



WOMEN ON THE FRONT LINES OF THE COVID-19 BATTLE

The Covid-19 pandemic rocked the daily routine of senior women researchers at the Hebrew University of Jerusalem, and they decided to dedicate themselves to researching this field. In a special conversation, three of them talk about their lives, the professional and personal challenges that women face, and the surprising ways they coped during the current health crisis

Galia Hipsh and Yoel Tsafrir

A single revolving door separates the Hadassah Medical Center in Jerusalem from Hebrew University's Faculty of Medicine. For the first time in 70 years, this door was recently removed in order to transfer equipment from the hospital to the medical school for the purposes of setting up a coronavirus testing lab. Medical students, young medical researchers and lab technicians were recruited and, together with Prof. Dina Ben Yehuda, Dean of the Faculty of Medicine and Head of the Hematological Department at Hadassah, they carried out more than 400,000 coronavirus tests. The medical students also volunteered to collect samples at Teddy Stadium and in the homes of people with suppressed immune systems. They worked around the clock to help treat the population of Jerusalem, who suffered from high rates of Covid-19.

The family pushed towards higher education

During ordinary times, senior Hebrew University researchers are busy with groundbreaking research, teaching and other academic obligations. But these are not ordinary times. The coronavirus made them focus their academic and research talents on urgent public health issues. That is what happened to Prof. Ben Yehuda, who led the drive to recruit students to help at Hadassah, and that is also what happened to her colleagues Prof. Ronit Calderon-Margalit and Prof. Masha Niv.

As a faculty member of the School of Public Health in the Faculty of Medicine and an expert on epidemiology, Prof. Calderon-Margalit led studies related to Covid-19 during the past year. She has been closely involved with the government's decision-making process and served as a consultant to the "Corona cabinet." Prof. Niv was among the first researchers in the world who identified losing one's sense of smell and taste as symptoms of the virus. We went back in time with all three women to better understand their backgrounds.

How did the home where you grew up impact your career choice?

Prof. Ben Yehuda: "My home definitely had an impact. When I was three, my older brother, who was then seven, died of lymphoma. That same year I decided that I would become a doctor. I grew up in the shadow of his death. When I got to medical school, I told everyone that I wanted to develop medicine for lymphoma. They laughed at me, but today we are in the last stages of developing a drug for lymphoma, after having devoted many years to this goal.

"Today, I am the head of Hadassah's Hematology Department, a researcher who manages the drug development research lab. Since 2017, I am also the Dean of the Faculty of Medicine."

Prof. Calderon-Margalit: "My family pushed me to pursue higher education and expand my horizons. It was important to my parents, who were very intelligent and talented but were unable to obtain higher education themselves. Since my brother was sick for many years, it was clear to me that medicine is the most important profession in the world. I chose epidemiology with a specialty in public health, which appealed to me because of its potential impact on the health and quality of life of so many people. I learned from the best in Israel, at The



Prof. Dina Ben Yehuda

Age and status: 67, married + 3 children and 5 grandchildren
Residence: Mevaseret Zion
Position: Head of the Hematology Department at Hadassah Hospital in Jerusalem, Dean of the Faculty of Medicine of the Hebrew University of Jerusalem
Education: Doctor of Medicine, Ben-Gurion University of the Negev
Volunteering: Volunteers at Physicians for Human Rights
Motto: "Excellence, compassion and giving to others is the way to improve quality of life"
Inspirational woman: Prof. Ruth Gavison
Recognition and appreciation: Commendation from the Chief of Staff in the Yom Kippur War, Danielle Prize for Healing with a Heart

Hebrew University-Hadassah Braun School of Public Health and Community Medicine, where I continued as a faculty member.

"Today I head the school's International Master of Public Health program, as well as the national program for measuring the quality of health in the community. Israel has an excellent public health system, and the fact that everyone is insured is a huge benefit that doesn't exist in many countries and that has a real impact on public health. For example, one of its achievements is increasing the share of 50-74-year-olds who are tested for early detection of colon cancer from 1/8 to 2/3 – a huge success which has resulted in a drop in diagnoses of this common type of cancer."

