

# Willowherb (Fireweed) – *Chamerion angustifolium*

Walk on the Wild Side  
November 30, 2017



# Features

- Common and abundant, grows primarily after forest fires
- Prepares the soil for other plants to follow
- Propagates by seed and by shoots sprouting from rhizomes
- Fragmentation of rhizomes stimulates shoot production, so pulling to harvest encourages further growth

# Indigenous Ethnobotany

- Medicinal – applied to boils and infections, intestinal parasites, blood purifier, rectal hemorrhage, to stimulate breast milk secretion
- Flowers rubbed on leather for waterproofing
- Roots as food source
- Fluff as tinder or as lampwick, woven into blankets by west coast First Nations



Cloth made from the woven seed plume of the Fireweed plant – Suneymuxw FN Artifact

# Global Uses

- Roots steamed as early green, unopened buds added to salads or pickled like capers
- In Russia, teas from dried or fermented leaves, known as Ivan Chai, once primary tea in Europe
- Lucas Meyer Cosmetics markets skin care product, developed by Fytokem
- Indigenous people of Kamchatka made ale
- Fireweed honey important commercial product



# Medicinal Potential

- Chemical Constituents provided in technical sheets
- Decoctions used for hiccoughs, whooping cough, asthma, ulcers, gastritis, and colitis
- Anti-inflammatory properties for Arthritis and Rheumatism
- Effective for prostatitis and enlarged prostate
- No contraindications with drugs



# Commercial Potential

- Potential to expand tea market for Canadian product
- Niche products such as picked fireweed buds
- Potential as fiber for textiles
- Growth of Lucas Meyer Cosmetic's market for skin care product
- Other products developed by using Fytoken's research model



Today is..  
**TFE** ToxicFree Friday

Every Friday we highlight one of our organic or toxic free ingredients

**Canadian Willowherb Extract**  
(*Epilobium angustifolium*)

Canadian Willowherb Extract is made from the Willowherb flower in northern Canada and is known for its soothing properties.

- Strong antibacterial properties
- Reduces redness and calms irritated, inflamed skin
- Free Radical Scavenger

Canadian Willowherb Extract can be found in Chaé AcneTX™ Cleanser

# Fytokem's Research Model

- Fytokem established by Warren Steck after retiring from U of S Plant Biotechnology Institute
- Compiled chemical and processing information on 300 or more Sk plants, anti-inflammatory compound found in fireweed as part of process
- Conducted in vivo studies that confirmed compound's effectiveness on irritated skin
- Conducted studies that determined process to extract active anti-inflammatory ingredient

# Fytokem's Research Model

- Marketed as Canadian Willowherb <sup>TM</sup>
- Further research isolated and identified the principal active molecule that provided anti-inflammatory action
- Patented discovery
- Sales did not provide enough revenues to sustain operation in long term. Fytokem folded, but Lucas Meyer Cosmetics picked up the Canadian Willowherb <sup>TM</sup> product
- Fytokem may not have been large enough to sustain the research investment required

# Lucas Meyer Cosmetics

- Business unit of International Flavors and Fragrances (IFF)
- IFF is 184 year old company that operates on a global basis, has sustainability as the enabler of their business strategy – driven by the concept of a circular economy
- IFF spends approximately \$250M US per year in research and development ([www.statista.com](http://www.statista.com))
- IFF along with their 3 main competitors; Givaudan, Firmenich, and Symrise hold 66% of the flavors and fragrances market worldwide ([www.wikinvest.com](http://www.wikinvest.com))
- IFF had \$3.1B in sales in 2016 (Wikipedia)

# Research Potential

- Studies have shown fireweed effective against various bacteria (staph, e coli) – potential to follow up
- Follow up studies could evaluate effectiveness against prostate conditions and cancers
- Effectiveness against coughs and asthma could be studied

