

Curcuma e curcumina: Storia e uso

Giovanni Appendino

Università del Piemonte Orientale, Novara



La curcuma: un'origine sconosciuta



Curcuma: analisi etimologica

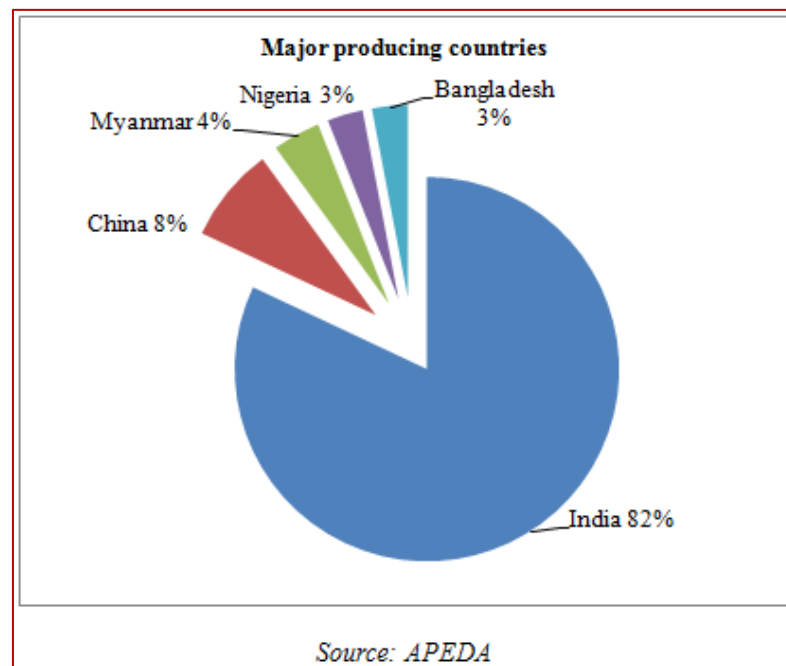
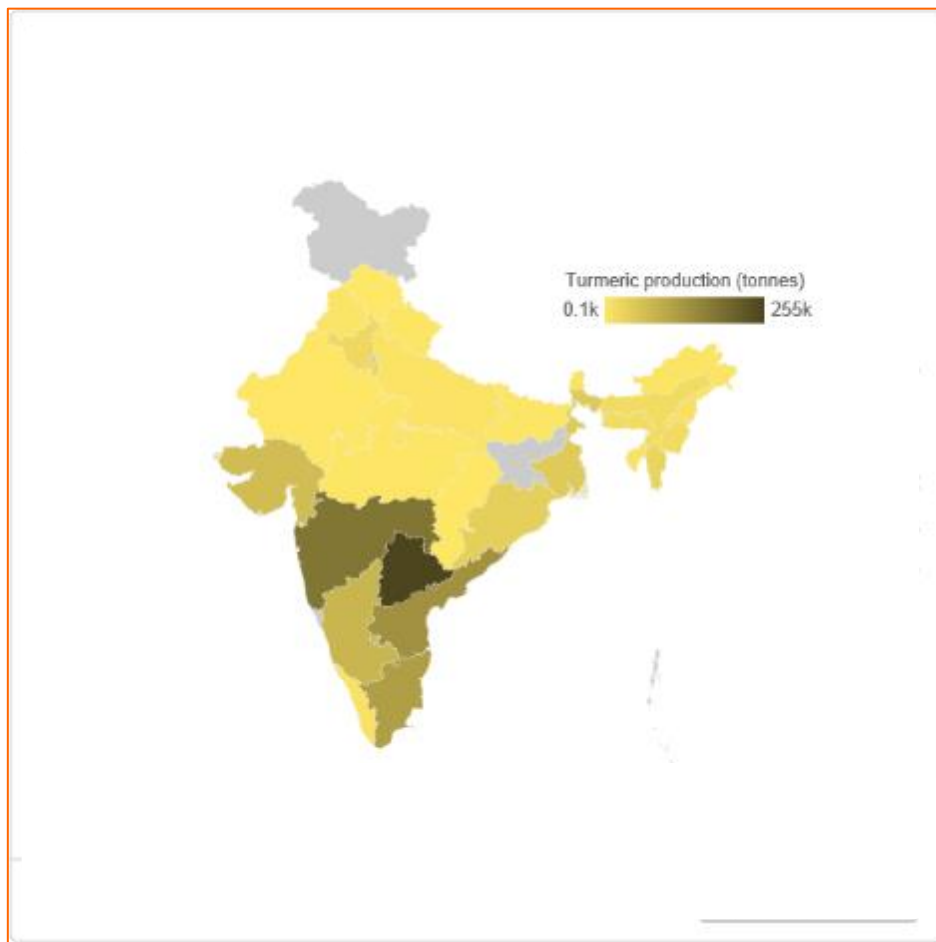
Curcuma: dal sanscrito *kuṅkuma* e dall'arabo *kurkum* (zafferano)

Turmeric: dal latino *terra merita*, attraverso il francese *terre mérite* e l'inglese *turmeryte*.

