

# PROJECT FINAL REPORT

**Grant Agreement number:** IRG 268224

**Project acronym:** Risk-Update

**Project title:** Identification of the process by which patients recall and UPDATE their subjective RISK assessments for various diseases to incorporate objective genetic risk information

**Funding Scheme:** MC-IRG International Re-integration Grants (IRG)

**Period covered:** from 1 November 2012 to 1 November 2014

**Beneficiary:**

<b>Person in charge of scientific aspects:</b>	<b>Researcher:</b>
<b>Title:</b> Prof. (Full Prof. President of the Ono Academic College)	<b>Title:</b> Prof. (Associate Prof. Founding Director, Center for Medical Decision Making, Ono Academic College)
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## 1. FINAL PUBLISHABLE SUMMARY REPORT

This report summarizes reintegration project IRG 268224 (Risk-Update: Identification of the process by which patients recall and UPDATE their subjective RISK assessments for various diseases to incorporate objective genetic risk information as well the successful professional reintegration of **Prof. Talya Miron-Shatz** in Israel after a 4-year post-doctoral fellowship with Nobel Laureate Daniel Kahneman at Princeton University, USA. At this point in time, she is an established authority on patient comprehension and risk communication, no doubt largely thanks to the European Research Council Support.

The original goals of the project were to quantify the degree to which genetic risk information (in the case of Alzheimer's disease – APOE gene variant, and in the case of breast cancer – BRCA 1 and BRCA 2 gene mutations) and were accurately recalled and adopted. Furthermore, the project aimed to link lack of recall and adoption with patient characteristics – cognitive (numeracy), emotional (perceived risk of having the mutation and of developing the disease) and experiential (presence of one or more relatives with the disease, and, in the case of breast cancer, with the gene mutation).

At this point in time, marking the project's conclusion, the goals were achieved and even exceeded. Prof. Miron-Shatz pursued the research agenda with great success. The work on breast cancer has resulted in five peer reviewed publications so far, in respectable venues such as *Psycho Oncology*<sup>1</sup> (Impact factor: 4.044), *Judgment and Decision Making*<sup>2</sup> (Impact factor: 2.62), and *Health Expectations*<sup>3</sup> (Impact factor: 2.852). Another paper has been accepted to the *Journal of Genetic Counseling*<sup>4</sup>. This shows how the knowledge is being disseminated academically within various realms – going beyond genetic counsellors, to other health professionals and researchers, as well as to researchers of decision making. On top of this, the research group, which includes Yaniv Hanoch of Plymouth University, England, and Elissa Ozanne of Dartmouth College, USA, has now expanded to include Andrew Barnes, a health economist from Virginia Commonwealth University, USA. The highly qualified team are finalizing two manuscripts – one on willingness to test for breast cancer among high risk women, and another on women's ability to choose the risk format which promotes understanding. Thus, the ability to set aside time for research, to have a post-doc, and to travel to meet collaborators, has been incredibly beneficial for the project.

The end of the grant does not mean the end of the work within the research paradigm. The work on the very complex issue of Alzheimer's Disease is continuing – the first manuscript, on recall and adoption of risk information, is in final stages of preparation with the collaborators from Harvard University, University of Michigan, and Ohio State University. Furthermore, Prof. Miron-Shatz presented a poster on the topic with an Israeli PhD student from Hebrew University of Jerusalem, Guy Itzhakov, and they are now working on a manuscript examining long term changes in Alzheimer's Disease risk information recall and adoption. This means that for both projects, additional papers will be published even when the grant period is over.

The impact of the IRG grant goes far beyond the specific papers:

1. **Professional impact:** The research paradigm on understanding risk information has implications that extend far beyond the specific topics stated in the grant. Along with the PhD student she has been advising through Tel

Aviv University, they researched how pregnant women incorporate risk information from the triple serum test into their decision of whether or not to undergo amniocentesis. This work has resulted in two accepted papers (*Health Expectations*<sup>5</sup>, *Journal of Communication in Healthcare*) and another one with 'revise and resubmit' in the *Israel Journal of Health Policy Research*<sup>6</sup>.

