

Lemon Myrtle ( Backhousia citriodora) Extract and Its Active Compound, Casuarinin, Activate Skeletal Muscle Satellite Cells In Vitro and In Vivo by Ayumi Yamamoto 1,2,\* , Shinichi Honda 1, Mineko Ogura 1, Masanori Kato 1, Ryuichi Tanigawa 3, Hidemi Fujino 4 and Seiji Kawamoto 2,\* 1



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## Lemon myrtle facts and health benefits

# Organic Lemon Myrtle

Boost your health with 5 amazing properties:



Antibacterial

Antimicrobial

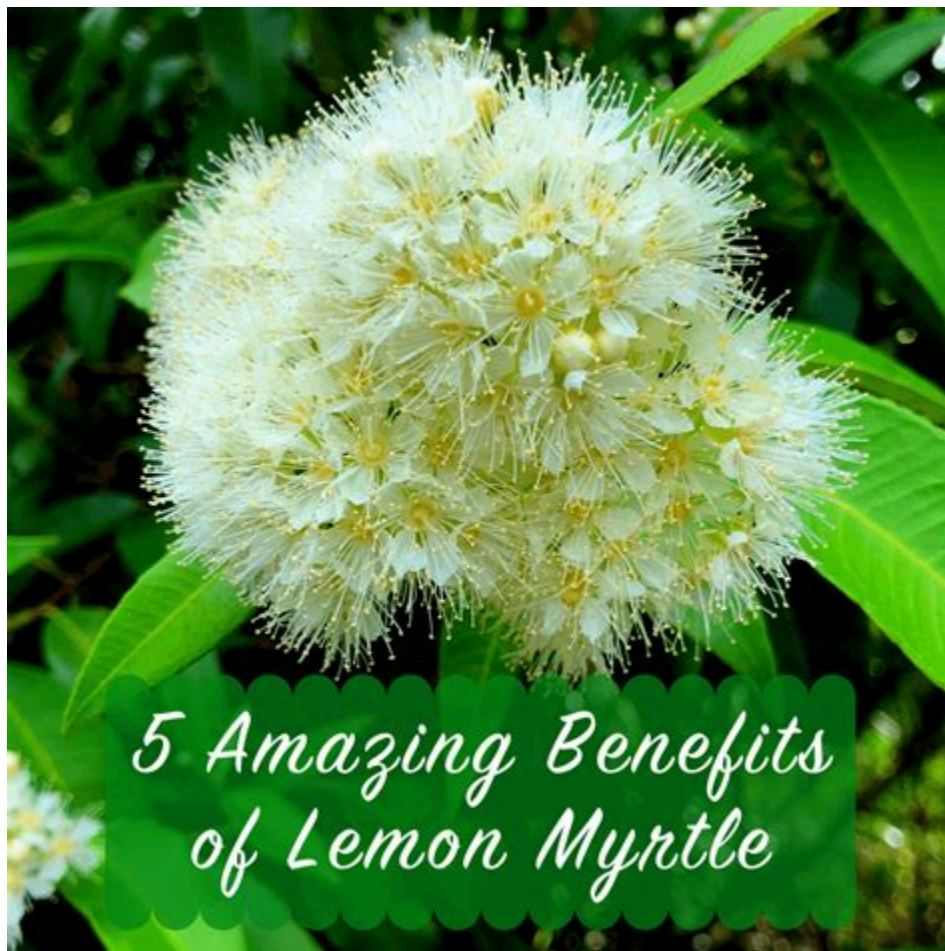
Antioxidant

Antibiotic

Antiviral

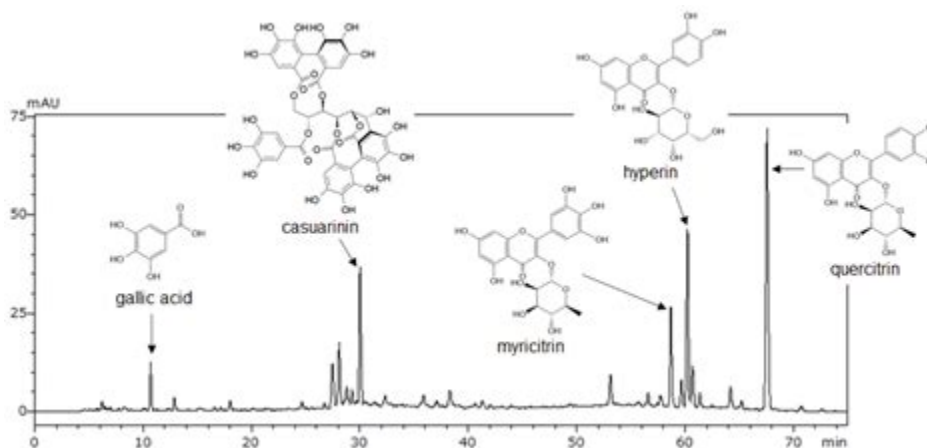
Lemon Myrtle helps stimulate muscle satellite cells and muscle protein synthesis. is this the new Breakthrough for elderly and bodybuilders ? study :.

## 5 Amazing Benefits of Lemon Myrtle - Lemon Myrtle Fragrances



So how did lemon myrtle become discovered as a powerful supplement for muscle hypertrophy? Jerry Brainum explains that a recent study was done to find natural substances to aid in reducing sarcopenia. What is sarcopenia? It's a disorder that usually happens in adults 60 years and older.

