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Medicinal plants from the Himalayan region as potential novel antimicrobial and anti-inflammatory skin treatments

Michael HEINRICH^{1,2,*}, Haiping JIANG,¹ Francesca SCOTTI¹, Anthony BOOKER^{1,3}, Heinrich WALT⁴,
Caroline WECKERLE⁵, Caroline MAAKE³,

- 1) Research Group 'Pharmacognosy and Phytotherapy', UCL School of Pharmacy, Univ. London, 29 - 39 Brunswick Sq., London WC1N 1AX
- 2) 'Graduate Institute of Integrated Medicine, College of Chinese Medicine', and 'Chinese Medicine Research Center', China Medical University, No. 100, Sec. 1, Jingmao Rd., Beitun Dist. Taichung, Taiwan.
- 3) School of Life Sciences, College of Liberal Arts and Sciences, University of Westminster. 115 New Cavendish St. London W1W 6UW, UK
- 4) Department for Cranio-Maxillo-Facial Surgery, University Hospital Zurich, CH – 8091 Zurich, Switzerland.
- 5) Institute of Systematic and Evolutionary Botany, University of Zürich, Zollikerstrasse 107, CH-8008 Zürich, Switzerland I
- 6) nstitute of Anatomy, University of Zurich, Winterthurerstrasse 190 CH - 8057 Zurich Switzerland
- 7)

Abstract

Background

Adequate treatment of wounds remains one of the major medical needs globally, most notably in regions with poor or limited access to healthcare. In many local and traditional systems of medicine plants are often widely used for treating infected wounds.

Aim and Objectives

The overarching aim of this project is the selection of potential species for use in a future treatment combining plant resources with aspects of antimicrobial photodynamic therapy (aPDT). Specifically, we focused on species used locally in the Himalayan region against skin disorders and then assessed the existing evidence for key species.

Methods

Database searches were applied to identify relevant publications describing local and traditional uses of plants in the Himalayan region of Bhutan, PR China, India, Nepal and Pakistan. Using the Global Biodiversity Information Facility (GBIF), species were researched in terms of their distribution including in different climatic regions, focusing on species mostly found in higher climatic zones (based on the Köppen-Geiger climate classification). For species used in three or more countries and restricted to the higher altitudes data on safety, pharmacology as it relates to dermatological conditions and phytochemistry were retrieved.

Results and Discussion

The study identified a total of 606 species that are used in the treatment of various skin conditions often associated with infections reported in 84 articles. Common weeds like *Ageratum conyzoides* and *Bidens pilosa*, widely used and cultivated species like *Centealla asiatica* and *Prunus armenica* were excluded. This ultimately led to the identification of a core group of five widely used species restricted to the Himalayan region (*Cedrus deodara*, *Nardostachys jatamansi*, *Pinus wallichiana*/*Pinus roxburghii* and *Valeriana jatamans*).

Conclusions

Here we apply a novel approach comprising an assessment of the published information on the use of medicinal plants (i.e. local and traditional knowledge) in the context of their potential to be used in a biomedical form of clinical treatment - aPDT. In a next step and once sustainable sourcing based on access and benefit sharing arrangements is in place, these species could be investigated for their potential in wound treatment. Ultimately, the goal is to develop a new baseline for primary healthcare in some of the poorest regions of the world.

Keywords: Himalaya, medicinal plants, wound treatment, traditional medicine, dermatology, infectious diseases (skin)

1. Introduction

Injuries account for 7.6% of global deaths and 11% of years of life lost in 2019, especially in low and low-middle-income countries ^[1]. Importantly, recovery of trauma patients may be severely disrupted by infections of wounds with microbes, leading to often long-term economic consequences due to temporary or permanent disabilities, considerable health costs and reduced or even ceased income ^[2]. This has specific impact on the health-related quality of life and specifically the lives of the poor and poorest and their families, and all too often, women are more heavily affected, also in terms of access to healthcare ^[3,4].

Generally, a low bacterial load in open injuries is a critical goal in wound care to prevent delayed wound healing, difficult-to-treat chronic situations or – with certain pathogens – patients' death ^[5,6]. However, especially in less and medium developed countries, as well as in poorer regions of other countries, established antibiotic treatment regimens are associated with a number of particular challenges. These include, among others, a limited drug availability for poorer segments of the population and, in rural areas, distribution of adulterated or poor-quality drugs, inappropriate prescription practices, and unmonitored use of antimicrobials with risks of poor compliance and misapplication ^[7]. Especially the latter factors are known to contribute to the ever-growing development of antibiotic resistance, now recognised as one of the most urgent challenges currently facing global public health ^[8,9].

Local and traditional medicinal plants are frequently recorded to be used in the prevention and treatment of infected wounds and for promoting wound healing. However, apart from the use in their natural state, some species identified from local pharmacopoeias have shown their potential to be a major source of new pharmaceutical leads like ingenol 3-angelate (used in dermatology) or galanthamine (with uses in cognitive decline) ^[10]. Such leads are still largely underexplored but could serve to develop safe, cost-effective and efficient first-line treatments of wounds prone to infections, and – at the same time – prevent an overuse of common antibiotics and eventually save last resort drugs ^[11,12]. Ingenol 3-angelate (Ingenol mebutate; Picato®) from *Euphorbia peplus* L. offers an excellent example of linking a detailed assessment of local / traditional uses with pharmacological and later clinical research. As a prerequisite for our basic research project aiming to identify natural molecules suitable for innovative antimicrobial and wound healing protocols, we here present a first literature search with the aim to identify plants that are generally used in the context of dermatological conditions. Such a search strategy broadens the spectrum of potential plant candidates, since the vast majority of such diseases are associated with skin defects and/or a direct or indirect microbial involvement.

For our search we chose to further focus on plants from the Himalayans regions. People in these regions often have poor access to biomedical ('Western') healthcare and treatments due to their remote location and poverty. These challenges, combined with the fact that such regions are recognised as global biodiversity hotspots might have contributed to the maintenance of a thriving traditional medicine based on local medicinal species ^[13-17]. The exact number of Himalayan medicinal plants has not been reported, but the mountain range is a cradle for around 10,000 plant species ^[17]. The Himalayas house many indigenous societies, who possess and apply knowledge of medicinal plants available to them. Furthermore, the region spreads across five countries, namely Bhutan, China, India, Nepal and Pakistan, all of

which retained a strong traditional medicine system, for example, the well-known and increasingly popular Ayurveda (India) and Traditional Chinese Medicine (China). Bhutan sits on the Eastern Himalayas and features high mountains. Bhutan's official traditional medical system - *Sowa rigpa* - blends principles of Indian and Tibetan Medicine with ancestral medical applications^[18]. Nepal is situated between the Western and Eastern Himalayas, featuring a unique blend of flora; over 6000 vascular plants in Nepal have been documented to date^[19]. Due to the influence of neighbouring India and China, Nepalese traditional medicinal practices are now a combination of Ayurveda, Tibetan Medicine and local ethnomedicines^[19]. Mixed climate zones, due to altitudinal variations (from 0 to 8611 m), endow Pakistan with a large diversity of plants (6000 flowering plants)^[20]. Similarly, to its neighbouring countries, Pakistan has a very rich experience of using plants to treat diverse ailments. However, in contrast to Bhutan and Nepal, Pakistani traditional medicine system is based predominantly on Unani medicine^[21]. Furthermore, the country has accepted Unani medicine and integrated it into the national health system, as well as other complementary and alternative medicine (CAM) systems, e.g. Ayurveda and homoeopathy^[21].

The high altitude of the Himalaya is another important aspect in our search for promising plants candidates. We hypothesize that species with a wide distribution in higher altitudes may produce particularly interesting leads from the perspective of our future research into a wound care based on daylight for the activation of plant-derived chromophores. One of the best investigated examples of such photosensitizer molecules is hypericin, a hydroxylated phenanthroperylene dione occurring in flowers and leaves of *Hypericaceae* (the St John's Wort family)^[22,23]. At least under in vitro conditions, activated hypericin has been shown to display a remarkable broad-band antimicrobial efficiency towards various bacteria, viruses, fungi and protozoa, including difficult-to-treat microbial biofilms^[24]. Its mode of action in microbes is not resolved in detail, but seems to strongly rely on the generation of reactive oxygen species, that irreversibly damage vital cell constituents - a principle often termed antimicrobial photodynamic therapy (aPDT)^[25]. Due to these pathways, which are fundamentally different to antibiotics, light-activated photosensitizers, including hypericin, are able to kill even antibiotic-resistant bacteria^[26]. Not unexpectedly, several studies with synthetic photosensitizers in patients showed that aPDT-mediated wound disinfection may impressively contribute to wound closure and healing^[27]. We propose that plants able to thrive or survive under prolonged stronger UV irradiation (such as those found at extremely high altitudes) may have developed very effective systems of protection from high UV stress by producing compounds responsive to UV stimulation that may be especially relevant for our research.

Our overall project, dealing with the development of an herbal-compound-based PDT for the efficient, easy, safe and cheap primary treatment of infected wounds addresses urgent medical needs especially in low-income countries. It also strongly contributes to the Sustainable Development Goals of the United Nations^[28], while strictly adhering to principles of Access and Benefit Sharing as defined in the Nagoya Protocol^[29].

2. Methods

Literature search strategy

Literature was retrieved using three online bibliographical databases: Web of Science, Scopus, China National Knowledge Infrastructure (CNKI) and a detailed review of the 2015 edition of the Chinese Pharmacopoeia for species applied to treat skin diseases found in this region. The keywords originally used on Web of Science and Scopus were “Bhutan”, “China”, “India”, “Nepal” or “Pakistan” for the region, “skin” or “dermat*” for the disease of interest, “Himalaya” or “high altitude/elevation” to restrict habitat and “plant”. As only a small number of articles were found, the search terminology indices were modified as follows: a) Web of Science: (TOPIC: (Bhutan/China/ India/ Nepal/ Pakistan) AND TOPIC: (skin/dermat*) AND TOPIC: (plant)); b) Scopus: TITLE-ABS-KEY (Bhutan/China/ India/ Nepal/ Pakistan AND skin/dermat* AND plant). For CNKI, keywords – “high altitude”, “plateau”, “Tibetan medicine”, “Himalaya”, “Changbai mountain” and “Hengduan mountain” in Chinese were searched, restricted to “Subject”, and “Synonym Search” was allowed. No time restrictions were included. The literature search is up to date until 10th August 2020. Plant names were assessed for taxonomic validity using *Medicinal Plant Names Services* (MPNS) (mpns.science.kew.org/mpns-portal). *The Plant List* (www.theplantlist.org), which was used in many published articles ^[20,30-33], was checked when MPNS provided confusing or no information about the plant name searched. The search result on MPNS was given priority when it contradicted that on *The Plant List*, or other specialist resources were consulted. Global Biodiversity Information Facility (www.gbif.org) was used to estimate the altitude range of species occurrences, with two datasets – The Himalayan Uplands Plant database and Database of Vascular Plants of Himalaya.

Inclusion and exclusion criteria

The inclusion criteria for literature were: (a) for CNKI, articles which were in the Traditional Chinese Medicine (TCM) category but also written in Chinese; (b) for Web of Science and Scopus, published articles in journals written in English; (c) papers reviewing plant species used to treat certain skin conditions of humans; (d) articles addressing a single herb’s traditional uses; and (e) articles with the available full text. Papers were excluded if their study areas were far away from the Himalayas and provided no information about altitude. Inclusion of a species was based on: a) plant species with a clear description of traditional usage against skin ailment(s); b) within the two datasets, plants with recorded occurrences at altitudes of at least 1000 m above sea level (asl).

Tabulation of plants

Titles and abstracts of search results were scrutinized, and a selection of full texts was made. A master list was developed with Microsoft Excel 2019 (Appendix 1). The list includes the international accepted name, the name as published in the original source, family, habit, study region, plant part used, mode of preparation, route of administration, disease they were used

for and the relevant sources. Species reported in more than one country were enlisted only once. Based on information provided by *Flora of China*, CABI (<https://www.cabi.org/isc/datasheet/55072>), Plants of the World Online (www.plantsoftheworldonline.org/), GBIF (<https://www.gbif.org/>) and other biodiversity related sources, four groups were created, which in essence represents the general abundance of a species: “*” (generally restricted to montane areas above 1000 m), “#” (widely cultivated as a food, ornamental or for other purposes) or “^” (widely distributed and generally weedy, or invasive). All other are listed with no symbol.

2.1. Review on pre-existing pharmacological evidence and phytochemistry of core species

Species used in three or more countries and restricted to the higher altitudes were reviewed for their safety and pharmacology as well as phytochemistry as it relates to dermatological conditions.

Literature search strategies for species selected were: a) (TITLE-ABS-KEY (species name) AND TITLE-ABS-KEY (skin OR dermat*)) on Scopus; b) TOPIC: (species name) AND TOPIC: (skin OR dermat*) on Web of Science. Species included in the TCM system were also searched on CNKI, (Subject: species name) AND (Title, Keyword and Abstract: uses recoded in Appendix 1).

The literature inclusion criteria were: a) for CNKI, papers written in Chinese; b) for Web of Science and Scopus, published articles in journals written in English; c) studies researching phytochemistry and/or pharmacology related to the positive effect on skin conditions of species searched; d) articles reporting side effects caused by the administration of the plant's extracts; and e) articles with the available full text. Additionally, the reference list of each paper was checked for relevant articles. Studies on polyherbal preparations were excluded. We followed Heinrich et al. ^[34] for assessing the quality of the studies under review.

3. Results and discussion

Species used in high altitude regions

In total, 84 articles, including 12 which focused on a certain species or genus, were selected from the title and abstract according to the criteria listed in Section 2.2. Including the Chinese Pharmacopoeia, 85 publications in total were reviewed. Studies were distributed unevenly among the countries included. Most publications (34; 40%) targeted the local and traditional uses in Indian communities, followed by Pakistan (16; 19%), while China and Nepal had similar proportions (13; 15% and 14; 16%, respectively). By contrast, only four papers (5%) recorded botanical treatments in Bhutan, and from more than one country, respectively.

A total of 606 species representing 126 families are recorded as being used by indigenous people for cutaneous complaints, with Asteraceae (58 species), Fabaceae (42), Lamiaceae (32), Polygonaceae and Rosaceae (21, respectively) and Ranunculaceae (19) being the most commonly cited families (Appendix 1). As one would expect, the majority of the included species are herbs (373, 61.5%), followed by shrubs (113; 18.6%) and trees (89; 14.7%). Very few climbers (25; 4.1%) and ferns (3; 0.5%) are recorded.

The number of medicinal species recorded in each country also varies greatly and is correlated with the number of papers, which to some degree also indicates varying degree of research interest in these countries: India (340 species), Pakistan (190) and Nepal (156). Only 72 species from China 36 from Bhutan are included (multiple listings possible).

None of the species documented was used in all countries with five species recorded in four out of 5 countries for similar or different dermatological complaints: *Centella asiatica* (L.) Urb., *Melia azedarach* L., *Oxalis corniculata* L., *Ricinus communis* L. and *Zanthoxylum armatum* DC. *R. communis* stands out as being particularly widely used (15 studies with records in 15 different categories of skin problems). Of note, all these species are widely distributed and, in many cases, weedy species, which are not endemic to high altitude regions.

Local and traditional medical uses in the context of dermatological conditions

The terminology for dermatological conditions used in the papers was inconsistent. Similar diseases were recorded with different terms, such as chilblain and frostbite, tinea pedis and athlete's foot, and leukoderma and leucoderma. Besides, catch-all terms like "skin diseases" and "dermatological disorders" were used to indicate ethnomedicinal applications. Also, separated/attached form of terms for the same types of disorder (e.g. smallpox and small pox) occurred in different papers. Therefore, the data summarised in **Table 1** represents a synthesis and cannot be correlated with standard biomedical terms (e.g. ICD11).

Table 1. Disease categories and number of species reported from Bhutan, China, India, Nepal and Pakistan

Disease category	Number of species recorded					
	Total	Bhutan	China	India	Nepal	Pakistan
Abscess	32	6	2	17	-	8
Acne	6	-	1	3	-	2
Animal bites (stings)	65	-	11	31	14	18

Disease category	Number of species recorded					
	Total	Bhutan	China	India	Nepal	Pakistan
Blister	7	-	-	4	3	-
Boils	149	1	12	100	26	30
Burn (scald)	84	1	8	37	25	17
Carbuncle	38	-	27	8	-	3
Chickenpox	7	1	1	4	-	1
Chilblain (frostbite)	3	-	-	3	-	-
Corns	2	-	1	-	-	1
Crack (chapped hands and feet)	11	-	1	6	4	1
Cut	127	4	-	88	47	6
Dandruff	16	-	-	7	5	8
Dermatitis	10	-	3	1	-	6
Eczema	57	1	18	30	1	9
Erysipelas	5	-	4	1	-	-
Herpes	1	-	-	1	-	-
Inflammation	13	-	-	5	2	6
Itch (itching)	46	1	2	31	5	8
Leprosy	45	4	1	26	9	12
Leucoderma (leukoderma)	2	-	-	18	2	4
	2					
Measles	10	-	1	4	-	5
Pimples	52	-	-	23	8	24
Pus	2	-	-	1	1	-
Pustule	5	-	1	1	-	3
Rashes	4	-	-	1	1	2
Ringworm	41	-	1	27	8	7
Scabies	52	2	4	25	13	16
Skin allergy	16	-	-	11	1	4
Skin eruption	9	-	-	4	1	6
Skin/dermatological infections	52	2	4	15	2	29
Skin irritation	8	-	-	3	1	4
Skin /dermatological diseases/problems/disorders/compl aints/ailments	174	6	2	84	37	56
Skin spots	3	-	-	1	-	2
Smallpox	9	-	1	6	-	2
Sores	51	1	35	8	5	3
Sunburn	2	-	-	-	1	1
Swelling	12	-	-	5	1	6
Thorn	1	-	-	1	-	-
Tinea pedis (athlete's foot)	4	-	2	1	-	1
Ulcer	15	-	5	3	1	6
Urticaria	4	-	3	1	-	-
Warts	12	-	1	2	-	9
Wound (skin damage, scar)	270	23	15	140	76	71

^aMost species were practised in over one disease category (Appendix 1)

Wounds, cuts (which could be classed as a subcategory of wounds) as well as boils, stand out

as being of particular importance. Wounds, boils and cuts were also the most common skin ailments in several studies investigating traditional dermatology practices in India and Pakistan [11,12,20,35-37]. Specific reference to inflammatory and infectious conditions is relatively low, and in case of sunburns only 2 uses were recorded, for *Ephedra gerardiana* and *Sesamum indicum*. In addition, chilblains/frostbites are rarely treated. These data provide some indication of what particular health problems are treated in these high-altitude regions. For example, based on the data retrieved, chilblains/frostbite seem to be rarely treated or there is an underreporting of such uses. The reasons for this low number of reported species remains unclear.

Clearly, the uses for a single species may also differ widely. For instance, *Ageratum conyzoides* L. is applied to wounds in Bhutan, India and Nepal, but it also plays a role in the treatment in leprosy and boils in India (Appendix 1).

Achyranthes bidentata Blume is used to treat pimples, boils, itchy pustules and insect and snake bites in India, whereas in Chinese medicine it is mainly used for musculo-skeletal conditions and was originally cited in texts of the 2nd century c.e. (Chen and Chen, 2004). However, it could potentially have an application in skin diseases due to its steroidal content and its potential application in tissue regeneration [38].

The top twelve species recorded for medicinal use in high altitude regions are *Cedrus deodara* (Roxb. ex D.Don) G. Don, *Houttuynia cordata* Thunb., *Lobelia chinensis* Lour., *Nardostachys jatamansi* (D.Don) DC, *Paris polyphylla* Sm., *Pinus wallichiana* A. B. Jacks and *P. roxburghii* Sarg., *Prinsepia utilis* Royle, *Punica granatum* L., *Solanum nigrum* L., *Tussilago farfara* L. and *Valeriana jatamansi* Jones ex Roxb. Interestingly, seven of them are not typical of high-altitude regions – *H. cordata*, *L. chinensis*, *Paris polyphylla*, *Prinsepia utilis*, *P. granatum* L., *S. nigrum* L., *T. farfara* L.

High altitude medicinal species

An initial impetus for this review was the search for species, which – due to their exposure to high intensities of light - might be of particular interest for further research and development focusing on light activated potential anti-infective and anti-inflammatory agents for treating wounds. We used a systematic strategy as outlined in Figure 1 to select the most promising species. Basing the selection criteria on the updated Köppen climate classification [39], we took a very broad approach and included species which are restricted to or have their biodiversity centre in climate region Cwb and above (E - tundra and high mountains). However, we also included species found in Cwa taking the reported altitude range for a species as an approximation.

Only five species restricted to the Himalayan region (*Cedrus deodara*, *Nardostachys jatamansi*, *Pinus wallichiana*/ *Pinus roxburghii* and *Valeriana jatamansi*) have been more widely used in the region. Species numbers used in only one, two and three countries are 125, 19 and 5, respectively. Among the 606 species, those generally restricted to or at least widely distributed in mountain regions account for less than a quarter (150 sp.) (Appendix 1). This group includes Himalayan endemic species, as well as species with a distribution centre

around the Arctic circle and in high mountain regions. Another core group is composed by commonly cultivated species (139; 23%), which are grown for ornamental purposes or for food, like the pomegranate (*Punica granatum*) and maize (*Zea mays*). 99 species (16%) are widely distributed, weedy or invasive species. The remaining ones are species distributed both in higher and lower elevations of Asia.

These data are interesting from another perspective. It has been demonstrated before that the access to a resource to be used medicinally or in other words its ‘weediness’ is a core factor determining the selection of a plant, both in local/traditional medical systems, but also in biomedicine [40,41].

Plant parts used, preparation methods and modes of administration

The uses of plant parts for medicinal preparations were highly diverse, covering almost all parts but also different developmental stages (e.g. buds and flowers or leaves) (Table 2). Uses of the same parts of a species for different ailments and different parts for the same conditions were often documented (Appendix 1). Leaves were the most frequently used part, followed by roots, whole plants, seeds and bark (similarly to other studies from India and Pakistan [12,20,35,36]). The employment of leaves is preferable since it potentially offers a more sustainable use of natural resources, and since, compared to fruits and flowers, leaves satisfy medicinal demand for a longer period over an annual cycle.

Table 2. Plant parts used (based on Appendix 1)

Part of plant used	Number of species (n= 1009*)
Leaf	289
Root	148
Whole plant	123
Seed (kernel)	65
Bark	64
Fruit	59
Flower (floret, floral part, inflorescence)	57
Aerial part	37
Stem	25
Rhizome	24
Latex (milky sap)	19
Bulb	15
Tuber	10
Pseudobulb	10
Stem bark	9
Shoot	8
Root bark	6
Resin (oleoresin)	6
Branch	5
Peel (rind)	5
Berry	4
Bud, corm, gum	2 each
Bine, clove, corolla, dust, frond, endosperm, gall, petioles, pulp, spike, spore, stem node, twig, underground part, young saplings*	1 each

* - a species may yield more than one drug

In a dermatological context, the mode of preparation and formulation is of particular importance. However, this type of data is often lacking in ethnobotanical studies, such as those reviewed here (Appendix 1).

The majority were made into pastes, followed by juice, decoction, and powder (Table 3), in line with data from previous studies [20,35]. Multiple uses of drugs from a species and modes of preparation are recorded in the studies reviewed, for example the paste of *Trigonella foenum-graecum* L.: leaf (decoction, paste/oral), flowers (decoction, paste/oral), seed (paste/oral) (Appendix 1). The decoction of *Celosia argentea* L. stems, leaves, flowers and seeds, respectively, was used as medicinal baths to treat eczema (Appendix 1; Li et al 2006). Clearly, in most cases the formulations point to a potential use of the entire spectrum of metabolites (i.e. from hydrophilic to lipophilic) since the directly processed plant material is most commonly used (paste, juice, powder). Hydrophilic preparations (decoctions, poultice, and infusion) are recorded in 114 (14.2%) cases; lipophilic preparations account for 5% (40) and in case of 'paste' the excipients remains unclear and often more detailed information on traditional preparation methods would have been essential.

Table 3. Use frequency (number of species) of different preparation methods in the studied regions (based on Appendix 1)

Preparation	Number of species (n= 801)*
Paste	259
Juice	120
Decoction	89
Powder	77
Extract	51
Poultice	50
Oil	40
Infusion	25
Raw material	22
Crushing	21
Fresh material	10
Heating	7
Cooking (frying)	6
Grinding, rubbing	5
Ash, pounding	4
Boiling	3
Crude, mashing, smoke	2 each
Cake, pill, warming	1 each

* - multiple drugs / forms of preparation possible

As expected, a large majority of species with clear records of administration routes were used externally (359; 83%). Internal uses account for 16% (72), including species with both external and internal uses (including plant preparations from a botanical drug being used externally in one study and internally in another) (Appendix 1).

The potential of high-altitude plants in the management of skin diseases

Several species retrieved from the literature search are widely used, and often they are

common weeds or invasive species, which, in general terms, are already very well studied. These include *Ageratum conyzoides*, *Bidens pilosa*, *Centella asiatica*, *Cissampelos pareira*, *Euphorbia hirta*, *Melia azedarach*, *Oxalis corniculata*, *Ricinus communis*, *Rubus ellipticus* and *R. spp.*, *Urtica dioica*, *Cannabis sativa*, *Paris polyphylla*, *Prunus armeniaca*, *Sapindus mukorossi*, *Vitex negundo* and *Woodfordia fruticosa*. Some like *P. armenica* are used relatively widely both for their fruit and as medicines, Others are well-studied medicinal plants and all these were excluded. The cases that will be examined are therefore those of the species more typical of high altitudes habitats and not widely used/known.

