

Chloe Sales:

Welcome to The Spark: Medical Education for Curious Minds. We present the stories behind the people at UCSF and get to know the human behind the professional. I'm Chloe Sales, a student in the School of Medicine.

Paul Brandfonbrener:

And I'm Paul Brandfonbrener This season we're sparking a new conversation across UCSF. Where do you find joy, meaning, or purpose in your work? And now, Chloe, can you introduce us to our next interview guest?

Chloe Sales:

Yes. Our next guest is Dr. Andy Josephson, who's the chair of neurology here at UCSF. And in addition to his multiple leadership roles, he actually is the course director for Brain, Mind and Behavior, or BMB, which is a course that second year medical students take about neurology and psychiatry.

Paul Brandfonbrener:

It sounds like such a fun class, even though the material is so hard. My introduction to it, I was in a class next door to yours, and we had to get warned that there's going to be some shouting and loud noises next door until 9:30. And so we had to kind of deal with that. It sounded like a great time. What was going on in there?

Chloe Sales:

It was awesome. So for the first day of BMB... Which, neurology and psychiatry are difficult topics for anyone to learn. There's just a lot of anatomy that goes into it, a lot of different treatments, a lot of different medical ETI ideologies. But to make learning fun and engaging, what Andy actually did along with his co-teacher, was get all these little mini firecrackers, those little handheld fireworks, and he handed them out to us before class started and was like, just wait. And I'm going to start playing music, and then we're going to pull them all at the same time and just have a fun little introduction to BMB, which was amazing. There was like music playing. We had all these firecrackers. Everyone was dancing. It was a good time.

Paul Brandfonbrener:

That would explain the noises next door. Wow. It's so great. And we thank Dr. Andy Josephson so much for coming on and talking with us today. And now without further ado, here is our interview.

Chloe Sales:

Thank you so much for coming Andy. I really appreciate having you on The Spark. For those of you who don't know, Andy is the course director for the Brain, Mind and Behavior course here at UCSF for second year medical students. Welcome, Andy.

Dr. Andy Josephson:

Thanks so much for having me.

Chloe Sales:

Yeah, of course. How did you get from point A to point B, where you are right now?

Dr. Andy Josephson:

Well, that feels long. So I grew up in the Midwest, came out here for college, was the first time I experienced California, went back to the Midwest for medical school. And then I actually matched here as an intern at UCSF in medicine and then in neurology. My course to medicine was not a straight one. I didn't know what I wanted to do when I grew up. I got really excited about medicine in general, both in undergrad and then obviously in medical school. And for me, one of the things that really attracted me to academic medicine was the real diversity of things that you can do.

So I'm lucky, I wear a lot of different hats around here. One of them this time of year is directing the Brain, Mind and Behavior course, and I just enjoy sort of the tripartite, it's even more than three now, missions of an academic university. I love taking care of patients, we can talk about that. I love teaching and everything around education. I love research. I love my ability to impact things in our diversity mission, global health, public health. And so for me, it's really ideal. And I have this very interesting job where depending on what time of year we'd be having this conversation, my daily activities would be completely different. And right now I'm very focused on the second year Brain, Mind and Behavior course.

Chloe Sales:

Could we dive into that a little bit for our listeners who might not know what neurology is or what the Brain, Mind and Behavior course is? Could you give a brief overview?

Dr. Andy Josephson:

Yeah, sure. So neurology is a great specialty, this'll be my plug, where we get a chance to deal with all disorders of the nervous system. Some of these are disorders that affect elderly individuals, like Alzheimer's disease or Parkinson's disease. Some of these are people right in the midlife, like people who have stroke or traumatic brain injuries. Some affect people when they're young, multiple sclerosis, neurodevelopmental diseases, et cetera. These are disorders of the brain, the spinal cord, the nerves, the muscles, et cetera. And so for me, it encompasses not only rare conditions, but conditions that are the most common reasons why people go to a doctor back paying neck pain, nerve pain, et cetera, headache. And so this is a wonderful field if you like the spectrum of illnesses.

And to some extent, neurology is almost a little bit of a deferred choice because people go into neurology, say, well, I'm not sure. Do I want to work with young people, older people? Do I want to work in the hospital, outside the hospital? Do I want to work in research or education or clinical? And so to some extent, our residents, one of the reasons we love it is that it's an opportunity to sort of put off the choice a little bit about what your lifestyle would be. As opposed to some specialties where everybody who goes in that specialty has a very similar lifestyle, however you might do it.

