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Dear Sirs,

A Submission In Response to the Australian Law Reform Commission's Discussion Paper 68 and The Advisory Council on Intellectual Property's Issues Paper on Patents and Experimental Use

I was surprised and disappointed by some elements of Discussion Paper 68. Firstly, it is disappointing that the ALRC has deferred to the NHMRC on the vital question of ownership of genetic materials. I note your reference to the NHMRC's "new guidelines on ethical masses in Aboriginal and Torres Strait Islander research".(1) Equally, one also notes your commentary regarding the National Principles of Intellectual Property for Publicly Funded Research and the NHMRC's Interim Guidelines: Intellectual Property.(2) While acknowledging that these documents were obviously put together after extensive consultations, it concerns me that there is so much deference to 'policies, guidelines and principles'.

Unlike law, the force of the aforementioned instruments depends largely on institutional culture and individual adherence to and respect for moral, social and other communal expectations. While many people will adhere to professional and ethical standards, the same documents can become the equivalent of 'the three wise monkeys' in the wrong hands. On this basis (and for other reasons which will be explained), I recommend that the NHMRC be given a discretionary power to ask the government of the day to table various guidelines and principles as regulations in Parliament, as the NHMRC sees fit.

While recognising that this elevates the NHMRC from body which is "setting an environment"(3) to 'enforcing a standard', I believe such a change can be justified. My argument rests on your continued resistance to the concept of individual ownership of genetic material. Those who voluntarily choose to become research subjects will generally have a range of motives, from altruism to self-interest. Nothing in this range of motivations is bad in my opinion, however I believe that these people need some formal legal protections when dealing with research institutions, be they in the public or private sector. You indicate a general view among submission writers that so-called benefit sharing arrangements should be "negotiated between the researcher and participant directly".(4) From an individual perspective, trying to negotiate an arrangement with a large institution could be quite intimidating, and from personal experience, it has been.

You will note that attached to this submission is a copy of one of my submissions to the Commonwealth Government's Crossroads Inquiry into Higher Education. While the document principally deals with an academic dispute between myself and my University, there are several general reflections on

the accessibility, responsiveness and ultimate satisfaction gained from proceeding through the institution's appeal processes. My sentiments at the conclusion of the process can be summarised thus:

"...During the passage of my dispute with the University, I have been very aware of an organisation with its own internal (and often very authoritarian) mechanisms. Obscure bachelor degree rules are quoted, inaccurate declarations are made that nothing further can be done in my case and, individuals appointed by Parliament to sit on the University's Council defer to a University's 'autonomy'..." (5)

Be it economic or legislative (or both) many research institutions will have a significant power and knowledge advantage over potential research participants. What is a research participant to do, if having entered a binding arrangement with an institution, finds their understanding of the process to be followed is significantly different to that of the researchers? I certainly found that my expectations about when I could graduate and with what degree were very different to that of my University. Equally, one found that the means for putting my views were to officials and committees that were "inadequate, (sometimes) in error and far too much 'in-house'." (6) Extrapolating some of these experiences to the potential distress of a hypothetical research participant who had an adverse experience, I would want an open, external and ultimately legally enforceable review process to be followed. In this respect, 'policies, guidelines and principles' do not measure up to the task.

Furthermore, I am both very enthusiastic to see research proceed, as well as become actively involved in a project, should the opportunity become available. The self-interest component of this enthusiasm is the possibility that genetic and stem cell technologies could ameliorate my cerebral palsy, as well as the ailments of many others. However, as indicated to you in the response to your Issues Paper No 27, property rights (particularly over coding DNA) is vital. I argued the case in these terms:

"...I submit that the differences in each individual's coding DNA provides that morphing or tweaking that will insulate Australian scientists from the claims of Genetic Technologies and similar companies. However, to ensure this process can work there must be legislation enshrining in each individual citizen property rights to their own DNA...I would seek to assure myself of my property rights by using the law of nuisance. As such, I would expect to be able to quietly enjoy the property in my own (unique) coding DNA without interference from others. But my rights could and should extend to an implied invitation to occupy the property in my non-coding DNA. This is because the non-coding DNA has a strong causal link to the operation of the coding DNA..." (7)

