Helen: If we don't have people from different backgrounds looking at any scientific problems, getting involved, not just at the starting point of their careers, but at the end and in leadership positions, then the world that we're building is just half built.

**Kat: This is the Suffrage Science podcast: How women are changing science, brought to you by the MRC London Institute of Medical Sciences. I’m Kat Arney and over the coming series we’ll be exploring the journeys of women in science - reflecting on progress we’ve made and the challenges still to be addressed - through conversations with an incredible group of women scientific leaders, who have all received one of the Suffrage Science awards over the past ten years.**

**Over the next few weeks we’ll be hearing from inspirational figures like former Chief Medical Officer Sally Davies, computing professor Wendy Hall, and space scientist Maggie Aderin-Pocock, so make sure you’ve subscribed to the Suffrage Science Podcast through Apple podcasts, Spotify or wherever you get your podcasts so you don’t miss a single episode.**

**But first we’re going to take a step back to explain what Suffrage Science and the awards are all about, speaking with some of the key figures involved in the scheme: Mandy Fisher and Vivienne Parry, who dreamed it up, and women’s rights activist Helen Pankhurst.**

**Founded in 2011 on the 100th anniversary of International Women's Day, the Suffrage Science award scheme celebrates and inspires women in science.**

**Initially focusing on the life sciences, a group of 11 women were recognised for their work and leadership by being given a beautiful piece of handcrafted heirloom jewellery inspired by scientific themes and the women’s suffrage movement, including the traditional suffragette colours of white, green and violet. ​But here’s the catch: they’re not for keeps. Every two years, each awardee must choose another inspiring woman to pass their jewellery on to, creating a self-perpetuating cohort that will encourage others to enter science and reach senior leadership roles.**

**In 2013, Suffrage Science expanded to recognise women in the Engineering and Physical Sciences. Then on Tuesday 11 October 2016 - Ada Lovelace Day - the scheme expanded again to include women in Maths and Computing. Since the Suffrage Science awards started in 2011, there have been 148 holders of the heirlooms, growing a network of inspirational women role models in science from across the globe.**

**For our first conversation, it was only right that we go back to the two women who invented the whole scheme in the first place: Professor Dame Amanda Fisher, or Mandy as I know her -** [**Director of the MRC London Institute of Medical Sciences**](https://lms.mrc.ac.uk/about-us/our-mission/) **and** [**Head of the Institute of Clinical Sciences at Imperial College London**](https://www.imperial.ac.uk/people/amanda.fisher) **- and science writer and broadcaster** [**Vivienne Parry**](http://www.vparry.co.uk/)**.**

Viv: So one day I fetch up in a cafe in Dartmouth park with Mandy Fisher, and we're kind of having this discussion about Suffrage Science. I'm getting a bit overexcited, they have very good cakes, it must have been a sugar rush. And we'd started thinking about the suffragettes and they had this extraordinary jewellery and the jewellery was of a colour and type that, if you knew the secret signals, you could tell that somebody was wearing it was a suffragette. The colours were green, purple and white. And we talked about, or she had talked about the idea of doing some special jewellery that might honour special women scientists, but the trouble was that it was going to be a fortune and we couldn't give a bit of jewellery to everyone. And then I had this idea about making it an heirloom. And so what you had to do was you had to give your bit of jewellery to someone coming up behind you. And you'd like that idea, Mandy.

Mandy: I mean, I liked the idea of having sort of scientific daughters and daughters-in-law and passing jewellery on from one person to another. I thought it was a fantastic idea. And I wanted to celebrate, you know, the amazing contribution that women scientists have made throughout decades and decades. And sometimes their contribution gets kind of overlooked by their male counterparts. And I thought it would be a great thing to start.

Kat: And going right back to the beginning, because obviously this idea of the heirlooms that you have these pieces of jewellery, and then they're passed down from scientist to scientist. How did you decide on the first people, the first recipients?

