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: HILTON SAN FRANCISCO AIRPORT BAYFRONT
600 AIRPORT BOULEVARD
BURLINGAME, CALIFORNIA

DATE: JULY 25, 2013
9 A.M.

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

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I N D E X

I N D E X (CONT'D.)

BURLINGAME, CALIFORNIA; THURSDAY, JULY 25, 2013

9 A.M.

CHAIRMAN THOMAS: AS YOU MAY HAVE NOTICED, WE MOVED THE SPOTLIGHT TO FIRST THING IN THE MORNING AS OPPOSED TO OVER LUNCH. AND WE FOLLOWING THAT NOW WILL OFFICIALLY CALL THE MEETING TO ORDER. AND, MARIA, WILL YOU PLEASE LEAD US IN THE PLEDGE OF ALLEGIANCE.

(THE PLEDGE OF ALLEGIANCE.)

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

MS. BONNEVILLE: LARS BERGLUND.

DR. BERGLUND: HERE.

MS. BONNEVILLE: DAVID BRENNER.

DR. BRENNER: HERE.

MS. BONNEVILLE: ANNE-MARIE DULIEGE.

DR. DULIEGE: HERE.

MS. BONNEVILLE: MARCY FEIT.

MS. FEIT: HERE.

MS. BONNEVILLE: LEON FINE.

DR. FINE: HERE.

MS. BONNEVILLE: MICHAEL FRIEDMAN.

DR. FRIEDMAN: HERE.

MS. BONNEVILLE: MICHAEL GOLDBERG. SAM

HAWGOOD.

DR. HAWGOOD: HERE.

MS. BONNEVILLE: STEPHEN JUELSGAARD. SHERRY LANSING. BERT LUBIN. MICHAEL MARLETTA. LLOYD MINOR.

DR. MINOR: HERE.

MS. BONNEVILLE: FRANCISCO PRIETO.

DR. PRIETO: HERE.

MS. BONNEVILLE: CARMEN PULIAFITO.

DR. PULIAFITO: HERE.

MS. BONNEVILLE: ROBERT QUINT.

DR. QUINT: HERE.

MS. BONNEVILLE: DUANE ROTH. AL ROWLETT.

MR. ROWLETT: HERE.

MS. BONNEVILLE: JOAN SAMUELSON.

MS. SAMUELSON: HERE.

MS. BONNEVILLE: JEFF SHEEHY.

MR. SHEEHY: HERE.

MS. BONNEVILLE: OSWALD STEWARD.

DR. STEWARD: HERE.

MS. BONNEVILLE: JONATHAN THOMAS.

CHAIRMAN THOMAS: HERE.

MS. BONNEVILLE: ART TORRES.

MR. TORRES: HERE.

MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: HERE.

MS. BONNEVILLE: EUGENE WASHINGTON. DIANE WINOKUR.

MS. WINOKUR: HERE.

CHAIRMAN THOMAS: THANK YOU. BEGIN WITH OUR CHAIR'S REPORT. AS EVERYBODY KNOWS, OUR HIGHLY ESTEEMED COLLEAGUE DUANE ROTH WAS IN A SERIOUS BICYCLE ACCIDENT LAST SUNDAY. HE IS IN THE BEST POSSIBLE CARE DOWN AT UCSD. AS WAS REPORTED IN THE PRESS, WAS IN A MEDICALLY INDUCED COMA FOR A COUPLE OF DAYS AS A PREVENTIVE MEASURE TO HELP SPEED RECOVERY. AND WHAT WE HEAR FROM THE FAMILY IS THAT THERE HAVE BEEN SOME POSITIVE SIGNS IN THE LAST DAY OR SO, BUT THAT THE FAMILY WISHES THAT PRIVACY BE MAINTAINED FOR DUANE AND THE FAMILY GOING FORWARD. AND WE WILL KEEP EVERYBODY POSTED HERE AS TO HIS PROGRESS AS WE HEAR ABOUT IT. AND OBVIOUSLY OUR THOUGHTS AND PRAYERS ARE WITH DUANE AND HIS FAMILY AT THIS TIME.

AS YOU NOTICE, WE HAVE DUANE'S POSITION HERE PROMINENTLY TO MY RIGHT AS ALWAYS, AND IT WILL REMAIN THERE UNTIL HE IS ABLE TO REJOIN US, WHICH WE HOPE WILL BE AS SOON AS POSSIBLE AND THAT THAT WILL BE VERY SOON. SO, DUANE, I DOUBT YOU'RE LISTENING TO THIS; BUT ON THE OFF CHANCE YOU HAVE THIS PIPED

INTO YOUR HOSPITAL ROOM, EVERYBODY IS THINKING OF YOU AND SENDING BEST WISHES FOR A SPEEDY RECOVERY.

WE HAVE A NUMBER OF NEW MEMBERS HERE IN ATTENDANCE. I'M GOING TO INTRODUCE THEM AND PERHAPS EACH COULD SAY A BIT ABOUT THEMSELVES AND THEIR WORK SO THAT OTHER MEMBERS OF THE BOARD AND MEMBERS OF THE AUDIENCE WILL GET TO KNOW THEM A BIT BETTER. WE'LL START WITH LARS BERGLUND FROM UC DAVIS.

DR. BERGLUND: THANK YOU VERY MUCH. SO I'M AN ALTERNATE MEMBER. I'M THE SENIOR ASSOCIATE DEAN FOR RESEARCH AT THE SCHOOL OF MEDICINE. I AM THE DIRECTOR OF THE CLINICAL AND TRANSLATIONAL SCIENCE CENTER AT UC DAVIS. MY OWN INTEREST IS IN CARDIOVASCULAR DISEASE PREVENTION AND METABOLIC DISORDERS.

CHAIRMAN THOMAS: THANK YOU. DEAN LLOYD MINOR FROM STANFORD.

DR. MINOR: THANK YOU VERY MUCH. I'M LLOYD MINOR. I'M THE DEAN OF THE STANFORD UNIVERSITY SCHOOL OF MEDICINE. I MOVED OUT TO STANFORD FROM JOHNS HOPKINS UNIVERSITY WHERE I HAD BEEN THE PROVOST OF THE UNIVERSITY, AND THEN PRIOR TO THAT THE CHAIR OF THE DEPARTMENT OF OTOLARYNGOLOGY, HEAD AND NECK SURGERY AT JOHNS HOPKINS. I MADE THE MOVE TO STANFORD IN SEPTEMBER

OF 2012, BECAME DEAN ON DECEMBER 1ST. AND IT'S A GREAT PRIVILEGE AND PLEASURE TO BE HERE. THANK YOU.

CHAIRMAN THOMAS: AND LAST, BUT NOT LEAST, AL ROWLETT, OUR NEW PATIENT ADVOCATE FOR MENTAL HEALTH DISEASE AND CONDITIONS.

MR. ROWLETT: GOOD MORNING. IT'S A PRIVILEGE TO REPRESENT THE CITIZENS OF THE STATE OF CALIFORNIA AND TO BE HERE WITH ALL OF YOU. LOOKING FORWARD TO BEING ABLE TO MAKE MORE SUBSTANTIVE CONTRIBUTIONS IN THE VERY NEAR FUTURE. I'VE BEEN INVOLVED IN MENTAL HEALTH FOR OVER 32 YEARS IN THE PRIVATE SECTOR IN A COMMUNITY-BASED ORGANIZATION AND AM DELIGHTED TO BE PART OF THIS ORGANIZATION.

CHAIRMAN THOMAS: THANK YOU. AND, GENTLEMEN, A HEARTY WELCOME TO THE BOARD, AND I THINK YOU WILL FIND IT TO BE A MOST INTERESTING AND REWARDING UNDERTAKING. SO THANK YOU FOR YOUR PARTICIPATION. WE GREATLY APPRECIATE IT.

OVER THE LAST FEW WEEKS, I'VE HAD THE PRIVILEGE OF ATTENDING A NUMBER OF MEETINGS WHICH SORT OF SPAN THE BREADTH OF THE SCIENTIFIC COMMUNITY AS WE KNOW IT IN THE STEM CELL WORLD. ON THE ONE HAND ALL THE WAY TO AND INCLUDING THE ISSCR ANNUAL MEETING IN BOSTON, WHICH, AS ALWAYS, WAS A FASCINATING COMBINATION OF PRESENTATIONS ON THE

CUTTING-EDGE WORK THAT'S GOING ON WORLDWIDE IN THE SPACE.

I WILL NOTE AS AN ASIDE WE HAD OUR ANNUAL COLLABORATIVE FUNDING PARTNER LUNCH, WHICH OUR COLLEAGUE IAN SWEEDLER LED AND WILL BE SAYING MORE ABOUT IN HIS PRESENTATION A BIT LATER IN THE MEETING.

ON THE OTHER HAND, GOING DOWN TO OUR YOUNGEST SCIENTISTS, HAD A WONDERFUL EVENT AT USC HOSTED BY DEAN PULIAFITO, WHICH WAS DEDICATED TO HIGH SCHOOL STUDENTS DOING SUMMER INTERNSHIPS IN THE USC STEM CELL LABS.

OUR COLLEAGUE KEVIN MCCORMACK WILL GIVE MORE CHAPTER AND VERSE ON THAT, BUT JUST SUFFICE IT TO SAY IT WAS WONDERFUL TO SEE THE YOUNGEST MEMBERS OF THE STEM CELL RESEARCH COMMUNITY INTERACTION. AND AS I MENTIONED IN MY BLOG, THE FUTURE IS IN GOOD HANDS IF THESE STUDENTS ARE ANY INDICATION.

ALSO, MOVING A BIT FURTHER UP THE EDUCATION CONTINUUM, WE HAD OUR BRIDGES MEETING, WHICH, AGAIN, WILL BE DISCUSSED IN MORE DETAIL A BIT LATER. BUT THAT, OF COURSE, FEATURED OUR WONDERFUL BRIDGES STUDENTS FROM COLLEGES WHO ARE PARTICIPATING WITH HOST INSTITUTIONS AND DOING STEM CELL WORK. AND THEY, AS ALWAYS, WHEN YOU TALK TO THEM AND VIEW

POSTERS AND ALL THAT SORT OF THING, KNOCK YOUR SOCKS OFF AS TO THE HIGH LEVEL OF TALENT THAT WE HAVE AND THAT WE'VE HAD THE PRIVILEGE OF FUNDING.

A NUMBER OF OTHER MEETINGS THAT WERE OVER THE COURSE OF THE LAST FEW WEEKS. DR. FEIGAL HAS LED THE LATEST IN THE CONTINUING SERIES OF CLINICAL DEVELOPMENT ADVISORY PANEL MEETINGS WHEREIN WE GET PROGRESS REPORTS ON DISEASE TEAM WORK, WHICH IS ALWAYS INTERESTING AND REALLY HIGHLY SUBSTANTIVE BOTH FOR THOSE LISTENING AND FOR THOSE PRESENTING THROUGH THE TREMENDOUS COMMENTARY AND RECOMMENDATIONS PROVIDED BY THE PANEL SO ABLY DRAWN TOGETHER BY DR. FEIGAL.

WE HAD, OF COURSE, THE EARLY TRANSLATION IV GRANTS WORKING GROUP AND A COUPLE OF MEETINGS THAT ELONA PUT TOGETHER WHICH WERE MOST INSTRUCTIVE ON THE PRESENTATIONS BY A NUMBER OF OUR GRANTEES TO A BUNCH OF VENTURE CAPITALISTS AND TO SORT OF SEE THE INTERACTION THERE, AS WELL AS A MEETING ON SORT OF TOOLS AND TECHNOLOGIES, WHERE ARE THE HURDLES IN STEM CELL RESEARCH THESE DAYS, A VERY ROBUST DISCUSSION BY A NUMBER OF HIGHLY QUALIFIED EXPERTS.

SO THERE'S BEEN A LOT OF ACTIVITY, AND IT, AS ALWAYS, CONTINUES TO SHOW THE BREADTH OF WORK BEING DONE BY EVERYBODY AT CIRM AND THOSE THAT WE'RE

FORTUNATE ENOUGH TO BE ABLE TO FUND.

THE LAST THING I'D LIKE TO MENTION, JUST AS A HOUSEKEEPING ITEM, OUR DECEMBER MEETING IS GOING TO BE, WHICH IS IN LOS ANGELES AS IT WAS LAST YEAR, IS NOW A TWO-DAY AFFAIR AS WE WILL BE HEARING REPORTS AND VOTING ON THE DISEASE TEAM III AWARDS. AND SO IF EVERYBODY COULD NOTE ON THEIR CALENDAR THAT IT'S DECEMBER 11TH AND 12TH, AND THAT, AS LAST YEAR, WE NOW HOPE TO HAVE AN ANNUAL TRADITION. PLEASE NOTE THE EVENING OF DECEMBER 11TH WILL BE A HOLIDAY PARTY AT THE CHAIR'S HOUSE IN LOS ANGELES.

SO WITH THAT, THAT CONCLUDES THE CHAIRMAN'S REPORT. ONE THING I WILL SAY BEFORE TURNING IT OVER TO DR. TROUNSON, WHEN WE BREAK FOR LUNCH, AS A SPECIAL TOUCH FOR DUANE, WE ARE GOING TO TAKE A PICTURE OF THE BOARD AND STAFF WHICH WE'RE GOING TO SEND TO DUANE. AND SO IF EVERYBODY, BEFORE WE GO OUT THERE, AND I'LL MENTION THIS AGAIN, FIGURE OUT WHERE WE'RE GOING TO CONVENE TO DO THAT. UP HERE? IT'S GOING TO BE A LITTLE TIGHT. WE WANT TO HAVE, OF COURSE, DUANE'S NAME TAG PROMINENTLY FEATURED. SO WE'LL TALK ABOUT THAT AT THE TIME.

ANYWAY, SO THAT CONCLUDES THE CHAIR'S REPORT. NOW ON TO THE PRESIDENT'S REPORT. DR. TROUNSON.

MS. SAMUELSON: MR. CHAIRMAN, CAN WE ACCESS THROUGH THE WEB SITE OR SOMETHING THE REPORTS OR SLIDE PRESENTATIONS OR WHATEVER FROM THE DISEASE TEAMS? AND THEN THERE WAS ANOTHER -- ONE OF THE OTHER MEETINGS YOU WENT TO THAT SOUNDED VERY INTERESTING. I WAS JUST WONDERING IF WE CAN SEE THE MATERIALS THAT ARE AVAILABLE?

CHAIRMAN THOMAS: DR. FEIGAL.

DR. FEIGAL: I'D BE HAPPY TO GO OVER IT, AND WE GIVE YOU UPDATES AT THE BOARD. BUT THESE ARE CONFIDENTIAL AND PROPRIETARY INFORMATION THAT'S PRESENTED. BUT I'D BE HAPPY TO TALK WITH YOU OR THE BOARD AT THE APPROPRIATE TIME.

MS. SAMUELSON: WELL, I'D REALLY LIKE TO SEE THE MATERIALS. AND AS A BOARD MEMBER WITH A FIDUCIARY DUTY, I THINK IT'S INCUMBENT ON US TO LOOK AT THEM. AND, OF COURSE, HONORING THE CONFIDENCE.

CHAIRMAN THOMAS: JOAN, PERHAPS YOU COULD HAVE A SIDEBAR DISCUSSION WITH DR. FEIGAL.

MS. SAMUELSON: OF COURSE.

DR. FEIGAL: YEAH. I'D BE MORE THAN HAPPY TO HAVE A CONVERSATION WITH YOU OFF-LINE. THANK YOU.

MS. SAMUELSON: THANKS.

CHAIRMAN THOMAS: THANK YOU. DR.

TROUNSON.

DR. TROUNSON: THANKS VERY MUCH, CHAIR. AND JUST TO ECHO YOUR SENTIMENTS FOR DUANE, IT WAS A SHOCK FOR ALL OF US TO HEAR ABOUT THE TERRIBLE ACCIDENT. AND, YOU KNOW, WE REACH OUT TO RENEE AND DUANE'S OTHER FAMILY. I HOPE THAT THEY'RE ABLE TO GET THROUGH THIS REASONABLY QUICKLY AND HE'S ABLE TO RECOVER FULL HEALTH IN SHORT AS POSSIBLE TIME. JUST TO SEE THE EMPTY SEAT IS QUITE DISTURBING REALLY KNOWING A GOOD FRIEND IS IN QUITE A BIT OF TROUBLE AT THE MOMENT.

WITH THAT, LET'S TALK A LITTLE BIT MORE ABOUT SCIENCE. I HAVEN'T BEEN -- I WASN'T HERE AT THE LAST BOARD MEETING BECAUSE I WAS IN GERMANY AT AN INSTITUTE REVIEW. BUT THERE ARE A NUMBER OF VERY IMPORTANT PAPERS THAT HAVE COME THROUGH JUST RECENTLY. AND THIS ONE IN PARTICULAR IS VASCULARIZATION AND FUNCTION OF HUMAN LIVER FROM IPS-DERIVED ORGAN BUD TRANSPLANT.

SO WHAT THEY'VE DONE HERE, AS SHOWN IN THE TOP PART OF THE LINE, IS TO TAKE HUMAN-INDUCED PLURIPOTENTIAL STEM CELLS AND THEN CO-CULTURE THOSE CELLS WITH TWO OTHER CELL TYPES. THEY'RE THE HUMAN MESENCHYMAL STEM CELLS, THE CELLS THAT ARE IN THE BONE MARROW, THE BONE MARROW ORIGINS, STROMAL CELLS,

THE BONE MARROW ORIGIN. AND ALSO HUMAN UMBILICAL VEIN ENDOTHELIAL CELLS, WHICH ARE THE CELLS THAT GO TO FORM UP THE BLOOD VESSELS.

SO THIS COMBINATION OF CULTURE WAS ABLE TO, ACTUALLY IN A THREE-DIMENSIONAL CULTURE SYSTEM, WAS ABLE TO SHOW -- ON THE BOTTOM LINE THERE ARE PICTURES -- GET THE CELLS TO COALESCE AND MOVE TOGETHER AND ACTUALLY FORM WHAT THEY CALL ORGAN BUDS, LIVER BUDS. AND THESE BUDS HAVE THE SYSTEM OF THE LIVER CELLS INTACT IN THERE.

AND WHEN THEY TRANSPLANTED THOSE INTO SUITABLE MICE, IMMUNE-SUPPRESSED MICE, THEN THESE HUMAN LIVERS BEGAN TO FUNCTION AND, IMPORTANTLY, THEY'RE ABLE TO VASCULARIZE VERY QUICKLY. WITHIN 48 HOURS THE LIVER HAS TO BE QUICKLY VASCULARIZED. AND THESE LIVERS WERE ABLE TO DEAL WITH HUMAN-SPECIFIC DRUG METABOLISM, WHICH IS A REALLY IMPORTANT POINT, AND RESCUED LETHAL LIVER FAILURE IN THIS MOUSE MODEL -- IN A MOUSE MODEL.

SO THIS IS AN ORGAN, IF YOU LIKE, THAT'S BEEN NOW DEVELOPED. AND THIS GROUP IN YOKOHAMA CITY -- SO THERE'S NOW BEEN A NUMBER OF PAPERS IN THIS AREA WHERE YOU TAKE THE STEM CELL DERIVATIVES AND YOU CULTURE THEM WITH OTHER CELLS. IT'S THE INSTRUCTIONS FROM THESE OTHER CELLS WHICH ENABLE THE

STEM CELLS TO TAKE ON THEIR PROPER ROLE OR FUNCTION, MATURE, AND GET UP INTO PROPER FUNCTION.

SO WE HAVEN'T HAD A LOT OF THESE STUDIES IN THE WORK THAT WE'VE BEEN SUPPORTING, SO I'M VERY KEEN TO SEE MORE CO-CULTURE WORK TO MATURE SOME OF THE CELLS THROUGH TO FUNCTIONAL TYPE. LIVER HAS BEEN ONE OF THE AREAS WHERE IT'S REALLY BEEN A PROBLEM. AND TO GET A MATURE CELL, YOU WILL BE AWARE ALSO HEMATOPOIETIC STEM CELLS THAT WILL ENGRAFT IN THE BONE MARROW CAN'T BE DEVELOPED UNLESS YOU GO INTO SOME SORT OF CO-CULTURED SYSTEM. AND THEY'VE BEEN ABLE TO SHOW IN REPRODUCTIVE TISSUES THAT IF YOU USE SOMATIC CELLS FROM FETAL OVARY, YOU CAN INSTRUCT THE DEVELOPMENT OF EGGS AND EMBRYOS AND BABY MICE ALL FROM STEM CELLS.

I THINK WE'VE GOT A TECHNICAL FAILURE GOING ON HERE. SO MAYBE I'LL LOOK OVER MARIA'S SHOULDER WHILE THIS SORT OF GETS ITS MIND BACK TOGETHER AGAIN.

SO THE SECOND PAPER I WANTED TO TALK ABOUT, YOU CAN'T SEE CLEARLY, BUT I CAN BEAUTIFULLY HERE OVER MARIA'S SHOULDER. IT'S FROM THE GROUP BING REN AND JOE ECKER AT THE LUDWIG & SALK INSTITUTES IN LA JOLLA. IT'S AN ABSOLUTELY FABULOUS PAPER. IT'S ONE OF THOSE PAPERS LIKE SOME OF THOSE

THAT THEY'VE PRODUCED BEFORE WHICH ARE HUGELY CREDITED IN THE LITERATURE.

SO THIS IS AN EPIGENETIC ANALYSIS OF MULTILINEAGE DIFFERENTIATION OF HUMAN EMBRYONIC STEM CELLS. HOW DO CELLS DIFFERENTIATE IN DIFFERENT LINEAGES BECAUSE IT'S ALL ABOUT HOW YOU CONTROL THE GENES THAT ARE BEING EXPRESSED. SO THIS EPIGENETICS IS A CRITICAL COMPONENT.

THEY'VE STARTED TO WORK THROUGH THIS IN A VERY EFFECTIVE WAY. SO THEY STUDIED THE REAL KEYS TO THE CONTROL OF GENE EXPRESSION. THAT'S DNA METHYLATION, CHROMATIN REMODELING AND TRANSCRIPTOME, JUST TO WORK OUT HOW ALL OF THESE CELLS MAKE THESE TRANSITIONS TO WHAT WE CALL MESOENDODERM. MESODERM FORMS MUSCLE. AND MESOENDODERM ALSO FORM ENDODERM, WHICH IS THE PRIMARY ORGANS OF THE INTERNAL ORGANS. ALSO LOOKED AT THE NEURAL PROGENITORS WHICH GO TO FORM THE NEURONS AND GLIA, TROPHOBLAST-LIKE CELLS, WHICH ARE PART OF THE PLACENTAL FAMILY, AND THEN MESENCHYMAL STEM CELLS, WHICH ARE THE STROMAL CELLS THAT GO TO FORM IN MOST ORGANS.

SO THEY LOOKED AT ALL OF THESE, AND THEY FIGURED IT THROUGH WITH A HUGE AMOUNT OF DATA THAT PROMOTERS ARE ACTIVE. THE REAL CRITICAL OBSERVATIONS ARE PUT DOWN HERE. THE PROMOTERS ON

THESE GENES ARE ACTIVE IN EARLY DEVELOPMENTAL STAGES TEND TO BE THOSE THAT ARE RICH IN THE DINUCLEOTIDES, CG, WHICH ARE KNOWN AS CPG ISLANDS, AND THEY MAINLY ENGAGE A METHYLASE ENZYME THAT IS ACTIVE UPON SILENCING. SO THAT'S THE WAY THEY SILENCE THE GENES IN EARLY DEVELOPMENT.

FOR THOSE THAT ARE PREFERENTIALLY EXPRESSED AT LATER STAGES, THEY'RE OFTEN CG POOR AS A DIFFERENCE TO THE OTHER, THE GENES THAT COME ON EARLY AND PRIMARILY EMPLOY METHYLATION PROCESS TO REPRESS.

AND THEN THESE EARLY DEVELOPMENTAL REGULATORS ARE OFTEN LOCATED IN LARGE GENOMIC DOMAINS THAT ARE GENERALLY DEVOID OF DNA METHYLATION IN MOST LINEAGES, WHICH IS TERMED -- THEY CALL THESE DNA METHYLATION VALLEYS. SO WE'RE NOW STARTING TO WORK OUT THE WHOLE PRO FORMA ABOUT HOW CELLS MOVE IN THESE DIFFERENT LINEAGES. AND THESE WILL HELP SCIENTISTS FIGURE OUT WHAT TO DO WITH BOTH IPS CELLS AND EMBRYONIC STEM CELLS AND BE ABLE TO DIRECT THE CELLS TO GO TO THE KIND OF LINEAGES THAT ARE INTERESTS OF THOSE GROUPS IN THEIR PARTICULAR RESEARCH. SO IT WILL ATTRACT A LOT OF ATTENTION. IT'S A VERY DETAILED, BUT INTERESTING PAPER.

I HAD TO TALK ABOUT BRIEFLY AT LEAST THE

HUMAN EMBRYONIC STEM CELLS WHICH WERE DERIVED FOR THE FIRST TIME BY SOMATIC NUCLEAR TRANSFER BY SHOUKHRAT MITALIPOV'S LAB IN OREGON, WHICH WAS PUBLISHED IN *CELL* IN JUNE. AND THEY WERE REASONABLY EFFICIENT IN DERIVING SOMATIC CELL NUCLEAR TRANSFER. I'LL JUST GIVE YOU A FEW OF THE FIGURES ON THAT.

IT'S BEEN TRIED FOR A LONG TIME TO GET THIS TO WORK IN THE HUMAN. IT'S WORKED IN THE MOUSE. IT'S WORKED IN THE MONKEY. SO MANY OF US THOUGHT, WELL, IT'S KIND OF VERY STRANGE THAT IT DOESN'T WORK IN A HUMAN. AND NOW IT HAS WORKED. AND THIS IS THE GROUP THAT MADE IT WORK, SHOWED IT COULD WORK IN THE MONKEY IN THE FIRST PLACE.

SO THEY HAD A REASONABLY HIGH RATE OF SUCCESS IN THEIR TECHNOLOGY, AND I THINK THIS IS THE KEY. THESE ARE VERY EXPERIENCED MICROMANIPULATING EMBRYOLOGISTS, AND THEY'RE ABLE TO GET HIGH RATES OF ENUCLEATION, FUSION, AND GET THE EMBRYOS TO DEVELOP THROUGH THE VARIOUS STAGES AT PRETTY HIGH RATES. AND TO END UP WITH -- THEY FORMED FOUR EMBRYONIC STEM CELL LINES BY NUCLEAR TRANSFER WHICH WAS FROM THE 60 STARTING OOCYTES, WHICH IS ABOUT 7 PERCENT, WHICH IS A RELATIVELY HIGH FIGURE. AND THEN THEY REPRODUCED IT IN A PATIENT WITH LEIGH SYNDROME WHERE THEY USED 20 OOCYTES FROM TWO DONORS AND PRODUCED 35

PERCENT OF THOSE AS THE BLASTOCYST, THE MORE ADVANCED EMBRYOS, AND TWO OF THEM WENT ON TO MAKE STEM CELLS.

SO IF YOU LOOK AT THIS CARTOON, THE TOP LINE SHOWS WHAT HAPPENS IN NORMAL DEVELOPMENT. THE SPERM ENTERS AN EGG, FORMS A ZYGOTE, GOES ON, IF IT'S TRANSFERRED TO THE UTERUS, WILL FORM A BABY. OR IF YOU TAKE OUT THE INNER CELL MASS CELLS, YOU CAN FORM EMBRYONIC STEM CELLS. SO THE SECOND LINE IS WHAT THEY DID. SO YOU TAKE -- YOU REMOVE THE NUCLEUS FROM THE EGG. SO NOW THE EGG NUCLEUS IS GONE SO THAT THE GENOMIC COMPONENT FOR THE EGG IS GONE. YOU INSERT BY ELECTRICAL FUSION A NUCLEUS FROM YOUR ADULT CELL, AND THAT WILL DEVELOP TO A BLASTOCYST, AND YOU CAN MAKE EMBRYONIC STEM CELLS FROM THAT.

THE IMPORTANT OTHER BIT ON THE BOTTOM LINE IS THAT YOU CAN USE THIS TECHNIQUE TO HELP PATIENTS WHO HAVE MITOCHONDRIAL DISEASE. MITOCHONDRIAL DISEASE IS INCREDIBLY SEVERE IN PEOPLE WHO HAVE THAT AND THE MAJORITY OF MITOCHONDRIAL MUTATION, AND THAT WILL BE THE METABOLIC DISORDER OR REALLY SEVERE ABNORMALITY, GENETIC ABNORMALITY. WELL, YOU CAN TAKE A CELL FROM THOSE PATIENTS, INSERT THAT INTO AN EGG, AND YOU CAN FORM, IF YOU HAVE APPROVAL TO DO

THAT, YOU COULD FORM A CHILD THAT DOESN'T HAVE THAT MITOCHONDRIAL GENETIC DISORDER, OR YOU CAN MAKE EMBRYONIC STEM CELLS WHICH YOU MIGHT USE TO HELP THOSE POOR PATIENTS WITH THOSE KIND OF DISEASES.

SO THERE'S NOW A MODEL FOR LOOKING REALLY INTENTLY AT MITOCHONDRIAL DISORDERS. SO THERE'S A FAIRLY SIGNIFICANT PAPER AND ATTRACTED A LOT OF DISCUSSION IN THE SCIENTIFIC PRESS AND IN LAY PRESS.

THERE'S ALSO, I THOUGHT, A VERY INTERESTING PAPER FROM THE UNIVERSITY OF MASS MEDICAL SCHOOL AND THE COMPANY SANGAMO THAT WE SUPPORT, ONE OF OUR GRANTEES, LOOKING AT DOWN'S SYNDROME. DOWN'S SYNDROME IS A TRISOME. IT'S THREE COPIES OF CHROMOSOME 21. IT'S A VERY COMMON DISORDER UNFORTUNATELY, AND IT'S MORE PREVALENT IN PARENTS THAT ARE OVER THE AGE OF 37, 37 AND OLDER, AND IT LEADS TO PHENOTYPES WHICH ARE VERY VARIABLE, BUT CAN BE VERY SEVERE.

SO WHAT THEY'VE DONE HERE, WHAT NORMALLY HAPPENS IN DEVELOPMENT IS THAT ONE OF THE -- IN THE FEMALE ONE OF THE TWO X CHROMOSOMES HAS TO BE INACTIVATED. SO RANDOMLY THE XIST GENE INACTIVATES. IT COATS ONE OF THE X CHROMOSOMES AND INACTIVATES THEM. SO IN EVERY FEMALE, ONE OF THE EGG'S X CHROMOSOMES BECOMES INACTIVE. IN THE MALE YOU DON'T

WANT TO DO THAT BECAUSE YOU'VE ONLY GOT ONE X CHROMOSOME, SO IT DOESN'T HAPPEN IN MALES. SO IT'S THE XIST GENE THAT DOES IT.

SO WHAT THEY'VE DONE IS TAILOR A TARGET USING THE ZINC FINGER NUCLEASE TECHNOLOGY OF SANGAMO WHERE THEY TARGETED THE XIST GENE INTO A GENE THAT'S ON CHROMOSOME 21. AND WHEN THEY DID THAT, THIS ENTERED THE CELLS OF THE DOWN'S SYNDROME CELLS AND IT COATED ONE OF THE CHROMOSOME 21 CELLS AND TURNED IT OFF. TURNED IT INTO WHAT WE CALL A BARR BODY, SO IT WAS NONFUNCTIONAL. SO YOU DROP THE GENE DOSAGE FROM THREE TO TWO, WHICH BRINGS YOU BACK TO THE NORMAL STATE.

IT'S A VERY IMPORTANT OBSERVATION. IT'S A GREAT MODEL FOR SCIENTISTS NOW TO WORK OFF THAT TO LOOK AT THE CONDITIONS AND THE PHENOTYPES OF DOWN'S SYNDROME AND PARTICULARLY THOSE SEVERE TYPES OF PHENOTYPE IN DOWN'S SYNDROME, BUT IT'S ALSO POSSIBLE IN THE LONGER TERM WAY OF LOOKING TO SEE IF WE CAN CONTROL THIS EXTRA GENE DOSAGE IN THESE KIDS THAT ARE BORN WITH DOWN'S SYNDROME, WHICH WOULD BE A REALLY, REALLY IMPORTANT DEVELOPMENT IN TIME. SO I'M NOT TRYING TO PREDICT THAT THAT'S GOING TO HAPPEN SOON, BUT THE MODELS ARE GOING TO BE SET UP FOR THAT TO BE EXPLORED. SO I THOUGHT IT WAS A

REALLY GREAT PIECE OF WORK, AND I THOUGHT I SHOULD BRING THAT TO YOUR ATTENTION.

SO MOVING OFF THOSE NOW, BECAUSE THERE WERE MANY OTHER PAPERS, BUT I THOUGHT THAT'S ENOUGH. REALLY QUITE IMPRESSIVE GROUP OF PAPERS. BUT JUST TO NOTIFY YOU OF THE AWARD THAT WAS MADE TO MARIUS WERNIG, WHO'S AN M.D. PH.D. FROM STANFORD, ABSOLUTELY BRILLIANT YOUNG SCIENTIST, AND WAS GIVEN THE OUTSTANDING YOUNG INVESTIGATOR AWARD AT THE INTERNATIONAL SOCIETY FOR STEM CELL RESEARCH. HE'S, OF COURSE, ONE OF OUR GRANTEES, AND WE'RE INCREDIBLY PROUD OF MARIUS. HE'S A PHENOMENAL YOUNG SCIENTIST, AND HE'S CLEARLY GOING TO BE ONE OF THOSE PEOPLE THAT WILL SET THE WORLD ON FIRE WITH ALL THE WORK THAT HE'S DOING.

HE'S INVOLVED WITH THE DISEASE TEAM THAT'S LOOKING AT THE SKIN DISORDER, THE PRIMARY SKIN DISORDER, EPIDERMOLYSIS BULLOSA. HE'S ALSO THE SCIENTIST WHO'S BEEN WORKING ON DIRECT DIFFERENTIATION OR CHANGING CELLS INTO NEURONS OR NEURAL PROGENITORS WITH TRANSCRIPTION FACTORS, BUT DOING THAT IN A VERY SHORT-CIRCUITED WAY. AND HIS WORK IS ATTRACTING A LOT OF INTEREST AROUND THE WORLD.

WE HAVE A NEW APPOINTMENT THAT WILL BE

JOINING US END OF JULY AND IS GOING TO BE WORKING WITH ME AS AN EXECUTIVE ASSISTANT, WHICH MEANS WE'RE GOING TO LOSE CANDACE. CANDACE IS GOING TO LEAVE US AT THE START OF JULY. SHE'S GOING TO GO TO GRADUATE SCHOOL IN EDINBURGH TO BE AN AUTHOR. SO SHE'S GOING TO WRITE STORIES ABOUT YOU GUYS. I KNOW WHO SHE'S GOING TO WRITE ABOUT. AS AN AUTHOR YOU USE THE BASIS OF WHAT YOU LEARN IN LIFE TO WRITE THE STORIES. SO LOOK -- KEEP AN EYE ON THE LITERATURE THAT COMES FROM CANDACE. AND WE REALLY DO WISH HER THE BEST GOING TO EDINBURGH.

YOU'LL NEED TO RUG UP THERE. SO WE'RE WISHING HER FROM THE STAFF ALL THE BEST IN MOVING ON. AND WE'RE GOING TO WELCOME MANDA AT THE END OF THIS MONTH.

THE RFA PROGRAMS, JUST TO KEY YOU IN, ALPHA CLINICS IS A CONCEPT AT THIS MEETING. TOOLS AND TECHNOLOGIES III CONCEPT AT THIS MEETING. RESEARCH LEADERSHIP EXTENSION CONCEPT AT THIS MEETING. SO A LOT OF CONCEPTS HERE FOR THIS PARTICULAR MEETING.

STRATEGIC PARTNERSHIP III, THE RFA WILL BE POSTED THIS MONTH, HAS BEEN POSTED THIS MONTH. EARLY TRANSLATIONAL IV, THERE'S AN ICOC FUNDING DECISION IN AUGUST. DISEASE TEAM III, THE GRANTS

WORKING GROUP REVIEW OF APPLICATIONS WILL BE SEPTEMBER. WE EXPECT TO BRING IT TO THE BOARD IN DECEMBER, AS JON SAID. BASIC BIOLOGY V, THE GRANTS WORKING GROUP REVIEW WILL BE PROBABLY IN OCTOBER. AND THE GENOMICS RE-REVIEW OF THE GENOMICS RFA WILL BE DONE IN NOVEMBER. SO A LOT OF WORK JUST COMING UP IN THE NEXT FEW MONTHS FOR ALL OF US.

JUST TO FILL YOU IN ON THE RESEARCH LEADERSHIP AWARDS, JUST TO KEY THEM THROUGH, SANFORD BURNHAM IS APPOINTED. UC SANTA BARBARA APPOINTED, USC APPOINTED. PARKINSON'S INSTITUTE DECLINED THEIR NOMINEE. CEDARS-SINAI HAVE APPOINTED THEIR PERSON AS HAVE UC SAN DIEGO. SO THAT'S GREAT. STANFORD IS COMPLETING THEIR TASK OF BRINGING THEIR PERSON ON, AND THE UC SANTA CRUZ IS IN PROGRESS. GLADSTONE INSTITUTE IS IN NEGOTIATION. WE EXPECT THAT WILL PROBABLY BE OKAY, BUT IT'S IN NEGOTIATION. AND FINALLY UC SAN FRANCISCO, UNFORTUNATELY WE JUST HEARD YESTERDAY THAT THAT WAS DECLINED. SO JUST TO FILL YOU IN ON THOSE LEADERSHIP AWARDS. SO WE'RE PROBABLY GOING TO END UP WITH EIGHT, MAYBE SEVEN, BUT I THINK THAT'S THE LIST FOR THE PRESENT TIME.

AND, OF COURSE, THOSE INSTITUTES THAT HAVEN'T HAD AN AWARD HAVE BEEN IN PARTICULAR TALKING TO ME AND HOPING THAT THEY'LL GET ANOTHER CHANCE.

SO WE'LL BE BRINGING A CONCEPT TO YOU TO DISCUSS THAT WITH YOU TODAY.

EXTERNAL INNOVATION RFA WE'RE RELEASING. THIS IS THE ONE THAT REALLY CONNECTS US TO THOSE ABSOLUTELY BRILLIANT THINGS THAT ARE HAPPENING OUTSIDE CALIFORNIA, TRIES TO CONNECT THAT WITH SOME OF OUR CALIFORNIA RESEARCHERS. SO TO BE ABLE -- THOSE CALIFORNIA INVESTIGATORS TO COLLABORATE WITH UNIQUELY PROMISING RESEARCH. THERE'S REALLY IMPORTANT WORK THAT'S GOING ON THAT WE HAVEN'T GOT IN CALIFORNIA. BECAUSE THERE'S SO MUCH MOVEMENT IN THE FIELD, THIS HAPPENS. CALIFORNIA IS THE LEADER CLEARLY, BUT AT TIMES OTHER RESEARCHERS GET OUT AND DO SOME ABSOLUTELY PHENOMENAL WORK, AND WE'D LIKE TO CONNECT THAT TO CALIFORNIA AT TIMES.

SO IT TARGETS WORLD-CLASS OPPORTUNITIES THAT WE CAN'T REACH THROUGH OTHER RFA'S. AND THEY HAVE TO BE TRULY EXCEPTIONAL. WE'RE EXPECTING ONE OR TWO AT THE MOST A YEAR. AWARDS ARE UP TO THREE YEARS, 500,000 A YEAR, AND, OF COURSE, IS SUBJECT TO GRANTS WORKING GROUP REVIEW AND ICOC APPROVAL AS YOU AGREED. SO IAN WILL PROBABLY MENTION THAT AGAIN WHEN HE TALKS ABOUT COLLABORATIVE FUNDING PARTNERS. AND IF YOU WANT TO DISCUSS ANY OF THIS WITH HIM, I'M SURE HE'LL BE HAPPY TO TALK ABOUT IT.

UPCOMING MEETINGS, THE MEETINGS THAT WE JUST HAD, THE BRIDGES TRAINEE MEETING WAS PHENOMENAL AS USUAL. THOSE PEOPLE, THOSE YOUNG PEOPLE ARE JUST FANTASTIC. YOU KNOW, THE STORIES THAT THEY HAVE ARE REALLY INSPIRING. I WAS TALKING TO A YOUNG WOMAN WHO'S A SINGLE MOTHER WITH THREE KIDS, AND THE KIDS HAVE MOVED ON FAR ENOUGH FOR HER TO REENGAGE IN SCIENCE, AND SHE WAS INTO IT IN A REALLY EMPHATIC WAY. SHE WAS A BRIDGES STUDENT. SHE WAS WANTING TO GO ON. HOPED TO DO A PH.D. THROUGH NURSING AND WAS REALLY, REALLY DRIVEN. AND YOU HEAR MANY DIFFERENT STORIES LIKE THIS. ALL OF US GOT THESE WONDERFUL STORIES AT THIS MEETING OF THESE YOUNG PEOPLE WHO ARE SO COMPLETE IN THEIR AMBITIONS TO BE PART OF WHAT WE'RE DOING. IT IS PHENOMENAL, AND SO ANY CHANCE YOU GET TO MEET THESE PEOPLE, IT'S REALLY INSPIRING. IT REALLY IS.

SO IT'S ONE OF THE PROGRAMS I'M REALLY, REALLY PROUD OF. THE STAFF ARE AND I KNOW YOU ARE. AND TO GET THEM TOGETHER AND PRODUCING THEIR POSTERS AND TALKING TO THEM, THEY'RE LIKE PH.D. STUDENTS OR POST DOCS. THEY'RE SO EMPHATIC. I DIDN'T WANT TO LET YOU GO AND I WANT TO ASK YOU, QUIZ YOU ABOUT WHAT DO YOU THINK THAT WAS RIGHT. IT WAS FANTASTIC. THOSE ARE WONDERFUL YOUNG PEOPLE.

HAD A CREATIVITY POSTER DAY, AND THAT WAS FANTASTIC. THIS IS YOUNG PEOPLE COMING FROM HIGH SCHOOL. AND, AGAIN, THESE KIDS ARE LIKE MY PH.D.'S. THERE'S PROBABLY MORE ENTHUSIASM IN THESE HIGH SCHOOL STUDENTS IN COMING IN AND WORKING WITH THE TEAMS. THEY ARE GOING TO CREATE CAREERS, AND I HOPE THAT THEY WILL BE IN SCIENCE, AND I HOPE THAT SOME OF THEM WILL SORT OF COME BACK AND SORT OF BE WITH US OR BE PART OF WHAT WE'RE DOING IN THE FUTURE. THEY ARE JUST PHENOMENAL. THESE YOUNG PEOPLE EMBRACE THE LAB. THE LOVED IT.

THEY THOUGHT THAT THEY WERE GOING TO BE DOING ALL THE WASHING UP AND ALL THE DIRTY CHORES. NO, THEY WEREN'T. THEY WERE ENGAGED AND THEY WERE ACTUALLY INTO THE LAB. THEY WERE ACTUALLY DOING ASSAYS AND RUNNING GELS AND STUFF. OH, IT WAS FANTASTIC. IT REALLY DOES TURN THOSE YOUNG PEOPLE ON. SO I THINK THEY'RE GREAT PROGRAMS.

WE HAD THE NIH REGENERATIVE MEDICINE INTERACTIONS WITH INDUSTRY AS WELL IN AUGUST.

THERE'S AN IPS INITIATIVE START-UP MEETING THAT WE BROUGHT ALL OF THE IPS DERIVERS AND THE TEAMS THAT WERE COLLECTING THE SAMPLES AND THE BANK TOGETHER. WE HAD A GREAT DAY. WE HAD LOTS OF DEBATE ABOUT HOW WE SHOULD DO THOSE THINGS, AND I

THINK WE CAME TO REALLY GOOD CONSENSUS VIEWS ON HOW TO DO THE WHOLE THING.

AND MIKE YAFFE, WHO'S HERE, IS GOING TO BE TAKING OVER MANAGEMENT OF THAT PROGRAM. IT'S A REALLY IMPORTANT PROGRAM FOR US TO MAKE SURE THAT THE PEOPLE USE THIS BANK TO THE MAXIMUM. SO MIKE IS GOING IN TO MANAGE THAT, AND WE THANK HIM VERY MUCH FOR STEPPING UP TO THAT. AND WE WANT TO THANK UTA FOR ALL OF THE BACKGROUND WORK THAT SHE'S DONE ON GETTING IT TO THAT POINT.

SO ATTRACTING A LOT OF INTEREST, THAT BANK, FROM ALL AROUND THE WORLD ABOUT WE HAVE NOW REALLY TAKEN THE FRONT LINE IN THE IPS CELL AREA, WHICH I THINK IS WONDERFUL.

THERE'S AN NINDS MEETING ON IPS CELLS MAY 30 TO THE 1ST OF JUNE. THE ISSCR, AS JON SAID, JUNE 12TH TO THE 15TH, SO WE WERE REALLY BUSY AT MEETINGS THROUGH THAT TIME.

