BEFORE THE
INTELLECTUAL PROPERTY AND INDUSTRY SUBCOMMITTEE
OF 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: AS INDICATED ON THE AGENDA

DATE: MONDAY, SEPTEMBER 23, 2013
1 P.M.

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

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I N D E X

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MONDAY, SEPTEMBER 23, 2013

1 P.M.

CHAIRMAN JUELSGAARD: I'M GOING TO CALL THIS MEETING OF THE INTELLECTUAL PROPERTY AND INDUSTRY SUBCOMMITTEE TO ORDER. MARIA, WILL YOU DO A ROLL CALL?

MS. BONNEVILLE: SUE BRYANT.

DR. BRYANT: HERE.

MS. BONNEVILLE: ANNE-MARIE DULIEGE.

DR. DULIEGE: HERE.

MS. BONNEVILLE: MICHAEL GOLDBERG.

MR. GOLDBERG: HERE.

MS. BONNEVILLE: STEVE JUELSGAARD.

CHAIRMAN JUELSGAARD: HERE.

MS. BONNEVILLE: OS STEWARD. JONATHAN THOMAS.

CHAIRMAN THOMAS: HERE.

CHAIRMAN JUELSGAARD: WHY DON'T WE GO AHEAD AND GET STARTED THEN. SO THE PRINCIPAL ITEM FOR BUSINESS IS TO TALK ABOUT, IN ESSENCE, THE PROGRAMS THAT WE HAVE CURRENTLY TO TRY AND ATTRACT INDUSTRY TO THE PROJECTS THAT WE'RE HELPING TO SUPPORT AND ALSO TALK ABOUT SOME OF THE INFORMAL CONTACTS OR DISCUSSIONS WE'VE HAD WITH INDUSTRY, SO

TO DISCUSS BOTH SOME OF THE MORE FORMAL PROGRAMS AND SOME OF THE MORE INFORMAL APPROACHES.

SO THIS IS THE ONE THAT WAS PRECIPITATED AT THE LAST ICOC MEETING, AND THERE WAS A DISCUSSION THAT ENSUED DURING THE CONSIDERATION OF THE ADOPTION OF THE COLLABORATIVE AND CO-FUNDING AGREEMENTS, AND REALLY QUESTIONS WERE ASKED ABOUT THE ATTRACTIVENESS OF THESE PROGRAMS OR THE EFFECT THAT THEY WERE HAVING ON INDUSTRY. AND JUST IN THE LARGER SCHEME OF THINGS, I THINK JEFF SHEEHY WAS THE PERSON WHO REALLY BROUGHT THAT TO THE TABLE.

AND SO WE AGREED THAT WE WOULD HAVE A MEETING OF THE SUBCOMMITTEE REALLY TO DISCUSS THE ISSUE OF THE INTERACTION BETWEEN CIRM AND INDUSTRY AND HEAR WHAT'S GOING ON AND SEE IF THERE ARE ANY THOUGHTS OR SUGGESTIONS FOR ENHANCING THAT. AND SO WITH THAT, I'M GOING TO ASK ELONA, SHE'S PUT TOGETHER A PRESENTATION, TO TALK A LITTLE BIT ABOUT OUR PROGRAMS AND ALSO EFFORTS WE'VE MADE ON A MORE INFORMAL BASIS.

MS. BAUM: THANKS VERY MUCH. WHAT I THOUGHT I WOULD DO IS START OFF WITH SOME CONTEXT, WHICH ALWAYS MAKES SENSE, TO SET THE STAGE AND KNOW WHERE WE'RE COMING FROM IN TERMS OF ENGAGING IN THESE ACTIVITIES AND, AS YOU SAID, DESCRIBE THOSE

ACTIVITIES AND, IMPORTANTLY, THE OUTCOMES TO DATE. AND IT'S A TWO-HOUR SUBCOMMITTEE MEETING, AT LEAST TWO HOURS HAS BEEN ALLOCATED, SO I ANTICIPATE THERE WILL BE A LOT OF DISCUSSION ON WHAT THE NEXT STEPS COULD BE AND MAYBE SOME QUESTIONS AND JUST GENERAL DEBATE.

SO I WANT TO REMIND EVERYBODY THAT WHEN WE PREPARED THE STRATEGIC PLAN, IT SET FORTH THREE PHASES OF CIRM'S LIFE SPAN.

CHAIRMAN JUELSGAARD: DID SOMEBODY JUST JOIN THE CALL?

DR. STEWARD: YES, HI. THIS IS OS.

CHAIRMAN JUELSGAARD: WELCOME, OS. WE'RE JUST GETTING UNDER WAY. ELONA IS JUST STARTING TO PRESENT BOTH SOME OF THE MORE FORMAL ARRANGEMENTS THAT WE PUT TOGETHER TO TRY AND ATTRACT INDUSTRY TO OUR PROGRAMS AND ALSO TALK ABOUT SOME OF THE MORE INFORMAL APPROACHES. WHEN WE'RE FINISHED WITH THAT, WE'RE GOING TO HAVE A BROADER DISCUSSION ABOUT WHAT WE MIGHT DO TO ENHANCE THOSE INTERACTIONS, IF ANYTHING.

MS. BAUM: SO WHERE I WAS IS I WAS DESCRIBING OUR STRATEGIC PLAN AND THE FACT THAT WE HAD LOOKED AT OUR LIFE SPAN AT CIRM AS BEING IN THREE DIFFERENT PHASES, WHICH WE ARE CURRENTLY IN

THE SECOND PHASE. AND I JUST HAVE UP ON THE SCREEN BEFORE US, AND HOPEFULLY THOSE OF YOU WHO CALLED IN HAVE THE SLIDES BEFORE YOU AS WELL, OUR STRATEGIC PLAN THAT SHOWS THAT WE ARE IN THE FOCUS PHASE OF OUR LIFE SPAN. IT INCLUDES EFFORTS TO DEVELOP PARTNERSHIPS.

AND I BELIEVE IT GOT THERE FOR THREE REASONS. THE FIRST IS THAT WE WILL NOT BE FUNDING CLINICAL PHASE IIIS AND, THEREFORE, THERE NEEDS TO BE SOME SOURCE OF FUNDING FOR THAT. I THINK WE RECOGNIZE THAT HAVING PHARMA AND VC'S ENGAGED WITH OUR GRANTEES PROVIDES THEM WITH VALUABLE EXPERTISE. AND THE THIRD REASON IS THAT IF YOU CAN ACTUALLY DEVELOP A RAPPORT, A RELATIONSHIP EARLY ON WITH THE GRANTEES AND VC'S OR PHARMAS, YOU ESTABLISH INTERNAL CHAMPIONS, WHICH OFTEN GOES A LONG WAY WHEN IT COMES TIME FOR THE NEXT PHASES OF RESEARCH TO PROGRESS AND THE QUESTION OF WILL THEY FUND OR WILL THEY NOT FUND OCCURS. SO THAT WAS THE RATIONALE FOR HAVING PARTNERSHIPS INCLUDED IN THIS FOCUSED PHASE.

AND SO WHAT DOES THAT TAKE? HOW DO YOU GET TO THESE VARIOUS AGREEMENTS? AND THERE'S TWO DIFFERENT PROBABLY AVENUES THAT YOU CAN GO. YOU CAN GO FROM THE TOP DOWN AND YOU CAN GO FROM THE BOTTOM UP. I'M FOCUSING MOSTLY ON THE BOTTOM UP, THE WAY

THAT BD OFFICES WOULD DO IT IN YOUR TYPICAL COMPANIES AND THAT SORT OF APPROACH THAT WE'RE DOING HERE. THERE'S ALWAYS THE ABILITY TO TRY TO ENGAGE AT A HIGHER LEVEL AS WELL. BUT ESSENTIALLY WHAT YOU DO IS YOU MEET A LOT OF THE SCOUTS THAT ARE OUT, AND YOU HAVE MEETINGS WITH THEM, YOU TELL THEM ABOUT YOUR PORTFOLIO. HOPEFULLY SOME OF THOSE MEETINGS TURN INTO DUE DILIGENCE, AND HOPEFULLY THEY TURN INTO A NEGOTIATION WHICH ENDS UP IN AN AGREEMENT.

SO I RECENTLY WENT TO A CNS PARTNERING EVENT A COUPLE WEEKS AGO. AND I WISH I ACTUALLY HAD THE SLIDE THAT MERCK SHOWED BECAUSE IT PROVIDED A LOT OF INFORMATION. BUT LET ME JUST GO OVER SOME OF THE STATISTICS THAT THEY SHARED. I'LL TRY TO HIGHLIGHT THE CONTEXT IN WHICH THEY SHARED IT AS BEST I CAN. I DON'T HAVE THEIR SLIDE YET.

THEY SAID THAT IN 2012 THEY HAD 7,002 WHAT THEY REFERRED TO AS OPPORTUNITIES PRESENTED TO THEM FOR PARTNERING. OF THOSE THEY CHOSE 586 TO REVIEW. AND WHEN I SAY REVIEW, THEY SAID IT WAS REVIEWED INTERNALLY WITH THEIR EXPERTS. OF THOSE, 375 MADE IT TO A CONFIDENTIALITY DISCLOSURE AGREEMENT WHERE THEY THOUGHT THAT THE PROJECT WAS INTERESTING ENOUGH THAT IT WARRANTED A FURTHER LOOK AND INDEED AN IN-DEPTH DUE DILIGENCE. AND THEN OF THOSE 375, 61

ENDED UP IN AGREEMENT. SO THAT'S PRETTY SOMBERING. AND THE CONTEXT IN WHICH THEY PROVIDED IT IS THAT THEY ALSO LOOKED AT THESE AGREEMENTS IN THE CONTEXT OF THE LEVEL OF RISK PRESENTED. AND FOR THE MOST PART MERCK SEEMED PRETTY RISK AVERSE.

I DON'T WANT TO DISCOURAGE EVERYBODY JUST BY THESE SETS OF NUMBERS. YES, I THINK IT'S QUITE A NUMBER OF PROJECTS THAT YOU COMPETE WITH. BUT IN THE BROADER CONTEXT, THERE ARE OTHER COMPANIES THAT HAVE MADE SOME INVESTMENTS IN EITHER STEM CELL THERAPIES AND/OR IN REGENERATIVE MEDICINE. SO I WANT TO BRING YOUR ATTENTION TO CELGENE, WHICH LAST YEAR OR ACTUALLY THIS YEAR IN MAY JUST APPOINTED HARRY CARSON AS CEO OF THE CELLULAR THERAPY THERAPEUTICS PROGRAM THERE AT CELGENE. SO THAT'S ONE COMPANY THAT'S ENGAGING INTERNALLY IN THIS PROJECT. BAXTER HAS AN INTERNAL PROJECT. J & J CORPORATION HAS FOR YEARS DONE SOME INVESTMENTS INCLUDING INVESTMENTS IN VIACYTE. AT THE TIME IT WAS NOVOCELL AND MORE RECENTLY VIACYTE AS WELL AS TENGION AND OTHERS.

SO WE NEED TO TAKE THIS WITH A GRAIN OF SALT, BUT I THINK IT'S IMPORTANT FOR PEOPLE TO UNDERSTAND THE CONTEXT IN WHICH WE'RE ENGAGING.

AND I THINK IT'S IMPORTANT FOR PEOPLE TO

UNDERSTAND HOW MATURE OUR PRODUCT PIPELINE IS BASICALLY BECAUSE, AS MERCK SAID, THEY ARE LOOKING AT RISK IN THE CONTEXT OF WHAT THEY'RE DECIDING TO INVEST IN. AND AS YOU CAN SEE BY OUR PRODUCT PIPELINE HERE, WE DON'T HAVE ANY PHASE IIS CURRENTLY AT THIS STAGE. WE'VE GOT A COUPLE PHASE IS, AND OUR DISEASE TEAM PROJECTS AND OUR STRATEGIC PARTNERSHIP PROJECTS ARE IN PRECLINICAL STAGE. SO THAT MEANS NATURALLY THEY DON'T HAVE THAT MUCH DATA AND, THEREFORE, THEY'RE CONSIDERED BY SOME A LITTLE MORE RISKY.

THAT SAID, WE HAVE BEEN USING A NUMBER OF DIFFERENT TOOLS TO ENGAGE THE COMPANIES. AND IT'S NOT LIKE THEY'RE ALL SHUTTING THE DOOR AND NOT WILLING TO SPEAK TO US. I THINK WE'VE MADE SOME GREAT HEADWAY, AND I'LL TALK ABOUT SOME OUTCOMES SHORTLY. BUT LET ME JUST GO THROUGH THE DIFFERENT MECHANISMS WE'RE USING BECAUSE THERE WAS SOME INTEREST IN KNOWING ABOUT THAT.

THE FIRST ONE THAT COMES TO MIND AND WORTH MENTIONING IS, OF COURSE, THE STRATEGIC PARTNERSHIP FUNDING PROGRAM, AND IT'S SORT OF A WIN-WIN FOR BOTH OF US, FOR CIRM AND FOR THE FUNDING PARTNER. FOR THE FUNDING PARTNER, IF THEY SEE A PROGRAM THAT THEY'RE INTERESTED IN AND IT'S READY TO ENTER INTO A

STRATEGIC PARTNERSHIP FUNDING RFA, THE GOOD NEWS IS THEY DON'T HAVE TO TAKE ON A HUNDRED PERCENT OF THE COST OF THE PROGRAM. THEY MERELY NEED TO COOPERATE WITH US AND FIND A WAY TO PROVIDE 50 PERCENT IS WHAT WE'VE BEEN ASKING FOR LATELY IN THE STRATEGIC PARTNERSHIP FUNDING ROUNDS. AND WE ASK THAT THAT 50 PERCENT OR WE ALLOW THAT 50 PERCENT TO BE IN THE FORM OF IN-KIND SERVICES BEGINNING ALL THE WAY BACK TO ONE OF OUR INITIAL GOALS OF ACCESSING EXPERTISE AND INTERNAL CHAMPIONS.

SO THAT'S ONE VEHICLE WE'RE USING. AND IT'S REALLY GOOD TO USE WHEN YOU HAVE A PROGRAM THAT'S JUST SORT OF TOWARDS THE END OF ITS CIRM FUNDING. SO THE PI'S ARE VERY INTERESTED IN LOOKING FOR THE NEXT FUNDING SOURCE. AND IF YOU ARE FORTUNATE ENOUGH TO FIND A POTENTIAL VC OR PHARMA PARTNER, THEN THIS IS A GREAT TOOL AND WE'VE HAD SOME SUCCESS WITH IT.

IT DOESN'T EVEN HAVE TO BE IN THE CONTEXT OF A STRATEGIC PARTNERSHIP FUNDING PROGRAM. IT COULD BE A DISEASE TEAM II WHERE WE REQUIRE THAT THERE BE A MATCH. IT'S THE SAME SORT OF MECHANISMS AND INCENTIVES THAT WORK THERE.

CHAIRMAN JUELSGAARD: BEFORE YOU MOVE ON, ELONA, YOU SAID WE'VE HAD SOME SUCCESS WITH THIS

PROGRAM. CAN YOU TALK ABOUT THOSE SUCCESSES?

MS. BAUM: DO YOU WANT ME TO DO THAT NOW?

CHAIRMAN JUELSGAARD: IF YOU WOULD JUST BACK UP. I JUST PREFER TO DO THIS AS WE GO ALONG.

MS. BAUM: SO HERE'S MY SLIDE ON OUTCOMES. I'VE JUST ADVANCED IT TO PAGE 13 FOR THOSE WHO AREN'T IN THE ROOM HERE. HERE'S WHAT WE HAVE. WE HAVE SIX LETTERS OF SUPPORT FROM BIOPHARMAS IN THE CONTEXT OF OUR STRATEGIC PARTNERSHIP RFA'S AND OUR DISEASE TEAM III.

LET ME EXPLAIN WHAT A LETTER OF SUPPORT MEANS. I THINK YOU MIGHT ALL RECALL AT THE LAST MEETING I WAS SAYING WE HAVE SOME DIFFICULTY IN MAKING SURE THAT THE AGREEMENTS BETWEEN THE PHARMAS OR THE VC'S, IN PARTICULAR THE PHARMAS, AND OUR GRANTEES ARE ACTUALLY COMPLETED. WHAT WE HAVE SEEN IS THAT THEY'RE IN THE DUE DILIGENCE STAGE. THEY THINK THEY MIGHT BE INTERESTED, BUT THEY HAVEN'T WORKED OUT THE FULL NEGOTIATIONS. AND RATHER THAN SAY WAIT SIX MONTHS OR 12 MONTHS FOR THE NEXT RFA, WE SAY, OKAY, YOU CAN COME INTO THE GRANTS WORKING GROUP REVIEW IF YOU HAVE AT X DATE A GENERAL LETTER OF SUPPORT. THAT'S USUALLY OFTEN JUST THE LOI STAGE. BY Y DATE, IF YOU HAVE BEEN MAKING PROGRESS IN YOUR NEGOTIATIONS, YOU CAN COME IN AND BE

REVIEWED.

IT'S NOW BEEN OUR POLICY THAT UNTIL THEY ACTUALLY HAVE A DEFINITIVE AGREEMENT SIGNED, WE WILL NOT BE ENTERTAINING THEM AT THE ICOC LEVEL. SO WHAT THAT MEANS, THERE'S SOME RIGHT NOW THAT ARE PROGRESSING THROUGH THE NEGOTIATIONS, AND IT DOESN'T LOOK LIKE THEY'LL HAVE A DEFINITIVE AGREEMENT FOR SP III IN THIS CIRCUMSTANCE PERHAPS BY DECEMBER. SO WE SAID, WELL, THE NEXT ICOC REVIEW, I THINK, IS IN JANUARY. AND SO THEY'RE PROBABLY SHOOTING FOR JANUARY AND HOPEFULLY THEY'LL MAKE THAT DATE. I THINK WE HAVE TO DECIDE, AND THIS IS A GOOD POINT FOR DISCUSSION, HOW LONG WE WANT THEM TO SORT OF ROLL OVER TO THE NEXT REVIEW.

CHAIRMAN THOMAS: ON THE ISSUE OF HAVING THEM GETTING A SIGNED, EXECUTED DOCUMENT BEFORE BRINGING IT TO THE BOARD, I ASSUME THAT'S IN RESPONSE TO THE GSK VIACYTE SEQUENCE.

MS. BAUM: YES. IT'S JUST BETTER FOR ALL PARTIES INVOLVED TO JUST KNOW THERE'S A DEAL AND THERE'S A DEAL AND NOT TO HAVE THIS AWARD AND THEN SPEND TIME TRYING TO NEGOTIATE OUR NGA'S AND THEN HAVE IT NOT MATERIALIZE. IT'S JUST BETTER. SO THAT'S WHY WE ADOPTED THIS.

AND THERE IS, OF COURSE, IF YOU WANT TO

DEBATE THIS, THE OPTION TO SAY YOU DON'T HAVE A DEAL. DON'T EVEN COME IN. WE'RE NOT TAKING YOU INTO GRANTS WORKING GROUP. BUT MY PERSONAL FEELING WAS THAT MIGHT BE TOO DISCOURAGING, AND I'D RATHER WHILE THE IRON IS HOT CONTINUE TO FOSTER THESE NEGOTIATIONS. SO THAT'S WHAT WE'RE DOING.

SO WE'VE HAD SIX IN DIFFERENT FORMS. SOME THAT SEEM LIKE I THINK THERE'S A REALLY GOOD SHOT AT THEM TURNING INTO A DEAL. I DON'T WANT TO NAME NAMES AT THIS POINT. I DON'T THINK IT'S APPROPRIATE.

SO ANOTHER SUCCESS THAT I LIKE REFER TO IS, AND IT'S NOT RELATED TO OUR CURRENT EFFORTS, BUT IT OCCURRED AS THE RESULT OF A PRIOR PROGRAM WE FUNDED, AND IT'S A SITUATION WHERE WE DID, I THINK IT WAS, A COMPREHENSIVE GRANT TO STANFORD. THEY CREATED A TOOL THAT WILL SUPPORT SOME SORT OF IDENTIFICATION OF A THERAPEUTIC IN THE AREA OF HEARING LOSS, NOT HAIR, BUT HEARING LOSS. AND THAT'S SOMETHING THAT WE CAN CLAIM SUCCESS FOR.

