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ARCH: We're just gathering here and we're ready to begin our hearing, so if you'll just hold for a second, I will open the hearing and then we can get a chance to talk to you.

DENNIS ROOP: OK.

ARCH: Good morning, and welcome to the Health and Human Services Committee. My name is John Arch. I represent the 14th Legislative District in Sarpy County and I serve as Chair of the HHS Committee. I'd like to invite the members of the committee to introduce themselves standing in my right- starting on my right with Senator Day,

DAY: Senator Jen Day. I represent Legislative District 49, which is northwestern Sarpy County.

MURMAN: Hi. I am Senator Dave Murman from District 38, and I represent seven counties to the southwest and east of Kearney and Hastings.

WILLIAMS: Matt Williams from Gothenburg, Legislative District 36, Dawson, Custer and the north portion of Buffalo Counties.

ARCH: Also assisting the committee is one of our legal counsels, T.J. O'Neill, and our committee clerk, Geri Williams. We would ask that you turn off your cell phones. We would ask that you please wear a mask in the room. And with that, we will begin today's gubernatorial appointment hearing and welcome to Dr. Roop. Dr. Roop, if we could ask you to please open with some comments and give us a little bit about your background and your involvement up to this point with the Stem Cell Research Advisory Committee.

DENNIS ROOP: OK. Obviously, you know, my name is Dennis Roop. I'm at the University of Colorado School of Medicine. I've been in Colorado since 2007 when I was recruited from Baylor College of Medicine in Houston to develop a stem cells center for Gates Center for Regenerative Medicine. I've actually been on this committee from the very beginning. One of the-- I guess you could call it founding members of the committee to evaluate applications for state funding for stem cell research that does not involve the use of embryonic stem cells. I'll just say that from my perspective, this has been a very important state funded program. I think the return on investment, at least from the reports I've seen, has been a very worthwhile

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investment from the state and I'm really glad that the state has
continued to fund this program.

ARCH: Great, great. Thank you. Well, thank you very much for your
service to the committee. How many years has that been?

DENNIS ROOP: You know, I was thinking about that. I think since-- you
can remind me, but maybe since 2009.

ARCH: So 10-plus years.

DENNIS ROOP: Yes.

ARCH: Yeah. Great. Could you-- could you tell us a little bit about
your own research line? What-- what it looks-- it appears to be mostly
skin-related, dermatology-related. What if-- we're all-- we're all lay
members here, so we can't go too deep but help-- help us understand
the research that you're personally involved in?

DENNIS ROOP: Yeah, my-- my own research is involved now almost three
decades of studying a-- a series of rare, inherited skin, western
diseases. Kids that have these-- inherited these defects have very
fragile skin. They blister with minor mechanical trauma. There is no
cure. These are really very debilitating diseases that cause not only
the patient but also their family lots of distress because they-- the
patients have to be bandaged, usually takes several hours a day to
bandage because they try to protect them from further blistering or to
cover their wounds. So we're working to develop-- and if all goes
well, we'll enter into a clinical trial this year. We actually can
take a biopsy from the skin. We can reprogram those cells back into an
embryonic-like state. We can genetically correct the defect and then
we differentiate the cells back into normal skin cells and these will
be then grafted back on to the patient. And that should be a permanent
corrective cure. So, you know, it's a rare skin disease. But, you
know, our research has implications for many other diseases that we
get-- show that this approach is successful for the skin, which is
very accessible. We can monitor it to make sure everything is safe,
and then the same approach can be used for many other inherited
diseases where we know the genetic defect.

ARCH: Very important work. Great work. Thank you. Other questions from
the Senators? Senator Williams.

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WILLIAMS: Thank you, Chairman Arch, and thank you again, Doctor Roop for your continued service. You've been there a long time, other members have come and gone. Has there been a consistent theme that you have worked on with the Stem Cell Research Advisory Committee?

DENNIS ROOP: Well, I think one of the things that has impressed me and I think the other members that have been on the committee from time to time is, really bringing together not only-- but, you know, stem cell biologists, but also engineers to find better ways to potentially grow, let's say, a bone or muscle and I think combining engineering along with biology, I've been very impressed with the integration and the collaboration across just different disciplines in the projects that I've seen through-- come through the program.

WILLIAMS: Thank you.

ARCH: Other questions? I have one more question, and this isn't directly--

DENNIS ROOP: Sure.

ARCH: --related to your involvement on the advisory committee, but what's-- what's the state of science? How-- how are you seeing science progress with-- with research in the nonembryonic stem cell research?

