

BEFORE THE  
BIOTECH LOAN PROGRAM TASK FORCE 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: 8950 VILLA LA JOLLA DRIVE  
SUITE A124  
LA JOLLA, CALIFORNIA

DATE: TUESDAY, FEBRUARY 19, 2008  
1 P.M.

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

BRS FILE NO. : 80689

**BARRISTERS' REPORTING SERVICE**

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**BARRISTERS' REPORTING SERVICE**

LA JOLLA, CALIFORNIA; TUESDAY, FEBRUARY 19, 2008

1 P.M.

BIOTECH LOAN TASK FORCE

CHAIRMAN ROTH: OKAY. I THINK WE'RE GOING TO GO AHEAD AND GET STARTED SINCE WE DON'T NEED A QUORUM. LET'S START WITH THE ROLL CALL, IF WE COULD HAVE IT.

MS. KING: CAN EVERYBODY HEAR ME FROM HERE? THOSE OF YOU ON THE PHONE, CAN YOU HEAR ME?

DR. PENHOET: YES. LOUD AND CLEAR.

MS. KING: EXCELLENT. CALLING THE ROLL, FLOYD BLOOM.

DR. BLOOM: HERE.

MS. KING: MARCY FEIT. MICHAEL GOLDBERG. BOB KLEIN.

MR. KLEIN: HERE.

MS. KING: TED LOVE. ED PENHOET.

DR. PENHOET: HERE.

MS. KING: DUANE ROTH.

CHAIRMAN ROTH: HERE.

MS. KING: JEFF SHEEHY.

MR. SHEEHY: HERE.

MS. KING: OSWALD STEWARD.

UNIDENTIFIED SPEAKER: YES, VERY

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SHORTLY.

CHAIRMAN ROTH: SO GOOD AFTERNOON. MY NAME IS DUANE ROTH, AS YOU JUST HEARD, AND I CHAIR THIS TASK FORCE. AND TODAY BEFORE WE GET STARTED ON THE SERIOUS BUSINESS WE HAVE, I WANT TO TALK ABOUT A UNIQUE AND VERY SPECIAL INDIVIDUAL, JEFF KRSTICH, WHO I WAS INVITING TO COME BE A PANELIST TODAY. HE DIED LAST MONTH AT AGE 60 OF A MASSIVE HEART ATTACK. AND I THINK IT REMINDS US ALL WHY WE'RE HERE AND WHAT WE'RE TRYING TO DO, THAT THINGS LIKE THAT JUST SHOULDN'T HAPPEN AND THEY DO.

FOR THOSE OF YOU THAT KNEW JEFF, HE WAS A REMARKABLE PERSON. HE WAS A NAVY ACADEMY GRADUATE, CO-CAPTAIN OF HIS FOOTBALL TEAM, FLEW HELICOPTERS IN VIETNAM, AND CAME BACK AND JUST ABSOLUTELY LOVED THIS INDUSTRY, WORKED FOR BIOGEN AS SALES MANAGER OUT HERE.

I GOT TO KNOW HIM IN REPUBLICAN POLITICS, AND HE CAME AROUND AND BECAME A GREAT SUPPORTER OF THIS, BUT JEFF WAS CEO OF INTERNATIONAL STEM CELL CORPORATION, AND BILL ADAMS IS HERE TODAY, THE CO-FOUNDER. I CAN'T TELL YOU HOW MUCH THIS GUY IS GOING TO BE MISSED IN THIS FIELD. WITH THAT, I'D JUST LIKE TO HAVE US

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ALL RECOGNIZE WHAT A GREAT CONTRIBUTION HE MADE. HE ACTUALLY SAT IN THAT CHAIR RIGHT OVER THERE LAST TIME WE WERE IN THIS MEETING ROOM TALKING ABOUT STEM CELLS. GREAT GUY. BILL, THANK YOU FOR BEING HERE.

MR. ADAMS: THANK YOU.

CHAIRMAN ROTH: SO I'M GOING TO START WITH JUST A VERY BRIEF OVERVIEW BECAUSE THIS IS ALREADY PART OF THE RECORD. THIS TASK FORCE HAS THE JOB OF COMING UP WITH THE POLICY TO GOVERN THE LOAN PROGRAM. THAT MEANS THAT WE DON'T DEAL WITH THE AMOUNT THAT MIGHT GO INTO THIS PROGRAM. IT MEANS WE DON'T DEAL WITH THE PROCESS TO REVIEW THE SCIENTIFIC SIDE OF THE PROGRAM. THOSE THINGS HAVE ALREADY LARGELY BEEN WORKED OUT, AND WE'LL USE THE GRANT ADMINISTRATION POLICY AND OTHER THINGS THAT WILL BE LIFTED FROM PAST WORK THAT'S BEEN DONE BY THE CIRM STAFF AND ICOC, SO WE HAVE A LOT TO START FROM.

SO TODAY WHAT I'M GOING TO TRY TO DO IS GET US TO FOCUS FROM THE INDUSTRY PERSPECTIVE ON THE KINDS OF THINGS THAT YOU'D LIKE US TO THINK ABOUT, BE AWARE OF, AND TO CONSIDER AS WE COME UP WITH THIS FINAL POLICY. AT TIMES IT MAY BE A BIT FRUSTRATING BECAUSE THERE ARE CERTAIN GUIDELINES

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AND THE LEGISLATION ITSELF THAT WE HAVE TO ABIDE BY. SO WHEN THOSE THINGS COME UP, WE'LL TRY TO QUICKLY GIVE YOU SOME BRIEF EXPLANATION OF WHAT'S IN THE POLICY SO YOU WILL KNOW WHAT'S IN THE LEGISLATION ITSELF SO YOU'LL KNOW WHY WE MAY BE REACTING ONE WAY OR THE OTHER.

SO THE FIRST THING THAT WE'RE GOING TO DO, WE HAVE A REPRESENTATION TODAY FROM INDUSTRY. SOME PEOPLE WILL BE ON THE PHONE BECAUSE OF PLANE PROBLEMS AND OTHERS, BUT MANY PEOPLE TRAVELED HERE FROM THE BAY AREA AND SOME ARE STILL EXPECTED TO BE HERE SHORTLY. SO WE'RE GOING TO START WITH SORT OF JUST SOME GENERAL THOUGHTS AND COMMENTS FROM EACH OF OUR INDUSTRY REPRESENTATIVES ABOUT THE PROGRAM, ABOUT FUNDING EARLY STAGE RESEARCH, TRANSLATIONAL MEDICINE, THINGS THAT YOU ALL WORK WITH EVERY DAY, AND TO TRY TO ELICIT FROM YOU SOME GUIDANCE ABOUT THE IMPORTANCE OF THIS PROGRAM, WHETHER YOU FEEL IT'S NECESSARY, NEEDED, AND SO ON.

DR. MURPHY: DUANE, RICH MURPHY HERE. WE'RE HAVING TROUBLE HEARING YOU IN SAN FRANCISCO. ALSO THERE'S A LOT OF PAPER MOVEMENT OR SOMETHING THAT'S MAKING IT EXTREMELY DIFFICULT.

CHAIRMAN ROTH: THAT'S NOT HERE, SO IT

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MAY BE ONE OF THE OTHER PEOPLE ON THE PHONE  
BECAUSE NOBODY HAS GOT PAPERS NEAR THE SPEAKERS.  
IS THAT BETTER, RICH?

DR. MURPHY: THAT'S BETTER. YEAH, IT  
IS.

CHAIRMAN ROTH: SO THE LAST COMMENT I  
WANT TO MAKE, AND IT WAS ACTUALLY ASKED OF ONE OF  
THE PANELISTS, AND I THINK IT'S IMPORTANT TO  
ADDRESS. WHY DID THIS GET INCLUDED IN PROPOSITION  
71? AND THE REASON IT GOT INCLUDED IS, A, A  
NUMBER OF OTHER DISEASE ASSOCIATIONS MAKE LOANS  
SIMILAR TO WHAT WE'RE TALKING ABOUT, SO THERE WAS  
PRECEDENT FOR IT, NO. 1. AND NO. 2, IT'S A WAY  
FOR US TO MAKE THE MONEY EXTEND A LITTLE FURTHER.  
SO IF WE CAN MAKE LOANS AND GET PEOPLE THROUGH  
CRITICAL GAPS IN FUNDING AND THEY GO ON TO BE  
SUCCESSFUL, THOSE LOANS GET REPAYED AND CIRM CAN  
THEN PUT THAT MONEY BACK INTO THE HANDS OF PEOPLE  
WHO CAN DO MORE TRANSLATIONAL MEDICINE AS A RESULT  
OF THAT. THAT WAS THE THOUGHT PROCESS. AND BOB  
KLEIN, WHO'S CHAIRMAN, WROTE MOST OF THE PROP 71,  
CAN EMBELLISH THAT AT SOME POINT DOWN THE ROAD.

SO WITH THAT, WHAT I'M GOING TO DO IS  
ASK THE PANELISTS EACH TO MAKE SOME VERY BRIEF  
COMMENTS JUST ON THE CONCEPT THAT WE'RE TALKING

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ABOUT. YOU'VE ALL HAD A CHANCE TO LOOK AT THE NARRATIVE. WE'RE GOING TO GO THROUGH THAT NARRATIVE SORT OF SECTION BY SECTION, SO YOU DON'T NEED TO ADDRESS THOSE THINGS NOW. I'M LOOKING FOR OVERVIEW COMMENTS. AND, BILL, I'M GOING TO START WITH YOU, BILL ADAMS. I'VE GOT TWO BILLS HERE. SO, BILL, IF YOU WANT TO GO FIRST. AND INTRODUCE YOURSELF, IF YOU WOULD. I THINK EVERYBODY HAS YOUR BRIEF BIOS, BUT IF YOU JUST TAKE A MINUTE AND TELL US WHO YOU ARE.

MR. ADAMS: I'M BILL ADAMS. I'M THE CO-FOUNDER AND CHIEF FINANCIAL OFFICER OF INTERNATIONAL STEM CELL. AND, DUANE, THANK YOU FOR YOUR KIND COMMENTS ON JEFF. WE'RE, OF COURSE, LIKE OTHERS ON THE PANEL, VERY INTERESTED IN THE LOAN PROGRAM. AS A FOR-PROFIT COMPANY, I BELIEVE THAT THE PROGRAM MAKES A LOT OF SENSE. SOME OF US ARE PUBLIC AND SOME ARE NOT. FOR US THAT ARE PUBLIC, IF THE LOAN PROGRAM TAKES US TO A CLINIC SITUATION, OUR STOCK JUMPS A FEW BUCKS, THIS IS A GOOD DEAL, SO WE'RE VERY MOTIVATED FOR THAT.

AT THE LAST MEETING IN SAN FRANCISCO, THEY TALKED ABOUT THE VALLEY OF DEATH, WHICH IS THE AREA BETWEEN STARTING UP AND GETTING TO THE CLINIC WHERE YOU CANNOT GET FUNDING OUT OF THE



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VENTURE CAPITALISTS. AND THE ONES THAT PRESENTED IN SAN FRANCISCO MADE THAT VERY CLEAR. SILICON VALLEY BANK MADE IT VERY CLEAR ALSO THAT IT IS BAD.

SINCE THAT MEETING, I THINK IT'S NOT A VALLEY OF DEATH ANYMORE. IT'S A GRAND CANYON. IT HAS BECOME REALLY DIFFERENT AND MUCH MORE DIFFICULT. SO IF THERE IS A WAY TO ACCELERATE THIS PROGRAM AND PUSH US ALONG TO WHERE THE FOR-PROFIT COMPANIES OBVIOUSLY CAN APPLY PROPERLY AND DO EVERYTHING WE NEED TO DO, THEN I THINK THIS PROGRAM IS GOING TO BE GREAT.

CHAIRMAN ROTH: THANKS, BILL. LET ME GO DOWN THE LIST AND LET ALAN LEWIS TALK TO US. AGAIN, ALAN, JUST FOR THE PEOPLE ON THE PHONE INTRODUCE YOURSELF.

MR. LEWIS: WELL, I'M ALAN LEWIS, AND I'M CEO OF NOVOCELL HERE IN SAN DIEGO, AND WE'RE A STEM CELL ENGINEERING COMPANY WITH A MAJOR FOCUS ON DIABETES.

WELL, I WAS EXPLAINING TO ONE OF THE PANELISTS THAT WE DID, IN FACT, APPLY FOR ONE OF THE EARLIER GRANTS, THE DISEASE-FOCUSED GRANTS, AND SO ARE VERY MOTIVATED TO SEEK ACCESS TO CIRM'S MONEY. WE ARE A PRIVATE COMPANY. AND WHILST WE

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WERE IN THE VALLEY OF DEATH, WE WERE ABLE TO RAISE SOME MONEY LAST YEAR, 25 MILLION IN A SERIES C, WHICH, AS YOU ALL KNOW, IT DOESN'T TAKE US INDEFINITELY, AND AT THE SAME TIME DOESN'T ACTUALLY GET US INTO THE CLINIC.

THE CHALLENGE THAT WE HAVE, OUR INVESTORS HAVE SPENT A LOT OF MONEY ON THE COMPANY. I'M CURIOUS TO KNOW EXACTLY HOW MUCH MONEY MIGHT BE AVAILABLE AND EXACTLY WHAT THAT WOULD ENTAIL IN TERMS OF WHAT WE'LL HAVE TO GIVE UP TO ACHIEVE A LOAN OR EVEN A GRANT, FOR THAT MATTER. I KNOW WE'VE TALKED ABOUT IT IN THE PAST.

BOTTOM LINE IS I AM ENTHUSIASTIC. I THINK IT'S AN ESSENTIAL PART OF THE SUPPORT FOR THIS VERY IMPORTANT FIELD OF REGENERATIVE MEDICINE. OBVIOUSLY WE'RE NOT PUBLIC. WE DON'T HAVE ACCESS TO THE PUBLIC FUNDS. THE INVESTOR COMMUNITY IS DEFINITELY COOL TO WHAT WE'RE DOING, EVEN THOUGH I KNOW THAT PEOPLE LIKE TO THINK THAT EVENTUALLY THEY'LL GET RELIGION AND START SUPPORTING IT BIG TIME. I DON'T SEE THAT IN THE NEAR TERM. SO I'M FULLY SUPPORTIVE, AND WE'LL DO WHATEVER WE CAN DO IN PROGRAMS DEFINING WHAT CIRM NEEDS FROM US AND VICE VERSA IN TODAY'S MEETING.

CHAIRMAN ROTH: THANK YOU, ALAN. LET ME

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GO TO BILL CALDWELL.

MR. CALDWELL: THANK YOU. MY NAME IS BILL CALDWELL. I'M THE CHAIRMAN AND CEO OF ADVANCED CELL TECHNOLOGY. WE'RE VERY EXCITED ABOUT THE OVERALL PROGRAM FOR FUNDS AND THE DEVELOPMENT OF THIS INDUSTRY. I THINK THIS IS AN ESSENTIAL INGREDIENT TO AN OVERALL PACKAGE.

AND I MADE COMMENTS A MONTH AGO, AND I WANT TO REITERATE THE COMMENTS I MADE THEN. I BELIEVE THAT YOU'RE GOING TO FIND THAT YOU'RE GOING TO NEED TO HAVE DIFFERENT CATEGORIES FOR DEBT. YOU HAVE A WHAT I THINK YOU'VE ALLUDED TO AS A START-UP CATEGORY. I DO BELIEVE THAT IT WOULD BE IMPRUDENT JUST TO FUND THOSE TYPES OF COMPANIES WITH DEBT. I BELIEVE THAT THERE SHOULD BE SUBSTANTIAL CAPITAL, WHETHER IT BE GRANTS OR OTHERS, TO DEFINE THE PROGRAM, AND THEN MAYBE THE DEBT WOULD ADD BASED UPON SOME ISSUES THAT MIGHT COME UP BECAUSE ONE IN THAT PARTICULAR SITUATION CAN'T UNDERSTAND ALL COMPONENTS AND ISSUES THAT MIGHT ARISE AT THE EARLY STAGE.

WHEN IT COMES TO THE PRECLINICAL, I BELIEVE THAT, AGAIN, IT'S A COMPONENT IN THE PRECLINICAL ATMOSPHERE. THERE'S A LOT OF ISSUES THAT ARE OCCURRING WITH RESPECT TO THIS PARTICULAR

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INDUSTRY SEGMENT. THE FDA IS ON NEW GROUND RELATIVE TO WHAT THEY REALLY ARE LOOKING FOR. I KNOW THAT THERE IS ANOTHER COMPANY HERE LIKE OURSELVES THAT ARE RIGHT NOW IN THE PRECLINICAL STAGE, LOOKING TO TRY AND FILE AN IND, AND THE FDA IS EXTREMELY RIGID IN TERMS OF TRYING TO DEFINE WHAT IT IS THEY REALLY WANT TO SEE BEFORE THEY WILL ALLOW A SUCCESSFUL IND TO GO THROUGH.

I, AGAIN, THINK THAT THIS WOULD BE A SUPPLEMENTAL TYPE OF PROGRAM, COMPANIES AVAILING THEMSELVES OF OTHER METHODS AS WELL.

AS IT RELATES TO THE LATER STAGE WHERE YOU ARE NOW IN THE CLINIC, I THINK THIS IS A VERY POSITIVE PROGRAM THAT CAN BE AN ADDED INSTRUMENT IN THE CLINICAL ENVIRONMENT. FOR COMPANIES THAT ARE, AGAIN, LOOKING AT THIS AS PREDOMINANTLY THEIR FIELD, I BELIEVE THAT YOU CAN WORK WITH COMPANIES AND THE INSTITUTIONS, FOR EXAMPLE, DOWN HERE, UCSD OR OTHER MEDICAL INSTITUTIONS, THAT ARE IN A PRECLINICAL ENVIRONMENT WHERE THEY HAVE PATIENTS NOW THAT ARE WORKING WITH THE DISEASE. I THINK THAT THIS WOULD LEND ITSELF VERY NICELY AS A PRIMARY SOURCE OF FUNDS.

SO I THINK THAT YOU HAVE STAGES AND YOU'LL HAVE POCKETS, AND I THINK THAT YOU OUGHT TO

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SERIOUSLY CONSIDER THAT.

CHAIRMAN ROTH: THANKS. YOU HAVE A COUPLE OF IMPORTANT THINGS I WANT TO MAKE SURE WE AS A PANEL GET BACK TO DISCUSS WITH YOU, AND THAT WAS THE SCOPE OF WHAT WE FUND AND THIS LAST PART ABOUT THE INSTITUTIONS BEING ABLE TO APPLY FOR THESE GRANTS AS WELL.

YOU WILL NOTICE THERE'S NO INSTITUTIONS HERE, BUT I'VE HAD A CHANCE TO TALK TO SEVERAL, AND I'D LIKE TO SHARE THEIR THOUGHTS ON THAT, SO WE'LL COME BACK TO IT.

JOYDEEP, IF YOU WOULD, JUST INTRODUCE YOURSELF BRIEFLY AND GIVE US YOUR THOUGHTS ON THE OVERALL CONCEPT HERE.

DR. GOSWAMI: JOYDEEP GOSWAMI. I RUN THE STEM CELLS AND REGENERATIVE MEDICINE BUSINESS UNIT IN INVITROGEN. I GUESS I'M KIND OF AN ODDBALL IN THIS COMMITTEE HERE. YOU KNOW, AS MOST OF YOU ON THE PANEL KNOW, THAT WE RUN A BUSINESS AND WE DO HAVE REVENUES. WE'RE PART OF A LARGER ORGANIZATION, AND PROBABLY A LITTLE BIT MORE FOCUSED TOWARDS THE TOOLS AND THE ENABLING TECHNOLOGIES THAT GO INTO THE SPACE, BE IT RESEARCH, BE IT THERAPY OR, FRANKLY, EVEN DRUG SCREENING FOR THAT MATTER.

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BUT I THINK WE ARE PRETTY INTERESTED IN THE LOAN PROGRAM AS WELL. AND THE REASON IS QUITE SIMPLE. AS ANY LARGE COMPANY OR SMALL COMPANY, WE HAVE MORE IDEAS THAT MERIT FUNDING THAN WE CAN FUND INTERNALLY. AND MANY OF THESE THAT UNFORTUNATELY FALL ON THE CHOPPING BLOCK, GIVEN OUR COMMITMENTS TO WALL STREET AND OUR PROFILE AS A COMPANY, TEND TO BE THE MORE RISKY IDEAS, BUT ALSO THAT CAN POTENTIALLY LEAD TO HUGE BENEFITS FOR, NOT ONLY THE COMMUNITY AT LARGE, BUT SEVERAL OF THE COMPANIES THAT ARE REPRESENTED HERE ON THE PANEL TODAY.

SO I THINK WE WOULD BE INTERESTED. I THINK THESE WOULD HAVE THE ADDITIONAL ADVANTAGE, I THINK, OF GETTING SCRUTINY OUTSIDE THE COMPANY AS WELL. THAT, I THINK, IS A BENEFIT TO THE STATE BECAUSE THE PANELS THAT ARE GOING TO REVIEW THESE APPLICATIONS ARE GOING TO BE THE SAME PANELS THAT ARE JUDGING OTHER PROGRAMS ACROSS THE STATE. AND ACTUALLY I THINK YOU GUYS HAVE PULLED TOGETHER QUITE AN IMPRESSIVE PANEL OF PEOPLE OUTSIDE THE STATE AS WELL.

I THINK THE BIGGEST PIECE FOR US IS WE DO HAVE ACCESS TO OTHER LOANS, BUT I THINK THE LOAN MONEY THAT WOULD COME FROM CIRM HAS TO BE

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COMPETITIVE AND HAS TO TAKE A LOOK AT US AND OUR PROFILE AS A COMPANY AND THE RISK PROFILE OF OUR COMPANY. SO THAT WOULD BE ONE OF THE THINGS.

THE OTHER PIECE IS THIS IS A LOAN; AND, HENCE, WE WOULD NOT WANT NEGATIVE COVENANTS ON IT. WE WOULDN'T WANT IP THAT COMES OUT OF IT TO BE TIED UP IN THE PROCESS. SO THOSE WOULD BE KIND OF IMPORTANT THINGS FOR US.

SOME OF THE THINGS THAT OUR FINANCE GROUP HAS BROUGHT UP, ALTHOUGH I THINK THESE CAN EASILY BE ADDRESSED, IS JUST HOPEFULLY THERE WON'T BE ANY CONFLICT OF INTEREST US BEING A CALIFORNIA ORGANIZATION AND SELLING TO THE GOVERNMENT OR GOVERNMENT-FUNDED INSTITUTIONS, SUCH AS THE UC'S. YOU KNOW, HOPEFULLY THIS SHOULD NOT BE A PROBLEM. THIS HAS ALREADY BEEN SOLVED FOR MOST NIH INSTITUTIONS THAT WE SELL TO, AND WE GET FUNDING FROM THE SAME AGENCIES. I'LL STOP THERE, BUT THOSE ARE KIND OF WHERE I WOULD BE AT.

CHAIRMAN ROTH: THANK YOU. EXCELLENT. DAVID, LET'S GO TO YOU. YOU'RE PINCH-HITTING TODAY BECAUSE OF SOME PLANE PROBLEMS.

MR. EARP: I'M DAVID EARP. I'M SENIOR VICE PRESIDENT OF BUSINESS DEVELOPMENT AND CHIEF IP COUNSEL AT GERON IN THE BAY AREA. I'LL JUST

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MAKE A FEW GENERAL COMMENTS, KNOWING THAT WE'RE GOING TO COME BACK TO SOME OF THE MORE DETAILED ISSUES LATER ON.

I THINK GERON WOULD BE STRONGLY SUPPORTIVE OF A LOAN PROGRAM, PARTICULARLY ONE THAT IS FOCUSED ON THE TRANSLATIONAL ASPECTS OF THE DEVELOPMENT OF STEM CELL THERAPEUTICS. AS JUST A GENERAL, AND MAYBE THIS IS AN OVERLY SIMPLISTIC WAY OF THINKING ABOUT THE LOAN PROGRAM VERSUS THE GRANT PROGRAM, I THINK THE TWO DIFFER IN TERMS OF WHERE THE RISK IS BEING ALLOCATED. IN THE GRANT PROGRAM CIRM IS ONLY GOING TO BE GETTING A RETURN ON THAT FUNDING, AND STATE OF CALIFORNIA WILL ONLY GET A RETURN ON THAT FUNDING IF THERE IS THE SUCCESSFUL DEVELOPMENT OF A COMMERCIAL PRODUCT AT THE END OF THE DAY. SO IN MAKING A GRANT, CIRM IS BEARING THE RISK.

IN THE LOAN PROGRAM, THESE LOANS ARE TO BE REPAYED BY THE COMPANY REGARDLESS OF WHETHER THE PROGRAM FAILS OR SUCCEEDS. NOW, WE HAVEN'T GOT DOWN TO THE DETAIL OF TALKING ABOUT WHETHER CIRM WOULD EXPECT A GREATER RECOVERY IF THE PROGRAM SUCCEEDED. NEVERTHELESS, UNDER THE LOAN PROGRAM, IT IS THE COMPANY THAT BEARS THE RISK. I THINK THAT WOULD THEN GO BACK TO ECHOING SOME OF



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JOYDEEP' S COMMENTS ABOUT WHAT SORT OF NEGATIVE COVENANTS OR OBLIGATIONS WOULD GO ALONG WITH THAT FUNDING. WE NEED TO RECOGNIZE THAT, SIMPLISTICALLY SPEAKING, COMPANY BEARING ALL OF THE RISK VERSUS CIRM BEARING THE RISK, I THINK, NEEDS TO BE REFLECTED IN THE CONDITIONS THAT ATTACH TO THE LOANS.

I ALSO THINK THAT IT' S REALLY IMPORTANT TO CONSIDER THE SCOPE OF THE PROGRAMS THAT WILL BE FUNDED WITH LOANS AND WHAT THE END POINTS FOR THOSE PROGRAMS WOULD BE. A VERY EARLY STAGE PROGRAM THAT IS A LONG WAY FROM THE CLINIC AND A LONG WAY FROM THE SUCCESSFUL DEVELOPMENT OF A PRODUCT, A COMMERCIAL RETURN FOR THE COMPANY COULD BE STRUCTURED IN A WAY THAT' S QUITE DIFFERENT, A SHORT-TERM LOAN FOR A SMALLER AMOUNT AND PERHAPS AT A FIXED INTEREST RATE OF RETURN BACK TO CIRM. IF YOU THEN LOOK AT THE OTHER END OF THE SPECTRUM WITH A COMPANY THAT' S GOING INTO THE CLINIC FOR CLINICAL TRIALS, THE LOAN AMOUNTS WILL PROBABLY NEED TO BE LARGER, THE TERM OF THE LOAN, IF YOU' RE SEEKING TO TAKE THE LOAN OVER THE TERM OF THE PRODUCT DEVELOPMENT TO COMMERCIALIZATION, MIGHT NEED TO BE LARGER. BUT IN MIRRORING THAT, YOU MIGHT SUGGEST THAT CIRM COULD GET A LARGER RETURN

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RATHER THAN JUST A FIXED INTEREST RATE IF THERE WAS COMMERCIAL SUCCESS AT THE END OF THE PROGRAM.

AND ONE FINAL COMMENT, WHICH I BROUGHT UP IN ONE OF THE MEETINGS BEFORE, BUT I HAVEN'T REALLY GOT MUCH OF A RESPONSE ON YET IS THE NOTION OF WHERE THE FUNDS CAN BE SPENT. GERON IS NOW A, SOON WILL BE A CLINICAL STAGE COMPANY WITH STEM CELL THERAPIES IN THE CLINIC. THOSE PROGRAMS ARE NECESSARILY NOT GOING TO BE CONFINED TO THE STATE OF CALIFORNIA. WE CAN'T. THERE AREN'T ENOUGH CLINICAL TRIAL SITES IN CALIFORNIA FOR US, FOR EXAMPLE, TO CONDUCT OUR SPINAL CORD INJURY PROGRAM.

SO WE'RE INTERESTED IN GETTING CLARITY ON HOW THE FUNDS THAT WE RECEIVE CAN BE SPENT FOR THAT CLINICAL TRIAL PROGRAM. CLEARLY CIRM IS UNDER STATUTORY RESTRAINTS THAT PREVENT FUNDING OF ACTIVITIES OUTSIDE THE STATE OF CALIFORNIA; BUT, FOR EXAMPLE, COULD FUNDS BE USED WITHIN THE STATE OF CALIFORNIA FOR MANUFACTURING THE CLINICAL TRIAL MATERIAL WHICH WOULD THEN GO INTO CLINICAL TRIAL SITES WITHIN AND OUTSIDE OF CALIFORNIA TOO? I THINK IT WOULD BE VERY HELPFUL TO GET SOME CLARITY AROUND THOSE ISSUES.

THAT ISSUE, I THINK, PERTAINS EQUALLY TO

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THE GRANT PROGRAM AS WELL, BUT I THINK IT WOULD BE HELPFUL TO GET SOME CLARITY AROUND IT.

CHAIRMAN ROTH: THANK YOU. WE WILL -- I KNOW BOB IS DYING TO ANSWER THAT, BUT LET'S GO AHEAD AND HEAR FROM THE OTHERS, AND THEN LET'S GET INTO A DIALOGUE WITH YOU ON SOME OF THE THINGS THAT WE HAVEN'T FIGURED OUT.

SO I'M GOING TO TURN NOW TO DAVID GOLLAHER, WHO'S CEO OF CALIFORNIA HEALTHCARE INSTITUTE. AND THEN WE HAVE ONE MORE, KEN STRATTON, WHO'S ON THE PHONE TODAY. SO DAVID.

