#### BEFORE THE BIOTECH LOAN 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

LOCATI ON:	CROWNE PLAZA HOTEL
	1177 AI RPORT BOULEVARD
	BURLINGAME, CALIFORNIA

DATE:	JANUARY 16,	2008
	11 A.M.	

REPORTER:	BETH	C.	DRAIN,	CSR
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1	SAN FRANCISCO, CALIFORNIA; WEDNESDAY, JANUARY 16, 2008
2	11 A.M.
3	
4	CHAIRMAN ROTH: GOOD MORNING. MY NAME IS DUANE
5	ROTH, AND I'M THE CHAIR OF THE LOAN TASK FORCE
6	SUBCOMMITTEE. AND I WOULD LIKE TO CALL THE MEETING TO
7	ORDER WITH A ROLL CALL OF THE TASK FORCE MEMBERS.
8	MS. KING: FLOYD BLOOM.
9	DR. BLOOM: HERE.
10	MS. KING: MARCY FEIT.
11	MS. FEIT: HERE.
12	MS. KING: MICHAEL GOLDBERG. BOB KLEIN. TED
13	LOVE.
14	DR. LOVE: HERE.
15	MS. KING: ED PENHOET.
16	DR. PENHOET: HERE.
17	MS. KING: DUANE ROTH.
18	CHAIRMAN ROTH: HERE.
19	MS. KING: JEFF SHEEHY. OSWALD STEWARD.
20	DR. STEWARD: HERE.
21	CHAIRMAN ROTH: THANK YOU. BEFORE WE GET
22	STARTED, I THOUGHT IT WOULD BE USEFUL FOR OUR GUESTS,
23	WHICH WE'LL INTRODUCE IN A MINUTE, TO JUST GO THROUGH THE
24	BACKGROUND AND SCOPE OF WHAT THIS TASK FORCE IS CHARGED
25	WITH DOING. OUR MISSION IS TO DEVELOP A PROGRAM, A
	3

POLICY, TO GOVERN LOANS GIVEN OUT BY CIRM. 1 THE LOAN PROGRAM WAS INCLUDED IN PROP 71, AND 2 THE WAY WE PROCEEDED WITH PROP 71 IS TO FIRST GET THE 3 4 GRANT POLICIES IN PLACE AND NOW ARE PROCEEDING TO THE 5 LOAN POLICY. THE INTENT OF THE LOAN PROGRAM WAS REALLY 6 THOUGHT OF AS A PRODUCT LOAN AS OPPOSED TO MAYBE A BASIC 7 RESEARCH LOAN OR FACILITY LOAN IN CONTRAST. SO WHILE 8 9 MUCH OF THE DISCUSSION IS GOING TO BE AROUND COMPANIES. WE BELIEVE THAT THERE MAY BE ALSO APPLICATION FOR THE 10 LOAN PROGRAM IN CERTAIN RESEARCH CENTERS THAT ARE GETTING 11 12 MORE INVOLVED IN TRANSLATIONAL MEDICINE WHERE THEY MAY, 13 IN FACT, DO EARLY PRODUCT DEVELOPMENT AS OPPOSED TO JUST 14 TECHNOLOGY TRANSFER. SO THAT IS A BRIEF BACKGROUND. 15 THE TASK FORCE HAD ITS FIRST MEETING ON 16 DECEMBER 11TH, AND WE AT THAT POINT WORKED OUT OUR PLAN, OUR WORK PLAN, SO THAT WE COULD HAVE SOMETHING TO REPORT 17 TO THE ICOC BOARD AT OUR MARCH MEETING IN SACRAMENTO. 18 S0 AS PART OF THAT WORK PLAN, WE AGREED THERE WERE A NUMBER 19 OF STAKEHOLDERS THAT WE REALLY NEEDED TO GET INPUT FROM. 20 AND THE FIRST WOULD BE THE CAPITAL PROVIDERS WHO FUND 21 MOST OF THIS WORK HISTORICALLY OVER THE PAST 25 OR 30 22 AND SO WE WANTED TO TALK WITH THEM TO GET THEIR 23 YEARS. COMMENTS ON POLICIES AND PROCEDURES THAT MAY IMPACT THEM 24 25 AS PEOPLE WHO FUND SOME OF THESE ACTIVITIES DOWN THE

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D.

THE THINKING IN ICOC AND, IN FACT, IN MANY OF 2 OUR DISCUSSIONS IS THAT OUR MISSION IS TO FUND THE GAPS 3 WHERE MONEY IS NOT READILY AVAILABLE TO SUPPORT 4 5 ADVANCEMENT OF THESE PRODUCT IDEAS. SO WE WILL NOT BE DEFINING THAT IN THIS TASK FORCE, BUT CIRM WILL, IN FACT, 6 TRY TO HELP IDENTIFY THOSE GAPS AND THEN PUT OUT REQUESTS 7 FOR APPLICATIONS ACCORDINGLY. SO WE WON'T DEAL WITH THE 8 9 RFA PROCESS. WE WILL NOT DEAL WITH THE AMOUNT OF MONEY THAT MIGHT BE AVAILABLE IN THE LOAN PROGRAM VERSUS THE 10 GRANT PROGRAM. 11 12 SO FROM THAT, WE NOW ARE IN OUR FIRST INPUT

13 MEETING, WHICH IS WITH THE CAPITAL PROVIDERS, AND WE'LL 14 INTRODUCE THEM. THE NEXT MEETING WILL BE WITH INDUSTRY, 15 AND IT WILL BE SCHEDULED, IF IT ISN'T ALREADY, IN 16 FEBRUARY IN SAN DIEGO. AND WE'LL ASK SIMILARLY A NUMBER OF THE COMPANIES OR INTERESTED PARTIES THAT MAY, IN FACT, 17 BE APPLYING FOR THESE LOANS TO GIVE US SOME INPUT AT THE 18 SAN DIEGO MEETING. AND THAT WILL BE SOMETIME IN 19 20 FEBRUARY.

INFORMALLY WE WILL BE DISCUSSING THE LOAN
PROGRAM WITH LEGISLATORS AS WE MOVE ALONG SORT OF ONE ON
ONE. IT'S DIFFICULT TO GET THEM ALL IN ONE PLACE, BUT WE
WANT TO MAKE SURE WE KEEP THE LEGISLATORS ADVISED ABOUT
WHAT WE'RE DOING AND THE INTENT OF THIS POLICY SO THAT

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THERE'S NO PREJUDGMENT BEFORE THEY ACTUALLY HEAR ABOUT
 THE WORK WE'RE TRYING TO DO.

3 I WANT TO JUST BRIEFLY ACKNOWLEDGE THAT WE DO
4 HAVE A GROUP IN SAN DIEGO ON THE PHONE, AND THEY WILL BE
5 GIVING US SOME INPUT DURING THE PUBLIC COMMENT SECTIONS,
6 WHICH WE'LL ASK FOR ON AN ONGOING BASIS THROUGHOUT TODAY.

SO LET ME MAKE SURE THAT EVERYONE KNOWS THERE 7 ARE SOME DOCUMENTS IN THE BACK OF THE ROOM. THERE'S A 8 DOCUMENT, A PARTICULARLY IMPORTANT ONE, CALLED THE "LOAN 9 NARRATIVE DOCUMENT" THAT WE PUT TOGETHER AS A STARTING 10 POINT TO INVITE DISCUSSION ON SOME OF THE PRELIMINARY 11 12 THOUGHTS. I WANT TO ACKNOWLEDGE LYNN HARWELL, WHO DID A 13 LOT OF WORK ON THIS, AND SCOTT TOCHER, BOTH WHO ARE 14 STAFFING THE PROGRAM. THEY DID AN EXCELLENT JOB OF 15 HELPING ME ELICIT COMMENTS AND TO GET THIS DRAFT PUT 16 TOGETHER, SO REALLY WANT TO ACKNOWLEDGE THEM. WE FOUND IT TO BE A VERY USEFUL DOCUMENT IN SOLICITING COMMENTS 17 FROM PEOPLE THAT COULD NOT BE HERE TODAY, BUT WANTED TO 18 BE HEARD NEVERTHELESS. SO WE HAVE THOSE. 19

ALSO IN THE BACK OF THE ROOM ARE A LIST OF THE PEOPLE WHO WILL BE PRESENTING TO US TODAY SO THAT YOU HAVE THE BACKGROUNDS ON THEM. WE ARE GRATEFUL THAT THEY COULD TAKE THE TIME TO COME ON THEIR OWN TO BE WITH US TODAY AND DO THAT.

25

I GUESS I'M GOING TO STOP AT THAT POINT AND SEE

6

1	ARE THERE ANY OTHER COMMITTEE MEMBERS THAT HAVE COMMENTS
2	OR QUESTIONS? IF NOT, LET'S MOVE RIGHT INTO THE PROGRAM.
3	AND LET'S BEGIN WITH GREG, WHO IS GOING TO GREG HAS
4	AGREED TO GIVE US SOME BACKGROUND ABOUT THE VENTURE
5	PERSPECTIVE FROM HIS POINT OF VIEW ON FUNDING AND WHERE
6	SOME OF THE GAPS ARE. I FOUND IT VERY USEFUL IN OUR
7	DIALOGUE ON THE PHONE, AND HE MENTIONED THAT HE HAD A
8	POWERPOINT PRESENTATION THAT HE GIVES REGULARLY. SO,
9	GREG, WE REALLY APPRECIATE YOUR TAKING THE TIME TO DO
10	THIS TODAY.

MR. BONFIGLIO: HAPPY TO DO IT. I THINK WE 11 12 NEED TO TAKE THE GATE OFF THE FRONT OF THAT PROJECTOR. SO WHAT I'M GOING TO TRY AND DO IS PUT IN CONTEXT THE 13 14 CURRENT FUNDING ENVIRONMENT FOR REGENERATIVE MEDICINE 15 COMPANIES AND ALSO TALK A LITTLE BIT ABOUT WHAT THE 16 VENTURE COMMUNITY IS LOOKING FOR AND WHAT WE'RE 17 INTERESTED IN AND WHAT KIND OF TERMS WE'RE ASKING FOR WHEN WE COME TO FUND A REGENERATIVE MEDICINE COMPANY JUST 18 19 TO GIVE YOU A SENSE OF WHERE WE ARE.

20 SO HERE'S THE AGENDA. I'LL TALK A LITTLE BIT 21 ABOUT WHO -- WHAT MY FUND IS, VERY LITTLE, SINCE THERE'S 22 A BIO HERE AND YOU CAN PICK THAT UP, AND WE'LL JUMP RIGHT 23 INTO WHAT IS THE FUNDING ENVIRONMENT.

24I WANT TO PUT IT IN A HISTORIC PERSPECTIVE FOR25YOU BECAUSE I THINK IT'S IMPORTANT TO UNDERSTAND HOW WE

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GOT TO WHERE WE ARE RIGHT NOW. WE'RE IN A POSITION RIGHT 1 NOW WHERE THE VENTURE COMMUNITY IS RE-EMERGING INTO THE 2 FIELD AND STARTING TO SHOW SOME INTEREST AND WILLINGNESS 3 4 TO FUND COMPANIES, BUT THAT HASN'T BEEN TRUE FOR THE LAST 5 FOUR OR FIVE YEARS. AND THE REASON FOR THAT, THAT'S PRETTY EASY TO EXPLAIN. I HOPE I CAN PUT THAT IN CONTEXT 6 THEN I'M GOING TO SPEND A LITTLE TIME TALKING 7 FOR YOU. ABOUT THE CURRENT MARKET DYNAMICS. WHY IS IT THAT THE 8 9 VENTURE COMMUNITY HAS REAWOKEN TO THE OPPORTUNITY, WHAT'S HAPPENING, AND THEN WE'LL GET INTO WHAT I THINK MOST OF 10 YOU ARE INTERESTED IN ON A MORE GRANULAR LEVEL. WHAT ARE 11 12 THE VENTURE COMMUNITY LOOKING FOR AND WHAT KIND OF 13 TYPICAL TERMS ARE THERE?

14 SO REAL QUICKLY, MY FUND IS FOCUSED SOLELY ON 15 REGENERATIVE MEDICINES. ONE OF THE REASONS THAT WE'RE 16 HERE TALKING WITH YOU IS THIS IS THE SOLE FOCUS OF THE FUND. WE SPEND ALL OF OUR TIME AND ENERGY LOOKING AT 17 REGENERATIVE MEDICINE COMPANIES AND TALKING WITH 18 COMPANIES ABOUT FUNDING STRUCTURES. SO I THINK I'M IN A 19 REASONABLY GOOD POSITION TO TRY AND HELP YOU UNDERSTAND 20 WHAT THE VENTURE COMMUNITY THINKS ABOUT WHEN THEY LOOK AT 21 REGENERATIVE MEDICINE COMPANIES. I'D BE HAPPY TO TALK TO 22 ANY OF YOU IN DETAIL ABOUT THE FUND LATER IF YOU WOULD 23 LIKE, BUT PROBABLY NOT WHAT WE OUGHT TO BE TALKING ABOUT. 24 I'M SURE THAT MANY OF YOU ARE FAMILIAR WITH THE 25

8

GARTNER HYPE CYCLE. THIS IS A THEORY THAT'S BEEN 1 POSTULATED BY THE GARTNER FOLKS THAT PRETTY ACCURATELY, 2 HONESTLY, DESCRIBES THE ADOPTION CURVE FOR ANY NEW 3 4 TECHNOLOGY. THE THEORY GOES THAT WHEN NEW TECHNOLOGY IS 5 BORN, YOU HAVE THIS TECHNOLOGY TRIGGER. THE TECHNOLOGY TRIGGER TYPICALLY, IF THE TECHNOLOGY IS COMPELLING, IS 6 FOLLOWED BY A HUGE RUN-UP IN ENTHUSIASM AND FROTH AROUND 7 THE TECHNOLOGY. YOU HIT THE PEAK OF INFLATED 8 9 EXPECTATIONS WHERE THE TECHNOLOGY IS GOING TO CHANGE THE WORLD AND PEOPLE EXPECT IT TO HAPPEN NOW. REALITY THEN 10 SETS IN, AND IT BECOMES APPARENT THAT THE TECHNOLOGY IS 11 NOT GOING TO CHANGE THE WORLD WITHIN THE NEXT 30 DAYS, 12 13 AND YOU DROP DRAMATICALLY BACK DOWN TO THE TROUGH OF 14 DISILLUSIONMENT, AND THEN THE REAL WORK BEGINS, AND YOU 15 BEGIN TO BUILD OUT AND FOLLOW A PATH THAT TAKES YOU UP 16 ONTO THE BENEFITS THAT THE TECHNOLOGY OFFERED IN THE FIRST INSTANCE. 17 IT'S BEEN PRETTY CLEAR THAT MANY NEW 18

19 TECHNOLOGIES THAT FOLLOWED THIS PATH -- I SEE A LOT OF
20 FACES AROUND HERE, I THINK, WHO HAVE LIVED OR GROWN UP OR
21 SPENT TIME IN SILICON VALLEY OVER THE YEARS. WE'VE ALL
22 SEEN THIS CYCLE. WHETHER IT WAS THE EARLY ADOPTION OF
23 THE PC, WHETHER IT WAS THE INTERNET, IT'S A PRETTY
24 ACCURATE DESCRIPTION OF HOW TECHNOLOGY, NEW TECHNOLOGIES,
25 ARE ADOPTED IN THE MARKET OR ENTERED INTO THE MARKET.

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1	AND MY THEORY IS, AND I HAVE SOME DATA FOR YOU, THAT
2	REGENERATIVE MEDICINES FOLLOW THIS VERY CYCLE, AND THAT
3	WE ARE NOW COMING OUT OF THE TROUGH OF DISILLUSIONMENT,
4	AND WE ARE ON THE SLOPE OF ENLIGHTENMENT.
5	MR. ROTH: SOMEBODY ONCE DESCRIBED THIS FOR ME,
6	GREG, AS THE MARRIAGE CYCLE.
7	MR. BONFIGLIO: THERE ARE MANY PARALLELS IN
8	LIFE. SO LET ME TALK ABOUT THE FIRST PART OF THE CYCLE.
9	THIS IS THE FIRST PART OF THE GARTNER HYPE CYCLE. THIS
10	IS THE FUNDING ENVIRONMENT FROM 1985 TO 2002. DURING
11	THAT PERIOD CELL THERAPIES AND TISSUE-ENGINEERED PRODUCTS
12	WERE INCREDIBLY HOT, AND HONESTLY IT WAS MORE TISSUE
13	ENGINEERING AT THAT TIME THAN IT WAS CELL THERAPIES. IT
14	WAS A TIME WHEN THE VENTURE COMMUNITY WAS VERY
15	AGGRESSIVELY PURSUING THE TECHNOLOGY AND FUNDING
16	COMPANIES ON A VERY AGGRESSIVE BASIS. WE WERE FUNDING
17	RESEARCH PROJECTS, WE WERE FUNDING GRAND BUSINESS
18	VISIONS. ADVANCED TISSUES SCIENCES IS PROBABLY THE
19	POSTER CHILD FOR THAT ERA.
20	REALIZE, OF COURSE, THAT THIS ALSO COINCIDES
21	WITH THE RUN-UP IN THE STOCK MARKET. AND AT THAT TIME
22	THERE WERE A WHOLE SLEW OF COMPANIES THAT WERE FORMED WHO
23	ARE NO LONGER AROUND. AGAIN, ADVANCED TISSUE SCIENCES,
24	ATS, IS THE POSTER CHILD THERE. ATS WAS A
25	TISSUE-ENGINEERED COMPANY THAT WAS GOING TO ENGINEER
	10

EVERY PART OF THE HUMAN BODY AND MAKE IT AVAILABLE FOR
 THERAPEUTICS. THEY ULTIMATELY ENGINEERED ONE PRODUCT,
 BUT THEY RAISED OVER \$600 MILLION BETWEEN PUBLIC AND
 PRIVATE SECTOR. THEY WENT PUBLIC IN THE MID-'90S AND HIT
 A MARKET CAP OF \$1.4 BILLION. THEY WERE BANKRUPT A
 COUPLE YEARS LATER.

ATS, CURIS, SYSTEMIX, BRESAGEN, ORGANOGENESIS,
THESE ARE ALL NAMES THAT WERE VERY HOT COMPANIES BACK IN
THAT TIMEFRAME. I KNOW MANY OF YOU LIVED THROUGH IT, SO
YOU RECOGNIZE THOSE NAMES AND KNOW THE STORY PRETTY WELL.
THERE WERE A FEW PRODUCTS PRODUCED DURING THAT ERA:
CARTICEL, APLIGRAF, DERMAGRAF, MOSTLY SKIN PRODUCTS OR
CARTILAGE-BASED PRODUCTS.

14 THE MARKET PEAKED IN 2000. THERE WERE 3,000 15 JOBS, 73 COMPANIES, AND YOU KNOW YOU HAVE HIT THE TOP OF 16 THAT PEAK WHEN TIME MAGAZINE SAYS THAT TISSUE ENGINEERING IS THE NO. 1 JOB IN THE UNITED STATES. OF COURSE, THE 17 MARKET COLLAPSED. YOU WILL ALL PAINFULLY RECALL MARCH 18 2000 WHEN THE STOCK MARKET MADE ITS FIRST CORRECTION AND 19 THEN IT STARTED COMING DOWN FROM THERE. THE I.T. MARKET, 20 OF COURSE, COLLAPSED DRAMATICALLY. THE BIOTECH SECTOR 21 DID NOT FALL QUITE AS FAR BECAUSE IT HADN'T COME UP QUITE 22 AS FAR, BUT ADVANCED TISSUE SCIENCES, ORGANOGENESIS, A 23 NUMBER OF THOSE COMPANIES FILED FOR BANKRUPTCY. ALL OF 24 25 THEM HAVE BEEN RESTRUCTURED AND RECAPPED. SOME OF THEM

11

ARE STILL AROUND. ATS IS NO LONGER AROUND. IT'S BEEN
 REBORN AS THERAGEN, AND THERE'S ANOTHER COMPANY THAT'S
 WORKING WITH THEIR PRODUCTS.
 OF COURSE, YOU HAD THE POLITICAL CONTROVERSY

AROUND HUMAN EMBRYONIC STEM CELLS. WHEN YOU HAVE SENATOR
BROWNBACK GETTING UP ON THE FLOOR OF THE SENATE AND
LIKENING SCIENTISTS WORKING IN THE FIELD WITH THE DEVIL
INCARNATE, YOU KNOW YOU'VE KIND OF RUN INTO A BUZZ SAW.
THAT CERTAINLY PUT THE BRAKES ON THE MARKET A LITTLE.
I'M SURE YOU'RE ALL PAINFULLY AWARE OF THAT AS WELL.

AGAIN, ATS, CURIS, THESE COMPANIES ALL WENT AWAY. AS A RESULT OF THIS, THE VENTURE COMMUNITY WITHDREW THEIR SUPPORT FROM THE SECTOR. OVERALL FUNDING FROM THE VENTURE COMMUNITY FOR HEALTHCARE REMAINS STRONG, BUT REGENERATIVE MEDICINE COMPANIES GOT UNDER 2 PERCENT OF THE CAPITAL THAT WAS BEING PROVIDED TO THE BIOTECH SECTOR AT THAT TIME.

WHY IS THAT? WELL, ACCEPTED WISDOM WITHIN THE 18 VENTURE COMMUNITY IS THAT IF YOU HAVE A NUCLEAR BOMB GO 19 OFF IN YOUR PORTFOLIO IN ONE SECTOR, YOU TEND TO STAY 20 AWAY FROM IT. WE'RE IN A BUSINESS OF INVESTING THE FUND 21 THAT WE'RE CURRENTLY INVESTING, BUT WE'RE ALSO IN THE 22 BUSINESS OF RAISING OUR NEXT FUND. AND THAT'S SOMETHING 23 THAT YOU DO ALL THE TIME. AND IF YOU HAVE A COLLAPSE OR 24 25 A FAILURE IN YOUR EXISTING FUND, IT'S GOING TO BE VERY

12

HARD TO PERSUADE YOUR INVESTORS TO PROVIDE YOU MONEY FOR 1 YOUR NEXT FUND. SO IF YOU' VE INVESTED HEAVILY IN 2 ADVANCED TISSUE SCIENCES IN THE TISSUE ENGINEERING 3 4 SECTOR, FOR INSTANCE, AND THAT COMPANY FILES FOR 5 BANKRUPTCY AND YOU' VE LOST ALL OF YOUR MONEY, YOU' VE NOW HAD A NUCLEAR BOMB GO OFF IN YOUR PORTFOLIO. YOU 6 TYPICALLY ARE PUTTING A BIG RED CROSS ON YOUR DOOR WHEN 7 SOMEBODY COMES IN WITH A REGENERATIVE MEDICINE BUSINESS 8 9 THAT IS PRECISELY WHAT HAPPENED. PLAN.

HOW DID THE MARKET BEGIN TO CHANGE? YOU GUYS 10 ARE ALL FAMILIAR WITH THIS. AND I APOLOGIZE FOR SOME OF 11 THE GRAPHICS HERE. PROP 71, WHICH, OF COURSE, YOU ALL 12 13 KNOW WELL, GALVANIZED THE WORLD. I TRAVEL ALL OVER THE 14 WORLD, AND I SEE A NUMBER OF FOLKS WHO FOLLOWED ME ALONG 15 OR WERE WITH ME ON A LOT OF THOSE TRIPS. PROP 71 REALLY 16 HAS CHANGED THE WEATHER IN THE WORLD IN TERMS OF THE FUNDING THAT'S PROVIDED AND THE ACTIVITY AROUND 17 REGENERATIVE MEDICINES, AND THAT HAS TRIGGERED A 18 FUNDAMENTAL CHANGE. ALSO THE POLITICAL RISK IS 19 20 DECLINING.

THERE HAVE BEEN A NUMBER OF STUDIES OF HOW THE AMERICAN POPULATION THINKS ABOUT STEM CELLS, AND BY AND LARGE A MAJORITY OF THE AMERICAN POPULATION ACROSS BOTH POLITICAL SECTORS AND ACROSS RELIGIOUS BASES SUPPORT STEM CELL WORK AND SUPPORT REGENERATIVE MEDICINE.

13

1	AND ALSO EQUALLY IMPORTANT FOR THE VENTURE
2	COMMUNITY, THE MARKET IS MATURING. WE'RE NOT SEEING
3	PRODUCTS ENTER THE MARKET. SO IF YOU TOOK THE GARTNER
4	HYPE CYCLE AND YOU MAPPED OUT WHAT HAPPENED WITH
5	REGENERATIVE MEDICINES, THIS IS WHAT IT LOOKS LIKE. I
6	THINK WE ARE GOING TO MAKE THIS AVAILABLE, SO I WON'T GO
7	THROUGH IT ALL. SUFFICE IT TO SAY THAT WE HIT THE TROUGH
8	OF DISILLUSIONMENT AND WE'RE NOW ON OUR WAY OUT.
9	HOW DO I KNOW THAT? WHAT IS THE CURRENT MARKET
10	DYNAMIC? WELL, THE CURRENT MARKET DYNAMIC, TRIGGERED
11	AGAIN IN PART TO RESPOND TO PROP 71, IS THAT YOU ARE
12	SEEING AN INCREDIBLE AMOUNT OF ACTIVITY AT THE UNIVERSITY
13	LEVEL. THIS TECHNOLOGY IS SO COMPELLING THAT IT HAS
14	CAPTURED THE IMAGINATION OF THE BEST AND BRIGHTEST AT OUR
15	MAJOR UNIVERSITIES. EVERY MAJOR UNIVERSITY IN THE UNITED
16	STATES NOW WITH A MEDICAL SCHOOL HAS A DEDICATED
17	REGENERATIVE MEDICINE PROGRAM. THERE ARE 65 OF THEM IN
18	THE U.S. ALONE. THERE ARE ANOTHER TEN TO TWELVE IN THE
19	UK, AND THERE IS ALSO VERY, VERY PROMISING RESEARCH GOING
20	ON IN SINGAPORE, IN AUSTRALIA, IN CHINA, IN INDIA.
21	AROUND THE WORLD YOU' RE SEEING THIS TECHNOLOGY PUSH
22	COMING OUT OF UNIVERSITIES.
23	ON THE OTHER SIDE YOU'VE GOT A MARKET PULL, AND
24	AGAIN I'M SURE ALL OF YOU ARE FAMILIAR WITH THESE ISSUES,
25	THE DEMOGRAPHICS, OUR POPULATION IS AGING, WE'RE
	14

INCREASING OUR HEALTHCARE SPEND. AND, OF COURSE, ON THE
 PHARMA SIDE, YOU' VE GOT COMPANIES WHOSE PATENTS WHOSE KEY
 PRODUCT IS BLOCKBUSTER DRUGS ARE GOING OFF PATENT, AND
 THEY ARE LOOKING FOR WAYS TO FILL THAT PIPELINE.

5 THERE WAS A RECENT STUDY DONE OF WHERE PHARMA REVENUES ARE GOING TO COME FROM OVER A TEN-YEAR CYCLE. 6 THIS WAS ACTUALLY PUBLISHED. WALL STREET JOURNAL HAD AN 7 ARTICLE ABOUT IT ABOUT TWO MONTHS AGO. THE STUDY 8 9 CONCLUDED THAT 50 PERCENT OF THE REVENUE, 50 PERCENT OF THE REVENUE TO BIG PHARMA IN YEARS FIVE THROUGH TEN, IN 10 THE NEXT TEN-YEAR CYCLE, WILL COME FROM PRODUCTS THAT ARE 11 12 CURRENTLY UNKNOWN TO THEM, UNKNOWN TO THEM. SO YOU' RE 13 TALKING ABOUT BILLIONS OF DOLLARS OF PRODUCTS THAT NEED 14 TO BE IDENTIFIED.

15 AS A RESULT OF THAT, WHAT YOU' VE GOT: 16 TECHNOLOGY PUSH, MARKET PULL. NATURE ABHORS A VACUUM; SO DOES BUSINESS. YOU END UP SEEING A BUNCH OF COMPANIES 17 OUR FIRM MAINTAINS A DATABASE OF ACTIVITY IN THE 18 FORMED. FIELD AND THE COMPANY FORMATION. WE ACTUALLY HAVE THREE 19 DATABASES. WE'VE GOT A COMPANY DATABASE, A UNIVERSITY 20 DATABASE, AND AN INTELLECTUAL PROPERTY DATABASE. WE HAVE 21 A THOUSAND COMPANIES IN THE DATABASE THAT COVER THE 22 ENTIRE ECOSYSTEM FROM START-UPS ALL THE WAY TO BIG 23 PHARMA, ANYBODY WHO'S EXPRESSED AN INTEREST IN THE FIELD 24 25 OR HAS SOME KIND OF RESEARCH PROJECT ONGOING, BUT THERE

15

ARE 300 COMPANIES RIGHT NOW THAT ARE PURE PLAY 1 REGENERATIVE MEDICINE COMPANIES IN EXISTENCE, OPERATING. 2 SO THE MARKET IS CHANGING. THIS IS JUST A 3 4 QUICK GRAPHIC ON WHERE THE REGENERATIVE MEDICINE PROGRAMS 5 ARE. ANOTHER GRAPHIC ON HOW THE FUNDING AROUND THE WORLD IS HELPING TO TRIGGER THIS CHANGE. THE FUNDING IS NOT 6 JUST COMING FROM THE UNITED STATES, BUT IT IS COMING 7 WORLDWIDE. THERE'S A LOT OF PUBLIC FUNDING AVAILABLE, 8 9 AND THE PRODUCTS ARE ENTERING THE MARKET. SO WE'VE GOT -- RIGHT NOW THAT SAYS 90 PROGRAMS -- 80 CLINICAL 10 TRIALS. THAT IS -- I APOLOGIZE FOR THAT -- THAT IS A 11 12 SUBSTANTIAL ERROR. THERE ARE 800 CLINICAL TRIALS ONGOING 13 RIGHT NOW REGARDING STEM CELLS AND REGENERATIVE MEDICINE 14 PRODUCTS. YOU CAN DO IT TONIGHT. GO HOME AND GO TO THE 15 FDA SITE THAT TRACKS. IT'S CLINICALACTIVITY. GOV. YOU 16 CAN GOOGLE IT. AND JUST TYPE IN STEM CELLS AND SEE HOW MANY HITS YOU GET. YOU WILL GET OVER 800 HITS FOR 17 ONGOING CLINICAL ACTIVITY. 18 19 WE'VE GOT A NUMBER OF PRODUCTS IN THE MARKET. ONE OF THE KEY METRICS FOR THOSE PRODUCTS IS WE'VE 20 CROSSED THE BILLION-DOLLAR MARK FROM ACTIVITY IN THE 21

22 SECTOR. REGENERATIVE MEDICINE PRODUCTS HAVE NOW

23 GENERATED MORE THAN A BILLION DOLLARS. NOW, YOU CAN --

24 WE MADE THIS CUT. YOU CAN CUT IT A NUMBER OF DIFFERENT

25 WAYS. ONE OF THE OBVIOUS THINGS HERE IS THAT MEDTRONICS'

16

PRODUCT INFUSE DRIVES A LOT OF THAT REVENUE. INFUSE 1 ACCOUNTED FOR HALF A MILLION DOLLARS AS A BONE 2 MORPHOGENIC PROTEIN. SOME WOULD ARGUE THAT ISN'T PURELY 3 A REGENERATIVE MEDICINE PRODUCT. BUT THE POINT IS THAT 4 THE MARKET IS MATURING. WE NOW HAVE PRODUCTS IN THE 5 MARKET THAT ARE GENERATING REVENUES FOR COMPANIES. YOU 6 HAVE THIS TECHNOLOGY PUSH. YOU' VE GOT COMPANY FORMATION. 7 HERE'S JUST A PARTIAL LIST OF THE COMPANIES THAT ARE IN 8 9 EXISTENCE IN OUR DATABASE.

AND THE PUBLIC MARKETS ARE BECOMING RECEPTIVE. 10 HONESTLY YOU WOULDN'T BELIEVE THAT OVER THE LAST SIX 11 12 WEEKS. IT'S BEEN A TOUGH CYCLE OVER THE LAST SIX WEEKS, 13 BUT WE'VE GOT 15 COMPANIES PUBLIC IN THE U.S. NOW, AND 14 THE PUBLIC MARKETS HAVE DEMONSTRATED PRETTY CLEARLY. IF 15 YOU SIMPLY HAVE WATCHED WHAT'S HAPPENED WITH DENDREON AND 16 WITH OSIRIS, THE TWO COMPANIES THAT HAVE HAD BIG RUN-UPS IN THE LAST YEAR, 18 MONTHS, THOSE RUN-UPS HAVE 17 TRIGGERED -- HAVE CORRESPONDED DIRECTLY TO PROGRESS IN 18 THE CLINIC. SO IF YOU SHOW CLINICAL ACTIVITY, IF YOU ARE 19 WORKING YOUR WAY THROUGH, YOU'RE PUTTING YOURSELF IN A 20 POSITION WHERE YOU CAN GET A PRODUCT TO MARKET, THE 21 PUBLIC MARKETS ARE GOING TO REWARD YOU. 22 23 AND HERE'S JUST SOME EXAMPLES OF DEALS THAT HAVE BEEN DONE, BOTH PUBLIC DEALS AND THERE ARE ALSO SOME 24 M&A TRANSACTIONS. THESE ARE ALL PUBLIC. WE'VE GOT 25

17

1	ANOTHER COMING UP ON M&A ACTIVITY.
2	SO THE POINT OF ALL THAT IS YOU'VE NOW GOT A
3	MATURE MARKET, YOU'VE GOT THE TECHNOLOGY BARRIER STARTING
4	TO DROP, AND THE VENTURE COMMUNITY GETTING BACK IN THE
5	GAME AGAIN. APOLOGIZE FOR THE GRAPHICS. A LOT OF PEOPLE
6	LIKE IT. OKAY.
7	SO NOW LET ME TALK ABOUT THE FUNDING CYCLE FOR
8	REGENERATIVE MEDICINE. JUST TO SET THE STAGE FOR THAT,
9	I'M SURE ALL OF YOU ARE FAMILIAR WITH THIS. THIS IS THE
10	PRODUCT DEVELOPMENT CYCLE FOR ANY NEW PHARMACEUTICAL
11	PRODUCT. WHETHER IT'S A DRUG OR IT'S A BIOLOGIC, THIS IS
12	WHAT YOU GO THROUGH. YOU'VE GOT TO SPEND TIME IN BASIC
13	RESEARCH, TYPICALLY IN A UNIVERSITY SETTING, YOU'VE GOT
14	TO SPEND SOME TIME IN PRECLINICAL RESEARCH WHERE YOU'RE
15	WORKING THROUGH YOUR ANIMAL MODELS, THEN YOU'VE GOT TO
16	IDENTIFY WHAT IS YOUR FIRST THERAPEUTIC APPLICATION,
17	SPEND SOME TIME ON THAT, PUT YOURSELF IN A POSITION WHERE
18	YOU CAN FILE YOUR IND, THEN YOU GO TO THE FDA, AND YOU
19	WORK YOUR WAY THROUGH THE CLINIC. PHASE I, OF COURSE, IS
20	SAFETY, PHASE II IS EFFICACY ON A SMALL SCALE, AND PHASE
21	III, IF YOU GET THERE, IS A COMBINED SAFETY AND EFFICACY
22	STUDY ON A MUCH BROADER SCALE. VERY WELL KNOWN TO
23	ANYBODY WHO'S IN THE PHARMACEUTICAL INDUSTRY. I'M SURE
24	MOST OF YOU UNDERSTAND THIS QUITE WELL.
25	THE BOTTOM CIRCLES IN GREEN ARE A SENSE OF HOW

18

THIS FUNDING GOES, WHERE THE FUNDING COMES FROM, AND WHO 1 IS THE DOMINANT PLAYERS IN THAT SECTOR. IN THE CORE 2 RESEARCH SECTOR, WHEN AN IDEA IS FIRST BEING GERMINATED 3 AND DEVELOPED, OF COURSE, IT'S UNIVERSITIES AND RESEARCH 4 5 INSTITUTES AND HOSPITALS. TYPICALLY THE VENTURE COMMUNITY PLAYS IN THE MIDDLE SECTOR, GENERALLY BEYOND 6 PROOF OF CONCEPT AND UP TO PHASE III; AND ONCE YOU GET 7 OUT INTO THE MARKET, YOU' RE TYPICALLY BRINGING IN A 8 9 PHARMA PARTNER OR GOING PUBLIC. UNLESS YOU' RE BUILDING A VERTICALLY INTEGRATED OPERATION AND YOU WANT TO BE THE 10 NEXT AMGEN, YOU' RE TYPICALLY PARTNERING UP WITH BIG 11 12 PHARMA OR BIG BIO.

13 A COUPLE OF KEY METRICS IN THIS CYCLE, AND THIS 14 IS FOR BIOTECH PRODUCTS AS A WHOLE. AGAIN, I'M JUST 15 TRYING TO SET THE STAGE FOR REGENERATIVE MEDICINE. I'LL 16 PLACE REGENERATIVE MEDICINE COMPANIES IN A SECOND WHERE THIS FITS. THE AVERAGE TIME TO BRING A PRODUCT TO MARKET 17 IS BETWEEN 10 AND 15 YEARS. THE AVERAGE COST IS A 18 BILLION DOLLARS, A BILLION DOLLARS. THE FAILURE RATE IS 19 OVER 90 PERCENT. IT'S ACTUALLY RIGHT NOW 93 PERCENT. 20 S0 WHEN 93 COMPOUNDS ENTER THIS DEVELOPMENTAL CYCLE, ONLY 21 SEVEN ARE GOING TO GET TO THE END. AND LESS THAN 30 22 PERCENT OF THOSE SEVEN WILL RECOUP THE DEVELOPMENT COST 23 ASSOCIATED WITH THE EFFORT. BOTTOM LINE, THIS IS AN 24 25 EXTRAORDINARILY EXPENSIVE PROCESS, AN EXTRAORDINARILY

19

EXPENSIVE PROCESS THAT IS VERY, VERY RISKY. SO IF YOU'RE 1 AN INVESTOR, IT'S A SCARY PLACE TO PLAY. YOU CAN GET 2 YOUR HEAD HANDED TO YOU VERY EASILY. 3 THIS IS AN ANALYSIS OF HOW VALUE IS CREATED 4 5 WITHIN BIOTECH COMPANIES ACROSS THE CYCLE. IT'S ESSENTIALLY THE SAME DATA YOU JUST SAW LAID OUT ON A BAR 6 CURVE AND FOCUSED. WHAT I'M TRYING TO TRACK THERE IS 7 VALUATION STEP-UPS IN COMPANIES AGAINST FUNDING TO THE 8 9 COMPANY AND PROGRESS IN THE CLINIC. AND WHAT I WOULD HOPE YOU WOULD DRAW FROM IT, I KNOW IT'S A LITTLE 10 DIFFICULT TO READ, THERE'S A FAIR AMOUNT OF DATA THERE, 11 12 WHAT YOU WILL SEE IS, AGAIN, A HUNDRED COMPOUNDS OR 13 PRODUCTS ENTERING THE PIPELINE, ONLY SEVEN GETTING 14 THROUGH, A SUBSTANTIAL AMOUNT OF MONEY BEING INVESTED AS 15 YOU GO THROUGH. ON AVERAGE, IF YOU HAVE A SUCCESSFUL 16 PRODUCT, IT'S GOING TO COST YOU ABOUT A HUNDRED TO 125 MILLION TO GET THAT PRODUCT THROUGH. THE BILLION-DOLLAR 17 NUMBER INCLUDES ALL THE FAILURES. 18

19 SO WHEN YOU HEAR PEOPLE SAY IT COSTS A BILLION 20 DOLLARS TO GET A NEW DRUG TO MARKET, THAT INCLUDES ALL 21 THE COST ASSOCIATED WITH THE PRODUCTS THAT FAILED. SO 22 THAT'S AN AVERAGE NUMBER ACROSS THE INDUSTRY FOR THE 23 NUMBER OF PRODUCTS THAT GET TO MARKET. BUT IF YOU JUST 24 LOOK AT ONE, IF YOU GOT LUCKY AND YOU BACKED A PRODUCT 25 THAT WENT ALL THE WAY THROUGH THIS CYCLE AND MISSED ALL

20

1	OF THE LAND MINES AND GOT THERE, YOU'RE STILL SPENDING
2	ABOUT \$100 MILLION TO GET THE PRODUCT THERE BECAUSE
3	CLINICAL TRIALS ARE VERY EXPENSIVE.
4	AND THIS TRACKS WHERE VALUE IS CREATED,
5	STEP-UPS IN VALUATION THAT THE VENTURE COMMUNITY OR
6	OTHERS WOULD SEE AS YOU WERE GOING THROUGH THE CLINICAL
7	PROGRAM. AND WHAT YOU WILL SEE IS THE MOST DRAMATIC
8	STEP-UP ON A RISK ADJUSTED NET PRESENT VALUE BASIS IS
9	FROM JUST BEFORE YOU FILE THE IND TO THE COMPLETION OF
10	THE PHASE II STUDY. AND ALSO IN REAL DOLLARS TERMS, YOU
11	GET A MUCH BIGGER STEP-UP UPON COMPLETION OF PHASE III,
12	BUT PHASE III IS A VERY EXPENSIVE STUDY BECAUSE THERE'S A
13	LOT OF PEOPLE INVOLVED AND IT TAKES A LONG TIME TO DO IT.
14	ON A RISK ADJUSTED NET PRESENT VALUE BASIS, YOU'RE
15	LOOKING AT THE MOST VALUE CREATED DURING THE PRECLINICAL
16	TO POST-PHASE II BASIS, AND THAT'S WHERE YOU ARE GOING TO
17	SEE A LOT OF VENTURE FOLKS INTERESTED BECAUSE WE ARE
18	JUDGED ON AN IRR BASIS. FOR ME IT'S NOT JUST THE MONEY I
19	INVEST AND WHAT I GET BACK. IT'S HOW LONG IS THAT MONEY
20	OUT THERE.
21	ON A MORE GRANULAR LEVEL, LOOKING JUST AT A
22	COMPANY AND A COMPANY DEVELOPMENT OR A PRODUCT
23	DEVELOPMENT WITHIN A COMPANY, HOW DO THESE THINGS LOOK ON
24	A MUCH MORE GRANULAR LEVEL? THE RESEARCH THAT GOES ON
25	AND THIS IS, AGAIN, FOR A PRODUCT THAT ACTUALLY MAKES IT
	21

THROUGH. I'M NOT LOOKING AT THE AVERAGE OF COMPANIES
 THAT GET ALL THE WAY THROUGH. YOU'RE TYPICALLY SPENDING
 TWO TO THREE YEARS, SOMETIMES MUCH MORE, DEPENDING ON THE
 NOVELTY OF THE TECHNOLOGY, IN RESEARCH. THERE COULD BE A
 TEN-YEAR CYCLE ON THE FRONT END OF THIS.