2. **Industry impact:** Based on the knowledge gained on people's difficulty to understand risk information and medical information in general, and am applying it as an advisory board member of Telesofia Medical, and consultant to numerous start-up companies in Israel and the USA.
3. **Promotion:** The high volume of publications resulting from the research resulting from the project has been a definite consideration in the promotion from Assistant Professor (senior lecturer) to an Associate Professor position. The promotion occurred in July 2013, only 8 years after Miron-Shatz completed her PhD.
4. **Reintegration in Israel:** Prof. Miron-Shatz is now firmly established in Israel, professionally and financially. She recently received a grant from Pfizer Israel to study prescriber behaviour. Another grant, from Israel's National Institute of Health Policy Research allows her and a collaborator, Dr. Avi Zafirir, to study older women's comprehension of fertility chances. The Center for Medical Decision Making has been established at the Ono Academic College, with collaborators from the college, from Israel, and from Germany, England and the USA. The grant has allowed fruitful and meaningful research and promoted broad international collaboration, while residing in Israel.

On a personal note, Miron-Shatz's son, who was a high school student in Princeton when she finished her work there, decided to return to Israel following his mother. He is now a student at Tel Aviv University, and already the author of two peer reviewed papers, thus launching the careers of a new generation of qualified researchers joining the European research arena.

Scientifically, the final results of the project show a distinct difficulty of patients in understanding and interpreting risk information. This applies to genetic counselling, as well as beyond it, to medical information in general. The intensive research and public involvement is being carried out with the purpose of simplifying the presentation and communication of medical information, and, with the project currently being carried out within the REVEAL framework of Alzheimer's Disease research, to examine the guidelines within which risk communication is conveyed. Due to the academic credibility gained from research conducted under this grant, Miron-Shatz is able to carry this message into industry, for example within systems designed to increase patient adherence to medication.

Within the Ono Academic College, she has established a Centre for Medical Decision Making, with colleagues from the college, from Israel's leading hospitals and universities, and institutes such as UCLA, Essen University, Dartmouth, and more.

In an era of ever increasing patient empowerment and patient centred care, such a study is unique in its commitment to not only map extant patient use of information, but also to offer means for furthering such use and involvement. This has societal value, especially when considering weaker populations.

## **2. USE AND DISSEMINATION OF FOREGROUND**

### **Section A (public) – DISSEMINATION MEASURES**

The overall goals of the reintegration project on risk communication were: (1) to study how people comprehend, recall and adopt their genetic risk assessments, and (2) to communicate the results to the general public and to disseminate the findings within the scientific and medical community in the hope of influencing how risk is conveyed. During the project period Prof. Miron-Shatz was active in considerable dissemination efforts, as the mission with this project is to empower patients and help shape the way medical information is conveyed. The effect of the project, and the dissemination efforts, are expected to extend beyond the grant period.

#### Academic publications:

During the period of the grant Miron-Shatz published five papers which directly resulted from the project and acknowledging its support, and 18 others, most on the topic of risk communication. Of note is the invitation to act as rapporteur in a chapter on health literacy which was co-created by some of the world's leaders on the topic.<sup>7</sup>

Two additional papers resulting from research developed under the auspices of the project will be sent for review in early 2015, and several others are planned.

#### Academic conferences, policy forums, and industry Public speaking:

During the project period, Miron-Shatz presented numerous talks on patient comprehension and the current research on updating risk information. This research was funded by the Marie Curie Reintegration Grant. Miron-Shatz presented her findings on increasing patient comprehension and motivation in almost 20 talks at conferences, seminars and professional associations throughout Europe, Israel and the USA. Furthermore, as an acknowledged authority in the digital health arena, Miron-Shatz presented her findings in NYC's Health 2.0 group, as well as in the eHealth Venture Summit and Innovation Award, which she was invited to organize in MEDICA, the world's largest medical device trade show, held in Dusseldorf, November 2014. See C:\\Users\\taliamironshatz\\Downloads\\www.evs.CureMyWay.com for details.

Media coverage: During the period of the grant, articles discussing findings on patients' difficulty in comprehending medical information have been published in various Israeli outlets: Globes (Israel's leading business journal), Ynet (Israel's most popular website), Menta and La'isha (women's journals), Family (a publication designed for the ultra-orthodox community, and more. In addition, Miron-Shatz participated in radio shows: Regional North Radio, and Israel's Broadcasting Service show on health.

