

# Chemical composition, pharmacological effects and applications *Hibiscus sabdariffa* L. (Malvaceae) in skin care and dermatology: A review

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## ABSTRACT

In recent years, it is estimated that 80% of world population rely on traditional herbal medicine for primary health care. The cosmetic preparations and functional foods derived from medicinal herbs are widely used in around the world and in Vietnam. The use of standardized medicinal herbs, with chemical compositions with antioxidant and skin-beautifying effects, is great research and interested. Bup Giam (*Hibiscus sabdariffa* L. Malvaceae) is a medicinal herb that is interested in skin care and alternative medicines. Therefore, in this paper, the authors will generalize the chemical composition from parts of the hibiscus plant along with pharmacological effects such as antioxidation, hypoglycemia, antihypertensive, and some research directions. Research on medicinal herbs of Bup Giam found the effect in skincare and dermatology such as acne treatment, wound healing, skin cancer resistance, antifungal. The review aims to the basis for in-depth studies on the effects of Bup Giam in skin beauty and dermatology to evaluate the importance of the chemical components of this medicinal herb applied in cosmetics and functional foods today.

**Keywords:** *Hibiscus sabdariffa*, skincare, application

## 1. INTRODUCTION

*Hibiscus sabdariffa* L. is a widely grown plant in Vietnam, which is considered a food in meals. Calyx and leaves of *Hibiscus sabdariffa* L. have been shown to have antibacterial, antifungal, and antiparasitic activity, antioxidant activity, hepatoprotective activity, nephroprotective activity, ... [1] but in Vietnam, this medicinal herb have paid little study attention. *Hibiscus sabdariffa* L. also has the effect of beautifying the skin and treating dermatological diseases. This review summarizes *Hibiscus sabdariffa* L. and outlines its skin effects and provides the basis for in-depth pharmacological studies of this herb.

### 1.1. Botanical

*Hibiscus sabdariffa* L. is mostly a shrub or small tree, distributed mainly in tropical and subtropical Asia and Africa. *Hibiscus sabdariffa* was introduced to Vietnam about 10 years ago [2] and is easy to grow in most well-drained soils but can tolerate poor soils. It grows for 4 - 8 months with a minimum night time temperature of 20°C. Rain or high humidity during harvest and drying can degrade calyx quality and reduce yield [1]. The position of the species *Hibiscus sabdariffa* L. in the taxonomy according to Armen Takhtajan is as follows [3].

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Kingdom Plante

Phylum Magnoliophyta

Class Magnoliosida

Subclass Dillenidae

Superorder Malvanae

Order Malvales

Family Malvaceae

Genus *Hibiscus*

Species *Hibiscus sabdariffa*

**Figure 1.** Taxonomy of *Hibiscus sabdariffa* L.

### 1.2. Morphology

*Hibiscus sabdariffa* L. is an annual, erect, bushy, herbaceous subshrub that can grow up to 2.4 m tall, with smooth or nearly smooth, cylindrical, typically red stems. The leaves are alternate green with reddish veins and long or short petioles. Flowers, borne singly in the leaf axils, yellow or buff with a rose or maroon eye, and turn pink as

they wither at the end of the day. At this time, the typically red calyx, consisting of 5 large sepals with a collar (epicalyx) of 8 to 12 slim, pointed bracts around the base and fully encloses the velvety capsule, which is green when immature, 5-valved, with each valve containing 3 to 4 kidney-shaped, light-brown seeds. The capsule turns brown and splits open when mature and dry [1].



