

18th World Congress of the International Society on Toxinology

The Examination Schools & The Sheldonian Theatre
Oxford, United Kingdom

Congress Agenda



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18th World Congress of the International Society on Toxinology | 25-30 September 2015 | Oxford, UK

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The organising committee of the Congress is most grateful to BTG Plc for their generous educational grant to support the organisation of the Congress.

COMMITTEES

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Dr Muhammad Sohail, UK (Admin)
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Dr Robert Harrison, UK
Professor Alan Harvey, UK
Dr Denis Servent, France
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Kini, Professor R Manjunatha, Singapore
Križaj, Professor Igor, Slovenia
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Montecucco, Professor Cesare, Italy
Müller, Dr Gert J, South Africa
Nicholson, Professor Graham M, Australia
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Rahmy, Professor Tarek R, Egypt
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Tambourgi, Professor Denise, Brazil
Tytgat, Professor Jan, Belgium
Utkin, Professor Yuri, Russia
van Helden, Dr Dirk, Australia
Vogel, Professor Carl-Wilhelm, Hawaii
Wagstaff, Dr Simon, UK
Williams, Dr David J, Papua New Guinea
Wüster, Dr Wolfgang, UK
Zachariah, Professor Anand, India
Zhang, Professor Yun, PR China

KEYNOTE PLENARY SPEAKERS

Professor David Julius, California (San Francisco), USA
Professor Harry Greene, New York, USA
Professor Baldomero Olivera, Utah, USA
Professor Oliver Dolly, Dublin, Ireland
Professor Dr Juan Calvete, Valencia, Spain
Professor Dr Cesare Montecucco, Padova, Italy
Professor Hagan Bayley, Oxford, UK
Professor Angela Vincent, Oxford, UK
Professor Peter Ratcliffe, Oxford, UK

PODIUM AGENDA

Friday 25th September, The Examination Schools, High Street

ARRIVAL

11.00-13.00 Registration

Friday 25th September, The Sheldonian Theatre, Broad Street

OPENING CEREMONY

CHAIR: David Warrell

13.00 **Welcome** by Professor Alan Harvey (President, IST)

13.05 **Congress Inauguration** by Professor Sir John Bell “Basic science and industry”

13.15 **Welcome to the University of Oxford, to the “City of dreaming spires”, and to toxinology in Oxford** by Professor David Warrell (Congress Host Co-President)

13.35 00A **ELSEVIER LECTURE** by Professor David Julius

14.35 Comfort break

14.45 **REDI AWARD** and lecture (awardee to be announced)

15.45 **OXFORD STYLE PUBLIC DEBATE** – This House believes that venomics will provide a complete understanding of venoms

- **PROPOSERS:** i-Juan Calvete (Spain); ii-Bruno Lomonte (Costa Rica); iii-Kini Manjunatha (Singapore)
- **OPPOSERS:** i-Gilberto Domont (Brazil); ii-Dietrich Mebs (Germany); iii-Steve Mackessy (USA)

16.45 **General discussion** for and against the motion followed by **vote**.

17.30 **Close** (The Opening Ceremony will be followed by drinks reception at St Hilda’s College)

Friday 25th September, St Hilda’s College, Cowley Place

SOCIAL EVENT

18.30-19.30 Drinks reception

Saturday 26th September, The Examination Schools, The South Schools

TRACK A

SESSION 1: NATURAL TOXINS AND DRUG DISCOVERY

CHAIRS: Glenn King | Ray Norton | Yara Cury

09.00 001 **Baldomero Olivera (Keynote Plenary)**

Rationalizing Toxinology with Species-specific Biology: Fish-hunting Cone Snails and other Conoideans

09.40 Change over

09.50 002 **Glenn King (Keynote)**

Venoms to drugs: spider-venom peptides for the treatment of chronic pain and epilepsy

10.10 003 **Raymond Norton (Keynote)**

Potassium channel blocking toxins as treatments for autoimmune diseases: design, synthesis, stability & delivery

10.30 Refreshment break, poster viewing, networking and exhibition in the South Schools

11.00 004 **Yara Cury (Keynote)**

Bunodosine 391 (BDS 391) - a novel sea anemone compound that induces peripheral analgesia mediated by 5-HT₃ and TRPV1 ion channels

11.20 005 **Miryam P Alvarez-Flores**

Neuroprotective mechanisms of Losac in B27-deprived cortical neurons involve the expression of monocarboxylate transporter 2

11.35 006 **Grazyna Faure**

Snake venom phospholipase A₂ as a novel dual acting modulator of human F508del-CFTR and regulator of the prokaryotic pentameric proton-gated ion channel

11.50	007	Kerly Fernanda Mesquita Pasqualoto Prediction of immunogenicity: an <i>in silico</i> approach applied to the recombinant protein Amblyomin-X, a promising antitumor agent
12.05	008	Jeroen Kool Venom analytics for discovery of peptide biopharmaceutical candidates
12.20	009	Trinh Xuan Kiem A novel antitumor protein from <i>Calloselasma rhodostoma</i> venom
12.35		Lunch break, poster viewing, networking and exhibition in the South Schools

Saturday 26th September, The Examination Schools, The South Schools

TRACK A

SESSION 2: TOXINS AND THEIR DERIVATIVES IN CLINICAL USE OR IN DEVELOPMENT

CHAIRS: Baldomero Olivera | Carl-W Vogel

14.30	010	Oliver Dolly (Keynote Plenary) Molecular basis for the therapeutic efficacy of botulinum neurotoxins and new recombinant variants
15.10		Change over
15.20	011	Samira R Aili Ant venom as a source of bioinsecticide and antimicrobial drug leads
15.40	012	Elaine C Fitches Exploitation of spider venom peptide toxins for the development of novel molluscicides
16.00		Refreshment break, poster viewing, networking and exhibition in the South Schools
16.30	013	Francis S Markland Rational Design of a Snake Venom Derived Anti-invasive Agent: A Novel Recombinant Disintegrin as Cancer Therapeutic
16.45	014	Masahiro Miyashita Synthesis and biological characterization of insecticidal toxin LaIT2, a two-domain peptide isolated from the <i>Liocheles australasiae</i> scorpion venom
17.00	015	Célia R Carlini Ion Channel Activity and Neurotoxicity of Jaburetox in Insect Models
17.15	016	Marcus V Gomez Analgesic and side-effects in rodents of Ph α 1 β a spider venom toxin calcium channel blocker
17.30	017	Nicolas Gilles Mambaquaretin, a green mamba toxin as a new therapeutic agent for polycystic kidney diseases
17.45		Close

Saturday 26th September, The Examination Schools, The East Schools

TRACK B

SESSION 8: ANTIVENOM-1 INNOVATION AND COMMERCIALISATION

CHAIRS: José María Gutiérrez | Philippe Billiald

09.50	059	José María Gutiérrez (Keynote) Improving the distribution of antivenoms through a knowledge-based approach: a neglected aspect of innovation
10.10	060	Philippe Billiald (Keynote) An update on the use of antibodies against envenomings
10.30		Refreshment break, poster viewing, networking and exhibition in the South Schools
11.00	061	Abdulrazaq G Habib (Keynote) Cost-effectiveness of Antivenoms for Snakebite Envenoming in 16 countries in West Africa
11.20	062	Robert A Harrison (Keynote) Approaches to improve the snake-species, dose and local tissue-necrosis efficacy of snakebite treatment: Next Generation Snakebite Therapies
11.40	063	David J Williams Papua New Guinea's innovative Snakebite Research & Training Project: an international collaboration for sustainable change