THERE WAS A REIMBURSEMENT STRATEGIES WEBINAR ON JUNE 20TH, SO WE'RE STARTING TO LOOK AT ABOUT HOW WE SHOULD UNDERSTAND HOW TO FRAME OUR WORK TO LOOK INTO REIMBURSEMENT. AND THERE WAS A CIRM VC FIRST LOOK ON JUNE THE 24TH. SO NIEL LITTMAN, WHO HEADS UP OUR BUSINESS DEVELOPMENT GROUP UNDER ELONA, WAS THE ONE WHO REALLY PUT A LOT OF ENERGY IN

GETTING THOSE PEOPLE TOGETHER. AND THAT WORKED REALLY, REALLY WELL AND HAVE TAKEN THOSE CONCLUSIONS FROM THAT MEETING AND ARE PUTTING INTO THEIR PROCESS AND BRINGING IT FORWARD. SO I THINK THAT KIND OF THING IS DOING A LOT OF REALLY GOOD THINGS FOR THE REGENERATIVE MEDICINE, BUT ALSO PARTICULARLY OUR INTEREST IN THE AREA.

THERE WAS A TOOLS AND TECHNOLOGIES R & D ROUNDTABLE ON THE 25TH. SO IT FOLLOWED ON LOOKING FOR WHAT WERE THE THINGS THAT WERE NEEDED PARTICULARLY IN THE TRANSLATIONAL AREAS, AND WE CAME UP WITH SOME VERY DEFINITIVE VIEWS ON THAT.

AND THERE WAS A NATIONAL EYE INSTITUTE NIH WORKSHOP MOVING TOWARDS CELL-BASED IND FOR DISEASES. THAT WAS JUNE 24TH TO THE 25TH, AND ELLEN AND COLLEAGUES WERE ATTENDING THAT.

WE HAD THE HOUSE OF LORDS SELECT COMMITTEE ON SCIENCE AND TECHNOLOGY, AND I ASKED MARIA TO LET YOU KNOW THAT THAT WAS PUBLISHED. IT WAS A TERRIFIC REPORT. AND THANK EVERYBODY FOR PUTTING IN THE EFFORTS, ALL OF THE CALIFORNIA SCIENTISTS AND BUSINESS PEOPLE WHO CAME TO MEET WITH THEM. IT WAS A LOOK AT OBSTACLES TO DEVELOPMENT OF REGENERATIVE MEDICINE IN THE UK. THEY VISITED US DECEMBER 3D TO THE 5TH. THOSE WERE THE LORDS FROM THE HOUSE. AND

THEY'RE VERY IMPRESSIVE PEOPLE, I CAN TELL YOU, WHO CAME.

WE HAD TEN PANELS OF 30 PARTICIPANTS. AND LORD KREBS IS THE CHAIR. HERE'S A QUOTE FROM HIM. "WE LOOKED AROUND THE WORLD TO SEE WHERE THINGS ARE BEING DONE WELL, AND WE THOUGHT THAT THE PLACE TO GO IS CIRM." AND THERE ARE NUMEROUS QUOTES IN THE REPORT THAT WENT TO THE LORDS AND IS A REPORT TO THE LORDS AND OTHERS, THE HOUSE OF REPRESENTATIVES IN THE UK, WITH LOTS OF QUOTES ON THE KIND OF THINGS THAT WE DO REALLY VERY WELL. SO IT WAS NICE TO HAVE THAT GROUP OF PEOPLE OPINE ON THE KIND OF THINGS THAT WE DO. SO I'LL LEAVE THAT PARTICULAR THING THERE.

AND I THINK WE'RE GOING TO TREAT THIS SEPARATELY, MARIA, THE STRATEGIC GOALS. ARE THERE ANY PARTICULAR QUESTIONS, AND WE'LL MOVE ON TO THE NEXT SUBJECTS BEFORE WE DO ANYTHING MORE? ANY QUESTIONS?

MS. SAMUELSON: I HAVE A COMMENT ON THE FAILURE OF THE PI GRANT. AND WE CAN DO IT WHEN WE'RE REVIEWING THE EXTENSION OF THAT PROGRAM, MR. CHAIRMAN, OR NOW.

CHAIRMAN THOMAS: LET'S WAIT TILL THE EXTENSION DISCUSSION, JOAN.

MS. SAMUELSON: OKAY. THANKS.

DR. TROUNSON: SO LET ME INVITE CHILA UP TO TALK ON THE FINANCIAL REPORT TO YOU.

MS. SILVA-MARTIN: THANK YOU, DR. TROUNSON. GOOD MORNING, MR. CHAIR, MEMBERS OF THE BOARD, AND THE PUBLIC. TODAY I'M GOING TO PROVIDE YOU WITH A BRIEF FINANCIAL UPDATE. AS YOU ARE PROBABLY AWARE, OUR FINANCIAL FISCAL -- OUR FISCAL YEAR IS FROM JULY 1 THROUGH JUNE 30TH. SO WE ARE JUST FINISHING UP THE '12-'13 FISCAL YEAR. WE ARE CURRENTLY WORKING ON THE YEAR-END PROCESS.

OUR FINANCIAL REPORTS ARE DUE TO THE STATE CONTROLLER'S OFFICE ON AUGUST 20TH, AND WE'RE ON TRACK TO MEET THAT DEADLINE.

SO BASED ON THIS TIMELINE, WE WILL BE PRESENTING TO YOU THE FULL YEAR FINANCIAL STATEMENTS AT THE NEXT BOARD MEETING. WHAT I CAN SAY AT THIS POINT REGARDING THE '12-'13 FISCAL YEAR EXPENDITURES IS, AS YOU RECALL ON SEVERAL OTHER OCCASIONS, I HAVE PRESENTED TO YOU PROJECTIONS FOR THE '12-'13 FISCAL YEAR, AND WE'RE PRETTY MUCH ON TRACK WITH THOSE PROJECTIONS. I DON'T ANTICIPATE ANY MAJOR DEVIATIONS FROM THOSE NUMBERS.

AS SOON AS WE COMPLETE THE YEAR-END FINANCIAL PROCESS, WE'RE GOING TO GO RIGHT INTO THE

ANNUAL FISCAL FINANCIAL AUDIT. WE'VE ALREADY MADE CONTACT WITH THE AUDITORS, AND AT THIS TIME THE PLAN IS FOR THE AUDITORS TO COME IN AT THE END OF AUGUST AND COMPLETE THE FIRST DRAFT OF THE REPORT BY OCTOBER 1ST, AND THEN HAVE THE FINAL REPORT TO THE STATE CONTROLLER'S OFFICE SOMEWHERE AROUND OCTOBER 15TH.

AND THEN LASTLY, I JUST WANT TO TOUCH UPON THE FINANCIAL DATABASE. AND ALEX CAMPE WILL ACTUALLY BE PRESENTING ON THIS LATER IN MORE DETAIL. BUT AS YOU MAY RECALL, AS PART OF THE PERFORMANCE AUDIT, ONE OF THE RECOMMENDATIONS WAS THAT WE CONSIDER SOME TYPE OF A FINANCIAL DATABASE. SO WE DID PROCURE GREAT PLAINS, AND WE ARE CURRENTLY WORKING WITH THE VENDORS TO UPLOAD OUR '13-'14 FINANCIAL DATA INTO THE SYSTEM. SO THE GOAL REALLY OF THE SOFTWARE IS TO ASSIST US IN ELIMINATING SOME REDUNDANCIES THAT WE CURRENTLY HAVE AND REALLY PROVIDING US WITH GREATER FINANCIAL REPORTING CAPABILITIES.

SO NOW JUST MOVING ON TO A VERY BRIEF AND HIGH LEVEL OVERVIEW OF OUR FINANCIAL STATUS AS OF JUNE 30TH, 2013. SO OUR GRANT DISBURSEMENTS FOR THE '12-'13 FISCAL YEAR WERE JUST UNDER $200 MILLION AS COMPARED TO THE PRIOR FISCAL YEAR '11-'12 WHICH WE

DISBURSED ABOUT $203 MILLION.

NOW, WE CONTINUE TO RECEIVE FUNDING, MONTHLY DISBURSEMENTS, THROUGH COMMERCIAL PAPER; AND AS A RESULT, WE MAINTAIN A VERY HEALTHY CASH RESERVE. OUR AVAILABLE CASH AS OF JUNE 30TH WAS $68 MILLION, WHICH IS ABOUT A $4.4 MILLION INCREASE FROM WHAT WE HAD IN APRIL, WHICH IS WHAT I REPORTED AT THE MAY ICOC BOARD MEETING. ALL OF THIS REALLY TO SAY IS THAT WE'RE IN VERY GOOD SHAPE TO CONTINUE OPERATIONS INTO THE COMING MONTHS.

AND THIS REALLY CONCLUDES MY FINANCIAL UPDATE. ARE THERE ANY QUESTIONS? GREAT. THANK YOU.

CHAIRMAN THOMAS: THANK YOU. AND, ALAN, THANK YOU, AS ALWAYS, FOR YOUR INTERESTING PRESIDENTIAL REPORT. AND, AS USUAL, YOU HAVE ADDED TO OUR GLOSSARY OF AUSTRALIAN VERNACULAR. I BELIEVE TODAY'S NEW EXPRESSION WAS RUGGING UP. DID I HEAR THAT CORRECTLY? YES. DR. OLSON.

DR. OLSON: GOOD MORNING. WHAT I'D LIKE TO DO NOW IS, AS WE AGREED, GIVE THE BOARD AN UPDATE ON THE RFA FUNDING STATUS THAT WE DO EVERY TIME WE ARE GOING TO BRING CONCEPT PROPOSALS TO YOU.

SO THIS IS ACTUALLY AN UPDATE FROM WHAT WAS PRESENTED TO YOU AT THE LAST MEETING IN MAY. SO

I JUST WANT TO REMIND YOU THAT THE 2.77 BILLION AVAILABLE FOR RESEARCH FUNDING WE CATEGORIZE IN A COUPLE OF DIFFERENT WAYS. AND I'M GOING TO GO INTO A LITTLE BIT MORE DETAIL JUST BECAUSE WE HAVE SO MANY NEW MEMBERS HERE TODAY. SO I BEG THE INDULGENCE OF THOSE OF YOU WHO ARE VERY FAMILIAR WITH THIS. BUT --

MS. SAMUELSON: EXCUSE ME, PAT. DO WE HAVE PAPER ON THIS? I'M SORRY.

DR. OLSON: I BELIEVE YOU DO. WE WILL SEND IT TO YOU.

MS. SAMUELSON: THANKS.

DR. OLSON: THE AWARDED CATEGORY ARE THOSE FUNDS THAT HAVE BEEN APPROVED BY THE ICOC FOR SPECIFIC PROJECTS. AND ESSENTIALLY THE $1.67 BILLION THAT YOU SEE THERE IS COMPARABLE TO WHAT YOU SAW LAST MONTH. YOU HAVEN'T APPROVED ANYTHING IN MAY OR AT THIS MEETING.

THE CONCEPT APPROVED CATEGORY IS WHERE THE ICOC HAS AGREED TO ALLOCATE A GIVEN AMOUNT OF FUNDS TO BE AVAILABLE FOR A GIVEN REQUEST FOR APPLICATIONS, FOR A GIVEN FUNDING PROGRAM.

THIS CATEGORY HAS INCREASED SINCE LAST TIME, AND WE'LL GO IN MORE DETAIL. RECALL THAT WHAT I DO IS I MAKE THE ASSUMPTION THAT ALL THE CONCEPT

PROPOSALS BEING BROUGHT TO YOU TODAY WILL BE APPROVED. IF THAT'S NOT THE CASE, YOU WILL SEE A CHANGE NEXT TIME WE PRESENT, BUT CURRENTLY THAT CATEGORY IS AT $491 MILLION.

THE FUTURE FUNDING ARE OBVIOUSLY THE REMAINING RESEARCH FUNDS.

THE NEXT SLIDE JUST SORT OF SHOWS THAT YOUR FUTURE FUNDING CAN BE FURTHER BROKEN DOWN INTO WHERE IT'S BEEN ALLOCATED ACCORDING TO THE FUNDING PLAN THAT WAS PRESENTED TO YOU EARLY LAST YEAR AND APPROVED BY YOU. AND THE SO-CALLED UNALLOCATED CATEGORY ARE THOSE CASES WHEN THERE'S AN APPROVED CONCEPT PROPOSAL. FOR EXAMPLE, I'LL JUST USE ONE EXAMPLE, STRATEGIC PARTNERSHIP I. YOU APPROVED IN CONCEPT $30 MILLION FOR THAT RFA. IN POINT OF FACT, WE ONLY -- YOU AWARDED ONLY $20 MILLION IN AWARDS. SO THE $10 MILLION GOES INTO THAT POT.

WHAT I WANT TO DO NOW IS JUST GIVE YOU A LITTLE BIT MORE DETAIL ON THE FUNDING ALLOCATION. AND AGAIN, JUST ESPECIALLY FOR THOSE NEW MEMBERS, WE FURTHER -- WHEN WE MAKE AWARDS, WE PUT THEM INTO CERTAIN CATEGORIES. SO A FACILITIES CATEGORY ARE FACILITIES/CORE RESOURCES ARE THINGS LIKE THE MAJOR FACILITIES. WHEN WE FUNDED MAJOR FACILITIES, CORE RESOURCES IS SOMETHING LIKE THE IPSC PROGRAM WHICH

YOU'VE HEARD ABOUT, AND THE ALPHA CLINIC WHICH WILL BE COMING TO YOU TODAY. THOSE KINDS OF PROGRAMS, DEPENDING ON WHERE THEY ARE, EITHER AWARDED, FUTURE, OR CONCEPT, WOULD BE IN THAT CATEGORY.

TRAINING/CAREER DEVELOPMENT, YOU'VE HEARD ABOUT OUR RESEARCH LEADERSHIP PROGRAM. YOU'VE HEARD ABOUT OUR CREATIVITY PROGRAM. YOU'VE HEARD ABOUT THE BRIDGES PROGRAM. ALL OF THOSE FALL INTO THAT PARTICULAR CATEGORY.

BASIC RESEARCH IS REASONABLY SELF-EXPLANATORY. OUR GENOMICS PROGRAM, OUR BASIC BIOLOGY PROGRAM FALL INTO THAT CATEGORY.

TRANSLATIONAL RESEARCH CATEGORY INCLUDES OUR EARLY TRANSLATION RESEARCH PROGRAMS, OUR TOOLS AND TECHNOLOGIES AWARDS PROGRAM.

THE DEVELOPMENT CATEGORY INCLUDES ESSENTIALLY OUR IND ENABLING, OUR PRECLINICAL DEVELOPMENT PROGRAMS, AND OUR CLINICAL DEVELOPMENT PROGRAMS, ALL THOSE PROGRAMS THAT FALL UNDER REGULATION. SO THAT'S WHAT'S IN THAT CATEGORY.

SO HAVING SAID THAT, I JUST WANT TO NOTE THAT, AGAIN, AS I SAID BEFORE, THIS CATEGORY HASN'T CHANGED REALLY SINCE THE LAST TIME YOU SAW IT. AND AS YOU CAN SEE, THE DISTRIBUTION OF THE FUNDING IN THAT CATEGORY RANGES FROM 14 PERCENT TO 25 PERCENT.

THE CONCEPT APPROVED CATEGORY, THIS IS, AS NOTED BEFORE, THIS INCLUDES THE CONCEPTS BEING BROUGHT FORWARD TO YOU TODAY. SO WHAT'S NEW SINCE WE LAST DISCUSSED IS IN THE TRAINING/CAREER DEVELOPMENT. WE'RE PROPOSING AN EXTENSION TO THE RESEARCH LEADERSHIP PROGRAM, AND YOU WILL HEAR ABOUT THAT LATER FROM DR. YAFFE.

IN THE TRANSLATION CATEGORY, WE'RE PROPOSING THE THIRD ITERATION OF OUR TOOLS AND TECHNOLOGIES PROGRAM, AND YOU WILL HEAR ABOUT THAT LATER TODAY FROM DR. LILA COLLINS.

THE OTHER THING THAT'S CHANGED IS IN THE FACILITIES/CORE RESOURCES CATEGORY, AND WE ARE BRINGING FORTH THE ALPHA CLINICS PROGRAM TODAY TO CREATE A CORE RESOURCE TO MAKE CALIFORNIA A CENTER FOR CLINICAL DEVELOPMENT IN STEM CELL-BASED THERAPIES. AND AGAIN, YOU WILL HEAR ABOUT THAT LATER TODAY FROM DRS. DEWITT AND MILLAN.

SO THE OTHER CATEGORIES, I'LL JUST REMIND YOU WE HAVE OUTSTANDING CONCEPT PROPOSALS AND THEY'RE IN THE REVIEW PROCESS FOR BASIC BIOLOGY AND THE BASIC PROGRAM FOR DISEASE TEAM III AND SP III IN THE DEVELOPMENT CATEGORY, AND FOR ET IV IN THE TRANSLATION CATEGORY. SO THAT PRETTY MUCH COMPRISES THAT.

FUTURE FUNDING JUST HIGHLIGHTS THE ALLOCATION, AND THIS BASICALLY REPRESENTS, AGAIN, AS WE NOTED IN THE STRATEGIC PLAN, THE FACT THAT IT COSTS A LOT OF MONEY TO DEVELOP THERAPIES TO ACHIEVE CLINICAL PROOF OF CONCEPT, WHICH IS ONE OF OUR KEY GOALS AND PART OF OUR MISSION. SO THIS JUST OUTLINES THIS CATEGORY, HOW THE FUNDING HAS BEEN AT LEAST CURRENTLY PLANNED FOR ALLOCATION IN THIS CATEGORY.

SO FINALLY, I JUST HAVE PROVIDED ESSENTIALLY THE INFORMATION THAT HAS BEEN PROVIDED IN TABLE FORM BEFORE, BUT IN PERHAPS MORE DETAIL HERE SO THAT YOU CAN SEE HOW AT LEAST THE FUNDING HAS BEEN ALLOCATED INTO AWARDED PROGRAM, HOW IT CURRENTLY IS IN THE CONCEPT APPROVED, AND HOW THE FUTURE IS GOING. SO HOW ESSENTIALLY THE 2.78 BILLION WILL BE USED.

AND I JUST WANT TO MAKE THE POINT THAT, AGAIN, THAT THIS CONTINUES. WE ARE IMPLEMENTING THE FUNDING STRATEGY APPROVED BY THIS BOARD. WE ARE USING EXCESS UNALLOCATED FUNDS THAT ARE CONSISTENT WITH THAT STRATEGY, AND THAT THERE IS CURRENTLY OR THERE WILL BE, ASSUMING APPROVAL OF ALL CONCEPTS, CLOSE TO 600 MILLION AVAILABLE FOR FUTURE FUNDING. SO I'M HAPPY TO ANSWER ANY QUESTIONS.

CHAIRMAN THOMAS: MR. SHEEHY.

MR. SHEEHY: THANKS FOR THE PRESENTATION, DR. OLSON. SO, YOU KNOW, THIS THING WILL SEGUE INTO OUR STRATEGIC PLAN UPDATE AS WELL. LAST FALL WE PRESENTED TWO DIFFERENT SCENARIOS FOR FUNDING. SO ARE WE OPERATING UNDER SCENARIO 1 OR SCENARIO 2?

DR. OLSON: AT THE MOMENT WE ARE OPERATING UNDER SCENARIO 1. AS WE SAID AT THIS TIME THAT THIS WOULD BE SUBJECT TO REVISITATION, AND I THINK THAT'S SOMETHING THAT'S BEING PLANNED FOR POSSIBLY LATER THIS YEAR.

MR. SHEEHY: OKAY. SO IN SCENARIO 1 WE BASICALLY ZEROED OUT TRAINING AND DEVELOPMENT FUNDING.

DR. OLSON: THAT'S RIGHT. WE HAD ACTUALLY VERY LIMITED. WE DID NOT DO TRAINING AGAIN. AND, AGAIN, THAT WAS GOING TO BE A DISCUSSION POINT.

MR. SHEEHY: THAT WOULD BE TRAINING AND BRIDGES, RIGHT?

DR. OLSON: THAT'S CORRECT.

MR. SHEEHY: AND AGAIN, WHY I HAVE THE QUESTION, I GUESS I THINK AS A BOARD APPROVES SOME OF THESE OR DOES NOT APPROVE SOME OF THESE INITIATIVES TODAY, ARE WE NOT MAKING DECISIONS -- SO, FOR INSTANCE, IF I VOTE FOR RESEARCH LEADERSHIP,

AM I NOT SAYING THAT I'M NOT GOING TO VOTE FOR AN EXTENSION OF BRIDGES? THAT I'M NOT GOING TO VOTE FOR EXTENSION OF TRAINING?

DR. OLSON: I DON'T THINK YOU'RE SAYING THAT. I THINK WHAT YOU ARE SAYING IS THAT WHAT YOU MIGHT WANT TO DO IS YOU MIGHT WANT TO REVISE THE ALLOCATION FOR FUTURE FUNDING AT SOME POINT. AND I WOULD SUGGEST THAT I KNOW THAT WE WERE TARGETING PERHAPS RAISING THIS DISCUSSION NEAR THE END OF THIS YEAR.

MR. SHEEHY: BECAUSE I GUESS ONCE WE APPROVE ALL THIS STUFF, YOU CAN'T REALLY GO BACK AND UNDO IT.

DR. OLSON: WELL, LET ME ALSO REMIND YOU THAT ALTHOUGH WE HAVE, WHAT DID I SAY, 491 IN THE CONCEPT APPROVED CATEGORY, WE'VE ALL HAD EXPERIENCE WITH THE FACT THAT NOT ALL CONCEPTS GET FULLY AWARDED. NOW, CURRENTLY I DROP THAT MONEY BACK INTO THE CATEGORY IN WHICH IT WAS ORIGINALLY DONE. SO OBVIOUSLY I THINK IT IS WORTHWHILE HAVING THE DISCUSSION ABOUT ARE WE STILL HAPPY WITH THE ALLOCATION. AND I THINK THAT DISCUSSION WILL BECOME IMPORTANT LATER THIS YEAR.

MR. SHEEHY: BUT IS IT UNFAIR AS A BOARD MEMBER AT THIS POINT IN TIME TO THINK ABOUT AN

EXTENSION OF RESEARCH LEADERSHIP BEING IN DIRECT COMPETITION WITH AN EXTENSION OF BRIDGES OR TRAINING, AND/OR TRAINING? I MEAN IT SEEMS TO ME THAT AS A BOARD MEMBER THAT SHOULD BE THE FRAMEWORK FROM WHICH I'M LOOKING AT IT BECAUSE WE ARE KIND OF THINKING ABOUT CERTAIN POTS.

AND I LOOK AT EVEN FUTURE SCENARIO 2, WHICH WAS THE MOST OPTIMISTIC FOR TRAINING AND DEVELOPMENT, AND WE ONLY TALKED ABOUT $60 MILLION UNDER THAT. AND IF WE DO ANOTHER 25 MILLION INTO RESEARCH LEADERSHIP TRAINING OR BRIDGES, SEEMS LIKE IT'S GOING TO START TO HAVE TO COME OUT OF DEVELOPMENT OR TRANSLATIONAL OR BASIC. IN OTHER WORDS, WE'RE APPROVING A LOT OF STUFF TODAY, AND THAT MEANS THAT A LOT OF THINGS THAT WE MAY WANT TO DO A YEAR DOWN THE ROAD, BECAUSE TRAINING IS GOING TO END, I THINK, IN THE NEXT YEAR. I THINK BRIDGES IS GOING TO END IN THE NEXT --

DR. OLSON: THOSE DECISIONS DON'T NEED TO BE MADE NEXT YEAR.

MR. SHEEHY: WELL, WHEN DO THOSE RFA'S END?

DR. OLSON: I'VE GONE THROUGH AND LOOKED AT THIS. AND AS I SAY, THAT'S WHY I THINK WE DO NEED TO HAVE A DISCUSSION AT THE END OF THIS YEAR

THAT MAINLY HAS TO DO WITH THE SHARED LABS. WE NEED TO HAVE A DISCUSSION ON TRAINING. I THINK ALL OF THIS COMES INTO A DISCUSSION ON ARE WE HAPPY WITH THE ALLOCATIONS. I THINK WE WERE THINKING ABOUT THE END OF THIS YEAR. I WOULD NOTE THAT EVEN IN THE FUTURE FUNDING CATEGORY, EVEN IF WE APPROVE THE RESEARCH LEADERSHIP, THAT THERE IS STILL 21 MILLION. THESE CATEGORIES ARE NOT FIXED IN STONE. THIS IS WHAT WE TALKED ABOUT ON A CERTAIN PLAN. SO, YOU KNOW, WE CAN CHANGE IT.

MR. SHEEHY: I KNOW. WE'RE MAKING DECISIONS TODAY THAT WILL HAVE AN IMPACT. WE MAY HAVE THIS DISCUSSION AT THE END OF THE YEAR, BUT WE WILL HAVE ALREADY APPROVED --

DR. OLSON: RIGHT.

MR. SHEEHY: -- SEVERAL MILLION DOLLARS. AND $21 MILLION ALLOCATED MIGHT COVER BRIDGES, BUT THAT LEAVES NO MONEY FOR TRAINING. AND I GUESS IF THE BOARD DOESN'T WANT TO CONTINUE OUR TRAINING PROGRAM -- I THINK THAT'S ONE OF THE THINGS WE MAY BE DECIDING TODAY -- IF WE DECIDE TO CONTINUE RESEARCH LEADERSHIP. WE MAY BE DECIDING TODAY THAT WE DON'T WANT TO CONTINUE BRIDGES IF WE DECIDE TO FUND RESEARCH LEADERSHIP. DON'T YOU THINK AS A BOARD MEMBER THAT WOULD BE A RESPONSIBLE WAY IN

WHICH TO APPROACH THIS DECISION?

DR. OLSON: I THINK WHAT I'M SAYING TO YOU IS YOU HAVE THE OPTION OF SHIFTING THE ALLOCATION AMONGST THE CATEGORIES. THAT IS WHAT I'M SAYING TO YOU. AND THAT IS, YOU KNOW, SOMETHING THAT I DO THINK YOU'LL WANT TO LOOK AT AT SOME POINT.

MR. SHEEHY: AGAIN, JUST NOT TO BE TOO PROCESS ORIENTED, BUT WE DID TALK ABOUT LAST FALL TWO DIFFERENT FUNDING SCENARIOS.

DR. OLSON: RIGHT.

MR. SHEEHY: SO IF THAT EXERCISE HAS NO IMPORT OR DOESN'T DIRECT US TO KIND OF THINK ABOUT THINGS IN A WAY GOING FORWARD, ARE WE JUST APPROVING -- I GUESS I GET CONFUSED BECAUSE IF THAT WAS NOT IN SOME WAY DIRECTIVE, THEN WE'RE JUST KIND OF APPROVING THINGS KIND OF LIKE SERENDIPITOUSLY.

DR. OLSON: WHAT I COULD DO IS THE NEXT TIME I DID THIS, I COULD MAKE AVAILABLE WHAT THIS WOULD LOOK LIKE UNDER SCENARIO 2.

MR. SHEEHY: YOU KNOW, I'M NOT TRYING TO PUT YOU ON THE --

DR. OLSON: I UNDERSTAND.

MR. SHEEHY: -- SPOT.

DR. OLSON: I APPRECIATE THE CONCERN.

MR. SHEEHY: BECAUSE I THINK YOU AND I ARE

PROBABLY ON THE SAME PAGE, THAT WE NEED TO MAKE SOME CHOICES BECAUSE WE DON'T NEED TO BE SITTING HERE AT THE END OF THE DAY WITH ALL THE MONEY ALLOCATED AND SAY, GOD, I WISH WE HAD MONEY LEFT OVER FOR THIS OR HAD MONEY LEFT OVER.

AS MORE TO MY FELLOW BOARD MEMBERS, AS WE ARE APPROVING THINGS, WE NEED TO THINK THAT THERE ARE NOW COSTS INVOLVED. THERE ARE OTHER THINGS THAT WE WON'T BE ABLE TO DO IF WE DO THINGS TODAY, AND THAT NEEDS TO BE PART OF HOW WE APPROACH SOME OF THESE THINGS. SO THAT WAS MY POINT. I'M SORRY. YOU'RE UNDER THE GUN ON THIS AND IT'S PROBABLY NOT FAIR.

DR. OLSON: NO. I MEAN I GUESS I BASICALLY AM JUST TRYING TO KEEP THE BOARD AND EVERYBODY AWARE OF MORE OR LESS WHERE WE ARE. I THINK THAT THE OPTION HAS ALWAYS BEEN THAT OF CHANGING HOW MONEY IS ALLOCATED IN THE FUTURE. I MEAN YOU ALL HAVE THE STRATEGIC PLAN. YOU ALL UNDERSTAND THE THINKING THAT WENT INTO IT. I THINK YOU ALL RECOGNIZE THAT THE CONCEPT FUNDING OF $491 MILLION, THE LIKELIHOOD OF THAT ALL GETTING AWARDED, I WOULD SAY, IS NEXT TO ZERO. THAT MONEY WILL GO BACK INTO THIS FUTURE FUNDING POT, AND YOU HAVE SOME SAY.

CHAIRMAN THOMAS: DR. TROUNSON.

DR. TROUNSON: SO IT'S IMPORTANT TO BE INFORMED ABOUT WHAT REMAINS AND WHAT WE AGREED TO AT THE LAST AGREEMENT ABOUT THE CONSTRUCT. WHAT WE'RE GOING TO BE DOING IN AUGUST IS TO GET SOME INPUT FROM THE SCIENTIFIC ADVISORY BOARD. AND THAT MIGHT COME BACK WITH SEVERAL OR SOME SEVERAL RECOMMENDATIONS. THEIR REPORT WILL COME BACK TO THE BOARD WITH COMMENTS FROM US. I THINK THAT'S THE TIME TO SORT OF RELOOK BECAUSE WE SORT OF GOT TO BE LOOKING AT WHETHER THERE'S 600 -- AROUND ABOUT 600 MILLION THAT'S STILL LEFT TO BE ALLOCATED. I THINK WHAT HAPPENS IS THAT YOU HAVE TO HAVE TAKEN A LOOK AT DIFFERENT TIMES AND MAKE THOSE DECISIONS; BUT CERTAINLY AS YOU AGREE TO FUND SOMETHING, IT WILL CLEARLY BE LESS MONEY IN THE TOTAL POT AT THE END UNLESS WE GET REFUNDED, OF COURSE.

SO I WAS GOING TO BRING THE RECOMMENDATIONS OF THE SCIENTIFIC ADVISORY BOARD, WHICH WE FOCUS ON WHAT THEY THINK WE SHOULD BE HAVING OUR FOCUS, AND IT MAY OR MAY NOT BE SUPPORTIVE COMPLETELY OF OUR STRATEGIC PLAN, BUT IT WILL BE A RECOMMENDATION WE'LL BRING TO THE BOARD FOR FURTHER DISCUSSIONS ABOUT HOW WE ORIENT OURSELVES. AND IT'S VERY CLEARLY THE CASE. WE MET

WITH THE STEM CELL LEADERSHIP, THAT THEY'RE VERY SUPPORTIVE OF THESE TRAINING PROGRAMS AND HAVING THEM TO CONTINUE, BUT THEN THEY'RE SUPPORTIVE OF ALL THE PROGRAMS. THAT'S PART OF THE PROBLEM. EVERYONE IS SUPPORTIVE OF ALL OF THE PROGRAMS. SO IT'S NOT THAT THERE'S ANY PROGRAM THAT'S NOT SUPPORTED, BUT CLEARLY THERE'S A STRONG SUPPORT FOR THE TRAINING PROGRAMS AS WELL AS ALL THE OTHERS THAT WE'RE ACTUALLY BRINGING FORWARD AT THE MOMENT.

CHAIRMAN THOMAS: DEAN PULIAFITO.

DR. PULIAFITO: SO IF WE APPROVE ALL THE CONCEPTS TODAY, YOU'RE SAYING THAT WE HAVE $600 MILLION MORE OR LESS, 577, UNALLOCATED?

DR. OLSON: YES.

DR. PULIAFITO: THERE WAS ANOTHER NUMBER THAT SAID $115 BILLION. THAT WAS ON YOUR SECOND TO LAST SLIDE. WHAT WAS THAT? 115 MILLION.

DR. OLSON: THAT'S JUST MORE DETAIL BECAUSE THE SLIDE I PRESENTED HERE, FUTURE, INCLUDES FUTURE ALLOCATED AND FUTURE UNALLOCATED. I THINK IN THE THIRD SLIDE I EXPLAIN --

DR. PULIAFITO: SO THIS IS FUTURE UNALLOCATED?

DR. OLSON: NO. THAT'S BOTH. THAT'S THE TWO COMBINED.

DR. PULIAFITO: SO HOW MUCH MONEY DO WE HAVE LEFT THAT'S UNALLOCATED?

DR. OLSON: 500 -- YOU HAVE 577 MILLION THAT HAS BEEN ALLOCATED ACCORDING TO A FUNDING STRATEGY.

DR. PULIAFITO: SO IN WHAT CALENDAR YEAR ARE WE GOING TO STOP MAKING NEW AWARDS BY THIS MATH?

DR. OLSON: 16/17.

DR. TROUNSON: IT, AGAIN, DEPENDS ON --

DR. PULIAFITO: NOT WHEN WE'RE SPENDING, BUT SITTING IN THIS ROOM APPROVING THINGS. IS IT GOING TO GO FOR ANOTHER TWO YEARS?

DR. TROUNSON: 2017. 2017 IS WHEN WE WOULD PREDICT AT THE CURRENT RATE OF DECISION-MAKING THAT IN 2017 THAT WE WON'T BE ABLE TO ALLOCATE FURTHER NEW GRANTS, 2017. MAYBE IT WILL BE A LITTLE BIT LONGER, 2018, BUT 2017 IS WHAT WE PREDICT.

DR. PULIAFITO: I'D SAY I AGREE WITH JEFF. I THINK THERE NEEDS TO BE AN EXAMINATION. FIRST OF ALL, ALL OF US THAT ARE IN THE RESEARCH WORLD KNOW THAT SUSTAINABILITY IS A BIG QUESTION. AND WE'RE NOT -- THERE'S NO EVIDENCE THAT THE NIH IS GOING TO BE SUSTAINING ANYTHING. OKAY. SO ONE OF THE MAIN FUNCTIONS OF THE BOARD IS TO SET OUT A FUNDING STRATEGY THAT MAKES SENSE GOING FORWARD.

YOU KNOW, IT'S EASY TO SAY YES, YES, YES FOR EVERYTHING. BUT IF WE ONLY HAVE -- WE COMMITTED 2.4 BILLION. WE HAVE 600 MILLION LEFT. WE REALLY NEED TO LOOK AT HOW WE'RE GOING TO SPEND THAT 600 MILLION.

DR. OLSON: LET ME REMIND THE BOARD THIS IS A FUNDING STRATEGY THAT WAS AGREED TO BY THE BOARD. I MEAN JEFF IS CITING ANOTHER SCENARIO, BUT THAT WAS ROUGHLY $100 MILLION DIFFERENCE. THAT'S ALL THAT WAS.

DR. PULIAFITO: I WOULD SAY THE FOLLOWING: TIMES CHANGE.

DR. OLSON: THAT IS CORRECT.

DR. PULIAFITO: TIMES CHANGE; ENVIRONMENT CHANGES. THOSE OF US WHO ARE IN THE BIOMEDICAL RESEARCH ARENA KNOW TIMES ARE TOUGH AND ARE NOT GOING TO GET BETTER SOONER. SO DECISIONS THAT YOU MAKE ABOUT HOW YOU SPEND THAT $600 MILLION IS REALLY GOING TO DETERMINE HOW AND WHAT REMAINS OF STEM CELL RESEARCH IN CALIFORNIA IF THE NIH STAYS THE SAME, WHICH I ASSUME IS GOING TO BE YES, AND WHETHER OR NOT WE'RE REFUNDED, WHICH WE CAN MAKE NO ASSUMPTION ABOUT AT THIS POINT. SO THAT'S JUST A CAUTIONARY NOTE. TIME FLIES.

DR. TROUNSON: WE AGREED TO BRING YOU THIS

DATA ON EVERY MEETING SO THAT WE WOULD MAKE THE POINT. SO THAT'S EXACTLY WHAT WE AGREED TO DO WITH THE BOARD.

DR. PULIAFITO: THE QUESTION IS ARE WE EVER GOING TO JUST SIT BACK AND SAY, OKAY, HERE WE ARE TODAY. WE'VE GOT 577 -- IF WE SAY YES TO EVERYTHING TODAY, WE'VE GOT 600 LEFT, AND COULD EVERY MEMBER OF THE BOARD GO AROUND AND SAY, YEAH, THIS IS WHAT THE STRATEGIC PLAN SAYS WE'RE SUPPOSED TO SPEND THE 600. I THINK THE ANSWER IS PROBABLY NOT.

CHAIRMAN THOMAS: THESE ARE POINTS VERY WELL TAKEN, JEFF AND CARMEN. WE'VE BEEN HAVING INTERNAL DISCUSSIONS ON THIS PARTICULAR TOPIC AND FEEL THAT, IN LIGHT OF WHAT WILL BE A NUMBER OF MONTHS OF IMPLEMENTING THE DIRECTION THE BOARD DID DECIDE TO GO LAST YEAR, PLUS THE ADVENT AND MEETING OF THE STRATEGIC ADVISORY BOARD, TO ALAN, ETC., AND THE FACT THAT AFTER TODAY FOR THE NEXT SIX MONTHS OR SO I BELIEVE THERE'S ONLY ONE CONCEPT PROPOSAL THAT'S COMING, DR. OLSON?

DR. OLSON: LET ME THINK. YES. I DON'T THINK WE'RE GOING TO SEE MUCH MORE BEFORE THE END OF THE YEAR IN TERMS OF CONCEPT PROPOSALS. THAT IS CORRECT.

CHAIRMAN THOMAS: SO THERE'S NOT GOING TO BE A LOT. SO I THINK WE'LL BE MORE OR LESS WHERE WE ARE AT THE END OF THE DAY PLUS MAYBE ONE ADDITIONAL CONCEPT PROPOSAL. AND WE WERE THINKING ABOUT THE IDEA OF ACTUALLY, AS WE WERE GOING TO DO LAST JANUARY, OF HAVING A BOARD RETREAT TO DISCUSS THIS ISSUE CERTAINLY BECAUSE IT IS, YOU'RE RIGHT, TIMES DO CHANGE, WE NEED TO REVISIT THE STRATEGIC PLAN IN LIGHT OF ALL THE INPUT THAT HAS COME IN THE INTERIM, AND TO DISCUSS AS FULLY AS A BOARD AND VET IT AS TO WHETHER WE WANT TO CONTINUE ALONG THIS PATH, MODIFY, ETC. DEAN PULIAFITO.

DR. PULIAFITO: EVERY SCIENTIFIC OFFICER AT AN INSTITUTE AT THE NIH ARE MAKING THESE DECISIONS. AND DECISIONS ARE MADE USUALLY WE'RE GOING TO MAXIMIZE THE ABILITY TO FUND INDIVIDUAL INVESTIGATORS AND KEEP THEM ALIVE. SO THAT'S, OF COURSE, MY PREJUDICE LOOKING AT ALL THIS. SO I WOULD LIKE TO BE IN A POSITION OF SUSTAINING THE STEM CELL INVESTIGATORS IN CALIFORNIA FOR AS LONG AS WE POSSIBLY CAN. AND WHEN WE LOOK AT THAT, THEN JUST ABOUT EVERYTHING IS ON THE TABLE, INCLUDING BRIDGES, TRAINING, ALL THESE THINGS, BECAUSE THOSE -- AT THE NIH THEY GET RID OF PROGRAM PROJECT GRANTS, THEY DOWNSIZE CORE FACILITIES, AND FEATURE

R01S. AND THAT'S GOING ON RIGHT NOW.

CHAIRMAN THOMAS: I HOPE, BY THE WAY, FOR EVERYBODY'S SAKE, THAT NIH DOES STAY THE SAME AND DOESN'T GET WORSE GOING FORWARD.

MS. LANSING: I HOPE IT GETS BETTER.

CHAIRMAN THOMAS: SHERRY.

MS. LANSING: YES.

CHAIRMAN THOMAS: YES, THAT WOULD BE OUTSTANDING. WITH SEQUESTRATION, ETC., CONTINUING ALONG, NOT PARTICULARLY, BUT ONE COULD CERTAINLY HOPE. JOAN, DID YOU HAVE A COMMENT?

MS. SAMUELSON: YEAH. I WOULD HOPE THAT WE COULD, STARTING REALLY TODAY, COME UP WITH SOME SENSE OF WHAT MATERIALS WE WILL NEED AS THE BOARD TO BE INFORMED ENOUGH TO MAKE THOSE JUDGMENTS IN THE UPCOMING -- IN OUR DECISIONS TODAY AND UPCOMING MEETINGS. AND I'M THINKING ABOUT THE MATERIALS FROM THE SCIENTIFIC ADVISORY BOARD. THAT'S NOT THE GRANTS WORKING GROUP, RIGHT?

CHAIRMAN THOMAS: VERY DIFFERENT.

MS. SAMUELSON: AND WE DON'T GET THEIR MATERIALS, AND I THINK WE NEED TO HAVE THEM IF WE'RE GOING TO MAKE THESE JUDGMENTS. BECAUSE WHAT WE'RE SAYING IS NOT ONLY HOW DO WE CHOOSE AMONG THE PROGRAMS WE'RE ALREADY FAMILIAR WITH, BUT IF WE'RE

GOING TO DO ANYTHING ELSE. AND AS FAR AS I CAN TELL, THE FUNDING STRATEGY AVAILABLE TO US RIGHT NOW DOES NOT PRODUCE ANY CALIFORNIANS WHO GET BETTER FROM SUFFERING FROM SOME INTRACTABLE DISORDER. AND THAT MAY SEEM REALLY SIMPLISTIC, BUT THAT IS THE WAY OUR CONSTITUENCY EVALUATES IT. AND I THINK WE'RE GOING TO HAVE TO HAVE ANSWERS TO QUESTIONS ABOUT THAT AND INFORMED, SERIOUS JUDGMENT ABOUT HOW FAR WE CAN GO, WHAT WE CAN ACCOMPLISH, AND THAT MIGHT BE A DIFFERENT GOAL FROM SUSTAINING THE SCIENTIFIC ARMY, IF YOU WILL, WHICH IS A LAUDABLE GOAL, BUT WE MIGHT HAVE TO DO SOMETHING SOMEWHAT DIFFERENT IF WE'RE GOING TO ADVANCE RESCUE OF CALIFORNIANS AND PEOPLE WORLDWIDE WITH ANY KIND OF DILIGENT EFFORT. THAT MIGHT TAKE A DIFFERENT STRATEGY.

SO I'M HUNGERING TO GET AT SOME OF THESE MATERIALS I WAS TALKING TO ELLEN ABOUT. AND I THINK IT'S IMPORTANT THAT WE FOCUS ON THAT.

CHAIRMAN THOMAS: ALAN.

DR. TROUNSON: JUST ONE THING, JOAN. FOUR OF THE MEMBERS OF THE SAP ARE MEMBERS OF THE GRANTS WORKING GROUP. WE'VE INCLUDED STU ORKIN, WHO USED TO BE THE CHAIR OF THE GRANTS WORKING GROUP. SO THEY'RE PEOPLE WHO KNOW PRETTY WELL.

CHAIRMAN THOMAS: GOOD POINT. THANK YOU.

MS. SAMUELSON: IT ISN'T A PROGRAMMATIC VEHICLE BY WHICH WE'RE INTERACTING AND SHARING INFORMATION AND MAKING DECISIONS. THINGS COME TO US AND WE HAVEN'T HAD THE BENEFIT OF RECOMMENDATIONS LIKE WE DO WITH THE GRANTS WORKING GROUP. SO I'M A LITTLE CONCERNED.

CHAIRMAN THOMAS: OKAY. DR. OLSON, ARE YOU DOWN TO YOUR LAST SLIDE HERE?

DR. OLSON: I'M FINISHED UNLESS THERE ARE MORE QUESTIONS.

CHAIRMAN THOMAS: OKAY. THANK YOU. THANK YOU, MEMBERS OF THE BOARD, FOR ALL YOUR INSIGHT AND SUGGESTIONS AS ALWAYS. VERY IMPORTANT POINTS.

MARIA, ARE WE GOING TO THIS NEXT?

MS. BONNEVILLE: YEAH. I THINK WE SHOULD DO THIS.

CHAIRMAN THOMAS: OKAY. SO WE'RE GOING NEXT INTO ITEM 6, WHICH IS A REVIEW OF HOW WE'VE DONE ON OUR ONE-YEAR STRATEGIC PLAN GOALS FOR FISCAL '12-'13. DR. TROUNSON.

DR. TROUNSON: THESE ARE THE STRATEGIC PLAN GOALS THAT WE HAD FOR OUR ONE-YEAR FOR 2012-13. AND THEY'VE ALL GOT TICS BESIDE THEM, SO WE'VE ACTUALLY ACHIEVED ALL THE GOALS THAT WERE SET UP IN THE STRATEGIC PLAN. SO WE CAN READ THROUGH THEM,

BUT IT HAD TO INCLUDE AT LEAST TWO PROGRAMS WITH APPROVED IND FILING, ACHIEVE $50 MILLION IN OUTSIDE FINANCIAL COMMITMENTS. WE ACTUALLY HAD 62 OR $63 MILLION. SO WE'RE ABOVE THE 50 MILLION ON THAT.