Leaves



Flower



Seeds



Fresh calyces



Dried calyces



Fruit

**Figure 2.** Some parts of *Hibiscus sabdariffa* L. [4]

### 1.3. Traditional culinary use

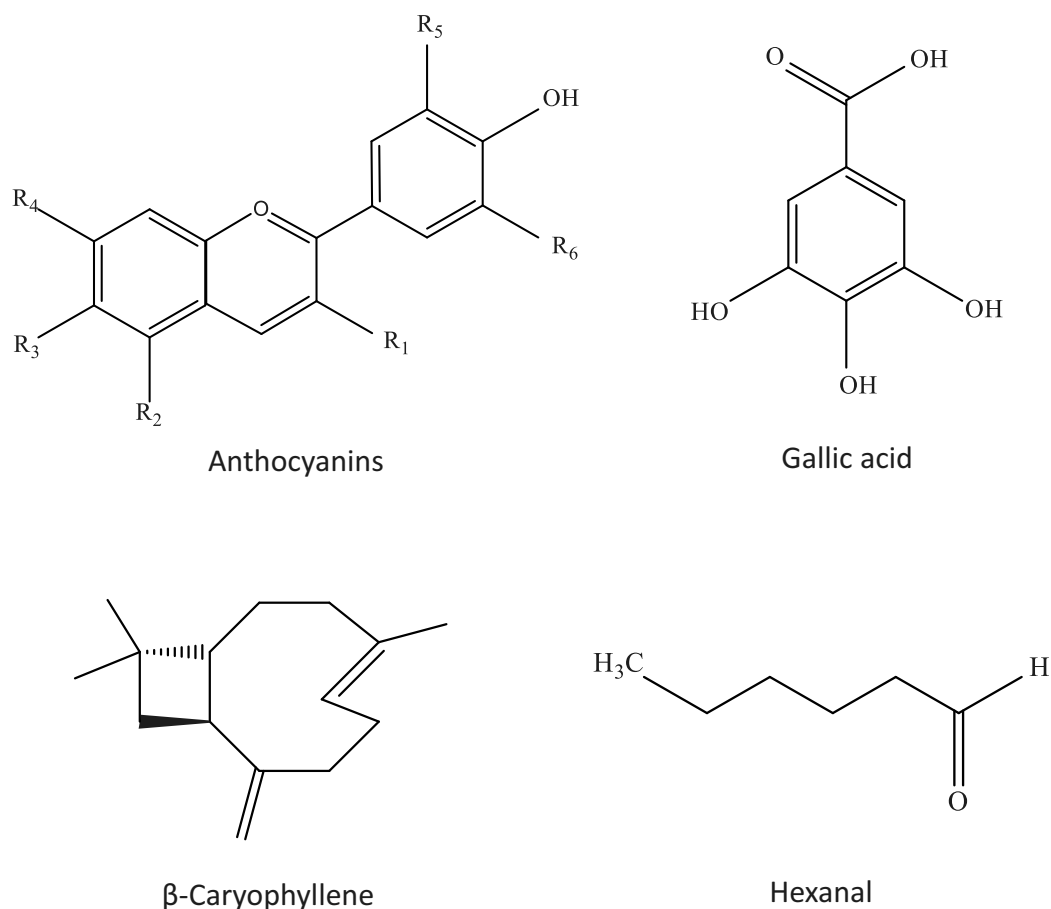
Fresh or dried calyces of *Hibiscus sabdariffa* L. are used in the preparation of herbal drinks, wine, jam, jellied confectionaries, ice cream, chocolates, flavouring agents, puddings, and cakes. The seeds are eaten roasted or ground in meals, while the leaves and shoots use as a sour-flavoured vegetable or condiment. The seeds are also used for their oil. Another use for the seed is as a substitute for coffee [1].

## 2. PHYTOCHEMISTRY

### 2.1. *Hibiscus sabdariffa* calyces

The extract from the calyx *H. sabdariffa* showed the presence of organic acids such as hydroxycitric acid; anthocyanins include delphinidin-3-sambubioside, cyanidin-3-sambubioside; flavonoids and phenolic acid include gallic acid, chlorogenic acid isomer I, chlorogenic acid, chlorogenic acid isomer II,

5-hydroxymethylfurfural, methyl digallate, 2-O-trans-caffeoyl-hydroxycitric acid, 5-caffeoylquinic acid, myricetin-3-arabinogalactoside, 3-caffeoylquinic acid, protocatechuic acid, protocatechuic acid glucoside, coumaroylquinic acid, quercetin-3-sambioside, quercetin-3-rutinoside, 5-O-caffeoylshikimic acid, leucoside (kaempferol-3-O-sambubioside), quercetin-3-glucoside, kaempferol-3-O-rutinoside, feruloyl derivative, methyl-epigallocatechin, myricetin, N-feruloyltyramide, 4-caffe-oylquinic acid, caffeoylquinic acid isomer, kaempferol 3-(p-coumarylglucoside), quercetin, caffeic acid, galloyl ester, feruloyl quinic acid derivative, kaempferol-3-glucoside, quercetin derivative, tiliroside [1]. In addition, the calyx also contains essential oils with 89 different compounds such as hexanal, 2-pentyl furan, n-nonanal, d,  $\beta$ -caryophyllene, oleic acid, n-octanal,... [5].