INTERESTINGLY, ONE OF THE COMPANIES THAT'S BEEN 6 QUITE SUCCESSFUL IN THE REGENERATIVE MEDICINE SPACE IS 7 TANGEN, TONY ATALA'S COMPANY THAT'S OUT OF WAKE FOREST. 8 THEY ARE MAKING HUMAN BLADDERS. THEY'VE CREATED AN 9 ENTIRE HUMAN BLADDER IN THE LAB. THEY GROW IT ON A 10 MATRIX THAT WAS DEVELOPED BY HARVARD AND MIT IN A 11 12 COLLABORATIVE PROCESS THAT TOOK THEM 25 YEARS TO BUILD 13 THAT MATRIX, TO FIND THE RIGHT SET OF MATERIALS TO GET 14 THAT MATRIX IN PLACE, BUT THEY NOW HAVE IT. AND THEY CAN 15 SEED THREE CELL TYPES ONTO THAT MATRIX, AND THEY'RE 16 GROWING ENTIRE HUMAN BLADDERS. AND THEY'RE TAKING THOSE BLADDERS AND TRANSPLANTING THEM INTO HUMANS. THEY'VE NOW 17 TREATED TEN PATIENTS AND OVER 50 DOGS. THEY' VE HAD NO 18 ADVERSE IMPACTS, AND THE BLADDERS ARE FULLY FUNCTIONAL 19 AND FULLY INTEGRATED WITHIN ABOUT NINE MONTHS AFTER 20 IMPLANTATION. THEY GROW THEM UP TO 80-PERCENT MATURITY 21 IN THE LAB AND THEN TRANSPLANT THEM AND LET THEM CONTINUE 22 TO GROW IN THE SUBJECT, IN THE PATIENT, SO THAT THEY CAN 23 FULLY INTEGRATE. 24 25 THE POINT OF IT IS, IF YOU LOOK AT TONY'S

22

TANGEN CYCLE, YOU WOULD STILL SEE TWO TO THREE YEARS OF
 WORK IN VITRO, BUT IT'S LEVERAGING OFF OF THE 25 YEARS OF
 CORE RESEARCH THAT WAS DONE BY HARVARD AND MIT BEFORE
 THEY GOT TO THE POINT THAT THEY FORMED A COMPANY AROUND
 IT.

IN ANY EVENT, ONE OF THE THINGS I THINK WE'RE 6 FOCUSED ON HERE IN THIS TASK FORCE IS THE VALLEY OF 7 DEATH. IF YOU HARKEN BACK TO THE SLIDE I SHOWED YOU 8 9 EARLIER ABOUT WHERE VENTURE PEOPLE WANT TO PLAY, THAT'S A FLAT CYCLE. LET ME JUST GO BACK TO THAT FOR A SECOND. 10 THE FRONT END OF THE CYCLE YOU WILL NOTICE IS VERY FLAT. 11 THERE'S NOT A LOT OF VALUE CREATED, AT LEAST RECOGNIZED 12 13 VALUE IN THE MARKET, DURING THAT FIRST PART OF THE CYCLE. 14 THAT FLAT PART OF THE CYCLE CORRESPONDS TO THE VALLEY OF 15 DEATH RIGHT HERE. IT'S AN AREA WHERE MOST VENTURE PEOPLE 16 DO NOT WANT TO INVEST BECAUSE IT'S GOING TO TAKE YOU FIVE YEARS TO GET GOING AND YOU' RE NOT GOING TO SEE MUCH OF A 17 STEP-UP IN VALUE. 18

HONESTLY, THERE HAS BEEN SIGNIFICANT MOVE AWAY
FROM EARLY -- AGAIN, THIS IS EARLY STAGE INVESTING RIGHT
HERE. THE VALLEY OF DEATH REPRESENTS THE EARLIEST OF
EARLY STAGE INVESTING. MOST FOLKS WOULD THINK ABOUT THAT
AS SEED CAPITAL OR ANGEL CAPITAL AREAS WHERE TYPICALLY
VENTURE GUYS ARE NOT GOING TO PLAY. ONE OF THE REASONS
IS YOU CAN'T SEE A STEP-UP IN VALUE WITHIN A DEFINED

23

TIMEFRAME. AGAIN, BACK TO THAT CHART. AND HONESTLY IT 1 FITS INTO A LARGER CYCLE, AND THAT WAS WITH THE COLLAPSE 2 OF THE STOCK MARKET AND ALL OF THE FAILURES THAT PEOPLE 3 HAD IN THEIR PORTFOLIOS AROUND THE EARLY REGENERATIVE 4 5 MEDICINE PRODUCTS. THERE WAS A FLIGHT FROM EARLY PRODUCTS. THERE'S ACTUALLY BEEN A MOVE OF CAPITAL OUT OF 6 EARLY STAGE TO MORE LATER STAGE COMPANIES WHERE THERE IS 7 LESS RISK. TECHNOLOGY RISK HAS BEEN REDUCED, AND SO YOUR 8 9 OPPORTUNITY TO GET SOMETHING THROUGH TO THE MARKET IN A TIMEFRAME IS A LOT BETTER. THE CHANCE OF GETTING 10 SOMETHING SUCCESSFUL AND GENERATING A RETURN FOR YOUR 11 12 INVESTORS IS BETTER.

SO THE BOTTOM LINE IS THE VALLEY OF DEATH
EXISTS AND IS AN AREA WHERE FUNDING IS VERY DIFFICULT TO
ACHIEVE IF YOU'RE STARTING A COMPANY, AND IT'S COMPOUNDED
BY THE MARKET DYNAMICS THAT WE'RE LIVING IN RIGHT NOW.

17 TYPI CALLY YOU GET GRANT MONEY ON THE FRONT END, 18 YOU HAVE POTENTIAL EXITS ON THE BACK END. THE VENTURE 19 COMMUNITY WILL START TO PLAY ONCE YOU GET TOWARDS THE 20 CLINICAL TRIALS ON THE BACK END OF THAT. THE POINT THAT 21 IS OF GREATEST CONCERN FOR MOST NEW COMPANIES IS WHAT WE 22 CALL THE VALLEY OF DEATH THERE. VENTURE GUYS ARE 23 TYPI CALLY INVESTING RIGHT HERE.

LET'S ASSUME YOU'RE IN A POSITION WHERE YOU'VE GOT A COMPANY, YOU WANT TO BRING IT OUT. WHAT ARE WE

24

LOOKING FOR? WHAT ARE THE TYPICAL VENTURE METRICS THAT 1 WE'RE MEASURING COMPANIES AGAINST? THIS IS JUST A QUICK 2 OVERVIEW. I KNOW MANY OF YOU HAVE SPENT YOUR LIVES 3 WORKING IN THE FIELD, AND I APOLOGIZE FOR GOING THROUGH 4 5 STUFF YOU ALREADY KNOW. BUT, AGAIN, YOU' VE GOT TO HAVE GOOD TECHNOLOGY, HAS TO BE PROPRIETARY, IT HAS TO BE 6 COMMERCIAL. ONE OF THE THINGS THAT IT IS VERY CLEAR IN 7 LIFE SCIENCES AND BIOTECH INVESTING IS THAT GREAT SCIENCE 8 9 DOES NOT EQUAL GREAT BUSINESS. YOU MAY BE ABLE TO GET A NOBEL PRIZE FOR THE WORK THAT YOU' VE DONE IN YOUR LAB, 10 BUT THAT DOESN'T MEAN YOU' RE EVER GOING TO MAKE A PENNY 11 12 ON IT. IT MAY BE A FUNDAMENTAL BREAKTHROUGH IN SCIENCE, 13 BUT IT MAY NOT BE POSSIBLE FOR YOU TO COMMERCIALIZE THAT 14 IN A WAY THAT WILL GENERATE A RETURN FOR YOU.

15 TYPICALLY WHAT VENTURE GUYS ARE LOOKING FOR IS 16 TOP QUALITY SCIENCE, BUT TOP QUALITY SCIENCE THAT IS PROPRIETARY AND COMMERCIAL. YOU' VE GOT TO HAVE YOUR CORE 17 RESEARCH COMPLETED. AGAIN, THAT'S THE VALLEY OF DEATH 18 ISSUE BECAUSE THE CORE RESEARCH MAY NOT BE COMPLETED 19 THERE. YOU' VE GOT TO HAVE YOUR PROOF OF CONCEPT 20 ESTABLI SHED. AGAIN, THE VALLEY OF DEATH I SSUE. 21 WE'RE ALSO, OF COURSE, LOOKING FOR A MANAGEMENT 22 YOU' VE GOT TO HAVE INTELLECTUAL PROPERTY THAT 23 TEAM. PROTECTS YOUR PRODUCTS, AND YOU HAVE TO BE ADDRESSING A 24 25 LARGE MARKET, YOU' VE GOT TO HAVE A GOOD BUSINESS MODEL.

25

1	IN REGENERATIVE MEDICINE COMPANIES, IT'S ANOTHER
2	CHALLENGE THEY FACE BECAUSE, HONESTLY, THE BUSINESS
3	MODELS ARE NOT WELL ESTABLISHED. IT ISN'T CLEAR WHAT THE
4	BUSINESS MODEL IS GOING TO BE FOR AUTOLOGOUS CELL
5	THERAPIES. IS THIS A SERVICE BUSINESS? ARE YOU GOING TO
6	TAKE THE CY TORRE APPROACH WHERE YOU DO A SERVICE AND A
7	DEVICE? YOU' RE NOT GOING TO HAVE A PRODUCT BECAUSE YOU
8	CAN'T PUT AUTOLOGOUS CELLS IN A BOTTLE AND FREEZE THEM
9	AWAY. SO YOU'RE NOT GOING TO HAVE A BLOCKBUSTER DRUG
10	MODEL.
11	IF YOU DO THE ALLOGENEIC MODEL, WHICH IS CLOSER
12	TO THE PILLS IN A BOTTLE OR CELLS IN A BOTTLE MODEL,
13	YOU' VE GOT OTHER CHALLENGES. THE CHALLENGE THERE IS THAT
14	THESE CELLS WILL HAVE AN IMMUNE REACTION TYPICALLY. SO
15	YOU ARE GOING TO HAVE PUT THE PATIENT ON IMMUNE
16	SUPPRESSANTS IF YOU WANT TO GIVE THEM ALLOGENEIC
17	TREATMENTS TYPICALLY UNLESS THERE'S A STRATEGY THAT
18	WORKS. PEOPLE ARE TALKING ABOUT IMMUNE MODULATION.
19	THEY'RE TALKING ABOUT SENSITIVITY ISSUES WITH MESENCHYMAL
20	CELLS. THERE MAY BE A WAY TO DEAL WITH THAT, BUT RIGHT
21	NOW THAT'S A CHALLENGE THAT IS NOT WORKED OUT. SO WHEN
22	YOU GO TO PITCH A VENTURE FIRM, IF YOU'RE IN A
23	REGENERATIVE MEDICINE START-UP AND YOU'RE COMING TO PITCH
24	ME, AND I ASK YOU WHAT'S YOUR BUSINESS MODEL, YOU'RE NOT
25	GOING TO BE ABLE TO SAY TO ME I'M FOLLOWING THE BUSINESS
	26

MODEL OF X COMPANY WHO HAS BEEN SUCCESSFUL IN THIS PHASE
 AND THEY' VE ALREADY TREAD THIS PATH AND THIS IS GOING TO
 WORK BECAUSE I KNOW THEY DID IT. IT'S JUST NOT THERE.
 SO PRODUCT VERSUS SERVICE.

TYPICALLY IN THE VENTURE BUSINESS WE DON'T WANT 5 TO FUND SERVICE COMPANIES. YOU CAN MAKE A VERY NICE 6 BUSINESS OUT OF A SERVICE BUSINESS. YOU CAN MAKE VERY 7 NICE PROFITS OUT OF A SERVICE BUSINESS. LAW FIRMS HAVE 8 9 BEEN DOING IT FOR YEARS. ACCOUNTING FIRMS HAVE BEEN DOING IT FOR YEARS, BUT THAT'S NOT A VENTURE BUSINESS. 10 YOU CAN MAKE A LOT OF MONEY, BUT I CAN'T GET THE KIND OF 11 12 RETURN THAT I NEED IN ORDER FOR ME TO JUSTIFY THE 13 FAILURES THAT ARE GOING TO BE IN MY PORTFOLIO. I HAVE TO 14 HAVE EVERY COMPANY HAVE THE POSSIBILITY OF AT LEAST 15 GENERATING A 3 X RETURN, AND I WANT TO BE ABLE TO PENCIL 16 IT OUT SO I CAN GET A 10 X RETURN ON ALL OF MY COMPANIES SO THE ONES THAT FAIL WILL COVER THE ONES -- THE ONES 17 THAT SUCCEED WILL COVER THE ONES THAT DON'T. YOU CAN'T 18 GENERATE A 10 X RETURN ON AN INVESTMENT IN THE SERVICE 19 BUSINESS TYPICALLY. SO IT'S A CHALLENGE THERE. 20

YOU' VE ALSO GOT CHALLENGES JUST AROUND HOW IS
YOUR APPROACH DIFFERENT FROM OTHERS. THAT'S SEPARATING
YOURSELF FROM YOUR COMPETITORS. YOU GOT TO HAVE A
REALISTIC EXIT STRATEGY, AND YOU WANT TO HAVE MULTIPLE
SHOTS ON GOAL. YOU WANT TO BE IN A POSITION WHERE IF ONE

27

OF YOUR PRODUCTS FAIL, WE CAN INVEST IN SOMETHING ELSE. 1 WHAT ARE WE TYPICALLY GETTING WHEN I DO A 2 VENTURE FINANCING? IF I GO IN AND FUND A COMPANY, WHAT 3 4 AM I ASKING FOR JUST PRICE OF ADMISSION? WELL, OF 5 COURSE, THE MAJOR ISSUE TO THE ENTREPRENEUR IS HOW MUCH AM I GOING TO GIVE YOU AS YOUR VALUATION OF THE COMPANY? 6 AM I GOING TO VALUE YOUR COMPANY AT 5, 10, \$15 MILLION? 7 WHATEVER IT IS, THAT IS ALWAYS ISSUE NO. 1. WHAT'S THE 8 9 VALUATION. THAT REALLY TRANSLATES INTO THE PERCENT OF

10 OWNERSHIP THAT THE MANAGEMENT TEAM AND THE FOUNDERS ARE 11 12 GOING TO HAVE AFTER WE FUND, WHAT DILUTION ARE THEY GOING 13 TO TAKE? THE OTHER TERMS ARE ALL PRETTY STANDARD IN 14 VENTURE CAPITAL TERM SHEETS. YOU' RE ASKING FOR A 15 DIVIDEND RATE, YOU WANT TO GET TYPICALLY 8-PERCENT 16 RETURNS. IF YOU HAVE TO TAKE ADVANTAGE OF DIVIDEND PROVISIONS IN YOUR TERM SHEET, YOU GOT A FAILURE. I 17 CAN'T STAY IN BUSINESS MAKING 8 PERCENT. THAT JUST 18 DOESN'T WORK, BUT YOU TYPICALLY PUT IT IN THERE TO 19 PROTECT YOURSELF IN THE EVENT THAT YOU HAVE PROVISIONS IN 20 A WORST-CASE SCENARIO ANALYSIS. 21

VERY OFTEN YOU'RE ASKING FOR A PREFERRED
RETURN. WHAT THAT MEANS IS I GET CASHED OUT FIRST ON THE
SALE OF THE COMPANY. TYPICALLY I'M ASKING FOR THE AMOUNT
OF MY INVESTMENT COMES OUT FIRST AND THEN I SHARE PRO

28

1	RATA WITH EVERYBODY ELSE. OFTENTIMES IT IS A VERY, VERY
2	RISKY COMPANY AND THEY CAN'T FIND FINANCING AND IT'S A
3	VERY HIGH BETA DEAL, MEANING IT'S EITHER GOING TO BE A
4	BILLION-DOLLAR COMPANY OR IT'S GOING TO BE A FLOP. I
5	MIGHT ASK FOR A 3 X RETURN. THREE TIMES MY MONEY
6	INITIALLY BEFORE I SHARE PRO RATA WITH EVERYBODY ELSE IS
7	MEANINGLESS IF IT'S A BILLION-DOLLAR COMPANY. EVERYBODY
8	IS GOING TO DO VERY WELL, BUT IT ALSO THEN HELPS ME
9	JUSTIFY THE RISK THAT I'M TAKING IN THOSE MUCH MORE RISKY
10	INVESTMENTS. THAT'S THE RATIONALE.
11	ANTIDILUTION PROTECTION IS TO PROTECT THE
12	VENTURE COMMUNITY OR THE VENTURE INVESTOR IN THE EVENT
13	THAT THE NEXT ROUND OF FINANCING IS AT A LOWER RATE THAN
14	THE ONE THAT WE FINANCED. IF I GIVE YOU A \$15-MILLION
15	VALUATION ON YOUR MONEY AND I GAVE YOU 50 MILLION, THAT'S
16	A POST MONEY OF 30, YOUR COMPANY IS NOW WORTH 30 ONCE
17	WE'VE FUNDED YOU. IF YOUR NEXT ROUND OF FINANCING IS
18	DONE AT 20, YOU'VE NOW LOST 30 PERCENT OF YOUR VALUE.
19	AND I WANT MY EQUITY STATE TO BE PROTECTED AGAINST THAT,
20	AND SO I ASK TYPICALLY FOR ANTIDILUTION PROTECTION, AND
21	THERE ARE A RANGE OF AGGRESSIVE PROVISIONS. FULL RATCHET
22	IS THE MOST AGGRESSIVE; WEIGHTED AVERAGE IS THE MOST
23	COMMON.
24	PROTECTIVE PROVISIONS, I'M USUALLY ASKING TO
25	HAVE PROVISIONS BUILT INTO THE CORPORATE CHARTER THAT
	29

1	LIMIT WHAT MANAGEMENT CAN DO WITHOUT MY APPROVAL. SO I
2	WILL TAKE A BOARD SEAT, WHICH IS THE NEXT BULLET, BUT I
3	ALSO WANT TO HAVE PROVISIONS THAT SAY, FOR INSTANCE, YOU
4	CANNOT SPEND MORE THAN \$250,000 ON ANYTHING UNLESS IT
5	COMES TO THE BOARD AND IS APPROVED BY THE BOARD. AGAIN,
6	A WAY OF CONTROLLING MANAGEMENT SO THAT YOU CAN FROM THE
7	BOARD LEVEL TRY TO DIRECT WHERE THE COMPANY IS GOING.
8	AND THEN THERE ARE RIGHTS THAT PROTECT ME IN THE EVENT OF
9	TYPICAL FOLLOW-ON FINANCING, RIGHT OF FIRST REFUSAL, AND
10	OUR ABILITY TO PARTICIPATE IN THE NEXT FINANCING.
11	SO THAT'S IT. AND THEN I'VE GOT A WHOLE BUNCH
12	OF DATA TO BACK ALL THIS UP IN THE APPENDICES. LYNN, IF
13	YOU WANT TO MAKE THAT AVAILABLE, I'D BE HAPPY TO LET
14	FOLKS HAVE IT.
15	CHAIRMAN ROTH: GREG, THANK YOU. THAT WAS AN
16	INCREDIBLE PRESENTATION. THAT'S TAKING 30 YEARS AND
17	HUNDREDS OF BILLIONS OF DOLLARS AND PUTTING IT IN 20
18	SLIDES AND EXPLAINING THE RISK BENEFIT THAT YOU'VE GONE
19	THROUGH. I REALLY APPRECIATE THAT. IT WOULD BE GREAT IF
20	WE COULD MAKE THAT AVAILABLE TO THE TASK FORCE BECAUSE I
21	THINK THERE'S SO MUCH DATA IN THERE.
22	MR. BONFIGLIO: I DID COVER A LOT OF DATA, SO
23	IF ANYBODY HAS QUESTIONS, I'D BE VERY HAPPY TO ANSWER
24	THEM.
25	CHAIRMAN ROTH: LET'S OPEN IT FOR QUESTIONS
	30

1	SINCE THIS IS FRESH IN EVERYBODY'S MIND. AND IF YOU HAVE
2	CLARIFICATION QUESTIONS OR QUESTIONS RELATED TO HOW THIS
3	MIGHT IMPACT OUR LOAN PROGRAM, NOW IS THE TIME.
4	DR. BLOOM: IN TERMS OF APPLICATION TO
5	REGENERATIVE MEDICINE, OF THE COMPANIES THAT HAVE FAILED
6	SO FAR FOR FINANCIAL REASONS, IS THERE ANYONE TAKING A
7	LOOK AT REVITALIZING THOSE COMPANIES?
8	MR. BONFIGLIO: YES. GOOD QUESTION. VIRTUALLY
9	THE TECHNOLOGY THAT WAS FUNDED IN THAT INITIAL BUBBLE
10	BACK IN THE EARLY '90S, THAT'S THE ATS, THE CURIS, THE
11	BRESAGEN, ALL THOSE TECHNOLOGIES ARE STILL VIABLE AND
12	STILL IN PLAY IN ONE FORM OR ANOTHER. SO, FOR INSTANCE,
13	ADVANCED TISSUE SCIENCES, THEIR TECHNOLOGY HAS NOW BEEN
14	REBORN INTO TWO DIFFERENT START-UPS. WHAT THEY
15	ULTIMATELY GENERATED WAS A DERMAL PATCH THAT WAS USED FOR
16	WOUND REPAIR. AND THERE'S A COMPANY THAT'S TAKING THAT
17	PATCH AND JUST SELLING IT AS A WOUND REPAIR FOR DIABETIC
18	ULCERS IN OTHER WOUND SETTINGS. AND THEN ANOTHER
19	COMPANY, WHICH IS RIGHT HERE IN WOODSIDE, THERMOGEN
20	THERAGEN HAS TAKEN THAT PATCH AND USING IT FOR CARDIAC
21	APPLI CATI ONS.
22	IT TURNS OUT THAT THE CELLS THAT THEY DEVELOPED
23	PROMOTE REVASCULARIZATION IN A CARDIAC INCIDENT, SO
24	THEY' RE SELLING THE PATCH, THAT YOU ESSENTIALLY TAKE THE
25	PATCH AND SEW IT ON AFTER YOU'VE CRACKED SOMEBODY'S
	31

1	CHEST, AND IT PROMOTES REVASCULARIZATION AND HELPS HEAL A
2	HEART. SO VIRTUALLY NONE OF THOSE TECHNOLOGIES WERE
3	LOST. THEY HAVE BEEN REBORN, BUT HONESTLY IT WAS A \$1.4
4	BILLION MARKET CAP, \$600 MILLION OF CAPITAL. THERAGEN'S
5	OUT RAISING MONEY ON A SINGLE DIGIT VALUATION, JUST TO
6	GIVE YOU A SENSE OF WHERE THE VALUES ARE.
7	CHAIRMAN ROTH: JUST FOR THE COMMITTEE TO KEEP
8	THAT ONE THOUGHT WHEN WE GET INTO DISCUSSIONS ABOUT
9	REPAYMENT OF LOANS, BECAUSE I THINK WHAT GREG JUST
10	DESCRIBED IS MANY COMPANIES WHO MOVE FORWARD IN THE
11	PROCESS END UP, AS YOU SAW FROM THE SLIDE, HAVING
12	PROBLEMS. BUT MUCH OF THAT INTELLECTUAL PROPERTY IS
13	EVENTUALLY TAKEN OVER BY SOMEONE ELSE, IN WHICH CASE IN
14	OUR CASE THE APPLICATION WOULD THE LOAN WOULD ACTUALLY
15	FOLLOW THE TECHNOLOGY. SO THAT'S AN IMPORTANT
16	CONSIDERATION. WHEN YOU LOOK AT THOSE DEPRESSING
17	NUMBERS, YOU WOULD THINK THAT WE'D HAVE 97 BANKRUPTCIES
18	OR 93 BANKRUPTCIES. AND, IN FACT, MOST OF THOSE
19	COMPANIES ARE MERGED OR TAKEN OVER OR RESTRUCTURED AS HE
20	DESCRI BED.
21	MR. BONFIGLIO: IT IS RECAPS ARE VERY COMMON
22	IN BIOTECH COMPANIES. BY RECAP I MEAN A COMPANY WHO HAS
23	RAISED AT ONE VALUATION ON A PROJECTED PATH AGAINST
24	MILESTONES, A CREATION OF VALUE AGAINST MILESTONES THAT
25	THEY CANNOT ACHIEVE EITHER BECAUSE THE TECHNOLOGY MOVES
	32

1	TOO SLOW OR BECAUSE THEY LACK FUNDING, AND THEN THEY HAVE
2	TO GO BACK OUT TO THE MARKET AND TRY AND RAISE MONEY
3	HAVING NOT MET THEIR MILESTONES, SO THEY DIDN'T GET THE
4	STEP-UP IN VALUATION, AND YOU HAVE TO DO IT AT A LOWER
5	LEVEL. THAT'S WHY I HIGHLIGHTED THE PROTECTIVE
6	PROVISIONS IN THE ANTIDILUTION PROVISIONS BECAUSE IT'S
7	PRETTY COMMON IN BIOTECH. UNLIKE I.T. INVESTING WHERE
8	YOU'RE INVESTING IN SOFTWARE CHIPS, ETC.

9 THE PRICE OF ADMISSION TO MAKE A PRESENTATION 10 TO A VENTURE GUY IN AN I.T. SITE IS TYPICALLY HAVE YOU 11 COMPLETED YOUR SCIENCE? IS THE SCIENCE DONE AND WE'RE 12 NOW JUST TALKING ABOUT ENGINEERING? AND USUALLY IN THE 13 I.T. SIDE, YOU WANT TO FUND COMPANIES WHERE IT'S JUST 14 ENGINEERING BECAUSE YOU KNOW IF YOU THROW ENOUGH MONEY AT 15 IT, YOU CAN ENGINEER YOUR WAY OUT OF THE PROBLEM.

16 THE ISSUE FOR BIOTECH, IT'S ALL SCIENCE. S0 YOU NEVER KNOW UNTIL YOU GET THE PRODUCT TO MARKET, AND 17 EVEN THEN YOU DON'T KNOW THAT THE PRODUCT IS ULTIMATELY 18 GOING TO BE SUCCESSFUL. THERE'S JUST A HUGE AMOUNT OF 19 RISK IN INVESTING IN THIS SECTOR. AND YOU CAN HAVE THE 20 BEST PEOPLE IN THE BUSINESS, YOU CAN HAVE VERY COMPELLING 21 TECHNOLOGY, AND FOR REASONS REALLY BEYOND YOUR CONTROL, 22 YOU CAN' T MEET THOSE MILESTONES. SINCE YOU' RE USUALLY 23 PLAYING PRE-IND UP TO THROUGH PHASE II, YOU'RE WORKING IN 24 25 A REGULATORY FRAMEWORK MOST OF THE TIME AS YOU' RE TRYING

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1 TO CREATE VALUE HERE.

YOU' RE WORKING WITH THE FDA, YOU' RE TALKING 2 ABOUT TRYING TO GO THROUGH A CLINICAL PROGRAM WHERE YOU 3 4 MAY NOT EVEN BE ABLE TO ENROLL THE PATIENTS. THEY HAVE NOTHING TO DO WITH YOUR TECHNOLOGY. YOU JUST CAN'T GET 5 THE PATIENTS ENROLLED IN THE TRIAL IN THE TIME THAT YOU 6 IF THE PATIENT ENROLLMENT SLOWS DOWN, YOU' RE STILL 7 NEED. OPERATING YOUR BUSINESS, YOU'RE BURNING MONEY, BUT YOU'RE 8 9 NOT HITTING YOUR MILESTONE. AND THEN YOU GET TO THE END OF THE CYCLE, TYPICALLY YOU' RE ONLY GETTING FUNDING TO 10 KEEP YOU GOING FOR 18 MONTHS, MAYBE 24 MONTHS AT THE 11 12 OUTSIDE. IF YOU HAD AN 18-MONTH CYCLE THAT EXPECTED YOU 13 TO GET THROUGH ONE PHASE OF THE CLINIC AND YOU CAN'T 14 ENROLL YOUR PATIENTS, YOU'RE STILL BURNING YOUR MONEY 15 OUT, AND YOU GET TO THE END OF THAT CYCLE, YOU CAN'T 16 RAISE MONEY ON THE SAME VALUATION THAT YOU WENT IN, SO 17 YOU' RE DOING A RECAP. AND IT'S JUST COMMON. IT HAPPENS. DR. MURPHY: IF YOU HAVE AN EARTHQUAKE ON THE 18 BASIC SCIENCE SIDE LIKE INDUCED PLURIPOTENCY, WHICH IS 19 NOW TWO OR THREE MONTHS AWAY, DOES THAT AFFECT YOUR 20 THINKING, AND HAS IPS AFFECTED YOUR THINKING IN WHAT YOU 21 22 GUYS ARE LOOKING FOR IN THE FUTURE? CHAIRMAN ROTH: GREG, WOULD YOU REPEAT THE 23 QUESTION JUST SO THE PEOPLE ON THE PHONE CAN HEAR? 24 25 MR. BONFIGLIO: SO THE QUESTION IS IF YOU HAVE 34

A BREAKTHROUGH, A MONUMENTAL CHANGE IN THE TECHNOLOGY, 1 LIKE INDUCED PLURIPOTENCY, WHICH I AGREE IS ABSOLUTELY A 2 FUNDAMENTAL SHIFT, DOES THAT CHANGE YOUR THINKING? OF 3 4 COURSE, IT DOES. INDUCED PLURIPOTENCY IS A MAJOR 5 BREAKTHROUGH FOR TWO REASONS. ONE HAS TO DO WI TH COMMERCIALIZATION AND TECHNOLOGY. THE OTHER IS REALLY 6 MORE POLITICAL. IT REMOVES A LOT OF THE POLITICAL 7 BARRIERS. ON THAT BASIS ALONE, IT FUNDAMENTALLY CHANGES 8 9 THE THINKING BECAUSE, WHETHER YOU ARE WORKING IN EMBRYONIC OR NOT, MOST PEOPLE OUT THERE IN THE WORLD 10 THINK ABOUT REGENERATIVE MEDICINE COMPANIES. WHEN I'M 11 12 OUT PITCHING OR TALKING TO FOLKS ABOUT REGENERATIVE 13 MEDICINE, THEY THINK I'M TALKING EMBRYONIC. AND 14 EMBRYONIC IS A SMALL PART OF THE WORLD. AND THROUGH 15 INDUCED PLURIPOTENCY YOU' VE KIND OF REMOVED THE POLITICAL 16 OVERHANG THAT WAS EMBRYONIC, BUT THERE WAS A HALO EFFECT, A NEGATIVE HALO EFFECT, AROUND THE REST OF IT. THAT HAS 17 NOW BEEN LIFTED, SO THAT DOES FUNDAMENTALLY CHANGE. 18 19 DR. MURPHY: SO WHAT ARE YOU DOING DIFFERENTLY NOW BECAUSE OF IT? 20 MR. BONFIGLIO: HONESTLY, I'VE BEEN TRACKING 21 THIS FIELD FOR YEARS. I INVESTED IN MY FIRST STEM CELL 22 23 COMPANY IN 2000. THEY HAVE AN IP, AND I'VE BEEN FOLLOWING THE DEVELOPMENTS AT THE UNIVERSITY LEVEL AROUND 24

25 INDUCED PLURIPOTENCY. THE GENE MODIFICATION APPROACH

35

1	THAT YAMANAKA AND JAMIE THOMPSON TOOK, I DON'T THINK IT'S
2	COMMERCIALLY VIABLE, BUT THERE ARE OTHER FOLKS WORKING
3	ON IT'S A GREAT BREAKTHROUGH. IT DEMONSTRATES PROOF
4	OF CONCEPT, BUT THERE ARE A NUMBER OF FOLKS WORKING ON
5	EXTRACELLULAR TRIGGERS THAT WILL INDUCE AN EMBRYONIC-LIKE
6	STATE. AND THERE WAS A COMPANY JUST FUNDED A COUPLE
7	WEEKS AGO, FATE THERAPEUTICS, THAT'S WORKING ON THAT VERY
8	ISSUE. DAVE STANTON OUT OF HARVARD AND SOME OTHER GUYS
9	HERE ON THE WEST COAST ARE WORKING ON THAT.
10	WHAT I'M DOING IS I'M TRACKING THE COMPANIES
11	AND THE RESEARCH THAT'S GOING ON AROUND THAT. STEVEN
12	MINGER AT OXFORD HAS BEEN WORKING ON THAT FOR QUITE A
13	WHILE. WE'RE TRYING TO IDENTIFY WHERE THAT COMPELLING
14	TECHNOLOGY IS BECAUSE, HONESTLY, FROM MY PERSPECTIVE, THE
15	COMMERCIAL ASPECT OF THAT IS AROUND EXTRACELLULAR
16	TRIGGERS, DRUGS OR CYTOKINES, GROWTH FACTORS THAT WILL
17	TRIGGER DEDIFFERENTIATION. BUT THAT'S JUST ONE OF A
18	NUMBER OF MAJOR BREAKTHROUGHS THAT HAVE OCCURRED IN THE
19	LAST 10, 15 YEARS. AND THEY ALL CHANGE YOUR THINKING.
20	YOU HAVE TO CHANGE THE WAY YOU THINK ABOUT IT.
21	CHAIRMAN ROTH: LET ME SEE IF THERE'S ANY
22	MORE
23	DR. LOVE: GREG, VERY NICE PRESENTATION. I
24	WANTED TO ASK JUST TO THE EXTENT THAT WE'RE FOCUSING ON A
25	LOAN PROGRAM HERE, AND ULTIMATELY WE'RE ALL TRYING TO
	36

ACHIEVE THE SAME THING. WE WANT TO BASICALLY STRUCTURE
THIS IN A WAY WHERE IT'S COMPATIBLE WITH YOUR CONTINUED
SUPPORT OF THE INDUSTRY AS WELL. COULD YOU JUST KIND OF
AT A HIGH LEVEL MAYBE GIVE US SOME GUIDANCE ON HOW WE CAN
STRUCTURE THINGS THAT WOULD BE MOST COMPATIBLE WITH YOUR
PARTICIPATION, AND WHAT KIND OF TOXIC THINGS THAT WE
MIGHT WANT TO AVOID?

MR. BONFIGLIO: SURE. LET ME JUST AT A HIGH 8 9 LEVEL SAY IT'S REALLY UNUSUAL FOR BIOTECH COMPANIES TO FUND THEMSELVES THROUGH LOANS. IT'S NOT THE WAY IT'S 10 TYPI CALLY DONE BECAUSE YOU DON' T HAVE ANYTHING THAT YOU 11 12 CAN SECURE THE LOAN AGAINST. IT'S NOT A CAPITAL 13 INTENSIVE BUSINESS. THIS IS A BUSINESS ABOUT WORK IN A 14 LAB, AND YOU MAY NEED AN ELECTRON MICROSCOPE AND YOU MAY 15 NEED SOME EXPENSIVE EQUIPMENT; BUT WHEN YOU NET IT ALL 16 OUT, IT'S ONLY A COUPLE MILLION BUCKS, NOT ENOUGH TO FUND A COMPANY. SO IT IS NOT TYPICAL TO HAVE LOAN STRUCTURES 17 IN PLACE, WHICH IS -- LET ME DISTINGUISH. A PURE LOAN, A 18 LEASE LINE OR A STRAIGHTFORWARD LOAN FROM A CONVERTIBLE 19 FINANCING, IT IS VERY TYPICAL FOR VENTURE GUYS TO COME ON 20 THE FRONT END OF A BUSINESS THAT HAS SOME RISK. 21 PARTICULARLY IN A RECAP SETTING, AND PROVIDE THE 22 FINANCING ON A CONVERTIBLE BASIS, MEANING I'M GOING TO 23 GIVE YOU \$10 MILLION THAT WILL CONVERT TO EQUITY IF YOU 24 25 HIT CERTAIN MILESTONES. BUT IF YOU DON'T HIT THOSE

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### **BARRISTERS' REPORTING SERVICE**

1	MILESTONES, THEN IT BECOMES DEBT AND IT'S SECURED AGAINST
2	EVERYTHING YOU'VE GOT, WHICH IS TYPICALLY YOUR
3	INTELLECTUAL PROPERTY. THAT IS SOMEWHAT COMMON.
4	DR. GOLDFISCHER: ALTHOUGH I WOULD SAY NOW
5	PROBABLY AROUND 10 PERCENT OF THE CAPITAL YOU PUT INTO A
6	COMPANY OVER ITS LIFETIME DOES COME IN THE FORM OF
7	VENTURE DEBT PROVIDED BY THE SVD GUYS, FOR EXAMPLE, AT A
8	15 ODD PERCENT RETURN ON CAPITAL. ABOUT 10 PERCENT OF
9	THE CAPITAL THAT GOES INTO THESE COMPANIES NOW IS OFTEN
10	IN THE FORM OF A DEBT INSTRUMENT PROVIDED BY A BANK. IT
11	IS SECURED BY ASSETS.
12	YOUR BASIC POINT IS CORRECT. WE DON'T DO
13	ANYTHING THAT TRADITIONAL LENDERS WOULD LEND AGAINST. WE
14	HAVE INTELLECTUAL PROPERTY AND WE'VE GOT NO CASH FLOW, SO
15	IT'S A SOMEWHAT DIFFERENT BUSINESS.
16	MR. BONFIGLIO: SO THE KIND OF TERMS THAT WOULD
17	BE TOXIC TO ME, IF I'M LOOKING AT FUNDING A COMPANY AND
18	IN PART BECAUSE OF WHERE THE INDUSTRY IS AND PART BECAUSE
19	OF MY BIAS AND WHAT MY FUND IS LOOKING AT, I'M LOOKING AT
20	MORE EARLY STAGE COMPANIES. WE'RE NOT TYPICALLY MY
21	FUND IS NOT GOING TO BE FUNDING COMPANIES COMING OUT OF
22	PHASE III, OR WE'RE NOT GOING TO TYPICALLY FUND THE LAST
23	PART OF THE PHASE III TRIAL. WE'RE LOOKING AT FUNDING
24	PRE-IND AND GETTING UP THROUGH PHASE II.
25	THE KIND OF TERMS I'M CONCERNED ABOUT OR WOULD
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BE VERY CONCERNED ABOUT IS IF THERE WAS A LOAN OUT IN
 FRONT OF ME THAT HAD TO BE REPAID BEFORE I GOT REPAID.
 SO PRIORITY IN THE REPAYMENT PROCESS WOULD BE ONE. AND
 ANOTHER CONCERN THAT I WOULD HAVE IS SECURITY. IF THERE
 IS A LOAN INSTRUMENT OUT THERE THAT IS SECURING THE
 INTELLECTUAL PROPERTY OF THE COMPANY, THAT WOULD BE A
 REAL ISSUE FOR ME.

