



#### UPCOMING MEETINGS

The next IST Congress will be in Yerevan, Armenia, likely late September 2018 (tentative dates are September 24 to 28). A "pre-registration" website is available to register your interest in attending the congress (<http://ist2018.sci.am/index.html>) and a full website for this congress will be available soon. This congress will be a European Section regional congress. (see the "From the IST Executive" column adjacent for what this may imply)

The next IST World Congress will be hosted by the Pan-American Section of IST in 2019. There are bids being considered by Council, so it is too soon to announce when and where the congress will be held.

The 20th anniversary Clinical Toxicology Short Course was held in Adelaide, Australia, November 28th to December 6th, 2017 (see report later in newsletter). Dates for the next course are not yet determined (likely late 2019).

The next European Association of Poisons Control and Clinical Toxicology Congress will be in Bucharest in May, 2018.

The next North American Congress of Clinical Toxicology will be in Chicago, USA, October 25-29, 2018.

The French Clinical Toxicology congress will be held in Angers, France, April 4-5, 2018 with a toxinology theme.

#### FROM THE IST EXECUTIVE

Another year is almost over, and another IST congress has been and gone. The IST World Congress, hosted by our Asia-Pacific Section and led by Prof. Sulan Luo, was held in late October 2017 in Haiku, Hainan Island, China. With over 400 registrants and many presentations and posters, this was a busy congress with numerous highlights. However, the most important highlight, for me, was the Redi Award. In 2017 two long-time IST members, Prof. Michel Lazdunski and Prof. Dietrich Mebs were joint recipients of our coveted Redi Award. Each gave a magnificent lecture showcasing their own career-long involvement in toxinology. I think the whole Society will join me in congratulating these two most worthy recipients of the Redi Award.

At our AGM we confirmed the bid from Armenia to host the next IST congress, a European Section regional (not world) congress, to be held in Yerevan, capitol of Armenia, in late September 2018. I am sure this will be an exciting congress.

Your IST Council, amongst other matters, decided to progressively revise how our congresses are organised and run. In future preference will be given to IST members and you will need to be an IST member to have an abstract accepted for presentation. This is just one of a number of changes intended to further improve the value of membership.

Lastly, I wish all members who celebrate Christmas a Very Merry Christmas and a Happy New Year. I will send out notices about IST dues for 2018 in January.

Julian White AM, 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 Toxinology 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 AM  
Secretary/Treasurer IST

### IST Council 2017-19

President: J Fox  
Secretary/Treasurer: J White  
President Elect: vacant  
Immediate Past President: A Harvey  
Toxicon Editor: G King  
A number of other Council positions will shortly be up for election. The 2015-17 Councillors were:  
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: Songping Liang  
Secretary Asia-Pacific Section: Sulan Luo  
General Councillors  
Europe: D Warrell & J Tytgat  
Pan-America: JM Gutierrez & F Mari  
Asia-Pacific: G King & M Kini



## IST STUDENT MEMBERS - THIS IS FOR YOU - The Special Interest Group for Student Toxinologists

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 previous process of developing the student group, we established a special wiki site which allowed student members to interact directly with fellow students. We also investigated 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 President know of their interest. Our new President, Prof. Jay Fox, has indicated his strong desire to better engage with IST Student Members and he will be making contact with Members about this in the near future, either directly, or through a special group he has established to promote this, currently headed by Brian Fry.*

julian.white@adelaide.edu.au

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

Fellow members of the IST. As the end of the year approaches most of us take the time for quiet reflection on our lives, families and friends. For we in the IST, this has been a very eventful year with the establishment of relationships with a number of scientific societies, including the French Society of Toxinology, The Brazilian Society of Toxinology and the Toxinology Society of India. Through a number of efforts we have increased and broadened membership in our society and significantly reinvigorated ourselves with a number of vibrant young members. We also now even have a Facebook page to help launch our initiatives into social media. The highlight of the year, as in most years, is our society meetings. This year our World Congress was held in China with over 250 participants, an outstanding program with an expanded role in the program for student presentations. All of us who were fortunate enough to attend fully enjoyed the meeting and the society extends its gratitude to the organizers, particular Sulan Luo and Song Ping. As I have said several times, the bar for our meetings continues to rise with each meeting being outstanding in its own right. I must also congratulate the most recent Redi Awardees, Dietrich Mebs and Michel Lazdunski; faithful members of the society, excellent scientists, and true ambassadors for the IST to the scientific world beyond our society.

Finally, few countries in our world are not impacted at some level by the problems associated with poisons and toxins as represented by our collective fields of study. It is with great pride that I see continuing advances made in the scientific, clinical, social and even political arenas by our fellow members. For this we all should be proud, but yet also redouble our efforts to improve the condition of our fellow men no matter what area of toxinology in which you work. We are indeed fortunate to be able to toil on such noble causes.

I wish each of you a wonderful New Year and hope you and yours a prosperous year with health and happiness. With luck perhaps we will meet in Armenia next September.

All the best,

Jay W. Fox, IST President

Department of Microbiology, Immunology and Cancer Biology  
Director, Research Infrastructure  
Assoc. Director, UVA Cancer Center  
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*IST Annual General Meeting October 26th, 2017 - Minutes***International Society on Toxinology**

**Annual General Meeting**  
**Thursday October 26th, 2017**  
**New Yantai Hotel, Haiku, Hainan, China**

**MINUTES**

1. **Meeting opened:** by Prof. Jay Fox, IST President & Prof. Julian White, IST Secretary/Treasurer  
Members present 33. A quorum was achieved.
2. **Apologies:** Nil
3. **President's Report:** delivered by Prof. Fox
4. **Toxicon Editor's Report:** delivered by Prof. Glenn King, Editor in chief  
The meeting thanked Alan Harvey for his work as the previous Editor.
5. **Secretary/Treasurer's Report:** delivered by Prof. Julian White  
**Motion:** *That Treasurer's report be accepted.*  
**Moved:** G King  
**Seconded:** J Calvete  
Motion carried
6. **Annual dues:**  
**Motion:** That the Annual Dues for the Society be maintained at US\$55.00  
**Moved:** J White  
**Seconded:** D Mebs  
Motion carried
7. **Election of Office Bearers and Council Members for the Society:**  
**International level:**  
Nominations for President (term 2019 to 2023):  
M Kini  
Nominations for Secretary Treasurer (term 2019 to 2023):  
J White  
In the absence of other nominations, these two positions are now filled.  
  
**Asia-Pacific Section:**  
Nominations for Chairperson (term 2017 to 2020):  
Sulan Luo  
Ray Norton  
Nominations for Secretary (term 2017 to 2020):  
Narelle Daly  
Dibakar Chakrabarty  
Jurgen Wigge  
The Secretary/Treasurer of IST will call for nominations for these two positions, via email, to Members of the IST Asia-Pacific Section, followed by an election, also by email.

