

This transcript is the uncertified transcript of the California Department of Public Health (CDPH) Human Stem Cell Research (HSCR) Advisory Committee meeting held on February 20, 2009. This transcript has not been reviewed for accuracy and has not been approved by the CDPH HSCR Advisory Committee.

Moderator: Shabbir Ahmad
February 20, 2009
10:00 am PST

Coordinator: Excuse me, this is the operator, today's call is being recorded, if you have any objections, please disconnect at this time. You may begin.

Henry Greely: Thank you. Well I think we should get started. Welcome to all of you who are in here in person and those who are here on the telephone to the February of 2009 meeting of the California Department of Public Health Human Stem Cell Research Advisory Committee.

As I think you all know my name is Hank Greely from Stanford and I'm chairing the committee. With us here in person from the committee are David Magnus from Stanford, Bernie Lo from UCSF, Margaret McLean from Santa Clara University.

And sitting in for Bert Lubin from CHORI- CHORI or CHORI?

David Martin: It's CHORI believe it or not.

Henry Greely: I believe it, CHORI, Dr. Martin. We're expecting Professor Radhika Rao and we have on phone currently Dr. Elliot Dorff. So we're one short of a quorum at this point but we do have a number of things we can talk about before we have any need for a vote if we end up having a need today.

I also want to recognize a couple of members of the public who are here. I know the names of a couple of you, Geoff Lomax from the California Institute for Regenerative Medicine.

Ellen Auriti from the UC Legal Office, President's Office. You I don't know. Thank you. And then we have four members of the state staff here lead by Dr. Shabbir.

Shabbir Ahmad: Shabbir Ahmad from California Department of Public Health.

Amber Christiansen: Amber Christiansen.

Henry Greely: Hi.

Heidi Mergenthaler: And Heidi Mergenthaler.

Elizabeth Carson-Cheng: Elizabeth Carson-Cheng.

Patricia Rodriguez: Pat Rodriguez.

Henry Greely: Great. Well we're going to thank everybody for coming out, particularly appreciate the presence and the continuing efforts of our state employees after - through a period of California's history that I think we will not look back on fondly and with great pride.

But in a chaotic period the dedicated work of California state employees in very difficult circumstances. It's been heartwarming and essential to the well being of the state, so I thank you and your hundreds of thousands of colleagues.

All right, today we have - everybody's been given the agenda, we have some fairly specific things to talk about.

There are also a couple of things I hope we'll get to in a more general matter and just to give you a sense of what I hope we can talk a little bit about, long term ways for us to deal with the regulatory structure that's evolving.

We as a committee make recommendations to the department which in turn generates guidelines that's subject to, that's pursuant to and subject to special state statutes.

We try to coordinate with CIRM which is regulated under other statutes and with the different regulatory body, but we think as I think CIRM thinks to the extent we can avoid having two completely different regulatory authorities governing stem cell research in California that would be a good thing.

We try to keep up with the National Academy of Sciences and pay attention to their guidelines which appropriately change from time to time.

And at some point I think everybody thinks that...

Elizabeth Blackburn: Hello.

Henry Greely: Hello?

Elizabeth Blackburn: Hello, this is Elizabeth Blackburn from UCSF.

Henry Greely: Ah, Dr. Blackburn, welcome.

Elizabeth Blackburn: Thank you.

Henry Greely: You are our quorum. I'm just bloviating a little bit about what the long term issue that I hope we'll get some time at the end of today to discuss and that's how this regulatory process and guidance process could work.

We try to keep up with CIRM, we try to keep up with the National Academies. I think it's everybody's expectation that the federal government will soon become a significant player.

Elizabeth Blackburn: Yes.

Henry Greely: Funding, and when the federal government becomes a funding player it is likely to become a regulatory player.

Elizabeth Blackburn: Indeed. Yes, so California will lead the way.

Henry Greely: But that does put our committee in the difficult situation of trying to keep up with, respond to, pay attention to and provided by such change in the guidelines with respect to changes in regulations or different regulations.

Very different regulatory bodies. Somebody just join or leave?

Samuel Cheshier: Yes, it's Sam Cheshier, I just arrived.

Henry Greely: Ah Sam, welcome. Dr. Cheshier I understand that you are far away.

Samuel Cheshier: I am in Sweden.

Henry Greely: That counts. You get the award for who has at least vocally come the farthest.

Samuel Cheshier: I haven't seen the sun since November so be kind to me.

Henry Greely: Well as of a couple days ago we hadn't seen the sun for a week, but lately it's been very nice.

Samuel Cheshier: I'm very envious.

Henry Greely: So I do think - I hope we'll get some time to discuss this and it does worry me in the long run how our committee can try to keep up with and provide good advice to the department on keeping up with changes coming.

Changes that we'll have to think about coming from so many different bodies and the one that of course has been the biggest set of issues has been the change of regulations at CIRM.

And our need to think about those, often modify our guidelines with respect to it. So that's sort of my big issue for this meeting. But we do have a full agenda with other matters.

Dr. Ahmad is there anything, any words you would like to start out with before we move to agenda item two?

Shabbir Ahmad: Yeah, no first of all I'd like to thank Dr. Lubin in hosting this meeting for CHORI and thank you to Dr. David Martin and (unintelligible) and him, yep.

Just a few things, finally we have the statement that is sort of it was even as President Obama said that these are extraordinary times and extraordinary measures needs to be taken. So I think it was a teamwork and with some facts and fee increase and borrowing and program spending cuts, the deficit has been at least taken care of for the time being.

We don't know in the department yet what will be the effect of the spending cuts. As you've heard the Department of Education saw the biggest hit, social services again (unintelligible).

So what would be its impact on the Department of Public Health we don't know at this - I think in the next few days (unintelligible).

As far as you know for the committee, the funding for the committee, I think I don't see any indication that it is on the chopping block or anything like that.

So that's at least for the time being is a good news. So we will continue with the committee and I'm very much thankful for your volunteer time and for the time to give advice and recommendations to the department.

And especially thanks to the chair and the vice chair for excellent work being done on the behalf of the Department of Public Health and the Californians.

The other piece of news - our report I want to share with you is we are - we received 245 reports from different institutions on the human stem cell research projects.

And it's a legislatively mandated review which the department has to prepare. The review has been prepared. It is going through the department for approval.

It's with me at this moment and I will be submitting it to our director's office and then it would go to the legislators for sharing the information with them.

And then we will make it public at that time.

Henry Greely: And when it becomes public we'll get a copy?

Shabbir Ahmad: I would say it depends as to how this approval process goes through the department. It may take time but I would say six to eight weeks roughly.

Henry Greely: After it becomes public the committee will get a copy of it?

Shabbir Ahmad: Definitely, yeah. The committee would be the first one to get the copy, yeah.

Henry Greely: Does the department have any... noticed any particular problems in the reporting process?

Shabbir Ahmad: Not that we are aware of. None of it on like oocyte donation for research purposes so all to (unintelligible) reports were on the research (unintelligible) cell lines of the other human stem cell research related projects.

So we are expecting probably too in the next cycle of reporting the - on the donation effects for retest purposes (unintelligible).

Henry Greely: Based on your experience with what you've seen from this reporting cycle are there any changes to the reporting forms or requirements that you think we should consider recommending?

Shabbir Ahmad: In fact on the contrary we got a really encouraging remarks from various institutions that these are very end user friendly and the process of developing the forms was really very much participatory.

So I think we did not look at this one with - where there was a need for the change.

Amber Christiansen: Right now if there are changes they'd be minor – with the layout.

Shabbir Ahmad: Well nothing substantive but just format changes.

Henry Greely: Well two things, I would suggest you take those nice comments about what a wonderful process it was, get them bronzed and hang them, put them on the desk for all to see.

It's rare to get happy users of any compulsory form so that's a very good sign for the department's work.

But if the department thinks that there's anything about the reporting process for which they want the committee's advice, please let us know.

Shabbir Ahmad: Well in the next meeting I will bring some (unintelligible).

Henry Greely: I think that's probably all we need for preliminary introductions, reports, welcomes and so on.

I am going to ask Geoff Lomax to say something about CIRM but I think we probably should approve the last meeting's minutes first.

So move to agenda item number two, you've all received copies of the minutes of our last meeting. Are there any amendments, changes, corrections?

Elliot Dorff: Hank this is Elliot, I just wanted to say that as somebody who was not able to attend the last meeting I really appreciate the clarity and the thoroughness of the minutes.

I got a real sense not only of the topics but of the arguments pro and con and I know that that doesn't happen easily and I want to thank the minute taker.

Henry Greely: Who actually should we thank for the minutes?

Shabbir Ahmad: I think it's Amber and Heidi and now Elizabeth. They are the workers.

Henry Greely: I second Dr. Dorff's gratitude, they were impressive. I was at the last meeting and I don't think I understood it until I read it. Okay, so is there a motion to approve the minutes?

Elliot Dorff: So moved.

Henry Greely: Second. All in favor say aye.

All: Aye.

Henry Greely: Opposed, abstention? Minutes are approved unanimously. Now before we move to agenda item three which is the BresaGen stem cell lines, I would like to ask our guest Dr. Lomax if he could bring us a little bit up to date on developments at the California Institute for Regenerative Medicine.

Geoff?

Geoffrey Lomax: And good morning. Is there a particular area of interest?

Henry Greely: Well I think I'm - I know personally I'm interested - ah Dr. Rao, welcome. Personally I'm interested both in what you see as the likely recent - well recent events on medical and ethical standards (across).

And what you see as possible - pretend you can project what you think your future challenges are but also more generally what the thinking is across the bay in terms of the budget crisis, bonds, etcetera.

I know you won't have a definitive answer for that but any thoughts you can share with us I think would be appreciated. Anybody else have specific questions or general broad big questions? Suggestions?

Bernard Lo: Did you also want Geoff to address the (side kick) CIRM standards for (unintelligible).

Henry Greely: I was planning to come back to that later at the time.

Geoffrey Lomax: Okay let me give a - let me start with the standards obviously because that's easier for me to speak to and then I'll try to sort of reiterate what I think I heard at the last ICOC meeting, probably address the funding issues to some extent.

So the standard and I did notice that it sounds like that's a more detailed item down below, in the current thinking with the last sort of substantive revisions of the standards were proposed in December.

And there was a - we proposed a package of revisions, it was considered by the working group. I'd say about two thirds of that package moved forward, so the gist of it was looking at the area of use of somatic cells in research and particularly in IPS research.

And what we had sort of run in to, what we had discovered and this was through a fairly empirical process of going out and surveying institutions and meeting with people.

And you know really trying to - and at sort of the field level so going out to the committees and asking them you know what were they running in to that was a point of friction in terms of efficient progress in the area of science.

I mean to the extent, I'll sort of characterize it as perhaps we sort of over - we drew too big of a circle in terms of materials and sort of (unintelligible) regulations. And specifically there are areas where somatic cells were effectively sort of regulated almost at the level of embryos.

So things like areas of payment, the level of review wasn't clear in terms of if you're doing a reprogramming does that constitute a full blown derivation.

And do we need to get the full committee together to approve something like that? And I think the thinking sort of conceptually was that in vitro work with somatic cells is non-controversial or relatively non-controversial.

It doesn't elevate to the level of something like an embryo derivation or embryo destruction.

So there was a package of amendments that moved forward both to clarify certain standards, for example the level of - that you wouldn't want to convene a full committee review for someone doing in vitro work with somatic cells or doing reprogramming work.

And there was also - so that was up on the oversight level and also on the consent level there was a recognition that there is a vast array, of tissue and blood and cell banks that are not in their procurement processes.

They have IRB approval, they are - they've gone through a sort of the ethical procedures for how one appropriately collects material. But they hadn't, they don't have an eye towards either the CIRM or the state regulations.

So there's an appreciation that the consent requirement for somatic cells, particularly for somatic cells again that are going to be used in basic research need to be flexible enough to allow their use in basic research which means we're not going to apply the aggressive consent requirements to all somatic cells.

There was a third provision out there that we didn't move forward on mainly because of confusion on oversights, meaning the payment (unintelligible) Prop 71, perhaps this is something you all might want to consider.

You don't have the same constraint. There's recognition that there is often IRB approved compensation for somatic cell donors, modest you know \$10, \$15, \$25 for a blood sample, a skin sample.

And we were suggesting that that doesn't constitute undue influence and again it's part of the routine procurement of materials in blood banks and cell banks.

And that we should in the you know in the area of payment have a carve out for IRB approved protocols for somatic cells that states if there's compensation there that doesn't trigger the payment restrictions.

That those materials should be able to be used. During the meeting there was some confusion over the scope of the payment restriction in Prop 71 which we still need to resolve.

So that third piece of it, that sort of third part, the payment area, we've - it remains unresolved. We've come back to legal counsel and asked them for an opinion.

So we may come back to that but that is something that we got stuck on, again you all don't operate under the same constraints, you may want to consider that.

The thinking from - the thinking on both the consent and the payment in particular is that there are materials in banks that have by all intents and purposes gone through appropriate human subjects, IRB approval.

The materials have been obtained ethically. But for a CIRM funded researcher, a stem cell researcher to go in and pull something off the shelf, suddenly it's okay we need to go back and start doing a series of positive verifications if we want to know that we're in compliance with every rule.

And the question is, is that added verification necessary for basic in vitro research. So that's sort of the thrust of those changes. I think they are incorporated into the language and that's something we choose to get to later today we can kind of do that in more detail.

But that's really the framework in which those regs - those modifications were...

Henry Greely: And those are mainly these - the ones that you moved forward with are incorporated in the proposed amendments presented to the ICOC on January 30th?

Geoffrey Lomax: That's right and I hope the most useful sort of summary of that, the ICOC, sorry, we in December the working group signed off on those - the ICOC met in January and they were short of a quorum.

So we discussed the amendments and they're in a position to move forward but they'll require formal approval as of March under quorum.

Henry Greely: Right now they're not formally proposed amendments from CIRM. They're proposed by the working group to the ICOC.

Geoffrey Lomax: They're proposed to the ICOC and to the extent the ICOC has been briefed and sort of - they've been well received buy they're not sort of - they're in that sort of holding pattern until they can - they most likely will appear on the consent calendar for example.

Henry Greely: And then they'll need to go through the notice and comments?

Geoffrey Lomax: Correct.

Henry Greely: They won't become final for quite a few months.

Geoffrey Lomax: Yeah. Probably once we start in March we're roughly talking 90 days there so that pushes it into summer.

Henry Greely: So - and of course we've got Dr. Lo here who does double duty on both our committee and on the Medical and Ethical Standards Committee for CIRM.

So between the two of you anything you can tell us about what's on the radar screen for the MES and CIRM.

Bernard Lo: Before we get to that let me sort of address the question I think you posed in terms of the situation at CIRM with regard to funding. The ICOC meeting recognized that given the financial crisis it's going to be very difficult if not impossible to (unintelligible) raise money.

Although they have approved and they did approve funds (unintelligible) of funds (unintelligible) approve funding because they wanted to conserve what they have and fulfill this (unintelligible).

Ours is a position of them being a lack of actual funds on hand to support the (unintelligible) peer reviewed and (unintelligible) that will be dependent on the stake in the national financial situation.

Unfortunate consequence (unintelligible).

Henry Greely: I suspect this is not a question that anybody in the room can answer with any confidence but I wonder to what extent the resolution of - the fact that we now have a state budget for the state of Maldonado, California, will cause some significant immediate lightening of the bond selling difficulties for CIRM.

Geoffrey Lomax: Oh and thank you Bernie, it's always nice to have a - have someone else summarize a difficult situation for you. The queue if you will in the state overall for bond sales is quite lengthy.

So even with the resolution of the state budget, it is unlikely that in the next I'm just going to say about a year, I think that's about right, but the bonds that were - the sort of traditional sort of approach of sale of bonds through the state, it's CIRM bonds would be sold in sort of the one year time window and like they don't, that's - actually that data I don't know.

Henry Greely: So even if you (unintelligible) bond market returns to something like normalcy.

Geoffrey Lomax: That's right.

Henry Greely: So a year down the road.

Geoffrey Lomax: The state has a tremendous backlog of bonds on the order of - actually I don't know what it's on the order of but it's lengthy. Because essentially what happens is the market (unintelligible) time and everything piled up behind it.

So given that what we've done is - and over the last week or so we've taken a series of steps to sort of open this pathway. And this is what was discussed at the ICOC meeting is developing an approach where CIRM will go out into the private market.

And that involves essentially a sort of new pathway in terms of you know bond sales. And again that's out of my (unintelligible) in terms of how all this works and the mechanism and all the nuances.

But again there was a meeting this week in Sacramento with the Controller's office and they sort of - the sign off that gives CIRM the authority to go out and pursue this other pathway has been sort of secured.

