2:04 p.m. Monday, December 5, 1994

[Chairman: Mr. Dunford]

MR. CHAIRMAN: I would ask the committee members to come to attention please, including Mr. Havelock. [interjections]

DR. MASSEY: That counts as a question.

MR. CHAIRMAN: That counts as a question; you got it.

MR. SAPERS: But not one of ours.

MR. CHAIRMAN: Not one of yours, no. Isn't he one of yours?

MR. SAPERS: No, he's one of yours.

MR. CHAIRMAN: Oh, really. All this time I thought he was yours.

MR. HAVELOCK: Don't fight over me, guys.

MR. CHAIRMAN: Is there a member who wishes to read a recommendation into the record? Not seeing anything, an inquiry from Heather Forsyth. You had a question?

MRS. FORSYTH: I want on the list.

MR. CHAIRMAN: Oh, I see. Okay.

All right. I would like to welcome this afternoon Dr. Spence and Mr. Libin. You've been here before. We've not changed the procedure. We will hear your presentation and then we will start the questioning, first with the opposition members. Then we'll go to a government member, and we'll just alternate back and forth. I believe I called the meeting to order at approximately 2:04 p.m., so we'll be here until 4:04 p.m. or whenever questions cease, whichever first occurs.

When they're questioning, I just would advise you that while we call it a main question and two supplementaries, I have been very flexible. A supplementary may not tie into the main question, and I would simply look for your co-operation then in dealing with that. If any member appears to be getting way off topic, then it'd be my responsibility to try and bring that more into focus. Certainly the more you can co-operate with us, the more co-operation I get from the members and the easier the job I have. So with that, perhaps we'll get started.

I understand that you have a presentation in the form of an audiovisual presentation. You're certainly welcome now to let us know what you came to tell us.

MR. LIBIN: Thank you, Mr. Chairman. Thank you for inviting Dr. Spence and me here today to meet with you. We are pleased to share the successes of the Alberta Heritage Foundation for Medical Research and tell you how our activities contribute to the health of Albertans and to the province's economy. We are particularly excited about the way the foundation is responding to some of the long-term needs of a changing health care system, and Dr. Spence will be talking about that later.

First, I'll give you some background information about the foundation because some of you are new to this standing committee. Recognizing that building research is a long-term investment, the government placed the foundation at arm's length so that its medical research thrust would not be influenced by the hills and valleys of ever-changing politics. The wisdom and foresight of government in setting up an independent foundation in this way has been frequently praised by representatives of other provincial governments, federal officials, industry, and international visitors.

HFMR is governed by a nine-member board of trustees appointed by the Lieutenant Governor in Council. Half are public members, and half are nominated by the universities of Alberta and Calgary, the College of Physicians and Surgeons, and the MSI foundation. Dr. Matthew Spence is the president and chief executive officer of the foundation. The business office is in Edmonton and houses a staff of 17.

The science we support is spread between Edmonton and Calgary and impacts over all our province. The board of trustees and the president are advised by an international scientific advisory council and other groups, including committees of researchers from across North America, who assess applications for awards. Our funds primarily support a personnel program; that is, we support people. In co-operation with the universities of Alberta and Calgary we recruit researchers to work at the universities and teaching hospitals with salaries paid by HFMR and with the establishment grants to start up their research. We also support student researchers in training, who work with established scientists. In the last 14 years we have provided research career training for more than 3,000 young people. Since 1980 the foundation has contributed more than $475 million directly to the scientific community in Alberta universities and their affiliated institutions.

What has been accomplished? In summary, Alberta has better medical education and better health care. The province also has spin-off economic activity based on innovations coming out of AHFMR-supported labs and the economic benefits of more than $65 million annually from outside funding attracted to Alberta by the expertise of heritage researchers. There are 150 senior researchers at the universities of Alberta and Calgary, and many of them are gaining international reputations for their advances in such areas as diabetes, electrical rhythm therapy for heart attack patients, infectious diseases, the genetics of cancer, basic cell communication, nerve regeneration, and other areas. Within these areas, some of the scientists are also physicians available for specialized patient care, and other researchers provide backup diagnostic and other services for physicians.

Some of you may remember that a little over a year ago an independent international board of review came to Alberta to examine AHFMR and decided that largely because of the foundation's activities, Alberta has become one of the top 10 medical research centres in North America. Heritage researchers continue to make advances in many fields.

A review of news stories of the past three months reveals this. A University of Calgary scientist discovered two new genes for susceptibility to one of the most common chronic serious diseases, diabetes. Other Calgary researchers are testing new treatments to reduce brain damage after strokes. Another scientist has made a new aspirin-like drug which does not have the common side effects of taking aspirin daily: the risk of potentially deadly stomach ulcers. You may also have heard about the new Alberta health knowledge network, which has a potential to revolutionize medical decision-making. Funded by the U of A and the U of C, the foundation, and the College of Physicians and Surgeons of Alberta, this electronic library makes the latest medical findings available immediately to Alberta physicians, pharmacists, nurses, and other health care providers. Eventually, any of us will be able to check out our own health concern. This is a concrete example of how AHFMR responds to the changing needs of the community. We provide start-up funds for the network, which is expected to

become self-supporting when there is full service across the province.

Lastly, on behalf of the trustees I'd like to focus on key issues of these times. Fiscal management: our operations are supported by a portion of the interest revenue from our endowment so that we do not contribute to the general government spending or the deficit. We are conscious of our fiscal responsibility to the people of Alberta, and therefore we operate on four principles. First, we only invest in excellence. We have a stringent review system which uses scientific and health advisors from Alberta, Canada, and all over the world to ensure we wisely choose whom and what to fund. Secondly, we retain purchasing power for the future by returning a portion of our income to the endowment. Thirdly, we co-ordinate our funding with other agencies to ensure our support is complementary, with no duplication.

If you look on page 24 of our annual report, you will find a list of some of our funding partners. We provide researchers with their salary, establishment grants, and students and fellows, and they look elsewhere for special project grants and operating funds. Because AHFMR researchers are so high ranking, they now attract more than $2 for every foundation dollar invested in them. These outside funds come from other agencies such as the Medical Research Council, from voluntary groups such as the Heart and Stroke Foundation, from community fund drives, and from industry.

Our fourth fiscal principle is encouraging scientists to commercialize their innovations and where possible to develop new companies in Alberta. We do this through our technology commercialization program. I'll give you an example of this activity. Members of the committee from Calgary will have seen many news stories about Dr. Sam Weiss and Dr. Brent Reynolds at the U of C. Their discovery about how nerve cells can recover from injury has led them to form a spin-off biotech company which has now received more than $3 million in funding from industry. We're investing carefully, and judging by the accomplishments of the researchers, we're investing wisely.

2:14

We are proceeding with equal care in our relative-need program of health research. We have brought in experts from around the world to consult with us, with Alberta Health, and with health care providers in Alberta to help us determine the priorities for health research. We are looking at areas such as health care outcomes, rural health, pharmacoeconomics, and the science of identifying the most recent health problems in a geographical area. The trustees are proud that the HFMR has the research base Alberta needs to address the challenges presented by our health care system. As the demands upon it grow faster than the resources to sustain it, the foundation has the expertise of a strong research community, a program to train young people in new research skills, and an international network of advisers. We are confident we will serve Alberta as well in the area of health research as we have in the biomedical research that has put Alberta on the world map.

We are grateful for the continuing support of your government, and we do invite you and your constituents to visit our labs so you can see for yourself what all the excitement is about.

I now call on Dr. Spence to show you some of the scientists who are making discoveries and some of the patients who are better for it. He will review our new directions in health research.

DR. SPENCE: If this forest of technology here will work appropriately, what I'd like to do is show you pictorially some of the things that the foundation is all about. So let's see if I can make this thing start right. There we go. Yes, it looks like things are starting right because the foundation logo comes up, which is always a good sign when I begin.

What I'd like to do is to just briefly review with you some of the advances and some of the excitement we feel about the things that the foundation is doing in the province of Alberta. What I hope to show you is just a little bit about the foundation itself and then turn to the people that we've helped. What I'm going to be talking about are Albertans, people that live in your community and mine, and what some of the foundation activities have meant to them.

Now, we really started out with the people of Alberta because it was the people of Alberta who, through the wisdom of the government some 14 years ago, put the endowment aside to fund medical and health research in the province. We were supposed to invest that in research and discovery, and that research and discovery was to lead to knowledge and application, and we will apply that back for the benefit of the people of Alberta. That's what I call closing the loop, and we close that loop two ways. We apply this knowledge through health back for the benefit of the people of Alberta through teaching and through patient care, though we also apply it through technology commercialization, because in some of these the private sector is the best way to bring forward the advances in health. So through the commercialization technology, private companies, the economic spin-offs from these, and through the health system itself we try to return the benefits from the endowment.

Now, the principle that we have built the foundation on has been that we are in an international competition and ideas have no geographic boundaries. So what happens is that an idea in Alberta has to compete with ideas from around the world, and ideas from around the world are available to be applied in Alberta. So we're truly a global village, but in order to compete in this global village, we have to be the best in the business. We have to be as good as anybody anywhere in the world. To do that, what we have done in the foundation is ask people from around the world to advise us on what is the best science to invest in and to assure us that Alberta's science is second to none.

So the sort of people that we assemble on our advisory committees are a group of brigands like this group here. Let me introduce you to just two of them. The guy with the bow tie there on your left-hand side is the director of health of the British national health service. He directs the entire research operation in Great Britain in the health area. He has come to Alberta and advised us on how to carry out health research in this province. The gentleman sitting in the back row is the chairman of the Rockefeller Foundation. He is heavily involved in international health and brings a unique perspective to the types of activities that we would like to mount in Alberta for the benefit of the health of Albertans. So that's the group that advises.

Now, whom do we invest in? We invest in Albertans and in people we attract to Alberta from elsewhere. This young man here is an example of our investment. We've invested in him as a student, and we invested in him as a fellow. We sent him away to train. He came back to Alberta, and we've established and supported his laboratory and helped to support his salary. He's an orthopedic surgeon. He's one of the best orthopedic surgeons, I think – and obviously I'm totally biased – in North America. He's an expert in joint injury and in athletic injury and in arthritis and other diseases. He is a spark plug of the McCaig Centre in Calgary, which I think is one of our foremost arthritis and joint injury groups anywhere in the world. So he's the sort of person that we invest in.

