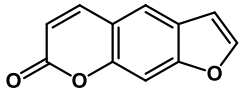
Psoralen

Name of the Phytochemical	**Psoralen**
Chemical Structure	
Botanical Source	Psoralea corylifolia
CAS Number	66-97-7
Functional Activity	• Used as photochemical probe in studies of DNA mutation and repair mechanisms • Shows antiviral, antibacterial, antifungal and insecticidal properties • Used in photochemotherapy for management of vitiligo, psoriasis, and mycosis fungoides • Intercalates with DNA, inhibiting DNA synthesis and cell division.
Key References	**1.** Psoralen-ultraviolet A treatment with Psoralen-ultraviolet B therapy in the treatment of psoriasis. **Pak.J.Med.Sci., 2013, 29, 758-761** **2.** Targeting and processing of site-specific DNA interstrand crosslinks. **Environ.Mol.Mutagen, 2010, 51, 527-539** **3.** Universal strategies for the DNA-encoding of libraries of small molecules using the chemical ligation of oligonucleotide tags. **Artif.DNA PNA XNA, 2014, 5** ***4.*** *Psoralen reverses docetaxel-induced multidrug resistance in A549/D16 human lung cancer cells lines. Phytomedicine, 2014, 21, 970-7* *5. Effects of psoralen on chondrocyte degeneration in lumbar intervertebral disc of rats. Pak J Pharm Sci. 2015, 28, 667-70* ***6.*** *Psoralens potentiate ultraviolet light-induced inhibition of epidermal growth factor binding. Proc Natl Acad Sci U S A. 1986, 83, 8211-5* **7.** Psoralen crosslinking between human immunodeficiency virus type 1 RNA and primer tRNA3(Lys). **J. Mol. Biol., 1995, 247, 25269–25272**

8. Psoralen activates cartilaginous cellular functions of rat chondrocytes in vitro. **Pharm Biol., 2014, 1-6.**
9. Psoralen inhibits bone metastasis of breast cancer in mice. **Fitoterapia. 2013, 91, 205-10**
10. Furanocoumarins: novel topoisomerase I inhibitors from Ruta graveolens L. **Bioorg Med Chem., 2009 , 17, 7052-5**
11. Psoralen-induced DNA interstrand cross-links block transcription and induce p53 in an ataxia-telangiectasia and rad3-related-dependent manner. **Mol Pharmacol. 2009, 75, 599-607**