ENSURE THE FUNDING OF POTENTIALLY HIGH IMPACT PROJECTS. WE PUT THOSE INTO OUR BASIC PROJECTS, AND SO THEY'RE THERE. AND EDUCATE AND ENGAGE THE CALIFORNIA COMMUNITY. SO WE RAISED THE NUMBER OF MONTHLY ONLINE ENGAGEMENTS FROM 70,000 TO A HUNDRED THOUSAND. SO THE COMMUNICATIONS GROUP HAVE DONE VERY WELL THERE.

AND WE'RE ALSO BEGINNING TO OPTIMIZE OUR WORKFORCE TO MEET THE CHANGING PRIORITIES WITHIN OUR 6-PERCENT CEILING. SO WE ACTUALLY ACHIEVED ALL OF THOSE GOALS.

SO WHAT WE DID WAS TO SET UP NINE GOALS FOR THE NEXT 12 MONTHS. SO I WANTED TO BRING THEM TO YOU SO THAT YOU COULD FOCUS ON THAT. SO WE'VE BEEN WORKING INTERNALLY TO GET AGREEMENT ON ALL THESE. SO REMEMBER THERE ARE FIVE-YEAR GOALS SET INTO THE STRATEGIC PLAN. SO THIS IS THE SECOND YEAR OF THOSE FIVE YEARS.

SO CIRM PORTFOLIO SHOULD INCLUDE AT LEAST THREE TO FIVE PROGRAMS ACTIVELY ENROLLING PATIENTS ON STEM CELL-BASED CLINICAL TRIALS, THREE TO FIVE IN

THIS NEXT 12 MONTHS.

SECONDLY, TO INITIATE FIVE TO TEN POTENTIALLY HIGH IMPACT PROJECTS THAT COULD LEAD TO TRANSFORMING THE FIELD THAT ARE A RESULT OF OUR MODIFYING PRIORITIES IN THE RFA'S. SO WE HAVE TO BE ABLE TO SHOW YOU THAT WE'LL HAVE DONE THAT, SOME REAL IMPACT IN PARTICULARLY OUR BASIC SCIENCE AND OUR TOOLS AND TECHNOLOGIES AND WHERE ELSE WE CAN REALLY FIND THESE.

INITIATE KEY IPS CELL AND GENOMIC PROGRAMS TO FURTHER SOLIDIFY CIRM'S GLOBAL LEADERSHIP IN STEM CELL RESEARCH. SO WE INTEND TO DO THAT.

IF YOU AGREE, WE'LL INITIATE THE DEVELOPMENT OF ALPHA CLINIC NETWORKS IN CALIFORNIA THIS YEAR.

THE OTHER FOUR, COMPLETE A WHITE PAPER, WHICH WHEN I WAS REVIEWED A LITTLE MORE THAN 12 MONTHS AGO I THINK NOW, I SUGGESTED WE REALLY NEEDED A WHITE PAPER FOR AN IN-DEPTH ANALYSIS AND RECOMMENDATION FOR A PUBLIC/PRIVATE FUNDING MODEL THAT WILL ENHANCE THE TRANSLATIONAL PART OF THE CIRM PROGRAM. THIS, I THINK, IS SOMETHING THAT THE BOARD NEEDS TO THINK ABOUT. SO I WANTED TO BRING A PAPER OF OPTIONS FORWARD FOR THE BOARD BECAUSE THERE ARE AROUND ABOUT 80 TRANSLATIONAL PROJECTS. AND IF WE

DON'T HAVE A SUBSTANTIAL AMOUNT OF FUNDING OVER THE NEXT FIVE TO EIGHT OR NINE YEARS, MANY OF THOSE WILL GO AGROUND BECAUSE THERE WON'T BE FUNDING FOR THEM TO CONTINUE.

SO I WAS TRYING TO FIND A WAY THAT WE MIGHT BE ABLE TO ATTRACT PRIVATE FUNDING TO JOIN US IN PUSHING THOSE TRANSLATIONAL PROJECTS FORWARD. AND I DIDN'T WANT TO REALLY BE IN A POSITION TO THINK THAT WHEN WE FINISH OUR FUNDING, THAT A LOT OF THOSE PROJECTS WERE GOING TO SORT OF CEASE BECAUSE OF THIS SO-CALLED VALLEY OF DEATH OR THE AREA WHERE IT IS HARDEST TO GET FUNDING. SO WE'RE GOING TO BRING SOMETHING TO YOU AND GIVE IT TO YOU AND SAY HERE'S A POSSIBILITY THAT WE MIGHT BE ABLE TO CONSIDER.

WE WANT TO LEVERAGE 60 MILLION PLUS IN NEW OUTSIDE FINANCIAL COMMITMENTS FOR CIRM. SO RAISE THAT ANOTHER $10 MILLION FROM LAST YEAR.

DOUBLE THE NUMBER OF STATEWIDE PUBLIC SPEAKING ENGAGEMENTS AND INCREASE THE NUMBER OF MONTHLY IMPRESSIONS ON OUR SOCIAL MEDIA SITES BY 10 PERCENT, TO EXPAND OUR OUTREACH EFFORT TO BETTER EDUCATE CALIFORNIANS, TO IMPROVE, AGAIN, PEOPLE TALKING ABOUT THIS PROGRAM, RECOGNITION OF THIS PROGRAM, AND SUPPORT OF THE PROGRAM. AND, AGAIN, TO

CONTINUE TO OPTIMIZE THE WORKFORCE STAFFING AND MANAGEMENT TO MEET THE CHANGING PRIORITIES WITHIN THAT 6-PERCENT CEILING THAT WE HAVE. SO I'M OPEN TO ANY QUESTIONS OR DISCUSSIONS.

MS. LANSING: I WANT TO GET ON THE LIST TO TALK.

CHAIRMAN THOMAS: HOLD ON, SHERRY, ONE SECOND. DIANE HAS GOT A QUESTION, THEN WE'LL GO TO YOU NEXT.

MS. WINOKUR: I THINK YOU SHOULD CALL ATTENTION TO THE MEETING EARLIER THIS MONTH OF ADVOCATES FROM ALL OVER THE STATE IN WHICH SEVERAL MEMBERS OF THE CIRM STAFF HAD AN OPPORTUNITY TO DESCRIBE CIRM PROGRAMS AND TAKE QUESTIONS. THAT WAS A VERY GOOD CIRM PUBLIC AFFAIR.

DR. TROUNSON: IT WAS, DIANE. IT WAS GREAT. I WASN'T UNFORTUNATELY THERE, BUT KEVIN IS GOING TO TALK ABOUT THAT A LITTLE LATER, BUT I ABSOLUTELY AGREE.

SHERRY, YOU HAD A COMMENT?

MS. LANSING: YES. WELL, MY COMMENT IS THANK YOU, AND I AGREE WITH ALL THE GOALS THAT YOU PUT FORWARD. BUT I WANTED TO PUT A SPECIAL EMPHASIS FOR THE BOARD AND FOR ALL OF US. I AM, AS ALL OF US ARE, GOING TO DO EVERYTHING WE POSSIBLY CAN TO GET A

RENEWAL OF THE BOND MONEY. BUT I THINK WE HAVE TO ALSO START TO PREPARE, AND THIS HAS TO BE A HIGH PRIORITY, AND YOU DID MENTION IT, ABOUT REACHING OUT TO PUBLIC/PRIVATE PARTNERSHIPS. AND I THINK WE REALLY AS A BOARD, AND OBVIOUSLY YOU AND YOUR TEAM REALLY NEED TO MAKE THAT, AND YOU DID MENTION IT. I JUST WANT TO STRESS THAT I THINK IT HAS TO BE A HIGH PRIORITY SO THAT ALL THE CLINICAL TRIALS THAT WE HAVE, ALL THE WORK THAT'S BEEN GOING ON, GOD FORBID IF WE DON'T GET A RENEWAL OF A BOND, THAT WE HAVE ANOTHER POSSIBILITY TO CONTINUE THIS WORK. SO I JUST WANTED TO --

DR. TROUNSON: I EMPHATICALLY AGREE, SHERRY, THAT WE NEED TO. EVEN IF WE GET REFUNDING, THAT'S ANOTHER WAVE OF ENABLING THAT PART OF IT AND GETTING MORE PRIVATE PARTNERSHIPS. IT'S A REALLY GOOD IDEA EVEN IF WE DID GET FUNDING.

MS. LANSING: WELL, YOU'RE RIGHT. AND YOU SAID IT MORE ELOQUENTLY. SO LET ME AMEND WHAT I WAS SAYING. YOU'RE ABSOLUTELY RIGHT. WE SHOULD DO BOTH IS WHAT WE'RE SAYING. AND THANK YOU FOR CORRECTING ME BECAUSE YOU ARE RIGHT. BUT WE MUST START TODAY BECAUSE WE NEED THIS EXTRA MONEY TO CONTINUE OUR WORK.

CHAIRMAN THOMAS: THANK YOU, SHERRY. I

SHOULD NOTE THAT ON THE SUBJECT OF SUSTAINABILITY IN GENERAL, THERE ARE A NUMBER OF OTHER THINGS, OTHER INITIATIVES WE'RE PURSUING, WHICH AT THE APPROPRIATE TIME WE'LL DISCUSS WITH THE BOARD, THAT DEAL WITH SORT OF THE ORGANIZATIONWIDE NEED FOR ADDITIONAL FUNDING. ALAN'S PROGRAM, AS HE'S SAID, IS TARGETED PRINCIPALLY AT THE TRANSLATIONAL PART OF THE PORTFOLIO TO ENABLE IT TO CONTINUE ALONG. SO A COMBINATION OF ALL THESE EFFORTS, WE'RE MOST HOPEFUL, WILL END UP WITH ADDITIONAL FUNDING TO SUSTAIN THE AGENCY AND THE TRANSLATIONAL PORTFOLIO, ETC.

MS. LANSING: THANK YOU. I'M GLAD YOU'RE DOING THAT.

CHAIRMAN THOMAS: WE HAVE DEAN HAWGOOD THEN DEAN PULIAFITO.

DR. HAWGOOD: ALAN, ALL OF THESE GOALS WITH THE EXCEPTION OF THE FIRST ARE MORE OR LESS UNDER THE STAFF'S AND BOARD'S CONTROL TO EXECUTE ON. BUT TO HAVE THREE TO FIVE CLINICAL TRIALS ACTIVELY ENROLLING PATIENTS GIVEN THE TIMELINE, IS THAT A GOAL THAT WAS ESTABLISHED BASED ON YOUR ANALYSIS OF WHAT'S PROBABLE?

DR. TROUNSON: YES. YEAH. WE FEEL THAT WE CAN MAKE THAT, SAM. WE FEEL CONFIDENT THAT WE

CAN DO THAT. AND WE'RE PRESSING HARD TO DO THAT. WE'RE ENROLLING IN TWO PROJECTS AT THE MOMENT. SO THAT'S A GREAT START. SO LET'S HOPE THAT WE'VE DRIVEN IT UP TO THE FIVE ON THE OPTIMISTIC END. BUT WE'RE IN THE GAME. WE'RE ACTUALLY IN THE GAME. SO THAT'S REALLY IMPORTANT.

CHAIRMAN THOMAS: JOAN, IT'S DEAN PULIAFITO IS FIRST, JOAN, AND THEN YOU.

MS. SAMUELSON: I JUST WONDERED IF YOU COULD IDENTIFY THE TWO AND WHEN THEY STARTED.

DR. TROUNSON: I THINK IN THE CASE OF THE HIV/AIDS WORK, IT'S RUNNING UNDER CAL-IMMUNE. THEY'VE STARTED THEIR PATIENTS. I SEE JEFF NODDING AND WE AGREED. AND IN THE CARDIOMYOCYTE WORK, THEY'RE ENGAGING THEIR PATIENTS AS WELL. SO THERE'S THE TWO.

DR. FEIGAL: THAT'S CORRECT.

MR. SHEEHY: CAL-IMMUNE INFUSED THEIR FIRST PATIENT. I THINK KEVIN ISSUED A PRESS RELEASE AND SO DID THE COMPANY, WHAT, LAST WEEK, WASN'T IT?

DR. TROUNSON: YEAH. YEAH.

MR. SHEEHY: THEY'VE ACTUALLY TREATED THEIR FIRST PATIENT.

DR. TROUNSON: SO OTHERS ARE GETTING READY AS WELL, BLUEBIRD, ETC. SO WE'RE HOPEFUL THAT WE

CAN MEET THE UPPER LIMIT OF THIS. AND SO WE'RE PUSHING REALLY HARD AND WORKING WITH THOSE TEAMS TO MAKE SURE THAT WE GET THOSE UP AND AS MANY PATIENTS AS POSSIBLE INTO THESE TRIALS.

MS. SAMUELSON: AND THE SECOND WAS WHAT?

DR. TROUNSON: THE CARDIOMYOCYTE WORK OUT OF CEDARS-SINAI. AND WE EXPECT BLUEBIRD IN THALASSEMIA TO BEGIN RELATIVELY SOON AS WELL, I THINK, ELLEN, NOT TOO FAR OFF.

MS. SAMUELSON: SO THAT'S AN ONGOING CLINICAL TRIAL, THE CARDIOMYOCYTE?

DR. FEIGAL: THERE ARE TWO ONGOING CLINICAL TRIALS, ONE IN HIV AND ONE IN CARDIAC DISEASE. AND THEN WE ANTICIPATE A THIRD ONE STARTING BEFORE THE END OF THE YEAR. AND THEN WE HAVE FOLLOWING THE THINGS, IF THINGS STAY ON TRACK, WE ANTICIPATE MORE IN 2014.

MS. SAMUELSON: IT WOULD BE GOOD TO JUST GET ON PAPER SO THAT WE CAN REFER TO IT AND NOT HAVE TO KEEP ALL THIS IN OUR HEADS.

DR. FEIGAL: YOU KNOW, AT THE PREVIOUS BOARD MEETING, I GAVE AN UPDATE ON EACH OF THE TEAMS AND WHERE THEY ARE, AND WE'D BE HAPPY TO CONTINUE THOSE UPDATES SO YOU'RE AWARE.

MS. SAMUELSON: IN THE SAME CONTEXT OF OUR

DECISION-MAKING BECAUSE IT SHIFTS FROM TIME TO TIME.

CHAIRMAN THOMAS: I WOULD LIKE TO NOTE ON THIS POINT THAT THIS IS, NOT TO GLOSS OVER THIS TOO QUICKLY, THIS IS A LANDMARK DEVELOPMENT FOR CIRM TO GET THE FIRST OF OUR PROJECTS INTO HUMAN CLINICAL TRIALS AND THE FIRST OF WHAT PROMISE TO BE MANY AND REALLY HIGHLIGHTS, THOUGH INCREMENTAL, THE DECIDED PROGRESS THAT OUR SCIENTISTS ARE MAKING TOWARDS ACHIEVING OUR GOAL OF DEVELOPING THERAPIES AND CURES. THIS IS A VERY BIG DEAL TO HAVE THESE TWO GO INTO CLINICAL TRIALS THAT WE'RE UNDERWRITING HERE.

DR. TROUNSON: THAT'S RIGHT. DON'T FORGET, JON, THEY'RE THE DISEASE TEAMS. WE'VE HAD OTHERS GO IN CANCER, MYELOFIBROSIS.

CHAIRMAN THOMAS: YES. BUT FOR THE DISEASE TEAMS, THOSE TWO FIRST BIG HITS. DEAN PULIAFITO.

DR. PULIAFITO: CAN YOU PROVIDE THE BOARD WITH AN ITEMIZED LIST OF THE $52 MILLION IN PRIVATE COMMITMENTS --

DR. TROUNSON: YEAH.

DR. PULIAFITO: -- TO CIRM? AND WHAT'S A GREAT EXAMPLE OF THAT? GIVE ME THE BEST EXAMPLE.

DR. TROUNSON: WELL, OUR COLLABORATIVE FUNDING PARTNERS HAVE BROUGHT $5.3 MILLION IN

COLLABORATIVE PROJECTS IN THIS LAST 12 MONTHS.

DR. PULIAFITO: HOW DOES THAT WORK THOUGH?

DR. TROUNSON: SO THESE ARE PROJECTS THAT COME TOGETHER. THEY'RE CONSIDERED AS A COMPLETE PROJECT BY THE GRANTS WORKING GROUP. AND SO WE PAY FOR THE CALIFORNIA PART AND THE OTHER AGENCY OR OTHER COUNTRY PAYS FOR THE OUT OF CALIFORNIA. SO THAT WAS 5.3 MILLION.

THERE WERE MATCHING FUNDS OF 53.4 MILLION, AND THESE ARE MATCHING FUNDS FROM THE DISEASE TEAM COMPANIES IN OUR STRATEGIC PARTNERING AND IN OUR DISEASE TEAMS THAT CAME.

AND THERE WAS A SUPPLEMENTAL GRANT THAT CAME WITH VIACYTE FROM JDRF OF THREE MILLION.

DR. PULIAFITO: I'D JUST LIKE TO MAKE A CLARIFYING POINT. I THINK THIS IS WONDERFUL, BUT WHAT THIS DOESN'T HAPPEN -- WHAT'S NOT HAPPENING IS NOT -- AN OUTSIDE AGENCY ISN'T GIVING YOU MONEY THAT YOU CAN DISTRIBUTE TO THE SCIENTISTS OF CALIFORNIA IN A WAY THAT CIRM SEES FIT. AND THE POINT I NEED TO MAKE ABOUT THAT IS YOU SEE THAT THERE REALLY IS NO SUBSTITUTE FOR CIRM AND THE STATE FUNDS.

AND I'LL TELL YOU JUST AS -- I MEAN SO WE'RE NOT GOING TO RESCUE THE PROGRAM JUST WITH THESE PUBLIC/PRIVATE PARTNERSHIPS ON VERY DESIGNATED

SPECIFIC THINGS.

DR. TROUNSON: OKAY. BUT IN THE CASE OF THE PARTNERSHIPS WITH THE COMPANIES, THEY'RE PUTTING THEIR MONEY INTO THE PROJECT AS WELL AS US. SO THIS IS -- WE CAN'T DO THOSE PROJECTS WITHOUT THAT MONEY. SO YOU KNOW IT IS THE SAME CASE THAT THE GRANTS WORKING GROUP REVIEW THE WHOLE OF THE PROJECT, BOTH OURS AND THE OTHER, AS AN INTEGRATED PART OF THE PROJECT. SO THE DECISIONS WERE MADE ON THE WHOLE PROJECT, NOT JUST OUR PART OF IT. BUT I TAKE YOUR POINT. I THINK YOU MADE YOUR POINT. WE'VE GOT OTHER THINGS TO DO TO RAISE MONEY THAT WE CAN ALLOCATE VERY SPECIFICALLY.

CHAIRMAN THOMAS: OKAY. I BELIEVE WE NEED A MOTION TO APPROVE THE STRATEGIC PLAN GOALS FOR FISCAL '13-'14.

MS. LANSING: I'LL MOVE IT.

CHAIRMAN THOMAS: MOVED BY SHERRY.

MR. TORRES: SECOND.

CHAIRMAN THOMAS: SECONDED BY, I THINK THAT WAS, SENATOR TORRES; BUT IF NOT, I KNOW HE MEANT TO SAY THAT. ALL THOSE IN FAVOR PLEASE SAY AYE. OPPOSED? ON THE PHONE?

MS. LANSING: AYE.

DR. FINE: YES. AYE.

CHAIRMAN THOMAS: ANY ABSTENTIONS? HEARING NONE, THE MOTION PASSES. THANK YOU, DR. TROUNSON. YOU MIGHT -- YES. THANK YOU.

SO WE'RE GOING TO HEAD NOW RIGHT INTO ITEM 7, WHICH IS CONSIDERATION OF CONCEPT -- OH. ACTUALLY WE'RE GOING TO GIVE OUR STENOGRAPHER A QUICK BREAK.

MS. SAMUELSON: MR. CHAIRMAN, ONE QUESTION.

CHAIRMAN THOMAS: YES. HOLD ON ONE SECOND, JOAN, IF YOU WOULD, PLEASE. I WAS DULY NOTED I FORGOT TO GET PUBLIC COMMENT ON THAT LAST MOTION. IS THERE ANY? YES. DON, PLEASE APPROACH THE PODIUM.

MR. REED: ONE OF THE MOST IMPRESSIVE THINGS IN THE WORLD IS THE MICROLOANS WHICH ARE GIVEN OUT IN INDIA TO SMALL BUSINESSES, VERY SMALL AMOUNTS OF MONEY, BUT THEY BRING TREMENDOUS RESULTS. THE ROMAN REED ACT HAS ALWAYS BEEN VERY SMALL GRANTS, BUT BECAUSE THEY GET A SMALL GRANT, THERE WAS OFTEN A BIG FOLLOW-UP. ONE OF THOSE SMALL GRANTS BECAME THE GERON TRIALS. I WOULD LIKE TO SEE CONSIDERATION GIVEN TO JUST A SERIES OF SMALL GRANTS WHICH WILL BE JUST LIMITED, JUST VERY SMALL BECAUSE A SCIENTIST COULD GET A TRACK RECORD WITH THAT, GET

INITIAL DATA, AND GO TO THE NIH AND SAY, LOOK, THIS IS WHAT I HAVE DONE, NOT WHAT I WOULD LIKE TO DO, BUT THIS IS WHAT I HAVE DONE. I HAVE A TRACK RECORD.

SO I WOULD REALLY LIKE TO SEE THE ICOC GIVE SERIOUS CONSIDERATION AS WE WIND DOWN THE AMOUNT OF MONEY THAT WE HAVE TO A COUPLE MILLION DOLLARS OF JUST SMALL GRANTS.

CHAIRMAN THOMAS: THANK YOU FOR THAT SUGGESTION, MR. REED.

NOW, LET'S MOVE TO ITEM 7 -- YOU NEED A QUICK BREAK. YOU'RE OKAY. OKAY. THANK YOU.

MS. SAMUELSON: I HAVE ONE MORE QUICK QUESTION.

CHAIRMAN THOMAS: YES.

MS. SAMUELSON: IT WOULD BE HELPFUL IF WE HAD A TIME FRAME FOR FEEDBACK ON THE TWO CLINICAL TRIALS THAT HAVE BEEN FUNDED SO THAT WE CAN -- SOUNDS LIKE OUR DECISION-MAKING IS GOING TO BE MORE FOCUSED AND IN SHORTER INCREMENTS OF TIME THAN IT HAS BEEN IN THE PAST. SO WE NEED TO BE STAYING UP TO DATE ON HOW THEY'RE DOING. AND OUR PAST CLINICAL TRIALS WENT THROUGH ROUGH SLEDDING, AND I DON'T THINK WE HAVE ANY OTHER. WE FUNDED TWO BEFORE, BOTH OF WHICH I DON'T THINK ARE PENDING NOW. SO WE JUST

HAVE THESE TWO NEW ONES. AND I'D JUST LIKE TO HAVE A SENSE OF WHAT KIND OF UPDATES AND IN WHAT TIME FRAMES WE WOULD GET THEM ABOUT THE PROGRESS OF THOSE CLINICAL TRIALS AND ANY THAT JOIN THEM.

CHAIRMAN THOMAS: DR. TROUNSON.

DR. TROUNSON: WELL, IT'S A LITTLE DIFFICULT, SORRY, TO FOLLOW THE WHOLE OF WHAT YOU'RE ASKING. I'M SORRY. I WAS TRYING TO CONCENTRATE. ELLEN FEIGAL, OF COURSE, BRINGS THE PROGRAM TO YOU ON A REGULAR BASIS. AND IF YOU FEEL THAT WE COULD INCLUDE WHAT WE KNOW IN TERMS OF PROGRESS IN THE CLINICAL TRIALS, IF WE GET IT INTO A NEWSLETTER FOR YOU, I THINK WE COULD TRY AND DO THAT TOO. BUT SHE'S REALLY UPDATING THE BOARD FAIRLY FREQUENTLY ON THIS, AND WE CAN CERTAINLY EXPECT HER TO LET YOU KNOW WHEN THERE'S ANY CHANGE, WHEN THERE'S SOMETHING NEW HAPPENING. SO WE DON'T ALWAYS -- OF COURSE, WE DON'T ALWAYS KNOW SOME OF THE THINGS UNTIL A LITTLE LATER BECAUSE THE COMPANIES THEMSELVES WANT TO PROGRESS THINGS IN A WAY WHICH IS NOT PUBLIC. SO GIVEN THAT PART, WE'LL GET ELLEN TO KEEP THE BOARD AS WELL INFORMED AS WE CAN. OKAY.

MS. SAMUELSON: AND IN SUFFICIENT SCOPE THAT WE CAN MAKE THE DECISIONS THAT WE HAVE TO MAKE GOING FORWARD.

CHAIRMAN THOMAS: I THINK DR. FEIGAL DOES A VERY GOOD JOB OF KEEPING US UPDATED AS DEVELOPMENTS OCCUR. SO I THINK THAT WILL BE VERY HELPFUL, JOAN, IN HELPING YOUR DECISION-MAKING PROCESS AS WELL AS THE BOARD.

MS. SAMUELSON: WE'LL NEED THE WEEDS AT THIS POINT.

CHAIRMAN THOMAS: WE DON'T WANT TO GET TOO FAR INTO THE WEEDS. WANT TO MAKE SURE THAT ALL OF THE BOARD FOLLOWS EVERYTHING THAT'S GOING ON THERE, BUT POINT WELL TAKEN. SO THANK YOU.

ALL RIGHT. ITEM 7 IS CONSIDERATION OF THE ALPHA CLINIC CONCEPT PROPOSAL. DRS. DEWITT AND MILLAN.

DR. DEWITT: GOOD MORNING, MR. CHAIRMAN, MEMBERS OF THE BOARD, AND MEMBERS OF THE PUBLIC. TODAY WE'RE GOING TO PRESENT THE CONCEPT PROPOSAL FOR THE ALPHA STEM CELL CLINICS. BUT FIRST I'D LIKE TO SHOW YOU A SHORT VIDEO THAT WAS TAKEN OF A WORKSHOP THAT WE HELD LAST FALL WHERE WE BROUGHT TOGETHER STAKEHOLDERS AND EXPERTS IN THE FIELD OF STEM CELL THERAPY DEVELOPMENT TO ASK HOW THE CLINICS IN CALIFORNIA CAN MORE EFFECTIVELY TEST AND DELIVER STEM CELL THERAPIES.

(VIDEO WAS THEN SHOWN, NOT REPORTED

NOR HEREIN TRANSCRIBED.)

DR. DEWITT: I WANT TO THANK TODD DUBNICOFF FOR MAKING A GREAT VIDEO. I THINK IT DOES A GOOD JOB OF CAPTURING THE EXCITEMENT AT THE WORKSHOP FOR CIRM ESTABLISHING A FOOTPRINT IN THE CLINICAL ARENA.

SO I'LL START BY SETTING THE STAGE A BIT AND EXPLAIN WHY IT'S SUCH A CRITICAL TIME FOR CIRM TO INITIATE FUNDING SUCH A CLINICAL NETWORK. THROUGH VARIOUS FORMS OF RESEARCH THAT WE'VE DONE AT CIRM, INCLUDING THE WORKSHOP AND INTERVIEWS WITH A VARIETY OF STAKEHOLDERS AND EXPERTS, WE FOUND THAT THERE'S SIGNIFICANT UNMET NEEDS IN THE CLINICAL INFRASTRUCTURE FOR STEM CELL THERAPIES. AS A FUNDING AGENCY WITH THE MISSION OF DRIVING STEM CELL RESEARCH FORWARD AND STEM CELL THERAPIES FORWARD, IT'S IMPORTANT THAT WE ANTICIPATE THESE UNMET NEEDS AND START PUTTING IN PLACE THE MISSING COMPONENTS.

SO AS YOU ALL WELL KNOW, CIRM AND OTHER FUNDERS HAVE MADE AN ENORMOUS COMMITMENT OF FUNDING IN STEM CELL RESEARCH DURING THE PAST DECADE, AND IT'S HOPED THIS HAS FINALLY LED TO AN INCREASED NUMBER OF INVESTIGATIONAL STEM CELL THERAPIES IN THE PIPELINE. SO WE HAVE EVERY REASON TO BELIEVE THAT THIS ACTIVITY WILL CONTINUE IN UPCOMING DECADES.

SO COMPOUNDING THE EFFECTS OF INCREASED ACTIVITY IS THE UNIQUE SET OF CHALLENGES THAT THESE TYPES OF PRODUCTS PRESENT. THIS CAN INCLUDE THE NEED FOR TRACKING THE CELLS IN THE PATIENTS, HANDLING THE CELLS IN SPECIALIZED CLEAN ROOMS, BEING ABLE TO PERFORM GENE MODIFICATION ON THE CELLS, AND THE NEED FOR COLLECTING AND MANAGING DATA, AND THE LENGTHY FOLLOW-UP STUDIES THAT ARE NEEDED FOR SAFETY.

SO THE ALPHA STEM CELL CLINICS NETWORK WOULD HAVE AS ITS MISSION THE CREATION OF RESOURCES, KNOW-HOW, AND EFFICIENCIES TO ACCELERATE CLINICAL TESTING AND DELIVERY OF STEM CELL PRODUCTS. THE PROPOSED NETWORK WOULD ALIGN CLOSELY WITH CIRM'S STRATEGIC PLAN, WHICH IS DIVIDED INTO THREE PHASES. CURRENTLY CIRM IS IN THE MIDDLE OR THE FOCUS PHASE WHERE OUR KEY GOAL IS TO DRIVE CLINICAL TRIALS FOR PATIENTS TO GENERATE PRELIMINARY EVIDENCE OF BENEFIT AND, OF COURSE, SAFETY.

STARTING IN 2016 CIRM WILL START THE DELIVERY PHASE WHERE THE FOCUS WILL BE ON ADVANCING THERAPIES TO PATIENTS, FACILITATING THE COMMERCIALIZATION OF THERAPIES, AND ENABLING BUSINESS MODELS FOR STEM CELL-BASED THERAPIES.

SO THE ALPHA CLINICS NETWORK WILL SUPPORT

BOTH OF THESE CRUCIAL PHASES AND IN DOING SO ACCELERATE THE OVERALL MISSION OF CIRM AND PROP 71, WHICH IS TO SUPPORT THE DEVELOPMENT AND DELIVERY OF THERAPIES AND CURES FOR PEOPLE WHO NEED THEM.

SO THE NETWORK WOULD HAVE FIVE MAJOR GOALS AS WE PROPOSE. THE FIRST IS CLINICAL TRIALS TO IMPROVE THE EFFECTIVENESS AND EFFICIENCY OF CLINICAL TRIALS FOR INVESTIGATIONAL STEM CELL PRODUCTS. SECOND, THE DELIVERY OF THERAPIES TO CREATE CENTERS OF EXCELLENCE FOR DELIVERY OF STEM CELL-BASED THERAPIES PROVEN SAFE AND EFFECTIVE.

THIRD, DATA AND INFORMATION MANAGEMENT. TO COMPILE AND APPROPRIATELY AND SECURELY SHARE CLINICAL TRIAL DATA AND EXPERIENCE TO INFORM A VARIETY OF IMPORTANT POLICYMAKERS, RESEARCHERS, AND CLINICIANS, AS WELL AS THE PUBLIC.

FOURTH, PUBLIC EDUCATION, TO BETTER INFORM THE PUBLIC BY DEVELOPING EDUCATION AND OUTREACH PROGRAMS, PATIENT COUNSELING PROGRAMS TO ADVISE ON WHAT CLINICAL TRIALS ARE AVAILABLE IN THE NETWORKS AND OUTSIDE OF IT, AND TO EDUCATE PEOPLE ON THE POTENTIAL DANGERS OF UNTESTED STEM CELL-BASED PROCEDURES THAT ARE OFFERED WORLDWIDE, AS YOU ALL KNOW, I'M SURE.

SO FINALLY, HEALTHCARE ECONOMICS. THE

ALPHA CLINICS CAN HELP WITH THE SUSTAINABILITY OF THESE NEW THERAPIES BY PROVIDING A PROVING GROUND FOR NEW BUSINESS MODELS AND TO DEVELOP A BASE OF EVIDENCE TO INFORM EVENTUAL COVERAGE DECISIONS BY INSURANCE COMPANIES AND HEALTHCARE PROVIDERS FOR APPROVED THERAPIES ONCE THEY BECOME AVAILABLE.

SO THE SCOPE OF THE ALPHA CLINICS WILL BE LIMITED TO THE SUPPORT OF CONCEPTUALLY NOVEL STEM CELL-BASED THERAPIES AS OPPOSED TO MODIFICATIONS OF THOSE IN CURRENT MEDICAL PRACTICE. IN ADDITION, THE PROCEDURES SHOULD INVOLVE TRANSPLANTATION OR INFUSION OF CELLS AS OPPOSED TO TESTING AND DELIVERY OF SMALL MOLECULES OR BIOLOGICS.

SO WE PROPOSE THAT THE NETWORK WOULD HAVE TWO MAJOR COMPONENTS, A NETWORK OF CLINICS AND AN ORGANIZING CENTER. WE PROPOSE SEEDING UP TO FIVE CLINICS IN EXISTING MEDICAL CENTERS THROUGHOUT CALIFORNIA. THESE CLINICS WILL CONDUCT CLINICAL TRIALS FOR STEM CELL-BASED INVESTIGATIONAL THERAPIES, PROVIDE COUNSELING AND INFORMATION FOR PATIENTS AND POTENTIAL CLINICAL TRIAL SUBJECTS, AND EVENTUALLY BECOME THE GO-TO SITE FOR PATIENTS TO RECEIVE A VARIETY OF THERAPIES.

THE CLINICAL SITES WILL BE LINKED BY A COORDINATION AND INFORMATION MANAGEMENT CENTER,

WHICH WE'RE CALLING THE CIMC. THE MAJOR ACTIVITIES OF THE CENTER WILL BE TO CREATE OUTREACH, EDUCATION, AND TRAINING RESOURCES AND TO BUILD A TEAM OF COUNSELORS TO WORK DIRECTLY WITH PATIENTS. THERE WILL ALSO BE A GROUP OF EXPERTS TO PROVIDE CONSULTING SERVICES TO THE CLINICS AND THE CLINICAL TRIAL SPONSORS AND WHO WILL CONSOLIDATE INFORMATION GAINED THROUGH ACTIVITIES THROUGHOUT THE NETWORK. THE CIMC WILL CREATE A DATABASE OF INFORMATION SUCH AS PATIENT REGISTRIES, CLINICAL TRIAL DATA, ALL WHICH WILL BECOME A VALUABLE RESOURCE FOR HEALTHCARE POLICY AND RESEARCH. AND FINALLY, THE CIMC WILL ALSO HAVE A STAFF WITH EXPERTISE IN HEALTHCARE ECONOMICS AND BUSINESS DEVELOPMENT, AS I MENTIONED, TO CREATE MODELS FOR SUSTAINABILITY AND WORK WITH HEALTHCARE ORGANIZATIONS AND ACCOUNTABLE CARE ORGANIZATIONS AND INSURERS TO ESTABLISH PRICING AND PAYMENT MODELS.

SO THE LONG-TERM GOAL IS TO CREATE A ROBUST AND ACTIVE NETWORK OF CLINICAL TRIALS IN CALIFORNIA. IT WILL PROVIDE CLINICAL TRIAL SITES FOR CIRM-FUNDED DISEASE TEAMS AS WELL AS OTHER INVESTIGATORS AND COMPANIES INSIDE AND OUTSIDE OF CALIFORNIA. CIRM IS CURRENTLY FUNDING OVER 25 CLINICAL TRIALS AND TWO STRATEGIC PARTNERSHIPS, ALL

ADDRESSING A VARIETY OF MEDICAL NEEDS. SO FROM THE CIRM PIPELINE ALONE WE ANTICIPATE TEN DISEASE TEAMS WILL HAVE AN EARLY PHASE CLINICAL TRIAL IN PROGRESS BY THE END OF 2017. ADDITIONAL ACTIVITY WILL COME FROM ACADEMIC- AND INDUSTRY-SPONSORED CLINICAL SPONSORS OUTSIDE CALIFORNIA OR INSIDE CALIFORNIA. THE CLINICS WILL ESTABLISH A BRAND OF EXCELLENCE IN STEM CELL-BASED THERAPIES THAT WILL EVENTUALLY ATTRACT PATIENTS SEEKING APPROVED THERAPIES FOR A VARIETY OF CONDITIONS.

THE INTERACTIONS BETWEEN ALL THE COMPONENTS OF THIS NETWORK, AS SHOWN HERE, INCLUDING THE NONFUNDED COMPONENTS, SUCH AS PATIENTS AND THE CLINICAL TRIAL SPONSORS, IS AN UNDERTAKING WITH A LOT OF ORGANIZATIONAL COMPLEXITY. AND SO, THEREFORE, THIS PROPOSAL CAME FROM A TEAM OF US AT CIRM WITH COMBINED EXPERTISE IN STEM CELL RESEARCH, CLINICAL RESEARCH AND MEDICINE, PUBLIC HEALTH, BUSINESS DEVELOPMENT, AND REGULATORY ISSUES.

SO NOW I'LL PASS THE PRESENTATION OVER TO ONE OF THE MEMBERS OF THIS TEAM, MARIA MILLAN, WHO HAS THE CLINICAL AND MEDICAL EXPERTISE.

DR. MILLAN: THANK YOU, NATALIE. AND GOOD MORNING, MEMBERS OF THE BOARD AND MEMBERS OF THE PUBLIC.

SO WE THOUGHT THAT IN THE NEXT FEW MOMENTS IT WOULD BE HELPFUL TO JUST DESCRIBE HOW SUCH A NETWORK WOULD OPERATE AND WHAT VALUE THIS WOULD BRING TO PATIENTS, TO THE MEDICAL COMMUNITY, AND TO CLINICAL RESEARCH COMMUNITY.

SO CURRENTLY PATIENTS WITH DEBILITATING OR SOMETIMES FATAL DISEASES ARE SEEKING ALTERNATIVES TO WHAT'S AVAILABLE OUT THERE. AND NOW THAT THERE IS MUCH MORE PROGRESS IN THE FIELD OF STEM CELLS, THEY ARE HEARING MORE IN THE PRESS, MAYBE IN PUBLICATIONS, AND OFTEN IN THE INTERNET. AND THERE'S A HUGE AMOUNT OF INFORMATION THAT'S OUT THERE, AND IT'S VERY DIFFICULT FOR THEM, EVEN SOPHISTICATED AND EDUCATED PATIENTS, TO SORT THROUGH THIS MATERIAL AND FIGURE OUT WHAT ARE LEGITIMATE ACTIVITIES VERSUS NOT. AND THERE'S REALLY NO ONE PLACE OR NO RESOURCE THAT THEY CAN USE, AND EVEN THEIR PHYSICIANS OFTEN WOULD NOT HAVE THAT INFORMATION TO HELP THEM.

AND SO THIS OFTEN LEADS TO MORE QUESTIONS, CONFUSION, SOMETIMES A SENSE OF DESPERATION, HONESTLY, AND SOME WILL SEEK DANGEROUS, UNPROVEN, UNREGULATED TREATMENTS ABROAD OR ELSEWHERE AND ACTUALLY PAY FOR THESE.

WITH ESTABLISHMENT OF AN ALPHA CLINICS

NETWORK WITHIN REPUTABLE AND ESTABLISHED MEDICAL CENTERS THROUGHOUT CALIFORNIA, THESE PATIENTS AND THEIR FAMILIES WOULD THEN HAVE SOMEWHERE TO GO. THERE WOULD BE PATIENT COUNSELORS WHO WOULD BE ABLE TO BRING THEM INFORMATION AND DATA-DRIVEN MATERIALS THAT WOULD BE ASSEMBLED AND VETTED THROUGH THE CIMC AND THE EXPERTISE THAT THAT WOULD DRAW, AS WELL AS COLLECTIVE INPUT FROM ALL OF THE PARTICIPATING ALPHA NETWORKS AND THEIR COLLABORATORS.

SO WHETHER THE PATIENTS END UP ENROLLING AT ONE OF THE ALPHA CLINICS OR ELSEWHERE FOR A CLINICAL TRIAL, THEY'RE BETTER INFORMED AS TO WHAT CONSTITUTES LEGITIMATE TRIALS AND TREATMENTS AND BETTER INFORMED TO MAKE DECISIONS ABOUT PARTICIPATION IN VARIOUS TRIALS. IF THERE ARE NO TRIALS AVAILABLE OUT THERE AT THAT TIME, THEY WOULD BE IN THE PATIENT REGISTRY AND THEY COULD BE CONTACTED SHOULD THERE BE SOMETHING DOWN THE PIKE THAT MAY BE APPROPRIATE FOR THEM.

AND IF THEY DO ENROLL IN A CLINICAL TRIAL AT ONE OF THESE SITES, THEY WOULD BE CARED FOR BY AN EXPERIENCED AND SPECIALIZED CLINICAL TRIAL TEAM THAT WOULD HAVE SPECIALIZATION AND EXPERTISE AND EXPERIENCE WITH RUNNING STEM CELL TRIALS. THAT TEAM WOULD BE SUPPORTED BY THE RESOURCES AS DESCRIBED AT

THE CIMC. IT WOULD BE FULLY INTEGRATED WITHIN THE MEDICAL CENTER AND THE MEDICAL NETWORK WHERE THEY WOULD BE ABLE TO LEVERAGE THE MEDICAL SPECIALTIES, RESOURCES, AND INFRASTRUCTURE OF THAT INSTITUTION AND PARTNER INSTITUTIONS.

I JUST WANT TO REEMPHASIZE THAT WE DON'T PROPOSE DUPLICATING OR RECREATING RESOURCES THAT ALREADY EXIST. TO THE CONTRARY, THE IDEA IS THAT THESE HOST INSTITUTIONS FOR THE ALPHA CLINICS WOULD LEVERAGE THEIR RESOURCES TOWARDS SUPPORTING THE CLINICAL TRIALS AND THE ACTIVITIES AT THESE CLINICS.

SO WHY WOULD SPONSORS AND RESEARCHERS AND EVENTUALLY CLINICIANS REFER THEIR PATIENTS TO THESE CLINICS? WELL, FIRSTLY, THERE WOULD BE A VERY EXPERIENCED ALPHA CLINICAL TRIAL TEAM WITH THE EXPERIENCE AND EXPERTISE TO EXECUTE THESE PROJECTS. IN ADDITION, THEY WOULD HAVE ACCESS TO PATIENT REGISTRIES. AND WITH TIME THAT WOULD BUILD INITIALLY DISEASE SPECIFIC. MAYBE PATIENTS WHO HAVE INTEREST IN STEM CELL TRIALS WOULD BE ENTERED INTO THE REGISTRIES AS WELL. ACTUALLY THEY WOULD BE. AND THEY WOULD BE ABLE TO ACCESS THESE REGISTRIES. AND AS WE KNOW, ENROLLMENT IS A MAJOR GATING ITEM FOR CLINICAL TRIALS. SO THIS WOULD BE OF GREAT VALUE TO THESE SPONSORS.

IN ADDITION, THEY WOULD HAVE ACCESS TO CLINICAL AND REGULATORY SUPPORT AS WELL AS BENEFIT FROM THE COLLECTIVE KNOW-HOW, ACCELERATED LEARNING, AND EXPERIENCES THAT ARE EMBODIED AND CONSOLIDATED WITHIN THE CIMC BY ALL THE PARTICIPATING ALPHA CLINIC SITES.

IN ADDITION, THE CIMC WOULD HAVE ESTABLISHED RELATIONSHIPS WITH PARTICIPATING INSTITUTIONS AND ALPHA CLINICS, AND THIS WOULD BUILD EFFICIENCIES INTO THE SYSTEM WITH PROCESSES SUCH AS IRB SUBMISSION SO THAT PROPER IRB REVIEWS COULD TAKE PLACE IN A TIMELY MANNER WITH APPROPRIATE INPUT FROM THOSE WHO HAVE EXPERIENCE IN THE FIELD. AND ALSO WITH MATTERS SUCH AS CLINICAL TRIAL AGREEMENTS, FOR INSTANCE, WHERE THERE COULD BE MODEL AGREEMENT FORMS OR MAYBE EVEN STANDARD AGREEMENT FORMS THAT COULD BE APPROPRIATELY MODIFIED FOR A GIVEN TRIAL. AND ALL OF THIS WOULD TRANSLATE INTO TIMELINE EFFICIENCIES AND COST SAVINGS FOR THE CLINICAL TRIAL SPONSORS.