What happens when we invest in people like this? Well, let me show you a few patients and examples of what has happened in

terms of the health care system. I'm not really stressing the "gee whiz" of this. What I'd really like to stress is that as a result of the activities of young men like this, people are living healthier longer, and they don't cost our health care system as much.

Let me let one of them tell you about this. The film clip you're going to see is of a gentleman who had a heart attack. He was basically saved by types of therapy developed by heritage researchers. He now has a pacemaker sitting in his chest which is keeping his heart going, and as a result of that he is not back in hospital. He is not an invalid; he is active at home and costing our health care system far less. This is obviously Edmonton. It wouldn't be Calgary, with snow on the ground.

> One night I was watching T.V., and I got this bad pain in my chest. Of course, when I went to the hospital – I didn't know, but my wife was saying – they told them, the kids, that I wouldn't last, that I wouldn't be there by morning. That's how bad I was. I proved to them that I still can kick.

He's at home. He's running a snowblower. He's doing everything that he would like to do. He's an example, I think, of one of the triumphs in medicine.

Here is probably one of the most famous Alberta citizens in medical circles. She's diabetic. She was a recipient of one of the first islet cell transplants, where you take the cells that produce insulin in your body and inject them into a diabetic. In her the transplant took successfully, and she went for a period of two years without insulin injections, almost unheard of in medical literature to date. We're currently into the second wave of these types of studies, trying to figure out ways to stop the body from rejecting these cells. The hope of this type of therapy is that diabetics will be able to live without insulin and that their disease will be conquered. Diabetes is one of the leading causes of blindness, of kidney disease, and of heart disease, and if we can lick that one, we can truly save the health system enormous amounts of money.

This woman is another triumph. Notice her hands. She has very severe arthritis. She's an example of a very motivated person who recognized that a lot of what happens in arthritis can be helped by your own attitude and by self-help. She, together with some heritage investigators, has formed self-help groups for this disease, and they work together to keep each other out of the physician's office and out of the hospital. An example of people taking responsibility for their own health, catalyzed by heritage-funded investigators.

This picture takes us to another disease. This is a very loving couple. I like this picture because it shows an enormous amount of family love. There's a tragedy in this picture, and it's in the man's eyes, because they are totally empty. This man has Alzheimer 's disease, and this family is supported by a clinic which has been set up by one of the heritage investigators, a young woman who dedicated her life to beating Alzheimer 's disease and eventually, unfortunately, succumbed to cancer, but her clinic continues to support patients with Alzheimer 's disease throughout Alberta. Just supporting these people is not enough. We've got to try to lick the disease, and the hope in Alzheimer 's is in understanding the brain and how to stop the brain from degenerating. Until a few years ago I'd have said that we weren't close to it, but now, thanks to a young heritage investigator, we're getting closer. But let him tell you about it.

> What makes injury relating to the brain so devastating is that when cells are lost, it's been thought that they cannot be replaced. Up until a couple of years ago I, like everyone else, believed that cells of the brain could not be replaced. But what we found is that single cells taken out of an adult mammal's brain and stimulated with a growth factor, a protein that's normally found in the body, will begin to divide. They'll divide and form the main brain cell types that make up the normal brain.
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> What does this mean? It means that if you can produce all of these normal cell types from a very few number of cells in the adult brain, then the adult brain really does have the power to repair itself. We hope that our research using the approaches that we've now got in the culture dishes might be eventually applied to man after injury or disease to allow for brain repair.

That's a very exciting story, because up until about two or three years ago we didn't think the brain could repair itself. It looks like they're on track for a really breakthrough discovery, and the reason I can be reasonably assured of that is that multinational companies are investing in this technology now in Alberta in an effort to develop it up and use it for therapies of stroke, Parkinson's disease, multiple sclerosis, and others.

2:24

Now, this type of activity has a major effect on the Alberta economy. We judge that for every dollar that we invest, two more dollars come into the province, but it's not stopping just there. What I'd like to show you is an example of what actually is happening at the level of the medical schools in this province. The foundation funding of research in this province from 1980 through to 1993 is shown in green. You'll notice that our funding plateau is about the mid-80s, because we were ramping back our spending in order not to erode the endowment, so spending has continued relatively stationary in terms of amounts across and through into the '90s. But this is the funding attracted into Alberta by heritage-catalyzed activity, and you can see that that line continues to rise. I am convinced that that line will rise again in the future as more investment is attracted to this province on the basis of the types of things that are being developed in this province by people in the heritage-funded laboratories.

Now, other examples. Ethics. There are a lot of medical advances and health advances coming forward from a variety of places, not just Alberta but around the world, about which there are enormous ethical issues, and we have to ask questions about this.

This woman is one of the most brilliant scholars in Canada. She comes from Quebec. She's come to Alberta to work here for a period of time in genetic issues and the law. So they're looking at ethics, genetics, and the law in a very imaginative activity at the Health Law Institute at the University of Alberta that I am sure will blaze the trail for jurisprudence and other areas that are related to medical advances.

Away from the ethical area. This young man is Steve Hrudey, and he is an environmental engineer. He is funded by heritage, but he's also funded by a number of other organizations to put together a consortium which is dealing with the environment and health, again an area with which we are all concerned and in which Steve and his group are going to have an enormous impact in the future.

Babes and moms, a very important area. We have, I think, a major research effort going on in this province in the area of perinatology and the area of nourishment of children in the womb. We're also very interested in women's health issues as they relate to children but also as they relate to families and to women themselves. The foundation, again in partnership with other partners here in the province and elsewhere, is putting together a consortium here in Alberta that I'm hopeful will put together one of the foremost women's health institutes, if you like, for looking at challenges related to women's health anywhere in North America.

But what of the future? The future is really bound up in little monkeys like this in the tree, but where do we see the foundation moving in the future? Well, we see our research continuing to impact out in the community, in the regional health authorities, to help the regional health authorities assemble the evidence and the information that they need to make decisions, to measure outcomes, what treatments are better, to measure the best ways of delivering health in our rural communities, to look at other strategies for improving health, to look at prevention, to look at the promotion of health and the promotion of healthy attitudes and self-help attitudes within the community. These are the sorts of areas that we're moving on in the future, accident and injury prevention and others. So we see the province, then, as having centres of expertise in our major institutions but also research going on from border to border throughout the RHAs to support the health system of the future. This is our sort of vision for the future, if you like, and it will be catalyzed by men like that, the chaps who just sort of flash by.

Now, what I'd like to do is just flip the disk and tell you one more story about an Alberta-based research, because I think this is one that typifies the entire story. What I'm going to do is to tell you the story of one man who had been recruited to Alberta some years ago as a scientist and the impact that he has had on our province. He was recruited to Alberta by the foundation and the University of Calgary. He was recruited here as a respirologist; okay? He's a breather, if you like, a breathing type. Then he got interested in the snoring disease. Those of you who snore don't all have the disease, but some people snore enough that they wake themselves up, they don't sleep very well, and they get into all sorts of trouble. Here he is talking to a patient, and we'll come back to that in a minute. Then he took the snoring disease and he developed a device to help cure the snoring disease, and that device was commercialized. You're going to see that device in the actual film clip that we're going to show here in a minute. Then he has branched out and started to become more interested in other areas of health. He has actually become interested in cost-effectiveness, slashing costs, something that I think all of us in this room are familiar with. I want him to tell you the story of his approach to this.

> All of us in medicine are under great pressure to constrain costs and actually lower costs, do more with less. This would be an example of technology which is going to allow us to do that. Most of the time, however, it's not so clear that a new drug or a new technology or a new test is going to allow us to do more for less. Sometimes it allows us to do more for more. The key thing is to determine the cost-effectiveness of any job or any new technology.
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> That's then an important role of the centre, the Centre for Advancement of Health, which is supported by the heritage foundation and Foothills hospital. It plays a key role in assisting investigators to assess whether or not a new drug or a new technology actually saves money and does a better job. That's a key role because we're always having new drugs and new technology, and the inevitable tendency is to increase the cost of health care. If we don't insist that these things are evaluated before they are put into use, we're missing the boat.
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> I was very fortunate to have moved into the health services area just at the time that it became a very exciting one because of the budgetary constraints. So for me there's a silver lining to that cloud. The cloud which is descending over all of us is that this country is in deep trouble economically, but for me it's just a challenge to see if we can do more and better with less.

So this is a man who started out in basic science laboratories, moved through the clinics, through commercial development, and is now looking at cost-effectiveness, the quality of life issues with respect to our health care system. There are many like him throughout the system, throughout the heritage-funded system, and throughout our province. I think we have a team of people assembled now who can tackle problems from the test tube through to the population and beyond, and I think this is a very exciting time in Alberta. I think the foundation has helped to put Alberta on the map, and Alberta is in the lead in Canada. Quite frankly, at this point in time I'm very proud to be an Albertan and proud to be a Canadian.

Thank you very much.

MR. CHAIRMAN: Thank you, Dr. Spence.

I just might inform the committee members that through the magic of technology we've just had our annual tour. We will not be buying bus tickets or anything like that now to go anywhere outside of the Chamber, nor do we have to because of an excellent presentation.

Now, I guess if we could – the lights will come up as he speaks. We'll now start to entertain questions. Howard Sapers is number one this afternoon.

MR. SAPERS: Thank you, Mr. Chairman. You don't know what a privilege and a pleasure it is for me to be the first questioner.

Gentlemen, thank you very much for reviewing the recent history and the development of the foundation and of the work. It certainly is an impressive legacy that the foundation has already created and I'm sure an equally impressive future to come. In our questions today we would like to be focused on some of the issues that concern us in terms of how the fund is being spent and some of the accountability issues and really not so much on some of the marvelous research. Just the other day I had an opportunity to view the results of some of the research at the opening of the Glenrose rehabilitation clinic and saw the very impressive results of the research into bioengineering and orthotics.

