

# 2<sup>nd</sup> International Conference and Exhibition on Pharmacognosy, Phytochemistry & Natural Products

August 25-27, 2014 DoubleTree by Hilton Beijing, China

## Anatomy and identification of Indian medicinal Aconites

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Species of *Aconitum* L. (Ranunculaceae) are commonly known as *Aconites*. Roots of *Aconitum* are extremely poisonous and hence named as “the Queen of Poisons”. *Aconites* have been used both in traditional and modern systems of medicine across the world. They have been over-exploited due to their various medicinal properties, which ultimately resulted in the rarity of the species. Hence, the Government of India has placed all the species of *Aconites* under “Negative List of Exports” in India during 1998, which regulates illegal trade/exploitation of *Aconites* from wild. Identification is one of the important prerequisites to get the desired therapeutic effects from the source medicinal plants/crude drugs. In the absence of morphological features, anatomical characters can be used to ascertain the correct botanical identity of the crude *Aconite* roots. Anatomical characters are of great value in establishing botanical identity of crude drugs. Further, it is simple, time saving, cost effective and most reliable. The tuberous roots of *Aconites* exhibit distinguishing anomalous anatomical characters, which can be used as a tool to delimit each species from its close allies. Besides, all the species of *Aconitum* possess starch grains in their roots. The size, shape, surface features, presence of hilum, birefringence properties and extinction cross of starch grains are characteristic for the species, which can also be used to identify the genuine *Aconite* roots as well as to detect possible adulterants that are prevalent in crude drug trade.

### Biography

Ayyavu Brama Dhayala Selvam obtained his PhD degree in 1996 from University of Madras, Chennai. He has joined Botanical Survey of India, Kolkata as a Scientist in 2002. He has published 26 research papers/articles and 9 popular/career articles and many of them are available online for public utility. Recently, he has published a book entitled, ‘Pharmacognosy of Negative listed Plants’. He is also a creative writer, written many poems on nature, especially on plants which are made online for public wakefulness.

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