10:26 a.m. Thursday, November 7, 1991

[Chairman: Mr. Ady]

MR. CHAIRMAN: I'd like to call to order the formal portion of our meeting and express appreciation, first of all, in having before us today Mr. Al Libin, chairman of the Alberta Heritage Foundation for Medical Research, and Dr. Matthew Spence, the president of that foundation. I'd also like to express appreciation to them for the slide presentation we just viewed and for the really good insight they gave us on some of their activities.

I'd also like to commend them on their annual report that we received recently and tell them that I took the time to read that report and found it very interesting. I don't read all annual reports that come across my desk with the interest this one had. I think you're to be commended for the human appeal this report has; there's something there that would interest just Albertans. Also, thank you for the fact that it was issued prior to your coming before us. It's helpful to the committee to have annual reports of any organization they're going to review, so thank you again for that.

Prior to having you perhaps give some opening remarks, I'd like to give the committee an opportunity to read in any recommendations they have this morning.

The Member for Calgary-Foothills.

MRS. BLACK: Thank you, Mr. Chairman. I have two recommendations. The first recommendation is

> that the supporting schedules of the Alberta Heritage Savings Trust Fund annual financial report be amended by providing a schedule of deemed assets showing a comparison of book value and current market value. In situations where a definitive market value is not apparent, as in the case of a foundation and/or endowment, the current value of the foundation and/or endowment would be reflected in the schedules within the report.

My second recommendation, Mr. Chairman, is

> that the Provincial Treasurer undertake to provide the Standing Committee on the Alberta Heritage Savings Trust Fund Act with the annual report of the trust fund five days prior to the commencement of the committee hearings and that the appropriate ministers undertake to ensure that all annual reports of companies and entities whose association is directly related to the fund be made available five working days prior to the appearance of the minister responsible for the company or entity. In the situation where the annual report is not yet available, the appropriate minister should undertake to provide the committee with an interim financial report five working days prior to the appearance of the minister responsible for the company or entity.

MR. CHAIRMAN: Thank you.

Are there others who have recommendations? The Member for Wainwright.

MR. FISCHER: Thank you, Mr. Chairman. I would like to read in that consideration be given

> that the net profits from Syncrude be exempt from section 4(2) of the Alberta Heritage Savings Trust Fund Act, which states, "The net income of the Trust Fund shall be transferred from the Trust Fund to the General Revenue Fund." This would allow Syncrude's net profits to be returned to the Alberta Heritage Savings Trust Fund.

MR. CHAIRMAN: Thank you.

Are there others? If not, Mr. Libin, we would welcome some brief remarks from you to the committee if you'd like to give an overview. If not, that's fine too. We would ask you not to make them too extensive so the committee has an opportunity to put the questions they have prepared for you this morning. So if you'd like to go ahead with that, we'd be glad to hear from you.

MR. LIBIN: Thank you very much, Mr. Chairman, for those kind opening remarks.

Good morning, ladies and gentlemen. This is the second opportunity Dr. Spence and I have had to make a presentation to the standing committee. Our first meeting with you was last year shortly after both of us joined the foundation.

The past year has given the trustees and the new president an opportunity to become even more familiar with the impressive accomplishments of the foundation and the challenges of the future. As a result, the trustees have just embarked on a strategic planning process to consider directions for the future. The challenges are exciting, and I will be commenting on some of these directions later in my remarks.

This year we departed from the tradition established by Mr. Eric Geddes, the former chairman of the foundation, and Dr. Lionel McLeod, the former president, and opened our presentation using slides. I hope the presentation gave you an appreciation of the impact of the foundation not only on research in Alberta but also on patient care and health education. As Dr. Spence pointed out, these three activities – research, patient care, and education – are an essential part of any modern health care system. Not to do research is to sacrifice our ability to develop the future and realize the promise of knowledge gained in the past.

I would like to stress briefly a few of the points made by Dr. Spence and touch on the theme of our annual report, We're Learning a Few Secrets, which you have before you. Since its inception the foundation has contributed over $300 million directly to the scientific community in Alberta, and the results are impressive. Heritage researchers are on the leading edge of research in areas such as the immune system and cancer, diabetes and arthritis, transplantation, infant nutrition, electrical stimulation for paralyzed muscles, heart attack therapy, the commercial development of vaccines, and methods to diagnose cancer, to name only a few.

These advances are being made by 150 scientists recruited from Canada and throughout the world, 30 of them physicians who have established 10 specialty clinics in the province. We have funded the training of over 3,000 young scientists from the undergraduate to the postgraduate level. As Dr. Spence pointed out, this remarkable increase in biomedical research in our province has resulted in not only more knowledge of human health, better medical care, and potentially marketable products; it has also yielded direct dollar returns to the Alberta economy for every foundation dollar invested. The research catalyzed by the foundation in the past 10 years is attracting $2 to $3 for every dollar invested by the foundation. These dollars are directly invested in jobs and services with a direct benefit to the Alberta economy.

The '80s were characterized by recruitment and growth in biomedical research, particularly in the laboratory based sciences. Clinical or patient based research and research on promotion of health as opposed to the treatment of disease did not grow at the same pace. There are a number of reasons for this, among them a lack of skilled investigators locally and nationally, and perhaps we might discuss this later.

When the foundation was established in the late '70s, it was recognized that if they were to be as successful as was hoped by the government of the day, they would eventually require additional dollars for the endowment to maintain research activities and counteract inflation and the consequent erosion of the endowment. There was a directive in the Act to consider supplementing the endowment at a future date. Mr. Geddes and Dr. McLeod stressed

the importance of supplementing the endowment at every presentation they made to this committee. We did the same last year, and we'll continue to press for supplementation in the future.

The failure to supplement the endowment has been a major disappointment to the trustees and to the Alberta scientific community. The spending policies adopted by the previous trustees were the minimum necessary to build medical research in our province to the pre-eminent position it presently enjoys in the national and international scene. They husbanded the resources wisely, and at first glance the over $500 million in the endowment fund seems healthy when compared to the initial $300 million, but its value in 1980 dollars is only $278 million.

Even with prudent stewardship the relentless onslaught of inflation has continuously decreased purchasing power. If we cannot anticipate supplementation of the endowment in the near future, then the trustees must move to a spending formula which preserves the purchasing power of the endowment for future Albertans but at the same time provides as many dollars as possible for the initiatives of the present. The spending formulas also should ensure that budgets are relatively steady and free from rapid fluctuations that changes in interest rates and equity yields can cause in endowment income. Adopting such spending formulas places a limit on foundation expenditures and results in a steady state rather than a growth situation for research. The challenge of the '90s, then, is to maintain the morale, vigour, innovation, and excellence of our programs in this new steady state.

10:36

The foundation must ensure that only the most productive and effective investigators are supported and the Alberta scientific community is continually renewed by the addition of new, young investigators. Unless the medical/scientific community of Alberta is continually infused with new blood, the strength of our research efforts will diminish with time. To achieve this, recruitment and promotion must be structured in such a way that at each level of seniority only the most productive investigators continue to be supported. There will always be more young investigators than senior investigators. The rewards to those who are successful are substantial. The disappointment to those who are less successful is also very great, and I'm sure some of their concerns have come to your attention.