### Lemon Myrtle (*Backhousia citriodora*) Extract and Its Active Compound .

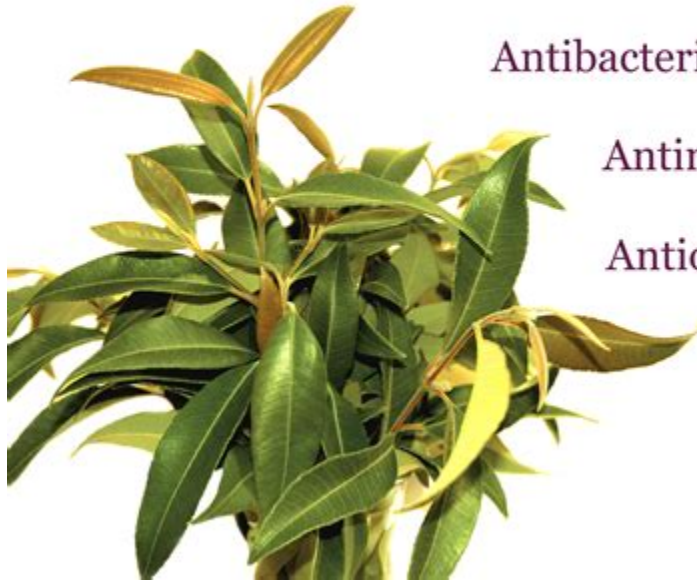


What Are Its Benefits? Helps in treating sinus, bronchitis, acne, depression, and digestion-related issues. Who Can Use It? People with sinusitis, bronchitis, and influenza can consume it. How Often? Consume it in moderation. Please consult a doctor for an exact dosage Caution

## Lemon Myrtle Uses, Benefits & Dosage - Drugs Herbal Database

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Lemon myrtle (*Backhousia citriodora*) extract and its active compound casuarinin, one of hydrolysable tannins, activated SCs as shown by increased BrdU incorporation, an indicator of cell.



## Backhousia citriodora - Wikipedia



2. 1. Etymology. In 1845, lemon-scented myrtle was named *Backhousia citriodora* F. Muell. by botanist Ferdinand von Mueller, the genus after the English botanist, James Backhouse and the species epithet from the distinctively strong lemon scent of the foliage []. The genus *Backhousia*, from the Myrtaceae family, is endemic to eastern Australia and is a close relative of the genus *Choricarpia*, with .

