BEFORE THE

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

REGULAR MEETING

LOCATION:	CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE 1999 HARRISON STREET, SUITE 1650 OAKLAND, CALIFORNIA
DATE:	DECEMBER 13, 2018 10 A.M.
REPORTER:	BETH C. DRAIN, CSR CA CSR. NO. 7152
FILE NO.:	2018-19

I N D E X

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DECEMBER 13, 2018; 10 A.M.

CHAIRMAN THOMAS: WOULD LIKE TO WELCOME EVERYBODY TO THE DECEMBER 2018 REGULAR MEETING OF THE INDEPENDENT CITIZENS OVERSIGHT COMMITTEE AND THE APPLICATION REVIEW SUBCOMMITTEE OF CIRM. BEAUTIFUL DAY IN DOWNTOWN OAKLAND. WITHOUT FURTHER ADO, MARIA, WILL YOU PLEASE CALL THE ROLL?

MS. BONNEVILLE: GEORGE BLUMENTHAL.

DR. BLUMENTHAL: HERE.

MS. BONNEVILLE: LINDA BOXER. LARS BERGLUND.

DR. BERGLUND: HERE.

MS. BONNEVILLE: DEBORAH DEAS.

DR. DEAS: HERE.

MS. BONNEVILLE: ANNE-MARIE DULIEGE.

DR. DULIEGE: HERE.

MS. BONNEVILLE: JUDY GASSON.

DR. GASSON: HERE.

MS. BONNEVILLE: BERT LUBIN.

DR. LUBIN: HERE.

MS. BONNEVILLE: DAVID HIGGINS.

DR. HIGGINS: HERE.

MS. BONNEVILLE: STEPHEN JUELSGAARD.

MR. JUELSGAARD: HERE.

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MS. BONNEVILLE: SHERRY LANSING. LINDA MALKAS.

DR. MALKAS: HERE.

MS. BONNEVILLE: DAVE MARTIN.

DR. MARTIN: HERE.

MS. BONNEVILLE: SHLOMO MELMED.

DR. MELMED: HERE.

MS. BONNEVILLE: LAUREN MILLER.

MS. MILLER: HERE.

MS. BONNEVILLE: ADRIANA PADILLA.

DR. PADILLA: HERE.

MS. BONNEVILLE: JOE PANETTA.

MR. PANETTA: HERE.

MS. BONNEVILLE: FRANCISCO PRIETO.

DR. PRIETO: HERE.

MS. BONNEVILLE: ROBERT QUINT. SUZANNE SANDMEYER.

DR. SANDMEYER: HERE.

MS. BONNEVILLE: JEFF SHEEHY. OSWALD STEWARD.

DR. STEWARD: HERE.

MS. BONNEVILLE: JONATHAN THOMAS.

CHAIRMAN THOMAS: HERE.

MS. BONNEVILLE: ART TORRES.

MR. TORRES: HERE.

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MS. BONNEVILLE: KRISTINA VUORI.

DR. VUORI: HERE.

MS. BONNEVILLE: DIANE WINOKUR. DOUG SEDANIS.

DR. SEDANIS: HERE.

CHAIRMAN THOMAS: THANK YOU, MARIA. I WANTED TO START BY NOTING THAT A NUMBER OF YOU HAVE BEEN KIND ENOUGH TO COMMENT ON MY HOLIDAY TIE. I WOULD LIKE TO POINT OUT I WAS PLANNING ON WEARING A DODGER TIE TO THIS MEETING, BUT THINGS DIDN'T QUITE WORK OUT THE WAY WE HOPED, SO HOLIDAY TIE IT IS.

MARIA, CAN YOU PLEASE LEAD US IN THE PLEDGE OF ALLEGIANCE.

(THE PLEDGE OF ALLEGIANCE.)

CHAIRMAN THOMAS: OKAY. WE'LL PROCEED TO THE CHAIR'S REPORT. YES, MR. SENATOR.

MR. TORRES: MR. CHAIRMAN, WE LOST A GREAT CALIFORNIAN YESTERDAY. JUSTICE WILLIAM NEWSOM, FATHER OF OUR GOVERNOR-ELECT, WHO I HAD THE HONOR OF KNOWING FOR MANY YEARS AND PROBABLY ONE OF THE BRIGHTEST MINDS ON THE APPELLATE COURT, PASSED AWAY YESTERDAY AT THE AGE OF 84 IN SAN FRANCISCO. AND I WOULD LIKE TO MOVE THAT WE ADJOURN THIS BOARD MEETING IN HONOR OF JUSTICE NEWSOM.

CHAIRMAN THOMAS: THANK YOU, MR. SENATOR.

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WE SHALL DO THAT.

FIRST ORDER OF BUSINESS, WE HAVE A NEW MEMBER TO WELCOME HERE, WHO IS DOUG ZIEDONIS, WHO IS DR. BRENNER'S ALTERNATE FROM UCSD. AND I'VE ASKED DOUG IF HE WOULD GIVE A FEW WORDS OF BACKGROUND TO THE BOARD.

DR. ZIEDONIS: THANK YOU. IT'S A PLEASURE TO BE ABLE TO SERVE WITH SUCH A GREAT, TERRIFIC GROUP HERE. I'M NEW TO UCSD. I CAME IN JUNE OF LAST YEAR AS THE ASSOCIATE VICE CHANCELLOR AND CHIEF ACADEMIC OFFICER AND WORKED CLOSELY WITH DR. BRENNER AS IT RELATES TO FACULTY MATTERS AND ALSO STUDENT ISSUES. AND WE'RE BUILDING A NEW SCHOOL OF PUBLIC HEALTH AT UCSD, WHICH ALSO FILLS MY DAY. I ALSO DO A LOT AS IT RELATES TO OUR GLOBAL ACTIVITY. THANK YOU FOR THE OPPORTUNITY TO BE HERE.

CHAIRMAN THOMAS: THANK YOU AND WELCOME ABOARD.

SO I'M GOING TO MOVE NEXT TO A REPORT ON THE BRIDGE FUNDRAISING, SORT OF A YEAR-IN-REVIEW SUMMARY. AS YOU RECALL, THROUGH THE END OF LAST YEAR, WE HAD SECURED 7 MILLION FROM BILL BOWES AND PITCH JOHNSON. WE TALKED ABOUT THAT EARLIER. AT OUR DECEMBER BOARD MEETING LAST YEAR, WHEN WE REPORTED ON THE FACT WE WERE AWARE WE'RE GOING TO BE

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OUT OF FUNDS POTENTIALLY BY THE END OF 2019, WE TALKED ABOUT A COUPLE THINGS. ONE, BOB KLEIN WAS HERE AND TALKED ABOUT HIS POTENTIAL INTENT TO RUN A NEW BOND MEASURE IN THE NOVEMBER 2020 GENERAL ELECTION FOR $5 BILLION.

WE ALSO AT THAT MEETING DISCUSSED THE FACT THAT WE WOULD LIKE TO BE ABLE TO KEEP THINGS GOING AT A NORMAL PACE BETWEEN THE TIME WE HAD RUN OUT OF MONEY, WHICH WE ANTICIPATED TO BE LATE 2019, AND THE ELECTION. AND SO WE DECIDED AT THAT POINT THAT WE WOULD LOOK TO PURSUE BRIDGE FUNDING TO FILL THAT GAP IDEALLY IN AN AMOUNT EQUAL TO ROUGHLY THE AVERAGE OF WHAT WE PUT OUT OVER THE LAST FEW YEARS.

SO THE VISION AT THAT TIME WAS TO RAISE BRIDGE FUNDS TO NOT ONLY GO THROUGH 2020, BUT, IF SUCCESSFUL IN 2020, THE NEXT ACTUAL REALIZATION OF BOND PROCEEDS WOULD BE IN THE SPRING ISSUANCE BY THE STATE TREASURER OF BONDS ON BEHALF OF ALL STATE AGENCIES FUNDED OUT OF THE STATE TREASURER'S OFFICE. SO IT WOULD REALLY BE GETTING FROM LATE 2019 TO SPRING OF 2021.

THE IDEA WAS ALL OF THAT MONEY HAD TO BE RAISED IN A STAGGERED WAY THROUGH THE LAST INSTALLMENT IN THE MIDDLE OF 2020. A NOTE THAT THIS IS JUST REFERRING TO RESEARCH FUNDS. WE HAVE ADMIN

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FUNDS EARMARKED CURRENTLY ALL THE WAY THROUGH 2023.

THE STRATEGY AT THAT POINT TO PURSUE THE VISION WAS TO IDENTIFY MOST LIKELY PARTIES INTERESTED IN MEDICAL RESEARCH BOTH IN CALIFORNIA AND IN THE REST OF THE COUNTRY. WE SPENT A GREAT DEAL OF TIME DOING THAT.

SECONDLY, TO TAILOR THE ASKS TO SPECIFIC CANDIDATES THAT WE FELT WOULD BE THE MOST SUCCESSFUL IN TERMS OF WHAT WE WERE PITCHING.

THIRDLY, TO APPROACH THOSE CANDIDATES EITHER DIRECTLY OR THROUGH THIRD-PARTY INTERMEDIARIES WELL KNOWN TO THE CANDIDATES. AND THE THEORY THERE IS NOT ONLY IS HOW YOU ASK IMPORTANT, BUT WHO GETS YOU IN THE DOOR TO ASK IS VITAL. SO WE'VE SPENT A LOT OF TIME ANALYZING WHO THE CORRECT THIRD-PARTY INTERMEDIARY WOULD BE WHO WOULD HAVE INDIVIDUAL AND DIRECT CONTACT WITH THE CANDIDATES IN QUESTION.

WE'VE HAD WEEKLY MEETINGS OF OUR FUND-RAISING TEAM, CONSISTING OF MYSELF, MARIA MILLAN, MARIA BONNEVILLE, SCOTT TOCHER, AND ELIANA BARNETT, TO DISCUSS STRATEGY AS WE CONTINUE TO UPDATE. AND WE HAVE COORDINATED WITH BOB KLEIN'S OFFICE AND WITH MELISSA KING OF BOB KLEIN'S OFFICE ON THESE DISCUSSIONS.

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THE PLAN TO IMPLEMENT THE STRATEGY IS TO OFFER A MENU OF FUND-RAISING OPTIONS INCLUDING CHARITABLE GIFTS, THE LOAN PRODUCT THAT WE DISCUSSED THAT TIED TO THE ELECTION, PROGRAM-RELATED INVESTMENTS, AND OTHER DERIVATIVES OF THOSE IDEAS. WE DEVELOPED THAT MENU OF OPTIONS IN CONSULTATION WITH LEGAL COUNSEL, BOND COUNSEL FOR THE STATE, THE STATE TREASURER'S OFFICE, THE STATE CONTROLLER'S OFFICE, AND OTHER OUTSIDE PARTIES WITH RELEVANT INPUT, SUCH AS THOSE THAT HAVE HAD PROGRAMS THAT WE MIGHT WISH TO EMULATE. NOTE THAT WE'RE ASKING FOR A VARIETY OF THINGS, INCLUDING UNRESTRICTED GIFTS OR LOANS OR GIFTS OR LOANS TO SPECIFIC PROJECTS OR CONDITIONS OR WHATEVER.

THE IDEA WITH THE GIFT WOULD BE, OR LOAN, IF YOU PUT MONEY IN, NOT ONLY WOULD IT ENABLE THE BRIDGE PERIOD, BUT IT WOULD ALLOW FOR GIVING US THE MOST CREDIBLE SHOT OF GETTING AN ELECTION PASSED IN 2020, AT WHICH TIME, WHATEVER YOUR PARTICULAR INTEREST WOULD BE, IF THE MEASURE PASSED, YOU WOULD HAVE A TREMENDOUS LEVERAGING EFFECT. SO IF YOU WERE TO PUT IN, FOR EXAMPLE, 50 MILLION AND THE MEASURE PASSED, YOU'VE HAVE A HUNDRED-TO-ONE LEVERAGE THAT WOULD RESULT FROM THAT, A GOOD CHUNK OF WHICH COULD GO TOWARDS WHATEVER YOUR SPECIFIC INTEREST WAS.

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SO AS WE'VE BEEN DEVELOPING THOSE IDEAS, WE'VE BEEN REFINING THE ASKS AS WE'VE GONE ALONG IN TERMS OF WHAT FEEDBACK WE GET AS TO WHAT SOUNDS MORE APPEALING OR LESS APPEALING.

TO DATE, IMPLEMENTING THAT PLAN, WHICH IS CONNECTED TO THE STRATEGY, WE'VE MET OR HAD CONFIDENTIAL CALLS WITH DOZENS OF STAKEHOLDERS, INCLUDING ULTRA HIGH NET WORTH INDIVIDUALS WHETHER INDIVIDUALLY OR IN GROUPS.

I REFERENCED AN EVENT THAT BOB AND I DID IN THE SUMMER IN THE PALO ALTO AREA FOR A NUMBER OF FAMILY OFFICES. WE'VE ALSO TALKED, MET WITH MAJOR FOUNDATIONS, WITH CORPORATIONS WHO HAVE AN INTEREST IN THE MEDICAL RESEARCH SPACE, AND WITH NUMEROUS THIRD-PARTY INTERMEDIARIES OF THE KIND I DESCRIBED EARLIER.

THE WAY IT SORT OF IS BROKEN DOWN, BEEN LOOKING AT FUNDING EITHER CIRM GENERALLY OR WITH RESPECT TO SPECIFIC PROJECTS, WHICH I'VE SORT OF TAKEN THE LEAD ON. MARIA MILLAN HAS DONE A LOT OF GREAT WORK IN DEVELOPING PROJECT-SPECIFIC RELATED ASKS FOR DIFFERENT INITIATIVES THAT CIRM EITHER HAS OR WOULD CONSIDER HAVING THAT WOULD GET THE FUNDRAISERS IN THE GAME.

TO DATE, AS YOU MIGHT EXPECT, A NUMBER OF

THE MEETINGS THAT WE'VE HAD, THE PEOPLE WE HAVE TALKED TO HAVE, AS FAR AS THE PITCHES GO, EITHER DECLINED RESPECTFULLY, OTHERS ARE ONGOING AS WE SPEAK.

SINCE THE LAST BOARD MEETING, WE'VE CONTINUED OUR STRATEGY DISCUSSIONS OF THIRD-PARTY INTERMEDIARIES. WE'VE HAD SEVERAL APPROACHES TO SPECIFIC ULTRA HIGH NET WORTH INDIVIDUALS EITHER IN PERSON OR THROUGH THESE INTERMEDIARIES. AS BEFORE, A NUMBER OF THOSE HAVE DECLINED; HOWEVER, THERE ARE A NUMBER OF THOSE DISCUSSIONS WHICH ARE ONGOING.

WE'VE CALENDARED A NUMBER OF MEETINGS WITH POTENTIAL STAKEHOLDERS BETWEEN NOW AND THE NEXT BOARD MEETING, INCLUDING MEETINGS WITH MAJOR FOUNDATIONS, ULTRA HIGH NET WORTH, AGAIN, EITHER IN PERSON OR THROUGH THIRD-PARTY INTERMEDIARIES. IN ADDITION, WE HAVE TWO GROUP MEETINGS SIMILAR TO THE ONE WE HAD IN THE SUMMER WITH FAMILY OFFICES SCHEDULED FOR THE FIRST QUARTER, WHICH ARE ONE IN SAN DIEGO AND ONE IN LOS ANGELES.

SO THAT IS SORT OF WHERE WE ARE AT THIS POINT. WE CONTINUE TO LOOK FOR OUR ANCHOR INVESTOR. AND IF WE CAN DO THAT, THE STRATEGY IS WHEN YOU GET THE ANCHOR INVESTOR ON BOARD, THAT ANCHOR INVESTOR TYPICALLY HAS A NUMBER OF FRIENDS THAT HE OR SHE CAN

THEN ROPE INTO THE FOLD.