So we're going to see a lot of activity on our front or there will be a lot of activity in CIRM in terms of you know looking for alternative venues other than the traditional sales of bonds (unintelligible) the market again because given the backlog and the competing needs of the state, that's not going to be an effective approach with CIRM in the near term.

Henry Greely: So it sounds like the CIRM funding for stem cell research in California may be slowed down over the next year or so but there are creative things being done to try to limit that part?

Geoffrey Lomax: Yeah, I think if I can paraphrase the sense of the ICOC or their view in terms of what they're thinking is at the moment they are very sensitive. They do not want to take any actions that would increase the current burn rate of CIRM funds which will carry through until sometime in the fall.

So what you're seeing is they're approving grants and getting grants - they're continuing the process of review and approval of research grants but subject to the successful sale of bonds through these other venues.

So again maintaining the current – which is nothing that would increase the current burn rate for the research market.

Henry Greely: Of course knows that we don't have any jurisdiction over CIRM funded research and non-CIRM funded research I think has significantly affected by the extent of CIRM funding.

A lot of research is (unintelligible) funding for the purposes of - to the extent that CIRM funding slows down, I think it is likely that non-CIRM funded research may also slow down.

One would hope that the opposite would be true, sort of a step up to make up for an anticipated slowdown in funding. But I think that would be a very (unintelligible) to the state (unintelligible) I think they're going to go.

Shabbir Ahmad: Depends on how the (unintelligible) comes out of NIH or NIH funding that may impact overall the (unintelligible) level.

Radhika Rao: And NIH has just approved something like \$10 billion funding for grants in the next (unintelligible).

Elizabeth Blackburn: Not just to grants, some of that is earmarked for buildings and other things. It's not all freely for grants.

Henry Greely: Right, the stimulus package includes \$10 billion, \$10.7 I think billion for additional financing.

Elizabeth Blackburn: And I think \$1 billion is for capital.

David Martin: The problem is that that cost is ongoing commitment to funding.

Elizabeth Blackburn: Right, it's two years.

David Martin: Right, so it enables funds for part one on that basis.

Bernard Lo: So that would actually fund (unintelligible) already to (unintelligible) submitted toward but didn't have the burn actually funded because of the lack of money.

Henry Greely: So as we try to take a survey of these uncertain times, and again I don't know that - I'm confident that nobody at the table or on the phone who can speak with authority about this.

But do people have understanding - useful - understandings they could usefully share about what's likely to go on at the federal level with respect to stem cell research funding?

We're now months into the Obama administration, the Bush policy has not yet been changed, one keeps hearing rumors that it's about to change. Anybody at the table have anything other than vague rumors?

Do we have a sense of what's going to happen with the feds? Because again the federal government becomes a major funding player, it's likely to become a major ethics and regulatory player and that will affect - that will be another set of significant guidelines that will affect our work.

Anybody know anything?

Elizabeth Blackburn: Nothing beyond rumors.

Henry Greely: Sorry?

Elizabeth Blackburn: Nothing beyond the rumors.

David Magnus: It's too early to know. The key players are not in place yet.

Henry Greely: That's right without either a Director of NIH or a Secretary of HHS. All right, well are there any other preliminary matters anybody wants to bring forward as being relevant for our meeting today?

Bernard Lo: Well if I could again follow on with a couple of things, couple of concerns. In terms of the standards working group (unintelligible) earlier this week and there are two things I guess (unintelligible).

Woman: Could you speak up just a little bit please?

Bernard Lo: Yeah, sort of reporting back from the standards working group meeting, there will be a request to CDPH and members of the - an update. The request is that CIRM try to address the issue of reporting by its grantees and of course there's particular interest in that CIRM should fund protocols that involve oocyte donations (unintelligible).

There are certainly public concerns with the (unintelligible) mechanism of reporting of (unintelligible) confidential information by institutions.

And your experience with that and also your (unintelligible) the even receive and protect confidential personal information. The - CIRM wanted to sort of explore with you and your office because there's some of the CIRM reporting.

So that particular issue oocyte donation if there are ever grants with that - whether that could somehow be done by CDPH (unintelligible) with that and your (unintelligible). We certainly don't want to create a separate duplicate mechanism where you already have what seems to be a well thought out and well - and working mechanism.

Second issue is just a signal I think in terms of things we're thinking about. CIRM is hoping (unintelligible) that if the funding situation lightens (unintelligible) to try and target translational research (unintelligible) and early clinical trials and sort of (unintelligible) really think about what are the ethical issues involving stem cell clinical trials that sort of go beyond the ethical regulatory framework it might already with the FDA (unintelligible).

Related information, but we will be thinking about and again it will be important for us and I think useful to try and coordinate with Shabbir's office (unintelligible) that would follow what this group does and what Shabbir and the department can do in terms of those (unintelligible).

CIRM is - their strategic plan calls for the development of these - this sort of (unintelligible) from bench to translational research to (unintelligible).

Part of that of course is the hope that eventually products (unintelligible) to market (unintelligible) sure that (unintelligible) provides the you know (unintelligible). Geoff do you have anything to add on that?

Geoffrey Lomax: Pretty stimulating meeting but we're just sort of starting that deliberating process.

Yeah, the only thing to add there really is that we are working frantically on producing a sort of meeting summary and meeting report.

And I think that would be a control document from the standpoint we're trying to make it (unintelligible). But sort of briefly outlining the (unintelligible) and then sort of developing (unintelligible) so we're hoping to turn around fairly quickly (unintelligible).

Sort of captures the spirit of the meeting, sort of points of intervention.

Henry Greely: And that is one area of course where our committee went beyond what CIRM had done (unintelligible) the guidelines.

David Magnus: So we actually had (unintelligible) clinical trials (unintelligible) of that well in advance of CIRM's working group and (unintelligible) more confident that it's also done.

This year (unintelligible) basically (unintelligible) getting close to - pretty close to the approach he was taking or that we took.

I think actually time (unintelligible) that our approach will develop (unintelligible) standards for clinical trials and I would certainly hope that while we've certainly made every effort in the areas where CIRM has been working ahead of us to try and take advantage of that and to try and (unintelligible).

I would hope in this one area where we've actually taken the lead that the CIRM working group take that into account and would make every effort to try and conform (unintelligible) good standards for (unintelligible) approach.

Shabbir Ahmad: Excuse me, somebody on the line and they are using either computer or paper shuffling?

Gregory Stock: I'll be more careful, it could be me, this is Greg Stock. I came in a while ago and then I've been looking through this conversation.

Henry Greely: Well I'm glad we know you're on, we didn't realize you were there Greg, welcome.

Gregory Stock: Okay.

Henry Greely: But be quiet.

Gregory Stock: But I'm hearing sort of a background noise that makes it hard for me to understand and I'm not sure it's coming from me, it feels like there's a sort of a pounding is that...?

Elizabeth Blackburn: I'm hearing that too, it's not me.

Elliot Dorff: Right, I'm hearing it too.

Elizabeth Blackburn: Can we put our mute functions on, would that help if somebody put their mute function on?

Gregory Stock: Let's try it and see if there's any problem.

Bernard Lo: Okay. So just to follow the comment, I totally agree to sort of take advantage of the thinking where this group is going.

One of the things that we will need to think through is to what extent we merely issue guidance or suggestions or recommendations, to what extent do we move beyond that to any sorts of new either regulations or conditions of awarding a grant.

So that again if we sort of think about the actual (unintelligible) of good ideas, sort of at what levels we want to sort of...

Henry Greely: Just for clarity, the we in that last paragraph was CIRM.

Bernard Lo: CIRM, yes.

Henry Greely: Also, for clarity, ISSCR is the International Society for Stem Cell Research.

Bernard Lo: Which are wonderful, there are also guidelines that are voluntary and they're written at a rather high level abstraction which may not provide enough specificity for grantees to know exactly what their request is.

Henry Greely: But I'm glad they've been mentioned because that adds yet another body whose guidelines, recommendations, regulations, etcetera are relevant to our

work and to whom we need to pay attention and with whom we need to keep up.

Make it our management job on this committee no more complicated. So I think I've just created an informal additional agenda item. Background information about stem cell stuff, it seems relevant to this committee's work.

Anybody either in person or on the phone have anything to add to that discussion? And viewing it as an informal agenda item I think I'm also - I should also let the public who are present either in - physically present here although Geoff you've already had your shot.

Or present over the phone comment on - add any comments they wish. Anybody from the public want to say something? All right, well thanks to everybody for those updates.

I know it's really a - you know I think this meeting would have been - things would have seemed clearer if we had done it two months ago and I hope - trust things will seem clearer two months from now.

But this is a peculiarly confusing time in the area of stem cell research. But we do what we can. All right, our next agenda item is the issue of - it's listed on the agenda, the NIH BresaGen stem cell line.

With us as part of our discussion from last time about the broader question of the status of cell lines that had been on approved lists, specifically on the NIH registry, but as to which there may be - may have been some ethical questions.

We talked about Cellartis lines and BresaGen lines at our last meeting. Cellartis line issue of (unintelligible) is on and still appears as far as I know based on what we've been you know effectively gone away.

As they had additional consent that were not initially known that met the standards of the time. The BresaGen situation remains somewhat troubling. And as I recall our conclusion last time was we should come up with a statement on this to be put on the Website to provide some guidance to SCROs as they individually attempt to discharge their duties under the statute and the guidelines.

And CIRM regulations although we're not providing guidance with respect to the CIRM regulations per se. Unfortunately, and I have a feeling that this is my fault, I don't think we have that statement.

Drafted that statement unless David...

David Magnus: That statement just about - I thought what we talked about the last meeting was something slightly more general which was how to grapple with the fact that there are cell lines that have - that essentially get on the list of being accepted into lines by virtue of having been approved by the authority essentially as one of the recognized authorities that are listed.

But which might or might not meet standards or might fall short of standards that we believe are appropriate.

Then it raises the more general issue that we know that the standards are going to evolve over time more recent lines that are approved meet a higher ethical standards.

What does that mean in terms of how SCROs should be evaluating early lines that don't meet the high standards? And I will add a third problem that we didn't talk about last time, but that is the reality that there are cell lines that have in fact superior consent processes.

But who aren't on an approved list but fall short of the current guidelines as we have the sort of unhappy position of right now there are cell lines that some people want to use that under the CIRM regulations and under our guidelines that mirror the CIRM regulations couldn't be used because they don't meet one or another of the standards.

And don't happen to be on any of those authorized lists.

Henry Greely: Although in other ways they have excellent...

David Magnus: Otherwise they have excellent - superior to lines that are approved that just happen to be on those lists, so BresaGen lines for example happen to be NIH approved.

I've had the opportunity to review another line that is not on the NIH list and not on the authorized list but has a much, much better informed consent than actually any of the - actually many of NIH registered lines.

But it's not on any of those lists and falls short of the current guidelines (unintelligible) approval. And so I constructed which I said I would do at the last meeting a (unintelligible) formal proposal.

I wanted us to talk about this as our approach and then make some decisions based on discussion maybe at the next meeting we could actually bring our board a proposal for discussion.

But it's essentially a revision to section six that I think would be an approach to addressing all these (unintelligible).

Henry Greely: And David is this the document that is distributed as proposed amendment number two?

David Magnus: Yes.

Henry Greely: So this was distributed by email to the committee members this past week.

David Magnus: Right. So the idea so far...

Bernard Lo: Hang on a second, so it's not...

David Magnus: It is (unintelligible).

Man: Well it was...

Radhika Rao: It was in an email.

David Magnus: But it's also in the packet that you have (unintelligible) table.

Henry Greely: Oh it was on the desk, not the packet that was couriered out. So those of you who are not - the committee members who are not present at the meeting, you would not I think receive the physical copy of this but in the email that Heidi sent out two days ago.

Heidi Mergenthaler: Yesterday.

Henry Greely: And there are copies of it here for - we think. It should say at its top proposed amendments to CDPH guidelines for human stem cell research number two.

Woman: I have number three.

Henry Greely: There's also a number three.

David Magnus: This is the one that says change section six. It's in the packet.

Woman: Okay.

Man: It's this one.

Woman: It's got a different header.

Henry Greely: Oh, okay. It's a different header from the email version. So the email version has the header proposed amendments number two, the one we physically received today doesn't have that header and starts out with change section six.

Woman: Thank you.

David Magnus: So the idea here and again this is rough so I wanted to talk about scope from here, but the - again the thinking being that we want to preferentially give priority to cell lines that are - or that have SCROs and reach - and investigators already have the cell line that meet the highest (unintelligible).

At the same time we want to give investigators much - I think flexibility and SCROs flexibility for applying that right now is factored into the regulation guidelines can't be approved but might actually have been done with a pretty good consent.

And right now can't be done within the regulations. So the approach would be to on the one hand basically have two different ways of thinking about what would count as acceptably derived material.

One way is meet the full standards of voluntary form consent and oversight including the payment issues. So that's sort of one way.

And then the second way would be for a SCRO to determine two things first that a cell line counts as what I'm calling a permissible line.

And second that whatever variation exists between a permissible line and a line that's approvable under the sort of ideal circumstances that we have is warranted that that gap between those two is warranted for each of that particular cell line by a scientific rationale.

So SCROs should have to both say this is a permissible line and although the permissible line doesn't meet the full standards that we would ideally like, in this particular case it's good enough to meet the - have a sufficient scientific rationale for the (unintelligible) to get approved.

So it essentially instead of subsequently finding ways of drawing those lines, it would essentially do this through a process of (unintelligible) some standard and the standard would be in the definition of what counts as a permissible line.

And then I would say what should count as a permissible line is anything that is recognized and authorized authority that would be all the things that follow through our guidelines (unintelligible) that are (unintelligible) in our section and fall under the CIRM regulations.

Although I think you should also add CIRM has a petition process too as an authorized approver. But also allow a permissible line to be one that in the judgment of the SCRO met the ethical guidelines and standards for all (unintelligible) conform oversight at the time the line was created.

So it creates the opportunity for lines that actually are not on any of these lists and don't meet the standards to secure an (A) to nonetheless get approved because in the judgment of the SCRO it had acceptable oversight and ulterior purposes at the time of (unintelligible) derivation.

Henry Greely: So let me back up for a second and make sure that we all, including me, understand the problem. The problem was that under our guidelines we had two ways for stem cell lines to be permissible, to be useable, to be acceptably derived.

That's the term I'm looking for. One was that they met all the conditions, all the ethical conditions currently in place under our guidelines, etcetera.

The other was that they had been approved on some pre-existing - by some - one of the approved blessing organizations, the NIH and other organizations.

And this paralleled the CIRM position. The BresaGen problem was that something in the second category seemed to fail basic ethical constraints, ethical consideration, not the heightened, not the first category of heightened stem cell ethics.

But a more fundamental ethical consideration, so David as I understand your proposal is to say you can still be good if you meet all the current stem cell things.

If you don't meet all the current stem cell things and if you are approved by an appropriate organization and you meet basic consent requirements, ethical requirements as they existed at the time of the creation of the cell line you can be okay.

And finally you can be okay if you meet those basic requirements as they existed at the time even if you aren't blessed by...

David Magnus: So but...

Henry Greely: ...by a registry.

David Magnus: But it requires for all those latter things...

Henry Greely: Yes.

David Magnus: ...for it to be, for there to be sufficient scientific rationale. So thinking of the BresaGen lines would be permissible by definition so a SCRO would have to say there has to be a good scientific rationale. And the thinking here for some research, if you look at the protocols we get some research is like we need a cell line to do a comparison or something and we (unintelligible).

Henry Greely: Yeah, and we don't care which cell lines.

David Magnus: And we don't care which cell lines but just starting out we haven't done the work yet of spending a year doing any kind of annotation. We need a line, we need it to have certain characteristics and properties, but there's a lot to choose from, this would essentially create a way of giving priority to lines that have better consents.

So lines that meet the current standards, if there are existing lines that actually exist and can do the job then all things being equal there's no reason not to use those lines and this would give priority to those in a way that the CIRM regulations and our mirroring of them does not meet. So I think, and I think that would be a good thing. In giving some pressure that if all things being equal it's better to use lines that meet the full standards, that would be what happens.

If something falls short of that, as for example the BresaGen lines do rather badly, but it is on the permissible list, this would require that there has to be in the SCROs judgment good scientific rationale to overcome that gap. And I think it would be up to the SCRO to make that determination given how big a gap there is and just trade that off against the scientific rationale for why they need to use that particular line.

Henry Greely: One example of the rationale might be we've been using this for two years and we'd have to start our experiments from scratch...

David Magnus: Right.

Henry Greely: ...but we had to abandon the...

David Magnus: That would be I think a pretty good rationale for using a line, but again you'd weigh that against how much of a gap there is between what you think of as sufficient for meeting all of the standards for voluntary informed consent that have evolved versus the, versus the what was actually done (unintelligible).

