

## Harnessing traditional knowledge: antiviral medicinal flora of the lower Brahmaputra Valley

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### Supplementary Data

All plant families, along with their respective plant species, UV Index and traditional uses by the Ethnic communities of different regions of LBVZ, Assam is given as Supplementary File (Supplementary Table S1)

Supplementary Table S1 — Use report of plant species used against various viral diseases in the LBVZ of Assam

Family	Botanical name	Local name	Parts used	Mode of preparation and administration	Effective against	UV
Acanthaceae	<i>Andrographis paniculata</i> (Burm. fil.) Nees	Sorai-gukha	Wp, R	1. Juice is consumed 2. Root paste of <i>A. paniculata</i> and <i>M. alba</i> is applied onto forehead like 'bindi'	1. Dengue 2. Hepatitis	0.02
	<i>Justicia adhatoda</i> L.	Barsikhe	L	1. Juice is consumed with honey 2. Water boiled with leaves is used for bathing	1. Common cold, flu, and pneumonia 2. Measles	0.11
	<i>Pachystachys lutea</i> Nees	Hunboronia	R	Decoction is consumed	Flu	0.02
	<i>Rungia pectinata</i> Nees		Wp	Juice extracted from whole plant is consumed	Jaundice	0.02
Acoraceae	<i>Acorus calamus</i> L.	Bos laifang	R	1. Powdered root is mixed with a spoon of honey and consumed 2. A few drops of juice obtained from the roots is consumed by mixing with water	1. Flu 2. Dengue	0.04
Amaranthaceae	<i>Alternanthera brasiliana</i> (L.) Kuntze	Bishalyakarani	L	1. Juice is consumed 2. Paste is wrapped around the injured part with a cloth	1. Sore throat 2. Dog bite	0.04
	<i>Chenopodium album</i> L.	Butua	L	Juice of tender leaves is consumed twice daily	Warts	0.02
Amaryllidaceae	<i>Allium sativum</i> L.	Sambram gupur	Bu	1. Bulb decoction is consumed 2. The paste is applied locally	1. Chicken pox and measles 2. Genital warts	0.02
Anacardiaceae	<i>Mangifera indica</i> L.	Aam	B	Paste is mixed with lime and consumed	Jaundice	0.02
Apiaceae	<i>Centella asiatica</i> (L.) Urb.	Manimunigeder	L, Wp	Juice is consumed directly. It may also be combined with leaf juice of <i>O. tenuiflorum</i> and <i>P. nigrum</i> and consumed	Pneumonia	0.09

(Contd.)

Supplementary Table S1 — Use report of plant species used against various viral diseases in the LBVZ of Assam (Contd.)

