00:22 Life did not exist always on this planet, all right?
00:28 Earth is predicted to form around 4.8 billion years ago
00:36 and then approximately four billion years ago
00:39 is when the first sign of life appeared.
00:42 So that was almost 800 million years later, all right.
00:46 And all living things today on this planet
00:50 have descended from that first life form, all right,
00:54 that existed four billion years back.
00:57 And how do we know that?
00:59 Well, if we look at the characteristics
01:04 of all living organisms on this planet,
01:07 we find a lot of similarities, right?
01:11 So here are some of those, you know, common characteristics.
01:17 All organisms on this planet are made up of cells
01:22 and these cells are comprised of
01:26 very essential biomolecules.
01:28 Again, whether it's a bacteria, whether it's a worm
01:30 or whether it's us humans,
01:33 we are all made up of the same biomolecules.
01:35 We are made up of, you know, carbohydrates,
01:38 we are made up of proteins, you know,
01:40 fatty acids and nucleic acids.
01:42 And these cells can interact with its environment
01:48 and is capable of, you know, drawing energy
01:53 for its survival.
01:55 For example, you know, all organisms need to extract energy
01:59 either through food or oxygen or through some other method.
02:04 Now...
02:08 All organisms have genetic material in the form of DNA
02:16 that stores all the information in order to make proteins
02:20 that drives the function in all living organisms.
02:25 Now, for example, if I take the example
02:29 of all you folks listening to this lecture,
02:32 there are proteins that are working right now in you,
02:37 making it possible for you to listen to this lecture.
02:40 So there are proteins that are working in your ears,
02:43 helping you listen,
02:44 there are proteins that are working in your brain,
02:47 you know, helping you process the information
02:49 and there are proteins working in your eyes
02:51 that are helping you see.
02:53 So every single function is driven by a protein
02:57 and the information to make that protein
03:00 is stored in your DNA, all right.
03:03 All organisms also need to pass down that information
03:08 from one generation to another,
03:09 either through sexual means or through asexual reproduction.
03:14 So again, these are all common to all living organisms
03:19 on this planet, right?
03:21 And again, lastly, all organisms on this planet
03:25 can self-regulate themselves and if need be,
03:29 can mutate to the changing environment around them, right?
03:33 If an organism is not able to adapt, they will go extinct.
03:38 It's not the biggest or the fastest
03:41 or the strongest that survives.
03:43 The one that survives is the one that adapts, right?
03:47 So these are the characteristics
03:49 that is pretty much found in all living organisms.
03:54 Now...
03:58 Here is how a cell looks like, okay.
04:05 Now, they are mainly divided into two categories, the cells.
04:11 One are your simple cells, your unicellular cells,
04:17 they are single cells, and they're not as complex, right?
04:21 And they do not have any membrane enclosed organelles, okay.
04:27 Two major groups of this particular single-set organisms,
04:34 which are called prokaryotes are bacteria and archaea.
04:40 And then, you know, comes the eukaryotes,
04:44 which is the other kind of cell,
04:45 which are a lot more complex, right?
04:49 Now, they have membrane enclosed organelles,
04:53 which are dedicated in doing specialized functions,
04:56 making them much, much more complex, you know,
04:59 than the prokaryotes.
05:01 Now, eukaryotes can either be unicellular.
05:06 Example of a unicellular eukaryote would be yeast, right,
05:10 or they can be multicellular like, you know,
05:14 bigger organisms like animals, you know, mammals.
05:18 Those are all examples of multicellular eukaryotes.
05:22 If you look at our body, all the cells in our body
05:25 are multicellular in nature.
05:28 Now, the image that you're seeing here
05:33 is a picture of an immune cell, all right.
05:36 It's a neutrophil, it's one of those immune cells
05:38 that protects you against, you know, any kind of infections.
05:44 Now, these are all examples of eukaryotes.
05:50 Now, if I have to compare them side-by-side,
05:54 this is how a prokaryotic cell looks like,
05:58 simple, you know, not much complexity inside the cell,
06:06 you know, very simple looking, has just one membrane
06:10 that is protecting the cell from the outside
06:15 and the DNA that is present, you know, in prokaryotes,
06:20 they are not enclosed in a membrane, all right.
06:24 So they are just lying naked in the cytoplasm
06:27 without any protection.
06:28 Like I mentioned before,
06:29 prokaryotic cells are very primitive, they're very simple.
06:32 So they don't have any membranes inside the cell.
06:37 Okay, now if you look at the eukaryote cell,
06:42 that appears a lot more complex, all right.
06:45 You can see that even within the plasma membrane,
06:50 there are different cell organelles,
06:53 which are specifically bound by a membrane of its own
06:58 and it is there just because each of these organelles
07:01 can perform their own function, which is quite separate
07:04 from the rest of the cell, all right.
07:07 So there, you have a nucleus which just protects the DNA.
07:12 So the DNA is found inside the nucleus.
Then you have a mitochondria, you have the ER, a golgi apparatus, which are all dedicated in doing a certain function inside the eukaryotic cell.

