

Interview with The Greater Pittsburgh Area Women Chemists Committee's Student Affiliates Group

WCC Student Affiliates: Ariana Park, Ebru Lider, and Rotem Benharush

Interviewer: Alysia Mandato

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Zoom Interview can be found at pittsburghacs.org

Transcript was edited for clarity

Alysia: Hi everyone. I'm Alysia Mandato, and I am the editor of *The Crucible*, the monthly newsletter for the ACS Pittsburgh Section. Today I have this wonderful group of ladies with me from Pitt who are starting the first Women Chemists Committee (WCC) Student Affiliates Section of ACS. Welcome everyone and thank you so much for being here. We'll get started by having everyone introduce themselves.

Ariana: Hi, I'm Ariana. I am a junior chemistry major. After college I am planning on going into forensic science, and I am the president of the WCC.

Ebru: Hi, I'm Ebru. I'm also a junior chemistry major at Pitt, and I'm also doing a computer science minor. My post-undergrad plans are to go to grad school or do a PhD related to something with physical chemistry.

Rotem: I'm Rotem. I'm also a junior chemistry major, and I'm doing the materials science track within the chemistry major. I'm the operations officer for WCC. I am thinking about grad school, but maybe industry. I don't yet know.



Ariana Park



Ebru Lider



Rotem Benharush

What made each of you interested in chemistry?

Ariana: In my first chemistry class in high school, I thought it was really interesting, and it made a lot of sense to me. I thought it was really enjoyable. And then, I wasn't really sure what I wanted to do when I got to college, but I knew I liked chemistry and I was good at chemistry, so I just kind of stuck with that until I found something to do with it.

Ebru: I feel like for me, chemistry is a nice healthy mix of the two more extreme sciences. I think of science as kind of like a spectrum, with the extremes being biology and math. In biology, you are mainly

remembering concepts so you can apply them to your experiments, and physics is math and theory and not as much wet-lab work. Chemistry is a nice healthy blend of that - you can get the best of both worlds - so that's how I reasoned my major.

Rotem: The reason that I was attracted to chemistry is mainly because in high school, I had really great chemistry teachers. Every time I came to class, I wanted to do my chemistry work and homework, which is really, really weird to want to do your homework, but I was wanting to do it! I was really interested in what we were learning, and I wanted to keep doing it in college, too.

What made you all want to start this WCC student affiliates group?

Ariana: I think it was the fact that there are a lot of women-centered groups on campus. There's "Women in Healthcare", "Women in Business", "Women in Physics", but there is nothing like that for chemistry. The only thing we really have is the ACS Student Affiliates group, which is good, but we wanted to have a place where women could come and talk about the different things that we face as compared to the men in chemistry. So that was where this came from, just wanting a group where we can talk about what we face in chemistry and how to make sure that we keep staying in chemistry because it's very credit heavy - stuff like that and promoting the wellbeing of everyone in the club.

What are some long-term goals that you see the student affiliates group having? Do you have any events or programs in the works for this new group?

Rotem: Yeah, so what we are working on right now is having some sort of chemistry career fair where we have speakers that are mostly in industry come and talk about what their everyday life is like, what their schooling was like, and how they got to where they are today within industry. We want to show students that they do not necessarily need to go to grad school and that it's not the only option for chemistry majors. We are going to have them come virtually and speak to students and have that as a resource for people to come and see their options for post-undergrad. We're going to plan this event sometime this semester. We're hoping that maybe over the summer to reach out to the community, maybe with Girl Scouts, to do some sort of chemistry programming with them. Obviously, that's all dependent on the world and where we're at, but that's what we're focusing on right now.

Since this is the first WCC student affiliates group, do you plan on reaching out to other colleges to encourage them to make their own groups and make this a national presence?

Ebru: Because we're the first one, we are planning on stemming off the Greater Pittsburgh WCC. One of the great things about Pittsburgh is there are so many colleges within a five-mile radius, like Chatham, Carlow, Duquesne, CCAC, and CMU. I think it will be easy for us to reach other colleges. Because we're in such close proximity, we all probably have a couple friends or colleagues, especially chem majors working in labs. For example, I worked in a joint lab with Pitt and CMU. It will be easy to reach out to these colleges. A good way to do this is by email and asking if they have any women clubs in chemistry and would be

willing to stem off the Greater Pittsburgh WCC and build that network of women undergraduate and graduate chemists.

So, let's get into some fun, yet maybe depressing stuff. Do we have any interesting facts we'd like to share about women in STEM?

