EUPERTSTRAIN
EUPERTGENOMICS

Brussels 2022
22nd EUPertStrain-EUPertGenomics meeting
Thursday 15/09/2022 - Friday 16/09/2022

VUB Brussels Health Campus
Auditorium Vanden Driessche
Laarbeeklaan 103
1090 Brussels, Belgium

Organising Committee:
Denis Piérard & Helena Martini
UZ Brussel, Belgium
Qiushui He & Alex-Mikael Barkoff
University of Turku, Finland
### Previous EUPertStrain-EUPertGenomics meetings

<table>
<thead>
<tr>
<th>Edition</th>
<th>Year</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1999</td>
<td>Paris, France</td>
</tr>
<tr>
<td>2</td>
<td>2001</td>
<td>Stockholm, Sweden</td>
</tr>
<tr>
<td>3</td>
<td>2002</td>
<td>Paris, France</td>
</tr>
<tr>
<td>4</td>
<td>2003</td>
<td>Turku, Finland</td>
</tr>
<tr>
<td>5</td>
<td>2004</td>
<td>Stockholm, Sweden</td>
</tr>
<tr>
<td>6</td>
<td>2005</td>
<td>Paris, France</td>
</tr>
<tr>
<td>7</td>
<td>2007</td>
<td>Turku, Finland</td>
</tr>
<tr>
<td>8</td>
<td>2008</td>
<td>Copenhagen, Denmark</td>
</tr>
<tr>
<td>9</td>
<td>2009</td>
<td>Rome, Italy</td>
</tr>
<tr>
<td>10</td>
<td>2010</td>
<td>Bilthoven, The Netherlands</td>
</tr>
<tr>
<td>11</td>
<td>2011</td>
<td>London, United Kingdom</td>
</tr>
<tr>
<td>12</td>
<td>2012</td>
<td>Oslo, Norway</td>
</tr>
<tr>
<td>13</td>
<td>2013</td>
<td>Warsaw, Poland</td>
</tr>
<tr>
<td>14</td>
<td>2014</td>
<td>Copenhagen, Denmark</td>
</tr>
<tr>
<td>15</td>
<td>2015</td>
<td>Brussels, Belgium</td>
</tr>
<tr>
<td>16</td>
<td>2016</td>
<td>Utrecht, The Netherlands</td>
</tr>
<tr>
<td>17</td>
<td>2017</td>
<td>Oslo, Norway</td>
</tr>
<tr>
<td>18</td>
<td>2018</td>
<td>Copenhagen, Denmark</td>
</tr>
<tr>
<td>19</td>
<td>2019</td>
<td>Rome, Italy</td>
</tr>
<tr>
<td>20</td>
<td>2020</td>
<td>Paris, France (virtual meeting)</td>
</tr>
<tr>
<td>21</td>
<td>2021</td>
<td>Ljubljana, Slovenia (virtual meeting)</td>
</tr>
</tbody>
</table>
Programme  
Thursday 15/09/2022  

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00-12:30</td>
<td>Registration, poster setup, lunch</td>
</tr>
<tr>
<td>12:00-12:30</td>
<td>Virtual setup, guidelines and welcome</td>
</tr>
<tr>
<td>12:30-13:00</td>
<td>Welcome address</td>
</tr>
<tr>
<td>13:00-13:20</td>
<td><strong>Special topic: B. parapertussis</strong></td>
</tr>
<tr>
<td>13:20-13:40</td>
<td>A novel and versatile immune assay to distinguish and monitor vaccination and infection-induced antibody-mediated recognition of <em>Bordetella pertussis</em> Janeri Fröberg (virtual)</td>
</tr>
<tr>
<td>13:40-14:00</td>
<td>Validation of ELITe InGenius® and Bordetella ELITe MGB® Kit for the molecular diagnosis of <em>Bordetella pertussis</em> and related species Helena Martini</td>
</tr>
<tr>
<td>14:00-14:20</td>
<td>First results from an External Quality Assessment scheme targeting the Antimicrobial Susceptibility Testing among the European Pertussis Reference Laboratories Alex-Mikael Barkoff</td>
</tr>
<tr>
<td>14:20-14:40</td>
<td>The first external quality assurance scheme for <em>Bordetella pertussis</em> vaccine antigen expression Norman Fry</td>
</tr>
<tr>
<td>14:40-15:10</td>
<td>Coffee break, poster viewing</td>
</tr>
<tr>
<td>15:10-15:30</td>
<td>Anti-<em>Bordetella pertussis</em> bactericidal antibody responses to natural infection or vaccines in infants, children and adults Andrew Gorringe</td>
</tr>
<tr>
<td>15:30-15:50</td>
<td>Effectiveness of pertussis vaccination in pregnancy to prevent hospitalisation in infants aged &lt;2 months and effectiveness of both primary vaccination and mothers vaccination in pregnancy in infants aged 2-11 months. Lore Merdrignac</td>
</tr>
<tr>
<td>15:50-16:10</td>
<td>An update on the novel, live attenuated pertussis vaccine BPZE1 Camille Locht</td>
</tr>
<tr>
<td>16:10-16:30</td>
<td>An update on maternal pertussis vaccination in England; what’s polio got to do with it? Helen Campbell</td>
</tr>
<tr>
<td>16:30-17:00</td>
<td>Open discussion, closing remarks, group photo</td>
</tr>
<tr>
<td>18:00-22:00</td>
<td>Social event and dinner: dine-around guided walking tour</td>
</tr>
</tbody>
</table>
Programme
Friday 16/09/2022

