

Promoting scientific enquiry and inherited disease awareness: UCD Science inherited blindness summer school

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Background & Aims: Promoting scientific inquiry through an interactive, laboratory-based approach introduces secondary school students to science (1). Young students receive theoretical tuition in the sciences but little practical experience and are marginalised (2). Therefore, we aimed to: introduce secondary school students (15-17 y/o) to pharmacological research in an academic setting; enhance awareness of research & patient impact of inherited ocular diseases (IODs) & introduce students to university life.

Summary of Work & Outcomes: The 4-day workshop with approx. 30 students consisted of interactive talks (morning), covering key scientific topics, career advice, university life & the patient voice describing life with inherited blindness and the importance of pharmacological research. Afternoon practical sessions challenged students to apply the knowledge gained in laboratory-based research on the genetics and pharmacology of a zebrafish model of inherited blindness. Students collaborated in groups to communicate their learning to a lay audience with outputs including poetry, crossword puzzles & a music video. Feedback questionnaires from 3 student cohorts show all students (57% strongly agree, 43% somewhat agree) found the material covered interesting, they enjoyed the laboratory component (73% strongly agree) and the combination of classroom and practical sessions were well balanced (65% strongly agree, 33% somewhat agree). 94% would consider studying a scientific/medical subject at third level with 2% strongly disagreeing.

Discussion: The feedback from students highlighted the importance of a laboratory based approach which fostered critical thinking, requiring students to work & learn together (3), enabling them to gain an insight into the possibility of studying science and pharmacology at third level. We aim to maintain contact with students to ascertain what they have chosen to study at university.

Conclusion: This summer school gives students the chance to experience pharmacological research, transitioning to university and the patient voice in research. The workshop for mat is easily reproducible by combining informal pharmacology talks with lab based practicals illustrating the concepts & allowing young students freedom to perform their own experiments.

References:

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