

Research Report

2004-09

**Faculty of Health Sciences
American University of Beirut**



November 2009

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EXECUTIVE SUMMARY

The Faculty of Health Sciences (FHS) has attracted substantial funding over the past years. In the 2008-09 academic year (AY), the Faculty was awarded a total of \$1,048,286 for research as *new* grants spanning a duration between one month and three years, making the annual amount of funds *available* for research \$1,625,533, a figure higher than the corresponding amount of \$1,443,633 in 2007-08 (Table 1). The majority of funding available for spending on research was obtained from international and regional sources (94.5%), a trend which has been consistent for the past five years (Figure 1).

In 2008-09, the total number of publications was 59, out of which 41 were publications in refereed journals. The latter included 39 articles and two publications as letters, book reviews or brief reports. The number of publications in refereed journals during AY 2008-09 (n=41) falls within the range of the previous four years (39 in 2006-07 and 68 in 2005-06). The mean number of articles published in refereed journals per full-time equivalent research active faculty member was 1.5 as compared to 1.4 to 2.5 over the period 2004-09 (Figure 2). The proportion of faculty members who published 2 or more articles in refereed journals was 55.6 %.

With respect to collaborative research, co-authorship within one department was the lowest (12.2%) in 2008-09 as compared to the previous 4 years whereas co-authorship across the five departments at FHS increased (from 5% to 22.0 %). During the same period, co-authorship with colleagues outside FHS increased from 75.0% to 85.4%. Out of the total publications co-authored with colleagues from outside institutions in 2008-09, co-authorship with national or international researchers (34.1% and 36.6%, respectively) was much higher than that with regional researchers (9.8%). The proportion of publications with FHS Faculty as principal authors (first or corresponding) was 68.3%, and those co-authored with current or recent graduate students was 31.7%.

FHS faculty members continue to publish in high quality international refereed journals, with the majority of papers (61.0%) being published in high quality journals (journals ranking in the top 60%). The percent of publications in journals not ranked by ISI-Citation Index was 17.0%.

Summary: Facts and Figures

Table 1: Total funding available for spending and new grants in US Dollars in AYs 2007-08 and 2008-09 by source

Funding Source	2008-09		2007-08	
	Total available*	New grants**	Total available*	New grants**
International/Regional	1,535,709	878,462	1,322,672	939,405
Local agencies	74,104	154,104	95,894	63,157
University Research Board (URB)	15,720	15,720	25,067	25,067
Total	1,653,533	1,048,286	1,443,633	1,027,629

* Funds available for spending in the respective years were included.

** New grants amended to FHS during the year were included.

Figure 1: Total funding available for spending in US Dollars by source and AY, 2004-09

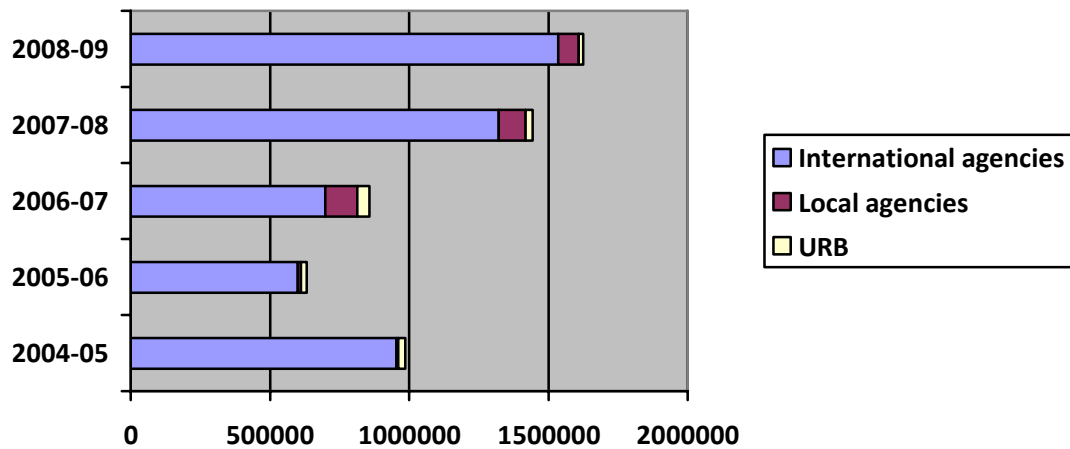
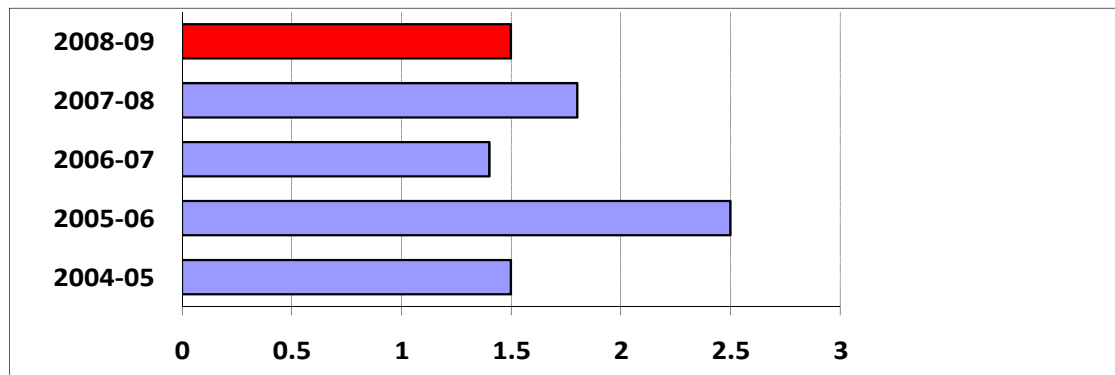


