

	<b>Sunday September 8</b>
<b>14:00 – 17:00</b>	Registration
<b>17:00 – 17:30</b>	Welcome and Opening Remarks
<b>17:30 – 18:30</b>	Redi Award Lecture
<b>18:30 – 20:30</b>	Reception and Inter Sectional Event

Monday September 9			
9:00 – 10:00	Plenary: “Public Health and Toxinology” David J. Williams, World Health Organization “The WHO roadmap for confronting snakebite envenoming”		
10:00 – 10:30	Coffee		
<b>Concurrent Session I</b>			
10:30 – 12:30	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top; padding: 5px;"> <p><b>1A. Public Health and Toxinology. Chairs: Gutiérrez/Fan Hui Wen</b></p> <p>Abdulrazaq Habib (Bayero University, Nigeria): Burden of Snakebite and Antivenom Supply Challenges in Africa (25 min)</p> <p>Mohammad Afzal Mahmood: A framework for shifting the paradigm and developing coalitions to address neglected public health problems: Lessons from the Myanmar Snakebite Project (25 min)</p> <p>Fan Hui Wen: (Instituto Butantan, Brazil): Public health policies to better manage the burden of scorpion sting envenoming (25 min)</p> <p>Ymkje Stienstra (University of Groningen, the Netherlands): The neglected tropical disease Buruli ulcer; time to team up. (25 min)</p> </td> <td style="width: 50%; vertical-align: top; padding: 5px;"> <p><b>1B. New Developments in Basic Toxinology I. Chairs: Calvete/ Luo</b></p> <p>Vincent Viala: Long reads DNA sequencing in genomics and venom gland transcriptomics (21 min)</p> <p>Aida Verdes: Venom without glands: Novel methods to investigate toxin diversity, function and evolution in ribbon worms (Nemertea) (21 min)</p> <p>María Ikonomopoulou: The antiproliferative profile of a linear octopus-derived peptide in melanoma of BRAF-mutation (21 min)</p> <p>Dennis Servent: Pinnatoxins, an emergent class of marine toxins interacting with nAChRs. Pharmacological characterization, biodistribution and musculo-skeletal effect of these neurotoxic agents (21 min)</p> <p>Sulan Luo: Preclinical Research of Analgesic <math>\alpha</math>O-Conotoxin GeXIVA Without Addiction Side Effect (21 min)</p> <p>Alexander A. Vassilevski: P2X3 receptor antagonists from spider venom (15 min)</p> </td> </tr> </table>	<p><b>1A. Public Health and Toxinology. Chairs: Gutiérrez/Fan Hui Wen</b></p> <p>Abdulrazaq Habib (Bayero University, Nigeria): Burden of Snakebite and Antivenom Supply Challenges in Africa (25 min)</p> <p>Mohammad Afzal Mahmood: A framework for shifting the paradigm and developing coalitions to address neglected public health problems: Lessons from the Myanmar Snakebite Project (25 min)</p> <p>Fan Hui Wen: (Instituto Butantan, Brazil): Public health policies to better manage the burden of scorpion sting envenoming (25 min)</p> <p>Ymkje Stienstra (University of Groningen, the Netherlands): The neglected tropical disease Buruli ulcer; time to team up. (25 min)</p>	<p><b>1B. New Developments in Basic Toxinology I. Chairs: Calvete/ Luo</b></p> <p>Vincent Viala: Long reads DNA sequencing in genomics and venom gland transcriptomics (21 min)</p> <p>Aida Verdes: Venom without glands: Novel methods to investigate toxin diversity, function and evolution in ribbon worms (Nemertea) (21 min)</p> <p>María Ikonomopoulou: The antiproliferative profile of a linear octopus-derived peptide in melanoma of BRAF-mutation (21 min)</p> <p>Dennis Servent: Pinnatoxins, an emergent class of marine toxins interacting with nAChRs. Pharmacological characterization, biodistribution and musculo-skeletal effect of these neurotoxic agents (21 min)</p> <p>Sulan Luo: Preclinical Research of Analgesic <math>\alpha</math>O-Conotoxin GeXIVA Without Addiction Side Effect (21 min)</p> <p>Alexander A. Vassilevski: P2X3 receptor antagonists from spider venom (15 min)</p>
