



INTERNATIONAL SOCIETY ON TOXINOLOGY

NEWSLETTER

August 2013

UPCOMING MEETINGS

The 11th Pan-American Section IST Congress will be held at the Grand Casa Hotel, Guarujá, São Paulo State, Brazil, November 3-8, 2013, in conjunction with the 12th Congress of the Brazilian Society of Toxinology.

The next Asia-Pacific Section IST Congress will be held in Changsha, China, June 14-18, 2014.

The next European Section IST Congress will likely be the IST World Congress, in 2015, but location and details are not currently available.

IST Council has agreed to a changed schedule for IST congresses, commencing in 2015 with the World Congress held every second year, rotating between the 3 regions.

10th Australian Peptide Conference, Penang, Malaysia, September 8-13, 2013.

Venoms 2013 Symposium, Oxford, UK, September 24-26, 2013.

Venomics: Drug Discovery From Nature's Deadliest. New York Academy of Sciences, New York, November 4th, 2013

3rd Toxinology Society of India conference, Goa, India, December 19-21, 2013.

Clinical Toxinology Short Course, Adelaide, Australia, March 31st to April 5th, 2014.

FROM THE IST EXECUTIVE

The main purpose of this edition of the Newsletter is to provide a summary of the recent IST Council meeting (see later in the newsletter).

Elsevier have now set up their dedicated website for IST financial members to access Toxicon online. This system is new and it is likely there may be some technical problems. If members are having problems with the system, the first point of contact should be Elsevier, since the system is entirely controlled by them. The access is available through a portal on the IST website (http://www.toxinology.org/Membership_ToxiconAccess.htm).

The next IST regional congress, for the Pan-American Section, is fast approaching (see later in this newsletter). The program is well developed and it should be a good meeting, held in conjunction with the Brazilian Toxinology Society.

A venom-focussed meeting of the New York Academy of Sciences is also scheduled for early November (see later in newsletter).

The Toxinology Society of India is also planning a meeting to be held in December, 2013, in Goa, India (see later in newsletter). Earlybird registration closes September 15th.

Many members have already paid their annual dues to the Society, via our website. To those of you who have not yet paid, please can you do so now.

Julian White, Secretary/Treasurer, IST

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MEMBERSHIP ANNOUNCEMENTS

The IST Membership Database has been updated, a process that will be ongoing. Please let the IST Secretary know if you change any of your contact details (email, phone, address etc). The Membership Database is available to all IST members via the IST website, with password protection for access. User name and password details have been sent out to all IST members previously. Please keep these details safe. If you cannot find your details then please email Dr. David Bates (Chief Scientist in my Toxicology Dept.) on david.bates@adelaide.edu.au.

Because of file size, the Newsletter is too big to email and so it is more practical to post the

Newsletter on the IST website and just email members advising it is ready to download, via a link.

As discussed in an email to members earlier in 2011, changes at my workplace meant that as of June 2011 I was no longer able to use my hospital to collect IST dues by credit card. We now have an online payment system for all IST dues, on the IST website. This commenced in early January, 2012. The old system, of sending in forms for credit card payments, or cheques, no longer apply. ALL payments must be through the online website system.

Julian White
Secretary/Treasurer IST

IST Council 2012-2016

President: A Harvey
Secretary/Treasurer: J White
President Elect: J Fox
Immediate Past President: P Gopalakrishnakone
Toxicon Editor: A Harvey
President European Section: J Calvete
Secretary European Section: R Harrison
President Pan-American Section: D Tambourgi
Secretary Pan-American Section: Y Cury
President Asia-Pacific Section: E Grishin
Secretary Asia-Pacific Section: vacant
General Councillors
Europe: D Warrell & R Stocklin
Pan-America: JM Gutierrez & L Posani
Asia-Pacific: G King & M Kini



IST STUDENT MEMBERS - THIS IS FOR YOU - The Special Interest Group for Student Toxinologists Establishment of a special wiki site

Students have been an important and valued part of IST since the inception of the Society in 1962. To emphasize the importance of the role of students in the IST, the Society has created a Special Interest Group for Student Toxinologists.

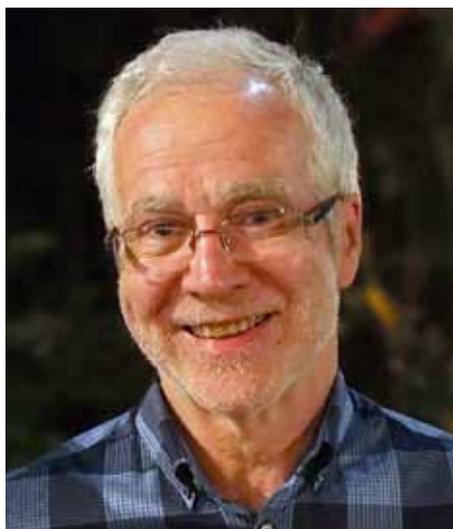
The aims of the Special Interest Group for Student Toxinologists include: to increase opportunities for students to network with possible collaborators and employers; to work with the Executive and Council, IST to ensure students are included and supported in future decisions of the IST; and to train students to become contributing members to the IST and other professional societies.

As part of the process of developing the student group, we have established a special wiki site which will allow student members to interact directly with fellow students. Student members will soon receive an email giving them details on how to access this site. We are also investigating a way of interfacing student members with established members prepared to answer questions on methodology. Established members prepared to engage in such a process should let the IST Secretary know of their interest.

A number of student members have expressed interest in being a part of such a network, but we continue to encourage other students to become involved. Any students interested in participating in such a network should contact the following by email (please send your email to the Secretary, IST, with cc to the President, IST and to student member Maggie Gentz):

julian.white@adelaide.edu.au
a.l.harvey@strath.ac.uk
m.gentz@uq.edu.au

MESSAGE FROM THE PRESIDENT (I.S.T)



ian Society of Toxinology on 3-8 November. I will look forward to meeting many members in Brazil at that time.

Somewhat unfortunately, the IST meeting overlaps with an interesting event at the New York Academy of Sciences on 'Venomics: drug discovery from nature's deadliest'. However, it is good to see continuing interest in various aspects of toxinology outside of the IST. More details of this symposium appear in the Newsletter.

Dear IST members,

You will find much of interest in this edition of the Society's newsletter. Many thanks are due to our Secretary Julian White for his continued efforts with the Newsletter, and I would like to echo his request for contributions or suggestions from members. The Newsletter could and should be a vehicle for the exchange of news and views by members of the Society.

With best wishes

Alan Harvey
President, IST
Email: A.L.Harvey@strath.ac.uk

Preparations are progressing well for the next meeting of the Pan-American Section, which will be held jointly with the Brazil-

THE FUTURE OF THE IST NEWSLETTER

The IST Newsletter needs input from IST members to make it a more effective communication tool within the Society. The move to electronic format may open up opportunities for new sections. For instance, it might be possible to have annotated bibliographies of recent toxinology publications from other journals, or reports of other meetings with toxinology content. Available toxinology-related jobs and student postings could be listed. There are doubtless many other possibilities members may think of.

So I ask all IST members to consider what they want from the Newsletter and let me know by email. I also want to hear from IST members prepared to contribute regular sections to the Newsletter. To be vibrant and relevant the Newsletter must become more than just a brief report on IST business by myself and our President, but that requires your input.

Julian White
Secretary/Treasurer IST
julian.white@adelaide.edu.au

IST Council Minutes March/April 2013

IST COUNCIL MEETING SUMMARY

The IST Council now meets regularly via email, to discuss, decide and act on matters pursuant to Society affairs.

Council has decided to trial release of a summary of minutes of Council meetings, via the Society newsletter, to keep members informed about Society business. The full minutes may, from time to time, contain matters of a sensitive or contractual nature, such as finances and agreements pertaining to Society congresses, which cannot be given unrestricted release. Council has yet to determine if and how full minutes might be made available to members.

INTERNATIONAL SOCIETY ON TOXINOLOGY COUNCIL MEETING

July 23rd to 30th, 2013

Meeting held via email

SUMMARY OF MINUTES

1. ***Those participating:*** J White, G King, J Fox, J Calvete, D Warrell, J Gutierrez, P Gopalakrishnakone, L Possani, A Harvey, M Kini, D Tambourgi, Y Cury, R Harrison, R Stocklin
2. ***IST World Congress 2012, Hawaii:*** As agreed at the March Council meeting, the Society has provided a further grant to the Hawaii Congress organisers and that now completes all financial obligations in regard to this congress.
3. ***President's report:*** A Harvey did not have any major news to discuss.
4. ***Secretary/Treasurer's report:*** J White outlined the current state of IST finances. At this stage the Society has sufficient income to cover expected expenses. A reserve of funds is being built up to help support future congresses.
5. ***Toxicon Editor's report:*** A Harvey noted the journal continues to grow in stature, with a steady rise in manuscript submissions. Several special issues are in preparation.
6. ***Clinical toxinology initiative/ Board of Clinical Toxinology:*** Following Council's adoption of a constitution to cover a Board of Clinical Toxinology and establishment of the inaugural Board of Clinical Toxinology at the March Council meeting, the Board has met (by email) and has commenced the tasks before it. It is too early in this process to report major progress.
7. ***GSI report:*** D Warrell informed Council of developments with the GSI (full report in the Newsletter) which continue to be positive.
8. ***Snake Taxonomy Advisory Committee report:*** J White reported that this committee is inactive at present, but suggested it should be encouraged to become active, rather than disbanded.
9. ***IST Pan-American Congress 2013:*** The meeting organisers on Council (D Tambourgi & Y Cury) reported progress with this meeting. There are already about 360 registrants, 70 speakers and 340 abstracts.
10. ***IST Asia-Pacific Congress 2014:*** There was no update available from the organisers of this meeting.
11. ***IST European Congress/World Congress 2015:*** Council has now had expressions of interest from 2 groups; from Oxford, UK and from Switzerland. Further

IST Nomenclature Committee

At the last IST World Congress held in Recife, Brazil in March 2009, a symposium devoted to the topic of toxin nomenclature received significant interest from IST members. The IST Council subsequently decided to form a nomenclature committee to examine the issue of toxin naming standards and recommend possible solutions. The mandate of this committee was to propose a nomenclature system, with interim reports to IST Council and a "final" report to be delivered at the IST World Congress in 2012. This deadline was not met, but it is hoped progress will be made in the following triennium. If you have any comments or suggestions on toxin nomenclature, could you please send them to a member of the nomenclature committee, which is currently comprised of the following members:

Dr Gerardo Corzo, Mexico (Email: corzo@ibt.unam.mx)

Dr Florence Jungo, Switzerland (Email: Florence.Jungo@isb-sib.ch)

Dr Evanguedes Kalapothakis, Brazil (Email: ekalapo@icb.ufmg.br)

Prof. Glenn King, Australia (Chairman; Email: glenn.king@imb.uq.edu.au)

Prof. Manjunatha Kini, Singapore (Email: dbskinim@nus.edu.sg)

Prof. Graham Nicholson, Australia (Email: graham.nicholson@uts.edu.au)

Prof. Toto Olivera, USA (Email: olivera@biology.utah.edu)

Prof. Jan Tytgat, Belgium (Email: jan.tytgat@pharm.kuleuven.be)

ArachnoServer spider toxin database

ArachnoServer is a manually curated database that provides detailed information about proteinaceous toxins from spiders. Key features of ArachnoServer include a new molecular target ontology designed especially for venom toxins, the most up-to-date taxonomic information available, and a powerful advanced search interface. Toxin information can be browsed through dynamic trees, and each toxin has a dedicated page summarising all available information about its sequence, structure, and biological activity. ArachnoServer currently manages 567 protein sequences, 334 nucleic acid sequences, and 51 protein structures. ArachnoServer is available online at www.arachnoserver.org.

The IST has established a special wiki site for members of this Nomenclature Committee to use to both communicate and develop information and recommendations. Members of the committee will soon receive an email detailing how they may access this site.

IST Snake Taxonomy Advisory Group

Keeping up with changes in taxonomy for venomous animals is always a challenge for toxinologists, but it is important to do so, if published research is to maintain viability longer term, as taxonomy evolves. To improve dissemination of information on taxonomic changes the IST is trialling an internet-based process for taxonomists to interact through.

The first stage is a small invited group of experts on snake taxonomy, who can interact through a special wiki site and develop updates and recommendations for dissemination to all IST members through the main IST website or the Newsletter. This group is in its formative stages at present and our experiences with this will be used to guide establishment of similar groups in the future to cover other areas of taxonomy, such as scorpions, spiders, marine organisms etc.

