

CA15216 Quarterly Newsletter



July 2018



Dear Action member,

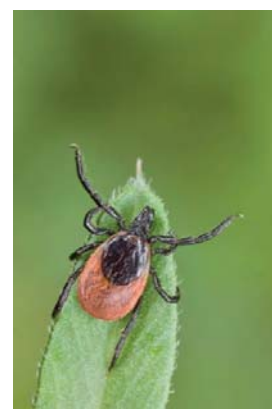
Welcome to the new quarterly Action newsletter. From now on you will receive this by email approximately every three months. The purpose is to update you about Action activities, provide direction for how you can contribute to delivering the goals of the Action and to disseminate information relating to events, research highlights and opportunities. A copy will also be available on the ENBA website (www.enba4.eu) where all other Action-related information can be found.

We hope that this newsletter will become the primary platform for circulation of Action-related information, stimulate interactions, and promote networking and inclusivity within the Action. Space can be made available for all members who wish to publicise their novel research findings, relevant events or vacant positions. To discuss this, please contact the most relevant Task Leader, as presented on the ENBA website.

Research Highlights

In future newsletters, your research highlights can be presented here alongside other exciting bioadhesion news from the media. Please contact the most relevant Task Leader with a brief, exciting summary of your findings and a relevant graphic if you would like to participate.

Recently, ticks have been in the spotlight thanks to a National Geographic article featuring work by Sylvia Nürnberger (Austria) <https://news.nationalgeographic.com/2018/01/animals-ticks-saliva-health-disease/>



Scientific Objectives

Every year the Action must submit a Work and Budget Plan, in which the primary Action Activities are described and costed. One important element is the list of Scientific Objectives. These objectives should be proposed and delivered by Action members, preferably those formed into Focus Groups. Below are some of the new Scientific Objectives that the Action must address within the current Grant Period (until April 2019). The full list can be located on the ENBA intranet. We would be particularly interested to hear about your work, collaborations, publications and other activities relating to these:

- Identify common themes in the biology and chemistry of problematic adhesion to surfaces in the marine environment (**biofouling**). (Cont. next page)

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Scientific Objectives

(Continued)

- Investigate the potential of **catechols** for production of bio-inspired adhesives and fouling-resistant coatings.
- Develop a web resource to enable the community to locate publicly available **molecular/compositional data** for the adhesives of commonly-studied organisms.
- To identify and address challenges associated with **heterologous expression** of adhesive proteins.

Focus Groups

The objectives of the Action are defined in a 'bottom-up' direction from the Action Focus Groups. Currently there are four, as outlined below. If you wish to initiate a Focus Group and have between 6 and 12 interested individuals, you can propose this to the most relevant Task Leader. Focus groups can then bid for Workshop/Training School support to further the Action objectives:

Biofouling

- Nick Aldred
(Leader)
- Thomas Ederth
- Anne Marie Power
- Marco Faimali
- Mattias Berglin
- Sheelagh Conlan
- Claire Hellio
- Romana Santos
- Patrick Flammang
- Nicole Poulsen
- Marleen Kamperman
- Päivi Laaksonen

Wood Adhesives

- Janek von Byern
(Interim Leader)
- Pavlo Bekhta
- Tomasz Krystofiak
- Eleftheria Athanasiadou

Biomolecular

- Romana Santos
(Leader)
- Patrick Flammang
- Päivi Laaksonen
- Nick Aldred
- Peter Ladurner
- Janek von Byern

Catechols

- Daniel Ruiz
- João F. Mano
- Marleen Kamperman
- Klaus Rischka
- Henrik Birkedahl
- Seda Kizilel

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Short-Term Scientific Missions (STSMs)

Applications for STSMs are particularly encouraged in areas that address the Action Scientific Objectives (above) and from/between early-career investigators and inclusiveness target countries.

Please check the Action website (<http://www.enba4.eu/activities/short-term-scientific-missions/>) or contact Patrick Flammang (Patrick.Flammang@umons.ac.be) for further information. **Here are a few examples of recent STSMs:**

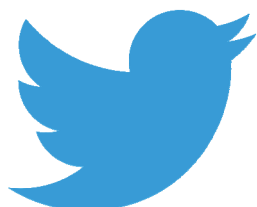
- *Bacterial Cellulose Based Hydrogel Food Packaging (27 days, CZ to SI)*
- *Biocompatibility investigation of supramolecular hydrogel biomaterials (50 days, IT to FI)*
- *Analysis of adhesive secretions in *Idiosepius paradoxus* (Cephalopoda) (8 days, AT to JP)*

The next deadline for applications is **September 1st** for STSMs taking place between 01/10/2018 and 30/04/2019.

