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: UNIVERSITY OF CALIFORNIA IRVINE
PACIFIC BALLROOM D
STUDENT CENTER
IRVINE, CALIFORNIA

DATE: WEDNESDAY, OCTOBER 26, 2011
9 A.M.

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

BRS FILE NO.: 89092

I N D E X

I N D E X (CONT'D.)

IRVINE, CALIFORNIA; WEDNESDAY, OCTOBER 26, 2011

9 A.M.

CHAIRMAN THOMAS: GOOD MORNING, EVERYBODY. LIKE TO WELCOME EVERYBODY TO THE OCTOBER MEETING OF THE ICOC HERE IN BEAUTIFUL IRVINE, CALIFORNIA. THANK YOU, EVERYBODY, FOR BEING HERE AND FOR ATTENDING ON THE PHONE. WE APPRECIATE EVERYBODY'S PARTICIPATION AS ALWAYS.

AS YOU KNOW, THE PROCEEDINGS, AS THEY ALWAYS ARE, ARE BEING AUDIOCAST AND MADE AVAILABLE TO ALL MEMBERS OF THE PUBLIC AROUND THE WORLD VIA THE INTERNET.

MARIA -- AND BY THE WAY, WOULD LIKE TO WELCOME MARIA AGAIN IN HER CAPACITY AS THE LEADER OF HER FIRST OFFICIAL BOARD MEETING. I'D LIKE TO CALL UPON HER TO LEAD US NOW IN THE PLEDGE OF ALLEGIANCE.

(THE PLEDGE OF ALLEGIANCE.)

CHAIRMAN THOMAS: MARIA, WOULD YOU PLEASE CONDUCT THE ROLL CALL.

MS. BONNEVILLE: ROBERT BIRGENEAU. FLOYD BLOOM. DAVID BRENNER. SUE BRYANT.

DR. BRYANT: HERE.

MS. BONNEVILLE: MARCY FEIT. TED KRONTIRIS. LEEZA GIBBONS. MICHAEL GOLDBERG.

MR. GOLDBERG: HERE.
MS. BONNEVILLE: SAM HAWGOOD.
DR. HAWGOOD: HERE.
MS. BONNEVILLE: STEVE JUELSGAARD.
DR. JUELSGAARD: HERE.
MS. BONNEVILLE: SHERRY LANSING. TED LOVE. BERT LUBIN.
DR. LUBIN: HERE.
MS. BONNEVILLE: SHLOMO MELMED. PHIL PIZZO.
DR. PIZZO: HERE.
MS. BONNEVILLE: CLAIRE POMEROY. FRANCISCO PRIETO.
DR. PRIETO: HERE.
MS. BONNEVILLE: CARMEN PULIAFITO.
DR. PULIAFITO: PRESENT.
MS. BONNEVILLE: ROBERT QUINT. DUANE ROTH. JOAN SAMUELSON. DAVID SERRANO-SEWELL. JEFF SHEEHY.
MR. SHEEHY: HERE.
MS. BONNEVILLE: JONATHAN SHESTACK.
MR. SHESTACK: HERE.
MS. BONNEVILLE: OS STEWARD.
DR. STEWARD: HERE.
MS. BONNEVILLE: JONATHAN THOMAS.

CHAIRMAN THOMAS: HERE.

MS. BONNEVILLE: ART TORRES.

MR. TORRES: HERE.

MS. BONNEVILLE: KRISTINA VUORI. JAMES ECONOMOU.

DR. ECONOMOU: HERE.

CHAIRMAN THOMAS: THANK YOU, MARIA.

WE'LL PROCEED TO ITEM NO. 4 ON OUR AGENDA, WHICH IS THE CHAIRMAN'S REPORT. GOT A NUMBER OF THINGS I WANTED TO BRING TO THE BOARD'S ATTENTION THAT HAVE TRANSPIRED SINCE OUR LAST MEETING IN AUGUST.

NO. 1, WE ARE OFF AND RUNNING WITH THE IOM AND THEIR PERFORMANCE REVIEW OF CIRM AND ALL OF ITS PROGRAMS, PROCEDURES, POLICIES, ETC. WE HAD ABOUT A MONTH OR SO AGO THE CHAIR AND VICE CHAIR OF THE IOM COMMITTEE CAME OUT. THAT WOULD BE HAROLD SHAPIRO AND TERRY MAGNUSON. HAROLD BEING FORMERLY THE PRESIDENT OF PRINCETON AND BEFORE THAT UNIVERSITY OF MICHIGAN AS THE CHAIR. TERRY IS AT THE UNIVERSITY OF NORTH CAROLINA. THEY CAME OUT TO DO A SORT OF PREMEETING WITH US IN CALIFORNIA TO GET A JUMP START ON THE FLAVOR FOR THE WHOLE CIRM UNDERTAKING.

WE HAD A NICE PRESENTATION AT OUR OFFICES. A NUMBER OF THE STAFF PRESENTED. WE THEN WENT TO

UCSF WHERE DEAN HAWGOOD HOSTED THE TWO GENTLEMEN AND GAVE THEM A TOUR OF THAT FACILITY. THEY MET WITH SOME PI'S THERE, HAD A VERY GOOD TALK, AND WERE VERY IMPRESSED, DEAN HAWGOOD, WITH EVERYTHING YOU'VE GOT GOING AT UCSF.

WE THEN PROCEEDED DOWN TO STANFORD WHERE THEY GOT A TOUR DOWN THERE AND HAD A NICE MEETING WITH DEAN PIZZO WHO TOLD THEM ALL ABOUT WHAT WAS HAPPENING IN THE STANFORD PROGRAM, GAVE THEM A NICE HISTORY OF HOW THINGS HAD PROGRESSED AND WHERE THINGS WERE GOING. THEY MET WITH A NUMBER OF THE STAFF THERE AS WELL AND WERE SIMILARLY HIGHLY IMPRESSED WITH BOTH THE FACILITY AND WITH THE STRENGTH OF THE PROGRAM, AS THEY HAD BEEN AT UCSF.

WE WERE JOINED IN THAT SECOND MEETING AND TOUR BY BOB KLEIN, AND WE FOLLOWED UP THE STANFORD SEGMENT WITH DINNER WITH BOB, AND MICHAEL GOLDBERG JOINED US. AND WE JUST HAD A VERY SUCCESSFUL DAY.

THE WHOLE DAY WAS ORCHESTRATED BY LYNN HARWELL, WHO HAS BEEN OUR CHIEF PERSON RUNNING THE ENTIRE INTERACTION WITH THE IOM. AND I'LL GIVE ANOTHER COMMENT ON LYNN ON THAT SUBJECT IN A MINUTE. IT WAS A VERY GOOD DAY. THEY'RE VERY IMPRESSED. THEY GOT HIT WITH LOTS OF DATA, AND I THINK IT WAS VERY SUCCESSFUL.

WE THEN FLASH FORWARD ABOUT SEVERAL WEEKS TO LAST WEEK, AND WE ENDED UP GOING BACK TO HAVE OUR INITIAL MEETING WITH THE IOM, THE FULL PANEL OF THE IOM, BACK IN WASHINGTON, D.C., IN THE BUILDING OF THE NATIONAL ACADEMY OF SCIENCES. WE HAD A LENGTHY PRESENTATION WHICH CONSISTED OF BOB KLEIN, WHO WENT BACK WITH US, GAVE SORT OF HISTORICAL CONTEXT, HOW CIRM STARTED AND GOT TO WHERE IT WAS UP UNTIL A FEW MONTHS AGO. DR. ELLEN FEIGAL THEN GAVE A TALK ON THE PORTFOLIO AND OUR ENTIRE SCIENCE PROGRAM, WHICH WAS VERY DIFFICULT TO DO IN A LIMITED PERIOD OF TIME. DID A VERY NICE JOB. FOLLOWED BY ELONA BAUM WHO DISCUSSED OUR INDUSTRY OUTREACH AND INTELLECTUAL PROPERTY ELEMENTS OF OUR PROGRAM.

AND THEN I CONCLUDED WITH A FORMAL CHARGE TO THE COMMITTEE AND THE HOST OF QUESTIONS WHICH WE WERE ASKING THEM TO CONSIDER AS THEY PERFORM THEIR REVIEW. WE HAD VERY GOOD Q AND A. THE WHOLE SESSION LASTED ABOUT FIVE HOURS.

AND SO WE'RE NOW OFFICIALLY INTO THE PROCESS. THAT PROCESS WILL TAKE A NUMBER OF MONTHS AND WILL CONCLUDE TOWARDS THE END OF 2012 WITH A REPORT ON CIRM AS THEY SEE IT WITH THEIR RESPONSE TO HOW WE ARE DOING WITH SUGGESTIONS. VERY THOROUGH ANALYSIS WHICH ARE WE LOOKING FORWARD TO. SO THAT

IS THE IOM.

I WILL SAY THAT, AGAIN, I WANT TO GIVE SPECIAL THANKS TO LYNN WHO WENT TO A GREAT DEAL OF EFFORT AND CONTINUES TO WITH RESPECT TO THE INTERACTION WITH THOSE FOLKS AND SORT OF MAKING SURE THAT EVERYBODY'S PRESENTATIONS WERE VERY GOOD. SHE HAD TO BE DEALING WITH US ON THE FLY. WE WERE HANDING HER AMENDMENTS TO OUR SLIDES IN THE MIDDLE OF SOMEONE ELSE'S PRESENTATION. SHE HAD TO GET THEM ONTO THE COMPUTER IN REAL-TIME. SHE'S DONE A TERRIFIC JOB WITH RESPECT TO THAT. SO I JUST TO WANT, LYNN, TO THANK YOU SPECIFICALLY.

SECOND ITEM I'D LIKE TO REPORT ON IS A NUMBER OF US HAVE SPOKEN. WE HAD OUR OCTOBER STATE GENERAL OBLIGATION BOND SALE WHICH TOOK PLACE LAST WEEK. AS YOU MAY RECALL, THE STATE SPLITS THEIR SALE INTO TWO COMPONENTS. ONE IS THE TAX-EXEMPT SIDE. THE OTHER IS THE TAXABLE SIDE. AND YOU FALL AS DICTATED BY HOW YOUR USE OF PROCEEDS ARE DEFINED WITHIN THE CONTEXT OF IRS LAWS AND REGS, AND WE ARE IN THE TAXABLE SIDE OF THE LEDGER.

I'LL SAY PARENTHETICALLY WE'RE WORKING WITH ORRICK, WHO IS BOND COUNSEL, TO SEE IF WE CAN GET THE IRS TO ISSUE A PRIVATE LETTER RULING WHICH ULTIMATELY WILL MAKE OUR PROCEEDS TAX-EXEMPT. MUCH

MORE TO COME ON THAT AT A LATER DATE. THAT'S A MULTIMONTH PROCESS AND AT BEST CASE WOULD AFFECT THE FALL ISSUE NEXT YEAR, BUT WE ARE WORKING ON THAT.

ANYWAY, LAST WEDNESDAY THEY HAD THE BOND ISSUE THAT HAD THE TAXABLE COMPONENT. WE WERE IN THAT ISSUE, AS YOU KNOW. AND WE HAVE FOR OUR OVERALL FUNDING PACKAGE NEGOTIATED A DEAL WITH THE STATE DEPARTMENT OF FINANCE WHICH BASICALLY INVOLVES US SPENDING CASH ON HAND, TAKING THE AMOUNT WE'VE GOT FROM THIS RECENT BOND ISSUE, COMBINING THAT WITH A SIGNIFICANT COMPONENT OF COMMERCIAL PAPER TO SERVE AS CONTINGENCY IN THE EVENT WE NEED MORE MONEY IN THE FUNDING PERIOD THAN WE THOUGHT WE MIGHT AND TO SERVE AS A RESERVE FUND TO SHOW TO OUR COLLABORATIVE FUNDING PARTNERS, GRANTEES, LOAN RECIPIENTS, ALL OTHER STAKEHOLDERS THAT WE HAVE PLENTY OF FACILITY AVAILABLE. WE PUT TOGETHER THIS PACKAGE, AND IT HAS, I THINK, WORKED OUT VERY WELL FOR US.

WE WILL RECEIVE FULL FUNDING AND HAVE A FULL RESERVE ELEMENT THERE WHICH IS STRUCTURED A LITTLE DIFFERENTLY THAN WE HAVE IN THE PAST. IT'S THE WAY THAT THE GOVERNOR'S OFFICE HAS ASKED ALL AGENCIES WHO ARE BEING FUNDED BY THE G.O. BOND ISSUE TO CONSIDER, AND SO WE'RE VERY HAPPY WITH HOW THIS TURNED OUT. IT WAS A LOT OF WORK.

I WOULD LIKE TO SPECIFICALLY ACKNOWLEDGE A NUMBER OF PEOPLE: SENATOR TORRES FOR HIS POLITICAL CONTACTS, ACUMEN, STRATEGIC ADVICE, PARTICIPATION IN THE MEETINGS WITH DOF AT WHICH OUR DEAL WAS NEGOTIATED AND OVERALL EXCELLENT ADVICE.

TO ALAN WHO HAS LED THE STAFF'S EFFORTS IN TERMS OF GETTING INFORMATION COMPILED FOR THE DOF AND THE STATE TREASURER'S OFFICE AND PLAYED A KEY ROLE IN OUR MEETING WITH DOF STAFF AT WHICH WE HAMMERED OUT OUR DEAL.

TO LYNN, WHO SEEMS TO BE THE PERSON FOR ALL SEASONS AT THIS MEETING, WHO HAS BEEN OUR PRINCIPAL LIAISON WITH DEPARTMENT OF FINANCE AND THE STATE TREASURER'S OFFICE, PULLED TOGETHER ALL THE MATERIAL, ALL THE SPREADSHEETS, ALL THE JUSTIFICATION THAT FORMED THE BASIS FOR OUR NEGOTIATION, AND PLAYED A CENTRAL ROLE IN THE MEETINGS WE HAD WITH DOF AND CONTINUES TO BE OUR PERSON WHO'S THE ONGOING PRINCIPAL CONTACT WITH THOSE OFFICES. SO, LYNN, THANK YOU VERY MUCH.

I'D LIKE TO IN ADDITION SINGLE OUT JAMES WHO HAS, AS ALWAYS, GIVEN GREAT LEGAL GUIDANCE IN THE COURSE OF THESE NEGOTIATIONS AND WAS AN ACTIVE PARTICIPANT IN THE MEETINGS WITH DOF STAFF AND THE SUBSEQUENT MEETING WITH DIRECTOR ANA MATOSANTOS AS

WAS SENATOR TORRES AND HAS BEEN VERY HELPFUL IN THE DRAFTING OF ALL RELEVANT LANGUAGE THAT'S GONE BACK AND FORTH.

THANK YOU, PAT, FOR A SIMILAR INTEGRAL ROLE IN HELPING GETTING TOGETHER ALL THE INFORMATION ON THE SCIENCE PROGRAMS THAT FORMED THE BASIS FOR OUR DRAWDOWN ANALYSIS THAT WAS SUBMITTED TO THE DOF AND THE TREASURER'S OFFICE.

AND CERTAINLY LAST, BUT NOT LEAST, CHILA WHO IS THE KEEPER OF ALL RELEVANT NUMBERS AND WITHOUT WHICH WE WOULDN'T HAVE ALL THE INFORMATION AND BACKUP THAT IS NECESSARY TO BE ABLE TO MAKE OUR CASE, WHO ALSO CAME WITH US TO THE PIVOTAL DOF STAFF MEETING.

SO THIS WAS A REAL TEAM EFFORT. WE'RE VERY GRATEFUL TO THE GOVERNOR'S OFFICE AND TO THE STATE TREASURER'S OFFICE FOR THEIR CONTINUED SUPPORT OF CIRM AND APPRECIATE THAT THEY VIEW WHAT WE'RE DOING AS VERY WORTHWHILE. AND WE LOOK FORWARD TO CONTINUED EXCELLENT RELATIONS WITH BOTH OFFICES GOING FORWARD.

WE HAVE EXTENDED AN INVITATION TO THE GOVERNOR WHO HAS BEEN HIMSELF VERY SUPPORTIVE OF US AND HOPE THAT HE AND DIRECTOR ANA MATOSANTOS WILL BE ABLE IN THE NEAR FUTURE TO VISIT US EITHER IN SAN

FRANCISCO OR PERHAPS AT ONE OF OUR CAMPUSES, LIKELY UC DAVIS SINCE IT'S CLOSEST, TO GET EVEN A GREATER FLAVOR FOR THE WHOLE THING. SO WE'RE VERY APPRECIATIVE OF THE GOVERNOR AND THE DIRECTOR AND OF STATE TREASURER LOCKYEAR. AND I'D ALSO LIKE TO MENTION OUR GOOD FRIEND STEVE COONY IN THE STATE TREASURER'S OFFICE WHO'S BEEN GREAT THROUGHOUT THIS WHOLE PROCESS.

AT THE WORLD STEM CELL SUMMIT, WHICH WAS, I THOUGHT, A VERY SUCCESSFUL AND INTERESTING EVENT ON ALL SORTS OF FRONTS, CIRM WAS VERY STRONGLY REPRESENTED BOTH BY BOARD MEMBERS, BY STAFF, AND CERTAINLY LAST, BUT NOT LEAST, BY GRANTEES AND LOAN RECIPIENTS WHO ALL OF THOSE WERE SCATTERED THROUGHOUT THE THREE-DAY PROGRAM AND I THINK GAVE VERY, VERY VALUABLE INSIGHTS INTO ALL SORTS OF THINGS.

AND I DO WANT TO NOTE WITH RESPECT TO THAT EVENT, FURTHER TO MY PARTICULAR CONCERN THAT WE HEIGHTEN THE EMPHASIS OF THE PATIENT ADVOCATE PARTICIPATION IN OUR ALL EFFORT, WE GAVE A RECEPTION FOR PATIENT ADVOCATES ATTENDING THE STEM CELL SUMMIT WHICH WAS VERY NICELY ATTENDED AND APPRECIATED. AND I THINK THAT IT WAS A VERY NICE THING TO DO TO ADVANCE THIS GOAL WE HAVE OF THAT INCREASED

PARTICIPATION.

FURTHER ON THAT THEME, WE HAD A MEETING LAST SATURDAY, WHICH I ATTENDED, THAT DON GIBBONS SET UP IN BAKERSFIELD, WHICH WAS A PATIENT ADVOCATE EVENT THAT WAS HIGHLIGHTING A NUMBER OF SPEAKERS ON THE WORK THAT'S BEING DONE WITH RESPECT TO AGE-RELATED MACULAR DEGENERATION. THERE WERE QUITE A FEW FOLKS THERE. I THOUGHT THE PANEL THAT WAS ASSEMBLED DID A REALLY GOOD JOB OF LAYING OUT WHAT IS BEING DONE IN LAYMAN'S TERMS AND WAS THE SOURCE OF LOTS OF GOOD Q AND A FROM THE FOLKS WHO WERE THERE.

I GAVE THE KEYNOTE AT THE TOP OF THAT, AND I THINK IT WAS JUST A VERY GOOD EVENT WHICH WE'RE LOOKING TO DUPLICATE ALL OVER THE STATE WITH THE SORT OF FORMAT OF HAVING SCIENTISTS SPEAK AND PATIENT ADVOCATES, BOTH OF WHICH GAVE SORT OF IMPASSIONED PRESENTATIONS.

THERE IS A SIMILAR EVENT THAT'S COMING UP THIS SATURDAY IN SANTA ROSA AT WHICH SENATOR TORRES WILL BE THERE ON BEHALF OF THE BOARD AND WILL BE GIVING THE KEYNOTE SPEECH AT THAT EVENT. SO, AS I SAY, WE LOOK TO THIS AS SORT OF A MODEL TO DUPLICATE TO GENERATE INTEREST AND SPREAD THE WORD THROUGHOUT THE STATE.

THERE WAS A TERRIFIC CEREMONY ON FRIDAY IN BERKELEY DEDICATING LI CA SHING CENTER ON THAT CAMPUS, WHICH ACTUALLY IS GOING TO BE OCCUPIED IN JANUARY, BUT THE EVENT WAS TIMED WHEN MR. LI WAS GOING TO BE IN TOWN FROM HONG KONG. HE HAD VERY GENEROUSLY DONATED $40 MILLION TOWARDS THAT BUILDING, AND THEY HAD A VERY NICE EVENT FOR HIM AT WHICH CHANCELLOR BIRGENEAU PRESIDED.

AND SPEECHES WERE GIVEN BY THE CHANCELLOR, BY BOB TJIAN, WHO'S A PROFESSOR AT BERKELEY AND ALSO THE HEAD OF THE HOWARD HUGHES MEDICAL INSTITUTE, BY YOURS TRULY, AND LAST, BUT NOT LEAST, BY MR. LI, WHO DID THE BULK OF HIS SPEECH IN MANDARIN AND HAD ONE OF HIS COLLEAGUES GIVE THE TRANSLATION. VERY THOUGHTFUL, ELOQUENT SPEECH. AND THEY HAD SEVERAL HUNDRED PEOPLE AT THAT. WE WERE WELL REPRESENTED BY CIRM AT THAT EVENT AS WELL. SENATOR TORRES WAS THERE, DR. PRICE WAS THERE, CHANCELLOR BIRGENEAU OBVIOUSLY WAS THERE, AND A NUMBER OF FOLKS FROM CIRM WERE THERE, ELONA AND GEOFF AND LYNN. AND IF I'M LEAVING ANYBODY OUT, FORGIVE ME. BUT THE EVENT HAD A GREAT FEEL, AND THE SPACE IS FANTASTIC IN THE TRADITION OF ALL OF THE FACILITIES THAT HAVE BEEN BUILT AS PART OF THE CIRM EFFORT.

SO WE'RE LOOKING FORWARD TO GREAT WORK

BEING DONE IN THAT BUILDING AS IT'S CURRENTLY BEING DONE ELSEWHERE ON THE CAMPUS, BUT THE SCIENTISTS ARE CHAMPING AT THE BIT TO GET IN THERE AND WILL DO SO, AS I SAY, IN JANUARY.

DR. PIZZO: MR. LI ALSO WAS ONE OF THE TEN RECIPIENTS OF THE CARNEGIE CORPORATION'S AWARD FOR PHILANTHROPY, WHICH WERE GIVEN IN NEW YORK CITY THURSDAY, THE DAY PRIOR TO THAT, AND I WAS THERE FOR THAT EVENT ALONG WITH MANY, MANY OTHERS AROUND THE COUNTRY. SO HE'S BEEN HONORED FOR HIS EXTRAORDINARY CONTRIBUTIONS, AND THE BERKELEY EXAMPLE IS JUST ONE OF THE GREAT ONES.

CHAIRMAN THOMAS: THANK YOU, DEAN PIZZO. I SHOULD NOTE THAT AT THE END OF MY REMARKS, I NOTED THAT MR. LI WAS A POLITICALLY SAVVY GUY AND DIDN'T WANT TO LOOK LIKE HE WAS PLAYING FAVORITES, AND SO HAD DONATED LOTS OF MONEY BOTH TO BERKELEY AND TO STANFORD.

DR. PIZZO: LET THE RECORD SHOW THAT IT WAS MORE TO BERKELEY, WHICH IS WHY I'M VISITING HONG KONG IN THREE WEEKS.

CHAIRMAN THOMAS: THANK YOU FOR THAT CLARIFICATION, DEAN PIZZO.

THE LAST THING I'D LIKE TO TOUCH ON IS THERE WAS A SIGNIFICANT OPINION IN THE STEM CELL

SPACE HANDED DOWN BY THE EUROPEAN COURT OF JUSTICE LAST WEEK, AND I WOULD LIKE TO HAVE ELONA SAY A FEW WORDS ABOUT THAT BECAUSE IT IS SOMETHING THAT WE NEED TO MAKE SURE EVERYBODY IS AWARE OF.

MS. BAUM: I GAVE A SUMMARY OF THIS AWHILE BACK, IT MIGHT HAVE BEEN IN JUNE ALREADY, TO THE IP SUBCOMMITTEE. AND WE KNEW THAT THERE WAS BEFORE THE EUROPEAN COURT OF JUSTICE A CASE THAT THEY WERE ASKED TO OPINE ON CERTAIN LEGAL ISSUES THAT CAME FROM GERMANY. GREENPEACE HAD CHALLENGED A DECISION GRANTING A PATENT ON NEURAL PRECURSOR STEM CELLS THAT AROSE FROM EMBRYONIC STEM CELLS.

AND THE COURT IN GERMANY WAS REQUIRED TO INTERPRET WHAT THEY CALL THE BIOTECH INVENTIONS DIRECTIVE. AND THAT PARTICULAR DIRECTIVE STATES THAT THE USE OF HUMAN EMBRYOS FOR INDUSTRIAL OR COMMERCIAL USE SHALL BE CONSIDERED UNPATENTABLE.

SO THERE WERE A NUMBER OF LEGAL QUESTIONS THAT THE GERMANY COURT WOULD HAVE TO OPINE ON, AND IT FELT THAT IT WAS APPROPRIATE TO ASK THE EUROPEAN UNION COURT OF JUSTICE FOR GUIDANCE ON THAT. I WON'T GET INTO ALL THE SPECIFIC QUESTIONS AND ANSWERS THAT THE COURT PROVIDED, BUT THE MOST CONCERNING ONE IS A FINDING. I'M GOING TO QUOTE IT AND THEN I'LL PARAPHRASE IT.

IT STATED THAT AN INVENTION MUST BE REGARDED AS UNPATENTABLE, EVEN IF THE CLAIMS OF THE PATENT DO NOT CONCERN THE USE OF HUMAN EMBRYOS, WHERE THE IMPLEMENTATION OF THE INVENTION REQUIRES THE DESTRUCTION OF HUMAN EMBRYOS.

AS YOU CAN SEE, IT'S A FAR-REACHING OPINION THAT ALL THE COUNTRIES WOULD HAVE TO APPLY WHEN THEY'RE DETERMINING PATENT CHALLENGES. SO THE GUT IS OR THE TAKEAWAY IS THAT IF IT INVOLVED THE DESTRUCTION OF A HUMAN EMBRYO, EVEN IF THAT IS NOT STATED DIRECTLY WITHIN THE PATENT APPLICATION AND MIGHT HAVE HAPPENED THROUGH PREVIOUS RESEARCH YEARS AGO, THE PATENT WOULD BE BANNED. SO THAT'S A FAR-REACHING APPLICATION OF THE LAW WHICH WILL HAVE BINDING EFFECT ON ALL THE COUNTRIES IN EUROPE.

THE OUTCOME OF THAT WILL DETERMINE HOW THE PATENT OFFICES ACTUALLY APPLY THAT. THERE ARE ANALYSTS THAT BELIEVE THAT AT LEAST SOME SMART ATTORNEYS IN EUROPE WILL BE ABLE TO IN SOME DEGREE PATENT OTHER ASPECTS OF A PROJECT. OTHERS POINT OUT THAT EVEN REGARDLESS OF THE PATENTS, THERE MIGHT STILL BE AN ABILITY TO PROTECT THE RESEARCH AND THAT, UNDER REGULATORY REQUIREMENTS, YOU'D STILL HAVE TO GO THROUGH ALL THE REGULATORY REVIEW ON THE PARTICULAR CELL LINE AND PRODUCT AT ISSUE, AND THAT

CREATES SOME BARRIER TO ENTRY.

SO I THINK THAT WHILE IT'S CONCERNING BECAUSE IT'S A BROAD REACH, THE SILVER LINING IN SOME RESPECTS IS THAT THERE COULD BE SOME ABILITY TO STILL PROTECT THE SPECIFIC WORK VIA REGULATORY REQUIREMENTS, ETC.

DR. BRYANT: COULD I ASK A QUESTION? SO DOES THAT MEAN, FOR INSTANCE, WE DON'T DESTROY EMBRYOS NOW BECAUSE WE'VE GOT CELL LINES. ARE THEY SAYING EVEN SOMETHING THAT COMES FROM A CURRENT CELL LINE WOULD BE PROHIBITED BECAUSE IT ORIGINALLY CAME FROM A HUMAN EMBRYO?

MS. BAUM: THAT'S THE CONCERN. IT REACHES ALL THE WAY BACK IN EUROPE, NOT HERE.

SO I THINK THOSE WERE THE KEY TAKEAWAY, THAT IT'S A BROAD APPLICATION OF THE EUROPEAN LAW, AND FOLKS ARE VERY CONCERNED ABOUT IT. THERE STILL MIGHT BE SOME ABILITY TO PROTECT THE RESEARCH IN EUROPE BECAUSE OF REGULATORY BARRIERS, ETC.

CHAIRMAN THOMAS: ANY OTHER QUESTIONS OF ELONA ON THIS POINT? OKAY. THANK YOU VERY MUCH.

ONE MINOR HOUSEKEEPING ISSUE, IF YOU NOTICE THE MEETING SCHEDULE IN YOUR BOOKS THERE, THE DATES FOR THE JANUARY AND DECEMBER MEETINGS NEXT YEAR HAVE BEEN SLIGHTLY ALTERED. AND YOU CAN SEE

THE JANUARY MEETING IS THE 17TH IN SAN DIEGO AND DECEMBER IS THE 12TH IN LOS ANGELES.

THAT CONCLUDES MY REPORT. ANYBODY HAVE ANY QUESTIONS ON ANY OF THE ITEMS?

DR. LUBIN: IT WOULD BE INTERESTING TO SEE THE LIST OF QUESTIONS, THE FINAL LIST OF QUESTIONS THAT WERE SUBMITTED TO THE IOM. MAYBE YOU DISTRIBUTED THIS; AND IF I'M ASKING THAT AND HAVEN'T SEEN IT, I APOLOGIZE, BUT IT WOULD BE NICE TO SEE WHAT THEY'RE -- WHAT YOU'VE ASKED THEM TO LOOK AT.

CHAIRMAN THOMAS: LYNN, CAN YOU MAKE SURE THAT'S CIRCULATED TO THE BOARD? THANK YOU.

LET'S NOW PROCEED TO THE NEXT ITEM, WHICH IS THE PRESIDENT'S REPORT. DR. TROUNSON.

MS. BONNEVILLE: QUICKLY I'D JUST LIKE TO CONFIRM CLAIRE POMEROY AND MARCY FEIT ARE ON THE LINE.

DR. POMEROY: YES, I AM. THANK YOU VERY MUCH.

MS. BONNEVILLE: MARCY, ARE YOU ON?

MS. FEIT: THIS IS MARCY. I'M ON LINE.

DR. VUORI: THIS IS KRISTINA VUORI. I'M ON THE PHONE AS WELL.

CHAIRMAN THOMAS: MORNING, KRISTINA.

DR. VUORI: GOOD MORNING, EVERYBODY.

DR. TROUNSON: SO, JON, JUST FOLLOW-UP COMMENTS ON THE EUROPEAN RULING. I'M ACTUALLY VERY CONCERNED ABOUT THE OVERALL MOVEMENT IN THE WORLD TOWARDS A VERY MORE CONSERVATIVE VIEW. AND I JUST DRAW YOUR ATTENTION TO THE VATICAN INVESTMENT INTO AN ADULT STEM CELL COMPANY WITH RADICALLY FALLING PRICES. IT DOESN'T SOUND AN ECONOMIC REASON TO BACK THAT COMPANY.

AND ALSO CONCERNS THAT I HAVE IN THE U.S. ABOUT WHAT I SEE AS SOME STRONG POTENTIALLY NEGATIVE VIEWS ARISING, I THINK, AS THIS PRESIDENTIAL ELECTION PROGRESSES. SO I THINK THE WORLD, THE GLOBAL ORGANIZATIONS HAVE REALLY BEEN MUCH MORE REACTIVE IN RECENT YEARS RATHER THAN PROACTIVE. AND I'M ENCOURAGING THOSE ORGANIZATIONS TO BECOME A BIT MORE PROACTIVE, I THINK, BECAUSE THE COMMUNITY ACTUALLY DOESN'T REALLY RECOGNIZE A BIG DIFFERENCE BETWEEN STEM CELLS AND EMBRYONIC STEM CELLS ACTUALLY. SO IT WOULD HAVE A BIG NEGATIVE IMPACT REALLY ACROSS THE WHOLE SPACE IF THIS SORT OF MOVEMENT REALLY GAINS MOMENTUM.

SO I SEE IT AS A CONCERN AND SOMETHING THAT WE OUGHT TO BE INTERESTED IN. AND MAYBE IF AN ORGANIZATION IS PREPARED TO COME TOGETHER TO BE A BIT MORE PROACTIVE, I THINK WE SHOULD ENCOURAGE THAT

AT THE VERY LEAST. SO IT'S JUST A CONCERN THAT I'VE HAD FOR A LITTLE WHILE NOW.

SO I WANT TO -- CAN YOU SEE THIS? I WANT TO TALK TO YOU ABOUT NUCLEAR TRANSFER BECAUSE THERE WAS A PAPER, AN INTERESTING PAPER, THAT WAS PUBLISHED RECENTLY ON NUCLEAR TRANSFER. IF YOU LOOK AT THE TOP LINE HERE, IF YOU CAN SEE THAT THAT FAR, I THINK IT SHOULD BE ABLE TO BE VISUALIZED. AT THE TOP BRACKET WE'VE GOT WHAT'S NORMAL DEVELOPMENT WHEN YOU TAKE AN OOCYTE AND THEN IT'S FERTILIZED BY SPERM AND THEN PRODUCES AN EMBRYO THAT GOES ON TO EITHER REPRODUCTION OR YOU CAN MAKE AN EMBRYONIC STEM CELL OUT OF IT. SOMEHOW THE SPERM GOT MISSING. IT'S PROBABLY GONE TO YELLOW IN THE PICTURE.

THE EMBRYO IS A 2N AND IT'S A DOUBLE SET OF CHROMOSOMES. THAT'S REALLY WHAT'S VERY IMPORTANT HERE. SO IF YOU TAKE NUCLEAR TRANSFER, YOU TAKE THE 2N DONOR SOMATIC CELL, A SKIN CELL, IF YOU LIKE, AND YOU PUT IT INTO AN EGG THAT YOU'VE REMOVED THE NUCLEUS FROM. SO YOU TAKE OUT THE EGG'S NUCLEUS, THE RED COMPONENT THERE ON THE SECOND LINE, AND INTRODUCE THE 2N NUCLEUS. YOU'VE GOT A SOMATIC CELL NUCLEAR TRANSFER CONSTRUCT, WHICH ACTUALLY DEVELOPS AS THE EQUIVALENT OF AN EMBRYO. AND THAT'S NOT PERMITTED TO BE USED FOR REPRODUCTIVE CLONING, OF

COURSE, BUT YOU CAN ACTUALLY MAKE AN EQUIVALENT OF AN EMBRYONIC STEM CELL OR PLURIPOTENTIAL STEM CELL OUT OF IT. AND THAT COULD BE USED FOR THERAPEUTIC PURPOSES IN ANIMALS.

AND THE BOTTOM ONE IS A PROCEDURE THAT'S BEING WORKED ON, THIS SORT OF GIVES YOU THE FULL PARAMETERS HERE, WHERE PATIENTS MIGHT HAVE MITOCHONDRIAL DISEASE. SO ACTUALLY IN A PATIENT'S EGGS, YOU TAKE THE NUCLEUS AND YOU PUT IT INTO A DONOR EGG WHICH YOU'VE REMOVED THE NUCLEUS, AND YOU CAN GROW AN EMBRYO FROM THAT. AND THAT EMBRYO WILL NOT CONTAIN ANY OR VERY LITTLE, IF ANY, MITOCHONDRIAL COMPONENT WHICH HAS GOT -- MITOCHONDRIA HAVE DNA, SO THAT'S WHERE MITOCHONDRIAL GENETIC DISEASE EXISTS. SO THIS WOULD BE A CURE, AND IT'S BEEN SHOWN TO WORK IN ANIMALS. THIS WOULD BE A CURE FOR MITOCHONDRIAL DISEASES. THAT'S THE SORT OF SPACE THAT THE SCIENTISTS HAVE BEEN WORKING IN, AND WE'VE ALWAYS BEEN INTERESTED IN THE NUCLEAR TRANSFER PART.

SO THE TOP LINE REMAINS NORMAL DEVELOPMENT. BUT IF YOU COME DOWN TO THE SECOND LINE NOW, AND I'LL TAKE YOU THROUGH THE SOMATIC CELL BEING INTRODUCED INTO THE EGG. THE EGG HAD ITS NUCLEUS REMOVED, THE 1N REMOVED. WE'RE ON THE

SECOND LINE NOW. AND NOW WHAT HAD HAPPENED IN A PUBLICATION THAT WAS JUST RECENTLY PUBLISHED WAS THAT IF YOU DO THAT IN THE HUMAN, INSTEAD OF PRODUCING A BLASTOCYST AND, THEREFORE, THE EQUIVALENT OF PLURIPOTENTIAL OR EMBRYONIC STEM CELLS FOR THERAPEUTIC CLONING, THE EMBRYO STOPPED DIVIDING. IT JUST HAS CELLS. SO YOU CAN SEE THE BIG RED X. IT DIDN'T GO ON ANY FURTHER. SO THIS IS WORK THAT SHOWED THAT THEY COULDN'T GO ON ANY FURTHER.

NOW, IF YOU GO DOWN TO THE BOTTOM LINE, WHAT THEY WERE ABLE TO DO WAS TO DO THE WHOLE PROCEDURE EXCEPT THEY DIDN'T REMOVE THE RED NUCLEUS OF THE EGG. SO NOW YOU HAVE THE NUCLEUS OF THE EGG STILL THERE, BUT YOU'VE ADDED THE SOMATIC CELL CHROMOSOMES IN ITS NUCLEUS. NOW YOU'VE GOT A 3N, SO YOU'VE GOT THREE SETS OF CHROMOSOMES. SO THAT'S CALLED TRIPLOIDY. AND THEY'RE ABLE TO GROW THE BLASTOCYSTS, TRIPLOID BLASTOCYSTS FROM THAT, AND ALSO PRODUCE THE EQUIVALENT OF EMBRYONIC STEM CELL LINES.

SO IF YOU LEAVE THE EGG'S NUCLEUS IN PLACE, YOU CAN ACTUALLY GET THE PROCEDURE TO WORK. SO THAT WAS INTERESTING. THIS WAS THEIR EXPERIMENT. IT WAS INTERESTING.

I WANT TO TAKE YOU BACK TO THE SECOND LINE BECAUSE I THINK WHAT'S ALSO MORE INTERESTING OR AS INTERESTING IS THEY TOOK AN EMBRYONIC BLASTOMERE, THAT IS, A CELL OF AN EIGHT-CELL EMBRYO, HUMAN EMBRYO, CELL OF AN EIGHT-CELL EMBRYO. AND INSTEAD OF USING A SKIN CELL, THEY PUT IN THE CELL OF THE EIGHT-CELL EMBRYO. SO THIS IS A PRETTY UNDIFFERENTIATED CELL BECAUSE IT'S BEFORE ANY DIFFERENTIATION OCCURS.

WHEN THEY FUSE THAT INTO THE EMPTY EGG CELL, THEY GOT BLASTOCYSTS, AND THEY GOT BLASTOCYSTS PRODUCED. RIGHT. SO THIS IS ALSO INTERESTING. THEY DON'T MAKE MUCH OF A POINT IN THE PAPER ABOUT THAT, BUT I THINK IT'S PARTICULARLY INTERESTING.

SO NOW LET'S GO TO THE PAPER. SO THIS WAS PUBLISHED IN *NATURE* IN OCTOBER, AND IT WAS THE WORK OF THE ELGI LAB OF THE NEW YORK STEM CELL FOUNDATION. LET ME GO THROUGH IT JUST IN WORDS. THE SOMATIC CELL NUCLEAR TRANSFER EMBRYOS WOULD NOT DEVELOP BEYOND A FEW CLEAVAGE STAGES. THAT'S DIFFERENT TO WHAT HAPPENED IN CALIFORNIA BECAUSE THE CALIFORNIANS SHOWED THAT YOU COULD GROW BLASTOCYSTS. YOU COULD GROW BLASTOCYSTS. IT WAS ANDY FRENCH, WHO'S A POST-DOC THAT ACTUALLY WORKED WITH ME, BUT HE'S WORKING WITH SAM WOOD IN CALIFORNIA. SO THAT'S

SOMETHING A LITTLE DIFFERENT THERE.

ALSO, IN MONKEYS THEY COULD GET IT TO WORK. SO THE MITALIPOV GROUP IN SEATTLE WERE ABLE TO PRODUCE SOMATIC CELL NUCLEAR TRANSFER CELL LINES, EQUIVALENT OF EMBRYONIC STEM CELL LINES. SO THESE THREE LABS ARE ALL A BIT DIFFERENT. AT LEAST IN TWO INSTANCES THEY'RE ABLE TO DO IT, BUT IN THE NEW YORK STUDIES THEY COULDN'T. THEY ONLY GOT CLEAVAGE. SO YOU HAVE TO REMEMBER THAT THERE'S A LOT OF DARK OUT THERE, AND WE NEED TO FIGURE OUT WHAT'S IMPORTANT.