WE'RE ALSO GOING TO FOCUS MORE BEYOND THE ANCHOR INVESTMENT TO THE SMALLER POTENTIAL GIFTS. WE'VE SPENT A GREAT DEAL OF OUR TIME ON THE ANCHOR EFFORT. AND WE WILL BE, AS WE HAVE SUCCESSES, REPORTING IN REAL TIME BACK TO THE BOARD AND IN THE NEXT IN-PERSON MEETING IN MARCH. SO THAT'S A REVIEW OF THE YEAR.

ARE THERE QUESTIONS? THANK YOU. THAT IS MOST DEFINITELY A SUBJECT TO BE CONTINUED AND CONTINUED AND CONTINUED.

WE'VE HAD A NUMBER OF ISSUES THAT ARE SORT OF MACRO ISSUES THAT HAVE CONTINUED TO CROP UP IN THE LAST COUPLE MONTHS SINCE OUR LAST BOARD MEETING. WE'VE DISCUSSED THIS WHOLE NOTION OF STEM CELL TOURISM AND THE PROBLEMS SURROUNDING THAT BOTH IN CALIFORNIA AND BEYOND. I DID AN INTERVIEW FOR CBS ON THAT SUBJECT THAT WAS AN INVESTIGATIVE REPORT DONE DOWN IN LOS ANGELES THAT GOT A REASONABLE AMOUNT OF AIRING. HEARD FROM A NUMBER OF PEOPLE.

ANOTHER THING THAT'S COME UP IS A MACRO ISSUE WHICH FUNDAMENTALLY APPLIES TO WHAT CIRM DOES IS THIS NOTION OF THE ADMINISTRATION PUTTING A BAN ON NIH WITH RESPECT TO FETAL TISSUE. AND I'VE ASKED MR. SHEEHY IF HE WOULD COMMENT ON THIS BECAUSE HE'S

BEEN OUT IN FRONT ON THIS ISSUE AND HAS A GREAT QUOTE FOR THOSE OF YOU WHO HAVEN'T SEEN THE MOST RECENT BLOG ON THE SUBJECT. I'VE ASKED HIM IF HE WOULD COMMENT ABOUT THIS AND GIVE HIS PERSPECTIVE. MR. SHEEHY.

MR. SHEEHY: THANK YOU, CHAIRMAN THOMAS. WHAT REALLY SEEMS STRANGE IS THAT THE PARTICULAR TARGET, THE TWO IMMEDIATE PROJECTS THAT HAVE BEEN TARGETED, ARE BOTH HIV RELATED, WHICH DOESN'T NECESSARILY MAKE SENSE BECAUSE CERTAINLY FETAL TISSUE RESEARCH ISN'T JUST LIMITED TO HIV. IT'S UNFORTUNATE THAT THE ONE PROJECT AT UCSF IS ONE WHICH HAS LED TO THE DEVELOPMENT OF SEVERAL ANTIRETROVIRAL MEDICATIONS. AND I BELIEVE -- I DON'T KNOW IF IT WAS IN IRV WEISSMAN'S LAB -- BUT I THINK THESE MICE ARE ACTUALLY -- I THINK IT'S IRV'S LAB. I KNOW THAT DEVELOPING THESE MICE OF HUMAN IMMUNE SYSTEMS HAVE PLAYED A CRITICAL ROLE, NOT ONLY IN DEVELOPING HIV MEDICATIONS, BUT IN DEVELOPING VACCINES. I THINK IN MANY, MANY OF OUR PROJECTS, WE USE THESE MICE TO TEST THE IMMUNOGENICITY OF THESE CELL THERAPIES.

I THINK IT REALLY IS EXTREMELY UNFORTUNATE THAT THIS IS HAPPENING RIGHT NOW, AND IT IS REALLY, I THINK, A FAIRLY STARK THREAT TO THE HEALTH OF

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MILLIONS OF AMERICANS. CERTAINLY ANY NEW VIRAL EPIDEMIC, WE WOULD NEED THESE MICE IN ORDER TO DEVELOP A VACCINE. THEY'RE USING THESE MICE TO DEVELOP VACCINES FOR EBOLA.

SO IT REALLY IS MYSTIFYING TO ME HOW -- IT SEEMS TO BE THE PERSON IN CHARGE OF THIS PARTICULAR EFFORT SEEMS TO BE A RESPECTED SCIENTIST AND SOME ENGAGEMENT WITH THE BIOTECH FIELD, AND IT JUST DOESN'T MAKE ANY SENSE. THIS REALLY GOES TO THE HEART OF WHY CIRM WAS ESTABLISHED WAS PRECISELY TO DEAL WITH TRULY ANTISCIENCE ACTIVITIES THAT COME OUT OF MISGUIDED FEDERAL ACTION. AND I HOPE THAT THIS GETS REVERSED, BUT I ALSO THINK THAT WE SHOULD BE PREPARED TO STEP UP WHERE WE CAN TO FILL THIS GAP BECAUSE THIS RESEARCH IS ABSOLUTELY VITAL.

CHAIRMAN THOMAS: THANK YOU, MR. SHEEHY. ARE THERE ANY COMMENTS ANYBODY WANTS TO ADD ON THAT PARTICULAR TOPIC?

I THINK THE OBVIOUS CONCERN THAT FOLLOWS FROM THIS IS TO WHETHER OR NOT THE ADMINISTRATION IS GOING TO GO BEYOND THAT TO TAKE A POSITION ON FUNDING AT NIH FOR STEM CELL RESEARCH IN GENERAL, WHICH WE'VE SORT OF BEEN THERE, DONE THAT IN THE PAST, AND WHAT THE IMPLICATIONS OF THAT WOULD BE FOR THE FIELD, WHICH WOULD BE VERY SIGNIFICANT AND

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HIGHLY DETRIMENTAL. SO WE'LL JUST KEEP AN EYE OUT ON THAT.

THE NEXT THING I WANTED TO TALK ABOUT IS, AS YOU WILL HEAR MORE FROM DR. PATEL DURING THE PRESIDENT'S REPORT, WE HAVE AN INCREASINGLY ROBUST EFFORT TO REACH OUT TO ENGAGE INDUSTRY TO FORM ALLIANCES WITH OUR INVESTIGATORS, WHETHER THEY'RE IN ACADEMIA OR WITH COMPANIES OR WHATEVER, IN THE FORM OF SOMETHING CALLED OUR INDUSTRY ALLIANCE PROGRAM OR IAP.

I'VE HAD A COUPLE OF MEETINGS WITH PROMINENT VENTURE FUNDS THAT ARE NOW GETTING MORE BACK INTO THE CELLULAR THERAPY SPACE, WHICH WE DISCUSSED YESTERDAY, WE'RE GOING TO SUGGEST THEY CONSIDER THE IAP. AND DR. PATEL WILL DESCRIBE MORE WHAT THE IAP DOES IN GENERAL. BUT FOR THE PURPOSES OF THIS REPORT, WHAT I THOUGHT WOULD BE INTERESTING, BECAUSE WE REALLY HAVEN'T HAD THE BENEFIT OF THE COMMENT, IS THERE'S A VERY MAJOR EFFORT TO DEVELOP BIOTECH IN GENERAL THROUGHOUT THE STATE AND CELLULAR THERAPY-RELATED BIOTECH SPEARHEADED BY JOE PANETTA AND HIS ORGANIZATION. I THOUGHT IT WOULD BE HELPFUL FOR THE BOARD TO HAVE JOE SPEAK FOR A FEW MINUTES ON WHAT HE'S DOING BECAUSE IT DEFINITELY JIVES WITH THIS WHOLE NOTION OF INDUSTRY ENGAGEMENT. MR.

PANETTA.

MR. PANETTA: THANK YOU, MR. CHAIRMAN. I WANT TO BEGIN BY THANKING YOU FOR SERVING ON OUR ADVISORY COMMITTEE IN THE NASCENT, BUT QUICKLY GROWING LIFE SCIENCE COMMUNITY IN LOS ANGELES. JUDY HAS DONE THE SAME. SO WE APPRECIATE THE SERVICE THAT YOU'VE PUT INTO THAT.

SO J.T. ASKED ME TO DO THIS THIS MORNING, AND I SAID THIS MAKE SENSE. I'VE BEEN ON THIS BOARD FOR A WHILE, BUT MAYBE SOME OF YOU WONDERED WHAT DOES THIS GUY DO BESIDES SHOWING UP FOR MEETINGS. SO I'VE RUN AN ORGANIZATION CALLED BIOCOM, WHICH IS ACTUALLY SHORTHAND FOR WHAT WAS CREATED AS THE SAN DIEGO BIOCOMMERCE ASSOCIATION WAY BACK IN 1995, WHICH WAS ALSO AN OUTGROWTH OF AN EARLIER ORGANIZATION THAT WAS CREATED IN SAN DIEGO IN THE LATE '80S CALLED THE BIOMEDICAL INDUSTRY COUNCIL. SO ALL THIS COINCIDED WITH THE EARLY STAGE GROWTH OF THE LIFE SCIENCE COMMUNITY DOWN IN SAN DIEGO.

AND THE IDEA BEHIND BIOCOM AT THE TIME WAS TO BEGIN TO ENGAGE WITH ELECTED AND APPOINTED OFFICIALS TO MAKE THEM FAMILIAR WITH THE WORK THAT WE WERE BEGINNING TO DO IN THE LIFE SCIENCE INDUSTRY AND THE ECONOMIC DRIVER THAT WE EXPECTED THAT THE LIFE SCIENCE COMMUNITY WOULD BECOME IN THE YEARS

BEYOND THOSE EARLY STAGES OF CREATING THE ORGANIZATION.

SO WE FLASH FORWARD TO TODAY. BIOCOM IS NOW SHORTHAND FOR WHAT WE REFER TO AS THE LIFE SCIENCE ASSOCIATION OF CALIFORNIA WITH 1200 MEMBER COMPANIES AND ACADEMIC AND RESEARCH INSTITUTIONS AND SERVICE PROVIDERS ACROSS THE STATE AND OFFICES IN NOT ONLY SAN DIEGO, BUT ABOUT TWO YEARS AGO AN OFFICE THAT WE OPENED IN LOS ANGELES, AND IN SEPTEMBER AN OFFICE THAT WE OPENED UP HERE IN SAN FRANCISCO, A LOBBYING OFFICE IN SACRAMENTO, ANOTHER LOBBYING OFFICE IN WASHINGTON D.C. AND A MEMBERSHIP OFFICE IN TOKYO, WHICH SERVES ABOUT 50 OF OUR INTERNATIONAL MEMBERS THERE.

BIOCOM HAS A VERY-WELL DEFINED, STRAIGHTFORWARD MISSION. IT'S SIMPLY TO ACCELERATE THE SUCCESS OF THE LIFE SCIENCE COMMUNITY HERE IN CALIFORNIA. AND WE DO THAT IN FIVE WAYS. THE ADVOCACY WORK THAT WE DO FOR THE INDUSTRY, PUBLIC POLICY AND LOBBYING WORK, CAPITAL FORMATION IN HELPING COMPANIES TO RAISE VENTURE CAPITAL, ANGEL CAPITAL, AND TO CONNECT WITH PARTNERS IN THE BIOPHARMACEUTICAL INDUSTRY TO HOPEFULLY CREATE LICENSING AND BUSINESS PARTNERSHIPS BETWEEN THEM. TO DEVELOP THE WORKFORCE IN CALIFORNIA THROUGH THE

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BIOCOM INSTITUTE, WHICH WORKS WITH UNIVERSITIES AND HIGH SCHOOLS AND ALSO PROVIDES SHORT-TERM TRAINING PROGRAMS FOR EMPLOYEES. A FOR-PROFIT SUBSIDIARY CALLED THE BIOCOM PURCHASING GROUP THAT DOES ABOUT $150 MILLION IN SALES THROUGH CONTRACTS THAT WE HAVE WITH LAB SUPPLIES VENDERS AND OTHERS WHO PROVIDE SERVICES TO THE LIFE SCIENCE COMMUNITY. AND THEN FINALLY ABOUT 120 OR SO DIFFERENT TYPES OF CONFERENCES AND EVENTS THAT WE DO THROUGHOUT THE YEAR TO BRING INDUSTRY TOGETHER.

I THINK OUR MOST SIGNIFICANT START IN LOBBYING WAS IN 2004 WHEN BOB KLEIN CAME TO TALK TO US ABOUT WHAT WAS THEN PROPOSITION 71. AND WE ENGAGED THROUGH A LOT OF EFFORT BY A FORMER, NOW DECEASED, MEMBER OF THIS COMMITTEE, DWAYNE ROTH, WHO WAS ON OUR BOARD AT THE TIME AND REALLY PUSHED US TO GET BEHIND THE INITIATIVE TO CREATE A STEM CELL AGENCY IN CALIFORNIA.

BUT OUR CURRENT MISSION IS REALLY TO BRING TOGETHER CALIFORNIA, TO BRING TOGETHER LIFE SCIENCE IN CALIFORNIA, AND BUILD BRIDGES BETWEEN THE VARIOUS LIFE SCIENCE COMMUNITIES AND AN ECONOMY HERE IN CALIFORNIA THAT IS CLEARLY THE LARGEST LIFE SCIENCE ECONOMY IN THE WORLD. WE ENGAGE IN ABOUT $320 BILLION IN ECONOMIC ACTIVITY IN LIFE SCIENCE. WE'VE

GOT ROUGHLY 12,000 LIFE-SCIENCE RELATED COMPANIES THAT WORK IN AREAS SUCH AS MEDICAL DEVICES, PROVIDING THE TOOLS THAT COMPANIES WORK WITH, BIOMANUFACTURING, BIORENEWABLES, AND BIOPHARMACEUTICALS, AND WE EMPLOY ROUGHLY 320,000 PEOPLE IN THE LIFE SCIENCE INDUSTRY HERE.

SO IT'S BECOMING A HUGE, HUGE DRIVER WITHIN THE STATE, ESPECIALLY WITH THE GROWTH NOW OF LOS ANGELES. AND WHAT I'VE FOUND IN THE TWO YEARS THAT WE'VE BEEN IN LOS ANGELES IS THAT THERE'S AN INCREDIBLE WILL ON THE PUBLIC SIDE AND THE PRIVATE SIDE IN L.A. TO CREATE A SUCCESSFUL LIFE SCIENCE COMMUNITY THAT I THINK HAS THE POTENTIAL IN THE YEARS TO COME TO BECOME EVERY BIT AS SUCCESSFUL AS SAN DIEGO AND SAN FRANCISCO AND CONTINUE TO GROW THE ECONOMY.

SO THAT'S WHAT WE DO. WE'RE COMPLETELY PRIVATELY FUNDED. WE DON'T RECEIVE ANY STATE OR FEDERAL OR CITY MONEY TO DO THE WORK THAT WORK WE DO. IT'S ALL MEMBER DUES AND SPONSORSHIP AND OTHER KINDS OF SERVICES THAT WE PROVIDE. THANK YOU.

CHAIRMAN THOMAS: THANK YOU VERY MUCH, JOE. IT WAS VERY HELPFUL. I HOPE THAT WAS INFORMATIVE FOR THE BOARD. I THINK IT'S IMPORTANT THAT THE INDUSTRY CONTINUE TO TAKE UP MAJOR STEAM TO

UNDERSTAND WHAT THE ROLE IS THAT JOE'S ORGANIZATION IN HELPING TO MAKE THAT HAPPEN, WHICH IS VERY SIGNIFICANT. SO THANK YOU FOR YOUR WORK.

SO THAT CONCLUDES THE CHAIRMAN'S REPORT. WE'LL NOW TURN IT OVER TO DR. MILLAN FOR THE PRESIDENT'S REPORT.

