Matt: Hello, and welcome to the podcast pathways from Warwick chemistry.

This week, we'll be talking to Dr. David Fox. We'll be chatting about his journey to where he is. I'll let him tell you guys more. Would you like to introduce yourself?

Fox: Hello! Yes. Hello, Matt! So yes, I am David Fox. And I am indeed a academic at the University of Warwick, Chemistry department. I'm a only an associate professor. I haven't reached those bright hines and I, this will set the tone for the podcast and I probably never will, but that's a choice, right. Because you know, if you're here to talk about pathways, then you know, let's talk about all of the various possibilities.

Right. Um, and what life has to offer people. So, yeah, I being an academic is that is an odd thing. I mean, the university is, uh, you know, is always trying to evolve. It's always trying to improve. It's always trying to invest and you know, we've spent a lot of time recently talking about changes to the course, changes to the infrastructure, change the building even, they are thinking around new building. There's going to come in the next 10 years. It's very exciting as well. So really being an academic in the middle of all of that is often quite an interesting thing because you know, students come students go, right, but we're sort of semi permanent fixtures and we have to sort of change with the university. And I think what you realize very quickly is that there isn't a single path, right. To use your word pathway there isn't really a single pathway, I don't think. Um, and I can tell you a little bit about how I got here. Um, I suppose I was really fortunate when I was young. Right. My father was a farmer.

Right. Hello to all you, you know, sons and daughters of farmers out there. Um, uh, you know what I mean? Uh, okay. So in a slightly odd way without suddenly sounding entrepreneurial. Cause I never really saw my father as being like that, but you know, my dad sort of run a business and a large business, but not economically.

I mean, physically, it was quite large, you know, farms, you know, fields and all that kind of thing. So, but I think most importantly, uh, was, it was very interesting, um, uh, early life. Well, there's always things to do, right. There's always somebody to go outside and there was always something to do, help me out.

And it was always doing things, you know, sometimes he was mending things or digging things or driving tractors and all that kind of thing. And he spent a lot

of time in the workshop, uh, fixing things, building bits of machinery, all that kind of thing. And so I suppose I've always liked that kind of thing.

Right. I've always liked the hands-on aspects of. Of life and, and I particularly, and even now, I still like doing all that, but still I like fixing things. And usually when things break, actually, you know, the guys call me downstairs and I have a go at trying to fix them.

Right. So that sort of, it's terrible. They want to sound like some sort of cheesy thing, but, but, you know, People do stuff. I am a person, therefore I can do stuff. I'm not saying I'm going to do it well, but you know, if somebody can fix this or mend this, or do this, then I suppose I can have a go too. I'm not arrogant enough to believe I'll be great at it, but you know, I can start.

Right. So, so it's this thing. It's just sort of having a go and I there's a lot to be said for that. There's a lot to be said for being quite flexible as well. And haven't got a wide variety of things.

Matt: Yeah, absolutely.

Fox: Which is what I think farming kind of teaches you.

Matt: Yeah. You're absolutely right. You can try lots of things and you can succeed and fail. Right. But as long as you're understanding and flexible about what you can do and what the results are expecting, you can make good progress and learn lots of stuff. Right?

**Fox:** Well, most of the things you're going to do in life, you're going to fail at. Because actually, otherwise you'd never, I mean, you can't just roll the dice every time ago and pick some new activity and go, oh, you know, have a go and be awesome at it. I can try anything. I mean, that's the point, you learn very quickly. You know, I am the sort of person that needs a ruler in order to draw a circle.

You know what I mean? That's how level that's how good my artistic talent is. And, you know, I mean, things like that. There's all kinds of things out there and that's fine. And I'm trying to avoid them, uh, obviously, uh, just for everybody else's benefit mainly. But, um, but, but you, you have a go of things in life and after a while you sort of work out what you can, what you can do and what you can't do.

And so I suppose all the way through my education, uh, and, um, my job, I'm trying to avoid the word career. Well, I only, the only time I like to use the word career as a verb, really, rather than a noun, you know? Cause I feel I have careered not really have a career. Um, and that it's no, I've just ended up doing what I do because somehow I just quite enjoy it. People keep paying me. Uh, and so that's that really. You know, there's a lot to be said for that, right. There's a lot to be said for just doing something you want to do.