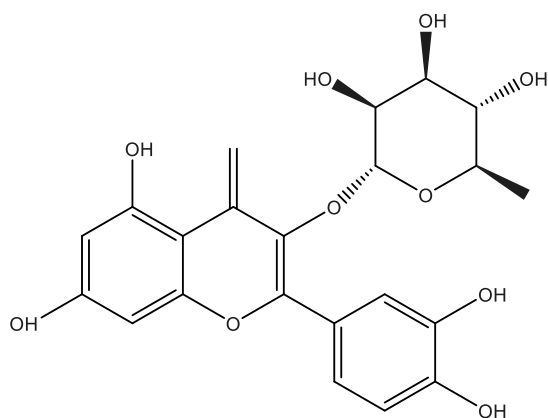


**Figure 3.** Some compounds in calyces of *H. sabdariffa* [5]

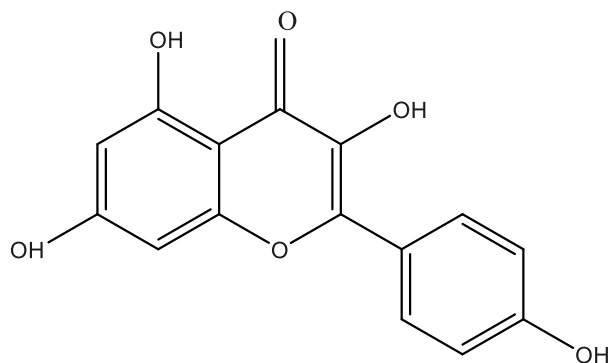
## 2.2. *Hibiscus sabdariffa* leaves

Aqueous extract of *Hibiscus sabdariffa* L. leaf contain is protocatechuic acid, catechin, epicatechin gallate, ellagic acid, epigal-locatechin, ferulic acid, quercetin, polyphenol, flavonoid [6].

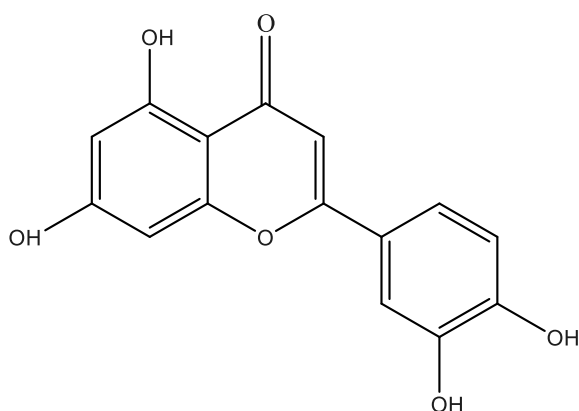
Besides, the leaf also contains essential oils with 82 different compounds such as 1,2-Dimethyl decahydro-naphthalene, 1,2,3,4-tetrahydro-1,5,8-trimetylnaphtalen, anethole, 1,2-dihydro-1,5,8-trimetylnaphtalen, n-pentacosane,.... [5].



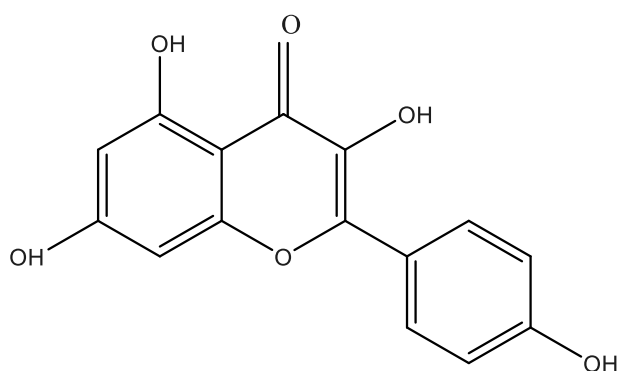
Quercetin



Kaempferol



Luteolin



Apigenin

**Figure 4.** Some compounds flavonoid in leaves of *Hibiscus sabdariffa* L. [6]

## 2.3. *Hibiscus sabdariffa* seeds

The study have shown the presence of cholesterol, campesterol, stigmasterol,  $\beta$ -sitosterol,  $\alpha$ -spinasterol, and ergosterol in the seeds of *Hibiscus sabdariffa* L. [7]. In addition to the leaves and sepals containing essential oils, the seeds still contain a small amount of essential oil. Oils were investigated by GC-MS analysis to detect compounds such as heptanoic acid, octanoic acid, nonanoic acid, methyl tetradecanoate, methyl stearate, oleic acid,... In the ethanol extract of the seeds, there are alkaloids, carbohydrates, flavonoids, saponins, triterpenes, sterols, and tannins [7].