Family	Botanical name	Local name	Parts used	Mode of preparation and administration	Effective against	UV
Apocynaceae	<i>Calotropis gigantea</i> (L.) Dryand.	Gogondu	B	Powder made from dried bark is consumed with hot water	Flu	0.02
	<i>Catharanthus roseus</i> (L.) G.Don	Nayantara	F	The flower juice is heated which is applied locally	Conjunctivitis	0.04
	<i>Tabernaemontana divaricata</i> L.	Pul daodwi	F	Juice of warmed flower is applied in the locally	Conjunctivitis, chicken pox	0.09
Araceae	<i>Alocasia macrorrhizos</i> (L.) G.Don	Mana-thaso	P	Petiole is burned and made into powder which is then consumed	Cough	0.02
	<i>Colocasia esculenta</i> (L.) Schott	Thaso-bisong	C	The corm is consumed after cooking	Tonsillitis, mumps	0.04
Araliaceae	<i>Hydrocotyle sibthorpioides</i> Lam.	Manimunipisa	L, Wp	Juice mixed with a cup of hot water is consumed	Common cold	0.04
Areaceae	<i>Cocos nucifera</i> L.	Narikol	Fr	Oil obtained from the fruit is mixed with paste made from leaves of <i>L. aspera</i> and <i>C. fruticosa</i> and massaged locally	Measles	0.02
Asparagaceae	<i>Asparagus racemosus</i> Willd.	Sotomul	Rh	Equal amount of rhizome powder is mixed with powder of <i>Smilax china</i> rhizome, <i>Glycyrrhiza glabra</i> stem, and <i>Myristica fragrans</i> seed which is added to 1 L boiling water to be consumed twice daily	Bronchitis, pharyngitis, Dry cough	0.06
	<i>Cordyline fruticosa</i> (L.) A.Chev.	Agnifool	L	Juice is applied locally	Chicken pox	0.02
Asphodelaceae	<i>Aloe vera</i> (L.) Burm.f.	Salkuori	L	The transparent leaf jelly is applied onto the affected parts	Cold sores	0.02
Asteraceae	<i>Acmella ciliata</i> (Kunth) Cass.	Usumwi	L, F	Leaf paste is consumed along with honey or applied topically on the affected parts	Tonsillitis, flu, bronchitis, cold sores	0.11
	<i>Ageratum conyzoides</i> L.	Larser	L, F	1. Leaf paste is applied locally 2. Flower juice is consumed	1. Measles 2. Common cold, fever	0.04
	<i>Blumealanceolaria</i> Druce	Jwглаori	L	Paste is applied topically and washed away with warm water	Chicken pox, measles	0.02
	<i>Chromolaena odorata</i> (L.) R.M.King & H.Rob.	Germin	L	Paste is consumed in combination with other plants	Jaundice	0.02
	<i>Eclipta prostrata</i> Lour.	Dabse jula	Wp	Whole plant juice along with juice from <i>B. diffusa</i> is consumed	Jaundice	0.02
	<i>Mikania cordata</i> (Burm.f.) B.L.Rob.	Japonilota	L	Juice is consumed twice daily	Viral fever	0.02
	<i>Tagetes erecta</i> L.	Gendhamalati	L	Paste is consumed in combination with other plants	Jaundice	0.02
Bignoniaceae	<i>Oroxylum indicum</i> (L.) Benth. ex Kurz	Dingdinga	L	Powder is consumed in combination with other plants	Viral fever	0.02
Brassicaceae	<i>Brassica nigra</i> W.D.J.Koch	Sorihoh	S	<i>A. sativum</i> bulb is mixed with salt and heated in <i>B. nigra</i> oil which is applied all over the body; a little amount is consumed	Viral fever, pneumonia	0.04
Boraginaceae	<i>Heliotropium indicum</i> L.	Hathihura	L	Juice is applied dropwise into the affected parts	Conjunctivitis	0.02

(Contd.)

Supplementary Table S1 — Use report of plant species used against various viral diseases in the LBVZ of Assam (Contd.)

Family	Botanical name	Local name	Parts used	Mode of preparation and administration	Effective against	UV
Caryophyllaceae	<i>Drymaria cordata</i> Willd. ex Schult.	Jabsri	L	Paste is applied on back side of the neck	Common cold	0.06
Combretaceae	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	Arjun	B	Bark decoction is consumed	Jaundice	0.02
	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Bhomora	Fr	Decoction of the fruits is consumed	Jaundice, flu	0.02
	<i>Terminalia chebula</i> Retz.	Hilikha	Fr	Raw fruit paste is applied topically	Chicken pox	0.02
Commelinaceae	<i>Commelina benghalensis</i> L.	Konahimol	Wp	Juice is consumed	Chicken pox and jaundice	0.04
Convolvulaceae	<i>Cuscuta reflexa</i> Roxb.	Akashi lota	Wp	Paste is consumed	Jaundice	0.02
Cucurbitaceae	<i>Coccinia grandis</i> (L.) Voigt	Khangkhla	L	Paste made from leaves is applied on to the affected parts	Chicken pox	0.02
Euphorbiaceae	<i>Euphorbia hirta</i> L.	Nasraikoro	Wp	Juice mixed with warm water is consumed	Gastroenteritis	0.02
	<i>Euphorbia neriifolia</i> L.	Sijou	L	Juice is consumed with honey	Common cold, cough	0.02
	<i>Euphorbia tithymaloides</i> L.	Ranghita	L	Decoction is consumed by adding salt/sugar to it	Common cold, laryngitis	0.02
	<i>Ricinus communis</i> L.	Indibiphang	S, L	1. Oil obtained from the seeds is applied onto the affected areas 2. Tender leaf paste applied onto the forehead	1. Genital warts 2. Viral fever	0.04
Fabaceae	<i>Cajanus cajan</i> (L.) Mill sp.	Rahar	L	Leaf juice is consumed	Jaundice	0.02
	<i>Cassia fistula</i> L.	Sonaru	L	Paste is consumed in combination with other plants	Jaundice	0.02
	<i>Clitoria ternatea</i> L.	Aparajita	L, F	Juice extracted from leaves/flowers is poured onto eyes dropwise	Conjunctivitis	0.02
	<i>Glycyrrhiza glabra</i> L.	Jasthimadhu	R	Powder is consumed in combination with other plants	Viral fever, jaundice	0.02
	<i>Mimosa pudica</i> L.	Lajuki lota	L, R	1. Juice taken directly twice daily 2. Water boiled with roots is used for bath	1. Common cold 2. Chicken pox	0.04
	<i>Lablab purpureus</i> (L.) Sweet	Urohi	L	Leaf paste of <i>L. purpureus</i> and <i>O. sativa</i> is heated and applied onto the affected area	Mumps	0.02
	<i>Senna alata</i> (L.) Roxb.	Khorpat	L	Juice of tender leaves is consumed	Hepatitis	0.02
	<i>Tamarindus indica</i> L.	Tetelitenga	L	Concoction of <i>T. indica</i> and <i>A. marmelos</i> leaves is consumed	Pneumonia	0.02
Hypericaceae	<i>Hypericum japonicum</i> Thunb.	Sonaphuli	Wp	Whole plant is boiled in water and then consumed	Viral fever, pneumonia	0.02
Lamiaceae	<i>Achyranthes aspera</i> L.	Ubhotasaak	L	Paste is consumed in combination with other plants	Jaundice	0.02
	<i>Leucas aspera</i> Link	Kansingsa	L, F	1. Juice of tender leaves and shoots is consumed 2. Juice from 15-20 flowers is consumed with a spoon of honey	1. Common cold 2. Pneumonia in infants	0.06
	<i>Ocimum gratissimum</i> L.	Ram tulokhi	L	1. Juice is applied on eyes twice daily 2. Juice is consumed directly, or consumed after mixing with <i>C. asiatica</i> leaf juice	1. Conjunctivitis 2. Common cold, pneumonia	0.09