12.10	064	Jorge Kalil Reducing costs in antivenom production: present and future
12.30	065	Andreas H Laustsen Rational design of snake antivenoms: Identification of key toxins targets and drug discovery via Next Generation Phage Display
12.40	066	Elda E Sánchez Neutralization of Snake Venom Myotoxins with a Chemically-Modified DNA Aptamer: An Approach to the Development of a Universal Antivenom
13.00		Lunch break, poster viewing, networking and exhibition in the South Schools

Saturday 26th September, The Examination Schools, The East Schools

TRACK B

SESSION 9: ANTIVENOM-2-PRE-CLINICAL AND CLINICAL ASSESSMENT

CHAIRS: David Williams | David Laloo | Fan Hui Wen

15.20	067	David G Laloo (Keynote) Clinical evaluation of interventions in envenoming; the challenges
15.35	068	David J Williams (Keynote) Clinical trials of a new Papuan taipan antivenom in Papua New Guinea: opportunities, challenges and rewards
15.50	069	Julian White (Keynote) Evidence versus experience; an antivenom dilemma
16.05		Refreshment break, poster viewing, networking and exhibition in the South Schools
16.30	070	Fiona M S Bolton Refinement of the WHO-recommended preclinical tests of antivenom efficacy
16.45	071	Dan E Keyler The development of a new polyspecific antivenom for snake envenoming in Sri Lanka: A new model of international research collaboration
17.00	072	Larissa M Alvarenga Engineered antibody fragments for the detection, quantification and neutralization of <i>Loxosceles intermedia</i> toxins
17.15	073	Steven A Seifert A prospective, multicenter, double-blind, randomized, controlled, clinical trial comparing Crotalinae Equine Immune F(ab') ₂ and Crotalidae Polyvalent Immune Fab (ovine) for the treatment of US Crotalinae envenomation
17.30	073A	Sanjib K Sharma A randomized, double blind, clinical trial of two dose regimens of VINS polyvalent antivenom for the treatment of snake bite with neurotoxic envenoming in Nepal
17.45		Close

Sunday 27th September, The Sheldonian Theatre

PUBLIC ENGAGEMENT WITH SCIENCE

09.00		Welcome by the Lord Mayor of Oxford – Councillor Rae Humberstone
09.05	00B	Professor Harry Greene (Cornell): Snakes and primates: a deadly 80 million-year-long dialogue”
10.00:		INTERACTIVE DISCUSSION “Venoms: deadly, but fascinating and potentially life-saving!” CHAIRED BY Professor Jeremy Farrar, <i>OBE, FRS</i>
		<ul style="list-style-type: none"> • Dietrich Mebs (Frankfurt): “What the hell is toxinology?” • David Warrell (Oxford): “Deadly and damaging venoms” • Alan Harvey (Strathclyde/Dublin): “Toxins as drugs” • Chris Shaw (Belfast): “The evolutionary magic of frog skin toxins”
11.00		Comfort break
11.15		OXFORD STYLE PUBLIC DEBATE – How and why did snakes get their venoms? CHAIRED BY Professor David MacDonald, <i>CBE</i>
		<ul style="list-style-type: none"> • THE MOTION “This House believes that venom originated only once in the course of reptilian evolution” • PROPOSERS: i-Bryan Grieg Fry (Brisbane); ii-Kartik Sunagar, (Jerusalem); iii-Timothy Jackson, (Brisbane) • OPPOSERS: i-John Mulley (Bangor); ii-Adam Hargreave (Oxford); iii-Scott A Weinstein (New York/Adelaide)
12.15		General discussion for and against the motion followed by a vote .
12.45		Close

Sunday 27th September, St Hilda's College, Canada Room

IST COUNCIL MEETING

14.30-16.30 IST Council Meeting (by invitation)

Sunday 27th September, St Hilda's College, Jacqueline Du Pré Music Building (JdP)

IST BUSINESS MEETING

18.00-20.00 IST Business AGM

Monday 28th September, The Examination Schools, The South Schools

TRACK A

SESSION 3: GENOMICS AND TRANSCRIPTOMICS

CHAIRS: Rob Harrison | Nick Casewell

- 09.00 018 **Cesare Montecucco (Keynote Plenary)**
The Neuromuscular Junction: a primary site of attack of protein neurotoxins
- 09.40 Change over
- 09.50 019 **Nicholas R Casewell (Keynote)**
Genomic and transcriptomic insights in to the origin and evolution of snake venom toxin genes
- 10.05 020 **Michael K Richardson (Keynote)**
What can we learn from snake genomics?
- 10.20 **John Mulley**
Characterisation of snake venom gland transcriptomes using the Oxford Nanopore MinION portable DNA sequencer
- 10.30 Refreshment break, poster viewing, networking and exhibition in the South Schools**
- 11.00 021 **Naoko Oda-Ueda**
Transcriptional activation of venom gland-specific genes by epithelium specific ETS transcription factor ESE-3 homolog in *Protobothrops flavoviridis* snake venom gland
- 11.15 022 **Gareth Whiteley**
Characterizing venom composition in the enigmatic genus *Aspidelaps*: genes, proteins and pathology
- 11.30 023 **Stephen P Mackessy**
Using venom to acquire complete venom protein cDNA sequences and assemble partial venom gland transcriptomes
- 11.45 024 **Sergey Kozlov**
Venom glands transcriptomics
- 12.00 025 **Frédéric Ducancel**
First insights about comparative Bumblebees high-throughput transcriptomes and proteomes
- 12.15 026 **Ricardo C Rodríguez de la Vega**
A large scale survey of toxin and toxin-like genes in transcriptomes reveals the molecular tool-kit of scorpion venom evolution
- 12.30 Lunch break, poster viewing, networking and exhibition in the South Schools**

Monday 28th September, The Examination Schools, The South Schools

TRACK A

SESSION 4: PROTEOMICS, VENOMICS, ANTIVENOMICS

CHAIRS: Juan Calvete | Bruno Lomonte

- 14.30 027 **Juan Calvete (Keynote Plenary)**
The bright future of venomomics
- 15.10 Change over
- 15.20 028 **Stephen P Mackessy (Keynote)**
Venom variation, taxon-specific toxins and biological roles of venoms
- 15.40 029 **Bruno Lomonte (Keynote)**
'Toxicovenomics' - towards an integrative view of compositional and functional aspects of snake venoms

16.00		Refreshment break, poster viewing, networking and exhibition in the South Schools
16.30	030	David J Williams (Keynote) Making antivenoms for the developing world: is there a place for high quality venom and antivenom technologies?
16.50	031	Florence Jungo VenomZone: a new web-portal to unravel venom complexity
17.05	032	Julien Echterbille High-throughput sequencing of toxins with pharmacological interest: proof of concept and first applications
17.20	033	Daniel Petras Pushing the limits - Integrating Top-down mass spectrometry into snake venomics
17.35		Close