#### Media writing

Since 2008 Miron-Shatz has been contributing to the Psychology Today website, where psychologists present important topics and research in a digestible format. Her column is titled "Baffled by Numbers" and it deals with how people understand medical information.

Since 2012 she has been writing 'Health Logic' – a monthly column in Yedioth Aharonot, Israel's most popular newspaper. The column deals with things that relate

to the grant topics, as well as with the broader theme of patient participation and comprehension.

In all these activities, Miron-Shatz is pursuing her goal of communicating about the IRG grant mechanism in general to outstanding students. She has specifically been interested in disseminating her findings so that health risk information is conveyed in an intelligible manner. This research also includes devices and apps that were designed for patients to allow them to follow the principles of increasing patient comprehension.

The following manuscript, based on results from this IRG project, is currently in preparation.

1. Miron-Shatz, T., Doniger, G.M., Roberts, S., Peters, E., and Green, R. Risk conveyance conversations: Protocol, practice, and patients' recall and adoption of Alzheimer's disease risk

The following manuscripts are in preparation, unrelated to the IRG project:

1. Bhaggrave, R., & Miron-Shatz, T. Lordi lordi look who's forty: The effect of milestone birthdays on the construct of life satisfaction.
2. Grinspan-Cohen, J., Miron-Shatz, T., Pras, E., & Tanner, D. A-priori attitudes, not medical factors, determine amniocentesis uptake in women of advanced maternal age.
3. Miron-Shatz, T., & Diefenbach, M. Worries and unrealistic expectations related to breast cancer screening.

The following talks and workshops, conference presentations and poster sessions, to which Prof. Miron-Shatz was invited related, are directly related to the topic of this IRG grant.

#### Invited Talks and Workshops

1. Tel Aviv University, Business Administration Faculty, Seminar: Misunderstanding Probabilities; Misunderstanding how I Feel. Tel Aviv, Israel, November 2014.
2. Hadassah Medical Center – Genetic Counseling – Past, Present and Future – Conference in Honor of Dr. Michal Sagi. Who Put the "Counseling" in Genetic Counseling? The case of Amniocentesis. Jerusalem, September 2014.
3. The 11<sup>th</sup> Annual Cancer Prevention Conference: "You are not Alone": The General Practitioner's Role with Patients at High Risk of Malignant Diseases when His/Her Patients Make Difficult Decisions." Nes Ziona, May 2014.
4. Nurses' Ethics Organization: Ensuring patient motivation and comprehension. Ramat Gan, April 2013.
5. Innovations in Cardiovascular Interventions. Ensuring patient comprehension and motivation. Tel Aviv, December 2012.
6. Annual Conference of Israeli Ethics Committee. Ensuring patient comprehension and Motivation. Ramat Gan, November 2012.
7. Minerva Workshop: Emotions and Decisions. Is it good, bad, or indifferent? Information overload in genetic testing. Technion, Haifa, June 2012.
8. Institute and Politechnique for Medical Psychology. Hamburg University. Miscomprehension, False Expectations, and Forgotten risk assessments – The Case of Medical Information. Hamburg, Germany, April 2012.

9. Max Planck Institute for Human Development. Miscomprehension, False Expectations, and Forgotten risk assessments – The Case of Medical Information. Berlin, Germany, April 2012.
10. Department of Health Systems Management, Faculty of Health Sciences & Guilford Glazer Faculty of Business and Management. Patient (mis)comprehension: the case of probabilities. Ben-Gurion University of the Negev, Israel, March 2012.
11. Frost & Sullivan Adherence Summit. You're talking to me? Patient comprehension and motivation. Philadelphia, Macrh, 2012.
12. Ethics Chamber, Hebrew Medical Association. Comprehension of medical information, and shared decision making. Ramat Gan, Israel. October, 2011.
13. Maliman School of Public Health, Columbia University, New York. Risk information – how to convey, and to whom? April, 2011.
14. Departmental seminar: Department of Obstetrics and Gynecology. How professionals and laymen understand medical information. Shaare Zedek Medical Center, The Hebrew University of Jerusalem. October, 2010.
15. The Israel Contraception and Sexual Health Society Fall conference. Can we assume comprehension of medical information? Tel Aviv, October, 2010.
16. Medical decision making conference: policy, professional and individual. Mind like a sieve: how people recall genetic risk for Alzheimer's Disease. Ono Academic College, October 2010.