And then our Brain, Mind and Behavior course is now our second year medical school course. It used to be the last course of first year. Where we delve into the brain as deeply as we can. This is neuroanatomy, neuropharmacology, neurophysiology, neuropathology, and then clinical neurology, clinical psychiatry, and clinical neurosurgery. I think one of the things that's really unique about our course is that it is a course that encompasses neurology and psychiatry. I personally of the opinion, and I think our whole courses, but our department, that neurology and psychiatry are just two different groups of disorders of the brain and why some things have been, quote, called neurologic, like Alzheimer's disease for instance, and some things that are called psychiatric, like schizophrenia for instance, is really old silos. These are all disorders of the brain and circuits of the brain and neurochemical problems of the brain. And so I think tackling them as one continuum rather than saying,

oh, these are, quote, neurologic or these are, quote, psychiatric, allow us to really help our patients regardless of what disorders they present with.

Chloe Sales:

Right, rather than seeing them as two completely separate different things, seeing them as having more common etiologies or perhaps vocabularies to share.

Dr. Andy Josephson:

That's right. And the way UCSF has done is that there are neuroscientists in my department, there are neuroscientists in psychiatry who are working on the same disorders. We don't view it as siloed. We also recognize that a lot of the disorders we learn about in neurology have a huge, quote, psychiatric component. They have coexisting mood disorders for instance or they're triggered by stress, et cetera. And similarly, there are disorders that have traditionally thought to be, quote, psychiatric, schizophrenia would be an example or psychosis, that now we know in many cases may have a, quote, neurologic basis. They have a genetic basis that we know they have neurochemical basis that we've identified. In some cases, an autoimmune basis that we've identified.

And so I think one of the reasons why UCSF has been such a leader in neuroscience is our ability to not think of these as two different areas, think of them as one. And that's how we approach the course. And that's what makes the course for me so much fun is thinking about these disorders broadly.

Chloe Sales:

And you mentioned fun and then you mentioned earlier the tripartite sort of system with which you approach your work. I was wondering if you could talk a bit about how you find that joy or meaning or purpose in that tripartite system that you mentioned?

Dr. Andy Josephson:

Yeah. Well, we could go on and on this, but let me give you some examples. So one, I'm a clinician at heart. I'm an inpatient neurologist. I work in the ICU, outside the ICU a neurohospitalist, a stroke neurologist, a neurointensivist. And to some extent, I just love caring for patients. I do some outpatient work, but outpatient or inpatient I just love caring for patients. And I feel that Brain, Mind, and Behavior's wonderful, during those seven weeks I spend time teaching, we'll talk about it. But in order to make time for it, I don't do much clinical work during Brain, Mind, and Behavior-

Chloe Sales:

That's right.

Dr. Andy Josephson:

And at the end, I am just hungry or thirsty to see some patients because it fulfills me so tremendously to be able to help patients, help their families, et cetera.

At the same time, I get so much out of teaching the next generation of hopefully neurologists, but also people who go into other fields, not only our medical school course, but I play a big role with our residents and our fellows in our department. And for me, teaching is really the one aspect of medicine that you can only do at an academic institution. I was someone who I don't believe that teachers are born great teachers, I think it's something you really work at hard and get better over the years and I think I'm still hopefully getting better as the years go by. But the key is that I get so much out of

imparting and trying to make teaching neurology fun and accessible and thinking about the brain as exciting. I probably missed that mark more than I hit it. But for me, that's great.

So this mix of those two pieces, which are only two of the pieces of the things that I do, is really nice. And they sometimes overlap like when I'm one of the few course directors who also really attends a lot in the third year. So sometimes we'll see our students come back and for them that might be fun, or I may quiz them on the brainstem lecture, which they're not so thrilled about. But it's great. It's great to see people across, all joking aside, the continuum of what we do and getting an opportunity to see students sort of get better and better over the years.

Chloe Sales:

Yeah, absolutely. And you mentioned the importance of teaching and you, you're such an enthusiastic professor. Every time we go to a lecture, I feel like we're so excited to learn. I was wondering if you have also had your own teachers who've made you very enthusiastic about certain subjects in medicine?

Dr. Andy Josephson:

Yeah. So I think there's no question that one of the things I always say about teaching, I say this about clinical work as well, is that everything I do is stolen. So how I interact with patients is a conglomeration of great physicians whom I've been lucky enough to learn from, take a little bit from each person and make it sort of mine. And I'd say the same thing about teaching. Dan Lowenstein and I taught this course together for over a decade. And we both, I think learned a lot from each other. And there's ways that I teach that I've adapted from Dan and vice versa.