WELL, NOW, IF YOU TAKE THE NUCLEAR TRANSFER OF THE DIPLOID SOMATIC CELL INTO THE INTACT OOCYTE, SO ONE OOCYTE DOESN'T HAVE ITS NUCLEUS REMOVED, THEY PRODUCE BLASTOCYSTS. AND THESE ES CELLS WERE ALL TRIPLOID. AND TRIPLOID ES CELLS ARE NOT PARTICULARLY USEFUL BECAUSE THEY'RE CHROMOSOMALLY ABNORMAL, AND YOU DON'T REALLY WANT TO USE THOSE BECAUSE THEY'VE GOT THREE SETS OF CHROMOSOMES. SO YOU COULDN'T ALWAYS PREDICT WHAT MIGHT HAPPEN IN THAT SENSE. I THINK THEY CAN BE UNSTABLE. I THINK THE GROUP THERE THINKS THAT THEY ARE STABLE, BUT GENERALLY YOU WERE WORRIED ABOUT TRIPLOID CELLS. THREE SETS OF CHROMOSOMES IS NOT WHAT YOU REALLY WANT.

SO I THINK THE WORLD THINKS THAT'S

INTERESTING, BUT MAYBE NOT TERRIBLY USEFUL AT THIS POINT. NOW, THE EMBRYONIC BLASTOMERE WORKED WHEN INJECTED INTO THE ENUCLEATED EGG, AND THEY PARTHOGENETICALLY ACTIVATED THAT OOCYTE TO DO THAT. SO THAT'S WHAT'S INTERESTING BECAUSE I WONDER WHY THEY DIDN'T TRY TO USE AN IPS CELL BECAUSE AN IPS CELL IS VERY CLOSE TO A BLASTOMERE. RIGHT. THAT'S A VERY UNDIFFERENTIATED CELL. SO THAT WAS THE OBVIOUS EXPERIMENT THAT I WOULD HAVE THOUGHT THAT THEY SHOULD HAVE DONE BECAUSE IF YOU TOOK AN IPS CELL AND USED IT, AND IF THAT WOULD WORK, WELL, YOU COULD GET YOUR THERAPEUTIC CLONING PROCEDURE WORKING FROM THAT. SO THAT WAS JUST AN INTERESTING OBSERVATION.

SO AT LEAST FROM THE NEW YORK STEM CELL STUDY, THERE'S SOMETHING WRONG WITH THE SOMATIC CELL, THE SKIN CELL, NUCLEUS. IT'S NOT WORKING FOR THEM AT LEAST. WHAT'S THE NEXT EXPERIMENT? I THINK YOU OUGHT TO TRY AN IPS CELL. SO I THINK IT'S AN INTERESTING SET OF EXPERIMENTS. I THINK IT'S BEEN INTERPRETED DIFFERENTLY, AND YOU'VE JUST GOT MY INTERPRETATION OF IT. I THINK IT'S AN IMPORTANT PIECE OF WORK BECAUSE THINGS HAVE GONE A BIT DEAD ON THE AREA OF NUCLEAR TRANSFER BECAUSE MOST PEOPLE HAVE SORT OF MOVED ON TO IPS CELLS.

AND WE JUST HAD A WORKSHOP NOT SO LONG AGO, AND THAT PUBLISHED THAT, AND WE ACTUALLY PUBLISHED A SUMMARY OF THAT IN *NATURE BIOTECHNOLOGY* AS WELL, SAYING WE THINK THAT SOMATIC CELL NUCLEAR TRANSFER HAS SOME VERY IMPORTANT ISSUES THAT COULD HELP US IF WE'RE ABLE TO DO IT. SO I STILL THINK IT'S AN IMPORTANT AREA OF RESEARCH, AND THIS IS A STEP, BUT IT'S A BIT OF A CLOUDY ONE, AND I THINK THE NEXT EXPERIMENT MIGHT BE THE MOST INTERESTING.

SO MOVING ON, THERE WAS A PAPER THAT WAS PUBLISHED IN *SCIENCE TRANSLATIONAL MEDICINE* ON MYOCARDIAL INFARCTS IN MICE THAT IMPAIR THE THERAPEUTIC POTENTIAL OF BONE MARROW CELLS. NOW, YOU WILL PROBABLY REMEMBER THAT MESENCHYMAL STEM CELLS OR MSC'S ARE BEING USED IN MANY, MANY STUDIES TO LOOK TO SEE IF THEY CAN IMPROVE THE HEART CONDITION OF PATIENTS. SO THEY'RE INJECTING PATIENTS IN A LOT OF DIFFERENT CLINICAL TRIALS NOW WITH MESENCHYMAL STEM CELLS.

AND THE QUERY THAT CAME FROM THIS RESEARCH GROUP IS, WELL, THIS WORKED PRETTY WELL IN THE MICE. SO WHEN YOU'VE GOT A NORMAL MOUSE AND YOU PUT IN MESENCHYMAL STEM CELLS, YOU ACTUALLY GOT QUITE A CONTRIBUTION THERE. BUT WHEN THEY TRIED IT WITH A MOUSE THAT HAD AN INDUCED INFARCT, IT DIDN'T WORK.

AND SO YOUR PATIENTS ARE THE ONES THAT HAVE GOT AN INFARCT. THEY'VE HAD A HEART ATTACK. THEY'VE GOT DAMAGED HEART. AND SO THERE'S SOMETHING IN THE BONE MARROW WHICH IS A RESPONSE, AN INFLAMMATORY RESPONSE, WHICH IS STOPPING THOSE MESENCHYMAL STEM CELLS BEING EFFECTIVE.

SO THE QUESTION HERE IS THAT IF YOU ARE GOING TO USE THE PATIENT'S OWN MSC'S, MAYBE THAT'S NOT THE BEST SOURCE. THIS EXPERIMENT SAYS MAYBE THAT'S NOT THE BEST SOURCE. MAYBE YOU SHOULD GO TO A SOURCE THAT HASN'T HAD MYOCARDIAL INFARCT IF YOU EXPECT IT TO DO SOME BENEFIT. SO I THINK IT'S AN INTERESTING OBSERVATION, NEEDS TO BE FOLLOWED UP, BUT THERE'S BEEN A LOT OF QUESTIONS ABOUT WHY DOESN'T IT WORK AS WELL AS IT DID IN THE ANIMAL MODELS.

THERE'S A BEAUTIFUL PAPER, AND THIS DESERVES TO HAVE LOTS OF FIGURES ATTACHED TO IT, AND I CAN'T DO THAT BECAUSE I DON'T REALLY HAVE ACCESS TO THOSE FIGURES. I ENCOURAGE YOU TO GO AND LOOK AT THIS *NATURE* PAPER. IT'S A BEAUTIFUL PAPER BY ARTURO ALVAREZ-BUYLIA'S GROUP AT THE UCSF IN *NATURE* PUBLISHED IN OCTOBER.

THEY'VE BEEN LOOKING IN THE HUMAN BRAIN FROM SAMPLES THAT THEY'VE BEEN OBTAINING FROM

INFANTS THROUGH TO ADULTS, BRAIN TISSUE. AND THEY HAVE BEEN LOOKING TO SEE WHAT'S THE STRUCTURE OF THE NEW NEURONS? WHERE ARE THE NEW NEURONS APPEARING IN THE HUMAN AS DISTINCT FROM HOW THEY APPEAR IN THE RODENT. IT'S VERY, VERY DIFFERENT IN THE HUMAN THAN IT IS IN THE RODENT. SO THAT RAISES A QUESTION ABOUT HOW RELEVANT SOME OF THE MODELS ARE IN THE RODENT. AND THIS BEAUTIFUL WORK HAS REALLY BEEN DONE VERY CAREFULLY BY A TERRIFIC GROUP AT UCSF, AND THEY'RE REALLY LEADING THE WAY IN GETTING TO UNDERSTAND WHAT'S HAPPENING THERE.

SO THERE'S A TOTALLY DIFFERENT SET OF MIGRATORY PATHWAYS IN THE HUMAN BRAIN AND A VERY DIFFERENT STRUCTURE FOR THE WAY THE NEURONS ACTUALLY MOVE OUT INTO THE PRINCIPAL AREAS OF THE FRONTAL CORTEX AND OTHERS. SO THESE, INSTEAD OF HAVING A SINGLE MIGRATORY STREAM GOING TOWARDS THE OLFACTORY BULB, WHICH IS PRETTY IMPORTANT FOR A MOUSE, IT NEEDS TO SNIFF EVERYTHING. YOU KNOW, A MOUSE NEEDS TO SNIFF ITS WHOLE LIFE AROUND FIGURING OUT WHAT DO ALL THESE NEW SMELLS MEAN TO HIM. HUMANS DON'T DO THAT. I THINK I DO. I'VE LOST A LOT OF MY ACUTE SENSE OF SMELL. THAT'S NOT REALLY RELEVANT TO THIS, BUT WE ARE DIFFERENT TO MICE AND WE DON'T SNIFF AS WELL AS MICE DO OR DOGS OR WHATEVER.

SO THE NEURONAL PATHWAYS HERE HAVE BEEN INVESTED IN SOME AREAS IN THE BRAIN WHICH REALLY MAKES US DIFFERENT. IF YOU DON'T UNDERSTAND THAT, IT'S GOING TO BE A PROBLEM. SO THIS NEW PATHWAY REALLY SORT OF GETS GOING IN EARLY INFANCY AND -- SORRY -- IN FETAL LIFE AND GOES ON IN INFANTS AND THEN DECAYS AWAY IN TIME. IT'S VERY IMPORTANT TO KNOW THIS IF YOU ARE GOING TO PUT NEURAL CELLS, GLIAL CELLS, INTO THE BRAIN AND EXPECT THEM TO GET TO THE RIGHT POSITION. YOU'VE GOT TO UNDERSTAND WHAT THE MIGRATORY PATHWAYS ARE.

SO IT'S A VERY BEAUTIFUL PIECE OF WORK, AND I CAN'T DO JUSTICE TO IT WITHOUT THE GREAT PICTURES, BUT I ENCOURAGE YOU TO GO LOOK AT THIS. JUST GO LOOK AT THE PICTURES AND YOU'LL BE REALLY, REALLY IMPRESSED. WHAT I THINK IS GOING TO HAPPEN IS THAT SCIENTISTS ARE GOING TO REFLECT A LITTLE BIT ON WHERE THEY PUT THEIR CELLS AND HOW THEY EXPECT THEIR CELLS TO MOVE INTO THE PLACES THAT THEY NEED TO FOR BENEFIT.

NOW, THERE'S A COUPLE OF PAPERS HERE I THOUGHT I'D DRAW YOUR ATTENTION TO THAT HAVE BEEN JUST PUBLISHED ON GENOMIC SEQUENCES IN IPS CELLS AND EMBRYONIC STEM CELLS BECAUSE THERE'S BEEN QUITE A LOT OF NEGATIVE THOUGHTS ABOUT HOW WELL THESE CELLS

ARE WITH RESPECT TO THEIR GENOMIC INTEGRITY. IT SEEMS LIKE EVERY PAPER THAT YOU READ, THAT THESE IPS CELLS HAVE GOT MAJOR PROBLEMS OF GENOMIC DELETIONS AND REARRANGEMENTS AND SO ON.

THIS ONE PAPER HERE BY WALTER FUNK'S GROUP. WALTER IS WITH THE BIOTIME COMPANY, AND HE'S DONE A VERY NICE STUDY LOOKING AT FIVE OF THE HUMAN EMBRYONIC STEM CELL LINES. AND THEY'VE LOOKED AT THAT IN SOME DETAIL, LOOKED AT THE CHROMOSOMES AND PARTICULARLY PARTS OF THE GENOME THAT YOU WOULD BE CONCERNED WITH. THAT IS, THOSE ARE THE ONCOGENES AND PARTICULARLY TUMOR SUPPRESSORS. ARE THERE REARRANGEMENTS IN THESE CELLS WHICH WOULD BE CONCERNING?

WELL, THEY'VE ACTUALLY FOUND, LOOKING ACROSS THIS SPACE, THAT THERE REALLY HASN'T BEEN MUCH REARRANGEMENT AT ALL, IF ANY. THEY LOOKED AT HLA BLOOD TYPES, APOE GENES ASSOCIATED WITH ALZHEIMER'S AND CARDIOVASCULAR DISEASE AND SO ON. AND THEY COULDN'T REALLY FIND ANY DIFFERENCES, NO DIFFERENCES THAT WOULDN'T BE EXPECTED IN A HUMAN POPULATION ANYWAY.

SO THEIR CONCLUSION IS, AT LEAST IN EARLY PASSAGE, THESE CELLS HAVE A GENOMIC INTEGRITY WHICH PRETTY MUCH MATCHES WHAT YOU'D EXPECT A HUMAN CELL

TYPE TO BE, AND THAT ONE SHOULDN'T BE OVERLY CONCERNED ABOUT ANY REARRANGEMENTS IN THOSE CELLS.

NOW, THAT'S NOT DEEP SEQUENCING THE WHOLE GENOME, MIND YOU. SO IT'S A REASONABLE CONCLUSION, I THINK, BASED ON THEIR STUDIES, BUT IT DOESN'T GO DEEP TO TELL YOU WHETHER THERE MIGHT BE CHANGES IN MINOR STRUCTURES. BUT THIS PAPER HERE, WHICH REALLY LOOKS AT IPS CELLS, AND MAYBE THE IPS CELLS HAVE SOME CONCERNS ABOUT THEM AS PUBLISHED IN *CELL STEM CELL* BY THE QUINLAN GROUP AND INCLUDES AT LEAST ONE AUTHOR FROM SCRIPPS, THEY LOOKED AT THE IPS CELLS IN MICE. AND THEY WERE LOOKING AT THE STRUCTURAL VARIANCE.

THESE ARE THE ONES THAT TELL YOU WHETHER THERE'S CHANGES IN THE GENOME, WHETHER THERE'S BEEN DELETIONS, REARRANGEMENTS, AND SO ON. AND THEY FOUND VERY FEW OF THESE STRUCTURAL VARIATIONS AT ALL, AND THESE INSERTIONS, 41 OF THEM, WERE INSERTIONS OF AN EXOGENOUS RETRO ELEMENT, AND FOUR WERE CANONICAL DELETIONS, DUPLICATIONS OR INVERSIONS, BUT THERE WAS REALLY NO EVIDENCE OF ANY ENDOGENOUS RETRO ELEMENT TRANSPOSITION. THAT MEANS THE RETRO TRANSPOSANS, WHICH ARE THE JUMPING GENES THAT TEND TO BE VERY ACTIVATED IN THESE CELLS, WERE NOT MOVING AROUND.

SO IN CONTRAST WITH A LOT OF EARLIER STUDIES ON IPS CELLS, THERE ARE VERY FEW DE NOVO STRUCTURAL VARIANTS EXISTING IN THE MOUSE IPS CELLS, VERY, VERY FEW, AT LEAST IN EARLY PASSAGE. THEY'RE NOT SORT OF SAYING THAT THEY'RE NOT THERE IF YOU GROW THEM FOR A LONG PERIOD OF TIME. THEY DIDN'T REALLY STUDY THAT. SO MORE STUDIES ARE NEEDED IN THIS AREA TO SEE IF REALLY THE MOUSE AND THE HUMAN ARE DIFFERENT. AND I THINK, AGAIN, IT'S GOOD REASON FOR US TO KEEP WORKING ON THE GENOME IN STEM CELLS TO MAKE SURE THAT WE'VE GOT A FULL UNDERSTANDING OF WHAT'S HAPPENING HERE. TWO PAPERS THAT WOULD SUGGEST THERE'S VERY LITTLE CHANGE, IF ANY, OF ANY REAL SIGNIFICANCE IN THESE CELLS, AT LEAST WHEN THEY'RE MADE. THAT'S KIND OF GOOD NEWS. AND I THINK WE NEED TO SEE WHAT HAPPENS IN THESE STUDIES IN THE FUTURE.

SO I THOUGHT THOSE WERE A RAFT OF VERY INTERESTING PAPERS, AND I HOPE YOU THINK THEY'RE INTERESTING AS WELL.

NOW, WITH THE UPCOMING RFA'S, THE DISEASE TEAM THERAPY DEVELOPMENT, WE'VE DONE -- THE PLANNING PERIOD HAS BEGUN NOW IN SEPTEMBER, AND THE RESEARCH AWARDS ARE POSTED. THEY WERE POSTED IN SEPTEMBER. SO TEAMS ARE OUT THERE GETTING BUSY. THEY'RE

GETTING BUSY ORGANIZED, AND WE EXPECT THEM TO BE SUBMITTING THEIR PROPOSALS. I THINK THERE WAS 19 OF THEM, AS I REMEMBER. THEY'LL BE SUBMITTING THEIR PROPOSALS IN JANUARY, I THINK.

AND WE'VE ALSO RECEIVED, I THINK, 16 APPLICATIONS FOR ENTRY BY COMPANIES. SO THEY HAVE BEEN SUBMITTED TO US, AND WE NEED TO LOOK TO SEE WHETHER THEY'RE APPROPRIATE. SO THERE'S 19 PLUS 16 AT THE MOMENT.

THE EARLY TRANSLATIONAL III AWARDS, THE GRANTS REVIEW OF APPLICATIONS WILL BE IN MARCH NEXT YEAR. BASIC BIOLOGY IV, THE CONCEPT PROPOSAL IS HERE AT THIS MEETING. CREATIVITY AWARDS, THE CONCEPT PROPOSAL IS AT THIS MEETING. AND THE IPS CELL INITIATIVE, BANKING INITIATIVE, WILL BE PRESENTED IN DECEMBER.

SO COLLABORATIVE FUNDING PARTNERS UPDATE, WE HAD AN MOU, MEMORANDUM OF UNDERSTANDING, SIGNED WITH NIH. AND WE'VE ALSO HAD ONE WITH SCOTLAND SIGNED. SO BOTH OF THOSE ARE NOW SIGNED MOU'S WITH US TO COLLABORATE. I'LL SPEAK A LITTLE BIT MORE ABOUT NIH IN A MOMENT.

IN THE EARLY TRANSLATIONAL II RFA, POTENTIAL COLLABORATIVE FUNDING PARTNERS WERE, ARE AUSTRALIA, CHINA, GERMANY, AND JAPAN. AND I THINK

THERE'S PROBABLY REPRESENTATIVES OF ALL OF THOSE COUNTRIES STILL MOVING FORWARD IN THOSE STUDIES. SO THIS IS OUR FIRST JOINT FUNDING EFFORT WITH CHINA AND WITH THE NH&MRC, THE NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL IN AUSTRALIA.

JUST A LITTLE MORE ON NIH. I HAD A WONDERFUL MEETING, ELLEN FEIGAL, MYSELF, AND NANCY KOCH, WITH MAHENDRA RAO, JOHN GALLEN AND OTHERS FROM THE NIH. AND THE GOAL OF THIS MOU IS TO BRING NIH AND CIRM TOGETHER. AND WE'RE STILL DIGESTING THE MEETING, AND SO I HAVEN'T REALLY SUMMARIZED THIS, BUT TO SAY THAT I'M TERRIBLY EXCITED. I THINK THIS IS GOING TO BE A NEW DAWNING OF A RELATIONSHIP WITH OUR FEDERAL FUNDING PARTNER. AND IT'S GOING TO BE VERY IMPORTANT FOR US AND VERY IMPORTANT FOR AMERICAN RESEARCH AND INDEED THE WORLD, I THINK, THIS ARRANGEMENT.

SO AMONG THE AREAS THAT WE THINK ARE GOING TO BE AREAS OF COLLABORATION ARE RARE AND NEGLECTED DISEASES. THERE'S A VERY STRONG PORTFOLIO IN THE CLINICAL CENTER AT NIH. EARLY TRANSLATIONAL BASIC BIOLOGY, WE THINK THERE'S GOING TO BE A FOCUS ON PARKINSON'S DISEASE. THAT'S A VERY OPPORTUNE INTERACTION WITH NIH. I THINK SOME OF THE CIRM-FUNDED DISEASE TEAM THERAPY DEVELOPMENT

RESEARCHERS, THOSE THAT ARE IN, THAT ARE ACTUALLY IN CONSIDERATION AT THE MOMENT, THEY'RE IN PLANNING, I THINK THEY OUGHT TO THINK ABOUT THE POSSIBILITY OF LINKAGES WITH NIH BECAUSE THE OPPORTUNITY WITH NIH IS BOTH INTRAMURAL AND EXTRAMURAL, AND IT'S VERY SIGNIFICANT. WE COULD HAVE SOME VERY SIGNIFICANT FUNDING AND RESEARCH LINKAGES TO THOSE PLANNING AWARDS.

SO WE'VE GIVEN NIH A LIST OF THOSE RESEARCHERS WHO GOT THOSE PLANNING AWARDS, AND WE'RE GOING TO ENCOURAGE OUR SCIENTISTS WHO HEAD THOSE TO ALSO TALK TO NIH TO SEE IF THERE'S A LOGICAL CONNECTION THERE AS WELL AS WITH SOME OF OUR OTHER GLOBAL COLLABORATIVE FUNDING PARTNERS WHO HAVE INDICATED THEY WANT TO BE PART OF THE DISEASE TEAM, UPCOMING DISEASE TEAM PROGRAM.

SO WE'VE GOT ACCESS, WE WILL HAVE ACCESS TO THE CLINICAL CENTER OUTSIDE AS WELL. SO THIS IS A TREMENDOUS DEVELOPMENT. AND I THINK PHIL PIZZO AND OTHERS WILL RECOGNIZE THIS AS SOMETHING THAT WE'VE REALLY DESIRED FOR A LONG TIME. AND IT'S TAKEN ME TWO AND A HALF YEARS, AND WE FINALLY GOT IT DONE THANKS TO SOME EXTRA PRESSURE FROM ELLEN FEIGAL, BUT ALSO MAHENDRA RAO, WHO WAS JUST RECENTLY APPOINTED HEAD OF THE REGENERATIVE MEDICINE CENTER

AT NIH. SO GREAT. THERE'S A NEW DAWNING THERE, AND I WILL GIVE YOU A MORE COMPLETE UPDATE WHEN WE DISTILL ALL OF THE INFORMATION THAT WE COLLECTED AT THAT MEETING.

WORKSHOP REPORT, THE CP WORKSHOP REPORT, THIS IS ABOUT TO BE PUBLISHED. AND I THINK SOME OF THE REAL INDICATORS OUT OF THAT YOU WILL BE INTERESTED TO READ. I WANT TO THANK PARTICULARLY TWO BOARD MEMBERS WHO STAYED THROUGH THAT WHOLE MEETING, JON SHESTACK AND BERT LUBIN, AND CONTRIBUTED SIGNIFICANTLY TO THE DISCUSSIONS AND SCIENCE. SO THAT WAS REALLY GOOD.

SO IN THE OUTCOMES, WHICH IS REALLY WHERE WE WANT TO SORT OF FOCUS THERE, WE WANT TO RAISE AWARENESS OF CP AND REALLY WHAT WE'RE CALLING NEUROLOGICAL DISORDERS OF CHILDHOOD BECAUSE WE HAVEN'T GOT A LOT IN OUR PORTFOLIO. WE'VE BEEN TRYING. WE'VE GOT AUTISM IN THERE, BUT IT'S JUST STARTING. AND WE KNOW THIS IS A DIFFERENT AREA, BUT IT'S ONE THAT IS REALLY, REALLY IMPORTANT AND WILL HAVE A VERY BIG IMPACT BOTH ON THE PATIENTS, BUT IT HAS A BIG IMPACT ECONOMICALLY IF WE CAN DO ANYTHING FOR THESE KIDDIES.

SO WE WANT TO RAISE AWARENESS. WE WANT TO ENCOURAGE THE STEM CELL COMMUNITY TO EXPAND ITS

STUDIES IN THESE AREAS IN NEURAL AND GLIAL DEVELOPMENT AND THE EFFECTS OF INJURY AND TIMING OF INJURIES THAT ARE OCCURRING IN THESE CHILDREN, OR IN THESE -- OFTEN IT'S IN FETAL DEVELOPMENT, AND EXPLORE FUNDING OPPORTUNITIES FOR BASIC AND CLINICAL RESEARCH IN CEREBRAL PALSY AND RELATED DEVELOPMENTAL DISORDERS IN HUMANS. SO WE'VE ACTUALLY INSERTED A PRIORITY INTO OUR UPCOMING BASIC SCIENCE RFA, AND WE'VE BEEN TO NOW THREE MEETINGS JUST LATELY ON CEREBRAL PALSY AND AUTISM. THEY'RE SPEAKING AND TELLING THEM THAT WE WANT THINGS TO BE ORGANIZED AND EFFECTIVE.

SO WE RECOGNIZE IT'S UNDERSTUDIED REALLY GLOBALLY. THESE AREAS ARE UNDERSTUDIED. THEY'RE AMENDABLE, WE THINK, TO IN VITRO STUDIES USING HUMAN STEM CELLS AND INDEED IPS CELLS, AND THEY'RE GOOD CANDIDATES FOR CELL THERAPY IN THE BRAIN. ALL TO BE PROVEN, BUT OPPORTUNISTIC.

SO MECHANISMS, WE WANT TO MOVE FORWARD MECHANISMS IN ENDOGENOUS STEM CELLS IN ANIMAL MODELS AND IN HUMAN MODELS, FOR EXAMPLE, CONDITIONS LIKE CP.

SO WE'VE GOT TWO MAIN GOALS TO REALLY DRIVE THE COLLABORATIVE NETWORK AND RAISE THE INTEREST IN BASIC AND PRECLINICAL WORK, BUT ALSO

CLINICAL DEVELOPMENT. THERE ARE SOME CLINICAL STUDIES OUT THERE. IT SEEMS DIFFICULT FOR ME TO UNDERSTAND SOME OF THEM. FOR EXAMPLE, IF YOU TREAT -- IF YOU TAKE CORD BLOOD CELLS FROM A BABY AND GIVE IT BACK TO THE BABY, HOW DOES THAT WORK? IT DOESN'T SOUND RIGHT. YOU JUST TOOK -- THE CELLS WERE IN THE BABY IN THE CORD AND NOW YOU GIVE IT BACK AND IT WORKS. BUT IF IT DOES, WE NEED TO UNDERSTAND THE MECHANISM BETTER BECAUSE IF THAT DOES DO SOMETHING, WELL, IT'S IMPORTANT TO FOLLOW IT ON WITH UNDERSTANDING HOW IT CAN BENEFIT THE CHILDREN.

SO WE ARE GOING TO PRESS ON WITH THAT AND TRY AND DO OUR BEST IN THAT AREA IN UPCOMING RFA'S AND TO INCREASE INTEREST ACROSS CALIFORNIA AND IN OUR COLLABORATIVE FUNDING PARTNERS IN BEING INVOLVED.

WE JUST RETURNED FROM A CIRM IMMUNOLOGY ROUNDTABLE WITH THE FDA. WE'VE BEEN WORKING WITH THE FDA QUARTERLY AND FACE TO FACE WITH THE FDA. IT WAS A GREAT MEETING. MOST OF THE CRITICAL PEOPLE AT FDA WERE THERE. WE HAD A TERRIFIC GROUP OF PEOPLE, LOT OF CALIFORNIANS, BUT ALSO PEOPLE FROM INTERSTATE WHO WERE THERE, THIS ROUNDTABLE.

WE'RE LOOKING AT THE CHALLENGES OF WHAT YOU'VE GOT TO DO IF YOU ARE INTRODUCING FOREIGN

CELLS, ALLOGENEIC CELLS, INTO A PATIENT. OUR IMMUNE SYSTEM IS BUILT TO KEEP OUT FOREIGN DEVILS AND IT'S VERY EFFECTIVE. SO IF YOU'RE GOING TO GIVE SOMEONE A NEW CELL, YOU'VE GOT TO OVERCOME SOME MAJOR IMMUNE BARRIERS AND WHAT ARE THE PROCESSES THERE. AND IT SEEMS LIKE THERE'S A LOT OF WORK INDEPENDENTLY IN ALL SORTS OF DIFFERENT DIRECTIONS. SO WE'RE GOING TO TRY AND DRAW THIS TOGETHER A BIT, GET SOME GENERIC APPROACHES OUT OF IT, AND THEN SORT OF LOOK AT EACH OF THE DISEASE AREAS TO SEE WHAT IS THE BEST PROCESS FOR HELPING THESE CELLS SURVIVE AND DO THEIR JOB, AN IMPORTANT PART, DO THEIR JOB FOR THE DISEASE.

SO THIS IS AN AREA WHICH IS REALLY CRITICAL FOR US, AND FDA WERE VERY HELPFUL IN GIVING US THEIR THOUGHTS AS WELL. SO I THINK THAT WE'LL HAVE A -- WE HOPE TO PRODUCE A PAPER OUT OF THAT THAT WE'LL SEND TO ONE OF THE JOURNALS, PROBABLY THE STEM CELLS AND REGENERATIVE MEDICINE JOURNAL, THAT WE'RE HELPING TO FUND AND SEE IF THEY WILL PUBLISH SOMETHING ON THIS TO TRY AND DRAW SOME MORE INTEREST IN THIS VERY IMPORTANT AREA.

YOU RECEIVED, I THINK, IN YOUR NOTES A STATEMENT REGARDING CIRM'S CONSIDERATION OF THERAPY DEVELOPMENT PROJECTS. SO THAT STATEMENT IS

MANAGEMENT'S STATEMENT ON BEHALF OF CIRM IN THIS AREA. AND IT'S REALLY AIMED AT GIVING SOME PERSPECTIVE TO A HISTORICALLY BALANCED OBLIGATION TO PROVIDE INFORMATION TO THE PUBLIC WITH THE RESPONSIBILITY ALSO TO PROTECT THE PROPRIETARY INFORMATION FOR THE APPLICANTS. SO WE'RE TRYING TO WALK IN THIS SORT OF NARROW SPACE OF DOING THE RIGHT THING. WE'RE GIVING EVERYBODY AS MUCH INFORMATION AS POSSIBLE, BUT ALSO, IMPORTANTLY, JUST PROTECTING COMPANIES, THEIR INTELLECTUAL PROPERTY AND THEIR REPUTATIONS.

SO ENGAGING INDUSTRY REQUIRES THAT CIRM ASSURE THE COMPANIES WITH WHICH IT WORKS HAS THE CAPACITY TO PROTECT THEIR COMPANY PROPRIETARY INFORMATION AND THEIR ABILITY TO OBTAIN FOLLOW-ON FINANCING. IT'S PARTICULARLY TRUE FOR COMPANIES INVOLVED IN CLINICAL RESEARCH. IF WE DON'T DO THAT, THEY WON'T COME AND APPLY TO US. SO WE'RE TRYING TO WALK THAT VERY NARROW LINE, AND WE'RE TRYING TO DO OUR BEST. AND THAT'S REALLY WHAT THE STATEMENT WAS INTENDED TO REFLECT.

WE'RE WORKING, I'VE GOT NATALIE DEWITT NOW WORKING BUSILY WITH RESEARCHERS THROUGHOUT CALIFORNIA ON OUR ALPHA CLINICS PROPOSAL. IT'S TO DEVELOP -- THE AIM OF THIS IS TO DEVELOP KNOWLEDGE

AND INFRASTRUCTURE FOR CELL THERAPIES AND CLINICAL TRIALS AND BEYOND, LOOKING TO BUILD EXPERTISE OF MEDICAL AND CLINICAL TRIALS STAFF, FACILITATE REGULATORY COMPLIANCE, BUILD AN INFORMATIONAL NETWORK, ESTABLISH STANDARDS FOR CELL HANDLING, PATIENT CARE, AND ASSESSING OUTCOMES, TESTING BUSINESS MODELS FOR BRINGING CELL THERAPIES TO THE MARKETPLACE. WE WANT TO ENGAGE WITH CALIFORNIA. WE WANT STEM CELL CLINICS STARTING TO BE OPERATIVE IN CALIFORNIA, AND SO WE'RE MOVING IN THAT DIRECTION.

WE'RE ALSO BUSY ON A PAPER WHICH WILL HOPEFULLY LINK GENOMICS WITH STEM CELLS. I'VE TOLD YOU A NUMBER OF TIMES WHY I THINK THAT'S IMPORTANT, BUT WE'VE GOT TO PROVIDE CALIFORNIAN SCIENCE AND CLINICIANS ACCESS TO TECHNOLOGIES FOR ANALYZING STEM CELL GENOMES THAT'S VERY CLEAR AND UNDERSTANDING THE VARIABILITY OF THE STEM CELLS, INCLUDING HANDLING, CHARACTERIZATION OF THOSE CELLS, DEVELOP NEW METHODS FOR SINGLE-CELL GENOME SEQUENCING, AND QUANTITATIVE ANALYSIS. IN FACT, IF YOU LOOK AT A POPULATION AND YOU SEE WHICH GENES ARE BEING PRODUCED OBLITERATES WHAT THE ACTUAL INDEPENDENT CELLS ARE DOING. YOU MIGHT HAVE A NUMBER OF ROGUE CELLS IN THERE, AND WE NEED TO KNOW WHAT THE POPULATION IS MADE UP OF.

STRATIFYING CANCER PATIENTS TO TARGET

THERAPIES IN THE RIGHT PATIENTS. SO THESE, WE THINK, ARE IMPORTANT. WE'RE WORKING ON THAT. WE WANT TO BRING THOSE TO YOU IN A SERIES OF WHITE PAPERS ON THOSE TWO AREAS.

JUST TO QUICKLY FILL YOU IN ON ARM COMMITTEE, THAT'S THE ALLIANCE FOR REGENERATIVE MEDICINE, UPDATES. THEY VOTED A SLATE OF NOMINEES FOR THEIR EXECUTIVE COMMITTEE. THE MEMBERSHIP HAS GROWN WITH MORE THAN 85 MEMBERS. RECENT DEVELOPMENTS: AN UPCOMING MEETING WITH FDA AND CBER OFFICES OF CELL TISSUE AND GENE THERAPY WITH DIRECTOR CELIA WITTEN TO DISCUSS CELL POTENCY ASSAYS. THAT WAS A VERY SUCCESSFUL MEETING. ARM HAS GOT NOW A LOT OF WORK BEING DONE IN CELL POTENCY. THIS IS VERY IMPORTANT FOR FDA. THEY'RE VERY ENGAGED WITH GETTING THIS INFORMATION.

THEY'VE HAD RECENT MEETINGS WITH CONGRESSIONAL HEALTH LEADERSHIP TO ADVOCATE FOR REGENERATIVE MEDICINE PROMOTION ACT. I'VE KEPT ART AS INFORMED AS POSSIBLE ON THAT. THEY'RE STILL WORKING THEIR WAY IN THAT AREA.

A BRIEFING FOR THE U.S. HOUSE OF REPRESENTATIVE TRICAUCUS, THEY'RE ARRANGING THAT. AND THE UPCOMING STEM CELL ON THE MESA MEETING, WHICH WILL BE HELD IN CONJUNCTION WITH CIRM AND THE

SANFORD CONSORTIUM, HAS REALLY KIND OF SORT OF LINKED TOGETHER THE INTERESTS OF ARM, OF THE INDUSTRY COMPONENTS OF STEM CELL THERAPIES TOGETHER WITH THE ACADEMIC ONES IN LA JOLLA IN LATE NOVEMBER, EARLY DECEMBER.

WORLD STEM CELL SUMMIT, THINK JON SPOKE TO YOU, SO I'M NOT GOING TO TAKE VERY LONG ABOUT THAT. THERE WAS ABOUT 1,400 ATTENDEES FOR AT LEAST A PORTION OF THE EVENT. SOME PEOPLE CAME AND WENT. WE HAD A LOT OF PRESENTATIONS FROM CIRM. WE HOSTED A RECEPTION FOR ADVOCATES. JON TOLD THE CIRM STORY AND SHERRY LANSING RECEIVED, IN ABSENTIA, I THINK, A LEADERSHIP AWARD FOR HER ROLE ON ICOC AND IN PATIENT ADVOCACY. AND THE PROGRAM THEME WAS TRANSLATIONAL SCIENCE. I RECOMMENDED STRONGLY THAT THEY DID THAT AND THEY DID IT, AND IT WORKED PRETTY WELL.

THEY HAD EVENTS, LAB TOURS, PUBLIC SYMPOSIA, AND EVEN AN ANIMAL FAIR. SORRY. WE'RE MOVING ON TO STEM CELL AWARENESS DAY. SO THERE WERE LAB TOURS, PUBLIC SYMPOSIUM, AND AN ANIMAL FAIR. I DIDN'T REALIZE THAT. THERE WERE 30 EVENTS IN CALIFORNIA. AND DAVIS INCLUDED TWO PONIES AND A DOG TREATED WITH STEM CELLS. SO THERE YOU ARE. THAT WAS THE ANIMAL FAIR. FIFTEEN IN OTHER STATES AND SIX COUNTRIES. THEY'RE REACHING HIGH SCHOOL

STUDENTS, 60 CLASSROOMS HAD CIRM GRANTEES GUEST LECTURES, AND I HAD A LOT OF INPUT FROM THOSE LECTURERS. THEY SAID THEY REALLY, REALLY ENJOYED IT AND THE STUDENTS AND TEACHERS DID AS WELL. MORE THAN 15 CLASSES WERE BUSED TO CIRM-FUNDED LABS IN GLADSTONE AND UC IRVINE.

AND CIRM PATIENT ADVOCACY DAYS ON OCTOBER THE 26TH IN BAKERSFIELD. JON SPOKE ABOUT THAT. OCTOBER 29 IN SANTA ROSA, AND, ART, YOU ARE GOING TO GIVE THE KEYNOTE. SO WE'RE BUSY.

WE HAD THE BEST MEETING OF STEM CELLS IN THE WORLD, THE GRANTEE MEETING IN SAN FRANCISCO, AND IT WAS JUST FANTASTIC. WE LIMITED IT TO 400 CIRM-FUNDED INVESTIGATORS. THE HIGHLIGHTS ARE SHOWCASING CIRM AND THE COLLABORATIVE FUNDING PARTNERS, CUTTING-EDGE RESEARCH, BASIC AND TRANSLATIONAL. THERE WERE SOME FANTASTIC LECTURES. CRAIG VENTER WAS SUPERB, BUT ALSO LEE HOOD AND JOHN WAGNER BROUGHT TEARS TO EVERYBODY'S EYES. HE'S JUST SUPERB. IF YOU HAVEN'T SEEN JOHN WAGNER'S LECTURE, GO ON OUR WEBSITE AND LOOK AT IT. IT'S JUST ONE OF THOSE SUPERB LECTURES.

AND I HAD A LOT OF THE PEOPLE TELL ME THAT THEY HEARD FOUR OF THE BEST LECTURES THAT THEY'VE EVER HEARD EVER. THESE WERE SENIOR SCIENTISTS.

FOUR BEST LECTURES THAT THEY EVER HEARD AT THIS MEETING. SO IT WAS A GREAT MEETING, A GREAT SCIENCE MEETING. I THINK THE PEOPLE WHO WERE THERE FROM THE BOARD ENJOYED IT. THERE WERE MEMBERS OF THE BOARD THERE. AND IT IS JUST A SUPERB MEETING, AND IT WORKED EXTREMELY WELL.

WE'RE HAVING A TISSUE ENGINEERING WORKSHOP. IT'S SLATED FOR JANUARY 12TH TO THE 13TH. THE GOAL IS TO EDUCATE ICOC MEMBERS AND OUR CIRM STAFF ON OPPORTUNITIES FOR STEM CELLS IN TISSUE ENGINEERING. SO A SERIES OF SCIENTIFIC TALKS AND MODERATED GROUP DISCUSSION. THEY'VE GOT A GREAT PANEL OF PEOPLE TALKING FROM AROUND THE WORLD. IT'S REALLY GOING TO BE A BUZZ. THIS IS GOING TO BE A GREAT WORKSHOP.

INTERNATIONALLY RENOWN LEADERS ARE ALL COMING. I THINK VERY FEW PEOPLE TURNED DOWN OUR INVITATION. WE'VE GOT THE BEST PEOPLE IN THE WORLD IN TISSUE ENGINEERING COMING TO TALK AT THIS WORKSHOP. IT'S GOING TO BE GREAT. SO IT'S HELD UNDER COLD SPRING HARBOR RULES, AS WE USUALLY DO SO THAT THE SPEAKERS CAN SPEAK IN A FREE FASHION.

NEW APPOINTMENTS IN CIRM. I WANT TO INTRODUCE CANDACE BAGLEY. THERE'S CANDACE. I'VE INTRODUCED HER TO SOME OF YOU ALREADY. SHE'S MY NEW

SENIOR EXECUTIVE ASSISTANT, AND SHE'S WONDERFUL. AND NOW I'M GETTING ORGANIZED AGAIN. IT'S BEEN ABOUT TWO OR THREE MONTHS WHERE I'VE BEEN IN THE WILDERNESS SINCE PAT BECKER LEFT. I'VE HAD SOME HELP, AND THANKS VERY MUCH TO ALEX CAMPE FOR STEPPING IN IN THE LAST MINUTE TO SORT OF BAIL ME OUT, BUT IT HASN'T BEEN EASY. I'VE DUPLICATED MEETINGS, AND I'VE DONE ALL THE WRONG THINGS WHEN YOU DON'T HAVE A REALLY GOOD ASSISTANT. SO I'M VERY THANKFUL SHE'S THERE.

MELANIE MILLER HAS JOINED ELONA TO HELP WITH HER WORK. ANKA URBAHN IS HERE. SAY HELLO TO ANKA IN THE HALLWAY WHEN YOU SEE HER. SO SHE'S PROGRAM MANAGER AND WORKING CLOSING WITH ELLEN FEIGAL. KIM WILLIAMS WHO'S HELPING PAT OLSON AND MICHAEL YAFFE AS ADMINISTRATION ASSISTANT THERE HAVE ALL JOINED US. AND NOW WE'RE GOING TO BE MUCH MORE EFFECTIVE BECAUSE WE'VE GOT THESE FANTASTIC PEOPLE HELPING US OUT.