DR. GOLLAHER: VERY BRIEFLY, CHI IS AN ASSOCIATION OF ABOUT 270 ACADEMIC INSTITUTIONS AND COMMERCIAL COMPANIES, MANY OF WHOM ARE REPRESENTED HERE. DR. TED LOVE IS OUR CHAIR ELECT. ED PENHOET IS A FORMER CHAIRMAN. AND ALL OF THE MAJOR LIFE SCIENCES ACADEMIC INSTITUTIONS FROM SALK AND SCRIPPS TO THE UNIVERSITY OF CALIFORNIA, CAL TECH, STANFORD ARE MEMBERS OF OUR ASSOCIATION.

MS. PRYNE: THIS IS SAN FRANCISCO.  
WE'RE HAVING TROUBLE HEARING THE SPEAKER, PLEASE.

DR. GOLLAHER: IS THAT BETTER?

MS. PRYNE: YES, IT IS. THANK YOU.

DR. GOLLAHER: I WAS JUST SAYING THAT  
ALL OF THE MAJOR LIFE SCIENCES ACADEMIC

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INSTITUTIONS, MANY OF WHOM WOULD APPLY AND RECEIVE GRANTS FROM CIRM, ARE MEMBERS OF OUR ORGANIZATION, AS ARE MANY COMMERCIAL COMPANIES FROM LARGE BIOTECH COMPANIES TO COMPANIES LIKE INVITROGEN AND SMALL START-UPS.

WE'RE EXTREMELY INTERESTED IN, NOT ONLY PUBLIC-PRIVATE PARTNERSHIPS, BUT IN FOSTERING INNOVATIVE APPROACHES TO ADDRESS THE SO-CALLED VALLEY OF DEATH BETWEEN BASIC RESEARCH AND WHEN RESEARCH IS FAR ENOUGH ADVANCED TO BE COMMERCIALIZED, PARTICULARLY TO ATTRACT VENTURE CAPITAL. IT'S AN OBSERVATION THAT WE'VE MADE RECENTLY, THAT VENTURE FUNDING IS AVAILABLE FOR LATER AND LATER STAGES OF COMMERCIALIZABLE PRODUCTS, AND THAT MANY PROMISING COMPOUNDS, MUCH PROMISING SCIENCE MAY REMAIN UNDEVELOPED UNLESS THERE ARE INNOVATIVE PROGRAMS TO ADDRESS THE FINANCING GAP.

SO IT SEEMS TO US THAT THE LOAN PROGRAM THAT'S BEING PROPOSED HERE IS ONE STRATEGY, ONE INNOVATIVE STRATEGY, TO ADDRESS THAT. AND WE'RE PREPARED TO TESTIFY ON BEHALF OF IT.

CHAIRMAN ROTH: THANK YOU, DAVID. OKAY.  
THE FINAL COMMENTS FROM KEN.

MR. STRATTON: CAN YOU HEAR ME?

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CHAIRMAN ROTH: YES, WE CAN.

MR. STRATTON: THANKS VERY MUCH.

APPRECIATE THE OPPORTUNITY TO PARTICIPATE IN THIS DISCUSSION. STEM CELLS, INC. IS A PUBLICLY TRADED STEM CELL COMPANY, AND I AM THE GENERAL COUNSEL.

WE REMAIN VERY INTERESTED IN THE LOAN PROGRAM. WE THINK IT'S COMMENDABLE THAT THE CIRM, ICOC ARE INTERESTED IN EXPLORING CREATIVE APPROACHES FOR ADDRESSING THE FUNDING NEEDS. WE CERTAINLY SHARE THE COMMENT FROM BILL EARLIER. IT SEEMS TO BE MORE AND MORE THAT IT'S BECOMING A GRAND CANYON OF DEATH RATHER THAN A VALLEY OF DEATH.

IF YOU LOOK AT THE TRADING PRICE OF PUBLICLY TRADED STEM CELL COMPANIES RECENTLY, A NUMBER OF US, MOST OF US, HAVE TAKEN A HIT OF ABOUT 50 PERCENT OR MORE IN THE LAST SEVERAL MONTHS.

OUR ATTITUDE AND THOUGHTS ON THE REGULATIONS AND REQUIREMENTS FOR GRANTS ARE A MATTER OF PUBLIC RECORD. WE FEEL THAT, MORE THAN ANYTHING ELSE, IT IS ESSENTIAL THAT THE LOAN PROGRAM CONTINUE TO TRY TO BE AS PREDICTABLE AND PROPORTIONATE AS POSSIBLE. THOSE ARE THE HALLMARKS AND THE STANDARDS BY WHICH WE WILL

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EVALUATE THE LOAN PROGRAM WHEN IT'S FINALLY ADOPTED. FRANKLY, IT'S MUCH MORE IMPORTANT FOR THE LOAN PROGRAM THAN IT WAS FOR THE GRANTS PROGRAM BECAUSE, AS WAS COMMENTED EARLIER, THE LOANS ARE REPAYED IN FULL.

AS THE ICOC CONTINUES TO PATTERN ITSELF OR ITS LOAN PROGRAM OFF OF COMMERCIAL LENDING PROGRAMS, I THINK IT'S IMPORTANT, WE THINK IT'S IMPORTANT TO CONTINUE TO EVALUATE AND ASSESS WHAT STRINGS WILL WE ATTACH TO THOSE LOANS? WHAT OBLIGATIONS WILL REMAIN BEYOND THE REPAYMENT OF THE LOAN? AND TO THE EARLIER COMMENT, WILL THE LOAN PROFILE BE COMPETITIVE IN THE LONG RUN.

IT'S IMPORTANT TO US THAT AT THE END OF THE DAY, THE LOAN PROGRAM AND THE GRANT PROGRAM WILL BE RELEVANT. DIFFERENT COMPANIES, DIFFERENT INVESTORS, AND DIFFERENT PARTICIPANTS WILL HAVE DIFFERENT RISK PROFILES. WE HOPE THAT THE LOAN PROGRAM WILL NOT BECOME A PROGRAM FOR THE TRULY DESPERATE. WE THINK THAT WITH ACTIVE INVOLVEMENT AND ENGAGEMENT, AND WE APPRECIATE THIS OPPORTUNITY, THAT IT COULD BE A VERY IMPORTANT PIECE FOR TARGETING FUNDS TO MUCH NEEDED ORGANIZATIONS IN CALIFORNIA.

CHAIRMAN ROTH: THANK YOU, KEN. IN JUST

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A MINUTE, I'M GOING TO OPEN IT UP TO THE PANEL TO SEE IF YOU HAVE ANY CLARIFYING QUESTIONS THAT YOU WANT FROM EACH OF THE PEOPLE THAT SPOKE BEFORE WE MOVE INTO MORE SUBSTANTIVE THINGS.

I MENTIONED BEFORE THAT I HAD A CHANCE TO TALK TO SEVERAL INSTITUTIONS THAT ARE INTERESTED IN THESE LOANS FOR POSSIBLE TRANSLATIONAL PRODUCT DEVELOPMENT. AND I GUESS THE CONCERN WHICH HAS BEEN EXPRESSED BY A COUPLE OF YOU TODAY IS IF THE LOANS FOLLOW A PRODUCT, THEN THEY PROBABLY CAN SET THAT UP AS A STAND-ALONE COMPANY WITH MAYBE TWO SCIENTISTS AS THE PRINCIPALS. BUT IF THEY HAVE TO TAKE ON RESPONSIBILITY TO REPAY, EITHER THE INSTITUTION AND/OR, MORE IMPORTANTLY, THE COMPANY, THEY'RE PROBABLY NOT GOING TO APPLY FOR THE LOAN. IF THE LOAN, HOWEVER, FOLLOWED THE PRODUCT, THEY CAN MAKE THAT WORK. IN OTHER WORDS, THE PRODUCT FAILS, GOES AWAY, YOU DON'T REPAY.

SO THEY WANTED TO MAKE SURE WE UNDERSTOOD THE COMPLICATIONS FOR AN INSTITUTION TO BEAR ANY TYPE OF DIRECT RESPONSIBILITY FOR A LOAN PROGRAM WOULD BE HIGHLY UNUSUAL AND VERY DIFFICULT PROBABLY TO IMPLEMENT. SO I PASS THAT ON SIMPLY AS INFORMATIONAL.

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ONE OF THE PEOPLE I TALKED AT LENGTH WITH WAS AT THE SCRIPPS CLINIC, WHO DOES THIS, THE TECH TRANSFER PEOPLE, AND, THEN, OF COURSE, AT THE UNIVERSITY. JUST AS A WAY OF THINKING ABOUT HOW TWO OR THREE SCIENTISTS WHO HAVE AN IDEA AND ACTUALLY HAVE A PRODUCT THAT THEY WANT TO ADVANCE TO A CLINICAL TRIAL MIGHT BE ABLE TO TAKE A LOAN TO DO THAT. IT LIKELY IS GOING TO HAVE TO BE SET UP AS A PRODUCT ONLY OR IT WON'T WORK FOR THEM. THAT'S A GENERAL CONCLUSION. I'D BE INTERESTED IN OTHER THOUGHTS ON THAT. QUESTIONS FOR THE PANEL.

MR. KLEIN: YOU WANT TO CONTRAST THAT WITH OPTIONS THAT WE'RE LOOKING AT FOR COMPANIES AS A PRODUCT LOAN OR AS A PRODUCT LOAN THAT IS BACKED BY THE COMPANY FOR THE BENEFIT OF THE PEOPLE HERE?

CHAIRMAN ROTH: SO ED PENHOET AND OTHERS OF US IN THE LAST MEETING, RIGHT AT THE END, WE HAD A CONVERSATION ABOUT THIS. AND THE QUESTION WAS SHOULD WE BE FINANCING COMPANIES OR FINANCING PRODUCTS. AND THAT SORT OF SET WITH A LOT OF US AS FOOD FOR THOUGHT ABOUT HOW WE MIGHT STRUCTURE THE PROGRAM TO BE POTENTIALLY OPTIONAL. YOU CHOOSE. IF YOU WANT THE LOAN TO BE A COMPANY LOAN, MAYBE YOU DON'T GIVE US ANY UPSIDE ON THAT,



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JUST THE LOAN REPAYMENT COMMITMENT WITH AN INTEREST RATE THAT'S PROBABLY ABOVE PRIME, FOR SURE. YOU WANT IT TO FOLLOW THE PRODUCT, MAYBE CIRM GETS THE LOAN INTEREST. AND IF WE CAN FIGURE OUT HOW TO ACCEPT EQUITY, SOME WARRANT COVERAGE MORE LIKE THE VENTURE DEBT APPROACH.

IF THE PRODUCT OR ITS DERIVATIVE IS SUCCESSFUL, WE DON'T WANT TO GET INTO THE NEXT GENERATION WORKED, BUT YOURS DIDN'T AND YOU'RE OUT. IT WILL FOLLOW THAT, BUT THE PRODUCT, IF IT EVENTUALLY GETS TO A POINT, AND WE HAVEN'T DEFINED THAT YET, BUT SOME OF THE DISCUSSION WE'RE HAVING, AND WE'LL GET INTO THIS IN A MINUTE, THE LENGTH OF THE LOAN AND WHAT ARE THE TRIGGERS FOR EARLY REPAYMENT.

I'D LOVE TO GET YOUR THOUGHTS ON THAT AND SOME OF THE PANELISTS' OR THE BOARD'S THOUGHTS ON THAT SO THAT WE CAN START HASHING THAT OUT A BIT. I THINK THAT GETS AT WHAT'S SORT OF AT THE CORE OF HOW WE'RE THINKING AND MAKE THIS PROGRAM FLEXIBLE ENOUGH. DAVID, YOU SORT OF HIT ON THIS TOO AND JOYDEEP, THAT YOU'D BE PROBABLY MORE INTERESTED IN THINGS THAT FOLLOW THE PRODUCT. AND THAT'S WHAT I HEARD FROM THE INSTITUTIONS AS WELL.

MR. KLEIN: JUST A COUPLE OF COMMENTS.

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THIS IS BOB KLEIN. ONE, IN RELATIONSHIP TO DAVID'S QUESTION, FROM OUR LEGAL ADVICE TO DATE AND FROM LEGAL ADVICE AND THE CASE LAW WE LOOKED AT WHEN I WROTE THE INITIATIVE, YOU SHOULD BE ABLE TO USE THE FUNDS FROM THIS INSTITUTION TO FUND ANYTHING IN STATE, WHETHER IT'S MANUFACTURING OR A CLINICAL TRIAL. AND IF THE PRODUCTS THEN GO OUT OF STATE FOR A CLINICAL TRIAL, WELL, YOUR FUNDS WERE SPENT IN STATE. SO YOU SHOULD BE ABLE TO EFFECTIVELY ALLOCATE THESE FUNDS.

AND IN ANY OF THESE HIGHER PRICED STAGES OF THE DEVELOPMENT, THEORETICALLY A PORTION OF THESE FUNDS MIGHT COME FROM A PATIENT ORGANIZATION. THE JUVENILE DIABETES RESEARCH FOUNDATION THAT I'M ON THE BOARD OF HAS DONE 170 MILLION THIS YEAR, IT'S 200 MILLION NEXT YEAR. THE PARKINSON'S MICHAEL J. FOX FOUNDATION HAS FUNDS FOR CLINICAL TRIALS OF TRANSLATIONAL DEVELOPMENT. SO YOU POTENTIALLY COULD HAVE SOME OF THESE FUNDS COMING FROM PATIENT-BASED ORGANIZATIONS. YOU COULD HAVE SOME OF THESE FUNDS COMING FROM US. AS LONG AS OUR FUNDS ARE SPENT IN THE STATE, THE FACT THAT OTHER FUNDS ARE SPENT OUT OF THE STATE SHOULDN'T BE RELEVANT TO US. IN FACT, IT'S FURTHER LEVERAGE FOR MOVING THE MISSION

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FORWARD.

IN TERMS OF THE ISSUE OF WARRANTS, WHICH PRELIMINARY LEGAL COUNSEL RESPONSE SAYS THAT WE CAN HAVE WARRANTS AS A WAY TO FURTHER THE RETURN, WE'RE LOOKING AT SEVERAL ISSUES. ONE, IS IT POSSIBLE THAT WITHOUT WARRANTS, WE COULD HAVE A TAX-EXEMPT BORROWING WHERE WITH WARRANTS WE HAVE PARTICIPATION IN A BUSINESS ACTIVITY; THEREFORE, IT'S A TAXABLE LOAN FROM OUR PERSPECTIVE. SO WHILE IN REAL-TIME WE'RE LOOKING AT THOSE ISSUES, WE NEED TO REMEMBER THAT OUR PRIMARY MISSION IS TO GET AS MUCH RESEARCH FUNDED AS POSSIBLE. WHETHER OR NOT THERE ARE WARRANTS OR THE MAGNITUDE OF THOSE WARRANTS IS NOT THE MOTIVATING FORCE FOR THIS PROGRAM.

WE'RE TRYING TO EXPAND OUR FUNDS, AND IT MAY BE GREATER -- MORE IN OUR INTEREST AND IN TERMS OF PREDICTABILITY BETTER FROM YOUR PERSPECTIVE TO HAVE A SLIGHTLY HIGHER INTEREST RATE AND NO WARRANTS BECAUSE WE'RE INTERESTED IN THE PREDICTABILITY AND THE STAGE AT WHICH WE GET REPAYED SO THAT WE CAN ROLL THIS FORWARD INTO MORE PROGRAM FUNDS. TO THE EXTENT THAT WE CAN LEVERAGE THESE FUNDS FOR THE BENEFIT OF CALIFORNIA AND MEDICAL RESEARCH AND GET MORE PROGRAMS FUNDED,

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WE'RE DOING A MUCH GREATER SERVICE, FROM MY INDIVIDUAL PERSPECTIVE, THAN TRYING TO OPTIMIZE PROFITABILITY IN A HIGHLY SPECULATIVE AREA.

CHAIRMAN ROTH: OTHER COMMITTEE MEMBERS THAT WANT TO ASK SOME QUESTIONS, GENERAL QUESTIONS? ED, OS. OKAY. WITH THAT --

MR. EARP: QUESTION ABOUT THE WARRANT STRUCTURE THEN. YOU'LL BE THINKING ABOUT WARRANTS AS SOMETHING THAT CIRM WOULD ASK BACK FOR IN EXCHANGE FOR THE LOAN AT THE VERY BEGINNING OF THE PROGRAM, OR ARE YOU THINKING ABOUT THAT AS A MECHANISM AT SOME POINT DOWN THE ROAD AFTER THE LOAN HAD BEEN GIVEN OUT AND A WAY TO SECURE THE RETURN OF THE ORIGINAL CAPITAL?

MR. KLEIN: THERE'S A THIRD OPTION, AND I THINK THEY'RE ALL OPEN FOR DISCUSSION RIGHT NOW. I'D LIKE TO HEAR DUANE'S VIEW ON THAT. A THIRD OPTION IS, SINCE WE'RE INTERESTED IN MOVING THIS MONEY THROUGH THE SYSTEM AND GETTING LEVERAGE ON IT, POTENTIALLY WE HAVE A PROVISION THAT SAYS IF YOU'RE IN THIS PROGRAM FOR FIVE YEARS, THERE ARE NO WARRANTS. AND IF YOU GO INTO THE SIXTH YEAR, THEN THERE ARE WARRANTS. AND IF YOU GO INTO THE SEVENTH YEAR, THERE'S MORE WARRANTS. SO IT BECOMES AN INCENTIVE TO ACCELERATE REPAYMENT AND

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THE ABILITY TO MOVE MORE MONEY THROUGH THE SYSTEM.

CHAIRMAN ROTH: I THINK THERE ARE A LOT OF OPTIONS. EVEN IF THERE WERE THIS CHOICE BETWEEN A PRODUCT WHERE THE COMPANY TAKES ON THE LOAN REPAYMENT OBLIGATION VERSUS A PRODUCT WHERE THE REPAYMENT IS ONLY ON SUCCESS, THERE MAY BE WARRANTS IN BOTH CASES, BUT IN ONE CASE ONLY EXERCISABLE AT CERTAIN CONDITIONS THAT ARE REACHED. SO I THINK THERE'S A LOT OF FLEXIBILITY IN HOW WE MIGHT STRUCTURE THAT.

BUT THE MOST IMPORTANT ISSUE THAT I HOPE WE CAN HEAR MORE FROM EACH OF YOU IS YOUR THOUGHTS AS YOU'VE HAD A CHANCE TO LET THIS SEEP IN A LITTLE BIT ABOUT PRODUCT FUNDING VERSUS COMPANY FUNDING OF A PRODUCT. THEY'RE ALL GOING TO BE PRODUCTS, BUT COMPANY FUNDING AND OBLIGATION VERSUS PRODUCT FUNDING AND OBLIGATION ONLY TO THAT PRODUCT.

OKAY. WHAT I'D LIKE TO DO NOW IS GET THE PANELISTS TO HELP US GO THROUGH THIS LOAN NARRATIVE, WHICH I SHOULD INTRODUCE LYNN HARWELL, WHO'S SITTING TO MY LEFT, AND SCOTT TOCHER IS IN THE BACK OF THE ROOM, WHO HAVE HELPED STAFF THIS COMMITTEE, AND REALLY THANK THEM FOR ALL THE WORK THEY'VE DONE, INCLUDING PULLING TOGETHER THIS

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DOCUMENT, WHICH WE USED IN THE SAN FRANCISCO MEETING WITH THE VENTURE CAPITAL FINANCE COMMUNITY, AND IT SERVED VERY USEFUL TO THE DISCUSSION WE HAD.

SO I'M GOING TO SUGGEST THAT IN THE OPENING TWO AREAS WHERE THE PREAMBLE AND THE LOAN-MAKING PROCESS ALL THE WAY UP UNTIL THE PRELIMINARY QUALIFICATION ASSESSMENT IS PRETTY MUCH STANDARD BOILERPLATE BACKGROUND INFORMATION. UNLESS SOMEBODY HAS SOMETHING THERE THEY WANT TO PARTICULARLY TALK ABOUT, WE CAN.

ONE THING THAT IS REALLY KEY IS THAT SO MUCH WORK, AS I MENTIONED EARLIER, HAS BEEN DONE ON THE INTELLECTUAL PROPERTY AREA, ON THE GRANTS ADMINISTRATION POLICY, ON THE REVIEW POLICY, THAT MANY OF THE THINGS THAT WILL COME OUT IN THE RFA WILL JUST BE LIFTED FROM THAT. WE DON'T HAVE TO REDO THAT. SO THAT'S WHAT THOSE DEAL WITH.

PART B ON PAGE 2 IS WHERE WE'D LIKE TO GET --

MR. KLEIN: BEFORE YOU GO TO THAT, JUST TO BRING THIS GROUP UP TO SPEED, ONE OF THE IDEAS THAT WAS PUT FORWARD, ACTUALLY THAT I SUGGESTED AT THE PRIOR SESSION, WAS THAT IN TERMS OF THESE BUSINESS ANALYSIS PROVISIONS, THAT WE LOOK AT

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MODELS LIKE FANNIE MAE, VERY EFFECTIVE DELEGATED UNDERWRITING STRUCTURE. FOR EXAMPLE, THE SILICON BANK OR THE VENTURE BANKS WHICH ALREADY HAVE THE STRUCTURE AND ALREADY HAVE THE EXPERTISE IN PLACE COULD ON A CONTRACTUAL BASIS AS AN ADDITIONAL PRODUCT THAT WOULD, IN FACT, HELP THEM DEVELOP FUTURE DOWNSTREAM PIPELINE BECAUSE OF THE KNOWLEDGE HELP MAYBE ACCELERATE VENTURE LOANS TO FOLLOW, THEY COULD CONTRACT WITH US AND ESSENTIALLY LOOK AT THE BASIC UNDERWRITING ON A VERY QUICK TURNAROUND. WE HAVE A MINIMUM NUMBER OF STAFF POSITIONS AT THE AGENCY. WE DON'T NEED TO DUPLICATE WHAT'S ALREADY OUT THERE IN THE PRIVATE SECTOR, AND IT GIVES YOU MORE PREDICTABILITY AND CONSISTENCY IN HOW IT'S GOING TO BE LOOKED AT BECAUSE YOU UNDERSTAND THEIR PERSPECTIVE.

NOW, THEY'RE GOING TO BE GIVEN THE CRITERIA BY US TO UNDERWRITE TO. SO THOSE WILL BE OPENLY UNDERSTOOD AND PUBLIC CRITERIA. BUT HAVING AN EXPERT GROUP THAT ALREADY HAS THE OVERHEAD INVESTMENT MADE, DELEGATING IT OUT, WE SHOULD BE ABLE TO HAVE A STRUCTURE IN PLACE OVERNIGHT THAT CAN PROCESS THESE AND MOVE IT VERY PROFESSIONALLY THROUGH THE SYSTEM.

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CHAIRMAN ROTH: SO, AGAIN, WHERE BOB IS SPEAKING TO IS PART B ON PAGE 2. AND WE'VE GIVEN FOUR BROAD CRITERIA THAT WOULD BE LOOKED AT. AND, AGAIN, WE HAD SOME PRETTY HELPFUL DISCUSSION IN SAN FRANCISCO FROM THE FINANCIAL COMMUNITY ABOUT SOME OF THESE CRITERIA AND HOW REALISTIC THEY MIGHT BE DEPENDING ON THE SOPHISTICATION OF THE COMPANY. SO WHILE A GERON OR INVITROGEN OR OTHERS, THIS IS NOTHING THAT WOULD BE OF CONCERN. IT COULD BE OF CONCERN ABOUT THE NEW START-UP FROM AN INSTITUTIONAL SIDE WHERE THERE HAS TO BE SOME DUE DILIGENCE ON OUR PART.

SO I'M GOING TO OPEN THE FLOOR, AND ANY OF YOU THAT HAVE COMMENTS ON ANY ONE OF THESE BULLET POINTS 1 THROUGH 4 PLEASE SPEAK UP.

MR. LEWIS: COULD I JUST MAKE A COMMENT. I THINK IT WAS KEN THAT MENTIONED THAT THESE SORTS OF LOANS SHOULDN'T BE GRANTED TO THE TRULY DESPERATE. I UNDERSTAND THAT, BUT I'M NOT SURE WHAT A TRULY DESPERATE STEM CELL COMPANY IS, TO BE HONEST WITH YOU. THE CREDIT EVALUATION PORTION, YOU KNOW, WHAT IS THE CRITERIA YOU USE? OBVIOUSLY IF YOU'RE INVITROGEN OR GERON, YOU'VE GOT PUBLICLY TRADED STOCK. YOU'VE GOT A LOT BEHIND YOU, A LOT OF MONEY IN THE BANK. YOU'RE A LITTLE COMPANY, A



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PRIVATE COMPANY, WHAT WOULD BE THE MINIMUM CRITERIA FOR A COMPANY TO BE CONSIDERED FOR A LOAN? IS IT X MONTHS OF CASH OR WHAT?

CHAIRMAN ROTH: ALAN, IN THE DISCUSSION ABOUT WHY WE PUT THIS IN, WHICH A NUMBER OF US PARTICIPATED IN, IT'S MORE TO MAKE SURE IF WE MAKE A LOAN TO SOMEBODY, THEY DON'T HAVE TO TURN AROUND AND REPAY LOANS THAT THEY HAVE SITTING OUT THERE. WE JUST WANT TO MAKE SURE THAT WE DON'T SEE IN DUN & BRADSTREET THAT THEY'RE LATE ON \$150,000 THAT'S SIX MONTHS PAST DUE, AND THAT WOULD RAISE A FLAG THAT WE'D WANT TO DISCUSS WITH THE APPLICANT ABOUT THAT. IF THAT HELPS, THAT GIVES --

MR. LEWIS: MINIMAL.

CHAIRMAN ROTH: IT'S A MINIMAL JUST TO MAKE SURE THERE ISN'T SOME TRADE DEBT SITTING OUT THERE THAT WE DIDN'T KNOW ANYTHING ABOUT AND WEREN'T TOLD ABOUT.

MR. EARP: I HAVE A COUPLE OF QUESTIONS. ONE OF THEM AT POINT 4, IT TALKS ABOUT --

CHAIRMAN ROTH: THIS IS DAVID EARP.

MR. EARP: QUESTION ABOUT POINT 4, THE BUSINESS PLAN. YOUR SECOND SENTENCE TALKS ABOUT THE APPLICANTS DESCRIBING THE TOTAL BUDGET NECESSARY FOR THE ACHIEVEMENT OF THE SCIENTIFIC

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AIMS OF THE RESEARCH PROGRAM. KNOWING THAT WE ARE, AT LEAST INITIALLY, AT THIS POINT TALKING ABOUT A VERY BROAD SCOPE OF PROGRAMS FROM VERY EARLY DISCOVERY POTENTIALLY ALL THE WAY THROUGH TO CLINICAL TRIAL WORK, I'M JUST STRUGGLING A LITTLE BIT TO UNDERSTAND IF IT'S A VERY EARLY STAGE PROGRAM, WILL THE EVALUATION OF THE BUSINESS PROGRAM OR THE SCIENTIFIC PROGRAM AND THE BUSINESS PLAN THAT GOES WITH IT TAKE INTO ACCOUNT THE QUESTION OF WHETHER THIS FUNDING, TOGETHER WITH OTHER FUNDING THAT THE COMPANY HAS, WILL IT ENABLE THE COMPANY TO GET TO A STAGE WHERE IT'S ACHIEVED SOMETHING, A MILESTONE THAT ALLOWS IT TO OBTAIN FURTHER FINANCING, RAISE FURTHER CAPITAL IN ORDER FOR THE LOAN TO BE REPAYED?

IT'S AN INTERESTING POINT BECAUSE IF YOU JUST FUND EARLY RESEARCH, AND AT THE END OF THE RESEARCH, THE MONEY IS SPENT; AND EVEN IF THEY'D BEEN SUCCESSFUL, THEY'RE NOT AT A FURTHER FUNDING OPPORTUNITY, HOW THEN ARE THEY GOING TO BE EXPECTED TO REPAY THE LOAN?

CHAIRMAN ROTH: AGAIN, I'LL TAKE A STAB AT IT. INVITE MY COLLEAGUES TO MAKE SOME COMMENTS HERE. BUT THE THINKING THERE, AND, AGAIN, A LOT OF GOOD INPUT FROM THE FINANCIAL COMMUNITY, WAS

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THAT WE REALLY SHOULD KNOW IF IT'S A \$3-MILLION TRANSLATIONAL PROGRAM TO MOVE THIS PRODUCT FROM HERE TO HERE, AND THEY'VE ASKED CIRM TO FUND HALF OF THAT, WE'D LIKE TO SEE WHERE THE OTHER HALF IS. AND IF IT'S MILESTONE DRIVEN, THAT'S FINE, THAT THEY THINK IF THEY CAN GET TO THIS POINT, THEY CAN RAISE THE ADDITIONAL CAPITAL. BUT WE'D LIKE TO AT LEAST LOOK AT THAT ON PAPER, AND HAVE SOMEBODY, AS BOB SAYS, WHO DOES THIS EVERY DAY FOR A LIVING SAY IS THAT REASONABLE? CAN THEY GET THERE?

I DON'T THINK IT'S TO PENALIZE PEOPLE WHO DON'T HAVE ALL THE MONEY TO DO WHATEVER PROGRAM, BUT TO MAKE SURE WHATEVER THEY'RE ASKING US TO PARTICIPATE IN, THE INCREMENTAL AMOUNTS ARE THERE. IN SOME CASES, THEY MAY BE ASKING FOR THE TOTAL AMOUNT, WHICH IS FINE, BUT IN MOST CASES IT WON'T BE THE TOTAL AMOUNT, AND WE'D LIKE TO SEE HOW THEY INTEND TO GET THE TOTAL AMOUNT TO MAKE THE PROGRAM.