LET ME ALSO MODIFY THE EARLIER STATEMENT I 8 IT IS VERY COMMON TO PROVIDE BRIDGE FINANCING IN 9 MADE. THE FORM OF A LOAN BETWEEN TWO DIFFERENT ROUNDS OF 10 FINANCING. THAT IS VERY COMMON, AND BRIDGE FINANCING 11 12 OFTEN IS SECURED BY THE INTELLECTUAL PROPERTY OF THE 13 COMPANY, BUT TYPICALLY YOU WOULD ENVISION THE BRIDGE 14 FINANCING TO LAST FOR NO MORE THAN A COUPLE MONTHS. 15 YOU' RE JUST TRYING TO GIVE THE COMPANY THE MONEY TO 16 OPERATE UNTIL YOU CLOSE THE ROUND OF FINANCING THAT YOU' RE RAISING. AND THAT FINANCING IS TYPICALLY DONE ON 17 18 A LOAN BASIS.

19 MR. WASDEN: THIS IS CHRIS WASDEN FROM PWC. 20 DUANE MENTIONED SOMETHING EARLIER THAT I'D LIKE YOU TO 21 ADDRESS. AND THAT IS THE THOUGHT THAT IF A COMPANY DID 22 FAIL AND THE TECHNOLOGY WAS PICKED UP BY SOMEBODY ELSE, 23 THAT THE LOAN WOULD BE ABLE TO TRAVEL WITH THAT 24 INTELLECTUAL PROPERTY AND, THEREFORE, HAVE SOME FUTURE 25 VALUE. COULD YOU ADDRESS HOW YOU THINK YOU MIGHT

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STRUCTURE THAT? 1 CHAIRMAN ROTH: LET'S HOLD THAT UNTIL WE GET 2 INTO THE ACTUAL DISCUSSION, CHRIS. CHRIS, BY THE WAY, IS 3 PART OF THIS INVITED GROUP. HE'S IN NEW YORK AND HE'S 4 WITH PRICEWATERHOUSECOOPER, SO WE'RE GOING TO GET 5 COMMENTS FROM HIM LATER. 6 WHAT I'D LIKE TO DO IS JUST GIVE EACH OF OUR 7 INVITED GUESTS A CHANCE NOW TO TALK ABOUT THE DOCUMENT 8 9 THAT WE RELEASED THAT THEY' VE HAD A CHANCE NOW TO LOOK AT. WE'RE GOING TO GO THROUGH THAT, HOPEFULLY, IN AN 10 ORGANIZED WAY, BUT I WANTED TO GIVE THEM SOME OVERVIEW 11 12 OPPORTUNITIES, OVERVIEW THOUGHT OPPORTUNITIES, BEFORE 13 THAT. 14 I'D LIKE TO LEAD WITH STEVE BURRILL WHO'S BEEN 15 KIND ENOUGH TO JOIN US ON THE PHONE FROM NEW YORK WHERE 16 HE'S TRAVELING. AND STEVE HAS HAD CONVERSATIONS WITH SOME OF US ON THE TASK FORCE INDIVIDUALLY AND HAS SOME 17 18 THOUGHTS. 19 THOSE OF YOU THAT MAY NOT KNOW STEVE, HE'S ONE OF THE -- I'LL CALL HIM ONE OF THE ORIGINALS IN 20 BIOTECHNOLOGY AND HAS REALLY BEEN A GREAT ASSET TO THE 21 INDUSTRY. STEVE, WHY DON'T YOU TAKE A FEW MINUTES AND 22 GIVE US YOUR THOUGHTS ON THIS PROGRAM. 23 MR. BURRILL: THANK YOU FOR THE OPPORTUNITY TO 24 25 DO THAT. I'M SITTING IN A BOARD MEETING. I PULLED 40

MYSELF OUT FOR A FEW MINUTES TO DO THIS, SO I APOLOGIZE
 FOR NOT BEING WITH YOU TODAY.

I DID HAVE A COUPLE OF KIND OF FOLLOW-UP 3 COMMENTS. I DIDN'T HEAR ALL OF THE QUESTIONS OR ANSWERS 4 5 FOR GREG. BUT FOR THE BENEFIT OF EVERYONE IN THE ROOM, LET ME JUST SAY A COUPLE THINGS. ONE ABOUT VALUATION. I 6 THINK THERE WERE SOME QUESTIONS ABOUT HOW COMPANIES ARE 7 VALUED AND HOW VALUE MIGHT ULTIMATELY STAY WITH THE 8 9 TECHNOLOGY. I THINK IT'S IMPORTANT WHEN ONE LOOKS AT VALUATION, TO UNDERSTAND THAT VALUATION IS ESSENTIALLY A 10 NEGOTIATED EVENT BETWEEN A WILLING BUYER AND A WILLING 11 12 SELLER. AND THERE ARE LOTS OF EVENTS THAT GO ON OUTSIDE 13 OUR INDUSTRY THAT HAVE A LOT TO DO WITH INDIVIDUAL 14 TECHNOLOGY VALUATIONS.

15 IN THE YEARS 2000 TO 2002 WE DID IN A VERY 16 ROBUST FINANCING PERIOD WHERE VALUES WERE PERCEIVED TO BE HIGH FOLLOWED BY THE . COM CRASH WHICH HAD VIRTUALLY 17 NOTHING TO DO WITH OUR TECHNOLOGY, BUT THE . COM WORLD, 18 THAT SORT OF WALL STREET AND THE INDUSTRY, LOST 50 19 PERCENT OF ITS VALUE IN A SINGLE DAY. SO THERE ARE 20 THINGS THAT HAVE TO DO WITH STEM CELL TECHNOLOGY THAT 21 HAVE NOTHING TO DO WITH THE UNDERLYING INTRINSIC VALUE OF 22 THE TECHNOLOGY AND EVERYTHING TO DO WITH THE WORLD AROUND 23 SO WE NEED TO BE AWARE OF THAT WHEN ONE LOOKS AT 24 IT. 25 SECURITY FOR A LOAN.

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### **BARRISTERS' REPORTING SERVICE**

1	SECONDLY, IF ONE LOOKS AT A LOAN PROGRAM, YOU
2	NEED TO LOOK AT PEOPLE LIKE HERTZ. HERTZ IS IN THE
3	RENTAL BUSINESS. THEY'LL RENT YOU A CAR AND YOU HAVE TO
4	BRING IT BACK AND YOU PAY A SERVICE FEE FOR THE TIME YOU
5	HAVE IT. SO TOO IS THE LOAN BUSINESS. WE BASICALLY RENT
6	MONEY FROM SOMEBODY WITH THE EXPECTATION THAT THEY GIVE
7	IT BACK WITH A SERVICE FEE FOR THE TIME THAT WE HAVE IT.
8	THE CHALLENGE TO BIOTECH COMPANIES IS THAT THEY
9	DO NOT HAVE THE CAPABILITY TO PAY IT BACK. SO IT IS NOT
10	GENERALLY DEBT CAPITAL IS NOT GENERALLY AVAILABLE TO
11	BIOTECH OR STEM CELL COMPANIES BECAUSE ALL OF THE CAPITAL
12	THEY HAD IS GOING TO BE SPENT ON R&D, WHICH IS, IF YOU
13	WILL, A PERISHABLE ASSET; WHEREAS, IT MAY ULTIMATELY
14	CREATE SOME VALUE. IN MOST CASES BANKS WON'T LEND
15	AGAINST THAT IP BECAUSE THEY HAVE NO WAY OF KNOWING WHAT
16	THAT IP IS WORTH AND THEY HAVE NO WAY OF MONETIZING IT.
17	SO LOAN PROGRAMS FROM COMMERCIAL ORGANIZATIONS ARE
18	GENERALLY NOT AVAILABLE. THE LOAN PROGRAM THAT'S BEING
19	CONTEMPLATED HERE BY CIRM COULD BE A VERY IMPORTANT
20	ASSET.
21	AND FINALLY, I JUST WANT TO SAY ONE THING ABOUT
22	THE COMMENT GREG WAS MAKING ABOUT BRIDGE FINANCING. AND
23	I WANT TO MAKE A SIMPLISTIC EXAMPLE. THE CONCERNS THAT
24	FINANCIERS HAVE IN THIS INDUSTRY IN BRIDGE FINANCINGS IS
25	THAT IT IS A BRIDGE AND NOT A PIER. AND THAT IS TO SAY,
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A PIER GOES OUT TO THE END AND THEN DROPS OFF. AND ONE 1 OF THE CHALLENGES FOR PROVIDING BRIDGE FINANCING FOR 2 SOMEONE IS WHAT DO YOU BRIDGE IT TO? IN OTHER WORDS, IS 3 4 THERE A FINANCING OR A TRANSACTION THAT YOU' RE JUST 5 TRYING TO HELP BECAUSE OF A TIMING DIFFERENCE, OR ARE YOU ACTUALLY PUTTING IN A FINANCING THAT MAY HAVE SOME VERY 6 REAL RISK? 7

IN THE PROGRAM THAT'S BEING CONTEMPLATED BY 8 9 CIRM, I THINK WE BASICALLY ARE GIVING COMPANIES, AS I UNDERSTAND IT, TWO CHOICES. THEY FUNDAMENTALLY HAVE A 10 CHOICE OF SOME LEVEL OF A GRANT IF THEY QUALIFY, AND THAT 11 12 GRANT WILL BE SUBJECT TO THE TERMS OF THE GRANTS AND THE 13 IP POLICY OF CIRM, OR THEY CAN TAKE A LOAN, AND THE LOAN 14 HAS DIFFERENT PROVISIONS, DIFFERENT COVENANTS, AND 15 DIFFERENT RISKS ASSOCIATED WITH IT. BUT IN THE LOAN 16 PROGRAM AS IT'S PRESENTLY CONTEMPLATED, IT IS REPAYABLE 17 EVEN IF NOT SUCCESSFUL.

AND AS GREG WAS ALLUDING TO WITH HIS COMMENTS 18 JUST BEFORE I GOT ON, THE BURDEN A LOAN MAY PLACE ON A 19 COMPANY IN TERMS OF ITS DOWNSTREAM FINANCABILITY COULD, 20 IN FACT, BE SIZABLE. THEREFORE, MOST COMPANIES WOULD 21 CHOOSE, I WOULD THINK, THE GRANT AS OPPOSED TO THE LOAN 22 BECAUSE A LOAN MAY VERY WELL REPRESENT A LARGE BARRIER TO 23 FUTURE FINANCINGS. 24 25

CHAIRMAN ROTH: OKAY. QUESTIONS FOR STEVE,

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### **BARRISTERS' REPORTING SERVICE**

1	ANYONE? STEVE, THAT'S HELPFUL. WE'LL LET YOU GO BACK TO
2	YOUR BOARD MEETING UNLESS YOU CAN STAY ON FOR A WHILE.
3	MR. BURRILL: YOU HAVE MY PHONE NUMBER. IF YOU
4	DO HAVE A QUESTION AND I CAN BE HELPFUL, WHY DON'T YOU
5	CALL ME AND I'LL BE GLAD TO JUMP ON TO HELP YOU OUT.
6	(MR. BURRILL THEN GIVES HIS CELL PHONE NUMBER, NOT
7	RECORDED, NOR HEREIN TRANSCRIBED.) IF YOU NEED ME, JUST
8	GIVE ME A JINGLE.
9	CHAIRMAN ROTH: THE WHOLE STATE OF CALIFORNIA
10	HAS STEVE'S CELL PHONE. THANKS, STEVE.
11	SO WHAT I'D LIKE TO DO IS JUST CONTINUE ON NOW
12	WITH OVERVIEW COMMENTS, AND THEN WE'RE GOING TO TAKE THE
13	DOCUMENT THAT YOU HAVE AND GO INTO SOME SPECIFICS AND
14	ELICIT YOUR COMMENTS ON EACH OF THE INDIVIDUAL ITEMS. SO
15	LET ME MOVE NEXT TO CARL. AND, CARL, THANK YOU FOR BEING
16	HERE.
17	FOR THOSE OF YOU IN THE BAY AREA, YOU KNOW THIS
18	FIRM VERY WELL ALSO, BAY CITY CAPITAL, AND HE'S MANAGING
19	DIRECTOR THERE. HE'S ALSO A PHYSICIAN. CARL, WE'RE
20	INTERESTED IN YOUR THOUGHTS.
21	DR. GOLDFISCHER: THANKS AND THANKS FOR THE
22	OPPORTUNITY TO BE HERE. I THINK GREG JUST DID JUST A
23	PHENOMENAL JOB OF ALMOST CONVINCING ME TO GO DO SOMETHING
24	ELSE. I'M STUCK.
25	BUT FOLLOWING ON THIS, WE SPEND A LOT OF TIME
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ACTUALLY IN THAT VALLEY OF DEATH. WE START COMPANIES ON
 A REGULAR BASIS THAT WE DON'T REALLY KNOW WHAT THE
 COMMERCIAL APPLICATION MIGHT BE. WE SORT OF THINK IT'S
 REALLY INTERESTING SCIENCE, WE LIKE THE WORK, AND WE
 THINK IT MAY HAVE SOME COMMERCIAL APPLICABILITY, BUT THE
 PATH TO GETTING THERE IS NOT EXACTLY CLEAR.

AND SO I THINK ANY FINANCING VEHICLE THAT SORT 7 OF ENCOURAGES US TO DO THAT HAS A ROLE IN ESTABLISHING 8 9 THESE COMPANIES. WE ARE IN THE BUSINESS OF TAKING INORDINATE RISKS WITH THINGS THAT ARE MOST LIKELY GOING 10 TO FAIL, BUT THAT'S WHAT WE DO. AND WE SORT OF LIKE 11 12 DOING IT. AND SO I THINK THERE IS ACTUALLY A PLACE FOR A 13 FINANCING VEHICLE THAT MAY BE, IF WE'RE SITTING AROUND A 14 TABLE THINKING SHOULD WE COMMIT A FEW MILLION DOLLARS TO 15 THIS IDEA OR NOT, AND THERE'S A PARTNER THAT WE HAVE, A 16 PARTNER THAT HAS CAPITAL AVAILABLE ON TERMS THAT MAYBE ENABLE US TO TAKE IT TO THE NEXT STEP EVEN IF THE MONEY, 17 QUOTE, UNQUOTE, NEEDS TO BE PAID BACK, BUT GIVES US SOME 18 TIME TO EXPLORE THESE IDEAS IN A WAY WHERE WE ON THE 19 BUBBLE MIGHT DECIDE NOT TO DO SO. 20

THERE ARE A MYRIAD OF STRUCTURES THAT WILL COME UP THAT ARE BEING DISCUSSED THAT MIGHT ENABLE THAT OR NOT BE PROHIBITIVE TO IT. YES, THE MONEY HAS TO BE PAID BACK. WE GIVE LECTURES ALL THE TIME WHERE WE HAVE PEOPLE LIKE SILICON VALLEY BANK COME AND SAY, REMEMBER, GUYS,

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THIS IS DEBT. IT DOES HAVE TO BE PAID BACK. IT'S NOT
 EQUITY. BUT AS PART OF A MOSAIC OF FINANCING THESE
 COMPANIES OVER A PERIOD OF TIME, THERE IS A ROLE FOR THIS
 TYPE OF VEHICLE.

CHAIRMAN ROTH: GREAT. THANKS FOR THOSE
COMMENTS. LET'S MOVE RIGHT ON DOWN TO JON NORRIS. YOU
JUST MENTIONED SILICON VALLEY BANK AND VENTURE DEBT
FINANCING. THAT'S WHAT YOU GUYS DO A LOT OF. WE'D LOVE
TO HEAR YOUR THOUGHTS.

10 MR. NORRIS: RIGHT. THANKS, FIRST OF ALL, FOR THE OPPORTUNITY TO SPEAK TODAY. I THINK IT WAS VERY 11 12 INTERESTING THAT THE QUESTIONS WE HAD EARLIER RELATING TO 13 THE ABILITY TO TRY AND FINANCE EARLY STAGE COMPANIES WITH 14 DEBT, MAYBE IT HELPS TO GIVE A BROAD PERSPECTIVE OF WHEN 15 SVB LIKES TO GET INVOLVED IN WORKING WITH EARLY STAGE COMPANIES. TYPICALLY WE WILL GET INVOLVED WHEN THE FIRST 16 INSTITUTIONAL VENTURE CAPITAL ROUND OF EQUITY FINANCING 17 GOES INTO THE COMPANY. SO PRIOR TO THAT, WHICH, I THINK, 18 IS A LOT OF THE VALLEY OF DEATH COMMENTS THAT GREG MADE 19 IN A LOT OF VERY EARLY WORK IN THE DEVELOPMENT OF 20 COMPANIES, THE BANK REALLY DOESN'T PLAY. 21 22 AND REALLY THE REASON BEHIND THAT IS THAT THE BANK AS A WHOLE, AND I'LL JUST MAYBE SAY FOLKS WHO 23 PROVIDE DEBT BASED ON VENTURE CAPITAL COMING INTO THE 24 25 COMPANY, WE DON'T HAVE THE ABILITY TO UNDERWRITE THE 46

1	TECHNOLOGY AS WELL AS THE VENTURE CAPITAL INDUSTRY DOES.
2	SO TYPICALLY WHAT THOSE PROVIDERS DO IS WE
3	LEVERAGE THE DUE DILIGENCE THAT THE VENTURE INVESTORS
4	HAVE PUT INTO THAT COMPANY. AND SO FOR US SEEING A
5	SERIES A COMPANY RAISE MONEY BY TOP TIER VENTURE
6	CAPITALISTS GIVES US A SENSE THAT THE VENTURE FOLKS HAVE
7	DONE THEIR DUE DILIGENCE ON THE COMPANY AND THE
8	OPPORTUNITY FOR THAT COMPANY TO RAISE THEIR SERIES B
9	FINANCING IS VERY HIGH. AND TYPICALLY OUR STRUCTURE
10	TENDS TO BE ABOUT THREE TO FOUR YEARS WORTH OF A LOAN
11	STRUCTURE FROM THE DRAWDOWN TO THE PAYBACK. AND THAT
12	TYPICALLY WILL ENCOMPASS YOUR SERIES B ROUND OF
13	FINANCING.
14	SO A LOT OF TIMES NOW WHAT'S CALLED VENTURE

SO A LOT OF TIMES NOW WHAT'S CALLED VENTURE 14 15 DEBT IS THE ABILITY FOR THAT COMPANY, ONCE IT RAISES ITS 16 SERIES A FINANCING, TO LEVERAGE THE EQUITY WITH DEBT TO 17 HELP PROVIDE ADDITIONAL RUNWAY BETWEEN THE SERIES A AND THE SERIES B ROUND OF EQUITY. IN ESSENCE, IT PROVIDES 18 THREE -- LET'S SAY THREE TO SIX EXTRA MONTHS OF CAPITAL 19 FOR YOU TO HIT MILESTONES THAT HELPS THAT COMPANY TO HIT 20 A VALUE CREATION END POINT, WHICH ALLOWS THAT COMPANY TO 21 RAISE THEIR NEXT ROUND OF EQUITY AT A HIGHER VALUATION. 22 IN ESSENCE, THEY'RE PAYING BACK A LOAN WITH MONEY THAT IS 23 LESS EXPENSIVE THAN THEIR SERIES A MONEY. 24

AND SO THAT'S REALLY WHERE WE PLAY. I THINK IT

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#### **BARRISTERS' REPORTING SERVICE**

MAKES A LOT OF SENSE TO DISCUSS HAVING A LOAN VEHICLE FOR 1 COMPANIES PRIOR TO THAT SERIES A VENTURE FINANCING. 2 THINK SOME ISSUES TO KEEP IN MIND IS SECURITY INTEREST 3 BECAUSE A BANK WILL TAKE A SECURITY INTEREST IN ALL THE 4 5 ASSETS WHEN A VENTURE DEBT FACILITY IS PUT INTO PLACE. INTELLECTUAL PROPERTY IS AN ISSUE THAT SOMETIMES THE 6 INTELLECTUAL PROPERTY IS PART OF THAT LOAN, SOMETIMES 7 IT'S NOT. EXCLUSIVE LICENSES IS ALWAYS A BIG ISSUE THAT 8 9 COMES UP BECAUSE WE WANT TO MAKE SURE WE KEEP THE TECHNOLOGY THAT WE'RE LENDING ON WITH THE COMPANY; OR IF 10 NOT, THEN WE END UP BEING ABLE TO FOLLOW WHERE THAT 11 TECHNOLOGY GOES BECAUSE WHEN YOU REALLY GET DOWN TO IT, 12 13 WE'RE LEVERAGING THE ABILITY OF THAT COMPANY TO CONTINUE 14 TO GET FINANCING FOR US TO GET PAID BACK. IF A MAJOR 15 PART OF THAT TECHNOLOGY LEAVES TO GO TO ANOTHER COMPANY, 16 AND WE'RE NOT ABLE TO FOLLOW THAT WITH OUR LOAN, THEN WE'RE LOSING ABILITY FOR US TO GET REPAID. 17 CHAI RMAN ROTH: THANKS. 18 DR. GOLDFISCHER: ONE POINT I WANT TO ADD 19 BECAUSE WE DEAL WITH JON ALMOST EVERY DAY. PART OF THIS 20 SECURITY THAT THEY HAVE IS THE FACT THAT WE DEAL WITH 21 THEM EVERY DAY. SO IN ANY PARTICULAR COMPANY, IF WE 22 STIFF THEM ON THEIR LOAN, THEY'RE GOING TO BE LESS LIKELY 23 TO DO THIS AGAIN WITH US THE NEXT COMPANY. THESE ARE 24 25 NOT -- SINCE THEY'RE NOT CASH FLOW ENTITIES, A LOT OF THE

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1	SECURITY IS SOMEWHAT EPHEMERAL. IT'S RELATIONSHIP BASED.
2	IF WE WANT TO KEEP DOING BUSINESS WITH SVB, I GOT TO PAY
3	THEM BACK, I THINK ANYWAY.
4	MR. NORRIS: IT'S VERY RELATIONSHIP BASED.
5	THAT'S REALLY WHY, FOR EXAMPLE, SILICON VALLEY BANK'S
6	BEEN ABLE TO BE AROUND FOR 25 YEARS BECAUSE OUR SOLE
7	FOCUS REALLY HAS BEEN WORKING WITH THE VENTURE CAPITAL
8	COMMUNITY AND SERIAL ENTREPRENEURS WHO START COMPANIES
9	THAT ARE FUNDED BY THOSE FOLKS.
10	CHAIRMAN ROTH: I LOOK FORWARD TO YOUR COMMENTS
11	WHEN WE GET INTO THE SPECIFIC DISCUSSION ABOUT SECURITY
12	AND HOW WE CAN LEARN FROM THE EXPERIENCES YOU' VE HAD.
13	LET ME MOVE TO OUR LAST SPEAKER. BEFORE I DO
14	THAT, TWO MEMBERS OF THE COMMITTEE HAVE JOINED US. JEFF
15	SHEEHY HAS JOINED US. THANKS FOR BEING HERE, JEFF. AND
16	CHAIRMAN KLEIN HAS JUST JOINED US. THANKS, BOB.
17	GLEN IS WITH COOLEY GODWARD AND HAS SOME
18	THOUGHTS AND EXPERIENCE IN TERMS OF OBSERVING FROM A
19	LEGAL STANDPOINT HOW THIS FINANCING THAT GREG DID SUCH A
20	GREAT JOB OF GIVING US AN OVERVIEW ON ACTUALLY OCCURS.
21	AND I THINK IT WILL BE VERY USEFUL TO THE COMMITTEE WHEN
22	WE GET INTO DISCUSSIONS ABOUT HOW WE MIGHT STRUCTURE OUR
23	LOAN PROGRAM.
24	MR. SATO: PART OF IT IS I THINK WHAT YOUR GOAL
25	IS BECAUSE FUNDAMENTALLY IF YOU'RE LOOKING FOR A
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1	FINANCIAL RETURN, I DON'T THINK THIS IS THE RIGHT AREA TO
2	INVEST, IF YOU WILL. PEOPLE WILL ALWAYS TAKE GRANTS
3	VERSUS LOANS GIVEN THE ALTERNATIVE BASED ON THE FACT THAT
4	THEY ARE NEGATIVE CASH FLOW COMPANIES. AND THEY ARE
5	REALLY TRYING TO BUILD EARLY STAGE IP.
6	I THINK ONE OF THE THINGS THAT'S PROBABLY
7	IMPORTANT TO BEAR IN MIND IS THAT VENTURE INVESTORS
8	TYPICALLY ARE YOUR NEXT STAGE OF INVESTORS WILL
9	PROBABLY NOT INVEST IN YOU TO THE EXTENT THAT THERE'S A
10	SECURITY INTEREST OUT THERE ON YOUR IP, AND THEY ALSO
11	FEEL PRETTY STRONGLY THAT THEY DON'T WANT TO USE THE
12	PROCEEDS FROM THE FUNDING TO ACTUALLY PAY OFF DEBT.
13	WITH THOSE FUNDAMENTAL PRINCIPLES SET OUT
14	THERE, I THINK THERE IS A NICHE HERE FOR SMALL AMOUNTS.
15	AND IF THE GOAL IS TO SEED CAPITAL, THEN I THINK THAT, AS
16	PART OF A COMPONENT OF A PACKAGE, I THINK IT MAKES SENSE
17	AND CERTAINLY VIABLE IN TERMS OF OFFERINGS.
18	CHAIRMAN ROTH: ANY OTHER QUESTIONS, OVERVIEW
19	QUESTIONS, BEFORE WE GET INTO THE DETAIL FROM THE
20	COMMITTEE? I THINK WHAT WE'RE GOING TO DO IS TAKE A VERY
21	SHORT BREAK. THERE ARE BOX LUNCHES FOR THE COMMITTEE AND
22	OUR GUESTS. FOR THE PUBLIC, THERE ARE SOME SNACKS BACK
23	THERE, BUT YOU CAN ALSO STOP BY THE RESTAURANT AND GET
24	SOMETHING QUICK. LET'S TAKE 15 TO 20 MINUTES, AND THEN
25	WE'LL CONVENE AND GET SPECIFICALLY INTO THE DETAILS OF
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1	THE WORKING DOCUMENT AND GET YOUR THOUGHTS ON THOSE.
2	(A RECESS WAS TAKEN.)
3	CHAIRMAN ROTH: CAN WE RECONVENE? FOR THOSE OF
4	YOU ON THE PHONE, WE'RE JUST WAITING FOR OUR PANELISTS TO
5	RETURN AND WE'LL GET STARTED. ALL RIGHT. WE'RE GOING TO
6	CALL THE MEETING TO ORDER AGAIN. WHAT I'D LIKE TO DO IN
7	THE NEXT HOUR OR SO IS GO THROUGH THE DOCUMENT THAT I
8	MENTIONED SEVERAL TIMES TODAY THAT WAS PREPARED REALLY TO
9	STIMULATE DISCUSSION ON SOME OF THE ISSUES THAT HAVE COME
10	UP IN OUR EARLIER CONVERSATION TODAY ABOUT HOW WE
11	STRUCTURE THE PROGRAM. BUT BEFORE I DO THAT, LET ME
12	JUST, AGAIN, SO THAT WE'RE ALL ON THE SAME PAGE HERE,
13	TALK ABOUT THE TASK FORCE RESPONSIBILITY RIGHT NOW IS TO
14	COME UP WITH A POLICY AND A RECOMMENDATION ABOUT HOW A
15	LOAN PROGRAM SHOULD BE STRUCTURED. WE'RE PROBABLY NOT
16	GOING TO BE ABLE TO DEBATE LOANS VERSUS GRANTS AND SCOPE
17	OF THE LOANS. WHAT WE WANT TO TALK MORE ABOUT IS
18	SPECIFIC STRUCTURAL ISSUES THAT WE NEED TO INCLUDE IF
19	WE'RE GOING TO DESIGN SOMETHING THAT CAN MEET THE
20	REQUIREMENTS OF THE FOLLOW-ON FINANCING AND CONTINUE THIS
21	GOI NG.
22	SO MANY OF THE COMMENTS TODAY SO FAR HAVE BEEN
23	EXCELLENT BECAUSE THEY ZEROED IN ON SOME AREAS OF
24	CONCERN, SUCH AS SUBORDINATION, THAT WE REALLY NEED TO
25	TRY TO COME UP WITH. WHAT WE'RE ASKING IS YOUR HELP NOW
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IN THINKING ABOUT, OKAY, IF WE'RE GOING TO HAVE THIS
 PROGRAM, HOW SHOULD IT BE STRUCTURED SO THAT IT WOULD NOT
 BE OFFENSIVE TO PEOPLE THAT MAY FOLLOW ON IN TERMS OF
 FINANCING.

THE CONCEPT OVERALL IS, ONE, FUND THE GAPS 5 WHERE THERE ARE NOT OTHER SOURCES OF CAPITAL AVAILABLE TO 6 ADVANCE IT; AND, TWO, IF WE'RE SUCCESSFUL WITH THIS 7 PROGRAM, WE'D LIKE TO RECYCLE THE MONEY. SO THERE IS AN 8 9 ALTRUISTIC GOAL OF CIRM, WHICH IS HELP THOSE TODAY WHO MOST NEED IT; BUT IF WE CAN, HELP PEOPLE IN THE FUTURE IF 10 THOSE I DEAS GO ON AND ARE SUCCESSFUL AND THE LOANS CAN BE 11 12 REPAI D.

WITH THAT IN MIND, I'D LIKE TO OPEN THE
CONVERSATION MAYBE WITH THE DOCUMENT AND FIRST JUST MAKE
SURE THERE AREN'T ANY OF THE PREAMBLE OR THE LOAN PROCESS
AREAS THAT ANYBODY HAS THOUGHTS OR COMMENTS ON. THOSE
ARE PRETTY STANDARD.

DR. PENHOET: STOP FOR A CLARIFYING NOTE TO 18 WHAT YOU JUST SAID JUST TO BE CLEAR. THE LOAN PROGRAM. 19 REPAYMENT OF THE LOANS WILL COME BACK TO CIRM TO BE 20 REINVESTED IN FURTHER STEM CELL WORK. THE ECONOMIC 21 RETURNS ASSOCIATED WITH A GRANT WILL GO TO THE GENERAL 22 23 FUND OF THE STATE OF CALIFORNIA. I WANTED TO MAKE SURE EVERYBODY UNDERSTOOD THE DISTINCTION. LOAN REPAYMENTS 24 25 COME BACK TO THE AGENCY.

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MR. SIMPSON: AS OPPOSED TO GRANTS WHICH GO TO 1 2 THE GENERAL FUND. DR. PENHOET: DEALS ON GRANTS FROM SUCCESSFUL 3 COMMERCIALIZATION GO TO THE GENERAL FUND. 4 5 CHAIRMAN ROTH: ROYALTIES AND SO ON. SO THE PREAMBLE IS REALLY LIFTED FROM OTHER AREAS THAT HAVE BEEN 6 DISCUSSED AS A BACKGROUND FOR YOUR INFORMATION MOSTLY. 7 IF THERE ARE ANY ISSUES THERE, WE CAN CERTAINLY TRY TO 8 9 ADDRESS THOSE IN THE CONVERSATION. 10 THE SECOND, II, LOAN MAKING PROCESS JUST SAYS HOW WE WOULD DEAL WITH THESE. UNDERGO A FOUR-PHASE 11 12 EVALUATION PRIOR TO FUNDING. AND WE'LL GO INTO THE 13 SPECIFICS FOR THAT. 14 I HAVE A COMMENT IN TERMS OF LETTER A THAT I'D 15 LIKE TO MAKE. WE USE THE TERM PART 1 OF THE APPLICATION 16 WILL DESCRIBE THE SCIENTIFIC RESEARCH PROGRAM. THAT'S PRETTY GENERIC, AND WE'LL PROBABLY CHANGE THAT TERM 17 BECAUSE WE WANT TO MAKE SURE WE HAVE A BROAD SCOPE OF 18 WHAT THAT REVIEW COULD BE. COULD BE A CLINICAL PROGRAM. 19 IT COULD BE OTHER ELEMENTS THAT WE THINK ARE FUNDING GAPS 20 IMPEDING PROGRESS IN THIS AREA. SO WE'LL PROBABLY 21 REDEFINE THAT TERM, BUT FOR NOW I THINK IT'S FINE. 22 ON PAGE 2 WE TALK ABOUT THE BUSINESS/FINANCIAL 23 FEASIBILITY REVIEW. SO IN ADDITION TO WHATEVER THE CORE 24 GRANT IS OR CORE LOAN PROGRAM IS LOOKING AT IN TERMS OF 25 53

1	ADVANCING PRODUCT IDEAS, THE SECOND PART OF THAT IS WHAT
2	WE'VE CALLED THE BUSINESS/FINANCIAL FEASIBILITY REVIEW.
3	AND I'D LIKE TO START THERE AND OPEN IT UP TO
4	THE PANELISTS TO MAKE SOME COMMENTS ON THAT SECTION, AND
5	YOU CAN TAKE IT IN ORDER OR OUT OF ORDER. WE'LL FOLLOW
6	ALONG. AND THEN ALLOW THE COMMITTEE MEMBERS TO INTERACT
7	WITH YOU ON THAT. WHO WOULD LIKE TO TAKE A SHOT AT IT?
8	DON' T BE BASHFUL. JON.
9	MR. NORRIS: SO RELATING TO THE BUSINESS PLAN
10	FINANCIAL FEASIBILITY SIDE OF THINGS, I THINK WHAT
11	DEFINITELY WOULD BE IMPORTANT FOR YOUR UNDERSTANDING IS
12	TO REALLY GET AN UNDERSTANDING, NOT ONLY OF THE OVERALL
13	BUDGET, BUT HOW IT'S PUT INTO PLAY, WHAT'S THE TIMING,
14	AND WHAT ARE THE MILESTONES THAT REALLY ARE THE SUCCESS
15	MILESTONES IN THE SENSE OF WHAT MILESTONES GETS YOU TO

MILESTONES IN THE SENSE OF WHAT MILESTONES GETS YOU TO
VENTURE FUNDING? BECAUSE IN THE END, THAT'S WHAT IS MOST
LIKELY GOING TO PAY BACK THE STATE AS WELL AS BE ABLE TO
BRING THE VENTURE MOVING FORWARD.

AND I THINK REALLY HAVING AN UNDERSTANDING OF
THAT, HAVING SOMEBODY BE ABLE TO CREATE A BALANCE SHEET
AND AN INCOME STATEMENT AND A CASH FLOW, EVEN A VERY
SIMPLIFIED FORM OF THAT, WOULD BE SOMETHING THAT YOU
WOULD PROBABLY WANT TO HAVE AS A PART OF THE PROCESS JUST
SO YOU UNDERSTAND WHAT ARE THE TIMING CONSIDERATIONS TO
HITTING THOSE VALUE INFLECTION MILESTONES. THE MORE

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SIMPLIFIED YOU HAVE THAT SECTION, THE LESS YOU REALLY
 UNDERSTAND WHAT THIS MONEY IS GOING FOR AND WHAT THE
 THOUGHT PROCESS IS OF THE COMPANY MOVING THAT TECHNOLOGY
 FORWARD.

CHAIRMAN ROTH: JON IS BRINGING UP AN IMPORTANT 5 POINT. IN THE DOCUMENT WE ACTUALLY DEAL WITH MILESTONES 6 IN TWO PLACES. WHAT HE'S TALKING ABOUT ARE OVERALL 7 BUSINESS MILESTONES, AND I THINK THAT'S PROBABLY A VERY 8 9 APPROPRIATE QUESTION TO ASK APPLICANTS. HOW DO YOU INTEND TO FINANCE YOUR BUSINESS ON AN ONGOING BASIS? 10 S0 WE AT LEAST UNDERSTAND IF THEY'RE AIMING FOR VENTURE 11 12 CAPITAL OR AIMING FOR VENTURE DEBT OR WHATEVER ASPECTS. 13 OTHER COMMENTS?

14 DR. GOLDFISCHER: YOU'RE REALLY -- IT GETS BACK 15 TO WHAT GREG SAID IN ONE OF HIS POINTS WAS WE HAVE THIS 16 EXPERIENCE WITH THE GREATEST SCIENTIST IN THE WORLD. IT'S NOT THAT THEY'RE BAD BUSINESS PEOPLE, BUT THEY JUST 17 DON'T THINK ABOUT IT IN RETURN ON CAPITAL. THAT'S JUST 18 19 NOT HOW THEY'VE DONE WHAT THEY DO, AND THEY'RE ALSO PEOPLE AT THE LEVEL OF SCIENCE THAT TEND TO COME UP WITH 20 THESE DISCOVERIES ARE REALLY NOT USED TO PEOPLE SAYING NO 21 TO THEM AND TURNING THEM DONE. AND THE ACCOUNTABILITY AT 22 23 THAT LEVEL IS SORT OF -- THEY'RE RESEARCHERS, RIGHT. HOW DO YOU COMBINE THAT LEVEL OF SCIENTIFIC CREATIVITY WITH 24 25 SOME MODICUM, AT LEAST, OF BUSINESS ACCOUNTABILITY

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#### **BARRISTERS' REPORTING SERVICE**

BECAUSE YOU ARE LENDING MONEY, SO YOU WANT TO BE LENDING
 IT TO PEOPLE WHO AT LEAST -- AT LEAST SOMEONE IN THAT
 ORGANIZATION HAS THAT KIND OF EXPERIENCE BASE AND
 UNDERSTANDS THE BUSINESS SIDE OF THE PROJECT.
 MR. KLEIN: I THINK IT'S A VERY IMPORTANT

POINT, THAT PART OF THE ANALYSIS REALLY HAS TO LOOK AT 6 MANAGEMENT CAPACITY. NOW, THEY MAY BE PART OF AN 7 ACCELERATOR MODEL WHERE THEY SHARE MANAGEMENT CAPACITY 8 WITH A NUMBER OF DIFFERENT GROUPS, OR THEY MAY HAVE 9 SUFFICIENT SCALE TO GET MANAGEMENT CAPACITY THEMSELVES. 10 THE MANAGEMENT SIDE OF IT IS PROBABLY THE MOST IMPORTANT 11 12 BECAUSE IF WE WANT TO HAVE A REASONABLY HIGH PERCENTAGE 13 PAYBACK, WE'RE GOING HAVE TO HAVE SOME REAL QUALITY 14 EXPERIENCE IN MANAGEMENT.