WITH THIS VISION AND SCOPE IN MIND, WE PROPOSE THE FOLLOWING ELIGIBILITY CRITERIA FOR THE APPLICANTS OR THE SUCCESSFUL APPLICANT. THE ALPHA CLINICS WOULD BE WITHIN CALIFORNIA INSTITUTIONS, CALIFORNIA MEDICAL CENTERS, AND WE PROPOSE LIMITING ONE ALPHA CLINIC AWARD PER INSTITUTION. THE PI AND

TEAM WOULD HAVE A STRONG TRACK RECORD IN MEDICAL CARE AND CLINICAL RESEARCH, AND THERE WOULD BE DEMONSTRATION OF STRONG INSTITUTIONAL COMMITMENT TO LEVERAGE EXISTING INFRASTRUCTURE AND RESOURCES, NOT JUST AT THE HOSPITAL, BUT IN TERMS OF RESOURCES REGARDING EXPERTISE IN NETWORKS THAT MAY ALREADY BE IN PLACE AT THOSE INSTITUTIONS. THEY WOULD HAVE A STRONG TRACK RECORD FOR CLINICAL TRIALS AND A LARGE PATIENT BASE AND REFERRAL BASE.

A CRITICAL PIECE OF THIS IN ASSURING THAT THESE CLINICS WON'T JUST BE ESTABLISHED AND SITTING THERE IS THAT THESE ALPHA CLINICS MUST DEMONSTRATE AND IT WILL BE A REQUIREMENT THAT THEY COULD INITIATE AT LEAST ONE STEM CELL CLINICAL TRIAL WITHIN 12 MONTHS OF THE AWARD DATE. THEY WOULD BE ASKED TO SUBMIT A CREDIBLE AND STRONG SUSTAINABILITY PLAN FOR THOSE CLINICS AS WELL AS DEMONSTRATE ONWARD ACTIVITIES WITH A PROMISE OF A PIPELINE OF STEM CELL CLINICAL TRIALS AND ACTIVITIES.

THE CIMC WOULD BE AN EXISTING CALIFORNIA FOR-PROFIT OR NOT-FOR-PROFIT ENTITY WITH A STRONG TRACK RECORD IN CLINICAL TRIAL MANAGEMENT AND SUPPORT, MUCH OF THE CORE COMPETENCIES THAT ARE OFTEN CLASSICALLY EMBODIED WITHIN CONTRACT RESEARCH ORGANIZATIONS, BUT ARE NOW ALSO WITHIN ACADEMIC

MEDICAL CENTERS. IN-HOUSE EXPERTISE THAT WOULD BE VALUABLE FOR CLINICAL TRIAL MANAGEMENT AND SUPPORT. AND THE PI WITH STRONG MANAGEMENT AND ADMINISTRATIVE SKILLS WHICH IS CRITICAL TO BRING ALL THESE PIECES TOGETHER. AND THE CIMC WOULD ALSO FORM A STEERING COMMITTEE WITH REPRESENTATION FROM THE ALPHA CLINICS AND A COMMITMENT TO SET UP PUBLIC EDUCATION AND OUTREACH ACTIVITIES, WHICH, AS WE MENTIONED, IS A CRITICAL PIECE TO THIS INITIATIVE.

TO FUND THIS, WE'RE PROPOSING TO THE BOARD $70 MILLION TO FUND TWO RFA'S, REQUESTS FOR APPLICATIONS, UP TO $55 MILLION TO FUND UP TO FIVE ALPHA CLINICS, AND UP TO $15 MILLION TO FUND A CENTRAL INFORMATION -- COORDINATING AND INFORMATION CENTER. THESE WOULD BOTH BE AWARDS THAT WOULD BE FOR THE LENGTH OF FIVE YEARS.

SHOULD THIS CONCEPT BE APPROVED BY THE BOARD TODAY, WE TARGET A RELEASE OF THE REQUEST FOR APPLICATIONS IN OCTOBER OF 2013, AND WE'LL BE BRINGING BACK TO THIS BOARD FUNDING RECOMMENDATIONS IN JULY 2014, NEXT YEAR.

SO BEFORE I END, I'D LIKE TO THANK THE BOARD AND THE PUBLIC FOR THEIR ATTENTION AND FOR ALLOWING US TO BRING THIS CONCEPT FORWARD TO YOU. AND ON BEHALF OF THE CIRM STAFF AND THE INVOLVEMENT

AS SHOWN ON THIS ACKNOWLEDGEMENT SLIDE, I'D LIKE TO THANK YOU FOR CONSIDERING THE ALPHA CLINICS CONCEPT, AND WE HOPE THAT WE'VE CONVEYED THE IMPORTANCE OF SUCH AN INITIATIVE IN TERMS OF BRINGING CIRM TO ITS NEXT PHASE OF ACCOMPLISHING ITS MISSION, WHICH IS TO BRING STEM CELL THERAPIES INTO THE CLINIC.

SO AT THIS TIME I'D LIKE TO ENTERTAIN QUESTIONS. AND NATALIE DEWITT AND I WILL BE HAPPY TO ENTERTAIN THE QUESTIONS AS WELL AS OUR COLLEAGUES WHO HAVE BEEN INTEGRAL TO THIS CONCEPT PROPOSAL DEVELOPMENT. THANK YOU.

CHAIRMAN THOMAS: THANK YOU. MR. SHEEHY.

MR. SHEEHY: I JUST WANT TO COMPLIMENT DR. TROUNSON, AND I'D MENTION STAFF MEMBERS BY NAME, BUT I THINK I'D BE HERE ALL DAY. I THINK THIS IS JUST A TREMENDOUS EFFORT. AND HAVING SEEN A LOT OF THE WORK THAT'S GONE INTO THIS, I REALLY WANT TO APPLAUD THE DILIGENCE AND THE PRODUCT THAT YOU PRODUCED. THIS IS JUST FANTASTIC. THANK YOU.

DR. MILLAN: THANK YOU.

CHAIRMAN THOMAS: DR. FRIEDMAN AND DEAN HAWGOOD AND THEN DIANE.

MS. LANSING: CAN I GO AFTER THEM?

CHAIRMAN THOMAS: YOU GOT IT.

DR. FRIEDMAN: AND, SHERRY, IF YOU LIKE,

I'LL YIELD THE FLOOR TO YOU FIRST IF YOU PREFER.

MS. LANSING: NO. I WANT TO WAIT IN LINE.

DR. FRIEDMAN: OKAY. I TOO WANT TO ECHO THOSE COMPLIMENTARY REMARKS. I THINK THERE'S A LOT OF APPEAL HERE. AND IF I CAN, I'LL SHARE 30 SECONDS WITH YOU OF PERSONAL EXPERIENCE WITH THE CREATION OF OTHER THERAPEUTIC NETWORKS OVER THE LAST 40 YEARS OR MORE, MOST ESPECIALLY WATCHING HOW CANCER CLINICAL TRIALS WERE CONDUCTED AND HOW COOPERATIVE GROUPS WERE FIRST SET UP AND LEARNING FROM SOME OF THE INEFFICIENCIES AND THE DYSFUNCTION OF THOSE ACTIVITIES. CERTAINLY MANY GOOD THINGS WERE GENERATED, AND I DON'T MEAN TO BE CRITICAL AT ALL. I SIMPLY WISH TO SAY THAT WE CAN LEARN FROM THOSE EXPERIENCES, AND THE IDEA OF SETTING UP SOMETHING LIKE THIS RIGHT NOW AT THIS TIME HAS A LOT OF APPEAL TO ME.

I THINK THAT THE OTHER THING THAT WE CAN LOOK TO ARE THE CREATION OF THE HIV CLINICAL TRIAL NETWORKS AND SOME OF THE LESSONS THAT CAN BE LEARNED THERE. I THINK THE TIMING ON THIS IS APPROPRIATE. I THINK THE SCOPE AND SCALE SOUNDS VERY REASONABLE TO ME. I THINK THAT WE HAVE THE OPPORTUNITY TO CORRECT SOME THINGS THAT OTHER TECHNOLOGY OR DISEASE AREAS HAVE FAILED WITH IN THE PAST, SUCH AS SIMPLE

THINGS LIKE STANDARDIZED DATA FORMS SO THAT EVERYBODY IS USING THE SAME THING RIGHT FROM THE BEGINNING, AND YOU DON'T HAVE ALL KINDS OF PROBLEMS WITH COMPARABILITY AND EXPENSIVE WAYS OF CONVERTING INFORMATION, OF ESTABLISHING A CULTURE OF COLLABORATION AND SHARING LEARNINGS BECAUSE EVEN THOUGH WE WILL BE ALL AROUND THE STATE LOOKING AT MANY DIFFERENT KINDS OF DISEASES AND TECHNOLOGIES, ALL THE RESEARCH INSTITUTIONS WILL BE FOCUSING ON THEIR OWN INDIVIDUAL AREAS. NONETHELESS, I THINK THERE'S AN OPPORTUNITY FOR A LOT OF CROSS LEARNING AND LEVERAGING OFF OF THAT, AGAIN, TO SAVE MONEY AND TO SAVE TIME.

SO WHILE I UNDERSTAND THERE HAS TO BE A NUMBER OF IMPORTANT DETAILS WORKED OUT HERE, I JUST WANTED TO SHARE WITH YOU WHY THIS SEEMS, AT LEAST INTELLECTUALLY, VERY APPEALING TO ME.

DR. MILLAN: THANK YOU.

CHAIRMAN THOMAS: DEAN HAWGOOD.

DR. HAWGOOD: SO I WOULD AGREE WITH THOSE COMMENTS. JUST A TECHNICAL QUESTION OUT OF IGNORANCE ON MY PART AROUND THE PROPOSITION. IS THERE ANY LIMITATION FOR PATIENTS FROM OUTSIDE THE STATE OF CALIFORNIA RECEIVING TREATMENT UNDER A CIRM-FUNDED TRIAL?

AND SECONDLY, BECAUSE SOME OF THESE VERY CUTTING-EDGE, COMPLICATED PHASE I TRIALS NEED TO DRAW ON A LARGE GEOGRAPHIC NETWORK, WILL THERE BE AN OPPORTUNITY FOR COLLABORATIVE SITES OUTSIDE OF CALIFORNIA IN DELIVERING CARE?

DR. MILLAN: SO FOR THE FIRST QUESTION, I THINK I'LL DEFER TO JAMES.

MS. BAUM: I'LL ANSWER THAT. IF YOU'RE ASKING WHETHER OR NOT PATIENTS FROM OUTSIDE OF CALIFORNIA CAN COME IN, THERE'S ABSOLUTELY NO PROHIBITION AT ALL.

DR. MILLAN: AND THE SECOND QUESTION ABOUT CLINICAL NETWORKS, YEAH, AS YOU SAY, IT'S ABSOLUTELY TRUE THAT ACCRUING PATIENTS FOR SOME OF THESE LATER PHASE CLINICAL TRIALS CAN BE A HUGE CHALLENGE AND SHOULD ENGAGE WITH INTERNATIONAL OR NATIONAL AND ULTIMATELY INTERNATIONAL PARTNERS. SO WITH THE COLLABORATIVE FUNDING PARTNERSHIP, WE MAY BE ABLE TO WORK OUT SOME KIND OF ARRANGEMENTS WITH FORMALIZED AGREEMENTS WITH OTHER CLINICAL SITES OUTSIDE OF CALIFORNIA. I THINK THE LIMITATION IS THE MONEY JUST HAS TO BE SPENT WITHIN CALIFORNIA, BUT THERE'S NOTHING TO LIMIT US FROM ESTABLISHING PARTNERSHIPS WITH EXTERNAL ENTITIES AS WE ALREADY DO.

DR. HAWGOOD: ONE OTHER COMMENT WHICH I

THINK SORT OF DOVETAILS OFF MICHAEL'S COMMENT ABOUT THINKING HARD ABOUT COMMON DATA SETS AND WHATNOT GOING FORWARD GIVEN THAT NOW MOST OF THE INSTITUTIONS THAT WILL PROBABLY BE INTERESTED IN THIS ARE ON ELECTRONIC HEALTH RECORDS, THAT WE TAKE THAT INTO CONSIDERATION IN THE VERY EARLY PLANNING STAGES.

CHAIRMAN THOMAS: DIANE.

MS. WINOKUR: I'D LIKE TO COMMENT AS A NONSCIENTIST, BUT AS A PATIENT ADVOCATE. AND ACTUALLY FROM MY OWN EXPERIENCE WITH MY OWN PATIENTS IN CLINICAL TRIALS, THERE IS SUCH A DIVERSITY FROM ONE SITE TO ANOTHER, DEPENDING ON THE LEADER OF THE TRIAL, DEPENDING UPON THE INSTITUTION WHERE IT IS, AND THIS IS FOR THE SAME THERAPY, THIS IS A TRIAL FOR THE SAME DRUG, WHATEVER. I THINK THAT THE ALPHA CLINICS WILL BECOME THE MODEL FOR CLINICS THAT ARE TESTING THINGS UNRELATED TO STEM CELL-RELATED THINGS. AND THAT WILL IMPROVE THE CLINICAL TESTING ACROSS THE BOARD.

CHAIRMAN THOMAS: THANK YOU, DIANE. SHERRY.

MS. LANSING: I JUST WANTED TO SAY THAT I THINK THIS IS ONE OF THE MOST EXCITING PROPOSALS THAT WE'VE EVER HAD IN FRONT OF US BECAUSE WAY BACK

WHEN WHEN WE BEGAN CIRM, THOSE OF US WHO ARE PATIENT ADVOCATES DREAMED OF THE TIME WHEN CLINICAL TRIALS WOULD BE THERE TO SAVE LIVES HOPEFULLY OR MAKE DISEASES -- CHRONIC DISEASES THAT WERE MANAGEABLE. SO I SEE THE BEGINNING OF THIS DREAM COMING TRUE IN THESE ALPHA CLINICS. AND I WOULD LIKE TO MOVE THE ITEM.

CHAIRMAN THOMAS: IT'S BEEN MOVED. BEFORE WE ACTUALLY TAKE A SECOND, MARCY WOULD LIKE TO COMMENT, BUT WE'LL TAKE THAT ON ADVISEMENT THERE FOR ONE SECOND, SHERRY.

MS. LANSING: THANK YOU.

MS. FEIT: AND, AGAIN, I JUST WANT TO THANK THE STAFF AND DR. TROUNSON FOR THIS CONCEPT. I HAD AN OPPORTUNITY YESTERDAY TO HEAR IT FOR THE FIRST TIME; BUT EARLY ON WHEN WE WERE CREATING THE INSTITUTE, AND JAMES YOU CAN HELP ME HERE, I DON'T KNOW IF THE PROPOSITION GAVE WORDS TO THE UNDERSERVED POPULATION OF CALIFORNIA IN THE DEVELOPMENT OF THERAPIES BECAUSE WE HAD A LOT OF DISCUSSIONS WHEN WE WERE PUTTING OUR STANDARDS AND POLICIES TOGETHER REGARDING HOW WE WOULD REACH OUT TO THOSE POPULATIONS. SO I JUST BRING THAT UP NOW TODAY IN TERMS OF YOU MENTIONED IN THE PROPOSAL THE NONPROFIT AND FOR-PROFIT. AND, OF COURSE, YOU KNOW

THE DIFFERENCE BETWEEN THE TWO IS IN THE NONPROFIT WE MAKE CONSIDERATIONS FOR THOSE POPULATIONS, AND MANY TIMES IN THE FOR-PROFITS THEY DON'T. SO I JUST WANT TO BRING THAT UP.

AND I DON'T KNOW IF THERE WAS LANGUAGE, JAMES. ORIGINALLY IN THE PROPOSITION, I BELIEVE THERE WAS BECAUSE WE HAD A GREAT DEAL OF DISCUSSION IN SETTING UP OUR STANDARDS AND OUR PROTOCOLS TO REACH OUT TO UNDERSERVED POPULATIONS. BUT GREAT CONCEPT AND CONGRATULATIONS FOR BRINGING THIS FORWARD AT THIS TIME.

CHAIRMAN THOMAS: FRANCISCO.

DR. PRIETO: YES. I ALSO REALLY LIKE THIS IDEA AND WANT TO THANK ALAN AND THE STAFF FOR ALL THE TIME THEY'VE SPENT DEVELOPING IT AND EXPLAINING IT TO US. AND THANK MARCY FOR THE COMMENTS SHE JUST MADE.

THE ONLY QUESTIONS I HAVE, PARTICULARLY IN LIGHT OF OUR DISCUSSION EARLIER THIS MORNING ARE ABOUT THE BUDGET. AND I'D LIKE TO UNDERSTAND A LITTLE BIT MORE ABOUT THAT. PARTICULARLY BECAUSE THIS IS A LARGE CHUNK OF MONEY, WHAT ARE THE INCREMENTAL COSTS THAT THE INSTITUTIONS THAT WERE SUCCESSFUL IN APPLYING WOULD BEAR IN DEVELOPING SOMETHING LIKE THIS? HOW MUCH SHOULD WE EXPECT THEM

TO LEVERAGE THE RESOURCES THEY ALREADY HAVE IN PLACE? I DON'T KNOW IF YOU CAN TELL ME MUCH MORE ABOUT THAT.

DR. DEWITT: YEAH, WE CERTAINLY CAN. WE PUT A LOT OF THOUGHT INTO THAT ACTUALLY. AND MAYBE I'LL JUST TURN THE MIC OVER TO NEIL LITTMAN, WHO DID THE FINANCIAL MODELING. AND, OF COURSE, THE WAY THE RFA HAS ALWAYS WORKED, AS YOU KNOW, IS THE APPLICANTS BRING FORWARD A PROPOSED BUDGET AND PLAN FOR HOW THEY WOULD MEET THE OBJECTIVES, AND WHAT THEY COULD LEVERAGE FROM THEIR INSTITUTION WILL BE AN EXTREMELY IMPORTANT COMPONENT HERE. AS MARIA POINTED OUT, THE RELATIONSHIP BETWEEN THE CLINIC AND THE HOSTING INSTITUTION HAS BEEN INTEGRAL. TIGHT INTEGRATION, THAT WILL DEFINITELY BE AN IMPORTANT COMPONENT OF WHETHER A PARTICULAR APPLICANT GETS AN AWARD, HOW MUCH SUPPORT THEY'LL GET FROM THE HOSTING INSTITUTION.

SO NEIL.

MR. LITTMAN: SO AS NATALIE AND MARIA INDICATED, IT'S IMPORTANT TO REITERATE THAT OUR FUNDING WILL NOT BE GOING TO THE DE NOVO DEVELOPMENT OF NEW INFRASTRUCTURE AND FACILITIES. SO WE FULLY ANTICIPATE BOTH THE COORDINATING CENTER AND ALPHA CLINICS WILL USE CIRM FUNDS TO LEVERAGE THEIR

PREEXISTING INFRASTRUCTURE AND RESOURCES. SO THIS WILL BE A CRITICAL COMPONENT OF EACH APPLICATION THAT WE WILL EVALUATE. AND WE'RE ANTICIPATING THAT 20 PERCENT OF THE OVERALL BUDGET, $15 MILLION, WILL GO TO THE COORDINATING CENTER, 80 PERCENT OF THE OVERALL BUDGET OR $55 MILLION WILL GO TO THE ESTABLISHMENT OF UP TO FIVE ALPHA CLINICS.

THE BUDGET FOR EACH OF THESE, IN TERMS OF THE COORDINATING CENTER, WE BELIEVE THAT IT WILL BE USED FOR OBVIOUSLY PERSONNEL. IT WILL BE USED TO CREATE A CENTRALIZED DATABASE THAT COULD ACT AS A REPOSITORY FOR CLINICAL TRIAL-RELATED INFORMATION. IT WILL FUND EQUIPMENT AND SUPPLIES FOR THE ALPHA CLINICS IN ADDITION TO PERSONNEL. WOULD ALSO FUND EQUIPMENT AND SUPPLIES.

ALSO, IT'S IMPORTANT TO NOTE THAT A PORTION OF FIXED EXPENSES WILL GO TO THE OVERHEAD FACILITIES RATES FOR BOTH THE ALPHA CLINICS AND THE COORDINATING CENTER.

AND I JUST WANT TO MAKE A COMMENT ON SCALABILITY. YOU KNOW, WE FULLY ANTICIPATE THAT THE BUSINESS MODEL WILL SCALE OVER THE YEARS. SO STARTING IN YEAR ONE, NOT ALL THE PERSONNEL MAY BE FULL TIME DEDICATED TO THE ALPHA CLINICS NETWORK. AND BY YEAR FIVE WE ANTICIPATE THAT THE PERSONNEL

WILL PROBABLY GROW IN RELATION TO THE DEMAND AND THE NUMBER OF CLINICAL TRIALS THAT ARE ACTUALLY BEING BROUGHT THROUGH THE ALPHA CLINICS NETWORK.

AND THEN JUST IN TERMS OF SUSTAINABILITY, AS WE MENTIONED, THIS IS A CRITICAL COMPONENT. AND THIS WILL VERY MUCH DEPEND UPON EACH APPLICANT AND THEIR EXISTING INFRASTRUCTURE OF HOW MUCH THEY'RE ABLE TO LEVERAGE THEIR EXISTING INFRASTRUCTURE. SO THIS IS SOMETHING THAT WE ARE REQUESTING IN THE BUDGET AND WE WILL EVALUATE VERY CLOSELY BECAUSE OBVIOUSLY, ONCE CIRM STOPS FUNDING THESE, WE WANT TO MAKE SURE THAT THESE WILL BE ABLE TO BE FUNDED AND FINANCIALLY VIABLE FOR THE LONG TERM.

CHAIRMAN THOMAS: DR. BERGLUND.

DR. BERGLUND: I ALSO WANT TO ADD MY COMMENTS AND CONGRATULATE YOU ON THIS VERY THOROUGH WORK BEHIND THIS. I THINK THE TIMING, I AGREE WITH THAT COMMENT, IS ACTUALLY PRETTY GOOD RIGHT NOW BECAUSE THERE'S BEEN SO MUCH GROWTH IN SOME OF THE RESOURCES THAT WILL BE USED TO LEVERAGE INTO THIS PROPOSAL, THAT THIS ACTUALLY CAN FOLD INTO PRETTY FERTILE GROUND.

I WAS PARTICULARLY PLEASED ACTUALLY TO SEE THE STRONG EMPHASIS ON THE PUBLIC EDUCATION AND CONNECTION TO THE PUBLIC. I THINK THAT'S AN AREA

THAT, ALTHOUGH IT'S RECOGNIZED AT THE NIH LEVEL, I ACTUALLY FEEL THAT THE NIH FREQUENTLY FALLS PRETTY SHORT THERE. AND I THINK THIS IS SOMETHING THAT IS WELL RECOGNIZED HERE AND I THINK ACTUALLY CAN SERVE AS A MODEL NATIONALLY AS WELL AS THE HEALTHCARE ECONOMICS.

HAVING BEEN -- THIS IS MY FIRST MEETING. I'M CURIOUS TO KNOW HOW YOU ARRIVED AT THE NUMBER OF FIVE SITES. IS THAT SORT OF A CRITICAL MASS ANALYSIS?

DR. TROUNSON: I'D RATHER HAVE TEN, BUT YOU HAVE TO WORK THROUGH THE PROCESSES OF WHAT YOU CAN OFFER IN TERMS OF IT'S A FIVE-YEAR GRANT. IT'S ABOUT $11 MILLION GOING TO THE CLINICS. SO IT REALLY CAME OUT, TO BE HONEST, ABOUT FIVE. AND I'M ALWAYS SORT OF PUSHING THE STAFF WHERE WE COULD HAVE EIGHT, SIX. AND THEY JUST BRING BACK. THE POINT IS THAT IF YOU WORK THROUGH THE FINANCES, EVEN ON A SLIDING SCALE, BEGINNING IN AN AREA BECAUSE WE'RE ACTUALLY GOING TO HAVE TO GET SOME PEOPLE TRAINED, THE INDEPENDENT COUNSELORS, FOR EXAMPLE, ARE GOING TO HAVE TO BE TRAINED BY THE INSTITUTIONS. THIS IS A REALLY IMPORTANT COMPONENT. BUT IF YOU EVEN PUT IT ON THAT SLIDING SCALE, YOU CAN'T REALLY GET MORE THAN FIVE. SO I WILTED UNDER THE PRESSURE OF SAYING

FIVE THAT WAS ALL AT THIS POINT.

BUT THERE'S A LOT OF INTEREST IN OTHERS WANTING TO CONNECT TO IT. SO IT MAY BE ABLE TO GROW REALLY, NOT NECESSARILY BY OUR FUNDING, BUT BY ATTACHMENT. AND THERE'S A LOT OF INTEREST OUTSIDE CALIFORNIA, IN TEXAS, OTHER PLACES THAT WANT TO CONNECT WITH US, AND THE EAST COAST WANTING TO CONNECT WITH US. AS NATALIE SAID, OUR COLLABORATIVE FUNDING PARTNERS ARE LOOKING TO SEE WHETHER THIS MODEL CAN BE UTILIZED OR CAN THEY CONNECT TO IT. SO I THINK IN DUE COURSE IT MIGHT GROW. AND HOPEFULLY THAT WILL GROW WITH APPROPRIATE FUNDING COMING FROM OTHER SOURCES.

CHAIRMAN THOMAS: DIANE, THEN DEAN BRENNER.

MS. WINOKUR: DO YOU ENVISION A SPECIAL ROLE FOR THE BRICK AND MORTAR STEM CELL RESEARCH CENTERS THAT WE'VE ESTABLISHED HERE IN CALIFORNIA?

DR. DEWITT: WELL, YEAH. I THINK THAT'S AN INTEGRAL PART OF IT BECAUSE THAT'S WHERE THESE INVESTIGATIONAL THERAPIES ARE BEING DEVELOPED. AND MANY OF OUR GRANTEES ON THE DISEASE TEAMS ARE HOUSED IN THESE FACILITIES. AND SO WE -- I MEAN WE DIDN'T EMPHASIZE THAT VERY MUCH IN THIS PRESENTATION, BUT THOSE TEAMS OF RESEARCHERS ARE REALLY INTEGRAL, AND

WE EXPECT THAT THEY'LL BE PART OF THE FIRST WAVE OF THERAPIES THAT ARE BEING TESTED AND APPROVED. SO, YEAH, I THINK THAT THIS BUILDS ON, THIS VERY MUCH BUILDS ON WHAT HAS ALREADY BEEN ESTABLISHED BY CIRM. SO IT'S A VERY NICE CONTINUITY TO THAT.

DR. TROUNSON: I WOULDN'T NECESSARILY THINK THAT THESE CLINIC FACILITIES WILL BECOME PART OF THE STEM CELL INSTITUTES BECAUSE THEY REALLY HOUSE RESEARCHERS. BUT MY FEELING, LOOKING AROUND, IS THAT THERE ARE FACILITIES THAT ARE BEING DEVELOPED WHICH WOULD ABSOLUTELY SORT OF FIT THIS BILL EXTREMELY WELL. SO THE RESEARCHERS WILL BE AT THOSE INSTITUTES, BUT THE FACILITIES, I THINK, WILL BE IN THE MEDICAL CENTERS AND THE APPROPRIATE AREAS. AND I KNOW AT THE DIFFERENT INSTITUTIONS AND SO ON, THEY'VE GOT THESE KIND OF THINGS IN THOUGHT IF NOT ALREADY IN EVOLUTION.

CHAIRMAN THOMAS: DEAN BRENNER AND THEN AL.

DR. BRENNER: SO I ASSUME ONE OF THE GOALS IS TO HAVE SITES WHERE YOU CAN HAVE A DISEASE TEAM PROGRESS AND ACTUALLY DO TRIALS. BUT I SUSPECT THAT SEVERAL DISEASE TEAMS WILL NOT DEVELOP CELL THERAPIES PER SE. THEY'LL DEVELOP SMALL MOLECULES BASED UPON USING STEM CELLS. AND I JUST WANT TO

MAKE SURE THAT WE INCLUDE -- I WOULD RECOMMEND THAT WE INCLUDE THEM IN THIS PROPOSAL.

DR. DEWITT: THAT WASN'T -- ACTUALLY WE DID DEFINE THE SCOPE DIFFERENTLY, WHICH WAS THE SCOPE WOULD BE LIMITED TO STEM CELL-BASED PRODUCTS THAT WOULD BE CELLULAR IN NATURE. AND THE REASON FOR THAT IS THAT THOSE TYPES OF PRODUCTS HAVE VERY DIFFERENT REQUIREMENTS FOR TESTING. SO WE REALLY WANTED TO BE SURE THAT THOSE RESOURCES ARE PUT INTO PLACE TO MEET THOSE SPECIFIC NEEDS THAT WE FEEL ARE UNMET.

THE BIOLOGICS AND THE SMALL MOLECULES, THERE'S ALREADY PRETTY GOOD INFRASTRUCTURE AND KNOWLEDGE BASE, BUT CERTAINLY I WOULDN'T WANT TO SEE ANYTHING INTERESTING EXCLUDED IN TERMS OF PUTTING THAT DATA INTO THE DATABASE AND HAVING PARTICIPATION. BUT REALLY THE FOCUS IS GOING TO BE MORE ON CELL-BASED THERAPIES JUST SIMPLY BECAUSE WE HAVE LIMITED RESOURCES AND THAT'S THE AREA OF GREATEST NEED.

DR. BRENNER: THAT COULD BE KIND OF A PURE VICTORY IF WE SPENT $20 MILLION ON A DISEASE TEAM AND THE PRODUCT THEY CAME UP WITH WAS A SMALL MOLECULE, THEN WE DIDN'T HELP THEM CONTINUE WITH IT.

DR. DEWITT: YEAH. THAT'S A GOOD POINT.

DR. TROUNSON: DAVID, I THINK I AGREE WITH NATALIE HERE. BUT THERE ARE A LOT OF COMBINATION THERAPIES THAT ARE GOING TO EVOLVE, AND THEY'RE GOING TO EVOLVE WITH CELLS AND WITH SMALL MOLECULES, TO BE HONEST. AND I THINK THAT WILL BE READILY INCORPORATED INTO THIS. AND, OF COURSE, THINGS LIKE GENETICALLY ENGINEERING CELLS TO PRODUCE CURES FOR GENETIC DISEASE OR PREVENTION OF HIV, THEY'RE ALL INCLUDED.

I THINK WE DIDN'T WANT TO DUPLICATE THE CAPACITY THAT THERE IS WITH THE CONVENTIONAL THERAPIES. WE WANTED TO SAY THIS IS SPECIAL. THIS IS GOING TO BE DIFFERENT. YOU'RE GOING TO TAKE YOUR CELLS AND WE'RE GOING TO HAVE TO WORK WITH THAT, AND THAT'S WHAT'S REALLY DIFFERENT. I MEAN I THINK WE NEED TO LOOK AT OTHER MECHANISMS, IF NEEDS BE, TO MAKE SURE THE POINT THAT YOU'RE MAKING, THEY'RE ACCOMMODATED, BUT I GOT THE FEELING THAT THEY WILL BE ACCOMMODATED, BUT WE'LL KEEP A VERY CLOSE EYE ON THAT.

CHAIRMAN THOMAS: MR. ROWLETT.

MR. ROWLETT: THANKS VERY MUCH. I APPRECIATE THE PRESENTATION AS A NEW BOARD MEMBER AND I TRY TO NAVIGATE ALL THIS. HOPEFULLY MY QUESTIONS WILL MAKE SENSE TO YOU FOLKS.

FIRST, AS SOMEONE SAID, FOR THE UNDERSERVED COMMUNITIES, OFTENTIMES THE RELATIONSHIP BETWEEN THE PAYER AND THE PATIENT IS IMPORTANT. SO MY ASSUMPTION IS THAT CONSIDERATION HAS BEEN GIVEN TO MEDICAID AND OTHER PROVIDERS, THAT THEY WILL PAY FOR THE THERAPIES THAT WILL BE PROVIDED AT THE ALPHA CLINICS.

DR. DEWITT: WELL, UNFORTUNATELY THAT HASN'T BEEN ESTABLISHED YET BECAUSE THOSE ORGANIZATIONS NEED MANY YEARS OF DATA, LIKE, I THINK FOUR YEARS OF DATA, TO AGREE. SO WE WILL HAVE AT THE CIMC STAFF IN PLACE THAT WILL TRY TO ACCELERATE THAT PROCESS AND WILL HAVE THE REPOSITORY FOR DATA THAT WILL INFORM THAT PROCESS. AND WE WANT FROM THE VERY BEGINNING FOR THIS NETWORK TO BE CONNECTED WITH THE ORGANIZATIONS THAT ARE TRYING TO ACCELERATE THE AGREEMENT OF MEDICARE, MEDICAID, AND SO ON TO PAY FOR THIS. OTHERWISE IT'S HARD TO IMAGINE HOW ANY OF THIS WILL BE SUSTAINABLE AND CAN BE DELIVERED TO PATIENTS. SO THAT'S A REALLY CRITICAL PART.

MR. ROWLETT: FOR THE MEMBERS OF THE BOARD AND THE CHAIR, AS THE CONVERSATION RELATED TO SUSTAINABILITY HAS COME UP SEVERAL TIMES, I THINK THAT IF THERE'S A WAY TO MORE FORMATIVELY ESTABLISH THAT RELATIONSHIP SOONER, YOU SHOULD DO THAT BECAUSE

I DON'T KNOW HOW -- IT'S A GREAT CONCEPT, BUT OFTENTIMES, AS SOMEONE SAID EARLIER, GREAT CONCEPTS DON'T COME TO FRUITION BECAUSE THAT HASN'T BEEN TAKEN INTO CONSIDERATION IN THE BEGINNING.

DR. MILLAN: SO THE CONSIDERATIONS REGARDING REIMBURSEMENT AND HEALTHCARE COST COVERAGE WERE DEFINITELY A TOPIC THAT WAS INTEGRAL TO OUR DISCUSSIONS. AND WE HAVE ACTUALLY BROUGHT IN SOME EXTERNAL EXPERTISE TO HAVE THESE DISCUSSIONS. THAT WILL BE A COMPONENT IN TERMS OF STATING SPECIFIC PROGRAMS. AT THIS TIME I THINK THERE'S STILL SOME GROUNDWORK THAT NEEDS TO BE DONE, AND THE IDEA IS THE CIMC WOULD BE ABLE TO ASSEMBLE THE CRITICAL EXPERTISE TO BE ABLE TO START FORMING THOSE SYSTEMS AND THOSE APPROACHES. SO IT IS ANTICIPATED, EVEN IF IT'S NOT FORMALLY STATED IN THIS CONCEPT.

CHAIRMAN THOMAS: DR. STEWARD.

DR. STEWARD: SO THE DETAILS OF THIS WERE A LITTLE, I GUESS, SURPRISING TO ME, BUT THAT'S JUST BECAUSE I PROBABLY DIDN'T PAY ENOUGH ATTENTION COMING FORWARD. AND BY THAT I MEAN THE REQUIREMENT THAT THE SITES BE READY TO START A CLINICAL TRIAL WITHIN 12 MONTHS. AND I BRING THAT UP NOW BECAUSE I HAD SORT OF ENVISIONED THIS AS SEARCH FOR THE VERY BEST SITES FOR THESE KINDS OF OPERATIONS REGARDLESS

OF WHERE THEY WERE ALONG THE TIMELINE.

I UNDERSTAND WHY YOU MIGHT WANT TO DO THAT, BUT MY SPECIFIC QUESTION THEN BECOMES WHAT IF THAT CLINICAL TRIAL DOESN'T GO FORWARD? THINGS HAPPEN.

DR. DEWITT: I THINK I'LL TAKE -- I'LL JUST TAKE A FIRST STAB AT THAT. THE IDEA BEHIND THAT ELIGIBILITY CRITERIA IS THAT WE DO FEEL THAT THERE IS ALREADY A NEED FOR THESE TYPES OF SYSTEMS TO BE PUT IN PLACE AND THESE RESOURCES, AND THAT CAME FROM THE NEED ANALYSIS AND THE GAP ANALYSIS.

IN ORDER WITHIN A TIME YEAR, THE FIVE-YEAR TIME FRAME, IN ORDER TO GET THIS SYSTEM UP AND RUNNING, OPERATIONAL AND GET EVERYTHING GOING, WE REALLY DO NEED ACTIVITIES WITHIN THE CLINICS. SO WHEN THESE APPLICANTS COME FORWARD FOR THE ALPHA CLINIC RFA, THEY WOULD BRING THEM WITH A LEAD PROJECT, AT LEAST ONE LEAD PROJECT, POSSIBLY TWO. AND THEY WOULD BE EVALUATED BASED ON THE STRENGTH OF THEIR INSTITUTION, THEIR TRACK RECORD, AND ALL THE COMPONENTS THAT WERE LAID OUT IN THE ELIGIBILITY AND SCOPE SLIDE.

BUT IN ADDITION, THE PROJECT THAT THEY BRING FORWARD WILL BE EVALUATED REGARDING ITS STRENGTH, AND THERE WILL BE THE REQUIREMENT TO

PROVIDE EVIDENCE THAT THIS IS SOMETHING THAT'S ALREADY AN ESTABLISHED RELATIONSHIP, WHETHER IT WAS CATALYZED BY THIS RFA OR WHETHER IT WAS ALREADY PLANNED, AND WHAT THE TIMELINE ON THAT LOOKS LIKE AND HOW FEASIBLE IT REALLY WOULD BE TO INITIATE THAT TRIAL WITHIN THE 12-MONTH PERIOD.

DR. STEWARD: THANKS. I DO APPRECIATE THAT, BUT THERE'S STILL THE QUESTION THINGS HAPPEN, AND WHAT HAPPENS IF THAT TRIAL DOESN'T GO FORWARD?

DR. FEIGAL: HERE'S WHAT I WOULD SUGGEST. SO WHAT WE'RE GOING TO DO, AT LEAST AS A FIRST PASS, WE WANTED TO MAKE SURE THESE UNITS COULD HIT THE GROUND RUNNING. SO THERE HAD TO BE SOMEWHERE IN THE DENOMINATOR AT LEAST THE POSSIBILITY THAT THERE WOULD BE CLINICAL TRIALS THAT WOULD ENTER INTO THIS CLINICAL INFRASTRUCTURE. AND, OF COURSE, STUFF HAPPENS. SO WE'LL DEAL WITH REALITY.

BUT THE OTHER ISSUE, I DO WANT TO BE CLEAR, IS IT'S RECEPTIVE AND IT'S OPEN TO CONTINUING INFLUX OF NEW TRIALS, THAT JUST WHAT COMES IN THE INITIAL BATCH IS NOT THE FINAL BATCH. SO WE EXPECT THERE'S GOING TO BE A LOT OF SETUP. THERE'S GOING TO BE A LOT OF ISSUES THAT WILL NEED TO BE ADDRESSED AND THAT TRIAL WILL COME IN.

WE ARE CONTINUING AS PART OF OUR STRATEGIC

PLAN TO FUND SCIENTIFICALLY SOUND PRECLINICAL AND IND-ENABLING CLINICAL TRIALS TO GO FORWARD. SO SEPARATE FROM CLINICAL INFRASTRUCTURE, CIRM IS GOING TO CONTINUE, IF THE BOARD AGREES, WITH CONTINUING TO FUND THESE GREAT IDEAS COMING IN, WHICH WILL PROVIDE SOME OF THE FODDER FOR WHAT COULD GO INTO THIS CLINICAL INFRASTRUCTURE. WE'LL CONTINUE TO FUND THAT SEPARATELY. SO, YOU KNOW, THIS IS REALLY THE COMPLEMENTARY PIECE OF WHAT WE KNOW ARE GAPS, ACCESS TO CONSULTATIVE EXPERTISE IN BIOSTATISTICS AND HOW TO NAVIGATE THE REGULATORY PATHWAY, IN METHODOLOGY, AND HOW TO PUT TOGETHER A CLINICAL TRIAL WITH APPROPRIATELY DEFINED ENDPOINTS TO ACTUALLY ANSWER THE QUESTION, AND ALSO CONNECT PEOPLE TO THE OTHER APPROPRIATE NETWORKS SO THAT THEY CAN ENROLL.

SO WE THOUGHT AT A MINIMUM WE NEEDED TO HAVE SOME LEVEL OF ACTIVITY TO SUPPORT PUTTING AN INFRASTRUCTURE INTO PLACE NOW. AND WE THINK FROM OUR OWN ANALYSIS WE DO HAVE THE TRIALS THAT, BARRING, AS YOU SAID, UNEXPECTED THINGS HAPPENING, THAT WE WILL BE ABLE TO HAVE THAT AT LEAST THRESHOLD LEVEL OF ACTIVITY TO JUSTIFY PUTTING THIS CLINICAL INFRASTRUCTURE IN PLACE.

CHAIRMAN THOMAS: DR. DULIEGE.

DR. DULIEGE: YES. AND ACTUALLY EXACTLY

ALONG THIS PATH, I THINK ONE OF THE MANY CRITICAL COMPONENTS OF THIS PLAN THAT YOU HAVE OUTLINED IS THE REGULATORY SUPPORT. CLEARLY BECAUSE, PARTICULARLY IN THE NONPROFIT ENVIRONMENT, THE KNOWLEDGE OF THE REGULATORY PATH FORWARD AND THE CHALLENGES ARE SIGNIFICANT. AND EVEN ON THE FDA SIDE, I'M SURE THE FDA THEMSELVES HAVE A TON OF QUESTIONS ON HOW THEY SHOULD DIRECT THE REGULATORY ENVIRONMENT IN THIS LARGELY UNCHARTERED PATH AND WOULD NEED SOME LEVEL OF COLLABORATION ESSENTIALLY WITH EDUCATION. SO THAT'S REALLY, I SEE, ONE OF THE KEY FUNCTIONS OF THIS.

I WANT TO CONGRATULATE, TOGETHER WITH MY COLLEAGUES, THE STAFF FOR THIS VISION HERE.

DR. FEIGAL: I ACTUALLY JUST WANT TO MAKE A COMMENT. WHEN THE FDA HEARD THAT WE WERE PUTTING THIS CONCEPT TOGETHER, THEY CALLED ME TO FIND -- THEY WERE QUITE -- VERY EXCITED, VERY INTERESTED THAT WE WERE TRYING TO PUT TOGETHER A VERY RIGOROUS, A CERTAIN LEVEL OF QUALITY THAT WOULD GO INTO THE CLINICAL TRIAL. SO ACTUALLY THEY GOT WIND OF WHAT WE WERE THINKING ABOUT AND WERE QUITE INTERESTED IN WHAT WE WERE DOING.

CHAIRMAN THOMAS: I HAVE A QUESTION HERE. ON THE SORT OF THEORY THAT IF WE BUILD THEM, THEY

WILL COME, ARE WE GOING TO REQUIRE IN ANY WAY THAT FUNDED PROJECTS GOING FORWARD UTILIZE THE ALPHA CLINIC NETWORK? AND I ASK THAT BECAUSE, IN THEORY AT ANY RATE, THIS WILL BE THE STATE-OF-THE-ART WAY TO GO AND PEOPLE WILL FLOCK TO IT. ON THE OTHER HAND, YOU MAY HAVE SITUATIONS WHERE THEY DECIDE TO RUN CLINICAL TRIALS AT THEIR OWN INSTITUTION OR WHATEVER. I GUESS THE QUESTION IS HOW ARE WE COMFORTABLE THAT THESE WILL BE UTILIZED?

DR. TROUNSON: JON, MY VIEW WOULD BE TO ENCOURAGE, BUT NOT REQUIRE. WHERE IT MAKES GOOD SENSE, ABSOLUTELY; BUT SOME INSTITUTIONS WHO ARE NOT PART OF THE NETWORK MAY WISH TO DO THAT SEPARATELY. BUT ALSO OUTSIDE OUR OWN PROGRAMS WE EXPECT CLINICAL TRIALS TO BE COMING IN THAT ARE NOT FUNDED SPECIFICALLY BY US AS WELL. SO WE THINK AS MUCH FLEXIBILITY AS POSSIBLE, BUT WITH GOOD ENCOURAGEMENT, BUT NOT REQUIRE.

CHAIRMAN THOMAS: MR. SHEEHY.

MR. SHEEHY: I THINK SHERRY'S MOTION IS DANGLING WITHOUT A SECOND, SO I'D LIKE TO OFFER THAT SECOND NOW.

CHAIRMAN THOMAS: MOTION MOVED AND SECONDED.

MS. SAMUELSON: AND I HAVE A COMMENT AND A

FRIENDLY AMENDMENT.

CHAIRMAN THOMAS: YES, JOAN.

MS. SAMUELSON: COMING IN FROM LEFT FIELD, BUT -- AND THAT WOULD BE THAT THERE BE AN ASSESSMENT OF THIS PLAN BY THE GRANTS WORKING GROUP WITH A RECOMMENDATION TO THE BOARD BEFORE WE TAKE A FINAL VOTE.

AND HERE'S WHY I SAY THAT. SITTING ALL THESE YEARS ON THAT WORKING GROUP AND LOOKING AT THE PROPOSALS COMING IN THE DOOR, AND LORD KNOWS THESE ARE EXTREMELY BRIGHT SCIENTISTS WORKING VERY HARD AND WANTING VERY BADLY TO DO THE BEST BY THEIR PATIENTS, AND THEY BY AND LARGE FAIL BECAUSE THE SCIENCE ISN'T THERE YET. MAYBE IT COULD BE IF WE WERE FOCUSING MORE ON THE TRANSLATIONAL PIECE.

WE BIT OFF A BIG JOB WHEN WE STARTED IMPLEMENTING PROP 71, AND THIS I SEE IS THE CULMINATION OF THAT WITH ALL THE ELEMENTS OF IT. BUT WE HAVEN'T DONE THE ESSENTIAL WORK TO GET THE BEST POSSIBILITY TO GET ACTUAL FINISHED, EFFECTIVE THERAPIES OUT THE DOOR WITH THE MONEY WE HAVE LEFT.