The foundation is also very careful to ensure that all young investigators we have recruited or trained in the province have an opportunity to continue their careers in medicine and science, although some of them may not continue to be supported by the foundation. Therefore, we have put in place terminal policies that provide one to four years of support for candidates who are unsuccessful in renewal competitions. These terminal policies are the most generous in the country and will help ensure skilled investigators are retained by the universities and hospitals.

While we continue to maintain the best of the basic biomedical research efforts in our universities and hospitals, we would like to accept the current challenge of the need for more patient based research and research on the health care system itself. The evaluation of present technologies, the prevention as opposed to the treatment of disease, research into the management of the health care system and the containment of costs, and the promotion of health and well-being: these issues are a priority for the public and government alike and are clearly articulated in the Rainbow Report and the Alberta Health report on utilization of medical services. These reports attach a high priority to expanded research in health care and the need for a health research agency to serve as a granting agency. Both reports also single out the foundation as a model of a way to proceed.

The trustees of the foundation are committed to a renewed and expanded effort in patient based and health care research. We feel that the foundation is one of the best vehicles in the province to catalyze such initiatives. We have had experience developing programs for the recruitment of new personnel, for the research training of young Albertans, and for the provision of infrastructure for conferences, workshops, and visiting professorships. We are already funding basic biomedical research, some of which will soon be translated into better patient care. Developing new research in health care will also require close consultation, collaboration, and co-operation with government, universities, hospitals, public health units, and many other stakeholder groups concerned with the promotion of health and the prevention of disease. The foundation is prepared to meet this challenge and to work together with all concerned Alberta citizens for a healthy Alberta in the future.

We recommend a target figure in the support of health care research of around $8 million to $10 million per annum for our province over the next five years. If this is to be derived from the endowment base, an addition to the endowment of at least $200 million is required. What if the additional dollars required for health care research are not forthcoming? With our current finite budget envelope and our current commitments, we would have to move gradually, selectively, and carefully into the support of health research and, even on this limited scale, may subtract dollars from basic biomedical research. The latter is something we do well, and one of the questions that must be asked during our strategic planning process is whether it is worth while to make even this limited commitment to health care research. Will it simply be too little to have a significant impact? A tangible financial commitment from this committee, this Legislature, and this government to the priority for health care research and to a foundation role in research would help us in making this difficult choice.

In closing, ladies and gentlemen, I would stress that the foundation has met the challenges in developing biomedical research in our province in the '80s. It is meeting the challenge of maintaining that activity at the highest level within available fiscal resources in the '90s, and it's prepared to accept the challenge of increased activity in health care research in the future. Without additional financial resources, however, we will have a very limited impact and may not be able to achieve our goals and your goals rapidly enough to adequately meet the acute problems of the health care system in the next decade. We see the need clearly. Can you help us meet the need?

Thank you very much.

MR. CHAIRMAN: Thank you very much.

The Chair recognizes Edmonton-Beverly, followed by Calgary-Foothills.

MR. EWASIUK: Thank you, Mr. Chairman. Good morning again, gentlemen. First of all, I want to commend and congratulate the gentlemen on their presentation to us this morning. I think the illustrations and graphs tell us a thousand words. As the old expression goes, a picture tells a thousand words, and your presentation certainly did that. It gave me a much better understanding of the process and the kinds of things you do. My thought on it was that it might have been helpful for us if you had included that kind of graphic presentation somewhat in your annual report. It might have been of some value to us, perhaps, in preparation for this morning and for future occasions when we

want to talk to our constituents or people in the province about your organization. I think it would be helpful to have that kind of material available to us.

Now, the questions I have. I think you covered the bases quite thoroughly in your presentation, but I was wondering about efforts to enhance encouragement of young Albertans into the program. I know that you have studentships, grants available to them, even clinical fellowships and so on, and you mentioned the nurses, doctors, dieticians, and everyone who contributes in some way. My question is: how vigorously do we approach our own students in bringing them into research? Is that an ongoing task? How do you attract these people to do research in this area?

DR. SPENCE: The recruitment of young minds into health and biomedical research is, I think, one of the most important priorities the foundation has. We move on it at a number of levels. I'm actually going to start with the progression in the educational system rather than with the size of the programs. One of the first things we've done is we've been involved with the science fairs in the province of Alberta, and we have a number of heritage awards we give to young high school and public school students who do a project in the health area, actually in any area sort of related to biology. We've had some fascinating projects. One was on a hanger for calves. Having been raised on a farm, I remember the problem: sometimes you have to hang up a calf right after they're born in order to drain the lungs. This kid, from Bentley actually, developed a super calf hanger for this sort of thing. We've had a number of others. So what we do is arrange for these young guys and gals to meet with heritage researchers and tour the labs and so on. We make a big deal of it, because what we're trying to do is really stimulate people down at that level. We want to catch them as young as we can and get them interested in it.

Then at the level of the universities, we have a lot of summer studentships we put out which encourage the students to come into the labs or the clinics during the summer and try it out and see what it's like, and maybe some of them will get attracted into it. We try to ensure we have both men and women supervising because it's very important to get woman role models for the women interested in coming through this; there are more and more women coming into science all the time. Then we also have studentships for the medical students and for postgraduate students as well.

We try to encourage this all the way along. It's a fundamental part of foundation activity, because without those bright young minds, the future simply isn't going to be there. We've got really bright people in Alberta. I am enormously impressed with the calibre of the young scientist coming through. We've got to feed back too. We've got to try to assist somewhere in the educational system so we continuously improve science education in trying to get people in. It's a competition, obviously; you know, we're trying to get the brightest to go into health as opposed to some other areas. Some of those other areas are very worth while as well, so it's a balancing act. But we really try to sell it.

10:46

MR. EWASIUK: Thank you very much. My second question. Again you alluded in your presentation to some of the good things that you have produced over the years, the advancements that you have made, and also you showed us that the contributions that the private sector and others have made have helped to finance the program. Other than these contributions to the fund that we get for your operation, what other kind of financial reimbursement is there if you develop a technique or a product that a company can then continue to develop? Do we get any money back for that sort of thing?

DR. SPENCE: The foundation has what we call the Alberta medical innovation fund, which has been made available to the foundation to administer. Actually, it flows through TRT to the foundation. This is a fund which is intended to assist in the commercialization of the research advances so that when a company sort of sees the commercial potential of this sort of thing, they come to us for help. We help them to patent, to do searches to find out whether this thing is patentable, to explore the business plan, to work together with the business community to develop a sound business plan for this. Basically, we try to take them out far enough so that they're totally competitive in the commercial sector. The idea is that then they can negotiate the best possible deal. If it requires a multinational eventually getting involved, they're at a stage where they've got enough muscle that they can negotiate the best possible deal with the multinational. We'd like to hold part of the activity here in Alberta. We want an Alberta edge. We don't want it exported to Switzerland or somewhere else. We want to get a piece of the action here.

One of the best examples is the peptide one that I think I mentioned earlier. Synthetic Peptides Incorporated is a company which is being started by a group of U of A researchers with foundation assistance and assistance from other places. Hopefully, when they get going they will have a big enough edge so that they can negotiate a very favourable deal with the drug companies and so on that will rebound to Alberta. We've also got one going in the artificial limb business in Calgary, which I think again will give us a real commercial edge ultimately. So we're very conscious of it and working at it very hard. We sort of ask the question: how can we retain part of it? Some of it's going to go offshore; there's no way of getting around it. If it's being developed best in Research Triangle Park, maybe that's where it should be moved, but at least some of the royalty fees may return to the province. We would like to see some spin-off to this.