DR. GOSWAMI: I HAD A QUESTION ON THIS. I GUESS, YOU KNOW, YOU'RE OBVIOUSLY HOPEFULLY GOING TO GET A LOT OF REQUESTS FOR LOANS, RIGHT. WHAT'S THE CRITERIA BY WHICH YOU WILL PRIORITIZE? BECAUSE THERE IS A CERTAIN AMOUNT HERE WHICH IS DUE DILIGENCE BASED, AND SOME OF THESE WILL FALL

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OUT. BUT ARE THERE CRITERIA THAT THE COMMITTEE WILL PUBLISH OR POST AS TO THIS IS HOW BECAUSE IT WAS VERY CLEAR IN THE SCIENTIFIC SIDE. HERE'S A THING, IT'S BASED ON SCIENTIFIC MERIT.

HOW ABOUT THE LOANS? IS IT BASED ON THE ATTRACTIVENESS OF WHAT'S HAPPENS AFTER THAT? IS IT STABILITY OF THE COMPANY? WHAT ARE SOME OF THE CRITERIA?

CHAIRMAN ROTH: ANYBODY WANT TO TAKE A SHOT?

MR. KLEIN: WELL, WE'RE AT AN EXPLORATORY PHASE RIGHT NOW BECAUSE WE'RE TRYING TO PULL IN AS MUCH EXPERT OPINION TO ANSWER THOSE QUESTIONS AS POSSIBLE. I DON'T PRETEND THAT ANY INFORMATION I GIVE YOU RIGHT NOW IS INTENDED TO BE DISPOSITIVE. THEY'RE JUST IDEAS TOWARDS THAT GOAL. BUT ALL OF THESE WILL NEED TO GO THROUGH SCIENTIFIC REVIEW AND THEY'LL HAVE A SCIENTIFIC SCORE. AND THEORETICALLY, AT LEAST, THE SCIENTIFIC SCORE, OTHER THINGS BEING CONSISTENT, SHOULD BE THE COMPELLING PRIORITIZATION OF WHAT WE'RE FUNDING.

NOW, THERE IS A SECOND PART TO THAT WHERE IF WE HAVE A PORTFOLIO STRATEGY THAT SAYS WE CAN ONLY TAKE 35 PERCENT HIGH RISK, 35 PERCENT OR

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30 PERCENT MODERATE RISK, AND 35 PERCENT LOW RISK, THAT THEN WE WOULD NEED TO SEE, BASED ON A RESOURCE LIMITATION WITHIN THE SCORING CATEGORIES FOR EACH OF THOSE RISK PROFILES, WHAT THE PRIORITIES WERE AND FUND DOWN TO THAT LEVEL.

NOW, THE BOARD CAN ALWAYS MODIFY THAT PORTFOLIO BALANCE IF THEY HAVE A COMPELLING SCIENTIFIC STORY THAT REALLY COMMANDS SOME ATTENTION AND SOME PRIORITIZATION BASED ON NEW BREAKTHROUGHS OR NEW PERSPECTIVES ON THIS BEING A CRITICAL LINKAGE, PERHAPS, IN A CHAIN OF SCIENTIFIC DISCOVERY WHERE WE'RE MISSING A TOOL, FOR EXAMPLE. SO THERE CAN BE STRATEGIC CONSIDERATIONS THAT CAN MODIFY IT. BUT IF YOU START OFF WITH A BASIC PROGRAM OF SCIENTIFIC SCORES CONTROLLING, AND THEN LOOK AT A PORTFOLIO BALANCE, SCIENTIFIC CAN GO WITHIN EACH CATEGORY OF THE PORTFOLIO, AND THEN HAVING THE POTENTIAL FOR SOME STRATEGIC MODIFICATION ALONG THE WAY THAT RESPOND TO PARTICULAR OPPORTUNITIES, THOSE COULD BE SOME IDEAS THAT COULD GUIDE THIS PROCESS.

CHAIRMAN ROTH: JOYDEEP, I WOULD ANSWER THE QUESTION BY SAYING I VIEW THIS SECTION AS SOMETHING THAT'S DONE BEFORE THE SCIENTIFIC REVIEW SO THAT WE DON'T ASK THE SCIENTIFIC REVIEWERS TO

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REVIEW THINGS THAT CLEARLY RAISE RED FLAGS. BUT I WOULDN'T SEE ANY KIND OF QUANTITATION HERE. I THINK IT'S A QUALIFICATION. THEY SORT OF PASS OR DON'T PASS. THERE'S NO HUGE AMOUNT OF DEBT SITTING OUT THERE, THERE AREN'T FIVE LAWSUITS AGAINST THE PRINCIPALS. ALL THE THINGS THAT WE JUST WOULDN'T WANT TO FIND OUT THAT WERE EMBARRASSING, AND THAT HAS HAPPENED PREVIOUSLY WITH GRANTS THAT WE'VE HAD COME IN.

SO IT'S KIND OF AN, OKAY, LET'S MAKE SURE THAT THIS IS CREDIBLE. DO ENOUGH DUE DILIGENCE, AND I LIKE BOB'S IDEA ABOUT HAVING PROFESSIONALS, MAYBE SEVERAL, THAT WOULD COMPETE TO DO THESE, AND JUST, OKAY, THIS ONE MEETS YOUR CRITERIA. THERE'S NOTHING WE FOUND THAT SHOULD PREVENT IT FROM GOING FOR THE SCIENTIFIC REVIEW. THEN LET IT GO ON THE SCIENCE.

DR. GOSWAMI: THAT MAKES SENSE. MY POINT IN ASKING THAT QUESTION, AND, I THINK, BOB, YOU PARTIALLY ANSWERED THAT, BUT WE'LL ALL PUT A LOT OF EFFORT INTO SUBMITTING THE BEST PROPOSALS TO YOU, BUT I WANT TO MAKE SURE THAT, FOR EXAMPLE, FOR ENABLING TECHNOLOGIES, THERE'S A CERTAIN AMOUNT OF AT LEAST GUIDANCE THAT ALL OF IT WON'T BE SPENT ON CLINICAL TRIALS WHERE THERE WILL BE

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SOME ALLOCATED TO BRINGING TOGETHER NEXT GENERATION TECHNOLOGIES, WHICH, FRANKLY, WILL ENABLE THE SCIENCE. MAKE IT SAFER FOR PATIENTS TO HAVE THINGS THAT ARE GROWN, CELLS THAT ARE GROWN IN ANIMAL ORIGIN FREE MEDIA. ALL THESE ARE VERY IMPORTANT IN FINALLY GETTING A THERAPY THAT IS BOTH ECONOMICAL AND SAFE TO THE COMMUNITY, BUT YOU JUST NEED TO PLAN FOR IT IN ADVANCE AND MAKE SURE THAT THAT'S DEMARCATED OR SOMEHOW COMMUNICATED.

MR. KLEIN: I INTERPRETED YOUR QUESTION DEALING WITH ULTIMATE OUTCOME, AND IT WAS VERY IMPORTANT THAT DUANE ALSO ANSWERED IT IN TERMS OF THE UP-FRONT SCREENING PROCESS. BUT I GUESS YOU NOW HAVE BOTH ENDS OF THAT SPECTRUM.

BUT IN TERMS OF ULTIMATE OUTCOME, I THINK WE'LL NEED TO HAVE SOME POLICY GUIDANCE AND CRITERIA THAT GIVE PEOPLE THE ABILITY TO EVALUATE THEIR RISK IN SUBMITTING AND WHAT THEIR POTENTIAL IS FOR A SUCCESSFUL OUTCOME.

DR. PENHOET: I THINK THAT TOGETHER, YOU, BOB, AND THE SPEAKER, HAVE HIT ON AN EXTREMELY IMPORTANT ISSUE THAT TROUBLES ME, WHICH IS HOW TO HAVE A REVIEW PROCESS WHICH COMPARES WHAT'S LIKELY TO END UP BEING A HUGE NUMBER OF HIGHLY HETEROGENEOUS GRANT APPLICATIONS. PEOPLE

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ARE READY TO GO THE CLINIC WHEN THEY'RE READY TO GO IN THE CLINIC, AND THAT'S A TIME-PHASED ISSUE. SO IF WE PUT OUT AN RFA FOR CLINICAL TRIALS, AND WE ONLY DO ONE EVERY COUPLE OF YEARS OR SOMETHING, THEN BASICALLY YOU HAVE A SHOT AT SOME NARROW WINDOW; BUT IF YOU HAVE A CLINICAL TRIAL READY A YEAR LATER, YOU WOULDN'T BE ABLE TO GET FUNDING FOR THIS.

IT'S NOT CLEAR TO ME WHAT, IF WE ARE GOING TO FOLLOW THE SAME ALGORITHM THAT WE'VE FOLLOWED FOR GRANTS, THERE, YOU KNOW, YOU LUMP ALL CELL LINES TOGETHER, ALL THESE THINGS. BUT WHEN IT COMES TO PRECLINICAL DEVELOPMENT AND CLINICAL DEVELOPMENT, THERE'S SO MUCH HETEROGENEITY IN WHAT WILL BE GOING ON, I THINK IT'S GOING TO BE VERY DIFFICULT TO HAVE SOME ALL ENCOMPASSING RFA THAT ALLOWS YOU TO ADDRESS THESE.

HAVING SAID THAT, I DON'T KNOW WHETHER PROP 71, COULD THE BOARD CONSIDER A GRANT TO A SINGLE COMPANY, FOR EXAMPLE, WITHOUT HAVING A COMPARATIVE REVIEW OF THE MERITS OF THAT PROPOSAL AGAINST FOUR OTHERS? TAKE THE EXAMPLE OF GERON. THEY'RE READY TO GO IN THE CLINIC NOW. THERE MAY NOT BE ANYBODY IN THEIR POSITION WITH AN EMBRYONIC STEM CELL LINE. DOES THAT MEAN THEY WOULD HAVE TO



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WAIT UNTIL FIVE OTHER COMPANIES CATCH UP BEFORE WE CAN HAVE A MEANINGFUL ASSESSMENT OF THEIR PROGRAM AND HAVE TO COMPARE IT TO OTHERS, OR COULD WE MAKE A GRANT TO A SINGLE COMPANY BECAUSE IT'S THE ONLY ONE IN THE STATE WHO'S READY? HOW ARE WE GOING TO DEAL WITH THIS ISSUE?

CHAIRMAN ROTH: ED, I WANT TO JUST QUICKLY THROW SOMETHING OUT, AND THEN I'LL GET TO ALAN AND TED RIGHT AFTER THAT.

ONE OF THE THOUGHTS THAT I THINK I RAISED LAST TIME, AND MAYBE I DID IT IN PRIVATE, SO I'M GOING TO DO IT IN PUBLIC TODAY, IS THAT WE'D HAVE A MATRIX WHERE THE GRANT WOULD BE FOR TRANSLATIONAL PRODUCT DEVELOPMENT, AND YOU CHOOSE WHICH PARTS OF THAT MATRIX YOU WANT TO GET ON. YOU COULD BE AT THE PRECLINICAL PHASE, AND YOU'D APPLY FOR PRECLINICAL MONEY, IND MONEY, AND PHASE I MONEY, AND IT WOULD BE TIERED.

IN BILL'S CASE, HE MAY SAY I WANT PHASE II A MONEY ONLY, AND I WANT TO BE REVIEWED FOR THAT SO THAT WE DO EXACTLY AS YOU'RE SAYING, ED. WE GET A WIDE VARIETY OF GRANTS THAT COME IN ASKING FOR LOANS THAT COVER A MYRIAD AND NOT PENALIZE. I DON'T THINK WE CAN TIME IT GIVEN THE PROCESS THAT WE HAVE TO GO THROUGH SO THAT WE CAN

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BE THERE WHEN YOU NEED US. BUT WE COULD DO IT IF IT'S BROAD AND THEN IT'S MILESTONE DRIVEN, SO THE MONIES DON'T GET PAID. IF YOU NEVER GET AN IND, YOU DON'T HIT THE MILESTONE, IT'S OVER. YOU DON'T GET THE TWO MILLION THAT WAS SET ASIDE.

I THINK IF WE DID IT THAT WAY, THEN WE CAN START TO ADDRESS A WIDE VARIETY OF OPPORTUNITIES FOR COMMERCIALIZATION OF ANY KIND OF PRODUCT, WHETHER IT BE A TOOL, A DIAGNOSTIC, OR A THERAPEUTIC. AND THAT THE TRIGGERS -- THIS IS GETTING A LITTLE AHEAD OF IT, BUT THE TRIGGERS FOR REPAYMENT, ONE OF THESE ONES I PARTICULARLY LIKE IS BEGINNING OF A PIVOTAL CLINICAL TRIAL. SIX MONTHS AFTER YOU BEGIN THE PIVOTAL, THE LOAN BECOMES DUE. SO YOU HAVE TIME TO RAISE THE MONEY, GET OUT, AND PAY US.

SAME THING WITH TOOLS AND DIAGNOSTICS. WHEN YOU FILE YOUR 510K OR YOU FILE FOR FDA APPROVAL, WITHIN SIX MONTHS THE LOAN BECOMES DUE, WHICH MEANS YOU HAVE ENOUGH MONEY IF YOU FILED FOR A PRODUCT. BUT YOU COULD TIE ALL THOSE THINGS TO TRIGGERS THAT MOVE FORWARD THE PAYMENT AS A RESULT OF WHERE YOU ARE IN THE DEVELOPMENT CYCLE, BUT LEAVE IT VERY BROAD IN TERMS OF WHAT YOU APPLY FOR.

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DR. LOVE: I JUST WANTED TO RESPOND IN PART TO WHAT ED WAS RAISING, BUT ALSO WHAT YOU AND BOB SAID. THAT IS, I THINK THAT THE IDEA OF THESE THRESHOLDS, THAT IF YOU DON'T MEET THESE CRITERIA, YOUR APPLICATION DOESN'T ADVANCE MAKES A LOT OF SENSE. I THINK WHAT BOB WAS SUGGESTING AROUND A PORTFOLIO STRATEGY IN TERMS OF TRYING TO REALLY MANAGE TOWARDS SOME OBJECTIVE IN TERMS OF RETURN MAKES SENSE.

I DO THINK IT WILL BE VERY IMPORTANT THAT WE BE VERY CLEAR THAT WE ARE FUNDING HIGH QUALITY SCIENCE. AND I DON'T THINK WE CAN AT ALL LET BREED INTO THIS THE IDEA THAT THE LOAN PROGRAM IS SOMEHOW POTENTIALLY FUNDING SCIENCE THAT ISN'T AS RIGOROUS AS THE GRANT PROGRAM OR VICE VERSA. I THINK QUALITY SCIENCE HAS TO BE THE CENTRAL THING. EVEN IF WE HAVE A PORTFOLIO AND WE AREN'T ABLE TO MEET QUALITY SCIENCE THRESHOLDS, I WOULD SAY THAT SOME OF THOSE CATEGORIES MIGHT BE UNDERFUNDED, BUT I REALLY THINK WE'VE GOT TO BE VERY CLEAR ALWAYS THAT WE'RE FUNDING THE HIGHEST QUALITY SCIENCE.

MR. LEWIS: TWO THINGS. FIRST OF ALL, GOING BACK TO JOYDEEP'S COMMENT, IS THERE ANY EVALUATION OF FREEDOM TO OPERATE WHEN YOU TAKE THESE PROPOSALS? I'M SITTING NEXT TO IP COUNSEL

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HERE, THE BIGGEST IP OF ANY STEM CELL COMPANY PROBABLY IN THE WORLD. BUT WILL THAT BE EVALUATED TO ESTABLISH WHETHER OR NOT YOU'RE PUTTING MONEY INTO SOMETHING WHICH IS GOING NOWHERE OR WOULD BE PROBLEMATIC FROM OTHER PEOPLE'S PERSPECTIVE?

CHAIRMAN ROTH: AGAIN, THIS CAME UP IN THE SAN FRANCISCO MEETING, AND I THINK THE CONCLUSION WAS DON'T GO THERE. YOU WILL SPEND SO MUCH RESOURCE TRYING TO DETERMINE THAT, THAT IT'S VERY HARD AT THE EARLY STAGES WHERE THIS IP IS ALL GETTING WORKED OUT, THAT WE CAN ASK FOR YOU TO SHOW US A CERTIFICATE FROM A LAWYER THAT SAYS YOU HAVE A FREEDOM TO OPERATE. THAT'S JUST GOING TO BE EXTREMELY TROUBLING. THAT'S ONE PERSON'S OPINION.

DR. LOVE: I AGREE WITH THAT.

MR. LEWIS: FOLLOWING UP ON TED'S COMMENT, IS IT POSSIBLE THAT YOU COULD BE INVOLVED WITH A DISEASE GRANT AS WELL AS GET A LOAN? HAS THAT BEEN A POSSIBILITY, OR IS THAT SOMETHING WHICH IS EXCLUDED?

MR. KLEIN: IN THEORY, WITH THE DISEASE TEAM GRANTS THIS NEXT FALL, YOU COULD, DEPENDING ON THE POLICY THE BOARD COMES TO AND THIS COMMITTEE RECOMMENDS, BUT YOU COULD FOR THE FRONT

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END APPLY FOR A GRANT FOR A FAIRLY LIMITED AMOUNT, AND AT A CERTAIN MILESTONE WHERE YOU REALLY ARE LOOKING TO STEP UP THE DOLLARS THAT ARE INVOLVED, IT COULD TRANSITION TO A LOAN PROGRAM. FROM A USE OF FUNDS PERSPECTIVE, ONE OF THE THINGS THAT WE COULD ARRIVE AT IS, LOOK, OUR GRANTS IN THIS PARTICULAR CATEGORY MIGHT BE A MILLION, A MILLION AND A HALF, BUT WE MIGHT GO TO A 3- TO \$5-MILLION LOAN.

SO WITH THE POTENTIAL TO GET A RECOVERY OF CAPITAL, YOU COULD JUSTIFY PHILOSOPHICALLY HAVING LARGER AMOUNTS, WHICH ARE REALLY NECESSARY TO REACH YOUR OBJECTIVES DOWNSTREAM, AND ON A TRANSACTIONAL BASIS MAKE IT REASONABLE FOR THE COMPANY TO INVEST MONEY. AND, THEORETICALLY AT LEAST, YOU COULD HAVE A COUPLE OF MILESTONES, THAT ONE MILESTONE DOWNSTREAM TRIGGERS A \$3-MILLION LOAN AND THE NEXT ONE IS A \$5-MILLION LOAN FOR THE NEXT PHASE. SO IT COULD REALLY BECOME A SIGNIFICANT PROGRAM, MILESTONE DRIVEN AND PERFORMANCE DRIVEN. AND, AGAIN, POTENTIALLY WITH SOME INCENTIVES BUILT IN TO HAVE THE COMPANY REPAY US AT THE EARLIEST POSSIBLE TIME TO AVOID WARRANTS OR OTHER TYPES OF PARTICIPATION OR HIGHER INTEREST RATES FOR LONGER LOANS THAT WE MIGHT BE IN.

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BUT THESE ARE ALL IDEAS THAT THIS COMMITTEE NEEDS TO ADVISE THE BOARD ON, AND IT WOULD BE INTERESTING TO NOW HAVE YOUR RESPONSE TO WOULD IT BE ATTRACTIVE TO HAVE A COMBINATION OF LOAN AND GRANT PROGRAM. WHAT IS YOUR THINKING?

MR. LEWIS: IT DEPENDS IF YOU GET THE GRANT PROGRAM, RIGHT. THE ANSWER IS, YOU KNOW, DEPENDS ON WHETHER -- I LIKE THE IDEA. WE OBVIOUSLY, AS I MENTIONED A BIT EARLIER, WE SUBMITTED FOR PART OF THE DISEASE GRANT. AND IF THAT WERE TO HAPPEN, I'D CERTAINLY BE INTERESTED IN STEPPING UP TO A LOAN PROGRAM ON THE BASIS OF SOME SUCCESS MILESTONE. I GUESS DEFINING THAT, THAT'S IN THE EYE OF THE BEHOLDER. WE WOULD HAVE IDEAS. WHETHER YOUR COMMITTEE WOULD AGREE WITH THOSE MILESTONES IS ANOTHER ISSUE.

MY ASSUMPTION IS THAT MILESTONES HAVE TO BE PRETTY SIGNIFICANT FOR YOU TO SIT AROUND A TABLE AND NOD AND AGREE. SO YOU'RE OBVIOUSLY PUSHING THE CLINICAL PERSPECTIVE OF THINGS AND MOVEMENT TO THE CLINIC. SO I WOULD BE COMFORTABLE WITH THAT. SO I WOULD CERTAINLY LIKE TO BE IN A POSITION TO APPLY FOR BOTH, BUT WE HAVE TO GET THE FIRST ONE FIRST BEFORE WE WORRY ABOUT THE SECOND ONE.

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I ASSUME DISEASE GRANTS, ARE THEY MORE LIKELY TO HAPPEN BEFORE THESE LOANS OR NOT?

MR. KLEIN: HOPEFULLY THIS LOAN PROGRAM IS IN PLACE BEFORE THE FALL.

MR. LEWIS: THIS MIGHT HAPPEN BEFORE THE OTHER ONE.

MR. KLEIN: BEFORE THAT TIME PERIOD. IN TERMS OF GOING INTO THE DISEASE TEAM GRANTS, THE BOARD HAS TO MAKE SOME DECISIONS THERE ON POLICY. BUT THEORETICALLY THE DISEASE TEAM GRANTS, ONE OF THE SUBMISSION CRITERIA COULD BE WHAT DUANE HAS PREVIOUSLY DESCRIBED IS HOW ARE YOU GOING TO GET TO THESE MILESTONES? AND ONCE YOU DO, WHAT'S YOUR EXIT PLAN? IS THIS A DEAD END? WHAT'S IT GOING TO COST TO GO TO THE NEXT STAGE?

MR. CALDWELL: SEVERAL POINTS. NO. 1, TAKING IT AWAY NECESSARILY FROM MY COMPANY'S PERSPECTIVE, I THINK THAT AS YOU AS A COMMITTEE REVIEW THIS, YOU OUGHT TO BE CONSIDERING COMBINATIONS. FLEXIBILITY IS ABSOLUTELY KEY TO THE PROGRAM. AND TO THE EXTENT THAT YOU HAVE AS MANY DIFFERENT COMBINATIONS THAT YOU CAN MANAGE, FROM A COMPANY STANDPOINT, THAT'S THE BEST ALTERNATIVE. WHETHER YOU AS A COMPANY WANT TO PARTICIPATE IN THE GRANT AND A LOAN OR JUST A LOAN

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OR BOTH, I THINK THAT'S SOMETHING THAT SHOULD BE OUT THERE FOR VARIOUS COMPANIES.

NOW, MANY OF US MAY ONLY PARTICIPATE IN ONE OR THE OTHER, BUT I THINK FROM THE STANDPOINT OF SUCCESS OF THE PROGRAM AND MEETING YOUR OBJECTIVES, THAT'S CLEARLY SOMETHING THAT YOU SHOULD HAVE AS A BASKET, IF YOU WILL.

SECONDLY, JUST A COMMENT. IN THE FOR-PROFIT ENVIRONMENT TIMING IS A BIG DEAL. AND SO I ONLY URGE YOU, AS YOU DEVELOP THIS PROCESS AND CRITERIA, THAT WHEN THERE'S AN APPLICATION THAT COMES IN, THERE'S AN EXPECTATION OF WHAT THE TURNAROUND TIME IS BECAUSE IN THE FOR-PROFIT ENVIRONMENT, YOU CAN ONLY WAIT SO LONG, AND THEN YOU'VE GOT TO GO DIFFERENT PLACES. AND GRANTED, YOU WANT TO DO WHAT YOU NEED TO DO, BUT I THINK AS THE APPLICANT APPLIES, THEY NEED TO UNDERSTAND KIND OF WHAT THE TIMEFRAME IS BEFORE THEY'RE GOING TO GET SOMETHING AS IT RELATES TO THE LOAN PROCESS.

ONE FINAL COMMENT IS I THINK THAT THERE'S AN OPPORTUNITY HERE FOR BRIDGE LOANS. AND IT MAY BE SOMETHING TOTALLY DIFFERENT THAN WHAT WE'RE CONTEMPLATING HERE. BUT YOU HAVE, FOR EXAMPLE, LET'S SAY, A GRANT. AND I THINK, BOB, I



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BELIEVE IT WAS BOB KLEIN MENTIONED THE LAST GO-AROUND WHEREBY YOU DON'T HAVE ENOUGH MONEY TO GET TO THE END BECAUSE OF THE X FACTOR THAT OCCURS AND YOU'RE OUT OF MONEY. MAYBE A BRIDGE LOAN THAT COMES IN THAT THEN CAN BE REPAID OUT OF POSSIBLY THE NEXT GRANT BECAUSE IT'S NOT THAT BIG A DEAL AND BECAUSE THE MILESTONE IS HIT, SO THERE'S A MUCH LARGER OPPORTUNITY HERE TO BRING IN GRANT MONEY FOR PHASE II.

I'M NOT SURE THAT THAT'S NECESSARILY THE RIGHT USE OF PROCEEDS FOR THE GRANT MONEY; BUT CLEARLY IF THEY MEET THE CRITERIA THAT'S SET OUT BECAUSE OF THE BRIDGE COMPONENT, I THINK YOU OUGHT TO CONSIDER THAT BECAUSE I THINK THAT THERE WILL BE COMPANIES THAT JUST AREN'T GOING TO BE ABLE TO GET TO THE END POINT, BUT ARE CLEARLY MAKING THE RIGHT -- GETTING DOWN THE ROAD, AND WITH A LITTLE EXTRA HELP, THEY COULD GET THERE, SO I THINK YOU OUGHT TO CONSIDER THAT.

CHAIRMAN ROTH: A RELATED COMMENT MAYBE. ONE OF THE THINGS I THINK THE LOAN PROGRAM CAN DO, ESPECIALLY IF WE GET OUT IN FRONT, AND I THINK THE POINT ABOUT THAT IS REALLY IMPORTANT, BILL, THAT WE'VE GOT TO MAKE THESE SO THAT PEOPLE CAN SEE OFF INTO THE FUTURE AND NOT HAVE TO TIME IT SO THAT

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THEY NEED THE MONEY AND HAVE TO WAIT WHILE WE DO OUR REVIEW FOR SIX MONTHS AND MAKE THE FINAL VOTE. INSTEAD, YOU HAVE SOMETHING THAT REALLY IS A MULTIYEAR PROGRAM THAT IS MILESTONE DRIVEN. I THINK THAT'S IMPORTANT.

SECOND IS IT GIVES THE COMPANIES SOME LEVERAGE TO RAISE ADDITIONAL MONEY IF YOU DON'T QUITE HAVE ENOUGH TO GET TO THE NEXT MILESTONE, TO SAY THAT WE'RE HERE AND FOR ANOTHER 300,000, WE'LL TRIGGER THE NEXT MILESTONE FROM A CIRM LOAN. THAT OFTEN CAN BE HELPFUL TO RAISE MONEY.

MR. ADAMS: COUPLE OF COMMENTS. IN TALKING TO OUR FELLOW COLLABORATORS AT THE UNIVERSITIES, I DID BRING UP THE LOAN PROGRAM. AND THEIR COMMENT TO ME WAS, "WHAT? DO YOU THINK WE'RE NUTS? WE GET MONEY FOR FREE." AND SO YOU'RE HEARING SOMETHING DIFFERENT, WHICH IS GOING TO BE KIND OF INTERESTING.

I THINK THE TERMS HAVE TO BE SOMEWHAT FLEXIBLE BECAUSE WE DON'T CONTROL THE FDA. AND WHETHER OR NOT WE'RE GOING TO GET A FAST TRACK -- AND WE'VE HAD THESE CONVERSATIONS WITH THE CLINICALS THAT WE'RE GOING INTO HOPEFULLY BY THE END OF THIS YEAR, AND THAT'S GOING TO BE SOMEWHAT OF A CONCERN, I THINK, FOR THE LOAN PROGRAM.

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AND LASTLY, I KNOW OUR COMPANY WON'T HAVE ANY PROBLEM AT ALL QUALIFYING FOR THE LOAN BECAUSE JOYDEEP IS GOING TO SIGN FOR US.

CHAIRMAN ROTH: THAT'S NICE OF YOU. ANYBODY ON THE PHONE LIKE TO MAKE A COMMENT?

MR. STRATTON: THIS IS KEN STRATTON SPEAKING. JUST A COUPLE OF COMMENTS FROM EARLIER DISCUSSION. SO I AGREE COMPLETELY WITH THE COMMENT THAT TIMING IS VERY IMPORTANT IN THE COMMERCIAL ARENA. IT TROUBLED ME A BIT THAT THIS IS TRIGGERED OFF OF AN RFA RATHER THAN AN OPPORTUNITY TO COME TO THE CIRM WITH AN URGENT NEED FOR CASH. FRANKLY, LOANS ARE MORE OFTEN THAN NOT SHORT-TERM OR HOPEFULLY SHORT-TERM BRIDGING STRATEGIES. AND I CAN ENVISION A DAY WHEN A COMPANY NEEDS CASH IN A CRUNCH, AND A LOAN FROM THE CIRM WOULD BE EXACTLY WHAT IT NEEDS TO STAY IN BUSINESS LONG ENOUGH TO PUT IN PLACE ALTERNATIVE FUNDING.

