Study of the advancement of women in the spheres of teaching, research and management in the Schools of Medicine of the Complutense University of Madrid and of Harvard University.

INTRODUCTION

The occasion for the study was a meeting between women professors of the Medical School of the Universidad Complutense de Madrid (UCM) and women faculty and deans of the Harvard Medical School, consequent upon the collaboration of the Real Colegio Complutense in Harvard and the HMS. The meeting was held in the Faculty of Medicine of the UCM in June, 2002, and was attended by four esteemed faculty members and two Deans of the HMS. For several months, thirteen women professors of the Faculty of Medicine of the UCM had worked on the preparation of the meeting.

OBJECTIVES

Three main points were chosen for consideration : 1) a joint study of the degree of incorporation of women into the various ranks of the teaching, research and management positions in the Schools of Medicine of the two Universities; 2) an indexing of the barriers to the advancement of women to the highest posts, and 3) an examination of the measures being taken in the two universities to eliminate these barriers. Finally, there was a consideration of possible measures to be adopted in this direction.

WORKING PLAN DURING THE MEETING

On the first day of the meeting the first theme was an outline of the criteria and procedures for advancement in each of the Universities (necessary for the identification of barriers), and this was followed by a categorization by gender of the students, residents and research fellows, the teaching staff and the administrative and leadership positions of each of the Schools, as well as the evolution of these figures over the last 10 –25 years. The Spanish segment also gave details of the salaries of the various teaching ranks and of the present legislation governing job security, salaries and maternity leave. The American section informed of the representation of minorities in the HMS and of the laws against discrimination and against sexual harassment in the workplace. Each section then gave its report on barriers to advancement and the respective measures to address these barriers. Finally a summary was made of the situation of women in the two Schools and conclusions were drawn.

The meeting on the second day was open to the whole Faculty. A summary was given of the reports and conclusions as well as of the main actions being undertaken by the HMS and the European Commission towards eliminating the barriers encountered by women in their advancement to the highest ranks of teaching and investigation in the university, and toward avoiding the present loss of women workers from academic medicine in the lower categories. This summary was followed by an interesting discussion, with the participation of two Vice-Rectors of the UCM and two male professors.

RESULTS AND DISCUSSION

Women representation statistics

The figures indicating the representation of women in the Faculty of Medicine of the UCM show that they make up only 24% of the teaching staff (in respect to the permanent or the whole teaching staff). The percentages of women professors in the staff ranks in respect to the total teaching staff are: 0.4% are Full Professors (CU), 5% are Professors (TU), 2.1% are College Professors (TEU), and 16.6% are Associated Professors (AS and ASCS). The

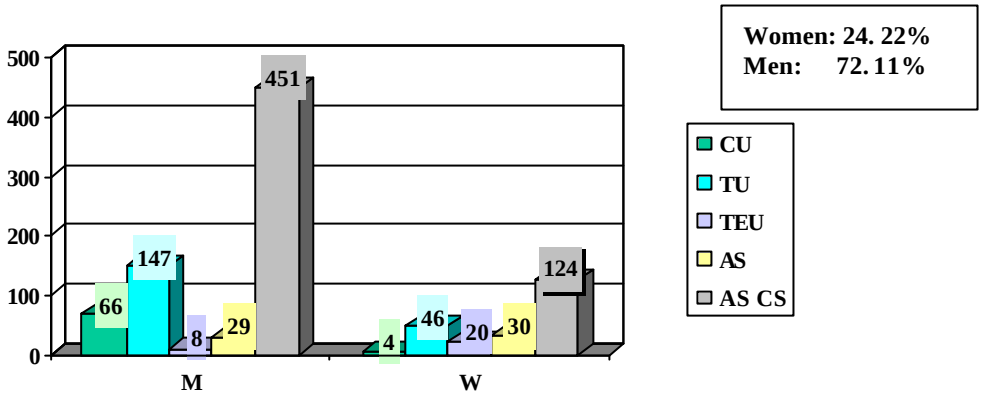

Fig. 1. **Total teaching staff (permanent and temporary) by gender and decreasing category from left to right in the Medical School of the Complutense University. Absolute numbers. M**, men; **W**, women. **CU**, Full Professor. **TU**, Professor. **TEU**, College Professor. **AS**, Associated Professor of Basic Faculty. **ASCS**, Associated Professor of Clinical Faculty. AS and AS CS are professors under contract.