(Contd.)

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Family	Botanical name	Local name	Parts used	Mode of preparation and administration	Effective against	UV
	<i>Ocimum tenuiflorum</i> L.	Tulokhi	L	Decoction is consumed directly Juice is consumed with honey	Common cold, tonsillitis and sore throat	0.11
Lauraceae	<i>Vitex negundo</i> L.	Nishinda	L	Juice or paste is consumed	Dengue fever	0.02
	<i>Cinnamomum tamala</i> (Buch.-Ham.) T.Nees & C.H.Eberm.	Tejpaat	L	Decoction is consumed	Flu, cough, sore throat	0.06
Lythraceae	<i>Punica granatum</i> L.	Dalim	L	Juice of leaves of <i>P. granatum</i> , <i>L. aspera</i> , <i>P. guajava</i> and <i>C. roseus</i> is consumed with honey	Pneumonia, common cold, viral fever	0.06
Malvaceae	<i>Abutilon indicum</i> (L.) Sweet	Jopabondha	L, R	Decoction is consumed	Jaundice and bronchitis	0.09
	<i>Corchorus olitorius</i> L.	Morapat	L	Leaf juice is mixed with juice extracted from <i>C. asiatica</i> and <i>T. cordifolia</i> which is then consumed	Jaundice, pneumonia	0.02
	<i>Sida cordifolia</i> L.	Haruboriyal	L, R	1. Root juice is consumed with goat milk 2. Juice of tender shoot is consumed	1. Jaundice 2. Common cold	0.04
	<i>Sida acuta</i> Burm.f.	Boriala	L, R	Paste is consumed	Jaundice	0.02
	<i>Urena lobata</i> L.	Bon agara	L	Concoction made from leaves of <i>U. lobata</i> , roots of <i>S. cordifolia</i> and <i>S. torvum</i> is consumed	Hepatitis	0.02
Meliaceae	<i>Azadirachta indica</i> A. Juss.	Neem	L, B	The juice from leaves or bark is mixed with bathing water; Two spoons of leaf juice are consumed	Chicken pox and measles	0.13
Menispermaceae	<i>Tinospora cordifolia</i> (Willd.) Miers ex Hook.f. & Thomson	Aamoilota	L, St	Decoction is consumed	Dengue	0.04
Molluginaceae	<i>Glinus oppositifolius</i> (L.) Aug.DC.	Gima shak	Wp	Juice is consumed	Jaundice	0.02
Moraceae	<i>Morus alba</i> L.	Meskuri	R	Juice is consumed	Hepatitis	0.09
Musaceae	<i>Musa acuminata</i> Colla	KachKol	L	The roots are first decayed and then made into paste which is consumed	Pneumonia, jaundice	0.06
	<i>Musa balbisiana</i> Colla	Tailir	S, L	1. The seeds are made into paste and consumed with curd 2. The affected person is allowed to sleep on the leaves	1. Chicken pox 2. Measles	0.06
Myrtaceae	<i>Psidium guajava</i> L.	Madhuriam	L	Decoction of tender leaves and <i>Z. officinale</i> rhizome is mixed with salt which is then used to gargle twice daily	Tonsillitis	0.02
	<i>Syzygium aromaticum</i> (L.) Merr. & L.M. Perry	Laung	F	The decoction made from flower buds is consumed	Common cold, Viral fever, jaundice	0.06
	<i>Syzygium jambos</i> (L.) Alston	Gulabjam	L	Paste is applied onto the affected parts	Measles	0.02
Myristicaceae	<i>Myristica fragrans</i> Houtt.	Jaifal	S	Powder is consumed in combination with other plants	Viral fever, jaundice	0.06
Nyctaginaceae	<i>Boerhavia diffusa</i> L.	Punarnava	Wp	Juice obtained from whole plant is consumed	Flu	0.02