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17:00 – 19:00	Posters I		

Tuesday September 10	
9:00 – 10:00	Plenary: Historical Perspective of Toxinology in the Americas with a Special Note on Argentinian Toxinology Domont/Adolfo de Roodt
10:00 – 10:30	Coffee
<b>Concurrent Session III</b>	
10:30 – 12:30	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><b>3A. Emerging Technologies in Toxinology. Chairs: Kini/Valente</b></p> <p>Somasekar Seshagiri: Genomic analysis of venomous animals and its application for antivenom development (25 min)</p> <p>Kushal Suryamohan: Bioinformatics driven high-quality genome assembly and annotation of venomous animals for effective antivenom development (15 min)</p> <p>Mrinalini: Venomous snake biology in the age of genomics (15 min)</p> <p>Ana Gisele C. Neves-Ferreira: Integrative structural biology in Toxinology: focus on natural inhibitors of snake venom toxins (25 min)</p> <p>Richard H. Valente: Inferring venom peptidomic biological activities with connectivity mapping (20 min)</p> <p>Manjunatha Kini: Subtleties of sequences in protein folding and function (20 min)</p> </div> <div style="width: 48%;"> <p><b>3B. Organ Systems and Toxins I. Chair: AM da Silva/Eble</b></p> <p>Jay W. Fox: The role of svVEGF in Russell’s viper venom-induced acute kidney failure (20 min)</p> <p>Sarah Natalie Cirilo Gimenes: Local damage in human envenomings by <i>Bothrops atrox</i> in Brazilian Amazon (15 min)</p> <p>Dilza Trevisan Silva: Systemic response of mice kidneys to the injection of HF3, a hemorrhagic SVMP from <i>B. jararaca</i> snake venom (20 min)</p> <p>Johannes Eble: Neuropilin-1, a novel target of snake venom toxins on endothelial cells, influences inflammatory processes and tumor vessel leakage (20 min)</p> <p>Jan Tytgat: Beyond hemostasis: a potassium channel blocker snake venom serine protease with potential antitumor activity (20min)</p> </div> </div>
12:30 – 14:00	Lunch on your own
<b>Concurrent Session IV</b>	
14:30 – 16:45	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><b>4A. Non-antibody and Adjuvant – Based Therapeutics. Chair: Yanagihara</b></p> <p>Greg Neely: “CRISPR screening used to identify an effective antidote for box jellyfish venom” (25 min)</p> <p>Angel Yanagihara: Cubozoan Envenomation: Mechanisms, Models and Management (20 min)</p> <p>Yoon Hwang; Improving envenomation outcomes by inhibiting venom spreading factors (e.g. hyaluronidases, gelatinases, phospholipase A2s) (20 min)</p> <p>Richard Lewis (University of Queensland): Re-evaluating the nirvana cabal deployed by piscivorous cone snails (20 min)</p> <p>Noel Saguil: “Antidote” Efficacy of cyclodextrin (Hydroxypropylbetacyclodextrin), copper gluconate, and temperature treatment with recent clinical case correlates from the Philippines (20 min)</p> <p>Nilgun Tumer: Inhibition of the activity of ricin by targeting its interaction with the ribosome (15 min)</p> </div> <div style="width: 48%;"> <p><b>4B. Organ Systems and Toxins II. Chairs: Ayvazyan/Krizaj</b></p> <p>Maria Elena de Lima Peres-Garcia: How a potent neurotoxin can become a promising drug (25 min)</p> <p>Igor Križaj: Understanding the molecular mechanism underlying