

**Laure Rittié, Ph.D.**  
**Research Investigator**  
Department of Dermatology  
Medical Science I, R6447  
1301 E. Catherine  
Ann Arbor, MI 48109-0609  
Phone: (734) 647-7957  
Email: lruttie@umich.edu

## Education

1995 B.S. (Biochemistry), Université de Reims Champagne-Ardenne, France.  
1996 M.S. (Cell Biology), Université de Reims Champagne-Ardenne, France.  
1997 DEA [*i.e.* Pre-graduate Research Degree] (Clinical Pharmacology – Drugs: Mechanisms of Action and Metabolism), Universités de Reims Champagne-Ardenne and Nancy I-Lorraine, France.  
2001 Ph.D. (Biochemistry and Molecular Biology) Université de Reims Champagne-Ardenne, France. *Summa cum Laude.*

## Training

Sep 1994 - Aug 1995 Research Assistant, Université de Reims Champagne-Ardenne, France, Department of Immunology.  
Sep 1996 - Jul 1997 Pre-graduate training, Université de Reims-Champagne-Ardenne, France, Department of Biochemistry and Molecular Biology.  
Aug 1997 - Feb 2001 Ph.D. thesis, Université de Reims-Champagne-Ardenne, France, Department of Biochemistry and Molecular Biology.  
Feb - Nov 2001 Post-doctoral fellow, Université de Reims Champagne-Ardenne, France, Department of Biochemistry and Molecular Biology (Mentor: William Hornebeck, Ph.D.)  
Jan 2002 - Apr 2006 Post-doctoral fellow, University of Michigan, Department of Dermatology (Mentor: Gary J. Fisher, Ph.D.)

## Academic Appointments

May 2006 - present Research Investigator, University of Michigan, Department of Dermatology.

## Research Interests

- ✗ Regulation and aging of human skin stem cells
- ✗ Cell-extracellular matrix interactions
- ✗ Regulation of collagen homeostasis
- ✗ Wound healing

## Grants

### Active

American Skin Association

Title: Effects of Aging on Follicular Stem Cell Functions in Human Skin

Principal Investigator: Rittié, Laure

Period: 04/2007 - 03/2008

Direct Cost: \$50,000.00

## Honors & Awards

2007 American Skin Association Research Scholar Award

## Membership in Professional Societies

2006 - Society for Investigative Dermatology

## Peer-review Service

2004 - *Journal of Investigative Dermatology*, Reviewer

2006 - *Experimental Dermatology*, Reviewer

2006 - *Biochimica et Biophysica Acta – Molecular Cell Research*, Reviewer

2006 - *Archives of Dermatological Research*, Reviewer

2007 - *The American Journal of Pathology*, Reviewer

## Teaching

1998 - 1999 Teacher Assistant, Biochemistry Lab Classes to first-year medical students, Faculté de Médecine, Université de Reims-Champagne-Ardenne, France.

1998 - 2000 Biochemistry Laboratory training to residents, University of Reims Champagne-Ardenne, France.

### *Mentoring*

2003 Mentor of Naomi Simon (M4 Individual Elective)

2003 Mentor of Suzan Tosh (M4 Individual Elective)

2004 Mentor of Hillary Alpert (Student Biomedical Research Programs)

2005 Mentor of Marcus Williams (Summer Clinical Research Apprenticeship Program)

2005-06 Mentor of Emily J Matthias (Undergraduate Student)

2006 Mentor of Jessica McPherson (Student Biomedical Research Programs)

2007 Mentor of Victoria Min (Student Biomedical Research Programs)

### *Intramural Lectures*

2003 “*In vitro* models to study hormone action in skin”, Dermatology Research Conference

2004 “Estrogen actions in human skin”, Dermatology Research Conference

2006 “Effects of topical estrogens on aged human skin *in vivo*”, Dermatology Research Conference

2007 “Intermediate filaments”, “Elastic fibers”, Dermatology Basic Science Journal Club

## Extramural Invited Presentations

“About the *in vitro* interactions between human monocytes and type I collagen”. Journée des Jeunes Chercheurs, Société de Biologie de Reims, Reims, France, 1998.

“Retinoid-induced epidermal hyperplasia is mediated by epidermal growth factor receptor activation *via* specific induction of its ligands heparin binding-EGF (HB-EGF) and amphiregulin (AR) in human skin *in vivo*”. The 65<sup>th</sup> Meeting of the Society for Investigative Dermatology, Providence, RI, 2004.

“Human skin expresses both estrogen receptor alpha and beta, and responds to topical estradiol by production of type I procollagen expression”. The 66<sup>th</sup> Meeting of the Society for Investigative Dermatology, St-Louis, MO, 2005.

“Topical 17 $\beta$ -estradiol stimulates collagen synthesis in sun-protected aged skin, but not in photoaged human skin *in vivo*”. The 68<sup>th</sup> Meeting of the Society for Investigative Dermatology, Los Angeles, CA, 2007.

