

How changes in African traditional medicine research can benefit South Africa

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The South African government's economic investment in indigenous knowledge has seen the exponential growth of research about medicinal plants and traditional medicines in South Africa.



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In 2014 alone, 140 scientific papers were published about these subjects. Pharmacology, pharmacy and integrative and complimentary medicines were the dominant research focus areas. By contrast, in the 20 years before South Africa became a democracy, fewer than five scientific papers were published on the subject annually.

This absence of research was largely linked to traditional medicines being [outlawed](#).

In the past two decades, the links between bio-cultural diversity and the richness of plant species in South Africa have contributed to ongoing attempts to develop traditional medicines for use in the modern complementary and alternative medicines sector. Eventually this will aid in the discovery of new drug entities for pharmaceutical industries.

African traditional medicines are divided into two streams. The first involves the informal trading of herbal remedies and medicinal plants sold by traditional healers or sangomas and bushdoctors. But there is also a more formal market in which medicinal plants like buchu and African potato extract are sold as over-the-counter drugs.

A local advantage

Plant species have long been used for medicinal purposes. In Africa, knowledge about different plants' properties has been transmitted orally from one generation to another. It has also played an important role in folklore.

Africa is home to incredibly unique flora and fauna, which means the continent's traditional medicines are comprised of an interesting combination of plants and sometimes animals.

For instance, Madagascar is considered one of the world's biodiversity hotspots. Despite the ecologically devastating effects of deforestation, 70% of Madagascar's species are unique to the island.

South Africa holds close to 10% of all species of birds, fish and plants documented in the world. This includes about 6% of recorded mammal and reptile species. There are also several biodiversity hotspots, including the Western Cape's distinct flora, the succulent Karoo which stretches across two provinces and the Maputaland-Pondoland-Albany in the Eastern Cape. Areas like these have made the country a centre for the development of local traditional medicines systems.

Using what we have to our advantage

Geo-climatic regions produce plants that are popular as traditional medicines. In the Western Cape, where fynbos (fine bush) dominates, leaf material is used by traditional healers from the KhoiSan culture. Elsewhere, in the Eastern Cape, KwaZulu-Natal and Gauteng, barks, roots and bulbs are all harvested from the wild for medicinal use. KwaZulu-Natal is also home to one of the largest medicinal markets in Africa.

It is estimated that 80% of the globe's population relies on traditional medicines. In South Africa, [studies](#) show there is one traditional healer for every 700 to 1200 patients. The primary health care system is [inaccessible](#) to many and this drives people's reliance on medical plants.

Many developing countries have dual health systems. One involves traditional medicine based on indigenous knowledge of local plant species and the other involves allopathic (Western) practices of medicine.

The challenge is that the concurrent use of both traditional and allopathic medicines and its associated side effects is poorly [understood](#). Many people think that natural products are safe and secure because they have been used for centuries. But because these products are so often traded in an unregulated, informal market, their side effects are often [underplayed](#).

Tightening up the industry

There needs to be stricter vigilance in the phytopharmaceutical industry to monitor the effects of traditional medicines after they have been licensed for use.

In 2009 the Medicines and Related Substances Act was [amended](#). It now stipulates that phytopharmaceuticals must undergo tests to prove their safety. But before this, many new herbal remedies entered formal markets as untested complementary and alternative medicines with unknown ingredients. Although the phytopharmaceutical industry believes it is being constrained by the legislation, the beefed up act means that the products are regulated and safer to use.

Many have called for indigenous plant knowledge to be documented and a pharmacopeia to be developed with standards that regulate the use of medical flora.

But the development of the industry is also being hampered by a cloud of scepticism from both indigenous knowledge holders and users, along with farmers. Some question the efficacy of the medicines after the plants they originate from

have been cultivated.

As a start, a better understanding of the chemistry of medicinal plants is required. This would provide additional information on the efficacy of these natural herbal products at the clinical level.

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