

SHARING THE START-UP EXPERIENCE



**Entrepreneurship Training Workshop for Young
Scientists and Engineers**

**Israel Academy of Sciences and Humanities
November 25-28.2013**

Hosted and organized by:



THE ISRAEL ACADEMY OF
SCIENCES AND HUMANITIES

Sponsored by:

aassa
THE ASSOCIATION OF ACADEMIES
AND SOCIETIES OF SCIENCES IN
Asia

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Global Young Academy
The voice of young scientists around the world



האקדמיה הלאומית הישראלית למדעים
THE ISRAEL ACADEMY OF SCIENCES AND HUMANITIES

Report on:

Sharing the Start-up Experience -
A Training Workshop on Entrepreneurship

Organized and Hosted by the Israel Academy of Sciences and Humanities

November 25-28 2013

Co-sponsored and supported by

AASSA

IAP

GYA

Supported by

Dor Chemicals, Ltd.

Background

In 2011 Professor Dan Shechtman responded, on behalf of the Israel Academy of Sciences and Humanities, to a call for proposals to convene AASA sponsored workshops funded by the IAP. He proposed convening in Jerusalem a Training Workshop on entrepreneurship geared towards early to mid-career Asian scientists and engineers, based on a course that he had taught at the Technion – Israel Institute of Technology for the past twenty-six years. Titled “Sharing the Start-up Experience”, the rationale for the Workshop was quite simple. The Israeli economy has been strengthened in recent years by successful “start-up” ventures that have attracted significant foreign and domestic investment. Professor Shechtman believed that by training a cadre of young Asian scientists and engineers in skills related to entrepreneurship, they could, in turn, help to fuel their local economies. The Workshop was subsequently approved for funding and scheduled for October 2012. Unfortunately, due primarily to a low rate of response, the original meeting was cancelled. When the IAP leadership was informed of such, the organizers were urged strongly not to cancel but rather to try again. They rose to the challenge and rescheduled the Workshop for late November 2013.

The call for the re-scheduled Workshop was disseminated to AASSA (The Association of Academies and Scientific Societies in Asia -- successor to AASA) member Academies with the full cooperation of the President and Secretariat and was followed-up by personal letters from Professor Shechtman to the Ambassadors of Israel in the relevant countries asking them to encourage recruitment. The Chairpersons of the Global Young Academy (GYA) distributed the call to the membership with the understanding that GYA members from Asian countries would have priority over those from the rest of the world. The Workshop took place from November 25th to November 28th 2013 with 24 participants representing ten foreign (Asian) countries and six Israelis. The [Call for Participants](#) is in Appendix 1.

About the Workshop

Target population:

“Sharing the Start-up Experience” was intended for GYA members and other outstanding early career scientists and engineers working in Asia who had already been awarded their PhD degrees and were interested in acquiring innovation skills and making a contribution to the economies of their countries. It was clearly stated that previous entrepreneurial experience is not required. Since the potential participants could not be evaluated by traditional methods, for example by reviewing proposed presentation abstracts, an alternative was sought incorporating “pre-selection” and it was decided to accept applications submitted by Asian Academies (up to two per Academy) and self-submitted by members of GYA. Members of the Israel Young Academy were also accepted by self-nomination. Due to the original funding source, priority was given to nominees coming from Asia and in retrospect this regional limitation appears to have paid off in term of the sense of cohesiveness that developed among the trainees.

The original budget was based on twenty-five foreign participants and 10 Israelis. In actuality, thirty one Asian (including Russian, from St. Petersburg) applicants were initially invited. Four subsequently declined the invitation for personal reasons and three did not arrive because visas were not issued in time. Thus there were 25 foreign plus six Israelis participants. [Biographical sketches](#) of the participants are in Appendix 2 of the hard copy of this report: (Fuming, Gubbi and Modi are listed in the participant booklet but were unable to attend). Twelve countries were represented, as follows:

1. Australia	2	5. Japan	3	9. Sri Lanka	3
2. China	3	6. Korea	3	10. Taiwan	2
3. India	1	7. Nepal	2	11. Thailand	3
4. Israel	6	8. Russia	2	12. Turkey	1

Workshop goals:

- To learn from researchers who have successfully initiated new technological ventures the various ways that this can be accomplished
- To emphasize the importance of start-up ventures as a means of improving local economies and connecting science with society
- To share experiences making the transition from bench to business
- To establish a cadre of young entrepreneurs in Asia

Session Themes:

- Encouraging entrepreneurship among engineers and scientists: moving from bench to venture
- The language of start-ups and entrepreneurs
- Management and leadership styles necessary for successful entrepreneurs
- A question of money: selecting from among different strategies for funding start-ups
- Community and government supports that increase the success of technological ventures

The Lecturers:

Lecturers of the highest caliber with personal experience in various aspects of entrepreneurship were enlisted. They all believed that the subject was important enough that they donated their time and received no payment whatsoever. Most of the lecturers have taught in the aforementioned course at the Technion. Brief [biographies of the lecturers](#) may be found in Appendix 3.

The Program:

The program was designed to be both motivational and practical; to electrify the participants with the excitement of the entrepreneurial experience and to provide them with practical tools and information that could serve them in their own future endeavors. During two full days of seminar presentations individuals who have achieved success in launching start-ups shared with the group their successes and failures and what they have learned from both. Lecturers who hold key positions in Israel's governmental programs and private and corporate venture capitalists spoke about what they look for in Start-up ventures and what opportunities are available – even for non-Israelis – in the different programs. Half of the day of touring was devoted to on-site visits in one of Jerusalem's high-tech industry areas and meetings with key players. The other half day of touring focused on historical and cultural places of interest – primarily inside Jerusalem's Old City. As part of the opening dinner, Prof. Namik Aras, AASSA Vice President, greeted the group on behalf of AASSA and presented an AASSA Service Award to Israel Academy President, Professor Ruth Arnon, who had served as AASA President. The award was received on her behalf by Prof. Menahem Yaari, Academy immediate past President because Prof. Arnon was abroad.

Many of the powerpoint presentations have been made available to the participants on Skydrive and others are available directly from the presenters.

Following is the detailed program:

Day 0 (November 25 2013)

Opening Reception at the Israel Academy of Sciences and Humanities

Day 1 (November 26 2013)

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| 1: Prof. Dan Shechtman , <i>Nobel Prize Laureate in Chemistry 2011</i> | Technological Entrepreneurship – A Key to World Peace and Prosperity |
| 2: Dan Vilenski , <i>Partner at Silicom Ventures Fund of Silicom Ventures LLC</i> | Can Everybody be an Entrepreneur? |
| 3: Prof. Shlomo Maital , <i>Senior Research Associate at the Samuel Neaman Institute for Advanced Studies in Science & Technology, Technion-Israel Institute of Technology, and Professor (emeritus)</i> | Bootstrapping: How to Launch Your Business Without Money |
| 4: Yair Snir , <i>Director of M&A and Business Development, Microsoft Ventures</i> | The Startup Story – A Constant Fishing for Competence |
| 5: Prof. Namik Aras , <i>Vice President of Association of Academies and Societies of Sciences of Asia (AASSA)</i> | Reversing Brain Drain through Brain Circulation for Entrepreneurship |
| 6: Prof. Shlomo Maital (<i>see above</i>) | How to Build Your Business Without Money: Basic Finance and Accounting |

Dinner at the Olive and Fish Restaurant

Day 2 (November 27 2013)

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|---|---|
| 7: Asa Kling , <i>Director of the Israel Patents Office; Commissioner of Patents, Designs and Trademarks Israel Patent Office; Ministry of Justice</i> | What You Need to Know About Patents |
| 8: Bob Rosenschein , <i>Founder & CEO of Curiyo</i> | Confessions of a Serial Entrepreneur |
| 9: Jonathan Misheiker , <i>Advoc.</i> | Why Incorporate? |
| 10: Yossi Smoler , <i>Technological Incubators Program Director, Office of The Chief Scientist, Ministry of Economy</i> | The Israeli Technological Incubators Program |
| 11: Ofer Vilenski , <i>CEO, Hola Networks Ltd.</i> | Mistakes I Have Made in my Entrepreneurial Career |
| 12: Gideon Ziegelman , <i>CEO at Vokee</i> | Market Research and Its Importance to High Tech Entrepreneurs |

Dinner at Ima Restaurant

Day 3 (November 28 2013) (Cultural, historical and educational touring)

- Visit Jerusalem's Old City up-close look at the historical and religious sites there. A **Rooftops Tour** touching all **four quarters** of the old city includes some surprising outlooks over the city, a visit to the **Kotel** (Western Wall), the **Austrian Hospice**, the **Via Dolorosa** and the **Church of the Holy Sepulchre**. Lunch at the **Haas Promenade** with its panoramic view of Jerusalem and the Judean Desert.

- After lunch visit the northern side of the city to explore entrepreneurial activity of all types at the **Har Hotzvim** Hi Tech park including meetings with key representatives of:
 - **Mobileye:** One of Jerusalem's most successful start-ups, Mobileye started from technology developed by Professor Shashua and has become a technology leader in the area of advanced image sensing and sells its products world wide.
 - **Intel Jerusalem:** This is the site of Intel's first fabrication site outside of the USA and has been an anchor of the Israeli hi-tech scene since the mid 1970's. Intel is Israel's largest hi-tech employer and accounts for a significant portion of its industrial export. An important multinational, Intel has had great influence on the entrepreneurial infrastructure.
 - **Terra Venture Partners:** *What the Venture Capitalist is looking for and how to position yourself for the initial funding round.* Dr. Harold Wiener, Managing Partner.