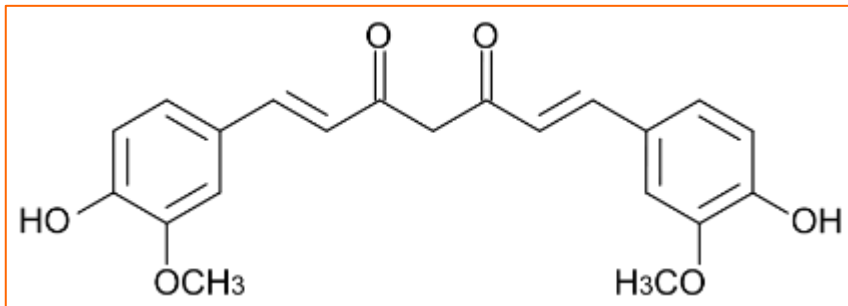
La monografia WHO della curcuma cita 76 nomi indiani diversi per la pianta



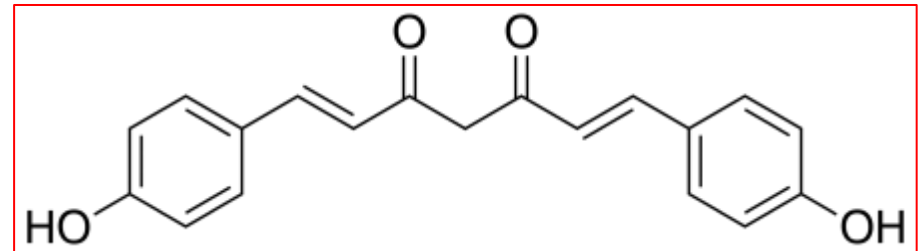
Zone di coltivazione



Il colore del rizoma di curcuma



CURCUMINA

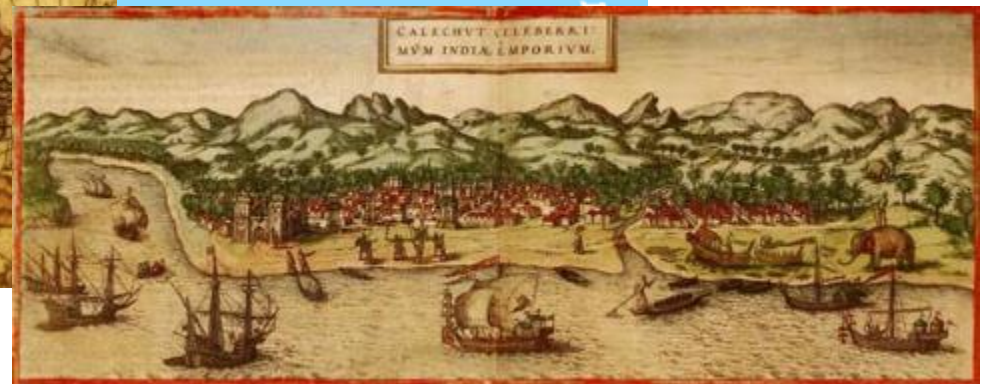


BISDEMETOSSICURCUMINA

La curcuma ha valenza multipla nella cultura indiana



La curcuma: troppo banale per il commercio delle spezie?

