WEBVTT
NOTE duration:"01:30:28.8850000"
NOTE language:en-us
NOTE Confidence: 0.843219220638275
00:00:00.000 --> 00:00:02.870 Cancer therapeutics and delivery systems.
NOTE Confidence: 0.843219220638275
00:00:02.870 --> 00:00:05.740 My name is Tim Shannon,
NOTE Confidence: 0.843219220638275
00:00:05.740 --> 00:00:08.680 partner at Canaan Partners venture capital
NOTE Confidence: 0.843219220638275
00:00:08.680 --> 00:00:11.589 firm that’s active in the oncology
NOTE Confidence: 0.843219220638275
00:00:11.589 --> 00:00:14.627 space in the biotech space in general.
NOTE Confidence: 0.843219220638275
00:00:14.630 --> 00:00:17.366 And you would like to thank you all
NOTE Confidence: 0.843219220638275
00:00:17.366 --> 00:00:19.954 for joining us today and what we hope
NOTE Confidence: 0.843219220638275
00:00:19.954 --> 00:00:22.709 will be a really engaging 90 minutes.
NOTE Confidence: 0.843219220638275
00:00:22.710 --> 00:00:25.374 I think you know, for those of us who
NOTE Confidence: 0.843219220638275
00:00:25.374 --> 00:00:27.856 have been involved in in this area,
NOTE Confidence: 0.843219220638275
00:00:27.860 --> 00:00:29.954 you know there’s nothing more exciting
NOTE Confidence: 0.843219220638275
00:00:29.954 --> 00:00:32.114 than to develop a novel cancer
NOTE Confidence: 0.843219220638275
00:00:32.114 --> 00:00:34.214 drug and see it benefit patient.
NOTE Confidence: 0.843219220638275
00:00:34.220 --> 00:00:35.924 It’s incredibly rewarding.
I think in today’s session is some of our speakers present their work. You’ll see how impactful Yale Bend in this sphere, and in particular, Yale Cancer Center and really helping to Harold the great progress that we’ve all seen in Cancer Therapeutics in the last decade. I think Yale on the El Cancer Center recognized that this is really a community effort and requires extensive collaboration networks to make this all work from start to finish. I you know that involves universities, governments,
industry as well as investors in all, playing a role in this very important activity.
So really, the goal of today’s session is really twofold. It’s for Yale really to continue to broaden that network in that community with whom they engage again to try to live out their passions of bringing promising and novel therapeutics to patients. But it’s also importantly for you in the audience to learn about what Yale has to offer and how you might be able to become part of...
this community around the El Cancer Center and share that mission and that passion to do great things.

So you know some of you may have already been involved in Cancer Center. Some of you this may be your first opportunity, but for both of those groups, we certainly hope it’s not the last opportunity in this really catalyzes more engagement with the Cancer Center. Just in terms of some housekeeping issues, you know the audience in general will be muted, so you don’t have to worry about the
noise you’re making in the background, but you know, we really do want this to be interactive, and the chat room will be live and that will be the vehicle with which you know we’d lash, like you to raise questions during the symposium, and particularly for panelists after here with panels, have to say, and your questions can pertain to their comments to there. Your questions can be, you know, really is broad as you like. So again, we would really encourage participation
00:03:01.632 --> 00:03:05.198 via the chat room that will be open
00:03:05.198 --> 00:03:07.650 and we will be monitoring this.
00:03:07.650 --> 00:03:09.828 Finally, this webinar will be recorded.
00:03:09.830 --> 00:03:12.614 I think I just saw a chat room
00:03:12.614 --> 00:03:15.486 question come up in that regard so
00:03:15.486 --> 00:03:18.117 that the webinars being recorded and
00:03:18.117 --> 00:03:20.829 will be available after the session.
00:03:20.830 --> 00:03:22.538 So with that introduction,
00:03:22.538 --> 00:03:26.330 I’d like to welcome our first speaker doctor,
00:03:26.330 --> 00:03:27.186 Charlie Fuchs.
00:03:27.186 --> 00:03:29.326 Doctor Fuchs is the Richard
00:03:29.326 --> 00:03:30.610 and Jonathan Sackler
00:03:30.685 --> 00:03:32.725 professor of medical Oncology
00:03:32.725 --> 00:03:34.765 and professor of chronic
00:03:34.765 --> 00:03:36.400 disease Epidemiology at Yale.
He also is the director of the Yale Cancer Center and Physician and Chief of the Smilow Cancer Hospital.

Charlie. Thanks very much.

Tim, thank you and I want to welcome all of you to our second in this series. Yale engage cancer, which really has been an exciting opportunity for us to reach out to a broad audience. And I want to just say that you know we're obviously engaged now and a global pandemic, which I think has to some extent been at the forefront of our attention and healthcare and drug development. But, you know, as we get past this and we're all looking forward to that point,
we are reminded of the fact.

That in the 21st century, cancer is really the great challenge that faces American medicine. It is the focus of so much work clinically in terms of support from government and philanthropy. And really the focus of investment in drug development. And I think one thing we all share. We are a diverse group on this call from Academia, Pharma, biotech, the investment community where diverse. But I think what we all share
in common is a commitment. To innovating in science and taking those discoveries and moving them into meaningful improvements in the treatment, early detection and prevention of cancer. You know, I’m pleased. As the director of the Yale Cancer Center to be at a place with an extraordinary legacy of Cancer Research. Really over the century in cell biology, genetics, chemical biology, pharmacology, immunobiology among others, and in clinical research. And, you know, as the NCI comprehensive Cancer Center for Connecticut in New England that we.
We carry that responsibility with great pride beyond the great science we really proud of our clinical programs. In fact, the building I sit in now is the Smilow Cancer hospital, which is celebrating its 10th anniversary as a center. Now that provides care to 48% of all newly diagnosed cancer patients in the state of Connecticut and patients well beyond that region. And with that has really been the laboratory of moving. Discovery in the laboratory into
meaningful clinical treatments for cancer.

In fact, one opportunity of great pride.

I wanted to share is that this year, 4 Yale lead clinical trials.

Will have led to new approvals in the oncology space with the FDA.

So not only we committed to great science, but we’re committed to moving that science into the clinic.

Ann into ultimate approval.

Tim has assembled for today’s forum.

Just a panel of rock stars who not only do great science, but actually are committed to moving that science into the clinic.
through their own work and through partnerships by starting companies by working with pharma and biotech. And I think each of their stories are really going to be interesting for us. I also want to particularly thank Josh Blinker, who’s the Chief Executive Officer for locks on Cology for joining our panel, which I think really adds more to the richest of discussion of how you ultimately move drug development from science into ultimate care of patients. You know, one thing we want to do in these forms, and I say this is the second one.
The first one was an immuno oncology and very well received. Is in this forum focused on a key aspect of cancer treatment research? Is really that it be conversational we want interaction not only between our panelists, but with all of you to answer your questions. And more importantly, we want this to be the beginning of a conversation. We hope that this stimulates new partnerships between our colleagues and Yale and you, because ultimately, as Tim indicated, really to make a difference in cancer treatment and Cancer Research. We have to be working together so you know.
00:07:52.190 --> 00:07:53.550 Please feel free to reach out to me to the panelists.

00:07:53.550 --> 00:07:55.630 My colleagues both during this meeting and after will remind you of that because we want to work together in this fight against cancer.

00:07:57.295 --> 00:07:59.284 So Tim, thank you for leading this and I look forward to an exciting forum.

00:08:01.111 --> 00:08:03.138 So the slide you’re seeing now reflects the agenda for today, so the way the session will be setup is so the way the session will be setup is

00:08:03.140 --> 00:08:05.678 So Tim, thank you for leading this and I look forward to an exciting forum.

00:08:12.530 --> 00:08:15.898 Thanks very much Charlie.

00:08:15.900 --> 00:08:18.954 So the slide you’re seeing now reflects the agenda for today, so the way the session will be setup is

00:08:21.660 --> 00:08:25.638 so the way the session will be setup is

00:08:25.638 --> 00:08:29.747 will have brief 5 minute presentations by the presenters you see listed on the slide,
followed by large period of time to
enable discussion and question question
And again, we really encourage
your participation here.
You know our goal here is really to provide
information that you’re looking for,
so your questions are really what
we need to help deliver that to
you in their presentations.
Each of the speakers will
talk a little bit about,
you know what their course
scientific expertise is an in,
particularly what?
What sort of questions they are trying
to answer with the goal again of

ultimate impacting cancer care in their presentations and in part of the comments.

Again, they also talk about.

Some of the ways they have collaborated,

you know,

to accomplish what they’ve accomplished thus far,

but also set up the stage for additional ideas about collaboration with the broader community.

So the chat room will be open throughout.

Please again,

feel free to put your questions into the chat room and will be monitoring
those and bring those forward.
And again all speakers will start
with about a 5 minute presentation
before we move into discussion.
And the question and answer session.
So with that,
I'd like to welcome our first presenter,
and I'm a professor of therapeutic radiology,
the Yale School of Medicine and also Co.
Director of Yale's Brain Tumor Center will go on to the next slide.
So one thing I'd like to start with this Doctor, Fuchs mentioned is.

We have quite a presence along the translation.

ULL research spectrum at yeah, and it’s I’ve been here both as a medical student and is a 9th year into faculty and it’s just a wonderful place to be.

On one end we have disruptive cutting edge science and just just a few examples that you won’t hear about today, but I wanted to highlight.

Jason Crawford and Seth Herzon.

Finding gut bacteria that produce entirely new DNA damaging agents in the middle there.
Mark Saltzman, Dawn Engelmann.

Peter Glaser with nanoparticles and tumor targeting peptides.

At the bottom there we have from Aaron Rings lab,

an entirely new secrete immune checkpoint.

But on the other side of the spectrum we also have we're known for pivotal studies and excellence in clinical research.

Two studies showing Biden Patrylak and Roy herbs,

and also work from Pat Larusso,

really defining high level clinical trial designs.

