



TAG DER CHEMIE

Der 30. Tag der Chemie fand am 5. Juli 2017 an der Humboldt-Universität zu Berlin, Standort Adlershof statt. Geboten wurde ein öffentliches Forum zum Erfahrungsaustausch zwischen Studierenden, Wissenschaftlern und Vertretern der chemischen Industrie in der Region Berlin-Brandenburg. Das Programm finden Sie [hier](#).

Der Tag der Chemie ist eine Gemeinschaftsveranstaltung von:

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Verband der Chemischen Industrie e.V., Landesverband Nordost



ABSTRACTS

Freie Universität Berlin

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ABSTRACTS

First venom analysis of the nose-horned viper *Vipera ammodytes transcaucasiana* and the transdanubian sand viper *Vipera ammodytes montandoni* by mass spectrometry and bioactivity screening

Maik Damm¹, Benjamin-F. Hempel¹, Ayse Nalbantsoy², Daniel Petras³, Mert Karis⁴, Bayram Gocmen⁴, Mehmet Anil Oğuz⁴, Anja Kunthning¹ and Roderich D. Süssmuth¹

¹Technische Universität Berlin Institut für Chemie, Straße des 17. Juni 124, 10623 Berlin

²Department of Bioengineering, Faculty of Engineering, Ege University, Bornova, 35100 Izmir, Turkey

³University of California - San Diego, Skaggs School of Pharmacy & Pharmaceutical Sciences, PSB 4231, 9500 Gilman Drive, La Jolla, CA, USA.

⁴Zoology Section, Department of Biology, Faculty of Science, Ege University, 35100 Bornova, Izmir, Turkey

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Vipers are one of the largest venomous snake families, that can be found in a wide range all over the world. A large agglomeration of multitude vipers is around the Mediterranean Sea, where the nose-horned viper (*Vipera ammodytes transcaucasiana*) is only regional endemic in turkey. They are spread in the north-east, whereas the subspecies *V. a. montandoni*, with their main area of circulation in Bulgaria, was captured in the north-west of turkey. In this study we want to show the venomic differences from two close relative snakes. In addition is the investigation of venomous vipers interesting for the search of different kinds of pharmacological drugs.

The composition of the two venoms (*V. a. transcaucasiana* and *V. a. montandoni*) were analyzed by bottom-up mass spectrometry, followed by *de-novo* sequencing and intact mass profiling. Both venoms show a high number of peptides (13 to 18%) and the major viper protein families: PLA2's (45 to 52%), VEGF-F (10 to 11%), SVSP (9 to 5%), LAAO's (6 to 5%), CRVP's (3 to 4%), CTL's (3 to <1%), SVMP's (9 to 2 %) and SVMP inhibitors (4 to 8%). The crude venom as well as isolated components were tested for cytotoxicity against different cancerous and non-cancerous human cell lines and show promising results.

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NOTE: The results are in publishing process, please do not print these results in any official literature.