All right, now, again, there are, we have, you know, a lot of, so far, we have answered a lot of questions, but, you know, in biology and there are still a lot of questions that are unanswered and scientists are working every day trying to get answers to those questions.

We biologists follow a very rigorous method to, you know, finding answers.

Scientific investigations are based on observation, they're based on data, you know, experimentation and logic and, you know, with the advent of, you know, new technology, our data collection and observation capabilities keep improving, right.

Now, information or data at the end of the day, we collect it, we collect all the evidence and then it must be quantified using, you know, mathematical and statistical methods and this is exactly what happens in, you know, in research labs.

Now, talking about, you know, research labs, a lot of the life science and, you know, biotech work that I am talking here in this presentation happens right here in Boston.

You know, Boston is the mecca for life science research and biotechnology.

Boston has been in the forefront in most, you know, medical research.

Take for example the current pandemic, you know, Moderna, Pfizer, AstraZeneca and Johnson & Johnson are all located in Boston and have actively participated in developing, you know, vaccines towards COVID-19.

In fact, other industries have suffered due to the pandemic, but the biotech industry is going strong financially.

And rest assured, you know, more money will flow into the industry if we are able to completely get rid of the pandemic.

Now, to give you an idea, modern biotechnology here in Boston, it ranks among the most attractive of, you know, the fast growing industries.

Estimated annual growth is close to 10% and a lot of the progress that has been made towards the pandemic, be it vaccine development, you know, the science behind making the kits to test COVID-19, you know, antibodies, a lot of these new drugs, it has happened here in Boston.

Not completely, but partly.

And if we are able to get out of this, investments will continue.

Two, again, Boston is popularly known as Genetown.
Kendall Square, which is like a station away from where we are, you know, at Park Street, Kendall has over 50 biotech companies per square mile. The top grad schools are right here in Boston, hospitals with state-of-the-art research facilities, MGH, Harvard Medical, they're right here in Boston. And just to give you an idea, you know, these are some of the various sectors in biotechnology that are trending for their molecular biology research, right? And I have listed some of them right here in the next two slides. Again, a lot of the vaccine development, test kits and drugs for, you know, the current pandemic or for other emerging infectious disease, research is going right here. CRISPR-based therapeutics, CRISPR is the next big thing in biotechnology for a lot of, you know, medical issues. The research is happening right here in Boston. A lot of the data, you know, DNA data storage and using that data that we get from, you know, sequencing various organisms and storing all that information that is there in their DNA and helping, using that data to produce or to come up with, you know, therapies for different diseases is happening right here in Boston. Research based on microbiome. Now, microbiome is the, it's the sum total of all organisms that exist within us, that's microbiome and recently, the microbiome field is booming in medical microbiology. Why? Because, you know, scientists have found that microbiome has very strong links to many human conditions like, you know, asthma, depression, anxiety, ALS, cancer. So again, that research is happening right here in Boston. Research and synthetic biology, biosecurity, a lot of research in cancer therapeutics, you know, wearable tech that can detect certain diseases, all that research is happening here in Boston. Right, with that, thank you for giving me the opportunity to present here. I will unshare my screen. I think the question and answer session is towards the end, right? Yeah, so we'll get to, we'll have people start to, I'm sure you have many questions, as do I for a Professor Dey about what is a really interesting topic, and it is. It's the foundational course for the Masters of Science in Law: Life Sciences program. And so, this is just a tiny little sneak peek
and I think Professor Dey did sort of an amazing job of connecting his course into what we're seeing and reading in the news on a regular basis about different areas of research that's really impacting our lives. And so, I'm sure his class, you know, it's always getting rave reviews from our current MSLL students. So I'm sure you'll have lots of questions for him as well. Let me just share my screen with you as well. And for some of you that might not be as familiar with Suffolk Law School, I just wanted to provide you a little brief introduction about Suffolk before we kind of get to the heart of our program.