Monday 28th September, The Examination Schools, The East Schools

TRACK B

SESSION 10: CLINICAL-1: SNAKE BITES

CHAIRS: Julian White | Steven Seifert

09.50	074	Steven A Seifert (Keynote) Far From Home: The Challenges of Non-Native Snake Envenomations
10.10	075	Owen K Paiva Clinical evaluation of the 20 Minute Whole Blood Clotting Test (20WBCT) and reliability at different temperatures and types of glassware
10.30		Refreshment break, poster viewing, networking and exhibition in the South Schools
11.00	076	Joerg Blessmann Snakebites in Lao PDR: Community-based surveys disclose high incidence of an invisible public health problem
11.20	077	Abdulrazaq G Habib The Public Health Burden of Snakebite Envenoming in 16 Countries in West Africa
11.40	078	Chamara Wijesinghe Development and assessment of a brief psychological intervention for snakebite victims
12.00	079	Jeremy N Day Space, time and species trends in snake envenomation in the south of Vietnam 1997 – 2012
12.20	080	Dirk F van Helden A pharmacological approach to snakebite first aid
12.40		Lunch break, poster viewing, networking and exhibition in the South Schools

Monday 28th September, The Examination Schools, The East Schools

TRACK B

SESSION 11: CLINICAL-2: ARTHROPOD BITES AND STINGS

CHAIRS: Rick Dart | Fábio Bucarechi

15.20	081	Fábio Bucarechi (Keynote) Scorpion stings in Brazil
15.40	082	Richard C Dart (Keynote) Efficacy of F(ab) ₂ Antivenom for the Treatment of <i>Latrodectus mactans</i> Envenoming in the United States
16.00		Refreshment break, poster viewing, networking and exhibition in the South Schools
16.30	083	Ronelle E Welton Hospitalisations and deaths due to venomous bites and stings in Australia from 2000 to 2013
16.45	084	David A Warrell Severe neurotoxic scorpion envenoming (<i>Parabuthus leiosoma</i>) in East Africa
17.00	085	John Rathbone Use of emergency transport by patients with envenomation injury in Queensland, Australia: a retrospective longitudinal study from 2007 to 2014
17.15	086	Thomas Junghans and Mauro Bodio "VAPAGuide – The free access Emergency Guide to Venomous and Poisonous Animals"
17.45		Close

Monday 28th September, The Examination Schools, Hall 9

TRACK C

SESSION 15: MARINE AND FRESHWATER ALGAL AND DINOFLAGELLATE TOXINS

CHAIRS: Brett Neilan | Richard Lewis

- 09.50 112 **Brett A Neilan (Keynote)**
Saxitoxin: a trans-kingdom sodium channel-blocking purine alkaloid
- 10.10 113 **Aurelia Tubaro (Keynote)**
Toxicological profiles of new palytoxins, a world wide problem for human health
- 10.30 Refreshment break, poster viewing, networking and exhibition in the South Schools**
- 11.00 114 **Richard J Lewis (Keynote)**
Ciguatera: recent advances but the risk remains
- 11.20 115 **Floriane Boullot**
Characterization of the voltage-gated sodium channel in *Crassostrea gigas*: its sensitivity to paralytic shellfish toxins produced by *Alexandrium minutum*
- 11.40 116 **John P Berry**
Xanthophyll Glycosides from Cyanobacteria are Teratogenic Pro-Retinoids with Potential Implications to Global Declines in Aquatic Vertebrates
- 12.00 Lunch break, poster viewing, networking and exhibition in the South Schools**

Monday 28th September, The Examination Schools, Hall 9

TRACK C

SESSION 16: TOXINS AND THE HAEMOSTATIC SYSTEM

CHAIRS: Manjunatha Kini | Kenneth Clemetson

- 15.20 117 **R Manjunatha Kini (Keynote)**
Fasxiator: a Novel, Highly Specific Factor XIa Inhibitor from Krait Venom
- 15.40 118 **Kenneth J Clemetson (Keynote)**
Toxins and their effects on platelets
- 16.00 Refreshment break, poster viewing, networking and exhibition in the South Schools**
- 16.30 119 **Ana Marisa Chudzinski-Tavassi**
Phospholipids role on Amblyomin-X selectivity for tumor cells and on its antihemostatic activity
- 16.45 120 **Xia Han**
Regulation of expression of venom prothrombin activators
- 17.00 121 **Ashis K Mukherjee**
Potential biomedical application of Kunitz-type protease inhibitors from *Daboia russelii russelii* venom
- 17.15 122 **Euikyung Kim**
Characterization and Molecular Cloning of Antithrombotic Activity of *Nemopilema nomurai* Jellyfish Venom
- 17.30 123 **Janaki Krishnamoorthy Iyer**
Thrombin inhibitors from hematophagous animals
- 17.45 Close**

Monday 28th September, St Edmund Hall (Dining Hall), High Street

SOCIAL EVENT

19.15-20.45 Congress banquet (by invitation or prior booking only)

Tuesday 29th September, The Examination Schools, The South Schools

TRACK A

SESSION 5: ION CHANNEL TOXINS

CHAIRS: Eddie Rowan | Jan Tytgat | Isabel Bermudez-Diaz

- 09.00 034 **Hagan Bayley (Keynote Plenary)**
DNA sequencing ... and other applications of pore-forming toxins

09.40		Change over
09.50	035	Neil V Marrion (Keynote) The folding of an ion channel revealed by toxin binding
10.10	036	Graham M Nicholson (Keynote) Spider peptide neurotoxins as positive allosteric modulators of insect nicotinic acetylcholine receptors
10.30		Refreshment break, poster viewing, networking and exhibition in the South Schools
11.00	037	Isabel Bermudez-Diaz (Keynote) Use of concatamers to identify and map the binding site of pharmacologically active compounds on Cys-loop ligand-gated ion channels
11.20	038	Yuri N Utkin What are nicotinic acetylcholine receptor blockers in venoms of Viperidae snakes?
11.35	039	Alexander A Vassilevski What's common between animal toxins and plant defence peptides?
11.50	040	Pierre E Bougis Micurotoxins MmTX1 and MmTX2 from coral snake venom potently modulate GABA _A receptor activity
12.05	041	Yingliang Wu Defensins, a novel kind of potassium channel inhibitors
12.20	042	Victor I Tsetlin Three-finger toxic and non-toxic proteins, old and new tools for research on neuroreceptors
12.35		Lunch break, poster viewing, networking and exhibition in the South Schools

Tuesday 29th September, The Examination Schools, The South Schools

TRACK A

SESSION 6: CONOTOXINS AND OTHER PAIN-INDUCING TOXINS

CHAIRS: Richard Lewis | Sébastien Dutertre | Sulan Luo

14.30	043	Angela Vincent (Keynote Plenary) Using animal toxins to explore neurological diseases: where would we be without them?
15.10		Change over
15.20	044	Richard J Lewis (Keynote) Evolution of new function in conotoxins
15.40	045	Sébastien Dutertre (Keynote) Novel insights into cone snail venom-ecology relationships
16.00		Refreshment break, poster viewing, networking and exhibition in the South Schools
<u>16.20</u>	<u>046</u>	<u>Sulan Luo (Keynote) **Please note an early start**</u> A new Hainan Conotoxin Potently Blocks $\alpha 9\alpha 10$ Nicotinic Acetylcholine Receptors
16.40	047	Irène R Chassagnon Inhibition of acid-sensing ion channel 1a by a novel double-knot spider toxin provides neuroprotection after stroke with a large therapeutic window
16.55	048	Catharina Reimers Cono-RFamide from <i>Conus textile</i> modulates proton-activated ASIC3 currents and alters sensory neuron excitability
17.10	049	Zhonghua Liu <i>Naja atra</i> venom peptide selectively blocks voltage-gated sodium channel Nav1.8 to abolish pain
17.25	050	Steve Peigneur When cone snails and spiders meet: design of selective and potent cyclized sodium channel inhibitors
17.40	051	Christina I Schroeder Rational design and synthesis of a novel Na _v 1.8 selective inhibitor
17.55		Close