That is my interpretation of the science, however I recognise that there are problems. The first is identified by the RCPA as being the setting of a legal precedent. (8) Secondly, the description of genetic discoveries as often "(occurring) from the top down" (9) is noteworthy. Thirdly, one also notes that IP Australia's Manual indicates that for a patent application to

be granted, applicants must demonstrate either the identification of a particular gene in a sequence, or how it can be used.(10) This initially looked like a robust test (which tended to somewhat restore my faith in IP Australia, whose application of inventive step I had described as "woefully inadequate"(11)) until considering the comments of the Walter and Eliza Hall Institute of Medical Research.(12) Such a loose test could lead to ambit claims about the use of a gene. If the usefulness test is to be meaningful, I recommend that instead of requiring the demonstration of a gene in a sequence or a use, the test become one of demonstration in a sequence and its use; the term 'use' the further refined and specified in IP Australia's Manual as per the organisation's advice to the ALRC.(13)

In my view however, these changes do not go far enough. While noting the comments of Davies Collison Cave about the limited nature of patent rights (14), there would still seem to be grounds for considerable concern given the evidence of HGSA that "gene patents are likely to inflate prices, the precise impact is not yet known".(15) When these are considered alongside the admittedly qualified remarks of the Department of Health and Ageing regarding the potential impact on State and Commonwealth health budgets (16), the case for urgent legal reform seems overwhelming. As such, I recommend that we draw on English legal history to solve the contemporary problem of gene patents. Feudal tenure could be quite useful here, even though the era of knight service, villeinage and the like is long since gone. Consider this description:

"...Under a hypothetically perfect and complete feudal economy, the type of tenure would have denoted not merely the services due from a tenant but also his status and way of life. The king at the top had the greatest bargaining power, the peasant at the bottom none. Everyone had his place in the hierarchy: tenure, rank and economic position were interdependent...Life was not, however, as neat as this in reality...A man might hold different lands for different kinds of service, or the same land for a mixture of services. It was quite possible for a tenant to hold part of his lands by knight-service and another part by socage. Moreover, tenure by knight-service did not make the tenant a knight, any more than tenure in villeinage made him a villein..." (17)

Now I will modernise the description and replace the concept of land holdings with a concept of personal holdings in DNA. Placing the individual at the top of the hierarchy, who could on reasonable terms, invite a variety of interested scientific parties to study his or her DNA, satisfies my concern that researchers could too easily exploit research participants. Your commentary on the Greenberg case in America exemplifies the problem I am trying to avoid by asserting a form of limited individual dominion over one's DNA.(18) The limitation on an individual's dominion would come in the form of the contracts which a person entered with various scientific interests being placed on a public register overseen by an independent authority. This was a suggestion I made to you during the joint ALRC and NHMRC inquiry into the protection of human genetic information; I restate it now for the purposes of this inquiry, as a means of securing each individual's proper position in the debate over proprietary interests in DNA.(19)

This argument can be justified on the number of grounds. Firstly, the ALRC

and others appear quite willing to acknowledge a special genetic heritage when it comes to the issue of indigenous peoples' DNA, and as mentioned earlier, the NHMRC has released guidelines on the conduct of indigenous health research.(20) I have no difficulty with this, as long as it is acknowledged that all people can potentially place great value, be it economic, social or historical, on their genetic make-up. Otherwise, guidelines aimed at one socio-political grouping could be seen as discriminatory and, certainly not in keeping with the generally egalitarian values of Australia. Prime Minister John Howard encapsulated this ethos when he said:

"...My love of Australia is based upon my innate embrace of a society that judges people according to their decency and their worth and not according to how much money they earn or what school they went to or what class they might think they belong to or what country they were born in or what colour of their skin it maybe, or what religion they profess, or what nationality they might still treasure other than their Australian nationality..." (21)

I endorse these sentiments.