## 7 Benefits of Lemon Myrtle Leaves Your Body Will Love - CureJoy



*Backhousia citriodora*. F. Muell. *Backhousia citriodora* (common names lemon myrtle, lemon scented myrtle, lemon scented ironwood) is a flowering plant in the family Myrtaceae, genus *Backhousia*. It is endemic to subtropical rainforests of central and south-eastern Queensland, Australia, with a natural distribution from Mackay to Brisbane.

## Straight Facts: Is Lemon Myrtle The Most Anabolic Supplement Ever .



The no-observed-adverse-effect level for lemon myrtle oil was calculated as 0.5 mg/L at 24 hours' exposure, and the reference dose was determined to be 0.01 mg/L. A product containing 1% lemon myrtle oil was found to be low in toxicity and could therefore potentially be used in the formulation of topical antimicrobial products.

### 10 Unbelievable Health Benefits of Using Lemon Myrtle



Effect of Lemon Myrtle on Muscle growth + Study 📝 Supplements I probably won't be testing this out myself since there are too many supplements to buy but this could be an interesting one. Here's the study if anyone wants to listen to the main points there was a video made on this too on youtube. [mdpi/2072-6643/14/5/1078/pdf](https://www.mdpi.com/2072-6643/14/5/1078/pdf)

**(PDF) Lemon Myrtle (*Backhousia citriodora*) Extract and Its Active .**



Lemon myrtle leaves also happen to contain high levels of antioxidants such as phytochemicals that work hard to neutralize disease-causing free radicals. 2 Eating lemon myrtle leaves can fortify your immune system, thus bolstering you against several health issues. 4. Are An Excellent Cure For Acne



# 20 HEALTH BENEFITS OF LEMON MYRTLE



STYLECRAZE



August 31, 2023 by Brianna Are you searching for a natural way to boost your muscle growth? Look no further than the vibrant world of lemons. These zesty citrus fruits might hold the secret to unlocking your muscle-building potential. But do lemons really have what it takes to enhance your muscles?

### **Myrtle: a versatile medicinal plant | NutrIRE - Springer**



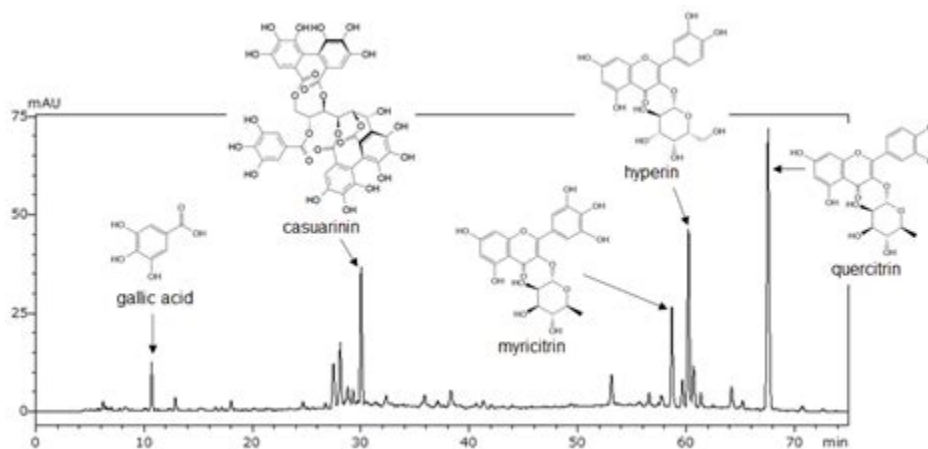
Lemon myrtle (*Backhousia citriodora*) extract displayed the highest GTF-inhibitory activity and inhibited *S. mutans* biofilm, but myrtle extracts did not inhibit cell growth. They also investigated the effect of the leaves, flowers, and roots of (*Myrtus communis* L.) essential oil on oxidative metabolism in an HT model induced by propylthiouracil .