***Cedrus deodara* (Roxb. ex D.Don) G.Don**

The essential oil of *C. deodara* is the main preparation reported with dermatological uses in India, Nepal and Pakistan (Appendix 1). Controlling sarcoptic mange in sheep, was achieved using the essential oil of *C. deodara* [42,43].

Antifungal [44], linked to two sesquiterpenes) and anti-inflammatory / analgesic effects were also reported, and it is likely that the essential oil has antibacterial effects [45].

***Nardostachys jatamansi* (D.Don) DC.**

The species is found from Western to Eastern Himalaya including, Nepal, Tibet, as well as in other regions of North- and South-Central China, Bangladesh and Myanmar. In the Himalayas, some communities use the leaves to treat altitude sickness as well as wounds (Ghimire and Aumeeruddy-Thomas, 2009). In Chinese medicine its main use is in the treatment of digestive complaints [46]. While the traditional use of the root in three countries to treat wounds or fungal infections is well known, limited information on relevant pharmacological effects is available. Ali et al [47] demonstrate potential effects on benzoyl peroxide-induced oxidative stress, toxicity, and ear oedema in mice and Min and Park [48] demonstrated inhibitory effects on inflammatory cytokines (IgE, IL-6, IL-8 and TNF- α) also in mice.

Bhattacharya and Dhiman [49] highlight the confusion between this species and *Valeriana jatamansi* (see below) . Since 1997 it has been listed by its synonym *N. grandiflora* in CITES Appendix II, as a plant of being at risk of becoming endangered unless trade becomes more sustainable [50]. It, additionally, figures in the IUCN Red List of Endangered Species [49,51].

***Pinus wallichiana* A.B. Jacks.**

P. wallichiana is a mountain plant which provides a wide range of botanical drugs including stems, resin, leaves, bark and seeds that have been used in the traditional medicine of India, Nepal and Pakistan to treat cracks, cuts and wounds, pus and abscesses. Antibacterial, antifungal and anti-inflammatory activities have been reported, but the evidence remains limited.

Hydro-alcoholic extract of *P. wallichiana* stem bark showed a potent antimicrobial effect on

Pseudomonas aeruginosa, *Streptococcus aureus* and *Klebsiella pneumoniae* and antifungal activity against *Candida albicans in vitro*. Besides, the extract exhibited potential *in vitro* anti-inflammatory activity via albumin denaturation and human red blood cells membrane (HRBC) stabilization assays [52].

The aqueous extract of *P. wallichiana* stems was found to be non-toxic and non-mutagenic at all tested doses (up to 80 mg/kg) using the Ames and acute toxicity assays (Khan *et al.*, 2020). Moreover, silver nanoparticles incorporating the water extract were significantly active against *Acinetobacter baumannii*, an opportunistic pathogen known to cause wound and surgical site infections, especially in individuals with immune system deficiencies [53].

***Valeriana jatamansi* Jones ex Roxb.**

V. jatamansi is distributed from Eastern Afghanistan to Central & East Central China but also in Eastern China. Rhizomes, roots and the whole plant of this species have been used in four countries for the treatment of cuts and wounds, boils, pimples, pus or abscesses and other skin diseases (Appendix 1). The species should not to be confused with *Nardostachys jatamasi*, see above.

V. jatamansi rhizomes' aqueous and methanolic extracts considerably reduced inflammation of carrageenan-induced paw oedema in rats by inhibiting the production of inflammatory mediators histamine, prostaglandin and serotonin [54]. This could be linked to the presence of iridoids, including a series of jatodamines (A to E), and the sesquiterpenoid 8-acetoxyl-pathchouli alcohol inhibiting nitric oxide release in LPS-induced murine microglial BV-2 cells. However, the latter model is not directly relevant for skin conditions and is, in pharmacological terms, very preliminary. Patan *et al.* (2018) also reported the antibacterial potential of hydroalcoholic extracts of *V. jatamansi* extracts, at doses of 0.3-0.7 mg/ml, on *S. aureus*, *P. aeruginosa*, comparable with chloramphenicol used at 1 mg/ml. Valerenic acid was responsible for the antibacterial activity [54].

Valeriana jatamansi is often confused with the endangered *Nardostachys jatamansi* (as mentioned earlier). Consequently, *V. jatamansi*, is considered potentially at risk, too [50].

4. Conclusion

In our approach we used a multi-step process to identify potential lead species for the future development of effective, safe and cheap treatment regimens for infected wounds that rely on the activating power of light. After an initial screening of the literature, we focused on species which are more likely to be exposed to intensive levels of light, because they may produce more bioactive substances, which are light-sensitive.

The approach has some important limitations. The available information on the distribution of species does not allow a clear-cut differentiation of species between high mountain and other regions. Therefore, further analysis of these species may be needed. Also, the number of species restricted to high mountain regions is relatively low (ca 25%). People living in the

region clearly use what they have access to and thus we identified a large number of common if not ubiquitous species. This finding, in fact, provides further evidence that people's choice of medicines is driven by accessibility and thus the level of distribution (and weediness) of a species affects the frequency of use. At the same time, some of these species may well be of pharmacological interest, since they have been able to adapt to challenging and diverse ecological conditions and are used globally. Of course, this is a preliminary analysis identifying lead species and, at this stage, much more evidence is needed in order to identify potential benefits, limitations and specific risks like ingenol 3-angelate (s) provides a good example of the level of research needed. It was first seen as an excellent treatment of treating actinic keratoses and non-melanoma skin cancer. After its introduction in 2012, the marketing authorisation was withdrawn in Europe in 2020 due to reported carcinogenicity [55].

In a next step and once sustainable sourcing based on full access and benefit sharing arrangements is in place, these species could be investigated for their potential in wound treatment. Ultimately, the goal is to develop a new baseline for primary healthcare in some of the poorest regions of the world

The strategy used here proposes a new combination of traditional ethnopharmacological approaches with innovative treatments and, as such, offers new opportunities for drug development, in this case for skin diseases. The combination of both has the potential to provide a long-sought sustainable method to promote wound healing while preventing or even treating local infections effectively, safely, at low cost and in an outpatient setting. Especially for people with lower or very low income and limited access to basic or standard health provision, this may provide a very high-impact, affordable primary care option.

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Figure headings

Figure 1: Flow diagram of species prioritisation based on the combination of local/traditional uses for skin infections/inflammation and the use in high altitude regions.

Appendix 1

Table 1. Ethnobotanical *data of species recorded from high altitude regions in Bhutan, China, India, Nepal and Pakistan