Tuesday 29th September, The Examination Schools, The East Schools

TRACK B

SESSION 21: CLINICAL SNAKE-BITE CASES

CHAIRS: David Warrell | David Williams | Thomas Junghans

- 09.50 148 **Fábio Bucarechi (Keynote)**
Coral snake (*Micrurus* spp.) bites in Brazil: A review of literature reports over the last 147 years
- 10.10 149 **Joseph K Joseph**
Morbidity and Mortality Related to Capillary Leak Syndrome in *Daboia russelli* Bite
- 10.25 Refreshment break, poster viewing, networking and exhibition in the South Schools**
- 11.00 150 **Paula R Oliveira**
Epidemiology of Snakebites in Angola
- 11.15 151 **Lois Armstrong**
Snakebites in rural northern Bihar, India – A one year, prospective study on snakebite epidemiology and risk factors for bad outcomes
- 11.30 152 **Marieke A Dijkman**
The clinical presentation of an Aruban rattlesnake bite is comparable with bites by snakes belonging to the *Crotalus durissus* complex
- 11.45 153 **Sadanand Raut**
Snake Bite management experience in western Mah (INDIA)
- 12.00 154 **Scott A Weinstein**
An instructive case of presumed brown snake (*Pseudonaja* spp.) envenoming
- 12.15 155 **Dileep P Punde**
Crusade against Snake Bite poisoning
- 12.30 156 **Gus A Gross**
“Size Does Matter”
- 12.45 157 **Aniruddha Ghose**
Russell’s Viper (*Daboia Russelii*): A Newly Recognized Cause of Neuro-Myo-Renal toxic envenomation in Bangladesh
- 13.00 Lunch break, poster viewing, networking and exhibition in the South Schools**

Tuesday 29th September, The Examination Schools, The East Schools

TRACK B

SESSION 22: MARINE AND FRESHWATER STINGS AND VENOMS

CHAIRS: Dietrich Mebs | David Warrell

- 15.20 158 **Rongfeng Li**
Lethal factor and mechanism of the venom from Jellyfish *Nemopilema nomurai* (*Stomolophus meleagris*)
- 15.35 159 **Yehu Moran**
State-of-the-art transgenic, genomic and microscopic approaches for characterizing venom and toxin producing cells in sea anemones
- 15.50 Refreshment break, poster viewing, networking and exhibition in the South Schools**
- 16.15 160 **Dalia Ponce **Please note an early start****
Unravelling the venom complexity of the jellyfish *Chrysaora fuscescens* (Cnidaria, Scyphozoa) by an integrated transcriptome and proteome approach
- 16.30 161 **Vidal Haddad Junior**
The lionfish in the New World: dissemination, ecological impact and risks to humans
- 16.45 162 **Angel A Yanagihara**
Cubozoan Envenomations: Pathogenetic Mechanisms and Clinical Management Implications
- 17.00 163 **Luis M Botana**
Presence of tetrodotoxin in an increasing number of vectors, and the real value of TEF (toxic equivalent factor)
- 17.15 164 **Julian White**
The Clinical Toxinology Resources Website; An Update On 13 Years Experience
- 17.30 Close**

Tuesday 29th September, The Examination Schools, Hall 9

TRACK C

SESSION 17: BIOTOXINS AND BIOTERRORISM

CHAIRS: Daniel Gillet | P Gopalakrishnakone

- 09.50 124 **Daniel Gillet (Keynote)**
Inhibitors of Ricin and Shigatoxin Intracellular Trafficking Treat Mice with O104:H4 STEC Infection
- 10.10 125 **P Gopalakrishnakone (Keynote)**
Detection of Venoms and Toxins
- 10.30 Refreshment break, poster viewing, networking and exhibition in the South Schools**
- 11.00 126 **Leonard A Smith**
Progress toward Developing a Safe and Efficacious Ricin Vaccine
- 11.20 127 **Mahdi Balali-Mood**
Chemical weapons with biological toxins origin
- 11.40 128 **Virginie Brun**
Exploring the toxinome of *Staphylococcus aureus* using targeted proteomics
- 12.00 129 **Suzanne R Kalb**
Functional Characterization of a Novel Botulinum Neurotoxin Hybrid
- 12.20 Lunch break, poster viewing, networking and exhibition in the South Schools**

Tuesday 29th September, The Examination Schools, Hall 9

TRACK C

SESSION 18: ADVANCES IN THE UNDERSTANDING OF BACTERIAL AND FUNGAL TOXINS

CHAIRS: Cesare Montecucco | Len Smith

(Including the International Society for Neurochemistry symposium on “*Medically-important bacterial neurotoxins affecting the nervous system*”)

- 15.20 130 **Marina de Bernard**
Treponema pallidum (syphilis) antigen TpF1 induces angiogenesis through the activation of the IL-8 pathway
- 15.40 131 **Ornella Rossetto**
The new world of hundreds of different Botulinum Neurotoxins
- 16.00 Refreshment break, poster viewing, networking and exhibition in the South Schools**
- 16.30 132 **Giampietro Schiavo**
The journey of tetanus and botulinum neurotoxins in the CNS
- 16.50 133 **Jordi Molgó**
13,19-didesmethyl and 13-desmethyl spirolide-C neurotoxic actions are mainly due to interactions with nicotinic rather than muscarinic receptors
- 17.10 134 **Robert J French**
New complexities of μ -Conotoxin actions are seen in their inhibition of “simple” prokaryotic sodium channels
- 17.30 Close**

Tuesday 29th September, The Examination Schools, Hall 11

TRACK D

SESSION 12: DISCOVERING NEW TOXINS IN UNEXPECTED TAXA MAMMALS, AMPHIBIANS, ANNELIDS, CRUSTACEANS, TICKS

CHAIRS: Christopher Shaw | Bryan Fry | Pat Nuttall

- 09.50 087 **Chris Shaw (Keynote)**
Anorexigenic peptides in amphibian skin: unexpected or not?
- 10.10 088 **K Anna I Nekaris (Keynote)**
What is the ecological function of slow loris (*Primates, Nycticebus*) venom?
- 10.30 Refreshment break, poster viewing, networking and exhibition in the South Schools**

11.00	089	Pat Nuttall (Keynote) Ticks and toxins
11.20	093	Sandy Richter Analysis of α -Glycerotoxin (GLTx) expression refines the view of the venom system in glycerid annelids
11.35	091	Igor Kasheverov Novel natural and designed cholinergic ligands: the possibilities of fundamental and practical applications
11.50	092	Douglas O C Mariano <i>Pipa carvalhoi</i> and <i>Rhinella jimi</i> : The non-peptidic anurans skin secretions
12.05	090	Lahcen I Campbell Evolution of venom toxins in bloodworms (Annelida: Polychaeta)
12.20	094	Tom Turk The genes of the Antarctic heteronemertine <i>Parborlasia corrugatus</i> coding for toxic parborlysins
12.35	095	William Kem Nicotinic Receptor Targeted Drug Design with a Nemertine Toxin
12.50	096	Björn M von Reumont Dark Venomics: transcriptomics, proteomics and morphology enlight the first venomous crustacean, cave dwelling Remipedia
13.05	097	Holger Scheib Toad toxins and poisonous snakes: the bufadienolide universe and its mechanism of action with Na^+/K^+ -ATPase
13.20		Lunch break, poster viewing, networking and exhibition in the South Schools

