ᒪᓯᓇᖅᐃᑲᓐ ᕿ ᐊᔾᒥᖅᑖᑦᑖᑦᑐ ᑲᓴ ᕿ ᓱᐳᖅᑐᑦᐁᐸᔾᖅᑖᑦᑖᑦᑐ ᒋᖓᐃᓄᒃ (ᒥᑦᑎᓯᓐᑐ ᑲᓴ ᑦᐋᐸᒣᑯᓐᑐᐃ)
ᒥᓯᓂᖅᐃᑭᓐ ᒫ ᐊᔾᒥᖅᑖᒃ ᑭᒃᑐ ᒫ ᓱᐳᖅᑐᑦᐋᐱᔾᖅᑖᒃ ᒋᓱᔾᔾᐅᒃ (ᒥᑦᑎᓯᓐᑐ ᑭᒃᑐ ᑦᐋᐱᒫᑯᓐᑐᐃ)

Publication to be reviewed and approved by Elders (Mistissini and Whapmagoostui)

CIHR Team in Aboriginal Anti-Diabetic Medicines
Équipe IRSC sur les médecines autochtones antidiabétiques

ᑦᐃᓴᒋᒥᓇᓐᖅ ᐁ ᑦᐃᒋᖅᐃᑦᐁᐸᔾᖅᑦᑲᓐᖅ ᕿ ᒋ ᒫᑦᒋᖅᑕᑲᓄᑦᐃᖅᒃ ᐁ ᑕᖅᒋᐳᓇᓄᑦᐃᖅᒃ ᑲᓴ ᐁ ᑦᑦᐊᑲᒥᖅᑦᑲᓄᑦᐃᖅᒃ: ᑲ ᐃᑦ ᒥᔾᑲᑲᓄᑦᐃᖅᒃ ᐁ ᓂᑑᒋᔾᕿᔾᔾᒫᑲᓄᑦᑖᓐ ᐊᐱᑯᑦᑦᒃ*
ᑦᐃᓯᒋᒥᓐᖅ ᐊ ᑦᐃᒋᖅᐃᑦᐊᐱᔾᖅᒃ ᒫ ᒋ ᒫᑦᒋᖅᑕᑭᓂᑦᐃᒃ ᐊ ᑕᖅᒋᐳᓇᓂᑦᐃᒃ ᑭᒃᑐ ᐊ ᑦᑦᐊᑭᒥᖅᑦᑲᓂᑦᐃᒃ: ᑲ ᐃᑦ ᒥᔾᑭᑭᓂᑦᐃᒃ ᐊ ᓂᑑᒋᔾᒫᔾᔾᒪᑭᓂᑦᐃᒃ ᐊᐱᑯᑦᑦᒃ*

Lowbush cranberries as a way to fight weight and diabetes: Results from some studies on mice*

* ᐅᐅᑯ ᐆᐅ ᐊᐱᑦᑦᔅ ᐅ ᒪᓯᓇᒐᒃ ᑎᐸᒋᒧᓯᓇᖅᐃᑲᓐ ᐅᖅᒋ ᐊᓐ ᐅᑎᑑ ᒥᔅᑕᖅᐃ ᐅ ᒪᓯᓇᒐᒃ ᑎᐸᒋᒧᓯᓇᖅᐃᑲᓂᔫ ᑲ ᒪᓯᓇᖅᐊᖅᑦᑲᓐ "ᐅᑖ ᐃᑦ, ᐊᓐᑐᑦᐊᓐ ᐱᑦᑫᓐ, ᕿᑦ ᑦᑖᓐ, ᒣᒪᔾᒪ ᐅᔅᐳᓐ, ᑖᑦᓐ ᑦᑖᓐᑫᓐ, ᑦᑎᓐ ᐊᑦᓇᓯᓐ, ᑫᓇ ᓱᑦᐃᓃ, ᑲᓴ ᐱᓴᑦ "ᐊᑖᑦ, ᐅᔫᑯ ᐊᓂᔫ "Vaccinium vitis-idaea) ᑲ ᐃᑦᓂᖅᑲᑐᔾᖅ (ᑲ ᒪᓯᓂᖅᐃᑲᓄᑦᐃᖅᒃ ᑦᑦᐸᐱᓯᒪ 6, 2010ₓ)
* ᐊᐅᑯ ᐆᐅ ᐊᐱᑦᑦᔅ ᐊ ᒥᓯᓇᑖᒃ ᑎᐸᒋᒧᓯᓂᖅᐃᑭᓐ ᐅᖅᒋ ᐊᓐ ᐊᑎᑑ ᒥᔅᑎ ᐊ ᒥᓯᓇᑖᒃ ᑎᐸᒋᒧᓯᓂᖅᐃᑭᓂᔾᔾᐅ ᑲ ᒥᓯᓂᖅᐊᖅᑦᑲᓐ "ᐅᑖ ᐃᑦ, ᐊᓐᑐᑦᐊᓐ ᐱᑦᑫᓐ, ᕿᑦ ᑦᑖᓐ, ᒣᒪᔾᒪ ᐅᔅᐳᓐ, ᑖᑦᓐ ᑦᑖᓐᑫᓐ, ᑦᑎᓐ ᐊᑦᓇᓯᓐ, ᑫᓇ ᓱᑦᐃᓃ, ᑭᒃ ᐱᓴᑦ "ᐊᑖᑦ, ᐊᔫᑦᐃᑯ ᐊᓂᔭ "Vaccinium vitis-idaea) ᑲ ᐃᑦᓂᖅᑲᑖᔾᖅ (ᑲ ᒥᓯᓂᖅᐃᑭᓂᑦᐃᒃ ᓂᔾᒋᐱᓯᒧ 6, 2010ₓ)
* This is a plain-language summary of a more technical article by Hoda Eid, Antoine Brault, Farah Thong, Merieum Ouchfoun, Diane Vallerand, John Arnason, Gary Sweeney, and Pierre Haddad, called "Vaccinium vitis-idaea, a medicinal plant of the Eastern James Bay Cree, mobilizes L6 muscle Glut4 transporters and exerts anti-obesity and antidiabetic effets in vivo." (Version of April 6, 2010.)

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Cree Board of Health and Social Services of James Bay

ᑲ ᓂᓯᑐᖅᑖᑯᖅᑖᑦ ᑎᐸᒋᒧᓯᓇᖅᐃᑲᓐ: **ᐅᓕᓐ ᐊᐆᐅᑦ**
Plain-language summaries: **Ellen Bobet**
ᐃᔾᔾᓐ/ᐃᓄᒃ ᐃᑦᑖᖅᑎᒫᒐᓯᓐ: **ᐱᕿᔾᔾᓐ ᐊᐅᑦ**
Cree translations: **Brian Webb**
ᒥᓯᓇᐱᔾᑭᖅᐃᑭᓐ: **ᐋᓗᐃᓐ ᑰᓇᔭᕿ**
Photos: **Alain Cuerrier**
ᑲ ᒥᔪᓇᑯᖅᑖᑦ ᒥᓯᓂᖅᐃᑭᓂᔾᔾᐅ: **ᑲᑎᔭ ᐯᑦᕿᕝ**
Design and page layout: **Katya Petrov**

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ᓱᓱᐸᐃᓯᒪ 16, 2010

ᐅᐃᓴᒋᒥᓈᓐᑎ ᐁ ᐅᐃᒋᑎᐃᐅᐁᐸᓕᑦᑏᑦᑎ ᑐ ᑏ ᒫᓂᑎᑖᑲᓄᐅᑦᑎᒃ ᐁ ᑖᑎᒋᐳᓈᓄᐅᑦᑎᒃ ᑲᔪ ᐁ ᓱᐅᒃᑎᑦᑏᓄᐅᑦᑎᒃ:

ᑏ ᐃᓱ ᒥᑦᑲᑲᓄᐅᑦᑎᒃ ᐁ ᓂᑑᒋᔅᑐᓕᐅᒫᑲᓅᐅᑖᑦᑏᑦᑎᒃ ᐊᐱᑯᓱᓱᒃ*

ᓅᔅᑕᒪ ᐁ ᐅᑦᑖᑯᑦᑎᒃ

ᐆ ᐁ ᐃᓱ ᓂᑑᒋᔅᑐᓕᑦᑖᑲᓄᐅᑦᑎᒃ, ᐁᐅᑯ ᒋᓐ ᐁ ᐱᒥᐸᓕᑦᑎᒃ ᐁ ᓂᑑᒋᔅᑐᓕᑦᑕᒫᑦᑎᒃ ᐅᐃᓴᒋᒥᓈᓐᑎ, ᐁᐅᑯ ᐊᓐ ᐁ ᓂᑑᒋᔅᑐᓕᑦᑕᒫᑦᑎᒃ ᑖᓐ ᐁ ᐃᓱ ᐊᐸᑎᓯᒪᑲᑦᑎᒃ ᐊᓂᒐ ᐊᐅᑦᑏᓱᑦᑎᒃ ᐁ ᐃᓄᑦᑖᓐ ᐊᓂᒐ ᐅᐊᐱᑐᑯᔅᑐᑦᑎᒃ ᐁ ᒋᑦ ᒫᐅᑦᑐᓇᒫᑦᑎᒃ ᐅᐃᓴᒋᒥᓈᓐᑎ ᓂᒋᑦ ᐊᐸᒋᑦᑖᓈᓐᓵ

ᐊᓐ ᓅᔅᑕᒪ ᑲ ᓂᑑᒋᔅᑐᓕᑦᑕᒫᑦᑎᒃ ᐅᐁᑯ ᑲ ᐅᑦᑕᒫᑯᔭᑦᑎᒃ:

- ᐊᓂᔫᑦᑎᒃ ᐅᐃᓴᒋᒥᓈᓐᑎ ᐁ ᐅᐃᒋᑎᐃᐅᐁᐸᓕᑦᑏᑦᑎᒃ ᓅᑦᑖᑦᑎᒃ ᑐ ᑏ ᐃᔅᐸᓕᑦᑎᒃ ᓱᑲᓐ ᐊᓂᑦ ᒥᑦᑯᑦᑎᒃ (ᐁᐅᑯ ᐊᓐ ᐅᔭᑲᓂᓱᑦᑎᒃ ᐁ ᒋᑦ ᐅᑦᒋ ᓂᑑᒋᔅᑐᓕᑦᑖᑲᓄᐅᑦᑎᒃ)ᓵ
- ᐊᓐ ᑐᑦᑲᓐ ᐁ ᓂᑐᑦᑯᓱᓄᐅᑦᑎᒃ ᐊᓂᑦ ᐅᐃᓴᒋᒥᓈᓂᑦᑎᒃ, ᐁᐅᑯ ᐊᓐ ᑭᔅᓴᑎᓐ ᑲ ᐃᓱᓂᑦᑎᒃᑐᒃ, ᐊᓐ ᒫᒃ ᓂᑐᑦᑯᓱᓐ ᐊᓂᑦ ᐁ ᐅᑦᒋ ᐅᓱᑦᑖᑲᓄᐅᑦᑎᒃᓵ (ᐁᔫᑯ ᓵᔅ ᑲ ᒥᔅᑭᑦᑎᒃᑲᓐ ᐊᓂᑦ ᑯᑕᑲᒃ ᐊᑦᐁᓂᑦ ᐁ ᐃᑖᐸᑎᓯᒪᑦᑎᒃ ᐁ ᓂᑑᒋᔅᑐᓕᑦᑕᑦᑎᒃᑲᓐ ᓂᑐᑦᑯᓱᓂᔫᑦ ᐊᓂᔫᑦ ᑭᔅᓴᑎᓐ ᑲ ᐃᓱᓂᑦᑎᒃᑐᓱᒃ ᓂᑐᑦᑯᓱᓂᔫᑦᑎᒃᓵ ᐅᐁᑯ ᐁ ᐅᑦᒋᑦᑎᒃᐃᑦᑎᒃ ᐆ ᑐ ᑏ ᒋᔅᑐᓕᑦᑕᑦᑎᒃᑲᓄᐅᑦᑎᒃ, ᐁᐅᓯᓐ ᓵᔅ ᑲ ᓂᑑᒋᔅᑐᓕᑦᑕᑦᑎᒃᑲᓐ ᑯᑕᑲᒃ ᐊᐁᐅᓂᑏ ᐁ ᐃᑖᐸᑎᓯᒪᑦᑎᒃ ᐁ ᓂᑑᒋᔅᑐᓕᑦᑕᑦᑎᒃᑲᓐ ᐊᓂᔫᑦ ᑭᔅᓴᑎᓐ ᑲ ᐃᓱᓂᑦᑎᒃᑐᓱᒃ ᓂᑐᑦᑯᓱᓂᔫᑦᑎᒃᓵ ᐁᔫᑯ ᑲ ᒥᔅᑭᑦᑎᒃᑲᓐ ᐁ ᐅᑦᑕᒫᑯᔭᑦᑎᒃ ᐊᐁᐅᓂᑏᑦ ᐁᑲᒃ ᑐ ᑏ ᒪᒋᐸᓕᑦᑎᒃᐃᑦᑎᒃ ᐁ ᓱᓐᐊᑲᒥᑦᑎᒃᑲᓄᐅᑦᑎᒃᓵ)
- ᐊᓐ ᐅᐃᓴᒋᒥᓈᓐ, ᐁᐅᑯ ᐁ ᐅᑦᒋᑦᑎᒃᐃᐁᐸᓕᑦᑎᒃ ᐊᓂᒐ ᐅᐃᔭᓂᑦᑎᒃ ᐅᑦᑎᒃ ᐁ ᐃᒐᓕᑦᑕᒧᒪᑲᑦᑎᒃ ᐁ ᓅᑦᑎᐸᓕᑦᑎᒃ ᓅᑦᑎᒃᓵ ᐁᑯ ᒫᒃ ᐁᑎᑑ ᒥᔅᑕᑦᑎᐃ ᐁ ᐃᑦᑎᐸᓕᑦᑎᒃ ᓅᑦᑎᒃᓵ ᐊᓂᒐ ᐅᑎᓂᑦᑎᐸᓕᑦᑎᒃ ᐊᓂᑦ ᒥᑦᑯᑦᑎᒃᓵ ᐁᐅᑯ ᒫᒃ ᐆ ᐁ ᒥᔭᒃ ᑐ ᑏ ᐃᔅᐸᓕᑦᑎᒃ ᐁ ᓱᓐᐊᑲᒥᑦᑎᒃᑲᓄᐅᑦᑎᒃᓵ

ᓱᓱᐸᐃᓯᒪ 16, 2010

ᐅᐃᓯᒋᒥᓈᑦᑎ ᐊ ᐅᐃᒋᑎᐃᐊᐱᐅᒃᑎ ᒫ ᑏ ᒫᓂᑎᑖᑭᓂᐅᒃ ᐊ ᑖᑎᒋᐳᓈᓂᐅᒃ ᑭᔭ ᐊ ᓱᐊᑭᒥᑦᑎᒃᑲᓂᐅᒃ:

ᑏ ᐃᓱ ᒥᑦᑭᑭᓂᐅᒃ ᐊ ᓂᑑᒋᔅᑐᓕᒫᑭᓂᐅᒃ ᐊᐱᑯᓱᓱᒃ*

ᓅᔅᑎᒪ ᐊ ᐅᑦᑖᑯᑦᑎᒃ

ᐆ ᐊ ᐃᓱ ᓂᑑᒋᔅᑐᓕᑦᑖᑭᓂᐅᒃ, ᐊᐅᑯ ᒋᓐ ᐊ ᐱᒥᐱᐅᒃ ᐊ ᓂᑑᒋᔅᑐᓕᑦᑎᒫᑦᑎᒃ ᐅᐃᓯᒋᒥᓈᑦᑎ, ᐊᐅᑯ ᐊᓐ ᐊ ᓂᑑᒋᔅᑐᓕᑦᑎᒫᑦᑎᒃ ᑖᓐ ᐊ ᐃᓱ ᐊᐱᑎᓯᒥᑭᑦᑎᒃ ᐊᓂᑖ ᐊᐊᑭᓱᑦᑎᒃ ᐊ ᐃᓅᐅᐅᐅᓂᒃ ᐊᓂᑖ ᐊᐱᒫᑯᔭᑦᑎᒃ ᐊ ᒋᑦ ᒫᐅᑦᑐᓂᒫᑦᑎᒃ ᐅᐃᓯᒋᒥᓈᑦᑎ ᓂᒋᑦ ᐊᐱᒋᑦᑖᓈᓐᓵ

ᐊᓐ ᓅᔅᑎᒪ ᑲ ᓂᑑᒋᔅᑐᓕᑦᑎᒫᑦᑎᒃ ᐊᐅᑯ ᑲ ᐃᑦᑎᒫᑯᔭᑦᑎᒃ:

- ᐊᓂᑦᐃ ᐅᐃᓯᒋᒥᓈᑦᑎ ᐊ ᐅᐃᒋᑎᐃᐊᐱᐅᒃᑎ ᓅᑦᑖᑦᑎᒃ ᒫ ᑏ ᐃᔅᐱᐅᒃᑎ ᓱᑲᓐ ᐊᓂᑦ ᒥᑦᑯᑦᑎᒃ (ᐊᐅᑯ ᐊᓐ ᐅᔭᑭᓂᓱᑦᑎᒃ ᐊ ᒋᑦ ᐅᑦᒋ ᓂᑑᒋᔅᑐᓕᑦᑖᑭᓂᐅᒃᑎᒃᓵ
- ᐊᓐ ᒫᒃᑲᓐ ᐊ ᓂᑐᑦᑯᓱᐅᓂᐅᒃ ᐊᓂᑦ ᐅᐃᓯᒋᒥᓂᑦᑎᒃ, ᐊᐅᑯ ᐊᓐ ᑭᔅᓴᑎᓐ ᑲ ᐃᓱᓂᑦᑎᒃᑖᒃ, ᐊᓐ ᒫᒃ ᓂᑐᑦᑯᓱᓐ ᐊᓂᑦ ᐊ ᐅᑦᒋ ᐅᓱᑦᑖᑭᓂᐅᒃᑎᒃᓵ (ᐊᔫᐅᐅᐅᓂᑏ ᓵᔅ ᑲ ᒥᔅᑭᑦᑎᒃ ᐊᓂᑦ ᑯᑎᑭᒃ ᐊᐅᐅᓂᑦ ᐊᐅᐅᓂᑦᑎᒃᑖᒃ ᐊᓂᔭ ᑭᔅᓴᑎᓐ ᑲ ᐃᓱᓂᑦᑎᒃᑖᐅᒃ ᓂᑐᑦᑯᓱᓂᐅᒃᓵ ᐊᐅᑯ ᐊ ᐃᓱᒋᑦᑎᒃᐃᐊᐱᐅᒃ ᐅ ᒫ ᑏ ᒋᔅᒫᐅᒃᑎᒃᑖᑭᓂᐅᒃᑎᒃᓵ ᐊᔫᐅᐅᓂᑏ ᐊᐅᑦᑖᒃ ᒫ ᑏ ᒥᑦᒋᐱᐅᒃᑎᒃᐃᑯᐅᒃᑎᒃ ᐊ ᓱᓐᐊᑭᒥᑦᑎᒃᑲᓂᐅᒃᑎᒃᓵ)
- ᐊᓐ ᐅᐃᓯᒋᒥᓈᓐ, ᐊᐅᑯ ᐊ ᐅᑦᒋᑦᑎᒃᐃᐊᐱᐅᒃᑎᒃ ᐊᓂᑖ ᓴᐱᐅᑖᓂᑦᑎᒃ ᒧᔭᒪ ᐊ ᐃᑖᐅᑦᑎᒧᒥᑭᑦᑎᒃ ᐊ ᓅᑦᑖᐱᐅᒃᑎᒃ ᓱᑲᓐᓵ ᐊᑯ ᒫᒃ ᐊᑎᑑ ᒥᔅᑭᑦᑎᒃ ᐊ ᐱᑦᑎᑖᐱᐅᒃᑎᒃ ᓱᑲᓐ ᐊᓂᑖ ᓴᐱᐅᑖᓂᑦᑎᒃ ᐊ ᐅᑎᓂᒫᐱᐅᒃᑎᒃ ᐊᓂᑦ ᒥᑦᑯᑦᑎᒃᓵ ᐊᐅᑯ ᒫᒃ ᓅᑦᑖᑦᑎᒃ ᐊ ᐃᔅᐱᐅᒃᑎᒃ ᓱᑲᓐ ᐊᓂᑦ ᒥᑦᑯᑦᑎᒃ, ᐊᐅᑯ ᒫᒃ ᐆ ᐊ ᒥᔭᒃ ᒫ ᑏ ᐃᔅᐱᐅᒃᑎᒃ ᐊ ᓱᓐᐊᑭᒥᑦᑎᒃᑲᓂᐅᒃᑎᒃᓵ

April 16, 2010

Lowbush cranberries as a way to fight weight and diabetes: Results from some studies on mice *

Background

This study continues our work on lowbush cranberry, by looking at how it works in live animals. We used lowbush cranberries collected from around Whapmagoostui.

Our previous studies† had told us:

- That lowbush cranberries held promise for lowering blood sugar levels (based on lab tests).
- That the "active" ingredients in the berries are something called quercetin, and its spin-off products. (It helped to know this, because other scientists had already looked at quercitin. They had found that it has anti-diabetic effects in animals.)

† ᐅᐁᑯ ᒫ ᐊᐸᑦᑕᒥᑯ ᐊᓂᔫᑦ ᑎᐸᒋᒨᓯᓇᑦᑕᑲᓐ "ᑖᓐ ᐁ ᐃᓱ ᐅᑦᒋᑎᐃᐅᐁᐸᓕᑦᑎᒃ ᐅᐃᓴᒋᒥᓈᓐᑎ ᓅᑦᑖᑦᑎᒃ ᒫ ᑏ ᐃᔅᐸᓕᑦᑎᒃ ᓱᑲᓐ ᐊᓂᑦ ᒥᑦᑯᑦᑎᒃ" ᑲᔪ "ᑖᓐ ᐁ ᐃᓱ ᐅᑦᒋᑎᐃᐅᐁᐸᓕᑦᑎᒃᓵ ᓂᑦᑖᐅᒋᑦᑎᒋᑲᓐᑎᒃ ᐁ ᓂᑑᒋᔅᑐᓕᑦᑎᒃᐃᑦᑎᒃᓵ ᐊᓂᔫ ᓅᑦᑖᑦᑎᒃ ᒫ ᑏ ᐃᔅᐸᓕᑦᑎᒃ ᓱᑲᓐ ᐊᓂᑦ ᒥᑦᑯᑦᑎᒃ" ᑲ ᐃᓱᓂᑦᑎᒃᑖᒃᑎᒃᓵ