When I was in medical school, I've got great teachers who I love, people like Allison Whelan who was a geneticist where I went to medical school and learning from them, taking some of those lessons. Oh, how do you teach that? How do you get students engaged? I'm just very much a conglomeration of people that I've learned from. And my dream is that there are educators in my department who I've mentored who are now faculty members who have stolen a little from me and made it their own. And I got to say, in terms of things that fulfill me, I find that tremendously rewarding to be able to learn from other folks and then be able to develop it into how I like to teach. And I find that to be one of the most fun things that happen. And I will emphasize that teaching's hard work and every year trying to get better at it is what I spend my life trying to figure out.

Chloe Sales:

Yeah, it's like anything in medicine you get better at it with time and practice and every year there's improvement.

Dr. Andy Josephson:

I think it's right. Although I will just caution that for reasons that are unclear to me many people say that doesn't apply to teaching. There's this lore that, well, you're either a good teacher or not a good teacher. But I don't believe that. I think just a clinical skill, just like a skill in the laboratory, these are things that you can learn.

Chloe Sales:

Yeah, absolutely. So we talked about the first and second parts of your tripartite, the teaching and the clinical, and the third I think you mentioned was the impact that you can have outside of UCSF.

Dr. Andy Josephson:

Yeah, that's really important to me. So my other hat around here, I'm the chair of the Department of Neurology. So I run a really large ship, about 250-70 faculty members. And one of the things that is really fun when you become in one of these administrative roles, a leadership role is that you realize that now much of what you need to be proud of and what should fulfill you is what others do who you lead or help. My job is to work for my faculty and staff and trainees and give them all the resources they need to be successful. And therefore when they put out a great paper or they do something great in the teaching world or make a great discovery in clinical medicine, I view that as very much prideful for me, which is great.

I think one of the other fun things about academics is just sort of dissemination of whether it be research or teaching techniques or clinical stories. And I think that academic medicine is unique because so much of the goal is to teach others broadly. So, when one of our students becomes a dermatologist and practices in Boston and sends me a note and says, Andy, I saw this patient with a brainstem problem and I thought of your lecture. I mean, that just warms my heart tremendously. But at the same time, we've got people in our department who I've supported and rooted on and been their biggest cheerleader, who then make a big discovery and a paper comes out and Nature or Science or something, and that teaches the world something important about one of our diseases. And I take great pride in that.

I think that UCSF is such a wonderful place because to a large extent it is about that dissemination. It is about making a difference globally, not just locally within the walls of UCSF, although we spend a lot of time on that. And for me, that's really part of it. So the fun of teaching this time of year is the dream that these students will go out whether they become neurologists or not, and take lessons away from me and our big groups teaching and Brain, Mind, and Behavior that'll help patients help discoveries help teaching for years to come.

Chloe Sales:

Exactly. And it sounds like teaching is so integral to who you are at UCSF, and I'm wondering, did you always know that you wanted to go into teaching or into academia or had you considered other forms of practicing medicine?

Dr. Andy Josephson:

What a great question. So I realized pretty early in medical school that there was something really unique about academic medicine that really afforded you the ability to do very different things. I looked at my professors in medical school I went to, and boy, they were all doing different stuff and that sounded really fun. And like me, some of them were doing different things in the spring than they did in the fall, and that sounded like that would be really exciting. So that was part of it. But I didn't know what I wanted to do. And early on when I was here, I was actually afforded the ability to teach some small groups in what was then Brain, Mind, and Behavior. This was a time when there was a new course leader. Dan had left the institution for a little bit to take another job before he came back and we were sort of just re-imagining the course. I really enjoyed that.

And then there were opportunities that came up and said, well, Andy, if you like this so much, could you help us redesign the small groups? And I said, sure, that sounds like fun. I think one of the lessons in academic neurology or academic medicine in general is that you're always going to be given opportunities. And one of the things that's tough is you can't say yes to all of them. That's really important. But so much of what has happened good in my life and my career has been because

someone was nice enough to give me an opportunity and I took it. Some of them turned out to be dead ends that, that was neat but I don't think that's something I want to do long term.

But with teaching, it was sort of little opportunities then became a big focus that I really enjoyed and I wanted to get better at. I think part of my role as a chair or a leader here at UCSF is trying to give as many people those opportunities as possible. because that's really what academics is about. And the joy that it brings me giving somebody an opportunity to explore some area they take in and say, man, that was great, Andy. Even if they decide they don't want to do that long term, but they want to do it for a little period of time, that is tremendously fulfilling. And I think that's a huge part of why I went into academics. And it is huge part why I stay in academics because that that's something that brings a tremendous amount of joy.

Chloe Sales:

What advice would you have for some of our medical students or even pre-medical students or how to find that joy? If it's not teaching safe for someone, how do we know what sparks it for us?

