EURAXESS
NORTH AMERICA

Contents

1 EURAXESS Country in Focus: ESTONIA – a place for independent minds .................................................................2

Research and Development in Estonia .........................................................2

Research Excellence in Estonia .................................................................2

Estonian R&D Strategy .................................................................................3

Entrepreneurship and Innovation.................................................................3

Funding and Recruitment Opportunities .....................................................3

Important Information for Incoming Researchers ........................................3

Research collaboration with North America ................................................4

Interview with Kyle Mokma from USA .........................................................5

2 European Scientific Diasporas in North America Series .................6

Italian Scientists and Scholars of North America Foundation - ISSNAF .....6

3 HOT TOPIC: Strengthening Scientific Collaboration Between Europe and Canada: A Researcher’s Point of View .................9

4 In case you missed it ..................................................................................11

4.1 Event Outlook .......................................................................................11
1 EURAXESS Country in Focus: ESTONIA – a place for independent minds

Did you know that Skype was programmed in Estonia in 2003? Or that Estonia has used legally binding digital signatures since the year 2000? These facts illustrate the innovative attitude of the small North European country called Estonia perfectly. Estonia has an attractive environment for research, top-level infrastructure, a collaborative research community and excellent research achievements.

Research and Development in Estonia

Estonian researchers are good partners in international collaboration projects and the number of international co-publications is rising. Research in Estonia is becoming more international as the number of foreign researchers from 2005 to 2014 has increased **sevenfold** [1]. The impact of papers authored by Estonian researchers is growing rapidly; average citations per paper exceed the Thomson Reuters’ Essential Science Indicators (ESI) mean citation rate by 5% [2].

There are 20 R&D institutions in Estonia, including 6 public universities where most research is performed. The leading scientific institution in Estonia is the **University of Tartu**.

The ratio of total R&D expenditure to GDP in 2015 was 1.5%, with nearly half of R&D expenditure in 2015 coming from the state budget [3].

Research Excellence in Estonia

**Biological sciences** are at the forefront of Estonian research – 2/3 of the top researchers (among 1% most cited in their field worldwide) who are affiliated with an Estonian research institution are **biologists** and **ecologists** [2]. Each Estonian paper published in environment/ecology and plant and animal science receives about 40% more citations than papers in these fields in general. Additionally, clinical medicine, molecular biology and genetics, physics, pharmacology and toxicology, and psychiatry/psychology are also above global average [2].

There are 12 **Research Centres of Excellence** in Estonia, composed of internationally highly regarded research groups. Featured topics are: terrestrial ecosystems in the context of global change from molecular to biome-level responses, genomics and translational medicine, information and communication technologies (ICT), molecular cell engineering, space studies.

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EURAXESS NORTH AMERICA

Estonia is a small North European country and it has been a member of the European Union since 2004.

Promotional page about Estonia: [www.estonia.ee](http://www.estonia.ee).

University of Tartu

Promotional page about Research in Estonia

Umbrella organisation uniting researchers, scholars and intellectuals: Estonian Academy of Sciences
Estonian R&D Strategy

The Estonian R&D strategy document *Knowledge-based Estonia 2014–2020* outlines four objectives: 1) Research in Estonia is of high level and diverse 2) RD functions in the interest of Estonian society and economy 3) RD makes the structure of economy more knowledge-intensive 4) Estonia is active and visible in international RDI cooperation. The strategy foresees that by 2020 investments in R&D will reach 3% of GDP [4].

Entrepreneurship and Innovation

Innovation and the start-up ecosystem in Estonia are growing rapidly. Notable recent success stories backed by R&D in the IT field include Skype, TransferWise, Lingvist, Starship Technologies and Guardtime.

Estonia is standing out as a digital society. We have developed highly innovative and practical solutions for digital public services including online tax-declarations (in use since 2000), digital signatures (2000), online voting (2005), digital recipes (2010), and most recently the e-residency (2016) for anyone in the world (you can become an e-resident of Estonia in order to register your business in Estonia).

**Competence Centres (8)** are designed to improve the competitiveness of enterprises through strategic cooperation between Estonian science, industry and the public sectors. Main topics are health and food technologies and ICT services. **Enterprise Estonia** promotes business and provides financial assistance, counselling, cooperation opportunities and training for entrepreneurs, research institutions and the public and non-profit sectors.

Funding and Recruitment Opportunities

Research in Estonia is primarily financed on the basis of quality competition. Financing comes from the state budget, foreign funds (mostly EU H2020 and other means) and companies. The **Estonian Research Council** is the principal funding body of R&D in Estonia, consolidating different grants and types of funding and giving research more visibility within society. There are also several mobility grants. Click here for the funding calls.