Source: Staff Office of the Medical School of the Complutense University. Data of 2002

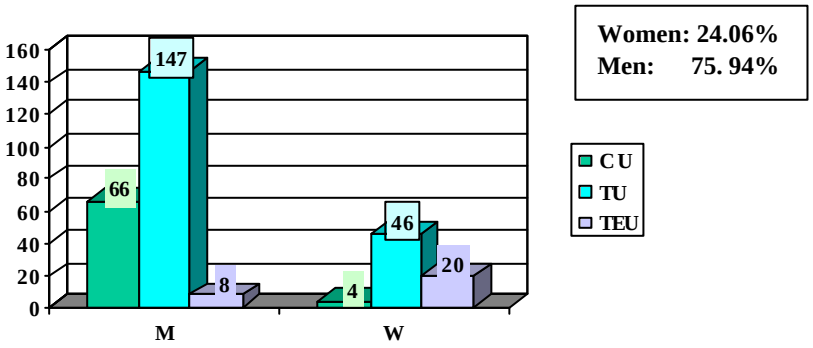

Fig. 2. **Permanent Professors staff by gender and decreasing category from left to right in the Medical School of Complutense University. Absolute numbers. M**, men; **W**, women. **CU**, Full Professor. **TU**, Professor, **TEU**, College Professor.

Source : Staff Office of the Medical School of the Complutense University. Data of 2002

percentages of women in the whole teaching staff of each category are: CU 5.7%, TU 23.8%, TEU 71.4%, and AS 24.9%. In **Fig. 1** the whole teaching staff is represented in absolute numbers, while **Fig. 2** represents only the permanent teaching staff. These percentages appear even lower if they are compared with those of the whole UCM, with those of other medical faculties of the UCM (Pharmacy, Biology and Veterinary Medicine) (**Fig. 3**), with those of the

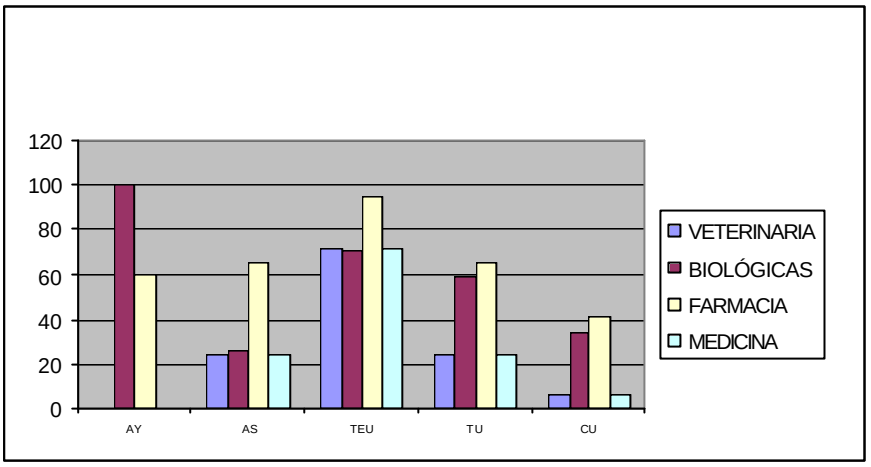

Fig. 3. **Percentage of women in Veterinary Medicine, Biology, Pharmacy and Medicine Faculties in the Complutense University of Madrid. AY**, Assistant professor. **AS**, Associated Professor. **TEU**, College Professor. **TU**, Professor. **CU**, Full Professor.