#### Conference Paper and Poster Presentations

1. A tailored approach to risk communication in decision aids: finding the optimal format for individuals. Ozanne, Miron-Shatz, Hanoch, Barnes. 36th Annual Meeting of the Society for Medical Decision Making, Miami FL, October 2014.
2. Presentation mode affects patient recall and adoption of Alzheimer's disease genetic risk. Miron-Shatz, T., Itzhacov, G. Israeli Association of Medical Informatics Systems, Tel Aviv, June 2014.

## Publications (peer reviewed)

The first five articles are a direct result of this IRG grant. The subsequent articles were authored by Prof. Talya Miron-Shatz during the time period of the IRG grant.

NO.	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place publication	Year of publication	Relevant pages
1	Single nucleotide polymorphism testing for breast cancer risk assessment: patient trust and willingness to pay	Howe, R., Omer, Z., Hanoch, Y., Miron-Shatz, T., Thorsen, C., & Ozanne, E.M.	<i>Cancer Research</i>	72 (24 Supplement 3)	American Association for Cancer Research, Inc. (AACR)	Philadelphia, PA	2012	(24 Supplement 3).
2	Understanding of BRCA1/2 genetic tests results: the importance of objective and subjective numeracy.	Hanoch, Y., Miron-Shatz, T. Rolison, J., & Ozanne, E.	<i>Psycho Oncology</i> .		John Wiley & Sons, Ltd.	Hoboken, NJ DOI: 10.1002/pon.3537	14 APR 2014	
3	Subjective, not objective numeracy and other subjective factors determine WTP for BRCA 1/2 testing.	Miron-Shatz, T. Hanoch, Omer, Z., Doniger, G., & Ozanne, E.	<i>Judgment and Decision Making</i>	9(2)	Society for Judgment and Decision Making (SJDM) and the European	Philadelphia, PA	2014	152–158



					Association for Decision Making (EADM).			
4	Shared decision making among cancer patients: The role of domain and numeracy.	Hanoch, Y., Miron-Shatz, T. Rolison, J., & Ozanne, E.	<i>Health Expectations.</i>		John Wiley & Sons, Ltd.	Hoboken, NJ	2014	
5	Realizing personalized medicine through SNP testing for breast cancer risk: interest, trust, and decision making.	Howe, R., Miron-Shatz, T., Hanoch, Y., Omer, Z., O'Donoghue, C., & Ozanne, E.	<i>Journal of Genetic Counseling</i>		Springer	New York, NY	forthcoming	
1	To give or not to give: A word to the wise, two to the wiser: Parental experience and adherence to the Food and Drug Administration warning about over-the-counter cough and cold medicine usage.	Miron-Shatz, T., Barron, G., Hanoch, Y., Gummerman, M., & Doniger, G.M.	<i>Judgment and Decision Making,</i>	5(6)	Society for Judgment and Decision Making (SJDM) and the European Association for Decision Making (EADM).	Philadelphia, PA	2010	428-436
2	Parsing decision outcome out of decision quality: focusing on the deliberative process	Elwyn, G. & Miron-Shatz, T.	<i>Health Expectations</i>	13(2)	John Wiley & Sons, Ltd.	Hoboken, NJ	2010	139–147