Participant Feedback

Quite a few Workshop trainees have written to the organizers following their return home. Overall the comments have been highly complimentary making note of the excellence of the presentations, the unique nature of the workshop format and the high level of the logistical arrangements. Their enthusiasm is palpable,

“Yes! It was truly a magnificent experience. Thank you Professor Dan for the wonderful "inspiration"!!! and thank you Bob for taking all the trouble to coordinate everything so perfectly!!! I will definitely inspire my students and the young researchers here ... by sharing our experience and of course will gradually spread it across the country.”

After thanking the organizers “for providing me the valuable opportunity to share your wisdom on how to start up,” one of the participants announced that after “reporting the fruit of this workshop to GYA and CAS” he has begun plans to “hold the 2nd workshop” in September 2014, in China.

Another participant expressed his “deepest gratitude ... for organizing the workshop effectively. The invited speakers opened my eyes and inspired me about start up experiences in Israel.”

It was most gratifying to learn from one of the trainees that, “I have been busy putting the wheels in motion to start my own business next year.” Much of the feedback focused on a similar theme -- putting to use what was learned during the Workshop. “Back to work tomorrow and hoping to implement a little bit of what we learnt, will keep you updated!”

Two participants who shared a very long trip home wrote that on the plane they had begun “formulating plans for an academic-industry group for the early-mid career level which could promote and facilitate the translation of research locally.” They explained, “Our thinking was loosely around looking for ways to start a small community of researchers + business types with a passion for this area. A workshop along the lines of the one that you and Danny organised could be a good way to start.”

A very rewarding side effect of the Workshop was the unexpected sense of camaraderie that developed over the very short time that the participants actually spent together. Within days of the conclusion of the Workshop they had already set up a facebook group and a LinkedIn group for the participants. There has been an exchange of photos and of season's greeting as well as some reflection on the experience they shared, “The meeting we [attended] in the Israel Academy of Sciences and Humanities was really remarkable and supportive for those who wish to enjoy their innovation in the form of money.”

Budget and Finances

The projected budget submitted in July 2011 to AASSA (then AASA) and IAP for a Workshop to be held in October 2012 was \$62,000. We asked for a grant of \$50,000 and were granted \$42,500. From the outset, one of the provisions that we included was that the full travel expenses for all participants would be covered by the organizers. This item alone (\$29,750) represented about fifty percent of the initial budget. We felt that this was important in order to enable the most free and open access to the Workshop for trainees from all countries, without regard to the ability to pay of the individual or of his sponsoring Academy or institute. In retrospect we believe that this was an important factor in enabling participation by scientists from the range of countries represented. We had hoped that in some cases the travel expenses would be covered under the terms of Agreements between our Academy and foreign Academies, but this did not happen.

It should be noted that the initial budget was prepared in mid 2011 – more than a year before anticipated implementation and it was ultimately held nearly two and a half years after the budget was prepared. Needless to say there was a significant rise in costs (especially airfares) and a significant depreciation of the value of the US \$ versus Israeli currency in the interim. As a result the portion of the expenditures expected to be covered by the grant was significantly diminished and we implemented two responses: first, expenses were reduced and second, support was sought from local industry and from AASSA (in terms of airfare support, as provided in the provisions for AASSA sponsored workshops).

A [Consolidated Financial Report](#) may be found in Appendix 4. Changes were made to the budget subsequent to the rescheduling of the Workshop from 2012 to 2013, reducing total anticipated expenditures by about \$ 9,000 to NIS 196,861 (~\$ 56,246). Income from organizations (AASSA and IAP) and industry (Dor Chemicals) amounted to NIS 184,506 (\$ 52,716). The deficit of NIS 11,450 (~\$ 3,272) has been absorbed by the Israel Academy of Sciences and Humanities. A [Financial Statement of AASSA Travel Subsidies](#) may be found in Appendix 5.

Conclusion

We are of the opinion that for many of the thirty-one young scientists and engineers representing a dozen Asian countries this was a formative experience, revealing to them a new perspective on their scientific research and engineering endeavors and suggesting additional avenues that may be available for them to contribute to their societies and countries. The organizers and lecturers were struck by the enthusiastic response of the participants and by the willingness of many of them to ask how they might personally apply the lessons of the Workshop and rise to the challenges raised by the entrepreneurial model. For their part, the lecturers and organizers stand ready to assist the participants in future start-up undertakings.

Without the cooperation of each and every one of the lecturers the Workshop would not have been as successful as it was. The lecturers all volunteered their time and expertise with no remuneration, whatsoever. We are indebted to them.

We are appreciative of the support of the President, Council and Secretariat of the Israel Academy of Sciences and Humanities and for the encouragement and assistance that they bestowed upon the organizers. We are grateful to the President, the Projects Coordinator and Secretariat of AASSA, to the Chairs of GYA and to Israel's emissaries in Asia for their help in promoting the Workshop and to AASSA, IAP and Dor Chemicals for the confidence that they showed in this conference by providing financial support. We believe that the confidence was well-founded.

Prof. Dan Shechtman
Bob Lapidot

If you have received this report electronically, please use the following links to access the appendices:

Appendix 1: Please follow this link to the [Call for Participants](#)

Appendix 2: Please follow this link to the [participant biographies](#)

Appendix 3: Please follow this link to the [biographies of the lecturers](#)

Appendix 4: Please follow this link to the [Consolidated Financial Report](#)

Appendix 5: Please follow this link to the [Financial Statement of AASSA Travel Subsidies](#)



האקדמיה הלאומית הישראלית למדעים
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November 26 2013
Kislev 23 5774

Dear Workshop Participants,

It is indeed a pleasure to welcome scientists and engineers representing a dozen Asian countries and diverse disciplines to Israel, to Jerusalem and to our Academy. You have at least one thing in common: an interest in using your scientific skills to promote the economic growth of your countries. We hope to encourage each of you to take up the challenge of looking beyond the bench and actively seeking ways not just to put your findings to use, but also to take the personal initiative necessary to move ideas into the marketplace at a faster pace.

Israel has been referred to as the "Start-up Nation" and this refers, among other things, to a mentality that includes risk-taking, thinking out of the box and not accepting at face value everything that you see or are told. These characteristics combine to make what is known in Israel as "chutzpah" and we hope that by the end of the Workshop you will have picked up a bit of this Israeli trait along with a better understanding of why it is important to be an entrepreneur and what it takes to be a successful one.

We are grateful to the Association of Academies and Societies of Sciences in Asia (AASSA) and to the Global Network of Science Academies (IAP) for their generous support; to the Global Young Academy (GYA) for their sponsorship; and to my own national academy, the Israel Academy of Sciences and Humanities, for their generous support and for organizing and hosting the Workshop.

All the best,

Dan Shechtman



Dr. Maduka de Lanerolle-Dias, From Colombo Sri Lanka is a University Lecturer attached to the Department of Biochemistry and Molecular Biology, Faculty of Medicine, University of Colombo. She graduated from the University of Sri Jayewardenapura, Sri Lanka with first-class honors in Biochemistry specialization (B.Sc in Human Biology) with Distinctions in Biochemistry, Microbiology and Parasitology. She obtained her PhD in the field of nutritional Biochemistry from the University of Colombo in 2012. While she has diverse interests in the Biochemistry arena namely nutritional, clinical and enzymology her main research interests lie in Body composition and food composition. She has publications in this respect.

Dr. de Lanerolle-Dias has been awarded the INF/Kraft Fellowship Award at the International Congress of Nutrition (2013), the Young investigators award at the Micronutrient Forum (2009) and the S E Seneviratne prize for her oral presentation at the Sri Lanka Medical Association sessions (2009). Her professional qualifications are diverse with a Diploma in Computer Systems design and a Certificate in Business Accounting. She is a council member of the Sri Lanka Academy of Young Scientist (SLAYS) and a life member of the Sri Lanka Association for the Advancement of Science" (SLASS) and the Nutrition Society of Sri Lanka. Apart from her life in academia and research Dr. de Lanerolle-Dias is a mother of two who enjoys spending time with her family and indulging in numerous creative activities.

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Prof. Yonina Eldar was born in 1973 in Toronto, Canada, and immigrated to Israel in 1979. She received B.Sc. degrees in Physics (1995) and Electrical Engineering (1996) from Tel Aviv University and a Ph.D. in Electrical Engineering and Computer Science (2002) from the Massachusetts Institute of Technology (MIT). She joined the Electrical Engineering Faculty of the Technion – Israel Institute of Technology in 2002 and has been a full professor there since 2010. She is also a Research Affiliate with the Research Laboratory of Electronics at MIT and a Visiting Professor at Stanford University, Stanford, CA. At the Technion, she holds the Edwards Chair in Engineering.

