Meeting Program
September 14 – 17, 2017
The Bolger Center, Potomac, MD, USA

THURSDAY, SEPTEMBER 14

4:00 pm–7:30 pm  **Arrivals and Meeting Check-in**
Owney Lounge, Hotel across from front desk

5:30 pm–7:15 pm  **Dinner**
Guest dining room, Osgood Building

7:30 pm–7:40 pm  **Welcome Remarks**
Room 17, Franklin Building

7:40 pm–8:40 pm  **Keynote Lecture**
Room 17, Franklin Building

**Toni Antalis**, University of Maryland, School of Medicine, Baltimore, USA

Novel insights into the role of the membrane-anchored serine protease testisin: From angiogenesis to ovarian cancer (1)

8:40 pm–10:30 pm  **Welcome Networking Reception**

Pony Express Patio, Hotel (enter through the lobby)
FRIDAY, SEPTEMBER 15

7:30 am-8:45 am  Breakfast for overnight guests  
Guest dining room, Osgood Building

Breakfast for commuters  
Continental breakfast available at the break station in the Franklin Building.

9:00 am–12:05 pm  Session I:  
Membrane-Anchored Serine Proteases: Structure, Specificity and Regulation  
Room 17, Franklin Building

Co-discussion Leaders:  
Karin List and Signe Thomsen

9:00 am–9:30 am  Charles Craik, UCSF, San Francisco, USA  
Targeting dynamic protein targets for structural and functional insight (2)

9:30 am-10:00 am  Roman Szabo, NIH, Bethesda, USA  
Matriptase and prostasin – not your typical proteolytic cascade (3)

10:00 am-10:30 am  John Hooper, Mater Research Inst., University of Queensland, Australia  
Understanding the biology of a protease activated cellular receptor reveals potential avenues for targeting disseminated cancer (4)

10:30 am-10:45 am  Coffee break  
Break station in hallway

10:45 am-11:05 am  Karl Chai, University of Central Florida College of Medicine, USA  
What does matriptase not cut? (5)

11:05 am-11:25 am  Hannah Limburg, Institute of Virology, University of Marburg, Germany  
The protease specificity of influenza A virus hemagglutinin monobasic cleavage site in human and murine airway epithelial cells (6)

11:25 am-11:45 am  Sébastien Dion, University Sherbrook, Canada  
Transcriptome analysis of human livers and cell lines reveals expression of TMPRSS6 isoforms and mutants with altered activity (7)

11:45 am-12:05 pm  Can Wang, Soochow University, Suzhou, China  
Transcriptional regulation of corin expression in the pregnant uterus (8)
FRIDAY, SEPTEMBER 15 (continued)

12:05 pm-2:15 pm  **Lunch & Free Time for Networking**  
Lunch is available until 1:30 pm in the Guest dining room, Osgood Building

2:30 pm-4:00 pm  **Session II:**  
**Membrane-Anchored Serine Proteases: Biosynthesis, Trafficking and Cellular Mechanisms**  
Room 17, Franklin Building  
Co-discussion Leaders:  
**Roman Szabo and Hao Wang**

2:30 pm-3:00 pm  **Chen-Yong Lin**, Georgetown University, Washington DC, USA  
*Matriptase life cycle features three distinct peptide bond cleavages* (9)

3:00 pm-3:20 pm  **Annika Nonboe**, University of Copenhagen, Denmark  
*HAI-2 stabilizes, inhibits and regulates SEA-cleavage-dependent secretory transport of matriptase* (10)

3:20 pm-3:40 pm  **Dongeun Park**, Seoul National Univ, Seoul, South Korea  
*JNK inhibitor-induced ectodomain shedding of Prss14/epithin is mediated by PKCβII and TACE translocation to the membrane* (11)

3:40 pm-4:00 pm  **Moon Kim**, Inha University, Incheon, South Korea  
*Epithin/Prss14 intercellular domain released by the regulated intramembrane proteolysis is a transcriptional regulator of cell migration and invasion* (12)

4:00 pm-4:15 pm  **Coffee break**  
Break station in hallway

4:15 pm-6:05 pm  **Session III:**  
**Membrane-Anchored Serine Proteases in Development and Physiology**  
Room 17, Franklin Building  
Co-discussion Leaders:  
**Hiroaki Kataoka and Stine Friis**