Once this early stage has allowed us to develop a viable structure and processes the IST will invite members to submit names of taxonomists in each major taxa who could then be approached re involvement in this initiative. Until then I ask that members do not send me names or indicate their own interest in this area, but rather allow me to work with this initial trial group to iron out details of how to make the process deliver results.

Julian White, Secretary IST

CLINICAL TOXINOLOGY INITIATIVE

The new Board of Clinical Toxinology has commenced meeting and working through the many matters to be considered in developing a viable long-term training and accreditation scheme for clinical toxinology.

One issue being considered is how to provide training, both at the academic/knowledge base level, and at the practical clinical experience/skills level. Each will require a tailor-made solution that will likely involve members across many nations.

For the academic/knowledge base portion of training, one option may be to develop a formal Graduate Diploma in Clinical Toxinology, probably as a one year full-time-equivalent university course. This possibility is being actively explored with a university, though no decisions have yet been made by the Board or the university. Such a Graduate Diploma would likely incorporate a number of training elements and amongst these might be the existing Clinical Toxinology Short Course run through the University of Adelaide since 1997. This week-long intensive course is international in scope and clinical in focus and provides a solid introduction to all main aspects of clinical toxinology. The next course is scheduled for March 31st to April 5th, 2014 (see later in this newsletter).

For the clinical skills/experience portion of training, it may be necessary to establish a series of training facilities in "hot spots" for toxinology cases, with trainees rotating through a series of these facilities, gaining different experience in each. Many potential "hot spots" are located, not in western developed nations, but in developing nations in the rural tropics, and it is likely the Board will seek existing members in these areas to become part of this training program and recruit suitable clinicians from these areas as new members of IST, to participate in this process.

The inaugural Board of Clinical Toxinology has just 5 members (Julian White as Chairperson, David Warrell, Scott Weinstein, Jean-Philippe Chippaux and Rick Dart). All 5 are experienced clinicians with many years involvement in clinical toxinology and all are current or past faculty of the Clinical Toxinology Short Course. It is likely the Board will soon seek further members to help with the substantial workload involved in developing, then maintaining the clinical toxinology training and accreditation scheme. This process will probably take several years to establish. The Board will appoint a Board Censor and a Director of Training who will coordinate respective aspects of this scheme.

As discussed in the last newsletter, this scheme is aiming to develop a recognised and accredited area of medical expertise covering diseases caused by animal, plant and mushroom toxins. Recognised medical practitioners who are or become members of IST will be eligible to undertake this training program and on satisfactory completion will be accredited by IST as Clinical Fellows. However, the success of this scheme is dependent on development of a cooperative arrangement between IST, through the Board, and existing national medical institutions, such as those accrediting expertise in general/internal medicine, emergency medicine, tropical medicine etc. At the local (national) level it is these organisations which will provide accreditation in clinical toxinology, using the program developed and administered by the IST Board of Clinical Toxinology. At least, that is the theory. The challenge for the Board and concerned IST members is to make this process function in practice.

Though this is a separate initiative from the Global Snakebite Initiative, it is clear both can work together to achieve a common goal; improving outcomes for patients with toxin-induced diseases such as snakebite.

Julian White, Chair, IST Board of Clinical Toxinology

REPORT ON DEVELOPMENTS WITH THE GLOBAL SNAKEBITE INITIATIVE (GSI)

**Prof. David Warrell
On behalf of the GSI group**

The new GSI website <http://www.snakebiteinitiative.org/> has attracted attention, resulting in many queries to which our team has responded, in the following categories:

- 1- snake identification from images,
- 2- clinical management,
- 3-antivenom choice and source,
- 4-prevention of snake-bite and
- 5- “lunatic fringe”.

All the final reports from the recipients of our small research grants will be available soon; we are encouraged by the news so far. A scientific research advisory group has been formed, led by Chema Gutiérrez, to plan the direction of future research and to coordinate collaborative research efforts on the preclinical testing of antivenoms.

The WHO WPRO report on snake-bite in Cambodia, produced by David Williams and Simon Jensen, is being reformatted as teaching modules to be applicable in sub-Saharan Africa. There is some encouragement for efforts to fund antivenom supply in Swaziland. Meanwhile, our collaborators at The James Ashe Antivenom Trust, Bio-Ken, Watamu, Kenya, continue their successful pilot study of local charity support for provision of antivenom and advice on all aspects of the problem. The next of the 2-yearly Watamu snake-bite seminars will be in late 2014 (strongly recommended!).

GSI's research collaboration with Rom Whitaker and his colleagues at the Madras Crocodile Bank will compare the murine ED50 of Indian polyvalent antivenom against venom from populations of *Daboia russelii* in 8-10 separate locations in India where bites by this species are common and show varying patterns of clinical manifestations and clinical response to antivenom.

Our main endeavour, to achieve substantial funding for a programme to design, develop, produce and assess (by conventional pre-clinical testing, new proteomic/antivenomic techniques, and clinical trials) a Pan-African antivenom, has not yet been successful. The application to UK's Department for International Development was shortlisted from a large field but was finally rejected, not on scientific grounds, but because snake-bite was not considered a priority for funding. We have learned a great deal from this “near-miss” and are not daunted.

Finally, “Position papers” have been published in various journals, and are being prepared for future publication, in order to promote international advocacy to bring attention to the problem of snake-bite envenoming and its treatment (most recently, see *PLoS Negl Trop Dis.* 2013 Jun 13;7(6):e2162 and *Indian J Med Res* 138 July 2013, pp 38-59).



XI Congress of the Pan-American Section of the International Society on Toxinology

XII Congress of the Brazilian Society of Toxinology

Envenomation by poisonous animals: a neglected disease

November 3-8, 2013
Casa Grande Hotel
Guarujá - SP - Brazil



The city of Guarujá, State of Sao Paulo, will host the XI Congress of the Pan American Section of the International Society on Toxinology and the XII Congress of the Brazilian Society of Toxinology. The theme of the meeting is "Envenomation by poisonous animals: a neglected disease".

Important names of the Toxinology field will be present in this multidisciplinary event. It aims to serve as a platform for the discussion of results and promotion of collaboration networks.

The goal is to deepen the understanding of the structural, molecular and clinical aspects associated with toxins and venoms. The results will be presented in the form of plenary sessions, symposia and poster sessions, and the event will feature national and international speakers.

We are certain that we will have an event of high scientific level in an environment of friendliness, since we will be celebrating the 25th anniversary of the founding of the Brazilian Society of Toxinology.

From 3 to 8 November 2013, come and enjoy with us a carefully elaborated scientific program and the beauty of one of the most delightful beaches in São Paulo, Brazil. We count on your presence!

PROGRAM

- Antivenoms
- Biology of venomous/poisonous animals
- Caterpillar toxins and envenomation
- Clinical aspects of scorpion envenomation
- Clinical aspects of snake envenomation
- Clinical aspects of spider envenomation
- Drug design based on venom components
- Education and diffusion in Toxinology
- Marine toxins
- Mechanism of action of toxins
- Others
- Plant toxins
- Scorpion toxins
- Spider toxins
- Structure and function of toxins
- Toxin genomics
- Toxin proteomics
- Toxins and evolution
- Toxins and haemostasis
- Toxins and inflammation
- Toxins and ion channels
- Toxins and pain
- Toxins from microbes

SCIENTIFIC COMMITTEE

- Alan Harvey - University of Strathclyde, Glasgow, UK
- Carl W. Vogel - University of Hawaii Cancer Center, Honolulu, USA
- Carlos Alvarez-Valcárcel - Universidad de la Habana, Cuba
- Consuelo Latorre Fortes Dias - Fundação Ezequiel Dias, MG, Brazil
- Denise V. Tambourgi - Instituto Butantan, SP, Brazil
- Frank Mari - Florida Atlantic University, FL, USA
- Gilberto B. Domont - Universidade Federal do Rio de Janeiro, RJ, Brazil
- Jay W. Fox - University of Virginia, VA, USA
- Jorge Kallil - Instituto Butantan, SP, Brazil
- Jose Maria Gutierrez - Instituto Clodomiro Picado Institute, San Jose, Costa Rica
- Lourival D. Possani - Universidad Nacional Autonoma de Mexico, Cuernavaca, Mexico
- Marcos R.M. Fontes - Universidade Estadual Paulista, SP, Brazil
- Yara Cury - Instituto Butantan, SP, Brazil

REGISTRATIONS

| Category - values in Reals (R\$) | Until 05/23/2013 | Until 07/26/2013 | Until 10/18/2013 | At venue |
|--|------------------|------------------|------------------|------------|
| Undergraduate student - Member* from SBTx | R\$ 150,00 | R\$ 180,00 | R\$ 200,00 | R\$ 225,00 |
| Undergraduate student - Non-member | R\$ 230,00 | R\$ 270,00 | R\$ 300,00 | R\$ 340,00 |
| Graduate Students (MsC/PhD) - Members* from SBTx** or IST*** | R\$ 340,00 | R\$ 410,00 | R\$ 480,00 | R\$ 510,00 |
| Graduate Students (MsC/PhD) - Non members | R\$ 420,00 | R\$ 490,00 | R\$ 550,00 | R\$ 590,00 |
| Members * from SBTx or IST | R\$ 520,00 | R\$ 600,00 | R\$ 660,00 | R\$ 700,00 |
| Nonmembers | R\$ 700,00 | R\$ 840,00 | R\$ 880,00 | R\$ 920,00 |
| Accompanying person | R\$ 220,00 | R\$ 280,00 | R\$ 290,00 | R\$ 300,00 |

*up to date with the annual fees till 2012 | ** SBTx- Sociedade Brasileira de Toxinologia | *** IST- International Society on Toxinology

www.jzbrasil.com/congressos/toxinologia

Executive Secretariat:

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Organized by:



Supported by:



**XIth Congress of the Pan-American Section of IST
and
XIIth Congress of the Brazilian Society on Toxinology**

PRELIMINARY PROGRAM

**November, 3rd 2013 - Sunday
AFTERNOON**

14h00 - 17h00

Satellite meeting

Meeting from the Iberoamerican network Biotox-CYTED - "Toxins of interest for Biomedicine"

14h00 - 17h00

Meeting registration

18h30 - 20h30

OPENING CEREMONY

OPENING CONFERENCE: To be announced

20h30 –Cocktail

**November, 4th 2013 - Monday
MORNING**

07h30 – 8h10: Course # 1 Ferramentas ômicas aplicadas ao estudo de venenos (course will be presented in portuguese)

07h30 – 8h10: Course # 2 A Citometria de Fluxo e sua aplicabilidade na Toxinologia (course will be presented in portuguese)

08h30 - 09h30

**CONFERENCE #1: OVERVIEW OF CLINICAL FEATURES AND THERAPY OF SNAKE-BITE
ENVENOMING IN THE AMERICAS**

Chair: Julia Prado Franceschi (Brazil)

Speaker: David Warrell (UK)

10h00 - 12h00

SESSION # 1: INTEGRATIVE TOXINOLOGY

Chairs:

1- Jay Fox (USA)

2- Carlos Sevcik (Venezuela)

Speakers:

1- Stephen Mackessy (USA) "Effects of positive selection on structure/function evolution of colubrid three-finger toxins: coevolutionary adjustments?"