AND SO TO DO ALL OF THIS INFRASTRUCTURE AND BUREAUCRACY AND COMMUNICATIONS AND SO ON, IT SEEMS PREMATURE BECAUSE WE DON'T HAVE INFINITE MONEY. AND I DON'T SEE US ABLE TO PRODUCE WHAT

PEOPLE REALLY WANT FROM THAT SPENDING, WHICH IS TO HAVE EFFECTIVE THERAPIES FOR, FOR EXAMPLE, THE NEURODEGENERATIVE DISORDERS. THEY'RE TRYING. THEY SUBMIT DISEASE TEAM GRANTS AND TRANSLATIONAL GRANTS AND THEY FAIL. THEY GET LOW SCORES BECAUSE THEY'RE DEEMED TOO RISKY. THERE'S NOT ENOUGH DATA.

AND SO I GUESS I QUESTION WHETHER THIS IS GETTING US WHAT WE REALLY WANT FOR THE COMMUNITY OF SICK AMERICANS AND CITIZENS OF THE WORLD WHO WANT TO GET REGENERATIVE MEDICINE TO DELIVER SOMETHING EFFECTIVE. THEY DON'T CARE IF IT'S A BRAND-NEW THERAPY OR NOT. THEY WANT SOMETHING EFFECTIVE. THERE ISN'T ANYTHING NOW. THERE ISN'T ANYTHING FOR PEOPLE WITH PARKINSON'S. THEY'RE STRUGGLING TERRIBLY AND DYING, AND THAT'S TRUE OF MANY OF THE NEURODEGENERATIVE DISORDERS AND, OF COURSE, LOTS OF THE OTHERS. AND OUR CURRENT AND RECENT HISTORY WITH CLINICAL TRIALS TO DATE SUGGESTS THAT THERE'S NOT GOING TO BE A LOT OF OPTIONS AT THE DOOR FOR THE PEOPLE WHO COME AND LINE UP.

CHAIRMAN THOMAS: CAN I JUST RESPOND TO THAT? I THINK, JOAN, THANK YOU FOR YOUR POINTS. THIS IS A CONCEPT PROPOSAL. I'M NOT SURE IF YOU'RE SUGGESTING THAT THE CONCEPT PROPOSAL BE SUBJECTED TO GRANTS WORKING GROUP REVIEW BECAUSE THAT'S NOT

HISTORICALLY HOW WE HAVE DONE THAT. THIS IS --

MS. SAMUELSON: I KNOW. IT IS AN OPTION. WELL, IT'S ONE OF THE TASKS OF THE WORKING GROUP THAT'S SPECIFIED IN THE LAW. WE HAVE NEVER IMPLEMENTED IT. I'VE ALWAYS WANTED TO BECAUSE THERE'S IMMENSE EXPERTISE BY THAT GROUP FROM THE MANY YEARS OF LOOKING AT THE GRANT PORTFOLIO, BUT I KNOW WE HAVEN'T DONE THAT.

CHAIRMAN THOMAS: DR. TROUNSON AND THEN MR. SHEEHY.

DR. TROUNSON: WELL, I THINK, OF COURSE, THE PROPOSALS ARE GOING TO GO IN FRONT OF THE GRANTS WORKING GROUP AS THEY NORMALLY DO. AND SO THEY WILL HAVE REAL OPPORTUNITY TO INPUT AT THAT POINT, AND THEY NEED TO SELECT THE APPROPRIATE OR SELECT NONE AS HAS BEEN DONE SOMETIMES IN THE PAST. SO I THINK THAT'S THE APPROPRIATE WAY TO PROCEED, IF I MAY SUGGEST.

MS. SAMUELSON: COULDN'T OUR SURPLUS MEMBERS, WE'VE GOT OVER A HUNDRED MEMBERS OF THE GRANTS WORKING GROUP.

DR. TROUNSON: YEAH. BUT WE DON'T NORMALLY BRING A HUNDRED MEMBERS TO EACH GRANT REVIEW. SO THAT WILL BE FOCUSED ON CLINICAL. WE WILL SELECT THOSE PEOPLE WHO HAVE GOT THE EXPERTISE,

AND WE'LL BRING MEMBERS HOPEFULLY TO THE BOARD HERE TO COMPLEMENT THOSE PEOPLE THAT ARE THERE WHO HAVE GOT REAL EXPERTISE IN THIS PARTICULAR AREA. SO I DO THINK IT'S THE WAY TO PROGRESS.

AND I THINK ELLEN MIGHT WANT TO MAKE A COMMENT, BUT WE HAVE A STEERING COMMITTEE OF THOSE -- OF THE KEY PEOPLE FROM THOSE CLINICS WHO ARE GOING TO BE ON THE STEERING COMMITTEE OF THE CENTRAL CORE. SO YOU KNOW THAT'S GOING TO HAPPEN. AND WE WILL ACTUALLY ALSO HAVE MILESTONES FOR WHICH WE WILL REVIEW, AND WE WILL PUT THAT THROUGH THE APPROPRIATE REVIEW. IF IT'S CDAP OR SOME OTHER APPROPRIATE REVIEW, WE WILL DO THAT.

SO I THINK IT'S REASONABLY WELL FORMATTED AS IT IS, IF I MAY SUGGEST.

MR. SHEEHY: I JUST WANTED TO MAKE ONE COMMENT BECAUSE I THINK THIS WILL KIND OF ADDRESS JOAN'S KEY CONCERN. AND YOU KIND OF ILLUSTRATED IT WITH THE VIDEO. DR. WAGNER IS ON OUR WORKING GROUP. SO I THINK THE PIECE OF THIS THAT YOU'RE MISSING, JOAN, IS WHAT TOOK PLACE AT THE WORKSHOP. AND AGAIN, SO MUCH CREDIT TO STAFF FOR ALL THEIR HARD WORK. THE KIND OF SCIENTIFIC EXPERTISE THAT YOU WANTED TO BRING TO BEAR FROM THE GRANTS WORKING GROUP ON THIS CONCEPT HAS ACTUALLY BEEN DELIVERED IN

THE DEVELOPMENT OF THE CONCEPT, WHICH INCLUDED -- YOU KNOW, YOU GUYS MAY KNOW HOW MANY PEOPLE FROM THE GRANTS WORKING GROUP ARE ACTUALLY PART OF THIS PROCESS, BUT THERE WERE A NUMBER OF -- THE SCIENTIFIC FIREPOWER, I THINK, IF I'M CORRECT, WAS INCREDIBLY IMPRESSIVE AND DID INCLUDE MEMBERS OF THE GRANTS WORKING GROUP.

CERTAINLY DR. WAGNER FOR THIS STAGE OF MEDICINE IS ONE OF THE TOP EXPERTS IN THE WORLD AND CERTAINLY THE TYPE OF PERSON YOU'D WANT TO HAVE WEIGH IN ON THIS.

SO WITH ALL DUE RESPECT, I APPRECIATE YOUR CONCERN, BUT I ACTUALLY THINK THAT STEP HAS BEEN TAKEN AND THAT THAT WORKSHOP WAS REALLY WHERE THE KIND OF DEEP THINKING THAT YOU WERE HOPING WOULD HAPPEN WOULD TAKE PLACE. AND THE FAILURES THAT YOU'RE ALLUDING TO IN OUR ABILITY TO MOVE THINGS INTO THE CLINIC, I THINK THIS WILL ADDRESS IT. THIS IS PRECISELY THE TYPE OF INITIATIVE THAT CAN REALLY TACKLE THAT GAP.

MS. SAMUELSON: BY ACTUALLY MOVING FOR ALL THE DISEASES THAT ARE TARGET DISEASES, MOVING THE STATE OF THE ART TO A PLACE WHERE THEY'RE READY?

MR. SHEEHY: IT CREATES AN INFRASTRUCTURE SO THAT EVERYBODY WHO WANTS TO TRY TO MOVE A PROJECT

INTO THE CLINIC CAN REALLY JUST GO AND TAP INTO SOMETHING. YOU KNOW, HOW MANY TIMES HAVE THINGS FAILED BECAUSE THEY DON'T HAVE THE RIGHT ANIMAL MODEL, THEY DON'T HAVE THE PRODUCTION TO MAKE THE CELLS? I MEAN YOU CAN JUST GO DOWN THE LIST OF THE THINGS THAT PEOPLE, AGAIN, RETURN TO WITHIN THE REVIEW THAT MAKE THE PROJECT A CHALLENGE, AND A LOT OF THESE THINGS ARE CORE FEATURES OF THE CLINICS AND OF THE CENTRAL COORDINATING CENTER. HAVING ALL THAT AVAILABLE TO AN INVESTIGATOR WHO HAS A GREAT IDEA, HAS SOME GREAT DATA, AND IS READY TO START MOVING TOWARDS THE CLINIC IS GOING TO HELP THAT INDIVIDUAL PRODUCE A PROJECT THAT WILL GET MUCH HIGHER SCORES IN OUR WORKING GROUP THAN WHAT THEY MIGHT GET WITHOUT THAT BEING IN PLACE.

CHAIRMAN THOMAS: INDEED, JOAN, I WOULD SAY THAT WITHOUT A PROGRAM LIKE THIS IN PLACE, YOU WOULD NOT BE ABLE TO ADVANCE THE BALL PRECISELY IN THE MANNER THAT YOU HOPED TO ACHIEVE. SO I THINK THIS IS A CRITICAL ELEMENT OF THE WHOLE GAME PLAN.

DR. VUORI.

DR. VUORI: I WOULD LIKE TO ECHO EXACTLY THAT POINT, THE POINT THAT J.T. AND JEFF MADE, THAT THIS ALPHA CLINIC CONCEPT IS ABSOLUTELY CRUCIAL IN NOT ONLY TESTING THE THERAPIES THAT ARE ABOUT TO

COME AND ARE ON THE CUSP IN MOVING TO THE PATIENTS, BUT ALSO LEARNING HOW IS IT THAT WE REALLY APPLY THE STEM CELL TECHNOLOGIES IN HUMAN BEINGS AND IN THE CLINIC. AND CIRM IS IN A VERY UNIQUE POSITION TO DO JUST THAT, SPEARHEAD AND LEAD THOSE EFFORTS IN IDENTIFYING THE ABSOLUTE BEST WAYS AND PROCESSES FOR IMPLEMENTING THESE THERAPIES IN HUMAN BEINGS AND WORKING WITH FDA AND PROBABLY BECOME REALLY A LEADER IN THIS AREA IN A VERY, VERY UNIQUE MANNER.

CHAIRMAN THOMAS: OKAY. I GUESS THE QUESTION IS -- YES, WE'RE GOING TO HAVE MEMBERS OF THE PUBLIC IN ONE SECOND. JUST WITH RESPECT TO THE MOTION, JOAN, DO YOU STILL WANT TO ASK THAT THERE STILL BE A FRIENDLY AMENDMENT, OR ARE YOU OKAY?

MS. SAMUELSON: I CAN'T VOTE FOR THIS WITHOUT THAT, SO I WOULD LIKE TO DO THAT. IF IT'S ONE VOTE FOR IT, MAYBE YOU COULD SKIP THAT.

CHAIRMAN THOMAS: I GUESS THE PROPER --

MS. SAMUELSON: WITH THE LIMITED POT, I'M JUST NOT -- THAT'S THE OTHER QUESTION REALLY. HOW MUCH MONEY WOULD BE LEFT AFTER WE USE THIS MONEY FOR THIS STEP --

CHAIRMAN THOMAS: WELL, I THINK WE HEARD --

MS. SAMUELSON: -- TO CONTINUE TO

DO -- I'M SORRY. EXCUSE ME, J.T. -- THE PORTFOLIO OF TRANSLATIONAL GRANTS THAT WOULD FEED THE MOVEMENT OF THE SCIENCE AS OPPOSED TO INFRASTRUCTURE?

CHAIRMAN THOMAS: I THINK WE HEARD EARLIER FROM DR. OLSON THAT IF WE GET THROUGH THE THREE CONCEPT PROPOSALS HERE, THERE WOULD STILL BE A LITTLE LESS THAN 600 MILLION LEFT IS THE ANSWER TO THAT QUESTION.

OKAY. MR. HARRISON, DO I -- IS THE PROPER PROCEDURE HERE TO ASK SHERRY AS THE MOVER WHETHER SHE WOULD ENTERTAIN THAT FRIENDLY AMENDMENT?

MS. LANSING: I'M VERY CONFUSED, SO YOU HAVE TO EXPLAIN TO ME WHAT THE AMENDMENT IS.

MS. SAMUELSON: HI, SHERRY. THE AMENDMENT WOULD SEEK AN ASSESSMENT OF THIS PLAN BY THE GRANTS WORKING GROUP AND WITH A RECOMMENDATION TO THE BOARD BEFORE A FINAL VOTE.

MS. LANSING: EVERYTHING WOULD GO FORWARD AND THERE WOULD BE ONE ADDITIONAL STEP?

MS. SAMUELSON: NO. THAT WOULD BE PART OF THE DECISION-MAKING ON WHAT WE VOTE ON.

CHAIRMAN THOMAS: SHE'S RECOMMENDING WE DEFER CONSIDERATION OF THIS PENDING REVIEW OF THE CONCEPT BY THE GRANTS WORKING GROUP.

MS. LANSING: MEANING DEFER CONSIDERATION

TODAY?

MS. SAMUELSON: YEAH.

CHAIRMAN THOMAS: YES.

MS. LANSING: I LOVE YOU, JOAN, AND I ALWAYS WANT TO SUPPORT WHAT YOU'RE SAYING, BUT I'M PREPARED TO VOTE ON THIS TODAY. SO I GUESS I WOULD ASK THE OTHER BOARD MEMBERS, IF NO ONE ELSE BUT ME -- I'M PREPARED TO VOTE APPROVAL FOR THIS TODAY. I THINK IT'S GREAT. AND I HAVE BEEN FOLLOWING IT ALL THROUGH THE PHONE VERY GOOD. EVERYONE TALKED VERY LOUDLY. SO IF OTHER PEOPLE ARE NOT COMFORTABLE, I THINK YOU SHOULD TAKE A VOTE AND SEE WHO'S PREPARED TO DO IT TODAY. SO I WOULD ASK FOR THIS. AND IF IT DOESN'T PASS, THEN LET'S PUT JOAN'S FORWARD.

CHAIRMAN THOMAS: OKAY.

MS. SAMUELSON: SOUNDS GOOD.

CHAIRMAN THOMAS: MR. SHEEHY, AS THE SECONDER OF THE MOTION, A COMMENT?

MR. SHEEHY: YEAH. I THINK -- AND AGAIN, THIS IN NO WAY DIMINISHES MY ENORMOUS ADMIRATION FOR YOU, JOAN, BUT --

MS. LANSING: I WANT TO SAY THE SAME THING, JOAN. I LOVE YOU. SO I HATE IT WHEN I CAN'T SUPPORT WHAT YOU'RE SAYING, BUT I'M VERY COMFORTABLE

WITH THIS MOTION. IF IT DOESN'T PASS, THEN I WOULD SUGGEST THAT YOU PUT YOUR MOTION FORWARD.

MR. SHEEHY: I THINK SHERRY AND I ARE VERY MUCH IN TUNE ON THIS. AND AGAIN, WE BOTH LOVE YOU, JOAN.

MS. LANSING: WITH ALL OUR LOVE. I GUESS WE RESPECT YOU SO MUCH, IT'S SO HARD FOR US TO DISAGREE WITH YOU.

CHAIRMAN THOMAS: OKAY. JUST SO WE KNOW WHAT THE MOTION IS AND THEN WE GO TO PUBLIC COMMENT, THE MOVER AND SECONDER DO NOT ACCEPT THE FRIENDLY AMENDMENT. SO THAT IS NOW OFF THE TABLE, MR. HARRISON?

MR. HARRISON: THAT'S CORRECT.

CHAIRMAN THOMAS: OKAY. SO WE'RE BACK TO THE ORIGINAL MOTION, WHICH IS TO MOVE APPROVAL OF THE CONCEPT. MEMBERS OF THE PUBLIC.

DR. CHIU: ARLENE CHIU, CITY OF HOPE. I WANT TO CONGRATULATE CIRM FOR SUCH A TIMELY AND THOUGHTFUL INITIATIVE, WHICH BRINGS STEM CELL RESEARCH TO A NEW LEVEL OF MATURITY.

I HAVE TWO QUICK QUESTIONS, BUT BEFORE I ASK THEM, I'D LIKE TO JUST TAKE A MOMENT TO SAY HOW SHOCKED AND DISMAYED I AM TO HEAR ABOUT DUANE ROTH'S INJURIES. AND AS A FOUNDING MEMBER OF THIS

COMMITTEE, HE HAS ALWAYS BEEN BALANCED, FAIR MINDED, WITH A KEEN FOCUS ON THE ECONOMIC AND HEALTH BENEFITS THAT STEM CELL RESEARCH BRINGS TO CALIFORNIA AND TO THE WHOLE FIELD. SO I REMEMBER HIM SAYING ONE TIME TO ME, "IN ACADEMIA YOU MEASURE SUCCESS BY THE NUMBER OF PUBLICATIONS AND PATENTS YOU HAVE, BUT THE PUBLIC MEASURES SUCCESS BY THE NUMBER OF PATIENTS YOU'VE HELPED." AND I THINK THIS INITIATIVE REALLY ADDRESSES THAT CONCERN. SO I WANT TO JOIN ALL THE WISHERS IN THIS ROOM IN A SPEEDY AND FULL RECOVERY FOR DUANE.

MS. LANSING: THANK YOU FOR SAYING THAT ON BEHALF OF ALL OF US.

CHAIRMAN THOMAS: THANK YOU, ARLENE.

DR. CHIU: SO I HAVE TWO QUICK QUESTIONS IN READING THE CONCEPT. AND I THINK IT MIGHT BE JUST CONFUSION ON MY PART. BUT THE FIRST IS THAT IN THE FIRST RFA WHICH ADDRESSES THE CLINICS, WILL RESEARCH PATIENT'S TREATMENT AND COMPONENTS OF THE TRIAL BE FUNDED BY A SEPARATE MECHANISM FOR CLINICAL TRIALS? AM I CORRECT IN ASSUMING THAT IT'S NOT PART OF THE $11 MILLION? THANK YOU.

MY SECOND QUESTION HAS TO DO WITH THE RFA 2 IN TERMS OF THE PI. MANY OF THE PI'S IN ACADEMIA THAT FULFILL ALL THE REQUIREMENTS OF EXCELLENCE ARE

ALREADY WORKING SOME PERCENTAGE OF THEIR TIME ON COORDINATING CENTERS AND THEY HAVE THE EXPERIENCE AND TRACK RECORD. IT SAYS IN THIS INITIATIVE THAT YOU REQUIRE THE PI HAVE A HUNDRED PERCENT COMMITMENT, AND THAT WOULD RULE OUT PEOPLE WHO ALREADY ARE PARTIALLY COMMITTED FOR A FEW YEARS TO OTHER COORDINATING CENTERS. SO I JUST WONDERED IF IT WOULD BE POSSIBLE FOR A PI WHO COULD NOT FULFILL A HUNDRED PERCENT RIGHT OFF THE BAT TO HIRE AN ADMINISTRATOR OR A CLINICAL TRIALS OFFICER AT FULL TIME TO HELP HIM OR HER UNTIL THEY MOVE INTO FORCE. IT'S VERY HARD FOR A PI TO DIVEST THEMSELVES OF OTHER ADMINISTRATIVE COMMITMENTS. SO THOSE ARE MY TWO QUESTIONS. THANK YOU.

DR. MILLAN: I JUST WANTED TO ANSWER ARLENE'S QUESTION. SO I DON'T THINK WE HAVE ANY HARD AND FAST DECISION ON THAT RIGHT NOW. HOWEVER, WE HAD SORT OF BUILT INTO OUR THINKING THAT THIS WOULD RAMP UP, THIS ACTIVITY WOULD RAMP UP. SO IN THE CONCEPT STATEMENT, WE SAID A HUNDRED PERCENT. BUT I THINK WE MIGHT CONSIDER OTHER ALTERNATIVE MODELS THAT ARE PUT FORWARD, AND THAT MAY BE SOMETHING THAT WE THINK ABOUT AT THE RFA STAGE AND HAVE A LITTLE CLEARER IDEA BECAUSE I DO UNDERSTAND YOUR POINT. AND WE CERTAINLY WOULD WANT TO

ENCOURAGE ACADEMIC ENTITIES TO APPLY FOR THIS AS WELL AS FOR-PROFIT. SO I UNDERSTAND YOUR CONCERN THERE.

MR. REED: HAVING WATCHED THE GERON TRIALS GO THROUGH SEVEN YEARS OF AGONIZING SOMETIMES INDECISION, IT SEEMED LIKE OFTENTIMES THE FDA DID REALLY NOT KNOW WHAT TO DO NEXT. I SEE THIS AS A WAY TO IMPOSE ORDER AND STRUCTURE ON CHAOS. I THINK THIS IS SOMETHING THAT WILL CREATE A LASTING BENEFIT FOR THE ENTIRE FIELD FOR EVERYONE. AND AS A PATIENT ADVOCATE, I APPLAUD YOU. THANK YOU.

CHAIRMAN THOMAS: THANK YOU, DON. ANY OTHER COMMENTS BY MEMBERS OF THE BOARD?

MS. SAMUELSON: ONE ADDITIONAL QUESTION. WE HAVEN'T YET BEEN ABLE TO RECEIVE AN ASSESSMENT OF OUR CURRENT GRANTS FUNDED PORTFOLIO. IF WE HAD THAT, WE WOULD KNOW HOW SUCCESSFUL THE FUNDED GRANTS HAVE BEEN MOVING THEM TOWARD CLINICAL TRIAL. AND SO HOW BIG THAT CHALLENGE IS TO GET THERE AND WHETHER WE CAN -- HOW MUCH TIME AND MONEY WE HAVE LEFT TO FILL THAT REMAINING GAP BECAUSE THERE'S CERTAINLY A GAP FOR LOTS OF DISEASES, AT LEAST PARKINSON'S. SO I'M WONDERING IF A FRIENDLY AMENDMENT OF THAT SORT WOULD BE APPROPRIATE.

CHAIRMAN THOMAS: I DON'T KNOW THAT THAT

NEEDS TO BE AN AMENDMENT. I THINK DR. FEIGAL, JOAN, KEEPS US POSTED ON PROGRESS OF ALL OF THE PROGRAMS AS THEY HEAD TOWARDS CLINICAL TRIALS. IS THERE SOMETHING BESIDES THAT THAT YOU'RE REFERRING TO?

MS. SAMUELSON: YEAH. YEAH. YEAH. YEAH. SOMETHING THAT WOULD ASSESS THE STATUS OF THE FUNDED GRANT. HOW FAR THE SCIENCE HAS MOVED ESSENTIALLY OVER THE PORTFOLIO THAT HAS BEEN FUNDED. SOME THINGS HAVEN'T MOVED FIVE INCHES, SOME HAVE TAKEN BIG LEAPS. WHAT HAVE BEEN -- WHAT HAS BEEN THE PROGRESS AND HOW MUCH DID IT COST US BECAUSE WE'RE GOING TO HAVE TO MAKE JUDGMENTS ABOUT WHAT'S LEFT.

CHAIRMAN THOMAS: DR. FEIGAL.

DR. FEIGAL: I WILL DO MY BEST TO TRY AND ANSWER YOUR CONCERNS. SO WHAT I DO RIGHT NOW IS AT LEAST ON A YEARLY BASIS, AND I AM HAPPY TO DO IT MORE FREQUENTLY, I COME TO THIS BOARD WITH AN UPDATE ON PROGRESS ON ALL OF THE FUNDED DEVELOPMENT TEAMS. AND I WOULD -- THE REASON WHY WE DO IT AT A POINT IN TIME IS BECAUSE THEY GO THROUGH INTERVAL INTERACTIONS WITH US AND WITH OUR ADVISORY PANEL. AND JUST SO THAT WE'RE TREATING THEM AS A COHORT, I'D LIKE TO HAVE A CERTAIN LEVEL OF EVALUATIONS TO BE DONE BEFORE I BRING INFORMATION TO THIS BOARD SO THAT IT'S COMPREHENSIVE AND COMPLETE.

IF YOU'D LIKE ME TO DO IT ON A MORE FREQUENT BASIS, WE CAN DO THAT. IF THERE'S SOMETHING COMPELLING THAT WOULD BE PERTINENT FOR THE BOARD TO KNOW, I CERTAINLY COULD RUN IT BY THE CHAIRMAN AND SEE IF HE THINKS IT'S APPROPRIATE TO BRING IT TO A FULLER AUDIENCE.

MS. SAMUELSON: IT'S NOT THE FREQUENCY. IT'S THE DEPTH OF THE ANALYSIS. I RECEIVE THOSE. I'M REAL INTERESTED IN THEM. I LOOK AT THEM ALL AND THEY TALK ABOUT X DOLLARS GOING TO X DISEASE. IT'S NOT SAYING THE SCIENCE WAS HERE AND NOW WE HAVE AN ANIMAL MODEL OR A MORE SOPHISTICATED SENSE OF WHAT THE THERAPEUTIC OPTIONS ARE AND SO ON. IT'S A MORE ELABORATE AND INFORMATIVE TOOL.

CHAIRMAN THOMAS: OKAY. POINT WELL TAKEN, JOAN. I THINK WE SHOULD -- WE CAN DISCUSS THIS OFF LINE. I DON'T THINK THIS IS THE SUBJECT FOR AN AMENDMENT BECAUSE THAT IS AN ONGOING CONCERN YOU'VE HAD, WHICH IS A VERY VALID ONE, BUT NOT PARTICULARLY PERTINENT, I THINK, TO THIS, BUT IT DOES REQUIRE FURTHER DISCUSSION, WHICH I KNOW DR. FEIGAL WILL BE HAPPY TO HAVE.

SO ARE THERE ANY OTHER COMMENTS BY MEMBERS OF THE BOARD? OKAY. HEARING NONE, ROLL CALL, PLEASE, MARIA.

MS. BONNEVILLE: LARS BERGLUND.
DR. BERGLUND: AYE.
MS. BONNEVILLE: DAVID BRENNER.
DR. BRENNER: GREAT.
MS. BONNEVILLE: ANNE-MARIE DULIEGE.
DR. DULIEGE: AYE.
MS. BONNEVILLE: MARCY FEIT.
MS. FEIT: AYE.
MS. BONNEVILLE: LEON FINE.
DR. FINE: AYE.
MS. BONNEVILLE: MICHAEL FRIEDMAN.
DR. FRIEDMAN: YES.
MS. BONNEVILLE: MICHAEL GOLDBERG. SAM HAWGOOD.
DR. HAWGOOD: YES.
MS. BONNEVILLE: STEPHEN JUELSGAARD. SHERRY LANSING.
MS. LANSING: YES.
MS. BONNEVILLE: BERT LUBIN. MICHAEL MARLETTA. LLOYD MINOR.
DR. MINOR: YES.
MS. BONNEVILLE: FRANCISCO PRIETO.
DR. PRIETO: AYE.
MS. BONNEVILLE: CARMEN PULIAFITO.
DR. PULIAFITO: YES.

MS. BONNEVILLE: ROBERT QUINT.
DR. QUINT: YES.
MS. BONNEVILLE: DUANE ROTH. AL ROWLETT.
MR. ROWLETT: YES.
MS. BONNEVILLE: JOAN SAMUELSON.
MS. SAMUELSON: NO.
MS. BONNEVILLE: JEFF SHEEHY.
MR. SHEEHY: YES.
MS. BONNEVILLE: OSWALD STEWARD.
DR. STEWARD: YES.
MS. BONNEVILLE: JONATHAN THOMAS.
CHAIRMAN THOMAS: YES.
MS. BONNEVILLE: ART TORRES.
MR. TORRES: AYE.
MS. BONNEVILLE: KRISTINA VUORI.
DR. VUORI: YES.
MS. BONNEVILLE: EUGENE WASHINGTON. DIANE WINOKUR.
MS. WINOKUR: YES.
CHAIRMAN THOMAS: OKAY. MR. HARRISON, IS IT SAFE TO SAY THE MOTION PASSES? THANK YOU. AND AGAIN CONGRATULATIONS TO ALAN AND NATALIE AND MARIA AND ALL STAFF WHO SPENT SO MANY HOURS, WEEKS, AND MONTHS, NEIL TO YOUR MODELING, ALL OF OUR LEGAL PEOPLE, ETC., ELLEN. I'M SURE I'LL LEAVE SOMEBODY

OUT. ANYWAY, CONGRATULATIONS TO EVERYBODY. THIS IS A BIG DEAL. SO THANK YOU.

WE'RE GOING TO SKIP DOWN TO ITEM NO. 13, WHICH IS ONE OF THOSE MOMENTS THAT IS ALWAYS BITTERSWEET BECAUSE IT IS THE CHANCE TO HONOR SOMEBODY WHO'S HAD AN ENORMOUS CONTRIBUTION TO CIRM OVER THE YEARS AND TO THE PATIENTS OF THE WORLD. AND IT'S BITTERSWEET BECAUSE THEY'RE NO LONGER MEMBERS OF THE BOARD. OTHERWISE WE WOULDN'T BE HAVING THIS MOMENT.

IN THIS INSTANCE WE WANT TO HONOR ONE OF OUR GIANTS OF THE PAST NUMBER OF YEARS WHOSE CONTRIBUTION IS INCALCULABLE, DEAN PHIL PIZZO FROM STANFORD. AND TO KICK OFF THE ROUND OF COMMENTS, CALL UPON DR. FRIEDMAN.

DR. FRIEDMAN: IT'S MY PLEASURE TO BEGIN THE PROPOSAL, THE CONSIDERATION OF THIS RESOLUTION HONORING DR. PIZZO. I HAVE KNOWN PHIL FOR MORE THAN THREE DECADES. PHIL IS ONE OF THE FEW PEOPLE IN THE ROOM WHO REMEMBERS ME WITH HAIR, WHICH TELLS YOU HOW LONG AGO IT'S BEEN.

THE COMMENTS I OFFER REALLY ARE ON BEHALF OF THE CITIZENS OF THE STATE WHO HAVE BEEN VERY FORTUNATE TO HAVE YOUR THOUGHTFUL ENGAGEMENT OVER A REALLY EXTENDED PERIOD OF TIME. FROM THE VERY

BEGINNING OF THE ORGANIZATION, FROM DECEMBER OF 2004, YOU'VE NOT ONLY BEEN SOMEONE WHO'S BEEN DEEPLY ENGAGED IN THESE MEETINGS, WHICH ARE VERY IMPORTANT, BUT SPENT AN ENORMOUS AMOUNT OF TIME OUTSIDE OF THIS VENUE TRYING TO HELP WITH VARIOUS SUBCOMMITTEES AND FORA.

WE'VE ALL HAD THE PLEASURE HERE WHO HAVE SERVED WITH YOU OF YOUR THOUGHTFUL, SOBER, CAREFUL COMMENTS, ADVICE, AND REALLY UNSELFISH HELP WITH THE CONSIDERATIONS, ASKING THE QUESTION WHAT'S THE BEST SCIENCE, BUT NOT SCIENCE IN AN ABSTRACT SENSE, WHAT'S THE BEST SCIENCE THAT LEADS TO SOMETHING THAT WILL HELP PEOPLE AND HOW TO DO SO IN THE SHORTEST POSSIBLE PERIOD OF TIME.

WE'RE ALL VERY GRATEFUL FOR YOUR SERVICE AND VERY APPRECIATIVE OF THE TREMENDOUS EFFORT THAT YOU'VE OFFERED. AS HAS BEEN COMMENTED, WE ALL WILL FEEL THE LOSS OF YOUR PRESENCE HERE, NOTWITHSTANDING THE ABLE SERVICE OF NEW REPRESENTATION WHO I'M SURE WILL DO A WONDERFUL JOB, BUT WE WILL MISS YOU VERY, VERY MUCH. AND THANK YOU SO MUCH FOR EVERYTHING.

CHAIRMAN THOMAS: SHERRY.

MS. LANSING: YES. PHIL, I WISH I COULD BE THERE TODAY BECAUSE THIS IS TRULY ONE OF THE MOST BITTERSWEET DAYS SINCE THIS INSTITUTE WAS FORMED. I

CAN STILL REMEMBER THE VERY FIRST MEETING AND YOU WERE THERE. AND I WAS A VERY NERVOUS PATIENT ADVOCATE FEELING RATHER INADEQUATE ABOUT MY BACKGROUND. AND I THINK I SPEAK FOR ALL THE PATIENT ADVOCATES IN SAYING THAT THERE WAS SOMETHING ABOUT YOU THAT DREW US ALL TO YOU. THERE WAS A KINDNESS IN YOUR FACE THAT CONTINUES TO THIS DAY AND A WARMTH.

AND SO FOR ME PERSONALLY, AND ACTUALLY I KNOW THAT ALL THE PATIENT ADVOCATES WHO WERE THERE FROM THE BEGINNING WOULD SAY THE SAME THING, YOU WERE A SOURCE FOR US THAT WE WOULD GO TO, WE WOULD GO TO TO ASK MORE DETAILED QUESTIONS ABOUT THE SCIENCE. AND YOU ALWAYS WERE SO PATIENT IN EXPLAINING IT TO ME PERSONALLY, AND YOU NEVER MADE ME FEEL SILLY OR STUPID FOR NOT UNDERSTANDING SOMETHING. AND BY THE END OF IT, I DID UNDERSTAND IT IN A PATIENT ADVOCATE WAY, NOT WITH ALL THE DETAILS OF A SCIENTIST.

AND SO I WAS SO GRATEFUL FOR THE EXTRA TIME THAT YOU GAVE ME FROM THE BEGINNING AND GAVE ALL OF US WHO WERE PATIENT ADVOCATES AND CONTINUE TO THIS DAY TO GIVE ME. BUT YOU WERE MUCH MORE THAN A SOURCE OF SCIENTIFIC KNOWLEDGE FOR US. YOU ALSO REPRESENTED THE ETHICS AND INTEGRITY OF THIS BOARD.

YOU ARE UNCOMPROMISING AND YOU ALWAYS CARED ABOUT WHAT WAS NOT ONLY BEST FOR THE SCIENCE, BEST FOR THE PATIENTS, BUT ALSO EVERYTHING THAT WAS DONE IN FULL TRANSPARENCY AND WITH FULL INTEGRITY AND FULL ETHICS.

YOU KNOW, WHEN YOU SERVE ON A BOARD, THERE WERE CERTAIN PEOPLE, BECAUSE OF THEIR VAST KNOWLEDGE, BECAUSE OF THEIR ETHICS, BECAUSE OF THEIR INTEGRITY, BECAUSE OF JUST WHO THEY ARE THAT WHEN THEY SPEAK, EVERYBODY LISTENS. AND THAT'S WHO YOU ARE, PHIL. YOU ARE THE PERSON THAT REALLY WAS ONE OF THE CONSCIENCE OF THE INSTITUTE, ONE OF THE GENIUSES OF THE INSTITUTE, AND SOMEONE WHO WHENEVER YOU GAVE AN OPINION ALMOST ALWAYS YOU CARRIED THE ROOM BECAUSE EVERYONE CARED WHAT YOU HAD TO SAY AND LISTENED TO YOU.

I CAN'T IMAGINE CIRM WITHOUT YOU. I KNOW WE WOULD NOT BE WHERE WE ARE TODAY WITHOUT YOU. SO I EXPRESS A SPECIAL GRATITUDE ON BEHALF OF THE CITIZENS, ON BEHALF OF THE PATIENT ADVOCATES, ON BEHALF OF ANYONE WHO SUFFERS FROM ANY DISEASE FOR EVERYTHING THAT YOU'VE DONE TO MAKE THIS INSTITUTE SO SPECIAL. AND ON A PERSONAL LEVEL I THANK YOU FOR YOUR FRIENDSHIP, AND I KNOW THAT OUR FRIENDSHIP WILL CONTINUE FOREVER. SO THANK YOU, PHIL.

CHAIRMAN THOMAS: DEAN HAWGOOD.

DR. HAWGOOD: PHIL, AS A FELLOW DEAN, I JOINED THIS GROUP AFTER I KNOW MOST OF THE REALLY HEAVY LIFTING HAD BEEN DONE, AND I REMEMBER MY FIRST COUPLE OF MEETINGS NOTING YOUR INCREDIBLY ACTIVE PARTICIPATION AND GETTING AN UNDERSTANDING OF JUST HOW MUCH TIME AND EFFORT AND THOUGHT YOU HAD PUT INTO THIS ORGANIZATION. AND KNOWING WHAT YOUR DAY JOB WAS LIKE, I WAS JUST EVEN MORE IMPRESSED THAT YOU HAD THAT ABILITY.

BUT MOST OF THE BOARD MEMBERS PROBABLY KNOW, BUT DURING THE SAME TIME THAT PHIL WAS PUTTING THE EFFORT INTO CIRM, HE WAS ALSO PLAYING OTHER LEADERSHIP ROLES IN THE COUNTRY TO ADVANCE PARTICULARLY THE RESEARCH MISSION THROUGH HIS WORK ON THE AAMC, THE COUNCIL OF DEANS, AND MANY OTHER ORGANIZATIONS. AND IT'S REALLY REMARKABLE THE BANDWIDTH AND HIS ABILITY TO GET ALL OF THAT WORK DONE AND NOT EVER LOOK FRUSTRATED OR HARRIED BY THE TIME COMMITMENT THAT IT REQUIRED.

SO HE'S BEEN A REAL ROLE MODEL TO ME, AND I SUSPECT I SPEAK ON BEHALF OF ALL OF THE DEANS ON THE BOARD, THAT YOU'VE BEEN A GREAT COLLEAGUE AND THANK YOU VERY MUCH. AND WE LOOK FORWARD TO WORKING WITH YOUR SUCCESSOR NOW, AND I LOOK FORWARD TO MY

RETIREMENT.

CHAIRMAN THOMAS: DON'T RETIRE ANY TIME SOON, SAM. THANK YOU. SENATOR TORRES.

MR. TORRES: I KNOW PHILIP IN A DIFFERENT WAY. MY SON WENT TO STANFORD AND HE MET A BEAUTIFUL AFRICAN-AMERICAN ACTRESS AND PROFESSOR BY THE NAME OF ANNA DEAVERE SMITH, WHO SINCE THEN AND STILL IS HIS MENTOR. AND SHE CREATED A ONE-WOMAN SHOW ON BROADWAY WHERE SHE TALKED ABOUT THE HEALTHCARE CRISIS IN AMERICA, AND THE PLAY WAS CALLED *LET ME DOWN EASY*.

YOU MAY REMEMBER ANNA DEAVERE SMITH FROM NURSE JACKIE AND OTHER KINDS OF SHOWS THAT SHE'S DONE. BUT IN THIS PLAY SHE PORTRAYED A VERY DEAR FRIEND OF MINE WHO HAD SINCE PASSED, FORMER GOVERNOR OF TEXAS, ANN RICHARDS, LANCE ARMSTRONG, THE MODEL LOREN HUTTON, AND JOEL SIEGEL, THE FILM CRITIC, AND DR. PHIL PIZZO.

SO WHEN ANNA WALKED ON THE STAGE IN A MEDICAL WHITE UNIFORM AND I SAW PHIL PIZZO'S NAME TAG, AND I SAID, "JOAQUIN," I SAID TO MY SON BECAUSE HE WAS AT THE PLAY, "WHY IS PHIL PIZZO IN THE PLAY?" AND HE EXPLAINED TO ME THAT YOU AND ANNA DEAVERE SMITH HAD BEEN VERY DEAR FRIENDS. AND THE WORK THAT YOU'VE DONE OVER THE DECADES, ESPECIALLY WITH

CHILDREN, HAS NOT ONLY BEEN RECOGNIZED BY THIS INSTITUTE AND BOARD, BUT BY MANY OTHER ORGANIZATIONS ACROSS THE COUNTRY.

AND I APPLAUD YOU FOR THOSE AWARDS. BUT I ALSO APPLAUD YOU FOR HAVING THE COURAGE AND THE SENSIBILITY AND PATIENCE WHEN PATIENTS WITH INCURABLE DISEASES OR THEIR FAMILIES WOULD COME TO OUR BOARD AND CONFRONT US WITH A DECISION THAT WAS VERY DIFFICULT. AND I RESPECT AND ADMIRED YOUR COUNSEL DURING THOSE VERY DIFFICULT TIMES AND FOLLOWED IT OFTEN.

SO I JUST WANT TO SAY NOT ONLY WILL I MISS YOU ON THIS BOARD, BECAUSE I WON'T SEE YOU AS OFTEN, I'LL TRY AND GET DOWN THERE AS OFTEN AS I CAN, BUT I WANTED THIS BOARD TO KNOW THAT YOU ARE NOT ONLY A NATIONAL FIGURE IN HEALTH, BUT IN THE ARTS AS WELL, AND THAT YOU PROBABLY COULD STAR IN YOUR OWN PLAY AT SOME TIME IN THE FUTURE. SO I LOVE YOU, PHIL.

CHAIRMAN THOMAS: OTHER COMMENTS BY MEMBERS OF THE BOARD? DR. TROUNSON.

DR. TROUNSON: WELL, I CAN'T TURN ROUND AND DO THIS, PHIL, BUT IT'S REALLY BEEN AN HONOR TO KNOW YOU AND INTERACT WITH YOU. AND REALLY AN INTELLECT LIKE YOURS DOESN'T COME OFTEN AROUND, AND TO BE ABLE TO DEAL WITH THOSE SCIENTISTS THAT I KNOW

SO VERY WELL AND YOU DO, NOT ONLY AT STANFORD, BUT AROUND CALIFORNIA AND THROUGH THE U.S., THEY ALL ADMIRE YOU MUCH. AND YOU'RE JUST A FANTASTIC MAN, AND I'VE APPRECIATED ALL THE WISE COUNSEL THAT I'VE NEEDED FROM TIME TO TIME WHICH YOU ALWAYS GAVE, AND I THINK THIS HAS MADE THIS A MORE INTERACTIVE AND A BETTER PLACE TO BE, AND IT CERTAINLY HELPED ME TO STAY AS LONG AS I HAVE ALREADY.

SO I REALLY WISH YOU THE BEST, AND I HOPE, LIKE EVERYBODY ELSE, THAT WE CAN SPEND A BIT OF TIME SOME OTHER TIME GOING FORWARD. ALL THE BEST, PHIL, AND THANK YOU VERY MUCH FOR ALL YOU'VE DONE FOR US AND ALL THE STAFF AT CIRM AND ALL THE SCIENTISTS OF CALIFORNIA AND BEYOND. WE REALLY DO APPRECIATE IT.

CHAIRMAN THOMAS: PHIL, IF YOU COULD JUST COME UP HERE WHILE I'M MAKING A COUPLE STATEMENTS. YOU COULD COME UP RIGHT NOW. THAT WOULD BE GREAT. I'D LIKE TO ECHO WHAT EVERYBODY SAID. I KNOW WHEN I STARTED -- FIRST OF ALL, AS A PERSONAL NOTE, PHIL, I WANTED TO THANK YOU VERY MUCH FOR PHONING IN FROM ISTANBUL WHEN THE VOTE WAS TAKEN FOR THE NEW CHAIR POSITION, WHICH I PERSONALLY GREATLY APPRECIATED. SO THANK YOU AGAIN FOR THAT.

I THINK SHERRY, ALL THE COMMENTS THAT SHE MADE, ONE THAT STICKS OUT, AND BEING A FINANCIAL

GUY, HARKENS BACK TO THE DAYS OF E. F. HUTTON. FOR THOSE OF YOU WHO REMEMBER, MANY ITERATIONS OF INVESTMENT BANKS AGO AND THE COMMENT, THE ADS THAT HE HAD WAS WHEN E. F. HUTTON TALKS, PEOPLE LISTEN. AND I SORT OF THINK OF PHIL AS THE E. F. HUTTON OF THE BOARD.

THERE WAS A GRAVITY TO ALL YOU SAID, A WISDOM, A SENSE OF FAIRNESS AND DEDICATION TO ANALYZING ALL SIDES OF THE ISSUE THAT LED YOU TO FORMULATE YOUR OPINION, WHICH WAS SOMETHING TAKEN VERY SERIOUSLY. AND PEOPLE ON THE BOARD WOULD LITERALLY SIT ON THE EDGE OF THEIR SEATS TO SEE WHAT PHIL PIZZO HAD TO SAY ON THE SUBJECT. AND AS SHERRY SAID, MOST OFTEN THAT OPINION CARRIED THE DAY. SUCH WAS THE RESPECT PEOPLE AFFORDED YOU AND THE GRAVITY OF WHAT YOU SAID AND THE WISDOM.