Matt: Yeah, absolutely. I feel like it's one of those things and it goes with the saying if you enjoy what you do, you won't work a day in your life. Right.

**Fox:** You know, and you know, there we go with my senior tutor hat on, because I'm Senior tutor in the Department, and is always having sort of attempting to steer people towards some sort of success and, you know, and I often say to people when they get into some sort of jobs or careers, you know, what do you actually like doing?

And is there some way you can get paid to do it? You know, that's it, that's the way forward because you know, jobs are somebody else's definition of a career, right? I mean, you know, if you want to do this thing here or that thing there.

Matt: Yeah, so going through undergrad, did you find that you knew you wanted to go into medicinal chemistry and do the work that you do now?

**Fox:** No, absolutely not. Didn't like biology. What was all that about? What do I need to do with that? So I've always liked organic chemistry, uh, like that curly arrows.

Thank you, Mr. Adams, just to name check my 6th form chemistry teacher. Thank you. Who first taught me curly arrows. So really liked doing that and yeah, always did the organic chemistry, uh, as much as I could. Really at the time it was a bit of a numerophob, uh, really struggled with the year 1 maths for anybody else who was out there.

It's a moment. Remember once sitting in a lecture about begrudging multipliers, I still don't know what one is or whether or not it has teeth. Um, it, it it's what the hell is that? So, anyway, so I'm sure they're great. Anyway, for those of you out there who understand what that is, but, but, um, uh, yeah, it was just not for me, all of that kind of thing.

And I suppose I only as a finally, when I got, as far as the post-doc, um, jumping about here, but I got interested in sort of much more mechanistic

chemistry. Well, physical, organic chemistry as we call it, um, and really had to go back and relearn kinetics and that kind of thing in order to get that.

So that's about as much physical chemistry I've liked, always been organic kind of chemistry person. And, uh, yeah, so that's that really. I suppose I carried on from there to do a doctorate because, well, I enjoy doing it and I just want to do some more. And that seemed to be the way one did it. You know, I wasn't anything that I had, no career aspirations never really had any, um, I'll tell you a story about that later. So I carried on doing that and I did organic synthesis in my doctorate. I did, you know, isometric synthesis. Lots of it didn't work. Lots of, some of it did work, you know, that kind of thing. And I suppose it was at that point that I saw a postdoc job and went for that. And it was in medicinal chemistry and I thought, okay, this isn't interesting but needed a job. Uh, went for it. And, uh, actually it was quite interesting because I realized very quickly that really medicinal chemistry, well, it's about senses, it's about basic molecular reactions and interactions I should say.

And, uh, polarity and hydrogen bonding, hydrophobic interactions, that kind of thing, which kind of makes sense if you understand the structural chemistry and, uh, and then there's some reactions, some metabolic reactions. And I actually, once you have a basic idea of sort of enzymes that are there, uh, in vivo, we're not going to metabolize your compound again, suddenly it doesn't seem that different from synthetic chemistry really?

And once I realized I didn't actually have to learn the names of enormous proteins and what they did, and sort of saw the world as you know, in that kind of, and described as blobology, you know, this idea where things aren't really molecules anymore, they're just sort of functional blobs interacting in some sort of network.

It's not really me, that kind of thing. So once you realise you don't have to do that, you realize that actually medicinal chemistry is chemistry and, uh, as is, most biology really, and then, you know, it was fine really. The other thing I've realized it was this it's quite useful. And quite a lot of people are quite interested in doing it and we'll pay for it.

So they you go, that's why I got into that.

Matt: Yeah, absolutely. So you were talking a bit about how you progress from synthetic chemistry and the mechanistic stuff towards the blobology right. Can you talk a bit more about what you're currently working on?