Source: Staff Office of UCM. Data of 2000

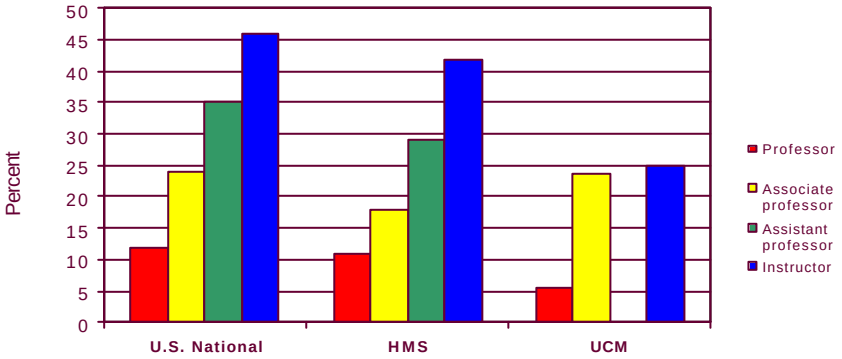

Fig. 4 **Percentage of women in each rank in US universities *(National)*, Harvard Medical School *(HMS)*, and in the Medical School of Complutense University *(UCM)*.**

Source: OWC (Partners Office for Women's Careers at Brigham and Women's Hospital) in Harvard, Boston MA) and UCM staff office. Data of 2002.

Country	Year	Full professor	Professor	Associate prof.
Finland	**1998**	**18.4**		
Portugal	**1997**	**17.0**	**36.0**	**44.0**
France	**1997/8**	**13.8**	**34.2**	
Spain	**1995/6**	**13.2**	**34.9**	**30.9**
	1998/9	**14.8**	**35.1**	**32.7**
Norway	**1997**	**11.7**	**27.7**	**37.6**
Sweden	**1997/8**	**11.0**	**22.0**	**45.0**
Italy	**1997**	**11.0**	**27.0**	**40.0**
Greece	**1997/8**	**9.5**	**20.3**	**30.6**
U.K.	**1996/7**	**8.5**	**18.4**	**33.6**
Iceland	**1996**	**8.0**	**22.0**	**45.0**
Bélgium	**1997**	**7.0**	**7.0**	**18.0**
Denmark	**1997**	**7.0**	**19.0**	**32.0**
Ireland	**1997/8**	**6.8**	**7.5**	**16.3**
Austria	**1999**	**6.0**	**7.0**	**12.0**
Germany	**1998**	**5.9**	**11.3**	**23.8**
Switzerland	**1996**	**5.7**	**19.2**	**25.6**
Belgium	**1998**	**5.1**	**10.0**	**13.1**
The Netherlands	**1998**	**5.0**	**7.0**	**20.0**
Australia	**1997**	**14.0**	**23.0**	**40.7**
USA	**1998**	**13.8**	**30.0**	**43.1**
Canada	**1998**	**12.0**		

Fig. 5. ***Percentage of women in each rank, in Universities of Europe, Australia, USA and Canada.***

Source: ETAN report, with Spain data from the course 1998/1999 added. (http://www.cordis.lu/rtd2002/science-society/women.htm)

HMS (which are slightly below the average of the U.S. Universities) (**Fig. 4**), and with those of European Universities (ETAN Report) [**Fig. 5**]. The worst results were that, 1) in the academic year 1980/1981, that is, 22 years ago, the women students and graduates in our Faculty made up 50% of the whole, as compared with the present 70%, 2) in the last 23 years (from 1978/1979 to 2000/2001), the rise in the number of women of CU rank – the highest teaching category – was zero, that of TU rank was of 24.6% (that is, of the total number of professors of all the categories) i.e. a 1% annual rise, and that of the TEU was 16.4%. 3) Of the women achieving advancement in the last 25 years, a significant number, 40%, remained in the TEU rank, the lowest category of the permanent teaching staff (really the ceiling for women), whereas only 12.6% of the men who were promoted remained at that level. In other words, the advancement of women has not risen above 1 – 2% per year during the last 23 years (between 1978/1979 and 2000/2001), and while men were advanced to the higher levels (CU and TU), no women reached the highest category (CU)***** and many remained at the lowest level (TEU).