SO I SHARE THE HOPE THAT THERE CAN BE WAYS EXPLORED TO TRY TO SPEED UP THE REVIEW PROCESS TO ALLOW FOR SHORT-TERM LOANS, WHATEVER THEY MAY BE.

I ALSO AGREE THAT FLEXIBILITY IN THE APPROACH BETWEEN GRANTS AND LOANS IS A VALUABLE

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THING. IT'S CERTAINLY SOMETHING CIRM CAN DO THAT A LOT OF BANKS CANNOT. FRANKLY, YOU MIGHT WANT TO CONSIDER -- I DON'T KNOW IF IT'S BEEN CONSIDERED BEFORE -- WHETHER YOU CAN HAVE A LOAN, THAT IF IT'S DEFAULTED UPON, CONVERTS INTO A GRANT AND HAS IP AND REVENUE SHARING OBLIGATIONS THAT WOULD FOLLOW FROM THAT RATHER THAN THE REPAYMENT OBLIGATION.

YOU MIGHT ALSO THINK ABOUT, INSTEAD OF INTEREST BEARING LOANS, LOANS THAT GET REPAID FROM A REVENUE STREAM. SO YOU CAN CREATE SORT OF A HYBRID OF A DEBT AND EQUITY INSTRUMENT SO THAT YOU CAN PROTECT THE BORROWER FROM SOME OF THE DOWNSIDES WHILE ALLOWING THE CIRM TO RECOUP THE UPSIDES IF THERE'S SUCCESS IN THE PROGRAM.

I CONTINUE TO GO BACK TO THE SAME QUESTION THAT'S BEEN KNOCKING AROUND IN MY HEAD. WHAT WILL THIS LOAN PROGRAM PROVIDE THAT WILL BE SUPERIOR THAT WILL BE BETTER IN SOME FASHION THAN WHAT A BANK COULD OFFER? IF THE CIRM LOANS ARE NO BETTER THAN A BANK LOAN AND AT THE SAME TIME IMPOSE OBLIGATIONS THAT A BANK WOULD NOT, THEN THE PROGRAM WOULD BE OF LIMITED UTILITY.

CHAIRMAN ROTH: KEN, COUPLE OF THINGS THERE THAT I'D LIKE TO GET OTHERS' THOUGHTS ON,

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BUT LET ME DEAL WITH THE LAST ONE FIRST.

I THINK IN MANY CASES THE TYPES OF LOANS THAT WE'RE GOING TO BE MAKING HERE WOULD NEVER BE DONE BY A COMMERCIAL BANK OR A VENTURE BANK. THEY'RE AN EARLIER STAGE HIGHER RISK AND JUST WOULD NOT QUALIFY IN MANY CASES. SOME WOULD, BUT CERTAINLY --

MR. KLEIN: HIGHLY IMPROBABLE.

CHAIRMAN ROTH: HIGHLY IMPROBABLE IS A GOOD TERM.

THE SECOND THING DEALS WITH YOUR THOUGHTS ABOUT THE FLEXIBILITY IN BEING ABLE TO RESPOND TO NEED. THAT'S A PARTICULARLY DIFFICULT ONE FOR THIS AGENCY. AND I WANT TO MAKE SURE WE GET THAT ON THE TABLE RIGHT AWAY, THAT WE HAVE TO GO THROUGH THIS PROCESS OF PEER REVIEW AND HAVING THESE EVALUATED AND CANNOT REACT REALLY TO INCOMING REQUESTS FOR EITHER GRANTS OR LOANS. WE'RE JUST NOT STRUCTURED TO DO IT THAT WAY, AND THE PROCESS WOULD NEVER GET US THROUGH THERE TO HAVE IT REALLY A LEVEL PLAYING FIELD WHERE EVERYBODY HAS THE SAME OPPORTUNITY TO PARTICIPATE. AND I WOULD IMAGINE WE'D BE INUNDATED WITH HUNDREDS OF URGENT REQUESTS FOR NEEDING TO GET A BRIDGE LOAN OR SOMETHING LIKE THAT, SO I DON'T

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THINK THAT'S VERY PRACTICAL. OTHERS MAY DISAGREE WITH ME.

DR. BLOOM: I WAS GOING TO TAKE BOB'S ANALOGY OF THE FANNIE MAE INTO THIS QUESTION. SUPPOSE WE PREQUALIFIED COMPANIES FOR POTENTIAL PRODUCTS FOR WHICH THEY ALREADY HAVE PRECLINICAL MONEY TO RUN THE RESEARCH, THAT IF THEY REACH THAT STANDARD READY TO GO INTO A TRANSLATIONAL ZONE, WE COULD THEN GIVE A RAPID DECISION?

MR. KLEIN: IT IS AN INTERESTING POINT, FLOYD. POTENTIALLY IN A DISEASE TEAM ROUND OR A CLINICAL ROUND, TRANSLATIONAL ROUND, WE COULD HAVE COMPANIES APPLY, GO THROUGH THE SCIENTIFIC REVIEW AND THE SCREENING, AND YET THEY HAVE ENOUGH MONEY AT THE MOMENT, BUT THEY'RE CONCERNED AS A BACKUP BECAUSE THEY HAVE BEEN THROUGH ENOUGH HORROR STORIES AND X FACTORS. AND SO THEY ESSENTIALLY GO THROUGH A PREQUALIFIED ROUND. WE KNOW THEIR SCIENTIFIC SCORE, AS TED SAYS, WE'RE ONLY GOING TO FUND BEST SCIENCE REGARDLESS OF WHAT OUR PORTFOLIO GUIDELINES ARE, AND THEN THEY KNOW IF THEY RUN INTO A PROBLEM, THEY'VE ALREADY BEEN PREQUALIFIED. THEY CAN COME IN. AND IF THEY NEED A MILLION-DOLLAR BRIDGE, THAT FACILITY IS SOMETHING WE CAN DO ADMINISTRATIVELY BECAUSE WE'VE CLEARED

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ALL THE HURDLES. SO THAT WOULD GIVE US THE ABILITY ON A TIME-EFFECTIVE BASIS WITH DELEGATED UNDERWRITING TO BE VERY RESPONSIVE.

SO WE COULD CREATE FOR INVESTORS AND COMPANIES THAT KIND OF STABILITY AND EXTRA LEVEL OF PREDICTABILITY THAT WOULD BE A VALUABLE BUFFER AGAINST THE UNCERTAINTIES THAT COME UP IN THESE HIGHLY EXPLORATORY TRANSLATIONAL DEVELOPMENT PHASES.

CHAIRMAN ROTH: WE ALREADY HAVE PRECEDENT FOR SOMETHING CALLED THE BOND ANTICIPATION NOTES. WE CAN DO THE ANTICIPATION LOAN PROGRAM, WHICH IS REALLY NOT A BAD IDEA, THAT YOU COULD HAVE SOMEBODY APPLY FOR MONEY FOR PHASE I WHEN THEY'RE STILL CLEARLY FILING THEIR IND. AND IF THE PHASE I IS APPROVED, THE MONEY FLOWS.

MR. KLEIN: ALSO THEY COULD GO THROUGH A DISEASE TEAM CYCLE AND GET A HIGHLY RATED SCORE AND NOT WANT THE FUNDS AT THAT POINT, BUT TWO YEARS LATER, THE FDA IS PUSHING THEM THROUGH AN EXTRA TWO YEAR OF TRIALS, NEVER HAPPENED BEFORE, I KNOW, BUT COULD HAPPEN, AND THEY NEED MORE MONEY. WE ALREADY KNOW IT'S HIGHLY RATED SCIENTIFICALLY. AND SO THEY HAVE THAT ABILITY TO COME TO US, AND WE WOULD HAVE AN ABILITY TO RESPOND. WE'D HAVE TO

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SET OUT THE CRITERIA WITH PREDICTABILITY AND POLICY GUIDANCE, BUT IT WOULD ALLOW US ON A TIME-SPECIFIC BASIS TO RESPOND TO REAL NEED.

MS. KING: JENNIFER, DO YOU HAVE SOMEONE IN SAN FRANCISCO THAT HAS A COMMENT?

MS. PRYNE: YES, MELISSA. ACTUALLY DR. TROUNSON WOULD LIKE TO MAKE SOME COMMENTS TO THIS POINT.

CHAIRMAN ROTH: THE PRESIDENT OF CIRM, DR. TROUNSON.

DR. TROUNSON: THANKS. I'VE JUST BEEN LISTENING FOR A WHILE, AND THERE ARE A COUPLE THINGS WHICH I THINK ARE REALLY IMPORTANT. AND I THINK THEY'VE BEEN BROUGHT UP BY THE SPEAKERS A NUMBER OF TIMES NOW. ONE IS ABILITY TO BE ABLE TO REACT IN REAL-TIME. I THINK WHATEVER WE CONSTRUCT HAS TO BE USEFUL TO BE AS CLOSE TO REAL-TIME AS POSSIBLE. SO I THINK WE HAVE TO THINK INNOVATIVELY ABOUT HOW WE CAN DO THAT. SO THAT I DON'T THINK A GENERALIZED RFA WOULD BE PARTICULARLY HELPFUL BECAUSE, YOU KNOW, IT COULD BRING JUST A GREAT RAFT OF APPLICATIONS, BUT MANY OF THEM MAY NOT FIT INTO THE REAL-TIME FINANCIAL NEEDS.

THE OTHER THING IS I THINK WE HAVE TO BE



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VERY CLEAR THAT, YOU KNOW, THAT IT FITS THE PROGRAM. IT WOULD BE SILLY TO SORT OF DIVERT OUR ENERGIES AND OUR ACTIVITIES AWAY FROM THE PROGRAM THAT WE'RE KIND OF COMMITTED TO. THAT'S REALLY DEALT WITH BY THE MISSION AND THE PROGRESS THAT WE'RE MAKING.

SO I THINK THESE THINGS NEED TO BE BUILT IN. SO THE DISEASE TEAMS IS A VERY GOOD EXAMPLE OF WHERE I THINK WE CAN BUILD INTO THE OPPORTUNITY FOR LOANS BASICALLY IN REAL-TIME BECAUSE WE'LL HAVE BEEN THROUGH QUITE A BIT OF THE BASIC SCIENCE INFORMATION, AND WE'LL HAVE BEEN THROUGH A PROCESS, AND THEN WE CAN ACTUALLY MOVE UP TO THE KIND OF NEEDS THERE WOULD BE IN ORDER TO ACCELERATE US THROUGH SOME OF THESE PHASES.

I'M ALSO VERY CONCERNED ABOUT TALK ABOUT VERY HIGH RISK PROJECTS. I'VE HEADED UP SEVEN COMPANIES, AND I JUST KNOW HOW RISKY SOME OF THESE THINGS ARE. I DON'T KNOW WHETHER THE EVALUATION FOR VERY EARLY STAGE IDEAS IS A GOOD ONE FOR CIRM TO BE IN. WHAT I THINK IS REALLY IMPORTANT FOR US TO BE IN IS TO LEVER THE OPPORTUNITY FOR OPPORTUNITY TO GET TO THE CLINIC BY SUPPORT THROUGH LOANS OR OTHER ACTIVITIES, THAT WE CAN ENHANCE THAT BY FUNDING THE NOT-FOR-PROFITS TO BE

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PART AND PARTNER OF THE PROCESS.

REFLECTING ON SOME OF THE IDEAS THAT ARE COMING THROUGH, BUT I'D LIKE TO SEE A FAIR BIT OF FLEXIBILITY BUILT INTO THIS TO ENABLE THIS THING TO WORK AS BEST AS POSSIBLE. I THINK FROM WHAT SOME OF THE SPEAKERS FROM THE COMPANIES ARE SAYING IS THAT IT NEEDS TO ACTUALLY FIT WITH THE NEEDS OF WHERE THE COMPANY IS AT THAT PARTICULAR TIME.

MR. KLEIN: I THINK THAT WE'RE HOPEFULLY FOCUSING THE LOANS AT THE TRANSLATIONAL SPACE AS VERSUS EARLY STAGE BASIC SCIENCE WHERE IT DOESN'T SEEM TO BE APPROPRIATE. WE'RE TRYING TO REALLY LEVERAGE THE TRANSLATIONAL DEVELOPMENT PHASE OF THE PROCESS. SO WHEN WE'RE REFERRING TO HIGH RISK, ALAN, IT'S A RELATIVE TERM, BUT HIGH RISK WITHIN THE TRANSLATIONAL SPACE, NOT IN THE BASIC SCIENCE SPACE WHERE THE DIMENSIONS OF RISK ARE ONLY LEFT TO THE IMAGINATION.

CHAIRMAN ROTH: I WOULD AGREE THAT WE'RE TALKING ABOUT A PRODUCT LOAN. WE'VE NEVER VEERED AWAY FROM THAT, THAT THERE'S A PRODUCT SOMEWHERE. COULD BE A SERVICE, WHICH IS ALSO A PRODUCT, BUT MOSTLY WE'RE TALKING ABOUT PRODUCTS, DIAGNOSTICS, THERAPEUTICS, MEDICAL DEVICES, AND TOOLS.

MR. KLEIN: IS THAT HELPFUL, ALAN?

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DR. TROUNSON: YES AND NO.

TRANSLATIONAL IDEAS THAT ARE WACKY OR EXTREMELY INTERESTING, BUT DIFFICULT TO ASSESS. AND I THINK SINCERELY WE NEED TO BE ADDING REALLY TO WHERE THE PROCESS IS GOING. SO IF IT'S A WILDLY INTERESTING IDEA, IT MIGHT WELL BE WORTH TESTING OUT EVEN IN TRANSLATION. BUT WE HAVE TO SORT OF BE CERTAIN THAT WE DON'T SPEND OUR MONEY TOO BROADLY IN VERY HIGH RISK ACTIVITIES BECAUSE WE'RE LOOKING FOR RETURN OF FINANCES TO CONTINUE TO DRIVE THE MISSION OF CIRM.

SO I DON'T THINK IT MATTERS MUCH TO ME WHERE THE IDEA IS. IT'S REALLY ABOUT WHETHER IT FITS IN AND IS LIKELY TO IMPROVE OUR CHANCE OF ACTUALLY ENDING UP IN A CLINIC WITH A VIABLE TREATMENT.

MR. KLEIN: THE OTHER POINT THAT WAS RAISED BY ONE OF THE SPEAKERS, AND, DUANE, I THINK YOU COMMENTED ON EARLIER, IS THAT WHILE THE COMPANIES MAY NOT BE IN A POSITION TO TELL US THAT THEY HAVE A CLEAR PATH IN TERMS OF IP, ONE OF THE DISCLOSURE PROVISIONS UP FRONT MAY DEAL WITH WHERE ARE THERE IP RISKS IN THIS SO THAT WE CAN EVALUATE THE POSSIBILITIES OF NAVIGATING THEM. CERTAINLY WE HAVE GREAT FAITH IN THE CREATIVITY AND

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DEDICATION OF THE COMPANIES IN NAVIGATING THESE, BUT I THINK AS A DISCLOSURE ITEM, OUR IP ATTORNEYS AND DELEGATED UNDERWRITERS SHOULD BE MADE AWARE OF THOSE RISKS UP FRONT.

IT DOES INFLUENCE THE AMOUNT OF MONEY YOU MAY NEED, FOR EXAMPLE, TO GET THROUGH THE PROCESS. WE MAY DECIDE TO RESIZE WHAT'S GOING TO CREATE A CONTINGENCY RESERVE TO DEAL WITH SOME OF THESE IP ISSUES. BUT THE IP RISK, AT LEAST HAVING A DISCLOSURE ON THE PREDICTABLE AREAS OF PROBLEMS, I THINK, IS IMPORTANT TO AT LEAST DISCUSS HERE AND CONSIDER.

CHAIRMAN ROTH: DAVID, ENLIGHTEN US.

MR. EARP: THAT'S A QUESTION I'M VERY INTERESTED IN. BUT I THINK IF YOU'RE ASKING COMPANIES TO DISCLOSE IP RISK THEY SEE IN THEIR PROGRAMS, THEY'RE NOT GOING TO DO THAT. THEY'RE NOT GOING TO WAIVE PRIVILEGE OF COUNSEL. AND CERTAINLY IF ALL OF THESE RECORDS ARE PUBLIC RECORDS, YOU'RE NOT GOING HAVE COMPANIES GOING ON FILE SAYING WE HAVE THESE ISSUES AND THESE CONCERNS.

MR. KLEIN: REMEMBER, THESE ARE NOT ON PUBLIC RECORDS AS TO THESE ISSUES. THIS IS A PROPRIETARY ISSUE. AND WE HAVE, IN FACT,

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DISCUSSED THIS VERY ISSUE, WHICH IS THAT AS TO THE IP RISK, PERHAPS IT'S A COUNSEL-TO-COUNSEL DISCLOSURE ISSUE, NOT TO THE GENERAL APPLICATION. BUT IN ADDITION, THE PROPRIETARY PROTECTION, WE'RE HIGHLY SENSITIVE TO NOT ESSENTIALLY CREATING A PROBLEM WHERE ONE MAY NOT EXIST.

MR. EARP: IS THERE ANYTHING IN ANY OF THESE PROCESSES THAT IS COMPLETELY PROTECTED FROM PUBLIC DISCLOSURE? I DON'T THINK SO.

MR. KLEIN: YES, THERE IS.

MR. EARP: I THINK THERE ARE PUBLIC ACCESS. THESE ARE PUBLIC RECORDS, RIGHT?

CHAIRMAN ROTH: I THINK THERE TECHNICALLY IS, BUT PRACTICALLY, IF YOU'RE GOING TO HAVE REVIEWERS HEAR THINGS LIKE THERE'S SOME IP RISK HERE, I THINK THAT IS VERY HARD TO KEEP ATTORNEY-CLIENT PRIVILEGE ON EVEN IF YOU HAVE EVERYBODY IN THE BEST CASE TRYING TO DO IT.

BOB, MAYBE ED AND TED HAVE SOME THOUGHTS ON THIS. BUT I THINK THE ADVICE WE GOT IN SAN FRANCISCO ON THIS WHOLE AREA IS IT'S SO HARD. YOU'LL SPEND AN AWFUL LOT OF MONEY AND TIME TRYING TO ASSESS IF THERE'S RISK HERE OR NOT IN THE INTELLECTUAL PROPERTY AREA.

MR. KLEIN: IN EVERY AREA OF BUSINESS

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YOU NEED TO MAKE SOME REASONED JUDGMENTS. BUT WE COULD HAVE THEORETICALLY AN OUTSIDE CONTRACT WITH A FIRM LIKE MORRISON & FORESTER, WHO HAS SOME SPECIALIZED EXPERTISE HERE. THEY COULD HAVE A DIRECT COUNSEL-TO-COUNSEL DISCUSSION OF THE IP RISK. THEY COULD GIVE US A GENERAL SUMMARY OF IT WITHOUT IDENTIFYING COMPANIES OR SPECIFIC TECHNOLOGIES. THEY COULD RATE THE IP RISK WITHIN RANGES, FOR EXAMPLE.

WE CAN BE CREATIVE HERE, BUT TO COMPLETELY IGNORE IP RISK, YOU MAY HAVE A PROPOSAL FROM SOME COMPANY THAT'S FAIRLY READILY ACHIEVABLE AND ANOTHER ONE THAT DEPENDS ON THE THEORY THAT YOU'RE GOING TO BREAK THROUGH 15 DIFFERENT CONFLICTING PATENT ISSUES. THERE NEEDS TO BE, FROM MY PERSONAL PERSPECTIVE, SOME GENERAL, SPECIALIZED, PROTECTED REVIEW OF WHAT'S THE RANGE OF INTELLECTUAL PROPERTY RISK WE'RE UNDERTAKING HERE.

MR. STRATTON: IF I MAY, I SHARE DAVID'S CONCERN, THAT THERE'S A VERY IMPORTANT DIFFERENCE BETWEEN HAVING THE FIRM CONDUCT ITS OWN EVALUATION OF THE IP RISK VERSUS HAVING THE APPLICANT DISCLOSE WHAT IT CONSIDERS TO BE POTENTIAL RISKS. I THINK THERE'S FAR TOO MUCH CASE LAW ON POINT THAT

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EVEN A VERY LIMITED QUALIFIED DISCLOSURE COUNSEL TO COUNSEL AND EVEN DISCLOSURE THAT MAY BE COMPELLED IN FULL OR IN PART BY A GOVERNMENT OFFICIAL IS A WAIVER OF THE PRIVILEGE AND EXPOSES THE DISCLOSANT TO POTENTIAL CLAIMS OF WILLFULNESS AND INFRINGEMENT. SO --

MR. KLEIN: THAT'S IMPORTANT.

MR. STRATTON: -- I THINK FROM A PRACTICAL SENSE THAT ASKING THE APPLICANT TO EXPOSE ITS OWN IP RISKS IS GOING TO BE VERY PROBLEMATIC FOR A COMMERCIAL ENTITY.

ON THE OTHER HAND, HAVING THE CIRM LOOK OVER AND ENGAGE COUNSEL TO DO A QUICK PATENT REVIEW OF THE LANDSCAPE, I COULDN'T BEGIN TO TELL YOU HOW MUCH THAT WOULD COST GIVEN THE NUMBER OF APPLICANTS YOU MIGHT HAVE, BUT CERTAINLY REMAINS A POSSIBILITY.

CHAIRMAN ROTH: AGAIN, I'M BIASED HERE. I THINK THAT'S AN AREA WHERE WE'RE NOT GOING TO BE ABLE TO MAKE MUCH OF THE INFORMATION WE'RE GIVEN. EVERYTHING WILL COME BACK, THAT THERE ARE 45 DISCLOSURES HERE THAT YOU ARE GOING TO HAVE TO GO THROUGH, AND YOU GET DEEP IN THIS ALMOST OVERNIGHT. I THINK WE HAVE TO ASSUME THAT THE PEOPLE, FOR THE MOST PART, THAT ARE MOVING THESE

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AHEAD HAVE BECOME COMFORTABLE WITH INTELLECTUAL PROPERTY. IT IS ALL THEY HAVE, AFTER ALL. AND THE QUESTION IS WILL THAT PLAY OUT, AND SOMETIMES IT TAKES TEN YEARS BEFORE WE KNOW WHERE THINGS REALLY END UP.

THINGS IN MY COMPANY THAT I THOUGHT WERE DEAD PATENTABLE, YOU END UP WITH THINGS COMING OUT OF THE WOODWORK FIVE, SIX, SEVEN YEARS LATER THAT YOU JUST MISSED. I THINK THAT'S THE PROBLEM YOU'RE GOING TO RUN INTO.

AND THE SECOND PART OF THAT IS SOME PEOPLE MOVE PROGRAMS WITHOUT ANY INTELLECTUAL PROPERTY. WE'VE FORGOTTEN THOSE DAYS, BUT IT USED TO BE THAT THERE WAS COMPETITION BEFORE WE GOT SO CONCERNED ABOUT IP, AND ACTUAL PRODUCT DEVELOPMENT DID OCCUR. IT OCCURS IN THE TOOLS AREA CERTAINLY AND SOME OF THE OTHERS.

MR. KLEIN: I THINK THE COMMENTS FROM KEN ARE VERY INFORMATIVE. I CAN IMMEDIATELY SEE THE ISSUES THAT HE RAISES. IN TERMS OF COMPANIES THAT HAVE SOME FUNDS INVESTED IN THIS WHERE WE'RE NOT BEING ASKED FOR A HUNDRED PERCENT OF IT, I'M MUCH MORE COMFORTABLE BECAUSE THEY'VE GOT AN ECONOMIC INTEREST HERE, THEY'VE GOT TO BELIEVE IN THE PATH FOR THE IP. I'M GOING TO SEARCH FOR AN



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ANSWER OF WHEN YOU DEAL WITH A START-UP THAT'S ASKING FOR A HUNDRED PERCENT LOAN FUNDING, THAT'S A PROBLEM FOR ME ON HOW WE DEAL WITH UNDERSTANDING THE IP RISK.

I CERTAINLY, IN TERMS OF YOUR POINT, DUANE, WHEN SOMEONE'S GOT MONEY INVESTED AND THEY'RE GOING FORWARD ON THIS AND WE'RE PROVIDING EVEN A MAJOR SUPPLEMENT TO THEIR MONEY, MAY BE SUBSTANTIALLY MORE THAN THEIR FUNDS UP, AT LEAST THEY HAVE SOME MONEY INVESTED THAT THEY'RE PUTTING TOWARDS THIS SO THEY THINK THEY CAN SOLVE THAT IP ISSUE.

CHAIRMAN ROTH: THE FREEDOM TO OPERATE QUESTION IS A COMPLICATED ONE BECAUSE YOU'RE ALLOWED TO DEVELOP A PRODUCT AND GO ALL THE WAY TO FILING WITH THE FDA BEFORE YOU CAN BE HELD AS INFRINGING THAT PATENT. SO THESE THINGS THAT WE'RE FUNDING ARE GOING TO BE MUCH EARLIER. THAT PROBLEM, IF IT EXISTS, IS GOING TO COME ONCE THEY FILE THE DRUG TO SELL OR THE DEVICE TO SELL OR THE TOOL TO SELL. UP UNTIL THEN, YOU CAN'T REALLY DO ANYTHING ABOUT IT.

MR. EARP: NOT QUITE TRUE.

MR. LEWIS: HIS TEETH ARE COMING OUT NOW.

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MR. EARP: THERE'S CERTAINLY A CLINICAL TRIAL EXEMPTION. IF YOU'RE IN THE CLINIC WITH AN FDA PRODUCT OR YOU'RE DEVELOPING INFORMATION THAT YOU REASONABLY EXPECT TO HAVE TO SUBMIT TO FDA, YOU'RE IN THE CLINICAL TRIAL EXEMPTION. PRIOR TO THAT TIME WHEN YOU'RE CONDUCTING BASIC RESEARCH, THERE IS, CONTRARY TO GENERAL MISCONCEPTION, THERE IS NO RESEARCH EXEMPTION TO PATENT INFRINGEMENT. SO THERE'S A WINDOW OF RISK. THERE'S A WINDOW OF PROTECTION WHEN YOU'RE DEVELOPING INFORMATION TO SUBMIT TO THE FDA, AND THEN COMMERCIALIZATION YOU'RE AT RISK AGAIN.

I THINK THE REAL ISSUE COMES DOWN TO LET'S JUST SAY FOR THE SAKE OF ARGUMENT CIRM DID HAVE AN OUTSIDE LAW FIRM DO A FREEDOM TO OPERATE SEARCH. YOU WOULD COME BACK AT A COST OF 50, \$100,000, YOU WOULD COME BACK WITH A 50 OR A HUNDRED PAGE TABLE OF IP. WHO'S GOING TO MAKE SENSE OF IT? THE ANSWER IS ALWAYS GOING TO BE THERE'S A RISK HERE. AND IT MAY BE REALLY SERIOUS RISK OR IT MAY BE SOME RISK. WE CAN'T PREDICT. YOU'RE NOT GOING TO GET A NICE CLEAR-CUT ANSWER. SO THEN HOW IS THAT GOING TO IMPACT THE PROCESS OF DECIDING WHETHER TO AWARD THE LOAN OR NOT?

CHAIRMAN ROTH: ANYBODY ELSE WANT TO

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WEIGH IN ON THIS ONE?

DR. GOSWAMI: DUANE, JUST TO FURTHER YOUR POINT, BOB MENTIONED IT TOO, I GUESS THIS REALLY BECOMES A PROBLEM WHEN CIRM IS FUNDING A HUNDRED PERCENT OF THE ENTITY OR THE PROJECT BECAUSE NORMALLY EVERY OTHER PROCESS OF FUNDING AROUND A FUNDING THAT YOU GO THROUGH, AND ESPECIALLY I THINK YOU GUYS HAVE SOME COMMENT, FEEDBACK FROM THE VC'S. THEY'RE GOING TO DO THEIR DUE DILIGENCE. AND IF YOU'RE FUNDING IT, SELF-FUNDING IT, YOU BETTER HAVE DONE YOUR DUE DILIGENCE THAT YOU'RE GOING TO BE ABLE TO SELL THIS. SO I THINK I'M KIND OF AGREEING WITH YOU, THAT IN MOST CASES THERE'S SOME ASSESSMENT SOMEBODY HAS DONE PRIOR TO YOU THAT HAS GONE INTO SOME DUE DILIGENCE HERE THAT THE PRODUCT IS SELLABLE.

AND, AGAIN, YOU'RE FUNDING MOSTLY THE CLINICAL TRIALS OR AT LEAST NOT BASIC RESEARCH. SO THAT PART DOESN'T COME IN. THE CLINICAL TRIAL EXEMPTION PROBABLY WILL APPLY.

I THINK YOU STILL HAVE A PROBLEM ON YOUR HANDS FOR THE LAST PART. IF IT'S A HUNDRED PERCENT THAT YOU ARE FUNDING OF THE COMPANY, IT IS QUITE A RISK. MAYBE IT GOES BACK TO YOUR PART B

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WHERE THIS IS A SERIOUS RISK, AND THAT'S WHERE YOU ASK THE COMPANY TO PROVIDE YOU ENOUGH PROOF THAT IT'S FUNDABLE.

CHAIRMAN ROTH: LET ME ASK A QUESTION BACK OF THE EXPERTS, AND THEN WE'RE GOING TO MOVE ON BECAUSE WE'RE NOT GOING TO GET THROUGH THE AGENDA. COULD WE ASK THEM TO HAVE THEIR COUNSEL PROVIDE A LETTER, WHERE THERE'S A HUNDRED PERCENT FUNDING, A LETTER THAT THEY BELIEVE THAT THIS TECHNOLOGY IS ABLE TO GO FORWARD. FREEDOM TO OPERATE IS A PRETTY STRONG WORD, BUT ISN'T THAT POSSIBLE?