(Contd.)

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Family	Botanical name	Local name	Parts used	Mode of preparation and administration	Effective against	UV
Oleaceae	<i>Nyctanthes arbor-tristis</i> L.	Hewali	L	1. Juice is taken 2. Tender leaf paste is consumed	1. Common cold 2. Jaundice	0.04
Pedaliaceae	<i>Sesamum indicum</i> L.	Til	S	Oil extracted from the seeds is applied on the inflamed area	Chicken pox	0.02
Phyllanthaceae	<i>Phyllanthus emblica</i> L.	Amlai	L, Fr	1. Fruits along with <i>T. chebula</i> fruit, <i>T. belerica</i> fruit, and <i>T. arjuna</i> bark is made into a concoction and then consumed 2. Leaf juice is consumed	1. Hepatitis 2. Jaundice	0.04
	<i>Phyllanthus fraternus</i> G.L. Webster	Gwthwiamlai	Wp	Powder made from dried plant is consumed with hot water	Jaundice, gastroenteritis	0.04
Piperaceae	<i>Peperomia pellucida</i> (L.) Kunth	Pononoa	Wp	Paste made from whole plant is applied topically	Measles	0.02
	<i>Piper longum</i> L.	Pipol	L, Fr	Warm leaf paste is applied locally. The fruit paste is also mixed with <i>P. nigrum</i> and <i>Z. officinale</i> for topical application	Mumps, tonsillitis	0.04
Plantaginaceae	<i>Piper nigrum</i> L.	Jathwisjaluk	Fr	Decoction is consumed	Common cold	0.09
	<i>Scoparia dulcis</i> L.	Bongpangrake b	L	Concoction made from the leaves of <i>S. dulcis</i> , <i>T. cordifolia</i> and <i>C. asiatica</i> is consumed	Jaundice, pneumonia	0.06
Poaceae	<i>Bambusa tulda</i> Roxb.	Auwa	L	Paste of bamboo leaves + <i>E. neriifolia</i> leaves is consumed with honey	Common cold, cough, pneumonia in adults	0.06
	<i>Chrysopogon zizanioides</i> (L.) Roberty	BirinaGhah	R	Juice is consumed with honey	Viral fever	0.02
	<i>Cynadon dactylon</i> (L.) Pers.	Dubrihagra	Wp	Juice is consumed	Common cold, cough	0.09
	<i>Eleusine indica</i> Gaertn.	Bobosabon	Wp	Juice is consumed	Gastroenteritis	0.02
	<i>Oryza sativa</i> L.	Saul	S	1. Hot cakes (Pitha) made from powdered rice is wrapped around the affected part 2. Leaves of <i>O. tenuiflorum</i> , <i>C. dactylon</i> , <i>T. divaricata</i> and <i>O. sativa</i> seeds along with 2 drops of milk is soaked in water with gold and silver ornaments. This water is then applied topically	1. Mumps 2. Chicken pox	0.06
	<i>Triticum aestivum</i> L.	Gehu	S	Steam from hot chapatis made from wheat flour is taken externally	Tonsillitis	0.02
Rhamnaceae	<i>Ziziphus mauritiana</i> Lam.	Bogori	L	1. Leaf juice is consumed along with honey 2. Aroma of crushed leaves is inhaled	1. Common cold and sore throat 2. Dry cough	0.09
Rubiaceae	<i>Paederia foetida</i> L.	Kephibendwng	L	Leaf juice is consumed with water	Jaundice	0.02
Rutaceae	<i>Aegle marmelos</i> (L.) Corrêa	Bel	L, Fr	Juice extracted from 2-3 leaves is consumed with a spoon of honey. Fruit paste + salt is boiled in water and consumed	Dry cough	0.04
	<i>Citrus limon</i> (L.) Osbeck	Kaji nemu	Fr	1. 2 spoons of juice + a few drops of goat milk are applied onto the forehead 2. Infected person is allowed to sleep on the leaves mixed with neem leaves	1. Viral fever 2. Measles	0.04

(Contd.)