DR. MILLAN: THANK YOU, MR. CHAIRMAN, MEMBERS OF THE BOARD, MEMBERS OF THE PUBLIC, AND CIRM TEAM. IT'S MY PLEASURE TO GIVE THE YEAR-END UPDATE FOR CIRM. AND AS WITH ANY PRESENTATION, WE POST THE MISSION, WHICH IS TO ACCELERATE STEM CELL TREATMENTS TO PATIENTS WITH UNMET MEDICAL NEEDS. THE MISSION HAS REALLY SERVED TO FOCUS US AND IS SOMETHING WE CAN POINT TO AND LOOK TO WHENEVER WE DO ANYTHING AT CIRM, AND THAT'S BEEN EXTREMELY HELPFUL.

JUST FOR A SUMMARY OF WHAT CIRM INVESTMENTS HAVE BEEN TO DATE, THE TOP LINE OF THE SLIDE INDICATES THE AMOUNT OF AWARDS FOR THE FIVE PILLARS THAT CIRM HAS FUNDED: FOR INFRASTRUCTURE, ALMOST 500 MILLION; EDUCATION, A LITTLE BIT OVER 200 MILLION; DISCOVERY, ALMOST 900 MILLION; TRANSLATION, 300; AND CLINICAL, 500, ALMOST 600 MILLION IN TOTAL.

AND THIS IS INCLUDING THE 2018 INVESTMENTS THUS FAR. AND AS YOU CAN SEE, THE SHIFT IN INVESTMENTS HAS BEEN TOWARD LATER STAGE PROGRAMS IN

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TRANSLATIONAL AND CLINICAL, CONSISTENT WITH OUR STRATEGIC PLAN AND CONSISTENT WITH DISCUSSIONS THAT HAVE OCCURRED HERE IN THIS MEETING.

THE BUDGET AS OF JANUARY 1, 2019, IN THE BIG BUCKET AND LITTLE BUCKET IN THE RESEARCH AND ADMINISTRATION ARE POSTED HERE. WE HAVE JUST A LITTLE BIT OVER A $140 MILLION LEFT TO ALLOCATE TO RESEARCH PROGRAMS AND JUST A LITTLE BIT UNDER 40 MILLION LEFT FOR ADMINISTRATIVE COSTS.

AS YOU KNOW, WE HAVE BEEN EXECUTING AND OPERATING ON A TRANSITION PLAN THAT WAS PRESENTED TO THIS BOARD. AND AS THE CHAIRMAN HAS STATED EARLIER, THE ADMINISTRATIVE FUND WILL ALLOW US TO CONTINUE, REGARDLESS OF THE 2020 OUTCOME, TO ADMINISTER THE PROGRAMS THAT WE FUND.

JUST AS A REMINDER, THIS WAS APPROVED AT THE LAST BOARD MEETING. THIS IS THE 2019 BUDGET ALLOCATION FOR THE RESEARCH FUNDS FOR THAT 140 MILLION THAT'S LEFT. THE MAJORITY OF IT WILL BE FOR CLINICAL PROGRAMS. AND AS YOU WILL RECALL, WE HAVE ENGAGED IN A VERY LANDMARK PARTNERSHIP WITH THE NIH FOR A CURE SICKLE CELL INITIATIVE, AND THIS BOARD HAS APPROVED SETTING ASIDE $30 MILLION THAT CAN MATCH NIH FUNDS TO FUND THOSE CURATIVE INITIATIVES.

AND THEN WE HAVE 20 MILLION FOR

TRANSLATIONAL, AND UNFORTUNATELY CURRENTLY, UNTIL WE GET BRIDGE FUNDING, WE DON'T HAVE ANY BUDGETED FOR DISCOVERY. WE DO HAVE EDUCATIONAL CONFERENCES THAT ARE ALREADY PLANNED AND ARE CRITICAL THAT WILL CONTINUE TO BE FUNDED.

SO I'M JUST GOING TO GO OVER WHERE WE ARE WITH THE STRATEGIC PLAN, AND THEN THE INTERESTING PART IS LATER. AFTER THIS TALK, I'LL BE INTRODUCING OUR TEAM MEMBERS WHO WILL BE UPDATING YOU ON HOW WE WERE ABLE TO ACHIEVE THIS.

SO JUST AS A REMINDER, WE CALL THIS THE BIG SIX. IN 2016 WE LAUNCHED THE STRATEGIC PLAN. THE OVERALL GOAL OF THE PLAN WAS TO INCREASE THE PROBABILITY OF SUCCESS OF STEM CELL REGENERATIVE MEDICINE THERAPIES TO GET TO PATIENTS. AND TO DO SO WE HAD GOALS TO INCREASE OUR PIPELINE, TO ACCELERATE BY ENACTING A NEW REGULATORY PARADIGM, BY PUTTING PROCESSES AND PRINCIPLES IN PLACE THAT INCREASE THE PROBABILITY THAT PROGRAMS WILL PROGRESS ALONG AND HIT THE CLINICS, AND THEN BY HAVING STRONG CLINICAL PROGRAMS TO INCREASE INDUSTRY ENGAGEMENT AND PULL SO THAT THESE PROGRAMS, SO THAT THESE PRODUCTS CAN BE BROUGHT TO MARKET AND TO PATIENTS.

SO I'M JUST SHOWING YOU WHERE WE ARE IN 2018, YEAR THREE, OF THE STRATEGIC PLAN FOR THESE

BIG SIX.

IN TERMS OF BUILDING THE PIPELINE, WE HAD A GOAL OF 50 NEW CANDIDATES IN FIVE YEARS, SO WE'RE A LITTLE BIT AHEAD OF THE CURVE, AND 36 NEW CANDIDATES. GIVEN THE SHIFT IN OUR ALLOCATION, WITH NO DISCOVERY PROGRAMS TO BE FUNDED GOING FORWARD, AS WELL AS A DECREASED AMOUNT FOR TRANSLATIONAL PROGRAMS, WE WILL RELY ON SOME INTERNAL PROGRAMS TO CONTINUE TO BUILD THE PIPELINE BY PROGRESSING TO THE NEXT STAGE, SO-CALLED PROGRESSION EVENTS. THE GOOD NEWS IS OUR PROGRESSION EVENTS ARE UP BY 110 PERCENT, WHICH FAR EXCEEDS THE GOAL OF INCREASING PROGRESSION EVENTS BY 50 PERCENT.

IN TERMS OF NEW REGULATORY PARADIGM, IN THE LAST MEETING DR. ABLA CREASEY GAVE AN UPDATE IN TERMS OF THE NEW PARADIGM THAT WAS MADE POSSIBLE BY THE 21ST CENTURY CURES ACT, IN WHICH THE FDA UNDERWENT AN OVERHAUL THAT WOULD ALLOW STEM CELL REGENERATIVE MEDICINE THERAPIES TO ACCESS AN EXPEDITED PATHWAY CALLED THE REGENERATIVE MEDICINE ADVANCED THERAPY DESIGNATION, WHICH INCREASES THE PROBABILITY OF SUCCESS OF PROGRAMS THAT ARE MAKING PROGRESS TO GET TO APPROVAL AND THEN COMMERCIALIZATION, PROVIDED THAT THEY MEET THE STANDARDS.

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BY ACTIVE ENGAGEMENT AND FREQUENT ENGAGEMENT WITH THE FDA, THAT IS THE MEANS BY WHICH WE CAN INCREASE THAT. WHERE CIRM PLAYS A ROLE IS WE ALSO HAVE ENGAGEMENT WITH THE FDA SO WE'RE ABLE TO ASSIST OUR PORTFOLIO PROGRAMS IN NAVIGATING THOSE WATERS. SO THE THERAPEUTICS TEAM UNDER DR. ABLA CREASEY'S LEADERSHIP HAS THE BENEFIT OF HAVING FIVE OF OUR PROGRAMS WITH THIS EXPEDITED PATHWAY DESIGNATION, WHICH IS REMARKABLE CONSIDERING THERE MAY BE 27 OR SO TOTAL IN THE COUNTRY.

THE NEXT GOAL OF ACCELERATING DEVELOPMENT WAS TO INCREASE OR CUT THE TIME IN HALF OF DEVELOPMENT CANDIDATES GETTING TO THE CLINICS, CUTTING IT DOWN TO FOUR YEAR. IN ORDER TO DO THAT, WHAT WE DID WAS SET GOALS IN TERMS OF HOW LONG OUR TRANSLATIONAL PROGRAMS WOULD GO AND HOW LONG OUR CLINICAL 1 PROGRAMS, WHICH ARE THE IND-ENABLING STAGE. AND BY BEING ABLE TO SET THOSE GOALS AND BY HAVING PROGRAM ANNOUNCEMENTS THAT INCORPORATE WITHIN IT CERTAIN CRITERIA IN TERMS OF READINESS, AND THROUGH ACTIVE ENGAGEMENT WITH OUR TEAM, WE HAVE HAD THE OPPORTUNITY TO DECREASE THE TIME FOR PROGRAMS TO GET TO AN IND FOR THE CLINICAL 1 PROGRAMS. AND FOUR OF OUR PROGRAMS HAVE ADVANCED AND OBTAINED AN IND WITH AN AVERAGE OF 17 MONTHS, WHICH IS A VERY

REMARKABLE ACCOMPLISHMENT. AND THAT'S WITH ACTIVE ENGAGEMENT BY OUR TEAM AS WELL AS OUR CLINICAL ADVISORY PANEL AND OTHER RESOURCES FROM OUR INFRASTRUCTURE. AND YOU WILL HEAR MORE FROM DR. CREASEY ABOUT HOW THAT HAPPENS.

IN TERMS OF EXPANDING OUR CLINICAL PORTFOLIO, OUR GOAL WAS 50 NEW CLINICAL TRIALS IN FIVE YEARS, 50 NEW CLINICAL TRIALS THAT WOULD BRING US UP TO 67 TOTAL CLINICAL TRIALS THAT CIRM WOULD HAVE FUNDED WITH THE PROPOSITION 71 FUNDS. AND SO IN YEAR THREE, WE'VE ADDED 32 NEW CLINICAL TRIALS, BRINGING OUR TOTAL TO 49 TRIALS THAT HAVE BEEN FUNDED BY CIRM IN ITS HISTORY. YOU WILL BE PRESENTED WITH A GWG RECOMMENDATION FOR A POTENTIAL 50TH TRIAL TODAY.

AND THEN IN TERMS OF THE FINAL GOAL OF THE BIG SIX, INCREASING INDUSTRY PULL. WHEN WE FIRST ROLLED OUT THE STRATEGIC PLAN WITH MY PREDECESSOR, DR. RANDY MILLS, THERE WAS AN ABSOLUTE LACK OF INDUSTRY ENGAGEMENT. THERE WERE VERY FEW PROGRAMS THAT WERE GETTING PARTNERSHIPS AND SIGNIFICANT INVESTMENT INTO THEM. AND SO WE'VE BEEN FORTUNATE THAT TO DATE WITH OUR GOAL OF 50 PERCENT OF OUR CLINICAL PROGRAMS BEING PARTNERED, WE HAVE 60 PERCENT OF OUR CLINICAL PROGRAMS PARTNERED. AND

JUST THIS YEAR ALONE, AND DR. SHYAM PATEL WILL GIVE MORE OF A BREAKDOWN OF THIS, BUT JUST THIS YEAR ALONE THERE HAVE BEEN $1.06 BILLION OF INDUSTRY INVESTMENT INTO OUR PROGRAMS BY WAY OF IPO'S, LICENSING, AND FOLLOW-ON SERIES INVESTMENTS.

AND WHAT HAS THIS RESULTED IN? OUR END POINT IS TO INCREASE THE NUMBER OF PROGRAMS THAT CAN GET TO THE CLINICS. THE WHOLE GOAL IS GET THESE TO THE CLINICS IN ORDER TO GET THEM TO PATIENTS. THEY NEED TO GO THROUGH THE CLINICAL TRIAL, A REGULATED, HIGH-QUALITY CLINICAL TRIAL. AND WE HAVE 49 TRIALS. AND, AS YOU CAN SEE, YOU'VE SEEN THIS SLIDE BEFORE, THIS IS A VARIETY OF DISEASE INDICATIONS IN A VARIETY OF ORGAN SYSTEMS AND WITH A VARIETY OF PLATFORMS UTILIZING STEM CELL REGENERATIVE MEDICINE.

AND THE GREAT THING ABOUT THIS IS, AS YOU KNOW, IT'S ON OUR WEBSITE, IT'S INTERACTIVE, SO YOU CAN GET UPDATES. THIS HAS BEEN -- KUDOS TO THE COMMUNICATIONS TEAM UNDER MARIA BONNEVILLE, KEVIN MCCORMACK, THAT THIS IS SOMETHING THAT'S ACCESSIBLE TO THE PUBLIC. IT IS SOMETHING WE'RE REPORTING TO THE PUBLIC CONTINUOUSLY BECAUSE THEY CAN ACCESS THIS INFORMATION, KNOW WHAT TRIALS HAVE BEEN FUNDED, HOW MUCH THEY RECEIVED, GET SOME UPDATES ON PRESS RELEASES AND DESCRIPTION, AND IT LINKS YOU TO THE

NIH CLINICALTRIALS.GOV.

AND THE CIRM-FUNDED CLINICAL TRIALS ARE CURRENTLY ONGOING. IT'S HAPPENING NOW. SO ENROLLMENT IS ALMOST AT 1200 DUE TO CIRM FUNDING. IN TERMS OF THE TOTAL ENROLLED IN THE TRIALS THEMSELVES, IT MAY BE GREATER. IT'S JUST THESE ARE THE ONES THAT WERE FUNDED BY CIRM IN TERMS OF EITHER CALIFORNIA PARTICIPANTS IN THE TRIAL OR CALIFORNIA COMPANIES THAT HAVE ENROLLED PATIENTS INTO CLINICAL TRIALS.

AND SO NOW WE GET TO THE MORE INTERESTING PART OF THE PRESENTATION. I'M GIVING YOU KIND OF THE OUTPUT, AND THIS IS NOW THE HOW TO. AND I CALL THIS INTEL INSIDE, BECAUSE IF YOU KNOW THE HISTORY OF INTEL, IT WASN'T UNTIL PEOPLE REALIZED THAT MICROPROCESSORS AND EVERYTHING ELSE THAT WERE INSIDE THE COMPUTERS, EVERYBODY JUST SAW THE COMPUTERS AND SAW THE OUTPUT, OUT REALLY -- SO THEY WERE HAVING PROBLEMS GETTING ENOUGH TRACTION; BUT WHEN THEY REALIZED THAT THEY NEEDED TO JUST TELL PEOPLE THERE IS INTEL INSIDE THAT MAKES ALL THIS RUN, THAT'S WHEN THEY GOT TRACTION AND NOW IS THE SECOND LARGEST FIRM OUT THERE.

BUT IN ANY CASE, OUR INTEL INSIDE OUR CIRM OPERATION, WE CALL THEM OUR VALUE PROPOSITION, HOW

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DO WE DO THINGS? AND IN ADDITION TO FUNDING THESE PROGRAMS, WE HAVE VERY CLEAR PARTNERSHIPS. WE'RE IN THE GAME WITH OUR GRANTEES, AND WE HAVE CRITICAL INFRASTRUCTURE TO HELP MOVE THE PROGRAMS ALONG. SO THE PRESENTATIONS YOU WILL BE HEARING NOW DESCRIBE SOME OF THIS.