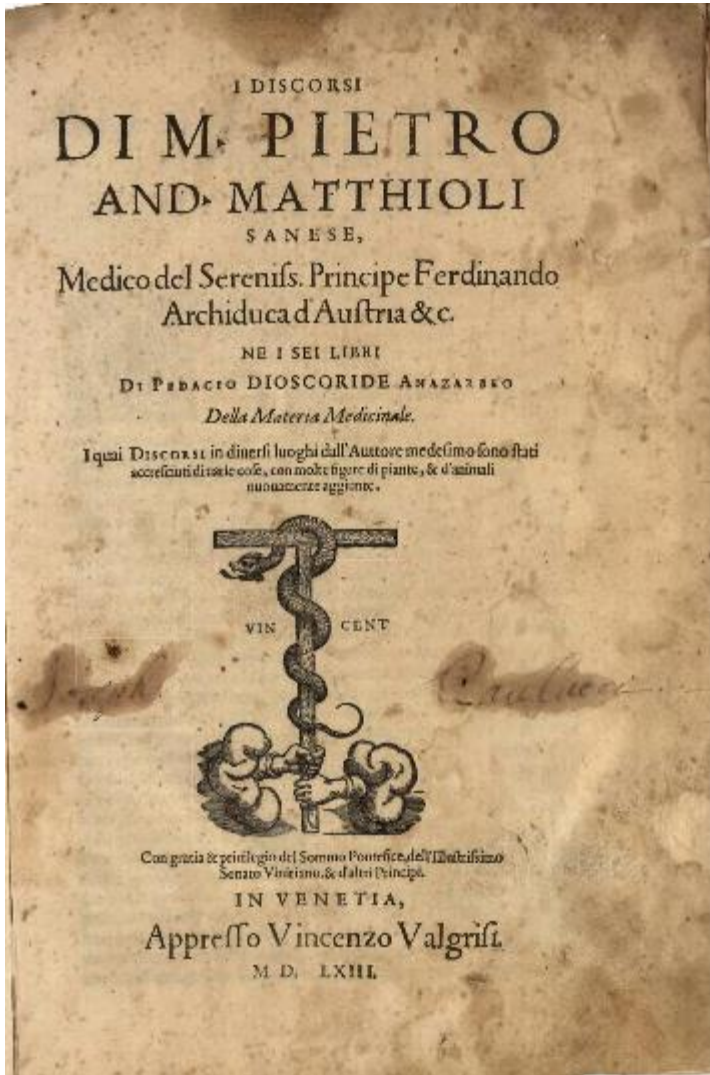


Marco Polo describe la curcuma come un surrogato dello zafferano



Cresce una pianta che ha tutte le proprietà del vero zafferano, come pure il suo profumo e colore. Eppure non è zafferano (ca 1280)

Mattioli describe gli usi topici della curcuma (*cipero indiano*)



Clinical Group

International Journal of Dermatology and Clinical Research

ISSN: 2455-8605 DOI CC BY

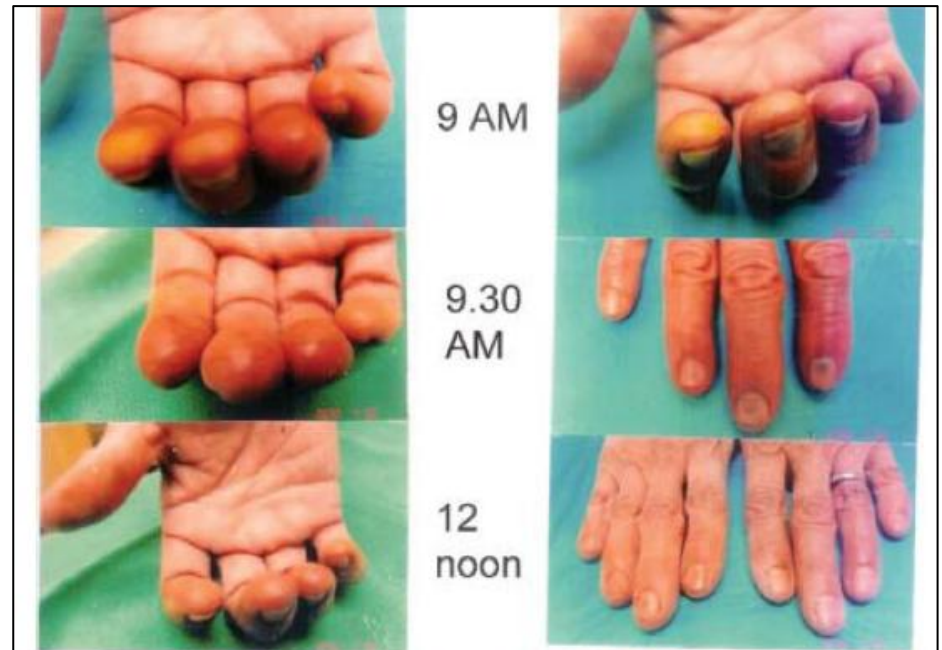
g*
Dermatology, UCLA School of

2017; Accepted: 05 July, 2017

adalene C.Y. Heng, Profes-
sor, UCLA School of Medi-

Review Article

Topical Curcumin: A Review of Mechanisms and uses in Dermatology



L'utilizzo topico della curcumina è stato al centro di una violenta diatriba legale fra USA e India

1995: Due ricercatori indiani attivi in un'università americana ricevono l'approvazione per un brevetto sull'utilizzo topico della curcumina per il trattamento delle ferite (Use of turmeric for wound healing, US005,401,504A)

Il Indian Council of Scientific and Industrial Research (CSIR) fece opposizione al brevetto, in quanto l'utilizzo della curcumina per il trattamento delle ferite era noto da millenni in India e documentato già in testi scritti in sanscrito.

A seguito di questa azione, il brevetto dovette essere ritirato. Si tratta della prima volta che un brevetto basato sulla medicina tradizionale è stato contestato con successo.

United States Patent [19]

Das et al.

[54] **USE OF TURMERIC IN WOUND HEALING**

[75] Inventors: **Suman K. Das; Hari Har P. Cohly,**
both of Jackson, Miss.

