



# INTERNATIONAL SOCIETY ON TOXINOLOGY

## NEWSLETTER

December 2012

### UPCOMING MEETINGS

**There are currently no IST Congresses scheduled for the remainder of 2012.**

The next Pan-American Section IST Congress will be held at the Grand Casa Hotel in Sao Paulo, Brazil, November 3-8, 2013.

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, probably in 2015, but location and details are not currently available.

Following the IST Constitution revision, approved at the IST World Congress in Hawaii, July 2012, there may be a progressive change in IST Congress scheduling.

### FROM THE IST EXECUTIVE

So ends another busy year for many of us and certainly for our Society. We saw a World Congress of IST in Hawaii in July, adoption of a revised constitution and a new and substantially revised contract with Elsevier for production of Toxicon.

From 2013 onwards IST membership dues will entitle financial Full and Associate members access to Toxicon electronically. The mechanics of how this will work, via an Elsevier website, are yet to be finalised and once this detail is worked out I will contact all financial members to inform them about how to access this service.

A number of members already have online access to Toxicon through their institutional libraries, but for others such access has been unaffordable or impractical. At last all financial members will have access to our journal, Toxicon and Council believes this is a positive development.

Both to help fund this new service and to better fund Society support for our meetings, both regional and full world congresses, Council recommended and members approved (in Hawaii at the AGM) an increase in annual dues. The new amount is US\$55 per year. It would be really helpful for our Society if members promptly pay their dues in the next few weeks, so I can send Elsevier a list of financial members for 2013 in preparation for the online access to Toxicon. Payment is by credit card via the online payment system on the IST website ([http://www.toxinology.org/Paying\\_Subscriptions.htm](http://www.toxinology.org/Paying_Subscriptions.htm)).

Lastly, may I take this opportunity, on behalf of Council, to wish every member of IST a joyous Christmas and New Year.

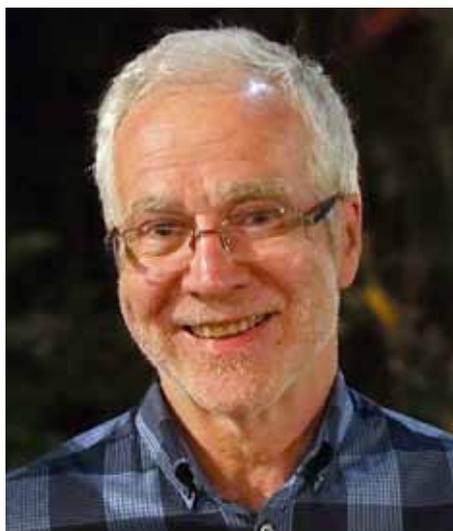
Julian White, Secretary/Treasurer, IST

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## MESSAGE FROM THE PRESIDENT (I.S.T)



Dear IST members

As 2012 nears its end, I would like to wish you all the best for 2013.

The present year has been another important one for the IST. We had a very successful international congress, for the first time held jointly with another society. The additional 'buzz' from the broader range of participants at the meeting was noticeable, and perhaps this is an approach that might be followed in future meetings of our society. We thank once again the two

main organisers, Steve Seifert and Carl-Wilhelm Vogel for their work in arranging the meeting and their friendly enthusiasm towards all participants.

2012 also saw the Society adopt a revised and modernised constitution. While this may not be regarded as a wildly exciting topic for most members, it will bring more clarity about how the Society is organised and how it goes about its business. I am very grateful to our Secretary-Treasurer Julian White and to members of Council for the extensive and meticulous work that they provided on this issue.

The Society also recently extended its links with Elsevier, publisher of our official journal *Toxicon*. Not only does Elsevier provide a top quality publishing service for the toxinology community, it is also an important sponsor of our international congress. Beyond that, we will soon announce details of an important development with Elsevier that will give IST members electronic access to *Toxicon*, in-

cluding back issues. To conclude, it has been a busy and successful year for the IST, and I hope that we will see significant progress for the Society and toxinology in 2013.