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
1	[#] <i>Abelmoschus esculentus</i> (L.) Moench	<i>Abelmoschus esculentus</i> (L.) Moench	Malvaceae	Herb	India	Scabies and skin diseases	Leaf, flower ^[56]
2	[#] <i>Abelmoschus manihot</i> (L.) Medik.	<i>Abelmoschus manihot</i> (L.) Medic.	Malvaceae	Herb	China	Carbuncle, subcutaneous ulcer and burns	Dry corolla (Powder/e) ^[57]
3	[#] <i>Abelmoschus moschatus</i> Medik.	<i>Abelmoschus moschatus</i> Medik.	Malvaceae	Herb	Nepal	Cuts and wounds	Bark (Paste/e) ^[58]
4	[*] <i>Abies pindrow</i> (Royle ex D.Don) Royle	<i>Abies pindrow</i> (Royle ex D.Don) Royle	Pinaceae	Tree	India	Itching	Bark (Decoction/o) ^[59]
5	[#] <i>Abrus precatorius</i> L.	<i>Abrus precatorius</i> L. ^[12,60,61] <i>Abrus precatorius</i> Linn ^[62]	Fabaceae	Climber	India	Blood purification in skin diseases	Leaf (Juice/o) ^[12]
						Skin	
						Eczema	Seed (Paste) ^[62]
						Skin disease	Seed ^[60]
					Nepal	Wounds	Root (Paste or powder) ^[61]
							Root (Paste) ^[61]
6	[#] <i>Abutilon indicum</i> (L.) Sweet.	<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	Herb	India	Boils	Leaf (Paste/e) ^[12]
						Leprosy	Root (Infusion/o) ^[12]
7	[#] <i>Abutilon theophrasti</i> Medik.	<i>Abutilon theophrasti</i> Medic.	Malvaceae	Herb	China	Carbuncle, sores	Dry ripe seed ^[57]
8	<i>Acacia intsia</i> (L.) Willd.	<i>Acacia intsia</i> (L.) Willd.	Fabaceae	Shrub	Nepal	Snake and scorpion sting	Root (Paste/e) ^[61]
						Sores and itches	Leaf (Paste/e) ^[61]
9	[^] <i>Acalypha indica</i> L.	<i>Acalypha indica</i> L.	Euphorbiaceae	Herb	India	Skin diseases	Leaf ^[56]
10	<i>Achillea millefolium</i> L.	<i>Achillea millefolium</i> L.	Asteraceae	Herb	Pakistan	Wounds	Leaf (Decoction, powder) ^[63]
11	[^] <i>Achyranthes aspera</i> L.	<i>Achyranthes aspera</i> L.	Amaranthaceae	Herb	India	Boils, wounds between toes	Leaf (Juice/e) ^[35]
						Skin allergy	Leaf (Paste/e) ^[35]
						Skin eruption	Whole plant (Ash/e) ^[12]
						Burn	Root ^[60]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					India	Scorpion sting	Spike (Paste/e) ^[64]
						Ringworm	Root (Juice/e) ^[65]
						Boils	Root and leaf (Paste/e) ^[59]
					Nepal	Insect and snakebites	Leaf (Paste/o) ^[66]
					Pakistan	Leprosy, Itching, skin eruptions and irritation, abscess and boils, wound healing, ulcer and other skin diseases	Leaf (Ash, paste), stem (Ash), seed, whole plant ^[20]
						Wound healing	Leaf ^[67]
						Pimples, boils and skin infections	Root (Infusion/o) ^[37]
12	<i>Achyranthes bidentata</i> Blume	<i>Achyranthes bidentata</i> Blume	Amaranthaceae	Herb	India	Pimples, boils and itchy pustules	Whole plant (Fresh/e) ^[68]
13	* <i>Aconitum chasmanthum</i> Stapf ex Holmes.	<i>Aconitum chasmanthum</i> Stapf ex Holmes.	Ranunculaceae	Herb	Pakistan	Measles	Leaf (Decoction) ^[36]
14	* <i>Aconitum ferox</i> Wall. ex Ser.	<i>Aconitum ferox</i> Wall. ex Ser. ^[61] <i>Aconitum ferox</i> Wall. ^[69]	Ranunculaceae	Herb	India	Skin disease, leprosy and snakebite	Rhizome ^[61]
					Nepal	Leprosy	Tuber ^[69]
15	* <i>Aconitum heterophyllum</i> Wall. ex Royle.	<i>Aconitum heterophyllum</i> Wall. ex Royle.	Ranunculaceae	Herb	India	Cut, wounds and boils	Tuber (Paste/e) ^[32]
					Pakistan	Snakebites	Root, leaf (Powder) ^[63]
16	* <i>Aconitum heterophylloides</i> (Brühl) Stapf	<i>Aconitum laciniatum</i> Stapf ^[70] <i>Aconitum laciniatum</i> (Bruhl) Stapf ^[71]	Ranunculaceae	Herb	Bhutan	Leprosy ^[70,71]	Tuber, leaf, flower, root ^[70,71]
17	* <i>Aconitum violaceum</i> Jacquem. ex Stapf	<i>Aconitum violaceum</i> Jacq.ex Stapf	Ranunculaceae	Herb	Pakistan	Snake bites and Scorpion sting	Root (Decoction, powder) ^[63]
18	[#] <i>Acorus calamus</i> L.	<i>Acorus calamus</i> L.	Acoraceae	Herb	India	Wounds	Leaf (Paste/e) ^[35] , root (Decoction/e) ^[72]
						Eczema	Rhizome (Paste/e, Poultice) ^[11,35]
						Burns, cuts and wounds	Rhizome (Paste/e) ^[32]
						Measles	Rhizome (extract/o) ^[61]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
19	* <i>Actaea spicata</i> L.	<i>Actaea spicata</i> L.	Ranunculaceae	Herb	Pakistan	Snake bites	Root, berry (Powder, extract) [63]
20	<i>Adiantum capillus-veneris</i> L.	<i>Adiantum capillus veneris</i> L.	Pteridaceae	Fern	Pakistan	Measles	Aerial part (Decoction/o) [37]
21	* <i>Adiantum venustum</i> D. Don.	<i>Adiantum venustum</i> D. Don.	Pteridaceae	Herb	India	Scorpion bites	Fronde [73]
					Pakistan	Wounds and cuts	Rhizome (Paste/e) [36]
22	^ <i>Aerva javanica</i> (Burm.f.) Juss. ex Schult.	<i>Aerva javanica</i> Burmf	Amaranthaceae	Shrub	Pakistan	Wound healing	Fresh flower and leaf (Paste/e) [74]
23	# <i>Aesculus indica</i> (Wall. ex Cambess.) Hook.	<i>Aesculus indica</i> (Wall.ex Cambess.) Hook. [75]	Sapindaceae	Tree	India	Wounds and cracks	Seed [75]
		<i>Aesculus indica</i> (Colebr. ex Cambess.) Hook. [76]			Nepal	Cuts, wounds and skin diseases	Fruit (Paste/e) [76]
24	#^ <i>Agave americana</i> L.	<i>Agave americana</i> L.	Asparagaceae	Shrub	India	Burns, cuts, wounds and skin irritation	Leaf (Heated/e) [59]
25	^ <i>Ageratina adenophora</i> (Spreng.) R.M.King & H.Rob.	<i>Eupatorium adenophora</i> Spreng.	Asteraceae	Shrub	India	Cuts and wounds Burns Pimples	Leaf (Extract/e or juice/e) [32,77] Leaf (Extract/e or juice/e) [32] Stem (Water extract/o) [32]
26	^ <i>Ageratina adenophora</i> (Spreng.) R.M.King & H.Rob.	<i>Ageratina adenophora</i> (Spreng.) R.M.King & H.Rob.	Asteraceae	Herb	Nepal	Cuts and wounds	Leaf (Juice) [77]
27	^ <i>Ageratum conyzoides</i> L.	<i>Ageratum conyzoides</i> (L.) L [35,77,78] <i>Ageratum conyzoides</i> Linn. [32,79] <i>Ageratum conyzoides</i> L. [11,12,30,80,81]	Asteraceae	Herb	Bhutan India	Wound healing Cuts Leprosy Wound healing	Leaf [78] Leaf (Juice/e) [11,35,82], aerial part (Extract and paste/e) [32], root [82] Leaf (Juice and paste/e) [12,35,82], root [82] Whole plant (Decoction/o) [79], leaf (Juice, paste/e) [11,30,32], aerial part (Extract and paste/e) [32], root [82]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					India	Skin diseases	Whole plant (Paste) ^[81] , root ^[82] , leaf ^[82]
						Burns	Leaf (Juice) ^[32,82] , root ^[82]
						Sores, scabies, swellings and boils	Root, leaf ^[82]
					Nepal	Cuts and wounds	Leaf (Juice) ^[77,83]
						Muddy wounds between toes	Plant (Paste/e) ^[83]
28	<i>Aglaiia elaeagnoidea</i> (A.Juss.) Benth	<i>Aglaiia roxburghiana</i> Miq.	Meliaceae	Tree	Nepal	Leprosy	Fruit ^[69]
29	* <i>Agrimonia pilosa</i> Ledeb.	<i>Agrimonia pilosa</i> Ledeb.	Rosaceae	Herb	China	Carbuncle, sores	Dry aerial part (e) ^[57]
30	<i>Ajuga integrifolia</i> Buch.-Ham. ex D.Don	<i>Ajuga bracteosa</i> Wall. ex Benth. ^[59,84] <i>Ajuga bracteosa</i> Wall.ex. Bth. ^[37] <i>Ajuga integrifolia</i> Buch.-Ham. ^[36]	Lamiaceae	Herb	India	Boils and pimples	Leaf (Paste/e) ^[59]
					Pakistan	Skin infections	Leaf (Decoction/o) ^[84]
						Boils	Aerial parts (Juice /o) ^[37] , leaf (Powder/o) ^[36]
31	* <i>Ajania nubigena</i> (Wall. ex DC.) Muldashev	<i>Ajania nubigena</i> DC.	Asteraceae	Herb	Bhutan	Abscesses	Aerial part ^[70]
32	<i>Ajuga parviflora</i> Benth.	<i>Ajuga parviflora</i> Benth.	Lamiaceae	Herb	India	Skin diseases, boils, and pimples	Leaf (Paste/e) ^[32]
						Skin infections	Leaf (Juice) ^[73]
33	<i>Alangium salvifolium</i> (L.f.) Wangerin	<i>Alangium salvifolium</i> (L. f.) Wang.	Cornaceae	Tree	India	Skin diseases	Leaf ^[56]
34	[#] <i>Albizia julibrissin</i> Durazz.	<i>Albizia julibrissin</i> Durazz.	Fabaceae	Tree	China	Sores	Dry bark (Powder/e) ^[57]
35	[#] <i>Albizia lebbek</i> (L.) Benth.	<i>Albizia lebbek</i> (L.) Benth.	Fabaceae	Tree	India	Boils	Leaf (Juice/e) ^[35]
					Pakistan	Burns	Leaf (Paste/e) ^[85]
						Wound healing, leucoderma, itching, inflammations, boils, eruption	Dry leaf (Smoked), seed, bark, flower (Paste), stem, whole plant ^[20]
						Boils, swelling and skin diseases	Bark and seed (Powder) ^[86]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
36	<i>Albizia lucidior</i> (Steud.) I.C.Nielson ex H.Hara	<i>Albizia lucidior</i> (Skud) Hara	Fabaceae	Tree	India	Abscesses and boils	Fresh root (Infusion/e) [87]
37	* <i>Allardia glabra</i> Decne.	<i>Waldehemia glabra</i> (Decne.) Regel	Asteraceae	Herb	Nepal	Itching	Dry whole plant (Powder with oil/e) [88]
38	# <i>Allium cepa</i> L.	<i>Allium cepa</i> L.	Amaryllidaceae	Herb	India	Ringworm Hard boils and skin allergy Burns skin diseases Abscesses Cuts and wounds, skin disease, blisters, itching and boils	Whole plant (Paste/e) [35] Bulb (Paste/e) [12,35] Bulb (Juice) [32] Bulb (Heated in mustard oil/e) [64] Bulb [82]
					Pakistan	Wound, eruption, boils, chickenpox, pimples, skin infections and other skin diseases Wound healing Boils and warts Abscesses Pimples	Stem, leaf and bark (Paste/e) [20] Bulb (Juice/o) [36] Bulb (Paste/e) [37,85] Bulb (Poultice/e) [89] Branch and leaf (Paste/e) [90]
39	# <i>Allium sativum</i> L.	<i>Allium sativum</i> L. [12,36,57,90] <i>Allium sativum</i> Linn. [87]	Amaryllidaceae	Herb	India	Ringworm and eczema Spider and snake bites	Clove (Paste/e) [12] Bulb (Paste/e) [87]
					China	Carbuncle, sores and scabies	Bulb [57]
					Pakistan	Pimples	Leaf (Paste/o) [36], branch (Paste/e) [90], leaf (Paste/e) [90]
40	# <i>Alstonia scholaris</i> (L.) R.Br.	<i>Alstonia scholaris</i> (L.) R.Br.	Apocynaceae	Tree	India	Leucoderma	Bark, latex and flower [61]
41	^ <i>Alternanthera sessilis</i> (L.) R.Br. ex DC.	<i>Alternanthera sessilis</i> (L.) R.Br. ex DC.	Amaranthaceae	Herb	India	Itch	Leaf [60]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
42	[^] <i>Amaranthus spinosus</i> L.	<i>Amaranthus spinosus</i> L.	Amaranthaceae	Herb	India	wounds between toes Boils Eczema Carbuncle Ringworm Itching burns	Leaf (Pounded/e) [35] Leaf (Food/o, paste/e) [35,61], root (Paste/e) [35] Leaf (Juice/e) [35] Root (Paste/e) [35] Leaf (Juice) [11] Root (Juice/e) [65] Leaf (Food/o) [61]
					China	Eczema and scabies	Whole plant (Bath/e) [91]
43	[#] [^] <i>Amaranthus viridis</i> L.	<i>Amaranthus viridis</i> L.	Amaranthaceae	Herb	Pakistan	Snake bites and scorpion stings Boils Abscesses	Leaf (warmed/e) [37,89,92] Leaf (warmed/e) [37] Leaf (Poultice with mustard oil/e, warmed/e) [37,89]
44	<i>Ampelocissus divaricata</i> (Wall. ex M.A.Lawson) Planch.	<i>Ampelocissus divaricata</i> (Wall.ex Laws.) Planch.	Vitaceae	Climber	India	Cut and wounds	Leaf (Paste/e) [93]
45	[*] <i>Androsace strigillosa</i> Franchet.	<i>Androsace strigillosa</i> Franchet	Primulaceae	Herb	Bhutan	Wounds	Aerial [70]
46	[^] <i>Anagallis arvensis</i> L.	<i>Anagallis arvensis</i> L.	Primulaceae	Herb	India	Leprosy and wounds Swelling	Whole plant (Juice/e) [12] Root (Powder/e) [11]
47	<i>Anaphalis adnata</i> Wall. ex DC.	<i>Anaphalis adnata</i> Wall. ex DC.	Asteraceae	Herb	Nepal	Fresh cuts and wounds	Leaf (Juice/e) [61]
48	<i>Anaphalis busua</i> (Buch.-Ham.) DC.	<i>Anaphalis busua</i> DC.	Asteraceae	Herb	Nepal	Wounds	Root (Juice/e) [94]
49	[*] <i>Anaphalis triplinervis</i> Sims ex C.B.Clarke	<i>Anaphalis triplinervis</i> (Sims) C. B. Clarke	Asteraceae	Herb	Nepal	Skin problems	Flower (Paste/e) [61]
50	<i>Androsace rotundifolia</i> Hardw.	<i>Androsace rotundifolia</i> Lehm.	Primulaceae	Herb	Pakistan	Skin problems	Leaf (Water extract) [36]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
51	* <i>Anemonastrum obtusilobum</i> (D.Don) Mosyakin	<i>Anemone obtusiloba</i> D.Don	Ranunculaceae	Herb	Pakistan	Skin spots	Root (Juice) [63]
52	# <i>Anethum graveolens</i> L.	<i>Anethum graveolens</i> L.	Apiaceae	Herb	Pakistan	Pimples	Whole plant (Decoction) [36]
53	<i>Anisochilus carnosus</i> (L.f.) Wall. ex Benth.	<i>Anisochilus carnosus</i> (L.f.) Wall. ex Benth.	Lamiaceae	Herb	India	Skin diseases	Leaf [56]
54	<i>Anisomeles indica</i> (L.) Kuntze	<i>Anisomeles indica</i> (L.) Kuntze	Lamiaceae	Herb	India	Wounds	Stem (Paste/e) [35]
55	<i>Anthogonium gracile</i> Wall. ex Lindl.	<i>Anthogonium gracile</i> Wall. ex Lindl.	Orchidaceae	Herb	India	Boils	Pseudobulb (Paste/e) [61]
56	<i>Aphanamixis polystachya</i> (Wall.) R.Parker	<i>Aphanamixis polystachya</i> (Wall.) R.Parker	Meliaceae	Tree	India	Skin infection	Leaf (Paste) [95]
57	* <i>Aquilegia pubiflora</i> Wall. ex Royle	<i>Aquilegia pubiflora</i> Wall. ex Royle	Ranunculaceae	Herb	Pakistan	Skin burns and wound healing	Leaf, floral part (Paste/e) [36]
58	^ <i>Arctium lappa</i> L.	<i>Arctium lappa</i> L.	Asteraceae	Herb	China Nepal	Measles, erysipelas, carbuncle, sores and urticaria Skin diseases	Dry ripe fruit [57] Seed (Powder mixed with water/e) [76]
59	<i>Ardisia macrocarpa</i> Wall.	<i>Ardisia macrocarpa</i> Wall.	Primulaceae	Shrub	India	Skin diseases	Fruits [96]
60	^ <i>Argemone mexicana</i> L.	<i>Argemone mexicana</i> L.	Papaveraceae	Herb	India	Itching Ringworm Chilblains Cracks on feet Leucoderma [35] Leprosy Skin disease, scabies and boils	Seed (Paste/e, juice) [35,65] Seed (Oil/e) [35] Leaf (Latex/e) [35] Latex (Raw/e) [35] Latex (with cow milk/e) [35] Latex (Poultice) [11], leaf [82], seed [82], root [82] Leaf, seed, root [82]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Nepal	Skin diseases	Root (Paste/e) ^[61,69,83] , plant (Juice/e) ^[83] , leaf (Paste) ^[61]
						Cut, wounds, blisters and burns	Leaf (Juice/e) ^[61]
61	<i>Argyrolobium roseum</i> (Cambess.) Jaub. & Spach	<i>Argyrolobium roseum</i> (Comb.) Jaub. & Spach.	Fabaceae	Herb	Pakistan	Boils and scabies	Leaf (Extract/o) ^[37]
62	* <i>Arisaema erubescens</i> (Wall.) Schott	<i>Arisaema erubescens</i> (Wall.) Schott	Araceae	Herb	China	Carbuncle, snake and insect bites	Dry tuber (Powder vinegar or wine/e) ^[57]
63	* <i>Arisaema flavum</i> (Forssk.) Schott	<i>Arisaema flavum</i> Schott ^[72] <i>Arisaema flavum</i> (Forssk.) Schott ^[97]	Araceae	Herb	India	Skin infections	Underground part (Paste/e) ^[72]
					Pakistan	Snake bites	Rhizome ^[97]
64	* <i>Arisaema jacquemontii</i> Blume	<i>Arisaema jacquemontii</i> Blume	Araceae	Herb	India	Snake bites	Rhizome ^[75]
65	<i>Arisaema speciosum</i> (Wall.) Mart.	<i>Arisaema speciosum</i> (Wall.) Mart.	Araceae	Herb	Pakistan	Boils, warts, ringworm and carbuncle	Tuber (Slice/e) ^[37]
66	* <i>Arnebia euchroma</i> (Royle) I.M.Johnst.	<i>Arnebia euchroma</i> (Royle) Johnst.	Boraginaceae	Herb	China	Sores, eczema and burns	Dry root (Paste or soaked in plant oil/e) ^[57]
67	* <i>Arnebia guttata</i> Bunge	<i>Arnebia guttata</i> Bunge	Boraginaceae	Herb	China	Sores, eczema and burns	Dry root (Paste or soaked in plant oil/e) ^[57]
68	[#] <i>Artemisia absinthium</i> L.	<i>Artemisia absinthium</i> L.	Asteraceae	Herb	Pakistan	Skin infections	Whole plant ^[97]
						Skin problems and itching	Aerial part (Paste/e) ^[98]
69	[#] <i>Artemisia annua</i> L.	<i>Artemisia annua</i>	Asteraceae	Herb	China	Skin disease ^[99]	
70	<i>Artemisia biennis</i> Willd.	<i>Artemisia biennis</i> Willd.	Asteraceae	Herb	Pakistan	Skin infections	Leaf (Poultice/e) ^[84]
71	<i>Artemisia dubia</i> L. ex B.D.Jacks.	<i>Artemisia dubia</i> L. ex B.D.Jacks.	Asteraceae	Herb	Nepal	Scabies and other skin diseases	Leaf (Decoction/e) ^[58]
72	<i>Artemisia dubia</i> Wall. ex Besser [unresolved]	<i>Artemisia dubia</i> Wall. ex Besser	Asteraceae	Herb	India	Cuts	Leaf (Extract) ^[61]
						Skin allergies	Leaf (Juice/e) ^[61]
73	* <i>Artemisia gmelinii</i> Weber ex Stechm.	<i>Artemisia gmelinii</i> Weber ex Stechm.	Asteraceae	Herb	Nepal	Boils and pimples	Fresh whole plant (Paste/e) ^[76]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
74	<i>Artemisia indica</i> Willd.	<i>Artemisia indica</i> Willd.	Asteraceae	Herb	Nepal	Skin irritation Scabies and ringworm infection Skin diseases	Leaf (Juice) ^[77] Leaf (Decoction/e) ^[100] Leaf (Juice/o, paste/e) ^[61,83] , flower (Juice/o) ^[61]
75	<i>Artemisia japonica</i> Thunb.	<i>Artemisia japonica</i> Thunb	Asteraceae	Herb	India, Pakistan	Cuts and wound Skin diseases	Fresh leaf (Ground/e) ^[58] Leaf (Juice, paste/e) ^[101]
76	<i>Artemisia nilagirica</i> (C.B.Clarke) Pamp.	<i>Artemisia nilagirica</i> (Cl.) Pamp. ^[102] <i>Artemisia nilagirica</i> (Clarke) Pamp. ^[79]	Asteraceae	Shrub	India	Skin diseases and sores Cuts and scabies Wounds	Leaf, stem and whole plant ^[102] Leaf ^[79] Leaf ^[79,102]
77	<i>Artemisia parviflora</i> Buch.-Ham. ex Roxb.	<i>Artemisia parviflora</i> Roxb	Asteraceae	Herb	India	Cut, wounds and skin conditions	Leaf (Juice and paste/e) ^[101]
78	* <i>Artemisia roxburghiana</i> Besser	<i>Artemisia roxburghiana</i> Bess	Asteraceae	Herb	India	Pimples, sores and eczema	Whole plant, leaf ^[102]
79	<i>Artemisia scoparia</i> Waldst. & Kitam.	<i>Artemisia scoparia</i> Waldst. et Kit.	Asteraceae	Herb	China	Eczema	Dry aerial part (Decoction) ^[57]
80	* <i>Artemisia vestita</i> Wall. ex Besser	<i>Artemisia vestita</i> Wall. ex Besser	Asteraceae	Herb	India	Snake bites	Leaf (Juice/e) ^[59]
81	^ <i>Artemisia vulgaris</i> L.	<i>Artemisia vulgaris</i> L.	Asteraceae	Herb	India Pakistan	Skin allergy Boils	Leaf (Crushed, mixed with water/e) ^[61] Leaf (Powder/o) ^[36]
82	#^ <i>Asclepias curassavica</i> L.	<i>Asclepias curassavica</i> Linn	Apocynaceae	Herb	India	Cuts and wounds	Leaf (Paste/e) ^[87]
83	<i>Asparagus filicinus</i> Buch.-Ham. ex D.Don	<i>Asparagus filicinus</i> Buch.-Ham. ex D.Don	Asparagaceae	Herb	Nepal	Skin diseases	Root ^[76]
84	* <i>Astilbe rivularis</i> Buch.-Ham. ex D.Don	<i>Astilbe rivularis</i> Buch.-Ham. ex D.Don	Saxifragaceae	Herb	Nepal	Wound	Root (Paste/e) ^[61]
85	* <i>Astragalus grahamianus</i> Benth.	<i>Astragalus grahamianus</i> Benth.	Fabaceae	Herb	Pakistan	Abscesses	Whole plant ^[92]
86	<i>Asystasia chelonoides</i> Nees	<i>Asystasia chelonoides</i> Nees	Acanthaceae	Shrub	India	Skin diseases	Whole plant ^[56]
87	^ <i>Atriplex canescens</i> (Pursh.) Nutt.	<i>Atriplex canescens</i> (Pursh) Nutt.	Amaranthaceae	Shrub	Pakistan	Snake bites	Leaf (Paste/e) ^[98]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
88	[#] <i>Azadirachta indica</i> A.Juss.	<i>Azadirachta indica</i> A.Juss. [11,12,35,65] <i>Azadirachta indica</i> Juss. [60,62] <i>Azadirachta indica</i> A. Juss.[61,83] <i>Melia azadirachta</i> L. [83]	Meliaceae	Tree	India	Boils Body infection Dandruff Blood purification in skin diseases Wounds Ringworm Skin Smallpox Leucoderma and itch Pimples and scabies	Stem bark (Ash/e, paste/e) [12,35], leaf (Paste/e) [12], bark (Paste/e) [65] Leaf (Decoction/e, o) [35] Seed (Oil/e) [35] Leaf (Raw/o) [12] Leaf (Decoction/e) [12,60] Seed (Oil/e) [12] Leaf (boiled/e) [62] Leaf (Paste/e, decoction) [11,62] Leaf [60] Bark (Paste/e) [65]
					Nepal	Eczema Sores, blisters, and skin diseases [61] Wounds	Leaf (Decoction/e) Leaf Juice/e Tender twig (Paste/e) [83], leaf (Juice/e) [61] Leaf (Decoction/e, paste/e) [61,83]
89	[#] <i>Barleria cristata</i> L.	<i>Barleria cristata</i> L.	Acanthaceae	Herb	India	Cuts and wounds Snake bites	Leaf and root (Paste) [32] Leaf (Juice/e) [64]
90	[#] <i>Bauhinia purpurea</i> L.	<i>Bauhinia purpurea</i> L.	Fabaceae	Tree	India	Abcesses Boils	Whole plant [61] Root (Paste /e), whole plant [61]
91	[#] <i>Bauhinia variegata</i> L.	<i>Bauhinia variegata</i> Eight & Arn.[65]	Fabaceae	Tree	India	Skin infection	Leaf (Juice) [65]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
		<i>Bauhinia variegata</i> L. [35,61,86,103]			India	Leprosy	Bark (Paste/o, decoction/o) [35,61], root (Decoction/o) [35]
						Skin disease	Buds (o) [61]
					Nepal	Leprosy	Bark (Paste/o) [61]
					Pakistan	Leprosy, ulcer and skin problems	Root [103]
						Skin infections	Bark (Decoction) [86]
92	<i>Begonia picta</i> Sm.	<i>Begonia picta</i> Sm.	Begoniaceae	Herb	Nepal	Wounds	Young shoot (Paste/e) [94]
93	<i>Berberis asiatica</i> Roxb. ex DC.	<i>Berberis aristata</i> DC. [69] <i>Berberis asiatica</i> Roxb. ex DC. [66]	Berberidaceae	Shrub	Nepal	Skin diseases	Root [69], bark [69] and root bark [66]
94	* <i>Berberis jaeschkeana</i> C.K.Schneid.	<i>Berberis jaeschkeana</i> Schneid.	Berberidaceae	Shrub	India	Skin diseases	Root [102]
95	<i>Berberis lycium</i> Royle	<i>Berberis lycium</i> Royle [36,67,103] <i>Berberis lycium</i> DC. [85] <i>Berberis lycium</i> Royle. [37]	Berberidaceae	Shrub	Pakistan	Wound healing	Leaf (Paste/e) [36,85], root (Paste/e, extract/e) [36,85], root bark [103] and bark [67]
						Pimples, boils	Bark (Infusion/o) [37]
96	* <i>Berberis napaulensis</i> (DC.) Spreng.	<i>Mahonia napaulensis</i> DC.	Berberidaceae	Shrub	India	Skin disease	Stem bark or root [75]
97	<i>Bergenia ciliata</i> (Haw.) Sternb.	<i>Bergenia ciliata</i> (Haw.) Sternb.	Saxifragaceae	Herb	India	Wounds	Leaf (Paste) [32], root (Juice/o) [32,61]
						Burns and cuts	Leaf (Paste) [32], root (Paste/e) [61]
						Boils	Rhizome (Powder) [73,104], root (Paste/e, juice/o) [32,61,104], leaf (Paste) [32]
					Nepal	Boils, cuts and wounds	Root (Juice/o, paste/e) [58,61]
					Pakistan	Wound healing	Rhizome (Powder/e, juice) [63,73], bark (Paste, powder) [36,63]
						Skin infections	Rhizome (Decoction) [84]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
98	* <i>Bergenia purpurascens</i> (Hook.f. & Thomson) Engl.	<i>Bergenia purpurascens</i> (Hook.f. & Thomson) Engl.	Saxifragaceae	Herb	India, Nepal	Wounds	Root (Paste) ^[61]
99	* <i>Bergenia stracheyi</i> (Hook.f. & Thomson) Engl.	<i>Bergenia stracheyi</i> Hook.f. & Thomson) Engl. ^[36] <i>Bergenia stracheyi</i> (Hook.f.&Thoms) ^[63] <i>Bergenia stracheyi</i> (Hook. f. and Thorns.) Engl. ^[98]	Saxifragaceae	Herb	Pakistan	Wounds Cuts	Leaf (Infusion, powder, paste) ^[36,63] , root (Infusion, powder, paste, poultice) ^[63,98] , flower (Powder/e) ^[36] Root (Poultice/e) ^[98]
100	<i>Betula alnoides</i> Buch.-Ham. ex D.Don	<i>Betula alnoides</i> Buch.-Ham. ex D.Don	Betulaceae	Tree	India	Snake bites	Bark (Paste/e) ^[61]
101	* <i>Betula utilis</i> D. Don	<i>Betula utilis</i> D. Don	Betulaceae	Tree	India	Cut and wounds and boils	Leaf and bark (Extract or juice/e) ^[32]
102	^ <i>Bidens pilosa</i> L.	<i>Bidens pilosa</i> L. ^[56,61,78] <i>Bidens pilosa</i> Linn. ^[79]	Asteraceae	Herb	Bhutan India Nepal	Wound healing Skin inflammations Wounds Cut	Whole plant ^[78] Leaf (Decoction and paste/e) ^[79] Whole plant, leaf (Decoction and paste/e) ^[79] Leaf and root (Extract) ^[61]
103	# <i>Bischofia javanica</i> Blume	<i>Bischofia javanica</i> Blume	Phyllanthaceae	Tree	India	Skin diseases and skin allergy	Bark (Crushed) ^[95]
104	* <i>Bistorta amplexicaulis</i> (D.Don) Greene	<i>Persicaria amplexicaulis</i> (D. Don) Ronse Decr.	Polygonaceae	Herb	India	Skin diseases	Stem (Paste) ^[73]
105	* <i>Bistorta vivipara</i> (L.) Delarbre	<i>Polygonum viviparum</i>	Polygonaceae	Herb	China	Wounds	Rhizome ^[99]
106	^ <i>Boerhavia diffusa</i> L.	<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Herb	India Nepal Pakistan	Boils Eczema Wounds Abscesses	Whole plant (Paste/e) ^[35] Leaf (Juice) ^[11] Whole plant (Paste) ^[105] Leaf (Infusion) ^[36]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
107	<i>Bombax ceiba</i> L.	<i>Bombax ceiba</i> L.	Malvaceae	Tree	India	Smallpox	Flower (Paste/e) ^[61]
108	[#] <i>Brassica juncea</i> (L.) Czern.	<i>Brassica juncea</i> (L.) Czern.	Brassicaceae	Herb	India	Boils and skin allergy Skin diseases	Seed (Paste/e) ^[35] Seed (Oil) ^[32]
					Pakistan	Wound healing	Leaf (Cooked) ^[36]
109	[#] <i>Brassica rapa</i> L.	<i>Brassica rapa</i> L.	Brassicaceae	Herb	India	Scabies	Seed (Paste/e) ^[12]
110	<i>Brucea javanica</i> (L.) Merr.	<i>Brucea javanica</i> (L.) Merr.	Simaroubaceae	Tree	China	Warts and corns	Dry ripe fruit (e) ^[57]
111	<i>Buchanania cochinchinensis</i> (Lour.) M.R.Almeida	<i>Buchanania cochinchinensis</i> (Lour.) M.R.Almeida	Anacardiaceae	Tree	India	Cuts and burns Pimples Wounds	Bark (Paste, decoction/o) ^[35] Seed (Powder with milk/e) ^[35] Leaf (Paste/e) ^[35]
112	[#] ^ <i>Buddleja asiatica</i> Lour.	<i>Buddleja asiatica</i> Lour.	Scrophulariaceae	Shrub	India	Skin diseases	Leaf, root ^[102]
113	[*] <i>Bulbophyllum leopardinum</i> (Wall.) Lindl. ex Wall.	<i>Bulbophyllum leopardinum</i> (Wall.) Lindl. ex Wall.	Orchidaceae	Herb	Nepal	Burns	Pseudobulb (Fresh or juice/e) ^[106]
114	<i>Butea monosperma</i> (Lam.) Taub.	<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae	Tree	India	Cuts and wound Itching and leprosy	Gum (Fresh/e) ^[35] Flower (Juice) ^[35]
115	[*] <i>Buxus papillosa</i> C.K.Schneid.	<i>Buxus papillosa</i> C.K.Schneid.	Buxaceae	Shrub	Pakistan	Skin problems	Leaf (Oil/e) ^[36] , dried leaf (Decoction/e) ^[74]
116	[#] <i>Cajanus cajan</i> (L.) Huth	<i>Cajanus cajan</i> L.	Fabaceae	Herb	India	Pimples	Seed (Poultice) ^[11]
117	[#] <i>Calendula officinalis</i> L.	<i>Calendula officinalis</i> Linn	Asteraceae	Herb	India	Wounds, herpes, ulcers, frostbite, skin damage and scars	Floret (Ointment/e) ^[107]
118	<i>Callicarpa macrophylla</i> Vahl	<i>Callicarpa macrophylla</i> Vahl	Lamiaceae	Shrub	India	Chilblains	Leaf (Juice/e) ^[35]
119	<i>Calotropis gigantea</i> (L.) W.T.Aiton	<i>Calotropis gigantea</i> (L.) Dryand. ^[32] <i>Calotropis gigantea</i> Linn. ^[87]	Apocynaceae	Shrub	India	Skin diseases Burns	Leaf, latex ^[32] Leaf (Poultice/e) ^[87]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
		<i>Calotropis gigantea</i> (L.) W.T.Aiton [66,83]			Nepal	Wasp stings	Latex (Raw/e) [66]
		<i>Calotropis gigantea</i> (L.) Dryand. [61]				Boils	Latex [66,83], root [83]
						Burns	Latex [61]
						Ringworm	Latex [61,83]
						Pimples and skin diseases	Root [83]
						Wounds	Latex [83]
120	[^] <i>Calotropis procera</i> (Aiton) Dryand.	<i>Calotropis procera</i> (Aiton) Dryand. [35,36,84,97]	Apocynaceae	Shrub	India	Boils	Leaf and flower (Paste/e) [35]
		<i>Calotropis procera</i> (Aiton) W.T.Aiton [64,85]				Leucoderma	Latex (Raw/e) [35]
						Ringworm	Root (Ground/e) [64]
		<i>Calotropis procera</i> (Ait) R.Br.[62]			Pakistan	Skin infection	Latex (Exudate/e) [62]
		<i>Calotropis procera</i> (Aiton) R. Br. [20]				Inflammation	Flower (Decoction with honey/e) [36]
						Ringworm, dog bite, insect bite	Areal parts (Latex/e) [85]
						Leprosy, wound healing, abscess, ringworm, dog bitten wounds, eczema, pustules and pimples, skin eruptions, boils, ulcer, burn, dermatitis, scabies, infection and other skin diseases	Stem (Decoction/o), flower (put in oil/e), bark, leaf (Crushed, poultice/e), root (powdered mixed with “desi ghee”/e), fruit, whole plant [20]
						Dog bitten wounds, ringworm	Stem, leaf [97]
121	[^] <i>Caltha palustris</i> var. <i>alba</i> (Cambess.) Hook.f. & Thomson.	<i>Caltha alba</i> Cambess [36] <i>Caltha alba</i> Camb. [63]	Ranunculaceae	Herb	Pakistan	Skin problems	Root (Paste) [63], leaf (Extract) [36,63]
122	[#] <i>Campsis grandiflora</i> (Thunb.) K.Schum	<i>Campsis grandiflora</i> (Thunb.) K.Schum	Bignoniaceae	Climber	China	Urticaria and acne	Dry flower [57]
123	[#] <i>Cannabis sativa</i> L.	<i>Cannabis sativa</i> L.	Cannabaceae	Shrub	India	Boils	Leaf (heated or juice/e) [59]
						Cuts and wounds	Leaf (Juice/e) [59]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Nepal	Wounds	Leaf (Juice/e) ^[94]
					Pakistan	Burns	Leaf (Paste/e, Crushed/e) ^[35,37]
						Dandruff	Leaf and flower (Juice) ^[36]
						Wounds healing	Leaf and fruit (Powder/e) ^[36]
						Boils	Leaf (Crushed/e) (16)
124	[#] <i>Capsicum annuum</i> L.	<i>Capsicum annuum</i> L.	Solanaceae	Herb	Bhutan	Leprosy	Fruit ^[108]
125	[*] <i>Caragana brevifolia</i> Komarov	<i>Caragana brevifolia</i> Kom.	Fabaceae	Shrub	India	Skin diseases	Root ^[102]
126	[*] <i>Caragana gerardiana</i> Royle	<i>Caragana gerardiana</i> Benth	Fabaceae	Shrub	India	Skin diseases	Stem ^[102]
127	[#] <i>Carthamus tinctorius</i> L.	<i>Carthamus tinctorius</i> L. <i>Carthamus tinctorious</i> L.	Asteraceae	Herb	China	Sores	Dry flower ^[57]
					Pakistan	Chicken pox, measles and eruptive skin problems	Flower, seed, leaf ^[20]
128	[#] <i>Cassia fistula</i> L.	<i>Cassia fistula</i> L.	Fabaceae	Tree	Nepal	Skin diseases	Leaf ^[61]
129	[*] <i>Cassiope fastigiata</i> (Wall.) D.Don	<i>Cassiope fastigiata</i> Don ^[102] <i>Cassiope fastigiata</i> (Wall.) D.Don ^[67]	Ericaceae	Herb	India	Itching	Whole plant ^[102]
					Pakistan	Chicken pox	Aerial part ^[67]
130	<i>Castanopsis tribuloides</i> (Sm.) A.DC.	<i>Castanopsis tribuloides</i> (Sm.) A.DC.	Fagaceae	Tree	Nepal	Skin diseases	Leaf (Paste/e) ^[94]
131	<i>Caulokaempferia sikkimensis</i> (King ex Baker) K. Larsen	<i>Caulokaempferia sikkimensis</i> (King ex Baker) K. Larsen	Zingiberaceae	Herb	India	Wounds	Bulb (Poultice/e) ^[61]
132	[*] <i>Cavea tanguensis</i> (J.R.Drumm.) W.W.Sm. & J.Small	<i>Cavea tanguensis</i> (Drumm.) Smith & Small	Asteraceae	Herb	Bhutan	Wounds	Aerial part ^[70]
133	[*] <i>Cedrus deodara</i> (Roxb. ex D.Don) G.Don	<i>Cedrus deodara</i> (Roxb.) Loud. ^[109] <i>Cedrus deodara</i> (Roxb. ex D. Don) G.Don ^[59,86] <i>Cedrus deodara</i> (Roxb.) G.Don ^[61]	Pinaceae	Tree	India	Scabies, eczema and measles	Stem (Essential Oil) ^[109]
						Boils	Bark (Paste/e) ^[59]
						Ringworm	Essential Oil/e ^[61]
					Nepal	Scabies	Wood (Essential oil/e) ^[66]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
		<i>Cedrus deodara</i> (Roxb. ex D.Don). [36,110]			Pakistan	Skin problems	Root (Extract) [36,110], bark (Essential Oil) [86]
134	# <i>Ceiba pentandra</i> (L.) Gaertn.	<i>Ceiba pentandra</i> (L.) Gaertn.	Malvaceae	Tree	India	Carbuncle	Bark (Essential Oil) [86] Root (Paste/e) [93]
135	<i>Celastrus paniculatus</i> Willd.	<i>Celastrus paniculatus</i> Willd.	Celastraceae	Climbing shrub	India	Leprosy Eczema Boil Skin allergies	Seed (Paste/e, Powder) [11,35] Leaf (Paste/e) (10) Root [60] Seed (Paste/e) [61]
136	# [^] <i>Celosia argentea</i> L.	<i>Celosia argentea</i> L.	Amaranthaceae	Herb	Nepal China	Wounds Eczema	Leaf (Paste/e) [61] Stem, leaf, flower and seed (Bath/e) [91]
137	<i>Celtis australis</i> L.	<i>Celtis australis</i> L.	Cannabaceae	Tree	Pakistan	Smallpox	Bark, leaf (Paste, decoction/e) [85]
138	[^] <i>Centella asiatica</i> (L.) Urb.	<i>Centella asiatica</i> (L.) Urb. [12,61,66,78,82,83,111] <i>Centella asiatica</i> Urban. [80] <i>Centella asiatica</i> L. Urban [11] <i>Centella asiatica</i> Linn. [79] <i>Centella</i> <i>asiatica</i> L. [69]	Apiaceae	Herb	Bhutan China India	Cuts and skin diseases Carbuncle and sores Skin diseases Wound healing Leprosy Cuts Scabies and boils	Leaf [78] Dry whole plant [57] Whole plant [80], leaf [61], fruit and root [82] Leaf (Paste) [111], whole plant (Decoction/i) [79] Leaf (Decoction/o) [112], root (Poultice) [11], fruit [82] Whole plant (Decoction/i) [112] Fruit, leaf, root [82]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Nepal	Leprosy and skin diseases	Herb ^[69] , whole plant (Decoction/o) ^[83]
						Cuts and wounds	Leaf (Juice) ^[66]
139	[^] <i>Chenopodium album</i> L.	<i>Chenopodium album</i> L.	Amaranthaceae	Herb	India	Cuts and wounds	Leaf (Poultice) ^[111]
140	<i>Choerospondias axillaris</i> (Roxb.) B.L.Burt & A.W.Hill	<i>Choerospondias axillaris</i> (Roxb.) B.L.Burt et A.W.Hill	Anacardiaceae	Tree	India	Wounds and second-degree burns	Fruit ^[96]
141	[^] <i>Chromolaena odorata</i> (L.) R.M.King & H.Rob.	<i>Chromolaena odorata</i> (L.) R.M.King & H.Rob. ^[78] <i>Eupatorium odoratum</i> L. ^[61]	Asteraceae	Herb	Bhutan India	Wounds and cuts Wounds and cuts	Leaf (Extract) ^[78] Leaf (Extract) ^[61]
142	[*] <i>Chrysojasminum humile</i> (L.) Banfi	<i>Jasminum humile</i> L.	Oleaceae	Herb	Pakistan	Ringworm	Root (Paste/e) ^[59]
143	[#] <i>Cicer arietinum</i> L.	<i>Cicer arietinum</i> L. ^[111] <i>Cicer arietinum</i> Linn. ^[65]	Fabaceae	Herb	India	Boils Leprosy	Leaf (Decoction) ^[111] Seed (Paste) ^[65]
144	[*] <i>Cinnamomum glanduliferum</i> (Wall.) Meisn.	<i>Cinnamomum glanduliferum</i> Meisn.	Lauraceae	Tree	Nepal	Wounds	Root (Paste/e) ^[94]
145	<i>Cinnamomum tamala</i> (Buch.-Ham.) T.Nees & C.H.Eberm.	<i>Cinnamomum tamala</i> (Buch.-Ham.) Nees & Eberm.	Lauraceae	Tree	India	Scabies	Leaf (Rubbed/e) ^[61]
146	[*] <i>Circaea alpina</i> L.	<i>Circaea alpina</i> L.	Onagraceae	Herb	Pakistan	Wound healing	Herb ^[67]
147	[^] <i>Cirsium arvense</i> (L.) Scop.	<i>Cirsium arvense</i> L.	Asteraceae	Herb	Pakistan	Wound healing	Fresh whole plant (Juice/e) ^[74]
148	<i>Cirsium japonicum</i> (Thunb.) Fisch. ex DC.	<i>Cirsium japonicum</i> Fisch. ex DC.	Asteraceae	Herb	China	Carbuncle and sores	Dry aerial part ^[57]
149	[^] <i>Cissampelos pareira</i> L.	<i>Cissampelos pareira</i> L.	Menispermaceae	Herb	India	Itching Leucoderma Wounds Boils	Leaf (Juice/e) ^[35] Root (Paste/e) ^[35] Leaf (Infusion/o) ^[35] Leaf (Paste/e) ^[35]
					Nepal	Snake bites	Root (Paste/e) ^[66]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Pakistan	Abscesses, wounds and snake bites	Leaf (Crushed/e) [37]
						Skin problems	Leaf [103]
150	<i>#Citrullus colocynthis</i> (L.) Schrad.	<i>Citrullus colocynthis</i> (L.) Schrad.	Cucurbitaceae	Herb	Pakistan	Leukoderma	Fruit, seed (Juice with sugar/e) [92]
						Snake bites	Fruit, seed (Oil/e) [92]
151	<i>#Citrus aurantiifolia</i> (Christm.) Swingle	<i>Citrus aurantiifolia</i> (Christm.) Swingle	Rutaceae	Shrub	India	Pimples, cuts and wounds	Fruit (Juice/e) [32]
152	<i>Clematis grata</i> Wall.	<i>Clematis grata</i> Wall.	Ranunculaceae	Herb	India	Cuts and wounds	Leaf (Juice/e) [59]
						Ringworm	Leaf (Paste/e) [64]
					Pakistan	Dermatitis	Leaf [67]
						Boils	Root [113]
						Eczema, warts and carbuncles	Leaf (Crushed/e) [37]
						Skin infections	Leaf (Crushed/e) [37], root [103]
153	<i>^Cleome viscosa</i> L.	<i>Cleome viscosa</i> L.	Cleomaceae	Herb	India	Wounds	Leaf [56]
154	<i>Clinopodium umbrosum</i> (M.Bieb.) K.Koch	<i>Clinopodium umbrosum</i> (M.Bieb.) C. Koch	Lamiaceae	Climber	Nepal	Cuts and burns	Leaf (Juice) [61]
155	<i>*Codonopsis bhutanica</i> Ludlow	<i>Codonopsis bhutanica</i> Ludlow	Campanulaceae	Herb	Bhutan	Leprosy	Aerial part [70], whole plant [71]
156	<i>*Coelogyne cristata</i> Lindl.	<i>Coelogyne cristata</i> Lindl.	Orchidaceae	Herb	Nepal	Sores and boils	Bulb (Paste) [61]
157	<i>Coelogyne fuscescens</i> Lindl.	<i>Coelogyne fuscescens</i> Lindl.	Orchidaceae	Herb	Nepal	Burns	Pseudobulb (Paste/e) [106]
158	<i>*Coelogyne nitida</i> (Wall. ex D.Don) Lindl.	<i>Coelogyne nitida</i> (Wall. ex D.Don) Lindl.	Orchidaceae	Herb	Nepal	Burns	Pseudobulb (Paste/e) [106]
159	<i>*Coelogyne prolifera</i> Lindl.	<i>Coelogyne prolifera</i> Lindl.	Orchidaceae	Herb	Nepal	Burns	Pseudobulb (Paste/e) [106]
160	<i>Colebrookea oppositifolia</i> Sm.	<i>Colebrookea oppositifolia</i> SM. [60,61] <i>Colebrookea oppositifolia</i> Smith [64]	Lamiaceae	Shrub	India	Burns	Leaf [60]
						Abscesses	Fresh leaf (in hot mustard oil/e) [64]
					Nepal	Wounds and skin inflammation	Leaf (Paste/e) [61]
						Cuts	Leaf (Juice) [61]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
161	[#] <i>Colocasia esculenta</i> (L.) Schott	<i>Colocasia esculenta</i> (L.) Schott	Araceae	Herb	China	Psoriasis, burn, carbuncle	Corm, leaf and inflorescence ^[91]
162	[^] <i>Commelina benghalensis</i> L.	<i>Commelina benghalensis</i> L.	Commelinaceae	Herb	India	Leprosy Wounds Skin diseases Burns	Leaf (Juice/o) ^[35] Whole plant (Paste/e) ^[35] Leaf (Juice/e) ^[12] Root (Paste with cow urine/e) ^[59]
					Pakistan	Wound infection	Leaf, fruit ^[36]
163	<i>Commelina paludosa</i> Blume	<i>Commelina paludosa</i> Blume	Commelinaceae	Herb	India	Boils	Root (Paste/e) ^[61]
164	[^] <i>Convolvulus arvensis</i> L.	<i>Convolvulus arvensis</i> L.	Convolvulaceae	Climber	India	Aene	Leaf (Paste/e) ^[64]
					Pakistan	Skin infections Skin problems	Leaf (Poultice) ^[92] Fresh whole plant (Paste/e) ^[74]
165	<i>Cordia dichotoma</i> G.Forst.	<i>Cordia dichotoma</i> G.Forst.	Boraginaceae	Tree	India	Skin diseases	Stem bark (Paste with clarified butter/e) ^[12]
166	[#] <i>Coriandrum sativum</i> L.	<i>Coriandrum sativum</i> L.	Apiaceae	Herb	Pakistan	Pimples	Whole plant (Raw, cooked/o) ^[36]
167	[*] <i>Corydalis govaniiana</i> Wall.	<i>Corydalis govaniiana</i> Wall.	Papaveraceae	Herb	Pakistan	Skin burn	Root (Powder) ^[36]
168	[*] <i>Cotoneaster microphyllus</i> Wall. ex Lindl.	<i>Cotoneaster microphyllus</i> Wall. ex Lindl.	Rosaceae	Shrub	India	Skin irritation	Fruit (Paste with mustard oil) ^[59]
						Cuts and wounds	Leaf ^[75]
					Pakistan	Skin infections	Fruit ^[103]
169	<i>Cremastra appendiculata</i> (D.Don) Makino	<i>Cremastra appendiculata</i> (D.Don) Makino	Orchidaceae	Herb	China	Carbuncle, boils, snake and insect bites	Dry pseudobulb (e) ^[57]
170	[#] <i>Crotalaria spectabilis</i> Roth	<i>Crotalaria spectabilis</i> Roth	Fabaceae	Herb	India	Ringworm	Root and leaf (Paste/e) ^[93]
171	<i>Cryptolepis dubia</i> (Burm.f.) M.R.Almeida	<i>Cryptolepis dubia</i> (Burm.f.) M.R.Almeida	Apocynaceae	Herb	India	Wounds, boils or sores	Latex (Raw/e) ^[35]
172	[#] <i>Curcuma angustifolia</i> Roxb.	<i>Curcuma angustifolia</i> Roxb.	Zingiberaceae	Herb	Nepal	Cuts and wounds	Rhizome (Powder) ^[61]

