



Interview



Michael Farthing

United European Gastroenterology (UEG) Lifetime Achievement Awardee 2021; Honorary Professor, University College London Medical School; Former President, British Society of Gastroenterology (BSG), European Association of Gastroenterology, Endoscopy & Nutrition (EA-GEN), and UEG.

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Q1 With your extensive experience in the field of gastroenterology and other associated disciplines, what initially sparked your interest in the field and what has motivated you to continue researching?

Well, I think it's a combination of things, as always. I think the most common reason why people select a particular career is, firstly, the inspirational figures that you come across that lead you towards it. That was certainly true for me. I had some very remarkable early role models. As a medical student, I was on the gastroenterology firm, and I managed to maintain that contact until I needed to make a life decision.

I was also really interested in the patients. In gastroenterology, we cover a wide spectrum of age. There are lots of young people, sadly, who have got, for instance, inflammatory bowel disease, and it was rather nice having that spectrum rather than purely dealing with one set of patients.

It was quite extraordinary. My wife and I had dinner with a man who's now very successful, a businessman who has created a major software package that works for remote reporting of radiology X-rays, and I met him when he was 14. I went to Great Ormond Street, where we used to transition young people

into the adult clinic at St Barts; I had an arrangement with the paediatricians. I will never, ever forget the day that I first met that young 14-year-old, and now, it must be 40 years later, I have had dinner with him and got the rest of his life story, having looked after him for 21 years.

Q2 As former President of both the UEG and BSG, what were the biggest challenges that you faced in these positions, and how did you overcome them?

Let me say at the outset that I've always enjoyed these sorts of jobs; I've seen them as a privilege, frankly. Although, they do take up quite a lot of time, and I work as a volunteer. I loved both. Both were in a state where they were ready to change, and I guess that's my professional life story. I've always been at the heart of change, in the changing of organisations.

At BSG, we had a very strong academic collection of clinicians and researchers, but needed to do something about our administration. I was able to hire a professional chief executive who ran the business for us in a much stronger way. This gave us continuity; because presidents change, secretaries change, and you need consistency.

You need a continuum in a strong administration.

Then of course, there's UEG. The joke I often say is that people talk about the accounts being presented on the back of an envelope, and I literally did go to a meeting in the late 1990s where the accounts were presented by the treasurer on the back of an envelope. Again, it was a question of professionalising the administration. Obviously, there was a need to build the clinical and research side, but that's what we do, that's our job. The thing that I think we all started to focus on was the need to professionalise administration. We took the organisation from back when I think it was actually run part-time in a travel agency in Barcelona, and created a major centre in Vienna. This was what really strengthened the core of the organisation and allowed us to function with a much stronger financial base, and a stronger organisational base.

Q3 You described attending this year's UEG Week to collect your award as 'unmissable'. Do you think that the virtual design of congresses over the last few years should continue, or are there benefits to meeting in person that hybrid congresses cannot offer? If so, what are these benefits?

To be absolutely honest, the reason I went to Vienna this time was because, at this stage, we are all starved of interpersonal contact. I've known that team for years and years. I know the senior leaders now, and it was a complete joy to go and meet them, to see them all in person, to go out for dinner, and to have a bit of a laugh. This was really important to me.

But I remember back when I was Chairman of the Scientific Committee of UEG, and then the President, constantly asking the question of our council: how long are we going to go on having conferences with more than 12,000

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people on an annual basis? How long are we still going to be doing that? Partly because of the costs of running it, that's just one thing. But also flying people in from all over the world; It's becoming increasingly scrutinised and yes, it's probably not a great thing to do. That being said, everybody agrees that there are times when that person-to-person, face-to-face interaction is absolutely critical, particularly when you're thinking about future strategy and future developments.

If young people grow up in a situation where they only see UEG online, then they will have missed out. They will have missed out on all of the wonderful experiences that I've had over, now, more than 30 years with UEG, or UEGF as it was before that, and all of the friends I've made. So I think there's a place for both, and we've got to find a way of doing that. We've got to find a way of allowing people to dip in and out as they choose. I think that is the future.