2:34

My first question is really – I have to put it into context a bit. The context is of governments in this province in the past which have tried to pick winners and losers in the marketplace and in fact, unfortunately, have picked far more losers than winners when it comes to giving government handouts, and also the context of when we've seen other health care facilities or other health providers try to get into commercial ventures and into business. What comes to mind would be the UniCare fiasco at the University of Alberta hospitals and the millions and millions of dollars squandered in development of computer technology there.

So in that context I want to ask about the foundation's becoming a source of venture capital, if we will. In particular, I notice that half a million dollars was given to NeuroSpheres Ltd., which is a company developing experimental pharmaceuticals for the treatment of Alzheimer's disease. I'm wondering about this venture capital, and I'm wondering if this is the most appropriate way for foundation dollars to be spent. I understand how important it is to make research real, how important it is to commercialize and make available to the public the fruits of the research funded by the foundation. But is it in fact the foundation's role to become a venture capitalist, and how is this consistent with the government's stated objective of getting out of the business of being in business?

DR. SPENCE: The foundation has a technology commercialization program, as you pointed out, and the $500,000 investment to which you referred in NeuroSpheres is a phase 3 grant of the foundation; we have much earlier ones. The purpose of that program when it was originally set up was to take some of the

technology that we are developing and to see whether it can be commercialized in Alberta for the benefit of Albertans, because if we don't commercialize it here for the really hot things, they're likely to be picked up and developed elsewhere. The benefits then would flow, if you like, to another venue, and we happen to feel that it would be nice to develop some of these in Alberta.

We pick them extremely carefully. We're also investing extremely early – I don't think any venture capitalist would actually invest at the early stage that we do – because we do have a sight on the research itself. We're in the business of supporting basic and clinical research, and we look at aspects of it and we see the commercial potential, or our advisers see it, and then we will invest in that and start to move it forward.

The investment in NeuroSpheres, for example, is the one that I referred to when I talked about Sam Weiss. It has really already returned a fourfold return on our $500,000 investment, because thanks to our $500,000 investment the pharmaceutical companies have now put $3.2 million into the province which will be spent here directly in jobs and services. That investment will continue for a period of time as they try to develop this technology further. If our advisers are correct and we develop a small Alberta company out of this, then the benefits and the spin-offs will remain, but I think already the return is there in terms of the investment that has been attracted to us.

So we're not really the VC in the typical sense. We're really an early nurturer of the research in trying to bring it forward.

MR. SAPERS: I appreciate the distinction that you're drawing between nurturing research at a very early stage and then providing venture dollars so you can commercialize and capitalize on the research, but I'm not sure that that distinction is clear. Certainly it's not clear in the annual report, and that leads me to my second question, which is: how are projects picked? How much money is earmarked for commercializing these projects? What kind of risk is there to the taxpayer? How are taxpayers protected from risk, not just the actual dollars but future liability? I'd like you to explain for me how you decided on that project and not another, particularly noting that the total amount of money spent last year on commercialization I think was about $515,000, so that means almost all of it went into this one project.

DR. SPENCE: There are two areas of funding in the technology commercialization. The very early stage, the phase 1 and the phase 2, is funded by the foundation from the endowment. That amounts to about $600,000, and you will see that, I think, in schedule 1. It shows there as technology commercialization. It shows I think at $515,000 in 1994 in schedule 1. So this is using the endowment money in the first and very early phases.

The phase 3, which is the one that shows as the medical innovation program, the $580,000, comes from money that originally came from the patent protection legislation, the Bill C-22 money back in I think late 1989. That money was set aside by the province and given to the foundation to administer as part of the medical innovation program. That's the one from which we make the larger awards of up to $500,000.

The liability. The amount that we invest is limited. The trustees have not invested more than $500,000 in any one project, and they don't give it as a lump sum. It's given with milestones attached to it so that we can see the milestones develop. In some cases we may stop funding, if we see that it's obviously not going in the directions – in other cases it goes very well, and we would complete the funding.

As in any early-stage process I cannot guarantee that this will form a viable commercial company or a viable commercial operation, but I can assure you that there will be increased activity in the province of Alberta and the money will be spent locally. So in a sense we are fueling, if you like, the research machine and bringing it forward in that way.

In terms of liability for the province, there is no liability for the province in the nature of the agreements which we write for this sort of thing. There may be a payback ultimately because we do have a payback clause in the agreements, but quite frankly whether those realize major returns in the future or not I think is always a calculated gamble, if you like, at this stage.

How do we pick them? We pick them on the basis of our scientific advisers really – they say that this technology is extremely good – and then we have people look at it from the business and management point of view. We do a lot of due diligence on it. If we have good technology, well protected by patent or copyright, good management, good marketing strategy, and everything in place, then we say: let's give it a whirl; let's see if it can go. But we do take a very limited stake in it.

MR. SAPERS: Thank you.

The Alberta Heritage Foundation for Medical Research is a separate entity from the rest of the heritage savings trust fund. That being said, ultimately the Treasurer has some degree of control over the investments and the activities of the foundation, as he does over the rest of the fund, and I'm assuming that the Treasurer probably discusses these things from time to time with cabinet. Given your answer about how it's scientists who make the determination about who gets the funds for commercialization and who doesn't, I'm just wondering: are there then policies in place? And if not policies, what would prevent the government from exercising its will in terms of what businesses were to receive this kind of money? Given this government's proclivity for giving handouts to business in the past, how can we guarantee that your foundation will be kept independent for the future and that that money will not be used for a purpose other than a purpose as established by that group of scientific reviewers?

DR. SPENCE: Well, I guess the answer to the question really lies in the Act which established the foundation, which set the foundation up at arm's length. In my experience, which really is only 1990 and on, the foundation truly has been at arm's length from government. The decisions are made by the review committees and by the experts who advise the foundation, and then ultimately, of course, the funding decision is by the trustees, and they take the advice of everybody into account in making that decision. I can assure you that it's made on the best evidence possible. The primary overriding consideration is: is this in the mandate of the foundation, and is this appropriate for the citizens of Alberta and for the future directions of Alberta? That's really what has prevailed to date.

We do get government advice in terms of the phase 3 awards. One of the members of the Department of Economic Development and Tourism is a member of our committee to provide some government input so that things we may look at will be consonant with some of the overall directions taken by government, but this is certainly not the override. If the science is not good, the trustees simply would not fund it.

2:44

MR. CHAIRMAN: Okay. Thank you.

Heather Forsyth.

MRS. FORSYTH: Well, thank you, Mr. Chairman. Dr. Spence, I'd like to ask you a couple of questions if I could. The first one

is: how do we ensure that the heritage foundation funding is not duplicating support or projects funded by other provincial and national research funding agencies?

DR. SPENCE: Well, that's a very good question, and it's one that we spend some time looking at to determine, you know, that we don't sort of double fund something. It's done really three ways. The first is that there's close communication between the various agencies in the country. For example, we have lists of people who are funded by other agencies.

The second thing is that we try to make our funding complementary. What we do is we fund the people, and we turn around to them and say: "You've got to find the money to run your lab or to run your study out in the community. You have to find that from other sources." We don't give it to them. In other words, we're paying their salary, and we're saying, "You'd better find those funds, because in five years we're going to come back and see how you've done, and if you haven't found the funds, we will no longer continue to fund you." So we're funding the salary. They roll out and pick up the money either from a federal agency or from industry, et cetera. This is where I get that $2 to $3 for every dollar we invest, because we pay their salary. They roll out and they pick up the money from elsewhere. So we're only funding that base support for them within the institution. They're pulling those dollars in from the outside. We also watch the list.

The other thing is that our reviewers are very good at picking up whether there may be a question of double funding, because the pool of people who are experts, for example, in a particular type of heart disease is very limited. The pool of people who might be expert, for example, in fulminating myositis, as Lucien Bouchard has picked up, who are expert in those sorts of things are rather limited. So it's a small pool. They spot the applications that are duplicating, and they warn us. That's another additional measure that we have on it.

So I'm reasonably certain. I mean, I can never guarantee, you know, that one might not slip through, but I think in almost all cases we can certainly rule that out.

MRS. FORSYTH: Thank you.

One of the growing concerns that I've heard about and have become interested in amongst our youth is bulimia and anorexia. I understand from watching a program recently on *20/20* that there is a very highly successful program in Victoria, B.C., done by a lady. The place the kids stay in is called the mansion, and it's not only dealing with the medical aspect of the disease by keeping the weight up with the kids but also dealing with the psychological. Why can we not do something like that? In the particular case I'm thinking of, the child has been in the Children's hospital for 10 months near death. They can't do anything, shipped her over to the Foothills because of, you know, the psychiatric unit. Why can't we pick up on something like that?

DR. SPENCE: Well, first of all, as I'm sure you're very aware, you've picked a very difficult condition to work with. The roots and the causes of bulimia are various. There's an enormous amount of work being done on this in terms of the early childhood bonding and culture and so on. I think the answer to your question is that we do try. One of the things that I stressed about the foundation is that it is trying to network; in other words, trying to pick up what is being done everywhere that is very successful and bringing that back to Alberta and showing it to people as, you know, a way to go or a way you might think about. Frequently researchers are the ones who pick up on this because they tend to have their networks connect to this type of activity.

On the other hand, the other thing you need is a champion for the field and a champion for the area. We have areas that are perhaps not as well developed because we haven't developed a champion yet in the community. I mean, Cy Frank, who I showed you, is the champion for joint injury and arthritis, and it's moving very well because he puts his shoulder to the wheel and just works, you know, a hundred hours a day getting this going. So identifying the champions, nurturing them, bringing them to Alberta is a full-time job. One of the areas that we've identified as being an area that we would like to try to nurture in the future is the whole area of psychological/mental health, all of these areas, but we also have to find the champions to help us.

MRS. FORSYTH: I have one more; don't I?

MR. CHAIRMAN: Yeah.

MRS. FORSYTH: Under the foundation's sort of mandate, when they're giving money to X person or X researcher, who determines that? The board? The board says, "Well, gee, we're going to pick the young lady that was doing all the research on Alzheimer 's and things like that and the fellow that was in the film." Is it: we're going to give X amount of dollars to them?