2- Carlos Sevcik (Venezuela) - Title to be announced

3- Inácio Junqueira de Azevedo (Brazil) "Combining transcriptomics, proteomics and

functional characterization to a better knowledge of colubrid venoms”

- 4- André Pereira P. Zelanis (Brazil) “Systemic approaches in Toxinology: perspectives and implications of omics methodologies on the study of snake venom toxins”
- 5- To be selected from the abstracts

10h00 - 12h00

SESSION # 2: CLINICAL ASPECTS OF SNAKE ENVENOMATION

Chairs:

- 1- Fan Hui Wen (Brazil)
- 2- Abdulrazaq G. Habiib (Nigeria)

Speakers:

- 1- Fan Hui Wen (Brazil) “Clinical Toxinology in a globalized world”
- 2- Abdulrazaq G. Habiib (Nigeria) “Overview of clinical features and therapy of snakebite envenoming”
- 3- Marcos Lacerda (Brazil) “Snakebites in the State of Amazonas: a preliminary analysis of a largely neglected problem”
- 4- Steven Seifert (USA) “A new dosing regimen for a Fab antivenom in rattlesnake bite with recurrent venom effects”
- 5- To be selected from the abstracts

10h00 - 12h00

SESSION # 3: MARINE TOXINS

Chairs:

- 1- Frank Mari (USA)
- 2- P. Gopalakrishnakone (Singapore)

Speakers:

1. Frank Mari (USA) “Adventures with marine toxins from the Americas: the discovery of Conotoxin structures and their functional implications”
2. María E. Lanio (Cuba) “Novel approaches for nanobiotech applications of Sticholysins, two pore-forming toxins”
3. Kathleen Rein (USA) - Title to be announced
4. To be selected from the abstracts
5. To be selected from the abstracts

AFTERNOON

13h30 - 14h30

CONFERENCE #2: VENOMICS OF SNAKES FROM THE AMERICAS

Chair: Jonas Peralez (Brazil)

Speaker: Juan Calvete (Spain)

15h00 - 17h00

SESSION # 4: TOXIN PROTEOMICS

Chairs:

- 1- Gilberto Domont (Brazil)
- 2- Bruno Lomonte (Costa Rica)

Speakers:

- 1- Gilberto Domont (Brazil) “Discovery driven-venomics: poisons of Brazilian rattle and coral snakes”
- 2- Bruno Lomonte (Costa Rica) “Venomous snakes of Costa Rica: taxonomical, biological, and clinical implications of their proteomic profiling through the strategy of “snake venomomics”

- 3- Mario Sérgio Palma (Brazil) “Proteomics as experimental strategy for proofing the functional targets of mastoparan peptides”
- 4- Alexandre K. Tashima (Brazil) “Venom peptidomics of the Brazilian spider *Acanthoscurria gomesiana*”
- 5- To be selected from the abstracts

15h00 - 17h00

SESSION # 5: TOXINS AND ION CHANNELS

Chairs:

- 1- Paulo Sérgio Beirão (Brazil)
- 2- Jan Tytgat (Belgium)

Speakers:

- 1- Jan Tytgat (Belgium) “Cone snail venom peptides: an inexhaustible treasury for drug leads”
- 2- Paulo Sérgio Beirão (Brazil) - To be announced
- 3- Frank Bosmans (USA) “ μ -Diguetoxin-Dc1a promotes BgNav1 opening by influencing the domain II voltage sensor”
- 4-To be selected from the abstracts
- 5- To be selected from the abstracts

15h00 - 17h00

SESSION # 6: TOXINS FROM MICROBES

Chairs:

- 1- Wilmar Dias da Silva (Brazil)
- 2- Celia Carlini (Brazil)

Speakers:

- 1- Wilmar Dias da Silva (Brazil) - To be announced
- 2- Jorge Kalil (Brazil) “How M Protein from *Streptococcus* causes Human Diseases”
- 3- Celia Carlini (Brazil) “Ureases are multifunctional toxins”
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

17h00 - 19h00 Poster Session 1

18h30 - 20h00 General Meeting - IST

20h00 SBTx Jovem – Happy hour

November, 5th 2013 - Tuesday MORNING

07h30 – 8h10: Course # 1 Ferramentas Ômicas aplicadas ao estudo de venenos (course will be presented in portuguese)

07h30 – 8h10: Course # 2 A Citometria de Fluxo e sua aplicabilidade na Toxinologia (course will be presented in portuguese)

07h30 – 8h10: Course # 3 Bioinformática estrutural aplicada ao estudo de toxinas (course will be presented in portuguese)

08h30 - 09h30

CONFERENCE #3: SNAKE VENOM PROTEINASES DEGRADOMICS: TOWARDS UNDERSTANDING THEIR EFFECTS UPON HUMAN PLATELETS AND PLASMA, AND MOUSE SKIN

Chair: Gilberto Domont (Brazil)
Speaker: Solange Serrano (Brazil)

10h00 - 12h00

SESSION # 7: STRUCTURE AND FUNCTION OF TOXINS

Chairs:

- 1- Marcos Fontes (Brazil)
- 2- Carlos Alvarez (Cuba)

Speakers:

- 1- Marcos Fontes (Brazil) "Proposition of novel comprehensive model for myotoxic activity on bothropic phospholipases A2"
- 2- Carlos Alvarez (Cuba) - To be announced
- 3- To be announced
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

10h00 - 12h00

SESSION # 8: ANTIVENOMS

Chairs:

- 1- Jorge Kalil (Brazil)
- 2- José María Gutiérrez (Costa Rica)

Speakers:

- 1- José María Gutiérrez (Costa Rica) "New antivenoms for sub-Saharan Africa: Key issues related to their design and evaluation"
- 2- Carlos Sevcik (Venezuela) - To be announced
- 3- Carla Cristina Squaiella Baptista (Brazil) "Anticomplementary activity of horse IgG and F(ab')₂ antivenoms"
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

10h00 - 12h00

SESSION # 9: TOXINS AND INHIBITORS

Chairs:

- 1- Consuelo Latorre Fortes Dias (Brazil)
- 2- Jonas Perales (Brazil)

Speakers:

- 1- Consuelo Latorre Fortes Dias (Brazil) "Inhibitors of Phospholipases A2 in the blood plasma of Brazilian snakes"
- 2- Jonas Perales (Brazil) "Inhibitors of snake venom metalloproteinases: state of the art and perspectives"
- 3- Paulo Melo (Brazil) "Ability of some natural and synthetic substances to antagonize toxins"
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

AFTERNOON

13h30 - 14h30

CONFERENCE #7: SNAKE VENOM PROTEINS AFFECTING PLATELET RECEPTOR FUNCTION

Chair: Ana Marisa Chudzinski Tavassi (Brazil)
Speaker: Kenneth J. Clemetson (Switzerland)

15h00 - 17h00

SESSION # 10: TOXINS AND HAEMOSTASIS

Chairs:

- 1- Russolina B. Zingali (Brazil)
- 2- R. Manjunatha Kini (Singapore)

Speakers:

- 1- R. Manjunatha Kini (Singapore) "Toxins in thrombosis and hemostasis"
- 2- Russolina B. Zingali (Brazil) "Antithrombotic agents isolated from venoms and bacteria"
- 3- Ivo Francischetti (USA) "Antihemostatics from Blood-Sucking Arthropods"
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

15h00 - 17h00

SESSION # 11: CLINICAL ASPECTS OF ARTHROPODS ENVENOMATION AND THERAPEUTICS

Chairs:

- 1- Mario Sérgio Palma (Brazil)
- 2- Julian White (Australia)

Speakers:

- 1- Fábio Bucarechi (Brazil) - To be announced
- 2- Julian White (Australia) - "Treating arthropod envenoming; do we have a clearly appropriate management strategy?"
- 3- Ceila Malaque Sant'Ana (Brazil) "Loxoscelism: how to evaluate the safety and efficacy of antivenom in clinical practice?"
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

15h00 - 17h00

SESSION # 12: TOXINS AND EVOLUTION

Chairs:

- 1- Inácio Junqueira (Brazil)
- 2- Lisle Gibbs (USA)

Speakers:

- 1- Lisle Gibbs (USA) "Phylogeny-based comparative analysis of venom proteome variation in a clade of rattlesnakes (*Sistrurus* sp.)"
- 2- Inácio Junqueira (Brazil) "Snake toxin genes origins and evolution in the light of toxin-related genes background"
- 3- To be announced
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

17h00 - 19h00 Poster session 2

18h30 - 20h00 General Meeting - SBTx

20h00 SBTx jovem – Happy hour

November, 6th 2013 - Wednesday
MORNING

07h30 – 8h10: Course # 1 Ferramentas Ômicas aplicadas ao estudo de venenos (course will be

presented in portuguese)

07h30 – 8h10: Course # 2 A Citometria de Fluxo e sua aplicabilidade na Toxinologia (course will be presented in portuguese)

07h30 – 8h10: Course # 3 Bioinformática estrutural aplicada ao estudo de toxinas (course will be presented in portuguese)

08h30 - 09h30

CONFERENCE #5: To be announced

Chair: Solange Serrano (Brazil)

Speaker: Jay Fox (USA)

10h00 - 12h00

SESSION # 13: TOXINS AND INFLAMMATION

Chairs:

1- Catarina Teixeira (Brazil)

2- Thereza Christina Barja Fidalgo (Brazil)

Speakers:

1- Catarina Teixeira (Brazil) - To be announced

2- Thereza Christina Barja Fidalgo (Brazil) “Pro-inflammatory response of vascular cells to toxins: the early beginning of everything”

3- Jay Fox (USA) - to be announced

4- Sandra Coccuzo (Brazil) “Modulatory action of Crotoxin on events involved in the tumour progression. In vitro assay”

5- To be selected from the abstracts

SESSION # 14: DRUG DESIGN BASED ON VENOM COMPONENTS

Chairs:

1- Ana Marisa Chudzinski Tavassi (Brazil)

2- Carl W. Vogel (USA)

Speakers:

1- Ana Marisa Chudzinski Tavassi (Brazil) “Amblyomin-X: development of a factor Xa inhibitor as a new antitumor molecule”

2- Carl W. Vogel (USA) “Intelligent drug design from a venom component: humanized Cobra Venom Factor for immunotherapy of diseases with complement pathogenesis”

3- P. Gopalakrishnakone (Singapore) “Pip Peptides: Novel Leads for Treatment of Inflammation Relating to PLA2”

4- To be selected from the abstracts

5- To be selected from the abstracts

10h00 - 12h00

SESSION # 15: EDUCATION AND SCIENCE DIFFUSION IN TOXINOLOGY

Chairs:

1- Norma Yamanouye (Brazil)

2- Julian White (Australia)

Speakers:

1- Norma Yamanouye (Brazil) “The Post-graduation Program in Toxinology”

2- Julian White (Australia) “New developments in clinical Toxinology education and training”

3- Martha Marandino (Brazil) “Education and Science Diffusion in Toxinology”

4- Rejane Maria Lira da Silva (Brazil) - To be announced

5- To be selected from the abstracts

AFTERNOON

12h00 - 13h00 – Meeting of the SBTx jovem

Free afternoon

14h00 - 17h00 - Satellite meeting

Annual Meeting from the National Institute of Science and Technology on Toxins (INCTTox) - Brazil

November, 7th 2013 - Thursday
MORNING

07h30 – 8h10: Course # 1 Ferramentas Ômicas aplicadas ao estudo de venenos (course will be presented in portuguese)

07h30 – 8h10: Course # 2 A Citometria de Fluxo e sua aplicabilidade na Toxinologia (course will be presented in portuguese)

08h30 - 09h30

CONFERENCE #6: SCORPION VENOM COMPONENTS

Chair: Paulo Sérgio Beirão (Brazil)

Speaker: Lourival Possani (Mexico)

10h00 - 12h00

SESSION # 16: SCORPION TOXINS

Chairs:

1- Lucia Helena Faccioli (Brazil)

2- Lourival Possani (Mexico)

Speakers:

1- Lucia Helena Faccioli (Brazil) “CD14, TLR2 and TLR4 are essential to macrophages recognize Tityus serrulatus venom and its toxin 1 and to release lipid mediators, IL-6 and TNF α ”

2- Gina D'Suze (Venezuela) “Macrophage activation by inflammatory toxins isolated from Tityus discrepans scorpion venom. The role of Na⁺/Ca²⁺exchangers”

3- Fernanda C.V. Portaro (Brazil) “Insights into scorpion venom peptides: A new naturally occurring bioactive pentapeptide has resulted from the alternative processing of β -KTx propeptide from Tityus serrulatus venom”

4- To be selected from the abstracts

5- To be selected from the abstracts

10h00 - 12h00

SESSION # 17: TOXINS AND PAIN

Chairs:

1- Yara Cury (Brazil)

2- Richard J. Lewis (Australia)

Speakers:

1- Richard J. Lewis (Australia) “Analgesic x-conopeptides”

2- Gisele Piccolo (Brazil) “Interaction of the cannabinoid and opioid systems in the modulation of antinociception induced by crotalphine”

3 - To be announced

4 - To be selected from the abstracts

5- To be selected from the abstracts

10h00 - 12h00

SESSION # 18: TOXIN GENOMICS

Chairs:

- 1- Paulo Lee Ho (Brazil)
- 2- Juan Calvete (Spain)

Speakers:

- 1- Juan Calvete (Spain) "Omic and structural studies evidence two clades of independently evolving short-sized disintegrins"
- 2- Matheus F. Fernandes Pedrosa (Brazil) "Profiling the venom gland of the scorpion *Tityus stigmurus* through a transcriptomic survey: new peptides potentially applicable in pharmaceutical research and biotechnology"
- 3- To be announced
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