Secondly, it is my belief that ownership of property empowers the individual and heightens individual human dignity. Dominion in my model allows all individuals to exercise freedom of choice in the provision (or not) of genetic samples for study. It is noted that the ALRC in a previous report had concluded that "granting individuals new property rights in their own genetic material would not be the most effective means by which regulate the collection use of such material".(22) My response is that I cannot help feeling there is some 'scientific socialism by stealth' occurring in this matter. What I mean by this statement is that while the ALRC acknowledges that the patent system is designed to deal with the concern that a resource held in common may not be utilised to its optimum benefit (23), you seem quite happy to leave the concept of 'benefit sharing' to the discretion of individual tertiary institutions and other like facilities, with their 'noble' though unenforceable codes of conduct and ethics statements.(24) Under these circumstances, I don't see many opportunities for the 'common man' other than him being reduced to the standing of a medieval peasant in feudal England, in terms of his influence over the use of his genetic material. Not all genetic research will necessarily lead to products that people will benefit from later as consumers (25) and, such an argument does not completely answer the question of why individuals should not benefit at an earlier stage in the process? Even if royalties to the individual are held in trust by the 'independent oversight authority' mentioned earlier, this is a step in the right direction.

You might ask why I want all this reform? The answer is that I have a distinct personal interest; ever since Christopher Reeve visited Sydney as a guest of Premier Bob Carr, I have been convinced that his spinal lesion and my cerebral palsy can ultimately be ameliorated by stem cell technology. Let me put this in context for you. On 1995 figures, 324,670 men and 139,760 women received the disability support pension, while 22,300 people received the mobility allowance and 87,120 children received the child disability allowance. (26) Can you imagine a world where disability is a concept and an experience consigned to history? I can! Such a change would stand alongside the harnessing of fire, Magellan's circumnavigation of the

globe, the development and wide use of the printing press, the dawning of the Enlightenment and Neil Armstrong's step onto the lunar surface. And not only will such a development immeasurably improve the quality of life for many millions across the globe, but it will save billions in welfare payments from Treasuries around the developed world.

To achieve this, we must act immediately to ensure that patents do not end up acting like legal "Berlin Wall's", separating individuals from potential cures to their diseases, and forcing anyone who chooses to challenge the legal orthodoxy to enter a "no man's land" where "patent infringers" face significant judicial penalty. Having said that, I acknowledge the ALRC's "preliminary view...that there is limited evidence to date that gene patents have had any significant adverse effect on the conduct of genetic research in Australia".(27) One must admit however, having considered the contents of Chapter 13 of Discussion Paper 68, I would not be prepared to declare such a view, be it 'preliminary' or otherwise. My concerns are only increased when considering the comments of the Ontario Government's report into gene patents. Given that these comments related directly to stem cell technology, I took particular notice of them:

"...Since stem cells have the potential to be developed into tissues and organs, the potential use of them for curing and treating many conditions and diseases is enormous. The patenting of stem cells may well mean that exclusive royalty fees will have to be paid in the future for replacement organs and tissues, developed in this manner, raising significant implications for publicly funded health care systems..." (28)

Again, I have cause to fear that individuals in need will be reduced to peasants, dependent on the largesse and philanthropic spasms of research institutions and corporations holding genetic patents. This is completely unacceptable and leads to much uncertainty. For example, it would appear that the company Genetic Technologies is selectively enforcing the genetic patents it holds. While the company has limited itself to enforcing only those patents which are concerned with non-coding DNA, this appears to be merely a company 'policy' which could conceivably be changed by executive fiat at any time.(29) Clearly, negative impacts of genetic patenting are already being felt with "a major biotechnology company, Applera Corporation...facing an infringement action for refusing to obtain a licence to use GTG's non-coding patents".(30) Given the likeness in corporate name, it is compelling to draw an analogy between the decline of the Apple Mac thanks to the market power of the Microsoft Corporation, and the potential fate of Applera's vital scientific work in the face of the GTG legal onslaught.

GTG would be likely to point to two important facts. The first is the reality that what they are patenting is not DNA but cDNA. This is a copy of the original, as explained in GlaxoSmithKline's submission to the ALRC.(31) Secondly, as indicated earlier, patent rights do not equate to real/physical property rights.(32) Nonetheless, many of my concerns remain and they are only emphasised by the comments of the RCPA:

"...All individuals have natural ownership of their genetic material, which they share with their genetic relatives and ultimately with all life. According to the principles of the patent law, because genomic DNA is a

naturally occurring substance, it is not patentable. Yet, tens of thousands of patents have been granted on DNA sequences that are identical to their natural form. These patents effectively confer ownership rights because they allow these sequences to be used, sold, traded, licensed and can be used to prevent others from doing so. The effect is that gene patents rob individuals of their natural ownership of their genetic material..." (33)