Prof. Eldar's research activities include developing algorithms for the representation, transmission, and processing of signals and information using advanced mathematical theories and methods. In recent years, she has focused on efficient sampling techniques, signal processing in communication systems and medical imaging, optics signal processing, super-resolution methods, and computational biology.

Dr. Eldar was in the program for outstanding students at Tel Aviv University from 1992 to 1996. She received the Rosenblith Fellowship for study in electrical engineering at MIT in 1998 and an IBM Research Fellowship in 2000. From 2002 to 2005, she was a Horev Fellow in the Leaders in Science and Technology program at the Technion and an Alon Fellow. She has been awarded the Wolf Foundation Krill Prize for Excellence in Scientific Research (2004), the Andre and Bella Meyer Lectureship (2005), the Henry Taub Prize for Excellence in Research (2007), the Hershel Rich Innovation Award (2008), the Award for Women with Distinguished Contributions, the Muriel & David Jacknow Award for Excellence in Teaching, the Technion Outstanding Lecture Award, the Technion's Award for Excellence in Teaching (2009), the Michael Bruno Memorial Award from the Rothschild Foundation (2010), and the Weizmann Prize for Exact Sciences (2011). In 2012 she was elected to the Young Israel Academy and to the Israel Council for Higher Education, and she became a Fellow of the Institute of Electrical and Electronics Engineers (IEEE). In 2013 she was appointed to the Edwards Chair in Engineering at the Technion, and she received the Technion's Award for Excellence in Teaching and the Hershel Rich Innovation Award.

Prof. Eldar has received several best paper awards together with her research students and colleagues. She is a Signal Processing Society Distinguished Lecturer, a member of the IEEE Bio-Imaging Signal Processing technical committee, an Editor-in-Chief of Foundations and Trends in Signal Processing, and an Associate Editor for the SIAM

Journal on Imaging Sciences. She also serves as an editor on a number of international journals and newsletters in the field of signal processing.

Prof. Eldar has published hundreds of articles in journals and conference volumes, three books, several chapters in scientific books and fifteen patents. She has been invited to present her work at major international conferences and in dozens of plenary lectures and seminars at universities around the world. She serves as a consultant to several high-tech companies and is on the board of directors of two companies.

She is married to Shalomi and a proud mother of four: Yonatan, Moriah, Tal and Noa.

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Prof. Zhang Fuming has acted as the chief designer of the national key project, Shougang Jingtang Iron & Steel Works, in charge of engineering design for latest 10MTPA (million metric ton per annum) coastal steel works and new generation recyclable iron & steel technological process, and presided at the engineering technology of a new generation recyclable extra large iron & steel process, which filled in a number of gaps of this industry in China; creative application of dynamic coupling operation theories; created and developed precise design system of new generation steel plant, and developed dozens of leading significant metallurgical technology and equipment with achievements of outstanding application results.

Dr. Fuming was awarded his Master's Degree in Engineering by the University of Science and Technology Beijing (USTB) followed by his Ph.D. in Metallurgy in 2010, also from USTB. He has served as first author or editor of a variety of publications, including to his credit, including Long Campaign Life Technology of Modern Blast Furnace, Beijing: Metallurgical Industry Press, Sep. 2012, "Eleventh-Five Year" National Key Books, First Author; Research and Innovation of Metallurgical Engineering Design (Metallurgy and Materials Engineering), Beijing: Metallurgical Industry Press, Feb. 2013, Chief Editor and Research and Innovation of Metallurgical Engineering Design (Energy, Environment, Architecture, and General Engineering), Beijing: Metallurgical Industry Press, Feb. 2013, Chief Editor.

His industry experience is equally varied and he is currently the Deputy General Manager and Professoriate Senior Engineer at Shougang International Engineering Technology Co. Ltd. in Beijing. Previously he held a series of increasingly senior position at the Shougang Design Institute, Beijing, culminating in the position of Deputy President and Professoriate Senior Engineer.

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Dr. Andrea Ghermandi is an Assistant Professor at the Department of Natural Resources and Environmental Management at the Faculty of Management of the University of Haifa (Israel). He also works as associate researcher at the Natural Resource and Environmental Research Center at the University of Haifa and Institute of Environmental Science and Technology at the Universitat Autònoma de Barcelona.

He received his Ph.D. in Analysis and Governance of Sustainable Development from the School for Advanced Studies in Venice Foundation at the University of Venice in 2008. He also holds two Master degrees in Water Resources Engineering and Environmental Engineering respectively from the Katholieke Universiteit Leuven / Vrije Universiteit Brussels (Belgium) and University of Trento (Italy). He is the academic head of the Global Green MBA program at the University of Haifa's Faculty of Management and a member of the Global Young Academy. In recent years, Dr. Ghermandi has contributed to international initiatives such as The Economics of Ecosystems and Biodiversity (TEEB), the Ocean Health Index, and the Ecosystem Service Partnership. He has published more than twenty original research articles and his research appeared in academic journals such as Ecological Economics, Ecological Engineering, Environmental and Resource Economics, Environmental Science and Policy, Science of the Total Environment and Water Resources Research.

His scientific research focuses on the multi-disciplinary analysis and evaluation of sustainable environmental management practices. Among his main research interests are the technical and economic evaluation of sustainable technologies for water treatment, reuse and desalination (such as constructed wetlands and solar desalination), the economic valuation of freshwater and coastal ecosystem goods and services, and the development of techniques for transferring and mapping ecosystem service values.

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Dr. Jayavardhana Gubbi received the Bachelor of Engineering degree from Bangalore University, Bengaluru, India, in 2000, the Ph.D. degree from the University of Melbourne, Australia, in 2007. For three years, he was a Research Assistant at the Indian Institute of Science, where he was engaged in speech technology for Indian languages. Dr. Gubbi is a Postdoctoral Research Fellow in the Department of Electrical and Electronic Engineering at The University of Melbourne. Currently, from 2010 to 2014, he is an ARC Australian Postdoctoral Fellow Industry (APDI) working on an industry linkage grant in crowd monitoring. His current research interests include Video Processing, Internet of Things and Ubiquitous healthcare devices with research grants of around AUD 500,000 in the last five years. He has coauthored more than 45 papers in peer reviewed journals, conferences, and book chapters over the last five years. He is one of the named inventors in a provisional patent directed at medical devices and in particular to a motor activity monitoring system for use in assessing limb movements in stroke patients. He is the founding Co-Director of NeuroGlide Pty Ltd, a start-up company in the field of biomedicine. Dr. Gubbi has served as conference secretary and publications chair in several international conferences in the area of wireless sensor networks, signal processing and pattern recognition.

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Prof. Dong Wook Han, an associate professor in Konkuk University, Korea, received his bachelor and master degrees at Konkuk University where he studied the underlying mechanism of reprogramming by assessing epigenetic changes during the somatic cell nuclear transfer. However, he noticed that therapeutic cloning might be impossible due to the extremely low efficiency as well as the ethical issue of using oocytes. Therefore, he moved to Max Planck Institute, Muenster, Germany (Prof. Hans R. Scholer Lab) as a PhD candidate to develop a novel reprogramming technology. In the early days of his training there, he tried to elucidate the reprogramming mechanism by using cell fusion technology and also tried to develop a novel protocol by which clinical-grade fusion hybrids could be generated. Although the procedure turned out not to be that successful, he did publish several papers at high impact journals such as Stem Cells.

The year 2006 was a turning point in his research history because novel reprogramming technology so called “induced pluripotent stem cells (iPSC)” which can complement the previous reprogramming technologies was reported in 2006. Although his previous works could not be highlighted anymore due to this brand new technology, he realized that even this novel technology has serious problems that preclude a therapeutic application of iPSC such as the tumor forming issue by using pluripotent cell type for cell therapy. Since 2008, he has been focusing on a direct conversion research, an alternative research field of iPSC by which cell fate could be changed into distinct cell types without passing through an iPSC state and was able to publish a couple of papers in this field (Han et al 2010 Cell; Han et al 2011 Nature Cell Biology; Han et al 2012 Cell Stem Cell).

Due to his outstanding achievements in stem cell fields, he was directly appointed as associate professor in Konkuk University in 2011 and now he is a President Trust Professor as well as director of the stem cell center in Konkuk University. Recently he was selected as “outstanding young researcher” from National Research Foundation of Korea and many pharmaceutical companies such as Dong-A Pharm. the biggest pharmaceutical company in Korea have been trying to collaborate with him to develop a novel therapy for neurodegenerative diseases such as Parkinson’s disease.

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Prof. Tomohiro Ichinose is a Japanese scientific researcher, who was born in Chiba, Japan on 23th July 1968. He took the degree of master from the Graduate School of Agricultural and Life Sciences, the University of Tokyo. From October 1996 to September 1998 he studied as a visiting researcher at Munich Technical University. He got the degree of Ph.D. (agriculture) from the Graduate School of Agricultural and Life Sciences, the University of Tokyo in March 1997. The title of his doctoral dissertation is "Methods of Environmental Evaluation for Avian Conservation". At that time, he focused on the relationship between bird distribution and environmental factors (e.g. land use types, vegetation structure, forest fragmentation and so on).

After that, he was appointed assistant professor, later associate professor, at the Institute of Natural and Environmental Sciences, University of Hyogo. He investigated dragonfly and damselfly species on water storage ponds in Awaji Island and bird species diversity in a city center of Nishinomiya and Osaka City, and analyzed long-term land use changes in Awaji Island. Now, he is a professor at Shonan Fujisawa Campus (SFC), Keio University.