We also made a separate study of the number of women in the various teaching ranks in the departments of basic subjects, of basic-clinical, and of clinical, examining the notable differences in salary between teaching without clinical assistance (basic courses) and those with clinical assistance (basic-clinical and clinical), the latter being much higher. The most

***** Two women have been made full professors after the 2001 statistics were reported.

striking differences were those between the three areas in the number of women in the category of Associated. While in the departments of basic subjects, the number of women is similar to that of men (14/16), in basic-clinical it is lower (51/82), and in clinical it is much lower (88/382). In other words, the lowest paid posts of professors are shared more or less equally between men and women, while those of professors with higher salaries are filled mainly by men. The same difference is found in the comparison of salaries of the various categories of permanent professors as well as in that of the representation of women. In the hospitals affiliated with the School of Medicine, in which the students are given clinical teaching, women make up 62% of the residents (the lowest paid job in the hospital), 35% of the service assistants, 23% of the heads of section and 7.4% of the heads of service. Here again, the higher the category and the job salary, the fewer the number of women. In the Faculty of Medicine of the HMS, women are also more numerous in the lowest clinical posts, and as we see in later paragraphs they are striving to obtain salaries equal to those of their male colleagues.

An examination of the data referring to the evolution of the staff under temporary contract (the lowest rung of the teaching ladder) over the last 25 years in our Faculty revealed a spectacular rise in number of this group throughout the eighties ; from 268 of these teachers in 1978/1979, the figure rose to 698 in 1989/1990, and even though from 1980 nearly 50% of the graduates were women, and about 40% of those qualifying as doctors were women, the percentage of contracts (all categories included) awarded to women was as low as 11.3%. This could have been a unique opportunity to incorporate women into the Faculty ; such an increase is now out of the question on account of the low birth-rate and the lack of university funds for expansion.

As regards elected academic representation, normally by voting, the figures for women were even more striking. The Dean is a man, the six Vice-deans are all men, the Heads of Department (20) are all men. The Department Secretaries are 20 men and 2 women. On the Committees, there are 50 men and 6 women (***Fig.* 6**). On the Board of the Faculty, the highest

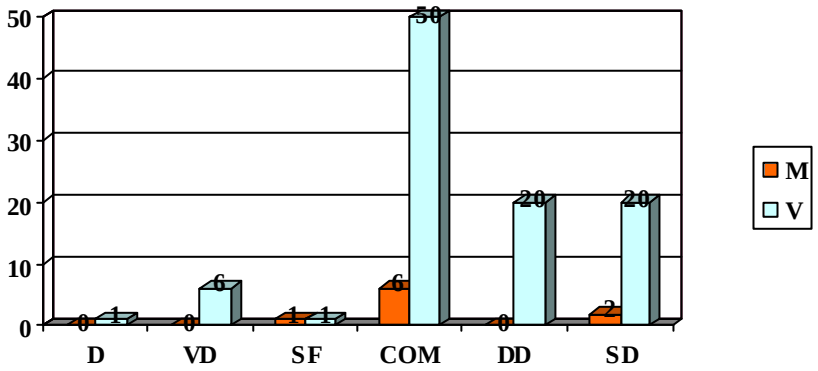

Fig. 6. **Academic posts in the Medical School of the Complutense University by gender. Absolute numbers.** M, women. V, men. D, Dean. **V**D, Vice Dean. **S**F, Faculty Secretary. **CO**M,Member of Committees. **D**D, Chair of Department. **S**D, Secretary of Department.

Source: Staff office of the Medical School of the UCM (Data of 2002)

organ of representation of all the faculty members, only 2 are women professors out of a total of 43 professors. The data of representation of women on Harvard Medical School Committees were better as **Fig. 7** shows.

Fig. 7. Representation of Women on Medical School Committees

Committee	% of Women			
	03/30/99	02/23/00	09/27/01	01/06/2002
Subcommittee of Professors (considers recommendations for full professorships)	17,2%	20,0%	21,4%	27,6%
Promotions, Reappointments, and Appointments (P&R) (considers recommendations for Assistant and Associate Professors) (Women Chair & Vice Chair)	14,3%	18,8%	23,3%	27,6%
Committee on Longer Service (Subcommittee of P&R)	12,4%	17,6%	14,3%	10,0%
Faculty Council (Elected)	41,7%	41,7%	36,8%	42,9%
Conference of Department Heads	3,5%	7,0%	9,8%	12,0%
Committee of Professors	9,3%	10,5%	11,3%	11,6%
Council of Academic Deans (Clinical Departments)	0,0%	0,0%	25,0%	25,0%
Council of Preclinical Department Heads	0,0%	12,5%	25,0%	25,0%
Council of Social Science Departments	0,0%	25,0%	25,0%	25,0%
Deans Executive Council	37,5%	38,9%	47,1%	
Deans, Associate Deans, and Assistant Deans	44,8%	54,2%	46,9%	45,0%
Academic	36,8%			39,0%
Non-Academic	60,0%			60,0%