MR. EWASIUK: Thank you. My final question then, Mr. Chairman, is one I asked the Minister of Health yesterday and I'll probably ask the minister of Occupational Health and Safety when he's before us. I'm thinking about preventative care now in terms of research. I asked yesterday about research on the worksite. My background is in the chemical industry, and I'm conscious of the fact that there are many chemicals in the workplace that have some long-term effects on people's health. I was wondering: does your organization get involved in that type of research, dealing with preventative health and establishing the kind of impact some chemicals have on the human body, so that we could somehow educate workers and employers as a result of our knowledge about those chemicals that would hopefully prevent diseases and other kinds of disabilities that human beings get as a result of exposure to those types of chemicals?

DR. SPENCE: I think we have a number of programs that relate to that area. Of course, everybody is enormously conscious at the present time of the stresses and strains on the human body that are introduced by the workplace, not simply the chemical ones but obviously, you know, diseases of life-style which relate to high-stress jobs and so on. A couple of examples that I can give you are that we do have strong research groups in both Edmonton and Calgary, actually, that are interested in the lung and in breathing. There is some interest in some of these groups in the effects of hydrogen sulphide relating, of course, to the sour gas wells. That happens to be of particular interest, insofar as we are concerned,

in the province but is also a general industrial pollutant, as I'm sure you're well aware.

The other area that we've certainly been interested in is in behaviour and life-style modification for people who are in particularly high-stress jobs, and we have investigators that have been involved in that type of activity as well. I think it's an activity, though, that we need to look at seriously as an increasing theme as we move more and more into the health sector as opposed to the basic biology sector, because so much of this impacts on healthy living. It's basically promotion of health.

MR. EWASIUK: Thank you very much.
Thank you, Mr. Chairman.

MR. CHAIRMAN: Thank you.
The Member for Calgary-Foothills.

MRS. BLACK: Thank you, Mr. Chairman. I'd also like to thank the gentlemen from the medical research foundation. It's absolutely a thrill to see what you're doing in research. I know some of the cases and scenarios that you pointed out to us this morning are just absolutely mind-boggling that we've come that far, particularly in the juvenile diabetes areas. There's a tremendous need for that, and I can give you nothing but accolades on what you're doing. I'm sure that you must get people every day asking you to do something in this area or that area and "How are we doing in another area?" I'm probably no different from anyone else, but if you can find a solution for diabetes, I know that millions of people will be eternally grateful to you in that area.

One of the concerns I do have is not with the foundation; it's maybe a concern with the overall approach. When you're making such tremendous advances and strides clinically in resolving some of these major medical issues such as the diabetes problems, I'm wondering: are you going in another direction, in the wellness and health promotion end, that is maybe being developed in other areas such as our health units and our public health boards and our hospitals and other community related areas? Are we maybe stretching those dollars too thin over too many groups to have as tremendous an effect as you have had on your clinical development and problem solving in that end? So I guess what I'm asking you is: should those dollars all be within one grouping to have the best effect on promotion of wellness and health styles, et cetera?

DR. SPENCE: I think that point is very well taken. It's one that the trustees are struggling with right now as they do strategic planning: to look at how the foundation can be maximally effective in terms of the dollar envelope that's available to it now.

One of the things that we feel quite strongly is that the areas of promotion . . . I'm not talking now about the delivery of health promotion and so on. I would agree with you. That's the function of people who are far more skilled at that than the foundation; in the public health units, for example, or in the various wellness groups. I don't think it has to be a function of health; there are a lot of other people that are very good at delivering this kind of thing as well. I think that that part of it is a function of our education systems, of our social services. There is a variety of places that this can come through.

The research in that area: what is the best way to promote health, what are some of the avenues that we should be doing for this sort of thing, how do we motivate populations? I mean, we've known for a long time about smoking, and yet walk by a high school, or a public school even, and look at the number of people puffing out in front. How do we motivate populations into healthful living? These are research questions, and I think the foundation has had an enormously successful track record in promoting research. That type of activity we can do very, very well: not the delivery but the research. I think that it's one of the few vehicles in the province with a track record in this area that can do this.

I realize and would agree with you a hundred percent that within existing resources we can only have a very limited impact, and that's why I think it's very important to look very seriously at either supplementation of the endowment or some other way to flow dollars so that we can get the research going. I like to use the wagon train analogy. It's getting those forward scouts out to tell us how to do it. Nobody knows how to do it at the moment. Nobody knows well. I mean, there are places that are experimenting, in Australia and California and so on, but nobody knows it well. Once we know how to do it, gosh no, the foundation shouldn't be involved in this; that's a function of people who are far better at doing this sort of thing than we are. We're sort of research scouts if you like, but once this research is through, there are other people to deliver it far better than we could.

10:56

MRS. BLACK: As my first supplementary, Mr. Chairman, if I might. I guess I'm looking at: we have the Cancer Board – and they're doing tremendous research into causes of cancer, smoking being one of them, and many other areas – and the Liver Foundation, the research that is happening there, and I'm wondering if we're expecting taxpayers' dollars to be stretched a little thin if we have individual foundations plus a tremendous thrust of medical research at the same time. I guess that's the comparison of where those dollars are in that kind of program instead of where those dollars should be dedicated. We support all of those other foundations, and in addition we support this foundation. You've just had such tremendous successes in your clinical area. I'm wondering if your concentration should be maintained in the clinical, and the Cancer Board and these other groups continue on with the other side of their specific research.

DR. SPENCE: The activities of the foundation I would see as being complementary to those of the Cancer Board – or, you know, if you want to use the ileitis, colitis, or liver. Let me just give you a specific example insofar as the Cancer Board is concerned. At the present time the foundation funds two investigators. They're looking at diagnostic markers in breast cancer. There are two or three scientists, actually, and they're superb in this area. We fund them. The Cancer Board, of course, is providing the space, the laboratory, and the operating funds for these individuals. The commercial sector is actually helping them. Vencap is assisting them in terms of a commercial venture that spins off it. It's a partnership. Each of us is taking a portion of it, that part that we understand best and can support and vet, then putting together a package, if you like, that would not be possible individually. So we certainly don't duplicate the activities of the others. We're complementary, and we're very careful not to overlap on it. We're trying to lever our scarce dollar and, at the same time, help the Cancer Board lever their scarce dollar. The co-operation then puts this activity forward.

I think, though, that we feel as a foundation that the priority in the health area is sufficiently high that we should be paying serious attention to it even if it does mean subtracting somewhat in this day and age.

MRS. BLACK: As a final supplementary, Mr. Chairman, if I might. Could I draw the conclusion, then, that possibly the

heritage foundation should be the umbrella group where these other foundations could possibly be co-ordinated and receive a co-operative approach to their research, have sort of an umbrella group to make sure that there isn't an overlapping and that a co-ordinated effort is made on the research dollars that are awarded from the taxpayer out to the various foundations? Would it be safe to say, then, that the foundation should receive the majority of the funds and designate them out to other foundations?

DR. SPENCE: I would hesitate to say that the foundation should be taking over from any other organization. I'm trying to be very diplomatic here. These all do a very, very good job. We try as much as possible to ensure that there is no duplication of effort in the things that we fund, because of course there's a cross talk between agencies. We sort of have different portfolios of things we look at. The foundation tends to try to work broadly, because the support, if you like, of cancer research or of diabetes research has to be very broad in terms of its activity.

