

## A science education project: the translation into Catalan and publication of the book *Your Amazing Immune System - How it Protects Your Body*

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Despite the importance of immunology and immune system function for understanding how the human body deals with infection, little has been done to educate the general public about these subjects. For this reason, in 2010 the Esteve Foundation collaborated with the Societat Catalana d'Immunologia (SCI, Catalan Immunology Society) and the European Federation of Immunological Societies (EFIS) in translating into Catalan and publishing the book *Your Amazing Immune System-How it Protects Your Body*.<sup>1</sup>

The characteristics of this book were described in an earlier article;<sup>2</sup> the present article focuses on the management of the translation, publication, and distribution of the book through the collaborative efforts of diverse institutions. We take pride in the fact that the Catalan translation is the first to be published after the English version.

### THE BOOK

The original, Japanese version of the book, entitled *Karada Wo Mamoru Meneki No Fushigi*, was written and published by the Japanese Society for Immunology in 2008. It was translated into English by the EFIS one year later with the title *Your Amazing Immune System - How it Protects Your Body*. The book is written in simple language but is scientifically accurate; especially noteworthy are the illustrations by Tomoko Ishikawa, which have been maintained in the translations of the book. The book first explains what immunity is and how the immune system works; then it goes on to explain how the immune system acts in different diseases and infections, as well as its role in allergies.

To facilitate the publication of the book in diverse languages, the EFIS offered its support to all European immunological societies interested in translating it.<sup>3</sup> On behalf of the SCI, Manel Juan and Aura Muntasell accepted the challenge of translating the book into Catalan and asked the Esteve Foundation for help with the project. From the start, it was made clear that this collaborative project would have to be a nonprofit venture for the individuals and institutions involved and that the book would be distributed free of charge to the widest public possible.

## THE CATALAN VERSION

Under these conditions, the Esteve Foundation agreed to coordinate and manage the project, assuming the costs of printing and distribution, as well. Furthermore, three members of the SCI (Manel Juan, Aura Muntasell, and Mariona Pascal) charitably agreed to translate the English text into Catalan. Marta Pagans (translator and proofreader) reviewed the text. In accordance with the collaborative agreement, the EFIS gave their final approval of the finished product before the book was printed. The entire process, from the initial agreement to the final printing, took nine months (Table 1).

**Table 1.** Main stages of the book translation and publication.

Project stages	Date started
1. Initial contacts	October 2009
2. Acquiring rights for translation and reproduction	November 2009
3. Translation into Catalan	December 2009
4. Revision and correction of the texts	February 2010
5. Edition, layout, and correction of galley proofs	February 2010
6. 1 <sup>st</sup> printing, 1,000 copies	July 2010
7. Launching event	November 2010
8. Distribution to schools and libraries	Nov 2010-Jan 2011
9. 2 <sup>nd</sup> printing, 3,000 copies	April 2011

## DISSEMINATION AND DISTRIBUTION OF THE BOOK



**Figure 1.** Event to launch the book, November 18, 2010 in El Palauet de Barcelona. Clockwise from the top left: Dr. Joaquim Ramis and Dr. Josep Esteve, attendees, Dr. Manel Juan and Dr. Fèlix Bosch, and the book.

Once the book had been printed, to mark the start of the distribution stage, the Esteve Foundation organized an event to launch the book on November 18, 2010. The event included a speech<sup>4</sup> by Dr. Joaquim Ramis (ex-president of the Acadèmia de Ciències Mèdiques i de la Salut de Catalunya i de Balears, Academy of Medical and Health Sciences of Catalonia and the Balearic Islands) and the presence of Dr. Josep Esteve (president of the Board of the Esteve Foundation) (Figure 1). More than 70 people of different professional backgrounds, especially from the field of education, attended.

The book was distributed in stages. First, it was distributed electronically through the websites of the SCI and the Esteve Foundation, as well as by email to both institutions' main contacts. Second, with the collaboration of the Ministry of

Education of Catalonia, the General Administration of Primary and Nursery Schools informed all public and charter schools that the book would be supplied free of charge to those who asked for it. Third, the book was offered to public libraries throughout Catalonia through the government body that administers the network of public libraries in the four provinces that make up Catalonia.

Table 2. Number of schools and municipal libraries that have received books and the total number of copies distributed in each province.