† ᐊᐅᑯ ᒫ ᐊᐱᑎᒫᑯ ᐊᓂᑦᐃ ᑎᐸᒋᒨᓯᓂᑦᐃᑭᓇᑦᑎᒃ "ᑖᓐ ᐊ ᐃᓱ ᐅᑦᒋᑎᐃᐊᐱᐅᒃ ᐅᐃᓯᒋᒥᓇᑦᑎᒃ ᓅᑦᑖᑦᑎᒃ ᒫ ᑏ ᐃᔅᐱᐅᒃ ᓱᑲᓐ ᐊᓂᑦ ᒥᑦᑯᑦᑎᒃ" ᑭᔭ "ᑖᓐ ᐊ ᐃᓱ ᐅᑦᒋᑎᐃᐊᐱᐅᒃᑎᒃ ᓅᑦᑖᐅᒋᑦᑎᒋᑭᑦᑎᒃ ᐊ ᓂᑑᒋᔅᑐᓕᑦᑎᒃᐃᑦᑎᒃᓵ ᐊᓂᔭ ᓅᑦᑖᑦᑎᒃ ᒫ ᑏ ᐃᔅᐱᐅᒃ ᓱᑲᓐ ᐊᓂᑦ ᒥᑦᑯᑦᑎᒃ" ᑲ ᐃᓱᓂᑦᑎᒃᑖᒃᑎᒃᓵ

† See the summaries called "How lowbush cranberry works to lower blood sugar levels" and "How the healing plants work to lower blood sugar levels."

ᐅᐅᑯ ᒫᒃ ᑊᕐᓗᒃ ᓃᓕ ᕿᑦᑲᓐ ᑲ ᑉᐃᑦ ᐃᑦᑐᑕᒫᖅᑦ ᐊᓐ ᓃᕐᑕᒻ, ᐅᐅᑯ ᐊᓐ ᐅᑎᑐ ᐅ ᑉᐃᑦ ᑭᕐᓂᕆᑕᒫᖅ ᑖᓂᑎ ᐊᓐ ᐅ ᐃᕐᐸᕆᖅ ᐅ ᑉᐃᑭᖅᐃᑉᐅᐸᕆᖅ ᑉᐃᕐᒋᒥᓈᓐᖅ ᐊᓐ ᓃᖅᑖᖅ ᕿ ᑭ ᐃᕐᐸᕆᖅ ᓅᑲᒃ ᐊᓂᑎ ᒥᖅᑯᖅᑦ ᐅᐅᑯ ᑲ ᐃᑎᕆᖅᑕᒫᖅ ᐊᓐ ᑉᑦᑎᒃ ᐅᖅᑭ ᐊᓐ ᐅᑎᑐ ᒥᕐᑕᖅᐃ ᕿ ᑭ ᐅᑎᓂᕿᐸᕆᖅ ᓅᑲᒃ ᐊᓂᑎ ᑉᐃᓂᖅ ᕿ ᑭ ᑲᓄᑉᐅᕆᖅᑖᑯᖅ, ᒥᑯ ᒫᒃ ᓇᒧᐃ ᓂᕿᕐᑎᓈᖅᐅᓈᓐᑉ ᐅᐅᑯ ᐅᑎᑐ ᒥᕐᑕᖅᐃ ᑲ ᑉᐃᑦ ᑭᕿᕐᑕᒫᖅ ᐅ ᑕᓐ ᐅ ᐃᕐᐸᕆᖅ

ᐊᓐ ᒦᓐ ᑯᑕᒃ ᕿᑦᑲᓐ, ᐅᐅᑯ ᑲ ᑉᐃᑦ ᑭᕿᕐᑕᒫᖅ ᑖᑉᐅ ᑖᐱᕐᑯᓐ ᕿ ᑭ ᐃᓂ ᐋᐸᑎᓲᒪᑲᖅ ᐊᓐ ᑉᐃᕿᒥᓈᓐ ᐊᓂᑦ ᐊᑉᐅᑏᓂᖅᑦ ᐅ ᐃᖅᑖᑦ ᑉᑎᖅ ᐊᓐ ᑲ ᐃᕐᐸᕆᖅ ᑲ ᓂᑑᕿᕐᑕᕐᑕᒫᖅ ᐊᓂᑦ ᑉᐃᕿᓂᓂᖅᖅᑉ ᐅᐅᑯ ᑲ ᐋᐸᕿᖅᐃᕿᖅᑦᑖᑯᖅ ᐊᐱᑯᑏᓂᖅ ᐅ ᑏᑦᑕᑦᑯᖅᑦ, ᐊᑉᑯ ᑲ ᒥᓂᖅᐃᕿᖅᑦᑖᒃ ᑉᐃᕐᒋᒥᓈᐳᓐᑉ ᐊᓂᑎ ᐅᓂᐱᒥᑉᐋᖅ ᑲ ᑭᑰᐸᕐᑕᕿᖅᑦᑖᒃ ᐊᓂᑭ ᐊᐱᑯᑏᓂᖅ ᑖᑦᑉᐅ ᐅᑎᑐ ᐅ ᒥᔪᐱᒫᑎᓲᑦᑖᒃ ᐃᕐᐱᓂ ᐃᓐ ᐊᓂᑭ ᐊᐱᑯᑏᓂᖅᖅᑉ ᐅᑲ ᐅᕿ ᑲ ᐃᓂ ᐱᒥᐸᕐᑕᕐᑕᒃ ᐅᐅᑯ ᑲ ᐃᑎᕆᖅᑕᒫᖅ ᐅᑎᑐ ᐅ ᐃᕐᐸᕆᖅ ᑲ ᐃᑎᕆᖅᑕᒫᖅ ᐅᑎᑐ ᐅ ᐃᕐᐸᕆᖅ ᑲ ᓂᑑᕿᕐᑕᕐᑕᒫᖅ ᐊᓂᑦ ᐃᕐᑕᕐᑕᒃᓂᓂᖅᖅᑉ ᐅᐅᑯ ᑲ ᐊᐸᕿᖅᐃᕿᖅᑦᑖᒃ ᐊᐱᑯᑏᓂᖅ ᐅ ᑏᑦᐊᑲᒥᖅᑕᕐᑕᒃ ᐊᓂᑦ ᐊᐱᑯᑏᓂᖅᖅᑉ ᐅᑲ ᐅᕿ ᑲ ᐃᑎᕿᖅᑦᑖ

ᓃᓕ ᕿᑊᒃᓐ ᑲᓄᓐᐊᐱᑦᑕᑲᓄᓅ: ᐁᔫᑯ ᐊᓂᔫ ᐁ ᐃᑌᔨᑦᑕᖅ ᐅᒋᒫᑉ ᐁ ᒣᕐᑖᖅᑲᖅᑌᔨᒃ ᐃᕐᑯᑌᔫ ᐊᓂᑦ ᒋᓴᐱᕐᒋᓴᐊᓂᖅ, ᑲᔪᑉ ᐊᓂᔫ ᑖᓐ ᐁ ᐃᕐᐱᓂ ᐃᖅᑖᔨᒃᑌ ᐅᑖᐹᓐᖅ ᐊᓐ ᒫᒃ ᑏ ᓂᑐᐅᖅᑕᒥᓐ ᐁᑎᑑ ᒥᕐᑕᖅᐃ ᕿ ᐊᐱᒋᖅᑖᑲᓅᖅᑳᖅ ᒥᖅᑕᖅ ᐊᓂᑦ ᒣᑐᐅᑲᒥᑯᖅ, ᐁᐅᑯ ᕿ ᑏ ᐊᓇᒧᔨᑦ ᐊᓐ ᐅᒋᒫᑉ ᕿ ᐃᑌᔨᖅᑕᖅ ᐁ ᒣᕐᑖᖅᑲᖅᑌᔨᒃ ᐃᕐᑯᑌᔫ ᐊᓂᑌ ᒋᓴᐱᕐᒋᓴᐊᓂᖅ, ᓄᕐᑦ ᒫᒃ ᐁᑎᑑ ᒥᕐᑕᖅᐃ ᕿ ᑏ ᐃᖅᑖᑦᑖᑉ ᐊᓂᑏ ᐅᑖᐹᓂᒃ, ᓄᕐᑦ ᒫᒃ ᑖᐱᕐᑯᓐ ᐆ ᕿ ᑏ ᐃᔅᐸᔨᖅᒃᓯ