DR. ABLA CREASEY, THE VP OF THERAPEUTICS AND STRATEGIC INFRASTRUCTURE; DR. SHYAM PATEL, ASSOCIATE DIRECTOR OF PORTFOLIO. AND THANK YOU, SHYAM PATEL, WHOSE TAKEN ON, ALONG WITH SOHIL TALIB, TAKEN ON THE ROLE OF BUSINESS DEVELOPMENT RECENTLY. AND THEY'VE BEEN DOING A SPECTACULAR JOB. THEY'RE VERY, VERY ADEPT AT HAVING WELL-INFORMED CONVERSATIONS WITH POTENTIAL PARTNERS. AND YOU WILL HEAR ABOUT THAT FROM SHYAM. AND THEN IMPROVING TRANSLATION, OF COURSE, OUR BELOVED PAT OLSON, WHO'S BEEN HERE, WE CALL HER OUR INSTITUTIONAL MEMORY, WHO HAS BEEN IN THE GAME WITH US ALL THE WAY THROUGH, AND SHE'LL BE GIVING YOU SOME VERY EXCITING UPDATES ON WHAT'S HAPPENED WITH OUR DISCOVERY AND SCIENTIFIC INFRASTRUCTURE PROGRAMS. AND THEN, FINALLY, KEVIN MCCORMACK WILL JUST GIVE YOU AN UPDATE IN TERMS OF HOW WE'RE COMMUNICATING OUR PROGRESS AND OUR PROGRAMS TO THE PUBLIC.

SO I'LL JUST PAUSE IN CASE THERE ARE ANY

QUESTIONS. OTHERWISE I'LL TURN IT TO DR. CREASEY. THANK YOU.

DR. CREASEY: THANK YOU, MR. CHAIRMAN, THE BOARD, MARIA, AND THE PUBLIC FOR HAVING ME SPEAK ABOUT THE STRATEGIC INFRASTRUCTURE IN THE CLINICAL ARENA.

I TEND TO BE SOFT-SPOKEN MOST OF THE TIME. SO OUR STRATEGIC INFRASTRUCTURE CONSISTS OF THREE PROGRAMS: ALPHA CLINICS NETWORK, THE CIRM ACCELERATING AND TRANSLATING CENTER IN PARTNERSHIP WITH IQVIA CELL AND GENE THERAPY CENTER. IF THE NAME IQVIA SOUNDS UNFAMILIAR TO YOU, IT'S THE FOLKS WHO DID QUINTILES I.M.S. THEY JUST CHANGED THEIR NAME ONCE THEY MERGED. AND THE LAST WOULD BE THE CLINICAL ADVISORY PANEL.

SO I'M GIVING YOU A BRIEF UPDATE ON THE CIRM INFRASTRUCTURE PROGRAMS IN ACCELERATING DEVELOPMENT.

SO THE ALPHA CLINICS NETWORK IS REALLY A BIG ENGINE.

(THE HOST PHONE CONNECTION WAS LOST. PLEASE REFER TO THE SLIDE PRESENTATION ATTACHED TO THE ITEM IN THE AGENDA FOR FURTHER INFORMATION THAT WAS NOT REPORTED NOR HEREIN TRANSCRIBED. WITH A TEMPORARY HOST LINE REINSTATED, THE FOLLOWING WAS

THEN HEARD AND REPORTED IN OPEN SESSION TO THE BEST OF THE REPORTER'S ABILITY TO HEAR AND UNDERSTAND THE TRANSMISSION:)

DR. OLSON: I'D NOW LIKE TO TALK ABOUT GENOMICS, TECHNOLOGY FOR BETTER DISCOVERY THAT SHOULD LEAD TO BETTER -- AND I WANT TO MAKE THE POINT THAT THE MISSION OF THIS GENOMICS PROGRAM WAS TO PROVIDE CORE CENTERS FOR EXPERTISE AND RESOURCES THROUGH THE DEVELOPMENT AND APPLICATION OF INNOVATIVE GENOMICS (INAUDIBLE) FUNDS FOR BIOLOGY AND REGENERATIVE MEDICINE.

THIS PROGRAM SUPPORTS OVER 20 CALIFORNIA LABS THAT ARE SUPPORTED BY THE SEQUENCING AND BIOINFORMATICS CENTER OF EXCELLENCE. THERE ARE TWO SEQUENCING CENTERS, ONE IN NORTHERN CALIFORNIA, THAT'S STANFORD, AND ONE IN SOUTHERN CALIFORNIA, JOE ECKHARDT AT UCSD. AND THEN THE BIOINFORMATICS CENTER (INAUDIBLE) IS JOSH STEWART AT THE (INAUDIBLE) GROUP IN SANTA CRUZ, WHICH IS REALLY WELL KNOWN FOR ALL OF THIS. SO WE HAVE SOME OF THE BEST EXPERTISE WORKING WITH A NUMBER OF LABS TO MAKE THIS HAPPEN.

UNIQUE FEATURES OF THIS GENOMICS PROGRAM, THE FOCUS REALLY IS HUMAN AS OPPOSED TO MANY INSTITUTIONS FOCUS ON MARINE OR MICE. AND IT'S

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HUMAN STEM AND PROGENITOR CELL FOCUSED. ALSO ANOTHER POINT IS METADATA AND BINARY ANALYSIS ON (INAUDIBLE).

WHAT THIS MEANS IS IT ALLOWS COMPARISON OF DATA BETWEEN LABS. SO IF YOU HAVE IT ALL IN A COMMON FORMAT, IT MAKES IT POSSIBLE TO COMPARE. FOR THIS NUMBER OF LABS AND THESE NUMBER OF INVESTIGATORS WORKING TOGETHER (INAUDIBLE.)

OKAY. ONE OF THE CRUCIAL OUTCOMES FROM THIS WILL BE DATA CENTRALIZED ONLINE FOR PUBLIC USE. SO YOU CAN SEE BY THOSE LITTLE CARTOONS IN THE TEXT --

DR. MARTIN: IS IT POSSIBLE TO TURN THE VOLUME UP SO THOSE OF US ON THE PHONE CAN HEAR? WE'RE CONNECTED, BUT THE VOLUME IS VERY LOW.

(THE OPERATOR THEN PROVIDED AN EXPLANATION FOR THE TECHNICAL ISSUES.)

DR. OLSON: -- THESE DATA FROM ALL OF THESE PROJECTS FEED INTO WHAT HAS BEEN CALLED THE STEM CELL HUB, WHICH WILL BE AN ONLINE, PUBLICLY ACCESSIBLE DATA RESOURCE THAT COLLECTS ALL THE DATA FROM THESE PROGRAMS AND INVESTIGATORS.

THE OTHER OUTPUT FROM THIS PROGRAM HAS BEEN BIOINFORMATICS (INAUDIBLE) DEVELOPMENT. THE KINDS OF DATA YOU GET WHEN YOU DO SINGLE CELL

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ANALYSIS IS REALLY PHENOMENAL. AND SO YOU NEED ALL THE TECHNOLOGIES IN ORDER TO EFFECTIVELY ANALYZE IT (INAUDIBLE). SO I LISTED A NUMBER OF THE TECHNOLOGIES THAT HAVE BEEN DEVELOPED (INAUDIBLE). AND I'M JUST GOING TO HIGHLIGHT ONE OR TWO OF THEM. I'M GOING TO TALK ABOUT THE INTERACTIVE SINGLE CELL ATLAS WHICH BASICALLY THEY'RE SINGLE CELL METADATA AND GENE EXPRESSION THERE FROM MULTIPLE FORMATS. SO IT TAKES IT FROM PEOPLE IN MULTIPLE WAYS AND PUTS IN A FORMAT THEY CAN ALL USE. BUT ALSO THIS IS TURNING OUT TO BE A VERY UNIQUE TOOL. THERE IS REALLY NOTHING QUITE LIKE IT. IT'S VERY POWERFUL, AND IT ACTUALLY ALREADY HAS VERY BROAD USE.

AND THE LAST SLIDE I'M GOING TO SHOW YOU IS JUST AN EXAMPLE OF HOW THAT WILL, NOT QUITE AN EXAMPLE BECAUSE IT'S NOT GOING TO BE INTERACTIVE ON THE SCREEN. AND THEN THE OTHER ONE I'M GOING TO HIGHLIGHT IS THE (INAUDIBLE) TOOL WHICH IS A MACHINE LEARNED PLATFORM TO PROTECT -- BETTER PREDICT CELL MARKERS. AND THIS IS FROM A GRANTEE OF THIS PROGRAM WHO'S AT THE J. CRAIG VENTER INSTITUTE DOWN IN SAN DIEGO. AND WHAT THIS DOES IS IT ALLOWS YOU (INAUDIBLE) CAN BE VERY VALUABLE IN THE CHARACTERIZATION AND (INAUDIBLE) DIFFERENTIATION (INAUDIBLE) HELPING TO DESCRIBE A CELL TYPE. SO

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THIS PARTICULAR PLATFORM IS PRETTY EXCITING.

AND JUST TO GIVE YOU AN EXAMPLE, I THINK --

(INAUDIBLE COMMENT FROM UNIDENTIFIED SPEAKER.)

DR. OLSON: SO WHAT I JUST WANTED TO SHOW HERE, I THINK ABOUT 33 PAPERS, PUBLICATIONS HAVE BEEN VAULTED TO DATE, AND THIS IS ACTUALLY A CRITICAL COMPONENT ANALYSIS PLOT OF A SINGLE CELL TRANSCRIPTOME ANALYSIS OF (INAUDIBLE) HERE AT UCSF. ALTHOUGH I WON'T BE ABLE TO DO IT FOR YOU, IF YOU WERE A SCIENTIST AND YOU WERE ONLINE, YOU PUT ON ONE OF THOSE DOTS WHICH REPRESENTS A CELL, WHAT THE SINGLE CELL VIEWER WOULD ALLOW YOU TO DO IS GIVE YOU ALL THE METADATA ASSOCIATED WITH THAT PARTICULAR CELL AS WELL AS GENE EXPRESSION.

(INAUDIBLE.)

WE HOPE THAT ALL OF THESE TOOLS WILL HELP GIVE US INSIGHTS INTO THE BIOLOGY, WILL ALLOW US TO PROPOSE NEW AND BETTER (INAUDIBLE), AND WILL ALLOW US (INAUDIBLE) MORE EFFECTIVELY (INAUDIBLE).

CHAIRMAN THOMAS: -- TREMENDOUS VARIATION OF THE THINGS THEY'RE GOING AFTER, BUT (INAUDIBLE) GOING TO MAKE AVAILABLE TO THE PUBLIC FOR RESEARCH IN ALL OF THESE AREAS IS GREAT.

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DR. OLSON, I HAVE ONE QUICK QUESTION ON THE TABS. (INAUDIBLE) SO FAR (INAUDIBLE) QUITE A PORTFOLIO (INAUDIBLE).

DR. OLSON: THE WAY THAT WE SELECTED --

(INTERRUPTION. THE HOST PHONE CONNECTION WAS THEN REINSTATED AND THE MEETING CONTINUED AS FOLLOWS:)

DR. OLSON: BASED ON OUR -- THE PROGRAM OFFICERS FOR THE TRANSLATIONAL PROGRAMS ARE PRETTY WELL AWARE OF THE STATUS OF THEM AND WHAT'S GOING ON FROM PROGRESS REPORTS AND FROM JUST DISCUSSIONS WITH THEM, SO SOME OF THE INITIAL ONES WERE ONES WHERE WE KNEW THERE MIGHT BE ISSUES THAT WERE COMING FORWARD. WE'VE ALSO -- ALSO ANOTHER REASON FOR SELECTION IS THERE'S SOME COMPLEX PROGRAMS. WE HAVE SOME COMPLEX PFC PROGRAMS, AUTOLOGOUS. AND IN THE TRAN AWARD IS WHEN WE EXPECT YOU TO DEVELOP YOUR PROCESS TO PRODUCE. SO THAT'S ANOTHER SORT OF SIGNAL THAT WE WOULD SELECT SOMEONE FOR CHOICE.

NEXT QUARTER WHAT WE, AT LEAST, ENVISION IN 2019, IN 2019, THE FIRST HALF OF 2019, IS PROBABLY BRINGING AT LEAST FOUR ADDITIONAL, AT LEAST FOUR ADDITIONAL NEW PROGRAMS ON BOARD, AS WELL AS WE HAVE ALREADY FOLLOW-UP MEETINGS SCHEDULED. THE RECEPTION HAS BEEN VERY POSITIVE SO FAR TO THE CAT

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MECHANISM, MUCH SIMILAR TO THE CAP. PEOPLE APPRECIATE IT. A LOT OF TIMES EXPERTISE AND HELP IN EARLY DEVELOPMENT AS WELL AS LATER DEVELOPMENT IS REALLY IMPORTANT TO PEOPLE.

CHAIRMAN THOMAS: DR. STEWARD, THEN DR. MILLAN.

DR. STEWARD: PAT, THAT'S GREAT. JUST A WONDERFUL SUMMARY OF ALL THE ACCOMPLISHMENTS THAT HAVE BEEN POSSIBLE THROUGH SUPPORT FROM CIRM. AND IT REALLY DOES OPEN, I THINK, A NEW DOMAIN OF DISCOVERY GOING FORWARD.

MY QUESTION IS A LITTLE BIT LIKE THE QUESTION THAT CAME UP IN TERMS OF INDUSTRY RELATIONS, WHICH IS HOW MANY OF THESE ACTIVITIES AND PROGRAMS ARE GOING TO DEPEND ON CONTINUED FUNDING OR WILL BE IMPACTED SHOULD CIRM NOT BE CONTINUED? I KNOW THAT'S A BIG QUESTION; BUT IF YOU COULD JUST SORT OF GIVE A VERY BROAD ANSWER, THAT WOULD BE, I THINK, VERY HELPFUL FOR US TO UNDERSTAND. THANK YOU.

DR. OLSON: I THINK THE DEVELOPMENTAL PROGRAMS, SOME OF THE PROGRAMS -- WHEN I SAY DEVELOPMENT, I SAY HERE SOME OF THE PROGRAMS THAT LOOK AT HUMAN DEVELOPMENT IN ORDER TO PREDICT DIFFERENTIATION PATHWAYS AND THINGS LIKE THAT. I

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LOOK AT ESC PROGRAMS. BUT WE'RE STARTING TO SEE A LOT MORE INDUCED PLURIPOTENT LINE USE EVEN FOR ALLOGENEIC PROGRAMS, SO OFF-THE-SHELF-TYPE STRATEGIES.

THE STEM CELL REGENERATIVE MEDICINE FOCUS IN GENERAL, I THINK THE TOOLS AND THE RESOURCES WE BRING IS SOMETHING THAT IS RATHER UNIQUE IN THE AREA. I WOULD JUST HIGHLIGHT FOR THE BOARD I HAVE BEEN WORKING ACTUALLY AS AN ADVISOR TO AN NIH, THE CRANIOFACIAL INSTITUTE, THEIR C-DOCTOR PROGRAM, JEFF LOTZ OVER AT UCSF, AND IT'S BASICALLY -- THE GOAL OF THAT PROGRAM IS TO BRING THINGS INTO THE CLINIC. BUT I HAVE, AT JEFF'S REQUEST, BEEN WORKING WITH A NUMBER, AT LEAST HAVE ADVISED A NUMBER OF THEIR APPLICANTS AND GRANTEES OVER THE STEPS THEY NEED TO TAKE TO ESSENTIALLY DO DEVELOPMENT, BE READY TO DO DEVELOPMENT.

SO I THINK THOSE KINDS OF -- THE KINDS OF RESOURCES, THE KINDS THAT CIRM PROVIDES, THE KIND OF PROGRAMS WE FUND I THINK THAT WILL BE MISSED, WOULD BE MISSED.