The ALRC shows its fairly timid response when you conclude that "the Patents Act should not be amended to exclude genetic materials or technologies from patentability".(34) Part of your concern is the effect such an amendment would have on Australia's compliance with the 1994 TRIPS Agreement. However, as cited above, the RCPA indicates that each individual has natural ownership of their DNA, but that this ownership has been appropriated by gene patent holders. I ask, at least at the level of legal theory, whether this appropriation has been conducted by the due process of law and whether appropriate compensation has been paid? On the first count, we can provide an affirmative answer because patents are issued by the duly constituted authority in the form of IP Australia. On the second count, it is not so clear, for while patents are clearly a form of property over which the Commonwealth has ability to make laws under section 51 (xxxii) of the Constitution, it is unclear whether "the acquisition of property (has been) on just terms".(35) Where is the compensation on just terms?

I also draw an analogy between the interest that the Commonwealth Government takes in the foreign acquisition of Australian companies and resources, as opposed to the somewhat more 'relaxed' position taken on the acquisition of DNA. For example, the Foreign Investment Review Board undertakes a long and complicated process to determine whether a foreigner will be permitted to invest in an Australian firm. The Australian Competition and Consumer Commission can also have an important role to play; ultimately, the Federal Treasurer applies a "national interest test" to investment recommendations referred to him. I would like to see a similarly rigorous process applied to the granting of DNA patents, where the provisions of the TRIPS Agreement are applied on a case-by-case basis and the responsible Minister has applied a national interest test to the granting of a patent. The furnishing of advice to the Minister could be another responsibility of my earlier mentioned 'independent oversight authority'. This is likely to both require an amendment to the Patents Act and a partial renegotiation of the TRIPS Agreement, but both of these changes would be in the national interest.

Furthermore, the principle that individuals have natural ownership of their genomic DNA has two other potential consequences. The first is that the test case could be mounted in the public interest, to determine the exact nature and scope of this ownership, as well as the proper compensation due from patent holders. Tilbury, Noone and Kercher explain public interest actions this way:

"...The duty to enforce public obligations rests primary on the Attorney-General, acting in ex officio capacity on her or his own initiative. However, private individuals may initiate enforcement activity through the civil courts in three circumstances: (1) where the Attorney-General gives consent to a relator action in the Attorney's name; (2) where the individual has a sufficient private interest to take the action in her or his own name; and (3) where the statute itself allows

private enforcement to go ahead. It is now clear that public rights which can be enforced by injunction need not contain a proprietary element: *Cooney v Ku-ring-gai Municipality* (1963) 114 CLR 582..." (36)

I would suggest (like the RCPA) that all individuals have ownership of their genomic DNA and as such, any person could satisfy the second test outlined above and initiate private action. Secondly, I would recommend that the statutory ability to initiate such action also be provided to my 'independent oversight authority'. From this point, we would be faced with a very interesting question: namely, is it companies like GTG who are having their patents infringed, or is the proper characterisation one where the rest of humanity is having its property infringed at first instance, by GTG?

GTG and others may respond by pointing out that what they are patenting is cDNA, which is "DNA...lacking the interspersed intron sequences (and as such) cDNA does not occur naturally".(37) If cDNA can be distinguished from DNA, then individuals can arguably appropriate, research and benefit from their DNA without infringing on GTG's patents (because these relate to cDNA). This distinction is important, because as I explained to you in my prior submission:

"...'Patent law has...rules, such as the doctrine of equivalents and the so-called 'means plus function' test. Both of these can broaden or narrow the effective scope of claims to a patent. Both doctrines try to discern the difference between a truly new invention which deserves a patent, and an insubstantial variation on an older invention which deserves no protection'. A short time after saying this, Karnow goes on to demonstrate just how similar two works can be prior to judicial objection. He says: 'Normally, anything that is substantially similar to the original is enough for copyright liability. Substantial similarity catches a lot of rough approximations -- it provides a thick shield around the original work. This then establishes powerful protection for the original creation. Anything that comes close as an infringement. But while the original's originality is at a bare minimum and creativity at its lowest tide, the law provides nothing but thin protection. The new replicator will be punished only (if) he makes a virtually identical copy. When judges apply the virtual identical test, very small differences -- just a little morph or tweak -- will be enough to distinguish the new work away from the original; and that will insulate the new work from legal attack'..."(38)