Figure 2: Average number of refereed articles per full-time equivalent research faculty member by AY, 2004-09



INTRODUCTION

The Faculty of Health Sciences (FHS) Research Committee (RC) is pleased to present the seventh annual Research Report for FHS, covering the past five academic years (2004-05 through 2008-09) with emphasis on the last AY (2008-09). For the sake of this report, the AY refers to the period extending from June 1'08 – May 31 09¹. This report is published by the RC on an annual basis.² The report contains numeric data on FHS research activities and output, with a focus on sponsored research and journal publications. The data are used to monitor progress towards achieving the following research objectives:

1. Maintain the amount of sponsored research,
2. Maintain the average quantity and quality of research publications,
3. Sustain interdisciplinary and collaborative research with AUB Faculties and other universities in Lebanon, the region, and internationally, and
4. Strengthen student participation in Faculty research.

FHS consists of five departments: Environmental Health (EH), Epidemiology and Population Health (EPH), Health Behaviour and Education (HBE), Health Management and Policy (HMP), and Medical Laboratory Technology (MLT). The report includes measurable outcomes on the research objectives for FHS as a whole and by department. The quantity, type, and quality of research publications are also provided.

The RC would like to acknowledge the contribution of Dr. Sani Hlais, lecturer, for conducting the data analysis, and Ms. Ruba Ismail-Hamad, instructor, for providing and collating the relevant data from various sources. Dalia Mikdashi, MPH student, assisted in data entry. We thank Dean Iman Nuwayhid and Assistant Dean Rima Afifi for their comments on earlier drafts.

¹ The previous research report (2007-08) covered the period July 1 2007 to June 30 2008

² An electronic copy of the previous reports is available on the RC website:
http://fhs-lb.aub.edu.lb/research/research_reports.html

Research Committee, 2008-09

Abla Sibai (EPHD), Chairperson

Jocelyn DeJong (EPHD)

Monique Chaaya (EPHD)

Rabih Kamleh (EHD)

Robin Heath (HBED)

Sawsan Abdulrahim (HBED)

Tamar Kabakian (HBED)

By invitation:

Nasser Yassin (Centre for research and Population Health - FHS)

Badia El-Masri (Student representative – FHS)

RESEARCH GRANTS

The FHS has been successful in forming multi-investigator, multi-disciplinary research teams that are able to attract substantial extramural funding. During the past AY (2008-09), the Faculty was awarded a total of \$1,048,286 for research as *new* grants.³ These grants have a start date between October 2008 and September 2009, and span over a duration between one month and three years. However, for the purpose of this report, the total amount of funding for each grant was divided over the duration of the grant, and what is reported here for each AY is the amount of funds allocated or available for expenditure only in that year. Hence, the amount of funds *available* for research in AY 2008-09 amounted to a total of \$1,625,533 (Table 2). This figure represents the highest amount of funds available in the past 5 years. Appendix A shows an itemized list of faculty research grants in 2008-09.

Table 2: Sponsored research grant funding available for research, 2004-09*

Source	2008-09		2007-08		2006-07		2005-06		2004-05	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
International Agencies	1,535,709	94.5	1,322,672	91.6	669,573	81.0	599,286	94.8	954,362	96.7
Local Agencies	74,104	4.6	95,894	6.7	115,194	13.9	11,525	1.8	5,915	0.6
URB	15,720	0.9	25,067	1.7	42,305	5.1	21,600	3.4	26,340	2.7
Total	1,625,533		1,443,633	100.0	827,072	100.0	632,411	100.0	986,617	100.0

* All figures are expressed in US Dollars and only funds available for spending in the respective years were included.

RESEARCH OUTPUT

Publications

During AY 2008-09, the number of publications, including those that appeared in refereed and non- refereed journals, books, book chapters and published research reports, was 59 in total. A full list of articles published in refereed journals in 2008-09 is included as Appendix B. The list does not include the Dean nor faculty on

³ Note that funds granted and allocated only for research are included in this report. Programmatic or scholarship funds do not appear in this report.

leave. This figure has fluctuated during the past five AYs between a minimum of 47 in 2004-05 and a maximum of 79 in 2005-06 (Table 3).