Henry Greely: So in terms of how the language you've given us today, that you've given us for today's meeting ties into our last meeting four and a half months ago, we

talked about the BresaGen problem, the problem of lines that were on official approved lists for the (unintelligible) report, what you're adding today is this additional situation for lines that meet, met the basic scientific ethical requirements at the time they were created that aren't on one of the blessed lists and for which there's a good scientific rationale.

David Magnus: Right. And it's essentially giving more discretion to SCRO's with some, with a little bit of guidance for what they should be looking at to be able to make those judgments and have the authority to make those judgments.

Henry Greely: And then procedurally there are two different things we could do either or both of with respect to such a statement, one is to make it advice from our committee posted on the Web site to help enlighten SCRO's if they think about it. In addition it could be an amendment to Section 6 of our guidelines. It could be for either or both of those. Comments?

Elliott Dorff: David this is Elliott Dorff. I just have a question about this version. As I understand what you're saying under B a SCRO could approve a line in either one of two cases, either that it's been officially approved by one of these institutes or that the SCRO on its own authority decides that the stem cell line met the requirements at the time.

David Magnus: Not quite. What it would be is that it would be deemed to be a permissible line by the SCRO on either of those two basis but just being permissible but falling short of the standards today isn't enough for a SCRO to say that, that it's acceptably derived. It would have to also be a scientific rationale for the use of that line to be in the particular accounting acceptably derived.

Elliott Dorff: All right. That was not clear to me in the language that you have here right, because if you want to say that then I think you should said that, right. In other

words I think you should say that see, I mean it's all in that one line that a permissible line is one that has been approved, right, so I mean I think it would be clearer if you were to say number one, it's a permissible line if it's recognized by one of these institutes.

Number two...

David Magnus: (Unintelligible) or is recognized by a SCRO as subsequently meeting the voluntary informed consent requirements and oversight.

Elliott Dorff: Yes. That's right, that would be number 2, in other words even if it's not recognized by one of these institutes nevertheless number 2 a SCRO in its own authority could determine that the line met the ethical guidelines for voluntary proof of consent and so on at the time that the line was created. I think if you separate it out under B one and then two that would make it clearer that the SCRO doesn't necessarily have to have the authorized authority of one of these institutes, that it also can or it may do this, I assume that this is what you're intending right?

David Magnus: Right. So in that you're right, this needs to be laid out I think much more clearly that so these are the two ways that the county is permissible and then being a permissible line has to, a SCRO has to determine that a permissible line that fails to meet the standards in A that there is sufficient scientific rationale for its use.

Elliot Dorff: Yes. Right.

Margaret McLean: I have a question and that is whether or not if they, authority is in the SCRO this could lead to a situation in which you know, a particular SCRO

and a particular institution says this is an acceptably derived line and you know, 30 miles down the road another institution says no it isn't so then...

David Magnus: Absolutely (unintelligible). That's true. That's (unintelligible).

Man: That's what happens is (unintelligible).

Man: That's what happens (unintelligible).

((Crosstalk))

David Magnus: (Unintelligible) SCRO's now we have to under the regulations we have to, a SCRO is required to for investigators to provide justification for the use of embryos and how many embryos and the destruction of embryos there have to be sufficient scientific rationale for however many embryos are to be used. It's not hard to imagine that that also might vary from SCRO to SCRO about what counts as sufficient rationale or what counts as an alternative.

There's really no, I think there's no way of avoiding the fact that if you require certain kinds of judgments from SCRO's that there may be some variation that comes along with that but I don't think that's necessarily a bad thing so.

Gregory Stock: But another suggestion, this is Greg Stock on the phone, is you mentioned scientific rationale but in fact your example was somewhat, there are other rationales that can be used budgetary, there could be a variety of rationales that would be meaningful and so I think that one might not limit it strictly a scientific rationale. For instance the example that we would have to restart our experiments, you could say that's scientific but in many ways it's logistical or budgetary so...

David Magnus: It satisfies the rationale but...

Henry Greely: It relates to the speed and the progress at the time, but I see your point Greg, I mean it is...

Radhika Rao: You could maybe say a sufficiently important or a significant rationale.

Gregory Stock: Yeah a meaningful rationale for you know, using their, something of that sort so if you don't create any ambiguities there.

Man: Yeah.

Margaret McLean: I think you'd want a scientific rationale but there may be a second rationale as well of expediency or something like that that...

Gregory Stock: But why, I mean the SCRO's are going to, if you say that there is a meaningful rationale for using it that is you know, an accepted or I don't know how you would put it but just the SCRO's are going to make that judgment of what, of whether there's a reason being to do it, to make that exception, if there's a valid rationale for making that exception essentially is what we're saying.

Henry Greely: Dr. Lo?

Bernard Lo: Yeah I like very much David's approach and sort of providing a conceptual framework for SCRO's to sort of apply to these decisions (unintelligible) coming up. So our group at UCSF sort of published an article that sort of addresses this issue from a somewhat different perspective but we kind of tried to look much more specifically and thought about what kinds of

violations of informed consent might be balanced against what kinds of scientific rationale and also (unintelligible) account the time at which the line was developed because the standards have sort of evolved over time.

So I don't think this is necessarily, I like David's approach for regulation but it's flexible and it's not overly detailed, but in terms of important guidance for SCRO's I mean those (unintelligible) makes these decisions now that (unintelligible) and weighing how much benefit what we call scientific or pragmatic or resource allocations.

How much benefit there justifies what kinds of shortcomings in the consent process and again I sort of keep going back towards the notion that putting some case examples of, just for guidance on the Web site, similar to what judges can do when they're deciding a case to sort of not have every SCRO do it from scratch might be helpful.

So I think we want to allow variation but we want that variation to be within bounds that are sort of logically or ethically defensible.

Henry Greely: So it may be that on the Web site we can, as I say this document that David prepared, this language has two potential lines, the Web site statement of it on the Web site we might also include references to or copyright laws permitting even copies of relevant articles such as your new piece, such as...

David Magnus: I think that's a very good idea...

((Crosstalk))

Henry Greely: ...such as the original piece from Rob Streiffer that kicked this issue off and any other literature we know of...

David Magnus: (Jeremy Sugarman) (unintelligible)...

Man: That's right (Jeremy)'s got a (unintelligible)...

David Magnus: ...another good example.

Radhika Rao: I like your idea of having examples actually (unintelligible) for example, you know, this, this and this.

Bernard Lo: I actually thought that the minutes from our last meeting where we actually got into a very volatile I thought discussion of the BresaGen line really kind of examples the reasoning and deliberation you would want (unintelligible).

Henry Greely: Particularly as reported and recorded by our minutes takers it's much more rational that it seemed at the time.

Woman: Much more rational.

Henry Greely: So you know, I think I like the idea of posting references, posting that chunk of the minutes and other things on the Web site. I like the case idea, I'm a little worried about how we as a committee go about approving languages of cases and getting them on without it doing, without going through, without waiting for another two or three of our meeting cycles to do it.

But one thing we might do is see if there's a sub-group of the committee that's willing to work on coming up with a couple of specific cases. This is in addition to the discussion from the minutes last time, which we could then consider and adopt perhaps in our next meeting, but in the interim I like the

idea of getting this statement references minutes, etc., on the Web site to provide some news and advice for SCROs.

Bernard Lo: Well it strikes me that this is an example sort of the power and limitations of the (unintelligible).

Man: Yeah.

Bernard Lo: So on the one hand there are things which are sort of DPH working group approved and (unintelligible) read the articles and think they're pretty good, they're our own deliberation, and we sort of want people to look at it. Then there are other things that other people have done on cases that we haven't looked at. But it maybe worth as a SCRO member or chair I may want to look at other people's deliberations even if they're no good just so I can sort of go through and say no, that reason, I don't think that's something we're able to follow.

So now that's sort of the (Wiki) approach, that's just everything gets put up and there's either commentary or there's explicit disclaimers that this is not sort of DPH working group sort of (unintelligible) approved.

Man: Right.

Bernard Lo: So I think it'd very hard for us to keep up with all the developments and yet, I don't think we want to discourage people from sort of bringing things out, figuring that, my gosh, if the subcommittee looks at it and sort of raps our knuckles we'll look bad. So I don't know if there's some way of doing that that kind of doesn't give the impression we've approved something (unintelligible).

Henry Greely: Well sure, we could certainly say that for example, so we could approve David's statement or a variation on it as advice from this committee, not a guideline but it's the committee's advice. We could recommend and post the minutes of our last meeting for a discussion to see some of the interplay within the committee and then we could say here are some additional resources, articles and so on that SCRO's may find valuable. We as a committee are not passing on their, on anything other than we think they may be relevant to you without necessarily endorsing the quality of Bernie's new article.

David Magnus: Right. I think that's good for the, but I think we have essentially two things, one is the nitty-gritty guidance of how to make those fine grained judgments the SCRO's need to have and that's basically, basically SCRO's are required to be following the literature, looking at these examples, looking at these things. And I think Bernie's idea of finding a resource or being (unintelligible) I think is a fantastic idea and would be a great way of spreading a real benefit for the SCRO's.

But then the second issue would be the fundamental framework for the guidance and the approach that we're telling them to take is a regulatory one. And it's like, or (unintelligible) or a guideline and I think we, this isn't ready yet for that. But I think in our next meeting depending on the feedback we get we should be thinking about turning this into an actual recommendation for the guidelines but the problem is our guidelines for CIRM's sake you just can't do it if you don't meet this and this standard.

Man: Right.

David Magnus: Then it doesn't really matter if we give them all this guidance about how they can make these lines (unintelligible). So I think we do need to make some

changes to the guidelines so that that increases flexibility SCRO's to actually take advantage of (unintelligible).

Patricia Rodriguez: And I think I could add something along those lines when you're referring to the guidelines. I wanted to point out that although I can understand the desirability of having flexibility for those SCROs to make these decisions, on the other hand you have the real, very real issue of the regulation process in California. Especially if CIRM is going to be looked at to adopt something the APA, that is the Office of Administrative Law (unintelligible) we call it the Administrative Procedure Act but administrative procedure and it requires some specificity.

So to the extent that you want to just say the SCRO's have their, they have the jurisdiction or the ability, the discretion to determine these things, that might not meet these clarity standards that are required, so if you could possibly come up with at least some categories of (unintelligible).

David Magnus: I think we can do that in here, I don't see that as being any more (unintelligible) any more problems with this than it is in giving the judgment to decide that thinking about actually deriving in that there's a sufficient justification for using the number of embryos.

So the guidelines and the regulations that have already gone through the process already have since we had something like this, all I'm proposing is that we essentially mirror that. So let's just think about it from the point of view of people who are actually running SCRO's it would just be like another protocol line that right now. If you're doing certain kinds of things say if you, you know, justify the, give your reasons for why you need this (unintelligible) embryos, or I mean the number of embryos actually used you would now say

(unintelligible) rationale for why you're using a line that doesn't meet all the standards of (unintelligible) it would actually be parallel to that.

So I don't see how it could be a problem (unintelligible) if you in this area once you word it carefully when it's already been seen that very similar parallel wording has already been approved.

Henry Greely: The Office of Administration Regulations may find problems where others might not, but that's part of the ongoing dance of the regulatory process.

Woman: (Unintelligible).

Henry Greely: I appreciate that.

Patricia Rodriguez: Yes but you can add some specificity it would (unintelligible).

Henry Greely: We can make it; we can make that dance shorter and easier, right. So let me suggest, let me first ask a not quite related question, but I'm afraid if I don't ask it now I will forget it, and then propose a way of going forward. The not quite related question goes to Dr. Ahmad, you've got two, you said you've got 245 reports. Does the Department as a result have a sense of how many SCRO's actually are operating in the State of California?

Shabbir Ahmad: (Unintelligible) 15...

Amber Christiansen: 15.

Shabbir Ahmad: About 15 insitutions of SCRO's I think were those 245 people yes.

Henry Greely: That's interesting. That's far fewer than I would've expected.

David Magnus: Those are only your SCRO's that...

Henry Greely: That reported.

Shabbir Ahmad: That reported, yeah, and those are the reports where it is either non-CIRM funded or partially non-CIRM funded.

Henry Greely: Right. Okay. So that's interesting. So the universe of SCRO's that we are addressing may be smaller than we thought. It may be in the range of 25 SCRO's throughout the State of California.

Man: Right.

David Magnus: We're finding one of the (unintelligible), just another background update, but a group of us have created a not-for-profit SCRO to help out with a lot of small institutions and companies that aren't going to be able to accommodate them. We'd originally thought that Stanford University (unintelligible) UCSFS is that these institutions would partner up with academic institutions, but for obvious liabilities and I think that wasn't a very practical solution so we've created...

Henry Greely: Stanford's upped the liability issue (unintelligible).

David Magnus: I think that (unintelligible) there've been other attempts that have failed (unintelligible) to find somebody else willing to do it. So we've created a not-for-profit SCRO and we've already, and we're extremely busy. And so it's picking up and I think a lot of sort of smaller things that would otherwise have been small SCRO's around the state are going to be picked up by our group.

Henry Greely: And this is, and presumably your SCRO, and I'm not affiliated with this activity, will be reporting to the State in the future.

David Magnus: Correct.

Henry Greely: Okay. So proposal for going forward, let's separate, I think I like the idea of doing this on two tracks and seeing if the committee is willing to approve today the substance of this document to be posted on the committee Web site as advice to the SCRO's.

David Magnus: Wow, but I didn't want to go that, so frankly I was hoping to see (unintelligible) approach so well, I just wanted to see if (unintelligible) because we could word it (unintelligible).

Henry Greely: You notice I said the, you notice I said the substance of...

Woman: Yeah.

Man: Okay.

Henry Greely: But approve the substance of recognizing that the language may and should for reasons as Dr. Dorff brought up among others, changed some if we like this approach. The substance of it as advice and then that we further tinker with it and bring it back as language at our next meeting for proposed changed guidelines. So that we may be able to post something as advice from the committee for the next meeting as long as it meets the substance, as long as it substantially the same as this. But we don't want to go, but will require us to get firm language, well thought out, worrying about some of the issues Patricia raises on the regulatory side to be considered at our next meeting.

So nothing to go forward as a, as a guideline change until our next meeting, but maybe we can put something on the Web site beforehand. Dr. Ahmad?

Shabbir Ahmad: And in addition to that public comments coming (unintelligible) the committee if we post these, yeah.

Henry Greely: Right. Views on that?

David Martin: So you're proposing to put on the Web site the substance of this...

Henry Greely: Correct.

David Martin: ...simply for informational purposes not as a guideline?

Henry Greely: Yes.

David Martin: So that it would...

Man: And (unintelligible).

David Martin: ...it would not actually be applicable.

Henry Greely: Well I wouldn't use applicable, but it.

David Martin: There's a danger that if you do that that some people may mistake that for a guideline or approval for some change in the way they're...

Henry Greely: I think that's a excellent reminder about the language that needs to preface it, so you need to say this is the current thinking of the committee, this is not a change in the guidelines or even yet, even yet a proposal for change in the

guidelines. But we thought SCRO's might find it of value as they think about these issues.

Radhika Rao: But I think it's important to ask what would be the purpose of this? Is it because we want to get input, that we want to have public comment to say well, you know, and we hear from many people who say no, you shouldn't do this, or yes you know, you should that that would influence this? Because if it's not actually, if the SCRO's aren't actually supposed to be applying this you wouldn't want to put it there and then have lead, you know, perhaps leave them a space if there's no benefit to be gained from placing it on the Web site before it's actually a guideline.

Gregory Stock: Yeah. I agree. I don't understand what the value is of putting it out other than for comments just as you're saying.

David Magnus: I guess I, I sort of agree. I think it would be better for us to, now that I know (unintelligible) what I wanted to do is find out whether this is a non-starter and (unintelligible) approach or idea. And now I think we can turn it into something (unintelligible) an actual proposal for the guidelines and maybe we can do a conference call and get it done quickly now that I know this is (unintelligible) and so we might be able to get this done fairly quickly and (unintelligible) as proposed changes to the regulation (unintelligible).

Radhika Rao: Well and I didn't mean to say that we shouldn't put it up, I just thought we should, I wondered why we were putting it up and if we have (unintelligible).

David Magnus: It would, there's going to be a period of public comment once it's put up (unintelligible) the guidelines there will be a period of public comment (unintelligible) that would be the time to do it when it's worked out instead of when it's still (unintelligible) or how it will have to be.

David Martin: Yeah I agree and then, and I think that this portion of it under B that has also determined that there is sufficient scientific rationale for the need to use the line needs to be elaborated upon and clarified. Because it will create a very large hole to drive practically anything through if the wording is left as it is.