## 2.4. *Hibiscus sabdariffa* root

Some literatures show the chemical components such as arachidic acid (49.18%), oleic acid (36.36%) and octadecanoic acid (14.47%) occur in the roots [8].

## 2.5. *Hibiscus sabdariffa* fruit

*Hibiscus sabdariffa* L. fruit contains  $\alpha$ -terpinyl acetate, pectin, anisaldehyde, ascorbic acid, calcium oxalate, caprylic acid, citric acid, acetic acid, ethanol, formic acid, pelargonic acid, propionic acid, isopropyl alcohol, methanol, benzyl alcohol, 3-methyl-1-butanol, benzaldehyde and minerals [9].

### 3. PHARMACOLOGICAL ACTIVITIES

#### 3.1. Hypoglycemia

The study about extraction of calyx polyphenolic components effect in a mouse model of type II diabetes (high-fat diet model) [10]. The study showed anti-insulin properties of the extract at a dose of 200 mg/kg, and reduced hyperglycemia and hyper-insulinemia. The extract was found to be effective in reducing serum cholesterol, triacylglycerol, low-density lipoprotein/high-density lipoprotein (LDL/HDL) ratio, as well as the formation (AGE) and lipid per oxidation, intestinal  $\alpha$ -glycosidase and pancreatic  $\alpha$ -amylase help digest complex carbohydrates found in food into bioavailable mono-saccharides and play an important role in postprandial hyperglycemia; Therefore, inhibition of these enzymes has been reported to be an effective mechanism for the control of postprandial hyperglycemia. Hibiscus acid (hibiscus-type (2S, 3R) -hydroxycitric acid lactone) has been shown to be a potent inhibitor of pancreatic  $\alpha$ -amylase and intestinal  $\alpha$ -glucosidase and pancreatic  $\alpha$ -amylase activity [10].

#### 3.2. Antioxidant activity

Many studies have shown the antioxidant effect on the components of *Hibiscus sabdariffa* L. as in the calyx alcohol extract, at a concentration of 250  $\mu$ g/mL, 86% DPPH was obtained while 125 and 50  $\mu$ g/mL caused DPPH inhibition. 53% and 23%, and mild inhibition was produced at concentrations of 5  $\mu$ g/mL [11]. The antioxidant effect of the aqueous extract and the methanol extract (80%) was  $46.5 \pm 0.96\%$  and  $89.8 \pm 0.33\%$  free radical collection with the DPPH method [12]. The seeds also had an antioxidant effect of the aqueous extract and the methanol extract (80%) which was  $65.1 \pm 2.58\%$  and  $91.8 \pm 1.05\%$  free radical scavenging with DPPH method [12]. There was also an antioxidant effect in roots by methanol extract with  $IC_{50}$  of  $13.37 \pm 1.06 \mu$ g/mL [8].

#### 3.3. Antihypertensive

The effectiveness of an aqueous extract of

*Hibiscus sabdariffa* L. on mild to moderate hypertension has been investigated in many studies. *H. sabdariffa* L. calyx extract was as effective as captopril in the treatment of mild to moderate hypertension and had no side effects in treatment, confirming the efficacy and safety of the extract. Although the possible mechanism of action of *H. sabdariffa* L. extract has not been studied, daily consumption of the *H. sabdariffa* L. aqueous extract of calyx decreases systolic and diastolic blood pressure [10].