The majority of the publications appeared in refereed journals (41; range 39-68 in last 5 years), out of which 39 were original research articles (range 32-62 in the last 5 years) and two in the form of letters, book reviews, or brief reports (range 2-8 in the last 5 years). These were followed by research reports (9, range 3-15 in the last 5 years). Additionally, publications included five papers that appeared in non-refereed journals and three book chapters (range 2-4). There was only one book published in 2008-09 out of a total of three which appeared in the last five years.

Table 3: Number of publications by publication type, 2004-09

Publication Type	2008-09	2007-08	2006-07	2005-06	2004-05
Publication in refereed journals	41	47	39	68	40
Articles	39	43	33	62	32
Letters/book reviews/brief reports	2	4	6	6	8
Publications in non-refereed journals*	5	4	-	-	-
Books	1	0	1	0	1
Book chapters	3	2	2	4	3
Research reports (published)	9	15	11	7	3
Total	59	68	53	79	47

* Owing to lack of data, earlier research reports did not report on publications in non-refereed journals.

The research articles that were published in refereed journals (n=41) were re-examined as mean number per full time equivalent (FTE) research active faculty member (Table 4). For the year 2008-09, the mean number of articles published per one FTE was 1.5 (range in the past five AYs 1.5 to 2.5) with the highest output (2.5 per FTE) achieved in 2005-06. Furthermore, the proportion of research active faculty members publishing at least 2 articles per AY in refereed journals was 55.6% in 2008-09, a value which is the highest over the last 3 years (range 52- 56%). For the latter estimate, articles co-authored by more than one FHS faculty member were credited for every author.

Table 4: Articles published in refereed journals according to full-time equivalent (FTE) research active faculty member*, 2004-09

Publications in Journals	2008- 09	2007- 08	2006- 07	2005- 06	2004- 05
Articles	39	43	33	62	32
Total number of research active faculty members*	27	25	24	26	23
Total FTE	26	23.5	23.0	25.0	22.0
Article/FTE	1.5	1.8	1.4	2.5	1.5
Percent active faculty members publishing at least two articles per year in refereed journals	55.6%	52.0%	54.2%	-	-

* Includes all full-time or part-time faculty of professorial rank, as well as those lecturers and instructors who are involved in research programs and projects.

Table 5 presents the research output at FHS in 2008-09 stratified by each of the five departments and compared to output over the last three years (2005-08). The three-year period is chosen to provide relevant information for the FHS accreditation process. Six articles published in refereed journals were co-authored by faculty members from different departments. For the purpose of this table, duplicate articles published by co-authors from different departments within FHS were counted in all corresponding departments; hence the totals in table 5 do not necessarily match with those in table 3. Compared to the average computed for the prior three years, two departments showed a decrease in the number of publications in refereed journals in the AY 2008-09; whereas the output was stable or increased in the three other departments. The total research output, including duplicates, for all departments for AY 2008-09 (n= 63) was lower than the average of the previous three years (n=72.3). The same trend was observed for research articles appearing in refereed journals as well as number of articles per FTE (Table 6). For AY (2008-09), the highest number of research articles per FTE was achieved in the HMP Department (2.3), and the highest proportion of research active faculty members publishing at least two articles per year in refereed journals was also observed in the HMP Department (100 %). This was followed by the EH Department (80.0%) and the HBE Department (50%).

Table 5: Number of publications in the AY 2008-09 compared to the mean number of publications in the previous three AYs (2005-08) by publication type and department*

Publication Type	EH	EPH	HBE	HMP	MLT
Publications in refereed journals					
AY 2008-09	8	12	15	7	3
Mean of 3 years (2005-08)	9.3	29.7	11.3	4	2.7
Publications in non- refereed journals					
AY 2008-09	0	2	0	3	0
Mean of 3 years (2005-08)	0	0	0	1.3	0
Books					
AY 2008-09	0	0	0	1	0
Mean of 3 years (2005-08)	0.3	0	0	0	0
Book Chapters					
AY 2008-09	1	2	0	0	0
Mean of 3 years (2005-08)	0.3	1	1.3	0	0
Research reports (published)					
AY 2008-2009	2	3	0	4	0
Mean of 3 years (2005-08)	1.7	4.7	2.3	2	0.3
Total					
AY 2008-2009	11	19	15	15	3
Mean of 3 years (2005-08)	11.7	35.3	15	7.3	3

*Articles published by co-authors from different departments within FHS were counted in all corresponding departments.

Table 6: Research articles published in **Refereed Journals** in the AY 2008-09 according to full-time equivalent (FTE) research active faculty member* compared to the mean in the previous three AYs (2005-08) by department

Publication Type	EH	EPH	HBE	HMP	MLT
Articles					
AY 2008-09	8	12	13	7	3
Mean of 3 years (2005-08)	8.7	27.7	8	4	2.7
Total number of research active faculty members					
AY 2008-09	5	8	8	3	3
Mean of 3 years (2005-08)	4.3	8	8	2.7	2
Total FTE					
AY 2008-2009	5	8	7	3	3
Mean of 3 years (2005-08)	4.3	8	7	2.7	1.83
Articles per FTE					
AY 2008-2009	1.6	1.5	1.9	2.3	1
Mean of 3 years (2005-08)	2.1	3.5	1.1	1.5	1.4
Percent active faculty members publishing at least two articles per year in refereed journals†	80%	37.5%	50%	100%	33%
Mean of last two years (2006-07, 2007-08)†	55%	74.1%	18.8%	66.6%	100%

* Includes all full-time or part-time faculty of professional rank, as well as those lecturers and instructors who are involved in research programs and projects.