His recent projects focus on ecological network planning methods in metropolitan cities, landscape changes in suburban and rural areas, depopulation and aging problem in remote areas of Japan. Since the great disaster on 11th March 2011 he has supported, together with students and teachers of SFC, the reconstruction of Kesenuma City, which was heavily damaged in the city center by the huge tsunami. He was a guest researcher at Vienna University of Technology from September 2012 to August 2013 and guest professor at the Department of Asian and North African Studies, Ca'Foscari University Venice from December 2012 to March 2013.

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Prof. Kyeung Min Joo (M.D.) graduated in Medicine (2002) from the Seoul National University College of Medicine in Seoul, South Korea followed by a Ph.D. (2006) from the same institution. From 2006 until 2009 he held a Post-doc position in neuro-oncology, cancer stem cell biology at the Samsung Medical Center, Department of Neurosurgery in Seoul, Korea.

As an Associate Professor at SungKyunKwan University School of Medicine he is teaching undergraduate courses in Anatomy, Histology, Embryology and Neuroanatomy. At the graduate level he is instructing in Cancer Stem Cell Biology, Stem Cell Biology and Translational Medicine.

His current research focuses on: Personalized Cancer Therapy using Cancer Stem Cell Translational Platform; Cancer Stem Cell Targeting Therapeutics; and Regenerative Medicine using Adult Human Neural Stem Cells

Among his most important publications (selected in 2013) are the following:

- Lee HW, Park YM, Lee SJ, Cho HJ, Kim DH, Lee JI, Kang MS, Seol HJ, Shim YM, Nam DH, Kim HH, Joo KM. Alpha-smooth muscle actin (ACTA2) is required for metastatic potential of human lung adenocarcinoma. *Clin Cancer Res.* 2013 Aug 30. [Epub ahead of print]
- Kim E, Kim M, Woo DH, Shin Y, Shin J, Chang N, Oh YT, Kim H, Rhee J, Nakano I, Lee C, Joo KM, Rich JN, Nam DH, Lee J. Phosphorylation of EZH2 activates STAT3 signaling via STAT3 methylation and promotes tumorigenicity of glioblastoma stem-like cells. *Cancer Cell.* 2013 Jun 10;23(6):839-52.
- Joo KM, Kim J, Jin J, Kim M, Seol HJ, Muradov J, Yang H, Choi YL, Park WY, Kong DS, Lee JI, Ko YH, Woo HG, Lee J, Kim S, Nam DH. Patient-specific orthotopic glioblastoma xenograft models recapitulate the histopathology and biology of human glioblastomas in situ. *Cell Rep.* 2013 Jan 31;3(1):260-73.
- Joo KM, Kang BG, Yeon JY, Cho YJ, An JY, Song HS, Won JH, Kim SJ, Hong SC, Nam DH. Experimental and clinical factors influencing long-term stable in vitro expansion of multipotent neural cells from human adult temporal lobes. *Exp Neurol.* 2013 Feb;240:168-77.

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Prof. Shoji Komai has served, since 2008, as an Associate Professor at the Graduate School of Biological Sciences of the Nara Institute of Science and Technology (NAIST) Japan. He graduated from Sophia University in 1993 (Bachelor of Art in Psychology), in 1997 he received his Master Degree from the Nara Institute for Science and Technology (NAIST), in 2000 he received his PhD (Doctor of Philosophy in Biological Science) from NAIST. In the meantime, he had worked at Kyoto University, Osaka University and Osaka Bioscience Institute. From 2000 to 2003, he was associated as a post-doctoral fellow with the School of Medicine of Kobe University; from 2003 to 2005, he was a Max-Planck-fellow at the Max-Planck Institute for Medical Research in Heidelberg (Germany). Since November 2011, he has served as a chairperson of the National Young Academy Committee of Science Council of Japan after a preparatory period of one and a half years.

His current research interest is: studying the information processing in the real brain, and the minimum local circuit where particular information is processed or encoded as a basic element. Therefore he is focusing on various aspects of differences of the brain, e.g. sex differences, diseases, sensory modalities by using of “behavioral imaging” which can allow us to split a particular behavior into small motions relating to local circuits.

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Dr. Nilwala Kottegoda is a Senior Research Scientist attached to Sri Lanka Institute of Nanotechnology and a Senior Lecturer at the University of Sri Jayewardenepura, Sri Lanka.

She graduated from University of Peradeniya, Sri Lanka and obtained her Ph.D. in Materials Chemistry from the University of Cambridge, UK. Her current research work spans over a wide spectrum of areas; nanotechnology applications in agriculture, nanomaterials for water purification, rubber nanocomposites. Dr Kottegoda received the “National Science and Technology Award for the Best Innovation with Commercial Potential” in 2011 and the “Young Scientist Award” from Third World Academy of Science for Sri Lanka in 2012 for her research work in nanoagriculture. Her recent innovation on nano-fertilizer has already moved from bench to commerce with a patent sale and technology transfer to one of the world leading fertilizer manufacturers.

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Dr. Tonni Agustiono Kurniawan is currently a JSPS Postdoctoral Fellow at United Nations University-Institute of Advanced Studies (Japan). At the Institute, he investigates how innovation could promote energy efficiency and sustainability in the developing world. After completing his PhD at the Hong Kong Polytechnic University (China), he has been undertaking research at the interface between applied technology and environmental sustainability.

So far Kurniawan has published 25 scientific articles. He has been cited over 2,000 times with a Hirsch factor of 13. His most cited paper is "Low-cost absorbents for heavy metals uptake from contaminated water; a review" in the Journal of Hazardous Materials. This paper is ranked among Scopus' Top 25 Most Cited Articles in Chemical Engineering, placing him among the top 1% of researchers in the field of Engineering according to Essential Science Indicators.

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Dr. Lain-Jong Li received a BSc and an MSc in chemistry at the National Taiwan University. After 5 years of R&D at the Taiwan Semiconductor Manufacturing Company (1997-2002), he obtained his PhD in condensed matter physics from Oxford University, United Kingdom in 2006. He was an assistant professor in the School of Materials Science and Engineering at Nanyang Technical University, Singapore (2006-2009). Since 2010, he has become an associate research fellow at Academia Sinica Taiwan. He was awarded a Humboldt Research Fellowship for Experienced Researchers (Germany) and Career Development Award in 2011 and 2010 respectively. He has also received Academia Sinica Research Awards (Academia Sinica, Taiwan) and Wu Ta-Yu Research Awards (National Science Council, Taiwan) in 2013. He has published 150 SCI journal and collected >3500 citations (h-index is 34).

His current research interests are in the following areas:

- (1) Growth and characterizations of 2-dimensional materials including graphene and its analogue such as MoS₂ and WS₂.
- (2) Energy-related applications based on 2-dimensional materials, such as energy storage, hydrogen generation and low-power electronics.

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Prof. Yin Li received his PhD degree in Fermentation Engineering at Jiangnan University in China in 2000. He then went to the Netherlands and worked in Wageningen Centre for Food Sciences as a Post-doc. He was later recruited as Research Officer by Science Foundation Ireland and worked in the Department of Microbiology, University College Cork. In 2006 he was appointed as Principle Investigator and Professor by the Institute of Microbiology, Chinese Academy of Sciences (IMCAS), under the support of CAS Hundred Talents Program. He was selected by Tang Cornell-China Scholars Program in fall 2012 and is presently working in Cornell University as a Visiting Professor.

Dr. Li is mainly interested in molecular physiology, metabolic engineering, and physiological engineering that enable the sustainable and efficient production of bio-based chemicals. He and his colleagues have filed over 20 Chinese patents and published more than 80 papers in peer-review international journals, which mainly include PNAS, Current Opinion in Biotechnology, Trends in Biotechnology, Trends in Microbiology, Biotechnology for Biofuels, Metabolic Engineering, Biotechnology & Bioengineering, and Applied & Environmental Microbiology, with over 1500 citations, and an H index of 21. His group has established firm cooperation with several multinational enterprises including Shell, Nestle, DSM and a dozen of domestic enterprises.

Dr. Li has been very active in supporting TWAS (The World Academy of Sciences for the advancement of science in developing countries) activities. In 2010, he was selected as Young Affiliate of TWAS. In 2012, he was awarded the TWAS Regional Prize for Building Scientific Institutions. Presently, he is serving as the Director of CAS-TWAS Centre of Excellence for Biotechnology, Director of CAS Key Laboratory of Physiological and Metabolic Engineering; Deputy Director of Industrial Biotechnology Division of Chinese Society of Biotechnology; and Member of the Editorial Board of Biotechnology Journal, Industrial Biotechnology, and Food Biosciences.