[73] Assignee: **University of Mississippi Medical
Center, Jackson, Miss.**

[21] Appl. No.: **174,363**

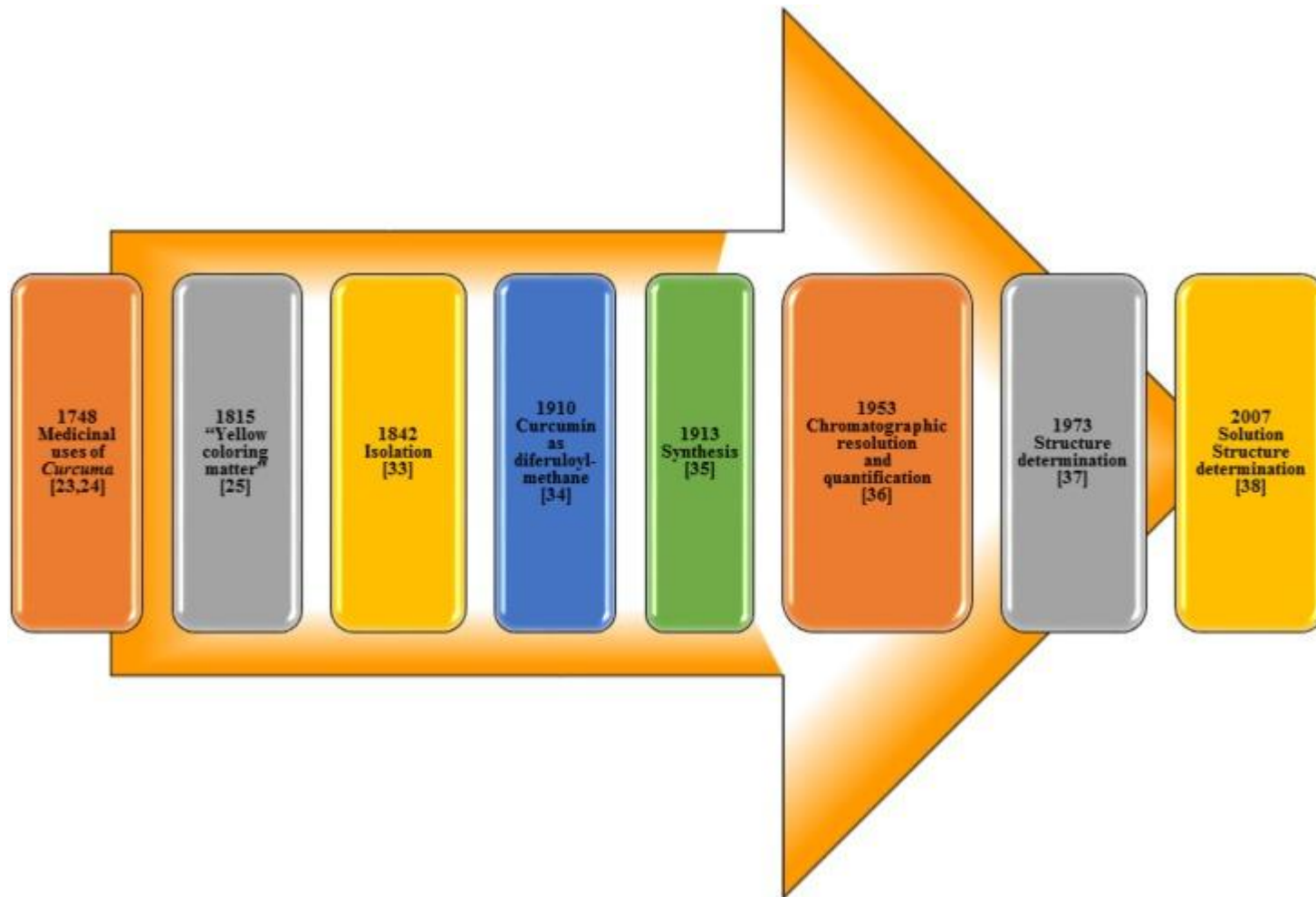
[22] Filed: **Dec. 28, 1993**

[51] Int. Cl.⁶ **A61K 35/78**

[52] U.S. Cl. **424/195.1; 514/925;**
514/926; 514/927; 514/928

[58] Field of Search **424/195.1**

Le ricerche chimiche: Isolamento, elucidazione strutturale e sintesi della curcumina



La curcumina fu isolata da Pelletier nel 1815



Joseph Pelletier (1788-1842)



J. Pharmacie, 1, 289, 1815

La struttura della curcumina fu chiarita da Kostanecki nel 1910

2163

**341. J. Miłobędzka, St. v. Kostanecki und V. Lampe:
Zur Kenntnis des Curcumins.**

(Eingegangen am 2. Juli 1910.)

