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A collaboration between C&EN and  
Andy Brunning, author of the popular  
graphics blog *Compound Interest*

## SUMMER PLANT IRRITANTS

When outdoors this summer, watch out for plants that can cause rashes, blisters, and more! Here, we look at these plants' itchy compounds and the remedies for reactions they cause.

### RASHES

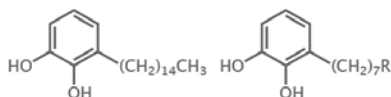


POISON IVY



EUROPEAN IVY

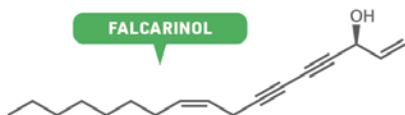
Some plants cause rashes on contact. Poison ivy leaves contain urushiol, an oily mixture of compounds that trigger allergic reactions on the skin. Urushiol is also found in poison oak and mangoes.



POISON IVY URUSHIOL CATECHOLS

Poison ivy grows in North America and in parts of China, but not in Europe. The common ivy species in Europe causes milder allergic reactions due to the presence of falcarinol in the sap.

FALCARINOL



### PHYTOPHOTODERMATITIS

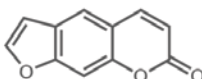


GIANT HOGWEED

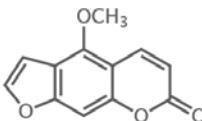


COW PARSNIP

Some plants contain furanocoumarins, which can cause a condition called phytophotodermatitis. When these compounds get on skin and are exposed to ultraviolet light from the sun, they react with the bases in our DNA to cause blisters and skin damage.



PSORALEN

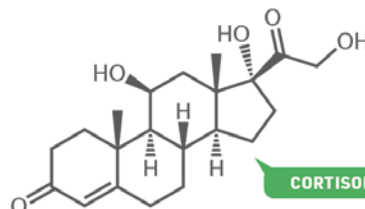


BERGAPTEN

Giant hogweed contains a furanocoumarin called psoralen. Bergapten is found in limes and is thought to be the primary cause for a type of phytophotodermatitis sometimes called margarita burns.

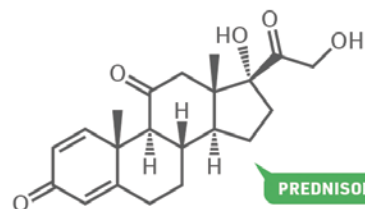
### TREATMENTS

No matter which plant you've bumped into, the best initial action is to wash exposed skin with soap and water to remove plant sap and oils. Don't expose the affected area to sunlight.



CORTISOL

Topical steroids, such as cortisol in hydrocortisone cream, help relieve mild dermatitis caused by these plants. Antihistamine tablets may reduce itching.



PREDNISONE

For more severe reactions, a doctor might prescribe oral steroids such as prednisone to reduce inflammation.