ᐊᓐ ᒫᒃ ᓐᒥᖅ ᒣᑐᐅᑲᒥᑯ, ᐊᓂᑦ ᓐᐃᔭᓂᖅ ᐋᐸᑎᓯᒪᑲᓐ ᕿᑲᓐ ᕿ ᑏ ᐃᕐᑯᑌᐅᒃ - ᐁᐅᑯ ᐊᓐ ᓈᑲᓐ, ᓇᒧᐃ ᒥᖅᑕᖅᓯ ᐁᑯᑦ ᐅᖅᒋ ᓴᐱᓯᔨᖅᑯ, ᕿ ᑏ ᑏᓈᓯᔨᖅᑯ, ᑲᔪ ᕿ ᑏ ᐋᔭᖅᒋᔨᖅᑯᓯ ᐊᓐ ᒫᒃ ᓈᑲᓐ, ᐁᑯᑌ ᐅᓴ ᐃᖅᑎᑯᖅ ᐊᓐ ᐃᓐᐃᑎᒥ ᐊᓂᑦ ᔪᑦ (cell), ᐁᑯᑌ ᑏᑯᒃ ᐁ ᐃᖅᑎᑯᖅ ᐊᓂᑌ ᒥᖅᑯᖅᓯ ᐊᓐ ᒫᒃ ᓐᒥᖅ ᒣᑐᐅᑲᒥᑯ, ᐊᓐ ᓐᐃᔭᓐᖅ ᐁᐅᑯ ᐁ ᐃᖅᑖᑦ ᓐᒥᖅ ᐊᓐ "ᐅᒋᒫᒃ" (ᐁᐅᑯ ᐊᓐ AMP Kinase ᑲ ᐃᑭᓂᖅᑳᑐᒃ) ᐁᑯᑦ ᐁᖅᒋ ᐃᓐᓕᑐᒃ ᐁᑎᑑ ᒥᕐᑕᖅᐃ ᓈᑲᓐ ᕿ ᓂᑐᐅᖅᑖᑯᖅᓯ ᐊᓂᑏ ᒫᒃ "ᐅᑖᔫᓂᒃ" ᐊᓂᑦ ᐃᔭᓂᖅ, ᐁᐅᑯ ᐁ ᐃᖅᑎᑯᖅ ᐊᓐ ᕿᑲᓐ ᐁ ᐅᖅᒋ ᐋᓈᔨᖅ ᐊᓐ ᓈᑲᓐ, ᐁᐅᑯ ᐊᓐ GLUT transporters ᑲ ᐃᑭᓂᖅᑳᑐᒃᓯ

ᐊᓐ ᒫᒃ ᐅᑖᖅ ᑲ ᐃᑭ ᒥᔭᑲᐊᖅᑖᔭᖅ, ᐁᐅᑯ ᑲ ᐊᐱᖅᒥᒫᖅ ᐊᓂᔫᖅ ᐃᔭᒋᒥᓈᓐᖅ ᐁ ᐃᒋᖅᐃᐊᔨᖅᑲᓐᖅ ᐁᑎᑑ ᒥᕐᑕᖅᐃ ᕿ ᐅᑎᓂᕿᔨᖅ ᓈᑲᓐᓯ ᐅ ᒫᒃ ᑲ ᓂᑑᒋᔭᕿᔨᖅᑕᒫᖅ, ᐁᐅᑯ ᑲ ᐊᖅᑕᒫᑯᔭᖅ ᐊᓐ ᓂᖅᑖᐅᒋᖅᒋᑲᓐᖅ ᐁ ᐃᒋᖅᐃᐊᔨᖅᑲᓐᖅ ᐁᑎᑑ ᕿ ᑏ ᒥᖅᑎᐊᖅᑖᒃ ᐊᓂᑏ ᐅᑖᐹᓂᒃ (GLUT4 transporters ᑲ ᐃᑭᖅᑳᑐᒃᓯ ᐁᐅᑯ ᑲᔪ ᐁ ᐃᑌᔨᖅᑕᒫᖅ ᐅ ᓂᖅᑖᐅᒋᖅᒋᑲᓐ ᐁ "ᐊᓂᒧᔨᖅᐅᒃ" ᐊᓂᑦ ᐅᒋᒫᑉ ᐁ ᐃᖅᑖᔨᖅ, ᐁᔫᑯ ᐊᓂᔫ ᐁᑎᑑ ᒥᕐᑕᖅᐃ ᐁ ᓂᑐᐅᖅᑕᖅᖅ ᓈᑲᓐ ᕿ ᐲᖅᑌᐸᔨᓂᔨᖅ, ᒥᑯ ᒫᒃ ᓇᒧᐃ ᓂᕿᑎᓇᖅᐅᓇᓐ ᐅ ᐊᐅᖅ ᐁ ᐃᔅᐸᔨᖅᒃᓯ ᐅ ᒫᒃ ᐸᔅᒃ ᑲ ᓂᑐᒋᔭᕿᔨᖅᑕᒫᖅ, ᐁᐅᑯ ᐅ ᑲ ᐃᔅᐸᔨᖅ, ᐊᓐ ᒦᓐ ᐋᖅᒋᓐᖅ ᑲ ᐃᑭ ᓂᑐᒋᔭᕿᔨᖅᑕᒫᖅ ᓇᒧᐃ ᐅᖅᒋ ᐃᔅᐸᔫᓯ

ᑭᓄᐊᐱᖅᑖᑭᓂᓐ: ᐊᔫᐃᑯ ᐊᓂᔭ ᐊ ᐃᑖᔨᖅᑎᖅᒃ ᐅᒋᒫᓐ ᐊ ᒫᔅᑖᖅᑭᖅᑖᔨᒃ ᐃᔅᑯᑖᔨᓐ ᐊᓂᑦ ᒋᓴᐱᕐᒋᓴᐊᓂᖅ, ᑭᔭ ᐊᓂᔭ ᑖᓐ ᐊ ᐃᔅᐱᓂ ᐃᖅᑖᔨᒃᑌ ᐅᑖᐹᓐᖅ ᐊᓐ ᒫᒃ ᑏ ᓂᑐᐊᔨᖅᑎᒥᓐ ᐊᑎᑑ ᒥᕐᑏ ᒫ ᐊᐱᒋᖅᑖᑭᓂᐃᒃᖅ ᒥᖅᑕᖅ ᐊᓂᑦ ᒫᑐᐊᔨᖅᑎᖅᒃ ᐊᓂᑏ ᒋᓴᐱᕐᒋᓴᐊᓂᖅ, ᑭᔭ ᒫᒃ ᐊᑎᑑ ᒥᕐᑏ ᒫ ᐃᑖᔨᖅᑎᖅᒃ ᐊᓂᑦ ᒫᑐᐊᔨᖅᑎᖅᒃ ᐊᓂᑏ ᒋᓴᐱᕐᒋᓴᐊᓂᖅ, ᑭᔭ ᒫᒃ ᐊᑎᑑ ᒥᕐᑏ ᒫ ᐃᖅᑖᖅᖅ ᐊᓂᖅ ᒫᒃ ᐅᑖᐹᓂᒃᓯ