Where the advances are going to come from is not immediately obvious. If you'd told us 20 years ago that the advance in diabetes would come out of immunology, we'd have said, "Probably not," but now, of course, it's very clear that there is an immune attack, if you like, that is mounted on the beta cells of the pancreas for some reason. So the advances from a whole host of areas are now focusing in on the disease. So then in a sense as the people that we support focus down, as they move in, cone in on a problem, they may use less and less heritage support and more and more support from a disease-oriented or -targeted agency. What the foundation has provided is the base structure that permits Alberta to access this successfully; in other words, so that they can then go out and bring the money in from these other voluntary or name agencies, targeting specifically on the disease. So we do function, I would say, rather than as an umbrella, almost as a basal structure if you like, an infrastructure to the activity. I think that's a very important part of our overall activity, and we share the information with the other agencies.

MR. CHAIRMAN: Thank you.

The Member for Edmonton-Meadowlark.

MR. MITCHELL: Thanks, Mr. Chairman. I would like to pursue the question asked by my colleague preceding me which raises the issue in a broader context of research management skills. I believe that it's something that isn't seen a great deal in advanced education institutions, postsecondary education institutions, but I believe McGill, for example, has a program on research management at the graduate level. Is there a critical mass now in Alberta where we could begin to use a program, perhaps at the University of Alberta or the University of Calgary, in precisely that, research management, to facilitate the efforts of organizations like yours, the co-ordination of research that's been done, as the member preceding me has suggested, in so many different organizations?

DR. SPENCE: I certainly think that Alberta is developing a real cadre of people who are skilled in research management. You've got some of the most magnificent entrepreneurs, I think, in Alberta that I have ever seen, and I've looked at them from Research Triangle Park to London, England and so on. We've got some superb people there who I think can assist, if you like, in the role modelling and the mentoring of people in terms of research management.

Whether a formal course in this area would be the sort of thing that one should be looking at – my guess is that one would want to look at something that was a little broader than perhaps just research itself. There are many basic management principles that would be involved in this, as I am now learning. Having sort of come out of a medical background, I've got to come back and learn how to manage companies and so on because of the nature of the foundation.

I would certainly agree with you; I think we've got a real resource there, that we should be looking at how we might capitalize on this expertise, because they're certainly very good at what they do and maybe we can make better use of it in the future. The business school certainly makes use of some of these things, as I know. They make use of some of our people in terms of this type of activity, but I don't think there's anything formal at the present time.

MR. MITCHELL: Speaking of research management, I'm back on SIDS. I know we've had this discussion last year and with your predecessors the years before. I understand the problem of government directing research and choosing what you should do. Could I ask that you bring us up to date, roughly, on what's happening with SIDS research? Last year you indicated that certain things that were going on in your area here in Alberta might actually have had some implications for developments with SIDS research.

DR. SPENCE: SIDS, sudden infant death, is that tragic condition, as I don't need to tell you, where mom comes in in the morning and the baby is dead in the crib. The reasons for this are still not clear, but it looks as though it's multiple causes, that some of them, at least, relate to the fact that the heart and the breathing systems are not matured, the pacers suddenly don't fire for some reason and they stop pacing, things that you and I take for granted as automatic. Other reasons appear to be bound up in the energy metabolism of the body. It suddenly goes astray, and they simply cannot digest food appropriately and so on, and they become catastrophically ill quickly and die. The reason it affects babies is that babies are so small that they've got no reserve, so they just go very quickly. A disease that in an adult might take a week to kill can kill an infant in hours.

There's a lot of work being done on this. We have a couple of heritage investigators that are directly in the area interested in the cardiac abnormalities and in nutrition abnormalities. There's also work being done right across the country which is, I think, going to have an impact on this.

The area of my own that you referred to happens to be on the genetic side of things. It was an area that we were looking at that I had no idea had any relationship to sudden infant death. Now it turns out to be a genetic cause of sudden infant death, in which the power plant of the cell, what they call the mitochondria – it's the thing that actually generates energy in the cell – has got a defect in it which is inherited. In babies, unfortunately, because they get stressed by diet, environment, a cold, or something like this or even by immunization, it suddenly puts a stress on this power plant, and these unfortunate babies it distresses too much. It just kills them, and it kills them in an hour or two.

11:06

The power of it now is that with the genetic testing we can detect that the babies are at risk for this, and then we just watch them like a hawk. If you feed the baby – this sounds terrible to moms, and the women in the audience can relate to this. You've got to get up a few times and feed them during the night, but if you do that, you can keep the attack from coming on. It's life saving, but it's a little hard on the parent. Sometimes we even put a tube in them and just drip them through the night to keep this

from happening. It sounds pretty horrendous to actually live your life – well, not your life, but as an infant – with a tube, but they actually tolerate it beautifully. They lie there all night with this tube going drip, drip, drip. Sometimes, of course, it pulls out, and then it drip, drip, drips all over that bed and so on, so you've really got a mess, but it's a pretty effective form of therapy.

It's a real problem. The tragedy, the impact on a family is just horrible. For some reason I've never really figured out, and maybe it's just because those who are taken from us are so precious, it always seems to have been the brightest and the best who go like this. It's a real tragedy.

MR. MITCHELL: Thank you. My third question concerns your slide on the spectrum of research directions. I'm interested in your mention of research into health care effectiveness. Could you detail what your plans are in that area and what the timetable is for pursuing that area?

DR. SPENCE: The major difficulty that we face at the present time with respect to a timetable on this one is simply one of resources because, as I also pointed out on the slides, we're up against the top end of the spending envelope. So to find resources for the health care initiative is going to be difficult, and we really need help there to have any significant impact. The foundation is going to have very limited impact if we are constrained by our current envelopes. What I would propose, and this is the foundation plan in this regard, is sort of a three-pronged attack. The first is to determine the activity that's going on in the province, because one of the things that you find very frequently as you start to talk about doing something – as soon as you realize somebody is starting to do something, what you need to do is nudge them. You don't need to start something new; you don't need to reinvent the wheel. What you've got to do is identify the skills that are there, and that's really not been done. It's not really been catalogued. The second thing is to identify the priorities of the province and of its citizens. In other words, what are the areas that we think are important, and can we get a mix between them, between the skills that are there and the priorities that we all feel are necessary in this area? If we can get a match between them, then what we need is just something that links them. It may just simply be a communications program.

My guess is, though, that when you look at the priorities – and some of them have certainly been clearly articulated in Rainbow – there aren't the resources in the province; there aren't the people. So what we have to look at, then, is training our own – and that's long term: five, 10 years maybe to start to train up a cadre of individuals – and recruiting in from the outside. Recruiting in from the outside in those areas – these people are as rare as hen's teeth. They really are very difficult to find. We can get a few, but I think that we're looking at a sustained long-term program to develop our own as well, and I would see both of them. But building on what we've got, augmenting that and also trying to reflect the priorities of the province, that means a lot of communication.

So in the initial phases I would see a fairly heavy concentration on conferences, workshops, visiting professorships, that sort of thing to get people looking at what it is they want, articulating it clearly. The foundation can catalyze this type of thing, then move from that, if you like, into the direct areas of recruitment, which we've done successfully in the past, and training. That's what we need to get at. If we can't do it through the existing mechanism, we'd be looking at a whole host of things: perhaps not just simply the universities and the hospitals but the community colleges, nontraditional areas where perhaps you haven't thought of medical funding, or at least we haven't though of medical funding in those areas. When you start talking economics, you're really talking about the faculties of economics or law, ethics, these areas that go well beyond the traditional concerns.