And behind and in parallel to all that,
we have a very vibrant and active biotech and form a community. It's really driven by the heart of it, at the Yale Office of Collaborative Research. You can check out their website and see logos of companies that have been recently started. Some of these companies are associated with the papers I showed earlier and will be talking about some of this work throughout the sessions today. Then we’ll move on to the next slide.
So just a little bit of background about me, so I sort of also live in multiple nodes of that research translational spectrum. I'm P of an NIH funded DNA repair lab, and our lab is mainly focused on oncology, synthetic lethal drug screening with a focus on DNA repair metabolism, and we've been fortunate to publish a number of high impact stories recently. In some of those journals shown there. I'm also a radiation oncologist and is a Co director of the Brain Tumor Center. I'm involved in a lot of glioma clinical trials. These are some of the cooperative groups that we work with.
Here at Yale and then sort of on the evenings and weekends and very much involved in the biotech world and an active biotech entrepreneur. Most notably some accompany you may be aware of a Cybex therapeutics which will be in the clinic early next year, will go to the next slide. This is a story that we recently published in Science Translational Medicine. So just wanted to give you really just two case studies of some of the work that we are doing and how we’ve been able to translate that from the bench into the bedside and really into biotech. This is a story that we recently published in Science Translational Medicine.
Medicine and then more recently in Nature and Nature Genetics where we found that alqama tablets like ID H1 mutations that induce two HG unexpectedly, causing our defector Bracken. This defect that causes PARP inhibitor sensitivity, and we made that discovery just a few years ago, and it’s really collaborative effort. Across multiple labs here at Yale, including Peter Glaser, Moroccan Alan Stuffing Helene. But we’ve been fortunate to be able to rapidly translate that into the clinic, and these are some of the trials that are shown here.
But most importantly, in the bottom right, those are the clinical trials that really made these clinical protocols possible, and we’re now taking specimens from these trials and bringing them back into the lab to try to understand who responds and who doesn’t and what’s the molecular basis for that response. Patterns on the next slide. And just a second more recent story that we published in Nature, Communications on the metabolic front, we found that a phosphatase which is
up regulated or mutated in a number of cancers, including brain tumors, actually has an epigenetic silencing function that had not been described previously. This leads to silencing of Aki metabolism gene called NAPER, which essentially inactivates the press handlers salvage pathway shown there and leads to exquisite sensitivity to class of drugs called nampt inhibitors. Now these drugs have actually been tested extensively in clinical trials, and many of them. Have been shelved or stymied because of lack of good biomarkers,
and we actually believe we have those biomarkers now and again. Leveraging the yellow CR in the Blatnik Fund, which we can get to later in Connecticut innovations. A local state backed VC and the pitch program developed by Craig Cruz, we’ve been able to start a company, developed a new class of nampt inhibitors and we hope to bring those in the clinical trials soon. So with that, that’s just the flavor of what we do and really looking forward to the discussion today and thank you.
00:14:36.790 --> 00:14:41.100 Thanks, Ron G much appreciated.
NOTE Confidence: 0.777699947357178
00:14:41.100 --> 00:14:42.850 Will save again. Collect questions
NOTE Confidence: 0.777699947357178
00:14:42.850 --> 00:14:43.900 throughout the presentation.
NOTE Confidence: 0.777699947357178
00:14:43.900 --> 00:14:46.796 So now we’d like to move on to
NOTE Confidence: 0.777699947357178
00:14:46.796 --> 00:14:48.448 the presentation of CD10 CD.
NOTE Confidence: 0.904331922531128
00:15:21.070 --> 00:15:22.074 Can you please turn on
NOTE Confidence: 0.904331922531128
00:15:22.074 --> 00:15:23.080 your video if you’re able.
NOTE Confidence: 0.849910497665405
00:15:47.120 --> 00:15:51.090 Siri, can you unmute and open your video?
NOTE Confidence: 0.849910497665405
00:15:53.680 --> 00:15:55.182 Tim, maybe we could advance
NOTE Confidence: 0.842703580856323
00:15:55.182 --> 00:15:57.030 to Craig slides and give City
NOTE Confidence: 0.842703580856323
00:15:57.096 --> 00:15:59.530 a chance and we can come back a city in a
NOTE Confidence: 0.842703580856323
00:15:59.530 --> 00:16:01.828 moment. Sounds like a good idea.
NOTE Confidence: 0.842703580856323
00:16:01.830 --> 00:16:04.974 So again, we’ll come back to see Chan,
NOTE Confidence: 0.842703580856323
00:16:04.980 --> 00:16:08.868 but let’s move on to Craig Cruise while
NOTE Confidence: 0.842703580856323
00:16:08.868 --> 00:16:12.730 we try to workout CDs kinks. Great
NOTE Confidence: 0.783548891544342
00:16:12.730 --> 00:16:17.093 by the way I go. Thanks Tim.
So I am the John C Malone professor of Emccd and joint appointment in pharmacology as well as in chemistry and I'll be talking a bit about my role in running the Yale Center for Electro Discovery, which is the small molecule an RNA eye screening center that is here at yeah.

So I've been here for 25 years working at the interface of chemistry and biology. When I started here, it was primarily focused on motive, action studies of natural products, and this is 1 molecule that
came from those efforts.

It is a derivative of a microbial Organism, derived Organism, excuse me,

compound that is an antitumor compound that is a producer,

monitor and so my lab identify the mode of action of this molecule,

did some additional chemistry.

I found it my first company.

Pretty Alex 17 years ago that turned this.

Pretty Alex was purchased by Onyx and ultimately by Amgen and Kyprolis
now does over a billion dollars in sales for again refract refractory relapsed multiple myeloma, but since then next slide I’ve been working on the flip side of that. Not blocking degradation but actually inducing degradation, and so my last played a key role in developing this new field of targeted protein degradation where we can through induced proximity drag proteins. To the quality control machinery of the cell, inducing its degradation. And I’ve been working on it for 20 years now, but a key part of this transition
in terms of translational impact

was the founding of our Venice

here in New Haven in 2013.

This is from their IPO in 2018.

They now have two clinical

one for breast and went for prostate,

Moreover,

Moreover,

at least for their leading one,

the prostate enable been able to

demonstrate that this technology.

Works in humans with respect to

actually targeting and decreasing

surrogate markers for prostate,

and so those quite quite exciting.

And I continue to play a role
00:18:51.072 --> 00:18:52.830 in advising our business,

00:18:52.830 --> 00:18:55.486 but I wanted to spend just a little

00:18:55.486 --> 00:18:57.781 bit of time talking about another

00:18:57.781 --> 00:19:01.060 hat that I wear on the next slide.

00:19:01.060 --> 00:19:03.304 And that is the Yale Center

00:19:03.304 --> 00:19:04.426 for Molecular Discovery,

00:19:04.430 --> 00:19:06.300 founded in 17 years ago.

00:19:06.300 --> 00:19:08.680 And this is the really the nexos

00:19:08.680 --> 00:19:10.166 of translational research at

00:19:10.166 --> 00:19:12.186 Yale with respect to developing

00:19:12.186 --> 00:19:13.398 assays screening compounds,

00:19:13.400 --> 00:19:16.920 you can go on to the next slide.

00:19:16.920 --> 00:19:19.167 And so we have the resources where

00:19:19.167 --> 00:19:21.480 we have small molecule compounds.

00:19:21.480 --> 00:19:24.140 We have RNA Sir and a collection,
00:19:24.140 --> 00:19:27.808 so you can go back to sleep.

NOTE Confidence: 0.783548891544342

00:19:27.810 --> 00:19:31.670 Now forward and so we have a

NOTE Confidence: 0.783548891544342

00:19:31.670 --> 00:19:34.424 team of professionals that are

NOTE Confidence: 0.783548891544342

00:19:34.424 --> 00:19:37.179 helping the Yale researchers to

NOTE Confidence: 0.783548891544342

00:19:37.179 --> 00:19:39.381 translate their academic findings

NOTE Confidence: 0.783548891544342

00:19:39.381 --> 00:19:42.136 into assay and thin screening.

NOTE Confidence: 0.783548891544342

00:19:42.140 --> 00:19:46.420 Small molecules.

NOTE Confidence: 0.783548891544342

00:19:46.420 --> 00:19:49.340 As I using robotics and then

NOTE Confidence: 0.783548891544342

00:19:49.340 --> 00:19:52.838 helping to interpret those assays

NOTE Confidence: 0.783548891544342

00:19:52.838 --> 00:19:55.909 and those results with the whole

NOTE Confidence: 0.783548891544342

00:19:55.910 --> 00:20:01.490 point of coming up with impact.

NOTE Confidence: 0.844229400157928

00:20:01.490 --> 00:20:04.094 And that is defined by

NOTE Confidence: 0.844229400157928

00:20:04.100 --> 00:20:06.158 papers as defined by grants.

NOTE Confidence: 0.844229400157928

00:20:06.158 --> 00:20:08.200 So where we stand now is that

NOTE Confidence: 0.844229400157928

00:20:08.200 --> 00:20:10.124 we have the infrastructure.
We have the network, we have the resources, but we want to reach out to establish more industrial partners to help guide us. Help prioritize, help direct where we should be focusing our efforts. You know what are the unmet needs an industry? What are the new indications that we're not aware of, and so we're really like to serve as a bridge? If you will, between? The diverse collection of cancer researchers at Yale and the greater World. And so.
With that, I'll stop and turn it back to Tim.

So I think we have City chance. Logistics worked out. An will go back to City Chance Presentation, City.

Can everyone hear me? Good OK thanks. Next slide.

Is cancer email therapy and we are trying to use multiple approach to improve cancer immunotherapy which is currently a transformative therapeutic modality, but still made a having major setbacks by more than 70% of patients not responding.
So the first program for us is to discover novel immune checkpoints or T cell regulators that are important for the team might be environment and in order to overcome the current therapy resistance. An once those new molecules will discover we will be able to identify the therapeutic strategy for them and then the second program to engineer immune cells themselves like car T cells and develop therapeutic strategy to infuse those cells back to patients and as a cell therapy modality. In the final one would be program.
based on cell and gene therapy, and in this case we call it Meiji, which I'll elaborate later on next slide. So Major is a new class of cancer immunotherapy. We believe even though he said early stage, it is coin as Multiplex activation of endogenous genes, as immunotherapy may imaging so we think this is a new strategy as compared to order over the existing ones, because cancer cells. They have a lot of signals that are considered non self meaning.
But in order to find and kill the cancer cells, we better off amplify such signals in one of the most efficient way we did. Figure out is by crisper activation, just crank up all the non self signal so the immune system can see the cancer cells clearly and then come to destroy the cancer cells and take off the new cycle next slide. And then we have done a few proof of principle experiments and so that these works quite well in the preclinical models across multiple cancer types, including a pressman.
normal pancreatic cancer types.

And.

We hope to continue to translate these new fair treatment modalities and use them either alone or in combination with what already available.

Thanks.

I guess that he. Next, we'll go to Offei Rogers and listen to the presentation of her work, right? Thank you Tim. So I am an associate professor in the Department of Therapeutic Radiology and my lab focuses on understanding DNA damage response and so I like to tell
you a little bit about how we’ve been using that interest to develop a novel.

Next slide, please.

