

Compact

Kaladhar DSVGK

**Studies on antimicrobial,
biochemical and image
analysis in *Mirabilis jalapn***



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DSVGK, Kaladhar: Studies on antimicrobial, biochemical and image analysis in Mirabilis jalapa, Hamburg, Anchor Academic Publishing 2015

Buch-ISBN: 978-3-95489-301-0

PDF-eBook-ISBN: 978-3-95489-801-5

Druck/Herstellung: Anchor Academic Publishing, Hamburg, 2015

Bibliografische Information der Deutschen Nationalbibliothek:

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.d-nb.de> abrufbar

Bibliographical Information of the German National Library:

The German National Library lists this publication in the German National Bibliography. Detailed bibliographic data can be found at: <http://dnb.d-nb.de>

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<http://www.diplom.de>, Hamburg 2015
Printed in Germany

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INTRODUCTION

Mirabilis jalapa Linn. (Family: Nyctaginaceae) is a widely used in conventional medicine in many parts of the world for the treatment of various diseases viz. virus inhibitory activity, anti-tumor activity, etc. Very few reports are available on Architecture of pollen grains, image analysis, Antimicrobial activity, pharmacognostic and phytochemical nature of *Mirabilis jalapa* Linn. The genus *Mirabilis* contains 350 species in 34 classifications. The common garden-variety four-o'clock (*Mirabilis jalapa*) is also known as Marvels of Peru. Four o'clock received its name because of its habit of opening in the late afternoon. It is not actually the time of day that causes the flowers to open, but the drop in temperature. The flowers close the next morning, except on dull, cloudy days.

An interested aspect of this plant is that flowers of different colors can be found simultaneously on the same plant. Additionally, an individual flower can be splashed with different colors. Another interesting point is a color-changing phenomenon. For example, in the yellow variety, as the plant matures, it can display flowers that gradually change to a dark pink color. Similarly white flowers can change to light violet.

Mirabilis jalapa (**Plate 1**) is said to have been exported from the Peruvian Andes in 1540. Around 1900, Carl Correns used the four o'clock as a model organism for his studies on cytoplasmic inheritance. The flowers are used in food colouring. An edible crimson dye is obtained from the flowers to colour cakes and jellies. In herbal medicine, parts of the plant may be used as a diuretic, purgative, and for vulnerary (wound healing) purposes. The root is believed an aphrodisiac as well as diuretic and purgative. It is used in the treatment of dropsy. Powdered, the seed of some varieties is used as a cosmetic and a dye. The seeds are considered as poisonous can cause vomiting and diarrhea and, in large quantities, death.

Each plant may have hundreds of two-inch, trumpet-shaped blossoms that will last throughout the summer until the first frost. Even on a single plant, these blossoms may be pink, yellow, white, salmon, red, or striped or blotted with any of these colors. Because of their variety of shades, though, they are hard to co-ordinate with other garden flowers and are best used as bedding, border, background, or in containers.