**Fox:** Yeah, so almost all of my research is commercially oriented medicinal chemistry.

So my research group is a joint sort of academic industrial group because I have visiting fellows. They're actually employees of a company and they work in my lab and I collaborate with them. I collaborate with their boss. Uh, there as well and we design molecules, we make molecules, we develop new synthetic routes to know molecules and that kind of thing.

So yeah, it it's mainly medicinal chemistry is lot of different projects. That's what we do. I mean, I had no big vision in terms of go yes, I'm the guy who works on this disease or that disease. And it's not like that at all. Um, it's very much working on things that we have to do now, company has clients, that they require stuff to be done.

I can consult on those routes and help. And I have some students who work on some, uh, related, uh, chemistry, cause we're trying to solve. I think more underlying problems, um, sort of known problems in medicinal chemistry as well, synthetic problems. So we're on a few of those as well, but yeah, it's a, it's quite a broad spectrum of med chem projects.

Matt: The interesting thing I always think with med chem is the fact that. It is the combination of so many different disciplines, right? So you've got the synthetic stuff, you've got the computational stuff, you've got the biology stuff, and they've all got to come together and work well to come with a good result.

**Fox:** I think you're actually right. You sort of learn very quickly that you can't do all of it. Um, and you've really got to collaborate. So, you know, I can spend another entire episode of this podcast, talking about the importance of teamwork, right. You know, why you need to work, not only with people with the right skill set, people you get on with people and people with whom you share a common goal and have the same, um, to be honest, the same reward drivers as well.

Like you're all going through the same thing for the same reason, for the same degree of, of drive and that you have complimentary sets of, uh, of abilities and yeah, absolutely. It's work with biologists and computational chemists. Because some of the work we do is working on process development and going then obviously we have to work with regulatory consultants and experts in more legal aspects of chemistry as well. So yeah, lots of things. And you have all these meetings with various sets of people, depending on the, uh, the stage, how

advance the project is, sometimes it's quite theoretical or sometimes it's more applied. Sometimes you're dealing with micrograms, sometimes it's kilograms.

You know, it just depends on where the project is and yeah, all of these things matter. And I think knowing that you want to work in a team is important. These kinds of situations where stuff actually gets done rather than trying to be a sort of unitary force, which can be very, very difficult to achieve anything real.

Matt: Yeah. Yeah, absolutely. I think we've all worked in the teams that we've struggled with. Right. And I think, uh, finding a good group of people to collaborate with really does make a difference. Yeah, you're absolutely right. And I think, uh, having the people where everyone's pushing each other on is, uh, is really great.

And, uh, I think it leads to projects where there's low attrition rates for interest. I mean, nevermind the actual, like chemistry, biology, uh, if you have a team that's demotivated, they'll, I'll never get anywhere. Right. Um, so did you ever find any challenges with, with motivation? What would you say is your been your biggest hurdle that you've had to overcome?

**Fox:** That's hard. Uh, and the reason is very simple is that I suppose in some level I'm quite a conservative person, uh, when it comes to myself and what I want to do, I'm not a massive risk-taker right. Actually other people involved in the teams that I work are. I'm very much a kind of, realized over the years.

I realized, see myself as being a problem solver, not a problem provider. Not, I'm not saying I'm good at solving problems. I'm just saying that, you know, I tend to work in a quiet reactionary, you know, way, in that way. I wonder if there's the opportunities for me to talk about how bad and academic I think I am.

Right. I think that's quite funny. So, so, so yeah, I think if I have any challenges, actually it's working where my academic colleagues I think are here for a different reason than I am. I think I'm probably the odd one out or one of a minority, uh, and that can be quite challenging, okay. So, so, and that's fine because the university has a model.

Academia has a traditional model and it seems to involve writing grants and publishing papers and going on tours and giving lectures and all that kind of thing. And so if you think about those three things, I don't really do any of

those. So, I've got my teaching load, and admin load and the research, the research I do is, is this collaborative, industrial research.

And, you know, we don't really publish that. And also, I don't spend a lot of time having to look for funding because, you know, if the funding wasn't there, we wouldn't even start. So that's how that works. There's always stuff to do. So, you know, that, that's how that works. And so it's really interesting that I don't have to be, I don't have to be a self publicist.