THIS IS A LITTLE BIT DIFFERENT NOW BECAUSE THERE'S BEEN PEOPLE COMING AND GOING JUST RECENTLY. SO THIS IS THE BEST TEAM IN THE WORLD IN STEM CELLS. THIS IS THE BEST TEAM BY FAR IN THE WORLD. THIS IS A GREAT TEAM. AND I HOPE YOU BEGIN TO MEET THEM ALL. THEY'RE JUST WONDERFUL PEOPLE, AND THEY'RE SO

EFFECTIVE. THEY WORK SO HARD. AND IT DOESN'T MATTER WHAT TIME OF DAY OR NIGHT. I ASK FOR SOME HELP, THEY GIVE IT TO US.

NOW I WANT TO INVITE CHILA FORWARD TO GIVE YOU AN UPDATE ON THE BUDGET.

CHAIRMAN THOMAS: DR. TROUNSON, WE HAVE A QUESTION FROM SENATOR TORRES.

MR. TORRES: I WANT TO THANK YOU AND THE STAFF FOR PUTTING ON THIS GRANTEE MEETING. IT WAS VERY IMPRESSIVE, AND IT WAS SO WELL ORGANIZED. AND YOU WOULD WALK THROUGH THERE, AND GETTING THE FEEDBACK FROM THE GRANTEES WAS SO EXHILARATING BECAUSE OF THE FACT THEY FELT SO COMFORTABLE. THEY FELT THEY HAD ACCESS. AND EVEN THE VENDORS THAT WERE THERE WERE VERY IMPORTANT AND ACCESSIBLE.

I WAS ALSO AT THE CEREBRAL PALSY WORKSHOP, AND I WANT TO THANK AGAIN THE STAFF THAT PUT THAT TOGETHER. I THOUGHT IT WAS TERRIFICALLY DONE. THE SPEAKERS WERE EXCELLENT. AND I JUST CAN'T SAY ENOUGH, AGAIN, ABOUT THE GRANTEE MEETING.

MR. SHESTACK: THANK YOU. I WANT TO ASK YOU. YOU SAID THAT, IF I HEARD YOU RIGHT, YOU HAVE SCIENTIFIC STAFF ATTENDING VARIOUS MEETINGS TO PROMOTE THE CP AND AUTISM INTEREST. WHICH MEETINGS?

DR. TROUNSON: I'VE BEEN TO ONE, I THINK

THE CHAIR WASN'T THAT HAPPY WITH ME, BUT I HAD GIVEN A COMMITMENT TO THE CP WORKSHOP IN SAN FRANCISCO THAT HAPPENED JUST AT THE DAY BEFORE, THE DAY OF THE IOM MEETING. SO I KEPT THAT APPOINTMENT WITH THEM AND IT WAS IMPORTANT. MANI VESSAL AND I SPOKE AT THAT MEETING. AND I'M GOING TO ONE IN NOVEMBER. AND THE THIRD ONE, I'LL HAVE TO DIG BACK IN MY DIARY, BUT I'M GOING TO AS MANY AND GETTING PEOPLE TO GO TO AS MANY AS WE CAN JUST TO TELL PEOPLE THAT WE'RE REALLY INTERESTED BROADLY IN THIS AREA BECAUSE, AS YOU HEARD, I THINK THERE IS OPPORTUNITIES HERE THAT WE'RE NOT SORT OF PICKING UP. A LITTLE BIT OF CONFUSION ABOUT WHETHER WE'RE INTERESTED IN THIS AREA OR WE'RE ONLY EMBRYONIC STEM CELL INTEREST.

SO I WANT TO GET THE MESSAGE OUT THERE PROPERLY, THAT WE'RE ENGAGED, WE'D LIKE TO HEAR SOME REALLY GOOD SCIENCE COMING FORWARD, AND WE MADE IT A PRIORITY IN OUR WORK GOING FORWARD.

MR. SHESTACK: AND YOU ALSO MENTIONED COLLABORATION WITH OUR FUNDING PARTNERS. WHAT IS THE MECHANISM? FOR INSTANCE, THERE WERE A LOT OF GREAT PEOPLE AT THAT MEETING, AND VERY FEW OF THEM FROM CALIFORNIA, BUT THEY MIGHT FUND A LOT OF PEOPLE WHO WOULD LOVE TO COLLABORATE WITH THEM IN

CALIFORNIA. WHAT IS THE MECHANISM FOR, SAY, THE BASIC BIOLOGY GRANT IV, WHICH IS, I GUESS, WHERE YOU'RE PUTTING THIS OUT FOR SOMETHING TO HAPPEN IN PARTNERSHIP WITH SOMEBODY?

DR. TROUNSON: AT THE SUMMIT IN SAN FRANCISCO, WE HAD A LOT OF PEOPLE FROM UCSF WHERE THERE'S A LOT OF INTEREST THERE, AND WE HAD SOME PEOPLE FROM SOUTHERN CALIFORNIA AS WELL. AND SO THEY WERE VERY KEEN TO PARTICIPATE, LINK IN, USE ALL SORTS OF MODELS. AND WHERE IT'S POSSIBLE, WHERE WE DON'T HAVE AN AGREEMENT, FOR EXAMPLE, WITH SOMEBODY IN ANOTHER STATE WHERE WE DON'T HAVE AN AGREEMENT, WE'VE SUGGESTED THERE'S SOME BOLT-ON OPPORTUNITIES TO HELP THEM. THAT MEANS IF THEY CAN FIND SOME FUNDING AND IF WE CAN GET A PROJECT UP, THEY CAN BOLT ON AND BECOME PART OF IT.

SO WE'RE SORT OF BEING MORE FLEXIBLE WITH OUR FINANCIAL ARRANGEMENTS. IT'S RELATIVELY STRAIGHTFORWARD IF WE'VE GOT AN AGREEMENT WITH SOMEONE, BUT IT'S NOT NECESSARILY THE OTHER WAY AROUND. BUT I HAVE TO SAY ALSO NIH IS VERY INTERESTED IN THIS AREA, JON, AND THEY WANT TO ALSO PARTICIPATE WITH US. THAT MIGHT ADD ANOTHER ACCELERANT, IF YOU LIKE, TO THE FLAME OF GETTING MORE STUDIES IN THIS AREA, MORE DEEPER SCIENCE.

MR. SHESTACK: WHICH INSTITUTE IS THAT?

DR. TROUNSON: IT WILL BE ACROSS ALL OF THEM, BUT IT WOULD BE THE NEURAL INSTITUTE. WE'RE CERTAINLY GOING TO HAVE ONE ON PARKINSON'S DISEASE, BUT WE PUT FORWARD ONE WHICH WE SHOULD DO IN THE AREA OF THE JUVENILE NEUROPATHIES. SO, YES, THEY WERE VERY INTERESTED TO HEAR ABOUT THAT AS WELL.

SO IT'S NOT AN OVERDONE AREA UNFORTUNATELY THROUGHOUT THE WORLD. I WAS SURPRISED. BUT I THINK WITH A BIT MORE OF OUR COLLABORATIVE FUNDING PARTNER INTEREST, WE MIGHT BE ABLE TO INJECT A LOT MORE IN. THE AUSTRALIANS THROUGH THEIR INTERESTS HAVE BEEN VERY ACTIVE, AND THEY'RE TALKING TO THE SCIENTISTS IN AUSTRALIA. THAT'S WHY I THOUGHT I WOULD DROP IN ON THEIR CP WORKSHOP WHEN I GO AT THE END OF THIS MONTH AND SEE IF I CAN GET THOSE SCIENTISTS TO SORT OF BE INTERESTED IN LINKING UP WITH US AS WELL AS PUSHING MORE ON THEIR NH&MRC.

SO WE'RE TAKING A MUCH MORE PROACTIVE ROLE, IF YOU LIKE, OR I AM AND THE STAFF WILL FOLLOW. HOPEFULLY WE'LL GET BETTER AND STRONGER APPLICATIONS COME WITH US AND GET INTO A DEEPER, MORE MEANINGFUL RESEARCH PROGRAM RIGHT ACROSS THAT SPACE.

DR. LUBIN: THAT WAS A GREAT PRESENTATION,

ALAN. I WOULD RECOMMEND THAT IN TERMS OF YOUR NIH INTERACTIONS, YOU ALSO CONSIDER INTERACTING WITH A GROUP THAT'S STUDYING BONE MARROW TRANSPLANT AND TRANSPLANT REJECTION IN TERMS OF IMMUNOLOGY, AS WELL AS NIDDK IS DOING A LOT OF WORK ON IMMUNE RECOGNITION, SO WE DON'T DUPLICATE THINGS, BUT TAKE ADVANTAGE OF WHAT'S BEEN DONE AND MAYBE COLLABORATE.

DR. TROUNSON: GOOD ADVICE, BERT. WE DIDN'T EXPLORE THAT, BUT WE SHALL. THANK YOU. ANY IDEAS PARTICULARLY COME FOR OUR ESTEEMED SCIENCE MEMBERSHIP TO LET US KNOW IF THERE ARE AREAS WHERE YOU THINK WE SHOULD APPROACH THEM BECAUSE IT'S ON THE BASIS OF US GETTING THEM INTERESTED. THEY SEEM TO BE VERY INTERESTED IN A NUMBER OF AREAS, VERY, VERY INTERESTED. SO I LIKE THE THOUGHTS OF US BEING ABLE TO ACCESS SOME OF THEIR ORPHAN DISEASE CAPACITY IN THEIR CLINICAL CENTER. IT'S A SUPERB CENTER FOR THAT KIND OF WORK.

CHAIRMAN THOMAS: ALAN, I'D JUST LIKE TO ADD OBVIOUSLY THERE'S A LOT OF VERY INTERESTING STUFF GOING ON RIGHT NOW. THANK YOU FOR THAT REPORT. WE'RE DELIGHTED TO HAVE SCOTLAND ON BOARD. LIKE TO PARTICULARLY CONGRATULATE YOU ON THE NIH AGREEMENT, WHICH I KNOW HAS TAKEN A LONG TIME AND I THINK WILL BEAR GREAT FRUIT GOING FORWARD. SO

CONGRATULATIONS ON THAT.

DR. TROUNSON: THANK YOU.

CHAIRMAN THOMAS: ALAN, THAT GOES TO YOU AS WELL AND EVERYBODY WHO IS INVOLVED IN THAT. IT'S A REAL FEAT OF GREAT MOMENT. THANK YOU.

MS. SILVA-MARTIN: GOOD MORNING, MR. CHAIRMAN, MEMBERS OF THE BOARD. I WILL BE REPORTING ON THE FINAL EXPENDITURES FOR THE 2010-11 FISCAL YEAR.

AS YOU MAY RECALL, AT THE LAST BOARD MEETING I DID PROVIDE A PRELIMINARY REPORT, BUT THAT REPORT DID NOT INCLUDE ANY OF OUR LAGS OR ACCRUALS. SO THE INFORMATION THAT I'M PRESENTING TODAY DOES INCLUDE THAT INFORMATION.

BEFORE I COVER THE INFORMATION THAT'S ON THE GRAPH, I WANT TO BRIEFLY EXPLAIN WHAT EACH OF THE BARS REPRESENTS. THE BLUE BAR REPRESENTS THE BUDGET ALLOCATION THAT WAS APPROVED BY THE ICOC BOARD. THE ORANGE BAR REPRESENTS THE ACTUAL EXPENDITURES FOR THE 2010-11 FISCAL YEAR. AND THE GREEN BAR REPRESENTS THE BALANCE OR THE UNSPENT AMOUNT.

SO GOING OVER THE DATA THAT'S IN THE FIRST GROUPING OF BARS, THIS REPRESENTS OUR SALARIES AND WAGES AND ASSOCIATED BENEFITS. IN THAT CATEGORY WE

WERE ALLOCATED A BUDGET OF $8,848,000, OF WHICH WE SPENT $8,043,000 OR 91 PERCENT. SO THE UNSPENT AMOUNT OR THE BALANCE WAS $804,000 OR 9 PERCENT OF THAT BUDGET.

MOVING ON TO THE SECOND GRAPH, SECOND SET OF BARS, WHICH REPRESENTS OUR OPERATING EXPENDITURES, IN THIS CATEGORY WE CAPTURE ALL OF OUR OTHER COSTS. WE CAPTURE THE MEETING COST LIKE FOR THE ICOC BOARD MEETING, THE STANDARD AND GRANTS WORKING GROUP MEETINGS, THE SCIENTIFIC MEETINGS, TRAVEL, TRAINING, OFFICE SUPPLIES, OUR INFORMATION TECHNOLOGY COSTS, AND ALL OTHER CONSULTANT COST.

IN THIS CATEGORY WE SPENT $6,948,000 OF THE $7,171,000 THAT WAS ALLOCATED. SO WE ACTUALLY SPENT 97 PERCENT OF THE BUDGET, LEAVING AN UNSPENT AMOUNT OF $222,000 OR 3 PERCENT.

SO OVERALL, WE HAD A BUDGET OF $16,019,000. WE SPENT $14,993,000, AND WE HAD A BALANCE OF $1,026,000 OR 6 PERCENT. SO WE SPENT 94 PERCENT OF OUR BUDGET.

IN YOUR BINDERS YOU WILL SEE THIS CHART THAT ACTUALLY PROVIDES MORE DETAILED INFORMATION ABOUT OUR OPERATING EXPENDITURES. I'M OPEN TO ANY QUESTIONS THAT YOU MAY HAVE REGARDING EITHER THE INFORMATION ON THE CHART OR IN THE GRAPH, BUT THAT

BASICALLY CONCLUDES MY PRESENTATION IN TERMS OF OUR OVERALL EXPENDITURES.

MR. GOLDBERG: THANK YOU, CHILA, AND CONGRATULATIONS TO THE STAFF FOR BEING ABLE TO MANAGE THE INSTITUTE WITHIN ITS DESIGNATED BUDGET AND EVERYTHING ELSE. IT'S EXTRAORDINARY TO BE ABLE TO DO THAT ON A CONSISTENT BASIS. IT'S MUCH APPRECIATED.

THE ONE AREA, CHILA, WHICH KIND OF JUMPS OFF THE PAGE AS BEING PROBLEMATIC IS INFORMATION TECHNOLOGY. COULD YOU COMMENT ON WHY WE'VE BEEN SO OFF IN OUR FORECASTING THERE?

MS. SILVA-MARTIN: ACTUALLY WE'RE TRULY NOT OFF ON OUR FORECASTING, AND I'M GOING TO EXPLAIN WHY THAT LOOKS SO HIGH. IN THAT AREA WE WERE BUDGETED THE $1,249,000, AND WE SPENT $1,853,000, BUT THE MAJORITY OF THAT OVEREXPENDITURE IS FOR MULTIYEAR CONTRACTS. WE HAD TWO CONTRACTS THAT WE AMENDED DURING THE '10-'11 FISCAL YEAR THAT COVERED EXPENDITURES INTO THE '11-'12 FISCAL YEAR.

SO THE CONTRACT FOR OUR INFORMATION TECHNOLOGY ADVISOR WAS AMENDED TO COVER EXPENDITURES FOR THE '11-'12 FISCAL YEAR IN THE AMOUNT OF $236,000. AND THAT FULL AMOUNT WAS ENCUMBERED AGAINST THE '10-'11 FISCAL YEAR.

SIMILARLY, WE HAD A CONTRACT WITH PROGRAMMERS THAT WE AMENDED DURING THE '10-'11 FISCAL YEAR THAT WAS ALSO TO EXTEND INTO THE '11-'12 FISCAL YEAR, AND THAT AMOUNT WAS $268,000. SO WHEN YOU FACTOR IN THE FACT THAT WE HAVE ABOUT $500,000 WORTH OF '11-'12 SERVICES THAT WILL BE COVERED OUT OF THE '10-'11 FISCAL YEAR, THAT ACCOUNTS FOR THE OVERAGE.

THE OTHER THING THAT WE DID IN INFORMATION TECHNOLOGY WAS WE DID SOME HARDWARE INFRASTRUCTURE. WE HAD -- OUR BACKUP SYSTEMS WAS FAILING. WE HAD ROUTERS -- SWITCHES THAT WERE UNABLE TO MEET OUR NEEDS. ADDITIONALLY, WE HAD SERVERS THAT NEEDED MORE RAM. AND SO WE SPENT ABOUT $71,000 FIXING THAT, ADDRESSING THOSE AREAS. AND THEN WE ALSO SPENT ABOUT $35,000 CONDUCTING A SECURITY AUDIT ON OUR SYSTEM.

DR. PIZZO: I'VE GOT A FOLLOW-THROUGH FOR THAT. ARE YOU HAVING TO ALSO PURCHASE LICENSING FOR DIGITAL SCIENCE INFORMATION ACCESS AS WELL?

MS. SILVA-MARTIN: I DON'T KNOW WHETHER WE'VE DONE MUCH OF THAT. I'D HAVE TO LOOK INTO IT AND GET BACK TO YOU ON THAT.

DR. PIZZO: FOR EXAMPLE, HOW DOES ALAN ACCESS THE LITERATURE? DO YOU HAVE A WAY OF DOING

THAT?

DR. TROUNSON: GOOD QUESTION. SO I'M EMERITUS PROFESSOR AT MONASH UNIVERSITY, SO I HAVE THOSE RIGHTS MYSELF. THAT DOESN'T REALLY HELP EVERYBODY ELSE. AND THE PROBLEM IS THAT IT'S A HUGE COST. AND I TALKED TO SAM HAWGOOD AND OTHERS, AND IT WAS JUST VERY DIFFICULT TO SEE HOW WE COULD DO IT IN A COMPLEMENTARY WAY THROUGH THE INSTITUTION.

WE KIND OF GOT STUCK WITH PEOPLE HAVING ACCESS PROVIDING THE MATERIALS TO ONE ANOTHER, PHIL. SO IT'S NOT AN IDEAL SYSTEM.

DR. PIZZO: THE REASON I ASKED IS BECAUSE I DIDN'T KNOW WHETHER THAT WAS PLAYING A ROLE IN THE COST BECAUSE THE COSTS ARE EGREGIOUS AT THIS POINT IN TIME WITH THE RATE GOING UP FOR ANY OF OUR ELECTRONIC LIBRARIES. WE COULD TALK OFFLINE. THERE ARE SOME THINGS THAT ARE BEING EXPLORED NOW THAT MAY BE HELPFUL THAT WEREN'T AVAILABLE EARLIER.

DR. TROUNSON: THAT WOULD BE TERRIFIC. I'D LIKE TO DO THAT. OTHERWISE I'M ENCOURAGING ALL THE UNIVERSITIES TO MAKE EMERITUS PROFESSORS OF ALL OUR STAFF, WHICH IS NOT THAT EASY TO DO.

DR. PIZZO: JUST FOR ONE VENDOR, JUST FOR THOSE AT ACADEMIC CENTERS, FOR ONE VENDOR ALONE, THE COST THAT WE FACED IN AN EIGHT-YEAR PERIOD HAVE GONE

UP 125 TIMES, 125 TIMES.

DR. LUBIN: SO THE OTHER THING. I AGREE WITH WHAT PHIL JUST SAID, BUT I THINK THAT EVERYBODY IS LOOKING AT A NEW I.T. BUDGET BECAUSE OF TECHNOLOGY SHARING AND BECAUSE OF THE IMPORTANCE OF THIS. AS WE GO GLOBALLY IN ALL OF OUR NETWORKING, I THINK IT'S TIME TO -- YOU HAVE ALL THESE CONSULTANTS TO TAKE A LOOK AT WHERE WE ARE NOW AND WHERE WE NEED TO GO SO THAT WE'RE NOT BEHIND THE BALL.

FOR THOSE OF YOU, JUST GENERAL INFORMATION, WE DON'T HAVE ELECTRONIC MEDICAL RECORDS. WE'RE LOOKING AT INSTALLING THAT. IT'S $128 MILLION OVER FIVE YEARS TO HAVE AN ELECTRONIC MEDICAL RECORD SYSTEM PUT IN A HOSPITAL. THAT'S OUTRAGEOUS, BUT THAT'S WHAT IT IS. SO I THINK THAT -- I'M NOT SAYING YOU NEED ELECTRONIC MEDICAL RECORDS, THANK GOD, BUT I DO THINK YOU SHOULD TAKE A LOOK AT THIS I.T. BUDGET IN A MORE REALISTIC WAY ABOUT HOW THINGS ARE NOW AND DATABASES AND GENOMICS AND INFORMATICS. THAT'S IMPORTANT FOR CIRM TO HAVE A GOOD HANDLE ON WHAT THE FUTURE MIGHT BE.

MS. SILVA-MARTIN: THANK YOU.

CHAIRMAN THOMAS: THANK YOU, CHILA.

MOVING ON TO ITEM NO. 6, JUST TO SET THE CONTEXT HERE, AS YOU RECALL, WE HAD A STRATEGIC PLAN

DEVELOPED FOR CIRM IN 2006. WE HAD CONSIDERABLE DISCUSSIONS IN 2009 WITH MANY SUGGESTIONS MADE AS TO ADVANCING THE PLAN AT THAT POINT. AND IT IS OUR RESPONSIBILITY PERIODICALLY, WHICH IS EVERY THREE YEARS OR SO, TO REVISIT OUR STRATEGIC PLAN AND UPDATE IT IN LIGHT OF WHERE WE'VE COME, WHERE THE TECHNOLOGY IS, WHERE WE'D LIKE TO GO, ETC.

IT WAS ABOUT TIME IN GENERAL TO BEGIN UNDERTAKING A STRATEGIC PLAN REVISION FOR 2012. THAT PROCESS WAS MOVED ALONG AS WE ENTERED INTO OUR RELATIONSHIP WITH THE IOM, AND IT WAS OUR SENSE THAT WE WANTED TO HAVE A 2012 STRATEGIC PLAN DONE FOR THEM TO INCLUDE AS PART OF THEIR EVALUATION OF WHAT CIRM IS DOING.

SO TOWARDS THAT END, WE HAVE BEGUN THAT PROCESS WITH AN EYE TOWARDS COMPLETION ROUGHLY MARCH OF NEXT YEAR. THERE'S BEEN A LOT OF WORK THAT HAS GONE INTO THE DEVELOPMENT OF THIS STRATEGIC PLAN AMENDMENT WHICH WILL NOW FORM THE BASIS OF DISCUSSION TO BE LED BY DR. FEIGAL.

DR. FEIGAL: OKAY. THANK YOU VERY MUCH. I PROVIDED A PREREAD WHICH IS IN YOUR BINDER THAT WAS POSTED ALSO PUBLICLY. SO I'M GOING TO ASSUME THAT YOU ALL HAD THE OPPORTUNITY TO READ IT. IT'S NOT A DATA DENSE DOCUMENT, SO HOPEFULLY YOU WERE

ABLE TO REVIEW IT IN ADVANCE AND THINK ABOUT IT. IT'S REALLY SETTING UP THE FRAMEWORK FOR HOW WE CAN GO FORWARD WITH THINKING ABOUT HOW TO INFORM THE REVISING OF THE STRATEGIC PLAN.

SO LET ME JUST SET THE STAGE IN TERMS OF THE CONTEXT AND THE OBJECTIVES FOR THE SESSION HERE WITH YOU TODAY. JUST A VERY BRIEF BACKGROUND, BECAUSE YOU'RE ALL VERY FAMILIAR WITH THIS, IS THAT CIRM ADOPTED A STRATEGIC PLAN BACK AT NEAR ITS BIRTH BACK IN 2006. IT WAS UPDATED IN 2009-2010. AND SINCE THAT TIME, WE'VE BEEN REVIEWED, WE'VE RECEIVED RECOMMENDATIONS FROM AN EXTERNAL REVIEW PANEL IN LATE 2010, AND THESE RECOMMENDATIONS PLUS THE OTHER TYPES OF SHIFTS IN THE STEM CELL FIELD THAT WE NEED TO CONSIDER, THE ICOC DISCUSSIONS WHICH WE'RE HAVING ONE OF THOSE DISCUSSIONS TODAY, YOU HAD A PREVIEW BACK AT THE AUGUST 25TH BOARD MEETING, AND STAKEHOLDER INPUT.

SO WE'RE HOLDING A SERIES OF MEETINGS WITH VARIOUS STAKEHOLDERS, INCLUDING THE PATIENTS, PATIENT ADVOCACY ORGANIZATIONS, RESEARCHERS, INDUSTRY, OTHER MEMBERS OF THE PUBLIC. ALL OF THIS WILL HELP INFORM THE 2012 UPDATE THROUGH THE ICOC CONSIDERATION IN MARCH OF 2012.

SO WHAT WE'RE HERE TODAY FOR IS REALLY TO

ENGAGE IN A COLLABORATIVE, IN A CONSULTATIVE, AND IN AN INCLUSIVE DISCUSSION THAT IS REALLY INTENDED TO DRAW OUT A RANGE OF ICOC VIEWPOINTS AND APPROACHES. THE MEMBERSHIP OF THIS BOARD IS DIVERSE. WE HAVE PATIENTS, WE HAVE PEOPLE FROM PATIENT ADVOCACY ORGANIZATIONS, WE HAVE RESEARCHERS, WE HAVE PHYSICIANS, WE HAVE PEOPLE FROM THE COMMERCIAL LIFE SCIENCES, SO WE HAVE A RANGE OF DIFFERENT DISCIPLINES AND PERSPECTIVES, AND WE WANT YOU ALL TO PARTICIPATE.

SO THE POINT TODAY IS NOT TO ARRIVE AT A CONSENSUS. THE POINT TODAY IS ACTUALLY TO DRAW OUT THE VARIETY OF PERSPECTIVES, POTENTIAL APPROACHES THAT COULD HELP INFORM THIS 2012 PLAN. IN THE PURSUIT OF DOING THAT, I DO JUST WANT TO MENTION, AND I WILL INTRODUCE THEM LATER, TO HELP FACILITATE THE DISCUSSION, WE'RE GOING TO HAVE MEMBERS FROM THE CAMPBELL ALLIANCE GROUP, WHICH IS A LIFE SCIENCES CONSULTING GROUP, HELP MODERATE THE DISCUSSION BECAUSE, AS CIRM STAFF, WE REALLY WANT TO LISTEN TO WHAT THE ISSUES ARE AND TO LISTEN TO WHAT THE ICOC PERSPECTIVES ARE.

SO WE WANT TO HEAR THE RANGE OF VIEWPOINTS AND APPROACHES, AND WE'RE STILL EARLY IN THE PROCESS OF REVISING THE STRATEGIC PLAN. AND WHAT WE'D LIKE

TODAY IS A FOCUS REALLY ON THE STRATEGIC OBJECTIVES AND THE STRATEGIES. THIS IS JUST ONE OF SEVERAL DISCUSSIONS THAT WE'LL HOLD WITH YOU AS THE STRATEGIC PLAN EVOLVES AND AS WE GATHER INPUTS FROM VARIOUS STAKEHOLDERS, AS I MENTIONED, FROM PATIENTS, PATIENT ADVOCACY ORGANIZATIONS, RESEARCHERS, MEMBERS OF INDUSTRY, AND OTHER MEMBERS OF THE PUBLIC.

WE ACTUALLY HELD ONE OF OUR FIRST PUBLIC MEETINGS YESTERDAY IN LOS ANGELES. WE HAVE ANOTHER PUBLIC MEETING SCHEDULED FOR OCTOBER 31ST IN SAN FRANCISCO. WE HAVE MEETINGS PLANNED WITH INDUSTRY, AND WE HAVE CONVERSATIONS THAT WE'VE ALREADY HELD, SOME PRELIMINARY ONES, WITH RESEARCH STEM CELL LEADERS AROUND THE TIME OF THE GRANTEE MEETING. WE'VE HELD INTERNAL DISCUSSIONS WITH OUR MANAGEMENT TEAM AND WITH OUR SCIENTIFIC TEAM. SO WE'RE GATHERING INPUTS FROM THEM, FROM THE PUBLIC, FROM PROFESSIONAL SOCIETIES THAT WE WORK WITH, AND OTHER TYPES OF ORGANIZATIONS TO TRY AND BE AS INCLUSIVE AS WE CAN IN TRYING TO INFORM THIS 2012 PLAN.

SO JUST A COMMENT, IF I COULD, IN TERMS OF FRAMING THE VISION OF WHERE IT IS WE WANT TO GO TODAY. AND THE POINT REALLY HERE IS TO SUPPORT AND ADVANCE STEM CELL RESEARCH AND REGENERATIVE MEDICINE, AS YOU KNOW, UNDER THE HIGHEST ETHICAL AND

MEDICAL STANDARDS -- THIS IS SIMPLY OUR MISSION STATEMENT -- FOR THE DISCOVERY AND DEVELOPMENT OF CURES, THERAPIES, DIAGNOSTICS, AND RESEARCH TECHNOLOGIES TO RELIEVE HUMAN SUFFERING FROM CHRONIC DISEASE AND INJURY. WE THINK THIS IS A GREAT MISSION. WE HAVEN'T INTERNALLY AS OF YET THOUGHT THAT WE NEEDED TO REVISE THIS MISSION, BUT IT'S IMPORTANT, THOUGH, THAT WE ARE ALIGNED ON THIS TYPE OF VISION AND MISSION BECAUSE EVERYTHING ELSE FLOWS FROM IT.

IF WE THINK OF THE DIFFERENT CATEGORIES OF WHERE WE'VE BEEN, WHERE WE ARE NOW, WHERE WE WANT TO GO IN THE FUTURE, WE LIKE TO CATEGORIZE WHERE WE'VE BEEN IN TERMS OF 2004 AND 2010 AS OUR EXPLORATORY PHASE WHERE WE REALLY FUNDED A BROAD NUMBER OF DISEASES AND PROJECTS. WE'VE ESTABLISHED THE FOUNDATION FOR LEADERSHIP IN STEM CELL RESEARCH. AND SO WE'VE REALLY BEEN VERY EXPLORATORY. WE DON'T KNOW WHERE THE BEST DISCOVERIES ARE GOING TO COME FROM, SO WE'VE REALLY TRIED TO BE ECUMENICAL IN TERMS OF THINKING ABOUT THE DIFFERENT APPROACHES AND ALSO THE BROAD RANGES OF DISEASES THAT WE CAN GO INTO. WE ARE FUNDING, INVESTING IN OVER 26 DIFFERENT DISEASE AREAS.

WHAT WE'RE THINKING OF, WHY WE CONTINUE TO

FUND THE ENGINE OF DISCOVERY WITH FUNDAMENTAL BIOLOGY, THAT WILL CONTINUE BECAUSE WE THINK THAT'S AN IMPORTANT ENGINE TO KEEP GOING. BUT WE'RE ALSO TRYING TO THINK -- WE DO HAVE A MISSION TO BRING THERAPIES TO PATIENTS. AND SO WE NEED TO BE THINKING OF THE PROPORTION THAT WE INVEST, THE ISSUE OF PRIORITIZATION AND THINKING ABOUT HOW TO INCORPORATE THAT INTO OUR PROJECTS AND INVESTMENTS. HOW DO WE FOCUS ON DRIVING AND ADVANCING SOME OF THIS STEM CELL SCIENCE INTO CLINICAL TRIALS FOR PATIENTS TO GENERATE PRELIMINARY EVIDENCE OF THERAPEUTIC BENEFIT.

BECAUSE AT THE BEGINNING AND AT THE END OF THE DAY, THIS INSTITUTE IS ABOUT PATIENTS. AND SO IT WAS THE PATIENTS, IT WAS THE PRIVATE CITIZENS THAT PUT THIS INSTITUTE TOGETHER THAT VOTED FOR THIS. AND SO WE HAVE TO ANSWER TO THE PEOPLE WHO ACTUALLY CREATED THIS INSTITUTE TO BRING THINGS BACK TO THEM. SO THAT IS A PART OF WHAT WE REALLY NEED TO THINK ABOUT IN TERMS OF HOW WE FOCUS.

WE'RE ALSO THINKING THIS IS THE TIME TO REALLY EXPAND AND EXTEND OUR PARTNERSHIPS WITH ACADEMIA, WITH MEDICAL GROUPS, WITH PHYSICIAN GROUPS, WITH PATIENT GROUPS INTERNATIONALLY, AND ALSO, MOST IMPORTANTLY, OR A VERY KEY IMPORTANT PART

IS WITH INDUSTRY BECAUSE WE KNOW WE NEED TO DEVELOP THOSE PARTNERSHIPS. WE'RE FUNDING A PARTICULAR AREA OF THAT WHOLE PRODUCT DEVELOPMENT SPECTRUM, BUT WE NEED TO ENGAGE WITH INDUSTRY IN A STRONGER AND MORE EXPANSIVE WAY IN TERMS OF TAKING THE MOST PROMISING THINGS FORWARD TOWARDS AND INTO THE CLINIC SO THAT, WHEN WE THINK ABOUT 2016, WE CAN THINK ABOUT THOSE ISSUES, WHAT WE ENVISION, WHERE WE CAN REALLY FACILITATE THE COMMERCIALIZATION OF THE THERAPIES, WE CAN REALLY BE ADVANCING THOSE THERAPIES FROM CLINICAL TRIALS TO PATIENTS. AND ALSO THAT WE'VE DONE OUR WORK IN TERMS OF HELPING TO ENABLE A BUSINESS MODEL FOR STEM CELL-BASED THERAPIES.

SO IT'S NOT JUST ABOUT FUNDING. IT'S ABOUT ALSO LOOKING AT THE REGULATORY PATHWAY, LOOKING AT THE BUSINESS PATHWAY ABOUT HOW TO MOVE THESE TYPES OF THERAPIES FORWARD.

I CAN ACTUALLY SEE THAT IT'S ACTUALLY A DIFFERENT SLIDE SET THAT SHOULD HAVE BEEN PULLED UP, BUT I'LL WORK FROM THIS ONE AND THEN WE CAN GO BACK TO THE OTHER SLIDE SET.

THESE ARE JUST SOME OF OUR ACTIVITIES TOWARDS OUR SCIENTIFIC MISSION. AND YOU'RE VERY FAMILIAR WITH THESE. I DON'T NEED TO READ THROUGH THESE. I THINK ALAN ALSO COMMUNICATED THIS A LITTLE

BIT EARLIER, BUT WE HAVE OVER 450 AWARDS THAT HAVE GONE OUT TO 59 DIFFERENT INSTITUTES, COMPANIES. WE'VE ESTABLISHED, AS YOU KNOW, 12 NEW INSTITUTES AND CENTERS OF REGENERATIVE MEDICINE THAT HAS ALSO BEEN LEVERAGED WITH PRIVATE AND UNIVERSITY DONATIONS. WE'VE ALLOCATED ABOUT 40 PERCENT OF OUR $3 BILLION ALLOCATION FOR THIS INSTITUTE. SO WE HAVE A LOT OF THINGS IN THE COOKER, A LOT OF VERY, VERY PRODUCTIVE SCIENCE, BUT IT IS A FINITE PURSE. SO WE DO NEED TO THINK ABOUT HOW WE WANT TO MOVE FORWARD.

WE HAVE 900 MAJOR SCIENTIFIC PAPERS THAT HAVE BEEN PUBLISHED, ABOUT A QUARTER OF THEM IN VERY HIGH IMPACT JOURNALS. WE'VE ATTRACTED OVER A HUNDRED NEW MAJOR STEM CELL RESEARCH LEADERS TO CALIFORNIA. WE HAVE 44 DIFFERENT TRANSLATIONAL DISEASE PROGRAMS OF WHICH 14 ARE VERY MUCH FOCUSED ON PARTICULAR DISEASES AND ON IND ENABLING RESEARCH TO GET THEM TO FIRST IN HUMAN CLINICAL TRIALS. AND WE'VE ALSO AWARDED IN JUNE OF THIS YEAR THE FIRST CLINICAL AWARD TO THE FIRST IN THE WORLD FDA APPROVED CLINICAL TRIAL UTILIZING HUMAN EMBRYONIC STEM CELL THERAPY IN PATIENTS WITH SUBACUTE SPINAL CORD INJURY. AND THAT TRIAL IS ENROLLING PATIENTS AND HAD THE FIRST CALIFORNIAN ENROLL IN THAT STUDY

BACK IN SEPTEMBER. SO THERE'S BEEN A LOT OF ACTIVITY AND A LOT OF FORWARD MOTION.

THIS IS OUR TRAJECTORY. IT REALLY STARTED WITH ESTABLISHING THE INTELLECTUAL CAPITAL, THE SAFE HAVENS TO DO THE RESEARCH, AND THE SEED FUNDING TO REALLY SPUR DISCOVERY AND HELP MOVE THINGS FORWARD. AND YOU'VE SEEN THIS SLIDE, I THINK, MULTIPLE TIMES, SO THIS IS JUST RECAPPING SOME OF THE THINGS THAT YOU'VE ALREADY SEEN OVER THE PAST YEAR OR SO. BUT, AS YOU CAN SEE, IT WAS IN 2009 WHEN WE REALLY STARTED FUNDING OUR FIRST TRANSLATIONAL PROGRAMS, AND THAT HAS CONTINUED THROUGH 2011.

HOWEVER, WHAT I WANT TO POINT OUT IS THAT WE CONTINUE TO FUND RESEARCH, INTELLECTUAL CAPITAL, AND FUNDAMENTAL BIOLOGY. YOU WILL SEE IN THE BRIGHTER YELLOW THE PHYSICAL INFRASTRUCTURE, THE RESEARCH LABS, THE SHARED CENTER WHERE THE RESEARCH TAKES PLACE. IN THE PALE GREEN, WHAT YOU WILL SEE IS THE RESEARCH INTELLECTUAL INFRASTRUCTURE THAT ALSO CONTINUES TO BE FUNDED. WE HAVEN'T STOPPED THAT. YOU ALSO SEE THE FUNDAMENTAL RESEARCH IN THE BRIGHTER GREEN, AND THEN YOU SEE IN THE ROYAL BLUE THE TRANSLATIONAL RESEARCH THAT'S BEEN GOING FORWARD THAT REALLY JUST STARTED IN 2009.

SO PART OF OUR ISSUES ARE THINKING ABOUT

ARE WE INVESTING IN THE RIGHT AREAS, IS IT THE RIGHT PROPORTION AS WE MOVE FORWARD. THESE ARE SOME OF THE BIG QUESTIONS WE REALLY WANT YOU TO HELP GIVE US INSIGHT INTO. THESE ARE JUST SOME OF THE PROGRAMS THAT WE PUT FORWARD FOR CREATING THE STEM CELL INFRASTRUCTURE. WE CREATED AN INTELLECTUAL INFRASTRUCTURE WITH OUR TRAINING AWARDS, WITH OUR BRIDGES AWARDS, WITH CREATIVITY AWARDS, AND NEW FACULTY RESEARCH LEADERS. YOU WILL HEAR A PROPOSAL LATER TODAY ABOUT THE CREATIVITY AWARDS.

SO OUR PROGRAMS, YOU'VE SEEN THIS MULTIPLE TIMES, COVER THIS PRODUCT DEVELOPMENT SPECTRUM. IT'S A UNIDIRECTIONAL CHEVRON ON THE SLIDE, BUT IT'S CLEARLY AN ITERATIVE PROCESS THAT'S BIDIRECTIONAL. SO IT'S NOT WE GO FROM THE LAB TO THE BEDSIDE, BUT WE LEARN FROM THE BEDSIDE AND GO BACK TO THE LAB TO TRY AND UNDERSTAND WHAT WE'RE SEEING IN THE CLINIC. SO YOU WILL SEE HERE THE FUNDAMENTAL BIOLOGY, WHICH IS GOING TO CONTINUE, THROUGH EARLY TRANSLATIONAL RESEARCH, AND YOU HEARD SOME INFORMATION ON THAT FROM ALAN EARLIER ABOUT THE NEXT APPLICATION PROCESS IS ALREADY IN FULL SWING. THE DISEASE TEAM RESEARCH, AND WE ARE GOING TO RECEIVE DISEASE TEAM II RESEARCH AWARDS IN JANUARY OF THIS YEAR AND BE REVIEWING THEM IN THE SPRING AND AWARDING THEM. SO

WE'RE GOING TO HAVE A NEW CADRE OF DISEASE RESEARCH TEAMS, BUT IN ADDITION WE HAVE AN ONGOING PIPELINE THAT'S BEEN FUNDED BY OUR DISEASE TEAM RESEARCH I.

WE ALSO HAVE TOOLS AND TECHNOLOGY AND TRANSPLANTATION IMMUNOLOGY WHICH WE'RE FUNDING. AND WE HAD A VERY GOOD WORKSHOP AT THE FDA, I GUESS IT WAS, ONLY TWO DAYS AGO TALKING ABOUT SOME OF THESE BOTTLENECKS WITH THE FDA, WITH INVESTIGATORS THAT ARE CIRM-FUNDED, BUT ALSO THOSE NOT CIRM-FUNDED. WE'RE TRYING TO REACH OUT AND PULL IN INVESTIGATORS WHO ARE WORKING IN THE FIELD, MAYBE NOT NECESSARILY FUNDED BY US, BUT WE'RE ALL WORKING ON THE SAME ISSUES. SO, BERT, TO YOUR POINT IN TERMS OF REACHING OUT, WE DO WANT TO MAINTAIN VIGILANCE IN TERMS OF BEING AWARE OF WHAT OTHERS ARE DOING BECAUSE WE DON'T WANT TO DUPLICATE. THERE'S NOT ENOUGH MONEY AND THERE'S NOT ENOUGH TIME IN THE DAY FOR PEOPLE TO BE DUPLICATING EFFORTS. SO WE ARE ACTIVELY WORKING WITH A VARIETY OF DIFFERENT RESEARCH ENTITIES, BOTH DOMESTICALLY, INTERNATIONALLY, WITHIN CALIFORNIA, TO MAKE SURE THAT WE'RE WELL INFORMED AND WE'RE LEVERAGING WHERE WE CAN.