Tuesday 29th September, The Examination Schools, Hall 11

TRACK D

SESSION 13: TOXINS IN NATURAL HISTORY AND EVOLUTION

CHAIRS: Wolfgang Wüster | Kevin Arbuckle | Kartik Sunagar

15.20	098	Wolfgang Wüster (Keynote) Snakes behaving badly: evolution of venom spitting in cobras in its historical context
15.40	099	Nicholas R Casewell (Keynote) Extreme convergence in toxin resistance by predictable parallel molecular evolution
16.00		Refreshment break, poster viewing, networking and exhibition in the South Schools
<u>16.20</u>	<u>100</u>	<u>Kartik Sunagar **Please note an early start**</u> The rise and fall of an evolutionary innovation
16.35	101	Eivind A B Undheim Limitations on a biochemical arsenal — do centipede venoms evolve under morphological constraint?
16.50	102	Gary M Bucciarelli Fluctuations of toxin levels in a chemically defended amphibian
17.05	103	Timothy N W Jackson Ontogenetic shifts in the diet of <i>Pseudonaja sp.</i> are paralleled by ontogenetic shifts in venom
17.20	104	Bryan G Fry The dynamic diversification of the reptile venom system
17.35	105	Kevin Arbuckle It's Not Easy Being Mean: Consequences of Chemical Antipredator Defence for Ecology, Evolution, and Conservation
17.50		Close

Wednesday 30th September, The Examination Schools, The South Schools

TRACK A

SESSION 7: SNAKE VENOM METALLOPROTEINASES, PHOSPHOLIPASES AND OTHER TOXINS MEDIATING INFLAMMATION

CHAIRS: Jay Fox | José María Gutiérrez | Ana Maria Moura de Silva

09.00	Gordon Duff Welcome from St Hilda's College
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09.05	052	Peter J Ratcliffe (Keynote Plenary) Oxygen sensing in animals: the new physiology of hypoxia
09.45		Change over
09.50	053	Jay W Fox (Keynote) Correlating Snake Envenomation Mechanisms and Pathophysiology with Wound Exudate Proteomics Over Time and Space
10.10	054	José María Gutiérrez (Keynote) Understanding the mechanisms of microvascular damage induced by snake venom hemorrhagic metalloproteinases
10.30		Refreshment break, poster viewing, networking and exhibition in the South Schools
11.00	055	Igor Križaj (Keynote) Protein disulphide isomerase in the retrograde cell transport of ammodytoxin and the structurally related mammalian secreted phospholipases A ₂
11.20	056	Michela Rigoni Animal presynaptic neurotoxins provide a relevant model of motor axon terminal degeneration followed by regeneration
11.40	057	Jonas Perales Structural determinants of the interaction between snake venom metalloproteinase and its natural inhibitors
12.00	057	Marie Delafontaine <i>Bothrops lanceolatus</i> venom: Potential mechanisms involved in envenoming
12.20	167	Alan Harvey (Closing Plenary-1) The future of toxinology: where are we heading?
12.30	166	Jay W Fox (Closing Plenary-2) What's Wrong Right with Toxinology
12.40	040	Closing remarks by Congress Co-Presidents (Closing Plenary-3)
12.50		Close of Congress and Departure

Wednesday 30th September, The Examination Schools, The East Schools

TRACK B

SESSION 20: PLANT AND MUSHROOM POISONING

CHAIRS: Michael Eddleston | Julian White

09.50	142	Michael Eddleston (Keynote) Epidemiology and management of plant self-poisoning in South Asia
10.10	143	Julian White (Keynote) Mushroom poisoning: a proposed new clinical classification
10.30		Refreshment break, poster viewing, networking and exhibition in the South Schools
11.00	144	Thomas R Zilker Management of Amanita poisoning
11.20	145	Régis Bédry The "new" mushroom syndromes
11.40	146	M Abul Faiz Challenges of diagnosis of fatal plant related acute intoxication in Bangladesh
12.00	147	David A Warrell Supping with the Panará: a case for Inspector Morse in Oxford
12.15		Back to the South Schools for Closing Plenaries

Wednesday 30th September, The Examination Schools, Hall 9

TRACK C

SESSION 19: VENOM AND TOXIN PHARMACOLOGY

CHAIRS: Denis Servent | Christine Wright

09.50	135	Denis Servent (Keynote) Aminergic Toxins interacting with GPCRs: Identification, pharmacological characterization, structural and engineering studies
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10.10	136	Christine E Wright (Keynote) The cardiovascular pharmacology of the venom of the Papuan black snake <i>Pseudechis papuanus</i>
10.30		Refreshment break, poster viewing, networking and exhibition in the South Schools
11.00	137	Patrick L Harrison Using atomic force microscopy to characterise the mechanism of action of two antimicrobial peptides from the venom of <i>Scorpio maurus palmatus</i>
11.20	138	Luciene M Zanchetta Cytoskeleton participation on crotofine-induced antinociception in inflammatory pain
11.35	139	Fernanda C Cardoso Harnessing animal venoms in the discovery of potent Na _v inhibitors through fluorescent and automated patch clamp assays
11.50	140	Janeyuth Chaisakul Sudden cardiovascular collapse in snakebite: differing mechanisms of hypotension with a venom PLA ₂ compared to a prothrombin activator
12.05	141	Lucas A Freitas Assessment of neurotoxic activity of an isolated toxin from <i>Tityus bahiensis</i> scorpion venom intrahippocampally injected in rats
12.20		Back to the South Schools for Closing Plenaries

Wednesday 30th September, The Examination Schools, Hall 11

TRACK D

SESSION 14: VENOMS AS AN EMERGING EVOLUTIONARY MODEL

CHAIRS: Juan Calvete | Marymegan Daly

09.50	106	Mandë Holford (Keynote) Using The Molecular Diversity of Terebrid Snail Venom To Investigate Gene Evolution and Adaptive Change
10.10	107	Marymegan Daly (Keynote) Evolutionary diversity of sea anemone venom
10.30		Refreshment break, poster viewing, networking and exhibition in the South Schools
11.00	108	Ronald A Jenner (Keynote) Tracking toxins in neglected venomous invertebrates
11.20	109	Stephen P Mackessy Expression of venom gene homologs in diverse python tissues: a new model for the evolution of snake venom and a re-assessment of transcriptome-based definition of venoms
11.40	110	Anita Malhotra Mechanisms of toxin evolution evaluated using the Phospholipase A2 gene family from pitvipers
12.00	111	Thomas M McCabe Evidence for the Presence of an Endogenous Venom-Resistance Molecule in a Local Population of Deer Mouse (<i>Peromyscus maniculatus</i>)
12.20		Back to the South Schools for Closing Plenaries