And Suffolk, we are founded in 1906, so we've been around for over 116 years, but really, the vision of our founder, I think, from starting in the early 1900s really remains true to today, that we at Suffolk really focus on providing our students experiential opportunities. So in and outside of the classroom, providing them with the skills necessary to take the knowledge that they're learning and being able to apply that in real practical ways. This allows our students to be competitive because they've taken that time to really develop the skills in our classroom and then lots of different opportunities that we're providing them outside of our classroom as well.

The Master of Science in Law: Life Sciences program, we are really excited about this program. It is our first truly interdisciplinary program that is offered at Suffolk University because it combines faculty members such as Professor Dey from our College of Arts and Sciences, we have faculty members teaching in the program from the Sawyer Business School, as well as from the Law School, Professor Landers teaches our Privacy Law course within the MSLL degree. And I think for many of us, we realize that an interdisciplinary program really reflects kind of our reality of how we work today because, you know, gone are the times when you just focused on one thing at work. Many of us are wearing many, many different hats, we're cross-trained and expected to know and understand knowledge in a variety of different areas. And so, offering an interdisciplinary program will allow you to customize the program, fill in the gaps and knowledge that you might be missing. So whether or not you are an individual
that's already an attorney and you're looking to transition into the life sciences industry and General Counsel's Office or you're a research scientist, maybe you're already working at one of the, I learned new terminology in Genetown in one of the many, many different biotech and pharma companies and you're looking to transition from the lab to a compliance or regulatory role. So we think that our program will provide you that additional knowledge to allow you to make the leap, transition into a new role and increase your career opportunities. This is data taken from MassBioEd, which is a nonprofit organization that releases yearly a report about the life sciences industry and workforce trends, and so, this data is taken from there. They're projecting an additional 20,000 new biotech pharma jobs just by 2024 alone. Over the last decade, a 67% increase.

And the specialization of the life sciences industry, and I think Professor Dey really was able to demonstrate that quite readily from his last few slides that he shared with you today, but this is a great graphic as well in which you are seeing from 2017 to 2019, that Massachusetts life sciences industry grew by 17%, almost double the rest of the life sciences industry in the United States and by and far much larger growth rate than the private sector, either in Massachusetts, both in Massachusetts and in the rest of the United States. And then even during COVID-19, you are able to see that they had a very strong and positive growth rate, more than double the rest of the United States at 4%, while the private sectors in Massachusetts, as well as in the rest of the United States did not perform quite as well.