YOU ALSO HAVE BEEN HEARING ABOUT SOME OF THE THINGS THAT WE'RE DOING TO ENGAGE INDUSTRY. AS

YOU'VE ALSO HEARD, WE WANT TO STRENGTHEN AND EXPAND THAT. AND ELONA HAS BEEN SPEAKING WITH THE I.T. AND THE SCIENCE SUBCOMMITTEES IN TERMS OF THESE DIFFERENT INITIATIVES. YOU'RE GOING TO HEAR ABOUT ONE OF THE COMPONENTS OF THAT INITIATIVE A LITTLE BIT LATER TODAY WITH THE STRATEGIC PARTNERSHIP, BUT THERE WAS ALSO TWO OTHER COMPONENTS, BRIDGE FUNDING AND EXTERNAL INNOVATION. SO YOU'LL BE HEARING ABOUT THAT, WE THINK, SOMETIME IN DECEMBER ABOUT THE FULL COMPLEMENT OF PROGRAMS THAT WE WANTED TO PUT TOGETHER.

SO I'M NOT GOING TO GO INTO DETAIL ABOUT THESE INITIATIVES, BUT REMIND YOU OF THE SPECTRUM OF ACTIVITIES THAT WE'RE ENGAGED IN.

I'D LIKE TO TAKE JUST A LITTLE BIT OF TIME TO GO OVER THE PERSPECTIVES ON THESE STRATEGIC OBJECTIVES, STRATEGIES, AND RATIONALE FOR CHANGE. AND WE'D LIKE TO REALLY FOCUS TODAY'S DISCUSSION, BECAUSE EVERYTHING ELSE WILL FLOW FROM THAT, ON THE MISSION, THE STRATEGIC OBJECTIVES, AND WHETHER OR NOT THE STRATEGIC OBJECTIVES AND THE STRATEGIES TO REACH THEM WILL IMPACT ON ANY PROCESS CHANGES.

SO THE FIRST THING WAS TO THINK ABOUT WHAT DOES SUCCESS LOOK LIKE. IN YOUR PREREAD WE GAVE SOME THOUGHTS ABOUT WHAT SUCCESS COULD LOOK LIKE.

WE WANT TO HEAR FROM YOU ABOUT WHAT YOU THINK SUCCESS COULD LOOK LIKE IN TERMS OF FOCUSING ON ACHIEVING OUR MISSION. THIS WILL DRIVE ORGANIZATIONAL PLANNING AND FOCUS. AND WE DO WANT TO BE ALIGNED ON OUR MISSION BECAUSE THEN IT WILL HELP US POPULATE THE ELEMENTS OF THE STRATEGIC PLAN IN TERMS OF STRATEGIC OBJECTIVES, HOW WE STAFF OURSELVES, WHAT KIND OF RESEARCH ALLOCATION WE MAKE, AND HOW WE CONFIGURE AND PUT OUT A REQUEST FOR APPLICATIONS. ALL OF THAT DERIVES FROM OUR STRATEGIES.

AND THEN IN THIS NEXT SIX YEARS, WE NEED TO THINK ABOUT WHAT ARE OUR PRIORITIES FOR THE NEXT SIX YEARS BECAUSE THIS WILL PROVIDE DIRECTION TO HELP US ACHIEVE OUR MISSION. SO YOU'VE ALL READ THE STRATEGIC PLANS FROM '06, FROM '09, AND '10. YOU'VE BEEN IN PREVIOUS BOARD MEETINGS INFORMED ON THE EXTERNAL REVIEW PANEL RECOMMENDATIONS AND THE REVIEW AND THE RECOMMENDATIONS THAT CAME FROM THAT. WE WILL UPDATE YOU IN REAL-TIME AS WE HAVE OUR STAKEHOLDER MEETINGS TO GIVE YOU INPUT IN TERMS OF WHAT WE'RE HEARING FROM THE PUBLIC, FROM INDUSTRY. BUT THIS WILL HELP, I THINK, MAKE FOR A MORE INCLUSIVE THOUGHT PROCESS IN TERMS OF WHAT WE PUT FORWARD. AND ALSO, IF WE DO MAKE CHANGES COMPARED

TO '09-'10, WE WANT TO BE ABLE TO PROVIDE CLARITY, NOT JUST TO US, BUT TO THE EXTERNAL COMMUNITY ON THE RATIONALE FOR THAT CHANGE.

AND THEN, AS I SAID, OUR MISSION AND OUR STRATEGY WILL DRIVE OUR PROCESS. SO THE STRATEGIC OBJECTIVES ARE REALLY THE BASIS OF THE PLANS FOR OUR OPERATIONAL IMPLEMENTATION, WHICH WOULD INCLUDE THE OPERATIONS PLAN, THE COMMUNICATIONS PLAN, WHICH YOU WILL HEAR ABOUT LATER TODAY, BUT WE THINK THE STRATEGIC PLAN SHOULD DRIVE WHAT'S IN THE COMMUNICATIONS PLAN, THE RFA CONTENT AND PRIORITIZATION, AND OUR GRANT REVIEW CRITERIA. AND THIS WILL ALSO, AS OUR OBJECTIVES AND OUR PROCESSES CHANGE, THIS WILL ALSO IMPACT ON WHAT METRICS WE PUT TOGETHER TO MEASURE THAT PROGRESS.

SO SOME OF OUR INITIAL THOUGHTS ON WHAT SUCCESS WOULD LOOK LIKE, AND THIS IS JUST MORE TELEGRAPHIC, WE HAVE MORE INFORMATION IN THE PREREAD, IS THAT RESEARCH IS THE FOUNDATION OF THERAPY, AND THAT REGENERATIVE MEDICINE AND CELL THERAPY HAS BEEN ENABLED BY CIRM'S WORK. IN TERMS OF THE MEDICINE CATEGORY, THAT STEM CELL-BASED THERAPIES ARE THE CORE OF CIRM'S MISSION, AND THEN TREATMENTS IN CLINICAL TRIALS EVOLVE FROM STEM CELL RESEARCH.

AND ALSO, WE THOUGHT A THIRD MAJOR SUCCESS WOULD BE IN THE AREA OF MAKING CALIFORNIA A STEM CELL HUB, THAT THERE WOULD BE A RANGE OF BENEFITS FROM CREATING A SUSTAINABLE STEM CELL HUB IN CALIFORNIA, THAT IT WOULD BE MORE WIDELY ACKNOWLEDGED AS A STEM CELL STATE, AS A WORLDWIDE CENTER OF EXCELLENCE IN STEM CELL SCIENCE AND IN STEM CELL-BASED THERAPY.

THESE ARE THE STRATEGIC OBJECTIVES FROM '09 AND 2010. AND AS YOU CAN SEE, IT HAD FIVE DIFFERENT BINS OR CATEGORIES WITH ACCELERATION OF THERAPEUTIC DISCOVERIES, OPERATIONAL EXCELLENCE, REGULATORY CERTAINTY, PUBLIC EDUCATION, AND THEN ECONOMIC BENEFIT TO CALIFORNIA. WE SUGGESTED MELDING THESE INTO FOUR MAJOR CATEGORIES, AND YOU WILL SEE THAT HERE, INTO SCIENTIFIC, MEDICAL, ECONOMIC, AND SOCIAL.

AND HERE UNDER SCIENTIFIC, THE BROADBRUSH IS THAT THE SCIENTIFIC WOULD ACCELERATE OUR UNDERSTANDING OF STEM CELL SCIENCE AND ITS APPLICATIONS TOWARDS HUMAN DISEASES AND INJURY.

IN TERMS OF MEDICAL, THE STRATEGIC OBJECTIVE WOULD BE TO ADVANCE SCIENCE INTO CLINICAL TRIALS TO ACHIEVE PRELIMINARY EVIDENCE OF THERAPEUTIC BENEFIT FOR PATIENTS.

THE ECONOMIC WOULD BE THAT WE'RE DRIVING ECONOMIC DEVELOPMENT FOR CALIFORNIA FROM THE STEM CELL SCIENCE.

AND IN TERMS OF SOCIAL, AND WE'RE VERY OPEN TO OTHER TERMS, ACTUALLY WE'RE VERY OPEN, THIS IS FLUID, WE'RE OPEN TO ALL OF THIS BEING COMMENTED UPON, WOULD BE TO INCREASE AWARENESS OF CALIFORNIA AS THE LEADER IN STEM CELL RESEARCH AND THERAPIES.

AND THESE ARE JUST SOME OF OUR PROPOSED STRATEGIES UNDER THOSE PROPOSED STRATEGIC OBJECTIVES. AND SOME OF THE STRATEGIES INCLUDE ENHANCING OUR FOOTPRINT BOTH ON AN INTELLECTUAL BASIS, INTELLECTUAL PROPERTY BASIS, AND THE PHYSICAL INFRASTRUCTURE, OUR STRATEGIES IN BUILDING PARTNERSHIPS WITH INDUSTRY TO INCREASE OUR SCIENTIFIC RESEARCH COLLABORATIONS, AND, AS WE NOTED, REALLY GREATLY LEVERAGE EXPERTISE BECAUSE THE PURSE IS FINITE. AND ALSO TO BE THINKING AS PART OF OUR STRATEGY DO WE NEED TO REVISE PRIORITIZATION AND THE DECISION-MAKING FRAMEWORK TO MAKE THIS WORK.

IN TERMS OF MEDICAL AND ADVANCING SCIENCE INTO CLINICAL TRIALS, DO WE NEED TO THINK ABOUT SOME KIND OF PRIORITIZATION HERE, OR DO WE CONTINUE IN AN EXPLORATION PHASE? WE'RE SUGGESTING THERE NEEDS TO BE SOME SENSE OF PRIORITIZATION AND SOME SORT OF

STRATEGIC GUIDANCE INTO THE PROPORTION THAT WE CONTINUE TO DRIVE THE ENGINE OF DISCOVERY VERSUS THE PROPORTION THAT WE WANT TO PUT INTO TRANSLATIONAL PROGRAMS. AND ALSO, DO WE CONTINUE ACROSS ALL THE STEM CELL PLATFORMS?

WE ALSO THINK, AS PART OF THE STRATEGY, IT'S NOT JUST ABOUT INVESTMENTS. IT'S ABOUT THINKING OF THE PATHWAY FORWARD BOTH ON A REGULATORY, ON A COMMERCIAL END, BUILDING THOSE PARTNERSHIPS WITH INDUSTRY, THE MEDICAL COMMUNITY, AND GLOBAL ORGANIZATIONS, AND ENGAGING PATIENTS AND PATIENT ADVOCATES EARLY IN ALL OF THESE DIFFERENT ENDEAVORS BECAUSE WE THINK PATIENTS AND THEIR ORGANIZATIONS WILL BE MOST INTERESTED IN THE STRATEGY INVOLVING MEDICAL.

IN TERMS OF ECONOMIC, THIS IS REALLY LEVERAGING, AGAIN, THROUGH PARTNERSHIP AND THINKING OF STRATEGIES TO ENGAGE THE CALIFORNIA GOVERNMENT AND ECONOMIC DEVELOPMENT AGENCY TO BRING COMPANIES TO CALIFORNIA. SO WE HAVE TO THINK ABOUT WHO IS OUT THERE THAT WE CAN REALLY ENGAGE AND HELP US IN ATTRACTING THESE COMPANIES TO CALIFORNIA. WE CAN DO SO MUCH WITH FUNDING. ARE THERE OTHER INCENTIVES, OTHER THINGS THAT COULD BE DONE TO ATTRACT PEOPLE HERE AND THEIR COMPANIES.

AND THEN IN TERMS OF SOCIAL, WHAT WE MEAN BY THAT IS INCREASING AWARENESS OF CALIFORNIA AS A LEADER IN STEM CELL THERAPIES. THIS IS WHERE WE SEE THE BIG DRIVE ON COMMUNICATION, TO COMMUNICATE THE VALUE PROPOSITION OF WHAT WE'RE DOING. THERE'S BEEN A TREMENDOUS AMOUNT OF WORK ON COMMUNICATION, VERY SUCCESSFUL WORK DONE IN THE SCIENTIFIC COMMUNITY. WE KNOW WE WANT TO BROADEN OUR COMMUNICATION AND STRENGTHEN OUR COMMUNICATION AMONG VARIOUS STAKEHOLDERS.

WHAT'S THE BEST WAY WE CAN DO THAT? AND YOU WILL HEAR LATER TODAY ABOUT SOME OF THOSE PROPOSED PLANS. THIS IS ABOUT OUR EDUCATION, OUR MESSAGING, AND HOW CAN WE BETTER PARTNER, NOT JUST WITH PATIENT ADVOCATES ON THE BOARD, WHICH YOU CAN DO A TREMENDOUS AMOUNT, BUT LEVERAGING THE HUNDREDS OF ORGANIZATIONS OUT THERE THAT DON'T HAVE AN OPPORTUNITY TO SIT ON THE BOARD TO ALSO HELP IN TERMS OF EDUCATING AND BRINGING THEM INTO THE FOLD OF BEING INVESTED IN WHAT WE'RE TRYING TO DO. AS WE SAID, ALSO INCREASING OUR GLOBAL OUTREACH EFFORTS.

SO I'M ACTUALLY GOING TO ASK MARIA TO PULL UP THE SLIDE DECK I MEANT TO USE, WHICH INCLUDES THE NEXT PHASE OF THIS DISCUSSION WITH YOU, WHICH IS TO BRING IN CAMPBELL ALLIANCE. AND I'M GOING TO BE

INTRODUCING JEFFREY LIEPMAN AND EMILY HUA TO HELP MODERATE THE DISCUSSION. AND ONE WAY THAT THEY'RE GOING TO DO THAT IS BY POSING QUESTIONS TO YOU.

SO PRESUMABLY START WITH RATHER OPEN-ENDED, BUT WE THOUGHT THE BEST WAY TO DO IT IS HAVE PEOPLE WHO ARE FROM THE OUTSIDE AND SO DON'T HAVE A PARTICULAR HORSE IN THE RACE AND SO CAN TRY AND GARNER INPUT FROM YOU IN TERMS OF HOW TO GO FORWARD.

LET ME JUST FIRST ASK, THOUGH, IF THERE ARE ANY QUESTIONS ON MY PART OF THIS PRESENTATION.

DR. PIZZO: ELLEN, I HAVE A QUESTION WHICH IS AN EXTENSION OF THE PRESENTATION THAT ALAN GAVE. SO HE MAY WANT TO COMMENT ON THIS FURTHER. IN TRYING TO THINK ABOUT THE RIGHT BALANCE BETWEEN CONTINUING TO FUND BASIC RESEARCH, WHICH WE ALL KNOW WE STILL NEED LOTS OF, VERSUS THE DIVIDEND THAT COMES FROM PROOF OF PRINCIPLE BY TRANSLATIONAL RESEARCH MODELS, WHEN YOU ALLUDED TO, ALAN, THE CONNECTION WITH THE NIH AND THE INTRAMURAL PROGRAM IN PARTICULAR, THAT AFFORDS AN OPPORTUNITY, AS I'M SURE YOU ARE AWARE, OF SAVING A TREMENDOUS AMOUNT OF RESOURCES IF THE INTRAMURAL PROGRAM EMBRACES THE CONDUCT OF PHASE I, II CLINICAL TRIALS, AND WE COULD PARTNER WITH THEM SUCCESSFULLY TO HAVE THEM DONE

THERE, THAT WOULD REALLY IMPACT ON HOW MUCH WE'RE INVESTING ON THE CLINICAL SIDE OF THIS TREMENDOUSLY. PLUS WHICH, AS SOMEBODY WHO HAS 23 YEARS WORKING IN THE INTRAMURAL PROGRAM AT THE NIH, YOU CAN BRING PATIENTS FROM ALL OVER THE WORLD TO THE CLINICAL CENTER. AND THAT INSTITUTION FAR EXCEEDS ANYTHING THAT ANY OF OUR INSTITUTIONS HAVE IN TERMS OF CLINICAL TRIAL DESIGN, DELIVERY, SUPPORT, AND THE LIKE.

SO THE QUESTION IS DO YOU THINK THAT THAT IS REALISTIC? THAT WOULD BE AN AMAZING PARTNERSHIP.

DR. FEIGAL: I JUST MENTION IT, BUT THEY'RE SENDING US SOME INITIATIVES RIGHT NOW IN TERMS OF BENCH TO BEDSIDE. AND I THINK IT'S DEFINITELY A POTENTIAL, BUT, ALAN, PLEASE COMMENT ON YOUR THOUGHTS ON THIS.

DR. TROUNSON: I THINK IT NEEDS TO BE REALIZED, PHIL. I THINK IT'S VERY CLEAR THAT THE OPPORTUNITY IS THERE. WE HAVE TO SORT OF WORK OUT WITH OUR CALIFORNIAN COLLEAGUES WHETHER THEY'D BE WILLING TO LINK IN WITH THAT DEEPLY. I THINK THEY WILL IN SOME CIRCUMSTANCES, POSSIBLY NOT IN OTHERS. BUT I THINK IT WILL JUST BROADEN OUR CAPACITY SO MUCH, AS YOU SAID, THAT I THINK WITH SOME ENCOURAGEMENT AND A LITTLE BIT OF WILL, I THINK IT

WOULD EXPAND OUR CAPACITY ENORMOUSLY. I'M AGREEING WITH YOU.

DR. PIZZO: I'D BE MORE THAN WILLING TO HELP WITH THIS DIRECTLY. I THINK HAVING DONE RESEARCH IN ACADEMIA VERSUS AT THE NIH, THERE IS NO COMPARISON. THE ABILITY TO DO IT FAST AND TO DO IT WITH ALL THE BELLS AND WHISTLES REALLY EXISTS. THAT CLINICAL CENTER IS THE LARGEST OF ITS KIND IN THE WORLD, AND IT'S HUNGRY RIGHT NOW FOR OUTSTANDING WORK. AND IF WE COULD FORGE A PARTNERSHIP, THIS WOULD MOVE US IN AMAZING WAYS. AND, YOU KNOW, THE COST FOR DOING THAT KIND OF RESEARCH IS EXTRAORDINARY, AND THAT WOULD BE -- THAT WOULD OFFSET SOME OF THE MONIES THAT WE'RE PUTTING INTO THAT HERE AND ONLY LEVERAGE OUR ABILITY TO DO IT BETTER, QUICKER, AND MORE EXUBERANTLY.

DR. FEIGAL: I JUST WANT TO ADD THEY SEE THIS, A COLLABORATION WITH CIRM, AS ALSO A TREMENDOUS OPPORTUNITY.

DR. PIZZO: THEY NEED IT. IT'S A GOOD TIME FOR THAT.

MR. SHEEHY: I HAD A COUPLE OF QUESTIONS. AND ONE OF THEM WAS ALONG DR. PIZZO'S LINES. INITIALLY IT'S JUST THE RESOURCE QUESTION. HOW MUCH MONEY -- IT WOULD BE GREAT IF WE AS A STARTING POINT

LOOKED AT HOW MUCH MONEY WE HAVE AVAILABLE IN ORDER TO COMMIT TO THE STRATEGIC PLAN. I DON'T THINK IT'S --

DR. FEIGAL: WE COULD TELL YOU.

MR. SHEEHY: -- FULLY 1.65, SO THAT WOULD BE HELPFUL.

DR. FEIGAL: 1.2 IS THE ESTIMATE.

MR. SHEEHY: SECOND WOULD BE, AS DR. PIZZO SAID, WHERE CAN WE LEVERAGE OUTSIDE FUNDING, I THINK, IS A KEY PART. THE NIH PIECE IS BIG OR IN INDUSTRY.

ANOTHER THING THAT WOULD BE HELPFUL FOR ME, WE'RE BASICALLY A TECHNOLOGY FUNDING ENTITY. AND YOU MENTIONED PLATFORMS. WHAT WOULD HELP ME IS TO GET SOME SORT OF MATRIX OF THE PLATFORMS THAT WE'RE FUNDING, MEANING WE DO ADULT STEM CELLS, WE DO -- AND YOU CAN EVEN BREAK THAT DOWN INTO AUTOLOGOUS, ALLOGENEIC, WE DO CANCER STEM CELL, WE DO EMBRYONIC STEM CELL, WE DO IPS. WE MAY DECIDE TO GO INTO DIFFERENT ORIENTATION. SOME SORT OF MATRIX THAT COULD CAPTURE WHAT OUR PLATFORMS ARE AND THEN TO OVERLAY THAT WITH DISEASE TARGETS, AND THEN PUT THAT -- AND THEN DO THAT ANALYSIS AGAINST THE DEVELOPMENT PATHWAY SO WE CAN GET A REAL SENSE OF WHERE OUR OPPORTUNITIES ARE, AND THEN WE CAN MAKE

STRATEGIC DECISIONS.

THERE MAY BE CERTAIN DISEASES AND CONDITIONS, FOR INSTANCE, THAT ARE IMPORTANT TO THE PEOPLE OF CALIFORNIA. YOU KNOW, ALZHEIMER'S OR AUTISM, WHICH ARE EPIDEMIC, COME TO MIND THAT MAY FALL IN A DIFFERENT DEVELOPMENTAL PATHWAY, BUT TO BE ABLE TO MAKE THAT KIND OF DECISION TO MAKE INVESTMENTS BASED ON, QUOTE, PLATFORM OUR CURRENT INVESTMENTS, OUR OUTSIDE FUNDING PARTNERS, THE AMOUNT OF MONEY WE HAVE LEFT. THAT WOULD BE A VERY HELPFUL WAY FOR ME TO BE ABLE TO ANALYZE THIS AS OPPOSED TO JUST SETTING OUT BROAD TARGETS.

IT WOULD BE ROUGHLY SIMILAR TO WHAT WE DID IN THE FIRST STRATEGIC PLAN WHERE WE BASICALLY LOOKED, WE WERE REALLY LOOKING AT A VERY NARROW SET OF TECHNOLOGIES, REALLY EMBRYONIC STEM CELLS AND SOMATIC CELL NUCLEAR TRANSFER, AND THEN LINED OUT A WHOLE SERIES OF RFA'S TO GET THERE.

THE OTHER THING THAT WOULD BE HELPFUL IN DOING THIS MATRIX IS PERHAPS WE CAN IDENTIFY CORE TECHNOLOGIES WITHIN EACH PLATFORM WHERE WE CAN PLAY A ROLE IN FURTHERING THE DEVELOPMENT OF THOSE TECHNOLOGIES, LIKE I THINK OF GENE THERAPY IN ADULT STEM CELLS. WELL, IMPROVING VECTORS IS A BIG PIECE OF THAT, HUGE PIECE OF THAT, OR TRANSDUCTION

EFFICIENCY BOTH POP OUT. BUT THAT WOULD HELP ME THINK ABOUT HOW MUCH TO PUT INTO BASIC SCIENCE OR HOW MUCH TO PUT INTO CLINICAL SCIENCE AND WHAT TO PRIORITIZE TO REALLY HAVE THAT KIND OF SCIENTIFIC GRANULARITY AS OPPOSED TO JUST KIND OF MAKING KIND OF A BROADBRUSH LOOK AT THIS.

AND THE OTHER THING, IN TERMS OF THE BUSINESS MODEL, I THINK THAT IF WE CAN ENGAGE ART AND DUANE AS EARLY AS POSSIBLE TO CREATE THE DIALOGUES WITH FUNDERS FOR HEALTHCARE SERVICES BECAUSE I THINK ULTIMATELY, ESPECIALLY GOVERNMENT, WHO'S PROBABLY THE BIGGEST SINGLE FUNDER OF HEALTH CARE SERVICES, THEY MAY BE -- THAT MAY BE WHERE WE GET ENORMOUS AMOUNTS OF SUPPORT THAT WE MAY NOT GET FROM INDUSTRY IN TERMS OF MOVING THESE TECHNOLOGIES FORWARD.

A CURE REALLY MAY NOT COST OUT FOR INDUSTRY IN THE SAME WAY THAT IT MIGHT COST OUT FOR KAISER, WHO'S TREATING A NUMBER OF PATIENTS FOR CHRONIC DISEASE, OR FOR MEDICARE OR FOR MEDICAID OR MEDI-CAL FOR ALL THESE FUNDERS. SO I THINK ENGAGING THEM IN THE DIALOGUE AT THE AS SOON AS POSSIBLE POINT WOULD BE ANOTHER ESSENTIAL COMPONENT ON THIS FOR ME.

DR. FEIGAL: I JUST WANT TO MAKE A

COMMENT. BACK IN AUGUST, IN PREPARATION FOR THE STRATEGIC PLAN DISCUSSION, WE DID PROVIDE ACTUALLY DATA ON INVESTMENTS AND PROPORTION ACROSS ALL THE STEM CELL PLATFORMS. THAT WAS THE PIE CHART. WE PROVIDED THE DISEASE INVESTMENTS ACROSS THE 26 DIFFERENT AREAS. SO I'VE JUST ASKED MARIA TO RESEND THAT DOCUMENT, BUT WHAT WE DON'T HAVE IS AS A MATRIX.

MR. SHEEHY: I UNDERSTAND. WE KIND OF LOOKED AT THIS, BUT IT DOESN'T REALLY KIND OF CAPTURE IN TERMS OF THE STRATEGIC PLANNING WHERE WE SHOULD BE MAKING OUR INVESTMENTS. IT DOESN'T SEEM -- IT SEEMS LIKE THAT SHOULD BE PART OF THIS DISCUSSION. RIGHT. WHAT ARE OUR KEY PLATFORM TECHNOLOGIES, AND REALLY WHICH ONES DO WE WANT TO CONTINUE TO INVEST HEAVILY IN, AND FOR WHAT REASON AND FOR WHAT DISEASES?

DR. FEIGAL: I CAN REPUT, IF YOU LIKE, THE SLIDES FROM THAT, WHICH GOES OVER IT.

DR. BRYANT: I HAD A COMMENT, AND THAT WAS THAT I THOUGHT YOUR ANALYSIS WAS EXCELLENT, AND I REALLY LIKED IT A LOT. WHAT IT REMINDED ME OF IS I AGREE WITH EVERYTHING THAT'S BEEN SAID ABOUT HOW WE'RE GOING TO PRIORITIZE AND EVERYTHING, BUT THE LONG-LASTING EFFECT OF THIS INITIATIVE IS IN

BUILDING THE FACULTIES IN THE UNIVERSITIES. AND THEY ARE HERE TO STAY, AND THEY WILL KEEP DOING THIS RESEARCH, HOWEVER THEY GET THE MONEY, AFTER THIS IS OVER. SO I THINK THAT'S PART OF THINKING ABOUT THE FUTURE.

AND ALSO, SINCE WE'RE STILL IN THE BASIC SCIENCE PHASE OF FIGURING OUT THE BEST WAY TO CREATE STEM CELLS, WE NEED TO KEEP THE BALANCE THAT YOU TALKED ABOUT. BUT I DO THINK THAT ONE OF THE MAJOR CONTRIBUTIONS HAS BEEN TO BUILD THIS INCREDIBLE, ENERGIZED WORKFORCE HERE THAT'S GOING TO STAY.

CHAIRMAN THOMAS: ELLEN, BEFORE WE GO TO THE FACILITATORS, WE MIGHT WANT TO TAKE A COUPLE-MINUTE BREAK HERE IN CASE ANYBODY NEEDS TO USE THE FACILITIES.

DR. FEIGAL: SOUNDS LIKE A GOOD IDEA.

(A RECESS WAS TAKEN.)

CHAIRMAN THOMAS: OKAY. WE'D LIKE TO GET BACK GOING HERE. SO IF EVERYBODY COULD PLEASE TAKE THEIR SEATS.

EMILY, I WILL TURN IT OVER TO YOU. YOU CAN NOW LEAD US IN FURTHER DISCUSSION ON THE STRATEGIC PLAN.

MS. HUA: GOOD MORNING, EVERYBODY. MY NAME IS EMILY HUA, AND I HAVE A COUPLE OF COLLEAGUES

WITH ME, JEFF LIEPMAN AS WELL, AND SEVERAL COLLEAGUES IN THE BACK WHO WILL BE HELPING TO CAPTURE ALL THE FEEDBACK.

AS ELLEN MENTIONED, WE ARE PART OF A COMPANY CALLED CAMPBELL ALLIANCE, WHICH IS A MANAGEMENT CONSULTING FIRM. OUR ROLE TODAY IS TO HELP MODERATE THE DISCUSSION AND TO REALLY SOLICIT YOUR FEEDBACK ON THE PRELIMINARY STRATEGIC OBJECTIVES THAT WE HAVE WORKED TOGETHER AS A TEAM.

SO I JUST WANTED TO PUT SOME GROUND RULES. AND THE FIRST ONE IS PLEASE BE VOCAL. AND I KNOW, WHEN WE WERE PREPARING FOR THIS, ELLEN SAID THAT'S NOT GOING TO BE A PROBLEM WHATSOEVER. BUT WE REALLY ENCOURAGE YOUR FEEDBACK, YOUR INSIGHTS BECAUSE WE REALLY WANT TO PRESSURE TEST WHAT WE HAVE PUT FORTH AND STRENGTHEN WHERE WE WANT TO GO.

SO WITH THAT IN MIND, WHAT I'D LIKE TO -- ACTUALLY GO TO THE NEXT SLIDE. WHAT I'D LIKE TO START OFF WITH IS ASKING THIS FIRST QUESTION. WHAT DOES SUCCESS LOOK LIKE FOR YOU BY THE TIME -- BY 2016? WHAT DOES SUCCESS LOOK LIKE TO YOU?

MS. SAMUELSON: MAY I ASK A QUESTION FIRST? ARE YOU GOING TO RETURN TO EVERY SLIDE? BECAUSE THAT'S WHERE I DID MY THINKING, PRELIMINARY THINKING, AND CAME UP WITH MY THOUGHTS.

MS. HUA: WE ARE GOING TO RETURN TO A FEW SELECT SLIDES AS IT RELATES TO THE STRATEGIC OBJECTIVE SLIDE. BUT IF YOU WERE REFERRING TO --

MS. SAMUELSON: I'D LIKE TO SEE THEM ALL. I'M NOT SURE IF I MEAN ALL, BUT I KNOW THAT THERE WERE SEVERAL WHERE I HAD --

DR. FEIGAL: EVERYTHING ON THE SLIDE ACTUALLY IS -- THE STRATEGIC OBJECTIVES PART ARE ALL IN THE PREREAD, WHICH IS IN YOUR BINDER. THE OTHER MATERIAL, I DON'T KNOW IF WE HAVE A WAY TO PRINT THEM OUT HERE, BUT BASICALLY IT'S MATERIAL YOU'VE ALL SEEN BEFORE. IT'S OUR FUNDING TRAJECTORY.

MS. SAMUELSON: I JUST WANT A REMINDER OF WHAT IT WAS THAT I WAS THINKING 20 MINUTES AGO AS WE WERE GOING THROUGH IT IN TERMS OF BEING ABLE TO PROVIDE THAT FEEDBACK NOW. I CAN LOOK AT THESE LATER AND SUBMIT SOMETHING.

MR. SHESTACK: WE ACTUALLY DON'T HAVE A SLIDE IN OUR BOOKS THAT SAYS SCIENCE, MEDICINE, STEM CELL HUB. IN ANY EVENT, THE QUESTION IS?

MS. HUA: SO THE QUESTION IS WHEN A SMALL GROUP OF THE CIRM REPRESENTATIVES THOUGHT ABOUT SUCCESS, THEY THOUGHT OF IT IN THESE THREE AREAS: TO BE VERY SCIENCE FOCUSED AND TO MAKE SURE THAT WE ARE PROLIFERATING THE RESEARCH IN STEM CELL.

ANOTHER SUCCESS FACTOR WOULD BE TO TRY TO MOVE SOME OF THE RESEARCH INTO CLINICAL DEVELOPMENT. AND LASTLY, IT WOULD BE DEEMED SUCCESSFUL IF, BY THE END OF THIS INITIATIVE, THERE IS A HUB FOR STEM CELL RESEARCH AND THERE IS THE FOOTPRINT OF STEM CELL BECAUSE OF US.

SO I WOULD LIKE TO OPEN IT UP TO YOU GUYS TO SEE IF YOU AGREE WITH THAT.

MR. ROTH: I'LL TAKE A SHOT. IT'S HARD TO SIT HERE AND SAY WHAT IS SUCCESS -- WHAT WOULD SUCCESS LOOK LIKE. I THINK I CAN ADDRESS IT BY SAYING IF I LOOK AT THOSE THREE CATEGORIES, WHERE HAVE WE BEEN SUCCESSFUL, AND WHAT WE MIGHT THINK ABOUT LATER. BUT IF I LOOK AT SCIENCE, I THINK WE'VE BEEN HIGHLY SUCCESSFUL. WE AND THE WORLD COMMUNITY IN GENERAL, THERE HAS BEEN MUCH FASTER AND MUCH MORE INFORMATION THAN I WOULD HAVE EVER IMAGINED WHEN THIS PROJECT STARTED. SO TO ME I THINK I WOULD RATE OUR SCORE PRETTY HIGH THERE.

IN TERMS OF THE STEM CELL HUB, I THINK THERE'S A POWERFUL ARGUMENT THAT WE'VE CREATED A LASTING INFRASTRUCTURE, SUE COMMENTED ON THIS, OF SORT OF THE BEST IN THE WORLD IN TERMS OF AT LEAST EQUALLY AS GOOD TO ANYPLACE ELSE IN THE WORLD TO ADVANCE THIS TECHNOLOGY. IT'S PERMANENT. THESE

PEOPLE CAME HERE. THEY'RE LIKELY TO STAY HERE BECAUSE CALIFORNIA IS PRETTY STICKY ONCE YOU GET THEM HERE.

SECOND, YOU'VE GOT ALL THESE INSTITUTES THAT WERE ERECTED THAT ARE GOING TO BE HERE FOR A LONG, LONG TIME. SO THE INFRASTRUCTURE PART OF THIS STEM CELL HUB, I THINK, I WOULD RATE VERY HIGHLY.

THE MIDDLE BOX IS THE ONE THAT I THINK WE'RE ALL LOOKING AT AND SAYING IN THE FUTURE WHAT WOULD THAT LOOK LIKE. AND I THINK WE'D ALL LIKE TO SEE THERAPIES THAT CHANGE THE LIVES OF INDIVIDUALS AND CHANGE THE COST OF HEALTHCARE AND CHANGE THE QUALITY OF EVERYTHING WE TALK ABOUT.

SO TO ME I'D GIVE US VERY HIGH SCORES ON SCIENCE AND STEM CELL HUB. THE NEXT PHASE IS HOW DO WE NOW TAKE THESE ASSETS AND PUT THEM INTO THAT MIDDLE BOX.

MS. HUA: THANK YOU. ANYONE ELSE?

MR. SHEEHY: WELL, IS THERE ANY WAY TO PUT UP THE OBJECTIVES OF THE ORIGINAL STRATEGIC PLAN, WHICH WERE REALLY CONCRETE, SO MANY PROJECTS, FOR INSTANCE, IN CLINICAL TRIALS, SO MANY PROJECTS PROOF OF CONCEPT, ETC., AND KIND OF MATCH THOSE? BECAUSE, YOU KNOW, IT WOULD BE GOOD TOO WHEN WE TALK ABOUT, FOR INSTANCE -- IT WOULD BE HELPFUL TOO. WE KNOW WE

HAVE $1.2 BILLION LEFT. WE HAVE SAID THAT WE BUILT THIS INFRASTRUCTURE, AND THERE SEEMS TO BE AN EMERGING CONSENSUS AROUND WHAT DR. BRYANT HAS SAID.

SO WHAT PORTION OF THAT $1.2 BILLION NEEDS TO GO OFF THE TABLE TO SUSTAIN THAT INFRASTRUCTURE? WE KNOW THAT TRAINING PROGRAMS, PERHAPS SHARED LABS, BRIDGES, IDENTIFYING THOSE PROGRAMS THAT WE NEED TO CONTINUE TO FUND AT LEAST TO SOME POINT X INTO THE FUTURE AND SAY, OKAY, WE NEED TO DO THIS DE MINIMIS IN ORDER TO SUSTAIN OUR INFRASTRUCTURE.

AND THEN THIS -- IT'S HARD FOR ME TO DO THIS WITHOUT TYING IT IN SOME WAY TO THE MONEY THAT WE HAVE AVAILABLE TO US. IT'S ALSO HARD FOR ME TO LOOK AT SCIENCE AND MEDICINE WITHOUT SOME MORE CONCRETE METRICS, WHETHER IT'S PHASE I CLINICAL TRIALS WE HOPE TO BE IN, WHETHER IT'S PROOF OF CONCEPT, IND'S ACHIEVED, BUT TO HAVE REALLY CONCRETE METRICS LIKE WE HAD IN THE FIRST STRATEGIC PLAN IS VERY HELPFUL FOR ME TO BE ABLE TO ORGANIZE MY THOUGHTS.

MS. HUA: WE ACTUALLY COMPLETELY AGREE WITH THAT. AND THE WHOLE POINT OF TODAY IS ACTUALLY TO GENERATE SOME OF THESE THOUGHTS TO ENSURE THAT WE INCLUDE THEM, BUT THERE WAS A WHOLE SECTION ON METRICS THAT WE WANTED TO PRESERVE AFTER AND MAYBE

PULL FOR A SEPARATE SECTION. THIS IS REALLY JUST TO GET THE BIG IDEAS UP FRONT, AND THEN WE CAN START WHITTLING IT DOWN INTO ITS INDIVIDUAL COMPONENTS.

CHAIRMAN THOMAS: I THINK WE NEED A FOURTH COLUMN WHICH IS ENTITLED SUSTAINABILITY. AND THERE ARE TWO ELEMENTS OF SUSTAINABILITY. THERE'S NO. 1, WHERE WILL WE BE SEVERAL YEARS DOWN THE ROAD IN TERMS OF POSITIONING CIRM TO CONTINUE FROM THE STANDPOINT OF ADDITIONAL FUNDING, AND WE'RE CONSIDERING VARIOUS ALTERNATIVES. THE SECOND COMPONENT OF THAT IS HOW FAR ALONG ARE OUR GRANTEES IN TERMS OF BEING ABLE TO SUSTAIN THEMSELVES THROUGH ATTRACTING BIG PHARMA, VENTURE FUNDING, OR WHATEVER SO THAT THEY WILL BE -- THE LEGACY OF CIRM, IF WE DON'T HAVE ADDITIONAL FUNDING, WILL BE THAT MANY OF THESE PROJECTS WILL HAVE ENABLED THEMSELVES TO CONTINUE ALONG HAVING HAD ADDITIONAL FUNDING SOURCES.

SO I WOULD RECOMMEND PUTTING A FOURTH COLUMN IN THE SUSTAINABILITY AREA.

MS. HUA: DO YOU FEEL IT IS OUR ROLE TO PROVIDE A ROAD MAP FOR THE OTHERS TO BE SUSTAINABLE AS WELL? SO AS PART OF OUR MISSION IS TO PROVIDE THE FUNDING, BUT ALSO THE GUIDANCE ON HOW THEY CAN BE SELF-SUSTAINED.

CHAIRMAN THOMAS: DUANE, I KNOW YOU THOUGHT ABOUT THIS ISSUE. PERHAPS YOU'D LIKE TO COMMENT ON THAT.

MR. ROTH: I THINK IT'S AN IMPORTANT POINT. SO WHEN I LOOK AT SCIENCE AND STEM CELL HUB, YOU WOULD LOVE TO SEE THAT BECOME EVENTUALLY SUSTAINABLE BECAUSE MORE AND MORE INVESTMENT FROM THE FEDERAL GOVERNMENT, NATIONAL INSTITUTE OF HEALTH AND OTHERS, ARE COMING IN AND TAKING THAT TO THE NEXT STEP. WE'D NEVER BE ABLE, NOR DID WE EVER INTEND THAT OUR MONEY WOULD LAST INDEFINITELY TO FUND THAT SCIENCE.

BUT I THINK ON THE RIGHT SIDE, THOSE FACILITIES THAT HAVE BEEN BUILT AND THOSE PEOPLE WHO HAVE BEEN BROUGHT HERE ARE MORE OR LESS PERMANENT. AND WE NEED TO UNDERSTAND, TO JEFF'S POINT, WHAT IT TAKES TO KEEP THAT AND TO KEEP THE SCIENCE GOING, AND THAT'S A DISCUSSION WE SHOULD DRILL DOWN INTO.

FOR ME IT COMES BACK TO THAT MIDDLE BOX, WHICH IS WHAT I THINK WE ALL -- BUILDING SCIENCE FOR SCIENCE SAKE IS INTERESTING, BUT IT DOESN'T OFFER WHAT WE HOPE FOR, AND THAT IS TO CHANGE THE LIVES OF CITIZENS WHO SUFFER FROM A LOT OF DISEASES. SO THAT MIDDLE BOX BECOMES THE ONE NOW THAT, AS WE THINK FORWARD, FOR ME IS WHERE WE NEED TO DETERMINE HOW DO

WE GET THAT SEEDED AND HOW DOES IT BECOME MORE OR LESS SUSTAINABLE?