David Magnus: (Plus) I think we should be careful not to make it, I mean I think we want the SCRO's to have some flexibility in that (unintelligible).

Henry Greely: Let's remember what the status quo is, which is you either have to be in A or if you are on one of those authorized lists (unintelligible) you're fine, with no qualms, no requirement of the scientific rationale, no requirement at least in our guidelines of having met basic ethical requirements that applied at the time of the creation. So to some extent B is a restriction to some extent with your new addition of things that aren't on blessed lists it's an addition so it partially restricts, this proposal would partially restrict what, if turned into a guideline would partially limit what SCRO's could do and partially increase what SCRO's could do vis-à-vis the status quo. Bernie.

Bernard Lo: One thing that I just wanted to point out the difference between California administrative law and federal administrative law (unintelligible). But what often happens with federal regulations is that the agencies issue guidance, which although it's not binding it's very helpful (unintelligible) particularly to human subjects (unintelligible) California doesn't allow (unintelligible) stealth regulations and so we don't in California have that tool (unintelligible) Office of Human Research (unintelligible) had (unintelligible) for example to clarify is to quality improve human subjects research or (unintelligible) deidentify existing materials.

So you know, I just think we just need to be sensitive to what we're used to seeing in a federal common rule of oversight of research may not be applicable, the techniques may not be applicable.

David Magnus: I thought we'd gotten around that a little bit by going through the first steps of the process of creating regulations. But not taking that last upgrade for administrative law, which as I understand it the existing guidelines that we had already been approved (unintelligible) the comment period my understanding is those never went through the full administrative law files, is that correct?

Man: That is correct.

David Magnus: (Unintelligible) thought is that (unintelligible) a way of creating a guideline that doesn't have to meet all of the standards that would have to be done, it's a way of doing that.

Patricia Rodriguez: However the CIRM guidelines, which were somewhat of a model have been approved.

David Magnus: Right. I understand that.

Man: Some are...

Henry Greely: Well I withdraw my, the first of my suggestion by posting this on the Web for advice, having heard lots of good reasons from all of you not to do that. But I do think we can go forward with the ask the committee whether we should, and of course before the committee takes a vote on this ask for any public comments on this agenda item as well. But ask the committee whether we should, whether we are happy enough with the proposed position that Dr.

Magnus has provided that we should work it into language that would be sufficient to be an amendment to the guideline, to our guidelines and for that language to be considered at our next meeting.

Comments from the committee on that question, it's not yet a motion but could be a motion?

Elliott Dorff: This is Elliot. That sounds very reasonable to me.

Henry Greely: Anybody else?

David Martin: I agree.

Gregory Stock: Yeah, I agree.

Elizabeth Blackburn: I agree.

Henry Greely: Okay let's give the public a chance to, oh actually before I open it to the public one other question I've got, I just want to make sure I understand how this resolution, how this approach to the problem corresponds to what CIRM is doing or has done? Dr. Lo, Dr. Lomax can you give us some thoughts about that?

Bernard Lo: Well, I mean CIRM is struggling with the same problem...

Man: Correct.

Bernard Lo: ...of course of all the (unintelligible) and I think we were able to carve out an exception where you (unintelligible). So there's a process that then is a public process as well, so I think, but we're not, we have sort of a petition

(unintelligible) process which cuts down on sort of unacceptable variation and once the decision is made that other SCRO's may use those lines as permissible (unintelligible) because it's sort of gone through the CIRM.

Henry Greely: Which is actually specifically in David's language, that's something that's gone through the CIRM petition process (unintelligible).

Radhika Rao: So is there a good reason that we want to include additional lines beyond the CIRM petition process?

David Magnus: I think so because there are lines that don't meet the current standards but (unintelligible) you have a point of getting (unintelligible) registry lists and right now we've got permission for we've got worse lines...

Radhika Rao: But if you get onto the (unintelligible).

David Magnus: They could but (unintelligible) type of time consenting process.

Henry Greely: And would they ask to do it if they weren't getting, if they weren't using them with CIRM funding.

Radhika Rao: Right. And if the rationale that we have lines that are actually less, you know, that are worse that are already approved...

David Magnus: Correct.

Radhika Rao: ...so we would, why wouldn't we then include lines that actually have better consent that aren't approved, but if that's the rationale then that's I think that we also think about do we want to water down our standards that way or at

least then to be buttressing them I mean because I think Hank (unintelligible) suggesting that this position actually creates additional restrictions...

David Magnus: Correct.

Radhika Rao: ...simply because a line is on an authorized list doesn't mean you can use it under this regulation where previously you could use it simply because it was on an authorized list. Now we're saying that in order to be able to use it it's on an authorized list it still has to give a good rationale, a scientific or other rationale in order to be able to use it...

David Magnus: And if it doesn't meet the full standards.

Radhika Rao: And show that there aren't already lines that meet the full standards that wouldn't be as good (unintelligible).

David Magnus: Correct.

Radhika Rao: So at the very least I think I feel more comfortable if it were kind of enhancing the scope to make it clear then that we're also providing these additional constraints and maybe (unintelligible).

David Magnus: And those constraints would be applicable to...

Radhika Rao: Authorized lines, yes.

David Magnus: Right.

Radhika Rao: As well as these unauthorized lines, yes.

David Magnus: Right.

Geoffrey Lomax: Just to clarify so on the CIRM standards Dr. Lo's correct, it's a basically an adjudication procedure and there's a strong emphasis on scientific rationale. In fact if you go to the September ICOC meeting you can actually see the documentation there there's a formal form and you can see that form populated for a particular line.

But the important thing to keep in mind is that, there's a cut off for that and it has an effective date requirement and it's prior to the effective date of the regulations, which really limits the scope of it, so I mean as a thought. I mean what, I think it's two concepts that seem important are the effective date, which set us, draws a line in the sand in terms of when the expectation changes with regards to what's required.

And in addition to that cutoff, I mean I think the concept of derived and you know, performed in accordance with the standards at the time, that's sort of the determination. I think if you go beyond that you, from an administrative implementation side it seems challenging, but I (unintelligible) to the committee...

Henry Greely: You mean with respect to the scientific rationale?

Geoffrey Lomax: (Unintelligible) with regard to charging a body to make the determination.

David Magnus: I totally agree that's why (unintelligible).

Man: Yep.

Bernard Lo: Just to amplify Geoff's point, which I think is an important one, CIRM drew a very clear line with the NAS guidelines in May of 2004 and so after that the standard of care were explicit consent for stem cells derivation from both the embryo donors and (unintelligible) donors. And so after that CIRM would not be willing to entertain sort of exceptions based on sort of strong or compelling scientific (unintelligible).

Geoffrey Lomax: Just to be, it's on advice from council though, we pegged to the effective date of the regulations as they sort of (unintelligible)...

Man: (Unintelligible).

Geoffrey Lomax: November...

Man: December of '08?

Geoffrey Lomax: '06?

Radhika Rao: Maybe we would want to include some (unintelligible).

David Magnus: I completely agree with the spirit of what you're saying but I'm not sure that, I generally don't like putting in, I generally don't like putting in explicit date because is it, as I say is it the date of when the NAS guidelines came out? Is it the date that the CIRM adopted the (unintelligible)?

Bernard Lo: Yes it was actually the adoption by CIRM of it's interim regulation.

David Magnus: Which makes complete sense (unintelligible) for CIRM funding. But that doesn't help us in for figuring out what the right date for the state (unintelligible).

Henry Greely: Although that is two years roughly, if it's '06 it's roughly two years after the NAS guidelines.

Radhika Rao: Which seems a sufficient amount of time.

David Magnus: Actually I would say that might be too late and so I would, so I would say, so I thought the language instead of being a date of saying that there has to be sufficient rationale, I'm sorry that, (unintelligible) met the ethical guidelines and standards for altering informed consent oversight at the time that the line was created. And maybe instead of just listing NAS or (unintelligible) should also list the NAS guidelines. But it's basically saying to be permissible you have to meet the standards for oversight and consent at the time that it was derived.

Radhika Rao: But I feel like there's a ambiguity in how a SCRO might interpret that and how, you know, so you could have a cell line that was recently derived that maybe they would say well, there's a really strong scientific rationale and you said we balance that against...

David Magnus: No, no.

Radhika Rao: ...(unintelligible) and but (unintelligible).

David Magnus: You only balance those, so just be clear, you balance the scientific rationale for the use of a permissible line (unintelligible) to be A but at first (has) to be seen to be a (unintelligible) the two-step process first. It has to be permissible, to be permissible it's either got to be on one of these lists or have been derived with (unintelligible) consent and oversight in accordance with the standards at the time it was derived.

Radhika Rao: But I feel like even that may be a little bit vague.

Henry Greely: Yeah and there are some benefits to having specific dates, times, numbers even though they're somewhat arbitrary, there are also some benefits in our California setting of being consistent with CIRM regulations. So what we might want to do is in whatever proposed language comes forward for our next meeting have two versions, the general version and a version with the same date as the CIRM version and we can figure out at that point which of those does the committee prefer.

Let me, I promised the public, the public a chance to talk and then I took it back but here's your chance public, anybody want to say anything on this agenda item? Yes Ellen? Could you come forward so they can get you, your wisdom recorded.

Ellen Auriti: I don't know if I have any wisdom I just have a couple of observations. I actually really support the idea of having this gel a little bit more and putting it out in a way that there can be some considered public comment, I think that's great.

But a couple of initial observations, it sounds like to the extent that this becomes guidance you are going down the road of having a divergent standard from CIRM-funded research, which I know is something that places a great difficulty on institutions complying with divergent standards. And I think that were a project to be completely CIRM-funded and to be using lines that were on one of the approved lists, no additional ESCRO review required under the CIRM standards but clear here would be an additional review and that's somewhat problematic, so I just hope that you'll think about that.

And the other is under B, I guess I don't have a concern about having ESCROs make judgments about scientific rationale, that really is something that ESCROs and IRBs do all the time.

Henry Greely: SCRO's. We're SCRO's in California.

Ellen Auriti: SCRO's, okay.

Henry Greely: We couldn't afford the extra letter.

Ellen Auriti: But what strikes me as different is the idea of having individual SCRO's make a factual determination about whether a line met the ethical requirements of the time. That does seem more problematic to me of having one SCRO say yep, it met the standards of the time and another SCRO 20 miles down the road saying not, I think that that's a more difficult divergence than having ethical balances of committees and making different determinations. So that's the advantage...

Henry Greely: So what would you do?

Ellen Auriti: (Unintelligible).

Henry Greely: I appreciate the problem there but how would you solve it?

Ellen Auriti: Well the way CIRM is solved is by having a process where there's a determination made I guess by the ICOC when an argument is made that something should meet a standard, and it's a little awkward for me here because far be it for me to argue for less flexibility for our institutions to make determinations. But I do think that it makes, it puts ESCROs or SCROs in a

difficult position of making these factual findings that could really come under criticism if there's divergence of...

Radhika Rao: But, so you're saying when you petition the CIRM for CIRM approval CIRM decides on whether it meets the ethical standard, but I thought it's not they also include scientific rationale, at least Dr. Lomax seemed to suggest that that was part of it. So wouldn't that then encompass a variation depending upon different (unintelligible)?

Ellen Auriti: Well the particular piece that I was just concerned about was the factual determination.

Radhika Rao: Yes. I agree with you that that's problematic, but does CIRM look at those two things separately and say this particular line we will approve for any research or did they say well we will approve this line, that it meets ethical standards for this particular research you know? Because if they do it in two stages then you could know that the line was now approved but if they do it coupled then...

Henry Greely: I think you agitated Dr. Lomax. He may have an answer to your question.

Geoffrey Lomax: (Unintelligible) not agitated it's just the point is no, I mean (unintelligible).

Henry Greely: Shaking, a head shaking (unintelligible).

Geoffrey Lomax: Well it's just, I guess the head shaking is that at a certain point the process has to actually function and so as a matter of administrative expedience, I think that's a fair way to describe it, a determination is made and if it's done, and there may be, that's absolutely right. Conceptually it may be in one context, it should be done and in another context perhaps it's not the best choice. But it

implies a sort of granularity of decision-making at sort of the administrative level that it's just not feasible and if we were to try to approach everything at that level I think we would run into our counter to our mandate to (unintelligible) and reason (unintelligible).

Radhika Rao: Right. So if I understand you CIRM once they approve a particular line then it's approved for everything?

Geoffrey Lomax: That's right. And (unintelligible).

Henry Greely: (Unintelligible) a good scientific, whether that particular project has a good scientific rationale for it or not.

Geoffrey Lomax: Correct. That's right. Once it's, and it's the same problem you all discussed about the NIH lines and not, but I just want to emphasize you know they're, and acknowledge that one can find problems in that but one has to balance that against our mandate (unintelligible) the mission of the institute and we sort of hit the bullet on that one.

Henry Greely: Which, I mean going back to Ellen's comment, one way, one alternative is to set up some administrative adjudicative process within the committee or within the department that makes this decision, but that isn't very appealing.

Another possibility would say even if you're not using current funding you've got to go through the CIRM petition process, which also has its down side, so I'm curious whether there's a, whether you've got a suggested solution to this problem for us.

David Magnus: Other than just saying there are lines that actually had (unintelligible) standards of time that don't have it (unintelligible) list and (unintelligible).

Ellen Auriti: Yeah, I don't know, I mean I'll have to think about that more which is why I think that it's really advantageous to kind of get this into something but then (unintelligible) public comment on (unintelligible).

Henry Greely: Good point. Anybody else from the public with comments? Yes. You came in late so we don't have your identity on record.

Lily Mirels: Sorry, no I'm Lily Mirels from UC Berkeley and I just wanted to comment on the part about the lines that are on these various registries like the NIH registry and the idea of declaring them permissible but still having to go (unintelligible) to weigh the merits of using that line.

And I'm not sure that it's helpful to SCRO's or that we really would want to be second-guessing these various organizations that already create registries and decide if something's permissible just because for one thing it's more uniform if everyone can just follow this rule and it's my understanding that that's (unintelligible) but it's (unintelligible) that if a cell line is on one of these registries you can use it and now without further questions. I don't know why we would want to (unintelligible).

David Magnus: Because that some of them have terrible, terrible consents and shouldn't have been approved so.

Woman: But now...

Lily Mirels: But it's okay to use them (unintelligible).

David Magnus: Correct.

Lily Mirels: I mean I would say the rationale is there, people in the other 49 states are using it, it's out there. Nobody wants to continue to do this (unintelligible).

Henry Greely: This was the main subject of our last meeting which is written up to the minutes and we talked about it at some length the particular problem was that the BresaGen lines very clearly didn't meet the requirements, the general ethical requirements at the time.

Lily Mirels: (Unintelligible) I think it should be (unintelligible) to take them off the registry. I think those registries need to mean something and they need to stand for something that everybody and not just certain people in certain states...

David Magnus: But that's not their job, so (unintelligible) the British registry, they're not, their primary goal is not to create a set of standards for people in California or for regulatory purposes. They've got other things that they're doing and the reality is if you look at the way which they're, they do have one on paper looks like a pretty good review process it's (unintelligible) so it's actually (unintelligible) there are some consensus that have gone through the British (unintelligible) on the British registry that are also quite problematic.

And so there really is, I mean it'd be ideal if we had bodies that really we can trust (unintelligible) to a job in a way that they (unintelligible) and that would play those roles. We don't have that right now for a lot of reasons CIRM from a practical point of view decided that they were going to just count any of these (unintelligible) but now that people have been looking at these things in more detail, you know, we know that a lot of these consents aren't as good.

And I, and the more general point I would make, even though it does divert from CIRM standards, is that all things being equal I think we ought to create an incentive for investigators to use better lines that have better consents.

Use the same way they want to use lines that are from a site to the clinic (unintelligible) better, they should (unintelligible) to use lines that are ethically better and so this would create a, and I think it's a very weak requirement for the investigators. This is just a, this is you know, very, I think it should be actually a very easy thing (unintelligible).

Henry Greely: We do recognize the, that you've got a point (unintelligible).

Lily Mirels: I have, yeah I don't think it's as quite as easy as (unintelligible)...

Henry Greely: (Unintelligible) value.

Lily Mirels: You know if it sounds like it's easy but when you talk about the (SCRO)'s (unintelligible) the consent (unintelligible) and reading them and comparing them, you know, it's complicated, I mean we've had complications (unintelligible) from very well known institutions and well known investigators and you know, I'm not sure we really want to go down the road of (unintelligible).

I mean at some point we need to maybe I think let go a little bit of control, trying to complete control of what (unintelligible). And going forward there would be a different standard (unintelligible) aware of (unintelligible).

Henry Greely: Okay. Thanks for your comments. Anyone else from the public want to comment? Anyone on the phone lines from the public who wants to comment? Bernie do you want to say something?