MR. EARP: NOT WITHOUT WAIVING PRIVILEGE, NO.

CHAIRMAN ROTH: NO. NO. I'M TALKING ABOUT -- YOU'RE TALKING ABOUT A HUNDRED PERCENT, SO YOU'RE PROBABLY TALKING ABOUT AN INSTITUTIONAL START-UP THAT BELIEVES THEY HAVE SOME IP THAT THEY'RE TRYING TO TAKE THIS PRODUCT FORWARD WITH. SOMEBODY HAS NOW LOOKED AT THAT. THE UNIVERSITY HAS LOOKED AT IT OR SOMEONE.

MR. KLEIN: IF THEY CAN DO IT, IT'S GOING TO BE A MORE PROBABLE THAN NOT LETTER.

MR. EARP: YES. YOU'RE NEVER GOING TO GET A CLEAR-CUT LETTER. BUT ISN'T THE RISK -- I

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TALKED AT THE VERY BEGINNING HERE ABOUT THIS WITH LOAN VERSUS GRANT IS A RISK ALLOCATION. THE RISK OF A LOAN IS ON THE RECIPIENT. IT ALWAYS HAS TO BE REPAYED. SO IF THEY HAVE AN IP PROBLEM AND THEY HAVEN'T DONE THEIR OWN DILIGENCE, THE RISK IS SITTING ON THEIR HEAD. IF THEY GET BLOCKED, THEY CAN'T GET TO COMMERCIAL MILESTONE, THEY NEVERTHELESS HAVE TO REPAY CIRM.

MR. KLEIN: THAT'S NOT NECESSARILY THE MODEL THAT DUANE HAS OUTLINED. IF IT'S A PRODUCT-BASED LOAN, HE DESCRIBED TWO CHOICES. COMPANY-BASED LOAN WHICH IT ALWAYS HAS TO BE REPAYED OR A PRODUCT-BASED LOAN. IF THE PRODUCT DOESN'T SUCCEED, THEN THERE ISN'T A REPAYMENT. THE SUGGESTION WAS IF THERE'S A DEFAULT, MAYBE IT BECOMES THEN A GRANT WITH A ROYALTY OBLIGATION ON IT.

BUT THE KEY HERE -- I THINK THE KEY HERE IS WHAT JOYDEEP WAS SAYING. UNDERSTANDING KEN'S COMMENTS, I CAN CERTAINLY SEE MY WAY THROUGH WHERE WE'RE NOT DOING A HUNDRED PERCENT FUNDING TO REALLY LOOKING AT THE ECONOMIC RISK OF THE APPLICANT COVERING ON A REASONED BUSINESS BASIS TO GO FORWARD WITH THE LOAN UNLESS THERE IS SOME EXISTING LITIGATION ON IP OR SOMETHING OF THAT

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TYPE. BUT IN THE HUNDRED PERCENT CASE, MAYBE WHAT WE DO IS JUST HAVE, IF THEY WANT TO GO FORWARD ON A LOAN, KEEPING IT FLEXIBLE, HAVING A VERY SMALL LOAN AMOUNT TO A PARTICULAR MILESTONE THAT'S EARLY, AND AT THAT MILESTONE SAYING YOU ARE GOING TO HAVE TO BRING IN SOME MATCHING FUNDS TO GO FORWARD TO GET THE NEXT LOAN AMOUNT BECAUSE THEN THOSE MATCHING FUNDS OF SOME KIND, WHETHER IT'S ANGEL CAPITAL, WHATEVER IT IS, GIVES US THE ASSURANCE THAT SOMEBODY ELSE IS WILLING TO BET ON THE ABILITY TO FULFILL THIS IP PATH.

I DON'T KNOW WHAT THE ANSWER IS. I'M JUST TRYING TO LOOK FOR IT. BUT AT SOME POINT IT SEEMS, IF WE'RE NOT GOING TO GET INTO THE INTELLECTUAL PROPERTY ANALYSIS, WHICH I CAN UNDERSTAND, DUANE IS RIGHT, IT'S A DEEP, DEEP CANYON, WE NEED SOME ECONOMIC DISCIPLINE IN THE PROCESS TO ASSURE US THAT THESE ARE REASONED JUDGMENTS THAT OTHER PEOPLE ARE CONCURRING WITH.

CHAIRMAN ROTH: OKAY. I'M GOING TO THANK YOU ALL. THAT WAS GREAT CONVERSATION. THE ONLY ONE WE SORT OF LEFT UP IN THE AIR WAS, ALAN, YOUR COMMENT ABOUT THE RFA PROCESS MIGHT NOT BE APPROPRIATE. I WANT TO COME BACK TO THAT TO TRY TO SEE IF THERE'S SOME THOUGHTS ABOUT WHAT WE DO

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IF WE DON'T DO AN RFA, WHAT WE'RE ALLOWED TO DO.

MR. KLEIN: BUT HE WAS SAYING THE DISEASE TEAM RFA MIGHT BE VERY APPROPRIATE.

CHAIRMAN ROTH: BUT I THOUGHT WE'RE TALKING ABOUT FOR JUST LOAN PROGRAMS, WHETHER WE CAN REACT TO PEOPLE COMING TO US WITH NEED VERSUS PUTTING OUT SOMETHING THAT IS STANDARD, EVERYBODY GETS A CHANCE TO APPLY FOR IT. IT CAN HAVE A RANGE, FOR SURE. BUT MY QUESTION IS REALLY A TECHNICAL ONE. CAN WE DO THAT? WE'RE SET UP RIGHT NOW TO REVIEW THESE OUTSIDE THE STATE BY EXPERTS, WHICH WE'LL ADD SOME PRODUCT PEOPLE TO THAT SO THEY GIVE US A SCORE, UNBIASED SCORE, COMING BACK IN ON THE MERITS OF THE PROGRAM, THE PRODUCT IN THAT CASE. WE THEN TEND TO REACT TO THOSE AND FUND THE ONES THAT GET THE HIGHEST SCORES AND NOT THE ONES THAT ARE DEEMED NOT FUNDABLE, AND WE SPEND A LOT OF TIME IN THE MIDDLE TRYING TO FIGURE OUT IF WE WANT TO MAKE SOME TWEAKS THERE.

MR. KLEIN: ONE OF THE THINGS THAT -- ALAN, MAYBE YOU COULD COMMENT. ONE OF THE THINGS I HEARD YOU SAYING IS FITTING THIS INTO OUR STRATEGIC PLAN, RFA'S KEEPS US FOCUSED ON OUR MISSION AND THE KEY LINKS IN THAT MISSION.

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WHEREAS, HAVING A COMPLETELY DIVORCED ROUND, WE'D HAVE TO LIMIT THAT ROUND TO CERTAIN RFA'S WE'VE ALREADY ISSUED, FOR EXAMPLE, WHETHER IT'S TOOLS OR PRECLINICAL OR DISEASE TEAM, SO THAT WE CONTINUE TO GET PRODUCT THAT RELATES TO OUR STRATEGIC PLAN AND OUR MISSION. IS THAT WHAT YOU WERE SAYING, ALAN?

DR. TROUNSON: YEAH, THAT'S RIGHT. WHAT I'M SAYING IS YOU COULD BUILD -- MOST OF THE PRODUCTS THAT WE'D BE INTERESTED IN WITH THE COMMERCIALS FITS INTO ONE OR THE OTHER OF THESE RFA PROGRAMS. IT MIGHT BE TOOLS BECAUSE I CAN SEE THAT AS BEING QUITE A CRITICAL COMPONENT FOR SOME COMMERCIAL BUSINESSES TO DEVELOP TOOLS, MANUFACTURING, ETC. I THINK IN THE DISEASE TEAMS SOME MAY BE INTERESTED IN, SAY, PARKINSON'S OR DIABETES, AND PART OF THE PORTFOLIO TO BE LINKED UP THERE IN A WAY. AND THE GOOD PART ABOUT THAT IS THAT, YOU KNOW, A LOT OF THE SCIENCE WILL BE SORT OF REVIEWED, WILL BE UNDER EXAMINATION. AND I LIKE THE IDEA OF KEEPING, SAY, DISEASE TEAMS REASONABLY OPEN SO WE MAY HAVE A DISEASE II OR TOOLS II OR WHATEVER TO ENABLE THOSE OPTIONS TO REALLY WORK TOWARDS US DELIVERING THE PROGRAM.

I JUST DON'T SEE HOW JUST OPENING IT



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ONLY JUST TO LOANS PER SE WILL BE EASILY REVIEWED, FOR EXAMPLE, IN A COMPETITIVE WAY. THEY WILL PROBABLY BE VERY, VERY DIFFERENT. THEN I'M NOT SURE IT'S GOING TO EXACTLY FIT THE FINANCIAL TIMELINES OF THE COMPANIES. WHEREAS, IF IT'S AN ONGOING ROLLING PROCESS, I THINK IT WILL BENEFIT REAL-TIME THE NEEDS OF THE COMPANIES, AND IT WILL HELP US IN DELIVERING OUR MISSION.

SO I'M NOT BEING -- I'M ONLY JUST TALKING IN TERMS OF PREFERENCES RATHER THAN ANY KIND OF POLICY. I WOULD TALK TO RICH MURPHY OR ANY OF THE SCIENTISTS HERE ABOUT IT, BUT IT JUST SEEMS LIKE IT MIGHT BE A BETTER WAY TO CONSTRUCT THE LOANS RATHER THAN JUST HAVING A ONCE-A-YEAR RFA CALL FOR LOANS PER SE.

DR. LOVE: I HATE TO BE THE FLY IN THE OINTMENT, BUT I MIGHT ASK US TO THINK ABOUT STARTING OUT SIMPLE. QUITE FRANKLY, A LOT OF WHAT I'M HEARING HERE IS HIGHLY TAILORED, KIND OF CONSTANTLY AVAILABLE. AND I GUESS MY WORRY, AS I LISTEN TO SOME OF THIS, IS THAT WE OVERENGINEER THINGS, AND THEN WE END UP NOT DOING THE INITIAL THING THAT WE DO WELL. ALAN, I KNOW THAT WE ALL WANT TO ACCOMMODATE EVERYBODY, BUT THAT'S MY CONCERN, AS I LISTEN TO SOME OF THIS, IS THAT WE

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COULD END UP WITH SOMETHING THAT'S SO COMPLEX,  
THAT THE WEIGHT OF IT IS A CHALLENGE FOR US.

CHAIRMAN ROTH: I THINK WE HAVE TO  
MAINTAIN THE LEVEL PLAYING FIELD. THAT'S WHY I GO  
BACK. I THINK THERE ARE THREE BIG COMPONENTS  
HERE. THE RFA PROCESS REALLY CONTROLS WHAT IT IS  
WE'RE GOING AFTER. AND THAT PROCESS WORKS FAIRLY  
WELL. IT'S ENTIRELY UP TO CIRM AND ICOC TO SET  
THOSE AMOUNTS OF MONEY WE'RE GOING TO PUT UP, WHAT  
ARE THE CRITERIA, THAT'S CONTROLLED. YOU CAN ADD  
LOANS, YOU CAN ADD GRANTS, YOU CAN PUT ANYTHING  
YOU WANT AS PART OF THAT RFA. IN THE MIDDLE THIS  
IS A REVIEW PROCESS. AGAIN, I THINK ROCK SOLID.  
IT IS UNBIASED, DONE THE RIGHT WAY, AND WE SEEM TO  
BE MAKING GREAT PROCESS.

AND THEN THE THIRD COMPONENT ARE THE  
GOVERNING POLICIES, WHICH ARE THE INTELLECTUAL  
PROPERTY POLICY AND THE LOAN POLICY. AND KEEPING  
THOSE SIMPLE, AS YOU SAY, SO THAT EVERYBODY KNOWS  
WHAT IT IS AND WE DON'T CREATE THIS SITUATION  
WHERE WE'RE TRYING TO REACT TO SOMEBODY'S NEED,  
WHICH I THINK IS EXTREMELY DIFFICULT, BUT YET OPEN  
THE PROCESS UP ENOUGH SO THAT PEOPLE CAN  
ANTICIPATE WHERE THEY'RE GOING, NOT WHERE THEY  
ARE, AND THEY NEED SOMETHING TODAY. SO THAT'S HOW

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I WOULD APPROACH WHICH IS NOT DISSIMILAR.

DR. GOSWAMI: I'M LISTENING AND I AGREE. YOU HAVE TO HAVE THE RFA. THIS MIGHT BE MAYBE AN INTERMEDIATE SOLUTION, AND, TED, I AGREE WITH YOU, KEEP IT SIMPLE, BUT DOES IT MAKE A BIG DIFFERENCE IF IT WERE TWO RFA'S PER YEAR VERSUS ONE? AND WE RUN INTO THIS PROBLEM ALL THE TIME. THERE'S JUST ONE FUNDING CYCLE. IT'S LIKE SAYING ALL GOOD IDEAS COME IN NOVEMBER AND THAT'S IT.

CHAIRMAN ROTH: THAT'S TRUE.

DR. GOSWAMI: THAT MIGHT BE SOMETHING TO CONSIDER IS TWO RFA'S PER YEAR IF IT'S NOT TOO MUCH OF A BURDEN FOR CIRM AS A WHOLE. THAT MIGHT SOLVE THIS ISSUE OF, OKAY, THEN YOU KNOW YOU'RE ONLY WAITING FOR SIX MONTHS VERSUS A WHOLE YEAR, AND IT MIGHT DO SOME GOOD, BUT I THINK THE PANEL SHOULD COMMENT ON THAT.

MR. KLEIN: JOYDEEP, WHAT ALAN WAS SAYING IS JUST TO GET THROUGH OUR STRATEGIC PLAN RFA'S IS TREMENDOUS EFFORT WITH A SMALL STAFF. AND IF STARTING SIMPLE, AS TED SAYS, IF WE JUST INTEGRATED, WHETHER IT'S IN THE DISEASE TEAM AND TOOLS RFA, TO START WITH AND GET THIS OFF THE GROUND, THEN WE CAN GO AND LOOK AT WHAT OUR CAPACITY IS TO HAVE ANOTHER ROUND PER YEAR OR TWO

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ROUNDS PER YEAR THAT RELATE TO RFA'S WE'VE HAD, SO THEY'RE COMPLEMENTARY TO OUR STRATEGIC PLAN. BUT, FIRST, IF WE JUST TIE IT DIRECTLY TO RFA PEER REVIEWS THAT WE'RE GOING TO GO THROUGH ANYWAY AND IT'S JUST THEY'LL GO THROUGH THE SAME COMPETITIVE PEER REVIEW AS IF THEY WERE GRANT, BUT THEY MAY BE ELIGIBLE BASED ON THEIR SCORE TO HAVE A DIFFERENT LEVEL OF FUNDING OR A DIFFERENT TERM OF FUNDING SO THAT WE CAN KEEP IT SIMPLE INTERNALLY FOR OPERATIONAL PURPOSES AND NOT SLOW DOWN OUR MOMENTUM STRATEGICALLY.

CHAIRMAN ROTH: THANKS. BILL, LAST COMMENT.

MR. CALDWELL: MAYBE I'M MISUNDERSTANDING SOMETHING BECAUSE IF YOU DIDN'T PARTICIPATE IN THE LAST RFA, THAT MEANS BY DEFINITION YOU'RE EXCLUDED. AND IT WOULD SEEM TO ME THAT WHAT YOU'RE TRYING TO DO IS TO BE INCLUSIVE AS OPPOSED TO BE EXCLUSIVE. THERE'S COMPANIES HERE THAT DIDN'T PARTICIPATE FOR ONE REASON OR ANOTHER OR HAVE PROGRAMS THAT DIDN'T PARTICIPATE IN THOSE RFA'S.

MR. KLEIN: ARE YOU TALKING ABOUT THE DISEASE TEAM RFA? THAT DISEASE TEAM RFA IS JUST THE \$50,000 PLANNING GRANT. IT HAS NO

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RELATIONSHIP TO WHO APPLIES FOR THE FALL RFA.

MR. CALDWELL: BUT MY POINT IS THAT IT'S A DISEASE-ORIENTED START FROM THE START GOING FORWARD VERSUS THERE ARE PROGRAMS RIGHT NOW TODAY, FOR EXAMPLE, WHERE COMPANIES DIDN'T PARTICIPATE IN THAT THAT MAY BE GOING TO THE CLINIC THAT WOULD BE VERY VIABLE CANDIDATES TO MEET THE BASIC CRITERIA THAT YOU WANT.

MR. KLEIN: I THINK THAT'S ED PENHOET'S QUESTION, WHICH IS HAVE WE PAID ATTENTION TO THE FACT THAT THERE MAY BE SOME EMERGING OPPORTUNITIES THAT MAY BE IMMEDIATE OR MORE IMMEDIATE? ON A POLICY BASIS, DO WE NEED TO MAKE A RECOMMENDATION TO DEAL WITH THAT BECAUSE THEY ALLOW US TO GET DOWNSTREAM TO THE CLINIC RIGHT AWAY? BUT, ED, WAS THAT YOUR QUESTION? WE LOST ED, I GUESS, FOR A MOMENT. I THINK THAT WAS HIS QUESTION.

DR. LOVE: I THINK ED, IN PART, WAS RAISING THE ISSUE OF IF ONE COMPANY IS READY TO GO AND IT'S IN ISOLATION AND THERE AREN'T THREE OR FOUR COMPANIES TO DO KIND OF A COMPARISON TO, WOULD WE BE COMFORTABLE FUNDING THOSE? I WOULD AT LEAST GO ON RECORD AS SAYING I THINK IF WE CAN CONVINCED OURSELVES THAT IT'S GOOD SCIENCE BEING SAFELY CONDUCTED, WE SHOULD BECAUSE PART OF OUR

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OBJECTIVE HERE IS TO, IN FACT, MOVE THINGS FORWARD PROPERLY, BUT ALSO EXPEDITIOUSLY. SO I WOULD NOT, AT LEAST, THINK THAT WE WOULD WANT TO WAIT TO FUND SOMETHING TILL THREE MORE THINGS COME ALONG TO BE COMPARED TO IT.

CHAIRMAN ROTH: I THINK JOYDEEP MADE A GOOD COMMENT, THAT IF WE GET IN A ROTATION BI ANNUALLY SO THAT YOU DON'T HAVE TOO LONG BETWEEN ANY ADDITIONAL THING, THAT'S ONE. TWO, THIS IDEA THAT I SUGGESTED REALLY BASED ON BILL CALDWELL'S COMMENT AT THE LAST MEETING OF HAVING A MATRIX WHERE YOU CAN PICK AND CHOOSE KIND OF WHERE YOU'RE AT. AND YOU COULD ASK FOR A THREE-STEP PROCESS OR YOU COULD ASK FOR JUST ONE BECAUSE YOU HAPPEN TO BE THERE, AND THOSE COULD BE EVALUATED ON THE SCIENTIFIC MERIT ALONE, AND THEN THE FUNDING DECISION COULD BE MADE ON THAT. I THINK IT'S GOT TO BE FAIRLY BROAD. THE NARROWER WE TRY TO MAKE IT, WE'RE JUST NOT GOING TO GET ENOUGH APPLICATIONS AND WILL NEVER BE ON TIME. IT'S A CALENDAR PROBLEM.

MR. ADAMS: I KNOW IN OUR CASE, INTERNATIONAL STEM CELL, WE COULD HAVE EASILY APPLIED FOR FOUR DIFFERENT DISEASE TEAM GRANTS. THOSE ARE THE AREAS WE'RE IN. AND BEING LIMITED

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TO ONE, WE HAD TO PICK AND CHOOSE AND THEN TRY TO HAVE SOMEONE ELSE PICK UP OUR CABOOSE AT THE OTHER END TO BRING US ALONG. AND WE WERE VERY SUCCESSFUL IN DOING THAT, BY THE WAY.

BUT CIRM DID NOT GET TO SEE EVERYTHING THAT WE WOULD HAVE BROUGHT TO THE TABLE. FOR INSTANCE, WE DID NOT APPLY FOR DIABETES BECAUSE WE SO WE WERE SO WELL PARTNERED UP ON OUR CORNEA PROJECT, THAT THAT'S THE ONE WE WENT WITH. THE NEXT ROUND, I DON'T KNOW -- I KNOW THE INSTITUTIONS COULD APPLY FOR FOUR, BUT THE FOR-PROFITS WERE LIMITED TO ONE. YOU MAY WANT TO RETHINK WHAT YOU WANT TO DO THERE.

MR. KLEIN: IN THIS CONTEXT I THINK A LETTER TO THE PRESIDENT POINTING OUT THOSE SITUATIONS SO THAT THE PRESIDENT CAN EVALUATE WHETHER WE'RE LEAVING OPPORTUNITIES ON THE TABLE IS ABSOLUTELY APPROPRIATE. AND HE CAN SELECT WHAT HE WANTS TO BRING TO THE BOARD ON A POLICY DECISION BEFORE THE NEXT RFA BECAUSE CERTAINLY WHEN THE DISEASE TEAM RFA'S COME OUT IN THE FALL, IT SOUNDS LIKE THAT'S GOING TO BE A POLICY DISCUSSION WHEN WE LOOK AT THE CONCEPT APPROVAL AT THE BOARD LEVEL. AND THE EARLIER YOU GIVE THE PRESIDENT THE ABILITY TO LOOK AT THE MERITS, THE

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BETTER YOUR UNDERSTANDING AND PRESIDENT'S UNDERSTANDING WILL BE OF WHAT THE OPPORTUNITIES ARE, THE POTENTIAL LOSSES ARE, AND HE CAN GIVE YOU SOME PERSPECTIVE OF REAL CONSTRAINTS THAT WE'RE WORKING WITH.

CHAIRMAN ROTH: AGAIN, I'M GOING TO REMIND EVERYBODY THAT THE RFA PROCESS WILL DETERMINE MANY OF THE THINGS WE'VE HAD A DISCUSSION ABOUT TODAY. IT WILL NOT INTERFERE WITH THE POLICY THAT WE'RE TRYING TO DEVELOP, BUT THEY ARE INTERCONNECTED. AND THE REVIEW PROCESS SITS IN THE MIDDLE OF THAT, THAT WE AGREE WE'RE GOING TO USE THAT. AGAIN, I ENCOURAGE YOU. GREAT COMMENTS AND THINGS WE CAN USE WHEN WE START TALKING ABOUT WHAT RFA'S OUGHT TO LOOK LIKE AND WHAT PART SHOULD BE GRANTS AND LOANS AND COMBINATIONS THEREOF.

LET ME MOVE US TO ROMAN NUMERAL III ON PAGE 3, TERMS OF THE DEBT. AGAIN, IN SAN FRANCISCO WE HAD INPUT FROM THE VENTURE CAPITALISTS AND OTHERS WHO HAD VARIOUS COMMENTS ON THE TERM. AND I WOULD CHARACTERIZE THAT AS GENERALLY THEY WANTED A LONGER TERM, BUT WITH EARLY REPAYMENT TRIGGERS, THAT THAT WOULD BE A WAY TO GET SORT OF BOTH BECAUSE THEY FELT THAT THE



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FIVE- TO SEVEN-YEAR PERIOD COMES RIGHT IN THE HEART OF ADDITIONAL FOLLOW-ON FUNDING FOR YOUR MIDDLE PHASE OR LATE PHASE CLINICAL TRIALS. AND IT'S VERY HARD TO RAISE MONEY FROM THE VENTURE COMMUNITY THAT HAS TO GO TO REPAY CIRM.

SO THEY LIKE THE LONGER TERM, AND THE NUMBER TEN WAS SUGGESTED, BUT THEN AGREED THAT THERE ARE SEVERAL THINGS THAT COULD IMPACT THAT FOR EARLY REPAYMENT, LIKE ONE THAT I PARTICULARLY LIKE, PHASE OF CLINICAL DEVELOPMENT, PIVOTAL TRIALS, COULD BE AMOUNT OF TOTAL CAPITAL RAISED BY THE COMPANY WOULD BE A TRIGGER, OR IT COULD BE CHANGE OF CONTROL WHERE THERE WAS A MEANINGFUL CHANGE OF CONTROL THAT WENT INTO PLACE.

SO WE'D BE INTERESTED IN YOUR THOUGHTS ON THAT. INTEREST RATES WAS NOT LENGTHILY DISCUSSED BECAUSE THERE, FRANKLY, WASN'T A LOT OF INTEREST IN TRYING TO FIGURE OUT WHAT THAT SHOULD BE, BUT RECOGNIZED IT WAS GOING TO BE GREATER THAN PRIME.

MR. LEWIS: WOULD IT BE FIXED, I ASSUME?

CHAIRMAN ROTH: LESS THAN CREDIT CARDS.

MR. LEWIS: WOULD IT BE FIXED OR NOT VARIABLE?

MR. KLEIN: FIXED IN EUROS, MAYBE.

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CHAIRMAN ROTH: AGAIN, I THINK THE RFA COULD TALK ABOUT IT. IF THE RFA CONTAINS A LOAN COMPONENT, THE TERMS OF THE LOAN IN TERMS OF INTEREST RATES BECAUSE THEY CHANGE CONSTANTLY AS WELL. THEY'RE A MOVING TARGET.

MR. ADAMS: WERE YOU LOOKING AT A CONVENTIONAL BANK TYPE OF INTEREST? OR MY THOUGHT WOULD BE TO TAKE A LOOK AT WHAT YOUR COST OF MONEY IS, WHICH IS YOUR BOND, AND PICK RATES OVER THAT BASED ON YOUR ASSESSMENT OF RISK WITH REGARD TO THAT PARTICULAR LOAN.

MR. KLEIN: WELL, YOU CAN CERTAINLY HAVE TIERS OF RISK. AND IF IT'S A COMPANY LOAN, SO YOU HAVE A HIGHER PROBABILITY OF REPAYMENT, MUCH LOWER INTEREST RATE WOULD BE APPROPRIATE. BUT IF IT IS A PRODUCT-SPECIFIC LOAN WHERE THERE'S NO REPAYMENT IF THAT PRODUCT IS NOT SUCCESSFUL, THAT SHOULD BE A HIGHLY RISK ADJUSTED INTEREST RATE. SO AS DUANE SAID, ALLOWING THE COMPANY TO CHOOSE WHICH WAY THEY WANT TO GO SEEMS LIKE APPROPRIATE FLEXIBILITY BECAUSE COMPANIES ARE IN THE BEST POSITION TO DECIDE WHAT'S BEST FOR THEIR PARTICULAR POSITION AND CAPITALIZATION.

BUT IN TERMS OF THE INTEREST RATE, IN A MIXED PORTFOLIO YOU CAN RUN THE NUMBERS AND ASSUME

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THAT IF YOU ARE GOING TO HAVE A -- IF YOU HAVE A 30-PERCENT LOSS RATE OR 35-PERCENT LOSS RATE, YOU ARE GOING TO HAVE CAPITAL RECOVERY ON 30 PERCENT WITH NO INTEREST REALLY RECOVERED, YOU'RE GOING TO HAVE FULL INTEREST RECOVERY ON AN AVERAGE ON ANOTHER 35 PERCENT. YOU CAN FIGURE OUT AN INTEREST RATE YOU NEED TO COVER YOUR CAPITAL LOSS TO HAVE ESSENTIALLY A FULL CAPITAL RECOVERY. AND TO THE EXTENT THAT YOU'VE GOT COMPANY LOANS AND YOU DON'T NEED TO HAVE THAT OFFSET, YOU DON'T NEED TO HAVE THAT HIGHER RATE FOR CAPITAL CONSERVATION.

SO ALL THOSE ISSUES ARE OPEN, BUT THOSE ARE SOME OF THE CONSIDERATIONS. AND IN THE END, IF THE GOAL IS TO HAVE A REVOLVING LOAN FUND WHERE YOU HAVE ESSENTIALLY AT LEAST CAPITAL CONSERVATION, IT'S TO THE BENEFIT OF THE COMPANIES TO MAKE CERTAIN THAT WE'RE SOMEWHAT SUCCESSFUL ON THAT ON A PROGRAMMATIC BASIS BECAUSE YOU WILL BENEFIT DOWNSTREAM.

THE OTHER THEORY TOO IS OVER TIME, THEORETICALLY AT LEAST, THE FIELD MATURES, THE BARRIERS TO ENTRY OF CAPITAL ARE LOWER, BUT IN INFLATION ADJUSTED DOLLARS, WE HAVE LESS DOLLARS TO PUT ON THE TABLE. SO WE HAVE LESS LEVERAGE, BUT HOPEFULLY SEVEN YEARS FROM NOW THERE'S MORE

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PEOPLE OUT THERE WILLING TO PUT UP PART OF THE MONEY WHICH CAN OFFSET SOME OF THAT DISCOUNTING DEAL IN REAL DOLLARS DUE TO INFLATION IF WE JUST HAVE CAPITAL RECOVERY.

DR. GOSWAMI: QUESTION ON THE INTEREST. I THINK YOU GUYS HAVE ANSWERED THIS, BUT I JUST WANT TO MAKE SURE. THE INTEREST RATE IS DETERMINED ON A CASE BY CASE, SO ON COMPANY AND A PROJECT BASIS, CORRECT?

CHAIRMAN ROTH: THAT WAS ONE SUGGESTION. I THINK THAT'S PROBABLY, AGAIN, VERY DIFFICULT TO ASSESS. SO MY OWN VIEW, JOYDEEP, WOULD BE THERE'S A STANDARD INTEREST RATE ON A COMPANY LOAN AND AN INTEREST RATE ON A PRODUCT LOAN, AND THAT WOULD BE PART OF THE RFA THAT COMES OUT AND SAYS HERE ARE THE LOAN TERMS.

