



# **BSc** **Biological** **Sciences** **Applicant Day**

**Dr Lorenzo Santorelli**  
- Programme Director  
- Undergraduate Admissions Tutor

# Overview of presentation



Biological  
Sciences  
degree  
programme

Our  
teaching

Professional  
Training Year  
(PTY)

# Modular Bioscience Programmes



8 modules -  
120 credits per year

Semester system:

- » **Autumn:**      **October-January**
- » **Spring:**      **February-June**
- » Christmas and Easter breaks
- » January and June exams
- » Compulsory and optional modules
- » Some programme flexibility

# BSc (Hons) Biological Sciences

- » Multidisciplinary approach
- » Professional Placement Programme
- » Personal tutors
- » Library and Learning Centre
- » Great location

Mix of lectures  
and practicals





**Let's talk  
about your  
choice**

# BSc (Hons) Biological Sciences



Broad and flexible course  
which looks at the study of  
life in all its forms:

- » Molecular biology and genetics
- » Biochemistry
- » Health and disease
- » Animal and plant biology
- » Ecology and evolution

# Teaching and Assessment

## Contact time

Year 1	20 – 25 hours per week
Year 2	15 – 20 hours per week
Year 3	about 15 hours per week + project

## Modes of Delivery

Lectures

Tutorials

Lab-based practicals

Field trips

Small group work

## Assessment methods

Examinations

Essays

MCQs

Presentations

Practical write ups

Website/blog design

# BSc (Hons) Biological Sciences is accredited by the Royal Society of Biology

- An external accreditation body acknowledges that a programme meets a defined set of overarching criteria
- Graduates from accredited courses receive a one-year free [membership](#) for the Royal Society of Biology at Associate level.
- This will open up networks at a crucial time when applying for jobs.





# Level 4 modules (first year)

Module	Biological Sciences
Current topics in biosciences	R
Microbiology: An introduction to the microbial world	R
Biochemistry: The molecules of life	R
Cell biology	R
Introduction to principles of physiology and practical skills	R
Molecular biology and genetics – genes and their function	R
Evolutionary origins of biodiversity	R
Biochemistry: A conceptual overview	R

**LEGEND:**  
R = Required



# Level 5 modules (second year)

Module	Infection & Immunity	Cellular & Molecular	Animal & Ecology
Biochemistry – enzymes and metabolism	R	R	R
Molecular biology and genetics	R	R	R
Cellular microbiology and virology	R	-	O
Neurosciences, from neurones to behaviour	-	R	O
Integration of physiological systems	R	R	R
Analytical and clinical biochemistry			
Introduction to immunology	R	O	O
Pharmacology: Introduction to drug action	O	R	O
Microbiology	O	-	O
Animal biology	R	R	R
Animal and plant ecology – theory and practice	R	R	R
Animal Nutrition, Tox., Pharm.	-	-	R
Pathology and medicine	O	O	-



## LEGEND:

R – Required,  
O = Optional,  
- = Not Available



# Level 6 modules (final year)

Infection & Immunity	Cellular & Molecular	Animal & Ecology
Clinical immunology	Biochemistry - metabolism	Man and the environment
Human microbial diseases	Pharmacology and toxicology	Animal diversity
Epidemiology of infectious diseases	Technologies in gene expression	Animal behaviour
	Cancer	Animal infectious diseases
	Human genetics	
Research project		





# How you will study - facilities and opportunities

# Teaching laboratories



# Teaching Laboratory: Innovation for Health



# Teaching delivery



# Field trips



Millennium Seed Bank

Kew Gardens

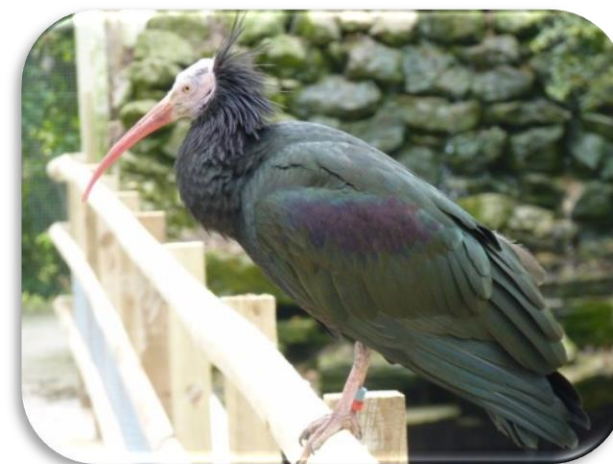


Natural History Museum



Merrist Wood College

Birdworld





# Professional Training Year (PTY)



- More than 200 placements provided
- Chosen by c.a. 50% of students
- Paid and unpaid placements
- Tuition fee significantly reduced
- Two to three tutor visits
- » Does not count towards degree classification