DR. PIZZO: I AGREE WITH THE POINTS THAT HAVE BEEN MADE VERY MUCH SO BY DUANE AND OTHERS. AND I JUST WANT TO AMPLIFY A LITTLE BIT ON THE SUSTAINABILITY ARGUMENT BECAUSE I THINK THAT WHILE WHAT I'M ABOUT TO SAY WON'T BE THAT APPEALING IN TERMS OF THE STRATEGIC PLANNING EFFORT, I THINK IT'S A REALITY. THAT IS, THAT MOST EFFORTS AT EARLY CLINICAL TRIALS DON'T WORK, AND THEY TAKE A LOT LONGER THAN ANY OF US ENVISION. OF COURSE, WE ALL HOPE THAT IN THE NEXT COUPLE OF YEARS ANY ONE OF THE CURRENT DISEASE PLANNING GRANTS, THOSE FUNDED OR THOSE ABOUT TO BE FUNDED, WILL ACHIEVE A POSITIVE RESULT. BUT HAVING, AS OTHERS OF US IN THIS ROOM HAVE BEEN INVOLVED IN RESEARCH OR CLINICAL RESEARCH FOR A LONG TIME, THE LIKELIHOOD OF THAT HAPPENING IS STILL RELATIVELY SMALL.

AND TO ME, THEREFORE, SUCCESS IS ALSO THE ABILITY TO NOT LOSE OUR INVESTMENT SO THAT WE CAN CONTINUE TO DO THE WORK THAT WILL BE THE BIDIRECTIONAL TRANSLATION THAT GOES FROM THE CLINICAL EXPERIENCE BACK TO THE LAB TO FINE-TUNE THE ISSUES THAT WE NEED TO MOVE THIS AGENDA FORWARD.

IF WE SET TOO FIRM AN END POINT OF

EXPECTATION, AND I KNOW THE REASONS WHY WE'VE DONE THAT, I THINK WE RUN THE RISK OF HAVING AN INADVERTENT LACK OF SUCCESS BECAUSE WE'VE NOT BUILT IN THE CONTINGENCIES FOR DEFINING THAT ELEMENT OF SUCCESS.

MR. ROTH: TO PHIL'S POINT, THAT'S EXACTLY WHAT I SEE IN THAT MIDDLE BOX. I DON'T BELIEVE WE'RE AT SUSTAINABILITY THERE. THE INVESTMENTS HAVE NOT COME EX-GOVERNMENT INTO THAT SPACE. AND SO WHAT WE NEED TO DO -- WHAT DO WE NEED TO DO TO SEED THAT SPACE. WE'VE SEEDED THE OTHER TWO PRETTY WELL. WHAT WE'VE DONE IS CREATED COMPETITION AROUND THE WORLD FOR FUNDING RESEARCH AND BUILDING FACILITIES, AND MANY SCIENTISTS HAVE CHANGED THEIR CAREERS BECAUSE OF WHAT WE'VE DONE HERE.

MS. GIBBONS: I THINK THIS IS A REALLY BIG QUESTION OBVIOUSLY, AND THIS IS A BIG PART OF THE STRATEGY MOVING FORWARD. WHEN YOU ASK THE QUESTION WHAT DOES SUCCESS LOOK LIKE, ARE WE GOING TO CONSIDER OURSELVES SUCCESSFUL AS WE SPEED TOWARDS OUR OBSOLESCENCE? EVERYBODY HERE, AS HAS BEEN POINTED TO, GOT ON BOARD TO GET IT DONE. AND I DON'T THINK WE'LL CONSIDER OURSELVES DONE UNTIL WE HAVE TREATMENTS AND CURES TO ALLEVIATE HUMAN SUFFERING AND TO END THESE DISEASES.

SO TO THE EXTENT THAT THAT IS A MUCH LONGER TARGET THAN PERHAPS ANYONE WOULD HAVE EVER ANTICIPATED, I AGREE WITH WHERE YOU GUYS ARE GOING WITH THIS BECAUSE THERE DOES, IN MY ESTIMATION, NEED TO BE THIS VERY KEY SEPARATE COLUMN WHERE WE'RE LOOKING SERIOUSLY AT WHAT DOES THAT MEAN AND HOW DO WE INCORPORATE THE ASPECTS, JEFF, THAT YOU WERE SPEAKING OF UNDER THAT SUSTAINABILITY DISCUSSION.

BUT I THINK IF YOU SAY ARE WE SUCCESSFUL, WE WOULD HAVE TO SAY NO. IF WE CLOSE UP SHOP AND TAKE DOWN OUR SHINGLES, DESPITE THE FACT THAT WE'VE GOT THESE INSTITUTES THAT WILL OUTLAST THIS AGENCY, I THINK THAT'S NOT GOING TO FEEL VERY SATISFYING. SO I THINK THE SUSTAINABILITY IS THE KEY.

MS. SAMUELSON: I THINK THAT'S EXACTLY RIGHT. I THINK ONE WAY OF LOOKING AT IT IS TO SEE THIS AS THE ANSWER TO A QUESTION OR A DEMAND OR SOMETHING THAT THE PEOPLE OF CALIFORNIA WERE MAKING WHEN THEY VOTED SO OVERWHELMINGLY FOR THE PROPOSITION. THAT'S THE WORLD IN WHICH WE LIVE. AND THEY WERE SAYING WE WILL AGREE TO GIVE YOU THIS MONEY, OUR MONEY, IF YOU WILL DO THIS. THAT IS, PRODUCE AS SOON AS IS HUMANLY POSSIBLE, I DON'T THINK THEY EXPECT MIRACLES, BUT THEY DO EXPECT A GRAND RESPONSE TO THIS GRAND AMOUNT OF MONEY THAT WE

WERE GIVEN. AND THAT'S REALLY CLEAR THAT THAT'S THE WAY THE PEOPLE LOOKED AT IT.

AND I THINK THERE ARE THINGS WE CAN DO THAT ARE ON THAT SAME SCALE. I THINK WE HAVE TO MAKE OUR WORK AND THE RESULTS FROM IT HOUSEHOLD WORDS AND UNDERSTANDINGS. THEY HAVE TO KNOW WHAT WE'RE DOING. THEY HAVE NO IDEA WHAT WE'RE DOING RIGHT NOW. SO ON THE COMMUNICATION END OF THINGS, THERE'S A LOT OF WORK TO DO. WE NEED TO BE ON T.V. AND WE NEED TO BE ON THE NET AND JUST OMNIPRESENT WITH WHAT WE'RE DOING.

AND WE HAVE TO HAVE, I THINK, A MORE ROBUST TRANSLATIONAL APPARATUS SO THAT WE CAN -- THERE'S THAT ONE SLIDE THAT SHOWS THE CHEVRON, THE ONE WHERE ALL THE ARROWS ARE GOING OVER. IT SEEMS TO ME THAT IT'S, AND I'M WONDERING IF ANYBODY ELSE FELT THIS WAY, THAT IT'S MORE THERE IS THAT ROW, BUT THEN THE ARROWS KIND OF CYCLING BACK AND COMING THROUGH ALL THE WAY BACK TO BASIC RESEARCH BECAUSE WE'RE GOING TO HAVE -- ONE THING THAT SUCCESS IS GOING TO LOOK LIKE IS FAILURES. THERE ARE GOING TO BE LOTS OF POINTS IN THE TRANSLATIONAL EFFORTS AND CLINICAL EFFORTS WHERE THEY DON'T ACHIEVE THE ULTIMATE GOAL THEY SOUGHT. BUT THAT'S GOING TO TEACH US WHAT THE TRUE PROCESS IS, AND IT'S GOING TO

FILL A LOT OF GAPS OF UNDERSTANDING. AND THOSE WILL BE WONDERFUL DEVELOPMENTS THAT WE CAN EDUCATE THE PUBLIC ABOUT, WHICH WILL ALL BE PART OF OUR REMARKABLE ACHIEVEMENT THAT WE'VE MADE FOR SPENDING THIS MONEY.

I THINK THE FINAL THING IS THEY HAVE BEEN ASKING US TO BE THE GLOBAL LEADER AND LOTS OF PEOPLE HAVE, THE EXTERNAL ADVISORS FOR ONE. AND I THINK WE'VE GOT TO RISE TO THAT CHALLENGE, AND THAT INVOLVES A LOT OF OTHER THINGS. BUT ANOTHER PIECE OF SUCCESS IS THAT WE CONTINUE THIS ENTERPRISE EVOLVING INTO THE ROLE OF GLOBAL LEADER.

MR. SHESTACK: I ALWAYS GET A LITTLE CONFUSED BETWEEN STRATEGY AND TACTICS. SO I WOULD SAY TWO SEPARATE THINGS. STRATEGICALLY ONE THING IS WE HAVE TO MAKE SURE THAT WITH OUR REMAINING MONEY WE CREATE RESOURCES THAT CAN CONTINUE -- MAKE OTHER PEOPLE BE ABLE TO CONTINUE DOING THE SCIENCE IN THE MOST INEXPENSIVE WAY WHERE THERE ARE SHARED RESOURCES THAT EXIST AND THAT CAN BE TAKEN UP BY A COMMUNITY OF UNIVERSITIES IN CALIFORNIA IN CASE WE'RE NOT RENEWED.

BUT THE OTHER THING IS I THINK EVERYBODY WOULD AGREE THERE WILL STILL BE THINGS BY 2016 THAT HAVE NOT BEEN FIXED. SO IN THAT REGARD, NOBODY

ACTUALLY REALLY SAYS IT, SO WHAT WE REALLY WANT IS TO SHOW -- IS TO BE RENEWED, FIND A WAY TO HAVE RENEWED FUNDING BECAUSE WE BELIEVE OUR WORK IS GOOD AND WE'RE MAKING SOME PROGRESS.

SO THEN IT DOESN'T GO IN THE STRATEGIC PLAN. MAYBE IT GOES IN THE TACTICAL PLAN. WHAT WE NEED IS LIKE A HIT. WHAT EVERYBODY AT A CERTAIN POINT HAS TO DO IS SORT OF LOOK AT WHAT WE'RE FUNDING WITH A KIND OF COLDER EYE AND SAY WHAT'S MOVING FASTEST, WHERE CAN WE GET RESULTS THAT WE CAN -- IF THEY'RE GETTABLE. IF THEY'RE NOT, THEN WE CAN PACK -- UP. WHERE WE CAN GET RESULTS WE CAN SHOW THE PUBLIC THAT THIS IS A PROMISING LINE OF WORK AND RESEARCH AND WILL IN SHORT TIME REDUCE SOME, BUT NOT ALL, HUMAN SUFFERING. IDENTIFYING THE MOST PROMISING AREA IS AN IMPORTANT PART OF THE TACTICS OF A STRATEGIC PLAN.

DR. JUELSGAARD: JUST TO FOLLOW UP ON THAT BECAUSE I AGREE VERY MUCH WITH THE COMMENTS THAT WERE JUST MADE. TWO THINGS. FIRST OF ALL, I WOULD MAKE THE ASSUMPTION THAT WE WON'T BE ABLE TO CONTINUE THE FUNDING. AS MUCH AS WE MIGHT HOPE TO, I THINK IT WOULD BE A MISTAKE THAT SOMEHOW THIS IS GOING TO START WITH THE NOTION THAT WE'RE GOING HAVE FUNDING BEYOND WHEN THE ORIGINAL $3 BILLION RUNS

OUT, AND BUILD PLANNING AROUND THAT. IT'S GREAT IF WE CAN EXTEND THAT, BUT I THINK IT WOULD BE A MISTAKE IN TERMS OF STRATEGIC PLANNING AT THIS POINT TO COUNT ON THAT HAPPENING.

SO JUST LET'S ASSUME WE HAVE $3 BILLION TO SPEND, AND WE'VE NOW GOT 1.3 BILLION LEFT. SO WHAT'S THE MOST EFFECTIVE WAY TO SPEND IT FOR WHAT IT IS THAT WE HOPE TO ACHIEVE. AND I AGREE THAT THE THING WE HOPE TO ACHIEVE IS TO ACTUALLY BE ABLE TO DEMONSTRATE THE CURES AS IN THE MISSION STATEMENT. IT'S THE LAST PART OF IT, WHICH TO ME IS THE MOST IMPORTANT PART, IS TO CURE DISEASE. SO REALLY LET'S INCREASE THE ODDS AS MUCH AS WE CAN OF FINDING THAT OUTCOME IN A PARTICULAR DISEASE WITH A PARTICULAR FORM OF STEM CELL THERAPY.

SO, ANYWAY, THOSE ARE MY THOUGHTS ON HOW TO APPROACH THE STRATEGIC PLAN.

DR. PIZZO: WELL, I WANT TO JUST -- IT'S HARD TO DISAGREE WITH YOU ON THAT AS A DEFINED SUCCESS. I THINK ALL OF US RECOGNIZE THAT IF WE HAVE A TREATMENT OR AN IMPACT THAT DOES EITHER CURE OR DEMONSTRATE FULLY THAT STEM CELL THERAPIES WORK, THAT IS THE END POINT THAT WE'RE ALL LOOKING FOR. BUT I THINK THE ISSUE THAT I'M STRUGGLING WITH, AND IT'S NOT THAT I HAVE A FULL ANSWER TO THIS, IS ALSO

DEFINING SUCCESS AS A STEP TOWARD THAT OR AT LEAST HAVING THE CAVEAT THAT WE'VE BUILT THAT IN BECAUSE WE DON'T WANT THIS TO BE A BINARY FUNCTION. WE EITHER HAVE IT OR WE DON'T HAVE IT. BECAUSE THE PROBABILITY, JUST THE BASIS OF HOW SCIENCE GOES, IS THAT WE WON'T HAVE THAT HOLY GRAIL. WE MIGHT HOPE TO DO IT, AND IF WE DO, IT'S TERRIFIC, BUT WE SHOULD BE DEFINING AS WELL THE STEPS TOWARD THE SUCCESS. AND THEY COULD BE MILESTONES THAT WE'RE BUILDING IN IN TERMS OF INSIGHTS THAT ALLOW US TO BELIEVE THAT IF WE CONTINUE MOVING DOWN THAT PATHWAY, THAT WE WILL GET TO THAT ULTIMATE SUCCESS.

I THINK ACTUALLY, STEVE, THAT THAT'S WHERE I ALLUDED TO EARLIER AND I THINK OTHERS HAVE AS WELL THAT TO ME SUCCESS IS THAT WE'VE BEEN ABLE TO PERSUADE THE CITIZENS OF CALIFORNIA THAT THIS INVESTMENT IS WORTH CONTINUING. THIS IS A UNIQUE AND SPECIAL EXPERIMENT, AND IT'S NOT -- THE LIKELIHOOD IS IT'S GOING TO GO ON FOR MANY MORE YEARS THAN THE CURRENT ALLOTMENT OF FUNDING IS. AND THAT'S WHERE ANOTHER ELEMENT OF SUCCESS HAS TO RESIDE BECAUSE THE FEAR THAT WE ALL HAVE IS THAT OUR INVESTMENTS TO DATE WILL BE SQUANDERED IF WE'RE NOT ABLE TO CARRY THAT EFFORT FORWARD.

THERE'S NO PLACE ELSE IN THE UNITED

STATES, TO THE THIRD POINT, THAT'S GOING TO BE ABLE TO PICK UP THAT BALL. SO WE HAVE TO BE ABLE TO DO THAT, AND WE HAVE TO BE ABLE TO PERSUADE THE COMMUNITY THAT THERE'S A SET OF MOVABLE ACHIEVEMENTS THAT GET TO THE ULTIMATE SOLUTION, BUT MAY NOT BE THE ULTIMATE CURATIVE SOLUTION BY THE TIME 2016 HAPPENS.

CHAIRMAN THOMAS: CAN I JUST BUILD ON THAT AND WHAT JOAN SAID? THAT IS ONE OF THE MAJOR POINTS OF THE COMMUNICATIONS EFFORT THAT WE'RE GOING TO BE DISCUSSING LATER AT THE MEETING HERE, AND TO EDUCATE THE PUBLIC THAT THIS IS AN INCREMENTAL STORY, BUT ONE OF CONTINUING MOVEMENT FORWARD THAT IS ACHIEVING MILESTONES OF DIFFERENT NOTE THAT ARE, WE HOPE, INEXORABLY MOVING TOWARDS THERAPIES AND CURES.

AND IF WE DO OUR JOB AND HAVE AN UNRELENTING EDUCATIONAL COMMUNICATIONS PROCESS, WE WILL GET THAT POINT ACROSS AND I DO BELIEVE WILL GENERATE GENUINE ENTHUSIASM AND UNDERSTANDING AMONGST THE POPULACE FOR WHAT WE'RE DOING HOPEFULLY TOWARDS THE END, AMONG OTHER THINGS, OF GETTING SOME ADDITIONAL FUNDING.

DR. JUELSGAARD: COULD I JUST ASK A QUESTION? SO TO WHAT EXTENT -- I WANT TO GO BACK TO WHAT I ORIGINALLY FOCUSED ON, WHICH IS THE

CONTINUATION OF FUNDING. AT THIS POINT WE DON'T HAVE THAT AS THE CASE. SO TO WHAT EXTENT IS THIS STRATEGIC PLAN GOING TO BE BUILT ON EITHER THE ABSENCE OF SUCH FUNDING IN THE FUTURE OR THE PRESENCE OF IT?

MR. SHESTACK: ISN'T THIS JUST PLANNED FOR THE NEXT FOUR YEARS?

DR. JUELSGAARD: RIGHT. THAT WE WILL ULTIMATELY EITHER BE ABLE TO RAISE MORE MONEY OR NOT. I THINK THAT NEEDS TO BE CONSIDERED AS PART OF HOW WE THINK ABOUT THE STRATEGIC PLAN OVER THE NEXT FOUR YEARS. SO ARE WE GOING TO HAVE MONEY BEYOND THAT OR NOT BECAUSE THIS IS -- THAT'S GOING TO BE AT SUNSET OR WE'RE STILL GOING TO BE AT MIDDAY. WE NEED TO FIGURE THAT OUT ONE WAY OR THE OTHER AND WORK THAT INTO THE PLAN WHAT OUR ASSUMPTION IS GOING TO BE AROUND THAT.

MS. HUA: THAT'S AN EXCELLENT QUESTION. I ACTUALLY WANTED TO --

MS. SAMUELSON: THAT'S FOR US TO DECIDE, ISN'T IT?

DR. FEIGAL: THAT MIGHT BE HARD FOR CAMPBELL TO ANSWER, BUT I THINK WHAT WE'RE THINKING OF IS GIVEN THE TIME FRAME THAT WE THINK WE HAVE, WHAT WOULD BE THE STRATEGIC IMPERATIVES TO MOVE

FORWARD. I THINK THE ENVISIONING IS THE HOPE THAT IT WILL CONTINUE TO BE SUSTAINED, BUT I THINK IN PRACTICAL MATTERS, WE SHOULD THINK OF THE TIME PERIOD THAT WE'RE WORKING IN, BUT WE ARE ALSO OPEN TO YOUR POINT OF VIEW AS TO HOW TO DO THIS.

MS. HUA: THAT'S WHAT I WAS GOING TO ASK. WHAT DO YOU ALL THINK? SHOULD WE WRITE THE PLAN WITH TWO SCENARIOS IN PLACE, OR JUST THE ONE SCENARIO, WHICH IS FUNDING WILL CEASE AFTER THE TIME ALLOTMENT?

MR. ROTH: I WOULD COMMENT THAT I DON'T SEE A DISCONNECT BETWEEN BOTH POSITIONS HERE. IF YOU DO THE RIGHT THING AT THE POINT IN TIME WHEN WE HAVE TO DO THE NEXT PIECE, THEY'RE BOTH -- I THINK THEY'RE ALIGNED. IF THERE'S A CASE FOR CONTINUING SUPPORT, IT WILL BE MADE. BUT TO REACT THAT WE HAVE TO HAVE THIS HOME RUN OR WE'RE DOOMED I DON'T THINK IS TRUE. I THINK WE SHOULD, AND STEVE'S POINT IS WELL TAKEN, YOU HAVE TO ASSUME THERE'S NO MORE FUNDING. IF TODAY WAS THE DAY WE'RE OUT OF MONEY, THE STATE, I DON'T CARE WHAT YOU DO, YOU WOULDN'T PASS THE BILL. BUT THAT COULD CHANGE IN THE NEXT TWO OR THREE YEARS, AND WE'LL BE IN A POSITION, IF THERE'S MORE MONEY NEEDED, TO SUSTAIN THESE KINDS OF CONTINUING OPERATIONS. THEN YOU CAN BRING THAT

CASE. WE SHOULD LOOK AT ALTERNATIVE FINANCING MECHANISMS AND A WAY TO LEVERAGE. ALL OF THOSE THINGS, I THINK, SHOULD BE PART OF THE PLAN, AND THEY DON'T REALLY SAY WE DO THIS OR WE DO THAT. THEY'RE KIND OF ALIGNED.

MS. GIBBONS: I AGREE WITH THAT, DUANE. I THINK THESE ARE PARALLEL TRACKS. AND I THINK WE DEAL RESPONSIBLY WITH THIS FINITE AMOUNT OF MONEY THAT WE HAVE. WE CONTINUE TO REFINE THAT AND WORK INTO THE STRATEGY ADJUSTMENTS THAT WE WANT TO MAKE WITH REGARD TO THE PORTFOLIO AND THE ASPECTS ALONG THAT PIPELINE THAT WE WANT TO REALLY PUT OUR FOCUS ON. WE'VE GOT THE COMMUNICATIONS PLAN COMING UP. BUT I DON'T THINK THAT IT TAKES OUR FOCUS AWAY FROM THAT TO BE ABLE TO ALSO PUT WITHIN THE STRATEGY PERHAPS THIS SEPARATE CHANNEL OF SUSTAINABILITY, WHICH CAN RUN CONCURRENTLY. AND I DO THINK THEY'RE PARALLEL, AND I WOULD HATE TO SEE US DECIDE AS PART OF THIS DISCUSSION THAT WE HAVE TO CHOOSE ONE OVER THE OTHER. I REALLY DON'T FEEL THAT WE DO.

DR. TROUNSON: JUST CAN I ASK MAYBE FOR A CLARIFICATION OR MAYBE SOME HELP FROM DAVID BRENNER, SUE, AND PHIL. ONE OF THE CONCERNS THAT I HAVE, AND I THINK THERE WAS A CONCERN SORT OF DEMONSTRATED BY NIH, IS IF WE HAPPEN TO DEPART, WHAT DOES THE CLIFF

LOOK LIKE FOR YOU GUYS BECAUSE, YOU KNOW, IT COULD BE A REALLY FEARFUL CLIFF OF HOW DO YOU MAKE UP FOR SUPPORT OF A REALLY LARGE CADRE OF TOP PEOPLE. SO I DO THINK IT NEEDS SOME THOUGHT ABOUT WHAT MIGHT HAPPEN, TO BE HONEST, BECAUSE WE DON'T REALLY WANT TO PLUNGE YOU INTO THE DEPTHS OF REAL DIFFICULTY JUST BECAUSE WE FLOAT OFF THE SCENE.

SO WITH ALL RESPECT, I THINK WE NEED TO AT LEAST THINK ABOUT THAT.

DR. BRYANT: I AGREE AND I ALSO THINK THAT WE DON'T WANT TO SEE A MASS EXODUS OF STEM CELL RESEARCHERS FROM CALIFORNIA AT THE END OF THIS FUNDING. MY MAIN CONCERN IS THAT IF THERE IS NOTHING THAT KIND OF LIKE SOFTENS THE BLOW, PEOPLE AREN'T GOING TO STICK AROUND VERY LONG WITHOUT FUNDING.

DR. PIZZO: IT'S NOT AS IF THEY'VE GOT A LOT OF PLACES TO GO. BUT I THINK WHAT THEY WILL DO IS SWITCH THEIR AREAS OF RESEARCH TO OTHER VENUES THAT ARE MORE FUNDABLE.

CHAIRMAN THOMAS: EMILY, MAY I JUST ASK. IT'S TOUGH FOR FOLKS ON THE PHONE TO GET A WORD IN EDGEWISE HERE. IF THERE ARE ANY QUESTIONS OR COMMENTS FROM ALL OF YOU LISTENING IN?

MS. FEIT: NOT RIGHT NOW.

DR. VUORI: VERY INTERESTING CONVERSATION, BUT I THINK WE ARE FINE IN FOLLOWING THE FLOW RIGHT NOW.

MR. ROTH: JEFF, YOU ASKED A VERY IMPORTANT POINT ABOUT THE PREVIOUS STRATEGIC PLAN AND SORT OF THE SIMPLE GOALS THAT WERE SET BACK THERE, WHICH I AGREE WITH. THEY WERE WELL DESIGNED AND I THINK APPROPRIATE. BUT I'M REMINDED THAT ON THE COVER THERE WAS A QUOTE, AND I DON'T RECALL IT VERBATIM, BUT IT WAS ROMAN REED WHO SAID SOMETHING LIKE STEM CELLS TO CURES. AND, AGAIN, WHEN YOU LOOK AT THOSE THREE AREAS, WE'VE DONE A LOT OF THE UNDERPINNING TO MOVE THE STEM CELL SCIENCE TO THE POINT WHERE WE CAN AT LEAST BE TALKING ABOUT CLINICAL TRIALS AND CURES. THAT WAS NOT THE CASE WHEN THIS ORGANIZATION CAME TOGETHER.

MR. SHEEHY: I AGREE. WHAT I LIKED ABOUT THAT PLAN WAS THE VERY CONCRETE METRICS. AND TO LOOK AT THAT AND THEN MEASURE THAT AGAINST WHAT WE'RE TRYING TO DO GOING FORWARD, I THINK, IS IMPORTANT.

ONE OF THE THINGS THAT'S KIND OF STRIKING IS HOW OFTEN NIH IS COMING UP IN THIS DISCUSSION. AND IT SEEMS TO ME IF THE BETTER THAT WE CAN INTEGRATE OUR STRATEGIC PLANNING WITH SOME SORT OF

MORE FORMAL DIALOGUE WITH THE NIH, THE BETTER THIS ENTIRE PROCESS WILL BE. WE'RE KIND OF MAKING ASSUMPTIONS. AND ONE OF THE THINGS THAT -- I THINK YOU'RE GOING TO SAY A LOT MORE ABOUT IT A LOT MORE ARTICULATELY THAN I WILL, DR. PIZZO, BUT I JUST WANT TO KNOW. ONE OF THE THINGS WHEN WE TALK ABOUT SUSTAINABILITY IS ONE BIG QUESTION THAT'S COME UP ALREADY IS HOW DO WE FIT WITH THE NIH BECAUSE NIH EXISTS. YET I CAN SAY RIGHT NOW THAT IF WE DID NOTHING ELSE BUT SUSTAIN THE INFRASTRUCTURE WE BUILT AND CONTINUE TO DO BASICALLY OUR TRANSLATIONAL RESEARCH, THAT WE PROVIDE A CRITICAL ROLE IN WHAT THE NIH IS TRYING TO ACCOMPLISH.

THEY SET UP THE CTSI CORE FACILITIES UP AND DOWN THE STATE. WE'RE FEEDING PEOPLE INTO THAT INFRASTRUCTURE THAT THEY REALLY PROBABLY DON'T HAVE THE MONEY TO DO. THEY'RE THERE ON THE CLINICAL SIDE TO PICK US UP. AGAIN, THIS ALMOST HAS TO BE -- IT CAN'T BE REALLY SO ORGANIC AS IT NEEDS TO BE MORE STRATEGIC AND ORGANIZED.

DR. PIZZO: JEFF, YOU SAID IT PERFECTLY. I THINK THAT THE FACT IS THE INVESTMENTS FROM CIRM HAVE CREATED AN INFRASTRUCTURE OF SCIENCE THAT'S UNPARALLELED ANYWHERE IN THE WORLD RIGHT NOW IN STEM CELL AND REGENERATIVE MEDICINE. THE NEXT PHASE, THE

PHASE THAT WE'RE CURRENTLY WORKING ON OF TRANSLATING THOSE DISCOVERIES INTO CLINICAL TRIALS, IS AN ENORMOUSLY EXPENSIVE VENTURE. AND THAT'S WHERE THE UNIQUE PARTNERSHIP, IF WE COULD FIGURE IT OUT, COULD BECOME HIGHLY LEVERAGED.

I THINK THE BIGGEST WORRY THAT I HAVE, AND IT'S NOT JUST TRUE OF US, BUT IT'S ALSO TRUE, QUITE HONESTLY, OF WHAT'S HAPPENING AT THE NIH, WHICH IS BECOMING, IN MY MIND, SAY THIS CAREFULLY, BUT TOO TRANSLATIONAL IN ITS CONCEPT IS THAT IT LOSES THE INSIGHT, THE ABILITY TO GET INSIGHTS FROM BASIC RESEARCH.

BASIC RESEARCH HAS OVER AND OVER AGAIN PROVEN TO CREATE NEW PATHWAYS THAT WE WOULDN'T HAVE OTHERWISE IMAGINED. AND I HOPE THAT WE DON'T INVEST ALL OF OUR RESOURCES IN WHAT MIGHT BE KIND OF A BEST OR EVEN A LONG SHOT AND HAVE NOTHING LEFT TO FIGURE OUT WHAT WENT WRONG BECAUSE THE HIGHLY PREDICTABLE THING IS THAT SOMETHING IS GOING TO GO WRONG. THAT'S WHY THE PARTNERSHIP MODEL THAT YOU'VE JUST REFERRED TO BECOMES SO IMPORTANT BECAUSE IF WE COULD LEVERAGE, NOT AGAINST NIH FUNDING, OUR RESEARCH BECAUSE THEY'RE NOT GOING TO DO THAT IN A COMPETITIVE WAY, BUT IN FUNDING THE CLINICAL TRIAL RESULT INFRASTRUCTURE THAT WE'D OTHERWISE HAVE TO

PUT IN PLACE AND FIGURE OUT HOW TO DO BECAUSE OF THE POTENTIAL FOR, IF A STUDY, AND I CAN SAY THIS PERSONALLY, IF A STUDY GETS DONE AT THE NIH, IT OPENS UP MUCH CLOSER CONNECTIONS WITH THE FDA. IT CREATES A PARTNERSHIP MODEL THAT'S REALLY QUITE UNIQUE. AND IF WE CAN BE CREATIVE IN DOING THAT, WE CAN BREAK DOWN BARRIERS, LEVERAGE OUR DOLLARS, POTENTIALLY EXTEND OUR LIFE SPAN, AND CREATE MORE OF A NATIONAL PROSPECTUS ON WHAT WE'RE DOING WILL AT THE END OF THE DAY CREATE OTHER FUNDING SOURCES THAT WILL ALLOW US TO GO FORWARD.

MS. HUA: GREAT.

MS. SAMUELSON: AND IF WE ARE SUCCESSFUL AT COMMUNICATING ALL OF THIS TO CALIFORNIANS AND BEYOND, IF WE ACCEPT THE CHALLENGE OF BEING A GLOBAL LEADER AND SAY, OKAY, WE'RE GOING TO PARTNER, WE'RE GOING TO FUND IN CALIFORNIA, BUT WE'RE GOING TO PARTNER WITH THE BEST AND BRIGHTEST SCIENTISTS THROUGHOUT THE WORLD SO THAT WE'RE ADVANCING FROM THE POINT OF ALL OF THEIR DISCOVERIES, NOT JUST OUR OWN, SO THAT WE KNOW WHERE WE'RE AT SCIENTIFICALLY IN ALL THESE AREAS. AND IF THE PEOPLE OF CALIFORNIA UNDERSTAND IT AND PEOPLE BEYOND BECAUSE THEY ARE LOOKING AT STEM CELL T.V. AND REGENMED.COM AND MAYBE WE'VE GOT A NEW SOAP OPERA THAT JON AND LEEZA

PRODUCE THAT'S THE SECOND *GENERAL HOSPITAL* THAT'S GOT A CLINICAL TRIAL IN IT, IT'S GOT HARRIED TRANSLATIONAL RESEARCHERS WHO ARE TRYING TO COME UP WITH A HYPOTHESIS, AND THEY THINK THEY HAVE ONE, AND THEN MOUSE DIES AND --

MS. GIBBONS: ONLY IF YOU PLAY YOURSELF, JOAN.

DR. KRONTIRIS: I JUST WANT TO REFLECT BACK ON THE CONVERSATION SO FAR IN TERMS OF THE TENSION BETWEEN ASSET ALLOCATION TOWARD THE SCIENTIFIC ACTIVITIES -- OBVIOUSLY IT GOES WITHOUT SAYING POINT IN TERMS OF THE POINT THAT PHIL WAS MAKING EARLIER, UNTIL WE HAVE A MUCH MORE COMPREHENSIVE MECHANISTIC UNDERSTANDING OF BOTH DISEASE AND STEM CELLS, IN ANY WAY DEEMPHASIZING THE BASIC SCIENCE ACTIVITIES JUST DOESN'T MAKE SENSE, AND CERTAINLY WE'RE ON A SUCCESSFUL PATH THERE.

ON THE OTHER HAND, WE NEED FOR PATIENTS FOR THE VISIBILITY AND FUTURE SUCCESS OF THE PROGRAM TO BE HAVING CLINICAL SUCCESSES AS WELL. AND THE IDEA OF TRYING TO TARGET SOMETHING, I THINK, PROBABLY WOULDN'T APPEAL TO ME AS MUCH BECAUSE I THINK THAT SUCCESSFUL CLINICAL ACTIVITIES WILL OUT. AND WE DON'T HAVE TO BET ON THOSE HORSES SO MUCH. AS TIME GOES ON, WE'LL SEE THAT.

BUT I THINK THERE IS A PARTICULAR AREA OF EMPHASIS THAT THIS ORGANIZATION CAN EMPHASIZE THAT MIGHT MAKE ALL THE WORLD DIFFERENT. I'M REFERRING TO THE RESOURCES OF THE CLINICAL CENTER BEING ABLE TO LEVERAGE THOSE IS ONE THING CERTAINLY, BUT IN A MORE LOCAL LEVEL, THERE ARE JUST TREMENDOUS ISSUES THAT RELATE TO TAKING METHODS, CELLS, TARGET STRUCTURES THE NEXT STEP INTO CLINICAL AND TRANSLATIONAL ACTIVITY, WHICH I HAVE TO SAY AS WONDERFUL AS THE SCIENCE IS IN THIS STATE AND AROUND THE COUNTRY, THERE'S STILL A WOEFUL LACK OF INFRASTRUCTURE THAT SUPPORTS TAKING A SCIENTIST'S IDEA INTO THE NEXT COUPLE OF STEPS AND THEN INTO TRANSLATIONAL AND EARLY CLINICAL WORK.

THAT SPHERE IS SOMETHING THAT THIS ORGANIZATION COULD REALLY SUPPORT THAT IS NOT EXTANT NOW IN OUR VARIOUS UNIVERSITY AND INSTITUTE SETTINGS. AND IN THAT WAY, WITHOUT PICKING SOMETHING, BUT SIMPLY REDUCING THE THRESHOLD BETWEEN A SCIENTIST'S IDEA AND PUSHING IT ALONG INTO TRANSLATIONAL DEVELOPMENT, THAT IS WHERE I THINK THIS ORGANIZATION COULD MAKE A TREMENDOUS IMPACT, AND WE WOULD SEE THAT IN METRICS THAT I THINK OUGHT TO BE ADOPTED, PARTICULARLY IND DEVELOPMENT.

SO I WOULD ARGUE THAT WHILE ON THE ONE

HAND YOU WANT TO BE PUSHING ON CLINICAL TRIALS, I THINK IT'S MORE PRACTICAL TO BE FOCUSING ON THE REQUIRED INFRASTRUCTURE FOR THOSE. AND I DON'T THINK THEY EXIST YET TO BE EFFICIENT AS WE WOULD LIKE THEM TO BE.

MS. SAMUELSON: DO YOU MEAN TRANSLATIONAL EXPLORATIONS BASICALLY.

DR. KRONTIRIS: YES. THE POINT OF GENERALLY, LOOSELY WE WOULD SAY BEING ABLE TO DEVELOP PROCESSES FOR THE DEVELOPMENT OF PRODUCTS, WHATEVER, LESS SO FOR STEM CELLS, BUT TOXICITY IF THEY ARE SMALL MOLECULES THAT ARE BEING USEFUL IN THIS, ALL OF THE MEDICINAL CHEMISTRY AND TOXICITY STUDIES AND TARGET EVALUATIONS, ALL THOSE KINDS OF THINGS HAPPEN BEYOND THE BASIC SCIENCE LABORATORY SETTING, AND THEY ARE WOEFULLY INADEQUATE, NOT HERE IN CALIFORNIA, ANYWHERE ACROSS THE COUNTRY.

DR. PIZZO: I AGREE WITH THAT STATEMENT TOTALLY. AND I THINK THAT ANY OF OUR INSTITUTIONS WILL STRUGGLE TO GET THOSE KINDS OF ELEMENTS IN PLACE. AND EVEN IF WE FORMED A CONSORTIA, WE WOULD STILL STRUGGLE, BUT THEY ARE -- THAT IS WHAT IS AVAILABLE POTENTIALLY THROUGH THE INTRAMURAL PROGRAM AT THE NIH. I CAN SAY THIS AGAIN FROM DIRECT EXPERIENCE, HAVING WORKED THERE FOR A LONG TIME.

YOU CAN DO ALL THE THINGS THAT YOU JUST DESCRIBED FROM TARGET DISCOVERY TO MEDICINAL CHEMISTRY TO TOXICITY TO ALL OF THE PHASE I PRECLINICAL STUDIES INTO EARLY CLINICAL TRIALS, AND YOU CAN DO IT WITH -- IF WE DO THIS WISELY, WE CAN DO IT WITH SUPPORT THAT WOULD COME REALLY QUITE UNIQUELY.

SO I DON'T WANT TO OVERSTATE IT, BUT YOU'VE HIT ON WHAT I THINK IS A REAL CHALLENGE FOR US. MANY OF OUR INSTITUTIONS, INCLUDING OUR OWN, RIGHT NOW IS STRUGGLING TO TRY AND GET THINGS TO THE PHASE I, II LEVEL, IF YOU WILL. IT'S NOT OUR SWEET SPOT. I THINK THAT THERE ARE OTHER PROGRAMS THAT CAN DO THAT, AND I THINK THIS JUST DESERVES AS PART OF THIS EFFORT MORE CONSIDERATION.

MS. SAMUELSON: I WANT TO FINISH JUST THE ENDING OF THAT RUN-ON SENTENCE THAT LEEZA MADE ME SPEECHLESS ABOUT FOR A SECOND THERE. IF WE DO THAT AND WE COMMUNICATE IT TO THE PEOPLE OF CALIFORNIA AND BEYOND IN AN INTELLIGIBLE AND SOMETIMES MAYBE EVEN ENTERTAINING WAY, THEY ARE GOING TO UNDERSTAND THIS AND THEY CAN TELL OUR STORY ABOUT THOSE GAPS IN UNDERSTANDING AND INFRASTRUCTURE. AND THEN MAYBE WE LOOK TO AN OLD MODEL LIKE THE MARCH OF DIMES. THAT'S WHAT FUNDED THE POLIO VACCINE, AND IT WAS JOE BLOW PUTTING HIS DIME INTO A BOX. AND WE COULD HAVE

BOXES ALL OVER THE WORLD. AND IF WE BECOME THE GLOBAL LEADER THAT LOTS OF PEOPLE WANT US TO BE, SO IT MUST BE POSSIBLE BECAUSE THEY'RE ALL ASKING US. IF WE ACHIEVE THAT, WE'VE GOT PEOPLE ALL OVER THE WORLD WHO WILL FINANCE THIS BECAUSE THEY KNOW IT'S DIFFICULT. AND WE CAN EXPLAIN HOW DIFFICULT IT IS, YES, AND HOW WE'RE WORKING IN SUCH A SMART WAY ON IT THAT WE'RE DOING THE BEST JOB POSSIBLE TO GET THOSE CURES AS FAST AS THEY CAN COME, AND THEN PEOPLE WILL PAY FOR IT.

MR. LIEPMAN: IF WE COULD TAKE JUST ONE MINUTE AND TURN TO THE PUBLIC OR ANYONE ON THE LINE THAT WOULD LIKE TO COMMENT AS WELL, I'LL PASS THE MIKE ON.

MR. REED: DON REED. TWO THINGS. FIRST OFF, IF WE SPEND EVERY NICKEL WE HAVE AS WISELY AS POSSIBLE, WE WILL GET A CHANCE TO ASK FOR MORE, AND WE WILL ASK FOR MORE AND WE WILL FIGHT FOR IT. EVERYBODY AGREES WITH THAT. I DON'T THINK ANYBODY REALLY DISAGREES WITH THAT. OF COURSE, WE'RE GOING TO FIGHT FOR MORE.