#### 3.4. Others

In addition to the above effects, *H. sabdariffa* L. extract also has several other effects such as hepatoprotective activity by anthocyanins of *H. sabdariffa* L. extract creating detoxification enzymes in phase II, such as glutathione S-transferase, NAD (H): quinone oxidoreductase, and uridyl diphosphoglucuronosyl transferase. Renal protective activity by antioxidant action of renal extracts of *H. sabdariffa* L. from oxidation. Several studies have shown that extracts of *H. sabdariffa* have a lipid-lowering activity, which could prevent diseases like hyperlipidemia and cardiovascular diseases (atherosclerosis and coronary heart disease) [1]. The extracts (water and ethanolic extracts of dried calyces or leaves) were able to decrease low-density lipoprotein cholesterol (LDL-c), triglycerides (TAG), total cholesterol (TC), and lipid peroxidation *in vivo*. A few of them even reported that the extract was also able to reduce very-low-density lipoprotein cholesterol (VLDL-c) [13, 14] along with an increase in serum level of high-density lipoprotein cholesterol (HDL-c) levels [14, 15]. A preliminary study on the use of *H. Sabdariffa* L. decoctions as an alternative source of iron for the treatment of anemia and some other mineral deficiency diseases was conducted and showed that dry fermented calyces of hibiscus demonstrated a very low pH value which enhanced mineral availability. Another reason for enhancing mineral (iron, zinc, calcium, and magnesium) bioavailability is the high concentration of ascorbic acid [16].

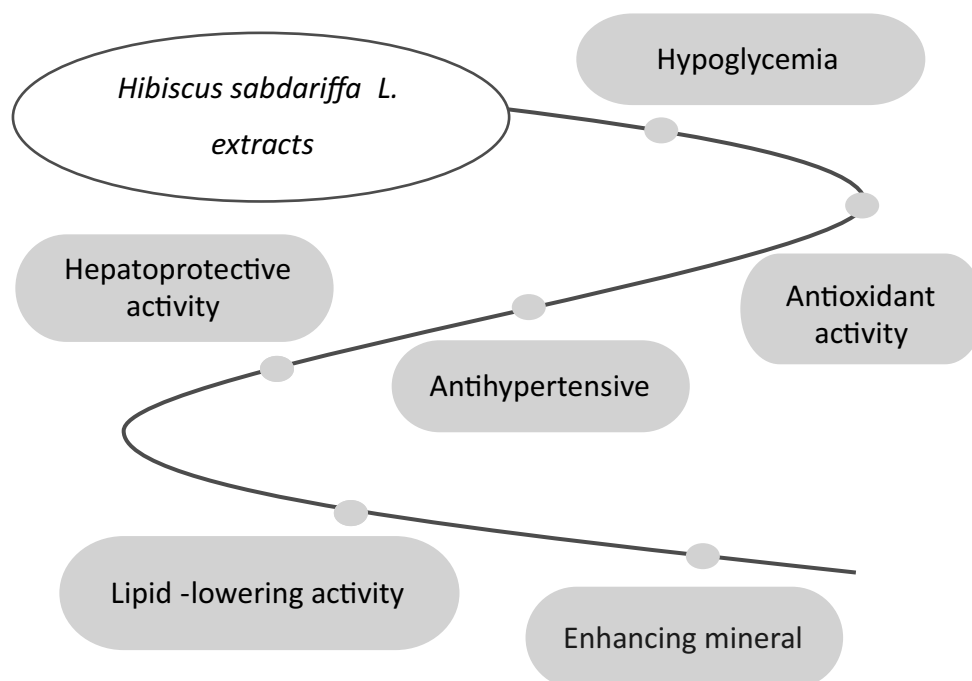


Figure 5. Pharmacological effects of *Hibiscus sabdariffa* L. extract [1, 7, 10-16]

#### 4. DERMATOLOGICAL APPLICATION

##### 4.1. Acne treatment

*Hibiscus sabdariffa* L. is known to have antibacterial effects, *Propionibacterium acnes* has been described as an obligate anaerobic organism, it is implicated in the development of inflammatory acne. *Staphylococcus epidermidis*, an aerobic organism, usually involves superficial infections within the sebaceous unit. The MIC and MBC values of *Hibiscus sabdariffa* L. extracts against *Propionibacterium acnes* are 2.5 mg/mL and 5 mg/mL. On *Staphylococcus epidermidis* are 0.625 mg/mL and 5 mg/mL. *Hibiscus sabdariffa* L. is used as an antibacterial and anti-inflammatory agent, antibacterial associated with inflammatory acne, *Propionibacterium acnes* and *Staphylococcus epidermidis* [17].

##### 4.2. Wound healing

Several studies have shown that wound healing is faster with *H. Sabdariffa* L. extract. To our knowledge, *H. sabdariffa* L. is not directly indicated for wound healing in folk and orthodox applications. Therefore, the study

used cream prepared with extracts of *H. sabdariffa* L. to experiment. Through the above experiment, the results showed that creams containing 1 and 5% (w/w) extract also showed faster wound healing than placebo. Creams containing 10% (w/w) extract and creams containing 1% (w/w) extract and 1% gentamicin showed much better wound healing with placebo. Although the wound-healing mechanism of *H. sabdariffa* L. methanol extract is unknown, it has been shown in experiments that its wound-healing effect is one of the effects that need attention at present [18].

