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## *Malassezia* yeast and their role in atopic dermatitis in dogs

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Atopic dermatitis (AD) is a chronic skin disorder. It is characterized by itchy skin eczema with relapsing episodes. There are a lot of scientific data concerning on mechanisms of this illness, but still pathogenesis of AD is not fully understand. It seem that in parts this skin disorder maybe genetically determined, but many other factors may contribute to the development of AD among human or animals. The main reason is impaired skin barrier function. Additionally AD is consider to be an immunoglobulin E (IgE) mediated hypersensitivity response to environmental allergens and it is suggested, that some kind of dysfunction of the adaptive immune system is involves. Yeasts of the genus *Malassezia* are well known as both commensal and pathogenic microorganisms on the skin. *Malassezia pachydermatis* is a species for which dogs are a natural host. In normal dogs with healthy skin these fungi colonizes the stratum corneum in very low numbers. In dogs with allergic skin disease the numbers of *M. pachydermatis* usually increase dramatically. It is hypothesized that in dogs the atopic dermatitis is a risk factor for *M. pachydermatis* infection, but in our opinion, contrary some factors which are favorable for abundant colonization of these yeasts are responsible for involving this increasing reactivity against members of the normal skin microbiota. The objective of this work is to provide an update on recent advances in the explanation of the role of factors like fungi as *Malassezia* in involving acute stage of AD lesions in dogs.

**Method:** Citation databases, abstracts and proceedings from symposia published in last decade.

**Result:** The development of canine AD in association with changing of Canine Skin Microbiome and lymphocyte responses, including the large spectrum of cytokine and noncytokine factors that appear in dermatitis will be discussed.

### Biography

Bozena Dworecka-Kaszak graduated from Veterinary Medicine Faculty of Warsaw University of Life Sciences in 1979. In 1982 she finished her PhD thesis: "The effect of *Clostridium oncolyticum* s. *butyricum* M55 on hematopoiesis in healthy and irradiated mice" at National Institute of Hygiene in Warsaw. She did habilitation in 2002 on the topic: "Characteristics of yeast-like fungi *Malassezia pachydermatis* and evaluation of their immunomodulation properties *in vivo* and *in vitro*" and become Specialist in Veterinary Laboratory Diagnostics. Since 1985 till present she has been working at Veterinary Medicine Faculty of Warsaw University of Life Sciences at the Department of Precinical Sciences. In years 2000-2012 she was the Head of Mycology Division and she become University Professor in 2004. During her career, she completed many fellowships, such as at Felnstitut fur Mikrobiologie und Tierseuchen der Tierarztlichen, Hochschule Hannover (Germany) and at Dipartimento di Sanita Pubblica Veterinaria e Patologia Animale, Universita Degli Studi di Bologna (Italy) as well as a Tempus Phare at Dipartimento de Medicina y Sanidad Animal, Patologia Infecciosa, Facultad de Veterinaria of Univesitad Extremadura in Caceres (Spain) and Tempus Phare, Erasmus Teacher Mobility Grant in Valencia UPV (Spain). Her field of interest is Mycology, *Malassezia* dog's infections and dermatophytes.

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