**IST Annual General Meeting October 26th, 2017 - Minutes**

The Secretary will poll all Members via email for nominations for the 6 Council positions (two per regional Section; Europe, Pan-American & Asia-Pacific) and, if necessary (more than two nominations per region), hold an election via email.

**8. The next IST World Congress:**

The President and Secretary discussed mechanisms for determining the next IST World Congress. This should be held in 2019, hosted by the Pan-American Section of IST. A tentative expression of interest has been indicated by the SBtX in Brazil. Council will work on firming up this proposal.

**9. Other business:**

9.1 Discussion of other matters pertaining to the future of the Society:

R Norton: Suggested Council should consider having a student representative on Council. Council will examine ways of implementing this idea.

9.2 N Ayvazyan: Presented a brief overview of plans for the 2018 IST European Section Congress to be held in Yerevan, Armenia in late September.

**10. Close meeting:**

IST Council Minutes October 2017

**INTERNATIONAL SOCIETY ON TOXINOLOGY COUNCIL MEETING****October, 2017****Meeting held at IST World Congress, Haiku, Hainan, China****SUMMARY OF MINUTES**

1. **Those participating:** J Fox, J White, J Calvete, A Harvey, J Tytgat, G King, S Luo, Songping Liang

In attendance by invitation Naira Ayvazyan

2. **Apologies:** M Kini, R Harrison, D Warrell, JM Gutierrez, Y Cury, D Tambourgi

3. **Minutes of last meeting:**  
Minutes of the August 2017 meeting were confirmed.

4. **Business arising:**

- 4.1 Developing and promoting IST:

Council discussed ways of strengthening the IST, particularly through IST congresses and decided the following through fully supported Motions:

*That the minimum differential between member and non-member congress registration fees be the twice the cost of annual dues.*

*That this Council determines that you must be a member of IST to submit an abstract and present at a congress, except where the person is an invited speaker, who will be joined up as a member for that year.*

As a principle, Council will ensure that money raised from Members through annual dues are used directly to support activities benefiting Members, particularly support for congresses.

- 4.2 Congress management:

Council ratified proposed new management processes to take full control of organisation of all future IST congresses. Non-Council Members may be invited to nominate for congress-related committees to spread involvement in congress planning more widely within the Society. Members are encouraged to actively participate in this process.

5. **Officer bearers reports**

The main report and discussion at this Council meeting related to planning for the 2018 European Section Congress in Yerevan, Armenia. Dr. Naira Ayzavyan attended Council to provide an update on planning. Dates will likely be late September 2018, possibly 24th to 28th. An interesting venue has been selected, but this has a maximum seating of 300 in the main hall. Accommodation will be available at a variety of price ranges, in general quite reasonable/affordable and registration fees will also be set at a reasonable level to encourage attendance. New rules regarding who may submit abstracts and be considered for presentation will apply (except for invited speakers, who will be joined up as IST members, abstracts will only be considered from IST members). If possible the congress will plan for brief oral presentations for each poster and posters may be left up for the entire meeting.

IST Council Minutes October 2017

Secretary/Treasurer's report: J White

This report was approved by Council and is available elsewhere in the Newsletter.

Council thanked Prof. Sulan Luo for organising the IST World Congress in China, 2017.

6. ***New business:***

6.1 No new business discussed.

## INTERNATIONAL SOCIETY ON TOXINOLOGY SECRETARY-TREASURER'S REPORT 2015-2017

The past two years, since the IST World Congress in Oxford, UK, have witnessed both consolidation and new initiatives for our Society. At the 2016 Pan-American Section Congress in Miami Beach, members present voted in favour of amendments to our Constitution that have expanded the range of available membership classes. In particular we now have a Life Member class, which several members have moved to, and an Affiliate Organisation Member (AOM) class which will allow us to more formally affiliate with like-minded organisations such as national toxinology organisations. We already have existing Memorandum of Understanding (MOU) agreements with toxinology societies in Brazil, India and France and will now need to explore moving these MOUs into the new AOM class. We hope and expect this will bring benefits for all concerned. I wish to acknowledge the pivotal role our President, Prof. Jay Fox and Council member Prof. Kini have played in moving this process forward and securing the initial MOUs.

Our President has also moved to streamline and define IST relationships and responsibilities with respect to all future IST congresses, to strengthen Society involvement and control, provide an avenue for access to any surplus funds generated by congresses and ensure IST is more directly involved in fiscal planning and support for congresses. This should benefit both the Society and our members and those seeking to organise congresses through IST.

Annual dues have remained unchanged at US\$55.00 per year. Notice for payment of 2017 annual fees to IST was sent out by email to members early in the year, with several follow ups. As of 19-10-2017 2031 members have paid their 2017 dues; this figure includes 13 student members who have paid the newly-introduced student fees this year. This compares to 149 members who paid (excludes student members) in 2014, 223 in 2015 and 220 in 2016. A number of members have paid past dues owing, when paying their 2017 dues and I thank them for this support of our Society. Two members chose to become Life Members of IST in 2017, utilising this new membership class, which requires a large up-front payment. There are a further 13 in the "special" category currently unable to pay dues due to technical issues. There are 83 student members currently listed as "active" (ie contactable and student status confirmed), but only 13 have paid dues for 2017. There are a further 247 members listed as "active", but who have not paid 2017 dues. Of these, 53 paid dues in 2016, of whom 31 paid in both 2015 and 2016 and of this latter subgroup, 24 paid in 2014, 2015 and 2016. We therefore have a significant attrition rate. There are 27 members who last paid in 2015. 22 new members joined IST in 2017, 8 of whom were in the student category. Overall we are seeing a slow but steady decline in membership which, if it continues, will see the dissolution of IST.

Our Society finances, however, are in a less concerning state, for the present. At the last IST World Congress, Oxford, UK, 2015, I reported that the total funds held by IST, adjusted to US\$ at prevailing exchange rates (always subject to change) were US \$58,723.06. At the AGM in Miami Beach in 2016 this figure was US\$68,176.12. At this AGM I can report that the adjusted amount is now US\$73,009.07. This amount includes a large loan to the organisers of this 2017 World Congress (US\$10,000), which we expect to be repaid, plus airfare costs for one of the 2017 Redi awardees (the other awardee has not yet submitted an account). I recommend that IST maintain annual dues at the current rates for the next 12 months. The rate can again be reviewed at the next AGM in 2018.

IST newsletters were made available to members via the Society website ([toxinology.org](http://toxinology.org)) in September and December, 2016. There remains a problem in producing newsletters, because members are not supplying material for inclusion. The newsletter is a potentially valuable communication mechanism, but to function it does require active involvement by members.