As most research is performed in the public universities, most research jobs are also available in public universities. PhD students are regarded as students and receive a monthly scholarship.

Important Information for Incoming Researchers

**EURAXESS Estonia** provides information and support to international researchers for free. We provide information about entry conditions, visas and residence permits. Estonia in general, the Estonian research landscape, job & funding offers, events for researchers and much more!

Citizens of the USA and Canada can stay in Estonia visa free for up to 90 days. For longer stay they will need a residence permit. See the **US Embassy in Estonia** for USA-Estonia information, news and events.

Research collaboration with North America

Research collaboration between Estonia and North America is wide-ranging and continual.

Research collaboration of Estonia with USA and Canada is mostly based on relations between researchers with particular interest on a specific topic. There are also several state level agreements to promote collaboration with Estonia. For example, the Agreement between the Government of the Republic of Estonia and the Government of the United States of America for Scientific and Technological Cooperation is in force since 2009. The agreement prioritizes collaboration on environmental and biodiversity protection, marine science, energy, space, engineering, and sustainable development. Canada-Estonia Youth Mobility Agreement took effect on August 1, 2010. The agreement facilitates young adults (18-35yr) from Canada and Estonia to travel and gain valuable work or study experience in each other’s country for up to one year.

In 2016 Estonia and USA signed a R&D collaboration agreement in the defence field. That was partly triggered by Estonia’s experience in cybersecurity issues and that the NATO Cooperative Cyber Defence Centre of Excellence (NATO CCD COE) is located in Estonia. The NATO CCD COE is a NATO-accredited knowledge hub, research institution and training and exercise facility. The Tallinn based international organisation focuses on interdisciplinary applied research, as well as consultations, trainings and exercises in the field of cyber security.

All researchers from USA and Canada can apply to Estonian Research Council mobility grants.

Estonian expats in North America are dedicated to advancing R&D relations with their homeland. Estonian communities help young Americans and Canadians with Estonian roots to study in Estonia and create opportunities for Estonians to study in North America.

The Fulbright Programme has been in action in Estonia since 1992. A new and updated Memorandum of Understanding (MOU) of the Fulbright Programme between USA and Estonia was signed on February 19, 2015. “The Fulbright program brings together the best and the brightest of our two nations and this agreement which we will sign today lays the foundation to grow and expand the opportunities for our scientists, researchers and students,” Ambassador Levine said at the signing ceremony. The Fulbright Program is an elite educational exchange program sponsored by the U.S. government, it provides funding for students, scholars, teachers, artists and professionals to undertake graduate study, advanced research, university lecturing and teaching in elementary and secondary schools. In the past 22 years, more than 170 U.S. Fulbright students and scholars have studied, researched, or taught classes in Estonia.
Interview with Kyle Mokma from USA

1. How did you get the job in Estonia and why did you decide to work in Estonia?
I am interested in research in behavioral systems analysis. I am a Board certified assistant Behaviour Analyst. I came to Estonia working with an American family providing pediatric psychological services (Applied Behaviour Analysis services). Through this work I discovered that Estonia was attempting to modernize and create increased standards for services offered to children with developmental disabilities and autism. I decided to go to Tallinn University and speak with the head of the special education department to see if she would allow me to teach my profession, which is applied behaviour analysis.

She was excited to try this project and we started teaching graduate students basic theoretical knowledge about behaviourism and behavioural psychology in 2015 course titled Käitumise printsibid (principals of behaviour) and a practicum course titled ABA Praktikum in the fall, that if passed allows the students to qualify to take a board examination through the Behaviour Analyst Certification Board to become a registered behaviour technician.

2. Name three characteristic things about research work in Estonia or about Estonia in general.
Research in Estonia is well organized and well funded. Attending the Welcoming Program is one of the best ways to become familiar with various funding mechanisms, and the overall structure of how research is conducted in Estonia. Research and projects in “smart” areas like cyber-security, information technology, e-governance are very well received here in Estonia as they are areas the government has deemed priority. Estonians are typically very open warm and welcoming to well thought out proposals and ideas.

3. A message to anyone from your country who is considering research work with Estonian partners or moving to Estonia for work.
Estonia is a beautiful country especially during the summer. The countryside is rich with old world culture. There are a number of new private international schools that teach in English and cater to the growing number of international families moving to Estonia to work in the booming IT sector. Estonia is very welcoming to the international community offering language courses, introductions to research, family life, legal system etc. Estonia is working very hard to be a welcoming place to the international community and that is very easy to see.