the presynaptic toxicity of sPLA2s is a window into pathophysiology of their mammalian orthologues (25 min)</p> <p>Yuri N. Utkin Three finger neurotoxins: new discoveries and arising questions (25 min)</p> <p>Igor E. Kasheverov: Channel blockers from scorpion venoms inhibit nicotinic acetylcholine receptors (15 min)</p> <p>Jordi Molgó: Gambierol, a marine dinoflagellate toxin, potently increases evoked quantal transmitter release and reverses pre- and post-synaptic neuromuscular block at vertebrate junctions (15 min)</p> <p>Naira Ayvazyan: The specificity of Middle East vipers’ venom action on the nervous tissue (15 min)</p> <p>Choo Hock Tan: Insights into the evolutionary and medical significance of unique alpha-neurotoxin and phospholipase A2 compositions in <i>Naja</i> spp. (cobra) venoms (15 min)</p> </div> </div>
16:45 – 17:00	Coffee
17:00 – 19:00	Posters II
19:00 – 21:00	Student Reception

Wednesday September 11	
Concurrent Session V	
<b>9:00 – 10:00</b>	<p style="text-align: center;"><b>5A. North American Society on Toxinology. Chairs: C. Vogel/J. Fox</b></p> <p>Micaiah Ward (Florida State University, Tallahassee, Florida, USA): Experimental evolution of venom resistance (15 min)</p> <p>Marcelo Strauch (Universidade Federal do Rio de Janeiro, Instituto Vital Brazil, Rio de Janeiro, Brazil): Apilic antivenom, a new treatment for bee attacks, is effective in preclinical studies (15 min)</p> <p>Marcos Monteiro-Machado (Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil): Effects of fucosylated chondroitin sulfate (fucCS) and N-acylhydrazone derivative LASSBio-785 on <i>Apis mellifera</i> venom activities (15 min)</p> <p>Pamella Nogueira-Souza (Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil): Neutralization of bee venom activities by wedelolactone (15 min)</p>
<b>10:00 – 10:30</b>	Coffee
Concurrent Session VI	
<b>10:30 – 12:30</b>	<p style="text-align: center;"><b>6A. North American Society on Toxinology. Chairs: C. Vogel/J. Fox</b></p> <p>Elda Sanchez (Texas A&amp;M University, Kingsville, Texas, USA): The role of snake venom CRiSP toxins on blood and lymphatic endothelial cell permeability and pro-inflammatory responses: New insights into the pathophysiology of snake bites (20 min)</p> <p>Jacob Galan (Texas A&amp;M University, Kingsville, Texas, USA): Proteomic identification and quantification of snake venom biomarkers in plasma extracellular vesicle (20 min)</p> <p>Paulo A. Melo (Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil): A synthetic metalloproteinase inhibitor derivatives from lapachol (20 min)</p> <p>Emelyn Salazar: (Texas A&amp;M University, Kingsville, Texas, USA): Biochemical characterization and comparative analysis of two phospholipases A2 from venoms of North American snakes (20 min)</p> <p>Carl-Wilhelm Vogel (University of Hawaii, Honolulu, Hawaii, USA): Identification of Functionally Important Amino Acid Residues for C3 Convertase Activity Using Chimeric Proteins of Human C3 and Cobra Venom Factor (15 min)</p>
<b>12:30 – 14:00</b>	Lunch on your own

Wednesday September 11		
Concurrent Session VII		
