BEFORE THE

INDEPENDENT CITIZENS' OVERSIGHT COMMITTEE
TO THE
CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE
ORGANIZED PURSUANT TO THE
CALIFORNIA STEM CELL RESEARCH AND CURES ACT

REGULAR MEETING

LOCATION: SHERATON SAN DIEGO
1380 HARBOR ISLAND DRIVE
MARINA TOWER, HARBOR ISLAND I
SAN DIEGO, CALIFORNIA

DATE: TUESDAY, JUNE 22, 2010
10 A.M.

REPORTER: BETH C. DRAIN, CSR
CSR. NO. 7152

BRS FILE NO.: 85131

I N D E X

SAN DIEGO, CALIFORNIA; TUESDAY, JUNE 22, 2010

10:24 AM

CHAIRMAN KLEIN: I'D LIKE TO BEGIN THE MEETING. WE CAN BEGIN THE MEETING WITHOUT A QUORUM. WE HAVE A NUMBER OF MEMBERS OF THE BOARD THAT ARE IN PROCESS OF TRANSITING TO SAN DIEGO. THEY DON'T YET KNOW WHAT A BEAUTIFUL DAY THEY'RE MISSING HERE. I THINK THIS IS GOD'S COUNTRY.

WELCOME EVERYONE TO BEAUTIFUL SAN DIEGO. WE HAVE AN IMPORTANT SET OF GRANT APPLICATIONS TO CONSIDER FOR STEM CELL TRANSPLANTATION IMMUNOLOGY AWARDS AND A NUMBER OF OTHER VERY IMPORTANT ITEMS. THE FIRST PART OF OUR AGENDA, HOWEVER, WILL BE AN EXECUTIVE SESSION IN PART OF OUR REVIEW PROCESS FOR BOARD LEADERSHIP AND WILL CONTINUE ON TO THE AGENCY LEADERSHIP. SO IT IS SPECIFICALLY SET AS A TIME FOR THE SCIENTIFIC STAFF AND FOR THE SUPPORT PERSONNEL TO BE HERE AT 2 O'CLOCK TO BEGIN THAT PART OF THE SESSION.

AT THAT POINT THE EXECUTIVE SESSION OF THE BOARD AND THE BOARD'S LUNCH SHOULD HAVE BEEN CONCLUDED HOPEFULLY WITH TIME FOR A SHORT BREAK OF SIGNIFICANCE. SO IF YOU HAVE ANY CALLS, THAT WOULD BE A GOOD TIME PERIOD POTENTIALLY BETWEEN ONE AND

TWO TO MAKE THOSE CALLS.

I'D LIKE TO, BEFORE I HAVE OUR FORMAL CALL TO ORDER, JUST TO THANK JENNIFER PRYNE, AMY CHUNG, NICK WARSHAW, AND MELISSA KING FOR THE NORMAL HEROISM IN BRINGING THIS ALL TOGETHER WITH THE LOGISTICS, AND INTERN SIENNA LOFTON AND DANIELLE WOLFSON, WHO HAVE PARTICIPATED IN BRINGING US TO THIS MEETING. LYNN HARWELL, ALTHOUGH AWAY ON PREGNANCY LEAVE, PARTICIPATED WITH AMY CHUNG IN ARRANGING OUR SPOTLIGHT ON ALS FOR TOMORROW MORNING. WE HAVE A NUMBER OF DISTINGUISHED SPEAKERS TOMORROW MORNING. I WOULD HOPE THAT WE'D HAVE A GREAT ATTENDANCE. AND THAT TIME, MELISSA, WILL BE?

MS. KING: 8:30.

CHAIRMAN KLEIN: 8:30 A.M. IN THIS BUILDING, IN THIS BUILDING. IT SHOULD BE AN EXTRAORDINARILY POIGNANT SPOTLIGHT ON ALS. SO PLEASE TRY AND ARRANGE YOUR SCHEDULES TO BE HERE FOR THAT PORTION OF THE PROGRAM.

WE WILL HAVE BOARD MEMBERS JOINING US BY PHONE BOTH DAYS FOR OUR QUORUM. WE HAVE SOME LAST-MINUTE CHANGES THAT HAVE AFFECTED CALENDARS OF BOARD MEMBERS WHO WERE PLANNING TO BE HERE. SO WE WILL HAVE OUR QUORUM SUPPLEMENTED BY MEMBERS JOINING BY PHONE WITH SOME ADDITIONAL MEMBERS JOINING TO

MAKE SURE WE MAINTAIN OUR QUORUM.

I'D LIKE TO, THEREFORE, BEGIN THE FORMAL MEETING BY ASKING MELISSA KING TO LEAD US IN THE FLAG SALUTE AND THE ROLL CALL.

MS. KING: PLEASE STAND IF YOU ARE ABLE.

(THE PLEDGE OF ALLEGIANCE.)

MS. KING: DONALD DAFOE FOR RICARDO AZZIZ. ROBERT PRICE FOR ROBERT BIRGENEAU.

DR. PRICE: HERE.

MS. KING: FLOYD BLOOM.

DR. BLOOM: HERE.

MS. KING: DAVID BRENNER.

DR. BRENNER: HERE.

MS. KING: WILLIAM BRODY.

DR. BRODY: HERE.

MS. KING: SUSAN BRYANT.

DR. BRYANT: HERE.

MS. KING: MARCY FEIT. MICHAEL FRIEDMAN. LEEZA GIBBONS. MICHAEL GOLDBERG. SAM HAWGOOD. BOB KLEIN.

CHAIRMAN KLEIN: HERE.

MS. KING: SHERRY LANSING. GERALD LEVEY.

DR. LEVEY: HERE.

MS. KING: TED LOVE. ED PENHOET. PHIL PIZZO. CLAIRE POMEROY. FRANCISCO PRIETO.

DR. PRIETO: HERE.

MS. KING: CARMEN PULIAFITO. ROBERT QUINT. JOHN REED.

DR. REED: HERE.

MS. KING: DUANE ROTH.

MR. ROTH: HERE.

MS. KING: JOAN SAMUELSON. DAVID SERRANO-SEWELL. JEFF SHEEHY. JONATHAN SHESTACK. OSWALD STEWARD.

DR. STEWARD: HERE.

MS. KING: ART TORRES.

MR. TORRES: HERE.

MS. KING: WE DON'T YET HAVE A QUORUM, BUT WE HAVE SEVERAL MEMBERS THAT WILL BE JOINING US AS SOON AS THEIR FLIGHTS ARE IN.

CHAIRMAN KLEIN: AND I KNOW THAT JOAN SAMUELSON CAME IN LAST NIGHT. SHE'S WORKING ON FUNCTIONALLY BEING ABLE TO JOIN US IN PERSON. IT'S A GREAT EFFORT FOR JOAN, WHICH WE APPRECIATE SINCERELY.

THE CHAIR'S REPORT AND THE PRESIDENT'S REPORT WILL BE DEFERRED UNTIL A LATER PORTION OF THE MEETING. WE'RE NOT GOING TO CONSIDER THE MINUTES UNTIL WE HAVE A QUORUM. AND SO ITEM 7 IS OUR FIRST ITEM OF THE DAY. IT'S DISCUSSION OF PERSONNEL,

EVALUATION OF THE BOARD CHAIR UNDER GOVERNMENT CODE SECTION 11126(A), HEALTH AND SAFETY CODE SECTION 125290.30(D)(3)(D).

AND, COUNSEL, WOULD YOU LIKE TO ADD ANY SPECIFIC REFERENCES?

MR. HARRISON: NO.

CHAIRMAN KLEIN: ALL RIGHT. WE ARE SET THEN TO ADJOURN. AND THOSE MEMBERS OF THE PUBLIC THAT ARE HERE, FOR YOUR PREDICTABILITY OF SCHEDULE, I'D COUNT ON 2 O'CLOCK. AND MY UNDERSTANDING IS WE WILL NOT HAVE STAFF HERE, SO WE COULDN'T EVEN, IF WE WERE ABLE TO COMPLETE EARLY, COMMENCE THAT PORTION PRIOR TO; IS THAT CORRECT?

MS. KING: IF WE HAD A QUORUM AND WE WERE BACK IN OPEN SESSION BEFORE 2 P.M., THERE ARE SOME ITEMS ON THE AGENDA THAT WE COULD DO WITHOUT ADDITIONAL STAFF MEMBERS HERE.

CHAIRMAN KLEIN: RIGHT. OKAY. SO WITH THAT SAID, FOR EFFICIENCY WE'LL TRY AND SEE IF WE CAN POTENTIALLY RECONVENE SLIGHTLY BEFORE TWO, MAYBE 1:30, DEPENDS ON THE EXECUTIVE SESSION, AND THE BOARD HAS MANAGEMENT OF THAT TIME. SO WE'LL SEE HOW THAT WORKS OUT. BUT BE AVAILABLE IN CASE WE ARE RECONVENING EARLY, BUT THANK YOU VERY MUCH. AND WE'RE GOING TO ADJOURN NOW TO EXECUTIVE SESSION. IN

WHICH ROOM? WE'RE GOING TO FOLLOW MELISSA KING.

(THE BOARD THEN CONVENED IN EXECUTIVE SESSION AT 10:31 A.M., NOT REPORTED NOR HEREIN TRANSCRIBED. THE BOARD THEN RECONVENED IN OPEN SESSION AT 2 P.M. AS FOLLOWS:)

CHAIRMAN KLEIN: ALL RIGHT. IT IS 2 O'CLOCK AND WE ARE GOING TO BEGIN THE MEETING RECONVENING AT THIS POINT. PREVIOUSLY WE CALLED ROLL AND WENT THROUGH THE PLEDGE OF ALLEGIANCE, BUT WE WILL BEGIN TODAY WITH AN UPDATE TO THE ROLL CALL BY MELISSA KING, AND THEN WE'RE GOING TO MOVE DIRECTLY INTO THE DISCUSSION OF THE STEM CELL TRANSPLANTATION IMMUNOLOGY RESEARCH AWARDS.

WE HAVE A QUORUM PRESENT, AND WE WANT TO MAKE CERTAIN THAT WE OPTIMIZE THE TIME WE HAVE WITH THAT QUORUM FOCUSED ON THESE AWARDS, PARTICULARLY GIVEN THAT WE HAVE A NUMBER OF EXTRAORDINARY PETITIONS WHICH NEED TO BE CONSIDERED ALONG WITH THE AWARDS THEMSELVES. WE'LL BEGIN THAT SESSION IMMEDIATELY AFTER THE ROLL CALL, AGAIN, WITH A GENERAL DISCUSSION OF THE CRITERIA FOR THIS SESSION AND GENERAL CONSIDERATIONS OF THE GRANT ROUND. MELISSA KING.

MS. KING: DONALD DAFOE FOR RICARDO AZZIZ.

DR. DAFOE: HERE.

MS. KING: ROBERT PRICE FOR ROBERT BIRGENEAU.

DR. PRICE: HERE.

MS. KING: FLOYD BLOOM.

DR. BLOOM: HERE.

MS. KING: DAVID BRENNER.

DR. BRENNER: HERE.

MS. KING: WILLIAM BRODY.

DR. BRODY: HERE.

MS. KING: SUSAN BRYANT.

DR. BRYANT: HERE.

MS. KING: MARCY FEIT. MICHAEL FRIEDMAN. DR. FRIEDMAN IS JOINING US BY THE PHONE. I DON'T KNOW IF WE'RE UP YET, BUT WE WILL BE SHORTLY.

LEEZA GIBBONS. MICHAEL GOLDBERG. SAM HAWGOOD. BOB KLEIN.

CHAIRMAN KLEIN: HERE.

MS. KING: SHERRY LANSING. GERALD LEVEY.

DR. LEVEY: HERE.

MS. KING: TED LOVE. ED PENHOET. PHIL PIZZO. CLAIRE POMEROY. FRANCISCO PRIETO.

DR. PRIETO: HERE.

MS. KING: CARMEN PULIAFITO. ROBERT QUINT.

DR. QUINT: PRESENT.

MS. KING: JOHN REED.
DR. REED: HERE.
MS. KING: DUANE ROTH.
MR. ROTH: HERE.
MS. KING: JOAN SAMUELSON.
MS. SAMUELSON: PRESENT.
MS. KING: DAVID SERRANO-SEWELL.
MR. SERRANO-SEWELL: HERE.
MS. KING: JEFF SHEEHY.
MR. SHEEHY: HERE.
MS. KING: JON SHESTACK. OSWALD STEWARD.
DR. STEWARD: HERE.
MS. KING: ART TORRES.
MR. TORRES: HERE.
MS. KING: AND I KNOW THAT DR. PULIAFITO IS HERE. HE JUST HASN'T YET RETURNED TO THE MEETING. WHEN HE JOINS US AND DR. FRIEDMAN JOINS US, WE WILL HAVE A QUORUM.
CHAIRMAN KLEIN: ALL RIGHT. IF STAFF COULD ASK DR. PULIAFITO TO JOIN US. JENNA, MAYBE YOU OR -- IT LOOKS LIKE AMY IS GOING TO TRY AND ACCOMPLISH THAT TASK.
SO, DR. TROUNSON, COULD WE HAVE A SCIENTIFIC OVERVIEW. AND I APPRECIATE VERY MUCH THE FACT THAT YOU HAVE THIS TREMENDOUS PRESIDENT'S

REPORT WITH A LOT OF GREAT SCIENCE IN IT AND A REPORT ON THE ISSCR WHICH YOU'RE GOING TO PRESENT IMMEDIATELY AFTER WE GET THROUGH THE GRANTS PROCESS ITSELF.

DR. TROUNSON: DR. TALIB WILL LEAD THIS, CHAIR. IF IT HELPS EVERYONE ON THE BOARD, SOHEL TALIB IS AN IMMUNOLOGIST AND A VERY GOOD YOUNG IMMUNOLOGIST WHO'S JOINED US SOME TIME AGO NOW, A YEAR OR MORE AGO, BUT HE IS VERY WELL VERSED IN THIS AREA.

DR. TALIB: THANK YOU, DR. TROUNSON. MR. CHAIRMAN, MEMBERS OF THE BOARD, I'D LIKE TO PRESENT FOR YOUR CONSIDERATION RECOMMENDATIONS FROM THE GRANTS WORKING GROUP ON TRANSPLANTATION IMMUNOLOGY AWARDS. IT IS ITEM 8 IN YOUR FOLDERS.

SO IN TERMS OF THE SCIENTIFIC RATIONALE FOR THESE AWARDS, IT'S BEEN RECOGNIZED THAT ONE OF THE GREATEST HURDLES IN TRANSLATING STEM CELL RESEARCH TO THE CLINIC IS THE ISSUE OF HISTOCOMPATIBILITY AND GRAFT REJECTION BY THE RECIPIENT'S IMMUNE SYSTEM. MOREOVER, MANY PATIENTS FOR WHICH THESE THERAPIES ARE BEING TARGETED WILL NOT TOLERATE MULTIDRUG IMMUNOSUPPRESSION. THEREFORE, THERE IS A NEED FOR NEW CELL-BASED IMMUNE TOLERANCE STRATEGIES.

SO THE PURPOSE OF THESE AWARDS IS TO SUPPORT TRANSFORMATIVE RESEARCH WHICH WILL LEAD TO THE DEVELOPMENT OF IMMUNE TOLERANCE OF PLURIPOTENT STEM CELL DERIVATIVES AND POTENTIAL CORRECTION OF AUTOIMMUNITY.

SPECIFICALLY THESE AWARDS WILL SUPPORT FOLLOWING AREAS OF IMMUNOLOGY RESEARCH. THAT IS, REPROGRAMMING OF THE HOST IMMUNE SYSTEM, ENGINEERING THE STEM CELL DERIVATIVES FOR THE ENGRAFTMENT IN ALLOGENEIC HOST, DEVELOPMENT OF PREDICTIVE ANIMAL MODELS OF HUMAN IMMUNE RESPONSE TO STEM CELL TRANSPLANTATION, TOLERANCE INDUCTION VIA MIXED CHIMERISM, ASSESSMENT OF THE DENDRITIC CELLS AND TOLEROGENIC T-CELLS TO INDUCE TOLERANCE INDUCTION, AND THE DEVELOPMENT OF ASSAYS FOR MONITORING OR PREDICTING GRAFT ACCEPTANCE OR REJECTION.

IN TERMS OF THE PROGRAM FEATURES WHICH YOU APPROVED EARLIER THIS YEAR INCLUDES UP TO 20 AWARDS. THESE ARE THREE-YEAR AWARDS WITH A DIRECT PROJECT COST OF UP TO 300,000 PER YEAR AND ESTIMATED TOTAL COST FOR THESE RFA'S, $30 MILLION.

IN TERMS OF THE REVIEW CRITERIA WHICH WAS USED BY THE GRANTS WORKING GROUP TO REVIEW THESE APPLICATIONS, INCLUDES INNOVATION AND IMPACT. BECAUSE WE ARE INTERESTED IN TRANSFORMATIVE

RESEARCH, THE GRANTS WORKING GROUP WERE INSTRUCTED TO PAY ATTENTION TO THOSE APPLICATIONS WHICH HAVE INNOVATION AND HAVE A STRONG SCIENTIFIC RATIONALE.

FEASIBILITY AND EXPERIMENTAL DESIGN WAS ALSO AN IMPORTANT REVIEW CRITERIA. AND SINCE THESE AWARDS IN THIS PARTICULAR AREA IS MULTIDISCIPLINARY, WE SPECIFICALLY ASKED THAT THE APPLICANTS SHOULD HAVE EXPERTISE BOTH IN TRANSPLANTATION IMMUNOLOGY AND STEM CELL RESEARCH.

THIS SLIDE SHOWS THE SCORE DISTRIBUTION. FOR THESE AWARDS WE RECEIVED TOTAL OF 44 APPLICATIONS, AND ALL 44 APPLICATIONS WERE REVIEWED BY THE GRANTS WORKING GROUP. AND I SHOULD POINT OUT AT THE BEGINNING OF THE GRANTS WORKING GROUP, WE MADE THEM AWARE OF THE FACT THAT HISTORICALLY A SCORE OF 75 OR ABOVE IS CONSIDERED -- IS THE AREA WHICH IS APPROVED OR WHICH IS RECOMMENDED FOR FUNDING.

IN THIS CASE INITIALLY WHEN THESE GRANTS WERE REVIEWED BY THE GRANTS WORKING GROUP, THEY PUT APPLICATIONS WHICH RECEIVED A SCORE OF 72 OR ABOVE IN THE TIER I CATEGORY; THAT IS, THE CATEGORY RECOMMENDED FOR FUNDING. AND THOSE APPLICATIONS WHICH RECEIVED A SCORE OF LESS THAN 59 WERE PLACED IN A CATEGORY OF TIER III; THAT IS, NOT RECOMMENDED

FOR FUNDING. AND IN BETWEEN WERE THE APPLICATIONS WERE THOSE IN TIER II. SO INITIALLY THEY APPROVED TEN APPLICATIONS ON THE BASIS OF SCIENTIFIC MERIT.

FOLLOWING PROGRAMMATIC DISCUSSION, FIVE OTHER ADDITIONAL APPLICATIONS WERE MOVED TO TIER I. SO AT THE END OF THE GRANTS WORKING GROUP RECOMMENDATION, TOTAL OF 15 APPLICATIONS WERE RECOMMENDED BY THE GRANTS WORKING GROUP FOR FUNDING.

AND THIS IS SUMMARIZING THIS TABLE. ON LEFT-HAND SIDE IS THE GRANTS WORKING GROUP RECOMMENDATION; THAT IS, TOTAL NUMBER OF APPROVED -- TOTAL NUMBER OF APPLICATIONS THAT WERE RECOMMENDED FOR FUNDING IS 15 WITH A TOTAL ESTIMATED COST FOR THESE AWARDS TO ABOUT $20.3 MILLION. ON THE RIGHT-HAND SIDE COLUMN IS THE ICOC TARGET WHICH YOU APPROVED EARLIER THIS YEAR; THAT IS, A TOTAL OF 20 AWARDS WITH AN ESTIMATED COST UP TO $30 MILLION.

IN THE LAST SLIDE I HAVE SUMMARIZED AREAS WHICH WERE OF IMMUNE TOLERANCE STRATEGIES WHICH ARE INVOLVED IN THESE APPLICATIONS OR WHICH ARE PROPOSED IN THESE 15 APPLICATIONS WHICH WERE RECOMMENDED FOR FUNDING. AS YOU SEE HERE, THESE STRATEGIES WHICH ARE PROPOSED AND WHICH WERE ASKED IN OUR APPLICATION THAT WE HAVE APPLICATIONS WHICH ARE COVERING REGULATORY T-CELLS AS AN IMMUNE STRATEGY TO IMMUNE

TOLERANCE, THYMIC EPITHELIAL CELLS, INNATE IMMUNITY AND NK CELLS, IN UTERO TRANSPLANTATION, AND IMMUNE MONITORING AND OTHERS. SO THERE'S A BROAD DISTRIBUTION IN TERMS OF THE AREAS OR THE CATEGORIES WHICH ARE COVERED IN THESE 15 APPLICATIONS WHICH ARE RECOMMENDED FOR FUNDING BY THE GRANTS WORKING GROUP.

MR. CHAIRMAN, THIS CONCLUDES MY PRESENTATION, AND I'LL BE HAPPY TO TAKE ANY QUESTIONS YOU HAVE.

CHAIRMAN KLEIN: THANK YOU VERY MUCH. JEFF SHEEHY, WOULD YOU LIKE TO SAY SOMETHING AT THIS POINT?

MR. SHEEHY: WELL, JUST A COUPLE OF GENERAL COMMENTS. I WANTED TO COMMEND STAFF FOR THE EXTRAORDINARY INDIVIDUALS THAT THEY BROUGHT IN TO REVIEW THESE APPLICATIONS. I THINK, WHAT, YOU HAD ALMOST A THIRD OF THE GROUP FROM OUT OF COUNTRY THIS TIME. AND THEY WERE REALLY EXCEPTIONAL IMMUNOLOGISTS, AND IT WAS AN EXCEPTIONAL ROUND.

I DO THINK, THOUGH, THAT ONE UNIQUE FEATURE OF THIS ROUND THAT WE SHOULD CONSIDER AS WE LOOK AT THESE GRANTS AND WE LISTEN TO THE APPEALS THAT HAVE BEEN BROUGHT FORWARD IS TO RECOGNIZE THAT, AT LEAST WHEN I TALK TO REVIEWERS, THIS IS ONE OF THE -- THE FIRST TIME, IF NOT THE FIRST TIME, THAT

STEM CELL SCIENTISTS HAVE BEEN THRUST INTO PARTNERSHIP WITH TRANSPLANT IMMUNOLOGISTS AND BASICALLY FORCED TO COME UP WITH A PROJECT TOGETHER, I MEAN IN SUCH A SYSTEMATIC WAY.

THESE TEAMS, PUTTING THESE TEAMS TOGETHER AND GETTING THEM TO WORK TOGETHER ON SOME OF THESE PROBLEMS, I THINK, HAS SIGNIFICANT VALUE IN AND OF ITSELF, TO HAVE SOME OF THE WORLD'S LEADING STEM CELL SCIENTISTS BEING PART OF A TEAM WITH SOME OF THE WORLD'S LEADING IMMUNOLOGISTS. JUST EVEN IF SOME OF THESE THINGS AREN'T QUITE HITTING THE MARK, I THINK IT'S EXTRAORDINARY THAT WE'VE GOT THESE TEAMS TOGETHER. AND ANYTHING THAT WE CAN ENCOURAGE THEM TO DO TO KEEP ON WORKING TOGETHER I THINK WILL HELP US OVERCOME. THIS IS PROBABLY ONE OF THE TWO OR THREE MOST SIGNIFICANT ROADBLOCKS TO CELL THERAPY IS IMMUNE REJECTION.

SO I THINK THAT'S -- I THINK IF YOU WANT GO STRAIGHT TO THE GRANTS OR WHATEVER YOU WANT TO DO NEXT, BOB, THAT'S MY GENERAL. I THOUGHT THEY WERE WELL REVIEWED. I THINK THAT THERE'S A NUMBER OF MINORITY REPORTS, SO THERE WERE SOME DIFFERENCES OF OPINION. AND THERE WAS A LIVELY PROGRAMMATIC REVIEW. AND I HOPE FOLKS WILL USE THEIR JUDGMENT AND LOOK AT THE MINORITY REPORTS AND LOOK AT THE

BALANCE. WE DON'T COVER EVERY ASPECT OF THE IMMUNE SYSTEM THROUGH THE STRATEGIES WE HAVE UP THERE. SO THERE MAY BE OTHER ASPECTS OF THE IMMUNE SYSTEM THAT WERE NOT INCLUDED FOR WHICH THERE WAS A MINORITY REPORT. AND I JUST THINK WE SHOULD APPROACH THIS WITH A DUE DEGREE OF DELIBERATION.

THIS ROUND WILL NOT BE REPEATED AT LEAST IN THE NEAR TERM, SO I THINK IT'S IMPORTANT FOR US TO CONSIDER THAT AND WE ARE UNDER BUDGET.

CHAIRMAN KLEIN: ADDITIONAL COMMENTS FROM THE BOARD?

DR. REED: I HAD A QUESTION. IT MAY BE FOR CIRM STAFF. THAT IS, TO PUT THESE APPLICATIONS, THIS NUMBER AND THE AMOUNT OF FUNDING INTO PERSPECTIVE, DO WE HAVE DATA ON NIH FUNDING FOR SIMILAR TYPES OF RESEARCH? ROUGHLY WHAT IS THE NIH FUNDING ANNUALLY ACROSS THE COUNTRY FOR WORK ON IMMUNE TOLERANCE THAT WOULD BE DIRECTLY APPLICABLE TO OUR GOALS HERE?

DR. TALIB: IN TERMS OF IMMUNE TOLERANCE, THERE IS IMMUNE TOLERANCE NETWORK WHICH IS FUNDING RESEARCH IN IMMUNE TOLERANCE AREA, BUT THOSE ARE MOSTLY WORKING ON SOLID ORGAN TRANSPLANT OR IN ADULT STEM CELL AREA, BUT NOT SPECIFICALLY DEALING WITH THE ISSUES RELATED TO EMBRYONIC STEM CELL-DERIVED

CELLS AND TISSUES.

DR. REED: THANK YOU.

CHAIRMAN KLEIN: SO I THINK THE POINT OF THIS COMMENT IS THAT THIS PORTFOLIO IS OUR ONLY PORTFOLIO IN THE IMMUNOLOGY AREA FOCUSED ON STEM CELL AND CELLULAR TRANSPLANTS. IF WE ARE GOING TO MAKE A CONTRIBUTION HERE, THERE'S NOT A LOT OF REDUNDANCY IN THE NATIONAL FUNDING SYSTEM. THIS IS A UNIQUE CONTRIBUTION OF GREAT IMPORTANCE TO OUR ENTIRE PORTFOLIO, AND I'D LIKE TO SEE US WHERE THERE'S REAL QUALITY SCIENCE, EVEN IF IT'S HIGH RISK AND HIGH REWARD, THAT WE TAKE A VERY CLOSE LOOK AT THOSE OPPORTUNITIES BECAUSE WE WON'T SEE THIS ROUND AGAIN FOR QUITE A WHILE.

