



Oxford Bound Student Explores Medical Cannabis as Future Mental Health Treatment

As students across the country celebrate their A-Level results, 17 year old Ariana Howells from Barry is marking an exceptional milestone — securing a place to study Biochemistry at Oxford University's St Hilda's College, whilst also emerging as a young voice in the growing conversation around medical cannabis and mental health treatment.

Ariana, who is a scholarship student at Cardiff Sixth Form College achieved three A* and one A in Biology, Chemistry, Maths, and English Literature plus a standout 97% in her Extended Project Qualification. Her research focused on 'To what extent can THC (tetrahydrocannabinol) negatively affect sleep architecture?' — an investigation that revealed both the promise and gaps in existing research around cannabis' role in sleep and mental wellbeing.

Her findings echo a growing tension in the scientific community as whilst anecdotal evidence suggests cannabis can help with anxiety, insomnia, PTSD and ADHD, the scientific data is still limited and inconclusive.

"There were only seven studies worth citing," Ariana explains. "I expected clearer answers, but what I found was a real need for more in-depth, unbiased research. This is something I want to keep exploring at university and beyond."

Ariana's interest in medical cannabis is more than academic. Her mother lives with Crohn's disease and medical cannabis has played a crucial role in improving her quality of life. Her parents now run the first medical cannabis clinic in Wales — Cannabis Clinic Cardiff — where Ariana has spent the last two years helping with admin and learning about the evolving science behind the plant-based treatment.

"Seeing my mum's condition and the way cannabis helped her and the patients who visit our clinic really opened my eyes to its medical potential. My dad is also a senior psychiatrist, so I've grown up in a household where science and care come together."

Beyond the lab and lecture halls, Ariana is a dynamic all-rounder. She was Co-President of the Chemistry Club and Founder of the Biotech Club at Cardiff Sixth Form College, where she thrived in an environment she calls "passionate and intellectually alive." Her clubs explored drug synthesis, genetic engineering, and critical thinking through hands-on practicals and discussions and she also undertook work experience at Diamond Light Sources where she studied crystallisation and robotics.

Ariana's academic record is matched by impressive extracurricular achievements: she earned Gold in the Biology Olympiad, reached the semi-finals in the International Biology Bowl, and is also a competitive ice skater having competed in the Juvenile British Championships in 2020 for synchronised ice skating.

Now preparing to turn 18 and take her place at Oxford University, Ariana plans to channel her experience, empathy, and scientific curiosity into drug development and mental health research — with a special interest in how medical cannabis could one day transform care.

“There’s still stigma and strong media opinions,” she says. “But science is about asking difficult questions and being open to where the evidence leads.”

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