4:15 pm-4:45 pm  **Shaun Coughlin**, UCSF, San Francisco, USA  
*Roles of Protease-Activated Receptor-2 activity in Zebrafish skin—a model epithelial tissue* (13)
FRIDAY, SEPTEMBER 15 (continued)

4:45 pm-5:15 pm  **Eric Camerer**, INSERM, Paris, France  
*PAR2 signaling by membrane-anchored serine proteases: mechanisms of engagement and developmental consequences (14)*

5:15 pm-5:45 pm  **Edith Hummler**, University of Lausanne, Switzerland  
*Regulation of ENaC by channel-activating proteases (15)*

5:45 pm-6:05 pm  **Ce Zhang**, Soochow University, Suzhou, China  
*Molecular studies of corin expression in the apical membrane of polarized renal epithelial cells (16)*

6:05 pm-7:15 pm  **Dinner**  
Guest dining room, Osgood Building

7:30 pm-10:00 pm  **Poster Session & Reception**  
Room 18/19, Franklin Building

**Poster presentation schedule**  
See pages 8-10 for a list of poster presentations and board assignments.  
- **7:30-8:30 pm**, odd-numbered boards presented  
- **8:30-9:30 pm**, even-numbered boards presented  
- **9:30-10:00 pm**, all presenters are free to view posters they have not yet visited

**Attention poster presenters:**  
Posters must be removed by **12:00 pm** on Saturday, before the lunch break.
SATURDAY, SEPTEMBER 16

7:30 am-8:45 am  Breakfast for overnight guests
Guest dining room, Osgood Building

Breakfast for commuters
Continental breakfast available at the break station in the Franklin Building.

9:00 am-12:15 pm  Session IV:
Membrane-Anchored Serine Proteases in Metabolism and Homeostasis
Room 17, Franklin Building

Co-discussion Leaders:
Shaun Coughlin and Koji Yamamoto

9:00 am-9:30 am  Delphine Meynard, INSERM, Toulouse, France
Matriptase-2: master regulator of iron homeostasis (17)

9:30 am-9:50 am  An-Sheng Zhang, Oregon Health & Science University, Portland, USA
Matriptase-2 cleaves multiple components of the hepcidin induction pathway to suppress hepcidin expression (18)

9:50 am-10:10 am  Hiroaki Kataoka, Faculty of Medicine, University of Miyazaki, Japan
HAI-2 is essential for the maintenance of intestinal epithelium in mice (19)

10:10 am-10:30 am  Chuan-Jin Wu, National Cancer Institute, NIH, Bethesda, USA
HAI-2, Matriptase, EpCAM and Claudin-7 coordinately regulate intestinal epithelial homeostasis (20)

10:30 am-10:45 am  Coffee break
Break station in hallway

10:45 am-11:15 am  Thomas R. Kleyman, University of Pittsburg, USA
Proteases and epithelial sodium channels: Translating basic findings to the bedside (21)

11:15 am-11:35 am  Stine Friis, NIH, USA and University of Copenhagen, Denmark
Matriptase zymogen supports epithelial development, homeostasis and regeneration (22)

11:35 am-11:55 am  Jehng-Kang Wang, National Defense Medical Center, Taipei, Taiwan
Increased matriptase zymogen activation by UV irradiation protects keratinocyte from cell death (23)
SATURDAY, SEPTEMBER 16 (continued)

11:55 am-12:15 pm  Robert Lazarus, Genentech, South San Francisco, USA  
Mechanism of allosteric activation of tryptase: Dual functionality of tryptase protomers as both proteases and cofactors (24)

12:15 pm-1:45 pm  Lunch & Free Time for Networking  
Lunch is available until 1:30 pm in the Guest dining room, Osgood Building

2:00 pm-5:05 pm  Session V: Membrane-Anchored Serine Proteases in Cancer and Host Defense  
Room 17, Franklin Building  
Co-discussion Leaders: Charles Craik and Gregory Conway

2:00 pm-2:30 pm  James Janetka, Washington University, St. Louis, USA  
Resistance to anticancer therapy derived from serine protease activation of growth factors (25)

2:30 pm-2:50 pm  Gregory Conway, University of Maryland, Baltimore, USA  
Expression of testisin reduces ovarian tumor metastasis through a PAR-2-angiopoietin signaling pathway (26)