† For articles co-authored by more than one single FHS faculty member, the article is credited for each single author.

Conference Presentations and MS Theses

The number of conference presentations including oral presentations, papers, and posters presented at conferences in AY 2008-09 was 55, which is higher than the prior 4 AYs (Table 7). The number of graduate MS theses finalized in 2008-09 was 3, the lowest in the past 5 years. The data on conference presentations were re-analyzed by department and findings were compared with those reported in the previous three years (Table 8). Two departments, HMP and MLT, have shown a small decrease in conference presentations, while the three other departments have shown an overall increase in conference presentations in the AY 2008-09 as compared to their respective means of the prior three AYs.

Table 7: Summary of conference presentations and MS theses, 2004-09

Type	2008-09	2007-08	2006-07	2005-06	2004-05
Conference presentations	55	33	35	50	45
MS theses	3	8	5	8	11
Total	58	41	40	58	56

Table 8: Conference presentations and MS theses in the AY 2008-09 compared to the mean in the past three years (2005-08) by Department

Type	EH	EPH	HBE	HMP	MLT
Conference presentations					
AY 2008-09	14	16	19	5	1
Mean of 3 years (2005-08)	11	14	8.3	5.6	1.3
MS theses					
AY 2008-09	0	3	N/A*	N/A	N/A
Mean of 3 years (2005-08)	1.3	5.7	0	0	0

*HBE, HMP, and MLT departments do not offer an MS degree

INTERDISCIPLINARY AND COLLABORATIVE RESEARCH

Table 9 describes the range of interdisciplinary and collaborative research produced by FHS faculty members in refereed journals as evidenced by co-authorship between faculty members at FHS departments and colleagues from other Faculties at AUB or at outside institutions (not AUB) for the academic years 2004-09. Of the total number of refereed journal publications (n=41), the proportion of publications co-authored within one department at FHS decreased from 17.5 % in 2004-05 to 12.2 % in 2008-09, after a peak of 41.2% in 2005-06. Co-authorship across the five departments substantially increased from 5 % to 22 %, between 2007-08 and 2008-09. Co-authorship with colleagues from outside institutions has increased from 75% to 85.4%.

The proportion of refereed publications led by FHS faculty as first authors or as principal authors⁴ has been maintained at over 50% and over 60%, respectively, for the past three or four years (Table 9). Publications co-authored with current or recent

⁴ A principal author is defined as first, corresponding or sole author.

graduate students, however, decreased from 43.6% in 2006-07 to 31.7 % in 2008-09 but increased in the last year.

RESEARCH QUALITY

Table 10 shows the distribution of journal publications by FHS ranking of the journals, which is based on the Journal Impact Factor as defined by the Institute for Scientific Information (ISI).⁵ The majority of papers (61%) were published in high quality journals (A⁺ and A journals ranking in the top 60%); 22 % were published in the type-B journals (rank in the lower 61-85%), while none was published in type-C journals (rank in the lowest 86-100%). The number of publications in non-ranked journals (i.e., not listed and ranked by the ISI system) decreased from 25.6% in 2007-08 to reach 17 % in 2008-09.

Table 9: Percent distribution of refereed journal publications by co-authorship within and outside FHS

Co-authorship	2008-09	2007-08	2006-07	2005-06	2004-05
Co-authorship within one department at FHS	12.2	29.8	30.8	41.2	17.5
Co-authorship across departments within FHS	22.0	6.4	25.6	16.2	5.0
Co-authorship outside FHS	85.4	87.2	66.7	73.5	75.0
Co-authorship with other Faculties at AUB	29.3	53.2	35.9	50.0	17.5
Co-authorship with national researchers	34.1	25.5	15.4	14.7	22.5
Co-authorship with regional researchers	9.8	2.8	5.1	7.4	22.5
Co-authorship with international researchers	36.6	38.3	30.8	25.6	42.5
First author from FHS	51.2	53.2	56.4	51.5	40.0
Principal author from FHS	68.3	63.8	66.7	-	-
Co-authorship with students	31.7	27.7	43.6	-	-
Total number of publications	41	47	39	68	68

* Principal author includes first, corresponding and sole author.

† Students include current or recent graduates.

⁵ For the corresponding Impact Factor of each journal, as defined by the Institute for Scientific Information (ISI), you can follow the link <http://smlweb.aub.edu.lb/Databases/Default.aspx?CatID=6>

Table 10: Percent distribution of journal publications in refereed journals by FHS ranking of journal, 2007-09

FHS Ranking Journal	ISI rank (percentile)	2008-09	2007-08
A ⁺	1-10%	24.4	10.6
A	11-60%	36.6	48.6
B	61-85%	22.0	8.5
C	86-100%	0	6.4
Not ranked		17.0	25.6

*Ranking refers to the ISI rank of the journal out of the total number of journals listed in the subject category. Hence, A⁺ as an example, refers to journals in the top 10% percentile of all journals in the same subject category of the specific publication.