Right. I don't have to go and advertise my stuff. I'm don't spend any time wondering if anybody has read anything I've ever done or, or if anybody cites my work or, or, and any of that. So, so yeah, that's quite liberating, but it's at the same time, quite odd, having that attitude, working in a department where, you know, and that's fine, because this is kind of what academia in modern academia requires you to have that kind of.

Grants, papers, you know, all that kind of thing. That's absolutely, that's the sort of traditional model, uh, but watching other people do that and sometimes struggle, which is actually really tricky. And watching people, they see me walking around going there is another way, you know, but it's quite hard, but I've been very fortunate, you know?

And so to be in situation that I am now. I don't know if it always work out for everybody, but yeah, it doesn't, it's a very odd thing.

Matt: Yeah, you're absolutely right. Having to, to go through these processes and it's, it's quite challenging, but I think, I think it's really interesting how there really is two sides to the chemical research coin, right with the academic and the commercial site. There's a lot of projects that are going on in academia that, that people don't, when they come up with the problems, they don't necessarily know the utility of the solutions.

And that is true. You can find a lot of problems where once you've got a solution, you can try and fit it over, uh, another problem. Right. Um, whereas the commercial stuff, obviously it's very direct to the relevant problems and that, I think that's quite interesting, but, um, what would you say keeps you motivated to work on this problem?

So obviously you have to stay quiet about a lot of these, these problems and a lot of the difficult stuff, but equally a lot of the interesting stuff. So where would you say you find creativity and motivation for your ideas?

**Fox:** This is a really interesting thing. I could give you a very flippant answer, which is my inbox, right literally, I don't have to worry about coming up with new things to do.

I have to, I have to, you know, answer problems, right? That, that, that's what I do. The problems are provided for me. Right. And then I have to come up with interesting and hopefully creative and novel ways in order to solve them. But actually once you've got the problem on the page, then usually, you know, it's quite easy just to get your head around that.

I find, I find not knowing the answer to something quite annoying so that's it. So it's not, it's not that I've never felt that I have to be the person who'd come up with the question. Um, there's a line in the West Wing, if any of you guys ever listened to or watched The West Wing, greatest TV of all time probably, in which at one point the president Bartlett, he turns to one of his aides, Josh Lyman, and says, um, the thing difference between you and me is that, you know, I always wanted to be the guy and you just want to be the guy, the guy relies on. I think the thing is, is that I think I'm more that sort of person actually.

I quite like helping, I quite like solving other people's problems. I think it gives a direct focus to my time. I don't have to worry about keeping motivated. I don't have to worry about new ideas and new problems because there's always a stimulus. There's always a stimulus. And once you've got that and you've got resource, which we have here, fantastic, you know, you know, you've got the literature you've got, you know, you've got the labs, you've got everything you need all the equipment we need.

So that it's just, you just need to do it. It's not difficult when you know that that's it. There's nothing particularly big or metaphysical or philosophical. Someone's just going 'please, will you? Oh, yeah, OK, sorry'. You know? PS we're paying you. Oh yeah. But that would be the one. Yeah, yeah.

The money maybe. Maybe the big motivation answer is wishing to get, get paid. Um, so yeah, that, that's, it really, I don't have to look much, much further than that. At no point, have I sat here in my office with my feet on the desk, looking out the window going what am I going to do? It has never happened.

Matt: Yeah, I think it's, I think it's good. And I think it joins in with the discussion about the people that you put around you, right? Whether it be like the same level, above or below you within your organization. Uh, I think there is a real human driver to please other people. And I think if you've got teams

where you can find victories and share those victories, you know, um, it really does help with motivation.

Obviously a paycheck really does show the good things, but I think finding the affirmation from colleagues really is...

**Fox:** Yeah, you're completely right there. So the industrial people I work with, the guys who set up the company that I worked with, I've worked with them since 1998 and previously we've got as far as phase two clinical trials.

Right. So my desire is to do it again, do it again and again and again, because I really enjoy that process. It was fantastic. And working with the guys was great and what we did. Yeah. It didn't work by the way the drug didn't actually, uh, didn't work in the end. Uh, but getting there was, was really interesting. Learned lots and yeah. It's, it's that.