15 IF YOU WERE TO DIFFERENTIATE FOR ME OUR ROLE AS 16 VERSUS SILICON VALLEY BANK'S ROLE, WE'RE HOPING TO GO IN THIS AREA AND KICK-START IT BY LOANS, NOT WHERE THE 17 MANAGEMENT IS BAD, BUT IN AREAS WHERE THE AREA OF 18 DISCOVERY AND THE PROOF OF LONG-TERM PRODUCT FEASIBILITY 19 IS NOT YET WELL ENOUGH ESTABLISHED FOR SILICON VALLEY 20 BANK TO BE IN THE AREA OR AT LEAST NOT WITHOUT MAYBE 21 SOMEONE LIKE US GOING IN FOR THE FIRST FEW YEARS. 22 S0 SILICON VALLEY BANK MIGHT COME ON THREE OR FOUR YEARS 23 INTO IT AFTER THEY'VE GONE DOWNSTREAM AND GOTTEN SOME OF 24 25 THE MAJOR MILESTONES OUT OF THE WAY, BUT WE'RE TRYING TO

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1	TAKE THE FRONT END OF THAT PROCESS. REGARDLESS OF WHERE
2	WE ARE IN THE PROCESS, WE'RE GOING TO NEED SOME PRETTY
3	HIGH QUALITY MANAGEMENT BECAUSE IT'S PARTICULARLY
4	CHALLENGING THAT WE'RE IN A PIONEERING FIELD.
5	DR. GOLDFISCHER: I THINK WHAT YOU MAY BE
6	GETTING TOWARDS IS ARE YOU TRYING TO BE AN ADJUNCT NOT TO
7	A WONDERFUL RESEARCHER WITH AN IDEA, BUT WE OFTEN SEE
8	PROJECTS, WE'LL CALL IT, THAT ATTACH THE WONDERFUL
9	RESEARCHER OR A COUPLE OF SUCCESSFUL INDIVIDUALS. SO WE
10	ARE BROUGHT THINGS BY PEOPLE WHO ARE PRETTY GOOD BUSINESS
11	PEOPLE OR ANGEL INVESTORS, GOOD WORD FOR IT, AND THERE'S
12	SOME MONEY THAT'S GONE INTO IT. BUT THERE IS SOMEBODY
13	AROUND THIS PROJECT IS SORT OF A BUSINESS PERSON. I
14	THINK IT FEELS LIKE YOU'RE SORT OF TRYING TO FIT IN
15	SOMEWHERE IN THAT MIX OF NOT JUST A PURE PROJECT
16	FINANCING BY A SCIENTIST, BUT THERE'S SOME IDEA THAT
17	SOMEONE THINKS THERE'S SOME COMMERCIAL APPLIABILITY,
18	MAYBE IT'S COME TO PEOPLE LIKE US, MAYBE NOT, BUT AROUND
19	IS SOMEONE WHO CAN ADDRESS THE ISSUES THAT YOU ARE
20	TALKING ABOUT.
21	MR. BONFIGLIO: I WOULD CAUTION YOU NOT TO GET
22	TOO FAR DOWN THE ROAD AND EXPECTING TO HAVE SENIOR
23	MANAGEMENT WITH BUSINESS EXPERIENCE IN THE COMPANY AS A
24	CRITERIA, AS A THRESHOLD CRITERIA, FOR THE FINANCING
25	BECAUSE YOU'RE JUST NOT GOING TO FIND THAT IN A LOT OF
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#### **BARRISTERS' REPORTING SERVICE**

THE COMPANIES IN THE EARLY STAGE. IN THAT VALLEY OF 1 DEATH, THE BUSINESS IS BEING BUILT BY THE FOUNDERS WHO 2 ARE TYPICALLY SCIENTIFIC FOUNDERS, AS CARL QUITE 3 CORRECTLY POINTED OUT, ARE USUALLY VERY BRILLIANT 4 5 SCIENTISTS, BUT NOT THE BEST BUSINESS GUYS. THEY MAY HAVE GONE AND GOTTEN SEED FINANCING AND THEY MAY HAVE 6 FRIENDS AND FAMILY FINANCING OR OTHER COLLEAGUES IN THEIR 7 BUSINESS SCHOOL OR WHEREVER THAT CAN HELP THEM PUT 8 9 TOGETHER A BUSINESS PLAN.

10 AND JON'S POINT ABOUT MAKING SURE YOU HAVE SOME 11 MILESTONES IS REALLY WELL TAKEN, BUT I WOULDN'T LINK 12 MILESTONES TO HAVING SENIOR MANAGEMENT RESIDENT IN THE 13 COMPANY BECAUSE YOU WILL TAKE OUT OF THE BOX A HUGE CHUNK 14 OF THE COMPANIES THAT WOULD NEED THIS FINANCING. THEY 15 WON'T HAVE IT RESIDENT ON THE TEAM.

16 MR. KLEIN: GREG, THEY MAY NOT HAVE SENIOR MANAGEMENT, BUT THEY CERTAINLY COULD GO INTO AN 17 ACCELERATOR MODEL WHERE THEY' RE SHARING MANAGEMENT AMONG 18 A NUMBER OF PROJECTS AS AN ACCELERATOR MODEL. LIKE THE 19 ONE IN SEATTLE, FOR EXAMPLE, WILL TAKE IN STRAIGHT 20 SCIENTIFIC GROUPS AND REALLY PROVIDE SOME OVERSIGHT, SOME 21 FINANCIAL MANAGEMENT, SOME DEVELOPMENT EXPERTISE THAT 22 WOULD BE VERY HELPFUL. BUT IT'S CERTAINLY POSSIBLE THAT 23 WE HAVE SOME PEOPLE WITH SOME MANAGEMENT EXPERIENCE WHO 24 25 YOU WOULDN'T CONSIDER SENIOR MANAGEMENT. THEY DON'T HAVE

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1	A RECORD OF BRINGING ONE OR TWO OR THREE COMPANIES TO
2	SUCCESSFUL FRUITION, BUT THEY DEFINITELY HAVE A
3	MANAGEMENT AND FINANCIAL BACKGROUND TO PROVIDE SOME
4	STRUCTURE TO THE PROCESS.
5	MS. FEIT: WELL, THE PRESENTATION WAS REALLY
6	HELPFUL TO ME BECAUSE IT APPEARS THAT WHERE CIRM WILL BE
7	WORKING IS IN A PORTION OF THE VALLEY OF THE DEATH. IT
8	SOUNDS LIKE YOU ALL COME IN WHEN IT'S ALL SAFE TO COME
9	IN, AND THAT'S A GOOD TIME.
10	DR. GOLDFISCHER: COME SPEND A WEEK IN OUR
11	OFFICE.
12	MS. FEIT: THAT'S A GREAT THING. BUT IT SEEMS
13	TO ME THAT CIRM'S ABILITY TO DECIDE WHEN WE SHOULD
14	FINANCE ANY RESEARCH IS GOING TO BE BASED ON THE RESEARCH
15	ITSELF BECAUSE WHAT I HEARD TODAY IS THERE REALLY ISN'T A
16	CASH FLOW, THERE'S VERY LITTLE EQUITY AVAILABLE. SO
17	TYPICAL THINGS THAT PEOPLE WILL FINANCE FOR REASONS
18	AREN'T THERE, BUT WHAT IS THERE IS THE RESEARCH. I THINK
19	CIRM DOES HAVE THE ABILITY TO EVALUATE THE RESEARCH.
20	IF IT'S A RESEARCHER WHO HAD ALREADY APPLIED
21	FOR A GRANT THROUGH CIRM OR SOMEBODY ELSE AND IS AT A
22	POINT WHO'S SAYING I NEED THIS MUCH MORE AND THEN I CAN
23	GO TO CLINICAL TRIALS, I THINK AT THAT POINT THE
24	EVALUATION OF THE RESEARCH, WHAT HAS HAPPENED, THE
25	EFFICACY, AND CERTAINLY THE TALENT THAT'S BEEN AVAILABLE
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1	TO CIRM TO MAKE THOSE EVALUATIONS IS IMMENSE.
2	SO I THINK FROM THAT PERSPECTIVE I DON'T THINK
3	WE'RE GOING TO BE ABLE TO BUILD IN CREDITWORTHINESS,
4	ASSETS. THAT JUST ISN'T GOING TO WORK BECAUSE WE CLEARLY
5	ARE WORKING IN THAT PERIOD THAT THEY'RE REFERRING TO AS
6	THE VALLEY OF DEATH.
7	AND SO I THINK THAT THE QUALITY OF HOW FAR THE
8	RESEARCH HAS GONE, THE EFFICACY OF IT, AND EVEN AN
9	OPINION ON THE VALUE OF IT GOING FORWARD IS WHAT CIRM'S
10	GOING TO BE HANGING THEIR HAT ON TO GIVE A LOAN.
11	MR. NORRIS: JUST TO BUILD ON THAT AS WELL, I
12	THINK WHEN YOU DO LOOK AT, LET'S SAY, NO. 2, CREDIT
13	EVALUATION, THE ODDS OF ANY OF THE COMPANIES THAT ARE
14	GOING TO BE APPLYING FOR THESE LOANS TO HAVE ANYTHING TO
15	HANG YOUR HAT ON IN TERMS OF ANY INFORMATION ABOUT THE
16	COMPANY, ASSUMING THAT THE MAJORITY OF THESE COMPANIES
17	ARE PROBABLY JUST VERY RECENTLY INCORPORATED, AND THERE'S
18	NO INFORMATION THERE. SO I THINK THAT'S WHERE SECTION
19	NO. 4 REALLY COMES INTO PLAY WHERE YOU'RE TRYING TO
20	UNDERSTAND THEIR BUSINESS PLAN BECAUSE REALLY
21	CREDITWORTHINESS IS PROBABLY NOT GOING TO BE A
22	CONSIDERATION FOR WHETHER THEY SHOULD QUALIFY.
23	DR. GOLDFISCHER: YOUR EARLIER POINT ABOUT THE
24	PEOPLE INVOLVED IN THIS HAVING THE BASIC SKILLS TO CREATE
25	A BUSINESS PLAN WITH A P & L AND SOME MILESTONES TO PASS
	60

SOME KIND OF REASONABLE SMELL TEST DOES SEEM TO BE
 PRETTY --

3 MR. NORRIS: WHAT'S NICE ABOUT THAT IS THAT 4 THERE ARE LOTS OF CONSULTING CFO COMPANIES AND LOTS OF 5 FOLKS IN THE FINANCE INDUSTRY THAT ARE ABLE TO SPEND 6 MAYBE TWO OR THREE HOURS A WEEK WITH A COMPANY TO GET 7 THEIR FINANCES IN A REASONABLE ENOUGH ORDER SO THAT 8 SOMEBODY CAN LOOK AT THAT AND UNDERSTAND THEIR PATHWAY 9 FORWARD.

10 CHAIRMAN ROTH: LET ME JUST SUMMARIZE. I WANT TO CAPTURE THIS BECAUSE I THINK IT'S REALLY IMPORTANT. 11 12 WHAT IS BEING SAID IS THAT WE'RE PROBABLY NOT IN MANY 13 CASES GOING TO HAVE A FULLY DEVELOPED MANAGEMENT TEAM 14 THAT HAS EXPERIENCE. THERE MAY BE PEOPLE AROUND THE 15 PRINCIPALS WHO HAVE SUCH EXPERIENCE. THERE ARE A LARGE 16 NUMBER OF ORGANIZATIONS THROUGHOUT THE STATE, INCLUDING ONE I WORK WITH EVERY DAY, CONNECT, WHICH DOES THIS TYPE 17 OF HELP FOR SCIENCE-BASED COMPANIES EVERY DAY. OCTANE IN 18 ORANGE COUNTY AND THERE ARE OTHERS. STANFORD HAS 19 SOMETHING IN THAT AREA. BUT I THINK YOU CAN GET THIS 20 INFORMATION, BUT THE INFORMATION ITSELF IS WHAT'S 21 PROBABLY GOING TO BE IMPORTANT. HOW WILL THIS LOAN 22 ENABLE THIS IDEA TO PROGRESS? AND WHAT WOULD BE THE 23 FOLLOW-ON FINANCING PLAN IF SUCCESSFUL? 24 25 AND TO CAPTURE THAT IN TERMS OF WHAT ARE YOUR

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KEY FINANCIAL MILESTONES GOING FORWARD IS, I THINK, WHAT
 YOU' RE RECOMMENDING.

3 DR. GOLDFISCHER: MAYBE THERE'S SOMETHING THAT 4 YOU WERE TALKING ABOUT, BOB. ALEXANDRIA WOULD LOVE TO DO MORE ACCELERATORS. THEY HAVE SPACE ALL OVER CALIFORNIA. 5 BUT SOMEONE WOULD HAVE TO GO TO THEM WITH A PLAN IN 6 EFFECT OF REBUILDING WHAT'S IN SEATTLE OR A VERSION OF 7 IT, WHETHER IT'S IN SAN DIEGO OR AROUND HERE. AND MAYBE 8 9 WHAT YOU ARE DOING HERE KIND OF HELPS STIMULATE OR CAUSE SOMEONE TO ACTUALLY SAY, WELL, MAYBE WE CAN GO IN AND PUT 10 A LITTLE INCUBATOR, GO GET SOME SPACE FROM ALEXANDRIA WHO 11 12 MIGHT BE WILLING TO COMIT SOME CAPITAL TO THE WHOLE 13 THING. IT'S NOT IMPOSSIBLE.

MR. KLEIN: CERTAINLY THAT WOULD BE A GREAT
OUTCOME. OFTENTIMES IF THERE'S FINANCING AVAILABLE, YOU
NOW MADE IT FEASIBLE FOR THESE NEW BUSINESS MODELS TO BE
EXPANDED INTO THAT SPACE.

AND IN TERMS OF DUANE'S POINT ON WHAT'S THE 18 DOWNSTREAM PLAN, THE EXIT PLAN, THERE'S TWO DIFFERENT 19 POINTS THAT I THINK COME TO MY ATTENTION. ONE IS SOMEONE 20 LIKE SILICON VALLEY BANK MAY SAY, LOOK, WE'LL HELP YOU 21 WORK OUT A BUSINESS PLAN, BUT UNTIL YOU GET TO THIS THIRD 22 MILESTONE, WE'RE NOT GOING TO LEND YOU ANY MONEY. 23 BUT WITH THIS BUSINESS PLAN, IF CIRM WILL DO A LOAN TO COVER 24 25 YOU THROUGH THOSE THREE MILESTONES, WE'D SERIOUSLY

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CONSIDER MAKING A LOAN AT THAT POINT. SO THE BANK
 PERSONNEL CAN PROVIDE SOME FRONT-END GUIDANCE THAT COULD
 BE PART OF A PACKAGE THAT LET'S US HAVE A LONGER TERM
 DEVELOPMENT SCENARIO FOR THE COMPANY.

5 THE OTHER POINT TOO IN TERMS OF THE POINT RAISED EARLIER ABOUT VENTURE CAPITAL IS GOING TO HAVE A 6 PROBLEM WITH THESE LOANS, NOT WANTING TO ENTER IF, IN 7 FACT, THEIR PROCEEDS HAVE TO PAY BACK THIS LOAN. THERE'S 8 9 A COMPROMISE ALONG THAT PATH SO THAT POTENTIALLY THIS IS A SUBORDINATED DEBENTURE THAT SPECIFICALLY UP FRONT UNDER 10 THE BUSINESS PLAN IS SUBORDINATED TO, YOU KNOW, A 11 12 SIGNIFICANT CAPITAL ROUND; BUT IT SAYS IF YOU GET TO 13 MILESTONE FIVE AND ARE BRINGING IN A SECOND CAPITAL 14 ROUND, AT THAT POINT YOU SHOULD BE MATURE ENOUGH THAT YOU 15 CAN PAY US BACK.

16 SO YOU COULD SUBORDINATE SPECIFICALLY IN YOUR 17 BUSINESS PLAN TO ONE OR TWO CAPITAL ROUNDS, BUT BY THE 18 SECOND OR THIRD CAPITAL ROUND, AS APPROPRIATE, THEN IT 19 MAY BE APPROPRIATE TO PUT INTO THAT BUSINESS PLAN TO GET 20 PAID BACK AT THAT POINT.

21 MR. NORRIS: JUST ONE OTHER THING TO BUILD OFF 22 OF WHAT ROBERT SAID RELATING TO THE ABILITY OF THE BANK 23 TO HELP THESE EARLY STAGE COMPANIES. WHAT'S NICE ABOUT 24 SILICON VALLEY BANK AND OTHER BANKS IS THAT IT'S NOT FOR 25 US JUST ABOUT LOANS. IT'S ABOUT WORKING WITH COMPANIES,

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### **BARRISTERS' REPORTING SERVICE**

1	HELPING OPEN UP ACCOUNTS, AND HELPING THOSE COMPANIES
2	QUALIFY FOR VENTURE FUNDING. AND THAT'S A MAJOR PART OF
3	WHAT WE DO. AND SO THERE ARE A LOT OF QUALIFIED FOLKS
4	OUT THERE THAT ARE LOOKING TO HELP THESE COMPANIES. IF
5	IT'S HELPING THEM MODIFY THE BUSINESS PLAN OR UNDERSTAND
6	WHAT THE MAJOR MILESTONE THAT THEY NEED TO WORK ON AND
7	ACTUALLY BE ABLE TO PUT TOGETHER AN EXECUTIVE SUMMARY OR
8	BUSINESS PLAN OR AN APPLICATION FOR A LOAN LIKE THIS,
9	THERE ARE A LOT OF PEOPLE OUT THERE THAT ARE WILLING TO
10	PUT FORTH THE EFFORT FOR THESE EARLY STAGE COMPANIES. I
11	THINK SILICON VALLEY AS WELL AS SAN DIEGO AND BOSTON ARE
12	THREE AREAS WHERE THERE'S A LOT OF THOSE FOLKS.
13	CHAIRMAN ROTH: SO LET ME GET A COMMENT FROM
14	ALAN. I'M SORRY WE DIDN'T HAVE ROOM AT THE TABLE FOR
15	ALAN.
16	DR. TROUNSON: I'M HERE LEARNING. I APPRECIATE
17	THE KIND OF RISKS BECAUSE I THINK CIRM IS GOING TO TAKE
18	FRONT-END RISKS IN SUPPORT OF EARLY DEVELOPING COMPANIES.
19	AND I DON'T SEE HOW YOU CAN ACTUALLY AVOID IT. SO YOU
20	NEED AS GOOD ADVICE AS YOU CAN GET. BUT I DON'T THINK
21	THAT'S THE ONLY COMMERCIAL INTEREST THAT WE MIGHT HAVE,
22	AND I'D BE INTERESTED AS TO HOW THE COMMITTEE SAW THIS.
23	GREG TALKED ABOUT THOSE SERVICE INDUSTRIES
24	WHICH ARE NOT REALLY ALL THAT VC ATTRACTIVE BECAUSE THEIR
25	MARGINS ARE SMALLER THAN THE RETURN. BUT THEY MAY BE
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1	VERY GOOD PLACES FOR CIRM TO BE INVOLVED IN BECAUSE THEY
2	MAY PROVIDE SERVICE TO ACTUALLY GET THE PIPELINE MOVING
3	OR MOVING IT ALONG, OR EVEN LEVERAGING SOME MONEY THAT'S
4	AVAILABLE IN ORDER TO GET A REDIRECTION OF ATTEMPTING TO
5	ACCOMMODATE OUR STEM CELL INTERESTS.
6	SO I THINK THAT THERE'S A BROADER OPPORTUNITY
7	HERE, AND I THINK WHATEVER IT IS WE'RE GOING TO CLEARLY
8	GET GOOD ADVICE, BUT WE COULD ACTUALLY ALSO BE WORKING IN
9	AREAS WHERE THE RISK IS MUCH LOWER THAN THE VERY EARLY
10	START-UP COMPANIES.
11	CHAIRMAN ROTH: I THINK THAT'S AN EXCELLENT
12	COMMENT, ALAN. WE HEARD THAT FROM SEVERAL PEOPLE,
13	INCLUDING GREG, ABOUT WHERE ARE THE FUNDING GAPS? THIS
14	IS A LITTLE OFF TOPIC, BUT AN IMPORTANT ONE PROBABLY TO
15	GET SOME THOUGHTS FROM THESE EXPERTS ON. IF WE'RE DOING
16	THE LOAN PROGRAM TODAY AND WE'RE PUTTING AN RFA OUT, ONE
17	OF THEM IS OBVIOUSLY THE VALLEY OF DEATH, THAT EARLY
18	STAGE BETWEEN THE LAST GRANT YOU CAN GET AND BEFORE ANY
19	CAPITAL WILL REALLY COME IN OF SIGNIFICANCE AND INVEST.
20	ANOTHER ONE IS RESOURCES FOR THOSE IDEAS. IF
21	YOU HAVE TWO FACULTY WITH AN IDEA AND IT'S A GOOD ONE AND
22	THE IP LOOKS GOOD AND THEY NEED TO ADVANCE IT, IT'S ONE
23	THING TO HAVE THE MONEY. IT'S ANOTHER THING TO HAVE THE
24	INFRASTRUCTURE AVAILABLE TO YOU TO ACTUALLY DO IT.
25	REMEMBER, IT HAS TO BE IN THE STATE OF CALIFORNIA
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1 I NFRASTRUCTURE.

2 MR. BONFIGLIO: WELL, IF YOU'RE REFERRING TO 3 THE INCUBATOR MODEL, IT'S A GREAT IDEA. IF YOU COULD GET 4 ALEXANDRIA OR WHOMEVER TO STEP UP AND PUT TOGETHER AN 5 INCUBATOR, WORK WITH YOU TO PUT TOGETHER AN INCUBATOR, I 6 THINK THAT WOULD BE PHENOMENAL. THAT WOULD SOLVE SOME OF 7 THE PROBLEMS WE'RE TALKING ABOUT.

IN TERMS OF REPAYING THE LOAN UPON -- THE 8 9 TRIGGER FOR REPAYMENT OF A LOAN BE THE SUBSEQUENT ROUND OF FINANCING, THAT'S A PROBLEM, I THINK. IT DEPENDS, 10 HONESTLY, ON HOW MUCH THE LOAN IS AND HOW BIG THE ROUND 11 12 OF FINANCING IS. IF YOU'VE GOT A MILLION-DOLLAR LOAN OUT 13 AND YOU' RE DOING A \$5 MILLION ROUND OF FINANCING, THEY 14 HAVE TO TAKE ONE MILLION, 20 PERCENT OF THE MONEY, THAT 15 YOU' RE COMING INTO THAT FINANCING AND TURN AROUND AND 16 WRITE THAT CHECK BACK TO SOMEBODY ELSE, THAT'S GOING TO MAKE GUYS LIKE ME SAY I DON'T THINK SO. THAT'S MORE 17 FINANCIAL RISK THAN I WANT TO TAKE. 18

19 I THINK THE TRIGGER FOR REPAYMENT OF THESE 20 LOANS, IF YOU WANT TO MAKE IT AS PALATABLE AS POSSIBLE 21 FOR THE VENTURE COMMUNITY, OUGHT TO BE SOMETHING THAT'S 22 TIED MORE TO THE OVERALL FINANCIAL HEALTH OF THE COMPANY 23 AND THE VALUATION. SO THE IDEAL TRIGGER WOULD BE ON A 24 SALE OR M&A. JUST MAKE THE LOAN AND REALIZE YOU'RE GOING 25 TO BE IN THE COMPANY JUST LIKE THE VENTURE GUYS UNTIL THE

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COMPANY HAS EXITED. AND THEN WHEN YOU DO AN M&A 1 TRANSACTION, THEN YOU' RE REPAID JUST AS THE VENTURE GUYS 2 GET THEIR RETURNS. SO TO SOME EXTENT YOU STAND IN THE 3 4 SAME FOOTING WITH THE VENTURE COMMUNITY. 5 DR. LOVE: WOULD YOU INCLUDE AN IPO IN THAT AS WELL? 6 MR. BONFIGLIO: ABSOLUTELY. REALIZE I DO THAT 7 RECOGNIZING THAT, FOR MOST BIOTECH COMPANIES, AN IPO IS 8 9 NOT AN EXIT FOR THE VENTURE GUYS. IT'S A FINANCING EVENT. BUT ADD AN IPO, THE STATE SHOULD BE REPAID 10 BECAUSE THERE WILL BE CAPITAL AVAILABLE THAT COULD GO ON 11 12 TO PAY THAT OFF. 13 CHAIRMAN ROTH: MAYBE WE SHOULD MOVE THAT 14 DISCUSSION TO WHEN WE GET ON THE NEXT PAGE IN TERMS OF 15 TERM, WHICH WE'VE PUT AT FIVE TO SEVEN, AND TALK ABOUT 16 ALTERNATIVES TO TERM. 17 MR. BONFIGLIO: BACK TO THE FIRST POINT, I THINK YOU NEED TO SEPARATE AN ABILITY TO THINK ABOUT YOUR 18 BUSINESS, THINK ABOUT YOUR COMPANY IN BUSINESS TERMS, 19 MEANING FUNDING TO MILESTONES, FUNDING TO GOALS AND 20 OBJECTIVES, AGAINST HAVING A CEO WHO COMES OUT OF THE 21 STANFORD BUSINESS SCHOOL OR CAL BUSINESS SCHOOL OR 22 23 SOMEBODY OF THAT NATURE. I MEAN YOU'RE JUST NOT GOING TO FIND THAT MANY CEO'S OF THAT TYPE SITTING IN SMALL 24 25 COMPANIES. WHAT YOU' RE GOING TO HAVE IS A SCIENTIFIC

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FOUNDER WHO CAN REACH OUT TO HIS CLOSE COLLEAGUE OR TO A 1 CONSULTANT TO HELP HIM DO THE BUSINESS PLAN. 2 I THINK YOU NEED TO REQUIRE HIM TO GO THROUGH 3 THAT EXERCISE SO HE'S THINKING ABOUT HIS COMPANY IN TERMS 4 OF BUSINESS AND SO THAT YOU HAVE SOME CERTAINTY THAT THIS 5 FUNDING WILL GET YOU SOMEWHERE AND IT WON'T BE JUST 6 FUNDING INTO NOTHING. BUT I WOULD NOT PUT IN A 7 REQUIREMENT THAT HAVE YOU HAVE RESIDENT ON THE TEAM A CEO 8 9 WHO HAS THAT KIND OF BUSINESS BACKGROUND BECAUSE YOU' RE HONESTLY JUST NOT GOING TO SEE IT. 10 MR. KLEIN: I DON'T THINK WE'RE TALKING HIRING 11 EXPENSIVE PEOPLE UP FRONT. I THINK WE'RE TALKING ABOUT 12 IN THE CONSULTING ROLE, ADVISORY ROLE. BUT HOW WOULD YOU 13 14 FEEL ABOUT -- THERE'S GOING TO BE OBVIOUSLY LOANS TO 15 DIFFERENT SEGMENTS IN THIS RISK PROFILE. SOME OF THESE 16 LOANS ARE GOING TO GO FURTHER DOWNSTREAM WHERE IT'S GOTTEN TO THE POINT WHERE THE RISK IS MITIGATED ENOUGH 17 YOU CAN GET -- WHERE IF YOU COME IN, YOU MAY COME IN 18 CONCURRENT WITH THE MAJOR VENTURE CAPITAL ROUND WHERE THE 19 VENTURE CAPITAL IS NOT WILLING TO PUT UP 10 MILLION INTO 20 THIS, BUT THEY'LL PUT FOUR MILLION. SO YOU MAY COME IN 21 CONCURRENTLY AND THEN MAKE IT FEASIBLE AT AN EARLIER 22 STAGE TO GET THE VENTURE CAPITAL IN BECAUSE WITH FOUR 23 MILLION IN, THEY CAN SPREAD RISK OVER A BROADER 24 25 PORTFOLIO. AND AT THAT RISK LEVEL, IT'S TOLERABLE. WE

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1	GET LEVERAGE AND THE COMPANY MOVES FASTER.
2	MR. BONFIGLIO: THAT SCENARIO WILL PLAY OUT
3	MORE OFTEN THAN NOT, HONESTLY, BOB. TYPICALLY WHEN WE
4	LOOK AT COMPANIES THAT ARE FUNDABLE, THEY HAVE MORE THAN
5	ONE THERAPEUTIC APPLICATION THAT THEY CAN APPLY THEIR
6	TECHNOLOGY AGAINST. THEY'RE TYPICALLY ASKING FOR FUNDING
7	FOR THEIR DOMINANT, THEIR LEAD PRODUCT, THEIR LEAD
8	THERAPEUTIC APPLICATION. IT HELPS ME REDUCE MY RISK IF I
9	KNOW THAT THERE'S ANOTHER THERAPEUTIC APPLICATION THEY
10	CAN PURSUE AT THE SAME TIME, SO YOU CAN ENVISION A
11	SCENARIO WHERE I'M ON THE BUBBLE. I MIGHT OR MIGHT NOT
12	FUND THIS COMPANY; BUT IF I KNOW THE COMPANY CAN GET A
13	CIRM LOAN TO FUND THE CLINICAL PROGRAM AROUND THEIR
14	SECOND THERAPEUTIC APPLICATION, WHICH REDUCES MY RISK,
15	BECAUSE IF THE FIRST ONE FAILS, I'VE GOT A FALLBACK, THEN
16	I JUMP IN AND FUND BECAUSE I KNOW TECHNOLOGY RISK, SOME
17	OF THE BUSINESS RISK HAS BEEN WORKED OUT, AND THAT IS A
18	LITTLE BIT MORE MATURE COMPANY THAN THE ONE IN THE VALLEY
19	OF DEATH, BUT ONE THAT EQUALLY NEEDS THE FUNDING BECAUSE
20	THEY'RE NOT GOING TO GET FUNDING UNLESS YOU ARE THE
21	BUBBLE EVENT, YOU GET THE VENTURE COMMUNITY OFF THE
22	BUBBLE.
23	DR. TROUNSON: WOULD CIRM BE ABLE TO ACCESS THE
24	DATA, THE INFORMATION, THAT THE VC WAS HELPING TO MAKE
25	THAT DECISION BECAUSE IF THERE WAS, IT WOULD ALSO HELP US
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1	IN THE DECISION-MAKING. IS THAT FEASIBLE?
2	MR. BONFIGLIO: WELL, TYPICALLY AT SOME POINT
3	IN THE PROCESS WHEN YOU'RE SYNDICATING A ROUND OF
4	FINANCING, THE FUNDS WILL SHARE SOME OR ALL OF THEIR DUE
5	DILIGENCE DATA. MOST FIRMS CONSIDER THEIR DUE DILIGENCE
6	DATA TO BE SOMEWHAT PROPRIETARY, BUT THERE IS SOME
7	INFORMATION SHARING ACROSS THE BOARD. CARL, WHAT POINT
8	DO YOU SHARE YOUR DUE DILIGENCE DATA?
9	MR. KLEIN: IT CAN BE PROPRIETARY AT CIRM. WE
10	HAVE THE ABILITY TO PROTECT PROPRIETARY INFORMATION
11	SPECI FI CALLY.
12	DR. GOLDFISCHER: WE HAVE THIS. WE DO THIS ALL
13	THE TIME WITH THE BANK. THEY DO DUE DILIGENCE ON THE
14	COMPANY. THEY ASK US FOR CERTAIN COMMITMENTS. WE HAVE
15	SOME VERSIONS OF THAT THAT WE DO ON A PRETTY REGULAR
16	BASI S.
17	MR. BONFIGLIO: IF YOU WERE GOING TO ASK FOR
18	THAT DATA, THOUGH, ALAN, YOU'D HAVE TO MAKE SURE THAT THE
19	CONFIDENTIALITY OF THE DATA WAS PROTECTED.
20	DR. TROUNSON: I UNDERSTAND THAT.
21	DR. LOVE: BECAUSE WE'VE GOT THESE REALLY SMART
22	FINANCIAL GUYS HERE, I THINK IT'S IMPORTANT AT LEAST TO
23	ASK ONE PRETTY HIGH LEVEL QUESTION. THAT IS, I'M A
24	SCIENCE MEDICINE GUY BY TRAINING, KIND OF PICKED UP A
25	LITTLE BUSINESS ALONG THE WAY, BUT FUNDAMENTALLY I'VE
	70

1	BEEN JUST SOMEBODY WHO AVOIDS DEBT LIKE CRAZY. AND, IN
2	FACT, I DON'T WANT TO TAKE ANY DEBT UNTIL I CAN SEE
3	PRODUCT REVENUES REASONABLY CLOSE ON THE HORIZON. THAT
4	POSITION IS HELD BY A LOT OF CEO'S RUNNING COMPANIES KIND
5	OF ALONG THE LINES I'M RUNNING. WE'RE AT THE OTHER
6	EXTREME.

AND FUNDAMENTALLY WITH LOANS YOU EITHER WANT 7 THERE TO BE A VERY HIGH CHANCE OF THEM BEING PAID BACK, 8 9 YOU CAN SET A REASONABLE INTEREST RATE: OR IF YOU THINK THERE'S A LOT OF RISK, YOU SET A REALLY HIGH RATE AND YOU 10 TRY TO GIVE SECURITY AROUND IT TO GIVE YOURSELVES KIND OF 11 12 A SECOND OPPORTUNITY TO GET REPAID. I GUESS WHAT I'M GETTING AT IS HOW COULD WE STRUCTURE THIS LOAN PROGRAM TO 13 14 MAKE IT MORE ATTRACTIVE THAN A GRANT? BECAUSE A GRANT IS 15 SOMETHING THAT IF YOU DO IT UP FRONT, YOU ARE SAYING THIS 16 IS HIGH RISK, WE KNOW IT, BUT WE THINK IT'S A GREAT OPPORTUNITY; BUT IF IT FLAMES OUT, YOU KNOW, NO WIN, NO 17 OBLIGATION. AND A LOAN, THIS OBLIGATION IS THERE, AND 18 WE'RE TRYING TO REALLY FIGURE OUT HOW TO MAKE IT WORK. 19 SO I'M REALLY TRYING TO FIGURE OUT ARE WE 20 TRYING TO FIT A SQUARE PEG INTO A ROUND HOLE, OR IS THERE 21 A WAY REALLY WE CAN MAKE SURE THIS IS TRULY COMPETITIVE 22 23 WITH GRANTS?

24DR. GOLDFISCHER:LET ME TRY AND ANSWER IT THIS25WAY.SO WE HAVE AT ANY GIVEN MOMENT TWO OR THREE

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PROJECTS THAT WE DO INTERNALLY, SO WE'RE WORKING OUT OF 1 \$500 MILLION OF INVESTABLE CAPITAL. SO WE'VE DECIDED WE 2 CAN TAKE A MILLION TO \$2 MILLION PER PROJECT TO ITS PURE 3 AT RISK CAPITAL TO LET US SPEND A LOT OF TIME SOMETIMES 4 5 EXPLORING A SCIENTIFIC IDEA WITH AN APPROACH TO A DISEASE TO SEE IF WE CAN BUILD A, QUOTE, UNQUOTE, COMPANY AROUND 6 WE JUST COMMIT UP TO A CERTAIN AMOUNT OF MONEY OUT 7 IT. OF OUR FUND. 8

9 SO WE OFTEN HAVE DISCUSSIONS, OKAY, SO \$2 MILLION BUYS US X, BUT \$5 MILLION WOULD BUY US Y OR \$3 10 MILLION. SO IN THE SCENARIO LIKE THAT, AN ENTITY LIKE 11 12 THIS THAT IS IN THIS AREA, YOU SAY, OKAY, WE GO TO YOU 13 GUYS AND WE SAY, THIS IS SORT OF WHAT WE'RE THINKING 14 ABOUT. WE ARE COMFORTABLE EXPLORING THIS IDEA FOR UP TO 15 TWO AND A HALF: BUT IF WE HAD AN EXTRA MILLION FROM 16 SOMEBODY THAT WAS COMING ALONGSIDE OF US, WE MIGHT BE ABLE TO GET A LITTLE FURTHER, BE ABLE TO PROVE THE 17 CONCEPT A LITTLE MORE, MIGHT OR MIGHT NOT WORK, THERE'S 18 RISK ASSOCIATED WITH IT. 19

20 SO I HAVE THESE DISCUSSIONS ACTUALLY PRETTY 21 REGULARLY, FOR EXAMPLE, WITH THE ALEXANDRIA GUYS, WHO 22 SAY, OKAY, IF YOU PUT THIS IDEA IN MY SPACE, THEN THEY 23 HAVE SOME VENTURE FUND THAT COMES ALONGSIDE THAT MAYBE 24 WHAT YOU'RE BEGINNING TO DO IS YOU'RE BEGINNING TO PATCH 25 TOGETHER PIECES OF MONEY FOR EARLY STAGE IDEAS; AND WHEN

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YOU PUT THEM ALTOGETHER, INSTEAD OF IT BEING A 1 HALF-A-MILLION-DOLLAR PROJECT, MAYBE YOU WIND UP WITH 2 THREE OR \$4 MILLION AROUND THE IDEA THAT CARRIES IT 3 ACTUALLY FOR A COUPLE YEARS AND MAYBE GIVES YOU A BETTER 4 5 SHOT AT GETTING SOMETHING THAT GOES TO THE BIGGER B ROUND THAT PEOPLE GET PAID BACK AND STEP IT UP. 6 DR. LOVE: WHY IS IT MORE ATTRACTIVE THAT I'M 7 GIVING AN EXTRA ONE OR \$2 MILLION IN THE FORM OF A LOAN 8 9 VERSUS A GRANT? WHAT AM I DOING WITH A LOAN THAT MAKES IT MORE ATTRACTIVE THAN A GRANT? 10 MR. BONFIGLIO: I THINK YOU'VE GOT TO MODEL IT 11 12 OUT, TED. YOU' RE TALKING ABOUT DIFFERENT FINANCIAL 13 PACKAGES. VENTURE CAPITAL IS ONE FINANCIAL PACKAGE; 14 VENTURE DEBT IS ANOTHER VEHICLE. A GRANT IS ONE VEHICLE, 15 AND A LOAN FROM YOU GUYS WOULD BEING A FOURTH VEHICLE TO 16 PUT IN THIS, ANOTHER ARROW IN THE QUIVER. AS ED SAID AT THE START, THIS IS A DIFFERENT MODEL, A DIFFERENT 17 REPAYMENT MODEL, A DIFFERENT SET OF OBLIGATIONS THAN YOU 18 TAKE ON WITH A GRANT. 19 CERTAINLY WHAT I WOULD DO, WE TEND TO BE PRETTY 20 ANALYTIC IN THE WAY WE APPROACH THIS, WE'D MODEL IT OUT. 21 IF I TAKE THE MONEY AS A LOAN AND IT'S GOT A REPAYMENT 22 RATE OF 8 PERCENT, WHAT'S MY CONSEQUENCE? WHAT IS THE 23 NET PRESENT VALUE OF THAT MONEY RIGHT NOW, ASSUMING I'VE 24

25 GOT A FIVE-YEAR PAYOUT DOWNSTREAM AND I'M GOING TO BE

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ABLE TO PAY OUT? ONCE I PAY OUT, I'M NOW FREE OF ALL MY
OBLIGATIONS VERSUS THE GRANT WHERE I HAVE ONGOING
OBLIGATIONS IN TERMS OF THE PRICING OF MY PRODUCT, WHERE
I HAVE TO SELL IT, WHO I HAVE TO GIVE IT TO, ETC. SO
THERE'S DIFFERENT PACKAGES, DIFFERENT FINANCIAL VEHICLES,
AND YOU GOT TO MODEL THEM OUT. SOME OF THEM WILL BE
APPROPRIATE FOR SOME COMPANIES.

8 CHAIRMAN ROTH: I THINK IT'S THE INTELLECTUAL 9 PROPERTY POLICY THAT HAS TO BE FOLLOWED WITH THE GRANTS 10 THAT WOULD BE DIFFERENT THAN THE POLICIES THAT ARE GOING 11 TO FOLLOW THIS LOAN PROGRAM.

MR. BONFIGLIO: YEAH, BECAUSE YOU' RE PAYING THEMONEY BACK.