Nach unseren Arbeiten über gelbe und orangerote Farbstoffe scheint uns möglich zu sein, bei der Untersuchung eines noch unbekanntes, stickstofffreien, gelben oder orangeroten Farbstoffs mit einiger Wahrscheinlichkeit a priori die Frage zu beantworten, welchen Chromophor der betreffende Farbstoff enthalten dürfte. Beim Curcumin

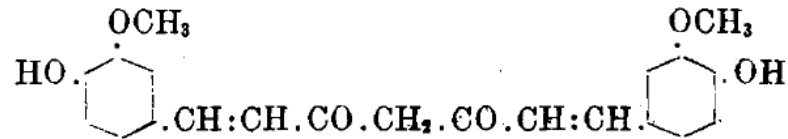


La curcumina fu sintetizzata da Lampe nel 1913

288. V. Lampe und J. Miłobędzka: Studien über Curcumin⁵⁾.

(Eingegangen am 27. Juni 1913.)

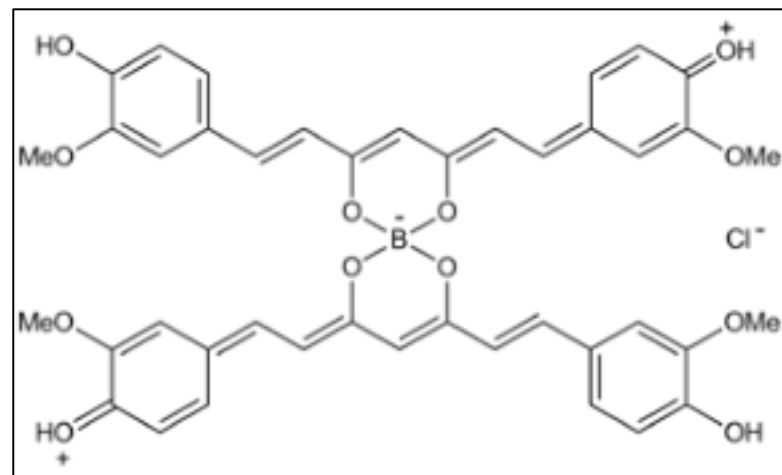
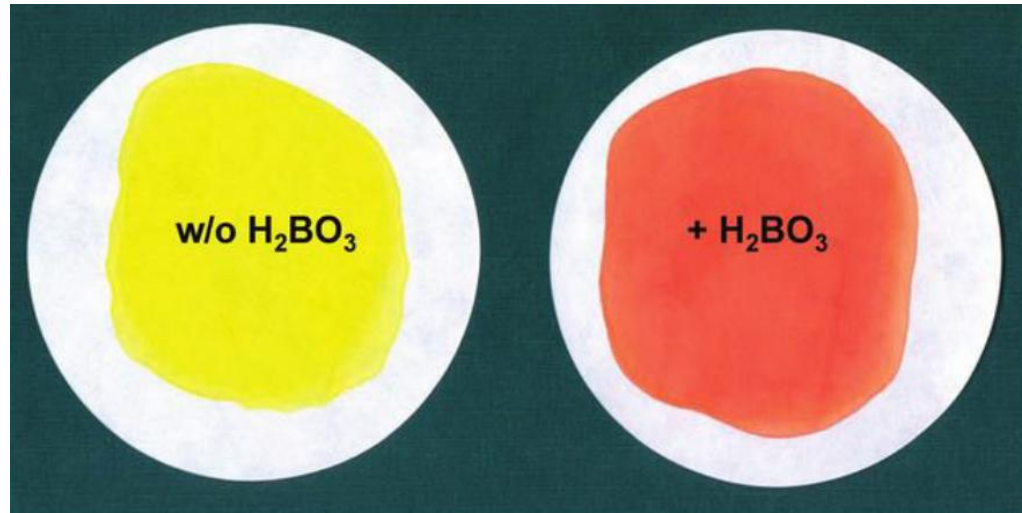
Für Curcumin, den Farbstoff der Curcumawurzel, haben Miłobędzka, Kostanecki und Lampe⁶⁾ folgende Strukturformel:



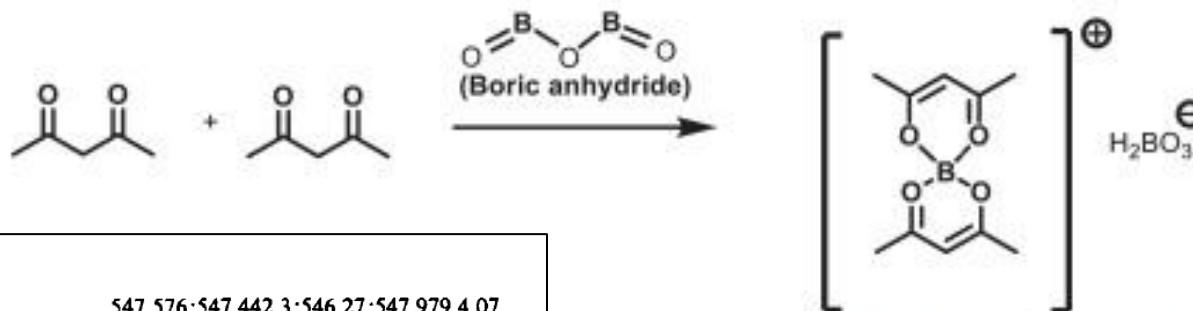
aufgestellt und ihre nähere Prüfung auf synthetischem Wege in Aussicht gestellt. Vor allem sollte die Synthese des Dicinnamoylmethans, der vermutlichen Muttersubstanz des Farbstoffes erstrebt werden, um mit den leicht zugänglichen Ausgangsmaterialien eine für