Viv: I'm not sure that I really remember how we did that. I think there were so many women at the time that we knew about that actually, they kind of popped up in our heads hardly without thinking about it because there were just so many of them. I think what's been more of a surprise and actually what's been really revelatory about this whole thing is the way that people that were initially chosen selected others. And actually some of them have not been known to us at all, but - oh my goodness me - what discoveries they've been! Because we didn't want it to be specifically the kind of the good and the great of science. We wanted it to be people that, if you had made it in science, that you were pulling up behind you, because that's the thing about being a leader - isn't it - that you need to pull people up behind you. And actually, we're seeing some of those people that were nominated in the early years really blossoming into fine scientists, leading their own departments and actually developing a whole new cohort of great women scientists.

Mandy: I guess the thing that has thrilled me is that these awards have gone around the world. Some sort of stayed quite local, others have gone, you know, to Hong Kong, we had Iranian female scientists win awards, and I was just looking up an article in the Tehran times about that. And I think that's the thing of immense joy, really, that it's a global scheme, which I guess I didn't necessarily think it would become at the outset.

Kat: Let's focus a little bit more about the future of the scheme, because now we have so many women, it's almost this wonderful network of mentorship, of support, of people who are recognising, holding up and passing on to other women. Where are we going next? Maybe over the next decade?

Mandy: So I think we were really interested in having a new design competition to really celebrate planetary science, you know, how the oceans are being degraded and the kind of research that we need to tackle that. So I think that's one thing we'd like to develop. And the other is that many of our network of suffrage scientists are taking part in a scheme to pair with groups in, particularly in Africa, in other areas across the globe to try to help and provide mentorship and to share stories, really. And so we'd really like to extend the scheme a little bit,

Kat: I do love this idea of mentorship and it's wonderful to be on a call with both of you because you have both been mentors to me at various points in my life. And I know that there was a paper recently that got quite panned by people flagging that women mentorship in science was not working or not very good, but that certainly hasn't been my experience. And I was wondering if you could both speak to your experiences of perhaps being mentored and then acting as a mentor to the women that are around you or the men as well that are in your orbit, Mandy?

Mandy: I guess I'm a little bit uncomfortable about being a mentor because I think I make a lot of mistakes and I wouldn't like to… you know, I just want to acknowledge that. So I always think that, you know, who am I to give advice or what have you. And so I think mentorship is mostly about listening and occasionally giving some sort of steers or occasionally just saying, you know, you're doing a great job, carry on, rather than being very decisive. I don't know if you remember when we talked Kat and you were undecided about what you wanted to do. And I remember saying to you, "well, it doesn't really matter, you'll be great at anything and everything you do", worry less and just take opportunities as they come along.

Kat: Yeah. And it's also just been wonderful that you have continued to give me opportunities, even though I'm no longer in your lab breaking things. I know Viv as well, like your experience of leaving science, because life in the lab wasn't working out for you, you did benefit from people's advice and support when you had to make those kinds of decisions.

Viv: I had to tell you that I was banned from doing practicals at UCL because I broke so much equipment. They said they couldn't afford to teach me, would I please stop it. And I had to look at my lab book the other day and I was doing something with shore crabs and it's a litany of horrible things, like number 43: ran away, number 67: lost.

Mandy: I still have a gel here, Kat, that you gave me. This piece of what looks like plastic is actually something that you created. And I still have it hanging in my, in my lab. I think you were close to tears and you said this was what you'd spent several weeks trying to get.

Kat: Not the most dramatically successful! Are there any particularly memorable moments that you think of when you, when you think about looking back over the past ten years of the Suffrage Science scheme?

Viv: I just want to say that at the very beginning, Mandy wore quite a small Suffrage Science hat and her hats have got bigger and bigger and bigger. And now the hat that she wears on demonstrations is actually bigger than Mandy.

Mandy: Yes, I do have an extraordinary hat collection. It's true, Viv. I didn't realise they were getting bigger, but they certainly got more... flamboyant? And they catch the wind quite a lot more than they did at the outset. Yeah, that's true. I mean, I remember one kind of amazing event we had, which was at the Waldorf hotel...

Viv: Oh, that's one of my favourites!

Mandy: Because of the cakes, scones and cakes piled to the ceiling. And it was fantastic. And Helen Pankhurst was giving away the awards and was chatting and hosting the event or co-hosting the event. And she had been marching all day in the driving rain and I offered: “would you like a whiskey or something to sort of warm you up?” And she said, "No, tea will be fine". And I thought - I'd been guzzling whiskeys - I remember just thinking, my goodness, I'm in the presence of someone genuinely good and just incredibly resilient. And I have a huge admiration for the kind of activism that she represents.