ᐊᓐ ᒫᒃ ᒧᔭᒻ ᒫᑐᐊᐅᑲᒥᑯ, ᐊᓂᑦ ᓴᐲᐅᑖᓂᖅ ᐊᐱᑎᓯᒥᑭᓐ ᒫᑲᓐ ᒫ ᑏ ᐃᕐᑯᑖᐅᒃ - ᐊᐅᑯ ᐊᓐ ᓈᑲᓐ, ᓂᒧᔨ ᒥᖅᑕᖅᓯ ᐊᑯᑦ ᐊᖅᒋ ᓴᐱᓯᔨᖅᑯ, ᒫ ᑏ ᑏᓈᓯᔨᖅᑯ, ᑭᔭ ᒫ ᑏ ᐋᔭᖅᒋᔨᖅᑯᓯ ᐊᓐ ᒫᒃ ᓈᑲᓐ, ᐊᑯᑖ ᐅᓴ ᐃᖅᑎᑯᖅ ᐊᓐ ᐃᓐᐃᑎᒫ ᐊᓂᑦ ᔪᑦ (cell), ᐊᑯᑖ ᑏᑯᒃ ᐊ ᐃᖅᑎᑯᖅ ᐊᓂᑖ ᒥᖅᑯᖅᓯ ᐊᓐ ᒫᒃ ᐊᖅᒫ ᒫᑐᐊᐅᑲᒥᑯ, ᐊᓐ ᓴᐱᐅᑖᓐᖅ ᐊᐅᑯ ᐊ ᐃᖅᑖᑦ ᒧᔭᒻ ᐊᓐ "ᐅᒋᒫᒃ" (ᐊᐅᑯ ᐊᓐ AMP Kinase ᑲ ᐃᑭᓂᖅᑳᑖᒃ) ᐊᑯᑦ ᐊᖅᒋ ᐃᓐᓕᑖᒃ ᐊᑎᑑ ᒥᕐᑏ ᓈᑲᓐ ᒫ ᓂᑐᐊᔨᖅᑖᑯᖅᓯ ᐊᓂᑏ ᒫᒃ "ᐅᑖᔫᓂᒃ" ᐊᓂᑦ ᓴᐱᐅᑖᓂᖅ, ᐊᐅᑯ ᐊ ᐃᖅᑎᑯᖅ ᐊᓐ ᒫᑦᑲᓐ ᐊ ᐅᖅᒋ ᐊᓈᐱᔨᒃ ᐊᓐ ᓈᑲᓐ, ᐊᐅᑯ ᐊᓐ GLUT transporters ᑲ ᐃᑭᓂᖅᑳᑖᒃᓯ

think of a muscle cell as a large building like an arena, with some delivery trucks to move things around in it. The arena is heated with woodstoves, but most of the wood is stacked outside. The arena manager's job is to make sure it never gets too cold: if the stoves run low, he sends whatever trucks he has to bring in more wood. So how much wood the arena uses up depends on two things: whether the manager thinks the stoves are running low on fuel, and how many trucks he has available. If for some reason you wanted the arena to use more wood than usual, you could try to fool the manager into thinking the stoves were running low, or you could provide more trucks—or both.

Like the arena, a muscle cell also burns fuel—but in this case, it burns sugar, not wood. This gives us energy to live, stay warm, and move around. The sugar is mostly found outside the cell, in our blood. And like the arena, a muscle cell has a "manager" (called AMP Kinase) who can send for more sugar when needed. The "trucks" a muscle cell uses to move sugar around are called GLUT transporters.

Our earlier tests showed us clearly that lowbush cranberries somehow make a cell take in more sugar than usual. The tests we did in this study told us that the plant does this by supplying more trucks (GLUT4 transporters). We also think the plant might "fool" the

ᐋᐸᑎᓯᒪᒃᓐᑦ-ᐋ ᐧᐃᓴᒋᒥᓈᓐᑦ ᐊᓂᑦ ᐊᐧᐁᓱᕐ ᐁ ᐃᑦᑖᑦ?

ᒫᒥᔾᑲᒐᔨᑦᑖᑯᓐ ᐊᓐ ᒃᑲ ᒥᔾᑲᐧᐋᑦᑖᔭᑦᑕ ᐊᓂᒌ ᒃᑲ ᓂᑑᒋᔾᕋᔨᒪᒋᑦᑖᑦ ᐋᐱᑯᓱᕐᓱᕐᓗ ᐁᐅᑯ ᕿ ᒋᔾᒋᓯᔪᑯ ᓃᓕᔨᒃ ᐁ ᒌ ᐃᓱ ᓂᑑᒋᔾᕋᔨᒪᒋᑦᑖᑦ ᐋᐱᑯᓱᕐᓱᕐ ᐁ ᓱᐧᐋᑲᒥᑦᑕᑦ - ᐯᔭᑯ ᐊᓂᒌ ᒃᑲ ᒥᓂᑦᐋᑲᓄᐧᑖᑦ ᐧᐃᓴᒋᒥᓈᐳᔫ ᐊᓂᑦ ᐅᓂᐲᒥᐧᐋᑦᑕᒃ, ᑲᔪ ᐊᓂᒌ ᑯᑕᑲᒃ ᐁᒃᑲ ᐅᑦᒋ ᒥᓂᑦᐋᑲᓄᐧᑖᑦ ᐧᐃᓴᒋᒥᓈᐳᔫᓐ ᐊᓂᒌ ᐋᐱᑯᓱᕐᓱᕐ ᒃᑲ ᒥᓂᑦᐋᑲᓄᐧᑖᑦ ᐧᐃᓴᒋᒥᓈᐳᔫ:

- ᑏᐧᐁᑦᑕᑦ ᐁᑎᑑ ᐊᐱᓱᕐᓱᕐ ᒌ ᐃᔾᐱᓱᕐ ᒦᒋᓯᒃᑕᑦ - ᓇᒧᐃ ᐅᑦᒋ ᐃᔾᐱᓱᕐ ᓱᐧᐁᐅᒃᑕᑦ ᑲᔪ ᐁᔫᑯ ᒨᔾ ᒃᑲ ᐃᑦᑎᐧᑖᑦ, ᑲᔪ ᒌ ᐊᒍᐸᔫᒃᑕᑦ
- ᓈᔾᑖᐧᐁ ᒥᔾᑕᑦᐃ ᓃᑦᑖᑦᑕᑦ ᒌ ᐃᔾᐸᔨᓂᔫ ᓅᒃᑲᔫ ᐊᓂᑦ ᐅᒥᑦᑯᐧᐋᑦᑕᒃ
- ᕿᒃᑲᑦ ᑯᐃᔾᑯ ᒌ ᐃᔾᐸᔨᓂᔫ ᒃᑲ ᒥᓄᐧᐋᑲᒥᑦᐃᕿᐸᔨᓂᔨᑕᑦ ᐊᓂᑦ ᐅᒥᑦᑯᐧᐋᑦᑕᒃ
- ᓇᒧᐃ ᐅᑦᒋ ᐃᔾᐱᓱᕐ ᑲᓄᐧᐁᔨᑖᑯᓂᔫ ᐱᒦᔫ ᐊᓂᑕ ᐅᔾᑯᓂᐧᐋᑦᑕᒃ, ᐁᑯ ᒫᒃ ᓇᒧᐃ ᐅᑦᒋ ᐃᔾᐱᓱᕐ ᐅᓱᑦᐅᒪᑲᓂᔫ ᓅᒃᑲᔫ ᐅᑦᒋ ᐊᓂᑕ ᐅᔾᑯᓂᐧᐋᑦᑕᒃ
- ᐁᑎᑑ ᒌ ᒥᔪᐸᔨᓂᔫ ᕿ ᒌ ᐋᐸᑎᓯᒪᑲᓂᔨᑕᑦ ᑲᒦᓄᐧᐋᑲᒪᑦᐃᕿᐸᔨᓂᔨᑕᑦ ᐊᓂᑕ ᐧᐃᔭᓂᐧᐋᑦᑕᒃ
- ᓇᒧᐃ ᐅᑦᒋ ᐃᔾᐱᓱᕐ ᒥᓂᑦᐧᕿᐅᒃᑕᑦ ᐊᓂᒌ ᐋᐱᑯᓱᕐᓱᕐ ᐁ ᒌ ᐃᔾᐱᓱᕐᓱᕐ ᐧᐃᑦᑖᑦᑕᑦ