Identification of obstacles

In the UCM, even more difficult than collecting the figures was the task of identifying the barriers. We examined the criteria adopted for the appointment of teaching staff, both permanent and temporary, looking for obstacles to the advancement of women. A major consideration in the committees responsible for the choice of staff under contract and in the boards that select professors, is that of research. And since scientific production depends largely on the financing of projects of investigation and on the number of fellows engaged in these projects, we thought it useful to compare the number of projects that were financed and

the number of fellows awarded to men and to women professors. A comparison of the number of projects granted to women and to men professors by public and private institutions between 1995 and 2000 (the only period for which these data were available) revealed no significant difference. Neither did we find sex differences in the proportion of fellows requested and awarded by the total of professors, but when we studied the proportion of fellows received by men and women head of projects we did find that projects where the main researcher was a women received 20% fewer fellows. So it is a fact that women at the head of a research project obtain fewer fellows, but this might not indicate any sex discrimination on the part of the committees that assess the projects and scholarships; it may be that scientific production is weighted heavily and that this may be lower in the case of the women professors of our faculty. We concluded that this point should be studied. Another study that we considered necessary was that of a possible sex discrimination on the part of the selection committees and boards since we detected that at least in the clinical area the main barrier comes at the beginning of the academic career, although further obstacles arise at the higher levels of this area as a consequence of the complicated system of selection. We are aware, however, of the difficulty of obtaining information for a study of this kind. It is worth noting that our colleagues in Harvard did not raise this point, and we do not know whether they had identified any such obstacle.

We were impressed by the account given by the participants from HMS of the work done in their faculty to identify the barriers to advancement, and the results achieved. It was clear that they are far ahead of us in this task since they started many years ago to examine the relative position of female representation in their faculty. Progress at the full professor level has been slow in the last twenty years, but the representation of women has steadily increased due to many organizational efforts in the School and the affiliated hospitals. See **Fig. 8** that sets forth the representation of women by rank from 1984 to 2002. As early as 1972, the Governance Committee of the HMS recommended there be a Joint Committee on the Status of Women (JCSW), which was to include HMS, the Harvard School of Dental Medicine and the Harvard School of Public Health. Its first meeting was held in 1973 with a mandate to monitor the progress of women faculty and staff and to make recommendations for improving the status of women. The mission has been further defined in the following words: "The task of the JCSW is to facilitate the development and contribution of women affiliated with HMS and HSDM by expanding and improving the opportunities for advancement of women to their maximum potential."

In 1996, a Partners HealthCare, Inc. committee representing Brigham and Women's Hospital and Massachusetts General Hospital administered a questionnaire to 1,260 full-time members of their faculty. Half of them replied, of which 46% were men and 54% women. The Committee's report identified the women's perceptions of gender inequality in salary, promotion, visibility, and leadership opportunity. It also documented perceptions of less support for women, problems of work/family balance, and lack of clear guidelines on promotion/advancement. The survey indicated that women are more likely than men to spend 50% or more work time on patient care, and to be over represented in lower faculty ranks. Without children, women faculty members were as likely as men to attain the rank of professor, but with children women were underrepresented at the rank of professor. Women reported comparable productivity to that of men for grants and for first-authored publications, but they reported a smaller number of publications than men. Finally, women reported lower levels of satisfaction with work, career goals, and research than men, particularly when the women had children.