I'D LIKE TO KNOW DOWN THROUGH SCORE NO. 64 WHAT THE HIGH, LOW, AND MEDIAN AND STANDARD DEVIATIONS ARE IF I COULD. IF OTHER MEMBERS WANT ADDITIONAL -- THE INFORMATION ON THE ADDITIONAL SCORES, CERTAINLY WE WILL DO THAT, BUT IF WE COULD HAVE THOSE FOR THE BOARD, THAT WOULD BE HELPFUL.

DR. SAMBRANO: IF I CAN JUST PROVIDE A LITTLE ORIENTATION ON THIS SPREADSHEET. THIS SCORE IS WHAT YOU ALL TYPICALLY KNOW AS THE AVERAGE SCORE THAT WE'VE TYPICALLY PRESENTED BEFORE. IN ADDITION, THERE ARE COLUMNS THAT ARE SHOWING THE STANDARD

DEVIATION, THE MEDIAN, THE LOWEST, AND THEN THE HIGHEST SCORE GIVEN BY THE INDIVIDUALS FOR THAT PARTICULAR APPLICATION.

ALSO, YOU SHOULD NOTE THAT THEY ARE RANKED BY THE SCORE, WHICH IS THE AVERAGE. IF YOU RANK THEM BY MEDIAN, FOR EXAMPLE, ALL THOSE IN TIER I REMAIN IN TIER I.

DR. REED: ANOTHER QUESTION. THE LENGTH OF TIME OF THE FUNDING IS HOW MANY YEARS?

DR. OLSON: THREE.

DR. TROUNSON: IF I COULD JUST ADD INFORMATION TO JOHN'S QUESTION, IN 2009 THERE WAS 230 MILLION FUNDED IN TRANSPLANTATION RIGHT ACROSS THE BOARD. AND THERE WAS 586 IN AUTOIMMUNE DISEASE. THEY'RE CLOSELY RELATED.

DR. REED: THANK YOU.

CHAIRMAN KLEIN: ADDITIONAL QUESTIONS BY THE BOARD? AND WOULD THE BOARD LIKE TO HAVE THE PRESENTATIONS ON THE EXTRAORDINARY PETITIONS AS WE'VE DONE IT BEFORE AFTER OUR EXECUTIVE SESSION SO WE CAN FOCUS ON THOSE THE BOARD IS INTERESTED IN, OR WOULD THE BOARD LIKE ANY PRESENTATIONS ON EXTRAORDINARY PETITIONS BEFORE WE GO INTO EXECUTIVE SESSION? WHAT IS THE PLEASURE OF THE BOARD? IS THE EXISTING PROTOCOL ACCEPTABLE? ALL RIGHT.

ARE THERE SPECIFIC COMMENTS BY THE PUBLIC BEFORE WE GO INTO EXECUTIVE SESSION? APPEARS THE PUBLIC WOULD LIKE TO RESERVE THEIR COMMENTS UNTIL AFTER EXECUTIVE SESSION. SO, DR. TROUNSON, UNLESS THE SCIENTIFIC STAFF HAS ANY COMMENTS, I THINK WE WILL GO INTO --

MR. SHEEHY: COULD WE GET A PRINTOUT OF THIS ACTUALLY TO TAKE IN EXECUTIVE SESSION, HAVING THE MEAN AND THE HIGH AND THE LOW AND THE STANDARD DEVIATION, OR WE COULD HAVE A COPY AVAILABLE?

CHAIRMAN KLEIN: ARE WE GOING TO DO EXECUTIVE SESSION IN WHICH ROOM?

MS. KING: THE SAME ROOM YOU WERE BEFORE.

MR. SHEEHY: THAT'S HELPFUL. THAT WILL IMPACT WHICH ONES I MAY WANT TO HAVE ADDITIONAL INFORMATION ON.

MS. KING: WE CAN. IT WILL TAKE US FIVE MINUTES, MAYBE TEN MINUTES TO GET THE COPIES MADE AND BROUGHT TO THE ROOM.

MR. TORRES: WHAT'S THE PROBLEM WITH HAVING THE EXECUTIVE SESSION HERE? INSTEAD OF US MOVING, OTHER PEOPLE MOVE.

MS. KING: SENATOR TORRES RAISES A FINE POINT. MEMBERS OF THE PUBLIC AND STAFF THAT ARE NOT STAYING IN THE CLOSED SESSION TO LEAVE THIS ROOM AND

ENJOY THE SUNSHINE.

DR. TROUNSON: YOU NEED SMALLER TABLES, I THINK, CHAIR, IF YOU'RE GOING TO HAVE IT IN THE SAME KIND OF FORMAT THAT YOU USED, SO WE WOULD HAVE TO REARRANGE THE ROOM.

DR. PRIETO: IF WE STAY HERE, WE CAN LEAVE THIS UP ON THE SCREEN.

CHAIRMAN KLEIN: I THINK THAT THE PRESIDENT'S POINT IS THAT IN ISOLATING GROUPS TO LOOK AT SUBJECT APPLICATIONS AND SEGREGATING OUT CONFLICTS --

DR. TROUNSON: WE CAN GET THIS PRINTED. IT TAKES ABOUT SIX MINUTES. OTHERWISE THE CONFLICTS OF INTEREST ISSUES JUST BECOME DIFFICULT.

MR. SHEEHY: THE CONFLICTS OF INTEREST ISSUES ARE RESOLVED BY HAVING PEOPLE LEAVE THE ROOM, AND WE HAVE MORE SPACE TO SPREAD OUT IN HERE THAN WE DO IN A SMALL ROOM WHERE WE'RE ON TOP OF EACH OTHER. AND WE CAN PUT ONE IN THAT CORNER OF THE SEATS, ONE IN THAT CORNER OF THE SEATS.

CHAIRMAN KLEIN: SO LET'S DO THIS. IT APPEARS THAT WHILE WE CAN GET IT PRINTED OUT, THAT THE SENSE OF THE BOARD IS THAT THEY WOULD LIKE TO TRY AND MEET IN THIS ROOM. SO I'D ASK THE PUBLIC AND THE SCIENTIFIC STAFF THAT IS NOT INVOLVED IN THE

EXECUTIVE SESSION TO GIVE US THE BENEFIT OF THIS ROOM.

NOW, I THINK MOST, IF NOT ALL, THE SCIENTIFIC STAFF IS ACTUALLY GOING TO BE INVOLVED IN THE REVIEW, SO THERE'S A LIMITED NUMBER OF PEOPLE THAT WILL NEED TO LEAVE THE ROOM IN THE FIRST PLACE. BUT OUR WONDERFUL, DEDICATED TRANSCRIPTIONIST WILL NEED TO ADJOURN.

MR. HARRISON, COULD YOU CITE THE SECTION FOR EXECUTIVE SESSION FOR INTELLECTUAL PROPERTY AND PEER REVIEW PROPRIETARY DISCUSSIONS.

MR. HARRISON: YES. THE BOARD WILL BE CONVENING IN CLOSED SESSION TO DISCUSS CONFIDENTIAL INTELLECTUAL PROPERTY OR OTHER WORK PRODUCT AND PREPUBLICATION AND CONFIDENTIAL SCIENTIFIC RESEARCH OR DATA RELATING TO APPLICATIONS FOR CIRM STEM CELL TRANSPLANTATION IMMUNOLOGY RESEARCH AWARDS PURSUANT TO HEALTH AND SAFETY CODE SECTION 125290.30(D)(3)(B) AND (C).

CHAIRMAN KLEIN: WHOSE COMPUTER IS THIS CHART ON?

MS. KING: MINE. I'M STAYING.

CHAIRMAN KLEIN: SO WITH THAT, WE WILL GO INTO EXECUTIVE SESSION. AND WE THANK THE MEMBERS OF THE STAFF AND PUBLIC WHO CANNOT ATTEND THE EXECUTIVE

SESSION FOR THEIR COOPERATION.

(THE BOARD WHEN RECONVENED IN CLOSED SESSION AT 02:21 PM, NOT REPORTED NOR HEREIN TRANSCRIBED. FOLLOWING THE CLOSED SESSION, THE BOARD THEN RECONVENED IN OPEN SESSION AND WERE HEARD AS FOLLOWS:)

CHAIRMAN KLEIN: OKAY. THANK YOU. WE'RE JUST WAITING FOR THE PUBLIC TO REJOIN US HERE. IF STAFF WOULD GO OUT TO THE VERY FRONT, AND I KNOW THERE'S A COUPLE MEMBERS OF THE PUBLIC MIGHT BE IN THE GENERAL LOUNGE.

DR. FRIEDMAN: BOB, WE'RE ALL SET HERE AT THE CITY OF HOPE. THANK YOU.

CHAIRMAN KLEIN: THANK YOU SO MUCH.

DISCUSSING LOGISTICS HERE, GIVEN THAT WE DON'T HAVE AN EXCEEDINGLY LARGE NUMBER, I WOULD SUGGEST WE GO THROUGH THESE ONE AT A TIME. JEFF, IS THAT ACCEPTABLE TO YOU?

MR. SHEEHY: SOUNDS LIKE A GREAT IDEA.

CHAIRMAN KLEIN: ALL RIGHT. WHILE WE'RE WAITING FOR THE PUBLIC, WE'RE BACK IN PUBLIC SESSION, DR. REED.

DR. REED: I HAD TWO, ONE QUESTION AND ONE COMMENT. QUESTION IS WITH RESPECT TO THE PETITIONS THAT WERE FILED, WERE ALL OF THE PETITIONS THAT

WE'RE CONSIDERING RECEIVED BY THE TIME OF THE CIRM DEADLINE? I BELIEVE THERE WAS A DEADLINE POSTED.

DR. TROUNSON: NO, THEY WEREN'T, JOHN. GIL WILL GIVE YOU THE DETAILS, BUT THERE WERE ONLY THREE OF THEM RECEIVED IN TIME.

DR. REED: WHY ARE WE CONSIDERING THE OTHERS THEN?

CHAIRMAN KLEIN: I'D LIKE TO SAY THAT, DR. REED, WHILE WE REALLY WANT TO ENCOURAGE PEOPLE VERY STRONGLY TO RESPOND TO THE DEADLINE, WE HAD A VERY UNIQUE SITUATION HERE THAT WE HAD ISSCR IN THE WEEK BEFORE THIS MEETING. AND THE SCIENTISTS THAT WE WERE WANTING TO GET -- MANY OF THE SCIENTISTS WHO HAD GRANTS BEFORE US WERE AT ISSCR WITH OBLIGATIONS THERE AT THE IDENTICAL TIME, SO WE KIND OF HAD EXTRAORDINARY PRESSURES ON INDIVIDUALS.

I WOULD ALSO SAY SECONDARILY THAT BECAUSE THIS IS A NONRECURRING ROUND AND BECAUSE IT'S A UNIQUE ROUND IN IMMUNOLOGY, THERE'S A DIFFERENT IMPACT OF FORCING SOMEONE OUT OF THIS ROUND FOR A LACK OF A PETITION IN TIME THAN THERE WOULD BE A RECURRING ROUND.

DR. REED: JUST FOR CLARIFICATION, SO WHAT WAS THE DURATION FROM THE TIME THAT SCORES WERE RECEIVED AND CANDIDATES WERE GIVEN SOME INKLING OR

SOME SORT OF INDICATION THAT PERHAPS THEY WERE NOT GOING TO BE WITHIN THE FUNDABLE RANGE AND THE TIME THAT THEY WERE THEN ASKED TO PROVIDE SOME SORT OF A RESPONSE IF THEY CHOSE TO?

DR. TROUNSON: SO GIL OR REBECCA, CAN YOU GIVE US THAT TIMEFRAME?

DR. SAMBRANO: RIGHT. SO BETWEEN THE TIME THAT THEY WERE SENT THEIR SUMMARY, WHICH WAS BY E-MAIL, WAS APPROXIMATELY EIGHT TO TEN DAYS BEFORE THE DEADLINE.

DR. REED: OKAY. I THINK GIVEN THE RELATIVELY SHORT AMOUNT OF TIME, THAT IT WOULD MAKE SENSE TO CONSIDER ALL THE RESPONSES, BUT THANKS FOR THAT CLARIFICATION.

CHAIRMAN KLEIN: MR. SHEEHY.

MR. SHEEHY: WELL, I JUST WANT TO MAKE A POINT ABOUT THE EXTRAORDINARY PETITIONS. WHETHER THEY'RE RECEIVED ON TIME OR LATE, WE DON'T HAVE TO CONSIDER THEM AT ALL. AND WHETHER THEY'RE RECEIVED ON TIME OR LATE, THEY HAVE TO BE GIVEN TO US BECAUSE WE'RE A PUBLIC BODY. UNDER BAGLEY-KEENE PEOPLE CAN COME AND GIVE US LETTERS AND THEY CAN COME AND SPEAK TO US WHEN MATTERS ARE UNDER CONSIDERATION.

IT WOULD BE HELPFUL, I THINK, AS A BODY IF WE STARTED THINKING ABOUT ONLY LOOKING AT

EXTRAORDINARY PETITIONS, WHETHER LATE OR EARLY, THAT HAD SOME VALUE AND DIDN'T PAY ANY ATTENTION TO THOSE THAT DIDN'T HAVE ANY MERIT OR VALUE. THAT SHOULD BE THE METRIC WE USE. OTHERWISE WE'RE INVITING EVERYBODY TO GIVE US EXTRAORDINARY PETITIONS, WHICH IS BASICALLY WHAT HAPPENED THIS TIME. WE CANNOT MECHANICALLY CONTROL IT GIVEN THE PUBLIC MEETING LAWS WHICH GOVERN THE OPERATION OF THIS BOARD. THE WAY WE CONTROL IT IS TO EXERCISE DISCIPLINE. AND IF SOMEONE GIVES AN EXTRAORDINARY PETITION AND NO ONE ON THIS BOARD FINDS ANY MERIT IN IT, WE JUST DON'T DISCUSS IT. WE DON'T BRING IT UP. AND PERHAPS THAT COULD BE PERSUASIVE TO FOLKS THAT THIS IS NOT NECESSARILY ALWAYS THE BEST USE OF THEIR TIME.

CHAIRMAN KLEIN: SO I THINK AS WE GO THROUGH HERE TODAY, WE MAY FIND THAT NOT ALL OF THESE ARE PICKED UP FOR DISCUSSION BY MEMBERS OR THE SCIENTIFIC STAFF. AND THAT WILL HOPEFULLY SEND A STRONG MESSAGE THAT THERE'S GOT TO BE SOME STRONG MERIT.

IT APPEARS THAT WE HAVE A COUPLE OF MEMBERS OF THE PUBLIC THAT WERE HERE BEFORE THAT ARE STILL NOT BACK.

MS. KING: WE'RE WORKING ON GETTING THEM BACK. WE KNOW WHERE THEY WERE SITTING A WHILE AGO

AND WE'RE HONING IN ON THEM.

CHAIRMAN KLEIN: OKAY. SO I'D LIKE TO START WITH NO. 1743. AND IF WE COULD HAVE THE SCIENTIFIC STAFF ADDRESS 1743, PLEASE.

MR. SHEEHY: BOB, THE WAY WE TYPICALLY HAVE DONE THIS IS IF YOU WANT TO MOVE DOWN THE LIST, YOU SHOULD ASK FOR A MOTION. IF THERE'S NO MOTION, WE DON'T NEED TO TALK ABOUT IT. LET'S EITHER HAVE A MOTION -- IF THERE'S NO MOTION TO MOVE IT INTO FUNDING --

CHAIRMAN KLEIN: POINT WELL TAKEN. THIS WAS AN ITEM BROUGHT UP BEFORE. IS THERE A MOTION FOR FUNDING OF 1743?

DR. REED: QUESTION BEFORE WE DO THAT. WHAT ABOUT THE GRANTS THAT WERE CLEARLY RECOMMENDED FOR FUNDING?

CHAIRMAN KLEIN: WE'RE GOING TO COME BACK AFTER WE'VE MOVED GRANTS FROM THESE CATEGORIES UP, IF WE MOVE ANY OF THEM UP, AND TAKE A VOTE. WE COULD ALSO, IF YOU WOULD PREFER, IF YOU'D LIKE TO MOVE SOMETHING DOWN OUT OF THE CATEGORY, OUT OF THE PRIOR CATEGORY, OUT OF THE FUNDING, WE COULD ADDRESS THAT BEFORE WE GO TO ANYTHING IN THOSE CATEGORIES.

DR. REED: I WAS GOING TO MOVE THAT WE FUND ALL THOSE IN THE TOP TIER RANGE THAT WERE

RECOMMENDED FOR FUNDING AND WE GET THAT ESTABLISHED AND THEN MOVE INTO ANY OTHER OTHERS THAT WE WISH TO CONSIDER LATER IN THE MEETING.

CHAIRMAN KLEIN: WELL, WE WILL HAVE A MOTION LATER, MR. HARRISON, THAT WILL ADDRESS FUNDING EVERYTHING THAT IS IN THAT CATEGORY NOW AND HAS BEEN MOVED INTO THAT CATEGORY WHERE INDIVIDUALS WILL HAVE TO VOTE YEA OR NAY EXCEPT FOR THOSE FOR WHICH THEY HAVE A CONFLICT. AND SO, JOHN, I THINK WE'LL TAKE CARE OF THAT, DR. REED, AFTER WE'VE BEEN ABLE TO MOVE -- DECIDE WHETHER WE'RE MOVING ANYTHING INTO THAT CATEGORY.

MR. SHEEHY: SO I MOVE TO MOVE 1743 INTO THE FUNDING CATEGORY. THE MEDIAN IS WITHIN THE RANGE OF WHAT WE FUNDED, AND IT LOOKS LIKE AN INTERESTING APPROACH, AND IT'S A GOOD TEAM. AND IT DOESN'T -- I DON'T READ IN THE REVIEW TERRIBLE THINGS ABOUT IT. AND I THINK IT'S VERY IMPORTANT THAT WE GET THESE TEAMS WORKING. IT'S AN INCREDIBLY IMPORTANT OBSTACLE TO THE FURTHERANCE OF STEM CELL RESEARCH.

DR. BRYANT: SECONDED.

CHAIRMAN KLEIN: SECOND BY DR. BRYANT. I'D LIKE TO JUST ADD TO THAT THERE WAS QUITE A BIT OF SUPPORT AMONG THE PEER REVIEW GROUP. THERE'S

OBVIOUSLY A COUPLE OF -- THERE'S A VERY LOW SCORE WITH RECUSALS STATISTICALLY. JUST ONE SCORE THAT'S AT A 50 CAN REDUCE THE AVERAGE SCORE SIGNIFICANTLY. AND AS JEFF SAID, THE MEDIAN CLEARLY IS IN THE RANGE WE FUNDED. AND A LOT OF VERY POSITIVE THINGS WERE SAID IN THE REVIEW ABOUT THE QUALITY OF THE TEAM.

ANY ADDITIONAL COMMENTS ON THIS ONE? IS THERE ANY ADDITIONAL PUBLIC COMMENT? DR. FRIEDMAN, DO YOU HAVE ANY COMMENT?

DR. FRIEDMAN: I HAVE NO COMMENT. THANK YOU.

CHAIRMAN KLEIN: DOES YOUR PUBLIC THERE HAVE ANY COMMENT?

UNIDENTIFIED PUBLIC: I HAVE NO COMMENT.

CHAIRMAN KLEIN: THANK YOU. I THINK IF WE COULD REMIND EVERYONE ABOUT THE CONFLICTS ON THIS, PLEASE. I WANT TO REMIND PEOPLE OF THE CONFLICTS.

MS. KING: WE HAVE ACTUALLY A MORE IMPORTANT --

MR. SHEEHY: WE GENERALLY CALL THE ROLL WITHOUT CALLING THE CONFLICTS.

CHAIRMAN KLEIN: PROCEDURALLY WE WILL AVOID THOSE THAT HAVE A CONFLICT. PLEASE, I'D JUST LIKE TO REMIND YOU YOU SHOULD HAVE A LIST WITH YOU OF YOUR CONFLICTS.

MR. HARRISON: UNFORTUNATELY BECAUSE OF THE PRESENT QUORUM WE HAVE CONSTITUTED NOW, WE'RE GOING TO HAVE TO DEFER ACTION ON THIS ITEM BECAUSE WE DON'T PRESENTLY HAVE ENOUGH MEMBERS TO ADDRESS IT. SO AT 5:30, WHEN WE EXPECT DR. HAWGOOD TO ARRIVE, WE CAN RETURN TO THIS PARTICULAR ITEM.

CHAIRMAN KLEIN: FOR THE BENEFIT OF THE AUDIENCE, COULD YOU PLEASE EXPLAIN THE MATH TO THIS, PLEASE.

MR. HARRISON: IT'S A LITTLE BIT COMPLICATED, BUT YES. MEMBERS WHO ARE IN CONFLICT DON'T COUNT FOR PURPOSES OF ESTABLISHING A QUORUM. AND WHEN THE BALANCE OF MEMBERS WHO ARE PRESENT AND THOSE WHO ARE ABSENT INCLUDES A HIGH NUMBER OF THOSE WHO HAVE CONFLICTS AND A RELATIVELY LOWER NUMBER OF THOSE WITHOUT, WE CAN'T ACHIEVE A QUORUM IN ORDER TO TAKE ACTION. IN THIS PARTICULAR CASE WE'RE ONE MEMBER SHORT WITHOUT A CONFLICT IN ORDER TO TAKE ACTION.

CHAIRMAN KLEIN: AND WE EXPECT TO HAVE THAT MEMBER JOINING US.

MS. KING: IF EVERYBODY THAT'S HERE RIGHT NOW AND ON THE PHONE STAYS WITH US UNTIL DR. HAWGOOD GETS HERE, WHICH WILL HOPEFULLY BE AT 5:30, THEN WE CAN TAKE ACTION ON THIS. IF WE LOSE ANYBODY, WE

MIGHT NOT BE ABLE TO.

MR. SHEEHY: I MEAN JUST TO MAINTAIN THE QUALITY OF THE DISCOURSE AND THE CONTINUITY, COULD WE JUST LEAVE THIS OPEN BECAUSE WE'VE DONE THAT BEFORE?

MR. HARRISON: SURE.

MR. SHEEHY: AND I THINK THAT MIGHT BE A LITTLE BIT EASIER. BECAUSE THIS IS FRESH, WE'VE JUST BEEN DISCUSSING IT. AND DR. HAWGOOD, WHEN HE COMES, CAN LOOK AT THE ITEM AND REGISTER HIS VOTE IN WHATEVER WAY HE FEELS APPROPRIATE.

CHAIRMAN KLEIN: ALL RIGHT. WITHOUT OPPOSITION. WOULD YOU CALL THE ROLL OF THOSE WHO ARE NOT IN CONFLICT.

MS. KING: DONALD DAFOE.

CHAIRMAN KLEIN: YOU ARE NOT IN CONFLICT AND ARE YOU IN FAVOR OF MOVING THIS INTO THE FUNDING CATEGORY?

DR. DAFOE: YES.

MS. KING: ROBERT PRICE.

DR. PRICE: YES.

MS. KING: FLOYD BLOOM.

DR. BLOOM: YES.

MS. KING: WILLIAM BRODY.

DR. BRODY: YES.

MS. KING: SUSAN BRYANT.
DR. BRYANT: YES.
MS. KING: MICHAEL FRIEDMAN.
DR. FRIEDMAN: YES.
MS. KING: BOB KLEIN.
CHAIRMAN KLEIN: YES.
MS. KING: GERALD LEVEY.
DR. LEVEY: YES.
MS. KING: FRANCISCO PRIETO.
DR. PRIETO: YES.
MS. KING: ROBERT QUINT. DUANE ROTH.
MR. ROTH: YES.
MS. KING: JOAN SAMUELSON.
MS. SAMUELSON: YES.
MS. KING: DAVID SERRANO-SEWELL.
MR. SERRANO-SEWELL: YES.
MS. KING: JEFF SHEEHY.
MR. SHEEHY: YES.
MS. KING: OSWALD STEWARD.
DR. STEWARD: YES.
MS. KING: ART TORRES.
MR. TORRES: AYE.
MS. KING: WE WILL NEED TO COME BACK TO DR. HAWGOOD AND DR. QUINT. IF SOMEONE COULD GET DR. QUINT, THAT WOULD BE HELPFUL.

CHAIRMAN KLEIN: FOR THE RECORD, EVEN IF WE ARE IMMEDIATELY ABLE TO LOG IN DR. QUINT'S VOTE, WE'LL LEAVE THIS OPEN PENDING DR. HAWGOOD'S ARRIVAL.

ALL RIGHT. THE NEXT ITEM IS 1717. IS THERE A MOTION TO MOVE 1717 INTO FUNDING OR LEAVE IT WHERE IT IS?

DR. QUINT, ON 1743 THERE'S BEEN A MOTION BY JEFF SHEEHY, THERE'S SUPPORT BY DR. SUSAN BRYANT, THERE HAVE BEEN INDIVIDUALS WHO HAVE SPOKEN IN FAVOR, NO ONE HAS SPOKEN OPPOSED. WE'VE HAD A VOTE. THE VOTE IS OPEN. YOUR VOTE WILL NOT DETERMINE THE OUTCOME, BUT WE DO NEED IT FOR PURPOSES OF A QUORUM. QUESTION IS ARE YOU -- CAN HE ABSTAIN? HE CAN ABSTAIN.

DR. QUINT: ABSTAIN.

CHAIRMAN KLEIN: ALL RIGHT. SO 1717, IS THERE ANYONE THAT WOULD MAKE A MOTION ON THIS ITEM?

MR. SHEEHY: YES. I WOULD MOVE TO MOVE 1717 INTO THE FUNDABLE CATEGORY, BOTH ON THE BASIS OF THE MINORITY REPORT, WHICH NOTES ITS PROGRAMMATICALLY IMPORTANT, UNIQUE USE OF ETHNICALLY DIVERSE CELL LINES AND BECAUSE OF THE KEY EXPERTISE IN THE AREA OF THYMIC DEVELOPMENT, WHICH IS ALSO NOTED. AND THE ELEMENT THAT WE IDENTIFIED WITH THE MISMARKED PRELIMINARY DATA, THE MISMATCH BETWEEN THE

MARKING BETWEEN THE PRELIMINARY DATA AND THE DATA THAT WAS USED IN THE PROPOSAL, I THINK THAT THAT HAS BEEN IDENTIFIED AND RECOGNIZED THAT THAT WAS PART OF THE REASON WHY ITS SCORE WAS DIMINISHED.