AND TO BE FRANK WITH YOU, THERE'S AT LEAST TWO INSTANCES WHERE I KNOW THAT THE PROGRAM COULD HAVE BEEN TEAMED WITH A PHARMA, BUT FOR THE EITHER INABILITY TO REACH AGREEMENT ON TERMS OR THE LACK OF INTEREST AT THIS TIME IN EVEN NEGOTIATING ON THE

PART OF OUR OWN GRANTEES. THEY HAVE WHAT THEY THINK IS SUFFICIENT FUNDING FROM US NOW OR IN THE FUTURE, AND SO THEY ARE LESS MOTIVATED. SO WE'VE HEARD ABOUT THAT.

IF YOU WANT TO HEAR ABOUT SOME OF THE DEALS THAT DIDN'T GO THROUGH AND THE REASONS, I CAN POINT TO THOSE.

CHAIRMAN THOMAS: ELONA, WHEN YOU SAY INABILITY TO AGREE UPON TERMS, COULD YOU ELABORATE ON THAT A LITTLE? WERE THERE ANY PARTICULAR LESSONS LEARNED AS TO WHAT WE COULD BE DOING TO TRY TO DRIVE THE CONVERSATION?

MS. BAUM: WELL, I THINK --

CHAIRMAN THOMAS: WITHOUT MENTIONING NAMES.

MS. BAUM: I WON'T MENTION NAMES. I JUST THINK THAT, ONE, WE NEED TO UNDERSTAND THAT WHEN WE MAKE A COMMITMENT OR WE LOOK LIKE WE'RE MAKING A COMMITMENT TO FUND, THEN IT ACTS AS A DISINCENTIVE TO GRANTEES TO GO OUT AND SEEK OTHER FUNDING BECAUSE WHAT THEY WANT TO DO IS MAKE THEIR PROGRAMS MORE VALUABLE. IF THEY CAN USE CIRM FUNDING TO GET DATA, THEN THEY THINK THEY CAN HAVE A BETTER DEAL CUT LATER ON THAN TO ACCESS IT EARLIER.

WHAT WE CAN DO IS MARKET.

DR. TROUNSON: MAKING DEALS WITH COMPANIES IN THE PAST, THEN THOSE DEALS SOMEHOW FELL APART, AND NOT REALLY BECAUSE OF THE SCIENCE, BUT BECAUSE OF THE INTEREST OF THE COMPANY. UNDER THOSE CIRCUMSTANCES, THERE ARE SOME PEOPLE WHO FEEL QUITE NEGATIVE ABOUT THAT. AND IF SO, IT'S NOT SIMPLY WANTING TO TAKE TO THE NEXT STAGE. IT'S REALLY WANTING TO MAKE SURE IT GOES THE DISTANCE.

MS. BAUM: I KNOW THAT'S THE THOUGHT PROCESS THERE, BUT I DO BELIEVE THERE ARE LEGAL MECHANISMS TO ADDRESS THOSE CIRCUMSTANCES. IT'S WHAT THEY CALL CLAW-BACK PROVISIONS, ETC. MAYBE THERE'S NOT A TRUE FACE IN WORKING THOSE CLAW-BACK PROVISIONS, BUT THEY'RE PRETTY COMMON THESE DAYS. I DON'T KNOW. I HOPE THAT IF WE COULD DO ONE THING IS TO EXPLAIN THAT CIRM WILL DO EVERYTHING IN ITS POWER TO MAKE SURE THAT SOMETHING DOESN'T SIT ON A SHELF AT A PHARMA COMPANY ONCE IT GOES THERE. AND WE CAN EXPLORE WAYS ON HOW TO DO THAT.

CHAIRMAN JUELSGAARD: ALAN, I TAKE WHAT YOU SAY, AND I THINK THAT CONCERN OF SOMETHING JUST GETS SHUNTED ASIDE AND DOESN'T SEE THE LIGHT OF DAY IS A LEGITIMATE CONCERN ON THE PART OF YOUNGER COMPANIES. HAVING SAID THAT, I THINK HOW BIG OF A ROLE IT PLAYS OBVIOUSLY IS A MATTER OF DEBATE, BUT

THERE IS A DISINCENTIVE FOR SEEKING OTHER SOURCES OF FUNDING ONCE CIRM PROVIDES THE MONEY. IT'S JUST A BY-PRODUCT. THERE'S NOTHING NECESSARILY WRONG WITH THAT, BUT IT'S JUST OBSERVATIONAL IN NATURE.

DR. TROUNSON: YOU CAN ALWAYS DEBATE ABOUT WHAT IT IS. I THINK IN THIS ONE CIRCUMSTANCE THAT I KNOW, IT'S A PRETTY STRONGLY HELD VIEW THAT I WANT TO SEE IT GO TO A POINT WHERE THERE'S A REAL OPTION FOR IT TO GO INTO PATIENTS. AND THAT'S A GENUINE FEELING. SO AT LEAST IN ONE CIRCUMSTANCE THAT'S A VERY STRONG POSITION, AND THAT POSITION HAS BEEN PUT TO US IN WHITE PAPER. SO IT MAY WELL BE SEEN EITHER WAY. AND IT'S NOT THAT THOSE PARTIES ARE NOT INTERESTED IN COMMERCIALIZING. THEY WANT TO MAKE SURE THAT THERE'S A VERY STRONG CHANCE IT GOES TO PATIENTS.

MS. BAUM: THE OTHER CIRCUMSTANCE WAS THEY WERE OFF BY MAGNITUDES OF DIFFERENCE. IT WAS JUST ONE PARTY VALUATING THE ASSET DIFFERENTLY THAN THE OTHER PARTY. I DON'T KNOW WHAT WE CAN DO ABOUT THAT.

CHAIRMAN JUELSGAARD: BEFORE YOU GO ON TO THIS SLIDE, WHY DON'T I APOLOGIZE FOR HAVING INTERRUPTED JUST TO SPEAK ABOUT THE STRATEGIC PARTNERSHIP INITIATIVE AND HOW WELL IT WAS WORKING.

AND THE ANSWER THAT I HEARD YOU GIVE IS WE DON'T HAVE ANY YET. WE POTENTIALLY HAD ONE LAST FALL WITH GSK. THAT DIDN'T WORK OUT. YOU'VE GOT SEVERAL POTENTIALS IN THE HOPPER RIGHT NOW AND WE'LL SEE HOW THEY PROGRESS NEXT YEAR.

BUT IF YOU GO BACK UP AND GO TO THE SLIDE YOU WOULD HAVE PROCEEDED TO NEXT, JUST KIND OF TALK ABOUT THE ACTIVITIES OUTSIDE OF THE PROGRAMS, SOME OF THE MORE INFORMAL APPROACHES, AND THEN WE CAN KIND OF CATCH UP TO THE REACTION OF PHARMA THAT YOU WERE GOING TO GET TO.

MS. BAUM: GREAT. ALL RIGHT. SO SOME OF THE OTHER ACTIVITIES THAT WE DO, GOING BACK TO THE CREATION OF LINKAGES, IS WE SPEND A LOT OF TIME, AT LEAST WE HAVE LAST YEAR, AT THE MEETING STAGE, IDENTIFYING OURSELVES TO ALL THE SCOUTS, LETTING THEM KNOW WHAT OUR PORTFOLIO IS ABOUT, UNDERSTANDING WHERE THEIR PRIORITIES WERE, AND THEN HANDPICKING SPECIFIC ONES THAT MATCHED THEIR AREAS OF INTEREST, AND THEN FOLLOW-UP, FOLLOW-UP, FOLLOW-UP.

AND WHAT WE HAVE DONE IN THE PAST IS WE TARGET THOSE CONFERENCES WHERE THEY HAVE EXTENSIVE WHAT THEY CALL 360 OR ONE-ON-ONE PARTNERING ACTIVITIES. IT'S A HUGE FACILITY CONFERENCE ROOM THAT HAS TINY LITTLE ROOMS. THEY MUST HAVE A

HUNDRED OR SO ROOMS. AND YOU GO THROUGH THE WHOLE PARTNERING PROCESS, HALF HOUR EACH, ALL DAY LONG. PEOPLE PROBABLY SEE MANY, MANY, MANY DIFFERENT PEOPLE DURING THE COURSE OF THE DAY. AND NEIL LITTMAN, BY THE WAY, HAS BEEN FUNDAMENTAL IN HELPING WITH THAT AND EXECUTING ON THAT.

AND SO I REPORTED THIS LAST MAY, BUT WHAT WE'VE DONE IS WE ENGAGED IN 121 SEPARATE LINKAGES, WHICH INCLUDE THE INITIAL MEETING WITH AN INDIVIDUAL SCOUT PLUS THE FOLLOW-UPS. THOSE HAVE TRANSLATED TO 26 ACTUAL MEETINGS BETWEEN THE GRANTEES AND THE VC OR PARTNER. SO AT LEAST IT SORT OF BROUGHT THEM TO OUR GRANTEES. AND THEN NOW WE HAVE THESE SIX LETTERS OF SUPPORT THAT ARE MAKING THEIR WAY THROUGH. MAYBE A COUPLE OF THEM WILL MAKE IT TO THE END.

CHAIRMAN JUELSGAARD: BEFORE YOU MOVE ON, SO IN THE SLIDE YOU HAD BEFORE WITH THE NUMBER OF THESE CONFERENCES, SO YOU CAN BE ONE OF TWO PLAYERS IN THIS KIND OF SETTING. TAKE JP MORGAN FOR EXAMPLE. YOU CAN BE THE PERSON OF WHOM A MEETING IS REQUESTED BY SOMEBODY ELSE OR YOU CAN REQUEST A MEETING. AND SO AT JP MORGAN, FOR EXAMPLE, WHICH ROLE DID WE PLAY?

MS. BAUM: BOTH. SOME PEOPLE CAME TO US.

SOME OF THOSE PEOPLE THAT CAME TO US WERE ACTUAL COMPANIES THAT WANTED OUR FUNDING ADMITTEDLY. SOME PEOPLE THAT CAME TO US WERE OTHER FUNDING AGENCIES THAT WANTED TO COLLABORATE, ISRAEL FOR ONE. AND THEN WE WERE PRETTY MUCH THE AGGRESSORS WHEN IT CAME TO MEETING WITH THE DIFFERENT PHARMAS.

CHAIRMAN JUELSGAARD: JUST TAKE, AGAIN, JP MORGAN IS PROBABLY THE BIGGEST OF THESE, AND WHAT'S THE BROADEST AMOUNT OF ORGANIZATIONS PARTICIPATING AT LEAST?

MS. BAUM: WAS IT 15?

MR. LITTMAN: I THINK SO. AT JP MORGAN, FOR INSTANCE, I THINK WE HAD 26.

CHAIRMAN JUELSGAARD: YOU ASKED TO MEET WITH 26 PHARMAS?

MR. LITTMAN: WE HAD 26 MEETS. SOME OF THOSE WE REQUESTED, AND SOME WERE REQUESTED OF US.

CHAIRMAN JUELSGAARD: HOW MANY DID WE REQUEST? AND WITHOUT NAMING NAMES, WHO WERE THEY GENERALLY WITH?

MR. LITTMAN: SO THE ONES THAT WE REQUESTED, I DON'T HAVE THE EXACT NUMBER, BUT IT WAS PROBABLY ABOUT HALF THAT. AND OF THOSE IT WAS MOSTLY MAJOR WHAT WE CALL BIG PHARMA COMPANIES WERE IN ATTENDANCE.

MS. BAUM: JP MORGAN IS A LITTLE DIFFERENT TOO. THAT ONE, IT'S NOT ONE LIKE IT'S ONE OF THESE HUGE CONFERENCE HALLS THAT ARE SET UP ELECTRONICALLY TO DO THIS. LIKE EVERY SINGLE MAJOR PHARMACEUTICAL COMPANY RENTS OUT SPACE IN A HOTEL, AND THEN THEY DO IT. IT'S A LITTLE MORE WORK TO ORGANIZE, AND IT'S A LITTLE MORE EFFORT TO GO FROM HOTEL TO HOTEL TO HOTEL AS OPPOSED TO THESE TIMED ONES EVERY 30 MINUTES. WE COULD GET MORE DATA.

AND THAT'S MY NEXT POINT WITH THIS SLIDE IS WE'RE TRACKING, AND SO I CAN GET YOU REPORTS BECAUSE WE ACTUALLY HAVE PURCHASED SALES FORCE, WHICH ALLOWS US TO TRACK EVERY SINGLE ENGAGEMENT THAT WE HAVE. WE HAVE TO REMIND OURSELVES TOO BECAUSE WE'RE NOT JUST SAYING, HEY, HERE WE ARE AND HERE'S OUR PORTFOLIO. WE ACTUALLY ARE TRACKING THE SPECIFIC PROGRAMS. WHAT THEY SAID THEY LIKED AND THEN WE KEEP FOLLOWING UP. WE DON'T WANT TO BE PESTERING THEM, BUT WE DON'T WANT TWO MONTHS TO GO BY OR THREE MONTHS TO GO BY WITH US HANDING OUT SOME NONCONFIDENTIAL INFORMATION AND NOT GETTING RESPONSE BACK. SOMETIMES YOU HAVE TO JUST SORT OF SHAKE THE TREE A LITTLE BIT. SO WE'VE BEEN TRACKING THAT.

AND THIS PARTICULAR EXAMPLE THAT YOU SEE BEFORE YOU ON THE SLIDE DOESN'T HAVE A LOT OF THE

CONFIDENTIAL INFORMATION, BUT THE NAME OF WHO WE SPOKE TO AND EXACTLY WHAT THEY WANTED AND EXACTLY WHAT WE SENT THEM HAS BEEN ALL TRACKED THROUGH SALES FORCE.

ARE WE READY TO SPEAK ABOUT OTHER APPROACHES IN ADDITION TO THESE?

CHAIRMAN JUELSGAARD: GO AHEAD.

MS. BAUM: OTHER TOOLS THAT WE HAVE AVAILABLE TO US ARE, FOR INSTANCE, WHAT WE HAVE SEEN IN DISEASE TEAM III. AGAIN, IT'S CREATING INCENTIVES. BY INCENTIVES I MEAN REQUIRING THAT PI'S ACTUALLY HAVE TO GET SOME SORT OF FUNDING. AND IN DISEASE TEAM III WE REQUIRED THAT ANTIBODIES AND SMALL MOLECULES PROVIDE 25 PERCENT OF THE FUNDING FOR A CLINICAL TRIAL. I CAN TELL YOU RIGHT NOW THAT BUT FOR THAT REQUIREMENT, ONE OF THESE SIX LETTERS OF SUPPORT THAT ARE MAKING THEIR WAY THROUGH THE PROCESS WOULD NEVER HAVE OCCURRED. AND SO IT CREATES AN INCENTIVE AT LEAST TO GET PEOPLE THINKING.

AND I UNDERSTAND THAT IT'S KIND OF LIKE A GAME OF CHICKEN BECAUSE YOU DON'T WANT TO SET THESE REQUIREMENTS, ESPECIALLY FOR THE CELLULAR COMPANIES MAYBE, AND THEN NOT BE ABLE TO ATTRACT THE FUNDING AND THEN WHERE ARE YOU. SO I THINK WE ACTUALLY HAVE

A GOOD SORT OF BALANCE AT LEAST VIS-A-VIS HOW WE HANDLE DISEASE TEAM III.

ANOTHER WAY WE DID IT SO WE COULD BE MORE PROACTIVE IS WE CREATED A VC MEET-UP DAY. THIS IS AGAIN -- AND PHARMA WAS INVITED TOO -- TO GET THEM ACTUALLY IN FRONT OF OR GET OUR GRANTEES IN FRONT OF SOME OF THE KEY POTENTIAL INVESTORS. WE DID IT HERE RIGHT IN THIS SPACE, VERY INFORMAL. RAVE REVIEWS. THEY ALL LOVE IT. THE VC'S THAT CAME AND THE PHARMA REPRESENTATIVES SAID, "GEE, I'D LIKE TO DO THIS AT LEAST ONCE A YEAR," AND MAYBE WE'LL DO IT TWICE A YEAR.

CHAIRMAN THOMAS: DO WE HAVE A WAY TO TRACK THE DISCUSSIONS AND WHAT HAPPENED AS A RESULT OF THAT?

MS. BAUM: WE CAN SEND OUT BASICALLY A QUESTIONNAIRE AND ASK THEM.

CHAIRMAN THOMAS: IT WOULD BE NICE TO KNOW BECAUSE THAT TELLS YOU IF IT WAS, IN FACT, A PRODUCTIVE UNDERTAKING.

MS. BAUM: RIGHT. I GUESS YOU HAVE TO REALLY DESCRIBE AND AGREE ON WHAT'S PRODUCTIVE. SO IF THEY SAID I LIKED IT, BUT RIGHT NOW THEY DIDN'T SIGN A CDA, DOES THAT MEAN IT'S UNPRODUCTIVE? PART OF THIS IS SORT OF JUST GETTING THE TEAMS KNOWING

ONE ANOTHER, GETTING THEM, EVEN IF THEY WATCH FOR A YEAR OR TWO, AT LEAST IT'S ON THEIR RADAR SCREEN AND THEY MIGHT HAVE A HELPFUL COMMENT OR TWO. I THINK WE NEED TO DISCUSS THAT.

CHAIRMAN JUELSGAARD: I AGREE WITH J.T. I THINK IT WOULD BE GREAT TO FOLLOW UP WITH EACH OF THE SEVEN CIRM TEAMS AND SAY YOU ALL PRESENTED HERE IN THIS ROOM SEVERAL MONTHS AGO. THERE WERE 16 VENTURE CAPITAL FIRMS THAT WERE IN ATTENDANCE. DID ANY OF YOU RECEIVE ANY FOLLOW-UP FROM ANY OF THOSE VC'S? IF SO, HOW MANY? AND WHAT WAS THE SUBSTANCE OF THE DISCUSSIONS AND WHERE DID THEY LEAD? I THINK GATHERING THAT DATA IS JUST HELPFUL FOR US TO KNOW. IF THERE'S SOME ADDITIONAL ROLE THAT WE CAN PLAY IN HELPING FACILITATE THINGS, AT LEAST KIND OF KNOWING THE OUTCOME WOULD BE REALLY GREAT.

DR. TROUNSON: ONE OF THE ISSUES THAT HAS JUST SHOWN UP IN A DISEASE TEAM REVIEW THAT YOU WERE AT IS THAT THE RISK PERCEIVED FOR THE CELL THERAPIES IS A MUCH BIGGER RISK THAN MONOCLONAL ANTIBODIES OR MOLECULES. SO I SEE OVER AND OVER AGAIN A KIND OF RELUCTANCE TO GO TOO FAR INTO ANY PROJECTS OF CELL THERAPY UNTIL SOMETHING STARTS TO REALLY WORK. AND YOU GET THIS THE HIGHER UP THE CHAIN YOU GO IN THOSE COMPANIES.

SO OFTEN YOU'VE GOT THE REPRESENTATIVES WHO COME TO THESE MEETINGS WHO REALLY THINK THAT'S GREAT. BUT IF YOU MOVE IT UP THE CHAIN SOME DISTANCE, YOU FIND, WELL, WHAT'S THE EXAMPLE? WHAT'S THE EXAMPLE OF THIS WORKING IN ANOTHER CONTEXT? SO LIKE THAT GRANTS REVIEW, IT'S KIND OF EASY TO GET AN ACCELERANT MARK BECAUSE YOU CAN SEE WHERE YOU'RE GOING AND YOU CAN SEE THAT MAYBE THIS WILL GET CONNECTED SOMETIME RELATIVELY SOON WHERE THE OTHERS, IT'S TOWING THE WATER APPROACH, A LITTLE BIT OF FUNDING, BUT NOT SORT OF CONVINCINGLY SORT OF GETTING THERE.