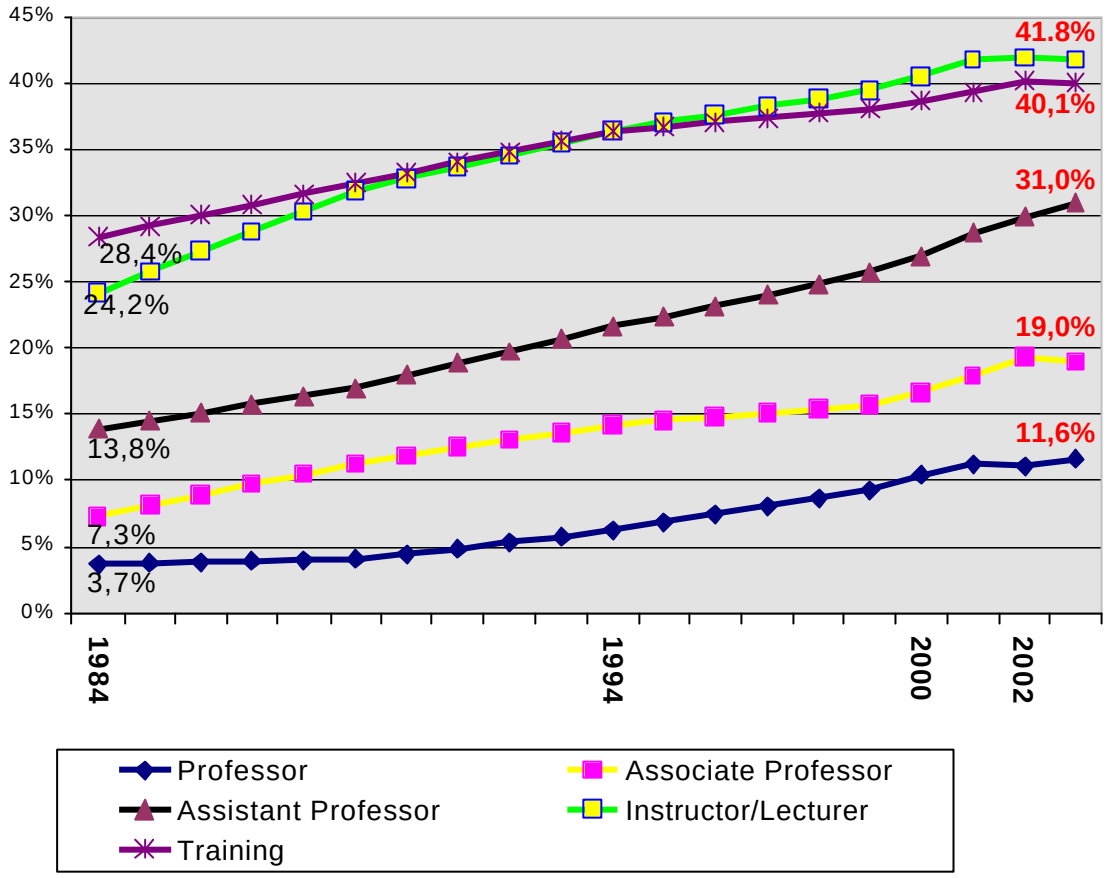

***Fig. 8*. Harvard Medical School and Harvard School of Dental Medicine growth in percentage of women Faculty by rank, from 1984 to 2002**

The Offices for Women´s Careers and for Faculty Development in the HMS affiliated hospitals have continued to focus on the perceptions of barriers to academic advancement that women in their institutions have brought to their attention. The following concerns are a summary of those which have been identified by HMS, its affiliated hospitals, the Association of American Medical Colleges, MIT, and Johns Hopkins: 1) Discrimination in the methods of evaluation since one criterion is the number of publications, and it is known that men publish more and therefore are at an advantage. On the other hand, the citation indexes, which are also used as a measure of impact, rate women above men but are rarely quoted in discussions of academic advancement. 2) Discrimination in financing, recognition, hiring and tenure. 3) Less recognition of women's academic accomplishments, and less acceptance of women as collaborators. 4) Fewer invitations to take part in professional activities such as congresses or presentations at conferences, with the result that women have more difficulty in establishing a national reputation. 5) A lack of training or experience in the exercise of leadership, and a scarcity of leadership positions held by women. 6) Less information shared with women about the necessary steps for advancement, 7) Fewer advisers or mentors for women. 8) Sexual and intellectual harassment. 9) Problems with the balance between academic-scientific

career and family life. 10) Delegation of women to service or support roles that will not lead to academic advancement.