Dr. Andy Josephson:

So my advice is probably one that's different from others, and it kind of goes on that last answer. And it's to really spend time taking all that UCSF has to give, and that means trying out a bunch of different things. To not be afraid that I'm going to do this and hate it. If you do something and are unsuccessful or don't like it, I view that as a tremendously good thing because that means that's not the thing for you. But if you never try that thing, if you never say, I'd like to be a TA in grad school or whatever it may be, if you never try that thing, you'll never know. And so I always encourage students, even ones who seem to have a really straightforward path, this is what I'm good at, this is why UCSF wanted me here. This is my thing. I say the same thing to residents. I say, look, we know you're good at that. You want to do that your whole life. That should be part of your career. But when you're in training, spend time doing the other things. Trying everything from the buffet and deciding if it's something that's right for you. I've never really heard people who said, oh, I tried too many things when I was in training.

Again, something that's unsuccessful is as good of an answer because I don't want to do that as finding something that really jazzes you. And a lot of what I've done in life have been things that I was given little opportunities and they grew into big parts of my career. And so I am forever grateful for people giving me those opportunities. But that advice I give out all the time to people who ask me.

Chloe Sales:

Yeah, that's actually so funny that you mentioned that, Andy, because before I got to UCSF I had gotten in and I talked to my mentor and I said, oh, what do I do? How do I approach first year medical school? And she said, just treat it like a buffet. Try every single thing you can.

Dr. Andy Josephson:

That's great. I totally agree with that. She's on my side. Yeah, I agree with that. You will find other advice that is polar opposite of that, which is you are talented in this area, dig deeply into it. I think you still need to dig deeply into areas that you find outstanding, but spend time with those other things. Because when you're, like me, when you're a professor and you've been here quite some time, I've been at UCSF over 20 years, there comes a point where I'm not going to learn to be a surgeon tomorrow. That's very unlikely I'm going to go back and do another residency. But you have that opportunity while you're in training to really try all sorts of different things.

Fourth years ask me all the time, Andy, I think I want to go into neurology. Tell me the six neurology rotations I should take in fourth year and I say, don't do any of them. Do a sub-I If you're sure you want to be a neurologist, spend the rest of fourth year trying out ophthalmology and dermatology and rheumatology. These are the last chances you're going to have to try these things out. So, some people view that as a little bit of skewed advice. But I think it's been really good for me and I think it's been really good for students heeded that advice, which has been really fun. This is a chance to sample that buffet, as your mentor said, and I totally agree with it.

Chloe Sales:

Yeah, I know. I feel like sometimes we get siloed into certain tracks and don't really get an opportunity to look beyond that, which is cool. And then I did want to just touch on this one last thing. You mentioned the importance of clinical care and I feel that that's something that's been very evident from the way that Brain, Mind, and Behavior has been taught in that for those of you who don't attend UCSF, we have a number of patient panels where actual patients at UCSF come and speak to us about various neurologic conditions that they've been experiencing. And I just want to say that I've been really grateful for the opportunity to hear their stories and to hear firsthand what they've been going through. I was hoping you could comment a little bit about the practice of inviting patients over.

Dr. Andy Josephson:

Yeah, well, it's a very personal, difficult thing to do. I have tons of patients whom I care for and even just broaching the subject of, would you like to tell this incredibly personal story in front of 160 plus medical students-

Chloe Sales:

It can't be easy.

Dr. Andy Josephson:

... It's really tough. But for us, we find that you can learn so much more in an hour by hearing a patient talk. You don't have to listen to me in an hour lecture in front of the class. I can do that on a audio or a video, and you can watch it at 10 times speed, but I talk pretty fast. But at 10 times speed, you can do that. But there's nothing that is more eye-opening than patients.

I find that in clinical medicine, I have learned so much from patients, and it's very cliché to say, but I can still remember patients I saw as a medical student who had a disorder X and when I think of that disorder, I think of that person. And that was 25 years ago. And so to some extent, we think the value of learning for patients it's not scripted, it's a little off the cuff. Things can go sideways sometime. But hearing from patients and their physicians, I don't think there's anything that supplants that. In medical school, we thought long ago, and we've done a lot of innovations in BMB. We were the course where people try things. Sometimes they work, sometimes they don't.

And one of the things we started doing maybe about 10 years ago was that, look, if we have a session and all it is a one-way exchange of information, it's me talking to you, let's just record that. There's no reason for us to all come in for that. But if we've got a patient or we have a flip classroom or some sort of interactive session, let's then get everybody together in a room post-COVID, pre-COVID to be able to make that happen.