With best wishes

Alan Harvey  
President, IST  
Email: [A.L.Harvey@strath.ac.uk](mailto:A.L.Harvey@strath.ac.uk)

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## 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](mailto:julian.white@adelaide.edu.au)

## 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 is 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](http://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.*

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## 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

## African Society of Venimology: A new scientific society for venomous animal and venom knowledge and envenomation management in Africa

Jean-Philippe Chippaux (UMR 216 « Mother and Child facing Tropical Diseases », Institut de Recherche pour le Développement, Cotonou, Bénin)

Achille Massougboji (Parasitology & Mycology Unit, Faculté des Sciences de la Santé, Université d'Abomey-Calavi, Cotonou, Bénin)

Abdulrazaq Habib (Infectious & Tropical Diseases Unit, Bayero University Kano, Kano, Nigeria)

Following the creation in 1975 of the European section of the IST ([http://www.toxinology.org/European\\_Section.htm](http://www.toxinology.org/European_Section.htm)), African and Middle Eastern researchers have gradually attached to this section. However, since the 90s, the need to develop an African and Middle Eastern specific section was felt.

Since 2001, several "International Conferences on envenomation by snakebites and scorpion stings in Africa" were held successively in Dakar (1), Cotonou in 2004 (2), Brazzaville in 2007 (3) and again in Dakar from 25 to 29 April 2011 (4). This fourth edition has been characterized by a significant increase in the number of participants and scientific papers with more than 250 registered from 21 countries. The direct involvement of international organizations, especially WHO, has been remarkable and demonstrates that the interest for envenomations is rising in Africa.

Meanwhile, the Egyptian Society of Natural Toxins organized the first international conference on natural toxins in Cairo from 16 to 18 December 2008, which has since become annual.

In this context and to coordinate these initiatives, the idea of the creation of the African Society of Venimology (ASV) was born. To prepare this project, we organized a questionnaire that was sent in early 2012 to all African scientists and practitioners we knew to assess the needs of creating a scientific society devoted to the study of venoms and envenomations.

We obtained 63 responses from 13 African countries (Fig. 1). Unfortunately, only one English speaking country, Nigeria, has responded (but however, massively!).

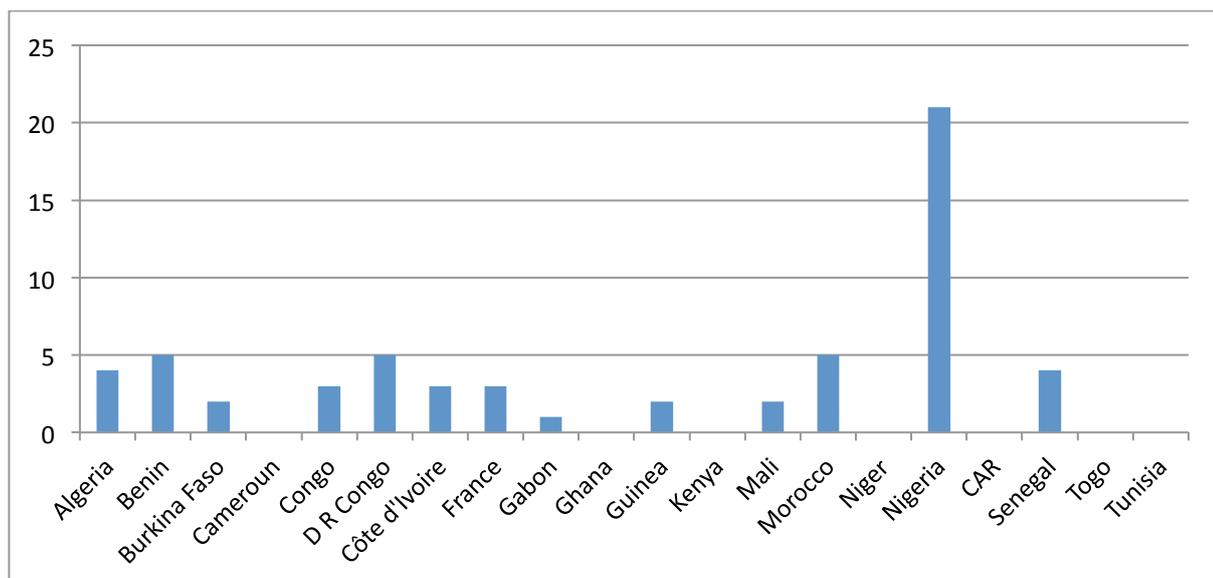


Figure 1: Number of responses according to the country.