The American participants informed us of other studies of the progress of women through the faculty ranks, with conclusions similar to those of the HMS studies and experience. One study done by Wennaras and Wold with support from a grant of the Swedish Ministry of Education was reported in 1997. Another study was done by a group of tenured women in the Faculty of Science at MIT and reported in 1999 and 2002. A third report was made by the Association of American Medical Colleges in 2001. The first of these studies (Wennaras and Wold, *Nature* 347, 341-343, 1997) analyzed peer-review scores obtained from the Swedish Medical Research Council through the Freedom of the Press Act. The authors found that the committees charged with peer review of applications for postdoctoral fellowships in Sweden did not judge scientific merit independent of gender, and overestimated the achievements of men in comparison with those of women. This conclusion was supported by the finding that men and women with equal scientific productivity were given different competence ratings, with lower ratings for women. In addition, personal relationships with the mentors carried considerable weight in the success of a grant application. In the MIT study, the full professors did a careful quantitative analysis, with the support of the Dean of their Faculty, and reported inequities in salary, space, awards, and resources (with women receiving less), and the marginalization or exclusion of women from top leadership roles. They also found that the women faculty received less recognition and fewer awards thus contributing to the failure of women to increase their representation at the highest ranks over the past 20 years. The third report, that of the Association of American Medical Colleges, concluded that with equal preparation for an academic career (board certification, advanced degrees, and research during fellowship training), women are less likely to have their own office or laboratory space, less likely to have protected time for research, and less likely to begin their faculty careers with grant support. This same report found that women have worked fewer hours per week and have published fewer papers than have their male colleagues, but after adjustment for these factors, women still remain less likely to be promoted.

Actions

The professors of the UCM were anxious to hear the session devoted to actions undertaken in other faculties as we ourselves had no action to report, apart from the recent unconditional willingness on the part of the Dean, the Vice Rector of International Relations, and the Director of the Real Colegio Complutense to facilitate this meeting. Although this was the only action we could report, it was very important to us because it was the first, and we added to it the actions being undertaken by the Consejo Superior de Investigaciones Científicas and those of the European Commission. On listening to our American colleagues we realized once again that we are a long way behind the HMS. In our opinion, their most important action has been the creation of the Offices for Women's Careers (OWC) at the Brigham and Women's Hospital (BWH) and the Massachusetts General Hospital, as well as the Offices for Faculty Development at the Beth Israel Deaconess Medical Center and the Children's Hospital, all with official backing. As one example, the BWH Office has set forth the following aims : 1) to recruit women and keep them in the faculty, 2) to encourage and help women to engage in research, and 3) to facilitate the academic progression of women. We were also impressed by the details of the measures and actions officially adopted to attain these goals. For example, the head of the BWH office acts as adviser and consultant to the departments and the

administration of the BWH; she is a mentor of the women on the staff; she is able to intervene directly and to act in defense of a woman in a conflict; and she is authorized to negotiate and mediate in conflicts of opinion. The OWC at the BWH also has an Advisory Committee made up of women members of all ranks of the faculty, with representatives of all the departments and divisions, including women researchers and clinicians. Among other duties, this Committee advises the Head of the OWC, attends to the needs and important questions of the women of the faculty, and has a voice in the decisions of the hospitals that may affect them. Another task of the OWC is to organize seminars and workshops dealing with matters that may help women to progress through the ranks of the faculty. The diversity of the subjects dealt with in these workshops may be judged by some of the titles : 'History of women in medicine in the USA', 'Scientific writing: summaries, articles, projects, budgets, reviews, books, book chapters', 'Criteria for advancement', 'The challenge of combining teaching, research, care of patients, with the education of one's children', 'Harassment', 'Strategies of negotiation', 'Solution of conflicts'. The BWH report on 'action' finished with a list of the results obtained by the OWC since 1998. The following are some of its important achievements: periodic reviews of the number of women in the faculty at each rank, a grant equity review, an increase in the number of women at each rank, a rise in the number of mentors, greater recognition of the work of women in the faculty as shown by the higher number giving lectures or sitting on important committees, and an increase in hospital sponsorship of women taking leadership training courses.