SO I WOULD LIKE TO JOIN ALL MY FELLOW BOARD MEMBERS IN CONGRATULATING YOU ON THE TREMENDOUS CONTRIBUTION TO CIRM, TO THE MEDICAL FIELD IN CALIFORNIA, AND TO THE NATION AND BEYOND. AND ON BEHALF OF CIRM WANT TO PRESENT YOU THIS FRAMED RESOLUTION, WHICH WILL BE SOMETHING TO ADD TO YOUR DECOROUS WALLS IN YOUR OFFICE IF YOU EVEN HAVE SPACE BECAUSE YOU'VE RECEIVED SO MANY HONORS TO DATE. SO ON BEHALF OF CIRM, PHIL -- AND BY THE WAY,

I DO HOPE YOU WILL HAVE A COMMENT OR TWO -- WANT TO CONGRATULATE YOU AND GIVE YOU THIS HEARTFELT RESOLUTION FOR ALL YOUR WONDERFUL HELP.

(APPLAUSE.)

DR. PIZZO: I WANT TO BEGIN BY, OF COURSE, THANKING ALL OF YOU. I'M DEEPLY HUMBLED TO BE HERE. AND I FEEL LIKE I'M ALMOST AT THE POINT OF LISTENING TO AN OBITUARY, NONETHELESS VERY, VERY MEANINGFUL. AND I WOULD SAY, QUITE HONESTLY, THAT REALLY THE HONOR HAS BEEN MINE TO SERVE WITH YOU. OVER THE YEARS THAT WE'VE WORKED TOGETHER AS AN ICOC, STAFF REALLY COLLABORATING WITH US TOGETHER, THE WONDERFUL GROUP THAT'S BEEN ASSEMBLED, AND THOSE OF US WHO HAVE BEEN HERE FROM THE BEGINNING REMEMBERING HOW HARD IT WAS TO GET THIS PROCESS GOING. AND TO WITNESS WHAT'S BEEN ACCOMPLISHED OVER THE LAST EIGHT YEARS IS TRULY EXTRAORDINARY.

MOST OF US NEVER ASSUMED IN OUR LIVES THAT WE WOULD HAVE BEEN HERE. THIS WAS NOT ON THE PATH OF THE JOURNEY THAT WE THOUGHT WE WOULD TAKE. AND WHEN THE VISION -- YOU KNOW, BOB KLEIN AND MANY OTHERS REALLY BROUGHT PROP 71 TO FRUITION IN 2004. FIRST OF ALL, THAT WAS A MOMENT AS A NEW CALIFORNIAN THAT I SAID I'M REALLY PROUD TO BE A CALIFORNIAN. THIS IS A STATE THAT HAS A VISION FOR THE FUTURE AND

RECOGNIZED THAT STEM CELL BIOLOGY AND REGENERATIVE MEDICINE WAS IMPORTANT AND REALLY GAVE LIFE TO THIS ORGANIZATION. AND WHAT EACH OF YOU IN THIS ROOM DID AND THE MANY WHO SERVED ALONG THE WAY HAS TAKEN THAT SEED OF LIFE AND REALLY ALLOWED IT TO HAVE THE SET OF ACHIEVEMENTS THAT ARE NONPARALLELED.

LOOK AROUND AT WHAT'S HAPPENED, NEW INVESTIGATORS, NEW ACCOMPLISHMENTS AND RESEARCH THAT WOULDN'T HAVE HAPPENED. WITHOUT CIRM I CAN'T EVEN IMAGINE THAT IPS WOULD HAVE EXISTED IN THE WAY THAT IT HAS TODAY. LOOK AT WHAT'S HAPPENED IN TERMS OF OUR STATE AND THE INFRASTRUCTURE THAT'S BEEN DEVELOPED IN TERMS OF A COMMITMENT TO THIS RESEARCH. AND INDEED EVERY DAY AS I GO INTO MY NEW OFFICE IN THE LORRY LOKEY STEM CELL RESEARCH BUILDING, I'M REMINDED EVEN MORE FIGURATIVELY ABOUT HOW IMPORTANT THIS IS.

MY HOPE, OF COURSE, LIKE YOURS, IS THAT THE INCREDIBLE INVESTMENT THAT'S BEEN MADE IN THIS EFFORT TO DATE ALONG WITH THE PROGRESS ACHIEVED WILL BE MET BY REGENERATION OF CIRM OVER TIME SO THAT THIS WORK CAN CONTINUE AND REALLY BRING TO THOSE CITIZENS OF CALIFORNIA WHO SAW AND ENVISIONED A NEED AND A BENEFIT THE TRUE FRUITION AND ACCOMPLISHMENTS BY DISCOVERIES AND INNOVATIONS THAT ARE COMING FROM

THE LABORATORY TO PATIENTS, NOT ONLY HERE, BUT, OF COURSE, AROUND THE WORLD.

SO AS I CLOSE, I WANT TO THANK YOU FOR TEACHING ME, FOR YOUR COLLEGIALITY, FOR YOUR FRIENDSHIP, FOR THE PARTICIPATION THAT WE'VE HAD TOGETHER. THIS HAS BECOME ITS ONLY FAMILY UNIT IN MANY WAYS. WE'VE HAD OUR OPPORTUNITIES TO KNOW EACH OTHER AND LEARN ABOUT EACH OTHER AND TO REALLY CARE ABOUT THE MISSION THAT CIRM IS ABOUT. AND I WISH YOU ALL THE VERY BEST IN THE FUTURE. AND WHATEVER I CAN DO ON THE SIDELINES TO HELP WITH THE CONTINUATION OF FUNDING, YOU CAN COUNT ON THAT. I REALIZE THIS IS RECORDED, BUT YOU CAN COUNT ON ME BEING SOMEONE WHO WILL STAND FOR THE CONTINUATION OF CIRM BECAUSE IT'S GOOD FOR THE WORLD. AND THAT'S WHAT YOU'RE ABOUT. THANK YOU AGAIN.

(APPLAUSE.)

CHAIRMAN THOMAS: OKAY. I THINK THIS IS A GOOD TIME TO GO GRAB OUR LUNCH ACROSS THE HALL. AND PLEASE, AFTER YOU'VE TAKEN A RESTROOM BREAK AS WELL, BRING YOUR LUNCH BACK HERE. WE'RE GOING TO CONTINUE WITH THE AGENDA THROUGH A WORKING LUNCH. THANK YOU.

(A RECESS WAS TAKEN.)

CHAIRMAN THOMAS: OKAY. WE ARE NOW RESUMING THE ICOC MEETING POST EVERYBODY GETTING

THEIR LUNCH. PROCEED TO ITEM NO. 8, CONSIDERATION OF THE CONCEPT PROPOSAL FOR TOOLS AND TECHNOLOGIES III. LILA.

DR. COLLINS: GOOD AFTERNOON, MR. CHAIRMAN, MEMBERS OF THE BOARD, AND AUDIENCE. TODAY I'D LIKE TO MOVE BACK INTO THE TRANSLATIONAL SPACE AND PRESENT TO YOU THE CONCEPT PROPOSAL FOR THE THIRD CALL OF OUR TOOLS AND TECHNOLOGIES INITIATIVE. THIS IS AGENDA ITEM NO. 8 IN YOUR BINDERS, AND YOU SHOULD ALSO HAVE THE CONCEPT PROPOSAL THERE.

BEFORE I BEGIN, I'D LIKE TO JUST GIVE A LITTLE REFRESHER ON THE PURPOSE OF THE TOOLS INITIATIVE AS WE HAVEN'T DISCUSSED IT IN SOME TIME. AND I THINK IT'S INTENDED TO ADDRESS SOME OF THE ISSUES THAT JOAN RAISED AND JEFF ALLUDED TO EARLIER.

NOW, THE GOAL IS QUITE BROADLY TO ENABLE TRANSLATIONAL STEM CELL RESEARCH BY ADDRESSING SOME OF THE CHALLENGES SPECIFIC TO OUR FIELD. AND THIS INITIATIVE IS REALLY FAIRLY UNIQUE TO CIRM, AND IT'S REALLY EAGERLY ANTICIPATED BY OUR APPLICANTS AND GRANTEES IN THAT IT DOES SOMETHING THAT A LOT OF AGENCIES DON'T DO. WE FUND DEVELOPMENT NOT ONLY OF TECHNOLOGIES, BUT ALSO OF DEVICES THROUGH THIS INITIATIVE. AND IT FOSTERS MULTIDISCIPLINARY COLLABORATIONS, AND A FAIR NUMBER OF INVENTIONS COME

OUT OF THIS TYPE OF WORK AS WELL.

IT'S BEEN A PRODUCTIVE PROGRAM SO FAR. YOU WILL RECALL DR. OLSON PRESENTED YOU SOME OUTCOMES OF THE TOOLS AND TECHNOLOGIES I RFA IN JANUARY. AND THE TOOLS AND TECHNOLOGIES II RFA IS STILL IN PROCESS, OR THOSE AWARDS ARE STILL ONGOING, AND WE SHOULD HAVE OUTCOMES OF THAT RFA. I BELIEVE IN 2014 THOSE SHOULD BE COMPLETED. SO NEXT YEAR WE'LL HEAR ABOUT THOSE.

SO I'D LIKE TO JUST SPEND A FEW MOMENTS AND DISCUSS SOME OF THE CHALLENGES THAT WE DO FACE IN THE TRANSLATION OF STEM CELL THERAPIES BECAUSE THERE ARE SOME SPECIAL CHALLENGES IN THE FIELD. SO LISTED IN THIS SLIDE ARE SOME OF THE THINGS THAT WE'D LIKE STEM CELLS TO DO. AND UNDERNEATH THOSE THINGS ARE WHAT WE NEED TO ACHIEVE TO ACCOMPLISH THE GOALS.

NOW, THE FIRST POINT HERE REALLY GETS TO THE CORE GOAL OF REGENERATIVE MEDICINE. AND IN A NUMBER OF DISEASES AND INJURIES, IT JUST MAY NOT BE POSSIBLE TO INDUCE THE BODY TO HEAL ITSELF. SO IN THESE CASES, IN ORDER TO REPLACE DAMAGED TISSUES, WE NEED THE CELLS THAT WE DELIVER TO PERSIST AND FUNCTION IN THE PATIENT. AND THE CHALLENGE WE FACE HERE IS MULTIFACETED. FIRST, A NUMBER OF THE CELLS

THAT WE TRANSPLANT ARE LOST SHORTLY AFTER DELIVERY. WE NEED BETTER METHODS TO DELIVER CELLS. WE ALSO NEED THE CELLS TO INTEGRATE INTO A TISSUE IN A FUNCTIONAL WAY.

AND I'LL GIVE AN EXAMPLE OF A CARDIOMYOCYTE. IN ORDER FOR THAT CELL TO SUPPORT THE PUMPING FUNCTION OF THE HEART, IT NEEDS TO GET TO WHERE IT'S NEEDED AND NEEDS TO STAY THERE AND NEEDS TO SURVIVE, IT NEEDS TO COMMUNICATE WITH THE CELLS OF THAT HOST HEART FOR IT TO REALLY HELP. SO WE NEED TO FIND WAYS TO BE ABLE TO HAVE CELLS ACHIEVE THAT LASTING FUNCTIONAL ENGRAFTMENT.

TO THE NEXT POINT, ANIMAL MODELING, REALLY THE PURPOSE OF USING ANIMAL MODELS IN TRANSLATION IS TO BETTER PREDICT WHAT WILL HAPPEN IN THE CLINIC AND TO BETTER DESIGN CLINICAL TRIALS. AND IT'S CLEAR FOR SOME INDICATIONS THAT THE ANIMAL MODELS THAT WE HAVE ARE JUST NOT ADEQUATE. PARTICULARLY THERE CAN BE AN ISSUE USING SMALL ANIMAL MODELS TO TRY TO PREDICT WHAT WOULD HAPPEN IN HUMANS. SO, FOR EXAMPLE, IF YOU HAVE A NEURON THAT NEEDS TO PROJECT TO A DISTANT SITE IN THE BRAIN, THE ABILITIES OF THAT NEURON TO PROJECT IN THE TINY BRAIN OF A MOUSE MAY NOT PREDICT WHAT THAT NEURON CAN DO IN A MUCH LARGER HUMAN BRAIN. IN THE CASE OF OUR

CARDIOMYOCYTE, IN ORDER FOR THAT CELL TO CONTRIBUTE PUMPING FUNCTION, IT NEEDS TO BE PLACED IN A HOST THAT HAS A HEART RATE THAT'S PHYSIOLOGICALLY RELEVANT TO HUMANS.

SO THE CHALLENGE TO DOING THIS KIND OF WORK IS THAT THE VAST MAJORITY OF THE LARGE ANIMAL MODELS THAT WE HAVE ARE ACTUALLY IMMUNE COMPETENT. AND AS A RESULT OF THAT, THEY TEND TO REJECT OUR CELLS. AND DESPITE QUITE A BIT OF EFFORT, IT HAS BEEN QUITE DIFFICULT TO ACHIEVE IMMUNOSUPPRESSION REGIMENS THAT WILL ALLOW FOR A PROLONGED RETENTION OF THE HUMAN XENOGRAPHS IN THESE MODELS. SO THIS IS AN AREA WHERE WE CAN HAVE SOME IMPROVEMENT.

FINALLY, ONE OF THE GREATEST STRENGTHS OF THE CELL THERAPY, THE ABILITY OF CELLS TO PERSIST AND EVEN PROLIFERATE IN VIVO, CAN ALSO RAISE SAFETY CONCERNS. AND IN ORDER TO REALLY EVALUATE THAT, WE NEED TO BE ABLE TO TRACK OURSELVES OVER TIME IN VIVO AND WE NEED THE TOOLS TO DO THAT.

AND THE LAST POINT GOES TO SOME OF THE REAGENTS AND THE NEED TO DEVELOP COST-EFFICIENT STEM CELL PRODUCTION PROCESSES. AND WE REALLY STILL HAVE A NEED TO REPLACE SOME OF THE ANIMAL-DERIVED PRODUCTS OR ANIMAL-DERIVED REAGENTS THAT WE USE IN THESE PROCESSES THAT CAN BE INCONSISTENT, THAT CAN

CAUSE EXPENSIVE LOTS FAILURES, AND IN ADDITION THEY CAN IMPOSE A BURDEN OF EXTRA INFECTIOUS AGENT TESTING ON THOSE PROGRAMS.

NOW, GETTING TO THE RFA, I THINK THIS IS REALLY OUR OPPORTUNITY TO IMPACT THESE PROBLEMS AND REALLY HELP MOVE THE FIELD FORWARD AND ADDRESS SOME OF THE CONCERNS THAT YOU RAISED IN OUR EARLIER DISCUSSION, JOAN. WE REALLY WANT TO ENABLE TRANSLATION OF STEM CELL THERAPIES BY SUPPORTING THE TYPES OF PROJECTS THAT ADDRESS THESE TRANSLATIONAL BOTTLENECKS THAT ARE BROADLY APPLICABLE AND CAN BE USED BY MULTIPLE PROGRAMS IN THE FIELD. SO THIS COULD INCLUDE CREATION AND TESTING OF NEW TOOLS AND TECHNOLOGIES OR ALSO OPTIMIZATION OF AN APPLICATION OF EXISTING TOOLS AND TECHNOLOGIES TO OUR FIELD.

LISTED BELOW ARE SOME OF THE BOTTLENECKS THAT WE'VE IDENTIFIED TO BE ESPECIALLY IMPORTANT TO ADDRESS IN THIS RFA. I MENTIONED THE NEED FOR CELLS TO REALLY ENGRAFT, SURVIVE, INTEGRATE TO SUPPORT FUNCTION. WE ANTICIPATE THIS COULD BE ACCOMPLISHED BY TISSUE ENGINEERING APPROACHES, BY SOME OF THE NANOTECHNOLOGY APPROACHES THAT WERE ALLUDED TO THIS MORNING TO ENABLE CELLS TO GO WHERE THEY NEED TO GO.

THE SECOND POINT IS TO REALLY TRY TO IMPROVE THE INFORMATION THAT WE'RE ABLE TO GET OUT

OF LARGE ANIMAL MODELS. SO WE WOULD LIKE TO SEE PROGRAMS THAT WOULD HELP US ESTABLISH LONG-TERM HUMAN CELL ENGRAFTMENT EITHER THROUGH THE DEVELOPMENT OF NOVEL STRAINS OF ANIMALS THAT MIGHT BE IMMUNE DEFICIENT AND WILLING TO ACCEPT HUMAN GRAFTS OR THROUGH IMMUNOSUPPRESSION REGIMENS, EFFORTS TO INDUCE GRAPH TOLERANCE. THOSE TYPES OF PROGRAMS COULD REALLY BE HELPFUL.

AND THE SECOND POINT HAS ACTUALLY RECEIVED A LOT OF ENTHUSIASM, AND THAT'S THE CONCEPT OF REALLY DEVELOPING SURROGATE DEVELOPMENT CANDIDATE CELLS THAT COULD BE USED TO ENABLE SAME SPECIES MODELING IN THOSE LARGE ANIMALS SO THAT WE COULD REALLY GET AN IDEA IN AN IMMUNE COMPETENT SYSTEM ABOUT THE MECHANISM OF ACTION OF OUR CANDIDATES WITHOUT HAVING TO WORRY ABOUT THAT IMMUNE REJECTION COMPONENT.

SO THOSE ARE SORT OF TWO SIDES OF THE SAME COIN, TO TRY TO GET SOME TOOLS TO GET A BETTER UNDERSTANDING IN THOSE TYPES OF MODELS.

FINALLY, I NOTED THE IMPORTANCE OF BEING ABLE TO TRACK CELLS AT HIGH SENSITIVITY. WE HAVE CONCERNS OF OFF-TARGET TISSUE FORMATION THAT WE WANT TO BE ABLE TO MONITOR. AND PREFERABLY WE'LL HAVE TOOLS TO MONITOR OVER LONG PERIODS OF TIME.

I ALLUDED TO THE NEED FOR XENOBIOTIC FREE REAGENTS. THOSE WOULD BE THINGS LIKE EXTRACELLULAR MATRICES THAT WE USE TO SUPPORT PLURIPOTENT STEM CELL GROWTH, GROWTH FACTORS, THOSE TYPES OF THINGS.

THIS NEXT POINT IS A KNOWN BOTTLENECK IN THE FIELD, AND THAT IS THE GENERATION OF TRUE RECONSTITUTING HEMATOPOIETIC STEM CELLS. I THINK THAT THIS IS NOT JUST A BOTTLENECK. IT'S ALSO A TREMENDOUS OPPORTUNITY FOR CIRM. IF WE COULD BREAK THROUGH THIS, IMAGINE, CALIFORNIA IS ON THE VERGE OF BECOMING A MAJORITY/MINORITY STATE. AND IT'S VERY DIFFICULT FOR A LOT OF PEOPLE TO FIND A MATCH TO A HEMATOPOIETIC STEM CELL DONOR. IF WE COULD CRACK THAT NUT AND GET HEMATOPOIETIC STEM CELLS, MATCHED TRANSPLANTS FOR EVERYONE WHO NEEDS THEM, YOU IMAGINE WHAT WE COULD DO. SO WE THINK THIS IS AN ENORMOUS OPPORTUNITY FOR US.

AND NANOTECHNOLOGIES, I REALLY CONSIDER THIS COULD BE A VERY POWERFUL TOOL FOR US TO HELP CONTROL CELL DELIVERY TO TARGETED SITES, TO HELP CONTROL CELL BEHAVIOR IN VIVO, AND POTENTIALLY EVEN MONITOR BY DISTRIBUTION OF CELLS, AND WE COULD EVEN HAVE SUICIDE SWITCHES TO ELIMINATE ROGUE CELLS IN VIVO.

MOVING TO THE SPECIFICS OF THE AWARDS,

WE'RE ASKING FOR A 20-PERCENT MINIMUM PERCENT EFFORT COMMITMENT FROM OUR INVESTIGATORS. AND THE RFA IS OPEN TO OUR COLLABORATIVE FUNDING PROGRAM. AND IT'S ALSO OPEN TO ACADEMIC NOT-FOR-PROFIT AND FOR-PROFIT INSTITUTIONS. WE'RE ASKING YOU FOR A TOTAL BUDGET OF $35 MILLION TO SUPPORT THIS PROGRAM, AND WE'RE ANTICIPATING APPROXIMATELY 20 AWARDS OF THREE YEARS APIECE WITH UP TO $900,000 IN DIRECT PROJECT COST EACH. AND WE'RE ALSO ASKING FOR A SUPPLEMENT IN THE CASE OF LARGE ANIMAL MODELING. WE REALIZE THAT THIS IS A COSTLY EFFORT, AND FOR THESE AWARDS WE'D CONSIDER UP TO $1.2 MILLION OF JUSTIFIABLE TOTAL DIRECT PROJECT COST FOR THAT EFFORT.

SO WE'D LIKE TO PRODUCE THE RFA BY SEPTEMBER AND COME BACK TO YOU AGAIN NEXT SEPTEMBER WITH THE RESULTS OF THE GRANTS WORKING GROUP REVIEW THAT WILL HAPPEN NEXT SUMMER. AND THAT CONCLUDES THE PROPOSAL, AND AT THIS TIME I'D LIKE TO REQUEST YOUR APPROVAL OF THE CONCEPT PLAN FOR THE TOOLS AND TECHNOLOGIES III RFA.

CHAIRMAN THOMAS: ARE THERE QUESTIONS? YES, MR. SHEEHY.

MR. SHEEHY: ON DEVELOPMENT AND TESTING OF CLINICALLY COMPATIBLE TECHNOLOGIES WITHIN THAT BUCKET, WOULD THAT INCLUDE EFFORTS TO FACILITATE OR

INDUCE IMMUNE TOLERANCE? BECAUSE IT SEEMS LIKE -- YOU'RE PROBABLY GOING TO GET A BUNCH OF IMMUNOLOGISTS IN THE REVIEW FOR HEMATOPOIETIC STEM CELLS. IMMUNE TOLERANCE IS A BIG BARRIER. WILL THERE BE -- WOULD THOSE BE IN SCOPE?

DR. COLLINS: I THINK A TECHNOLOGY TO IMPROVE FUNCTION OF A STEM CELL THERAPY SHOULD ABSOLUTELY BE IN SCOPE. IMMUNOLOGY IS A BIG PIECE, YES.

MR. SHEEHY: I THINK YOU'RE PROBABLY GOING TO HAVE A LITTLE BIT HEAVIER IMMUNOLOGIC -- BECAUSE IF YOU LOOK AT THE HSC THING, YOU MIGHT CONSIDER MAYBE EMPHASIZING THAT A LITTLE BIT MORE WHEN YOU ACTUALLY DO THE RFA. THERE'S SOME INTERESTING STUFF OUT THERE, I THINK.

DR. TROUNSON: THE REASON IT'S INTERESTING OUT THERE, AND I THINK WE HAD THAT IMMUNE RFA, AND IT'S KIND OF ALMOST TIME TO CATCH UP WITH THAT AND JUST SEE IS THERE A NEXT STEP. THERE ARE SEVERAL REALLY GOOD PAPERS, AND THERE'S A WHOLE T-CELL TECHNOLOGY WHICH HAS REALLY MOVED ALONG DRAMATICALLY. SO I THINK WE OUGHT TO BE RECEPTIVE TO THOSE THINGS, TO BE HONEST. AND SO MAKING SURE WE'VE GOT THE APPROPRIATE TEAM TO REVIEW IS GOING TO BE CRITICAL.

MR. SHEEHY: WHEN YOU DO THE RFA, YOU MIGHT WANT TO ASK BECAUSE YOU'RE GOING TO HAVE THOSE PEOPLE ANYWAY FOR THE HSC PART.

CHAIRMAN THOMAS: OTHER QUESTIONS OF DR. COLLINS? DEAN PULIAFITO.

DR. PULIAFITO: I MOVE THAT WE APPROVE THIS CONCEPT EXTENSION.

CHAIRMAN THOMAS: IS THERE A SECOND?

MR. SHEEHY: SECOND.

CHAIRMAN THOMAS: MOVED BY DEAN PULIAFITO, SECONDED BY MR. SHEEHY. ADDITIONAL --

LILA, I'M SORRY. I DIDN'T MEAN TO INTERRUPT YOU THERE. YOU DIDN'T WANT TO BE INTERRUPTING THAT FOR SURE. OTHER QUESTIONS, COMMENTS FROM MEMBERS OF THE BOARD?

MS. SAMUELSON: I HAVE A QUESTION.

CHAIRMAN THOMAS: YES, JOAN.

MS. SAMUELSON: WHERE IN THIS VALUATION THAT WE'RE DOING, AND LEADING UP TO A VOTE, WHERE DOES IT FIT IN THE QUESTION OF HOW IMPORTANT ARE THESE GRANT OBJECTIVES OF THE APPLICANTS WHO WILL APPLY RELATIVE TO APPLICANTS WHO ARE TRYING TO GET AN EARLY TRANSLATION GRANT FUNDED SO THAT THEY CAN GET INTO THE GATE AND KEEP HAVING PROBLEMS BECAUSE THEIR SCIENTIFIC PROBLEMS ARE GNARLY. A LOT OF THE

NEURODEGENERATIVE DISORDERS AND MOST OF THE OTHERS THAT WE SEE NOT QUITE MAKE THE GRADE BECAUSE IT'S RISKY AND THAT IS PERCEIVED AS NOT ENOUGH DATA, ETC. BUT THOSE ARE OBVIOUSLY EXTREMELY IMPORTANT BECAUSE THE THING YOU WANT MOST IS JUST TO GET SOME SORT OF EFFECTIVE THERAPY, AND YOU GOT TO GO THROUGH THAT WICKET.

DR. COLLINS: SO I WOULD SAY, JOAN, THAT MAYBE SOME OF THE REASON THAT SOME OF OUR THERAPEUTIC AREAS ARE HAVING A DIFFICULT TIME MOVING FORWARD IN THE PIPELINE IS OWING TO THESE BOTTLENECKS. SO WE THINK THAT IF WE WERE ABLE TO RESOLVE SOME OF THOSE, THEN THOSE FIELDS WILL REALLY BE SPARKED TO MOVE FORWARD FASTER.

MS. SAMUELSON: HOW DO YOU TEST THAT OUT? IS THERE ANY WAY TO DO IT TO KNOW?

DR. COLLINS: WE'D HOPE THAT, AND THIS WILL BE IN THE RFA, THAT WHEN PEOPLE ARE DEVELOPING THESE TOOLS AND TECHNOLOGIES, THAT THEY'RE GOING TO BE WORKING TOGETHER WITH STEM CELL SCIENTISTS TO BETA TEST THEM IN THE CONTEXT OF RELEVANT DISEASE. SO WE DON'T WANT TO DEVELOP THEM IN A VACUUM, AND THAT'S REALLY THE MULTIDISCIPLINARY COLLABORATIVE PIECES THAT WE'RE LOOKING FOR.

MS. SAMUELSON: YOU GET GOOD EXPERTISE

FROM THE WORKING GROUP, BUT THAT'S KIND OF LATE IN THE PROCESS.

DR. COLLINS: ACTUALLY PAT'S REMINDED ME OF AN OUTCOME THAT WE'VE HAD FROM ONE OF OUR TOOLS AND TECHNOLOGIES GRANTS, AND THAT'S DR. LIM'S WORK TO DELIVER CELLS IN THE BRAIN. IT'S BEEN A VERY SUCCESSFUL AWARD. AND WE'VE HAD, YOU KNOW, SOME ADDITIONAL TECHNOLOGIES GETTING A LOT OF UPTAKE, INCLUDING SOME WORK BY DR. LORING, WHO'S DEVELOPED A TOOL THAT'S HAD THOUSANDS OF USES SO FAR.

WE'VE HAD ANOTHER GRANTEE DEVELOP A DEVICE THAT'S BEEN USED FOR SOME IMAGING. AND AS A RESULT OF THAT TOOLS AND TECHNOLOGIES I AWARD, WE'VE HAD A CONTRACT WITH THE FDA AND A LARGE PHARMACEUTICAL. JUST REMINDING YOU OF SOME OF THE OUTCOMES PRIOR. I REALLY DO THINK THAT THIS HAS THE POTENTIAL TO HELP THE NEURODEGENERATION EFFORT AND PERSONALLY ALSO THE CARDIOVASCULAR, A NUMBER OF FIELDS.

MS. SAMUELSON: THE QUESTION IS GETTING HARDER FOR ME TO ANSWER. WHAT IS THE BEST USE OF THE MONEY? HOW DO WE TRIAGE BECAUSE WE'RE RUNNING OUT OF MONEY? AND MY HUNCH, MY STRONG HUNCH, IS THAT WE WILL BE ABLE TO GET SUPPLEMENTAL FUNDING IF WE HAVE MADE PEOPLE BETTER. SOME PEOPLE IN SOME ENVIRONMENT WHERE THEY HAVE BEEN STRUGGLING AND OUR

MONEY GAVE THEM ANOTHER CHANCE. AND SO THAT'S MY QUESTION, AND IT'S SORT OF NOT ON THE POINT, BUT YET IT IS.

CHAIRMAN THOMAS: I THINK, JOAN, MY COMMENT WOULD BE THAT I SORT OF VIEW TOOLS AND TECHNOLOGIES AS A CRITICAL ENABLING RFA THAT CAN HAVE IMPACT OVER A WIDE RANGE OF DIFFERENT RESEARCH PROJECTS. AND IT REALLY IS AMONGST THE MOST VALUABLE THAT WE HAVE BECAUSE IT DOES HAVE A LOT OF APPLICATION DOWNSTREAM THAT ALLOWS PEOPLE TO GET INTO TRANSLATION, ETC. SO I THINK THIS IS VERY, VERY VALUABLE.

OKAY. OTHER COMMENTS BY MEMBERS OF THE BOARD? COMMENTS BY MEMBERS OF THE PUBLIC? COMMENTS BY ANYBODY ON THE PHONE? OKAY. THANK YOU. MARIA, WILL YOU PLEASE CALL THE ROLL.

MS. BONNEVILLE: LARS BERGLUND.

DR. BERGLUND: AYE.

MS. BONNEVILLE: DAVID BRENNER.

DR. BRENNER: YES.

MS. BONNEVILLE: ANNE-MARIE DULIEGE.

DR. DULIEGE: AYE.

MS. BONNEVILLE: MARCY FEIT.

MS. FEIT: YES.

MS. BONNEVILLE: LEON FINE.

DR. FINE: YES.
MS. BONNEVILLE: MICHAEL FRIEDMAN.
DR. FRIEDMAN: YES.
MS. BONNEVILLE: MICHAEL GOLDBERG. SAM HAWGOOD.
DR. HAWGOOD: YES.
MS. BONNEVILLE: STEPHEN JUELSGAARD. SHERRY LANSING. BERT LUBIN. MICHAEL MARLETTA. LLOYD MINOR.
DR. MINOR: YES.
MS. BONNEVILLE: FRANCISCO PRIETO.
DR. PRIETO: AYE.
MS. BONNEVILLE: CARMEN PULIAFITO.
DR. PULIAFITO: YES.
MS. BONNEVILLE: ROBERT QUINT.
DR. QUINT: YES.
MS. BONNEVILLE: DUANE ROTH. AL ROWLETT.
MR. ROWLETT: YES.
MS. BONNEVILLE: JOAN SAMUELSON.
MS. SAMUELSON: YES.
MS. BONNEVILLE: JEFF SHEEHY.
MR. SHEEHY: YES.
MS. BONNEVILLE: OSWALD STEWARD.
DR. STEWARD: YES.
MS. BONNEVILLE: JONATHAN THOMAS.

CHAIRMAN THOMAS: YES.

MS. BONNEVILLE: ART TORRES.

MR. TORRES: AYE.

MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: YES.

MS. BONNEVILLE: EUGENE WASHINGTON. DIANE WINOKUR.

MS. WINOKUR: YES.

CHAIRMAN THOMAS: OKAY. MOTION PASSES. THANK YOU VERY MUCH.

ITEM NO. 9, CONSIDERATION OF THE EXTENSION OF AN ALLOCATION OF ADDITIONAL FUNDS FOR RESEARCH LEADERSHIP PROGRAMS. DR. YAFFE.

DR. YAFFE: MR. CHAIRMAN, MEMBERS OF THE BOARD, MEMBERS OF THE PUBLIC, I BRING FOR YOUR CONSIDERATION TODAY AN EXTENSION OF THE RESEARCH LEADERSHIP AWARDS PROGRAM. JUST TO REMIND YOU, AND FOR THOSE NEW BOARD MEMBERS, LET ME BRIEFLY TOUCH ON THE GOALS AND FEATURES OF THAT PROGRAM WHICH HAS BEEN ONGOING.

THE GOALS INCLUDE TO FACILITATE THE RECRUITMENT TO CALIFORNIA OF THE MOST PRODUCTIVE AND PROMISING EARLY TO MIDCAREER SCIENTISTS IN STEM CELL BIOLOGY AND REGENERATIVE MEDICINE. AND FOLLOWING THEIR SUCCESSFUL RECRUITMENT, TO SUPPORT THEIR

ROBUST AND INNOVATIVE RESEARCH PROGRAMS FOCUSED ON FUNDAMENTAL STUDIES OF PLURIPOTENT AND PROGENITOR STEM CELL BIOLOGY AND ON TRANSLATIONAL STUDIES LEADING TO INNOVATIVE STEM CELL-BASED THERAPIES FOR DISEASE AND INJURY.

THIS PROGRAM HAS BEEN OPEN TO NONPROFIT CALIFORNIA INSTITUTIONS, HAS HAD THE CONDITION THAT A CANDIDATE OR PI MUST HOLD A POSITION OUTSIDE CALIFORNIA AND HAVE BEEN INDEPENDENT FOR AT LEAST THREE YEARS AT THE TIME OF THE APPLICATION. AND THAT INDIVIDUAL INSTITUTIONS COULD RECEIVE ONLY A SINGLE RESEARCH LEADERSHIP AWARD.

THE AWARD FEATURES, THE PREVIOUS AWARDS THAT YOU HAVE MADE HAVE PROVIDED FUNDS TO SUPPORT RESEARCH FOR UP TO SIX YEARS. WE'RE PROPOSING FOR THIS EXTENSION THE AWARDS WILL SUPPORT RESEARCH FOR FIVE YEARS. AWARDEES MUST COMMIT AT LEAST 75 PERCENT OF THEIR TIME TO STEM CELL OR REGENERATIVE MEDICINE RESEARCH. AND ELIGIBLE COSTS INCLUDE THE PI'S SALARY, LAB OPERATIONS, LAB RELOCATION COSTS, EQUIPMENT, WHICH MUST BE MATCHED ONE TO ONE BY FUNDS FROM THE INSTITUTION, AND APPROPRIATE FACILITIES AND INDIRECT COSTS.

HERE IS OUR SCORECARD ON THIS PROGRAM TO DATE. YOU HAVE APPROVED 11 AWARDS. OF THOSE, FIVE

HAVE BEEN ACCEPTED. THREE AWARDS ARE PENDING CURRENTLY. I'LL SAY SOMETHING ELSE ABOUT THAT IN A MOMENT. THREE AWARDS WERE DECLINED.

THIS IS A LIST OF THE RESEARCH LEADERSHIP AWARDS MADE TO DATE. THREE OF THESE ARE ACTIVE. TWO OF THEM HAVE BEEN ACCEPTED. THIS IS FROM THE MOST RECENT ROUND THAT YOU APPROVED. AND THOSE AWARDS ARE IN PREFUNDING ADMINISTRATIVE REVIEW CURRENTLY, AND FUNDS WILL START FLOWING VERY SOON. AND THEN FOR THREE AWARDS, THE RECRUITMENT IS STILL IN PROGRESS. WE ARE HOPEFUL. WE DON'T KNOW THAT ALL THREE WILL BE LANDED, BUT WE'RE HOPEFUL THAT AT LEAST SEVERAL OF THESE WILL COME TO CALIFORNIA.

THIS IS A FAIRLY NEW PROGRAM WITH REGARD TO TRACK RECORD. AS YOU SAW, THERE ARE ONLY THREE ACTIVE AWARDS WHERE FUNDS HAVE BEEN DISBURSED AND PEOPLE ARE ACTUALLY WORKING. BUT I JUST WANT TO REPORT TO YOU SOME PRELIMINARY OUTCOMES ON THOSE THREE AWARDS. THOSE THREE AWARDS HAVE RESULTED IN THE HIRING OF 30 NEW RESEARCH PERSONNEL OR THE RELOCATION OF THESE PERSONNEL TO CALIFORNIA. THEY'VE BROUGHT IN MORE THAN $2.1 MILLION IN ADDITIONAL RESEARCH FUNDS TO CALIFORNIA. THIS IS GRANTS BROUGHT BY THE SCIENTISTS WHO WERE RECRUITED TO CALIFORNIA FROM AGENCIES AND PRIVATE FOUNDATIONS.

THEY'VE LED TO NOVEL RESEARCH DIRECTIONS UNDERTAKEN BY THESE CANDIDATES AND AN INCREASED FOCUS IN PARTICULAR ON TRANSLATIONAL RESEARCH. THEY'VE LED TO NEW COLLABORATIONS WITH CALIFORNIA SCIENTISTS AND SUPPORT FOR HIGH RISK, HIGH IMPACT PROJECTS, IN AN ENHANCED LEVERAGING OF INSTITUTIONAL RESOURCES.

OUR PROPOSAL TO YOU IS TO EXTEND THE RESEARCH LEADERSHIP PROGRAM FOR ONE ADDITIONAL APPLICATION CYCLE AND TO FUND UP TO FOUR ADDITIONAL AWARDS. THE GOAL OF THIS EXTENSION IS TO BRING ADDITIONAL EXCEPTIONAL STEM CELL SCIENTISTS TO CALIFORNIA TO STRENGTHEN AND SYNERGIZE WITH OTHER EFFORTS TO BUILD UP LOCAL SUSTAINED RESEARCH COMMUNITIES AND TO PROVIDE OPPORTUNITIES FOR ADDITIONAL CALIFORNIA INSTITUTIONS TO PARTICIPATE IN THIS PROGRAM AND RECRUIT LEADERS IN REGENERATIVE MEDICINE.

YOU'VE PREVIOUSLY VOTED TO AWARD AND FUNDS ARE PENDING OF UP TO $46 MILLION. WE'RE ASKING FOR ADDITIONAL FUNDS TO SUPPORT FOUR MORE AWARDS AT $23 MILLION.

A PROVISIONAL TIMETABLE, SHOULD YOU APPROVE THIS, IS THAT THIS ONE APPLICATION ROUND WOULD HAVE APPLICATIONS DUE IN JANUARY, HOPEFULLY GIVING ADEQUATE TIME FOR INSTITUTIONS TO IDENTIFY

CANDIDATES AND BEGIN THE RECRUITMENT PROCESS. THE GRANTS WORKING GROUP WOULD REVIEW THESE APPLICATIONS IN MARCH OR APRIL, AND WE WOULD BRING RECOMMENDED APPLICATIONS TO YOU FOR YOUR CONSIDERATION IN MAY.

IN SUMMARY, WE REQUEST BOARD APPROVAL FOR AN EXTENSION OF THE RESEARCH LEADERSHIP AWARDS PROGRAM FOR ONE ADDITIONAL APPLICATION CYCLE TO FUND UP TO FOUR ADDITIONAL AWARDS WITH AN INCREASED BUDGET ALLOCATION OF UP TO $23 MILLION. I'D BE VERY HAPPY TO TAKE YOUR QUESTIONS.

CHAIRMAN THOMAS: DR. STEWARD.

DR. STEWARD: JUST CURIOUS. WHY ONLY ONE CYCLE?

DR. YAFFE: WELL, PART OF IT, I THINK, HAS TO DO WITH THINKING ABOUT HOW LONG THESE AWARDS WILL GO, HOW LONG THE AGENCY MAY CONTINUE FUNCTIONING. WE NEED TO HAVE ADEQUATE ADMINISTRATIVE OVERSIGHT TO MONITOR THE AWARDS. AND I MAY BE THE LAST PERSON OUT THE DOOR IF I'M IN CHARGE OF THIS, BUT HOPEFULLY IT WON'T COME TO THAT. BUT I THINK WE'RE MINDFUL OF THE CONSTRAINTS ON FUNDS AND THE TIMELINE OF THE AGENCY.

DR. STEWARD: I ASKED THE QUESTION BECAUSE THE JANUARY TIMELINE IS AWFULLY FAST GIVEN THAT WE'RE JUST ANNOUNCING THIS. AND WE'VE SEEN HOW LONG

IT ACTUALLY TAKES TO MAKE THESE THINGS HAPPEN OVER THE COURSE OF THE EXISTENCE OF WHATEVER, TWO YEARS OF THESE.

DR. YAFFE: THREE YEARS.

DR. STEWARD: JUST TO SAY THAT SEEMS AWFULLY FAST.

DR. YAFFE: APPRECIATE THAT. WERE AN AWARD MADE IN MAY OF NEXT YEAR, IT'S UNLIKELY THE BODY WOULD ACTUALLY BE HERE IN CALIFORNIA BEFORE PERHAPS THE END OF 2014, BEGINNING OF 2015. IF WE'RE TALKING FIVE YEARS, THEN WE'RE OUT TO 2020. YOU CAN SEE THE PROBLEM.

DR. TROUNSON: SO, OS, JUST A LITTLE BIT OF CONTEXT AS WELL. WE GOT A LOT TO COME IN THE LAST ROUND, AS YOU RECALL. AND THE INSTITUTIONS HAVE BEEN TALKING TO ME BROADLY, THOSE THAT DON'T HAVE THEM OR THOSE THAT HAVE THEM AND PENDING, AND ESSENTIALLY SAID, WELL, IF YOU HAVEN'T GOT OFF THE BOOKS BY OCTOBER, YOU CAN'T COME IN AT ALL. SO YOU EITHER HAVE TO GET THEM IN OR YOU'RE OUT. BUT THERE'S QUITE A LOT OF THESE INSTITUTIONS WHO HAVE BEEN NEGOTIATING AND SAY WE'RE NEARLY THERE. WE WANT TO COME NOW, AND, YOU KNOW, WE HAVEN'T HAD A CHANCE. AND SO CAN YOU GIVE US ANOTHER CHANCE? THAT'S REALLY WHERE IT ORIGINATES FROM.

I THINK THERE ARE A NUMBER OF INSTITUTIONS THAT ARE REASONABLY READY TO BRING SOMETHING. SO WE THOUGHT, WELL, WE'VE DONE REASONABLY WELL TO THIS POINT, BUT WE THOUGHT PERHAPS, IF THE BOARD FELT SO, THAT ANOTHER FOUR WOULD REALLY ACCOMMODATE A FEW MORE OF THE INSTITUTIONS THAT ARE REALLY WANTING THESE BADLY, BUT NOT TO SORT OF PROLONG IT TOO LONG.

CHAIRMAN THOMAS: DEAN BRENNER.

DR. BRENNER: SO I'M VERY SYMPATHETIC WITH THE DIFFICULTY IN THIS TYPE OF RECRUITMENT. SO I'M IN FAVOR OF THIS. BUT I'M NOT SURE OF THE MATH. THIS SEEMS LIKE THERE ARE THREE THAT ARE IN PLAY. IF THEY DON'T WORK OUT, ARE YOU ASKING FOR SEVEN? ARE YOU ASKING --

DR. YAFFE: IT'S A GOOD POINT. IF THOSE THREE DON'T WORK OUT, WE'RE NOT GOING TO SPEND ALL THE MONEY. THE MONEY IS GOING TO COME BACK. THE REQUEST IS MADE AT THIS POINT TODAY WITH OUR UNDERSTANDING RIGHT NOW OF WHERE THINGS ARE. IF NONE OF THOSE THREE COME IN, WE PROBABLY MAY NOT EXCEED THE MONEY THAT'S ALREADY BEEN APPROVED FOR THIS PROGRAM. SO IT'S UNLIKELY WE WILL SPEND ALL THE MONEY, AND THE MONEY IS NOT GOING TO GO AWAY. IT'S GOING TO COME BACK INTO THE RESEARCH POOL.

MS. SAMUELSON: IS THAT HUNCH BASED ON

THE, FOR A WHILE THERE, THE SCARCITY OF APPLICANTS? IT COULD JUST GET BUSY AGAIN, RIGHT? I THINK IT'S A GREAT PROGRAM.

DR. YAFFE: MY PERSONAL OPINION IS IT'S GOING TO BE DIFFICULT TO LAND ALL THE CANDIDATES. AS I'M SURE MANY OF THE ADMINISTRATORS AROUND THE ROOM AND DEANS CAN TELL YOU, ACADEMIC RECRUITMENT IS A REALLY FORMIDABLE CHALLENGE. SO THAT'S JUST AN ESTIMATION THAT WE'RE NOT GOING TO LAND EVERYONE WHO'S OFFERED SUCH A POSITION.

DR. TROUNSON: THERE'S BEEN SOME TREMENDOUS CO-OFFERS TO THESE PEOPLE TO EITHER KEEP THEM THERE OR MOVE THEM SOMEWHERE ELSE. SO WITHOUT NAMING NAMES, YOU COULD WELL IMAGINE MAYBE WHERE SOME OF THESE COME FROM. SO THE COMPETITION FOR THESE KEY PEOPLE IS VERY, VERY HIGH. SO THAT'S PARTLY WHY IT'S DIFFICULT FOR THE INSTITUTIONS TO LAND THEM BECAUSE ONCE THEY GET TO KNOW THAT THEY'RE INTERESTED IN MOVING, THERE'S A LOT OF COMPETITION FOR THOSE PARTICULAR PEOPLE.

