



FP7-SME-2013-2. GA605835. www.campybro.eu

Research for the benefit of specific groups.

Control of Campylobacter infection in broiler flocks through two-steps strategy: nutrition and vaccination "CAMPYBRO"

Newsletter

Nº
02/2016

RESEARCH & DEVELOPMENT

In **WP4**, trials have been done in France, Hungary and Spain. In France, a turkey trial with 4 farms with twin buildings has started with two treatments, control and treated (*B. subtilis* all the period and growing levels of MGOA from 0,2 to 1,2% from 0-4 to 12-16weeks respectively), but the results are not available. In Spain three broiler farms from EXPLOTACIONES AVÍCOLAS REDONDO with twin buildings were used, with a control diet and a treated diet (*B. subtilis* all the period and 0,5 and 1,5% of MGOA form from 0-7 and 7-42d, respectively). The three farms have a different patron of contamination, and the treatment had not a consistent effect on Campylobacter infection. In Hungary, three broiler farms from HER_CSI with twin buildings were used, with a control diet and a treated diet (*B. subtilis* all the period and 0,5 and 1,5% of MGOA form from 0-7 and 7-42d, respectively). Surprisingly, the broilers fed the supplemented diet showed more contamination than the control birds. In **WP5**, the fourth trial testing the best vaccine candidates detected through reverse vaccinology in Ross broilers was done. Interestingly, several candidates, but specially two in a regime DNA/protein at 5/12d of age, decrease significantly the Campylobacter infection at 42d of age. This trial is being repeated to confirm these results and to determine if those proteins consistently are potential antigens for work with in a vaccine development. In **WP6**, the trials has been designed and started in Spain, The Netherlands, Hungary and France. In Spain three trials were done. In the first one (Zaragoza), the treated broilers had less contamination at 21d, but not thereafter. In the second trial (Murcia), birds treated with MGOA through water presented 1 log less than the control birds at 50d of age. In the third trial (Toledo), there were no differences between treatments. In Hungary, there were no differences

between treatments also. However in France, treated animals presented also 1 log less than control animals and in the Netherlands, the birds were not contaminated until de the end of the experiment.

It was concluded that the addition of MGOA and *B. subtilis* had an inconsistent effect on Campylobacter infection, since sometimes showed a significant reduction, but sometimes did not.

MANAGEMENT

The coordinator has maintained the next meetings with the partners:

- BTT: 04/05/2016, 24/06/16
- CIDEF: 05/07/2016
- FIA: 05/07/2016
- MIKROLAB: 24/06/16; 24/08/2016;
- PROPOLLO: 19/04/2016
- CVZ: 24/05/2016
- NEPLUVI: 31/08/2016
- REDONDO: 22/6/2016

The third General Assembly was hold the 24th of August 2016 in London Room of Leonardo HOTEL in Budapest (Hungary), which was organized by the Coordinator and BTT. The assistant to the GA were:

Name	Institution
Pedro Medel	IMASDE AGROALIMENTARIA
Daniel Dory	ANSES
Muriel Guyard	ANSES
Ángel Martín	PROPOLLO
Gilles Le Pottier	CIDEF
Yannick Carre	CIDEF
Véronique Elgosi	FIA
Julie Mayot	FIA
Attila Csorbai	BTT
Andrea Szabó	BTT
Peter Vesseur	NEPLUVI
Fernando	EXPLOTACIONES AVÍCOLAS

Sánchez	REDONDO
Alberto Parra	CZ Veterinaria, S.A.

Third General Assembly



After the General Assembly, the consortium presented the project to the Project Officer and the independent technical reviewer the 25th of August.