So Uncle Gene Amplification is considered to play major roles not only in the formation of cancers. By amplifying genes that provide glued advantages, such as increased cell proliferation, angiogenesis, and decreased apoptosis, but also in later progression to states that accesses by amplifying genes that facilitate migration and invasion. So it’s not a surprise that gene amplification has become an
important therapeutic target in the
development of precision medicine,
and so the current drug
target the overexpress protein products
that are produced due to gene amplification,
which has resulted in major drug
breakthroughs such as Herceptin and
other tyrosine kinase inhibitors,
and so our lab as I said to you before,
is really interested in understanding
DNA damage response,
and we have taken an approach to
manipulate the DNA damage response
network in order to find a novel way to
treat these types of cancers so the cell.
Has already in place DNA damage response. Mechanisms in order to conserve genomic integrity and our goal is to hope to manipulate this network by forcing cancer cells to go towards pathway on the right following excessive DNA damage to activate a pop ptosis as opposed to normal cells. So by hijacking the cell zone machinery, our goal is to reduce the normal tissue toxicity that might be experienced by these kind of drugs and prevent off target effects.

So next slide please.
So our focus has been to directly convert the amplified DNA into DNA damage and so by doing so we have designed oligonucleotides that can bind to specific sequences within the amplified gene, which is then forms a triplex structure that is recognized by the cell’s DNA damage and through replication stress leads to excessive DNA damage, specifically, at the amplified regions this excessive DNA damage. Then can activate a DNA damage response as a result of all this damage leading to the activation.
of a P53 independent pathway,

and so we believe that this drug design platform can actually have far reaching approaches due to the fact that there are over 500,000 unique triplex targeted sequences throughout the human genome, and in fact there are more than 460 amplified genes are cross 14 different cancer subtypes.

So we believe that we can specifically use this drug design platform to target many different types of cancers that are characterized by gene amplification.

And thank you.
00:27:46.620 --> 00:27:48.560 Thanks very, very interesting.
NOTE Confidence: 0.839542080055584
00:27:48.560 --> 00:27:52.655 So now we move on to the final
NOTE Confidence: 0.839542080055584
00:27:52.655 --> 00:27:55.365 speaker who’s joined our panel
NOTE Confidence: 0.839542080055584
00:27:55.365 --> 00:27:58.330 today and that’s Josh Blinker.
NOTE Confidence: 0.839542080055584
00:27:58.330 --> 00:28:01.246 Josh comes from outside of Yale,
NOTE Confidence: 0.839542080055584
00:28:01.250 --> 00:28:04.618 but he certainly is part of the community
NOTE Confidence: 0.839542080055584
00:28:04.618 --> 00:28:07.718 living in Connecticut Ann and starting
NOTE Confidence: 0.839542080055584
00:28:07.718 --> 00:28:10.982 his last company here in Connecticut.
NOTE Confidence: 0.839542080055584
00:28:10.990 --> 00:28:14.399 So we’re thrilled to have him here.
NOTE Confidence: 0.839542080055584
00:28:14.400 --> 00:28:17.292 Josh can really speak to today’s
NOTE Confidence: 0.839542080055584
00:28:17.292 --> 00:28:20.249 topic from a number of angles.
NOTE Confidence: 0.839542080055584
00:28:20.250 --> 00:28:22.680 You know, given his background,
NOTE Confidence: 0.839542080055584
00:28:22.680 --> 00:28:25.590 so he’s a trained medical oncologist.
NOTE Confidence: 0.839542080055584
00:28:25.590 --> 00:28:28.010 He’s worked at the FDA.
NOTE Confidence: 0.839542080055584
00:28:28.010 --> 00:28:30.692 He’s worked in venture capital and
NOTE Confidence: 0.839542080055584
00:28:30.692 --> 00:28:33.567 then most recently he’s started his
own incredibly highly successful company locks in one Cology, which recently was acquired by Lily.

So now he sits inside Eli Lilly and is really one of the senior managers there in charge of. Well, is strategy and oncology, so again, we’re really pleased to have Josh here today and he’ll just offer some comments on what he sees is the challenges and opportunities and developing novel cancer Therapeutics in regard to collaborations of companies and academia.
00:29:14.650 --> 00:29:15.610 Josh?
NOTE Confidence: 0.839542080055584
00:29:15.610 --> 00:29:16.570 Thanks
NOTE Confidence: 0.753304362297058
00:29:16.570 --> 00:29:18.715 Tim for the con introduction
NOTE Confidence: 0.753304362297058
00:29:18.715 --> 00:29:20.860 and having me here I.
NOTE Confidence: 0.753304362297058
00:29:20.860 --> 00:29:24.759 Prepared, prepared like two sets of remarks.
NOTE Confidence: 0.753304362297058
00:29:24.760 --> 00:29:27.192 And I think one of them may be
NOTE Confidence: 0.753304362297058
00:29:27.192 --> 00:29:28.730 appropriate for this session.
NOTE Confidence: 0.753304362297058
00:29:28.730 --> 00:29:30.390 I might save the other,
NOTE Confidence: 0.753304362297058
00:29:30.390 --> 00:29:33.369 but I’ll try to get them to quickly Tim.
NOTE Confidence: 0.753304362297058
00:29:33.370 --> 00:29:36.349 And if you want me to elaborate on anything,
NOTE Confidence: 0.753304362297058
00:29:36.350 --> 00:29:39.320 please interrupt me or come back at the end.
NOTE Confidence: 0.753304362297058
00:29:39.320 --> 00:29:41.602 But one set of remarks I thought
NOTE Confidence: 0.753304362297058
00:29:41.602 --> 00:29:43.575 might be interesting and relevant to
NOTE Confidence: 0.753304362297058
00:29:43.575 --> 00:29:45.731 the attendees is the topic of what
NOTE Confidence: 0.753304362297058
00:29:45.796 --> 00:29:47.866 are the types of relationships and
NOTE Confidence: 0.753304362297058
00:29:47.866 --> 00:29:49.804 academic lab can have with industry?
And what are the sort of risk rewards and implications of those relationships? I really break them into sort of 3 three buckets with sort of increasing levels of intensity. I think at the in the sort of lightest intensity relationship, said is, I'll call it the advisor expert model, where the goal of the relationship with industry is really to raise awareness or detract resources in a global sense to a problem set that you or your lab thinks is important to human disease. And you can have this influenced by say.
Riding free, even or providing paid expert advice as a retained consultant. Or maybe being a scientific advisory member to accompany or small company or large company or guest lecturer in a large pharma setting is another example and the output that you're expected to supply whether there is sort of. Compensation return or not is basically your ideas. A lot of your remarks are going to likely refer to public domain information, but it's really your expertise and again the goal from both sides is just to bring awareness and education to
perhaps a biology set of questions that needs your particular input, so that’s that’s level one that’s light. That’s no strings. That’s kind of easy to come and go with, and I suspect many of you have already engaged. In that type of relationship. One level up from that. Is probably the media’s, then I’ll just call it for lack of a better sort of bucket term, let’s call it some kind of sponsored research agreement that covers you and your lab or your group.
And in probably involves your,

you know your University signing

off and in this type of agreement,

the expectation is that your lab

or know how is providing some kind

of assay expertise where there’s

a data readout expectation that.

That is awesome.

What’s proprietary you know between

you and the industrial partner.

And I’ve seen this transpire in both.

What I’ll call an external model and

an internal model, the external model.

There’s a,

there’s a transference of the

assay to the partner, they run,
the assay,
they perhaps share the results back with you,
but your academic lab mission is not asked to be amended to supply the data.
Ultimately it sits on the part of the industrial sponsor to do that,
the industrial sponsor to do that,
asked to be amended to supply the data.
Ultimately it sits on the part of the industrial sponsor to do that,
the industrial sponsor to do that,
ultimately it sits on the part of the industrial sponsor to do that,
ultimately it sits on the part of the industrial sponsor to do that,
ultimately it sits on the part of the industrial sponsor to do that,
ultimately it sits on the part of the industrial sponsor to do that,
ultimately it sits on the part of the industrial sponsor to do that,
ultimately it sits on the part of the industrial sponsor to do that,
ultimately it sits on the part of the industrial sponsor to do that,
ultimately it sits on the part of the industrial sponsor to do that,
But either way that the goal here is to create data, not just your ideas and those data. Again, our internal or externally generated, and then the third level is probably the most intense that’s co-founder or cofounder role, where it might subsume the other two categories. There might be a sponsored research component. There might be an advice component, but really you’re really putting your kind of currency, your personal currency, behind a set of ideas. And there’s some expectation.
that commitment.
With all its conflicts and my next set of remarks tries to handle some of those conflict issues. But really, the behavior involves you know your personal sort of stake in this thing, and you might be involved in mediating conversations with check, transfer or investors or entrepreneurs as they come around. That idea or pharma executives.

If it’s a big pharma relationship or subsidiary, so I think that’s the
00:33:52.590 --> 00:33:54.690 most intense and I think.
NOTE Confidence: 0.8607497215271
00:33:54.690 --> 00:33:56.766 It it has its own tradeoffs,
NOTE Confidence: 0.8607497215271
00:33:56.770 --> 00:33:58.690 but but with that I'll pause
NOTE Confidence: 0.8607497215271
00:33:58.690 --> 00:34:00.789 and see if Tim you'd like
NOTE Confidence: 0.8607497215271
00:34:00.789 --> 00:34:02.649 me to stop or elaborate.
NOTE Confidence: 0.831209242343903
00:34:04.960 --> 00:34:06.796 Josh, I think you're gonna run.
NOTE Confidence: 0.831209242343903
00:34:06.800 --> 00:34:08.990 Why don't you spend another minute
NOTE Confidence: 0.831209242343903
00:34:08.990 --> 00:34:11.174 or two elaborating and then will
NOTE Confidence: 0.831209242343903
00:34:11.174 --> 00:34:13.136 then next look for some panel
NOTE Confidence: 0.831209242343903
00:34:13.136 --> 00:34:15.059 reaction to your comments so can
NOTE Confidence: 0.831209242343903
00:34:15.059 --> 00:34:18.100 tune on a little bit more. Alright.
NOTE Confidence: 0.840795814990997
00:34:18.610 --> 00:34:22.075 It might be too much to handle
NOTE Confidence: 0.840795814990997
00:34:22.075 --> 00:34:24.560 the complexities of you know.
NOTE Confidence: 0.840795814990997
00:34:24.560 --> 00:34:28.408 I'd like to have sort of a dedicated
NOTE Confidence: 0.840795814990997
00:34:28.408 --> 00:34:31.720 sensor set of remarks about the
NOTE Confidence: 0.840795814990997
00:34:31.720 --> 00:34:35.092 frictions that I see as academics.
00:34:35.100 --> 00:34:36.930 Uh. Is academics?