14:30 – 16:45	<p><b>7A. Clinical I. Chair: J. White/Adolfo de Roodt</b></p> <p>Julian White: Latrodectism; evidence of “failure” or a failure of evidence? (15 min)</p> <p>Abdulrazaq G Habib: Clinico-Epidemiologic Determinants of Limb-Loss following Snakebite in Nigeria (15 min)</p> <p>Jordan Benjamin: Bringing Snakebite Treatment to the Point of Injury: The Asclepius Snakebite Foundation Model for Field Treatment (15 min)</p> <p>Fouad Chafiq: Assessment of Use of Inoserp®MENA in the management of snake envenomation in Morocco (15 min)</p> <p>Adolfo de Roodt: Relationship between separation between fangs and fang mark at the bite site and size of coral snakes in Argentina and their usefulness for early diagnose of snakebites (15 min)</p> <p>Caitlyn Rogers: Green snake” bites; characteristics and significance of this subset of snakebites in the Mandalay region of Myanmar (15 min)</p> <p>Caitlyn Rogers: The effect of snake length on the extent of envenoming in Russell’s Viper (<i>Daboia siamensis</i>) snake bite cases in Myanmar (15 min)</p> <p>José María Gutiérrez: Ability of the phospholipase A2 inhibitor Varespladib to abrogate or delay lethality induced by neurotoxic snake venoms (15 min)</p> <p>Julian White: Envenoming by monitor lizards; a modern mythology? (15 min)</p> <p>Adolfo de Roodt: Change in the distribution of <i>Tityus</i> species of sanitary importance in Argentina (15 min)</p>	<p><b>7B. Student Invited Presentations II</b> <b>(15 min each)</b></p>
16:45 – 17:00	Coffee	
17:00 – 19:00	IST General Business Meeting	

Thursday September 12			
9:00 – 10:00	<p style="text-align: center;"><b>Platinum Sponsor Presentations</b> (10 min each)</p> <p style="text-align: center;">Fernando Vazquez: The Challenges and Specificities of the Pharmacovigilance of Antivenoms (Inosan Biopharma) Elsevier/Toxicon MDPI/Toxins</p>		
10:00 – 10:30	Coffee		
<b>Concurrent Session VIII</b>			
10:30 – 12:30	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>8A. New Biology and Evolution of Venomous Organisms I. Chairs: Casewell/Richardson</b> Ronald Jenner (NHM, London): Parallel evolution of complex centipede venoms (20 +5 min)</p> <p>Ashlee Rowe (University of Oklahoma): Molecular mechanisms of resistance to lethal scorpion neurotoxins in a scorpion predator (20 +5 min)</p> <p>Ray Norton (Monash University): Correlations among sequence, physicochemical properties and function in peptide toxins (20 + 5 min)</p> <p>Tim Lüddecke (Fraunhofer IME): Translational tarantula phylogenomics: Evolution of theraphosid spiders and their defensive arsenal with implications for venom bioprospecting (12 + 3 min)</p> <p>Luciana Freitas-de-Sousa (Instituto Butantan) Individual variability and ontogenetic variation in Bothrops jararacussu snake venom (12 + 3 min)</p> <p>Nick Casewell (Liverpool School of Tropical Medicine): Solenodon genome reveals convergent evolution of venom in eulipotyphlan mammals (12 + 3 min)</p> </td> <td style="width: 50%; vertical-align: top;"> <p><b>8B. Clinical II. Emerging Clinical Topics: Safety and Effectiveness of Current Antivenoms; Clinical Presentations of Intoxication and Management; Epidemiology. Chairs: Wuelton Monteiro / Fan Hui Wen</b></p> <p>Charles Gerardo (Duke University): Need for better evidences and methodological aspects of clinical trials in snakebites (20 min)</p> <p>Ceila Málaque (Butantan Institute): Severe snakebite envenomations and management (20 min)</p> <p>Joao Ricardo Vissoci (Duke University): Bottlenecks for access to treatment of snakebites and scorpion stings, with special attention to clinical consequences (20 min)</p> <p>Jacqueline Sachett (Universidade do Estado do Amazonas): Barriers to access to antivenom serum in the Amazon (20 min)</p> <p>Fernando Val (Fundação de Medicina Tropical Dr. Heitor Vieira Dourado): Disabilities