BUT I THINK IT'S CHANGING, BUT IT WOULD BE REALLY HELPFUL IF WE WERE ABLE TO SHOW SOME VERY EFFECTIVE THERAPIES THAT COME FROM THE KIND OF THINGS THAT WE'RE FUNDING. WE'RE NOT FUNDING THE SORT OF SIMPLE MSC-TYPE APPROACH, BUT SOME COMPANIES ARE FUNDING MESOBLASTS OR SUPPORTING MESOBLASTS, BUT YOU'VE GOT SOME ACTIVITY. THAT'S NOT WHERE WE'VE REALLY BEEN. WE'RE DEALING WITH MUCH MORE WITH COMPLICATED THERAPIES THAT REALLY HAD MECHANISMS BEHIND THEM; WHEREAS, A LOT OF THE OTHER STUFF OUT THERE BEFORE (UNINTELLIGIBLE) BUT IS BEING SUPPORTED NEVERTHELESS.

SO IT'S A SORT OF PLAYS GAME IN A WAY, AND

SO WE CAN GET THEM INTERESTED OFTEN; BUT TO GET IT CONVERTED TO ACTUALLY PUTTING MONEY OR A SUBSTANTIAL AMOUNT OF MONEY, SOMETIMES IT'S A LITTLE AMOUNT OF MONEY, BUT NOT A SUBSTANTIAL AMOUNT OF MONEY UNTIL WE GET SOME POSITIVES. THAT'S WHAT WE'RE TOLD.

CHAIRMAN THOMAS: ON THE POINT YOU RAISED, ALAN, WE'VE BEEN BURNED NOW BY DEALING WITH PHARMA AT A LEVEL THAT WASN'T SUFFICIENTLY HIGH IN TERMS OF WHO THE DECISION MAKERS ARE. SO HOW DO WE TRY TO CORRECT THAT SO THAT PEOPLE DON'T SPIN THEIR WHEELS, WHICH WE SPUN QUITE A LOT IN THAT PARTICULAR INSTANCE.

DR. TROUNSON: SOME COMPANIES, ELONA HAS SORT OF DESCRIBED SOME OF THEM, HAVE GOT A MORE POSITIVE ATTITUDE. J & J, THEY'RE COURTING THE WATER A BIT MORE THAN OTHER COMPANIES. BUT EVEN WITH VIACYTE, THEY'RE SORT OF ADDING TO IT RATHER THAN SORT OF -- THE REAL THING THERE, THEY SHOULD TAKE IT OVER. THAT WOULD BE GOOD SENSE, I WOULD HAVE THOUGHT, BECAUSE THEY'VE GOT A COMPANY ANYWAY THAT'S DOING THAT, AND IT WOULD MAKE REALLY GOOD SENSE, BUT THEY HAVEN'T DONE THAT YET. SO WHILE THEY'RE A REALLY INTERESTED COMPANY, PFIZER IS ANOTHER, BUT PFIZER HAS BEEN CUTTING BACK IN SOME PLACES IN REGENERATIVE MEDICINE PROGRAMS IN THE UK

AND BUILDING THEM SOME OTHER PLACE. SO IT'S A BIT HARD TO FOLLOW THEM.

WHERE YOU GET A VERY STRONG POSITIVE, FOR EXAMPLE, THE GROUP I WAS TALKING TO YOU THIS MORNING WITH, THEY'VE GOT A VERY STRONG POSITIVE FROM ONE OF THE DECISION MAKERS THAT'S REALLY AT THE TOP, WANTS TO BE IN THIS, AND IS LOOKING FOR DOING SOMETHING PERHAPS WITH A MAJOR ENTITY, BUT NOT NECESSARILY PUTTING THEIR MONEY IN A UNIVERSITY. OFTEN THEY'LL JUST PUT IT IN HARVARD AND HOPE SOMETHING COMES THROUGH, BUT THEY WANT TO DO SOMETHING MORE.

SO YOU HAVE TO GET TO THOSE PEOPLE, I THINK. SO YOU HAVE TO BE LISTENING. YOU HAVE TO BE AWARE. I THINK YOU HAVE TO GO, YOU HAVE TO TRY AND FIND OUT WHEN THE DECISION MAKERS ARE STARTING TO SORT OF CHANGE THEIR MIND. AND I THINK THEY'LL CHANGE THEIR MIND AS MORE EXAMPLES HAPPEN, OR YOU'LL GET A KIND OF RENEGADE WHO THINKS THIS IS GOING TO BE A GOOD FIELD AND IS GOING TO GO THERE, AND YOU HAVE TO LINK UP WITH THEM. I FEEL THAT YOU GOT TO GO FOR THE TOP, AS CLOSE TO THE TOP OF THE DECISION MAKERS AS YOU CAN GO, BUT IT'S NOT EASY TO GET TO THE TIME UNLESS THEY'RE REALLY INTERESTED, UNLESS THEY'RE INTERESTED.

CHAIRMAN JUELSGAARD: THIS IS JUST TO

ADDRESS YOUR QUESTION, J.T., FROM MY POINT OF VIEW. I THINK THIS IS ALWAYS ONE OF THE ISSUES OR CONCERNS THAT YOU HAVE TO DEAL WITH; BUT AT THE END OF THE DAY, A DEAL WHICH IS BEING HEAVILY SUPPORTED BY THE SCIENTIFIC PEOPLE AND BY THE BUSINESS DEVELOPMENT PEOPLE WITHIN AN ORGANIZATION, ULTIMATELY THE PLUG GETS PULLED. AND THERE ARE A LOT OF REASONS THAT THAN CAN HAPPEN. AND ONE OF THEM, WHICH MAY HAVE HAPPENED IN THIS CASE, I DON'T KNOW, IS BUDGETARY IN NATURE.

IN THE FALL, THAT'S WHEN COMPANIES ARE ESTABLISHING THEIR BUDGETS FOR THE COMING YEAR. AND THEY'RE LOOKING AT AT THE END OF THE DAY WHAT THEIR BOTTOM LINE NEEDS TO BE, AND THEY'RE LOOKING AT THEIR REVENUE FORECASTS. THEY'VE GOT THEIR EXPENSE FORECAST. IF THEY'RE NOT LINING UP WITH WHERE THEIR EPS OR THE REVENUES TO BE FOR THE COMING YEAR, THEN THINGS START GETTING WHACKED. AND WHAT THEY TEND TO DO IS WHACK SOME OF THE RISKIEST ONES FIRST.

SO IT'S ONE OF THOSE VAGARIES. I'M NOT SUGGESTING THAT THAT'S NECESSARILY WHAT HAPPENED HERE. THERE'S NOTHING YOU CAN PREVENT. WE CAN DO ALL THE WORK AND SEEMINGLY BE ON THE RIGHT COURSE, AND THAT COULD JUST COME AT YOU OUT OF LEFT FIELD. SO THERE ARE A LOT OF REASONS. ALL YOU CAN REALLY

DO IS TRY. IF YOU'VE GOT STRONG SCIENTIFIC SUPPORT AND BD SUPPORT, BUSINESS DEVELOPMENT SUPPORT, WITHIN AN ORGANIZATION, AND THEN ULTIMATELY IT WILL WORK ITS WAY UP THE CHAIN. THERE'S GOING TO BE A SENIOR MANAGEMENT GROUP IN A LOT OF ORGANIZATIONS THAT WILL APPROVE THESE DEALS ONCE THEY GET WORKED UP BY THE BD AND SCIENCE PEOPLE, AND DECISIONS WILL BE MADE THERE. BUT THERE'S ALWAYS THIS POSSIBILITY THAT EVEN A MUCH MORE SENIOR EXECUTIVE WOULD NIX THEM FOR SOME OTHER EXTRANEOUS REASON THAT WE'RE NOT AWARE OF.

DR. TROUNSON: IN THE CASE THAT ELONA REALLY HELPED WAS THE DUE DILIGENCE DONE ON TWO OF OUR LEADING PROJECTS WHICH CAME THROUGH THE DUE DILIGENCE PROCESS VERY, VERY WELL EXCEPT FOR A COUPLE OF MINOR ISSUES, THINGS THAT HAD TO BE FIXED ON THE IP, BUT THE REST OF IT WAS A VERY GOOD REPORT. TWO WEEKS, 20 PEOPLE FROM ONE OF THESE COMPANIES LOOKING AND GIVING IT A BIG STRONG KICK, BOTH OF THOSE. I THINK THAT DOES A LOT OF GOOD. I THINK THAT'S GOOD FOR US, IT'S GOOD FOR THE PROGRAMS, AND IT WILL EVENTUALLY BE GOOD, AS WE GO FORWARD, TO HAVE THAT KIND OF KICK GOING. BUT IT DIDN'T CONVERT. I THINK, AS YOU SAID, IT WAS SOME OTHER DECISION THAT WAS RISK VERSUS WHATEVER IT WAS,

BUT IT WAS DONE RIGHT AT THE TOP. AND UNLESS YOU'RE SITTING IN THE ROOM, I DOUBT YOU COULD HAVE CHANGED ANYTHING.

DR. DULIEGE: IF I COULD MAKE A COMMENT AT THIS POINT.

CHAIRMAN JUELSGAARD: SURE. GO AHEAD, ANNE-MARIE.

DR. DULIEGE: ONE THING ABOUT THE DISCUSSION. I RECENTLY ATTENDED A CMO, CHIEF MEDICAL OFFICER'S, MEETING, GET-TOGETHER, CONFERENCE WHERE WE HAD A CHANCE TO HAVE A VERY INFORMATIVE PANEL ON BUSINESS DEVELOPMENT. AN INDUSTRY PANEL ESSENTIALLY ADVISES FOR CMO. AND THERE WERE HIGH LEVEL BUSINESS DEVELOPMENT, BUT CELGENE, FOR INSTANCE, PFIZER AS FAR AS I RECALL. REALLY GOOD DISCUSSIONS ON HOW TO REACH OUT TO THESE PEOPLE FIRST AND THEN CONTINUE THE LEVEL OF DISCUSSION, BEING AWARE THAT AT SOME POINT PUSHING IT TOO MUCH MAY BE DETRIMENTAL. ALTHOUGH THERE ARE SPECIFIC INSTANCES WHERE IF WE KNOW PEOPLE AT THE TOP, AT LEAST MAKING A CONTACT THERE CAN HELP. AND I'M SURE CIRM WILL CONTINUE. MANY OF US DO KNOW PEOPLE AT THE TOP THAT COULD HELP A LITTLE BIT IN A SOMEWHAT MEASURED FASHION.

BUT THE TWO AREAS I KNOW CIRM HAS ALREADY

HELPED AND SHOULD CONTINUE TO HELP THE GRANTEES IS, ONE, IN THE QUALITY OF THE PRESENTATION. CLEARLY ONE OF THE KEY MESSAGES I HEARD WAS THAT A LOT OF THE WEIGHT FOR FUTURE DECISION WILL BE MADE ON THE QUALITY OF THE HIGHEST SCIENTIFIC PERSON, I DON'T KNOW IF IT'S A CHIEF MEDICAL OFFICER OR EQUIVALENT. AND WHETHER THAT PERSON HAS A LOT OF CREDIBILITY CARRIES SOME WEIGHT AND KNOWS THE PROJECTS IN AND OUT. SO THAT WAS NO. 1.

AND NO. 2, IN TERMS FOLLOWING UP, I'M SURE CIRM CAN CONTINUE TO HELP PEOPLE WITH THE RIGHT WAY TO FOLLOW UP WITH PEOPLE. I'M SURE SOME OF THE SMALL COMPANIES, SMALL GRANTEES EITHER DO NOT FOLLOW UP AT THE RIGHT TIME OR IN THE RIGHT WAY FOR A VARIETY OF REASONS, WHETHER IT'S TIME OR LACK OF EXPERIENCE. BUT THAT PART IS CERTAINLY AN AREA WHERE CIRM HAS HELPED AND SHOULD CONTINUE TO DO SO AT EARLY STAGE.

CHAIRMAN JUELSGAARD: THANK YOU, ANNE-MARIE. I THINK THOSE WERE GREAT OBSERVATIONS.

ANY OTHER QUESTIONS OF ELONA WHILE SHE'S RECOVERING HER PRESENTATION?

CHAIRMAN THOMAS: WERE THERE, I'M SURE THERE WERE, SINCE IT'S NEVER POSSIBLE TO GET EVERYBODY YOU WANT TO COME, BUT WERE THERE ANY

NOTABLE VC'S THAT YOU WEREN'T ABLE TO GET TO THAT MEETING THAT YOU'D LIKE TO GET MORE INTO THE LOOP? IF SO, HOW DO WE DO THAT?

MS. BAUM: I THINK THIRD ROCK, THEY WERE THERE. WE WOULD LOVE -- ATLAS. I DIDN'T REALIZE THAT NESSON SAID HE WOULD HAVE FLOWN OUT FOR THAT EVENT. I THINK IT WOULD HAVE BEEN GREAT TO HAVE PEOPLE FROM ATLAS THERE. I THINK WE GOT A REALLY GOOD TURNOUT FOR A MONDAY. AND I THINK THAT, BECAUSE A LOT OF THEM HAVE THEIR MEETINGS ON MONDAY MORNINGS, AND WE DID THIS MONDAY AFTERNOON, BUT THEY WERE VERY WILLING TO COME, AND I THINK THAT WAS A GOOD SIGN.

DR. TROUNSON: I THINK ALSO THE PRESENTATIONS AT THE STEM CELLS ON THE MESA MEETING, THE GRANTEES, OUR GRANTEES, REALLY STOOD OUT. AND MAYBE SOME OF THOSE OTHER COMPANIES DIDN'T REALLY PERFORM AS WELL FOR ALL SORTS OF DIFFERENT REASONS. OUR PEOPLE, I THINK, REALLY DID STAND OUT.

MS. BAUM: SO ANOTHER EVENT THAT WE PARTICIPATED IN AND WE ACTUALLY HELPED DEVELOP WITH THE ALLIANCE FOR REGENERATIVE MEDICINE WAS AN INVESTOR DAY IN NEW YORK. IN THAT CIRCUMSTANCE MOST OF THE PITCHES, SO TO SPEAK, WERE MADE BY COMPANIES, BUT WE HAD THREE OF OUR FOR-PROFIT GRANTEES PITCH AS

WELL OUT THERE. AND THAT WAS THE FIRST TIME THAT ARM ACTUALLY ENDEAVORED TO DO AN INVESTOR DAY, AND ACTUALLY THEY WERE SPILLING OUT OF THE ROOM. SO IT DREW A GOOD AUDIENCE. SO I THINK THAT WAS VERY ENCOURAGING.

AND LAST, BUT NOT LEAST, ONE OF THE OTHER THINGS THAT WE HAVE BEEN DOING AND WE WOULD LIKE TO INCREASE EFFORT IN IS WHAT I SORT OF CATEGORIZE AS MENTORSHIP OPPORTUNITIES. BUT THEY'RE ABOUT IMPROVING THE PITCHES OF THE DIFFERENT GRANTEES. AND, IN FACT, NEIL TODAY MET WITH ONE OF OUR GRANTEES IN PREPARATION FOR STEM CELL MEETING ON THE MESA TO GO OVER HER PRESENTATION. AND THAT'S JUST THE FIRST STEP.

IN ADDITION, WE'VE GOT TWO VC'S THAT ARE GOING TO JUDGE, SO TO SPEAK, AND GIVE COMMENTARY BEFORE THEY ACTUALLY GO AND DO THE PRESENTATION IN OCTOBER. SO WE'RE TRYING TO CREATE MORE OF THESE INFORMAL OR FORMAL PANELS OF MENTORS THAT WILL GO OUT AND HELP THESE TEAMS. AND THERE'S SOME ADDITIONAL IDEAS THAT WE COULD TALK ABOUT ON HOW TO DO THAT LIKE ENTREPRENEURS IN RESIDENCE. WOULDN'T THAT WE GREAT IF EACH GRANTEE TEAM COULD ATTRACT ONE? IT'S HARD TO DO ESPECIALLY FOR NON-PROFITS BECAUSE THEY USUALLY WORK FOR EQUITY AND THERE'S NO

EQUITY THERE. BUT SOME OF THE UNIVERSITIES ARE NOW GETTING POSITIONS SUCH AS THOSE AND MAYBE THAT COULD HELP OUR GRANTEES.

SO LET ME TALK A LITTLE BIT ABOUT SOME OF THE THINGS. I STARTED TALKING ABOUT WHAT WE'VE HEARD FROM PHARMA, HAVE ALLUDED TO IT, BUT SOME HAVE SAID, AFTER DOING A DUE DILIGENCE IS, "OH, WE'LL WAIT FOR THE PHASE I DATA, THANK YOU. IT'S RISKY AND WE LIKE THE PROJECT, BUT WE'LL TAKE OUR CHANCES THAT YOU'LL FUND IT, AND LET'S WAIT AND SEE WHAT HAPPENS."

ANOTHER COMPANY, I DON'T THINK THEY QUITE UNDERSTOOD, THEY'RE OBVIOUSLY NOT ENGAGED AS MUCH IN CELL THERAPY, THEY WERE CONCERNED ABOUT THE HETEROGENEITY OF THE CELL MIXTURE. AND THAT'S AN EDUCATION ISSUE, BUT WE COULDN'T OVERCOME THAT IN ONE REGARD.

ON THE GOOD NEWS FRONT, ASTRAZENECA ACTUALLY LAST YEAR SAID THAT THEY WANTED TO MAKE CARDIO REGEN MEDICINE A FOCAL POINT. TO BE HONEST WITH YOU, THE PROGRAMS WE'VE SENT THEM THUS FAR THEY HAVE NOT BEEN RESPONSIVE TO. AND I UNDERSTAND THERE'S NOW A LOT OF INTERNAL REORGANIZATION GOING ON THERE. SO THAT MIGHT HAVE A LOT TO DO WITH IT. THAT HAPPENS A LOT TOO IS EVERYONE IS GETTING

SHUFFLED VERY OFTEN IN THESE CORPORATIONS.

WE'VE HEARD FROM SOME PHARMA THAT, GEE, WE REALLY LIKE REGENERATIVE MEDICINE, BUT WE LIKE IT WHEN IT'S A SMALL MOLECULE THAT'S HAVING AN ENDOGENOUS EFFECT. AND THEY SAID, "HEY, IF YOU FIND AN ENDOGENOUS EFFECT IN THIS DISEASE AREA, CALL ME UP UPRIGHT AWAY. WE'LL HOP ON IT." STILL LOOKING FOR THOSE TO COME THROUGH THE PIPELINE.

AND THEN WE HEARD THE WHOLE THING ABOUT THE PARTNER JUST WASN'T AT THAT TIME WHOLLY INTERESTED IN ENGAGING. SO THOSE ARE SOME OF THE NEGATIVES.

CHAIRMAN JUELSGAARD: BEFORE YOU GO ON, I HAVE TO ASK ALAN OR GIL OR PAT ABOUT THIS NOTION OF HETEROGENEITY IN THE CELLS THAT ARE AT THE BASE OF WHAT ARE GOING TO BE THE THERAPY. WHAT IS THE EXTENT OF HETEROGENEITY IN THESE?

DR. TROUNSON: IT CAN BE VERY CONSIDERABLE. DEPENDS HOW YOU MEASURE IT. IF YOU GO DOWN TO SINGLE CELLS, THEY'VE GOT TO BE HETEROGENEOUS BECAUSE ALL THE CELLS ARE DIFFERENT -- THEY'RE NOT EXACTLY IN ORDER. IT'S NOT LIKE A DRUG WHICH EACH MOLECULE IS ACTING THE SAME.

SO THE QUESTION IS, IT IS A REALLY GOOD QUESTION, IT'S ONE OF THE CONCERNS IN THE FIELD, IS

THAT AT WHAT LEVEL SHOULD WE BE CONCERNED ABOUT HETEROGENEITY? WE REALLY DON'T KNOW THE ANSWER TO THAT YET, BUT I SUSPECT WE'LL NEED TO DO THAT.