And so for us, not only bringing patients in, but deciding what material, I mean, look, we have huge textbooks of neurology and psychiatry, we could talk for years. But we, as you know, in the course have said, let's focus on things that are clinically relevant and that every student, no matter what subject they

go into, we'll need this information for the rest of their career. And so for me, hearing a patient we did this morning with Alzheimer's Disease talk and describe their journey and what that's like. Seeing a patient with a stroke, sort of talk about what that was like in the recovery from that. That's more than we could ever lecture. And that's a much more valuable use of our students time than hearing a one way flow of information, which one can get online or we can turn into an online module, or Khan Academy or YouTube or Twitter or TikTok or whatever that teaches that.

So we are just so humbled and grateful that these patients allow this type of a personal exchange. And our students are just, I still believe we've got the best students in the United States by far at our medical school, and they are so not only respectful but I think so grateful to hear these stories that are sometimes tough to tell, sometimes tough to hear. And that's in, remember, neurology and psychiatry, which are very, very personal stories. And for me, that's one of the things that makes the course so exciting.

The other sort of secret is we use different patients each year. Today, this morning we had two different patients, if you'll remember, and both of them had never taught in Brain, Mind, and Behavior before. And that allows us to have a real diversity of voices, diversity of disorders, diversity of people, diversity of experiences. And so each year we are all as excited to hear the patient presentations as I think our students are. It's a key part of our course.

Chloe Sales:

I had no idea that there are different patients every year. That's incredible. And I can tell you too, from the medical student perspective, some of us walk out of that classroom and just sit out in Saunders Court and just sit there for 15 minutes just debriefing what we've heard from the patient, just an admiration of what they're able to share. And it also removes the anonymity from a lot of these conditions and diseases as well. I think sometimes learning from a textbook can be so impersonal.

Dr. Andy Josephson:

And I think as one of the things we try to do, but I think is throughout the whole curriculum, is how do you teach compassion? How do you make students compassionate about illness? And I think when you put a face to the name, when you hear a story from a real life person that breeds that compassion. As you say, when you're reading a textbook it all sounds very impersonal, very distant, very rote. But when you have an opportunity to learn from an actual person who's talking to you and telling you personal things about how they interact, you become a more compassionate person. You become a better doctor. And ultimately, that's what we're trying to do. We've got the smartest medical students in the country too. I'm sure I can give you a textbook and you can pass every exam that we'd ever put in front of you. But that's very different than teaching people to be great physicians. And I think it's that compassion that allows us to do so.

Chloe Sales:

That's amazing. Thank you, Andy. And on that note, I think we've answered our question, how to find joy, meaning, and purpose in our work. Thank you so much.

Dr. Andy Josephson:

Thanks so much for having me. Really appreciate it.

Paul Brandfonbrener:



That was such a great interview with Andy. It really seems like he has such a wide range of interests, and he is really found a job here that allows him to dive deeply into all those interests.

Chloe Sales:

Yeah, I agree. And I really thank Andy for sharing what his life as a doctor looks like. As Andy showed us, there are multiple ways to contribute to medicine. Not just taking care of patients, but also helping train, say the next generation of doctors as a professor of medicine, or even going to a different country and helping establish a foundation to help treat and provide care for populations there.

Paul Brandfonbrener:

Yeah, that's something I really appreciated in my time as a medical student so far, is that there are so many people here doing so many different interesting things that they find meaning in. I think one of those that really has stood out to me is how important that mentorship is here at UCSF, and how much people prioritize that as parts of their profession. And I think that kind of comes back to something Andy said, where he felt that someone was nice enough to give him the opportunity to lead him to where he is today and he feels that responsibility and mission to pass that onward and pass that forward.

Chloe Sales:

Absolutely. I think especially in medicine, mentorship is just a chain of teaching and learning. And I think he mentioned this too, that he is sort of the amalgamation of all these different, quote-unquote, parts of stuff that he admired in his own mentors and parts that he borrowed in order to become the best teacher or physician that he could be.

Paul Brandfonbrener:

And I think you gain kind of those parts and those experiences through trying new things, which is something that Andy also talked a lot about as well. Which is, kind of in your training to try out sample the buffet and try these new experiences that you're not sure if you're going to like or not and maybe you might not a lot of them. And that's also good data points. It's important to know what you like and what you don't, and to take all that information to kind of push you forward and grow from that.

Chloe Sales:

Right. How would you know if you don't try?

Paul Brandfonbrener:

Exactly. So our message to the listeners this week is to sample the buffet. Try something new that pushes you out of your comfort zone, that you're not sure if you'll like it or not. But either way, you'll grow from it. And thank you again for listening and stay tuned for our next episode of The Spark.