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173	[#] <i>Curcuma caesia</i> Roxb.	<i>Curcuma caesia</i> Roxb.	Zingiberaceae	Herb	India, Nepal	Leucoderma	Rhizome (Powder/o) ^[61]
174	[#] <i>Cucumis melo</i> L.	<i>Cucumis melo</i> L.	Cucurbitaceae	Herb	Pakistan	Skin burns	Fruit (Infusion/e) ^[36]
175	<i>Curculigo orchiooides</i> Gaertn.	<i>Curculigo orchiooides</i> Gaertn.	Hypoxidaceae	Herb	India	Skin complaints	Rhizome (Paste) ^[61]
176	[#] <i>Curcuma longa</i> L.	<i>Curcuma longa</i> ^[12,65] <i>Curcuma domestica</i> Val. ^[109] <i>Curcuma longa</i> L ^[83]	Zingiberaceae	Herb	India	Cut, wounds and spots on skin, Blood purification in skin diseases Pimples and boils Skin diseases	Rhizome (Powder/e) ^[12] Rhizome (Powder/o) ^[12] Rhizome (Paste/e) ^[109] Rhizome ^[65]
					Nepal	Wounds	Rhizome (Paste/e) ^[83]
177	<i>Cuscuta reflexa</i> Roxb.	<i>Cuscuta reflexa</i> Roxb.	Convolvulaceae	Herb	India	Eczema (10), leprosy (10), dandruff ^[12,35] , cuts (5), wounds (5), leucoderma (6), eczema ^[60] , ringworm (11), inflammation (11) and itching ^[64]	Whole plant (Paste/e)
					Nepal	Itches Skin diseases Skin infections	Plant (Paste) ^[66] Plant (Juice) ^[66] Plant (Infusion/e) ^[61]
					Pakistan	Skin problems Wound Scabies	Root (Decoction) ^[36] , whole plant (Decoction), aerial part (Juice/o) ^[85] Whole plant (Powder/e) ^[89] Whole plant (Decoction/e) ^[89]
178	[*] <i>Cyathula tomentosa</i> (Roth) Moq.	<i>Cyathula tomentosa</i> (Roth) Moq.	Amaranthaceae	Herb	India	Skin diseases	Leaf ^[75]
179	<i>Cymbidium aloifolium</i> (L.) Sw.	<i>Cymbidium aloifolium</i> (L.) Sw.	Orchidaceae	Herb	India	Wounds	Tuber ^[56]
180	<i>Cymbidium iridioides</i> D.Don	<i>Cymbidium iridioides</i> D.Don	Orchidaceae	Herb	Nepal	Wounds	Leaf (Juice/e) ^[106]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
181	<i>Cynodon dactylon</i> (L.) Pers.	<i>Cynodon dactylon</i> (L.) Pers. [12,32,35-37,61,83,85,94] <i>Cynodon dactylon</i> L. Pers. [111] <i>Cynodon dactylon</i> Pers.[30]	Poaceae	Herb	India	Cuts and wounds Wounds and boils Carbuncles Skin diseases	Whole plant (Paste/e) [35], root (Paste) [61], aerial part (Paste/e) [32] Whole plant (Paste/e) [12] Whole plant (Infusion) [111] Aerial part (Paste/e) [32], leaf (Paste/e) [30]
					Nepal	Burns Scabies Cuts and wounds	Young shoot (Paste/e) [94] Plant (Juice/o) [61] Plant (Juice/o) [61], whole plant (Paste/e) [83]
					Pakistan	Wound healing, skin problems Cuts and wounds	Whole plant (Powder) [36] Areal part (Crushed/e, Paste, poultice/e) [37,85]
182	<i>Cynoglossum microglochin</i> Benth.	<i>Cynoglossum microglochin</i> Benth.	Boraginaceae	Herb	Pakistan	Burns	Leaf [67]
183	* <i>Cynoglossum wallichii</i> G.Don	<i>Cynoglossum wallichii</i> G.Don	Boraginaceae	Herb	Bhutan	Wounds	Whole plant [71]
184	<i>Cynoglossum zeylanicum</i> (Sw. ex Lehm.) Thunb. ex Brand	<i>Cynoglossum zeylanicum</i> (VahlexHornem.) Thunb.exLehm. [56] <i>Cynoglossum zeylanicum</i> (Vahl) Brand [105]	Boraginaceae	Herb	India Nepal	Fungal infection Cuts and wounds	Whole plant [56] Plant (Juice/e) [105]
185	<i>Cyperus difformis</i> L.	<i>Cyperus difformis</i> L.	Cyperaceae	Herb	Pakistan	Skin problems	Whole plant (Paste/e) [36]
186	<i>Cyperus rotundus</i> L.	<i>Cyperus rotundus</i> L.	Cyperaceae	Herb	Pakistan	Wound healing and scabies	Tuber (Paste/e) [37]
187	<i>Dactylorhiza hatagirea</i> (D.Don) Soó	<i>Dactylorhiza hatagirea</i> (D.Don) Soo	Orchidaceae	Herb	India	Cuts	Tuber (Paste/e) [61]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Nepal	Cuts and wounds	Root (Paste/e) [76], tuber (Paste/e) [58]
188	<i>Dalbergia sissoo</i> Roxb. ex DC.	<i>Dalbergia sissoo</i> DC. [35,103] <i>Dalbergia sissoo</i> Roxb. [11] <i>Dalbergia sissoo</i> Roxb. [37,83]	Fabaceae	Tree	India	Burns Leprosy Eczema Itching	Root (Paste/e) [76] Stem bark (Paste/e) [35] Leaf and bark (Paste/e) [35] Leaf (Juice) [11]
					Nepal	Cuts and wounds	Bark and leaf (Juice/e) [83]
					Pakistan	Leprosy Dandruff	Leaf (Crushed/e) [37] Leaf (Crushed/e) [37,103], wood [103]
189	<i>Daphne papyracea</i> Wall. ex G.Don	<i>Daphne papyracea</i> Wall.	Thymelaeaceae	Shrub	India	Eczema	Leaf (Paste/e) [102]
190	<i>Daphne mucronata</i> Royle	<i>Daphne mucronata</i> S Royle	Thymelaeaceae	Shrub	Pakistan	Skin problems	Seed (Raw) [36]
191	[^] <i>Datura metel</i> L.	<i>Datura metel</i> L.	Solanaceae	Herb	India	Dandruff	Leaf [56]
					Nepal	Dandruff and leprosy	Seed (Powder) [61]
192	[^] <i>Datura stramonium</i> L.	<i>Datura stramonium</i> L. [35-37,66] <i>Datura stramonium</i> Linn [62]	Solanaceae	Shrub	India	Wounds Eczema, ringworm, boils and sores	Leaf (Ground/e) [35] Leaf, seed (Paste/e) [62]
					Nepal	Dandruff Boils	Seed (Paste) [66] Flower (Juice/e) [66]
					Pakistan	Warts and dandruff Boils	Leaf (Paste/e, crushed/e) [36,37] Leaf (Crushed/e) [37]
193	[^] <i>Datura innoxia</i> Mill.	<i>Datura innoxia</i> Mill.	Solanaceae	Herb	India	Leprosy	Leaf (Decoction) [11]
194	<i>Debregeasia longifolia</i> (Burm.f.) Wedd.	<i>Debregeasia longifolia</i> (Burm.f.) Wedd.	Urticaceae	Tree	Bhutan	Scabies	Fruit or leaf (Juice/e) [78]
195	[*] <i>Debregeasia saeneb</i> (Forssk.) Hepper & J.R.I.Wood	<i>Debregeasia saeneb</i> (Forssk.) Hepper and Wood [86]	Urticaceae	Shrub	Pakistan	Eczema	Aerial part (Paste) [86]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
		<i>Debregeasia saeneb</i> (Forssk.) Hepper & J.R.I.Wood ^[97]			Pakistan	Skin ailment	Stem ^[97]
196	<i>Delphinium denudatum</i> Wall. ex Hook.f. & Thomson	<i>Delphinium denudatum</i> Wall. ex Hook.f. & Thomson	Ranunculaceae	Herb	India	Boils, pimples, cuts and wounds Snakebites and scorpion	Root (Paste/e) ^[32] Root (Paste with ghee/e) ^[32]
197	<i>Delphinium umbrosum</i> var. <i>drepanocentrum</i> (Brühl ex Huth) W.T.Wang & M.J.Warnock	<i>Delphinium drepanocentrum</i> (Bruhl) Munz.	Ranunculaceae	Herb	Bhutan	Wound and abscesses	Whole plant ^[71]
198	<i>Dendrobium amoenum</i> Wall. ex Lindl.	<i>Dendrobium amoenum</i> Wall. ex Lindl.	Orchidaceae	Herb	Nepal	Burnt skin	Pseudobulb (Paste) ^[106]
199	<i>Dendrobium densiflorum</i> Lindl.	<i>Dendrobium densiflorum</i> Lindl.	Orchidaceae	Herb	Nepal	Boils and pimples	Pseudobulb (Fresh/e) ^[106]
200	<i>Dendrocalamus hamiltonii</i> Nees & Arn. ex Munro	<i>Dendrocalamus hamiltonii</i> Nees & Arn. ex Munro	Poaceae	Shrub	Nepal	Boils	Stem node (Paste/e) ^[83]
201	<i>Dendrophthoe falcata</i> (L.f.) Ettingsh.	<i>Dendrophthoe falcata</i> (L.f.) Ettingsh. ^[35]	Loranthaceae	Shrub	India	Wounds Skin allergy	Bark (Juice/e) ^[35] Root (Juice/e) ^[35]
		<i>Dendrophthoe falcata</i> (L.f.) Etting. ^[114]			Nepal	Rashes, pus and boils	Leaf (Paste/e) ^[114]
202	<i>Desmodium gangeticum</i> (L.) DC.	<i>Desmodium gangeticum</i> (L.) DC. ^[35] <i>Desmodium gangeticum</i> L. DC. ^[11]	Fabaceae	Herb	India	Boils Burns	Leaf (Paste/e) ^[35] Leaf (Powder) ^[11]
203	<i>Desmostachya bipinnata</i> (L.) Stapf	<i>Desmostachya bipinnata</i> (L.) Stapf	Poaceae	Shrub	India	Wounds	Root (Powder) ^[35]
204	<i>Dichrocephala integrifolia</i> (L.f.) Kuntze	<i>Dichrocephala integrifolia</i> (L.f.) Kuntze	Asteraceae	Herb	Nepal	Cuts and wounds ^[105]	
205	<i>Dicliptera bupleuroides</i> Nees	<i>Dicliptera bupleuroides</i> Nees	Acanthaceae	Herb	India Pakistan	Wounds Scabies	Leaf ^[75] Whole plant (Poultice/e) ^[89]
206	<i>Dicliptera paniculata</i> (Forssk.) I.Darbysh.	<i>Dicliptera paniculata</i> (Forssk.) I.Darbysh.	Acanthaceae	Herb	India	Wounds	Leaf (Paste/e) ^[35]

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207	<i>Dictamnus albus</i> L.	<i>Dictamnus angustifolius</i> G. Don ex Sweet	Rutaceae	Herb	China	Skin diseases	Root bark (Decoctions/o, powder/e) [115]
208	<i>Dimetia scandens</i> (Roxb.) R.J.Wang	<i>Hedyotis scandens</i> Roxb.	Rubiaceae	Herb	India	Boils	Whole plant, root [61]
209	[#] <i>Dioscorea alata</i> L.	<i>Dioscorea alata</i> L.	Dioscoreaceae	Climber	India	Itch and leprosy	Root [61]
210	<i>Dioscorea bulbifera</i> L.	<i>Dioscorea bulbifera</i> L.	Dioscoreaceae	Climber	India	Boils Bruises	Tuber (Paste/e) [12] Tuber (Poultice) [11]
211	<i>Diploknema butyracea</i> (Roxb.) H.J.Lam	<i>Diploknema butyracea</i> (Roxb.) H.J.Lam	Sapotaceae	Tree	India	China Skin infections [116] Skin problems	Ripe fruit (Crushed/e) [68]
212	<i>Dodonaea viscosa</i> (L.) Jacq.	<i>Dodonaea viscosa</i> (L.) Jacq.	Sapindaceae	Shrub	India Pakistan	Cuts and wounds Burns Wounds Swelling, wounds healing, pimples, burn healing, cracked skin, rashes, itching and pustules, skin infections, allergy Swelling	Leaf [102] Leaf (Powder, paste) [36,86,97] Leaf (Paste/e, powder, extract/e) [36,37,85] Leaf (Paste) [20] Leaf (Paste/e) [37,86,97]
213	<i>Drymaria cordata</i> (L.) Willd. ex Schult.	<i>Drymaria cordata</i> (Linn.) Willd. [87] <i>Drymaria cordata</i> (L.) Willd. ex Schult. [111] <i>Drymaria cordata</i> (L.) Willd. ex. Roem. & Schult. [61]	Caryophyllaceae	Herb	India	Ringworm and contact dermatitis Boils Dog bites	Whole plant (Paste/e) [87] Leaf (Raw) [111] Whole plant (Paste) [61]
214	<i>Dryopteris filix-mas</i> (L.) Schott	<i>Dryopteris filix-mas</i> (L.)	Polypodiaceae	Fern	India	Skin irritation and snake and insect bites	Leaf (Paste) [87]
215	[*] <i>Drosera peltata</i> Thunb.	<i>Drosera peltata</i> Sm. ex Willd.	Droseraceae	Herb	China	Eczema	Corm and whole plant (Bath/e) [91]

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216	<i>*Dryopteris wallichiana</i> (Spreng.) Hyl.	<i>Dryopteris wallichiana</i> (Spreng.) Hyl.	Polypodiaceae	Herb	Pakistan	Dermatitis	Leaf ^[67]
217	<i>Echinops corniger</i> DC.	<i>Echinops cornigerus</i> DC.	Asteraceae	Herb	Pakistan	Wounds	Leaf (Paste/e) ^[98]
218	<i>^Eclipta prostrata</i> (L.) L.	<i>Eclipta prostrata</i> (L.) L. ^[12,35,61,64,66,93] <i>Eclipta prostrata</i> L. ^[11,83,113]	Asteraceae	Herb	India	Boils Wounds Warts and leprosy Scabies Cut and wounds	Whole plant (Juice/e) ^[35] Stem or leaf (Hand-crushed/e) ^[12] Leaf (Juice) ^[113] Leaf (Juice) ^[11] Leaf (Paste/e) ^[93] , whole plant (Juice/e) ^[35]
					Nepal	Abscesses Scorpion stings Snake bites Cut and wounds	Leaf (Decoction/o) ^[64] Leaf (Juice/e) ^[66] , root ^[61] Roots ^[61] Leaf and tender shoot ^[61] , hole plant (Paste/e) ^[66,83]
219	<i>#Elaeagnus angustifolia</i> L.	<i>Elaeagnus angustifolia</i> L.	Elaeagnaceae	Shrub	Pakistan	Skin infections	Whole plant ^[84]
220	<i>^Elephantopus scaber</i> L.	<i>Elephantopus scaber</i> L.	Asteraceae	Herb	India	Blood purification in skin disease Cuts and wounds	Whole plant (Decoction/o) ^[12] Leaf (Juice) ^[11]
221	<i>*Elsholtzia eriostachya</i> (Benth.) Benth.	<i>Elsholtzia eriostachya</i> (Benth.) Benth.	Lamiaceae	Herb	Bhutan	Wounds and skin disorders	Whole plant ^[71]
222	<i>Embelia vestita</i> Roxb.	<i>Embelia vestita</i> Roxb.	Primulaceae	Shrub	India	Chickenpox, itching and other skin diseases	Leaf (Decoction/e) ^[96]
223	<i>Entada phaseoloides</i> (L.) Merr.	<i>Entada phaseoloides</i> (L.) Merr.	Fabaceae	Climber	Nepal	Dandruff	Seed ^[61]
224	<i>Entada rheedei</i> Spreng.	<i>Entada rheedii</i> Spreng.	Fabaceae	Climber	India	Scabies	Stem (Juice/e) ^[117]
225	<i>Entada rheedei</i> subsp. sinohimalensis (Grierson & D.G.Long) ined.	<i>Entada pursaetha</i> subsp.sinohimalensis Grierson & D.G. Long	Fabaceae	Climber	India	Skin disease Dandruff	Bark (Juice/e) ^[61] Seed (Powder) ^[61]

