PROGRAM  
September 19-22, 2013,  
The Bolger Center, Potomac, MD, USA

THURSDAY, SEPTEMBER 19

4:00pm – 7:30pm  Arrival and Registration  
*Owney’s Room, Hotel Check-In Building*

5:30pm – 7:30pm  Dinner  
*Guest Dining Room, Osgood Building*

7:30pm – 8:40pm  Keynote Lecture  
*Stained Glass Hall, Osgood Building*

  7:30pm – 7:40pm  Welcome Remarks

  7:40pm – 8:40pm  Qingyu Wu (Lerner Research Institute, The Cleveland Clinic, USA)  
“The membrane-anchored serine protease corin: from physiology to pathology” (Abstract #1)

8:40pm – 10:30pm  Welcome Networking Reception  
*Lounge Terrace, Hotel Check-In Building*

FRIDAY, SEPTEMBER 20

7:30am – 9:00am  Breakfast  
*Guest Dining Room, Osgood Building*

9:00am – 10:20am  Session I: Membrane-Anchored Serine Proteases as Guardians of Epithelial Integrity  
*Stained Glass Hall, Osgood Building*

  **Co-Discussion Leaders:**  
  *Edith Hummler* (Universite de Lausanne, Switzerland)  
  *Daniel Madsen* (NIDCR, National Institutes of Health, Bethesda, MD, USA)
FRIDAY, SEPTEMBER 20 (continued)

9:00am – 9:40am  Edith Hummler (Universite de Lausanne, Switzerland)
“The channel-activating protease 1 (CAP1/Prss8) is required for placental labyrinth maturation” (Abstract #2)

9:40am – 10:00am  Makiko Kawaguchi (University of Miyazaki, Japan)
“Hepatocyte growth factor activator inhibitor type 1 (HAI-1) is required for maintaining keratinocyte morphology through regulation of PAR-2-dependent p38 MAP kinase signaling” (Abstract #3)

10:00am – 10:20am  Benjamin Delprat (Inserm, Paris, France)
“TMPRSS3, a type II serine protease, is a key component of the cochlear hair cell activity” (Abstract #4)

10:20am – 10:40am  Coffee Break

10:40am – 12:00pm  Session II: Membrane-Anchored Serine Proteases in Development and Reproduction

Stained Glass Hall, Osgood Building

Co-Discussion Leaders:
Erik Camerer (INSERM, Paris, France)
Gina Zoratti (Wayne State University, Detroit, MI, USA)

10:40am – 11:20am  Erik Camerer (INSERM, Paris, France)
“Membrane-anchored serine proteases as agonists for protease-activated receptors” (Abstract #5)

11:20am – 11:40am  Roman Szabo (NIDCR, National Institutes of Health, Bethesda, MD, USA)
“Serine protease matriptase and protease-activated receptor (PAR)-2 play complementary roles in mouse embryonic development” (Abstract #6)

11:40am – 12:00pm  Kathryn H. Driesbaugh (University of Maryland School of Medicine, Baltimore, MD, USA)
“The GPI-anchored serine protease testisin activates protease-activated receptor-2” (Abstract #7)
FRIDAY, SEPTEMBER 20 (continued)

12:00pm – 1:30pm  Lunch

*Guest Dining Room, Osgood Building*

1:30pm – 3:30pm  Free Time

3:30pm – 6:10pm  Session III: Regulation of Membrane-Anchored Serine Proteases: synthesis, zymogen activation, inhibition, trafficking and beyond

*Stained Glass Hall, Osgood Building*

**Co-Discussion Leaders:**

Hiroaki Kataoka (University of Miyazaki, Japan)
Lasse Holt (University of Copenhagen, Denmark)

3:30pm – 4:10pm  Hiroaki Kataoka (University of Miyazaki, Japan)

“Roles for HAI-1, a cell surface inhibitor of membrane-anchored serine proteases, in epithelial integrity and cancer progression” (Abstract #8)

4:10pm – 4:30pm  Salma Elghadban (University of East Anglia, Norwich, UK)

“Matriptase activity is required for the re-establishment of MDCK-I barrier function and integrity in a claudin-2 independent manner” (Abstract #9)

4:30pm – 4:50pm  Marguerite Buzza (University of Maryland School of Medicine, Baltimore, MD, USA)

“Prostasin is required for matriptase activation during the formation and maintenance of the intestinal epithelial barrier” (Abstract #10)

4:50pm – 5:10pm  Coffee Break

5:10pm – 5:30pm  Stine Friis (NIDCR, National Institutes of Health, Bethesda, MD, USA)

“A matriptase-prostasin reciprocal zymogen activation complex with unique features: prostasin as a non-enzymatic co-factor for matriptase activation” (Abstract #11)
FRIDAY, SEPTEMBER 20 (continued)

5:30pm – 5:50pm  
Chen Yong Lin (Georgetown University, Washington DC, USA)  
“Matriptase autoactivation and inhibition, insights into how matriptase processes substrates” (Abstract #12)