DR. SPENCE: What we do is we invite applications, all right, you know, proposals to the foundation, and these are judged by our committees like that group of individuals that I showed you. They provide us with their priority ranking of them. They look at them, and they consider the feasibility, the scientific validity, you know, whether you could pull it off or whether it's just a wild idea. They go through all these and provide this to us in the form of an assessment. Then the trustees look at them, and we rank order them. We can only fund so many, obviously, and we fund those that are the most meritorious, that will have the greatest impact, the greatest likelihood of success. That's the way we fund them.

Now, there are areas – health research is an example – where we would like to nurture things; we would like to build and develop this field. There we have to get people to start thinking about it, so we fund conferences and workshops for visiting professors like that lady I showed you coming in on ethics and the law to try to stimulate the activity in Alberta, to develop it, to build the expertise in Alberta so that they can apply and be successful as well. We pick out those areas, and we try to develop them. Now, some we develop very successfully. Others, for a variety of reasons – perhaps there are not the people around who can develop the interest or there are not enough people in the world to develop the interest – we simply are going to have to wait for a while, or it'll be a little slower developing.

MRS. FORSYTH: In closing, Mr. Chairman, I just wanted to tell you that I think the foundation does a super job, and I congratulate you.

DR. SPENCE: Thank you.

MR. CHAIRMAN: It's good you got that in.

MRS. FORSYTH: Well, I think that they do a good job.

MR. CHAIRMAN: Now I have to give the Liberals one. Okay. Michael Percy.

DR. PERCY: Thank you, Clint, Dr. Spence, Mr. Libin. I'd like to follow up on some of the questions asked by my colleague

Howard Sapers from Edmonton-Glenora. I guess the concern is that there are venture capital firms out there. I know you said that it's not venture capital, but when I read page 6 of the annual report that says "that's how Dr. Weiss and Dr. Reynolds find themselves as scientists turned entrepreneurs, tackling the challenges of the biotech business," that scares me. That scares me a lot because I think that the funding that goes to the foundation is for research. If we're talking of clinical trials here, which is what I suspect this is, ought not they be done in-house and then once the research is to a sufficient stage, commercialization be undertaken with some share of the patent rates retained by the foundation? This strikes me as a move beyond what I would have thought the mandate of the fund was, and $500,000 is a significant amount of money.

DR. SPENCE: I would certainly agree. Well, the funding of Dr. Weiss and Dr. Reynolds. First of all, they've gone through the phase 1, phase 2, phase 3 process, and the funding you're talking about there is phase 3 funding. In phases 1 and 2 and for part of phase 3 a fair amount of the activity has basically been in intellectual property protection; in other words, to put a fence around that technology so that it can be protected and developed for the benefit of Albertans. Otherwise, if they had simply published it and put it out in the public realm, as you well know, somebody else would have picked it up and used it. So part of it has been to set the fences around that technology and also to be able to do some of the critical experiments that were necessary to convince the pharmaceutical companies to come in and invest – okay? – in other words, to put value added into their projects so that then the investment would come in from the outside to further develop their intellectual property.

The other thing that we've done, of course, is that in our funding, which is again, as I say, at a very early stage, we've always been very careful to put milestones in it so that if they're not developing along the lines that our advisory groups feel are important – for example, getting some management in to help them so they can stay in the labs and do the research that they should be doing – then we simply would not put the funding forward. I'm pleased to report that they have been able to put a management structure in place, so we were able to flow more of the funding to them.

DR. PERCY: I guess just to return to the essential question, though: do you think this is within the mandate of the fund, to undertake this type of commercialization?

DR. SPENCE: You want to remember that the Act establishing the foundation says: to develop, to stimulate and strengthen medical and health research in the province for the benefit of the health of Albertans. The point that I tried to make in enclosing the loop diagram is that the commercialization of technology is one way of effectively delivering things in the health care system for the benefit of the health of Albertans.

It does it three ways. First of all, many times the commercial sector is more effective in getting something out there than the public sector may be. The second point that I think is very important to recognize is that if you can develop a company and develop jobs, the economic spin-off – and, of course, I'm telling my grandmother how to suck eggs here. But, you know, when you raise the standard of living, that has a very direct lever on health in terms of the spin-off and the benefit to health. I think the third thing is that we originally established the idea of creating a brain trust, part of which would diversify the economic activity of the province. So I think on all three counts this is well within the mandate of the foundation's activities.

2:54

DR. PERCY: My final supplemental. I know that the Alberta Research Council has had significant problems in trying to commercialize some of its research, and they, too, have management teams in place and a structure in place to try and commercialize. Is there any integration between what the foundation is doing and the ARC, since many of the obstacles that they're running into are very similar?

DR. SPENCE: There is certainly extensive consultation back and forth between our technology commercialization people and the people at ARC. We're certainly aware of the technologies that they may be developing, as they are of ours, but there's not a lot of cross between us. Ours is really in the medical health sector, and many of theirs of course are in forestry or in the oil sands or in other areas.

MR. CHAIRMAN: Okay. Thank you.
Victor Doerksen.

MR. DOERKSEN: Thank you, Mr. Chairman. I was pleased to see in your report a section on ethics, which is of course what was requested last year from this committee. I'm wondering if you can elaborate a little bit more on your work in that area, whether policies are being developed or have been developed. If there are, can they be shared with this committee? Are they a published kind of thing? Could you elaborate on that?

DR. SPENCE: The ethical issues, of course, with respect to research are worldwide. They're not simply Alberta, but they're throughout the world. So there is a continuing debate, I think, looking at the ethical issues with respect to human research or research on human subjects, with respect to animal research, with respect to research on dangerous organisms, et cetera. There's a series of guidelines that have been developed by consensus across North America and throughout the world basically which govern the activities in each of these areas.

We require that any research that is supported by the foundation be signed off by the organization sponsoring the research – the university, the hospital, the health unit, or whatever it may be – that this research has passed this type of review and conforms to these very, in some cases extremely, stringent guidelines or requirements for the research. There are, for example, ethical review committees in our major institutions, which are not simply scientists. They have lay people on them, clergy, ethicists, and so on. If they do not feel this research is appropriate, it will not be funded by the foundation and it would not be signed off by the organization.

Even beyond that, we ask each one of our peer review committees when they review an application to raise any concems they may have about ethical issues, because all of these people deal with ethics in their own institutions. They on occasion will flag something and say, "We think this should be looked into." The minute that is raised, brought to the foundation's attention, we will raise questions about it. Until it is solved to the satisfaction of our consultants in this area, we would not fund it.

So the guidelines are the guidelines for the ethics of human experimentation as published by the Medical Research Council of Canada. That's the Canadian set at the present time. There's a set for biohazards for organisms and dangerous organisms and for certain experiments which probably shouldn't be done. They

would be too dangerous. Then there are guidelines for animal care, which are enforced by the Canadian Council on Animal Care. If that council were to say to us, "One of your Alberta institutions is in violation of the regulations of the Canadian Council on Animal Care," we would withdraw funding.

MR. DOERKSEN: Okay. Having said that, there is still seemingly a fair amount of latitude in terms of what's ethical, and the law doesn't always tell us very clearly what that should or shouldn't be. Are there any specific things that you decide? Let me use an example and ask you about, for instance, the use of fetal tissue for research. Do you have a policy that is a policy that will not be violated? If you follow the direction I'm going.

DR. SPENCE: Yeah. There are certainly strict guidelines with respect to the use of fetal tissue in research. These are Canadian guidelines at the present time, and those are certainly strictly adhered to within the Alberta institutions, to my knowledge, at least the ones to whom we provide funding. The issue, though, is continuously revisited. Sometimes what may be ethical in one culture is not ethical in another. That's why sometimes there is a certain amount of discretion left in the hands of an individual institutional review board, because for certain people from certain backgrounds something may not be ethical. For another group coming from a different background, they may have a different type of ethic which is conditioned by where they have come from. So we do have a certain amount of variation as you cross this country in terms of what people will accept as being ethical and not ethical. We respect very much the rules and regulations, if you like, and the ethic, if you like, of individual institutions in this regard. But if they violate the overall ethical guidelines, then obviously, you know, we certainly cannot fund that.

MR. DOERKSEN: Okay. I still see too much leeway there.

Let me ask specifically, because you didn't quite address the specific point: you alluded to the fact that we don't generally do it, but do we in fact fund research that uses fetal tissue in their research?

DR. SPENCE: The foundation is not directly funding research that is using fetal tissue. No.

MR. DOERKSEN: Okay. Thank you.

MR. CHAIRMAN: Okay. Thank you.

Don Massey.

DR. MASSEY: Thank you, Mr. Chairman. Thank you for the presentation. I found that interesting. There are a number of questions that it raises, though. Nationally there's been a concern by women's groups that their health issues in terms of research take second place to those of a man, and I couldn't help but be struck by your advisory group, which was totally male. I wonder: does that bias the kind of research or the research directions that you take? Do you see it?

DR. SPENCE: This is an issue that we've been enormously conscious of all right, and we are concerned about. First of all, I mentioned the issue in women's health. We are definitely trying to help that initiative develop in the province of Alberta and are very conscious of the importance of that particular initiative that we're trying to bring forward. Beyond that, we're also looking for gender balance in our committees. I am concerned with the career path trajectory for women in science, because at the level of the graduate student that we fund – and we fund some 150 graduate students in this province at the present time – it's about 50-50. Men and women compete equally, and the success rates are equal in our competitions.

When you move beyond that to the graduate fellowships, then what you find is that the men and women are still equally successful, but for some reason there are far fewer women applying for those awards. Then when you get to the faculty level, you know, more senior, the number decreases still more. We're looking at ways to try to encourage this stream to widen out so there will be more and more opportunities for women in science at these more senior levels of award. That's one of the things we're looking at, but it's a bit of a chicken and egg, because there are fewer women scientists at the present time. I ask them to sit on our committees, and they tell me: "I'm already on 10 different committees. I can't sit on yours because you've overburdened us. I'm on all of these."

As a matter of fact, one very talented woman scientist at the University of Calgary was complaining to me that there weren't enough women on the committee. I said: "Fine. Here are three of my committees. I would be delighted to have you on any one of them." She agreed reluctantly to take it on, but she pointed out that this is a two-edge sword: it may compromise her scientific productivity. This will be a slow build in terms of increasing the numbers, but it's something we're very conscious of and we're addressing directly.