00:34:36.930 --> 00:34:41.200 Really set up one of these three relationships and how do they?

00:34:41.327 --> 00:34:44.987 I'm just being distracted by some inappropriate comments on my.

00:34:44.990 --> 00:34:47.954 Screen, maybe I'll ask the moderator to look into that.

00:34:47.954 --> 00:34:49.930 My apologies were taking care of that now, OK.

00:34:49.930 --> 00:34:51.805 Screen, maybe I'll ask the moderator to look into that.

00:34:51.805 --> 00:34:53.680 moderator to look into that.

00:34:53.680 --> 00:34:55.184 My apologies were taking care of that now, OK.

00:34:55.184 --> 00:34:58.580 care of that now, OK.

00:34:58.580 --> 00:35:00.505 You know, I think I think it all of these relationships sets involve some soul searching,

00:35:00.505 --> 00:35:02.454 all of these relationships sets involve some soul searching,

00:35:02.454 --> 00:35:04.558 which I think happens at 2 levels.

00:35:04.560 --> 00:35:07.178 which I think happens at 2 levels.

00:35:07.180 --> 00:35:09.430 That happens at the personal level.

00:35:09.430 --> 00:35:11.668 Like what am I comfortable with?
How do I want to use my time?

How do I feel comfortable, uncomfortable with the idea of industry being part of my academic mission?

And then I think there’s also a time management, you know, sort of implication to some of this.

How do I want to? Spend my time. Do I like the idea of being around a company? Do I like the idea of being in the halls of a large pharma periodically?

So you know, I think. I think it all looks like roses. I think the the worst assumption set to go in with is like OH industry.
is this sort of undisciplined, unlimited source of capital that’s just going to augment the academic mission of my lab. I think that’s the most simplistic and quite honestly unhelpful for both parties mentality, and it’s a very common mentality. I encounter an I don’t, I don’t. I think it’s sort of a dishonest partnership. If that’s the thesis, because it misunderstands. What I think the true value of the partnership was intended to be, and so happy to unpack that a little more.
00:36:22.250 --> 00:36:24.818 But I want to say it out loud,
NOTE Confidence: 0.840795814990997
00:36:24.820 --> 00:36:26.425 because if one listening to
NOTE Confidence: 0.840795814990997
00:36:26.425 --> 00:36:27.709 this had that expectation,
NOTE Confidence: 0.840795814990997
00:36:27.710 --> 00:36:29.660 I think it’s really worth another
NOTE Confidence: 0.840795814990997
00:36:29.660 --> 00:36:31.326 set of discussions that maybe
NOTE Confidence: 0.840795814990997
00:36:31.326 --> 00:36:32.846 the panel wants to unpack.
NOTE Confidence: 0.776738524436951
00:36:39.640 --> 00:36:44.476 Great thanks Josh. So that’s yeah.
NOTE Confidence: 0.776738524436951
00:36:44.480 --> 00:36:47.469 A great entry into our panel discussion
NOTE Confidence: 0.776738524436951
00:36:47.469 --> 00:36:51.097 so we could just ask all the panelists,
NOTE Confidence: 0.776738524436951
00:36:51.100 --> 00:36:54.670 open up their mikes and turn on
NOTE Confidence: 0.776738524436951
00:36:54.670 --> 00:36:58.915 their videos and. Will move into.
NOTE Confidence: 0.776738524436951
00:36:58.915 --> 00:37:03.160 The discussion session. Of the meeting.
NOTE Confidence: 0.776738524436951
00:37:03.160 --> 00:37:06.730 So again reminder to the audience it.
NOTE Confidence: 0.776738524436951
00:37:06.730 --> 00:37:09.265 Please bring forward any questions
NOTE Confidence: 0.776738524436951
00:37:09.265 --> 00:37:12.340 you want into the chat room.
NOTE Confidence: 0.776738524436951
00:37:12.340 --> 00:37:16.420 Again, we’d very much like to hear those,
00:37:16.420 --> 00:37:19.972 so let me maybe just start out by

00:37:19.972 --> 00:37:23.225 asking the panelists just to react

00:37:23.225 --> 00:37:26.615 a little bit to Josh’s comments.

00:37:26.620 --> 00:37:30.516 And in terms of your experiences in terms

00:37:30.516 --> 00:37:33.798 of interactions with investors about tech.

00:37:33.800 --> 00:37:36.348 For Pharma and maybe comment a little

00:37:36.348 --> 00:37:39.267 bit on how you thought about that.

00:37:39.270 --> 00:37:42.000 As you’ve sort of entered into those

00:37:42.000 --> 00:37:44.316 relationships and how you’ve managed some

00:37:44.316 --> 00:37:47.490 of those issues and some of those tensions.

00:37:51.350 --> 00:37:53.419 I I, I think that

00:37:53.420 --> 00:37:55.891 Josh should bring up a good point

00:37:55.891 --> 00:37:58.797 in terms of just expectations on the

00:37:58.797 --> 00:38:01.952 faculty’s part in terms of what they

00:38:01.952 --> 00:38:04.976 hope to get out of these relationships.
I like to think that isn’t that big of a problem with these days. It has been a problem in the past, but OCR and the entrepreneurial ecosystem at Yale does a really good job. I feel in terms of educating faculty and helping them set expectations, figure out what’s possible and so at least compared to when I started again 25 years ago, I find that the younger faculty that are now thinking about these types of partnerships are much more sophisticated in terms of what they need to prove with respect to what they bring to the table, so I’m sure that there will
always be exceptions,
but I’ve been impressed.

Thanks Greg. And Elsa Ranjit,
any comments in a youth? Sort of.
Been involved in some of these
situations, so yeah, it’s
a really great question and I’ve
been involved in a lot of different levels,
including the companies that I’ve
started and also companies have
reached out to me and there really
is a sweet spot I found. I’m I’ve.

I’ve found that some smaller companies
in larger companies really understand,
You know, the balance in the symbiosis of what each party can offer an you know if you can get it right, you can, really, you know. The academic and offer expertise or think about things the way the farmer, farmer, biotech side wouldn’t necessarily an really vice versa. So I think it’s there’s an art to it, I think it’s actually quite important to recognize really. A lot of comments that Josh said so. But my Sanji, who said that anyone else with any comments or thoughts? I mean, I think it’s important guidance and really these interactions,
like all interactions, require trust and familiarity and are really based on relationships. That was a part of the purpose of meetings like this. Again, is to build those relationships again to sort of navigate those. Those inherently or potentially tricky issues between an academic scientist and an investor or. Industry. Um? Let me say so. We have some questions coming in, so let’s move to some questions from the audience. The first one I’ll just read out.
As an investor, I'm intrigued by the YMCD. Is this facility and the professionals working there accessible to people start up companies outside of Yale? Yeah, no I can. So the answer is yes, we have mechanisms in place that allow the screening technology, robotics, the compounds they actually development. At at at prices that are of course consistent with hail policy. But yes, it is possible. In fact, several startups Yale based startups use this as a way to augment in a virtual way some of their challenges
just getting off the ground. And so it really I think, is nice bridge again to translational work from you.

Thanks Greg. Another question, can I interrupt one second I I want to apologize to the panel and the audience. There was obviously some individuals who are disruptive and posting it totally inappropriate things, and I know the Kathy Lynch and her team are working to remove it, so I just want to apologize for what is a great forum and I’m sorry to interrupt, but I just wanted to explain that.
we will carry on for sure.

Make sure we pick up the appropriate questions from the chat

room so one of these phase was for you and I don’t know if you saw it,

people find you know the basis of your approach and the potential scale of

So the question really was framed around, you know, potential downsides of

this in regard to toxicities and how that might be able to be managed,

but maybe could you just how you think about that in terms of measuring

the toxicities and also maybe.
On delivery, so how would you think about delivering these therapeutics to target tissues?

Yes, I think the beauty of our approach is the limitation of having toxicities. So you might imagine if we decide on oligonucleotide to bind to a specific sequence within a gene that in a normal cell you would only have one or two copies, meaning there would be only two binding events within that normal cell at the most.
and that this kind of DNA. Damage would be effectively repaired by DNA damage response pathways that we know can recognize and repair this type of DNA damage. Conversely, in a cell that has gene amplification, the induction of excessive DNA damage that would then overwhelmed the repair capacity, and so the cell will then choose as an alternative to activate a pop ptosis. So I think that that is the beauty of our approach because. It takes advantage of the cells genomic integrity and those pathways.
that put in place to maintain that normal cells can repair. They will survive and they will be fine, while the amplified cancer genes would have excessive DNA damage and they would choose to activate their own cell death. In regards to delivery, we have been working with Doctor Mark Salzman and have been able to use nanoparticles to affectively deliver these oligonucleotides specifically to tumors, and we've been very successful with this.
we have very good uptake of our oligonucleotides to tumors. Alright, thanks very much, next question comes from the inside. Think is is again a bit of a follow up on. You know, the potential academia industry tensions. So you know, maybe the question we go to out to each of the academic pies. How do you manage? You know, sort of euryale responsibilities of training and developing students. PHD’s post docs, you know with issues that pertain to your corporate relationships. Maybe talk a little bit about how
you all just manage those issues within your lab in terms of who isn’t my pretentious sort of who’s involved in purely or academic work versus who might be involved in an industry work. So let me just open that up for anyone. Great, I’ll jump in first. You know, actually 1 one thing that I’ve learned in the recent years is that you know it’s not. You know you’ll have graduate students and postdocs,
especially in these times that aren’t.

You know, may have an academic focus for their career, may have pharma,

biotech, startup consulting,

venture capital and actually now often will.

When I have career development discussions, I actually first ask my trainees.

Where do you want to be?