POSTER LISTING

Presentation Date: Saturday 26th September, The North Schools

- 26-1-1: **José E Barbosa**, Production of human monoclonal antibodies (scFv) able to inhibit toxic actions of crude venom, purified melittin and PLA₂ from Africanized bees
- 26-1-2: **Evelyne Benoit**, Effects of pinnatoxins and other cyclic imine phycotoxins on the mouse neuromuscular system *in vivo*
- 26-1-3: **Cháriston A. Dal Belo**, Neurotoxicity of Jack Bean Urease: Investigation of its convulsive-like activity
- 26-1-4: **Thomas Besson**, Binding Site and Inhibitory Mechanism of the Mambalgin-2 Pain-relieving Peptide on Acid-sensing Ion Channel 1a
- 26-1-5: **Cicilia de Carvalho**, A prothrombin activator protein and derived peptides as promising tissue remodeling agents
- 26-1-6: **Felipe Augusto Cerni**, Ts19 Fragment II: a new long-chain potassium channel toxin from *Tityus serrulatus* venom
- 26-1-7: **Laura Droctové**, Structure and molecular mode of action of a snake toxin acting on type 2 vasopressin receptor
- 26-1-8: **Fernanda Faria**, Placolín, a new inhibitor of platelet aggregation from *Haementeria depressa* leech
- 26-1-9: **Matheus F Fernandes-Pedrosa**, Structural characterization of a novel peptide with antimicrobial and anticancer activities from the venom gland of the scorpion *Tityus stigmurus*
- 26-1-10: **Suely G Figueiredo**, Identification of C-type isolectins in the venom of the scorpionfish *Scorpaena plumieri*
- 26-1-11: **Suely G. Figueiredo**, *Scorpaena plumieri* venom and skin mucus: biochemical and pharmacological features
- 26-1-12: **Francia García**, Identification and characterization of a peptide with anti-nociceptive effect isolated from the skin secretion of an American veined tree frog
- 26-1-13: **Aya Kiriake**, Primary structure of a proteinaceous toxin from rabbitfish *Siganus fuscescens*
- 26-1-14: **Hang Fai Kwok**, High-throughput approach for isolation and identification of novel peptides with anticancer activities from scorpion venoms
- 26-1-15: **Sara E Lucena**, Purification, isolation and partial characterization of four dimeric disintegrins from the venom of Broad-Banded and Trans-Pecos Copperheads
- 26-1-16: **Irasema Oroz-Parra**, Caspase3/7-related apoptosis induced by two synthetic disulfide bond toxins from *Conus californicus* in lung cancer cell lines
- 26-1-17: **Manuela Berto Pucca**, Tityus serrulatus toxins as immunosuppressants: insights of a novel K⁺ channel pattern in T cells
- 26-1-18: **Kalyani Saha**, Neutralization of *Naja kaouthia* venom induced acute stress and cytokines response with herbal gold nano particle (VN-GNP)
- 26-1-19: **Cristina P Sousa**, Endophytic *Paenibacillus terrae* can produce toxic effect in promastigotes forms of *Leishmania infantum/chagasi* nitric oxide sensitive
- 26-1-20: **Mohamed M Tawfik**, Cytotoxic properties of smp24 and smp43, alpha-helical antimicrobial peptides from the egyptian scorpion, *Scorpio maurus palmatus*
- 26-1-21: **Kiem X Trinh**, The research and application results of sero-therapy for snake bite patients in Vietnam
- 26-1-22: **Héctor H Valdivia**, Structure-function relationship of Calcins, a group of high-affinity membrane-permeable peptide ligands of Ca²⁺ release channels/Ryanodine Receptors
- 26-1-23: **Sarah J Whitfield**, Superantigens in sepsis: effective treatment of staphylococcal enterotoxin B intoxication in the mouse
- 26-7-1: **Oyama Etsuko**, Purification and characterization of two platelet-aggregation inhibitors, named angustatin and H-toxin TA₂, from the venom of *Dendroaspis angusticeps*
- 26-7-2: **Carlos A. H. Fernandes**, Biophysical studies suggest a new arrangement of crotoxin complex and provide insights into CB oligomerization
- 26-7-3: **Consuelo L Fortes-Dias**, Structural and evolutionary insights into endogenous alpha-phospholipase A₂ inhibitors of Latin American pit vipers
- 26-7-4: **Karina C Giannotti**, Snake venom phospholipases A₂ (MT-3 and BthTx-2) induce vascular smooth muscle foam cell formation dependent on lipid metabolism factors
- 26-7-5: **Alexandra Rucavado**, Proteolytic degradation of muscle basement membrane by SVMPS: pathophysiologic implications in muscle necrosis
- 26-7-6: **Léa Rodrigues-Simioni**, A new neuromuscular active fraction from *Bothrops fonsecai* venom
- 26-7-7: **Luciana A F Sousa**, Comparison of venoms from wild and long-term captive *Bothrops atrox* snakes and characterization of Batrotoxragin, the predominant class PIII-SVMP
- 26-7-8: **Catarina Teixeira**, Phospholipase A₂ subunit of crotoxin inhibits expression of endothelial cell adhesion molecules involved in leukocyte diapedesis during inflammation
- 26-7-9: **Hossein Vatanpour**, Direct Cytotoxic activity of Iranian *Agkistrodon Halys* Crude Venom on Endothelial Cells
- 29-7-10: **Binta Kurfi**, Effect of serum creatine kinase in rabbits as affected by myotoxin phospholipase A₂ partially purified from *Naja nigricollis* venom
- 29-7-11: **Teresa Escalante**, Snake venom metalloproteinases inhibit angiogenesis in a three-dimensional *in vitro* assay
- 26-8-1: **Alexandra Bak Jakobsen**, Economic analysis of the underlying causes for the snake antivenom market failure in sub-Saharan Africa: looking beyond science for explanations
- 26-8-2: **Milind V Khadilkar**, Development of equine origin lyophilized polyvalent Snake Venom Antiserum against 4 Bitis, 3 Echis, 3 Naja and 4 Dendroaspis species for Africa
- 26-8-3: **Andreas H Laustsen**, The future of antivenoms: Oligoclonal mixtures of recombinant, human(ized) antibodies
- 26-9-1: **Joerg Blessmann**, High incidence of anaphylactic shock to horse-derived F(ab')₂ antivenom in 99 snakebite patients treated at Savannakhet provincial hospital, Lao PDR

- 26-9-2: **Rita C O Collaço**, Size-exclusion chromatography on venom: antivenom binding analysis: a new perspective for F(ab')₂ antibody fragments study
- 26-9-3: **Shyam B Dhawan**, Retrospective review of snakebites treated with new Snake venom Antiserum in rural Maharashtra, India
- 26-9-4: **Gus A Gross**, The Diamond Hour
- 26-9-5: **Ajith Venugopalan**, A study to estimate the prevalence of adverse reactions to anti-snake venom therapy in a tertiary care centre in South India
- 26-14-1: **Summer Xia Han**, Gene regulatory elements and evolution of snake toxins
- 26-19-1: **Sonia Adi-Bessalem**, Pharmacomodulation of Gastric Inflammatory Response by Histamine H4 Receptor and Cyclooxygenase 2 Pathway during scorpion envenomation
- 26-19-2: **Aouatef Ait-Lounis**, TNF-alpha modulates adipose macrophage polarization to M1 phenotype in response to scorpion venom
- 26-19-3: **Naira Ayvazyan**, Morphological and functional alteration of erythrocyte ghosts caused by vipers venom
- 26-19-4: **Amina Ladjel-Mendil**, Involvement of signaling pathways in the induced neuropathological disorders by Kaliotoxin
- 26-19-5: **Ladjel-Mendil Amina**, IL-6 and TNF- α involvement in immuno-inflammatory response and oxidative stress induced by *Androctonus* scorpion venom
- 26-19-6: **Adriana N Martins**, Exposure of lactating rats to the Tityus bahiensis scorpion venom: Effects on behavioral development, neuronal intactness and cytokine levels.
- 26-19-7: **Gabriel O Meissner**, First recombinant expression and biological characterization of an ICK toxin from *Loxosceles intermedia* (brown spider)
- 26-19-8: **Paulo A Melo**, Cytotoxicity of *Apis mellifera* Bee Venom: Pharmacological interventions and treatment
- 26-19-9: **Selvanayagam Nirthanan**, Delineating a potassium channel blocking peptide segment from spinoxin (α KTx6.13), a Kv1 channel inhibitor from *Heterometrus spinifer* scorpion venom
- 26-19-10: **Fernanda C. Oliveira**, Investigation of cytotoxicity of *Bothrops atrox* venom and purified LAAO in primary keratinocytes
- 26-19-11: **Thalita Rocha**, The effect of Dipotassium Glycyrrhizinate to minimize the myonecrosis induced by *Bothrops jararacussu* snake venom and to induce muscle regeneration
- 26-19-12: **Maria R Sandoval**, Effects of an anti-muscarinic component isolated from *Micrurus lemniscatus* venom on inositol phosphate and learning and memory in rats
- 26-19-13: **Carlos Chavez- Olortegui**, Determination of toxic activities in *Bothrops spp.* snake venoms using animal-free approaches: Correlation between *in vitro* versus *in vivo* assays
- 26-19-14: **Hossein Vatanpour**, *Ex-vivo* evaluation of the electrophysiological effects of the crude venom of *Buthotus schach* on rat brain neurons.
- 26-19-15: **Joshua S Wingerd**, A novel tarantula venom peptide with subtype-dependent pharmacology at voltage-gated sodium channels