MR. CHAIRMAN: Thank you.

The Member for Three Hills.

MRS. OSTERMAN: Thank you, Mr. Chairman. Gentlemen, welcome once again, and I think all of us enjoyed your presentation. I wanted to move from the precise research that has been talked about and go back to the economics and the situation with respect to your fund. As Mr. Libin mentioned, this is something, in terms of enhancing the endowment, that has been discussed for many, many years, and you obviously have a great concern there. My first question is: do we have any kind of a push out in the public to look at potentially raising money through public donations, suggesting that people look at potentially a donation through their will and this kind of thing?

DR. SPENCE: The foundation, as I'm sure you know, traditionally has not gone to the public in terms of support, but I think it's something that we certainly will have to look at in the next while as one possible alternative way of seeking support. I'm always continuously impressed by the enormous public support of areas of health as witnessed by the voluntary giving to the various disease- oriented societies: cancer, multiple sclerosis, and so on. However, it is a highly competitive area, and the foundation moving into this area could be perceived as competition by others. That doesn't necessarily preclude us from taking a look at it, but I think one has to be conscious of the balance. The benefactors of the largess of the foundation are obviously out in the fund-raising business as well, the universities and the hospitals and so on. So there's a certain amount of territorial imperative, if you like, there that people are concerned about. But I think it's an area that the foundation does have to examine as a possible alternative.

However, the priority for health research generally is such that I think it should be a government and a public priority as well. I mean, this is an area that we're all . . . If you believe the *Globe and Mail* poll, everybody is still very upbeat about our health system, but they all recognize that it's got problems in it, and they want something to be looked at. So I think it should be a government priority as well. I don't think it can be entirely moved to the private sector.

MRS. OSTERMAN: I would certainly agree with Dr. Spence in that regard. I guess I was speaking to what I perceive to be also a balance, and I think it is recognized, looking at the graying population, that indeed we have been a generation of people that have been very, very fortunate. We've had pioneers who have built a province, left us with an incredible endowment in many, many ways, and we owe a lot. I think also it's recognized that our generation potentially has funds to contribute that go much beyond what is presently being contributed. I note that there are fund-raisers, people identified as such, that work for most foundations, and I had not seen this with our medical foundation.

Looking at your slides touches our heartstrings. It's obviously a sense of not only reality but good salesmanship. When we look at the children, particularly, we acknowledge where our heart-strings are. But with the reality of where the population is, again going back to the graying population, and where the escalating costs in health care are, the last number of days of a person's life I think we recognize as being very important. A population of 2 and a half million people: how much can we reasonably support

in keeping this critical mass going? How will the foundation, either through Mr. Libin or yourself, Dr. Spence, be looking at the priorities for research in the future when those kinds of tough decisions are obviously having to be made? How will you bring information in to set those priorities?

11:16

DR. SPENCE: Well, I think you've hit the nail on the head. One of the things that I think is clear for all of us, not just the foundation but in any organization, is that we do have to set priorities for our activities and look at them. I think the shift in the spectrum of our population – and it's very clear that people are living longer and that what I would like to refer to as gray power, as I get grayer and grayer, is going to become a larger factor in all of our thinking in the future.

How we set priorities is that we try to get the best advice we can from, if you like, the community and the experts. We have both national and international scientific panels of advisers that advise us on where research is going in the future. We also – and I try to do this very actively – sample the opinions of government and various public organizations to get their input into the process. We're going into a strategic planning process at the foundation in which we'll be sampling opinion from the public, the private sector, government, and so on to get some sort of idea of where they see the priorities for the future. I think we will have to look at some of these as thrusts for the foundation, always having a bit of a reserve there that picks up the thing that flies to the side because occasionally there is a highflier at the side, but focusing some of the resources, if you like, in areas in which there are natural strengths or natural advantages in the province and also are a priority insofar as society is concerned.

For example, there are things, I think, in this province where we already have real strengths, and it would be logical to build on those. There are other areas where we probably would be in such intense competition with other venues elsewhere that perhaps we should let them do it and import the knowledge. But there are other areas where I think nobody's going to do it and we're going to have to do it ourselves, in terms of Alberta.

But it's a consultive process. What we do is go as wide as we possibly can in terms of getting advice, sift this down, and then ultimately somebody has to make a hard decision. That is the function of the foundation, the trustees, to ultimately come up with this. That's a long way, I guess, of saying that what we do is ask all the wise people and then eventually just tie it down ourselves. Obviously, it's a function of the type of group you consult. If you're going out to talk about health care, you go out and talk to the health care people; you don't talk to somebody who is not interested in that area, who wants to keep things bottled up in a laboratory. If you want to talk about laboratory-based research, you go talk to the laboratory researcher.

I think it's important in terms of health to go very wide, not simply to talk to our traditional biomedical people but to go much wider, because some of the answers in health are going to lie well beyond the conventional in the future.

MRS. OSTERMAN: Well, I think probably you both recognize that when the foundation was formed some time ago, there was not only a humane sense about it and the thing that Alberta could contribute to health technology in general but also a sense that it was important to our economic development. These were the kinds of jobs we very much wanted for Albertans.

I'm pleased to hear about this wide consultation, because it's sort of a chicken-and-egg situation: you would like government support, but if our costs keep escalating the way they are in many, many areas and we don't have that balance in research that addresses some of those costs – and I think some of my colleagues have been speaking to that – we cannot fund to the same degree. So in a very crass way research that is done, hopefully a component of it, looks at that problem we have. So it is a matter as well of looking at Alberta's population, not just the glamourous things that may be done internationally and so on.

DR. SPENCE: If I could just comment on that. I think if I could be just as crass about it, I would say that it would be very smart of the foundation and its programs to position the sort of activity we're doing to meet the provincial priority. Ultimately, the province is going to be the paymaster with respect to the activity. If we're turning around and saying, "This research that we're going to get going is a top provincial priority," it almost guarantees that it's going to be funded in the future, if it's high quality. If you're asking questions about health care economics, we've got the people going into place who can work in this sort of area. It's a natural marriage. We both win. It's a win, win situation. That's where I think everybody comes off feeling much better about it.

But if the provincial priority is not an area that the foundation is looking at, then I think the foundation has to rethink this one. I'd just say: "Okay, we think it's important enough. We think you may be wrong, and down the line we hope you'll approve that. We will fund it for a period of time." That's our choice then, and obviously it may not attract the resources, but it would be silly not to take into account the priorities of society and priorities of the province because, after all, they're our priorities as well.

MR. LIBIN: There's a problem. One of the things that needs to be done in this province is that we have a $4 billion health care system cost and there is no central area that's looking at how we protect this, how we evaluate technology and the treatment of disease and looking into wellness. I mean, right now we're looking into sickness, but basically we've got to start having a central focus that's developed and led by somebody like the foundation worrying about how you keep people well in order to reduce the costs. This thing can't just go on the way it's going on now, because the $4 billion will be $6 billion and $8 billion. There's focused research taking place by various cancer boards looking at something specific and the different organizations, the heart and stroke and lung, et cetera. But in order to protect what we've built in this province – and we've built a very wonderful system and it's working well out there – we need to do some work in this area in order to ensure that we can continue delivering this to Albertans. This is what this is all about.

