**UNIVERSITY OF CAMBRIDGE : DEPARTMENT OF PATHOLOGY**  
**NATURAL SCIENCES TRIPOS**  
**PART II PATHOLOGY 2017-2018**

**CANCER & GENETIC DISEASES**

Organisers: Dr Pier Paolo D’Avino (email: cgd-organiser@path.cam.ac.uk, telephone: 33712) or Dr Carole Sargent (email: cgd-organiser@path.cam.ac.uk, telephone: 65667)

Lectures will be given in the Pathology Lecture Theatre unless marked with * in which case they will take place in the Seminar Room* at Tennis Court Road and take place Tuesday, Thursday and Saturday at 9.00 am unless stated otherwise.

### MICHAELMAS TERM 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed Oct 4</td>
<td>3:00 PM</td>
<td>Part II Introduction Talk</td>
<td>Kelly</td>
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<tr>
<td>Thu Oct 5</td>
<td>9:00 AM</td>
<td>Cell morphology</td>
<td>D’Avino</td>
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<tr>
<td>Fri Oct 6</td>
<td>2:00 PM</td>
<td>Tissue morphology</td>
<td>D’Avino</td>
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<tr>
<td>Sat Oct 7</td>
<td>9:00 AM</td>
<td>Cell cycle regulation I</td>
<td>Laman</td>
</tr>
<tr>
<td>Mon Oct 9</td>
<td>9:00 AM</td>
<td>Data interpretation session for all options</td>
<td>Trotter</td>
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<tr>
<td>Tue Oct 10</td>
<td>9:00 AM</td>
<td>Cell cycle regulation II</td>
<td>Laman</td>
</tr>
<tr>
<td>Sat Oct 14</td>
<td>9:00 AM</td>
<td>Mechanics and control of cell division I</td>
<td>D’Avino</td>
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<tr>
<td>Mon Oct 16</td>
<td>3:00 PM</td>
<td>Mechanics and control of cell division II</td>
<td>D’Avino</td>
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<td>Tue Oct 17</td>
<td>9:00 AM</td>
<td>Stem cells I</td>
<td>Rawlins</td>
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<td>Thu Oct 19</td>
<td>9:00 AM</td>
<td>Stem cells II</td>
<td>Rawlins</td>
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<td>Sat Oct 21</td>
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<td>Life and death of cells I</td>
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<td>Mon Oct 23</td>
<td>4:00 PM</td>
<td>Life and death of cells II</td>
<td>Watson</td>
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### Genomic Approaches to Disease

#### Organisation and Mapping of the Genome

<table>
<thead>
<tr>
<th>Date</th>
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<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>Thu Oct 26</td>
<td>9:00 AM</td>
<td>What makes a genome?</td>
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<tr>
<td>Sat Oct 28</td>
<td>9:00 AM</td>
<td>How do genomes evolve?</td>
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<tr>
<td>Tue Oct 31</td>
<td>9:00 AM</td>
<td>How do genomes differ?</td>
<td>Sargent</td>
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<tr>
<td>Thu Nov 2</td>
<td>9:00 AM</td>
<td>What chromosome studies tell us about disease</td>
<td>Griffin</td>
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<tr>
<td>Thu Nov 2</td>
<td>10 AM</td>
<td>Why chromosome position matters in disease</td>
<td>Griffin</td>
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<tr>
<td>Sat Nov 4</td>
<td>9:00 AM</td>
<td>Mapping disease genes for simple disorders</td>
<td>Sargent</td>
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<tr>
<td>Tue Nov 7</td>
<td>9:00 AM</td>
<td>Complex disorders: populations and pedigrees (I)</td>
<td>Sargent</td>
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<tr>
<td>Tue Nov 7</td>
<td>10.00am</td>
<td>Complex disorders: populations and pedigrees (II)</td>
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<td>Wed Nov 8</td>
<td>2:00 PM</td>
<td>Sex and the single Y: the rock’n’roll chromosome?</td>
<td>Ellis</td>
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<tr>
<td>Wed Nov 8</td>
<td>3:30pm</td>
<td>Sex chromosome specialisation and disease</td>
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#### Rare Diseases

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<th>Time</th>
<th>Title</th>
<th>Speaker</th>
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<tr>
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<td>9:00 AM</td>
<td>Next generation sequencing approaches to rare diseases</td>
<td>Skinner</td>
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#### Chromatin Regulation and Epigenetics

<table>
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<tr>
<th>Date</th>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue Nov 14</td>
<td>9:00 AM</td>
<td>Chromatin structure and expression</td>
<td>Bannister</td>
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<tr>
<td>Thu Nov 16</td>
<td>9:00 AM</td>
<td>Long-range regulation of gene transcription</td>
<td>Bannister</td>
</tr>
<tr>
<td>Sat Nov 18</td>
<td>9:00 AM</td>
<td>Non-Mendelian inheritance</td>
<td>Quilter</td>
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<tr>
<td>Tue Nov 21</td>
<td>9:00 AM</td>
<td>Epigenetic Disease</td>
<td>Quilter</td>
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## The developmental origins of disease

**Ozanne**

### DNA methylation and gene activity

**Constancia**

### Genomic imprinting: lessons from mouse models

**Constancia**

## Neurodegenerative Disease

**Laman**

### The genetics of Parkinson’s disease

**Rubinsztein**

### Introduction to autophagy*

**Rubinsztein**

### Autophagy and neurodegeneration*

**Rubinsztein**

## Molecular and Cell Biology of Cancer

### Oncogenes and Tumour Suppressors

**Laman**

- **Tumour suppressors**

**Watson**

- **Oncogenic pathways I**

**Watson**

- **Oncogenic pathways II**

**Carroll**

- **Cell senescence and telomeres**

**Narita**

### The Cancer Genome

**Edwards**

- **Investigating the cancer genome**

**Carroll**

- **Transcription factors and transcription networks in cancer**

**Narita**

- **Nuclear receptors in cancer**

**Vire**

- **Micro RNAs in cancer**

**Murray**

- **Genomic instability I**

**D’Avino**

- **Genomic instability II**

**D’Avino**

- **Genomic instability III**

**D’Avino**

### Cancer Examples and Models

**Bruna**

- **Models of Cancer I**

**Turner**

- **Models of Cancer II**

**Turner**

- **Hereditary Cancer I**

**Maher**

- **Hereditary Cancer II**

**Maher**

- **Stem cells and cancer**

**Huntly**

- **The tumour microenvironment**

**Shields**

- **Inter and Intra-tumour heterogeneity**

**Bruna**

- **Paediatric Cancer I**

**Coleman**

- **Paediatric Cancer II**

**Coleman**

- **Oesophageal adenocarcinoma**

**Contino**

- **Haematopoietic cancers: Lymphoma**

**Du**

- **Invasion and Metastasis**

**Bruna**

## EASTER TERM 2018

**Project Presentations (Single Subject)**

**D’Avino**

- **Sargent**

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05/03/2018
Bibliographic IT training will be available on multiple dates at the start of Michaelmas Term. Students need only to attend one of the sessions. Please complete the form available here to select the session you will attend https://www.surveymonkey.co.uk/r/PathPartII-2017

Updates to the information on this timetable will appear on the Departmental Web Server: www.path.cam.ac.uk, click on Undergraduate Teaching, then Third Year (part II teaching), then Part II Timetables (or go directly to http://www.path.cam.ac.uk/undergraduate/third_year/timetables). It is also available online to print or export to your personal timetable www.timetable.cam.ac.uk.

Paper Presentation Sessions for all students and Data Handling Seminars for single subject students only will be held in LT. (Dates TBC)