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Dr. Dong-Kwon Lim is an assistant professor at the Department of BIN Fusion Technology in Chonbuk National University (South Korea). After he finished his BS and MS degrees in Chemistry from Kyungpook National University, he worked for more than 10 years in the pharmaceutical research institutes of the company in Korea. After he received his Ph. D. degree from Seoul National University in 2011, he started his postdoctoral research at MIT (David H Koch Institutes, Prof. Robert Langer Lab) and Harvard Medical School (Children's Hospital Boston). Dr. Lim has made pioneering contributions to the field of DNA-based nanostructure synthesis for single molecule surface-enhanced Raman scattering (SERS) and developments of useful bio detection & therapy strategies based on new organic/inorganic hybrid materials. His recent research topics include the synthesis of plasmonic hybrid materials with graphene for improved photothermal therapy and photoacoustic imaging, DNA-tailorable nanoparticles with hollow 1-nm interior gap for highly uniform and reproducible surface-enhanced Raman scattering, and nanogap-engineerable Raman-active nanodumbbells for single-molecule detection. He has authored or co-authored a number of peer-reviewed publications including recent publications in Nano letters, Nature Materials, Nature Nanotechnology, and ACS Nano. He is a member of Korean Chemical Society (KCS), Korean BioChip Society (KBCS), and the Polymer Society of Korea.

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Dr. Shoshy Mizrahy received her B.Sc. in biotechnology and food engineering from the Technion, Israel Institute of Technology, in 2002. From 2002-2003, she worked as a research assistant at Bio-Technology General (Israel) Ltd. She then obtained her M.Sc. in pathology from the Tel Aviv University school of medicine. From 2006–2009, she worked as a researcher in Procognia Ltd., focusing on glycobiology and glycochemistry. The research in Procognia was performed in collaboration with the multinational consortium – GLYFDIS (EU FP6 project) in the field of glycodiagnostics and biomarker discovery and resulted in an international patent.

In 2009 she began her Ph.D. studies in the laboratory of nanomedicine at Tel Aviv University, focusing on Hyaluronan-coated lipid nanoparticles: physicochemical, structural and immunological considerations for optimized drug carriers.

In 2011 she became involved in the establishment of a biotechnological initiative offering a biosensor based complete solution for food safety monitoring. The venture reached finalist positions in the feasibility study of "New Venture" and the "NGI Venture challenge".

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Dr. Deepak Modi holds a Masters Degree in Zoology and PhD in Human Genetics (2002) from University of Mumbai, India. He is currently a Scientist D, at the National Institute for Research in Reproductive Health and heads the Molecular and Cellular Biology Laboratory.

Dr. Modi is the recipient of the following awards:

INSA young Scientist award 2006

National Academy of Sciences India (NASI) Young Scientist award 2007

Innovative Young Biotechnologist Award 2007 from the Department of Biotechnology (DBT) Govt of India

Recipient of the GP Talwar Young Scientist Award 2009

Wellcome trust grant for training at the Marine Biological Laboratories -FIR course 2003, Boston USA

He has over 50 publications in several prestigious national and international journals to his credit and is guide to four PhD students.

His current research areas include: Molecular basis of embryo implantation and sex differentiation in mammals; determining the mechanisms of non-genomic actions of progesterone in human sperm cells; genetic basis of male and female infertility.

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Dr. Victoria O'Collins was educated at the University of Melbourne (Law/Commerce), Swinburne University (Neuropsychology) and the University of Amsterdam (International Law). She currently works at the Florey Neuroscience Institute of Australia, the largest brain research group in the Southern Hemisphere. Her work there includes the investigation of how fluid flows in the brain alter sensory systems and attention, and secondly, how synchrony between the brain and the heart are altered after stroke. Stroke affects 15 million people globally each year and this work is aimed at finding new targets for the treatment of stroke patients using the techniques of optogenetics, cognitive neuroscience and epidemiology. Victoria also has a number of years' experience working in multidisciplinary teams on the development of novel treatments and biomarkers for stroke; her first review of stroke treatments was referred to in global stock market reports.

Prior to her time at the Florey, she gained experience in international trade at the Australia China Chamber of Commerce and Austrade. Victoria is passionate about innovative approaches to assist researchers transfer knowledge between disciplines and translate research findings into outcomes that benefit society. She is currently working on the development of a platform to account for in-kind contributions in the research economy. The working title is "Research In Kind".

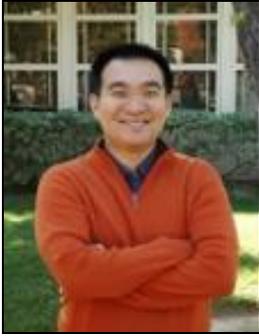
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Dr. Bhoj Raj Pant was born on March 03, 1966 in Baitadi Nepal. He completed his schooling from public schools in Baitadi. After school level education, his parents sent him to India for higher education, where he completed undergraduate course in science. After completing his studies in India in 1988, Dr. Pant returned to Nepal and was admitted to Tribhuvan University for Master's level education. In 1993 he completed Masters Degree with a major in Inorganic chemistry. After higher education, Dr. Pant joined Nepal Academy of Science and Technology (NAST) as a chemist and was involved in research in the Environment research laboratory of the academy. During his tenure at the NAST, he received a scholarship from Asian Institute of Technology (AIT) Bangkok for higher study and pursued a Master's degree in science in 2003.

In 2006, he received a Korean government fellowship for Doctorate degree at Hannam University in Daejeon, South Korea. During his PhD studies, he conducted research on removal of toxic metals and metalloid from water using cross-linked carboxymethyl starch. For his innovation he was awarded doctorate degree in 2010. Recently, Dr. Pant has been involved in the research on removal of chemical contaminants from water using locally available low-cost materials. Besides water purification, he is also involved in the management of solid wastes.

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Dr. Wibool Piyawattanametha received his Ph.D. degree in Electrical Engineering from the University of California, Los Angeles, USA in 2004. From 2005 to 2007, he was with the Bio-X Program, Stanford University, Stanford, CA, USA as a senior scientist and later become a research associate in 2009.

Currently, he is with the National Electronics and Computer Technology Center (NECTEC), Pathumthani, Thailand, as a Group Leader of Cancer Imaging Consortium and the Faculty of Medicine, Chulalongkorn University, Pathumwan, Thailand, as the Director of Advanced Imaging Research (AIR) Center.

He has authored or co-authored over 80 peer-reviewed publications, has contributed 8 book chapters and 4 patents in areas of Microelectromechanical Systems (MEMS), Photonics, and Biomedical Imaging. He serves as the technical program chairperson and organizing chairperson in many international meetings such as the Society of Photo-Optical Instrumentation Engineers (SPIE) in Optical MEMS and Miniaturized Systems of Photonics West Conference, the Institute of Electrical and Electronics Engineers (IEEE) Optical MEMS and Nanophotonics (OMN), IEEE Nanoelectromechanical Systems (NEMS), IEEE CYBER, and IEEE Nanomedicine (NANOMED). He served as a co-editor of the SPIE Micro/Nanolithography, MEMS, and MOEMS. In 2013, He was selected by the World Economic Forum (WEF) to be one of the 40 top young scientists under the age of 40 who plays transformation role in integrating scientific knowledge and technological innovation to improve the state of the world.

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Prof. Song Qin is a Professor and Deputy Director of Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences. He is former President of Asia Pacific Society for Applied Phycology (APSAP) and former President of Asia Pacific Society of Marine Biotechnology (APSMB). Now he serves as EC member of International Marine Biotechnology Association (IMBA), China Commission of SCOR-IOC, APSAP and APSMB.

Prof. Qin has over 20 years of research experience in seaweed and microalgae in topics ranging from genomics, evolution, genetic engineering, biosynthesis of phycobiliproteins, lipids and carotenoids, bio-energy from seaweeds and microalgae, and interdisciplinary research on molecular oceanography collaborated with worldwide colleagues. He has authored or co-authored over 100 research articles and book chapters. Prof. Qin is on the editorial boards of *Marine Biotechnology* (Springer), *Chinese Science Bulletin* (Springer), *Chinese Journal of Oceanology and Limnology* (Springer), and other academic journals. He received the Inter Academy Panel Award to Young Scientists in 2009, 2nd Place for Innovation Achievements Award of State Ocean Administration of China. Prof. Qin served as Conference Director of 9th International Marine Biotechnology Conference (IMBC2010) in Qingdao, China and is the convener of 1st International Conference on Coastal Biotechnology (ICCB2011) in Adelaide, Australia.

Prof. Qin received a Bachelors of Genetic Engineering from Fudan University in 1988 and a Ph.D. degree in Marine Biology from Institute of Oceanology, Chinese Academy of Sciences in 1994.

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Prof. Patchreenart Saparpakorn received her Bachelor's degree in Chemistry in 2000 and Ph.D. in Chemistry in 2006 from Kasetsart University, Bangkok, Thailand. During her Ph.D. studies she went to do research for one year in Strasbourg, France. In 2007, after graduation, she started working as a lecturer at Department of Chemistry, Faculty of Science, Kasetsart University. Between 2010 and 2012 she held an assistant professorship to teach and do the research at International Center for Science and Engineering Programs, Waseda University, Tokyo, Japan. She is now Assistant Professor at Department of Chemistry, Faculty of Science, Kasetsart University.

Her research interest is computer-aided drug design by using the techniques in computational chemistry. Her research focused on the binding study of inhibitors in several disease targets; for example HIV-1 and dengue viruses. The topic of her recent publication is "Divide-and-conquer based quantum chemical study for interaction between HIV-1 reverse transcriptase and MK-4965 inhibitor" which was published in International Journal of Quantum Chemistry in 2013.