A GOOD EXAMPLE IS IN PARKINSON'S DISEASE. IF YOU HAVE A MIXTURE OF CELLS THERE, THEY THINK THAT THE MIXTURE OF SEROTONIN RESPONSIVE CELLS AS WELL AS YOUR DOPAMINE PRODUCING CELLS GIVES YOU THAT OVERREACTION IN THE PATIENTS. NOW, I'M NOT EXACTLY SURE THAT EVERYBODY BELIEVES THAT, BUT IT'S A VERY STRONG VIEW IN THE FIELD. IF YOU DON'T GET A PURE DOPAMINE PRODUCING CELL LINE, YOU'LL GET THESE OTHER UPSTART EFFECTS WHICH ARE VERY DETRIMENTAL TO THE PATIENT.

SO THESE THINGS ARE STILL SORT OF WORKING THEIR WAY THROUGH. BUT IF YOU TAKE BONE MARROW CELLS, THEY'RE VERY HETEROGENEOUS. IF YOU TAKE MESENCHYMAL STEM CELLS, THEY'RE VERY HETEROGENEOUS AS WELL. AT LEAST IN THE MSC'S, THEY DON'T LAST VERY LONG, SO MAYBE THE HETEROGENEITY DOESN'T REALLY MATTER. WHATEVER THEY'RE DOING IS PROVIDING SOMETHING THAT'S NOT RELATED TO THEIR HETEROGENEITY.

SO WE'RE STILL TRYING TO STRUGGLE WITH THAT. IT'S NOT AN EASY QUESTION TO ANSWER TO BE HONEST. BUT THE BETTER THE PURIFIED CELL, THE BETTER. I THINK THE MORE COMFORTABLE THE REGULATOR

IS AND THE MORE COMFORTABLE THE PHARMA PEOPLE ARE BECAUSE THEY'RE USED TO PURIFIED PRODUCT. AND SO WE JUST HAVE TO FIGURE OUT WHAT IT IS THAT IS AN APPROPRIATE LEVEL OF HETEROGENEITY BECAUSE THERE'S ALWAYS GOING TO BE THAT IN CELLS, ALWAYS.

CHAIRMAN JUELSGAARD: IT'S NOT JUST WHAT IS THE APPROPRIATE LEVEL OF HETEROGENEITY, BUT HOW YOU THEN CONTROL AND CONTAIN THAT OVER TIME AT THE MASTER CELL BANK BECAUSE IF IT DRIFTS OFF IN ONE DIRECTION OR THE OTHER, THERE'S A PROBLEM.

DR. OLSON: THAT'S WHAT THEY ASK FOR. THEY RECOGNIZE IN MANY CASES THAT THE POPULATION IS NOT PURE, BUT THEY WANT TO HAVE BEEN ABLE TO CHARACTERIZE CALL IT THE IMPURITIES, IF YOU LIKE. AND THEY WANT YOU TO SEND SPECIFICATIONS THAT SAY BASED ON SOME SORT OF ACTIVITY, WHICH IDEALLY WILL END UP BEING CORRELATED WITH CLINICAL ACTIVITY, YOU CAN SAY THAT A POPULATION THAT IS THIS MUCH OF THIS CHARACTERISTIC WILL YIELD AN ACTIVE POPULATION. SO THAT'S WHAT YOU HAVE TO DO.

ALAN IS RIGHT. IT'S A QUESTION OF HOW MUCH DO YOU GO INTO DETAIL. SINGLE CELL LEVEL, YOU'LL RUN INTO A LOT MORE HETEROGENEITY, WHICH TENDS TO BE WHY IT'S AT A POPULATION LEVEL NOW.

CHAIRMAN JUELSGAARD: THANK YOU. NOT A

SMALL HURDLE.

DR. TROUNSON: NO, IT'S NOT A SMALL HURDLE, AND IT'S ONE THAT THE FDA STRUGGLES WITH AND WE'RE ALL STRUGGLING WITH. I THINK IT'S ONLY GOING TO BE IN TIME WE'RE GOING TO LEARN WHAT DEGREE HETEROGENEITY WILL BE APPROPRIATE TO EACH AND EVERY DISEASE PROBABLY. PARKINSON'S IS CERTAINLY AN ISSUE THERE, AND THERE'S SOME OTHER CONDITIONS THAT WILL BE. BUT IF THE CELLS ARE GOING TO BE RESIDENT FOR LONG TERM, THEY NEED TO BE DOING THE RIGHT JOB, NOT AN OFF JOB. THAT'S WHAT'S CRITICAL.

DR. OLSON: I JUST WANTED TO MAKE ONE MORE COMMENT. THOSE OF YOU WHO ARE FAMILIAR WITH PROTEIN THERAPEUTICS, YOU MIGHT REGARD IT AS AN ANALOGOUS SITUATION. PROTEINS WHEN THEY SIT AROUND FOR A WHILE, EVEN IF THEY'RE FROZEN, YOU GET MODIFICATION. SO THE DEGREE OF GLYCOSYLATION OR THE DEGREES THAT THEY GET POST-TRANSLATIONAL MODIFICATIONS, THE FDA HAD TO GET COMFORTABLE WITH YOU DEFINING THE EXTENT OF THOSE DIFFERENT MODIFICATIONS. I WOULD REALLY LOOK AT IT IN THE SAME WAY, WHICH I DO THINK IS HOW THE FDA IS LOOKING AT IT NOW.

BUT, AGAIN, TO YOUR POINT VIS-A-VIS SMALL MOLECULES, YOU CAN'T STICK IT IN A MASS SPEC AND KNOW EXACTLY WHAT YOU HAVE. BUT I WOULD LOOK AT THE

CELL SITUATION AS VERY ANALOGOUS TO THE THERAPEUTIC SITUATION AND TO SOME EXTENT THE MONOCLONAL ANTIBODY SITUATION AS WELL. YOU ARE REQUIRED TO CHARACTERIZE THOSE VARIANCES, IF YOU LIKE.

CHAIRMAN JUELSGAARD: AND YOU HAVE TO CREATE OUTER BOUNDARIES.

DR. OLSON: RIGHT. AND YOU CREATE RELEASE SPECS AND PROCESS SPECIFICATIONS. VERY SIMILAR TO THAT AND I THINK SHOULD BE LOOKED AT THAT WAY.

CHAIRMAN THOMAS: ELONA, COULD YOU GO BACK TO THE BIOPHARMA COMMENT PAGE PLEASE? HERETOFORE PHARMA HAS TYPICALLY SORT OF PLAYED AFTER YOU GET PROOF OF CONCEPT IN PHASE II. DOES THAT FIRST COMMENT SUGGEST THAT THEY ARE NOW LOOKING AFTER PHASE I AND THAT THEY'RE ACTUALLY WILLING TO GET IN EARLIER IN THE GAME?

MS. BAUM: SO THE MERCK EXAMPLE IS A PERFECT EXAMPLE WHERE IT WOULD SUGGEST PHASE II, BUT THIS IS A GOOD EXAMPLE WHERE IT WOULD SUGGEST THAT THEY ARE WILLING TO LOOK EARLIER, ESPECIALLY BECAUSE I THINK SOMEBODY MENTIONED THAT SOMETIMES YOU SEE BIOLOGICAL ACTIVITY IN A PHASE I WITH THIS THERAPY WITH REGENERATIVE MEDICINE. SO THEY --

CHAIRMAN JUELSGAARD: THE RIGHT PHASE I.

MS. BAUM: RIGHT. IT'S GOT TO BE THE

RIGHT PHASE I, YES.

DR. TROUNSON: BUT I DO THINK SOME OF THE COMPANIES, JUST SOME, ARE EVEN MORE INTERESTED IN EARLIER PRECLINICAL. THEY HAVE COME TO US WITH TRANSLATIONAL PROJECTS, NOT ALWAYS GETTING THROUGH OUR REVIEW SYSTEM, MIND YOU, BUT THEY HAVE, BUT THAT DOESN'T MEAN THAT THEY'RE PUTTING A LOT OF MONEY IN. THEY'RE PUTTING A RELATIVELY SMALL AMOUNT INTO A NUMBER OF DIFFERENT AREAS AND HOPING THAT SOME OF THESE MIGHT GO FOR THEM, BUT SMALL AMOUNTS OF MONEY, I GUESS, ACROSS QUITE A SPECTRUM.

MS. BAUM: THAT'S EXACTLY WHAT I WANTED TO EMPHASIZE TOO BECAUSE WE'VE HAD SOME COME IN AT THE EARLY TRANSLATION STAGE, AND THEY JUST DIDN'T MAKE IT THROUGH. AND SO THEY ARE WILLING, BUT IT'S BECAUSE IT'S A SMALL INVESTMENT. SOME DESCRIBE IT AS PARTNER AND LEARN. THEY WANT TO HAVE AT LEAST A TOE IN IN THE AREA, AND THAT'S ONE WAY TO DO IT.

DR. OLSON: I GUESS THE QUESTION THERE WAS WHEN YOU COME IN AS TWO PROJECTS OUT OF 140 IN A PREAPP STAGE, THAT'S A BIG POOL THAT YOU'RE SWIMMING IN. WHEREAS, SAY, OUR STRATEGIC PARTNERSHIPS, WHICH CURRENTLY HAVE BEEN FOCUSED ON THE DEVELOPMENT STAGE, THE NUMBERS ARE MUCH SMALLER. THAT HAS BEEN AN ISSUE. YOU KNOW, WHEN YOU'VE GOT 140 THINGS COME

IN AT A PREAPP, IT'S A BIG PROBLEM.

MS. BAUM: AND THAT GETS TO THE POINT ABOUT THE CREATION OF STRATEGIC PARTNERSHIP FUND BECAUSE IT HAD THIS COMMERCIAL VALIDATION ENTRY REQUIREMENT. IT'S NOT ENORMOUS, SO THE ODDS OF ACTUALLY GETTING A PARTNERSHIP THROUGH ARE MUCH BETTER.

CHAIRMAN THOMAS: WE'VE TALKED IN THE PAST ABOUT THIS FORBES ARTICLE THAT CAME OUT A COUPLE YEARS AGO NOW THAT COREY GOODMAN WAS QUOTED IN AS SAYING THAT BIG PHARMA, HAVING HAD RELATIVELY LITTLE SUCCESS WITH HUGE AMOUNTS SPENT ON R&D OVER THE LAST DECADE IS LOOKING TO FORM STRATEGIC ALLIANCES EARLIER THAN NORMAL TO HELP NOT JUST EDUCATE, BUT TO GET PIPELINES IN THE WORKS. ARE YOU SEEING THAT TREND AT ALL? AND IS THERE ANYTHING WE CAN DO TO FACILITATE IT BECAUSE IT MAKES PERFECT SENSE?

MS. BAUM: YES. I HAVE A THOUGHT. AND I THINK LET ME JUST -- THIS IS PAGE -- THE EXAMPLE OF THE VERSANT ROCHE DEAL IS A PERFECT EXAMPLE. WE TRIED THAT TOO IS WHERE WE SEE A PHARMA THAT SAYS, "OH, WE'RE INTERESTED. WE DON'T HAVE THAT MUCH BUDGET." I WAS LIKE WHAT IF YOU PARTNER WITH A VC IN THE BUILD-BUY MODEL, WHICH IS EXACTLY WHAT VERSANT DID WITH ROCHE WITH ONE OF OUR ASSETS. I

THINK THERE'S SOME DEFINITE OPPORTUNITY TO MINE THERE. AND I HAVE A SLIDE TOWARDS THE END OF THE PRESENTATION ON OUR ET PROGRAMS WHERE WE SORT OF BUILD SCREENING TOOLS THAT MIGHT ACTUALLY END UP IN ARRANGEMENTS LIKE THIS.

SO I THINK THAT'S SOMETHING THAT'S HAPPENED.

INTERESTINGLY, AT THE CNS CONFERENCE I WAS JUST AT TOO, BECAUSE IT'S SUCH A TOUGH FIELD, ONE OF THE VP'S OF BD THERE SAID THAT THEY'RE ACTUALLY WILLING TO LOOK AT PRECOMPETITIVE CONSORTIA, WHICH IS ANOTHER FOLLOW-UP ITEM, BECAUSE THERE'S JUST BEEN A LOT OF FAILURES IN ALZHEIMER'S AND OTHER AREAS, AND THEY THINK THAT THEY NEED SOMETHING REALLY GAME CHANGING. SO THAT MIGHT BE SOMETHING TO CONSIDER.

DR. TROUNSON: I THINK IT'S STILL BUILT AROUND RESEARCH, J.T. IF YOU TAKE ON ONE OF THESE, YOU TAKE ON A FAIRLY HIGH RISK PROJECT COMPARED TO THE SMALL MOLECULE WHERE YOU CAN ACTUALLY FORMULATE WHAT YOUR RISKS ARE A LITTLE BETTER. THE EFFECT OF A CELL THERAPY IS PROBABLY GOING TO BE LONGER. IT'S SORT OF YOU DON'T KNOW WHETHER YOU'RE GOING TO BE ON CLINICAL HOLD AND THINGS LIKE THIS. IT'S SORT OF A MORE THAN UNKNOWN PLACE. IT'S THINKING REALLY ABOUT WHERE THEIR RISK IS. AND I KNOW PHARMA NOW IS ON

AVERAGE $4 BILLION PER DRUG COMING ONTO THE MARKET NOW, FOUR BILLION PER DRUG. SO YOU'RE RIGHT. THAT PIPELINE NEEDS TO SORT OF GO UP DRAMATICALLY. I DON'T SEE CELL THERAPIES AS THE WAY TO DO IT YET UNTIL THEY GET SOME REALLY GOOD EXAMPLES. THAT'S WHAT WE'RE SHORT OF.

CHAIRMAN THOMAS: HOW ABOUT OUR PROJECTS THAT ARE SMALL MOLECULE OR ANTIBODIES? HOW ARE WE DOING ON GETTING EARLY PHARMA INTERESTED IN THOSE?

MS. BAUM: I MIGHT SAY THEY'RE VERY WELL.

DR. TROUNSON: IF WE ONLY HAD THEM, THEY WOULD BE ALL OVER US. THAT, I THINK, IS A FAIR THING TO SAY. PROBABLY BEFORE PHASE II. SO I THINK THAT'S WHAT WE'RE FACING. WE'RE IN THE HARD TRACK. WE JUST NEED TO GET A FEW OF THESE ACROSS THE LINE IF WE CAN AND THAT THEY CAN REALLY DEMONSTRATE. PART OF THE PROBLEM IS KNOWING WHAT THEIR BUSINESS PLAN IN THIS. THEY STILL DON'T REALLY SEE THAT TERRIBLY WELL. HOW WE'RE GOING TO MAKE THEM COME IN IN CELL THERAPIES, IT'S NOT NECESSARILY CLEAR TO THEM. THEY'VE GOT SOME IDEAS, BUT UNTIL SOMEONE STARTS TO SORT OF DO IT, THEY'RE JUST A BIT RETICENT. AND IT'S A RISK RETICENCE, I THINK.

CHAIRMAN JUELSGAARD: I WOULD JUST ADD TO WHAT YOU SAID, ALAN. SO YOU STEP BACK AND COMPARE

ANTIBODIES AND SMALL MOLECULES WITH CELL THERAPY. SO THERE'S A LOT KNOWN ABOUT SMALL MOLECULES AND NOW ANTIBODIES. THERE WASN'T A LOT IN THE '90S, BUT BACK TO THE LATE 1990S WHEN THEY WERE FIRST COMING ON THE MARKET. SO IT'S ALL ABOUT RISK. COMPANIES LIKE SITUATIONS WHERE YOU MINIMIZE RISK.

SO WHAT ARE THE RISKS? SO THEY KNOW HOW SMALL MOLECULES AND ANTIBODIES WORK, GENERALLY SPEAKING, MECHANISM OF ACTION. THE CELL THERAPIES, JUST WITNESS THIS DISCUSSION ABOUT CELL POPULATIONS, WHICH CAN BE A SCARY IDEA IF THEY MIGRATE SOMEWHERE WITHIN THE BODY THAT THEY'RE NOT SUPPOSED TO. SO YOU HAVE KNOWING THE MECHANISM OF ACTION. YOU KNOW HOW TO MAKE THEM. WE'VE MADE SMALL MOLECULES AND ANTIBODIES FOR AGES. WE HAVEN'T REALLY STARTED MAKING BIG POOLS OF STEM CELLS. SO BOTH THE PROCESS DEVELOPMENT AS WELL AS THE MANUFACTURING.

THE REGULATORY PATH IS LESS THAN CLEAR. AGAIN, BACK TO THIS ISSUE OF TRYING TO CONTAIN THE DIVERSITY OF THE CELLS WITHIN NARROW BANDS. BUT IT'S GOING TO BE A BIT OF A CHALLENGE.

AND THEN THERE'S THE WHOLE COMMERCIALIZATION ASPECT, AND HOW DOES THIS STUFF GET PAID FOR, AND WHAT'S THAT GOING TO LOOK AT? SO THOSE ARE THE RISKS THAT A COMPANY WHEN THEY LOOK AT

THIS FIELD GENERALLY IN CELL THERAPY THINK ABOUT. IF THERE'S A PROJECT WHERE THOSE RISKS HAVE BEEN MINIMIZED BECAUSE IT'S A WELL-WORN PATH, THE ONLY RISK IS AM I GOING TO GET PHASE II PROOF OF CONCEPT? AND THEN ULTIMATELY IF I DO, PHASE III COMING IN SIGNIFICANT FASHION, I CAN GET APPROVAL WITHOUT UNDUE SAFETY CONCERNS.

SO IT'S A VERY STRAIGHTFORWARD KIND OF PROBLEM THAT A LOT OF COMPANIES THAT ARE IN THIS AREA ARE FACING IF IT'S PURELY CELL THERAPY, NOT SMALL MOLECULES OR ANTIBODIES OR OTHER PROTEINS.

DR. TROUNSON: DESPITE THAT, YOU HAVE A MESOBLAST WHO GETS A CAPITAL VALUE OF 2.3 MILLION. YOU HAVE TO SORT OF SET THAT ASIDE A LITTLE WAY BECAUSE THAT'S A VERY UNUSUAL NUMBER. OTHERWISE WHAT WE'RE SAYING DOESN'T MAKE A LOT OF SENSE. BUT THAT'S GOT AN UNUSUAL SET OF FACTS AROUND IT.

I KNOW THERE'S A COMPANY IN CALIFORNIA THAT'S RAISED 500 MILLION ON THE BASIS OF SMALL MOLECULES STIMULATING STEM CELLS. YOU CAN GET OUT THERE AND CAN DO AMAZING THINGS WITH THOSE SMALL MOLECULES TO CONVINCE PEOPLE. WE'VE GOT THE SMALL MOLECULES. YOU CAN ACTUALLY DO THAT. IT SEEMS LIKE IT'S A HECK OF A LOT EASIER SELL.

CHAIRMAN JUELSGAARD: ANYTHING ELSE?

MS. BAUM: I THINK I ALREADY TOUCHED ON, THIS IS PRETTY MUCH MY LAST SLIDE, THE FACT THAT A LOT OF ATTENTION WAS PLACED ON OUR DISEASE TEAMS AND LINKING THOSE UP. BUT I THINK MAYBE THE FUTURE FOCUS FOR THE NEXT FEW MONTHS WILL BE ON OUR EARLY TRANSLATION I AND IIS BECAUSE THOSE ARE PRETTY MUCH COMPLETE. AND I THINK THERE MIGHT BE 20 PROGRAMS, MAYBE A LITTLE LESS THAT MIGHT HAVE SOME ATTRACTION MORE ON THE LINES OF WHAT WE JUST TALKED ABOUT WHERE THERE'S THE END LICENSING OF THIS SCREENING TECHNOLOGY, MAYBE A DEVELOPMENT CANDIDATE, THAT A VC IN PARTNERSHIP WITH A PHARMA MIGHT BE INTERESTED IN BECAUSE THOSE ARE VERY, VERY EARLY.