14 DR. PENHOET: THIS CONVERSATION IS EVOLVING. 15 IT'S PRETTY CLEAR WE'VE BEGUN TALKING ABOUT LOANING MONEY 16 TO FUND COMPANIES. THAT'S WHAT THIS CONVERSATION IS NOW ALL ABOUT. AS IT WAS ORIGINALLY ENVISIONED IN THE FIRST 17 PLACE, IT WAS ACTUALLY TO FUND SPECIFIC PROJECTS WHICH 18 WILL BE COMPETED ON A SCIENTIFIC BASIS OR THE PROJECT. 19 SO WE'RE NOW DISCUSSING A VERY DIFFERENT MODEL OF FUNDING 20 COMPANIES VERSUS FUNDING PROJECTS. AND THE VALUATION 21 PROCESS, WE DON'T HAVE TODAY A SCIENTIFIC REVIEW GROUP 22 THAT'S CAPABLE OF EVALUATING COMPANIES. THEIR JOB IS TO 23 EVALUATE SPECIFIC RESEARCH PROJECTS. 24

SO IT'S DIFFERENT. IN THAT SENSE, IF WE

25

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1	CONTINUE DOWN THIS PATH AND WE ARE ESSENTIALLY VENTURING
2	WITH THE VENTURE GUYS FUNDING COMPANIES, THAT'S A
3	DIFFERENT MODEL.
4	DR. GOLDFISCHER: YOU SET YOURSELVES UP. WHAT
5	KIND OF ENTITY DO YOU WANT TO BE?
6	MR. KLEIN: THERE'S A CONTINUUM HERE, I THINK,
7	ED, BECAUSE WE'VE ANTICIPATED IT DOESN'T MATTER
8	WHETHER THE SCIENCE THAT WE'RE GOING TO LOAN TO ADVANCE
9	IS IN A COMPANY OR IS CREATING A COMPANY. WE'RE STILL
10	GOING TO HAVE TO GO THROUGH SOME PEER REVIEW TO ANALYZE
11	THE QUALITY OF THIS AND THE CAPACITY OF THIS TO
12	CONTRIBUTE TO THE MISSION.
13	BUT, SECONDLY, TO THE EXTENT THAT THIS IS IN A
14	MAJOR COMPANY, THEY'RE PROBABLY GOING TO NOT NEED OUR
15	HELP EXCEPT EVEN WITH SIGNIFICANT COMPANIES, THEY CAN
16	GET INTO A SITUATION WITH THESE NEW THERAPEUTICS WHERE
17	THE FDA REQUIREMENTS ARE SO STRONG AND ONEROUS IN THE
18	FRONT END, THAT IT'S VERY DIFFICULT FOR THEM TO GET
19	DOWNSTREAM WITH A CLINICAL TRIAL OR A PHASE I OR A PHASE
20	II. THEY MAY NEED SOME LOANS IN THAT SPACE. THERE'S A
21	LONG CONTINUUM HERE WHERE THERE MAY BE SOME SIGNIFICANT
22	NEEDS.
23	AND ALSO, TED, IN TERMS OF YOUR POINT, WE MAY
24	DECIDE THAT WE CAN PUT OUT MILLION-DOLLAR GRANTS; BUT IF
25	IT'S A LOAN, WE CAN PUT OUT THREE MILLION. NOW, THERE'S
	75

1	AN OBVIOUS WAY THAT THE LOAN IS, THEREFORE, HIGHLY
2	PREFERABLE BECAUSE WITH THREE MILLION WITH THE VENTURE
3	CAPITAL FUNDS, MAYBE THEY CAN DO THE APPLICATION ONE AND
4	APPLICATION TWO, REDUCE THEIR RISK, AND THEY CAN'T DO IT
5	WITH A MILLION. IT JUST DOESN'T GET THEM THERE.
6	SO WE COULD THEORETICALLY AFFORD TO PUT OUT
7	MORE MONEY WITH A LOAN PROGRAM. NOW, THIS LOAN PROGRAM,
8	I PERSONALLY THINK WE NEED TO HAVE OUR EYES OPEN AND LOOK
9	AT 30 PERCENT OR 40 PERCENT LOSS RATE ON IT; BUT THEN,
10	AGAIN, THE INTEREST INCOME SHOULD BE ABLE TO OFFSET SO
11	THAT ESSENTIALLY ON SEVEN-YEAR CYCLES WE HAVE ENOUGH
12	COMING BACK OUT OF INTEREST THAT WE'RE AT LEAST ROLLING
13	OVER OUR CAPITAL, INCLUDING INTEREST THAT OFFSETS LOSS OF
14	CAPITAL. AND IF WE CAN DO THAT, WE CAN LOAN
15	SIGNIFICANTLY LARGER AMOUNTS, HAVE A BROADER PORTFOLIO
16	DISTRIBUTION, AND OVER A PERIOD OF 15 YEARS, \$500 MILLION
17	IN A PROGRAM LIKE THIS WHERE YOU CAN JUST RECOVER CAPITAL
18	WOULD PUT OUT OVER 21 YEARS WOULD PUT OUT \$1.5 BILLION
19	INSTEAD OF 500 MILLION IN A GRANT PROGRAM.
20	SO THERE'S SIGNIFICANT BENEFITS TO US IN
21	SCALING UP WHAT WE CAN DO ON THESE PROGRAMS AND HOW
22	BROADLY WE CAN FUND A PORTFOLIO IF WE CAN RECOVER CAPITAL
23	AND INTEREST ON MOST OF THE PORTFOLIO.
24	CHAIRMAN ROTH: JEFF'S BEEN WAITING, THEN WE'LL
25	GO TO MARCY.
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1	MR. SHEEHY: I KIND OF THINK THAT WE'RE COMING
2	BACK TO SOME OF THE ISSUES THAT WE'VE TALKED ABOUT THAT
3	CAME UP IN THE IP ISSUE AND REALLY IS VERY SIMILAR TO
4	FACILITIES AS WELL IS THAT I REALLY DON'T THINK WE HAVE
5	THE CAPACITY TO EVALUATE AND MANAGE THESE KINDS OF
6	THINGS, AND WE NEED TO LOOK AT POTENTIALLY LOOKING AT
7	PARTNERS. I WAS INTRIGUED BY THE IDEA THAT THE COMMENT
8	THAT WAS COMING OUT WAS THAT YOU WORK WITH THIS ONE AND
9	YOU WORK WITH THIS ONE AND YOU CAN PUT TOGETHER A TEAM,
10	AND YOUR \$2 MILLION IS SUDDENLY LEVERAGED TO SIX OR \$8
11	MILLION.
12	AND, YOU KNOW, THAT'S BASICALLY WHAT WE'VE DONE
13	WITH FACILITIES. WE CANNOT BUY A BUILDING. WE CAN'T
14	EVEN MAYBE BUY HALF A BUILDING. BUT IF WE PUT OUR MONEY
15	OUT, THEN THE UNIVERSITIES ARE GOING TO LEVERAGE THAT TO
16	BUILD A NEW BUILDING WHERE THE RESEARCH WILL TAKE PLACE.
17	IN THE SAME WAY OUR IP RULES, WE'RE NOT MANAGING ANY IP
18	BECAUSE WE DON'T HAVE THE CAPACITY TO MANAGE IP. WE, IN
19	FACT, HAVE PARTNERED WITH THE UNIVERSITIES. THEIR
20	TECHNOLOGY OFFICES ARE THE ONES THAT ARE ACTUALLY
21	MANAGING AND KEEPING TRACK OF THE IP THAT GETS CREATED,
22	AND WE TRUST THEM TO COME BACK TO US.
23	AND I WONDER IT SEEMS THAT WE'RE TRYING TO
24	DO A LOT OF STUFF VERY BROADLY. AND I WONDER IF IT MAKES
25	SENSE TO THINK ABOUT REALLY LOOKING AT FOLKS LIKE SOME OF
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1	THE PEOPLE HERE WHO CLEARLY KNOW WHAT THEY'RE DOING AND
2	WE'D HAVE A MUCH BETTER CHANCE OF GETTING A RETURN THAN
3	IF WE TRY TO DO IT ON OUR OWN, AND THINKING ABOUT WHAT
4	KIND OF COLLABORATIONS CAN WE CREATE THAT MIGHT, YOU
5	KNOW, REALLY GET SOME COMPANIES GOING, GET SOME SCIENCE
6	OUT INTO PEOPLE'S HANDS. LIKE DR. TROUNSON SAID, THERE'S
7	SOME REAL OPPORTUNITIES THAT THEY MIGHT BE ABLE TO POINT
8	US TO WHICH ARE JUST I'M SURE PEOPLE COME TO THEM WITH
9	THE SERVICE-TYPE MODEL, AND THEY SAY THERE'S NO
10	OPPORTUNITY HERE FOR US. THEY COULD FEED THOSE INTO US,
11	AND WE COULD ACTUALLY MAKE A DIFFERENCE IN A PATIENT'S
12	LIFE IN A MUCH SHORTER TIMEFRAME FOR OUR MISSION.
13	I'M NOT THAT OBSESSED ABOUT GETTING PAID BACK.
14	I HEAR A LOT OF TALK ABOUT GETTING PAID BACK, BUT THAT'S
15	NOT OUR PRIMARY MISSION TO MY MIND. OUR PRIMARY MISSION
16	IS TO MAKE A DIFFERENCE IN A PATIENT'S LIFE. SO GETTING
17	A COMPANY UP AND MOVING THAT LOOKS LIKE ENOUGH
18	COMPANIES UP AND MOVING THAT WE'RE LIKELY GOING TO GET A
19	PRODUCT OUT, HELPING IN SOME OF THESE AREAS WHERE THERE'S
20	NO REAL INVESTMENT LIKE THE SERVICE MODEL BECAUSE I DO
21	THINK THAT THAT'S GOING TO BE A MAJOR FACTOR IS THESE
22	THERAPIES BECAUSE TO A LARGE DEGREE RIGHT NOW WE'RE AT A
23	POINT WHERE PEOPLE HAVE TO DELIVER THEM, AND THAT'S THE
24	BIGGEST PIECE OF IT.
25	I WONDER IS THERE A WAY THAT WE CAN KIND OF

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1	STOP THINKING ABOUT TRYING TO DO THIS ALL ON OUR OWN AND
2	START THINKING ABOUT WHO ARE OUR PARTNERS, HOW CAN WE GET
3	PARTNERS IN HERE? THAT'S JUST
4	CHAIRMAN ROTH: I'LL LET BOB ADDRESS THAT IN A
5	MINUTE. MARCY.
6	MS. FEIT: JUST TO TAG ON, THAT'S EXACTLY WHERE
7	I WAS GOING WITH THIS BECAUSE MY CONCERN IS THAT WE WOULD
8	PUT OUT SO MUCH MONEY IN SOME OF THESE LOANS, THAT WE
9	WOULD PROHIBIT, THEN, THE VENTURE CAPITAL PEOPLE FROM
10	WANTING TO COME IN BECAUSE OF JUST WHAT GREG SAID. I
11	DON'T WANT TO BE SUBORDINATED INTO SOMETHING THAT'S GOING
12	TO TAKE AWAY A THIRD OR A FIFTH OF THE MONEY THAT I'M
13	PUTTING UP FOR MY FUND.
14	SO I'M JUST CONCERNED ABOUT THAT, THAT WE WOULD
15	BE IF WE PUT OUT \$5 MILLION OR \$3 MILLION, EVEN THOUGH
16	THE EFFICACY IS VERY PROMISING, DOES THAT THEN PUT A WALL
17	FOR VENTURE CAPITAL PEOPLE TO COME IN?
18	MR. BONFIGLIO: IT DOES IF YOU STAND IN FRONT
19	OF ME, BUT HONESTLY MONEY BUYS TECHNOLOGY RISK REDUCTION.
20	THAT'S REALLY WHAT YOU GET WITH MONEY IN A BIOTECH
21	SETTING. THE MORE MONEY THAT GOES IN, THE MORE
22	TECHNOLOGY RISK IS WORKED OUT, THE MORE BUSINESS RISK IS
23	WORKED OUT, THE MORE ATTRACTIVE THE COMPANY LOOKS TO ME
24	AS AN INVESTOR. SO HAVING MORE MONEY IN THE COMPANY IS A
25	GOOD THING. IT'S ONLY A BAD THING IF IT STANDS IN FRONT
	79

1	OF MY RETURN. SO IF YOU STRUCTURE THE LOAN IN A WAY THAT
2	IT IS SUBORDINATED, THEN IT'S A WONDERFUL THING. AND
3	WHAT YOU GET FROM IT IS THE MONEY GETS RECYCLED. IT
4	COMES BACK IN AS OPPOSED TO A GRANT.

I THINK YOU COULD DO THIS IN A WAY THAT'S A 5 WIN-WIN FOR EVERYBODY THAT WILL NOT PREVENT THE VENTURE 6 COMMUNITY FROM COMING IN AND FINANCING, AND, IN FACT, 7 WOULD MAKE COMPANIES MUCH MORE ATTRACTIVE, WHICH WILL 8 9 ACCELERATE THE TIME TO MARKET AND GET THESE THERAPIES OUT INTO THE COMMUNITY. BUT TWO KEYS FROM MY PERSPECTIVE, 10 THE LOANS HAVE TO BE SUBORDINATED; AND, TWO, YOU CAN'T 11 12 TIE UP THE INTELLECTUAL PROPERTY. IF YOU TRY TO TIE UP 13 THE INTELLECTUAL PROPERTY AS SECURITY, THAT'S GOING TO BE 14 A REAL PROBLEM DOWNSTREAM.

15 CHAIRMAN ROTH: BECAUSE WE HAVE A TIMEFRAME, WE 16 HAVE A LOT TO DISCUSS, I'M GOING TO ASK BOB TO ADDRESS 17 JEFF'S COMMENT BECAUSE I THINK WE PROBABLY HAVE ISSUES OF 18 BEING ABLE TO JUST FARM THE MONEY OUT, SO TO SPEAK.

MR. KLEIN: JEFF, ONE MODEL THAT WE COULD
FOLLOW, PURSUANT TO YOUR SUGGESTION, IS IF YOU LOOK IN
THE HOUSING AREA, AFFORDABLE HOUSING AREA, THE FEDERAL
NATIONAL MORTGAGE ASSOCIATION HAS DELEGATED UNDERWRITERS
THAT IT APPROVES. SO WE COULD DO THE SCIENTIFIC REVIEW,
BUT HAVE A DELEGATED UNDERWRITER WHO ESSENTIALLY CAN, IN
FACT, BE IN A RISK SHARING POSITION OR A NONRISK SHARING

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1	UNDERWRITER THAT IS A TEAM LIKE YOU WOULD HAVE IN AN
2	ACCELERATOR WHO WOULD, IN FACT, DO THE FINANCIAL
3	UNDERWRITING ON A CONTRACT BASIS WITH OR WITHOUT RISK
4	SHARING. AND UNDER A RISK SHARING ARRANGEMENT, FOR
5	EXAMPLE, THAT DELEGATED UNDERWRITER MIGHT GET A PART OF
6	THE UPSIDE ON THE REPAYMENT OF THE LOAN, INCLUDING A PART
7	OF THE INTEREST REVENUES.
8	SO YOU MIGHT REALLY ACCELERATE THIS PROGRAM AND
9	HAVE A HIGHER LEVEL OF EXPERTISE BY COPYING THAT SYSTEM
10	AND APPLYING IT HERE.
11	CHAIRMAN ROTH: OKAY. SO I'M GOING TO
12	SUMMARIZE SO FAR SOME OF THE THINGS WE'VE TALKED ABOUT
13	AND MOVE, THEN, TO THE NEXT SECTION, WHICH IS TERRIBLY
14	IMPORTANT WE GET YOUR INPUT ON, AND THE FINAL SECTION,
15	THE COVENANTS.
16	BUT IN TERMS OF THE EVALUATION, THE THINGS
17	WE'RE REQUESTING, THE BACKGROUND EVALUATION, I ASSUME
18	NOBODY HAS A PROBLEM WITH US DOING OUR DUE DILIGENCE
19	THERE.
20	THE CREDITWORTHINESS OR THE CREDIT CHECK IS
21	REALLY TO FIND OUT DOES THIS COMPANY HAVE A BUNCH OF PAST
22	DUE BILLS THAT ARE SITTING OUT THERE, JUST SOMETHING THAT
23	TELLS US WE'RE NOT GOING TO LOAN A MILLION DOLLARS AND
24	HALF OF IT GOES TO PAY LAWYERS, ACCOUNTANTS, AND RENT.
25	DR. GOLDFISCHER: OH, WELL, IT WILL.
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MR. BONFIGLIO: THAT IS GOING TO BE THE STATE 1 OF A BUNCH OF COMPANIES. 2 CHAIRMAN ROTH: BUT WE NEED TO KNOW THAT IF IT 3 4 HASN' T BEEN DI SCLOSED. IF THEY DI SCLOSE IT, I THINK IT'S 5 FINE. DR. GOLDFISCHER: THAT GETS TO WHAT THE P & L 6 LOOKS LIKE. 7 8 CHAIRMAN ROTH: BUT I THINK YOU KEEP IN MIND 9 ED'S COMMENT, THAT THIS IS REALLY DESIGNED TO MOVE PRODUCTS ALONG OR TO FUND GAPS IN PRODUCT DEVELOPMENT 10 THAT ALAN IS SPEAKING TO AND OTHERS AS OPPOSED TO FUNDING 11 12 COMPANIES OR SO ON. IF THAT CHANGES, THAT NEEDS A WHOLE 13 NEW SET OF THINKING THAT WE GO INTO, WHICH WE CAN DO, BUT 14 PROBABLY NOT TODAY. 15 THE THIRD ISSUE HERE IS LITIGATION ASSESSMENT. 16 WE FELT THAT THAT WAS IMPORTANT THAT WE KNOW IF THERE'S 17 ANY LITIGATION WITH THE COMPANY. MR. SATO: COULD I JUST WEIGH IN ON THAT 18 BECAUSE MOST EARLY STAGE COMPANIES DON'T HAVE LITIGATION 19 BECAUSE OF CLINICAL RESEARCH EXEMPTION OR THE FACT THAT, 20 UNLESS THERE'S MISAPPROPRIATION, THERE WILL NOT BE 21 22 LITIGATION AT AN EARLY STAGE COMPANY AS A GENERAL RULE. AND MAYBE MORE IMPORTANTLY HERE IS THAT OTHER PART, THE 23 RISK OF FUTURE LITIGATION. TO THE EXTENT THAT THERE'S AN 24 FTO ANALYSIS OR ANY OTHER ATTORNEY-CLIENT PRIVILEGED 25 82

CONVERSATION, THAT I WOULD STRONGLY ADVISE ANY COMPANY OR 1 MANAGEMENT TEAM NOT TO SHARE BECAUSE THEN YOU HAVE 2 3 SIGNIFICANT PRIVILEGE RISK. 4 SO I THINK IT'S A NICE GOAL, BUT FROM A LEGAL 5 PERSPECTIVE, THOSE ARE THINGS THAT I WOULD ONLY SHARE COUNSEL TO COUNSEL AND NOT AS PART OF THE EXERCISE IN ANY 6 EVENT. 7 CHAIRMAN ROTH: SO IT WOULD BE VERY HELPFUL TO 8 9 THE COMMITTEE IF YOU WOULD GIVE SOME THOUGHT TO HOW WE MIGHT ADDRESS LITIGATION RISK AND THE KINDS OF THINGS WE 10 SHOULD LOOK AT. 11 THE FOURTH ONE IS THE BUSINESS PLAN AND 12 13 FINANCIAL FEASIBILITY. I THINK WE GOT SOME GREAT INPUT 14 TODAY ABOUT WHAT WE NEED IN THAT REGARD. AND I REALLY 15 APPRECIATE THE ADVISORS' COMMENTS ON THAT. 16 DR. MURPHY: I THINK THE NOTION THAT ALL OF THIS WOULD BE EVALUATED BY CIRM STAFF IS REALLY 17 OVERSHOOTING. AS YOU KNOW, WE'RE LIMITED TO 50 PEOPLE IN 18 THE ORGANIZATION. WE WOULD NEED TO HAVE REAL 19 PARTNERSHIPS SOMEWHERE TO BE ABLE TO DO THIS IN A WAY 20 THAT THESE GUYS WOULD BUY INTO AS PARTNERS. I SUSPECT 21 THAT CANNOT BE DONE IN-HOUSE, AT LEAST WITH OUR PRESENT 22 23 STRUCTURE. CHAIRMAN ROTH: I WOULD POINT YOU TO THE FIRST 24 25 PARAGRAPH ABOVE THIS WHERE WE TALK ABOUT THAT THE LOAN 83

APPLICATION, THE REVIEW OF THIS LOAN APPLICATION, WE'RE 1 TALKING ABOUT THESE FOUR CRITERIA WOULD BE DONE BY 2 CONSULTANTS OR OTHERS OUTSIDE THE AGENCY. WE DO NOT 3 4 EXPECT TO HAVE THAT EXPERTISE IN-HOUSE. BUT THERE WOULD 5 BE ON AN RFA, SOMEBODY WOULD HAVE TO GO THROUGH AND CHECK THE BOXES ON THESE FOUR TO MAKE SURE THE INFORMATION IS 6 AVAILABLE, AND IT WOULD BE DONE BY AN OUTSIDE GROUP THAT 7 CIRM WOULD DECIDE. 8

OKAY. FLIPPING THE PAGE, THERE'S JUST ONE 9 LITTLE THING AT THE TOP OF THE PAGE THAT YOU CAN GIVE US 10 YOUR QUICK THOUGHTS ON. THERE'S TWO OPTIONS HERE. IF 11 12 THERE'S A REVIEW BY AN OUTSIDE GROUP, AND IT COMES BACK AND SAYS, YOU KNOW, THERE ARE DEFECTS IN ITEM NO. 4, THE 13 14 BUSINESS PLAN IS NOT CLEAR AND SO, SHOULD WE GIVE THE 15 APPLICANTS A CHANCE TO ADDRESS THOSE DEFECTS, OR SHOULD 16 WE JUST SAY, SORRY, THAT WAS THE RFA AND GO ON?

17 MR. BONFIGLIO: FROM MY PERSPECTIVE, THIS IS A REAL EASY QUESTION BECAUSE, AGAIN, MY EXPERIENCE IS THE 18 GUYS AT THE LEVEL THAT YOU' RE GOING TO BE DEALING WITH 19 ARE BRILLIANT SCIENTISTS, AND THEY MAY BE GOOD AT WRITING 20 GRANTS, BUT THEY DON'T TYPICALLY HAVE THE BUSINESS 21 JUDGMENT TO ANSWER ALL THE QUESTIONS THAT YOU WANT, TO 22 THINK THROUGH THE ISSUES THAT YOU ARE IDENTIFYING HERE. 23 AND, YEAH, THEY'LL WORK WITH CONSULTANTS, BUT THERE'S NO 24 25 REASON, IN MY VIEW, TO TURN DOWN A LEGITIMATE PROJECT

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THAT COULD PROVIDE AN EFFECTIVE THERAPY SIMPLY BECAUSE 1 THE GUY STUBS HIS TOE ON THE RFA PROCESS. IF YOU'VE 2 IDENTIFIED PROBLEMS IN THE PROCESS, GIVE THEM A CHANCE TO 3 FIX THEM. 4 CHAIRMAN ROTH: OTHERS AGREE. THERE SEEMS TO 5 BE CONCURRENCE WITH THAT. 6 THE NEXT SECTION DEALS WITH THE SCIENTIFIC 7 GRANTS WORKING GROUP. AND WE DESCRIBED THE PROCESS AS IT 8 9 EXISTS TODAY. I THINK IT'S CLEAR, IF WE'RE GOING TO EVALUATE PRODUCTS AND PRODUCT ADVANCEMENT, WE'RE GOING TO 10 NEED POTENTIALLY DIFFERENT KINDS OF REVIEWERS, RICH AND 11 ALAN, THAN WE HAVE NOW, BUT THOSE SHOULD READILY EXIST 12 OUTSIDE THE STATE OF CALIFORNIA. WE GET SOME PEOPLE IN 13 14 AND YOU SHARE THAT. 15 DR. TROUNSON: ABSOLUTELY. 16 CHAIRMAN ROTH: OKAY. SO THEN WE MOVE DOWN TO THE REVIEW PROCESS, THE CIRM LOAN CONTRACTING. ANY 17 COMMENTS ON THOSE, LOAN CONTRACTING? OKAY. 18 19 LET'S MOVE, THEN, TO TERMS OF THE DEBT AND START WITH BULLET NO. 1 THAT WE'RE SEEKING INPUT IS WHAT 20 WE BEGAN TO HAVE CONVERSATION ON, THE DEBT TERMS. 21 MR. KLEIN: IN TERMS OF THE LOAN CONTRACTING AS 22 WELL, AGAIN, JEFF SHEEHY'S COMMENT, WE COULD HAVE A 23 DELEGATED UNDERWRITING GROUP THAT BECOMES THE 24 25 COORDINATING OFFICER OR THE COORDINATING FIRM THAT, JUST 85

1	AS IN THE REAL ESTATE FIELD, THE DELEGATED UNDERWRITERS
2	EVALUATE THE APPRAISALS, THE MARKET STUDIES, THE TOXICITY
3	REPORTS, ETC. IN THIS FIELD THE DELEGATED UNDERWRITER, A
4	BANK, FOR EXAMPLE, SILICON VALLEY BANK, COULD BE A
5	DELEGATED UNDERWRITER WHO COULD AGREE TO SERVICE THIS FOR
6	US.
7	WE STILL HAVE AN INTERNAL CONTACT PERSON, BUT
8	ON DELEGATED UNDERWRITING BASIS, THEY CAN HANDLE A LOT
9	A MUCH BROADER PORTFOLIO.
10	CHAIRMAN ROTH: CAN THEY BE WITHIN THE STATE OF
11	CALIFORNIA, OR THEY HAVE TO BE OUTSIDE?
12	MR. KLEIN: THE DELEGATED UNDERWRITER? YOU'D
13	WANT THEM IN THE STATE BECAUSE ALL THE WORK IS GOING TO
14	BE IN THE STATE, SO YOU'RE GOING TO WANT OVERSIGHT.
15	CHAIRMAN ROTH: I JUST WAS REFERRING TO THE
16	REVIEW ITSELF. THE REVIEW ITSELF, I THINK, HAS TO BE
17	OUTSIDE THE STATE, THE SCIENTIFIC REVIEW. THE PRODUCT
18	REVIEW HAS TO BE DONE OUTSIDE.
19	MR. KLEIN: YOU MEAN WITH REVIEWERS WHO COME IN
20	THE STATE TO SIT ON A REVIEW PANEL, BUT COME FROM OUTSIDE
21	THE STATE?
22	MR. BONFIGLIO: CAN I ASK A QUESTION ON THE
23	CIRM LOAN CONTRACTING? THERE'S A PHRASE HERE THAT SAYS
24	YOU ARE GOING TO HAVE EXPERTS IN THE RELEVANT THERAPY
25	DEVELOPMENT THAT ARE GOING TO DETERMINE THE MILESTONES
	86

AND WHETHER THEY'RE EFFECTIVE. THAT SOUNDS TO ME LIKE A
 DUPLICATION OF THE WORK THAT'S BEING DONE BY THE
 SCIENTIFIC GRANT WORKING GROUP. AND IT ALSO SOUNDS LIKE
 IF YOU PUT THREE OF THESE PIECES OF THE PUZZLE TOGETHER,
 YOU'RE TALKING A REVIEW PROCESS THAT'S GOING TO TAKE YOU
 A YEAR.

CHAIRMAN ROTH: GREG, I THINK I CAN EXPLAIN THE 7 INTENT HERE IS THAT THE LOAN ITSELF MAY BE STRUCTURED AS 8 9 THREE MILLION, BUT IT'S MILESTONE DRIVEN. SO IT MAY BE UPON APPROVAL OF YOUR IND, YOU GET ANOTHER MILLION 10 DOLLARS. SOMEBODY WOULD RESPOND TO THAT AND SAY WE HAVE 11 12 THE PROOF THAT WAS REQUIRED. YOU CAN NOW RELEASE THE FUNDS FOR THE NEXT PHASE. SO THE I DEA IS THAT JUST 13 14 BECAUSE YOU WANT A \$3 MILLION LOAN, THAT LOAN WILL BE 15 MILESTONE DRIVEN, AND WE'LL IDENTIFY THOSE IN THE RFA 16 PROCESS, AND THEN SOMEBODY HAS TO FOLLOW UP.

MR. BONFIGLIO: THIS LAST STEP THAT YOU'RE
DESCRIBING IS POST LOAN ABOUT THE DISTRIBUTION OF THE
FUNDS TO DETERMINE WHETHER OR NOT YOU MET THE MILESTONE.
OKAY.

CHAIRMAN ROTH: IN TERMS OF THAT, LET'S OPEN
THE DISCUSSION WITH THE DEBT STRUCTURE. AND THIS DEALS
WITH THE TERM AND SOME OF THE COMMENTS THAT WE WERE
HAVING BEFORE ABOUT HOW THAT TERM MIGHT ALSO BE
ACCOMPANIED BY SOME OTHER CRITERIA. THOUGHTS ON THE

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1 TIMEFRAME?

MR. NORRIS: I WAS GOING TO DEFER TO YOU 2 BECAUSE I THINK YOU MADE A GREAT POINT RELATING TO HAVING 3 4 SOME SORT OF LIQUIDITY EVENT, BE IT M&A OR AN IPO OR SALE 5 OF THE COMPANY. IF THAT TRIGGERS THE REPAYMENT, I THINK THAT THAT CERTAINLY CURES A LOT OF ILLS FROM ADDITIONAL 6 LENDERS WANTING TO COME IN AND HELP TO SUPPORT THE 7 COMPANY THAT BECOMES VENTURE FUNDED AND CONTINUES TO MOVE 8 9 FORWARD. I THINK THAT MAKES A LOT OF SENSE VERSUS HAVING A BULLET SORT OF LOAN, THAT EVERYTHING COMES DUE IN FIVE 10 OR SEVEN YEARS, AND YOU HAVE THIS BIG LUMP SUM THAT YOU 11 12 HAVE TO REPAY AND YOU' RE NOT QUI TE SURE WHERE YOU' RE 13 GOING TO BE FIVE OR SEVEN YEARS FROM NOW. YOU MIGHT BE 14 THREE OR FOUR MONTHS AWAY FROM A VERY BIG VALUE CREATION 15 MILESTONE, AND THEN YOU'VE CREATED A BIG ISSUE FOR THE 16 COMPANY AND THE INVESTORS.

17 MR. BONFIGLIO: WHAT YOU DON'T WANT TO DO WITH 18 THE PROGRAM IS PUT IN PLACE A CAPITAL STRUCTURE, IMPOSE A 19 CAPITAL STRUCTURE ON A COMPANY THAT PREVENTS FUTURE 20 FINANCING. AND FIVE TO SEVEN YEARS MAY SOUND LIKE A LONG 21 TIME, BUT IN THE LIFE CYCLE OF A BIOTECH COMPANY FROM 22 RESEARCH TO PRODUCT, IT'S NOT. IT'S RIGHT IN THE MIDDLE 23 OF THE WINDOW ACTUALLY.

24SO I WOULD ENCOURAGE YOU TO THINK STRONGLY25ABOUT HAVING THE TRIGGER EVENT BE AN M&A OR EXIT

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TRANSACTION WHERE CASH IS PAID, NOT NECESSARILY BECAUSE 1 YOU HAVE REVENUES. MOST OF THE COMPANIES ARE NOT GOING 2 TO HIT REVENUES BEFORE THEY GET PAID. THEY'LL DO AN M&A 3 TRANSACTION OR THEY'LL GO PUBLIC. NOW YOU'VE GOT FREE 4 CASH THAT CAN REPAY THE LOAN. AND WHAT I'M ARGUING FOR 5 IS THAT YOU PUT THESE LOANS ON EQUAL FOOTING WITH THE 6 VENTURE FINANCING THAT'S BEING DONE WITH THE COMPANY 7 BECAUSE THE VENTURE GUYS ARE NOT GETTING PAID OFF TILL 8 9 THERE'S AN EXIT EITHER.

10 DR. TROUNSON: I THINK THAT IS A VERY GOOD POINT, BUT I WONDER IF I CAN ASK BOB. IS CIRM'S 11 12 LONGEVITY ONLY GUARANTEED FOR TEN YEARS? DO WE HAVE AN 13 ISSUE HERE THAT WE REALLY CAN'T GO BEYOND THE ENDPOINT? 14 MR. KLEIN: SURE. VERY HELPFUL COMMENT, DR. 15 TROUNSON. THE TEN YEARS IS MERELY A SHORTENED KIND OF 16 SIMPLE MESSAGING THAT THE MEDIA PICKED UP. THERE'S NO PLACE IN THE INITIATIVE THAT IT'S LIMITED TO TEN YEARS. 17 DOESN' T EXIST. 18

19 THE INITIATIVE IS WRITTEN SO THAT IF WE HAD 20 SOMETHING LIKE LITIGATION, IT DOESN'T MEAN THAT WE'VE 21 LOST TWO YEARS OF OUR LIFE OR TWO AND A HALF YEARS OF OUR 22 LIFE. WE HAVE A MAXIMUM WE CAN PUT OUT IN ANY ONE YEAR 23 OF COMMITTED -- I SHOULD SAY THERE'S A MAXIMUM BOND SALES 24 IN ANY ONE YEAR OF \$350 MILLION. WE HAVE DISCUSSED AT A 25 STABILIZED LEVEL IT COULD AVERAGE 300 MILLION. THREE

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1	HUNDRED MILLION TIMES TEN IS 3 BILLION. THAT'S WHERE
2	PEOPLE COME UP WITH TEN YEARS. BUT, IN FACT, WHAT WAS
3	INITIALLY SUBMITTED TO LEGISLATIVE ANALYST WAS A LIFE
4	SPAN OF ABOUT 13 OR 14 YEARS, BUT, IN FACT, IT TRAILS
5	DOWN AT THE END BECAUSE YOU ARE GOING TO RUN OUT OF MONEY
6	UNLESS YOUR LOAN PROGRAM IS BRINGING BACK REPAYMENTS IN
7	THAT TIME PERIOD WHERE YOU COULD THEN SUSTAIN ACTIVITY.
8	SO WE HAVE A SET AMOUNT OF MONEY. THE QUESTION
9	IS HOW WELL CAN WE STEWARD THAT MONEY. OUR GRANT MONEY
10	WILL LIKELY BE GONE IN THE FIRST TEN YEARS. THE LOAN
11	MONEY COULD KEEP THIS PROGRAM GOING OUT THERE 15, 17
12	YEARS.
13	NOW, WITH THE CALIFORNIA HOUSING FINANCE
14	AGENCY, IT PERFORMED WELL IN THE FIRST TEN YEARS, IN THE
15	FIRST FIVE YEARS OF ITS LIFE. AND ACTUALLY THE STATE
16	LEGISLATURE CAME BACK AND SAW PERFORMANCE, ADVANCED MORE
17	FUNDING. SO WHAT STARTED OUT AS \$500 MILLION, THE BOND
18	ALLOCATIONS HAVE EXCEEDED 25 BILLION AT THIS POINT. IN
19	THEORY, IF WE'RE PERFORMING WELL FOR THE STATE AFTER TEN
20	YEARS, THE STATE CITIZENS AND THE LEGISLATURE CAN LOOK AT
21	THIS AND SAY WE SHOULD PROVIDE MORE FUNDS OR WE
22	SHOULDN' T.
23	SO THIS IS BASED AS A PERFORMANCE-BASED
24	ACCOUNTABLE ORGANIZATION THAT HAS TO SHOW A CERTAIN
25	FUNCTIONAL PERFORMANCE AND DELIVERY TO PATIENTS. BUT, IN
	90

1	FACT, WITH THE LOAN PROCEEDS COMING BACK THROUGH IF THERE
2	IS A LOAN PROGRAM, IT COULD EASILY OPERATE OUT 13, 14,
3	15, 17 YEARS.
4	CHAIRMAN ROTH: OKAY. BACK TO THE TERMS. THE
5	LONGER THE BETTER IN TERMS OF FIXED TERMS. AND YOUR
6	ENCOURAGEMENT WOULD BE FOR US TO EXPLORE OTHER WAYS TO
7	TIE THE REPAYMENT TO TRANSACTIONS AND TRY TO ADDRESS
8	THAT.
9	MR. BONFIGLIO: TRIGGER EVENTS OUGHT TO BE TIED
10	TO FOR REPAYMENT OF THE LOAN OUGHT TO BE TIED TO CASH
11	COMING IN IN EXCHANGE FOR THE COMPANY HAVING DONE AN M&A
12	TRANSACTION OR AN IPO. IF YOU PUT ME IN AND SAY I'M
13	LOOKING AT FINANCING A COMPANY, I KNOW IT'S THREE YEARS
14	INTO A FIVE-YEAR CYCLE ON A NOTE THAT GOT \$10 MILLION,
15	SAY, I'M LOOKING TO FUND THE COMPANY AND BUILD INTO THE
16	MODEL MY CASH GOING BACK TO YOU, THAT MAKES IT A LOT MORE
17	DIFFICULT FOR ME. YOU ALSO DON'T WANT TO FIND YOURSELF
18	IN COMPETITION WITH SILICON VALLEY BANK. SO IF YOU MAKE
19	THE LOAN PAYMENT TOO NARROW, THEN YOU'RE COMPETING WITH
20	THEM ESSENTIALLY.
21	CHAIRMAN ROTH: CHRIS, IN NEW YORK.
22	MR. WASDEN: I'M HERE.
23	CHAIRMAN ROTH: CHRIS, DO YOU HAVE SOME
24	THOUGHTS ON THE TERM FROM YOUR OTHER EXPERIENCE WITH
25	WORKING WITH OTHER AGENCIES THAT HAVE DONE LOANS?
	91

1	MR. WASDEN: YEAH. I THINK THAT TEN YEARS IS
2	SOMETHING THAT THE PEOPLE ARE LOOKING AT SO THAT THERE'S
3	A LONG A LARGE ENOUGH WINDOW. AS YOU HEARD EARLIER,
4	AS YOU KNOW, MOST OF THESE THERAPEUTICS ARE TAKING THEM
5	10 TO 15 YEARS TO HIT SOME SORT OF A LIQUIDITY EVENT
6	MILESTONE. AND YOU DON'T WANT TO HAVE IT TOO SHORT SUCH
7	THAT IT CAUSES A COMPANY TO HIT A WALL.
8	CHAIRMAN ROTH: CAN YOU GIVE US SOME EXAMPLES
9	OF OTHER ORGANIZATIONS THAT ARE DOING TEN YEARS?
10	MR. WASDEN: SO THE STATE OF TEXAS IS ONE
11	EXAMPLE WHERE THEY'RE DOING TEN YEARS. I HAVE TO LOOK AT
12	SOME OF THE OTHER STATES, BUT THAT'S ONE OF THE LARGER
13	MORE ACTIVE PROGRAMS.
14	MR. KLEIN: THERE'S A BALANCING HERE. AND NO
15	ONE IS GOING TO GET EVERYTHING THEY WANT. SO WHEREAS
16	FROM THE IDEAL WORLD, FROM THE CAPITAL SIDE, THE
17	LIQUIDITY EVENT MIGHT BE THE RIGHT SOLUTION. IF WE'RE AT
18	SEVEN YEARS AND WE HAVE A FACT PATTERN WHERE THE VENTURE
19	CAPITAL INTERESTS CARRY IT FURTHER, THEY'RE GOING TO GET
20	A BETTER VALUATION BECAUSE THEY'RE GOING TO TRY AND DO AN
21	IPO OR SOMETHING OF THAT KIND. WE REALLY NEED TO GET
22	OUT. WE REALLY NEED TO THINK ABOUT THIS TERM BECAUSE ONE
23	OF THE BIGGEST VALUES TO US IS THAT IF WE CAN CREATE A
24	STRUCTURE WHERE WE GET FULL OR PARTIAL RECOVERY IN THE
25	FIVE- TO SEVEN-YEAR TERM BECAUSE WE NEED TO ROLL IT INTO
	92

1	MORE PROGRAM FUNDS.
2	SO IT IS A BALANCING ACT, AND IT'S VERY CLEAR,
3	I THINK, THOUGH, THAT YOU DON'T WANT TO PRECIPITATE OR
4	PREVENT PRECIPITATE A FAILURE OR PREVENT A VENTURE
5	CAPITAL ROUND FROM COMING IN. SO YOU NEED TO BE PRETTY
6	FLEXIBLE ABOUT SUBORDINATION. AND IF YOU GET OUT TO
7	SEVEN YEARS AND IT'S CLEAR THERE'S MORE CAPITAL THAT WILL
8	COME IN, BUT YOU NEED TO SUBORDINATE AND YOU MIGHT HAVE
9	AN ADDITIONAL REVIEW FOR AN EXTENSION, I THINK IN THIS
10	FIELD A LOT OF BANKS EXTEND A LOT OF LOANS, BUT YOU NEED
11	TO HAVE SOME GUIDANCE HERE ON WHAT ARE THE TERMS AND
12	WHAT'S THE BASIS.
13	IF IT'S JUST THAT YOU ARE BUILDING VALUE IN THE
14	COMPANY TO WAIT FOR AN IPO, THAT MAY NOT BE THE
15	EXPLANATION THAT MEANS YOU DEFER FOR THE LIQUIDITY EVENT.
16	MR. WASDEN: THERE'S TWO WAYS TO ADDRESS THIS.
17	THE ONE THAT WAS JUST SUGGESTED IS THAT YOU COULD
18	OBVIOUSLY EXTEND THE LOAN. THE OTHER THAT WE TALKED
19	ABOUT IS THAT YOU COULD HAVE A TEN-YEAR TERM AND YOU
20	COULD ACTUALLY FORCE ACCELERATION BASED UPON EVENTS.
21	IF YOU LOOK AT A NEW INVESTOR COMING IN LIKE A
22	VENTURE CAPITAL FIRM, THEY WOULD MUCH RATHER ENTER INTO A
23	TRANSACTION WHERE IT HAS A TEN-YEAR TERM WITH FORCED
24	ACCELERATION SINCE AT CERTAIN MILESTONES OR A HIT, THEY
25	GET REPAID RATHER THAN HAVE TO TRUST THAT THE LENDER WILL
	93

BE WILLING TO EXTEND TERMS IN CERTAIN SITUATIONS. 1 CHAIRMAN ROTH: SO THERE SEEMS TO BE A LOT OF 2 HEAD NODDING GOING ON. 3 4 MR. BONFIGLIO: I AGREE WITH THAT. 5 DR. GOLDFISCHER: I AGREE WITH THAT. YOU KNOW, YOU CAN THINK OF CHANGE OF CONTROLS, SO I PO OR AN M&A 6 TRANSACTION. I THINK A LONGER TERM WITH THAT COVENANT 7 MAKES -- SEEMS PRETTY REASONABLE. 8 9 CHAIRMAN ROTH: SO WE'RE GOING TO MOVE TO THE NEXT ONE, BUT ON ALL OF THESE I'M GOING TO ASK YOU TO, 10 WHEN YOU GO AWAY, THINK ABOUT THESE, SEND TO LYNN YOUR 11 12 THOUGHTS ON HOW WE MIGHT WORD THIS THAT WOULD MEET THE 13 REQUI REMENTS. 14 MR. NORRIS: JUST ONE POINT OF CAUTION FROM THE 15 LENDER PERSPECTIVE IS THAT WHEN A COMPANY IS VENTURE 16 FUNDED AND IS LAYERING DEBT ON TOP, REALLY MAJORITY OF THE TIME WHEN WE LOOK AT THESE DEALS, IT'S ALL ABOUT CASH 17 BURN AND HOW MUCH CASH THE COMPANY HAS LEFT, HOW MANY 18 MONTHS OF CASH, WHERE DOES THAT GET THEM. HAVING 19 SOMETHING COME DUE DURING THAT TIME PERIOD, WHICH WOULD 20 BE A BIG CASH OUTLAY FOR THE COMPANY, WILL DEFINITELY 21 AFFECT OUR ABILITY TO MAKE THOSE LOANS AND THE AMOUNT 22 THAT WE CAN MAKE IN THOSE LOANS. JUST A POINT OF CAUTION 23 ON THAT IF THERE'S NO CASH INFUSION THAT'S COMING ALONG 24 25 IN CONCERT WITH THAT.