Bernard Lo: (Unintelligible) but I think someone on the phone (unintelligible).

Henry Greely: Was somebody on the phone about to speak? Speak now or don't. Okay.
Bernie.

Bernard Lo: I wanted to ask a question about how the (unintelligible) justifiable (unintelligible) so that if I am an investigator and I said, you know, I just need some stem cell lines. And I look around and say oh NIH has this on the list, it's on the Web site, and I sort of (unintelligible) wrongly so after (unintelligible) that you know, they were ethically appropriate. I mean after all they were published in a period of extreme attention to the ethical aspects of (unintelligible).

Does that in and of itself count in this?

Man: Are you...

Bernard Lo: I mean it comes into it in a sense that well if I have to redo all my, if I have to restart my work like a different line and (unintelligible).

Henry Greely: In a way this is part of Greg's question from the phone line too is that what do we mean by scientific rationale and how broad is it? It seems my own view is that it should play into it that if you in good faith started down that road and changing lines at this point causes problems which have a negative effect on how your science progresses, have a - likely to have a negative effect on how your science progresses, which is the science book, that I think gives me (unintelligible).

Man: I totally agree with that.

Bernard Lo: So we'd say that it seems to be that implied different, if you've been working with the line at (unintelligible) start working.

((Crosstalk))

Man: Also, are they actually going to start and there is something peculiarly special to your experiment about that line.

Man: Right. Hard to imagine...

Man: And it is hard to imagine.

David Magnus: There are several. There are some lines that have been genetically modified that have different characteristics that makes them unusually valuable so there's actually several ways, several lines that are unique (unintelligible) that would be hard to replicate (unintelligible) particular projects.

Bernard Lo: But I think where the ethical difficulty is, is that you have to weigh that against how much of a slippage was there from what...

Man: Right.

Bernard Lo: ...at the time there (unintelligible) consent and again, you know, as I think back I was listening in to (unintelligible) BresaGen lines and I thought some of the things that were said really made my hair stand on end. I mean this notion that well, there are other things about the company we (unintelligible) they thought I'm not at liberty to say but gave us a reason to think that maybe they didn't do what they said they had done.

So it strikes me even that where it's just a (unintelligible) you know, I would tend to say wait I really want a compelling reason not just convenience whereas others where, I mean there's another line where I think it was Novocell (unintelligible) where (unintelligible) oocyte donor did not give consent for embryo research and (unintelligible) to find there was additional (unintelligible).

So you've got some consent you know, but it wasn't explicit (unintelligible) it strikes me that it would sort of allow (unintelligible) scientific rationale, but kind of balancing the various components (unintelligible) which it's very hard to do (unintelligible) regulation but I don't know how judges get it, but you know, I mean judges would say (unintelligible) criteria (unintelligible) it more of a balancing (unintelligible).

Henry Greely: Which I think is part of the tension with the California administrative process with its desire for very clear guidance against a question that will inherently involve subtle and difficult judgments in the weighing of apples against oranges.

Gregory Stock: Well, Greg Stock again. You know there is sort of a natural screen being created because of the fact that if you have uncertainty in the process then that automatically will inhibit your investigators from actually going down that path if they don't feel there is a significant justification for it because, I mean what you really don't want to have happen is...

Man: Right.

Gregory Stock: ...casual efforts that you know, use sort of substandard lines and who's going to do that if there's very, a great deal of uncertainty and a lot of effort trying to

justify them. So while some of that uncertainty is valuable by creating reasons for people not to pursue those other lines.

Henry Greely: Okay. I think we've had a really good discussion of this. The public, unless there's somebody else on the phone out there, I think we've had time for public discussion. We've discussed this a lot. It seems to me as though we're probably ready for a motion that says we'd like to take the substance of what Dr. Magnus has provided and before, and well in advance of our next meeting distribute to the committee language that is more worked out and ready to be an amendment, ready to be proposed as an amendment to the guidelines for us to pick up at our next committee meeting.

David Magnus: And the (unintelligible) this approach would be some difference between the guidelines and the CIRM regulations (unintelligible).

Henry Greely: Which may lead us to vote against it in the next one but at least that we're interested enough to pursue (unintelligible).

Man: (Unintelligible).

Henry Greely: Bernie?

Bernard Lo: I would look at a clarifying question (unintelligible) there was a (unintelligible).

Man: (Unintelligible).

Bernard Lo: Well I'll make the substance motion. What I need to understand (unintelligible) is there was sort of a, an absence of the main (unintelligible) in

terms of who would be (unintelligible) so call on David or David and Shabbir.
I mean it's up to the Chair(unintelligible).

Henry Greely: I would certainly hope that David would be willing to continue to do this with the assistance of anybody on the committee who wants to work with him. And of course calling on the resources of the ever helpful state staff.

David Magnus: Yeah we'll definitely want to (unintelligible).

Henry Greely: But you're willing to take the labor (unintelligible).

David Magnus: Yeah (unintelligible).

Bernard Lo: I'd be willing to comment but I really can't quite very actively.

Henry Greely: And I certainly would be willing to help. I'm looking at another one of our law professors here at the table.

Radhika Rao: I'll help.

Man: Okay.

Man: (Unintelligible).

Henry Greely: So Bernie do you so move?

Bernard Lo: I so move and I hope someone's recorded (unintelligible) know what we actually (unintelligible).

Elliot Dorff: And I second.

Henry Greely: Any further discussion? All those in favor say “aye” and then I’ll ask those of you who are saying “aye” over the phone to then individually identify yourselves.

All those in favor say “Aye”

Man: Aye.

Woman: Aye.

Man: Okay those who said, so who said “Aye” over the phone?

Elliott Dorff: Elliott Dorff.

Gregory Stock: Gregory Stock.

Henry Greely: Anybody else? Elizabeth are you still there?

Elizabeth Blackburn: Elizabeth Blackburn.

Henry Greely: Okay. And you said aye?

Elizabeth Blackburn: Yes Aye.

Henry Greely: All those, Sam are you there? Is Sweden still with us?

Man: (Unintelligible).

Woman: Yeah (unintelligible).

Henry Greely: Okay. So we have at least the six members here and three members on the phone voting aye. I think that's everyone there is but just for the sake of completeness are there any no votes? Any abstentions? Okay that motion appears to have passed unanimously.

If I look at our agenda our next item is discussion of the impact of possible federal regulations. We've talked about this a little bit. I don't know how much more there is for us to say and given that the next agenda item is break and I see some, something to break for in terms of food for which I believe we owe thanks to CHORI.

Man: Thank you CHORI.

Henry Greely: Does anybody have anything further to say about the federal regs other than, we'd sure like to know what was going on.

Woman: I'd like to know what they're (unintelligible).

Henry Greely: I think at the time this got onto the agenda we had hoped that we would know more about what's going on at the federal level. In that case let me suggest that we take a break. I don't, you know, this meeting is scheduled to run until 2:00. It's not clear to me that we're going to need that much time. Along that line it's currently ten minutes till noon, let me suggest that we restart in a half hour, that's not too short for anybody?

Man: We, yeah.

Woman: Yeah.

Henry Greely: Well let's restart it then at 12:20.

Elliot Dorff: Okay. So we should call back then right?

Man: Yeah.

Man: Okay.

Henry Greely: Take a half hour.

Elliot Dorff: Enjoy lunch.

Man: All right (unintelligible).

Woman: You too.

Man: All right (unintelligible).

Woman: (Unintelligible) stem cell lines to be proved ethically and then how the ones that meet those, you know, as opposed to having each SCRO say well, I think the (unintelligible).

Elizabeth Blackburn: Hello?

Man: Yes.

Elizabeth Blackburn: Hello, this is Elizabeth Blackburn rejoining the meeting.

Henry Greely: Hello Elizabeth we haven't quite started yet but I think your call is a good wake up for us.

Elizabeth Blackburn: Oh I'm sorry, I didn't mean to wake you.

Henry Greely: Oh no, that's good, 12:20 is the time. Anybody else on the phone line?

Samuel Cheshier: Yeah, this is Sam Cheshier rejoining. Sorry about my communication issue earlier.

Henry Greely: Okay. Now we voted to make you chair Sam so.

Samuel Cheshier: (Unintelligible).

Henry Greely: It was only a joke but if you, you know. And that's off the line again you may end up with that punishment.

Anybody else on the line? Well I'm hoping that, well let's see, Elliot and Greg back on soon, but I think we can start up again. It's a little bit after 12:20.

So our agenda has several items here for post break, but I think really what it mainly boils down to is one substantial issue and one that we began to approach last time, how are we going to deal with, how should we deal with induced pluripotent stem cells? Cells that seem to fall within our (unintelligible) but raise a variety of very different issues. (Unintelligible) or fail to raise some of the issues, you know, because they're not derived from embryos or typically from gametes of any sort, avoid some of the issues that have made stem cell research particularly problematic.

So again I want to thank David Magnus for taking the lead on this. David has provided us with two alternatives.

David Magnus: One of them I didn't draft (unintelligible). Did the department do that?

Henry Greely: So there are two alternatives, and we'll figure out now whose they are (unintelligible).

Elliott Dorff: Hi, Elliott Dorff is back.

Henry Greely: Hi Elliot, welcome back.

Elliott Dorff: Thank you.

Henry Greely: Draft to proposed amendments to the guidelines with respect to the use of cell lines derived from somatic cells.

Man: And the other one (unintelligible).

Henry Greely: I wonder who the I was, this might even have been me but I have no recollection of it.

Woman: Yeah (unintelligible).

Man: (Unintelligible) yours yeah.

Henry Greely: Okay. You can tell my pride of authorship is beat.

Woman: Yes.

Henry Greely: But this was an effort to revise this to conform fundamentally to the CIRM approach to dealing with IPSCs. The second, which has the e-mail version of it has the heading proposed amendment CDPH guidelines to human stem cell

research number three and which starts out, it starts out I propose that we handle iPSC unlike me, who remember whether the I in the last one was me, the I in this one remembers who he is and that would be David Magnus.

So David let me ask you to talk a little about the proposal you made and why you think it's superior to us shadowing the CIRM approach?

David Magnus: Sure. So first of all I think it's important to note that there is a difference, an important difference between CIRM in our guidelines, which is CIRM is set up for research, we're not. We're basically setting up guidelines and saying if you're going to be in California you have to do, you know, meet these guidelines and standards, which is different than (unintelligible) says you have to meet this (unintelligible) for us to be able to pay for you and so services (unintelligible) CIRM actually have a higher bar that I think we should, that we might have for research in the state.

In addition SB 1260 is primarily about embryos and oocyte procurement, use of embryos again we, not about (unintelligible) cells per se, and then third as was pointed out in the NAS revised guideline, and as I think (unintelligible) thinks about this is aware most of the ethical issues concern that arrive in human embryonic stem cell research are not applicable to induced pluripotent research.

So for that reason I have proposed initially at the last meeting that we consider changing the definition of a covered cell line so that we restrict it to only things that are, rather than being any pluripotent cells only for pluripotent cells that are derived from an embryo or a product of SCNT (unintelligible) an embryo-like thing.

But it was played out that there is one exception to those concerns, which is although as the NAS guidelines state there's no particular ethical issues that are different from any other kind of research for the creation, derivation or in vitro use of iPSCs the, putting the, however, the results of pluripotent cells into animals, non-human animals does raise some issues that might rise to the level of the kind of the challenge that should have SCRO review.

And so I've tried to capture both of these things by changing the definition of a covered cell line to be more restrictive just to embryos, but then in the regulation where essentially we talk about oversight of cells that are being placed in animals, which already mirroring the CIRM guidelines had to carve out anyway for neuroprogenitor cells, to instead of using the constant covered cell line at that point to a stated use of pluripotent cells but it would capture the use of iPSC.

I think in that way we would still have chimera research to have oversight from SCRO's but it would basically take (unintelligible) off the table any role of the SCRO's in trying to figure out what, you know, having to inquire what the (unintelligible) requirements are, what the, whether they were ethically derived really just any oversight or examination or any of the things that we want to do (unintelligible) looking at iPSC I think that's just outside the scope of requiring SCRO's to do unless we're paying for it.

So again, the mechanism that the CIRM uses to try and achieve to some extent the same thing is tied to being non-identifiable. And I think that our approach is a little bit broader, this approach would be a little bit broader than that and because I just don't, I think IRBs are actually well equipped to deal with it (unintelligible) in a new area banking it's been around for a long time.

There's a lot of literature about it, there's a lot of guidance about how to deal with it IRBs some expertise in it and I think some of the informed consent work that's been done on behalf of CIRM and stem cell arena is something that (unintelligible) procurement for the course of standards but I don't think (unintelligible).

Henry Greely: So to back up a little bit, the reason we got into this issue to begin with was the fact that somatic cells were being used, or somatic cell lines were being used for IPSC that didn't meet the requirements of consent, etc., the ethical requirements. CIRM modified it's regulations with respect to that. We propose to modify our guidelines with respect to that.

What David's proposing really does take a big step beyond that and say let's just not deal with IPSCs as part of our guidelines with the exception of the area of creation of chimeras because given their non-embryonic source and non-gametic source that's the only thing about IPSC that raise the kinds of issues that the SCROs need to deal with, right?

So I think you're actually on that I think that's a fairly substantial, even radical if not elegant, possibly elegant resolution (unintelligible).

David Magnus: Very minor changes in wording. Minor changes to the guidelines (unintelligible).

Henry Greely: And (unintelligible) it's hard to keep straight all of the various state statutes but I don't think the statutes require SCRO approval with respect to IPSC at least literally so I think this is something that's legally doable, SCRO's will still need to work with IPSCs and have oversight of IPSCs to the extent it's CIRM funded research, but under David's resolution, David's proposals SCROs would not have to deal with anything about IPSCs, not just the use of

that externally derived iPSCs but the derivation of new iPSCs with the sole exception of their transplantation into non-human (unintelligible).

Radhika Rao: What about the clinical trials?

David Magnus: Actually under the way those were written they aren't covered now.

Henry Greely: Should they be?

David Magnus: So all I'm saying is that this change wouldn't affect that (unintelligible). Their language covered cell line actually used in that section. I believe that the (unintelligible) about embryo, talk about pluripotent cells and they already had a carve out for neuroprogenitor cells in place in the humans and but it was about embryos in that section. We could revisit that (unintelligible) should require, this change wouldn't effect that.

Radhika Rao: But I feel like we would want to include induced pluripotent stem cells in (unintelligible)...

David Magnus: I actually agree with that.

Radhika Rao: ...provisions regulated clinical trials because whatever issues are posed by stem cell research may very well also exist with respect to (unintelligible).

Man: (Unintelligible).

David Magnus: So I agree with that. So but I think that would require a change as well, but (unintelligible).

Henry Greely: We're going to change to a different section.

David Magnus: I think it would require changing, but right now I think it doesn't say covered cell lines there. I think it says, I think it says embryos, use of embryos so we should make sure that that's (unintelligible) and if there is coverage going up there we should in that section be (unintelligible), pluripotent.

Henry Greely: (Unintelligible) I mean it is fairly unusual for a regulatory or even guideline agency to carve out a whole bunch of stuff and say you don't have to worry about this anymore.

Woman: Yean.

Henry Greely: Because to reduce ones jurisdictional scope is less common politics than (unintelligible), which of course is not an argument that it's a bad thing. What do we think?

Elizabeth Blackburn: Well, this is Elizabeth Blackburn here. With respect to the question of transplanting cells or cells derived from on the IC to, into non-human animals, you know I gather the concern was mainly to do with neural tissue.

Now a lot of research is done in which cancer cells are transplanted into non-human animal models, and I can imagine that research could very well be evolving in which IC's to recapitulate the course of cancer and such research would then involve introducing, you know, transplantation into animals just as it's done now with other cell types.

And that seems to me to put the SCRO's under potentially a lot of work which is sort of not really relevant to their goals and so I'm even wondering if that transplantation part should be made more specific for what I gather is the real concern and that's neural cell types.

David Magnus: But those are required now so that SCRO oversight...

Elizabeth Blackburn: Exactly. But I don't think SCRO oversight needs to be applied to other forms of transplantation of induced pluripotent stem cells, because I think that that could mean an awful lot of things are going through SCRO's scrutiny for reasons that seem completely unnecessary.

Henry Greely: I do think there are, I think the neural tissue issues are, were the leading reason for the transplantation.

Elizabeth Blackburn: Yes. And I can't think of any other reason (unintelligible).

David Martin: (Unintelligible) early embryos of non-human primates.

Elizabeth Blackburn: Okay. Okay.

Man: And this is (unintelligible)...