Presentation Date: Monday 28th September, The North Schools

- 28-3-1: **Márcia H Borges**, Global profile of the venom of *Grammostola Iheringi* Brazilian tarantula: searching for biotechnological potential
- 28-3-2: **Michel Degueudre**, Multi-analytical method to characterise *Naja atra* venom
- 28-3-3: **Mikael Engmark**, High-throughput epitope identification for snakebite antivenom
- 28-3-4: **Julián Fernández**, Snake venomomics of *Micrurus alleni* and *Micrurus mosquitensis* from Costa Rica: two divergent compositional patterns in New World elapids
- 8-3-5: **Paul M N Heiss**, Venomic characterization and bioactivity screening of *Vipera anatolica*, *Vipera dorevskii* and *Montivipera bulgardaghica*
- 28-3-6: **Florence Jungo**, VenomZone: a new website to unravel venom complexity
- 28-3-7: **Tai Kubo**, Utilization of neurotoxin-inspired peptide libraries in *in-vitro* evolution, and its proved pluripotency to target GPCRs, proteases and trophic factors
- 28-3-8: **Rafael D Melani**, Top-down Venomics: mapping intact proteoforms and protein complexes in king cobra venom.
- 28-3-9: **Bruno Madio**, Proteomic and transcriptomic investigation of the venom from Australian sea anemones provides insight into venom evolution and ecology
- 28-3-10: **Gilles Mourier**, VENOMICS project: Production of two and three-Disulfide-Bridges small Toxins
- 28-3-11: **Carlos Correa-Netto**, Monoclonal-based antivenomics and biological activities revealing conserved neutralizing epitopes across Elapidae family
- 28-3-12: **Carolina A Nicolau**, *Bothrops jararaca* proteopeptidome: extensive molecular characterization of samples to be assayed by the connectivity map approach
- 28-3-13: **Davinia Pla Snake**, venomomics of the palm-pitvipers *Bothriechis bicolor*, *B. aurifer* and *B. thalassimus* from Guatemala
- 28-3-14: **Loic Quinton**, Diversity of peptide toxins from four *Conus* venoms revealed by combined cutting-edge technologies of proteomics, transcriptomics and bioinformatics
- 28-3-15: **Ene Siigur**, *Vipera lebetina* venom nucleases
- 28-3-16: **Leijiane F de Sousa**, Adaptive advantages of individual variation of *Bothrops atrox* venom from snakes collected at different phytogeographical scenarios in Brazilian Amazon
- 28-3-17: **Ana F Sequeira**, High-Throughput synthesis and cloning of genes encoding venom peptides: developing a platform for the discovery of novel therapeutic molecules
- 28-3-18: **Wang-Chou Sung**, High Throughput Disulfide Bond Profiling of Crude Snake Venom Using Mass Spectrometry
- 28-3-19: **Choo Hock Tan**, Venomomics of *Hydrophis schistosus*, the beaked sea snake: a simple toxin arsenal cross-neutralised by two heterologous antivenoms
- 28-3-20: **Kae Yi Tan**, Geographical variations of *Naja kaouthia* (monocled cobra) venom from Southeast Asia: a venomic and functional study

- 28-3-21: **Norma Yamanouye**, Mechanisms of production and secretion of toxins by secretory cells from *Bothrops jararaca* venom gland in culture: a secretome study
- 28-4-1: **Diego D Almeida**, An overview on the development of *Bothrops jararaca* genome project
- 28-4-2: **Diana R Amazonas**, Population genomics of *Bothrops atrox* in the West of Para State, Brazil: Analyses Using RADseq Genetic Markers
- 28-4-3: **Jimena Cid-Urbe**, Transcriptome analysis of venomous glands of male and female scorpions of the species *Centruroides limpidus*
- 28-4-4: **Jordi Durban**, Testing the hypothesis that miRNAs modulate ontogenetic changes in the venom of *Crotalus simus*
- 28-4-5: **Fernanda Faria**, Genes Involved in Blood Coagulation: Exploring Salivary Complexes from *Haementeria vizottoi* leeches through Transcriptomic and Phylogenetic Studies
- 28-4-6: **Andrea Figueroa-Montiel**, *In silico* identification of protein disulfide isomerase genes in the *de novo* assembled transcriptomes of four different species of the genus *Conus*
- 28-4-7: **Inácio L M Junqueira-de-Azevedo**, Deciphering the venom of the rear fanged snake *Phalotris mertensi* by integrative multiomics and biochemical approaches
- 28-4-8: **Ursula C de Oliveira**, Comparative transcriptomes and proteomes from medically important scorpions from the genus *Tityus*
- 28-4-9: **María T Romero-Gutiérrez**, Insights on the transcriptomic analysis of the venomous gland of the scorpion *Thorellius atrox*
- 28-4-10: **Libia Sanz**, Genomic organization of *Echis ocellatus* PI- and PII-SVMP genes
- 28-4-11: **Montamas Suntravat**, Transcriptomic analysis of the venom gland of the Venezuelan mapanare (*Bothrops colombiensis*) using expressed sequence tags (ESTs)
- 28-10-1: **Lois Armstrong**, Snakebites in rural northern Bihar, India – A one year, prospective study on snakebite epidemiology and risk factors for bad outcomes
- 28-10-2: **Hui Wen Fan**, Microorganisms isolated from blisters and abscess secretions in patients bitten by *Bothrops* snakes.
- 28-10-3: **Kasun Fernando**, Severe local pain after Hump nosed viper bite alleviation with new methods: Audit in Base Hospital Elpitiya Sri Lanka
- 28-10-4: **Jay W Fox**, Proteomic Analysis of Human Blister Fluids Following Envenomation by Three Snake Species: Differential Markers for Venom Mechanisms of Action and Potential for Personalized Therapeutic Intervention
- 28-10-5: **Francisco O S França**, Rattlesnakes (*Crotalus durissus*) bites in Santarém/Pará (Brazilian Amazonia)
- 28-10-6: **Francisco O S França**, Forest pit viper (*Bothrops bilineata bilineata*) bite in the Brazilian Amazon with acute kidney injury and persistent thrombocytopenia
- 28-10-7: **Eric C K Gren**, From Venome to Syndrome: Using Mass Spectrometry to Understand the Correspondence of Rattlesnake Venom Composition and Clinical Symptoms of Snakebite
- 28-10-8: **Gus A Gross**, Classic “Depo-effect” of *Crotalus* Venom
- 28-10-9: **Gus A Gross**, “Tip of The Iceberg”
- 28-10-10: **Gus A Gross**, Our Country’s Coral Conundrum
- 28-10-11: **Nicholas B. Hurst**, Venous Thrombosis Following Rattlesnake Envenomation
- 28-10-12: **Joseph K Joseph**, Six interesting cases of snakebite
- 28-10-13: **Jing-Hua Lin**, A rapid, sensitive, and specific lateral-flow immunochromatographic device to detect most Asian *Naja* snake venom
- 28-10-14: **Nguyen Thi Thuy Ngan**, A retrospective study of Red-necked Keelback envenomation at Cho Ray Hospital, Ho Chi Minh City, Viet Nam
- 28-10-15: **Paula R Oliveira**, Registration and location of *Bitis Gabonica* in Angola
- 28-10-16: **Deb P Pandey**, Medically relevant venomous snakes in Nepal
- 28-10-17: **Deb P Pandey**, A season of snakebite envenomation: presentation patterns, timing of care, anti-venom use, and case fatality from a hospital of southcentral Nepal
- 28-10-18: **Pallavi Raut**, 0% mortality & 0% renal failure in Russell’s Viper bite patients in rural set up
- 28-11-1: **Mauro Bodio, Thomas Junghanss**, “VAPAGuide – The free access Emergency Guide to Venomous and Poisonous Animals”
- 28-11-2: **Francisco O S França**, Acute cerebellar dysfunction with neuromuscular manifestations after scorpionism presumably caused by *Tityus obscurus* in Santarém, Pará/Brazil
- 28-11-3: **Kenneth D Winkel**, Venom Allergy – Lessons from Auditing 30+ years of Fatalities in Australia
- 28-15-1: **Amparo Alfonso**, Effect of growth conditions over TTX-like compounds produced by *Prorocentrum minimum*
- 28-16-1: **Raghuvir K Arni**, Structural Analysis of Snake Venom Serine Proteinases

