

What should our policy be for appointing non-Indian citizens as heads of public institutions?

Current Science has earlier reported on the need for and appointment of non-Indian citizens to academic positions in the country^{1,2}. I understand that the government has now approved a policy to consider persons of Indian origin, who are not citizens of this country, for appointment as heads of publicly funded academic and research institutions. In this connection, reproduced below is the Oath of Allegiance that is required to be taken by all immigrants at the time of their acquiring naturalized citizenship of USA:

'I hereby declare, on oath, that I absolutely and entirely renounce and abjure all allegiance and fidelity to any foreign prince, potentate, state, or sovereignty of whom or which I have heretofore been a subject or citizen; that I will support and defend the Constitution and laws of the United States of America against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I will bear arms on behalf of the United States when required by the law; that I will perform noncombatant service in the Armed Forces of the United States

when required by the law; that I will perform work of national importance under civilian direction when required by the law; and that I take this obligation freely without any mental reservation or purpose of evasion; so help me God.'

No one denies that science and the practice of science are international, but neither will anyone deny that several strategic decisions of public interest are decidedly national. Scientists and academics in publicly funded institutions are often called upon to provide expert opinion and advice to the government, and the heads of such institutions may also be decision-makers in this context. Therefore, it is quite possible that situations leading to potential conflicts of interest may arise if an institution's head is a foreign national. To cite just a few examples from the technical arena, the public interest in India has been (or is expected to be) different from the strategic interests of a country such as USA on the Bhopal gas tragedy aftermath, establishment of atomic power stations, patents on pharmaceuticals, climate-change issues, purchase of civilian aircraft or defence

equipment, co-operation with countries such as Iran, Palestine, Israel and so on.

Although I have focused on USA as an example, similar considerations would apply with regard to naturalized citizens of other countries as well. It is my opinion, therefore, that only Indian nationals, including of course permanent residents of another country who continue to retain Indian passports (such as 'green card' holders of USA), should be considered for appointment as heads of publicly funded institutions in the country. This is also the practice followed in other countries, for example, in the research institutions of the federal government of USA itself.

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Opium threat in the Eastern Himalayan zone of Arunachal Pradesh, North East India

The opium poppy (*Papaver somniferum* Linn.) belonging to the family Papaveraceae, has been widely used throughout the world for centuries. Though evidence of opium intake dates back to prehistoric times, it had been produced systematically and consumed on a large scale since the 19th century in the Asian countries; these areas are currently referred to as the Golden Crescent and the Golden Triangle¹. Opium is the chief foreign exchange earner amongst the agricultural crops in India². The districts in the Eastern Himalayan zone of Arunachal Pradesh, North East India share a long international border with Myanmar, which is famous for the production and nodal distribution of opium and its derivatives³.

Nonetheless, opium poppy cultivation in Arunachal Pradesh is closely associated with cultural practices and religious faith of the ethnic hilly communities^{4,5} and is traditionally used for treating illnesses like diarrhoea and alleviating physical and mental stress^{6,7}, and also for recreational and social purposes.

The study was undertaken in Tirap District (26°38'–27°47'N lat. and 96°16'–95°40'E long.) situated within the periphery of Patkai Himalaya range, Arunachal Pradesh. The Longding District has been created from Tirap District on 26 September 2011 to become the 17th district of Arunachal Pradesh. Currently, the Tirap District is inhabited by the ethnic Noctes and Tutsas, whereas the Long-

ding District is inhabited by the ethnic Wanchos, the most backward tribes of the state. The total geographical area of undivided Tirap District is 2362 sq. km.



Figure 1. Mass cultivation of opium poppy.

Table 1. Livelihood status among addicts and non-addicts

	Addict	Non-addict
Social status	Low	Middle to high
Educational status	Negligible	Mostly literate
Income status	Negligible	Moderate
No. of children/household	>10	<10
Opium cultivation	Not done	Done
Agricultural land	Low	Marginal

with a total human population of 111,997 (57,992 males and 54,005 females) (according to the 2011 Census). All these ethnic groups trace their ancestry to the Mongoloid race, whereas their local dialects are believed to be of Indo-Burman origin. Their cultural traits and ethnic origins remain distinctive, mainly due to their geographical location. Geologically, the district has the surface build of Disang, Baruil, Tipam and Dining series of Tertiary sediments⁸.

Since the last two decades, insurgency and opium addiction have been the two major threats in Tirap District. Mass cultivation of opium and its production have significantly increased among the ethnic Noctes and Wanchos (Figure 1), mainly for the extraction of alkaloids. Traditionally, extraction of alkaloids from the capsule is a strenuous job consisting of several stages. First, the ripe capsule is incised vertically, then horizontally in the second stage, diagonally in the third stage and so on, so that the latex oozes and totally dries up⁹. At this stage the farmers collect latex from the stems and leaves, which is considered to be of inferior quality. Morphine and codeine are two major alkaloids of commercial importance². The cultivators believe that opium of the first lancing has the highest morphine content, which decreases with subsequent lancing⁹.

The Turkish method of spiral incision was reported to give a relatively larger yield of opium than the Indian method of vertical incision¹⁰. Traditionally, the incision is done with utmost care using a newly sharpened knife, in such a fashion that only a thin film of the capsule is cut without touching the seeds, as it is believed that a deep incision results in exudation of latex inside the capsule affecting the quality. Eventually, subsequent incision is not possible and shallow incision will not exude latex at all. After incision of the capsules, the latex is collected in a container. The latex so

collected is smeared on a piece of newly polished, washed, boiled cloth and dried in the sun till it becomes a hard and black tar-like substance¹¹. This dried form is typically smoked by the addicts with a bamboo pipe, but can also be eaten as such. Like heroin or morphine, opium can create feelings of warmth, relaxation and sedation¹¹.

In the backward rural hamlets of Tirap District, opium had been traditionally used as folk medicine since time immemorial. The fact that opium can help relieve severe cases of diarrhoea and also works as an analgesic¹² cannot be ruled out *in toto*. Users in the studied area mentioned that consumption of opium stimulated them to a certain extent. Women generally take opium to ease muscle pain from long working days in the fields.

Opium addiction is a global problem and is a matter of great concern. Recently, opium abuse, especially among the youth, has become an epidemic in several rural villages in Tirap District. Ironically, the opium addict is never the cultivator of the opium poppy (Table 1). It is the non-addict who uses opium as a source of income and feeds the addicts⁹. For a small piece of opium, the addicts would toil hard in the cultivator's field throughout the day. Ghani¹⁰ has cited poverty as the primary reason for choosing opium poppy cultivation by the Afghan farmers. In terms of age, opium addicts are found up to 60 years amongst both men and women. Expectedly, among the younger generation, addiction is more among the males. Nevertheless, the side effects of opium addiction can prove both dangerous and debilitating and unmonitored use could cause the addict to become confused, weak or even faint. The brain becomes used to the continued presence of the drug and signals the body that it needs more¹².

While we value the farmers' traditional knowledge on opium poppy cultivation and processing, the plight of

opium addicts needs to be documented and addressed. De-addiction centres need to be opened in the opium addiction belts. In this direction, NGOs and SHGs can play a vital role to educate and motivate people and make them aware of the negative effects of opium addiction. Providing proper educational facilities is another valuable option for rehabilitation purposes.

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