SECOND THING IS SOMETHING CONCRETE I WOULD LIKE TO SEE. I WOULD LIKE TO SEE THE WORLD'S LARGEST E-MAIL LIST SO THAT, FOR INSTANCE, SOMEWHERE IN MY PILE OF BOOKS AT HOME, I'VE GOT A BOOK WHICH

HAS EVERY BIOMEDICAL COMPANY AND BIOETHICS AND BIOTECH COMPANY IN CALIFORNIA. I HAVE THEIR E-MAIL ADDRESS. THAT'S OUT THERE. EVERY ONE OF THOSE PEOPLE, EVERY ONE OF THOSE COMPANIES SHOULD BE GETTING ON OUR E-MAIL LIST, ALL OUR ANNOUNCEMENTS.

THIS MORNING I GOT AN E-MAIL ANNOUNCEMENT ABOUT THE EUROPEAN SITUATION, VERY WELL DONE BY GEOFF LOMAX AND AMY ADAMS. THAT WAS VERY GOOD TO CLARIFY IN MY MIND WHAT'S GOING ON. WE NEED THAT. WE NEED TO INVOLVE EVERYBODY THAT'S A NATIONAL STAKEHOLDER. THAT'S EVERY BIOMEDICAL GROUP, EVERY RESEARCH ADVOCATE GROUP, EVERY COMPANY IN CALIFORNIA AND PROBABLY AMERICA. IF WE TELL THEM EVERY SINGLE DAY WHAT'S GOING ON, THEN WE HAVE A CHANCE TO INVOLVE THEM, AND THAT'S WHAT THEY SHOULD BE. THANK YOU.

MS. HUA: FOLKS ON THE PHONE.

MS. FEIT: I JUST WANT TO COMMENT THAT I THINK THE COMMUNICATION PORTION OF THE STRATEGIC PLAN IS THE MOST IMPORTANT FOR ME AS A BOARD MEMBER. I'D LIKE TO HAVE IT BE A WORKING DOCUMENT RATHER THAN A DOCUMENT WE LOOK AT NOW, AND THEN WE DON'T LOOK AT FOR ANOTHER YEAR. THAT'S MY ONLY COMMENT. I'D LIKE IT TO BE MORE OF A WORKING DOCUMENT FOR US GOING FORWARD.

CHAIRMAN THOMAS: MARCY, IT'S J.T. I COMPLETELY AGREE WITH THAT. IT'S GOING TO BE A DYNAMIC PLAN THAT CONTINUES TO EVOLVE. AND ONCE WE HAVE OUR NEW DIRECTOR IN PLACE, WHICH I HOPE WILL HAPPEN FAIRLY SHORTLY, WE WILL LAUNCH THE STRATEGIC PLAN IN THAT REGARD THAT YOU WILL HEAR MORE ABOUT ON THE PHONE LATER. BUT IT PLANS TO BE A VERY RIGOROUS AND CONSTANTLY EVOLVING IDEA. SO WE'D LOVE, OF COURSE, TO HAVE YOUR FULL INPUT EVERY STEP OF THE WAY AS WELL AS EVERYBODY ELSE'S.

MS. FEIT: THANK YOU.

MS. HUA: SO WHAT I'D LIKE TO DRAW EVERYONE'S ATTENTION TO NOW IS THE PROPOSED STRATEGIC OBJECTIVES THAT ELLEN PRESENTED. THERE WERE FIVE AND NOW THERE ARE FOUR. AND THE SPECIFICS IN HOW WE WENT FROM FIVE TO FOUR ISN'T AS RELEVANT AS WHAT WE'RE PROPOSING RIGHT NOW BECAUSE THE RATIONALE FOR SOME OF THOSE CHANGES ARE ALL FOLDED IN THE FOUR, SO IT'S MORE OF A WAY TO LOOK AT THE FOUR.

SO THIS IS VERY MUCH ALIGNED TO THE PREVIOUS SLIDE THAT WE SHOWED AROUND WHAT DOES SUCCESS LOOK LIKE. NO. 1 IS AROUND SCIENTIFIC. SO THE WAY WE LOOK AT IT OR THE WAY I'M LOOKING AT IT IS IF THIS WERE A HOUSE, THE SCIENTIFIC OBJECTIVE IS

THE KITCHEN. THIS IS THE HEART OF EVERYTHING. WE WERE ESTABLISHED TO REALLY SUPPORT THE INNOVATION AND THE RESEARCH THAT STEM CELLS COULD BE AND THIS SHOULD NOT GO AWAY. I THINK THE CHALLENGE, AND MANY OF YOU ARTICULATED THIS VERY WELL, BUT THERE IS A BALANCE BETWEEN HOW MANY SEEDS DO WE WANT TO CONTINUE TO PLANT WHILE TRYING TO PRIORITIZE WHERE WE WANT TO PUT THOSE SEEDS IN LIGHT OF LIMITED BUDGET. I THINK THAT'S GOING TO BE THE BIGGEST CHALLENGE FOR STRATEGIC OBJECTIVE NO. 1.

DO YOU ALL HAVE ANY COMMENTS REGARDING STRATEGIC OBJECTIVE NO. 1 IN TERMS OF ANY OTHER HURDLES?

MR. ROTH: I WOULD LIKE TO JUST CONCLUDE THAT THIS CONVERSATION ABOUT SUSTAINABILITY, WHETHER WE ARE ABLE TO CONTINUE TO FUND IT OR OTHERS STEP IN, IS AN IMPORTANT ONE TO CONSIDER. WE'VE TALKED A LOT ABOUT NIH. AND THAT'S WHAT I'M LOOKING FOR IS TO SAY IN THAT SCIENTIFIC AREA, HAVE WE DONE ENOUGH TO SOLVE ENOUGH PROBLEMS SO AT SOME FUTURE POINT SOMEBODY IS GOING TO TAKE A HAND-OFF HERE IN THE EVENT THAT WE CAN'T REFINANCE OR THERE ISN'T ANY MONEY. I FEEL PRETTY GOOD ABOUT THAT. I THINK THE SCIENCE IS SO COMPELLING, THAT THE COUNTRY WILL FUND IT THROUGH NIH AND OTHERS.

SAME THING WHEN IT COMES TO THE SORT OF ECONOMIC PART OF CALIFORNIA, THAT THOSE BUILDINGS ARE UP, THEY'RE PERMANENT, THERE'S SCIENCE THERE. I DON'T KNOW IF THERE'S ENOUGH SCIENCE THERE. MAYBE WE STILL NEED TO EMPHASIZE RECRUITING. BUT THEN WHEN IT GETS TO THE MEDICAL, AND I AGREE COMPLETELY WITH WHAT TED SAID, WHERE ARE THE BOTTLENECKS? WHAT'S GOING TO HOLD IT BACK? I DON'T WANT TO PICK WINNERS AND LOSERS, BUT I'D LIKE TO SEE DOZENS OF TRIALS ENABLED SO THAT YOUR ODDS GLOBALLY ARE PRETTY HIGH THAT YOU ARE GOING TO HAVE SUCCESS.

I DON'T CARE PERSONALLY, IT WOULD BE LOVELY IF IT HAPPENED AS A RESULT OF THE WORK WE DID DIRECTLY, BUT WHAT WE DID CAUSED SO MUCH COMPETITION AROUND THE WORLD TO ALSO DO IT, THAT I'LL TAKE CREDIT FOR THE UK OR AUSTRALIA OR ANYBODY ELSE IF THERE'S A SUCCESSFUL TRIAL THAT WE HAD A BIG, BIG PIECE OF THAT BECAUSE OF WHAT WE DID.

SO I'M LOOKING AT WE CANNOT, AND I'VE ARGUED THIS OVER AND OVER, WE CANNOT FUND LOTS OF CLINICAL TRIALS. WE DON'T HAVE ENOUGH MONEY. BUT WE CAN USE SOME MONEY TO ENABLE THAT TO HAPPEN SO THAT OTHERS LIKE PHARMACEUTICAL AND BIOTECH COMPANIES WILL STEP IN AND FUND THOSE. AND WE HAVE SOME PROGRAMS THAT I THINK THE SCOPE AND SIZE THAT

WE COULD EASILY MANAGE THAT STEVE IS WORKING ON AND ELONA AND ELLEN AND OTHERS THAT I THINK WILL ENABLE US TO DO THAT. THAT'S HOW I WOULD VIEW THOSE.

MS. HUA: SO IN OTHER WORDS, UNDER THE MEDICAL, IF WE, AND WE CANNOT, WE CANNOT FUND ALL THE CLINICAL TRIALS -- THESE ARE BILLIONS OF DOLLARS JUST TO FUND ONE CLINICAL TRIAL -- IT IS TO HELP BRIDGE WITH PARTNERSHIPS -- WHAT WE'RE TRYING TO ARTICULATE IS TO BUILD A PATHWAY SO THAT WE CAN SUSTAIN THAT. WE DON'T NECESSARILY HAVE TO INVEST ALL OF THE MONEY, BUT WE NEED TO AT LEAST PROVIDE SORT OF AN INFRASTRUCTURE OR THE MODEL TO SUPPORT THAT GLOBALLY AS WELL AS WITHIN CALIFORNIA.

MR. ROTH: WELL, A CONSTANT FOCUS ON THAT. THAT'S WHERE YOU HAVE TO ASK WHAT ARE THE IMPEDIMENTS? AND YOU JUST HEARD IT COME OUT, THAT WE DON'T KNOW WHERE WE'D GO TO GET GMP MATERIALS TO DO THESE CLINICAL TRIALS. THERE'S SOME SUGGESTIONS BACK AND FORTH, BUT TO ME THERE'S SOME ISSUES THERE IN THAT MEDICAL CATEGORY THAT PROBABLY NEED OUR HELP TO SEED AND HELP MOVE ALONG.

MS. HUA: I HEARD A LOT ALSO FROM JOAN ABOUT BEING A LEADER. COMMUNICATION WAS A BIG THEME AMONGST YOU ALL. AND THAT WAS REALLY THE INTENT OF THE SOCIAL OBJECTIVE, AND IT'S AROUND INCREASING

AWARENESS. SO BEING ON *GENERAL HOSPITAL*, IT'S LIKE WHOEVER HEARD OF VIAGRA A COUPLE YEARS AGO. IT'S JUST SO COMMONPLACE NOW, THAT COULD WE MAKE STEM CELL IN THE VOCABULARY OF THE DAY-TO-DAY DISCUSSION?

MS. SAMUELSON: YOU LOOK AT WHAT'S ON T.V.

DR. PIZZO: FOR THE PUBLIC MEETING, COULD YOU CHANGE YOUR EXAMPLE? HOW ABOUT IPS CELLS?

MS. HUA: YES.

MS. SAMUELSON: PEOPLE ALL OVER THE WORLD ARE NOW EXPERTS IN THE WORLD OF CRIME, HOW TO COMMIT A CRIME, HOW TO KILL PEOPLE, HOW TO APPREHEND THEM, HOW TO PROSECUTE THEM. HOW MANY SHOWS ARE THERE? IT'S ALMOST EVERY SHOW ON T.V. IS ABOUT THAT INDUSTRY. THERE'S NO REASON WHY WE COULDN'T MAKE THE PEOPLE OF CALIFORNIA AND THE WORLD, BECAUSE THEY ALL WATCH THE SAME STUFF, EXPERT IN THIS NEW FIELD AND INCREASE THE AWARENESS OF MATH AND SCIENCE IN THE STATE AND ACROSS THE COUNTRY AND ADVANCE THE ACCELERATION OF THE TRANSLATIONAL, HOWEVER PHIL AND YOU WERE DESCRIBING IT, THE BUILDING OF THAT INTELLECTUAL INFRASTRUCTURE IN THE TRANSLATIONAL REALM SO THAT MORE AND MORE THINGS ARE GETTING TO CLINICAL APPLICATION BECAUSE GAPS IN UNDERSTANDING ARE BEING FILLED.

MS. HUA: ANYONE ELSE AROUND THE SOCIAL

ASPECTS? THE COMMUNICATION WE HEARD THAT IT'S GOING TO BE AN ITERATIVE PROCESS. I THINK THE TAKEAWAY THAT I'M HEARING AROUND COMMUNICATION IS WE WANT TO BUILD A LOT OF MOMENTUM BEHIND THIS. AND WE WANT TO MAKE SURE THAT WHAT WE'VE DONE UP TO DATE HASN'T BEEN LOST AND ACTUALLY IS ENERGIZED BEYOND OUR PURVIEW.

DR. POMEROY: IF I COULD JUST ADD TO THAT. I THINK AS WE DEVELOP OUR COMMUNICATION STRATEGIES, IT WILL BE VERY IMPORTANT FOR US TO REMEMBER THAT WE NEED TO DEFINE THE DIFFERENT AUDIENCES. SO THE STRATEGY WE HAVE FOR THE NIH MIGHT BE VERY DIFFERENT THAN THE STRATEGY FOR THE LEGISLATION THAN FOR THE GENERAL PUBLIC THAN FOR INDUSTRY THAN FOR ACADEMIA AND GO THROUGH ALL THE CONSTITUENCIES. SO I HOPE WE CAN OUTLINE THOSE DISTINCTIONS IN THE STRATEGIC PLAN.

DR. LUBIN: CLAIRE, WE JUST DISCUSSED THAT LAST NIGHT. ABSOLUTELY YOU ARE GOING TO HEAR MORE ABOUT THAT LATER. I WANTED TO MENTION ONE WORD WE HAVEN'T USED IS FOCUS. DO WE WANT TO TRY TO REFOCUS OUR ENERGIES GIVEN THE BUDGET WE HAVE ON WHAT OUR ULTIMATE GOALS ARE? AND I KNOW THAT'S WHAT YOU'RE SAYING, BUT I THINK THAT THAT'S AN IMPORTANT POINT TO KEEP IN MIND.

MS. HUA: I THINK, MR. SHEEHY, LIKE YOUR SUGGESTION AROUND THE MATRIX WILL HELP TOWARDS THAT. SO IT'S HARD TO MAKE STRATEGIC DECISIONS IF WE DON'T REALLY HAVE A MECHANISM TO REALLY ANALYZE WHAT WE'RE GOOD AT, WHERE WE WANT TO PLAY, WHERE WE WANT TO MOVE FORWARD.

ANYONE ELSE?

CHAIRMAN THOMAS: EMILY, I'LL JUST MAKE ONE OTHER COMMENT. AS I SORT OF LOOK AT ALL THIS, WE'RE DEVELOPING A STRATEGIC PLAN IN A VERY DYNAMIC POLITICAL CONTEXT. WE COULD END UP UNDER A CERTAIN SET OF FACTS BY THE END OF NEXT YEAR WITH NO NIH FUNDING AVAILABLE FOR ANY OF THIS IF WE HAVE THE PRESIDENCY GO A CERTAIN WAY AND HAVE SOMEBODY THERE WHO IS NOT A FAN OF STEM CELLS. WE HAVE A NUMBER OF MOVEMENTS AFOOT IN VARIOUS STATES, THE PERSONHOOD PROPOSED LEGISLATION, THAT COULD MATERIALLY AFFECT DIFFERENT STATE'S ABILITIES TO UNDERTAKE EMBRYONIC STEM CELL RESEARCH.

WE HAVE AN INTERESTING CHALLENGE HERE BECAUSE WE'RE TRYING TO DEVELOP A PLAN THAT KIND OF ASSUMES A CERTAIN WORLD ORDER THAT MAY OR MAY NOT BE IN PLACE. SO JUST AS WE HAVE TO CONSIDER WILL WE HAVE ADDITIONAL FUNDING OR WON'T WE, I THINK WE HAVE TO TAKE INTO ACCOUNT THE VERY DYNAMIC NATURE OF THE

POLITICAL LANDSCAPE AS IT WILL AFFECT PARTNERSHIPS, LEVERAGED FUNDING, AND ALL THAT SORT OF THING. IT MAKES IT MUCH MORE DIFFICULT TO COME UP WITH SOMETHING PARTICULARLY WHEN WE'RE GOING TO HAVE A PLAN THAT'S OUT IN MARCH IN AN ELECTION YEAR THAT COULD HAVE PROFOUND IMPACT ON THE FIELD IN GENERAL.

MS. HUA: YOU BRING UP AN EXCELLENT POINT. THAT LEADS ME TO MY NEXT QUESTION, WHICH IS WHAT ARE THE POTENTIAL RISKS THAT WE FACE IN THE SAME HORIZON? SO DR. THOMAS MENTIONED POLITICAL RISKS. ANY OTHER RISKS THAT WE NEED TO INCORPORATE AS PART OF OUR STRATEGIC PLAN?

MR. SHEEHY: CATASTROPHIC FAILURE IN A CLINICAL TRIAL. WE SHOULD HAVE A COMMUNICATIONS PLAN OR BE IN THE PROCESS OF DEVELOPING A COMMUNICATIONS PLAN FOR THAT NOW.

MS. HUA: THAT'S A REALLY GOOD POINT.

MS. SAMUELSON: I COULDN'T HEAR.

MR. SHEEHY: SORRY. I SAID CATASTROPHIC FAILURE IN A CLINICAL TRIAL AND THAT WE SHOULD BE DEVELOPING A STRATEGIC COMMUNICATIONS PLAN FOR THAT NOW ACTUALLY.

MS. SAMUELSON: A LOT OF PEOPLE DYING, FOR EXAMPLE. OR SIMPLY MUCH LESS SUCCESS THAN THE PUBLIC OR WE OR SOME AUDIENCE EXPECTS.

MS. GIBBONS: I THINK THIS WAS CORRECTLY IDENTIFIED IN YOUR CHALLENGES IN THE NOTES HERE FOR THAT, JEFF. I THINK THAT'S RIGHT ON TOO. AND I SUSPECT THAT WILL COME OUT THIS AFTERNOON AS WELL WHEN WE'RE TALKING MORE ABOUT THE OVERALL COMMUNICATIONS EFFORT.

MS. SAMUELSON: IF THIS ISN'T A SURPRISE TO THOSE AUDIENCES BECAUSE THEY HAVE BEEN EDUCATED ABOUT IT, IT WON'T HAVE THE SAME IMPACT PRESUMABLY.

MS. HUA: OKAY. SO I'M GOING TO TURN IT OVER TO MY COLLEAGUE, JEFF, TO FACILITATE THE NEXT SET OF QUESTIONS.

MR. LIEPMAN: LET ME JUST SUMMARIZE SOME OF THE KEY POINTS THAT HAVE COME OUT SO FAR, AND THEN I JUST WANT TO HIGHLIGHT A FEW OF THE THINGS THAT WE HAVEN'T TOUCHED ON, AND THEN LOOK FORWARD TO KIND OF WHAT ARE THE TAKEAWAYS FROM THE DISCUSSION TODAY AS WE LOOK FORWARD.

WE'VE HEARD A LOT OF COMMENTS AROUND SOCIAL AWARENESS AND THE MOVEMENT THAT COULD BE MADE TO REALLY BECOME A BEST-IN-CLASS, MOST WELL-KNOWN INSTITUTE SCIENCE WORLDWIDE. WE'VE ALSO HEARD QUITE A BIT ABOUT SUSTAINABILITY AND WHAT CAN BE DONE TO REALLY UNDERSTAND OVER THE LONG PERIOD OF TIME HOW TO BEST PRIORITIZE THE ALLOCATION OF FUNDS.

WE'VE ALSO HAD SOME GOOD DISCUSSION AROUND CONTINUING TO FEED THE SCIENTIFIC ENGINE SO THAT WE CAN ALLOW OURSELVES TO ALSO FEED THE MEDICAL ADVANCEMENTS AND THE CLINICAL OPPORTUNITIES. AND THEN, LASTLY, SOME OF THE POINTS THAT WERE JUST MADE AROUND THE RISKS, THE POLITICAL RISKS, SOME OF THE CLINICAL TRIAL FAILURES THAT MAY EVENTUALLY COME TO FRUITION THAT WE NEED TO BE PREPARED TO COMMUNICATE AGAINST IN A POSITIVE MANNER.

SO SOME OF THE POINTS THAT WE'VE CAPTURED THERE, AND I ALSO JUST WANT TO POINT TO THE ECONOMIC COLUMN, THAT WE HAVEN'T TOUCHED IN A GREAT LEVEL OF DETAIL SO FAR TODAY. I KNOW THAT A FEW PEOPLE HAVE BROUGHT UP THE IDEA OF PARTNERING AND WHAT CAN BE DONE TO BETTER PARTNER WITH INDUSTRY, WITH EMERGING BIOTECHS, WITH OTHER INSTITUTE'S FUNDS IN CALIFORNIA.

ARE THERE INNOVATIVE IDEAS OR CONCEPTS THAT WE COULD SHARE WITH THE GROUP ON HOW TO BETTER PARTNER AND DRIVE ECONOMIC DEVELOPMENT IN CALIFORNIA?

DR. HAWGOOD: SOMEWHERE IN THAT GENERAL AREA, I THINK WE'VE GOT TO DEAL WITH THE FACT THAT HEALTHCARE COSTS ARE TOO HIGH IN THIS COUNTRY. THIS FEELS AND SOUNDS LIKE A VERY EXPENSIVE ADDITION TO

THAT PROBLEM; WHEREAS, IF IT ACTUALLY CURES CHRONIC DISEASE, IT COULD BE THE OPPOSITE. SO SOMEWHERE IN THERE WE'VE GOT TO BUILD THAT. AND I LIKE THE IDEA OF BRINGING THE PAYERS INTO THAT CONVERSATION. SO IT'S NOT TOTALLY ABOUT REVENUE ENHANCEMENT AND JOB CREATION AND ECONOMIC GROWTH, BUT IT IS ALSO ABOUT CONTROLLING THE COST OF HEALTHCARE.

MR. LIEPMAN: ANY IDEAS ON HOW TO ACTUALLY DO THAT? WHEN WE MOVE FROM THE STRATEGY OF CONTROLLING HEALTHCARE COSTS CONCERNS, ARE THERE ANY TACTICS, ANYTHING THAT THE INSTITUTE CAN HAVE A PLAY IN?

DR. LUBIN: I THINK WHAT SAM JUST SAID IS REALLY IMPORTANT. I THINK MEETING WITH THE KEY FINANCIAL COMPANIES THAT BENEFIT GREATLY FROM THE OUTRAGEOUS COST OF HEALTHCARE AND SEE IF YOU CAN PARTNER WITH THEM TO GET SUPPORT TO SOMETHING THAT WILL DECREASE THE COST OF CARE BECAUSE WE'RE ALL GOING TO HAVE TO ADDRESS DECREASING COST OF CARE. AND MANY OF THE COMPANIES, BLUE CROSS ANTHEM AND OTHERS, HAVE FUNDS THAT HELP SUPPORT RESEARCH, AND I THINK WE HAVE TO CULTIVATE THAT AS AN OPPORTUNITY THAT WE HAVEN'T DONE BEFORE AS IT RELATES TO STEM CELLS AND CIRM.

MR. LIEPMAN: GREAT.

DR. HAWGOOD: I THINK POTENTIALLY EVEN FUNDING SOME HEALTH POLICY OR HEALTH ECONOMICS FOLKS TO BEGIN TO GET THEIR ARMS AROUND WHAT THIS ACTUALLY LOOKS LIKE AND WHERE THE BALANCE TIPS FROM BEING AN ADDITIVE TO THE HEALTH COST PROBLEM TO A SOLUTION.

MR. LIEPMAN: WHERE IS THE BEST POINT OF ENTRY FOR PARTNERSHIPS? OR IS IT SOMETHING THAT'S DONE IN PARALLEL? DO WE WANT TO FOCUS MORE ON EARLY STAGE TECHNOLOGY, SCIENTIFIC DEVELOPMENTS, OR IS THIS SOMETHING THAT SHOULD BE FURTHER DOWNSTREAM WITH LARGER COMMERCIALIZED COMPANIES, PAYERS? AGAIN, IS THIS SOMETHING THAT SHOULD BE MORE BROADLY CONSIDERED, OR IS THIS SOMETHING THAT WE START WITH EARLIER STAGE ADVANCES AND THEN MOVE FORWARD SEQUENTIALLY?

CHAIRMAN THOMAS: I'LL JUMP IN HERE. WE'RE OBSERVING THE FACT THERE SEEMS TO BE A SHIFTING DYNAMIC IN THE AREA OF R & D WITH LARGE PHARMA, FOR EXAMPLE, WHERE THEY'VE HAD ENORMOUS COSTS WITH NOT A LOT TO SHOW FOR IT OVER THE LAST FEW YEARS. AND THEY ARE LOOKING POTENTIALLY, OR AT LEAST SOME OF THEM ARE, TO ENGAGE WITH SMALLER, EARLIER STAGE RESEARCH, WHETHER IT'S COMPANIES OR RESEARCH INSTITUTIONS, TO PARTNER UP WITH THEM TO GIVE THEM ACCESS TO OUTSIDE R & D. AND FROM THE

STANDPOINT OF THE LITTLER, NIMBLER GUYS WHO ARE DOING THIS EARLIER STAGE RESEARCH, IT'S A CHANCE POTENTIALLY TO GET ALIGNED WITH SOMEBODY THAT CAN PROVIDE DOWNSTREAM FUNDING AS THINGS PROGRESS.

AND WE'RE VERY AWARE OF THAT. WE'RE GOING TO HAVE, IN FACT, A BRAINSTORMING SESSION ON THIS COMING UP IN A COUPLE OF WEEKS, TRYING TO FIGURE OUT HOW TO ENGAGE -- TO ARRANGE FOR THESE PARTNERSHIPS AT AN EARLIER STAGE TO EVERYBODY'S POTENTIAL BENEFIT.

DR. PIZZO: SO I'LL BE VERY INTERESTED TO HEAR HOW THAT PROCEEDS. IT MAY BE DIFFERENT IN THE STEM CELL SPACE THAN IN OTHER AREAS OF DEVELOPMENT. BUT I'VE ACTUALLY BEEN INVOLVED WITH A NUMBER OF ORGANIZATIONS IN LEADING DISCUSSIONS WITH INDUSTRY ON ACADEMIC-INDUSTRY RELATIONS. AND WE JUST HAD A BIG DISCUSSION ABOUT THIS IN OUR INSTITUTION A COUPLE OF WEEKS AGO WITH INDUSTRY PARTNERS PRESENT.

THE ONE THING THAT HAS EVOLVED, AS WE ALL KNOW, AND YOU STATED THIS, J.T., IS THAT INDUSTRY HAS MOVED OUT OF THE EARLY DEVELOPMENT PHASE, AND THEY'RE NOW AT A PLACE WHERE THEY'RE SAYING BRING US THE PHASE II LEVEL STUDIES.

THIS IS A VERY UNREALISTIC PLACE FOR ANY OF US TO BE. TO GET TO THAT LEVEL IS

EXTRAORDINARILY EXPENSIVE AND I THINK IS GOING TO PROVOKE A WHOLE DIFFERENT DIALOGUE ABOUT HOW WE BRIDGE THAT GAP. I THINK THERE MAY BE OPPORTUNITIES IN THIS AREA THAT ARE DIFFERENT FROM OTHER AREAS OF DEVELOPMENT, BUT I WOULD SAY THIS CHALLENGE IS NOT ONLY YOU NEED CURE, BUT WHAT WE'VE HEARD FROM INDUSTRY LEADERS IS, LOOK, WE'RE GOING TO DO THIS WORK, THE WORK THEY'RE GOING TO DO, WE'RE GOING TO DO IT GLOBALLY BECAUSE IT IS TOO EXPENSIVE TO DO ANYWAY IN THE U.S. AND WHILE WE'VE BEEN TALKING ABOUT U.S. PARTNERSHIPS, WE SHOULD ALSO, AND I KNOW ALAN HAS THOUGHT ABOUT THIS, BE LOOKING AT GLOBAL PARTNERS AS WELL TO CARRY OUT SOME OF THAT WORK AS WELL.

CHAIRMAN THOMAS: DEAN PIZZO, ELONA HAS CONVENED THIS MEETING ON NOVEMBER 8TH. AND IF SOMEBODY FROM STANFORD WOULD BE AVAILABLE TO PARTICIPATE, THAT WOULD BE VERY HELPFUL.

MR. LIEPMAN: BEFORE WE MOVE ON TO THE LAST BUCKET OF QUESTIONS, I JUST WANT TO ASK AGAIN ARE THERE ANY OTHER COMMENTS, IDEAS, QUESTIONS ON THE ECONOMIC PIECE, THE SOCIAL PIECE, THE MEDICAL OR SCIENCE HERE, WHAT WE'VE GOT CAPTURED ON THIS DRAFT SET OF STRATEGIC OBJECTIVES?

MR. REED: I WOULD LIKE TO SEE A CONCRETE

LIST OF ACCURATE STATISTICS WHICH WOULD BE AVAILABLE TO EVERYBODY. FOR INSTANCE, LAST YEAR, 2009, $1.65 TRILLION, CHRONIC DISEASE COST, DIRECT OUT-OF-POCKET COST. THAT'S EQUALING THE NATIONAL DEFICIT, 1.6 TRILLION. IT'S MORE THAN ALL FEDERAL INCOME TAXES PUT TOGETHER, 1.2 TRILLION. THOSE KIND OF STATISTICS NEED TO BE AVAILABLE SO EVERY ADVOCATE CAN USE THEM.

MR. HENRY: I'M EVAN HENRY. I'M ON THE UCI PATIENT ADVOCACY COMMITTEE. AND I WANT TO THANK CIRM FOR SPONSORING ME TO GO THE WORLD STEM CELL CONGRESS. IT WAS REALLY FUN UP IN PASADENA. WE GOT A LOT OF NETWORKING DONE AND MET A LOT OF GOOD PEOPLE THERE. SO I WAS ONE OF 37 ON THE LIST UP THERE.

COUPLE THINGS I WANTED TO SAY AS OBSERVATIONS FROM THAT MEETING HAD TO DO WITH ADVOCACY AND IT HAS TO DO WITH THE INCREASING AWARENESS ONE. ONE OF THE THINGS THAT WAS VERY CLEAR WAS THAT THE ADVOCATES IN THE ROOM, WHETHER THEY WERE FROM OUT-OF-STATE OR MAKING PRESENTATIONS OR THE ADVOCATES IN THE ROOM WHO WERE TRYING TO LEARN THINGS, WE WERE ALL THERE FOR DIFFERENT REASONS. SOME OF THEM WERE ADVOCATING FOR THE LAWS AND REGULATIONS OR FIGHTING LAWS AND REGULATIONS.

SOME OF US ARE MORE ADVOCATING FOR AWARENESS AND INVOLVEMENT IN THE RESEARCH, NOT NECESSARILY MAYBE THE RESEARCH DIRECTIONS, BUT HELPING RESEARCHERS UNDERSTAND WHETHER SOMETHING IS URGENT IN THEIR OWN PERSONAL MINDS.

AND THEN ALSO THERE WAS THE WHOLE FUND-RAISING ASPECT, AND ONE THAT CAME UP WAS ALSO THE IDEA THAT PATIENT ADVOCATES COULD BE VERY INSTRUMENTAL IN BUILDING A RESERVOIR OF PATIENTS THAT COULD BE THEN USED OR THEN VOLUNTEER FOR CLINICAL TRIALS. BECAUSE WE GET ALL THIS TRANSLATIONAL STUFF GOING REALLY FAST ALL OF A SUDDEN, THEN YOU'RE NOT GOING TO HAVE THE PATIENTS TO BE ABLE TO TEST THEM OUT ON. SO THERE'S AN ARMY THAT COULD BE -- OF ADVOCATES THAT COULD BE BROUGHT TO BEAR TO HELP OUT IN THAT KIND OF AREA.

THE OTHER THING WAS THAT I DON'T THINK YOU CAN PRESUME THAT THE DISEASE-RELATED ORGANIZATIONS, WHETHER IT'S THE NATIONAL PARKINSON'S FOUNDATION OR MULTIPLE SCLEROSIS, THEY'RE ALL GOING TO BE ADVOCATING SPECIFICALLY FOR STEM CELLS. THEY HAVE A LOT OF OTHER THINGS ON THEIR MINDS, AND SOME ORGANIZATIONS MAY NOT EVEN HAVE A SPECIFIC FOCUS OR WANT TO HAVE A SPECIFIC FOCUS ON STEM CELLS. SO WE CAN'T JUST PRESUME THAT EVERYBODY IS ON BOARD WHEN

THEY'RE ADVOCATING FOR THEIR PARTICULAR DISEASE AND CURES IN THE STEM CELL SPACE.

THE LAST THING IS THAT OUR APPROACH AT UCI HAS BEEN TO TRY TO PUT DOWN OUR SEPARATE LITTLE BALKAN STATES, WHETHER WE'RE ADVOCATING FOR PD IN OUR OWN -- PARKINSON'S DISEASE LIKE I HAVE IN OUR OWN WORLDS OR WHETHER WE'RE ADVOCATING FOR HUNTINGTON'S DISEASE. IT DOESN'T MATTER WHICH ONE BECAUSE I FIRMLY BELIEVE THAT THE RISING TIDE FLOATS ALL BOATS, AND THAT'S REALLY WHERE -- I THINK YOU ALL UNDERSTAND THAT, BUT I THINK IT'S A MESSAGE THAT ISN'T CLEARLY UNDERSTOOD WITH THE POPULATION. AND I URGE YOU TO REALLY LOOK AT IT IN A BROAD MESSAGE, BROAD POSITIVE MESSAGE, SO THAT ALL DIFFERENT KINDS OF PATIENTS OR PEOPLE WHO HAVE HAD INJURIES REALLY GET TO BE ABLE TO JUMP ON THE BOAT THEMSELVES. THANKS.

MR. LIEPMAN: THANK YOU VERY MUCH. ANY COMMENTS WITH RESPECT TO THAT?

MS. SAMUELSON: HE'S ABSOLUTELY RIGHT. NOT EVERY PATIENT ORGANIZATION IS GOING TO BE PLAYING AN ADVOCACY FUNCTION.

MR. LIEPMAN: GREAT. SO AS WE MOVE TOWARDS CLOSING, I CAN SENSE THERE'S A LOT OF HUNGER GROWING IN THE ROOM FOR LUNCH. I WANT TO SUMMARIZE

A COUPLE OF THINGS AGAIN.

WE'VE HEARD A LOT TODAY ABOUT THE TREMENDOUS PROGRESS THAT CIRM IS MAKING. WE'VE HEARD A LOT ABOUT THE PARTNERSHIPS THAT ARE BEGINNING TO REALLY FLOURISH AND THE SCIENCE ADVANCES THAT ARE BEING MADE. BEFORE WE CLOSE THE DISCUSSION, THOUGH, I DO WANT TO ASK AGAIN EVERYONE HERE TODAY AND CERTAINLY THOSE THAT HAVEN'T SPOKEN UP, PLEASE TAKE A CHANCE TO PROVIDE SOME COMMENTARY, BUT WHAT CAN CIRM DO TO BETTER SERVE THE PATIENT COMMUNITY, THE SCIENTIFIC COMMUNITY, ANY STAKEHOLDERS INVOLVED REALLY IN THE APPLICATION OF WHAT CIRM DOES?

THIS IS KIND OF THE FINAL QUESTION FOR US TO THINK CREATIVELY ABOUT WHAT IS IT THAT CIRM COULD DO BETTER, AND WE'D CERTAINLY LOVE TO CAPTURE THAT AS A GROUP.

MS. GIBBONS: I THINK THAT WHEN YOU LOOK AT HOW THIS INITIATIVE FIRST CAME TO LIFE, IT WAS BY UNLEASHING A LOT OF THOUGHT INFLUENCERS AND KEY LEADERS IN CERTAIN FIELDS WHO WERE STARS. SO WE HAD ACTUAL POP CULTURE CELEBRITIES WHO HAD CREDIBILITY, AND YOU HAD STARS IN RESPECTED FIELDS ALL KIND OF COMING TOGETHER. I THINK THAT WE'LL NEED TO UTILIZE THAT HOLISTIC APPROACH. THAT'S ONE THING WE CAN DO

BETTER IS TO CREATE AN APPARATUS FOR OUR STARS, FOR OUR INVOLVED ADVOCATES WHO SIT HERE EVERY WEEK, WHO ARE OUT THERE AT THE MEETINGS. HOW CAN WE PROVIDE THE VESSELS FOR THEM TO BE MORE EFFECTIVE? HOW CAN WE CREATE PLATFORMS FOR THEM TO SHINE?

AND, YES, WE HAVE THE SPOTLIGHTS AND WE HAVE OPPORTUNITIES, AND THAT'S FANTASTIC. IT'S JUST NOT ENOUGH. BECAUSE IF WE GIVE THIS STORY BACK TO THE PEOPLE WHO VOTED FOR THIS INITIATIVE, I AGREE WITH JOAN AND OTHERS WHO HAVE SAID THEY WILL BE THE CUSTODIANS OF OUR NEXT STEPS, BUT WE HAVE TO EMPOWER THEM AND GIVE IT BACK TO THEM. IT'S NOT OUR STORY. WE'RE NOT PROPRIETARY. IT'S THE STORY OF ALL THE VOTERS OF WHICH WE ARE A PART OF THAT GROUP.

SO I THINK THAT'S ONE THING THAT WE'LL HEAR A LOT MORE ABOUT TOO THAT WE'VE BEEN DISCUSSING IS HOW DO WE -- AND WE'VE MADE TREMENDOUS STRIDES RECENTLY AS WELL. I DON'T WANT TO BE DISMISSIVE OF ANY OF THAT. WE HAVE MADE TREMENDOUS STRIDES AT TAKING THAT DELICATE BALANCE OF HOW DO WE ACTIVATE ALL THE TECHNOLOGIES. AND DON TALKED ABOUT THE E-MAIL LIST. AND MAYBE WHEN WE LOOK AT THE STRATEGY, E-MAIL WILL BE COMPLETELY DEFUNCT. WE JUST DON'T KNOW, BUT ANTICIPATING WHAT ARE THE STREAMS OF COMMUNICATION THAT WE NEED TO HAVE ACCESS

TO. AND WHATEVER THEY ARE, THEY HAVE TO BE HEADLINED BY THE STARS WHO ARE THE PATIENTS WHO HAVE THE STORIES WHO WILL CRYSTALLIZE THIS POLITICALLY, ECONOMICALLY, AND WITH REGARD TO OUR SUSTAINABILITY.

WHETHER WE HAVE ACTIVE CURES AND TREATMENT AS WE WANT, IF WE HAVE THOSE STORIES OUT THERE, I THINK WE'RE ALL IN AGREEMENT THAT WE'RE GOING TO GET TO THESE OTHER PLACES THAT WE'VE BEEN DISCUSSING. I THINK WE CAN DO THAT BETTER.

MR. LIEPMAN: ANYONE ELSE? HOW ABOUT THOSE ON THE PHONE OR THE PUBLIC COMMUNITY?

MR. REED: THERE ISN'T A WHOLE LOT THAT COULD BE DONE BETTER. THIS IS A MAGNIFICENT THING. THIS IS THE GREATEST THING IN THE WORLD.

(APPLAUSE.)

MS. HUA: SO ALAN CHARGED US LAST TIME I FACILITATED A MEETING WITH HIM WITH A BIG INNOVATIVE IDEA. AND HE CHARGED HIS TEAM WITH TRYING TO COME UP WITH WHAT ARE THOSE BIG INNOVATIVE IDEAS. AND NOW WE ARE GOING TO EMPOWER YOU GUYS TO SEE IF THERE'S ANYTHING ELSE, BLUE SKY, CRAZY, OFF THE WALL THINGS THAT WE SHOULD CONSIDER OR AT LEAST JUST BRING UP TO DISCUSS BEFORE WE WRAP UP. I'M LOOKING AT YOU.

MR. SHEEHY: I LIKE ANDY GROVES'

PRESENTATION. WE SAW THAT AT THE WORLD STEM CELL CONGRESS. AND I THINK ESPECIALLY STEM CELL RESEARCH HAS HAD SOME VERY INTERESTING COMPONENTS. I THOUGHT THE IDEA OF GETTING THE FDA TO GO BACK TO ITS ORIGINAL MISSION OF JUST APPROVING SAFETY. KIND OF WHAT HE DESCRIBED WAS A DISTRIBUTIVE TRIAL NETWORK WHERE PATIENTS COULD BE ENROLLED IN A NUMBER OF DIFFERENT SITES, AND THEN DATA THAT'S COLLECTED SHARED WIDELY. BUT I MEAN REALLY I WOULD GO TO HIS PRESENTATION AND TAKE SOME OF THE HIGH POINTS OUT BECAUSE I THOUGHT IT WAS VERY THOUGHTFUL ABOUT THIS PROCESS.

AND I THINK WHAT MAY BE TRUE IN CELL THERAPY IS THAT YOU ARE GOING TO HAVE A LOT OF DIFFERENT OUTCOMES, AND MAYBE THE CLASSIC CLINICAL TRIAL MODALITY IS NOT GOING TO WORK. YOU'RE TAKING LIVING THINGS AND PUTTING THEM INTO LIVING PEOPLE. AND SO THE TRANSPLANT MODE IS GOING TO BE MORE OF WHAT WE SEE. YOU ARE GOING TO HAVE -- A LOT'S GOING TO DEPEND ON THE EXPERTISE OF THE PEOPLE DOING THE PROCEDURES. SO THERE WILL BE PEOPLE WHO DO IT BETTER. THERE WILL BE PEOPLE WHO ACCEPT CELLS BETTER AND FIGURING OUT WHY THEY DO. THERE WILL BE CERTAIN TYPES OF CELLS THAT WORK BETTER FOR CERTAIN CONDITIONS.