The trustees are putting into place a maternity leave policy for our trainees. We haven't had one to date. We've always said, you know: that's fine. There is certainly a leave policy, but we have not supported them during that leave. We're now going to support them during that leave, and we'll simply extend the term of their award. So if they take six months' maternity leave, we will extend their award for six months so that they can continue to compete in science appropriately. So we're looking at every barrier we possibly can and trying to remove those. I would welcome suggestions that members of the committee may have, because we certainly are very conscious of this and working very hard at it.

3:04

DR. MASSEY: Well, if I could just follow that. It is the case, then, that there were no women you could get to be advisors. Is that why they were all men?

DR. SPENCE: No. That particular committee happened to be all men, but most of our committees have women on them. That particular one I showed didn't have a woman on it.

DR. MASSEY: If I might, then, go back to my question. Do you feel that there is a bias built in? Obviously, you're apprehensive. You're trying to do something about it. Do you think it's biasing your research?

DR. SPENCE: In terms of the subjects being chosen, I don't think there's any question that in the past women have been disadvantaged in terms of the research community. Since thalidomide we've never dared look at a pregnant woman in any drug trial. We've been concerned with enrolling women of childbearing age in many trials simply because of the potential danger to a pregnancy. I think that's changing. We will gradually work through that, and women and children, because that's the other group that I think is disadvantaged when it comes to this type of activity, will be also the subjects of studies of that type and the benefits of that type of research. I think it's something the entire scientific community is very, very conscious of.

DR. MASSEY: Thanks.

MR. CHAIRMAN: Denis Herard.

MR. HERARD: Thank you, Mr. Chairman. I, too, appreciated the nature and the technology of that presentation. As you know, this government has led by example in its fiscal restraint. I go to schedule 2 in your report, and the very first line that I see is operating expense, administration, salaries and employee benefits, and an increase of about 25 percent. Then I look at a line called annual report and see an increase of 200 percent. Another line on legal and consulting has quite a phenomenal increase as well. I wonder if you could comment on those, please.

DR. SPENCE: Okay. First of all, with respect to the salaries and benefits being up, which was, I believe, the first line that you're referring to in schedule 2, the salaries of the foundation have been frozen between the two fiscal years. What this reflects is a replacement of staff with more skilled staff, and we simply had to go to a higher level for the particular individuals we were recruiting. It also reflects $96,800 in pension accrual, which we were advised was necessary in order to top up the pension for the employees that we have in the system at the present time to bring it up to the amount that the actuaries felt was necessary to reflect the requirement for pensions for these people.

MR. HERARD: The second part of my question was related to the annual report. It's a very nice report. It's in four or five colours. Do you feel that it's necessary to make this kind of a statement in the business you're in, with respect to going from the cost of last year's to this year's?

DR. SPENCE: The cost of the report last year and this year – this year reflects part of the cost of last year's report, which was the triennial report of the foundation, The Power and the Promise, which was a substantially larger document than the one you see in front of you. That report was also used as a textbook at schools and has been well received and has also won four awards: one in the U.S. and three here in Canada. So we're very, very proud of that publication. However, we too are conscious of the need to be fiscally responsive, so this year we sent out a number of annual reports which were a much shortened down version of this one, done on very plain recycled paper. We have asked for the opinion of the constituency as to the short report and the long report. I wouldn't want to prejudge the study, but if it comes back that our message could be delivered just as effectively with a much less detailed and much plainer report, then that's the way we would move. So we're certainly conscious of the importance of your question and looking at that.

MR. HERARD: My last question deals with schedule 3. I'm curious about a couple of amounts. Director, grants and awards. You indicated that you had to replace some people and that you had to pay them more when you replaced them. Is this one of the cases?

DR. SPENCE: The director of grants and awards position was filled by an individual who is probably one of the best grants and awards people in Canada, who we were successful in attracting here for a period of two years. He has become demented and returned to Toronto, but he was here for two years to help us establish a first-class grants and awards system.

MR. HERARD: Do I have another one?

MR. CHAIRMAN: Yes, you do, as a matter of fact.

MR. HERARD: Oh, thank you. The last one deals with your own remuneration. I notice that it's gone from $193,000 to $215,000. Most of that is in benefits. Now, is this what you were talking about with respect to pension amortization? What does this retiring allowance related to prior service involve?

DR. SPENCE: If you don't mind, maybe I can defer this question to the chairman.

MR. LIBIN: Yeah, thanks. The present salary is $160,000 per annum, and this salary has been exactly the same for four and a half years. In other words, despite an exemplary performance in his job and increasingly varied responsibilities, Dr. Spence has not received an increase in his salary. For this reason the trustees did not accept his recommendation to roll his salary back by 5 percent. He is worth $160,000 per annum. I think so and so does the board of trustees.

When we went out to look for a new president of the foundation in '89, we sought a person of unusual, diverse qualifications, a man for all seasons. We were looking for a physician who understood both general and hospital specialty practice. We were looking for a researcher who had established a reputation in both basic science and clinical investigation and who understood something of the problems of the health promotion prevention field. We were looking for someone who understood research administration, who could manage a multimillion dollar operation such as the foundation. Finally, we wanted someone who knew something about the commercialization of technology. As I am sure you can appreciate, such individuals are in short supply, and the market is extremely competitive. Dr. Spence fulfills all these requirements. The compensation package we offered him and he accepted is in our view a minimally competitive package and recognizes the multiple skills that Dr. Spence brings to his job.

As far as his benefit package of $55,439 is concerned, the breakdown is as follows. Nine thousand dollars of this is health care benefits and insurance: Blue Cross, dental coverage, out-of-country medical benefits, group life insurance, accidental disability and dismemberment insurance, long- and short-term disability plans. Nine thousand dollars is membership in professional organizations and societies. These are societies and organizations to which Dr. Spence belongs such as the Canadian Society for Clinical Investigation, American Association of Health Services Research, the Canadian Institute of Academic Medicine, the Canadian Medical Protective Association, the Alberta Medical Association, and others. Dr. Spence receives no direct benefit from these memberships, but the benefits to the foundation are enormous through these memberships. Dr. Spence is in touch with the international scientific and medical community and is able to bring Albertans the latest knowledge from all these organizations and apply it to the Alberta advantage.

The $31,292 is the current pension accrual, the contribution on behalf of the foundation to Dr. Spence's pension plan. When Dr. Spence joined the foundation, it was our undertaking to provide him with a pension and benefit similar to those enjoyed by other professionals with similar responsibilities and similar to what he had in his previous position in Halifax. The existing foundation plan could not provide this, and after considering a number of alternatives, the trustees elected to adjust the pension to make it fair and equitable for Dr. Spence. This resulted in an increase in pension benefits in 1994. These will actually be lower in 1995. An allocation was made to adjust for prior years.

Finally, the last substantial item, $4,302 in interest benefit, has been declared in every annual report since 1990. The trustees provided Dr. Spence with an interest free loan to purchase a home in Edmonton the time he moved. The differential in house prices between Halifax, Nova Scotia, and Edmonton, Alberta, was substantial, and the penalty would have been sufficiently high that Dr. Spence probably would not have returned to Alberta. He has paid back this interest free loan of $125,000 at $25,000 per annum. The amount outstanding at the present time is $25,000. The interest benefit to Dr. Spence is $4,302. A similar foundation program is in place for senior researchers recruited to Alberta.

3:14

I should point out that Dr. Spence sits on the advisory committee of several organizations concerned with research and technology commercialization. In some cases he receives a meeting fee or retainer fee for this. All such earnings are returned to the foundation. In the last fiscal year this amounted to only a few hundred dollars. In the '94-95 fiscal year it will amount to some 7,000 dollars, which is given to the foundation. Dr. Spence receives no additional compensation himself for these activities, and the foundation benefits from the information he picks up and obviously from the meeting fees he receives.

In conclusion, the present salary is $160,000 not $215,439.

MR. CHAIRMAN: Okay. Thank you for that.

Ken Nicol.

DR. NICOL: Thank you, Mr. Chairman, Dr. Spence, Mr. Libin. In your presentation at the start of the session you mentioned that in the mid-80s you kind of cut back the steep incline in the expenditures. I assume that this was kind of to establish the integrity of the fund and to make sure the capital base was maintained. We noticed that on your graph there was a little downturn again the last year. Is this because of the interest rate returns that are received right now, or is there a change in philosophy of the foundation in terms of the kind of funding levels that they're going to support into the future?

DR. SPENCE: No. Our policy is an endowment policy, and you correctly identified that what we're trying to do is to maintain this purchasing power of the endowment by returning a certain amount of income to it. We don't do it on a year-by-year basis, because that would result in fluctuations in spending which might damage the overall research system. We try to maintain a steady spending rate. We actually set our spending rate a little low to be on the safe side, so if the market gets into trouble, we don't have to ramp down very, very suddenly. The reason that there is a slight downturn in that year is simply that we did not get as high a density of excellent applications as judged by our peer review committees, and we simply were not advised to fund to the level that we had anticipated funding in that year. So it was down slightly, and it may come back up slightly. We sort of look at it on a rolling three-year average.

DR. NICOL: You feel now that the fund, though, is fairly well inflation proof and that you'll be able to maintain a fairly constant dollar level of investment in research.

DR. SPENCE: I'm reasonably confident. We get good advice from Treasury, and I must give Alberta Treasury full marks on their management of the endowment. You know, we watch it closely. We compare it to all the indices, and I think they've done extremely well. We are concerned, of course, with the uncertainty of the investment climate in the future that perhaps the endowment may not do as well as it has in the past, and therefore we do set our spending rate a little conservatively.

DR. NICOL: In order to protect the fund and to potentially increase its usefulness in the future, did you ever consider taking an equity position or a royalty return position in any of these groups that are now venturing off into private industry and starting to market their own products?