MR. CHAIRMAN: Thank you.

Perhaps I could ask the members to just tighten up a little on their preamble in forming their questions. I have quite a list of speakers who would like to get a question before these gentlemen.

The Chair will recognize Calgary-Mountain View.

MR. HAWKESWORTH: Thank you, Mr. Chairman. To our guests this morning, let me also add my appreciation for the slide show that you gave us earlier. I think pictures somehow communicate more effectively than words alone.

It's the slide about the transfer of technology that I'd like to talk with you a bit about this morning and the whole question of how you commercialize your research findings. I'm wondering if you could maybe expand. I know you've already made some comments, Dr. Spence, about how some researchers have formed a

company in Edmonton, I think, to commercialize the diabetes advance that they've made. I'm just wondering: what's the next step? How does that develop, and are there any patents involved? Who owns the patents? How are those reimbursed, and so on? I wonder if you could just talk a little bit more about how that works.

DR. SPENCE: All right. First of all, I should point out that the process is in some ways an educative one, because often you're starting out with a physician or a researcher or somebody who doesn't know anything about commercialization, so you've got to teach him. That's one of the things that maybe the foundation programs over the years will give us: a set of entrepreneurs who are used to thinking in this vein, and I think a very important vein in terms of how you get the thing out there and get it delivered to the public.

The intent of the foundation program is to take the idea when it's a glimmer in the head of the inventor, if you like, or whoever it is and get it out far enough in terms of commercial development that it then becomes attractive to the venture capitalist or to somebody else or to the drug company. So we do it in phases. We have a phase 1 grant, which is very small but sort of gets them started to explore the idea with respect to its commercial feasibility; you know, maybe just do a patent search, do a few more experiments to see whether it would work that way, start on a prototype or something like that. Then we have a phase 2 grant, which takes it a little further out. In that one you might actually patent it, protect it in some way, because you do have to protect it; otherwise, somebody's going to steal your idea. You might contract somebody to help you with a business plan and explore that.

The third one is what we call the phase 3, and it's a large grant. It's intended, really, to carry it out far enough so that either they would be starting to realize the prototypes that take you into the commercial sector or put them in a position where they would be competitive to negotiate a deal with a large multinational. If it's a drug development, for example, you'd be able to negotiate the best partnership, if you like, between your company and one of the major multinationals. We don't go all the way. We certainly don't replace Vencap or any of the big companies in this regard. We're just not a big enough player, but we try to do this.

11:26

Now, in the phase 2 and phase 3 grants we put in a payback clause. We expect that ultimately, when this individual or group of individuals is able to commercialize this, they will be able to return some dollars to us. We're certainly not going to make any money on the payback clauses. I can assure you that they're very liberal, and we try to put them in place so that it's encouraging rather than being a penalty to them. But we do expect that ultimately they would repay it so that we could turn the money back and help somebody else out with it.

So that generally is the sort of way we put it through, but I would stress that it's an educative process. When we look at it, the science of it is maybe 15 percent. We're really looking at the commercialization, and the people who look at it are people who've come up through sort of the science ranks but have now gone into business, and they've got a business background. We have hard-nosed businesspeople sitting on that committee as well. I mean, the question is really commercialization. It may be the greatest research idea in the world, but if you can't carry it into the commercial sector, we won't support it. What we try to do is to educate them so they know how to do that. By the time they get to phase 3, they know it's critically important that they've got a superb businessman driving it, that they've got good accounting advice, and that they've got all that infrastructure in place that is critical in the commercialization process, and that's well beyond the scientific idea by that time.

MR. HAWKESWORTH: Thank you, Mr. Chairman. I really appreciate the comprehensive answer to the question. I think I've got a better sense of it. One question I have is: with all this investment being made by the foundation itself to individuals, and we can definitely see the benefit with these research findings, is there anything that would prevent, say, a company from Atlanta, Georgia, or Los Angeles, California, just to pick some place, coming to Alberta and making a deal where the key individuals are maybe transplanted to another laboratory and the manufacturing of some new technology goes with them, so that all the value-added benefits end up in another part of North America thanks to the subsidy that's been provided by the heritage foundation? I mean, there are some dilemmas about restricting scientific development and knowledge and so on. How do you grapple with some of these questions? Are there any policies in these clauses or arrangements with the researchers?

DR. SPENCE: The currency of science, of course, is the exchange of information by journals, at meetings, and so on and so forth. So that information is in the public domain, and if an Alberta researcher had a commercial idea, didn't even think it was commercially applicable, and delivered the address in Atlanta, there's nothing to stop the company in Atlanta from just jumping on it, patenting it, and taking off. That just happens to be the way that the thing is developed. It's the person who's developing it that's got to think of its commercial potential, and that's one of the things we're trying to do by creating, if you like, a culture which thinks about that, that they would think to protect it. If they do protect it, if the protection costs are underwritten by the university or by the foundation, for example, part of the share of that then is retained by the institution.

So there is a return to Alberta on that basis, but you're quite right if the individual has never thought to protect it. Some of the best ideas in the world have been broadcasted because somebody has never even thought that it had a commercial spin-off and lost the commercial potential. Other people have been aware of it and have been able to insure the patent. The formula Pablum, for example, was patented. It's the base for the Research Institute at the Hospital for Sick Children. You know, it's just keeping that in mind. Very frequently we don't think of the commercial advance, and that's what we're trying to do, to sensitize our culture. Fortunately, because we still have a lot of the frontier spirit in Alberta, our investigators have got some of that feel for: well, can we do this? On their part it's not so much, you know, to make their fortunes, although I suspect many of them would not mind being a little better off, but often it's because they see the spin-back as helping them do research. If they can get the dollars back, then that enables them to push their bump of curiosity a little farther.

MR. HAWKESWORTH: My final supplementary, Mr. Chairman. Dr. Spence and Mr. Libin have raised with us a question about supplementing the heritage foundation itself, the endowment fund, and that there may be a problem over the long term if there isn't some additional capital injected into the endowment fund. What thought has been given by the foundation itself or action steps whereby you could maybe introduce a stronger regime in terms of licensing and royalty fees and perhaps profit sharing from some of this commercialization, which would then be returned back into

the capital of the fund to maintain its viability over the longer term? Instead of coming to the Legislature to perhaps seek further funds to boost the endowment fund, is there some avenue that you could pursue in the commercialization area that might generate that revenue and go into the capital of the fund for the future?

DR. SPENCE: The idea of sharing in the intellectual property and using that intellectual property as a source of revenue is being explored at the present time by the foundation, whether there is a way of doing this. There is, of course, already a share in the intellectual property by the universities. The foundation's share of this would probably be relatively modest. I mean, eventually it becomes a point of no return. We don't see that as being a major source of income in the future. It's certainly one that I think we could explore, but I don't think it's by any means going to return the sort of revenue to the endowment that would permit us to ramp up the spending rate very quickly. So I guess my answer to your question is yes, we certainly are looking at it. I'm not wildly optimistic about it being a major source of dollars in the future simply because there are already other people taking a share of that pie, and I think the foundation would have to be a little – we couldn't take very much without being sort of killing the goose that laid the golden egg, as it were.

MR. CHAIRMAN: Thank you.
The Member for Calgary-Fish Creek.

