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Training of Pulmonologists in Overseas Centers: A Resident's Experience

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ABSTRACT

Training in pulmonology at overseas centers may require a considerable effort, and although such an experience could even imply a financial burden for the trainee, the benefits far outweigh the material costs. The desire for personal and scientific growth should encourage young pulmonologists and medical residents to rotate outside Spain and become acquainted with other health care systems, customs, dynamics, and resources in order to obtain quality training and added value that will further enrich our specialty. Any pulmonologist wishing to undergo specialized training at an overseas institution will necessarily consider questions such as the relevance of the stay and its objectives, timing, availability of centers, eligibility, and funding agencies. Based on one resident's personal experience, we attempt to answer several of these questions.

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Formación neumológica en centros extranjeros. A propósito de una estancia

RESUMEN

La formación neumológica en centros extranjeros puede suponer un gran esfuerzo, siendo incluso importantes las dificultades económicas, pero los beneficios superan con creces estos costes materiales. El crecimiento personal y científico debe servir de estímulo a los residentes y neumólogos jóvenes para que roten fuera de España y conozcan otros sistemas sanitarios, con otras costumbres, dinámicas y recursos, en aras de una formación de calidad y con un valor añadido que enriquezca más nuestras especialidades. Es habitual que el especialista que desea acceder a esta formación especializada internacional se plantee preguntas relevantes, como la pertinencia de esta estancia y su objetivo, la decisión sobre el mejor momento para llevarla a cabo, los centros disponibles, los requisitos necesarios y las agencias financiadoras. En el presente artículo trataremos de responder a varias de estas cuestiones sobre la base de nuestra experiencia personal.

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Introduction

In recent years, new diagnostic and therapeutic techniques in pulmonology have led to a rapid increase in the potential of this field for health care and scientific applications. This has helped to broaden the horizons of the specialty beyond what it was only a

few years ago. The excellent clinical and research work by Spanish pulmonologists and thoracic surgeons in recent years means that we now have a strong presence abroad.^{1,2} This improved international presence has made it possible for our professionals to visit centers in other countries with the aim of improving their knowledge and skills in different areas of our specialty. Thus, any specialist wishing to take advantage of international training in a specific field usually asks relevant questions about the suitability and objectives of such placements, timing, available centers, necessary requirements, and funding agencies. Based on our

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personal experience, we attempt to answer several of these questions.

Importance of Training Abroad

Training abroad provides an excellent opportunity to benefit in many important ways. First, spending time at a center in another country helps expand training objectives in various areas of a specialty, such as clinical knowledge, diagnostic and therapeutic techniques, and research methodology. It also enables us to learn a language, an important asset, especially if the destination is an English-speaking country. As English is currently the lingua franca of scientific communication, knowledge and further study of the language can increase the professional's projection as a scientist. Mastery of English makes it easier to communicate with colleagues from abroad and helps disseminate our work to a larger number of scientific journals and to those with a higher impact factor.³ It is worth remembering that specialist training programs envisage the presentation of a scientific project in English at an international symposium, meeting, or conference on the specialty⁴; therefore, learning this language is almost mandatory. Newly trained specialists or residents who speak English obtain grants for training abroad more easily and for greater amounts.⁵

A placement abroad also provides the opportunity to learn different ways of organizing clinical work. This is important, as it allows us to bring fresh approaches and, therefore, improvements to our workplace. Finally, placements of this type can be beneficial in that they allow Spanish physicians to play a role in the main international pulmonology and thoracic surgery organizations.⁵

Importance of Timing

Centers in other countries are generally prepared to accept applicants for rotation at any point in their career. However, rotation usually takes place in one of the following 3 situations: during the final years of intern or resident training, on finishing one's specialty, or when starting in a new specialist care area or research area at any time during one's career.

There are several important advantages to carrying out a rotation during residency training. This period, by definition, is for training. As such, it includes the possibility of external rotations and there are generally more opportunities for funding. In addition, candidates are usually in a better personal situation, with fewer family responsibilities; therefore, they can leave home for more or less long periods.

