Elena Timoféeff-Ressovsky *Seminar Series*

Notable Women in Science & Medicine

presents

Photographic design: Lukas Eckardt

supported by the Society of Friends of the MDC Berlin-Buch

Prof. Sarah Millar

University of Pennsylvania, Dept. of Dermatology and Cell & Developmental Biology

Development and regeneration of the epidermis and its appendages: insights from mouse genetics

Thursday, December 20, 2012

3.00 p.m.

MDC.C Dendrite II/III

Hosts: Ruth Schmidt-Ullrich,
Christiane Nolte

After the scientific presentation there will be opportunity for personal discussion with the speaker about issues related to women in life-science careers
please contact **Christiane Nolte** beforehand at cnolte@mdc-berlin.de

Sarah E. Millar, Ph.D.

Professor, Departments of Dermatology and Cell & Developmental Biology
Director of Research, Department of Dermatology

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422 Curie Boulevard
Philadelphia, Pennsylvania 19104-6100

Education

1982	B.A.	Cambridge University, U.K.
1987	Ph.D.	University of London, U.K.

Research Area of Interest

Development of hair follicles, mammary glands, taste papillae and teeth; regeneration and neogenesis of hair follicles and teeth; hair follicle, mammary gland and dental stem cells; skin and mammary gland tumorigenesis; microRNA functions in embryonic and postnatal skin and mammary glands; functions of histone deacetylases in skin and hair follicle development and renewal.

Research Summary

Our research is focused on understanding cell-cell signaling mechanisms controlling development, stem cell function and regeneration of the epidermis and organs such as hair follicles, mammary glands, taste papillae and teeth that arise from embryonic ectoderm (ectodermal appendages). We have shown that Wnt/beta-catenin signaling is required for initiating the formation of hair follicles, mammary glands and taste papillae from multipotent cells in the embryonic surface ectoderm. We are currently using genetic approaches to determine how Wnt signaling is regulated and patterned within the skin, and are utilizing activation of this pathway in strategies for organ regeneration. We are using genetic approaches to identify Wnt ligands and receptors required for appendage development, and to investigate the roles played by non-beta-catenin mediated Wnt signaling in the skin. We are also interested in epigenetic mechanisms controlling development, differentiation, regeneration and tumorigenesis. We are studying the functions of Dicer, Drosha and miRNAs in the formation and maintenance of hair follicles and mammary glands, and investigating the mechanisms by which histone deacetylases control self-renewal and differentiation of skin stem cells.

(taken from:http://www.uphs.upenn.edu/dermatol/faculty/millar.html)