

Journal of Apicultural Research

Volume 55 Number 5 2016

Contents

Hive Product Science

Effect of processing conditions on the bioactive compounds and biological properties of bee pollen

Lúis G Dias, Georgina Tolentino, Ananias Pascoal and Leticia M Estevinho 357

Cell cycle and apoptosis pathway modulation by Tualang honey in ER-dependent and -independent breast cancer cell lines

Agustine Nengsih Fauzi and Nik Soriani Yaacob 366

Pathology and Parasitology

Preliminary analysis of loss rates of honey bee colonies during winter 2015/16 from the COLOSS survey

Robert Brodschneider, Alison Gray, Romée van der Zee, Nouredine Adjlane, Valters Brusbardis, Jean-Daniel Charrière, Robert Chlebo, Mary F Coffey, Karl Crailsheim, Bjørn Dahle, Jiří Danihlík, Ellen Danneels, Dirk C de Graaf, Marica Maja Dražić, Mariia Fedoriak, Ivan Forsythe, Miroljub Golubovski, Ales Gregorc, Urszula Grzęda, Ian Hubbuck, Raşan İvgin Tunca, Lassi Kauko, Ole Kilpinen, Justinas Kretavicius, Preben Kristiansen, Maritta Martikkala, Raquel Martín-Hernández, Franco Mutinelli, Magnus Peterson, Christoph Otten, Aslı Ozkirim, Aivar Raudmets, Noa Simon-Delso, Victoria Soroker, Grazyna Topolska, Julien Vallon, Flemming Vejsnæs and Saskia Woehl 375

Prevalence of bee viruses among *Apis cerana* populations in Vietnam

Ha Thi Thu, Nguyen Thi Kim Lien, Mai Thuy Linh, Thanh Hoa Le, Nguyen Thi Hoa, Pham Hong Thai, Kondreddy Eswar Reddy, Mi Sun Yoo, Young-Ha Kim, Yun Sang Cho, Seung Won Kang and Dong Van Quyen 379

The use of probiotics, essential oils and fatty acids in the control of American foulbrood and other bee diseases

Katarína Kuzyšinová, Dagmar Mudroňová, Juraj Toporčák, Ladislav Molnár and Peter Javorský 386

Epidemiology, risk factors and varroa mite control in the Estonian honey bee population

Kerli Mõtus, Arvi Raie, Toomas Orro, Marie-Pierre Chauzat and Arvo Viltrop 396

Effects of neem (*Azadirachta indica*) on honey bee workers and queens, while applied to control *Varroa destructor*

Rebeca González-Gómez, Gabriel Otero-Colina, Juan A. Villanueva-Jiménez, Ma. Teresa Santillán-Galicia, Cecilia Beatriz Peña-Valdivia and José Antonio Santizo-Rincón 413

First record of resistance to flumethrin in a varroa population from Uruguay

Giulia A Mitton, Silvina Quintana, Pablo Giménez Martínez, Yamandú Mendoza, Gustavo Ramallo, Constanza Brasesco, Agustina Villalba, Martín J Eguaras, Matías D Maggi and Sergio R Ruffinengo 422

(Continued on inside back cover)

(Continued from outside back cover)

Physiology, Biochemistry, and Chemical Ecology

FMRamide-cells in the midgut of *Scaptotrigona xanthotricha* (Apidae: Meliponini) of different ages and fed different diets

Débora Linhares Lino de Souza, José Cola Zanuncio and José Eduardo Serrão

428

Sociobiology and Behaviour

Shape indexes of nests of *Apis dorsata* and *Apis laboriosa*

Jerzy Woyke, Jerzy Wilde and Maria Wilde

433