A unique master degree on Infectious Diseases and One Health concept

Overview of the curriculum:

<table>
<thead>
<tr>
<th>Université de Tours</th>
<th>Universitat Autònoma de Barcelona</th>
<th>University of Edinburgh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Immunology/Statistics</td>
<td>Epidemiological Surveillance and Risk Analysis</td>
<td>Bioethics and Animal Welfare</td>
</tr>
<tr>
<td>Public Health</td>
<td>Major and Endemic Zoonoses</td>
<td>Comparative Animal Models</td>
</tr>
<tr>
<td>Host-Pathogen Interactions</td>
<td>One Health in Emergent Diseases and in Special Situations</td>
<td>Laboratory Tools for Bioscience</td>
</tr>
<tr>
<td>Virulence and Resistance</td>
<td>One Health in Food Safety</td>
<td>Bioinformatics and Analysis</td>
</tr>
<tr>
<td>Immunology and Immunity of Mucosal Surfaces</td>
<td>Biosafety and Biosecurity</td>
<td></td>
</tr>
<tr>
<td>Biodrugs, Bioinformatics, Development</td>
<td>Spanish Language</td>
<td></td>
</tr>
<tr>
<td>French Language</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Internship worldwide

Internships are available at the three academic partners or any of 35 associated partners (academic and industrial) located worldwide.
3 main partners:
• Université de Tours,
• Universitat Autonoma de Barcelona
• University of Edinburgh

36 Associate Partners:
• 9 HEI
• 10 Research centers
• 1 National Institute for Public Health
• 16 companies

A very large network of almost 40 partners involved in the IDOH programme

Erasmus +: EMJMD Call for Proposals 2016: Results

The call for proposals closed on February 2016 for the Key Action 1 - Erasmus Mundus Joint Master degrees (EMJMDs). Applications were assessed on a scale from 0 to 100 points and were ranked according to merit. Out of the 89 eligible applications, 27 have been selected for funding and 3 have been placed in a reserve list. The funding threshold has been set at 78/100 points.

The IDOH application received 95/100 points and has been ranked first.

56 scholarships (45 for Partner countries and 11 for Programme countries) have been allocated to the programme for the 3 intakes.
2016-2017: Very intense preparatory year!

After the results of the financing by the European Commission, we had to settle all the procedures for the implementation of the EMJMD IDOH.

**Consortium agreement and Budget**
We have to establish the consortium agreement between the 3 main partners defining the rules for running the programme.

**Accreditation of the programme**
Each main partner had to run the accreditation process in its own country.

**Communication and Application platform set up**
The colleagues from the University of Edinburg have implemented the IDOH website to inform students as soon as possible. An application platform has also been designed to allow the online application procedure and online assessment of the applications.

**Selection procedure**
We were gratified by the large number of applications and the high quality of the applicants, indicating that our promotional strategy had succeeded. We were conscious that there was a short lead time to promote the programme from notification of funding and setting up the website to the application deadline and we had anticipated that in the first year we might have a lower number of applications. However, there were 738 applications initiated in total (scholarship and self-funded) and 275 completed and submitted. After a first round of selection we have made around 80 interviews. From these we were able to select 24 high quality students for the first intake. Listing on the EMJMD website seems to have been particularly useful in disseminating information about the programme.

**Assistance**
After selecting the students, we had to help them obtaining their visas, finding accommodations, opening an European bank account...
Statistics of the first application procedure

A - Number of applications: 739 applications opened

- 580 applications for a scholarship
- 159 applications as self-funded students

<table>
<thead>
<tr>
<th>Applications</th>
<th>Not Sent</th>
<th>Sent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>For a EMJMD scholarship</td>
<td>339</td>
<td>241</td>
<td>580</td>
</tr>
<tr>
<td>As a self funded student</td>
<td>124</td>
<td>34</td>
<td>158</td>
</tr>
</tbody>
</table>

Withdrawals: 6:2 among the selected students (1 self funded and 1 scholar), 2 among the preselected students (1 self funded and 1 scholar) and 2 during the application procedure.

B - Number of eligible, preselected and selected applications

<table>
<thead>
<tr>
<th>Applications</th>
<th>Sent</th>
<th>Eligible</th>
<th>Pre selected (for interviews)</th>
<th>Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>For a EMJMD scholarship</td>
<td>241</td>
<td>142 (59%)</td>
<td>57 (40% of eligible)</td>
<td>21 (14.8% of eligible)</td>
</tr>
<tr>
<td>As a self funded student</td>
<td>34</td>
<td>27 (79%)</td>
<td>19 (70% of eligible)</td>
<td>3 (11% of eligible)</td>
</tr>
</tbody>
</table>
C - Geographical origin of the applicants (Not sent and sent applications)

1) Programme Countries (Member states of the EU and Former Yugoslav, Republic of Macedonia, Iceland, Liechtenstein, Norway, Turkey)