ᐅᐃᒋᑦᐃᑯᐅᑦᑐᑦ ᐊᐅᐅᓂᒋ ᐅ ᓱᐅᐊᑲᒥᑦᑊᐅᑦᑐᑦᓵ ᐆ ᒫᒃ ᑎ ᒋ ᓂᑑᒋᔅᑎᔨᑦᑕᒫᑦ, ᐅᐆᑯ ᑳ ᓂᑑᒋᔅᑎᔨᑦᑕᒫᑦ ᑕᓐ ᓈᑦᐊᑦ ᐅ ᐃᔅᐱᓂ ᒥᒋᓱᑦᑐᑦ ᒣᓂᑯᒻ ᒋᓂᑳᑦ ᐊᐱᑯᓂᓂ ᑳ ᒥᓂᑦᐊᑲᓄᑦᑐᑦ ᐅᐃᓴᒋᒥᓈᐅᓐᓵᓵᓵ ᐅᑯ ᒥᓐ ᑯᑕᑳᒃ ᐊᐱᑯᓂᓂ ᐅ ᓱᐅᐊᑲᒥᑦᑊᑦᑐᑦ ᑳ ᓂᑑᒋᔅᑎᔨᒪᒋᑦᑐᑦ, ᐅᓵᑯ ᑳ ᐃᔅᐱᓂ ᓂᒫᑲᓄᑦᑐᑦ ᐊᓂᓵᑦ ᑳ ᐃᔅᐱᓂ ᒥᒋᓱᔨᒃᑦ ᐊᐱᑯᓂᓅᑦ ᑳ ᒋ ᒥᓂᑦᐊᑲᓄᔨᒃᑦ ᐃᓴᒋᒥᓈᐅᓐᓵᓵᓵ ᐅᑦᑦᒃ ᒫᒃ ᐊᓂᒋ ᑳ ᐃᑦᑎᑦᑐᑦ ᓃᔅᑕᒪ ᑳ ᓂᑑᒋᔅᑎᔨᒫᑲᓄᑦᑐᑦ ᐊᐱᑯᓂᓂ ᑳ ᒥᓂᑦᐊᑲᓄᑦᑐᑦ ᐃᓴᒋᒥᓈᐅᓐᓵᓵ, ᐅᒋ ᒥᑯ ᑳ ᓈᓈᑲᒋᑦᑕᑲᓄᔨᒃ ᐅ ᐃᔅᐱᓂ ᒥᒋᓱᑦᑐᑦ ᐊᐱᑯᓂᓂ, ᓴᐸᒃ ᒋ ᐊᒍᐸᓵᒃ ᑲᔅᑯᐃᔅᑯ ᒋ ᐃᔅᐸᔨᓂᓵ ᐊᓂᓵ ᓄᑳᓵ ᐅᒥᑯᐊᑦᑲᔅ ᑲᒦᓄᐊᑲᒥᑦᐃᑐᐸᔨᓂᔨᒃᓵ ᐊᓂᒋ ᒃ ᐊᐱᑯᓂᓂ ᐅᑲ ᐅᑦᒋ ᓱᐊᑲᒥᑦᑊᑦᑐᑦ ᑳ ᒥᓴᑲᓄᑦᑐᑦ ᐃᓴᒋᒥᓈᐅᓐᓵᓵ, ᓇᒧᐃ ᐅᑦᒋ ᐊᑦᒋᐸᔨᓂᓵ ᐊᓂᓵ ᐅ ᐃᔅᐱᓂ ᒥᒋᓱᑦᑐᑦ

ᓇᒧᐃ ᓈᑦᐊᑦ ᓂᒋᔅᑎᔨᑦᑐᓈᓐ ᑕᓂᑐ ᐆ ᐅ ᐃᓱᓂ ᐊᐸᑎᓱᒪᑲᑦᑐ ᐆ ᓂᑦᑕᐅᒋᑦᒋᑲᓐ ᐅᑲ ᑎ ᒋ ᐃᔅᐱᓂ ᓱᐅᓱᓄᐃᑦᑐᓵ (ᐯᔭᑯᔨᒃ ᓂᒋ ᓂᑑᒋᔅᑎᔨᑦᑐᓈᓐ, ᒥᑯ ᒫᒃ ᓇᒧᐃ ᐅᑦᒋ ᒥᔪᐸᓵ ᐆ ᑎ ᒋ ᐃᔅᐸᔨᑦᑐᓵ) ᒥᑯ ᒫᒃ ᓂᑎᔅᑎᓈᑦᐅᓈᓐ ᐅᑲ ᑎ ᒋ ᒪᒋᐸᔨᑦᐃᑯᑦ ᐊᐅᓐ ᐅᓵ ᓂᑦᑕᐅᒋᑦᒋᑲᓂᓵ, ᐅᒋᓐ ᓱᔅ ᐅᔅᑲᒃ ᒋ ᒦᒍᒃ ᐃᓈᒃ ᐊᓂᓵ ᐃᔅᒋᒥᓈᐅᓐᓵ ᐅᐆᑯ ᑲᔭ ᑲ ᐅᐊᑦᑕᒫᑦᑐᑦ ᐊᓂᒋ ᐊᐱᑯᓂᓂ ᑲ ᒥᓂᑦᐊᑲᓄᑦᑐᑦ ᐃᓴᒋᒥᓈᐅᓐᓵᓵ, ᒥᓐᐅ ᐆ ᓈᑯᓂᓵ ᐅ ᐃᓂᓈᑯᑦᑐᑦ ᐅᑦᒋᔅᑎᔨᑦᑐᑦᒋᑲᓐ ᐅᑦᒋ ᐊᑦᒋᐸᑦᑐᑦᒋᑲᓄᑦᑐᑦ ᐅᑲ ᑎ ᒋ ᐃᔅᐱᓂ ᓂᐅᑦᑐᑦᒋᑲᓄᑦᑐᑦᑐᑦ ᑲᔭ ᑎ ᒋ ᐊᒍᐸᓵᒃᓈᑦᑐᑦᒋᑲᓄᑦᑐᑦᑐᑦ ᑲᔭ ᑎ ᒋ ᐃᓂᓈᑯᑦᑐᑦᒋᑲᓄᑦᑐᑦᑐᑦ ᑲᔭ ᑎ ᒋ ᒪᒋᐸᔨᑦᐃᑯᑦ ᐊᐅᓐ ᐅᓵ ᐅ ᐃᓂ ᐊᐸᒋᑦᑕᑦᑐᑦ ᓈᔅᑕᑦᐅ ᒥᔭᑦᑎᑦᑐᑦᒋᑲᓄᑦᑐᑦᑐᑦ ᐅᐆᑯ ᒫᒃ ᑕᑦᐅ ᐅᑯᔅᑎᔨᑦᑐᑦᒋᑲᓄᑦᑐᑦᑐᑦ ᑎ ᒋ ᐊᐸᒋᑦᑕᑦᑐᑦᑐᑦ ᐅᑯᑦ ᒫᒃ ᒋᐸᑦ ᒥᑦᒃᑦ ᐊᓂᐃ ᐃᓈᒃ ᐊᔅᑦᑐᑦ ᐅ ᑎ ᒋ ᐅᑦᒋ ᒋᑦᒋᐸᔨᑦᑕᑲᓄᑦᑐᑦᑐᑦ