Q4 What do you see as the highlight of your professional career?

Being recognised in this way, and to be given a Lifetime Achievement Award by one of the most influential organisations in gastroenterology in the world, is a huge honour. That has to be a highlight.

I've had some research highlights; I've done often quite simple studies that

seem to have had quite a lot of impact. I mentioned one of these at UEG Week, which was a very simple study for travellers' diarrhoea. One of my main academic interests has been in intestinal infection. We did a study which showed that a single tablet of an antibiotic could reduce the severity, and the duration, of travellers' diarrhoea by about 50%. Everybody is worried about antibiotic resistance, and the widespread use of antibiotics. But I can tell you, if you're about to go up that morning and give a lecture on stage; you're in a tropical country somewhere, and you can feel the gurgling going on, knowing you're going to be in trouble up on that stage; to drop one pill, and be pretty much reassured that you're going to be okay, that's huge. I think all my colleagues then went on and used this, and it was a great study but a very simple one; not high science. I knew it would work because I had done it on myself. I did the "n=1" study a number of times, and knew that it would work. When we did the formal study, it then certainly did work.

One of my more personal research highlights is that I, and a research fellow of mine, went to set up a research project in Zambia. This was in Lusaka, and he is still there. Some 25 years later, he married a local Zambian paediatrician, has kids out there, and he's still running the centre that we established on a major Wellcome Trust grant many years ago. This was all about building capacity; it wasn't about going and doing a smash-and-grab, a bit of research, taking the data, and running off. It was about embedding what we were doing, and training other people. I take very little credit for this, because he is the person that's done it. But it's a great tribute really, to think that one was able to be part of that, at a stage in one's career, and that there is still something to see.

Q5 You have served lasting terms as an educator in Glasgow, Sussex, and London, amongst other locations. Where do you believe you gained the most valuable experience to make it to where you are today?

I think I would say two places.

