance of meeting
- Improve meeting efficiency of discussion by providing information ahead of time
- Provide pre-meeting homework
- Have access to market volumes
- Work towards a larger network of researchers focused on methods & materials; more than up to 5 plants per year needs to be done.
- No, very Informative session