* ᐅᐆᑯ ᐆ ᐊᐱᑦᔅ ᐅ ᒪᓱᓈᐃᒃ ᑎᐸᒋᒧᓱᓇᑦᐃᑲᓇ ᐅᑦᒋ ᐊᓇ ᐅᑎᔅᑐ ᒥᔅᑕᑦᐃ ᐅ ᒪᓱᓈᐃᒃ ᑎᐸᒋᒧᓱᓇᑦᐃᑲᓂᓵ ᑲ ᒪᓱᓇᑦᐊᑦᑊᑦᑲᑦ ᑐᑦᑕ ᐃᑦ, ᐊᓇᑐᑦᐊᓇ ᐱᑦᑦᑦ, ᑫᑦᑦ ᑦᑦᓇ, ᒥᓇᒪᒃ ᐅᔅᑭᓇ, ᑕᑦᓇ ᑦᑦᓇᑦᓇ, ᑦᒐᓇ ᐊᑦᓈᓱᓇ, ᑫᓈ ᓱᑦᐃᓃ, ᑲᔭ ᐱᔭᑦ "ᐊᑕᑦ, ᐅᓵᑯ ᐊᓂᓵ "*Vaccinium vitis-idaea*, a medicinal plant of the Eastern James Bay Cree, mobilizes L6 muscle Glut4 transporters and exerts anti-obesity and antidiabetic effets in vivo" ᑳ ᐃᓂᓂᑦᑲᐅᒃ (ᑳ ᒪᓱᓂᑦᐃᑲᓄᑦᑐᑦ ᓱᓱᐸᐃᓱᒪ 6, 2010ₓ)

All of these things are good for diabetes.

We think these good results are not so much because cranberries fight diabetes directly as because they fight weight, and lower weight is good for diabetes. To test this, we measured exactly how much the cranberry-eating mice ate each day. Then we took another group of diabetic mice, and only gave them as much food as the cranberry-eating mice had eaten. Like the cranberry-eating mice, these mice too lost weight and had better blood sugars and insulin levels than before. Interestingly, when we gave cranberries to mice that didn't have diabetes, their appetites didn't go down.

We don't know exactly how the plant works to reduce appetite. (We tested one way, and that wasn't it.) But

ᐊᐅᐊᓂᒋ ᐊ ᓱᐅᐊᑭᒥᑦᑊᑦᑲᔭᑦ ᐅ ᒫᒃ ᒐ ᒋ ᓂᑑᒋᔅᒐᔨᑦᑎᒫᑦᑐ, ᐊᐅᑯ ᑳ ᓂᑑᒋᔅᒐᔨᑦᑎᒫᑦᑐ ᑕᓐ ᓈᑦᐊᑦ ᐊ ᐃᔅᐱᓂ ᒥᒋᓱᑦᑐᑦ ᐊᓂᓵᑦ ᒋᓂᑑᑦᑐᑦ ᐊᐱᑯᓂᓂ ᑳ ᒥᓂᑦᐊᑭᓂᑦᐃᑦ ᐊᑯ ᒥᓐ ᑯᑎᑭᑦ ᐊᐱᑯᓂᓂ ᐊ ᓱᑦᐊᑭᒥᑦᑊᑦᑲᑦ ᑳ ᓂᑑᒋᔅᒐᔨᑦᑎᒫᑦᑐ ᐊᐱᑯᓂᓂ ᑳ ᒥᓂᑦᐊᑭᓂᑦᐃᑦ ᐊᑯ ᒥᓐ ᑯᑎᑭᑦ ᐊᐱᑯᓂᓂ ᑳ ᒥᓂᑦᐊᑭᓂᑦᐃᑦ ᐅᑦᒋᔅᑎᔨᑦᑐᑦᒋᑲᓐ ᐅᑦᒋ ᐊᑦᒋᐸᔨᑦᑕᑲᓄᑦᑐᑦᑐᑦ ᑲᔭ ᑎ ᒋ ᐃᔅᐱᓂ ᓂᐅᑦᑐᑦᒋᑲᓄᑦᑐᑦᑐᑦ ᑲᔭ ᑎ ᒋ ᐊᒍᐸᓵᒃᓈᑦᑐᑦᒋᑲᓄᑦᑐᑦᑐᑦ ᑲᔭ ᑎ ᒋ ᒪᒋᐸᔨᑦᐃᑯᑦ ᐊᐅᓐ ᐅᓵ ᐅ ᐃᓂ ᐊᐸᒋᑦᑕᑦᑐᑦ ᓈᔅᑕᑦᐅ ᒥᔭᑦᑎᑦᑐᑦᒋᑲᓄᑦᑐᑦᑐᑦ ᐅᐆᑯ ᒫᒃ ᑕᑦᐅ ᐅᑯᔅᑎᔨᑦᑐᑦᒋᑲᓄᑦᑐᑦᑐᑦ ᑎ ᒋ ᐊᐸᒋᑦᑕᑦᑐᑦᑐᑦ ᐅᑯᑦ ᒫᒃ ᒋᐸᑦ ᒥᑦᒃᑦ ᐊᓂᐃ ᐃᓈᒃ ᐊᔅᑦᑐᑦ ᐅ ᑎ ᒋ ᐅᑦᒋ ᒋᑦᒋᐸᔨᑦᑕᑲᓄᑦᑐᑦᑐᑦ

* ᐊᐅᑯ ᐆ ᐊᐱᑦᔅ ᐊ ᒥᓱᓈᑦᑕᑦ ᑎᐸᒋᒧᓱᓂᑦᐃᑭᓇ ᐅᑦᒋ ᐊᓇ ᐅᑎᔅᑐ ᒥᔅᑎ ᐊ ᒥᓱᓈᑦᑕᑦ ᑎᐸᒋᒧᓱᓂᑦᐃᑭᓂᓵᑦᑐ ᑲ ᒥᓱᓂᑦᐊᑦᑊᑦᑲᑦ "ᐅᑦᑕ ᐃᑦ, ᐊᓇᑐᑦᐊᓇ ᐱᑦᑦᑦ, ᑫᑦᑦ ᑦᑦᓇ, ᒥᓇᒪᒃ ᐅᔅᑭᓇ, ᑕᑦᓇ ᑦᑦᓇᑦᓇ, ᑦᒐᓇ ᐊᑦᓈᓱᓇ, ᑫᓈ ᓱᑦᐃᓃ, ᑭᑦ ᐱᔭᑦ "ᐊᑕᑦ, ᐊᓵᑯ ᐊᓂᓵ "*Vaccinium vitis-idaea*, a medicinal plant of the Eastern James Bay Cree, mobilizes L6 muscle Glut4 transporters and exerts anti-obesity and antidiabetic effets in vivo" ᑳ ᐃᓂᓂᑦᑲᑦᑐᒃ (ᑳ ᒥᓱᓂᑦᐃᑭᓂᑦᐃᑦ ᓂᔅᑭᐱᓱᒃ 6, 2010ₓ)

we are sure the plant is not harmful, since people have been eating lowbush cranberries for generations. Also, the mice that got the cranberry juice showed every sign of being healthy. In short, this plant seems to reduce appetite and weight without being bad for you. These findings are very exciting. It would definitely be worth testing lowbush cranberries on humans with diabetes. Iiyiyiu Aschii would be a good place to start doing this.

* This is a plain-language summary of a more technical article by Hoda Eid, Antoine Brault, Farah Thong, Merieum Ouchfoun, Diane Vallerand, John Arnason, Gary Sweeney, and Pierre Haddad, called "*Vaccinium vitis-idaea*, a medicinal plant of the Eastern James Bay Cree, mobilizes L6 muscle Glut4 transporters and exerts anti-obesity and antidiabetic effets in vivo." (Version of April 6, 2010.)