Presentation Date: Tuesday 29th September, The North Schools

- 29-1-24: **Cristina Herrera**, Effects of BaP1, a P-I haemorrhagic metalloproteinase from *Bothrops asper* snake venom, on cremaster muscle vasculature: a model using confocal microscopy
- 29-1-25: **Sajjad Khan**, A protein possessing L-amino acid oxidase activity isolated from *Crotalus adamanteus* snake venom induces caspase independent apoptosis in a human ovarian cancer cell line
- 29-5-1: **Antonina A Berkut**, Parallel evolution of sodium channel activation inhibitors in Araneomorphae and Mygalomorphae?
- 29-5-2: **Craig A Doupnik**, Identification of Kir4.1 channel as a prospective target by the bee venom peptide tertiapin through virtual screening and computational docking
- 29-5-3: **Marie-France Martin-Eauclaire**, Modulation of Kv4. channels by pore blockers of the scorpion α -Ktx 15 subfamily
- 29-5-4: **Alessandra Matavel**, Spider toxin distinguish between mammalian and insect sodium channels
- 29-5-5: **Ian R Mellor**, Philanthotoxin analogues are potent and subtype selective inhibitors of nicotinic acetylcholine receptors
- 29-5-6: **Lien Moreels**, Activity-guided purification and electrophysiological characterization of a novel K_v10.1 inhibitor from the sea anemone *Anthopleura elegantissima*

- 29-5-7: **Neville M Ngum**, Centipede venom components and their synthetic analogues as tools to study ion channels and as potential drugs and pesticides
- 29-5-8: **Andrias O O'Reilly**, Expression of disulfide-rich toxins in *E.coli*: co-expressed chaperone enzymes produce correct disulfide reticulation and folding of a scorpion β -toxin
- 29-5-9: **Rohit N Patel**, Investigating the inhibition of nicotinic acetylcholine receptors by ladybird alkaloids
- 29-5-10: **Jennifer J Smith**, Mapping the residues that mediate interaction of the spider-venom peptide μ -TRTX-Hd1a with the analgesic target $\text{Na}_v1.7$
- 29-5-11: **Kittipong Tachampa**, Disturbance of Intracellular Calcium Homeostasis and Cardiomyocyte Function by a protein in fraction six of *Naja kaouthia* Venom
- 29-5-12: **Changlin Tian**, Chemical synthesis of mambalgin-1 toxin and binding analysis to Acid Sensing Ion Channels using two-Photon Fluorescence Microscopy
- 29-6-1: **Yaroslav A Andreev**, Natural compounds as inhibitors of acid sensing channel ASIC3
- 29-6-2: **Johanna Bernáldez**, Member of gamma-conotoxin family isolated from *Conus princeps* displays novel molecular target
- 29-6-3: **Qiuyun Dai**, Structures, functions of several novel conotoxins from *Conus* snails in South China Sea
- 29-6-4: **Sylvie Diochot**, Pharmacological exploration with animal toxins of the role of Acid-Sensing Ion Channels in pain pathways
- 29-6-5: **Eline K M Lebbe**, *Conus australis*, an as yet unexplored *Conus* sp. with novel conotoxins
- 29-6-6: **Maria Elena de Lima**, PnPP-19, a synthetic peptide representing an epitope of the toxin PnTx2-6 from the spider *Phoneutria nigriventer*, shows antinociceptive effect
- 29-6-7: **Dmitry I Osmakov**, ASIC3 channel inhibitors produced by a mutagenesis of inactive homolog of peptide Ugr9-1 from the venom of sea anemone *Urticina grebelnyi*
- 29-6-8: **Natalie J Saez**, Complementary molecular dynamics and mutagenesis approach reveals critical interactions for PcTx1 inhibition of the therapeutic target ASIC1a
- 29-9-6: **Adolfo de Roodt**, Neutralization of *Crotalus atrox* venom by heterologous antivenom in experimental model
- 29-9-7: **Adolfo de Roodt**, The immunochemical reactivity and the neutralizing capacity of *Crotalus durissus terrificus* antivenom
- 29-9-8: **Laura Sánchez**, Preclinical efficacy of four antivenoms distributed in Western sub-Saharan Africa against *Echis ocellatus* venom from three countries
- 29-9-9: **Walter Garcia**, Electrophysiological analysis of anti-venom efficacy against North African scorpions
- 29-10-19: **Julian White**, The Myanmar Snakebite Project: Experience With A Practical Approach To Confronting The Snakebite Problem In A Developing Nation
- 29-11-4: **Adolfo de Roodt**, Mortality by venomous animals in Argentina: Arachnids and Hymenoptera are responsible of the highest mortality
- 29-12-1: **Pavína Bartíková**, "Tick toxins" target vertebrate host wound healing
- 29-12-2: **Mária Kazimírová**, *Amblyomma variegatum* (Acari: Ixodidae) salivary glands are a rich source of antithrombotic compounds
- 29-12-3: **Yun Zhang**, Pore-forming toxin aerolysin-like proteins (ALPs) in immunity and venoms
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