5:50pm – 6:10pm  
Anna de Regt (Massachusetts Institute of Technology, Cambridge, MA, USA)  
“Allosteric activation of DegS: How an activation signal propagates across an enzyme” (Abstract #13)

6:10pm – 7:30pm  
Dinner  
Guest Dining Room, Osgood Building

7:30pm – 9:30pm  
Poster Session and Reception  
Overland Room, Hotel Check-In Building

SATURDAY, SEPTEMBER 21

7:30am – 9:00am  
Breakfast  
Guest Dining Room, Osgood Building

9:00am – 10:40am  
Session IV: Identification of Target Substrates for Membrane-Anchored Serine Proteases: Genomic, Proteomic, and Biochemical Approaches  
Stained Glass Hall, Osgood Building

Co-Discussion Leaders:  
Charles Craik (University of California, San Francisco, CA, USA)  
Yutaka Kakizoe (Kumamoto University, Kumamoto, Japan)

9:00am – 9:40am  
Charles Craik (University of California, San Francisco, CA, USA)  
“Using pericellular proteolysis as a functional biomarker for monitoring tumorigenesis” (Abstract #14)
9:40am – 10:20am  Mingdong Huang (Fujian Institute of Research on the Structure of Matter, Fujian, China)  “Structural basis of the regulation of matriptase proteolytic activity” (Abstract #15)

10:20am – 10:40am  George Caughey (University of California, San Francisco, CA, USA)  “On “living fossils” and the origins of mast cell and basophil tryptases as membrane-anchored serine proteases” (Abstract #16)

10:40am – 11:00am  Coffee Break

11:00am – 12:20pm  Session V: Membrane-Anchored Serine Proteases as Regulators of Homeostasis  
*Stained Glass Hall, Osgood Building*

   **Co-Discussion Leaders:**
   Shaun Coughlin (University of California, San Francisco, CA, USA)  
   Erik Martin (University of Maryland School of Medicine, Baltimore, MD, USA)

11:00am – 11:40am  Shaun Coughlin (University of California, San Francisco, CA, USA)  “Does protease-activated receptor-2 contribute to matriptase function in epithelia?” (Abstract #17)

11:40am – 12:00pm  Alvin H. Schmaier (Case Western Reserve University, Cleveland, OH, USA)  “Prolylcarboxypeptidase promotes angiogenesis and vascular repair while protecting from hypertension and arterial thrombosis risk” (Abstract #18)

12:00pm – 12:20pm  Keren S. Borensztajn (INSERM, Paris, France)  “Membrane-anchored serine protease matriptase triggers fibroproliferative responses in human fibroblasts: potential implication in pulmonary fibrosis” (Abstract #19)
SATURDAY, SEPTEMBER 21 (continued)

12:20pm – 2:00pm  Lunch  
*Guest Dining Room, Osgood Building*

2:00pm – 4:40pm  Session VI: Membrane-Anchored Serine Proteases in Human Diseases  
*Stained Glass Hall, Osgood Building*

**Co-Discussion Leaders:**  
**Karin List** (Wayne State University, Detroit, MI, USA)  
**Hao Wang** (Lerner Research Institute, The Cleveland Clinic, Cleveland, OH, USA)

2:00pm – 2:40pm  **Karin List** (Wayne State University, Detroit, MI, USA)  
“Matriptase-mediated c-met signaling in breast cancer” (Abstract #20)

2:40pm – 3:00pm  **Katiuchia Sales** (NIDCR, National Institutes of Health, Bethesda, MD, USA)  
“Non-hematopoietic PAR-2 is essential for matriptase-driven pre-malignant progression and potentiation of ras-mediated squamous cell carcinogenesis” (Abstract #21)

3:00pm – 3:20pm  **Feng Pai Chou** (Georgetown University, Washington, DC, USA)  
“Matriptase expression may contribute to the pathogenesis of malignant B-cell lymphomas” (Abstract #22)

3:20pm – 3:40pm  Coffee Break

3:40pm – 4:00pm  **Nathan Goldfarb** (University of Florida, Gainesville, FL, USA)  
“Hip1, a novel serine protease drug target for tuberculosis” (Abstract #23)

4:00pm – 4:20pm  **James Reihill** (Queens University Belfast, Northern Ireland)  
“Targeting trypsin-like proteases in cystic fibrosis airways: a mechanism to restore mucociliary function?” (Abstract #24)
SATURDAY, SEPTEMBER 21 (continued)

4:20pm – 4:40pm  David Wilkinson (Newcastle University, Newcastle, UK)  
“Type II transmembrane serine proteases are involved in the pathological destruction of cartilage in osteoarthritis” (Abstract #25)

5:00pm – 6:00pm  Business Meeting  
(Poster Awards, Conference Evaluation, Organization of Next Meeting)  
*Overland Room, Hotel Check-In Building*

