

# MGSE Newsletter 02/2015

Activities & accomplishments at the Münster Graduate School of Evolution

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## Workshop on "Evolutionary Aspects of Alloreognition"



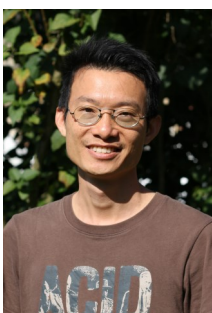
Together with ETT-Fellow Lorian Ballarin from the University of Padova the MGSE organized a workshop on "Evolutionary Aspects of Alloreognition: From Intraspecific Conflicts to Links with Adaptive Immunity" on 6-7 July. The workshop was opened by Lorian Ballarin with a keynote lecture on alloreognition as a common phenomenon in nature and with special regard to metazoans including the colonial ascidian *Botryllus schlosseri*. His talk was followed by Baruch Rinkevich from the National Institute of Oceanography in Haifa who gave fascinating insights into chimerism as an important evolutionary phenomenon that might influence metazoans' life histories.

The talks formed the basis for the Knowledge Café on the second day of the workshop in which the participants discussed, e.g., the relation of alloreognition with immunity, the origin and evolution of acquired immunity, and the role of chimerisms in shaping immune systems. The workshop ended with a keynote lecture by Louis Du Pasquier from the University of Basel on analogies and homologies in the somatic generation of immune repertoires of metazoans. In addition to the scientific part, a barbecue and a dinner at the Aasee gave the participants yet another chance to discuss, network, and socialize in a relaxed surrounding.

A meeting report on the workshop has recently been published as letter to the editor in the *Invertebrate Survival Journal* (Ballarin L, Du Pasquier L, Rinkevich B, Kurtz J (2015) Evolutionary aspects of Alloreognition. *Invertebrate Survival Journal* 12: 233-236).

<http://www.wwu.de/Evolution/mgse/workshop/alloreognition.html>

## Chih-Hao Hsieh visited the MGSE as ETT-Fellow



In August, Prof. Chih-Hao Hsieh from the Institute of Oceanography and Institute of Ecology and Evolutionary Biology at the National Taiwan University in Taipei City, Taiwan, visited the MGSE as Fellow of the Evolution Think Tank. During his stay, Prof. Hsieh was actively involved in a joint workshop of the Center for Nonlinear Science (CeNoS) and the MGSE on "Nonlinear Dynamics in Biology - From Time Series to Knowledge" on 25 - 26 August, organized by Arndt Telschow and Oliver Kamps. The workshop kicked off in the historic ambience of Münster's city palace with inspiring talks by theoreticians working on nonlinear dynamics and empirical researchers working on eco-evolutionary questions. It was demonstrated how dynamical thinking can lead to new research questions in life sciences by focusing on specific empirical sys-

tems including *Anopheles* mosquitoes and the human microbiome. Moreover, the issue of appropriate data collection was problematized. In addition to talks by Prof. Hsieh and internal speakers from Münster, the CeNoS and the MGSE were happy to welcome Vasilis Dakos from the Institute of Integrative Biology at the ETH Zürich and Elena Levashina from the MPI for Infection Biology in Berlin as guest speakers. On the second day of the workshop, interested participants joined in the Kavaliershäuschen to discuss in more detail how nonlinear dynamics can be applied in specific biological systems.

<http://www.wwu.de/CeNoS/Veranstaltungen/Tagung1/index.html>



## ETT-Fellows Alexander Bolshoy and Olga Vasilieva are currently visiting the MGSE



On 7 July, Prof. Alexander Bolshoy arrived in Münster who is an Associate Professor at the Department of Evolutionary and Environmental Biology and a member of the Institute of Evolution at the University of Haifa, Israel. Prof. Bolshoy is interested in computational molecular biology, molecular evolution, structural biology and bioinformatics with the major goal to reveal the biological role of certain evolutionary preserved genomic patterns using statistical and other methods of sequence comparison. Members of the MGSE got an insight into his research during a public lecture on "Combinatorial optimization methods as tools in evolutionary genomics of prokaryotes" on 18 August. Before Prof. Bolshoy will leave at the end of September, he will be involved in a workshop on "Multiple DNA Codes" on 28–29 September.

<http://www.wwu.de/Evolution/mgse/ett/alexanderbolshoy.html>

Since 6 September, Prof. Olga Vasilieva from the Department of Mathematics at the Universidad del Valle in Cali, Colombia, is another guest scientist at the MGSE who will stay until the beginning of December. Prof. Vasilieva's research interests include, e.g., population and epidemiological modelling, applications of optimization techniques in economics, biology, ecology, and epidemiology, and mathematical methods and models for sustainable management of natural resources. During her stay, Prof. Vasilieva will collaborate with the group of Arndt Telschow. Her research stay is funded by the DAAD.

<http://www.wwu.de/Evolution/mgse/ett/olgavasilieva.html>



## Review article by MGSE PIs Francesco Catania and Jürgen Schmitz

Recently, a review article on programmed DNA elimination and RNA splicing was jointly published by MGSE PIs Francesco Catania and Jürgen Schmitz in *WIREs RNA*. The article presents recently proposed models and empirical evidence for how splicing can shape the structure of protein-coding genes in eukaryotes and chronicles a number of intriguing similarities between the processes of programmed DNA elimination and RNA splicing (Catania F & Schmitz J (2015) On the path to genetic novelties: insights from programmed DNA elimination and RNA splicing. *WIREs RNA* 6: 547-561).

<http://wires.wiley.com/WileyCDA/WiresArticle/wisId-WRNA1293.html>

## Science Pub starts in October



The MGSE will act as co-organizer of a Science Pub, bringing scientists and the public together for easy-to-understand presentations and thought-provoking discussions in an informal atmosphere with the overall aim to promote understanding of and enthusiasm for science in the public. The Science Pub is jointly organized by the LWL-Museum für Naturkunde, the Westfälischer Naturwissenschaftlicher Verein, MT Mediendesign, and the MGSE with Prof. Hans-Dieter Görtz as major initiator and Proinnovera as Sponsor. It will take place at regular intervals in the Café Flechtheims at Münster's harbour. The first talk will be given by Dr. Jan Ole Kriegs

from the LWL-Museum für Naturkunde who will talk about „Von Fischotter, Wolf und Gelbhalsmaus - Neues zur Säugetierfauna in NRW“ on 12 October at 19.15 in the Café Flechtheims.



## Upcoming events



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|----------------|--|
| 28–29 Sept     | Workshop on „Multiple DNA codes“ with Alexander Bolshoy          |
| 12 Oct 2015    | Science Pub with Jan Ole Kriegs at Café Flechtheims              |
| 20–21 Oct 2015 | MGSE Symposium on „Evolutionary Medicine“                        |
| 28 Oct 2015    | Start of lecture series "The Growth of the Evolutionary Thought" |
| 10 Nov 2015    | Talk by Olga Vasilieva at CeNoS colloquium                       |

Up-to-date information  
can also be found on:

[www.wwu.de/Evolution/  
mgse/](http://www.wwu.de/Evolution/mgse/)

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