## Lemon Myrtle Growing Guide: Tips for a Healthy, Aromatic Tree



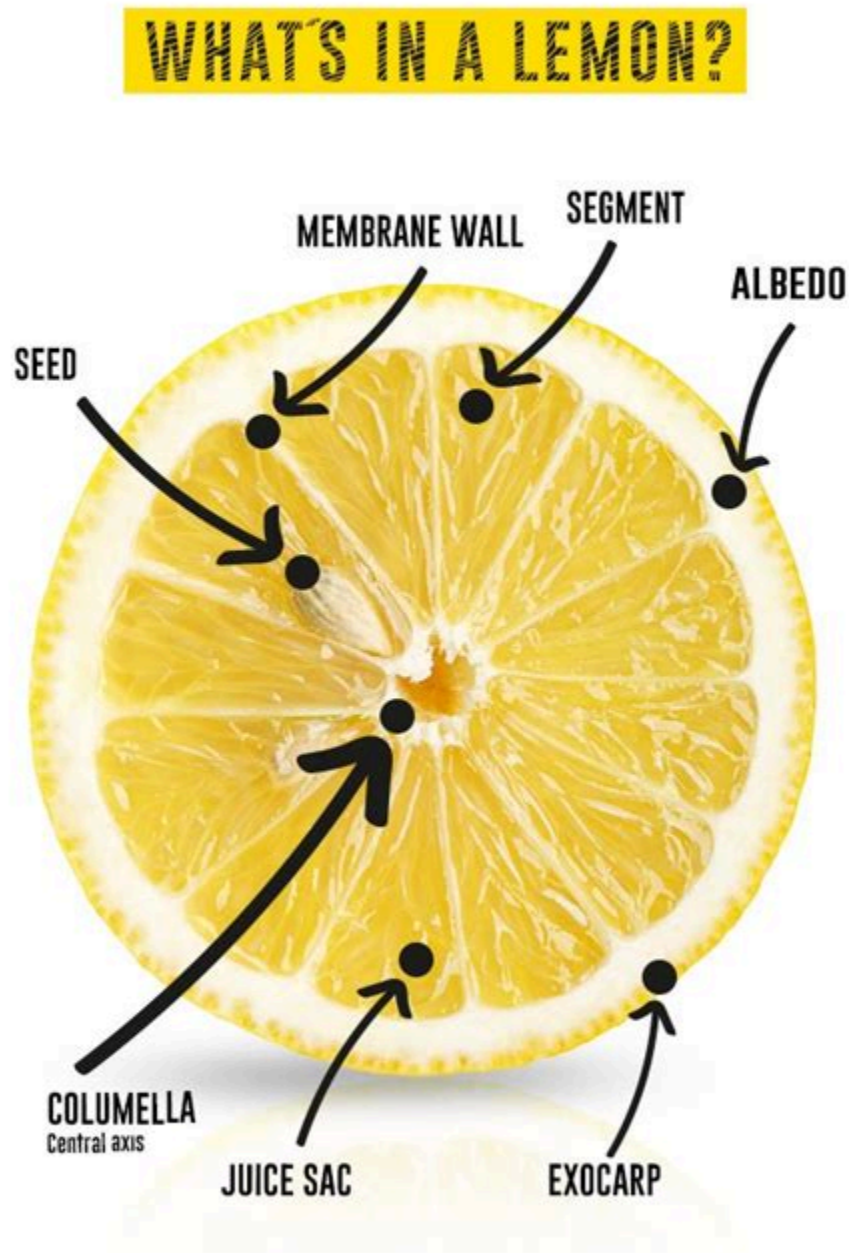
Lemon Myrtle is Antifungal ~ Used to kill or prevent the growth of fungi, Lemon Myrtle is a powerful antifungal agent and used to treat symptoms of athlete's foot, nail infections, ringworms. Applied as a spray or cream or by adding Lemon Myrtle Oil to a foot bath.