Three quarter of the responses came from faculty members (professors and researchers), the rest from practitioners.

Nearly half of the respondents identified themselves as public health specialist (43%), slightly less (40%) was rather fundamentalists (biochemists or zoologists), and 17% were clinicians, almost all A&E physicians. Finally, one respondent was an anthropologist.

Half the responses came from herpetologists, nearly a third said they were concerned by all venomous animals and 12% were concerned only by scorpions. The distribution of interests is given in Table 1.

<b>Interests or objectives</b>	<b>Number (%)</b>
Management of envenomations	17 (38%)
Epidemiology of envenomations	9 (20%)
Modern or traditional treatments	8 (18%)
Ecology of venomous animals	7 (16%)
Venom studies	3 (1%)

Table 1: Distribution of the interests of the respondents (the majority of Nigerians did not answer this question)

A large majority of respondents (87%) are not yet member of the IST. A majority (80%) favored the creation of an African section (with colleagues from the Middle East eventually) rather than join the European section (11%). The rest (9%) would agree to join either of the sections. This seems mainly explained by the feeling that the concerns of the European section are far from the aspirations of African researchers and practitioners, particularly in regard to therapeutic and operational aspects.

If half of the respondents are willing to join a society whose objectives are both basic and operational researches, one third would like to join a society rather oriented operational research. Finally, a small minority (3%) would join a society dedicated preferentially to basic research. The rest (14%) did not comment this question.

Finally, strategies and activities proposed in the framework of the future African Society of Venimology concern:

- Support from the society for the realization of an inventory of the epidemiological and clinical situation (45%);
- Assistance in training its members (40%);
- A commitment to international and regional mobilization in order to create national programs (30%)
  - The institutionalization of the control of envenomations (25%);
  - Synergy between members and the sharing of experiences at regular scientific meetings (20%)
- Support for research funding (15%).

However it emerges from the questionnaire, the strong willingness to create an African Society of Toxinology (AST) primarily devoted to apply and operational researches ensuring a better knowledge of snake and scorpion envenomation and the organization of their management at a regional level.

In the near future, ASV would be eligible to join the International Society of Toxinology in an African and Middle Eastern Section.

The Society was created on June the 20th, 2012 by a Constituent General Assembly during the International Symposium on Envenomations by Snakebites and Scorpion Stings in Cotonou, Bénin.

The agenda included:

- Welcome and opening remarks by Professors Achille Massougboji and Amadou Diouf
- The history and foundations of the creation of the African Society of Venimology,
- The reminder of the objectives of ASV,
- Reading and approval of the Statutes,
- The election of officers,
- Miscellaneous points.

Outline of the statutes were exposed by the Secretary of the meeting rather than a complete reading of the text which was projected simultaneously on the screen. After presentation and discussion of the key points, statutes were accepted by show of hands.

The members of the board of the society presented by the chairmen were approved unanimously by the participants (Table 2).

President: Pr Achille Massougboji  
 Honorary President: Dr Jean-Philippe Chippaux  
 Vice President Central Africa: Pr Henri-Joseph Parra  
 Vice-President West Africa: Pr Martin Chobli  
 Vice-President North Africa: Pr Mohamed Guerinick  
 Vice-President East Africa: vacancy  
 General Secretary: Dr Absa Lam-Faye  
 Deputy General Secretaries: Pr Jean-Noël Poda and Dr Sophie Bokata  
 General Treasurer: Pr Amadou Diouf  
 Deputy General Treasurers: Dr Celou Baldé and Pr Oumar Kane

Table 2: Composition of ASV Board

The statutes were adopted by acclamation on June 20<sup>th</sup>, 2012 at 18:15 in the Amphitheatre-Benoît-Christophe Sadeler of the Institute of Applied Biomedical Sciences.