DR. STEWARD: FOLLOW UP WITH SORT OF A COMMENT, SORT OF A QUESTION. I ASKED THAT DELIBERATELY WITH REGARD TO SORT OF THE FUTURE BECAUSE, AGAIN, PARTICULARLY THE LAST PART, ALL

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ABOUT THE SINGLE CELL GENOMICS AND EVERYTHING. THE OTHER THING YOU DESCRIBED IS REALLY PLATFORMS FOR DISCOVERY. JUST TO POINT OUT, WE HAVE ZERO DOLLARS IN OUR BUDGET NEXT YEAR FOR DISCOVERY. AND GOING FORWARD, I THINK THAT'S GOING TO HAVE A HUGE IMPACT, AND I JUST WANTED TO SAY THAT OUT LOUD PERHAPS AS A WAY OF HIGHLIGHTING THE NEEDS FOR SOME OF THE FUNDRAISING IN THIS TRANSITIONAL PERIOD, THAT IT REALLY IS IN THE DISCOVERY ARENA. WE'RE ALL SET TO GO HERE, AND YET THERE'S NO MONEY AVAILABLE FOR IT. SO I WOULD INVITE COMMENTS FROM YOU, DR. MILLAN, ANYBODY ABOUT THAT, BUT I JUST WANTED TO SAY THAT.

DR. MILLAN: JUST IN FOLLOW-UP TO THAT STATEMENT, QUESTION, I THINK THAT IS ABSOLUTELY TRUE, THAT THE TYPES OF PROGRAMS WE'RE DEVELOPING HERE FOR THERAPEUTICS, THE ACTIVE INGREDIENT IS THE BIOLOGY. SO TO UNDERSTAND THAT BIOLOGY, THIS ISN'T GOING TO BE A ONE-WAY STREET. AS WE LEARN MORE FROM THE CLINICAL EXPERIENCE, MORE AND MORE NEEDS TO BE CHARACTERIZED USING THE GENOMICS TOOLS AND MODELING TOOLS TO IMPROVE ON THE ABILITY TO DELIVER THIS MORE EFFECTIVELY TO THE PATIENTS.

THE BASIS FOR THESE PROGRAMS IS ON SOLID SCIENCE, AND WE'RE GOING TO CONTINUE TO RELY ON SOLID SCIENCE AS WE MOVE FORWARD WITH THESE PROGRAMS

MOVING FORWARD.

THE OTHER THING IS ABOUT THE TRANSLATIONAL ADVISORY PANEL. IN ADDITION TO WHAT DR. OLSON SAID, THE GOAL AND THE VALUE OF THIS RESOURCE IS IT ALLOWS US TO REALLY CAPITALIZE ON OUR INVESTMENT INTO THESE EARLY STAGE PROGRAMS AND HAVE AN IMPACT EARLY ON SO WE HELP THEM TO DESIGN THE BEST PLAN MOVING FORWARD AND THE STRONGEST PLAN GOING INTO THE NEXT STAGE OF OUR DEVELOPMENT PROGRAM, FOR INSTANCE, A TRANSLATIONAL PROGRAM BEING THE BEST DESIGN, ANTICIPATING, VERY WELL-INFORMED BY EXPERTS, THAT WHEN THEY COME TO US WITH A CLIN1 PROGRAM, IT SETS THEM UP FOR SUCCESS.

AND SO WHEN WE TALK ABOUT PROGRESSION AND ACCELERATION, ALL OF THESE INFRASTRUCTURE PROGRAMS ARE DESIGNED TO FACILITATE ALL OF THIS. THANK YOU.

CHAIRMAN THOMAS: THANK YOU, DR. OLSON.

MR. MCCORMACK: CHAIRMAN THOMAS, MEMBERS OF THE BOARD, MEMBERS OF THE PUBLIC, I MEAN DAVID, AND DEAR COLLEAGUES, I'M HERE TO TALK ABOUT CIRM'S IMPACT ON COMMUNICATING OUR VALUE PROPOSITION. AND I DON'T OFTEN QUOTE FROM THE *BIBLE*. I DON'T ACTUALLY OFTEN READ THE *BIBLE*, BUT THERE'S A CHAPTER IN MATTHEW 5, VERSE 15 WHICH SAYS, AND I HAVE TO READ THIS BECAUSE I DON'T REMEMBER IT, "NEITHER DO

MEN LIGHT A CANDLE AND HIDE IT UNDER A BUSHEL." SO AT CIRM WE'RE NOT GOING TO DO ALL THIS WORK AS ALL MY COLLEAGUES HAVE LAID OUT BEFORE YOU AND THEN HIDE IT UNDER A BUSHEL.

SO WE GO OUT AND WE TALK ABOUT THIS AS MUCH AS WE CAN, AS OFTEN AS WE CAN, TO AS MANY DIFFERENT PEOPLE AS WE CAN. OBVIOUSLY THERE ARE VERY DIFFERENT AUDIENCES FOR THIS. SO WE COMMUNICATE TO THESE DIFFERENT AUDIENCES IN DIFFERENT WAYS.

THE SCIENTIFIC COMMUNITY IS OBVIOUSLY THE FIRST ONE WE DEAL WITH, AND WE GO OUT TO MANY DIFFERENT PLACES TO TALK ABOUT THIS. EARLIER THIS YEAR DR. MILLAN WENT TO THE UNITE TO CURE CONFERENCE AT THE VATICAN, AND SHE'S ALSO SPOKEN AT THE PHACILITATE AND THE WORLD STEM CELL SUMMIT. SHE WAS ONE OF SEVERAL CIRM SPEAKERS AT THE WORLD STEM CELL SUMMIT. AND THESE ARE VERY GOOD AUDIENCES FOR US TO REACH BECAUSE THEY ATTRACT KIND OF VERY HIGH-POWERED, HIGH-INFLUENCE PEOPLE. SO IT'S A GREAT OPPORTUNITY FOR US TO DO THIS.

AND OBVIOUSLY, AGAIN, WE TALK TO GROUPS LIKE THE NATIONAL ACADEMY OF SCIENCES AND WORK OUT, LIKE GEOFF LOMAX HAS DONE, A NUMBER OF ALPHA STEM CELL CLINIC EVENTS, INCLUDING A NURSING CONFERENCE.

SO WE REACH OUT TO MANY DIFFERENT THINGS, AND MANY OF THE OTHER MEMBERS OF THE TEAM, PARTICULARLY THE SCIENCE TEAM, GO TO DIFFERENT CONFERENCES ALL AROUND THE U.S. TALKING ABOUT HUNTINGTON'S DISEASE AND STROKE RESEARCH. SO WE REALLY REACH OUT TO THE SCIENTIFIC AUDIENCE TO LET THEM KNOW WHAT WE'RE DOING, BUT ALSO TO LET THEM KNOW ABOUT THE OPPORTUNITIES FOR FUNDING FROM CIRM AND PARTNERSHIPS, EVERYTHING ELSE THAT SHYAM TALKED ABOUT WITH OUR BUSINESS DEVELOPMENT.

A SECOND AUDIENCE IS WE'RE A STATE AGENCY, AND I THINK SOMETIMES THAT GETS OVERLOOKED. AND SO OBVIOUSLY THERE'S A VERY IMPORTANT POLITICAL ELEMENT TO THIS. AND SO TALKING TO STATE LAWMAKERS IS A CRITICAL PART OF WHAT WE DO. AND OBVIOUSLY SENATOR TORRES LED THE CHARGE ON THIS, AND HE REGULARLY GOES TO SACRAMENTO TO UPDATE THE STATE LEGISLATURE. AND EARLIER THIS YEAR SENATOR TORRES AND DR. MILLAN LED WHAT I THINK WAS A REALLY WELL-RECEIVED BRIEFING IN FRONT OF THE STATE ASSEMBLY BIOTECH COMMITTEE.

ONE WORD OF CAUTION. IF YOU EVER GO TO SACRAMENTO AND YOU'RE IN A HURRY, DON'T GO WITH ART. HE KNOWS EVERYONE AND EVERYONE KNOWS HIM AND THEY ALL WANT TO TALK TO HIM. SO WALKING THROUGH THE CAPITOL BUILDING WITH SENATOR TORRES IS JUST GOING

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TO BE AN EXERCISE IN PATIENCE. YOU'RE NOT GOING TO GET VERY FAR VERY FAST.

CHAIRMAN THOMAS: TAKES 45 MINUTES TO GET FROM THE PARKING GARAGE TO THE BUILDING.

MR. MCCORMACK: THAT'S WHY HE'S SO USEFUL TO US, BECAUSE HE KNOWS EVERYONE.

ANOTHER OBVIOUS AVENUE FOR KIND OF GETTING THE MESSAGE OUT IS THE MEDIA, THE MAINSTREAM MEDIA. AND WE'VE BEEN QUITE BUSY THIS LAST FEW MONTHS. THE RECENT STORY ABOUT THE SCIENTIST WHO CREATED A CRISPR GENE-EDITED BABY OBVIOUSLY GENERATED A LOT OF INTEREST. AND DR. TALIB AND LOMAX WERE VERY USEFUL IN WORKING WITH BRAD FIKES OF THE *SAN DIEGO UNION TRIBUNE* IN HELPING GIVING HIM SOME BACKGROUND, SOME PERSPECTIVE ON WHAT THIS IS, AND ALSO SOME GOOD QUOTES TO FEATURE IN HIS PIECE.

DR. MILLAN DID AN INTERVIEW RECENTLY WITH DENISE GRADY OF THE *NEW YORK TIMES* AND THAT'S GOING TO BE IN A STORY COMING OUT LATER THIS MONTH OR EARLY NEXT YEAR. WE'RE NOT QUITE SURE YET. AND AS DR. THOMAS MENTIONED EARLIER, HE DID AN INTERVIEW WITH CBS2 IN LOS ANGELES. HE ACTUALLY TALKED TO THE REPORTER FOR ABOUT HALF AN HOUR AND WAS ON CAMERA FOR ABOUT 12 SECONDS, BUT IT WAS A REALLY GOOD 12 SECONDS. AND AS A FORMER TV NEWS PRODUCER, 12

SECONDS IS PRETTY GOOD, J.T. I HAVE TO SAY.

PERHAPS THE BIGGEST STORY FOR US IN THE LAST FEW MONTHS WAS A SERIES OF STORIES IN THE *SAN FRANCISCO CHRONICLE* THAT LOOKED AT THE HISTORY OF STEM CELL RESEARCH FROM THE PASSAGE OF PROP 71 TO TODAY. THREE OF THE FOUR STORIES WERE REALLY GOOD. ONE WAS CALLED "IMMENSE PROMISE, HARD-WON PROGRESS." AND IT LOOKED AT KIND OF THE CHALLENGES A LOT OF STEM CELL RESEARCHERS ARE FACING AS THEY TRY TO KIND OF ADVANCE THE RESEARCH, GET APPROVAL FROM THE FDA AND EVERYTHING ELSE.

ONE OF THE STORIES, THE LAST ONE, WAS CALLED "LOFTY PROMISES, LIMITED RESULTS." AND I THINK THE BIGGEST LESSON FROM THAT IS THAT I'M RUBBISH AT MY JOB.

WE ALSO USE SOCIAL MEDIA A LOT. WE HAVE A BLOG. AND OVER THE LAST THREE MONTHS, WE'VE HAD SOMETHING LIKE 63,000 VIEWS OF THAT. WE USE TWITTER AND FACEBOOK AND EVERYTHING. ONE OF THE THINGS WE'VE BEEN USING A LOT IN THE LAST FEW MONTHS IS FACEBOOK LIVE, WHICH IS A GREAT WAY TO KIND OF REACH OUT TO A WIDER AUDIENCE WHERE WE FEATURE LIVE ON FACEBOOK SOME OF OUR EXPERTS AND SCIENCE OFFICERS AND PATIENT ADVOCATES, WHERE POSSIBLE, TO TALK ABOUT THE WORK WE'RE DOING AND TO KIND OF LET PEOPLE KNOW

WHAT OPTIONS ARE OUT THERE AND ALSO TO KIND OF LET THEM KNOW WHAT CIRM HAS BEEN DOING. WE'VE DONE FOUR SO FAR THIS YEAR, ONE ON STROKE, ALS, SICKLE CELL DISEASE, AND VISION LOSS. SO FAR THOSE HAVE ALL HAD ABOUT 19,000 VIEWS IN TOTAL. SO THAT'S A REALLY IMPORTANT WAY OF REACHING OUT TO A MUCH WIDER AUDIENCE. SO WE'RE GOING TO BE DOING MORE OF THOSE IN THE COMING YEAR AS WELL.

OBVIOUSLY ONE OF THE OTHER THINGS THAT WE DO IS WE GO OUT AND WE DO TALKS. WE DO TALKS TO THE FOUNDATION FIGHTING BLINDNESS, TO ALS SUPPORT GROUPS, TO ANY GROUP REALLY THAT WOULD LIKE US TO COME OUT AND TALK TO THEM, TO ROTARY CLUBS. I GAVE A TALK A COUPLE OF WEEKS AGO AT A MENSA CONFERENCE. THAT WAS A LITTLE BIT INTIMIDATING.

SADLY, I HAVE TO END TODAY WITH NEWS OF THE LOSS OF A COLLEAGUE, DR. BRIAN SORRENTINO. DR. SORRENTINO WAS THE PRINCIPAL INVESTIGATOR IN COLLABORATION WITH UCSF ON A CIRM-FUNDED CLINICAL TRIAL TARGETING X-LINKED SCID. DR. SORRENTINO WAS HIMSELF A CHILDHOOD CANCER SURVIVOR WHO THEN WENT ON TO BECOME A WORLD RENOWNED RESEARCHER. AND HE WAS BY ALL ACCOUNTS AN EXTRAORDINARY PERSON AND CERTAINLY ACTIVE AND COMMITTED RIGHT TO THE END. IN FACT, JUST TWO WEEKS BEFORE HE PASSED, HE WAS ON A

CLINICAL ADVISORY PANEL, A CIRM CLINICAL ADVISORY PANEL FOR ONE OF OUR PROJECTS.

THE PROJECT, THE THERAPY HE HELPED DEVELOP IS FOR X-LINKED SCID. AND IT'S A RARE DISEASE. CHILDREN BORN WITH THAT CONDITION HAVE NO FUNCTIONING IMMUNE SYSTEM. AND SO EVEN A SIMPLE INFECTION, A COLD, FOR EXAMPLE, COULD PROVE LIFE THREATENING OR EVEN FATAL. SO FAR NINE CHILDREN HAVE BEEN TREATED AS PART OF THAT CLINICAL TRIAL, INCLUDING RONNIE, WHO'S THE YOUNG MAN YOU MAY REMEMBER FROM THE FRONT COVER OF OUR ANNUAL REPORT LAST YEAR. ALL NINE ARE DOING WELL. IN FACT, I JUST SPOKE WITH RONNIE'S PARENTS YESTERDAY. AND HE'S ABOUT TO COME OFF ALL THE IMMUNOSUPPRESSIVE DRUGS THAT HE WAS ON FOR A WHILE. HE'S DOING WELL. HE'S THRIVING.

SO I THINK THAT DR. SORRENTINO'S WORK LIVES ON IN THOSE NINE CHILDREN AND IN ALL THE CHILDREN WHO WILL BE TREATED WITH THIS THERAPY IN THE COMING YEARS.

AS I LOOKED AT THIS SLIDE AS I WAS PUTTING IT TOGETHER, IT JUST STRUCK ME THAT THE WORDS AT THE BOTTOM WERE REALLY APPROPRIATE FOR HIS LIFE AND LEGACY, WHICH IS EVERY MOMENT COUNTS AND DON'T STOP NOW. AND WITH THAT, I'LL HAND BACK TO DR. MILLAN.

(APPLAUSE.)

DR. MILLAN: THANK YOU VERY MUCH, KEVIN. I WANTED TO JUST MENTION ALSO THAT DR. SORRENTINO WAS CRITICAL IN TERMS OF BRINGING VISIBILITY TO CIRM'S VALUE PROPOSITION WITH NIH THAT LED TO THE CONVERSATIONS EVENTUALLY LEADING TO THE PARTNERSHIP WITH NHLBI, AGAIN DEMONSTRATING HOW OUR SUPPORTERS ARE WITHIN CALIFORNIA, OUTSIDE OF CALIFORNIA. AND THERE'S A MULTIPLIER EFFECT BY THE WORK THAT CIRM IS DOING. AND WE HAVE A WHOLE COMMUNITY AROUND US OF RESEARCHERS WHO ARE SUPPORTING OUR EFFORTS. THANK YOU.

