

## Foundations of Biomedical Research 2021

### Week 9: Cell Cycle and DNA Repair Machinery – David Johnson and Francesca Cole

Time	Monday October 25	Tuesday October 26	Wednesday October 27	Thursday October 28	Friday October 29
8:30	Lecture 1: Nucleotide Excision Repair pathways (RW)	Lecture 2: Base Excision and Mismatch repair (KM)	Lecture 4: History of Cell Cycle Research (HPW)	Lecture 5: RB and cell cycle checkpoints (DJ)	Lecture 6: Inter-strand crosslink repair (FC & KS)
9:15-9:30	Break	Break	Break	Break	Break
10:15	Breakout 1: Week 9 overview and breakout time (FC)	Lecture 3: Base Excision and Mismatch repair (KM)	Biostats/ bioinformatics Exercise	Breakout 4: Human Genetic Diseases presentations Groups 1 to 5	Breakout 5: Human Genetic Diseases presentations Groups 6 to 10
11:00 AM		Breakout 2: Work in groups on presentations			
			Breakout 3: Work in groups on presentations		

DJ – David Johnson

FC – Francesca Cole

RW – Rick Wood

KM – Kevin McBride

PC – Philip Carpenter

HPW – Helen Piwnica-Worms

KS – Katharina Schlacher

## Week 9 Objectives

- 1) Gain an understanding of the molecular machinery controlling the cell cycle, checkpoints, DNA replication, and DNA repair
- 2) Gain an appreciation for the evolutionary conservation of the cell cycle and DNA repair machinery and how studies in model organisms have contributed to our current understanding of human biology
- 3) Learn how the cell cycle and DNA repair machinery minimize loss of genomic integrity
- 4) Learn how defects in the cell cycle and DNA repair machinery contribute to diseases such as cancer
- 5) Learn how defects in cell cycle and DNA repair machinery can be targeted for therapy