Matt: Yeah. Yeah. It's, it's challenging with the high attrition rates and medchem. Oh yeah, absolutely. I didn't even get to phase two in the first place is a full career goal for a lot of chemists, just to contextualize it for some of the non med chem listeners. It's absolutely crazy to have one of these.

**Fox:** here, um, when I got here, to the department, I got here in 2006. And I remember about 2007, eight, whatever. I was having chat with the head of department at the time, we were having a conversation about career progression and Mike was really good. He was trying to, you know, encourage me and all this kind of thing.

You know, he's doing it, doing his job well. And, um, I remember sort of sitting there having a conversation with him, I'm thinking to myself, have I peaked? Right? Because you know, it was 2008. I'd been at a couple of years. In order to get to work. I had been really, really fortunate. I applied for and gained a EPSRC fellowship to come here.

A fire year fellowship. Um, and at that point as well, I have a compound entering clinical trials. It was, it was that one. It was, it was going into phase one at that point. I remember sitting there thinking, I don't know, 10 years ago, five years ago, whatever. If he turned to me and said, you know, one day you would have won five-year fellowship from the EPSRC and you will have gained academic position in a university. And you've got a compound as far as clinical trials, you know. My god, that would be amazing!

So, yeah, so 2008, I sat here in my office as I am now. And I've done all that now. So that was it. I was done, you know, all the things I'd ever thought would be great to do. I'd done, uh, through good fortune of being in the right place, right time, knowing the right people. People who were successful. I think don't often, um, credit good fortune enough, but I will.

Um, yeah, so, so since then, I would say I'm not troubled for motivation because I wanted to do that, you know, to do that again, not, not the EPSRC and the fellowship, but the drug discovery pathway. And so, yeah, that's what I thought. That's what sort of kept me going, working with the same people and trying to try to do it again. So, yeah, it's interesting. Find the thing in life that, you know, keeps you going and do that.

Matt: Yeah. Yeah, exactly. And I think it's interesting. You're absolutely right. A lot of people don't, don't credit a lot to luck and, uh, but the way I've always viewed it is that, uh, in doing things that progress your understanding and, uh, develop your skills, you can reduce your need for luck. So luck is always a factor I think in everyday academic journey, it takes a lot to get to professorships and heads of department. Yeah. EPSRC grants. Right. And, uh, I think it always takes a lot of skill, but it also takes quite a bit of luck sprinkled in with that.

Fox: I think it's, you know, yeah. Get some skills, understand the subject, really get into it. And so that when you do get lucky, you can take advantage of it. Right? I think that's the point. You know, everybody needs a bit of luck to get started sometimes or on something, but you kind of also need to be able to take advantage of that as well, so that, you know, you can't just wait around for stuff to happen. You have to kind of, you know, put your bid in, but you know, then it's just dice rolling.

Matt: Yeah, exactly. Exactly. I think it's interesting. I think when you, when you develop these skills, you kind of start to move towards understanding and start moving towards the bleeding edge of your field and start to become an innovator.

And I think it's pretty fair to say that with a phase two clinical trial, you're definitely in an innovation field. Right. Um, but what does innovation mean to you? How would you, how would you define it?

**Fox:** I think there's a big difference between theoretically being able to solve the problem and actually solving the problem.

One of those is research and the other one is innovation, right. You know, it's, I've built a spanner. Does the span actually turn the nut? Theoretically, the spanner will turn the nut. Well, you haven't actually really done anything until you've turned the nut and shown that actually it's actually quite a good spanner, and it may even be better than the other guy's spanner, you know, that's it, you know, this is the point. You can design all the spanners in the world, but you know, it's going to turn some nuts. I'll stop now with that. But, um, but that's it, that's the thing. I mean, academia is mainly about theoretically solving problems. You alluded to people kind of finding things. Academic research. I often, often, you know, this idea of randomly firing an arrow into a field, seeing where it lands, quickly painting a target around the arrow and go 'look, look, I hit it', you know, cause it it's about, you know, solutions in need of a problem.