And you know there’s no no judgment about where you know every part of this life science development process is very important and it will help me know what you want to do in your career, because that actually also helps me. How much to involve some of our trainees when appropriate?
Obviously, in some of the work that we do outside of Yale, I think that you know I'll leave it at that as a first comma, but let some other folks comment as well. Anyone else wanna add? I can simply say that way I enter these collaborations partnerships. And of course, Yale requires that work that's done in my lab has to be published. A bowl with. Of course. The write write reviews and checks and
balances, but it has to be in theory,
NOTE Confidence: 0.837155401706696

But to Rungis point,
NOTE Confidence: 0.837155401706696

you know, I find that there’s
NOTE Confidence: 0.837155401706696

a wide spectrum of people.
NOTE Confidence: 0.837155401706696

Wanting to sample industry and in
NOTE Confidence: 0.837155401706696

fact I think that’s a big knock
NOTE Confidence: 0.837155401706696

against academia right now is that
NOTE Confidence: 0.837155401706696

we are don’t do enough to offer
NOTE Confidence: 0.837155401706696

them real world opportunities,
NOTE Confidence: 0.837155401706696

so I find that these relationships that
NOTE Confidence: 0.837155401706696

I have with the private sector actually
NOTE Confidence: 0.837155401706696

help my lab in terms of recruiting people,
NOTE Confidence: 0.837155401706696

people that want to learn how industry
NOTE Confidence: 0.837155401706696

works and specifically you know
NOTE Confidence: 0.837155401706696

what type of skill sets they need
NOTE Confidence: 0.837155401706696

to or can pick up while in my lab.
And so I find that it is a really nice balance, but I haven’t had a problem in terms of students. And maybe it’s because there’s a selection there. They come to my lab wanting specifically to gain that skill set. Yeah, great anyway I’ll just add. You know local here in involved a bit to speak to that hunger and interest. You know we had came in with both. Yale and UConn have started at. Yeah, what’s called the Yale Canaan Fellowship program.
Which really you know is open to MD or PhD students who are really interested in the more corporate side of this bit and startup biotechs or on the investment side. And again the interest in that program is exquisite and that the talent is frankly outrageous. So again, I think there are certainly large segments of the new world of Chinese who overly learn this other side of the universe early on in their careers, and I think it’s great because I think the less this is sort of a side game and the more it’s just...
the continuum and I think that much more productive it will be in frankly needs to be a continuum. Obviously with appropriate precautions to protect. You know academic integrity, but you know, I think the world would be a far better place. You know more seamless. We can sort of make make this for people. Throwback to you, I mean you can you as I’ve mentioned,
00:49:07.956 --> 00:49:11.407 have you know real wide aperture and?
NOTE Confidence: 0.807492434978485
00:49:11.410 --> 00:49:14.695 In terms of what you know what you’ve gone,
NOTE Confidence: 0.807492434978485
00:49:14.700 --> 00:49:16.932 you know your work experiences and
NOTE Confidence: 0.807492434978485
00:49:16.932 --> 00:49:19.177 your success is I’m just curious
NOTE Confidence: 0.807492434978485
00:49:19.177 --> 00:49:20.897 now as you sit inside,
NOTE Confidence: 0.807492434978485
00:49:20.900 --> 00:49:23.192 you know one of the largest
NOTE Confidence: 0.807492434978485
00:49:23.192 --> 00:49:25.215 pharma companies and you really
NOTE Confidence: 0.807492434978485
00:49:25.215 --> 00:49:27.295 have oversight in terms of.
NOTE Confidence: 0.807492434978485
00:49:27.300 --> 00:49:29.484 In a lot of their strategic
NOTE Confidence: 0.807492434978485
00:49:29.484 --> 00:49:30.576 thinking around oncology,
NOTE Confidence: 0.807492434978485
00:49:30.580 --> 00:49:33.513 maybe just share you know with the
NOTE Confidence: 0.807492434978485
00:49:33.513 --> 00:49:36.169 panelist as well as the audience.
NOTE Confidence: 0.807492434978485
00:49:36.170 --> 00:49:38.697 You know how will is thinking about
NOTE Confidence: 0.807492434978485
00:49:38.697 --> 00:49:40.421 their oncologist strategy and what
NOTE Confidence: 0.807492434978485
00:49:40.421 --> 00:49:42.451 might be similar in in regards to
NOTE Confidence: 0.807492434978485
00:49:42.451 --> 00:49:44.397 Lillie with other major companies.
But also, you know what might be different, you know, sort of with a focus on where you see the ball moving and back to sort of Craig’s opening, comments are really trying to give people an understanding of what the big oncology franchises are going to be looking for. You know five and 10 years down the road when investigators work starts. Yeah, I mean big formal environments are complicated places. I think they’re confusing.
from the outside to try to interpret

that were confusing to me when I was working at a small company,

Is sometime collaborators,

One reason is large farmers are constructed and what they’ll call most

So that means there are these

technical disciplines that are somewhat independent of each other.

So the commercial group.

Is the commercial group the

Biology discovery group?
Is the biology discovery of the pharmaceutics people are their own group? The business development or their own group and they might report up into common structures, but if you as an outsider or interacting with somebody, it’s really hard to from their business card. Sort of know what political entity they represent in the larger company, so you may think that you have the ear of a company or not, but it’s really hard to know what political sort of dynamics are going on behind the scenes.
That may or may not allow that person to deliver on what you're talking about or delivering the way you'd hope, and so one of the things I've tried to do it. Lily is break that down as much as possible and make our portfolio is coherent as possible all the way from target ID to first approval and not have these gating technical go no goes where at any moment the rug could be pulled out and that's the problem with the matrix model. Is that they often can lead to incoherent decision making, I think. A second so I think two other themes worth
mentioning is the commercial entities at these companies. The ones who are marketing approved products have a lot of say on what happens in R&D. They have this idea of what moves the needle and they still see the world through the lens of conventionally defined markets. Lung cancer is bigger than you know, Melanoma and Melanoma is bigger than some even rare orphan, so they’re going to see the
world commercially an like. They'll use this like troubling phrase. You know what moves the needle? Can we make a billion dollars on this drug a year? Can we make 5 billion dollars a year on this drug if it's just 200 million? We don’t even want to hear about it, so there’s this. In many large farmers, this disproportionate commercial voice that affects strategic thinking and that voice is not futuristic, it’s backward looking at sort of water, the franchises that already exist and are proven.
And can we bolt on to those existing franchises in ways that sort of feel familiar so as to fill in holes from patent cliffs. And that’s not, in my opinion the right way to look to the future, and then the third. I think in companies that have more R&D influence at the top. They are thinking about futuristic platforms. They are thinking about thematic bets that they feel they don’t want to feel like they’ve missed out on. Things like gene therapy, self therapy. Or an AI crisper like big delivery.
big idea, new modality, kind of thinking.
And then there are a handful of companies ready to risk capital it just not missing fear of missing out. They’re not going to quote over pay for that optionality.
But in other words, in the absence of an approved product, but they’ll place some bets and I think can drive some collaboration. Some companies have a greater appetite for that type of early platform.
They don’t want to miss out type of approach. What distinguishes those companies from their peers? Some of its corporate structure and an individual. The force of individual personality, which is the most surprising and Lee satisfies ING answer and give you so you know you’ve been in a complicated room of decision makers. You have some rooms that are dominated by certain voices that and those, and that’s separate from their title. Sometimes an some others have
org structures that represent
that you know who's at the top is
that is the CEO of the company.
Does he come out of commercial or
does he come out of research or she?
It's a very what is the last
board meeting they had and what
pressures did the executive team
feel coming out of that board?
Was the board feeling like
cash poor and risk averse?
Or was the where they fear
of missing out because their
competitor just did a big deal that
they feel embarrassed that they
00:55:16.383 --> 00:55:18.980 didn’t get to look at like these?
00:55:18.980 --> 00:55:20.740 Are these like incredibly soft,
00:55:20.740 --> 00:55:21.432 unknowable things?
00:55:21.432 --> 00:55:23.508 That that prevent me from really
00:55:23.508 --> 00:55:25.486 answering you in a in a coherent way.
00:55:26.020 --> 00:55:29.016 But you know, at you’ve been on
00:55:29.016 --> 00:55:32.300 the other side of the CEO of A
00:55:32.300 --> 00:55:35.165 now you’re on the other side.
00:55:35.165 --> 00:55:37.745 How can you as a CEO of a biotech
00:55:37.750 --> 00:55:40.648 position yourself so that you can take
00:55:40.648 --> 00:55:43.349 advantage of some of these unique
00:55:43.349 --> 00:55:46.193 characteristics of the marketplace?
00:55:46.193 --> 00:55:48.649 Can you create a market without
00:55:48.650 --> 00:55:51.158 losing the bird in the hand?
What do you mean by burden when you’re when you want to sell yourself right?

If you get an Overture, how do you make sure that your company is?

What is the market value of your company?

If you only have one interested party?

Well, if you look at like Form 14 SEC documents that describe the anatomy of most M and a deals 70% of them are one party deals, there’s all. So that’s just that’s just how it goes.

The majority of the time there’s only one party at the table.
The second assumption I always make is every company that’s pre-commercial is for sale at all times. So like the notion that like there’s this board of Directors or investor base, that’s hoping that’s holding out, you know, most credible offers are considered, and it usually taken, and I don’t really see this sort of waiting for perfection mentality. Everybody’s for sale. If you’re a public company, your prices listed on the ticker everyday there’s some takeover premium that needs to be added to that.
00:57:06.200 --> 00:57:09.488 Whether that’s a 20% premium or 100% premium.
NOTE Confidence: 0.844939947128296
00:57:09.488 --> 00:57:12.694 Is sort of up to the multiparty
dynamic that you alluded to earlier,
NOTE Confidence: 0.844939947128296
00:57:12.694 --> 00:57:15.689 or the swagger of your banker
NOTE Confidence: 0.844939947128296
00:57:15.690 --> 00:57:18.612 and your CEO or just the lacquer?
NOTE Confidence: 0.844939947128296
00:57:18.612 --> 00:57:22.509 Black of discipline or intense
discipline of the counterparty?
NOTE Confidence: 0.844939947128296
00:57:22.510 --> 00:57:24.365 I mean, I can’t.
NOTE Confidence: 0.844939947128296
00:57:24.365 --> 00:57:25.849 These are incredibly like human
one off moments in time,
NOTE Confidence: 0.844939947128296
00:57:25.850 --> 00:57:27.326 like there’s again no strategic way
that I can give you first order advice.
NOTE Confidence: 0.844939947128296
00:57:27.326 --> 00:57:29.171 Just spin my Tim.
NOTE Confidence: 0.844939947128296
00:57:29.171 --> 00:57:31.038 What have you seen is as a board
member in this.
NOTE Confidence: 0.844939947128296
00:57:31.040 --> 00:57:33.158 And I agree, I think. First of all,
most lemonades are one party,

and as you know, so the notion of this competitive processes is not the norm,

But I do think most boards have to be open to respectable offers.

You know 'cause boards are representing the interests of shareholders,

so I'm going to have a responsibility to entertain any.

Any offer behalf of investors.

I think it's all fair game I guess.

Just one follow up with Josh.

So like what would be your advice too?