from snakebites in the Amazonia region (20 min)</p> </td> </tr> </table>	<p><b>8A. New Biology and Evolution of Venomous Organisms I. Chairs: Casewell/Richardson</b> Ronald Jenner (NHM, London): Parallel evolution of complex centipede venoms (20 +5 min)</p> <p>Ashlee Rowe (University of Oklahoma): Molecular mechanisms of resistance to lethal scorpion neurotoxins in a scorpion predator (20 +5 min)</p> <p>Ray Norton (Monash University): Correlations among sequence, physicochemical properties and function in peptide toxins (20 + 5 min)</p> <p>Tim Lüddecke (Fraunhofer IME): Translational tarantula phylogenomics: Evolution of theraphosid spiders and their defensive arsenal with implications for venom bioprospecting (12 + 3 min)</p> <p>Luciana Freitas-de-Sousa (Instituto Butantan) Individual variability and ontogenetic variation in Bothrops jararacussu snake venom (12 + 3 min)</p> <p>Nick Casewell (Liverpool School of Tropical Medicine): Solenodon genome reveals convergent evolution of venom in eulipotyphlan mammals (12 + 3 min)</p>	<p><b>8B. Clinical II. Emerging Clinical Topics: Safety and Effectiveness of Current Antivenoms; Clinical Presentations of Intoxication and Management; Epidemiology. Chairs: Wuelton Monteiro / Fan Hui Wen</b></p> <p>Charles Gerardo (Duke University): Need for better evidences and methodological aspects of clinical trials in snakebites (20 min)</p> <p>Ceila Málaque (Butantan Institute): Severe snakebite envenomations and management (20 min)</p> <p>Joao Ricardo Vissoci (Duke University): Bottlenecks for access to treatment of snakebites and scorpion stings, with special attention to clinical consequences (20 min)</p> <p>Jacqueline Sachett (Universidade do Estado do Amazonas): Barriers to access to antivenom serum in the Amazon (20 min)</p> <p>Fernando Val (Fundação de Medicina Tropical Dr. Heitor Vieira Dourado): Disabilities from snakebites in the Amazonia region (20 min)</p>
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12:30 – 14:00	Lunch on your own		
<b>Concurrent Session IX</b>			
14:30 – 16:45	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>9A. New Biology and Evolution of Venomous Organisms I. Chairs: Casewell/Richardson</b></p> <p>Fernanda Cardoso (University of Queensland): Harnessing multifunctional spider-venom peptides to modulate pain pathways (20 +5 min)</p> <p>Jens Puschhof (Hubrecht Institute): Slithering stem cells – understanding snake venom production in vitro using organoids (20 +5 min)</p> <p>Frank Mari (NIST) Genome-Guided Assessment of the Venom Composition and Dynamics of Cone Snails (15 + 5 min)</p> <p>José Antonio Portes-Junior (Instituto Butantan): The venom variability of the Bothrops jararaca complex and its correlation with the speciation processes in continental islands (15 +5 min)</p> <p>Juan Calvete (CSIC, Valencia): Comparative venomomics of Brazilian coral snakes: <i>Micrurus frontalis</i>, <i>Micrurus spixii spixii</i>, and <i>Micrurus surinamensis</i> (15 + 5min)</p> <p>Mike Richardson (Leiden University) Evo-devo and genomics of snakes (15 + 5min)</p> </td> <td style="width: 50%; vertical-align: top;"> <p><b>9B. SBTX: Innovation in Clinical and Basic Research in Toxinology. Chairs: Picolo /de Lima Perez Garcia</b></p> <p>Gisele Picolo, Special Laboratory of Pain and Signaling, (Butantan Institute, Brazil) Crotoxin induces analgesic and immunomodulatory effects on chronic pain models that is potentiated by nanostructured silica