ensure a healthy global trade in biological resources.

Beyond these issues many questions and problems concerning bioprospecting remain:

- The demands of some countries may be so high that pharmaceutical companies may be deterred from accessing their resources.
- The CBD encourages bilateral agreements with nation states, but often difficulties can be encountered in using the indigenous knowledge of cultures that may be at odds with or enemies of the nation state or occupy more than one nation state.
- There are sometimes difficulties in determining with whom agreements should be made. Who are the official guardians of the knowledge? Where are the boundaries of an indigenous culture?
- Much indigenous knowledge is already published and therefore in the public domain.
- Should there be retrospective repatriation of funds for plant knowledge taken in the past?
- Accusations of biopiracy by the media could diminish the chances of success of a drug and tarnish the public face of a company. Pharmaceutical companies may view this as a disincentive to forge agreements with developing countries for access to their biodiversity.

Hope for the future

Central in the fight to conserve biodiversity is the struggle for indigenous cultures to gain self-determination. Julian Burger (UN Working Group on Indigenous Populations, Geneva, Switzerland) reported that a draft declaration on the rights of indigenous peoples has been drawn up and that within it are some provisions that refer to the use of medicinal plants and traditional knowledge. Human rights issues raised in UN talks have included the protection of ownership of indigenous knowledge. It has been proposed that a permanent forum should be established within the UN to facilitate the participation of indigenous peoples in debate on global issues.

Successful resolution of many of these issues may only be possible when developed countries can find some way to accommodate the belief, held by many traditional cultures, that nature in essence is not a commodity that can be owned.

Simon Fenwick

Alosetron in women – improving gut reactions

Results from a Phase II dose-ranging trial from Glaxo Wellcome suggest that their investigational drug alosetron can provide adequate relief of pain and discomfort for women with irritable bowel syndrome (IBS). The same trials, however, show that it does not work for men. Allen Mangel, MD, Clinical Research Director at Glaxo Wellcome in North Carolina presented the results during US Digestive Disease Week (16–22 May 1998). Mangel says the trials demonstrated that the proportion of female patients who reported relief of IBS-related pain and discomfort was significantly greater with alosetron (1 and 2 mg twice daily) than the proportion of patients reporting adequate relief with placebo. Alosetron is a selective hydroxytryptamine type 3 (5-HT_3) receptor antagonist.

Suffering in silence

Irritable bowel syndrome, also known as spastic colon and mucous colitis, is a rather common but little discussed syndrome. Some 15% of Americans are suffering, amounting to ~25 million people. With no definite cause having been identified, it is difficult to treat. Symptoms usually first appear in the mid-twenties and often include severe abdominal pain, bloating, urgency, and sporadic constipation and diarrhoea. Its cause is not fully understood but IBS has commonly been linked to neuroticism, stress, diet, genetics and even a history of abuse, especially of a sexual nature. Women tend to be more prone to the syndrome (70% of cases) than men.

The Glaxo Wellcome Phase II trials involved 370 patients in five countries. Patients were randomly assigned 12 weeks of alosteron treatment (1, 2, 4 or 8 mg) or placebo. Female patients taking alosetron reported that within the first month, not only was there relief from pain, but there was also improved stool consistency, less frequency and urgency. Some patients felt some improvement within a week. The men in the trial reported no improvements in their bowel function at all.

Therapeutic role

According to Mangel, the trial has provided positive results for a developmental drug, which is now in Phase III to confirm the efficacy of this putative drug in IBS. Moreover, the trial has also helped to define the clinical end point of efficacy for future experimental drugs for IBS, as indicated by relief of abdominal discomfort and pain rather than some previously indeterminate symptoms.

David Bradley

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