

Plants

By Cynthia Chen, DO

ALLERGIC CONTACT DERMATITIS

Common Name	Formal Name	Inciting Agents
Garlic	Alliaceae	
Chive	Alliaceae	Diallyl Sulfide, Allylpropyl Disulfide, Allicin
Onions	Alliaceae, <i>Allium cepa</i>	
Peruvian lily	Alstromeria spp	Tuliposide A
Poison ivy	Anacardiaceae, Toxicodendron genus	
Poison oak	Anacardiaceae, Toxicodendron genus	Pentadecacatechol in oleoresin (urushiol)
Poison sumac	Anacardiaceae, Toxicodendron genus	
Japanese lacquer tree	Anacardiaceae, <i>Toxicodendron verniciflua</i>	
Mango	Anacardiaceae, <i>Mangifera indica</i>	Resorcinols
Brazilian pepper tree	Anacardiaceae, <i>Schinus terebinthifolius</i>	
Indian marking tree	Anacardiaceae, <i>Semecarpus anacardium</i>	
Ragweed	Asteraceae (Compositae), Ambrosia spp	Sesquiterpene lactone
Artichokes	Asteraceae (Compositae), <i>Cynara scolymus</i>	
Chrysanthemum	Asteraceae (Compositae), <i>Dendranthema</i> cultivars	
Pyrethrum	Asteraceae (Compositae), <i>Tanacetum cinerariifolium</i>	
Feverfew	Asteraceae (Compositae), <i>Tanacetum parthenium</i>	
Ginkgo tree	Ginkgoaceae	Urushiol cross-reacting chemicals
Tea tree	<i>Melaleuca alternifolia</i>	Terpinolene, ascaridol, alpha-terpinene, 1,2,4-trihydroxy menthane
Longleaf pine	<i>Pinus palustris</i>	Colophony
Primrose	Primulaceae, <i>Primula obconica</i>	Primin
Tulips	Tulipa spp	Tuliposide A, Tuliposide B

CHEMICAL IRRITANT DERMATITIS

Common Name	Formal Name	Inciting Agents
Century plant	<i>Agave Americana</i>	Calcium oxalate, saponins (latex throughout plant)
Garlic	Alliaceae, <i>Allium sativum</i>	Thiocyanates
Daffodil	Amaryllidaceae, Narcissus spp	Calcium oxalate
Cashew tree	Anacardiaceae, <i>Anacardium occidentale</i>	Cashew nut shell (oil of nut shell)
Dumb cane	Araceae, <i>Dieffenbachia picta</i>	Calcium oxalate
Philodendron	Araceae, Philodendron spp	Calcium oxalate
Mustard	Brassicaceae	Thiocyanates
Radish	Brassicaceae	Thiocyanates
Pineapple	Bromeliaceae, <i>Ananas comosus</i>	Bromelain, Calcium oxalate
Crotons	Euphorbiaceae, <i>Codiaeum variegatum</i>	Phorbol ester
Poinsettia	Euphorbiaceae, <i>Euphorbia pulcherrima</i>	Phorbol ester
Manchineel tree	Euphorbiaceae, <i>Hippomane mancinella</i>	Phorbol ester
Hyacinth	Lilaceae, <i>Hyacinthus orientalis</i>	Calcium oxalate
Rhubarb	Polygonaceae, <i>Rheum rhaponticum</i>	Calcium oxalate
Buttercup	Ranunculaceae, Ranunculus spp.	Protoanemonin
Chili pepper	Solanaceae, <i>Capsicum annum</i>	Capsaicin



Cynthia Chen, DO, was chief resident of dermatology at Michigan State University, McLaren Oakland earlier this year, and is currently working in private practice in Newport Beach, CA.

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PHYTOPHOTODERMATITIS		
Common Name	Formal Name	Inciting Agents
Bishop's weed	Apiaceae, <i>Ammi majus</i>	
Cow parsley	Apiaceae, <i>Anthriscus sylvestris</i>	
Celery	Apiaceae, <i>Apium graveolens</i>	Furocoumarins
Fennel	Apiaceae, <i>Foeniculum vulgare</i>	
Tromso palm	Apiaceae, <i>Heracleum laciniatum</i>	
Common hogweed	Apiaceae, <i>Heracleum sphondylium</i>	Psoralens
Parsnip	Apiaceae, <i>Pastinaca sativa</i>	Furocoumarins
Babchi or scurf pea	Fabaceae, <i>Psoralea corylifolia</i>	Psoralens
Fig tree	Moraceae, <i>Ficus carica</i>	Psoralens, 5-MOP
Bergamot orange	Rutaceae, <i>Citrus bergamia</i>	Bergamot oil
Lime	Rutaceae, <i>Citrus latifolia</i>	Furocoumarins
Gas plant or burning bush	Rutaceae, <i>Dictamnus albus</i>	5-MOP, 8-MOP
Rue	Rutaceae, <i>Ruta graveolens</i>	5-MOP, 8-MOP, angelicin

TOXIN MEDIATED CONTACT URTICARIA		
Common Name	Formal Name	Inciting Agents
Stinging nettle	<i>Urtica dioica</i>	
Australian stinging nettles	Dendrocnide spp	
Spurge nettle	Euphorbiaceae	Histamine, serotonin, acetylcholine within sharp hairs
Water leaf family	Hydrophyllaceae	

MECHANICAL IRRITANT DERMATITIS		
Common Name	Formal Name	Inciting Agents
Cactus	Cactaceae, <i>Opuntia</i> spp	Glochid
Prickly pear	<i>Opuntia vulgaris</i>	Glochid

SELECT PLANT-DERIVED MEDICATIONS RELEVANT TO DERMATOLOGY		
Plant name	Medication/Active Ingredient	Dermatology Uses
Chrysanthemum	Permethrin, pyrethrum	Scabies
Corn lily, False hellebore (<i>Veratrum Californicum</i>)	Cyclopamine	Research tool to elucidate Sonic hedgehog pathway
Euphorbia Peplus	Ingenol mebutate	Actinic Keratosis
Fever tree (<i>Cinchona</i> Spp)	Anti-malarials, quinine	Photosensitive d/o
Green tea (<i>Camellia Sinensis</i>)	Sin catechins	Condyloma
Licorice (<i>Glycyrrhiza Inflata</i>)	Flavonoids, chalcones, glycyrrhizin, liquiritin	Melasma, PIH
May apple	Podophyllin	Verruca, condyloma
Periwinkle	Vinblastine, vincristine	Kaposi's sarcoma
Turmeric (<i>Curcuma longa</i>)	Curcumin	Anti-inflammatory
Vouacopoua araroba tree	Anthralin, Goa powder	Psoriasis
Willow bark	Salicylic acid	Keratolytic, anti-inflammatory

References

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2. McFerrer MA. Useful plants of dermatology. VIII. The false hellebore (*Veratrum californicum*). J Am Acad Dermatol. 2006 Apr;54(4):718-20.
3. Schloemer JA, Zirwas MJ, Burkhart CG. Airborne contact dermatitis: common causes in the USA. Int J Dermatol. 2015 Mar;54(3):271-4.

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