BUT AT LEAST THE DATA NOW IS IN FOR THE ET IS FOR THE MOST PART, AND ET IIS WILL BE FINISHED SOONER THAN LATER, CERTAINLY BEFORE THE DISEASE TEAM II AWARDS. AND SO YOU ALSO NEED TO THINK ABOUT, WELL, YOU HAVE TEN DISEASE TEAM IIS, BUT THEY'VE GOT FUNDING FOR THREE YEARS OR SO. SO THERE'S -- ALMOST FOUR YEARS. WE'RE INTO IT A YEAR OR SO. NOT ALL OF THEM. WE'RE IN THE FIRST YEAR. IF THEY'RE FULLY FUNDED ALREADY, I REALLY DON'T FIGURE WHAT THE INCENTIVES ARE FOR BOTH SIDES TO SORT OF ACTUALLY PUT MONEY INTO THEM UNTIL THEY GET THE DATA.

DR. TROUNSON: STEVE, THE OTHER THING

THAT'S REALLY APPARENT TO ME IS THE AUTOLOGOUS CELL WORK IS REALLY ON A VERY RAPID GRADIENT GOING UP. I THINK YOU CAN DEMONSTRATE THAT BY SUCCESS OF THE IPO FOR BLUEBIRD. I THINK PEOPLE LIKE CAL-IMMUNE ARE GOING TO DO WELL. I THINK SANGAMO IS GOING TO DO WELL. THEY'RE GOING TO BE PROVIDING REAGENTS INTO THERAPEUTICS INTO THE MEDICAL CENTERS. SO THEY'RE GOING TO PROVIDE THOSE THERAPEUTICS. I THINK THOSE COMPANIES WILL DO WELL ON THAT BASIS. I THINK THEY WILL MAKE THOSE AVAILABLE BROADLY ACROSS THE WORLD AND DO EXTREMELY WELL.

I THINK THAT'S THE NEXT PHASE WHERE YOU WILL SEE CELL THERAPIES REALLY STARTING TO MOVE UP. I SENSE THE STRONG INTEREST IN SUPPORTING THESE COMPANIES IS REALLY COMING FROM THE GOOD FEELING THAT THIS IS GOOD SCIENCE. IT'S BEING BUILT. WE CAN SEE A BUSINESS PLAN BECAUSE THEY'RE GOING TO PROVIDE THE TREATMENT AS A REAGENT BASE FOR THERAPEUTICS ACROSS A VERY LARGE NUMBER OF CLINICAL CENTERS AROUND THE WORLD PROBABLY. WE'RE IN THAT AREA, BUT IT'S NOT A BIG PART OF OUR PORTFOLIO, BUT WE'RE IN THAT AREA. AND I THINK THAT'S WHERE WE'LL PROBABLY FIND A LOT MORE CONFIDENCE IN CREATING SOME LINKAGES OR AT LEAST COMPANIES BEING STRONGLY SUPPORTED WHO ARE DOING THAT WITH US.

CHAIRMAN JUELSGAARD: SO IN THOSE COMPANIES THAT ARE FOLLOWING THAT PATH, ARE YOU AWARE OF ANY WORK THAT'S BEEN DONE MODELING THE COST OF DELIVERING THOSE THERAPIES, THE COST TO THE PATIENT WHICH TRANSLATES TO THE COST TO THE PAYOR? IF YOU TAKE A COMPANY LIKE GENZYME, FOR EXAMPLE, THAT'S NOW PART OF SANOFI-AVENTIS, THEY WORK ON DEVELOPING ORPHAN DRUGS; THAT IS, ENZYME REPLACEMENT THERAPIES FOR ENZYME DEFICIENT DISEASES THAT OCCUR IN VERY SMALL GROUPS OF PEOPLE, AND THOSE PRODUCTS ARE SELLING IN THE RANGE FROM $100,000 TO $300,000 A PATIENT PER YEAR. HUGE SUMS OF MONEY. BUT THE SYSTEM WAS WILLING TO DEAL WITH IT BECAUSE THERE WERE SUCH SMALL NUMBERS OF PATIENTS, AND THESE ARE REALLY BAD DISEASES.

SO MY QUESTION IS WHAT IS THE MODELING THAT'S BEEN DONE? SO TREATING AUTOLOGOUSLY, SO YOU GOT TO SHIP THE PATIENT'S CELLS SOMEWHERE, HAVE THEM BASICALLY INCREASED IN NUMBER, ISOLATED AND INCREASED IN NUMBER, AND THEN SHIPPED BACK AND GIVEN BACK TO THE PATIENT.

DR. TROUNSON: I THINK THEY'VE DONE SOME OF THAT WORK, BUT THEY'RE NOT MAKING IT PUBLIC. I THINK THEY HAVE A LOT OF DISCUSSIONS GOING ON, I GUESS, WITH THE INSURANCE PEOPLE AND SCIENCE. BUT I

THINK THE CONFIDENCE IS THAT THEY WILL GET --

DR. FEIGAL: I WAS JUST GOING TO MENTION SOME OF THESE AUTOLOGOUS STEM CELL APPROACHES ARE BUILDING ON DECADES OF WORK WITH GENE THERAPY, AND A LOT OF THESE ARE HEMATOPOIETIC STEM CELLS THAT ARE GENE MODIFIED OR GENE EDITED. THAT JUST DIDN'T COME ABOUT IN THE LAST COUPLE YEARS. THAT'S 20 YEARS IN THE MAKING WHERE PEOPLE FEEL AT EASE. PEOPLE ARE FEELING MORE COMFORTABLE WITH THAT TYPE OF APPROACH AS OPPOSED TO THE PLURIPOTENT STEM CELL, WHICH IS MUCH MORE RECENT.

THE OTHER THING, I THINK, WITH A LOT OF THE AUTOLOGOUS STEM CELL APPROACHES, THAT AT LEAST MANY OF THEM ARE GOING INTO ORPHAN DISEASES BECAUSE THEY DO SEE THAT AS A SWEET SPOT FOR THIS KIND OF RATHER INTENSIVE TYPE OF APPROACH. SO I THINK, AT LEAST FOR SOME, THE BUSINESS MODEL IS MORE AROUND THE ORPHAN APPROACH, AND THEY SEE THAT AS THE FOOT IN THE DOOR. AND THERE MAY BE PERHAPS MORE COMMON APPROACHES DOWN THE LINE, BUT INITIALLY AT LEAST A LOT OF THEM ARE STARTING WITH SOME OF THOSE ORPHAN DISEASES.

MS. BAUM: IN TERMS OF MODELING, I KNOW SANGAMO OBVIOUSLY DID ITS OWN COST MODELING, BUT THEY HAVE RELEASED PUBLICLY A JUSTIFICATION ON HOW

YOU PRICE, QUOTE, UNQUOTE, A CURE. AND IT'S A LOT OF NEW THOUGHT AROUND THAT PROCESS. SO WE CAN MAKE THAT REPORT.

CHAIRMAN JUELSGAARD: DID THEY PUT THAT INTO NUMERICAL FORM? DID THEY USE AN EXAMPLE OR SOMETHING?

MS. BAUM: I THINK THAT THEY DID IN THEIR SLIDE, AND WE CAN GET THAT FOR YOU.

CHAIRMAN JUELSGAARD: BE NICE TO SEE. ALL RIGHT. SO YOU WANT TO GO TO NEXT STEPS.

MS. BAUM: SO NEXT STEPS, JUST A COUPLE OF IDEAS TO THINK ABOUT AND TO LET YOU KNOW WHAT WE'RE THINKING ABOUT. I THINK QB III IS REALLY GOOD AT HAVING A CADRE OF EXPERTS AT THE DISPOSAL OF THEIR GRANTEES. I WOULD SURE LOVE TO HAVE ACCESS TO THEM FOR OUR GRANTEES SIMILAR EXPERTISE. AND SO THAT'S SOMETHING THAT WE CAN THINK ABOUT TRYING TO FORMULATE AND TO ENCOURAGE.

ON A CASE-BY-CASE BASIS, WHEN THE NEED HAS ARISED, WE'VE DONE A LITTLE OF THAT. I HOOKED ONE TEAM UP WITH SOME LAWYERS I USED TO WORK WITH AND SAID, "CAN YOU DO THIS PRO BONO FOR THEM PLEASE TO GET JUST TO THE TERM SHEET STAGE?" SO WE INFORMALLY HAVE BEEN ABLE TO DO THAT AS NEEDED. BUT IF WE COULD GET PEOPLE THAT ARE WILLING TO SORT OF SIGN UP

IN ADVANCE AND, YES, I'LL TAKE ON ONE OR TWO COMPANIES A YEAR, AND I'LL PROVIDE THIS KIND OF EXPERTISE TO THEM DIRECTLY, OR IT'S NOT EVEN COMPANIES NECESSARILY, BUT GRANTEES, THAT MIGHT BE HELPFUL. IT'S SOMETHING TO THINK ABOUT.

ALSO ANOTHER THING TO THINK ABOUT IS JUST INTERNALLY OUR TEAM, THE BD FOLKS LINKING UP WITH SCIENCE OFFICERS IN AREAS OF SPECIFIC DISEASE. SO THE SCIENCE OFFICERS WOULD BE IDENTIFIED AS DISEASE EXPERTS A, B, C, AND THEN THEY MIGHT BE PART OF A TEAM OR AT LEAST PREPARATION FOR DIFFERENT MEETINGS WITH PHARMAS WHEN IT COMES TO THAT. BECAUSE AT SOME POINT YOU CAN TALK ABOUT, GEE, WE HAVE THIS PROGRAM, BUT WHAT YOU REALLY NEED TO DO IS SAY WE HAVE THIS PROGRAM AND IT'S BETTER THAN EVERYTHING ELSE BECAUSE X, Y, AND Z. AND THIS IS THE STATE OF CARE RIGHT NOW, AND THIS IS WHAT'S IN THE PIPELINE, AND WE THINK OURS IS BETTER BECAUSE IT HAS A DIFFERENT MECHANISM OF ACTION. YOU SORT OF HAVE TO REALLY BE ABLE TO CONVERSE WITH THEM, AND THAT MIGHT BE HELPFUL AS WELL ON A TECHNICAL PERSPECTIVE.

CHAIRMAN THOMAS: MY PERCEPTION IS THAT AS BETWEEN BIG PHARMA AND VC'S AT THE MOMENT, THAT BIG PHARMA IS MORE LIKELY TO ENGAGE IN DISCUSSIONS AT AN EARLIER STAGE THAN VC'S ARE. WE'VE HEARD FROM

NESSON AND OTHERS ARE JUST AS GUN-SHY, MAYBE EVEN MORE SO, AND REALLY WANT TO GET TO THE END OF PHASE II BEFORE THEY'RE WILLING TO DO ANYTHING. SO DOES THAT TELL US ANYTHING ABOUT WHERE OUR FOCUS SHOULD BE GOING FORWARD, MORE EMPHASIZING THE PHARMA CONNECTIONS THAN THE VC? HOW DO YOU THINK THAT PLAYS?

MS. BAUM: I WOULD AGREE WITH YOU AND THAT'S WHAT WE ARE SEEING. AND I THINK THAT WE KIND OF HAVE FOCUSED FOR THE MOST PART ON THE PHARMAS. AND WITH NEIL COMING, HE'S BEEN HELPING MORE WITH THE VC'S. I THINK WE CAN DO BOTH, BUT I WOULD NOT DO IT AT THE DETRIMENT OF THE PHARMAS BECAUSE I THINK THEY ARE WILLING TO COME IN EARLIER, AND FOR THAT REASON WANT TO MAINTAIN THOSE RELATIONSHIPS.

CHAIRMAN THOMAS: NEIL, CAN YOU OFFER ANY COMMENTS ON VC PERSPECTIVES RIGHT NOW? IT WOULD BE HELPFUL.

MR. LITTMAN: SO, J.T., I THINK YOU'RE RIGHT. I THINK WE ARE LIKELY TO SEE MORE INTEREST FROM PHARMA. THEY ARE WILLING TO LOOK EARLIER, I THINK, FOR A VARIETY OF REASONS, ONE OF WHICH THEY HAVE BEEN STRUGGLING INTERNALLY WITH THEIR PIPELINES AND BRINGING PRODUCTS THROUGH TO MARKET. THEY'RE ALSO LOOKING TO EXTERNALIZE R&D COST. AND SO I

THINK THEY'RE LOOKING TO BUILD THEIR PIPELINE, AND THEY'RE NOT AFRAID TO LOOK EARLIER, EVEN AT THE PRECLINICAL STAGE IN MANY WAYS.

I THINK FROM THE VENTURE PERSPECTIVE, IT'S A LITTLE MORE CHALLENGING FOR THEM TO LOOK THAT EARLY BECAUSE IT CAN BE VERY COSTLY AND IT'S A VERY LONG TIME FRAME TO BRING PRODUCTS THROUGH PRECLINICAL DEVELOPMENT THROUGH CLINICAL DEVELOPMENT AND ALSO INTO THE MARKET. SO THEIR RETURN ON INVESTMENT IS GOING TO BE A MUCH LONGER TIME HORIZON, AND THERE ARE A LOT MORE INHERENT RISKS OBVIOUSLY AS YOU INVEST EARLIER ON.

I THINK WHAT WE HAVE SEEN FROM THE VC PERSPECTIVE ON NEW BUSINESS MODELS, AND THE VERSANT ROCHE EXAMPLE IS A PERFECT EXAMPLE OF ALMOST A BUILD-TO-BUY MODEL WHERE A VC WILL PARTNER WITH A PHARMA, THEY WILL SHARE THE DEVELOPMENT COST. THE VC WILL PUT IN SOME EQUITY CAPITAL. THE PHARMA COMPANY CAN PUT IN EQUITY-BASED MILESTONES TO FUND THE RESEARCH, AND THEN THE PHARMA CAN HAVE AN OPTION TO BUY IF THOSE MILESTONES ARE REACHED.

SO I THINK IN THAT CONTEXT VC'S ARE WILLING TO LOOK A LITTLE EARLIER. AND SO I DON'T THINK WE SHOULD TOTALLY DISCOUNT THEM, BUT I THINK IT IS CHALLENGING FOR THEM TO GO ON A STAND-ALONE

BASIS AND MAKE THOSE EARLY INVESTMENTS.

DR. TROUNSON: I AGREE WITH NEIL. IT'S JUST THAT THERE ARE SOME PEOPLE WHO YOU SHOULDN'T IGNORE. I GIVE YOU THAT EXAMPLE OF THE COMPANY IN SOUTHERN CALIFORNIA. IT'S ALL PRECLINICAL BASED ON THAT AND THEY'RE OVERSUBSCRIBED AT 500 MILLION. SO WE NEED TO SORT OF THINK ABOUT WHAT CONSTITUTES AN ATTRACTIVE THING LIKE THAT TO THOSE KIND OF INDIVIDUALS AS WELL.

BUT I ABSOLUTELY AGREE THAT THE PHARMA IS KIND OF THE EASIER, IT'S NOT EASY, BUT IT'S A BIT EASIER THAN THE VENTURE INDUSTRY. BUT THE VENTURE INDUSTRY IS MADE UP OF PEOPLE WHO ARE VERY DIFFERENT. IF YOU CAN FIND THAT DIFFERENT PERSON OR DIFFERENT GROUP WHO REALLY WANT TO DO SOMETHING QUITE RADICALLY DIFFERENT, IT CAN BE VERY WELL WORTHWHILE.

SO I THINK WE NEED TO BE WISE AND KEEP AN EYE OUT FOR THOSE OPPORTUNITIES. BUT FOR THE BULK OF OUR ENERGY IN GETTING THE PHARMA TO REALLY SORT OF ENGAGE WITH US AS WE MOVE OUR PROJECTS ALONG THE PIPELINE, BUT GET THEM TO COME IN PRECLINICALLY AS WELL. I THINK IT'S A LEARNING EXPERIENCE FOR THEM, AND I THINK THAT HELPS IF THEY'RE PART OF IT ACTUALLY TO BE HELPFUL, EVEN IF A SMALL PART. I

THINK IT CAN HELP CREATE A BETTER KNOWLEDGE AND UNDERSTANDING, AND IT CERTAINLY CAN BE USEFUL FOR THE PROJECTS THEY'RE INVOLVED IN.

MS. BAUM: SO ONE OF THE THINGS THAT WE WERE ALSO THINKING ABOUT WITH ARM WAS, WELL, SHOULD WE EXPAND THE INVESTOR DAY TO HAVE A DAY WITH ANGELS OR DISEASE FOUNDATIONS BECAUSE THEY'RE ANOTHER SOURCE OF FUNDING. IN YOUR EXAMPLE, ALAN, THEY'RE BASICALLY ANGELS EXCEPT THEY HAVE WRITTEN VERY LARGE CHECKS. SO THAT MIGHT BE SOMETHING TO CONSIDER.

CHAIRMAN JUELSGAARD: SO I DON'T KNOW THAT THIS IS PRACTICAL, BUT ONE OF THE THINGS THAT SMALLER COMPANIES TRIED IN THE PAST AND WITH SOME SUCCESS AT TIMES IS TO TAKE A THERAPEUTIC AREA, FOR EXAMPLE, WHERE THEY HAVE PRODUCTS THAT ARE IN VERY EARLY STAGE AND ESSENTIALLY SAY WE'RE WILLING TO LICENSE OUT SEVERAL PRODUCT APPROACHES THAT WE HAVE BUT TO ONE SINGLE ENTITY AS OPPOSED TO A BUNCH OF ENTITIES. SO WE'RE WILLING TO HEAR ALL OFFERS OR WHATEVER. AND WHAT THAT TENDS TO DO TYPICALLY, AND EVEN THOUGH THIS IS STILL IN EARLY STAGES, IT CREATES A RISK ON THE PHARMA SIDE THAT IF THEY JUST IGNORE THIS, THEY COULD MISS A GREAT OPPORTUNITY. THEY COULD BE LEFT IN THE DARK. AND SO YOU CREATE A DIFFERENT KIND OF RISK FOR THE PHARMAS OF THE RISK

OF MISSING THE BOAT, SO TO SPEAK.

I DON'T THINK IT'S PRACTICAL, BUT TAKE OUR CARDIOVASCULAR PORTFOLIO FOR A MOMENT OR THE PROJECTS THAT ARE IN IT. IF THERE WAS A WAY OF AGGREGATING THEM IN SOME FASHION SO THAT A PHARMACEUTICAL COMPANY COULD SORT OF STAND FIRST IN THE LINE SHOULD ANY OF THEM TURN OUT TO BE POSITIVE, THAT MIGHT CREATE INTEREST IN THE LONGER SPECTRUM OF MORE WILLINGNESS TO FUND EVEN SOME OF THE EARLIER STAGE ONES IF THAT'S THE WAY IT'S PUT IS, YOU KNOW, THIS IS THE WHOLE PORTFOLIO AND YOU'VE GOT TO PROVIDE SOME FINANCIAL SUPPORT FOR ALL OF THEM. BUT I THINK IT'S REALLY IMPRACTICAL BECAUSE OF, WHAT, HALF A DOZEN INSTITUTIONS WITH A PROJECT AND GOD KNOWS IF THEY'LL GET TOGETHER TO DO THAT, MUCH LESS WHETHER THERE ARE ANY LEGAL ISSUES WITH THAT AS WELL.

DR. TROUNSON: WE'RE AT LEAST TRYING TO SORT OF SEE WHERE WE CAN GO WITH THAT BECAUSE THERE'S A GRAND CHALLENGE, THE WHITE HOUSE GRAND CHALLENGE. WE PUT IN AN APPLICATION ALONG THAT FOR CARDIOVASCULAR DISEASE. WE THINK THERE'S A VERY STRONG PROGRAM THAT CAN BE BUILT AROUND A LOT OF INSTITUTIONS AND A LOT OF COMPANIES, AND IT'S SOMETHING THAT IS SUCH A HUGE PROBLEM IN THE

DEVELOPED WORLD AND PROBABLY ALSO IN THE UNDERDEVELOPED WORLD, BUT IS CERTAINLY A MAJOR PROBLEM IN THE DEVELOPED WORLD. IF WE'RE ABLE TO ERODE SOME OF THE COST OF CARE IN THAT AREA, IT WOULD MAKE A HUGE IMPACT.