Kat: Just running purely on feminism and tea,

Mandy: Mostly tea, yes.

Kat: A lot of the panel discussions at the suffrage science events have really focused on some of the most challenging issues affecting women in science, things like the pipeline, things like sexism. I know that we've tackled things like bullying and the Me Too issues. Where do you think we've come over the past ten years in actually addressing and making change and where do we really still need to be driving change for all kinds of women in working in scientific fields?

Viv: I think we think that we've moved on, but actually during this pandemic, all those old problems have resurfaced all over again. I mean, it's demonstrably and empirically true that women have got the fuzzy end of the lollipop during the pandemic, because they've had to cope with home schooling, they've borne the burden of doing that. They've borne the burden of trying to keep things together at home and they've been trying to write papers. And I feel very strongly that women's publication rates have dropped during this period. Men's haven't dropped, women's have dropped, and that makes it really apparent to me that for all that we've done, we still haven't done enough.

Mandy: I think that the single most important issue is to have affordable day-care for women and we still don't have it. And when I started marching in these big hats, as Vivienne recalls, my two girls were unimpressed. And they said, you know, "things have changed so much for us and what are you marching for, and dressing up like that?" I mean, it's sort of completely "you're a dinosaur". And what's interesting is they were at school at the time, but as they went through university and out into the wider world, they realised that things hadn't changed for them at all. And now they dress up and they march with me. They have smaller hats generally, but they do march too. So I think we haven't made, as we've said, we haven't made nearly as much progress as we'd like to think we have.

**Kat: Mandy Fisher and Vivienne Parry. Later on we’ll be hearing from the tea-fuelled Helen Pankhurst, leader of the London Women’s March, graced by Mandy and her spectacular hats, about her connection to the Suffrage Science scheme and her thoughts on the challenges facing women today, not just in science but everywhere.**

**But before that, we wanted to take a moment to focus on the Suffrage Science jewellery itself. There’s a pendant that opens up to reveal key dates in women’s history, a brooch that doubles up as a magnifying glass, a necklace inspired by cells and set with jewels, a magnetic brooch designed to defy gravity, a beautiful bangle inscribed with a mathematical formula with a single pearl running around the outside of it, and another brooch based on punched computer tape with a secret suffragette message - check out our upcoming episode with computer scientist Hannah Dee to find out how she decoded it.**

**Each of the pieces is designed by students at Central Saint Martins-UAL college of art and design and brought to life by master jeweller Martin Baker. The whole point of the scheme is that each piece of jewellery is handed over to a new recipient every two years. But first they go back to Martin for a check-up.**

Martin: It's a pleasure because it's nice to see the bits back, see how they people have used them. I feel sort of sad for the people that are handing them over because it must be difficult to be wearing these pieces and enjoying them and then they get given onto the next person. But that's the nature of the project.

Kat: Do you have a favourite one out of all of them, all the ones you've made?

Martin: I think the ticker tape one is the favourite just because I thought that was such a simple design and it's just a nice piece to feel - it's very light, it's sort of springy and works well as a brooch.

Kat: I've been speaking to many of the women who've received the awards and they all say how great they feel the responsibility of not breaking or damaging or losing these pieces because they are so beautiful. How does it feel to have, when you think about these, you must be incredibly proud of the work that you've done.

Martin: I am. Yeah. It's a very satisfying feeling to come up with a solution to these designs because, as I said, they're fabulous designs and all of them, they've just got a certain feeling about them. And although they're all separate, there's a sort of a theme running through, but they just feel special.

**You can find out more about the Suffrage Science awards, read profiles of previous awardees and see pictures of the beautiful jewellery, at** [**suffragescience.org**](https://www.suffragescience.org/)

**This is the Suffrage Science Podcast. Don’t forget to subscribe on Apple Podcasts, or wherever you get your podcasts, and please do rate and review so that more people can discover inspirational stories of women in science.**

**Helen Pankhurst is an activist and writer whose work focuses on international development and women’s rights. And if you know your suffragette history you’ll recognise her name: she’s great-granddaughter of Emmeline Pankhurst and granddaughter of Sylvia Pankhurst, both leaders in the British Suffragette movement, which played a pivotal role in securing women’s right to vote. So, how did she get roped into Suffrage Science?**

Helen: Well, it goes back quite a few years. I'm not sure I remember the details, just that I was contacted, told the idea of what was going on. And I loved it. I loved the concept of using the link to the past, to the suffrage story and the individual connections through passing on a beautiful piece of jewellery. Jewellery is so resonant in terms of how the suffragettes used jewellery to, through the colours of the jewellery, make the point about their engagement in the cause. And then it being passed on from one woman to another over time. So many aspects of it, I just thought were delightful and important.