3	Trust and adherence to the FDA warning regarding cough and cold medicine for children under two.	Hanoch, Y., Gummerman, M., & Miron-Shatz, T.	<i>Child: care, development and health,</i>	36(6)	John Wiley & Sons, Ltd.	Hoboken, NJ	2010	795–804
4	Choice, numeracy and physicians-in-training performance: the case of Medicare Part D.	Hanoch, Y., Miron-Shatz, T, Cole, H., Himmelstein, M., & Federman, A. D.	<i>Health Psychology,</i>	29(4)	American Psychological Association	Washington, DC	2010	454–459
5	Genetic Testing and Risk Interpretation: How Do Women Understand Lifetime Risk Results?	Hanoch, Y., Miron-Shatz, T., & Himmelstein, M.	<i>Judgment and Decision Making</i>	5(2)	Society for Judgment and Decision Making (SJDM) and the European Association for Decision Making (EADM).	Philadelphia, PA	2010	116–123
6	Over-the-counter cough and cold medicines for children: A comparison of UK and US parents' parental usage, perception and trust in governmental health organization.	Himmelstein, M., Miron-Shatz, T., Hanoch, Y., & Gummerum, M.	<i>Health, Risk, and Society,</i>	13(5)	Taylor & Francis Group LLC	Florence, Kentucky	2011	451–468
7	From blind acceptance to active inquiry: Jumping the barriers to Health Literacy. In G. Gigerenzer	Miron-Shatz, T., Bowen, B., Diefenbach,	<i>Better doctors, better patients, better decisions: Envisioning</i>		Cambridge: MIT Press	Boston, MA	2011	191–212

	& J. A. M. Gray (Eds.).	M., Goldacre, B., Mühlhauser, I., Smith, R.S.W., Spiegelhalter, D., & Wegwarth, O.	<i>healthcare 2020. Strüngmann Forum Report (Vol. 6)</i>					
8	The status of shared decision-making and citizen participation in Israeli medicine. “Special Issue – Implementation of Shared Decision Making in Health Care”.	Miron-Shatz, T., Golan, O., Brezis, M., Siegal, G., & Doniger, G.M.	<i>German Journal for Evidence and Quality in Health Care (ZEFQ)</i>	105	Elsevier BV	Germany	2011	271–276
9	The potential of an online and mobile health scorecard for preventing chronic disease.	Miron-Shatz, T. & Ratzan, S.	<i>Journal of Health Communication,</i>	16(2)	Taylor & Francis Group LLC	Florence, Kentucky	2011	175–190
10	To serve and protect? Electronic health records pose challenges for privacy, autonomy and person-centered medicine.	Miron-Shatz, T., & Elwyn, G.	<i>International Journal of Patient Centered Medicine</i>	1(2)	The University of Buckingham Press	UK	2011	405–409
11	What do men understand about lifetime risk following genetic testing? The effect of context and numeracy.	Hanoch, Y., Rolison, J., & Miron-Shatz, T.	<i>Health Psychology</i>	31(4)	American Psychological Association	Washington, DC	2011	530–533
12	Shared decision making in Israel: Status, barriers,	Miron-Shatz, T., Golan, O.,	<i>Israel Journal of Health Policy</i>	(1)	BioMed Central Ltd	Israel	2012	1–6

	and recommendations.	Brezis, M., Siegal, G., & Doniger, G.M.	<i>Research</i>					
13	Effects of Symptom Presentation Order on Perceived Disease Risk.	Kwan, V., Votruba, A., Miron-Shatz, T., Wojcik, S., & Olivola, C.	<i>Psychological Science</i>	23(4)	Association for Psychological Science	Washington, DC	2012	381–385
14	Smokers: At risk for prostate cancer but unlikely to screen.	Rolison, J., Hanoch, Y., & Miron- Shatz, T.	<i>Addictive Behaviors</i>	37	Elsevier BV	New York	2012	376–378
15	Emotions, experiences and usability in real-life mobile phone use.	Kujala, S. and Miron- Shatz, T.	<i>Proceedings of the SIGCHI Conference on Human Factors in Computing Systems,</i>		ACM	New York	2013	1061–1070
16	Social Media for the Promotion of Holistic Self-Participatory Care: An Evidence Based Approach. Contribution of the IMIA Social Media Working Group.	Miron-Shatz, T. Hansen, M.M., Grajales III, F.J., Martin- Sanchez, F., & Bamidis, P.D.	<i>IMIA Yearbook of Medical Informatics 2013</i>		Schattauer GmbH	Stuttgart, Germany	2013	162–8
17	Charting the internal landscape: Affect associated with thoughts about major life domains	Miron-Shatz, T. Diener, E., Moore, T., & Saphire-	<i>Judgment and Decision Making</i>	8(5)	Society for Judgment and Decision Making	Philadelphia, PA	2013	603–616