And I think when you start doing projects like that, it's often quite difficult to genuinely innovate because what you end up with is sort of a slightly random and obscure way of solving something. And you've got to be really lucky to have hit something that actually have utility. And so, yeah, so I've sort of given up that.

So now it's, you know, it's all about pull, not push it's all about the problem being presented in, you know, starkly in front of you, you know, here is this disease, and therefore here is this protein or this receptor you've got to interact a molecule with in some way or something like that.

And so, yeah, that's, it, it suddenly becomes very much that kind of that driver, rather than this kind of, Hey, let's have a go at this. I can do something like that.

Matt: Yeah. Yeah. Huh. That's it. That's really interesting. It always feels like, um, these bi-directional systems with, um, developing or innovating, right.

You get, you have top-down and bottom up leadership. You have problem focused and solution focused innovation. And, uh, it's interesting how all these things can go in two ways. Uh, I think it, they present different benefits. Okay. I think it's very suited to a person, right. And a team. Uh, some people can be solutions focused.

Some peoples can be problem focused. And I think trying to find a balance between the two is often what exactly what you need. Research will always be a case of trying things out, looking for those solutions and keeping focused on the problem. Um, you may not always succeed. In fact, you'll probably more often fail than succeed. It's absolutely the way you have to be, and you've got to be

quite hardy. Got to be like an old oak tree. Sturdy and, uh, uh, having to stand up to the weather. Right.

So what, what would you say your, your, your key learning or top piece of advice that you'd pass to anyone listening would be?

**Fox:** Yeah, well, we sort of touched on it, haven't we, in some, in some fashion about finding something that you want to do and find a way to get paid to do it. I mean, it's that. For too many people they, you know, they go through education, they come out the end and they're presented with some menu, and often it's based on some menu of expectation as well.

This idea of going well, if you, if you've got a degree of this class from this institution, in this subject, you're the sort of person who should go and do this, you know, and okay, well, you know, maybe you just like the teacher or you just were interested in the subject and actually you don't want to do something like that at all and that's fine. Right?

Ask yourself some basic questions, you know, indoors-outdoors, do you like people or not? Are you a sort of tinkerer, inventor kind of engineer type person, or are you a sort of an analytical person or are, you know, are you a sort of process driven person, you know, and, and what kinds of things do you want from your job? You know, just the money or a strong desire to just do it despite the money? I think there are so many. So many things and people see, you know, young people see people around them who have been successful. Right. And they often, how do I, how do I get like that?

How do I do this? And you realize actually that most of the time people weren't thinking about, you know, you know, I I've, I said before, I'd vowed off all that biology malarkey. You're not doing that. I deliberately didn't do biology. You know, I did biology GCSE. It was the first year of GCSE, by the way, in 1988. You don't want to talk about that anyway, moving on. Um, anyway, but, um, so yeah, it was, you just sort of have to find that pathway, as you would say, um, you know, there's going to suit you and yeah, don't worry too much about other people's expectations. And also what other people are doing. In fact, stop comparing yourself to other people because you will be happier doing what you do.

Matt: Yeah. It's, it's challenging. I've I've noticed I do it occasionally. And I think it's interesting how a lot of, um, others will compare others' work. Right. So I, I think I mentioned this recently, maybe like episodes zero, the fact that I had the viva coming up. I had that viva and it went pretty well, but it was

interesting to have half my work compared to other people, you know, uh, cause you kind of introspectively compare your work to others and you're like, oh, these big companies are doing similar things and I have to perform against them and compete. And I think it's good to have a competitive spirit. Right. Um, but I think if you let competition get in the way of actual innovation. Uh, you will just stop dead in the water. Right.

**Fox:** I think you've got to know why you're doing what you're doing and you've got to be happy with that and it's going to be because you want to do it and that's it. And it ranges. I mean, I suppose you're talking about quite a, sort of a technical, academic sort of job kind of thing here. I was talking as much about kind of personal stuff.