Appendix A: Sponsored Research grants and URB grants for 2008-09

	Project Name	Investigator	Collaborators	Funding Source	Funding Start and End Date	Amount Total Award	Amount for this year (Oct 1 08-Sept 30 09)
International & Regional Sponsored Research Grants							
1	Workshop on Public Health in the Arab World	Dean		ICPH- Birzeit University	1-Oct-09 31-Jan-10	\$25,000	\$0
2	Towards Evidence Informed Policies in the Middle East & North Africa Region	El-Jardali		IDRC	1-Sep-09 1-Sep-12	\$197,720	\$0
3	Peer Education Training & Research International Unit-Beirut	Ghandour / Afifi		UNFPA	1-Jul-09 31-Dec-09	\$140,000	\$46,667
4	Exploring the problem of scarcity of nurses in underserved areas in the Middle East: Factors, Reasons & incentives for recruitment & retention	El-Jardali	Saleh	WHO	1-Jun-09 31-Oct-11	\$199,000	\$19,000
5	Risky Behaviors and Protective factors among the Youth in Lebanon*	Yassin	Afifi, Ghandour	Swiss Academy for Development	15-May-09 14-May-10	\$30,473	\$15,237
6	AIDS paper writing workshop	DeJong		WHO	26-Apr-09 31-Jul-09	\$39,973	\$39,973
7	Safe Work in Lebanese Bakeries: From Policy to Practice	Habib		AMIDEAST	20-Apr-09 31-May-10	\$50,000	\$25,000
8	Behavioral Risk Factor Survey: Comparison of estimates based on cell phone interviews with face to face interviews	Sibai		WHO	1-Mar-09 31-Aug-09	\$20,867	\$20,867
9	Smoke free policies in Lebanon: lessons learned from existing experiences and recommendations for the future	Nakkash	Afifi, Chaaya	IDRC	1-Mar-09 28-Feb-10	\$37,044	\$18,522
10	AUB Neighborhood Initiative - Ras Beirut well Survey	Kaddour	Yassin	Sub award from main Ford Foundation to AUB	1-Jan-09 31-Dec-09	\$60,000	\$30,000
11	Validation of the concept and measurement of youth developmental assets in Lebanon	Afifi	Nakkash	UNDP	5-Dec-08 15-Aug-09	\$14,905	\$14,905
12	A national study to estimate prevalence, burden of illness and help seeking behavior of Rheumatic diseases in Lebanon	Chaaya	Thurayya Arayssi, Imad Uthman, Rima Habib	International League of Associations of rheumatology	1-Jan-09 31-Dec-09	\$10,000	\$8,000
13	A national study to estimate prevalence, burden of illness and help seeking behavior of Rheumatic diseases in Lebanon	Chaaya	Thurayya Arayssi, Imad Uthman, Rima Habib	Shering Plough	1-Jan-09 31-Dec-09	\$36,480	\$24,320
14	Displaced Arab families coping and changes: Iraqi refugees in Lebanon	Makhoul		Arab Families working Group	1-Nov-08 15-Apr-10	\$17,000	\$11,333
15	Patient Safety Culture Assessment in Lebanese Hospitals: Developing action oriented strategies	El-Jardali		WHO-EMRO	1-Sep-08 1-Sep-09	\$8,700	\$8,700
16	Health Warning Labeling Practices for Waterpipe Tobacco Products	Nakkash		Physicians for a Smoke-Free Canada	5-Jul-08 28-Feb-09	\$24,860	\$12,430
17	Support for the Reproductive Health Working Group: Institutional Learning for the next phase	Jocelyn DeJong		Ford Foundation	1-Jun-08 31-May-11	\$450,000	\$100,000
18	Strengthening Research Capacity for Operations Research in Reproductive Health in Eastern Mediterranean Region	Marwan Khawaja	Kassem Kassak , Loulou Kobeissi	WHO-Geneva	15-Jun-08 31-Aug-09	\$110,815	\$110,815
19	Comparison of Estimates based on Cell Phone and Face to Face Interviews	Abla Sibai	Monique Chaaya, Ziyad Mahfoud	The Training Programs in Epidemiology and Public Health Interventions Network	12-Mar-08 30-Jun-10	\$140,130	\$35,033
20	The publication and dissemination of two books on public health and on Childbirth in the Arab region	Iman Nuwayhid	Marwan Khawaja	Ford Foundation	1-Feb-08 31-Jan-10	\$195,000	\$97,500
21	Neurotoxic Effects of solvents on working children	Iman Nuwayhid		NIH	15-Sep-07 31-Aug-10	\$288,528 (\$148,270 for Year 1)	\$148,270
22	Does reducing depression and/or anxiety symptoms of low-income married women (residing in Hey El-Selloum) using a community-based psycho-social intervention decrease their complaints of medically unexplained vaginal discharge?*	Khawaja/ Zurayk	Ziyad Mahfoud, Sami Ramia, Faysal El-Kak, Kobeissi, Nakkash	Wellcome Trust	1-Aug-07 31-Jul-10	\$410,406	\$136,802
23	Impact of a community based RCT to improve mental health of Palestinian refugee youth	Rima Afifi/ Huda Zurayk	Judy Makhoul, Ziyad Mahfoud, Sawsan Abdulrahim, Mayada Kanj, Nakkash	Wellcome Trust	1-Jul-07 30-Jun-10	\$371,291	\$123,764
24	Bedouin Health- Improving Access to and Quality of Reproductive and Child Health Care to Marginal Peoples: Bedouin in Jordan and Lebanon	Marwan Khawaja	Faysal El-Kak	Oxford U/ Warwick University/ EC	1-Jun-07 20-Dec-09	\$333,291	\$111,097