ASV –which already counts one hundred members– aims to bring together researchers and practitioners working for a better understanding of venomous animals, venoms, and envenomations to improve their management. Its primary objective is to welcome all colleagues from French, English, Spanish and Portuguese-speaking Africa to rally the entire African scientists. Similarly, a Nigerian Society for Toxinology (NST) was established in March 2012 with Professor Adaudi, a Veterinary Pharmacologist at Ahmadu Bello University (ABU), Zaria, Nigeria as President and Professor Abdulrazaq G. Habib a Tropical Medicine practitioner at Bayero University Kano (BUK), Nigeria as Vice President. Professor I. Asuzu, a Pharmacologist/Toxinologist and currently a Deputy Vice-Chancellor at University of Nigeria Nsukka, South Eastern Nigeria will serve as Patron. Ahmadu Bello University (ABU) Venom Research Foundation has been created and will oversee a rehabilitated herpetarium at the Veterinary School at ABU Zaria, Nigeria. Initial funds for take-off of the society have been collected. It is expected the NST will be affiliated and linked to the ASV and the African/Middle Eastern IST section.

### References:

1. **Chippaux J.-P.**, Goyffon M.- Immunothérapie dans les envenimations. Dakar, 26 octobre 2001. *Bull Soc Pathol Exot*, 2001, **94** : 366-367.

2. **Chippaux J.-P.**, Alagón A., Stock R.- Report of the 2<sup>nd</sup> International Conference on Envenomations in Africa (Deuxième Colloque International sur les Envenimations en Afrique). *Toxicon*, 2005, **46**: 115-118.
3. **Chippaux J.-P.**, Massougbdji A., Stock R., Akiana J., Mokondjimobe E., Parra H.-J.- Compte rendu de la 3<sup>ème</sup> Conférence Internationale sur les Envenimations en Afrique. *Bull Soc Pathol Exot*, 2008, **101** : 437-438.
4. **Chippaux J.-P.**, Diouf A., Stock R. P., Parra H. J., Massougbdji A.- Report of the 4th international conference on envenomations by snakebites and scorpion stings in Africa, Dakar, April 25-29, 2011. *Toxicon*, 2011, **58**: 426-429.

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## NEXT PAN-AMERICAN SECTION OF IST CONGRESS

**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



As more information about this meeting becomes available, we will keep members informed.

### NOTICE REGARDING IST MEMBER EUGENIO BEER (ITALY)

Eugenio has informed me and requested I inform IST members that he is unable to be active in the Society due to personal illness, but that he remains interested in Societies affairs. Eugenio has been a member of our Society for many years and, on behalf of members, I have extended our best wishes to him. Those of you who know Eugenio may wish to make contact with him in his time of need, especially those of you based in Italy. Eugenio was an active clinician in Italy and developed an interest in snakebite and venomous snakes. Eugenio's email address is [e.beer@virgilio.it](mailto:e.beer@virgilio.it)

# **NEXT ASIA-PACIFIC SECTION OF IST CONGRESS**

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

**June 14<sup>th</sup> –18<sup>th</sup>, 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.



Changsha

An advertisement for the Maple Forest Hotel. It features a collage of images: a night view of the hotel's exterior with green and yellow lighting; a large conference room with many green tables and orange chairs; a smaller conference room with green tables and purple chairs; and another large conference room with green tables and blue chairs. Text in the advertisement includes the hotel's name in Chinese and English, and its website address: <http://www.fenglinhotel.com>

Maple Forest Hotel



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 <sub>50</sub> mg/kg, mice)	VENOM PRICE			
			1 mg	5 mg	25 mg	100 mg
<b>SOCIAL WASPS</b>		(LD <sub>50</sub> )				
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	*	
<b>SOCIAL BEES</b>						
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 <sub>50</sub> mg/kg, mice)	VENOM PRICE			
			1 mg	5 mg	25 mg	100 mg
<b>ANTS -- FORMICIDAE</b>		(LD <sub>50</sub> )				
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	*	
<b>SOLITARY WASPS AND BEES</b>						
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](http://ntrc.tamuk.edu/cgi-bin/serpentarium/snake.query)) for additional information about each snake.