DR. SPENCE: We do have a payback arrangement attached to the phase 2 and the phase 3 awards. This is at two times the value of the award, but of course if it's paid back way in the future, you wouldn't make a great return on it. We are examining at the present time the possibility of taking equity in a certain number of very selected investments, but that has not been actually done. It's something we've been looking at: the upsides, the downsides, how compatible this is with current government policy, with the investment climate in Alberta, and with the mandate of the foundation. It is certainly something we are exploring, because we're looking at all avenues to try to increase investment research in our province.

MR. STELMACH: Dr. Nicol perhaps asked a question similar to what I was going to ask you in terms of who owns the intelligence, the technology of those research projects that we have funded through the fund. Now, I know that you get into various agreements under different circumstances, but is any of that technology owned by the people of Alberta?

DR. SPENCE: The foundation's policy on this is to respect the intellectual property rules and regulations of the institutions. So to date at least where technologies have been coming up, say, either through the universities or through the hospitals, et cetera, what we try to do is to ensure that the organization or agency has a position with respect to intellectual property rights. In this province at least and I think in many other jurisdictions, a portion of course of the ownership and of the return goes to the inventor. That I think is quite right. It is their sweat, blood, and tears that has done this, and they should have part of the return. Certainly I think our major institutions also take a position where they get something from this, and, as I say, in terms of our investment, for the larger ones at least, there is a payback arrangement so there would be a return to the province if there was a major hit in the investment.

MR. STELMACH: Thank you.

MR. WHITE: Dr. Spence, in the Statement of Income and Retained Earnings there's an item called investment management fee. Now, my guess is that the department of Treasury takes that for managing. If it's just an investment management fee, then in my view it seems a little high from my experience with the city. If in fact they manage all the funds and the cash flow – the short-term and the pooled funds and all of that lot – then it's probably within reason. I guess the question is twofold: one, is it just for that part of the fund, and, two, why is it all of a sudden now that they've decided they have to ding you when prior to this they didn't?

DR. SPENCE: That's the question I asked when I got the bill, quite honestly. I believe it is because they were requested to put their operations on a cost recovery basis by other arms of government, so they have done that. On the basis of handling the

endowment, we have compared their charges with those that would be charged in the commercial sector and are confident that they are not charging as high a rate as the commercial rate would be. I have to defer to the chairman on this, but his feeling was that it was a reasonable charge for a fund of that size.

MR. LIBIN: Yeah. They manage all of our funds and our cash management. On checking with competitive fund managers, they're substantially less.

MR. WHITE: If you're going to do a comparison of cost, I presume you did a comparison of performance also then.

MR. LIBIN: Our performance over the period has been extremely well managed. We have what we consider excellent investment results and are very satisfied with the job that Alberta Treasury is doing for us.

MR. WHITE: In note 3 there are cash deposits, cash in banks. I note that there's currently none in the United States, $26,000 in Canada, and in international there's $1.5 million. That seems to be a great deal of money (a) to have in cash without having T-bills or some other short-term instrument, if there is such need for cash, but (b) why is it necessary to be offshore and to be at management risk for changing in values?

DR. SPENCE: I'm not now referring to the cash that's in the endowment itself but the cash the foundation holds. Part of that of course is the medical innovation fund, which is not part of the main endowment, so that cash is held separately. That's in the – I can never remember the full name of it – consolidated fund where Treasury maintains the cash. It goes out into the short-term money market all the time, so it's rolled back and forth in the short-term money market. I take it that what you're referring to there reflects the activities of that fund.

MR. WHITE: Right. Well, it's listed on your balance sheet as an asset to the foundation, to the endowment fund. It's from page 223 to note 3 as on page 225, and it's directly from the balance sheet.

3:24

DR. SPENCE: Are you looking at the consolidated statement? I don't have that in front of me. The only thing I have is the foundation statement.

MR. WHITE: The public accounts perhaps; is it not?

DR. SPENCE: I'm sorry; I don't have that statement in front of me, so I can't comment on that one.

MR. WHITE: Yeah. I'm sorry. Okay.

MR. LIBIN: Actually, it's a discretionary account. We don't really decide how much should be invested in the U.S. or offshore or in Canadian equities or bonds. This is really a part of the mandate in the original setting up of the foundation. Alberta Treasury was given the responsibility of managing our endowment funds. We counsel with them. We plan with them. They talk to us about the issue, but it's what you call a discretionary account, and they have full discretion on wherever they want to put the funds.

MR. CHAIRMAN: Okay. Thank you.
Bonnie Laing.

MRS. LAING: Thank you, Mr. Chairman, and good afternoon, gentlemen. I'd like to say how much I enjoyed your presentation and also the visit that I made there not too long ago. It was very interesting, very innovative to be able to see actually what was happening in the lab.

My question is about young people. I know we're looking at trying to encourage them to follow careers in science. What kind of things are you doing in the foundation to encourage young people to have an interest in science, especially young women?

DR. SPENCE: Well, we have a number of programs. First of all, we invest in WISEST: Women in Scholarship, Education, Science and Technology. It's a very active program here in Alberta to take young women in high school and have them spend a summer in a research lab or in some other activity related to science and technology. So we fund within that program.

We fund within the science fairs. We place awards in many of the science fairs across the province, and our prize contribution is to bring the student and generally the teacher or the parent – often it's the teacher and the parent who have been a large part of it – into either Calgary or Edmonton to visit the labs, meet some of the researchers. I often get an opportunity to have lunch with them, which is really fun.

We're also working very closely with Jim Gray's Science Alberta Foundation. We've been working on a couple of displays for them to try to increase the interest in science. Then a little while ago we sponsored the opening of the film *To the Limit* in the Imax Theatre in Calgary. We invited the Calgary corporate community but reserved half the places for high school students, and they came. We had a really good question and answer session. We had some of our investigators there, and they had a really good rap back and forth. A couple of the students talked to me afterwards and said, you know, that they'd really like to go visit some of the labs, so we're teaming up with them. We really try to be as active as we can as a foundation but also through the other organizations who are doing such an excellent job in this province to try to stimulate youth. It's very important to try to get them interested in following in other scientists' footsteps.

MRS. LAING: I was going to ask you about physicians who have a clinical practice such as at the U of C and, I imagine, at the university here. About how much of their time would be put into the actual research? Is it half-and-half, or does it vary?

DR. SPENCE: A foundation award carries a requirement that 75 percent of the time should be spent in research, and to be competitive they really have to do that. These people work incredibly long hours, and they spend an enormous amount of time on the research. They really couldn't be competitive under that figure, so we watch it fairly closely. It's for their protection too. They're very talented people, and everybody tries to load everything else on them. So we try to maintain that figure as much as we can.

MRS. LAING: Can you tell me what impact the activity of the foundation has on patient care, like, right in the hospitals and in doctors' offices?

DR. SPENCE: I think we've had quite a major impact on patient care. I indicated, I think, some of the areas that we've had an impact on, but many of our foundation-funded investigators are physicians. They run clinics or they work in the community. We're funding, for example, a thing called the Alberta primary care research unit, which is actually research being done by family practitioners in their offices, scattered throughout Alberta. I think

this has a major impact on patient care, because they can ask questions about the type of care that they're providing – Is this the best way to do it? Are there better ways to do it? – measure this, make a comparison, and then decide to change.

MRS. LAING: Thank you very much and again my congratulations.

MR. CHAIRMAN: Thank you.
Howard Sapers.

MR. SAPERS: Thank you. Back to me again. Dr. Spence, I want to pursue the question about the $93,931 management fee. Also, I want to link that to or, I guess, find out what kind of link there might be to the fact that some 10 and a half million dollars more net gain on disposition of portfolio investments is noted in the 1994 public accounts over 1993. In '93 some $6,230,000 was retained; in '94, almost $16,800,000. I'm wondering, first of all: does that reflect the sale of some assets, or is it just much better investing? What accounts for the $10 million difference between '93 and '94?

DR. SPENCE: I'm afraid that question would have to be addressed to the Provincial Treasurer because we do not basically manage the endowment. The Provincial Treasurer manages the endowment. Our policy with respect to spending rates obviously sets where they would invest, because if we required extra amounts of money, they would want to ensure that there was more liquidity in the endowment. If, on the other hand, we are maintaining a fairly constant spending rate, which we are at the present time, this allows them then perhaps to diversify the portfolio and take some longer term equity interest. We don't set where they actually invest. So those questions would have to be addressed to the Treasurer. I simply could not answer them.

MR. SAPERS: Thanks. I want to make sure I understand this. You set the criteria for what you're going to spend money on and the policy about whether you're going to spend in a constant way or if you're going to spend in a more unusual way that might vary year to year or might not, but the Treasurer sets all of the other significant policies around the assets of the fund: the disposition of those assets, the retention of those assets, and the accounting policies for how those assets might be disposed of. Is that correct?

DR. SPENCE: Yeah.

MR. SAPERS: Then they charge you $93,000, almost $94,000.

MR. LIBIN: You've got to realize that they're managing approximately $675 million. As we explained, it's discretionary management. They're managing as they see fit. So if they see a change in the marketplace or interest rates are going up or interest rates are going down or they believe markets are going up or markets are going down, they're shifting between Canadian markets, maybe U.S. markets, and international markets. This creates a certain amount of transactions within the fund, and profits are made or losses are taken depending on their own investment criteria. This is completely discretionary in their hands. We do review our forecasted cash needs so that there are always sufficient funds on hand to meet our commitments as we're going down, you know, over a period of years. So we work with Treasury, review this twice a year, but all of these decisions and the fees are set by them.

MR. SAPERS: How can you determine a policy that you would like to spend or invest in research in a certain fashion?

MR. LIBIN: Well, they do forecasting for us on rates of return. In other words, they indicate to us as we meet where they believe our rate of return over long periods of time will be so that if we're hoping to make 7 percent or 8 percent or whatever the number is on the endowment, the investment philosophy is based on creating a return that looks after our needs as we go down the road.

MR. CHAIRMAN: Okay. Thank you.

MR. SAPERS: I wasn't finished my question.

MR. CHAIRMAN: Yes, you are. We'll get back to you.

MR. SAPERS: You'll notice that it was mid-sentence, Mr. Chairman. If you want to proceed, feel free to, but I wasn't finished my question.

MR. CHAIRMAN: Well, let's ask the next member in line. Do you wish to stand aside for another half-question, Victor?