	Project Name	Investigator	Collaborators	Funding Source	Funding Start and End Date	Amount Total Award	Amount for this year (Oct 1 08-Sept 30 09)
25	Governance, Equity and Health in the Middle East and North African Region: A Scoping Study	Fadi El-Jardali		IDRC	1-Jun-07 30-Sep-09	\$61,020	\$0
26	Labor Supply, Child Bearing & Women's Welfare in Old Age	Abla Sibai		Center of Arab Women for Training and Research	1-Feb-07 30-Sep-10	\$25,289	\$0
27	Determinants and Consequences of Smoking Nargileh: Extending the Research Agenda	Monique Chaaya	Rima Afifi, Abla Sibai, Ziyad Mahfoud, Robin Health, Mayada Kanj, Rima Nakkash	IDRC	13-Nov-06 31-Oct-09	\$187,230	\$0
28	Health status, well-being and population change in the Middle East: a research network approach	Huda Zurayk / Marwan Khawaja	Jocelyn DeJong, Tamar Kabakian, Hibah Osman	Wellcome Trust	1-Jan-05 30-Sep-10	\$3,085,075	\$377,475
29	Governance, Equity and Health in the Middle East and North African Region: A Scoping Study	Fadi El-Jardali		IDRC	1-Jun-07 30-Sep-09	\$61,020	\$0
30	Developing Country-Specific Retention Strategies for Nurses in Lebanon	Fadi El-Jardali		WHO-EMRO	1-Feb-07 Till funds end	\$8,100	\$0
31	Towards a Better Understanding of the Magnitude and Predictors of Nurse Migration out of Lebanon	Fadi El-Jardali		WHO-EMRO	1-Aug-06 Till funds end	\$7,500	\$0
	Local Sponsored Research						
32	Complementary & Alternative Medicine Therapies in Lebanon: A Baseline Study	Mohammad Alameddine	Dr. Farah Naja - FAFS	LNCSR	1-Apr-09 31-Mar-11	\$17,241	\$17,241
33	Lebanese Hospital Quality performance Scorecard system: next steps for national scorecard initiative	EI-Jardali		WHO	9-Apr-09 30-Nov-09	\$9,900	\$9,900
34	Establishment of Water Quality Assessment & Management Unit at the Environmental Health Department	May Jurdi	Sami Ramia, May Massoud, Samira Korfali (LAU)	LNCSR	1-Jan-09 31-Dec-11	\$120,000	\$40,000
35	Effect of substitution of Sodium Chloride with Potassium Chloride in brines and microbiological and physio chemical characteristics of Akkawi and Halloumi cheeses	Rabih Kamleh		LNCSR	1-Nov-08 1-Nov-09	\$6,963	\$6,963
36	Strengthening National Monitoring, Evaluation, & surveillance systems in Lebanon, Middle East and North Africa Region	Kassem Kassak, Jocelyn DeJong	Rima Afifi, Sami Ramia, Ziyad Mahfoud, Sawsan Abdulrahim, Fatea Rimalwi	National AIDS Program – Ministry of Public Health/WHO	10-Nov-06 Till funds end	\$98,210	\$0
	URB Grants						
37	Factors influencing the implementation of environmental management systems in the food industry: case of Lebanon	May Massoud		URB	1-Oct-08 30-Sep-09	\$8,893	\$8,893
38	Determinants of Violence in Emergency Departments in Lebanon	Mohammad Alameddine		URB	1-Feb-09 30-Sep-09	\$6,827	\$6,827
	Institutional Development Support Grants						
39	Multidimensional scholarship program for graduate education in public health	Dean		Arab Fund	1-Feb-09 30-Jun-13	\$350,877	\$0
40	Support to Strengthen Teaching, Research and Community Capacities & promote the Regional Role of FHS with a focus on HIV/AIDS	Iman Nuwayhid	Jocelyn DeJong	Ford Foundation	1-Oct-06 31-Mar-10	\$275,000	\$0
41	Strengthening Teaching, Research & Community Outreach Capacities at FHS	Dean		Ford Foundation	1-Jan-03 30-Apr-09	\$430,000	\$0
	Grants No. 1 and 2 will start the expenditures in November 09. Grant No. 38 will start expenditures in AY 2009-10						\$1,625,533
	Grants No. 25,26, 27, 29,30, 31, 36 have no funding for 2008-09 (Have been extended, budget accounted in previous reports)						

Appendix B: List of articles in refereed journals^{1 2}

ENHL Department

Doummar J., Massoud M.A., Khoury R. and Khawlie M. Optimal Water Resources Management: Case of Lower Litani River, Lebanon. *Water Resources Management Journal*. - In Press.