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1	CHAIRMAN ROTH: OKAY. IN TERMS OF INTEREST
2	RATES, YOUR THOUGHTS ON WHAT KIND OF RATES THESE LOANS
3	WOULD CARRY.
4	MR. NORRIS: YOU KNOW, YOU CAN LOOK AT DOING
5	THINGS ON BOTH A FLOATING SIDE AS WELL AS A FIXED SIDE.
6	I WOULD PROBABLY RECOMMEND SOME SORT OF FLOATING RATE
7	BASED ON PRIME BECAUSE THAT'S JUST EASY TO FOLLOW.
8	THINK THERE CAN BE A BIG SWAY IN INTEREST RATES IF WE'RE
9	TALKING TEN-YEAR PERIODS OR EVEN FIVE-YEAR PERIODS. AND
10	SO IT MIGHT MAKE SENSE TO HAVE SOMETHING THAT IS FLOATING
11	BASED ON PRIME THAT YOU CAN FIGURE OUT AMOUNTS FROM
12	THERE.
13	CHAIRMAN ROTH: JUST TO BE CLEAR, YOU' RE NOT
14	SUGGESTING PRIME. I WANT TO MAKE SURE EVERYBODY
15	UNDERSTANDS. THESE ARE GOING TO CARRY HIGHER INTEREST
16	RATES.
17	MR. NORRIS: I CAN GIVE YOU A LITTLE BIT OF
18	FEEDBACK IN TERMS OF WHAT IF WE WERE TO LOOK AT DOING
19	A SMALL LOAN TO A SERIES A-BACKED COMPANY, TYPICALLY THE
20	INTEREST RATES ARE SOMEWHERE BETWEEN, YOU KNOW, PRIME
21	PLUS ONE TO PRIME PLUS FOUR, SOMETHING IN THAT.
22	MR. KLEIN: WITH STOCK OPTIONS?
23	MR. NORRIS: AND THAT INCLUDES WARRANTS IN THAT
24	DEAL.
25	MR. KLEIN: PLUS WARRANTS. SO ON YOUR PRO
	95

FORMA, WHAT ARE YOU ASSUMING YOUR ALL-IN YIELD IS? 1 DR. GOLDFISCHER: IT'S A CLOSELY HELD SECRET. 2 I'LL ANSWER IT. WE CALCULATE THEM GETTING MIDTEENS 3 RETURNS. THAT'S WHAT WE CALCULATE. 4 5 MR. KLEIN: I WOULD ASSUME IT'S 12 PLUS RETURN. CHAIRMAN ROTH: THOUGHTS ON THAT WOULD ALSO BE 6 VERY HELPFUL. 7 DR. GOLDFISCHER: YOU CONVINCED US YOU DON'T 8 9 WANT TO TIE THIS TO LIBOR ANYMORE. 10 MR. KLEIN: UNLIKE A BANK, WE DON'T HAVE A DEPOSIT COST THAT'S INCREASING OVER TIME. SO WE CAN DO A 11 12 FIXED RATE THAT MAY, IN FACT, BE A RISK MITIGATOR RATHER 13 THAN A FLOATING RATE. WITH THE WAY CHINA IS UNLOADING 14 TREASURIES, FIXED RATE MIGHT APPEAR PRETTY ATTRACTIVE IN 15 FOUR OR FIVE YEARS. 16 CHAIRMAN ROTH: JUST ALSO A POINT OF CLARITY, INTEREST RATES WOULD BE ACCRUED. THE INTEREST WOULD NOT 17 BE PAID ANNUALLY. IT WOULD ACCRUE WITH THE LOAN. 18 19 MR. NORRIS: IS THERE ANY SORT OF DISCUSSION RELATED TO TAKING WARRANTS IN THE COMPANY TO OFFSET THE 20 21 RI SK? CHAIRMAN ROTH: MY UNDERSTANDING IS THE STATE 22 OF CALIFORNIA CANNOT EXCEPT EQUITY. IT CANNOT HOLD 23 EQUITY, BUT LET BOB TALK ABOUT HOW. 24 25 MR. KLEIN: JAMES IS NOT IN HERE, IS HE? WE 96

1	CAN'T OWN STATE OF CALIFORNIA CAN'T OWN STOCK. IT'S A
2	CONSTITUTIONAL ISSUE. BUT WE'RE IN RESEARCH AS TO
3	WHETHER WE CAN OWN STOCK OPTIONS WHICH WE COULD THEN SELL
4	OR WARRANTS OR OTHER STRUCTURES. BUT POTENTIALLY A STOCK
5	OPTION THAT WE CAN'T EXERCISE, BUT WE COULD SELL, IS
6	POSSIBLE, BUT WE JUST DON'T HAVE THE DUE DILIGENCE DONE
7	ON THE LEGAL SIDE TO GIVE US COMFORT YET.
8	MR. SIMPSON: I THINK YOU'RE CORRECT, THAT SOME
9	FORM OF WARRANTS CAN WORK.
10	MR. KLEIN: I JUST WANT TO BE VERY CAREFUL.
11	CHAIRMAN ROTH: SO WE NEED TO INVESTIGATE THAT
12	MORE FROM A LEGAL STANDPOINT.
13	DR. GOLDFISCHER: BECAUSE YOU' RE GOING TO DO A
14	BUNCH OF THESE TRANSACTIONS. ACCUMULATING WARRANTS IN
15	THESE COMPANIES, ONE WOULD GUESS IF YOU CHOOSE REASONABLY
16	WELL, A COUPLE OF THOSE THINGS ARE GOING TO WIND UP BEING
17	PRETTY VALUABLE.
18	CHAIRMAN ROTH: OTHER THOUGHTS THERE?
19	SUBORDINATION, SOMETHING THAT'S BEEN DISCUSSED MANY TIMES
20	ALREADY TODAY, BUT LET'S ACTUALLY TALK ABOUT
21	SUBORDI NATI ON.
22	MR. NORRIS: CLEARLY AN UNSECURED LOAN WOULD BE
23	THE BEST OPTION FROM ANOTHER BANK COMING ON TOP OF THAT
24	DEBT AT A LATER TIME. BUT I THINK IF THERE'S ANY SORT OF
25	SECURITY INTEREST ATTACHED TO IT, TYPICALLY A FINANCE
	97

1	INSTITUTION THAT WOULD PROVIDE DEBT TO A VENTURE DEBT
2	COMPANY WOULD REQUIRE THE DEBT THAT WE'RE CONTEMPLATING
3	HERE TO BE TOTALLY SUBORDINATED THROUGH A DOCUMENT THAT
4	IS A PRETTY BOILERPLATE DOCUMENT THAT MOST FINANCIAL
5	INSTITUTIONS HAVE.

AND I THINK REALLY THE ONE ISSUE COMES DOWN TO 6 INTELLECTUAL PROPERTY. I THINK THAT THAT'S AN ISSUE THAT 7 IN A SENSE, IF THE FINANCING INSTITUTION THAT COMES ON 8 BOARD AFTERWARDS DOESN'T TAKE THE IP, WHICH DOES HAPPEN 9 IN SOME SITUATIONS, THAT'S JUST SOMETHING THAT THE 10 FINANCIAL INSTITUTION HAS TO LOOK AT LATER IF THERE'S A 11 12 SITUATION WHERE THERE'S SOME SORT OF VALUE ASSIGNED TO THE IP THAT'S GOING TO BE DISTRIBUTED TO EVERYONE WHO'S 13 14 LAYING ANY SORT OF CLAIM TO THE COMPANY IN, LET'S SAY, A 15 BANKRUPTCY SITUATION BECAUSE THAT WOULD BE SOME 16 COLLATERAL WE WOULD HAVE TO SHARE. BUT I DON'T THINK THAT THAT WOULD BE AN OVERRIDING ISSUE FOR THOSE 17 FINANCING INSTITUTIONS, JUST SOMETHING THAT WE TAKE INTO 18 19 CONSI DERATI ON.

20 CHAI RMAN ROTH: OTHER THOUGHTS?

21 MR. BONFIGLIO: OBVIOUSLY THE INTEREST AND 22 BUSINESS MODEL OF THE BANK IS DIFFERENT THAN THE INTEREST 23 AND BUSINESS MODEL OF THE VENTURE GUYS LOOKING AT THE 24 DEAL. FROM MY PERSPECTIVE, AND I WANT TO HEAR CARL'S 25 THOUGHTS ON THIS AS WELL, SUBORDINATION IS CRITICAL. IF

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1	THIS MONEY DOES NOT SIT DOWN BELOW OUR MONEY, THEN I
2	CAN'T MODEL OUT MY RETURN. I CAN MODEL IT OUT, BUT IT
3	TAKES A BIG HOLE OUT OF IT. SO SUBORDINATION IS
4	ABSOLUTELY CRITICAL.
5	IN TERMS OF SECURITY, IF YOU SECURE THIS
6	AGAINST THE IP OF THE COMPANY, IT MAKES IT MUCH, MUCH
7	LESS ATTRACTIVE FOR ME TO COME IN AND FINANCE THAT
8	BUSI NESS.
9	CHAIRMAN ROTH: CHRIS, ANY THOUGHTS ON THAT,
10	SUBORDI NATI ON?
11	MR. WASDEN: I ABSOLUTELY AGREE. I THINK THAT
12	ONE OF THE THINGS WE NEED TO UNDERSTAND IS THAT THE
13	SUBORDINATION CAN ACTUALLY MAKE THE COMPANY MORE
14	ATTRACTIVE IN THE FINANCING OPPORTUNITY FOR EITHER A
15	SENIOR LENDER OR FOR THE VENTURE FIRM.
16	MR. BONFIGLIO: THAT'S ABSOLUTELY RIGHT. YOU
17	GO FROM A NEGATIVE TO A POSITIVE.
18	MR. WASDEN: ABSOLUTELY. SO I THINK THAT THIS
19	IS, AGAIN, SOMETHING THAT'S ACTUALLY A VERY ATTRACTIVE
20	ELEMENT BY DOING THE SUBORDINATION. IF YOU LOOK AT
21	ECONOMIC DEVELOPMENT ORGANIZATIONS IN DIFFERENT STATES
22	THAT PROVIDE THIS SORT OF DEBT FINANCING, THEY DO IT ON A
23	SUBORDINATED BASIS TO A SENIOR LENDER.
24	MR. KLEIN: IN TERMS OF THE QUESTION OF WHETHER
25	THERE'S A SECURITY INTEREST IN THE IP, WE NEED TO
	99

CERTAINLY WHATEVER THE SECURITY INTERESTS ARE IN THIS 1 COMPANY, YOU' VE GOT TO SUBORDINATE THEM. THAT'S NOT THE 2 BUT THERE HAVE TO BE LOAN COVENANTS THAT DEAL 3 QUESTI ON. WITH THE FACT THAT YOU CAN'T HYPOTHECATE THIS IP AND 4 5 PLEDGE IT FOR OTHER PROJECTS OR OTHER COMPANIES, THAT YOU CAN'T TAKE THIS IP AND SELL OFF PART OF IT TO FINANCE 6 SOME OTHER VENTURE. THERE'S GOING TO HAVE TO BE 7 COVENANTS THAT EFFECTIVELY CREATE A SECURITY VALUE IN 8 9 THIS. ALTHOUGH IT'S EFFECTIVELY THE SENIOR LENDERS AND VENTURE CAPITALISTS HAVE A PRIORITY RIGHT TO ALL THIS IP, 10 YOU' RE EFFECTIVELY NEEDING TO CONTROL THE USE OF THIS IP 11 12 TO KEEP IT FOCUSED, ITS TOTAL ASSET VALUE IN THIS COMPANY 13 AND IN THIS VENTURE.

14 MR. BONFIGLIO: THAT'S A VERY DIFFERENT RISK 15 ASSESSMENT FROM MY PERSPECTIVE WHEN I COME IN LOOKING AT 16 THOSE KIND OF COVENANTS. I CAN DEAL WITH THOSE COVENANTS BECAUSE, HONESTLY, WE BUILD THOSE COVENANTS INTO OUR 17 FINANCINGS. SO THAT'S SOMETHING I'M REAL FAMILIAR WITH, 18 AND I DON'T THINK THAT'S AS MUCH OF AN ISSUE, BOB. I 19 THINK IF YOU TAKE A SECURITY INTEREST IN THE IP, THAT'S A 20 VERY TOUGH ONE. 21 MR. SATO: THE SO-CALLED NEGATIVE BUDGETS ARE 22 FAIRLY CONVENTIONAL IN VENTURE DEBT, SO I DON'T EXPECT 23 THAT TO BE A PROBLEM FOR COMPANIES. 24

25 I DO HAVE A QUESTION, HOWEVER, TO THE EXTENT

100

1	THAT THERE IS A DEFAULT, WHAT IS YOUR WILLINGNESS TO SUE?
2	BECAUSE THIS ONLY MATTERS IF YOU'RE WILLING TO BRING
3	LI TI GATI ON.
4	CHAIRMAN ROTH: SO THIS AGENCY HAS BEEN SUED
5	REPEATEDLY.
6	MR. SATO: THIS PROBABLY GOES TO THE COVENANTS.
7	AND SO PART OF IT IS GOING TO BE WHAT'S THE PERCEPTION
8	THERE ABOUT CIRM'S WILLINGNESS TO BRING LITIGATION?
9	CHAIRMAN ROTH: AGAIN, HAVING BEEN THROUGH THE
10	OTHER SIDE OF THIS AND BEING SUED SO MANY TIMES OVER SO
11	MANY TRIVIAL ISSUES, I THINK WHEN WE GET TO THAT POINT,
12	WE'RE GOING TO HAVE TO REALLY FIGURE OUT IS THIS
13	SOMETHING THAT WE WOULD ACTUALLY LITIGATE. AND IT WOULD
14	HAVE TO, IN MY MIND, BE A SIGNIFICANT BREACH, EGREGIOUS
15	UNWILLINGNESS TO MEET THE TERMS.
16	I THINK IN TERMS OF I GO BACK TO WHAT I SAID
17	AT THE LAST MEETING. THERE ARE TWO WAYS WE CAN DO THIS.
18	WE CAN STRUCTURE A LOAN PROGRAM THAT INDUSTRY OR THE
19	PEOPLE DEVELOPING PRODUCTS FIND ATTRACTIVE AND WILL
20	ACTUALLY TAKE ADVANTAGE OF, OR WE CAN JUST DO IT ALL IN
21	GRANTS. BUT WE PREFER TO DO IT, FOR REASONS BOB HAS
22	ARTICULATED, A PORTION OF THIS WE WOULD PREFER TO DO AS
23	LOANS; AND IF WE COULD STRUCTURE SOMETHING ATTRACTIVE, WE
24	WILL DO THAT.
25	MR. KLEIN: IN TERMS OF LITIGATION, I THINK YOU
	101

101

1	HAVE TO BE PREPARED TO LITIGATE, BUT YOU REALLY, UNDER
2	THE DELEGATED UNDERWRITER OR DELEGATED AGENT PROCESS, TO
3	HAVE THEM IN A RISK SHARING POSITION WHERE THEY EXECUTE
4	ON ENFORCEMENT RATHER THAN THIS AGENCY. WE DON'T HAVE
5	THE STAFF TO DEAL WITH THIS. SO WE'RE GOING TO HAVE TO
6	LOOK AT THAT FUNCTION, BUT WE'RE GOING TO HAVE TO HAVE
7	ENFORCEMENT FOR THESE LOAN COVENANTS TO MEAN ANYTHING.
8	CHAIRMAN ROTH: WE'VE REALLY ADDRESSED IN THE
9	SAME CONVERSATION SUBORDINATION AND SECURITY UNLESS
10	SOMEBODY HAS A SPECIFIC COMMENT ON SECURITY OR QUESTIONS
11	FROM THE TASK FORCE.
12	MILESTONES, I THINK I DESCRIBED THAT EARLIER,
13	BUT PERHAPS WE COULD SPEND A LITTLE BIT OF TIME ON THAT.
14	I'M NOT SURE IT'S APPROPRIATE THAT THAT BE IN THIS
15	SECTION BECAUSE WE DISCUSSED THE KINDS OF MILESTONES
16	WE'RE TALKING ABOUT PREVIOUSLY FOR MAKING THE LOANS.
17	THIS WOULD BE MILESTONES AND BENCHMARKS FOR PAYMENTS. SO
18	THAT'S WHERE WE'D LIKE TO HEAR ABOUT ACCELERATED PAYMENT
19	TRIGGERS. WHAT WOULD TRIGGER AN ACCELERATED PAYMENT OF A
20	LOAN?
21	DR. GOLDFISCHER: I THINK CHANGE OF CONTROL
22	DEFINED AS AN M&A OR AN IPO. IF THIS THING GOES PUBLIC,
23	THEY'RE GOING TO PAY THIS OFF AS USE OF PROCEEDS. IT
24	HAPPENS ALL THE TIME.
25	CHAIRMAN ROTH: SO THINGS LIKE THAT IS WHAT
	102

1	WE'D LIKE TO HEAR FROM YOU, IPO.
2	DR. GOLDFISCHER: HOWEVER YOU WANT TO.
3	CHAIRMAN ROTH: DESCRIBE CHANGE OF CONTROL.
4	MR. BONFIGLIO: FUNDAMENTALLY IT'S A LIQUIDITY
5	EVENT. SO WHETHER IT'S AN M&A TRANSACTION, IT'S AN OUT
6	LICENSING OF THE TECHNOLOGY BECAUSE REALIZE YOU CAN
7	GENERATE SUBSTANTIAL REVENUES BY OUT LICENSING THE
8	TECHNOLOGY AND NOT BE ACQUIRED AND NOT GO PUBLIC. BUT A
9	LIQUIDITY EVENT, THEY FALL IN THREE BUCKETS: M&A, OUT
10	LICENSING, AND AN IPO.
11	DR. GOLDFISCHER: IT'S ALL COST OF CAPITAL, SO
12	AT SOME POINT YOU' RE HOPING THAT YOU BECOME AN
13	EXPENSIVE THE MORE EXPENSIVE COST OF CAPITAL THAN
14	OTHER THINGS THE COMPANY CAN DO AND, THEREFORE, IT
15	BECOMES ATTRACTIVE TO PAY IT OFF.
16	CHAIRMAN ROTH: AGAIN, THOUGHTS ON THAT
17	DR. GOLDFISCHER: THOSE ARE THE KIND OF EVENTS
18	THAT WILL MAKE IT ATTRACTIVE TO PAY IT OFF.
19	MR. KLEIN: THAT'S AN IMPORTANT COMMENT BECAUSE
20	AT A CERTAIN POINT, IF THEY HAVE ENOUGH VITALITY THAT
21	THEY CAN GET MAJOR SECOND LEVEL BANK DEBT THAT'S
22	SIGNIFICANT AND YOU BECOME A MINOR PORTION OF THE
23	CAPITAL, YOU DO WANT TO YOU POTENTIALLY WANT TO HAVE A
24	STEP-UP IN THE LOAN TERMS TO INCENTIVIZE PAYOFF, AND YOU
25	WANT THE PRIVATE SECTOR LOAN CAPITAL TO TAKE OVER. SO
	103

1	THAT YOU MIGHT BUILD AN INCENTIVE SYSTEM IN BECAUSE YOU
2	WANT SILICON VALLEY BANK TO COME IN AND TAKE YOU OUT WITH
3	THEIR CAPITAL, BUT THAT MEANS THAT AT SOME POINT YOU'LL
4	HAVE A STEP-UP IN YOUR RATES SO THAT YOU ARE MORE
5	EXPENSIVE DOWNSTREAM THAN THEY ARE.
6	DR. GOLDFISCHER: EVEN IF YOU DON'T HAVE IT,
7	WHATEVER YOUR NUMBER IS, RIGHT, IT'S GOING TO BE HOW MUCH
8	IT COSTS YOU TO DO SO. AS YOU WERE SAYING, IF YOU GET A
9	BIG PARTNERSHIP THAT TAKES A LOT OF RISK OFF, YOU'RE
10	GOING TO PAY THIS OFF. THAT'S JUST NORMAL COST OF
11	BUSI NESS.
12	MS. FEIT: IS THERE
13	DR. GOLDFISCHER: IT'S ALSO WHERE YOUR WARRANTS
14	ARE GOING TO BE IF YOU CAN TAKE THEM. THAT'S WHERE YOU
15	START, AND THAT'S WHERE YOU REALLY JUICE THE RETURNS OF
16	THIS THING. IT'S NOT THE 10 TO 12 PERCENT OR WHATEVER
17	YOU'RE GOING TO GET ON IT AND X'ING OUT THE LOSSES. IT'S
18	THE WARRANTS THAT ARE GOING TO DRIVE THE RETURNS ON THIS.
19	MS. FEIT: IS THERE EVER A TIME WHERE A CHANGE
20	OF OWNERSHIP MIGHT OCCUR, BUT NOT NECESSARILY AN INFUSION
21	OF LIQUIDITY? SO JUST A PLAIN CHANGE OF OWNERSHIP MAY BE
22	A TRIGGERING EVENT.
23	DR. GOLDFISCHER: WE'RE NOT DEFINING IT AS YOU
24	DO A B ROUND AND BRING IN 40 MILLION NEW DOLLARS,
25	ALTHOUGH THAT MIGHT BE A SITUATION WHERE EVENTUALLY
	104

1	EVERYBODY AROUND THE TABLE MIGHT DECIDE THIS IS BETTER
2	PAPER TO GET RID OF, BUT YOU WOULDN'T NECESSARILY WANT
3	THAT TYPE OF EVENT TO FORCE A PAYING OFF OF THE DEBT
4	BECAUSE YOU DON'T KNOW WHAT THE CIRCUMSTANCES ARE.
5	MS. FEIT: WHAT I'M THINKING OF IS JUST A
6	CHANGE OF OWNERSHIP WHERE, SAY, YOU HAVE A PROJECT IN ONE
7	INSTITUTION OR THE INSTITUTION IS ABSORBED BY ANOTHER,
8	NOT NECESSARILY A LIQUIDITY EVENT, BUT A CHANGE OF
9	OWNERSHIP EVENT, SO THAT SHOULD TRIGGER A PAYOUT. I
10	THINK JUST THAT ALONE, JUST THE OWNERSHIP CHANGE, BY
11	ITSELF BECAUSE I ACTUALLY
12	DR. GOLDFISCHER: I'M NOT SURE I UNDERSTAND.
13	MS. FEIT: IS IT ASSUMED, THEN, IF COMPANY X OR
14	INSTITUTION X IS ABSORBED BY INSTITUTION Y, THAT THERE'S
15	A LIQUIDITY INVOLVED? IS THAT AN ASSUMPTION?
16	MR. BONFIGLIO: IF YOU'RE TALKING AT THE
17	COMPANY LEVEL, ONE OF THE THINGS YOU'RE DESCRIBING WILL
18	HAPPEN IN THE NATURAL COURSE TO THE ECOSYSTEM. THE 300
19	COMPANIES THAT I IDENTIFIED UP THERE, IT'S PROBABLY 400
20	AS WE'RE SPEAKING, BUT THOSE COMPANIES ARE CHARACTERIZED
21	AS SMALL SHOPS WITH FOUR TO FIVE TO SIX EMPLOYEES EACH
22	WORKING ON AN INDIVIDUAL PIECE OF TECHNOLOGY THAT
23	HONESTLY PROBABLY WILL NEVER STAND ALONE.
24	SO THE INDUSTRY IS GOING TO HAVE A SHAKE-OUT AT
25	SOME POINT IN THE NEXT THREE, FIVE, HOWEVER MANY YEARS,
	105

1	WHERE A BUNCH OF THOSE COMPANIES ARE GOING TO GET ROLLED
2	TOGETHER. A ROLL-UP CAN BE A CHANGE OF CONTROL AND ONE
3	YOU DON'T HAVE TRIGGERING THE LOAN OBLIGATIONS BECAUSE
4	WHEN YOU ROLL A COUPLE OF COMPANIES TOGETHER, TYPICALLY
5	YOU'RE TAKING TWO BUSINESSES THAT ARE BARELY SURVIVING,
6	PUTTING THEM TOGETHER TO FORM A MORE COMPELLING VALUE
7	PROPOSITION. AND IF YOU HAVE TO REPAY THE LOAN AS PART
8	OF THAT PROCESS, THEN YOU' VE GOT AN ISSUE.
9	MS. FEIT: THAT IS SOME OF WHAT I'M THINKING
10	OF, BUT IT COMES IN TERMS OF THE OWNERSHIP STRUCTURE
11	CHANGES. SO IS THAT A TRIGGER EVENT TO CALL IN THE LOAN,
12	OR IS THAT A TRIGGER EVENT TO MAKE SURE THERE'S A
13	COVENANT THAT SAYS THIS LOAN STAYS IN PERPETUITY BECAUSE
14	IT'S STILL A LOAN REGARDLESS OF THE NAME CHANGE OR THE
15	OWNERSHI P?
16	DR. GOLDFISCHER: WHAT YOU MIGHT WANT MAYBE IS
17	A REASSESSMENT OF THE BUSINESS. YOU MIGHT IF YOU
18	DON'T CALL IT IF YOU FORCE TWO OF THESE THINGS
19	TOGETHER, YOU MIGHT WANT TO HAVE THAT TRIGGER SOME
20	COVENANT.
21	MR. WASDEN: OFTENTIMES YOU ACTUALLY WANT TO
22	HAVE THE OPPORTUNITY TO CALL IT IN, NOT BECAUSE YOU WILL,
23	BUT BECAUSE YOU WANT TO BE BROUGHT TO THE TABLE IN THAT
24	CHANGE-OF-CONTROL EVENT TO MAKE SURE THAT YOUR POSITION
25	IS SECURE.

106

1	DR. STEWARD: IT JUST OCCURS TO ME TO ASK. IT
2	SEEMS THAT IN SOME OF THESE CASES, IT MIGHT BE THE
3	ROLLING UP OF THE CALIFORNIA-BASED AND THE
4	NON-CALIFORNIA-BASED COMPANY WHICH WOULD, BY OBLIGATION,
5	TRIGGER A REPAYMENT EVENT, I GUESS. HOW WOULD THAT
6	MR. KLEIN: IF THE FUNDS HAVE BEEN EXPENDED IN
7	CALIFORNIA ALREADY THE FUNDS CANNOT BE EXPENDED
8	OUTSIDE OF CALIFORNIA. BUT IF THE FUNDS HAVE ALREADY
9	BEEN EXPENDED IN CALIFORNIA, I'LL ASK OUR COUNSEL TO
10	REVIEW THAT FACT PATTERN.
11	IN TERMS OF THESE SPECIFIC EVENTS, THE RIGHT TO
12	LOOK AT IT IS AN APPROPRIATE STATEMENT BECAUSE YOU CAN
13	HAVE TWO COMPANIES MERGE, AND THE SCIENTIFIC IDEA THAT
14	YOU FUNDED IS NOW NOT THE ONE THEY'RE GOING TO CARRY
15	FORWARD WITH. AND SO THAT'S AN APPROPRIATE TIME TO LOOK
16	AT WHETHER THOSE FUNDS SHOULD REMAIN WITH THAT MERGED
17	ENTITY. I THINK THAT'S A REASONABLE COVENANT TO HAVE FOR
18	OVERSI GHT.
19	CHAIRMAN ROTH: JUST THE ABILITY TO LOOK AT IT.
20	MR. KLEIN: TO LOOK AT IT.
21	DR. STEWARD: BY LOOKING AT IT, YOU MEAN WE
22	COULD CALL THE LOAN.
23	CHAIRMAN ROTH: I THINK WE DON'T WANT TO
24	FORCE IN MARCY'S SCENARIO, FORCE REPAYMENT OF THE
25	LOAN. WE SIMPLY WANT TO MAKE SURE THE LOAN FOLLOWS THE
	107

NEW COMPANY AND IT REMAINS AN OBLIGATION THERE. 1 AND UNDER CERTAIN CIRCUMSTANCES, YOU MAY, IN FACT, WANT TO 2 3 TRIGGER REPAYMENT. BUT WE NEED TO BE CAREFUL WITH THOSE, 4 I THINK, IN TERMS OF HOW THOSE ARE WRITTEN, OR THAT, 5 AGAIN, GETS IN THE WAY OF ADVANCING AN IDEA BECAUSE SUDDENLY THERE'S A TWO OR \$3 MILLION PAYMENT THAT HAS TO 6 GO BEFORE YOU PUT TWO OR THREE MILLION NEW DOLLARS IN TO 7 ADVANCE IT. 8

9 MR. SATO: CAN I JUST GET A CLARIFICATION ON 10 THE FUNDS EXPENDED IN CALIFORNIA? JUST FUNDS EXPENDED TO 11 SUPPORT OPERATIONS IN CALIFORNIA? OBVIOUSLY THERE ARE 12 MANY MORE CLINICAL SITES ACROSS THE NATION THAN THERE ARE 13 IN EUROPE AND THAN THERE ARE IN THE STATE OF CALIFORNIA. 14 I JUST WANT TO BE SURE WE'RE TALKING ABOUT SUPPORTING 15 OPERATIONS.

16 CHAIRMAN ROTH: GLEN, THAT QUESTION HAS COME UP REPEATEDLY, AND I THINK WE'RE LOOKING AT IT TO DETERMINE 17 WHAT SERVICES CAN BE ACQUIRED OUTSIDE OF THE STATE. THE 18 ENTITY HAS TO BE IN THE STATE AND MOST OF THE EXPENSES, 19 20 BUT, AGAIN, THE THINKING THERE WAS PRIMARILY GRANTS, AND WE HADN' T CONSIDERED WHAT HAPPENS WHEN YOU DO, FOR 21 EXAMPLE, FUND A CLINICAL TRIAL THAT MAY BE LOCATED 22 INTERNATIONALLY. AND THAT'S ONE THAT WE HAVE TO LOOK AT. 23 MR. KLEIN: I THINK THAT I'M VERY INTERESTED IN 24 25 THE LEGAL ANALYSIS ON THIS GIVEN, AS SUPPLEMENTING WHAT 108

1	WE'VE ALREADY LOOKED AT, THE FACT PATTERN IS SOMEWHAT
2	DIFFERENT, BUT YOU COULD WELL HAVE A SITUATION WHERE YOU
3	HAVE A CLINICAL TRIAL OUTSIDE OF THE STATE, BUT YOU HAVE
4	SOME SIGNIFICANT COST IN THE STATE. AND SO ON AN
5	ALLOCATION BASIS, YOU USE THE FUNDS FROM THIS LOAN TO
6	COVER THE COST IN THE STATE AND THE OTHER FUNDS, WHETHER
7	VENTURE CAPITAL OR OTHERWISE, GO TO THE CLINICAL TRIAL.
8	BUT WE'RE GOING TO NEED TO LOOK CLOSELY AT THIS.
9	CHAIRMAN ROTH: YOU'RE ALLOWED UNDER THE WAY
10	IT'S WRITTEN TO HAVE SERVICES THAT YOU PAY FOR THAT MIGHT
11	COME FROM VENDORS OUTSIDE OF THE STATE. THAT'S THE TERM.
12	BUT I THINK IT'S PROBABLY SOMETHING WE'LL HAVE TO DEAL
13	WITH IN GENERAL FOR WHETHER WE DO GRANTS OR LOANS.
14	THAT'S AN ISSUE.
15	MR. KLEIN: SERVICES AND EQUIPMENT AND A NUMBER
16	OF OTHER THINGS.
17	CHAIRMAN ROTH: OKAY. THE LAST SECTION THAT WE
18	WOULD LIKE YOUR INPUT ON DEALS WITH WHAT WE'VE CALLED THE
19	COVENANTS, BUT THESE ARE TERMS AND CONDITIONS THAT ARE
20	EMBEDDED IN PART IN PROP 71 IN TERMS OF ACCESS,
21	AFFORDABILITY, PUBLICITY, THINGS LIKE THAT. I'M GOING TO
22	ASK OUR COLLEAGUE ED PENHOET HERE, WHO REALLY HEADED UP
23	ALL THE IP WORK ON BOTH THE NOT-FOR-PROFIT AND
24	FOR-PROFIT, TO HELP ME WITH THIS BECAUSE HE HAD AN AWFUL
25	LOT TO DO WITH HOW THIS ENDED UP.
	100

109

1	LET ME START BY JUST GIVING AN OVERVIEW.
2	AFFORDABILITY AND ACCESS WERE TWO TERMS THAT WE REALLY
3	HAD TO WRESTLE WITH. WE DETERMINED THAT THEY WERE REALLY
4	TIED TOGETHER, AND THAT ACCESS IS REALLY WHAT WE WANT.
5	WE WANT ACCESS FOR NEW DIAGNOSTICS AND THERAPEUTICS TO BE
6	AVAILABLE TO EVERY PATIENT THAT NEEDS THEM IN THE STATE
7	OF CALIFORNIA.
8	AFFORDABILITY IS A VERY SUBJECTIVE TERM.
9	WHAT'S AFFORDABLE TO ONE PERSON IS COMPLETELY DIFFERENT
10	THAN AFFORDABLE IF YOU HAVE CANCER. CANCER, YOU TEND TO
11	VIEW AFFORDABILITY VERY DIFFERENTLY THAN YOU DO IF YOU
12	ARE TALKING IN THE THIRD PARTY.
13	SO WHAT WE ENDED UP WITH IS REALLY FOCUSING ON
14	ACCESS AND TRYING TO PUT INTO THE POLICY THAT THOSE THAT
15	TAKE MONEY, WHETHER GRANTS OR LOANS, FROM THE STATE OF
16	CALIFORNIA WILL AGREE TO PROVIDE ACCESS TO THESE PRODUCTS
17	WHEN THEY BECOME COMMERCIALIZED. AND SO THERE ARE A
18	NUMBER OF WAYS WE ADDRESS THAT. ONE, YOU HAVE TO ABIDE
19	BY ANY CURRENT REGULATION OBVIOUSLY WHEN YOU LAUNCH THE
20	PRODUCT. SO IF MEDICAID HAS A CERTAIN REQUIREMENT, YOU
21	HAVE TO MEET THAT. IF MEDICARE HAS A REQUIREMENT, YOU
22	HAVE TO MEET THAT. IF THIRD-PARTY INSURERS HAVE
23	REQUIREMENTS, YOU HAVE TO MEET ALL LAWS THAT WOULD BE IN
24	PLACE AT THAT TIME OR PROGRAMS LIKE CALIFORNIA RX IF THAT
25	EVER GETS FUNDED. IF YOU ARE GOING TO PARTICIPATE IN THE
	110

1	STATE OF CALIFORNIA AND SELL YOUR PRODUCTS HERE, YOU
2	WOULD, IN THEORY, HAVE TO BUY INTO CALIFORNIA RX.
3	BUT PROBABLY THE MOST IMPORTANT ASPECT OF THIS
4	IS TO MAKE SURE THAT THE COMPANIES THAT COMMERCIALIZE THE
5	PRODUCT SEND TO CIRM THEIR PATIENT ACCESS PROGRAM THAT
6	IS, QUOTE, INDUSTRY STANDARD AT THAT POINT IN TIME. SO
7	TODAY WE COULD PROBABLY DEFINE INDUSTRY STANDARD GIVEN
8	THE SIZE OF THE COMPANY, THE SCOPE OF THE PRODUCT, AND
9	WHAT THEY OFFER FOR THE PEOPLE WHO FALL OUTSIDE OF ALL
10	THESE OTHER PROGRAMS, INCLUDING DISEASE ASSOCIATIONS WHO
11	MAKE FUNDS AVAILABLE TO PAY FOR SOME OF THESE THERAPIES.
12	SO YOU CAN TAKE A TOTAL UNIVERSE AND SAY THERE'S GOING TO
13	BE A FEW PEOPLE AT THE END OF THE DAY WHO CAN'T AFFORD
14	THE PRODUCT. THEY' RE UNDERINSURED OR UNINSURED, AND WHAT
15	DO THE COMPANIES DO THAT PROVIDE THESE THERAPIES TO MAKE
16	SURE THAT ACCESS IS THERE?
17	THAT'S WHAT WE'RE REQUIRING UNDER THE CURRENT
18	FOR-PROFIT IP POLICY. WE WANT TO SEE THAT AT THAT POINT
19	IN TIME AND IT HAS TO BE APPROPRIATE FOR WHAT'S THEN.
20	LET ME STOP.
21	MR. SATO: JUST A QUICK QUESTION. THIS WOULD
22	APPLY EVEN IF THE LOAN HAD BEEN REPAID. SO IF YOU ACCESS
23	THE LOAN PROGRAM, YOU WOULD HAVE THIS CONTINUING
24	OBLI GATI ON.
25	DR. PENHOET: AT THE MOMENT THIS POLICY ONLY
	111