Recommendations for training in pulmonology are based on the National Pulmonology Board Syllabus for Specialists approved in 2008 by the National Council of Medical Specialties. This syllabus states that, as far as possible, priority for rotations in other hospitals should be given to fourth-year pulmonology residents, according to current guidelines and with specific training objectives in mind. Rotation at an English-speaking center abroad is only proposed as an option in the fulfillment of training objectives.⁴ Placements abroad are not currently part of the training program for the specialty of

Table 1
International Pulmonology and Thoracic Surgery Organizations

Organization	Web Page
American Academy of Allergy, Asthma and Immunology (AAAAI)	http://www.aaaai.org/
American Academy of Sleep Medicine	http://www.aasmnet.org/
American Association for Bronchology and Interventional Pulmonology (AAB)	http://www.aabronchology.org/
American Association for Thoracic Surgery (AATS)	http://www.aats.org/
American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR)	http://www.aacvpr.org/
American Association of Respiratory Care (AARC)	http://www.aarc.org/
American College of Chest Physicians (ACCP)	http://www.chestnet.org/
American Lung Association	http://www.lungusa.org/
American Sleep Apnea Association (ASAA)	http://www.sleepapnea.org/
American Thoracic Society (ATS)	http://www.thoracic.org/
Latin American Thoracic Society (ALAT)	http://www.alatorax.org/
Asociación Iberoamericana de Cirugía Torácica	www.aiatorax.org/
Canadian Lung Association	http://www.lung.ca/
European Association for Cardio-thoracic Surgery (EACTS)	http://www.eacts.org/
British Thoracic Society (BTS)	http://www.brit-thoracic.org/
Canadian Cystic Fibrosis Foundation (CCFF)	http://www.ccff.ca/
European Respiratory Society (ERS)	http://www.ersnet.org/
European Society of Thoracic Surgeons (ESTS)	http://www.ests.org/
International Association for the Study of Lung Cancer (IASLC)	http://www.iaslc.org/
Pulmonary Hypertension Association (PHA)	http://www.phassociation.org/
Society of Thoracic Surgeons (STS)	http://www.sts.org/
World Association of Sarcoidosis and Other Granulomatous Disorders (WASOG)	http://www.pinali.unipd.it/sarcoid/

thoracic surgery.⁶

Residents in training, both in pulmonology and in thoracic surgery, must become aware of the importance and necessity of expanding their specialist training abroad. Several scientific societies associated with the main fields in pulmonology and thoracic surgery can provide information on the subject (Table 1).

Nevertheless, the end of residency training does not mean the end of opportunities for further training abroad, since scientific societies provide several grants so that medical residents can take advantage of placements at centers in other countries once their training has finished (see below). The transitory period that generally follows the end of specialist training can be used for rotation at a center abroad. This rotation could be part of a doctoral thesis, a means of gaining specific training with a view to future research projects, or simply an opportunity to broaden one's knowledge in a given area of the specialty. Although options for training are the same, the disadvantage at this point in a resident's career is that a placement in another country does not form part of a specific postresidency program, since continuing medical education has not been developed as a training program in Spain. Therefore, various work-related or personal factors could make it difficult for a resident to be absent for a long period. However, if it is possible to train abroad, this could be as advantageous as during the residency.

Finally, since centers in other countries are usually open to rotation requests—as long as the minimum requirements are fulfilled—the question of timing does not usually present problems. This is generally useful when beginning in a new area of clinical practice or undertaking research in a new field of pulmonology or

thoracic surgery. Meeting the requirements is usually all that is necessary to obtain a rotation.

Choice of Destination

When planning a training placement abroad, one must set objectives, choose a destination, and seek funding. The objectives must be set first so that the destination can be chosen, and not the other way round. When choosing a destination, particular attention must be paid to factors associated with the specialty, care or research objectives, length of stay, and greater or lesser mastery of a specific foreign language. It is therefore advisable to seek advice from other health care professionals who have experience or knowledge of centers abroad within the area of the specialty to be developed. Options should be evaluated depending on whether one wishes to acquire clinical knowledge, improve one's grasp of a technique, or learn how to carry out research. In the case of hospitals in the United States, it is important to remember that the possibilities of interventional medicine are limited due to legal restrictions.