CHAIRMAN KLEIN: SO TO BE CLEAR, MR. SHEEHY, MY UNDERSTANDING IS THAT IN THE INTRODUCTION TO THE GRANT, IT DESCRIBED THE CELL TYPE. WHEN IT CAME TO THE DATA CHARTS, THE TOP OF THE DATA CHART INDICATED A DIFFERENT CELL TYPE. THAT WAS, IN FACT, AN ERROR, AND THE EXTRAORDINARY PETITION IDENTIFIED, IN FACT, THE ERROR IN LABELING OF THE CHART. IS THAT A CORRECT STATEMENT?

MR. SHEEHY: YES.

CHAIRMAN KLEIN: THANK YOU. SO THERE'S A MOTION. IS THERE A SECOND? DID I HEAR A SECOND?

MR. TORRES: SECOND.

CHAIRMAN KLEIN: SECOND BY SENATOR TORRES. ADDITIONAL DISCUSSION BY THE MEMBERS?

DR. REED: QUESTION. THEN TO THE EXTENT THAT --

CHAIRMAN KLEIN: HOLD ON, DR. REED. LET'S CONFIRM THE CONFLICTS.

DR. REED: I DON'T KNOW IF I HAVE A CONFLICT ON THIS OR NOT.

MR. HARRISON: YOU DO.

CHAIRMAN KLEIN: YOU DO HAVE A CONFLICT.

DR. REED: I DO HAVE ONE. WELL, I SHALL SAY NOTHING THEN.

CHAIRMAN KLEIN: YES. MR. HARRISON, THE PROTOCOL YOU'D LIKE TO FOLLOW HERE, SINCE WE HAVEN'T OTHERWISE IDENTIFIED THE CONFLICTS, FOR PURPOSES OF THE MEMBERS KNOWING WHETHER THEY ARE IN CONFLICT AND CAN VOTE.

MR. HARRISON: MEMBERS SHOULD ALL HAVE A LIST IN FRONT OF THEY ITEMIZED WITH THE NUMBERS OF THE APPLICATIONS IN WHICH THEY HAVE A CONFLICT. SO IF MEMBERS COULD CONSULT THEIR LISTS BEFORE SPEAKING, THAT WOULD PROBABLY BE THE BEST WAY TO ADDRESS IT.

CHAIRMAN KLEIN: I'D PREFER A DOUBLE FIREWALL HERE. AND WHEN I CALL ON SOMEONE, IF THEY'D JUST HESITATE A MOMENT BEFORE THEY SPEAK SO THAT MR. HARRISON AND SCOTT TOCHER CAN BOTH CHECK THEIR CONFLICTS LIST.

MR. HARRISON: WE WILL DOUBLE-CHECK AND ADMONISH ANYONE WHO TRIES TO SPEAK.

CHAIRMAN KLEIN: SO IS THERE ANYONE ELSE WHO WOULD LIKE TO SPEAK TO 1717?

DR. TROUNSON: I CAN'T SPEAK, BUT A MEMBER OF STAFF WOULD LIKE TO.

CHAIRMAN KLEIN: ALL RIGHT. STAFF. DOCTOR, YOU'RE RECOGNIZED.

DR. COLLINS: JUST TO CLARIFY 1717, THE CONFUSION ABOUT THE CELL TYPES. REVIEWERS WERE CONCERNED THAT THE CHOICE OF CELL TYPE TO BE USED IN THE STUDIES WAS NOT OPTIMAL. AND THERE WAS ALSO -- AND THAT'S BECAUSE THAT CELL TYPE TENDS TO EITHER NOT DIFFERENTIATE OR POTENTIALLY DIFFERENTIATE INTO ASTROCYTES, WHICH IS NOT THE THERAPEUTIC EFFECT THAT THEY WERE AFTER.

AND THE OTHER CONCERN WITH THE CELLS WAS THAT THE PRELIMINARY DATA SAID THAT THEY HAD SHOWN EFFICACY WITH OLIGODENDROCYTE PRECURSOR CELLS, WHICH WOULD BE THE MORE TYPICAL CELL TYPE TO USE IN THIS DISEASE MODEL. WHAT CAME OUT IN THE DISCUSSION AND IN THE PETITION WAS THAT ACTUALLY THAT WAS NOT OLIGODENDROCYTE PRECURSOR CELLS IN THE PRELIMINARY DATA. IT WAS, INDEED, NEURAL STEM CELLS, WHICH IS WHAT WAS PROPOSED IN THE RESEARCH PLAN AND WAS A SOURCE OF A LITTLE BIT OF DISSATISFACTION TO THE REVIEWERS BECAUSE THEY FELT THAT PERHAPS OPC WAS INDEED A BETTER CELL TYPE TO USE. SO DOES THAT CLARIFY?

CHAIRMAN KLEIN: THANK YOU. BUT THERE WAS A MISLABELING OF THE DATA CHART; IS THAT CORRECT?

DR. COLLINS: YES. THE DATA WAS ACTUALLY MISLABELED. AND SO THE PROPOSAL HAS PRELIMINARY DATA WITH NEURAL STEM CELLS AND IS PROPOSING TO USE NEURAL STEM CELLS, AND THE REVIEWER CONCERN WAS THAT OLIGODENDROCYTE PRECURSOR CELLS MIGHT HAVE BEEN AN IDEAL CHOICE.

CHAIRMAN KLEIN: OKAY. IS THERE PUBLIC INPUT ON THIS ITEM?

DR. FRIEDMAN: NONE FROM CITY OF HOPE.

CHAIRMAN KLEIN: WE DO HAVE DR. LORING HERE FROM SCRIPPS WHO HAS A COMMENT.

DR. LORING: ACTUALLY I'M REALLY HERE JUST TO ANSWER QUESTIONS BECAUSE THIS IS MY GRANT. I WAS THE PI. I'M A STEM CELL RESEARCHER, AND THIS WAS AN OPPORTUNITY FOR ME TO BE ABLE TO BE FORCED, SO TO SPEAK, TO WORK WITH AN IMMUNOLOGIST. I'VE BEEN DYING TO WORK WITH AN IMMUNOLOGIST FOR YEARS. AND I FOUND A PAIR OF IMMUNOLOGISTS THAT ARE REALLY EXCEPTIONAL AND WHO ARE VERY INTERESTED IN THE PROJECT THAT WE HAVE PROPOSED.

I THINK THE MAJOR ISSUES HERE WERE THE ETHNIC DIVERSITY OR THE HLA ETHNIC DIVERSITY OF THE CELLS THAT WE ARE GOING TO PROVIDE, AND THEN THERE WAS THE MISLABELING IN THE IMMUNOLOGY SECTION, WHICH I CONFESS I DID NOT CATCH. ONE OF MY COLLEAGUES HAD

USED A FIGURE FROM ANOTHER APPLICATION. AND WE DO INDEED INTEND TO USE NEURAL STEM CELLS. ALL OF TOM LANE'S RESEARCH INDICATES THAT NEURAL STEM CELLS ARE THE APPROPRIATE CELL TYPE.

SO WITH THAT, I'M HAPPY TO ANSWER ANY OTHER QUESTIONS THAT MAY HAVE ARISEN.

CHAIRMAN KLEIN: IT'S MY UNDERSTANDING ON THIS GRANT THAT YOU'RE USING AN OUTSTANDING IMMUNOLOGIST.

DR. LORING: EXTRAORDINARY, I THINK, YEAH.

CHAIRMAN KLEIN: FROM THAT VIEWPOINT. DO YOU WANT TO COMMENT AT ALL ON THE QUALIFICATIONS OF THAT IMMUNOLOGIST?

DR. LORING: YEAH. THE TEAM IN MELBOURNE IS RICHARD BOYD AND HIS COLLEAGUE DR. TOH. AND THEY ARE, I UNDERSTAND, SOME OF THE WORLD'S BEST IN THIS THYMIC REEDUCATION SORT OF APPROACH TO ADAPTING THE IMMUNE SYSTEM TO ACCEPT EXOGENOUS CELLS.

I HAVE TALKED TO RICHARD A GREAT DEAL. JUST MET WITH HIM AT THE ISSCR MEETING. I AM ON ANOTHER PROJECT WITH RICHARD AS WELL, AN ALZHEIMER'S PROJECT. AND I'VE BEEN VERY IMPRESSED WITH THE PROGRESS THAT HE'S MADE TOWARDS THE GOALS, WHICH ARE ESSENTIALLY SIMILAR, TO MAKE THE IMMUNE SYSTEM OF THE HOST ACCEPT OTHER CELLS AS THEIR OWN. I THINK

IT'S ONE OF THE MOST PROMISING APPROACHES THAT I'VE EVER HEARD OF.

NOW, AGAIN, I'M NOT AN IMMUNOLOGIST, BUT I WAS QUITE CONVINCED BY THE DATA THAT I SAW THAT THIS WOULD BE THE KIND OF APPROACH I WANTED TO BE INVOLVED IN.

CHAIRMAN KLEIN: JEFF SHEEHY.

MR. SHEEHY: YOU HAVE A DISEASE TARGET?

DR. LORING: MS.

MR. SHEEHY: AND YOU PROPOSE TO? WHAT DO YOU PROPOSE?

DR. LORING: REMYELINATION WITH NEURAL STEM CELLS. I THOUGHT IT WAS KIND OF -- IT'S TOM LANE'S MODEL. HE'S AT UC IRVINE. HE'S THE OTHER MEMBER OF OUR TEAM. AND I THOUGHT THAT IT WAS A PARTICULARLY AMENABLE MODEL FOR TESTING OUR HLA CELL TYPES.

CHAIRMAN KLEIN: ALL RIGHT. AND I THINK THAT THERE'S VERY STRONG SUPPORT, AS I SAID, FOR THE IMMUNOLOGISTS. AND I WOULD SAY THE THYMUS IS ONE OF OUR BASIC APPROACHES TO IMMUNOLOGY, ONE OF THE KEY OPTIONS. AND THE TEAM, IN TERMS OF HAVING ACCESS TO EXPERTISE IN THE THYMUS, WAS REVIEWED VERY HIGHLY.

ANY ADDITIONAL BOARD COMMENT ON THIS? I BELIEVE THAT WE HAVE A MOTION AND A SECOND. WE'VE

HEARD ALL PUBLIC COMMENT. COULD WE HAVE A ROLL CALL, PLEASE.

MS. KING: DONALD DAFOE.

DR. DAFOE: YES.

MS. KING: ROBERT PRICE.

DR. PRICE: YES.

MS. KING: WILLIAM BRODY.

DR. BRODY: YES.

MS. KING: MICHAEL FRIEDMAN.

DR. FRIEDMAN: YES.

MS. KING: BOB KLEIN.

CHAIRMAN KLEIN: YES.

MS. KING: GERALD LEVEY.

DR. LEVEY: YES.

MS. KING: FRANCISCO PRIETO.

DR. PRIETO: YES.

MS. KING: CARMEN PULIAFITO.

DR. PULIAFITO: YES.

MS. KING: ROBERT QUINT.

DR. QUINT: YES.

MS. KING: DUANE ROTH.

MR. ROTH: YES.

MS. KING: JOAN SAMUELSON.

MS. SAMUELSON: YES.

MS. KING: DAVID SERRANO-SEWELL.

MR. SERRANO-SEWELL: YES.

MS. KING: JEFF SHEEHY.

MR. SHEEHY: YES.

MS. KING: ART TORRES.

MR. TORRES: AYE.

MS. KING: I BELIEVE, COUNSEL, WE ACTUALLY EVEN HAD A VOTING QUORUM FOR THIS ONE. WE'LL HAVE COUNSEL TELL US WHETHER OR NOT THAT MOTION CARRIES.

CHAIRMAN KLEIN: WHILE THE COUNSEL IS MAKING SURE THAT THE EXACT MATHEMATICS WITH THE NONVOTING MEMBERS WORKS, WE WILL GO ON AND ASK ON 1745, IS THERE A MOTION TO FUND 1745? OKAY.

I DON'T SEE A MOTION FROM ANY MEMBER OF THE BOARD. IS THERE ANY PUBLIC MEMBER TO SPEAK? I SEE NO PUBLIC MEMBER.

I'M GOING TO GO ON TO 1710. 1710, IS THERE A MOTION TO FUND ON 1710? MR. SHEEHY.

MR. SHEEHY: YES. I WOULD MOVE TO FUND 1710. WE HAVE NO DENDRITIC CELL APPLICATION, SO PROGRAMMATICALLY IN TIER I. AND I THINK THAT WE SHOULD INCLUDE THOSE APPROACHES PROGRAMMATICALLY FOR BALANCE.

I THINK THIS IS -- THERE WAS A PROGRAM -- SO I JUST HAVE TO REFRESH MYSELF FOR EACH OF THESE. I THINK THAT THERE WAS WITHIN SOME MEMBERS OF THE

WORKING GROUP, ESPECIALLY DENDRITIC CELL EXPERT, THERE WAS SIGNIFICANT ENTHUSIASM FOR THIS APPLICATION.

CHAIRMAN KLEIN: IS THERE A SECOND?

DR. REED: I WAS WONDERING IF I COULD -- DO I HAVE TO SECOND OR COULD I OFFER A FRIENDLY AMENDMENT?

CHAIRMAN KLEIN: YOU CAN OFFER AMENDMENT AND SEE IF THE -- ACTUALLY YOU CAN OFFER AN AMENDMENT JUST TO BE EXPEDITIOUS HERE AND SEE IF THE MAKER WOULD LIKE TO ACCEPT YOUR AMENDMENT.

DR. REED: MOVE FOR FUNDING AT TWO RATHER THAN THREE YEARS TO ALLOW THE FEASIBILITY OF THE USE OF THE FIXED CELLS APPROACH TO BE TESTED.

MR. SHEEHY: IF I CAN GET YOUR SECOND TO THAT, I WOULD BE HAPPY TO TAKE THAT FRIENDLY AMENDMENT.

CHAIRMAN KLEIN: OKAY. IT SOUNDS LIKE WE HAVE A MOTION AND A SECOND. ARE THERE ADDITIONAL COMMENTS ON THIS GRANT FROM ANYONE?

DR. REED: CALL FOR THE QUESTION.

CHAIRMAN KLEIN: ALL RIGHT. ANY PUBLIC COMMENT ON THIS ITEM? DR. FRIEDMAN, DO WE HAVE ANY PUBLIC COMMENT FROM YOUR LOCATION?

DR. FRIEDMAN: NO.

CHAIRMAN KLEIN: ALL RIGHT. I WOULD LIKE TO THEN CALL FOR A ROLL CALL, PLEASE.

MS. KING: ROBERT PRICE.

DR. PRICE: YES.

MS. KING: FLOYD BLOOM.

DR. BLOOM: YES.

MS. KING: DAVID BRENNER.

DR. BRENNER: YES.

MS. KING: SUSAN BRYANT.

DR. BRYANT: YES.

MS. KING: MICHAEL FRIEDMAN.

DR. FRIEDMAN: YES.

MS. KING: BOB KLEIN.

CHAIRMAN KLEIN: YES.

MS. KING: GERALD LEVEY.

DR. LEVEY: YES.

MS. KING: FRANCISCO PRIETO.

DR. PRIETO: YES.

MS. KING: CARMEN PULIAFITO.

DR. PULIAFITO: YES.

MS. KING: ROBERT QUINT.

DR. QUINT: YES.

MS. KING: JOHN REED.

DR. REED: YES.

MS. KING: DUANE ROTH.

MR. ROTH: YES.
MS. KING: JOAN SAMUELSON.
MS. SAMUELSON: YES.
MS. KING: DAVID SERRANO-SEWELL.
MR. SERRANO-SEWELL: YES.
MS. KING: JEFF SHEEHY.
MR. SHEEHY: YES.
MS. KING: OSWALD STEWARD.
DR. STEWARD: YES.
MS. KING: ART TORRES.
MR. TORRES: AYE.
CHAIRMAN KLEIN: THANK YOU. THE NEXT ITEM IS 1705. REQUEST FOR A BREATHER FOR COUNSEL.
MR. HARRISON: THAT MOTION CARRIED. THE SECOND MOTION TO MOVE 1717 TO TIER I, WE NEED TO HOLD OPEN FOR DR. HAWGOOD'S ARRIVAL.
CHAIRMAN KLEIN: WE WILL ACCEPT COUNSEL'S RECOMMENDATION. THE CHAIR WILL HOLD OPEN -- THAT WAS 1717 WILL REMAIN OPEN FOR DR. HAWGOOD TO FIND OUT HIS VOTE WHEN HE ARRIVES.
MS. KING: AS DOES 1743.
CHAIRMAN KLEIN: WE PREVIOUSLY NOTED 1743. OKAY. ARE WE OTHERWISE, SCOTT, PREPARED TO MOVE FORWARD?
MR. TOCHER: YEP.

CHAIRMAN KLEIN: 1705, IS THERE ANYONE TO MAKE A MOTION FOR FUNDING OF 1705?

MR. SHEEHY: I WOULD MAKE THE MOTION TO FUND 1705. AGAIN, THAT'S A DENDRITIC CELL APPROACH. THIS IS A GOOD TEAM. AND SO JUST TO BALANCE OUT OUR PORTFOLIO, I'D LIKE TO HAVE A COUPLE OF THESE APPROACHES IN OUR PORTFOLIO.

CHAIRMAN KLEIN: ANY ADDITIONAL COMMENT ON 1705?

DR. REED: WOULD YOU RECOMMEND FUNDING OF ALL THREE YEARS?

MR. SHEEHY: IF YOU WOULD SECOND WITH THE SAME MOTION, I WOULD ACCEPT.

DR. REED: DELIGHTED TO.

CHAIRMAN KLEIN: MY UNDERSTANDING IS THE MOTION IS TO MOVE TO FUND, BUT FUND ONLY FOR TWO OF THE THREE YEARS. THIS IS 1705 FOR IMMUNE TOLERANCE BY ES CELL-DERIVED DENDRITIC CELL.

DR. PRICE: QUESTION. THE PREVIOUS VOTE, THE PREVIOUS MOTION OR MODIFIED MOTION, THERE WAS AN EXPLANATION FOR WHY TWO YEARS MADE SENSE RATHER THAN THREE BECAUSE YOU SAID THERE WAS A PARTICULAR PROOF OF PRINCIPLE, I GUESS. WHAT'S THE RATIONALE HERE?

DR. REED: PART OF MY RATIONALE WOULD BE, ONE, THAT THE APPROACHES ARE INNOVATIVE, BUT BECAUSE

OF THAT, THEY'RE HIGH RISK. AND IF ONE CAN GIVE AT LEAST SOME PARTIAL FUNDING TO TRY TO GET FURTHER TO POINTS OF FEASIBILITY, I THINK IT WILL HELP MOVE THE PROJECT ALONG, BUT WON'T NECESSARILY COMMIT US TO FULL FUNDING OF SOMETHING THAT IN THE END MAY PROVE TO BE UNSUCCESSFUL. SO THAT'S MY MAIN RATIONALE FOR THINKING WHY THESE APPLICATIONS WITH DENDRITIC CELL EFFORTS, WHICH ARE EXCITING, BUT UNPROVEN, SHOULD BE GIVEN AT LEAST SOME CHANCE TO DEMONSTRATE FEASIBILITY, BUT NOT MAYBE A FULL FUNDING.

CHAIRMAN KLEIN: THANK YOU VERY MUCH. ADDITIONAL BOARD COMMENT?

DR. STEWARD: IN LOOKING OVER THE REVIEW SUMMARY, IT SEEMS TO ME PRETTY UN, WHATEVER, EXCITING. REVIEWERS DID NOT FIND THIS PROPOSAL TO BE PARTICULARLY INNOVATIVE. REVIEWERS CITED A NUMBER OF WEAKNESSES IN THE RESEARCH PLAN. OTHER THAN THE FACT THAT IT'S DENDRITIC CELLS, WHAT'S THE STRENGTH OF THIS THAT WE'RE RECOMMENDING?

CHAIRMAN KLEIN: IF WE COULD SEE THE SCREEN AGAIN ON THOSE SCORES. THIS IS 1705. I BELIEVE IT HAS A MEDIAN SCORE OF 70, WHICH IS INTERESTING BECAUSE --

DR. STEWARD: YEAH, IT IS.

CHAIRMAN KLEIN: -- IT MEANS THERE WAS A

SIGNIFICANT NUMBER WHO WERE REALLY SUPPORTIVE OF THIS GIVEN A COUPLE OF VERY LOW SCORES WE'RE AWARE OF.

DR. STEWARD: THE REVIEW DOESN'T MATCH UP WITH THE SCORES.

CHAIRMAN KLEIN: EXACTLY. MR. SHEEHY.

MR. SHEEHY: I THINK, DR. STEWARD, THERE WERE A COUPLE OF REVIEWERS THAT WERE NOTABLY UNENTHUSIASTIC ABOUT THE FEASIBILITY OF DC APPROACHES, DENDRITIC CELL APPROACHES. NOW, DENDRITIC CELLS COULD BE A GOOD APPROACH, AND THAT'S WHY I THINK -- YOU KNOW, EVERY NOW AND THEN WE'VE GOT TO THROW A LONG PASS, SO TO SPEAK, TO USE A FOOTBALL METAPHOR. I THINK THAT'S WHY I ACCEPTED DR. REED'S AMENDMENT. WE'RE NOT IN THIS SPACE, AND JUST BECAUSE PEOPLE DON'T THINK WE'LL SUCCEED WITH THIS DOESN'T MEAN -- THIS IS A VERY POSSIBLE WAY IN WHICH TO INDUCE IMMUNE TOLERANCE USING DENDRITIC CELLS. PEOPLE HAVE TRIED TO USE THIS IN CANCER. WE TRIED THIS IN HIV. PEOPLE TRIED TO DO STUFF WITH DENDRITIC CELLS. MOST OF THE TIME IT DOESN'T WORK. BECAUSE IT DOESN'T WORK DOESN'T MEAN YOU SHOULDN'T TRY.

I THINK IF WE'RE GOING TO TRY TO INDUCE IMMUNE TOLERANCE FOR STEM CELL GRAFTS, WHY SHOULD WE

NEGLECT THIS APPROACH JUST BECAUSE NO ONE HAS HAD MUCH SUCCESS WITH IT IN PRIOR ATTEMPTS? AND GIVEN THE UNIQUE TEAMS THAT WE'RE FORMING COMBINING IMMUNOLOGISTS AND STEM CELL SCIENTISTS AND WHAT MAY BE UNIQUE PROPERTIES TO EMBRYONIC STEM CELLS TO PLURIPOTENT CELLS IN TERMS OF HOW THEY GET TOLERATED, YOU KNOW, WHY NOT? IT SEEMS REASONABLE TO ME TO MAKE THAT INVESTMENT.

CHAIRMAN KLEIN: I'D ALSO LIKE TO SAY THAT THE REVIEWERS DID PRAISE THE PRINCIPAL INVESTIGATOR AND ASSEMBLED RESEARCH TEAM, AND THEY BROUGHT TO OUR ATTENTION THE OUTSTANDING RECORD OF PUBLICATION IN MANY HIGH PROFILE PUBLICATIONS AND NOTED THAT THERE WERE THREE EXCELLENT RESEARCH GROUPS AT THE APPLICABLE INSTITUTION THAT HAVE BEEN BROUGHT TOGETHER. SO WITH A HIGH RISK APPROACH, AT LEAST THE TEAMS THAT THEY'VE MARSHALLED APPEAR TO BE PRETTY STRONG.

ANY ADDITIONAL COMMENTS?

DR. TROUNSON: I THINK YOU NEED TO BE PRETTY CERTAIN ABOUT THIS BECAUSE THE MOUSE MODEL HERE IS GOING TO BE VERY DIFFICULT TO GET ACROSS TO THE HUMAN. AND THE MIXED CHIMERISM BY THIS METHOD AS DISTINCT FROM ONE OF THE OTHER PROJECTS THAT'S THERE, THIS IS REALLY, REALLY GOING TO BE

CHALLENGING. AND EVEN IF IT DOES WORK IN THE MOUSE, I THINK YOU ARE GOING TO BE REALLY FLAT OUT TO EVEN TRIAL IT OUT ON THE HUMAN.

MY FEELING IS THE FEASIBILITY HERE IS REALLY A GENUINE ISSUE. AND I THINK YOU JUST NEED TO TAKE THAT ON BOARD BECAUSE I THINK THIS IS -- OUR AIM IS TO GET TOLERANCE IN THE HUMAN, NOT TOLERANCE IN THE MOUSE. THAT'S A REALLY, REALLY DIFFICULT THOUGHT HERE. NONE OF THE IMMUNOLOGISTS THOUGHT THAT WAS REALLY GOING TO TRANSLATE. SO IT'S JUST A WORD OF CAUTION HERE FOR YOU.

CHAIRMAN KLEIN: OKAY. THANK YOU FOR THAT VERY IMPORTANT POINT.

DR. BRODY: YOU KNOW, I HAVE A GENERAL PROBLEM WITH ALL OF THESE CONTESTING OF THE -- WE HAVE A SCIENTIFIC GROUP OF EXPERTS FROM AROUND THE WORLD TO REVIEW THESE. AND THERE ARE CERTAIN SITUATIONS WHERE ONE WOULD UNDERTAKE A SECOND LOOK. SOMETHING, FOR EXAMPLE, WHEN THERE'S A LARGE DISCORDANCE IN THE REVIEW, ONE REVIEWER SAYS THIS IS THE GREATEST THING SINCE SLICED BREAD AND THE OTHER SAYS IT'S NOT, OR THEY SAY, WELL, THIS IS REALLY HIGH RISK, BUT IF IT PAID OFF, IT WOULD BE REALLY GREAT EVEN THOUGH WE'RE NOT SURE IT'S GOING TO WORK.

I MEAN THIS IS AN EXAMPLE OF AN

APPLICATION THAT HAS EXPERT REVIEW WHICH SAYS THERE ARE SERIOUS LIMITATIONS TO THIS SCIENTIFIC METHODOLOGY, AND IT'S NOT SOMETHING THAT HAS POTENTIALLY ENORMOUS PAYOFF BECAUSE THERE ARE PROBLEMS, EVEN IF IT WORKS, FIGURING HOW YOU GET THIS IN HUMANS. I THINK THIS IS EMBLEMATIC THAT WE'RE ASKED TO LOOK AT IT WITH A LIMITED VIEW, AND MOST OF THESE ARE BEING APPROVED. I JUST DON'T THINK IT'S APPROPRIATE.

CHAIRMAN KLEIN: SO ON MANY OF THESE BEING APPROVED, 75 PERCENT OR 65 PERCENT OF THE PEER REVIEW GROUP IS IN THE SCORING RANGE, AND THERE ARE SOME VERY LOW SCORES, 50 OR 60. AND IF WE WERE TO ACCEPT THE VERY LOW SCORES, THEY WOULD ESSENTIALLY AMOUNT TO VETOES ON THE MAJORITY OF THE GROUP.

