

## Proposal for the establishment of an EFIS-IL Study Group on “Non-coding RNA and epigenetic regulation in immune cells”

The past decade has seen a tremendous increase in RNA research, leading to the discovery of an entire parallel universe of small (and large) non-protein-coding RNAs and their regulation of protein-coding gene expression. Buzzwords include RNA interference, microRNA regulation, small and large non-coding RNAs, circular RNAs, competing endogenous RNAs (ceRNAs), RNA-mediated epigenetic regulation of gene expression, to name but a few. Particularly the developing- and steady state immune system with its' need for delicate regulation of gene expression is especially affected by these molecules.

On the occasion of the SIICA-DGfI 2011 joint meeting in Riccione (Italy), members of both immunological societies discussed the value of a small meeting focused solely on the role of non-coding RNAs and their impact on the immune system of men and mice. The goal was to stimulate and facilitate interaction among researchers from both countries working in this field of immunology, with the vision to create an European platform on this topic. Consequently, the first “miRNA and immune system” meeting was organized as a standalone event in Desenzano (Italy) in 2012 with approx. forty participants. The meeting format consisted of 15 minutes oral presentation of ongoing research projects and 10 minutes discussion, allowing a lively debate on each talk. Due to the fundraising efforts of the organizers, the meeting was low-budget, with attendees covering participation expenses (flight, accommodation) on their own. The initial meetings took place as a 2-year routine, so in 2014, the meeting was held in Zurich (Switzerland), expanding the group of participants by members of the Swiss Society for Allergology and Immunology. The third workshop on “Non-coding RNAs and immune system” was held in Milan (Italy) in 2016, while the tentative next workshop on “Non-coding RNA and epigenetic regulation in immune cells” will take place in Berlin (Germany) in April 2018.

As the field of non-coding RNAs and their impact on the immune system is still young and poised for major advances in the near future, we would therefore like to apply for an EFIS-IL study group on the topic of “Non-coding RNA and epigenetic regulation in immune cells” for the period from 2018 to 2020.

The current study group consists of members of the German, Italian and Swiss societies of immunology, but in the long term, we plan to increase the number of participating immunological societies. Core group of proponents include, amongst others, Flavia Bazzoni (Verona), Hans-Martin Jäck (Erlangen), Massimiliano Pagani (Milan), Andreas Radbruch (Berlin), Sergio Abrignani (Milan) and Steffen Gay (Zurich). As speaker/coordinator of the EFIS-IL study group, we would like to nominate Jürgen Wittmann (Erlangen) and Mir-Farzin Mashreghi (Berlin), who were involved in the organization of the precursor group from the beginning on and who will interact with EFIS. They will also coordinate the authoring of one Special Issue of

Immunology Letters on “Non-coding RNA and epigenetic regulation in immune cells“ during the three years of establishment of EFIS-IL study group.

Beginning in 2018, we plan to change the meeting schedule to a 1-year routine, while preserving the special characteristics of our previous meetings, i.e., a high scientific quality yet low budget meeting to ascertain that especially junior scientists unable to attend high-quality (or at least “high-cost”...) meetings can participate and have an opportunity to present their work. A list of participants from previous meetings is attached to this application. Additional funding sources could come from companies, which either have a booth at the meeting or give brief oral updates on their latest products of general interest.

Besides fostering existing or new collaborations, the exchange of reagents or mouse strains, the yearly meetings could also serve as a location for PhD thesis advisory committee meetings to gain a fresh look on projects from the outside. Within the EFIS-IL study group, the exchange of methodologies via visiting students will further help to cross-link the labs involved.

In conclusion, we believe that the establishment of an EFIS-IL Study Group on “Non-coding RNA and epigenetic regulation in immune cells” will be an essential next step to creating an European platform on this fascinating topic.

## Appendix

- Previous Meetings' Programs and participant lists

1<sup>st</sup> workshop “miRNA and immune system”, Desenzano (Italy), July 9-11, 2012

2<sup>nd</sup> workshop “miRNA and immune system”, Zurich (Switzerland), April 8-10, 2014

3<sup>rd</sup> workshop “Non-coding RNAs and immune system”, Milan (Italy), July 19-20, 2016

- Program proposed for the meeting in 2018

4<sup>th</sup> workshop (tentative) “Non-coding RNA and epigenetic regulation in immune cells”, Berlin (Germany), April 12-13, 2018