AFTERNOON

13h30 - 14h30

CONFERENCE #7: UNDERSTANDING LOCAL TISSUE PATHOLOGY INDUCED BY SNAKE VENOMS: UNSOLVED ISSUES

Chair: Catarina Texeira (Brazil)

Speaker: Jose Maria Gutierrez (Costa Rica)

15h00 - 17h00

SESSION # 19: SNAKE TOXINS

Chairs:

- 1- Ana Maria Moura da Silva (Brazil)
- 2- Heloisa Selistre de Araújo (Brazil)

Speakers:

- 1- Ana Maria Moura da Silva (Brazil) "Diversity of snake venom metalloproteinases targeting hemostasis: an adaptive advantage for Viper snakes with consequences for human pathology"
- 2- Heloisa Selistre de Araújo (Brazil) "RGD disintegrins and the effects of v3 integrin blockade in the tumour microenvironment"
- 3- Danielle Paixão Cavalcante (Brazil) "Biochemical characterization of African adders' venoms (*Bitis ssp*)"
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

15h00 - 17h00

SESSION # 20: ARTHROPOD TOXINS

Chairs:

- 1- Elizabeth F. Schwartz (Brazil)
- 2- Maria Elena de Lima (Brazil)

Speakers:

- 1- Elizabeth F. Schwartz (Brazil) "α-KTx isolated from scorpion venoms and their potential therapeutic use"
- 2- Maria Elena de Lima (Brazil) "Spider toxins: exploring new peptides to possible drug models"
- 3- Adolpho Borges (Venezuela) "Towards a risk map for scorpionism in tropical America: a proposal for a toxinological partitioning of the *Tityus* scorpion fauna"

- 4- Denise Tambourgi (Brazil) - To be announced
- 5- To be selected from the abstracts

15h00 - 17h00

SESSION # 21: ENVENOMATION AND THERAPEUTICS

Chairs:

- 1- Vidal Haddad Junior (Brazil)
- 2- David Warrell (UK)

Speakers:

- 1- Vidal Haddad Junior (Brazil) “Stings of freshwater stingrays as a real neglected problem in North, Midwest and Southeast regions of Brazil”
- 2- David Warrell (UK) “Challenges in the management of envenoming in developing countries”
- 3- Fábio Tozzi (Brazil) “Assistance to riverside communities in the Amazon and its implications for snakebites”
- 4- To be selected from the abstracts
- 5- To be selected from the abstracts

17h00 - 19h00 Poster Session 3

20h00 Galla Dinner

November, 8th 2013 - Friday MORNING

08h30 - 09h30

CONFERENCE #8: WHAT CAN TOXINS PROVIDE FOR DRUG DISCOVERY

- Chair: Yara Cury (Brazil)
Speaker: Alan Harvey (UK)

10h00 - 12h00

SESSION # 22: INITIATIVES IN TOXINOLOGY

Chairs:

- 1- Osvaldo Sant’Anna (Brazil)
- 2- Alan Harvey (UK)

Speakers:

- 1 - Osvaldo Sant’Anna (Brazil) “Five years of the National Institute of Science and Technology on Toxins [INCTTOX]”
- 2 - Hugo Harmelin (Brazil) “Toxins and Cell Signalling Networks”
- 3 - Carlos Alvarez (Cuba) “Iberoamerican Network BIOTOX “
- 4 - Abdulrazaq G. Habiib (Nigeria) “Initiatives for snakebite management in sub-Saharan Africa: The EchiTab study Group (Nigeria-UK)”
- 5 - David Warrel (UK) “The Global Snakebite Initiative”

12h00 - 14h00

Celebrating 25 years of SBTx

- Chair: Lea Simioni (Brazil)
Speaker: Julia Prado Franceschi (Brazil)

Closing Session
Awards

Invited and confirmed speakers

Abdulrazaq G. Habiiib (Nigeria)
Adolfo Borges (Venezuela)
Alan Harvey (UK)
Alexandre K. Tashima (Brazil)
Ana Maria Moura da Silva (Brazil)
Ana Marisa Chudzinski Tavassi (Brazil)
André Pereira P. Zelanis (Brazil)
Bruno Lomonte (Costa Rica)
Carl W. Vogel (USA)
Carlos Alvarez (Cuba)
Carlos Sevcik (Venezuela)
Catarina Teixeira (Brazil)
Consuelo Latorre Fortes Dias (Brazil)
Danielle Paixão Cavalcante (Brazil)
David Warrell (UK)
Denise V. Tambourgi (Brazil)
Elizabeth F. Schwartz (Brazil)
Fábio Bucarechi (Brazil)
Fábio Tozzi (Brazil)
Fan Hui Wen (Brazil)
Fernanda C.V. Portaro (Brazil)
Frank Mari (USA)
Gilberto Domont (Brazil)
Gina D'Suze (Venezuela)
Gisele Piccolo (Brazil)
Heloisa Selistre de Araújo (Brazil)
Hugo Harmelin (Brazil)
Inácio Junqueira (Brazil)
Jan Tytgat (Belgium)
Jay Fox (USA)
Jonas Perales (Brazil)
Jorge Kalil (Brazil)
Juan Calvete (Spain)
Julian White (Australia)
Lisle Gibbs (USA)
Lourival Possani (Mexico)
Lucia Helena Facioli (Brazil)
Marcos Fontes (Brazil)
Marcos Lacerda (Brazil)
María E. Lanio (Cuba)
Maria Elena de Lima (Brazil)
Mario Sérgio Palma (Brazil)
Marta Marandino (Brazil)
Matheus F. Fernandes Pedrosa (Brazil)
Norma Yamanouye (Brazil)
Osvaldo Sant'Anna (Brazil)
P. Gopalakrishnakone (Singapore)
Paulo Lee Ho (Brazil)
Paulo Sérgio Beirão (Brazil)
R. Manjunatha Kini (Singapore)
Rejâne Lira Casais (Brazil)
Russolina B. Zingali (Brazil)
Sandra Coccuzo (Brazil)
Solange Serrano (Brazil)
Vidal Haddad Junior (Brazil)
Yara Cury (Brazil)



Changsha

An advertisement for the Maple Forest Hotel. It features three images: a night view of the hotel building with its name in Chinese characters and English, a large conference room with many tables and chairs, and a meeting room with a stage and screens. Text in Chinese and English identifies the hotel and provides a website URL.

湖南枫林宾馆
Maple Forest Hotel
<http://www.fenglinhotel.com>

Maple Forest Hotel

NEXT ASIA-PACIFIC SECTION OF IST CONGRESS

The 10th IST – Asia Pacific Meeting on Animal, Plant & Microbial Toxins

June 14th –18th, 2014

Changsha, China

Organized by:

College of Life Sciences, Hunan Normal University

Co-organized by :

Key Laboratory of Tropical Biological Resources of Ministry of Education,
Hainan University

The Bio-toxin Committee of the Chinese Society of Biochemistry and Molecular
Biology

Congress Chairman:

Songping Liang

Sulan Luo

Yun Zhang

Hunan Normal University

Hainan University

Yunnan Zoology Institute, Chinese

Academy of Science

International Scientific Committee:

Baldomero Olivera, USA

Gleen F. King, Queensland, Australia

Pierre Escoubas, Nice, France

Eugene Grishin, Moscow Russia

Anthony T Tu, Fort Collins, USA

Jan Tytgat, Leuven Belgium

Julian White, North Adelaide, Australia

P. Gopalakrishnakone, Singapore

Hodgson Wayne, Clayton Australia

Reto Stocklin, Switzerland

Songping Liang, Changsha, China

Sulan Luo, Haikou China

Yun Zhang, Kunming, China

Organizing Committee

| | | |
|-----------------|------------------|----------------|
| Sulan Luo, | Yun Zhang, | Songping Liang |
| Dongyi Zhang, | Zhonghua Liu, | Yingliang Wu, |
| Xiongzhi Zeng, | Xianchun Wang, | Ren Lai, |
| Chunguang Wang, | Jiuping Ding, | Maikun Teng, |
| Yonghua Ji, | Shuanglin Xiang, | Zuohong Chen, |
| Zhen Liu, | Ying Wang, | Ping Chen, |
| Wenxing Li, | | |

Conference Venue

Maple Forest Hotel, Yuelu Mountain, Changsha City, China

Something important about the meeting:

1. About the meeting venue:
Changsha is the capital city of Hunan province, in south-central China, with the population of three millions. The Maple Forest Hotel is a quasi-five star hotel, located in the beautiful hill of Yuelu mountain, in Changsha City. The hotel has 400 bedrooms and 8 meeting rooms, which can hold 500, 300, 150, and 50 people, respectively. The price for a double bed room is about 70 USD. There are also three other hotels near the Maple Forest Hotel with the price of about 40-50 USD, which are good for students.
2. The registration fee of the meeting will be about 450-500 USD, which includes all of the food, bus fee between Changsha airport and the hotel for all the attendees.
3. We are going to invite about 30 outstanding scientists worldwide as invited speaker for the meeting. We will pay the hotel fee and the registration fee for all the invited speakers.

2nd Oxford World Symposium on Venoms

24-26 September 2013

Venoms2013

St Hilda's College
Oxford, UK

Making Sense of Venoms in Health & Disease

Web: <http://lpmhealthcare.com/Venoms2013/venomshome.htm>**Twitter:** @VenomsOxford

Distinguished Keynote Speakers



Prof Dietrich Mebs



Prof David Warrell



Prof Chris Shaw



Symposium Chair

Dr Edward Rowan

Distinguished Faculty

Dr Edward Rowan, UK

Professor Dr Cesare Montecucco, Italy

Professor Dr Juan Calvete, Spain

Professor Jan Tytgat, Belgium

Professor Alan Harvey, UK

Professor Dr Philippe Billiald, France

Professor Michael Eddleston, UK

Professor Dr Igor Križaj, Slovenia

Dr Thomas Junghanss, Germany

Professor Dr Eric Lingueglia, France

Professor Robert Harrison, UK

Dr Wolfgang Wüster, UK

Dr Nicholas Casewell, UK

Dr Ulrich Kuch, Germany

..more on the symposium website..

Deadlines:

Early Registration

27 May 2013

Poster Abstracts

17 July 2013

Group discounts
available

Contact:

Dr M Sohail, St Hilda's College, Oxford, UK

Email: VenomsOxford@gmail.com



Dear Colleagues,

With now little over a month to go before the start of the conference we are delighted to tell you that the planning for the 10th Australian Peptide Conference continues well on all fronts. We already have more than 210 registrants from 28 different countries, the program committee has put together an exciting oral program, and we have more than 150 top quality poster presentations.

We are also pleased to announce that the inaugural Tregear Awardee is Associate Professor Richard Payne, University of Sydney. This award recognises outstanding research by an early career researcher (less than 10 years from completion of PhD) in the field of Peptide Chemistry.

The meeting will commence at 9am Sunday 8th September with **Proteomics Forum Malaysia**. Invited speakers include Prof Ralph Bradshaw, Prof Rudi Grim, Prof Iekhsan Othman, Prof Onn Hashim, Dr Qing Song, Prof Manfred Raida, Prof Tony Purcell, Prof Bill Hancock, Dr Yasmine Abdiche and Dr Christie Hunter. Full details of the program are available at <http://www.peptideoz.org/australian-peptide-conference-2013/proteomics-forum-malaysia/>. Please note that registration is included for all delegates registered for the 10th Australian Peptide Conference, but please indicate via your Registration Dashboard that you will be attending for catering purposes. Please note that single day registration is also available for local delegates wishing to attend this forum.

Planning for the **International Conference on Natural Products and Health 2013**, an official satellite of the conference to be held at Nanyang Technological University (NTU) of Singapore from 5th – 7th September (<http://www.nph2013.org/>), is also progressing well, and we look forward to seeing delegates from this meeting in Penang.

We have scheduled a free afternoon/evening on Tuesday 10th September for those wishing to visit historic Georgetown, renowned for both its cultural and culinary delights. For those who do not want to make their own arrangements, but would prefer a transport and meals package, Diethelm Events, who are organising the pre and post conference tours, have offered to organise this if there is sufficient numbers. Details are available at <http://peptidessociety.asnevents.com.au/australian-peptide-conference-2013/tuesday-night-dinner-options/> and you can register for the venue of your choice via the 'add-ons' section of your registration dashboard.

We look forward to seeing you all in Penang in September

Ed Nice and Paul Alewood
Meeting Co-Chairs



Register
Now!