MR. DOERKSEN: Oh, sure.

MR. CHAIRMAN: Okay. Go ahead, Howard.

MR. SAPERS: Thank you, and I appreciate the courtesy of my colleague.

Mr. Libin, I appreciate your answer, and you partially anticipated the remainder of my question but not entirely. Without being able to have control over those two sets of policies, to what extent can I be guaranteed as a member of this committee that in fact you do have control over the amount of money that will be available in any given year and particularly to guarantee multiyear funding, because as it has been explained, often these initiatives and projects take more than one year to mature? How can I be guaranteed that that money will be available, when the government can, it seems by whim, introduce new charges and change the investment strategies of the fund?

3:34

MR. LIBIN: I don't think the government does that by whim. I think that, number one, a certain amount of our fund is kept in short-term treasury bills, government of Canada bonds, money market funds – it's all very high quality – so that our immediate needs are sitting basically in reserve. It's earning interest, but it's sitting there in reserve as to what we need this year, next year, and the year after.

Now, their investment philosophy is one that they manage a major pool of money. Our endowment funds are just a portion of what Alberta Treasury manages, and Alberta Treasury has a very good track record in their ability to manage funds. I think you're at risk whenever you have an investment manager and you're not managing it yourself, but we're satisfied that our funds are placed. There are rules and regulations that allow them certain latitudes and only certain latitudes, and the trustees are satisfied that their funds are well managed in a very conservative fashion.

MR. CHAIRMAN: Okay. Thank you.
Victor Doerksen.

MR. DOERKSEN: Thank you, Mr. Chairman. In your presentation you referred to some advancements in your research on

Alzheimer's disease. Could you elaborate a bit further in terms of where that's taking us and the advancements that are being made in that field?

DR. SPENCE: Okay. The research in Alzheimer's disease is sort of moving on several fronts, but two, I think, are quite significant. One has been the genetic approach to Alzheimer's, because a certain subportion of Alzheimer's which appears to be genetically determined is actually a dominant. So localizing where it sits on the gene and what may be near it in terms of things that might cause Alzheimer's I think is a very important part. The other part has been actually to go back and look at the pathology of the disease itself and to isolate certain proteins from the tissue and to realize that some of them are not being processed properly. This is what appears to tip the cell into death.

The third thing that appears to be happening is that cells – brain cells, at least – require a signal all the time to keep them alive. You start out actually, when you're a fetus in utero, with far more brain cells than you're actually going to use, and they all die out. If they don't make connections, they die. So one of the things that we're wondering about in terms of a therapy for the future is to use that same molecule that tells those cells to stay alive on people who have a predisposition for pre-senile dementia to stop the cells from dying. Your brain cells actually die out. All of you, your cells are dying out at the rate of 10,000 a day approximately. If you started out with enough, it's no problem, but if you didn't, you could be in trouble when you get fairly old. So the idea is to try to retard that. These growth factors, we call them, appear to be the agents that do that. It's very interesting: if a nerve cell doesn't make a connection, it dies. You know, if you have a squint at birth – you know how babies have a squint – they'll suppress the vision in that eye, and very shortly after they're functionally blind. You can't restore it. It just locks off; it quits. So that's the other secret we're looking at for Alzheimer's.

MR. DOERKSEN: Is this research being done in isolation here, or are we combining with other bodies elsewhere?

DR. SPENCE: Very much being done in collaboration with everybody else. The investigator that I referred to who unfortunately died of cancer was co-ordinating a national study in Alzheimer's, looking at certain self-help measures for Alzheimer patients in their homes. She was co-ordinating nationwide studies that were looking at this type of activity. There is an enormous amount of cross talk. As a matter of fact, one of the most important things about scientific activity, about the type of activity we try to catalyze in the foundation is to ensure people are plugged into the world net, because if they're not, they're not competitive. I mean, they've got to know what's happening in Japan and Korea and Russia and so on as quickly as it happens.

MR. DOERKSEN: You referred to a predisposition towards Alzheimer's. Do we know that? Can we predict that already?

DR. SPENCE: There is a suggestion that there is a protein in your blood, that certain types of it in certain people may give a far greater predisposition to Alzheimer's. Okay? That needs to be explored more. I quite frankly don't want somebody taking blood from me and telling me I have a predisposition to Alzheimer's. I'd like to know a hell of a lot more about it before they tell me that sort of thing. So that needs to be explored. But you will see it in the press, that there will be blood tests. I think it's a ways down the pike.

MR. CHAIRMAN: Thank you.

Michael Percy.

DR. PERCY: Thank you, Mr. Chairman. Dr. Spence, one issue that often crops up, at least in my constituency, is that people believe chelation therapy works. They believe it fervently. I've talked to a number of constituents, and it's clear that it has changed their lives. Whether it's a placebo, I don't know, but it has changed their lives. There's just no doubt in my mind that that's the case. I know that last year this committee passed a motion encouraging the Minister of Health to further investigate the use of chelation therapy, and I think it was to be directed to the foundation. Can you tell me: has any progress been made on that? Is the foundation going to set up a study or assess the benefits of chelation therapy?

DR. SPENCE: As I think you know, Dr. Percy, the foundation funds people, not projects. Okay? We've been advised to invest in the people and have the people do the projects and attract the funds from the outside.

I think that a very carefully set up and well-designed study on chelation therapy could probably attract funding from national and international agencies to be done in Alberta or across Canada if we had to accumulate, you know, a large number of patients to do this. I think it's the sort of study that should be done on any type of medical therapy, when we look at all types of therapy, should be assessed to see whether in point of fact they do what we think they do or whether there are risks that we didn't anticipate happening or they simply do not work.

The issue of chelation therapy, of course, is one that attracts enormous attention. I, like you, have talked to people whose lives I think have certainly been changed by this form of therapy. There are several possible explanations for this, one of which of course is that the therapy actually works. I think it should be tested in that mode, but it should be tested the way all therapies are tested, in the appropriate rigorous design trial: where individuals are enrolled in the trial and the treatments are compared very carefully and the evidence is then weighed at the end. I think that's the type of trial we need for this and for many other therapies.

DR. PERCY: Well, this is one where I think there is certainly a lot of public support for such a set of trials.

Now, I understand that you fund people, not projects. On the other hand, there are certain types of projects which by their nature are orphans. You can think of some that the medical establishment doesn't necessarily leap to on the first pass, and I think chelation therapy is one of them. Is there a mechanism by which the foundation is proactive in this, or is this passive in terms of they accept the best candidates possible for funding and then the luck of the draw says that if an individual is interested in chelation therapy, it will happen and otherwise it won't?

DR. SPENCE: No. I think the foundation is very proactive in terms of recruiting and funding the types of people who could back up a trial on chelation therapy or any other type of medical or health therapy, because we're looking at more than chelation therapy in terms of whether they're effective or not: the epidemiologists, the biostatisticians, and so on. You heard John Remmers on the video refer to the Centre for Advancement of Health in Calgary, and we have the health quality outcomes here in Edmonton. Both of those groups have the sorts of horsepower behind them that can provide the backup and the infrastructure to a trial of this type in terms of the epidemiology, the biostatistics,

and so on that are necessary. So we definitely do try to fund the infrastructure for these types of things. We do not determine the problem.

DR. PERCY: My final supplemental. I know Alberta seems to be a hot spot for some particular types of medical problems: asthma and MS, for example. Are there studies undertaken or funded by the foundation that deal with these types of medical issues that are very specific to the province in terms of high degrees of incidence?

DR. SPENCE: In both cases, because they have attracted the attention of the Alberta medical and health community and the leadership in Alberta, the champions have developed in the community who have been interested in these diseases, and they have put forward candidates to foundation programs. For example, we are funding a group of very brilliant investigators who are looking at multiple sclerosis. They're actually looking at the genetic determinants of multiple sclerosis, at some of the genes that probably have an impact on this disease. I'm very hopeful that these individuals will make significant advances in that area.

Asthma has also been signaled as an area, and thanks to the work of partner groups like the Alberta Lung Association, for example, which is very active in this area, and so on – the holder of the asthma chair at the University of Alberta at the present time is a heritage-funded investigator. So there is activity going on there. In both cases it's been championed by people in the community, and the foundation has been pleased to fund the individuals. They put forward very high-calibre people.

3:44

MR. CHAIRMAN: Okay. Thank you.

Don Massey.

DR. MASSEY: Thanks, Mr. Chairman. I wondered if I could ask – I'm going back to this business of bias – do you see a conflict in the need for basic health research and the need for research to yield a profit, to be commercialized?

DR. SPENCE: No, I don't think there's a conflict. In point of fact, the bulk of the foundation's resources – far and away most of the money we spend is on, I would say, research to find an answer to a question, be it a basic test-tube type of question or a clinical question or a question in the health sphere. The amount of money we're spending directly in technology commercialization would be about a million out of the $25 million or $26 million that we are actually spending. So it's a very small part of our overall activity.

You know, we always look to see whether there is commercial potential in some of these other things, but for many of them their avenue to being applied in Alberta will be through education or through application in the community, et cetera. I don't think our choice is biased. We certainly don't tell our committees to look for the commercial potential. That's not what they're scoring it on. They're scoring it on the scientific excellence and its strategic advantage to Alberta.

DR. MASSEY: Just so that I'm clear, because a number of scientists across the province have expressed some fear that research is going to be directed, I think, to the entrepreneurial spirit that reigns supreme, and they're worried that that's going to permeate their field and that funds even for the very basic questions will be the basic questions that will ultimately result in a payoff. So you're saying no. You're assured that the basic questions in health that should be addressed are being addressed without undue concern.

DR. SPENCE: We certainly monitor, watch, ask our advisory committees this and are very conscious that we want to ensure that there is always what I call the undifferentiated core of research – okay? – which is the wellspring from which everything else springs, as you know. The discovery: you don't really see what its direct application is going to be, but down the way it may turn out to be the most fundamental discovery that fuels the whole thing. We always support part of that.

Part of our activity is more applied, very clearly, but we always do support the undifferentiated research, which is really on the basis of excellence and the relevance to the overall provincial mission. I mean, we do have things in Alberta that we think are important for this province. There are issues of rural health. There are issues of health in a northern climate. Somebody – I believe it was Dr. Percy – in his question touched on multiple sclerosis, for example. We do know that there's an increased incidence in this province, so therefore it is of interest. But fundamentally it's got to be good science.