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226	<i>*Ephedra gerardiana</i> Wall. ex Stapf	<i>Ephedra gerardiana</i> Wall. ex Stapf	Ephedraceae	Shrub	Nepal	Cuts	Plant (Juice) ^[61]
					Pakistan	Sunburn, wounds and skin problem	Leaf, root, stem (Extract, decoction) ^[63]
227	<i>*Epilobium latifolium</i> L.	<i>Epilobium latifolium</i> L.	Onagraceae	Herb	Pakistan	Itch	Aerial part ^[67]
228	<i>^Equisetum arvense</i> L.	<i>Equisetum arvense</i> L.	Equisetaceae	Herb	Pakistan	Skin problems and allergy Wound healing	Whole plant (Powder) ^[36] Stem ^[67]
229	<i>^Erigeron bonariensis</i> L.	<i>Conyza bonariensis</i> (L.) Cronquist	Asteraceae	Herb	Pakistan	Wound healing	Leaf (Powder/e) ^[85]
230	<i>*Erythrina arborescens</i> Roxb.	<i>Erythrina arborescens</i> Roxb.	Fabaceae	Tree	India	Skin diseases	Leaf and bark ^[61]
231	<i>#Eucalyptus globulus</i> Labill.	<i>Eucalyptus globulus</i> Labill.	Myrtaceae	Tree	Pakistan	Warts	Leaf, flower (Paste/e) ^[90]
232	<i>Eulaliopsis binata</i> (Retz.) C.E.Hubb.	<i>Eulaliopsis binata</i> (Retz.) C.E.Hubb.	Poaceae	Herb	India	Cuts and wounds	Leaf (Juice/e) ^[35]
					Nepal	Skin allergy	Whole plant (Dust) ^[61]
233	<i>Euphorbia helioscopia</i> L.	<i>Euphorbia helioscopia</i> L.	Euphorbiaceae	Herb	India	Ringworm Abscesses	Latex (Raw/e) ^[64] Latex (mixed with mustard oil/e) ^[64]
					China	Skin infection	Whole plant ^[118]
					Pakistan	Wound healing	Leaf (Powder/o) ^[36]
						Boils Skin problems	Leaf (Paste/e) ^[85] , latex (Raw/e) ^[37] Latex (Raw/e) ^[74]
234	<i>^Euphorbia hirta</i> L.	<i>Euphorbia hirta</i> L. ^[11,35,57,60,61,68,83] <i>Euphorbia hirta</i> Linn. ^[62]	Euphorbiaceae	Herb	China	Boils, sores, eczema, tinea pedis and itching	Dry whole plant (Decoction/e) ^[57]
					India	Boils, ringworm, skin and abscesses	Whole plant (Juice/o) ^[62]
						Wound	Whole plant (Paste/e) ^[35,68] , latex (Poultice, raw/e) ^[11,35,60]
						Cuts	Latex (Poultice) ^[11,61] , whole plant (Raw/e) ^[35]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					India	Eczema	Whole plant (Poultice) [35]
						Ringworm	Whole plant (Juice/o, raw/e) [35,62]
						Warts	Latex [61], whole plant (Juice/o) [62]
					Nepal	Pimples and old wounds	Latex (e) [61]
						Cuts and wounds	Whole plant (Juice/e) [11]
235	<i>Euphorbia nerifolia</i> L.	<i>Euphorbia nerifolia</i> L.	Euphorbiaceae	Shrub	India	Leprosy	Latex (Poultice) [11]
236	<i>Euphorbia royleana</i> Boiss.	<i>Euphorbia royleana</i> Boiss.	Euphorbiaceae	Shrub	India	Wounds	Latex [102]
						Skin diseases	Latex (e) [87,102]
						Leucoderma	Whole plant (deep fried in mustard oil/e) [64]
						Abscesses	Latex (Raw mixed with mustard oilis/e) [64]
237	<i>Euphorbia thymifolia</i> L.	<i>Euphorbia thymifolia</i> L.	Euphorbiaceae	Herb	India	Itches	Whole plant (Paste/e) [35]
						Leucoderma	Leaf (Juice) [11]
238	* <i>Euphorbia wallichii</i> Hook.f.	<i>Euphorbia wallichii</i> Hook.f.	Euphorbiaceae	Herb	Bhutan	Eczema and pimple	Root [71]
					Pakistan	Wounds and skin diseases	Latex [63]
239	<i>Eurya acuminata</i> DC.	<i>Eurya acuminata</i> DC.	Pentaphylacaceae	Shrub	India	Cuts and wounds	Leaf (Paste/e) [87]
240	<i>Evolvulus alsinoides</i> (L.) L.	<i>Evolvulus alsinoides</i> L.	Convolvulaceae	Herb	India	Scabies	Plant (Juice) [65]
241	* <i>Excoecaria acerifolia</i> Didr.	<i>Excoecaria acerifolia</i> Didr.	Euphorbiaceae	Shrub	India	Wounds and skin diseases	Leaf, latex [102]
242	<i>Fagopyrum acutatum</i> (Lehm.) Mansf. ex K.Hammer	<i>Fagopyrum acutatum</i> (Lehm.) Mansf. ex K.Hammer	Polygonaceae	Herb	Pakistan	Wound healing	Leaf (Powder mixed with oil/e) [36]
243	[#] <i>Fagopyrum cymosum</i> (Trevir.) Meisn.	<i>Fagopyrum dibotrys</i> (D.Don) H. Hara	Polygonaceae	Herb	Nepal	Cuts, wounds and skin diseases	Root (Paste/e) [76]
244	[#] <i>Fagopyrum tataricum</i> (L.) Gaertn.	<i>Fagopyrum tataricum</i> (L.) Gaertn.	Polygonaceae	Herb	Nepal	Wounds	Seed, leaf (Flour cake/e) [76]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
245	<i>Ficus auriculata</i> Lour.	<i>Ficus auriculata</i> Lour.	Moraceae	Tree	India	Leucoderma, ringworm and other skin diseases	Fruit (Juice) ^[96]
					China	Wounds and dermatitis	Latex (Decoction) ^[31]
					Nepal	Wounds	Leaf (Paste/e) ^[94]
246	[#] <i>Ficus carica</i> L.	<i>Ficus carica</i> L.	Moraceae	Tree	Pakistan	Skin infection	Fruit (Juice) ^[86]
						Wound healing and measles	Leaf ^[97]
247	<i>Ficus sarmentosa</i> Buch.-Ham. ex Sm.	<i>Ficus foveolata</i> Wall.Ex Miq	Moraceae	Shrub	Pakistan	Skin diseases	Latex ^[63]
248	<i>Ficus palmata</i> Forssk.	<i>Ficus palmata</i> Forssk.	Moraceae	Tree	India	Abscesses	Leaf (Fresh/e) ^[64]
						Thorn	Latex (Raw/e) ^[64]
249	<i>Ficus racemosa</i> L.	<i>Ficus racemosa</i> L.	Moraceae	Tree	India	Cracks	Stem bark ^[56]
250	[#] <i>Ficus religiosa</i> L.	<i>Ficus religiosa</i> L.	Moraceae	Tree	India	Pimples	Leaf (Ash/e) ^[109]
						Boils	Bark (Paste/e) ^[35] , leaf (Ash/e) ^[109]
					Pakistan	Scabies	Bark (Infusion) ^[86]
						Septic wounds	Bark (Poultice) ^[111]
251	<i>Ficus subincisa</i> Buch.-Ham. ex Sm.	<i>Ficus subincisa</i> Buch.-Ham. ex Sm.	Moraceae	Herb	India	Boils	Latex (Fresh/e) ^[61]
252	<i>Ficus virens</i> Aiton	<i>Ficus virens</i> Ait.	Moraceae	Tree	India	Wound infection	Leaf (Powder) ^[95]
253	[#] <i>Flemingia macrophylla</i> (Willd.) Kuntze ex Merr.	<i>Flemingia macrophylla</i> (Willd.) Merr.	Fabaceae	Shrub	India	Smallpox	Whole plant ^[102]
254	[*] <i>Fragaria nubicola</i> (Lindl. ex Hook.f.) Lacaita	<i>Fragaria nubicola</i> (Hook. f.) Lindl. ex Lacaita	Rosaceae	Herb	Pakistan	Skin infections	Leaf, root (Powder) ^[84]
255	<i>Fraxinus paxiana</i> Lingelsh.	<i>Fraxinus paxiana</i> Lingelsheim	Oleaceae	Tree	Bhutan	Wounds	Bark ^[70]
256	<i>Fumaria indica</i> (Hauskn.) Pugsley	<i>Fumaria indica</i> (Hauskn) Pugsley ^[67] <i>Fumaria indica</i> (Hauskn.) H.N. Pugsley. ^[37]	Papaveraceae	Herb	Pakistan	Skin acne Pimples, skin burns and scabies	Whole plant ^[67] Aerial part (Decoction/o) ^[37]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
257	[^] <i>Galium aparine</i> L.	<i>Galium aparine</i> L.	Rubiaceae	Herb	Pakistan	Wound healing	Leaf (Poultice/e) [36]
258	<i>Galium asperifolium</i> Wall.	<i>Galium asperifolium</i> Wall.	Rubiaceae	Herb	India	Skin diseases	Leaf [75]
259	[^] <i>Galium rotundifolium</i> L.	<i>Galium rotundifolium</i> L.	Rubiaceae	Herb	India	Wounds	Leaf [75]
260	[#] <i>Gardenia jasminoides</i> J.Ellis	<i>Gardenia jasminoides</i> Ellis	Rubiaceae	Shrub	China	Sores	Dry ripe fruit (Powder/e) [57]
261	<i>Garuga pinnata</i> Roxb.	<i>Garuga pinnata</i> Roxb.	Burseraceae	Tree	India	Skin disease Wounds	Root (Bark) [61] Root (Juice/e) [61]
262	[*] <i>Gaultheria trichophylla</i> Royle	<i>Gaultheria trichophylla</i> Royle	Ericaceae	Shrub	India	Wounds	Leaf [102]
263	[*] <i>Gentiana kurroo</i> Royle	<i>Gentiana kurroo</i> Royle	Gentianaceae	Herb	Pakistan	Skin disease, leprosy and leucoderma	Root (Decoction/o) [98]
264	[*] <i>Gentiana tibetica</i> King ex Hook.f.	<i>Gentiana tibetica</i> var.robusta (King ex Hook.f.) Kusn.	Gentianaceae	Herb	Bhutan	Wounds	Flower [71]
265	[*] <i>Geranium sibiricum</i> L.	<i>Geranium sibiricum</i>	Geraniaceae	Herb	China	Wounds	Whole plant [99]
266	[#] <i>Gloriosa superba</i> L.	<i>Gloriosa superba</i> L.	Colchicaceae	Climber	India	All skin diseases Boils Leprosy Smallpox and sores Wounds	Rhizome (Paste/e) [12] Root (Poultice) [11] Root and flower [61] Root, leaf [82] Rhizome [56]
					Nepal	Ringworm and other skin diseases	Rhizome (Paste/e) [83]
267	[#] <i>Glycyrrhiza glabra</i> L.	<i>Glycyrrhiza glabra</i> Linn	Fabaceae	Herb	India	Scalds Cuts and wounds	Leaf (Poultice/e) [62] Roots (Paste with butter/e) [62]
268	[#] <i>Ginkgo biloba</i> L.	<i>Ginkgo biloba</i> L.	Ginkgoaceae	Tree	China	Chapped hands and feet, rosacea, patches and nodules on the face and scalp, genital ulcers, crab louse-induced itchiness, dog bite wound abscess, bullae or pustules	Raw kernel (Paste or sliced/e) [119]
269	<i>Girardinia diversifolia</i> (Link) Friis	<i>Girardinia diversifolia</i> (Link) Friis	Urticaceae	Herb	India	Boils	Root (Paste with cow urine/e) [59]

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270	[#] <i>Gossypium herbaceum</i> L.	<i>Gossypium herbaceum</i> L.	Malvaceae	Shrub	India	Ringworm	Leaf (Paste/e) ^[12]
271	<i>Gouania leptostachya</i> DC.	<i>Gouania leptostachya</i> DC.	Rhamnaceae	Climber	India	Sores and inflammation	Leaf (Paste/e) ^[61]
272	<i>Gynocardia odorata</i> R.Br.	<i>Gynocardia odorata</i> Roxburgh	Achariaceae	Tree	India	Skin diseases and leprosy	Seed (Oil/e) ^[61]
273	[*] <i>Hedychium spicatum</i> Sm.	<i>Hedychium spicatum</i> Sm.	Zingiberaceae	Herb	India	Burns and skin diseases Boils Cuts and wounds	Rhizome (Paste/e) ^[32] Rhizome (Paste/e, extract or juice) ^[32] Rhizome (Extract or juice) ^[32]
274	[#] <i>Helianthus annuus</i> L.	<i>elianthus annuus</i> L. ^[12] <i>Helianthus annuus</i> L. ^[56]	Asteraceae	Herb	India	Boils and carbuncles Allergy	Leaf (Paste/e) ^[12] Root ^[56]
275	[#] <i>Hemidesmus indicus</i> (L.) R.Br.	<i>Hemidesmus indicus</i> L. R. Br.	Apocynaceae	Climber	India	Scabies	Latex (Poultice) ^[11]
276	[*] <i>Hemiphragma heterophyllum</i> Wall.	<i>Hemiphragma heterophyllum</i> Wall.	Plantaginaceae	Herb	China	Eczema	Whole plant (Bath/e) ^[91]
277	[*] <i>Heracleum candicans</i> var. obtusifolium (Wall. ex DC.) F.T.Pu & M.F.Watson	<i>Heracleum candicans</i> var. obtusifolium (Wall. ex DC.)	Apiaceae	Herb	Bhutan	Leprosy	Root ^[71]
278	[*] <i>Heracleum candicans</i> Wall. ex DC.	<i>Heracleum candicans</i> Wall. ex DC.	Apiaceae	Herb	Pakistan	Antifungal Snake bites and skin diseases	Rhizome ^[67] Root (Decoction), leaf (Decoction), flower (Decoction) ^[63]
279	[*] <i>Heracleum maximum</i> W.Bartram	<i>Heracleum lanatum</i> Michx.	Apiaceae	Herb	India	Leucoderma and psoriasis ^[73]	
280	[*] <i>Heracleum nepalense</i> D.Don	<i>Tetrataenium nepalense</i> (D.Don) Manden.	Apiaceae	Herb	Nepal	Wound healing	Whole plant (Paste/e) ^[76]
281	[#] <i>Hibiscus cannabinus</i> L.	<i>Hibiscus cannabinus</i> L.	Malvaceae	Herb	India	Boils	Flower (Juice) ^[11]
282	[^] <i>Hibiscus trionum</i> L.	<i>Hibiscus trionum</i> L.	Malvaceae	Herb	Pakistan	Skin ailments and itching	Flower (Infusion) ^[92]
283	[*] <i>Himalaiella heteromalla</i> (D.Don) Raab-Straube	<i>Himalaiella heteromalla</i> (D.Don) Raab-Straube	Asteraceae	Herb	Pakistan	Wound healing	Root ^[103]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
284	<i>Himalrandia tetrasperma</i> (Wall. ex Roxb.) T.Yamaz.	<i>Himalrandia tetrasperma</i> (Wall. ex Roxb.) T.Yamaz.	Rubiaceae	Herb	Pakistan	Chickenpox	Leaf ^[67]
285	* <i>Hippophae salicifolia</i> D.Don	<i>Hippophae salicifolia</i> D.Don	Elaeagnaceae	Shrub	India	Skin eruptions	Bark and fruit ^[61]
286	<i>Holarrhena pubescens</i> Wall. ex G.Don	<i>Holarrhena pubescens</i> Wall. ex G.Don ^[35,66] <i>Holarrhena pubescens</i> (Buch. Ham.) Wall ex G.Don. ^[93]	Apocynaceae	Tree	India Nepal	Leprosy Boils Dog bites Boils	Seed (Decoction/o) ^[93] Leaf (Paste/e) ^[35] Bark (Pill/i) ^[93] Leaf ^[66]
287	# <i>Hordeum vulgare</i> L.	<i>Hordeum vulgare</i> L.	Poaceae	Herb	India	Pimples and spot s	Seed (Paste with milk and lemon juice/e) ^[12]
288	# <i>Houttuynia cordata</i> Thunb.	<i>Houttuynia cordata</i> Thunb.	Saururaceae	Herb	China India	Smallpox Carbuncle and sores Skin infections	Whole plant (Bath/e) ^[91] Fresh whole plant or dry aerial part (pounded or decoction/e) ^[57] Leaf (Paste/e) ^[30]
289	* <i>Hoya longifolia</i> Wall. ex Wight	<i>Hoya longifolia</i> Wall. ex Wight	Apocynaceae	Shrub	Nepal	Burns	Leaf (e) ^[61]
290	^ <i>Hyoscyamus niger</i> L.	<i>Hyoscyamus niger</i> L.	Solanaceae	Herb	Pakistan	Skin inflammations	Seed (Paste, poultice, extract) ^[63] , leaf (Paste, poultice, extract) ^[63]
292	* <i>Hypocoum leptocarpum</i> Hook.f. & Thomson	<i>Hypocoum leptocarpum</i> Hook. f.	Papaveraceae	Herb	Bhutan	Skin diseases	Whole plant ^[108]
291	<i>Hypericum oblongifolium</i> Choisy	<i>Hypericum oblongifolium</i> Choisy	Hypericaceae	Shrub	India	Wounds and boils	Leaf ^[75]
293	* <i>Hypericum uralum</i> Buch.-Ham. ex D.Don	<i>Hypericum uralum</i> Buch.-Ham. ex D.Don	Hypericaceae	Herb	India	Wounds	Bark (Juice/e) ^[61]
294	^ <i>Hyptis suaveolens</i> (L.) Poit.	<i>Hyptis suaveolens</i> (L.) Poit ^[12,35,60]	Lamiaceae	Herb	India	Cuts and wounds	Leaf (Paste/e, juice) ^[11,35]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
		<i>Hyptis suaveolens</i> L.Poit. ^[11]			India	Wounds Itching Urticaria	Leaf (Juice/e, root) ^[12,60] Leaf (Juice) ^[35] Root ^[60]
295	[#] <i>Impatiens balsamina</i> L.	<i>Impatiens balsamina</i> L.	Balsaminaceae	Herb	Nepal	Burns	Plant (Decoction) ^[61]
296	<i>Impatiens brachycentra</i> Kar. & Kir.	<i>Impatiens bicolor</i> Royle.	Balsaminaceae	Herb	Pakistan	Dermatitis	Leaf ^[67]
297	[^] <i>Impatiens glandulifera</i> Royle	<i>Impatiens glandulifera</i> Royle	Balsaminaceae	Herb	Pakistan	Snake bites	Root, leaf, flower (Decoction, powder) ^[63]
298	[^] <i>Imperata cylindrica</i> (L.) P.Beauv.	<i>Imperata cylindrica</i> (L.) P.Beauvois	Poaceae	Herb	India	Boils	Root (Paste/e) ^[61]
299	[#] <i>Indigofera heterantha</i> Wall. ex Brandis	<i>Indigofera heterantha</i> Wall.ex Brandis ^[59,63]	Fabaceae	Shrub	India	Cuts and wounds Scabies	Leaf (Paste/e) ^[59] Root ^[103]
300	[#] <i>Inula grandiflora</i> Willd.	<i>Inula grandiflora</i> Willd.	Asteraceae	Herb	Pakistan Bhutan	Skin allergy, warts and leprosy Abscesses or boil	Whole plant (Decoction) ^[63] Flower ^[71]
301	<i>Ipomoea asarifolia</i> (Desr.) Roem. & Schult.	<i>Ipomoea asarifolia</i> (Desr.)Roem.& Schultes.	Convolvulaceae	Herb	India	Wounds	Leaf ^[56]
302	[#] <i>Ipomoea batatas</i> (L.) Lam.	<i>Ipomoea batatas</i> (L.) Lam.	Convolvulaceae	Herb	India	Hard boils	Leaf (Paste with salt/e) ^[12]
303	[^] [#] <i>Ipomoea nil</i> (L.) Roth	<i>Ipomoea nil</i> (Linn.) Roth. ^[87] <i>Ipomoea nil</i> (L.) Roth ^[37,75]	Convolvulaceae	Climber	India Pakistan	Burns Skin diseases Dandruff	Leaf and flower (Paste/e) ^[87] Whole plant ^[75] Leaf (Decoction) ^[37]
304	[*] <i>Iris goniocarpa</i> Baker	<i>Iris goniocarpa</i> Baker	Iridaceae	Herb	Nepal	Itching	Root (Paste/e) ^[76]
305	[#] <i>Isatis tinctoria</i> L.	<i>Isatis indigotica</i> Fort.	Brassicaceae	Herb	China	Carbuncle, erysipelas	Dry leaf or dry root ^[57]
306	<i>Isodon coetsa</i> (Buch.-Ham. ex D.Don) Kudô	<i>Isodon coetsa</i> (Buch.-Ham. ex D.Don) Kudô	Lamiaceae	Herb	Nepal	Cuts and wounds	Leaf and shoot ^[61]
307	<i>Isodon lophanthoides</i> (Buch.-Ham. ex D.Don) H.Hara	<i>Rabdosia lophanthoides</i> (Hamilt. ex D. Don) Hara	Lamiaceae	Herb	China	Leprosy	Whole plant (Bath/e) ^[91]

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308	<i>Isodon rugosus</i> (Wall. ex Benth.) Codd	<i>Isodon rugosus</i> (Wall. ex Benth.)	Lamiaceae	Shrub	Pakistan	Wound healing Skin infections	Leaf (Powder/o) [36] Seed (Decoction/o) [84]
309	<i>Jacobaea analoga</i> (DC.) Veldkamp	<i>Senecio chrysanthemoides</i> DC.	Asteraceae	Shrub	Pakistan	Skin problem Wounds	Leaf (Oil) [36] Leaf, flower, root (Decoction, poultice, powder) [63]
310	* <i>Jaeschkea oligosperma</i> Knobl.	<i>Jaeschkea oligosperma</i> Knobl.	Gentianaceae	Herb	Bhutan	Wound	Whole plant [102]
311	* <i>Jasminum dispersum</i> Wall.	<i>Jasminum dispersum</i> Wall.	Oleaceae	Climber	India	Cuts and wounds	Leaf [90]
312	[#] <i>Jasminum officinale</i> L.	<i>Jasminum officinale</i> L.	Oleaceae	Shrub	India Pakistan	Boils and chickenpox Corns Skin diseases	Leaf (Paste/e) [59] Leaf (Paste) [102] Flower (Paste) [86]
313	[#] <i>Jatropha curcas</i> L.	<i>Jatropha curcas</i> L.	Euphorbiaceae	Shrub	India Nepal	Scabies and whitlow Burns Boils and pimples Burns, eczema and ringworm Boils Wounds, scabies and ringworm Pimples and boils	Latex (Raw/e) [113] Stem (Bark) [60], latex (Poultice) [11] Latex (Raw, seed oil) [65] Latex (e) [61] Seed (Oil/e) [66] Bark (Juice) [66] Latex [66]
314	[#] <i>Juglans regia</i> L.	<i>Juglans regia</i> L.	Juglandaceae	Tree	India	Boils and tinea pedis Cuts and wounds Skin diseases	Fruit peel (Paste) [32] Fruit peel (Paste), bark and leaf (Paste/e) [32] Stem bark (Decoction/o) [61,75], fruit [75], fruit peel (Paste) [32], bark and leaf (Paste/e) [32]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Nepal	Scabies	Bark [66]
						Skin diseases	Nut (Oil) [66]
					Pakistan	Skin infections	Leaf (Decoction) [86]
315	<i>Justicia adhatoda</i> L.	<i>Adhatoda vasica</i> L. [32] <i>Justica adhatoda</i> L. [64,65,89]	Acanthaceae	Shrub	India	Cut and wounds	Leaf (Extract or juice/e) [32]
						Abscesses	Leaf (Extract/o) [64]
						Scabies and other skin diseases	Decoction [65]
					Pakistan	Skin infection	Leaf (Decoction/e) [89]
						Pimples and boils	Leaf (Decoction/o) [37]
						Wound healing	Leaf (Raw/e) [36]
						Scabies	Whole plant [97]
316	[#] <i>Juniperus communis</i> L	<i>Juniperus communis</i> L.	Cupressaceae	Shrub	Pakistan	Skin problems	Berry (Decoction/e) [36]
						Dermatitis	Stem (Oil) [67]
317	<i>Juniperus communis</i> var. <i>saxatilis</i> Pall.	<i>Juniperus communis</i> L. var. <i>saxatilis</i> Pallas.	Cupressaceae	Shrub	Pakistan	Skin diseases	Berry (Infusion) [63]
318	<i>Juniperus excelsa</i> M.Bieb.	<i>Juniperus excelsa</i> M.Bieb. [36] <i>Juniperus excels</i> M.Bieb [63]	Cupressaceae	Shrub	Pakistan	Skin problems	Bark (Powder) [36], fruit (Juice) [63]
319	[*] <i>Juniperus indica</i> Bertol.	<i>Juniperus indica</i> Bertol.	Cupressaceae	Shrub	Nepal	Sores and wounds	Leaf and fruit [61]
						Skin diseases	Leaf and fruit (Paste/e) [61,76]
320	[*] <i>Juniperus recurva</i> Buch.-Ham. ex D.Don	<i>Juniperus recurva</i> Buch.-Ham. ex D.Don	Cupressaceae	Shrub	Nepal	Skin diseases	Leaf and fruit (Paste/e or bath/e) [76]
321	[*] <i>Juniperus squamata</i> Buch.-Ham. ex D.Don	<i>Juniperus squamata</i> Buch.-Ham. ex D.Don	Cupressaceae	Shrub	Nepal	Cuts and wound	Leaf (Paste/e) [76]
322	<i>Kaempferia rotunda</i> L.	<i>Kaempferia rotunda</i> L.	Zingiberaceae	Herb	India	Fresh wounds	Tuber (Poultice) [61]
					Nepal	Wounds	Plant (Juice) [61]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
323	[#] <i>Lablab purpureus</i> (L.) Sweet	<i>Lablab purpureus</i> (L.) Sweet	Fabaceae	Climber	India	Ringworm Boils	Leaf (Juice/e) ^[12] Leaf (Paste/e) ^[12]
324	[#] <i>Lagenaria siceraria</i> (Molina) Standl.	<i>Lagenaria siceraria</i> (Molina) Standl.	Cucurbitaceae	Herb	India Pakistan	Skin diseases and inflammation Wounds and burns	Leaf (Juice/e) ^[87] Leaf, fruit (Raw/o) ^[36]
325	<i>Lannea coromandelica</i> (Houtt.) Merr.	<i>Lannea coromandelica</i> Houtt.Merr. ^[11] <i>Lannea coromandelica</i> (Houtt.) Merr. ^[35,64]	Anacardiaceae	Tree	India	Cuts Wounds Burns and boils	Leaf (Juice/e, infusion) ^[11,35] Leaf (Juice/e, infusion) ^[11,35] , bark (paste/e) ^[35] Bark (Paste/e) ^[64]
326	[^] <i>Lantana camara</i> L.	<i>Lantana camara</i> L.	Verbenaceae	Shrub	India	Ringworm Cuts and wounds Insect stings, skin eruptions, measles Itching, skin diseases Carbuncles	Leaf (Juice/e, paste/e) ^[12,35,102] Leaf (Juice/e) ^[35,61] Leaf (Fresh/e) ^[120] Leaf ^[102] Fruit (Poultice) ^[11]
327	<i>Lathyrus aphaca</i> L.	<i>Lathyrus aphaca</i> L.	Fabaceae	Herb	Pakistan	Wound healing Skin infection	Seed ^[103] Seed and flower (Decoction/e) ^[89]
328	<i>Launaea nudicaulis</i> (L.) Hook.f.	<i>Launaea nudicaulis</i> (L.) Hook.f.	Asteraceae	Herb	India	Allergy	Leaf ^[56]
329	<i>Launaea procumbens</i> (Roxb.) Amin	<i>Launaea procumbens</i> (Roxb.) Ramayya et Rajagopal	Asteraceae	Herb	India	Skin itching	Leaf (Juice/e) ^[12]
330	[#] <i>Leonurus japonicus</i> Houtt.	<i>Leonurus japonicus</i> Houtt.	Lamiaceae	Herb	China	Sores and skin ulcer	Fresh or dry aerial part ^[57]
331	[*] <i>Lepisorus contortus</i> Ching	<i>Lepisorus contortus</i> (Christ) Ching	Polypodiaceae	Epiphytic herb	Bhutan	Burns and wounds	Leaf ^[71,108]
332	[^] <i>Leucas aspera</i> (Willd.) Link	<i>Leucas aspera</i> Spreng ^[79] <i>Leucas aspera</i> (Willd.) Link ^[56]	Lamiaceae	Herb	India	Cuts and wounds Skin diseases	Leaf (Juice and paste/e) ^[79] Leaf ^[56]
333	<i>Leucas cephalotes</i> (Roth) Spreng.	<i>Leucas cephalotes</i> (Roth) Spreng.	Lamiaceae	Herb	Nepal	Wounds	Plant ^[61]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Pakistan	Scabies	Whole plant (Extract) ^[110]
334	<i>Leucas lanata</i> Benth.	<i>Leucas lanata</i> Benth.	Lamiaceae	Herb	India	Wounds	Leaf ^[75]
335	<i>Leucosceptrum canum</i> Sm.	<i>Leucosceptrum canum</i> Sm.	Lamiaceae	Herb	India	Wound	Root and leaf ^[61]
336	[#] <i>Leycesteria formosa</i> Wall.	<i>Leycesteria formosa</i> Wall.	Caprifoliaceae	Shrub	India	Dandruff	Leaf ^[102]
337	[*] <i>Ligusticopsis wallichiana</i> (DC.) Pimenov & Kljuykov	<i>Selinum wallichianum</i> (DC.) Raizada & Saxena	Apiaceae	Herb	India	Skin diseases and scabies	Fruit ^[61]
					Nepal	Cuts and wounds	Root and fruit ^[61] , whole plant (Paste/e) ^[76]
338	[*] <i>Lilium nepalense</i> D.Don	<i>Lilium nepalense</i> D.Don	Liliaceae	Herb	Nepal	Scabies and boils	Bulb ^[61]
339	[*] <i>Lindenbergia grandiflora</i> Benth.	<i>Lindenbergia grandiflora</i> (Buch.-Ham. ex D.Don) Benth.	Orobanchaceae	Herb	India	Skin disease	Whole plant ^[75]
340	<i>Lindenbergia indica</i> (L.) Vatke	<i>Lindenbergia indica</i> L.Vatke	Orobanchaceae	Herb	India	Scorpion stings	Leaf (Juice) ^[11]
341	[*] <i>Lindera neesiana</i> (Wall. ex Nees) Kurz	<i>Lindera neesiana</i> (Wall. ex Nees) Kurz ^[78]	Lauraceae	Tree	Bhutan	Scabies	Bark or fruit ^[78]
		<i>Lindera neesiana</i> (Wallich ex Nees) Kurz ^[79]			India	Scabies	Fruit or seed (Hot oil/o) ^[79]
		<i>Lindera neesiana</i> (Wall ex Nees) Kurz ^[76]			Nepal	Boils and scabies	Fruit (Paste/e) ^[76]
342	[*] <i>Lindera pulcherrima</i> (Nees) Benth. ex Hook.f.	<i>Lindera pulcherrima</i> (Nees) Hook. f.	Lauraceae	Shrub	India	Skin disease	Leaf ^[75]
343	[#] <i>Linum usitatissimum</i> L.	<i>Linum usitatissimum</i> L.	Linaceae	Herb	India	Wounds	Whole plant (Paste/e) ^[35]
						Boils	Seed (Paste/e) ^[12,35]
						Abscesses	Seed (Paste/e) ^[64]
					Nepal	Burns and boils	Seed (Oil/e) ^[64]
344	[#] <i>Litsea cubeba</i> (Lour.) Pers.	<i>Litsea cubeba</i> (Lour.) Pers.	Lauraceae	Tree	India	Eczema	Fruit (Paste/e) ^[79]