The residents' supervisor in the applicant's center or members of the applicant's department could provide additional advice depending on the personal characteristics of the resident in training and the objectives of the rotation. If no one at the resident's center has sufficient experience, advice must be sought elsewhere. Rotation at a center in another country is an enriching experience. However, it has important personal and financial implications; therefore, the choice of destination must not be taken lightly. Fortunately, the Internet and electronic mail have made it easy to contact the appropriate members of the Spanish Society of Pulmonology and Thoracic Surgery (SEPAR) for advice.

Eligibility

The application requirements for a rotation abroad are generally as follows: participation in a training or research project, accreditation as a hospital resident or staff physician, a curriculum vitae in English, a letter from one's head of department, and a letter from the host center so that the application can be processed by the Ministry of Health. The approval process is not complicated, although it should be started early, as the different stages take some time. In our experience, the process should begin no later than 4-5 months before the desired departure date. The process generally follows the summary shown in Table 2.

Table 2
Application Process for Rotation at a Center Abroad

Develop a training or research proposal in the language (generally English) of the host center
Contact the person responsible for the rotation at the host center in order to request permission and forward the proposal
Once permission has been granted, prepare the necessary documentation: Accreditation that the applicant is a resident or staff physician at a hospital Curriculum vitae in English Letter of approval from one's own head of department Letter of acceptance from the host hospital
Send the application to the Ministry of Health and Consumer Affairs for processing

Table 3
Funding of Placements Abroad by National and European Official Bodies

Body Offering Funding	Name	Objective
European Commission	COFUND	To support regional or national programs for cross-border mobility of research personnel in order to expand possibilities beyond Europe
European Commission	International exchange for research personnel	To strengthen collaboration in research in the long term through joint exchange programs for research personnel
European Commission	Grants to enable researchers to travel to third countries	Funding for training of research personnel during stays in third countries
Ministry of Education and Science	Funding for postdoctoral research at centers abroad (including the MEC/Fulbright and Príncipe de Asturias Chair Grants)	Funding to promote and facilitate further training of professionals who have just completed their doctorate and who can carry out research work that completes their training period in centers of excellence abroad that are highly competitive in the candidate's scientific field
Ministry of Education and Science	Placements for Spanish research personnel and faculty in centers abroad (José Castillejo Program)	Funding to help and encourage mobility among young doctors abroad
Ministry of Education and Science	Placements for Spanish research personnel and faculty at centers abroad, including the Salvador de Madariaga Program	Funding opportunities for placements for Spanish research personnel and faculty in research and higher education centers abroad and, exceptionally, in Spain
Ministry of Health and Consumer Affairs Carlos III Health Institute	Salk Fund	To promote training among young doctors in research with human stem cells through subsidized projects at the Salk Institute for Biological Studies in La Jolla, California

Funding

Several foundations, scientific societies, and official bodies currently provide funding for placements abroad. The amount generally depends on the center chosen and the length of stay. For most agencies, the process involves a standard series of steps: presentation of a research or training project stating the amount requested and the viability of the project, justification of the need for funding according to personal training requirements and the interests of the home center, and presentation of a letter of acceptance from the host center.

The main funding agencies are scientific societies, official bodies, and private foundations. SEPAR is particularly interested in and committed to encouraging study and research in pulmonology and thoracic surgery, and is willing to provide funding to professionals who wish to carry out a rotation abroad. Its annual offer to fund placements abroad is made alongside offers of research funding at the national conference.

The European Respiratory Society (ERS) also offers funding (fellowships) for placements—both long-term (12 months) and short-term (up to 3 months)—in European cities through its training

school (Education and Research). The objective of these fellowships is to provide young professionals (under 40 years) with the opportunity to develop research projects in respiratory, clinical, or basic medicine, and to learn techniques or procedures in respiratory medicine in another European country. Approximately 15 long-term fellowships are currently awarded. This offer is of particular interest to SEPAR members, since the joint ERS-SEPAR program ensures that a Spanish researcher or physician can enjoy a placement in another European country, or an investigator from another European country can develop a research project in Spain. A new approach used in these offers involves long-term postdoctoral fellowships, which have no upper age limit. On the other hand, short-term grants have the advantage that they are offered 3 times per year, thus eliminating the need to have to wait a whole year to apply for a placement. Information on the offer and application forms are available from the following address: www.ersnet.org/fellowships.