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Prof. Roded Sharan is an associate Professor in the School of Computer Science, Tel Aviv University. His PhD studies in the School of Computer Science at Tel Aviv University under the guidance of Prof. Ron Shamir and his post-doctoral training in the University of California at Berkeley under the guidance of Prof. Richard Karp shaped his interests in bioinformatics and systems biology. At the end of his post-doctoral training he was offered a Senior Lecturer position at Tel Aviv University to which he returned as an Alon fellow. Additional awards he obtained include the Raymond and Beverly Sackler Career Development Chair, Krill prize of the Wolf Foundation, Best Paper in the RECOMB'10 conference and a Distinguished Young Investigator award from Tel Aviv University. Currently he heads a research group that specializes in the analysis of biological networks and their applications to medicine.

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Dr. Kanti Shrestha completed her education in chemistry in Nepal, India and Finland. She has been working in Nepal Academy Science and Technology where she serves as a Chief Scientific Officer. She has been involved in research and development of Natural Products since more than two decades. Dr. Shrestha has also been involved in analysis of different types of samples received from Government of Nepal and other institutions as well.

Dr. Shrestha takes keen interest in the chemistry and biology of Medicinal and Aromatic plants from high altitude Himalayas and their secondary metabolites. She has also isolated and identified many endophytic fungi that produce the anticancer drug, taxol. Her research work has been published in many international and national journals in the fields of anticancer drugs, bio-pesticides, biodiesel etc. She has good knowledge of modern chromatographic and spectroscopic techniques such as GC-MS, LC-MS, NMR, FTIR etc. She had supervised many master and Ph.D. level students from different faculties including Chemistry, Microbiology, Agriculture, Botany, Food Technology, Biotechnology and Pharmacy.

She is creative, imaginative, and perseverant towards goals, enthusiastic, sincere, diligent and honest. As researcher and employee of Academy she is very dedicated to learn more in field of Science and Technology and have confidence that she can share her talents with others.

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Dr. Amit Singh has been working for the last two years as a Young Scientist Fellow in the DST sponsored fast track project titled: “Structural and Functional Investigations of Mammalian Heme Peroxidases” in Department of Biophysics, All India Institute of Medical Sciences, New Delhi, India. He completed his Ph.D. on the “Structural and Functional Studies of Lactoperoxidase” from Department of Biophysics, All India Institute of Medical Sciences, New Delhi, India. He has a very good academic education background.

He was the first investigator who succeeded in producing diffractable crystals of lactoperoxidase (LPO) in year 2007. He reported the first crystal structure of LPO in 2008 and answered a number of questions related to its structure and functions. Results of his research work have established the structural and functional relationship of LPO, mode of diffusion and binding of substrates/inhibitors, mechanism of action and binding preferences for substrates and useful applications of LPO. One of the most significant results was the structural and functional basis of activation of antituberculosis prodrugs (isoniazid and pyrazinamide) by lactoperoxidase indicating the possible role and application of this enzyme in the treatment of tuberculosis.

He has published his work in highly reputed international journals. His work on “Mammalian heme peroxidases and *Mycobacterium tuberculosis*” has been published as a chapter of an international book.

The significance of his work is also recognized by national scientific agencies such as DST, INSA and DBT and recently he has been rewarded by INSA young scientist medal award and DST young scientist fellow award for his research contributions.

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Dr. Guangfu Tang was born in 1966, in Anhui province, China. He received his B.Eng. degree in electrical engineering from Xi'an Jiao Tong University in 1990 and the M. Eng. and Ph.D. degrees in electrical engineering from the Institute of Plasma Physics, Chinese Academy of Sciences (ASIPP), in 1993 and 1996, respectively.

Dr. Tang has been long dedicated to the R&D and application of power electronics equipment for power system, including FACTS, HVDC/UHVDC and VSC-HVDC.

He was a regular member of CIGRE SC B4 before. He is now a regular member of CIGRE SC B4 AG4 and IEEE PES Narain Hingorani FACTS and Custom Power Award Committee. He is also a member of IEC SC22F WG25 and MT22. In addition, the Administrative Council of CIGRE bestowed upon him the title of Distinguished Member in 2012 in acknowledgement of his long-standing collaboration on the work of the Association.

He led and/or participated in the development of multiple international standards and norms. So far, he has published 110+ papers and is the holder of 70+ patents in his research fields. He and his team delivered China's first static var compensator; developed China's own HVDC valve, both LCC and VSC, and commissioned China's first VSC-HVDC pilot project.

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Dr. Tharanga Thoradeniya obtained her B.V.Sc degree from the Faculty of Veterinary Medicine and Animal Science, University of Peradeniya, Sri Lanka in 2001 and PhD in Nutritional Biochemistry from the Faculty of Medicine, University of Colombo, Sri Lanka in 2009. Dr Thoradeniya is a member of the academic staff of the Department of Biochemistry and Molecular Biology, Faculty of Medicine, University of Colombo and currently the Head of the Animal House at the Faculty of Medicine.

Her work involves teaching undergraduate (MBBS) and postgraduate courses (M.Sc. in Biochemistry and Molecular Biology, MSc in Human Nutrition and Certificate course in Nutrition & Dietetics) and supervising and evaluating undergraduate and postgraduate research projects. Presently, she is actively involved in Nutrition research which is of high priority to the country, such as sodium and potassium intake, micronutrient status, biochemical and genetic markers of Non Communicable Disease (NCD) risk and dietary assessment techniques for Asian foods. She focuses on developing targeted nutrition education material for specific populations to improve public health.

Dr Thoradeniya has received many National and International awards for her research work including the Presidential Award (2010), award for the best research paper in Community Medicine-Sri Lanka Medical Association (2011), National consultative award - the International Atomic Energy Authority (IAEA) (2006), Scholarship -- First World Congress of Public Health Nutrition, Spain (2006). She has published her research work in international peer reviewed journals and presented papers at many International and national conferences. As a working group member of the Research Promotion and Facilitation Centre (a world bank funded project; Higher Education for the Twenty-first Century), at the Faculty of Medicine, Colombo, Dr Thoradeniya is involved in organizing research training workshops in order to support young researchers and working towards establishing a Mentoring Network for Postgraduate Research Students.

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Dr. James Tickner read physics at Oxford University and completed his DPhil in particle physics at the same institution in 1997. The following year, he moved to Australia to join CSIRO (The Commonwealth Scientific and Industrial Research Organisation, Australia's national science agency) working on the development of nuclear instrumentation for the minerals and security industries. He specialises in the development of techniques for modelling radiation and using these to invent new ways of solving challenging measurement and imaging problems. He is currently a CSIRO OCE Science Leader and heads the on-line analysis in mineral processing research stream. Working with industry to implement new solutions is an important part of his role.

Some of the key projects he has worked on include: building a neutron/gamma-ray analyser for bulk cement analysis; developing X-ray analysers for precision, trace-element and mineralogical measurements; and developing novel, radiation-based imaging techniques. With Dr Brian Sowerby, he co-developed the fast-neutron/gamma-ray radiography method for air cargo screening. Following a successful, full-scale demonstration of the technology at Brisbane airport, the air cargo scanner has now been commercialised with a major Chinese security company, with systems being installed in Europe and the Middle East.

Dr Tickner has received numerous awards for his work including two CSIRO medals, the Australian Academy of Science Frederick White prize, the Eureka Prize for Science in Support of Defence or National Security and an ADC Leadership Award. He has authored over 100 publications and patents in the fields of particle physics, computer modelling methods and nuclear instrumentation.

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Prof. Edit Tshuva completed her Ph.D. studies with distinction at Tel Aviv University in 2001, under the supervision of Prof. Moshe Kol. She received several awards, including the Wolf Award, the Schmidt Award and others, for her thesis on the development of organometallic catalysts for the polymerization of olefins. In 2003, after completing post-doctoral studies at the Massachusetts Institute of Technology (MIT), she became a senior lecturer at the Hebrew University of Jerusalem as an Alon Scholar, and in 2009 she was promoted to the rank of Associate Professor. In that year she was awarded a European Research Council (ERC) Young Investigator Grant. Her research focuses on bioinorganic chemistry, a field that lies on the interface between inorganic and coordination chemistry and life sciences.

Prof. Tshuva designs and develops synthetic inorganic molecules with biological and medicinal applications. Her research group (with previous support from the Human Frontier of Science program) develops peptide models for copper-binding proteins in biological systems. Initial findings from this research were published in 2011 in *Chemical Communications*, followed by a full paper in *Inorganic Chemistry* in 2013. Copper is an essential metal for the proper functioning of cells, but an excess of copper may become toxic and cause disease. Thus, copper-metallochaperone proteins in biological systems are responsible for the controlled delivery of copper to various parts of the cell. Using peptide models of these proteins, Prof. Tshuva and members of her group investigate the copper coordination and its dependence upon various conditions, in order to shed light on the way nature copes with copper's potential toxicity. For example, it was found that pH has a tremendous impact on the metal binding mode, giving rise to the theory that varying pH conditions in different biological environments contribute to the metal binding and its release in specific locations. Understanding the mechanism of metal delivery is of critical importance, as this could lead to the development of medicinal systems designed to remove excess copper from the biological environment.