1	REFERS TO DRUGS. WE'RE TRYING TO NOW BRING UP THE ISSUE
2	OF WHAT, IF ANY, OF THESE THINGS WOULD APPLY TO LOANS AND
3	UNDER WHAT CIRCUMSTANCES AND REPAYMENT TERMS, ETC. IN
4	THE GRANT CASE, IT GOES FOR THE LIFETIME OF THE PRODUCT
5	ESSENTIALLY THAT'S FUNDED WITH THAT GRANT.
6	MR. SATO: GOING BACK TO TED'S ORIGINAL
7	QUESTION ABOUT WHAT WOULD MAKE A LOAN MORE ATTRACTIVE, TO
8	BE ABLE TO ELIMINATE ALL OF THESE REQUIREMENTS CERTAINLY
9	WOULD MAKE THE LOAN MORE ATTRACTIVE OVER THE LONG RUN
10	WHEN YOU GET TO COMMERCIALIZATION.
11	CHAIRMAN ROTH: WE'RE INTERESTED IN THOSE
12	THOUGHTS. JUST SO YOU UNDERSTAND, THE POLICY THAT IS IN
13	THE FOR-PROFIT IP ESSENTIALLY DOES THIS. IT SAYS THAT
14	YOU WILL AT THE TIME OF COMMERCIALIZATION PROVIDE
15	WHATEVER IS, QUOTE, AN INDUSTRY STANDARD FOR A COMPANY OF
16	YOUR SIZE AND SCOPE IN A PRODUCT AREA TO CIRM AND SAY
17	THIS IS HOW WE INTEND TO MAKE SURE THERE'S ACCESS TO OUR
18	NEW THERAPY OR OUR NEW DIAGNOSTIC AT THAT POINT IN TIME.
19	SO WE'RE NOT ASKING ANYTHING THAT WOULD BE OUTSIDE OF
20	COMMON OPERATING PROCEDURES AT THAT POINT.
21	NO. 2 DEALS WITH PUBLICATIONS. WE HAD A LOT OF
22	DISCUSSION WITH INDUSTRY ABOUT THIS. WE THINK WE ENDED
23	UP WITH A VERY GOOD PUBLICATION REQUIREMENT. IT SAYS IF
24	YOU CHOOSE TO PUBLISH, YOU WILL MAKE AVAILABLE TOOLS OR
25	REAGENTS THAT ARE IN THAT PUBLICATION TO OTHERS IN THE
	112

STATE, MUCH LIKE THE NONPROFITS DO, EXCEPT IF IT 1 INTERFERES WITH ANY OF YOUR BUSINESS PRACTICES. FIRST 2 YOU HAVE TO DECIDE TO PUBLISH. THAT'S YOUR DECISION. 3 4 SECOND, YOU CAN THEN SAY WE'RE GOING TO PUBLISH, BUT WE'RE NOT GOING TO DO THIS BECAUSE IT DIRECTLY CONFLICTS 5 WITH OUR ABILITY TO COMMERCIALIZE THE PRODUCT FOR 6 WHATEVER REASON. AND YOU CAN READ. THERE ARE SEVERAL 7 OTHER WAYS YOU CAN ADDRESS THE BIOMATERIALS PUBLICATION. 8 9 MR. KLEIN: MAYBE ED SHOULD GO INTO HOW THEY'RE MADE AVAILABLE BECAUSE IT'S NOT FREE. MAYBE SOME OF THAT 10 INFORMATION WILL BE VALUABLE. 11 12 DR. PENHOET: WELL, PEOPLE CAN RECOVER THEIR 13 COST OF PROVIDING A BIOMEDICAL MATERIAL TO A THIRD PARTY, 14 BUT THAT'S ESSENTIALLY IT. BUT IF THEY'RE GOING TO 15 COMMERCIALIZE THE PRODUCT AND MAKE IT BROADLY AVAILABLE 16 COMMERCIALLY, THEY DON'T HAVE TO PROVIDE IT FREE TO RESEARCHERS. THAT'S WHAT DUANE WAS JUST REFERRING TO. 17 CHAIRMAN ROTH: IT SAYS OTHERWISE CREATE AN 18 ONEROUS FINANCIAL HARDSHIP. THAT IS THERE. SO THERE'S 19 SEVERAL WAYS YOU WOULD SAY THIS INTERFERES WITH MY 20 BUSINESS. AND I DON'T WANT TO DO THIS. YOU PROVIDE THAT 21 TO CIRM, GIVE THE REASON, AND THEY WOULD ACCEPT IT. 22 23 THE LAST ONE THAT I THINK IS APPROPRIATE TO HAVE A DISCUSSION ABOUT IS PRESS-RELATED REQUIREMENTS, 24

25 PRESS RELEASE REQUIREMENTS. THAT SAYS IF YOU ARE GOING

113

1	TO REFERENCE CIRM, IN OTHER WORDS LEVERAGE THE NAME, THAT
2	YOU RECEIVED A GRANT OR YOU RECEIVED A LOAN, THAT YOU
3	WILL GIVE US NOTICE OF THAT, LET US COMMENT ON IT BEFORE
4	IT GOES OUT.
5	THEN THERE ARE TWO LISTED BELOW THAT WE DO NOT
6	THINK ARE APPROPRIATE, BUT WE THREW THEM IN BECAUSE
7	THEY' RE PART OF THE REQUIREMENTS FOR THE GRANT PROCESS.
8	ASSUMPTION FOR LICENSING, THAT'S AN IP ISSUE, LICENSING
9	TO THIRD PARTIES. IF YOU RECEIVED A GRANT AND YOU GO ON
10	AND LICENSE THE TECHNOLOGY TO A THIRD PARTY, I DON'T
11	THINK IT APPLIES.
12	AND THEN THERE'S THE MARCH-IN REQUIREMENT,
13	WHICH WE DO NOT THINK SHOULD APPLY IN THIS CASE. THERE
14	IS OVERARCHING MARCH-IN RIGHTS THAT CONGRESS HAS OR THE
15	PRESIDENT HAS IN NATIONAL EMERGENCIES AND THINGS LIKE
16	THAT. THIS ONE DEALT SPECIFICALLY WITH MARCH-IN RIGHTS
17	IN CALIFORNIA; IS THAT CORRECT, ED?
18	DR. PENHOET: (NODS.)
19	CHAIRMAN ROTH: OKAY. SO WE'D LIKE TO OPEN IT
20	UP, THEN, FOR DISCUSSION ABOUT THE ACCESS AND
21	APPROPRIATENESS OF THOSE BEING IN THIS AS PART OF IT AND
22	WHAT YOU MIGHT BE ABLE TO LIVE WITH AND WHAT YOU THINK
23	WOULD CLEARLY BE A DISINCENTIVE.
24	DR. PENHOET: COULD I RETURN TO THE COMMENT I
25	MADE EARLIER THOUGH? IT'S NOT CLEAR TO ME YET WHETHER
	114

1	WE'RE TALKING ABOUT FUNDING COMPANIES OR PROJECTS. WE'VE
2	COMMINGLED THE TWO THINGS MANY TIMES TODAY. AND IF WE
3	ARE GOING TO PROVIDE LOANS TO COMPANIES, THEN THEY'LL
4	DO IT WILL BE ON THE BASIS OF WHAT THEY CAN CONTRIBUTE
5	TO THE FURTHERANCE OF REGENERATIVE MEDICINE, ETC., BUT
6	THEY WILL USE THAT MONEY, I PRESUME, AS THEY WOULD USE
7	OTHER SOURCES OF FUNDS. SILICON VALLEY BANK OR A VENTURE
8	CAPITALIST DOESN'T SAY, YES, WE'RE PROVIDING THIS FUNDING
9	TO THIS PROJECT, BUT SUBJECT TO BOARD OF DIRECTORS, YOU
10	CAN CHANGE PROJECTS AND DO A NUMBER OF THINGS WITH THE
11	MONEY.
12	THERE ARE ORGANIZATIONS THAT DO
13	PROJECT-SPECIFIC FINANCING. THERE'S A COMPANY CALLED
14	SYMPHONY, FOR EXAMPLE, THAT FUNDS CLINICAL TRIALS,
15	SPECIFIC PRODUCT, SPECIFIC CLINICAL TRIAL AND JUDGE THAT
16	SCI ENCE.
17	AND I THINK MANY OF THESE THINGS HERE PRESUME
18	WE FUNDED A RESEARCH PROJECT. THAT'S WHAT THE GRANT
19	PROGRAM IS ALL ABOUT. SO IT'S PROJECT FINANCING. AND IF
20	WE ARE ALSO GOING TO CONTEMPLATE COMPANY FINANCING WITH
21	THESE LOAN FUNDS, WHICH IS A DIFFERENT BEAST, IT WOULD
22	COME WITH A DIFFERENT SET OF REQUIREMENTS, I ASSUME. AND
23	I'M STILL UNCLEAR ABOUT WHICH OF THOSE TWO.
24	WE HAVE CERTAINLY TALKED A LOT ABOUT
25	ORIGINALLY WE TALKED ABOUT THE LOANS PRIMARILY AS AN
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ALTERNATIVE TO GRANTS FOR PROJECT FINANCING. BUT I THINK 1 WE'VE HEARD A LOT OF DISCUSSION THAT PROVIDING LOANS TO 2 COMPANIES, AS SILICON VALLEY BANK DOES, OR IN PARTNERSHIP 3 IF THEY PUT UP -- IF WE PUT UP FOUR MILLION AND THEY PUT 4 5 UP FOUR MILLION, WE'D DO THIS TOGETHER. THEN IT'S MUCH MORE COMPANY FINANCING THAN IT IS PROJECT FINANCING. 6 I THINK THAT THOSE TWO, YOU'D HAVE VERY 7 DIFFERENT SET OF RULES, I SUSPECT, IF YOU WERE BASICALLY 8 9 PLAYING THE ROLE OF VENTURE CAPITALIST WITH LOANS VERSUS PROJECT FINANCING, WHICH IS SPECIFIC PROJECTS. 10 CHAIRMAN ROTH: I AGREE COMPLETELY WITH THAT 11 LAST STATEMENT, THAT IF WE GO THAT WAY, THAT'S PROBABLY A 12 13 DIFFERENT POLICY THAN THE ONE WE'VE BEEN WORKING ON. THE 14 ONE WE'VE BEEN WORKING ON ESSENTIALLY PULLS A LOT FROM 15 WHAT'S BEEN DONE UNDER THE GRANT PROGRAM AND MOVES IT 16 OVER TO A LOAN, BUT IT'S PROJECT SPECIFIC WHERE THE PROJECT WOULD BE ANALYZED. NOT THE CONCEPT OF A COMPANY 17 OR COMMINGLING. THAT COULD BE DONE, I GUESS, BUT I THINK 18 WOULD BE A COMPLETE --19 DR. GOLDFISCHER: AT THIS STAGE IT GETS A 20 LITTLE GRAY SOMETIMES. 21 DR. PENHOET: I KNOW. THAT'S WHY I WANTED TO 22 STRESS THAT WE EVOLVED IN THIS MEETING WE'VE HAD TODAY 23 AND HAS CERTAINLY STARTED TO TALK ABOUT JOINT VENTURING, 24 25 SETTING UP ACCELERATORS, ALL THOSE KINDS OF THINGS ON 116

1	COMPANY FINANCING. THEY ARE NOT PROJECT FINANCING FOR
2	THE MOST PART.
3	MR. KLEIN: WELL, THE ACCELERATOR MODEL,
4	THOUGH, THEY GET INTO THE ACCELERATOR WITH A
5	PROJECT-SPECIFIC THERAPY 1, THERAPY 2 FOCUS. SO MAYBE
6	THEY'D APPLY TO US AND SAY THIS IS THERAPY APPLICATION 1,
7	THERAPY APPLICATION 2. WE'RE FUNDING THE MONEY FOR THE
8	DEVELOPMENT OF THOSE THERAPIES IN THIS COMPANY.
9	NOW, THAT MAY BE THE ENTIRE COMPANY, BUT I
10	THINK WE'VE BEEN FOCUSED ON PROJECT-SPECIFIC FUNDING
11	WHICH ESSENTIALLY BECOMES A COMPANY FUNDING OF THOSE
12	PROJECTS IN MANY CASES.
13	CHAIRMAN ROTH: AND YOU HAVE TO REMEMBER WE'RE
14	SET UP ON THE RFA PROCESS. AND FOR US TO HAVE TIMING TO
15	REACT TO A FINANCING, YOU KNOW, THE ODDS THAT WE'RE GOING
16	TO HAVE SUCH A PROGRAM AT THE TIME YOU ACTUALLY NEED IT
17	AND NEGOTIATE IT WOULD BE A VERY DIFFERENT PROGRAM.
18	THINK WE COULD DEFINE TODAY AN RFA THAT WOULD TALK ABOUT
19	FUNDING VALLEY OF THE DEATH, FOR LACK OF A BETTER TERM,
20	PROJECTS. AND SO THAT WE CAN GET OUR ARMS AROUND IT, WE
21	COULD READ AND EVALUATE WHETHER THAT PROJECT IS WORTHY OF
22	THE LOAN PROGRAM. BUT TO DO THAT IN A MORE ALL
23	ENCOMPASSING WAY AS PART OF THE LEVERAGE FINANCING,
24	THAT'S PRETTY TRICKY TO WRITE THE RFA'S TO GET A NUMBER
25	OF APPLICANTS IN. THEY HAVE TO LINE UP THE ADDITIONAL
	117

1	FUNDING, HAVE IT SIT THERE UNTIL WE GET OUR APPROVAL.
2	DR. GOLDFISCHER: IT'S HARD, THOUGH. WHEN YOU
3	START THREE MILLION BUCKS AND STUFF, YOU'RE GETTING INTO
4	COMPANIES OR GETTING TO AN ENTITY, A PROJECT ENTITY, THAT
5	HAS A CORPORATE STRUCTURE AROUND IT. YOU CAN CALL IT
6	I DON'T KNOW WHAT YOU CALL THAT. SOMEWHERE IN THE
7	MIDDLE. CALL IT WHATEVER YOU WANT TO CALL IT ACTUALLY.
8	DR. PENHOET: IF WE STAYED WITH THE SIMPLE
9	MODEL, WHICH IS FUNDING RESEARCH PROJECTS ONE AT A TIME.
10	WE FUND THEM. THEN, YOU KNOW, I THINK THE COLD REALITY
11	IS ANYONE DECIDING WHETHER THEY WOULD TAKE A GRANT VERSUS
12	A LOAN, THE ONLY TRADING BAIT WE HAVE TO ENCOURAGE THEM
13	TO TAKE A LOAN RATHER THAN A GRANT IS PROBABLY THIS SET
14	OF REQUIREMENTS ON THIS BACK PAGE. I DON'T KNOW HOW ELSE
15	TO SAY IT EXCEPT IN PLAIN ENGLISH.
16	CHAIRMAN ROTH: ED, THE IP POLICY, IN SOME
17	CASES PEOPLE MAY BE CONCERNED ABOUT THEIR ABILITY TO WORK
18	IN THE IP POLICY BECAUSE OF SOME
19	DR. PENHOET: SO THEY CAN CHOOSE. IF THAT WAS
20	THE TRADING CURRENCY, IT MIGHT NOT BE A POPULAR OUTCOME
21	OF THIS MEETING, BUT IF THAT'S THE ONLY INDUCEMENT WE
22	HAVE FOR SOMEBODY TO ACTUALLY TAKE A LOAN THAT THEY MUST
23	PAY BACK VERSUS A GRANT THAT THEY GET WITHOUT ANY PAYBACK
24	TERMS EXCEPT THE LONG-TERM PAYBACK TERMS, WHICH ARE STILL
25	THERE IN THE GRANT PROGRAM. THERE IS AN ECONOMIC RETURN,
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BUT BASED ONLY ON SUCCESS. 1 2 DR. GOLDFISCHER: THE QUESTION I HAVE, AND I HEAR WHAT YOU ARE SAYING, IS THAT SINCE YOU ARE TRYING TO 3 4 GET A LOAN PAID BACK ON A PROJECT. IT'S GOT TO BECOME A 5 COMPANY, MOST LIKELY. MR. KLEIN: THAT'S RIGHT. IF YOU'RE GOING TO 6 GET A COMPANY BUSINESS PLAN BECAUSE THAT IS THE EXIT, 7 THAT'S THE EXIT PROGRAM. 8 DR. GOLDFISCHER: A LOT OF THINGS YOU' RE ASKING 9 FOR HERE, BUSINESS PLANS, FINANCIAL, THAT SORT OF GETS 10 YOU INTO COMPANIES. 11 12 MR. KLEIN: BUT IT'S STILL A PROJECT-BASED 13 FINANCING OF A COMPANY. SO YOU' RE FINANCING -- YOU' RE 14 NOT FINANCING -- THE COMPANY MAY HAVE SOME OTHER 15 INITIATIVE OUT THERE, BUT THE CASH FLOWS AND SOURCES AND 16 USES ON THIS SPECIFIC PROJECT IS WHAT YOU' RE FINANCING. 17 DR. GOLDFISCHER: IT'S NOT SO BAD REALLY. LET'S SAY IF YOUR AIM -- IF THE AIM OF THIS IS TO 18 19 DRIVE --DR. PENHOET: I CAN CREATE A VALUE JUDGMENT IN 20 MY OWN MIND WHICH IS BAD OR NOT BAD. 21 DR. GOLDFISCHER: I'M JUST SAYING IF THE AIM OF 22 THIS IS TO DRIVE DEVELOPMENT IN THE TECHNOLOGICAL SPACE, 23 WHETHER THE ENTITY -- THAT'S WHAT YOU WANT TO DO. SO IF 24 SOMEONE IS SETTING UP AN ENTITY AND THIS BECOMES PART OF 25 119

THAT ENTITY AND A SIGNIFICANT PART OF IT, IT'S ACHIEVING 1 YOUR PURPOSES, RIGHT. 2 3 DR. PENHOET: SURE. DR. LOVE: IN SOME WAYS IT'S DIVERSIFICATION. 4 YOU COULD EASILY SEE A SITUATION WHERE YOU FUND A 5 PROJECT, THAT PROJECT DOES NOT FAIL, YET THE COMPANY, 6 THROUGH SOMETHING THAT HAPPENS IN BIOTECHNOLOGY ALL THE 7 TIME, DOES OTHER THINGS, BECOMES VERY SUCCESSFUL, YOUR 8 9 WARRANTS, IF WE'RE ABLE TO TAKE THEM, ACTUALLY BECOME VERY VALUABLE. THAT WOULD NOT BE A PARTICULARLY UNLIKELY 10 EVENT POTENTIALLY EVEN IF THE PROJECT FAILED. 11 12 MR. BONFIGLIO: YOU' RE NOT GOING TO GIVE 13 WARRANTS IN A PROJECT, SO BY NECESSITY AS SOON AS YOU 14 START TALKING IN THOSE TERMS, YOU'RE TALKING A COMPANY. 15 YOU' RE TALKING ABOUT PROJECT FINANCE WITHIN A COMPANY, AS 16 BOB SALD. 17 CHAIRMAN ROTH: THAT'S PROBABLY WHERE WE'RE AT. MR. SHEEHY: MY ONLY QUESTION IS WHY DON'T THEY 18 DO AN RFA, FIRST OF ALL, FOR PARTNERS, AND THEN YOU 19 20 START. ONCE YOU' VE I DENTIFIED YOUR PARTNERS, YOU LET THEM SUBMIT PROJECTS. I WOULD STAY WITH THE COMPANY 21 FORMATION NOTION BECAUSE I DO THINK WE'LL HAVE INCREDIBLE 22 POLITICAL PROBLEMS IF WE KICK OUT ALL THIS STUFF. 23 BUT THE IP IS ALREADY THERE IN A COMPANY. THIS IS REALLY 24 25 BUILT AROUND IP POLICY, NOT THE CREATION OF IP AND

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1	CAPTURING THE VALUE THAT'S CREATED THERE WITH OUR
2	DOLLARS, BUT THE IP HAS ALREADY BEEN CREATED FOR THE MOST
3	PART. BUT WHY DON'T WE MAKE OUR FIRST STAGE TO IDENTIFY
4	PARTNERS?
5	MR. KLEIN: WHAT YOU'RE SAYING WE CAN HAVE
6	MR. SHEEHY: AN RFA FOR PARTNERS, AND IT WOULD
7	BE A LIMITED NUMBER OF PARTNERS, AND THEN A SUBMISSION
8	WITHIN THAT GROUP OF PROJECTS THAT WE WOULD AGREE TO
9	PARTNER ON BECAUSE THE KEY TO THIS IS OUR PARTNERS IN MY
10	MIND. IT'S NOT THE PROJECTS. IT'S WHO'S GOING TO WORK
11	WITH US TO MAKE THESE PROJECTS WORK. THE INDIVIDUAL
12	PROJECT IS NOT GOING TO BE AS IMPORTANT AS WHO WE DO IT
13	WITH IN MY MIND IN THE ULTIMATE BECAUSE WE CANNOT DO IT.
14	I AGREE WITH DR. MURPHY. WE'RE GOING TO BE
15	WHAT IS GOING TO BE OUR PROCESS FOR FINDING THESE
16	UNDERWRITERS YOU'RE TALKING ABOUT OR WHATEVER? THE FIRST
17	STAGE TO ME IS TO FIND OUT WHO YOU ARE GOING TO DO THIS
18	WI TH.
19	MR. KLEIN: SO YOU'RE SAYING YOU DO AN RFP FOR
20	DELEGATED UNDERWRITERS AND PROGRAM ADMINISTRATORS.
21	SILICON VALLEY BANK OR SOME OTHER GROUP COULD SUBMIT A
22	PROPOSAL, JUST LIKE FANNIE MAE DELEGATED UNDERWRITERS, TO
23	PROVIDE THESE SERVICES WITHIN THE SCOPE OF THE RFP FOR
24	DOING THE BUSINESS DUE DILIGENCE AND DOING THE OVERSIGHT
25	AND DOING RISK SHARE OR NOT RISK SHARE.
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MR. SHEEHY: IF THAT MAKES SENSE. MAYBE IT 1 2 DOESN' T. MR. KLEIN: THAT'S ONE POSSIBLE MODEL. I'D 3 4 LIKE TO ASK, I MEAN IF THEY'RE CALIFORNIA COMPANIES, WHY 5 COULDN'T THEY, DESPITE THE FACT THIS IS A LOAN VERSUS A GRANT, WHY COULDN'T THEY LIVE WITH CALRX; AND IF THEY'RE 6 A CALIFORNIA COMPANY, WON'T THEY BE SUBJECT TO CALRX 7 ANYWAY? 8 9 CHAIRMAN ROTH: THAT'S THE PROPOSAL IS THAT WE'D KEEP INDUSTRY STANDARD AT THE TIME OF 10 COMMERCIALIZATION, SO YOU'RE REALLY AGREEING. IF IT WERE 11 12 TODAY, YOU'D HAVE TO PROBABLY SUBMIT AN ACCESS PROGRAM TO 13 COVER UNDERINSURED AND UNINSURED, BUT VIRTUALLY EVERY 14 COMPANY DOES THAT. IT WON'T HAVE TO BE GENENTECH STYLE. 15 IT'D HAVE TO BE A NEW COMPANY WITH MAYBE THEIR FIRST 16 PRODUCT STYLE, BUT IT WOULD HAVE TO BE A REQUIREMENT. 17 MR. BONFIGLIO: YOU' RE ASKING WHETHER THE COMPANIES THAT RECEIVE THE LOANS WOULD BE WILLING TO 18 COMPLY WITH THE LAW AT THE TIME THE PRODUCT REACHED THE 19 MARKET. THAT SEEMS PRETTY STRAI GHTFORWARD. 20 CHAIRMAN ROTH: IT IS. IN MANY CASES THAT IS 21 THE CASE, BUT IN ADDITION, OTHER INDUSTRY STANDARD IS 22 23 REALLY WHAT I'M TRYING TO WORK IN. INDUSTRY DOES PLAY A ROLE, AND ED AND OTHERS PIONEERED THAT ROLE BY MAKING 24 25 SURE THAT COMPANIES GOT PRODUCTS.

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1	MR. KLEIN: AND THE OTHER SIDE OF THAT IS
2	THEY'RE NOT GOING TO MOVE OUT OF THE STATE TO ESCAPE THE
3	LAW. SO THEY UNDERSTAND UP FRONT THAT IF THEY AGREE TO
4	THIS, THE CALRX PROGRAM, THEY'RE PART OF IT UNDER THIS
5	PROGRAM.
6	CHAI RMAN ROTH: OTHER THOUGHTS?
7	MR. BONFIGLIO: SO IF YOU GO TOO MUCH FURTHER
8	DOWN THE ROAD WITH ALL THESE OTHER ISSUES THAT ARE NOW
9	TIED TO GRANTS, YOU GET ED'S POINT IN SPADES. YOU'VE GOT
10	THE ISSUE OF WHY WOULD I TAKE A LOAN WHEN THE GRANT HAS
11	THE SAME REQUIREMENTS AND I DON'T HAVE TO REPAY IT? SO I
12	THINK WHAT YOU NEED TO THINK ABOUT IN TERMS OF MAKING
13	THIS ATTRACTIVE, YOU'RE OFFERING TO THE COMPANY AN
14	ALTERNATIVE. SIGN UP FOR THIS WHOLE SET OF RESTRICTIVE
15	COVENANTS AND GET A GRANT, OR SIGN UP FOR A LOAN AND
16	REPAY THE MONEY.
17	CHAIRMAN ROTH: OTHERS THAT HAVE THOUGHTS ON
18	THAT? WE'LL HAVE PUBLIC COMMENT IN A MINUTE, AND WE NEED
19	TO HEAR FROM THE PUBLIC ON SOME OF THESE ISSUES, BUT THAT
20	IS ONE THAT I'M SURE THERE WILL BE CONSIDERATION FOR.
21	THE PUBLICATION-RELATED BIOMATERIALS DOES NOT
22	SEEM TO BE A PROBLEM WITH INDUSTRY. I THINK WE'VE
23	ADDRESSED MOST OF THOSE.
24	AND A PRESS RELEASE, I THINK, IS PRETTY
25	STRAIGHTFORWARD. IS THERE AGREEMENT THAT THIRD PARTIES
	123

1	IS NOT APPROPRIATE HERE, AND I CAN'T UNDERSTAND WHY, BUT
2	WE JUST THREW IT IN THERE SO WE WERE INCLUSIVE. THERE IS
3	NO THIRD-PARTY LICENSING. THIS IS NOT THAT'S IN THE
4	IP. MARCH-IN RIGHTS, SIMILAR.
5	MR. BONFIGLIO: YEAH.
6	CHAIRMAN ROTH: THAT WOULD NOT BE PART OF THIS.
7	MR. KLEIN: THOSE ARE TWO GOOD REASONS TO TAKE
8	A LOAN, IF IT'S, IN FACT, APPROPRIATE.
9	IN TERMS OF THIS ISSUE OF UNINSURED
10	CALIFORNIANS, SO WE ADDRESS THAT, OBVIOUSLY THERE'S
11	LISTED HERE THERE'S A LOT OF COVERAGE PROGRAMS IN
12	PLACE, INCLUDING IN CALIFORNIA, CALIFORNIA CHILDREN'S
13	SERVICES, ETC. BUT WHAT'S YOUR VIEW ABOUT US BEING ABLE
14	TO USE THAT PROVISION WHICH WE DEVELOPED UNDER THE IP
15	POLI CY?
16	MR. BONFIGLIO: I DON'T KNOW THE FULL SCOPE OF
17	THE PROGRAM, SO IT'S HARD FOR ME TO GIVE YOU, AT LEAST
18	FOR ME, AN INFORMED VIEW ON HOW IT WOULD IMPACT THE
19	FINANCING ALTERNATIVES DOWNSTREAM. IF IT'S A CONTAINED
20	PROGRAM AND DOESN'T TAKE A BIG CHUNK OUT OF THE MARKET
21	SHARE FOR THE PRODUCT WHEN IT REACHES THE MARKET, THEN I
22	THINK IT'S CONTAINABLE. IT'S A RISK THAT YOU GOT TO
23	MANAGE, AND I DON'T KNOW THE FULL EXTENT OF THE RISK, SO
24	IT'S HARD FOR ME TO GIVE YOU A FULL ASSESSMENT OF WHAT
25	THE IMPACT WOULD BE.

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1	YOU ARE ASKING THAT A PORTION OF THE MARKET
2	THAT YOU'D BE SELLING INTO BE REMOVED AND PRICED AT A
3	LEVEL WHERE YOU PROBABLY ARE NOT GOING TO GET THE MARGINS
4	TO JUSTIFY 93-PERCENT FAILURE RATE YOU'RE FACING WHEN YOU
5	GET IN ON THE FRONT END. BUT I DON'T KNOW.
6	DR. PENHOET: MOST COMPANIES HAVE THESE
7	PROGRAMS TODAY, SO IT'S ALMOST BECOME A STANDARD.
8	CHAIRMAN ROTH: THAT'S WHY I SAID IF WE DO IT
9	TODAY, IT'S A STANDARD, BUT WE DIDN'T WANT TO PUT THAT
10	STANDARD IN BECAUSE WE DON'T KNOW TEN YEARS DOWN THE ROAD
11	WHAT THE STANDARD IS GOING TO BE. WHATEVER IT IS, AND
12	WE'LL KNOW AND YOU'LL SUBMIT THAT TO US AND SAY THIS IS
13	HOW WE'RE GOING TO ADDRESS ACCESS.
14	MR. BONFIGLIO: THAT GUIDING PRINCIPLE, I DON'T
15	THINK, IS A PROBLEM. AT LEAST IT WOULDN'T BE A PROBLEM
16	FOR US.
17	CHAIRMAN ROTH: OKAY. ANY OTHER COMMENTS
18	BEFORE WE OPEN IT TO THE PUBLIC FOR COMMENTS? SO LET'S
19	TAKE PUBLIC COMMENT. IF YOU'D COME FORWARD AND IDENTIFY
20	YOURSELF SO PEOPLE ON THE PHONE KNOW WHO'S ON.
21	MR. LASH: I'M ALEX LASH. I COVER BIOTECH FOR
22	THE DEAL. TO A POINT THAT SOMEONE MADE, I CAN'T
23	REMEMBER, ABOUT LOCATION. AND IF A COMPANY TAKES A LOAN
24	AND THEN IT'S PROJECT-SPECIFIC OR WHAT HAVE YOU, WOULDN'T
25	THAT THEN THAT MONEY HAS TO BE SPENT WITHIN
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CALIFORNIA. WOULDN'T THAT TIE THE HANDS OF OWNERSHIP FOR
POSSIBLE M&A? I GUESS IT WAS GREG WHO SAID THAT THERE'S
GOING TO BE A HUGE ROLL-UP, HUGE CONSOLIDATION IN THE
NEXT FEW YEARS. WOULDN'T THAT BE A DISINCENTIVE TO TAKE
THE LOAN IF YOU THEN WOULDN'T BE ABLE TO DO SOME OR M&A
WITH A COMPANY OUTSIDE OF CALIFORNIA, MOVE THE COMPANY
OUTSIDE OF CALIFORNIA?

DR. PENHOET: PROJECT-SPECIFIC FINANCING, THE 8 9 REQUIREMENT IS THAT THE MONEY BE SPENT IN CALIFORNIA. THE OWNERSHIP OF THE ENTITY THAT'S SPENDING THE MONEY IN 10 CALIFORNIA CAN BE ANYWHERE IN THE WORLD. IT'S NOT AN 11 OWNERSHIP ISSUE. IT'S WHERE THE MONEY IS SPENT. SO THE 12 13 MONEY WOULD STILL HAVE TO BE SPENT IN CALIFORNIA. 14 MR. LASH: SO YOU COULDN' T MOVE THOSE 15 RESOURCES, THOSE PERSONNEL OUTSIDE OF THE STATE? 16 DR. PENHOET: NOT AND WORK ON THAT PROJECT, BUT IT WOULD MUDDY THE WATER IF WE DO COMPANY FINANCING. 17 WE'RE NOT PROJECT SPECIFIC. YOU KNOW THE COMPLICATION OF 18

19 THAT.

20 MR. KLEIN: YOU CAN MOVE ANY PORTION OF THOSE 21 PERSONNEL OUTSIDE THE STATE. THE PROBLEM IS YOU CAN'T 22 MOVE THE MONEY SO THAT AS LONG AS YOU'RE EXPENDING MONEY, 23 YOU KNOW, YOU GO FROM ONE PHASE TO THE PROJECT THERAPY 24 DEVELOPMENT TO ANOTHER PHASE, IT'S JUST THAT THE 25 PERSONNEL THAT YOU ARE SPENDING MONEY ON WITH STATE FUNDS

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1	HAVE TO BE IN CALIFORNIA. SO THE COMPANY MAY HAVE A LOT
2	OF PERSONNEL THAT ARE MOBILE AND WORK ON PROJECTS AROUND
3	THE WORLD; BUT TO THE EXTENT WE'RE GOING TO PAY THEM FOR
4	EFFORTS WITH THIS MONEY, THAT WORK HAS TO BE DONE IN
5	CALI FORNI A.
6	CHAIRMAN ROTH: AND THE CONCEPT WOULD BE THAT
7	SOME OF THIS MONEY WILL HAVE ALREADY BEEN SPENT AT THAT
8	POINT IN TIME.
9	SECOND, IN THE WORST-CASE SCENARIO WHERE THE
10	NEW COMPANY BUYS THE TECHNOLOGY AND TAKES IT OUT OF THE
11	STATE, IT'S MILESTONE DRIVEN, SO ONLY A PORTION OF THE
12	MILESTONE PAYMENT, THE TOTAL MILESTONE PAYMENTS, WOULD
13	HAVE BEEN MADE, AND THAT WOULD BE TRIGGER REVIEW.
14	DR. GOLDFISCHER: WHEN YOU MERGE COMPANIES,
15	THERE'S ALL KINDS OF THINGS THAT YOU HAVE TO DEAL WITH,
16	RIGHT? SO IF THIS LOAN PROJECT FINANCING HAS BECOME SOME
17	SORT OF ESTABLISHED COMPANY, THAT IS, DOING THINGS, AND
18	THEY DECIDE FOR THEIR REASONS TO MERGE IT WITH ANOTHER
19	ENTITY THAT'S OUT OF STATE, THEN THE BUSINESS ISSUE THAT
20	THEY'LL HAVE TO SIT AROUND A TABLE AND DECIDE IS DO THEY
21	WANT TO PAY THIS OFF OR CONTINUE TO COMPLY WITH THE
22	REQUIREMENTS OF THE LOAN. IT HAPPENS IN EVERY MERGER.
23	MR. LASH: SO IN THE GRAND SCHEME OF THINGS,
24	THIS WOULD PROBABLY NOT BE A BIG IMPEDIMENT.
25	DR. GOLDFISCHER: I DON'T THINK SO.
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1	MR. BONFIGLIO: I DON'T THINK SO.
2	CHAIRMAN ROTH: OTHER PUBLIC COMMENT?
3	DR. GOLDFISCHER: AGAIN, THE OTHER PART OF THAT
4	IS THE WORK THAT YOU ARE SORT OF FINANCING, HOWEVER YOU
5	WANT TO DESCRIBE IT, IS PROBABLY DERIVED FROM PEOPLE IN
6	THE STATE. AND ACCESS TO THE SCIENTISTS IS IMPORTANT AT
7	THE WHOLE LEVEL. THIS MOST LIKELY WOULD BE MOST
8	OPERATI VE.
9	MR. BONFIGLIO: ALTHOUGH REALIZE ONE OF THE
10	THINGS, IF YOU'RE TALKING ABOUT PROJECT FINANCING EVEN
11	WITHIN A COMPANY AND YOU'RE BRINGING THERAPEUTICS TO THE
12	MARKET, YOU'RE TALKING ABOUT FINANCING TECHNOLOGY THROUGH
13	THE CLINICAL PROGRAM. ONE OF THE CHALLENGES YOU' RE GOING
14	TO HAVE, WORST-CASE SCENARIO, JUST AN EXTREME CASE WHERE
15	YOU'VE FUNDED THE ENTIRE CLINICAL PROGRAM, IT MAY NOT BE
16	POSSIBLE FOR YOU TO DO THE PATIENT ENROLLMENT SOLELY IN
17	CALIFORNIA. YOU MAY NEED TO REACH OUTSIDE THE STATE TO
18	FIND PATIENTS WHO WILL FILL THE PROGRAM FOR YOU. YOU
19	NEED TO FACTOR THAT INTO YOUR THINKING.
20	CHAIRMAN ROTH: THAT'S A GREAT POINT. AND BOB
21	ADDRESSED THIS EARLIER, AND THERE'S A COUPLE OF THINGS.
22	ONE, WE NEED A LEGAL INTERPRETATION OF WHETHER WE, IN
23	FACT, CAN SUPPORT THINGS LIKE CLINICAL TRIALS OUTSIDE AS
24	A SERVICE, MEETING THAT DEFINITION. THAT'S ONGOING.
25	THE SECOND IS THAT IF THE TOTAL CLINICAL
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PROGRAM COST 10 MILLION AND WE PROVIDE TWO, THE COMPANY
 COULD SHOW THAT TWO OF THAT WAS SPENT IN CALIFORNIA,
 EIGHT OF IT SPENT OUTSIDE, THAT WOULD MEET THE
 REQUIREMENT.

5 MR. SIMPSON: JOHN SIMPSON FROM THE FOUNDATION FOR TAXPAYER AND CONSUMER RIGHTS. I'M STILL SOMEWHAT 6 AGNOSTIC ABOUT THE WHOLE PROGRAM HERE. I HAVEN'T YET 7 SEEN THAT THERE'S A DEMONSTRATED NEED ON THE PART OF 8 9 COMPANIES THAT THEY'RE ASKING FOR THIS. AND I WONDER WHETHER THIS IS REALLY BEING DRIVEN BY A DESIRE TO KIND 10 OF RECYCLE MONEY, IF THAT'S THE PRIMARY THING. I'M NOT 11 12 SURE.

THE OTHER COUPLE OF POINTS I WANT TO MAKE 13 14 QUICKLY, IT DOES SEEM TO ME THAT THE REGIONAL FUNDS FOR 15 THIS PROGRAM WOULD BE YOUR MOST EXPENSIVE MONEY BECAUSE I 16 THINK THE BONDS THAT YOU WOULD SELL COULD NOT POSSIBLY BE TAX EXEMPTS BECAUSE THEY' RE GOING TO FUND LOANS WHICH ARE 17 PROFIT MAKING, ETC., ETC. AND I THINK THAT ALL YOUR 18 BONDS ARE GOING TO HAVE TO BE TAXABLE BONDS, WHICH MAKES 19 THEM MORE EXPENSIVE WHEN THEY GET PAID BACK AND ALL THAT 20 STUFF. THAT MAY BE A FACTOR TO CONSIDER. 21 22 I'M TROUBLED BY WHAT WOULD APPEAR TO BE THE POSSIBILITY OF LETTING COMPANIES OFF ON THE IP COVENANTS, 23

24 WHICH I THOUGHT WERE VERY WELL THOUGHT OUT. AND ALL

25 STAKEHOLDERS TOOK A LOT OF EFFORT OVER TWO YEARS OR SO TO

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COME UP WITH THOSE, AND THEY SEEM TO ME TO BE EMINENTLY
 FAIR TO ALL SIDES BECAUSE, AS IT'S OFTEN BEEN SAID, NO
 ONE'S COMPLETELY HAPPY WITH THEM, MYSELF AND BIOTECH AND
 SO ON. BUT THEY'RE THERE AND THERE WAS A LONG PROCESS
 THAT DID IT. SO THAT'S PUZZLING.