DENNIS ROOP: You know, it's tremendous. I mean, we're doing things now and I can't really get into the specifics, but I can just tell you that, you know, my own group, we're able to do things that we couldn't even dream of three years ago so the field is moving very fast. You know, on our campus, which is out in Aurora, this is east of Denver, and we actually reach-- I believe, you know, our campus-- our medical school campus has a tremendous draw where we draw all the way into Nebraska, up into Wyoming, down to New Mexico. We-- we built and opened five years ago a facility where we can actually manufacture. We can actually grow patient cells. We can modify them, expand them, and return to patients, and so just in the last year, for the first time in Colorado, we actually initiated a clinical trial where all the science was done on our campus. We manufactured the cells. We genetically modified them so they could attack cancer cells. Just across the street and this GMP, it's called the Good Manufacturing Practices facility, manufactures the cells across the street and then walk them across to the hospital where they were infused into our own

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patients here in Colorado. So, you know, for the first time now, our patients don't have to go to the East Coast, the West Coast, or down to Houston to get, you know, this type of cell-based immune therapy. So, you know, certainly I can speak very personally from this to be able to see this happen here in Colorado. I think the field is moving extremely quickly and we've now treated four patients with this new cell-based therapy. These are for advanced stages of lymphoma where they failed all other types of treatments. These patients, all four of them are now in complete remission. We're just initiating the first trial at our children's hospital for-- for children that have advanced stages of leukemia that haven't responded to traditional therapy. So to see that happen here locally, I think this-- we really are optimistic about the future. Things are moving very, very quickly.

ARCH: Real clinical application. Yeah, it's--

DENNIS ROOP: Yes.

ARCH: --definitely advanced a long ways. That's-- that's great. Are there any other questions from the committee? Senator Day.

DAY: Thank you, Chairman Arch, and thank you, Dr. Roop, for your service and for being with us today. The work that you're doing is fascinating and important, and I'm impressed with what you have done so far in your service, but what would you say that your primary area of interest is in continuing to be-- in continuing to serve in this capacity?

DENNIS ROOP: Well, again, I think as scientists, we would like to see progress made in other institutions and certainly in our neighboring state. I wish Colorado had state support for stem cell research the way that-- that Nebraska does. That's something I've always been impressed that Nebraska was able to convince its citizens and to support. So, I-- I hope that I can help select the best projects that will move forward and-- and eventually benefit the citizens of the state of Nebraska as well.

DAY: OK, wonderful. Thank you.

ARCH: Any other questions? Seeing none, thank you very much for your time, Dr. Roop, and thank you for your service to the state of Nebraska and to this committee. We'll-- we will consider your

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reappointment and we'll vote that and move it to the floor, so thank
you very much again for your time.

DENNIS ROOP: Certainly.

ARCH: Have a good day.

DENNIS ROOP: Goodbye.

ARCH: Goodbye. And this will conclude the hearing for the
appointments-- our hearings for the morning, and so we will adjourn.

[BREAK]

ARCH: OK, we're ready to begin. Good afternoon. Welcome to the Health
and Human Services Committee. My name is John Arch. I represent the
14th Legislative District in Sarpy County and I serve as Chair of the
HHS Committee. I'd like to invite the members of the committee that
are here today to introduce themselves starting on my right with
Senator Murman.

MURMAN: Hello. I'm Senator Dave Murman from District 38 and I
represent seven counties to the southwest and east of Kearney and
Hastings.

WILLIAMS: Matt Williams from Gothenburg, Legislative District 36.
That's Dawson, Custer, and the north portion of Buffalo Counties.

ARCH: Also assisting the committee is one of our legal counsels, T.J.
O'Neill, and our committee clerk, Geri Williams. This afternoon we
just have one gubernatorial appointment and it's Dr. Owens. And so
with that, we will begin, and Dr. Owens, welcome. And we would ask if
you would give us some introductory remarks regarding your background
and perhaps you can talk a little bit about the research that you are
personally engaged in, and-- and then we'll have some time for some
questions.

DAVID OWENS: OK, sure. Good afternoon, everyone. My name is David
Owens. Currently, I'm an associate professor in the Department of
Dermatology and Pathology and Cell Biology at Columbia University. So
my-- my scientific training goes as follows. I received a Ph.D. from
North Carolina State University in 1996 and subsequently and-- sorry,
this was in the field of carcinogenesis. And I then conducted

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post-doctoral training in London from 1997 up to 2003. And the training that I did in London was with Fiona Watt and this was in-- this was in the field of epidermal stem cells. And following my post-doctoral training, I came back to the state, and to Columbia, where I started as a faculty member in dermatology and-- and I've been at Columbia ever since. So my-- my work as a trainee in stem cell continues to this day and-- and so I have an interest in how the epidermal stem cells regulate in function and integrity and how those functions are perturbed in cancer. So we're interested in stem cells in terms of normal day to day consumption and we're also interested in stem cells in terms of their role in forming different types of skin tumors. And so I'd say that-- yeah, I'll leave it at that.