2:50 pm-3:10 pm  Elaine Da Silva, Ribeirao Preto Medical School, Univ. of São Paulo, Brazil  
Lympho-epithelial Kazal-type inhibitor (LEKTI) inhibits matriptase-dependent premalignant phenotype (27)

3:10 pm-3:30 pm  Makiko Kawaguchi, University of Miyazaki, Miyazaki, Japan  
Accelerated tumor formation induced by HAI-1 deficiency in the ApcMin/+ model is prevented by concomitant deficiency of PAR-2 (28)

3:30 pm-3:45 pm  Coffee break  
Break station in hallway

3:45 pm-4:05 pm  Fausto Varela, Wayne State University, Detroit, USA  
TMPRSS13 as a modulator of colorectal cancer (29)

4:05 pm-4:25 pm  Denis Belitškin, Institute of Biochemistry, University of Helsinki, Finland  
Type II transmembrane serine protease hepsin is essential for breast cancer cell survival (30)
SATURDAY, SEPTEMBER 16 (continued)

4:25 pm-4:45 pm  **Meng Liu**, Cyrus Tang Hematology Center, Soochow Univ., Suzhou, China  
*Human airway trypsin-like protease 4 in acute myeloid leukemia (31)*

4:45 pm-5:05 pm  **Anne Harbig**, Institute of Virology, University of Marburg, Germany  
*Distribution of trypsin-like serine proteases in the murine respiratory tract and their putative role in proteolytic activation of influenza A virus (32)*

5:05 pm – 6:05 pm  **Business Meeting**  
Room 17, Franklin Building  
*All conference participants are requested to attend.*  
Agenda includes poster awards, conference evaluation and organization of 2019 meeting.

6:05 pm – 8:00 pm  **Dinner**  
Guest dining room, Osgood Building

SUNDAY, SEPTEMBER 17

7:00 am – 8:30 am  **Final networking breakfast**  
Guest dining room, Osgood Building  
*Departures, hotel check out by 11:00 am.*  
The Bolger Center Hotel front desk team are happy to assist you in arranging a cab to the airport.
<table>
<thead>
<tr>
<th>Board Number</th>
<th>Title</th>
<th>Abstract Number</th>
<th>First Name</th>
<th>Last Name</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type II transmembrane serine protease hepsin is essential for breast cancer cell survival</td>
<td>30</td>
<td>Denis</td>
<td>Belitškin</td>
<td>Biomedicum Helsinki</td>
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<tr>
<td>2</td>
<td>Matriptase cleaves activated Her-2 at the plasma membrane and confers Herceptin resistance</td>
<td>33</td>
<td>Li-Mei</td>
<td>Chen</td>
<td>Univ. of Central Florida College of Medicine, Orlando</td>
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<tr>
<td>3</td>
<td>JNK inhibitor-induced ectodomain shedding of Prss14/epithin is mediated by PKCβII and TACE translocation to the membrane.</td>
<td>11</td>
<td>Young</td>
<td>Cho</td>
<td>Seoul National Univ., Seoul</td>
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<td>4</td>
<td>Expression of Testisin Reduces Ovarian Tumor Metastasis through a PAR-2 - Angiopoietin Signaling Pathway.</td>
<td>26</td>
<td>Gregory</td>
<td>Conway</td>
<td>Univ. of Maryland, Baltimore</td>
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<tr>
<td>5</td>
<td>Transcriptome analysis of human livers and cell lines reveals expression of TMPRSS6 isoforms and mutants with altered activity</td>
<td>7</td>
<td>Sébastien</td>
<td>Dion</td>
<td>Université de Sherbrooke, Canada</td>
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<td>6</td>
<td>The Transmembrane Serine Protease HAT-like 4 Is Important for Epidermal Barrier Function to Prevent Body Fluid Loss in Mice</td>
<td>34</td>
<td>Ningzheng</td>
<td>Dong</td>
<td>Soochow Univ., Suzhou</td>
</tr>
<tr>
<td>7</td>
<td>Distribution of trypsin-like serine proteases in the murine respiratory tract and their putative role in proteolytic activation of influenza A virus</td>
<td>32</td>
<td>Anne</td>
<td>Harbig</td>
<td>Philipps-Univ., Marburg</td>
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## Poster Presentations

### Poster presentation schedule
- 7:30-8:30 pm, odd-numbered boards presented
- 8:30-9:30 pm, even-numbered boards presented
- 9:30-10:00 pm, open viewing (no required manning)