SO I THINK THAT LOOKS LIKE A DIFFERENT WAY OF DOING THINGS, AND WE WOULD HOPE IF WE CAN GET MULTI-INSTITUTIONAL, MULTICOMPANY CONNECTION WITH SOMETHING LIKE THAT, AND IF IT WAS SUPPORTED, WOULD BE SUPPORTED BY THE WHITE HOUSE OR INSTITUTIONS LIKE THAT, IT COULD MAKE A VERY BIG DIFFERENCE AND CIRM COULD BE PART OF IT, BUT SHOULDN'T BE THE ONLY PART OF IT.

SO I AGREE WITH YOU. THAT MIGHT BE A DIFFERENT WAY OF DOING THINGS AND SOMETHING THAT'S ATTRACTIVE EVEN AS A GLOBAL INITIATIVE. IT WOULD BE WORTHWHILE US SORT OF LOOKING AT AT SOME POINT.

DR. DULIEGE: IF I MAY INTERVENE NOW. REALLY APPRECIATE WHAT YOU SAID, ALAN, ABOUT FIRST IT IS CLEARLY THESE INNOVATIONS OR ACTUALLY INITIATIVES RATHER THAT ARE GOING TO BENEFIT FIRST THE DEVELOPED WORLD. BUT IF AT SOME POINT THERE'S A WAY TO THINK MORE GLOBALLY ABOUT THE DEVELOPING WORLD, I'D LOVE TO ENTERTAIN THAT DISCUSSION.

BACK TO INITIAL DISCUSSION ABOUT FIRST

FOCUSING ON BIG PHARMA AND SECOND ON VENTURE CAPITAL OR ANGELS, ABSOLUTELY YES. WOULD IT BE USEFUL, SEVERAL OF US, I'M SURE MANY OF YOU AROUND THE PHONE OR IN THE ROOM HAVE CONTACTS WITH THE HEADS OF THESE BIG PHARMA AS WELL AS VC'S, I CERTAINLY DO BY NOW, EVEN MORE SO THAN A COUPLE OF MONTHS AGO. AND IF IT WAS TO BE USEFUL FOR CIRM TO PUT TOGETHER A LIST OF CONTACTS THAT HAVE ALREADY BEEN MADE SO THAT IF WE KNEW OF OTHER PEOPLE IN OTHER COMPANIES, GENENTECH, GILEAD, AND OTHERS, WE COULD ADD THEIR NAMES AND MAYBE SERVE AS AN INTRODUCTION TO PEOPLE, I'D LOVE TO DO THAT.

DR. TROUNSON: GREAT IDEA. I THINK WE NEED ALL THE HELP WE CAN IN THESE INSTANCES. IT WOULD BE GREAT TO HAVE THAT. AND INTRODUCTIONS, THEY ALWAYS HELP.

MS. BAUM: SURE.

DR. DULIEGE: VERSANT WAS NAMED. THIRD ROCK, I'M MEETING WITH THEM NEXT WEEK. FRAZIER, DOMAIN. AND THEN ON THE BIG PHARMA, THE LIST IS ESSENTIALLY LONGER.

THE SECOND ASPECT OF WHAT WAS EARLIER MENTIONED IS THE NEED FOR PEOPLE IN -- THE GRANTEES TO HAVE MENTORS AS WELL IN SOME CASES. I KNOW THAT CIRM DEFINITELY SERVES AS A MENTOR TO THEM IN MANY

REGARDS, BUT WE PROBABLY KNOW SOME PEOPLE WHO KNOW VERY WELL A SPECIFIC AREA AND WHO BY THEN AT THIS STAGE OF THEIR CAREER WOULD BE VERY WILLING TO SERVE AS MENTORS. WE COULD PROBABLY START BRAINSTORMING ABOUT THIS.

I WAS REVIEWING A GROUP THAT I'VE BEEN MADE AWARE OF, WHICH IS CALLED THE GLOBAL SOCIAL BENEFIT INSTITUTE. FOR SOME OF YOU WHO MAY KNOW OF IT, GSBI, WHICH IS BASED IN SANTA CLARA. AND IT'S A SOCIAL ENTERPRISE SUPPORT SYSTEM. SO THEIR GOAL IS A LITTLE BIT DIFFERENT, BUT THEIR GOAL IS TO PUT IN CONTACT A YOUNG ENTREPRENEUR THAT WANTS TO CREATE A COMPANY THAT ULTIMATELY WOULD BE A FOR-PROFIT COMPANY, BUT THAT WANTS TO HAVE AN IMPACT ON PEOPLE'S WELL-BEING THROUGHOUT THE WORLD AND HELP PEOPLE IN A VARIETY OF WAYS, WHETHER IT'S AGRICULTURE OR SOMETHING.

WHAT THIS GROUP, BASED IN SANTA CLARA, OFFERS THEM IS, FIRST OF ALL, A DAY OF MEETING WITH POTENTIAL INVESTORS SO THAT THEY CAN PRESENT THEIR PROGRAM AND HOPEFULLY GET FUNDED. BUT BEFORE THAT, THEY PROVIDE THEM THE OPPORTUNITY TO BE CONNECTED WITH SEVERAL MENTORS THROUGHOUT THE YEAR WHO CLEARLY HELP THEM WITH THEIR BUSINESS DEVELOPMENT AND EVEN THEIR PRESENTATION.

AND IF IT'S FELT TO BE OF ANY USE, I'D BE VERY HAPPY TO SHARE THE LINK WITH YOU TO BEGIN WITH. IF NOT, TO PUT SOMEONE AT CIRM IN TOUCH WITH THE SPONSOR OF THIS SOCIAL ENTERPRISE SUPPORT SYSTEM AND SEE IF THERE COULD BE SOME PARALLELS TO BE DONE. JUST AN IDEA AND I CAN BE IN TOUCH WITH ELONA SEPARATELY IF APPROPRIATE.

MS. BAUM: THAT WOULD BE GREAT.

CHAIRMAN JUELSGAARD: ANNE-MARIE, WHAT WAS THE NAME OF THIS ORGANIZATION AGAIN?

DR. DULIEGE: IT'S GSBI, WHICH IS THE GLOBAL SOCIAL BENEFIT INSTITUTE. AND I'M ACTUALLY LOOKING FROM THEIR WEB PAGE. AGAIN, THEY'RE BASED IN SANTA CLARA UNIVERSITY. IT'S A HELPFUL GLOBAL INNOVATION BASED-ENTREPRENEURSHIP IN SERVICE TO HUMANITY. AND THERE'S A WHOLE PRESENTATION. IT'S QUITE EXCEPTIONAL. I'VE HAD THE PLEASURE OF ATTENDING THEIR ONE-DAY WORKSHOP WHERE EACH OF THEIR 12 FELLOWS, AND THEY HAVE ABOUT 12 FELLOWS A YEAR, WHO, HAVING WORKED WITH THEIR MENTORS, WERE PRESENTING THE PROJECTS. AND IN THE ROOM WERE SITTING A LOT OF OTHER MENTORS TO SORT OF COMMENT ON THEIR PROJECT AND OFFER THEM THE BENEFIT OF POSITIVE AND NEGATIVE CRITICISMS, THEIR INSIGHT, AND THEN ALSO INVESTORS FOR FUTURE COLLABORATION.

SO I WON'T EXPLAIN TOO MUCH MORE OF THAT BECAUSE IT'S SOMEWHAT A LITTLE DIFFERENT BECAUSE IT'S ALL ABOUT SOCIAL ENTERPRISES, INNOVATORS, AND ACCELERATORS. MAYBE WE COULD THINK ABOUT A SIMILAR SYSTEM WHICH WOULD BE FOCUSED ON STEM CELL RESEARCH. AND, AGAIN, I THINK THAT CIRM HAS ALREADY BEEN AN EQUIVALENT OF THIS SYSTEM AT LEAST UP TO A POINT, AND MAYBE LOOKING AT THE PARALLEL WITH THE PARTICULAR SOCIAL ENTERPRISE ACCELERATOR GROUP MIGHT HELP MOVING TO THE NEXT STEP.

CHAIRMAN JUELSGAARD: I THINK IT'S WORTH THINKING ABOUT A PARALLEL ORGANIZATION, NOT THIS PARTICULAR ORGANIZATION YOU'RE REFERRING TO, BUT THE MODEL THAT THEY PRESENT.

DR. DULIEGE: I'LL SEND TO EVERYBODY THE LINK AND SOME INFORMATION IMMEDIATELY AFTER THE MEETING.

DR. TROUNSON: JUST RECENTLY, MAYBE MICHAEL KNOWS MORE ABOUT THIS, GOOGLE HAVE ENTERED THE HEALTH FIELD WITH AN ANNOUNCEMENT THAT THEY'RE GOING TO MOVE INTO THE HEALTH FIELD. I THINK IT WAS REALLY QUITE -- HE WAS SERIOUS. AND IF HE DOES LEAD, SOME OF THE OTHERS MAY FOLLOW. THERE IS THAT SORT OF MENTALITY SOMETIMES. SO IT MIGHT BE A GOOD IDEA TO MAKE CONTACT THROUGH MICHAEL OR SOMEONE

ELSE.

MR. GOLDBERG: LET ME SUGGEST THAT TO MY RIGHT EXTREMELY WELL ACQUAINTED WITH ART LEVINSON. I THINK THAT'S AN EXCELLENT SUGGESTION. I THINK THERE'S SOME OTHER THINGS.

I HAVE A -- ARE YOU FINISHED WITH THAT?

DR. TROUNSON: SURE.

MR. GOLDBERG: I DON'T KNOW IF THIS IS AN APPROPRIATE PLACE TO SAY IT OR NOT.

CHAIRMAN JUELSGAARD: IT DEPENDS ON WHAT YOU ARE GOING TO SAY.

MR. GOLDBERG: ANYWAY, I THINK YOU GUYS HAVE A GREAT GROUNDS GAME. I THINK WHAT WE LACK IS NOT INTERNALLY, BUT EXTERNALLY IS WE LACK CHAMPIONS. AND THE PEOPLE THAT WE'RE INTERACTING WITH, PRINCIPALLY ON THE PHARMA SIDE, BECAUSE THE VENTURE PEOPLE, THIS IS A VERY, VERY TOUGH AREA FOR VENTURE GIVEN THE CAPITAL INTENSIVITY, THE REGULATORY UNCERTAINTY, THE LONG TIME FRAMES. IT JUST DOESN'T FIT WITH THEIR BUSINESS MODEL VERY WELL.

BUT IN TERMS OF PHARMA, I THINK THERE ARE SOME POTENTIAL FITS. AND THE QUESTION IS, AND I'VE GOT SOME IDEAS THAT I'D LIKE TO FURTHER RUMINATE ON AND MAYBE GET BACK TO YOU AND HAVE A SKULL SESSION, ON HOW TO GET SOME SERIOUS SENIOR LEADERSHIP MIND

SHARE IN PHARMA. BECAUSE THE STORY THAT WE HAVE IS A MAGNIFICENT STORY, BUT IT'S A STORY. AND IT'S A LITTLE DISTANT FROM THE REALITY THAT THE PEOPLE IN THE ORGANIZATIONS THAT THE SENIOR LEADERS RUN HAVE TO DELIVER TO MEET WHAT THE FINANCIAL FIDUCIARY RESPONSIBILITIES AND OBLIGATIONS THAT THEY HAVE TO THEIR SHAREHOLDERS REQUIRES.

SO THE VISION BUDGET DOESN'T RESIDE WITH ANYBODY THAT WE GET ACCESS TO. AND I THINK OUR CHALLENGE IS TO TRY TO GET TO THE VISION BUDGET. SO MORE ON THAT LATER, BUT I THINK YOU'RE DOING ALL THE RIGHT THINGS, BUT THEY'RE NECESSARY, BUT LACKING SUFFICIENCY, WHICH IS WHY WE'VE GOT ACTIVITIES, WE'VE GOT MEASURES. I APPLAUD THE WAY WE'RE APPROACHING THIS. I CAN'T GIVE YOU ANY BETTER ADVICE IN TERMS OF THE BLOCKING AND TACKLING, BUT WE NEED TO PROVIDE YOU AN AIR FORCE.

CHAIRMAN JUELSGAARD: I THINK THAT WAS APPROPRIATE.

MS. BAUM: NO MOTION TO STRIKE THEN?

CHAIRMAN JUELSGAARD: OTHER COMMENTS, SUGGESTIONS IN THE GROUP? AGAIN, PART OF THIS WAS NOT ONLY TO UNDERSTAND KIND OF WHAT'S BEEN GOING ON, WHAT WE'VE BEEN SEEING AND HEARING, BOTH POSITIVE AND NEGATIVE, BUT THEN ALSO TO TALK, AS MICHAEL JUST

DID, ABOUT WHAT ELSE WE MIGHT DO THAT WE'RE NOT DOING ALREADY. SO MICHAEL'S PROPOSAL ITSELF IS THE KIND OF THING. IN ESSENCE, YOU'VE GOT TO FIND SOMEBODY WHO CAN PROVIDE ENTRY EVEN AT THE SENIOR LEVEL IN THE ORGANIZATION. THE CHANCE THEY'RE GOING TO TAKE ON SOME NEW DIRECTION, WE WANT TO BE THE FIRST ONES THERE AND IT MIGHT WORK OR IT MIGHT NOT. WE'RE ALL ON A SEPARATE BUDGET, THEIR WILLINGNESS TO PUT THE MONEY (INAUDIBLE).

MR. SHEEHY: COULD I JUST BECAUSE I'VE KIND OF HAD --

CHAIRMAN JUELSGAARD: IS THIS APPROPRIATE?

MR. SHEEHY: IS THIS THE APPROPRIATE?

CHAIRMAN JUELSGAARD: PLEASE GO AHEAD.

MR. SHEEHY: NO. 1, I AGREE WITH MICHAEL, AND I REALLY THINK, ELONA, YOU'VE DONE A PHENOMENAL JOB. I THINK THIS ISSUE OF ENGAGING INDUSTRY WITH OUR CURRENT PROJECTS, YOU'RE DOING TONS OF STUFF. AND I THINK A SHOUT OUT SHOULD REALLY GO TO DR. FEIGAL AND THE CDAP PROCESS BECAUSE I THINK THAT'S KIND OF A HIDDEN FORCE HERE BECAUSE THE REASON ESPECIALLY SOME OF THESE PROJECTS IN OUR LATEST DISEASE TEAM ROUNDS ARE ATTRACTING SOME INTEREST IS THAT THEY'RE MANUFACTURING, REGULATORY. THE KIND OF DRILL THAT THEY HAVE BEEN UNDER FOR A COUPLE OF

YEARS NOW HAVE MADE THEM MUCH MORE ATTRACTIVE PROJECTS.

ONE SUGGESTION MIGHT BE TO LOOK AT SOME OF OUR DEVELOPMENT CANDIDATE EARLY TRANSLATIONAL PROJECTS AND BRING THEM INTO THIS KIND OF PROCESS SO THAT THEY'RE MORE PREPARED TO MOVE INTO THE NEXT STAGE.

BUT THERE WERE TWO ISSUES THAT WEREN'T ADDRESSED THAT I WAS CONCERNED ABOUT. ONE IS THE ENGAGEMENT OF CALIFORNIA COMPANIES, WHICH WE STILL HAVE FAILED TO DO AND WASN'T REALLY PART OF THE TOPIC TODAY. AND SOME OF THE THINGS THAT I'VE HEARD SUGGESTED WERE COMPANY ONLY RFA'S, AN SBIR PROGRAM. A GREAT IDEA FROM CHARLES COX, A HOUSTON PHYSICIAN WHO PARTICIPATES IN A LOT OF CLINICAL TRIALS, WAS TO HAVE A GRANTS WORKING GROUP THAT WAS REALLY A PITCH SESSION AND HAD THE COMPANIES COME IN WITH WHAT THEY THOUGHT WERE THEIR BEST PROJECTS AND MAKE THEIR PITCHES AND HAVE SOME -- WE'VE SEEN SOME REVIEWERS WHO WERE PRETTY HARDNOSED. YOU WERE THERE, STEVE. I THINK THEY CAN KIND OF HANDLE THAT AND MAKE THE DECISION WHETHER OR NOT TO INVEST IN THESE COMPANIES. BECAUSE THE WAY WE KIND OF DO IT IN OUR GRANTS REVIEW PROCESS IS WE KIND OF ASK THEM TO SHOW US ALL THEIR CARDS. AND I JUST DON'T THINK THAT

THAT'S HOW INDUSTRY OPERATES. THAT'S JUST MY GUT INSTINCT.

I THINK IF THEY WERE SITTING THERE WITH SOME FOLKS AND THEY WERE ACTUALLY TRYING TO CREATE A RELATIONSHIP WHERE WE WANTED TO DECIDE WHETHER WE WANT TO BE PARTNERS WITH THESE FOLKS, THAT MIGHT BE ANOTHER WAY TO GO, BUT I DON'T THINK OUR CURRENT REVIEW SYSTEM IS ACTUALLY WORKING TO ENGAGE CALIFORNIA COMPANIES. I THINK PAT KIND OF ALLUDED TO THAT IN THE CONTEXT OF ET.

SO I DO THINK PART OF OUR MISSION HERE AT CIRM IS TO ENGAGE CALIFORNIA COMPANIES AND TO ACTUALLY FUND THEM IN THIS SPACE. SO WE'VE TALKED A LOT ABOUT HOW WE'RE CONNECTING INDUSTRY TO THE PROJECTS WE'VE ALREADY FUNDED. SEEMS LIKE A LOT OF GREAT STUFF IS GOING ON, BUT THERE'S STILL A LOT OF COMPANIES THAT CAN'T GET IN OUR DOOR.

THEN THE THIRD ISSUE THAT REALLY WAS KIND OF THE DRIVER WAS THE STRATEGIC PARTNERSHIP PROGRAM, WHICH I WOULD HAVE TROUBLE CLASSIFYING AS A SUCCESS BECAUSE, AS I UNDERSTOOD IT, BASED ON NOT THE LAST PANEL OF ADVISORS, BUT THE PREVIOUS PANEL OF ADVISORS WE HAD, THE IDEA WAS TO ATTRACT COMPANIES INTO CALIFORNIA TO BRING THEIR PROJECTS HERE BECAUSE REALLY TO GO OUT AND FIND PROJECTS AND CREATE

INCENTIVES FOR THEM TO BE PART OF, WASN'T THAT KIND OF THE PLAN?

DR. TROUNSON: THAT WAS PART OF THE SUGGESTION THEY HAD.

MR. SHEEHY: IF I LOOK AT IT, WE'VE HAD TWO ROUNDS. WE'VE FUNDED TWO COMPANIES, ONE OF WHICH IS AN EXTENSION OF OUR DISEASE TEAM. SO THEY COULD HAVE COME INTO A DISEASE TEAM ROUND. AND THE OTHER ONE ACTUALLY IS A CALIFORNIA COMPANY THAT WE'RE ALREADY FUNDING IN ONE PROJECT IN A DISEASE TEAM ROUND. WE COULD HAVE BROUGHT THEM IN THROUGH A DISEASE TEAM ROUND AGAIN. I JUST DON'T SEE THE STRATEGIC PARTNERSHIP PROGRAM AS ACTUALLY BEING SOMETHING THAT'S A SUCCESS RIGHT NOW.

DR. TROUNSON: I DON'T THINK WE REALLY BASED IT ON THAT, BUT THERE IS ONE COMPANY THAT WE DID FUND THAT WAS OUT OF CALIFORNIA THAT DID DROP OUT BECAUSE THEY DIDN'T LIKE OUR RULES. SO THEIR RESPONSE -- I DON'T THINK WE BASED IT ON THAT. IT WAS REALLY TRYING TO DRAW THE PHARMACEUTICAL INDUSTRY TO SORT OF CO-FUND THAT. THAT WAS ONE OF THE ARGUMENTS. IT WASN'T SORT OF PRIMARILY BASED ON BRINGING OUTSIDE COMPANIES.