	explains life satisfaction.	Bernstein, S.			(SJDM) and the European Association for Decision Making (EADM).			
18	Physician recommendation for invasive prenatal testing: the case of the 'precious baby'	Srebnik, N., Miron-Shatz, T., Rolison, J.J., Hanoch, Y., & Tsafirir, A.	<i>Human Reproduction</i>	28:11	Oxford University Press	UK	2013	3007–3011
19	Adherence to governmental health warnings: The case of over-the-counter cough and cold medications. In: J. Eliashberg, S. Stermersch, & M. Ding (Eds).	Miron-Shatz, T., Doniger, G., & Hanoch, Y.	<i>Innovation and Marketing in Pharmaceutical Industry: Achieving Sustainable Success. Series: International Series in Quantitative Marketing,</i>	Vol. 20	Springer	New York	2014	
20	Knowing your numbers – the first step to improved medical decision making: A scorecard approach. In: K.H. Baker & V. Ricciardi (Eds.)	Miron-Shatz, T., & Gati, S.	<i>Investor Behavior - The Psychology of Financial Planning and Investing.</i>		John Wiley & Sons, Ltd.	Hoboken, NJ	2014	
21	Experiences, Possibilities and Perspectives of mHealth	Becker, S., Miron-Shatz, T.,	<i>Journal of Medical Internet</i>	2(2)	JMIR Publications	Canada	2014	

		Schumacher, N., Krocza, J., Diamantidis, C., & Albrecht, U.V.	<i>Research</i>					
22	Promoting Business and Entrepreneurial Awareness in Health Care Professionals: Lessons from Venture Capital Panels at Medicine 2.0 Conferences.	Miron-Shatz, T., Shatz, I., Becker, S., Patel, J., Eyesenbach, G.	<i>Journal of Medical Internet research</i>	16(8)	JMIR Publications	Canada	2014	
23	Factors that affect the decision to undergo amniocentesis in women with normal Down syndrome screening results: it is all about the age.	Grinshpun-Cohen, J., Miron-Shatz, T., Ries-Levavi, L., & Pras, E.	<i>Health Expectations</i>	12 MAY 2014, DOI: 10.1111/hex.12200	John Wiley & Sons, Ltd.	Hoboken, NJ	2014	

**Section B (confidential) - EXPLOITABLE FOREGROUND AND PLANS FOR EXPLOITATION**

TABLE B1: LIST OF APPLICATIONS FOR PATENTS, TRADEMARKS, REGISTERED DESIGNS, ETC.			
Type of IP Rights: Patents, Trademarks, Registered designs, Utility models, etc.	Application reference(s) (e.g. EP123456)	Subject or title of application	Applicant (s) (as on the application)
N/A			

*Please complete the table hereafter:*

TABLE B2: OVERVIEW TABLE WITH EXPLOITABLE FOREGROUND					
Exploitable Foreground (description)	Exploitable product(s) or measure(s)	Sector(s) of application	Timetable, commercial use	Patents or other IPR exploitation (licences)	Owner & Other Beneficiary(s) involved
<i>N/A</i>					



### 3. SCIENTIST IN CHARGE QUESTIONNAIRE

#### RESEARCH TRAINING ASSESSMENT:

What is the size of the hosting research group?	52 researchers at the Ono Academic College Business School
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How many researchers have you supervised, within the past 10 years? Of which funded by:	
EC/Marie Curie actions	0
EC Other Funding	0
University fellowships	0
National public bodies	1
Industry	0
Other	2
Other, please specify:	I am the president of the college and do not directly supervise researchers. I work for the Bank of Israel, which is a national public body.

How many researchers have you supervised within this project?	1
Corresponding to how many person months?	48

Number of publications resulting directly from the research project:	
Recruited researcher(s) and yourself	0 This is because I am a finance professor, so have been able to supervise Prof. Miron-Shatz in terms of her professional development, but not in her research topic.
Recruited researcher(s) alone	0 Prof. Miron-Shatz is part of several research groups, including for the projects covered under the grant.
Recruited researcher(s) with authors other than yourself	5 (and 3 more to be submitted in early 2015).