You know the panelists here,
or an academic sitting in the audience if they, if they wanted to really check for real interest in their technology within a big pharma company, what would you say? Is that the key? To making sure that whatever that interaction is will give a person quality feedback is is there a way to get that or is it you think it’s a little bit of a hit or miss in a large farm environment? Yeah, and then let’s do large farm and then go down to you know how biotech might be different?
It’s important to have a champion in R&D who has influence in the company and can drive a deal. I think it’s always best to have R&D level champions. I mean there are other sources of capital and large farmers like a lot of them have some kind of sort of internal venture fund, or they’ll make strategic passive investments that sort of without real buy in from R&D sometimes, or like token by in so I think those are usually the two parties that most.
Small companies interact with either the VC group within the company or the R&D. I think if you're in a series of meetings where the seniority of the attendees is not going up or staying the same, you're not seeing things in writing. You don't feel like you're on a timeline like the diligence field goal post keeps shifting around. I think those are all subtle clues that it's kind of going sideways and then, on the other hand, if you really seeing like a focused
01:00:04.920 --> 01:00:07.122 effort to get something done and
01:00:07.122 --> 01:00:09.187 you’re seeing consistency of voice,
01:00:09.190 --> 01:00:10.960 not just in your conversation,
01:00:10.960 --> 01:00:12.730 but with Yale Tech Transfer,
01:00:12.730 --> 01:00:14.150 that’s an encouraging sign.
01:00:15.720 --> 01:00:16.462 Great, thanks.
01:00:16.462 --> 01:00:18.688 So we’re going to shift some
01:00:18.688 --> 01:00:20.714 questions from the audience. Again.
01:00:20.714 --> 01:00:23.018 Just remind the audience that again,
01:00:23.020 --> 01:00:24.940 we’ve disabled the chat room,
01:00:24.940 --> 01:00:28.004 so if you want to ask a question,
01:00:28.010 --> 01:00:30.747 raise your hand and then the people
01:00:30.747 --> 01:00:33.098 supporting the logistics will engage with
01:00:33.098 --> 01:00:35.695 you and will get your question answered.
01:00:35.700 --> 01:00:39.130 Irmo Glaser has a question.
01:00:39.130 --> 01:00:40.747 Asked if you can open the mic.
NOTE Confidence: 0.857857882976532
01:00:49.320 --> 01:00:53.680 And yet Go ahead your mikes, 
NOTE Confidence: 0.857857882976532
01:00:53.680 --> 01:00:57.170 open anything. No, not yet. Gamma, 
NOTE Confidence: 0.914929866790771
01:00:57.170 --> 01:01:03.050 it looks like your Mike still baby muted. 
NOTE Confidence: 0.931177705526352
01:01:07.070 --> 01:01:11.320 OK, try now. Thank you very much. 
NOTE Confidence: 0.931177705526352
01:01:11.320 --> 01:01:15.935 I like to. No. Whether 
NOTE Confidence: 0.931177705526352
01:01:15.935 --> 01:01:17.509 there are guidelines, I 
NOTE Confidence: 0.863902449607849
01:01:17.510 --> 01:01:20.040 am like a an investor. 
NOTE Confidence: 0.863902449607849
01:01:20.040 --> 01:01:22.470 Just looking around if 
NOTE Confidence: 0.865689635276794
01:01:22.470 --> 01:01:27.310 there are guidelines as to. How 
NOTE Confidence: 0.897919267416
01:01:27.310 --> 01:01:31.760 do they? The pitch people. 
NOTE Confidence: 0.846987843513489
01:01:31.760 --> 01:01:35.600 Speech to investors to make sure that 
NOTE Confidence: 0.846987843513489
01:01:35.600 --> 01:01:38.900 all the basic Yale ethical considerations 
NOTE Confidence: 0.846987843513489
01:01:38.900 --> 01:01:40.538 are in place. 
NOTE Confidence: 0.846987843513489
01:01:40.540 --> 01:01:42.740 In other words, how 
NOTE Confidence: 0.846987843513489
01:01:42.740 --> 01:01:44.390 do we know
that the information they are giving us 100%? Size base are not. Dangit by the interest in getting funding. To be very blunt, great yeah, thanks for the question. Thinking jump useless to you around. Maybe you can speak a little bit about sort of the venues use for this purposes as well as sort of the curation of what goes in. Sure, thanks Tim. So gramma. Thanks for your question. So when we have faculty pitching to investors or two companies, they’re generally working very closely with. The with OCR with my colleagues
here in the Tech Transfer Office.

So for example I had mentioned earlier in the chat that there’s a pitch fest being held in earlier December.

These are the applicants for our Blavatnik Fund for Innovation Awards, so these faculty I think there’s about 30 of them this year.

Have all applied for this award. They’re giving 5 minute pitches in their coached extensively, not only by people in the tech transfer office, but also by a board of reviewers which includes Investors.
01:03:01.580 --> 01:03:04.163 corporate VC funds as well as

01:03:04.163 --> 01:03:06.851 people in the pharma and biotech

01:03:06.851 --> 01:03:08.680 community are entrepreneur in

01:03:08.680 --> 01:03:10.725 residence network and you know,

01:03:10.730 --> 01:03:14.112 I think we all expect that Yale faculty

01:03:14.112 --> 01:03:16.919 are going to adhere to the highest

01:03:16.919 --> 01:03:18.663 standards of scientific integrity

01:03:18.663 --> 01:03:21.617 when there’s any kind of conflict of

01:03:21.694 --> 01:03:24.089 interest management plan in place,

01:03:24.090 --> 01:03:26.778 faculty are expected to make those

01:03:26.778 --> 01:03:28.570 those financial interests known

01:03:28.639 --> 01:03:30.879 publicly when in publications or.

01:03:30.880 --> 01:03:32.068 Nations or the like.

01:03:32.068 --> 01:03:34.470 So I hope that answers your question.

01:03:36.880 --> 01:03:39.904 Thanks John. I think there’s been a
couple mentions of the Botnick program

I think runs you had it in the slides.

I think some of the panels

have been involved in this.

I think John you just mentioned, maybe John.

don’t know if you’d be best

or even Ranji just to speak a

little bit about that program.

‘cause again I think it’s one of the

key parts of the infrastructure here.

Trying to help sure bridge

academia into commercialization.

Yeah, I can give a little bit of an overview,

so yells been very lucky and we’re

very grateful to have a generous award

from the Bubonic Family Foundation.
This is an award or foundation set up by Lindblad Botnek and similar awards. These have been made to Harvard into Columbia, so yields received a total of I think, $25,000,000 from the Bubonic Family Foundation. And this is used to fund projects at Yale that have significant potential to have an impact on human health and medicine. And every year we have a contest amongst faculty at Yale who apply for these awards there between 100 and $300,000, and generally these are quite competitive. I would say there are significantly more than these.
01:04:57.610 --> 01:05:00.876 competitive than I jar one award for example,
NOTE Confidence: 0.790457308292389
01:05:00.880 --> 01:05:02.932 and some of these have already
NOTE Confidence: 0.790457308292389
01:05:02.932 --> 01:05:05.441 advanced to the point of having
NOTE Confidence: 0.790457308292389
01:05:05.441 --> 01:05:07.589 significant venture capital investment.
NOTE Confidence: 0.790457308292389
01:05:07.590 --> 01:05:08.946 So for example, city.
NOTE Confidence: 0.790457308292389
01:05:08.946 --> 01:05:10.641 Had launched a company last
NOTE Confidence: 0.790457308292389
01:05:10.641 --> 01:05:12.430 year called Evolved Immune,
NOTE Confidence: 0.790457308292389
01:05:12.430 --> 01:05:14.452 which raised I think something like
NOTE Confidence: 0.790457308292389
01:05:14.452 --> 01:05:16.589 35 or $36,000,000 in and arround,
NOTE Confidence: 0.790457308292389
01:05:16.590 --> 01:05:18.492 and this was based on research
NOTE Confidence: 0.790457308292389
01:05:18.492 --> 01:05:20.962 that was in part funded by the
NOTE Confidence: 0.790457308292389
01:05:20.962 --> 01:05:22.466 Bubonic Award and Ranjit.
NOTE Confidence: 0.790457308292389
01:05:22.470 --> 01:05:24.195 I know you’ve applied for
NOTE Confidence: 0.790457308292389
01:05:24.195 --> 01:05:25.575 the award this year,
NOTE Confidence: 0.790457308292389
01:05:25.580 --> 01:05:27.686 you could talk perhaps a little
NOTE Confidence: 0.790457308292389
01:05:27.686 --> 01:05:29.499 bit about your experience or
city talk about your experience and in going through the process perhaps they are happy to know. See if you want to go first or some not dominate discussion. Oh sure, I think the bubonic. Our process is extremely rigorous. We went through multiple rounds of training and multiple rounds of discussion internally first, fully badly the signs and then extensive discussion with the other partners. And we are fortunate to be funded based on the science by the panel of extensive
community from multiple entities, including academic industry venture. And then we’re able to advance science because of the award, and then eventually able to create a startup so. Yeah, yeah I’ll just. I mean, I’ve absolutely loved the process. You know, we started a company called Cyber Exca Therapeutics a few years back, and that was not through this process and I was able to sort of compare contrast and the process for Athena, which was recently awarded above that Nick Grant,
and we're in the middle of the award. I can tell you is it was a phenomenal learning experience. You know each round of the pitch is not only learn how to refine your pitch, but also from the VC folks on some of these calls would sort of give a lot of real time feedback. And you know, I I kind of think of it as a rapid acting SP IR that’s internal to the Yelp Community. And so I think it’s a great opportunity. It allows you to do a little bit of the risking still inside the walls of Yale.
Before that, you know, startup really takes off into the air. So yeah, really a big fan. Yeah yeah, I'll just add from being part of some of those values for those in the audience. Maybe not as familiar with the ecosystem here. You know there are multiple venues, whether it's provodnik pitch and even you know precursors of those. Where you know vetting goes on by, you know, people who you know been there before, including scientists, venture capital, people who really pressure test.
opportunities. So again,

I think there's been a nice build,

an infrastructure around Yale really to

support that growth and mentoring of

scientists interested in translating

their research to commercialization.

And the quality is high because

of those interactions.

I do have a couple questions

from the audience that were.

Questions that that came in in advance.

Let me put the first one out there.

Maybe maybe.

Ranjit and Josh just thinking

about the nature of this question
it might be addressed by you.

The question is, are rare tumors disadvantaged? You know, and sort of this translation from science to commercialization, and this is someone who's interested in units, primitive neuroactive dermal tumors. So how did Reggie I know? You have some interest in these areas? And Josh, I know you’ve had certain experience in and what might have been considered rare cancers. Maybe if you guys can just adjust that. Start ’cause I’ve
learned so much from Josh and my time that I’ve known him and.