DR. GOSWAMI: JUST THE RISK PROFILE OF DIFFERENT COMPANIES SITTING AT THIS TABLE ITSELF IS SO DIFFERENT. YOU ARE GOING TO PISS SOMEBODY OFF, PARDON MY FRENCH, BUT THAT'S JUST GOING TO HAPPEN. AND I UNDERSTAND THIS IS A DIFFICULT SITUATION, BUT YOU ARE DEALING WITH A VERY DIVERSE GROUP OF INDIVIDUALS.

CHAIRMAN ROTH: BACK TO THAT, JOYDEEP, EVEN YOU, IF YOU TAKE A PRODUCT LOAN --

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DR. GOSWAMI: THAT SHOULD BE DETERMINED ONLY ON THE PRODUCT AND NOT THE COMPANY. I AGREE WITH THAT.

CHAIRMAN ROTH: IF YOU TAKE A COMPANY LOAN, THEN I THINK WE'RE TALKING ABOUT INTEREST RATES THAT WOULD BE MUCH MORE COMPETITIVE.

DR. GOSWAMI: SUITABLE FOR INVITROGEN.

CHAIRMAN ROTH: THAT'S WHAT BOB SAID. I AGREE WITH THAT.

MR. KLEIN: IN TERMS OF COMPANY LOANS EVEN, DUANE, YOU MIGHT NEED TO GET A LITTLE BIT MORE HIGHLY DIFFERENTIATED THERE. AND YOU MIGHT HAVE AN ABC COMPANY AND AN ABC RISK BECAUSE THERE ARE COMPANIES WHO WILL GO FORWARD AS A COMPANY LOAN AND THEY HAVE A CAPITALIZATION OF FIVE MILLION, AND THERE'S COMPANIES THAT HAVE A CAPITALIZATION OF A HUNDRED MILLION.

CHAIRMAN ROTH: I THINK, BACK TO THE RFA, WE'LL GET THOSE CATEGORIZATIONS. THE POLICY ITSELF JUST SAYS THERE'S GOING TO BE AN INTEREST RATE TO BE DETERMINED ON AN RFA-BY-RFA BASIS, AND WE CAN DEAL WITH IT AT THAT POINT. ANY OTHER THOUGHTS ON INTEREST RATES?

MR. EARP: COULD YOU PROVIDE A LITTLE MORE INFORMATION ABOUT THE CONCEPT OF PRODUCT

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LOAN? I'M A LITTLE CONFUSED BY THIS BECAUSE I'M HEARING SOME INTIMATIONS THAT A PRODUCT MIGHT NOT NEED TO BE REPAID IF THE PRODUCT DOES NOT, IN FACT, EMERGE THROUGH THE COMMERCIALIZATION PROCESS. IS THAT ACCURATE?

CHAIRMAN ROTH: YES. DAVID, IN ALL CASES I THINK THESE LOAN APPLICATIONS ARE GOING TO BE A PRODUCT THAT YOU ENVISION GOING FORWARD, SO WE CAN TOUCH AND FEEL IT, IT'S HEADED FOR AN IND, AND CLINICAL TRIALS. IF THE PRODUCT IS -- IF THE COMPANY CHOOSES TO MAKE THE PRODUCT THE BASIS OF THE LOAN, AND YOU GET TO PHASE I AND IT BLOWS UP AND YOU'RE DONE, YOU WALK AWAY.

MR. EARP: WHY IS THAT NOT A GRANT?

CHAIRMAN ROTH: IT, IN ESSENCE, TURNS INTO A GRANT.

MR. EARP: THEN WHY CONFUSE THE LOAN PROCESS WITH SOMETHING THAT LOOKS LIKE A GRANT?

CHAIRMAN ROTH: WE CAN DO BOTH. WE DETERMINE THAT. SO WE CAN DECIDE IN AN RFA THERE'S GOING TO BE 50 MILLION IN GRANTS, BUT A HUNDRED MILLION IN LOANS. YOU CHOOSE. YOU WANT A GRANT OR LOAN BECAUSE WE WANT TO RECYCLE THE MONEY. I WENT THROUGH THAT BEFORE, THAT OUR GOAL HERE IS TO SAY WE'RE GOING TO GET A RETURN THAT WE

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CAN USE TO HELP PEOPLE IN NEED FIVE, SEVEN, EIGHT, TEN YEARS DOWN THE ROAD. SO WE CAN DETERMINE THAT.

YOU KNOW, WE COULD GIVE IT ALL AWAY IN GRANTS, BUT WE DIDN'T SET IT UP THAT WAY. WE SET IT UP SO WE COULD DO BOTH OF THESE THINGS AND GET SOME KIND OF RETURN.

MR. EARP: BUT I'M A LITTLE CONFUSED. SOME OF THE CONDITIONS THAT COME WITH THIS MONEY, LOAN VERSUS GRANT, ARE GOING TO BE VERY DIFFERENT, AND THERE MAY BE COMPANIES WHO WOULD SAY WE'RE NOT INTERESTED IN SOME OF THE CONDITIONS THAT ATTACH TO GRANTS; THEREFORE, WE'RE GOING TO A LOAN. WE RECOGNIZE THE RISK GOES ON US. WE HAVE TO REPAY IT.

ARE YOU SUGGESTING THAT IF THEY APPLY FOR A LOAN, THERE ARE TWO DIFFERENT TYPES OF LOANS, A PRODUCT LOAN VERSUS A COMPANY LOAN, AND THE CONDITIONS WILL BE DIFFERENT ON EACH OF THOSE?

CHAIRMAN ROTH: THAT IS WHAT WE'RE SUGGESTING.

MR. EARP: BUT THEN THE PRODUCT LOAN WILL BE PERHAPS THEN A FORM OF GRANT THAT DOES NOT COME WITH SOME OF THE CONDITIONS WHICH, IF THEY HAD APPLIED FOR A GRANT, WOULD ATTACH TO IT.

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CHAIRMAN ROTH: IT'S BECAUSE IT FAILED. YOU REMEMBER I SAID THE DERIVATIVES THEREOF. SO I WANT EVERYTHING THAT GOES WITH THAT PRODUCT. IF YOU DO A SECOND GENERATION, STILL HAVE TO REPAY. YOU DO ANY KIND OF MODIFICATION WHERE YOU DIDN'T QUITE GET IT RIGHT THE FIRST TIME, STILL HAVE TO REPAY AS LONG AS THE PRODUCT GOES. BUT IF THE PRODUCT GETS JUST DROPPED, WIPED OUT, THEN THE IP, SUGGESTING THE IP RETURN TO THE CIRM AT THAT POINT. ONCE WE GET IT BACK, YOUR LOAN IS FORGIVEN. THAT'S THE CONCEPT.

MR. KLEIN: AND IP IS SUBORDINATED. WE HAVE AN INCENTIVE TO MAKING CERTAIN THAT THERE'S AS MUCH LEVERAGE IN THIS AS POSSIBLE. IT'S A BENEFIT TO US IF WE GIVE YOU A LOAN AND THEN YOU'RE ABLE TO BRING IN A ROUND OF VENTURE CAPITAL, AND THEN YOU WOULD BE ABLE TO BRING IN A VENTURE LOAN, AND WE'RE GOING TO GET SUBORDINATED TO IT. SO TO THE EXTENT WE'VE BEEN ABLE TO BE A CATALYST IN MOVING THIS DOWNSTREAM WITH A SUBORDINATED LOAN, THAT'S A BIG BENEFIT TO US BECAUSE WE PUT OUT LESS MONEY AND GOTTEN YOU FURTHER DOWNSTREAM.

IN FACT, BECAUSE OF OUR SCIENTIFIC REVIEW, THERE COULD BE A VALIDATION EFFECT ON YOUR



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ABILITY TO GET OTHER MONEY, WHICH LET'S NOT OVERLOOK. THAT VALIDATION EFFECT COULD BE VERY, VERY VALUABLE TO YOU, HIGHLY VALUABLE, AND HIGHLY VALUABLE TO THE MARKET'S PERSPECTIVE ON WHAT YOU ARE DOING.

SO THE ISSUE HERE IS THAT WE'RE GOING TO TRY AND MAKE LOANS IN THE TRANSLATIONAL SPACE, AND WE WOULDN'T PROVIDE A LOAN WHERE IT REALLY SHOULD BE THEORETICALLY A HIGH RISK GRANT IN THE GRANT CATEGORY WITH BASIC SCIENCE OR HUGE PROBLEMS IN APPLIED SCIENCE THAT HAVEN'T BEEN SOLVED AND THINGS OF THAT KIND.

CHAIRMAN ROTH: SO THE OTHER BIAS HERE, DAVID, IS VERY FEW COMPANIES ACTUALLY GO AWAY. THEY'RE MERGED OR PUT TOGETHER WITH SOMETHING ELSE, IN WHICH CASE THE LOAN WOULD FOLLOW WHATEVER HAPPENS TO THAT. AND ON THE OTHER CASE, VERY FEW PRODUCTS THAT GET TO THE PHASE WE ARE ACTUALLY DIE COMPLETELY. THEY MAY COME UP IN NEW GENERATIONS. OCCASIONALLY THEY DO. THERE'S NOTHING THERE. THEY GET DROPPED. IN THOSE CASES WE WOULD WALK AWAY WITHOUT HAVING THE COMPANY HAVE TO REPAY THE LOAN BECAUSE IT WAS A PRODUCT LOAN. BUT THE TERMS THAT WE'RE GOING TO ASK FOR ON A PRODUCT LOAN ARE GOING TO BE SUBSTANTIALLY HIGHER THAN THEY ARE ON

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A COMPANY LOAN. SO THAT'S THE THOUGHT.

NONE OF THIS IS FINALIZED, BUT THAT'S WHAT WE'RE THINKING, AND WE'D LIKE CONTINUED INPUT ON THAT. BUT IT JUST APPEARED TO ME FROM THE MANY DISCUSSIONS WE'VE HAD THAT IT'S PROBLEMATIC TO FORCE EVERYBODY INTO A COMPANY LOAN, WHICH IS WHERE WE STARTED OUT, AND IT'S PROBLEMATIC TO PUT THEM ALL IN THE PRODUCT LOAN CATEGORY AS WELL. SO THERE SHOULD BE THAT KIND OF FLEXIBILITY SO YOU CHOOSE WHICH YOU WANT TO BE RESPONSIBLE FOR.

MR. KLEIN: DUANE, I'D LIKE TO GET SOME PERSPECTIVE TOO OF WHETHER THE PANEL THINKS THERE'S ANY VALIDATION EFFECT. I KNOW IN THE RESEARCH NONPROFIT INSTITUTIONS, THEY'RE MARKETING WITH DONORS BECAUSE OF CIRM LOANS. IT'S A VALIDATION OF THEIR LEADERSHIP IN A SPECIFIC SUBAREA OR NICHE, AND IT'S HELPING THEM RAISE SUBSTANTIAL AMOUNTS OF MONEY. I THINK WE MAY BE SURPRISED AT THE AMOUNT OF MONEY, AT LEAST BASED ON WHAT I'M AWARE OF.

FOR COMPANIES, IS THERE A VALIDATION, POSSIBILITY OF A VALIDATION EFFECT WHEN CIRM HAS APPROVED A PRODUCT AREA LOAN FOR YOU THAT ANGEL CAPITAL OR OTHER POTENTIAL EARLY PHASE INVESTORS ARE LOOKING AT AS COMPARED TO A PROPOSAL THAT HAS

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NO CIRM SCIENTIFIC REVIEW AS VERSUS A PROPOSAL THAT DOES HAVE A CIRM SCIENTIFIC REVIEW, AND THEY'RE IN THE SAME AREA WITH THE SAME AMOUNT OF INFORMATION THAT CAN BE PROVIDED? IS THERE GOING TO BE ANY EDGE THAT THOSE COMPANIES PICK UP OUT OF THE VALIDATION FROM OUR SCIENTIFIC REVIEW?

MR. ADAMS: I WOULD SAY IT CERTAINLY CAN'T HELP BUT BE REFLECTED IN OUR STOCK FOR US THAT ARE PUBLIC.

MR. LEWIS: IT CAN'T HURT. AND I THINK IT WOULD BE BENEFICIAL. THE CLASSIC SAB, BOARD OF DIRECTORS, CIRM APPROVAL OR JDRF FUNDING, THAT'S POSITIVE. IT'S NOT NEGATIVE. HOW POSITIVE IT WILL BE TO A PRIVATE COMPANY, I DON'T KNOW, BUT I'M SURE IT'S GOING TO HAVE SOME BENEFIT TO US.

CHAIRMAN ROTH: I'M GOING TO TRY BRING US BACK TO THE SUBJECT MATTER. SO ANYBODY WANT TO TALK ABOUT INTEREST RATES? I THINK YOU GET A FEEL. IT'S GOT TO BE FLEXIBLE. IT'S GOT TO ADJUST FOR RISK.

MR. CALDWELL: ONE OTHER COMMENT. I WOULD JUST SUGGEST THAT COMPANIES MIGHT BE MORE THAN HAPPY TO OFFSET COMPUTED INTEREST WITH WARRANTS.

CHAIRMAN ROTH: SO THE WARRANT SUBJECT

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IS CERTAINLY ON THE TABLE WITH REGARD TO THE PRODUCT LOANS PARTICULARLY.

MR. STRATTON: MAY I ASK A QUESTION FOR CLARIFICATION? IT SPEAKS BOTH TO THE RESPONSIVENESS ISSUE WE TALK ABOUT EARLIER AS WELL AS THE TERM. WOULD THE CIRM BE IN A POSITION TO AWARD A LOAN AT THE BEGINNING OF A CLINICAL STRATEGY PHASE I DAY ONE THAT WOULD STAND READY, SOMETHING LIKE A LINE OF CREDIT THAT COULD BE CALLED UPON AND DRAWN DOWN ANY TIME OVER THE FOLLOWING FIVE YEARS, SIX, SEVEN YEARS OF CLINICAL STUDY? YOU WOULD HAVE IDENTIFIED AND REVIEWED, THE SPONSOR OF THE STUDY WOULD HAVE IDENTIFIED AND REVIEWED THE THERAPEUTIC.

AND WHAT I'M HOPING OR THINKING IS THE COMPANIES THAT APPROACH THE CIRM FOR LOANS ARE ALMOST CERTAINLY LOOKING FOR OTHER SOURCES OF FINANCING, EITHER EQUITY RAISES OR PARTNERING OPPORTUNITIES. BUT DEPENDING ON WHAT HAPPENS IN THE CLINICAL TRIAL, THERE COULD BE A SURPRISE RESULT OR AN AMBIGUOUS RESULT THAT CAN LEAVE THE COMPANY AND ALL ITS EMPLOYEES AND ALL ITS INFRASTRUCTURE HIGH AND DRY, AND THAT'S EXACTLY THE TIME WHEN YOU WOULD WANT TO COME TO THE CIRM FOR \$3 MILLION TO BRIDGE A SMALLER STUDY,

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SOMETHING THAT CAN SHOW THAT THERE MAY BE SOME POTENTIAL UTILITY FOR THE THERAPEUTIC LONG ENOUGH TO REESTABLISH SOME TRACTION AND GO OUT AND SEEK ADDITIONAL FUNDS SOMEWHERE ELSE.

I GUESS THE QUESTION IS WHETHER THERE IS ENOUGH FLEXIBILITY IN THE REQUEST FOR APPLICATIONS AND THE FUNDING MECHANISM THAT PERMIT A LOAN THAT CAN SIT OPEN AND READY FOR A PERIOD OF YEARS DURING THE CLINICAL TRIAL.

CHAIRMAN ROTH: THOUGHTS, ANYBODY? BOB.

MR. KLEIN: WELL, AS YOU KNOW, THERE ARE MANY FIELDS THAT THIS IS POSSIBLE IN. AND THEORETICALLY YOU CAN'T JUST HAVE AN UNLIMITED CAPACITY OF LOANS THAT SIT OPEN BECAUSE IT'S GOING TO IMPACT YOUR CASH FLOW. THERE HAS TO BE A PRICE FOR THAT, BUT YOU MIGHT HAVE A STANDBY FEE, FOR EXAMPLE, SO THAT PEOPLE AREN'T UNNECESSARILY TYING UP UNUSED CAPITAL, BUT IT'S PROVIDING A VERY VALUABLE BACKSTOP. AND BASED UPON A STANDBY FEE BEING THERE, AND GIVEN THE ACCRUED CAPACITY WE HAVE BECAUSE THE LITIGATION, BECAUSE OUR CAPACITY IN ANY ONE YEAR HAS ACCRUED AND IS UNUSED, WE DO HAVE POTENTIAL CAPACITY THAT IS UNCOMMITTED. AND RFA SPEED IS NOT NECESSARILY HIGH ENOUGH TO BURN OFF THAT CAPACITY SHORT TERM.

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SO IN THE NEXT FIVE YEARS, WE COULD POTENTIALLY ACCOMMODATE THAT, BUT PROBABLY I WOULD JUST SUGGEST HAVING A STANDBY FEE TO IT SO IT'S USED ONLY WHEN IT'S VALUABLE TO SOMEONE AND NOT JUST TYING UP CAPACITY THAT WOULD OTHERWISE BE IN SOME IMPORTANT PROGRAM.

CHAIRMAN ROTH: OTHER THOUGHTS?

DR. PENHOET: I THINK THAT KEN'S SUGGESTION IS AIMED AT THE POINT I WAS TRYING TO MAKE EARLIER. IF YOU ARE GOING TO HAVE AN RFA TO SUPPORT CLINICAL TRIALS, IT'S UNLIKELY YOU'LL HAVE A WHOLE BUNCH OF THEM AT THE SAME STAGE. YOU WILL HAVE THEM AT A NUMBER OF STAGES. SO YOU COULD COMPARE A NUMBER OF APPLICATIONS, SOME OF WHICH AREN'T READY TO GO, BUT AT LEAST IT WOULD ALLOW YOU TO HAVE ENOUGH APPLICANTS IN A SINGLE POOL, THAT IF OF HAD TO DO A COMPARATIVE STUDY AND YOU COULDN'T JUST MAKE THESE DECISIONS ON A CASE-BY-CASE BASIS, THAT IF PEOPLE KNEW OR COULD PROJECT THAT THEY WERE GOING TO START A CLINICAL TRIAL A YEAR FROM NOW, TWO YEARS FROM NOW, BOB'S CONCERNS NOTWITHSTANDING, THAT WOULD BE A WAY TO HAVE A MORE ROBUST COMPETITION AND DEAL WITH THE REALITY THAT THESE THINGS ARE NOT ALL GOING TO BE READY AT THE SAME TIME.

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MR. KLEIN: THE OTHER THING TOO IS THAT MAYBE, DUANE, BEFORE THE NEXT MEETING, I'D LIKE COUNSEL, BOARD COUNSEL, TO LOOK AT THE ISSUE OF PROPRIETARY INFORMATION BECAUSE THE TIMING OF THESE TRIALS AND THESE OTHER ISSUES IS VERY IMPORTANT. IT'S HIGHLY PROPRIETARY, HIGHLY MARKET SENSITIVE. AND IF ANYBODY IS RELEASING INFORMATION, IT SHOULD BE THE COMPANY, I THINK, NOT US AS RELATES TO THOSE ISSUES. SO MAYBE COUNSEL CAN WEIGH IN AT THE NEXT MEETING ON WHAT WE CAN PROPERLY PROTECT AS PROPRIETARY INFORMATION. I THINK WE CAN -- IT'S SO IMPORTANT TO OUR MISSION TO PROTECT THIS INFORMATION, THAT I WOULD HOPE THAT THE TIMING OF TRIALS AND PROJECTS OF THAT KIND ARE VERY SENSITIVELY PROTECTED, WHICH I THINK IS THE CASE.

MR. LEWIS: IT'S NOT THE INTENT YOU'RE ONLY GOING TO BACK ONE CLINICAL TRIAL FOR PARKINSON'S, DIABETES --

MR. KLEIN: NO.

MR. LEWIS: IMPRESSION I'M GETTING FROM THAT CONVERSATION WAS YOU WANT TO SEE A COMPARISON AND SELECT ONE, BUT THAT'S NOT THE CASE.

CHAIRMAN ROTH: ED, WHILE I'M SYMPATHETIC ALSO TO THE NEED FOR THESE STANDBY

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LOANS, I PUT THE OTHER SIDE OF MY HAT ON AND SAY HOW DO YOU ADMINISTER THAT. THERE'S SOMETHING THAT HAPPENS, HOW DOES THAT GET REEVALUATED IN A FAIR AND REASONABLE WAY? AND I THINK WE'D HAVE TO BE VERY CAREFUL HOW WE DO THAT. AND ESPECIALLY, KEN, THE TIMEFRAME YOU ASKED FOR, FIVE, SIX, SEVEN YEARS, I THINK THAT WOULD BE VERY DIFFICULT FOR US TO SAY THAT ANY TIME IN THIS SIX- OR SEVEN-YEAR PERIOD YOU CAN CALL IN THIS LOAN.

MR. KLEIN: I THINK I PRESUPPOSE IN MY ANSWER THEY HAVE TO MAKE THEIR MILESTONES IN THAT PERIOD. BUT IF THEY'VE BEEN THROUGH MILESTONE THREE AND THE PROBLEM IS THEY HAVE SOME X FACTOR DEVELOP AND THEIR FUNDING THEY THOUGHT IN MILESTONE THREE WOULD BE SUFFICIENT TURNS OUT TO BE INSUFFICIENT, RATHER THAN -- THE OTHER OPTION IS TO TIE UP MORE OF OUR MONEY UP FRONT, WHICH WE DON'T WANT THEM TO DO. SO IF THERE'S AN ABILITY TO HAVE A RESERVE COMMITMENT AS WELL AS AN ONLINE COMMITMENT, THAT ALLOWS THEM TO DRAW DOWN LESS OF OUR MONEY, PRESERVING OUR MONEY FOR MORE PROGRAMS. SO I THINK IT'S OF SYNERGISTIC VALUE TO US TO CONSERVE MONEY WHEN WE DON'T NEED TO PUT IT OUT, OF VALUE TO THEM TO HAVE IT AVAILABLE IF THE X FACTOR OCCURS.



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CHAIRMAN ROTH: I THINK THE TIMEFRAMES ON THAT WOULD PROBABLY HAVE TO BE FAIRLY NARROW BECAUSE OF THE ISSUES OF FAIRNESS.

MR. CALDWELL: LET ME JUST GIVE YOU ONE OTHER OBSERVATION TO BOB'S ISSUE. NOT ONLY COULD YOU JUST HAVE THE RENEWAL, BUT YOU COULD HAVE -- IN LINES OF CREDIT AND WHATNOT, THEY ARE RENEWED EVERY YEAR. THEY'RE RENEWED WITH A RENEWAL FEE FIRST AND THEN APPLICATION, TALKING ABOUT WHAT HAPPENED IN THE LAST YEAR, WHERE YOU'RE GOING IN THE NEXT YEAR, AND IT DOESN'T ANYWHERE NEAR SUGGEST THE ORIGINAL APPLICATION, BUT IT'S BASICALLY A VARIANCE APPLICATION THAT YOU THEN CAN MAKE SOME ASSESSMENTS ON. SO I DON'T KNOW THAT YOU HAVE TO HAVE A WHOLE NEW APPLICATION, BUT YOU COULD STILL THEN, IF EVERYTHING SEEMS TO BE COPACETIC BASED UPON THE REPRESENTATIONS OF THE COMPANY AND THE RENEWAL FEE THAT'S BEEN PUT FORTH, YOU RENEW IT THEN FOR THE NEXT PERIOD OF TIME.

CHAIRMAN ROTH: AGAIN, I THANK YOU FOR THOSE COMMENTS. KEEP IN MIND WE'RE STAFF LIMITED, RULE BASED, AND DEALING WITH EXCEPTIONS IS GOING TO BE EXTREMELY DIFFICULT FOR US TO FIGURE OUT HOW TO DO THAT IN A FAIR AND OPEN WAY. WE'RE A STATE AGENCY. AS MUCH AS I'D LIKE TO ACCOMMODATE, AND I

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THINK THAT'S WHAT TED WAS SAYING EARLIER, IN THE END THIS HAS GOT TO BE PRETTY TRANSPARENT AND STRAIGHTFORWARD FOR US TO ADMINISTER IT PROPERLY. WE'D LOVE TO HAVE THE FLEXIBILITY, BUT WE TRIED TO BUILD THAT IN WITH THE RFA PROCESS AS OPPOSED TO TRYING TO COME UP WITH, I THINK, MANY IDEAS THAT ARE GOOD IDEAS IF WE WERE MAKING THESE DECISIONS AND IT WAS OUR BANK THAT WE WERE PULLING THE FUNDS FROM.

MR. KLEIN: DUANE, I KNOW THAT YOU LOVE INNOVATION AND ARE A HIGHLY ADAPTIVE INDIVIDUAL.

CHAIRMAN ROTH: I AM VERY MUCH.

MR. KLEIN: IT'S A REALITY CONSTRAINT YOU'RE DEALING WITH HERE. BUT I WOULD HOPE THAT, AS THEY DO IN THE FANNIE MAE PROGRAM, THEY HAVE WAIVERS THAT CAN BE APPLIED FOR, AND THE DELEGATED UNDERWRITERS LOOK AT THOSE WAIVERS AND PROCESS THEM, SO IT'S NOT A BURDEN ON THEIR CORE STAFF, AND SEND THEM IN WITH A RECOMMENDATION SO YOU CAN HAVE MANAGEMENT -- ONE OR TWO MANAGEMENT OFFICERS WHO CONSISTENTLY ARE LOOKING AT THESE FOR CONSISTENCY WITH THE MILESTONES OR SOME REASONABLE VARIATIONS THAT ARE SUBJECTIVELY CONSTRAINED. SO HOPEFULLY WE CAN GET TO SOME MIDPOINT IN WHAT BILL IS SUGGESTING, REALIZING THAT IT IS A VALUE TO

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KEEP THE EXPECTATIONS LOW AT THIS POINT ON THAT DECISION.

CHAIRMAN ROTH: I THINK AS WE GAIN EXPERIENCE, THAT WE CAN START TO ADD SOME BELLS AND WHISTLES, BUT I THINK WHAT WE'D LIKE TO GET KNOCKED OUT RIGHT NOW IS LET'S GET SOME EXPERIENCE, LIKE WE DID IN THE IP AREA. I TELL YOU WE GOT BETTER AND BETTER AS WE WENT THROUGH THE PROCESS OF REVIEWING HOW WE CAN MAKE IT FLEXIBLE, AND I THINK WE ENDED UP WITH A FAIRLY GOOD PRODUCT. OKAY.

SUBORDINATION IS THE NEXT BULLET. WE HAD A LOT OF DISCUSSION ABOUT THIS FROM THE FINANCIAL TYPES WHO ARE GOING TO FOLLOW ON THIS FUNDING IN MANY CASES. AND THEY CLEARLY WANT THIS TO BE SUBORDINATED TO OTHER FORMS OF DEBT AND NOT TIED TO IP. AND THAT KIND OF GETS INTO THE NEXT ONE, SECURITY. SO YOUR THOUGHTS ON THAT.

MR. CALDWELL: SUBORDINATION? I THINK IT HAS TO BE SUBORDINATED. I'M STILL STRUGGLING WITH, I THINK, A COUPLE OTHERS ON THIS PANEL WITH THIS DIFFERENCE BETWEEN PRODUCT AND FUNDING INTO A COMPANY. FROM A STANDPOINT OF A LOAN THAT COMES TO THE COMPANY, YOU CAN GO TO A PARTICULAR ENTITY, YOU CAN GO TO WHEREVER, IT'S STILL ON MY BALANCE

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SHEET. UNTIL IT'S CHANGED, I AS A COMPANY HAVE THAT LIABILITY. IT MAY BE FUNDED TO A PRODUCT, BUT IT'S STILL A LIABILITY FROM A COMPANY STANDPOINT.

NOW, A PRIVATE COMPANY OR SOME SORT OF PARTNERSHIP OR SOMETHING ELSE, THAT'S DIFFERENT. FROM A PUBLIC TRADED COMPANY, YOU'VE GOT IT ON YOUR BALANCE SHEET. YOU GOT TO HAVE IT SUBORDINATED. LENDERS AREN'T GOING TO ALLOW IT TO BE ANYTHING LESS. OTHERWISE YOU'RE GOING TO CRAMP YOURSELF IN TERMS OF BEING ABLE TO GO AND FUND OTHER TYPES OF LOANS.

AND SECURITY, IT'S A TOUGH ONE. THAT'S A TOUGH ONE.

DR. PENHOET: IT'S VERY DIFFICULT TO HEAR THE CURRENT SPEAKER.

CHAIRMAN ROTH: THE COMMENT WAS ABOUT SECURITY, AND THAT THAT'S REALLY A DIFFICULT ONE. AGAIN, NOT DIFFERENT THAN WE ARE HEARD FROM THE LENDERS.

MR. KLEIN: IT MIGHT BE WORTHWHILE THOUGH, BILL, TO REPEAT YOUR COMMENT SO THEY CAN HEAR IT ABOUT IF YOU ARE A COMPANY, IT'S ON THE BALANCE SHEET.

