



THE BRITISH ASSOCIATION OF SPORT AND EXERCISE SCIENCES

Summer Workshop Programme 2010

Sport, Exercise and Genes: A Practical Introduction to Genetic Testing in Sport and Exercise Science

(Molecular Exercise Physiology - Polymerase Chain Reaction, PCR techniques)

Saturday 8 May and Sunday 9 May 2010

Oxford Brookes University, School of Life Sciences, Gypsy Lane Campus, Headington, Oxford, OX3 0BP

Laboratory S303 (Practical work), S110 (PC Cluster Room), Room SG05 (Sinclair Building: Lecture venue and tea/coffee/discussion area).

Saturday

	Arrival (Gypsy Lane Main Reception) and refreshments (Sinclair Building: SG05)
09.00-09.30	Welcome, introduction and scene-setting (SG05) Dr Roger Ramsbottom
	Practical: Extract human genomic DNA from mouthwash
09.30-10.30	Paper problem: DNA sequence analysis. Designing primers (S303) Dr Shirley McCready
10.30-11.00	Break (SG05)
	Practical: Extract human genomic DNA from mouthwash
11.00-12.00	Paper problem: DNA sequence analysis. Designing primers (S303) - continued Dr Shirley McCready
12.00-13.00	Seminar: What is Molecular Exercise Physiology and Why does it Matter? (SG05) Dr Henning Wackerhage
13.00-14.00	Lunch (SG05)
14.00-15.00	Seminar: Genotyping in Sports and Exercise: Methods and Findings (SG05) Dr Alun Williams
15.00-17.00	Practical: Analytical techniques. Prepare and run PCR (S303) Dr Shirley McCready
15.30-16.00	Break (SG05)
16.00-17.00	Practical: Analytical techniques. Prepare and run PCR (S303) - continued Dr Shirley McCready



17.30-18.30	Social: Jog over Magdalen Bridge Dr Roger Ramsbottom and Dr Mike Gilder
19.30-22.00	Evening Meal: Windmill Road

Sunday

	Practical: Run gel and obtain results
09.00-10.30	Paper problem: DNA fingerprinting (S303) Dr Shirley McCready
10.30-11.00	Break (SG05)
	Practical: Run gel and obtain results
11.00-12.00	Paper problem: DNA fingerprinting (S303) - continued Dr Shirley McCready
12.00-13.00	Lunch (SG05)
13.00-14.00	Seminar: Genotyping in Sport and Exercise Science: Ethics (SG05) Dr Alun Williams
14.00-15.00	Seminar: How to teach Molecular Exercise Physiology (SG05) Dr Henning Wackerhage
15.00-16.00	Certificate Distribution/thank-yous and departures (SG05)

Dr Alun Williams received his MSc from the University of Liverpool and his PhD from the University of Birmingham. Most recently, he has worked in the Department of Exercise and Sport Science at Manchester Metropolitan University, teaching and researching Exercise Physiology. His research interests now mainly focus on genetic, molecular and hormonal influences on muscle function, principally in vivo. A particular research interest is the inter-individual variability in human muscle performance and training responses.

Dr Henning Wackerhage is a Senior Lecturer in Molecular Exercise Physiology and degree convener of an MSc in Molecular Exercise Physiology at the University of Aberdeen. He is convener of the BASES Molecular Exercise Physiology special interest group and together with Neil Spurway author of a book entitled 'Genetics and Molecular Biology of Muscular Adaptation' which is published by Elsevier.

Dr Shirley McCready is a Reader in Cell Biology and Microbiology at Oxford Brookes University. She received her first degree at Sheffield University and her DPhil from the University of Oxford. Her research is on genome stability and DNA damage and repair, and she currently has active collaborations with colleagues in the USA and Japan.