CHAIRMAN THOMAS: DO WE HEAR A MOTION?

MR. TORRES: SO MOVED.

CHAIRMAN THOMAS: MOVED BY SENATOR TORRES. IS THERE A SECOND?

MS. SAMUELSON: I'LL SECOND IT.

CHAIRMAN THOMAS: SECOND BY JOAN.

MS. SAMUELSON: AND I HAVE A COMMENT TO MAKE AT WHATEVER POINT THAT'S APPROPRIATE.

CHAIRMAN THOMAS: OKAY. HOLD ON ONE SECOND. MR. SHEEHY.

MR. SHEEHY: I JUST WANTED TO SPEAK TO THE MOTION. SO I'M GOING TO VOTE AGAINST THIS. THIS IS EXACTLY -- I MEAN THESE INDIVIDUALS ARE HONESTLY PROBABLY NOT GOING TO START WORKING TILL SOMETIME IN 2015. YOU KNOW, I REALLY THINK WE HAVE TO MAKE SOME DECISIONS ABOUT THEY'RE NOT GOING TO MEANINGFULLY IMPACT THE COURSE OF THIS FIRST PHASE OF PROP 71. AND, YOU KNOW, I THINK THIS IS -- WE HAVEN'T REALLY HAD THIS DISCUSSION, BUT YOU MAY BE TRADING OFF YOUR TRAINING PROGRAMS FOR ANOTHER ROUND OF RECRUITMENT. WE MAY BE TRADING OUT THE BRIDGES PROGRAM FOR ANOTHER ROUND OF RECRUITMENT.

IN THE ABSENCE OF THAT DISCUSSION, IF IT WERE ME, I WOULD PREFER TO SEE OUR TRAINING PROGRAMS CONTINUE. I WOULD PREFER TO SEE OUR BRIDGES PROGRAM CONTINUE MYSELF BECAUSE I THINK THAT WE'RE GOING TO END UP HAVING ALLOCATED ALL THE MONEY THAT WE -- AT LEAST, AS I UNDERSTAND OUR STRATEGIC PLAN, EVEN UNDER SCENARIO 2, WE HAD PLANNED TO ALLOCATE FOR THIS TRAINING AND DEVELOPMENT CATEGORY, AND I

JUST -- I JUST -- I DON'T KNOW. WE'RE NOT ADDING ANY NEW CAPACITY TO THE FIELD. THESE INDIVIDUALS ARE ALREADY WORKING IN STEM CELL SCIENCE. SO WE HAVEN'T CREATED ANYTHING NEW.

I LOOK AT THIS, WE'RE PROBABLY CREATING A LITTLE BIT OF INFLATION ACROSS THE BOARD IN STEM CELL SCIENTISTS. IT'S LIKE THE NEW YORK YANKEES, RIGHT? AND THE OTHER PART OF IT -- BUT IF YOU GO TO -- IF YOU REALLY LOOK AT THIS WITH 30,000 FEET, IN SOME WAYS IT'S NOT EVEN BENEFICIAL TO THE FIELD BECAUSE YOU'RE TAKING THESE FOLKS OUT OF THEIR LABS FOR A YEAR, RIGHT, SO THAT THEY CAN PACK UP AND MOVE. I MEAN TO MY MIND THIS IS ONE OF THE -- YOU KNOW, THERE WAS A TIME WHEN THIS WAS USEFUL BECAUSE WE BUILT NEW BUILDINGS, WE NEEDED TO POPULATE THOSE BUILDINGS, WE HAD A LOT OF MONEY TO SPEND, AND I THINK WE WERE RUNNING INTO CAPACITY LIMITS AND THE ABILITY TO ABSORB THE FUNDS THAT WE HAD IN TERMS OF GETTING GOOD SCIENCE.

NOW WE'RE SITTING ANTICIPATING SCARCITY. AND FOR ME MY BIAS IS TOWARDS SUSTAINING VITAL INFRASTRUCTURE, SO PROGRAMS THAT WE'VE ALREADY DEVELOPED AND SEEING THAT WE CAN CONTINUE THOSE AS FAR AS OUT AS WE CAN PENDING ANOTHER SOURCE OF MONEY, AND IDENTIFYING THE BEST SCIENCE THAT WE HAVE

IN THE TRANSLATIONAL AND CLINICAL SPACE, AND MAKING SURE THAT WE CAN SUPPORT THAT ALL THE WAY THROUGH.

SO WHERE ALPHA CLINICS SEEMS RIGHT ON THE SPOT, THIS SEEMS LIKE A DISTRACTION. AND THERE ARE OPPORTUNITY COSTS TO REVIEWING THIS. THERE ARE OPPORTUNITY COSTS TO PROGRAMS BEING ENGAGED IN THIS ACTIVITY. SO IT'S NOT LIKE MAYBE NOBODY GETS IT OR WHAT HAVE YOU. SO I JUST -- I THINK THIS IS KIND OF A DEVIATION FROM OUR MISSION OR WHERE I WOULD HAVE THOUGHT OUR MISSION WOULD BE AT THIS STAGE IN OUR DEVELOPMENT AND WHAT I WOULD HAVE THOUGHT -- WHAT I TOOK TO BE WHERE WE WERE COMING OUT OF OUR APPROVAL OF THE STRATEGIC PLAN LAST FALL. THIS WAS NOT A PROGRAM I WOULD HAVE THOUGHT WOULD HAVE APPEARED ANYWHERE IN THERE. SO...

CHAIRMAN THOMAS: JOAN.

MS. SAMUELSON: COUNTERPOINT. WE USUALLY AGREE ON EVERYTHING, SO THIS IS SURREAL. I THINK -- WELL, AND IT COMES FROM MY PERSPECTIVE FROM NEURODEGENERATIVE DISEASES. AND YOU MIGHT NOT BE ABLE TO IMAGINE HOW DEAD IN THE WATER IT FEELS IN THAT AREA. AUTISM, NOTHING. IN PARKINSON'S, ALS. PARKINSON'S WE WERE ALL SAYING FIVE TO TEN YEARS 20 YEARS AGO, AND WE COULDN'T GET A DISEASE TEAM GOING. AND I THINK WHAT THE FIELD NEEDS FOR PARKINSON'S,

JUST AS ANOTHER EXAMPLE, ARE FRESH IDEAS, BRILLIANT IDEAS THAT MOVE -- CHANGE THE PARADIGM AND JUST CHANGE AND REENERGIZE THE SCIENCE. AND THAT'S NEW BRILLIANT MINDS COMING IN AND COLLABORATING, I THINK. AND THAT'S WHAT THIS DOES.

CHAIRMAN THOMAS: DR. STEWARD.

DR. STEWARD: JUST TO ENDORSE, AMPLIFY WHAT JOAN SAYS, I THINK IT'S UNBELIEVABLE WHAT THIS PROGRAM HAS ACCOMPLISHED OVER THE EIGHT PLUS YEARS THAT IT'S BEEN GOING. AND UNBELIEVABLE IN PARTICULAR BECAUSE WHEN YOU THINK ABOUT IT, WHAT EXISTED BACK THEN WAS VERY FEW PEOPLE DOING STEM CELLS, AND WE ESSENTIALLY RETOOLED OUR SCIENTIFIC COMMUNITY HERE IN CALIFORNIA. THERE WERE A LOT OF PEOPLE WHO WERE EXPERTS IN RELATED THINGS, BUT NOT VERY MANY PEOPLE WHO WERE EXPERTS IN STEM CELLS.

IT'S NOTEWORTHY THAT ALL THIS HAS BEEN ACCOMPLISHED LARGELY ON THE BACKS OF CALIFORNIA SCIENTISTS WITH ONLY REALLY THREE ADDITIONS THROUGH THIS PROGRAM. BUT CALIFORNIA ISN'T THE WORLD, AND THERE IS A LOT OF TALENT OUT THERE THAT CAN STILL BE RECRUITED AND BROUGHT INTO THIS. AND I THINK IT'S IMPORTANT TO DO THIS IN TIMES OF SCARCITY AS WELL AS IN TIMES OF ABUNDANCE. MAYBE EVEN MORE SO IN TIMES OF SCARCITY BECAUSE THESE EXPERTS OUT IN THE OTHER

AREAS ARE NOT GOING TO BE ABLE TO HAVE THE RESOURCES FROM NIH OR OTHER FUNDING SOURCES THAT WE CAN STILL PROVIDE. THE PROGRAMS THAT ARE IN EXISTENCE HERE ARE GOING STRONG ACTUALLY.

WE HEARD THAT EACH OF THESE PEOPLE, THESE THREE BROUGHT IN ABOUT AN AVERAGE OF TEN, SO 30 PEOPLE NOW ENGAGED IN THESE LABS. THAT'S A HUGE BOOST TO THE ENTERPRISE. SO I THINK IT'S MONEY WELL SPENT. I ALWAYS THINK IT'S MONEY WELL SPENT WHEN YOU'RE BRINGING IN NEW EXPERTISE.

CHAIRMAN THOMAS: DR. PRIETO, DID I SEE YOUR HAND UP OVER THERE?

DR. PRIETO: YEAH. I FIND IT A LITTLE STRANGE TO FIND MYSELF DISAGREEING WITH JOAN AND OS, BUT I HAVE TO AGREE WITH JEFF HERE, THAT I THINK WE'VE DISCUSSED THIS IN DISCUSSING THE STRATEGIC PLAN IN SORT OF GENERAL TERMS, BUT THIS IS WHERE THE RUBBER MEETS THE ROAD. AND WE'RE LOOKING AT ACTUALLY SPENDING A LARGE CHUNK OF MONEY THAT WILL NOT BE SPENT ON SOMETHING ELSE, AND WE'RE COMING UP AGAINST HARD DEADLINES AND FINITE RESOURCES. SO THIS MONEY IS MONEY THAT WE WILL NOT BE ABLE TO DEVOTE TO OTHER THINGS.

I THINK THAT WE HAVE CERTAINLY ATTRACTED SOME OUTSTANDING PEOPLE TO CALIFORNIA, BUT I THINK

WE WILL CONTINUE TO DO THAT EVEN WITHOUT THIS PROGRAM. AND I JUST THINK THERE ARE BETTER WAYS RIGHT NOW FOR US TO SPEND OUR MONEY.

CHAIRMAN THOMAS: DIANE.

MS. WINOKUR: WE HAVE RECRUITED SUCCESSFULLY AND WE HAVE ALSO TRAINED A NEW GENERATION OF STEM CELL SCIENTISTS. I THINK IT'S IMPORTANT THAT INSTITUTIONS MAKE USE OF THE ONES WE'VE TRAINED LOCALLY STATEWIDE. AND I'M AWARE THAT THE INSTITUTIONS ARE DOING RECRUITING ON THEIR OWN COMPLETELY WITHIN THE INSTITUTION. AND I ALSO KNOW THAT SCIENTISTS ARE MOVING HERE BECAUSE OF CIRM WITHOUT OUR DOING ANYTHING TO BRING THEM. AND SO I WOULD PREFER THAT WE SPEND THE MONEY ON SOME OF OUR OTHER PROJECTS LIKE INDIVIDUAL RESEARCH PROPOSALS, ANY OF OUR INDIVIDUAL PROJECT PROPOSALS.

CHAIRMAN THOMAS: DEAN PULIAFITO.

DR. PULIAFITO: I STRONGLY ENDORSE EXTENDING THE PROGRAM. I'VE SEEN THIS FIRSTHAND. WE GOT ANDY MCMAHON, WHO IS CHAIRMAN OF THE BIOLOGY DEPARTMENT AT HARVARD, TO LEAVE. NOW USC PUT A LOT OF MONEY INTO THIS RECRUITMENT, BUT YOU KNOW WHAT, THE RESEARCH LEADERSHIP AWARD REALLY HELPED. AND IN THE END, IT REALLY IS ABOUT THE PEOPLE THAT WE HAVE IN THE COMMUNITY. SO IF ALAN TELLS US THAT THERE

ARE INSTITUTIONS THAT HAVE LINED UP SOME GOOD FOLKS, THEN I THINK THAT THIS IS A GOOD THING TO VOTE FOR.

DR. TROUNSON: SO, CHAIR, THE CONTEXT IS THIS IS ONE DISEASE TEAM OR SLIGHTLY MORE, ONE DISEASE TEAM. THESE ARE POWERHOUSE PEOPLE. THEY REALLY ARE. I THINK YOU CAN ASK A LOT OF THE GRANTS WORKING GROUP AND OTHER PEOPLE. THOSE PEOPLE WHO DELIVER IN THIS AREA CONTINUE TO DELIVER. YOU'RE BACKING A PERSON. I JUST ENCOURAGE THE BOARD TO THINK ABOUT THIS BECAUSE I JUST -- I KNOW IN SEVERAL CASES THAT THIS WILL MAKE A REALLY BIG DIFFERENCE IF THEY CAN GET THESE PEOPLE TO COME. IF NOT, WELL, YOU KNOW, THEY WILL FOREGO IT AND WHATEVER LIFE WILL BE LIFE.

BUT THESE ARE POWERHOUSE PEOPLE. IF YOU LOOK AT THEM, ONE OR TWO OF THOSE PEOPLE WHO ARE NOT FAR OFF A NOBEL PRIZE THAT ARE ON THAT LIST. THESE ARE REALLY POWERHOUSE PEOPLE WHO WILL MAKE A HUGE DIFFERENCE FOR A LIFETIME IN CALIFORNIA. SO I THINK IT'S WORTH THINKING ABOUT THAT. I REALLY DO. AND IN THE END WE'RE JUST SAYING, LOOK, WE THINK ONE MORE ROUND, THERE MIGHT ONLY BE SIX OR SEVEN OF THEM UP UNTIL NOW, ONE MORE ROUND OF THIS, THIS IS YOUR LAST CHANCE, FOR EXAMPLE, AND WOULD BE REALLY, REALLY WORTHWHILE FOR CALIFORNIA. SO I'D LIKE YOU

TO THINK CAREFULLY WHEN YOU COME TO VOTE ON IT BECAUSE I THINK IT'S VERY, VERY IMPORTANT FOR THE LONGEVITY OF CALIFORNIA IN THIS SPACE.

CHAIRMAN THOMAS: CARMEN, QUESTION FOR YOU. WHEN ANDY CAME OUT, DID HE BRING OTHERS WITH HIM AND HOW MANY?

DR. PULIAFITO: HE BROUGHT -- HE CLEANED OUT HIS LAB AT HARVARD. SO THERE ARE 15 SCIENTISTS THAT CAME. AND I SHOULD ALSO POINT OUT WE'VE JUST -- WE MADE SUBSTANTIAL INVESTMENT. SO WE'RE JUST STARTING TO RECRUIT THREE OTHER STEM CELL SCIENTISTS DIRECTLY ASSOCIATED WITH HIM HE'S RECRUITED FROM ACROSS THE COUNTRY AND TURNING DOWN OFFERS AT PRESTIGIOUS PLACES ELSEWHERE. I MEAN THIS IS SHORT MONEY TO ME COMPARED TO THE WAY WE SPEND MONEY HERE.

CHAIRMAN THOMAS: SO YOUR POINT WOULD BE THAT YOU'RE NOT ONLY GETTING THE PERSON, BUT THERE'S A BIG MULTIPLIER EFFECT OF SUBSTANTIAL TALENT THAT COMES ALONG WITH THAT PERSON. OKAY.

MR. ROWLETT.

MR. ROWLETT: ONE OF THE THINGS THAT'S A BIT CONFUSING ABOUT THIS IS JUST THE IMPLICATIONS OF THE LOST OR THE OPPORTUNITY COST ASSOCIATED WITH THIS EFFORT. AND WHAT WE WILL REALIZE, IN ALL DUE

RESPECT TO EVERYBODY, WHAT WE REALIZE LONG-TERM FROM THESE RECRUITMENT EFFORTS. SO I'M GOING TO ABSTAIN FROM THE VOTE BECAUSE I DON'T HAVE A FULL APPRECIATION OF THAT.

IF I WERE TO MAKE A SUGGESTION, IT WOULD BE VERY HELPFUL FROM AN ADVOCATE'S PERSPECTIVE TO GET -- TO SOMEHOW INCORPORATE THE PATIENT'S VIEW INTO THESE PRESENTATIONS. IT IS INFLUENTIAL IN MAKING A DECISION WHEN PATIENTS CAN TALK ABOUT WHAT THESE SCIENTISTS THAT YOU FOLKS HAVE BROUGHT IN, WHAT THEY HAVE DONE IN TERMS OF STEM CELL RESEARCH. IT HELPS INFLUENCE, AND TYPICALLY THE PATIENTS SPEAK IN TERMS OF PRACTICAL VALUE THAT THESE FOLKS HAVE BROUGHT TO THE STATE OF CALIFORNIA IN THE AREA OF STEM CELL RESEARCH. SO...

CHAIRMAN THOMAS: THANK YOU. JOAN.

MS. SAMUELSON: AND I'LL TRY TO BE QUICK. THE BOARD HAS ALREADY SPENT A FAIR AMOUNT OF TIME ON THE PROPOSED RESEARCH LEADERSHIP AWARD WHICH WAS AWARDED TO THE PARKINSON'S INSTITUTE AND DENNIS STEINDLER TO RECRUIT HIM. AND AS WE WERE TOLD, WHENEVER IT WAS, THAT AWARD HAS FALLEN APART. I THINK IT'S MOST IMPORTANT THAT THE BOARD BE AS INFORMED ABOUT THAT AS IT WANTS TO BE AND DOESN'T NECESSARILY NEED TO INQUIRE NOW. BUT I AM CONFIDENT

THAT, AS I THINK WE ALL SAW AT THE TIME OF THE AWARD, THIS WAS A TREMENDOUSLY EXCITING TEAM EFFORT, AND IT INVOLVED TWO STELLAR -- A STELLAR INSTITUTION AND A STELLAR INDIVIDUAL CANDIDATE. AND IT'S CERTAINLY MY STRONG HOPE THAT WE CAN ASSIST THEM IN FINDING PLACEMENT FOR BOTH, A RECRUITMENT FOR THE PARKINSON'S INSTITUTE AND SOME OTHER WONDERFUL PERSON TO MATCH THE EXCEPTIONAL QUALITY OF THE PARKINSON'S INSTITUTE -- AND I CAN FILL YOU IN ABOUT THE DETAILS OF THAT SINCE YOU WEREN'T AROUND IN THE FIRST ROUND PROBABLY LATER -- AND GET THE LEAPS IN SCIENCE THAT I WAS CONFIDENT WE WOULD GET WITH THAT TEAM.

CHAIRMAN THOMAS: THANK YOU. DR. STEWARD.

DR. STEWARD: JUST ONE MORE QUICK POINT, AND I REALLY WANTED TO JUST COMMENT ON WHAT DIANE SAID. THE THING THAT IS IMPORTANT TO UNDERSTAND IS THAT THESE PEOPLE ARE ACTUALLY REVIEWED ON THE BASIS OF THEIR SCIENCE. THEY MAKE A PROPOSAL TO THE GRANTS WORKING GROUP, AND IT'S REVIEWED JUST LIKE ANY OF OUR OTHER GRANTS. SO IT IS REALLY FUNDING RESEARCH TO BRING THESE PEOPLE ON, BUT IT'S FUNDING RESEARCH THAT MAY OR MAY NOT BE POSSIBLE UNLESS THOSE PEOPLE ARE ACTUALLY HERE.

AND JUST TO MENTION ONE OTHER THING, I

THINK A LOT OF THESE RECRUITS ARE MADE ON THE BASIS OF FILLING A NEED FOR SYNERGY, THAT YOU KNOW YOU SOMETIMES HAVE A GREAT GROUP, BUT THERE'S THAT ONE KEY PIECE MISSING OR SOME CRITICAL ABILITY THAT WOULD JUST LAUNCH YOU IN TOTALLY NEW WAYS. SO AGAIN, JUST TO SAY I THINK THAT THE PEOPLE ARE REALLY THE MOST IMPORTANT RESOURCES.

MS. WINOKUR: LET ME BE SURE I UNDERSTAND WHAT YOU SAID. YOU THINK THAT THESE OUTSTANDING PEOPLE WILL NOT CONTINUE TO CONTRIBUTE TO STEM CELL RESEARCH WHERE THEY ARE? THEY'RE MISSING SOMETHING?

DR. STEWARD: NO. I WOULDN'T SAY THAT AT ALL. BECAUSE THESE ARE HARDWORKING PEOPLE, THEY'RE GOING TO FIND A WAY TO GET SUPPORT, BUT WE'RE GOING TO BE ABLE TO SUPPORT THEM BETTER FOR AT LEAST A PERIOD OF TIME OUT HERE THAN THEY WOULD OTHERWISE. AGAIN, I THINK THAT WE STILL ARE THE 600-POUND GORILLA IN TERMS OF FUNDING STEM CELL SCIENCE.

CHAIRMAN THOMAS: OKAY. ARE THERE COMMENTS FROM MEMBERS OF THE PUBLIC?

MR. REED: I SEE HIRING SOMEONE LIKE THIS IS LIKE HIRING AN ENCYCLOPEDIA OF KNOWLEDGE. THEY'RE PEOPLE THAT NOT ONLY KNOW EVERYTHING ABOUT THE FIELD, BUT CAN PUT IT TOGETHER IN NEW WAYS, PLUS THEY'RE BRINGING WITH THEM 15 OR 16 ALSO MINOR

EXPERTS.

THERE WAS A PROGRAM ON NPR RECENTLY ABOUT THE PRICE OF PROGRESS, AND IT SAID WHEN YOU BRING PEOPLE TOGETHER, THE SYNERGY, THE MIND WAVES, THEIR CONVERSATIONS, EVERYTHING ADDS UP TO PROGRESS, BUT YOU HAVE TO BRING THEM TOGETHER. I THINK WE'RE AT A UNIQUE SPOT IN HISTORY WHEN WE ARE BRINGING PEOPLE TOGETHER. I'D LIKE US TO DO IT.

CHAIRMAN THOMAS: OTHER COMMENTS BY MEMBERS OF THE PUBLIC? HEARING NONE, MARIA, PLEASE TAKE THE ROLL.

MS. BONNEVILLE: LARS BERGLUND.

DR. BERGLUND: YES.

MS. BONNEVILLE: DAVID BRENNER.

DR. BRENNER: YES.

MS. BONNEVILLE: ANNE-MARIE DULIEGE.

DR. DULIEGE: YES.

MS. BONNEVILLE: MARCY FEIT.

MS. FEIT: YES.

MS. BONNEVILLE: LEON FINE.

DR. FINE: YES.

MS. BONNEVILLE: MICHAEL FRIEDMAN.

DR. FRIEDMAN: YES.

MS. BONNEVILLE: MICHAEL GOLDBERG. SAM HAWGOOD.

DR. HAWGOOD: YES.

MS. BONNEVILLE: STEPHEN JUELSGAARD. SHERRY LANSING. BERT LUBIN. MICHAEL MARLETTA. LLOYD MINOR.

DR. MINOR: YES.

MS. BONNEVILLE: FRANCISCO PRIETO.

DR. PRIETO: NO.

MS. BONNEVILLE: CARMEN PULIAFITO.

DR. PULIAFITO: YES.

MS. BONNEVILLE: ROBERT QUINT.

DR. QUINT: NO.

MS. BONNEVILLE: DUANE ROTH. AL ROWLETT.

MR. ROWLETT: ABSTAIN.

MS. BONNEVILLE: JOAN SAMUELSON.

MS. SAMUELSON: YES.

MS. BONNEVILLE: JEFF SHEEHY.

MR. SHEEHY: NO.

MS. BONNEVILLE: OSWALD STEWARD.

DR. STEWARD: YES.

MS. BONNEVILLE: JONATHAN THOMAS.

CHAIRMAN THOMAS: YES.

MS. BONNEVILLE: ART TORRES.

MR. TORRES: AYE.

MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: YES.

MS. BONNEVILLE: EUGENE WASHINGTON. DIANE WINOKUR.

MS. WINOKUR: NO.

CHAIRMAN THOMAS: MR. HARRISON.

MR. HARRISON: THE MOTION PASSES BY A VOTE OF 14 YES, FOUR NO, AND ONE ABSTENTION.

DR. YAFFE: THANK YOU.

CHAIRMAN THOMAS: THANK YOU, DR. YAFFE.

OKAY. ON TO THE NEXT ITEM, WHICH IS CONSIDERATION OF APPOINTMENT OF NEW SCIENTIFIC MEMBERS OF THE GRANTS WORKING GROUP. DR. SAMBRANO.

DR. SAMBRANO: THANK YOU, MR. CHAIRMAN, MEMBERS OF THE BOARD, MEMBERS OF THE PUBLIC. WE'RE COMING TO YOU TODAY WITH FIVE NOMINEES FOR MEMBERSHIP FOR THE GRANTS WORKING GROUP. THE BIOS AND NAMES OF THESE INDIVIDUALS ARE IN YOUR BOOKS. I WILL NAME THEM FOR CONVENIENCE. THESE ARE BRENDA ANDREWS, JOHN CENTANNI, ROBERT MARCUS, HASSAN MOVAHHED, AND KELLY OTTO. AND THEY'RE BRINGING TO US EXPERTISE IN THE AREAS OF SYSTEMS BIOLOGY, GENOMICS, CLINICAL OPERATIONS, AND REGULATORY AFFAIRS.

SO WE'RE SEEKING YOUR APPROVAL OF THESE NOMINEES.

CHAIRMAN THOMAS: DO I HEAR A MOTION TO

THAT EFFECT?

DR. HAWGOOD: SO MOVED.

CHAIRMAN THOMAS: MOVED BY DEAN HAWGOOD.

DR. PRIETO: SECOND.

CHAIRMAN THOMAS: SECONDED BY DR. PRIETO. COMMENTS FROM MEMBERS OF THE BOARD? HEARING NONE, COMMENTS BY MEMBERS OF THE PUBLIC? OKAY. I THINK THIS DOES NOT REQUIRE A ROLL CALL VOTE. ALL THOSE IN FAVOR PLEASE SAY AYE.

WAIT. WAIT. MR. HARRISON IS FURROWING HIS BROW. IT'S NEVER A GOOD SIGN.

MR. HARRISON: FOR THOSE ON THE PHONE YOU HAVE TO TAKE A ROLL CALL.

CHAIRMAN THOMAS: OKAY. SO IT'S A SEMI-FURROW. OKAY. ALL THOSE IN FAVOR PLEASE SAY AYE. OPPOSED? ON THE PHONE?

DR. FINE: AYE.

CHAIRMAN THOMAS: THANK YOU, DR. FINE. MOTION CARRIES UNANIMOUSLY.

WE WILL NOW MOVE ON TO ITEM NO. 12 -- NO. YES. ITEM NO. 12, CONSIDERATION OF ALLOCATION OF ADDITIONAL FUNDS FOR A CONFERENCE GRANT PROGRAM FOR FISCAL YEAR '13-'14. DR. TROUNSON.

DR. TROUNSON: THANK YOU VERY MUCH, CHAIR. THE REPORTING ON THE CONFERENCE GRANT PROGRAM, WHICH

WE'RE REQUIRED TO DO FROM TIME TO TIME, SO THIS IS FOR THE TIME, THE APPROPRIATE TIME. SO JUST OVER THE YEARS, IF I CAN GIVE YOU THE BREAKDOWN, 2008-9 TO 2012-13, THE NUMBER OF GRANTS THAT WE RECEIVED, THE NUMBER -- THE AMOUNT OF DOLLARS THAT WERE REQUESTED AND THE AMOUNT OF DOLLARS THAT WERE AWARDED. AND IF YOU REMEMBER, WE HAVE TO REMAIN WITHIN $300,000.

SO THE NUMBER OF GRANTS HAVE BEEN PROGRESSIVELY GOING UP IN TIME, BUT WE'VE REMAINED UNDER THAT $300,000. LAST YEAR THERE WERE 13 GRANTS. AND JUST TO GIVE YOU A BIT OF AN IDEA, THEY WERE REALLY FROM VERY DIFFERENT PLACES WORKING TO WALK SCIENCE AND ADVOCACY, 11TH ANNUAL GENE THERAPY SYMPOSIUM FOR HEART, LUNG, AND BLOOD DISEASES, STEM CELLS AND CRANIOFACIAL DEVELOPMENT OF DISEASE, CELL THERAPIES IN TRAUMA AND CRITICAL CARE, BARRIERS TO TRANSLATION FROM PRECLINICAL TO CLINICAL DEVELOPMENT, THE ISSCR, RODDENBERRY INTERNATIONAL SYMPOSIUM ON CELL REPROGRAMMING, CALIFORNIA ALS SUMMIT, THE SANFORD CONSORTIUM FOR REGENERATIVE MEDICINE, AND INVESTA PARTNERING ON STEM CELLS ON THE MESA, THE 2013 RACHEL LEVINE DIABETES AND OBESITY SYMPOSIUM, THE NEXT BEST STEPS, SETTING A PATH FOR ADVANCING PEDIATRIC NEUROLOGY, USC

FRONTIERS OF STEM CELLS AND AGING SYMPOSIUM, 2013 MATERIALS RESEARCH SOCIETY, DESIGN OF CELL INSTRUCTIVE MATERIAL, THE 14TH UC SYSTEMWIDE BIOENGINEERING SYMPOSIUM, CELL THERAPY FOR ALS, TESTING THE LIMITS, WHAT SHOULD WE USE AS PRECLINICAL STANDARDS THROUGH INITIATION OF CLINICAL TRIALS.

SO THERE'S A REAL SPREAD ACROSS THE WHOLE GAMUT. AND WHAT WE USUALLY DO IS WE MAKE A DECISION ABOUT HOW MUCH STEM CELLS IS REALLY IN THERE, WHAT CONTRIBUTION IT WOULD BE MAKING TO THE FIELD OF INTEREST THAT WE'RE IN, AND THEY ALWAYS, NEARLY ALWAYS, APPLY FOR VERY CLOSE TO $50,000, WHICH IS THE LIMIT, BUT WE ADJUST IT TO MAKE GOOD SENSE OF WHAT WE THINK THE PROGRAMS HAVE APPLIED FOR. SO IT'S A BUSY PROGRAM AND IT'S BEEN VERY USEFUL AND VERY WELL REGARDED.

SO THIS YEAR 2013-14 MOVING FORWARD IS A LITTLE BIT OF A PROBLEM BECAUSE WHAT WE DID WAS WE SAID, WELL, THERE'S A NUMBER OF REALLY KEY MEETINGS, CONFERENCES THIS YEAR, THIS PARTICULAR YEAR. ONE OF THEM IS A KEYSTONE STEM CELL AND REPROGRAMMING CONFERENCE WHICH IS REALLY HEADED UP BY DEEPAK SRIVASTAVA AND SHINYA YAMANAKA. AND SO WE, WITH HELP FROM NATALIE DEWITT, WE ARE GOING TO BE RUNNING

A SPECIAL SESSION IN THAT.

THE STEM CELLS ON THE MESA, WHICH IS A REALLY IMPORTANT PROGRAM FOR OUR PARTNERING COMPANIES AND THOSE STEM CELL DISEASE GROUPS THAT ARE WORKING THEIR WAY UP INTO SUPPORT, THERE'S A REGENERATIVE MEDICINE FOUNDATION HUMAN ORGAN CONFERENCE EARLY NEXT YEAR.

AND THEN THE WORLD STEM CELL SUMMIT, WHICH IS COMING BACK TO CALIFORNIA, WHICH IS A REALLY LARGE CONFERENCE THAT WILL BE HELD IN SAN DIEGO. AND THEN DUANE ROTH REMINDED US BIO WAS GOING TO BE IN SAN DIEGO THIS YEAR -- SORRY -- NEXT YEAR. AND SO IN THIS 2013-14 TIME FRAME. AND THAT BIO IS THE BIGGEST MEETING IN BIOTECHNOLOGY IN THE COUNTRY, HE FELT VERY STRONGLY WE SHOULD BE PART OF IT. I ENDORSED THAT. I'VE BEEN AT THESE MEETINGS WHERE WE'VE HAD A ROLE IN THOSE CONFERENCES, AND WE'VE BEEN ABLE TO HAVE A SESSION WHERE WE'RE ABLE TO INVITE A GROUP OF PEOPLE REALLY TO SHOW OFF WHAT WE'RE DOING IN THE AREA. AND SO I'M SUPPORTIVE OF THAT, BUT IT DOES COST US MONEY TO DO THOSE THINGS.

SO WITH THOSE KEY CONFERENCES, THERE'S A COMMITMENT, IF WE'RE GOING TO GO FORWARD, OF AROUND ABOUT 225,000, WHICH DOESN'T LEAVE MUCH FOR ALL OF THOSE OTHER ONES I KIND OF DESCRIBED TO YOU. AND SO

I WAS -- I THINK -- IT'S DIFFICULT TO ASK FOR MORE FUNDS AT THIS POINT IN TIME IN THE BOARD MEETING, BUT I THINK A ONE-OFF OF $50,000 WOULD HELP US MAKE SURE THAT WE GOT SOME OF THOSE OTHER WORTHWHILE CONFERENCES INCLUDED BECAUSE WE'RE REALLY DOWN TO PERHAPS ONLY 75,000 FOR ALL OF THOSE OTHERS. SO I'D LIKE TO RECOMMEND OR PUT A PROPOSAL TO YOU A ONE-OFF EXTENSION TO THE CONFERENCE GRANTS OF $50,000. SO IT WAS 350,000 FOR 2013-14 IF THERE'RE REALLY MERITORIOUS CONFERENCE GRANT APPLICATIONS RECEIVED IN ADDITION TO THOSE THAT WE THOUGHT ARE A PRIORITY FOR 2013 AND 14.

MS. SAMUELSON: SO MOVED.

DR. PULIAFITO: SECOND.

CHAIRMAN THOMAS: MOVED BY JOAN, SECONDED BY DEAN PULIAFITO. COMMENTS FROM MEMBERS OF THE BOARD? DR. FINE, DO YOU HAVE A COMMENT BY ANY CHANCE?

DR. FINE: NO COMMENTS.

CHAIRMAN THOMAS: THANK YOU. HEARING NO COMMENTS, DO WE HAVE COMMENTS FROM MEMBERS OF THE PUBLIC? NO COMMENTS. MR. HARRISON, CAN WE DO THIS ON A VOICE VOTE? ALL THOSE IN FAVOR PLEASE SAY AYE. OPPOSED? ABSTENTIONS? DR. FINE.

DR. FINE: AYE.

CHAIRMAN THOMAS: THANK YOU. MOTION PASSES.

OKAY. NOW GOING ON TO -- LET ME ASK A QUESTION. IAN, HOW LONG DO YOU NEED FOR YOUR PRESENTATION?

MS. BONNEVILLE: THREE HOURS.

CHAIRMAN THOMAS: THREE HOURS DOESN'T WORK FOR ME. WHAT ELSE YOU GOT?

MR. SWEEDLER: FIFTEEN, 20 MINUTES DEPENDING ON HOW MANY QUESTIONS THERE ARE.

CHAIRMAN THOMAS: OKAY. AND ALEX, HOW LONG -- WE'RE TIMING THIS BECAUSE THERE ARE ICE CREAM SANDWICHES --

MS. BONNEVILLE: THEY'RE HERE.

CHAIRMAN THOMAS: THEY'RE HERE. IT'S A VERY IMPORTANT LINE OF QUESTIONING. LET'S PROCEED TO IAN ON ITEM 14, AN UPDATE ON OUR COLLABORATIVE FUNDING PARTNER PROGRAM.

DR. FINE: HOW ARE YOU GOING TO GET THE ICE CREAM SANDWICH TO ME?

CHAIRMAN THOMAS: MICHAEL FRIEDMAN IS FAXING IT. EVEN BETTER, HE'S 3D PRINTING IT TO YOU. OKAY.

DR. FINE: THANK YOU.

CHAIRMAN THOMAS: I KNOW. SO IF THEY'RE

HERE, MARIA, YOU'RE SAYING PEOPLE CAN AT THEIR LEISURE WANDER OVER AND PARTAKE? THERE THEY ARE. AT YOUR LEISURE.

MR. SWEEDLER: THANK YOU, MR. CHAIRMAN, MEMBERS OF THE BOARD. IT'S A PLEASURE TO SPEAK WITH YOU THIS AFTERNOON. FIRST, LET ME BE CLEAR I'M NOT GOING TO BE ASKING FOR ANY MONEY. TO THE CONTRARY, THIS IS A PROGRAM THAT BRINGS IN MONEY. AND I'D LIKE TO QUOTE SOMEBODY VERY WISE, DR. STEWARD, FROM ABOUT FIVE MINUTES AGO. CALIFORNIA IS NOT THE WORLD, AND THERE'S A LOT OF TALENT OUT THERE. AND THAT'S CLEARLY A VERY TRUE STATEMENT, AND IT'S ONE OF THE MAIN REASONS THAT WE HAVE THIS PROGRAM.

IT'S AN ACTIVE PROGRAM, AND IT'S BEEN QUITE SOME TIME SINCE WE'VE COME TO THE BOARD TO TELL YOU ABOUT IT, WHAT IT'S DOING, AND HOW IT'S DOING. SO OUR CHAIRMAN ASKED ME TO COME AND MAKE THIS PRESENTATION TODAY.

AS YOU KNOW, WE FUND RESEARCH IN CALIFORNIA. THERE'S A LOT OF GREAT RESEARCH GOING ON ELSEWHERE. SOMETIMES WE BRING THOSE PEOPLE TO CALIFORNIA, BUT IT'S IMPORTANT FOR RESEARCHERS IN CALIFORNIA TO BE ABLE TO WORK WITH THE BEST PEOPLE IN THE FIELD. SOMETIMES WHAT THEY NEED IS TO WORK WITH SOMEBODY WHO IS THE BEST AT ONE VERY SPECIFIC

TECHNOLOGY THAT'S REALLY THE PIECE THAT'S MISSING TO MAKE THEIR PROJECT MOVE FORWARD.

AND THIS IS A VERY SCIENTIST DRIVEN PROGRAM. SCIENTISTS TELL US THAT -- CALIFORNIA SCIENTISTS TELL US THAT THERE ARE PEOPLE OUT THERE WHO THEY WANT TO BE ABLE TO WORK WITH IN DIFFERENT PLACES. SO THIS IS A PROGRAM THAT ALLOWS CIRM-FUNDED PROJECTS IN CALIFORNIA TO ACCESS RESOURCES AND EXPERTISE BEYOND WHAT CIRM PROVIDES.

I THINK THEY USED TO SAY IN THE BRITISH EMPIRE THAT THE SUN NEVER SETS ON IT, AND THAT'S MORE OR LESS TRUE OF OUR COLLABORATIVE FUNDING NETWORK. SO AS YOU CAN SEE FROM THIS MAP, WE COVER ALMOST EVERY CONTINENT AND MOST OF THE COUNTRIES THAT ARE PRODUCING SIGNIFICANT RESEARCH IN THIS AREA WITH SOME GAPS. MOST OF OUR COLLABORATIVE FUNDING PARTNERS ARE NATIONAL LEVEL RESEARCH FUNDING AGENCIES. SOME OF THEM ARE LIKE CALIFORNIA, SUBNATIONAL STATE, PROVINCIAL LEVEL.

WE ALSO HAVE COLLABORATIVE FUNDING RELATIONSHIPS WITH SOME DISEASE FOUNDATIONS, AND I WILL TALK TO YOU ABOUT HOW ALL OF THOSE DIFFERENT KINDS OF RELATIONSHIPS WORK.

OVERALL THE WAY WE WORK WITH OUR PARTNERS IS THROUGH -- FIRST OF ALL, WE OFFER JOINT FUNDING

OPPORTUNITIES. AND I'LL GO INTO MORE DETAILS ABOUT ALL OF THESE. BUT THIS IS ANNOUNCING AN OPPORTUNITY FOR A COLLABORATIVE PROJECT, A COLLABORATIVE PROPOSAL, TO COME TO US. WE WORK WITH OUR PARTNERS TO SUPPORT COLLABORATIONS WHERE AN EXISTING CIRM-FUNDED PROJECT CAN BENEFIT FROM A COLLABORATIVE ELEMENT TO BE ADDED AND SUPPORTED BY AN EXTERNAL RESEARCH AGENCY.

WE WORK WITH OUR COLLABORATIVE FUNDING PARTNERS IN WAYS THAT ARE NOT DIRECTLY FUNDING RELATED. THESE ARE MANY OF THE PREMIERE STEM CELL RESEARCH AGENCIES AROUND THE WORLD, AND IT IS AN EXCELLENT WAY TO WORK WITH THEM ON UNDERSTANDING THE SCIENTIFIC LANDSCAPE, SCIENTIFIC PRIORITIES.

AND THAT TRANSITIONS INTO THE NEXT -- SOME OF THE OTHER ITEMS THERE, SHARED EXPERTISE, THE REGULATORY ISSUES THAT WILL ARISE IF THERAPIES DEVELOPED IN ONE COUNTRY ARE TO BE AVAILABLE IN ANOTHER COUNTRY.

AND WE ALSO WORK WITH OUR COLLABORATIVE FUNDING PARTNERS AT TIMES TO SPONSOR JOINT SCIENTIFIC WORKSHOPS WHICH ARE OFTEN THE WORKSHOPS THAT BOTH LEAD TO NEW COLLABORATIVE IDEAS, INTERNATIONAL COLLABORATIONS, AND SOMETIMES THEY'VE LED TO SOME EXCELLENT COLLABORATIONS BETWEEN

CALIFORNIA SCIENTISTS WHO HAPPEN TO BE AT THESE WORKSHOPS.

SO THE PRIMARY WAY THAT WE BRING THIS FUNDING IN IS BY HAVING COLLABORATIVE FUNDING PARTNERS JOIN US IN A PARTICULAR RFA. SO WE HAVE OUR STANDARD RFA PROCESS, AND EACH FUNDING PARTNER DECIDES, BASED ON THE INFORMATION WE PROVIDE AND THEIR PRIORITIES, WHETHER THEY WANT TO JOIN A PARTICULAR RFA.

ONCE WE'VE MADE THAT OPPORTUNITY AVAILABLE AND WE PUT THAT IN THE RFA AND THE FUNDING PARTNER AGENCY EXPLAINS HOW THEIR HALF OF THE PROCESS WILL WORK, AND WE DO EVERYTHING WE CAN TO STREAMLINE THIS SO THAT THERE ISN'T A DUPLICATION OF EFFORT BY APPLICANTS, WHERE THERE'S A TEAM OUT THERE THAT HAS A COLLABORATIVE PROPOSAL, THEY PREPARE THE CIRM APPLICATION, WHICH IS SET UP TO ALLOW THOSE COLLABORATIVE POSSIBILITIES TO BE IDENTIFIED, THEY HAVE THEIR FUNDING AND TASKS LAID OUT FOR BOTH THE CALIFORNIA TEAM AND THE EXTERNAL TEAM.

THE ENTIRE PROPOSAL IS REVIEWED AS A SCIENTIFICALLY UNIFIED PROJECT BY THE GRANTS WORKING GROUP. AND IF ULTIMATELY BOTH CIRM AND ITS FUNDING PARTNER APPROVE FUNDING FOR A PROJECT, THEN WE FUND THE PART IN CALIFORNIA. THEY FUND THE PART IN THEIR

JURISDICTION. WE COORDINATE ON ISSUING THE AWARDS SO THAT THEY START AT THE SAME TIME. EVERYONE CAN BE MOVING FORWARD TOGETHER. WE COOPERATE ON OVERSIGHT OF THESE AWARDS. WE TRY AS MUCH AS POSSIBLE TO ALLOW THE TEAMS TO DO A SINGLE PROGRESS REPORT THAT WORKS FOR BOTH AGENCIES. WE SEE WHAT'S GOING ON WITH THE WHOLE PROJECT. DEPENDING ON THE PARTNER, WE'LL OFTEN GET ON THE PHONE WITH OUR OPPOSITE NUMBERS AT THOSE AGENCIES TO CHECK IN AND SEE WHAT EACH OF US THINKS ABOUT HOW A PROJECT IS GOING OR IF WE HAVE CONCERNS.

AT THE DISEASE TEAM STAGE, WHERE WE HAVE THESE VERY INFORMATIVE CLINICAL DEVELOPMENT ADVISORY PANEL MEETINGS, OUR COLLABORATIVE FUNDING PARTNERS LOVE THOSE. THEY WILL COME INTO THE COUNTRY TO ATTEND THOSE OR THEY WILL PARTICIPATE BY PHONE BECAUSE IT IS A LEVEL OF OVERSIGHT AND INPUT THAT IT IS HARD FOR OTHER AGENCIES TO MATCH.

THE OTHER WAY THAT THESE COLLABORATIVELY FUNDED PROJECTS COME TOGETHER IS WHAT WE CALL A BOLT-ON, AND THAT'S WHEN CIRM HAS APPROVED AND INITIATED A NEW CALIFORNIA ONLY PROJECT AND A SCIENTIST FROM OUTSIDE OF CALIFORNIA IN ONE OF OUR FUNDING AREAS CONTACTS THE CALIFORNIA SCIENTIST AND SAYS I WOULD LIKE TO WORK WITH YOU. I HAVE A

PROPOSAL THAT COULD ADD VALUE TO WHAT YOU'RE DOING. AND THEY WILL GO TO THEIR FUNDING AGENCY. AND IF THEIR FUNDING AGENCY IS WILLING TO MAKE THE FUNDING AVAILABLE, AND WE AGREE THAT IT SUPPORTS THE GOALS OF THE CIRM-FUNDED PROJECT, THEN WE WILL SUPPORT THAT.