El Azar G., Habib R.R., Mahfoud Z., El-Fadel M., Zurayk R., Jurdi M. and Nuwayhid IA. Effect of Women's Perceptions and Household Practices on Children's Diarrhea in a Low Income Community. *EcoHealth*. - In Press.

Habib R.R., Mahfoud Z., Fawaz M., Basma S.H. and Yeretzian. J.S. Housing quality and ill health in a disadvantaged urban community. *Public Health*. 2009;123:174-181.

Kamleh R., Fanni J., El Mayda E. Study of cows' milk characteristics in Bekaa region (Lebanon). *Arab Journal of Food and Nutrition*. -Accepted.

Massoud M.A., Tareen J., Tarhini A., Nasr J. and Jurdi M. Effectiveness of Wastewater Management in Rural Areas of Developing Countries: A Case of Lebanon. *Environmental Monitoring and Assessment Journal*. - In Press.

Massoud M.A., Tarhini A. and Nasr J. Decentralized Approaches to Wastewater Treatment and Management: Applicability in Developing Countries. *Journal of Environmental Management*. 2009; 90(1): 652-659.

Nasr D., Massoud M.A., Khoury R. and Kabakian V. Assessment of Environmental Impacts of Reconstruction Activities: Case of Lebanon. *International Journal of Environmental Research*. 2009; 3(2): 301-308.

Vrijheid M., Cardis E., Ashmore P., Auvinen A., Gilbert E., Habib R.R., Malke H., Muirhead C.R., Richardson D.B., Rogel A., Schubauer-Berigan M., Tardy H. and Telle-Lamberton M. for the 15-Country Study Group. Ionizing radiation and risk of chronic lymphocytic leukemia in the 15-country study of nuclear industry workers. *Radiation Research*. 170: 661-665.

¹ The list does not include the Dean or faculty on leave.

² When authors include more than one department, the article is included in the department of the corresponding author

EPHD Department

Badra M., Sibai A.M., Al-Hazzouri Z., Abou Naja H., Baliki G., Salamoun M., Afeiche N., Baddoura O., Bulos S., Haidar R., Lakkis S., Musharrafiéh R., Nsouli A., Taha A., Tayim A. and El-Hajj Fuleihan G. Risk estimates for hip fracture from clinical and densitometric variables and impact of database selection in Lebanese subjects. *Journal of Clinical Densitometry*. – Accepted.

Bradshaw C.P., Rodgers C., Ghandour L. and Garbarino J. Social-Cognitive Mediators of the Association between Community Violence Exposure and Aggressive Behavior at School: Implications for School-Based Interventions. *Psychology in the Schools*. - In Press.

Chaaya M., Sibai A.M., Tabbal N., Chemaitelly H., El Roueiheb Z., and Slim Z. Work and mental health: the case of older men living in underprivileged communities in Lebanon. *Ageing & Society*. - Accepted.

Ghandour L., Karam E. and Maalouf W. Lifetime alcohol use, abuse, and dependence among university students in Lebanon: Exploring the role of religiosity in different religious faiths. *Addiction*. 2009; 104: 940-948.

Hamdan A.L., Deeb R., Hussein S. and Sibai A.M. Vocal technique in a group of Middle Eastern singers. *Folia Phoniatrica*. – Accepted.

Karrowni W., Abdallah M., Itani S., Kobeissi L., Shamseddeen W. and Dakik H. Management of Acute Coronary Syndromes in developing countries: Are we complying with practice guidelines?. *International Journal of Cardiology*. - In Press.

Mansour A.M., Arevalo F., Ziemssen F., Sibai A.M., Mackensen F., Adan A., Chan W-M., Ness T., Banker A.S., Dodwell D., Chau T.H., Fardeau C., LeHoang P., Mahendradas P., Berrocal M., Tabbarah Z., Hrisomalos N., Hrisomalos F., AL-Salem K. and Guthoff R. Long-term visual outcomes of intravitreal bevacizumab in inflammatory ocular neovascularization. *Am J Ophthalmology*. – Accepted.

Sibai T., Tohme R.A., Beydoun H., Kanaan N. and Sibai A.M. Violent behaviour among adolescents in post-war Lebanon: The role of personal factors and correlation with other problem behaviours. *Journal of Public Health*. 2009; 31:39-46.