The first drug I developed at box Oncology with was a TRK inhibitor. For a population that in the United States was probably about 2500 patients a year, assuming you could find every last one which you certainly couldn’t because of the state of the diagnostic testing environment. So, like I candidly, I think Big Pharma is not seeking out those opportunities is not seeking out those opportunities until there’s an approved product. And then there’s just so few. There’s just so little in the cupboards of approved products that they can.
add to their commercial pipeline.

They get interested after approval when they can begin to think about pricing and think about time on drug and prevalence modeling, and maybe they dare to dream once it’s. It’s FDA approved, but they almost never green light. An interim being, like really reductive here, and I’m not talking about my own company, which now I have some influence on their thinking, but I think I think most want to see that the commercial guys nip that in the Bud at a lot of large companies early.
Let’s just say, I think in contrast, Wall Street gives a lot of value to the rare company. The Wall Street places a premium on unlikelihood of success, and that’s I think why rare tumors are exciting and that presumably there. Their mechanistically better understood, certain maybe more homogeneous in their in their biologic drivers and therefore druggable with a higher probability of success, and so I always probable eyes success over. I always value PTS probability technical
success over commercial potential,

I'm weird that way,

but I think Wall Street.

I think Wall Street gets it,

they just want to see great data.

They want to understand.

Is this a company?

That's going to be worth greater than

zero on their leader programs or not.

An being in a group of programs that

is on the way to an FDA approval or

not is a big fork in the road for the

biotech investing universe out there.

And small small companies.

So like you know,
out there developing amenan inhibitor for mixed lineages, leukemia.
You know, there’s two companies out there doing it and they’re able to attract capital and.
In a following and people are excited about being exposed to that. That’s not a kind of program you’ll run across in most large pharma,
there’s really now infrastructure that’s allowing a lot of these rare tumor
trials to progress much faster. As you know, adult pediatric brain tumor doctor.

We've been working on things like IDH mean gliomas in kids, which is actually not that common, and we now have pretty robust cooperative groups that are ready to jump on, sort of precision medicine angle. Another interesting thing is a lot of these foundations are becoming more active. The National Brain Tumor Society, for instance, is started a venture fund. To try to get the more rare tumors funded kidney cancer, we look at FH Mutant HL RCC. This is like 300 cases a year,
but there’s actually now a whole group that’s trying to fund these smaller trials, and then when you throw that together with the orphan status priority review vouchers. Depending on which area are looking at that there are pieces of the puzzle that are coming together that are making this a little bit more tractable. I think the existential risk of everything we just said is the drug pricing debate. So if if you example say, If we can accept that there is such a thing as a $20,000 per month
or $30,000 per month therapy,
then we create legislation or mandates
around price caps and limits.
I don’t know how the financial model
works even at the small company level,
and I’m not seeing enough nuances
in the public policy debate that’s
really tackling that question.
Yep.
Yeah, you still let you look
at and I would just add.
You know so so small tumors are great.
If you really understand the biology,
’cause the therapies can
have a tremendous impact.
I mean, Josh response rates with your
product’s were in the range of 50 sixty, 70%.

Just remind us 80 percent, 80%.

And that’s not only unheard of in cancer.

Almost any indication across the industry.

So when when you have something

so profoundly impactful,

you know, just because of the.

Transformative benefit that

has to patient that that really

subscribe value so you know a small

population with a really potent

therapy rightfully can be can be

valued highly and therefore draw,

certainly,
01:13:57.112 --> 01:13:59.776 do investment is just want enough
NOTE Confidence: 0.873570382595062
01:13:59.776 --> 01:14:01.937 from investors from the small
NOTE Confidence: 0.852439188957214
01:14:01.940 --> 01:14:02.534 biotech community.
NOTE Confidence: 0.852439188957214
01:14:02.534 --> 01:14:05.279 So I will add that there's a way to
NOTE Confidence: 0.852439188957214
01:14:05.279 --> 01:14:07.435 have a strategy where your first solid
NOTE Confidence: 0.852439188957214
01:14:07.435 --> 01:14:09.459 tumor phase one might have all comers
NOTE Confidence: 0.852439188957214
01:14:09.459 --> 01:14:11.655 and you have a dream that your your
NOTE Confidence: 0.852439188957214
01:14:11.655 --> 01:14:13.650 follow on trial is for that population.
NOTE Confidence: 0.852439188957214
01:14:13.650 --> 01:14:15.075 Obviously that's always difficult to
NOTE Confidence: 0.852439188957214
01:14:15.075 --> 01:14:17.640 walk that line, but if there is a way,
NOTE Confidence: 0.852439188957214
01:14:17.640 --> 01:14:19.350 certainly many companies have done it.
NOTE Confidence: 0.852439188957214
01:14:19.350 --> 01:14:21.345 Then you can kind of hedge your
NOTE Confidence: 0.852439188957214
01:14:21.345 --> 01:14:24.780 bets a little bit, but. But
NOTE Confidence: 0.847855269908905
01:14:24.780 --> 01:14:27.538 it still takes an enormous amount of
NOTE Confidence: 0.847855269908905
01:14:27.538 --> 01:14:29.986 capital to develop a rare tumor drug.
NOTE Confidence: 0.847855269908905
01:14:29.986 --> 01:14:32.730 Yeah, our second drug was a.
You know, targeting 2% of the lung cancer community with red alterations and.

Anne medullary thyroid cancer.

We were running GNP manufacturing campaigns that cost 3040 million dollars.

Just the manufacturing and then you throw on top of that like it takes hundreds of millions of dollars to get a drug approved. No matter what the market potential is, it’s just these fixed costs of compliance, manufacturing, pre clinical data management, post safety, post marketing, safety monitoring like there’s just. The small product in the big product.
are exposed to the same fixed cost. You know issues. And so don’t assume you can skunk work it forever if the drug starts to work, you’re going to real capital in a real management team behind it. Yep. Um? So again, open up to the audience for any questions, raise your hand and we’ll get you into the meeting and Kathy, you make me aware of any of those that I’m missing. Let me it just make an observation and then know pass on a question to the panel. So one thing that I’m struck by about Yale compared to other.
Institutions with worldwide were now

is that while you know there's an

incredible depth of talent and science.

You know around every corner.

The institution has a smallness to it in
terms of being able to interact with it,

which to me is like really unique

compared to other places I go,

and I think it's a wonderful attribute.

I see that also in the collaborations

within Yale.

So again, I know many of you and I

see a lot of collaborations going on.

You know, with within,

within the walls of Yale,
01:16:32.650 --> 01:16:35.146 and within that the Cancer Center run sheet.
NOTE Confidence: 0.852326154708862
01:16:35.150 --> 01:16:38.190 I think you called some of this out.
NOTE Confidence: 0.852326154708862
01:16:38.190 --> 01:16:40.806 Army Reserve without the lab to the clinic.
NOTE Confidence: 0.852326154708862
01:16:40.810 --> 01:16:43.888 Maybe if you could speak a little bit more
NOTE Confidence: 0.852326154708862
01:16:43.888 --> 01:16:47.003 about that as sort of my angle is you know,
NOTE Confidence: 0.852326154708862
01:16:47.003 --> 01:16:48.568 you know translation is so
NOTE Confidence: 0.852326154708862
01:16:48.568 --> 01:16:50.222 important and markers of translation
NOTE Confidence: 0.852326154708862
01:16:50.222 --> 01:16:51.917 or so important in Ranji.
NOTE Confidence: 0.852326154708862
01:16:51.920 --> 01:16:53.666 You talked about this iteration of
NOTE Confidence: 0.852326154708862
01:16:53.666 --> 01:16:55.867 Lab to the clinic and the importance
NOTE Confidence: 0.852326154708862
01:16:55.867 --> 01:16:57.817 of tissue human tissue tested with
NOTE Confidence: 0.852326154708862
01:16:57.817 --> 01:16:59.768 your drug and interrogating that.
NOTE Confidence: 0.852326154708862
01:16:59.770 --> 01:17:01.078 Understand what’s going on.
NOTE Confidence: 0.852326154708862
01:17:01.078 --> 01:17:02.059 So maybe lunch.
NOTE Confidence: 0.852326154708862
01:17:02.060 --> 01:17:03.700 It’ll throw it to you,
NOTE Confidence: 0.852326154708862
01:17:03.700 --> 01:17:05.482 but I really would ask others

125
01:17:05.482 --> 01:17:07.828 really just to talk a little bit  
NOTE Confidence: 0.852326154708862  

01:17:07.828 --> 01:17:09.648 about some of their collaborations.  
NOTE Confidence: 0.852326154708862  

01:17:09.650 --> 01:17:10.550 Within the walls,  
NOTE Confidence: 0.852326154708862  

01:17:10.550 --> 01:17:12.350 email that they think are really  
NOTE Confidence: 0.852326154708862  

01:17:12.350 --> 01:17:14.127 unique and really haven’t enabled.  
NOTE Confidence: 0.852326154708862  

01:17:14.130 --> 01:17:16.826 You know you to do what you want  
NOTE Confidence: 0.842048724492391  

01:17:16.830 --> 01:17:19.381 Question and you know, as I mentioned,  
NOTE Confidence: 0.842048724492391  

01:17:19.381 --> 01:17:21.732 a bit yellow while I was a resident at  
NOTE Confidence: 0.842048724492391  

01:17:21.732 --> 01:17:23.628 Sloan Kettering for about five years  
NOTE Confidence: 0.842048724492391  

01:17:23.628 --> 01:17:25.562 and was able to compare experiences  
NOTE Confidence: 0.842048724492391  

01:17:25.562 --> 01:17:27.715 that at much larger sort of complexes.  
NOTE Confidence: 0.842048724492391  

01:17:27.715 --> 01:17:29.995 And one of the reasons I came back  
NOTE Confidence: 0.842048724492391  

01:17:29.995 --> 01:17:32.370 to you was that that spirit at the  
NOTE Confidence: 0.842048724492391  

01:17:32.370 --> 01:17:34.140 Cancer Center and on the campus.  
NOTE Confidence: 0.842048724492391  

01:17:34.140 --> 01:17:36.184 It’s a very small close knit community,  
NOTE Confidence: 0.842048724492391
01:17:36.190 --> 01:17:38.534 but with very, very big ideas and deep
NOTE Confidence: 0.842048724492391
01:17:38.534 --> 01:17:39.847 collaborations and certainly doctor
NOTE Confidence: 0.842048724492391
01:17:39.847 --> 01:17:41.851 fuses really engender that further at
NOTE Confidence: 0.842048724492391
01:17:41.851 --> 01:17:43.765 the center and it’s just a wonderful
NOTE Confidence: 0.842048724492391
01:17:43.765 --> 01:17:45.805 place to be and just an example is,
NOTE Confidence: 0.842048724492391
01:17:45.805 --> 01:17:47.515 you know when we found that
NOTE Confidence: 0.842048724492391
01:17:47.515 --> 01:17:49.108 you know I DH mutations.
NOTE Confidence: 0.842048724492391
01:17:49.110 --> 01:17:50.370 Cause PARP inhibitor sensitivity and
NOTE Confidence: 0.842048724492391
01:17:50.370 --> 01:17:52.408 it was sort of the opposite of the
NOTE Confidence: 0.842048724492391
01:17:52.408 --> 01:17:54.109 current approach in the clinic to use
NOTE Confidence: 0.842048724492391
01:17:54.157 --> 01:17:56.124 I DH inhibitors that suppress the mutation.
NOTE Confidence: 0.842048724492391
01:17:56.130 --> 01:17:58.210 We actually say we should exploit the defect.
NOTE Confidence: 0.842048724492391
01:17:58.210 --> 01:18:00.570 We still need to figure out if it’s got legs
NOTE Confidence: 0.842048724492391
01:18:00.631 --> 01:18:02.887 in the clinic and that’s what we’re doing,
NOTE Confidence: 0.842048724492391
01:18:02.890 --> 01:18:04.970 but it was the folks like Pat Larusso,
NOTE Confidence: 0.842048724492391
01:18:04.970 --> 01:18:07.310 Inpo leader, who run Phase one here at Yale,
and, you know, we literally shoot down the Hall.