Drawing on these principles, cDNA is protected from action by individuals claiming their DNA has been copied (and their property appropriated) without consent. This is because cDNA contains that very small difference that will distinguish it from the original; the interspersed intron sequences. However, by the same token I would challenge the ability of GTG and others to prevent research facilities and other interested parties studying DNA. Their patents relate to cDNA, a distinguishably different compound. As long as individuals are prepared to give their own samples of naturally occurring DNA material (invariably containing the intron sequences), then the cDNA patents will not be effected. This makes the role of my 'independent oversight authority' and its public register of research agreements all the more important. Ultimately, I would draw an analogy between what I am arguing here and the Australian experience of Native Title. In the cases of *Mabo* and *Wik*, the High Court of Australia found that Native Title had survived English settlement and could coexist with Crown sovereignty and

some forms of pastoral lease. In the case of DNA, I am arguing that upon similar principles the common law should be able to find title for each individual in their DNA which remains unaffected by the patents covering cDNA. This introduces a form of 'Native Title' which is available to everybody, regardless of race, colour, creed or history and would be in accord with the quintessential Australian values enunciated by the Prime Minister and quoted earlier.(39)

To see the principle of 'Universal Native Title' enunciated in legislation would be even better. As such, I would enthusiastically support the proclamation of the Genetic Research and Diagnostic Access Bill 2002 and/or the Canadian equivalent described in Discussion Paper 68.(40) Such legislative provisions would give individuals unambiguous rights to the use and enjoyment of their genetic material for the benefit of their own personal health and welfare. Individuals could arrange with scientists (or vice versa) to provide samples for study, towards the treatment and/or cure of particular ailments they were suffering, without infringing broad commercial patents. This process of research, aimed at individual betterment and initiative, could be partly funded by a percentage of application and processing fees for the lodgement of patent applications going to a public fund styled on Medicare and administered by my 'independent oversight authority'. Persons of means who also had disabilities and ailments could conceivably fund studies on their own samples through use of the private health-care funds. The private funds could conceivably draw up risk benefit analyses of potential research, noting of course that success would mean that a fund member with a disability would have positive outcome where they would make less future claims on the fund, because of their improved medical condition.

Another thing that legislative action needs to achieve is a correction to IP Australia's Manual. I became concerned when reading your list of exclusions from patentability, as this applied to "human beings and the biological processes for their generation". (41) The first dot point could be interpreted as meaning you understand the concept of humanity as an unbroken continuum from fertilised ova to complete human. I must ask you to clarify this, as it has grave and unfortunate ramifications for the development of the science on which I am depending to ameliorate disability and, as indicated earlier, make it an historical curiosity. To achieve this, it is my understanding of the science that somatic cell nuclear transfer is the process required to be undertaken.(42) This process requires a blastocyst, which is an egg five or six days after fertilisation.(43) Then:

"...Embryonic stem cells can be removed from the blastocyst with a thin glass needle, or by a biochemical dissociation of the cells...The embryonic stem cells can be placed in a culture medium, where they can replicate and remain undifferentiated indefinitely. They can also be frozen and stored, or grown in culture to differentiate into a wide range of specialised cell types or 'lineages'..." (44)

To ensure that research may continue, we must clarify at law that the blastocyst is not human. I acknowledge that there is a body of opinion that suggests humanity exists from the moment of conception.(45) However, significant opinion leaders including the head of the Anglican Church in Australia, Dr Peter Carnley have cast grave doubt on this simplistic notion.