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<tr>
<td>8</td>
<td>Accelerated tumor formation induced by Hai-1 deficiency in the ApcMin/+ model is prevented by concomitant deficiency of Par-2</td>
<td>28</td>
<td>Makiko</td>
<td>Kawaguchi</td>
<td>Univ. of Miyazaki, Miyazaki</td>
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<tr>
<td>9</td>
<td>The protease specificity of Influenza A virus hemagglutinin with monobasic cleavage site in human and murine airway epithelial cells</td>
<td>6</td>
<td>Hannah</td>
<td>Limburg</td>
<td>Philipps-Univ., Marburg</td>
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<tr>
<td>10</td>
<td>Human Airway Trypsin-Like Protease 4 in Acute Myeloid Leukemia</td>
<td>31</td>
<td>Meng</td>
<td>Liu</td>
<td>Soochow Univ., Suzhou</td>
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<tr>
<td>11</td>
<td>Genetic Variants in NPPA are Associated with Ventricular Septal Defects</td>
<td>35</td>
<td>Xuefei</td>
<td>Ma</td>
<td>The Affiliated Nanjing Children's Hospital of Nanjing Medical Univ., Nanjing</td>
</tr>
<tr>
<td>12</td>
<td>HAI-2 stabilizes, inhibits and regulates SEA-cleavage-dependent secretory transport of matriptase.</td>
<td>10</td>
<td>Annika</td>
<td>Nonboe</td>
<td>Univ. of Copenhagen</td>
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<td>13</td>
<td>Involvement of TMPRSS11A in carcinoma initiation and progression</td>
<td>36</td>
<td>Manuella</td>
<td>Pires</td>
<td>Univ. of Sao Paulo</td>
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<td>14</td>
<td>Global Profiling of Extracellular Proteolysis as a Molecular Stratification Tool for Breast Cancer</td>
<td>37</td>
<td>Eugenia</td>
<td>Salcedo</td>
<td>Univ. of California, San Francisco</td>
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<td>15</td>
<td>Identification of inhibitory antibodies for active urokinase plasminogen activator (uPA)</td>
<td>38</td>
<td>Natalia</td>
<td>Sevillano</td>
<td>Univ. of California, San Francisco</td>
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<td>16</td>
<td>Is induced dissociation of inhibitory matriptase-HAI-complexes an unidentified key player in epithelial carcinogenesis?</td>
<td>39</td>
<td>Signe</td>
<td>Skovbjerg</td>
<td>Univ. of Copenhagen</td>
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<td>17</td>
<td>TMPRSS13 as a Modulator of Colorectal Cancer</td>
<td>29</td>
<td>Fausto</td>
<td>Varela</td>
<td>Wayne State Univ., Detroit</td>
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<td>18</td>
<td>Transcriptional Regulation of Corin Expression in the Pregnant Uterus</td>
<td>8</td>
<td>Can</td>
<td>Wang</td>
<td>Soochow Univ., Suzhou</td>
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<td>19</td>
<td>N-glycosylation in Corin Intracellular Trafficking and Cell Surface Expression</td>
<td>40</td>
<td>Hao</td>
<td>Wang</td>
<td>Lerner Research Inst., Cleveland Clinic</td>
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<tr>
<td>20</td>
<td>HAI-2, Matriptase, EpCAM and Claudin-7 Coordinately Regulate Intestinal Epithelial Homeostasis</td>
<td>20</td>
<td>Chuanjin</td>
<td>Wu</td>
<td>National Cancer Inst., Bethesda</td>
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<td>21</td>
<td>HGFA inhibitor type-2 (HAI-2) is required for invasive growth of oral squamous cell carcinoma cells: A loss of function study</td>
<td>41</td>
<td>Koji</td>
<td>Yamamoto</td>
<td>Miyazaki Univ.</td>
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<td>Molecular studies of corin expression in the apical membrane of polarized renal epithelial cells</td>
<td>16</td>
<td>Ce</td>
<td>Zhang</td>
<td>Soochow Univ., Suzhou</td>
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<tr>
<td>23</td>
<td>Identification and Functional Analysis of Corin Variants in Hypertensive Patients</td>
<td>42</td>
<td>Tiantian</td>
<td>Zhou</td>
<td>Cyrus Tang Hematology Center, Soochow University, Suzhou, China</td>
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