Hello Eurekians,

In this month's *Eureka Briefing*, we focus on diversity, equity, and inclusion (DEI) by talking to Vicki Seyfert-Margolis, who will become Eureka's Chief Diversity Officer, and Hester den Ruijter, who studies cardiovascular disease in women. Both interviews highlight how we as Eurekians can better represent diverse communities and advocate for change to improve DEI.

Wildflower meadows contain a diverse collection of flower species (images from Pixabay)

Vicki Seyfert-Margolis, CEO of MyOwnMed and one of the founders of Eureka, is set to become Eureka's Chief Diversity Officer. *Eureka Briefing* spoke to her about the new role and the need to represent diverse communities in translational science.

Can you tell us about the role of Chief Diversity Officer and why the role was created?

The role is about facilitating awareness of diversity, equity, and inclusion (DEI) issues among the Eureka faculty and students. But it's more than that. Until now Eureka has focused on the mechanics, creativity and thought process for someone to bring an idea from lab to clinic, as well as on career paths and mentoring.

We haven't really focused on how Eureka can actively facilitate DEI awareness, for example by bringing DEI into our courses. This includes the teaching material, diverse representation in the teaching faculty and the invited students, who each bring different cultural experiences from across the globe. And above all, it's about bringing DEI into how we create our community.

The impetus was triggered by the increasing worldwide awareness of DEI, but also by our students, who said it is important to consider the racial, ethnic, and cultural components that we incorporate in our courses. I'm really grateful to our students and alums who spoke up about this issue.

And so if we can influence how people think about these aspects in their research, at least we have a starting place to help.

How do we as Eurekians ensure that what is taught on a course turns into something meaningful, say, in a clinical trial?

I think one of the interesting things that we can do is point out where there have been significant discussions, whether it's in academic journal articles, or more recently for example, with the US Food and Drug Administration, where they've issued clear guidance about adequate representation in clinical trials. We can

make everyone aware of the importance of these policy shifts, so that they can be brought into people's thinking and research.

You mentioned clinical trial representation was problematic. Can you tell us more?

There's been a recent drop-off in clinical trial participation that's concerning. IQVIA did a US-based study showing that black participant inclusion plummeted 46% in four years, with 81% of the U.S. Census demographic levels represented in clinical trials in 2018 compared to 43% in 2022. And that in 2022, Hispanic patients were enrolled in clinical studies at 53% of national demographic levels.
COVID brought many inequality issues to the forefront, at least in the United States, and there are questions as to whether ongoing recruitment issues are linked to the lack of trust surrounding the rapid development and testing of COVID vaccines, as well as plummeting overall trust in the healthcare system due to ongoing biases.

Within Eureka, we should work to raise awareness of such issues and think of creative ways that we can help frame future research so that these issues are taken into account.

What needs to be done to better represent underserved communities?

First, we should recognize that medical issues present in different ways in different people. And it is also known that how people describe their disease symptoms or experiences can also be dependent on their cultural context. We need to make sure we're adequately incorporating what patients from all groups and genders express into how we diagnose and treat people.

Second, we need to make sure that different racial, ethnic, and also socioeconomic backgrounds are represented when we develop new therapies. I keep thinking about the example of type 2 diabetes. People from African–American, Latino or low-income communities are more likely to suffer from debilitating diabetic complications, even though many new therapies are available that could prevent this. But access to these therapies is often limited due to under-diagnosis in these communities, or lack of access to ongoing consistent healthcare and insurance coverage.

At the end of the day, if new therapies aren't being tested and utilized in communities where the disease burden is, then we're not doing our job properly.

"Within Eureka, we should work to raise awareness of DEI issues and think of creative ways that we can help frame future research so that these issues are taken into account."

Hester den Ruijter is an alumnus of Eureka and professor of cardiovascular disease in women at the University Medical Center Utrecht, Netherlands. *Eureka Briefing* spoke to Hester about the lack of diversity in clinical trials and how we as Eurekians can advocate for change.

Can you tell us a little bit about your research?

Women are more likely to develop what we call stable atherosclerosis, whereas men are more likely to develop unstable disease. In women, atherosclerosis is more chronic, difficult to diagnose, and is the major cause of heart attacks and strokes. Yet because stable atherosclerosis has historically been viewed as more favorable, it hasn't been researched that much.

I'm trying to understand, at the level of molecular pathology, how and why this type of atherosclerosis becomes symptomatic in women and if we can devise a new diagnostic test. My team got a proof of concept grant from

the European Research Council to move toward patentability; this is really translating the way that we are taught in Eureka.

Are clinical trials and treatments for atherosclerosis skewed towards men at the moment?

Definitely. One of the important trials in atherosclerosis — which was investigating a repurposed antigout medication — had only 15% women in the trial. So it still is very difficult to have women participate in clinical trial trials.

The reasons are multifactorial. Inclusion criteria are known factors. In addition, when the clinical trial recruitment site is in an academic hospital, there tend to be very few women participating. And that's probably because women are less referred to academic hospitals because they're more chronically ill and remain in the care of a general practitioner, for example with heart failure with preserved ejection fraction. Moreover, when the trial leader is a woman, you see that the inclusion rate for females is better.

How do we go about improving this situation?

It's actually just about doing good science and making sure that the innovation you develop is going to improve the quality of life for most individuals.

If the underlying mechanism of a particular disease is equal, then it's feasible to translate the knowledge from men to women, or vice versa. But the problem arises when the underlying mechanisms are different, and you're really not sure whether the type and dosage of the medication should be different. And I think that the chronic nature of the diseases that women more often suffer from is an issue – there's always much more focus on research for acute diseases.

How can the Eureka community be better advocates for diversity and inclusion?

Diversity is not only about male and female but is of course much broader. It's about very old versus very young people, or people with different ethnic backgrounds, in different areas of the world, and people with varying socioeconomic status. Those are all important things to think about.

As an example, the wording used on clinical trial consent forms the language is complicated and hard to understand. This feature means the consent form can be off-putting or exclude the very people that we want to recruit to the trial to ensure that the results are generalizable to a diverse population.

Diverse trial populations is a complex issue that needs to be addressed. So I'm happy that this issue is getting attention within Eureka. As Eurekians we should stand strong for the values that we have as a researcher and take time to think about creative ways of doing translational science that benefits all.

Do you have a story to share? Please get in touch!

Our quiz this month is about the heart (images from Pixabay and the Cleveland Clinic)

And finally....

… some trivia. Above, we talked to Hester, who noted that atherosclerosis in women is the major cause of heart attacks. The Cleveland Clinic lists '28 amazing facts about your heart' – before you click on the link, see if you know the answers to these three facts:

- What prompted the invention of the stethoscope? (fact 9)
- How many times a day does your heart beat? (fact 12, but also see fact 21)
- Which cell in your body does not receive blood from the heart? (fact 23)

Thank you for reading!

Charlotte Harrison
Freelance Science writer and editor
And with fact 13 in mind, I'm going for a walk.