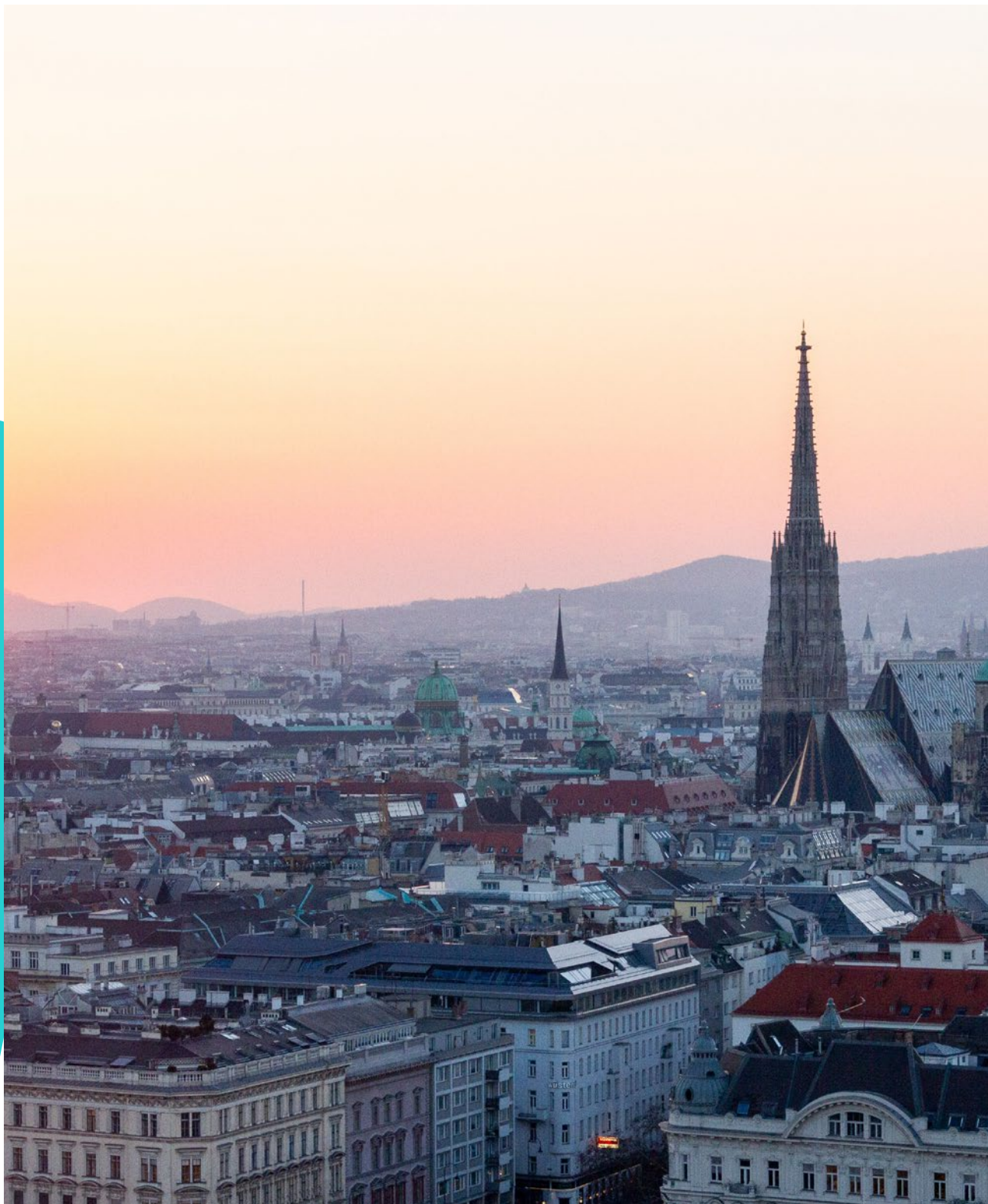
One was a very small, impoverished mission hospital in South India, where I went as a medical student. It opened my eyes to the fact that not everybody lives the way that I lived in southwest London, where I was brought up. It was going to India, seeing a completely different world, and getting to really engage with the care of patients. I was working with a Scottish missionary paediatrician, who taught me a lot about childhood illnesses, including childhood diarrhoea and malnutrition. I think that had a major influence on what I eventually chose as my research area for the rest of my academic career. I went back to India, and also repeatedly sub-Saharan Africa and Central America, but I've worked mainly in the south of England throughout my academic career. So that was hugely influential, and gave me a curious sort of confidence. Although I was only a medical student at the time, and had very little clinical experience, I realised that I was going to be able to do the job. It was fantastic.

Maybe the other was when I did some research training in this country. I did my doctorate with a very distinguished physician. He was a great researcher, Sir Anthony Dawson. But I think I learnt my best science in Boston. I went to do a postdoctoral in Boston immediately after my doctorate. I worked with a guy called Jerry Keusch, who was an infectious disease physician. I moved right out of gastroenterology for two years, and immersed myself in what then was called geographic medicine. This was effectively tropical resource, poorer country-type medicine in the southern hemisphere. I learnt a lot there; I learnt a lot of good laboratory science, got some quite good publications, and I gained

a personal friend, which I've kept. He's 10 years older than me, but we're great pals. We see each other a lot, and he was hugely influential in the way in which the infectious diseases side of my career developed; he gave me lots of opportunities.

Q6 What do you believe to be the current gaps in literature within the specialty of gastroenterology?

I'm very much committed to the microbial world. Firstly, I am interested in the continuing impact of intestinal infection. I don't think this is traditional



gastroenterology, and I it's now under-represented; there aren't that many people working with pathogenic organisms who would call themselves a gastroenterologist. So, I probably personally would like to see a bit more of that.

I know there's plenty of it already, but the whole question of our relationship with our internal microbiome, and with the intestinal microbiota, is massive. There are times when I read something and think "This is going too far", or "This is being used to explain everything that goes wrong in the human body". I frankly can't believe that.