Final technical review



DISSEMINATION

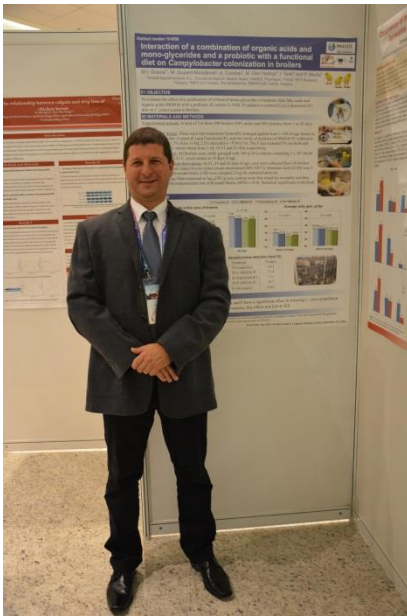
The next actions have been done:

- The website www.campybro.eu has been maintained and updated.
- Three new scientific peer reviewed articles have been published.
 - Meunier, M., M. Guyard-Nicodème, D. Dory, M. Chemaly, 2016. Control Strategies against Campylobacter at the Poultry Production Level: Biosecurity Measures, Feed Additives and Vaccination. *Journal of Applied Microbiology* 120: 1139-1173. DOI: 10.1111/jam.12986.
 - Meunier, M., M. Guyard-Nicodème, E. Hirchaud, A. Parra, M. Chemaly, D. Dory, 2016. Identification of Novel Vaccine Candidates against Campylobacter through Reverse Vaccinology. *Clinical and Developmental Immunology* 2016 Article ID 5715790: 1-9. DOI: <http://dx.doi.org/10.1155/2016/5715790>
 - Gracia, M. I., J. Sánchez, C. Millán, Ó. Casabuena, P. Vesseur, Á. Martín, F. J. García-Peña, P. Medel, 2016. Effect of Feed Form and Whole Grain Feeding

on Gastrointestinal Weight and the Prevalence of Campylobacter jejuni in Broilers Orally Infected. *PLoS ONE* 11(8): e0160858. doi:10.1371/journal.pone.0160858.

- Four abstracts have been presented in the World Poultry congress hold in Beijing (China) between 5 and 9 of September 2016.
 - Millán, C., M. Chemaly, J. Mayot, P. Vesseur, M.I. Gracia, P. Medel, 2016. Interaction of a combination of organic acids and mono-glycerides and a probiotic on Campylobacter colonization in broilers. *The Proceedings of XXV World's Poultry Congress. September 5-9, 2016. Beijing, China. S10-0059, pp: 570.*
 - M.I. Gracia, M. Guyard-Nicodème, A. Csorbai, M. Den Hartog, I. Tenk, P. Medel, 2016. Interaction of a combination of organic acids and mono-glycerides and a probiotic with a functional diet on Campylobacter colonization in broilers. *The Proceedings of XXV World's Poultry Congress. September 5-9, 2016. Beijing, China. S10-0058, pp: 570.*
 - O. Casabuena, A. Martín, V. Elgosi, M. G. Molnar, M.I. Gracia, P. Medel, 2016. Effect of feeding a combination of organic acids and mono-glycerides at different dosages and a probiotic on Campylobacter colonization in broilers. *The Proceedings of XXV World's Poultry Congress. September 5-9, 2016. Beijing, China. S10-0056, pp: 569.*
 - J. Sánchez, O. Casabuena, A. Parra, G. Le Pottier, F. Sánchez, P. Medel, 2016. Effect of supplementing a combination of organic acids and mono-glycerides and a probiotic during different times of administration on Campylobacter colonization in broilers. *The Proceedings of XXV World's Poultry Congress. September 5-9, 2016. Beijing, China. S10-0057, pp: 569.*

Attila Csorbai presenting a poster



- The Public Workshop in The Netherlands was celebrated the 31 of August 2016 at Ade-Wageningen. It was a success of participation, with more than 120 people participating in the meeting.



Pedro Medel during his oral presentation



OTHERS

The project finished the 31/08/2016 and the final Reports and Deliverables will be sent to the EC before 30/10/2016.

- The Public Workshop in France was celebrated the 5 of July 2016 at Rennes. It was a success of participation, with more than 60 people participating in the meeting.