IN THIS PARTICULAR ONE, THE MEDIAN IS 70, BUT I THINK IN CONCEPT I WOULD AGREE WITH YOUR POINT. THERE HAS TO BE A STRONG SCIENTIFIC POINT --

DR. BRODY: LET ME MAKE --

CHAIRMAN KLEIN: DR. TROUNSON'S POINT HERE IS A VERY IMPORTANT ONE FOR ME, THAT IN THIS PARTICULAR CASE, HE'S REMINDED ME THAT THERE WAS AN ISSUE OF THE TRANSFERRAL OF THIS TECHNOLOGY FROM MOUSE TO HUMAN, WHICH I THINK WAS A VERY MEANINGFUL POINT. DIDN'T CONVINCE --

DR. BRODY: MR. CHAIRMAN, MAY I HAVE A WORD, PLEASE? IF YOU ARE ASKING US TO SIT HERE WITH SOME EXPERTISE AND LOOK AT THIS, I'M TELLING YOU AS A SCIENTIST MY ABILITY TO MAKE JUDGMENTS ON THESE GRANTS IS VERY LIMITED IN THIS SITUATION UNLESS I WAS INVOLVED IN THE DETAILED REVIEW. AND ALSO SO THAT THERE ARE ONLY CERTAIN SITUATIONS WHERE I THINK I WOULD FEEL COMFORTABLE OVERRULING AN EXPERT SCIENTIFIC PANEL. AND THIS IS NOT ONE OF THEM. MANY OF THESE IN MY VIEW ARE NOT IN THAT CATEGORY.

SO I ASK OURSELVES WHAT DO WE THINK WE'RE DOING? ARE WE REALLY ADDING VALUE, OR ARE WE GOING TO FUND BAD SCIENCE? THERE'S ONLY SO MANY GOOD IDEAS. AND THE EXTENT TO WHICH WE FUND MORE, I DON'T THINK WE ARE SPENDING OUR MONEY IN THE MOST EFFICACIOUS WAY. AND I FEEL VERY STRONGLY ABOUT THAT. AND IT SEEMS LIKE WE'RE GETTING MORE AND MORE APPLICATIONS IN THE MARGIN THAT WE'RE VIEWING. IF SO, WE OUGHT TO JUST DROP THE PERCENTAGE WHERE WE'RE FUNDING THEM BECAUSE I JUST DON'T THINK THAT WE HAVE THE ABILITY TO ADD VALUE TO THE PROCESS. I GUESS THAT'S MY POINT.

CHAIRMAN KLEIN: IT'S A VERY LEGITIMATE PERSPECTIVE OBVIOUSLY, DR. BRODY. YOU NOTICE THAT WE HAVE SKIPPED OVER SOME THAT NO MOTION HAS BEEN

MADE ON THOSE. I THINK THIS GROUP VERY SELECTIVELY IS ADDRESSING THESE AND READING THE BACKGROUND MATERIALS WITH A GREAT DEAL OF DEPTH.

ADDITIONALLY, A NUMBER OF US SAT THROUGH TWO DAYS OF REVIEWS LISTENING TO DIFFERENT SCIENTISTS WHO DISAGREED ON SOME OF THESE QUITE SIGNIFICANTLY, AS YOU JUST DESCRIBED, WHERE THERE WAS REAL POLARIZATION. SO ON A SELECTIVE BASIS, I HOPE WE'RE ONLY FUNDING GOOD SCIENCE, BUT I ABSOLUTELY RESPECT AND HOPEFULLY IDENTIFY WITH YOUR POSITION THAT WE'RE ONLY FUNDING GOOD SCIENCE, WHICH IS WHAT WE SHOULD BE DOING.

DR. PRICE: WOULD IT BE APPROPRIATE TO ASK WHAT THE TALLY OF DOLLARS THAT WE'RE COMMITTING AT THIS POINT? WE HAD A CEILING. I JUST WONDER IF WE'VE ALREADY BREACHED THAT.

CHAIRMAN KLEIN: WE'LL TRY AND GET THAT FOR YOU RIGHT NOW.

DR. FRIEDMAN: WHILE YOU ARE DOING THAT CALCULATION, I'M SORT OF CONTRASTING THE REVIEW OF THE PREVIOUS GRANT WITH THIS GRANT. AND ALTHOUGH THERE WERE CONCERNS RAISED IN BOTH, THERE SEEMED TO BE MORE ENTHUSIASM AND MORE SCIENTIFIC BASIS FOR SUPPORT OF THE PREVIOUS GRANT. I TAKE JEFF'S COMMENT VERY SERIOUSLY ABOUT TAKING SOME SCIENTIFIC

RISKS IN ORDER TO HAVE A BIG PAYOFF. AS I READ THIS, THOUGH, AND THAT'S WHY I NEED ADVICE FROM YOU ALL IN TERMS OF WHO ARE ACTUALLY THERE, THE OVERWHELMING SENSE I GET FROM THE WRITTEN REVIEW IS NOT THAT THIS WAS HIGH RISK, BUT THAT IT WAS NOT NOVEL AND BROAD.

AND IF I'M MISINTERPRETING IT, I'D LIKE YOU TO PLEASE HELP ME BECAUSE I HAVE -- I JUST THINK THERE'S AN INTERESTING CONTRAST BETWEEN THE PREVIOUS DENDRITIC APPROACH AND THIS ONE. THANK YOU.

CHAIRMAN KLEIN: JEFF, WOULD YOU LIKE TO RESPOND TO THAT? JOAN?

MS. SAMUELSON: SURE. I'M LOOKING AT THE CRITIQUE, AND ONE OF THE REVIEWERS WAS VERY ENTHUSIASTIC, GAVE IT A 78. HE THOUGHT IT WAS A CONSIDERABLE AMOUNT OF INNOVATION, SCIENTIFIC RATIONALE IS LOGICAL, THERE'S STRONG EVIDENCE TO SUPPORT THE PRESENCE OF TOLEROGENIC DC'S. RESEARCH TEAM HAS A TRACK RECORD OF PUBLICATIONS. PRELIMINARY DATA SHOWS THE RESEARCH TEAM IS ABLE TO GENERATE DC'S FOR MOUSE AND HUMAN ESC AND THEY CAN BE GENETICALLY MANIPULATED.

SO IT SOUNDS LIKE THERE WAS A DIFFERENCE OF OPINION IN THE WORKING GROUP. I ALSO REMEMBER THAT THE CHAIR WAS VERY ACTIVELY INVOLVED IN THE

DISCUSSION. I DON'T REMEMBER THE DISCUSSION IN THIS PARTICULAR CASE. BUT IT LOOKS LIKES THERE WAS AT LEAST A DIFFERENCE OF OPINION AND SOME WERE ENTHUSIASTIC.

CHAIRMAN KLEIN: THANK YOU. CAN WE GET WHAT THE RUNNING TOTAL IS?

MS. KING: IT'S ACTUALLY ON THE SCREEN AT THE TOP OF THE SCREEN. I DON'T KNOW IF YOU CAN SEE IT. $25,523,573.

MR. HARRISON: THAT'S ASSUMING THE APPLICATION THAT'S PENDING IS APPROVED.

CHAIRMAN KLEIN: OKAY.

DR. STEWARD: ON THE OTHER ONE THERE WAS A MINORITY REPORT INDICATING SOME DEGREE OF ENTHUSIASM BY 35 PERCENT OF THE PANEL. WAS THERE ANY DISCUSSION OF A MINORITY REPORT OR, FOR THAT MATTER, DISCUSSION OF MOVING THIS FORWARD INTO THE TOP TIER?

CHAIRMAN KLEIN: THERE WASN'T, BUT ONE OF THE PROBLEMS HERE IS THAT, AS PREVIOUSLY BEEN DISCUSSED IN THE SCIENTIFIC PEER REVIEW GROUP, AS A POTENTIAL ENHANCEMENT OF OUR PEER REVIEW IS THAT CURRENTLY WE'RE NOT REPORTING WITHIN PEER REVIEW THE MEDIAN SCORE. SO IT'S NOT CLEAR TO THE PEER REVIEWERS HOW MANY ARE, IN FACT, IN FAVOR AND HOW MANY ARE OPPOSED.

THERE'S ALSO A RELUCTANCE TO STAND AGAINST -- IN SOME CASES TO STAND AGAINST OTHER REVIEWERS DEPENDING UPON WHO THE PERSON IS WHO'S THE CHAMPION. IF THERE'S A STRONG CHAMPION, THEY'LL STAND UP AND DEFEND IT. AND IF THERE ISN'T, IT DOESN'T NECESSARILY MEAN THERE WILL BE A MINORITY REPORT.

DR. TROUNSON: BOB, I'M NOT SURE THAT THAT'S REASONABLE TO SAY THAT THE SCIENTISTS --

CHAIRMAN KLEIN: I JUST HAVE -- LET ME STATE THAT AS STRONG PERSONAL OPINION FROM OBSERVATION.

DR. TROUNSON: OKAY. SO I THINK THAT WOULD BE FAIR ENOUGH. THESE SCIENTISTS DON'T BACK BACK VERY FAR AT ALL. THERE'S A ROBUST DISCUSSION GOING ON THERE. I DON'T THINK -- I THINK IT'S REALLY THE MERIT OF THE DISCUSSIONS, TO BE HONEST. AND THAT'S WHAT THEY GET TO. IT'S THE MERIT OF THE ARGUMENTS.

MR. SHEEHY: SO, DR. STEWARD, IT'S PRETTY MUCH AS I DESCRIBED IT WHEN I INTRODUCED IT. THERE WAS -- THIS ONE WAS NOT MOVED UP, WAS NOT OFFERED UP IN PROGRAMMATIC. IN FACT, THE DENDRITIC CELL EXPERT, NOTICING THE LACK OF DENDRITIC CELLS, I BELIEVE, MOVED THE OTHER ONE UP AS BEING THE BEST OF

THE LOT. AND I THINK THIS IS -- THERE'S JUST NOT A LOT OF ENTHUSIASM FOR IT. THIS IS NOT -- PEOPLE ARE NOT WIDELY OPTIMISTIC ABOUT THIS APPROACH. BUT THIS COULD BE A BREAKTHROUGH APPROACH.

SO, AGAIN, AND I UNDERSTAND PEOPLE'S TREPIDATION, AND WHETHER OR NOT THEY WANT TO DO THIS OR NOT IS FINE. I PERSONALLY WOULD GO AHEAD AND DO IT. IF OTHERS HAVE DIFFERENT OPINIONS, THAT'S WHY WE VOTE. I DON'T EXPECT TO WIN EVERY ONE.

CHAIRMAN KLEIN: I WOULD, HOWEVER, LIKE TO SAY THAT I THINK DR. TROUNSON'S POINT THAT HE REMINDS US OF IS A VERY IMPORTANT POINT IN THIS DISCUSSION THAT'S AT LEAST VERY POIGNANT FOR ME.

DR. REED: I WAS GOING TO MAKE THE POINT, SINCE I SECONDED THE MOTION, THAT DR. TROUNSON'S COMMENT MEANS A LOT TO ME AS WELL IN TERMS OF THE FEASIBILITY.

I DID HAVE A CLARIFICATION THOUGH AS WELL, AND THAT IS WHEN THIS FUNDING WAS INTRODUCED, I BELIEVE WE WERE PRESENTED THE NUMBERS THAT THE TOP TIER COMING OUT OF THE STUDY SECTION WAS ABOUT $15 MILLION WORTH OF GRANTS, THAT CIRM HAD TARGETED TO FUND AROUND 20 MILLION.

CHAIRMAN KLEIN: 30.

DR. REED: 30 MILLION. I MISUNDERSTOOD

THAT.

MR. SHEEHY: IT WAS ABOUT 20 COMING OUT OF THE WORKING GROUP.

CHAIRMAN KLEIN: 20 COMING OUT OF THE WORKING GROUP. WE HAD TARGETED 30, BUT WE ONLY WANT TO FUND GOOD SCIENCE.

DR. REED: GOT YOU. THANK YOU FOR THAT CLARIFICATION.

CHAIRMAN KLEIN: I THINK WE'VE HAD SOME VERY GOOD DISCUSSION, ROBUST DISCUSSION, WHICH IS VERY VALUABLE HERE. ANY PUBLIC COMMENT ON THIS ONE? LIKE TO CALL THE QUESTION ON THIS.

MS. KING: ROBERT PRICE.

DR. PRICE: NO.

MS. KING: FLOYD BLOOM.

DR. BLOOM: NO.

MS. KING: DAVID BRENNER.

DR. BRENNER: NO.

MS. KING: WILLIAM BRODY.

DR. BRODY: NO.

MS. KING: SUSAN BRYANT.

DR. BRYANT: NO.

MS. KING: MICHAEL FRIEDMAN.

DR. FRIEDMAN: NO.

MS. KING: BOB KLEIN.

CHAIRMAN KLEIN: NO.
MS. KING: FRANCISCO PRIETO.
DR. PRIETO: NO.
MS. KING: CARMEN PULIAFITO.
DR. PULIAFITO: NO.
MS. KING: ROBERT QUINT.
DR. QUINT: NO.
MS. KING: JOHN REED.
DR. REED: NO.
MS. KING: DUANE ROTH.
MR. ROTH: NO.
MS. KING: JOAN SAMUELSON.
MS. SAMUELSON: NO.
MS. KING: DAVID SERRANO-SEWELL.
MR. SERRANO-SEWELL: YES.
MS. KING: JEFF SHEEHY.
MR. SHEEHY: YES.
MS. KING: OSWALD STEWARD.
DR. STEWARD: NO.
MS. KING: ART TORRES.
MR. TORRES: NO.
CHAIRMAN KLEIN: OKAY. THANK YOU. COULD WE SEE IS THERE ANY MOTION ON 1733?
DR. PRIETO: I MOVE THAT BE MOVED UP INTO THE FUNDABLE CATEGORY.

CHAIRMAN KLEIN: OKAY. IS THERE A SECOND?

DR. PULIAFITO: SECOND.

CHAIRMAN KLEIN: SECOND DR. PULIAFITO.

IS THERE DISCUSSION BY MEMBERS OF THE BOARD ON THE REASONS FOR MOVING IT UP?

DR. PRIETO: I'LL RESPOND TO THAT. THERE WERE A COUPLE OF APPARENT FACTUAL ERRORS MADE BY THE REVIEWERS IN THIS REVIEW THAT CAME OUT LATER. ONE, THERE'S A COMMENT BY A REVIEWER THAT, QUOTE, THE PROPOSAL FAILS TO ACKNOWLEDGE THE PURIFIED CD34+ CELLS HAVE BEEN USED IN THE ALLOGENEIC SETTING WITH NO GRAFT VERSUS HOST DISEASE DEVELOPMENT, AND APPARENTLY THAT ACTUALLY IS CONTRADICTED BY THE LITERATURE.

THE OTHER WAS AN ASSERTION THAT THE THIRD AND FOURTH AIMS WERE NOT NOVEL AND HAD BEEN PERFORMED IN ANOTHER STUDY DONE IN BRAZIL BY DR. RICHARD BURT. BOB HAS SPOKEN TO DR. BURT AND IS FAMILIAR WITH THAT WORK. IN FACT, IT APPEARS THAT HE IS OF THE OPINION THAT THIS IS NOT WORK THAT DUPLICATES WHAT WAS DONE IN THE BRAZIL STUDY.

SO I THINK THERE WERE A COUPLE OF JUST FACTUAL MISTAKES THAT BROUGHT THIS DOWN A FEW POINTS, WHICH WOULD HAVE PUT IT IN THE FUNDABLE CATEGORY.

CHAIRMAN KLEIN: ANY ADDITIONAL BOARD COMMENTS? DR. PULIAFITO, DID YOU HAVE ANY COMMENTS?

DR. PULIAFITO: I THINK THE KEY FACTORS FOR ME IS THAT THERE WERE INDEED THESE FACTUAL ERRORS, THAT IF HAD BEEN RECOGNIZED, THIS GRANT WOULD HAVE PROBABLY BEEN IN THE FUNDABLE RANGE.

CHAIRMAN KLEIN: DR. PRICE.

DR. PRICE: CAN I ASK A QUESTION OF THE FOLKS WHO WERE PRESENT FOR THE REVIEW, SUCH AS JEFF? WERE THESE ISSUES PARAMOUNT OR PROMINENT IN THE DISCUSSION, THESE FACTUAL MATTERS?

CHAIRMAN KLEIN: CAN I ASK THIS QUESTION? DR. TROUNSON WAS PRESENT AS WELL.

DR. PRICE: SURE.

CHAIRMAN KLEIN: DR. TROUNSON, DO YOU WANT TO SAY IF EITHER OF THESE WAS IMPORTANT IN THIS DISCUSSION?

DR. TROUNSON: WELL, I THINK THEY WERE. THERE'S AN INTERESTING HISTORY WITH THIS WORK, THAT THE REALLY PURIFIED HEMATOPOIETIC STEM CELLS THEMSELVES DO NOT CAUSE ANY GRAFT VERSUS HOST DISEASE; WHEREAS, THE CD34 CELL, IF YOU JUST SELECT SIMPLY FOR THAT AND YOU TRANSPLANT IT IN AN ALLOGENEIC WAY, YOU WILL GET GRAFT VERSUS HOST DISEASE VERY FREQUENTLY. THAT WAS WRONG. THAT

WASN'T RIGHT.

SO THE WHOLE SORT OF SETTING WAS THEN CHANGED BECAUSE WHAT THEY WOULD LIKE TO DO IS USE THESE TWO ANTIBODIES CKIT AND CD47 TO TAKE DOWN THE T-CELLS AND THE NK NATURAL KILLER CELLS, WHICH ARE THE ONES THAT ARE REALLY CAUSING THE DAMAGE WHEN YOU TRANSPLANT ACROSS A BARRIER.

SO USING THE PURIFIED HEMATOPOIETIC CELL TAKING DOWN THOSE TWO SETS OF DANGEROUS CELLS FOR REJECTION AND THEN HAVING A MILD ABLATIVE THERAPY THAT DOESN'T -- THAT'S NOT A COMPLETE ABLATIVE THERAPY THAT YOU WOULD NORMALLY DO, THE PATIENTS ARE VERY MILD TREATMENT ACROSS THAT. AND I THINK FRANCISCO WOULD COMPLEMENT THAT. IF YOU CAN GET THAT ABLATIVE THERAPY MILD, THE PATIENTS CAN -- THERE'S A MUCH BETTER RESPONSE IN THE PATIENTS.

SO IT SEEMS LIKE THIS KIND OF APPROACH, ALTHOUGH I'D SAY A LITTLE CHALLENGING BECAUSE YOU GOT TO USE MULTIPLE ANTIBODIES WHEN YOU GO TO THE HUMAN, I THINK IT'S VERY REALISTIC. SO IT SITS IN THAT BRACKET, AND I THINK SOME OF THOSE COMMENTS PROBABLY UNHINGED THAT DISCUSSION A LITTLE, TO BE HONEST. SO I WENT OFF TO READ ABOUT IT BECAUSE I THOUGHT I WAS A BIT DIFFERENT IN MY PERSPECTIVE BECAUSE I DON'T REALLY TALK MUCH AT THE GRANTS

REVIEW UNLESS PEOPLE ASK ME TO. IN REVIEWING THIS, I THINK I SEE IT MUCH MORE ON THE 70 SIDE OF LIFE THAN I DO ON THE 60 SIDE OF LIFE, AND I THINK THOSE COUPLE OF ERRORS WOULD PROBABLY POSSIBLY CHANGE A FEW OTHERS.

FRANCISCO, DO YOU THINK THAT'S FAIR ENOUGH?

DR. PRIETO: I THINK THAT'S FAIR. I WAS ALSO THERE FOR THIS REVIEW.

CHAIRMAN KLEIN: OKAY. ADDITIONAL BOARD COMMENTS? PUBLIC COMMENTS? DR. FRIEDMAN, ANY PUBLIC COMMENTS FROM YOU?

DR. FRIEDMAN: NO PUBLIC COMMENTS FROM ME OR FROM THE PEOPLE SITTING HERE.

CHAIRMAN KLEIN: OKAY. THANK YOU. CALL THE QUESTION.

MS. KING: ROBERT PRICE.

DR. PRICE: YES.

MS. KING: FLOYD BLOOM.

DR. BLOOM: YES.

MS. KING: DAVID BRENNER.

DR. BRENNER: YES.

MS. KING: SUSAN BRYANT.

DR. BRYANT: YES.

MS. KING: MICHAEL FRIEDMAN.

DR. FRIEDMAN: YES.
MS. KING: BOB KLEIN.
CHAIRMAN KLEIN: YES.
MS. KING: GERALD LEVEY.
DR. LEVEY: YES.
MS. KING: FRANCISCO PRIETO.
DR. PRIETO: YES.
MS. KING: CARMEN PULIAFITO.
DR. PULIAFITO: YES.
MS. KING: ROBERT QUINT.
DR. QUINT: NO.
MS. KING: JOHN REED.
DR. REED: YES.
MS. KING: DUANE ROTH.
MR. ROTH: YES.
MS. KING: JOAN SAMUELSON.
MS. SAMUELSON: YES.
MS. KING: DAVID SERRANO-SEWELL.
MR. SERRANO-SEWELL: YES.
MS. KING: JEFF SHEEHY.
MR. SHEEHY: YES.
MS. KING: OSWALD STEWARD.
DR. STEWARD: YES.
MS. KING: ART TORRES.
MR. TORRES: AYE.

CHAIRMAN KLEIN: THANK YOU.

1740, ANY MEMBER WANTS TO MAKE A MOTION ON THAT ITEM?

MS. KING: FOR THE RECORD, THAT MOTION CARRIES.

CHAIRMAN KLEIN: MELISSA KING REPORTED THAT 1733 CARRIED.

ANYONE WANT TO MAKE A MOTION ON 1740? DR. PRIETO HAS ASKED TO READ IT FOR A MINUTE, SO I'M GOING TO PASS OVER IT FOR A MOMENT. ANYONE IS INTERESTED IN 1721?

MR. TORRES: I'M NOT GOING TO MAKE A MOTION ON THIS, BUT I WANTED TO RAISE IT BECAUSE IT RAISED AN ISSUE FOR ME. AS MANY OF YOU KNOW, I SIT ON AN ORGAN TRANSPLANT BOARD CALLED ONE LEGACY OUT OF SOUTHERN CALIFORNIA. AND LIVER DISEASE IS VERY MUCH AN ISSUE, NOT ONLY FOR AMERICA, BUT AT LEAST 20 PERCENT OF THE ORGAN TRANSPLANTS, AS YOU INDICATE HERE, ARE WAITING ON WAITING LISTS HERE IN CALIFORNIA.

I THINK THE OTHER ISSUE THAT'S RAISED BY THIS PROPOSAL IS THE DIVERSITY ISSUE RAISED BY DR. MARTINEZ. I DON'T WANT TO ADDRESS THAT OTHER THAN TO SAY THAT THIS IS A MAJOR CHALLENGE WE'RE GOING TO HAVE FACE, AS DR. TROUNSON WELL KNOWS. IN OUR WORK

WITH DREW UNIVERSITY AND OTHER AREAS, PERHAPS THE SCIENCE MAY NOT WORK IN THIS APPLICATION, BUT THAT'S ALWAYS SOMETHING I HOLD PARAMOUNT. AT THE SAME TIME I JUST WANTED TO RAISE THIS ISSUE OF DIVERSITY BECAUSE WE'RE GOING TO HAVE TO START FIGURING OUT JUST WHERE WE'RE GOING TO GET SOME OF THESE CELLS THAT WILL BE UTILIZED FOR LIVER DISEASE ESPECIALLY IN LATINOS IN CALIFORNIA. THAT'S ALL.

CHAIRMAN KLEIN: THANK YOU.

DR. TROUNSON: I'M VERY SUPPORTIVE OF WHAT ART TORRES JUST SAID. AND WE HAVE TO FIND A WAY TO DO THESE THINGS. I THINK I'M A LITTLE BIT NOT INCLINED SORT ON THE SCIENCE SIDE OF THIS PROJECT BECAUSE THE REVIEWERS WERE THERE, BUT WE HAVE TO WORK OUT A WAY AND I'M TRYING TO DO THAT. WE'RE GOING TO TRY AND SORT OF NARROW SOME MARGINS TO ENABLE, SO WE'RE WORKING ON THAT. AND I THINK WE NEED TO GET THERE. AND HOPEFULLY THE NEXT TIME WE CAN INCORPORATE THIS SORT OF SCIENTIST BECAUSE I THINK OBVIOUSLY A VERY GOOD PERSON AND MAKES A DIFFERENCE IN THAT COMMUNITY TOO IN TRAINING AND SCIENCE. SO IF YOU DON'T FUND IT, WE WILL NEED TO DO SOMETHING ABOUT IT.

MR. TORRES: THANK YOU, ALAN.

DR. PRIETO: TO STAY ON THIS ONE FOR A

MOMENT, ACTUALLY I THINK I WOULD LIKE TO MAKE A MOTION ON 1721. IF I COULD JUST GO AHEAD AND MAKE THE ARGUMENTS. BASED ON THE SCIENCE AND THE RESPONSE OF THE INVESTIGATOR IN THE EXTRAORDINARY PETITION, AND I'M NOT SOMEONE WHO IS IN FAVOR OF MOVING -- OF RESPONDING TO ALL OF THESE EXTRAORDINARY PETITIONS, PARTICULARLY THE ONES THAT COME IN LATE, BUT THIS ONE DID COME IN ON TIME. AND I DON'T SPECIFICALLY RECALL THE DETAILS OF THIS DISCUSSION IN THE WORKING GROUP, BUT THE PI DOES DIRECTLY ADDRESS SEVERAL OF THE POINTS THAT WERE CHALLENGED BY SOME OF THE REVIEWERS. I JUST WANT TO GO OVER SOME OF THOSE.

THE THIRD POINT, REVIEWERS STATED THAT THEY SHOULD HAVE USED REAL-TIME PCR-BASED ANALYSES FROM LIVER OR KIDNEYS. THE PI POINTS OUT, QUOTE, OUR LAB WAS ONE OF TWO LABS TO SIMULTANEOUSLY PUBLISH THE FIRST INTERGRAFT PCR ANALYSIS 1992, ALMOST 20 YEARS AGO. WE PERFORM REAL-TIME PCR ANALYSES IN OUR ALL TRANSPLANT MODELS AND PLAN TO INCLUDE IT IN THESE STUDIES, BUT DIDN'T EXPAND UPON IT DUE TO SPACE CONSTRAINTS, CONSTRAINTS THAT WE IMPOSE IN OUR RFA'S.