Venomics: Drug Discovery from Nature's Deadliest

Image credit: Bryan Grieg Fry

 Register at www.nyas.org/Venomics

Spiders, snakes, scorpions, sea snails and leeches produce over 10 million compounds, offering great potential in drug discovery. Encouraged by the substantial medicinal and fiscal success of hypertension remedy Captopril and analgesic Prial[®], used to alleviate chronic pain in HIV and cancer patients, many pharmaceutical companies are investing heavily in venom-based drug discovery programs. New analgesics, anti-tumor agents and even agricultural pesticides await discovery and can be realized through an integrated approach combining genomic, proteomic, and transcriptomic data, now referred to as 'venomics'. This symposium will investigate integrated strategies necessary to harness the cornucopia of venom compounds using mass spectrometry, nucleotide sequencing, and synthetic chemistry.

Organizers

Mandë Holford, PhD, Hunter College, CUNY / American Museum of Natural History

Steven Gross, PhD, Weill Cornell Medical College

Jennifer Henry, PhD, The New York Academy of Sciences

Speakers

Anirban Banerjee, PhD, National Institute of Child Health and Human Development, NIH

Carole A. Bewley, PhD, National Institute of Diabetes and Digestive and Kidney Diseases, NIH

Pierre Escoubas, PhD, VenomeTech

Bryan Fry, PhD, The University of Queensland, Australia

Mandë Holford, PhD, Hunter College, CUNY / American Museum of Natural History

Inés Ibañez-Tallon, PhD, The Rockefeller University

Baldomero Olivera, PhD, University of Utah

Mark E. Siddall, PhD, American Museum of Natural History

Beatrix Ueberheide, PhD, NYU Langone Medical Center

Silver Sponsor:  **Agilent Technologies**

Presented by **Hot Topics in Life Sciences** at the **New York Academy of Sciences**

Mission Partner support for the Frontiers of Science program provided by **Pfizer**

NOV
04
8:30 AM-
5:00 PM

Reception to follow

Registration

Member: \$30

Student/Postdoc Member: \$15

Nonmember (Academia): \$65

Nonmember (Corporate): \$85

Nonmember (Non-profit): \$65

Nonmember (Student/Postdoc/
Resident/Fellow): \$45

Location

The New York
Academy of Sciences
7 World Trade Center
250 Greenwich St, 40th Fl
New York, NY 10007

Customer Service

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customerservice@nyas.org

Phone (Toll Free):

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Sponsorship Opportunities

For sponsorship opportunities,

contact **David Smith**

at dsmith@nyas.org

or 212.298.8671

**3rd ANNUAL CONFERENCE OF THE TOXINOLOGICAL
SOCIETY OF INDIA (TSICON)**



&

**1ST INTERNATIONAL CONFERENCE ON
'BIOLOGY OF NATURAL TOXINS'**



**THE DEPARTMENT OF BIOLOGICAL SCIENCES,
BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI,
K K BIRLA GOA CAMPUS, GOA, INDIA**

19th to 21st DECEMBER, 2013

Organising Secretary: Dr. Dibakar Chakrabarty; diba27@yahoo.com



TSICON 2013



3rd Annual Conference of the Toxinological Society of India
& 1st International Conference on

"Biology of Natural Toxins"



With great pleasure, we invite you all to the 3rd Annual Conference of the Toxinological Society of India and 1st International Conference on "**Biology of Natural Toxins**" to be held in BITS Pilani K K Birla Goa Campus, Goa, India from **19-21 December, 2013**. This conference aims to provide a common platform for all researchers, clinicians, students, conservationists and industries working on different aspects of natural toxins of animals, microbes and plant, snake bite management and related environmental issues to discuss their research findings. The conference will consist of plenary sessions, invited lectures, oral and poster presentations.

OBJECTIVES

To create awareness and understanding of issues related to natural toxins (animal, microbial, plant) and snake bite management.

To discuss:

- ❖ Current research trends in natural toxins
- ❖ Management of envenomation/intoxication of biological origin
- ❖ Applications of biological toxins in drug discovery and as research tools
- ❖ Anti-venom production and related issues
- ❖ Conservation of poisonous and venomous species
- ❖ Ethics in toxin research

TSICON 2013

Organizing Secretary & President Elect

Dr. Dibakar Chakrabarty
Associate Professor,
Department of Biological
Sciences, BITS Pilani K.K
Birla Goa Campus.

Email:
tsicon2013@gmail.com

Phone:
+91 832 2580173



SCIENTIFIC AREAS TO BE COVERED

- ❖ Venomics
- ❖ Clinical toxinology
- ❖ Characterization of natural toxins
- ❖ Pharmacology, pharmacokinetics and drug discovery
- ❖ Anti-venom/Antidotes and Industry
- ❖ Ethics, Conservation and more...

REGISTRATION INFORMATION

Advance registration is encouraged. Registration fee includes cost towards conference material, beverages and all meals from dinner on 18 December till farewell high-tea on 21 December except conference dinner on 20 December.

| CATEGORY | Registration till 15 th September, 2013 | | Late registration between 16 th September to 15 th October 2013 | |
|--|---|-----------------------------|--|----------------------------|
| | Indian Delegates (INR) | Foreign Delegates* (USD) | Indian Delegates (INR) | Foreign Delegates (USD) |
| Delegates | 4000 (TSI Members) 5000 (Non Members) | 500 | 4500 (TSI Members) 5500 (Non Members) | 550 |
| Student | 3500 | 300 | 4000 | 350 |
| Accompanying person | 3500 | 300 | 3500 | 300 |
| Corporate | 10000 | 1000 | 12000 | 1200 |
| Conference Dinner (On the Cruise) | 150/person | 5/person | 150/person | 5/person |

* Registration fees for delegates from Nepal, Bangladesh, Myanmar, Sri Lanka and Pakistan: USD 250 (regular), USD 300 (late) and accom. person USD 200.

MODE OF PAYMENT

Indian Delegates: Demand Draft/Multi-city Crossed Cheque in favour of **Director, BITS Pilani K K Birla Goa Campus**, payable at **State Bank of India, Goa**.

International Delegates: Online transfer to be made to **State Bank of India, Commercial Branch, Vasco da Gama**, using the following details:

Beneficiary Name: BITS Pilani K K Birla Goa Campus
Beneficiary Account Number: 30803684122
IFSC Code: SBIN0010720
SWIFT Code: SBININBB229
Remarks: TSICON 2013

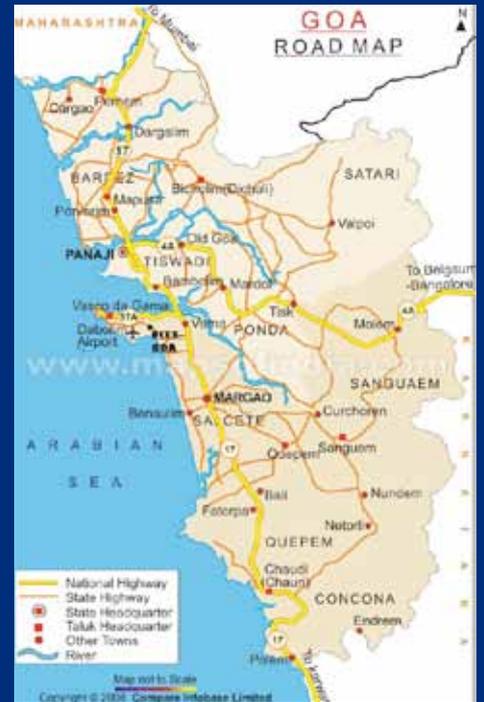
STEP BACK AND FEEL THE SAND BETWEEN YOUR TOES...UNPLUG, UNWIND, STEP OUT IN THE SUNSHINE...

Goa dubbed as the 'Pearl of the Orient' is one of the most sought after holiday destination in India. This tiny but beautiful state located in the western coast of Indian peninsula is full of surprises that leave every visitor spell bound with its magical charm and splendor. Goa is resplendent with picturesque palm dotted beaches, fascinating forts, churches, breathtakingly beautiful waterfalls, absorbing wildlife parks, sanctuaries and much more.

East and west come together in this sun-soaked state, where the beaches have long served as a magnet for hedonists and Indian culture intertwines with Portuguese influences left over from a 450 year occupation. The state of Goa has 39 beaches and all of them are famous for their own unique charm and tranquility. Some of the top beaches that are visited by tourists all the year round are Arambol, Vagator, Calangute, Baga and Bambolim. These are the north Goa beaches and are popular for their striking features and are regular host of all the happening activities and festivals that take place in Goa. Some of the most visited beaches in South of Goa which are perfect for tourists looking forward to experience the tranquility of the beaches and nature are Bogmalo, Majorda, Palolem and Cavellissim Beach. These beaches are ideal for water sports as well as adventurous activities.

Churches of Goa are a reflection of Portuguese dominance in the area. Be sure to visit Basilica of Bom Jesus, Church of St. Alex, Church of St. Cajatan, Convent & Church of St. Francis of Assisi and Se Cathedral. An evening cruise in the river Mandovi with local folk songs and dance add to the tourist attractions in Goa. Other major attractions in Goa are the exotic seafood and the festivals. Goa maintains a festive mood round the year.

During Christmas and New Year, it seems all roads lead to Goa...



BITS Pilani K K Birla Goa Campus from:

- Goa Airport (Dabolim) – 5 Kms
- Vasco da Gama Railway Station – 10 Kms
- Madgaon Railway Station – 25 Kms

Taxi Tariff (Source to Venue)

- Goa Airport (Dabolim) – INR 200-250
- Vasco da Gama Railway Station – INR 300-350
- Madgaon Railway Station – INR 500-550

WEATHER IN DECEMBER

With plenty of sun shine seen each day, the weather remains pleasant throughout with barely any rain seen during the month. This may be winter, but the temperatures remain high, so expect beach weather.

The average daily temperature for this month in Goa is 27°C which can reach 32°C or drop to 21°C. There is an average of 10 hours of sunshine each day in Goa. The average temperature of the sea during this month is 27°C.



BITS Pilani a university of excellence in Technology and Sciences. It is ranked as the best private university in India. BITS Pilani has four campuses in Pilani, Dubai, Goa and Hyderabad. The university is committed to generating, disseminating, and preserving knowledge, and to working with others to bring this knowledge to bear on the world's great challenges. BITS Pilani K K Birla Goa Campus boasts of its innovative teaching methods and state of the art infrastructure. It seeks to develop in each member of its community the ability and passion to work wisely, creatively and effectively for the betterment of mankind.



TSICON 2013**REGISTRATION FORM**

Name _____

Organization _____

Street _____

City _____ State _____

Postal Code _____ Country _____

Telephone Number _____ Fax Number _____

Email Address _____

Please tick

 I will attend Conference Dinner on Friday evening, 20 December 2013 - INR 150/USD 5 per person. I will bring an accompanying guest for the Conference Dinner - INR 150/USD 5 per person. Vegetarian Non Vegetarian**PAYMENT DETAILS****INDIAN DELEGATES**

DD/Multi-city Crossed Cheque Number _____ Amount _____

Bank _____ Date _____

Signature _____

Send to: Dr. Angshuman Sarkar, Treasurer TSICON 2013, Department of Biological Sciences, BITS Pilani
K K Birla Goa Campus, Zuarinagar 403726, Goa, India.

INTERNATIONAL DELEGATES

Transaction ID _____ Amount _____

Date _____ Signature _____

Duly filled registration forms should be emailed to Treasurer (treasurertsicon2013@gmail.com)
and Cc to Organizing Secretary (tsicon2013@gmail.com).

ABSTRACT* (TEMPLATE)

Submission Category: _____

Preference for Presentation (Oral/Poster): _____

Title: _____

Author(s) **: _____

Affiliation: _____

Abstract (Max. 250 words):

ABSTRACT

*Indian delegates presenting paper(s) must obtain TSI membership (annual/life). Form attached.