Prof. Niv: "I was born in Moscow to a family of academics. We moved to Israel when I was 12 and it was clear that I would have an academic career too. I wanted to study something with life-saving therapeutic applications, so after my PhD I worked for an exciting biotech start-up, in the computational development of cancer drugs. After that, we travelled to New York, where I did a post-doc at Cornell's Medical School. Although I enjoyed the start-up, I wanted to return to academia and I was accepted at the Institute of Biochemistry, Food Science and Nutrition at Hebrew University's Robert H. Smith Faculty of Agriculture, Food and Environment in Rehovot.

"As an immigrant, you have to bridge between two worlds, and that's what I do in my work as well – I connect between disciplines. That is how I imported computational methods that were less common here in the fields of food and agriculture. I chose to focus on researching the sense of taste – I research biological receptors and how they enable spatial and chemical knowledge of



Prof. Masha Niv

Age and status: 51, married + 3 children
Residence: Beit Zayit
Position: Professor at the Institute of Biochemistry, Food Science and Nutrition at Hebrew University's Robert H. Smith Faculty of Agriculture, Food and Environment; member of the board of directors of the Israeli Institute for Advanced Studies; founder of the international consortium for researching the sense of taste and smell in Covid-19
Education: B.Sc. with honors and direct PhD in Chemistry at the Hebrew University of Jerusalem
Hobbies: Running, including half-marathons
Volunteering: Promoting women in academia in various ways, including establishing a mentoring program for female post-doctoral students abroad
Motto: "Work hard and dare, while making an active and conscious effort to preserve fairness and equity"
Inspirational women: Prof. Dina Ben Yehuda and Prof. Jen Heemstra, a Chemistry professor whose insights and humanity are a source of inspiration to thousands of Twitter followers

taste molecules. It's a fascinating field from a physiological, psychological and chemical perspective. I served as VP for Research at the Faculty, where we develop many projects, some of which have been successfully commercialized."

Few women at the top of the pyramid

Prof. Ben Yehuda smiles when asked about work-life balance: "There are three things that I wasn't taught in medical school and two of them I teach today. One is how to deal with the death of a patient. We now have an important palliative medicine course in the Faculty. The second is how to deal with a mistake. I also teach this subject. The third is how to juggle your career with your home life. I still don't know how to teach that. I'm a rather absent mother and grandmother."

To what extent are there egalitarian opportunities today for women doctors and researchers?

Prof. Ben Yehuda: "Today, more than 50% of medical students are women, which was not the case when I was a student. Women are more driven towards science than in the past. At Hadassah, nearly 50% of the senior doctors are women, but I am almost the only one at meetings of the hospital's department heads. There are fewer women at the top of the pyramid. The same

is true for medical school deans. There was only one other woman in this position in Israel before me. The situation is similar in the U.S."

Prof. Niv: "The Covid crisis may have caused a significant regression in the advancement of women. Studies show that female researchers' productivity is hampered these days because of the challenges from home and a division of labor that is still not equal, especially when it comes to child care. I was able to devote myself to research during the coronavirus only because my youngest son is not so young. I am lucky because my husband is supportive and believed in me, but that's not the case for everyone, and it's not always enough.

"For example, doctoral students can apply to prestigious scholarships within a specified time limit, and not all foundations agree to defer an application due to childbirth. Women don't even think they are allowed to request such a thing. Several col-



Prof. Ronit Calderon-Margalit

Age and status: 51, married + 3 children
Residence: Ramat Gan
Position: Expert in public health and professor of epidemiology; head of the International Master in Public Health program at the Hebrew University-Hadassah Braun School of Public Health and Community Medicine
Education: M.D. from Technion-Israel Institute of Technology (with honors), Master's in Public Health from the Hebrew University-Hadassah Braun School of Public Health and Community Medicine
Hobbies: Reading, crossword puzzles, travelling; pre-coronavirus enjoyed lots of cultural events, especially music and various activities to expand knowledge and feed the soul, such as theater and Ladino classes
Motto: "Hard work, thoroughness and perseverance"
Inspirational women: Prof. Orly Manor, Prof. Ora Paltiel and Prof. Dina Ben Yehuda

leagues and I wrote a petition, which many people signed, asking leading foundations to change their policy, and some did. The subject of childbirth affects women in other ways too, such as for the "40 best under age 40" rankings. Another important point is that women should be seen and represented everywhere, for example at conferences. In every field, there are impressive women who can be key speakers and serve as role models for female students."