##### 4.3. Anti skin cancer

Melanoma is the least common but most fatal form of skin cancer, and its worldwide incidence has doubled in the past 20 years [19]. The study show that *H. sabdariffa* L. leaf extract can inhibit skin cancer by Apoptosis and Autophagy [6]. The leaf extract of *H. sabdariffa* L. induces apoptosis in human skin cancer cells by 7.3% at a concentration of 250 µg/mL, by DAPI staining. The study determined that the expression of caspase-3, -8, and -9 was increased with the *H.*

*sabdariffa* L. extract (250 µg/mL). It was also detected that the expression of an anti-apoptosis protein, Bcl-2, was inhibited after treatment with *H. sabdariffa* L. leaf extract (250 µg/mL). The cytochrome C is released from mitochondria to the cytosol after treatment with *H. sabdariffa* L. leaf extract. These data indicate that *H. sabdariffa* L. leaf extract could induce apoptosis through an intrinsic pathway in cancer cells. In addition, the expressions of Fas-L and Fas in membrane fraction were also increased after *H. sabdariffa* L. leaf extract. Therefore, these results demonstrated a pathway that *H. sabdariffa* L. leaf extract not only induced intrinsic apoptosis pathway but also activated extrinsic apoptosis in cancer cells. *H. sabdariffa* L. leaf extract can also inhibit cancer cells by autophagy mechanism. *H. sabdariffa* L. leaf extract inhibits Atk protein and mTOR protein (which inhibits autophagy) and increases autophagy-enhancing proteins such as PI3K class III/Beclin1, ATGs, LC3, and P62. *H. sabdariffa* L. leaf extract can be a therapeutic or preventive agent for Melanoma [6].

#### 4.4. Anti fungal agent

Some studies show that *H. sabdariffa* L. calyx extract has antifungal effects, especially against skin fungi. The aqueous extract showed effects on *Candida albicans*, *Trichophyton mentagrophytes*, *Trichophyton rubrum* (three common skin fungi) with MIC (minimal inhibitory concentration) of 8.0 mg/mL, 4.0 mg/mL, 4.0 mg/mL, respectively. Thereby, it shows that the aqueous extract of the calyx *H. sabdariffa* L. has an effective antifungal effect on the skin [20].

#### 4.5. Anti-aging skin and reducing melanin formation

From the referenced literature, it is shown that *H. sabdariffa* L. extract has protective effects on the skin when exposed to UVB rays. The oxidative stress is caused by UV rays causing excessive production of ROS (reactive oxygen species) causing damage to collagen

and elastin in the skin, reducing the skin's resilience. MPP is an enzyme activated by UV exposure or inflammation. *H. sabdariffa* L. calyx extract can reduce ROS and reduce the effect of ROS on the skin. The extract from *H. sabdariffa* L. has anti-aging effects by inhibiting collagenase activity and expression. The extract inhibited collagenase activity, increased collagen synthesis, and decreased collagenase expression. Inhibits the amount of MPP (matrix metalloproteinase) which causes collagen destruction and increases TIMP (tissue inhibitor of metalloproteinase) to prevent collagen breakdown by MPP and has a beneficial effect on collagen retention in the skin. When tissue exposed to UVB increased MPP production higher than the control group when using 0.1 mg/mL of *H. sabdariffa* L. extract, it was only 60% higher than the control group, but with 2 mg/mL of extract, it was only 10%. Cells exposed to UVB and treated with *H. sabdariffa* L. calyx extract had 70% collagen compared with the control group. After treatment with 2 mg/mL of *H. sabdariffa* L. calyx extract, collagen increased by 6%. *H. sabdariffa* L. calyx extract also has anti-melanoma effects by inhibiting tyrosinase activity and expression. Factors that increase melanin include MITF (microphthalmia-associated transcription factor) and three enzymes (Tyrosinase, TRP-1, TRP-2). When exposing skin cells to UVB, the MITF increased by 30% compared to the control group, when using 1 mg/mL of *H. sabdariffa* L. calyx extract, MITF decreased to 85% compared with the control group. Tyrosinase decreased to 52% compared to the control group when used at a concentration of 2 mg/mL extract. The same TRP-1 and TRP-2 were reduced to 72% compared with the control group when administered at a concentration of 2 mg/mL extract. *H. sabdariffa* L. calyx extract inhibits tyrosinase activity, reduces mRNA and protein expression,

reduces melanogenesis protein, and has skin whitening properties. *H. sabdariffa* L. calyx extract has a strong anti-oxidant capacity, the ability to maintain collagen production, inhibit melanogenesis, and is, therefore, a potential anti-aging cosmetic ingredient [21].