SO IT'S REALLY NOT GOING TO THE CLASSIC SMALL MOLECULE MODEL FOR APPROVING THERAPIES AND DENYING THERAPIES TO PATIENTS WHO MIGHT BENEFIT AND BE WILLING TO GO THROUGH THESE TRIALS UNTIL YOU GET THE GOLD STANDARD RANDOMIZED CONTROLLED TRIAL. IT MAY BE SIMPLY JUST GETTING THE INITIAL SAFETY CUT MADE AND THEN LETTING PEOPLE MAKE THEIR OWN DECISIONS, LETTING CLINICIANS AND PATIENTS DECIDE THAT THEY WANT TO TRY THESE PROCEDURES, AND THEN COLLECTING THE DATA FROM ALL THESE PATIENTS AND TURNING IT INTO SOME SORT OF MASSIVE DATABASE, AND THEN GOING BACK AND LOOKING AT WHAT'S HAPPENED WITH THOSE OUTCOMES AND DOING SOME DISCOVERY RESEARCH ON THAT. THAT'S TO ME THE BIG IDEA IS REALLY HOW THESE THERAPIES ARE GOING TO BE APPROVED.

DR. STEWARD: I'VE SAID THIS BEFORE, AND I'LL SAY IT AGAIN. I THINK THAT CIRM HAS DONE A WONDERFUL JOB IN PUTTING TOGETHER A VARIETY OF PROGRAMS THAT REALLY TARGET SPECIFIC AREAS OF ADVANCEMENT. THE BASIC BIOLOGY, THE DISEASE TEAM AWARDS, EACH ARE FOCUSED ON A PARTICULAR AREA.

THE ONE THING THAT I THINK THE ORGANIZATION MAY STILL LACK IS THE ABILITY TO, IF YOU WANT, HARVEST OUT-OF-THE-BOX IDEAS. SO WHAT WE'RE TALKING ABOUT ARE A LOT OF THE BOXES OUT THERE

THAT THERE ARE REQUIREMENTS FOR AT A PARTICULAR PHASE OF THE DEVELOPMENTAL PROCESS. AND WHAT WE LACK IS THAT ABILITY TO PICK UP ON THINGS THAT ARE OUT THERE RIGHT NOW THAT WE MAY NOT KNOW ABOUT, THAT SOMEBODY WOULD JUST RAISE THEIR HAND AND SAY, HEY, WE ARE READY RIGHT NOW. SOME COMPANY, FOR EXAMPLE, WOULD SAY I KNOW RIGHT NOW I HAVE THE FOLLOWING THINGS THAT I CAN MOVE FORWARD.

UNFORTUNATELY THERE'S A DIFFICULTY IN DOING THAT BECAUSE WE ARE A STATE AGENCY. WE HAVE TO PUT OUT RFP'S. WE HAVE TO GIVE EQUAL OPPORTUNITIES TO PEOPLE TO APPLY FOR SUCH THINGS. AND I DON'T KNOW THE SOLUTION. JUST TO SAY IT, I THINK THAT THERE'S STILL A NEED OUT THERE FOR SOME OF THESE AVENUES FOR OUT-OF-THE-BOX THINGS TO COME IN UNPREDICTABLY WITHOUT RFP'S OR WHATEVER.

MS. HUA: TO BE NIMBLE ENOUGH.

MR. ROTH: I'D LOVE TO TAKE THIS AS MY IDEA, BUT IT'S NOT. BUT ONE THAT I THINK WE SHOULD PAY ATTENTION TO IS GOING TO COME OUT OF THE PUBLICATION OF MIT'S INNOVATION AND FINANCE LABORATORY. AND I HAD A PRELOOK AT THIS. AND IT'S THE KIND OF THING THAT GETS TO WHAT THE FUTURE MODEL FOR FINANCING INNOVATION IS GOING TO LOOK LIKE, WHERE THE MONEY IS GOING TO COME FROM, AND IT'S A

VERY DIFFERENT APPROACH. IT HAPPENS TO BE IN LIFE SCIENCES THAT ARE USED AS THE EXAMPLE AND I THINK WILL IN THIS PAPER.

IF YOU THINK ABOUT IT, THE ORIGINAL SORT OF INNOVATION IN AMERICA CAME FROM LARGE COMPANIES. THEY WERE NOT VENTURE BACKED. THEY GOT STARTED WITH A PRODUCT AND THEY BUILT UP, BUT THEY WERE 50, HUNDRED-YEAR-OLD COMPANIES, AND THAT LASTED THROUGH THE '70S. AND THEN IT BEGAN TO DISSIPATE BECAUSE OF THINGS I WON'T GO INTO. IN THE '80S WITH BAYH-DOLE WE SUDDENLY COULD DO THE START-UP MODEL. AND THE START-UP MODEL WAS BASED PRIMARILY ON GOOD SCIENCE, GOOD DISCOVERIES COMING OUT OF RESEARCH INSTITUTES, PUT AN ADVISORY BOARD TOGETHER, HIRE A CEO, DO A COUPLE OF VENTURE ROUNDS, BUY SOME EQUIPMENT, AND THEN YOU COULD GO PUBLIC. SO THE TURN WAS PRETTY QUICKLY.

THAT TODAY IS GONE. THERE IS NOT AN IPO MARKET FOR PREREVENUE COMPANIES. AND IN HEALTHCARE YOU'RE NOW LOOKING DOWN THE BARREL AT TEN, TWELVE YEARS OF FUNDING VERSUS TWO OR THREE AND THEN SOMEBODY OWNING IT AND THE UPS AND DOWNS. SO WHEN YOU TAKE ALL THAT OUT, THE BIG IDEA IS GOING TO COME FROM THOSE THAT FIGURE OUT WHERE THE NEXT MODEL IS GOING TO BE AND HOW THAT'S GOING TO BE FUNDED. I

THINK FOR US WE HAVE TO BE PART OF THAT PROCESS BECAUSE WE HAVE AN EVEN BIGGER PROBLEM. WE DON'T HAVE PROVEN PRODUCTS. AND SO TO START A SINGLE COMPANY ON EVERY SINGLE IDEA, WHICH IS WHAT WE'RE STILL DOING, PROBABLY DOESN'T MAKE SENSE. AND I THINK WHEN THIS ANDREW LOWE PAPER COMES OUT, WE SHOULD BE READY AND POISED TO JUMP ON THAT IDEA.

MS. HUA: WELL, I WANT TO THANK YOU ON BEHALF OF CAMPBELL AND BEHALF OF CIRM FOR YOUR INPUT. IT WAS VERY INTERACTIVE, AS ELLEN SUGGESTED, AND I JUST WANT TO CLOSE ON THIS NOTE.

I HAVE A SEVEN-MONTH-OLD SON, FIRST BORN. AND I THINK ABOUT HIS FUTURE, I WOULD LOVE FOR HIM TO SAY I DON'T WANT TO BE A POLICEMAN OR A FIREMAN, BUT I WANT TO WORK IN STEM CELL RESEARCH. SO WITH THAT SAID, I HOPE, I WISH YOU ALL THE BEST IN THIS ENDEAVOR. THANK YOU.

(APPLAUSE.)

CHAIRMAN THOMAS: THANK YOU, EMILY AND JEFF. THANK YOU FOR THAT THOUGHTFUL FACILITATION AND HELP IN GUIDING OUR DISCUSSION.

WE HAVE ONE TWO-SECOND ITEM I'D LIKE TO DISPENSE WITH BEFORE LUNCH, WHICH IS THE APPROVAL OF THE AUGUST MINUTES.

MR. ROTH: MOTION TO APPROVE.

MS. GIBBONS: SECOND.

CHAIRMAN THOMAS: ANY DISCUSSION? ALL IN FAVOR PLEASE SAY AYE. OPPOSED? CARRIED UNANIMOUSLY.

WE ARE GOING TO, BECAUSE OF THE FACT THAT IT IS NOW LUNCHTIME -- SORRY, DAVID AND JEFF. GOING TO HOLD YOU OVER A LITTLE BIT LONGER. WE'RE GOING TO NOW BREAK FOR LUNCH. LUNCH IS NEXT DOOR. WE ARE GOING TO BE HAVING LUNCH AND AT THE SAME TIME HAVING A CLOSED SESSION.

MR. HARRISON: BECAUSE WE HAVE THREE MEMBERS OF THE BOARD PARTICIPATING BY TELEPHONE, WE NEED TO ASK THEM FOR THEIR VOTE ON THE VOICE VOTE MOTION.

CHAIRMAN THOMAS: THANK YOU. ALL THOSE IN FAVOR ON THE PHONE --

MR. HARRISON: YOU NEED TO POLL THEM INDIVIDUALLY.

CHAIRMAN THOMAS: MARIA, WOULD YOU.

DR. POMEROY: POMEROY. YES.

MS. BONNEVILLE: MARCY FEIT.

MS. FEIT: YES.

MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: YES.

CHAIRMAN THOMAS: UNANIMOUSLY CARRIED.

SO LUNCH NEXT DOOR. LIKE TO CONFINE THAT TO 45 MINUTES. AS IT'S GOING TO BE A CLOSED SESSION AS WELL, WOULD ASK STAFF FIRST TO GO OVER AND GET YOUR LUNCH AND BRING IT BACK OVER HERE AND FOR THE BOARD TO REMAIN IN THAT ROOM FOR CLOSED SESSION.

MR. HARRISON: FOR THE RECORD, THE BOARD WILL BE CONVENING IN CLOSED SESSION TO DISCUSS PERSONNEL PURSUANT TO GOVERNMENT CODE SECTION 11126 AND HEALTH AND SAFETY CODE SECTION 125290.30(F)(3)(D).

CHAIRMAN THOMAS: THANK YOU. WE WILL NOW ADJOURN HERE FOR LUNCH, AND WE'LL COME BACK TO DISCUSS THE COMMUNICATIONS PLAN.

(A RECESS WAS TAKEN.)

CHAIRMAN THOMAS: BOARD MEMBERS TAKE THEIR SEATS. JAMES, DO WE HAVE ANYTHING TO REPORT OUT OF CLOSED SESSION?

MR. HARRISON: THE BOARD TOOK NO ACTION, SO THERE'S NOTHING TO REPORT.

CHAIRMAN THOMAS: OKAY. SO WE WANT TO MOVE ALONG HERE. WE'RE LOSING A NUMBER OF OUR BOARD IN ABOUT 40 MINUTES. SO WE WANT TO GET THROUGH AS MUCH OF THE REMAINING AGENDA AS WE CAN.

JAMES, IF WE LOSE SEVERAL MEMBERS GOING TO THE AIRPORT, WHAT'S THAT GOING TO DO TO OUR QUORUM,

ETC., AND ABILITY TO VOTE ON THE VARIOUS ACTION ITEMS?

MR. HARRISON: I BELIEVE WE HAVE LOST ONE MEMBER. SO WE'RE DOWN TO 21 MEMBERS PROVIDED THE THREE ON THE PHONE HAVE REJOINED US -- I'M SORRY -- 22 MEMBERS. SO WE HAVE A THREE-MEMBER MARGIN.

CHAIRMAN THOMAS: OKAY. AND WHO IS LEAVING AT 2:30? FOUR. THAT'S A PROBLEM. LET'S GET MOVING.

DR. TROUNSON: JON, WE NEED THOSE CONCEPT APPROVALS. THAT'S REALLY, REALLY URGENT.

CHAIRMAN THOMAS: OKAY. SO I WONDER HOW QUICKLY WE CAN GET THROUGH. SO JUST IN TWO SECONDS OR LESS, WE ALL KNOW, AS WE'VE HEARD IN NUMEROUS MEETINGS IN THE PAST, AS WAS REITERATED TODAY, THAT WE ARE MOVING INTO A NEW PHASE OF COMMUNICATIONS AT WHICH WE AIM TO VERY ACTIVELY LET ALL STAKEHOLDERS KNOW THE FULL EXTENT OF THE EXTRAORDINARY WORK THAT'S BEING UNDERTAKEN BY OUR FUNDED SCIENTISTS.

AND TOWARDS THAT END, WE HAVE DEVELOPED AN AMBITIOUS COMMUNICATIONS PLAN. WE CONTEMPLATE BRINGING IN A NEW DIRECTOR OF PUBLIC COMMUNICATIONS AND PATIENT ADVOCATE OUTREACH WHICH IS GOING TO, AMONG OTHER THINGS, EMPHASIZE OUR RECOMMITMENT TO INVOLVING THE PATIENT ADVOCATE COMMUNITY TO AN EVEN

GREATER EXTENT GOING FORWARD IN ALL ASPECTS OF COMMUNICATIONS AS WELL AS OTHERWISE. AND WE HAVE COMMISSIONED A COMMUNICATIONS AUDIT TO BE DONE, WHICH YOU WILL HEAR ABOUT HERE PROMPTLY, ALL OF THIS UNDER THE AUSPICES OF OUR AUGUST COMMUNICATIONS SUBCOMMITTEE CHAIRMAN SENATOR TORRES.

MR. TORRES: THANK YOU. I'D LIKE TO CALL ON THE FIRM OF TOWNSEND AND RAIMUNDO TO COME FORWARD AND MAKE THEIR PRESENTATION AND GET TO THE RECOMMENDATIONS AS QUICKLY AS YOU CAN GIVEN THE TIME FACTOR THAT WE HAVE, AND THEN WE CAN OPEN IT UP.

THE SUBCOMMITTEE MET LAST NIGHT. THERE WAS NO ACTION TAKEN BECAUSE WE DID NOT HAVE A QUORUM. SO THE CONSENSUS WAS TO APPROVE THIS REPORT AS WELL AS TO APPROVE THE DUTY STATEMENT OF THE QUALIFICATIONS FOR THIS NEW DIRECTOR OF PUBLIC COMMUNICATIONS AND PATIENT ADVOCACY. MR. TOWNSEND.

MR. TOWNSEND: THANK YOU, SENATOR. I WILL ABBREVIATE MY THREE-HOUR REMARKS, SO THAT PEOPLE CAN CATCH THEIR AIRPLANES, TO ABOUT FIVE MINUTES. AND THEN MY COLLEAGUE, JEFF RAIMUNDO, WILL COME UP AND GIVE OUR RECOMMENDATIONS.

FIRST OF ALL, VERY QUICKLY, TOWNSEND, RAIMUNDO, BESLER, & USHER, JEFF RAIMUNDO, ONE OF MY COLLEAGUES, 20 YEARS AS A REPORTER, 20 YEARS IN THE

PUBLIC RELATIONS, PUBLIC AFFAIRS BUSINESS. CHRIS DEUTSCHMAN, WHO ALSO WORKED ON THIS PROJECT, 15 YEARS IN PUBLIC RELATIONS. MYSELF, ALMOST 40 YEARS IN BOTH PUBLIC AFFAIRS, PUBLIC RELATIONS, AND POLITICAL CONSULTING, AND HAVING PASSED SEVERAL BOND MEASURES MYSELF.

WE LOOKED AT THIS ASSIGNMENT WHICH WAS GIVEN TO US WHICH WAS TO CREATE A PLAN AND A STRUCTURE TO MAXIMIZE STRONG RESPONSIVE COMMUNICATIONS AND TO BROADEN THE EFFORT OF CIRM. AS YOU SAW IN THE STRATEGIC PLAN PRESENTED THIS MORNING, AND YOU READ OUR REPORT, THEY FIT LIKE A GLOVE BECAUSE FRANKLY WE'VE BEEN WORKING VERY CLOSELY WITH THE COMMUNICATIONS STAFF. OUR METHODOLOGY WAS TO INTERVIEW EVERYBODY IN THE COMMUNICATIONS STAFF, ALL THE OUTREACH CONSULTANTS, SENIOR MANAGEMENT, SOME OF THE FOLKS FROM THE PATIENT ADVOCACY GROUPS.

AND THE MODEL WE USED WAS CALPERS. WE HELPED SEVERAL YEARS AGO DEVELOP THEIR ENTIRE COMMUNICATIONS PROGRAM. AND THE REASON WE SETTLED ON THE CALPERS SITUATION IS CALPERS DEALS WITH VERY DISTINCT POPULATIONS. THEY HAVE THE WHOLE INVESTMENT SIDE. IT'S VERY COMPLICATED AND YOU HAVE TO BE VERY CAREFUL WHAT'S SAID OR NOT SAID IN THE

INVESTMENT COMMUNITY.

AND THEN WE HAVE THE WHOLE HEALTHCARE SIDE WHERE CALPERS PROVIDES HEALTHCARE FOR ITS MEMBERS. AND SO WE HAD TO BLEND TOGETHER THAT COMMUNICATIONS DEPARTMENT AND FIGHT THE TENDENCY IN COMMUNICATIONS FOR PEOPLE TO SILO INTO THEIR EXPERTISE. AND SO THAT'S WHAT WE'VE DONE HERE.

WE ALSO DID A REVIEW OF THE MAINSTREAM MEDIA. WE DID A REVIEW OF THE TRADE AND SCIENCE MEDIA. WE TOOK TRADITIONAL COMMUNICATIONS STRUCTURE. WE TOOK AND APPLIED THOSE PRINCIPLES TO WHAT YOU ALREADY HAD BECAUSE WHAT YOU ALREADY HAD WAS DOING A HECK OF A JOB CONSIDERING THE SIZE OF THE SHOP AND THE MAGNITUDE OF THE INFORMATION THAT NEEDS TO BE DISTRIBUTED.

AND SO THE SYNTHESIS OF TRADITIONAL, HOW WE DEALT WITH CALPERS, AND WHAT YOU ALREADY HAVE HERE LED TO THE RECOMMENDATIONS THAT MY COLLEAGUE JEFF IS GOING TO PRESENT.

WE BOTH WERE SMILING IN THE BACK BECAUSE OUR PRESENTATION WAS BASICALLY GIVEN BY YOU, THE BOARD MEMBERS. WE HAD SO MANY VERY STRONG ADVOCATES FOR WHAT WE ABSOLUTELY BELIEVE WE HAVE TO DO. WE HAVE TO BROADEN -- IF YOU DON'T TELL YOUR STORY, NOBODY KNOWS ABOUT IT. AND YOU HAVE A WONDERFUL

STORY, AND IT NEEDS TO BE TOLD, AND THAT'S WHAT THIS PLAN IS ABOUT. SO I WOULD URGE YOU TO TAKE A SECOND, READ THE PLAN. AND I'LL HAVE JEFF GIVE A FEW RECOMMENDATIONS AND WE'LL MOVE QUICKLY SO THAT PEOPLE CAN CATCH THEIR PLANES. THANK YOU VERY MUCH FOR LETTING US WORK WITH YOU.

MR. TORRES: YOU HAVE TWO MINUTES, MR. RAIMUNDO.

MR. RAIMUNDO: SINCE EVERYBODY HAS ALREADY MADE THE CASE ON THE BOARD, THANK YOU, MR. VICE CHAIRMAN. I'LL JUST POINT OUT REAL QUICKLY THAT WHAT WE'RE SEEING HERE IN THE NEW STRATEGIC PLAN AS WELL AS BOARD COMMENTS WE DO BELIEVE SHOWS A NEW -- A COMMITMENT TO THE VERY THINGS THAT WE WERE GOING TO BE RECOMMENDING TO YOU, WHICH IS COMMUNICATIONS THAT ENHANCE THE SUSTAINABILITY OF WHAT YOU DO.

SO WHAT WE DID IS WE -- YOU HAVE BEFORE YOU OUR REPORT. SO I WON'T GO INTO THAT DETAIL, BUT I WOULD LIKE TO GO OVER THE RECOMMENDATIONS.

MR. TORRES: VERY QUICKLY.

MR. RAIMUNDO: THE RECOMMENDATIONS ARE THAT WE BELIEVE THAT THE SILOS THAT DAVID REFERRED TO HAVE BEEN A CONTRIBUTING FACTOR TO SOME DYSFUNCTION IN THE COMMUNICATIONS ARENA OVER THE LAST FEW YEARS, AS WELL AS A LACK OF COMMITMENT,

FRANKLY, IN YOUR STRATEGIC PLANS IN THE PAST TO THAT MAINSTREAM MEDIA PUBLIC OUTREACH. SO OUR RECOMMENDATIONS ARE TO COMBAT THOSE.

ON PAGE 6 OF OUR RECOMMENDATIONS, WE RECOMMEND THAT YOU CENTRALIZE THE MANAGEMENT AND COMMUNICATIONS ACTIVITIES UNDER A MORE STRUCTURED ARRANGEMENT THAT FOCUSES EVERYTHING IN A CENTRALIZED WAY. YOU WILL SEE THE DETAILS THERE.

MR. TORRES: IT'S ON PAGE 7, MEMBERS. GO AHEAD.

MR. RAIMUNDO: IN FRONT OF YOU AND ON THE BOARD HERE IS WHAT WE BELIEVE IS THE BEST PRACTICE FOR THIS ORGANIZATION IN THE WAY OF POSSIBLY STRUCTURING YOUR COMMUNICATIONS STAFF. YOU WILL NOTICE THAT IT IS ORGANIZED DIFFERENTLY AND FOCUSED UNDER THE MANAGEMENT OR, IF YOU WILL ALLOW ME, UNDER THE DIRECTION OF THE VICE CHAIRMAN FOR COMMUNICATIONS AND THE SENIOR VICE PRESIDENT FOR RESEARCH AND DEVELOPMENT, ELLEN AND ART. AND THE SENIOR DIRECTOR OF PUBLIC COMMUNICATIONS AND PATIENT ADVOCATE OUTREACH WOULD HAVE THE RESPONSIBILITY FOR SUPERVISING STAFF.

YOU WILL ALSO SEE -- AND THE COMMUNICATIONS EFFORT AT CIRM, SOMETHING THAT REALLY DOESN'T EXIST RIGHT NOW. UNDER HIM OR HER YOU WILL

SEE SEVERAL OTHER STAFF POSITIONS, SOME OF WHICH CURRENTLY EXIST AND SOME WHICH ARE ADDITIONAL. WE DO BELIEVE THAT YOU HAVE A BANDWIDTH ISSUE ON YOUR STAFF, AND YOU COULD AUGMENT THAT STAFF TO GREAT ADVANTAGE FOR YOURSELVES.

ANOTHER ONE OF OUR RECOMMENDATIONS IS TO REBRAND CIRM AS THE STEM CELL INSTITUTE. YOU SAW SOME OF THAT STARTING ALREADY TODAY IN THE STRATEGIC PLAN. CALIFORNIA IS THE STEM CELL CAPITAL OF THE WORLD REALLY. SO THE CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE JUST DOESN'T TELL THE STORY TO YOUR GREATER AUDIENCE.

FOURTH RECOMMENDATION IS TO REQUIRE AN ANNUAL SUBMISSION OF A COMMUNICATIONS PLAN. YOU'VE HAD TWO SIGNIFICANT COMMUNICATIONS PORTIONS TO YOUR STRATEGIC PLAN, ONE OF WHICH WAS NOT ADOPTED. SO WE THINK THERE NEEDS TO BE A MORE REGULAR AND UPDATED COMMUNICATIONS STRATEGY.

AND THEN WE RECOMMEND THAT YOU ESTABLISH A SOLID MESSAGE PLATFORM THAT TELLS YOUR STORY. SOME OF THE BOARD MEMBERS ALREADY REFERRED TO THAT.

MR. TORRES: PAGE 10 REFLECTS THAT.

MR. RAIMUNDO: AND PAGE 10 REFLECTS THAT. SO I WILL LET IT GO AT THAT. IF ANYBODY HAS ANY QUESTIONS, DAVID AND I WOULD BE HAPPY TO ANSWER

THEM.

DR. JUELSGAARD: IN TERMS OF CALLING THIS THE STEM CELL INSTITUTE, SO DID YOU TAKE INTO ACCOUNT PROPOSITION 71 AND THE FACT THAT THE CALIFORNIA CONSTITUTION WAS AMENDED TO CREATE AN ORGANIZATION CALLED THE CALIFORNIA INSTITUTE OF REGENERATIVE MEDICINE? HOW DO YOU COUPLE THOSE TWO?

MR. RAIMUNDO: YOU WOULD STILL USE THE FORMAL NAME, CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE, WITHIN THE CONFINES OF THE EXISTING LAW. BUT THEN ALL THE PUBLIC RELATIONS EFFORTS YOU MAKE, MAYBE EVEN IN YOUR LETTERHEAD, YOU HAVE A SUBSTATEMENT OF WHO ARE YOU ARE. IT'S A STATEMENT OF WHAT YOU DO.

CHAIRMAN THOMAS: THINK OF IT AS A NICKNAME, MR. JUELSGAARD.

MR. RAIMUNDO: MORE OF A NICKNAME, YEAH. SO IT WOULD STILL ACKNOWLEDGE THE FACT THAT IN LAW YOU'RE THE CIRM.

DR. PIZZO: CAN I JUST MAKE A POINT? SO IN THIS JUST IN TERMS OF THAT, IN THESE POLITICAL TIMES WHEN WE ARE THINKING ABOUT THE FUTURE AND HOW WE'RE GOING TO COMMUNICATE ACROSS THE NATION, AND FOLLOWING -- I DON'T KNOW IF THIS IS WHERE STEVE WAS GOING, BUT IT SEEMS TO ME, DESPITE ALL THE VALUE

THAT WE PUT INTO STEM CELL RESEARCH, AND TO CALL OUR OWN INSTITUTE STEM CELL RESEARCH, REGENERATIVE MEDICINE IS A MORE ACCEPTABLE TERM WITH LESS POLITICAL CHARGE AROUND IT. SO I JUST WONDER WHETHER OR NOT AT THE HIGHEST LEVEL OF OUR COMMUNICATION STRATEGY WHAT YOU'VE THOUGHT ABOUT THAT IN TERMS OF THE RISK-BENEFIT RATIO OF ONE VERSUS THE OTHER.

MR. RAIMUNDO: TWO THINGS OCCUR. ONE IS THAT I THINK THE VOTERS WERE ENTIRELY AWARE OF THAT AT THE TIME THEY APPROVED BY A FAIRLY SIGNIFICANT MARGIN THE CREATION OF THE ORGANIZATION IN THE FIRST PLACE. AND SO THAT IS THEIR AFFIRMATION OF THEIR WILLINGNESS TO PLUNGE IN TO STEM CELL RESEARCH.

AND THEN SECOND THING IS THAT I THINK YOU STILL HAVE TO COMMUNICATE TO THEM WHAT YOU DO. I'M NOT SURE -- AS A TERM OF ART, REGENERATIVE MEDICINE IS PROBABLY GOOD, BUT IT'S A TERM FOR PUBLIC RELATIONS. I DON'T THINK MOST PEOPLE CONNECT WITH IT.

MR. ROTH: I'M NOT GOING TO BELABOR, BUT I WANT TO AGREE WITH PHIL ON THIS, THAT YOU THINK CAREFULLY ABOUT THAT.

MR. RAIMUNDO: SURE. AND ONE OF OUR RECOMMENDATIONS, YOU WILL NOTICE LATER ON, IS

ADDITIONAL POLLING AND VOTER -- BOTH POLLING AND FOCUS GROUPS, AND WE CAN TEST THAT OBVIOUSLY.

MR. TORRES: ANY OTHER COMMENTS?

MS. GIBBONS: I THINK THAT WE PERPETUATE THE POLARIZATION OF STEM CELL BY AVOIDING IT. I THINK IT NEEDS TO BECOME VERNACULAR. I THINK WE NEUTRALIZE IT. AND IF WE MAKE IT MORE CONVERSANT KIND OF IN THE EVERYDAY LEXICON, THAT THE PEOPLE DO GET IT. I AGREE THAT THERE MAY BE POLITICAL BENEFITS TO REGENERATIVE MEDICINE, BUT I THINK IN THE COURT OF PUBLIC OPINION, THAT WE SHOULD JUST OWN IT, CLAIM IT, NAME IT, AND LIVE BY IT BECAUSE THAT'S WHAT IT IS.

MR. RAIMUNDO: I WOULD JUST ADD ONE LAST THING IS THAT WE HAVE TO LOOK AT YOUR POLITICAL AND SOCIAL PRESENCE AS AN INSTITUTION IN CALIFORNIA. AND, YES, I THINK ON A NATIONAL STAGE, THAT IS MUCH MORE TO BE WARY OF, BUT I THINK IN CALIFORNIA WE HAVE A POPULATION THAT'S ALREADY DEMONSTRATED ITS ACCEPTANCE.

DR. PIZZO: I ACCEPT -- I THINK THE POINTS YOU MAKE, LEEZA, ARE VERY APPROPRIATE. I ACCEPT THOSE TOTALLY. I WAS THINKING ON A NATIONAL STAGE, AND I DO AGREE WITH YOU THAT WE DON'T WANT TO AVOID WHAT WE'RE ABOUT. I'M JUST TRYING TO THINK IN TERMS

OF WHAT THE PUBLIC OUTSIDE OF THE WORLD WE LIVE IN IS GOING TO THINK AS WELL. WE DO TEND TO -- I KNOW I DO AND WE OFTEN LIVE IN A KIND OF BUBBLE WHERE WE THINK EVERYONE FEELS THE SAME THAT WE DO. THIS IS YOUR WORLD. YOU KNOW IT FAR BETTER THAN I, BUT THAT'S NOT ALWAYS THE AFFIRMATION.

I GOT INTO THIS GREAT DEBATE ONCE WITH PAUL BERG WHEN WE WERE FIRST STARTING THIS PHASE BECAUSE OF THE WORD "CLONING." AND HE WAS ADAMANT THAT WE SHOULD JUST PUSH THAT INTO THE PUBLIC DOMAIN BECAUSE IT WAS WHAT WE DID, AND WE SHOULDN'T ASSIGN NEGATIVE TONALITY TO IT. BUT EVENTUALLY WE MOVED AWAY FROM THAT, AND I THINK THAT WAS A GOOD STRATEGY BECAUSE CLONING CARRIES SOME EXTRA MEANING.

I THINK WE SHOULD -- I TAKE YOUR POINT, BUT I WOULD ARGUE THAT AS WE THINK ABOUT THIS ON A NATIONAL STAGE, WHICH IS WHERE WE WANT TO BE IF WE'RE GOING TO BE ULTIMATELY SUCCESSFUL, WE THINK ABOUT BOTH ASPECTS.

MS. GIBBONS: WE'RE NOT LOSING CIRM. A, WE CAN'T LEGALLY. AND, B, THERE'S TIMES WHEN IT'S EXPEDIENT TO KEEP CIRM.

MR. RAIMUNDO: WE'RE THINKING ABOUT MORE AS A MARKETING IMAGE PIECE. AND I DON'T WANT TO BE TOO DEFENSIVE ABOUT WHAT YOU ARE SAYING. OF COURSE,

IN OUR STRATEGIC MOVING FORWARD STRATEGICALLY, WE'LL ALWAYS KEEP THAT IN MIND.

DR. PIZZO: I USED STEM CELL BIOLOGY ALL THE TIME WHEN I WAS SPEAKING ABOUT IT.

CHAIRMAN THOMAS: I'D LIKE TO CLOSE BY SAYING IT'S A BIT UNFORTUNATE THAT THIS IS A RUSHED DISCUSSION BECAUSE THERE WAS A LOT OF WORK THAT WENT INTO THIS. I WOULD LIKE TO NOTE THAT JEFF SHEEHY PARTICIPATED BECAUSE OF HIS EXPERTISE IN COMMUNICATIONS A GREAT DEAL IN THE DISCUSSIONS ON THIS PLAN AS WELL. WE THINK THIS IS A VERY GOOD PLAN. WE COMMEND DAVID AND JEFF AND CHRIS AND THEIR WORK. WE THINK IT ACHIEVES THE GOALS OF REALLY PUSHING FORWARD A VERY COORDINATED, HIGHLY UNIFIED COMMUNICATIONS EFFORT THAT PAYS ATTENTION BOTH TO THE PUBLIC SIDE AND FULLY ATTENDS TO THE NEEDS OF THE SCIENCE STAFF AND THEIR COMMUNICATIONS AS WELL.

SO, MR. CHAIR, I THINK IT'S TIME.

DR. PRIETO: ASK ONE QUESTION. I HAD A QUESTION BECAUSE I THOUGHT THIS WAS A CHANGE FROM WHAT WE HAD DISCUSSED RECENTLY. WHY THE SENIOR DIRECTOR OF COMMUNICATIONS APPEARS TO REPORT BOTH TO THE VICE CHAIR OF THE BOARD WHO HEADS THE COMMUNICATIONS SUBCOMMITTEE AND TO THE SENIOR VP FOR RESEARCH AND DEVELOPMENT. IT WOULD SEEM TO ME TO BE

MORE APPROPRIATE TO HAVE A SINGLE REPORT, AND THAT SCIENTIFIC ISSUES WOULD BE VETTED BY THE VP FOR R & D.

MR. SHESTACK: I WAS CONFUSED BY THAT SAME ISSUE. I THOUGHT ONE OF THE OBJECTS OF THE REORGANIZATION WAS TO REORGANIZE TO AVOID JOINT REPORTS. WAS I JUST INCORRECT ABOUT THAT?

CHAIRMAN THOMAS: CAN I ANSWER THAT VERY QUICKLY? THE THINKING WAS AS OF LAST SPRING, THE BOARD HAD VOTED TO MOVE THE PUBLIC COMMUNICATIONS TO THE CHAIR'S OFFICE, BUT THE REST OF THE COMMUNICATIONS STAFF WAS STILL OVER IN THE SCIENCE SIDE OF THE LEDGER. IT WAS MY OPINION, BASED ON ADVICE OF OUR CONSULTANTS AND IN MUCH DISCUSSION, THAT THIS SHOULD ALL BE CONSOLIDATED. ALL MEMBERS OF THE COMMUNICATIONS TEAM SHOULD BE IN THE OFFICE OF THE CHAIR, BUT IN SO DOING, IN AN EFFORT TO MAKE SURE THAT THE NEEDS OF THE SCIENCE STAFF WERE LOOKED AFTER FULLY, WE CAME UP WITH THIS REPORTING SCENARIO WHERE THE VICE PRESIDENT OF RESEARCH AND DEVELOPMENT, IN THIS CASE DR. FEIGAL, WILL BE INTEGRALLY INVOLVED WITH RESPECT TO SCIENTIFIC CONTENT AND SUBSTANCE AND LOOKING TO SEE THAT THE SCIENCE STAFF'S NEEDS ARE TAKEN CARE OF. ALL OTHER MATTERS IN TERMS OF REPORTING WILL GO UP TO THE VICE

CHAIRMAN, IN THIS CASE SENATOR TORRES, AND THAT'S WHY IT'S A LITTLE BIT OF AN UNUSUAL STRUCTURE, BUT IT WAS AN ATTEMPT TO PULL TOGETHER EVERYTHING IN SUCH A WAY THAT IT COULD WORK. AND MUCH DISCUSSION. THIS HAS HAD A LOT OF DISCUSSION, AS YOU CAN IMAGINE, BELIEVE THAT THIS WILL BE A VERY WORKABLE SOLUTION.

MR. TORRES: I THINK IF WE MOVE NEXT TO THE -- I WILL TAKE A MOTION FOR THE ENTIRE REPORT RATHER THAN AD SERIATIM. IF WE MOVE TO THE DUTY STATEMENT, I THINK SOME OF THE ISSUES THAT DR. PRIETO AND JONATHAN HAVE RAISED ARE APPROPRIATE, AND THAT'S WHY THE LANGUAGE ON PAGE 2 REALLY DELINEATES THE SCIENTIFIC CONTENT ISSUES THAT THE CHAIRMAN HAS JUST ARTICULATED AND WAS OF A CONCERN BY THE PRESIDENT AND THE SENIOR VICE PRESIDENT OF OUR INSTITUTION.

CAN YOU GIVE US A QUICK COMPARISON, MR. HARRISON, BETWEEN WHAT WE HAD ADOPTED BEFORE AS TO THESE QUALIFICATIONS TO HOW THIS IS DIFFERENT TODAY BEFORE THE BOARD?

MR. HARRISON: YES. AS CHAIRMAN THOMAS MENTIONED, IN JUNE THE BOARD ADOPTED WHAT WAS ESSENTIALLY A BIFURCATED COMMUNICATIONS STRUCTURE WITH SCIENTIFIC AND EDUCATION COMMUNICATIONS

REPORTING TO THE PRESIDENT AND PUBLIC COMMUNICATIONS REPORTING TO THE CHAIR. WITH THIS REPORT AT HAND AND WITH OUR NEW CHAIR, WE HAVE DEVELOPED A UNIFIED STRUCTURE WITH THE JOINT REPORT THAT HAS BEEN ALLUDED TO.

AND WHAT THIS POSITION DESCRIPTION DOES IS TO DEFINE THOSE AREAS FOR WHICH VICE CHAIR TORRES WILL HAVE OVERSIGHT RESPONSIBILITY AND THOSE AREAS AS TO WHICH DR. FEIGAL WILL HAVE OVERSIGHT RESPONSIBILITY, AS WELL AS AREAS IN WHICH EACH OF THEM WILL HAVE RESPONSIBILITY FOR WORKING DIRECTLY WITH THE DIRECTOR OF COMMUNICATIONS TO ENSURE THAT WE HAVE A UNIFIED MESSAGE.

MR. TORRES: IT'S ALSO IMPORTANT TO NOTE THAT THE THREE POSITIONS THAT ARE ON THE CHART ON PAGE 7, SCIENCE AND EDUCATION, GRAPHIC AND MULTIMEDIA, AND INTERNAL AND DIGITAL ARE CURRENT EMPLOYEES AT CIRM, AND THERE IS NO INTENT TO REMOVE THEM FROM SUCH POSITION UNLESS THEY CHOOSE TO LEAVE. THE ONLY NEW PERSON THAT WE WILL HAVE TO LOOK FOR IS ON POLICY AND PATIENT ADVOCATE OUTREACH.

CHAIRMAN THOMAS: AND IT'S NOT JUST -- NO INTENT TO REMOVE. WE THINK THEY'VE BEEN DOING A VERY GOOD JOB WITHIN THEIR JOB RESPONSIBILITIES, AND WE ARE VERY HAPPY THAT THEY ARE PART OF THE WHOLE

PROGRAM AND PART OF THIS UNIFIED EFFORT.

MR. TORRES: HAPPY TO STAY ON. ALL RIGHT. ANY OTHER COMMENTS ON THIS POSITION DUTY STATEMENT OR THE COMMUNICATIONS PLAN BY MEMBERS OF THE BOARD? ANY PUBLIC COMMENT? THERE BEING NONE, THE CHAIR WILL NOW ENTERTAIN A MOTION THAT SHOULD READ AS FOLLOWS, MR. HARRISON.

MR. HARRISON: THE MOTION WOULD BE TO APPROVE THE PROPOSAL IN THE COMMUNICATIONS PLAN TO RESTRUCTURE THE COMMUNICATIONS FUNCTION AT CIRM AND TO APPROVE THE REVISED POSITION DESCRIPTION FOR THE SENIOR DIRECTOR OF PUBLIC COMMUNICATIONS AND PATIENT ADVOCATE OUTREACH.

MR. TORRES: AND TO DIRECT THE STAFF TO --

MR. HARRISON: I FORGOT MY OWN ADDITION. AND TO DIRECT THE STAFF TO CONFORM THE INTERNAL GOVERNANCE POLICY TO THE CHANGES REFLECTED IN THE COMMUNICATIONS PLAN.

CHAIRMAN THOMAS: THANK YOU, MR. HARRISON.

MS. GIBBONS: SO MOVED.

MR. TORRES: IS THERE A SECOND?

DR. HAWGOOD: SECOND.

MR. HARRISON: VOICE VOTE EXCEPT AS TO THOSE ON THE PHONE.

MR. TORRES: ALL THOSE IN FAVOR PLEASE

SIGNIFY BY SAYING AYE. OPPOSED? ABSTENTIONS? WOULD YOU CALL THOSE ON THE PHONE, PLEASE, MARIA.

MS. BONNEVILLE: MARCY FEIT.

MS. FEIT: YES.

MS. BONNEVILLE: CLAIRE POMEROY.

DR. POMEROY: YES.

MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: YES.

MR. TORRES: THE MOTION CARRIES UNANIMOUSLY.

CHAIRMAN THOMAS: THANK YOU. WE NOW HAVE ABOUT SIX ITEMS TO GET THROUGH IN 20 MINUTES OR WE'RE GOING TO SET A LAND SPEED RECORD GOING FORWARD. WE'RE GOING TO TAKE THEM A LITTLE OUT OF ORDER. LET'S START WITH NUMBER -- I WANT TO MAKE SURE WE GET THROUGH CERTAIN THINGS ABSOLUTELY FIRST.

NO. 12, CONSIDERATION OF CONCEPT APPROVAL OF THE CREATIVITY AWARDS. MIKE OR PAT, ONE OF YOU DOING THIS? DR. MANI VESSAL.

DR. VESSAL: MR. CHAIRMAN, MEMBERS OF THE BOARD, PUBLIC, I KNOW WE'RE RUNNING LOW ON TIME, SO I'LL MAKE THIS QUICK. I'M HERE TO INTRODUCE YOU TO THE CONCEPT PROPOSAL FOR AN RFA FOR CREATIVITY AWARDS, WHICH REALLY HAS THE FOLLOWING AIMS, WHICH IS TO EXPOSE THE NEXT GENERATION OF CALIFORNIANS TO

THE STEM CELL SCIENCE BY INTRODUCING HIGH SCHOOL STUDENTS TO CUTTING-EDGE MEDICAL RESEARCH IN THE FIELD OF STEM CELL SCIENCE.