In other research (supported primarily by the ERC, the Israel Science Foundation, the Lower Saxony Ministry of Science and the Israel Cancer Research Fund), Prof. Tshuva's group develops titanium-based compounds with anticancer properties. Their first study

was published in the Journal of the American Chemical Society (2007), demonstrating for the first time titanium-based systems with salan ligands that feature high stability toward hydrolysis and high anti-tumor activity. The metal-based anti-cancer chemotherapy in clinical use today is based on platinum compounds that have serious side effects. Past studies have shown that titanium compounds, which are more biologically-friendly, have fewer side effects while remaining highly active and effective against platinum-resistant cells. The main problem has been the low stability of the titanium compounds in aqueous environments and their rapid dissociation to undefined aggregates. This behavior has made it difficult to study the mechanism of the biological activity and to characterize the nature of the active species.

In a series of articles, Prof. Tshuva's research group described the high stability and defined hydrolysis of titanium-salan compounds and the impact of several structural aspects on the behavior of these complexes. Their properties enabled to monitor and investigate the mechanism of their reactivity in aqueous environment. This has led to the unexpected discovery that the hydrolysis products feature anti-cancer properties, and that it is possible to develop titanium-based compounds combining high and broad-spectrum anti-cancer activity with resistance toward hydrolysis. The publication of this finding in the journal *Angewandte Chemie Int. Ed*, chosen for the issue's back cover photo, was selected as a "hot paper." Additional mechanistic studies are currently underway, with the collaboration of Prof. J. Hochman (life sciences, Hebrew University) and Prof. S. Magdassi (applied chemistry, Hebrew University).

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Dr. Shih-Long Tu received his master's degree from Institute of Radiation Biology, College of Nuclear Science, National Tsing Hua University and Ph. D degree from Graduate Institute of Life Science, National Defense Medical Center in Taiwan. After one year of post-doc work in his Ph. D advisor's lab, he continued post-doctoral training at University of California-Davis, USA beginning in 2002. He joined the Institute of Plant and Microbial Biology, Academia Sinica, Taiwan as an Assistant Research Fellow in 2006 and set up his laboratory. He was promoted into Associate Research Fellow with tenure track in 2013. Currently, he leads a research team of 5 employees and 4 graduate students. His research is mainly focused on the structure and function of plant photoreceptors. As a faculty member of the Taiwan International Graduate Program, Academia Sinica, he frequently gives lectures in English together with other faculty members. Before 2006, he published 9 papers; for most, he was the first author, and they were published in journals such as *The Plant Cell*, *Journal of the American Chemical Society*, and *Journal of Biological Chemistry (JBC)*. In the last 5 years, he has published 3 independent works: 2 in the *JBC* and 1 in *Proceedings of the National Academy of Sciences of the United States of America*.

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Dr. Natalia Tyurnina completed her undergraduate studies at the Ural Federal University named after the First President of Russia B.N. Yeltsin on the basis of Ural State Technical University – UPI. She is a specialist in chemical technology of glass and silicates. (1998-2003) She has worked at the Institute of Silicate Chemistry of the Russian Academy of Sciences since 2003. From 2003 to 2006 she was at the postgraduate studies, and then worked in the research laboratories of high-temperature chemistry of heterogeneous processes, coatings. At present, she is a research scientist of the laboratory of organo-silicon compounds and materials. In 2009 she received her Ph.D. in chemical sciences, specializing in physical chemistry. Topic of thesis “Physical - chemical properties of glassy and crystalline phases in the $\text{SrO-B}_2\text{O}_3\text{-SiO}_2$ ”.

Among research interests of N. Tyurnina are the study of phase equilibria in silicate systems, synthesis of bioactive materials, research and analysis of the mechanism and kinetics of the formation of new materials in the process of ion exchange and the study of physico-chemical and thermodynamic properties of the materials. At the present time she studies phase equilibria in the $\text{SrO-B}_2\text{O}_3\text{-SiO}_2$, physico-chemical and bioactive properties of glasses for purpose of producing new chemical compounds and materials with unique properties.

She is the author of 29 scientific articles in peer-reviewed journals. She was a reviewer of graduate work and scientific articles.

Her scientific work is undertaken in the framework of the Programs of the Department of chemistry and material sciences of RAS, Russian foundation of basic research, the Government of St. Petersburg, the Ministry of Education and Science of the Russian Federation.

She takes an active part in scientific, organizational and social life of the Institute. N. Tyurnina is the Chairman of the Council of Young Scientists and Specialists of St. Petersburg Scientific Center of Russian Academy of Sciences and the Council of Young Scientists and Specialists of Institute silicate chemistry of Russian Academy of Sciences.

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Dr. Sakulsuk Unarunotai obtained his BS degree (with 1st class honors) in Chemistry from Chulalongkorn University in 2004. He received his PhD degree in Materials Chemistry from the University of Illinois at Urbana-Campaign in 2010 under the supervision of Professor John A. Rogers. He was awarded scholarships from the Development and Promotion of Science and Technology Talents Project (DPST) and Anandamahidol Foundation during his undergraduate and graduate studies, respectively. He joined Chulalongkorn University as a faculty member at the Department of Chemistry in 2010. Here, he teaches basic chemistry courses for Engineering and Pharmaceutical Sciences students and advanced courses for graduate students in Chemistry and Nanoscience and Technology. His current research focuses on synthesis of carbon nanomaterials such as graphene and graphene oxide, and their use as label-free sensors for detection of molecules/ions of interest. sakulsuk.u@chula.ac.th

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Dr. Roie Yerushalmi has been on the staff of the Institute of Chemistry of the Hebrew University of Jerusalem since 2008, and he is also a member of the university's Harvey M. Krueger Center for Nanoscience and Nanotechnology. He entered the field of nanoscience during his postdoctoral studies at UC Berkeley, focusing on the study of nanometric-scale systems and particularly on nanostructure synthesis, characterization, and assembly. He has participated in developing new methods for the formation of large-scale ordered nanowire arrays, deployment of nanostructures at interfaces, and surface doping of nanostructures. His current research interests concern the design and synthesis of hybrid nanostructures for photocatalysis and for the harvesting of light energy as a renewable and sustainable energy source. His group's research activities range from the development of new surface chemistries and the synthesis and surface modification of hybrid nanostructures, to nanostructure array assembly and comprehensive characterization of complex nanostructured systems by application of analytical methods. Roie is the recipient of several awards, including the Kennedy Prize, the Career Development Award of the Human Frontier Science Program and a prestigious European Research Council (ERC) young scientist research grant.

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Dr. Andrey Zdravkov graduated from St. Petersburg State University, specialist in chemistry. Since 2004 he has worked at the Institute of Silicate Chemistry of the Russian Academy of Sciences. From 2007 to 2010 he worked at his Ph.D. studies, and then took part in research in the laboratory of chemical synthesis of nanoparticles and nanocomposites. In 2010 he received his Ph.D. in Chemical Sciences specializing in physical chemistry. His thesis was entitled: "Organic-inorganic hybrids in the system organic complexes of ruthenium - silica". He is currently a senior scientist in the laboratory of Nanostructures Research.

The main research interests of Andrey Zdravkov are: non-hydrolytic sol-gel synthesis of inorganic and hybrid nanomaterials for optics and catalysis. His work is focused mainly on development of new routes to functional nanomaterials.

Zdravkov A.V. is the author of 42 publications (of which 16 scientific articles are in peer-reviewed journals and 1 patent). He was a reviewer of graduate work and scientific articles.

He is an active researcher leading two scientific projects supported by Russian Foundation for Basic research and Russian Academy of Sciences (RAS). Over the last four years he participated in five projects supported by Department of chemistry and material sciences of RAS, Russian foundation of basic research, the Government of St. Petersburg, the Ministry of Education and Science of the Russian Federation. He takes an active part in scientific, organizational and social life of the Institute.

Dan Vilenski is former chairman of Applied Materials Israel, having served the company since 1997, when he began as Corporate Vice President to 2006.

Mr. Vilenski is responsible for the successful integration in Israel of three independent subsidiaries for leading American high tech companies: Kulicke and Soffa (K&S), KLA Instruments and Applied Materials. All three firms operate in the field of semiconductor capital equipment and employ a combined total of 1500 employees in Israel.

Mr. Vilenski served for four years (1993-1996) as Executive Director of the Israel - US joint Bi-national Industrial Research and Development (BIRD) Foundation, spearheading innovative industrial cooperation between Israeli and US high tech companies. During the period of his management, the BIRD Foundation created about 160 unique cooperation programs, many of which proved highly beneficial. He is a familiar figure among Israeli industrialists and continues to support Israel's Ministry of Trade and Industry in selected activities.

Mr. Vilenski received his B.Sc. in 1964 and his Mechanical Engineering M.Sc. in 1967 from the Technion - Israel Institute of Technology in Haifa. From 1967 to 1969 he was a staff member at Carnegie Mellon University in Pittsburgh, and subsequently began as a design engineer at Kulicke and Soffa in Philadelphia. He eventually served as a Vice President at K&S. From 1985 to 1992, he served as the Vice President and General Manager of KLA Instruments in Israel.