So I think it really sort of demonstrates how solid the life sciences industry is and how much it is going to continue to grow in Massachusetts, which I think anybody would say is the life sciences hub in the world. So we are, the law school itself being located right in the heart of the city and we couldn't hope to be better located than where we are. This just shows over a five-year period from 2016 to 2020, there's a 55% increase over that short time period. Just drawing again to the strength and the continued demand. This was not a degree that we created overnight. This is a degree that was created because we saw that there was a need from the life sciences industry. They said, we went and talked to many different people, we talked with research scientists, we talked with the lawyers that were working
in the industry, the people that were doing the business development and securing venture capital of what, you know, and they said we can't find people. And so, we saw that there was a need that we could fill by offering this really, truly unique degree. And in fact, to our knowledge, there isn't any other degree like it because it really is a degree available to everyone. As long as you have completed an undergraduate degree, it doesn't matter what area it could be, you know, you just need to have a genuine interest in the life sciences industry. So it is, you don't have to be a scientist, you don't have to be a lawyer. It is open to any major. It is 30 credits in total and that is comprised of having 10 courses that are three credits each and you can complete the degree in as little as one academic year, so that's in two semesters, or you can be a part-time student and you can complete the degree as fast or as slowly as you want. And so, a year and a half to over to two and a half years. And what might that look like for somebody thinking about a part-time program, that could be as little as one day a week because our courses are taught in a module. So you would go from 4:30 until a little bit after seven and then 7:15 till just about before 10:00 PM at night. So you could be at Suffolk for as little as one night a week and so I think for many of us, we go, hmm, I think I could do and commit to that as a full-time working professional, to be able to come into beautiful Downtown Boston, to our lovely building, to learn about the life sciences industry. For any international students that are joining us this evening, what's really special about this degree is that it is STEM-approved. And so that's science, technology, engineering and math, and that means, so once you complete a degree in the United States, as an international student on an F1 student visa, you are able to stay in the United States up to 12 months after your degree completion. During that time, you can work and be paid and as long as it is a position related to your degree that you just completed. A STEM-approved degree allows you to remain in the United States for those 12 months.
and be eligible for an additional 24 months on top of that.
So 36 months, three years in total.
You would complete the degree in one academic year,
and then you would be able to stay,
work in the life sciences industry
and the global hub of that industry of that sector
in Massachusetts for up to three years.
So that's a really very special aspect
about our program for international students.
You can start, full-time students,
you can start in the fall semester
and we do have full-time students
only starting in the fall semester.
Part-time students, we're looking out for you
in that you have some additional flexibility
that you can start in the fall
or you can start in January as well.
So there are two start dates for our part-time students.
There is still plenty of time left for you
to submit your application for fall of 2022.
That priority application deadline date is May 15th.
So you do still have plenty of time to be able to do that
and put together your application materials.
If that's still a little too soon for you
for part-time students, the second application deadline
is in the middle of October for the January start date.
Every single application will be automatically reviewed
for merit-based scholarship potential.
So, you do not need to submit any special forms
or special statements.
Every single application will be automatically considered
for scholarshiping.
Scholarships range up to about a third
of the total degree costs.
And then let's get, well, you've seen
our Introduction to Molecular Bio course,
so that is one of the 10 required courses.
As you see listed here,
there's about half the degree program
is focused more on science
and then the other half on law
and business types of courses.
So you see, it's kind of the Intro to Molecular Biology
is the foundational course,
and it will unlock additional and more sophisticated
science-based courses,
such as Therapies and Applied Genetics.
You will see, for those of you that may have been
liberal arts majors and may have not had a time
or opportunity to take statistics, you might be
and say, hmm, I don't know about
Biostatistics for Clinical Trials.
All of these courses are aimed at anybody,
no matter their background.
So we are not going to be making you into a statistician, do not worry about that, unless you are one already. But what we do need for you to understand is the language that a clinical researcher speaks. So you have to be able to understand the data and that is important for somebody that is working and is a lawyer and working in the legal area of the biotech or med device company and it's also important for somebody who is doing business development, so they can speak intelligently about the science and what is happening and what people are working on in order to have additional funding.

So any of these courses, we are preparing you all along the way. And as I said, it's really customizable. If you were coming into this degree, so if you were, you know, for example, as Professor Dey, if he said, I'm gonna apply to this degree, he wouldn't be taking the Introduction to Molecular Biology course, nor would he be taking some of these other science courses with his background.

If you majored in molecular biology, we want to make sure that each course you're going to be taking within the program is going to add value to your degree. So I work very closely with a team of individuals, in particular with Professor Renee Landers, as the Faculty Director and we would ask for a syllabus, or if you're thinking about multiple courses, we would make sure to submit syllabi and we would interact with our faculty members in the science department, if there were a science course, so going to Professor Dey and say, can you review this? And students are able to waive up to nine credits, and then we would make sure we're finding an appropriate course to fit your particular interests.