Kat: Well, let's unpack a bit more then going back, even further to talk about the suffragettes and your family connection there. And then also the connection to this idea of, of jewellery and colours and, and heirlooms.

Helen: There's so much to talk about, isn't it, it's quite difficult to know what order to do it. The idea of jewellery let's work with that one. So the suffragettes used jewellery because it's a feminine way of expressing yourself. So purple, white and green could be used very, very simply, very cheaply through to the most expensive precious stones. So it was a way of women being able to express their link to the cause without words, visually ,and to have fun with it, to add their own personality, to do it within their own abilities, within their economic abilities as well.

Kat: So I did want to talk about your activism. Obviously the Suffrage Science program is for women in science, you're a social scientist, I think that probably still counts, more or less, but tell me a bit about your activism and what you think is really important. And maybe tying that into what you think is important still to campaign for, for women in the scientific world.

Helen: My sense is that the issue of women's rights cuts across all parts of their lives or parts of society and what we can do cover so many different aspects from the very small to the massive. So we can look at how we live our lives, we can see how we work, we can look at what options we take in terms of career. We can look at how we parent, there's so many ways which gender inequality comes at us and we can respond to it, either accepting it, perpetuating it or challenging it and creating a new narrative. In my life, I grew up in Ethiopia, I was born in Ethiopia, so the issue of global feminism was very, very quickly part of what I wanted to be addressing. So I have worked in international development most of my life, as one of my hats, I'm also an academic and interested in other ways in which you tackle these issues of gender inequality, but global feminism, I think is one that's particularly important because it's quite easy to be constrained and just think of your own lives and not realise the connections with other countries.

And then when you start thinking thematically, as a lot of my work has been, so I've worked on sexual reproductive rights and looked at what needs to be done there, I've looked at economic issues or violence against women, political inequalities... always it surfaces. In fact, in terms of the environmental movement, that's one that's very active and very live now. And it's really great because it's not just that the problem is there, but you see women's voices and their engagement in these stories. So that's an area where I think we'll see a lot more activism and it links closely to the sciences. One of the initiatives that I've been involved in is around, therefore in a way, is around international women's day and bringing together people interested in feminism here with those who are interested in global international development issues, those who are interested in the past so these events that I've been leading around March for Women, which a lot of the MRC Suffrage Science participants have also attended. We're also linking to the past, so some people get dressed up as suffragettes and they come to these marches today and that's linking the past, the present and global issues around feminism. And I think that's a really powerful story to be telling.

Kat: I do think it's very interesting that there is still this real need to keep moving forward. I think sometimes, particularly in the UK, there can be this attitude: It's like, well, "we've solved feminism now, sit down ladies, we've done that." But in your view, then it does feel like there's so much more that still needs to be done.

Helen: Yeah, absolutely. You know that idea that it's done, as soon as you start unpacking it, nobody says it's done. So I wrote a book called 'Deeds not Words: The Story of Women's Rights Then and Now', which looked thematically at how far we got in politics; how far have we got in terms of economics; what about in terms of violence issues; what about in terms of culture? As soon as you unpick how far have we got and look at any set of data, any areas of women's lives, you realise how much more there is to be done. And in fact, everybody agrees. So I often try and get people to score how far we've gone. You know, are we there? From zero to five, are we at five? And as soon as you unpick it, everybody will say, "no, no, obviously we're not there".

So, there still is a lot to be done in any sphere, in all spheres. And that's not to say that we haven't had progress. It's also a warning, it's a flashing warning light that if you assume we've got there, we have seen very quickly how things can go backwards as well as forwards over time. So there's also that danger of just assuming, even if we're not there, gradually, we're getting better. Well no, there are areas in which actually things have gone backwards. You can look at countries where women's rights have clearly gone back in terms of specific rights around abortion, around the attitude to women in leadership, et cetera. And that applies here as well. If you look at Covid and the impact of Covid in terms of increased inequality, many, many gains that we thought we'd achieved are not there.