Elizabeth Blackburn: This is going to, but I guess again there's a lot of work in which cells would be transplanted into, which already goes on in just non-human (unintelligible) animals such as studying for example cancer cells and because induced pluripotent stem cells are such good potential models for cancers, you know, I can't see that this wouldn't be something that people will want to do for scientific research reasons.

Henry Greely: And so having such a (unintelligible) David's presenting a radical proposal your comment is we should become even more radical on that.

Elizabeth Blackburn: Right. But based on, I mean it's, you know I don't see any departure from the, you know the ethical goals of what is you know, trying to be covered here and these kinds of experiments to me don't pose any to me perceivable ethical issues.

David Martin: I agree as long as just the embryos of non-human primates are accepted (unintelligible).

Elizabeth Blackburn: Yes. So maybe it could be made a little more specific because (unintelligible) a very broad blanket.

Henry Greely: There's also the concern (unintelligible) Elizabeth about the possibility of the transplanted human cells giving rise to human gametes inside a non-human animal.

Elizabeth Blackburn: Right. Those are three things we've identified right now which I agree.

Henry Greely: And although I think...

Elizabeth Blackburn: A huge breadth of other things that wouldn't fall into these ethical concerns and so once one starts to say these kinds of experiments, you know, and just don't want to be dealing with the gamut of cancer models for example.

Henry Greely: And I think there is a potential fourth area, although it really hasn't to my knowledge come up specifically in the context of stem cell research. People have qualms about transplanting human cells into animals in a way that gives rise to human appearing features.

Elizabeth Blackburn: Yes. I understand. Yes, that too. So here's the question, how to deal with the idea that these might be very useful cancer models which I think don't raise any of the concerns that we're talking about, you know, to have that not become under SCRO scrutiny, because I think this really would add a huge burden of work.

David Magnus: (Unintelligible) out of a huge burden of work it's something that we've been dealing with all along.

Man: Other (unintelligible).

Elizabeth Blackburn: The IPS work has been greatly increased, you haven't seen anything, right, because this is a very, very useful research tool.

Man: Okay.

Elizabeth Blackburn: Going to apply to a lot of disease development models, some of which will involve transplantation into animal models like the cancer ones already do these will be very advantageous I think for certain scientific questions.

Henry Greely: Okay. Thanks. I think that's a point we've got to keep in mind. Other people with other concerns or issues (unintelligible)? Bernie?

Bernard Lo: Yeah, I mean yeah I think this is important to think about because we're going to see more and more IPS research. We just wrote a paper where we tried to distinguish between issues related to just the derivation of an IPS (unintelligible) basic research needed to characterize it and to demonstrate it and so (unintelligible) pluripotent, which struck us didn't really raise the kinds of ethical concerns that embryonic stem cell research (unintelligible).

But we thought that like any other pluripotent stem cell those downstream research projects that did raise ethical concerns that did not fall (unintelligible) purview or the expertise for the practice of the (unintelligible) and we've mentioned a couple of them sort of (unintelligible) transplantation of neural progenitor cells into non-human animals. The issue of putting human stem cells into embryos (unintelligible) accidental generation of gamete cells, human gamete cells in animals.

But then there are a couple others, one is the use of IPS cells for human reproductive research that is directed towards creating the totipotent (unintelligible) so you would derive (unintelligible) cell into a human gamete oocyte or sperm depending on the (unintelligible) and then use that then artificial (unintelligible) reduction. (Unintelligible) talked about as (unintelligible) is the one possibility for allowing for example people who had chemotherapy and are infertile you know, biologically have children.

So the issue is how do you design it (unintelligible) that captures those special downstream uses or ethical oversight in a way that if it's done totally in the laboratory or totally out, it's not, it would not fall under IRB purview if you have the cells and you work with them in the lab or in animals, there's no oversight mechanism. And IACUC only look at the animal welfare issues, not at the sort of (unintelligible) ethical.

So I'm not sure, so I support the idea of not imposing requirements for the derivation of cells, so I think (unintelligible) what we were concerned about (unintelligible) wrote is that people would derive these cells because it's easy to do and you can use you know, non-(unintelligible) cells it's just very general consent.

And then for some reason the (unintelligible) very robust, very useful line to other scientists and then they carry on, they want to use it for downstream research that the original scientists (unintelligible) hadn't talked about in the consent process, then you have a problem with the way that (unintelligible) that research downstream when you (unintelligible) cannot get back, you may not be able to get back the original donors for...

Henry Greely: Even assuming there was a consent process...

Bernard Lo: Yep.

Henry Greely: ...I mean to the extent that these are widely publicly available, anonymous lines there will have been no specific consent process.

Bernard Lo: But what we call (unintelligible) a regulatory (unintelligible) achievements deriving from (unintelligible) take a little extra time to (unintelligible).

David Magnus: I completely agree with that.

Bernard Lo: But how, but I think it is important that some way of providing oversight for that kind of what we might call sensitive downstream research, which now is (unintelligible) of oversight without creating insurmountable barriers that we only are doing what we call basic sort of stem cell biology.

Elizabeth Blackburn: Right. That's the concern. Yes.

David Magnus: So David says let's only regulate tricky uses and the tricky uses you came up with were transplantation into animals. Elizabeth says not all transplantation into animals is tricky.

Elizabeth Blackburn: Right.

Henry Greely: Bernie says, and Dr. Martin says, and Dr.'s Lo and Martin...

David Martin: Yeah other type of sensitive...

Henry Greely: ...say that there are some other types of sensitive issues, whether it's implantation into non-human embryos or the creation of gametes that are intended to be used clinically, and I think Radhika said that clinical trials (unintelligible).

Man: Quoting percentage.

Henry Greely: And so I do think we've seen, I have not yet heard anybody who said it is a bad idea in theory to try to separate out the IPSC activities that are not of ethical concern and say the SCROs don't have to deal with those versus those that are of ethical concern, which we want the SCROs to deal with. Whether we can make that division, whether we can list, come up with a checklist of things that are sensitive or whether at some level we want to have the SCRO's look at everything so they can see what unanticipated sensitive issues may, sensitive issues that don't get on our checklist may arise are two different strategies for dealing with this.

Radhika Rao: And I thought Bernie was suggesting that it may not be sensitive at the time the research is being performed but that down the line you might then want, you might want to use it for purposes that you didn't think about that could be sensitive, and at that point it's too late.

So if it didn't start out with all of the appropriate consent, then now we'll be back in a situation where they now sort of grandfather in and you know.

Bernard Lo: (Unintelligible) I mean (unintelligible).

Henry Greely: And I haven't seen this PLoS article, when did it come out?

Bernard Lo: It came out a couple weeks ago.

Man: Okay.

Bernard Lo: I can send it (unintelligible).

Man: (Unintelligible) one.

Man: (Unintelligible) biology.

Man: Okay.

Bernard Lo: Yeah. We suggested that you get permission to recontact the original somatic cell donor on the grounds that it wouldn't be as sensitive as keeping (unintelligible) embryos or gametes (unintelligible) number of cells, scientific groups that are deriving (unintelligible) IPS cell lines.

David Magnus: I'd that there's a million ways in which when you first procure tissue from a bank (unintelligible) that explain of having used those different from that they can wind up being (unintelligible). There's a million different ways in which (unintelligible). (Unintelligible) the latest examples that illustrate that. There's a lot of literature on why that's tricky and what you have to, ways of wording that satisfy our needs because it's a tricky issue. It's a lot of literature, it's a lot of guidance and a lot of the things have been produced from stem cell research should go in some guidance for flipping.

There's nothing special I would argue about iPSC research except for the mere fact that they are pluripotent, at least anything special that makes it special or different from other kinds of cell tissues that also can wind up leading to tricky issues in the downstream application. This is an ongoing problem of research, you collect tissues, you collect cells it's going to have unanticipated (unintelligible) it may become immortalized, if the cells have been immortalized long before there were iPSC research came online (unintelligible) pluripotent.

So all of those kinds of issues, things that we've been dealing with for years there are issues that IRBs have to deal with and (unintelligible) you to deal with and things that are not pluripotent I just don't see why we have to have in our guidelines or regulations. CIRM (unintelligible) money for research so they can put (unintelligible).

I don't see why we should say that if somebody happens to be in California and carrying out the research here that we want to put extra restrictions on the research without a really darn good reason, since this is an area that's been discussed widely for a long time and that (unintelligible) maybe imperfectly deals with.

I don't see that we have a justification for having a separate set of guidelines for dealing with that. I think the only exception I'd make are for applications in non-human animals and clinical trials (unintelligible), but derivation (unintelligible) stem cell research (unintelligible). You're right there's going to be a challenge for informed consent (unintelligible) stem cells, that's true for all tissue (unintelligible).

Henry Greely: But fundamentally there aren't, you're willing to accept downstream regulation through SCROs of sensitive uses...

David Magnus: Yes.

Henry Greely: ...that are sensitive because they have SCRO relevance, consideration.

David Magnus: Correct.

Henry Greely: You're, you would not like to see regulation of derivation and (unintelligible) up front (unintelligible) downstream (unintelligible).

David Magnus: Correct.

Henry Greely: And some of those downstream uses that we've identified as sensitive I'm not sure there's going to be much dissent about clinical trials, neural progenitors in animals, into non-human and the human cells into non-human embryos, non-human primate embryos in particular. The gamete ones I guess I'm with you on Bernie, I'm not entirely sure...

David Martin: The gamete one is maybe the strongest one of all, it would be for some people (unintelligible) ability that you could donate your somatic cells and that they could be used to create children, your children who might come to visit you some day.

Man: I agree.

David Martin: A lot of people would be shocked by that.

Henry Greely: I agree. I also think you know, the potential for a political explosion when we're able to create sperm from cells from women and eggs from cells from men will also be interesting.

Man: (Unintelligible).

Elizabeth Blackburn: And chromosomes will be tricky.

David Martin: But none of that is particularly unbelievable. So any of these things could happen.

Henry Greely: Tricky but not...

David Martin: Tricky but it's always (unintelligible).

Henry Greely: ...it's not inconceivable so to speak.

Bernie?

Bernard Lo: So I think to go back to David's report about how is this different from other ethical concerns regarding the use of existing biological materials for uses for which other than the purpose which (unintelligible) going. I think one of the things that (unintelligible) the notion that stem cell research (unintelligible) to take these sort of bioethical questions that go beyond individual or specific group based concerns about violating what they were (unintelligible) issues with regard to what's human, what's beyond natural boundaries. I mean all of the other issues that were implicated embryonic stem cell (unintelligible) basis (unintelligible) about (unintelligible).

I think all these issues in terms of (unintelligible) barriers creating quote end quote entities from (unintelligible) the somatic cells we need to begin to sort of address issues that A) sort of, you know, even more difficult that the issues of I wouldn't have wanted my particular (unintelligible) cells used for (unintelligible).

David Magnus: (Unintelligible) right, so all the animal (unintelligible).

Bernard Lo: I think (unintelligible) worked out Dr. Martin's concerns and Dr. Blackburn's concerns (unintelligible) not making it too broad or too narrow.

David Magnus: Can I make a proposal about that, it seems to me that the issue of clients, I think it would be a mistake now while we're trying to just handle the IPSC issue, I guess I think it would (unintelligible) state by right now also address the issue, it's not just about, it may be that we'll see an increase in volume but it's not just about IPSC, it's also about HESC we want to say there's certain animal HESC and IPSC that really doesn't require SCRO oversight in the animals. Right now the guidelines and the regulations are too broad.

I think that's a good thing to address but I think that's (unintelligible) address separately this revision (unintelligible). But I would suggest that trying to craft a proposal to try and restrict the scope of our oversight of chimera research or placement of pluripotent cells or cells (unintelligible) from animals somebody should take a crack at figuring out how to do that.

So that to me is separate from the issues before us which is how we're going to handle (unintelligible) the existing regulations. Because right now our guidelines actually are extremely prohibitive of IPSC research, more prohibitive than CIRM (unintelligible) one of these changes, the (unintelligible) bring us closer to CIRM (unintelligible).

Henry Greely: And more prohibitive I suspect than the reality of what's going on.

David Magnus: Correct.

Henry Greely: Where I think it's (unintelligible) that there are a lot of people who are violating our guidelines without realizing or they're violating guidelines or even that the guidelines might apply to them with this growth of ideas.

Bernie?

Bernard Lo: Yeah. And I think that's an important point that we've been very concerned about, researchers just not realizing it falls under the oversight system that really was put in place during the (unintelligible).

And my, the other concern we have at UCSF is that if you don't sort of have some sort of oversight up front it's very hard to get it later (unintelligible). A lot of this (unintelligible) research if you already have the cells in hand requires no further oversight. It's outside the IACUC's purview, it's not human subject's research because you (unintelligible) de-identify the cell (unintelligible) and once it's, so there's no other organization (unintelligible).

David Magnus: Putting it into an animal that will...

Bernard Lo: But they don't look at, they don't look at the bio-ethics issue, they looked at (farmed) animal welfare.

David Magnus: But you have to have some kind of mechanism in place, which we do and I'm assuming other places have so that any (unintelligible) gets involved (unintelligible) stem cells into animals that it'll trigger a review whether the

SCRO gets involved and in fact under these guidelines they would. And so they you know, it's required I would say (unintelligible) triggered doesn't have at least some level of oversight whereas IACUC or IRB it should trigger that mechanism to be able to have a (unintelligible) SCRO purview that's required by the regulations.

So I think for those applications the only exception I think that I'd have to actually go back and look in the CIRM regulations and in the, in our guidelines do we have some provision about, I try to remember something about creating a, using cells to create a reproduction or to create a person?

Henry Greely: There's an SCNT carve out.

David Magnus: Well how does the CIRM regulation deal with it (unintelligible)?

Woman: (Unintelligible).

David Martin: Yeah is there a prohibition on introducing the ES cells into human blastocysts or something like that?

Bernard Lo: (Unintelligible) it falls (unintelligible). So again CIRM brought in (unintelligible) in terms of being able to some control (unintelligible) the consent for the original donor, (unintelligible) so let me look that up and come back to you.

David Magnus: But what about the application?

Bernard Lo: For reproduct (unintelligible).

Henry Greely: And we do have to...

Man: (Unintelligible).

Henry Greely: ...right, so if we think this is important, that a useful function is served by having some regulations at the time of the derivation of the iPSC lines then we also have to worry about what happens with all iPSC lines that are derived outside California and are brought into California, as opposed to just focusing on sensitive use, but of course you're right, if you only focus on a sensitive uses you lose the opportunity so then the conditions of derivations in ways that might be ethically significant given particular sensitive uses.

Patricia Rodriguez: But David (unintelligible) point out (unintelligible) in your packet are the guidelines, in the guidelines in section three and it lists activities not permitted (unintelligible).

Henry Greely: Human reproductive cloning, culture in vitro of an embryo or product of SCNT etcetera after more than 12 days, introduction of stem cells from covered stem lines, stem cell line into non-human primate embryos so if we make iPSCs not covered lines that would have to be fixed.

David Magnus: So we'd have to say pluripotent cells rather than covered lines.

Henry Greely: Yeah. The introduction of any stem cells whether human or non-human into human embryos that presumably would still be covered (unintelligible) stem cells, breeding of any animals into which stem cells from a covered stem cell line have been introduced that would be another area where presumably you would try to change, you would need to change that language.

David Magnus: Right. What's that last one?

Henry Greely: Breeding of animals to which...

David Magnus: Right.

Henry Greely: ...cells from, derived from a covered stem cell line (unintelligible). It seems to me we've got a fundamental, we've got three fundamental issues here. One is, or three approaches are different potential problems. One is the possibility of regulating of requiring SCRO regulation only of sensitive uses of iPSC, which is David's position with the additions to what counts as sensitive uses that have been made from those of us around the table.

The second issue is Elizabeth's issue of putting them into animals is too broad a definition of a sensitive use but a lot of transplantation to animals shouldn't really count as a sensitive use. Which as David properly points out is also a problem for embryonic stem cells and not just for pluripotent stem cells, and I do sort of like David's suggestion that we take on the issue of carving out more narrowly what kinds of transplantation into animals requires significant oversight for either kind of stem cell, embryonic or induced.

And then we've got Bernie's issue of the potential value, significance of regulating at the derivation stage. Mainly I think if I'm right Bernie, mainly in terms of regulating the consent at the derivation stage to avoid or limit downstream problems when you end up with somebody trying to do something that wasn't expressly included in (unintelligible).

Bernard Lo: And actually regulation, I wouldn't use the term regulation (unintelligible) creating a best practice for scientists so that they could have a broader scope of (unintelligible).

Henry Greely: Right.

David Magnus: In (unintelligible) you're (unintelligible) and the approach you're talking about here is actually (unintelligible).

Henry Greely: So I've got just three different issues out here on the table are there any other issues we should have on the table as we think about how we might go about trying to revise or deal with IPSCs in our guidelines?