So maybe it's a FDA and drug law course, maybe it's a biomedical and public policy course, maybe it's a forensics course and so, really we would look at the wide array of courses that we offer at the law school and if you're already an attorney and you're looking to transition into the life sciences industry and you took the basic IP survey course, you're not taking that again. We would either round it out with another science course or with a course from the Sawyer Business School as well, whatever it is that is of most interest to you.
It's important to note these are waivers, it is not advanced standing. So you are, the degree total itself still remains at 30 credits. We are just making sure the courses that you're taking are going to be the most beneficial for you, given your particular expertise and prior educational experience. And then, here are some upcoming MSLL events that we will be hosting. So I will be having a couple of meet and greets in April and May, and I have one in June as well. And then, we have a really exciting in-person event. So I think it's really our first in-person event since we stopped hosting in-person events for the MSLL program, and that will be on April 20th. So that will be a life sciences networking event. All are welcome to come and attend and that is from five to 6:00 PM in that gorgeous Sergeant Hall Building that we have, and you can register using that Bitly link there, /MSLLnetworking. So I hope that many of you will be able to join us for that. And then here is my contact information. Please feel free to email me directly if you have additional questions after the webinar tonight, or any of the rest of the MSLL team members that are both here with us tonight. They would also be happy to receive your email as well. And that concludes my portion of the PowerPoint presentation. I do want make sure that we get to any questions that you might have about the program, about the program structure or any questions that you might have for Professor Dey as well. So if you haven't had a chance to yet, please make sure to drop your question into either the Q&A box or into the chat box. We are monitoring those. I do see one question about cost, of how much does the program cost. The program is structured, you pay by the credit for the number of credits that you register in each semester and the current per credit rate is just under $1,800. So you're looking at just under $54,000 if you were taking all of those courses over that one academic year, that is for this coming fall in spring of 2023. Obviously as a part-time student, you have that flexibility to continue to take courses over a number of semesters. There might be questions also about externship
or internship opportunities during the program and we definitely, as Dean Sandusky explained, if students are able to waive out of courses, it's possible to make arrangements for an internship, a supervised internship that can count for credit. And also, we have a, Suffolk University Law School has a terrific career services and professional development office where we have lots of listings for opportunities in the life sciences area. And we would, you know, help students sort of sift through those opportunities and determine something that's useful and appropriate for them. And then finally, the Massachusetts Life Sciences Center has an internship platform where their members can actually, you know, sort of look through resumes that are posted on that site when they're looking for interns. So there are ways to get experience while you're still doing the program. Okay, and here a question, I think it's probably geared toward Professor Dey, of individuals that may have not taken a science course in a long time, maybe they're an individual like myself and I was an undergrad liberal arts major, and I took, fulfilled my science requirements. Is there any reading or other work that you could recommend, Professor Dey, for them to take either during your class or before your class to feel maybe a little bit better and more prepared? So usually the Introduction to Molecular Biology, the first science course that students take when they enter the program, it covers the foundational concepts of biology, all right. And while I'm teaching that class, if there is additional resources that you need access to, at that point, I do recommend, you know, books that are very useful and sort of gives you a very good idea of, you know, the topics that we are discussing in class. And I've had students who did not have any background in science and they informed me that they found the reading really, really helpful. Thank you.

A question about sort of, what is the application process? The application process, it's fairly straightforward. It's pretty generic to most applications. There's an online application that you would complete and an application fee, a personal statement, which would be your opportunity to tell the admissions committee more about yourself and why do you wanna pursue the MSLL degree? Where do you see this degree fitting in with your career path?
34:51 How do you hope to leverage this degree in the future?
34:56 And then obviously a resume, curriculum vitae,
35:00 two letters of recommendation, so it's really up to you.
35:06 They might be professional letters of recommendation
35:09 if you've been in the workforce for some time,
35:13 or if you are more a recent graduate,
35:17 you can also, maybe you would have a close relationship
35:21 from a faculty member that you would like to submit.
35:25 There is no requirement for work experience
35:32 for you to be applying to the MSLL program.
35:36 We have had individuals that have been recent graduates
35:39 and we've had individuals that have had a number of years
35:42 of professional work experience
35:45 before deciding to come and pursue this degree.
35:50 And then finally, transcripts, of course,
35:52 and that would round out your application file.
35:59 I think this question is directed to me, I guess.
36:05 So I can obviously talk about
36:08 Introduction to Molecular Biology.
36:10 Usually there's different ways to assess
36:14 how somebody's doing in the class.
36:17 We have multiple exams, you know,
36:20 we have four exams and then one final
36:23 and then apart from that,
36:26 the book that is recommended for this course,
36:30 for Intro to Molecular Biology,
36:32 that book comes with an online resource called Achieve
36:35 and I personally love Achieve.
36:38 Why? Because...
36:39 And it's really good for students
36:41 who don't have a very strong background in science.
36:44 Why?
36:45 Because Achieve not only comes with a quiz section,
36:49 it also comes with something called Learning Curve
36:52 where you are not graded based on what you know, all right.
36:57 If you get questions wrong in Learning Curve,
37:00 it just takes you back to the section of the book
37:03 where that concept has been discussed
37:05 and it just tells you to read that again
37:07 and come back to the question and answer that question.
37:09 All right, so it doesn't take any points
37:13 for getting answers wrong.
37:14 It just ensures that you have understood
37:17 the concept really well
37:19 and you know how to apply them to those questions.
37:22 So, you know, these are some of the ways in which,
37:25 you know, we assess.
37:27 In some of the other courses, for example,
37:30 the Business of Life Sciences course,
37:35 the professor assigns group projects for students to work on
37:40 and complete throughout the semester.
37:43 In my course on Privacy Law,
37:46 we, you know, do a lot of readings
37:49 on various privacy regulations in the United States,
and also focusing on Europe now
with the General Data Protection Regulation.
And we take a look at things like evaluating
particular organizational needs for privacy policies,
evaluating the privacy policies
they've posted on their own webpages.
So real assignments, you know,
trying to get you to think about what it's like
to work in an organization and understand
what kinds of information the organization produces
and what kinds of regulations might apply
to how the organization uses that information.
And so, there's a tremendous variety of the ways
in which the courses are evaluated
depending on where they sit in the curriculum.
There was also a question from Simone Blowers
about what kind of majors are offered in the program
and this is a graduate program,
which is really fairly targeted,
narrowly targeted on training people
in the various disciplines that relate to,
you know, working in the life sciences industry.
So it doesn't really,
it's not really amenable to any kind of majors.
However to the...
So if a person comes and is not able to waive
out of any of the courses,
then the entire curriculum is filled
by the required courses for the program.
If a person, for example,
is able to waive out of a science course,
or if they're a lawyer, one of the law courses,
then the possibility exists for that person
to kind of drill down in the law school curriculum
or the business school curriculum
on some particular area of focus.
So there really isn't the opportunity for a major
and, you know, a full-time student would complete
the program in a year,
a part-time student, you know,
over two or two and a half years.
So, really isn't time either to, you know,
kinds of have that kind of concept operating in the program.
Any other questions?
You can also just place 'em in the chat or in the Q&amp;A box.
And you, as I indicated earlier,
please feel free to outreach to any of us here this evening
with other additional questions or concerns
that you might have.
And I hope that many of you will decide
to come to one or many of our upcoming MSLL events
to learn more about the program,
to come to the in-person networking event that is happening
next month that we are really excited about.
And you would be able to, Professor Renee Landers, she did a mini-class like this for her privacy class this past fall and you can go to our website and see some of the other mini-classes that we have offered over the last couple of years.