Kat: Yeah. I definitely wanted to bring that up because certainly looking around, talking to my friends, my colleagues, particularly women in science that I know, and women in general, it feels like just this incredible burden has mostly fallen on women to keep going with your work, keep going with your job, keep going with your research, and now you're home-schooling, and now you're doing everything, you know, and cleaning the toilets and all of this. And it feels like it's really exposed just how fragile, the position that, that women, even in a country where we have so many advantages as women like the UK, just sort of how fragile that peace was with equality.

Helen: Exactly. And layer onto that other forms of inequality around ethnicity class, etc. So there's so many ways in which Covid has shown the fractures that are there and widened them. And also, you know, the other side of that is how few women there are that have been visible in terms of political decision-making. So the fact that women aren't visible and making the policies that would therefore address these underlying social inequalities that women's lives are not seen and therefore policy-making is exacerbating the problem.

Kat: Yeah. It really has been highlighted so much in Covid. And I think it is important that we stress, we have come so far in terms of women's rights, but it's about expanding that tent, making sure that we are bringing in the full diversity of women: women of colour, transwomen, all these kinds of people who come under the banner of women and maybe have not had the advantages that that many of us have, particularly in terms of white, middle-class ladies have been able to bring forward. So how do we go forward really expanding this tent of what feminism should mean and can achieve?

Helen: I think it's always being conscious of who's at the table and who's not; who's visible, who's not? Who might be there but not be involved? What are the issues that we're talking about? Whose interests are we prioritising? I think the awareness and understanding of our privilege, as well as our vulnerabilities, as women, who are the women, starts to change the actions. It's again, it's actually about deeds, not words, it's going beyond the words to what we then do, how we look at our organisations, how we look at the structures decision-making etc.

Kat: It certainly feels like we're living in a time when there are a lot of words. There are certainly a lot of words on social media, a lot of words on the internet and maybe these don't always actually translate into deeds. So what are some of the things that we can actually do? What really needs to happen rather than necessarily just like spouting off on Twitter all day?

Helen: Yes, I think not spouting off on Twitter is a good idea. And then being really conscious of who you're attacking and the displaced kind of simplistic language that Twitter sometimes uses, I find really unhelpful because life is full of nuances and sensitivity takes us a long way. And I think the kind of simple language of Twitter doesn't do us any good. What can we do? Well, the point for me is that everybody can do small acts, and small acts by everybody creates a wave of change, creates massive change. And those small acts can be domestic, they can be how we bring up our children, how we talk to our grandchildren, being aware of how we very quickly differentiate and speak slightly differently to the boys and the girls. It can be how we work, what work we choose, what priorities we have, how we relate to others at work, even small acts of engagement with the massive political systems or the massive organisations that we're in. And fundamentally it's about saying this isn't good enough. This isn't good enough for me for the next generations. For those that came before us, we can, we must do better.

Kat: I always think one of the most important things that I do as a woman is just to vote, because I've always looked back at the history of the first suffragettes and the incredible sacrifices and the power and the determination they displayed, so that now I could just basically vote by post because I'm lazy. It's just an incredibly powerful act to be able to do that. We trace back through the feminists that, and the, the women that came before us.

Helen: Yeah, for me, it's non-negotiable, the voting, people must do it. They must do it because of all the sacrifices of women in the past, but critically important because it's those voters who mould their party and the political system. If you don't vote, you're abdicating the power that you have, and you are shifting possibly into the interests and the priorities of those who are voting. So your interests, your priorities, your views, your values are not being reflected. So you're perpetuating a problem. It's a non-starter, people must vote.

