



Professor Alon Chen

PRESIDENT

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Dear Friends,

It has been three-quarters of a century since Israel's birth, which we celebrated on Independence Day, *Yom Ha'atzmaut*, in May. This special milestone has coincided with the upsurge in protest across a large sector of society over the government's attempts at judicial overhaul, and concern over the vulnerability of Israel's democratic foundations. In academia, there is broad understanding that free thought and expression can only thrive in a strong democracy.

Now is a critical moment to reflect on the foundational role that Israeli universities and research institutions have played in the history and achievements of this country—and the imperative that they continue to keep Israel resilient and strong. In an example rather unique in the world, such institutions were envisioned as pillars upon which the State of Israel would be built, in a strategy advanced by Zionist leaders, including **Dr. Chaim Weizmann**, starting in the late 19<sup>th</sup> century. The **Daniel Sieff Research Institute**, the precursor to the Weizmann Institute, was one of three such entities to open its doors well before Israel's founding. These hubs of rigorous intellectual thought, learning, and investigation laid the groundwork for a knowledge-based economy in a small country with few natural resources, located in a troubled region; self-sufficiency, these leaders understood, was going to be essential to ensure survival.

Moreover, these institutions have contributed to an ever-expanding reservoir of world knowledge from which *everyone* can draw sustenance, and are a source of resilience for society at large. While in my lab we investigate the biological underpinnings of resilience in the brain and body that allow individuals to cope with stress, on a societal level we should consider the institutions that underpin a resilient society. It's a parallel I think about often.

I will return to this concept again, but I would like to first inform you of several organizational changes in the senior management of the Institute which will take place at the end of the calendar year (effective January 1, 2024). **Prof. Alon Harmelin** will step down from his role as Vice President for Administration and Finance after four years of dedicated and outstanding service. I want to thank Alon deeply for his hard work and special personal touch in this important role. As the responsibilities that the position entails have grown considerably in recent years, we decided to create a new division of responsibilities.

**Alon Weingarten**, Head of the Construction and Engineering Division, will be the new Vice President for Administration, which involves overseeing the divisions of Construction and Engineering, Human Resources, Operations, and Procurement. **Tamir Kadishi**, Head of the Finance Division, will take on a new, expanded role as Chief Financial Officer (CFO). He will also continue to head the Finance Division and will be part of the senior management team. In addition, Tamir as well as **Michal Naveh**, the General Counsel, will report directly to me as President. I wish Alon and Tamir the best of luck in their new roles and I look forward to working more closely with them.

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Going back to the contribution of Weizmann to the resilience of society, our alumni are certainly part of that phenomenon, and we just celebrated the newest ones, on May 31, at the commencement ceremony for the **Feinberg Graduate School**. Nearly 320 masters and doctoral students received their degrees, about 10 percent of whom were international students. Our alumni fuel high-tech, biotech, academia, education, and the nonprofit sector in Israel and abroad; they add to an ever-expanding network of individuals who make the world better and stronger, at a time when the world is rife with challenges that should best be addressed by answers from science.

We had one such breakthrough in the field of environmental health on campus recently. **Prof. Yinon Rudich** of the Department of Earth and Planetary Sciences, in collaboration with the lab of **Dr. Shira Raveh-Rubin** of the same department, recently published a study showing how to predict dust storms—a nuisance and an environmental and health danger in many regions of the world, including right here at home. They did this by tasking an artificial intelligence system they devised with analyzing reams of existing meteorological data so that the system could both “learn” when a dust storm was approaching, and predict the area in which the dust would be dispersed. Ultimately, using data from all of Israel’s meteorological stations over the past 20 years, they showed that they could successfully forecast more than 80 percent of dust storms one day ahead of time, and around 70 percent two days ahead of time. This is just the kind of critical work that will be part of the Institute for Environmental Sustainability, and will bolster resilience to climate change and shifting weather patterns.

Research that will help doctors prevent, diagnose, and better treat cancer is another example of addressing disease resilience. Under the **Moross Integrated Cancer Center**, for instance, our scientists have made a large array of discoveries in the last year. It’s impossible to capture it all here in a few words. In broad strokes, much of cancer research today involves the study of immunity and the exploitation of a growing body of knowledge about the immune system and its ability to fend off cancer. Other areas of exploration are uncovering the role of bacteria inside tumors and others are looking at the so-called “microenvironment” in which a tumor resides. Yet others are looking at how the body’s metabolic functions affect cancer—and could be manipulated to treat it.

