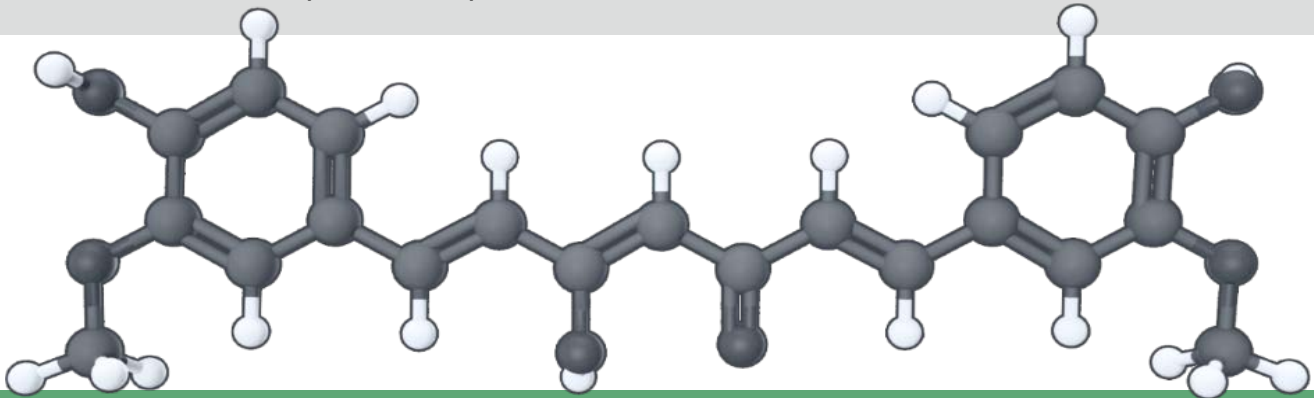


<b>FORMULA</b>	$C_{21}H_{20}O_6$
<b>CLASS</b>	Phenol, curcuminoid (Diferuloylmethane)
<b>ORAL BIOAVAILABILITY</b>	Less than 1%
<b>ORAL BIOAVAILABILITY (LIPOSOMAL)</b>	Estimated at least 30-fold higher



## MAIN PHARMACOLOGICAL ACTIVITY

### ANTIOXIDATIVE

Improves systemic markers of oxidative stress  
 Modulates the activity of GSH, catalase, and SOD enzymes active in the neutralization of free radicals  
 Inhibits ROS-generating enzymes such as lipoxygenase/cyclooxygenase and xanthine hydrogenase/oxidase

### ANTI-INFLAMMATORY

Capable to suppress inflammation through many different mechanisms

### ANTIVIRAL

Antiviral activity against different viruses: papillomavirus virus (HPV), influenza virus, Hepatitis B virus (HBV), Hepatitis C virus (HCV), adenovirus, coxsackie virus, Human norovirus (HuNoV), Respiratory syncytial virus (RSV) and Herpes

### ANTICANCER

Prevents carcinogenesis by affecting two primary processes: angiogenesis and tumor growth

### ANTIBACTERIAL, ANTIFUNGAL

Inhibits growth of a variety of periodontopathic bacteria, pathogenic bacteria (*E.coli*, *S.aureus*, *H.pylori*), able to control fungal related spoilage and fungal pathogens

### ANTIALLERGIC

Regulates airway inflammation and airway obstruction mainly by modulating cytokine levels

### IMMUNOMODULATING

Immunesuppressive activities resulting in improvement of symptoms of rheumatoid arthritis

### LIPID LOWERING, ANTIDIABETIC

Improves overall function of beta-cells, lowering level of HOMA-IR (insulin resistance index)  
 Shown significant improvements in BMI, body fat and body measures

### NEUROPROTECTIVE

Beneficial effects against neurodegenerative diseases

## POSSIBLE CLINICAL APPLICATION

Allergies and respiratory diseases, including respiratory tract infections and asthma  
 Bacterial and parasitic diseases, fungal and viral infections  
 Cancers, tumors, lupus, AIDS,  $\beta$ -Thalassemia  
 Cognitive impairment, including Alzheimer's disease  
 Metabolic disorders, including diabetes and obesity  
 Musculoskeletal diseases, including arthritis and degenerative bone diseases  
 Neuroinflammatory diseases, including Parkinson's disease and diabetic neuropathy  
 Depression, anxiety  
 Skin diseases (vitiligo, psoriasis)

### References:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5664031/>  
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