

Maria Bouga

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Key research and expertise

My research and teaching activities cover aspects of Molecular Taxonomy, Genetics and Apiculture focused on genetics of honey bee and *Varroa destructor* that is the world's most devastating pest of Western honeybee *Apis mellifera*. I am involving also on the conservation of native bee populations. I am collaborating with the Laboratory of Agricultural Zoology & Entomology where I am responsible for the Molecular Unit. I am member of the Executive Committee of the COLOSS honey bee research association (Prevention of honey bee COLony LOSSes) (<http://www.coloss.org/>) that is currently comprised of 935 members from 97 countries and I coordinate the Apimondia (International Federation of Beekeepers Associations) WG7 "Queen rearing and impact on the genetic variability (and health) of productive bee colonies" (<http://www.apimondia.com/en/activities/working-groups>). Currently, I participate in SMARTBEES collaborative research European project between 16 partners from universities, research institutions and companies across Europe. In the frame of this project we are working on solutions to prevent colony losses caused by the Varroa mite and viruses and to counteract the systematic replacement of many native European bees with only two specific races which is observed over the last years (<http://www.smartbees-fp7.eu/>). I am involving also in Super B COST Action FA1307, focused on the conservation and sustainable management of ecosystem services mediated by pollinators.

An understanding of the genetic variability of bee populations and their adaptation to regional environmental factors such as climate and vegetation, prevailing diseases and agricultural practices, is an important prerequisite for understanding problems in the health of honey bee colonies.

Focus on M. Bouga's publications

Meixner, M., Buchler, R., Costa, C., Andonov, S., Bienkowska, **M., Bouga**, M., Filipi, J., Hatjina, F., Ivanova, E., Kezic, N., Kryger, P., Conte, Y.L., Panasiuk, B., Petrov, P., Ruottinen, L., Uzunov, A., Wilde, J. Looking for "the Best Bee" An experiment about interactions between origin and environment of honey bee strains in Europe (2015) American Bee Journal, 155 (6), pp. 663-666.

Uzunov, A., Meixner, M.D., Kiprijanovska, H., Andonov, S., Gregorc, A., Ivanova, E., **Bouga, M.**, Dobi, P., Büchler, R., Francis, R., Kryger, P. Genetic structure of *Apis mellifera macedonica* in the Balkan peninsula based on microsatellite DNA polymorphism (2014) Journal of Apicultural Research, 53 (2), pp. 288-295.

Francis, R.M., Kryger, P., Meixner, **M., Bouga**, M., Ivanova, E., Andonov, S., Berg, S., Bienkowska, M., Büchler, R., Charistos, L., Costa, C., Dyrba, W., Hatjina, F., Panasiuk, B., Pechhacker, H., Kezić, N., Korpela, S., Le Conte, Y., Uzunov, A., Wilde, J. The genetic origin of honey bee colonies used in the COLOSS genotype-environment interactions experiment: A comparison of methods (2014) Journal of Apicultural Research, 53 (2), pp. 188-204.

Büchler, R., Costa, C., Hatjina, F., Andonov, S., Meixner, M.D., Le Conte, Y., Uzunov, A., Berg, S., Bienkowska, **M., Bouga**, M., Drazic, M., Dyrba, W., Kryger, P., Panasiuk, B., Pechhacker, H., Petrov, P., Kezić, N., Korpela, S., Wilde, J. The influence of genetic origin and its interaction with environmental effects on the survival of *Apis mellifera* L. colonies in Europe (2014) Journal of Apicultural Research, 53 (2), pp. 205-214.

Hatjina, F., Costa, C., Büchler, R., Uzunov, A., Drazic, M., Filipi, J., Charistos, L., Ruottinen, L., Andonov, S., Meixner, M.D., Bienkowska, M., Dariusz, G., Panasiuk, B., Le Conte, Y., Wilde, J., Berg, S., **Bouga, M.**, Dyrba,

- W., Kiprijanovska, H., Korpela, S., Kryger, P., Lodesani, M., Pechhacker, H., Petrov, P., Kezic, N. Population dynamics of European honey bee genotypes under different environmental conditions (2014) *Journal of Apicultural Research*, 53 (2), pp. 233-247.
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- Charistos, L., Hatjina, F., **Bouga, M.**, Mladenovic, M., Maistros, A.D. Morphological discrimination of Greek honey bee populations based on geometric morphometrics analysis of wing shape (2014) *Journal of Apicultural Science*, 58 (1), pp. 75-84.
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