

"*P. apista* must therefore be considered a new and sometimes important pathogen for CF patients," the researchers concluded. "Cohort isolation prevented further spread of *P. apista* in our CF center."

Jorgensen and colleagues published their study in *Pediatric Pulmonology* (Epidemic spread of *Pandoraea apista*, a new pathogen causing severe lung disease in cystic fibrosis patients. *Pediatr Pulm*, 2003;36(5):439-446).

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Danish University of Pharmaceutical Science

***Salvia hydrangea* terpenoids have oleanolic acid-mediated antimalarial effects**

2003 DEC 17 - (NewsRx.com) -- Hydrangea-derived terpenoids have demonstrated oleanolic acid-mediated antimalarial effects.

In a recent study from Denmark, "Four abietane-type terpenoids, including two known royleanones and two new, rearranged 20-norabietanes, were isolated from the roots of the Iranian medicinal plant *Salvia hydrangea* DC. ex Bentham (Lamiaceae), which is used as an anthelmintic and antileishmanial remedy."

"Their structures were established using COSY, NOESY, HSQC, and HMBC spectral data," which revealed "the possible identity of one of the 20-norabietanes with demethylmulti-cauline, previously reported from a different *Salvia* species," explained M. Sairafianpour and coauthors at the Danish University of Pharmaceutical Science.

"A moderate in vitro antiplasmodial effect of the extract of *S. hydrangea* flowers was found to be associated with the presence of large amounts of pentacyclic triterpenes, mainly oleanolic acid," according to the report. "The observed antiplasmodial activity of oleanolic acid is apparently due to its incorporation into the erythrocyte membrane, which adversely affects the growth of *Plasmodium falciparum* parasites."

"Thus, oleanolic acid caused transformation of erythrocytes into stomatocytes in the concentration range where the in vitro antiplasmodial activity was observed," the researchers concluded.

Sairafianpour and colleagues published their study in *Planta Medica* (Terpenoids of *Salvia hydrangea*: Two new, rearranged 20-norabietanes and the effect of oleanolic acid on erythrocyte membranes. *Planta Med*, 2003;69(9):846-850).

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Dartmouth College

Retinoids in cancer therapy and chemoprevention: Promise meets resistance

2003 DEC 17 - (NewsRx.com) -- When it comes to retinoids in cancer therapy and chemoprevention, researchers say promise meets resistance.

"Retinoids (natural and synthetic derivatives of vitamin A) signal potent differentiation and growth-suppressive effects in diverse normal, premalignant, and malignant cells," researchers in the United States report.

"A strong rationale exists for the use of retinoids in cancer treatment and chemoprevention based on preclinical, epidemiological, and early clinical findings. Despite the success of all-trans-retinoic acid (RA)-based differentiation therapy in acute promyelocytic leukemia (APL), the broad promise of retinoids in the clinic has not yet been realized," wrote S.J. Freemantle and colleagues, Dartmouth College, Hitchcock Medical Center.

"In addition to the expected limited activity of any single therapeutic agent, translation of retinoid activities from the laboratory to the clinic has met with intrinsic or acquired retinoid resistance. Evidence suggests that solid tumors develop intrinsic resistance to retinoids during carcinogenesis," the researchers wrote.

"In contrast, relapse of APL is often associated with acquired resistance to retinoid maturation induction. This review discusses what is known about retinoid resistance mechanisms in cancer therapy and chemoprevention. Strategies to overcome this resistance will be discussed, including combination therapy with other differentiation-inducing, cytotoxic or chromatin-remodeling agents, as well as the use of receptor-selective and nonclassical retinoids," they added.

The researchers concluded: "Opportunities exist in the post-genomic era to bypass resistance to classical retinoids by identifying target genes and associated pathways that directly mediate the antineoplastic effects of retinoids. In this regard, the retinoids are useful pharmacological tools to reveal important pathways targeted in cancer therapy and chemoprevention."

Freemantle and colleagues published their study in *Oncogene* (Retinoids in cancer therapy and chemoprevention: Promise meets resistance. *Oncogene*, 2003;22(47):7305-7315).

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