6:00pm – 8:00pm  Dinner  
*Guest Dining Room, Osgood Building*

SUNDAY, SEPTEMBER 22

7:00am – 8:30am  Final Networking Breakfast and Departure  
*Guest Dining Room, Osgood Building*
## POSTER SESSION

**Friday, September 20, 2013**

**7:30-9:30pm**

**Overland Room**

**The Bolger Center, Potomac, MD, USA**

### POSTER BOARDS

<table>
<thead>
<tr>
<th>Board/Abstract #</th>
<th>Presenting Author</th>
<th>Institution</th>
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</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Makiko Kawaguchi</td>
<td>University of Miyazaki, Japan</td>
<td>Hepatocyte growth factor activator inhibitor type 1 (HAI-1) is required for maintaining keratinocyte morphology through regulation of PAR-2-dependent p38 MAP kinase signaling</td>
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<td>26</td>
<td>Petr Busek</td>
<td>1st Faculty of Medicine, Charles University in Prague, Institute of Biochemistry and Experimental Oncology</td>
<td>Expression of fibroblast activation protein in human glioblastomas and its role in the interaction of glioma cells with the proteins of extracellular matrix</td>
</tr>
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<td>27</td>
<td>Lasse Holt</td>
<td>Department of Cellular and Molecular Medicine, University of Copenhagen</td>
<td>Development of a buffer allowing detection of active matriptase in tissue lysates using a biotinylated chloromethyl ketone peptide</td>
</tr>
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<td>28</td>
<td>Yutaka Kakizoe</td>
<td>Department of Nephrology, Kumamoto University Graduate School of Life Sciences, Kumamoto, Japan</td>
<td>Plasmin plays deleterious roles in aldosterone-induced kidney injury: a beneficial effect of serine protease inhibitor</td>
</tr>
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<td>29</td>
<td>Chun-Jung Ko</td>
<td>Department of Biochemistry and Molecular Biology, College of Medicine, National Taiwan University</td>
<td>HAI-2 suppresses the tumor growth and metastasis of prostate cancer through regulation of matriptase</td>
</tr>
<tr>
<td>30</td>
<td>Sylvain Le Gall</td>
<td>INSERM, Paris Cardiovascular Research Center, Paris, France</td>
<td>Molecular determinants of Protease-activated receptor 2 activation by matriptase</td>
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<td>Melody Lee</td>
<td>University of California, San Francisco, CA</td>
<td>Engineering human recombinant antibodies from a biased antibody library to inhibit and target prostate cancer related protease TMPRSS2</td>
</tr>
<tr>
<td>32</td>
<td>Stephen Leppla</td>
<td>Laboratory of Parasitic Diseases, NIAID, NIH</td>
<td>Engineering Anthrax Toxin Variants That Exclusively Form Octamers, and Their Application to Targeting Tumors Expressing matrix metalloproteases and urokinase</td>
</tr>
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<td>33</td>
<td>Hsin-Ying Lin</td>
<td>Department of Biochemistry and Molecular Biology, College of Medicine, National Taiwan University</td>
<td>Matriptase is involved in COX-2-induced Prostate Cancer Cell Invasion</td>
</tr>
<tr>
<td>34</td>
<td>Daniel Madsen</td>
<td>Proteases and Tissue Remodeling Section, NIDCR, NIH</td>
<td>Tmprss13-deficient mice display impaired skin barrier function</td>
</tr>
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<td>35</td>
<td>Erik Martin</td>
<td>University of Maryland School of Medicine, Baltimore, MD</td>
<td>Targeting the Enzymatic Activities of Membrane-anchored Serine Proteases Using Engineered Anthrax Toxins</td>
</tr>
<tr>
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<td>Selen Muratoglu</td>
<td>University of Maryland School of Medicine, Baltimore, MD</td>
<td>LRP1 protects the vasculature by regulating levels of Connective Tissue Growth Factor and HtrA1</td>
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<td>Department of Cellular and Molecular Medicine, University of Copenhagen</td>
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<td>38</td>
<td>Hao Wang Qingyu Wu</td>
<td>Department of Chemistry, Cleveland State University, Cleveland, OH</td>
<td>Role of N-Glycans in Regulating Corin Cell Surface Expression, Zymogen Activation and Proteolytic Shedding</td>
</tr>
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<td>39</td>
<td>Jehng-Kang Wang</td>
<td>National Defense Medical Center, Taipei, Taiwan</td>
<td>Matriptase expression and zymogen activation in human epidermis and pilosebaceous unit</td>
</tr>
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<td>40</td>
<td>Hanjiang Yang</td>
<td>Department of Vascular Biology and Thrombosis Research, Medical University of Vienna, Austria</td>
<td>The A+ helix of mPCI, which is removed by mTestisin cleavage, is cell penetrating peptide and responsible for internalization of mPCI by Jurkat cells</td>
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<td>Gina Zoratti</td>
<td>Department of Oncology, Wayne State University School of Medicine, Detroit MI</td>
<td>Matriptase Mediated Signaling in Breast Cancer</td>
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