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345	<i>Lobelia chinensis</i> Lour.	<i>Lobelia chinensis</i> Lour.	Campanulaceae	Herb	China	Carbuncle, sores, boils, eczema, snake and insect bites	Dry whole plant ^[57]
346	[#] <i>Lonicera japonica</i> Thunb.	<i>Lonicera japonica</i> Thunb.	Caprifoliaceae	Climber	China	Boils and erysipelas	Dry flower ^[12,57]
						Carbuncle and sores	Dry flower, stem and branch ^[57,121]
347	[#] <i>Lycopersicon esculentum</i> Mill.	<i>Lycopersicon esculentum</i> Mill.	Solanaceae	Herb	India	Ringworm	Leaf (Juice) ^[64]
348	<i>Lycopodium clavatum</i> L.	<i>Lycopodium clavatum</i> L.	Lycopodiaceae	Herb	Nepal	Scabies and ringworm	Spore ^[61]
349	<i>Lyonia ovalifolia</i> (Wall.) Drude	<i>Lyonia ovalifolia</i> (Wall.) Drude	Ericaceae	Tree	India	Scabies, wounds and boils	Leaf ^[75]
					Nepal	Pimples and other skin diseases	Leaf (Paste/e) ^[100]
						Scabies and dog bites	Leaf (Infusion/o) ^[61]
					Pakistan	Dermatitis and skin irritation	Leaf ^[67]
350	<i>Maesa indica</i> (Roxb.) Sweet	<i>Maesa indica</i> (Roxb.) Wall.	Primulaceae	Shrub	India	Cuts and wounds	Leaf (Paste/e) ^[87]
351	[#] <i>Malus pumila</i> Mill.	<i>Malus pumila</i> Mill.	Rosaceae	Tree	Pakistan	Boils	Leaf (Juice) ^[36]
352	[^] <i>Malva neglecta</i> Wallr.	<i>Malva neglecta</i> Wallr.	Malvaceae	Herb	India	Boils	Root (Paste/e) ^[59]
					Pakistan	Skin Rashes	Leaf (Decoction) ^[63] , root (Powder) ^[63]
353	[#] [^] <i>Malva verticillata</i> L.	<i>Malva verticillata</i> L.	Malvaceae	Herb	Nepal	Wounds	Dry whole plant (Paste/e) ^[76]
354	[^] <i>Martynia annua</i> L.	<i>Martynia annua</i> L.	Martyniaceae	Herb	India	Eczema	Seed (Oil/e) ^[35]
						Scorpion stings	Seed (Powder) ^[11]
355	[#] <i>Matricaria chamomilla</i> L.	<i>Matricaria chamomilla</i> L.	Asteraceae	Herb	Pakistan	Wounds	Leaf (Paste/e) ^[98]
356	[#] <i>Medicago falcata</i> L.	<i>Medicago falcata</i> L.	Fabaceae	Herb	Pakistan	Wound healing	Aerial part (Paste/e) ^[98]
357	[^] <i>Medicago polymorpha</i> Willd.	<i>Medicago polymorpha</i> L.	Fabaceae	Herb	Pakistan	Wounds	Areal part (o) ^[85]
358	<i>Melastoma malabathricum</i> L.	<i>Melastoma malabathricum</i>	Melastomataceae	Shrub	India	Cuts and wounds	Leaf (Paste/e) ^[87]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
359	[^] <i>Melia azedarach</i> L.	<i>Melia azedarach</i> L. [12,36,37,57,61,64,82,84] <i>Melia azedarach</i> Him. [85]	Meliaceae	Tree	China	Scabies	Dry bark (Powder with lard/e) [57]
					India	Cuts and wounds Dandruff Skin disease and antiseptic	Leaf (Paste/e) [12,82] Leaf (Decoction/e) [64] Leaf, fruit [82]
					Nepal	Leprosy	Fruit [61]
					Pakistan	Pimples and inflammation Smallpox Leprosy	Leaf (Powder) [36] Leaf, bark (Paste/e) [85] Fruit (Crushed mixed with wheat flour) [84]
						Boils, pimples and scabies Dandruff	Fruit (Paste/o) [37] Fruit (Paste/e) [37]
360	[#] <i>Mentha arvensis</i> L.	<i>Mentha arvensis</i> L.	Lamiaceae	Herb	India	Pimples	Leaf (Paste) [65]
					Nepal	Wounds and cuts	Leaf (Juice) [61]
361	[#] <i>Mentha × piperita</i> L.	<i>Mentha piperita</i> L. [11] <i>Mentha × piperita</i> L. [32]	Lamiaceae	Herb	India	Dog bites Burns	Leaf (Decoction) [11] Aerial part (Paste/e) [32]
362	[#] <i>Mentha spicata</i> L.	<i>Mentha spicata</i> L.	Lamiaceae	Herb	Nepal	Boils	Leaf (Juice/o) [66]
364	<i>Micromeria biflora</i> (Buch.-Ham. ex D.Don) Benth.	<i>Micromeria biflora</i> (Buch.-Ham. ex D.Don) Benth.	Lamiaceae	Herb	India	Wounds	Dried whole plant (Powdered) [73]
					Pakistan	Wound healing	Flower, leaf, root (Paste) [36]
364	[#] <i>Mimosa pudica</i> L.	<i>Mimosa pudica</i> L.	Fabaceae	Herb	India	Boils	Root (Paste/e) [61]
365	[#] <i>Mirabilis jalapa</i> L.	<i>Mirabilis jalapa</i> L.	Nyctaginaceae	Herb	India	Boils Carbuncles Abscesses	Leaf (Paste/e, juice/e) [35] Leaf (Paste/e) [12] Leaf (Juice/e, fried in clarified butter/e) [35,64]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
366	<i>Momordica charantia</i> L.	<i>Momordica charantia</i> L.	Cucurbitaceae	Herb	Pakistan	Wound healing	Flower (Paste/e) ^[36] , root (Paste/e) ^[36]
367	<i>Momordica dioica</i> Roxb. Ex Willd	<i>Momordica dioica</i> Roxb. ex Willd.	Cucurbitaceae	Climber	India	Boils Swelling	Root (Paste/e) ^[35] , fruit pulp (Paste/e) ^[35] Root (Poultice) ^[111]
368	<i>Morina longifolia</i> Wall. ex DC.	<i>Morina longifolia</i> Wall. ex DC.	Caprifoliaceae	Herb	India	Boils and pimples	Root (Powder mixed with a water/e) ^[109]
369	<i>Morus alba</i> L.	<i>Morus alba</i> L.	Moraceae	Tree	India	Cuts, burns and wounds	Root and bark (Paste/e) ^[122]
370	<i>Morus indica</i> L.	<i>Morus australis</i> Poir.	Moraceae	Shrub	India	Foot cracks	Seed (Extract/e) ^[61]
371	<i>Morus macroua</i> Miq.	<i>Morus macroua</i> Miq.	Moraceae	Tree	China	Wounds and dermatitis	Latex (Decoction) ^[31]
372	<i>Mucuna pruriens</i> (L.) DC.	<i>Mucuna pruriens</i> (L.) DC.	Fabaceae	Herb	Nepal	Boils and blisters	Leaf (Paste) ^[61]
373	<i>Murraya koenigii</i> (L.) Spreng.	<i>Murraya koenigii</i> (L.) Spreng.	Rutaceae	Tree	Nepal	Skin diseases Leprosy	Root (Extract/e) ^[66] , leaf ^[66] Leaf ^[66]
374	<i>Myrica esculenta</i> Buch.-Ham. ex D.Don	<i>Myrica esculenta</i> Buch.-Ham. ex D.Don	Myricaceae	Tree	India	Cuts and wounds	Bark (Extract or juice) ^[32] , leaf (Paste/e) ^[87]
375	<i>Myricaria rosea</i> W.W.Sm.	<i>Myricaria rosea</i> Smith	Tamaricaceae	Shrub	Bhutan	Wound, chickenpox	Aerial part ^[70]
376	<i>Myrsine africana</i> L.	<i>Myrsine africana</i> L.	Primulaceae	Shrub	Pakistan	Skin problems Scabies and pimples	Leaf ^[36] Leaf (Decoction/o) ^[37]
377	<i>Nardostachys jatamansi</i> (D.Don) DC.	<i>Nardostachys jatamansi</i> DC. ^[57] <i>Nardostachys grandiflora</i> DC. ^[61,66,76]	Caprifoliaceae	Herb	China India Nepal	Tinea pedis Wounds Wounds	Dry root and rhizome (Decoction or powder/e) ^[57] Root ^[61] Rhizome (Paste/e) ^[66,76] , leaf ^[66] , root ^[61]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
378	* <i>Neopicrorhiza scrophulariiflora</i> (Pennell) D.Y.Hong	<i>Neopicrorhiza scrophulariiflora</i> (Pennell) Hong ^[61] <i>Neopicrorhiza scrophulariiflora</i> (Pennell) D.Y.Hong ^[58]	Plantaginaceae	Herb	India Nepal	Snake bites Wounds	Rhizomes ^[61] Root (Paste/e) ^[58]
379	<i>Nepeta hindostana</i> (B.Heyne ex Roth) Haines	<i>Nepeta hindostana</i> Haines ^[12] <i>Nepeta hindostana</i> (B.Heyne ex Roth) Haines. ^[36]	Lamiaceae	Herb	India Pakistan	Ringworm Skin problems	Leaf (Paste/e) ^[12] Leaf (Extract/o) ^[36]
380	[#] <i>Nerium oleander</i> L.	<i>Nerium indicum</i> Mill. ^[64,102] <i>Nerium oleander</i> L. ^[20,37,86,89]	Apocynaceae	Shrub	India Pakistan	Skin diseases and blister Abscesses and insect bites Scabies, ulcers, leprosy and scaly skin, gangrene, maggots infesting wounds Leprosy Skin diseases Warts and boils Wound	Root, leaf, bark ^[102] Latex (Raw/e) ^[64] Rt (Oil), leaf (Poultice with honey), bark, branch (Oil) ^[20] Flower (Paste) ^[86] , leaf (Crushed) ^[37] Leaf (Crushed , paste) ^[37,86] Leaf (Crushed) ^[37] Leaf (Poultice/e) ^[89]
381	[^] <i>Nicotiana plumbaginifolia</i> Viv.	<i>Nicotiana plumbaginifolia</i> Viv.	Solanaceae	Herb	India	Leucoderma Wounds Itches	Root (Paste) ^[35] Leaf (Paste) ^[35] Leaf (Paste or juice/e) ^[35]
382	[#] <i>Nicotiana tabacum</i> L.	<i>Nicotiana tabacum</i> L.	Solanaceae	Herb	India	Eczema	Leaf ^[60]
383	[#] <i>Ocimum basilicum</i> L.	<i>Ocimum basilicum</i> L.	Lamiaceae	Herb	India	Itch	Whole plant ^[60]
384	[#] <i>Ocimum tenuiflorum</i> L.	<i>Ocimum sanctum</i> L. ^[65] <i>Ocimum tenuiflorum</i> L. ^[11,12,33,61,83]	Lamiaceae	Herb	India	Skin problems Ringworm Scabies	Leaf (Juice) ^[33,65] Leaf (Paste/e) ^[12] Leaf (Infusion) ^[11]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Nepal	Snake bites	Leaf (Juice) ^[61]
						Skin diseases	Whole plant (Decoction) ^[83]
385	* <i>Onosma bracteata</i> Wall.	<i>Onosma bracteata</i> Wall.	Boraginaceae	Herb	Pakistan	Dandruff	Whole plant (Decoction) ^[110]
386	^ <i>Opuntia elatior</i> Mill.	<i>Opuntia elatior</i> Mill.	Cactaceae	Shrub	India	Boil and cut	Whole plant ^[60]
387	# <i>Origanum vulgare</i> L.	<i>Origanum vulgare</i> L.	Lamiaceae	Herb	India	Skin diseases	Leaf (Paste) ^[73]
					Pakistan	Skin infections	Whole plant (Decoction/o) ^[84]
						Skin diseases	Whole plant (Extract, decoction, paste) ^[63]
388	* <i>Orobanche alba</i> Stephan ex Willd.	<i>Orobanche alba</i> Steph. ex Willd.	Orobanchaceae	Herb	Nepal	Burns and scalding wounds	Root (Pulverized/e) ^[114]
389	<i>Oroxylum indicum</i> (L.) Kurz	<i>Oroxylum indicum</i> (L.) Kurz	Bignoniaceae	Tree	India	Wounds	Bark (Powder/e) ^[35]
						Burns	Bark (Paste/e) ^[35]
					Nepal	Boils	Seed (Paste/e) ^[66] , bark (Powder/e) ^[61]
						Wounds	Seed (Paste/e) ^[66] , bark (Powder/e) ^[61]
						Burns	Bark (Powder/e) ^[61]
390	<i>Orthosiphon incurvus</i> Benth.	<i>Orthosiphon incurvus</i> Benth.	Lamiaceae	Herb	Nepal	Wounds and cuts	Plant (Juice) ^[61]
391	^ <i>Oxalis acetosella</i> L.	<i>Oxalis acetosella</i> ^[99] <i>Oxalis acetosella</i> L. ^[76]	Oxalidaceae	Herb	China	Wounds and dermatological infections ^[99]	
					Nepal	Boils and wounds	Fresh whole plant (Paste/e) ^[76]
392	^ <i>Oxalis corniculata</i> L.	<i>Oxalis corniculata</i> L.	Oxalidaceae	Herb	China	Ringworm on feet and eczema	Whole plant (Bath/e) ^[91]
					India	Pimples	Leaf (Decoction) ^[11,32] , aerial part or stem (Piece) ^[32]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					India	Boils	Areal part (Decoction, ointment/e) [32,72], leaf (Paste/e) [59]
						Skin diseases and burns	Aerial part or stem (Piece) [32]
						Skin itching	Leaf (Paste/e) [59]
						Wounds	Whole plant [75], aerial part (Ointment/e) [72], aerial part or stem (Piece) [32]
						Cuts	Areal part (Ointment/e) [72]
					Nepal	Boils and skin problems	Fresh whole plant (Paste/e) [76]
					Pakistan	Snake bites	Leaf (Paste/e, rubbed/e) [85]
						Wounds	Leaf (Crushed/e, Paste/e, rubbed/e) [37,84,85]
						Scorpion stings	Whole plant (Extract) [92]
						Skin diseases	Whole plant (Juice, poultice, extract) [63]
393	* <i>Oxyria digyna</i> (L.) Hill	<i>Oxyria digyna</i> (L.) Hill	Polygonaceae	Herb	India	Boils	Root (Paste with cow urine/e) [59]
394	* <i>Paeonia emodi</i> Royle.	<i>Paeonia emodi</i> Royle	Paeoniaceae	Shrub	India	Skin diseases	Root (Paste), leaf (Paste) [123]
						Wounds	Whole plant, root [123]
						Eczema	Flower (Paste, infusion, powder) [123]
						Cuts	Whole plant, root, flower (Paste, infusion, powder) [123]
					Pakistan	Wound healing	Shoot, rhizome (Powder with milk), root (Powder, poultice), tuber

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Pakistan	Wound healing	(Powder, juice), seed (Powder, juice) ^[123]
						Cuts	Rhizome (Powder with milk) ^[123]
						Skin diseases	Flower, leaf ^[123]
395	[#] <i>Paeonia</i> × <i>suffruticosa</i> Andrews	<i>Paeonia suffruticosa</i> Andr.	Paeoniaceae	Shrub	China	Carbuncle and sores	Dry root bark ^[57]
396	<i>Paris polyphylla</i> Sm.	<i>Paris polyphylla</i> Smith var. <i>yunnanensis</i> (Franch.) Hand.-Mazz . ^[57]	Melanthiaceae	Herb	China	Carbuncle, sores, boils, snake and insect bites	Dry rhizome (Powder/e) ^[57,124]
		<i>Paris polyphylla</i> Smith var. <i>chinensis</i> (Franch.) Hara ^[57]			India	Cuts	Rhizome (Paste/e) ^[32]
		<i>Paris polyphylla</i> Smith ^[32,58,77]				Wounds	Rhizome (Paste/e) ^[32] , root (Powder/e) ^[61]
		<i>Paris polyphylla</i> Smith ^[61,66,76]			Nepal	Snake and insect bites, burns, cuts and wounds	Root (Paste/e) ^[58,66,77]
397	[*] <i>Parnassia nubicola</i> Wall. ex Royle	<i>Parnassia nubicola</i> Wall. ex Royle ^[76]	Celastraceae	Herb	Nepal	Cuts and wounds	Root (Paste/e) ^[76]
		<i>Parnassia nubicola</i> Wallich ex Royle ^[98]			Pakistan	Snake bites, wounds and boils	Root (Paste/e) ^[98]
398	[#] <i>Passiflora edulis</i> Sim.	<i>Passiflora edulis</i> Sims	Passifloraceae	Climber	India	Snake bites	Root (Paste/e) ^[122]
399	[#] <i>Passiflora wilsonii</i> Hemsl.	<i>Passiflora wilsonii</i> Hems.	Passifloraceae	Herb	China	Scabies	Bine and leaf (Bath/e) ^[91]
400	[*] <i>Pedicularis integrifolia</i> Hook. f.	<i>Pedicularis integrifolia</i> Hook. f.	Orobanchaceae	Herb	Bhutan	Wounds	Aerial part ^[70] , whole plant ^[71]
401	[*] <i>Pedicularis longiflora</i> Rudolph	<i>Pedicularis longiflora</i> Rudolph	Orobanchaceae	Herb	Bhutan	Wounds	Aerial part ^[70]
402	[^] <i>Peganum harmala</i> L.	<i>Peganum harmala</i> L.	Nitrariaceae	Herb	Pakistan	Skin problems	Leaf (Extract) ^[36]
						Wound healing	Whole plant (Smoke/e) ^[74]
403	<i>Pentanema indicum</i> (L.) Ling	<i>Pentanema indicum</i> (L.) Ling	Asteraceae	Herb	India	Skin diseases	Whole plant (Infusion or decoction/o) ^[117]