La curcumina come reagente di laboratorio



La sintesi di Pabon (1964)



547.576:547.442.3:546.27:547.979.4.07

A SYNTHESIS OF CURCUMIN AND RELATED COMPOUNDS

BY

H. J. J. PABON

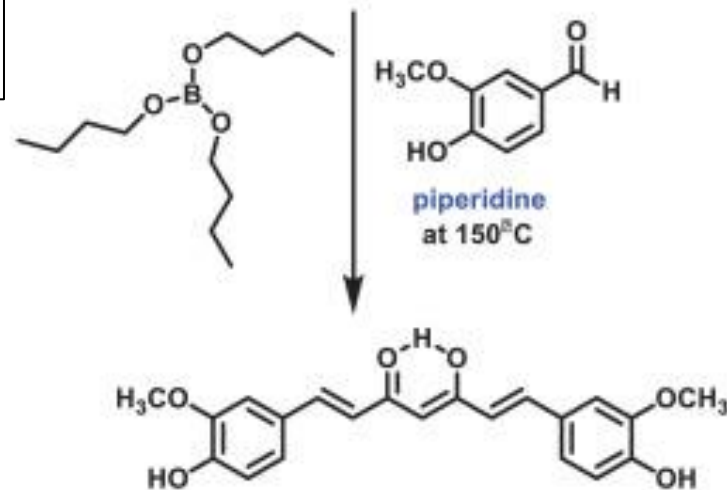
(Unilever Research Laboratory, Vlaardingen, The Netherlands)

Research Paper

Revisiting Curcumin Chemistry Part I: A New Strategy for the Synthesis of Curcuminoids

E. VENKATA RAO* AND P. SUDHEER

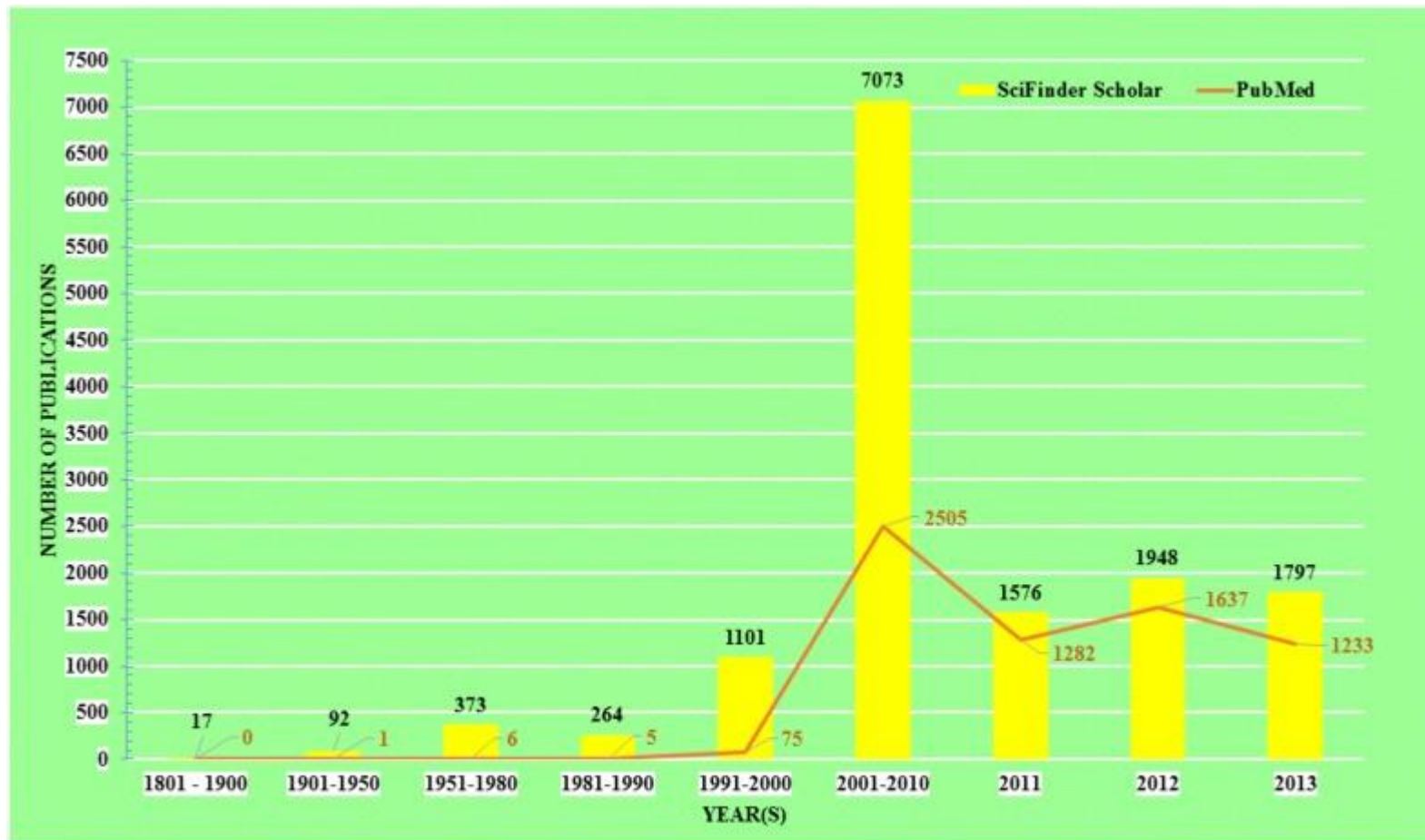
Natco Research Centre, B-13, Industrial Estate, Sanathnagar, Hyderabad - 500 018, Andhra Pradesh, India