MLT Program

Colleton B.A., Huang X.L., Melhem N.M., Fan Z., Borrowski L., Rappociolo G., and Rinaldo C.R. Primary human immunodeficiency virus type 1-specific CD8+ T –cell responses induced by myeloid dendritic cells. *Journal of Virology*. – Accepted.

Khalil G., El-Ghadban S., Azzi S., Shamra S., El-Sabban M. and Maroun R. Cytokines expression profile, by sensitized T human lymphocytes, after in vitro stimulation by amoxicillin. *Eur Cytokine Netw*. 2008; 19(3):131-141.

Melhem N.M., Gleason S.M., Liu X. and Barratt-Boyes S. High-level antigen expression and sustained antigen presentation in dendritic cells nucleofected with wild-type viral mRNA but not DNA. *Clin Vaccine Immunol*. 2008; 15(9):1337-1344.

HBED Department

Abdulrahim S. and Khawaja M. The Cost of Being Palestinian in Lebanon. *Journal of Ethnic and Migration Studies*. - In Press.

Batley N.J., Makhoul J. and Abdul Latif S. War as a positive medical educational experience. *Medical Education*. 2008; 42:1166–1171.

DeJong J., Mahfoud Z., Khoury D., Barbir F. and Afifi R.A. Ethical considerations in HIV/AIDS studies using Respondent Driven Sampling: examples from Lebanon. *American Journal of Public Health*. - In Press.

El-Kak F.H., Khawaja M., Salem M. and Zurayk H. Women self-reporting reproductive health problems in low-income urban neighborhoods. *International Journal Ob Gyn*. - In Press.

Hammoury N., Khawaja M., Mahfoud Z., Afifi R.A and Madi H. Domestic violence against women during pregnancy: the case of Palestinian refugees attending an antenatal clinic in Lebanon. *Journal of Women's Health*. - In Press.

Kanaan M. and Afifi R.A. Do Determinants of weight gain and weight loss differ among adolescent girls and boys in urban areas of Beirut? *Public Health Nutrition*. - In Press.

Khawaja M., Kaddour A., Zurayk H., Choueiry N. and El-Kak F.H. Symptoms of reproductive tract infections and mental distress among women in low-income urban neighborhoods of Beirut, Lebanon, *Journal of Women's Health*.- In Press.

Makhoul J. and Ghanem M. Displaced Arab Families: mothers' voices on living and coping in post-war Beirut. *Journal of Middle eastern Women's Studies*. 2009; 5 (3): 54-73.

Nakkash R. and Lee K. Smuggling as the “key to a combined market”: British American tobacco in Lebanon. *Tob Control*. 2008; 17: 324-331.

Nakkash R. and Lee K. The tobacco industry's thwarting of marketing restrictions and health warnings in Lebanon . *Tob Control*. - In Press.

Osman H., Campbell O.M.R. and Nassar A. The use of emergency obstetrical drills in maternity units as a performance improvement tool. *Birth*. 2009; 36(1):43-50.

Sahab B., Tamim H., Mumtaz G., Khawaja M., Khogali M., Afifi R., Nassif Y. and Yunis K.A. Predictors of breastfeeding in a developing country: results of a prospective cohort study. *Public Health Nutrition*. - In Press.

Yeretzian J.S. and Afifi R.A. 'It won't happen to me': the knowledge attitude nexus in adolescent smoking. *Journal of Public Health*. 2009:1-6.

HMPD Department

Alameddine M., Baumann A., Laporte A., O'Brien-Pallas L., Levinton C., Onate K. and Deber R. Career trajectories of nurses leaving the hospital sector in Ontario, Canada (1993-2004). *Journal of Advanced Nursing*. 2009; 65(5):1044-53.

Alameddine M., Dainty K., Deber R. and Sibbald W. The ICU Work Environment, Current Challenges and Recommendation for the Future. *Journal of Critical Care*. - In Press.

El-Jardali F., Dimassi H., Dumit N., Jamal D. and Mouro G. A National Cross-sectional Study on Nurses' Intent to Leave and Job Satisfaction in Lebanon: Implications for Policy and Practice. *BMC Nursing*. 2009; 8(3):1-13.

El-Jardali F., Dimassi H., Jamal D. and Tchaghchaghian V. Comparing Reasons for Nurse Migration against Predictors of Intent to Leave Lebanon: A Two-Hospital Case Study. *Middle East Journal of Nursing*. 2009; 3 (1).

El-Jardali F., Merhi M., Dumit N. and Jamal D. Assessment of Nurse Retention Challenges and Practices in Lebanese Hospitals: The Perspective of Nursing Directors. *Journal of Nursing Management*. - In Press.

Saleh S.S., Hannan E.L. and Racz M. Identifying Centers of Excellence in Efficiency and Quality (CEEQS): An Exploratory Approach for Procedure-Specific Value-Based Purchasing Program Design. *Journal of Healthcare Finance*. - In Press.

Saleh S.S., Racz M. and Hannan E.L. Determinants of Hospital-Based Costs for Coronary Revascularization Procedures. *Annals of Surgery*. 2009; 249(2): 335-341.