David Magnus: I'd just add that we deal with this now because right now the way things stands we basically got guidelines that can't be followed or are not (unintelligible) guidelines. So no matter what we have to change our guidelines being more realistic with the respect to IPSC (unintelligible).

Elliott Dorff: Hank, this is Elliott Dorff. I'm just wondering, does the legislation that created this commission authorize us to talk about anything other than embryonic stem cells?

Henry Greely: Well that is a question and it's been a question that's been raised before and I think the answer is it's not clear.

Elliott Dorff: I see.

Henry Greely: Our current guidelines do clearly go beyond just embryonic stem cells and this gets into the whole question of what the legal status of the guideline is. I don't think we're going to get a good clean answer to your question Elliot.

Elliott Dorff: Okay. So that we should just go on presuming that we have authority to do this?

Henry Greely: Or at least we certainly should, to the extent that we have asserted authority it shouldn't be trouble...

Man: It shouldn't be trouble...

Henry Greely: ...we shouldn't be getting in trouble for reducing our assertion of authority.

Elliott Dorff: Okay. Fair enough.

Patricia Rodriguez: Though I will just throw in that statute does refer to human embryonic stem cell research and status of authority that we have developed regulations that there is also...

Henry Greely: The guideline.

Patricia Rodriguez: ...and well, guidelines (unintelligible).

Henry Greely: Right. But they're not regulations.

Patricia Rodriguez: (Unintelligible) guidelines and there is a question of what the intentions of the statute was (unintelligible) it would it was created at a time when (unintelligible).

Henry Greely: When iPSCs didn't exist.

Patricia Rodriguez: But currently the way the statute reads they refer to human embryonic stem cell (unintelligible).

David Magnus: So this change would put us closer to what (unintelligible).

Henry Greely: Except to the extent there is a statutory provision, the one that says it's the policy of the State of California that all stem cell research shall be reviewed by SCROs and that would include iPSCs as well as hematopoietic stem cells and every other stem cell out there.

Well let me see if I can simplify matters a little bit by suggesting we take off from the immediate discussion, Elizabeth's very good point not to eliminate it but to set on a separate track an initiative to think about defining both for iPSCs and for HESCs defining better what kinds of transplantations into non-human animals are problematic and should require SCRO review.

And I'm willing to give some thought to that and take a crack at coming back with something on that for our next meeting. Elizabeth is that acceptable?

Elizabeth Blackburn: Yes it's excellent.

Henry Greely: And I will call on you for help.

Elizabeth Blackburn: Happy to help.

Henry Greely: Okay. But I think we still have now this issue of well, and now David's thrown another issue on, there is the question of our current guidelines are not very realistic with respect to iPSC, we should want them modified to some extent which and I don't think we're going to, I don't well, I shouldn't put it that way.

This fundamental difference that I now see here or potential differences between the desire to regulate only uses, sensitive uses and a desire to also regulate derivation or to regulate, provide guidance about derivation and consents for derivation. And that covers I think which way you want to go in

terms of how much oversight and what sorts of things SCROs should have oversight over.

David Magnus: If you don't think anything, that's what the current guidelines and regulations have is that we have to have the same level of oversight and requirement of informed consent that we do for anything involving embryos and gametes because we actually now currently have it. What that means is right now people are not following, most of them are not following the guidelines.

I think that's (unintelligible) so I think (unintelligible) too much (unintelligible) CIRM's changes actually don't go in that direction but the (unintelligible) CIRM should have it . So I think Bernie's ideas are very interesting but it would require a change in the direction of CIRM is not (unintelligible) as well as a change in the direction (unintelligible).

Bernard Lo: Now again I want to clarify (unintelligible) the article I've asked Heidi to pass around does not call for more regulation (unintelligible) poses the dilemma that how are you going to get to the downstream sensitive research that you want to oversee which now does not fall neatly within sort of regulatory framework that's been developed for either IRBs, IACUCs, (unintelligible).

My concern is that from a regulatory point of view it's not (unintelligible) but you want to be able to get some way inn to capture those downstream research projects which now I think fall through the cracks, because they are outside the purview of any of the regulatory (unintelligible).

David Magnus: I think that's interesting and important but I don't, but I guess for now (unintelligible) we're trying to construct the guidelines. I don't think that we're in a position right now to resolve that problem. I think that is an interesting issue but, and again when we figure out how to convert that into

some regulation from CIRM and for our guidelines (unintelligible) I think that makes sense.

Radhika Rao: But David doesn't Hank's proposal the Proposed Amendment Number 1 sort of go towards Bernie's (unintelligible) worries more than yours does?

David Magnus: No. So as long as they're anonymized it creates sort of the exact same problem. This (unintelligible) for that reason (unintelligible). Different ways of thinking about the same (unintelligible)

Radhika Rao: Well but one of them at least Hank's proposal keeps the committee from, keeps the sort of regulation over induced pluripotent stem cells, research as opposed to completely carving it out. So I mean if concerns arose you could then say well, you know, you could kind of (unintelligible) or something to the derivation of...

David Magnus: (Unintelligible) definition of covered cell lines but my (unintelligible) still have regulation or guidelines that (unintelligible) iPSCs because there are (unintelligible) very pluripotent cells (unintelligible) cell line. What it would do is say that we wouldn't (unintelligible) be having oversight of derivation which this also does in cases where it's anonymized which is most of this research. So they both have the same effect.

Henry Greely: In other words anonymized almost by definition it's not raising the new consent type of issues that you're worried about where...

David Magnus: And it does, that's the point.

Bernard Lo: Yeah, I mean the ethical concerns even if you've anonymized (unintelligible)...

David Magnus: Right.

Bernard Lo: (Unintelligible) substantial portion of the donors would have objected (unintelligible)...

David Magnus: Right.

Bernard Lo: ...to certain types of (unintelligible) research is (unintelligible).

David Magnus: Right.

Bernard Lo: But this comes across (unintelligible) this isn't (unintelligible) but any pluripotent line that you want to do (unintelligible).

Henry Greely: So what, well I guess I drafted it and what Radhika has referred to is my proposal is really just an effort as best I could to copy in our context to adopt for our context the CIRM position. And the CIRM position does say if you're creating iPSCs from basically anonymized cell line the derivation is, does not fall within the SCRO's jurisdiction.

Presumably the transplantation into animals still would under CIRM regulations right. You're just saying that derivation doesn't, not that that (unintelligible) okay.

Bernard Lo: So there is a prohibition on (unintelligible) to non-human (unintelligible) non-human...

Man: Right.

David Magnus: Right. And again all of that's done easily by (unintelligible) pluripotent cells.

Bernard Lo: Can I make another suggestion, since we're actually not writing regulations, we're writing guidelines (unintelligible) right, I mean and in part what we're struggling with is trying to make it, make something look like a regulation (unintelligible) guidelines. The actual ethical issues (unintelligible) example, right I mean saying that we don't think there are a whole lot of ethical problems (unintelligible) just getting consent, just getting materials from (unintelligible) derived from (unintelligible) and that's something (unintelligible).

You, however, think that there's (unintelligible) certain type of downstream research that might be (unintelligible) in ways that other stem cell research (unintelligible) and that we need to be careful about looking carefully at that research both from the point of view of investigator and the point of view of the institution where it's going. So we want to sort of say, start don't be handicapped by just derivation is based in science for by regulating (unintelligible) much more sensitive materials that (unintelligible).

So then if you go with guidelines (unintelligible) regulations (unintelligible) it may be simpler. How that gets implemented I'm not sure but...

Henry Greely: Part of this has implications for the actual workload of the SCRO's. So the SCRO's will be looking at this to figure out what do we have to review, right. What do we have to have people submit? What has to be reviewed in the full committee, what can be reviewed in administratively or expedited reviews (unintelligible)...

Bernard Lo: So any outside notification just have to say it's for (unintelligible) doing derivation.

Henry Greely: And in that context if I can ask you to think about your derivation and since that issues in that context what would you say?

Bernard Lo: What we would do is say thanks for letting me know, by the way (unintelligible) sample consent form (unintelligible) if you want to do downstream research in these places, or anyone else wants to do downstream research later (unintelligible) that we're going to have to require (unintelligible). Therefore, you're actually getting consent from (unintelligible) you ought to think about adding some (unintelligible) then you get consent for all of the conceivable (unintelligible).

Henry Greely: So implicit in this is the idea that it would be an ethical requirement to do the downstream consent, to have gotten consent for that sensitive issue either at an initial or a subsequent (unintelligible).

Man: (Unintelligible).

David Magnus: (Unintelligible) the guidance (unintelligible) in years or in place of (unintelligible) in animals all those sorts of things, but it's now essentially become (unintelligible) put in the consent form and it should be for all (unintelligible) so therefore with all tissue experiments (unintelligible) required by CIRM and our guidelines (unintelligible) that makes sense. I think IRBs are moving in that direction between (unintelligible) language and requiring investigators to do that.

So I think actually that's being done, that's my sense. But so I don't understand why we have to require that or if we did that could be a separate thing. That we recommend going forward that for all (unintelligible) they should include these elements but there's a difference between that and saying

going (unintelligible) between new uses you have to have met that standard when a lot of the cells were procured 30 years ago and the standards were very different. A lot of the fibroblasts are things that have been secured over a long period of time.

Henry Greely: And that's where we got into this.

David Magnus: Right.

Henry Greely: But we've moved, but you're proposal has moved us, well good for appropriate reasons beyond that but that still remains an action forcing issue. We've got people using these older fibroblasts, etcetera, lines, it's allowed under CIRM's regs, it is not currently allowed under our guidelines. There is no good reason for us not to parallel CIRM on that.

The question is do we want to go farther. I sense that we agree that there is a fairly broad agreement that the actual sensitive issues with respect to iPSCs are narrower than they are with HESCs and that would be a good thing for our guidelines to reflect that whether the scenario is to be only regulating uses or actually thinking about the initial consent, etc., remains a dispute here.

So we got to do something about these fibroblast lines. This older stuff that people are using currently in violation of our guidelines.

David Magnus: (Unintelligible) even though most of these cell lines are anonymized, if they weren't than under these then they have to go through the whole process.

Man: Yeah.

David Magnus: (Unintelligible) some reason there was (unintelligible) then that's, that would actually mean that they would go through some SCRO review (unintelligible) (unintelligible).

Henry Greely: Or if you were getting, if you wanted to get specific, if you wanted to get some from identifiable patients because you've got one patient with a rare disorder and you want to get (unintelligible) IPSC from that patient.

Man: Right.

Henry Greely: Then it can't fall within this CIRM...

David Magnus: And yeah, the other (unintelligible) things are moving the payment issue, which I know CIRM's looking at and (unintelligible) the payment issue for donors. Right now there are restrictions and that would mean that I think you don't want (unintelligible) I don't think we want to say gee, if you pay \$25 for the cells you can't use it but the ways that things written now you can. That may change with CIRM but it hasn't yet.

And again, the more we parallel the more we (unintelligible) problem especially when we lag behind any changes that they make but I'm recommending would avoid that kind of problem as well. You don't have to worry about (unintelligible) determined that the fibroblasts will determine but I think we should, it's just like any other tissue experiment, and if an IRB says it's okay to (unintelligible) the tissue then there's nothing special about the fact that they're going to be using (unintelligible) for pluripotent cells from making any other tissue experiment that are already (unintelligible).

Radhika Rao: But I think to confirm you're talking about David about (unintelligible). I think what Bernie's talking about is going forward and new research, or you

know, new procurement. So yes it's true that those cells that have already been procured cannot require them maybe to satisfy the same standards. But I think Bernie's asking couldn't we require for new procurement that if they're already going to satisfy some standards but they then satisfy these standards and that way they will be assured of being able to be...

David Magnus: As long as they're anonymized they don't (unintelligible) have to under the current regulations. So I think what we should say is going forward everyone should try their (unintelligible) full set of standards and my sense is that the (unintelligible) with the new standards (unintelligible) the template language that has been developed for accommodating the CIRM guidelines should be used for all (unintelligible) and my sense is that that's, so why wouldn't you have. So I don't think we need to have a guideline or regulation saying you shouldn't do a good job, the IRBs should make sure that they do a good job (unintelligible).

Radhika Rao: But my conclusion is that that may not be happening and unless you require the IRBs to do it they're not going to do it because they'll see it as burdensome. Why should we add all (unintelligible) traditional...?

David Magnus: Because it's trivially easy to drop in a paragraph or two that as a template language or you'd have to develop SCROs for your stem cell research that you've already gotten, but it's really easy since you've already got the template language and just drop that in as a requirement for every SCRO. It's trivial.

Radhika Rao: But we're talking about different (unintelligible) right, the IRB versus the SCRO. And the IRB may not be aware of what the SCRO is doing.

David Martin: And probably won't be.

David Magnus: I would be shocked if there isn't some pretty good coordination between the SCROs and IRBs and (unintelligible).

David Martin: The IRB can do anything it wants to. It can ignore it, it can forget about it, it can do any of those things. If the investigator doesn't put it into the consent form and nobody on the IRB that are reviewing that particular protocol that day remembers it (unintelligible).

David Magnus: So let's have something (unintelligible) for all tissue procurement they should meet the highest informed consent standards including, and say what those are in going forward. I'm happy with that, but it's different from having to make sure that we comply with all the different aspects of the things, of the regulations that were initially intended to apply to embryo procurement including things about payment and all the other things. I'd still rather have some separate carve outs that says going forward people should try and meet the highest standards for informed consent and (unintelligible) are included.

Henry Greely: So I'm coming clearly (unintelligible).

David Magnus: (Unintelligible).

Henry Greely: I'm coming to a conclusion that doesn't make me happy. I think that whatever we end up doing we're not going to be able to approve any language about a broad approach today. Because we have some substantive disagreement, we also have some new things we'd have, even if we all agreed with David's approach right now we'd have some new things to write in like the clinical trials, like the non-human primate embryos, etc.

In addition to that we've got this unresolved difference about the consent side and the derivation side, I actually don't think that's unresolvable but it's I don't think it's resolvable in the next hour in the meeting of the committee as a whole. Which makes me think we need to, that we can make progress on this but we're not going to have language that we're going to be able to vote on and approve today.

Part of what makes me unhappy with that is that continues our situation of having our guidelines with respect to the older somatic cell line be different from CIRM's and be different in a way that's making them widely I suspect ignored.

There is a potential very cludgy and inelegant solution that I don't like even saying but which would be to approve and send forward into the public comment process for creation as an amendment to the guidelines the narrow proposal which tracks CIRM while at the same time working on something that would effectively make that moot, really hesitate to suggest that we start a process thinking that if all goes well we'll come up with a newer version that will moot it out, maybe even before this process is done with the first one.

But I don't, I really don't like the idea of going another three months or four months or whatever before even a vote approving something that basically aligns us with CIRM with respect to the existing fibroblast line problem. So those are my, this is my unhappiness, help me.

Bernard Lo: And (unintelligible) let me see if this helps. I mean we have several problems which ultimately we all want to solve in harmonious ways but we've identified some more pressing problems and that is not wanting to put barriers in front of people who are using existing biological materials (unintelligible).

Man: Correct.

Bernard Lo: So again going back to this notion since we're only (unintelligible) guidelines and not regulations is it not enough to sort of pass a motion signaling that we want to allow IPSC researchers to derive IPSC lines using the existing materials that has either been de-identified or where derivation of IPS lines has been anonymized (unintelligible). The signal that we want to carry (unintelligible) and also say we're also going to work on issues that deal with downstream research (unintelligible) we're not ready to deal with that but in the meanwhile we don't want you to stop doing derivation if you have a pressing need to go ahead and do that (unintelligible).

Henry Greely: So we could effectively signal to people the committee believes that, the committee intends to go at least as far as the CIRM regulations, regulatory change has gone. We're not adopting that right now, because we think there may be some, we may be able to go beyond that and (unintelligible) improve further. And make more efficient the regulatory structure, the our guidance structure with respect to that, but we want you to know that we think this should be okay, this being the current CIRM position should be okay while we work on something that could go farther.

Bernard Lo: And we could also say we want to be consistent with the common (unintelligible) by OHRP with regard to use of de-identified materials.

David Magnus: So I don't like this approach for several reasons. Okay. The important one is so under California law as you pointed out there are no shadow regulations officially, there's no such thing as guidelines (unintelligible) the guidelines are just (unintelligible) and regulations under administrative law.

Bernard Lo: No. Those are guidelines that (unintelligible).

David Magnus: The only reason why that's true is because we haven't finished the last step of the administrative law process. You could've done this at CIRM instead of (unintelligible) regulations if at the end of the public comment period you hadn't submitted the regulation developed for the last step in the administrative process, that's the only thing we haven't done.

Bernard Lo: So I think we need a legal clarification here, what is the legal force of guidelines that have not been formally submitted as regulations? I mean are they (unintelligible).