Item/Account	Explanation	Amount		
		2015	2016	2017
<b>Income (shown as US\$ (Aus\$))</b>				
PayPal	Online annual dues payments <sup>1</sup>	\$16,370.00	\$14,465.00	\$14,510.00
	Number of members financial <sup>2</sup>	238 (223)	241 (220)	231
Life Members		N/A	N/A	2
Special member category <sup>3</sup>		17	13	13
Student member category <sup>3</sup>		86	80	83
New members joining (all categories)		33	30	22
Congresses <sup>4</sup>		\$0.00	\$0.00	Aus\$3,875.66 (US \$3,049.27) <sup>a</sup>
<b>Total income (US\$)</b>		<b>\$16,370.00</b>	<b>\$14,465.00</b>	<b>\$17,559.27</b>
<b>Expenditure (where paid from IST bank accounts, amount shown is in Aus\$)</b>				
<b>Congress related</b>	Grant/loan to 2015 congress	Aus\$3,027.74		
	Other 2015 congress related costs paid directly by IST		Aus\$752.37	
	Costs associated with 2015 IST Business Meeting paid directly by IST to StHildas College, Oxford		Aus\$533.51	
	IST loan to Miami congress		Aus\$4,371.6	
	IST loan to China congress			Aus\$13,753.74 (US\$10,000.00 + fees)
	IST payment of airfare for Redi awardee			Aus\$2,450.53
<b>PayPal</b>	Fees deducted (occurs when funds enter account) <sup>5</sup>	<i>US\$621.41</i>	<i>US\$576.99</i>	<i>US\$578.13</i>

Item/Account	Explanation	Amount		
		2015	2016	2017
<b>Other expenditure</b>	Refund of legal fees regarding incorporation			Aus\$716.81
<b>Total expenditure in that calendar year (for 2017 converted to US\$<sup>a</sup>)</b>		Aus\$3,027.74	Aus\$5,657.48	Aus\$16,931.14 (US\$13,893.71)
Total expenditure related to that calendar year <sup>6</sup>		Aus\$10,963.27	Aus\$4,371.60	Aus\$16,931.14 (US\$13,893.71)
<b>Excess Income over Expenditure (as at 19/10/2017)</b>				<b>US\$3,665.56</b>
<b>Net Position (as at 19/10/2017)</b>				<b>US\$73,009.07</b>
<b>Total amounts held in IST accounts at last assessment date for year</b>				
PayPal account <sup>7</sup>		US\$47,911.04	US\$61,799.05	US\$65,675.92 (Aus\$81,502.50) <sup>9</sup>
NationalAustraliaBank <sup>8</sup> 120941438		Aus\$13,586.26	Aus\$7,927.78	Aus\$6,739.11
NationalAustraliaBank <sup>8</sup> 153618880		Aus\$1,901.95	Aus\$1,901.95	Aus\$2,610.27

a: Based on exchange rate applicable on 19/10/2017. Exchange rate at the time of transaction may have been substantially different.

1: Some members in any given year choose to pay annual dues in arrears for 1+ previous years. Therefore the income in any given year may represent dues for that year plus some dues for previous years. The figure is money received by IST, after PayPal fees deducted.

2: The number of members listed as financial in a given year is based on whether fees were paid for that year, but not necessarily in that year, as some members choose to pay dues in arrears for 1+ years, when asked to do so. The number in brackets represents the number of members listed as financial at the end of that year (ie. those who paid during the year that dues were owed). This includes Life Members.

3: The "Special" category covers members who have been unable to pay because of technical issues, despite attempts to pay. This applies to members from certain countries.

4: Congresses have not been returning any profits made to IST, nor repaying any amount loaned to the congress, until the 2016 Miami congress, where funds were returned in early 2017 and show in that year.

5: PayPal deducts their processing fee automatically from any amounts collected, so only the remaining amount enters the PayPal account. This deducted amount in US\$ is shown in this row.

6: The adjusted total expenditure for each year shows money paid for IST activities occurring that year, in nearly all cases relating directly to support for the IST congress. In some cases money may be paid 2 or more years in advance, as occurred with the 2015 Oxford congress.

7: Annual dues collected via PayPal online are in US\$ and held in that currency. The Aus\$ amount shown is based on current exchange rates as calculated by PayPal.

8: The funds held in NationalAustraliaBank accounts are in Aus\$, so US\$ amounts are shown.

NOTE: To establish the online annual dues payment system using PayPal it was a legal requirement that there be a Society bank account in an Australian bank and a local responsible person (myself) for any accounts. This may change if IST becomes incorporated.

9: The apparent fall in Aus\$ value despite a rise in US\$ value is purely an artefact of changing currency exchange rates and funds in this account are held in US\$, not Aus\$.

**中国·海南****第19届世界毒素大会****The 19<sup>th</sup> World Congress of the International Society on TOxinology**

2017.10.28於海口新燕泰大酒店

**The 19th World Congress of the International Society on Toxinology****Julian White****An Interim Report*****Haiku, Hainan, China, October 24-29, 2017***

Currently the IST holds a world congress every second year. The most recent, prior to the current congress, was held at the University of Oxford, UK, in 2015. This is alternated with the IST regional section congresses, with a 6 year cycle, 2017 being the turn for the Asia-Pacific Section of IST to host a world congress.

The congress was organised by a team from China, led by Prof. Sulan Luo, from Haiku, with some input from senior members of IST globally. There were >450 registrants for the congress, from >30 countries, although by far the largest block was from China. There were >150 oral presentations, including 9 plenary lectures and 42 invited keynote lectures, plus >100 posters. As this was an IST World Congress, the Society, as usual, honoured a distinguished toxinologist with the prestigious Redi Ward. This year there were two awardees; Prof. Dietrich Mebs from Germany and Prof. Michel Lazdunski from France. Each gave a special Redi lecture on a subject of their choice and, of course, both lectures were superb.

The main social event was the congress banquet on the last night, where selected oral, poster and student presenters were awarded certificates for their excellent work. This followed a competitive judging process for student presentations, which were acknowledged as of a very high standard.

The congress was opened by the Vice Governor of Hainan Province, together with the Congress Chair, Prof. Sulan Luo, the IST President, Prof. Jay Fox (USA) and the IST Secretary, Prof. Julian White (Australia).

A more complete report will be prepared for a future IST newsletter.

Thank you to Sulan Luo and her Chinese team for organising this important congress.

## **The Opening Ceremony Announcement from IST President Prof. Jay Fox**

### **Greetings and Felicitations!**

As President of the International Society on Toxinology I wish to extend my heart-felt welcome to all our honored participants at this, the 19th World Congress of our society. This meeting, held at beautiful Haikou China promises to provide us all with an showcase of outstanding science focusing on the fascinating and far ranging field of toxinology. The meeting chair, Professor Luo and her organizing team have assembled a program that highlights all of the most important areas of the field including basic, translational and clinical science investigations devoted to toxinology. We also look forward to stimulating presentations from the student representatives at this congress. Of course, a successful meeting is not generated in the lecture halls alone but also from lively, engaged discussions held during breaks and before and after the formal sessions and all are encouraged to make new friends and colleagues at this congress with the aim of better understanding all facets of the field as well as potentially generating collaborations to synergize our science to the benefit of mankind.