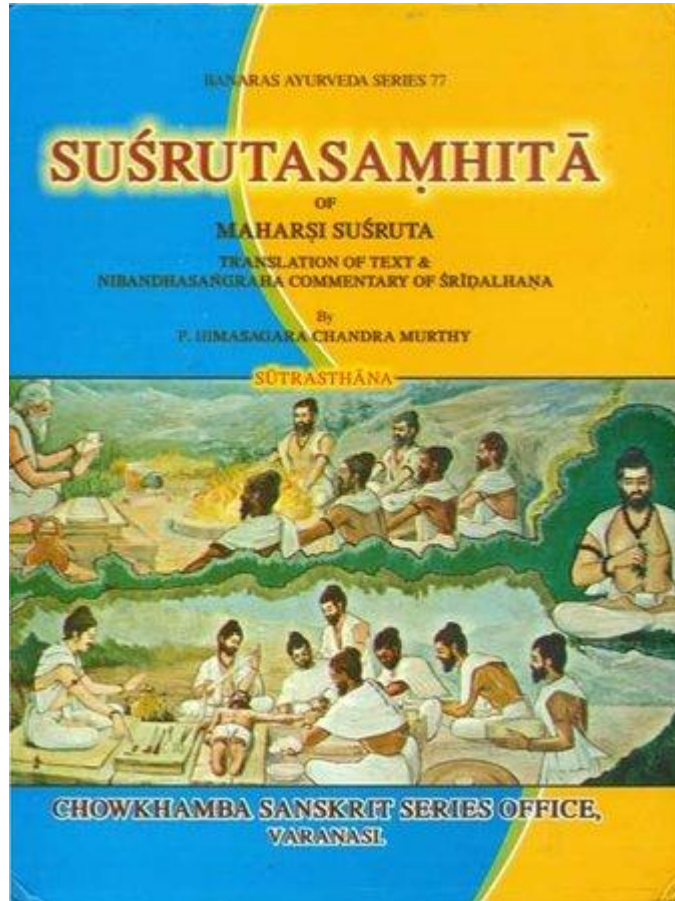
Enol form of Curcumin (1)

Yield 25%

Le ricerche farmacologiche e cliniche



I primi studi farmacologici furono sui disturbi epatici



THE LANCET] DR. A. OPPENHEIMER: TURMERIC (CU

TURMERIC (CURCUMIN) IN BILIARY DISEASES

BY ALBERT OPPENHEIMER, M.D.

ASSISTANT PROFESSOR OF ROENTGENOLOGY TO THE AMERICAN
UNIVERSITY OF BEIRŪT, LEBANON

TURMERIC, or *Temoe lavac*, is an oriental plant that for many centuries has been used by the native population of India in the treatment of jaundice. The powdered roots and leaves form one of the chief ingredients of "curry." The botanical name of the plant is *Curcuma*; there are a number of species, among which *Curcuma domestica* and *Curcuma longa* have medicinal value.

There are references to the therapeutic use of curcuma as early as 1748 (Loeber) and 1867 (Shortt). The interest of the medical profession and the pharmaceutical industry was reawakened in 1927, when Koch and Guttenberg reported successful treatment of hepatic and biliary diseases with a preparation containing extracts of curcuma. Similar observations have since been published by Kalk and Nissen (1931), Franquelo (1933), Fährndrich (1932), Henning and Künzel (1934), Potter van Loon (1934), von den Velden (1934), Helmy (1935), Vetterlein (1935), and Leclerc (1935). Some investigators used aqueous extracts of the whole root; others only the yellow pigment which it contains, called curcumin. Unlike