Mr. Vilenski is active as a volunteer for numerous educational and industrial activities, including the interactive Museum of Science in Haifa and several entrepreneurship programs for young students. He is the Chairman of the Board of the United States-Israel Educational Foundation, the bi-national commission responsible for Israel's participation in the Fulbright Program. Mr. Vilenski serves on the Board of Governors of the Technion and is a member of the Board of the Israeli National Nanotechnology Initiative.

Shlomo Maital is senior research associate at the Samuel Neaman Institute for Advanced Studies in Science & Technology, Technion-Israel Institute of Technology, and professor (emeritus). He was the academic director of TIM-Technion Institute of Management, Israel's leading executive leadership development institute and a pioneer in action-learning methods, from 1998 - 2009. He was summer Visiting Professor for 20 years in MIT Sloan School of Management's Management of Technology M.Sc. program, teaching over 1,000 R&D engineers from 40 countries. He is the author, co-author or editor of 12 books, including Technion Nation (2012), Global Risk/Global Opportunity (SAGE 2009), Innovation Management (Sage, 2007; 2nd edition, 2012); and Executive Economics (The Free Press 1994), translated into seven languages. He was co-founder of SABE-Society for Advancement of Behavioral Economics. Forthcoming books: The Imagination Elevator (on structured creativity) and Mapping National Innovation Ecosystems.

Shlomo Maital is married, with four children and 12 grandchildren. He completed the New York marathon in 1985 in 3 hours and 51 minutes, and in April 2007, completed the Boston marathon in about 5 hours. In February 2008 he climbed Mt. Kilimanjaro and reached Uhuru Summit. In 2010 he climbed Mt. Kazbek in Georgia. He celebrated his

70th birthday with his children and grandchildren by completing a 70 km. hike in the Dead Sea Mountains.

Yair Snir is Director of Mergers & Acquisitions and Business Development for Microsoft, driving acquisitions, investments and strategic partnerships in Europe and Israel. Prior to joining Microsoft he was with ECI Telecom, where he led the Corp. Strategy and Business Development. Previously, he was a strategy consultant for leading global and Israeli firms across a wide range of industries. Earlier in his career path, he had worked in the Bio-tech and Hi-tech industries, where he established and managed R&D groups, wrote patents and published scientific papers. He is a lecturer and a project faculty at the Global Consulting Practicum (GCP) at the Wharton School of the University of Pennsylvania and at the Interdisciplinary Center (IDC), Herzeliya, Israel.

Professor Namik K. Aras is a leading scholar who has experienced “brain circulation” first hand himself. A native of Resadiye, Tokat in Turkey, after receiving a BS degree in Chemistry from Ankara University, he was awarded the first NATO doctoral scholarship in Turkey and received a Ph.D. degree in 1963 from MIT under Professor’s Charles D. Coryell and Glen G. Gordon. After postdoctoral work at the Oak Ridge National Laboratory, he joined to the Department of Chemistry, Middle East Technical University (METU) in Ankara, Turkey.

While he was at METU, he served as Chairman, Department of Chemistry, Dean, Faculty of Arts and Sciences, Vice Chancellor; Committee Member, Technical and Scientific Council of Turkey (TUBITAK). He also served as the Director, Ankara Nuclear Research and Training Center and Vice President, Turkish Atomic Energy Authority.

He performed extensive research and teaching at C.E.N./S.C.K. Mol, Belgium, five years at University of Maryland, Kernforschungszentrum, Karlsruhe as an DAAD Scientist, visiting Research professor at Institute of Nuclear Science, National Tsing Hua University at Hsinchu, Taiwan, one semester as Visiting Distinguish Professor at Institute of Nuclear Chemistry, Mainz University, Germany and one year as Fulbright Scholar and visiting Professor at MIT.

He retired from METU in 1998 and currently He is Vice President of Association of Academies and Societies of Sciences of Asia (AASSA).

He is member of American Physical Society, American Chemical Society, Turkish Chemical Society and IUPAC. Because of his scientific work, he was awarded Technical and Scientific Council of Turkey's (TUBITAK) Science Award and honorary membership and prize from Turkish Chemical Society. He was elected as the full member of Turkish Academy of Sciences (TUBA) and served many years as Council member .

He is on the Editorial Board of Turkish Journal of Chemistry, Journal of Radioanalytical and Nuclear Chemistry.

Prof Aras published more than 100 papers in International Journals and presented at more than 160 International conferences around the world.

Asa Kling is Director of the Israel Patents Office and Commissioner of Patents, Designs and Trademarks at the Israel Patent Office in the Ministry of Justice.

Bob Rosenschein is an American-Israeli internet entrepreneur. His latest startup is [Curiyo](#). He is the founder and was CEO and chairman of [Answers.com](#), formerly [GuruNet](#), until May 2011, when it was bought by Summit Partner's AFCV Holdings for \$127 million.

Rosenschein grew up in [Harrisburg, Pennsylvania](#). He graduated with a [B.Sc.](#) in Computer Science from the [Massachusetts Institute of Technology](#) in 1976. In his early career, Mr. Rosenschein worked for Data General, American Management Systems, the World Bank, and Ashton-Tate. He moved to Israel in 1983, where he worked as a software consultant.^[3]

In 1988, together with his brother, Prof. Jeffrey Rosenschein, he founded Kivun, later Accent Software. Its initial product was [Dagesh](#), the first Hebrew/English word processor for Windows. From 1991-1992, the company consulted to Microsoft, helping design and develop Hebrew and Arabic versions of Windows 3.1. The company went on to develop multi-lingual software tools under the brand Accent. For the Hebrew Windows and Dagesh projects, Mr. Rosenschein was awarded the Prime Minister of Israel's Award for Software Achievement in 1997.^[5]

In 1999, Rosenschein founded GuruNet, which created a 1-click popup Internet-based information utility. The product later became Answers.com, incorporating both editorial reference and user-generated Q&A information. The company was listed on NASDAQ as Answers Corporation from 13 October 2004 until 14 April 2011, when it was purchased and taken private by AFCV Holdings.

In 2009, Rosenschein was named an Ernst & Young Entrepreneur of the Year 2009 Award Finalist in the Metropolitan New York region.

Jonathan Eugene Misheiker, born Johannesburg, South Africa, December 14, 1944; admitted to the Israeli Bar, 1972, Israel, *Education*: Hebrew University of Jerusalem (LL.B., 1966; LL.M. 1976). Partner in Wine, Misheiker & Ernstoff, Advocates, situated in Jerusalem, Israel. Co-author: "The Art of Advocacy: Planning Law Suit Management", 1995 (two volumes in Hebrew). Assistant to Attorney General, 1971-1973. Assistant State Attorney, 1973-1974. Deputy Legal Advisor, Ministry of Education and Culture, 1974-1981. Member: Israel Bar Association; Israel Bar Association Disciplinary Court, Jerusalem District (1996-2009); Chairman, Appeals Committee, under Supervision of Schools Law (2000-2004); Member Land Tax Matters Appeals Tribunal (2009-2011); *LANGUAGES*: English and Hebrew. *PRACTICE AREAS*: Commercial Litigation, Labor and Civil Rights, Real Property, Education Law, Non-Profits. *Email*: jonmish@winemelaw.co.il.

You may or not find it piquant to add: teaches Qigong and is the co-author of a recently-published book on the subject (in Hebrew). (Bob - but only if you think it adds something. Qigong is the basis of Tai Chi.)

Yossi Smoler, holds BSc in Industry and Management Engineering from the Technion, Haifa, with distinction and MSc in Operation Research (Naval Postgraduate School, Monterey, CA, with distinction).

Mr. Smoler served 25 years in the military, mostly in R&D activities, and resigned as a Full Colonel in 1989. Since 1989, Mr. Smoler has served as CEO of several Hi-Tech companies in a wide variety of fields (Communications, ICT, Health-Care, etc.) in Israel and abroad.

In March 2009 Mr. Smoler became Director of the Technological Incubators Program in the Office of The Chief Scientist, Ministry of Economy.

Ofer Vilenski is CEO of Hola Networks Ltd. As a kid Ofer loved to program and was also a professional actor at the Haifa Municipal Theater. During his military service Ofer was a fighter pilot, discharged as a Captain. After army service Ofer graduated Cum Laude in Computer Science at the Technion.

Together with Derry Shribman founded a software tools company in his basement, which went on to be a very profitable company. With the profits of that company they founded Jungo -- an operating system for routers ("Android" for home gateways). In 2005 Jungo became profitable, with over 170 employees. A year later, Jungo was acquired by NDS for \$107m.

Gideon Ziegelman, CEO of VOKEE, is a self-starter entrepreneur with 15 years of experience in the high-tech and startup ecosystems. Among his activities, Gideon founded IQwind, a well recognized startup in the wind energy ecosystem and co-founded a \$75 million unique mutual fund. Currently Gideon manages Vokee, a startup company developing revolutionary communication experiences. Gideon holds an MBA degree from INSEAD, Fontainebleau, France and a Bachelor of Science degree in Computer Engineering from the Technion, Haifa, Israel.

In 2008, Ofer and Derry founded a Hola – an overlay network that aims to make a faster, better Internet (www.hola.org). 100,000 people are joining the Hola network every day, and Hola is being used now by over 11m people worldwide.