Kyle Mokma
Lecturer of behavior analytics at Tallinn University.
MA student of industrial organizational psychology at Tallinn University of Technology

Estonia EU presidency in 2017
Estonia will be holding the EU Council presidency in the second half of 2017. The focal themes for Estonia will be the single and digital markets, the energy union and closer integration of our Eastern partners into Europe. We also want to focus on the promotion of e-solutions and the information society in EU policy areas. See Estonia EU presidency programme.
2 European Scientific Diasporas in North America Series

Italian Scientists and Scholars of North America Foundation - ISSNAF

Created in 2008, under the auspices of the Italian Embassy by 36 renowned scientists and academics, including 4 Nobel prizes, ISSNAF - Italian Scientists and Scholars of North America Foundation is a 501c (3) not-for-profit organization, whose mission is to promote scientific, academic and technological cooperation amongst Italian researchers and scholars active in North America and the world of research in Italy.

With a network of over 4,000 affiliates, consisting of prominent scholars, scientists and young researchers, ISSNAF is the largest representative of the Italian intellectual diaspora in North America and a bridge over the Atlantic that allows sharing and dissemination of this invaluable knowledge.

ISSNAF’s programs and partnerships

In fulfilling its purpose, ISSNAF collaborates with other foundations and governmental institutions, including the Italian Ministries of Education, Health, and Foreign Affairs, as well as the Italian Embassy, Consulates, and Cultural Centers based in the U.S. and Canada.

Thanks to generous contributions and key partnerships, ISSNAF offers a wide range of higher education programs to many Italian talents working in different fields of research, a unique opportunity for them to pursue a successful career and realize their dreams.

We believe that such opportunities can support the professional growth of tomorrow’s leaders and create added value to benefit both Countries, since science, research, and leadership aren't just Italian or American but global.

By increasing professional skills, exchanging best practices, and establishing strategic connections, ISSNAF’s effort is beneficial for both Countries and enhances scientific cooperation as well as economic growth at a Global level.

Volunteers and donors

In 2015/2016, among other activities, ISSNAF’s funded programs granted over 70 scholarships, hosted by prestigious universities and research centers in North America. The objective is to at least double this number in 2017.

To achieve this goal, ISSNAF relies on the support of volunteers and generous sponsors and donors, whose contribution is essential to create opportunities and make the difference in the life of brilliant Italian researchers abroad.

For additional information please write to ISSNAF’s Executive Director, Monica Veronesi (Veronesi@issnaf.org). To join ISSNAF as affiliate, become a volunteer or to make a donation: www.issnaf.org.
ISSNAF’s Chapters

In order to increase its outreach at a local level or in regards to specific fields of science, ISSNAF has established a number of Chapters, for the members to easily connect with peers and exchange information. There are the 9 City Chapters: New York (Chapter Co-Chair: Monica Fornier, MD – Riccardo Lattanzi, Ph.D), Chicago (Chapter Chair: Damiano Rondelli, MD), Minnesota (Chapter Chair: Marco Pravetoni, Ph.D), Seattle (Chapter Chair: Lorenzo Giacani, Ph.D), Ontario (Chapter Chair: Franco Berruti, Ph.D), US South West (Chapter Chair: Marco Marcelli, Ph.D), Florida (Chapter Chair: Vacant), San Diego (Chapter Chair - Bruno Conti, Ph.D), Washington DC (Chapter Chair – Francesco Tombesi, Ph.D). We’re working on: West Virginia, Boston, San Francisco, North Carolina, Texas, Los Angeles, Ottawa, Montreal.

Additionally, we created some thematic Chapters: Medical Imaging Science (Chapter Chair: Lorenzo Mannelli, MD), Neuroscience (Chapter Chair: Rodolfo Savica, MD, Ph.D), Cardiovascular Science (Chapter Chair: Francesco Santoni-Rugiu, MD), NASA (Chapter Chair: Giuseppe Cataldo, Ph.D), Open Innovation & Entrepreneurship (Chapter Chair: Luca Escoffier, LLM), Oncology (Chapter Chair: Cathy Pietanza, MD), NIH (Chapter Chair: Primavera A Spagnolo, MD, Ph.D). We’re working on: Advance Manufacture, Material Sciences, Biophysics & Biochemistry, Economic sciences, Immunology.