Thanks again to Professor Luo for organizing this congress as well as to our “sister” meetings taking place with us; The 11th Asia Pacific Conference of the International Society on Toxinology and the 13th Chinese Conference on Toxins and Medical Application.

Welcome all and let us enjoy our time together and leave with new friends and great colleagues!

Jay W. Fox, Ph.D.; President, International Society on Toxinology.



IST President, Prof. Jay Fox, opening the 2017 Congress



Chair of the Congress Local Organising Committee, Prof. Sulan Luo, at the opening ceremony.



Redi Award recipient, 2017, Prof. Michel Lazdunski (France) first receiving his award certificate and then giving his lecture, summarising his lifetime work in toxinology.





Redi Award recipient, 2017, Prof. Dietrich Mebs (Germany) first receiving his award certificate and then giving his lecture, detailing aspects of his work in toxinology.





The main lecture hall for the congress which seated all 400+ registrants.



Some IST "heavies" taking a photo opportunity moment. Left to right; Naira Ayvazyan (Armenia - Chair for 2018 IST European Congress), Julian White (IST Secretary/Treasurer), Sulan Luo (2017 Congress Chair), Jay Fox (current IST President), Glenn King (Editor of *Toxicon*), Alan Harvey (past Editor of *Toxicon* and immediate Past President of IST), P Gopalakrishnakone (a Past President of IST), Juan Calvete (current President of European Section of IST).





Naira Ayvazyan presenting at the IST AGM about the 2018 congress planning.



The Congress dinner on the last evening, where awards were presented to presenters and students.



Part of the award process at the Congress dinner. A happy occasion!



And the last event (unofficial) was ..... an impromptu opera recital by two young IST student members. An unexpected and delightful musical treat for those who hung around to listen.

## IST European Section Congress 2018

Congress Pre-Registration website available now at <http://ist2018.sci.am/index.html>



Dear delegates and invitees,

Toxinology and their applications constitute one of the main frontiers of contemporary Science and Technology; and it is expected that they have a revolutionary impact in the most diverse knowledge and industry fields, throughout the XXI century. The European Section of the International Society of Toxinology (IST) is the oldest Section of IST. These events are conceived as an academic space and an exchange forum of knowledge and experiences; both essential for the scientific debate on the characteristics and main tendencies of these subjects in the present-day world. They are also conceived to inform and to inspire young talents that will support the development of our Society. The 19th Congress of the European Section of the

International Society of Toxinology will session in mid- September, in the Matenadaran Conference Hall and it will be focused mainly in Basic Science of Animal, Plant and Microbial Toxins and their applications to health; as well as environmental, topics, public perception and social impacts associated to toxinology development. Through the valuable contribution of Invited Conferences of well-known scientists, the works presentation, poster, and panels realization; the main tendencies and challenges will be shown in the event's thematic axes. It will promote the international dialogue, between different scientists generations and other professionals; which certainly will contribute to its success.

As a sustainable program to educate in this field; different pre-congress courses taught by distinguished international experts will be also carried out. This academic space will propitiate the connection between scientists and professionals from dissimilar specialties and nations with young scientists still in the formation process; and it will contribute to the educational mission and to the intergenerational, cultural, and interdisciplinary dialogue. We look forward this Event's new edition contributes to an understanding and a common interpretation on toxinology and be able to open new ways of international cooperation with the growing Armenian community devoted to these subjects, and to the development of the new-born Armenian Society of Toxinologists.

Cordially,



Naira Ayvazyan, Dr. Sci.,

Chair of the IST 2018 European Section Congress Organizing Committee,  
Director of the Institute of Physiology named after acad. L.A. Orbeli  
Of the National Academy of Sciences of Republic of Armenia

# 56<sup>e</sup> congrès de la Société de toxicologie clinique

## Toxines d'origine naturelle

4 et 5 avril 2018 - Angers


[ACCUEIL](#)
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## BIENVENUE A ANGERS

### Angers | France, 4-5 avril 2018

**L'Anjou et la Provence se partagèrent un roi, René.** Aujourd'hui, ces deux régions se partagent les congrès de toxicologie ! Après le congrès mixte en Avignon en 2017, nous nous retrouvons en Anjou, toxicologues cliniciens, analystes, mais aussi toxinologues, mycologues, botanistes... pour ce 56ème congrès de la Société de Toxicologie clinique.

Les poisons en Anjou, une longue histoire ! Au XVème siècle, René aurait consacré quelques sommes à faire fabriquer une langue de serpent montée en orfèvrerie. Les ouvrages de ce type, les « languiers », suintaient en présence de venins, révélant la fraude maligne des empoisonneurs. Notre débonnaire souverain n'en était également pas moins spécialiste des « gants de senteurs », au parfum capiteux desquels étaient mêlés des poisons si violents qu'une simple bouffée suffisait à tuer...

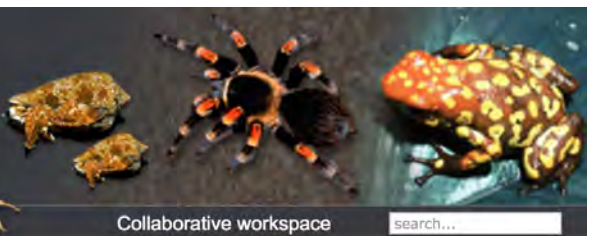
Mais, « ne nous jetons pas le gant » et pour filer la métaphore chevaleresque, joutons plutôt en toute amitié au sujet des Toxiques d'origine naturelle.

Bienvenue à tous


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Société Française pour l'Etude des Toxines



Français - English


Collaborative workspace

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**News**

**The Comprehensive Sourcebook of Bacterial Protein Toxins 4th Edition**



Alouf J., Ladant D. et Popoff M.R.

**More information**

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**Special TOXICON ISSUE "Toxins: Immunity, Inflammation and Pain" (dead line for submission : 30th September 2017)**

**Call for paper**

**Meetings on Toxinology**

**Toxins : Biodiversity, Environment and Evolution**

**24th Meeting of the French Society of Toxinology (SFET)**



**Program**

**December 7th - 8th, 2017**  
**Pasteur Institute - François Jacob Auditorium**  
**Paris - France**

**Congress**

**:: News ::**


**Toxins 2018 travel awards for Postdocs**  
[www.mdpi.com/journal/toxins/awards/136/view](http://www.mdpi.com/journal/toxins/awards/136/view)

**:: Congress ::**

**56ème congrès de la Société de Toxicologie clinique (STC) on "Toxins from natural origin" will be held in Angers (France), from April 4th to 5th, 2018.**  
<https://www.congres-stc-2018.com>

**Editorial**

**The next Toxinology Meeting**



In 2017, the Meeting will focus on a theme at the heart of current research in toxinology: **"Toxins: Biodiversity, Environment and Evolution"**. We hope that this year again many of you will attend the upcoming Meeting to be held on **7th and 8th December 2017 at the Pasteur Institute in Paris**. We strongly invite you to present your results, as an oral communication or a poster.