Dr Carnley has written:

"...The Latin root of 'conception' means 'to hold on to'. It refers to the withholding of menstrual blood by a pregnant woman from the point of the implantation of the embryo in the wall of the uterus. This signals that the process of conception is not just internal to the embryo; the external process of implantation must also occur before we can justifiably say that with 'time and nourishment' it will grow to maturity. This is also what makes it possible for us to say both that 'a child has been conceived' and that 'a mother has conceived a child' at roughly the same time. As the last point at which twinning can occur, this happens about 14 days after fertilisation..." (46)

I take great heart from the fact that a Churchman would take such an enlightened and considered view. Furthermore, if this is the true point of conception then it could be argued that this is the proper point from which to start considering something as "human". Therefore, remembering the rules of statutory construction, all words of a statute must be given their full, commonsense meaning. As such, if the Federal Parliament has legislated to prohibit human cloning, then the meaning of the word "human" in the phrase has great significance. I submit that you could quite reasonably say, on Dr Carnley's considered view, that anything which was under 14 days old, had not made it to a uterus wall and (perhaps through scientific intervention) was not meant to get there, was not "human" under the Act. I believe that this argument makes it possible to continue the vital work to refine somatic cell nuclear transfer, and would encourage both the ALRC and IP Australia to move in that direction and fulfil the Enlightenment of the 21st century -- a world without disability.

Beyond this, P. P. McGuinness (who incidentally, is not a supporter of embryo research) draws our attention to the inconsistencies in the supposed arguments of some religious leaders and so-called pro-life advocates, in their insistence that humanity begins at the point of conception; this was not the view of noted religious scholars. Mr McGuinness wrote in the Sydney Morning Herald recently:

"...Let us dispose of the theological arguments. First, one has to assume the existence of a god. Failing that, no theological argument is of any concern to non-believers. Second, there is the problem for believers in the argument that the soul (whatever that may be) enters the embryo at the instant of conception. This was not part of the doctrine of the greatest of Christian theologians, Thomas Aquinas, who thought the soul entered the embryo at the 'quickening', about the fifth month of pregnancy..." (47)

While this may somewhat dispose of the religious arguments against stem cell research and other studies involving human DNA, there are a few more points with regard to patents that I feel I need to address. The first, is the alleged importance of patents to the biotechnology industry. While noting the comments of Biotechnology Australia (48), it would appear that maintaining secrecy of inventions, commercial-in-confidence information and the like is next to impossible in either the public or private sector. This was emphasised by former NSW Auditor-General Tony Harris when he told the Senate that:

"...both the government and private sector have hundreds of people involved in examining (tenders), from lawyers to technical experts, and hence confidentiality could not easily be ensured for long..." (49)

If this is the environment in which major private and public contractors must operate in the course of day-to-day business, then I fail to see why the biotechnology business should be assumed to operate under different business practices. Therefore, it could be argued that as soon as a patent application was examined and IP Australia decided to grant one, 'confidentiality could not easily be ensured for long'. As a consequence, while Suzanne Scotchmer may well be able to mount effective arguments about the risks of upstream or initial research, leading to a defence of the grant of a broad patent (50), I doubt her arguments are of much practical use in light of Mr Harris's earlier cited comments.

As a result, while I have no difficulty with IP Australia continuing to issue broad patents as they believe the applications may warrant it, I would make several recommendations. Firstly, broad patents should come with a number of caveats. It was noted earlier that IP Australia will refine its Manual with regard to uses.(51) These could provide a basis to develop a sliding scale of royalty payments to patent holders, depending on how well the use of a DNA sequence had been defined in their application. Equally, where the use was only 'substantial' or 'credible' and not 'specific', an argument could be made that researchers did not hold a sufficiently good 'title' (to use a property analogy) to exclude others. In short, what I am suggesting is a revisitation of the feudal title I discussed earlier. This structure had room to allow land and other resources (as well as military obligations to a feudal Lord) to be held in a variety of capacities by a variety of people at different points in the feudal hierarchy. To address questions of equity and access, as well as ensuring scientists who wish to enter the 'market' to study DNA are not unduly inhibited, a system of multilayered, limited and interlinked proprietary holdings may need to be considered. Additionally, if IP Australia does not do this already, I would recommend that it places all the DNA patents which it grants on a publicly accessible register. This ensures transparency, equity and access. Furthermore, considering the advice of Mr Harris, attempting to maintain confidentiality is in many ways a forlorn hope and a facade.