SO WHAT THAT MEANS, THEN, IS NEW FUNDING AND NEW RESOURCES ARE BEING BROUGHT TO A PROJECT THAT CIRM HAS ALREADY DECIDED TO GO AHEAD WITH.

WE ALSO WORK WITH A GROWING NUMBER OF DISEASE FOUNDATIONS. AND UNLIKE THESE FUNDING AGENCIES, THESE ARE NOT NECESSARILY GEOGRAPHICALLY BASED. AND THEY'RE ABLE TO PROVIDE FUNDING DIRECTLY TO THE VERY SAME RESEARCHERS THAT WE'RE SUPPORTING. SO IT'S AN OPPORTUNITY TO GET ADDITIONAL DOLLARS AND ADDITIONAL RESOURCES OF OTHER KINDS MADE AVAILABLE TO THE RESEARCH TEAMS THAT ARE WORKING ON CIRM-FUNDED AWARDS.

WHEN ALAN MENTIONED EARLIER SOME OF THE LEVERAGED FUNDING THAT WE BROUGHT IN LAST YEAR, PART OF THAT WAS A $3 MILLION GRANT FROM THE JUVENILE DIABETES RESEARCH FOUNDATION THAT WAS PROVIDING MATCHING FUNDS ALONG WITH OUR GRANT TO VIACYTE THROUGH THE STRATEGIC PARTNERSHIP PROGRAM.

ONE ADVANTAGE THAT WE CAN OFFER TO THESE

DISEASE FOUNDATIONS IS THAT WE HAVE A LEVEL OF INTENSIVE SCIENTIFIC REVIEW AT THE FRONT END THAT IS HARD FOR MOST ORGANIZATIONS TO MATCH. WE HAVE AN AMAZING GRANTS WORKING GROUP, AND OUR SCIENCE OFFICE PULLS TOGETHER THE TOP PEOPLE FROM THAT GROUP AND OTHERS TO REVIEW THESE PROPOSALS. SO A DISEASE FOUNDATION HAS THE CONFIDENCE OF KNOWING THAT THIS HAS BEEN VERY WELL VETTED, AND THEY KNOW THAT IT WILL CONTINUE TO BE CAREFULLY MONITORED. SO FOR THOSE ORGANIZATIONS, WHICH LIKE EVERYONE HAVE LIMITED DOLLARS TO SPREAD AROUND, WE'RE PROVIDING SOME VALUE ADDED FOR THEM ON THIS WHEN THEY CAN PUT IN FUNDS THAT EXPAND OUR PROJECTS.

AND THEN WE HAVE A UNIQUE RELATIONSHIP WITH THE NATIONAL INSTITUTES OF HEALTH. PART OF IT WORKS SIMILARLY TO OUR COLLABORATIVE FUNDING PROGRAMS. AND THAT IS WE WILL RECEIVE PROPOSALS IN WHICH THERE IS A CALIFORNIA PI AND AN EXTERNAL PI. AND IN THIS CASE THAT EXTERNAL PI IS AN INTRAMURAL RESEARCHER AT NIH. SO THIS IS NOT NIH GRANT FUNDING TO THEIR FUNDED EXTERNAL RESEARCHERS. THESE ARE THE PEOPLE WORKING ON THAT CAMPUS IN BETHESDA. AND WHEN THESE PROPOSALS ARE REVIEWED AND APPROVED, THE SCIENTIFIC MERIT IS THERE, THEN NIH USES INTERNAL NIH FUNDING AND CHANNELS A BUDGET SPECIFICALLY FOR

THAT PROJECT.

THE OTHER ADVANTAGE THAT WE GET THROUGH THIS COLLABORATIVE FUNDING RELATIONSHIP IS THAT CIRM-FUNDED RESEARCHERS, WHETHER OR NOT THEY'RE WORKING WITH AN NIH INTRAMURAL RESEARCHER, CAN GET ACCESS TO SPECIALIZED RESOURCES THAT ARE NORMALLY ONLY AVAILABLE TO NIH RESEARCHERS OR NIH-FUNDED RESEARCHERS. AND THAT CAN RANGE FROM INFORMATIONAL RESOURCES, CELL LINES, TRAINING AND SPECIALIZED KINDS OF RESOURCES AVAILABLE AT THE NIH CLINICAL CENTER. AND THESE CAN COME IN AT ANY STAGE OF A PROJECT. THEY CAN BE PART OF THE APPLICATION. THEY CAN COME IN LATER ON IN A PROJECT THAT'S ALREADY UNDER WAY. IT'S A VERY FLEXIBLE RELATIONSHIP THAT IS INTENDED TO RESPOND TO THE NEEDS OF EACH OF OUR RESEARCH PROJECTS.

SO I MENTIONED THAT PARTNERS PARTICIPATE ONE RFA AT A TIME. SO WHAT I'VE PUT UP ON THIS CHART IS A LIST OF OUR DIFFERENT FUNDING PROGRAMS AND A LIST OF WHICH FUNDING PARTNERS HAVE MADE FUNDING AVAILABLE FOR EACH OF THOSE PROGRAMS. AND AS YOU CAN SEE, THERE'S BEEN SUBSTANTIAL PARTICIPATION. AND THAT PARTICIPATION HAS RUN THE FULL RANGE OF THE TYPE OF RESEARCH THAT WE SUPPORT. NUMEROUS COUNTRIES INVOLVED IN BASIC BIOLOGY,

TRANSLATIONAL, AND THE IND ENABLING AND CLINICAL RESEARCH, AS WELL AS SOME OF THE MORE SPECIALIZED RFA'S WE'VE OFFERED, TOOLS AND TECHNOLOGIES, TRANSPLANTATION IMMUNOLOGY. SO THE INTEREST IS BROAD.

AND THEN THIS CHART SHOWS ACTUAL COLLABORATIVE FUNDING AWARDS THAT HAVE BEEN MADE IN EACH OF OUR RESEARCH PROGRAMS. AND AGAIN, IT'S DISTRIBUTED ACROSS THE CONTINUUM OF THE TYPES OF RESEARCH THAT WE FUND WITH THE LARGEST AMOUNTS IN OUR BIGGEST PROGRAMS, EARLY TRANSLATIONAL AND DISEASE TEAM, AT LEAST BIGGEST PROGRAMS IN TERMS OF AWARD SIZE.

AND THEN FINALLY, IN TERMS OF THIS SCORECARD PART OF IT, I JUST WANTED TO HIGHLIGHT FOR YOU JUST IN THE LAST YEAR THESE ARE COLLABORATIVE PROGRAM -- COLLABORATIONS THAT HAVE COME INTO BEING AND FUNDED THROUGH OUR VARIOUS PROGRAMS. SO THE PROVINCE OF ANDALUCIA HAS JOINED ONE OF OUR DISEASE TEAMS. AUSTRALIA HAS JOINED AN EARLY TRANSLATIONAL PROGRAM. OUR FIRST COLLABORATION WITH FRANCE IS A BASIC BIOLOGY PROGRAM. GERMANY, EARLY TRANSLATIONAL. OUR FIRST COLLABORATION WITH INDIA, BASIC BIOLOGY. ONE OF MANY -- ONE OF SEVERAL COLLABORATIONS WITH THE MARYLAND STEM CELL RESEARCH

PROGRAM IS A BASIC BIOLOGY PROGRAM. AND WE HAVE TWO INVOLVING NIH, A DISEASE TEAM PROGRAM AND A SPECIALIZED IPSC CONSORTIUM THAT WE JOINED.

AND WHEN YOU ADD IT ALL UP, WE HAVE 30 CIRM PROJECTS THAT HAVE COLLABORATIVE FUNDING PARTICIPATION, AND THE FUNDING PARTNERS HAVE COMMITTED OVER $70 MILLION TO THOSE PROJECTS. SO THAT IS ALL LEVERAGE THAT'S COMING IN TO EXTEND THE IMPACT OF THE CIRM FUNDING FOR THOSE AWARDS.

SO I'M HAPPY TO ANSWER ANY QUESTIONS THAT YOU HAVE.

CHAIRMAN THOMAS: DR. BERGLUND.

DR. BERGLUND: THANK YOU. I THINK THIS SHOWS THAT THIS CAN BE A VERY POWERFUL PROGRAM GOING FORWARD. I HAVE TO ASK TWO THINGS. I WAS WONDERING WHAT'S THE RATIO SORT OF BETWEEN CIRM FUNDING AND EXTERNAL FUNDING ON AVERAGE?

MR. SWEEDLER: YES. IT'S A WIDE RANGE IN PART BECAUSE FUNDERS HAVE DIFFERENT AMOUNTS AVAILABLE, RESEARCH COSTS ARE A DIFFERENT AMOUNT IN DIFFERENT COUNTRIES. THE HIGHEST PARITY IS WITH THE CANCER STEM CELL CONSORTIUM OF CANADA WHO CO-FUNDS TWO OF OUR DISEASE TEAM I PROJECTS WITH US. AND THERE IT'S ONE TO ONE DEPENDING ON THE EXCHANGE RATE, BUT IT'S 20 MILLION U.S. AND 20 MILLION

CANADIAN TO EACH OF THOSE PROJECTS. MOST OF THE OTHERS IT'S A LESSER LEVEL OF COMMITMENT, USUALLY AROUND A THIRD OR SO. BUT IT REALLY DEPENDS ON THE TYPE OF PROJECT. AND WHAT I'VE HEARD FROM THE FUNDING PARTNERS IS THAT THEIR PERCEPTION IS THAT THE RELATIVE FUNDING AMOUNT HAS AN IMPACT ON HOW THE PARTNERSHIPS OPERATE.

DR. TROUNSON: A LOT OF THESE PLACES DON'T HAVE INDIRECTS EITHER, SO THEY DON'T PAY ANY INDIRECT.

DR. BERGLUND: AND THE SECOND QUESTION, I WONDER HAS THIS ACTUALLY COME UP IN THE QUESTION WITH REGARDS TO TRAINING GRANTS? I THINK THIS COULD ACTUALLY BE A VERY INTERESTING OPPORTUNITY TO BRING TRAINEES TOGETHER FROM DIFFERENT CULTURES, DIFFERENT NATIONS, AND ACTUALLY DO OPEN THE EYES OF THOSE TRAINEES FOR OPPORTUNITIES IN CALIFORNIA OVER TIME.

MR. SWEEDLER: YOU KNOW, WE'VE LOOKED INTO THE POSSIBILITY OF SORT OF SCHOLAR EXCHANGE PROGRAMS. MY SENSE IS THAT, FIRST OF ALL, A LOT OF THAT IS HAPPENING ALREADY, AND IT WAS A PRETTY TRANSACTIONALLY LABOR INTENSIVE KIND OF THING TO SET UP. BY THE TIME I WAS INTO THE FOURTH PAGE ON THE STATE DEPARTMENT WEB SITE ABOUT THE VISA REQUIREMENTS, I STARTED THINKING THIS MAY NOT BE

WHAT OUR FIRST PRIORITY SHOULD BE.

DR. YAFFE: I JUST WANTED TO ADD THAT OUR TRAINING GRANTS HAVE NO RESTRICTION WITH REGARD TO CITIZENSHIP OR GREEN CARD STATUS. SO UNLIKE THE NIH TRAINING GRANTS, WE CAN SUPPORT STUDENTS, POST DOCS, AND CLINICAL FELLOWS FROM OTHER COUNTRIES.

DR. BERGLUND: I APPRECIATE THAT. WE HAVE HAD AND I'M SURE OTHER UNIVERSITIES HAVE HAD PRETTY GOOD EXPERIENCE OF ACTUALLY HAVING THE TRAINEES BE THE GLUE BETWEEN MENTORS IN ONE ORGANIZATION AND MENTORS IN ANOTHER. THE MENTORS MAY NOT NECESSARILY COMMUNICATE THAT MUCH, BUT THE STUDENTS BRING THEM TOGETHER.

MR. SWEEDLER: AND THIS IS -- IT'S CERTAINLY AN AVAILABLE ELEMENT WITHIN THESE AWARDS. CIRM AWARDS PROVIDE SUBSTANTIAL TRAVEL FUNDING WHEN THAT'S AN APPROPRIATE COMPONENT. AND I'M NOT A SCIENTIST, BUT IT'S MY UNDERSTANDING THAT THIS KIND OF LABORATORY EXCHANGE IS A PRETTY COMMON FORM OF CROSS TRAINING AND TRANSFER OF TECHNOLOGY.

I ALSO DID WANT TO MENTION SOMETHING THAT WE'RE PRETTY EXCITED ABOUT. THIS IS A NEW RFA THAT'S BEING ISSUED TODAY. THIS IS A CONCEPT THAT THE BOARD APPROVED LAST YEAR. IT WAS RECOMMENDED BY OUR EXTERNAL ADVISORY PANEL. AND THIS IS KIND OF

THE FLIP SIDES OF THOSE BOLT-ONS THAT WE TALKED ABOUT.

THIS IS A PROGRAM, OUR EXTERNAL INNOVATION PROGRAM, WHERE CALIFORNIA RESEARCHERS CAN COME TO US AND SAY I WOULD LIKE CIRM FUNDING FOR A NEW CALIFORNIA PROJECT THAT'S INTENDED TO COLLABORATE WITH AN EXISTING PROJECT OUTSIDE OF CALIFORNIA. AND THERE IS GREAT WORK GOING ON OUTSIDE OF CALIFORNIA. IN SOME CIRCUMSTANCES THERE IS UNIQUE BARRIER BREAKING WORK GOING ON OUTSIDE OF CALIFORNIA, AND IT'S IMPORTANT FOR THE CALIFORNIA RESEARCH COMMUNITY TO HAVE ACCESS TO THAT.

SO THESE AWARDS ALLOW CALIFORNIA INVESTIGATORS TO PROPOSE THESE PROJECTS. AND IT FILLS IN SOME GAPS IN OUR EXISTING PROGRAMS. THAT MAP THAT I SHOWED YOU HAD A LOT OF COUNTRIES ON IT, BUT PEOPLE WHO KNOW THE FIELD SAW A NUMBER OF ABSENCES AS WELL. THERE ARE COUNTRIES WHERE, FOR A VARIETY OF REASONS, WE'VE JUST NOT BEEN ABLE TO ESTABLISH A COLLABORATIVE FUNDING RELATIONSHIP. SO THIS WOULD ALLOW CALIFORNIA RESEARCHERS TO COLLABORATE WITH INVESTIGATORS IN COUNTRIES WHERE WE DO NOT HAVE THOSE COLLABORATIVE FUNDING PARTNERSHIP ARRANGEMENTS IN PLACE.

MS. WINOKUR: WHEN YOU LIST THE COUNTRIES

WITH WHOM WE HAVE ARRANGEMENTS, WHAT IS THE ORGANIZATION OR STRUCTURE WITHIN THOSE COUNTRIES?

MR. SWEEDLER: SURE. I'LL GIVE YOU A FEW EXAMPLES. IN THE UNITED KINGDOM IT'S THE MEDICAL RESEARCH COUNCIL WHICH IS THE PRIMARY LIFE SCIENCES RESEARCH GRANTING AGENCY THERE. SIMILAR WITH THE NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL IN AUSTRALIA. IN CANADA IT'S THE CANCER STEM CELL CONSORTIUM, SO IT IS A CONSORTIUM THAT'S FOCUSED ON ONE PARTICULAR DISEASE RESEARCH AREA. ANDALUCIA, IT'S FOCUSED MORE AT THE TRANSLATIONAL CLINICAL END OF THINGS. IN GERMANY IT'S THEIR PRIMARY RESEARCH FUNDING AGENCY, THE BMBF. AND PLEASE DON'T ASK ME TO PRONOUNCE --

MS. WINOKUR: WHAT IS OUR STATE LIKE MARYLAND?

MR. SWEEDLER: SO MARYLAND HAS A STEM CELL RESEARCH FUNDING INITIATIVE THAT IS SIMILAR TO CIRM IN ITS AIMS, BUT MUCH SMALLER. SO WE'VE WORKED OUT A PROGRAM WITH THEM. THEY'RE NOT ABLE TO JOIN OUR RFA'S FOR TECHNICAL REASONS. SO WHEN THEY DO THEIR FUNDING ROUND EACH YEAR, THEIR RESEARCHERS ARE GIVEN A LIST OF NEW CIRM AWARDS. AND THEY HAVE A SPECIAL APPLICATION TRACK FOR THOSE WHO ARE PROPOSING TO COLLABORATE WITH CALIFORNIA RESEARCHERS.

CHAIRMAN THOMAS: IAN, I GOT A QUESTION OR MAYBE BETTER DIRECTED TO ALAN. ARE THERE ANY OTHER POTENTIAL PARTNERS IN THE OFFING OUT THERE, AND HOW ARE WE DOING IN LANDING THEM?

DR. TROUNSON: YEAH. WE'RE IN DISCUSSIONS WITH THE SPACE AGENCY AND CHILE. IN CHILE THEY FORMED A FUND THAT WAS SIMILAR TO THE CANADIAN GENOMICS FUND. SO IT'S PROPOSED THAT I TALK TO CHILE ABOUT DOING SOMETHING TOGETHER. BUT I THINK --

CHAIRMAN THOMAS: I TRUST YOU WILL RUG UP WHEN YOU GO DOWN THERE.

DR. TROUNSON: BUT I ALSO THINK PROBABLY SOME OF THE OTHER DISEASE FOUNDATIONS ARE PROBABLY IMPORTANT AS WE MOVE INTO THE CLINICAL PROGRAMS. THE HIV ASSOCIATION JUST -- WE JUST JOINED UP WITH THE HIV ASSOCIATION.

MR. SWEEDLER: THE AIDS HEALTHCARE FOUNDATION.

DR. TROUNSON: RIGHT. AND SO I THINK THERE ARE A NUMBER OF THOSE OTHERS THAT WE CAN SORT OF LINK WITH IN THE SPECIAL PROGRAMS. AND SO WE CONTINUE TO KEEP OURSELVES BRIEFED AND TALKING TO THOSE PEOPLE. SO THEY'RE THERE. AND WE'LL BRING THOSE OPPORTUNITIES FORWARD, I THINK, IN DUE COURSE

WHEN IT LOOKS LIKE THEY MIGHT WORK.

MR. SWEEDLER: THOSE ARE BOTH EXAMPLES OF SITUATIONS WHERE LEADING CALIFORNIA RESEARCHERS CAME TO US AND SAID THERE'S SOMEONE I WANT TO WORK WITH HERE, AND CAN YOU GET A COLLABORATIVE RELATIONSHIP IN PLACE SO WE CAN MAKE THAT WORK.

CHAIRMAN THOMAS: OTHER COMMENTS? OKAY. THANK YOU, IAN.

WE WILL NOW PROCEED TO AN UPDATE REGARDING THE IMPLEMENTATION OF THE PERFORMANCE AUDIT RECOMMENDATIONS. HEAR FROM ALEX.

MS. CAMPE: CHAIRMAN THOMAS AND MEMBERS OF THE BOARD AND MEMBERS OF THE PUBLIC, THANK YOU FOR LETTING ME SHARE WITH YOU SOME UPDATES ON THE PERFORMANCE AUDIT. FIRST, AS REQUIRED BY LAW, CIRM DID COMMISSION A PERFORMANCE AUDIT OF CIRM'S OPERATIONS. THE AUDITORS FROM THE ACCOUNTING FIRM OF MOSS ADAMS COMPLETED THE AUDIT AND RELEASED THE REPORT AND PRESENTED TO THE ICOC IN MAY OF 2012. CIRM WAS FOUND TO BE IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND POLICIES.

MOSS ADAMS MADE 24 RECOMMENDATIONS FOR IMPROVING OUR PERFORMANCE, AND OUR GOAL WAS TO COMPLETE THEM BY JUNE 30TH OF THIS YEAR. I HAVE PROVIDED UPDATES ON OUR PROGRESS TO THIS BOARD LAST

DECEMBER AND THE CITIZENS FINANCIAL ACCOUNTABILITY OVERSIGHT COMMITTEE IN FEBRUARY OF THIS YEAR.

THE STAFF AT CIRM HAS WORKED EXTREMELY HARD TO ACCOMPLISH AND FULFILL THESE RECOMMENDATIONS FOR IMPROVED PERFORMANCE. I WOULD LIKE TO UPDATE YOU ON OUR ACHIEVEMENTS ON THE RECOMMENDATIONS TO DATE.

THE PRESENTATION MATERIALS YOU HAVE IN YOUR BINDER ARE ACTUALLY MORE COMPREHENSIVE THAN WHAT YOU WILL SEE ON THE SCREEN. I'M GOING TO FOCUS ON TIER I, WHICH WERE THE TOP PROPERTIES THAT MOSS ADAMS HAD PROVIDED US, AND THEY WERE ALL COMPLETED.

SO LET ME RUN THROUGH THE TIER I RECOMMENDATIONS. ALL 12 HAVE BEEN COMPLETED. THE FIRST ONE WAS THE GRANTS MANAGEMENT SYSTEM. IP MODULE WAS RELEASED. THE IP MODULE ALSO INCLUDED COMMERCIALIZATION ACTIVITY QUESTIONS. WE DEVELOPED A COMMUNICATIONS STRATEGY. THERE WAS A MANDATORY GRANT OUTCOME CLOSEOUT SURVEY THAT WAS ADDED AS WELL TO OUR GRANTS MANAGEMENT SYSTEM. THE FIFTH HERE IS WE INCORPORATED MILESTONES INTO OUR PROJECT MANAGEMENT SOFTWARE, WHICH IS CONNECTED TO OUR GRANTS MANAGEMENT SYSTEM. OUR BOND FORECASTING PROCEDURES WERE IMPLEMENTED. OUR DIGITAL DASHBOARD IS NOW IN USE WITH SENIOR STAFF. WE NOW HAVE A

CENTRAL LOCATION FOR PROCUREMENT DOCUMENTATION. AND WE ARE MONITORING THE 6-PERCENT ADMINISTRATIVE CAP WITH THE USE OF MODELING AND EVALUATION OF STAFFING AND RESOURCE NEEDS.

THE LAST ONES IN THE TIER I WERE WE ACCELERATED OUR PROGRESS REPORT REVIEWS WITH ONLINE ACCESS. WE HAVE PURCHASED AND ARE ROLLING OUT OUR DOCUMENT MANAGEMENT SYSTEM. AND FINALLY, WE HAVE COMPLETED AN HR FORECASTING MODEL, AND WE HAVE FOUR STAFF TRAINED ON THAT. THOSE ARE ALL THE TIER I'S.

THE TIER II'S, SIX OF EIGHT HAVE BEEN COMPLETED, AND I'LL RUN THROUGH THOSE. THE OFFICE OF THE CHAIR, OFFICE OF THE PRESIDENT COOPERATION HAS BEEN ENHANCED TREMENDOUSLY. WE HAVE STREAMLINED OUR STANDING MEETINGS WITHIN THE OFFICE. THE STATE CONTROLLERS, WE NOW HAVE ACCESS TO THEIR SYSTEM. ELONA CAME TO YOU IN DECEMBER WITH A BUSINESS DEVELOPMENT PLAN. WE HAVE A WEB SITE PLAN THAT'S IN PLACE, AND WE HAVE A BRAND-NEW WEB SITE THAT'S BEEN ROLLED OUT. AND THERE'S BEEN MANY THINGS IN THE SCIENCE OFFICE THAT HAVE BEEN PRIORITIZED TO STREAMLINE THE VARIOUS WORK THAT THEY DO.

THERE ARE TWO THAT ARE STILL IN PROCESS THAT ARE TIER II ITEMS. ONE IS THE FINANCE WORKFLOW DATABASE THAT CHILA MENTIONED EARLIER. THAT'S GOING

TO BE ROLLED OUT THIS MONTH. AND THEN AN I.T. PLAN WAS RECOMMENDED, AND WE HAVE THAT DRAFT WITH OUR VENDOR CURRENTLY FOR INPUT.

FINALLY, THERE WERE FOUR TIER III RECOMMENDATIONS. THEY'VE ALL BEEN COMPLETED. FIRST WAS A FORMAL ON-BOARDING PROGRAM FOR NEW EMPLOYEES TO ENSURE THAT THEY WERE INTEGRATED INTO THE ORGANIZATION AS EFFICIENTLY AS POSSIBLE AND AS EFFECTIVELY AS POSSIBLE.

SECOND, THE ICO BOARD CODE OF CONDUCT WAS COMPLETED, AND YOU ALL RECEIVED A COPY OF THAT MEETINGS AGO. WE EVALUATED THE CONFLICT OF INTEREST, CHECKED REDUNDANCIES; AND, FINALLY, WE DID ADDRESS THE RECRUITMENT AND RETENTION TRANSITION PLAN AND WILL CONTINUE TO REVIEW THAT.

SO THAT ACTUALLY ENDS MY PRESENTATION ON THE UPDATES ON THE PERFORMANCE REVIEW. DOES ANYBODY HAVE ANY QUESTIONS?

CHAIRMAN THOMAS: OKAY. THANK YOU. VERY GOOD JOB, ALEX AND ALL WHO WERE INVOLVED IN THE IMPLEMENTATION PHASE. GOOD TO BE DOWN TO THE VERY END OF THE HOME STRETCH HERE. SENATOR TORRES.

MR. TORRES: ALEX, WE'RE GOING TO SEND THAT UPDATE TO THE LEGISLATURE, CORRECT?

MS. CAMPE: I WILL WORK WITH YOU TO DO

WHATEVER YOU'D LIKE US TO DO, YES.

MR. TORRES: WE SHOULD DO THAT. NOT EVERY MEMBER, BUT CERTAIN MEMBERS.

CHAIRMAN THOMAS: OKAY. LAST, BUT NOT LEAST, KEVIN IS GOING TO PRESENT US WITH THE COMMUNICATIONS UPDATE.

MR. MC CORMACK: CHAIR THOMAS, MEMBERS OF THE BOARD, AND MEMBERS OF THE PUBLIC, IT'S ALWAYS LOVELY TO HAVE A CHANCE TO COME AND TALK TO YOU AND GIVE YOU AN UPDATE ON WHAT WE'VE BEEN UP TO. AND IT'S BEEN A PRETTY BUSY SUMMER SO FAR. I THINK YOU ALL SAW AS YOU CAME IN THE NEW "STORIES OF HOPE." THIS IS THE -- WHAT WE DID LAST YEAR WHEN WE HAD THE NEW KIND OF ANNUAL REPORT, WE COMBINED THE DETAILS REQUIRED IN THE ANNUAL REPORT BY PROP 71 AND SOME STORIES ABOUT PATIENTS. AND WE DECIDED THIS YEAR TO BREAK THEM OUT BECAUSE THE *STORIES OF HOPE* ARE WHAT THE PUBLIC ARE REALLY INTERESTED IN. AND SO THIS GIVES US A REALLY POWERFUL COMMUNICATIONS TOOL WHEN WE GO AROUND TO HEALTH FAIRS AND OTHER EVENTS TO SHARE THIS WITH THE PUBLIC. THEY'RE REALLY INTERESTED IN STORIES LIKE THIS. WE'RE GOING TO CONTINUE WITH THIS MODEL FOR A WHILE.

AND WHAT'S NICE ABOUT THIS IS THAT WE CAN PRODUCE SEVERAL VERSIONS OF THIS THROUGHOUT THE YEAR

SO IT'S NOT JUST ONE STATIC DOCUMENT. IN FACT, OUR NEXT VERSION WILL TRANSLATE INTO SPANISH AND ALSO INCLUDE STORIES THAT ARE ABOUT DISEASES AND CONDITIONS OF PARTICULAR INTEREST TO THE LATINO COMMUNITY. SO WE'RE GOING TO BE WORKING WITH SENATOR TORRES TO KIND OF IDENTIFY INDIVIDUALS, IDENTIFY STORIES THAT WE THINK WILL RESONATE THERE.

MR. TORRES: HAVING BEEN A LATINO MOST OF MY LIFE.

DR. MC CORMACK: YESTERDAY WE GOT A REALLY GOOD ARTICLE IN THE *LOS ANGELES TIMES*, WHICH IS A PREVIEW OF THE VOTE THAT YOU TOOK HERE TODAY ON THE ALPHA STEM CELLS CLINIC. AND DRS. MILLAN AND DEWITT DID A GREAT JOB OF EXPLAINING EXACTLY WHAT IT IS, WHY WE'RE DOING THAT, WHAT OUR HOPES AND DREAMS ARE. AND SO I THINK THAT'S THE KIND OF ARTICLE WE WANT TO SEE MORE OF BECAUSE IT REALLY LOOKS AT THE WORK THAT WE DO AND THE POWER THAT IT HAS. SO THAT WAS REALLY GOOD.

YESTERDAY WE ALSO FOUND OUT THAT WE CAME THIS CLOSE TO WINNING THE BEST PR EVENT IN A NATIONAL PR COMPETITION FOR OUR ELEVATOR PITCH CHALLENGE. WE LOST TO THE GIRL SCOUTS. THIN MINTS, YOU JUST CAN'T COMPETE WITH THAT STUFF.

SO AS MENTIONED EARLIER, ON JULY 15TH WE

HELD A PATIENT ADVOCATE MEETING IN SAN FRANCISCO. AND THIS IS THE FIRST OF WHAT'S GOING TO BE A SERIES OF MEETINGS, REGULAR MEETINGS, AROUND THE STATE WHERE WE REACH OUT TO THE PATIENT ADVOCATE COMMUNITY AND GIVE THEM A CHANCE TO MEET US, TALK TO US FACE TO FACE, AND HEAR FROM US WHAT WE'RE DOING, ABOUT THE PROGRESS THAT'S BEING MADE IN RESEARCH, AND GIVE THEM A CHANCE TO ASK QUESTIONS AND FIND OUT AND TELL US WHAT THEY THINK WE CAN DO BETTER.

IT WAS A GREAT MEETING. THERE WERE A NUMBER OF VERY INTERESTING PEOPLE THERE. DIANE WINOKUR, OUR PATIENT ADVOCATE FOR ALS AND MS, WAS THERE. WE HAD A NUMBER OF PEOPLE WHO WERE INTERESTED IN STEM CELL RESEARCH IN GENERAL AND ALSO REPRESENTATIVES FROM SOME FAIRLY IMPORTANT GROUPS, LIKE THE ARTHRITIS FOUNDATION AND THE PARKINSON'S INSTITUTE. SO IT WAS A VERY ENGAGED GROUP.

CHAIRMAN THOMAS AND SENATOR TORRES BOTH GAVE REALLY THOUGHTFUL PRESENTATIONS ON THE RESEARCH AND THE SCIENCE AND THE WORK THAT'S GOING ON HERE. AND JEFF SHEEHY ALSO GAVE A REALLY THOUGHTFUL AND EXCELLENT, I THOUGHT, DISCUSSION WITH THE WORK WE'RE DOING IN HIV/AIDS, WHICH IS ALL THE MORE IMPRESSIVE BECAUSE IT WAS COMPLETELY IMPROMPTU.

THE GROUP WAS ALTOGETHER, I THINK, VERY

ENGAGED AND ASKED A LOT OF GOOD QUESTIONS, AND WE GOT SOME REALLY GOOD IDEAS FROM THEM ON HOW WE CAN WORK BETTER IN THE FUTURE. SO NOW WE'RE LOOKING AT HOLDING SIMILAR EVENTS IN SACRAMENTO, L.A., AND SAN DIEGO.

ONE OF THE ELEMENTS IN THE MEETING, THERE WAS A LOT OF ENTHUSIASM, WAS WHEN WE TALKED TO THEM ABOUT A WEBCAST THAT WE HELD ON ALS OR LOU GEHRIG'S DISEASE. THE WEBCAST WAS THE FIRST TIME WE'D USED THIS APPROACH TO REACH OUT TO A VERY SPECIFIC PATIENT POPULATION. AND OTHER THAN A FEW TECHNICAL PROBLEMS, IT WENT VERY WELL.

WE USED A NEW SERVICE THAT GOOGLE OFFERS CALLED HANGOUT. IT'S QUITE SIMPLE IN MANY WAYS WHERE YOU CAN JUST GET PEOPLE TO LOG ON AND THEY CAN WATCH FROM THEIR COMPUTER, SEE A CONVERSATION, A DISCUSSION GOING ON, AND LISTEN IN AND EVEN KIND OF POSE QUESTIONS THAT CAN THEN GET ANSWERED. IN THIS CASE IT WAS HOSTED BY MY COLLEAGUE AMY ADAMS. DIANE WINOKUR WAS OUR PATIENT ADVOCATE. AND SHE WAS SO GOOD, WE'RE ASKING HER TO STUDY UP ON EVERY OTHER DISEASE SO SHE CAN BE THE PATIENT ADVOCATE FOR EVERY SINGLE OTHER HANGOUT THAT WE DO IN THE FUTURE.

IT ALSO FEATURED CLIVE SVENDSEN FROM CEDARS-SINAI WHO HAS A DISEASE TEAM GRANT. AND I

WANT TO GIVE A PARTICULAR SHOUT OUT TO DR. KAREN BERRY, A CIRM SCIENCE OFFICER, WHO STOOD IN AT THE LAST MOMENT FOR LARRY GOLDSTEIN AND DID A TERRIFIC JOB. SHE WAS REALLY GREAT.

BUT RATHER THAN DRONE ON AT LENGTH, I'D LIKE TO ACTUALLY SHOW YOU WHAT THIS VIDEO LOOKED LIKE.

(THE VIDEO WAS THEN SHOWN, BUT NOT REPORTED NOR HEREIN TRANSCRIBED.)

MR. MC CORMACK: TOLD YOU SHE WAS WONDERFUL. SHE WAS GREAT. I MEAN THE WHOLE THING WAS ACTUALLY A LOT OF FUN. AND I THINK ONE OF THE NICE THINGS ABOUT USING THAT SERVICE, THE HANGOUT, IS THAT AS SOON AS THE WEBCAST IS COMPLETED, IT'S POSTED ONTO YOUTUBE. SO IT BECOMES A RESOURCE THAT CAN BE USED OVER AND OVER AGAIN. WITHIN MINUTES OF GOING UP ON YOUTUBE, THE NATIONAL ALS ASSOCIATION LOCAL CHAPTERS AND OTHER MEMBERS HAD BEEN TWEETING IT AND PUTTING IT ON THEIR SOCIAL MEDIA SITES AND KIND OF SPREADING THE WORD. SO NOW ANY TIME SOMEONE GOES TO LOOK AT IT, THEY LEARN ABOUT CIRM, THEY LEARN ABOUT THE WORK THAT WE'RE DOING.

DR. VUORI: DO YOU NEED A GOOGLE PLUS ACCOUNT FOR --

MR. MC CORMACK: YES. YES, YOU DO. IT'S

VERY EASY TO SET UP. NO, NOT TO WATCH IT. JUST TO BE ONE OF THE GUESTS ON THAT.

WE ALSO FOUND THAT THE FORBES NORRIS ALS CLINIC AT CALIFORNIA PACIFIC MEDICAL CENTER TOLD US THAT WHENEVER THEY GET REQUESTS FOR INFORMATION ABOUT STEM CELLS, THEY SIMPLY REFER THEM TO THE VIDEO ON YOUTUBE. SO AGAIN, IT'S A RESOURCE THAT IS USED OVER AND OVER AGAIN. SO IT'S A GREAT TOOL THAT WE'RE GOING TO BE USING LOTS IN THE FUTURE. AND WHAT'S NICE AS WELL IS THAT IT'S FREE. SO WE LOVE THAT.

AFTER SHOWING THE VIDEO CLIP AT THE PATIENT ADVOCATE MEETING, A NUMBER OF THE PEOPLE THERE ASKED US TO WORK WITH THEM ON DOING SIMILAR THINGS. AND ULTIMATELY OUR GOAL IS TO HAVE SIMILAR WEBCASTS FOR ALL OUR DISEASE TEAMS AND REALLY ANY GROUP, ANY DISEASE AREA THAT WE PROVIDE SUBSTANTIAL FUNDING TO BECAUSE IT'S SUCH A USEFUL TOOL TO BE ABLE TO KIND OF REACH OUT TO DIFFERENT MEMBERS, DIFFERENT PEOPLE, DIFFERENT AUDIENCES IN A VERY, VERY TARGETED WAY.

AS PRESIDENT TROUNSON AND CHAIRMAN THOMAS MENTIONED EARLIER, THERE'S BEEN KIND OF A REAL EMPHASIS ON YOUTH LATELY AS WELL. TWO WEEKS AGO WE HAD THE BRIDGES TRAINING MEETING, WHICH IT'S ALWAYS

FUN TO HANG OUT WITH THESE STUDENTS OR THIS KIND OF NEXT GENERATION OF RESEARCHERS. WE ALSO GOT A CHANCE TO DO A WORKSHOP WITH A LOT OF BRIDGES STUDENTS USING OUR ALMOST AWARDING WINNING ELEVATOR PITCH CHALLENGE TO HELP THEM UNDERSTAND HOW TO BETTER COMMUNICATE WITH THE PUBLIC. AND THEY WERE GREAT. THEY WERE REALLY ENTHUSIASTIC, AND IT WAS FUN TO WORK WITH THEM. THEY'RE JUST SO KEEN. SO THAT'S ALWAYS INSPIRING.

AND THE WEEK BEFORE THAT THERE WAS A WONDERFUL EVENT AT USC FOR OUR CREATIVITY PROGRAM, WHICH OFFERS HIGH SCHOOL STUDENTS A CHANCE TO DO INTERNSHIPS, SUMMER INTERNSHIPS, AT SOME WORLD-CLASS LABS. AND DEAN PULIAFITO, WHO WAS HERE EARLIER, WAS A GRACIOUS HOST, HONORED BOTH SENATOR TORRES AND THE STEM CELL AGENCY. AND IT WAS GREAT, SOME WONDERFUL SPEECHES. BUT AS ELOQUENT AS MANY OF THE ADULTS WERE, IT WAS THE KIDS, OF COURSE, WHO STOLE THE SHOW. I HAVE NO IDEA WHO THAT WOMAN IN THE MIDDLE IS, BUT SHE KEPT JUMPING INTO ALL THE PHOTOGRAPHS. IT'S MARIA.

I THINK A LOT OF THE KIDS WERE SURPRISED BECAUSE THEY SAID THEY ASSUMED, BECAUSE THEY WERE HIGH SCHOOL STUDENTS, THAT THEY REALLY WOULDN'T BE ALLOWED TO DO AN AWFUL LOT. THEY ASSUMED THAT

THEY'D BE SITTING IN THE LAB AND KIND OF WATCHING, BUT NOT REALLY ENGAGED. AND THEY WERE DELIGHTED TO FIND OUT THAT THEY WERE DOING EXPERIMENTS. THEY WERE GIVEN CELLS TO CULTURE. THEY WERE GIVEN EXPERIMENTS TO DO. AND THEY'RE REALLY ENTHUSIASTIC. THEY REALLY GOT INTO IT.

THIS IS DARIEN HARE (PHONETIC). NOW, DARIEN IS A STUDENT AT LIFELINE EDUCATION CHARTER SCHOOL. AND HE SAID, "I HAD NO CLUE THAT WITH ONE CELL YOU CAN GET SO MUCH OUT OF IT. SO IT'S ACTUALLY OPENED MY MIND TO SEE WHAT ELSE I CAN GET OUT OF LIFE." NOW, DARIEN, WHEN HE SIGNED UP FOR THIS, DIDN'T REALLY KNOW AN AWFUL LOT ABOUT STEM CELLS, BUT HE SAID AFTERWARDS HE'S JUST REALLY -- HE FINDS SCIENCE FASCINATING NOW AND IT'S REALLY CHANGED THE WAY HE THINKS ABOUT SCIENCE IN GENERAL.

DARIEN ALSO SAID THAT HE DIDN'T KNOW THAT YOU HAD TO KEEP YOUR WORK SPACE REALLY, REALLY CLEAN. AND HE SAID HE FOUND IT STRANGE THAT HE SPENT PROBABLY AS MUCH TIME TIDYING UP HIS WORK AREA AS HE DID DOING THE EXPERIMENTS. AND AS CHAIRMAN THOMAS SAID, I'D HATE TO SEE HIS BEDROOM.

ANOTHER STUDENT, LYNN WANG, LYNN COMES FROM MIRACOSTA HIGH SCHOOL, SAID THE COURSE HAD SOME SURPRISES, SAYING, "NO MATTER WHAT YOUR TEXTBOOK

SAYS, CELLS ARE NOT COLOR CODED." SO THAT'S A LITTLE BIT DISAPPOINTING. BUT THEN SHE ADDED THAT THE SECOND THING I LEARNED IS THAT SCIENCE DOES ULTIMATELY IMPACT THE PEOPLE OUTSIDE THE LAB.

THE STUDENTS WERE ALL INSPIRING, AND SO ALL SUMMER LONG WHAT WE'RE DOING IS WE'RE TRYING TO ENGAGE THEM AND KIND OF TAP INTO THAT LEVEL OF EXCITEMENT AND ENTHUSIASM BY GETTING THEM TO SEND US PHOTOS AND VIDEOS AND BLOGS SO THAT WE CAN POST THEM ON OUR WEB SITE AND SHARE IT WITH OTHER PEOPLE. AND IF YOU DON'T THINK THEY'RE ALSO HAVING FUN WHILE THEY'RE DOING THAT, I WANT TO SHOW YOU A VIDEO NOW. THIS IS A VIDEO MADE BY TWO CREATIVITY STUDENTS WHO WERE STUDYING AT CHILDREN'S HOSPITAL AND RESEARCH INSTITUTE IN OAKLAND, SO IT'S A SHAME BERT LUBIN ISN'T HERE TO SEE THIS.

IN IT THEY MAKE UP THEIR OWN LYRICS FOR A SONG ABOUT THE WORK IN THE LAB. AND WHILE THE LYRICS AREN'T ALWAYS EASY TO MAKE OUT, I THINK THEIR ENTHUSIASM IS.

APPARENTLY IT'S A PLAY ON THE CUP SONG BY NANA KENDRICK.

(VIDEO WAS THEN SHOWN, NOT REPORTED NOR HEREIN TRANSCRIBED.)

MR. MC CORMACK: AMY INFORMS ME THAT'S

ALSO FROM THE MOVIE *PITCH PERFECT* NOW PLAYING AT LOCAL THEATERS. WELL, ACTUALLY IT'S NOT.

SO AS YOU CAN SEE, IT'S ALWAYS FUN SEEING THESE KIND OF VIDEOS AND BLOGS COME IN BECAUSE THEY'RE JUST SO ENTHUSIASTIC. AND SO WE'VE BEEN HAVING A GOOD TIME KIND OF SEEING THEM COMING IN AND THEN POSTING THEM ON OUR ALL SOCIAL MEDIA SITES.

AND THAT LEADS ME QUITE NEATLY TO WHAT'S COMING UP AT AN UPCOMING BOARD MEETING, WHICH IS AMY ADAMS WHO'S GOING TO BRING AN UPDATE ON ALL THE CHANGES WE'VE MADE TO OUR WEB SITE OVER THE LAST YEAR AND HOW WE'RE USING SOCIAL MEDIA IN DIFFERENT WAYS NOW TO TRY AND GET OUT TO A DIFFERENT AUDIENCE AND TO INCREASE THE NUMBER OF PEOPLE WHO ARE COMING TO OUR WEB SITE AND LEARNING ABOUT THE WORK THAT WE DO.

SO THANK YOU. AND WITH THAT, I'M HAPPY TO ANSWER ANY QUESTIONS. SPEECHLESS. I LIKE THAT.

CHAIRMAN THOMAS: THAT WAS A GREAT REVIEW OF A LOT OF REALLY GOOD EVENTS.

MR. MC CORMACK: YEAH. THEY WERE FUN.

CHAIRMAN THOMAS: I THINK IT'S ALL PART OF GETTING THE MESSAGE MORE AND MORE OUT TO THE PUBLIC. SO VERY NICE WORK, KEVIN AND THE REST OF THE COMMUNICATIONS TEAM.

ARE THERE ANY OTHER ITEMS THAT ANYBODY WOULD LIKE TO BRING UP HERE, BOARD MEMBERS OR MEMBERS OF THE PUBLIC? IN THAT CASE, THE ICE CREAM SANDWICHES HAVE YOUR NAMES ON THEM.

JAMES WANTED ME TO POINT OUT THAT IN HONOR OF DUANE, HE'S WEARING A VERY THIN TIE. AND DR. STEWARD WANTED TO POINT OUT THAT HE IS LIKEWISE HONORING DUANE BY BEING EVEN MORE SARTORIAL AND ACTUALLY WEARING A SUIT TO TODAY'S MEETING. FIRST TIME EVER. SO ON THAT NOTE AND OUR CONTINUED BEST WISHES TO DUANE, THANK YOU, EVERYBODY. AND WE WILL SEE YOU LATE AUGUST.

(THE MEETING WAS THEN CONCLUDED AT 2:34 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

HILTON SAN FRANCISCO AIRPORT BAYFRONT
600 AIRPORT BOULEVARD
BURLINGAME CALIFORNIA
ON
JULY 25, 2013

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

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