

# MORE ABOUT...ANTIRETROVIRALS

## COMPLEMENTARY, ALTERNATIVE AND TRADITIONAL MEDICINES AND HIV AND AIDS

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Traditional medicine is defined as the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses.<sup>1</sup> Estimates suggest that approximately 27 million South Africans use indigenous medicines for their basic health care needs.<sup>2</sup> There is an extensive network of traditional healers throughout South Africa that play an important role in primary health care delivery, particularly in rural areas where there is poor access to conventional medical care. These healers serve not only as primary health care practitioners but also as educators, counsellors, support workers and custodians of indigenous knowledge, but also as teachers of traditional culture and spirituality. They look after both the individual's well-being as well as the health of the community.

For the management of HIV and AIDS, the continued suppression of the viral load with highly active antiretroviral therapy (HAART) is critically dependent on maintaining therapeutic serum concentrations of the individual medicines. The risk of the HI virus developing resistance increases as serum concentrations of antiretrovirals

fall to sub-therapeutic concentrations. Equally, the risk of toxicity from antiretrovirals rises as serum concentrations increase. Adverse effects associated with HAART regimens are common, often intolerable and sometimes fatal, and even minor adverse effects may result in serious consequences by leading to non-adherence and consequently to resistance to treatment regimens.

### Effect of CAT medicines

A wide variety of factors, including adherence and drug-drug interactions, can affect the concentrations of medicines used in HAART. Drug-drug or drug-herb (or other complementary, alternative and traditional (CAT) medicine) interactions are an important potential cause of toxicity or failure of therapy. While many conventional drugs are known to affect HAART, very little is known about the effect of the various CAT medicines on the pharmacokinetics of antiretroviral drugs. It is clear that, contrary to the popular notion that 'natural' means 'safe', CAT medicines unquestionably have the potential to influence the pharmacokinetics of many drugs, including antiretrovirals. This is demonstrated by the effect that St John's wort, a herb used for the management of mild to moderate depression, anxiety, restlessness and insomnia, has on the pharmacokinetics of certain antiretrovirals. The concurrent use of this herbal medicine with protease inhibitors, or the non-nucleoside reverse transcriptase inhibitors, may result in suboptimal antiretroviral drug concentrations, leading to an inadequate virological response, and consequently the potential for resistance or class cross-resistance. This interaction is mediated by the enzyme-inducing effect that St John's wort exerts on the cytochrome P450 drug-metabolising enzyme system.<sup>3,4</sup>

Although adverse events may be caused by an inherent toxicity of a CAT medicine or an interaction between a CAT medicine and a conventional drug, adverse events also occur as a result of poor quality or inappropriate use. Quality-related problems include the adulteration of medicinal products with other medicines or more potent pharmaceutical substances, such as corticosteroids and non-steroidal anti-inflammatory agents. Adverse events may also occur as a consequence of using the wrong medicinal plant, the incorrect dose or products contaminated with potentially hazardous substances, such as toxic metals or pathogenic micro-organisms.<sup>5</sup>

A significant proportion of patients in HAART treatment programmes use CAT medicines.<sup>6</sup> They tend not to disclose their use of CAT medicines to their health care providers, unless specifically asked.<sup>7</sup> The reasons for this non-disclosure include the fear of being judged or reprimanded, or simply not regarding the CAT medicines as medicine.<sup>7</sup> Few data are available on the prevalence and patterns of CAT medicine use in patients with HIV and AIDS. Research by this author indicates that a significant proportion of patients on the antiretroviral treatment programme (i.e. over 60% of patients surveyed) use CAT medicines (R Onia – unpublished data). A proportion of these patients are potentially putting their treatment regimens at risk by using CAT medicines that are known to potentially interact with antiretrovirals, or which may have an adverse impact on HIV disease progression. These CAT medicines include garlic, which may interact with protease inhibitors,<sup>8</sup> St John's wort, and the *Hypoxis* plant (African potato), for which evidence of a negative effect on HIV disease progression exists.<sup>9</sup>

## **Pharmacovigilance**

Effective pharmacovigilance of CAT medicines presents a difficult challenge to all stakeholders in their development, manufacture, prescription and utilisation. The current drive by the Department of Health to develop regulations for the control of the CAT medicine industry will go a long way to improving their safety, quality and efficacy. Although this legislation is desperately needed and would add considerable confidence to this area of medical practice, ongoing pharmacovigilance will remain an integral component in supporting the safe and effective use of CAT medicines, particularly within the context of HIV and AIDS management. Health care professionals need to engage more actively with traditional healers and allied health professionals who serve their communities. Most importantly, they also need to *ask* their patients, in a non-judgemental way, whether they use any CAT medicines. In addition, any adverse event or suspected drug interaction involving CAT medicines must be reported to the National Adverse Events Monitoring Centre (NADEMC) using the standard yellow report form. Contact NADEMC at tel. (021) 447-1618 or fax: (021) 448-6181.

*References available on request.*