2012 Ezell Research Symposium

TITLE: Ezell Fellows Present: Women on the Front Lines of Ocular Surface Translational Research

ABSTRACT

Dry eye is complex, multifactorial ocular surface disease that affects millions of individuals in the US alone and worldwide. It can have a significant impact on the patient's visual function, overall quality of life and treatment imposes a major economic burden. This Ezell Research Symposium will show how Ezell Fellowship funding has helped initially develop three independent investigators in their quests to unravel the complexities of dry eye diseases. The role of immunity in dry eye will be discussed, including toll-like receptors, innate immunity, and autoimmunity. Inflammation, and the clinical impact of the meibomian gland on dry eye status are reviewed.

OBJECTIVES:

Following completion of this course the attendee will be able to:

1) Discuss the current pathophysiology

2) Understand the concept of innate immunity in dry eye disease

3) Understand the concept of autoimmunity in dry eye disease

4) Compare and contrast innate and acquired immunity

5) Discuss the clinical implications of inflammation in dry eye

6) Evaluate the role of the meibomian gland-related in evaporative and aqueous deficient dry eye disease

OUTLINE

I. Introductions:

A. The American Optometric Foundation and Ezell Fellowship Program (Kathryn Dumbleton, MSc MCOptom FAAO FBCLA, AOF President Elect)

B. Background on Ocular Surface Disease and State of the Field (Jason Nichols, OD MPH PhD FAAO, American Academy of Optometry's Research Committee)

II. Innate Immunity and Dry Eye (Rachel Redfern, OD PhD FAAO)

A. Background on the impact of the Ezell Fellowship on career development, career/family life balance, NIH grants, academic success

B. Introduction to dry eye definition and pathophysiology

C. DEWS dry eye definition and etiology diagram 2007

D. The inflammatory cascade and toll-like receptors

E. Involvement of toll-like receptors in dry eye pathophysiology

III. The Impact of the Meibomian Gland and Dry Eye (Kelly Nichols, OD MPH PhD FAAO)

A. Background on the impact of the Ezell Fellowship on career development, career/family life balance, NIH grants, academic success

B. Re-visit dry eye pathophysiology from an evaporative dry eye perspective

C. Epidemiology of MGD and dry eye

D. Proteomic and lipidomic analyses of meibomian gland secretions and clinical implications

IV. Autoimmunity and Dry Eye (Nancy McNamara, OD PhD)

A. Background on the impact of the Ezell Fellowship on career development, career/family life balance, NIH grants, academic success

B. Re-visit dry eye pathophysiology from an autoimmunity perspective

C. Epidemiology of Sjögren's syndrome dry eye

D. Molecular events that promote dry eye in autoimmune disease and considerations for clinical management

V. Summary and Questions

A. How the AOF Ezell Fellowship can deepened a researcher's toolbox researchers—Panel discussion

B. Questions