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404	<i>Peperomia pellucida</i> (L.) Kunth	<i>Peperomia pellucida</i> (L.) H.B.K.	Piperaceae	Herb	India	Wounds	Leaf (Paste/e) ^[93]
405	<i>Peperomia tetraphylla</i> (G.Forst.) Hook. & Arn.	<i>Peperomia tetraphylla</i> (Forst.f.) Hook. & Arn.	Piperaceae	Herb	India	Wounds and burns	Whole plant ^[75]
406	<i>Persicaria barbata</i> (L.) H.Hara	<i>Persicaria barbata</i> (L.) H.Hara	Polygonaceae	Herb	India	Boils, cuts and wounds	Leaf (Paste/e or juice/e) ^[35]
407	<i>Persicaria capitata</i> (Buch.-Ham. ex D.Don) H.Gross	<i>Persicaria capitata</i> (Buch.-Ham. ex D.Don) H.Gross	Polygonaceae	Herb	China	Burns	Whole plant ^[112]
408	<i>Persicaria hydropiper</i> (L.) Delarbre	<i>Polygonum hydropiper</i> Linn.	Polygonaceae	Herb	India	Skin infections	Leaf (Paste/e) ^[87]
409	<i>Phanera vahlii</i> (Wight & Arn.) Benth.	<i>Bauhinia vahlii</i> Wight & Arn. ^[61]	Fabaceae	Climber	India	Skin disease	Bark ^[61]
410	<i>Phlogacanthus thyrsoformis</i> (Roxb. ex Hardw.) Mabb.	<i>Phlogacanthus thyrsoflorus</i> (Roxb.) Nees.	Acanthaceae	Herb	India	Scabies	Leaf (Water decoction) ^[111]
411	<i>Phoenix sylvestris</i> (L.) Roxb.	<i>Phoenix sylvestris</i> L. Roxb.	Arecaceae	Tree	India	Septic wounds	Leaf (Juice) ^[11]
412	<i>Phragmites karka</i> (Retz.) Trin. ex Steud.	<i>Phragmites vallatoria</i> (Pluk.ex L.) Veldkamp	Poaceae	Herb	Nepal	Cuts and wounds ^[105]	
413	<i>Phyla nodiflora</i> (L.) Greene	<i>Phyla nodiflora</i> (L.) Greene	Verbenaceae	Herb	Pakistan	Pimples, carbuncle and skin burns	Leaf (Juice/o) ^[37]
414	<i>Phyllanthus emblica</i> L.	<i>Phyllanthus emblica</i> L.	Phyllanthaceae	Tree	Nepal	Skin diseases	Fruit ^[66]
415	<i>Physalis minima</i> L.	<i>Physalis minima</i> L.	Solanaceae	Herb	India	Smallpox	Root (Poultice) ^[11]
416	<i>Phytolacca acinosa</i> Roxb.	<i>Phytolacca acinosa</i> Roxb.	Phytolaccaceae	Herb	China	Carbuncle and sores	Dry root (Decoction/e) ^[57]
417	<i>Phytolacca americana</i> L.	<i>Phytolacca americana</i> L.	Phytolaccaceae	Herb	China	Carbuncle and sores	Dry root (Decoction/e) ^[57]
					India	Cuts and wounds	Leaf (Fresh juice/e) ^[61]
418	<i>Picea smithiana</i> (Wall.) Boiss.	<i>Picea smithiana</i> (Wall.) Boiss.	Pinaceae	Tree	Nepal	Boils and skin cracks	Resin (Heated/e) ^[76]
419	<i>Picrasma quassioides</i> (D.Don) Benn.	<i>Picrasma quassioides</i> (D.Don) Benn. ^[57]	Simaroubaceae	Tree	China	Eczema, sores and boils, snake and insect bites	Dry branch and leaf (e) ^[57]
		<i>Picrasma quassioides</i> (Don) Benth. ^[102]			India	Itches	Stem (Bark) ^[102]
420	<i>Picrorhiza kurroa</i> Royle ex Benth.	<i>Picrorhiza kurroa</i> Royle ex Benth.	Plantaginaceae	Herb	India	Cuts and wounds	Fresh root (Paste/e) ^[61]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
421	<i>Pimpinella diversifolia</i> DC.	<i>Pimpinella diversifolia</i> DC.	Apiaceae	Herb	India	Snake bites	Root (Crushed, mixed with butter milk/e) [59]
422	<i>Pittosporum napaulense</i> (DC.) Rehder & E.H. Wilson	<i>Pittosporum nepaulense</i> Reh & Wilson	Pittosporaceae	Shrub	India	Skin ailments	Bark [102]
423	[#] <i>Pinus roxburghii</i> Sarg.	<i>Pinus roxburghii</i> Sarg. [32,36,66,67,75,89] <i>Pinus roxburghii</i> Sargent. [37,85,86]	Pinaceae	Tree	India	Cuts and wounds Boils	Resin [32] Leaf [75]
					Nepal	Burns and scalds Boils	Bark (Paste) [66] Resin (Raw/e) [66]
					Pakistan	Skin problems Ringworm and boils	Seed (Juice/o) [36], bark (Resin) [86] Resin (Plaster, herbal steam baths/e) [85]
						Measles	Leaf (Juice/o) [37]
						Boils and warts	Resin (Raw/e) [37]
						Snake bites	Resin [67]
						Scabies	Leaf (Extract/o) [89]
424	[*] <i>Pinus wallichiana</i> A.B. Jacks.	<i>Pinus wallichiana</i> A.B.Jacks. [36,125] <i>Pinus wallichiana</i> A.B.Jackson. [63,76]	Pinaceae	Tree	India	Cracked heels Boils Evacuation of pus Cuts and wounds	Resin, stem (Latex/e), oleoresin (e) [125] Resin [125] Stem (Latex/e) [125] Oleoresin (e), resin, stem (Latex/e), young sapling (Resin) [125]
					Nepal	Abscesses [125] Cuts and wounds	Resin (Heated/e) [76]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Pakistan	Wound infection Scorpion and Snakebites	Seed (Powder with sugar/o) [36] Resin, bark, leaf, seed (Infusion, powder) [63]
425	<i>Pistacia chinensis</i> Bunge	<i>Pistacia chinensis</i> Bunge.	Anacardiaceae	Tree	Pakistan	Ruptured heels	Stem gum (Poultice with mustard oil/e) [89]
426	<i>Pistacia chinensis</i> subsp. <i>integerrima</i> (J. L. Stewart ex Brandis) Rech. f.	<i>Pistacia chinensis</i> subsp. <i>Integerrima</i> (J.L. Stewart ex Brandis) Rech.f.	Anacardiaceae	Tree	Nepal	Snake and scorpion bites	Gall [77]
427	<i>Plantago asiatica</i> L.	<i>Plantago asiatica</i> L.	Plantaginaceae	Herb	China	Carbuncle and sores	Dry whole plant [57]
428	<i>Plantago depressa</i> Willd.	<i>Plantago depressa</i> Willd.	Plantaginaceae	Herb	China India	Carbuncle and sores Burns Boils and skin diseases	Dry whole plant [57] Leaf (Paste/e) [32] Root (Paste, extract or juice/e) [32]
429	* <i>Plantago himalaica</i> Pilg.	<i>Plantago himalaica</i> Pilger	Plantaginaceae	Herb	Pakistan	Skin problems	Leaf (Paste) [110]
430	^ <i>Plantago lanceolata</i> L.	<i>Plantago lanceolata</i> L.	Plantaginaceae	Herb	Pakistan	Wounds Burns and skin sores Athlete's foot	Leaf (Poultice/e, mashed/e) [20,36,84] Leaf (Mashed/e) [20,84] Fresh leaf (Crushed/e) [89]
431	^ <i>Plantago major</i> L.	<i>Plantago major</i> Linn. [79] <i>Plantago major</i> L. [36,61,63,72,110]	Plantaginaceae	Herb	India Pakistan	Wounds Cuts Wounds	Whole plant (Paste and juice/e) [79], plant (Juice/e) [61], root (Paste/e) [61], aerial part (Ointment/e) [72] Plant (Juice/e) [61], root (Paste/e) [61] Leaf (Poultice) [110], seed (Poultice/e) [36]
						Skin problems and boils Skin inflammations	Seed (Poultice/e) [36] Seed, leaf (Crude) [63]
432	* <i>Pleione humilis</i> (Sm.) D.Don	<i>Pleione humilis</i> (Sm.) D.Don	Orchidaceae	Herb	Nepal	Cuts and wounds	Pseudobulb (Paste/e) [106]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
433	* <i>Pleione praecox</i> (Sm.) D.Don	<i>Pleione praecox</i> (Sm.) D.Don	Orchidaceae	Herb	Nepal	Cuts and wounds	Pseudobulb (Paste/e) ^[106]
434	<i>Plumbago zeylanica</i> L.	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Shrub	India	Hard boils Ringworm Snake bites	Root (Paste/e) ^[12] Root (Ground/o) ^[117] Root (Poultice) ^[11]
					Nepal	Scabies Skin diseases	Root (Paste) ^[66] Leaf (Juice/e) ^[66]
435	# <i>Pisum sativum</i> L.	<i>Pisum sativum</i> L.	Fabaceae	Herb	Pakistan	Skin burns	Seed (Extract) ^[36]
436	* <i>Podophyllum hexandrum</i> Royle	<i>Podophyllum hexandrum</i> ^[104] <i>Podophyllum hexandrum</i> Royle ^[63]	Berberidaceae	Herb	India Pakistan	Septic wounds Wounds, skin allergy, and skin inflammation	Whole plant ^[104] Root (Extract) ^[63]
437	<i>Polygala chinensis</i> L.	<i>Polygala chinensis</i> L.	Polygalaceae	Herb	India	Itching	Leaf (Decoction) ^[11]
438	* <i>Polygala sibirica</i> L.	<i>Polygala sibirica</i> L.	Polygalaceae	Herb	China	Sores	Dry root ^[57]
439	# <i>Polygala tenuifolia</i> Willd.	<i>Polygala tenuifolia</i> Willd.	Polygalaceae	Herb	China	Sores	Dry root ^[57]
440	* <i>Polygonatum singalilense</i> H.Hara	<i>Polygonatum singalilense</i> H.Hara	Asparagaceae	Herb	Bhutan	Wounds	Flower ^[71]
441	* <i>Polygonatum verticillatum</i> (L.) All.	<i>Polygonatum verticillatum</i> (L.) All.	Asparagaceae	Herb	India	Boils and pimples	Tuber (Powder with mustard oil/e) ^[109]
442	^ <i>Polygonum aviculare</i> L.	<i>Polygonum aviculare</i> L.	Polygonaceae	Herb	China Pakistan	Eczema Wounds	Dry aerial part (Decoction/e) ^[57] Whole plant (Decoction, poultice, juice/e), leaf (Paste/e) ^[63,98]
443	^ <i>Persicaria perfoliata</i> (L.) H.Gross	<i>Polygonum perfoliatum</i> L.	Polygonaceae	Herb	China	Eczema, boils, snake and insect bites	Dry aerial part (Decoction/e) ^[57]
444	^ <i>Polygonum plebeium</i> R.Br.	<i>Polygonum plebeium</i>	Polygonaceae	Herb	India	Eczema, leg and finger infection, swelling and wounds	Whole plant (Ash) ^[126]
445	# <i>Populus ciliata</i> Wall. ex Royle	<i>Populus ciliata</i> Wall. ex Royle	Salicaceae	Tree	Nepal	Skin cracks	Resin (Heated/e) ^[76]

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446	[^] # <i>Portulaca oleracea</i> L	<i>Portulaca oleracea</i> L	Portulacaceae	Herb	China	Carbuncle, sores, boils, eczema, erysipelas, snake or insect bites	Dry aerial part (Pounded/e) ^[57]
447	* <i>Potentilla atosanguinea</i> G.Lodd. ex D.Don	<i>Potentilla astroguinea</i> Lodd.	Rosaceae	Herb	Pakistan	Wounds	Leaf, root (Paste) ^[63]
448	[^] <i>Potentilla indica</i> (Andrews) Th.Wolf	<i>Duchesnea indica</i> (Andrews) Focke	Rosaceae	Herb	India	Cut and wounds	Leaf (Paste/e) ^[61]
449	<i>Pourthiaea villosa</i> (Thunb.) Decne.	<i>Symplocos lucida</i> (Thunberg) Siebold & Zuccarini	Rosaceae	Tree	India	Spider stings	Seed (Powder/e) ^[61]
450	<i>Pouzolzia hirta</i> Blume ex Hassk.	<i>Pouzolzia hirta</i> Blume ex Hassk.	Urticaceae	Herb	India	Boils	Whole plant (Paste mixed with cow urine/e) ^[59]
451	* <i>Primula fasciculata</i> Balf. f. & Kingdon-Ward	<i>Primula fasciculata</i> Balf. f. & Kingdon-Ward	Primulaceae	Herb	Bhutan	Wounds	Whole plant ^[71]
452	* <i>Prinsepia utilis</i> Royle	<i>Prinsepia utilis</i> Royle	Rosaceae	Shrub	India	Burns, cuts and wounds	Fruit ^[75]
					Nepal	Skin diseases and ringworm	Seed (Oil/e) ^[66,76]
453	[#] <i>Prunus armeniaca</i> L.	<i>Prunus armeniaca</i> L.	Rosaceae	Tree	India	Skin diseases	Seed (Oil/e) ^[109]
					Nepal	Boils and skin cracks	Resin (Heated/e) ^[76]
					Pakistan	Skin problems	Fruit (Paste) ^[36,86]
454	[#] <i>Prunus cerasoides</i> Buch.-Ham. ex D.Don	<i>Prunus cerasoides</i> D.Don	Rosaceae	Tree	India	Skin diseases (eczema, leg and fingers infection, swelling and wound)	Stem bark (Water extract) ^[126]
					Nepal	Burns	Bark (Decoction/e) ^[76]
455	[#] <i>Prunus davidiana</i> (Carrière) Franch.	<i>Prunus davidiana</i> (Carriere) Franch.	Rosaceae	Tree	Nepal	Wounds	Fruit (Paste/e) ^[76]
456	* <i>Psammosilene tunicoides</i> W.C.Wu & C.Y.Wu	<i>Psammosilene tunicoides</i> W. C. Wu et C. Y. Wu	Caryophyllaceae	Herb	China	Sores, boils, snake and insect bites	Dry root ^[57]
457	[^] <i>Pteridium aquilinum</i> (L.) Kuhn	<i>Pteridium aquilinum</i> (L.) Kuhn	Dennstaedtiaceae	Fern	Pakistan	Scabies Wounds	Rhizome (Extract/o) ^[37] Rhizome (Paste) ^[37]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
458	<i>Pteris biaurita</i> L.	<i>Pteris biaurita</i> L.	Pteridaceae	Herb	India	Cuts and wounds	Stem (Mashed/e) ^[61]
459	[#] <i>Punica granatum</i> L.	<i>Punica granatum</i> L.	Lythraceae	Tree	India	Cuts and wounds Boils	Leaf (Infusion) ^[111] Leaf (Paste mixed with cow urine/e) ^[59]
					Pakistan	Skin diseases Face spots Pimples	Leaf (Powder) ^[86] Flower (Paste/e) ^[37] Rind (Powder/o) ^[37]
460	<i>Pyrola rotundifolia</i> L.	<i>Pyrola rotundifolia</i>	Ericaceae	Herb	China	Wounds ^[99]	
461	[^] <i>Pyrus pashia</i> Buch.-Ham. ex D.Don	<i>Pyrus pashia</i> Buchanan-Hamilton ex D.Don	Rosaceae	Tree	Pakistan	Skin infections	Leaf (Paste) ^[86]
462	[*] <i>Quercus semecarpifolia</i> Sm.	<i>Quercus semecarpifolia</i> Smith	Fagaceae	Tree	India	Cuts and wounds	Leaf ^[75]
463	[^] <i>Ranunculus arvensis</i> L.	<i>Ranunculus arvensis</i> L.	Ranunculaceae	Herb	India	Skin diseases	Whole plant ^[75]
					Pakistan	Boils and pimples	Leaf (Boiled in rapeseed oil and ground/e) ^[85]
464	[*] <i>Ranunculus brotherusii</i> Freyn	<i>Ranunculus brotherusii</i> Freyn	Ranunculaceae	Herb	Bhutan	Wounds and dried pus	Whole plant ^[71]
465	<i>Ranunculus laetus</i> Wall. ex Hook. f. & J.W. Thomson	<i>Ranunculus laetus</i> Wall. ex H. & T. ^[37] <i>Ranunculus laetus</i> Wall.Ex Hook.f. &Thoms. ^[63]	Ranunculaceae	Herb	Pakistan	Eczema Skin infection	Fresh leaf (Crushed/e) ^[37] Leaf, flower (Paste) ^[63]
466	[^] <i>Ranunculus muricatus</i> L.	<i>Ranunculus muricatus</i> L.	Ranunculaceae	Herb	Pakistan	Eczema, ringworm and leprosy	Aerial parts ^[92]
467	[^] <i>Ranunculus sceleratus</i> L.	<i>Ranunculus sceleratus</i> L.	Ranunculaceae	Shrub	China	Sores	Whole plant ^[127]
					India	Eczema and ringworm Boils	Leaf (Juice/e) ^[12] Leaf (Paste/e) ^[35] , whole plant ^[60]
468	[#] <i>Raphanus raphanistrum</i> L.	<i>Raphanus raphanistrum</i> L.	Brassicaceae	Herb	Pakistan	Skin diseases	Fresh root (Decoction/e) ^[74]
469	<i>Reinwardtia indica</i> Dumort.	<i>Reinwardtia indica</i> Dumort.	Linaceae	Shrub	India	Wounds	Leaf ^[75]

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470	<i>Rhazya stricta</i> Decne.	<i>Rhazya stricta</i> Decne.	Apocynaceae	Shrub	Pakistan	Pimples	Leaf (Powder/o) [74]
471	* <i>Rheum acuminatum</i> Hook.f. & Thomson	<i>Rheum acuminatum</i> Hook.f. & Thomson	Polygonaceae	Herb	Nepal	Wounds	Rhizome (Paste/e) [58]
472	* <i>Rheum australe</i> D.Don	<i>Rheum australe</i> D.Don	Polygonaceae	Herb	Bhutan	Wound [71,108]	Root [71,108]
					India	Cuts and wounds	Dried root (Paste mixed with cow urine/e) [59], young petiole and leaf [61]
						Skin eruption	Root [61]
					Pakistan	Burns and skin eruptions	Root [67]
						Skin infections	Whole plant (Powder) [84]
						Wound	Rhizome (Cooked, powder) [63,110], root (Powder) [63]
473	* <i>Rheum webbianum</i> Royle	<i>Rheum emodi</i> Wall. ex Meisn.	Polygonaceae	Herb	India	Burns, cuts and wounds	Root, leaf (Paste/e) [32]
474	# <i>Rheum palmatum</i> L.	<i>Rheum palmatum</i> L.	Polygonaceae	Shrub	China	Carbuncle, abscess, boils, sores, burns	Dry root and rhizome (Powder/e) [57]
475	* <i>Rhododendron arboreum</i> Sm.	<i>Rhododendron arboreum</i> Sm.	Ericaceae	Shrub	Pakistan	Skin diseases	Leaf, flower (Powder) [63]
476	* <i>Rhododendron campanulatum</i> D. Don	<i>Rhododendron campanulatum</i> Don	Ericaceae	Shrub	India	Skin diseases, burns and boils	Root, leaf [102]
						Eczema	Flower and leaf (Rubbed/e) [72]
477	<i>Rhus chinensis</i> Mill.	<i>Rhus chinensis</i> Miller.	Anacardiaceae	Tree	Pakistan	Pimples and boils	Fruit (Powder with sugar/o) [37]
478	* <i>Ribes himalense</i> Royle ex Decne	<i>Ribes himalense</i> Royle ex Decne.	Grossulariaceae	Shrub	India	Cuts and wounds	Leaf [102]
479	# [^] <i>Ricinus communis</i> L.	<i>Ricinus communis</i> L.	Euphorbiaceae	Shrub	China	Carbuncle and subcutaneous ulcer	Dry ripe seed (e) [57]
					India	Leprosy	Leaf (Decoction) [12]
						Sores,	Seed, leaf, root [82,102]
						Skin diseases	Leaf [102], root [102], seed (Oil) [65]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					India	Boils	Seed ^[102] , Leaf (Paste/e) ^[11,59] , root (Juice) ^[61]
						Itch	Seed ^[60]
						Wounds	Seed (Paste/e) ^[35]
						Heel cracks	Seed (Oil) ^[35]
						Eczema	Leaf (Paste/e) ^[35]
						Cuts	Seed, leaf ^[82]
					Nepal	Skin diseases	Root (Juice/o) ^[61,83]
						Cracking heels	Root (Endosperm) ^[61]
					Pakistan	Scabies, wounds and sores healing, boils, acne, leprosy, ring worm, swelling, warts removal and other skin diseases	Leaf, seed (Grinded, Oil, Paste/e) ^[20]
						Wounds	Leaf (Powder, poultice/e, paste/e) ^[37,85]
						Boils	Leaf (Powder, poultice/e, paste/e) ^[37,85,86]
480	* <i>Rosa brunonii</i> Lindl.	<i>Rosa brunonii</i> Lindl.	Rosaceae	Shrub	India	Acne	Flower (Paste/e) ^[64]
					Pakistan	Wounds	Flower (Powder, decoction/e) ^[85]
						Pimples, boils	Flower (Decoction/o) ^[37]
481	<i>Rosa indica</i> L.	<i>Rosa indica</i> L.	Rosaceae	Shrub	Pakistan	Skin disorders	Flower, root (Paste/e) ^[90]
482	<i>Rosa macrophylla</i> Lindl.	<i>Rosa macrophylla</i> Lindl.	Rosaceae	Shrub	Bhutan	Abscesses	Fruit ^[71]
					India	Skin ailments	Fruit (Paste/e) ^[102]
483	* <i>Rosa webbiana</i> Wall. ex Royle	<i>Rosa webbiana</i> Wall. ex Royle	Rosaceae	Shrub	Pakistan	Wounds	Bark ^[110]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
484	<i>*Roylea cinerea</i> (D.Don) Baill.	<i>Roylea cinerea</i> (D.Don) Baillon	Lamiaceae	Shrub	India	Skin allergy and wound healing Pimples Scabies and other skin infections	Leaf (Paste) ^[128] Leaf and root ^[128] Leaf and shoot (Extracts) ^[128]
485	<i>Rubia cordifolia</i> L.	<i>Rubia cordifolia</i> L.	Rubiaceae	Herb	India	Skin diseases	Root (Paste/e) ^[61]
486	<i>Rubia manjith</i> Roxb.	<i>Rubia manjith</i> Roxb. ex Fleming	Rubiaceae	Climber	India	Skin diseases Burns and boils Ringworm Snake bites and leprosy Scorpion bites ^[61]	Aerial plant (Paste/e) ^[32] , plant (Decoction) ^[61] , root ^[75] Aerial plant (Paste/e) ^[32] Whole plant (Paste mixed with cow urine/e) ^[59] Plant (Decoction) Stem ^[61]
					Nepal	Cuts Wounds Skin diseases Leprosy Snake bites Scorpion stings Scabies and other skin diseases	Stem, leaf ^[77] Stem (Decoction) ^[66,77] , leaf ^[77] Root (Paste/e) ^[100] , plant (Decoction) ^[61] Root ^[66] , plant (Decoction) ^[61] Stem ^[66] , plant (Decoction) ^[61] Stem ^[66] Root (Paste/e) ^[58]
487	<i>Rubus ellipticus</i> Sm.	<i>Rubus ellipticus</i> Sm. ^[32,61,96,100] <i>Rubus ellipticus</i> Smith. ^[109]	Rosaceae	Shrub	India	Skin diseases and boils Ulcers Wounds	Root, leaf (Paste/e) ^[32] Leaf (e) ^[96] Root (Paste/e) ^[61] , leaf (e) ^[96]
					Nepal	Wounds	Root (Paste/e) ^[100] , fruit (Juice) ^[61]
					Pakistan	Wounds	Fruit (Paste/e) ^[109]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
488	[#] <i>Rubus fruticosus</i> L.	<i>Rubus Fruticasus</i> D.Don.	Rosaceae	Shrub	Pakistan	Wounds	Flower, leaf (e) ^[90]
489	[*] <i>Rubus nepalensis</i> (Hook.f.) Kuntze	<i>Rubus nepalensis</i> Kuntze	Rosaceae	Shrub	India	Burns	Fruit (Paste/e) ^[102]
490	<i>Rubus paniculatus</i> Sm.	<i>Rubus paniculatus</i> Sm.	Rosaceae	Shrub	India	Skin ailments	Fruit (Paste/e) ^[102]
491	<i>Rumex chalepensis</i> Mill.	<i>Rumex chalepensis</i> Mill.	Polygonaceae	Herb	Pakistan	Scabies	Fresh leaf (Rubbed/e) ^[37]
492	<i>Rumex dentatus</i> L.	<i>Rumex dentatus</i> L.	Polygonaceae	Herb	Pakistan	Boils Skin irritation	Leaf (Powder/o) ^[36] Aerial part ^[67]
493	<i>Rumex dentatus</i> subsp. klotzschianus (Meisn.) Rech.f.	<i>Rumex dentatus</i> L. subsp. Klotzschianus (Meisn.) Rech. f.	Polygonaceae	Herb	India	Cuts and wounds	Leaf (Decoction) ^[11]
494	<i>Rumex hastatus</i> D. Don	<i>Rumex hastatus</i> D. Don	Polygonaceae	Shrub	India	Burns, cuts and wounds	Aerial part (Extract or juice) ^[32]
495	<i>Rumex nepalensis</i> Spreng.	<i>Rumex nepalensis</i> Spreng.	Polygonaceae	Herb	India	Burns, wounds and skin diseases Boils Snake bites Cuts Skin diseases	Leaf, root (Paste/e) ^[32] Root (Paste mixed with raw cow milk/e) ^[32,59] , leaf (Paste/e) ^[32] Root (powder mixed with buttermilk/o) ^[59] Root (Infusion/o, paste/e) ^[32,61] , leaf (Paste/e) ^[32] Shoot ^[61] , leaf (Paste/e) ^[32] , root (Paste/e) ^[32]
					Nepal	Wound	Root (Paste/e) ^[61,76,94] , leaf (Paste/e) ^[61] , fresh leaf (Extract and sap/e) ^[83]
						Cuts	Fresh leaf (Extract and sap/e) ^[83]
496	[#] <i>Salix babylonica</i> L.	<i>Salix babylonica</i> L.	Salicaceae	Tree	Pakistan	Skin cleanser Wounds and insect bites	Leaf, root (Extract/o) ^[36] Leaf (Raw/e) ^[84]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
497	* <i>Salvia moorcroftiana</i> Wall. ex Benth.	<i>Salvia moorcroftiana</i> wall. ex Benth [36] <i>Salvia moorcroftiana</i> Wallich ex Benth [110] <i>Salvia moorcroftiana</i> Wall. ex Bth. [37]	Lamiaceae	Herb	Pakistan	Itching Abscesses Wounds	Leaf (Poultice/e) [36] Leaf (Poultice) [110] Leaf (Crushed/e, poultice/e) [36,37]
498	* <i>Salvia nubicola</i> Wall. ex Sweet	<i>Salvia nubicola</i> Wall. ex Sweet	Lamiaceae	Herb	Pakistan	Skin eruptions	Leaf (Paste/e) [98]
499	* <i>Sambucus adnata</i> Wall. ex DC.	<i>Sambucus adnata</i> Wall. ex DC.	Viburnaceae	Herb	Bhutan	Wounds, abscesses and other skin diseases	Whole plant [71]
500	<i>Sapindus mukorossi</i> Gaertn.	<i>Sapindus mukorossi</i> Gaertn. [37,61,66,105,122] <i>Sapindus mukorossi</i> Gaertn. de Fruct. [85]	Sapindaceae	Tree	India Nepal Pakistan	Insect bites Burns Dandruff Snake bites, scorpion stings and dandruff Snake or scorpion bites Dandruff	Seed (Powder/e) [122] Fruit (Juice) [61] Fruit (Extract/e) [61] Fruit [66] Fruit, bark (Paste/e) [85] Fruit, bark (Paste/e) [85], rind (Decoction) [37]
501	<i>Satyrium nepalense</i> D.Don	<i>Satyrium nepalense</i> D.Don	Orchidaceae	Herb	Nepal	Cuts and wounds	Tuber (Juice/e) [106]
502	<i>Saussurea albescens</i> Hook. f & Thomson	<i>Saussurea albescens</i> Hook. f. & Thoms	Asteraceae	Herb	Pakistan	Skin diseases	Root (cooked in local butters) [110]
503	* <i>Saussurea gossypiphora</i> D.Don	<i>Saussurea gossypiphora</i> [104] <i>Saussurea gossypiphora</i> D.Don [58,76]	Asteraceae	Herb	India Nepal	Cuts Cuts Wounds	Plant (Paste) [104] Whole plant (Paste/e) [76] Whole plant (Paste/e) [76], wooly cotton (with water) [58]
504	<i>Schefflera venulosa</i> (Wight & Arn.) Harms	<i>Schefflera venulosa</i> (Wt. & Arn.) Harms	Araliaceae	Tree	India	Skin diseases and contusions	Leaf, bark [102]
505	<i>Schleichera oleosa</i> (Lour.) Merr.	<i>Schleichera oleosa</i> (Lour.) Oken	Sapindaceae	Tree	India	Cuts and wounds	Seed (Paste/e) [62]
506	<i>Scoparia dulcis</i> L.	<i>Scoparia dulcis</i> L.	Plantaginaceae	Herb	India	Wounds	Leaf (Paste/e) [35]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
507	<i>Scutellaria barbata</i> D.Don	<i>Scutellaria barbata</i> D.Don	Lamiaceae	Herb	China	Boils, sores, snake or insect bites	Dry whole plant ^[57]
508	* <i>Sedum multicaule</i> Wall. ex Lindl.	<i>Sedum multicaule</i> Wall. ex Lindl.	Crassulaceae	Herb	Nepal	Boils and wounds	Whole plant (Paste/e) ^[76]
509	<i>Semecarpus anacardium</i> L.f.	<i>Semecarpus anacardium</i> L.f.	Anacardiaceae	Tree	India	Skin infection	Root ^[61]
510	* <i>Senecio cappa</i> Buch.-Ham. ex D.Don	<i>Senecio cappa</i> Buch.-Ham. ex D.Don	Asteraceae	Herb	Nepal	Boils	Root and leaf (Infusion) ^[61]
511	<i>Senecio scandens</i> Buch.-Ham. ex D.Don	<i>Senecio scandens</i> Buch.-Ham. ex D.Don ^[91]	Asteraceae	Climber	China	Eczema	Whole plant (Bath/e) ^[91] , dry aerial part (Decoction/e) ^[57]
		<i>Senecio scandens</i> Buch. -Ham. ^[57]				Carbuncle, sores	Dry aerial part (Decoction/e) ^[57]
512	<i>Senegalia caesia</i> (L.) Maslin, Seigler & Ebinger	<i>Acacia caesia</i> (L.) Willd.	Fabaceae	Shrub	India	Skin diseases	Bark ^[56]
513	<i>Senna auriculata</i> (L.) Roxb.	<i>Senna auriculata</i> (L.) Roxb.	Fabaceae	Tree	India	Skin rashes	Flower ^[56]
514	^ <i>Senna occidentalis</i> (L.) Link	<i>Cassia occidentalis</i> Linn. ^[65]	Fabaceae	Herb	India	Leucopderma, ringworm and skin boils	Leaf (Paste/e) ^[65]
		<i>Cassia occidentalis</i> L. ^[61]			Nepal	Skin infection and inflammation	Flower and seed (Paste/e) ^[61]
515	# <i>Senna tora</i> (L.) Roxb.	<i>Cassia tora</i> L.	Fabaceae	Herb	Nepal	Ringworm and itch	Leaf (Extract/e) ^[61]
516	# <i>Sesamum indicum</i> L.	<i>Sesamum indicum</i> L. ^[35]	Pedaliaceae	Herb	India	Leprosy	Seed (Oil/e) ^[35]
		<i>Sesamum orientale</i> L. ^[61,76]				Boils	Seed (Paste/e) ^[35]
					Nepal	Sunburns and ringworm	Seed (Chewed/e) ^[61]
						Skin diseases	Seed (Oil/e) ^[76]
517	# <i>Setaria italica</i> (L.) P.Beauv.	<i>Setaria italica</i> (L.) Beauv.	Poaceae	Herb	India	Measles	With cow milk ^[109]
518	<i>Shorea robusta</i> C.F.Gaertn.	<i>Shorea robusta</i> Gaertn.	Dipterocarpaceae	Tree	Nepal	Wounds	Bark (Paste/e) ^[61]
519	^ <i>Sida acuta</i> Burm.f.	<i>Sida acuta</i> Brum. F.	Malvaceae	Shrub	India	Itching	Root ^[65]
520	^ <i>Sida cordata</i> (Burm.f.) Borss.Waalk.	<i>Sida cordata</i> (Burm. F.) Borss. Waalk.	Malvaceae	Herb	India	Boils	Leaf (Paste/e) ^[35]
521	^ <i>Sida cordifolia</i> L.	<i>Sida cordifolia</i> L.	Malvaceae	Shrub	Pakistan	Boils	Leaf (Paste) ^[86]
522	^ <i>Sida rhombifolia</i> L.	<i>Sida rhombifolia</i> L.	Malvaceae	Herb	India	Boils	Root (Paste/e) ^[35] , leaf (Juice/e) ^[113]
						Abscesses and wounds	Root (Paste/e) ^[35]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
523	<i>Sideroxylon mascotense</i> (A.DC.) T.D.Penn.	<i>Monothea buxifolia</i> (Falc.) A. DC.	Sapotaceae	Shrub	Pakistan	Skin infection	Fruit (Poultice/e) ^[89] , stem (Poultice/e) ^[89]
524	<i>Silene conoidea</i> L.	<i>Silene conoidea</i> L.	Caryophyllaceae	Herb	Pakistan	Pimples	Fresh plant (Paste/e) ^[74]
525	<i>Silene edgeworthii</i> Bocquet	<i>Silene edgeworthii</i> Bocquet	Caryophyllaceae	Herb	Nepal	Dandruff	Root ^[76]
526	* <i>Silene gonosperma</i> (Rupr.) Bocquet	<i>Silene gonosperma</i> (Rohrb.) Bocquet	Caryophyllaceae	Herb	Pakistan	Skin problems	Whole plant (Juice) ^[63]
527	* <i>Silene moorcroftiana</i> Benth.	<i>Silene morcroftiana</i> Wall	Caryophyllaceae	Herb	Pakistan	Skin problems	Whole plant (Extract) ^[63]
528	<i>Silene vulgaris</i> (Moench) Garcke	<i>Silene vulgaris</i> (Moench) Garcke	Caryophyllaceae	Herb	Pakistan	Eczema Skin problem	Flower ^[67] Leaf (Juice) ^[63]
529	* <i>Sinopodophyllum hexandrum</i> (Royle) T.S.Ying	<i>Sinopodophyllum hexandrum</i> (Royle) T.S.Ying	Berberidaceae	Herb	India Nepal	Skin diseases Skin diseases	Root ^[61] Ripe fruit ^[61]
530	<i>Smilax aspera</i> L.	<i>Smilax aspera</i> L.	Smilacaceae	Climber	India	Snake bites Scorpion stings Skin diseases	Fruit (Paste with Ghee/e) ^[32] , whole plant (Paste/e) ^[59] Fruit (Paste with Ghee/e) ^[32] Root ^[75]
531	<i>Solanum erianthum</i> D. Don	<i>Solanum erianthum</i> D. Don	Solanaceae	Shrub	India	Skin diseases, wounds and burns	Root, leaf ^[102]
532	^ <i>Solanum incanum</i> L.	<i>Solanum incanum</i> L.	Solanaceae	Shrub	India	Leucoderma	Root (Pounded/e) ^[35]
533	# <i>Solanum melongena</i> L.	<i>Solanum melongena</i> L.	Solanaceae	Shrub	India	Leprosy, cuts and wounds Hard boils	Leaf (Paste/e) ^[12] Fruit (Roasted/e) ^[12]
534	^ <i>Solanum nigrum</i> L.	<i>Solanum nigrum</i> L.	Solanaceae	Herb	India	Blisters Cuts and wounds, boils Pimples and acne Leucoderma Skin diseases	Fruit (Poultice) ^[11] Leaf (Juice/e) ^[32] Leaf (Paste/e) ^[64] Root, leaf and fruit ^[61] Leaf or fruit ^[75]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Pakistan	Pimples, corrosive ulcer, suppurating Syphilitic ulcer, pustules, ringworms, wounds healing, eczema and leukoderma Leprosy	Fruit (Juice or crushed/e) ^[20] Fruit ^[67]
535	[#] <i>Solanum tuberosum</i> L.	<i>Solanum tuberosum</i> L.	Solanaceae	Herb	India	Cuts and wounds	Tuber (Paste/e) ^[12]
536	<i>Solanum surattense</i> Burm. f.	<i>Solanum surattense</i> Burm. f.	Solanaceae	Herb	India	Skin diseases	Whole plant (Decoction/o) ^[12]
537	<i>Solanum virginianum</i> L.	<i>Solanum virginianum</i> L.	Solanaceae	Herb	Pakistan	Skin problem	Fruit (Decoction mixed in water/e) ^[36]
						Swelling	Fruit and Leaf (Extract/e) ^[36]
538	<i>Solidago decurrens</i> Lour.	<i>Solidago decurrens</i> Lour.	Asteraceae	Herb	China	Eczema and skin ulcer Sores and boils	Whole plant (Decoction) ^[129] Dry whole plant ^[57]
539	[^] <i>Sonchus arvensis</i> L.	<i>Sonchus arvensis</i> L.	Asteraceae	Herb	Pakistan	Wounds	Whole plant (Paste/e) ^[89]
540	[^] <i>Sonchus asper</i> (L.) Hill	<i>Sonchus asper</i> (L.) Hill	Asteraceae	Herb	Pakistan	Skin problems Wound healing	Flower, leaf (Powder) ^[36] Shoot ^[103]
541	<i>Sonchus wightianus</i> DC.	<i>Sonchus wightianus</i> DC.	Asteraceae	Herb	India	Abscesses and boils	Leaf (Paste/e) ^[64]
542	<i>Sophora mollis</i> (Royle) Baker	<i>Sophora mollis</i> (Royle) Baker	Fabaceae	Shrub	Pakistan	Eczema	Leaf and seed ^[92]
543	<i>Spermadictyon suaveolens</i> Roxb.	<i>Spermadictyon suaveolens</i> Roxb.	Rubiaceae	Shrub	India	Wounds	Leaf ^[75]
544	[#] <i>Spinacia oleracea</i> L.	<i>Spinacia oleracea</i> L.	Amaranthaceae	Herb	India	Erysipelas, eczema	Leaf and seed ^[33]
545	[*] <i>Spiraea bella</i> Sims	<i>Spiraea bella</i> Sims	Rosaceae	Shrub	India	Sores and wounds	Seed (Paste/e) ^[102]
546	<i>Spirodela polyrrhiza</i> (L.) Schleid.	<i>Spirodela polyrrhiza</i> (L.) Schleid.	Araceae	Herb	China	Urticaria	Dry whole plant (Decoction/e) ^[57]
547	<i>Sporobolus diandrus</i> (Retz.) P.Beauv.	<i>Sporobolus diandrus</i> (Retz.) P.Beauv.	Poaceae	Herb	Pakistan	Swelling	Aerial part ^[67]
548	[*] <i>Stauntonia latifolia</i> (Wall.) R.Br. ex Wall.	<i>Stauntonia latifolia</i> Wall.	Lardizabalaceae	Climber	India	Burns	Leaf (Crushed/e) ^[87]
549	<i>Stellaria media</i> (L.) Vill.	<i>Stellaria media</i> (L.) Vill.	Caryophyllaceae	Herb	Pakistan	Skin irritations and itching	Whole plant (Poultices, decoction) ^[63]