MR. SHEEHY: I DID THINK THAT COMING OUT OF THAT REVIEW THERE WAS THAT NOTION THAT YOU

WANTED -- I MEAN THAT ALL THE BEST SCIENCE WAS NOT HAPPENING IN CALIFORNIA. IN ORDER TO GET A WINNER IN SOME NEARER TERM FASHION, WE NEEDED TO BRING COMPANIES THAT HAD GOOD PROJECTS AND INCENTIVIZE THEM TO BE PART OF THIS. I GET YOUR POINT ABOUT MATCHING WITH FUNDING. BUT EVEN THAT, I DIDN'T REALLY HEAR THAT WE WERE HAVING THAT MUCH SUCCESS WITHIN THE CONTEXT OF THE STRATEGIC PARTNERSHIP PROGRAM IN CONNECTING WITH PEOPLE WITH MONEY.

SO I JUST -- I GUESS I GET REALLY GRANULAR ON THIS. WHAT ARE OUR RFA'S GOING TO BE? HOW ARE THEY GOING TO BE REVIEWED? WE TALKED LIKE 30,000 FEET ABOUT ENGAGING BIG PHARMA; BUT AT THE END OF THE DAY, WE HAVE REVIEWS, PROJECTS COME IN, AND WE HAVEN'T ACTUALLY WELL ENGAGED CALIFORNIA COMPANIES, AND WE HAVEN'T BROUGHT IN COMPANIES FROM OUTSIDE.

MS. BAUM: CAN I ADDRESS THAT? I DID START PREPARING SOME SLIDES IN THAT REGARD BECAUSE I THOUGHT THAT MIGHT COME UP, AND THEN I DON'T HAVE THEM IN THE DECK. THE POINT THAT I WAS TRYING TO MAKE WITH MY SLIDES IS THAT WE TOOK, QUOTE, UNQUOTE, AN ACCOUNTING OF CALIFORNIA COMPANIES IN THE STEM CELL SPACE. AS IT TURNS OUT, ONES THAT ARE IN WHAT WE HAVE TARGETED AS OF LATE, ENTRY INTO THE CLINIC, THERE ARE VERY, VERY FEW. AND OF THOSE VERY FEW,

THERE ARE EVEN LESS THAT ARE WITHIN OUR FUNDING MANDATE BECAUSE MOST OF THEM ARE EITHER ADIPOSE OR AUTOLOGOUS MSC'S OR THINGS THAT WE HAVE NOT MADE A POLICY OF FUNDING AND/OR ARE NOT A PROP 71 PRIORITY.

SO I COULD SHARE WITH YOU AT SOME POINT BECAUSE I DON'T HAVE THE DATA NOW WHAT THOSE NUMBERS ARE, BUT THE FACT IS THIS IS A VERY YOUNG INDUSTRY AND THERE AREN'T THAT MANY COMPANIES. AND I WOULD ASSERT, ESPECIALLY AFTER SP III, YOU WILL SEE THAT WE'RE FUNDING A GOOD BULK OF THE CALIFORNIA COMPANIES. IF WE WENT EARLIER WITH STRATEGIC PARTNERSHIP FUNDS AND IF WE WANTED TO CHANGE OUR FUNDING MANDATE, WE MIGHT BE ABLE TO GET A FEW MORE IN THAT WAY. BUT THAT IS IN FRICTION WITH OUR DESIRE TO GET PRODUCTS INTO CLINICAL PHASE. DO YOU GO EARLIER AND MAYBE ATTRACT SOME MORE CALIFORNIA COMPANIES, OR DO YOU STAY WHERE WE'RE AT, AND THEN AT LEAST YOU'RE ADVANCING THE GOAL OF HAVING SUCCESSFULLY PUT SOME DRUGS THROUGH THE CLINIC.

MR. SHEEHY: HAVE WE DONE AN ANALYSIS YOU CAN SHOW US THAT OUR MIX OF FUNDING OF ACADEMIC RESEARCH INSTITUTIONS AND PRIVATE INDUSTRY IN CALIFORNIA IS APPROPRIATE FOR THE STATE OF THE FIELD? I HEAR FROM PEOPLE IN INDUSTRY THAT THEY FIND IT DIFFICULT TO GET FUNDING FROM CIRM, BUT

THAT'S ALL ANECDOTAL. IF I LOOK AT THE STATISTICS, I KNOW THAT WE HAVEN'T FUNDED VERY MANY CALIFORNIA COMPANIES.

DR. TROUNSON: I THINK THERE'S EIGHT COMPANIES IN THIS NEXT ROUND.

MS. BAUM: NINE.

DR. TROUNSON: EIGHT OF THEM ARE CALIFORNIA.

MS. BAUM: NO. A COUPLE ARE NOT CALIFORNIA.

DR. TROUNSON: SO THERE'S A GROUP TO SEE HOW THEY ACTUALLY GO. I THINK, AGAIN, IF YOU LIST THEM OUT AND IF YOU REMOVE THOSE THAT ARE INAPPROPRIATE, AND YOU CAN DO THAT, AND LOOK TO SEE WHAT YOU'VE GOT, IT'S NOT A LOT LEFT OVER. THERE'S QUITE A LOT OF CANCER COMPANIES. THERE'S A LOT OF COMPANIES THAT DO BONE MARROW OR CORD BLOOD. GENERALLY SPEAKING, THE OTHER ONES ARE NOT -- THEY'RE NOT AT LEAST IN THIS PRECLINICAL TO CLINICAL TRANSITION. THEY'RE JUST NOT. OR THEY HAVE BEEN THROUGH GRANTS WORKING GROUP AND HAVEN'T MADE IT FOR WHATEVER REASON, WHATEVER REASON. THERE WAS SOME STRONG COMPANIES.

DR. FEIGAL: ONE THING I WANTED TO SAY ON THE NATIONAL LEVEL, EVEN IF WE DON'T THINK ABOUT IN

CALIFORNIA, IF YOU LOOK AT THE IND'S THAT ARE COMING INTO THE FOOD AND DRUG ADMINISTRATION UNDER THE REGULATED SPACE, MOST OF THEM ARE STILL COMING IN FROM ACADEMIC. SO IF YOU LOOK ACROSS THE COUNTRY, NOT JUST IN CALIFORNIA, BECAUSE IF YOU LOOK AT THE STEM CELL-BASED THERAPIES, A LOT OF THEM ARE STILL COMING IN FROM ACADEMICALLY BASED ENTERPRISES OR VERY SMALL ENTERPRISES. AND IF YOU LOOK ACROSS THE WORLD, THAT'S TRUE TOO. IT'S STILL VERY MUCH EITHER ACADEMIC OR SMALL ENTERPRISES THAT ARE COMING IN. AND THAT'S PRESUMABLY BECAUSE IT'S VERY INNOVATIVE, AND BIG PHARMA IN GENERAL IS VERY RISK AVERSE. SO YOU FIND THESE THINGS HAPPENING AT A VERY YOUNG AGE.

JUST THE ISSUE FOR THE STATE AGENCY IS I WOULD SAY 85 TO 90 PERCENT OF WHAT WE DO IS STILL WITH ACADEMICS OR VERY SMALL ENTERPRISES. AND SO HOW DO YOU -- SHORT OF SHOWING DATA IN SOME OF THOSE EARLY PHASE CLINICAL TRIALS, WE'RE AT A BIT OF A QUANDARY TO KNOW HOW TO ATTRACT THOSE BIGGER POCKETS EARLIER UNTIL YOU START DERISKING SOME OF THIS ENTERPRISE.

I'M JUST SHARING CALIFORNIA. I THINK IT'S SIMILAR TO WHAT'S HAPPENING ACROSS THE COUNTRY AND ACROSS THE WORLD. IT TENDS TO BE ACADEMICS OR SMALL ENTERPRISES.

MR. SHEEHY: AND I APPRECIATE THE COMMENTS, BUT IT WASN'T REALLY ABOUT GETTING BIG PHARMA INTO THE SPACE, BUT WE'RE NOT FUNDING THOSE SMALL CALIFORNIA COMPANIES. HAVE WE EVER FUNDED A COMPANY THAT WAS STARTED WITH INTELLECTUAL PROPERTY DEVELOPED WITH CIRM FUNDING? DO WE HAVE A MECHANISM TO PROVIDE FOLLOW-ONE FUNDING OUTSIDE OF VIACYTE MAYBE?

MS. BAUM: EVERYBODY IS ELIGIBLE TO COME THROUGH OUR DIFFERENT FUNDING ROUNDS.

MR. SHEEHY: SO THEY HAVE TO COME BACK. SO THEY CAN GO AND GET A PATENT AND THEY WANT TO START A COMPANY, THEN THEY HAVE TO COME BACK FOR ANOTHER FUNDING ROUND? I'M JUST TRYING TO LOOK AT THE MECHANISM. IF EVERYBODY IS COMFORTABLE THAT EVERYTHING WE'RE DOING RIGHT NOW IS THE RIGHT WAY TO GO IN TERMS OF ENGAGING WITH CALIFORNIA INDUSTRY, IN TERMS OF BRINGING IN PROJECTS FROM OUTSIDE OF CALIFORNIA, THAT'S KIND OF THE QUESTIONS I KIND OF HAVE WHEN I ASKED ABOUT THIS BECAUSE WE WENT DOWN A LOT OF THESE ROADS, AND WE HAVEN'T REALLY -- I JUST DON'T KNOW IF WE'RE REALLY BEING SUCCESSFUL DOING SO.

MR. HUONG: IN TERMS OF LAST DISEASE TEAM ROUNDS, DISEASE TEAM III, I WOULD SAY ALMOST HALF OF

THE APPLICATIONS HAD SPIN-OUT COMPANIES. THESE APPLICANTS HAD SPIN-OUT COMPANIES OF THEIR OWN, BUT THEY WERE REQUESTED TO -- I THINK THEY APPLIED UNDER THE INSTITUTION, BUT THEY DID HAVE THEIR OWN COMPANIES, WHICH IS ACTUALLY WHERE THE IP WAS RESIDING. SO THEIR SPIN-OFF COMPANY LICENSED THE IP FROM THE INSTITUTION.

THAT'S ACTUALLY ONE OF THE THINGS, DEPENDING ON WHICH GRANTS GET APPROVED, ELONA AND I HAVE TO DEAL WITH IS TO MAKE SURE THE DATA FROM THE GRANTS ACTUALLY GOES WITH THE IP WHICH IS RESIDING IN THESE SPIN-OUT COMPANIES. BUT THERE ARE -- JUST IN THIS CASE, THERE WERE A NUMBER OF COMPANIES ASSOCIATED WITH THESE PI'S AND THESE APPLICATIONS, BUT THEY APPLIED UNDER THE INSTITUTION.

CHAIRMAN THOMAS: FOLLOW-UP ON JEFF'S THOUGHT. SO FREQUENTLY ONE OF THE REASONS WHY THE COMPANIES WHO APPLY GET WHACKED IN THE GRANTS WORKING GROUP IS BECAUSE OF THE POOR QUALITY OF THEIR APPLICATION, EVEN IF THEY'RE IN THE SP ROUNDS, WHICH ARE ONLY COMPANIES, AND THEY'RE NOT BEING HELD UP AGAINST THE ACADEMICS WHO ARE EXPERTS. IS THERE A WAY THAT WE CAN HELP THEM? WE'RE NOT IN THE BUSINESS OF WRITING GRANT APPLICATIONS. BUT IT SEEMS TO ME THAT THE SCIENCE IN SOME OF THESE

COMPANIES IS BETTER THAN THE RESULTS YOU'RE SEEING IN THE GRANTS WORKING GROUP. AND IT'S LARGELY A FUNCTION OF FORM OVER SUBSTANCE. IS THERE SOMETHING WE CAN DO TO HELP THEM IN THE PRESENTATION OF THEIR APPLICATION THAT WOULD HELP THEM FARE BETTER IN THE REVIEWS?

CHAIRMAN JUELSGAARD: CAN I SPEAK TO THAT AND SOMETHING JEFF SAID? YEAH. AND I DON'T KNOW. SOMEBODY MADE THIS SUGGESTION HERE AT ONE POINT. BUT IT'S, IN ESSENCE, TO HAVE A FACE-TO-FACE REVIEW PROCESS. THAT'S WHAT THEY'RE USED TO DOING. THE APPLICATION PROCESS WE HAVE WAS DESIGNED FOR ACADEMIC. IT WAS DESIGNED FOR THE NIH APPROACH. INDUSTRY JUST DOESN'T DEAL THAT WAY. THEY NEVER HAVE. ANY DISCUSSIONS THEY'VE HAD INTERNALLY OR WITH OTHER ORGANIZATIONS, IT'S ALWAYS ABOUT MEETINGS IN REAL-TIME AND GETTING TO ANSWER QUESTIONS.

SO THE MECHANISM THAT WE BUILT IS ONE THAT THEY'RE JUST NOT FAMILIAR WITH. AND SO THE QUESTION YOU HAVE TO ASK YOURSELF IS DO YOU WANT TO IMPOSE THIS MECHANISM ON THEM AND THEN TRY AND TRAIN THEM IN HOW THIS MECHANISM WORKS, OR DO YOU WANT TO USE A DIFFERENT MECHANISM FOR THOSE PEOPLE WHO ARE USED TO A DIFFERENT MECHANISM? SO WE HAVE ONE FOR ACADEMIA AND WE HAVE ONE FOR THE COMPANY SIDE OF THINGS. I'M

NOT SUGGESTING AN OUTCOME HERE TODAY, BUT I THINK THAT'S THE NATURE OF THE PROBLEM.

AND THEN WHOEVER. JEFF. SO THE IDEA OF BRINGING OTHER COMPANIES TO CALIFORNIA, I THINK THAT'S A WONDERFUL WISH TO HAVE KIND OF THING, BUT THAT'S AN UPHILL, UPHILL, UPHILL ITEM. SO THERE ARE A LOT OF THINGS THAT GO INTO THE CALCULUS OF COMPANIES MOVING FROM WHERE THEY ARE. YOU HAVE TO START WITH VERY SIMPLE THINGS LIKE WHO ARE MY EMPLOYEES AND WHAT IS THEIR WILLINGNESS TO MOVE? BY THE WAY, WHAT'S THE COST OF LIVING IN THE PLACE THAT I'M MOVING TO FOR MY EMPLOYEES THAT I WANT TO BRING WITH ME? AND WHAT'S THE TAX STRUCTURE? THERE ARE ALL KINDS OF IMPLICATIONS ASSOCIATED WITH THIS. THIS IS NOT AN EASY THING TO DO.

I KNOW WHEN WE WERE AT GENENTECH, WE LOOKED AT LOCATING A NEW FACILITY WITHIN THE UNITED STATES, AND WE WERE DIVERTED AWAY FROM CALIFORNIA, BECAUSE OF THE TAX STRUCTURE OF CALIFORNIA, TO OUR NEIGHBORS TO THE NORTH IN OREGON. WE WERE VERY EXPLICIT ABOUT THAT BECAUSE OF THE WAY THE INCOME TAX STRUCTURE WORKED FOR CORPORATIONS IN CALIFORNIA. AND WE ALSO BUILT A MANUFACTURING FACILITY IN SINGAPORE AS OPPOSED TO THE UNITED STATES, AGAIN, LARGELY BASED ON SOME TAX CONSIDERATIONS. THAT IS,

THE U.S. HAS ONE OF THE HIGHEST CORPORATE TAX RATES ANYWHERE IN THE WORLD. OTHER COMPANIES DON'T HAVE THOSE HIGH TAX RATES, AND THAT'S WHY YOU SEE A LOT OF OFFSHORE MANUFACTURING FACILITIES BEING BUILT.

APART FROM GIVING SOME FUNDS TO AN ORGANIZATION, THERE ARE TONS OF CONSIDERATIONS WHICH I JUST THINK MAKE THIS A REAL UPHILL BATTLE TO TRY AND, NOT THAT WE SHOULDN'T TRY, BUT I DON'T EXPECT A HIGH DEGREE OF SUCCESS IN THAT KIND OF A PROGRAM FOR THE REASONS THAT I SAID.

SOMEBODY ELSE HAD SOMETHING TO SAY.

DR. FEIGAL: I THINK IT'S INTRIGUING THIS ISSUE ABOUT IN-PERSON MEETINGS BECAUSE I ACTUALLY HAD A COUPLE OF REVIEWERS SAY, BOY, SO MUCH BETTER LIKE YOUR CDAP IN TERMS OF INTERACTING WITH PEOPLE. I SAID PART OF THE PROBLEM IS IT'S THE NUMBERS. I MEAN WE CAN ONLY DO A VERY SMALL NUMBER. AND IF A REVIEW IS ALREADY THREE DAYS IN LENGTH, HOW LONG DO YOU DO IT? SO I COULD SAY IT COULD WORK IF YOU HAVE A SMALL NUMBER IN YOUR DENOMINATOR WHERE YOU'RE GOING TO HAVE PEOPLE COME IN IN PERSON. AND THAT'S SOMETHING WE'D HAVE TO REALLY THINK ABOUT. I ACTUALLY DID HAVE SEVERAL REVIEWERS ASK THAT QUESTION. AND THE NIH USED TO HAVE SITE VISITS. WHAT THEY DID IS THEY FIRST TRIAGED OUT APPLICATIONS

FROM A WRITTEN REVIEW, AND THEY DON'T DO IT ANYMORE, PROBABLY BECAUSE IT'S TOO TIME AND WORK INTENSIVE, BUT THEY USED TO HAVE SITE VISITS WHERE THEY ACTUALLY DID MEET WITH THE TEAM, GET TO KNOW WHO THEY ARE, AND UNDERSTAND THEIR SCIENCE, AND ASK SOME THEM QUESTIONS IN REAL-TIME.

DR. TROUNSON: PROBABLY HAVE TO HAVE THE REVIEWERS HAVE SOME KNOWLEDGE OF WHAT THE COMPANY IS ABOUT IN ORDER TO EVEN ENABLE THAT. OTHERWISE IT COULD BE A HALF DAY'S DISCUSSION. COULD BE VERY LONG. SO IT WOULD BE A BIT CHALLENGING TO FIGURE IT OUT, BUT --

MR. SHEEHY: AND THERE'S A COUPLE OF INSTANCES WHERE WE HAVE A LOT OF FOLLOW-UP WHERE THEY WERE AT A LEVEL OF ENGAGEMENT IN CDAP. AND THEN WHEN THEY'RE ABOUT TO GET ANOTHER FIVE TO $20 MILLION, THERE'S NOT THAT SAME LEVEL ENGAGEMENT. THAT FEELS A LITTLE BIT UNUSUAL. AND I AGREE WITH STEVE'S POINT. THE IDEA OF TRYING TO BRING COMPANIES FROM OUTSIDE CALIFORNIA WAS JUST ONE OF THE BIG RECOMMENDATIONS WE HAD FROM SCIENTIFIC ADVISORY PANEL, AND THAT REALLY DROVE TO SOME DEGREE A LOT OF THE IMPETUS FOR CREATING THIS VERY NEW SEPARATE RFA PROCESS. AGAIN, A LOT OF THIS IS MECHANICS AND WHAT WE'RE TRYING TO DO. AND WE DON'T

HAVE A LOT OF TIME LEFT, RIGHT?

DR. TROUNSON: I THINK IT WAS REALLY WE WERE TRYING TO BRING BIG IDEAS, WHETHER EXISTING COMPANIES OR WHEREVER, BIG IDEAS COME TO CALIFORNIA. SO WE HAVE A COUPLE OF DIFFERENT MECHANISMS IN ORDER TO DO THAT, AND WE'RE TRYING TO DO THAT. THAT'S NOT EASY EITHER, TO BRING A KNOWLEDGE BASE, AN IMPORTANT KNOWLEDGE BASE HERE, BUT WE ARE TRYING AND WE HAVE GOT A NUMBER OF DIFFERENT MECHANISMS TO TRY AND ACHIEVE THAT.