## 5. CONCLUSION

The results of the review are that *Hibiscus*

*sabdariffa* L. contains antioxidant components such as anthocyanins, flavonoids, ... In addition, it also shows pharmacological effects, prominent of which are effects on the skin. This review can be seen as the basis for in-depth studies of the pharmacological effects *in vivo* and *in vitro*, as a background, and as a generalization of the information needed for further studies on extended dermal application.

## REFERENCES

- [1] I. Da-Costa-Rocha, B. Bonnlaender, H. Sievers, I. Pischel and M. Heinrich, "Hibiscus sabdariffa L. -A phytochemical and pharmacological review," *Food Chemistry*, No. 165, pp. 424-443, 2014.
- [2] Đ. T. Lợi, "Cây thuốc và động vật làm thuốc Việt Nam," trong *Bộ phận giấm*, NXB Khoa học và kỹ thuật Hà Nội, 2006, tr. 270-272.
- [3] A. Takhtajan, *Flowering Plants*, Vol. 270, Springer Science & Business Media, 2009.
- [4] N. T. P. Thảo, "Cây bộ phận giấm," 12nd September 2021. [Online]. Available: <https://www.thuocdantoc.org/duoc-lieu/cay-bup-giam>. [Date 30th December 2021].
- [5] H. M. ., A. S. ., S. K. & M. R. Hamideh Amin Amlashi, "Volatile Composition of The Leaves and Calyxes Essential Oil of Roselle (*Hibiscus sabdariffa* L.) From Iran," *Journal of Essential Oil Bearing Plants*, Vol. 23, No. 4, pp. 743 - 755, 2020.
- [6] C. T. H. S. W. L. H. H. C.C. C. F. P. & C. J. H. Chiu, "Hibiscus sabdariffa Leaf Polyphenolic Extract Induces Human Melanoma Cell Death, Apoptosis, and Autophagy," *Journal of Food Science*, Vol. 80, No. 3, pp. 649-658, 2015.
- [7] T. E. A. I. A. Hagr, "Phytochemical Analysis, Antibacterial and antioxidant Activities of Essential Oil from Hibiscus sabdariffa (L) Seeds, (Sudanese Karkadi)," *Prog. Chem. Biochem. Res*, Vol. 3, No. 3, pp. 194-201, 2020.
- [8] R. A. H. I. M. a. Hasi, "Antioxidant and antineoplastic activities of roots of *Hibiscus sabdariffa* Linn. Against Ehrlich ascites carcinoma cells," *Clin Phytosci*, Vol. 5, No. 46, 2019.
- [9] S. P. K. N Malhadevan, "Hibiscus sabdariffa Linn. -An overview," *Natural Product Radiance*, Vol. 8, No. 1, pp. 77-83, 2009.
- [10] K. M. H. H. Singh P, "Nutritional and Health Importance of *Hibiscus Sabdariffa*: A Review and Indication for Research Needs," *J Nutr Health Food Eng*, Vol. 6, No. 5, pp. 212, 2017.
- [11] E. M. A. M. A. e. a. Nizar Sirag, "Determination of total phenolic content and antioxidant activity of Roselle (*Hibiscus sabdariffa* L.) Calyx ethanolic extract," *Standard Research Journal of Pharmacy and Pharmacology*, Vol. 1, No. 2, pp. 34-39, August 2014.
- [12] N. Mohd-Esa, F. S. Hern, A. Ismail và C. L. Yee., "Antioxidant activity in different parts of roselle (*Hibiscus sabdariffa* L.) extracts and potential exploitation of the seeds," *Food chemistry*, Vol. 122, No. 4, pp. 1055-1060, 2010.
- [13] E. O. & I. O. O. Farombi, "Hypolipidemic and antioxidant effects of ethanolic extract from dried calyx of *Hibiscus sabdariffa* in



alloxan-induced diabetic rats.," *Furndamental & Clinical Pharmacology*, Vol. 21, No. 6, pp. 601 -609, 2007.