WE'RE DOING THIS THROUGH SYNERGIZING WITH EXISTING PROGRAMS AT CALIFORNIA INSTITUTIONS AND WOULD AIM TO PROMOTE THE INVOLVEMENT OF STUDENTS REPRESENTING THE DIVERSITY OF CALIFORNIA'S POPULATION AND FOSTER CREATIVITY BY ENCOURAGING PURSUIT OF A SECOND DISCIPLINE. AGAIN, I'LL USE A QUICK EXAMPLE OF JUST STEVE JOBS, PASSING, WHO TOOK CALLIGRAPHY, AND WE SAW HOW THAT REALLY PLAYED A ROLE IN HIS DESIGN OF ALL THE PRODUCTS THAT HE CAME UP WITH AND IN THE CREATION OF FONT. SO WE KNOW THAT THIS ACTUALLY HAS WORKED IN THIS FIELD OF SCIENCES AND TECHNOLOGY AND ENGINEERING.

THIS, OF COURSE, WAS BASED ON A PILOT PROGRAM THAT WE RAN PAST SUMMER OF 2011, WHICH ENROLLED 22 JUNIOR AND SENIOR STUDENTS FROM CALIFORNIA HIGH SCHOOLS THAT WERE SELECTED BY FOUR PARTICIPATING INSTITUTIONS. AND THEY WERE ACCEPTED INTO THESE PROGRAMS BASED EITHER ON ACADEMIC ACHIEVEMENT AND/OR ON THEIR SOCIOECONOMIC STATUS.

THEY PRESENTED THEIR RESULT OF THE RESEARCH THAT THEY CARRIED OUT THROUGHOUT THE SUMMER ON AUGUST 2D AT CHILDREN'S HOSPITAL IN OAKLAND, AND

SELECT STUDENTS GAVE TALKS. THERE WAS A TWO-MINUTE VIDEO CLIP THAT I WAS GOING TO SHOW, BUT WE'RE RUNNING LOW ON TIME, SO I WOULD SKIP THAT, BUT I WILL REFER TO IT. IT IS ACTUALLY AVAILABLE ON OUR WEBSITE FOR THOSE WHO ARE INTERESTED OF THIS POSTER DAY.

WE DID A FOLLOW-UP SURVEY WHICH WE CONDUCTED BY BOTH THE PARTICIPATING STUDENTS, BUT AS WELL AS THE DIRECT MENTORS WHO WERE THE POST DOCS AND THE SENIOR GRADUATE STUDENTS. AND WE HAD ABOUT A 75-PERCENT RESPONSE RATE FOR THESE SURVEYS, AND THEY WERE UNANIMOUSLY POSITIVE AND VERY ENTHUSIASTIC TOWARDS THE PROGRAM.

THE PILOT PROGRAM, BUT ALSO THE UPCOMING RFA WOULD ENTAIL FOUR FULL-TIME RESEARCH AND TRAINING ACTIVITIES IN THE MENTORING PI'S LABORATORY WITH A DURATION OF SIX TO EIGHT WEEKS THROUGHOUT THE SUMMER. THE FOCUS WOULD BE ON STEM CELL SCIENCE AND/OR DEVELOPMENTAL BIOLOGY AND WEEKLY LECTURES. DISCUSSIONS AND MEETINGS WOULD BE HELD AS PART OF THE CURRICULUM OF THESE PROGRAMS THAT ARE ALREADY EXISTING IN THESE INSTITUTIONS. OF COURSE, WE ENCOURAGE PARTICIPATION IN A SECOND DISCIPLINE, AGAIN, FOR ALL THE REASONS THAT WE PROVIDED IN THE PAST.

ELIGIBILITY FOR THE PROGRAM, THE PROGRAM DIRECTOR WOULD BE AUTHORIZED BY THE APPLICANT INSTITUTION TO OVERSEE AND MANAGE THE ENTIRE SUMMER RESEARCH INTERNSHIP PROGRAM. THE INSTITUTIONS WOULD BE NONPROFIT INSTITUTIONS IN CALIFORNIA WITH A PREEXISTING SUMMER HIGH SCHOOL RESEARCH INTERNSHIP PROGRAM, AND, OF COURSE, THEY MUST HOLD ACTIVE RESEARCH LABS IN STEM CELL SCIENCE AND/OR DEVELOPMENTAL BIOLOGY AND HAVE PARTICIPATING FACULTY MEMBERS TO MENTOR THESE STUDENTS.

THE AWARDS WE'RE PLANNING ON ARE APPROXIMATELY TEN AWARDS, THREE-YEAR AWARDS, UP TO TEN STUDENTS PER AWARD PER YEAR. TOTAL OF 300 STUDENTS WOULD BE FUNDED AT THE END OF THE PROGRAM WITH A DIRECT PROJECT COST OF UP TO 67,500 PER YEAR AND A TOTAL ESTIMATED COST OF THE PROGRAM UP TO $2.2 MILLION.

PROVISIONAL TIMETABLE, RELEASE OF RFA WOULD BE NEXT NOVEMBER, NEXT MONTH. APPLICATIONS WILL DUE IN JANUARY OF 2012. THE REVIEW OF APPLICATIONS BY THE GRANTS WORKING GROUP WILL TAKE PLACE IN FEBRUARY, AND WE WILL BRING THEIR RECOMMENDATIONS BEFORE YOU FOR YOUR APPROVAL TO FUND IN MARCH OF 2012.

SO IN SUMMARY, WE WOULD LIKE TO REQUEST

FOR THE APPROVAL OF CONCEPT FOR CIRM CREATIVITY AWARDS, WHICH IS A THREE-YEAR PROGRAM SUPPORTING SUMMER RESEARCH INTERNSHIPS FOR HIGH SCHOOL STUDENTS WITH A FUNDING OF APPROXIMATELY TEN AWARDS, A TOTAL PROGRAM COST OF 2.2 MILLION.

MR. TORRES: SO MOVED.

MR. GOLDBERG: SECOND.

CHAIRMAN THOMAS: THIS, FOR EVERYBODY'S BENEFIT, WAS A LIGHTS-OUT SUCCESS. DR. TROUNSON HAS SAID ON A NUMBER OF OCCASIONS THAT HE THOUGHT HE WAS TALKING TO POST DOCS WHEN HE WAS SPEAKING TO THE HIGH SCHOOL KIDS AT THE END OF THEIR SESSION. THIS IS EMINENTLY WORTH DOING AND A GREAT PROGRAM.

DR. LUBIN: I'M ALL FOR THIS. I'M SORRY. WHAT IS THE STIPEND FOR EACH STUDENT? YOU MIGHT HAVE SAID THAT AND I MISSED IT.

DR. VESSAL: NO, I HAVEN'T. I WILL GIVE YOU THE BREAK. STUDENTS GET $2,000. THE ACTUAL STUDENTS GET $2,000.

DR. LUBIN: FOR ALL SUMMER?

DR. VESSAL: FOR THE SUMMER AND THE MENTORS, THE POST DOC, OR THE GRADUATE STUDENT WOULD GET A $1,000.

DR. LUBIN: THAT'S GOING TO EXCLUDE MINORITIES FROM APPLYING TO THIS BECAUSE MOST OF THE

KIDS THAT WE HAVE IN OUR SUMMER PROGRAM, WHICH WE'VE HAD FOR 30 YEARS, ALSO HELP SUPPORT THEIR FAMILIES. THERE'S NO WAY THEY'RE GOING TO BE ABLE TO DO A FULL-TIME JOB FOR 2,000 FOR THE SUMMER.

DR. VESSAL: I HAVE TO SAY THAT WE HAVE MADE UP FOR THAT POPULATION OF STUDENTS. WE'VE MADE AN EXCEPTION, FOR INSTANCE, FOR UCSF WHERE THEY DO COME THAT -- SOCIOECONOMIC BACKGROUND WAS THEIR MAIN CRITERIA FOR EXCEPTION. WE DID MAKE AN EXCEPTION AND THEY DID 20 HOURS A WEEK BECAUSE THEY HAD TO HOLD ANOTHER JOB FOR THAT.

WE HAD A PUSHBACK FROM ALL THE INSTITUTIONS WITH THE PROGRAMS BECAUSE THEY THOUGHT ANY FIGURE ABOVE 2,000 WAS UNREASONABLE BECAUSE THEIR FUNDING LEVELS WERE NOT EVEN AT 2,000, AND SO THE DISCREPANCY BETWEEN OUR FUNDING AND THEIR LEVEL WOULD HAVE BEEN --

DR. LUBIN: NIH FUNDS AT 6,000 FOR TWO MONTHS, 3,000 A MONTH.

DR. VESSAL: FOR A SIX TO EIGHT WEEK.

DR. LUBIN: WE'VE HAD A PROGRAM FOR 30 YEARS FUNDED BY NHLBI THAT FUNDS 20 STUDENTS -- NOW IT FUNDS 20 STUDENTS EVERY SUMMER, AND THEY GET 6,000 A STUDENT, 3,000 A MONTH FOR TWO MONTHS. THEY HAVE TO WORK FULL TIME, AND IT'S FOR

SOCIOECONOMICALLY CHALLENGED STUDENTS.

CHAIRMAN THOMAS: IS THERE ANY REASON THAT WE CAN'T INCREASE THE AMOUNT?

DR. JUELSGAARD: INCREASE THE AMOUNT FOR EVERYBODY OR JUST THOSE THAT REACH A CERTAIN SOCIOECONOMIC STATUS?

DR. PRIETO: OR MAKE SOME KIND OF ALLOWANCE WITHIN THE PROGRAM TO ALLOW IT.

CHAIRMAN THOMAS: TO TAKE INTO ACCOUNT SOCIOECONOMIC STATUS.

DR. LUBIN: WE HAVE ANOTHER 20 STUDENTS THAT VOLUNTEER WHO COME FROM GROUPS THAT DON'T NEED THE STIPEND, BUT WANT TO DO THE WORK.

DR. PIZZO: I ACCEPT THE POINTS THAT ARE BEING MADE. I THINK THAT THIS IS A REAL ISSUE THAT DR. LUBIN IS REFERRING TO. WE DO ALSO HAVE SUCH PROGRAMS, HAVE HAD THEM FOR A VERY LONG TIME. WE DON'T PAY AS MUCH, AND MANY OF THEM, MOST OF THEM ARE SOCIOECONOMICALLY DEPRIVED STUDENTS AND THEY'VE DONE FINE WITH IT. SO I THINK THERE ARE WAYS OF DOING IT. IF THERE'S FLEXIBILITY IN THAT REGARD, I THINK THAT WOULD BE GREAT.

THE POINT I WAS GOING TO MAKE JUST VERY QUICKLY IS THAT WHEN YOU'RE LOOKING FOR A METRIC OF SUCCESS OF CIRM GOING FORWARD, THIS IS ANOTHER GREAT

ONE TO UNDERSCORE BECAUSE REGARDLESS OF WHAT HAPPENS, I THINK WE ALL KNOW THIS IS GOING TO CHANGE LIVES AND CHANGE CAREERS IN A VERY SIGNIFICANT WAY. AND I WOULD REALLY INCLUDE THAT IN OUR REGISTER OF GOOD THINGS TO DO.

CHAIRMAN THOMAS: WE HAVE A MOTION ON THE FLOOR. I GUESS THE QUESTION IS CAN WE AMEND THAT TO DIRECT STAFF -- PROVISIONALLY APPROVE THIS, DIRECT STAFF TO DEVELOP SOME FLEXIBILITY WHICH TAKES INTO ACCOUNT SOCIOECONOMIC --

DR. LUBIN: SO I WOULD PROPOSE THAT YOU CAN GIVE THE SAME AWARD TO EACH PLACE FOR TEN, BUT WE MIGHT DECIDE WE ONLY WANT FIVE STUDENTS, BUT USE THE TEN AWARDS THAT WE GET TO COVER MORE STIPEND FOR THE STUDENTS, AND THAT THE REVIEW PROCESS COULD CONSIDER WHETHER THAT MAKES SENSE.

DR. PIZZO: I WOULD DISAGREE WITH YOU THERE. I WOULD LOVE TO SEE MORE STUDENTS BE SUPPORTED. SO I WOULD SUGGEST THAT WE TRY AND LOOK AT THE FLEXIBILITY OF THE FUNDING.

DR. VESSAL: AGAIN, AS I SAID, WE MADE THE EXCEPTION FOR UCSF EVEN FOR THE PILOT PROGRAM. WE DID THAT. IT WOULD BE NO ISSUE TO MAKE THAT FLEXIBILITY AND TO RAISE IT, BUT WE WOULD NEED MORE MONEY IN THE BUDGET, IN THE TOTAL BUDGET.

DR. PIZZO: WHY DON'T YOU LOOK AT THAT.

CHAIRMAN THOMAS: SINCE WE WANT TO GET THE RFA'S OUT IN NOVEMBER, JAMES, HOW DO WE HANDLE THIS? HOW DO WE PHRASE IT IN A WAY THAT WE CAN PASS SOMETHING TODAY WHICH GIVES SOME FLEXIBILITY FOR DRAFTING TO TAKE INTO ACCOUNT THESE COMMENTS?

MR. HARRISON: I THINK YOU APPROVE THE CONCEPT PLAN FOR CREATIVITY AWARDS WITH A DIRECTION TO STAFF TO CONSIDER ADDING FLEXIBILITY TO TAKE INTO ACCOUNT SOCIOECONOMIC STATUS OF APPLICANTS AND APPROVE A BUDGET OF UP TO $3 MILLION SO THEY HAVE THAT KIND OF FLEXIBILITY.

CHAIRMAN THOMAS: DR. LUBIN, DOES THAT WORK FOR YOU?

DR. LUBIN: THAT'S FINE.

CHAIRMAN THOMAS: WHO MADE THE ORIGINAL MOTION?

MR. TORRES: I DID.

CHAIRMAN THOMAS: SENATOR, DO YOU ACCEPT THE AMENDMENT?

MR. TORRES: MOVE AS AMENDED. SECOND?

MR. GOLDBERG: I ACCEPT.

CHAIRMAN THOMAS: ANY PUBLIC COMMENT ON THIS TOPIC?

MS. FEIT: I JUST WANT TO SAY THAT I AGREE

WITH DR. PIZZO, THAT I THINK THIS IS A PROGRAM THAT WILL GET US A LOT OF RECOGNITION IN THE GENERAL PUBLIC. ANY TIME WE'RE HELPING THE UNDERSERVED MOVE AHEAD, THIS IS A GOOD THING.

CHAIRMAN THOMAS: THANK YOU, MARCY. ANY OTHER COMMENTS BY THE BOARD? ALL THOSE IN FAVOR OF THE MOTION PLEASE SAY AYE. OPPOSED? MOTION PASSED. SORRY. MOTION NOT YET PASSED.

MS. BONNEVILLE: MARCY FEIT.

MS. FEIT: YES.

MS. BONNEVILLE: CLAIRE POMEROY.

DR. POMEROY: YES.

MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: YES.

CHAIRMAN THOMAS: MOTION PASSED.

AGENDA ITEM 13, BASIC BIOLOGY IV CONCEPT APPROVAL. HEARING FROM EITHER MICHAEL OR PAT. OH, IT'S DR. MANI AGAIN.

DR. PIZZO: I RECOMMEND APPROVAL. I LOVE IT.

CHAIRMAN THOMAS: ANY DISCUSSION IN ADVANCE OF THE PRESENTATION? DR. MANI, WE HAVE TEN MINUTES FOR FIVE ITEMS.

DR. VESSAL: ABSOLUTELY. I WILL MAKE IT QUICK. MR. CHAIRMAN, MEMBERS OF THE BOARD, AGAIN,

MY PLEASURE TO BE INTRODUCING THE SECOND CONCEPT FOR THE FOURTH ROUND OF BASIC BIOLOGY RFA. AS YOU KNOW, THIS IS ONE OF CIRM'S CORE AND REPEATING RFA'S WHICH FOSTERS CUTTING-EDGE RESEARCH.

AGAIN, IT'S BEEN REITERATED ENOUGH, I THINK, TODAY IN DISCUSSIONS IN THE MORNING THAT BASIC BIOLOGY IS REALLY A CORE NECESSITY FOR CIRM'S MISSION AND ALSO IN STEM CELL BIOLOGY. SO I WILL NOT GET INTO THE DETAILS OF THAT.

SOME OF THE FOCUS AREAS THAT HAVE ALREADY BEEN IN THE PREVIOUS ROUNDS THAT WE ARE CONTINUING, OF COURSE, WITH THIS ROUND AS WELL HAVE BEEN HUMAN PLURIPOTENT AND ADULT STEM CELL BIOLOGY, STUDYING MOLECULAR DETERMINANTS FOR CELL FATE, AND, OF COURSE, UTILIZING STEM CELLS TO STUDY MECHANISMS OF DISEASE. BUT FOLLOWING UP THE CEREBRAL PALSY WORKSHOP AND THE RECOMMENDATIONS THAT CAME OUT OF THAT, WE'VE ADDED, OF COURSE, AN ENCOURAGING SORT OF FACTOR TO THIS BULLET FOCUS OF ENCOURAGING THOSE WHO STUDY JUVENILE NEUROLOGICAL DISORDERS TO ALSO APPLY AND TO STUDY THE MECHANISMS AND USING STEM CELLS TO STUDY THE MECHANISMS OF THAT SPECTRUM OF DISEASE.

ANOTHER NEW ADDITION IS IMMUNOGENICITY OF HUMAN STEM CELL DERIVATIVES, AND IN TRANSPLANTATION, AGAIN, THIS A BOTTLENECK IN THE TRANSLATIONAL SORT

OF PIPELINE. AND BASIC BIOLOGY, OF COURSE, IS THERE TO INFORM THE MECHANISMS OF ACTION THAT TAKE PLACE, OF COURSE, AND FEED INTO IT, AS DR. FEIGAL SHOWED EARLIER ON THAT CHEVRON. SO, AGAIN, THEY'RE INTERLINKED.

ANOTHER NEW AREA THAT WE ARE INCLUDING AS A FOCUS AREA IS TISSUE ENGINEERING TO STUDY THE CELLULAR INTERACTIONS IN AN ARTIFICIAL ENVIRONMENT, WHICH WOULD, AGAIN, SHED LIGHT, AND THERE'S A LOT OF INTEREST IN THE FIELD NOW IN TISSUE ENGINEERING, AND SO WE'RE REALLY JUST MOVING ON WITH THE FIELD AND THE TREND AND COVERING THE AREAS THAT ARE NECESSARY FOR BASIC BIOLOGY TO INFORM.

ELIGIBILITY, AS ALWAYS, THE PRINCIPAL INVESTIGATOR MUST HOLD A PH.D. OR M.D. OR EQUIVALENT DEGREE, AUTHORIZED BY THE APPLICANT INSTITUTION TO CONDUCT THE PROPOSED RESEARCH IN CALIFORNIA, AND MUST COMMIT A MINIMUM OF 20-PERCENT EFFORT. INSTITUTIONS CAN BE EITHER NONPROFIT AND/OR FOR-PROFIT INSTITUTIONS.

WE'RE PLANNING ON APPROXIMATELY 25 AWARDS, THREE-YEAR AWARDS, AND DIRECT PROJECT COST OF UP TO $300,000 PER YEAR, AND AN ESTIMATED TOTAL PROGRAM COST OF UP TO 35 MILLION. AND, OF COURSE, WE'RE GOING TO BE ASSUMING A PREAPPLICATION REVIEW

PROCESS.

PROVISIONAL TIMETABLE, THE RELEASE OF RFA WOULD BE NEXT MONTH IN NOVEMBER. PREAPPLICATIONS WILL BE DUE IN JANUARY OF 2012. FULL APPLICATIONS WILL BE DUE APRIL OF 2012. AND THE GRANTS WORKING GROUP WILL REVIEW THE APPLICATIONS IN SUMMER OF 2012, AND WE WILL BRING THEIR RECOMMENDATIONS BEFORE YOU FOR APPROVAL TO FUND IN FALL OF 2012.

SO IN SUMMARY, WE'D LIKE TO REQUEST FOR CIRM BASIC BIOLOGY IV AWARDS TO BE FUNDED FOR UP TO $35 MILLION.

DR. JUELSGAARD: SO IF I READ THE REPORT, THERE'S $22.5 MILLION TOTAL OF DIRECT PROJECT COSTS. THAT'S THE 300 TIMES THREE YEARS TIMES 25 INSTITUTIONS, IF I HAVE MAY MATH RIGHT. SO IF THAT'S RIGHT, THERE'S AN ADDITIONAL 12.5 MILLION WITHIN THAT 35 MILLION THAT'S NOT GOING TO DIRECT PROJECT COST. WHERE DOES THAT MONEY GO?

DR. VESSAL: THE INDIRECTS.

DR. OLSON: FACILITIES COST AND INDIRECTS. THESE ARE THE COMMON ONES THAT WE USE. THE FACILITIES COSTS ARE BASED ON NEGOTIATED NIH RATES, AND THEN THE INDIRECTS ARE CALCULATED ON TOP OF THAT AT A RATE OF 20 PERCENT.

DR. JUELSGAARD: SO THAT'S PRETTY TYPICAL,

THAT THE INDIRECT COSTS ARE ROUGHLY HALF OF THE DIRECT COST OR A LITTLE BIT MORE?

DR. OLSON: YES. AND IT VARIES AMONG THE INSTITUTIONS AND WITH THE NEGOTIATED RATE WITH THE NIH OF FACILITIES DIRECT.

DR. LUBIN: CAN I JUST GET A CLARIFICATION ON THE DEFINITION OF STEM CELLS FOR THIS PEDIATRIC NEUROLOGIC OR THE CHILDHOOD BECAUSE AT THE CP MEETING, A LOT OF CORD BLOOD STEM CELLS WERE USED. IS THAT EXCLUDED BECAUSE IN THE PAST THERE'S BEEN QUESTION WHETHER THAT'S REASONABLE TO APPLY OR NOT? I JUST WAS CURIOUS WHETHER CIRM WAS CHANGING THEIR ATTITUDE ABOUT THAT OR INCLUSION OF THOSE STEM CELLS IN THIS PROCESS.

DR. VESSAL: WE'RE NOT REALLY BEING EXCLUSIVE FOR ANY CELL TYPE AS LONG THEY'RE TRULY STEM CELLS THAT ARE BEING UTILIZED TO STUDY THE MECHANISMS. NOW, THAT'S NOT TO SAY THAT -- AGAIN, IT'S GRANTS WORKING GROUP THAT WILL MAKE THAT JUDGMENT AND OUR EXTERNAL REVIEWERS THAT WILL MAKE THAT JUDGMENT ON WHETHER IT'S A VALID STUDY TO GO FORWARD WITH OR NOT AND THE RIGHT TYPE OF CELLS TO BE USED.

DR. LUBIN: THE STUDY GROUP HAS IN THE PAST SAID THAT'S REALLY NOT AN EMBRYONIC STEM CELL

OR AN IPS-DERIVED. IS CORD BLOOD GOING TO BE INCLUDED AS A SOURCE OF STEM CELLS BASED UPON THE CP WORKSHOP?

DR. OLSON: FOR THIS PARTICULAR RFA, THERE'S NO EXCLUSION AS TO CELL TYPE WHATSOEVER.

DR. LUBIN: THANK YOU.

DR. PIZZO: JUST ONE QUESTION ON THE PERCENT EFFORT. I ASSUME THAT THE GUIDANCE, THAT IF THERE WAS A LESSER PERCENT EFFORT SUGGESTED, THAT THIS COULD BE DONE WITH THE APPROVAL OF THE PRESIDENT, IS THAT STILL THE CASE?

DR. VESSAL: YES.

DR. PIZZO: I JUST WANT TO BE SURE THAT WE HAVEN'T LOST SIGHT OF THAT.

DR. STEWARD: THANKS. THIS IS GOING TO ACTUALLY GO BACK TO ONE OF THE EARLIER COMMENTS. I ALWAYS WORRY ABOUT BOXES, AND IN THIS CASE BOXES ARE THE FOCUS AREAS. WHAT DO YOU MEAN FOCUS AREAS? MAYBE I MISSED THAT.

DR. VESSAL: WELL, AGAIN, THESE ARE NOT PRIORITIES BY ANY MEANS. SO WE'RE NOT -- THIS IS NOT TO SAY THAT THIS LIST IS A LIST OF PRIORITIES FOR THE REVIEWERS TO PRIORITIZE THE PROJECTS OVER. THE FOCUS AREAS BEING THE SORT OF PILLAR -- THE FIRST TWO BULLET POINTS BEING REALLY WHAT HAS BEEN

THE MAIN BASIS OF BASIC BIOLOGY RFA REALLY, JUST THE STUDY OF PLURIPOTENT CELLS AND ADULT STEM CELL BIOLOGY AND THE MECHANISMS OF INTERACTION.

DR. STEWARD: IF UNDERSTAND THAT. I GUESS WHAT I'M QUESTIONING IS THE REST.

DR. VESSAL: SO THE DISEASE IN A DISH SORT OF MODELS AND STUDIES THAT WOULD BE UTILIZING STEM CELLS TO STUDY DISEASE IN A DISH MODEL REALLY WITH AN ENCOURAGEMENT OF THOSE WHO ARE STUDYING JUVENILE NEUROLOGICAL DISORDERS JUST SIMPLY BECAUSE IT'S BEEN SO NEGLECTED AND HAS NOT BEEN PRESENT AT ALL IN OUR PORTFOLIO REALLY. AND THE RECOMMENDATION FROM THE CP WORKSHOP THAT CAME OUT WAS THAT IT COULD ACTUALLY TAKE ADVANTAGE OF ESPECIALLY THIS SIDE OF THE BASIC SCIENCE OF OUR RFA AND WAS REALLY TO TRY TO INCORPORATE IT TO WHICHEVER RFA IT COULD BENEFIT FROM, THE FIELD COULD BENEFIT FROM, WHICH BASIC SCIENCE IS ONE OF THEM.

DR. STEWARD: SO JUST TO SAY I THINK I WOULD RECOMMEND SOMETHING OTHER THAN FOCUS AREAS BECAUSE IT IMPLIES THAT THERE'S GOING TO BE PREFERENCE GIVEN OR LIMITATIONS TO OTHER RESEARCH. PAT, I KNOW THAT THAT'S NOT PROBABLY THE INTENT.

DR. OLSON: ACTUALLY IN SOME SENSES THAT IS THE INTENT BECAUSE WE HAVE DONE SOME WORK, WE'VE

TALKED TO PEOPLE, WE'VE LOOKED AT WHAT WE CONSIDER TO BE AREAS WHERE WE THINK THAT THERE IS SOME NEED TO DO SOME WORK. SO WE HAVE SUGGESTED THAT THESE ARE AREAS THAT WE'RE PARTICULARLY LOOKING FOR APPLICATIONS IN. WHAT WE HAVE NOT SAID IS WE HAVE NOT EXCLUDED APPLICATIONS FROM OTHER AREAS.

SO OBVIOUSLY IF A VERY COMPELLING PROPOSAL COMES FORWARD IN AN AREA THAT DOESN'T FALL IN THE LIST THAT'S ESSENTIALLY DEFINED BY THAT, THAT IS OBVIOUSLY SUBJECT TO GRANTS WORKING GROUP REVIEW. BUT I THINK WHAT WE'RE TRYING TO SAY IS WE HAVE LOOKED AT THE FIELD, WE'VE SURVEYED THE FIELD, WE'RE PARTICULARLY INTERESTED IN SEEING APPLICATIONS IN THESE AREAS.

DR. STEWARD: SO MAYBE IF YOU CAN SAY LIKE -- AGAIN, I'M JUST CONCERNED ABOUT THE CHANCE OF MISSING SOMETHING OUT THERE THAT WE MAY NOT BE AWARE OF AND IT'S SUPER. THE DEVILS ARE IN THE DETAILS HERE.

DR. VESSAL: WE ACTUALLY HAVE LANGUAGE IN THE RFA ITSELF THAT ACTUALLY STATES THAT SO THAT PEOPLE ARE NOT DISCOURAGED FROM APPLYING.

MS. SAMUELSON: MY MEMORY IS THAT IN THE LAST ROUND FOR THE BASIC BIOLOGY GRANTS, THAT THE TOTAL APPLICANTS WERE DOWN. IS THAT RIGHT?

DR. VESSAL: NO. WE HAD 289 PREAPPS THAT WERE SUBMITTED, AND 65 WERE RECOMMENDED FOR FUNDING. WE'RE EXPECTING WE WELL OVER 300 FOR THIS ROUND. SO IT'S DEFINITELY FULL APPLICATIONS, 65 FULL APPLICATIONS WERE INVITED WHICH IS REALLY AT OUR CAPACITY.

MS. SAMUELSON: THAT WAS PRETTY MUCH CONSISTENT WITH THE ONE BEFORE. OKAY. GREAT.

CHAIRMAN THOMAS: ANY OTHER COMMENTS? DO WE HAVE ANY COMMENTS FROM THE PUBLIC? HEARING NONE, ALL THOSE --

MR. HARRISON: THE MOTION, AS I UNDERSTAND IT, IS TO APPROVE THE BASIC BIOLOGY IV CONCEPT APPROVAL. BUT WE WERE UNABLE TO CATCH THE SECOND FOR THE RECORD. SO IF YOU COULD REMIND US WHO THE SECOND ON THE MOTION WAS.

CHAIRMAN THOMAS: WHO WAS THE SECOND ON THE MOTION? WHO WOULD LIKE TO BE THE SECOND?

DR. PIZZO: I'LL SECOND.

CHAIRMAN THOMAS: SECONDED BY THE ENTIRE BOARD.

MR. HARRISON: DR. PULIAFITO WILL GET CREDIT.

CHAIRMAN THOMAS: YES. HE WAS QUICKEST. ALL THOSE IN FAVOR OF THIS MOTION PLEASE SAY AYE.

OPPOSED?

MS. BONNEVILLE: MARCY FEIT.

MS. FEIT: YES.

MS. BONNEVILLE: CLAIRE POMEROY.

DR. POMEROY: YES.

MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: YES.

CHAIRMAN THOMAS: OKAY. MOTION PASSED.

THE NEXT ITEM IS VERY IMPORTANT. IT'S THE STRATEGIC PARTNERSHIP ELEMENT OF THE OPPORTUNITY FUND COMING FROM THE IP AND INDUSTRY SUBCOMMITTEE. MR. JUELSGAARD, WE HAVE ABOUT TWO MINUTES.

DR. JUELSGAARD: SO WE DISCUSSED THE STRATEGIC PARTNERSHIP PROGRAM AT THE LAST MEETING, AND THE IP SUBCOMMITTEE, WHICH WE'LL TALK ABOUT RENAMING IN JUST A MOMENT, HAS TAKEN THAT UP. AFTER TALKING ABOUT THIS, OUR PROPOSAL IS TO FUND THIS PROGRAM TO THE FULL EXTENT OF $30 MILLION. SO THERE IS ACTUALLY A PROGRAM CREATED BEFORE THAT HAD THREE ELEMENTS TO IT AND $30 MILLION SET ASIDE TO ADDRESS ALL THREE ELEMENTS, AND THEN FIVE MILLION DOLLARS WAS TAKEN FROM THAT 30 AND PUT TO THE TECHNOLOGY TRANSFER PROCESS, LEAVING $25 MILLION TO ADDRESS THREE AREAS.

SO QUICKLY, THE REASON THAT WE FELT IT WAS

ESSENTIAL TO DO $30 MILLION FOR THIS PROGRAM IS TWOFOLD. FIRST, THIS IS LIKELY TO BE AN EXPENSIVE PROGRAM IN THE SENSE OF ATTRACTING INDUSTRY. AND I CAN GIVE YOU THE PARTICULARS AS TO WHY I BELIEVE THAT'S TRUE. BUT IN ADDITION TO THAT, I THINK THERE ARE ALSO THE ISSUES OF POTENTIAL CONFLICTS IF YOU TRY AND FUND THREE DIFFERENT EFFORTS FROM ONE SINGLE FUND BECAUSE AT ANY POINT IN TIME, NOBODY IS EXACTLY SURE WHAT COMMITMENT SOMEBODY ELSE IS MAKING IN A DIFFERENT DIRECTION. SO IT CAN MAKE IT A LITTLE HARD TO MAKE COMMITMENTS TO SOMEBODY ELSE ABOUT FUNDING IN THE ABSENCE OF KNOWING THAT FUNDS MIGHT HAVE ALREADY BEEN COMITTED ONE OR TWO OTHER DIRECTIONS.

SO WE THOUGHT BETTER JUST, TO CREATE CLARITY, TO CREATE A SEPARATE FUND FOR THIS TO THE TUNE OF $30 MILLION.

MS. BAUM: AND TO KEEP IT SHORT AND SWEET, I JUST HAVE ONE SLIDE, AND THAT IS THE CONCEPT. I'M HAPPY TO GO THROUGH THE DIFFERENT PARAMETERS OF THE CONCEPT VERY QUICKLY BECAUSE I KNOW TIME IS OF THE ESSENCE.

AS YOU'VE SEEN BEFORE ON AT LEAST ONE OCCASION, AND SOME OF YOU ON A NUMBER OF OCCASIONS, THAT WILL ENTAIL A PROGRAM ANNOUNCEMENT THAT WILL BE

AVAILABLE -- SUBMISSIONS WILL BE AVAILABLE ON A ROLLING BASIS WITH THE GRANTS WORKING GROUP APPROXIMATELY TWO TIMES A YEAR. THE ELIGIBILITY WILL BE FOR PROJECTS IN GOOD STANDING AND NEW PROJECTS AS LONG AS THEY ARE CALIFORNIA RESEARCHERS. THE PROJECTS WILL SPAN BASIC RESEARCH THROUGH AND INCLUDING PHASE II CLINICAL TRIALS. THEY WILL REQUIRE SOME FORM OF OUTSIDE COMMERCIAL VALIDATION THAT CAN BE IN THE FORM OF AN INDUSTRY PARTNERSHIP COMMITMENT FROM A, FOR INSTANCE, CO-FUNDING FROM A LARGE BIOPHARMA, ETC., OR FROM VENTURE CAPITAL.

AS STEVE SAID, THE FUNDING AMOUNT FOR THE FULL PROGRAM IS $30 MILLION, $10 MILLION A PROJECT UNLESS THE IP SUBCOMMITTEE RECOMMENDS AN ADDITIONAL AMOUNT. THE TERM WILL BE FOUR YEARS, AGAIN, UNLESS THE IP SUBCOMMITTEE APPROVES A LONGER PERIOD.

AND I THINK THAT'S THE SUM AND SUBSTANCE OF IT. IN DECEMBER THE GOAL IS TO HAVE THE OTHER PARTS OF THE OPPORTUNITY FUND THAT WAS PRESENTED IN JUNE COME BEFORE THIS BOARD FOR DIFFERENT FUNDING APPROVAL AMOUNTS.

CHAIRMAN THOMAS: THIS IS ANOTHER THING THAT HAS TAKEN A WHOLE LOT OF WORK BY ELONA, A WHOLE LOT OF WORK BY STEVE AND THE IP SUBCOMMITTEE. SO IT'S GETTING A LITTLE BIT OF QUICK AND SHORT SHRIFT

HERE, BUT IT HAS HAD CONSIDERABLE INPUT. ANY COMMENTS BY MEMBERS OF THE BOARD?

DR. STEWARD: JUST TO POINT OUT THAT IT WAS ALSO REVIEWED BY THE SCIENCE SUBCOMMITTEE IN TERMS OF THE REVIEW PROCESS.

CHAIRMAN THOMAS: THANK YOU FOR CLARIFYING THAT. I DID NOT MEAN TO OMIT THAT. THEY SPENT QUITE BIT OF TIME ON THIS AS WELL.

DO WE HEAR A MOTION TO APPROVE?

MR. TORRES: MOVED.

DR. PIZZO: SECOND.

CHAIRMAN THOMAS: ANY COMMENTS BY MEMBERS OF THE PUBLIC? HEARING NONE, ANY FURTHER COMMENT BY MEMBERS OF THE BOARD? ALL THOSE IN FAVOR PLEASE SAY AYE. OPPOSE?

MS. BONNEVILLE: MARCY FEIT.

MS. FEIT: YES.

MS. BONNEVILLE: CLAIRE POMEROY.

DR. POMEROY: YES.

MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: YES.

CHAIRMAN THOMAS: MOTION IS PASSED. VERY QUICKLY, WANT TO TAKE UP ITEM 14, CONSIDERATION OF APPOINTMENT OF NEW MEMBERS TO THE SCIENTIFIC AND MEDICAL ACCOUNTABILITY STANDARDS WORKING GROUP. DR.

FEIGAL.

DR. FEIGAL: THANK YOU VERY MUCH. THIS IS BASICALLY REPLACING TWO MEMBERS ON THE STANDARDS WORKING GROUP FOR TWO PEOPLE WHO HAVE LEFT, JOSE CIBELLI AND JACK KRACKAUER. AND THE PROPOSED MEMBERS ARE IN YOUR BINDER.

DR. PIZZO: DOES THIS REQUIRE A VOTE? RECOMMEND APPROVAL.

CHAIRMAN THOMAS: YES, IT DOES. LET'S MAKE THIS REALLY QUICK. WE'RE ABOUT TO LOSE FOUR PEOPLE.

DR. PIZZO: RECOMMEND APPROVAL. WE'VE ALREADY LOOKED AT THE NAMES.

MR. TORRES: SECOND.

CHAIRMAN THOMAS: ANY FURTHER DISCUSSION BY MEMBERS OF THE BOARD? ANY COMMENTS BY MEMBERS OF THE PUBLIC? ALL THOSE IN FAVOR PLEASE SAY AYE. OPPOSED?

MS. BONNEVILLE: MARCY FEIT.

MS. FEIT: YES.

MS. BONNEVILLE: CLAIRE POMEROY.

DR. POMEROY: YES.

MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: YES.

CHAIRMAN THOMAS: MOTION PASSED. WE'RE

LOSING OUR MEMBERS HERE. THANK YOU, DEANS HAWGOOD AND PIZZO, MR. GOLDBERG. WE'RE LOSING SOMEBODY ELSE. DEAN PULIAFITO. LET'S THANK YOU ALL FOR ATTENDING. WE GREATLY APPRECIATE YOUR INPUT AND WORK AS ALWAYS.

WHAT DO WE DO, JAMES, WITH RESPECT TO THE ITEMS 11 AND 15 WHICH ARE ACTION ITEMS?

MR. HARRISON: I THINK THAT GIVEN THE FACT THAT WE'VE LOST OUR QUORUM, WE SHOULD DEFER THOSE ITEMS UNTIL THE DECEMBER MEETING.

CHAIRMAN THOMAS: OKAY. IS DR. SLADEK HERE TODAY?

MR. HARRISON: HE IS NOT.

CHAIRMAN THOMAS: WE CAN DEFER BOTH OF THESE TO THE DECEMBER MEETING THEN?

MR. HARRISON: YES.

CHAIRMAN THOMAS: OKAY. IS THERE ANY PUBLIC COMMENT ON ANY ITEMS THAT ANYBODY WOULD CARE TO SAY ANYTHING ABOUT?

MS. GIBBONS: WHAT DATE IS THE DECEMBER MEETING?

CHAIRMAN THOMAS: DECEMBER 8TH, AND IT IS AT CEDARS-SINAI.

DR. LUBIN: SO I WOULD LIKE TO MAKE A REQUEST FOR THOSE OF US THAT DIDN'T CHANGE OUR PLANE

RESERVATION EARLIER AND TOOK A DAY OUT TO BE ON THE CIRM BOARD, WHICH WE AGREED TO BE, THAT MEMBERS SHOULD STAY FOR THE ENTIRE MEETING, AND WE SHOULD NOT BE COMPRESSED BY REARRANGING FLIGHTS TO AN EARLIER FLIGHT WHICH IS MORE CONVENIENT.

AND, J.T., IF YOU WROTE A NICE NOTE SAYING FOR THOSE OF US THAT DID BLOCK OUT THE DAY SO THAT WE COULD BE HERE TILL THE END, WHICH WE WERE REQUESTED TO DO, THAT WE KINDLY CONSIDER THAT FOR THE REST OF THE MEETINGS.

CHAIRMAN THOMAS: WE WILL CONVEY THAT MESSAGE.

DR. LUBIN: DON'T PUT MY NAME ON THAT, PLEASE.

CHAIRMAN THOMAS: IT'S ON THE RECORD AS ANONYMOUSLY PUT FORTH.

ANY OTHER ITEMS FOR DISCUSSION? HEARING NONE, DO I HEAR A MOTION TO ADJOURN? ALL IN FAVOR AYE. OPPOSED? WE ARE ADJOURNED. THANK YOU VERY MUCH. THANK YOU TO THOSE ON THE PHONE AS WELL FOR STICKING WITH US. WE'LL SEE YOU ALL IN DECEMBER.

(THE MEETING WAS THEN CONCLUDED AT 02:39 P.M.)

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

UNIVERSITY OF CALIFORNIA IRVINE
PACIFIC BALLROOM D, STUDENT CENTER
IRVINE, CALIFORNIA
ON
WEDNESDAY, OCTOBER 26, 2011

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.

BETH C. DRAIN, CSR 7152
BARRISTER'S REPORTING SERVICE
1072 BRISTOL STREET
SUITE 100
COSTA MESA, CALIFORNIA
(714) 444-4100