# Recent PTY Placements

United Kingdom	
Sanofi	AstraZeneca Environmental
Shepherd Neame	Quotient Bioresearch
Royal Surrey County Hospital	UCL Molecular Biology Laboratory
Medpharm	Whitman labs
LGC Forensics	Thermofisher Scientific
GlaxoSmithKline	Animal and Plant Health Agency (APHA)
Cardiff Medical School	Pirbright Institute
Plymouth Hospital	Royal Botanic Gardens Kew

International	
Belgium: Leuven	Italy: Milan, Sardinia, Lampedusa
Denmark: Lindholm	Spain: Madrid, Barcelona, Navarra
Finland: Turku, Kuopio, Helsinki	Sweden: Kalmar, Lund
France: Paris, Lyon	Australia: Sydney, Melbourne
Germany: Potsdam, Bonn, Frankfurt	USA: New York, Boston, North Carolina
Holland: Amsterdam, Groningen	China: Chendu, Shenzen

# Professional Training Year (PTY)



# Undergraduate students contribute to research



## Histamine H<sub>3</sub>-receptor signaling in cardiac sympathetic nerves: Identification of a novel MAPK-PLA<sub>2</sub>-COX-PGE<sub>2</sub>-EP<sub>3</sub>R pathway

Roberto Levi<sup>a,\*</sup>, Nahid Seyedi<sup>a</sup>, Ulrich Schaefer<sup>a</sup>, Rima Estephan<sup>a</sup>, **Christina J. Mackins**, **Eleanor Tyler**, Randi B. Silver<sup>b</sup>

<sup>a</sup>Department of Pharmacology, Weill Medical College of Cornell University, New York, NY 10021, United States

<sup>b</sup>Department of Physiology and Biophysics, Weill Medical College of Cornell University, New York, NY 10021, United States

## Inter-Individual Differences In Habitual Sleep Timing and Entrained Phase of Endogenous Circadian Rhythms of *BMAL1*, *PER2* and *PER3* mRNA in Human Leukocytes

Simon N. Archer, PhD, Antoine U. Viola, PhD, **Vanessa Kyriakopoulou**, BSc, Malcolm von Schantz, PhD, and Derk-Jan Dijk, PhD



## Absence of phosphoglucose isomerase-1 in retinal photoreceptor, pigment epithelium and Muller cells

Simon N. Archer<sup>1</sup>, Poonam Ahuja<sup>2</sup>, Romeo Caffé<sup>2</sup>, **Catherine Mikol**<sup>1</sup>, Russell G. Foster<sup>3</sup>, Theo van Veen<sup>2</sup> and Malcolm von Schantz<sup>1</sup>



**JOURNAL  
OF VIROLOGY**

*Published Twice Monthly by the American Society for Microbiology*

The 5' untranslated region of Rhopalosiphum padi virus contains an internal ribosome entry site which functions efficiently in mammalian, plant, and insect translation systems.

Woolaway KE, **Lazaridis K**, Belsham GJ, Carter MJ, Roberts LO.

## DRUG METABOLISM & DISPOSITION

Vol. 34, No. 8  
9498/3128273  
Printed in U.S.A.

### INDUCTION OF CYP1A AND CYP2-MEDIATED ARACHIDONIC ACID EPOXYGENATION AND SUPPRESSION OF 20-HYDROXYEICOSATETRAENOIC ACID BY IMIDAZOLE DERIVATIVES INCLUDING THE AROMATASE INHIBITOR VOROZOLE<sup>[S]</sup>

Silvia Diani-Moore, **Fotini Papachristou**, Erin Labitzke, and Arleen B. Rifkind

*Department of Pharmacology, Weill Medical College of Cornell University, New York, New York*

## Proceedings of the National Academy of Sciences

### Mast cell renin and a local renin–angiotensin system in the airway: Role in bronchoconstriction

Arul Veerappan\*, Alicia C. Reid\*, Racha Estephan\*, Nathan O'Connor\*, **Maria Thadani-Mulero**\*, Mariselis Salazar-Rodriguez†, Roberto Levi†, and Randi B. Silver\*‡

Departments of \*Physiology and Biophysics and †Pharmacology, Weill Cornell Medical College, 1300 York Avenue, New York, NY 10065

# The ideal biosciences graduate



# Employability

8<sup>th</sup>  
 in the  
*Guardian for  
 Biosciences  
 2020*



Faculty of  
 Health and  
 Medical  
 Sciences:  
**91%**

TEF GOLD  
 Gold in the  
 UK's first  
 teaching  
 excellence  
 framework



95% of  
 Biological  
 Sciences  
 students  
 in work/ study  
 6 months  
 after finishing

## Examples of graduate destinations

Research (MSc) PhD	Teaching
Academic	Nursing
Pharma/Biotech/CRO	Law
Medicine (Fast Track)	Marketing
Dentistry	Accountancy
NHS Biomedical Scientist	Finance Management
Forensics	Business/Commerce
Scientific Civil Service	Armed Forces Personnel
Scientific publishing	

# Graduation at Guildford Cathedral





# Thank you