MR. CALDWELL: THE POINT IS IF YOU'RE

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TAKING A LOAN FROM CIRM, THIS IS A LOAN TO THE COMPANY, IT'S ON THE BALANCE SHEET. IT COULD BE PRODUCT SPECIFIC, BUT IT'S STILL ON YOUR BALANCE SHEET. AND SO AS A SENIOR OFFICER OF A COMPANY, THAT'S HOW YOU VIEW IT. AND WHETHER IT'S FORGIVEN OR CHANGED OR WHATEVER HAPPENS DOWN THE ROAD IN TERMS OF THE TYPE, IT'S STILL GOING TO BE INCLUDED ON YOUR BALANCE SHEET. AND PEOPLE COMING IN ARE GOING TO BE LOOKING AT IT FOR THE FUTURE FINANCING AS A LIABILITY OF THE COMPANY.

MR. KLEIN: SO, BILL, IF IT'S CLEARLY IDENTIFIED AS A DEBENTURE, WHICH HAS SOME UNDERSTANDABLE SUBORDINATION, IS THAT HELPFUL TO YOU?

MR. CALDWELL: YES.

DR. LOVE: I ACTUALLY THINK IT'S VERY HELPFUL. I TOTALLY AGREE WITH WHAT BILL SAID, BUT THERE ARE LOANS AND THEN THERE ARE LOANS. SOME LOANS ARE SECURED, SOME LOANS YOU HAVE TO ESCROW. THOSE ARE MUCH MORE ONEROUS THAN WHAT WE'RE TALKING ABOUT HERE.

MR. KLEIN: I WOULD THINK THAT A DEBENTURE WOULD BE QUITE HELPFUL IN TERMS OF EXTERNAL EVALUATION. DOES THAT MAKE SENSE TO ANYONE ELSE?

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CHAIRMAN ROTH: OTHER COMMENTS?

MR. KLEIN: NODDING DOESN'T COME ACROSS,  
SO FOR THE RECORD AND OTHER PEOPLE, YOU NEED TO --  
ALAN OR BILL, DO YOU WANT TO COMMENT?

MR. LEWIS: AGREED.

(BRIEF TELEPHONE INTERRUPTION.)

CHAIRMAN ROTH: ANYTHING ELSE ON  
SECURITY? I THINK UNSECURED, SUBORDINATED. AND  
THEN MILESTONES WE'VE DISCUSSED, I THINK, AT  
LENGTH, THAT THESE WILL BE LOANS THAT ARE  
MILESTONE DRIVEN. AND, AGAIN, MAKING IT VERY EASY  
FOR US TO DETERMINE WHAT THOSE MILESTONES ARE WHEN  
THEY'RE ACHIEVED TO THE LESS GRAY AREA THERE IS,  
THE EASIER I THINK IT IS FOR US TO PROCESS.

MR. CALDWELL: JUST ONE COMMENT ON  
MILESTONES. AGAIN, AND I DON'T WANT TO COMPLICATE  
LIFE, BUT OFTENTIMES MILESTONES CAN BE -- AND I  
THINK IT WAS TO EITHER ED, I THINK ED HAD THIS  
POINT LAST TIME OR BOB. A LOAN CAN GO FOR A  
PERIOD OF TIME. LET'S SAY IT'S A THREE-YEAR LOAN  
OR A FIVE-YEAR LOAN. AND BASED UPON HITTING  
CERTAIN MILESTONES, IT MATURES AT THAT POINT, BUT  
THEN CAN BE RENEWED. SO I THINK A RENEWABLE  
ELEMENT OR A RENEWABLE FEATURE TO YOUR LOANS MAY  
BE AN ADVANTAGEOUS SITUATION ONLY BECAUSE THEN YOU

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CAN APPROPRIATELY ADJUST THE RISK REWARD QUOTIENT AT THAT POINT UP AND DOWN BASED UPON WHAT'S HAPPENED. YOU MAY WANT TO CONSIDER THAT IN TERMS OF THE RENEWAL PROCESS AS OPPOSED JUST LETTING THEM ALL GO OUT TO A LONG POINT IN TIME BECAUSE THERE'S CERTAIN TIMES WHEN YOU'RE EXPECTING A LIQUIDITY EVENT, AND THAT LIQUIDITY EVENT SHOULD BE A BASIS BY WHICH THE LOAN IS RENEWED.

AND THERE MAY BE AN OPPORTUNITY FOR PEOPLE TO DISCUSS WHETHER THAT LOAN SHOULD BE RENEWED OR REPAYED AT THAT POINT.

CHAIRMAN ROTH: AGAIN, HOW WOULD WE ADMINISTER IT? WHO WOULD MAKE THE DECISION IN A PROCESS WHERE YOU HAVE TO HAVE PEER REVIEW?

DR. LOVE: THE OTHER POINT IS THAT, YOU KNOW, LOANS AND LEASES GET RENEGOTIATED ALL THE TIME WITHOUT NECESSARILY HAVING THAT BUILT IN. IN FACT, I THINK THAT ONE OF THE THINGS WE PROBABLY WOULD HAVE TO RECOGNIZE IS THAT, GIVEN THE NATURE OF THE COMPANIES THAT WE'RE TALKING ABOUT, THERE LIKELY WOULD BE SOME OF THESE DISCUSSIONS DOWN THE ROAD AND WE NEED TO BE PREPARED TO DEAL WITH THEM. I'M NOT SURE IF WE'D WANT TO TRY TO BUILD THAT IN UP FRONT, BUT I THINK WE SHOULD AT LEAST GO IN WITH OUR EYES OPEN THAT THAT PROBABLY WILL HAPPEN.

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CHAIRMAN ROTH: AGAIN, BILL, JUST SO WE ALL ARE CLEAR ON WHAT YOU SAID, WHAT WE'RE TALKING ABOUT IS YOU MAY APPLY FOR A \$5-MILLION LOAN THAT IS MILESTONE DRIVEN, PRECLINICAL, THE FIRST PAYMENT IS \$1 MILLION. IF YOU FILE AN IND, YOU GET ANOTHER MILLION. IF YOU START YOUR PHASE I, YOU GET THE REST OF IT. SO THAT'S HOW WE WERE THINKING ABOUT IT. HOW WERE YOU THINKING ABOUT IT?

MR. CALDWELL: THAT CLEARLY COULD BE ONE WAY. ANOTHER WAY COULD BE THAT YOU HAVE AT THE CLINIC YOU'RE GOING TO GET A \$2-MILLION LOAN, BUT FOR WHATEVER REASON YOU NEED THREE OR YOU NEED ONE BECAUSE YOU'VE HAD A PARTNER THAT'S COME IN TO PARTICIPATE WITH YOU, THESE ARE EXCEPTIONS, I AGREE, BUT THERE SHOULD BE SOMETHING, I THINK, AT LEAST RECOGNIZING OR BUILT IN AT LEAST IN YOUR DOCUMENTS THAT SUGGEST THAT YOU HAVE THE ABILITY TO DISCUSS THOSE KINDS OF THINGS.

CHAIRMAN ROTH: I THINK NOT TAKING A LOAN IS EASY. YOU DECLINE. YOU DON'T HAVE TO TAKE IT. BUT I THINK THE PROBLEM IS EXTENDING THAT TO A HIGHER NUMBER WITHOUT, AGAIN, GIVING EVERYBODY THE CHANCE TO DO THAT WITHOUT HAVING IT BE A ONE-OFF. IF WE HANDLE THIS CORRECTLY, THERE



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SHOULD BE A FREQUENCY THAT WOULD SAY YOU CAN APPLY FOR AN ADDITIONAL AMOUNT OF MONEY, YOU KNOW, IN A SUBSEQUENT APPLICATION WHICH MAYBE COVERS THAT NEXT PHASE.

MR. KLEIN: BUT TO AVOID THE SUBSEQUENT APPLICATION, WE CAN CERTAINLY BUILD A SYSTEM THAT ORIGINALLY SAYS, LOOK, TO THIS MILESTONE, IT'S MILLION AND A HALF AND THEN IT'S THREE MILLION; AND THEN IF YOU GET TO THE THIRD MILESTONE, IT'S FIVE MILLION OR UP TO FIVE MILLION. AND, YOU KNOW, YOU CAN, THROUGH A DELEGATED UNDERWRITING SYSTEM, HAVE A DOCUMENT THAT'S REASONABLY TAILORED, NOT THAT COMES BACK TO OUR STAFF FOR FINAL SIGN-OFF, BUT A LOT OF THE REAL WORK IS DONE BY DELEGATED UNDERWRITER AND COMES BACK AND SAYS IN THE THIRD STAGE, IF YOU'RE ABLE TO LIMIT YOUR AMOUNT TO TWO MILLION INSTEAD OF FIVE, THEN YOU'RE GOING TO PAY A SMALLER AMOUNT, LOWER INTEREST RATE OR NO WARRANTS. GIVE YOU SOME INCENTIVE TO USE OUTSIDE SOURCES AT THE EARLIER POSSIBLE DATE.

AND SO I DO THINK -- I THINK THAT, THOUGH, DUANE'S COMMENT IS PROBABLY VERY APPROPRIATE. WE NEED TO THINK ON THE FRONT END HAVING YOU MAKE A REQUEST THAT SAYS I THINK I'LL NEED THREE, BUT I NEED A STANDBY FOR A MILLION.

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SO IT'S NOT A NEW THING THAT'S INTRODUCED LATER ON. SO YOU ANTICIPATE THE RANGE THAT YOU MAY NEED ADDITIONAL CAPITAL UP FRONT. MAYBE YOU SAY I THINK I NEED THREE, BUT I MAY NEED FIVE, SO I'M GOING TO HAVE A STANDBY LOAN FOR TWO MILLION, SO IT'S NOT A SEPARATE APPROVAL. BECAUSE HE'S CONCERNED WITH EQUITY IN TERMS OF IF WE HAVE NEW DOLLARS COMING IN THAT WEREN'T CONSIDERED UP FRONT.

DR. LOVE: BOB, HOW IS THAT DIFFERENT FROM A GRANT, FOR EXAMPLE, WHERE YOU APPLY AND YOU HAVE A BUDGET, AND THEN AS YOU GET INTO IT, YOU REALIZE THAT THE BUDGET THAT YOU INITIALLY PROPOSED ISN'T QUITE ADEQUATE? WOULD WE BE DOING SOMETHING DIFFERENT IN TERMS OF ALLOWING PEOPLE TO KIND OF RE-UP THEIR REQUEST THAT ISN'T AVAILABLE IN THE GRANT PROGRAM?

MR. KLEIN: WELL, FROM JUST SPEAKING AS AN INDIVIDUAL, IF WE'RE IN THE TRANSLATIONAL SPACE, FOR ANY LARGE OR SUBSTANTIAL AMOUNT, I HAVE A HARD TIME MAKING IT JUST A GRANT. I DON'T CARE WHETHER IT'S A NONPROFIT OR FOR-PROFIT BECAUSE WHEN WE GET TO LARGE DOLLAR AMOUNTS, WE NEED TO GET SOME RECOVERY OF CAPITAL OVER TIME TO BE ABLE TO SUSTAIN THIS ACTIVITY. AND FOR THE COMPANIES

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AND FOR THE NONPROFITS, WHOEVER IS INVOLVED, THE ABILITY TO SUSTAIN HIGH DOLLAR VOLUMES OVER A LONG PERIOD OF TIME IS VERY VALUABLE IN THIS PROCESS. FURTHERMORE, IT MIGHT BE VALUABLE FOR THE STATE. IF WE'RE GOOD STEWARDS OF THE MONEY, THEY MIGHT APPROVE MONEY 12 OR 13 YEARS FROM NOW.

BUT IN TERMS OF THE GRANT PROGRAM, YOU KNOW, I PERSONALLY WOULD HAVE A TOUGH TIME APPROVING A STANDBY FOR AN EXTRA GRANT; BUT IF IT'S A STANDBY FOR EXTRA LOAN AMOUNT, THAT THEY'RE PAYING A STANDBY FEE ON AND WE'RE GETTING A VERY EFFECTIVE USE OF OUR MONEY AND INCENTIVIZING THEM NOT TO TAKE IT, BUT IT'S AVAILABLE IF THEY NEED IT, FROM A FINANCIAL BUSINESS POINT OF VIEW AND FURTHERING OUR MISSION, I THINK THAT THE LOAN PROGRAM OFFERS SOME FLEXIBILITY THE GRANT PROGRAM JUST MIGHT NOT.

CHAIRMAN ROTH: OKAY. ANYTHING ELSE? WE'RE GOING TO TAKE A FIVE-MINUTE BREAK OR MELISSA IS GOING TO SHOOT ME. THE RESTROOMS ARE OUT HERE. COME BACK LITERALLY IN FIVE MINUTES AND WRAP UP ON THE COVENANTS.

(A RECESS WAS TAKEN.)

CHAIRMAN ROTH: OKAY. I'D LIKE TO AGAIN BEGIN, AND WE'RE GOING TO MOVE TO THE COVENANTS

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BECAUSE SOME PEOPLE HAVE TO LEAVE, AND I WANT TO HAVE SOME TIME FOR PUBLIC COMMENT AT THE END.

SO THE LAST SECTION IS THE COVENANTS. AND, AGAIN, THIS DEALS WITH PROP 71. WE SPENT AN AWFUL LOT OF TIME IN THE SUBCOMMITTEE ON IP POLICY THAT ED PENHOET CHAIRED IN TRYING TO GET THIS RIGHT. AND IT DEALS WITH THINGS LIKE AFFORDABILITY AND ACCESS, WHICH WE'VE HAD MANY DISCUSSIONS ON. WE FOCUSED PRIMARILY ON ACCESS. WANT TO MAKE SURE EVERYBODY WHO NEEDS THESE PRODUCTS AND THERAPIES HAS ACCESS TO THEM IN THE STATE OF CALIFORNIA AS WELL AS THE U.S. AND BEYOND.

SO WHERE WE ENDED UP IN THE IP POLICY WAS WITH A LIST OF THINGS THAT WERE REQUIREMENTS IF YOU TOOK MONEY FROM CIRM. WE'VE TAKEN THE APPROPRIATE ONES, AT LEAST FOR OUR BELIEF, AND MOVED THEM OVER TO THIS POLICY AS WELL. WE HAVE STREAMLINED THEM, AND WE'LL TRY TO WORD THEM POTENTIALLY EVEN BETTER THAN ED'S GROUP DID, EVEN THOUGH MOST OF US WERE PART OF ED'S GROUP. BUT I THINK THE CONCEPTS ARE STARTING TO REALLY CRYSTALLIZE HERE, THAT THE FOCUS IN BULLET NO. 1 IS ACCESS FOR CALIFORNIANS FOR CIRM-FUNDED CELL THERAPIES, WHETHER GRANTS OR LOANS, REQUIRES THE

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RECIPIENT TO PROVIDE DRUGS AND THERAPIES AT A BENCHMARK PRICE AS DESCRIBED IN THE CALIFORNIA DISCOUNT PRESCRIPTION PROGRAM OR ITS EQUIVALENT. AND THEN IT'S FOR INDIVIDUAL CALIFORNIANS PARTICIPATING IN CALRX, SHOULD THAT EVER BE FUNDED, AND CALIFORNIA ENTITIES PURCHASING DRUG AND THERAPIES WITH PUBLIC FUNDS.

SO BASICALLY WE'RE SAYING THAT YOU WILL ABIDE BY TAKING OUR MONEY WITH THE THEN RULES IN THE STATE OF CALIFORNIA FOR LOW INCOME, UNDERINSURED, WHATEVER THAT MAY BE, I DON'T KNOW WHAT IT WILL BE, BUT WHATEVER THE STATE LAW IS, YOU ARE GOING TO AGREE TO THAT, WHICH SEEMS PRETTY STRAIGHTFORWARD.

THE SECOND ONE IS PROBABLY THE MOST IMPORTANT FOR THIS GROUP, AND THAT IS YOU WILL FURTHER AGREE THAT WHATEVER AN INDUSTRY STANDARD ACCESS PROGRAM LOOKS LIKE TEN YEARS FROM NOW OR FIVE YEARS OR FIFTEEN YEARS FROM NOW, YOU TOO WILL HAVE ONE AND YOU WILL SEND IT TO US IN ADVANCE SO THAT WE CAN AT LEAST LOOK AT IT.

NOW, WHEN WE SAY AN INDUSTRY STANDARD, IT'S AN INDUSTRY STANDARD FOR THE TYPE OF COMPANY YOU ARE AND THE TYPE OF PRODUCT IT IS. SO WE'LL ASK YOU TO TELL US WHO'S IN YOUR PEER GROUP, IF

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YOU WILL, AND WHAT'S THEIR PROGRAM AND WHAT'S YOURS. SO IT MAY BE THAT IN YOUR PEER GROUP, THERE ISN'T AN INDUSTRY STANDARD AND THAT BECAUSE THESE THERAPIES ARE SO NEW AND COSTLY AND LIMITED, THEY AREN'T BEING MADE AVAILABLE.

WE'RE ALSO NOT ASKING YOU TO BE PHIZER OR MERCK OR GENENTECH, BUT SOMEBODY OF THE CALIBER OF WHERE YOUR COMPANY IS, FIRST PRODUCT ON THE MARKET, UNPROFITABLE, WHATEVER IT MAY BE SO THAT WE CAN LOOK AT THAT AT THAT POINT IN TIME. SO BY DOING THAT, WE DON'T SAY BY TODAY'S STANDARD BECAUSE WE DON'T KNOW. IF WE GET NATIONAL HEALTHCARE AND ALL OF THIS IS INCLUDED, THIS IS A MOOT POINT. IF THAT DOESN'T HAPPEN, AND I WON'T MAKE ANY COMMENT, IF THAT DOESN'T HAPPEN, THEN I THINK WHATEVER THE INDUSTRY STANDARD IS AT THAT POINT IN TIME YOU'LL AGREE TO.

SO, AGAIN, I THINK IT'S PRETTY STRAIGHTFORWARD, AND WE'D LOVE TO HEAR YOUR THOUGHTS ON THAT.

PUBLICATION-RELATED BIOMEDICAL MATERIALS SHARING, THIS ONE IS ONE THAT, AGAIN, WE HAD A LOT OF HELP FROM INDUSTRY FROM INVITROGEN AND OTHERS TO HAMMER OUT HOW THIS OUGHT TO LOOK. SO FIRST YOU HAVE TO DECIDE YOU WANT TO PUBLISH IT; AND,

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SECOND, YOU HAVE TWO OR THREE REASONS THAT YOU DON'T HAVE TO DO THIS. ONE IS IT INTERFERES WITH YOUR NORMAL COURSE OF BUSINESS. IF YOU'RE A FOR-PROFIT COMPANY AND YOU'RE MAKING TOOLS OR OTHER THINGS THAT WERE IN THAT PUBLICATION THAT YOU DECIDED TO PUT OUT THERE, THEN YOU CAN BE EXEMPT FROM THAT. OR IF YOU THINK THERE'S COMMERCIAL VALUE TO IT IF YOU KEEP IT PROPRIETARY, THEN YOU CAN BE EXEMPT. OR IF ANYTHING THAT IS IN THAT PAPER AND PUBLICATION BECAME BROADLY COMMERCIALY AVAILABLE, YOU'RE FINISHED. YOU DON'T HAVE TO DO THAT.

SO, AGAIN, I DON'T THINK THERE'S ANYTHING IN HERE FROM AN INDUSTRY STANDPOINT THAT SHOULD BE TERRIBLY ALARMING; BUT IF THERE IS, WE'D LIKE TO HEAR IT.

AND THEN THE FINAL ONE IS IF YOU USE OUR NAME IN A PRESS RELEASE, PER BOB'S CONVERSATION, TELLING PEOPLE HOW GREAT YOU ARE BECAUSE YOU GOT A FIRM LOAN AT AN INTEREST RATE THAT'S FAIR, THAT'S A GOOD THING, AND YOU ALL SHOULD INVEST IN OUR COMPANY, TELL US ABOUT IT BEFORE YOU DO IT AND LET US LOOK AT THE PRESS RELEASE.

THOSE ARE THE FOUR. THERE ARE A COUPLE OTHERS BELOW THE LINE THAT CLEARLY WE DON'T THINK

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ARE APPLICABLE IN THIS CASE. THERE'S NO IP REQUIREMENT HERE. THERE'S NO MARCH-IN RIGHTS REQUIREMENT HERE THAT'S IN THE IP POLICY. SO THAT'S IT. OPEN FOR DISCUSSION.

DR. GOLLAHER: DUANE, LET ME GRAB THE MICROPHONE OVER HERE. ONE THING THAT OCCURS TO ME, WE WERE TALKING EARLIER ABOUT THE NOTION OF WHETHER ENTIRE PROJECTS WOULD BE FUNDED BY THESE LOANS OR WHETHER THEY WOULD BE PARTIAL FUNDING, AND I THINK THERE'S A GENERAL CONSENSUS THAT THEY WOULD BE PARTIAL FUNDING. IF THAT'S THE CASE, DECIDING ON THRESHOLDS, DECIDING ON WHAT WOULD TRIGGER THESE REQUIREMENTS FOR ACCESS AND DEVELOPING A PLAN FOR THE UNINSURED WOULD BE AN IMPORTANT CALCULATION THAT SOMEONE APPLYING FOR THE LOAN WOULD WANT TO MAKE. IN OTHER WORDS, IF BY TAKING A \$500,000 LOAN ON A \$5-MILLION PROJECT, AM I CREATING A SET OF RISKS AND REQUIREMENTS THAT WOULD INCREASE THE RISK OF THE TRANSACTION?

CHAIRMAN ROTH: JUST A QUESTION BACK, DAVID. IN THESE FOUR, WHICH ONES WOULD YOU SAY WOULD BE EXEMPT, WOULD BE REASONABLY EXEMPT? ALL OF THEM OR ANY ONE IN PARTICULAR?

DR. GOLLAHER: I'M ASKING A QUESTION ABOUT PARTIAL FUNDING AND FUNDING THRESHOLDS. SO



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IF THE ISSUE IS THAT BY TAKING ANY MONEY, EVEN IF IT'S A SMALL PART OF A LARGE PROJECT, I'M OBLIGATING MYSELF TO FULFILL THESE REQUIREMENTS, WOULD THAT DISCOURAGE PEOPLE AT THE MARGIN?

CHAIRMAN ROTH: SO, AGAIN, I THINK THAT WAS RAISED EARLY IN THE IP POLICY.

DR. GOLLAHER: VERY MUCH.

CHAIRMAN ROTH: AND WE DEALT WITH THAT THERE. AGAIN, I'LL GO BACK TO THESE. THE FIRST ONE IS BASICALLY STATE LAW. THE SECOND ONE IS AN ACCESS PLAN. THIS IS THE ONLY ONE THAT I THINK COULD BE CONSIDERED CONTROVERSIAL, BUT I DON'T BELIEVE IT IS BECAUSE VIRTUALLY EVERYONE PARTICIPATES IN SOME TYPE OF ACCESS PROGRAM ONCE THEY BECOME SOPHISTICATED ENOUGH. THE THIRD ONE IS COMPLETELY YOUR CONTROL. AND THE FOURTH ONE IS SIMPLY IF YOU'RE GOING TO USE US IN A PRESS RELEASE, TELL US ABOUT IT.

SO I DON'T -- WHILE I'M SENSITIVE TO A THRESHOLD, I THINK THIS WOULD GO WITH DOLLAR ONE BECAUSE WE PROBABLY WON'T BE MAKING ANY \$100,000 LOANS. THEY'RE GOING TO BE FAIRLY SUBSTANTIAL, AND IT'S EARLY MONEY, THAT THESE ARE REASONABLE THINGS, THAT INDUSTRY, AT LEAST FROM MY STANDPOINT IN INDUSTRY, CAN BUY INTO. IF THEY AREN'T, THAT'S

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WHERE I REALLY WANT TO FOCUS IN HERE, THINGS THAT WOULD REALLY MAKE PEOPLE RESIST.

DR. GOLLAHER: WE DID A SURVEY OF OUR MEMBERS AND A NUMBER OF OTHER COMPANIES THAT ARE NOT MEMBERS OF OURS IN CALIFORNIA WITH RESPECT TO THE INTELLECTUAL PROPERTY REQUIREMENTS FOR NONPROFIT AND THEN FOR FOR-PROFIT COMPANIES. AND THERE WAS A LOT OF FEEDBACK THAT THOSE REQUIREMENTS POSED RISKS THAT PEOPLE HAD A HARD TIME EVALUATING AND WOULD, THEREFORE, RAISE THE BARRIER TO DOING THE TRANSACTION, MEANING AT THAT POINT TAKING A GRANT. NO ONE KNOWS HOW HIGH THAT BARRIER IS, AND SO WE'LL HAVE TO DO THE EXPERIMENT.

AND IT SEEMS TO ME CLEAR THAT, SINCE THE MAIN GAME IS IN THE GRANTS AND THE POLICY HAS BEEN DECLARED AND FOUNDED ALREADY, THAT THE LOAN PROVISIONS SHOULD FOLLOW IN SUIT. NONETHELESS, THAT REMAINS OUT THERE AS AN OVERHANG.

CHAIRMAN ROTH: DAVID, I THINK THE CONTROVERSIAL ONES ARE BELOW THE LINE NOW. I DON'T THINK ANYTHING ABOVE THE LINE. WE ACTUALLY USED AND LISTENED CAREFULLY TO YOUR SURVEY IN INDUSTRY AND IP POLICY, AND HERE'S WHERE WE ENDED UP. AND I THINK ON THE TOP --

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DR. GOLLAHER: I AGREE WITH THAT. IT'S NOT A PERFECT WORLD.

CHAIRMAN ROTH: OTHERS?

MR. LEWIS: JUST HAD A COMMENT REALLY. THE CELL THERAPY COMPANIES ARE OBVIOUSLY THE ONES THAT ARE PENALIZED, BUT WE OBVIOUSLY HAVE TO GIVE A LOT BACK. WHAT HAPPENS TO THE TOOL COMPANIES? WHAT ARE THEY GIVING BACK IN TERMS OF FREE TOOLS? WHAT ARE WE DOING, JOYDEEP, BECAUSE IT SEEMS TO ME THAT THEY'RE EXCLUDED FROM THIS?

DR. GOSWAMI: LET'S TALK ABOUT AVAILABLE.

MR. LEWIS: DO WE GET A SPECIAL DISCOUNT? SERIOUS THOUGH, IT SEEMS A LITTLE UNFAIR THAT WE'VE GOT THE BURDEN OF -- UNFAIRLY IS THE WRONG TERM.

CHAIRMAN ROTH: THEY HAVE EVERY OBLIGATION UNDER THIS POLICY AS IT APPLIES TO TOOLS AND/OR DIAGNOSTICS OR ANY OF THOSE THINGS THAT YOU WOULD. THE DIFFERENCE BEING THE MOST IMPORTANT FOR THEM WHEN WE WENT THROUGH THIS WAS THIS PUBLICATION-RELATED BIOMATERIALS. THAT FOR THEM IS A BIG DEAL BECAUSE THAT'S THEIR LIVELIHOOD. AND, THEREFORE, WANTING TO COMMERCIALIZE THOSE, INSTEAD OF BEING TECHNICALLY

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REQUIRED TO GIVE THEM AWAY FREE, WAS OBVIOUSLY A BIG ISSUE.

I DON'T THINK THAT THE PRESS RELEASE, THE PUBLICATION-RELATED MATERIALS IS THEIRS. ACCESS PLAN, THAT'S NOT APPROPRIATE BECAUSE IT'S NOT A THERAPY.

MR. LEWIS: I UNDERSTAND THAT. JUST STILL SEEMS THAT THEY'RE GETTING AWAY LIGHT. I HAVEN'T GOT A SOLUTION.

DR. LOVE: AS SOMEONE SAID, IT'S NOT A FAIR WORLD.

MR. KLEIN: QUESTION. IN A CASE WHERE YOU HAVE A PRODUCT-BASED LOAN AND THEY CAN'T PAY IT BACK AND THERE'S A PRODUCT ABANDONMENT, SHOULDN'T THERE BE A MARCH-IN RIGHT THERE?

CHAIRMAN ROTH: I THINK THAT WAS ONE OF THE SUGGESTIONS TODAY, THAT IF YOU ABANDON IT AND THE IP IS NOT PLEDGED ON SOME OTHER LOAN, THAT THAT WOULD COME BACK TO CIRM.

MR. KLEIN: IN TERMS OF THE IP BEING PLEDGED ON SOME OTHER LOAN, IF THE IP PLEDGE IS NOT EFFECTIVELY TAKEN AND UTILIZED FOR SOME PERIOD OF TIME SO THERE'S EFFECTIVE ABANDONMENT EVEN ON A SENIOR PLEDGE USER, I MEAN IF THE SENIOR PLEDGE USER SELLS IT TO SOMEBODY TO LIQUIDATE, FINE; BUT

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IF THE SENIOR PLEDGE HOLDER DOESN'T SEE ANY VALUE IN IT AND ABANDONS IT AND IT'S SITTING THERE FOR TWO YEARS OR SOMETHING, THERE SHOULD BE SOME STANDARD WHERE YOU CAN HAVE MARCH-IN RIGHTS TO MAKE SURE THAT KNOWLEDGE GETS BACK OUT THERE INTO THE COMMUNITY. ALAN, YOU LOOK LIKE YOU'RE AGREEING WITH THAT, BUT --

MR. LEWIS: IN AGREEMENT. I THINK THAT'S FAIR.

DR. LOVE: IT'S PROBABLY FAIR. THE REALITY, THOUGH, IS THAT IT GENERALLY REQUIRES MONEY AND EFFORT TO KEEP THESE PATENTS GOING.