ARCH: Thank you. We-- um-- you perhaps know, Dr. Dennis Roop, who's also on the-- on the advisory committee, also in dermatology. And we had a conversation with him this morning as well. Sounds like there's some great strides being made in the-- in the area of skin cells and dermatology as it relates to stem cell research.

DAVID OWENS: Yeah. So, yeah, I've known him since I was a graduate student, but it goes back to the early '90s. He is a pioneer, or he has been a pioneer in the field. And so one of the great things about-- and if you're interested in stem cells there's the access, so this kind of affords you easy access. There are also many different lineages in the skin, so you can just look at your skin, you see nails, you see hair, you see, what we think of is skin, so stem cells are making these products every day. And they turn over, we lose a third, but it's a great organ, it's a great model to study stem cell functions because we need stem cells so desperately to maintain the turnover of all these financials, but they just can't.

ARCH: Thank you. Very interesting. I understand that you are-- that this will be a new appointment for you, is that correct?

DAVID OWENS: So that's correct. I have not been on a-- on a state advisory board, but I have been an active participant in the state of New York. The Department of Health has within its organization a stem cell group. It's referred to as New York State Stem Cell plan. And over the years, I've been fortunate enough to have several applications funded by them so I've benefited from that and I-- so I'm sort of personally seeing the benefits of state funded stem cell work.

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ARCH: Good, good. I'm going to open it up to the committee for-- for any questions that they might have. Senator Williams.

WILLIAMS: Thank you, Chairman Arch, and thank you, Dr. Owens, for your willingness to step up to this appointment. When you think about the Stem Cell Research Advisory Committee, what-- what interests you most about serving on this group?

DAVID OWENS: So I-- I would say that I feel-- I feel some duty to pay back the-- in terms of the benefits that I've received from New York state and so, funded research. Again, I have had multiple applications funded at state level for our stem cell work. And for many years, it was the only funding we had. And so it really served as a key area of support for our stem cell program. So I feel obligated in a lot of ways to support state funded organizations that-- that are driving stem cell research. I say that probably first-- first and foremost and second, you know, stem cell research has been at the core of my training and in my own biop for-- for as long as I can remember. And I don't see that changing any time, so I'm-- I feel a-- an obligation to support stem cell research, whether it's at the federal level, state or whatever level. I am highly motivated to support stem cell research in any way that I can.

WILLIAMS: Well, thank you, and thank you again for your willingness to volunteer for this position.

DAVID OWENS: Sure. Thank you.

ARCH: Are there other questions from the committee? Senator Murman.

MURMAN: Thank you, Senator Arch. Dr. Owens, I, too, want to thank you for your willingness to serve on this board. I'm wondering if you have any particular challenges that you look forward to in your service on the board. I know as a doctor and looking through your accomplishments, you must look forward to challenges, just curious about that.

DAVID OWENS: Yes, so, I mean, in that there are many challenges I think that-- that based on our field, some of those are technical in nature and some are scientific. And the skin is not unique in this aspect. So I feel that for as much as we've learned over the last 10 or 20 years about stem cells, and I would say the bulk of what we

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really know about stem cells, we've only learned recently. We still haven't really harnessed the true utility of these cells in adult organs. And so I think the challenge is that I look forward to facing both in my own work and other people's work is how we are breaking through technically with targeting and so in various adult organs and how we can better utilize or bring this to market, like, you know, when are we going to get to the stage where we have a therapy, a stem cell-based therapy that-- that is accessible in state or in any given [INAUDIBLE]? This is for all the work and for all the knowledge that we gain, there is a key gap in-- in bringing that to a translation or clinical stage. And-- and I-- I look forward to breaking down these barriers in my own field and helping other people do it in different organs.

MURMAN: Thank you.

DAVID OWENS: Yep.

ARCH: Are there any other questions? Well, again, I would like to-- I would like to thank you for your willingness to serve. It's a great service to the people in Nebraska and it's a great service to the-- to the science to the-- to-- to helping us all live healthier lives and to solve some of the issues that we face. So thank you very much. What-- what will happen now is we'll consider it as a-- as a committee at a future date. And assuming that we approve that, we will send it to the floor for confirmation from the full Legislature and then we'll be getting back in touch with you. But-- but thank you. Thank you for putting your name out there and being willing to serve and for spending time with us this afternoon.

DAVID OWENS: And thank you very much. You know, not every state has one of these organizations, but personally I think it's key, not only for scientific work, but also commercialization. So I thank you guys as well for your efforts.

ARCH: Great. Well, thank you. Thank you. All right. And with that-- with that, we will close the hearing for David Owens for the appointment. Thank you very much.

DAVID OWENS: OK, have a good afternoon. Thank you.

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ARCH: You too. And I see no-- I see no proponents, opponents or
neutral testifiers, so with that, we will close the hearings for the
day.