How Young Are You?

by Aaryan Singh and Marietjie Potgieter

During the IUPAC General Assembly in August last year, the Committee on Chemistry Education (CCE) saw the participation of young observers. (see also feature p. 22). One of them was even younger than usual: Aaryan Singh was only 17 year old. While Aaryan’s participation might have appeared surprising at first, it was welcome by all in The Hague where the GA took place. Soon after the GA, Aaryan and CCE chair Marietjie Potgieter wanted to immortalize their first encounter by holding a short virtual interview. This short account is shared here with the hope of inspiring others to take part regardless of their age and experience.

Marietjie: Please tell us a bit about yourself…

Aaryan: Well, I just turned seventeen years old and am in my penultimate year of high school.

Home for me is Brewood, a small tranquil village in a county called Staffordshire in the centre of England.

Both my parents are anaesthesiologists, and they were the ones who initially sparked the scientific curiosity within me and have always supported me immensely with my academic pursuits. I have one older brother, who is nine years older than me, and even though we wind each other up, I look up to him massively.

In my free time I love racquet sports, especially tennis and squash, and when I get the time, I am doing a little bit of songwriting as well.

Marietjie: What are your academic goals?

Aaryan: I received my IGCSE scores last year and I was very pleased. I am now focused on the International Baccalaureate in which I am pursuing higher level chemistry, physics, and mathematics. After that, I would like to go to university to get a degree and specialise in chemistry, before then pursuing higher education by doing a masters, followed by a PhD. I am interested in nanotechnology and electrochemistry at the moment, but I am so early on in my chemistry career that it may very well change. For me I know in the future I would like to be heavily involved in chemistry education, regardless of my job, just because I see how meaningful and rewarding the work is.

In the near future, having just joined, I am looking forward to becoming an active member of the International Younger Chemists Network (IYCN), a non-profit organisation that works closely with IUPAC, that has a very reputable mentoring program, and is currently a leading organisation for sustainable chemistry.

Marietjie: What is your dream for the future?

Aaryan: My dream is for students of all ages, all over the world, to have the same access to scientific opportunities. In my eyes, the direction humanity moves in will be heavily dictated by the cohort of our future scientists. We need scientists from all different countries and backgrounds to achieve the diversity of thought required for new innovation, which is necessary to tackle the challenges in the world at the moment.

I have already taken small steps in that direction. I have established a Science Outreach team within my region, who I have personally trained, and we run frequent workshops and events for children from all socio-economic backgrounds. Members of the CCE including Professor Uday Maitra have given me advice on these workshops that I would not have been able to acquire if it were not for connecting with them in the General Assembly (GA) in the Hague. However, I would like to do much more. That of course being why I am drawn to the CCE.

Marietjie: How did you first come across the CCE?

Aaryan: I have been part of the UK’s Royal Society of Chemistry (RSC) since I was 12. Recently though, I wanted to gain an insight into what chemistry education was like on a global scale so, of course, the logical next step was to become a member of IUPAC and I have not looked back since. Once I was a member, I got in touch with yourself and you warmly welcomed me into the CCE as a young observer, inviting me to a virtual CCE meeting, in which I was introduced to the CCE team and then after that to the GA in The Hague, which has been one of my best experiences in my life. From this experience, I would recommend any fellow chemist to not hesitate to contact members of the appropriate Committee or Division of IUPAC that they are interested in, as everyone is amicable and approachable.

Aaryan: May I ask, what do you think young chemists can do to contribute to the CCE (what value do they bring)?

Marietjie: The participation of young chemists in all the activities of the IUPAC is vital for the organisation to remain relevant and focused. Young chemists bring energy, originality, surprising perspectives, and enthusiasm for the power of chemistry to solve difficult problems. They have little hesitation to ask troubling
questions, or to reach out to sister disciplines for collaboration, and they instil a sense of urgency in established chemists to find solutions for the big challenges facing the planet.

Marietjie: Have you attended many IUPAC events?

Aaryan: Actually, this was my very first chemistry conference ever. I was slightly nervous as I thought I may not fit in in the presence of so many distinguished chemists; however, it was quite the contrary because although I was the only person still in high school, I quickly connected with other young observers including undergraduate and master’s students.

Looking forward, I cannot wait for the 2024 International Conference on Chemistry Education, which is to be held in Pattaya, Thailand. It was wonderful to meet with the conference chair, Supawan Tantayanon, in The Hague and from what she mentioned—the extensive talks and exhibitions planned, and the theme of the “Power of Chemistry Education for Advancing SDGs”—this is an event for all young chemists to put on their lists, including students and young teachers.

Marietjie: Did you enjoy your time in The Hague?

Aaryan: Yes, absolutely. From the weather and beaches, to the cobbled streets and palaces, the only inconvenience was that I had many close incidents of being bulldozered by cyclists, especially the ones on their phones.

Marietjie: What was your overall impression of the GA and the Congress?

Aaryan: Amazing atmosphere! What stood out to me most was the representation from all over the world, shown through the colourful dresses and dapper suits. With such marvellous opportunities to connect with fellow chemists, I was in awe of the integration of ideas and knowledge all under one roof. During the CCE meetings, contributions from young observers were always encouraged and I enjoyed the visit from President Martínez, who came to each of the divisions to hear what our concerns were for the future. I felt privileged that he made time to speak to me personally as well and really listened to my thoughts and ideas, which just goes to show how much IUPAC as a whole respects and cares for young chemists.

During a session at the GA, I presented in front of many distinguished professors in the field of chemistry education, which pushed me outside of my comfort zone, and encouraged me to think about the global challenges the world of science education is facing at the moment, an area I am still reflecting on.

After the GA was the World Chemistry Congress. This saw nearly two thousand chemists assemble, all with the same passion, and with such variety of speakers flying into the Netherlands, the occasion was a must attend event for all.

Aaryan: I have a final question for you. If you could go back to the start of your chemistry education career, what advice would you give yourself?

Marietjie: Volunteer your time and get involved in meaningful learning opportunities and outreach activities outside of your regular curriculum that are aligned with your personal dreams and your passion. Do not wait to be called or invited. Sign up and show up! This is likely to pay off richly for your personal development and in your future career.