Well, we certainly have full-time faculty like Professor Landers and Professor Dey that are teaching in the program. We also have a really rich and deep individuals that have been working in the field that are teaching some of our other courses.

So you would see a mini-class from attorney Bruce Leicher, who teaches our Biotechnology Business and the Law course and we have other individuals that are working, you know, full-time, doing compliance work, teaching our compliance and the life sciences program or compliance in the life sciences course.

So I think that adds an additional richness to our program. And in fact, I had a recent student who told me she was able to secure an internship through the very kind introduction of one of these faculty members for this coming summer at Dana-Farber. Really exciting and they're wonderful, all of our faculty members in really giving of their time and mentoring our students.

We have a question, what kind of placement assistance is offered after the program? And I'd actually like to kinda, you know, move that question back of, you know, during the program. So unless you are a part-time student that has a full-time job during the day, I do think it's probably to your benefit to be able to have some sort of internship experience during the MSLL program.

We work together, so director Jennifer Karnakis, who is here with us today and she's the Director of Intellectual Property Programs at the Law School, and then Professor Landers, both of them have very deep networks in the Boston legal community, health community, life sciences industry. In addition, because this is an interdisciplinary degree, you get the benefit of access to both of the Career Services Office.

So at the law school, we have our own professional career development office, just for students who are enrolled at the law school and you will be a law school student because it is a law school degree, but you also have the benefit for accessing the Career Services Office at the university in different events.

So for example, this week,
they're having a virtual STEM career fair through the university, at Suffolk University. So MSLL students have been invited to participate in that, and that, you know, I took a look at the employers who are participating and it reads as the who's who in biotech, you know. So it gives you an opportunity to interact. It's a really nice platform that they use when I took a peek at that earlier this week. And, you know, so both Career Services Offices can really sort of review resume and cover letters, talk with you about job search strategies and all of us, as part of the MSLL team, are there to mentor you as well, to think about, you know, what career options are out there for you, provide additional networking events on site and online for our students to be interacting. So I think exactly like what Director Karnakis is offering next month, we have a number of law school faculty and university, or law school, law school graduates and university graduates who are working in the life sciences industry. So we have been happily reconnecting with those graduates when we started this degree and so that community is deepening day by day for our soon to be graduates that are entering into the program as well. So I think we have a lot to offer by way of help and assistance for individuals in regards to career and job placement. Well, I think you have hit upon usually what would be the most pertinent questions when I have and host my meet and greets with our students. And so I will certainly, I will thank you for your time and your attention and attending this evening's mini-class. I thank Professor Arup Dey for his really engaging talk and I hope that many of you will continue the conversation with us and think about applying to the MSLL program in the future. So I thank you and I wish all of you a very pleasant evening.