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Family	Botanical name	Local name	Parts used	Mode of preparation and administration	Effective against	UV
	<i>Zanthoxylum armatum</i> DC.	Jabrang	S	Equal amount of dry seed powder is mixed with powder of <i>S. china</i> rhizome, <i>G. glabra</i> stem, <i>P. nigrum</i> fruit and <i>M. fragrans</i> seed which is added to 1 L boiling water to be consumed twice daily	Viral fever, jaundice	0.04
	<i>Murraya koenigii</i> (L.) Spreng.	Nwrsing	L	Leaf paste is consumed; Paste is also consumed in combination with other plants	Jaundice	0.02
Sapotaceae	<i>Mimusops elengi</i> L.	Bokul	B	250 mL of bark concoction of <i>M. elengi</i> and <i>Z. mauritiana</i> is used for gargling	Sore throat	0.04
Saururaceae	<i>Houttuynia cordata</i> Thunb.	Maisundri	L	1. Juice is consumed directly and applied onto the affected parts 2. Leaves are cooked by wrapping in banana leaves which is then consumed	1. Common cold, cold sores 2. Gastroenteritis	0.08
Selaginellaceae	<i>Selaginella kraussiana</i> (Kunze) A. Braun		Wp	Paste made from whole plant is applied directly on the affected part	Cold sores	0.02
Smilacaceae	<i>Smilax glabra</i> Roxb.	Chobchini	Rh	Powder is consumed in combination with other plants	Viral fever, jaundice	0.06
Solanaceae	<i>Capsicum frutescens</i> L.	Jolokia	Fr	Fruit is mixed with <i>Z. officinale</i> rhizome, <i>A. sativum</i> bulb, <i>P. nigrum</i> seed, Khar* and alum and made into small balls which are consumed	Mumps	0.02
	<i>Solanum americanum</i> Mill.	Horubhekuri, Mwisung	Fr	Ripe fruits are made into paste and applied onto the affected parts	Cold sores	0.02
	<i>Solanum torvum</i> Sw.	Bhekuritita, Khunthai	R	Juice is consumed	Jaundice	0.02
Urticaceae	<i>Pouzolzia zeylanica</i> (L.) Benn.	Khiraimul	L	A few drops of juice poured into the ear	Otitis media	0.04
Verbenaceae	<i>Lippia alba</i> (Mill.) N.E.Br. ex Britton & P. Wilson	Ontaibajab	L	Leave juice is consumed with root juice of <i>C. limon</i>	Jaundice	0.02
	<i>Phyla nodiflora</i> (L.) Greene	Jal pipoli, Bokkon	L	Paste is consumed with jiggery twice daily for 3 days. Must not consume non-veg and sour food during these days	Dog bite	0.02
Zingiberaceae	<i>Amomum subulatum</i> Roxb.	Dangorelaichi	Fr	Powder is consumed in combination with other plants	Viral fever	0.02
	<i>Curcuma amada</i> Salisb.	Bon halodhi	Rh	Juice extracted from 200 gm of rhizome is consumed	Bronchitis, chicken pox, viral fever	0.09
	<i>Curcuma longa</i> L.	Halodhi	Rh	Decoction is consumed orally. Juice of raw rhizome is applied locally	Chicken pox and measles	0.04
	<i>Hellenia speciosa</i> (J.Koenig) Govaerts	Devitokan	R	Decoction is consumed	Jaundice	0.02
	<i>Elettaria cardamomum</i> (L.) Maton	Soru-elachi	Fr	Powder is consumed in combination with other plants	Viral fever	0.02
	<i>Zingiber officinale</i> Roscoe.	Ada	Rh	Decoction is consumed directly or with salt	Common cold, flu	0.13

\*Khar is a juice made from sun-dried skin of the banana. The dried skins are burned into ashes, mixed with water and the fluid filtered out is known as khar.

\*\*Abbreviations used for plant parts: Leaves (L), Bark (B), flowers (F), Fruits (Fr), roots (R), rhizome (Rh), seeds (S), whole plant (Wp), Bulb (Bu), petiole (P), Corm (C), stem (St)