The application, comprising **1)** a work plan, **2)** a letter of support from the Home Institution (especially for PhD students), **3)** a written agreement from the Host Institution, and **4)** a CV, should be submitted online (<http://www.cost.eu/STSM>).

Resources

Do not forget our Action social media profiles!!!



Twitter: @ENBAbioadhesion

Facebook: European Network of Bioadhesion ENBA



Research Gate: European Network of Bioadhesion (ENBA)

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Forthcoming Action Events

The 3rd International Conference on Biological and Biomimetic Adhesives:

- Registration is open for this Action co-organised international conference in Haifa, Israel, 20th – 22nd November 2018. Abstract Deadline: **15th July 2018**.

Details: <https://sites.google.com/site/icbba3/>

Training Schools:

- “Recombinant protein expression”, Aalto (Finland), 22nd – 26th October. Application deadline: **14th September**.

Details: <http://www.enba4.eu/2018/05/21/2758/>

- “Bioinspired adhesive polymers and hydrogels”, Aveiro (Portugal), 5th – 9th November. Application deadline: **25th September**.

Details: <http://www.enba4.eu/2018/05/20/bioinspired-adhesive-polymers-and-hydrogels/>

- “Morphology, structure and biomolecular characterization”, Riga (Latvia), 3rd – 7th December. Application deadline: **3rd October 2018**.

Details: <http://www.enba4.eu/2018/05/21/morphology-and-structure-sem-and-sem-fib-and-biomolecule-characteristics-afm/>

Workshop:

- “Workshop on catechol-based coatings and adhesives”, Barcelona (Spain), 10th – 11th October. Application Deadline: **1st August 2018**.

Details: <http://www.enba4.eu/2018/05/21/international-workshop-on-bioinspired-adhesives-and-functional-coatings-based-on-catechols/>

MC Meeting:

- Haifa (Israel) prior to the ICBBA on 20th November 2018.

Details: <http://www.enba4.eu/2018/05/21/mc-meeting/>

Opportunities within this Action

An open Task Leader position – Task 1.3 properties/performance (Contact Nick Aldred; nicholas.aldred@ncl.ac.uk)

Opportunities to organise Training Schools and Workshops (Contact the relevant Task Leader)

An open-call for Short-term Scientific Missions (Patrick Flammang; Patrick.Flammang@umons.ac.be)

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External Opportunities

3-year **Post-doc position** studying the adhesion of sea anemones at Newcastle University, UK. Details: <https://www.jobs.ac.uk/job/BKL153/research-associate-molecular-biology-d134624r/>

Publications

Here are some recent journal publications that have stemmed from the Action:

- Sergei Vlassov, Sven Oras, Mikk Antsov, Jelena Butikova, Rünno Lõhmus and Boris Polyakov (2018): Low-friction Nanojoint Prototype. *Nanotechnology* 29: 195707. <https://doi.org/10.1088/1361-6528/aab163>
- Tiago D. Gomes, Sofia G. Caridade, Maria P. Sousa, Sara Azevedo, Muhammed Y. Kandur, Ebru T. Öner, Natália M. Alves, João F. Mano (2018): Adhesive free-standing multilayer films containing sulfated levan for biomedical applications. *Acta Biomaterialia* 69: 183-195. <https://doi.org/10.1016/j.actbio.2018.01.027>
- Hernandez-Montelongo, Y. R. Corrales Ureña, D. Machado, M. Lancelloti, M. P. Pinheiro, K. Rischka, P.N. Lisboa-Filho, M. A. Cotta (2018): Electrostatic immobilization of antimicrobial peptides on polyethylenimine and their antibacterial effect against *Staphylococcus epidermidis*. *Colloids Surf. B Biointerfaces*, 164: 370-378. <https://doi.org/10.1016/j.colsurfb.2018.02.002>
- Manuela Rebora, Jan Michels, Gianandrea Saleno, Lars Heepe, Elena Gorb and Stanislav Gorb (2018): Tarsal attachment devices of the southern green stink bug *Nezara viridula* (Heteroptera: Pentatomidae). *J Morphol*, 279(5): 660-672. <https://doi.org/10.1002/jmor.20801>