Equally important, HMS and its hospitals have undertaken a series of measures aimed at improving the balance between the job and the family. A very successful project has been the development of a program of grants for young faculty members whose family and other responsibilities could hamper their progression through the faculty ranks. These grants provide $25,000 per year for one or two years to buy protected time to pursue academic activities or to support a research assistant. Another effort is supported by a contract from the U.S. Department of Health and Human Services for an HMS Center of Excellence in Women's Health, which includes multiple affiliated hospitals and HMS. One of the 5 Committees within this Center is the Academic Leadership Committee which promotes activities within HMS and its affiliated hospitals to increase the representation of women in higher academic and leadership positions. The activities encompassed by the members of this Committee have included preparation of women for higher posts through leadership programs, encouragement of mentoring programs, support for salary equity surveys, and pressure for regular academic reviews of the academic progress of current faculty members.

The report by the HMS group also included information about their actions in support of the increased representation and academic advancement of minorities in the faculty (with a particular emphasis on women minorities), and in support of improved women's health, again with special attention to the minorities. These activities are of particular concern for the HMS Center of Excellence in Women's Health noted above. One committee within the Center is charged with developing plans for improving the health of minorities, with new programs for community health centers as well as for out-patient and hospital settings . Special training for health workers and new printed materials in English and Spanish have already been developed. Another Committee within the Center of Excellence is responsible for developing new curriculum in women's health for medical students and residents, with additional attention to subjects related to gender, race, ethnic group and culture. It is officially recognized that racial diversity among the members of the HMS provides a social and cultural enrichment that must be protected. Included in this mandate is the need to integrate minorities into

academic posts and to ensure their academic progress. Another HMS report focused on efforts that have been made to increase the interest of minorities in science and medicine through programs beginning in kindergarten and continuing through high school and college.

The professors of the UCM were very interested in the report of American legislation prohibiting discrimination and sexual harassment in the workplace, and the account of actions taken by the HMS in these matters. The legal aspects were explained, and seemed to be similar to ours. The Medical School has adopted a series of policies and guidelines to prevent discrimination in the workplace, including the establishment of an Ombuds Office to provide a confidential place for faculty, staff, and students to go with complaints in this area. It was surprising to hear that American law governing maternity leave is less advanced than Spanish law, since the former grants only 12 weeks of unpaid leave for family and medical reasons (including maternity). HMS grants 13 weeks of maternity leave with pay. Hospitals also provide paid maternity leave according to their own policies, but none grants more than 3 months paid leave unless there are medical complications.

Those taking part in this study, both the Spanish and American members, (see the accompanying data), joined in an interchange of impressions at the end of the meeting, and it was generally agreed that it had been useful to all those concerned. We agreed that the development of the problem has been similar in the two faculties over the last 20 years, with a very slow growth of the advancement of women in top positions, even though there are wide differences between our universities, one public and the other private, one with generous financing and good organization to try to raise the status of women, while the other is well behind in these matters. It was clear that we must strive towards faster progress and not depend on the passing of time to solve the problems. We agreed to continue working together in a joint effort to profit from the experience acquired by the women faculty and deans of the HMS.

ACKNOWLEDGEMENTS.

This study was made possible by the hard work and personal effort of the American and Spanish professors under the master direction of the Dean for Faculty Affairs of the HMS, Doctor Eleanor Shore, the unconditional collaboration of the Dean of the Faculty of Medicine, Doctor Vicente Moya, and by the organizational and financial support of the Vice Rector of International Relations of the UCM, and the Director of the Real Colegio Complutense Program of Complutense University and Harvard University. Our thanks are also due to the office staff of the Faculty of Medicine, especially to Ángela Amores and Ana González, to Doctors Javier Puerta and Jaime Arias, and to Rafael Camacho and many other colleagues of the UCM who provided the data for our work.

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Rosemary Duda, M.D., M.P.H. Director, Center for Faculty Development, Beth Israel Deaconess Medical Center. Chairperson of the Joint Committee on the Status of Women (for Harvard Medical School and Harvard School of Dental Medicine), Associate Professor of Surgery at Harvard Medical School.

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