## Bibliography

### Peer-Reviewed Journals & Publications

1. **Rittié L**, Berton A, Monboisse JC, Hornebeck W, Gillery P. Decreased contraction of glycated collagen lattices coincides with impaired matrix metalloproteinase production. *Biochem Biophys Res Commun*, 264 (2), 488-492, 1999.
2. Garnotel R, **Rittié L**, Poitevin S, Monboisse JC, Nguyen P, Potron G, Maquart FX, Randoux A, Gillery P. Human blood monocytes interact with type I collagen through alpha x beta 2 integrin (CD11c-CD18, gp150-95). *J Immunol*, 164 (11), 5928-5934, 2000.
3. Monboisse JC, **Rittié L**, Lamfarraj H, Garnotel R, Gillery P. *In vitro* glycooxidation alters the interactions between collagens and human polymorphonuclear leucocytes. *Biochem J*, 350 Pt 3, 777-783, 2000.
4. **Rittié L**, Monboisse JC, Gorisse MC, Gillery P. Malondialdehyde binding to proteins dramatically alters fibroblast functions. *J Cell Physiol*, 191 (2), 227-236, 2002.
5. **Rittié L**, Fisher GJ. UV-light-induced signal cascades and skin aging. *Ageing Res Rev*, 1 (4):705-720, 2002. Review.
6. **Rittié L**, Fisher GJ. Isolation and culture of skin fibroblasts. *Methods Mol Med*, 117, 83-98, 2005. Review.
7. **Rittié L**, Varani J, Kang S, Voorhees JJ, Fisher GJ. Retinoid-induced epidermal hyperplasia is mediated by epidermal growth factor receptor activation *via* specific induction of its ligands heparin binding-EGF and amphiregulin in human skin *in vivo*. *J Invest Dermatol*, 126 (4). 732-739, 2006.
8. Varani J, Dame MK, **Rittié L**, Fligel SEG, Kang S, Fisher GJ, Voorhees JJ. Decreased collagen production in chronologically aged skin: roles of age-dependent alteration in fibroblast function and defective mechanical stimulation. *Am J Pathol*, 168 (6), 1861-1868, 2006.
9. **Rittié L**, Kansra S, Stoll SW, Li Y, Gudjonsson JE, Shao Y, Michael LE, Fisher GJ, Johnson TM, Elder JT. Differential ErbB1 Signaling in Squamous Cell versus Basal Cell Carcinoma of the Skin. *Am J Pathol*, 170 (6), 2089-2099, 2007.

### Peer-Reviewed Academic Publications

1. **Rittié L**: DEA Report. *Interactions monocytes - collagène de type I : rôle de la matrice extracellulaire dans l'inflammation* [Monocytes - type I collagen interactions: role of the extracellular matrix in inflammation], Universités Henri Poincaré, Nancy I - Reims Champagne-Ardenne, France, 1997.
2. **Rittié L**: Ph.D. Thesis. *Influence des modifications post-traductionnelles des protéines sur les interactions cellules - matrice extracellulaire et le métabolisme des fibroblastes* [Effect of post-traductionnal modifications of proteins on cell – matrix interactions and fibroblast metabolism]. Université de Reims Champagne-Ardenne, France, 2001.

### Book Chapters

1. **Rittié L**, Fisher GJ. Isolation and culture of skin fibroblasts. In: *Fibrosis Research: Methods and Protocols* (Varga J, Brenner SA, Phan SH, eds), Humana Press Inc., Totowa, NJ, pp 83-98, 2005.
2. **Rittié L**, Fisher GJ, Voorhees JJ. Retinoid therapy for photoaging. In: *Skin Ageing* (Gilchrist BA, Krutman J, eds), Springer-Verlag, Berlin-Heidelberg-New York, pp 143-156, 2006.
3. **Rittié L**, Griffiths CEM, Fisher GJ. Anti-aging effects of retinoids and mechanisms of action. In: *Retinoids and Carotenoids in Dermatology* (Vahlquist A, Duvic M, eds), Informa Healthcare USA Inc., New York, NY, pp 77-102, 2007.

*Abstracts, Preliminary Communications*

1. **Rittié L**, Varani J, Fisher GJ, Voorhees JJ. Retinoid-induced epidermal hyperplasia is mediated by epidermal growth factor receptor activation *via* specific induction of its ligands heparin binding-EGF and amphiregulin in human skin *in vivo*. *J Invest Dermatol*, 122 (3): A49, 2004.
  2. **Rittié L**, Shao Y, Kang S, Voorhees JJ, Fisher GJ. Human skin expresses both estrogen receptor alpha and beta, and responds to topical estradiol by production of type I procollagen expression. *J Invest Dermatol*, 124 (s4): A43, 2005.
  3. **Rittié L**, Kansra S, Li Y, Stoll SW, Michael LE, Shao Y, Boyd C, Johnson TM, Fisher GJ, Elder JT. Differential autocrine ErbB signaling in SCC *vs.* BCC. *J Invest Dermatol*, 124 (s4): A21, 2005.
  4. **Rittié L**, Voorhees JJ, Fisher GJ. Genomic actions of estrogen receptors-alpha and beta are limited by their low levels of expression in primary human dermal fibroblasts. *J Invest Dermatol*, 126 (s4): 81, 2006.
  5. Stoll SW, Johnson JL, **Rittié L**, Elder JT. Differential expression and function of EGF receptor ligands influence autocrine keratinocyte proliferation and morphology. *J Invest Dermatol*, 126 (s4): 95, 2006.
  6. **Rittié L**, Kang S, Voorhees JJ, Fisher GJ. Topical 17- $\beta$ -estradiol stimulates collagen synthesis in sun-protected aged skin, but not in photoaged human skin *in vivo*. *J Invest Dermatol*, 127 (s1): s51, 2007.
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