

BL3303 Membranes and Cell Communication

(BL3303 online module handbook version 15)

Credits: 20

Semester: 2

Module Organiser

Dr Marcus Bischoff

mb273@st-andrews.ac.uk

01334 467199

Pre-requisite Modules:

Before taking this module you must pass BL2301 and (pass BL2305 or pass BL2306 or pass BL2309)

Anti-requisite Modules:

Post-requisite Modules:

Additional Module

Information:

Please [check MMS](#) regularly for additional module information

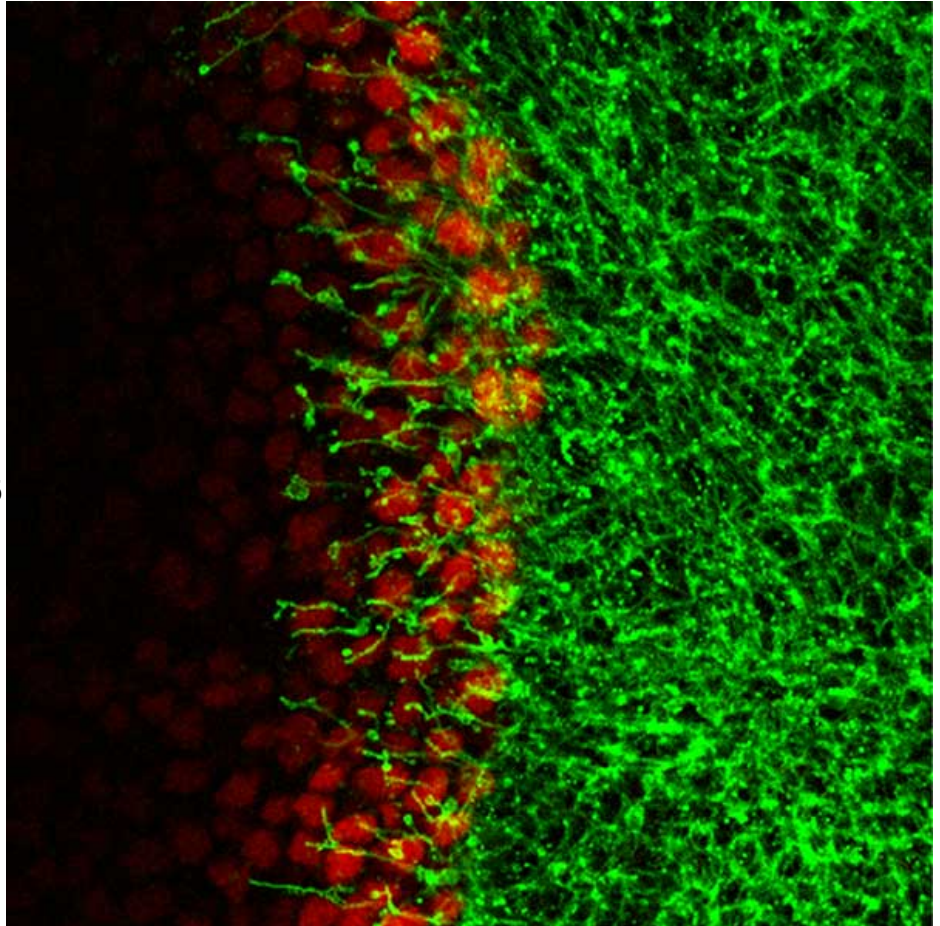


image: Cytonemes (green) and Hedgehog signalling activity reporter (red) in *Drosophila* wing imaginal disc.

This module looks at the various ways in which cells communicate with each other. Cell signalling not only involves the creation and reception of signals but also the mechanisms by which signals are transported across biological membranes. We will therefore consider the central role that biological membranes play in the regulation of the movement of molecules between different extracellular, intracellular and transcellular compartments. Also protein sorting and membrane trafficking will be studied. Using various examples of cell communication, the module will discuss both the molecular and the organismal implications of cell signalling. Topics covered include: (i) Lipids; (ii) Protein targeting and sorting; (iii) Membrane trafficking and transport; (iv) Wnt, Notch and Hedgehog signalling; (v) Plant cell signalling; (vi) Hippo signalling (vii) Ubiquitylation and SUMOylation.

[View the current Biology Online Module Catalogue for BL3303](#)

[BL3303View BL3303 \(2018/9\) in the University of St Andrews Module Catalogue](#)

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BL3303: Timetable

No details are currently available for BL3303 Timetable

BL3303: Reading List

[BL3303 Click for BL3303 reading list](#)

BL3303: Assessment

3-hour Written Examination = 66%, Coursework = 34%

(MMS assessment data cached: 19 October 2018
23:20:11.)

The following related information applies to all
Biology modules:

School of Biology Marking Criteria:

[See School of Biology Undergraduate Handbook](#)

Late submission of continuous assessment work:

All late submissions of coursework that do not require electronic submission should be made via the **late submissions box** in the Biomolecular Science Building (beside the Teaching Office)

Exam details:

[See School of Biology Undergraduate Handbook](#)

Exam timetable:

see
<http://www.st-andrews.ac.uk/students/academic/examinations/examtimetables/current/>

Expected attendance:

[See School of Biology Undergraduate Handbook](#) for detailed attendance requirements.