Participation of the recruited researcher(s) at conferences (number):	
Passive	5
Active	30
How do you rate the overall success of the research training?	Very high. We are incredibly pleased with having taken Prof. Miron-Shatz as a faculty member, and the reintegration grant was an important help.

General assessment: Prof. Miron-Shatz is a highly competent and valuable faculty member. Her research is impressive and has very high visibility within the faculty, the country, and internationally.	
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She has made a very active contribution to the faculty, constantly giving talks at the seminar, and inviting reputable speakers to the seminar. Most recently Prof. Noel Brewer of the world's leading school of public health at the University of Northern Carolina has sent commendations. She is remarkably competent and accomplished, and a great inspiration and support to faculty members.

I am personally responsible for promoting her as an Associate Professor, which is an illustration of my appreciation of her contribution.

### RESEARCHERS ASSESSMENT:

Rate the overall level of the recruited researcher(s) integration in the research team and the host organisation with regards to:	
participation in meetings/seminars	Excellent
discussions of results and project-related topics	Excellent
co-operation with other team members	Excellent
co-operation with other researchers of the host institution	Excellent

Rate the overall performance of the recruited researcher(s) with regard to:	
originality of fellow(s) approach towards research (initiative/independent thinking)	Highly original and incredibly independent. Prof. Miron-Shatz has established medical decision making as an important skill and knowledge base in our institute
capacity to develop new skills and to benefit from training	Prof. Miron-Shatz has shown an exceptional ability to benefit from training as well as from the collaborations made possible by the grant and in general.
productivity (research results/publications/international conference attendance)	With 23 peer reviewed papers and book chapters published in the grant period, and over 30 local and international conferences where she gave talks, Prof. Miron-Shatz's productivity is highly impressive.
communication skills	With her conference presentations, publications, and collaborations, Prof. Miron-Shatz has very high communication skills.
group leader skills (collaboration with other groups/project management)	Excellent
training and/or teaching skills	Excellent. She recently gave a faculty seminar and I was impressed with how comprehensive her research was, but also with how clearly and methodically she presented it.
Please comment: Please see above, as I elaborated on Prof. Miron-Shatz's competence and academic excellence.	

### RESEARCH TRAINING OUTCOMES:

Has this project provided additional links with other research groups or institutions?	Absolutely. The project has resulted in Prof. Miron-Shatz establishing a research group on breast cancer research, and joining one on
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	Alzheimer's Disease research.
If yes, indicate the number of contacts in each case	Breast cancer: 3; Alzheimer: 3.
Universities	Dartmouth, Plymouth, Harvard, University of Michigan. University of Commonwealth, Virginia.
Research Centres	0
Industry/private companies	0
Others	0
If Other, please specify: N/A	

Rate the importance of the following outcomes of the research training:	
results of the research	Very important
number of publications	Very important!!! Crucial.
development of research	Very important
establishment of international collaborations	Very important
transfer of knowledge/technology	N/A
training of researcher	Very important
further academic qualifications (PhD, habilitation etc.) for fellows	Important (the researcher became an Associate Professor, which is the equivalent of habilitation).
Please comment: The financial support made a huge difference for the researcher, and receiving the grant was proof of her academic excellence, which helped her in the academic qualification process.	

### **YOUR OPINION ABOUT THE MARIE CURIE ACTIONS:**

Do you have any other comments or suggestions of how to improve the concerned Marie Curie actions?	
We are very appreciative of the grant support. Improvement could come from (a) connecting the scientists with related industry projects, (b) creating research seminars for the researchers, and (c) providing guidance on related programs when the researchers advance, for example, ERC.	

Did you have previous knowledge of the Marie Curie actions?	No
If yes what sort of image do you think that the Marie Curie actions have among the scientific community in your research area?	N/A

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- <sup>1</sup> Hanoch, Y., Miron-Shatz, T., Rolison, J., & Ozanne, E. Understanding of BRCA1/2 genetic tests results: the importance of objective and subjective numeracy. (2014). *Psycho Oncology*. Impact factor: 4.044 14 APR 2014, DOI: 10.1002/pon.3537
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