ON THE FIFTH POINT, THERE AGAIN APPEARS TO BE A FACTUAL ERROR. THE REVIEWER STATES THE PI

PROPOSES TO USE BALB/C MICE AS RECIPIENTS AND C57BI/6 AS DONORS. AND THE PI STATES, QUOTE, THE REVIEWER IS INCORRECT IN THAT STATEMENT. IN FACT, I INDICATE ON PAGE 5 THAT C57BI/6 MICE ARE THE ALLOGENEIC RECIPIENTS. I ALSO STATE ON PAGE 5 THAT STEM CELL GRANTS ARE DERIVED FROM THE BALB/C MICE, SO THEY ARE THE DONORS, NOT THE RECIPIENTS.

HAVING WORKED IN FIELD OF TRANSPLANT IMMUNOLOGY FOR OVER 20 YEARS, I AM WELL AWARE AND GOES ON TO STATE SOME OF THE REASONS WHY THIS, WHICH THE REVIEWER APPARENTLY ALSO KNEW, BUT MISREAD THE APPLICATION.

ITEM 6, THE REVIEWER STATES PERFORM FLOW CYTOMETRY OR RECOMMENDS, I GUESS, PERFORM FLOW CYTOMETRY ON LEUKOCYTES ISOLATED FROM LIVER TISSUE AS REGULARLY DONE BY OTHERS. AND THE PI STATES, QUOTE, BECAUSE OF SPACE LIMITATIONS, WE DIDN'T INCLUDE A DESCRIPTION OF POSSIBLE FLOW-BASED ANALYSIS OF GRAFT CELLS, BUT WOULD CERTAINLY INCLUDE THAT IN OUR STUDY. INDEED, OUR LABORATORY OWNS A FLOW CYTOMETER (OPERATED AS A SERVICE CENTER TO THE REST OF THE CAMPUS) AND ROUTINELY PERFORM THIS TYPE OF ANALYSIS IN OUR TRANSPLANT MODELS.

I WAS JUST IMPRESSED AT THE WAY IN WHICH THIS PI ADDRESSED THE CRITIQUES, AND I WOULD THINK

THAT'S WORTH A FEW POINTS, WHICH WOULD BRING IT UP TO THE FUNDABLE LINE. ALSO I THINK I MADE THIS POINT BEFORE, THAT REALLY ALTHOUGH WE'RE ARGUING OVER APPLICATIONS THAT ARE A FEW POINTS BELOW THIS SOMEWHAT ARBITRARY FUNDABLE LINE, THERE IS VIRTUALLY NO STATISTICAL DIFFERENCE BETWEEN A 64 AND A 66 OR A 68. YOU KNOW, ONE REVIEWER OR TWO AND THAT COMPLETELY GOES IN EITHER DIRECTION FOR ANY OF THESE APPLICATIONS.

MR. SHEEHY: I'LL SECOND THE MOTION. AND I WOULD JUST NOTE THAT THERE WAS CONSIDERABLE ENTHUSIASM ON THIS GRANT FROM AN EXTERNAL SPECIALIST WELL ABOVE THE SCORE THAT THIS GRANT RECEIVED.

CHAIRMAN KLEIN: ALL RIGHT. WE HAVE A MOTION AND A SECOND.

DR. STEWARD: SO I JUST WANT TO REITERATE THE POINT THAT DR. BRODY MADE EARLIER ON. WE ARE REALLY NOT IN A POSITION TO ESSENTIALLY REREVIEW THE GRANT. AND I THINK THAT THE, QUOTE, FACTUAL ERRORS HERE ARE OF THE SORT THAT ARE RELATIVELY MINOR AND PROBABLY WOULDN'T HAVE MOVED THE GRANT IN ONE DIRECTION OR ANOTHER.

I THINK IF WE READ THOSE EXTRAORDINARY PETITIONS, ALMOST EVERY ONE CLAIMS SOME FACTUAL ERROR OR ANOTHER. I'M NOT OPPOSED TO CONSIDERING

THIS GRANT, BUT I AM IMPOSED TO CONSIDERING THOSE KINDS OF DETAILS BECAUSE WE JUST SIMPLY CAN'T DRILL DOWN AND ADJUDICATE BETWEEN THE TWO POINTS OF VIEW.

CHAIRMAN KLEIN: OKAY. ANY ADDITIONAL BOARD COMMENT?

DR. PRIETO: I GUESS I WOULD JUST RESPOND THAT IF WE HAVE A PROCEDURE FOR EXTRAORDINARY PETITIONS, AREN'T WE OBLIGED TO CONSIDER THE POINTS RAISED BY THE PETITIONER?

DR. STEWARD: NO.

CHAIRMAN KLEIN: WE CAN AT THE DISCRETION OF THE BOARD MEMBERS. AND IF YOU, AS A BOARD MEMBER, WISH TO CONSIDER THOSE POINTS, THEN THEY ARE PROPERLY IN DEBATE.

DR. STEWARD: WE'RE NOT REQUIRED TO CONSIDER THOSE POINTS.

CHAIRMAN KLEIN: WE'RE NOT REQUIRED TO.

DR. PRIETO: THANK YOU.

CHAIRMAN KLEIN: APPROPRIATE STATEMENTS FROM BOTH PARTIES.

ADDITIONAL COMMENTS FROM THE BOARD? ADDITIONAL COMMENTS FROM THE AUDIENCE? DR. FRIEDMAN, AT YOUR OFFICES?

DR. FRIEDMAN: NO, THANK YOU.

CHAIRMAN KLEIN: OKAY. CALL THE QUESTION.

MS. KING: ROBERT PRICE.
DR. PRICE: NO.
MS. KING: FLOYD BLOOM.
DR. BLOOM: NO.
MS. KING: DAVID BRENNER.
DR. BRENNER: NO.
MS. KING: SUSAN BRYANT.
DR. BRYANT: NO.
MS. KING: MICHAEL FRIEDMAN.
DR. FRIEDMAN: NO.
MS. KING: BOB KLEIN.
CHAIRMAN KLEIN: NO.
MS. KING: GERALD LEVEY.
DR. LEVEY: NO.
MS. KING: FRANCISCO PRIETO.
DR. PRIETO: YES.
MS. KING: CARMEN PULIAFITO.
DR. PULIAFITO: NO.
MS. KING: ROBERT QUINT.
DR. QUINT: NO.
MS. KING: JOHN REED.
DR. REED: NO.
MS. KING: DUANE ROTH.
MR. ROTH: NO.
MS. KING: JOAN SAMUELSON.

MS. SAMUELSON: YES.
MS. KING: DAVID SERRANO-SEWELL.
MR. SERRANO-SEWELL: YES.
MS. KING: JEFF SHEEHY.
MR. SHEEHY: YES.
MS. KING: OSWALD STEWARD.
DR. STEWARD: NO.
MS. KING: ART TORRES.
MR. TORRES: WHAT'S THE VOTE?
MS. KING: WE HAVE 12 NOES SO FAR, FOUR YESES.
MR. TORRES: AYE.
CHAIRMAN KLEIN: ALL RIGHT. AT THIS POINT --
MS. KING: IF WE COULD JUST HAVE A COMMENT FROM COUNSEL.
MR. HARRISON: FOR THE RECORD, THAT MOTION FAILS.
CHAIRMAN KLEIN: LET ME ASK AT THIS POINT IS THERE ANYONE THAT WANTS TO MAKE A MOTION ON 1731 OR ANY LOWER APPLICATION BY SCORING? ANY MEMBER? IS THERE ANY MEMBER OF THE PUBLIC THAT WOULD LIKE TO MAKE A COMMENT ON 1731 OR ANY OTHER APPLICATION?
DR. FRIEDMAN: MR. CHAIRMAN, WE HAVE REPRESENTATIVES HERE WHO WOULD LIKE TO SPEAK TO THAT

APPLICATION.

CHAIRMAN KLEIN: PLEASE ASK THEM TO SPEAK.

DR. REED: GOOD AFTERNOON, DR. TROUNSON, MR. KLEIN, MEMBERS OF THE ICOC. MY NAME IS ELAINE REED, THE PRINCIPAL INVESTIGATOR ON THIS APPLICATION. I HAVE WITH ME HERE MY CO-INVESTIGATOR, ZORAN GALIC. AND WE APPRECIATE THE OPPORTUNITY TO PROVIDE COMMENT IN REFERENCE TO THIS EXTRAORDINARY PETITION TO REQUEST RECONSIDERATION OF OUR GRANT REVIEW FOR THE PROJECT WHICH WE PROPOSE TO CHARACTERIZE THE ALLOIMMUNE RESPONSE TO HUMAN STEM CELL-DERIVED PANCREATIC LINEAGES IN CELLS.

LIKE TO TAKE THIS OPPORTUNITY TO RESPOND TO THE SPECIFIC ISSUES RAISED BY THE REVIEWERS AND CLARIFY SPECIFIC POINTS THAT WE BELIEVE WERE MISUNDERSTOOD BY ONE OR MORE REVIEWERS.

FIRST AND FOREMOST, OUR PROPOSAL RESPONDED TO THE RFA REQUEST FOR APPLICATIONS THAT ADDRESS THE DEVELOPMENT AND VERIFICATION OF ANIMAL MODELS TO PREDICT THE HUMAN IMMUNE RESPONSE TO ALLOGENEIC TRANSPLANTATION. AS NOTED BY CIRM, THERE'S A CRITICAL NEED FOR THE DEVELOPMENT OF SUITABLE ANIMAL MODELS TO STUDY RESPONSE TO STEM CELLS AND TO STEM CELL-DERIVED CELL TISSUE.

SO THE MAIN OBJECTIVE OF THIS RESEARCH

THAT WE PROPOSED IN THE GRANT WAS TO DEVELOP AN ANIMAL/HUMAN CHIMERIC MODEL. THE BLT MOUSE IS AN IN VIVO SYSTEM TO STUDY REJECTION OF HUMAN EMBRYONIC STEM CELL-DERIVED EMBRYONIC STEM CELLS.

AND CLEARLY, ONCE THIS MODEL IS FULLY DEVELOPED, THIS WILL OPEN THE DOOR TO A WHOLE HOST OF ADDITIONAL MECHANISTIC STUDIES.

WE BELIEVE THAT THIS RESEARCH IS VERY IMPORTANT BECAUSE RIGHT NOW CURRENTLY THE IMMUNOGENICITY OF EMBRYONIC CELL-DERIVED TISSUE GRAFTS IS NOT WELL UNDERSTOOD AND REQUIRES FURTHER ASSESSMENT BEFORE WE CAN EVEN DREAM OF STRATEGIES AND DEVELOP STRATEGIES FOR TOLERANCE REDUCTION AND TO MAXIMIZE THE POTENTIAL IN-CELL REPLACEMENT IN REGENERATIVE MEDICINE. THEREFORE, WE'VE DEVELOPED A HUMANIZED MOUSE THAT SHOWS LONG-TERM RECONSTITUTION OF A FUNCTIONAL HUMAN IMMUNE SYSTEM. AND WE NOW PROPOSE TO GENERATE EMBRYONIC STEM CELL-DERIVED PANCREATIC LINEAGE CELLS AND GRAFT THEM IN A BLT MOUSE WITH THESE TISSUES AND CHARACTERIZE HOW THEY ADAPT TO THE IMMUNE SYSTEM RESPONSE TO THESE COMPATIBLE TRANSPLANTS OF THESE STEM CELL-DERIVED PANCREATIC LINEAGE CELLS.

OUR OVERALL -- IF YOU LOOK AT OUR REVIEW BY THE STUDY SECTION, YOU WILL SEE THAT IT WAS WELL

RECEIVED BY THE REVIEWERS. AND THEY COMMENTED THAT THE COMBINATION OF THE USE OF EMBRYONIC STEM CELL-DERIVED PANCREATIC LINEAGE CELLS AND THE HUMANIZED MOUSE MODEL WERE BOTH NOVEL. THEY ALSO AGREED THAT THE PROJECT WOULD HAVE TRANSLATIONAL IMPACT IF SUCCESSFUL SINCE IT WOULD PROVIDE INSIGHT NOT CURRENTLY ACHIEVABLE IN MAN.

THE REVIEWERS DESCRIBED THIS AS A SOLID GRANT APPLICATION WITH A CAREFULLY DEVELOPED EXPERIMENTAL PLAN AND LOGICAL AIM. HOWEVER, THE REVIEWERS WERE SPLIT, AND I WANT TO EMPHASIZE THE REASON WHY WE'RE HERE TO TALK ABOUT THIS IS THAT THE REVIEWERS WERE SPLIT REGARDING ONLY SOME ASPECTS OF THE FEASIBILITY OF THE MODEL.

I'D LIKE TO BRIEFLY ADDRESS SOME OF THE REVIEWERS' CONCERNS THAT WERE RAISED SINCE WE BELIEVE THAT CERTAIN POINTS MAY HAVE BEEN MISUNDERSTOOD BY ONE OR MORE OF THE REVIEWERS WHICH HAVE IMPACTED THE IMPRESSION AND OUTCOME OF OUR GRANT.

FIRST OF ALL, THE REVIEWERS WERE SPLIT ON THE HUMAN-BLT MOUSE AS A SURROGATE FOR HUMAN IMMUNE RESPONSES TO ES-DERIVED CELL TISSUE. MOUSE-HUMAN CHIMERIC MODELS ARE RELATIVELY NEW, BUT THEY'RE BECOMING MORE HUMANIZED, THEIR USE IS GROWING, THEIR

IMPORTANCE OF THIS MODEL IS BEING RECOGNIZED GLOBALLY. THE BLT MODEL IS THE MOST HUMANIZED SYSTEM TO DATE AND OFFERS ADVANTAGES THAT IN VITRO SYSTEMS CAN CERTAINLY NOT PROVIDE. SO THERE'S THE POTENTIAL TO EXPERIMENTALLY MODEL HUMAN IMMUNE RESPONSE TO TRANSPLANTED CELLS. WHILE THIS SYSTEM TO DATE HAS NOT BEEN USED TO MODEL HUMAN EMBRYONIC STEM CELL-DERIVED PANCREATIC LINEAGE CELL REJECTION, THERE'S SUFFICIENT EVIDENCE BOTH IN OUR OWN PRELIMINARY STUDIES AND IN THE LITERATURE THAT THIS MODEL CAN BE SUCCESSFULLY ADAPTED FOR THIS PURPOSE.

ONE CONCERN RAISED BY THE REVIEWER REGARDED OUR ABILITY TO PRODUCE PANCREATIC LINEAGE CELLS IN SUFFICIENT NUMBERS TO CONDUCT THE EXPERIMENT.

CHAIRMAN KLEIN: IF THE CANDIDATE COULD TRY AND WIND IT UP, I REALIZE THIS IS VERY IMPORTANT, BUT IF YOU COULD TRY AND WIND IT UP. WE TRY AND STAY FAIRLY CLOSE TO A THREE-MINUTE PRESENTATION, BUT BECAUSE YOU ARE A CANDIDATE APPLICANT, I'M GIVING YOU A LITTLE BIT MORE TIME.

DR. REED: I APPRECIATE THAT. THANK YOU. SO I WANT TO SAY THAT WE ROUTINELY OBTAIN THE REQUIRED CELL NUMBERS TO GIVE THESE STUDIES, IN FACT, OVER A BILLION ES CELLS PRIOR TO

DIFFERENTIATION FOR EACH STUDY.

WE HAVE NO -- WE HAVE SEVERAL APPROACHES FOR USING REPORTER EXPRESSION, AND THAT WE BELIEVE THAT THE CONCERNS RAISED BY THE REVIEWERS WILL BE OVERCOME BY THE MODELS WE PROPOSE AND THE ALTERNATIVE STRATEGIES. IN THE UNLIKELY EVENT THAT THE REPORTERS DO NOT MAINTAIN EXPRESSION, WE HAVE PROPOSED THE USE OF OTHER PROMOTERS, AS I SAID, OR WE CAN STILL PERFORM OUR ANALYSIS OF THESE PANCREATIC LINEAGE CELLS BY LOOKING AT OTHER FUNCTIONAL ASSAYS OF THE CELLS.

THERE WAS A CONCERN RAISED ABOUT THE SURVIVAL OF THE CELLS, AND WHAT WE WANT TO SAY IS IT'S ALREADY DOCUMENTED IN THE LITERATURE THAT THESE PANCREATIC LINEAGE CELLS CAN ENGRAFT AND SURVIVE OVER 100 DAYS IN ANIMAL MODELS.

THE ONE REVIEWER WAS CONCERNED THAT THE HUMAN-MOUSE MODEL WAS NOT VALIDATED AS BEING TRULY HUMAN, AND WE DISAGREE SINCE THE NOD-SCID COMMON CHAIN NEGATIVE MICE CANNOT MOUNT MURINE RESPONSES AS THEY'RE TRULY IMMUNODEFICIENT.

IN THE RESPONSE TO AIM 2, THE REVIEWERS STATED THAT IT WAS NOT HYPOTHESIS-DRIVEN, BUT WE BELIEVE THAT THEY OVERLOOKED THE HYPOTHESIS WHICH WAS ON PAGE 4 OF THE GRANT APPLICATION, WHICH STATES

THAT WE BELIEVE THAT THESE BLT MICE WILL INDUCE HUMORAL ACTIVATION BY INDIRECT ALLORECOGNITION PATHWAY.

CHAIRMAN KLEIN: SO IS THAT -- WE DO HAVE THE BENEFIT, OF COURSE, OF THE PETITION. WE APPRECIATE YOUR PERSONAL PRESENTATION. I WOULD JUST ASK THE MEMBERS ARE THERE ANY QUESTIONS OF THE PRESENTER? I THINK WE WOULD HOPE THAT YOU WOULD APPLY. I DON'T SEE A MOTION ON THIS ITEM. IS THERE ANOTHER PRESENTER THERE ADDRESSING THIS ITEM?

DR. FRIEDMAN: THERE IS HER COLLEAGUE AND COLLABORATOR ON THIS, MR. CHAIRMAN.

DR. GALIC: GOOD AFTERNOON. MY NAME IS ZORAN GALIC, AND I'M CO-INVESTIGATOR ON THIS PROPOSAL.

CHAIRMAN KLEIN: IN YOUR COMMENTS, IF YOU COULD, SINCE WE HAVE THE BENEFIT OF THE PRESENTATION WE'VE JUST HEARD AND THE EXTRAORDINARY PETITION, IF YOU COULD TRY AND KEEP THESE COMMENTS ON THREE MINUTES WORTH OF HIGHLIGHTS THAT YOU COULD ADDRESS.

DR. GALIC: (UNINTELLIGIBLE.)

CHAIRMAN KLEIN: IF YOU COULD SPEAK MORE SLOWLY PLEASE BECAUSE THE TRANSCRIPTION, WE'RE NOT ABLE TO MAKE A TRANSCRIBED COPY OF IT BECAUSE YOU NEED TO SLOW DOWN FOR THE REPORTER.

DR. GALIC: OF COURSE. WHAT I WAS SAYING IS THAT HERE WE ARE TRYING TO UTILIZE THE BEST HUMANIZED MOUSE MODEL TO ANSWER A VERY IMPORTANT QUESTION. AND IT SEEMS THAT SOME OR MOST REVIEWERS UNDERSTOOD THAT FULLY AND PRAISED OUR GRANT FOR THAT. HOWEVER, SOME REVIEWERS DID NOT SEEM TO UNDERSTAND THAT THE POINT OF THIS GRANT IS REALLY TO DEVELOP A NOVEL MODEL. AND, THEREFORE, THEY CRITICIZED CERTAIN THINGS THAT ARE ALREADY ESTABLISHED IN LITERATURE THAT STILL HAS TO BE DISCOVERED USING THIS MODEL.

SO, THEREFORE, OUR MAIN CONCERN IS THAT SOME DATA OF THESE GRANTS ARE MISINTERPRETED. AS MENTIONED, IT'S A QUESTION IF YOU CAN PROVIDE SUFFICIENT NUMBER OF CELLS -- THE RETRIEVAL OF THESE NUMBERS OF CELLS. DATA THAT WAS ALREADY PUBLISHED AND CLEARLY CITED IN THE GRANT HE OVERLOOKED, AND THAT'S ANOTHER REASON WHY WE QUESTIONED A REVIEWER'S COMMENT. THERE ARE CERTAIN ISSUE THAT WE RECOGNIZE AND MENTION IN THE GRANT AND OFFERED ALTERNATIVE APPROACHES THAT WERE ALSO OVERLOOKED, AND WE FELT THAT THAT WAS A CERTAIN POINT AFFECTED THE FINAL SCORE. AND THAT WOULD PRETTY MUCH BE THE COMMENT I WANTED TO MAKE. THANK YOU.

CHAIRMAN KLEIN: THANK YOU VERY MUCH. FOR

THE APPLICANT, I'D LIKE TO POINT OUT THAT WHILE WE HAVE ADDRESSED SOME APPLICATIONS AND APPROVED MOVING THEM UP WHERE THERE WAS A SPLIT IN THE REVIEW, THE SCORES THAT ARE POSTED PUBLICLY HERE SHOW THAT THE SPLITS ARE MUCH GREATER THAN IN THE SUBJECT GRANT IN THIS CASE. THE SCORES ON THOSE WE'VE MOVED UP HAVE BEEN BETWEEN A 50 AND 75, A REAL VERY SUBSTANTIAL SPLIT WITHIN THE PEER REVIEW GROUP. AND IN THIS CASE THE HIGH SCORE IS ABOUT A 65. SO IT'S IMPORTANT FOR YOU TO NOTE THAT THERE IS A DIFFERENCE IN THE DEGREE OF THE SPLIT WITHIN THE REVIEW GROUP, AND THE HIGH SCORE HERE IS BELOW THE SCORING LINE.

BUT WE HAVE TREMENDOUS RESPECT FOR YOUR WORK AND WOULD HOPE THAT YOU REMAIN COMMITTED TO THIS FIELD AND WORK TO COME BACK TO US ON ANOTHER ROUND WHERE THIS MIGHT BE APPLICABLE BECAUSE I DO NOT SEE A MOTION HERE AMONG THE MEMBERS.

ARE THERE OTHER MOTIONS ON ANY OTHER ITEM IN THE LIST OF APPLICATIONS? ANY OTHER PUBLIC COMMENT? ALL RIGHT.

WITH THAT, COUNSEL, WE HAVE TWO ITEMS THAT ARE STILL OPEN WAITING FOR A TECHNICAL QUORUM, ALTHOUGH WE HAVE A QUORUM PRESENT. BECAUSE OF RECUSALS, WE DON'T HAVE A QUORUM FOR THOSE TWO ITEMS. OTHER THAN THOSE ITEMS, COUNSEL, COULD WE

MOVE ALL OF THE OTHER ITEMS FOR FUNDING?

MR. HARRISON: THERE ARE TWO OTHER APPLICATIONS IN TIER I FOR WHICH WE NEED DR. HAWGOOD'S VOTE AS WELL. SO DR. HAWGOOD, I BELIEVE, IS DUE TO ARRIVE AT 5:30. WE COULD POSTPONE AN OMNIBUS MOTION UNTIL THAT POINT, AND HOPEFULLY WE COULD THEN -- WE CAN DO THAT AS WELL.

CHAIRMAN KLEIN: SENATOR TORRES HAS SUGGESTED THAT WE TAKE THE ROLL ON THE MOTIONS AND PUT A CALL ON THE ROLL. WHAT IS THE PLEASURE OF THE BOARD?

DR. FRIEDMAN: MR. CHAIRMAN, I WOULD PREFER THAT. I'M CONCERNED THAT I'M GOING TO HAVE TO LEAVE IN A BIT, AND I DON'T WANT TO RUN US A VOTE SHORT.

CHAIRMAN KLEIN: OKAY. WITH THAT, I THINK I WILL FOLLOW THE SUGGESTION OF SENATOR TORRES. WITHOUT OBJECTION.

SO, COUNSEL, WOULD WE LIKE TO TAKE A SECOND. WHILE COUNSEL IS CONSOLIDATING THESE RESULTS FOR A VOTE, I'M GOING TO GIVE A TWO-MINUTE BREAK FOR THE STAFF AND THE MEMBERS.

(A RECESS WAS TAKEN.)

CHAIRMAN KLEIN: IN THE ROOM I'D LIKE TO SAY TO EVERYONE BEFORE WE END TONIGHT, SINCE THIS

WILL BE DR. LEVEY'S LAST MEETING, I'D LIKE TO HAVE A STANDING OVATION FOR HIM, BUT LET'S KEEP THAT TO THE END. AND THE PLAN WOULD BE TONIGHT TO BREAK BETWEEN 6:30 AND A QUARTER OF SEVEN, NOT COME BACK TONIGHT. I THINK WE CAN GET ENOUGH ACCOMPLISHED AND GO TO DINNER. AND THERE IS A GROUP DINNER THAT'S PROVIDED FOR EVERYONE IN THE SAME ROOM WHERE WE HAD LUNCH.

ALL RIGHT. IF COUNSEL CAN GIVE US SOME INSTRUCTIONS ON WHAT THE RECOMMENDED PROTOCOL WOULD BE.

MR. HARRISON: WE HAVE A MOTION FROM SENATOR TORRES, WHICH, IF I UNDERSTAND IT CORRECTLY, IS TO FUND ALL THE APPLICATIONS IN TIER I, SECONDED BY DAVID SERRANO-SEWELL. I MIGHT RECOMMEND, TO SIMPLIFY THINGS, THAT SENATOR TORRES CONSIDER INCORPORATING INTO THAT MOTION AN ADDITIONAL ELEMENT, WHICH WOULD BE NOT TO FUND THE REMAINING APPLICATIONS, SO THAT WE CAN COMPLETE IT ALL IN ONE MOTION.

MR. TORRES: THAT WOULD BE MY TOTAL MOTION.

CHAIRMAN KLEIN: ALL RIGHT. WE WOULD DO THEM AS A GROUP; BUT WHEN YOU VOTE, YOU WILL VOTE YEA OR NAY FOR ALL THOSE FOR WHICH YOU ARE IN FAVOR OR OPPOSED EXCEPT FOR THE ONES WITH WHICH YOU HAVE A

CONFLICT. MAKE SURE THE STATEMENT IS MADE EXCEPT FOR ONES FOR WHICH YOU HAVE A CONFLICT. AND WE ARE GOING TO HOLD THE ROLL OPEN FOR FOUR APPLICATIONS. AND WOULD YOU PLEASE, FOR THE RECORD, CITE THOSE FOUR APPLICATIONS?

MR. HARRISON: THERE ARE ACTUALLY MORE THAN FOUR. THERE WERE JUST TWO ADDITIONAL ONES IN TIER I THAT I HAD IDENTIFIED, BUT THERE ARE ADDITIONAL ONES IN TIER III.

CHAIRMAN KLEIN: FOR THE RECORD, IF YOU PLEASE CITE THOSE.

MR. HARRISON: SURE. 1739, 1709, 1743, 1717, 1744, 1742, 1712, 1723, AND 1741.

CHAIRMAN KLEIN: ALL RIGHT. SCOTT TOCHER, YOU AGREE WITH THAT?