You know, right when we’re getting the paper ready?

Brought the galley proofs over there and I said, well, you know, what do you think can we?

Can we take a lap ribbon?

And just get this going her in Polydor.

We sat down and had a Cup of coffee and we mapped it out and part of the reason it was so successful was that it isn’t an assembly line type of approach and it gets back to Josh’s
comments of at the upper level of those people know the deeper science. Same thing here. If the clinical trials have a deep understanding and respect and relationship with the science, you can have conversations with pure basic scientist anyone and really integrate that data. And so when patent Jeff and I and Peter Glaser folks are mapping those trials that we’re thinking about. The on treatment biopsies the PK, PD biomarkers and and we’re getting deep in the science and you know Pat as a deep respect for it and
we kind of go back and forth and no ones making assumptions about you know the other part of the coin.
The trial design versus the science, and so I'll leave it that. But that's just one example of why I think things have flourished here.
I'm actually in on the main campus, so I teach undergraduates biology. So for me the Yale Cancer Center has been instrumental in making sure that I know what's going on from a clinical point of view,
that the retreats the seminar series.

The pilot grants that are available to faculty to facilitate collaborations among people from different disciplines really make for a very tightly dense collaborative network.

But I just wanted, you know, put this two finer points on this with respect to my recent companies.

When I had this a bit of a crazy idea of how to degrade proteins.

I knew that I needed to have a killer app right?

And so the beauty of the platform technology.
It could be applied to many different targets. And so I sat down with Dan Pitch Black, a prostate cancer specialist here and with my investor. It was really nice to be able to sit and have the investor listen to the end user. If you will hear what could be a unique application of this technology and I think that really helped me seal the deal in terms of getting our business off the ground. More recently another platform technology company we were thinking about indications. I was able to go to the leadership
of the Cancer Center and say,

listen,

would it be possible for me to
get together three or four basic
researchers and cancer in this
area and just to have a sit down?
Or we could throw out ideas and really
whiteboard things and really allowed
for this nascent company to be able
to have again real world interactions.
And so it makes for a I think a
very unique place here at you.

Fair City, any any comments?
You know in regard to, you know,
some of your collaborative experiences. Sure,
It’s a wonderful place in I have so many different experts in collectively. We basically cover the entire cancer expertise in this place and you can basically find the Conditions and basic scientists in. Physician scientists across the board and no matter what cancer type you trying to? Only in order to discuss with. Really, truly collaborative environment over here. In, say, anything that so I would second all that has been said before, and I think one of the things that
we’ve been primarily interested in
is we know that our strategy can be
used to treat drug resistance and the
opportunity to get patient samples
so that we can make patient derived
xenograft models has been really
instrumental for us to kind of see
whether or not we have functional
activity in drug resistant tumors.
That’s great, thanks birthday.
So we do have a question from
the audience. Alexander Let’s
see if we can get you activated.
Yeah, hi. Can anyone hear me?
anyone hear me?
Yeah we can hear.
OK, thank you.
Thank you everybody for coming together. It’s been really, really exciting. So my question is open anyone on the panel? I’m just curious about the broad cultural differences between industry and academia specifically. Do you ever have or see very successful academic scientists and clinicians who, for personality reasons experience a lot of friction in their involvement with industry? And Conversely, what kinds of personality traits do you think predict maybe a smoother
transition from academia to industry?

Well, open that up. I love the question. Thank you for it.

I think about it all the time. I think a big one of the biggest differences.

Is the mindset around risk taking?

In academia, it’s OK to like place a lot of bets and be wrong most of the time. Learn some interesting things along the way. Get some publications, even if you’re wrong. I’m referring to even like clinical publications, posters that said.

An industry you’re accumulating a track record always the things that you, the projects that you launch.
and work on have to work.

You need to see patient results and you can’t just take Flyers all the time.

It’s kind of like being a movie producer in Hollywood.

Like if you the last movie you make if nobody comes with the box office, you don’t get to make another movie.

Not saying it says I don’t think it says reductive is that quite?

I mean this we have a high failure rate in this business, but if you’re just somebody who places bets because it’s someone elses money and like.

There’s a very common academic behavior of,
like, you know, I’m just. It’s not my money. I’ll learn some science. It’s an option. Benefit goes well. In the upside, if it’s on the downside, who cares? I’ll move on to the next thing. I’ll have better work and better work and better work and patience.
Better ultimately, hopefully become an approved product that turns into a marketed medicine for patients like that, shift in mind is like. Very stark and I see a lot of folks who come in industry sort of mid and late career from academia, and they think that they’ll come in be sort of a non high voice of logic and science and reason. The resident expert and be sort of off the hook on the harder parts of being right and on the harder parts of actually executing against the plan.
And those folks don’t do as well either, so I think both on like being right about your convictions. As well as being a contributor to the execution against the plan, those are the two behaviors that define success in industry, where in academia there needs to be room for failure. There needs to be room for exploration in multiple ideas and moving on to the next project to keep the academic mission moving forward. And I’m not judging one or the other, but they’re not interchangeable in terms of behavior.
Thanks Josh, anyone from the panel. Make a comma. Yeah, I'll just add ’cause I know.

we’re running out of time, but you know in recent years I feel like I’m learning. Sometimes the friction ’cause we all. I think we’ve seen it I personally, but derive some sort of maybe insecurity on what we think. We know. What we don’t know and this is really everyone involved in the drug development and I think very important principle is that from the process of just the molecule to getting it into
01:26:53.105 --> 01:26:55.000 a patient to then caring for that
NOTE Confidence: 0.875349223613739
01:26:55.000 --> 01:26:56.550 patient for several years afterwards.
NOTE Confidence: 0.875349223613739
01:26:56.550 --> 01:26:57.925 Every step of that process
NOTE Confidence: 0.875349223613739
01:26:57.925 --> 01:26:58.750 is enormously complex,
NOTE Confidence: 0.875349223613739
01:26:58.750 --> 01:27:00.200 and I thought I knew.
NOTE Confidence: 0.875349223613739
01:27:00.200 --> 01:27:02.192 A lot is an MD PhD work in
NOTE Confidence: 0.875349223613739
01:27:02.192 --> 01:27:04.089 the lab and in the clinic,
NOTE Confidence: 0.875349223613739
01:27:04.090 --> 01:27:05.475 and with Brexit going in
NOTE Confidence: 0.875349223613739
01:27:05.475 --> 01:27:06.583 the clinic this spring,
NOTE Confidence: 0.875349223613739
01:27:06.590 --> 01:27:07.898 you know unbelievably newfound
NOTE Confidence: 0.875349223613739
01:27:07.898 --> 01:27:09.533 respect for how difficult it
NOTE Confidence: 0.875349223613739
01:27:09.533 --> 01:27:11.399 is to get a drug just into the
NOTE Confidence: 0.875349223613739
01:27:11.399 --> 01:27:12.988 Ind and into a clinical trial.
NOTE Confidence: 0.875349223613739
01:27:12.990 --> 01:27:14.575 So I think really understanding
NOTE Confidence: 0.875349223613739
01:27:14.575 --> 01:27:16.160 and mutual respect often will
NOTE Confidence: 0.875349223613739
01:27:16.212 --> 01:27:17.843 stave off some of some of that
friction in my opinion.

Thanks Ron G. OK, so we are running up against the Clock here so again, thanks for the conversation. It's been great, sorry bout some of the disruptions, but hopefully you know we've been able to gather most questions.

What I'd like to do right now is just turn the microphone over to Charlie Fuchs again just for a few closing remarks from him.

Charlie please unmute.

Sorry, sorry I want to thank him for running a phenomenal panel and all
the panelists for great discussion.

I think it was really instructive in terms of the science and frankly at the forefront of cancer therapy.

I also want to apologize to all panelists and the audience on the disruptions, and I can assure you that we are going to make sure that we don’t experience a similar disruption.

Again, I hope you all will use this as an opportunity to advance this as an opportunity to advance what was been a great conversation, because as I say, we want to build partnerships.

I think you’ve heard today about the
challenges of those partnerships and we want to make them smooth and successful because ultimately to really advance cancer therapy, it’s going to require a community, so please feel free to reach out to me to the panelists. We hope this is the beginning of a conversation. In addition, I hope you’ll all join us again.

on Wednesday, December 9th, when are third in the series of Yale engage, cancer will be defining mechanisms and biomarkers of sensitivity.
and resistance to anti-cancer treatments and then finally, it just want to once again thank Tim. Tim is Tim Shannon is a member of the board of our Our Cancer Center and has been really a great supporter of all that we do and including running today’s session and Tim, I’ll turn it over you for the final closing remarks. Again, yeah, so just let me extend thanks to the audience to our faculty panelists. Special thanks to Josh for carving out time of his day. Josh, we hope to.
To see more and more here around Yale again, all I can say is you know, like most people on the call, this is my passion of trying to do hard things and. You know getting him into humans and hopefully making a difference in humans lives, so it’s a great community to be part of. Yale’s got great things going on. It is easy place to engage with so you know in reflection of the name of the event would encourage all of you. Again, we’re interested to engage with Yale Cancer Center.
Try to do some important things.

No thanks everyone,

and with that will sign off.