Do not hesitate to submit your latest work or a review in the special issue of Toxicon **"Toxins: Immunity, Inflammation and Pain"**.

While waiting to meet you next December, I wish you a good continuation in your research.

**E. BENOIT**



[ABOUT US](#)[RESOURCES](#)[SECTIONS](#)[EDUCATION](#)[NACCT](#)

## North American Congress of Clinical Toxicology (NACCT)

NACCT is an annual conference that allows physicians, pharmacists, nurses, and scientists from around the world to participate in the sharing of knowledge on a wide variety of clinical toxicology topics and issues. In addition, the congress includes presentation of original research papers, a number of symposia, as well as other traditional and novel continuing education sessions. Past sessions have taken us to Vancouver, Boston, San Francisco, New Orleans, Las Vegas, Atlanta, and Washington, DC.

Save the date for **NACCT 2018** in Chicago at the Hyatt Regency Chicago. The Pre-meeting Symposia will be held on October 25 – 26, 2018 and the Main Congress will be on October 27-29, 2018!

[Hide All](#) [Show All](#)

- ▼ [Post Meeting Information/After the Fact CE](#)
- ▼ [Dates and locations of past NACCT](#)



American Academy of Clinical Toxicology  
6728 Old McLean Village Drive  
McLean, VA 22101  
571-488-6000



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38<sup>th</sup> CONGRESS OF THE  
**EAPCCT** 2018  
EUROPEAN ASSOCIATION OF  
POISONS CENTRES AND  
CLINICAL TOXICOLOGISTS



22-25 MAY  
**2018**  
**BUCHAREST**  
#eapcct2018

## Important Dates

Abstract submission opens | **11 September 2017** To submit your abstract [click here](#)

Abstract submission closes | **9 October 2017**

Notification of abstract acceptance | **by end January 2018**



### Call for Abstracts



### Themes



### Accommodation



### Registration



#### TECHNICAL SECRETARIAT



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08006 Barcelona (SPAIN)  
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[eapcct2018@pacifico-meetings.com](mailto:eapcct2018@pacifico-meetings.com)



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## Themes

### Educational pre-congress

Chemical and biological weapons

### Main congress themes

Drug-induced organ failure: diagnosis and management

Understanding the inter-individual variability of presentation and severity in poisoning (from basic science to investigation at the bedside)

New psychoactive substances

Paediatric toxicology (including teenagers)

Novel oral anticoagulant overdose: update on clinical management

European Poison Centre data collection to support curative and preventative measures against poisoning

Guidelines & Systematic Reviews (Using your experience vs following guidelines)

We very much encourage you to submit your work and original data for Bucharest: we wish to include as many of your abstract submissions as we can for oral, short oral and poster presentation in the scientific programme of the Congress.

**Abstract submission will open on 11 September 2017 and close on 9 October 2017.**

## Important Dates

Abstract submission opens  
**11 September 2017**

Abstract submission closes  
**9 October 2017**

Notification of abstract  
acceptance  
**by end January 2018**

# Report on the 2017 Clinical Toxinology Short Course

## Prof. Julian White AM Course Director

In 2017 the Clinical Toxinology Short Course celebrated 20 years since this international-level comprehensive course was first held, in 1997. The course has been held regularly since then, providing clinical toxinology training for many hundreds of doctors from scores of nations, from every continent (excluding Antarctica). As in previous years, the 2017 course provided a number of subsidised places for doctors from less wealthy nations. In 2017 this allowed doctors from Papua New Guinea, Indonesia, Myanmar, Bangladesh and Nepal to attend. The course was, as usual, fully subscribed (maximum 50 registrants).

In celebration of this 20 year milestone, the course was slightly expanded in length and faculty, including the special return of two of the original faculty, Prof. David Warrell (UK) and Prof. Dietrich Mebs (Germany) to teach on a variety of subjects. It was wonderful to again have the benefit of their huge experience and engaging presentation styles.

The course was held at the Women's & Children's Hospital, Adelaide, Australia, plus other venues for some practical sessions (Botanic Gardens, Venom Supplies). Again, as usual, the last day was a trip to the famed wine region north of Adelaide, the Barossa Valley, visiting Venom Supplies to see a wide variety of venomous snakes from around the world and how a commercial venom extraction facility works. To finish off there was a lunch at Jacobs Creek Wine Centre and then visits to several wineries.

The course exam was only part of participant evaluation. We had a lively and contributory group of participants in 2017 (as has happened at most past courses) who shared their varied experiences managing cases of envenoming. The course faculty greatly appreciates this interactive input from registrants.

Course lectures and other teaching sessions were as follows:

<b>Session type</b>	<b>Topic</b>	<b>Speaker</b>
Lecture	Course introduction	Julian White
Lecture	World of toxins	Dietrich Mebs
CEP	Introduction to CEPs	Mark Little
Lecture	Venom research	Dietrich Mebs
Lecture	Neurotoxins	Dietrich Mebs
Lecture	Myotoxins	Dietrich Mebs
Lecture	Haemostasis system toxins	Vaughan Williams
Lecture	Nephrotoxins	David Warrell
Lecture	Local toxins, necrotoxins	Dietrich Mebs
CEP	Snake	Mark Little
Lecture	Antivenoms	Julian White
Lecture	First aid overview	Mark Little
Lecture	Clinical signs	David Warrell
Lecture	Treatment	Julian White
Lecture	Introduction to marine toxinology	Jamie Seymour
Lecture	Marine venoms	Dietrich Mebs
Lecture	Irukandji	Mark Little



<b>Session type</b>	<b>Topic</b>	<b>Speaker</b>
Lecture	Box jellyfish	Bart Currie
Lecture	Other jellyfish	Mark Little
CEP	Marine	Bart Currie
Lecture	Stinging fish	Mark Little
Lecture	Other marine envenomings	Mark Little
Lecture	Blue ringed octopus	Julian White
Lecture	Cone snails	Julian White
CEP	Marine	Mark Little
Lecture	Introduction to venomous snakes	Mark Hutchinson
Lecture	Venomousness	Scott Weinstein
Lecture	Australian snakes	Julian White
CEP	Snakes	Mark Little
Lecture	New Guinea snakes	David Warrell
Practical	Marine practical session	Jamie Seymour
CEP	Snakes	David Warrell
Lecture	NFFC snakes	Scott Weinstein
Lecture	Asian snakes	Joy Ghose
CEP	Snakes	Joy Ghose
Lecture	African snakes	Jean-Philippe Chippaux
CEP	Snakes	Jean-Philippe Chippaux
Lecture	Sea snakes	David Warrell
Lecture	South American snakes	Fábio Bucarechi
CEP	Snakes	Fábio Bucarechi
CEP	Snakes	David Warrell
Lecture	Central American snakes	Scott Weinstein
Lecture	European snakes	Luc De Haro
Lecture	North American Snakes	Rick Dart
CEP	Snakes	Rick Dart
Lecture	Exotic snakebite	David Warrell
Lecture	Marine poisoning	Luc De Haro
CEP	Marine	Luc De Haro
Practical	Snake identification practical	Mark Hutchinson et al
Practical	Snake venom detection practical	Seqirus staff et al
Lecture	Introduction to arthropods	Julian White
Lecture	Widow spiders	Julian White
Lecture	Widow spiders and antivenom trials	Rick Dart
Lecture	Funnel web spiders & mouse spiders	Julian White
CEP	Spiders	Scott Weinstein
Lecture	Loxoscelism	Fábio Bucarechi
Lecture	Other spiders	Julian White
Lecture	Ticks	Julian White
Lecture	Scorpions	Jean-Philippe Chippaux
Lecture	Scorpions - Americas	Fábio Bucarechi
CEP	Arthropods	David Warrell