### Lemon Myrtle ( *Backhousia citriodora*) Extract and Its Active Compound .



Abstract Sarcopenia is an age-related skeletal muscle atrophy. Exercise is effective in improving sarcopenia via two mechanisms: activation of skeletal muscle satellite cells (SCs) and stimulation of muscle protein synthesis.

## Lemon's Impact on Muscle Growth: Unveiling the Citrus Connection



to rats on SC activation in skeletal muscle. 2. Materials and Methods 2. 1. Preparation of LM Cut and dried samples of lemon myrtle leaves were supplied by Australian Native Lemon Myrtle Farms (Airlie Beach, Queensland, Australia). The weighed samples were extracted with 5-fold volume of water for 2 h at 50 C. The extract was filtered through an



## Lemon Myrtle: All the Health Benefits - Zuma Nutrition

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Antiviral

September 19, 2019 Lemon Myrtle (*Backhousia citriodora*), also known as Sweet Verbena, is an ingredient from a subtropical plant only found in Australia and has been used for medicine and flavoring in Australia for hundreds of years. Its leaves contain oils that are high in citral, a chemical compound that produces a strong lemon odor.

### NEW Natural Anabolic? Lemon Myrtle Extract Explained - YouTube



1. Treats Sinus Infections If you have a problem with your sinuses flaring up on the advent of a minor infection, lemon myrtle oil can work wonders for you. The oil is known to possess anti-inflammatory

properties that can help in decreasing the inflammation in the sinuses. 2. Bronchitis

**Nutrients | Free Full-Text | Lemon Myrtle (*Backhousia citriodora* . - MDPI**



Home Supplement Forum Supplements Lemon Myrtle? Islander73 Aug 1, 2022 Islander73 New member Awards 0 Aug 1, 2022 #1 Lots of buzz about this plant being able to stimulate satellite cells. Looks promising. Anyone trying it etc? ironkill Well-known member Awards 3 Aug 1, 2022 #2 Interesting. Will look into it aaronuconn Well-known member Awards 3

Effect of Lemon Myrtle on Muscle growth + Study : r/team3dalpha - Reddit



NEW Natural Anabolic? Lemon Myrtle Extract Explained👉 BOOST YOUR TESTOSTERONE IN 30 DAYS (FREE TRAINING): [bit. ly/BoostingYourTestosteroneFreeWebin](https://bit.ly/BoostingYourTestosteroneFreeWebin).



Article

## Lemon Myrtle (*Backhousia citriodora*) Extract and Its Active Compound, Casuarinin, Activate Skeletal Muscle Satellite Cells In Vitro and In Vivo

Ayumi Yamamoto <sup>1,2,\*</sup>, Shinichi Honda <sup>1</sup>, Mineko Ogura <sup>1</sup>, Masanori Kato <sup>1</sup>, Ryuichi Tanigawa <sup>3</sup>,  
Hiidemi Fujino <sup>4</sup> and Seiji Kawamoto <sup>2,\*</sup>

- <sup>1</sup> Biotechnology Research Laboratories, Pharma & Supplemental Nutrition Solutions Vehicle, Kaneka Corporation, 1-8 Miyamae-cho, Takasago-cho, Takasago 676-8688, Japan; shinichi.honda@kaneka.co.jp (S.H.); mineko.tsuruoka@kaneka.co.jp (M.O.); masanori.kato@kaneka.co.jp (M.K.)
  - <sup>2</sup> Unit of Biotechnology, Hiroshima Research Center for Healthy Aging (HiHA), Graduate School of Integrated Sciences for Life, Hiroshima University, 1-3-1 Kagamiyama, Higashi-Hiroshima 739-8530, Japan
  - <sup>3</sup> Analysis Division, Osaka Analysis Center, Kaneka Techno Research Corporation, 5-1-1 Torikairinabi, Settsu, Osaka 566-0072, Japan; ryuichi.tanigawa@kaneka.co.jp
  - <sup>4</sup> Department of Rehabilitation Science, Graduate School of Health Sciences, Kobe University, 7-10-2 Tomogaoka, Suma-ku, Kobe 654-0142, Japan; fujino@phoenix.kobe-u.ac.jp
- \* Correspondence: ayumi.yamamoto@kaneka.co.jp (A.Y.); skawa@hiroshima-u.ac.jp (S.K.); Tel.: +81-50-3133-8171 (A.Y.); +81-82-424-7753 (S.K.)