MR. TOCHER: YES.

CHAIRMAN KLEIN: OKAY. SO WE'RE GOING TO GIVE AN AWARD TO DR. HAWGOOD WHEN HE ARRIVES. DR. LEVEY HAS RETURNED. DR. PULIAFITO HAS RETURNED. I BELIEVE WE HAVE THE MEMBERS PRESENT; IS THAT CORRECT?

DR. FRIEDMAN: MR. CHAIRMAN, I'M ON THE CALL AS WELL.

CHAIRMAN KLEIN: DR. FRIEDMAN IS ON THE CALL.

DR. FRIEDMAN: THANK YOU.

CHAIRMAN KLEIN: COULD WE TURN DOWN THE VOLUME JUST A BIT?

MS. KING: JOAN WILL BE REJOINING MOMENTARILY.

CHAIRMAN KLEIN: AMY, COULD YOU SEE HOW JOAN IS DOING, PLEASE? ALL RIGHT. IF JOAN IS NOT IN IN TIME BY THE TIME WE FINISH THE ROLL CALL, WE WILL HOLD IT OPEN FOR HER. SO WOULD YOU PLEASE CALL THE ROLL, MELISSA KING.

MS. KING: DONALD DAFOE.

DR. DAFOE: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: ROBERT PRICE.

DR. PRICE: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: FLOYD BLOOM.

DR. BLOOM: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: DAVID BRENNER.

DR. BRENNER: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: WILLIAM BRODY.

DR. BRODY: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: SUSAN BRYANT.

DR. BRYANT: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: MICHAEL FRIEDMAN.

DR. FRIEDMAN: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: BOB KLEIN.

CHAIRMAN KLEIN: YES.

MS. KING: GERALD LEVEY.

DR. LEVEY: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: FRANCISCO PRIETO.

DR. PRIETO: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: CARMEN PULIAFITO.

DR. PULIAFITO: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: ROBERT QUINT.

DR. QUINT: YES, AND I HAVE NO CONFLICT.

MS. KING: JOHN REED.

DR. REED: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: DUANE ROTH.

MR. ROTH: YES.

MS. KING: JOAN SAMUELSON.

CHAIRMAN KLEIN: JOAN, THE MOTION AND THE SECOND ARE TO APPROVE ALL OF THOSE ON WHICH WE HAVE PREVIOUSLY VOTED APPROVAL INDIVIDUALLY. IN ADDITION THAT STARTED IN TIER I, WE ARE HOLDING THE ROLL OPEN --

MS. KING: AND ALSO TO NOT FUND THOSE IN TIER III.

CHAIRMAN KLEIN: WE ARE HOLDING THE ROLL OPEN FOR DR. HAWGOOD, BUT WE'RE RECORDING THE VOTES OF EVERYONE ELSE WHO WOULD SUPPORT THE PRIOR ACTIONS AND THE ONES IN TIER I AS ORIGINALLY RECOMMENDED WHILE VOTING NOT TO FUND ANYTHING THAT HAS NOT PREVIOUSLY BEEN RECOMMENDED AND APPROVED BY THIS BOARD FOR FUNDING.

MS. SAMUELSON: THANK YOU, MR. CHAIRMAN. I VOTE YES.

MS. KING: DAVID SERRANO-SEWELL.

MR. SERRANO-SEWELL: YES.

MS. KING: JEFF SHEEHY.

MR. SHEEHY: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: OSWALD STEWARD.

DR. STEWARD: YES, EXCEPT FOR THOSE FOR WHICH I HAVE A CONFLICT.

MS. KING: ART TORRES.

MR. TORRES: AYE.

CHAIRMAN KLEIN: DID YOU CALL DR. REED?

MS. KING: I DID, YES.

CHAIRMAN KLEIN: MR. PRESIDENT, DR. TROUNSON, WHAT I'D LIKE TO DO IS ADDRESS A COUPLE OF ITEMS VERY QUICKLY THAT I THINK WE CAN MOVE ON EXPEDITIOUSLY, ITEM NO. 11 AND ITEM 12, WHICH ARE VERY IMPORTANT ITEMS FOR FUNCTION OF THE STANDARDS AND THE GRANTS WORKING GROUP. IF COULD I ASK WHO YOU WOULD LIKE TO PRESENT ITEM 11?

MS. KING: GIL SAMBRANO WILL BE PRESENTING THAT, GEOFF LOMAX NOT BEING PRESENT.

DR. SAMBRANO: SO I THINK DR. LOMAX WANTED TO BE HERE TO BE ABLE TO SAY A FEW WORDS ABOUT DR. KAMP. SO IN LIGHT OF THE FACT THAT HE IS NOT PRESENT, HE ASKED ME JUST TO PRESENT THIS SLIDE TO YOU AND LET YOU KNOW THAT THIS IS A NEW CANDIDATE FOR THE STANDARDS WORKING GROUP, A SCIENTIST AND CLINICIAN WHO IS WELL RECOGNIZED AND KNOWN IN THE FIELD. AND I BELIEVE MEMBERS OF THE STANDARDS WORKING GROUP HAVE IN GENERAL AGREED THAT THIS IS SOMEBODY THEY WOULD LIKE TO SEE BE ADDED AS A SCIENTIFIC MEMBER OF THIS GROUP.

CHAIRMAN KLEIN: I'D LIKE TO POINT OUT THAT DR. KAMP IS EXTREMELY WELL RECOGNIZED FOR HIS

WORK WITH CARDIOMYOCYTES AND WAS RECENTLY AT THE ISSCR WHERE THE STATE OF WISCONSIN BROUGHT HIM FORWARD IN A PRESS CONFERENCE WITH THE GOVERNOR OF WISCONSIN, WHO RECOGNIZED HIM AS ONE OF THE LEADING RESEARCHERS FROM THEIR STATE. SO WE'RE VERY PRIVILEGED TO HAVE DR. TIMOTHY KAMP AS A CANDIDATE.

ANY ADDITIONAL BOARD COMMENT?

MR. ROTH: MOTION TO APPROVE.

CHAIRMAN KLEIN: MOTION FROM DUANE ROTH TO APPROVE. IS THERE A SECOND?

DR. PRIETO: SECOND.

CHAIRMAN KLEIN: SECOND FROM DR. PRIETO. DISCUSSION? DISCUSSION FROM THE PUBLIC? ALL IN FAVOR?

(CHORUS OF AYES.)

CHAIRMAN KLEIN: OPPOSED?

(NO RESPONSE.)

CHAIRMAN KLEIN: THANK YOU.

MS. KING: FOR THE RECORD, THE VOTE FROM DR. FRIEDMAN ON THE PHONE WAS AYE.

CHAIRMAN KLEIN: ITEM NO. 12.

DR. SAMBRANO: SO TAB 12.

CHAIRMAN KLEIN: FOR THE AUDIENCE ON THE PHONE, DR. SAMBRANO IS DOING THE PRESENTATION.

DR. SAMBRANO: WE ARE BRINGING FOR YOUR

CONSIDERATION EIGHT NOMINEES FOR ALTERNATE GRANTS WORKING GROUP MEMBERS. AND AS USUAL, I WOULD REMIND YOU THAT THESE GRANTS WORKING GROUP MEMBERS MAY BE CALLED UPON TO PARTICIPATE IN A GRANTS WORKING GROUP MEETING AS AN AD HOC REVIEWER OR ASKED TO BECOME A REGULAR MEMBER OF THE WORKING GROUP TO REPLACE CURRENT MEMBERS AS NECESSARY.

THESE NEW MEMBERS WOULD BE SUBJECT TO AND MUST AGREE TO ABIDE BY THE SAME CONFLICT OF INTEREST AND FINANCIAL DISCLOSURE POLICY AS REGULAR WORKING GROUP MEMBERS.

THE NOMINEES INCLUDE DR. PATRICK BRUNDIN, DR. MARC DIAMOND, DR. FRANZ HEFTI, DR. DAVID MCKENNA, DR. SEAN PALECEK, DR. DAVID SACHS, DR. G. SITTA SITTAMPALAM, AND DR. BARBARA WIROSTKO.

SO CIRM REQUESTS YOUR APPROVAL AND APPOINTMENT OF THESE NOMINEES AS ALTERNATE MEMBERS OF THE WORKING GROUP.

CHAIRMAN KLEIN: I THINK WE HAVE THE BIOS AS BEEN STATED. IS THERE COMMENTS FROM ANY MEMBERS OF THE BOARD? CERTAINLY THESE ARE VERY DISTINGUISHED INDIVIDUALS. WE ARE VERY PRIVILEGED TO THEM HAVE AS MEMBERS OF THE GRANTS WORKING GROUP. ANY MEMBERS FROM THE PUBLIC WITH COMMENT? IS THERE A MOTION TO APPROVE?

MR. ROTH: SO MOVED.
DR. BRENNER: SECOND.
CHAIRMAN KLEIN: THANK YOU. FURTHER DISCUSSION? ALL IN FAVOR?
(CHORUS OF AYES.)
CHAIRMAN KLEIN: OPPOSED?
(NO RESPONSE.)
CHAIRMAN KLEIN: DR. FRIEDMAN, YOUR VOTE?
DR. FRIEDMAN: AYE.
CHAIRMAN KLEIN: AND THE BASIC BIOLOGY AWARDS III, DR. TROUNSON.
DR. TROUNSON: SO WHO'S GOING TO PRESENT THAT? DR. KELLY SHEPHERD. I THINK THIS IS PERHAPS THE FIRST TIME SHE'S PRESENTED TO THE BOARD, SO PLEASE BE KIND TO HER.
CHAIRMAN KLEIN: WE'LL ALSO BE DULY IMPRESSED, DR. SHEPHERD.
DR. SHEPHERD: MR. CHAIRMAN, MEMBERS OF THE BOARD, AND AUDIENCE, IT IS MY PLEASURE TO PRESENT FOR YOUR CONSIDERATION THE CONCEPT PROPOSAL FOR RFA 10-04, THE BASIC BIOLOGY AWARDS III. THIS IS AGENDA ITEM NO. 13 IN YOUR BINDER.
THE FIELD OF STEM CELL BIOLOGY CONTINUES TO MOVE AT A RAPID PACE, YET THERE ARE STILL FUNDAMENTAL ISSUES RELATED TO THE CONTROL OF STEM

CELL FATE THAT REQUIRE FURTHER EXPLORATION BEFORE THEIR FULL TRANSLATIONAL POTENTIAL CAN BE REALIZED. THE PURPOSE OF CIRM'S BASIC BIOLOGY PROGRAM IS TO CAPITALIZE ON THE EXISTING MOMENTUM IN THE FIELD AND FOSTER INNOVATIVE, CUTTING-EDGE RESEARCH TOWARDS ADVANCING OUR BASIC UNDERSTANDING OF HUMAN STEM CELL BIOLOGY THEREBY EXPANDING THE KNOWLEDGE BASE THAT BOTH FUELS AND FACILITATES CLINICAL ADVANCE.

IN ORDER TO MOST EFFICIENTLY AND EFFECTIVELY REALIZE THESE GOALS, THE BASIC BIOLOGY III PROGRAM WILL BE TARGETED TOWARDS ADDRESSING SIGNIFICANT UNRESOLVED ISSUES PERTINENT TO THE UNDERSTANDING OF HUMAN STEM CELL BIOLOGY THAT HAVE THE POTENTIAL TO SUBSTANTIALLY ADVANCE THE FIELD. TO THIS END, CIRM HAS IDENTIFIED PRIORITY AREAS FOR FUNDING, WHICH ARE LISTED IN THE CONCEPT PROPOSAL DOCUMENT WITHIN YOUR BINDERS. I'LL JUST GIVE YOU A COUPLE OF EXAMPLES OF SOME OF THOSE AREAS.

ONE AREA IS UNDERSTANDING THE BIOLOGY OF HUMAN PLURIPOTENT STEM CELLS THAT INCLUDES EMBRYONIC STEM CELLS, INDUCED PLURIPOTENT STEM CELLS, ELUCIDATING MECHANISMS THAT CONTROL CELL FATE AND THEIR DEVELOPMENTAL POTENTIAL, AND THE MOLECULAR BASIS OF LINEAGE SPECIFICATION IN TISSUE IDENTITY.

WITH CIRM'S OVERALL MISSION IN MIND, THE

BASIC BIOLOGY III AWARDS WILL CONTINUE TO BE PRIORITIZED TOWARDS THOSE STUDIES FOCUSED ON AND UTILIZING HUMAN CELLS, AND ONLY IN EXCEPTIONALLY GROUNDBREAKING CASES WILL USE OF OTHER MAMMALIAN SYSTEMS BE CONSIDERED.

WHILE VERY SIMILAR TO THE CONCEPT YOU'VE PREVIOUSLY APPROVED FOR BASIC BIOLOGY I AND II, THE SCOPE OF BASIC BIOLOGY III HAS BEEN EXPANDED SOMEWHAT TO INCLUDE COMPELLING STUDIES WHERE THE UNIQUE PROPERTIES OF HUMAN STEM CELLS COULD BE EXPLOITED IN VITRO TO STUDY THE MOLECULAR BASIS OF DISEASE.

SO THE ELIGIBILITY CRITERIA FOR PRINCIPAL INVESTIGATORS ARE THE SAME AS THOSE THAT YOU HAVE APPROVED PREVIOUSLY AND USED IN CIRM'S OTHER RFA'S. BRIEFLY, THE PROGRAM WILL BE OPEN TO PRINCIPAL INVESTIGATORS WITH PH.D., M.D., OR EQUIVALENT DEGREES WHO ARE AUTHORIZED BY THE APPLICANT INSTITUTION TO CONDUCT THE PROPOSED RESEARCH.

DUE TO THE URGENCY OF CIRM'S MISSION, THIS INITIATIVE WILL REQUIRE A 20-PERCENT MINIMUM EFFORT COMMITMENT BY THE PRINCIPAL INVESTIGATOR. NOW, UNLIKE THE PREVIOUS BASIC BIOLOGY ROUNDS, THERE WILL BE NO RESTRICTIONS ON HOLDERS OF CIRM NEW FACULTY OR COMPREHENSIVE AWARDS. FOR THIS RFA ANY ELIGIBLE PI

MAY APPLY REGARDLESS OF WHAT OTHER GRANTS ARE HELD AS LONG AS THE MINIMUM 20-PERCENT EFFORT REQUIREMENT CAN BE MET. IN TERMS OF INSTITUTIONAL ELIGIBILITY, BOTH NONPROFIT AND FOR-PROFIT INSTITUTIONS WILL BE ELIGIBLE TO APPLY.

THE DETAILS OF THE BASIC BIOLOGY III AWARDS ARE THE FOLLOWING: CIRM PROPOSES TO FUND UP TO 30 AWARDS FOR UP TO THREE YEARS IN DURATION WITH JUSTIFIABLE DIRECT PROJECT COSTS UP TO 300,000 PER YEAR, FOR A TOTAL PROGRAM COST OF UP TO $45 MILLION.

THE BASIC BIOLOGY III AWARDS WOULD MAKE USE OF THE PREAPPLICATION MECHANISM WITH NO INSTITUTIONAL LIMITS. WE ANTICIPATE AN EVEN GREATER RESPONSE TO THIS CALLING FOR FUNDING THAN THE PREVIOUS ITERATION OF BASIC BIOLOGY AWARDS IN WHICH WE RECEIVED 289 PREAPPLICATIONS, EACH FROM A DIFFERENT PRINCIPAL INVESTIGATOR. FURTHERMORE, WITH THE REMOVAL OF ELIGIBILITY RESTRICTIONS ON INVESTIGATORS AND THE POTENTIAL INFLUX OF NEW INVESTIGATORS AND SPIN-OFF RESEARCH IN THE STATE OF CALIFORNIA, WE EXPECT THE RESPONSE THIS TIME TO BE EVEN GREATER.

THE PREAPPLICATION REVIEW PROCESS SCIENTIFIC REVIEW CRITERIA WILL BE USED TO SELECT THE 50 TO 60 MOST PROMISING COMPETITIVE AND

RESPONSIVE PREAPPLICATIONS TO BE INVITED TO SUBMIT FULL APPLICATIONS WHICH SUBSEQUENTLY WILL BE REVIEWED BY THE GRANTS WORKING GROUP.

CIRM HAS ESTABLISHED A PROVISIONAL TIMETABLE FOR THIS INITIATIVE. WE ANTICIPATE THAT RFA 10-01 WOULD BE RELEASED IN EARLY AUGUST OF THIS YEAR WITH PREAPPLICATIONS DUE THE FOLLOWING SEPTEMBER. FULL APPLICATIONS WOULD BE DUE IN DECEMBER AFTER WHICH THEY WILL BE ASSIGNED TO EXPERTS FROM THE GRANTS WORKING GROUP FOR REVIEW AND DISCUSSION AT THE FEBRUARY 2011 MEETING. THE RESULTING RECOMMENDATIONS WOULD BE BROUGHT BEFORE THIS BOARD IN APRIL OF 2011.

IN SUMMARY, WE'RE REQUESTING APPROVAL FOR THE CONCEPT PLAN FOR BASIC BIOLOGY AWARDS III, WHICH INCLUDES A PREAPPLICATION PROCESS, A BUDGET OF UP TO $45 MILLION TO FUND UP TO 30 AWARDS TOTAL FOR THREE YEARS IN DURATION, $300,000 A YEAR DIRECT PROJECT COST, AND NO LIMITATIONS ON ELIGIBLE PRINCIPAL INVESTIGATORS WHO COMMIT AT LEAST 20-PERCENT EFFORT.

AND WITH THAT, I'D BE HAPPY TO TAKE ANY QUESTIONS.

CHAIRMAN KLEIN: QUESTIONS FROM THE BOARD?

DR. REED: I JUST WANTED TO DISCUSS THE 20-PERCENT EFFORT REQUIREMENT INASMUCH AS THE

APPLICATIONS ARE UP TO 300,000 AND SOME MIGHT APPLY FOR LESS. COULD IT BE PERMISSIBLE TO PROVIDE LESS EFFORT IF ONE MIGHT BE APPLYING FOR LESS FUNDS?

DR. SHEPHERD: WE EXPECT THE PRINCIPAL INVESTIGATORS TO SHOW A REAL COMMITMENT TO THESE PROJECTS EVEN IF THEIR GRANT MAY BE LESS EXPENSIVE OR THERE MIGHT BE -- THERE ARE EXCEPTIONS TO THIS. THE DISCRETION OF THE PRESIDENT OF CIRM IF THERE'S AN EXCEPTIONAL CIRCUMSTANCE WHERE HE FEELS A PRINCIPAL INVESTIGATOR MIGHT BE ABLE TO MAKE A SIGNIFICANT CONTRIBUTION WITHOUT THAT 20-PERCENT EFFORT, BUT IN GENERAL THAT'S THE MINIMUM REQUIREMENT. AND THAT HAS BEEN THE WAY IT IS IN THE PAST BASIC BIOLOGY ROUNDS AS WELL.

CHAIRMAN KLEIN: I THINK THAT IT'S VERY HELPFUL, DR. TROUNSON, IF YOU COULD EXPAND ON WHAT THOSE EXCEPTIONS ARE FOR THE DELEGATED AUTHORITY TO THE PRESIDENT TO MAKE DETERMINATIONS ON EXCEPTION.

DR. TROUNSON: THANKS, CHAIR. AND WE DON'T OFTEN DO IT, WHICH IS ONE THING BECAUSE WE'RE NOT OFTEN REQUESTED TO DO IT, WHICH IS MAYBE A BIT SURPRISING. BUT IT'S REALLY WHERE THERE IS A SENIOR INVESTIGATOR AND THEIR ROLE IN THAT PROJECT IS REALLY SORT OF AN ORGANIZATIONAL COMPONENT THAT WITHOUT THEM, THE REVIEWERS WOULD FEEL THAT THE TEAM

WOULD BE NOT QUITE THE SAME OR NOT WELL BALANCED. SO IN SOME OF THOSE CASES WITH SENIOR INVESTIGATORS, WE'VE RECOGNIZED THAT REDUCING THEIR PERCENTAGE COMMITMENT CAN BE ENABLING FOR THEM TO BE INVOLVED IN SOME OTHER THINGS, WHICH ARE ALSO IMPORTANT TO US FREQUENTLY.

SO I THINK THE 20 PERCENT IS INDICATIVE OF WANTING TO HAVE A VERY STRONG COMMITMENT FROM THEM, FROM THE PI IN EACH AND EVERY CASE. BUT I THINK IN SOME CIRCUMSTANCES AND DEPENDING UPON THE GRANT AND THEIR INVOLVEMENT IN IT, THE ADJUSTMENTS CAN BE SUITABLY MADE, AND WE HAVE DONE THAT IN THE PAST.

DR. REED: SO I WONDER IF IT MIGHT BE SIMPLER TO SET A 20 PERCENT AS A GUIDELINE RATHER THAN A REQUIREMENT, SAYING THAT, IN GENERAL, WE'RE LOOKING FOR A COMMITMENT IN THE RANGE OF 20 PERCENT AND THAT ONE'S EFFORT SHOULD BE WELL JUSTIFIED AND ALLOWING EACH INVESTIGATOR TO SORT OF STAND ON THEIR OWN MERITS AND THEIR OWN JUSTIFICATION THAT THIS STUDY SECTION CAN THEN REVIEW AND DECIDE WHETHER THEY FIND COMPELLING OR NOT.

DR. TROUNSON: I THINK THAT THAT'S DEFINITELY AN OPTION THAT WOULD BE AVAILABLE. ONE THING I WOULD SAY IS THAT THE REVIEW PANELS DO LOOK AT THESE PERCENTAGE ALLOCATIONS AND AWARD IN FAVOR

OF THOSE WHO ARE GIVING THE BIGGER COMMITMENTS, PARTICULARLY IN SOME AREAS THEY RECOGNIZE THAT HAVING THAT MUCH OF A ROLE -- THAT MUCH PERCENTAGE ALLOCATION IS VERY MEANINGFUL. SO THE ONLY RISK IS THAT YOU MIGHT BE SITTING DOWN -- YOU MIGHT BE PENALIZED, IF YOU LIKE, IF YOU WENT DOWN BELOW 10 PERCENT, AND THEY THOUGHT, WELL, IT'S NOT SUCH A MEANINGFUL IMPORT INTO THE PROJECT, AND DOES THE REST OF THE TIME REALLY MAKE UP FOR THAT. I THINK THIS IS A LITTLE BIT TO DO ABOUT HOW YOU FASHION YOUR GRANT.

AND MORE THAN ANYTHING, I THINK THIS IS AN INDICATOR BECAUSE IF YOU ACTUALLY GO TO THE UNIVERSITIES, THERE'S A VERY VARIABLE DETERMINATION OF HOW THAT PERCENTAGE IS MADE UP ANYWAY. SO IT'S NOT A KIND OF ROCK SOLID FIGURE AT THE BEST OF TIMES. SO I THINK THE WAY WE'VE GOT IT IS A BIT INDICATIVE, BUT WE CAN MAKE THAT MORE INDICATIVE IN A FORMAL SENSE.

CHAIRMAN KLEIN: MR. SHEEHY.

MR. SHEEHY: FIRST, THANK YOU FOR YOUR PRESENTATION, DR. SHEPHERD. MY QUESTION IS ACTUALLY I GUESS I'M TRYING TO UNDERSTAND HOW WE'RE ROLLING OUT OUR GRANTS. SO I HAVE BASIC BIOLOGY SCHEDULED FOR JULY/SEPTEMBER 2011 ON AGENDA ITEM 17, AND WE

DON'T DO DISEASE TEAM II UNTIL DECEMBER OF 2011, SO WE'RE NOT GOING TO COME BACK AND DO THE NEXT DISEASE TEAM FOR ANOTHER YEAR?

CHAIRMAN KLEIN: DR. TROUNSON.

DR. TROUNSON: I NEED TO GET MAYBE PAT OLSON TO BE MORE SPECIFIC ABOUT THOSE DATES. WE ARE SUFFERING A BIT ON THE GROUND WITH RESPECT TO BEING ABLE TO DELIVER ON THESE PROGRAMS. IT'S TAKEN MUCH MORE OF OUR TIME THAN WE EVER THOUGHT IT WOULD TO GET THE DISEASE TEAMS PROPERLY SCOPED UP AND GOING. SO THE SENSE OF IT IS THAT WE ARE REALLY STRUGGLING FROM THE SCIENCE CAPACITY AT THE MOMENT TO DELIVER.

I THINK THE PROGRAM, PAT, HAVE YOU GOT THE ACTUAL PROGRAM FOR THE DISEASE TEAMS? I THINK JEFF'S ASKING THAT PARTICULAR QUESTION.

CHAIRMAN KLEIN: AND I THINK WE HAD -- THE REASON FOR THE QUESTION I THINK, JEFF, IS THAT WE HAD AN EARLIER SCHEDULE FOR DISEASE TEAM THAT'S ALSO BEEN DISCUSSED AT THE BOARD. DR. OLSON, IF YOU COULD HELP US.

DR. OLSON: I JUST WANT TO COMMENT THAT THE ROLLOUT SCHEDULE IN ITEM 17 REFLECTS THE TIMING OF FUNDS TO BE PAID OUT AS OPPOSED TO WHEN THEY WOULD BE REVIEWED BY THIS BOARD. SO IT'S BASED ON ESTIMATES OF THAT AS OPPOSED TO. SO THIS IS THAT --

OH, NEXT ICOC DECISION. THIS ONE -- I'M SORRY. I NEED TO LOOK AT THIS. THE BASIC BIOLOGY, YEAH, APRIL. THAT'S WHAT WE SAID.

DR. SHEPHERD: THAT'S WHEN IT'S PRESENTED TO YOU.

DR. OLSON: DISEASE TEAMS IS JUNE OF 2011. THOSE ARE CORRECT DATES ACTUALLY FOR THE BOARD REVIEW. IT ACTUALLY IS JUNE, I BELIEVE, OF 2011, BUT IT WOULD NOT BE PAID OUT UNTIL MUCH LATER.

MR. SHEEHY: I'M LOOKING UNDER ITEM 17, APPENDIX 1, THE LIST OF RFA'S. I DON'T KNOW. THAT'S JUST WHAT -- PAGE 9.

DR. TROUNSON: WHAT ARE YOU ACTUALLY LOOKING AT, JEFF?

DR. OLSON: HE'S LOOKING AT THE FINANCIAL PROJECTION SHEET. AND SO --

CHAIRMAN KLEIN: THERE'S ALSO A SCHEDULE ON ITEM 17 ON PAGE 2, JEFF, THAT HAS NEXT ICOC DECISION, AND IT ACTUALLY HAS DISEASE TEAMS AUGUST 2011 FOR A FINAL DECISION. SO I THINK DR. OLSON WAS THINKING IT MIGHT HAVE BEEN JUNE. COULD BE --

DR. OLSON: I'M JUST SAYING DEPENDING ON WHAT SCHEDULE. THE CURRENT SCHEDULE THAT I HAVE FOR DISEASE TEAMS AS BEING --

MR. SHEEHY: WE CAN GO AHEAD. I'M HAPPY

TO APPROVE THIS. IT'D JUST BE GREAT IF WE COULD GET SOME CONSISTENCY IN DOCUMENTATION, AND WE COULD HAVE SOME SENSE.

