

Mr Ian Dundas
Committee Secretary
House of Representatives Standing Committee on Primary Industries and
Regional Services
Parliament House
Canberra
ACT 2600

28 February 2001

Dear Mr Dundas,

Re: Inquiry into Development of High Technology Industries in Regional Australia Based on Bioprospecting

Thank you for the opportunity to submit comments to the inquiry into development of high technology industries in regional Australia based on bioprospecting.

The core business of ExGenix, created in January 2000 from a former subsidiary of the Australian pharmaceutical R&D company AMRAD, is the discovery of novel, pharmaceutically-active lead compounds for development as new medicines. Our discovery programmes are based on the screening of extracts derived from microbial, plant and marine macroorganism samples sourced largely from within Australia.

The Inquiry's issues paper noted a number of matters for consideration in a variety of areas.

ExGenix have some comments concerning the section on potential barriers to Australia reaping the benefits of bioprospecting. We consider that an opportunity does indeed exist for significant value adding to natural products prior to the commercialisation and full-scale production stages of a process and that intellectual property protection has a role to play in this. We also feel that comments such as "that within as little as five years all Australia's biota could be screened with the resultant intellectual property and knowledge sold off" are quite misleading. For example, ExGenix has been accessing plant samples within Australia since the mid-1990's and yet we have representatives of less than 25% of the Australian vascular plant flora in our collection. Further, much of Australia's microbial flora is actually unknown or poorly understood at this stage. It should also be noted that "screening" is an on-going process in which samples may be exposed to many hundreds of different screens, designed to identify different sorts of active compounds, over a very long period of time. There is no prospect of Australia's biological resources being exhaustively screened in the foreseeable future.

However, we note that access to biological diversity has become increasingly valuable due, in particular, to advances in technology over the past two decades. The ratification of the Convention on Biological Diversity (CBD) in 1993 whereby many countries rejected the doctrine of the 'common heritage of mankind' - under which biological material was free and legally protected - and began enclosure of their genetic resources, has impacted upon access to genetic resources and new technologies, and upon the ownership of intellectual property.

At present, the actual ownership of naturally occurring genetic material is not clear in Australia. The Commonwealth State Working Group (CSWG) discussion paper, *Managing Access to Australia's Biological Resources - Developing a Nationally Consistent Approach* noted that issues of ownership and sovereignty are critical to the ability of a government to manage access. Although the CBD reaffirmed the sovereignty of nations over their biological resources, the situation in Australia differs from State/Territory to State/Territory, and generally the Crown does not claim ownership of all such resources in Australia. Various individuals or groups in the community may legally have or claim ownership of biological resources and may have certain rights over those resources.

The 'ownership' of, access to, and management of biological and genetic resources are therefore of strategic importance to the development of Australia's high technology industries. For example, the development of a National Biotechnology Strategy is dependent upon the development of a nationally consistent approach to facilitate access to and conserve biological and genetic resources. In order that the high technology industries develop, it is imperative that a nationally consistent approach is adopted which will address the interests and, therefore, encourage the participation of all jurisdictions.

A consistency of approach across biological resources is also important. There is significant potential for the utilisation of microorganisms in high technology industries, yet, at present they are not considered under the Wildlife Protection Act (1982) and are rarely considered in discussions of access and conservation of biological resources. For example, the Victorian Government Environment and Natural Resources Committee Discussion Paper *Utilisation of Victorian Native Flora and Fauna* (1998) makes little mention of prokaryotic and eukaryotic microorganisms.

To reiterate, it is imperative that a national access strategy encompassing all types of biological resource is put in place as soon as possible to clarify ownership issues, to streamline access to biological resources, and to ensure that Australia's substantial and unique biological and genetic resources do not become lost opportunities for commercialisation of Australian high technology research.

We also note that the management of intellectual property can be both costly and a challenge for industry. The monetary value of biological and genetic diversity is, in a sense, not a tangible resource such as an oil or gold deposit. The monetary value is only a 'potential value', that can only be developed through intellectual application and, often, very significant expenditure. Whilst it is important that safeguards are in place to protect biodiversity and that benefit sharing occurs as appropriate with parties with a vested interest in the biological resource, industry must be able to secure and protect the intellectual property and financial outlay they have invested in the discovery and development of their 'invention'.

We would welcome the opportunity to expand on these issues and/or contribute further to the Inquiry if so desired.

Yours sincerely,

Murray Tait

Howard Wildman

R Murray Tait
Director, Drug Discovery

Howard G Wildman
Manager, Biotic Resources