- United Kingdom of Great Britain & Northern Ireland: 6
- Turkey, Republic of: 5
- Sweden, Kingdom of: 1
- Spain, Kingdom of: 10
- Romania: 1
- Portugal, Portuguese Republic: 1
- Poland, Republic of: 1
- Netherlands, Kingdom of the: 2
- Macedonia, the Former Yugoslav Republic: 1
- Lithuania, Republic of: 1
- Greece, Hellenic Republic: 4
- Germany, Federal Republic of: 4
- France, French Republic: 3
- Czech Republic: 1
- Cyprus, Republic of: 1
- Bulgaria, Republic of: 1
- Belgium, Kingdom of: 1

2) Western Balkans (Region 1), Eastern Partnership Countries (Region 2), South-Mediterranean Countries (Region 3), Russian Federation (Region 4)

- Palestinian Territory, Occupied: 3
- Western Sahara: 2
- Tunisia, Tunisian Republic: 3
- Syrian Arab Republic: 7
- Morocco, Kingdom of: 1
- Libyan Arab Jamahiriya: 1
- Lebanon, Lebanese Republic: 2
- Jordan, Hashemite Kingdom of: 2
- Egypt, Arab Republic of: 14
- Algeria, People's Democratic Republic of: 1
- Ukraine: 2
- Georgia, Georgia: 4
- Armenia, Republic of: 1
- Serbia, Republic of: 1
- Bosnia and Herzegovina: 2
- Albania, Republic of: 6
3) Region 5 (Andorra, Monaco, San Marino, Vatican City state, Switzerland), Region 9 (Iran, Iraq, Yemen), Region 10 (South Africa), Region 12 (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates)

4) Region 6 (Asia), Region 7 (Central Asia), Region 8 (Latin America)
5) Region 11 (ACP - Africa and Carribean), Region 13 (Other industrialised countries)

221 Not sent applications without any indication on the applicant nationality
D - Gender analysis

Ratio Women / men between all the sent applications

Scholarships

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>49%</td>
</tr>
<tr>
<td>Female</td>
<td>51%</td>
</tr>
</tbody>
</table>

Self funded

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>76%</td>
</tr>
<tr>
<td>Female</td>
<td>24%</td>
</tr>
</tbody>
</table>

E - Selected Students

Gender ratio for the selected students

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>37%</td>
</tr>
<tr>
<td>Female</td>
<td>63%</td>
</tr>
</tbody>
</table>

Geographical repartition for selected students

Region 6: 21%, Region 8: 33%, Region 11: 13%, Region 13: 25%

- 21 selected candidates for a scholarship:
  - 13 women, 8 men
  - 17 from outside UE UE (8 Area 6 - 5 Area 8 – 3 Area 11 – 1 Area 13):
    - Area 6: 2 Bangladesh, 1 Nepal, 3 Vietnam, 1 Myanmar, 1 Indonesia
    - Area 8: 3 Mexico, 1 Colombia, 1 Brasil
    - Area 11: 1 St Vincent and Grenadines, 1 Senegal, 1 Nigeria
    - Area 13: USA
  - 4 UE: 2 Spain, 1 France/USA, 1 Lithuania
- 3 selected candidates as self funded students:
  - 2 women and 1 man
  - 1 Colombia, 1 USA/Egypte, 1 Italia/UK

16 different nationalities
In September 2017, we have welcomed the students of the first intake.

We have welcomed on September 1st, the first class of the IDOH programme. The class is composed of 24 students from 16 different countries. After a welcome coffee, students have visited the campus. The afternoon, we have visited one of the most famous castles of the Loire Valley: Chenonceaux.

A curriculum focused on infectious diseases and Immunology
During this first semester, students have learned a lot about infectious diseases, molecular mechanisms of pathogen invasion, immunology and immunity of the mucosal surfaces. They also have some lectures on resistance and virulence of the pathogens. Finally, they had lectures on Bioinformatics given by a colleague from one of our associate partners, Adina Milac from the Romanian Institute of Biochemistry.

For ensuring that students started with a sufficient knowledge in Immunology, we have organized flipped classrooms: Students had to prepare and give some lectures to their colleagues.

Another very nice experience was the 2 “One Health Days” organized in collaboration with ONIRIS, one of the French Veterinary Schools (Vet and Agronomic school). ONIRIS has launched few years ago a Master focused on One Health called Man-imal. The students of the 2 masters degree had to prepare oral presentations on the following topic: “How does climate change impact on Infectious diseases?” During the afternoon of the first day, they have visited a BSL3 platform in the INRA Center of Nouzilly and learnt more about the handling of infectious samples.

During the second day in Nantes at ONIRIs, they met some representatives from WHO, OIE, ECDC, FAO and exchanged with them about the Climate change and how do these institutions deal with this main concerns.

Editorial board: S Germon and F Tersac