L'epatoprotezione è una delle maggiori aree di indagine clinica sulla curcumina

Scientia Pharmaceutica

www.scipharm.at

Research article

Open Access

Hepatoprotective Study of Curcumin-Soya Lecithin Complex

M **From kitchen to gut: curcumin** MA *
in cholestasis

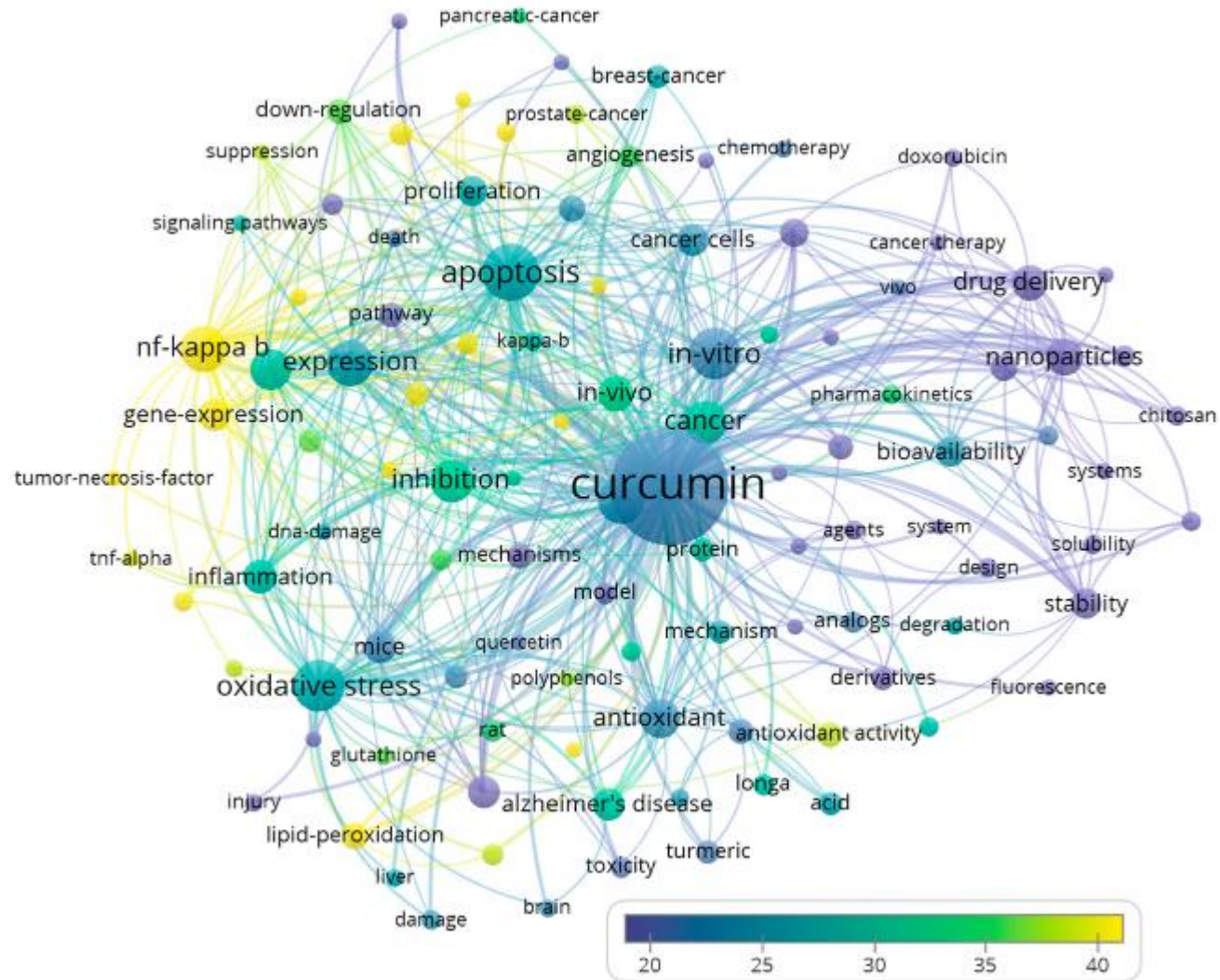
Rifaat Safadi

The Role of Turmeric

in Fatty Liver Disease



La curcumina presenta una “network pharmacology”



Curcuminofobia

DRUG DISCOVERY

Chemists warn against deceptive molecules

Spice extract curcumin dupes assays and leads some drug hunters astray.

Journal of
**Medicinal
Chemistry**

Perspective

pubs.acs.org/jmc

The Essential Medicinal Chemistry of Curcumin

Miniperspective

Kathryn M. Nelson,[†] Jayme L. Dahlin,[‡] Jonathan Bisson,[§] James Graham,[§] Guido F. Pauli,^{§,||}
and Michael A. Walters^{*,†}

*La medicina moderna studia i geni, ma la loro
interazione con l'ambiente è ugualmente
importante. La più importante componente
dell'ambiente è la dieta*