MR. SHEEHY: AND I WANT TO COMMEND STAFF. I THINK THEY'RE DOING AN EXTRAORDINARY JOB, SO I DON'T THINK ANY PART OF THIS IS CRITICISM FOR THE WORK THAT'S BEEN DONE. IT'S MORE LIKE BEING A LITTLE ANALYTIC AND TRYING TO SEE IF WE'RE ACTUALLY ACHIEVING WHAT WE SET OUT TO DO WHEN WE DID THIS THING.

MS. BAUM: I THINK IT COMES DOWN TO PRIORITIES TOO BECAUSE SOMETIMES YOU CAN'T SERVE ALL ENDS AT ONCE. AGAIN, I JUST WANT TO REITERATE, IF YOU WANT TO GO TO COMPANIES, A LOT OF TIMES THAT MEANS GOING WITH AN EARLIER STAGE OF RESEARCH, BUT THAT MEANS THAT THEN THERE'S AN OPPORTUNITY COST BECAUSE THE FUNDING THAT GOES THERE COULD HAVE GONE TO OTHER PROGRAMS THAT ARE MORE MATURE AND THAT YOU

COULD MORE READILY PUSH THROUGH THE CLINIC. SOMETIMES THERE IS A LITTLE FRICTION BETWEEN THE TWO.

CHAIRMAN JUELSGAARD: ANY OTHER COMMENTS?

DR. OLSON: ALSO JUST ONE OTHER COMMENT. WE HAVE TO REMEMBER THE PRIORITIES THAT WE SET IN EARLIER AWARDS THAT ARE NOW COMING TO THE NEXT STAGE OF THEIR DEVELOPMENT SUDDENLY RUN UP AGAINST (INAUDIBLE) THING. THESE ARE CELLS THAT ARE HARDER TO WORK WITH. SO WE FUNDED A GREAT DEAL OF PROJECTS IN CERTAIN KINDS OF AREAS THAT ARE IN WHAT ONE WOULD HAVE TO CALL MORE HIGH RISK CELL THERAPY KINDS OF AREAS. AND I THINK THAT'S GOING TO BE A CHALLENGE FOR US. SO WE HAVE TO THINK REALLY WHAT ARE WE TRYING TO LOOK FOR.

I THINK YOU ALL REMEMBER, AND ONE OF THE THINGS YOU'VE BEEN LOOKING AT OVER THE LAST FEW YEARS WAS THE FACT THAT IN EARLY 2012 WE SAID WE NEED TO GET PROJECTS THAT ARE GOING TO HAVE HOPEFULLY BIOLOGICAL ACTIVITY OR PROOF OF PRINCIPLE BY 2016-17. THAT HAS BEEN A BIG PUSH FOR US IN THE LAST TWO YEARS. SP II, SP III, DT III, ALL OF THOSE PROGRAMS HAVE BEEN REALLY DIRECTED TO THAT GOAL.

SO THESE ARE THE KINDS OF CONSIDERATIONS THAT YOU HAVE TO THINK ABOUT GOING FORWARD BECAUSE

WE SAID IF I WANTED THIS KIND OF DATA, WE HAD TO START DOING IT IN THESE PAST TWO YEARS. RFA'S WERE DIRECTED ACCORDINGLY.

CHAIRMAN JUELSGAARD: A QUESTION FOR ALAN, ELLEN, ELONA, PAT, WHOEVER. WE TALKED ABOUT THE FACT THAT THE TYPES OF COMPOUNDS THAT SEEM TO GAIN THE MOST TRACTION WITH THE OUTSIDE WORLD ARE THE ANTIBODIES AND SMALL MOLECULES. AND SO I WAS SITTING HERE THINKING OF WHAT IF WE TREATED THEM DIFFERENTLY FROM THE CIRM SUPPORT? AND ELONA TALKED ABOUT HAVING SOME SORT OF CO-FUNDING OR WHATEVER. WHAT IF WE SAID THAT WHAT WE'LL DO WITH THOSE KIND OF MOLECULES, WHICH HAVE A MUCH MORE WELL-WORN PATH TO APPROVAL, THE RISK IS REALLY DOES THE SCIENCE HOLD UP AS MUCH AS ANYTHING, THAT WE'LL ONLY SUPPORT CO-FUNDING ARRANGEMENTS. SO, FOR EXAMPLE, IF YOU WANT $20 MILLION WORTH OF FUNDING, YOU THEN HAVE TO FIND ANOTHER 20 OR WHATEVER. WE JUST SET THAT AS A RULE SET FOR EVERY ONE OF THESE. WE HAVE TO DO THIS PROSPECTIVELY OBVIOUSLY. WE HAVEN'T TOLD ANYBODY RETROSPECTIVELY.

DR. TROUNSON: THAT'S WHAT WE CURRENTLY DO, BUT I THINK IT MIGHT BE INTERESTING TO GET THE SCIENTIFIC ADVISORY BOARD'S VIEW ON THAT, BUT I THINK THEY HAVE A DIFFERENT VIEW ABOUT THAT.

ANYWAY, THAT'S ONE WE'VE ACTUALLY BEEN DOING. WE HAVEN'T REQUIRED 50-50.

(SIMULTANEOUS DISCUSSION.)

CHAIRMAN JUELSGAARD: WE EXPECT EVERYBODY TO LEVERAGE ON AN EQUAL BASIS. I DIDN'T REALIZE THAT. I THINK -- WELL, I'M SUGGESTING THAT WE OUGHT TO THINK ABOUT DOING MORE THAN THAT. MAYBE THAT ISN'T APPROPRIATE.

DR. TROUNSON: NO. WE HAD THAT IN THE FIRST PLACE.

CHAIRMAN JUELSGAARD: IT'S A RISK-BASE APPROACH FROM THE FINANCIAL POINT OF VIEW BECAUSE THERE'S A LOT LESS RISK WITH THESE FROM SOME OF THE THINGS I JUST TALKED ABOUT, LESS RISK REGULATORILY, LESS RISK IN TERMS OF MANUFACTURING AND PROCESS DEVELOPMENT, LESS RISK ON THE REIMBURSEMENT, UNDERSTANDING REIMBURSEMENT MECHANISMS, ALL THAT. SO THE RISK IS REALLY (INAUDIBLE). THAT'S EVERYDAY RISK.

MS. BAUM: THE ONE THING ABOUT THE 25 PERCENT IS THEY CAN RAISE IT FROM ANY SOURCE. WE'RE NOT PICKY IF IT COMES FROM A VC, A PHARMA. IT COULD COME FROM A FOUNDATION, A PHILANTHROPIC.

CHAIRMAN JUELSGAARD: SO ARE THERE ANY OTHER COMMENTS BECAUSE I HAVE ONE LAST THING HERE.

OKAY. IT'S MY GENERAL BELIEF THAT YOU SHOULD NEVER END THESE SESSIONS WITHOUT A TO-DO LIST. SO WE NEED TO DEVELOP A TO-DO LIST THAT COMES OUT OF THIS TO FOLLOW UP ON ANY RECOMMENDATIONS THAT PEOPLE BELIEVE ARE WORTHY OF FOLLOW-UP. SO BEFORE WE LEAVE, LET'S CREATE A TO-DO LIST AND TALK ABOUT IT.

ANYWAY, ONE OF THE THINGS I HEARD WAS MICHAEL'S SUGGESTION, WHICH I THOUGHT WAS A REALLY GREAT IDEA, IS TO ACTUALLY TALK TO A DIFFERENT GROUP OF PEOPLE THAN WE'VE BEEN TALKING TO, PARTICULARLY THE INDUSTRY. AND I AGREE ABOUT THE VC COMMUNITY. THERE'S A TURNIP THERE, BUT NO BLOOD. BUT TRYING TO TALK TO SOME MORE SENIOR PEOPLE WITHIN SOME OF THE BIGGER BIOPHARMA COMPANIES WHO MIGHT BE WILLING TO INVEST IN AN IDEA OR IN THE FUTURE AND TAKE ON A LITTLE BIT OF RISK. YOU WON'T SEE THOSE ON THE BUSINESS DEVELOPMENT SIDE OR WHATEVER. THEY'RE GOING TO EXIST SOMEWHERE ELSE IN THE ORGANIZATION, WHETHER IT'S THE HEAD OF RESEARCH OR THE CEO OR WHOEVER IT IS.

SO I WOULD PUT THAT ON THE TO-DO LIST TO DEVELOP SOME SORT OF WAY OF DOING THAT. AND I THINK YOU GUYS ARE GOING TO NEED SOME HELP IN TERMS OF THINKING ABOUT HOW TO DO THAT BECAUSE THESE ARE

PEOPLE THAT YOU WOULDN'T ORDINARILY INTERACT WITH.

CHAIRMAN THOMAS: SOUNDED LIKE ANNE-MARIE WOULD HAVE SOME GOOD INPUT ON THAT SUBJECT BASED ON HER COMMENTS.

CHAIRMAN JUELSGAARD: CERTAINLY WITH THE NUMBER OF COMPANIES.

DR. TROUNSON: AND YOU WERE GOING TO INTRODUCE ME TO ART LEVINSON.

CHAIRMAN JUELSGAARD: I CAN INTRODUCE YOU TO ART LEVINSON. I CAN INTRODUCE YOU TO SEVERIN SCHWAN.

MS. BAUM: THAT'S GREAT.

DR. TROUNSON: THIS NEW GOOGLE ENTERPRISE.

CHAIRMAN JUELSGAARD: BE HAPPY TO INTRODUCE YOU TO ART.

DR. DULIEGE: TO HAROLD BARRON, THE HEAD OF RESEARCH THERE. I BLANK ON HIS NAME. PROBABLY, STEVE, YOU PROBABLY KNOW THEM AS WELL.

CHAIRMAN JUELSGAARD: I THINK REALLY THE RIGHT PERSON, ANNE-MARIE, AT GENENTECH IS RICHARD SCHELLER, HEAD OF GENENTECH RESEARCH AND EARLY DEVELOPMENT. IF HE'S ON BOARD, THEN THINGS CAN HAPPEN. IF HE'S NOT ON BOARD, THEY WON'T.

DR. TROUNSON: WE'VE MET QUITE FREQUENTLY WITH -- QUITE OFTEN ANYWAY, A LONG TIME AGO, ON THE

PHONE ABOUT TWO MONTHS AGO.

CHAIRMAN JUELSGAARD: I THINK IT WOULD BE WORTH JUST SITTING DOWN AND HAVING DINNER WITH HIM DOWN AT STANFORD OR WHATEVER, WHICH IS WHERE HE LIVES.

MR. GOLDBERG: WHY DON'T YOU HAVE CLAIRE INVITE YOU TO THE LASKER AWARDS AND HAVE YOURSELF SEATED STRATEGICALLY.

CHAIRMAN THOMAS: THAT'S THIS WEEK. THIS FRIDAY.

MR. GOLDBERG: OH, GOOD. THEY PROBABLY HAVE SOME CANCELLATIONS.

CHAIRMAN JUELSGAARD: SO MAYBE ANNE-MARIE, MICHAEL, AND I AND ANYBODY ELSE WHO WANTS TO VOLUNTEER AT THIS POINT FOR THIS. I DON'T KNOW IF ANY -- PROBABLY NOT OS OR SUE -- BUT ANYWAY, THAT WE KIND OF GET OUR HEADS TOGETHER AND DRAW UP A LIST OF PEOPLE THAT MIGHT BE WORTH TALKING TO AND FIGURE OUT HOW TO MAKE THAT HAPPEN. PEOPLE LIKE ART LEVINSON AND RICHARD SCHELLER. THAT WAS REAL EASY. THEY LIVE HERE LOCALLY. WE COULD JUST DO IT OVER DINNER SOME EVENING OR SOMETHING LIKE THAT WITH INDIVIDUALS.

CHAIRMAN THOMAS: I'VE GOT SOME INSIGHT ON THE GOOGLE PROGRAM. WE CAN TALK ABOUT IT AT A

DIFFERENT POINT IN TERMS OF WHAT GOOGLE VENTURES IS LOOKING TO FUND AS IT SET UP THIS ENTERPRISE AND THE SORTS OF THINGS THEY'RE INTERESTED IN.

CHAIRMAN JUELSGAARD: THAT'S ONE TO-DO. WHAT ELSE? ELONA, WHAT DID YOU HEAR COMING OUT OF DISCUSSION

DR. DULIEGE: WE SAID THE SAME ABOUT VC'S EVEN IF IT'S NOT THE NO. 1 PRIORITY, AND LIKEWISE I'M HAPPY TO (UNINTELLIGIBLE) THERE.

CHAIRMAN JUELSGAARD: I THINK IT'S WORTH SPENDING SOME TIME ON THAT, BUT I THINK WHAT WE SHOULD REALLY DO IS TRY AND IDENTIFY THOSE THAT ARE REALLY POTENTIALLY INTERESTED BECAUSE THERE ARE A LOT OF THOSE ORGANIZATIONS OUT THERE, MY SENSE IS THAT, AS SOMEBODY SAID EARLIER, THEY'RE MUCH MORE RISK AVERSE THESE DAYS GIVEN THE REALLY LONG TIMELINES ASSOCIATED WITH RETURNS COMPARED TO OTHER INVESTMENTS YOU COULD BE MAKING IN OTHER THINGS THAT RETURN MUCH MORE QUICKLY.

CHAIRMAN THOMAS: CAN I JUST MAKE ONE COMMENT ON THAT? I THINK THERE'S AN EXCEPTION TO THAT, AND THAT'S THE IN-HOUSE VC'S AT BIG PHARMA. AND THAT TO ME SHOULD BE ONE OF OUR BIGGEST TARGET AREAS BECAUSE THEY ARE INCLINED TO BE IN THE FIELD. THEY'VE GOT THE WHEREWITHAL TO BE IN THE FIELD.

CHAIRMAN JUELSGAARD: AGREE. WE SHOULD TRY AND IDENTIFY THE IN-HOUSE VC FUNDS WHO HAVE THE MANAGEMENT, FOR EXAMPLE, AS ONE.

CHAIRMAN THOMAS: THEY ALL DO.

MS. BAUM: WE'VE MET A LOT. THEY'RE AT THE ONE-ON-ONE PARTNERING TOO. WHAT I SHOULD DO IS PROBABLY GIVE YOU THE LIST OF SOME OF THE KEY PEOPLE WE'VE MET WITH, THE DATE AND WHO WERE ABLE TO MEET WITH TOO.

CHAIRMAN JUELSGAARD: SO THE IDEA WOULD BE TO KEEP FOLLOWING UP WITH THEM PERIODICALLY TO SEE IF THERE'S ANY INTEREST, OR SOMETHING, A TELEPHONE CALL.

CHAIRMAN THOMAS: THE GUY WHO CAN GET YOU TO A BUNCH OF THEM IS COREY. HE KNOWS A LOT OF THEM. I KNOW THAT HE AGREES THAT THEY'RE A VERY FERTILE GROUND FOR DISCUSSION.

MS. BAUM: ON THE TO-DO LIST, I THINK WE SHOULD MAYBE REVISIT INTERNALLY IF WE MIGHT BE INTERESTED IN THESE FACE-TO-FACE REVIEWS FOR INDUSTRY. WE'VE HAD ONE OF OUR SESSIONS DISCUSS ABOUT THAT.

CHAIRMAN JUELSGAARD: I THINK I'D RESPOND TO DO A DIFFERENT ISSUE, WHICH IS WHY THERE'S SUCH A HIGH FAILURE RATE AT THE LEVEL OF THE GRANTS WORKING

GROUP PROJECTS MAKING TIER I, FOR EXAMPLE. SOMEBODY SUGGESTED THERE'S JUST NOT THE QUALITY OF PRESENTATION WE WANT. WHY IS THAT TRUE? IT'S BECAUSE THAT'S NOT WHAT THEY DO. THAT'S NOT HOW THEY DEAL WITH THE WORLD. THEY DEAL IN A VERY DIFFERENT FASHION AND ARE NOT USED TO WRITING NIH GRANTS. I DON'T KNOW THAT THAT REALLY IMPACTS -- I THINK THAT'S A GREAT SEPARATE THING TO DISCUSS, BUT IT'S KIND OF ASIDE FROM WHAT WE'RE TRYING --

MS. BAUM: IT'S NOT THE PARTNERSHIP. MENTOR LIST, I COULD USE HELP WITH IF YOU DO THINK THERE ARE PEOPLE THAT ARE WILLING TO USE THEIR EXPERTISE WITH A SPECIFIC GRANTEE, THAT WOULD BE GREAT. SO I COULD JUST USE A COLLECTION OF MENTORS, INTERESTED MENTORS.

CHAIRMAN JUELSGAARD: WOULD WE BE WILLING TO FINANCIALLY SUPPORT A MENTORING PROGRAM AS OPPOSED TO JUST A --

DR. TROUNSON: IT COMES FROM SAVINGS. WE'VE GOT TO TAKE IT OUT OF MANAGEMENT. WE'D HAVE TO SORT OF FIGURE IT INTO THE BUDGET. IF IT COMES OUT OF RESEARCH, IT HAS TO BE VOTED THROUGH THE GRANTS WORKING GROUP.

DR. FEIGAL: JUST FROM THE CDAP, AN HONORARIUM FOR VERY DISTINGUISHED PEOPLE, BUT

THEY'RE NOT DOING IT FOR THE SALARY. SOME OF THEM ACTUALLY WOULD DO IT FOR PROBABLY A PRETTY MODEST AMOUNT.

CHAIRMAN JUELSGAARD: I GUESS WHAT I WAS THINKING ABOUT, SO THERE ARE CONSULTING FIRMS THAT KNOW THIS INDUSTRY VERY WELL AND KNOW HOW TO MAKE PITCHES, ETC., BUT THEY DON'T WORK FOR FREE. THEY WORK FOR MONEY, SO THEY WOULD BE A SOURCE.

DR. TROUNSON: WE JUST NEED TO BUILD IT INTO THE BUDGET.

CHAIRMAN JUELSGAARD: AT LEAST TAKE A LOOK AT IT AND SEE WHAT YOU THINK. WE COULD LIST AN ENTERPRISE LIST AND GREAT MENTORING RESOURCES.

ANYTHING ELSE, ANYTHING THAT WE TALKED ABOUT THAT ANYBODY THINKS WE SHOULD FOLLOW UP ON?

DR. DULIEGE: I WILL FORWARD THE LINK TO THIS GSBI ENTREPRENEURSHIP AT SANTA CLARA IF SEVERAL OF YOU WANT TO TAKE A LOOK AT IT, AND I WILL BE MORE THAN HAPPY TO INTRODUCE CIRM TO THE HEAD OF THIS GROUP JUST TO SEE IF THERE'S A VALUE IN LOOKING AT HOW THEY'VE BEEN DOING THIS AND EXPANDING AND ANY GOOD TIPS FOR US.

CHAIRMAN JUELSGAARD: I'M AT LEAST JUST INTERESTED IN JUST LOOKING ONLINE AT THEIR MODEL, ANNE-MARIE, AND SEE IF THERE'S ANYTHING WE COULD

LEARN FROM THAT THAT MIGHT BE OF VALUE IN TERMS OF WHAT WE DO. I'M NOT SURE THAT THERE IS, BUT IT'S WORTH AT LEAST TAKING A LOOK AT. THAT WAS MY INTEREST IN IT.

ANYTHING ELSE? ALL RIGHT. WELL, ANY COMMENT FROM THE PUBLIC BEFORE WE ADJOURN? ALL RIGHT. NO COMMENTS, MEETING IS ADJOURNED.

(THE MEETING WAS THEN CONCLUDED AT 02:59 PM.)

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 INTELLECTUAL PROPERTY AND INDUSTRY SUBCOMMITTEE TO THE INDEPENDENT CITIZEN'S OVERSIGHT COMMITTEE OF THE CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE IN THE MATTER OF ITS REGULAR MEETING HELD ON MONDAY, SEPTEMBER 23, 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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