**Presenting author's name should be underlined.

(The abstract should be typed using Times New Roman font size 12. Please do not include figures in the abstract. The abstract should be sent to tsicon2013@gmail.com in .doc/.pdf format before 15 June 2013. Hard copy of abstracts will not be accepted)



Toxinological Society of India

(Registered under West Bengal Society Act : No. S/1L/77216)

MEMBERSHIP APPLICATION

To
The Secretary
Toxinological Society of India
Department of Biochemistry
KPC Medical College & Hospital
1F, Raja S.C. Mallick Road, Jadavpur
Kolkata – 700 032

Dear Sir,

I wish to be Annual Member / Life Member / Corporate Member of the Toxinological Society of India. I am furnishing the required particulars below, and request you to kindly allow me to be a member of the Society. The fee* for Annual Membership / Life Membership / Corporate Membership is enclosed as a Demand Draft (No. _____ Dt _____), in the name of "Toxinological Society of India" payable at Kolkata. I am also enclosing a copy of my Curriculum Vitae and two recent Passport size photographs for your record. Yours sincerely,

Place :

Date : _____ (Signature of the Applicant) _____ (Signature of the Nominating member of TSI)

Particulars of applicant

Full Name (in Block Letters) : _____

Date of Birth : _____ Qualifications (Name of University, Year) _____

Present Designation/ Department/ Institute/ Place : _____

Permanent Address : _____

Address for Correspondence (With Phone No., & Email ID) : _____

----- *For Official Use Only* -----

Membership No. _____ [] Approved [] Disapproved

Secretary, TSI

Note : Duly filled application form along with the Bank Draft should be forwarded to :

Prof. Antony Gomes

Secretary, Toxinological society of India

Lab. Of Toxinology & Exp. Pharmacodynamics,

Department of Physiology, University of Calcutta

92, A. P. C. Road, Kolkata – 700 009

E-mail : secretary.tsi@gmail.com

Mobile : +91-9433139031

Fax : 91-033-23519755

*Rs.1000 /4000 / 20,000 for Annual / Life / Corporate Membership respectively.

TENTATIVE LIST OF SPEAKERS

1. Anthony T. Tu

Professor Emeritus, Department of Biochemistry and Molecular Biology, Colorado State University - Fort Collins, USA.

Prof. Tu was bestowed The Order of the Rising Sun by the Japanese Emperor Akihito in November, 2009 for solving case of sarin-gas attacks in Japan in 1994 and 1995

Lifetime Special Recognition and Awards: NIH Merit Award, NIH Career Development Award.

Research Interests

Sea snake neurotoxins, Raman spectroscopy, structure-function relations of toxins, chemical weapons defense, NBCR anti-terrorism.

2. Alan L. Harvey

Professor of Pharmacology in Strathclyde Institute of Pharmacy and Biomedical Sciences and Vice Dean of Research in The Faculty of Science, University of Strathclyde Glasgow, UK

President, International Society on Toxinology and Editor-in-Chief, Toxicon

Research Interests

Physiology and Pharmacology of synaptic signaling, with particular interests in drugs and toxins affecting receptors and ion channels

3. P. Gopalakrishnakone

Professor, Department of Anatomy, Yong Loo Lin School of Medicine, National University Health System, Singapore.

Research Interests

Mechanism of action of venoms and toxins from various marine creatures, mechanism of venom secretion, venom and toxin induced muscle damage, immunology and cloning of toxins, microarray technology for proteomics and genomics, biosensors and biomedical applications.

4. Julian White

Professor and Head of Toxinology, Women's & Children's Hospital, Adelaide, Australia

Secretary/Treasurer of International Society on Toxinology.

Research Interests

Envenomation by snakes and other venomous animals and their clinical implications.

5. Shripad B. Deshpande

Professor of Physiology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India.

Fellow of Indian Academy of Neuroscience
Editor, Indian Journal of Physiology and Pharmacology

Research Interests

Neuroscience, Electrophysiology, Toxicology and Toxinology.

6. Antony Gomes

Laboratory of Toxinology & Experimental Pharmacodynamics, Department of Physiology, University of Calcutta, India.

Fellow of the Indian Pharmacological Society

Research Interests

Snake venom hemorrhagins, antivenom from plants, therapeutic uses of venom, nanopeptides for applications in iron deficiency anemia and snakebite in animal models, Anticancer potential of animal venoms and toxins, Toxins from Indian toad, Indian monocellate cobra and Indian black scorpion.

7. Glenn F. King

Institute for Molecular Bioscience, The University of Queensland, Australia.

Research Interests

Structure-function characterisation, and therapeutic development of venom peptides from the venoms of spiders, scorpions, centipedes, and other venomous animals.

8. Jay W. Fox

Professor & Associate Dean of Research of Microbiology, Immunology & Cancer Biology, University of Virginia School of Medicine.

Research Interests

Basement Membrane Structure & Metalloproteinases.

9. R. Manjunatha Kini

Professor, Department of Biological Science, National University of Singapore. Affiliate Professor in the Department of Biochemistry at Virginia Commonwealth University.

Founder and Chief Scientific officer of Pro-Therapeutics Private Ltd.
Chairman and co-chairman of the Registry of Exogenous Hemostatic factors.

Research Interests

Structure-function relationships and mechanism of action of proteins especially snake venom toxins, Protein-protein interaction and Protein design and engineering.

10. Romulus Whitaker

Noted Herpetologist and conservationist. Founder of Irula Snake Catchers' Co-operative Society and Madras Snake Park. World renowned expert on King Cobra behavior. Known as savior of gharials of India.

11. Gerry Martin

Founder Director of The Gerry Martin Project (TGMP)

Herpetologist, Naturalist, Wildlife conservation expert and educationist.

In 2000, Martin became the first Indian Adventurer for the National Geographic Channel and worked with them in India.

12. Manas Mandal

Associate Professor of Pharmaceutical Sciences, College of Pharmacy, University of Southern Nevada, South Jordan UTAH, USA.

Research Interests

Cellular immunology, vaccine development and cancer immunotherapy.

| 18-Dec-13 | | | | |
|-------------------|--|-------------------|------------------|-----------------------------|
| 5.30-7.30 pm | 7.45-9.30pm | | | |
| Registration | Welcome Dinner | | | |
| 19-Dec-13 | | | | |
| 8.00-9.00am | 9.00-9.50am | 9.50-10.20am | 10.20-10.30am | 10.30am-11.15am |
| Breakfast | Inauguration by Prof. Alan L. Harvey (President IST) | Plenary Lect. I | Tea | S.C Lahiri Memorial Oration |
| 11.15-12.00pm | 12.00-1.00pm | 1.00-2.00pm | 2.15-2.45pm | 2.45-3.45pm |
| Lectures (3X2) | Poster Session I | Lunch | Plenary Lect. II | Lectures (4X2) |
| 3.45-4.00pm | 4.00-5.00pm | 5.00-6.15pm | | |
| Tea | Lectures (4X2) | Lectures (5X2) | | |
| 20-Dec-13 | | | | |
| 8.00-9.00am | 9.00-9.45am | 9.45-10.15am | 10.15-10.30am | 10.30-11.30am |
| Breakfast | A.K Nag Chaudhuri Memorial Oration | Plenary Lect. III | Tea | Lectures (4X2) |
| 11.30am-12.30pm | 12.30-1.30pm | 1.30-2.00pm | 2.00-4.00pm | 4.00-4.15pm |
| Poster Session II | Lunch | Plenary Lect. IV | Lectures (8X2) | Tea |
| 4.15-5.15pm | 5.15-6.30pm | 6.30 pm onwards | | |
| Lectures (4X2) | Annual General Meeting | Gala Dinner | | |
| 21-Dec-13 | | | | |
| 8.00-9.00am | 9.00-10.00am | 10.00-11.15am | 11.15-11.30am | 11.30am-1.00pm |
| Breakfast | Lifetime Achievement Award to Prof. Anthony T. Tu | Lectures (4X2) | Tea | Lectures (6X2) |
| 1.00-2.00pm | 2.00-2.45 pm | 2.45-3.00pm | 3.00-3.30pm | 3.30-4.30pm |
| Lunch | Student Lectures (Best Poster Winners-3) | Tea | Plenary Lect. V | Validictory Ceremony |
| 4.30pm onwards | | | | |
| Farewell High Tea | | | | |



University of Adelaide
Faculty of Health Sciences



CLINICAL TOXINOLOGY SHORT COURSE 2014

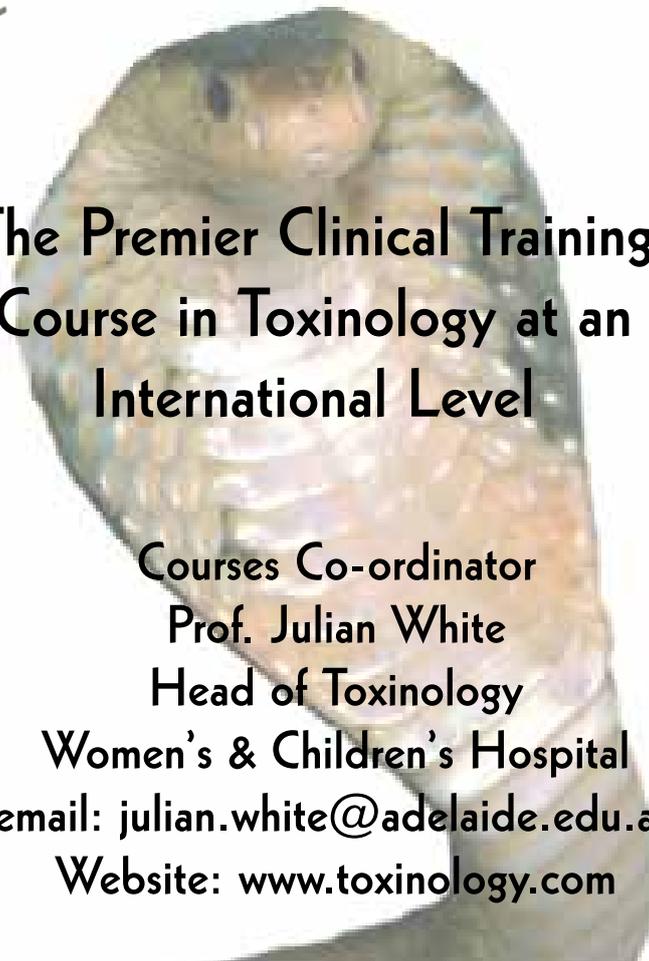
Women's & Children's Hospital
Adelaide, Australia
March 31st to April 5th
2014



The Premier Clinical Training
Course in Toxinology at an
International Level

Courses Co-ordinator
Prof. Julian White
Head of Toxinology

Women's & Children's Hospital
email: julian.white@adelaide.edu.au
Website: www.toxinology.com



IMPORTANT COURSE INFORMATION

COURSE RELATED QUESTIONS:

Who is this course designed for?

Primarily for doctors/health professionals requiring detailed and practical information on snakebite, spiderbite, scorpion stings, marine envenoming, poisonous plants & mushrooms and related topics with a global and Australian perspective. It is particularly relevant for those working in emergency medicine, toxicology, intensive care, or in rural practice. Throughout there will be an emphasis on practical clinical issues and development of clinically relevant skills. It will also be of interest to poisons information pharmacists and graduate nurses in emergency medicine and toxinology scientists. You should be fluent in English, as no language translation will be available.

When and where are the courses held?

The course runs over 6 days; Monday March 31st to Saturday April 5th, 2014. The venue is the Women's and Children's Hospital, North Adelaide, SA, Australia

What does the course cover?

We cover terrestrial & marine animals, plants & mushrooms, including extensive sessions on venomous snakes by region. Detailed sheets on course content will be available on the web at <http://www.toxinology.com>.

Is the course accredited in any way?

The course is a University of Adelaide postgraduate training course. We are seeking formal accreditation of continuing education points with relevant colleges and possible incorporation within some college specialist training schemes.

How many people can attend the course?

The maximum course capacity is 50 registrants, to ensure a chance for interactions with faculty. Previous courses filled early, so early registration is advisable.

How much does the course cost and what does this cover?

The course costs Aus\$2,200 (+GST for Australians only); the fee covers the full course, course notes, field trip, morning and afternoon teas and light lunches. It does not cover the course dinner or accommodation.

Are there any course notes or reading material available prior to the course?

We produce course notes for registrants prior to the course, which will include recommended textbooks and reading list. You are still strongly advised to take notes during all sessions. (The 2012 Course Handbook exceeded 500 pages.)

What sort of practical clinical sessions are included?

The programme includes many interactive sessions discussing "clinical evolving problems" (CEPs) to develop registrant's understanding of clinical skills in toxinology and test those skills in a group setting. These are all based on real patients contributed by faculty members, drawn from their own clinical experience.

Is there any formal evaluation of my performance on the course?

Yes! Faculty will be evaluating all registrants on their interactions, especially during the clinical evolving problem sessions. On the Saturday there will be a written examination.

For further information contact Prof. White (julian.white@adelaide.edu.au) or Dr. David Bates (david.bates@adelaide.edu.au).