CHAIRMAN ROTH: THERE'S A COST TO IT. I THINK WHAT WOULD HAPPEN IN THAT CASE, THE COMPANY DECIDES THAT THE \$3 MILLION LOAN THEY GOT FOR THE TECHNOLOGY AND WHERE IT ENDED UP, THEY'D JUST GIVE IT BACK TO CIRM VERSUS THEY COULD POTENTIALLY LICENSE IT BECAUSE IT HAS IMPLICATIONS TO SOMEBODY ELSE FOR 4 MILLION AND PAY US BACK THE THREE. THAT WOULD TRIGGER SOMETHING. THAT REALLY COULD HAPPEN AND DOES HAPPEN OFTEN.

DR. LOVE: I THINK WE'D RATHER GET THE MONEY BACK THAN THE IP, RIGHT?

MR. LEWIS: WHAT ARE YOU GOING TO DO WITH IT?

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DR. GOSWAMI: I HAVE A QUESTION, AND MAYBE I'M MISSING THIS. ONE OF THE THINGS THAT WAS THERE IN THE PREVIOUS GRANTS, ETC., BOTH FOR FOR-PROFIT AND NOT-FOR-PROFIT, WAS THE CALIFORNIA INSTITUTION AND THE NEED TO USE. AND, DAVID, YOU BROUGHT THAT UP EARLIER. I DON'T SEE IT IN THE COVENANTS HERE. I'M PRESUMING THAT THAT WILL COME IN AND IT WILL BE EXACTLY THE SAME AS THE PREVIOUS POLICIES, BUT IT'S SLIGHTLY CHANGED, I BELIEVE, IN THE BROADER DOCUMENT. IS THERE SOMETHING THAT YOU COULD PROVIDE US ON --

CHAIRMAN ROTH: THIS DOCUMENT DIDN'T CHANGE. WHICH DOCUMENT ARE YOU TALKING ABOUT?

DR. GOSWAMI: I GUESS IT'S IN THE NEED FOR USING IF ANYONE TAKES A GRANT.

MR. KLEIN: IT IS STATUTORY.

DR. GOSWAMI: AND IT'S EXACTLY THE SAME AS IN THE PREVIOUS DOCUMENTS, THAT YOU WILL HAVE TO USE CALIFORNIA ORGANIZATIONS TO THE EXTENT THEY CAN.

CHAIRMAN ROTH: BUT I'M NOT SURE THAT WILL BE IN THIS PARTICULAR POLICY. THAT'S AN OVERALL GOVERNING POLICY. THERE'S RULES THAT WOULD APPLY TO GRANTS AND LOANS. SO THIS IS LOANS ONLY.

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DR. GOSWAMI: THEN ONE QUICK CLARIFYING COMMENT. IN THE PRESS RELEASE REQUIREMENTS, IT'S ONLY A NOTIFICATION. AS LONG AS IT'S SENT, WE'RE NOT EXPECTING WORD BACK FROM CIRM SAYING OKAY OR NOT OKAY.

CHAIRMAN ROTH: JEFF, YOU CAN ANSWER THAT SINCE WE FOUGHT ABOUT THAT FOR I DON'T KNOW HOW LONG. I DON'T REMEMBER EXACTLY HOW IT ENDED UP. WHATEVER IT IS IN THE IP POLICY IS WHAT WE'RE REFERRING TO HERE.

MR. SHEEHY: THIS IS JUST NOTIFICATION. AND I THINK ACTUALLY COMPANIES, IT'S FUNNY, YOU GUYS ARE MORE CALM ABOUT THIS WHERE I WOULD HAVE THOUGHT THAT THIS WAS MORE RELEVANT BECAUSE WHENEVER WE DO ANYTHING WITH A COMPANY, THE DISCLOSURES ARE MUCH MORE COMPLICATED BECAUSE YOU HAVE ALL YOUR SEC. WHAT YOU TELL WHEN TO WHO AND HOW IS A REAL KETTLE OF FISH. INSTEAD, IT WAS THE INSTITUTIONS OF WE CAN'T SHARE ANYTHING WITH ANYBODY. IT'S ALL OURS.

CHAIRMAN ROTH: THEY DIDN'T WANT CIRM INCLUDED IN IT, SO THIS IS JUST NOTIFICATION.

MR. SHEEHY: YOU MIGHT LOOK AT THIS AND JUST MAKE SURE IT CONFIRMS BECAUSE THIS IS MORE OF A COURTESY ISSUE. THAT'S HOW I EXPLAINED IT. FOR

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US IT SEEMED VERY BENIGN TO ME.

DR. GOSWAMI: IT IS. THE REASON I BRING IT UP IS THE TIMING. SO IF YOU'RE WAITING TO HEAR BACK FROM YOU, THEN YOU MIGHT MISS THE WINDOW OF OPPORTUNITY.

MR. KLEIN: I WOULD SAY HERE THAT THERE HAVE BEEN SOME PRESS RELEASES RECENTLY THAT ARE NOT IDEAL. TALKING ABOUT -- THE MESSAGING IS IMPORTANT TO MAINTAIN PUBLIC UNDERSTANDING, PUBLIC CONFIDENCE SO PEOPLE DON'T THINK WE'RE CLONING HUMAN BEINGS. SO I WOULD HOPE THAT ANY COMPANY THAT'S IN A RELATIONSHIP UNDER A LOAN IS TAKING IT SERIOUSLY TO NOTIFY US, BUT THE COMPANIES THAT ARE HERE ARE VERY SOPHISTICATED IN THEIR MESSAGING. THERE ARE SOME THAT ARE NOT AS SOPHISTICATED IN THEIR MESSAGING.

WE'D LIKE TO TALK ABOUT, I THINK, THAT MESSAGING TO MAKE CERTAIN THAT THE PUBLIC REALLY DOES UNDERSTAND WHAT WE'RE DISCUSSING HERE AND THAT PEOPLE ARE POTENTIALLY REMINDED THAT IF IT GOES DIRECTLY TO THE ISSUE OF -- WELL, GOES DIRECTLY TO ANYWHERE CLOSE TO TERMINOLOGY WITH REPRODUCTION, IT'S CLEAR IT'S AGAINST STATE LAW TO HAVE HUMAN REPRODUCTION. WE JUST NEED TO MAKE SURE WE DON'T CREATE A MASSIVE LEGISLATIVE PROBLEM



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FOR OURSELVES AND THE COMPANIES.

CHAIRMAN ROTH: THIS IS ONLY IF YOU USE CIRM IN YOUR PRESS RELEASE. SO THAT'S THE STUFF THAT WE WOULD LIKE TO HAVE OUR COUNSEL TAKE A LOOK AT. AND IF ALAN WANTS TO SAY I GOT A CIRM LOAN AND IT GUARANTEES SUCCESS, WE'RE PROBABLY GOING TO HAVE A PROBLEM WITH THAT.

DR. LOVE: IT DOESN'T, JUST TO BE CLEAR, IF THEY'VE TAKEN MONEY FROM US AND THEY'VE FUNDED A PROGRAM AND THEY'RE TALKING ABOUT THE PROGRAM THEY FUNDED USING THE FUND FROM US, BUT THEY DON'T USE OUR NAME, THEY DON'T --

MR. KLEIN: I THOUGHT THEY WERE REQUIRED TO USE OUR NAME.

CHAIRMAN ROTH: WELL, THEY ARE NOT REQUIRED TO USE OUR NAME.

MR. KLEIN: IN OUR GENERAL POLICY?

CHAIRMAN ROTH: SCOTT'S THE EXPERT. LET'S ASK HIM.

MR. TOCHER: IN THE IP POLICY, IF A COMPANY IS GOING TO DISCUSS CIRM-FUNDED RESEARCH IN A PRESS RELEASE OR AN ANNOUNCEMENT, SOMETHING LIKE THAT, IN ADDITION TO THE NOTIFICATION ISSUE OF A PRESS RELEASE, THERE'S JUST ONE COMING OUT, THERE HAS TO BE ATTRIBUTION TO CIRM. AND THERE IS

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LANGUAGE THAT IS SUGGESTED THAT SAYS THIS RESEARCH IS MADE POSSIBLE BY A CIRM-FUNDED GRANT NUMBER, AND THERE'S EXEMPLARY LANGUAGE IN THE REGULATION.

CHAIRMAN ROTH: SO THERE IS ATTRIBUTION.

DR. LOVE: THAT'S GOOD TO HEAR. I THINK WHAT BOB IS DESCRIBING IS KIND OF BEST PRACTICE. IN REALITY, ANY COMPANY THAT TAKES OUR RESEARCH SHOULD BE INTERESTED IN MAINTAINING A QUALITY RELATIONSHIP WITH CIRM. BUT I THINK TO DUANE'S POINT, WE'VE REALLY TRIED TO SET THIS UP TO BE FRIENDLY TO COMPANIES, TO NOT TRY TO HAVE A HUGE AX OVER YOUR HEAD. THERE IS AN EXPECTATION, I THINK, THAT COMPANIES WILL FOLLOW A BEST PRACTICE IN TERMS OF COMMUNICATING WITH US, GIVING US A HEADS UP, AND BEING RECEPTIVE TO WHAT WE HAVE TO SAY IN TERMS OF LOOKING AT YOUR PRESS RELEASES BEFORE YOU SEND THEM OUT.

MR. EARP: I THINK IT'S REALLY IMPORTANT THAT CIRM HAVE AN APPROPRIATE POLICY, ONE, FOR SAFEGUARDING MATERIAL, INSIDE INFORMATION, MAKE SURE THAT EVERYBODY AT CIRM WHO GETS IN CONTACT WITH A PRESS RELEASE LIKE THAT UNDERSTANDS THE IMPLICATIONS OF IT. SECONDLY, THAT THERE'S A REALLY RESPONSIVE TURNAROUND BECAUSE COMPANIES ARE REALLY UNDER THE GUN WHEN THESE THINGS HAPPEN.

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THIRD, THERE HAS TO BE AN EXCEPTION FOR LEGALLY REQUIRED DISCLOSURES, THAT WE HAVE A VERY LIMITED PERIOD MEASURED IN HOURS TO MAKE A PUBLIC DISCLOSURE ON.

CHAIRMAN ROTH: JUST A HEADS UP TO PEOPLE WHO HAVEN'T DEALT WITH THIS, THAT THIS IS AN ENORMOUSLY COMPLEX THING. AND IF YOU TRY TO GET INVOLVED THERE, IT CAN BE DEVASTATING. YOU'RE GOING TO GET MATERIALS INSIDE INFORMATION IN SOME CASES.

MR. KLEIN: IN TERMS OF THAT ISSUE, I REALLY THINK WE SHOULD LOOK AT FORMALIZING A SYSTEM OF COMMUNICATING THIS TYPE OF HIGHLY CONTROLLED INFORMATION TO OUR COUNSEL OR A SPECIALIZED DESIGNATED OUTSIDE COUNSEL THAT WE RETAIN THAT IS USED FOR SEC ISSUES, ETC., SO THAT WE ISOLATE THE INFORMATION PROPERLY, AND THEN THAT COUNSEL IS DIRECTIVE AND CONTROLLING OF DISTRIBUTION.

CHAIRMAN ROTH: WE'LL GO TO WORK ON THIS.

MR. SHEEHY: I THINK THE PRESS OFFICER, I'M SURE, DON HAS SIGNED MILLIONS OF NDA'S. WE'VE GOT SOMEBODY FROM HARVARD COMING OVER. SO I'M SURE THAT HE'S VERY COMFORTABLE WITH THIS

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ENVIRONMENT AND IT SHOULDN'T BE A PROBLEM.

MR. TOCHER: I JUST HAVE ONE MORE THING. IF WE'RE TALKING ABOUT THE PROVISION THAT'S IN THE IP POLICY, WHICH CAN BE USED AS A MODEL, THAT ONE DOES NOT REQUIRE THAT THERE'S ANY PREAPPROVAL OR CO-SIGNOFF WITH THE CIRM COMMUNICATIONS OFFICER, JUST THAT THEY RECEIVE NOTICE OF IT 24 HOURS IN ADVANCE. THERE WERE MORE EXPANSIVE REQUIREMENTS, BUT THEY GOT NARROWED DOWN BY THE BOARD DURING THE ADOPTION PROCESS, SO THAT SHOULD BE CLEAR.

CHAIRMAN ROTH: WE'LL PICK THAT UP.

MR. ADAMS: I THINK I'M HEARING THAT THERE'S APPROVAL AND THEN THERE'S NOT APPROVAL. AND I WOULD THINK YOU GUYS WANT TO HAVE THE RIGHT TO APPROVE AND COME BACK.

CHAIRMAN ROTH: THERE'S --

MR. ADAMS: -- TEN KIDS, YOU'RE NOT GOING TO BE HAPPY CAMPERS.

CHAIRMAN ROTH: THERE'S A WIDE DEGREE OF CONVERSATION THAT WAS HAD ON THIS, BUT LET US GO BACK AND LOOK AND SPECIFICALLY BRING FORWARD THE POLICY THAT WE ENDED UP WITH, WHICH GOT A LOT OF DISCUSSION. IT WAS VERY SENSITIVE TO THE KINDS OF THINGS THAT WE'RE TALKING ABOUT.

DR. LOVE: IT WAS VERY SENSITIVE WITH

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THE UNIVERSITIES TOO. I REMEMBER A VERY HEATED DISCUSSION AMONG ACADEMICS ABOUT THIS.

CHAIRMAN ROTH: SO I'M GOING TO CLOSE THIS PART OF THE SESSION AND THANK THE PANELISTS. YOU GUYS DID AN ABSOLUTELY FANTASTIC JOB OF GIVING US A WHOLE BUNCH OF GREAT INPUT THAT I REALLY, ON BEHALF OF THE COMMITTEE AND ALL THE PEOPLE, THANK YOU FOR.

(APPLAUSE.)

CHAIRMAN ROTH: WE HAVE TWO OR ONE ORDER OF BUSINESS THAT I WANT TO TAKE CARE OF, AND THEN I WANT TO OPEN THE FLOOR FOR PUBLIC COMMENTS. THAT IS TO GO AHEAD AND AUTHORIZE THE HIRING OF PRICEWATERHOUSECOOPERS AS OUR CONSULTANT TO DO THE DILIGENCE IN TWO PARTS. ONE, TO SURVEY THE OTHER PROGRAMS THAT ARE OUT THERE IN LOANS AND GIVE US THE RELEVANT PIECES THAT THEY FIND THAT WE SHOULD BE LOOKING AT. GET RID OF ALL THE GARBAGE THAT WE CAN'T DEAL WITH, BUT THE THINGS THAT ARE REALLY CENTRAL TO WHAT WE'RE TRYING TO DO HERE, SO WE HAVE THAT DOCUMENT LOOKING AT THAT PIECE.

THE SECOND PART IS AT THE END OF THIS, WE WANT TO GIVE THEM INSTRUCTIONS ON SOME MODELING. AND THEY WOULD DO THE MODELING ON A RISK PROFILE ABOUT WHAT THE RETURNS MIGHT BE

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PROJECTED TO BE OUT IN THE FUTURE.

SO, LYNN, WE SURVEYED THREE COMPANIES TO DO THIS AND REQUESTED ORAL BIDS, AND THEY RANGED FROM, YOU KNOW, THE \$50,000 RANGE TO \$250,000, 350, TO DO THIS WORK. AND WE CHOOSE THE 50. SO WHAT I'D LIKE IS APPROVAL PENDING THE CIRM RESOLUTION OF THE ACTUAL CONTRACT WITH PRICEWATERHOUSE TO GET IT DONE. THEIR TIMEFRAME TO DO THIS WORK, BECAUSE THEY HAVE BEEN AT OUR MEETINGS AND FOLLOWING ALONG, IS FAIRLY SHORT, SO I THINK WE'LL HAVE IT AVAILABLE TO US IN MARCH. AND I'D LIKE TO HAVE A MEETING JUST AHEAD OF OUR NEXT ICOC MEETING TO FINALIZE AS MUCH AS WE CAN HERE, AND THEN GO INTO A JUNE MEETING FOR AN APPROVAL.

DR. LOVE: I WOULD BE HAPPY TO MAKE A MOTION. COULD WE MAKE THE MOTION IN TERMS OF UP TO A CERTAIN DOLLAR AMOUNT?

CHAIRMAN ROTH: FIFTY, NO MORE.

DR. LOVE: I WOULD MOVE THAT WE DO THIS.

CHAIRMAN ROTH: TED LOVE MAKES THE MOTION.

MR. KLEIN: I'LL SECOND.

CHAIRMAN ROTH: BOB SECONDS. ANY OTHER DISCUSSION?

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MR. KLEIN: DISCUSSION ON IT, I'D LIKE TO POINT OUT THAT ONE REASON I THINK THIS IS SUBSTANTIALLY LOWER THAN SOME OF THE OTHERS IS THAT THEY HAVE OFFERED TO CONTRIBUTE SOME SIGNIFICANT TIME OF THEIR PRINCIPALS TO MOVE THIS FORWARD. IT WAS POINTED OUT TO THEM WE'RE WORKING ON CONSTRAINED BUDGETS AND WANTED TO GET EACH OF THESE COMPANIES TO CONTRIBUTE WHATEVER THEY COULD. SO THAT'S BEEN VERY HELPFUL IN MOVING IT ON. DOESN'T -- LET US NOT BELIEVE THIS TAKES US TO A MODELING LEVEL THAT REALLY CAN BE IMPLEMENTED. THIS IS A CONCEPTUAL MODELING LEVEL ONLY. THIS IS A LIMITED SCALE. THIS IS INCREMENTAL PROCESS.

CHAIRMAN ROTH: OTHER DISCUSSION?  
PUBLIC COMMENT ON THE MOTION?

MR. SIMPSON: IT SOUNDS LIKE THE RIGHT THING TO ME. ARE YOU COVERED ON THE AGENDA ON THAT?

CHAIRMAN ROTH: ON THE AGENDA --

MR. SIMPSON: I'M NOT SURE. I MAYBE SHOULDN'T BRING THAT UP.

MR. KLEIN: THIS IS JUST A RECOMMENDATION TO THE PRESIDENT AND THE EXECUTIVE COMMITTEE.

MR. SIMPSON: PRESIDENT IS AUTHORIZED TO

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DO IT. UNDER A HUNDRED THOUSAND, HE CAN JUST DO IT.

MR. KLEIN: THE PRESIDENT IS AUTHORIZED, BUT WE WANTED TO --

MR. SIMPSON: SOUNDS LIKE A GREAT IDEA.

MR. KLEIN: -- FORMALLY HAVE DISCLOSURE WHICH WE THOUGHT YOU AMONG OTHERS WOULD LIKE.

CHAIRMAN ROTH: ALL IN FAVOR. WE GOT TO DO THE ROLL CALL.

MS. KING: FLOYD BLOOM.

DR. BLOOM: YES.

MS. KING: BOB KLEIN.

MR. KLEIN: YES.

MS. KING: TED LOVE.

DR. LOVE: YES.

MS. KING: ED PENHOET.

DR. PENHOET: YES.

MS. KING: DUANE ROTH.

CHAIRMAN ROTH: YES.

MS. KING: JEFF SHEEHY.

MR. SHEEHY: YES.

MS. KING: THAT MOTION CARRIES.

CHAIRMAN ROTH: THANK YOU. PUBLIC

COMMENT?

MR. KLEIN: WE HAD A SECOND PART OF



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THAT, THAT YOU DESCRIBED WHICH WAS TO TALK ABOUT THE MODEL, THE MODELING. ARE YOU GOING TO TALK ABOUT THAT NOW?

CHAIRMAN ROTH: WELL, I THOUGHT YOU BASICALLY COVERED THAT. WHAT WE WANT TO DO NOW IS WORK TOWARDS TAKING THE INPUT WE HAD TODAY, START TO WRITE SOME THINGS DOWN, AND THEN ASK THEM TO MODEL VARIOUS PORTFOLIOS IN TERMS. ONE OF THE THINGS WE'D LOOK AT IS HOW MANY COMPANIES ACTUALLY FAIL WHERE THEY JUST COMPLETELY GO AWAY VERSUS THE IP LIVES ON. SO THAT'S ONE PIECE OF INFORMATION WE COULD DO.

THE SECOND IS WHAT KIND OF AN ROI WOULD YOU HAVE IF THEY WERE COMPANY LOANS AND 70 PERCENT WERE REPAID, 80 PERCENT, WHATEVER THE NUMBER YOU WANT TO CHOOSE, BUT LOOK AT THE SENSITIVITY OF THAT TO SEE WHAT THIS MIGHT RESULT IN GIVEN SOME HYPOTHETICALS.

MR. KLEIN: I THINK ONE OF THE OTHER THINGS WE DISCUSSED TODAY IS WHAT KIND OF INTEREST RATES DO WE NEED TO HAVE A CAPITAL PRESERVATION MODEL GIVEN CERTAIN DIFFERENT LOSS ASSUMPTIONS AND DIFFERENT ASSUMPTIONS ON WHAT PORTION OF THE LOANS WOULD REPAY ONLY CAPITAL AS VERSUS CAPITAL AND INTEREST SO THAT WE CAN HAVE SOME PARAMETERS IN

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TERMS OF OUR RECOMMENDATIONS TO THE STAFF.

CHAIRMAN ROTH: OKAY. SO WE'LL TRY TO WORK WITH THE PWC PEOPLE AND GET THEM TO MODEL A WIDE RANGE. THEY'RE GOING TO HAVE A LOT OF INPUT FOR US ON HOW TO DO THIS. SO LET'S HAVE THE STAFF WORK WITH THEM AND SEE WHAT WE COME UP WITH.

PUBLIC COMMENT IN GENERAL.

MR. SIMPSON: JOHN SIMPSON FROM THE FOUNDATION FOR TAXPAYER AND CONSUMER RIGHTS. I'D LIKE TO THANK ALL THE INDUSTRY REPRESENTATIVES FOR SHOWING UP AND SPEAKING AND SHEDDING A LOT OF LIGHT ON WHAT I STILL THINK IS A VERY COMPLEX ISSUE. AND I THINK AT THE END OF THE DAY, OUT OF ALL OF THIS, SOMETHING WILL EMERGE THAT PROBABLY WILL BENEFIT THE TAXPAYERS AND RESIDENTS AND CITIZENS OF CALIFORNIA AS WELL AS INDUSTRY.

BUT MY TAKE-AWAY RIGHT NOW IS THAT THERE MAY BE A DANGER OF TRYING TO DO TOO MUCH TOO FAST AND TO INDIVIDUALLY TAILOR TOO MANY OF THE LOAN PROGRAMS.

REFLECTING BACK AT WHAT DR. LOVE SAID, I THINK IT'S IMPORTANT THAT WHAT EMERGES HERE BE RELATIVELY STRAIGHTFORWARD, TRANSPARENT, AND THAT MAY MEAN IT WON'T WORK FOR EVERYBODY OUT THERE, BUT I THINK THAT'S A REAL THING AS THIS GOES

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FORWARD. I DON'T KNOW ENOUGH YET ABOUT WHAT'S GOING TO EMERGE FROM THIS TO BE ABLE TO SAY THAT'S GOOD, THAT'S BAD, BUT THE PROCESS THAT IS MAKING THIS HAPPEN IS GOOD AND IS EXACTLY THE WAY PUBLIC POLICY SHOULD BE MADE. I THANK YOU ALL FOR THAT.

CHAIRMAN ROTH: OTHERS IN THE AUDIENCE?

MR. BENEDICT: I HAVE A QUESTION. MARK BENEDICT. I'M HEAD OF THE LA JOLLA INCUBATOR FOR PHIZER, AND I JUST STARTED A COUPLE WEEKS AGO. DUANE, NICE TO BE HERE.

SO THIS PROCESS SOUNDS VERY GOOD, IT'S BEING VETTED, I THINK, VERY TRANSPARENTLY. WHEN DO YOU THINK THE LOAN PROGRAM WILL BEGIN?

CHAIRMAN ROTH: I THINK BOB REALLY SAID IT. I THINK OUR GOAL SHOULD BE TO HAVE THIS TO THE STATE FOR REVIEW NO LATER THAN JUNE TO START THAT, AND THEN THERE'S A PUBLIC COMMENT PART, BUT IT WOULD BE READY IN THE FALL FOR THE DISEASE TEAM GRANTS, IF WE DECIDED TO USE IT AT THAT TIME. SO WE'LL BE MEETING IN MARCH. THAT WILL PROBABLY BE OUR LAST FACE-TO-FACE MEETING, AND THEN THE REST OF IT WE'LL EITHER DO THROUGH CONFERENCE CALLS OR JUST IN PUBLIC POSTINGS OF OUR INFORMATION, SO WE CAN GET A LOT OF REACTION TO WHAT WE HAVE.

BUT I THINK BASED ON WHAT WE GOT TODAY,

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WHAT WE'VE HAD PREVIOUSLY, WE CAN START WRITING SOME THINGS AND FILLING OUT THIS DOCUMENT, WHICH SCOTT IS GOING TO HELP, AND LYNN ARE GOING TO START GETTING THIS THING DRAFTED SO THAT WE HAVE SOME THINGS TO WORK OFF THE NEXT MEETING IN MARCH THAT MAYBE WILL REFLECT MUCH OF THE COMMENT WE'VE GOTTEN IN SAN FRANCISCO WITH THE CAPITAL PROVIDERS AND HERE.

LAST THING, WE REALLY LIKE, AFTER YOU THINK ABOUT IT AND SLEEP ON IT, IF YOU'VE GOT ANY KIND OF INPUT, LYNN WILL GIVE YOU HER CARD, AND MAKE SURE YOU GET IT TO HER, AND SHE CAN CERTAINLY EMBELLISH SOME OF THE THINGS WE TALKED ABOUT TODAY.

MR. KLEIN: DON'T WORRY ABOUT CONSTRAINING YOURSELF OR HAVING YOUR CHIEF FINANCIAL OFFICER CONSTRAIN THEMSELVES. LYNN IS A HARVARD MBA, JD WITH AN ACCOUNTING AGREE, SO WHATEVER YOU THROW AT HER, SHE'LL HANDLE EASILY.

CHAIRMAN ROTH: THANK YOU ALL FOR BEING HERE.

MR. REED: ALSO SAN FRANCISCO HAD A COMMENT. THIS IS DON REED. I HAD TWO COMMENTS. ONE, I BELIEVE THERE WAS A GOVERNMENT RELATIONS PERSON, IS THAT CORRECT? IF SO, I THINK IT WOULD

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BE GREAT IF THE SENATORS WHO ARE LIKELY TO BE INTERESTED IN THIS AND MIGHT CONSIDER BRINGING NEW LEGISLATION IN THE NEXT FEW MONTHS, IF THEY SHOULD BE BROUGHT UP TO SPEED WITH WHAT WE'RE WORKING ON. THE ONE PART THAT I THINK I HEARD MENTIONED AGAIN IS THE INDUSTRY STANDARD OF PLAN OF ACCESS WHICH SOUNDS GOOD, BUT THEY REGARD THAT AS TOO VAGUE. I THINK IT WOULD BE GOOD IF WE HAD SOMETHING IN THERE ABOUT AS THE THINGS CHANGE IN THE YEARS AHEAD, JUST SOME CLARIFICATION, THAT WOULD BE VALUABLE.

SECONDLY, IF I UNDERSTAND CORRECTLY, THAT A PRODUCT LOAN, IF THE PRODUCT FAILS, THEY DO NOT HAVE TO PAY IT BACK; IS THAT CORRECT?

CHAIRMAN ROTH: THAT'S WHAT WAS DISCUSSED, DON.

MR. REED: THANK YOU VERY MUCH.

CHAIRMAN ROTH: LET ME JUST COMMENT ON THE LEGISLATORS. BOB AND I PLAN TO START BRIEFING THE SENATE AND THE ASSEMBLY IN ADVANCE OF OUR MARCH MEETING ABOUT THIS PROGRAM TO BE AS PROACTIVE AS WE POSSIBLY CAN TO MAKE SURE THEY UNDERSTAND THIS IS NOT A CLASSICAL LOAN PROGRAM. WE'RE NOT A BANK, BUT WE'RE USING THIS AS A WAY TO FUND FUTURE IDEAS BY RECYCLING THE MONEY.

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MR. REED: THE ANSWERS THAT WERE COMING UP ARE VERY GOOD. THEY'RE A BALANCING OF ALL THE DIFFERENT NEEDS OF THE PLAYERS INVOLVED, BUT I ALSO AM VERY AWARE, AS YOU ARE, THAT THE FINANCIAL SITUATION OF THE STATE IS DIFFICULT. AND THERE WILL BE THOSE WHO WILL LOOK TO US AS THE SOURCE OF FUNDING, AND WE NEED TO MAKE SURE THAT WE DON'T WANT TO HAVE THAT ANY WAY INTERFERE WITH OUR GREAT FUTURE. AND I THINK WHAT YOU ARE TALKING ABOUT IS EXACTLY WHAT'S NEEDED. THANK YOU.

MR. KLEIN: THAT MIGHT BE A HIGH RISK LOAN FOR US.

CHAIRMAN ROTH: ANYBODY ELSE IN SAN FRANCISCO? THANK ALL THE COMMITTEE MEMBERS AND THANK THE PUBLIC AND THANK ESPECIALLY OUR INDUSTRY REPRESENTATIVES.

(THE MEETING WAS THEN ADJOURNED AT 03:57 P.M.)

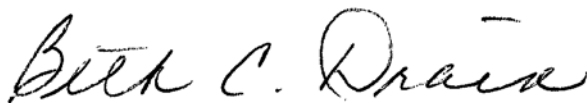
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REPORTER' S CERTIFICATE

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

8950 VILLA LA JOLLA DRIVE  
SUITE A124  
LA JOLLA, CALIFORNIA  
ON  
TUESDAY, FEBRUARY 19, 2008

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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