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**Abstract:** Sarcopenia is an age-related skeletal muscle atrophy. Exercise is effective in improving sarcopenia via two mechanisms: activation of skeletal muscle satellite cells (SCs) and stimulation of muscle protein synthesis. In contrast, most nutritional approaches for improving sarcopenia focus mainly on muscle protein synthesis, and little is known about SC activation. Here, we investigated the effect of lemon myrtle extract (LM) on SC activation both in vitro and in vivo. Primary SCs or myoblast cell lines were treated with LM or its derived compounds, and incorporation of 5-bromo-2'-deoxyuridine, an indicator of cell cycle progression, was detected by immunocytochemistry. We found that LM significantly activated SCs ( $p < 0.05$ ), but not myoblasts. We also identified casuarinin, an ellagitannin, as the active compound in LM involved in SC activation. The structure–activity relationship analysis showed that rather than the structure of each functional group of casuarinin, its overall structure is crucial for SC activation. Furthermore, SC activation by LM and casuarinin was associated with upregulation of interleukin-6 mRNA expression, which is essential for SC activation and proliferation. Finally, oral administration of LM or casuarinin to rats showed significant activation of SCs in skeletal muscle ( $p < 0.05$ ), suggesting that LM and casuarinin may serve as novel nutritional interventions for improving sarcopenia through activating SCs.

**Keywords:** sarcopenia; skeletal muscle satellite cells; lemon myrtle; *Backhousia citriodora*; casuarinin; ellagitannin; interleukin-6

### 1. Introduction

Sarcopenia is an age-related skeletal muscle atrophy and is defined as a progressive and generalized skeletal muscle disorder that involves accelerated loss of muscle mass and function [1]. Progression of sarcopenia is associated with many health risks, such as an increase in falls and fractures, loss of activities of daily living, and poor quality of life [2]. Sarcopenia was estimated to affect approximately 50 million people in 2010 and this number is expected to increase as the number of older adults increases [3]. The primary intervention for improving sarcopenia is exercise, which has been shown to benefit older adults with sarcopenia [1]. Among exercise methods, resistance exercise is recommended for improving sarcopenia, but it should be performed considering the risks of a temporary

Plant Extracts casuarinin Sarcopenia is an age-related skeletal muscle atrophy. Exercise is effective in improving sarcopenia via two mechanisms: activation of skeletal muscle satellite cells (SCs) and stimulation of muscle protein synthesis.

## Myrtle: a versatile medicinal plant - PMC - National Center for .



Lemon myrtle is a relatively slow-growing, aromatic, evergreen tall shrub or small tree that sometimes grows up to 20 meters tall in the wild, though usually smaller and rarely above 5 meters in cultivation. The plant is found growing in coastal forests, rain forests and semi-temperate rain forests.

### Lemon Myrtle The Breakthrough for Improving Skeletal Muscle



Where and How to Plant Lemon Myrtle. Lemon myrtle needs full sun to partial shade and fertile, well-draining soils that still retain moisture. These adaptable shrubs can tolerate various types of soil. However, they do prefer slightly acidic soils with a pH range between 5.5 and 6.5. Dig a hole that's as deep as the root ball and twice as large.

## Lemon Myrtle? - AnabolicMinds



The responses of muscle satellite cells to lemon myrtle supplementation combined with electrical stimulation in disuse-induced skeletal muscle atrophy were . Flamini G, Pistelli L, Ascrizzi R, Pistelli L, Zinnai A. The influence of ripeness stage and growth area on myrtle-leaved orange (chinotto) peel essential oil composition. Biochem Syst .

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