DR. MASSEY: If I may, my final supplement is not directly related, Mr. Chairman. Was the foundation and its staff subjected to the government rollbacks of 5 percent? Did that apply to the foundation?

MR. LIBIN: Yeah. The trustees rolled back their salaries last year. I don't think we were mandated to do it because of our relationship with government, but because we worked in that area the trustees did roll back their fees by 5 percent last year.

DR. MASSEY: Did that apply to the staff?

DR. SPENCE: We froze the salaries.

DR. MASSEY: They were frozen. They weren't rolled back.

DR. SPENCE: No.

DR. MASSEY: Thank you.

MR. CHAIRMAN: Ken Nicol.

DR. NICOL: Thank you, Mr. Chairman. Just one question to kind of conclude the issues I wanted to see addressed. Last session we saw the government change the way they were dealing with the release of medical records and that for research purposes. Do you feel that this is going to at all infringe on the confidentiality of people that are involved in medical efforts, the confidentiality of patient/doctor relationships, this kind of thing? Are you still confident that that's going to be maintained even with the new, more open regulation by the government?

DR. SPENCE: That's difficult for me to comment on. My understanding is that the intent of the legislation is to enable some of the information to be used for the management of the health system; in other words, to be able to look at some of the patterns of disease, some of the patterns of treatment so that we can better manage the health system, because we do need some of this information to be able to manage the system. From that point of view it's a very powerful research tool, providing of course the confidentiality of the individual per se is respected. If the data is in the aggregate – in other words, you're simply looking at how

many people have bladder problems, not individual but how many, and the pattern of treatment and the pattern of drug use, et cetera, et cetera – that's a very powerful research tool, and I think it could only enable health research. But I would be very concerned if in any way it disadvantaged individuals, and I think that's a concern for all of us, that the individual should be protected in this.

It's a little early for me to say how it will shake down in terms of how it's actually used, but I think things that help us measure outcomes in the health system would be very, very helpful, because if we can't get the information for the investigators to look at – patterns of prescribing drugs, patterns of drug use, patterns of procedure use, you know, hysterectomies and this or that or the other part of it and what's happening with them – we'll never be able to get the health system running appropriately. You've got to be able to measure it if you want to manage it, and I think that's what we're looking at.

DR. NICOL: Thank you. That's just the one question I had.

MR. WHITE: Dr. Spence, Mr. Libin, I heard you say earlier, and further to the questions that a number of us asked about the management of the funds, that in your meetings of the board, Treasury would say: "Look, this is the amount of money that we wish to spend in the coming year, and however you manage that, manage it, fellas. You've been doing a good job." Now, if a situation were to occur that that same guarantee were given and yet there was no fund – the fund had been whisked away, although you were guaranteed that amount of expenditures annually – would that change your operation at all?

MR. CHAIRMAN: We've moved into the hypothetical. You're welcome to answer if you wish. I'll seek your direction.

DR. SPENCE: I mean, if there weren't the funds there, I guess we would have to close up shop. I'm not sure I follow exactly what . . .

MR. LIBIN: One of the things the endowment does for us is guarantee the continuity for the scientific community that these funds are there. I mean, there's very prudent management going on at Alberta Treasury. We not only review our needs, but we also review where our funds are invested. We have an opportunity a couple of times a year to sit with Alberta Treasury, review their results, review where our securities are in fact invested. We see the names. So we know as much about our fund as one would have with any private manager.

I think there's great confidence, and we've been able to recruit people to Alberta from all of Canada and internationally because this endowment fund has been in place. Now, if government were to say, "Don't worry, boys, we're going to give you $30 million or $35 million a year" – that could change with next year's government. Do you know what I'm saying? How long can the government commit that? Well, we know that we have close to $700 million today, well managed, and we're using a spending rule that guarantees this fund will remain intact into perpetuity. That's the first thing the scientific community that we try to attract to Alberta looks at. They say, "How are you going to fund us?" We're going to fund them because we have this endowment fund. So I don't think what you're saying would create great fear and stop our ability to do what we've done because we wouldn't be able to attract people to Alberta.

3:54

MR. WHITE: Thank you.

MR. CHAIRMAN: Okay.
Howard Sapers.

MR. SAPERS: Thanks. We've talked this afternoon a fair bit about commercialization. I'd like to talk about commercialization in a slightly different context. In your opening remarks you talked about how in the future you hope to get into funding more outcome-type research, helping the new regional health authorities find their way. I take it this means that you'll be doing more policy-oriented research. Fair enough. If individuals, therefore, approach the foundation to do a research project that would in fact look at the ethics of commercializing health care, would you feel that that type of research would be in your mandate? If so, how do you plan on communicating the findings of such policy research to the government and what guarantee do you have that anybody would be listening?

DR. SPENCE: I would point out again that the foundation doesn't fund projects; it funds people. It would be a person that we funded who might get into that type of research and would attract the money from somewhere else to actually carry out the research. So we do fund the people and not the project.

We don't put any restrictions on our people publishing. I mean, freedom to publish is a cornerstone, if you like, of the academic and scientific community, and we simply do not put a restriction on that. What we do indicate to people who are working in a potentially commercializable sector is that it might not be a bad idea to look at protecting the intellectual property before you publish it, but we don't turn around and say thou shalt or thou shalt not. That's not the way the foundation operates. So my expectation would be that the activity would be in the public domain.

Now, whether it influences policy or not and whether it actually has an effect where the rubber hits the road, if you like, in the management of the health system – I would be extremely interested in that. If it does not, then I think we have to do research on the system itself: how do you effect the change in behaviour, the change in policy? You know, we've known about smoking for an awfully long time, yet we have a hard core of our population who continue to smoke. How do you motivate people to change a behaviour or to do this? How do you get findings implemented at the grassroots level? That's one of the reasons we're interested in doing research in partnership with the regional health authorities, because the hope would be that if it's done by people in the regional health authorities, whom the people who make the decisions in the regions have faith and trust in, it will rapidly affect policy. If, on the other hand, it's done at Harvard or Yale and doesn't get out here, it's unlikely to have much effect on policy. We do hope to do that.

MR. SAPERS: Do you have a plan, therefore, to allocate a certain percentage of your research dollars to policy research? If you do, do you have a sense of priorities where you'll actually be reaching out in much the same way you were talking about in terms of chelation? Do you have a set of priorities that'll help you identify people in terms of doing that kind of policy research?

DR. SPENCE: We have a set of overarching, sort of, strategic objectives in the area of health research which are dictated in part by local strengths, in part by the view of our international advisers

as to the areas that are likely to be of particular importance in the future. What we would hope to do is marry those with the interests of the regions and the interests of the academic centres, if you like, in terms of developing a health strategy for the future. For example, at the moment the University of Alberta and the University of Calgary in concert are very interested in looking at pharmacoeconomic studies, the economic impact of drugs, et cetera, and at costing and so on. So they are very interested in setting up a pharmacoeconomics institute between the two institutions, and they have been talking to drug companies about the possibility of them investing in this. This will be very early stage, presumably precompetitive, where the companies could come together in terms of funding this type of activity.

Were this type of initiative to come off the ground, it's very possible the foundation might fund some of the economic theorists who would be involved in this, who would be developing a theory and the tools on which pharmacoeconomic analysis would be based. The actual analyses themselves might be done by others within the institute or other structures, but the people who would lead this in the area of economic theory as applied to, if you like, the area of pharmaceuticals might very well be the sort of people that the foundation would fund.

The Nobel prize winner in economics in 1993, Robert Fogel from the University of Chicago, actually won his Nobel prize based on models that deal with the impact of nutrition on the economic health of a country. They make very interesting reading. What he basically points out is that the industrial revolution and the springing forward of the energy of Europe at that time was probably due more to the availability of food than it was to the invention of the steam engine. He won the Nobel prize for it, an interesting concept.

MR. SAPERS: Thank you for that.

Given the huge ethical concerns and dimensions of so much medical research, the utilization of medical technology, and the discussion we're just having now about the ethics around commercial and commercializing health care, do you see a point at which your foundation will establish clearly a priority and ongoing funding to help produce some answers to some of those ethical questions? It seems that while ethics are often at the forefront of everybody's mind when it comes to questions about health and health care, they often seem to be very much at the back of the book when it comes to actual funding and initiatives being undertaken. The subtext is: how do we get ethics out of the domain of just debate and how do we get some research on health ethics into this province?

DR. SPENCE: Well, in the first place I think we do have research going on in health ethics in this province. I alluded to the initiative on genetics ethics and the law, and we've put our money where our mouth is in the sense of funding Dr. Knoppers to come here and the development within the Health Law Institute. I should also point out that the head of ethics at the University of Calgary, at least the academic sector, went away for additional training in this area to pick up additional skills supported by the foundation. The foundation has also supported a conference looking at ethics in a changing health care environment, the ethics of cutting back on funding within a health care environment, and we have funded that because we feel that all sides of the equation should be examined. The principal thing we look at is: is it good science and does it make sense; you know, do our advisers feel that this is a good way to go. If we were getting proposals – and we do get some, obviously – in the ethics area, we would be funding the individuals who would be carrying out that type of activity.

MR. CHAIRMAN: Howie, you're all we have left.

MR. SAPERS: I'm it?

MR. CHAIRMAN: Yeah.

MR. SAPERS: Do you think we're doing enough?
Thank you.

MR. CHAIRMAN: Well, I want to thank you certainly on behalf of the committee but also on behalf of myself. I always find your sessions very interesting and entertaining, as a matter of fact. I think it's just a great thing that's going on.

Does any member wish to read a recommendation into the record? I might indicate at this time that Diane has sent me a little note saying that when I ask you folks to do that, we hope that you also have a written record which you can bring to the desk at that time. So when you are ready to start to read recommendations into the record, we hope that you'll have, then, the proper paper with you that you can present to us.

I'll entertain a motion for adjournment. All in favour? Carried. Thank you very much.

[The committee adjourned at 4:04 p.m.]