Province	Number of schools receiving books	Number of libraries receiving books	Copies sent
Barcelona	566	49	1,230
Girona	123	70	316
Lleida	95	40	270
Tarragona	119	43	324
<b>Totals</b>	<b>903 (81.7%)</b>	<b>202 (18.3%)</b>	<b>2,140*</b>

\*These copies account for most of the books (74%), which were sent to schools and libraries. Another 760 copies were sent out in April 2013 through various initiatives carried out with other institutions.



Figure 2. Science cafés about Immunology organized in collaboration with the SCI and BIOcomuniCA'T. Clockwise from the top left: What is autoimmunity? (Sala Jujol, La Pedrera), Let's discuss vaccinations (Café Carmelitas), Why do allergies appear? (Restaurant El Foro), and Transplants: present and future (cloister of the Institut d'Estudis Catalans in Barcelona).

This wide dissemination led to a large number of requests for copies of the book, so a second printing was necessary. To date, more than 2,900 books have been sent out, mostly to schools and libraries in Catalonia (Table 2). In parallel, diverse initiatives in collaboration with other institutions were launched; for example, science cafés were organized (Figure 2), and training courses and learning events were held. All together, more than 700 people attended these events (Table 3).

These actions generated a lot of excitement about the book, and at least fifteen online and printed publications have referred to it directly or indirectly (Table 4). Additionally, the Educational Telematic Network of Catalonia incorporated the book into the Application of Resources to the Curriculum platform.<sup>5</sup>

## COLLABORATING INSTITUTIONS

This project would not have been possible or so widely disseminated without the participation of multiple institutions in each stage; all these institutions have respected the nonprofit nature and strictly educational aims of the project.

Although the Esteve Foundation, the SCI, and the EFIS have been the main agents in achieving the Catalan translation of this book, many other institutions have played important roles in this project at one time or another (Table 5). Their contributions are recognized in the acknowledgments.

**Table 3. Activities to spread the word about the book carried out by collaborating institutions and the number of participants at each.**

Activities	Number of participants
1. Book launch "Els misteris del sistema immunitari – Com protegeix el nostre cos". Organized by the Esteve Foundation. El Palauet de Gràcia, in Barcelona, 18 Nov 2011.	73
2. "Science café: The two faces of the immune system. When does it protect us and when does it attack us?" Organized by the Centre for Genomic Regulation, Science Meets Society, the SCI, and the Esteve Foundation. Café Carmelites in Barcelona, 14 Apr 2011.	50
3. Course "Immunology for junior high and high school teachers". Organized by the Institut de Ciències de l'Educació (ICE) of the Universitat de Barcelona. November 2011.	50
4. Cafès científics d'immunologia 1: What is autoimmunity? Organized by the SCI, BIOcomuniCA'T, CX Catalunya Caixa Obra Social, Esteve Foundation, and the Secretariat of Universities and Research (Ministry of Economics and Knowledge, Government of Catalonia). Sala Jujol, CX La Pedrera, in Barcelona, 1 Dec 2011.	66
5. Cafès científics d'immunologia 2: Let's discuss vaccinations. Organized by the CSI, BIOcomuniCA'T, Esteve Foundation, and the Secretariat of Universities and Research (Ministry of Economics and Knowledge, Government of Catalonia). Café Carmelites, in Barcelona, 09/02/2012.	71
6. Cafès científics d'immunologia 3: Why do allergies appear? Organized by the CSI, BIOcomuniCA'T, Esteve Foundation, and the Secretariat of Universities and Research (Ministry of Economics and Knowledge, Government of Catalonia). Restaurant El Foro, in Barcelona, 19 Apr 2012.	46
7. Workshop: Genes and context. Organized by the Universitat de Barcelona, BIOcomuniCA'T, and PATHWAY. Barcelona, 10 May 2012	27
8. Cafès científics d'immunologia 4: Transplants, present and future. Organized by the CSI, BIOcomuniCA'T, Esteve Foundation, and the Secretariat of Universities and Research (Ministry of Economics and Knowledge, Government of Catalonia). Cloister of the Institute of Catalan Studies, in Barcelona, 14 Jun 2012.	54
9. Course "Basic principles of immunology: immune-mediated disease". Organized by Fòrum Ergos (Capresa). Headquarters of Capresa, in Barcelona, 14 Jun 2012.	20
10. Informative Seminar organized for the World Immunology Day 2013. Organized by the SCI, BIOcomuniCA'T, Fundació Claror, and the Association of Shopkeepers of Gaudi Comerç. Sagrada Família district, in Barcelona, 28/04/2013.	270
<b>Total</b>	<b>727</b>