<b>Session type</b>	<b>Topic</b>	<b>Speaker</b>
Lecture	Overview of poisonous plants	Trevor Christensen
Lecture	Neurotoxic & hallucinogenic plants	Phil Aplin
Lecture	Cyanotoxic plants	Michael Eddleston
CEP	Plants	Phil Aplin
Lecture	Hepatotoxic & nephrotoxic plants	Michael Eddleston
Lecture	Cardiotoxic plants	Michael Eddleston
CEP	Plants	Michael Eddleston
Lecture	Dermatotoxic plants	Geoff Newman-Martin
Practical	Botanic Gardens visit - poisonous plants	Trevor Christensen et al
Lecture	Lonomia & lepidopterism	Fábio Bucarechi
Lecture	Other insects & arthropods	Sam Alfred & J White
Lecture	Mushroom poisoning	Luc De Haro
CEP	Mushrooms	Luc De Haro
Panel	Panel discussion & answer questions	Faculty
Exam	Multiple choice questions exam	Faculty
Practical	Safe snake handling	Geoff Coombe
Practical	Snake husbandry & venom extraction - visit to Venom Supplies	Nathan Dunstan et al

We are still planning the full Diploma of Clinical Toxinology which will likely incorporate the existing Clinical Toxinology Short Course as one of about 8 modules in the full diploma-level training which will be equivalent to at least a year of full time post-graduate study.



University of Adelaide ~ Clinical Toxinology Short Course ~ Nov. 28 to Dec. 6, 2017



Fábio Bucarechi presenting a lecture



Dietrich Mebs discussing venoms



David Warrell discussing clinical cases



Jamie Seymour explaining marine biology



Mark Hutchinson & Geoff Coombe leading the snake identification practical



David Warrell & Scott Weinstein teaching during the snake identification practical



Participants undertaking venom detection



Practical visit to the Botanic Gardens, here discussing the yellow oleander



Safe snake handling demonstration led by Geoff Coombe



Visit to the Botanic Gardens Museum of Economic Botany. This is the only remaining museum of its type in the world and holds a treasure trove of Victorian-era material



One of the 2017 course participants receiving her certificate of completion of the course from Julian White. The participant shown here is Dr. Arabella Koliwan, from Papua New Guinea, one of our top course participants for 2017.



One of the many exotic and Australian snakes at Venom Supplies (this is a rhinoceros viper, *Bitis gabonica rhinoceros*, from Africa). Venom Supplies is a commercial venom producer for research, antivenom production and pharmaceutical production purposes and is not open to the public. The course has had a special arrangement allowing us to visit this important facility .



Nathan Dunstan and his team at Venom Supplies demonstrating snakes to course participants.



Lunch at Jacobs Creek Wine Centre in the Barossa Valley, after visiting Venom Supplies.



Jonathon at Langmeil Winery showing course participants the oldest set of continuously producing wine grape vines in the world, explaining how the vines are maintained and propagated and why the oldest vines are in this vineyard, not in France or Italy.

## Redi Award 2017

The IST makes the Redi Award in recognition of toxinology scientists or clinicians who have made outstanding contributions to the field of toxinology. The Award is named after Francesco Redi (1626-1697) was born in Arezzo, Italy, studied at the University of Pisa, and became court physician to the Medicis in Tuscany. He is generally considered one of the foremost scientists of his time and contributed to science and the arts in a number of areas, including a treatise on venomous snakes, "Osservazioni intorno alle vipere", published in 1664. Through this latter work and other contributions, he is considered one of the most important founders of the study of toxinology.

This year, there were two awardees: Professor Michel Lazdunski and Professor Dietrich Mebs. They were presented their awards at the IST's 19th World Congress at Haikou, China. Excerpts from their award citations are given below.

### **Professor Lazdunski:**

In recognition of his outstanding contributions to the field of toxinology, the Redi Award of the International Society on Toxinology is given to Professor Michel Lazdunski.

Professor Lazdunski has been a leading researcher for more than four decades. From his base in Nice, where he founded the Centre of Biochemistry and then the Institute of Molecular and Cellular Pharmacology and the Institute of Molecular Neuroscience, he has advanced the understanding of key properties of membrane ion channels. Much of his work has used animal toxins as specific probes to study cellular signalling processes as well as the physico-chemical nature of receptors and ion channels. He has contributed strongly to the elucidation of the functions of sodium, calcium and potassium ion channels in health and disease. From his early recognition of how useful toxins can be for biochemical research, he has been exceptionally prolific in discovering novel toxins against many molecular targets. Examples include toxins affecting acid-sensing ion channels, which may be important therapeutic targets.

Professor Lazdunski has been active in many scientific organisations, notably the European Molecular Biology Organisation and the European Research Council. He has been honoured many times, including the Gold Medal of the CNRS, the highest French scientific distinction, and the Prix Galien for his significant contributions to pharmaceutical research. In addition, Michel Lazdunski has also founded biotechnology companies to translate research into medical products.

With over 715 scientific publications, including many in which toxins played a central role, he has clearly made a major contribution to toxinology. It is with admiration and respect that the Society bestows upon him its highest honour – the Redi Award (2017).

### **Professor Mebs:**

In recognition of his outstanding contributions to the field of toxinology, the Redi Award of the International Society on Toxinology is given to Professor Dietrich Mebs.

Dietrich is one of the pioneers of toxinology. Even before starting his PhD, he had presented results from his personal research on the bioactivity of Gila monster venom at the key symposium on animal venoms held at the Instituto Butantan, Sao Paulo in 1966. Later, he collaborated with C.Y. Lee and Japanese colleagues on ground-breaking work on the purification and amino acid sequencing of  $\alpha$ -bungarotoxin, the key ligand in the first successful isolation of a neurotransmitter receptor.