Matt: I think, yeah, I think it's important whether it be like comparison of yourself to teams and other countries or coworkers in an office or students in a lecture theater, right?

**Fox:** Oh yeah, absolutely. Your colleagues, you know, you know, he's clever than I am or he's, you know what I mean? He knows some people, or he's got a placement that I haven't, or he's going to get into the degree or whatever, you know, and you end up in a, that kind of thing, and believe me, academia, just rife with that kind of thing.

Matt: It can, it can be quite destructive, in my opinion. I've seen people sit in lecture halls and go, I can't do this and lose the spark that they came into the department with.

I think it's really important to. Uh, keep that inspiration going. I think it like students come into these departments and start to progress their at least career in chemistry and any other, any field. Right. They've got this candle of inspiration and drive, and you've got to shield it, you got to make sure you keep that flame alive.

Cover it from people trying to blow your candle out by comparing you to others, make sure you shield it from the rain of the attrition from courses and the difficulty, and keep progressing and move out the wind, move into things that you actually enjoy. Right. And I think that's absolutely right. Keeping a focus on yourself and, uh, making sure you enjoy what you do.

**Fox:** Talking of that by the way, and for anybody else out there, who's, you know, can remember, or, you know, some of that first lectures or some of that

undergrad lectures, which they were just sitting there going, what on earth is this?

Yeah, my first lecture ever, uh, the guy stood up at the front and he derived, uh, Einstein specific heat capacity of a solid, it took in 50 minutes from first principles. It was an entire, like enormous, multiple black volts with chalk and got to the end and then we all walked out and I walked out going 'I'm in the wrong place'. What, what, what was that? What? Where are the curly arrows?

## Matt: Yeah.

**Fox:** Um, you know, fortunately curly arrows, I think we're in the next hour. So it was okay. But, but I just absolutely stunned by that. Yeah. I couldn't tell you anything about it. And I couldn't tell you, you know, I understand this possible.

I'm sure if I pulled out a book, I'd be able to, you know, follow along. Couldn't do it myself now. Never needed to, I don't know what that was for that lecture, by the way. I think it's just the benefits of the, of the academic in the front, because I don't think anybody learns anything else in there anyway.

So, um, but yeah, you're absolutely right. Don't don't don't, you know, your candle let's use your analogy. Your candle needs air. It does not need wind. Right. It needs enough, you know, but it doesn't need too much because you don't wanna get blown about by life's tribulations too much.

Matt: Exactly. I think, I think that's some really good takeaways. Um, how can any of our listeners connect with you or your work, with what you're up to?

**Fox:** Well, I simple, my office doors, they knock on my door. No, uh, yeah. Knock on my door. No, seriously. Uh, yeah, I email me that's it, right? I mean, that's my, mainly my view of the world. I have. I have a Twitter account, but I don't tweet.

In fact, I can admit right now I've basically abandoned my Twitter account and I've actually started one of those anonymous blocked ones just so I can use it as a newsfeed because I actually, I don't really have anything to say. Of the things I do want to say I probably can't say. And so that for legal reasons, for IP reasons.

And so therefore, yeah, I just don't really say very much, but no, I use, I use Twitter as, as, as a newsfeed, so you're not going to really learn anything from me on there. Uh, yeah, no, I'm here at Warwick.

Matt: So your office is on the, uh, the fifth floor right?

Fox: Yeah, I am on the fifth floor.

Matt: Okay, perfect. Well, it has been an absolute pleasure chatting with you Fox uh, listening to story and talking about your work and how to keep motivated during, uh, the long hours of development up to these kinds of points in your career.

I think that's absolutely great. And just, uh, just kind of big takeaway is just look after your candle. I feel.

**Fox:** Yeah, absolutely. You know, let it lead you where you want to go. Right. You know, there we go. That's getting a bit metaphorical there. Isn't it? But yeah, absolutely. No, thanks, Matt. It's been great. Thanks for inviting me on.

Matt: Yeah, absolutely. It's been fantastic. This has been the pathways podcast from Warwick Chemistry, produced by Bo Kelestyn and myself, Matt Taylor. Thanks very much for listening and we'll see you next time.