THE OTHER THING I THINK TOO THAT REALLY NEEDS 6 FURTHER THOUGHT IS THE ACTUAL COST OF ADMINISTERING THE 7 PROGRAM. YOU CAN'T DO IT IN-HOUSE. YOU DON'T HAVE THE 8 9 PEOPLE FOR THAT. AND DELEGATED UNDERWRITERS COULD WORK, BUT THERE'S GOT TO BE A SUBSTANTIAL COST TO THAT. AND IT 10 COULD BE THAT YOU ARE GOING TO END UP WITH A LOT OF MONEY 11 12 GOING TO GET MONEY OUT THE DOOR. SO ALL OF THOSE THINGS 13 TOGETHER STILL JUST LEAVE ME KIND OF SCRATCHING MY HEAD 14 AND VERY AGNOSTIC AND LOOKING FORWARD TO MORE SESSIONS IN 15 ALL OF THIS. I REALLY WOULD LIKE TO HEAR FROM COMPANIES 16 SAYING YES, YES, WE WOULD DO SOMETHING WITH THIS MONEY THAT WE WOULDN' T OTHERWISE. 17

AND THE OTHER THING IN THE PROCESS, I MEAN IT'S 18 NOT CLEAR TO ME, DO YOU PUT OUT AN RFA FOR SCIENCE AS YOU 19 HAVE DONE RECENTLY, OPEN THEM UP TO NONPROFITS AND 20 FOR-PROFITS? AND COMPANIES ARE APPLYING. THERE WAS A 21 FEAR THEY WOULDN'T, BUT IN BOTH ROUNDS YOU'VE GOTTEN 22 SUBSTANTIAL NUMBER OF COMPANIES APPLYING FOR GRANTS OR 23 SAYING THAT THEY WOULD. BUT YOU PUT AN RFA OUT FOR THE 24 25 SCIENCE, AND THEN YOU JUDGE IT ON THE SCIENCE, AND THEN

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SAY DO YOU WANT TO GO GRANT OR DO YOU WANT TO GO LOAN, OR 1 DO YOU LINE THEM UP FIRST, OR DO YOU ONLY DO RFA'S FOR 2 LOANS FOR SPECIFIC PROJECTS? THOSE ARE ALL ISSUES I 3 4 THINK YOU NEED TO WRESTLE WITH. 5 CHAIRMAN ROTH: THANKS. ANYBODY WANT TO MAKE SOME QUICK RESPONSES THERE IN TERMS OF --6 7 MR. BONFIGLIO: FROM MY PERSPECTIVE, I HAD A BRIEF DISCUSSION WITH ED ABOUT THIS AT THE BREAK, MONEY 8 9 REDUCES RISKS IN BIOTECH COMPANIES. IF THERE'S AN ADDITIONAL SOURCE OF FINANCING AVAILABLE WITH THE MONEY I 10 COULD PUT IN, IT HELPS ME REDUCE THE RISK, IT HELPS ME 11 MITIGATE THE RISK, AND MAKES THE TRANSACTION MORE 12 13 ATTRACTIVE. SO IF YOU CAN PUT THIS IN PLACE IN A WAY 14 THAT PROVIDES INCENTIVES INDEPENDENT OF THE GRANT 15 PROGRAM, IT'S A VERY POSITIVE THING. AND IT ALSO, FROM 16 MY PERSPECTIVE, I WOULD LOVE TO SEE MONEY COME BACK IN TO CIRM BECAUSE I WOULD LIKE TO SEE THE ORGANIZATION HAVE 17 THE ABILITY TO FUND MORE COMPANIES. I WANT MORE SHOTS ON 18 19 GOAL. I THINK OUR CHANCE AS A SOCIETY OF ADVANCING 20 THERAPIES TO THE BEDSIDE REQUIRES THAT WE HAVE LOTS OF 21 COMPANIES IN PLAY. THE MORE MONEY THAT YOU HAVE 22

23 AVAI LABLE, THE MORE FINANCING ALTERNATIVES THAT ARE

24 AVAILABLE, THE GREATER THE CHANCE YOU ARE GOING TO GET AN

25 EFFECTIVE THERAPY OUT INTO THE MARKET. SO FOR ME THIS IS

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1 A GREAT THING.

2 CHAIRMAN ROTH: JUST TO SUMMARIZE, THE IDEA HERE IS REALLY TO PUT TOGETHER A POLICY THAT SAYS HERE'S 3 4 WHAT YOU ARE GOING TO BUY INTO UNDER THE LOAN PROGRAM. 5 THE FLEXIBILITY OF CIRM AND ICOC TO DETERMINE, THEY MAY PUT, AS BOB SAID, AN OPPORTUNITY WHERE YOU CAN APPLY FOR 6 LOANS OR GRANTS. YOU CHOOSE UP FRONT. THERE'S 20 7 MILLION AVAILABLE IN GRANTS AND THERE'S 70 AVAILABLE IN 8 9 LOANS, SO CHOOSE WHICH SIDE YOU WANT TO GO. THERE'S GOING TO BE MORE MONEY IN LOANS, OR YOU CAN PUT SOMETHING 10 OUT THAT'S ALL LOANS, OR YOU COULD PUT SOMETHING OUT 11 THAT'S COMPLETELY FLEXIBLE. THE IDEA THAT THEY WOULD 12 13 HAVE, ICOC, CIRM, WILL HAVE THAT FLEXIBILITY IS BUILT 14 INTO THE ASSUMPTIONS THAT WE'RE DOING HERE. WE DON'T 15 KNOW WHAT THAT'S GOING TO BE. BUT IF THEY DO TAKE A 16 LOAN, THEN WE WANT THEM TO FOLLOW THIS POLICY.

17 MR. REED: DON REED. MARK TWAIN FUNDED THE FIRST TYPEWRITER, AND IT WAS AN ADVANCEMENT OF SCIENCE 18 AND IT WAS VERY HELPFUL, BUT THE PRODUCT ITSELF DID NOT 19 WORK OUT. HE LOST EVERYTHING. WHAT IF A MOM-AND-POP 20 COMPANY COMES UP WITH A GOOD IDEA, IF AN ORGANIZATION 21 JUST HAD A SMALL BREAKTHROUGH, IT'S A WAY TO SEPARATE 22 STEM CELLS BY THE ELECTRICAL POTENTIAL OF EACH CELL. 23 NOW, IT MAY BE A GREAT ADVANCE OF SCIENCE, BUT IT MAY NOT 24 25 WORK AS A PRODUCT. WHAT IF A COMPANY BORROWS THE MONEY

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AND THEY TRY THEIR BEST, BUT THEY FAIL? DOES THAT MEAN
 THAT THEY LOST EVERYTHING AND IT'S THE LUCK OF THE DRAW?
 IT'S BORROW FROM A BANK AND YOU LOSE YOUR HOUSE? IS THAT
 HOW IT WORKS?

DR. PENHOET: YEAH.

5

25

CHAIRMAN ROTH: I DON'T THINK YOU LOSE YOUR 6 HOUSE BECAUSE THE LOAN HERE, AGAIN, IS SUBORDINATED; AND 7 IF THE COMPANY GOES OUT OF BUSINESS, THE LOAN IS GOING TO 8 9 BE WRITTEN OFF. BOB MADE THE COMMENT THAT IF WE LOOKED AT SOMETHING LIKE 30 PERCENT OF ALL THE LOANS WE MAKE IN 10 THIS SPACE WILL NEVER GET REPAID, BUT 70 PERCENT WOULD 11 12 AND THERE'S A RETURN ON THOSE AT SOME LEVEL, THAT'S THE 13 IDEA THAT WE WOULD TRY TO RECYCLE THE MONEY.

MR. REED: BUT I'M SAYING WHAT IF THERE WAS AN
ADVANCEMENT OF THE SCIENCE, ALTHOUGH THE PRODUCT ITSELF
DID NOT WORK OUT. WOULD THAT --

17 MR. KLEIN: WELL, THE STATE BENEFITS. WHAT YOU ARE SAYING IS EVEN IF THE LOAN DOESN'T GET REPAID, WE MAY 18 GET KNOWLEDGE OUT OF THE RESEARCH THAT REALLY ADVANCES 19 THERAPEUTICS, WHICH IS A BENEFIT TO ALL CALIFORNIANS. 20 S0 THERE'S CLEARLY THE POSSIBILITY, EVEN IN EXPERIMENTS THAT 21 FAIL, THAT KNOWLEDGE CAN BE VERY HELPFUL IN DIRECTING 22 FUTURE RESEARCH. SO CALIFORNIA BENEFITS EVEN IF THE LOAN 23 ISN'T REPAID. 24

THE ANSWER, THOUGH, TO THE PRIOR QUESTIONS,

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THERE WERE SEVERAL QUESTIONS JOHN SIMPSON POSED, THE 1 INITIATIVE IS WRITTEN WITH TAX-EXEMPT AND TAXABLE 2 AUTHORITY FOR A REASON, FOR A NUMBER OF REASONS. 3 THIS IS ONE OF THOSE REASONS WHERE TAXABLE BONDS WOULD BE USED. 4 5 AND TAXABLE BONDS, DEPENDING UPON RELATIONSHIP OF MUNIS TO TREASURIES, THAT RANGE, MUNICIPALS OVER BONDS CAN BE 6 FAIRLY VARIABLE. BUT LOOKING AT A LONG-TERM STUDY, THE 7 TREASURER'S OFFICE WAS LOOKING AT THIS BEING A HALF OR 8 9 THREE-QUARTERS OF A PERCENT OVER TIME. AND HALF OR THREE-OUARTERS OF A PERCENT IN BORROWING COST AS COMPARED 10 TO SEVEN YEARS LATER HAVING INTEREST SUFFICIENT TO COVER 11 12 AT LEAST YOUR CAPITAL LOSS, SO YOU'RE GETTING A HUNDRED 13 PERCENT OF THE FUNDS BACK, IS A VERY SMALL COST 14 DIFFERENTIAL IN ORDER TO RECOVER A VERY LARGE AMOUNT OF 15 PROGRAM CAPITAL THAT CAN GO OUT AND EXTEND THE SCIENCE. 16 I THINK A VERY IMPORTANT POINT WAS MADE BY GREG WHEN HE SAID LOOK AT IT ON A PORTFOLIO BASIS. 17 THE BROADER WE CAN EXPAND THIS PORTFOLIO, THE GREATER OUR 18 POTENTIAL FOR REALLY HAVING THERAPEUTIC SUCCESS. IF YOU 19 LOOK AT THE NIH PORTFOLIO, YOU DON'T KNOW WHICH GRANT'S 20 GOING TO BE SUCCESSFUL; BUT IF WE HAVE MORE MONEY AND CAN 21 RECYCLE THAT MONEY AND, THEREFORE, BROADEN THE SCOPE OF 22 THERAPIES THAT WE TRY AND ADVANCE, WE HAVE A MUCH GREATER 23 POSSIBILITY OF YIELD TO SOCIETY. 24 25 DR. PENHOET: I WOULD POINT OUT, THOUGH, THAT

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1	PROJECT FINANCING IS MORE MUCH RISKY THAN COMPANY
2	FINANCING. THERE ARE SEVERAL OF US AROUND THIS TABLE WHO
3	ARE VENTURE CAPITALISTS. AND I WOULD SAY AT LEAST HALF
4	THE COMPANIES WE INVEST IN DON'T MAKE A SUCCESS OF THEIR
5	FIRST PROJECT, BUT SOME OTHER PROJECT EMERGES WITH A GOOD
6	MANAGEMENT TEAM. SO PROJECT FINANCING IS QUITE A BIT
7	MORE RISKY.
8	CHAIRMAN ROTH: ED, THE SAME THING WOULD APPLY.
9	I MEAN THE COMPANY MAY HAVE MULTIPLE THINGS GOING ON.
10	THEY STILL AGREE TO REPAY THIS LOAN REGARDLESS.
11	DR. LOVE: DO THESE COVENANTS ONLY APPLY TO
12	WHAT WE FUNDED IN THE PROJECT? IN OTHER WORDS, IF THE
13	COMPANY TAKES A LOAN, THE PROJECT FAILS, THAT TECHNOLOGY
14	IS GONE, BUT YOU DO SOMETHING TOTALLY DIFFERENT, NONE OF
15	THIS APPLIES?
16	CHAIRMAN ROTH: GREAT POINT.
17	MR. KLEIN: VERY IMPORTANT POINT.
18	MR. CALDWELL: MY NAME IS BILL CALDWELL, AND
19	I'M THE CHAIRMAN AND CEO OF ADVANCED CELL TECHNOLOGY. TO
20	A QUESTION HERE, I THINK A LOT OF COMPANIES ARE LOOKING
21	AT THIS PROGRAM RIGHT NOW AND ASSESSING IT.
22	I HAD A COUPLE QUESTIONS, AND I HAVE A FAIRLY
23	LARGE CONFUSION. MY BACKGROUND, I WAS AN INVESTMENT
24	BANKER AT ONE POINT. SO I HAVE THAT AT LEAST IN THE '80S
25	WHEN WE WERE GOING THROUGH SOME OTHER TECHNOLOGY CHANGES
	135

1 IN THE BIOTECH AREA.

LET ME MAKE THE POINT OF THE CONFUSION, AND I 2 THINK ED RAISED IT. AND THAT IS, IT WOULD SEEM THAT YOU 3 ARE TALKING ABOUT LOANS ALL ACROSS THE BOARD. YOU' RE 4 5 TALKING ABOUT LOANS TO NONPROFITS. YOU' RE TALKING ABOUT LOANS IN THE PROFIT CONTEXT FOR NEWLY FORMED COMPANIES, 6 FOR COMPANIES THAT ARE IN SOME SORT OF WHAT GREG 7 DESCRIBED AS THE VALLEY OF DEATH OR SOMETHING ALONG THAT 8 9 LINE, BUT THERE'S A TRANSITIONAL STAGE WHERE YOU MAYBE COME OUT OF THE VALLEY OF DEATH, BUT YOU' RE TRYING TO DO 10 YOUR PRECLINICALS. AND WITH THIS FDA, BY THE WAY, IT 11 12 TAKES A LONG TIME AND A LOT OF MONEY TO GET JUST OUT OF 13 THE SCIENCE, BUT INTO THE PRECLINICAL SPACE. THEN YOU'VE 14 GOT THE PHASE OF PHASE I WHERE A LOT OF THE VENTURE 15 CAPITALISTS STILL DON'T PLAY. THEN YOU GET INTO THE 16 PHASE II WHERE THEY WILL PLAY, AND THEN YOU GET INTO WHERE MAYBE BIG PHARMA AND SOME OF THE OTHERS WILL PLAY. 17 AND ALL ALONG THAT ROAD THERE'S NEED FOR CAPITAL BY 18 19 COMPANIES.

20 SO THE QUESTION I HAVE, I GUESS THE OBSERVATION 21 I HAVE IS I THINK YOU'RE GOING TO HAVE TO DIVIDE YOUR 22 PORTFOLIO INTO DIFFERENT STAGES. YOU'RE GOING TO HAVE TO 23 DIVIDE YOUR PORTFOLIO INTO A NONPROFIT LOAN CATEGORY, AN 24 EARLY STAGE CATEGORY, A TRANSLATIONAL STAGE CATEGORY, AND 25 THEN A CLINICAL CATEGORY. AND IN EACH STAGE IT WILL BE

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DIFFERENT. FOR EXAMPLE, I THINK THE POINT THAT WAS MADE
EARLIER, WHEN YOU START FUNDING INCUBATING COMPANIES,
YOU'RE BASICALLY SAYING IT'S A GRANT OR IT'S AN EQUITY
PIECE. YOU CAN CALL IT WHAT YOU WANT. YOU CAN CALL IT A
LOAN. BUT, GREG, IF YOU BELIEVE IN WHAT GREG HAS TOLD
YOU, MOST OF THESE THINGS WON'T SUCCEED AT THAT EARLY
STAGE.

SO MOST OF THOSE KINDS OF LOANS ARE GOING TO 8 HAVE HIGH RISK, AND YOU ARE GOING TO HAVE TO HAVE SOME 9 ASSOCIATION WITH IT. IF YOU ARE FUNDING A CLINICAL 10 PROGRAM WHERE THERE IS A NEED, THERE'S GOING TO BE A 11 12 RELATIVELY SHORTER TIMEFRAME THAT YOU'LL BE ABLE TO 13 DETERMINE WHETHER THAT PROGRAM IS GOING TO BE SUCCESSFUL, 14 AND THERE SHOULD BE MORE REQUIREMENTS RELATED TO THAT. 15 AND, OH, BY THE WAY, TO THE POINT THAT WAS

16 MADE, YES, CLINICAL PROGRAMS SOMETIMES ARE ONE SITE AT THE FIRST PHASE I TRIAL, BUT PHASE II HAS MULTIPLE SITES 17 THROUGHOUT THE COUNTRY. YOU SHOULD DEMAND THAT A SITE, 18 IF YOU ARE LOANING, A SITE SHOULD BE HERE IN CALIFORNIA. 19 WE'RE IN A PHASE II. WE ARE LOOKING AT TWO SITES HERE IN 20 CALIFORNIA. I'M INTERESTED IN THE LOAN FOR FUNDING THAT 21 PROGRAM DOWN ONE OF THOSE TWO SITES. ALL I CAN TELL YOU 22 IS THAT I THINK YOU' RE GOING TO NEED TO STAGE THIS, AND 23 AT EACH STAGE THERE'S GOING TO BE A DIFFERENT KIND OF 24 25 CRITERIA THAT YOU'RE GOING TO WANT TO EMPLOY.

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1	THE LAST THING THAT I WANTED TO SAY, AND THIS
2	IS THE REASON I WAS HERE AT THE BEGINNING, BECAUSE ED'S
3	POINT WAS SOMETHING THAT REALLY CONFUSED ME BECAUSE IF
4	YOU FUND A PROJECT UNDER THE GRANT CONCEPT, YOU'RE
5	FUNDING AN INVESTIGATOR. IF THAT INVESTIGATOR LEAVES TO
6	GO TO ANOTHER SITUATION, EITHER THE GRANT GOES AND YOU
7	HAVE AN APPROVAL PROCESS, OR SOMETHING HAPPENS AND IT
8	STOPS AND YOU TERMINATE IT. WITH A COMPANY, IF YOU FUND
9	AN INVESTIGATOR AND THAT INVESTIGATOR GOES SOMEWHERE
10	ELSE, YOU'VE PLACED A HUGE AMOUNT OF, IF YOU WILL SAY,
11	POWER OR SOMETHING TO THAT INDIVIDUAL PERSON. THAT'S
12	UNACCEPTABLE. I CAN'T I CAN'T DO YOUR GRANTS OR YOUR
13	LOAN PROCESS IF YOU ARE GOING TO EMPOWER MY EMPLOYEE TO
14	BE ABLE TO WALK AWAY WITH THE GRANT. AND THAT'S A
15	PROBLEM. SO I THINK YOU NEED TO THINK THROUGH SOME OF
16	THAT AS WELL.
17	CHAIRMAN ROTH: BILL, JUST INITIALLY, THE
18	CONCEPT IS THE LOAN IN THIS CASE GOES TO THE COMPANY, NOT
19	TO THE INVESTIGATOR.
20	MR. CALDWELL: THERE STILL WAS A CONFUSION. I
21	WAS CONFUSED, BUT I NOW UNDERSTAND. THAT WOULD BE A REAL
22	PROBLEM FOR A COMPANY.
23	CHAIRMAN ROTH: IN TERMS OF THE SCOPE THAT
24	WE'RE TALKING ABOUT, WE WOULD NOT EXPECT THAT WE WOULD
25	HAVE AN ALL ENCOMPASSING RFA FOR LOANS, THAT WE WOULD, IN
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1	FACT, TRY TO FIND THE MOST URGENT GAPS IN FUNDING, AND
2	THAT WILL CHANGE OVER TIME, AND GET THE RFA'S GOING
3	THERE. SO THE INPUT TO THE CIRM STAFF ON WHERE ARE THE
4	GAPS IS SOMETHING THAT WE'LL RELY ON INDUSTRY, THE
5	VENTURE COMMUNITY, AND OTHERS TO HELP US DEFINE.
6	MR. CALDWELL: DUANE, AS YOU KNOW, IN LOANS
7	THAT YOU GET, FOR EXAMPLE, AT THE NIH, THEY'RE PHASED.
8	YOU GET A FIRST PHASE, THEN YOU GET THE SECOND PHASE,
9	WHICH IS LARGER, AND THEN YOU GET THE THIRD PHASE. I
10	ASSUME OVER TIME THAT'S WHAT YOU ARE GOING TO BE DOING
11	HERE FOR THE GRANT SIDE OF IT.
12	CHAIRMAN ROTH: LOAN SIDE OF IT TOO.
13	MR. CALDWELL: THE GRANT. ALL RIGHT. BUT FOR
14	THE GRANT SIDE, THAT'S THE KIND OF CONCEPT THAT YOU HAVE.
15	THE LOAN, TO ME, IS A DIFFERENT KIND OF BALL GAME. IT
16	SHOULD BE FUNDED AT A SPECIFIC STAGE FOR THE COMPANY TO
17	ADDRESS THAT COMPANY'S TRANSITION INTO ANOTHER STAGE.
18	RIGHT NOW MOST OF THE LOANS THAT YOU SEE IN THIS INDUSTRY
19	ARE GOING FOR MOST OF THE GRANTS ARE GOING FOR BASIC
20	SCIENCE. AND THAT'S GREAT. BUT I CAN GO TO
21	MASSACHUSETTS WHERE WE HAVE OPERATIONS, OR I CAN GO DOWN
22	AND COLLABORATE IN TEXAS WHERE WE HAVE DONE, OR WE CAN BE
23	HERE IN CALIFORNIA. WHICH, BY THE WAY, WHEN I BECAME CEO
24	IN JANUARY OF '05, I MOVED THE COMPANY HEADQUARTERS TO
25	THE STATE TO TAKE ADVANTAGE OF THE PROGRAM. AND WE'RE
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1	STILL WAITING. AND I'M STILL HOPEFUL THAT WE'RE GOING TO
2	BE ABLE TO PARTICIPATE IN THIS.
3	BUT MY POINT IS IS THAT AS I LOOK AT THOSE
4	VARIOUS STATES AND THEIR PROGRAMS AND WHAT THEY'RE
5	MANDATING, I DON'T SEE THAT I HAVE TO HAVE I HAVE
6	SECURITY RELATED TO IT. THE PROGRAM THAT YOU'RE RELATING
7	HERE IS SOMETHING THAT'S VERY ATTRACTIVE TO US, BUT
8	NOBODY IS FUNDING THE TRANSLATION AT THIS STAGE. AND
9	THAT'S WHERE THE MONEY NEEDS TO GO. TRANSLATING THE
10	SCIENCE INTO THE CLINIC, THAT'S WHAT WE NEED.
11	CHAIRMAN ROTH: SO THAT IS WHAT WE HOPE TO DO
12	IN FEBRUARY IS REALLY ZERO IN ON WHERE THE GAPS ARE TODAY
13	AND RECOGNIZE THAT THIS WILL CHANGE OVER THE TEN YEARS OR
14	15 YEARS WE'RE AROUND. SO HAVING REALLY CONSTANT
15	INTERACTION WITH INDUSTRY ABOUT WHERE THE GAPS ARE
16	BECAUSE THEY WILL CHANGE AS THINGS ADVANCE. WE NEED TO
17	BE WITH THOSE.
18	MS. GHIO: DUANE, THIS IS TERRIE GHIO
19	REPRESENTING INTROVITOGEN. CAN I MAKE A COMMENT?
20	CHAIRMAN ROTH: YES. GO AHEAD, TERRIE.
21	MS. GHIO: WELL, FIRST OFF, I WANTED TO LET THE
22	GROUP KNOW THAT INVITROGEN HAS A DESIRE TO PARTICIPATE IN
23	THIS ONLINE DISCUSSION. UNFORTUNATELY, GIVEN THE FACT
24	THAT THE DOCUMENT THAT WE'RE REVIEWING TODAY WAS ONLY
25	MADE AVAILABLE YESTERDAY MORNING, THERE WAS VERY LITTLE
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TIME FOR US TO PREPARE AND UNDERSTAND SOME OF THE GOALS. 1 AND SO FOR FEBRUARY'S MEETING, ACCESS, EARLIER ACCESS, TO 2 THE DOCUMENTS FOR THE STAKEHOLDERS WOULD BE REALLY 3 4 APPRECIATED. CHAIRMAN ROTH: TERRIE, IT'S GOING TO BE THE 5 SAME DOCUMENT, SO YOU HAVE IT. 6 7 MS. GHIO: AND THEN AS FAR AS SCHEDULING, SCHEDULE IT AS SOON AS POSSIBLE. AND WE TO THANK YOU FOR 8 9 AGREEING TO SCHEDULE IT DOWN HERE IN SAN DIEGO SO THAT SOME OF OUR SENIOR MANAGEMENT AND SCIENTISTS MAY 10 PARTI CI PATE. 11 12 BUT I HAVE ONE COMMENT ON THE CONTENT OF 13 TODAY'S DISCUSSION. AND THAT IS, ONE OF THE THINGS I 14 WANT TO MAKE SURE IS MOST OF THE DISCUSSION UP TO NOW HAS 15 FOCUSED AROUND THERAPEUTIC PRODUCTS. AND WANTED TO MAKE 16 SURE THAT LOANS TO COMPANIES FOR THE DEVELOPMENT OF CRITICAL RESEARCH TOOLS ARE NOT PERCEIVED TO BE EXCLUDED 17 BY MAKING THE TERMS OR MILESTONES TO THERAPEUTIC PRODUCTS 18 ONLY. AND THAT'S JUST ONE COMMENT. I THINK WE'LL SPEND 19 MORE TIME ELABORATING ON THAT IN THE FEBRUARY MEETING. 20 AND THEN IN ADDITION, TO ANSWER MR. SIMPSON'S 21 QUESTION, YES. YES. AS WE FURTHER DEVELOP THIS PROGRAM. 22 23 THERE IS TRULY THE POTENTIAL THAT BIOTECH INDUSTRY MAY INDEED DO SOMETHING HERE IN CALIFORNIA THAT WOULD NOT 24 25 OTHERWISE BE DONE.

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CHAIRMAN ROTH: THANK YOU. BOB. 1 MR. KLEIN: THE COMMENT RELATED TO THE PRIOR 2 SPEAKER IS THAT WE MAY FROM THE INPUT OF INDUSTRY AND THE 3 INPUT IN OUR INTERFACE WITH LEGISLATORS AND OTHER CIVIC 4 5 LEADERS FIND THAT ONE OF THE BEST PLACES, ONE OF THE BEST PLACES WE CAN START IS WHERE CAN WE HAVE THE BIGGEST 6 IMPACT BECAUSE THE PUBLIC NEEDS TO SEE IMPACT ACTUALLY 7 MOVING THERAPEUTICS. SO WE LOOK FOR THESE CRITICAL GAPS: 8 9 BUT IF SOME OF THE FUNDS GO TO THAT AREA WHERE WE'RE REALLY IN THE TRANSLATIONAL STAGE, TRYING TO GET TO STAGE 10 ONE. THAT WE COULD HAVE IN A FOUR- OR FIVE-YEAR PERIOD 11 12 SOME REAL TANGIBLE IMPACT FROM THAT PORTFOLIO, IT WOULD 13 BE VERY VALUABLE FEEDBACK TO THE STATE SO THAT THEY CAN 14 UNDERSTAND THAT WE'RE MOVING THERAPIES THAT ARE REAL. 15 AND THAT INCLUDES, WHILE I USE THE WORD 16 "THERAPIES, " DIAGNOSTIC TOOLS. IT MAY BE THAT SOME OF YOUR LOWER RISK EARLY RETURNS ARE IN TOXICITY TESTING AS 17 A DIAGNOSTIC. AND THAT WE CAN CONTRIBUTE IN MOVING 18 SOMETHING THERE, THAT MIGHT BE QUITE VALUABLE IN MOVING 19 THE REST OF THE RESEARCH AS A LEAD-TIME FACTOR. BUT YOU 20 CAN HAVE A MIXED PORTFOLIO THAT HAS SOME LATER STAGE 21 DEVELOPMENT THAT MAY BE LOWER RISK AND SOME EARLY STAGE 22 THAT'S VERY HIGH RISK. 23 CHAIRMAN ROTH: OKAY. WE HAVE ONE MORE PUBLIC 24 25 COMMENT AND THEN WE'RE GOING TO CLOSE BECAUSE WE'VE KEPT

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OUR PANELISTS 30 MINUTES BEYOND OUR PROMISED TIME. 1 MS. KHAN: MY NAME IS KATIE KHAN, AND I RUN AN 2 INDEPENDENT CONSULTING BUSINESS. I WORK A LOT WITH SMALL 3 BIOTECH START-UPS AND MEDIUM SIZE AND LARGE BIOTECHS. 4 AND THERE IS DEFINITELY INTEREST IN APPLYING FOR THESE 5 LOANS FROM ALL DIFFERENT SIZES OF ORGANIZATIONS. 6 SO MY QUESTION IS AS, YOU KNOW, ME AND MY 7 CLIENTS ARE LOOKING THROUGH THIS DOCUMENT THAT YOU 8 9 DISTRIBUTED. THE QUESTION IS IS THERE REALLY A ONE SIZE FITS ALL? IT SEEMS LIKE THERE MIGHT NEED TO BE A TIERED 10 APPROACH. FOR EXAMPLE, AND SOME OF THIS I THINK JON 11 12 BROUGHT SOME OF THIS UP, SO SOME OF THE ELIGIBILITY REQUIREMENTS, YOU KNOW, THE DUNS AND BRADSTREET ANALYSIS 13 14 OF A REALLY SMALL BIOTECH, THAT'S NOT RELEVANT, RIGHT. 15 SO I GUESS THE QUESTION IS, NO. 1, IS IT GOING 16 TO BE TARGETED? DO YOU IMAGINE THAT YOUR INITIAL REA'S OR YOUR INITIAL LOAN PROGRAM WILL BE TARGETED TO A 17 SPECIFIC SIZE COMPANY OR BUSINESS? AND IF THAT'S THE 18 CASE, THEN, YOU KNOW, DO YOU PLAN ON TARGETING THE TERMS 19 AND CONDITIONS TO THAT TYPE OF BUSINESS? SO THAT'S THE 20 FIRST QUESTION. 21 SECOND OUESTION IS JUST MORE OF A COMMENT. IT 22 CAME UP WHEN YOU WERE MENTIONING THE PARTNERSHIPS. 23 AND ALSO GLEN, HE'S OUT OF THE ROOM NOW, BUT HE HAD MENTIONED 24 25 THAT, FOR EXAMPLE, THE LITIGATION. THERE'S A LOT OF 143

1	PRIVILEGED INFORMATION THAT COMPANIES ARE NOT GOING TO
2	WANT TO GIVE TO REVIEWERS. I WONDER IF IN A PARTNERSHIP
3	SITUATION, THAT WOULD ALSO BE A SCENARIO, LIKELY
4	SCENARIO, WHERE, YOU KNOW, IF A VENTURE CAPITAL FIRM OR A
5	BANK IS PARTNERING AND YOU'RE ASKING THESE SMALL START-UP
6	COMPANIES, YOU KNOW, TO GIVE UP BASICALLY ALL OF THEIR
7	PROPRIETARY INFORMATION TO A BANK PARTNER OR A VENTURE
8	CAPITAL PARTNER THAT MIGHT BE COMPETING, SO I GUESS
9	THAT'S SORT OF JUST A QUESTION. YOU KNOW, WHAT
10	SAFEGUARDS MIGHT YOU PUT IN PLACE TO PROTECT AGAINST THAT
11	TYPE OF SCENARIO?
12	CHAIRMAN ROTH: I'LL TAKE A QUICK CRACK AT YOUR
13	FIRST QUESTION IN TERMS OF TARGETED. I THINK THAT'S,
14	AGAIN, BACK TO THE RFA PROCESS. AND TO SET THAT CRITERIA
15	IS REALLY DONE BY CIRM STAFF. RECOMMENDATION IS MADE,
16	THEN, TO THE ICOC BEFORE AN RFA WOULD GO OUT. SO WE'RE
17	VERY INTERESTED IN HEARING FROM THE PUBLIC AT LARGE ABOUT
18	WHERE THESE FUNDING GAPS ARE AND WHERE THEY'RE MOST
19	ACUTE.
20	THE SECOND PART OF THAT QUESTION, MAYBE ONE OF
21	YOU GUYS WOULD LIKE TO TAKE A SHOT AT THAT.
22	MR. BONFIGLIO: CARL MADE THIS POINT EARLIER.
23	I THINK YOU' VE GOT SERIOUS PRIVILEGE ISSUES IF YOU' RE
24	LOOKING AT LEGAL ANALYSIS AROUND INTELLECTUAL PROPERTY.
25	ALL OF US DO THAT KIND OF ANALYSIS BEFORE WE MAKE AN
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1	INVESTMENT. YOU'VE GOT TO DETERMINE WHETHER THERE ARE
2	BARRIERS TO ENTRY. YOU' VE GOT TO DETERMINE WHETHER
3	YOU'RE GOING TO INFRINGE. SO YOU NEED A FREEDOM TO
4	OPERATE OPINION, AND YOU NEED TO HAVE SOME ANALYSIS OF
5	THE BARRIERS TO ENTRY THAT YOU CAN PRESENT ONCE YOU' VE
6	INVESTED THE CAPITAL AND PUT YOUR PRODUCT IN THE MARKET.
7	BUT THE WAY YOU HANDLE THAT IS BY HAVING COMMUNICATIONS
8	BETWEEN COUNSEL. SO THE CIRM NEEDS TO HAVE A LEGAL STAFF
9	THAT MY LEGAL STAFF COULD COMMUNICATE TO SO THAT WE CAN
10	PROTECT THE PRIVILEGE.
11	I WOULD NEVER SHARE THAT INFORMATION
12	DOWNSTREAM. IT WOULD, FRANKLY, BREACH MY FIDUCIARY
13	OBLIGATIONS TO THE COMPANY IF I DID IT BECAUSE IF THEY
14	GET IN LITIGATION, I'VE NOW EXPOSED THE THINGS. YOU CAN
15	HANDLE IT THROUGH LAWYER-TO-LAWYER COMMUNICATIONS.
16	MS. KHAN: JUST SORT OF A FOLLOW-ON TO THAT. I
17	THINK IN THE DOCUMENT, MY COMPUTER IS RUNNING OUT OF
18	BATTERIES, BUT IN THE DOCUMENT THERE'S AN ICOC REVIEW
19	WHERE IT WAS THE IDEA, I THINK THE CONCEPT WAS TO SORT
20	OF TEASE APART SOMETHING THAT MIGHT BE PROPRIETARY,
21	SOMETHING THAT'S NOT PROPRIETARY. I DON'T JUST KNOW IF
22	THAT' S PRACTI CAL.
23	CHAIRMAN ROTH: I DON'T THINK THAT THAT'S
24	INTENDED IN THERE.
25	MR. KLEIN: TWO THINGS. ONE, IT WON'T BE CIRM
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LEGAL STAFF BECAUSE THIS IS A BROAD SPECTRUM OF
 INTELLECTUAL PROPERTY. SO JUST AS MORRISON AND FORESTER
 REPRESENTS UNIVERSITY OF CALIFORNIA, WE WOULD GO TO THE
 SPECIALIZED COUNSEL AS AN EXTERNAL CONTRACT WHO IS EXPERT
 IN THAT PARTICULAR FIELD WHO WOULD THEN TALK TO THE
 COUNSEL FOR THE COMPANY. SO IT WOULD BE PRIVILEGED
 COMMUNICATION.

WHAT WAS YOUR SECOND POINT? ON THE PROPRIETARY 8 NATURE. IN OUR SCIENTIFIC PROCESS, IN THE GRANT PROCESS, 9 WE HAVE PROPRIETARY INFORMATION CONSTANTLY IN EVERY GRANT 10 CYCLE. AND SPECIFICALLY THE STATUTE GIVES US THE ABILITY 11 12 TO PROTECT THAT PROPRIETARY INFORMATION. SO IT IS 13 HANDLED -- HOPEFULLY, AS THIS PROGRAM IS LAUNCHED, THERE 14 WILL BE AN ESTABLISHED REPUTATION OF THE ORGANIZATION OF 15 HAVING PROTECTED PROPRIETARY INFORMATION QUITE 16 SUCCESSFULLY AND SERIOUSLY, SO THERE WILL BE A CONFIDENCE LEVEL THAT IT WILL REMAIN UNDER THE COMPLETE CONTROL OF 17 THE ENTITY THAT'S ADVANCING THE PROPOSAL. 18 19 ON THE CREDIT SIDE, IF YOU'VE GOT TWO LEADS TO THE PROPOSAL, TWO INDIVIDUALS, YOU MIGHT DO A CREDIT 20 REPORT ON THEM INDIVIDUALLY BECAUSE YOU DON'T HAVE ONE ON 21 THE COMPANY AT ALL. SO THE INTENT IS TO GET TO THE 22 APPLICABLE LEVEL WITH THE RELEVANT DATA, NOT A 23

24 ONE-SIZE-FITS-ALL APPROACH.

25 CHAIRMAN ROTH: OKAY. I WANT TO FIRST ANNOUNCE 146

1	THAT THE POWERPOINT THAT GREG STARTED THE MORNING OFF AT
2	11 O'CLOCK WITH IS NOW ON THE CIRM WEBSITE. THAT'S
3	TECHNOLOGY AT WORK, SO YOU CAN GO THERE.
4	MR. BONFIGLIO: CAN I ASK THAT YOU PUT THAT UP
5	IN PDF FORMAT? I REALLY IF WE COULD AMEND THAT TO LET
6	ME PUT IT IN A PDF AND GET IT TO YOU. I REALLY DON'T
7	WANT IT UP THERE IN A POWERPOINT FORMAT BECAUSE PEOPLE
8	WILL COPY, CHANGE IT, AND THEN IT COMES BACK AS MY WORK,
9	AND IT'S NOT MY WORK.
10	CHAIRMAN ROTH: WE'LL MAKE SURE IT GOES PDF.
11	MR. BONFIGLIO: THANK YOU. SO PLEASE TAKE IT
12	DOWN RIGHT NOW AND LET ME GIVE YOU A PDF FILE.
13	CHAIRMAN ROTH: SECOND, I WANT ON BEHALF OF THE
14	COMMITTEE JUST TO THANK EACH AND EVERY ONE OF YOU FOR
15	INVALUABLE COMMENTS TODAY. THEY WERE JUST TERRIFIC AND
16	HELPED US REALLY START TO CRYSTALLIZE WHAT THIS PROGRAM
17	MIGHT LOOK LIKE. SO THANK YOU ALL.
18	(APPLAUSE.)
19	DR. TROUNSON: I THANK YOU AND THE PANELISTS,
20	THE COMMITTEE, AND THE PUBLIC FOR A VERY INFORMATIVE
21	SESSION. I'VE COME A LONG WAY. I HAVE BEEN INVOLVED
22	WITH COMMERCIALIZATION OF COMPANIES IN THE SPACE, SO I
23	JUST THOUGHT THE CONVERSATION AND THE QUESTIONS WERE
24	TERRIFIC AND VERY, VERY HELPFUL FOR US IN MANAGEMENT.
25	AND SO IT'S A GREAT PROCESS. THANKS FOR DOING IT IN THE
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1	WAY YOU DID IT.
2	CHAIRMAN ROTH: SO WE'LL BE RECONVENING IN SAN
3	DIEGO. WE'LL TRY TO GET THAT DATE TO YOU AS SOON AS
4	POSSIBLE. AND THAT WILL BE WITH COMPANIES TO GET THEIR
5	INPUT BEFORE WE GO TO THE ICOC IN MARCH. THANK YOU.
6	(THE MEETING WAS THEN ADJOURNED AT 02:36
7	P.M.)
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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 LOAN 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

> CROWNE PLAZA HOTEL 1177 AI RPORT BOULEVARD BURLI NGAME, CALI FORNI A ON JANUARY 16, 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.

Bith C. Drain

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