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-09:10</td>
<td>Virtual setup and guidelines</td>
<td></td>
</tr>
<tr>
<td>09:10-09:30</td>
<td><strong>Biology and evolution of <em>B. pertussis</em></strong></td>
<td>Noémie Lefrancq (virtual)</td>
</tr>
<tr>
<td>09:30-09:50</td>
<td>Estimating the spatial dynamics of <em>Bordetella pertussis</em>, from local transmission to global dissemination</td>
<td>Sylvain Brisse (virtual)</td>
</tr>
<tr>
<td>09:50-10:10</td>
<td>Emergence and dissemination of pertactin-deficient <em>Bordetella pertussis</em> carrying an unusual mechanism of pertactin disruption in Spain</td>
<td>Juan José González-López (virtual)</td>
</tr>
<tr>
<td>10:10-10:30</td>
<td>Alterations in the expression of <em>Bordetella pertussis</em> virulence factors in relation to the use of acellular pertussis vaccine in Finland</td>
<td>Qiushui He</td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>11:00-11:30</td>
<td>PT makes the nasopharynx to a replication niche for <em>B. pertussis</em>, where FhaB and FIM are critical for transmission</td>
<td>Peter Sebo</td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>EUPertStrain V Study</td>
<td>Qiushui He</td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>Organisers’ remarks</td>
<td></td>
</tr>
<tr>
<td>12:00-13:00</td>
<td>Lunch</td>
<td></td>
</tr>
</tbody>
</table>

**Session 4: Epidemiology**
Chair: Camille Locht, Jussi Mertsola

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00-13:20</td>
<td>Pertussis surveillance and vaccine studies in Sweden</td>
<td>Bernice Aronsson Emma Appelqvist (virtual)</td>
</tr>
<tr>
<td>13:20-13:40</td>
<td><em>Bordetella pertussis</em> notifications in the Netherlands before and during the COVID-19 pandemic</td>
<td>Rob Mariman (virtual)</td>
</tr>
<tr>
<td>13:40-14:00</td>
<td>Populational changes of <em>Bordetella</em> strains circulating before and during the COVID-19 pandemic period in France</td>
<td>Valérie Bouchez</td>
</tr>
<tr>
<td>14:00-14:20</td>
<td>Pertussis in Denmark, from high to low: 2019-epidemic and the COVID-19 period</td>
<td>Tine Dalby</td>
</tr>
<tr>
<td>14:20-14:30</td>
<td>Closing remarks</td>
<td></td>
</tr>
</tbody>
</table>
Practical information

Contact

EUPertstrain2022@uzbrussel.be

Helena Martini
 helena.martini@uzbrussel.be
 +32 (0)2 474 92 35

UZ Brussel Microbiology dept. secretariat
 lmiksecr@uzbrussel.be
 +32 (0)2 477 50 00

During the meeting, cellular phone numbers of the meeting organisers will be provided for contact in case of urgent issues.

Venue location

Vrije Universiteit Brussel
Brussels Health Campus - Auditorium Vanden Driessche
Laarbeeklaan 103 – 1090 Brussels, Belgium


Please be aware of the LEZ-restrictions when reaching Brussels by car.

If you have requested a free parking spot, please follow the instructions you have received by email. Parking violations may incur a fine, and parking at the UZ Brussel is not free of charge.
Covid-19 guidelines
Please check http://www.uzbrussel.be/EUPERT2022 for the most recent instructions.

Virtual access
Please follow the instructions you have received by email for access to the meeting livestream. There will be a chat function where you may ask questions, which will be read aloud by the chair at the end of each presentation (time permitting).

If you are a virtual speaker, please follow the separate instructions for access to the Teams meeting for speakers.

Social event and dinner
We gather at 18:00-18:30 at Place Rogier, between the Belfius building and the Starbucks building with the large canopy. The guided tour starts at 18:00.

The best way to reach Place Rogier from the meeting venue is by public transportation. Included are four MIVB tickets, which may be used to travel to the social event as well as to and from the meeting venue, your hotel, or anywhere in Brussels you may wish to go.

Those who want to go to place Rogier directly from the venue may travel together in small groups, along with the meeting organisers. The following route will be used:

- Tram 9 from UZ Brussel to Simonis
- Metro 2 or 6 from Elisabeth to Rogier

Alternatively, you can go to your hotel first and make your way to Place Rogier independently. Please contact the organisers by phone should you encounter issues or run late at this point.
Public transportation

Included are four MIVB tickets. They are valid on all MIVB busses, trams and metros, except for line 12 starting at Brussels Airport (this requires a separate “Go2City” ticket).