Prof. Calderon-Margalit: "In Life Sciences, there are more female than male doctoral students, but here too there are mixed messages because post-docs involve going abroad and it isn't customary for families to move overseas for a woman's position, especially if the husband doesn't have anything to do abroad and he has a good job in Israel. This is an obstacle for many women."

Prof. Niv agrees that there is a hurdle for women who want to do post-doc research, and she has helped Dr. Natanella Illouz-Eliash establish a mentoring network for women doing post-docs abroad, to help them with the process.

Prof. Ben Yehuda explains: "Today, people try to find creative solutions. I met a woman who couldn't go abroad because her husband had a senior position in the army. She stayed in Israel and takes part in a combined post-doc program in Israel with a lab overseas. For another candidate, we asked the university to provide a budget for her husband's salary for the first year, until he finds work abroad. This will open the doors for more women."

"I am also not in favor of affirmative action," adds Prof. Ben Yehuda. "I got to where I am today because I was okay, not because I am a woman. We must change education from the ground up. Moreover, it's important to open kindergartens near workplaces. At Hadassah, we opened a preschool for the medical staff. When I was an intern spending days and nights at the hospital, I wasn't able to go visit my kids at a nearby preschool. There was so much longing and guilt. I'm glad that today it is different."

"We wasted our 'weapon of last resort' – lockdown"

During the first few months of the pandemic, Prof. Calderon-Margalit, who was previously almost unknown to the public at large, found herself exposed in the media more than ever before. She and her colleagues from The Hebrew University-Hadassah Braun School of Public Health and Community Medicine appeared in the government cabinet and in the Knesset's coronavirus, education and children's welfare committees. "The feeling was that decisions weren't being made in an educated manner. After studying the literature from Israel and around the world, as well as the morbidity data, we saw that, at least until the arrival of the British variant, children under the age of ten were infected less. The only advantage of locking down children was maybe to reduce the movements of adults who had to stay home with them. The third lockdown was not effective, and we already wasted our 'weapon of last resort,' which is lockdowns. We lost the public's trust and cooperation."

Prof. Ben Yehuda: "Ronit writes for the most important medical journal in the world, the New England Journal of Medicine. Every doctor in the world reads what she writes, but here no one listens to her."

Prof. Niv, how did you start researching the loss of taste and smell, which is a symptom of Covid-19?

"In March 2020, when the first reports surfaced of people losing their sense of taste and smell, I dove into research in two parallel channels – in Israel with doctors from Hadassah, and in an international consortium which I helped found. In the first stage, we examined the extent of damage to the senses and whether people sense sweetness, saltiness, sourness and bitterness. By comparing symptoms between Covid-19 patients and patients with other diseases, we found that if someone's sense of taste and smell is suddenly impaired, there is a strong suspicion that they have the coronavirus. In a joint research with doctors from Hadassah we found that for approximately 10% of patients (non-severe) their senses do not return to normal even after half a year."

In conclusion, what did you learn from the Covid-19 pandemic?

Prof. Calderon-Margalit: "That we have a good healthcare system that functioned extremely well even when the crisis was not managed that well. The low mortality rate from Covid in Israel is largely thanks to the community medicine and the flexibility of the hospital system. In the past year, we formed inter-disciplinary work groups and it was an honor to participate in them. On a personal level, I left my comfort zone in academia because I understood that our role is to influence and promote subjects connected to health in the public sphere. I hope I will continue to do this also after the pandemic will pass."

Prof. Niv: "The public is now very interested in science and that's wonderful. We must invest in disseminating information. Medicine alone is not enough. Behavioral aspects are extremely important, because even if we have the best vaccine but people don't want it, we will have a problem. Cooperation among the various branches of science and also among scientists, journalists and the public is critical."

Prof. Ben Yehuda: "Covid-19 was a sort of magnifying glass for us, which enlarged both the good and the bad in every aspect of life. My biggest hope is that when this will be over, we will establish discussion groups that will try to examine how we can leverage the good and eliminate the bad. Many good things happened during this period – we must see that."

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