Dietrich Mebs studied biology and biochemistry at the University of Frankfurt and joined the staff of the Center of Legal Medicine. Following further qualifications in Forensic Sciences, he continued there as a professor until his official retirement in 2007. However, he has remained active in research, publishing over 300 scientific papers, many articles on venoms and toxins for the popular



press, and four books. His interests are wide, covering many different aspects of toxinology including public health topics, ecological questions such as toxin sequestration and predator-prey relationships, as well as the structure and function of toxins from many different sources. These have included several previously unstudied snake and scorpion venoms, as well as corals, sponges, sea anemones and cone snails.

In addition to his research activities, Dietrich has been an active advocate for toxinology, not least by serving the IST as Secretary-Treasurer for 27 years from 1982 to 2009.

Without question, he has made a major contribution to toxinology. It is with admiration and respect that the Society bestows upon him its highest honour – the Redi Award (2017).

Alan Harvey

Convenor of the Redi Award Committee

## BRIEF BOOK REVIEW

### “Australia’s Dangerous Snakes”

**Authors: Peter Mirtschin, Arne Rasmussen & Scott Weinstein**

This important and major update of a much earlier book on the same topic by Peter Mirtschin and Richard Davis deserves a place in the library of anyone interested in Australia’s venomous snake fauna and will also be a valuable resource for clinicians managing cases of snakebite.

I should here declare some potential bias, because my colleague in the Toxinology Department, Women’s & Children’s Hospital, Adelaide, Australia, Prof. Scott Weinstein, is one of the authors of this book and I provided many illustrations for him. However, I had no part in writing the book and take no credit for the outcome.

The original book was in a smaller format and had 208 pages. This completely new edition, with two new authors, has a page size approximately twice that of the original book and spans 432 pages. A massive increase in size and information indeed!

Chapter headings indicate the breadth and depth of this book; 1: Introduction; 2: The relative danger of snakes; 3: Morphology and general features of snakes; 4: Identification of dangerous snakes; 5: The dangerous snakes described; 6: Conservation of Australia’s dangerous snakes; 7: Production, actions and uses of venoms; 8: Snakebite and envenoming: risks, realities and clinical management; 9: Snakes and people. Chapter 5 detailing species spans 126 pages, with photos and distribution maps for each species in addition to a taxonomic description. Chapter 8 covers clinical aspects in 73 pages, so considerable detail.

It is great to see the CSIRO (an Australian government scientific organisation) take on an important role in disseminating information, through publishing books like this. In 2014 they published the first major update to Harold Cogger’s “Reptiles and Amphibians of Australia”, an essential book for those interested in Australian herpetology. This new book by Mirtschin, Rasmussen and Weinstein will sit happily next to Cogger’s book, each complementing the other. CSIRO have also recently published other books of interest to toxinologists, such as a book on Australian spiders.

My congratulations to Peter, Arne & Scott. Well done!

Julian White



# Australia's Dangerous Snakes

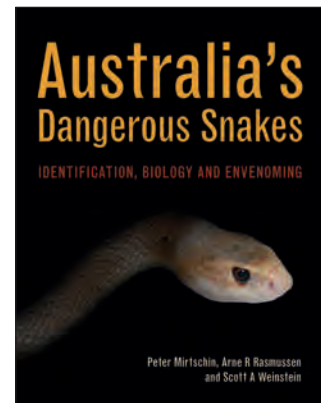
## Identification, Biology and Envenoming

Peter Mirtschin, Arne Rasmussen, Scott Weinstein

Examines the role played by Australia's venomous snakes, the threats they face, their ecology and the latest in bite management.

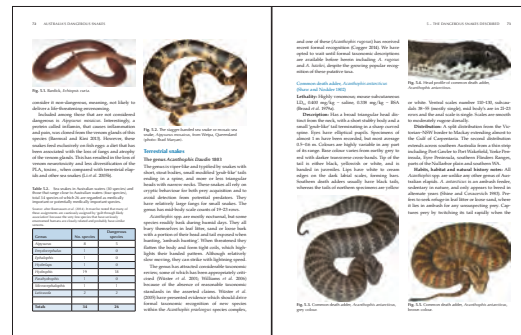
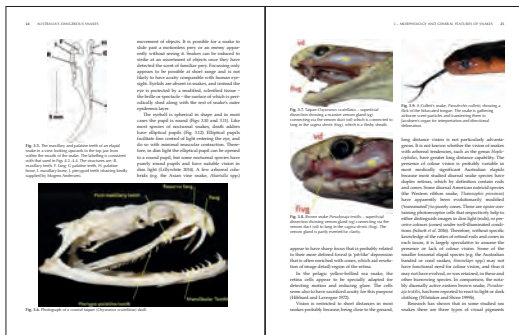
Australia's venomous snakes are widely viewed as the world's most deadly and are regarded with cautious curiosity, fascination and, regrettably, fear. *Australia's Dangerous Snakes* examines the biology, natural history, venom properties and bite treatment of medically important venomous marine and terrestrial snakes. It contains comprehensive identification profiles for each species, supported by keys and photographs. In addition to their medical importance, the environmental roles of these snakes and the threats that are causing the decline of many of these reptiles are discussed. Drawing on the authors' experience in the fields of herpetology, toxinology and clinical medicine, this book stimulates respect and admiration and dispels fear of Australia's fascinating snakes.

*Australia's Dangerous Snakes* will provide hours of rewarding reading and valuable information for anyone interested in Australia's unique wildlife and natural history, and will be an essential reference for herpetologists, toxinologists, physicians, zoo personnel and private snake collectors.



November 2017  
432 pages, Hardback  
ISBN: 9780643106734  
\$120.00

Also available as an eBook





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## 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>Agelaiia 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

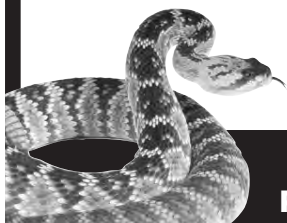
Venom is collected under stringent laboratory conditions using disposable labwear for each extraction. Venom is collected in new, non-reusable plastic cups with parafilm coverings. Snakes are allowed to bite into the parafilm diaphragm and the venom glands are not massaged. Immediately following collection, 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 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
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



*SERPENTARIUM SANMARU***HIGH QUALITY VENOMS & TOXINS****Lyophilized and  
crystallized venoms**

<b>Bothrops alternatus</b>	<b>1440,00 US\$</b>
<b>Bothrops jararaca</b>	<b>220,00 US\$</b>
<b>Bothrops jararacussu</b>	<b>264,00 US\$</b>
<b>Bothrops moojeni</b>	<b>300,00 US\$</b>
<b>Bothrops neuwiedi</b>	<b>340,00 US\$</b>
<b>Crotalus durissus terrificus</b>	<b>220,00 US\$</b>
<b>Crotalus durissus collineatus</b>	<b>300,00 US\$</b>
<b>Lachesis muta muta</b>	<b>600,00 US\$</b>
<b>Bufo marinus / schneideri</b>	<b>264,00 US\$</b>