1961 West Brichta Dr.
Tucson, AZ 85745, USA
Tel: 1 520 884-9345
Fax: 1 520 884-9345
ponerine@dakotacom.net

Southwest Venoms

CATALOGUE OF INSECT VENOMS (2012-2013)

Prices in U.S. dollars. All venoms are pure venoms (not venom sac or apparatus homogenates) collected according to the methods of Schmidt (1986. *In: Venoms of the Hymenoptera* [T. Piek, ed.], pp. 425-508. Academic Press: London.).

| Prod. No. | VENOM | (LD ₅₀ mg/kg, mice) | VENOM PRICE | | | |
|---------------------------------|---------------------------------------|--------------------------------|-------------|------|-------|--------|
| | | | 1 mg | 5 mg | 25 mg | 100 mg |
| SOCIAL WASPS | | (LD ₅₀) | | | | |
| Yellowjackets -- <i>Vespula</i> | | | | | | |
| W-10 | <i>V. pensylvanica</i> | (6.4) | 50 | 225 | 1000 | * |
| W-19 | other species** | | * | | | |
| Hornets -- <i>Vespa</i> | | | | | | |
| W-20 | <i>V. mandarina</i> | (4.1) | 50 | 225 | 1000 | * |
| W-21 | <i>V. tropica</i> | (2.8) | 50 | 225 | 1000 | * |
| W-29 | others ** | | * | | | |
| Paper wasps -- <i>Polistes</i> | | | | | | |
| W-30 | <i>P. comanchus navajoe</i> | (5) | 40 | 180 | 800 | * |
| W-31 | <i>P. flavus</i> | (3.8) | 40 | 180 | 800 | * |
| W-32 | <i>P. canadensis</i> | (2.5) | 50 | 225 | * | |
| W-33 | <i>P. erythrocephalis</i> | (1.5) | 50 | 225 | * | |
| W-39 | <i>Polistes</i> sp. as available** | | 30 | 135 | 600 | 2100 |
| New World Polybiine wasps | | | | | | |
| W-40 | <i>Brachygastra mellifica</i> | (1.5) | 60 | 270 | 1200 | * |
| W-50 | <i>Synoeca septentrionalis</i> | (2.7) | 60 | 270 | 1200 | * |
| W-60 | <i>Parachartergus fraternus</i> | (5) | 70 | 300 | 1400 | * |
| W-70 | <i>Polybia sericea</i> | (6) | 80 | 350 | * | |
| W-71 | <i>P. simillima</i> | (4.1) | 80 | 350 | * | |
| W-72 | <i>P. occidentalis</i> | (5) | 100 | * | | |
| W-80 | <i>Agelaia myrmecophila</i> | (5.6) | 140 | * | | |
| Old World Polybiine wasps | | | | | | |
| W-90 | <i>Belonogaster juncea colonialis</i> | (3) | 80 | 350 | * | |
| SOCIAL BEES | | | | | | |
| Honey bees -- <i>Apis</i> | | | | | | |
| B-10 | <i>A. mellifera</i> | (2.8) | 20 | 90 | 400 | 1400 |
| B-11 | <i>A. mellifera</i> Africanized bees | (2.8) | 20 | 90 | 400 | 1400 |
| B-12 | <i>A. mellifera</i> queens | | 40 | 180 | 800 | 2800 |
| B-13 | <i>A. dorsata</i> | (2.8) | 50 | 225 | 1000 | 3500 |
| B-14 | <i>A. cerana</i> | (3.1) | 55 | 245 | * | |
| B-19 | others (<i>A. florea</i> , etc.)** | | * | | | |
| Bumble bees -- <i>Bombus</i> | | | | | | |
| B-20 | <i>B. sonorus</i> | (12) | 50 | 225 | 1000 | * |
| B-21 | <i>B. impatiens</i> | (12) | 50 | 225 | * | |
| B-29 | other species** | | 30 | * | | |

| Prod. No. | VENOM | (LD ₅₀ mg/kg, mice) | VENOM PRICE | | | |
|-----------------------------------|--|--------------------------------|-------------|------|-------|--------|
| | | | 1 mg | 5 mg | 25 mg | 100 mg |
| ANTS -- FORMICIDAE | | (LD ₅₀) | | | | |
| Pogonomyrmex -- harvester ants | | | | | | |
| A-10 | <i>P. barbatus</i> | (0.6) | 50 | 225 | 1000 | 3500 |
| A-11 | <i>P. maricopa</i> | (0.12) | 60 | 270 | 1200 | 4200 |
| A-12 | <i>P. occidentalis</i> | (0.5) | 70 | 315 | 1400 | * |
| A-13 | <i>P. rugosus</i> | (0.7) | 50 | 225 | 1000 | 3500 |
| A-15 | <i>P. desertorum</i> | (0.7) | 160 | * | | |
| A-19 | <i>Pogonomyrmex</i> sp. as available | | 45 | 200 | 900 | 3200 |
| Myrmecia -- bull ants | | | | | | |
| A-20 | <i>M. gulosa</i> | (0.18) | 60 | 270 | 1200 | 4200 |
| A-21 | <i>M. tarsata</i> | (0.18) | 60 | 270 | 1200 | * |
| A-22 | <i>M. browningi</i> | (0.18) | 70 | 315 | * | |
| A-23 | <i>M. rufinodis</i> | (0.35) | 70 | 315 | * | |
| A-24 | <i>M. simillima</i> | (0.21) | 70 | 315 | * | |
| A-25 | <i>M. pilosula</i> | (5.7) | 100 | * | | |
| A-30 | <i>Pachycondyla (Neoponera) villosa</i> | (7.5) | 60 | 270 | * | |
| A-31 | <i>P. (Neoponera.) apicalis</i> | (> 16) | 70 | * | | |
| A-32 | <i>P. crassinoda</i> | (2.8) | 80 | * | | |
| A-33 | <i>P. (Megaponera) foetens</i> (Metabele ant) | (130) | 70 | 315 | * | |
| A-34 | <i>P. (Paltothyreus) tarsatus</i> (stink ant) | (64) | 50 | 225 | 1000 | 3500 |
| A-35 | <i>P. (Bothroponera) strigulosa</i> | (9) | 70 | * | | |
| A-36 | <i>Termitopone commutata</i> | (10) | 70 | 315 | 1400 | * |
| A-40 | <i>Platythyrea lamellosa</i> | (11) | 70 | 315 | * | |
| A-50 | <i>Diacamma</i> sp.** | (35) | 100 | 450 | * | |
| A-60 | <i>Dinoponera gigantea</i> | (11) | 60 | 270 | 1200 | 4200 |
| A-70 | <i>Paraponera clavata</i> (bullet ant) | (6.0) | 60 | 270 | 1200 | 4200 |
| A-80 | <i>Ectatomma tuberculatum</i> | (1) | 60 | 270 | * | |
| A-81 | <i>E. quadridens</i> | (17) | 60 | 270 | * | |
| A-90 | <i>Odontomachus</i> sp.** | (33) | 60 | 275 | * | |
| A-110 | <i>Tetraponera</i> sp.** | (.35) | 140 | 600 | * | |
| A-120 | <i>Streblognathus aethiopicus</i> | (8.0) | 80 | 360 | * | |
| SOLITARY WASPS AND BEES | | | | | | |
| Spider wasps -- Pompilidae | | | | | | |
| SW-10 | <i>Pepsis</i> sp.** | (65) | 60 | 270 | 1200 | 4200 |
| Mutillid wasps -- Mutillidae | | | | | | |
| SW-20 | <i>Dasymutilla</i> sp.** | (71) | 70 | 315 | 1400 | * |
| SW-39 | Other wasps (Scoliidae, Tiphiidae, Sphecidae, Eumenidae, etc.)** | | * | | | |
| Carpenter bees -- <i>Xylocopa</i> | | | | | | |
| SB-10 | <i>X. californica</i> | (21) | 50 | 225 | 1000 | * |
| SB-11 | <i>X. veripuncta</i> | (33) | 55 | 245 | * | |
| SB-20 | <i>Proxycopa rufa</i> | (11) | 100 | 450 | * | |
| SB-39 | Other bees** | | * | | | |

*Inquire for prices and availability.

**Available species provided; exact determinations usually included.

Natural Toxins

Research Center
(NTRC)

TEXAS A&M UNIVERSITY
KINGSVILLE

VENOM QUALITY GUARANTEE

Authenticity of Species • Purity of Venom
Maximum Biological Activity • Our Venom is Never Pooled

Snake venoms contain important molecules which are valuable for researching the treatments of strokes, heart attacks, and cancer.

The Natural Toxins Research Center (NTRC) at Texas A&M University-Kingsville is dedicated to providing high quality snake products for biomedical research. We are committed to the procurement and distribution of venoms, venom fractions and tissue for biomedical research. Venoms from the same species can be different, and therefore extracted venoms are never pooled. Each vial contains venom from a single snake, and venoms of the same species are never mixed. The vials are labeled with the snakes' scientific and common names, ID tag number and sex. The ID tag number can be traced back to the NTRC Internet Database (ntrc.tamuk.edu/cgi-bin/serpentarium/snake.query) for additional information about each snake.

| | | | | |
|--|--------------------------------|-----------------------------|----------------------------------|---------------------------------|
| Southern Copperhead - <i>Agkistrodon contortrix contortrix</i> | \$75 ⁰⁰ /1g | \$50 ⁶³ /500mg | | |
| Broad-Banded Copperhead - <i>Agkistrodon contortrix laticinctus</i> .. | \$100 ⁰⁰ /1g | \$67 ⁵⁰ /500mg | | |
| Northern Copperhead - <i>Agkistrodon contortrix mokasen</i> | \$50 ⁰⁰ /1g | \$33 ⁷⁵ /500mg | | |
| Trans-Pecos Copperhead - <i>Agkistrodon contortrix pictigaster</i> | \$75 ⁰⁰ /1g | \$50 ⁶³ /500mg | | |
| Florida Cottonmouth - <i>Agkistrodon piscivorus conanti</i> | \$60 ⁰⁰ /1g | \$40 ⁵⁰ /500mg | | |
| Western Cottonmouth - <i>Agkistrodon piscivorus leucostoma</i> | \$56 ⁰⁰ /1g | \$37 ⁸⁰ /500mg | | |
| Eastern Diamondback Rattlesnake - <i>Crotalus adamanteus</i> | \$50 ⁰⁰ /1g | \$33 ⁷⁵ /500mg | | |
| Western Diamondback Rattlesnake - <i>Crotalus atrox</i> | \$45 ⁰⁰ /1g | \$30 ³⁸ /500mg | | |
| Sonoran Sidewinder - <i>Crotalus cerastes cercobombus</i> | \$125 ⁰⁰ /1g | \$84 ³⁸ /500mg | | |
| Timber Rattlesnake - <i>Crotalus horridus</i> | \$70 ⁰⁰ /1g | \$47 ²⁵ /500mg | | |
| Mottled Rock Rattlesnake - <i>Crotalus lepidus lepidus</i> | \$125 ⁰⁰ /1g | \$84 ³⁸ /500mg | | |
| Blacktail Rattlesnake - <i>Crotalus molossus molossus</i> | \$400 ⁰⁰ /1g | \$270 ⁰⁰ /500mg | \$72 ⁹⁰ /100mg | \$49 ²¹ /50mg |
| Great Basin Rattlesnake - <i>Crotalus oreganus lutosus</i> | \$125 ⁰⁰ /1g | \$84 ³⁸ /500mg | | |
| Grand Canyon Rattlesnake - <i>Crotalus oreganus abyssus</i> | \$250 ⁰⁰ /1g | \$168 ⁷⁵ /500mg | \$45 ⁵⁶ /100mg | \$30 ⁷⁵ /50mg |
| Texas Coral Snake - <i>Mircrurus tener tener</i> | \$2000 ⁰⁰ /1g | | | |
| Florida Coral Snake - <i>Mircrurus fulvius</i> | \$1800 ⁰⁰ /1g | | | |
| Southern Pacific Rattlesnake - <i>Crotalus oreganus helleri</i> | \$400 ⁰⁰ /1g | \$270 ⁰⁰ /500mg | \$72 ⁹⁰ /100mg | \$49 ²¹ /50mg |
| Northern Pacific Rattlesnake - <i>Crotalus oreganus oreganus</i> | \$400 ⁰⁰ /1g | \$270 ⁰⁰ /500mg | \$72 ⁹⁰ /100mg | \$49 ²¹ /50mg |
| Mohave Rattlesnake - <i>Crotalus scutulatus scutulatus</i> (A)..... | \$250 ⁰⁰ /1g | \$168 ⁷⁵ /500mg | \$45 ⁵⁶ /100mg | \$30 ⁷⁵ /50mg |
| Mohave Rattlesnake - <i>Crotalus scutulatus scutulatus</i> (B)..... | \$1000 ⁰⁰ /1g | \$675 ⁰⁰ /500mg | \$182 ²⁵ /100mg | \$123 ⁰² /50mg |
| Prairie Rattlesnake - <i>Crotalus viridis viridis</i> | \$70 ⁰⁰ /1g | \$47 ²⁵ /500mg | | |
| Red Spitting Cobra - <i>Naja pallida</i> | \$100 ⁰⁰ /1g | \$67 ⁵⁰ /500mg | | |
| Desert Massasauga - <i>Sistrurus catenatus edwardsii</i> | \$1000 ⁰⁰ /1g | \$675 ⁰⁰ /500mg | \$182 ²⁵ /100mg | \$123 ⁰² /50mg |
| Western Massasauga - <i>Sistrurus catenatus tergeminus</i> | \$1000 ⁰⁰ /1g | \$675 ⁰⁰ /500mg | \$182 ²⁵ /100mg | \$123 ⁰² /50mg |
| Bushmaster - <i>Lachesis muta muta</i> | \$2000 ⁰⁰ /1g | \$1350 ⁰⁰ /500mg | \$364 ⁵⁰ /100mg | \$246 ⁰⁴ /50mg |

(A) - neurotoxic venom
(B) - non-neurotoxic venom
*Subject to availability

Venom is collected under stringent laboratory conditions using disposable labwear for each extraction. Venom is collected in new, non-reusable plastic cups with parafilm coverings. Snakes are allowed to bite into the parafilm diaphragm and the venom glands are not massaged. Immediately following collection, each venom sample is clarified by centrifugation at 500 x g for 5 minutes to remove cellular debris and frozen at -90° C until lyophilized.