MR. PAYNE: Mr. Chairman, I want to refresh the memories of our guests today as well as the committee of a very interesting exchange that took place between Dr. Spence and Mr. Taylor a year ago in the area of medical ethics. Among other things, Dr. Spence told us of two developing areas of ethics expertise at the University of Alberta and at the University of Calgary. He emphasized the fact that the foundation is certainly interested in the whole area of medical ethics, and at one point in his comments last year, Dr. Spence indicated that the foundation was actively exploring a lectureship initiative. If I could just quote one sentence from his comments of a year ago.

> What we are looking at is ways of catalyzing, getting our legal brethren involved together with our medical brethren in a consideration of some of the legal, moral, and ethical aspects of some of the things we do.

I'm wondering: could Dr. Spence advise the committee as to what progress, if any, has been made during the past year with respect to this interesting notion of a lectureship initiative dealing with medical ethics?

11:36

DR. SPENCE: The University of Alberta has established what they call sort of a Health Law Institute – I may not be using exactly the right terminology, but that's along the lines of it – which is running a series of lectureships which are related to, if you like, medical/legal/health sorts of issues. I have had the pleasure of being invited to one of the first lectureships, which was given by a Professor Kennedy from Great Britain, which addressed the issue of termination of pregnancy. They will be having other issues addressed as we go along, such as the rationing of resources given the fact that resources are finite. One of the major ethical issues facing us now is: to whom do you allocate resources if you've only got 10 respirators and there are 15 people requiring them; how do you make these types of choices? They will be inviting visiting lecturers into that to discuss that sort of thing. Some of the staff of the foundation have also participated in the deliberations of the national council on bioethics, which is a federally supported organization which is looking at the ethics of large-scale drug trials, particularly in the pediatric and elderly age groups. So we have got involved in that area as well. I think this one is continuing to proceed, and I am optimistic that we will have quite an Alberta presence in this area in the future.

MR. PAYNE: Mr. Chairman, probably my only supplemental question today has to do with a particular medical ethical issue, and that's the so-called death with dignity issue. Physician-assisted suicide is perhaps the most intense and certainly the most controversial issue of medical ethics confronting Canadian and, I think, United States society today; in fact, it's probably a global ethical concern. The state of Washington earlier this week placed a related question on a referendum ballot in their state elections, and other states are also planning to go to their electorates with similar referenda. Given the intensity and currency of the issue, is the foundation giving any consideration to the ethical implications of physician-assisted suicide in its planning and research activities related to the broad area of medical ethics?

DR. SPENCE: I think the answer to that would be: not directly as a foundation-sponsored topic per se, but the foundation does have programs in place that would permit the interested Alberta constituency, which of course would be the medical societies, the hospitals, the health care providers, who would be the groups that would want to debate and deliberate on this issue. Through our visiting speaker, visiting lecturer, workshop programs we can enable that type of activity, but we don't have a specific thrust in that area at the present time. It is an area, though, that I think we will have to look at again in the future. Whether there are things we can do to provide, whether it requires additional special attention on the part of the foundation is something we would have to examine, but certainly we are permissive in it. We're not being directive in it in terms of the activity itself.

MR. PAYNE: Perhaps I will ask a second supplemental question then, Mr. Chairman. If the Alberta government were to pursue policy formulation with respect to this intense and current and controversial issue, would the foundation directly or indirectly be in a position to provide research assistance as the government worked its way through such a difficult issue?

DR. SPENCE: I think the foundation could certainly assist government in identifying the expertise that exists in the province and exists elsewhere and perhaps even in partnership with government sponsor a workshop or conference in this area. I think that's certainly something we could look at. It's critical that we address these issues, start thinking about them now, because one of the problems, as you well know, is that in the heat of the moment when these things suddenly whack you in the face, sometimes you don't make the most reasoned and ethical decision. It becomes critically important to debate these issues, as painful as some of them are, in advance of the fact, and that's why the debate about Washington and others I think is so important for us to be considering in terms of what may be happening in Alberta. Of course, as you well know, there are very strong feelings on all sides, and it's something that I think we have to share with the expertise right across the country and also try to work on our own particular solution with respect to this, because what is appropriate in one venue is sometimes not appropriate in another, as you well know.

MR. PAYNE: Thank you, Mr. Chairman.

MR. CHAIRMAN: The Member for Westlock-Sturgeon.

MR. TAYLOR: Thank you, Mr. Chairman. I'd like to continue a little bit along the side that the Member for Calgary-Fish Creek has opened up, which was started last year. Also, I think you mentioned in your display there when you're talking about that triangle or pointed off to the right or whatever it is, you were balancing on a rope. I don't know if it was an accident; you looked as if you were falling to the right into the test tubes. But let's try to fall over to the left into the question of social medicine, if you want to call it that way. I'll be a little blunter than the Member for Calgary-Fish Creek. Knowing that it's in the medical and public's attention now, why haven't you set up a medical ethics committee to interface and get feed-in from the public and the government? You're supposed to be leaders and researchers. If you follow this government, you'll be back in the last century. Why haven't you set up a committee?

DR. SPENCE: In the foundation programs what we have traditionally done is work through the major stakeholder groups in the province which have been, if you like, the hospitals, the universities, the health associations, and so on. These have been the groups that we have sort of, if you like, provided the funding to for projects or things that they want to develop and get going. We have been less proactive in terms of picking an area and saying: "The foundation wants this to move. We will invite your suggestions as to how you might want to do it, and we'll pick the best one out of it; you know, the one that comes up with the best idea for how to pursue this. We will then provide the funding for that."

The only area we've done this in has been in the area of wide-scale population based trials of therapies: so-called clinical trials. We have asked for proposals in that area, and there are proposals currently in front of the foundation from both major schools.

We have not done this in the area of ethics. It's certainly something that we could look at, but my point would be that normally this has been catalyzed from the constituency and not from the foundation. I think that as part of our strategic planning process we should be looking at whether we should be more proactive as opposed to reactive in this, and that's what you're basically asking me: sort of chiding me to be more proactive in this regard. We're certainly hearing it from you and from other groups. If the foundation identified this as a priority and we're not getting a reaction from the constituency, then probably what we should do is fish a little. You put some resources out there and say, "Okay, guys; if you want to access these resources, we want something moving in this area of bioethics," and that would be something we'd have to establish.

MR. TAYLOR: I like your concept of fishing, but it does appear you seem to be trolling in waters that are occupied by the health professionals. I'd like to see you troll a little bit in waters occupied by the ethics professionals, and those are certainly not politicians. I'm talking generally about philosophers and members of the clergy and leading ethicists who are around; I think it would make a rounder committee. Would you think of going outside the medical profession?

DR. SPENCE: Yes, and the profession is well aware of that. If you look at the research ethics committees, for example, that look at all of the protocols that involve people, all of the protocols that come to the foundation that involve people are reviewed by local institutes, so-called IRBs, institutional review boards. All of these usually have either an ethicist or a member of the clergy, certainly a heavy representation from the lay public, the legal profession, and so on. These committees are not pushovers. They have the teeth to stop the project, and if they don't approve a project, the foundation certainly wouldn't look at it. So when you go back to get a constituency to debate some of these issues, yes, you would certainly want, you know, from philosophy, theology, the roots of ethics, if you like, which are way beyond medicine – and these individuals must have a major say in what's being talked about. Now, in terms of the technicalities of it, yes, you're going to need a physician or somebody on there who can tell you what the whirling thingamajig does when it's hooked up to the patient or whatever you are talking about, but the actual ethical issues are grounded far deeper in our philosophy and our faith, and that's way beyond medicine itself.