**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)**

**Prices quoted per gram in US\$. Transport FOB**

**Brazilian Contact:**

**Sanmaru Serpentarium,**

**Rod. Brig. Faria Lima km 365**

**14765-000 Taquaral SP, Brazil**

**[herpetoscience@hotmail.com](mailto:herpetoscience@hotmail.com)**

**[taquaral@gmail.com](mailto:taquaral@gmail.com)**

**Fone (55) 14 9731 2436**

**(55) 16 3958 7269**

200 L&E Railroad  
Slade, KY 40376



kyreptilezoo.org  
606-663-9160

# KENTUCKY REPTILE ZOO

## Kentucky Reptile Zoo offers only the highest quality venoms for sale!

Our venoms are collected only from healthy individuals and our non-invasive technique insures that all individuals are unharmed. Snakes used for extraction have passed quarantine, feed voluntarily, and produce viable offspring (if breeding is intended). They are kept in clean, sanitary conditions and we have had individuals live longer than their average life span.

- All venoms are collected in a sterile manner and frozen at  $-70^{\circ}\text{C}$  before lyophilization.
- Locale information available for many species.
- DNA samples in the form of scale clippings available; please inquire about tissue samples
- Other venoms available upon request; contact us for more information.
- CITES permits available for all CITES listed species. Extra cost for permits.
- KRZ makes every effort to stay current regarding nomenclature and taxonomy. Our listing reflects current trends, with former names in parentheses. If you have any questions, feel free to contact us.



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Slade, KY 40376



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606-663-9160

## VENOM PRICE LIST



### **Crotalidae**

<b>Species Name</b>	<b>Price (US\$) Per Gram</b>
<i>Agkistrodon bilineatus</i>	\$300.00
<i>Agkistrodon contortrix</i> (fmr. <i>A. c. contortrix</i> , <i>A. c. mokasen</i> )	\$150.00
<i>Agkistrodon laticinctus</i> (fmr. <i>A. c. laticinctus</i> , <i>A. c. phaeogaster</i> , <i>A. c. pictogaster</i> )	\$150.00
<i>Agkistrodon leucostoma</i>	\$75.00
<i>Agkistrodon piscivorus</i>	\$75.00
<i>Bothrops alternatus</i>	\$200.00
<i>Bothrops atrox</i> (Columbia origin)	\$250.00
<i>Bothrops atrox</i> (Surinam origin)	\$250.00
<i>Bothrops moojeni</i>	\$250.00
<i>Calloselasma rhodostoma</i>	\$200.00
<i>Crotalus adamanteus</i>	\$120.00
<i>Crotalus atrox</i>	\$120.00
<i>Crotalus durissus durissus</i>	\$200.00
<i>Crotalus durissus terrificus</i>	\$225.00
<i>Crotalus horridus</i>	\$150.00
<i>Crotalus scutulatus scutulatus</i>	\$175.00
<i>Crotalus viridis viridis</i>	\$100.00
<i>Protobothrops flavoviridis</i>	\$200.00
<i>Sistrurus catenatus tergeminus</i>	\$300.00

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**Helodermatidae**

**Species Name**

*Heloderma horridum*

*Heloderma suspectum*

**Price (US\$) Per Gram**

\$600.00

\$600.00



**Viperidae**

**Species Name**

*Bitis arietans*

*Bitis gabonica*

*Bitis rhinoceros*

*Deinagkistrodon acutus*

*Echis carinatus sochureki*

*Echis pyramidium*

**Price (US\$) Per Gram**

\$225.00

\$225.00

\$225.00

\$300.00

\$400.00

\$400.00

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### Elapidae

#### **Species Name**

#### **Price (US\$) Per Gram**

<i>Dendroaspis angusticeps</i>	\$450.00
<i>Dendroaspis polylepis</i>	\$500.00
<i>Naja annulifera</i>	\$80.00
<i>Naja haje</i>	\$80.00
<i>Naja kaouthia</i>	\$100.00
<i>Naja kaouthia</i> (Suphan province)	\$100.00
<i>Naja melanoleuca</i>	\$150.00
<i>Naja mossambica</i>	\$100.00
<i>Naja naja</i> (India origin)	\$150.00
<i>Naja naja</i> (Pakistan origin)	\$150.00
<i>Naja nigricollis nigricollis</i>	\$80.00
<i>Naja nivea</i>	\$150.00
<i>Naja pallida</i>	\$100.00
<i>Naja philippinensis</i>	\$300.00
<i>Naja samarensis</i>	\$300.00
<i>Naja siamensis</i>	\$80.00
<i>Ophiophagus hannah</i>	\$120.00
<i>Oxyuranus scutellatus scutellatus</i>	\$500.00
<i>Pseudechis colletti</i>	\$320.00



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# More than 300 venoms in stock

Discovery collections  
 Snakes – Spiders – Scorpions – Lizards  
 Amphibians – Insects  
 Cone snails – Fish – Sea anemones ... and more !

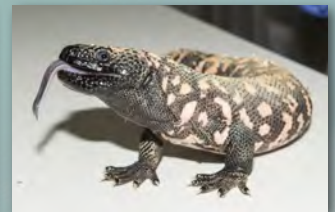
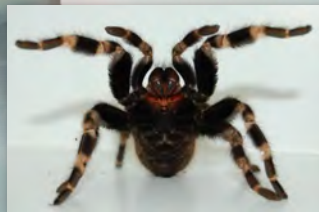
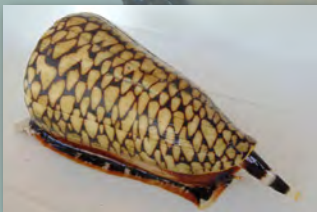
Venom glands – Plasmas & Haemolymphs  
 Synthetic & Purified toxins  
 Natural bioactive compounds



## Highest quality with certificates of analysis

### ALPHA BIOTOXINE

Your open-minded  
 partner for break-  
 through challenges



## Quality | Ethics | Service



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## ALPHA BIOTOXINE: a unique offer

We can help with all aspects of your research working by your side to define the best strategy for your project.

20 years of master expertise in the study of venomous animals and venom production.

All of our venoms are manufactured to industrial standards.

Venoms, tissues and pure toxins designed for research and pharmaceutical industry.



Our unique "all-in hotel" facility allows us to offer exclusive production from your own animals.

High quality venoms only, delivered as lyophilized powders with certificates of analysis.

Professional species identification – traceability is one of our major commitments.

Resupply from the same batch guaranteed. From milligrams to multi-gram amounts!

Quality, accuracy, reproducibility, reliability, excellence and delivery to the highest standards guaranteed.



### ALPHA BIOTOXINE

All you need to meet your innovative challenges



Quality | Ethics | Service

# Latoxan

Searching for your Discovery

## 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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