Young ISSNAF

Young ISSNAF (https://www.issnaf.org/young-issnaf-home-page.html) is the “network-inside-the-network” of under-40 ISSNAF affiliates, Italian investigators and scholars of all areas of scientific and academic research. Young-ISSNAF is a platform for promoting career opportunities, a virtual space to share experiences, seek advice and find collaborators. Young ISSNAF coordinator is Marco Pravetoni, Ph.D.

Annual event in Washington DC

ISSNAF celebrates its Annual Event (https://www.issnaf.org/2016-issnaf-annual-event.html) between October and November at the Italian Embassy in Washington, DC. The 2016 edition was held under the Patronage of the President of the Italian Republic Sergio Mattarella and with the participation of the Italian Embassy in Ottawa.

During the event, the Italian Scientific Community meets the institutions, the industry, and academia to discuss breakthrough ideas, to network, and to award projects of young Italians through the ISSNAF Young Investigators Awards in different fields of Science. The event brings together prominent Italian scientists and researchers active in North America, as well as representatives of the institutions and the industry.
ISSNAF Awards

The Annual Event hosts the ISSNAF Awards ceremony (https://www.issnaf.org/awards.html): rewarding five young Italian scientists excelling in the US and Canada, working on leukemia, bioscience and cognitive science, engineering, mathematics and physics, environmental science, astrophysics and chemistry. The five prizes are: Paola Campese Award for research in Leukemias, Hogan Lovells Award in Medicine, Biosciences and Cognitive Science, Franco Strazzabosco Award for Engineers, Anna Maria Molteni Award in Mathematics and Physics and Young Investigators Award in Environmental Sciences, Astrophysics and Chemistry.
3 HOT TOPIC: Strengthening Scientific Collaboration Between Europe and Canada: A Researcher’s Point of View

Authors: Catarina C. Ferreira and Martin Geiger

A long-standing cooperation coined by bilateral investments in research and innovation with a focus to this date on reinforcing the links between industry and research, fostering knowledge to stimulate education, job creation, economic growth and welfare on both continents. Considerable progress has been done through this partnership over the years, including in the fields of Social Sciences, Health Research, Aeronautics and Agricultural research. The new EU-Canada Administrative Arrangement will likely boost this cooperation further in other key areas.

Despite irrefutable success, a new window of opportunity presents itself at this moment to strengthen scientific ties through the new EU-Canada free-trade agreement CETA (Comprehensive Economic and Trade Agreement). CETA holds the potential for long-lasting economic, environmental and social impacts both in Canada and in the EU, namely improved collaboration in research through facilitation of mobility for scholars and innovators. Furthermore, the world is at a juncture where some nations are reducing their commitment to address global challenges, including climate change, migration, development and security. This places increased responsibility on countries that share similar scientific cultures to provide guidance in addressing these challenges. Now, more than ever, Canada and the EU have the opportunity to step up and renew their role as scientific leaders, which is why it is crucial to make sure that this partnership becomes more effective.

As European researchers based in Canada involved in EU-funded projects for the past years, we have been first-hand beneficiaries and observers of this joint scientific enterprise. This has allowed us to detect inefficiencies that could ultimately compromise the quality of collaborative endeavours between Canada and the EU. We highlight some of these issues here and propose ways to resolve them:

(1) **Researcher mobility and international collaboration** are core values of the scientific enterprise in Europe that are very much impregnated in the minds of European researchers, as they are indicators of scientific maturity. For example, ample possibilities for exchange exist at the student level (e.g. through the Erasmus program) and at the researcher level between academic institutions, supported by funding provided by member-state governments, EU institutions, as well as non-state private entities and other foundations. This mobility is an incredibly valuable feature of any scientist’s career that will ensure that professionals can provide the most holistic and relevant scientific contributions with worldwide application. However, while mobility of research
talent starts to be promoted at a young age in Europe, our experience of living and working in Canada has shown us that Canadians are much more immobile, as these values do not seem to be as instilled here as they are in Europe. This could be due to the fact that they are not rewarded as heavily in the Canadian academic environment as they are in Europe, and/or because the decentralized funding system in Canada (with the exception of agencies like NSERC and SSHRC) dissuades Canadian scholars from establishing international collaborations more frequently. This poses a problem in that international partnerships, at least in some research fields, become rather unilateral and depend on the inclination of individual academic institutions to scout for synergies in the international sphere. However, there are some initiatives between Europe and Canada that promote mobility across different scientific environments (such as the Canadian Banting Fellowships, European Marie Skłodowska-Curie Actions and European Research Council grants). The solution is to promote these mobility programs better and provide the necessary support (infrastructure and human resources) to aid in the access to funding opportunities. A more structural shift is also required to better align the criteria used to evaluate researchers between Canada and Europe, so that both mobility and international collaborations have the same leverage on both sides of the Atlantic.