MR. TAYLOR: Thank you, Dr. Spence. You're very good in your answers. If you ever think of a political career, I hope I'll be one of the first that you ask about it.

The second supplementary is a bit of a leap, but it's still intellectually in that same ballpark of social medicine. If I encounter anything that is a gap or a hole or a drawback, you might say, in health treatment in Alberta, it's the lack of access of our rural or our more remote communities to medical help or doctors. Now, I notice you're funding very much in the research area, but if you get into social medicine, have you thought at all about the funding of students who are going to university in return – it's like the old army system – for serving four or five years in remote communities?

11:46

DR. SPENCE: The whole question of person power distribution is a critical one at the present time for the profession, because if you look at the cities right across Canada, they have a fairly high proportion of health services of all types, but if you get out into the rural communities – you're quite right – then you can find where people have to travel a long way to get it and may not be able to get it.

One of the areas of research that I think is critical is to look at this whole question of what are the determinants of why people go to either a rural or an urban area. We can learn lessons from looking at some of the other constituencies. I just had the opportunity to be one of the surveyors of the medical school at Memorial University in Newfoundland. They have a pretty good record of getting people back into the outports and so on for the practice of medicine, and I think we can learn a lot from some research on their model; for example, look at how they do it. Perhaps there are lessons that we can learn there for Alberta. So I think where the foundation can get involved is not so much in the direct funding of people who might go back there but in trying to do research on what it is that determines why people go back to small communities or don't want to go back to small communities and what we can do to, if you like, alter the mix of people who are coming into the schools in nursing and in physio and so on. It's often not the position. You know, one of the problems that used to bother me when I was in general practice was trying to find a physiotherapist in the small community that I was working in. It was the rehabilitation that I was having the problem with, not the acute care medicine. So it's getting those sorts of services into the rural areas that I think is critical. It's a major problem that faces us and one that I think a lot of work needs to be done on.

MR. CHAIRMAN: Thank you.

The Member for Lacombe.

MR. MOORE: Thanks, Mr. Chairman. I certainly want to show my appreciation to the Member for Westlock-Sturgeon for giving me a chance to get my questions in today.

MR. TAYLOR: Why don't you move adjournment? You usually do.

MR. MOORE: It was very nice of the gentleman. He doesn't get appreciated very much. The odd time we show that to him when he gives us a reason.

However, to the gentlemen here. I enjoyed your film presentation, and I'd like to ask you: how many dollars, a ballpark figure, would it take to correct that balancing act you showed us and maintain your present thrust? Could you give us the addition of dollars that you're looking at?

DR. SPENCE: We estimate, from what we've looked at, that to mount a good health care thrust in this province, you're talking $8 million to $10 million a year. If that's based on an endowment income, then you're really talking about $200 million in the endowment, because if you figure taking 10 percent – let's say earning $20 million a year and returning half of that to stop erosion – then you're looking at $8 million to $10 million in income from that type of supplementation to the endowment. That's the sort of minimum figure that we figure is necessary in order to ramp up the health care research activity of the province to the area it should be at. It's predicated on the idea too, of course, that as we position people for this type of activity, they will be able to attract outside dollars. So my expectation would be that for that $10 million that we would spend, we would be able to attract an additional $20 million or $30 million from the outside. So I would expect that the leverage, the activity, would actually come up to $30 million or $40 million when it gets going.

MR. MOORE: Well, supposing that money was provided today, with your expectations where would the arc hit again when you'd be back here asking for additional funds? We saw where the arc hit from the original $300 million. You showed today where the arc hits down and said, "At that point we're in trouble." Where would that arc hit again, in your estimation?

DR. SPENCE: With this type of supplementation and a modification of the research profile – in other words, instead of that narrow triangle I've got it out so it's a battering ram, if you like, moving forward; I've got more activity on that front end – my expectation would be that I wouldn't come back to you. I think we could do it. That may come back to haunt me, but my expectation is that we could do it. I think we're underfunded for the activity at the present time, but I think if we could get up to that speed, we could carry it, assuming, of course, that we can leverage additional resources from other sectors. I'm thinking of outside, I'm thinking of industry, I'm thinking of a whole host of areas, and I'm also thinking that in the health care area we'd be able to develop a salable product.

For example, if you get really first-class ways of evaluating technology, can we patent these? Can we protect them in some way? Can Alberta become the place where everybody comes to learn how to evaluate lithotripsy or something like this, and we've got an exportable product? So what I'm really thinking of is that in the initial phases of our research it would be knowledge-based and working on our health care system, but ultimately if we get better medical records systems, better ways of promoting health, we can sell the packages. I mean, after all, Weight Watchers is a great package; they make a lot of money off some of their products. We funded, through the technology transfer program, a suicide prevention kit which I think is going to make money. I think we can lever both the public and the private sector in this regard. So I wouldn't make an absolute promise on coming back, but I think we could probably do it.

MR. MOORE: Mr. Chairman, I'm interested in this marketing of technology, very interested, because a drug company will spend millions of dollars on research and come out with some product or some process in the health care field, and they make millions on it selling it into – well, to whoever buys it. We're doing the same thing, and I'm interested in your statement that you look toward that area. The question is: have you done any of it so far? I see that the financial statement says:

> In addition, the Foundation funds an aggressive technology transfer program which is beginning to see the work of Alberta's fast growing medical research and industry community translated into successful commercial ventures.

Now, it says "translated into successful commercial ventures." Have you taken an equity position in any of those commercial ventures, or have you got anything back on those to date?

DR. SPENCE: We've not taken an equity position to date. What we have been putting is payback clauses in some the funds that we're putting out, so that they pay it back two or three times, if you like, somewhere down the pike. In other words, it's calculated to get a reasonable rate of return on the investment in terms of the dollars. If what you're asking is if we have had any money paid back to us, yes, we did get a cheque back, actually, from the peptide company that I happened to mention, I think, as one of my examples of a commercialization product. They have paid us back on a phase 2 application. My expectation is that we would see more of those in future.

If you want to remember, the technology transfer program started in '86 very small; the major infusions of funds have really only started in the last couple of years. So my expectation is that we're still looking three or four years down the line in terms of those. Which ones are likely to be big hits, which are likely to be small: I don't know. We're also, of course, as I mentioned, looking at the possibility of getting a piece of the intellectual property, but that is going to be a little longer down the road because we're also in competition with the universities and the hospitals in that regard, and we have to work out some sort of shared formula, I think, between them if we get into that one.

MR. MOORE: Thank you.

11:56

MR. CHAIRMAN: The Member for Wainwright. I believe we have time for a question prior to adjournment.

MR. FISCHER: Well, my questions have pretty well all been answered, thank you, Mr. Chairman.

I would move a motion to adjourn.

MR. CHAIRMAN: Okay. Thank you. You were the last person on our list, so the Chair will accept that motion, but could you just hold it for a moment?

I'd like to express appreciation again to our guests. We appreciate you coming and for the really good information you gave us. I'm sure it will be beneficial to our committee. Thank you again.

All in favour of the motion to adjourn?

HON. MEMBERS: Agreed.

MR. CHAIRMAN: Carried. Adjourned till 2 o'clock this afternoon when the hon. Minister of Forestry, Lands and Wildlife will appear before the committee.

[The committee adjourned at 11:57 a.m.]