Foreign Investigators: Please note that your order may be subject to import duties, taxes, tariffs, customs charges, DDP, VAT, and the like, once your package reaches your country. It is your responsibility to pay for these charges. The Natural Toxins Research Center will not be responsible for paying these charges, and we will not bill you for such charges when you place your order.

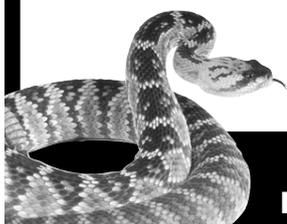
Venom glands and fractions also for sale - call for pricing & availability

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Venom Supplies Pty Ltd

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Email: venoms@venomsupplies.com

Web: www.venomsupplies.com

Lyophilised Venoms Snakes

| Scientific name | Price(US\$)/200mg | Price(US\$)/gm |
|------------------------------------|-------------------|----------------|
| <i>Acanthophis antarcticus</i> | \$170 | \$745 |
| <i>Acanthophis praelongus</i> | \$210 | \$845 |
| <i>Agkistrodon billineatus</i> | \$50 | \$200 |
| <i>Austrelaps superbus</i> | \$400 | \$1,600 |
| <i>Austrelaps labialis</i> | \$700 | \$3,000 |
| <i>Bitis arietans</i> | \$70 | \$300 |
| <i>Bitis rhinoceros</i> | \$75 | \$340 |
| <i>Bitis nasicornis</i> | \$75 | \$340 |
| <i>Bothriechis schlegelii</i> | \$200 | \$850 |
| <i>Crotalus adamanteus</i> | \$100 | \$450 |
| <i>Crotalus unicolor</i> | \$200 | \$900 |
| <i>Crotalus vegrandis</i> | \$160 | \$700 |
| <i>Hoplocephalus stephensii</i> | \$220 | \$900 |
| <i>Hoplocephalus bitorquatus</i> | \$220 | \$900 |
| <i>Naja kaouthia</i> | \$60 | \$250 |
| <i>Naja melanoleuca</i> | \$50 | \$200 |
| <i>Naja mossambica</i> | \$60 | \$250 |
| <i>Naja siamensis</i> | \$60 | \$250 |
| <i>Notechis ater humphreysi</i> | \$350 | \$1,600 |
| <i>Notechis ater niger</i> | \$350 | \$1,600 |
| <i>Notechis ater serventyi</i> | \$350 | \$1,600 |
| <i>Notechis scutatus</i> | \$300 | \$1,445 |
| <i>Ophiophagus hannah</i> | \$200 | \$850 |
| <i>Oxyuranus microlepidotus</i> | \$300 | \$1,300 |
| <i>Oxyuranus scutellatus</i> | \$260 | \$1,250 |
| <i>Oxyuranus scutellatus canni</i> | \$400 | \$1,500 |
| <i>Pseudechis australis</i> | \$110 | \$520 |
| <i>Pseudechis butleri</i> | \$160 | \$700 |
| <i>Pseudechis colletti</i> | \$110 | \$500 |
| <i>Pseudechis guttatus</i> | \$110 | \$500 |
| <i>Pseudechis porphyriacus</i> | \$140 | \$650 |
| <i>Pseudechis papuanus</i> | \$288 | \$1,380 |
| <i>Pseudonaja affinis</i> | \$800 | \$3,900 |
| <i>Pseudonaja aspidorhyncha</i> | \$800 | \$3,990 |
| <i>Pseudonaja inframacula</i> | \$800 | \$3,990 |
| <i>Pseudonaja nuchalis</i> | \$800 | \$3,990 |
| <i>Pseudonaja textilis</i> | \$760 | \$3,700 |
| <i>Tropidechis carinatus</i> | \$300 | \$1,500 |

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Latrodectus hasseltii \$500/50 sac contents.

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 250mg \$58
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 (6-10gm) \$116/gm
 (60gm and over) \$95/gm

Amphibian Venoms

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VENOM PRICELIST SPRING/SUMMER 2009

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| Dendroaspis polylepsis | \$550.00 |
| Dendroaspis angusticeps | \$400.00 |
| Dendroaspis viridis | \$750.00 |
| Naja nivea | \$205.00 |
| Naja melanoleuca | \$205.00 |
| Naja nigricollis (Tanzania) | \$205.00 |
| Naja nigricollis (Ghana) | \$205.00 |
| Naja h. annulifera | \$125.00 |
| Naja kaouthia | \$205.00 |
| Naja naja (Pakistan) | \$250.00 |
| Ophiophagus hannah | \$150.00 |
| Micrurus f. fulvius | \$2100.00 |
| | |
| Bitis arietans | \$150.00 |
| Bitis g. gabonica | \$150.00 |
| Bitis g. rhinoceros | \$150.00 |
| | |
| Crotalus adamanteus | \$150.00 |
| Crotalus atrox | \$150.00 |
| Crotalus h. atricaudatus | \$150.00 |
| Crotalus h. horridus | \$150.00 |
| Crotalus s.scutulatus | \$450.00 |
| Crotalus d. terrificus | \$450.00 |
| Sistrurus m. barbouri | \$450.00 |
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| Agkistrodon c.contortrix | \$190.00 |
| Agkistrodon c. laticinctus | \$190.00 |
| Agkistrodon c. mokasen | \$100.00 |
| Agkistrodon p. conanti | \$100.00 |

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crystallized venoms**

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| Bothrops jararaca | 220,00 US\$ |
| Bothrops jararacussu | 264,00 US\$ |
| Bothrops moojeni | 300,00 US\$ |
| Bothrops neuwiedi | 340,00 US\$ |
| Crotalus durissus terrificus | 220,00 US\$ |
| Crotalus durissus collineatus | 300,00 US\$ |
| | |
| Lachesis muta muta | 600,00 US\$ |
| | |
| Bufo marinus / schneideri | 264,00 US\$ |

All venoms collected in a sterile manner

Blood cells and freeze dried blood plasma from snakes

We have also other proteins, aminoacids and toxin polyclonal antibodies from Brazilian snakes

We trade or sale our products only with CITES from the IBAMA (Brazilian Environment Agency & Wildlife)

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Brazilian Contact:

Sanmaru Serpentarium,

Rod. Brig. Faria Lima km 365

14765-000 Taquaral SP, Brazil

herpetoscience@hotmail.com

taquaral@gmail.com

Fone (55) 14 9731 2436

(55) 16 3958 7269

Kentucky Reptile Zoo

Venom Price List 2009-2010

200 L and E Railroad

Slade, KY 40376

Tel:606-663-9160

Fax: 606-663-6917

Web: www.kyreptilezoo.orgEmail: reptilezoo@bellsouth.net**Crotalidae**

| | |
|--|----------|
| <i>Agkistrodon contortrix contortrix</i> | \$60.00 |
| <i>Agkistrodon contortrix mokasen</i> | \$55.00 |
| <i>Agkistrodon contortrix laticinctus</i> | \$70.00 |
| <i>Agkistrodon contortrix phaeogaster</i> | \$70.00 |
| <i>Agkistrodon contortrix pictigaster</i> | \$70.00 |
| <i>Agkistrodon piscivorus leucostoma</i> | \$45.00 |
| <i>Agkistrodon piscivorus piscivorus</i> | \$45.00 |
| <i>Bothrops asper</i> | \$100.00 |
| <i>Bothrops atrox</i> | \$100.00 |
| <i>Bothrops moojeni</i> | \$100.00 |
| <i>Crotalus adamanteus</i> | \$60.00 |
| <i>Crotalus atrox</i> | \$70.00 |
| <i>Crotalus basiliscus basiliscus</i> | \$200.00 |
| <i>Crotalus cerastes</i> | \$100.00 |
| <i>Crotalus durissus cumanensis</i> | \$300.00 |
| <i>Crotalus durissus durissus</i> (fmr. <i>C. d. dryinas</i>) | \$200.00 |
| <i>Crotalus durissus terrificus</i> | \$175.00 |
| <i>Crotalus horridus</i> | \$100.00 |
| <i>Crotalus horridus</i> (type A neurotoxin) | \$100.00 |
| <i>Crotalus molossus</i> (Texas origin) | \$70.00 |
| <i>Crotalus scutulatus scutulatus</i> | \$250.00 |
| <i>Crotalus viridis viridis</i> | \$70.00 |
| <i>Protobothrops flavoviridis</i> | \$200.00 |
| <i>Trimeresurus borneoensis</i> | \$200.00 |

Elapidae

| | |
|--|-----------|
| <i>Dendroaspis angusticeps</i> | \$350.00 |
| <i>Dendroaspis jamesoni kaimosae</i> | \$400.00 |
| <i>Dendroaspis polylepis</i> | \$400.00 |
| <i>Micrurus tenere</i> | \$1000.00 |
| <i>Naja kaouthia</i> | \$100.00 |
| <i>Naja kaouthia</i> (Suphan province) | \$100.00 |
| <i>Naja melanoleuca</i> | \$80.00 |
| <i>Naja naja</i> (India) | \$85.00 |
| <i>Naja naja</i> (Pakistan) | \$80.00 |
| <i>Naja nigricollis nigricollis</i> | \$80.00 |

| | |
|----------------------------|----------|
| <i>Naja nivea</i> | \$100.00 |
| <i>Naja pallida</i> | \$100.00 |
| <i>Naja siamensis</i> | \$60.00 |
| <i>Ophiophagus hannah</i> | \$95.00 |
| <i>Pseudechis colletti</i> | \$320.00 |

Viperidae

| | |
|----------------------------------|----------|
| <i>Bitis arietans</i> | \$120.00 |
| <i>Bitis gabonica rhinoceros</i> | \$130.00 |
| <i>Daboia (Vipera) russelli</i> | \$200.00 |
| <i>Daboia (Vipera) siamensis</i> | \$200.00 |
| <i>Echis carinatus</i> | \$350.00 |
| <i>Echis pyramidium</i> | \$350.00 |

Helodermatidae

| | |
|----------------------------|----------|
| <i>Heloderma horridum</i> | \$600.00 |
| <i>Heloderma suspectum</i> | \$600.00 |

Terms

- All venoms are collected in a sterile manner and frozen at -70C before lyophilization.
- Other venoms are available upon request in small quantities; please contact us for more information on other venoms
- CITES papers available on all CITES listed species. Extra costs apply for permits and inspection fees.
- Locale information available for most species.
- Payment may be made by check, money order, wire transfer, PayPal, MC, Visa, and Discover. All prices are listed per gram in US dollars. Shipping and packing charges are extra.
- Discounts on standing orders and orders of 10g or more.
- KRZ makes every effort to stay current regarding nomenclature and taxonomy. Our listing reflects current trends, with former names in parentheses. If you have questions, please feel free to contact us.
- Scale clippings for DNA analysis available at an extra charge. Please contact us for more information.



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Venom supplier
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Venins cristallisés, venins lyophilisés, bases pour teintures mères, plasma,...

Crystallised venom, lyophilised venom, mother tincture bases, plasma,...

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