DR. OLSON: REVIEWED IN JUNE AND APPROVED IN AUGUST.

CHAIRMAN KLEIN: I THINK SOME OF THESE SCHEDULES HAVE BEEN MOVING AS THEY'VE BROUGHT FORWARD A CLINICAL TRIALS RFA. AND MAYBE AT THE NEXT MEETING, WE CAN HAVE AN OVERVIEW.

MR. SHEEHY: YEAH.

DR. OLSON: SO THE DATES ARE CONSISTENT. THE BOARD APPROVAL DATE IS IN TABLE 1. THAT'S THE CURRENT SCHEDULE. AND THEN IN TABLE 1 OF AGENDA ITEM 17, PAGE 2, AND THEN APPARENTLY JOHN WAS SAYING THAT YOU WERE LOOKING AT ANOTHER TABLE, WHICH WOULD BE THE FUNDING START DATE, WHICH IS OBVIOUSLY DELAYED BECAUSE YOU HAVE TO GO THROUGH THE ASSURANCES AND ALL THE ESSENTIALLY PREFUNDING ADMINISTRATIVE REVIEW.

MR. SHEEHY: I'M LOOKING AT PAGE 9, APPENDIX 1.

CHAIRMAN KLEIN: SO WE'RE GOING TO GET A FULL UPDATE AT THE NEXT BOARD MEETING, BUT IMPORTANT FOR EVERYONE TO REMEMBER IS THAT, I BELIEVE, DR. TROUNSON, WE'RE STILL UNDER A POLICY WHERE YOU CAN

INCLUDE IN YOUR COST WORK THAT'S DONE WITHIN 90 DAYS OF THE DATE.

DR. TROUNSON: WELL, THAT'S CORRECT.

CHAIRMAN KLEIN: COULD YOU EXPLAIN THAT POSITION SO THAT THEY UNDERSTAND THAT THE WORK CAN BEGIN AT AN EARLIER DATE?

DR. TROUNSON: YOU CAN BEGIN WORK UP TO 90 DAYS, AS BOB SAID, PRIOR TO THE ISSUE OF THE CONTRACT FOR DOING THE WORK PROVIDING YOU ACCEPT THAT IF SOMETHING GOES WRONG, THAT WE WOULDN'T BE CHARGED. SO THE INTENT IS TO ENABLE THE PROJECTS TO GO FORWARD THREE MONTHS, AT LEAST THREE MONTHS PRIOR TO THE ACTUAL ISSUE OF THE AWARD.

I THINK WHAT JEFF IS LOOKING AT HERE IS THE PRESENTATION FROM JOHN ROBSON, WHICH IS LOOKING -- WE'VE BEEN USING A WHOLE LOT OF DIFFERENT DATA TO WORK OUR WAY THROUGH THE FINANCIAL PROJECTIONS. SO I THINK THE INFORMATION ON THE ACTUAL RELEASE OF ALL THE RFA'S IS REALLY VERY MUCH IN PAT OLSON'S PORTFOLIO, SO THERE ARE SLIGHT DIFFERENCES IN THAT REGARD.

CHAIRMAN KLEIN: THANK YOU. SO WE'LL LOOK FORWARD FOR JUST AN OVERALL TIME PATTERN REVIEW OF THIS SCHEDULE FOR THE NEXT MEETING.

MR. SHEEHY: IT WOULD BE HELPFUL IF WE HAD

A SCHEDULE AND THEN SOME SENSE STRATEGICALLY. I KNOW WE'RE GOING TO LOOK AT THE PORTFOLIO, THE DEVELOPMENTAL PIPELINE PORTFOLIO, BUT I'D LIKE TO HAVE SOME SENSE OF WHERE WE'RE GOING, HOW IT'S ROLLING OUT. I THINK THE BOARD --

CHAIRMAN KLEIN: SO THERE HAVE BEEN SOME REAL-TIME ADJUSTMENTS OF STAFF BASED ON OTHER CONSTRAINTS.

DR. STEWARD, DID YOU HAVE A COMMENT?

DR. STEWARD: QUESTION WHENEVER.

DR. TROUNSON: JUST TO FINISH OFF THAT, IF YOU COULD HOLD IT, OS. I THINK THERE'S A DISCUSSION THAT WE NEEDED TO HAVE EITHER WITH THE SCIENCE SUBCOMMITTEE OR WITH THE BOARD OR WITH THE EXECUTIVE WHICH WE HAVEN'T HAD, WHICH RELOOKS AT HOW WE DO THE DISEASE TEAMS. SO WE'VE HAD INDEPENDENT CONVERSATIONS WHICH WE REALLY NEED TO FIGURE OUT, SO THEY MIGHT MAKE SOME CHANGES. PAT OLSON WAS GOING TO GET YOU THAT INFORMATION IF YOU RECALL A CONVERSATION WE JUST HAD A FEW DAYS AGO.

CHAIRMAN KLEIN: ABSOLUTELY. I BELIEVE THERE'S A SCIENTIFIC COMMITTEE MEETING BEFORE THE NEXT BOARD MEETING SO THAT THESE COULD BE INTEGRATED IN TERMS OF A FLOW OF INFORMATION.

DR. TROUNSON: THE OTHER THING IS THAT WE

ARE STRUGGLING FOR STAFF AT THE MOMENT. SO THAT IS ANOTHER REAL EFFECT OF US AT THE MOMENT OF BEING ABLE TO DELIVER THE PROGRAM APPROPRIATELY. SO THAT IS REALLY -- WE REALLY ARE STRUGGLING, SO I WANT YOU TO RECOGNIZE HOW HARD THEY'RE WORKING TO DELIVER THE CURRENT THING. SO WE MAKE ADJUSTMENTS TO ENABLE US TO DO IT PROPERLY.

CHAIRMAN KLEIN: ALL RIGHT. THANK YOU, DR. TROUNSON. VERY GOOD PRESENTATION. THANK YOU. ADDITIONAL QUESTIONS?

DR. STEWARD: SO THE AREAS THAT YOU DEFINE HERE, ARE THEY MEANT TO DEFINE THE SCOPE OF THE AWARDS, OR ARE THEY MEANT TO BE EXAMPLES? AND I'M ASKING REALLY HOW MUCH FLEXIBILITY WILL THERE BE IF SOMETHING COMES IN THAT'S BASIC BIOLOGY, BUT DOESN'T QUITE FIT INTO ONE OF THESE LITTLE NOOKS.

DR. SHEPHERD: THOSE ARE THE AREAS OF PRIORITY THAT WE TARGETED. IF THERE'S AN EXCEPTIONALLY GROUNDBREAKING CASE, WE'RE TRYING TO LEAVE A WINDOW OF SOMETHING THAT WE FEEL IS PERTINENT. IT HAS TO BE MECHANISTIC AND IT HAS TO BE RELATED TO STEM CELL BIOLOGY, HUMAN STEM CELL BIOLOGY, AND WE DON'T WANT TO CLOSE THE DOOR ON SOMETHING THAT WE MIGHT NOT BE EXPECTING. IN GENERAL, WE WANT TO SEE APPLICATIONS FOCUSED IN

THOSE AREAS WHICH HAVE BEEN IDENTIFIED BY CIRM STAFF AND TALKING TO EXPERTS IN THE FIELD OF WHAT DO WE THINK ARE THE AREAS THAT COULD HAVE THE MOST IMMEDIATE NEAR TERM IMPACT, HIGH PRIORITY IMPACT IN THE AREAS THAT WE FEEL ARE IMPORTANT FOR ADVANCING CIRM'S MISSION.

DR. STEWARD: THAT'S GREAT. I JUST WOULD ENCOURAGE SOME LANGUAGE TO THAT EFFECT IN THE RFA SO THAT RESEARCHERS ARE CLEAR THAT THEY CAN COME IN WITH THINGS THAT ARE A BIT OUT OF THE BOX. AND ALSO BECAUSE THIS ONE IS GOING TO BE ANOTHER TRIAGE APPROACH, THAT THERE'S A VERY CLEAR EFFORT BY THE TRIAGERS TO RECOGNIZE THOSE OUT-OF-THE-BOX PROPOSALS AND NOT LIMIT THEM ON THE BASIS OF THESE DEFINITIONS THAT ARE CONSIDERED FOR WHATEVER REASON A PRIORI TO BE HIGH PRIORITY. SO THOSE TWO THINGS GOING FORWARD.

DR. TROUNSON: OS, I'M VERY DETERMINED TO MAKE SURE WE DON'T MISS SOME OF THOSE REALLY IMPORTANT THINGS, WHETHER THEY COME FROM AXOTALS OR DROSOPHILA OR WHERE, BECAUSE I THINK THE FIELD IS SUCH A HIGH ROTATION OF NEW BLOCKBUSTER DEVELOPMENTS, WE HAVE TO KEEP OUR EYE ON THAT. SO ABSOLUTELY. I'VE INSTRUCTED THE SCIENCE OFFICE TO ENSURE IN THE LANGUAGE THAT THAT IS APPROPRIATELY

ENCOURAGED, NO. 1. AND IF WE FIND IT, NURTURE IT AS BEST WE CAN THROUGH THE PROCESS BECAUSE IT'S OFTEN THOSE THINGS, THOSE THAT WILL CHANGE THE WHOLE FIELD, OF COURSE. SO I WANT PEOPLE TO FEEL THAT THEY CAN COME TO US IN THE BASIC BIOLOGY WITH SOME REAL OUT-OF-THE-BOX STUFF. AND I HOPE THAT'S THE FLAVOR OF WHAT WE DO, THAT WE DO ENCOURAGE THAT.

ON THE OTHER HAND, WE HAVE A HARD RUN TO DELIVER ON OUR MISSION. AND LOT OF THAT HAS TO DO WITH HUMAN EMBRYONIC STEM CELLS, SO WE UNDERSTAND WE ARE THE KEY -- STILL THE KEY FUNDER IN THAT AREA. SO WE'RE TRYING TO MAKE SURE THAT IF YOU CAN GO TO THE HUMAN WITH YOUR HYPOTHESIS AND YOUR GRANT, WILL YOU THINK ABOUT IT FIRST UP?

CHAIRMAN KLEIN: ADDITIONAL BOARD QUESTIONS OR COMMENTS?

MS. SAMUELSON: I'VE GOT A QUESTION. IN THAT SAME VEIN, I'M WONDERING ABOUT THE PRIORITY ATTENTION GIVEN TO USING HUMAN CELLS. IN THIRD PARAGRAPH OF THE CONCEPT PROPOSAL, IT TALKS ABOUT DOING THAT. EXCEPT FOR GROUNDBREAKING AND HIGHLY INNOVATIVE STUDIES, IF THOSE ARE THE ONES THAT WOULD BE MORE LIKELY TO NEED TO START WITH AN ANIMAL MODEL, LET'S SAY, DOESN'T THIS RISK DISCOURAGING THOSE APPLICANTS FROM DESIGNING THE PROPOSAL IN THE

MOST SUCCESSFUL WAY FROM THE STANDPOINT OF THEIR OBJECTIVE AS OPPOSED TO THE OBJECTIVE TO USE HUMAN CELLS?

DR. SHEPHERD: THE PREVIOUS ITERATIONS HAVE OF BASIC BIOLOGY I AND II WERE LIMITED TO HUMAN STEM CELLS EXCEPT IN GROUNDBREAKING CASES, AND THAT DID NOT DISCOURAGE PEOPLE FROM APPLYING WITH OTHER IDEAS. THE REASON WE WANT TO GIVE A HIGH PRIORITY TO THE HUMAN STUDIES IS BECAUSE THE HUMAN EMBRYONIC CELLS AND PLURIPOTENT STEM CELLS IN GENERAL ARE MUCH MORE DIFFICULT TO WORK WITH, AND PEOPLE OFTEN GO TO AN ANIMAL MODEL BECAUSE THEY'RE FASTER, THEY CAN USE GENETIC MODELS, THEY'RE EASIER TO WORK WITH, AND CERTAINLY THERE'S A LOT OF FUNDING AVAILABLE TO PURSUE THOSE THROUGH OTHER AGENCIES. WE FEEL LIKE WE NEED TO GIVE A LITTLE BIT OF A COMPETITIVE EDGE TO THOSE WHO ARE WILLING TO DO THE HARD WORK THAT MIGHT NOT HAVE THE NEARER TERM PAYOFF OF A PUBLICATION, BUT SOMETHING THAT CAN DO SOMETHING IMPORTANT AND SIGNIFICANT THAT COULD ADVANCE HUMAN EMBRYONIC STEM CELL BIOLOGY.

AND A TRULY GROUNDBREAKING DISCOVERY IN ANOTHER ORGANISM WHERE THAT ORGANISM MIGHT BE NECESSARY TO MAKE THAT DISCOVERY CAN CERTAINLY BE VERY IMPORTANT AND INFORM STUDIES; BUT TO BE

RELEVANT TO HUMAN BIOLOGY, IT'S STILL GOING TO HAVE TO TRANSLATE BACK INTO THE PIPELINE OF THE HUMAN TRACK TO MOVE TO THE CLINIC.

SO WE WANT TO RECOGNIZE THOSE CASES WHERE SOMETHING TRULY EXCEPTIONAL MIGHT BE DISCOVERED WHERE YOU WOULDN'T BE ABLE TO DISCOVER THAT USING A HUMAN. FOR EXAMPLE, WHEN MELTON DISCOVERED THE TRANSDIFFERENTIATION OF THE CELLS IN THE IN VIVO MOUSE MODEL. SO WE WOULDN'T WANT TO RULE OUT AN IMPORTANT DISCOVERY LIKE THAT; HOWEVER, WE FEEL THAT WE DO HAVE TO GIVE A SPACE WHERE THE PEOPLE WHO ARE WILLING TO PUT IN THE EFFORT AND DO THE HIGH IMPACT RESEARCH IN THE HUMAN SYSTEM, WHICH MAY BE MORE DIFFICULT, HAVE A PLACE WHERE THEY CAN COME AND GET THEIR FUNDING LOOKED AT SERIOUSLY.

AND WE ARE ALREADY BROADENING THE SCOPE JUST A TOUCH. THE PREVIOUS ROUNDS OF BASIC BIOLOGY WERE PRETTY MUCH LIMITED TO STUDIES IN STEM CELL BIOLOGY LOOKING AT THOSE MECHANISMS OF NORMAL STEM CELLS AND HOW THEY BEHAVE. WHEREAS, THIS TIME WE ARE OPENING THE DOOR A BIT TO ALLOW STUDY OF DISEASE MECHANISMS, NOT DISEASE THERAPIES, BUT DISEASE MECHANISMS WHERE THE STEM CELLS ARE THE KEY TO BEING ABLE TO STUDY THEM. SO IN A WAY THAT'S USING THE HUMAN STEM CELL AS A TOOL, BUT ONLY IN AS SUCH AS IT

COULD BE USED TO STUDY THE MOLECULAR BASIS OF DISEASE IN AN IN VITRO MODEL.

SO WITH THE HUGE RESPONSE WE HAD TO THE FIRST ITERATION OF BASIC BIOLOGY, WE DO THINK THAT WE'RE GOING TO GET AN EXCEPTIONAL RESPONSE TO THIS ONE, AND WE'RE A LITTLE BIT CONCERNED THAT SCIENTISTS WHO HAVE EXCITING PROJECTS IN OTHER ORGANISMS WILL CONSIDER THEIR WORK GROUNDBREAKING. AND BECAUSE THEY CAN DO THEM QUICKLY AND MORE EASILY IN A MOUSE, FOR EXAMPLE, THEY MIGHT FEEL WELCOME TO APPLY FOR THIS AWARD, AND WE'RE GOING TO HAVE A HUGE RESPONSE. AND WE WANT TO BE ABLE TO HAVE A WAY TO SEPARATE THE ONES THAT ARE TRULY SIGNIFICANT AND PERTINENT TO ADVANCING HUMAN STEM CELL BIOLOGY FROM THOSE. SO WE WANT TO BE ABLE TO HAVE REVIEWERS MAKE A JUDGMENT ON WHAT MIGHT BE THE GROUNDBREAKING CASES, BUT WE DO WANT TO HAVE A PRIORITY SO THAT THOSE HUMAN STEM CELL BIOLOGIES DON'T GET LOST BECAUSE THOSE PROJECTS MIGHT BE MORE DIFFICULT TO PURSUE THAN SOMETHING THAT COULD BE DONE IN ANOTHER MODEL.

CHAIRMAN KLEIN: SO I THOUGHT THAT WAS A REALLY EXCELLENT SUMMARY, DR. SHEPHERD. AND I WOULD HOPE WE COULD ACCELERATE THE TRANSCRIPT OF WHAT SHE'S PRESENTED AND ACTUALLY POST THAT BECAUSE I

THINK IT PROVIDES VERY GOOD INSIGHT TO THE RESEARCHERS OF THIS WHOLE FOCUS AND THE JUSTIFICATION FOR THIS FOCUS. SO THANK YOU.

ADDITIONAL POINTS? PUBLIC COMMENT? HEARING NONE, I'D LIKE TO -- IS THERE A MOTION?

MR. SHEEHY: I THOUGHT THAT'S WHAT WE WERE MISSING. I WAS GOING TO MOTION TO APPROVE THE CONCEPT.

DR. PRIETO: I'LL SECOND.

CHAIRMAN KLEIN: I'D LIKE TO CALL THE QUESTION. ALL IN FAVOR?

(CHORUS OF AYES.)

CHAIRMAN KLEIN: OPPOSED?

(NO RESPONSE.)

CHAIRMAN KLEIN: THANK YOU VERY MUCH, DR. SHEPHERD.

DR. SHEPHERD: YOU'RE WELCOME. THANK YOU.

MS. KING: FOR THE RECORD, DR. FRIEDMAN'S VOTE ON THE PHONE WAS AYE.

CHAIRMAN KLEIN: ITEM 14, DR. TROUNSON, WE HAVE A TECHNICAL AMENDMENT WE NEEDED TO GET APPROVED, ITEM 14. I THINK DR. ROBSON IS THE PRESENTER.

DR. TROUNSON: DR. ROBSON WHO WILL DO THAT.

DR. ROBSON: THANK YOU, CHAIRMAN KLEIN. I'M HERE TO REQUEST WHAT IS REALLY A MINOR ADJUSTMENT TO THE COMPENSATION PROGRAM THAT WAS FOR CIRM STAFF THAT WAS LAST ADJUSTED BY YOU IN 2008. YOU HAVE A DOCUMENT IN YOUR BINDER ABOUT THIS, BUT THIS SLIDE ILLUSTRATES WHAT WE'RE TRYING TO DO. WE'RE JUST TRYING TO BRING INTO ALIGNMENT THE COST OF LIVING INDEX THAT'S USED FOR THESE TWO ITEMS.

ONE IS THE COST OF LIVING ADJUSTMENT FOR STAFF, WHICH IS CURRENTLY IN THE POLICY BASED ON THE CONSUMER PRICE INDEX FOR THE SAN FRANCISCO AREA, FOR THE BAY AREA, WHERE MOST EVERYONE LIVES WHO WORKS ON THE STAFF.

THERE'S ALSO ON THE NEXT PAGE A SECTION THAT DEALS WITH ADJUSTMENT OF THE SALARY RANGES, AND THAT'S BASED ON THE CONSUMER PRICE INDEX FOR THE ENTIRE STATE. ALL WE'RE ASKING IS THAT WE JUST BRING THAT IN ALIGNMENT AND MAKE THAT THE CONSUMER PRICE INDEX FOR THE BAY AREA BECAUSE, AGAIN, THESE SALARY CATEGORIES ARE FOR THE STAFF WHO LIVE IN THE BAY AREA.

I WANT TO REMIND YOU THAT IF THIS IS APPROVED, THIS ADJUSTMENT AND THE CURRENT POLICY, THERE'S NO AUTOMATIC COST OF LIVING INCREASE THAT GOES ALONG WITH EITHER OF THESE. THAT'S A DECISION

THAT'S MADE BY THE PRESIDENT. SO WE'RE JUST ASKING FOR THIS ONE CHANGE IN THIS ONE PHRASE.

MR. ROTH: ANY COMMENTS FROM THE BOARD? QUESTIONS?

MR. SHEEHY: WHAT IS THE PRACTICE AT OTHER STATE AGENCIES IN TERMS OF SETTING? DO THEY USE THE LOCAL AREA TO SET THEIR -- I KNOW AS A UC EMPLOYEE, THIS IS NOT -- OUR SALARY RANGES ARE SET, I BELIEVE, STATEWIDE, NOT BASED -- THE RANGES ARE THE SAME AT UC DAVIS AS THEY ARE AT UCSF. SO I WOULD JUST LIKE US TO BE CONSISTENT WITH STATE PRACTICE. I WOULD NOT LIKE US TO BE THE ONLY AGENCY.

DR. ROBSON: I THINK IAN SWEEDLER CAN SPEAK TO THAT.

MR. SWEEDLER: MOST STATE AGENCIES ARE CIVIL SERVICE, AND ALL OF THAT'S DONE BY NEGOTIATION WITH THE UNION. SO THERE AREN'T AUTOMATIC CPI-BASED SALARY INCREASES OR CHANGES TO WAGES. IT'S ALL DONE THROUGH COLLECTIVE BARGAINING AND CHANGING. SO THEY'LL HAVE A CONTRACT THAT SAYS THERE WILL BE THESE ADJUSTMENTS OVER THE NEXT SEVERAL YEARS, AND IT'S DIFFERENT FOR EVERY UNION.

MR. SHEEHY: BUT NONEXEMPT EMPLOYEES GET THEIR RANGES ADJUSTED. I'M NOT THE ONLY UC PERSON HERE. THAT'S THE ONLY BENCHMARK I HAVE. BUT

PROFESSIONAL STAFF GETS THEIR RANGES ADJUSTED. I DON'T KNOW IF IT WOULD BE USEFUL TO READ IN THE *SACRAMENTO BEE* THAT WE'RE DOING SOMETHING THAT IS RADICALLY DIFFERENT FROM THE PRACTICE OF EVERY OTHER STATE AGENCY. WE'RE NOT UNIONIZED, SO THERE MUST BE -- I JUST WANT US TO BE CONSISTENT WITH EVERYBODY ELSE IN THE STATE IS ALL I'M ASKING.

MR. SWEEDLER: IT MIGHT HELP TO HAVE A LITTLE BACKGROUND ABOUT WHAT WAS PROBABLY JUST A DRAFTING ERROR. THERE'S ONE REFERENCE IN THERE. FOR SALARIES, IT REFERS TO USING THE LOCAL CPI. FOR BOARD MEMBERS, FOR THE PER DIEM, BOARD MEMBERS COME FROM ALL OVER THE STATE, IT USES THE STATEWIDE CPI. WHEN THE PROVISION WAS PUT IN ABOUT ADJUSTING THE RANGES, IT INCORPORATED THE BOARD PROVISION BY REFERENCE. AND IT WAS ONLY RECENTLY RECOGNIZED THAT THOSE AREN'T THE SAME. AND SO WE HAVE AN INCONSISTENCY. THIS IS CORRECTING AN INCONSISTENCY IN HOW WE'RE HANDLING THESE THINGS FOR THE STAFF.

I DON'T THINK THAT THERE WAS AN INTENTION TO HAVE PART OF STAFF ADJUSTMENTS BASED ON BAY AREA AND PART OF IT BASED ON STATEWIDE.

NOW, IN THE AGENCIES THAT I'M FAMILIAR WITH, I USED TO BE AT THE DEPARTMENT OF JUSTICE, THEY HAD -- WHAT THEY HAD WAS, FOR EXAMPLE, FOR THE

LEGAL -- THE CLERICAL SPECIALIZATIONS, THEY HAD A DIFFERENTIAL FOR THE HIGHER COST OF LIVING AREAS. SO THERE WAS A CERTAIN FIXED INCREMENT THAT PEOPLE GOT IF THEY WERE WORKING IN BAY AREA COUNTIES AS OPPOSED TO SACRAMENTO. SO THAT'S ONE WAY THAT THEY DEALT WITH THINGS LIKE THAT.

CIRM IS UNUSUAL IN BEING SUCH A SMALL AGENCY, THAT ITS EMPLOYEES ARE ALL IN ONE REGION.

MR. SHEEHY: I APPRECIATE THAT. I JUST DIDN'T WANT US TO BE THE OUTLIER. I WAS JUST LOOKING FOR SOME PRECEDENT. THE EXAMPLE YOU CITED -- I LIVE IN THE BAY AREA. I KNOW THAT THAT CAN BE PROHIBITIVE. AND SO I'M NOT -- BUT JUST IN TERMS OF OUR PUBLIC IMAGE, I WANT TO MAKE SURE THAT WE'RE NOT DOING SOMETHING THAT SOMEONE WILL SAY IS UNIQUE AND FURTHER --

MR. SWEEDLER: JUST TO ADD TO THAT, THIS IS ABOUT THE CHANGE IN COST OF LIVING. SO EVEN THOUGH THE COST OF LIVING IS HIGHER IN THE BAY AREA, WE LOOKED AT SOME RECENT YEARS THAT THE CHANGE IS NOT NECESSARILY GREATER IN ANY GIVEN YEAR IN THE BAY AREA. IN FACT, IN SOME RECENT YEARS, IT'S ACTUALLY BEEN LESS THAN STATEWIDE.

CHAIRMAN KLEIN: THANK YOU VERY MUCH. JOAN SAMUELSON.

MS. SAMUELSON: ON THAT SAME NOTE, JUST A QUESTION. THE REFERENCES TO SALARY LEVELS 1 AND 6 AND 9, COULD YOU GIVE EXAMPLES OF JUST WHAT THOSE THREE SALARY LEVELS ARE?

DR. ROBSON: EXAMPLES.

MS. SAMUELSON: THOSE ARE THE THREE SALARY LEVELS THAT ARE MENTIONED.

DR. ROBSON: OKAY. SO SALARY LEVEL 6, THE RANGE IS -- WELL, THERE'S SUBCATEGORIES OF IT, BUT IT'S ESSENTIALLY 102,000 TO ABOUT 165,000 FOR 6. SO A SCIENCE OFFICER, FOR EXAMPLE, IT WOULD BE 110 TO 165.

CATEGORY 1, ADMINISTRATIVE COORDINATOR, THAT'S 41 TO 61,700. WHAT WAS THE OTHER ONE YOU ASKED FOR, 3?

MS. SAMUELSON: NINE.