Kat: I also think it's really important that we do get more people with scientific backgrounds into positions of leadership, I think there's been an idea that if you're going into science, if you're going to study science, particularly for women and girls, if you're, if you're interested in a career in science, you're going to somehow end up all your life in a lab coat. But really, I started my life as a scientific researcher, my scientific career, and then moved into science communication. And I know people who have had scientific backgrounds and gone into all kinds of roles. And I think it's so important that we encourage women and girls to do scientific training, but then not think that it's the be all and end all to become a scientist. But there are so many places in society where we need A: women and B: women with some kind of scientific understanding,

Helen: Oh, a hundred percent. I mean, science permeates all aspects of our lives. So as a scientist, grounded in scientific understanding and thinking, you can take that to any sphere. And then, you know, linking it to the points we've just made about leadership and the political world, if we had more scientists with the scientific rigor of thinking through any problem that could be particularly powerful, but so many of the problems, so many of the policies are related to science. So if you don't have scientists involved in the political world, then what kind of political decisions are being made? And again, Covid: look at that and look at the importance of having scientists and their data, their understanding, influencing the policy that we make.

Kat: Because I think science isn't just about, you know, lots of knowledge of facts and all these things. It's about how you approach the world. It's how you ask for evidence. It's the framework by which you understand what's going on and know what to ask for.

Helen: On the 6th of February, one of the things that I'm involved in is the coalition in Manchester. It's called the Greater Manchester GM for Women 2028. And we're using the 10 years between 2018 and 2028 to look at what the situation is like for Greater Manchester. And we have a scorecard, it's called The Pankhurst-Fawcett scorecard, ten indicators to track, from 2018 to 2028, what's happening in terms of women's lives, ten indicators for the whole of women's lives. It's very difficult, but we've done it and we're in our third year. And so the reveal of the data every year is done on the 6th of February, centenary of when women first got the vote. And the event is called Data, Deeds and Determination. And our view is that data is the starting point for any deeds and determination.

Kat: Absolutely. Yeah. If you don't know what you're measuring you can't see if it's changing. I mean, you've talked about there, about the indicators for women in general, that you'd like to see changing over the next ten years. What about particularly in STEM, in the scientific fields? Are there things that you think could really change, have the potential to change or really need to change?

Helen: I think it's having more women in those worlds. I mean, the data that you see of women in STEM is still shockingly low and in some of those more-so than others, and if we don't have women studying those subjects, then they're not developing all the tools and ideas and processes and systems that reflect the world. So the direction of the world, in terms of the sciences, is skewed to a particular mindset rather than having two sets of mindset. And I'm not saying that women, all women think in a certain way and all men think another way, but I'm saying that that spectrum of different genders, that spectrum of people, of different backgrounds from an intersectional perspective as well, BAME disability, all sorts of things. If we don't have people from different backgrounds, looking at any scientific problems, getting involved, not just at the starting point of their careers, but at the end at leadership positions, then the world that we're building is just half built.

Kat: And finally, if you could give some words of advice to the next generation, what would those be?

Helen: It would be: continue to be the amazing women that you are! Engage with the world: the more you do, the more you learn, the more rich your life, but also the more you can give to others.

**Kat: Thanks to Helen Pankhurst for chatting with me. Unfortunately you’ve just missed the opportunity to join her at the March For Women this year, which was on the 7th March, but you can find out more and maybe join next year at** [**careinternational.org.uk/march4women**](https://www.careinternational.org.uk/march4women)

**And you can learn more about the Pankhurst-Fawcett scorecard for women’s rights at** [**gm4women2028.org**](https://www.gm4women2028.org/)

**Next time I’ll be chatting with Dame Sally Davies, former Chief Medical Officer for England and now the first female Master of Trinity College, Cambridge. She shares her experiences of being one of the UK’s leading women in the life sciences, as well as her advice for landing your dream job…**

Sally: And I went in to see the boss who I'd never met before and said, "I believe you might be offering me this job. I'll take it on these conditions. And if you're not offering it, why am I wasting my time here?" I've never been scared of telling the truth to anyone. And he said, "yes, I now see, I am going to offer it to you, what was the list?". I told him, and he said "done!".

**The Suffrage Science Podcast: Women Changing Science is presented by me, Kat Arney, with audio production by Georgia Mills. It is produced by First Create The Media for the MRC London Institute of Medical Sciences Suffrage Science scheme. Find out more and read profiles of previous awardees at** [**suffragescience.org**](https://www.suffragescience.org/) **and follow @MRC\_LMS on Twitter and the hashtag #SuffrageScience for all the latest news. Until next time, goodbye.**