CHAIRMAN THOMAS: THANK YOU, DR. MILLAN, AND ALL MEMBERS OF THE TEAM. THAT WAS A REALLY IMPRESSIVE DESCRIPTION OF THE STATUS OF EVERYTHING WE'RE DOING. AND I THINK WE AS A GROUP YOU SHOULD FEEL REALLY, REALLY GOOD ABOUT WHERE WE ARE AT THIS POINT AND OUR CONTRIBUTIONS TO THE FIELD.

DR. STEWARD: I'M NOT SURE THIS IS THE RIGHT TIME TO ASK THIS, AND I'M NOT EVEN SURE WHETHER TO ASK YOU, CHAIRMAN THOMAS, OR DR. MILLAN. I'LL THROW THE QUESTION OUT. SO WE SORT OF STARTED WITH LOOKING AT OUR END IN SIGHT AND WHAT YOU'RE DOING TO TRY TO RAISE FUNDS TO CARRY US OVER THROUGH THIS BRIDGE FUNDING PERIOD. AND IN SEEING ALL THIS,

IT'S JUST WONDERFUL WHAT'S GOING ON. AND I WONDERED IF EITHER OF YOU COULD TALK A LITTLE BIT ABOUT HOW, SHOULD YOU BE SUCCESSFUL IN FUNDRAISING, HOW THOSE FUNDS MIGHT BE DEPLOYED GOING FORWARD IN THIS TRANSITION PERIOD TO KEEP SOME OF THESE CRITICAL PROGRAMS GOING. I DON'T KNOW WHETHER -- I KNOW THIS DEPENDS ON WHAT KINDS OF DONATIONS COME IN, AND I KNOW IT'S A LONG ANSWER, BUT IF YOU COULD JUST GIVE US SORT OF A BROAD STROKES VIEW OF MAYBE THE WAYS THAT THOSE DECISIONS MIGHT BE MADE GOING FORWARD. THANK YOU.

CHAIRMAN THOMAS: THANK YOU, DR. STEWARD. SO YOU CORRECTLY NOTE THAT IT DEPENDS ON THE NATURE OF THE GIFT. THE GENERAL ASK WE ALWAYS WANT TO HAVE FIRST AND FOREMOST IS UNRESTRICTED, SO THAT WOULD ALLOW US TO TAKE THE MONEY. AND THE ANSWER TO HOW THAT WOULD BE DEPLOYED WOULD DEPEND UPON WHAT THE BOARD DETERMINES WOULD BE THE APPROPRIATE DISTRIBUTION. THERE ARE, AS I SUGGESTED, A LOT OF HIGHLY TAILORED ASKS. FOR EXAMPLE, GETTING TO YOUR EARLIER POINT, THERE ARE ENTITIES THAT ARE FIRST AND FOREMOST INTERESTED IN BASIC RESEARCH. SO THE PITCH TO THEM IS EXACTLY AS YOU SAID. WITHOUT FUNDING FOR CALENDAR YEAR FROM '19 TO '20, WE WOULD NOT BE ABLE TO FUND BASIC RESEARCH, SO WE DESPERATELY NEED THAT

MONEY. SO IF IT COMES IN THROUGH THAT, OBVIOUSLY THAT'S WHERE IT GOES.

THERE WILL BE OTHERS THAT MAY BE DISEASE OR CATEGORY SPECIFIC. AND TO THE EXTENT YOU GET A GIFT OF THAT ORDER, THEN AGAIN, THAT WOULD BE UP TO THE BOARD AS ADVISED BY GWG SORT OF HOW THAT WOULD BE SPLIT UP GOING FORWARD.

SO IT VERY MUCH IS SORT OF A CASE-BY-CASE THING. DR. MILLAN, DO YOU HAVE ANY OTHER THOUGHTS ON THAT?

DR. MILLAN: I THINK, AS WE USUALLY DO, IF THERE ARE FUNDS THAT ARE RAISED, WHAT WE WOULD DO IS CRAFT A PROPOSAL AND BRING IT TO THE BOARD IN TERMS OF HOW THOSE FUNDS WOULD BE USED.

AS J.T. HAD MENTIONED, THERE ARE DONORS WHO HAVE SPECIFIC INTEREST IN EITHER AREAS OR INFRASTRUCTURE. AND SO OUR APPROACH TO ENGAGING WITH THOSE POTENTIAL SOURCES OF FUNDING IS IN A DESIGNED THINKING MANNER. WHAT IS IT THAT WE CAN DO TO TACKLE THE CHALLENGE THAT THEY THINK IS MOST IMPORTANT?

WITHOUT GIVING TOO MUCH DETAIL, IN SOME OF THESE KIND OF TALKS THAT HAVE PROGRESSED TO THE SECOND OR THIRD STAGE OF CONVERSATION, IT WILL INVOLVE INFRASTRUCTURE, BASIC RESEARCH, SOME OF THE

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THINGS THAT PAT HAD DESCRIBED IN TERMS OF DEPLOYING THE CUTTING EDGE SCIENCE AND CLINICAL TRIALS AND CLINICAL DEVELOPMENT.

SO WHAT'S REALLY GREAT IS CIRM HAS ALREADY DEMONSTRATED HOW THIS MODEL OF INVESTING IN THE FIVE PILLARS FLOATS ALL BOATS IN TERMS OF PROGRESS. AND I THINK THAT THOSE WHO REALLY WANT TO MEANINGFULLY TARGET, ATTACK, SOLVE A PROBLEM SEE THE VALUE IN THIS.

SO I SUSPECT THAT IT WILL INVOLVE MULTIPLE DIFFERENT TYPES OF PROGRAMS. BUT UNTIL WE HAVE -- IF THERE ARE SPECIFICATIONS FOR HOW THEY WISH TO DONATE, UNTIL WE HAVE THAT, WE WON'T HAVE ANYTHING CONCRETE TO REALLY BRING TO YOU. THANK YOU.

CHAIRMAN THOMAS: OKAY. WE'RE GOING TO TAKE A FIVE-MINUTE BREAK AFTER WHICH WE'RE GOING TO HAVE THE APPLICATION REVIEW SUBCOMMITTEE. MARIA WOULD LIKE TO SAY SOMETHING AT THIS POINT.

MS. BONNEVILLE: I JUST WANTED TO CONFIRM. LAUREN MILLER, CAN YOU HEAR US? ARE YOU ON THE LINE?

MS. MILLER: YES, I'M HERE.

MS. BONNEVILLE: DAVID HIGGINS?

DR. HIGGINS: I'M HERE.

MS. BONNEVILLE: DAVE MARTIN?

DR. MARTIN: HERE.

MS. BONNEVILLE: GREAT. SO WE'RE GOING TO BREAK FOR FIVE MINUTES, WE WILL BE BACK, AND WE WILL THEN TAKE UP THE CLIN APPLICATION. THANK YOU.

DR. BOXER: MARIA, IT'S LINDA BOXER. I'M ALSO ON THE LINE.

(A RECESS WAS TAKEN.)

CHAIRMAN THOMAS: EVERYBODY WE'RE RECONVENING. NOW I'M GOING TO GO TO ITEM NO. 5, CONSIDERATION OF APPLICATIONS SUBMITTED IN RESPONSE TO CLINICAL TRIAL STAGE PROJECTS, CLIN1 OR CLIN2. TURN THIS MEETING AT THIS POINT OVER TO MR. SHEEHY.

MR. SHEEHY: THANK YOU, CHAIRMAN THOMAS. SO WILL YOU LEAD US THROUGH THIS TODAY, DR. SAMBRANO?

DR. SAMBRANO: YES, ABSOLUTELY. GOOD MORNING, EVERYONE. I'M GOING TO PRESENT TO YOU THE RECOMMENDATIONS FROM THE GRANTS WORKING GROUP REGARDING A CLIN2 PROJECT. JUST AS A REMINDER, AS WE BEGIN THIS OVERVIEW OF THE PROJECT, THE CLINICAL STAGE PROGRAMS THAT WE FUND ENCOMPASS LATE STAGE PRECLINICAL ACTIVITIES AS WELL AS THE FUNDING OF CLINICAL TRIALS ACROSS THE DIFFERENT PROGRAMS THAT WE OFFER.

THE GRANTS WORKING GROUP, WHEN THEY

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EVALUATE THESE APPLICATIONS, USE A SCORING SYSTEM OF 1, 2, AND 3. AND REALLY IT'S A SYSTEM THAT I THINK TELLS US A GREAT DEAL OF THEIR VIEW ON THE APPLICATIONS. A SCORE OF 1 BEING THAT THEY FEEL THE APPLICATION HAS EXCEPTIONAL MERIT AND WARRANTS FUNDING. A SCORE OF 2 ALLOWS AN APPLICATION TO ADDRESS SOME CONCERNS AND COME BACK TO THE GRANTS WORKING GROUP FOR A REASSESSMENT. AND THEN A SCORE OF 3 MEANS THAT IT HAS SUFFICIENT FLAWS THAT THEY WOULD LIKE THE APPLICANT TO GO BACK AND RETHINK THINGS. SO APPLICATIONS ARE NOT ACCEPTED FOR AT LEAST SIX MONTHS.

AN UPDATE ON THE CLINICAL BUDGET STATUS FOR 2018. AS YOU MAY RECALL, THERE WAS $130 MILLION THAT WAS ALLOCATED TO THE CLINICAL PROGRAM TO FUND THESE PROGRAMS AT THE BEGINNING OF THE YEAR. WE'RE NOW AT DECEMBER, AND AT THE END OF LAST MONTH, THERE WERE 95.4 MILLION THAT WERE APPROVED IN ABOUT 12 GRANTS INTO THIS PROGRAM. AND IF YOU APPROVE THE APPLICATION UNDER CONSIDERATION TODAY, IT WOULD ADD ABOUT 6.2 MILLION, AND IT WOULD LEAVE US WITH 28.4 FOR THE YEAR.

WE ALSO SET AWARD TARGETS INTERNALLY IN TERMS OF THE TYPES OF PROGRAMS WE WOULD LIKE TO GET FUNDED WITH THAT ALLOCATION. SO OUR TARGET

INITIALLY FOR CLINICAL TRIALS WAS 12. IF YOU APPROVE THIS APPLICATION, THAT WILL GIVE US NO. 7. IN TERMS OF LATE STAGE PRECLINICAL WORK, WE MET AND EXCEEDED THAT TARGET. WE HAVE SIX PROGRAMS THAT WERE APPROVED FOR FUNDING.

SO IN SPEAKING ABOUT THIS SPECIFIC APPLICATION THAT WAS REVIEWED AND RECOMMENDED BY THE GWG, THIS IS CLIN2-11371. AND SO THIS IS A CLINICAL STUDY OF A THERAPY FOR CHEMOTHERAPY-INDUCED TOXICITIES. THE THERAPY ITSELF IS A CELL THERAPY. IT IS GENETICALLY ENGINEERED CD31 POSITIVE CELLS, ENDOTHELIAL CELLS, ESSENTIALLY DERIVED FROM HUMAN UMBILICAL VEINS. THE INDICATION IS FOR PATIENTS WITH REFRACTORY LYMPHOMA THAT ARE TREATED WITH HIGH DOSE CHEMOTHERAPY FOLLOWED BY AN AUTOLOGOUS STEM CELL TRANSPLANT TO REDUCE THE TOXICITY THAT IS RELATED TO THAT TREATMENT.

SO THE GOAL OF THE PROJECT IS TO PRODUCE AND MANUFACTURE THE PRODUCT AND CONDUCT A PHASE 1 CLINICAL TRIAL. THE REQUEST FROM THE APPLICANT IS FOR ABOUT 6.2 MILLION. THEY ARE PROVIDING CO-FUNDING ON THE ORDER OF ABOUT 2.6 OR .7 MILLION.

THE IMPACT OF THIS THERAPY IS REALLY INITIALLY FOCUSED ON PATIENTS WHO HAVE LYMPHOMA. AND IN TERMS OF LYMPHOMA, THERE'S AN ESTIMATED

83,000 NEW CASES THAT WOULD BE DIAGNOSED IN 2018. IT IS TREATABLE, BUT THOSE THAT HAVE RELAPSED, OR REFRACTORY LYMPHOMA, UNDERGO AN AGGRESSIVE TREATMENT OF HIGH DOSE CHEMOTHERAPY FOLLOWED BY THE STEM CELL TRANSPLANT, WHICH LEADS TO AND HAS VARIOUS MORBIDITIES THAT INCLUDE MICOSITUS, BONE MARROW TOXICITY, INFECTIONS, AND PNEUMONITIS. AND THIS IS WHERE THE APPLICANTS ARE LOOKING TO START -- THERE IS THE POTENTIAL, IF SUCCESSFUL AND IDEALLY ADVANCES, IT COULD ALLOW THE APPLICATION OF THIS THERAPY FOR OTHER HIGH DOSE CHEMOTHERAPY APPLICATIONS.

SO THE VALUE HERE IS LARGELY IN SUPPORTING THE ORGAN-SPECIFIC TREATMENT OF CHEMOTHERAPY, THERE ARE AGENTS CURRENTLY THAT MAY HELP MITIGATE SOME OF THIS, BUT NOTHING THAT REALLY IS AS COMPREHENSIVE AS WHAT THEY ARE HOPING TO ACHIEVE WITH THIS THERAPY THAT WOULD BE INFUSED AND IMPACT ON ALL THE SITES THAT WOULD NEED SOME HELP IN ESTABLISHING A STEM CELL NICHE AND HELP THE BODY RECOVER FROM THE CHEMOTHERAPY TREATMENT ACROSS MULTIPLE ORGAN SYSTEMS.

WHY IS THIS A STEM CELL PROJECT? WELL, THIS IS A CELL THERAPY THAT IS ACTING ON ENDOGENOUS STEM CELLS FOR ITS THERAPEUTIC EFFECT. THE

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IMPLICATION IS THAT UPON INFUSION, IT IMPACTS THE NICHES THAT CONTAIN PROGENITOR AND STEM CELLS AND HELP THE ORGAN SYSTEMS RECOVER.

THERE ARE SOME RELATED PORTFOLIO PROJECTS, BASICALLY ONE, WHICH IS A PHASE 1 CLINICAL TRIAL THAT UTILIZES JUST ABOUT THE SAME ENGINEERED HUMAN UMBILICAL VEIN ENDOTHELIAL CELLS. IN THE OTHER PROJECT, THEY COMBINE THIS WITH CORD BLOOD IN ORDER TO TREAT LEUKEMIA. SO THIS WOULD BE A LEUKEMIA THERAPY.

THE APPLICANT HAS RECEIVED CIRM FUNDING PREVIOUSLY, BOTH TO SUPPORT IND-ENABLING ACTIVITIES AND THOSE THAT LED TO THE PHASE 1 TRIAL THAT IS ONGOING AND THAT WE ARE CURRENTLY FUNDING THAT IS DIFFERENT FROM THE ONE WE ARE CONSIDERING TODAY.

SO, LASTLY, THE RECOMMENDATION FROM THE GWG WAS A SCORE OF 1 WITH EIGHT VOTES GIVING IT A SCORE OF 1. THERE WERE FOUR VOTES SUGGESTING A SCORE OF 2 AND NONE A SCORE OF 3. THE CIRM TEAM RECOMMENDATION IS IN CONCURRENCE WITH THAT OF THE GWG AND SUGGEST THAT WE FUND FOR THE AWARD AMOUNT OF 6.2 MILLION. MR. SHEEHY.

MR. SHEEHY: DO I HAVE A MOTION TO EITHER ACCEPT THE CIRM TEAM RECOMMENDATION AND FUND THIS PROJECT OR TO NOT ACCEPT IT AND NOT FUND IT?