SBA-15 (15 min)</p> <p>Jose M. Gutiérrez, (Universidad de Costa Rica): Novel alternatives for improving the therapy of snakebite envenomings (15 min)</p> <p>Maria Elena de Lima, (IEP/SCBH, Belo Horizonte, MG, Brazil): In vitro and in vivo antimicrobial activity of peptides derived from the venom of the spider <i>Lycosa erythrogatha</i> (15 min)</p> <p>Kenneth J. Shea, (University of California): Synthetic antibodies. Polymer nanoparticles that sequester the medically relevant protein toxins in snake venom (10 min)</p> <p>Laura-Oana Albulescu: Repurposing DMPS, a metal chelator, as a rapid field intervention for treating hemotoxic snakebite. (10 min)</p> <p>Yaroslav Andreev: Sea anemone peptide modulates TRPA1 activity, produces analgesia and enhances process of regeneration. (10 min)</p> <p>Eliécer Jiménez Charris: Antitumor potential of Pllans-II, an acidic Asp49-PLA2 from <i>Porthidium lansbergii lansbergii</i> snake venom on human cervical carcinoma HeLa cells. (10 min)</p> </td> </tr> </table>	<p><b>9A. New Biology and Evolution of Venomous Organisms I. Chairs: Casewell/Richardson</b></p> <p>Fernanda Cardoso (University of Queensland): Harnessing multifunctional spider-venom peptides to modulate pain pathways (20 +5 min)</p> <p>Jens Puschhof (Hubrecht Institute): Slithering stem cells – understanding snake venom production in vitro using organoids (20 +5 min)</p> <p>Frank Mari (NIST) Genome-Guided Assessment of the Venom Composition and Dynamics of Cone Snails (15 + 5 min)</p> <p>José Antonio Portes-Junior (Instituto Butantan): The venom variability of the Bothrops jararaca complex and its correlation with the speciation processes in continental islands (15 +5 min)</p> <p>Juan Calvete (CSIC, Valencia): Comparative venomomics of Brazilian coral snakes: <i>Micrurus frontalis</i>, <i>Micrurus spixii spixii</i>, and <i>Micrurus surinamensis</i> (15 + 5min)</p> <p>Mike Richardson (Leiden University) Evo-devo and genomics of snakes (15 + 5min)</p>	<p><b>9B. SBTX: Innovation in Clinical and Basic Research in Toxinology. Chairs: Picolo /de Lima Perez Garcia</b></p> <p>Gisele Picolo, Special Laboratory of Pain and Signaling, (Butantan Institute, Brazil) Crotoxin induces analgesic and immunomodulatory effects on chronic pain models that is potentiated by nanostructured silica SBA-15 (15 min)</p> <p>Jose M. Gutiérrez, (Universidad de Costa Rica): Novel alternatives for improving the therapy of snakebite envenomings (15 min)</p> <p>Maria Elena de Lima, (IEP/SCBH, Belo Horizonte, MG, Brazil): In vitro and in vivo antimicrobial activity of peptides derived from the venom of the spider <i>Lycosa erythrogatha</i> (15 min)</p> <p>Kenneth J. Shea, (University of California): Synthetic antibodies. Polymer nanoparticles that sequester the medically relevant protein toxins in snake venom (10 min)</p> <p>Laura-Oana Albulescu: Repurposing DMPS, a metal chelator, as a rapid field intervention for treating hemotoxic snakebite. (10 min)</p> <p>Yaroslav Andreev: Sea anemone peptide modulates TRPA1 activity, produces analgesia and enhances process of regeneration. (10 min)</p> <p>Eliécer Jiménez Charris: Antitumor potential of Pllans-II, an acidic Asp49-PLA2 from <i>Porthidium lansbergii lansbergii</i> snake venom on human cervical carcinoma HeLa cells. (10 min)</p>
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16:45 – 17:00	Coffee		
17:00 – 18:30	<b>Closing Remarks (30 min)</b>		
20:30 – 23:00	<b>Meeting Banquet</b>		