I would like to see a new wave of research on the microflora, which perhaps is just a bit more critical: analysing not just whether it has an effect, but what the size of this effect is. We've established a very interesting link with obesity. There was a wonderful study, now probably 15–18 years ago, which showed that you could transfer the microbiota from a genetically obese mouse, put this into other ordinary mice, and they would become obese. I think that's fascinating stuff. How important is that really for humans? I think it is important, but I don't always understand the size of the effect, and that's a very difficult question to answer. But it's a very important question.

It's like drugs. I worked for years in irritable bowel syndrome, as one of my side interests, which also has an infectious disease story to it. But there were lots of drugs that came out during the 90s and the early 2000s, drugs that were going to really solve irritable bowel disease, but, they didn't. The reason they didn't was because, although there were some very well-run clinical trials with new compounds, they were very large trials. Therefore, the larger the trial, the easier it was to get a significant difference. So, they got significant differences between the placebo and the treatment, but the size of the effect was sometimes no more than 5, 8, or

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10 percent. I would argue that it's very difficult for an ordinary patient to be able to tell whether they are 10 percent better or not. It's a huge market. And if you can sell a new compound based on a positive significant result in a clinical trial, that's usually enough, and the regulator lets it through. They don't always ask the question: is anybody going to notice any difference when they are taking this?

Q7 Where do you see the focal points for research lying in the near future, and are there any notable innovative topics on the horizon?

Well, I think inevitably the increasing role of artificial intelligence and large-scale computers. I've always been a watcher of industrial revolutions, and I think we're probably in the 6th or the 7th now: that's the digital revolution. I'm told we are still only halfway through this revolution's normal cycle, and I think there's potential to upscale our computing capacity when quantum computers arrive. We will see some massive changes.

I was having a discussion with an ex-patient of mine, who's now involved in artificial intelligence in terms of reporting X-rays. This patient said to me that there won't be any radiologists in 10 years because machines are going to be able to read across an X-ray, pick up digital signals, endlessly compute these, turn them into 3D images, and then give

you the diagnosis. Human eyes, I think, eventually will become significantly less able to deliver what a machine can do in terms of reading digital X-rays.

The digital world is really going to take shape; we've now got microscopes down in endoscopes so that you can see individual cells of the mucosa. These sorts of machines will distinguish between healthy cells and pre-cancer cells. I think this sort of technology is going to be driving surgical endoscopy and intestinal surgery. We will be using Level 3 and Level 4 robots to do a lot of our procedures. I've seen that coming in, and again, that's going to be driven through computer technology.

Q8 Speaking now after your illustrious career, what advice would you give to a younger self setting out on their journey in research science?

I think it's actually much more difficult now than it was when I was at that stage. The rate of change in careers, and the way that career pathways are going to change over the next 10 or 20 years, is probably ten times the speed that they changed over the same period during my experience as a student, and as a young doctor. It's about spotting the future, and seeing where the developments are going to be.

I was talking to the same ex-patient of mine, who has a daughter wanting to

study medicine. He said to my wife, who is a radiologist, "I'd love you to meet my daughter, and I would love you to inspire her to continue, but for goodness' sake don't tell her to be a radiologist!" He is genuinely worried that this career is going to look very different. There will be radiologists, of course there will, but their jobs will be very different.

You've really got to spot where the opportunities are going to be. For instance, when I was a young doctor, all cardiac surgeons were spending most of their time doing coronary artery bypass grafts, vein grafts (now a rare operation) with most done by interventional cardiologists putting in stents as a standard. That has changed in 30 years. So, I think it's really important to look at the horizon, but follow your passion. You've got to follow something which is really going to sustain you, because training as a doctor is not just for Christmas: it's for life. You've got to be able to try and see that horizon for yourself.

The other final thing is, ultimately, we're going to have to become much more flexible as professionals. We've got to be happy to change. I changed my career in a way: I was a full-time clinician academic, then an academic leader manager. Now that I'm doing some very different things, the trick is to look at the horizon, but also to teach yourself how to be flexible and re-train as the future changes ahead of you.