Man: OAR.

Man: Yeah.

Patricia Rodriguez: Yeah the administrative procedure act (unintelligible) says that guidelines that have not been formally approved by the Office of Administrative Law have no authority (unintelligible).

David Magnus: Correct. But I'm just saying that the reason why we've got that is not because of something different between guidelines and regulations because in the steps that we've gone through we just stopped at the last step in the normal process. CIRM could also have done that (unintelligible).

Bernard Lo: Well but we, CIRM didn't because we wanted them to be binding that force of law and by not going through these steps all these guidelines that we've been working on are purely advisory.

David Magnus: Right. And...

Henry Greely: And it's also the case that our statutes authorize the department to issue guidelines despite the fact that the administrative statutes say guidelines don't exist as a category, our particular statute said the department shall issue guidelines.

Woman: Right.

Henry Greely: Which throws another bit of random noise into what all this means.

Bernard Lo: And so my only suggestion...

Henry Greely: But that also means we wouldn't issue regulations as we weren't authorized to issue regulations.

David Magnus: But the reason why I brought this up, I like that as an approach, I like the fact that they're not binding it's a reality is that things change and (unintelligible) all that (unintelligible) good. But I think this is pushing it to a different level (unintelligible) well we've got these guidelines that have gone through the public comment process and they're issued and it's still going to remain saying exactly what they say but we're just going to pass something, it hasn't gone through the normal process that these other guidelines have gone through, we're just going to say...

Henry Greely: We're telling you that we have changed our mind and we're in the process of revising the guidelines to reflect that.

David Magnus: And so if I'm a SCRO and I'm trying to figure out what to do whether your guidelines say this, and I sort of said something very loose about well we kind of want this other stuff (unintelligible) your guidelines say.

Henry Greely: Which of course is what our SCRO has said.

David Magnus: Right but we because it's not very practical we've (unintelligible) to do more (unintelligible).

Henry Greely: Because with the excuse that the, this committee indicated at its last meeting that we were going to revise it.

David Magnus: I think it would be better if we actually had an actual proposal on the table and I (unintelligible).

((Crosstalk))

Radhika Rao: Well why can't the actual proposal be the one to make look like CIRM (unintelligible) and say, and maybe we're going to go further.

Man: (Unintelligible) proposal language today.

David Magnus: So and I got, the change that we said about having to capture the other bits things it's trivially easy, we just change covered cell lines to pluripotent cell lines in three places in addition to the (unintelligible) changes that I've made and then we've got everything downstream covered that we want covered and we don't have to review the issues about payment and oversight for the actual derivation (unintelligible).

I think that would be a better way to handle it for now. If you want to make further restrictions at some point got a way of handling the kind of broader issue that Bernie's got the most guidance for them to do that. But if we do this it will restrict us to those downstream uses and we've already got elaborated in our guidelines.

Radhika Rao: But it feels, okay here's where (unintelligible) so (unintelligible) something that's sort of tentative in the sense that we're saying we're doing this for now but we're not still where we're headed seems to me it's better to do something to say, instead of kind of carving out more, taking away more of our regulatory authority and then asking for it back it's better to keep it and then give it away.

It looks, somehow it seems to me to send a mixed signal if you say, if you adopted your proposal and then later came in and said oh no, we don't actually think that that is correct and we want to bring some of this back in. It seems as if that would be sending a signal that would be different from saying, you know, I don't know.

Henry Greely: Bernie?

Bernard Lo: I think we need to clarify what the problem is we're trying to solve today because we're not going to solve all of this today. The one thing we feel we want to do today to just sort of give the right signal (unintelligible) if that is to reassure researchers that they can use existing biological materials that have been anonymized (unintelligible) consent (unintelligible) stem cells and then for new IPS (unintelligible) pluripotent then that's all we need to do, we can go ahead and start (unintelligible).

That's the problem we're trying to solve and I would suggest that (unintelligible) not try and wrap it all together because there's no way we can do that.

Henry Greely: And I think that's the difference between David and Bernie and I suspect more than Bernie, David you think we can wrap it up today but I actually agree with Bernie. I don't think we can.

I think there's enough uncertainty and unsettledness, I think people are going to want to look at specific language and think about it and see some specific language that might reflect even if it's just in the form of an exportation might reflect Bernie's concerns about the consent which I don't think, which I am confident we will not be able to draft at this table today in a way that will give everyone here as well as those listening on this phone confidence that this is really what we want. People are going to need to see (unintelligible).

I understand and appreciate and part of me strongly agrees with where you're coming from on this but I don't think it's going to fly.

David Magnus: You guys I (unintelligible) we just, I don't see this (unintelligible) I just don't see that pluripotent issue rising to the level that requires other oversight when we already have (unintelligible).

Henry Greely: Well but David that may well be where we end up. I actually think that 90% plus of what you've written is going to be the position that we end up adopting at our next meeting. I just don't think we're going to adopt it at this meeting. It's my sense of the group, I could be wrong, but I don't think I am.

Bernard Lo: So if you want we can call a vote.

Woman: (Unintelligible).

Henry Greely: Okay. So I guess we need a motion on the floor to adopt David's language.

David Magnus: So the language in those two plus the additional changes of covered pluripotent in section three and then section nine.

Henry Greely: And this is with respect to the document that says it starts I propose that we handle IPSC research...

Radhika Rao: And which section three is (unintelligible)?

David Magnus: Those are the changes for what counts as (unintelligible) to make sure that it's pluripotent cells and not covered cells placement in animals and the no (unintelligible) primates and the (unintelligible). So this is so it'll be pluripotent for all of the applications and then (unintelligible) derivation will be (unintelligible).

Henry Greely: So the motion is that we adopt that as an amendment to the guidelines. We still have to have public comment but I think we can get a second first, and then any committee discussion and any public discussion and then the committee would vote on that motion, assuming there is a second. Is there a second?

Man: Second.

Henry Greely: Okay. Committee discussion of the motion?

Are there public comments on the motion which again is to adopt what those two site modifications David's proposal with respect to IPSC? Yes.

Ellen Auriti: I just want to say I'm supportive of David's motion (unintelligible) but I think that it really (unintelligible) about the researchers not being able to comply with the guidelines (unintelligible) as they are written now. I think your

motion (unintelligible) other issues that were brought up (unintelligible) at a later point in a separate action (unintelligible).

Henry Greely: Yes.

Lily Mirels: (Unintelligible).

Henry Greely: Actually could you come closer so we get you? I think Ellen's voice may have been carrying enough, she's had legal training.

Lily Mirels: Sorry, I just want to, I want to say I support the idea of what you're doing but well I just wanted to point out covered research is defined as research that derives a covered stem cell lines or uses covered cells. So if the new wording is going to (unintelligible).

Man: Right.

Lily Mirels: (Unintelligible) pluripotent cells aren't from the (unintelligible) will bring in I guess (unintelligible).

David Magnus: So, sorry I'm not sure I followed that.

Henry Greely: She wants to get IPS cells out of covered...

Man: Yeah I'm trying to get...

Lily Mirels: (Unintelligible).

Man: Oh correct.

Lily Mirels: Right. So that's (unintelligible) covered research introducing cells for differentiated, (unintelligible) research.

Man: Right. I see what you're saying. So we should just take out the word covered there.

Henry Greely: Right. Thank you. Geoff? Dr. Lomax?

Geoffrey Lomax: I think I tracked the conversation or the ones that have concerns about the downstream uses doesn't address the animal questions so it may not be helpful but I just did want to point out that in our revisions we did have a carve out that said if you were intending to transplant IPS derived cells in human there had to be explicit (unintelligible) covered later under the transplant patient standard, which gives you some assurance that materials of substandard consent quality (unintelligible) end up in the most exploited (unintelligible).

David Magnus: Sounds like a good way to handle it is that in the downstream (unintelligible) direction we want to go.

Henry Greely: As a discussion, anybody on the phone? Public or committee members? I think the motion is right for a vote. The motion is to adopt David's proposal as modified on the floor by him. All those in favor say Aye.

Man: Aye.

Man: Was that an aye (unintelligible)? Okay who said I on the phone?

Gregory Stock: Greg Stock.

Henry Greely: All those opposed say nay.

Man: Nay.

Man: Nay.

Woman: Nay.

Henry Greely: All those abstaining? That would be me.

Elliott Dorff: And me as well, Elliot.

Henry Greely: The motion fails. Although you know, it is my personal hope and expectation that most of the body of that will come back and be adopted at our next meeting.

Man: (Unintelligible).

Radhika Rao: I actually wanted to vote (unintelligible) but just didn't feel there yet, so.

Henry Greely: So that leaves us with the question...

Radhika Rao: (Unintelligible) I'm still worried about (unintelligible).

Henry Greely: Yeah. I think people need to sleep on it. Need to see language and feel more comfortable that they know what's going on and I also think we need something, even if it's just in the nature of an exportation something that captures Bernie's concern before you, before this will be a consensus. I think there's a consensus here to be reached and I think it's a really good idea to try to limit our jurisdiction over IPSCs to only the things that we worry, that we should be worried about.

David Magnus: But as of now, right now we have very strict requirements in our guidelines.

Henry Greely: That's right. So that leads us to where we go from here and I guess we've got two possibilities that have been mentioned, one was my (unintelligible) possibility of adopting the existing language as a proposed amendment to the guidelines and the recognition that it's our hope that it will be overtaken by events which isn't a situation I like. And the other is I think it was Bernie's idea of a, of adopting a motion saying we approve of the at a minimum the CIRM revisions with respect to derivation of IPSCs. We think that's appropriate and we are working on amendments to guidelines that will incorporate at least that and may go beyond it. Is that a fair...?

Bernard Lo: Right. Except I wouldn't reference CIRM guidelines, I'd just say we support the use of existing biological derivation of IPS lines provided either (unintelligible) or they have been anonymized.

Henry Greely: So why would you avoid mentioning the elephant?

Bernard Lo: Well because...

Henry Greely: You've described the elephant why not...

Bernard Lo: Because that never actually goes back to look at what the CIRM guidelines actually say.

Henry Greely: But the SCROs have to look at the CIRM guidelines anyway.

David Magnus: I agree with Bernie, I think (unintelligible).

((Crosstalk))

David Magnus: We're sympathetic to IPSC research so we should kind of ignore the guidelines.

Henry Greely: Well you know, (unintelligible) was saying more than that.

Man: We are working to revise...

Man: We intend to modify (unintelligible).

Man: (Unintelligible).

Henry Greely: We are in agreement with modifying this (unintelligible) perhaps farther and we are working to do that. Somebody want to put that in the words of a motion?

Elliot Dorff: So move.

Henry Greely: I think our reporters may need a little bit more. Bernie you want to say it again?

Bernard Lo: I move that the committee go on record as supporting the use of human biological materials with derivation of new stem cell lines (unintelligible) you have specific consent from donors (unintelligible) derivation (unintelligible) to the derivation of IPS guidelines, all with the original consent, or three, you have de-identified biological materials in hand (unintelligible) materials as per the OHRP guidance for de-identifying material.

Henry Greely: And that's both with respect to new derivation of IPSC and the definition of acceptably derived.

Bernard Lo: Yes.

Henry Greely: But anybody want to tinker with the motion? Is there a second to the motion?

Man: Second.

Man: Second.

Henry Greely: Discussion first from the committee then from the public. I see no, I hear no, I see no hands up at the table. Anybody on the phone want to say anything?

Public members, public people? Those of the public who are present either telephonically or corporeally? In that case I think we vote. All those in favor of the motion say Aye.

Man/Woman: Aye.

Henry Greely: And those of you on the phone I heard Elliot, I heard Elizabeth, I heard Greg is that right?

Gregory Stock: Yes.

Henry Greely: Sam are you there?

Samuel Cheshier: Yes. I agree. Aye.

Henry Greely: Okay. So I think it's unanimous just again just for the sake of quorum are there any nays?

Man/Woman: No.

Henry Greely: Are there any abstentions?

Motion passes unanimously.

I'm a conflict avoider by nature and I hate unresolved disagreements particularly amongst people I like of good will, I don't think we're very far apart here guys, and I think we can pull it together and have something that we'll all be happy with. David it may well be in (unintelligible) exactly the same words that you proposed, but I don't think people weren't ready today. It may happen at the next meeting or it may be some modification of it, but I think we're going to do something that we will all be happy with and that will in addition, not inconsequentially, help advance stem cell research in California.

So thank you for your work, thank everybody for their work. Do we have any, I think that ends our agenda, do we have any new business? Dr. Lo?

Bernard Lo: This is actually old business. If there's you know, apparent inconsistency with regard to payment to donors of IPS funds between CIRM and DPH and that comes from the language of Prop 71...

Henry Greely: Right.

Bernard Lo: ...which talks about donors in general not just oocyte or embryo donors. There is no such a restriction in (unintelligible) legislation on authorizing this

(unintelligible) there's nothing now that (unintelligible) non-CIRM funded researcher from paying donors of IPS of somatic cell (unintelligible) line (unintelligible).

Radhika Rao: And the legislation applies only to oocytes (unintelligible) but there is...

((Crosstalk))

Radhika Rao: ...(unintelligible) legislation which of course applies (unintelligible).

((Crosstalk))

David Magnus: (Unintelligible) I was again one of the people I wanted to make the changes that I proposed but then it was a process problem, so as of right now the change (unintelligible) made even though (unintelligible) we can't (unintelligible) we now prohibit (unintelligible) in our guidelines I speak currently with (unintelligible).

Radhika Rao: For somatic cell donors.

David Magnus: Somatic cells, we now prohibit that as well.

Henry Greely: And how do you think this consistency is it that there should be an inconsistency?.

Bernard Lo: And obviously it's going to be virtually impossible to amend Prop 71, we're stuck with that.

David Magnus: But we don't have to have that restriction to (unintelligible) guidelines take that part out but leave for now anyway and realistically because for all these

existing cell lines there's small payments that were being made, so again in practice (unintelligible) that part of our guidelines that are going to be resolved are not going to be followed. We prohibit, it's not, nobody's actually going to (unintelligible) get documentation (unintelligible).

Henry Greely: So let me just push you Bernie if it's your view that our guidelines should be consistent with CIRM's and prohibit payment?

Bernard Lo: I think CIRM...

Man: You think that CIRM...

Bernard Lo: (Unintelligible) It's a Prop 71 anomaly I can't, I obviously can't speak for CIRM but my (unintelligible) is we will work out what they call a work around so that if CIRM doesn't pay for the derivation but someone else derives it and they make a token payment (unintelligible) IRB (unintelligible) we'll allow the line....

Henry Greely: So what are the things in preparing the proposed guideline amendments for next time. You need to keep in mind that they, this issue of payment which David's proposed language would have handled and which I hope whatever language we come up with will continue to handle to make it a realistic (unintelligible) set of provisions. Dr. Lomax?

Geoffrey Lomax: One thought there, terrific conversation, I really commend the direction of the committee on this one, but I do want to, I don't think it's just the definition where you capture it, if you're intent is to address the somatic cell issue also in section six under acceptable research materials. Section six there's the criteria 6.E. has been derived under the following conditions and you'd have

to take a look I think at that section as well if the intent was to
(unintelligible)...

Henry Greely: Yeah, you're right.

Geoffrey Lomax: ...that section. So I just wanted to draw your attention to that and I think Dr.
Lo is exactly right, I referred to that in my opening remarks that we were, felt
constrained by our lack of clear interpretation of Prop 71 at this time.
However, you all don't have that constraint so.

Henry Greely: Either lack of clear interpretation or unhappy resolution of an apparent
interpretation.

Geoffrey Lomax: But that's the specific sticking points that we would...

Henry Greely: Got it. Thank you. Do we have any new business committee? Well I would
note just while in danger of wrenching my shoulder by patting myself on the
back that it's 15 minutes till 2:00 and we may actually be able to finish early.
Dr. Lo?

Bernard Lo: Well I would like to suggest (unintelligible) the committee we do pat you on
the back and we also once again thank CHORI and (unintelligible)...

Woman: Yeah.

Bernard Lo: ...wonderful. I can't say how much I enjoy coming to a meeting where I don't
have to drive and don't have to (unintelligible).

Henry Greely: Although, you know, we should check with the committee staff. If Bernie were to, if he were to seek travel expense reimbursement there, what is the reimbursement rate for bicycles?

((Crosstalk))

Henry Greely: Okay. Well the chair will very gladly second most of Dr. Lo's remarks of gratitude and will also gratefully entertain a motion to adjourn. Is there such a motion?

Man: So moved.

Man: Is there a second?

Woman: Second.

Henry Greely: All in favor stand up, hang up and have a good weekend.

Man: Okay you too. Bye-bye.

Man: Bye.

END