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

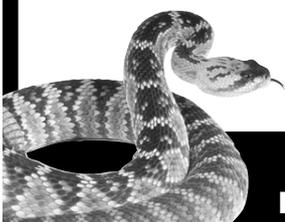
**Venom glands and fractions also for sale - call for pricing & availability**

**If you're interested in study or research opportunities  
at the NTRC, call us at the number below!**

**[www.ntrc.tamuk.edu](http://www.ntrc.tamuk.edu)**

**Please Contact Us for More Information:**

**Phone: (361) 593-3082 • Fax: (361) 593-3798 • Email: [kanmd00@tamuk.edu](mailto:kanmd00@tamuk.edu)**





# Venom Supplies Pty Ltd

ABN number 39 458 465 843

PO Box 547  
 Tanunda  
 South Australia  
 Phone 08 8563 0001  
 +61 8 8563 0001  
 Fax 08 8563 0020  
 +61 8 8563 0020

Email: [venoms@venomsupplies.com](mailto:venoms@venomsupplies.com)

Web: [www.venomsupplies.com](http://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

## Spider Venom

*Lampona cylindrata* \$360 / 10sac contents \$720 / 25sac contents  
*Latrodectus hasseltii* \$500/50 sac contents.

## Bee Venom

Pure bee venom (*Apis mellifera*)  
 250mg \$58  
 (1-5gm) \$130/gm  
 (6-10gm) \$116/gm  
 (60gm and over) \$95/gm

## Amphibian Venoms

*Bufo marinus* \$95/200mg \$450/gm

5% discount will apply for all orders over 5 gm and 7% will apply to orders over 15gm for venoms produced at Venom Supplies Pty Ltd.

**Medtoxin Venom Laboratories**  
**2710 Big John Drive**  
**Deland, Florida 32724**  
**Phone: 386-734-3049**  
**386-740-9143**  
**Fax: 386-734-4163**  
**elapid33@aol.com**  
**www.Medtoxin.com**

## VENOM PRICELIST SPRING/SUMMER 2009

Dendroaspis polylepis	\$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
Agkistrodon c.contortrix	\$190.00
Agkistrodon c. laticinctus	\$190.00
Agkistrodon c. mokasen	\$100.00
Agkistrodon p. conanti	\$100.00

Many other venoms available in limited quantity, please inquire  
 Special orders to meet research needs

Exact locality data on most species available, Species are guaranteed

Prices are quoted per gram in U.S. dollars, subject to change without notice

Payment terms net 30 days check, money order, or wire transfer

Shipping is free in the U.S. may be extra for international orders



**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.org](http://www.kyreptilezoo.org)Email: [reptilezoo@bellsouth.net](mailto: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.

**α****ALPHA BIOTOXINE**

**Laboratoire de production de venin**  
**Fournisseur en venin**  
**Négociant en toxines purifiées**

**Venom production laboratory**  
**Venom supplier**  
**Pure toxins dealer**

**Venins cristallisés, venins lyophilisés, bases pour teintures mères, plasma,...**

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

**ALPHA BIOTOXINE est une jeune société spécialisée dans la production de venin.**

**Nous mettons à votre service plus de 20 ans d'expérience dans l'étude des animaux venimeux et la production de venin.**

**Notre laboratoire s'adapte à tout type de demande. Contactez nous.**

**ALPHA BIOTOXINE is a young society specialised on venom production.**

**We offer you more than 20 years of experience on study of venomous animals and venom production.**

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Belgique - Belgium  
[info@alphabiotoxine.be](mailto:info@alphabiotoxine.be)**

**Visitez notre site web : [www.alphabiotoxine.be](http://www.alphabiotoxine.be)  
Please, visit our website : [www.alphabiotoxine.be](http://www.alphabiotoxine.be)**

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## Venoms, Toxins, Ion Channel and Receptor Ligands Alkaloids and Plant Compounds



**LATOXAN** provides an exclusive range of bioactive natural molecules from **Plant** and **Animal** origins:

- Purified small molecules from unique plants.
- Venom fractions for an easy access to new peptides, alkaloids or polyamines with high pharmacological activity potential.
- Pure venoms from over 250 animal species.

**LATOXAN's** products are supplied with reliable taxonomy, elucidated molecular structure or complex mixtures chromatograms.

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