[14] P. C. Ochani, "Antioxidant and antihyperlipidemic activity of *Hibiscus sabdariffa* Linn. leaves and calyces extracts in rats.," *Indian Journal of Experimental Biology*, Vol. 47, No. 4, pp. 276-282, 2009.

[15] M. Y. Jang, C. H. Peng, K. C. Chan, Y. S. Yang, C. N. Huang & C. J. Wang, "The hypolipidemic effect of *Hibiscus sabdariffa* polyphenols via inhibiting lipogenesis and promoting hepatic lipid clearance," *Journal of Agricultural and Food Chemistry*, Vol. 58, No. 2, pp. 850-859, 2010.

[16] O.S. Falade, I. O. Otemuyiwa, O. O. Oyedabo, B. A. Akinpelu & S. R. A. Adewusi, "The chemical composition and membrane stability activity of some herbs used in local therapy for anemia," *Journal of Ethnopharmacology*, Vol. 102, No. 1, pp. 15-22, 2005.

[17] M. T. S. S. N. V. S. & G. W. ., Chomnawang, "Antimicrobial effects of Thai medicinal plants against acne-inducing bacteria," *Journal of*

*Ethnopharmacology*, Vol. 101, No. 1, pp. 330-333, 2005.

[18] P. F. e. a. Builders, "Wound healing potential of formulated extract from *Hibiscus sabdariffa* calyx.," *Indian journal of pharmaceutical sciences*, Vol. 75, No. 1, pp. 45-52, 2013.

[19] P. A. C. C. S. M. M. E. R. V. D. B. G. B. C. Cifola I, "Comprehensive genomic characterization of cutaneous malignant melanoma cell lines derived from metastatic lesions by whole-exome sequencing and SNP array profiling," *PLoS ONE* , Vol. 8, pp. 1-10, 2013.

[20] V. M. Navarro García, G. Rojas, L. Gerardo Zepeda, M. Aviles, M. Fuentes, A. Herrera và E. Jiménez, "Antifungal and Antibacterial Activity of Four Selected Mexican Medicinal Plants," *Pharmaceutical Biology*, Vol. 44, No. 4, pp. 297-300, 2006.

[21] J. Li, Y. Lu, I. Lin, W. Kang, H. Chen, H. Lu và H. D. Wang, "Reverse UVB-induced photoaging by *Hibiscus sabdariffa* calyx aqueous extract," *Journal of the Science of Food and Agriculture*, Vol. 100, No. 2, pp. 672-681, 2019.

## Tổng quan thành phần hóa học, tác dụng dược lý và ứng dụng *Hibiscus sabdariffa* L. (Malvaceae) trong chăm sóc da và da liễu

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### TÓM TẮT

Trong những năm gần đây, người ta ước tính rằng 80% dân số trên thế giới dựa vào y học cổ truyền để chăm sóc sức khỏe ban đầu. Các chế phẩm mỹ phẩm và thực phẩm chức năng có nguồn gốc từ dược liệu được sử dụng rộng rãi ở Việt Nam và trên thế giới. Việc sử dụng các dược liệu được tiêu chuẩn hóa, chứa thành phần hóa học có tác dụng chống oxy hóa, làm đẹp da đang được nhiều người quan tâm và nghiên cứu. Bụp Giấm (*Hibiscus sabdariffa* L. Malvaceae) là dược liệu được quan tâm trong việc chăm sóc da và thay thế thuốc chữa bệnh. Vì vậy, trong bài báo này, nhóm tác giả sẽ khái

quát thành phần hóa học từ các bộ phận của cây Bụt Giấm cùng với các tác dụng dược lý như chống oxy hóa, hạ đường huyết, hạ huyết áp và một số hướng nghiên cứu. Nghiên cứu về dược liệu Bụt Giấm cho thấy tác dụng của cây trong việc chăm sóc da và da liễu như trị mụn, làm lành vết thương, kháng ung thư da, kháng nấm. Bài tổng quan này làm cơ sở cho các nghiên cứu chuyên sâu về tác dụng của Bụt Giấm trong việc làm đẹp da và da liễu nhằm đánh giá tầm quan trọng của các thành phần hóa học của dược liệu này để ứng dụng trong mỹ phẩm và thực phẩm chức năng hiện nay.

**Từ khóa:** *Hibiscus sabdariffa*, chăm sóc da, sử dụng

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