CHAIRMAN THOMAS: MOVE TO ACCEPT.

UNIDENTIFIED SPEAKER: SECOND.

MR. SHEEHY: IS THERE ANY DISCUSSION? THEN IS THERE ANY PUBLIC COMMENT? COULD WE CALL THE ROLL PLEASE.

MS. BONNEVILLE: ANNE-MARIE DULIEGE.

DR. DULIEGE: YES.

MS. BONNEVILLE: DAVID HIGGINS.

DR. HIGGINS: YES.

MS. BONNEVILLE: STEVE JUELSGAARD.

MR. JUELSGAARD: YES.

MS. BONNEVILLE: DAVE MARTIN.

DR. MARTIN: YES.

MS. BONNEVILLE: LAUREN MILLER.

MS. MILLER: YES.

MS. BONNEVILLE: ADRIANA PADILLA.

DR. PADILLA: YES.

MS. BONNEVILLE: JOE PANETTA.

MR. PANETTA: YES.

MS. BONNEVILLE: FRANCISCO PRIETO.

DR. PRIETO: AYE.

MS. BONNEVILLE: ROBERT QUINT. AL ROWLETT. JEFF SHEEHY.

MR. SHEEHY: YES.

MS. BONNEVILLE: OS STEWARD.

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DR. STEWARD: YES.
MS. BONNEVILLE: JONATHAN THOMAS.
CHAIRMAN THOMAS: YES.
MS. BONNEVILLE: ART TORRES.
MR. TORRES: AYE.
MS. BONNEVILLE: DIANE WINOKUR.
THE MOTION CARRIES.
MR. SHEEHY: THANK YOU. SO I JUST WANT TO NOTE THIS IS NOW OFFICIALLY CIRM'S 50TH CLINICAL TRIAL.
(APPLAUSE.)
MR. SHEEHY: SO I THINK FOR THOSE OF US, OS, FRANCISCO, MAYBE SHERRY, WHEN WE FIRST MET, AND I THINK THAT WAS ACROSS THE BAY AT UCSF, WE DIDN'T EVEN HAVE A PAPERCLIP. WHAT IS THAT, 14 YEARS AGO, 15, ALMOST TO THE DAY. IT WAS IN DECEMBER WE MET FOR THE FIRST TIME, 14 YEARS AGO. WHO COULD IMAGINE THE ROAD WE'VE TAKEN? THE SCIENCE AT THAT TIME WAS NOT, FRANKLY, PREPARED TO SUPPORT 50 CLINICAL TRIALS. WITH PERSISTENCE AND HARD WORK, I THINK WE ARE NOW AT ABOUT, WHAT, 35, 40 PEOPLE CURED? WHAT'S THE EXACT NUMBER OF PEOPLE WE HAVE CURED?
DR. MILLAN: AROUND THAT.
MR. SHEEHY: WE'VE ACTUALLY, ALBEIT NOT ON THE FRAME THAT WE HOPED, WE ARE CURING PATIENTS. WE

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ARE CONDUCTING CLINICAL TRIALS. HOW MANY PATIENTS, I CAN'T REMEMBER FROM YOUR SLIDE --

DR. MILLAN: OVER A THOUSAND PATIENTS.

MR. SHEEHY: OVER A THOUSAND PATIENTS ENROLLED. I THINK IT WOULD REALLY BE APPROPRIATE AT THIS POINT. THE VERY FIRST CLINICAL TRIAL WE FUNDED WAS WITH GERON, WHICH HAS NOW MORPHED TO ASTERIAS, USING EMBRYONIC STEM CELLS FOR SPINAL CORD INJURY. AND I REALLY WANT TO SALUTE -- FIRST OF ALL, I WANT TO SALUTE THE AGENCY AND THE TEAM FOR THE WORK AND ALL THE PEOPLE. WE'VE HAD PEOPLE COMING TO THIS AGENCY WHO HAVE REALLY DEDICATED THEIR LIVES. I'VE NEVER SEEN A GROUP OF INDIVIDUALS WORK SO HARD WITH SUCH PASSION AND SUCH COMMITMENT. REALLY THANK YOU TO ALL OF YOU FOR YOUR HARD WORK.

BUT AT THIS TIME, TOO, WE ACTUALLY HAVE RICH LAJARA -- DID I GET THE NAME RIGHT? -- WHO IS THE VERY FIRST PATIENT TREATED AS PART OF THE GERON CLINICAL TRIAL, THE FIRST PERSON TREATED FOR SPINAL CORD INJURY IN THE CIRM PROJECT. AND FIRST OF ALL, I'M REALLY DELIGHTED THAT YOU'RE HERE WITH US TODAY, BUT I ALSO REALLY WANT TO SALUTE YOUR COURAGE IN STEPPING UP AND TAKING THIS CHANCE, FOR REALLY BEING -- REALLY DOING THE HARDEST WORK OF ALL OF ANYBODY INVOLVED WITH THIS PROJECT, THE VERY FIRST

PATIENT TO STEP UP AND TAKE AN EMBRYONIC STEM CELL-DERIVED PRODUCT. THE ALTRUISM, THE LOVE THAT YOU'VE SHOWN THE ENTIRE WORLD BY YOUR WILLINGNESS TO SACRIFICE I SALUTE YOU, AND I THANK YOU.

(APPLAUSE.)

MR. LAJARA: THANKS FOR THAT INTRODUCTION. SO 50, RIGHT? IT'S AN HONOR TO BE HERE TODAY AS THE 50TH CLINICAL TRIAL HAS OFFICIALLY BEEN FUNDED BY CIRM. IT DOES FEEL LIKE IT WAS JUST YESTERDAY THAT I WAS ENROLLED IN THE FUNDED CLINICAL TRIAL BY CIRM AND IN TURN BECAME CALIFORNIA'S FIRST EMBRYONIC STEM CELL PATIENT.

LITTLE BACKGROUND. I BECAME PARALYZED FROM THE WAIST DOWN SEPTEMBER 2011. IT WAS LABOR DAY AND I WAS AT A RIVER WITH SOME CLOSE FRIENDS. AND THERE WAS THIS NATURAL GRANITE ROCK SLIDE FEATURE NEXT TO A WATERFALL. AND THE SLIDE WAS ABOUT 60 FEET LONG. AND ALLS YOU HAD TO DO WAS GET A BUCKET OF WATER AND GET THE ROCKS WET AND SLIDE DOWN INTO A NATURAL POOL. I ENDED UP FLIPPING, WENT HEAD FIRST DOWN BACKWARDS, BUT I WAS TOO FAR TO ONE SIDE AND SLID OFF ABOUT 15-FOOT LEDGE WHERE THE WATERFALL WAS. I WAS PULLED FROM THE WATER AND BANGED UP PRETTY BAD.

SO AFTER THEY PULLED ME OUT OF THE WATER,

SOMEONE HAD LOOKED AT MY BACK AND NOTICED THE DEFORMITY AND THEN TAPPED MY LEG AND ASKED IF I COULD FEEL THAT, AND I KNEW IMMEDIATELY I WAS PARALYZED. I THOUGHT THIS WAS THE END. LITTLE DID I KNOW THIS WAS JUST THE BEGINNING. I CALL IT BEING IN THE WRONG PLACE AT THE RIGHT TIME.

SO AFTER A FEW DAYS IN THE HOSPITAL, OF COURSE, EVERYONE AS WELL AS MYSELF WANTED A CURE, AND WE QUICKLY LEARNED THAT ONE DID NOT EXIST. CLOSE FAMILY FRIEND HAD BEEN MAKING SOME PHONE CALLS AND WAS ABLE TO CONNECT WITH THE DANA AND CHRISTOPHER REEVES FOUNDATION AND LEARNED ABOUT A CLINICAL TRIAL WITH STEM CELLS. ONE OF MY BIGGEST QUESTIONS WAS HOW MANY PEOPLE HAVE DONE THIS, AND I WAS TOLD CLOSE TO NONE. I WAS ALSO TOLD I'D MOST LIKELY HAVE NO DIRECT BENEFIT AS THIS WAS A SAFETY TRIAL. SO THE QUESTION WAS WHY DO IT AT ALL.

OBVIOUSLY AT THAT TIME I WAS HANGING ON TO THE NOTION THAT MOST LIKELY, PART IN MY MIND, SO I WAS WILLING TO DO ANYTHING AT THAT TIME TO GET MY NORMAL LIFE BACK. LOOKING BACK, THE BIG PICTURE WAS LAYING THE GROUNDWORK FOR OTHERS LIKE CHRIS OR JAKE. AT THE TIME I HAD NO CLUE THAT WHAT I WAS DOING WOULD BE SUCH A BIG DEAL. THE DATA COLLECTED FROM ME WOULD END UP BEING PRICELESS. IT'S STORIES LIKE

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JAKE OR CHRIS THAT MAKE ME PROUD AND REINFORCE MY DECISION TO PARTICIPATE IN CALIFORNIA'S FIRST STEM CELL CLINICAL TRIAL FUNDED BY PROP 71.

LIKE I SAID EARLIER, THIS WAS JUST THE BEGINNING FOR ME. A COUPLE YEARS LATER I BECAME A PATIENT ADVOCATE WORKING WITH AMERICANS FOR CURES. BEEN ABLE TO MEET MANY PEOPLE IN THE STEM CELL INDUSTRY. AND I LOVE TO SEE THE GLOW ON THEIR FACE WHEN THEY LEARNED THAT I WAS CALIFORNIA'S FIRST EMBRYONIC STEM CELL PATIENT. I CAN'T EVEN FATHOM ALL THE YEARS AND HOURS OF HARD WORK THAT LED UP TO MY LONG ANTICIPATED SURGERY. BUT WHEN I SEE THE GLOW ON THEIR FACE, I KNOW THAT THEY KNEW EXACTLY WHAT IT TOOK.

I ALSO LIKE SHARING MY STORY AND BRIDGING THE GAP BETWEEN MISSING FACTS ABOUT STEM CELLS AND INSPIRING THE NEXT GENERATION THAT WILL BE IN THE STEM CELL INDUSTRY. AS A MATTER OF FACT, I HAVE A 12-YEAR-OLD SISTER MADDIE THAT'S DEAD SET ON BEING A NEUROSCIENTIST.

FAST FORWARD TO TODAY, LIFE IN A WHEELCHAIR IS NOT EXACTLY A ROLL IN THE PARK. BUT I'VE GROWN ACCUSTOMED TO MY NEW NORMAL. AND ASIDE FROM SOME NEUROPATHIC PAIN, LIFE IS BACK ON TRACK. NOT ONCE DID I FEEL SORRY FOR MYSELF. I WAS EXCITED

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TO BE ALIVE. I DO HAVE BAD DAYS, BUT THE SAME NOTION, I THINK WE ALL DO.

IN THE PAST 14 YEARS CIRM HAS FUNDED NOW 50 HUMAN CLINICAL TRIALS, PUBLISHED AROUND 2750 NEW PEER-REVIEWED SCIENTIFIC DISCOVERIES, AND THEY'VE TRANSFORMED CALIFORNIA INTO A WORLD LEADER IN STEM CELL RESEARCH. AS I LOOK AROUND AT THE POSTERS ON THE WALLS, ALL THE PEOPLE WHOSE LIVES HAVE BEEN TRANSFORMED BY THE AGENCY, I CAN'T HELP BUT BE STRUCK BY HOW MUCH HAS BEEN ACHIEVED IN A SHORT PERIOD OF TIME.

WHILE MY JOURNEY YET MIGHT NOT BE OVER, EVIE AND 40 OTHER CHILDREN LIKE HER WILL NEVER REMEMBER WHAT IT'S LIKE TO LIVE WITH A HORRIBLE DISEASE BECAUSE THEY HAVE BEEN CURED THANKS TO CIRM. THERE ARE HUNDREDS OF OTHERS WHOSE LIVES HAVE BEEN TRANSFORMED BECAUSE OF THE WORK THE AGENCY HAS FUNDED. CIRM HAS PROVEN HOW MUCH CAN BE ACHIEVED IF WE INVEST IN CUTTING-EDGE MEDICAL RESEARCH.

AS MOST OF YOU PROBABLY KNOW, CIRM'S FUNDING FROM PROP 71 IS ABOUT TO RUN OUT. IF I HAD JUST ONE MESSAGE I WANTED TO LEAVE WITH PEOPLE TODAY IT WOULD BE THIS: EVERYONE IN THIS ROOM KNOWS HOW MUCH CIRM HAS DONE IN A LITTLE OVER A DECADE AND HOW MANY LIVES HAVE BEEN CHANGED BECAUSE OF ITS

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EXISTENCE. WE HAVE THE RESPONSIBILITY TO MAKE THIS WORK CONTINUE. WE HAVE A RESPONSIBILITY TO MAKE SURE THAT THE STORIES WE'VE HEARD TODAY ARE JUST THE BEGINNING.

I'LL DO EVERYTHING I CAN TO MAKE SURE THE AGENCY GETS REFUNDED, AND I HOPE ALL OF YOU WILL JOIN ME IN THAT FIGHT. I'M EXCITED FOR THE ROLE OF THE STEM CELLS AND PARTICULARLY IN CALIFORNIA AND CAN'T WAIT TO SEE WHAT'S NEXT ON THE HORIZON. THANK YOU.

(APPLAUSE.)

CHAIRMAN THOMAS: THANK YOU VERY MUCH. RICH, THANK YOU SO MUCH. THAT WAS VERY POWERFUL. I ECHO MR. SHEEHY'S COMMENTS, THAT WHAT YOU'VE DONE HAS HELPED COUNTLESS OTHERS WHO WILL FOLLOW BEHIND YOU AND WAS CRITICAL TO THE SUCCESS OF THE INDUSTRY AND TO THE PATIENTS. AND WE REALLY, REALLY APPRECIATE YOUR COURAGE AND YOUR WILLINGNESS TO BE A PART OF THIS, AND IN PARTICULAR TO COME HERE TODAY TO TELL US YOUR STORY BECAUSE IT'S WHAT WE'RE ALL ABOUT IS HEARING THINGS LIKE THAT. SO THANKS SO MUCH FOR ALL THAT YOU'VE DONE.

MR. LAJARA: THANK YOU AGAIN. IT WAS AN HONOR TO BE HERE.

CHAIRMAN THOMAS: OKAY. WE'RE GOING TO

MOVE ON NOW TO ONE OF OUR PERIODIC BITTERSWEET AGENDA ITEMS. AT THE END OF THIS MONTH, DR. LUBIN IS RETIRING AND, AS SUCH, WILL BE TRANSITIONING FROM THE BOARD. SO WE WANTED TO TAKE THIS OPPORTUNITY TO SAY A FEW THINGS ABOUT DR. LUBIN WHICH ARE ALL IN AN EFFORT TO PAINT WHAT HAS BEEN A MOST DISTINGUISHED CAREER THAT'S ABOUT TO EMBARK ON ITS NEXT STAGE. JUST A BIT OF BACKGROUND.

WE HAVE A RESOLUTION HERE, WHICH I WILL NOT READ, BUT I WILL GIVE YOU SOME OF THE HIGHLIGHTS. DR. LUBIN JOINED CHILDREN'S HOSPITAL AND RESEARCH CENTER OF OAKLAND AS IT WAS THEN KNOWN IN 1973 AS CHIEF OF HEMATOLOGY AND ONCOLOGY. IN 1984 BECAME DIRECTOR OF MEDICAL RESEARCH THERE. UNDER HIS TUTELAGE, CHILDREN'S WENT FROM A SMALL RESEARCH PROGRAM INTO A HIGHLY SUCCESSFUL ENTERPRISE RENAMED CHILDREN'S HOSPITAL OAKLAND RESEARCH INSTITUTE OR CHORI, WHICH IS WHAT WE'VE KNOWN IT AS MOST IN RECENT YEARS.