**Table 4. Some references linked to the book and its distribution.**

Publications in journals and magazines
1. Igea JM. Inmunología para torpes. <i>Panacea</i> . 2011;XIII(33):138-9. Available at: <a href="http://www.tremedica.org/panacea/IndiceGeneral/n33-Resenas-Igea.pdf">http://www.tremedica.org/panacea/IndiceGeneral/n33-Resenas-Igea.pdf</a>
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4. Mayor Serrano B. Inmunología para legos. Del japonés al... catalán. <i>Medicablogs</i> . <i>Diario Médico</i> [Internet]. 2013 Feb [consulted 2013 Apr 8]. Available at: <a href="http://www.medicablogs.diariomedico.com/blanca11/2013/02/06/inmunologia-para-legos-del-japones-al-catalan/">www.medicablogs.diariomedico.com/blanca11/2013/02/06/inmunologia-para-legos-del-japones-al-catalan/</a>
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Other references
1. Barcelona Cultura. La Talaia [Internet]. Barcelona: Ajuntament de Barcelona. El sistema immunitari; 2010 Feb. Available at: <a href="http://barcelonacultura.bcn.cat/el-sistema-immunitari">barcelonacultura.bcn.cat/el-sistema-immunitari</a>
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## CONCLUSIONS

We are convinced that this book has contributed to science education and that it has helped people learn about immunology. Although the book was initially distributed to young students, it has surely reached the general public as well. This type of nonprofit initiatives carried out through the firm commitment of the institutions and individuals involved can serve as an example for future projects dedicated to science education. After some initial setbacks, we are happy to announce that we are now working together with the Sociedad Española de Inmunología (Spanish Immunology Society) to produce the Spanish translation of this book.

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**Table 5. Institutions collaborating in the project to print and distribute the book.**

Promoting institutions
1. European Federation of Immunological Societies (EFIS), Berlin. <a href="http://www.efis.org">www.efis.org</a>
2. Esteve Foundation, Barcelona. <a href="http://www.esteve.org">www.esteve.org</a>
3. Societat Catalana d'Immunologia, Barcelona. <a href="http://www.sci.cat">www.sci.cat</a>
Other collaborating institutions*
1. Addenda SCCL, Barcelona. <a href="http://www.addenda.es">www.addenda.es</a>
2. Association of Shopkeepers of Gaudí Shopping Area, Barcelona. <a href="http://www.gaudishopping.cat/ca">www.gaudishopping.cat/ca</a>
3. BIOcomuniCA'T, Barcelona. <a href="http://www.biocomunicat.com">www.biocomunicat.com</a>
4. Centre for Genomic Regulation, Barcelona. <a href="http://www.crg.es">www.crg.es</a>
5. Fórum Ergos – Capresa, Barcelona. <a href="http://www.forum-ergos.net">www.forum-ergos.net</a>
6. Fundació Catalunya – La Pedrera (previously CX Catalunya Caixa Obra Social), Barcelona. <a href="http://www.lapedrera.com/ca/home">www.lapedrera.com/ca/home</a>
7. Fundació Claror, Barcelona. <a href="http://www.fundacioclaror.cat">www.fundacioclaror.cat</a>
8. Management of Library Services, Government Delegation of the Province of Barcelona. <a href="http://www.diba.es/biblioteques/">http://www.diba.es/biblioteques/</a>
9. Institut de Ciències de l'Educació, University of Barcelona. <a href="http://www.ub.edu/ice/index4.htm">www.ub.edu/ice/index4.htm</a>
10. <i>Science Meets Society</i> , Barcelona. <a href="http://www.sciencemeetsociety.tk/en/welcome.html">www.sciencemeetsociety.tk/en/welcome.html</a>
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16. <i>Annals de Medicina</i> (Barcelona). <a href="http://www.acmcb.es/publicacions/annals_medicina/_IK156jrm5Y43CAy3N62cQ">www.acmcb.es/publicacions/annals_medicina/_IK156jrm5Y43CAy3N62cQ</a>
17. Panacea@. <a href="http://www.tremedica.org/panacea/PanaceaActual.htm">www.tremedica.org/panacea/PanaceaActual.htm</a>
18. <i>European Journal of Immunology</i> . <a href="http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1521-4141/issues">http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1521-4141/issues</a>

\*Institutions that collaborated in the editing, publishing, and distribution of the book.

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