One of the main barriers to effective international collaboration is the lack of adequate infrastructure and resources that provide guidance to the panoply of funding schemes currently available to scientists in Canada and Europe. For example, despite the invaluable institutional support provided by the ERA-Can+ project partners, most of the practical support in Canada is provided by only a handful of people with limited budgets. This compromises the organization of more far-reaching events that can promote networking, give visibility to the funding opportunities available and help researchers navigate through administrative requirements. Most Canadian universities have no or only little experience with the European funding landscape, EU projects and how Canada-based researchers and students can benefit and profit from collaboration with Europe. Additionally, Canada-based researchers participating in EU projects as collaborators (e.g. in Horizon 2020 projects) are not able to benefit from them to the fullest extent, since, on one hand, the EU very rarely funds Canada-based collaborators in these projects, and, conversely, Canada has no co-funding structures currently in place that allow for these researchers to act as equal partners in EU projects. Therefore, expanding both the EURAXESS North America network (already in place and financed by the European Commission) and the number of National and Regional contact points for individual programs, in addition to making serious investments to create satellite structures in Canada that can provide local support to prospect collaborators in EU projects, and creating the necessary co-funding structures that can support Canada’s inversion of capital in international scientific projects, are essential to mitigate this problem.

Another challenge lies in how to turn differences in research philosophies, scales and priorities between the two continents into strengths and catalysts of positive change rather than drivers of conflict. For
example, renewable and clean energy are at different stages of development in Canada and Europe, which means that there are different levels of public awareness and discussion about these issues. Conversely, long-term species monitoring is much more widespread in Canada than in most of Europe and this has obviously implications in terms of the transferability of solutions to address threats to biodiversity from one continent to the other. The key is to not let these differences prevent us from focusing on similarities and common interests. For example, there are several funding mechanisms promoting bottom-up partnerships between Canadian and European institutions (private, non-profit and public) to collaboratively try to come up with innovative solutions to long-lasting problems.

There are multiple benefits to strengthening the scientific ties between Canada and Europe, perhaps the main one is to accelerate the finding of solutions to global issues through critical dialogue between two economic powers that share similar scientific values and the same willingness to address challenges through science and technology. These dialogues are particularly important to promote not only exchange of ideas and philosophies, but also of empirical data and modelling tools that will allow us to revert current environmental and humanitarian crises. There are already great reflections of this collaboration at the global scale, like transatlantic research alliances for Marine and Arctic research, but we need to make sure that we quickly multiply these initiatives across other subject areas.

4 In case you missed it....

4.1 Event Outlook

<table>
<thead>
<tr>
<th>Event</th>
<th>When</th>
<th>Where</th>
<th>Organized by</th>
<th>Link</th>
</tr>
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<tbody>
<tr>
<td>European Research Council’s 10th Anniversary Information Session: VIDEO &amp; PICTURES</td>
<td>21 February 2017</td>
<td>Washington, DC, USA</td>
<td>EURAXESS North America &amp; Spanish Scientists in the US</td>
<td>Link</td>
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<tr>
<td>Information Session on European Funding Opportunities for Researchers</td>
<td>1 April 2017</td>
<td>Johns Hopkins University, Baltimore, MD, USA</td>
<td>European Horizons &amp; EURAXESS North America</td>
<td>Link</td>
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<tr>
<td>Two Information Sessions on European Funding Opportunities for Researchers</td>
<td>11-12 April 2017</td>
<td>Seattle, WA, USA</td>
<td>Postdoctoral Community &amp; EURAXESS North America</td>
<td>Link</td>
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<tr>
<td>eMerge Americas 2017 Conference</td>
<td>12-13 June 2017</td>
<td>Miami, FL, USA</td>
<td>eMerge Americas</td>
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About EURAXESS North America

EURAXESS North America is a network of thousands of European and non-European researchers, scientists, and scholars throughout North America (USA and Canada). This multidisciplinary network includes members at all stages of their careers. It allows them to connect with each other and with Europe, ensuring that they are recognized as an important resource for European research, whether they remain in North America or return to Europe.

For further information about EURAXESS North America, please visit: http://northamerica.euraxess.org.

To sign up for membership in our network, please go to our website and click on Sign up and become a member for free button. Membership is free!