The Breathe Foundation (Spanish Lung Foundation), through the board of directors of SEPAR and the Latin American Thoracic Society (ALAT), makes a joint offer of 2 types of grant for cooperation and exchange: a short-term grant (Chagas Grant) for young researchers in training, and a long-term grant (López-Mejías Grant) for experienced researchers.

The Breathe Foundation, through the board of directors of SEPAR and the Portuguese Pulmonology Society (SPP), has offered the following grants for placements at Spanish and Portuguese centers: a) The SEPAR-SPP Faes-Farma exchange grants for trained specialists, and b) SPP-SEPAR Faes-Farma grants for specialists in training.

Several regional or local societies also have funding programs for training abroad. The Southern Pulmonology Association (Neumosur) makes an annual offer of research and training grants. It is important for regional societies to become increasingly involved in providing funding for training abroad so that more options are available to interested candidates.

Official bodies also provide funding for placements abroad. The Spanish Ministry of Education, the Ministry of Science and Innovation, and the Ministry of Health and Consumer Affairs, through the Carlos III Health Institute, offer various training programs every year on their web pages (Table 3). Likewise, several Autonomous Communities provide funding for placements outside Spain through their respective boards. Finally, some private foundations offer special funding for placements abroad.

A Resident's Experience

During the last few months of my training in pulmonology, I had the opportunity to carry out a rotation in the interventional bronchoscopy unit at the Cleveland Clinic (Cleveland, Ohio, USA). Sharing some aspects of my experience could prove beneficial for those considering embarking on a similar adventure.

Since the start of my residency, I was sure I wanted to train abroad, if possible in an English-speaking country so that I could improve my knowledge of the language. As I had always wished to learn first-hand how our profession worked in a country such as the United States, my choice was not difficult. While still in my training at the respiratory endoscopy unit, I sought the advice of

Dr. Rodríguez Panadero about the possibility of a rotation in an interventional bronchoscopy unit. Right from the start, he encouraged me to go ahead with the project, and thanks to him I met Dr. Atul Mehta, head of the interventional bronchoscopy unit at the Cleveland Clinic. The opportunity to speak with him in person, both at the first conference of the American Thoracic Society I attended and at the meeting of the Spanish Society of Respiratory Endoscopy, proved extremely helpful, since one of the requirements of the Ministry of Health and Consumer Affairs before authorizing the rotation was a letter of acceptance from the head of the host department. Once the Ministry approved the rotation, the training department of the Cleveland Clinic contacted me to organize accommodation to suit my budget. This was an enormous help, as I had no knowledge whatsoever of the city. During the following weeks, I made contact with the department by telephone and electronic mail, and arranged an appointment on my first day so that I could organize my 2-month stay. I was grateful for an organizational structure such as that of the Cleveland Clinic, since it makes integration easy and solves any problems that arise.

Money is an important problem when deciding to carry out a rotation abroad. The lack of duty assignments means that trainee physicians lose a large part of their income; therefore, the placement can be made more stable by applying for funding from the different scientific societies. In my case, I was able to enjoy a training grant from the Neumosur Foundation, which made my 2-month stay much easier.

In short, my experience of a rotation abroad was gratifyingly enriching. The objectives and results were not only to learn a new and pioneering technique, but also to have spent 2 months in another country, with a different health care system and a different language, which is essential in current medical practice. Therefore, I think every effort should be made to encourage residents to carry out rotations at other hospitals (mainly abroad), since this is a way to enhance one's training, which, as a result, could benefit the national health system. Finally, I would like to thank Dr. Rodríguez Panadero for his help, the Neumosur Foundation for their financial support, and my own department, whose constant encouragement enabled me to take advantage of this training.

Conclusions

Although specialized training in pulmonology and thoracic surgery at centers in other countries may require a huge effort and may even imply a sizable financial burden, the benefits far outweigh the material costs. The desire for personal and scientific growth should encourage residents and young pulmonologists and thoracic surgeons to obtain rotations outside Spain and to become acquainted with other health care systems that have different customs, processes, and resources. Such opportunities will provide these professionals with quality training whose added value further enhances our specialty.

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