DR. ROBSON: NINE. CATEGORY 9 IS -- WELL, HERE WE HAVE CHIEF SCIENTIFIC OFFICER, VICE PRESIDENT OPERATIONS, 180 TO 332.

MS. SAMUELSON: 180 TO WHAT?

DR. ROBSON: 332.

MS. SAMUELSON: THANK YOU.

CHAIRMAN KLEIN: THANK YOU. ADDITIONAL QUESTIONS FROM THE BOARD?

MR. SERRANO-SEWELL: CAN YOU JUST

BASICALLY REAL QUICK, THE PERFORMANCE AWARD AND THE SPOT AWARD, CAN YOU TALK TO ME ABOUT THOSE? I'M LOOKING AT IT RIGHT HERE, PERFORMANCE AWARDS.

DR. ROBSON: PERFORMANCE AWARDS, THAT'S A CATEGORY FOR PEOPLE IN SALARY RANGES 1 THROUGH 6. AND THESE ARE SMALL AWARDS THAT ARE MADE ANNUALLY BASED ON PEOPLE'S OUTSTANDING PERFORMANCE.

MR. SERRANO-SEWELL: HOW MANY SPOT AWARDS DID THE OFFICE OF THE PRESIDENT ADMINISTER LAST YEAR?

DR. ROBSON: I'M NOT AWARE THAT WE'VE GIVEN ANY SPOT AWARDS SINCE I'VE BEEN HERE.

MR. SERRANO-SEWELL: OKAY.

CHAIRMAN KLEIN: THANK YOU. ADDITIONAL QUESTIONS? IS THERE A MOTION FOR APPROVAL?

DR. PULIAFITO: SO MOVED.

DR. BLOOM: SECOND.

CHAIRMAN KLEIN: DR. PULIAFITO AND SECOND BY DR. BLOOM. ADDITIONAL DISCUSSION? SEEING NONE, IS THERE PUBLIC DISCUSSION? SEEING NONE, CALL THE QUESTION. ALL IN FAVOR?

(CHORUS OF AYES.)

CHAIRMAN KLEIN: OPPOSED?

(NO RESPONSE.)

CHAIRMAN KLEIN: THANK YOU VERY MUCH.

MS. KING: DR. FRIEDMAN'S VOTE ON THE PHONE WAS AYE. DR. HAWGOOD HAS ARRIVED.

CHAIRMAN KLEIN: DR. HAWGOOD.

(APPLAUSE.)

CHAIRMAN KLEIN: SO, DR. HAWGOOD, THE REASON FOR THE CELEBRATION IS THAT UNDER THE TECHNICAL RULES FOR GRANTS THAT WE JUST VOTED ON, WE HAD TO LEAVE A NUMBER OF ITEMS OPEN FOR YOUR VOTE, NOT BECAUSE THE VOTE WOULD BE DETERMINATIVE BECAUSE NONE OF THESE VOTES THAT PASSED WERE VERY CLOSE, BUT BECAUSE WE TECHNICALLY DID NOT HAVE A QUORUM ON THESE ITEMS WITHOUT YOU PRESENT BECAUSE OF RECUSALS FOR CONFLICTS. THERE'S ONLY THREE ITEMS. OKAY. IS MR. HARRISON GOING TO ADDRESS THOSE ITEMS?

MR. HARRISON: YES. THE FIRST MOTION IS TO MOVE APPLICATION 1743 INTO TIER I. THESE ARE, OF COURSE, THE STEM CELL TRANSPLANTATION IMMUNOLOGY AWARDS.

CHAIRMAN KLEIN: MR. HARRISON, I THINK EVEN THOUGH DR. HAWGOOD HAS THE BINDERS AND THE PRESENTATIONS ON THE AWARDS, COULD YOU LET DR. HAWGOOD KNOW THE VOTE THUS FAR AND THE TITLE OF THE ITEM? WHICH ITEM WAS IT?

MR. HARRISON: 1743. THUS FAR THERE ARE --

CHAIRMAN KLEIN: THIS IS INDUCTION OF IMMUNE TOLERANCE TO HUMAN EMBRYONIC STEM CELL-DERIVED ALLOGRAFTS.

MS. KING: DR. HAWGOOD, ALSO YOU CAN LOOK AT THE SCREEN AND YOU CAN SEE NEXT TO THE APPLICATION NUMBER VARIOUS DATA POINTS THAT MAY BE OF INTEREST TO YOU AS WELL.

CHAIRMAN KLEIN: I THINK IT'S IMPORTANT TO NOTE THAT THERE WAS A SIGNIFICANT STANDARD DEVIATION. IT WAS NOTED THAT THERE WAS A SPLIT IN THE VOTE ON THIS ITEM.

DR. REED: I HAD A QUESTION. IN TERMS OF MR. HAWGOOD'S POTENTIAL RESPONSES, IS ABSTAIN AN OPTION, AND THAT WOULD STILL PERMIT OUR QUORUM? I THOUGHT SO. I JUST WANTED TO NOTE THAT FOR THE RECORD.

CHAIRMAN KLEIN: IF THERE'S A QUESTION FOR YOU, AMONG THE MATERIALS YOU'VE ALREADY LOOKED AT, IF THERE'S A QUESTION IN YOUR MIND, YOU COULD CERTAINLY ABSTAIN AND STILL SUSTAIN THE VOTE, THE QUORUM IN THE VOTE. SO DO YOU HAVE A POSITION? WHAT IS THE VOTE ON THAT ITEM?

MR. HARRISON: FIFTEEN YES VOTES, ONE ABSTENTION THUS FAR.

CHAIRMAN KLEIN: DR. HAWGOOD, THIS IS ITEM

1743. IT WAS THE FIRST ONE BELOW THE FUNDING LINE. DO YOU HAVE A POSITION ON THAT ITEM?

DR. HAWGOOD: GIVEN THAT I MISSED THE DISCUSSION, I THINK I WILL ABSTAIN.

CHAIRMAN KLEIN: WHAT IS THE NEXT ITEM?

MR. HARRISON: FOR THE RECORD, THAT MOTION CARRIES.

MS. KING: THE NEXT ONE WILL BE 1717.

CHAIRMAN KLEIN: 1717 IS THE SECOND ITEM BELOW THE FUNDING LINE. IT IS THYMUS-BASED TOLERANCE TO STEM CELL THERAPIES. AND WHAT WAS THE PRIOR VOTE ON THAT ITEM?

MR. HARRISON: FOURTEEN YES VOTES.

CHAIRMAN KLEIN: DR. HAWGOOD.

DR. HAWGOOD: ABSTAIN.

CHAIRMAN KLEIN: WHAT IS THE THIRD ITEM?

MR. HARRISON: FOR THE RECORD THAT MOTION CARRIES.

THE THIRD ITEM IS AN OMNIBUS MOTION TO APPROVE ALL OF THE APPLICATIONS IN TIER I INCLUDING SEVERAL THAT WERE MOVED INTO TIER I AND NOT TO FUND APPLICATIONS -- THE REMAINING APPLICATIONS. SO THE APPLICATIONS THAT WERE MOVED INTO TIER I INCLUDE THE TWO THAT WERE JUST IDENTIFIED, 1743, 1717, 1710, 1733, AND THAT'S IT. AND THIS IS A MOTION FOR WHICH

YOU SHOULD VOTE YES, NO, OR AN ABSTENTION EXCEPT WITH RESPECT TO THOSE APPLICATIONS FOR WHICH YOU HAVE A CONFLICT.

DR. HAWGOOD: APPROVE EXCEPT FOR THOSE APPLICATIONS FOR WHICH I HAVE A CONFLICT.

CHAIRMAN KLEIN: ALL RIGHT. THANK YOU VERY MUCH.

MS. KING: THAT MOTION CARRIES.

CHAIRMAN KLEIN: THAT MOTION CARRIES.

AND I'D LIKE TO TAKE A MOMENT HERE TO THANK THE STAFF FOR THEIR TREMENDOUS INVESTMENT OF TIME AND ENERGY IN A UNIQUE ROUND. THERE'S EXTRAORDINARY EFFORT THAT WAS PUT INTO THIS. IT BROUGHT, AS JEFF SAID, FOR THE FIRST TIME WE'RE AWARE REALLY IMMUNOLOGISTS TOGETHER WITH STEM CELL RESEARCHERS IN TEAMS. IT PROVIDES A PORTFOLIO BASE FOR A CRITICAL LINK IN THE TECHNOLOGIES. WE NEED TO HAVE CELLULAR THERAPIES BE ACCEPTED BY THE BODY RATHER THAN REJECTED. AND I THINK WE OWE A HUGE ROUND OF APPLAUSE TO THE SCIENTIFIC STAFF AND DR. TROUNSON AND DR. OLSON IN LEADERSHIP.

(APPLAUSE.)

CHAIRMAN KLEIN: AND WITH THE PREROGATIVE OF THE CHAIR, I'D LIKE TO TAKE THE REMAINING MINUTES WE HAVE HERE TONIGHT TO RECOGNIZE A MEMBER OF THE

BOARD WHO IS AT HIS LAST MEETING. DR. LEVEY HAS BEEN WITH US FROM THE VERY BEGINNING, AND GRACIOUSLY AGREED AFTER HE CHANGED HIS POSITION AS DEAN AT UCLA TO REMAIN WITH THIS BOARD THROUGH THIS MEETING.

FROM THE BEGINNINGS OF THIS AGENCY AND THE SEEDS THAT WERE SOWN THROUGH THE NATIONAL ACADEMY MEETING AT IRVINE, I THOUGHT IT WAS EXTRAORDINARY TO SEE THE DEAN DEEPLY INVESTED IN THIS PROCESS. HE WENT TO THAT FIRST TWO-DAY PUBLIC SESSION THE NATIONAL ACADEMY PUT ON AT IRVINE EVEN BEFORE THIS BOARD WAS FORMED AND THEN IMMEDIATELY BECAME A PART OF THE LEADERSHIP OF THIS BOARD, COMMITTING MASSIVE NUMBERS OF HOURS IN THE INITIAL SEARCH COMMITTEES OF THIS BOARD TO PUT TOGETHER THE PEER REVIEW COMMITTEES AND THE STAFFS OF THE VARIOUS WORKING GROUPS, AS WELL AS THE PRINCIPAL MEMBERS OF THOSE WORKING GROUPS FROM OUTSIDE OF CALIFORNIA.

IT WAS AN EXTRAORDINARY EFFORT THAT DR. LEVEY, IN FACT, TODAY TOLD ME AT ONE POINT WAS CONSUMING 25 PERCENT OF ALL OF HIS TIME, A REMARKABLE, REMARKABLE COMMITMENT IN THE FIRST YEAR TO THIS GREAT VENTURE. AND THE KIND OF SEASONED LEADERSHIP, KIND OF REALLY ELEGANT INSIGHTS TO POTENTIAL PROBLEMS AND SOLUTIONS THAT DR. LEVEY BROUGHT WITH HIM, THE VERY REASSURING SENSE OF

BALANCE DURING TIMES OF GREAT CHALLENGE WERE REALLY A REMARKABLE CONTRIBUTION TO THIS JOURNEY. AND I THINK A MAJOR REASON THAT WE'VE ACHIEVED SO MUCH WHILE KEEPING THE BOARD TOGETHER WITH VERY VIBRANT, ROBUST DISCUSSIONS THAT WERE OFTEN PULLED TOGETHER BY HIS COMMENTS INTO A DECISIVE ACTION.

IT IS A REMARKABLE PERIOD WHEN DR. LEVEY AT UCLA SAW THE DEVELOPMENT OF TWO STEM CELL BUILDINGS, NOT ONE, A GREAT EFFORT THAT HE LAUNCHED ACTUALLY, I THINK, ON A BUILDING EVEN AS THE PROPOSITION WAS BEING PASSED AND THEN A SECOND EFFORT TO BUILD A STEM CELL BUILDING THROUGH OUR COMPETITION WHILE REBUILDING A TREMENDOUS NEW HOSPITAL FOR UCLA. SO THIS WAS A TIME OF TRIAL ON EVERY SIDE AND A TIME OF GREAT ACHIEVEMENT FROM DR. LEVEY WHERE HE UNSTINTINGLY GAVE THIS AGENCY HIS PERSONAL CONTRIBUTIONS CONSTANTLY THROUGH THIS PERIOD FAR BEYOND THE FIRST YEAR THROUGH THIS PROCESS AND EVEN THROUGH CHAIRING THE EVALUATION SUBCOMMITTEE THAT HE JUST FINISHED TODAY.

SO I WOULD LIKE TO OPEN THIS TO OTHER BOARD COMMENTS FOR, I'M SURE, WHAT WE FEEL IS ONE OF THE ABSOLUTELY CRITICAL CONTRIBUTIONS TO THE HISTORY OF THIS MIRACULOUS AGENCY THAT NO ONE THOUGHT WOULD EVER REALLY PASS IN THE BEGINNING, BUT HAS ACCRUED A

TREMENDOUS RECORD DUE TO THE DEDICATION OF THE BOARD AND THE STAFF. ADDITIONAL BOARD COMMENTS?

MR. SERRANO-SEWELL: WELL, YOU ALWAYS LOOK FOR GENUINE PARTNERSHIPS AND WHEN SOMEONE IS GOING TO STAND SHOULDER TO SHOULDER WITH YOU. AND GERALD HAS DONE THAT. WE GOT THE LAWSUIT, WE HAD A VARIETY OF CHALLENGES, AND NOT ONLY AS AN INDIVIDUAL, BUT THE INSTITUTION PUT ITS NAME AND SAID YOU KNOW WHAT. THIS IS THE RIGHT THING TO DO. WE'RE GOING TO MOVE THE BALL FORWARD.

AND INTERACTING WITH HIM, HE'S ALWAYS BEEN A CLASS ACT OBVIOUSLY, BUT HE'S ACTIVELY SOUGHT THE OPINION OF, YOU KNOW, THE PATIENT ADVOCATES ON THE BOARD. AND THAT'S ALWAYS NICE. IT'S NOT SOMETHING THAT'S ASKED FOR OR EXPECTED, BUT HE'S DONE THAT. AND I'LL MISS HIS ECUMENICAL APPROACH TO PROBLEM SOLVING. WHOEVER SUCCEEDS HIM, THEY'LL BE BIG SHOES TO FILL, BUT BE GREATLY MISSED.

CHAIRMAN KLEIN: ADDITIONAL COMMENTS?

MR. TORRES: I HAVE ALWAYS ADMIRED JERRY FROM AFAR, BUT NEVER HAD THE EXTRAORDINARY OPPORTUNITY TO WORK WITH HIM IN THIS INSTITUTE AND TO SHARE THE LOVE THAT SHERRY LANSING AND I HAVE FOR HIM AND ALSO THE TREMENDOUS WORK THAT HE AND DR. PRIETO ESPECIALLY HAD WORKED SO HARD ON THIS

EVALUATION SUBCOMMITTEE. I JUST WANT TO SAY IT'S BEEN AN HONOR TO SERVE WITH YOU, BUT EVEN MORE FUN TO SIT NEXT TO YOU.

CHAIRMAN KLEIN: IN JUST A MINUTE. WE NEED TO TAKE IN ALL THE PRAISE HERE FOR A MOMENT.

MR. ROTH: I WOULD LIKE TO JUST THANK DR. LEVEY FOR HIS STABILITY THAT HE BROUGHT TO THE BOARD. AND I THINK, JERRY, WHEN I RECALL THE MEETINGS THAT WE'VE ATTENDED, YOU SAID VERY LITTLE; BUT WHEN YOU DID SAY SOMETHING, WE ALL LISTENED. SO WE'LL MISS THAT GREATLY. THANK YOU.

CHAIRMAN KLEIN: ARE THERE ADDITIONAL BOARD MEMBERS THAT WOULD LIKE TO COMMENT BEFORE I CALL ON DR. LEVEY? JOAN SAMUELSON AND THEN I'M GOING TO CALL ON DR. PULIAFITO AND DR. TROUNSON, AND MR. HARRISON WOULD LIKE TO SPEAK, YES.

MS. SAMUELSON: IT'S TOO BAD THAT SHERRY LANSING ISN'T HERE BECAUSE I KNOW SHE WOULD HAVE A LOT TO SAY. AND I HAVE TO SAY THAT IT WAS CLEAR FROM THE BEGINNING THAT THERE WAS A DYNAMIC DUO OPERATING IN THE L.A. AREA BEING SHERRY AND DR. LEVEY. I NOTICED THAT BEFORE I REALLY GOT TO KNOW YOU INITIALLY FROM AFAR AND LATER HAVING CONVERSATIONS WITH YOU. AND SO I KNEW YOU MUST BE SOMEONE PRETTY SPECIAL, AND I DISCOVERED THAT TO BE

TRUE. AND I'M GRATEFUL FOR WORKING WITH YOU, AND THANK YOU FOR YOUR SERVICE TO THE BOARD, THE BOARD AND OUR JOINT ENTERPRISE.

CHAIRMAN KLEIN: THANK YOU. AND DR. PULIAFITO AND THEN DR. TROUNSON.

DR. PULIAFITO: ON BEHALF OF USC, I WOULD LIKE TO SAY THAT I AND MY PREDECESSOR ON THIS BOARD ARE BOTH GRATEFUL FOR THE GREAT COLLEGIALITY OF DR. LEVEY AND THE TREMENDOUS MENTORSHIP THAT HE SHOWED ME AS I BECAME A MEMBER OF THE BOARD. THANK YOU VERY MUCH, GERRY. WE'LL MISS YOU A LOT.

DR. TROUNSON: GERRY, ONE OF THE REAL PLEASURES OF THIS BOARD IS TO HAVE KNOWN YOU AND TO BE ABLE TO TALK TO YOU AND SEEK YOUR GUIDANCE. SO FOR ME IT'S A REAL LOSS. I'LL BE SORRY THAT I CAN'T DO THAT OR I MIGHT DO THAT, BUT IT WON'T BE IN A FORMAL WAY. IN THE PARLANCES OF CAMBRIDGE UNIVERSITY, YOU'RE A SCHOLAR AND A GENTLEMAN, MILORD. AND I'VE BEEN VERY PLEASED TO KNOW YOU, AND I KNOW ALL THE STAFF THINK THE SAME WAY, THAT GERRY LEVEY IS A REALLY GOOD PERSON.

AND I THINK WHAT'S HAPPENED AT UCLA WITH THE STRENGTHS OF THE STEM CELL CENTER CLEARLY IS SOME OF YOUR INFLUENCE IN THAT OF APPOINTING REALLY, REALLY TOP-LINE PEOPLE. AND SO WE THINK YOU'VE DONE

A FANTASTIC JOB, GERRY.

MR. HARRISON: I'D JUST LIKE TO ADD FROM A STAFF PERSPECTIVE FOR THOSE OF US ON THE STAFF WHO'VE HAD AN OPPORTUNITY TO WORK WITH DR. LEVEY CLOSELY, IT HAS JUST BEEN A REAL PLEASURE. HE'S A VERY KIND AND GENEROUS PERSON. AND I KNOW I SPEAK FOR ALL OF THE STAFF WHEN I SAY THANK YOU VERY MUCH FOR EVERYTHING YOU'VE DONE.

CHAIRMAN KLEIN: AND, DR. LEVEY, YOU HAVE THE FLOOR.

DR. LEVEY: WELL, I'LL KEEP DUANE'S STANDARDS HERE FOR ME, SO I WON'T SAY MUCH. FIRST OF ALL, I DO WANT TO THANK EVERYONE. THIS HAS BEEN A GREAT EXPERIENCE FOR ME. BOB AND I HAVE HAD SEVERAL CONVERSATIONS LATELY. IT'S BEEN AN HONOR FOR ME TO SERVE ON THIS BOARD UNDER YOUR LEADERSHIP. YOU'RE AN EXTRAORDINARY PERSON. THE THINGS THAT HAVE HAPPENED HERE WOULDN'T HAVE HAPPENED WITHOUT YOU. YOU ARE THE FOUNDER OF EVERYTHING THAT WE HOLD SO DEAR NOW WITH REGARD TO STEM CELL RESEARCH, AND I'M VERY GRATEFUL FOR THE OPPORTUNITY.

THE BOARD HAS BEEN AN AMAZING EXPERIENCE FOR ME. I'VE GOTTEN TO MEET, I GUESS, ABOUT A DOZEN AND A HALF, COUPLE DOZEN PEOPLE WHO I NEVER KNEW BEFORE. AND IT'S JUST AMAZING THE TALENT THAT HAS

COME THROUGH HERE. IT'S AN EXTRAORDINARY GROUP THAT HAS DONE THE IMPOSSIBLE ACTUALLY AT THE WORST POSSIBLE TIME FOR CALIFORNIA. A GROUP OF SEVERAL DOZEN PEOPLE ACTUALLY MANAGED TO PUT TOGETHER SOMETHING THAT FUNCTIONS, THAT'S STUCK WITHIN ITS BUDGET, AND IS NOW AN INTERNATIONAL FORCE IN STEM CELL RESEARCH. AND THE STATE SHOULD BE VERY PROUD OF THAT. THE CITIZENRY SHOULD. AND I HOPE THAT SOMEDAY EVERYBODY WILL GET TO RECOGNIZE WHAT WE'VE DONE.

SO TO MY COLLEAGUES ON THIS BOARD PAST AND PRESENT, THANK YOU FOR LETTING ME BE PART OF THIS BECAUSE IT'S BEEN A GREAT RUN FOR ALL OF US. AND, YOU KNOW, I'LL MISS EVERYONE, BUT AFTER 16 YEARS OF BEING THE DEAN AND THE VICE CHANCELLOR DOWN AT UCLA AND ALL THAT HAD TO GET DONE THERE AT THAT SCHOOL, I'M TIRED. BUT IT'S BEEN A GREAT EXPERIENCE, AND THANK YOU FOR TOLERATING ME ON THIS BOARD FOR THIS PAST ALMOST SIX YEARS.

(STANDING OVATION.)

CHAIRMAN KLEIN: WITH THAT, WHAT I'D LIKE TO DO IS ADJOURN THE MEETING TODAY. WE'RE GOING TO HAVE A SHORT MEETING TOMORROW. WE'RE GOING TO HAVE A WONDERFUL, SPECTACULAR ALS SPOTLIGHT IN THE MORNING. PLEASE, THERE'S TREMENDOUS EFFORT THAT'S

BEEN PUT INTO THIS BY THE ALS COMMUNITY AND THE RESEARCH LEADERSHIP. 8:30 IN THE MORNING. DO YOU KNOW WHICH ROOM WE'RE GOING TO BE IN? RIGHT HERE IN THIS ROOM.

I ALSO WOULD INDICATE TO YOU THAT, AS I WILL INDICATE TO THE PEOPLE PRESENT TOMORROW, THERE'S A GREAT NPR PROGRAM ON ALS AND THE RESEARCH DONE WITH DR. CLEVELAND THAT AMY CHUNG CAN GIVE YOU A REFERENCE TO, INCLUDING A PATIENT WHO IS AN EXTREMELY GOOD SPEAKER IN PRESENTING THE TERRIBLE TOLL OF THAT DISEASE. SO GREAT SCIENTISTS TOMORROW EARLY AT 8:30 FOLLOWED BY THE BUDGET, SO YOU ARE GOING TO GET INSPIRED, AND THEN YOU ARE GOING TO DEAL WITH THE HARD REALITIES OF BUDGETING. IT'S A REWARD TO START THE DAY TO COME TO THE SESSION AT 8:30.

AND WITH THAT, I'D LIKE TO ADJOURN FOR THIS EVENING. WE HAVE A DINNER WHERE?

MS. KING: SAME ROOM WHERE YOU HAD YOUR CLOSED SESSION.

CHAIRMAN KLEIN: SAME ROOM WHERE WE HAD LUNCH. AND FOR THOSE THAT CAME LATE, THAT'S PART OF THE DINING ROOM, BUT TO THE FAR LEFT. IT'S A PRIVATE ROOM ON THE FAR LEFT. STAFF AND BOARD MEMBERS. STAFF AND BOARD MEMBERS.

AND WHAT I WOULD LIKE TO DO AS WELL, WE'RE GOING TO GO STRAIGHT OVER TO DINNER. AND WHAT I'D LIKE TO ALSO DO IS SAY THAT THE ADMINISTRATIVE STAFF PUT A LOT OF WORK INTO THIS MEETING. MR. HARRISON PUT A LOT OF WORK INTO THE EVALUATION IN PARTICULAR. I'M VERY GRATEFUL FOR HIS PARTICIPATION AND MELISSA KING AND SCOTT TOCHER'S CONTRIBUTIONS TO THAT PROCESS. AND I'D LIKE TO GET A HAND FOR THE ADMINISTRATIVE STAFF OF THE AGENCY, INCLUDING THE PRESIDENT'S STAFF AND MY STAFF, WHO REALLY HAVE PUT A LOT OF WORK BOTH INTO THE PROGRAMS YOU'VE SEEN BEFORE YOU TODAY AND THE PROGRAM TOMORROW MORNING. AND BEFORE THINGS GET TOUGH, LET'S GIVE EVERYONE A ROUND OF APPLAUSE.

(APPLAUSE.)

CHAIRMAN KLEIN: MELISSA.

MS. KING: BEFORE EVERYBODY LEAVES, WE NOW HAVE OUR ILLUSTRIOUS PHOTOGRAPHER HERE. WE'D LIKE TO TAKE A PHOTO WITH DR. LEVEY IN THE MIDDLE WITH THE BOARD MEMBERS, PLEASE.

CHAIRMAN KLEIN: YOU'D LIKE US TO STAND WHERE?

(THE MEETING WAS THEN ADJOURNED AT 06:19 P.M. TO RECONVENE AT 9:30 A.M. ON WEDNESDAY, JUNE 23, 2010.)

REPORTER'S CERTIFICATE

I, BETH C. DRAIN, A CERTIFIED SHORTHAND REPORTER IN AND FOR THE STATE OF CALIFORNIA, HEREBY CERTIFY THAT THE FOREGOING TRANSCRIPT OF THE PROCEEDINGS BEFORE THE INDEPENDENT CITIZEN'S OVERSIGHT COMMITTEE OF THE CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE IN THE MATTER OF ITS REGULAR MEETING HELD AT THE LOCATION INDICATED BELOW

SHERATON SAN DIEGO
1380 HARBOR ISLAND DRIVE
MARINA TOWER, HARBOR ISLAND I
SAN DIEGO, CALIFORNIA
ON
TUESDAY, JUNE 22, 2010

WAS HELD AS HEREIN APPEARS AND THAT THIS IS THE ORIGINAL TRANSCRIPT THEREOF AND THAT THE STATEMENTS THAT APPEAR IN THIS TRANSCRIPT WERE REPORTED STENOGRAPHICALLY BY ME AND TRANSCRIBED BY ME. I ALSO CERTIFY THAT THIS TRANSCRIPT IS A TRUE AND ACCURATE RECORD OF THE PROCEEDING.

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