A ticket needs to be validated upon boarding for bus and tram, or upon entering the station for metros. Tickets stay valid for one hour after validation, during which time you may freely change lines – however, the ticket still needs to be validated at each change!

Extra tickets may be purchased at MIVB sales points (called BOOTIK or KIOSK) or their GO vending machines.

Please note that busses from De Lijn belong to a different network and require different tickets.
List of participants

Adele Louise Habington
Children’s Health Ireland at Crumlin
Ireland
adele.habington@olchc.ie

Adrienne Guignard
GSK
Belgium
adrienne.x.guignard@gsk.com

Alba Mir-Cros
Hospital Universitari Vall d’Hebron
Spain
alba.mir@vhir.org

Alexandra Douglas-Bardsley
MHRA
United Kingdom
alex.douglas-bardsley@nibsc.org

Alex-Mikael Barkoff
University of Turku
Finland
ambark@utu.fi

Andrew Gorringe
UK Health Security Agency
United Kingdom
andrew.gorringe@ukhsa.gov.uk

Antoine Francotte
Sciensano
Belgium
antoine.francotte@sciensano.be

Audun Aase
Norwegian Institute of Public Health
Norway
audun.aase@fhi.no

Bernice Aronsson
Public Health Agency of Sweden
Sweden
bernice.aronsson@telia.com

Camille Locht
Institut Pasteur de Lille
France
camille.locht@pasteur-lille.fr

Carine Notte
ELITechGroup Benelux BV
Belgium
c.notte@elitechgroup.com

Carla Rodrigues
Institut Pasteur
France
carla.parada-rodrigues@pasteur.fr

Caroline Rodeghiero
Sciensano
Belgium
caroline.rodeghiero@sciensano.be

Cathy Asokanathan
MHRA
United Kingdom
Cathy.asokanathan@nibsc.org

Cliona Sheila O’Shea
Children’s Health Ireland at Crumlin
Ireland
oshea.cliona@gmail.com

David Litt
UK Health Security Agency
United Kingdom
david.litt@ukhsa.gov.uk

Denis Piérard
UZ Brussel
Belgium
denis.pierard@uzbrussel.be

Elodie Lesne
UK Health Security Agency
United Kingdom
elodie.lesne@ukhsa.gov.uk

Emma Appelqvist
Public Health Agency of Sweden
Sweden
bernice.aronsson@telia.com

Florens G.A. Versteegh
The Netherlands
fgaversteegh@gmail.com

Gabriele Buttinelli
Istituto Superiore di Sanità
Italy
gabriele.buttinelli@iss.it

Georgeta Cristina Oprea
Cantacuzino National Institute for Medical
Military Research and Development
Romania
crisstina_bio@yahoo.com
Giorgio Fedele
Istituto Superiore di Sanità
Italy
giorgio.fedele@iss.it

Gro Tunheim
Norwegian Institute of Public Health
Norway
gro.tunheim@fhi.no

Helen Campbell
UK Health Security Agency
United Kingdom
helen.campbell@ukhsa.gov.uk

Helena Martini
UZ Brussel
Belgium
helena.martini@uzbrussel.be

Isabelle Desombere
Sciensano
Belgium
isabelle.desombere@sciensano.be

Jacky Flipse
Rijnstate Hospital
The Netherlands
jflipse@rijnstate.nl

Janeri Fröberg
Radboudumc
The Netherlands
janeri.froberg@radboudumc.nl

Jérôme Gallois
ELITechGroup Benelux BV
Belgium
j.gallois@elitechgroup.com

Joanna Jasinska
Medical University of Vienna
Austria
joanna.jasinska@meduniwien.ac.at

Juan Camilo Vargas
Sanofi Vaccines
France
juan.vargas@sanofi.com

Juanjo González-López
Hospital Universitari Vall d’Hebron
Spain
jjgonzal@vhebron.net

Julie Toubiana
Institut Pasteur
France
julie.toubiana@pasteur.fr

Jussi Mertsola
University of Turku
Finland
jussi.mertsola@utu.fi

Kevin Markey
MHRA
United Kingdom
kevin.markey@nibsc.org

Kris Huygen
Belgium
huyenkris@gmail.com

Lore Merdrignac
Epiconcept
France
l.merdrignac@epiconcept.fr

Marlena Kaczmarek
ECDC
Sweden
marlena.kaczmarek@ecdc.europa.eu

Maurine Duchenne
GSK
Belgium
maurine.x.duchenne@gsk.com

Maximilian Riess
ECDC
Sweden
maximilian.riess@ecdc.europa.eu

Noémie Lefrancq
Institut Pasteur
France
ncmjl2@cam.ac.uk

Norman Kenneth Fry
UK Health Security Agency
United Kingdom
norman.fry@ukhsa.gov.uk

Oriane Soetens
UZ Brussel
Belgium
oriane.soetens@uzbrussel.be

Paola Stefanelli
Istituto Superiore di Sanità
Italy
paola.stefanelli@iss.it

Pauline Labé
Institut Pasteur
France
pauline.labe@pasteur.fr