Rotem: There are gender biases in academia. Some examples include women are held to a higher standard for the same positions without an increase in pay in the workplace, there are more familial pressures on women, and women are often pushed to more secretarial positions in the workplace or given the office mother type jobs, even though there is absolutely no reason for that to happen. I think the worst of all of these is shown by a study. Women in STEM that are women of color, specifically African American women, who are obviously very accomplished and highly educated, are mistaken for custodial staff instead of workers in their fields ([reference](#))

In looking at our professors and the proportion of men and women in different levels of academia, you see who teaches the higher-level chemistry classes, and you see how many women are teaching and leading research labs. You see the proportion of people who are given these jobs, and you see it's not equal – it's not even close to equal in terms of gender. This is very blatant as to who are given the jobs and why they're given their jobs. It's not that they're not educated and that they don't deserve their jobs based on their education, but when you see how few women are given these positions, it's kind of terrifying.

Ebru: Something that I've noticed in my personal experience at Pitt is that we see a high proportion of the general chemistry professors at Pitt are female professors, but when you get to the upper-level classes, they're mainly taught by white cis men. That is also present in research groups. Out of the graduate advisors you can choose, there are five women and 30+ male advisors ([Pitt faculty page](#)). I think that goes to show that we don't really have a lot of role models in the positions that you can achieve if you want to go to grad school. We just don't see women in roles of power and roles that show that they are educated. Something that I'd like to experience is having a woman teach me upper-level chemistry instead of a man. What I've noticed from my female professors is they offer a diversity to the common PowerPoint lecture. I think that because they have all these experiences of being discriminated against in their field, they're very accommodating to a lot of things and understanding to different learning styles. Personally, I'd like to see that at Pitt.

Alysia: I know that the advisor of the WCC Student Affiliates is Dr. Michelle Ward, and she is very passionate about this and works very closely with the greater Pittsburgh WCC. I think she's a great role model to have at Pitt, but we don't see as many of those people in the Professor positions. We need more of these role models in those higher-level positions. Those are very good points.

**How do you think we can get more women involved in science and involved in chemistry?
How do you think we can get younger girls interested in science and stay interested in science?**

Ariana: I think from what I've seen there are two big problems. One is just the stereotype that men are scientists and women are not. You see that stereotype in a lot of situations, as far as men are chefs and women are bakers. Men's work tends to be seen as 'it's a career', and women's work tends to be seen as 'it's a hobby', which is frustrating. I think one solution is increasing visibility of women that are already in STEM so that girls have someone to look up to and can see someone that looks like them, letting them know that they can do that, too. Another problem that happens a lot with women is just not being confident in themselves. I've seen research (it was done in physics classes) on women who get As in classes have the same self-belief as men who get Cs ([reference](#)). Women just don't believe in themselves as much, so when they face challenges or don't understand something, I think it's a lot easier for women to feel like they're not cut out for science. This obviously isn't true, so I think another thing we have to work on is finding ways to make women more confident in themselves and understand that they have the capabilities to work in science and to do science.

Alysia: Just to add to that, last week was International Women in Science Day. I went to a panel and one of the facts that they showed was that at the age of fifteen, girls become uninterested in science ([reference](#)). It has a lot to do with that confidence that you were just talking about. Finding ways to encourage girls to stay in science is a real challenge, and I think there are a lot of ways to do it, but I think impacting a whole population is a bit tough so little steps are what we can do.

Let's get to a little bit of a brighter topic and our last question for the interview. Does anyone have a favorite woman in STEM or in chemistry or any sort of role model that you look up to?

Ebru: I like to change up my role models for women in science. In a lot of STEM classes, they tell you, 'Look at all these women from the 1800s! They did this great work! Look at Rosalind Franklin, she did X-ray diffraction for the DNA molecule, or look at Ada Lovelace who had discoveries in math and computers, or look at Marie Curie with her discoveries in nuclear chemistry.' People always use old examples. I really wish we didn't do that anymore because it gives this feeling that women role models are outdated. Like there was this huge scientific break 200 years ago, and we've just fallen off the face of the planet. So, I like to change up my role models. Currently, I really am interested in this one scientist, Dr. Burçin Mutlu-Pakdil, and she discovered a whole new galaxy ([reference](#)). This galaxy is a double-ringed elliptical galaxy. Can we just talk about that?! That's a whole new type of galaxy, but no – we're still talking about all these really old scientists. We should talk about them, but I think that since science is changing ever so often and ever so much, we should talk about all these new discoveries that are happening. It's not that hard to incorporate into syllabi or classes.

Rotem: So right now, I am working in Dr. Jenny Laaser's lab, and I am working with Julisa, a grad student who works in the Laaser lab, and she is really wonderful. Every time I go in, she teaches me so much, and she inspires me every day. She encourages me to learn about things, and I'm always so glad that I come in and that even though I'm spending four hours standing and measuring all of these polymers, it's always a really fun time. She is my current chemistry role model.

Alysia: Thank you so much for being here with me and talking about women in chemistry and for starting this WCC Student Affiliates Group. I'm really excited to see where it goes.