On that last subject, **Prof. Ayelet Erez**, for instance, recently approached the question of why and how cancer patients lose so much weight. Her lab found that very early during the cancer course, there is a decline in liver metabolism, resulting in increased availability of metabolites that support cancer growth. This liver malfunction leads to a decrease in synthesis of the most prevalent protein—albumin. Consequently, a cascade of events leads to “wasting syndrome,” a phenomenon of runaway weight loss in cancer patients that can’t be offset by high caloric intake. This finding could lead to new ways to target metabolic changes early in cancer onset and prevent late cancer-related systemic metabolic manifestations of weight loss, thus improving cancer patients’ outcomes.

Others yet are addressing the genomic “signatures” of particular types of cancer. **Dr. Liran Shlush** has revealed such a “signature”—a molecule called IPO11—that regulates the ability of acute myeloid leukemia (AML) to replicate. He and his team also found that this signature is more prevalent in males than in females, thereby clarifying why more males are diagnosed with AML—a gender bias that increases exponentially in older patients. Both Ayelet and Liran are members of the Department of Molecular Cell Biology.

Collaborations in cancer at home and with other institutions are growing in number and intensity. I’m delighted to announce that we have entered into a formal collaboration with the **University of Navarra** in Pamplona, Spain, on cancer research. Together, our scientists will work on three pioneering biomedical projects that integrate artificial intelligence, genomics technologies, and new therapeutic techniques to advance the understanding and treatment of three types of cancer: lung, pancreatic, and multiple myeloma. While Weizmann scientists engage in countless collaborations that typically arise organically, this formalized collaboration is generously supported by the **Alberto**

**Palatchi Foundation** through the European Committee, and it will continue to foster a pipeline of projects and leverage the best of Spanish and Israeli cancer research.

In May, we celebrated another important collaboration in the field of translational health research, with **Schneider Children's Medical Center**, in an evening event held in partnership with the Israeli Friends of the Weizmann Institute. This collaboration, generously sponsored by **Dr. Gilbert Omenn and Martha A. Darling** of Michigan, highlighted several joint pediatric research projects that are leveraging basic research at Weizmann for the benefit of clinical care.

Turning to new scientist hires, I'd like to introduce you to two bright minds—a chemist and a mathematician. In March, **Prof. Lev Buhovsky** became a new member of the Department of Mathematics, having joined the Institute at the professorial level from a tenured position at Tel Aviv University. His main interests lie in a field called symplectic geometry, which originally served as a geometric language for classical mechanics but later became an independent field interconnected with many other areas of mathematics and physics.

[Dr. Elena Meirzadeh](#) will join the Department of Molecular Chemistry and Materials Science on August 1, following a postdoctoral fellowship at Columbia University, where she was a recipient of the Israel National Postdoctoral Award for Advancing Women in Science. Elena, who immigrated to Israel with her family from Iran when she was 11 years old and only then began learning Hebrew, went on to get her PhD from the Feinberg Graduate School, where she was a **Rothschild Fellow**. Elena makes carbon nanomaterials that are structurally and functionally diverse and with potential applications for energy storage and organic electronics, including solar cells, photodetectors (light sensors) and other sensors.

Lastly, we are deep into planning our upcoming Annual General Meeting of the International Board, which will take place November 5-8, 2023, with a theme of "Science for Life". I hope you can join us for the many meetings and celebrations of Weizmann science. Among other things, I'm looking forward to awarding our honorary PhD to a group of exceptional individuals, each with inspiring life and career stories: **Prof. Sarab Abu-Rabia-Queder**, Israel; **Dr. Ilana Dayan-Orbach**, Israel; **Renée Drake**, the Netherlands; **Prof. Elaine Fuchs**, US; **Garry Kasparov**, US; **Israel Makov**, Israel; **Larry Marks**, US; and **Dr. Gladys Monroy**, US.

With best wishes for a pleasant and relaxing summer,



Prof. Alon Chen