Good Academic Practice & Avoiding Academic Misconduct:

[See School of Biology Undergraduate Handbook](#)

University Student Handbook:

[University Student Handbook](#)

School and University regulations in the School and University Undergraduate Handbook relating to absence reporting, penalties and rules for late submission of work, extensions for coursework, return of coursework, S-coding, good academic practice and Academic Alerts.:

[School of Biology Undergraduate Handbook](#) [University Student Handbook](#)

Who to ask

(Information in this section applies to all Biology Modules)

Questions about different aspects of the module should be directed to different people:

Questions about

General teaching matters
Rescheduled or cancelled events
Lecture or practical content
Completing assessed practical assignments
Completing assessments
Marking on continuous assessment
Marking on exams
Rearranging practical days
Absence and/or extensions
Difficulties with academic progress which impact more than one module:
Overall performance, progress or future directions:
Disability:

Contact

Biology Teaching Office (bioteach@st-andrews.ac.uk)
Check your University email
The lecturer who presented the material
The lecturer who set the assignment
Module Organiser (Dr Marcus Bischoff mb273@st-andrews.ac.uk)
The Demonstrator or Module Organiser (Dr Marcus Bischoff mb273@st-andrews.ac.uk)
Module Organiser (Dr Marcus Bischoff mb273@st-andrews.ac.uk)
[Grant Brown](#)
Module Organiser (Dr Marcus Bischoff mb273@st-andrews.ac.uk) **and** the Biology Teaching Office (bioteach@st-andrews.ac.uk)
Year Coordinator
See [School of Biology Undergraduate student handbook](#) for list:
<http://biology.st-andrews.ac.uk/documents/UndergraduateHandbook.pdf>
Advisor of Studies
Disability Coordinator (Dr Jacqueline Nairn jn37@st-andrews.ac.uk)

Biology Teaching Office:

The Biology Hive, New Technology Centre, University of St Andrews, North Haugh, St Andrews, Fife KY16 9SR

Email: bioteach@st-andrews.ac.uk

Tel: 01334 463602

BL3303: Contributing Staff



[Dr Marcus Bischoff](#)
(Module Organiser)

Lecturer

mb273@st-andrews.ac.uk



[Dr Marcus Bischoff](#)
(Module Organiser)

Lecturer

mb273@st-andrews.ac.uk



[Prof Frank Gunn-Moore](#)

Professor of Molecular
Neurobiology, Deputy Head
of School

fjg1@st-andrews.ac.uk



[Dr David J Hughes](#)

Lecturer

djh25@st-andrews.ac.uk



[Dr Samantha Pitt](#)

Royal Society of Edinburgh
Biomedical Fellow

sjp24@st-andrews.ac.uk



[Dr Christos Pliotas](#)

Royal Society of Edinburgh
Research Fellow

cp39@st-andrews.ac.uk

[Dr Gerald Prescott](#)

Senior Lecturer

grp2@st-andrews.ac.uk



[Dr Paul Reynolds](#)

Lecturer and Director of
Postgraduate Studies

par10@st-andrews.ac.uk

[Dr Alison Roberts](#)

Honorary Reader

ar255@st-andrews.ac.uk



[Prof Terry Smith](#)

Professor

tks1@st-andrews.ac.uk



[Dr Jens Tilsner](#)

Lecturer

jt58@st-andrews.ac.uk

BL3303: Learning Outcomes

The objective of this module is to provide insights into how cells communicate with each other, emphasising properties of biological membranes, membrane trafficking and cell signalling. Also to facilitate the development of essential scientific skills.

Students completing module BL3303 successfully should be able to:

- Acquire an understanding of the biology of biological membranes, protein sorting and membrane trafficking
- Gain insights into the mechanisms underlying cell signalling and signal transduction
- Find and critically read and evaluate literature
- Produce a summary of a scientific paper and a practical report
- Produce a figure of the results of a practical
- Work in small teams in a lab-based context
- Plan work in order to meet deadlines
- Understand the principles that underlie cell communication

BL3303: Acquired Skills

Practical Skills

- Compound Microscopy
- Fixing and preserving specimens
- Image processing
- Pipetting
- Stereomicroscopy

Transferable Skills

- "Full" practical write-up (Intro, Methods, Results, Discussion)
- Completing a research paper from which sections have been removed
- Problem-solving questions
- Data presentation

Policies

(Information in this section applies to all Biology Modules)

- The procedures and regulations followed by the School of Biology are outlined in the [University Handbook](#) and in the [School of Biology Undergraduate Handbook](#) (<https://synergy.st-andrews.ac.uk/biocurrentstudent/files/2017/09/UndergraduateHandbook.pdf>).
- All coursework associated with the module must be completed and submitted by its due date.
- Specific School regulations relating to absence reporting, penalties and rules for late submission of work, extensions for coursework, return of coursework, S-coding, Good Academic Practice and Academic Alert are stated in the [School of Biology Undergraduate Handbook](#) and students are required to carefully read these regulations.
- Students are also referred to the University Handbook, available at: <http://www.st-andrews.ac.uk/studenthandbook/>