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550	* <i>Stellaria monosperma</i> Buch.-Ham. ex D. Don	<i>Stellaria monosperma</i> Buch.-Ham. ex D. Don	Caryophyllaceae	Herb	Pakistan	Swelling	Leaf ^[67]
551	* <i>Stellera chamaejasme</i> L.	<i>Stellera chamaejasme</i> L.	Thymelaeaceae	Herb	Nepal	Cuts and wounds	Fresh or dry root ('Paste/e) ^[76]
552	<i>Stephania glabra</i> (Roxb.) Miers	<i>Stephania glabra</i> (Roxb.) Miers	Menispermaceae	Climber	India	Leucoderma, leprosy and other skin complaints	Tuber (Oil/e) ^[61]
553	<i>Streblus asper</i> Lour.	<i>Streblus asper</i> Lour.	Moraceae	Tree	India	Skin itching and scabies	Leaf (Decoction/e) ^[12]
554	* <i>Swertia chirayita</i> (Roxb.) H.Karst.	<i>Swertia chirayita</i> (Roxb. ex Flem.) Karsten ^[60] <i>Swertia chirayita</i> (Roxb. ex Fleming) Karsten ^[61,77] <i>Swertia chirayita</i> (Roxb. ex Flem.) Karst. ^[66]	Gentianaceae	Herb	India Nepal	Itch Skin diseases Leucoderma	Whole plant ^[60] Whole plant ^[61,66,77] Whole plant ^[61]
555	* <i>Swertia multicaulis</i> D.Don	<i>Swertia multicaulis</i> D.Don	Gentianaceae	Herb	Nepal	Burns, wounds and cuts	Root (Paste/e) ^[61,100]
556	* <i>Symplocos pyrifolia</i> Wall. ex G. Don	<i>Symplocos pyrifolia</i> Wall. ex G. Don	Symplocaceae	Tree	Nepal	Burns	Seed (Oil/e) ^[94]
557	# <i>Tagetes erecta</i> L.	<i>Tagetes erecta</i> L.	Asteraceae	Herb	India	Boils, pimples and ulcers	Flower (Powder) ^[109]
558	# <i>Tagetes minuta</i> L.	<i>Tagetes minuta</i> L.	Asteraceae	Herb	Pakistan	Wound healing	Leaf (Paste/e) ^[37]
559	<i>Taxus wallichiana</i> var. <i>mairei</i> (Lemée & H.Lév.) L.K.Fu & Nan Li.	<i>Taxus mairei</i> (Lemée & Le' v.) S.Y. HuexT.S.Liu	Taxaceae	Tree	India	Septic wounds	Stem ^[130]
560	<i>Taxus wallichiana</i> Zucc.	<i>Taxus wallichiana</i> Zucc.	Taxaceae	Tree	India Pakistan	Boils, cuts and wounds Skin problems	Leaf (Extract or juice/e) ^[32] Fruit (Extract) ^[36]
561	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Combretaceae	Tree	India Nepal	Leucoderma Cut, wounds, and skin diseases	Bark ^[61] Bark (Juice/e) ^[83]

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562	<i>Terminalia chebula</i> Retz.	<i>Terminalia chebula</i> Retz.	Combretaceae	Tree	India	Eczema Septic wounds Skin diseases	Bark (Paste/e) [62] Fruit (Poultice) [11] Fruit peel (Rubbed/e) [32]
					Nepal	Chronic ulcers and wounds	Fruit (e) [66]
563	<i>Teucrium stocksianum</i> Boiss.	<i>Teucrium stocksianum</i> Boiss.	Lamiaceae	Herb	Pakistan	Wound healing	Leaf (Decoction) [36]
564	* <i>Thalictrum foliolosum</i> DC.	<i>Thalictrum foliolosum</i> DC.	Ranunculaceae	Herb	India	Burns, boils, skin diseases, cuts and wounds Snake bites Leucoderma	Leaf and root (Paste, extract or fresh juice/e) [32] Root (Paste mixed with cow urine/e) [59] Root [75]
565	* <i>Thalictrum reniforme</i> Wall.	<i>Thalictrum reniforme</i> Wall.	Ranunculaceae	Herb	India	Cheek boils	Root (Paste/e) [61]
566	<i>Thysanolaena latifolia</i> (Roxb. ex Hornem.) Honda	<i>Thysanolaena maxima</i> (Roxb.) Kuntze	Poaceae	Herb	India, Nepal	Boils	Root (Extract or paste/e) [61]
567	^ <i>Torilis japonica</i> (Houtt.) DC.	<i>Torilis japonica</i> (Houtt.) DC.	Apiaceae	Herb	Pakistan	Antifungal	Seed [67]
568	# <i>Trachyspermum ammi</i> (L.) Sprague	<i>Trachyspermum ammi</i> (L.) Sprague ex Turrill.	Apiaceae	Herb	India	Boils and pimples	Seed (Oil) [109]
569	# <i>Trema orientalis</i> (L.) Blume	<i>Trema orientalis</i> (L.) Blume	Cannabaceae	Tree	India	Skin diseases, wounds and boils	Bark (Infusion) [95]
570	^ <i>Tribulus terrestris</i> L.	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Herb	India	Snake bites	Fruit (Poultice) [11]
571	<i>Tricholepis stewartei</i> C.B.Clarke ex Hook.f.	<i>Tricholepis stewartei</i> C.B.Clarke ex Hook.f.	Asteraceae	Herb	Pakistan	Skin disease	Whole plant (Decoction, extract) [63]
572	^ <i>Tridax procumbens</i> L.	<i>Tridax procumbens</i> (L.) L. [35] <i>Tridax procumbens</i> L. [11,12,60]	Asteraceae	Herb	India	Cuts and wounds Boils	Leaf (Paste/e, Juice) [11,12,35], whole plant [60] Leaf (Juice/e) [35]
573	# <i>Trifolium repens</i> L.	<i>Trifolium repens</i> L.	Fabaceae	Herb	Nepal	Cuts and wounds	Plant (Paste/e) [76]

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574	<i>#Trigonella foenum-graecum</i> L.	<i>Trigonella foenum-graecum</i> L.	Fabaceae	Herb	Pakistan	Wound healing	Leaf (Decoction, paste/o), flower (Decoction, paste/o), seed (Paste/o) [36,90]
575	<i>#Triticum aestivum</i> L.	<i>Triticum aestivum</i> L.	Poaceae	Herb	India	Eczema	Seed (Extract/e) [12]
576	<i>^Triumfetta rhomboidea</i> Jacq.	<i>Triumfetta rhomboidea</i> Lindl.	Malvaceae	Shrub	India	Carbuncle	Root (Paste/e) [93]
577	<i>Tussilago farfara</i> L.	<i>Tussilago farfara</i> L.	Asteraceae	Herb	Pakistan	Skin problem Eczema, ulcers, sores and bites	Flower (Poultice) [36] Flower (Paste/e) [98]
578	<i>Typha angustifolia</i> L.	<i>Typha angustifolia</i> L.	Typhaceae	Herb	India	Scabies	Inflorescence (Poultice) [11]
579	<i>^Typha domingensis</i> Pers.	<i>Typha domingensis</i> Pers.	Typhaceae	Shrub	India	Wounds	Fruit (Paste/e) [35]
580	<i>^Urtica dioica</i> L.	<i>Urtica dioica</i> L.	Urticaceae	Herb	India Nepal Pakistan	Dog and snake bites Cuts and wounds Dog bite wounds Wound healing	Leaf (Paste/e) [87] Leaf (Juice) [76] Leaf (Paste/e) [58] Leaf, seed (Paste mixed with oil) [36]
581	<i>*Valeriana jatamansi</i> Jones ex Roxb.	<i>Valeriana wallichii</i> DC. [71] <i>Valeriana jatamansi</i> Jones [32] <i>Valeriana jatamansii</i> Jones [61] <i>Valeriana jatamansi</i> Jones ex Roxb. [36]	Caprifoliaceae	Herb	Bhutan India Nepal Pakistan	Pus or abscesses Cuts and wounds, boils, skin diseases Wounds Pimples	Whole plant [71] Rhizome (Paste/e) [32] Rhizome [61] Root (Juice) [36]
582	<i>*Vanda cristata</i> Wall. ex Lindl.	<i>Vanda cristata</i> Wall. ex Lindl.	Orchidaceae	Herb	Nepal	Boils Cuts and wounds	Root (Paste/e) [106] Leaf (Paste/e) [106]
583	<i>*Veratrilla baillonii</i> Franch.	<i>Veratrilla baillonii</i> Franch.	Gentianaceae	Herb	Bhutan	Wounds	Root [71]
584	<i>^Verbascum thapsus</i> L.	<i>Verbascum thapsus</i> L.	Scrophulariaceae	Herb	India	Boils Leucoderma Abscesses	Leaf (Paste/e) [35] Seed (Paste/e) [35] Leaf (Soaked in hot mustard oil/e) [64]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Nepal	Cuts and wounds	Fresh or dry root (Powder/e) [76]
					Pakistan	Pimples	Aerial part (Infusion/o) [36]
						Burn	Floral part (Decoction/e) [84]
						Wound healing	Leaf (Powder/e) [37]
						Skin problems	Leaf (Paste), aerial part (Infusion/o) [36,110]
585	<i>Verbena officinalis</i> L.	<i>Verbena officinalis</i> [99,118] <i>Verbena officinalis</i> L. [57,91]	Verbenaceae	Herb	China	Wounds, dermatological infections and dermatitis	Whole plant [99,118]
						Eczema and dermatitis	Whole plant (Bath/e) [91]
						Carbuncle	Dry aerial part [57]
586	* <i>Veronica ciliata</i> subsp. <i>cephaloides</i> (Pennell) D.Y.Hong	<i>Veronica cephaloides</i> Pennell	Plantaginaceae	Herb	Bhutan	Wounds	Whole plant [71]
587	<i>Viburnum cylindricum</i> Buch.-Ham. ex D. Don	<i>Viburnum cylindricum</i> Buch.-Ham. ex D. Don	Viburnaceae	Shrub	China, Nepal	Wounds and burns	Seed (Oil/e) [31,61]
588	[#] <i>Vigna angularis</i> (Willd.) Ohwi & H. Ohashi	<i>Vigna angularis</i> Ohwi et Ohashi	Fabaceae	Herb	China	Carbuncle and sores	Dry ripe seed Powder/e [57]
589	[#] <i>Vigna umbellata</i> (Thunb.) Ohwi & H. Ohashi	<i>Vigna umbellata</i> Ohwi et Ohashi	Fabaceae	Herb	China	Carbuncle and sores	Dry ripe seed (Powder/e) [57]
590	[^] [#] <i>Viola biflora</i> L.	<i>Viola biflora</i> L.	Violaceae	Herb	Pakistan	Wounds	Whole plant, flower (Paste, crude) [63]
591	<i>Viola canescens</i> Wall.	<i>Viola canescens</i> Wall.	Violaceae	Herb	India	Cuts and wounds	Root (Powder mixed with raw cow milk/e) [59]
592	<i>Viscum album</i> L.	<i>Viscum album</i> L.	Santalaceae	Shrub	Nepal	Cuts and wounds	Whole plant (Paste/e) [58]
593	<i>Viscum articulatum</i> Burm. f.	<i>Viscum articulatum</i> Burm. f.	Santalaceae	Shrub	India	Cuts and wounds	Leaf (Paste/e) [102]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
594	[#] <i>Vitex negundo</i> L.	<i>Vitex negundo</i> L.	Lamiaceae	Shrub	India	Wounds and boils; Eczema Leprosy Abscesses Cuts, wounds, blisters, itching, sores, scabies, swelling and boils	Leaf (Paste/e) ^[35] Flower (Paste/e) ^[35] Leaf (Juice) ^[11] Leaf (Paste/e) ^[64] Stem, leaf, flower ^[82]
					Nepal	Boils	Bark (Paste/e) ^[83]
					Pakistan	Skin infection Skin diseases	Leaf (Crushed/e) ^[37] Flower (Powder) ^[86]
595	<i>Woodfordia fruticosa</i> (L.) Kurz	<i>Woodfordia fruticosa</i> Kurz. ^[62] <i>Woodfordia fruticosa</i> (L.) Kurz ^[61,66,82] <i>Woodfordia fruticosa</i> (L.) S.Kurz ^[37,86] <i>Woodfordia fruticose</i> L.Kurz ^[11]	Lythraceae	Shrub	India	Boil Cuts, wounds, skin disease, smallpox, carbuncle and burns	Flower, fruit or bud (Decction/i) ^[62] Flower ^[82]
					Nepal	Leprosy, skin diseases and burns	Bark and flower ^[61,66]
					Pakistan	Skin diseases Wounds	Leaf (Paste) ^[86] Flower (Powder/e, infusion) ^[11,37]
596	[*] <i>Wulfeniopsis amherstiana</i> (Benth.) D.Y. Hong	<i>Wulfeniopsis amherstiana</i> (Benth.) D.Y. Hong	Plantaginaceae	Herb	Pakistan	Antifungal	Leaf ^[67]
597	[^] <i>Xanthium strumarium</i> L.	<i>Xanthium strumarium</i> L.	Asteraceae	Shrub	India	Eczema Itch	Leaf (Juice/e) ^[12,60] Seed ^[60]
598	<i>Zanthoxylum armatum</i> DC.	<i>Zanthoxylum alatum</i> Roxb. ^[78] <i>Zanthoxylum armatum</i> DC. ^[36,66,69,84,108,109]	Rutaceae	Shrub	Bhutan India Nepal	Itching and dermatological diseases Skin diseases Skin diseases	Fruit ^[78,108] Bark, seed (Paste, powder) ^[109] Bark ^[69] , berry ^[66]

No.	Accepted name	Names used in articles reviewed	Family	Life form	Study area	Uses	Part used (Preparation/mode of administration) ^a
					Pakistan	Skin burns	Leaf (Paste) ^[36]
						Skin infections	Bark, fruit (Decoction/o) ^[84]
599	<i>Zanthoxylum bungeanum</i> Maxim.	<i>Zanthoxylum bungeanum</i> Maxim.	Rutaceae	Shrub	China	Eczema	Dry peel of ripe fruit (Decoction/e) ^[57]
600	<i>Zanthoxylum nitidum</i> (Roxb.) DC.	<i>Zanthoxylum nitidum</i> (Roxb.) DC.	Rutaceae	Shrub	China	Snake bites and burns	Dry root (Decoction or powder/e) ^[57]
601	* <i>Zanthoxylum oxyphyllum</i> Edgew.	<i>Zanthoxylum oxyphyllum</i> Edgew.	Rutaceae	Shrub	Nepal	Snake bites	Flowers and fruit (Extract) ^[61]
602	# <i>Zea mays</i> L.	<i>Zea mays</i> L.	Poaceae	Herb	India	Pimples	Seed (Poultice) ^[11]
603	# <i>Ziziphus jujuba</i> Mill.	<i>Ziziphus jujuba</i> Mill.	Rhamnaceae	Tree	Pakistan	Skin infections	Leaf, fruit ^[84]
604	^ <i>Ziziphus mauritiana</i> Lam.	<i>Ziziphus mauritiana</i> Lam.	Rhamnaceae	Tree	India	Boils	Bark ^[96]
						Wounds	Fruit ^[96]
					Nepal	Septic wounds	Bark (Extract) ^[61]
605	<i>Ziziphus nummularia</i> (Burm.f.) Wight & Arn.	<i>Ziziphus nummularia</i> (Burm.f.) Wight & Arn. ^[35,37]	Rhamnaceae	Shrub	India	Eczema	Bark (Paste/e) ^[35]
		<i>Ziziphus nummularia</i> Burm. f. Wt. ^[11]				Itching	Root (Poultice) ^[11]
					Pakistan	Boils and pimples	Leaf (Juice/o) ^[37]
						Dandruff	Leaf (Paste/e) ^[37]
606	<i>Ziziphus oxyphylla</i> Edgew.	<i>Ziziphus oxyphylla</i> Edgew.	Rhamnaceae	Shrub	Pakistan	Pimples	Root (Decoction/o) ^[37]

^a-e: Used externally; i: Consumed internally (unspecified); o: oral administration.

*- Species generally restricted to montane regions (> 1000 m asl); #- widely cultivated species (food, ornamental and other); ^- widely distributed weedy species.

Cultivated : 139
> 1000 m 150
Weedy - 99

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