Yours sincerely,

Adam Johnston

End notes

1. Australian Law Reform Commission, Gene Patenting and Human Health, Discussion Paper 68, Commonwealth of Australia, p. 78
2. See *ibid.*, pp. 321-325
3. *Ibid.*, p. 324
4. *Ibid.*, p. 75
5. Higher Education Review, Submission 42, Adam Johnston -- 24 June 2002, available at <http://www.backingaustraliasfuture.gov.au/submissions/crossroads/pdf/42.pdf>
6. *Ibid*
7. Johnston, Adam, Submission to the Australian Law Reform Commission Regarding Issues Paper 27, dated 27 September 2003 (e-mailed Monday 29

September 2003)

8. See Australian Law Reform Commission, *op cit.*, p. 75
9. *Ibid.*, p. 353
10. See *ibid.*, p. 151
11. Refer to footnote 7, above
12. See Australian Law Reform Commission, *op cit.*, p. 158
13. See *ibid.*, p. 161
14. See *ibid.*, p. 135
15. *Ibid.*, p. 552
16. See *ibid.*, p. 553
17. Baker, J. H., *An Introduction to English Legal History*, 3rd ed, Butterworths 1990, p. 260
18. See Australian Law Reform Commission, *op cit.*, p. 74
19. See Australian Law Reform Commission and National Health and Medical Research Council, *Protection of Human Genetic Information: Discussion Paper 66*, Commonwealth of Australia, August 2002, pp. 457-458
20. See Australian Law Reform Commission, *op cit.*, p. 76-78
21. Simms, Marian, and John Warhurst (eds), *Howard's Agenda: The 1998 Australian Election*, University of Queensland Press in association with the API Network, 2000, p. 21
22. Australian Law Reform Commission, *op cit.*, p. 72
23. See *ibid.*, p. 63
24. See *ibid.*, pp. 73-78
25. See *ibid.*, p. 75
26. See Blackall, Simon (Project Director), *The Book of Australia: the Essential Information Book on Everything Australian for Office, School and Home -- Almanac 1997-98*, The Watermark Press 1997, p. 189
27. Australian Law Reform Commission, *op cit.*, p. 371
28. *Ibid.*, p. 599
29. See *ibid.*, pp. 576-578
30. *Ibid.*, p. 578
31. See *ibid.*, p. 140
32. Refer to footnote 14, above
33. Australian Law Reform Commission, *op cit.*, p. 71
34. *Ibid.*, p. 184
35. Commonwealth of Australia, *The Constitution as altered to 31 October 1986*, Commonwealth Government Printer, 1990, p. 18
36. Tilbury, Michael and Michael Noone and Bruce Kercher, *Remedies: Commentary and Materials*, 2nd ed, L. B. C. Casebooks, The Law Book Company 1993, p. 750
37. Australian Law Reform Commission, *op cit.*, p. 140
38. Refer to footnote 7, above
39. Refer to footnote 21, above
40. See Australian Law Reform Commission, *op cit.*, pp. 389-390
41. *Ibid.*, p. 177
42. See House Of Representatives Standing Committee on Legal and Constitutional Affairs, *Human Cloning: Scientific, Ethical and Military Aspects of Human Cloning and Stem Cell Research*, The Parliament of the Commonwealth of Australia, August 2001, pp. 19-20
43. See Senate Community Affairs Legislation Committee, *Provisions of the Research Involving Embryos and Prohibition of Human Cloning Bill 2002*, Parliament of the Commonwealth of Australia, October 2002, p. 10
44. *Ibid.*, pp. 10-11
45. See *ibid.*, pp. 42-43

46. Carnley, Dr Peter, In the Beginning, The Bulletin with Newsweek, August 28 2002, available at <http://bulletin.ninemsn.com.au>
47. McGuinness, P. P., Embryo culling is an issue of concern for all, Sydney Morning Herald, March 9, 2004, available at <http://smh.com.au>
48. See Australian Law Reform Commission, op cit., p. 516
49. Finance and Public Administration References Committee, The Necessity for Public Accountability of all Government Services Provided by Government Contactors: Second Report, Australian Senate, May 1998, Chapter 5, p. 3 of 18, available at [http://www.aph.gov.au/senate/committee/fapa\\_ctte/contracting/contracting.ref](http://www.aph.gov.au/senate/committee/fapa_ctte/contracting/contracting.ref)
50. See Advisory Council on Intellectual Property, Patents and Experimental Use: Issues Paper, Australian Government, February 2004, p. 16
51. Refer to footnote 13, above