THROUGHOUT HIS CAREER DR. LUBIN HAS SERVED ON COUNTLESS NIH COMMITTEES, COMMUNITY-BASED HEALTH CONSORTIA, SPOKEN NATIONWIDE ON A VARIETY OF PANELS, FOCUSED ON STUDIES, PRINCIPALLY RED CELL MEMBRANE STRUCTURE IN NORMAL AND PATHOLOGIC STATES, CLINICAL BASIC RESEARCH RELATED TO SICKLE CELL ANEMIA, PUBLIC

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HEALTH INITIATIVES RELATED TO NEWBORN SCREENING FOR HEMOGLOBIN DISORDERS, AND NATIONAL CORD BLOOD BANKING PROGRAMS. THIS WORK HE DID AT THE DEPARTMENT GREW HE AND HIS TEAM TO BE NATIONALLY AND INTERNATIONALLY RECOGNIZED FOR ITS OUTSTANDING CARE OF CHILDREN WITH MALIGNANCIES, SICKLE CELL ANEMIA, THALASSEMIA, AND HEMOPHILIA.

IN 2009 DR. LUBIN WAS CHOSEN TO BE PRESIDENT AND CEO OF WHAT ULTIMATELY BECAME UCSF BENIOFF CHILDREN'S HOSPITAL, WHICH IS WHAT IT'S NOW KNOWN AS, UNTIL HIS APPOINTMENT BY UCSF AS ASSOCIATE DEAN OF CHILDREN'S HEALTH IN 2016.

WITH RESPECT TO CIRM, STATE CONTROLLER JOHN CHIANG APPOINTED DR. LUBIN TO CIRM IN 2010 AND HE HAS SINCE BEEN A HIGHLY ENTHUSIASTIC PARTICIPANT IN MANY WAYS, INCLUDING AS MEMBERS OF THE COMMUNICATIONS AND SCIENCE SUBCOMMITTEES.

I JUST WANT TO POINT OUT THAT DR. LUBIN, BECAUSE HE IS LOCAL, HAS BEEN PARTICULARLY ACCESSIBLE TO US, AND WE'VE GONE OVER MANY TIMES TO HIS OFFICE AND HAD THE BENEFIT OF SEEING FIRSTHAND HIS UNENDING ENTHUSIASM FOR THE WORK THAT HE'S DONE THERE, WHICH CONTINUES TO THIS DAY. THE REVERENCE WITH WHICH HE'S HELD BY MEMBERS OF THE TEAM OVER THERE IN ALL RESPECTS AND THE JUST CHEERFUL DEMEANOR

WHICH HE ALWAYS DEMONSTRATES NO MATTER WHAT THE SITUATION OR THE TASK AT HAND. IT'S BEEN A GREAT PLEASURE TO BE ABLE TO GO OVER AND SEE YOU IN YOUR NATURAL ENVIRONMENT OVER THERE, BERT. AND SO WE HAVE, AS I SAY, THIS RESOLUTION.

MR. TORRES: TO BE FRAMED LATER.

CHAIRMAN THOMAS: TO BE FRAMED LATER, YES. IT MAKES IT DIFFICULT TO HANDLE OTHERWISE.

LAST TWO LINES, "WHEREAS, DR. LUBIN WHOSE VAST EXPERIENCE, KNOWLEDGE, AND LEADERSHIP CONTRIBUTED GREATLY TO THE MOMENTUM OF DISCOVERY AND THE FUTURE THERAPIES WHICH WILL BE THE ULTIMATE OUTCOME OF THE DEDICATED WORK OF THE RESEARCHERS RECEIVING CIRM FUNDING, DOING SO WITH GRACE, HUMOR, AND RESPECT FOR HIS COLLEAGUES AND THE PUBLIC, BE IT RESOLVED THAT THE GOVERNING BOARD OF CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE, ON BEHALF OF THE PEOPLE OF THE STATE OF CALIFORNIA, WISHES TO EXPRESS ITS DEEPEST GRATITUDE TO DR. BERT LUBIN FOR HIS SERVICE ON CIRM'S GOVERNING BOARD AND HIS DEDICATION TO ACCELERATE STEM CELL TREATMENTS TO PATIENTS WITH UNMET MEDICAL NEEDS."

I WILL, JUST BEFORE I HAND THIS OVER TO HIM, POINT OUT THAT IN OUR LAST VISIT, MARIA BONNEVILLE AND I WENT OVER TO SEE BERT IN HIS

OFFICES, AND HIS INTENTION TO, AS SICKLE CELL IS ONE OF HIS GREAT PASSIONS, TO CONTINUE TO WORK WITH US IN THE CONTEXT OF, AMONG OTHER THINGS, THE MOU THAT DR. MILLAN AND TEAM EXPERTLY CREATED WITH NIH IN CONNECTION WITH SICKLE CELL DISEASE AND LOOKS FOR PROMISING CURES, DR. LUBIN WILL BE A CENTRAL PART OF THAT AND HELP US IN THE QUEST TO COME UP WITH AN END TO THAT TERRIBLE DISEASE.

BERT, IF YOU JUST COME HERE, I'D LIKE TO GIVE YOU THIS CERTIFICATE AND, OF COURSE, WE NEED A SPEECH.

(APPLAUSE.)

DR. LUBIN: THIS IS WONDERFUL, AND I REALLY APPRECIATE IT. SO I'M REALLY GRATEFUL TO BE ON THE BOARD. THERE'S SOME WONDERFUL PEOPLE AND CIRM HAS DONE SO MANY WONDERFUL THINGS. AND IT'S AN HONOR TO BE PART OF A GROUP THAT FUNCTIONS LIKE WE FUNCTION AND THAT BENEFITS PATIENTS LIKE WE'VE SEEN TODAY AND SEEN IN ALL OF THE MEETINGS THAT WE'VE BEEN HERE.

SOME OF YOU THAT KNOW ME PRETTY WELL, THAT THIS PAST YEAR, SIX MONTHS AGO, I WAS DIAGNOSED WITH A GLIOBLASTOMA. BUT TO COME TO A BOARD MEETING AND HEAR DISCUSSIONS ABOUT GLIOBLASTOMA, WHEN YOU ARE A PATIENT YOURSELF, JUST BRINGS IT SO STRONG THAT THIS

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IS SO IMPORTANT TO DO. FORTUNATELY, I'M DOING WELL SIX MONTHS LATER. MY NEUROLOGIC SYMPTOMS ARE NORMAL. AS MY NEURO-ONCOLOGIST AT UCSF SAID, "BERT, I WANT YOU TO EMBRACE FIVE THINGS." THIS IS GOOD FOR EVERYBODY, NOT JUST IF YOU HAVE A BRAIN TUMOR. "ONE IS GOOD DIET, TWO IS GOOD SLEEP, THREE IS GOOD EXERCISE, FOUR IS JOY, AND FIVE IS NOVELTY." I THINK HAVING THOSE IN YOUR LIFE REALLY ARE ALL GOOD THINGS, AND EVERYONE ON THIS BOARD HAS THAT BY VIRTUE OF BEING ON THIS BOARD.

ON THE 27TH OF THIS MONTH A BIG EVENT WAS HELD AT CHILDREN'S HONORING MY 43 YEARS OF BEING AT CHILDREN'S FOR 43 YEARS. AND NEXT MONTH I'LL BE 80. SO OVER HALF OF MY LIFE I'VE WORKED AT CHILDREN'S HOSPITAL IN OAKLAND. IT WAS A WONDERFUL EVENT. I SAID I'M GOING TO RETIRE THE WORD "RETIREMENT." I THINK IT'S A MISTAKE FOR PEOPLE THAT ARE SO ENGAGED IN SO MANY ACTIVITIES TO JUST STOP BECAUSE THEY'VE REACHED A PARTICULAR AGE. SO I'M REPURPOSING THE REST OF MY LIFE RELATED TO THINGS THAT CHAIRMAN THOMAS MENTIONED TODAY, BUT THE OTHER THINGS RELATED TO SOCIAL JUSTICE AND ACCESS.

AND I KNOW AN ISSUE THAT'S BEEN HERE FOR CIRM FROM THE BEGINNING IS IS WHAT WE'RE DOING AVAILABLE FOR EVERYONE IN OUR SOCIETY AND NOT JUST

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THOSE THAT CAN AFFORD TO GET TO THE PLACE WHERE THESE TREATMENTS ARE GIVEN. I KNOW EVERYONE HOLDS THAT NEAR AND DEAR TO THEM, AND I THINK WE REALLY HAVE TO EMBRACE THAT AS WE GO FORWARD WITH FUTURE FUNDING AND REALLY BE SUCCESSFUL IN DOING ALL THE THINGS WE'VE DONE.

I THOUGHT TODAY'S PRESENTATION, THE ONE SLIDE WITH ALL OF THE DIFFERENT DISEASES THAT HAVE BEEN APPROACHED BECAUSE OF FUNDING THROUGH CIRM, IT WAS REMARKABLE. I'M JUST SO PROUD TO BE PART OF IT, AND I WANT TO THANK ALL OF YOU. AND I REALLY WANT THE PUBLIC TO KNOW ALL THOSE THINGS THAT WERE ON THAT SLIDE BECAUSE IT WAS AMAZING TO ME, AND I DON'T THINK ENOUGH PEOPLE KNOW ABOUT IT.

SO THANK YOU VERY MUCH FOR THIS. I WILL PUT IT TOGETHER WITH MY ONE NEXT TO NANCY SKINNER AND ROB BEHUNTA (PHONETIC), AND TONY THURMAN, WHICH I EMBRACE IN MY OFFICE, AND IT WILL BE EQUALLY IMPORTANT. AND I WISH YOU ALL GOOD LUCK AS WE MOVE FORWARD, AND I AM DEVOTED TO HELPING YOU IN ANY WAY I CAN POSSIBLY DO IT. AND THE ONE AREA THAT I'VE BEEN VERY SUCCESSFUL IN IS PHILANTHROPY. A LOT OF PEOPLE KNOW ME, THEY TRUST ME, THEY BELIEVE ME, AND I'M GOING TO PUT MY EFFORTS INTO WORKING WITH THE GROUP TO SEEK WHATEVER PHILANTHROPIC RESOURCES WE

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CAN TO SUSTAIN AS A BRIDGE AND FOR OUR FUTURE. SO THANK YOU AGAIN. THANK YOU VERY MUCH.

(APPLAUSE.)

MR. TORRES: IN 1978 I TOOK OVER AS CHAIRMAN OF THE ASSEMBLY HEALTH COMMITTEE. I WAS A YOUNG LEGISLATOR. OF COURSE, BERT CAME TO OAKLAND IN '73. AND EVEN THEN IN '78 HE WAS RENOWN ESPECIALLY WHEN IT CAME TO CHILDREN. I'M JUST EVER SO GRATEFUL THAT ALL THOSE YEARS THAT I HAVE KNOWN BERT OFF AND ON, NOW MORE CLOSELY AS CO-MEMBERS OF THIS BOARD, HAVE ALWAYS BEEN REPLETE WITH TREMENDOUS ACHIEVEMENTS, BUT MORE THAN THAT, JUST HIS HUMILITY OF WHAT HE'S BEEN ABLE TO ACHIEVE. AND I THINK THAT IS CLEARLY A THANK YOU FROM ALL CALIFORNIANS FOR YOUR LEADERSHIP, BERT.

DR. LUBIN: THANK YOU VERY MUCH.

(APPLAUSE.)

CHAIRMAN THOMAS: OKAY. WE ARE GOING TO POWER THROUGH HERE. THOSE OF YOU WHO ARE LITTLE ON THE HUNGRY SIDE, WE WANT TO GET TO OUR CLOSED SESSION FIRST. BEFORE AT THAT POINT, WE WILL BE AT THE END OF THE MEETING. SO, MR. TOCHER, IF YOU COULD ADVISE US AND GIVE US THE APPROPRIATE CODE SECTION AND CHAPTER AND VERSE.

MR. TOCHER: SO CHRISTMAS COMES EARLY TO

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THE BOARD THIS YEAR. WE HAVE A DISTINGUISHED ALUMNUS OF THE ORGANIZATION TO JOIN YOU IN YOUR CLOSED SESSION TO DISCUSS PERSONNEL PURSUANT TO HEALTH AND SAFETY CODE SECTION 125290.30(F)(3)(D). SO I THINK YOU WILL BE MEETING IN A MOMENT.

CHAIRMAN THOMAS: MR. HARRISON IS IN THE HOUSE.

MS. BONNEVILLE: FOR THOSE OF YOU ON THE PHONE, IF YOU DO NOT HAVE THE CLOSED SESSION NUMBER, PLEASE E-MAIL ME AND I WILL SEND IT TO YOU.

CHAIRMAN THOMAS: SO FOR MEMBERS OF THE BOARD, WE'RE GOING TO BE GOING TO A CONFERENCE ROOM EXIT STAGE MY LEFT OVER HERE BACK IN MARIA AND MY OFFICE, AND WE WILL CONVENE THERE IN A COUPLE MINUTES. SO WE STAND TEMPORARILY ADJOURNED, BUT NOT ADJOURNED. WE WILL BE COMING BACK AT THE END TO REPORT ON ANY UNFINISHED BUSINESS. THANK YOU.

(THE BOARD THEN ADJOURNED TO CLOSED SESSION. AT THE CONCLUSION OF THE CLOSED SESSION, THE FOLLOWING WAS THEN HEARD IN OPEN SESSION:)

CHAIRMAN THOMAS: ANY PUBLIC COMMENT ON ANY TOPIC OF ANY NOTE FROM ANYBODY ANYWHERE? REALLY OPENING IT UP. OKAY. HEARING NONE, I WANT TO GIVE SPECIAL THANKS TO EVERYBODY ON THE TEAM WHO MAKES ALL OF THESE IN-PERSON MEETINGS POSSIBLE. THERE'S A

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LOT OF LOGISTICS THAT GO INTO THIS. TO DOUG AND PATRICIA AND ELIANA AND EVERYBODY, CHILA, AND APOLOGIZE IF I'M LEAVING SOMEBODY OUT -- WE ALREADY JUST TALKED ABOUT YOU AT LENGTH. SHE TELLS ME THAT. SO THANKS TO ALL OF YOU FOR THE LOGISTICS OF MAKING THESE THINGS HAPPEN. THEY DON'T JUST MAGICALLY APPEAR. WE DO HAVE THE OCCASIONAL AV ISSUE FROM TIME TO TIME, THOSE WILL HAPPEN, BUT THANK YOU ALL. AND WANTED TO SAY THAT I THINK THIS HAS BEEN A VERY SUCCESSFUL YEAR FROM THE STANDPOINT OF THE AGENCY. AS AN OVERALL TEAM EFFORT, WE CONTINUE TO MAKE THINGS HAPPEN AND SET THE STAGE FOR ULTIMATE THERAPIES AND CURES FOR PEOPLE WITH UNMET MEDICAL NEEDS, WHICH IS WHY WE'RE ALL HERE. SO WANT TO WISH EVERYBODY A HAPPY HOLIDAY. THANK YOU VERY MUCH FOR ALL YOU DO. WE REALLY APPRECIATE IT. WITH THAT, WE STAND ADJOURNED.

(THE MEETING WAS THEN CONCLUDED AT 1:20 P.M.)

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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 TELEPHONIC PROCEEDINGS BEFORE THE INDEPENDENT CITIZEN'S OVERSIGHT COMMITTEE OF THE CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE AND THE APPLICATION REVIEW SUBCOMMITTEE IN THE MATTER OF ITS REGULAR MEETING HELD AT THE LOCATION INDICATED BELOW

1999 HARRISON STREET
SUITE 1650
OAKLAND, CALIFORNIA
ON
DECEMBER 13, 2018

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

BETH C. DRAIN, CA CSR 7152
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