

The Stanley Steyer School
of Health Professions
Sackler Faculty of Medicine
Tel Aviv University

בית הספר למקצועות הבריאות
ע"ש סטנלי שטייך
הפקולטה לרפואה ע"ש סאקלר
אוניברסיטת תל אביב

TAU Board of Trustees Annual Report 2018 The Stanley Steyer School of Health Professions

Notable Developments

Prof. Ofer Amir (*Communication Disorders Dept.*) has collaborated with an Israeli startup company (AmplioSpeech, AKA NiNiSpeech), to promote an **online platform for providing speech therapy over the internet**. As a part of this collaboration, Prof. Amir has developed a novel approach for measuring stuttering and quantifying speech fluency. The resulting Speech Efficiency Score (SES) is duration-based, and it is intended to ultimately pave the way for automated fluency identification in the future. It was presented and validated in a study that was recently accepted for publication in the leading journal in the field of 'stuttering and fluency-disorders' (Journal of Fluency Disorders).

Dr. Sigal Portnoy (*Occupational Therapy Dept*), **Dr. Tammy Bar-Shalita** (*Occupational Therapy Dept*) and **Prof. Amit Gefen** (*Biomedical Engineering Dept*) developed with graduate (*Biomedical Engineering Dept*) and undergraduate (*Sagol School*) students a **neurofeedback system based on EEG bio-markers**. This system enables multiple feature selection and its machine learning capabilities allows accurate discovery of patient-specific biomarkers and treatment targets. Its novel characteristics may allow for improved evaluation of patients and treatment outcomes

Dr. Angela Rubin (*Nursing Dept*) was selected by Globes newspaper as one of the seven most important discoveries by the universities in Israel.

[הטכנולוגיה שתעצור הידרדרות רפואית במקרים של פציעות קשות](#)

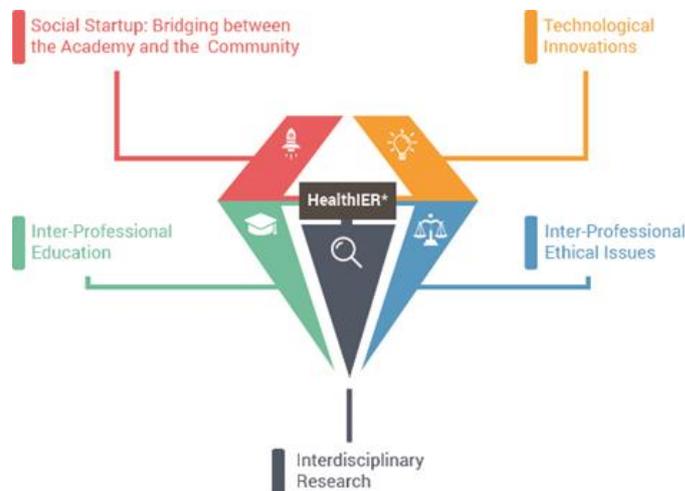
גלובס 7.9.2018

Notable Initiatives

Sackler [Bioethics and Law Initiative](#) was launched at the Faculty of Medicine on March 2018. Headed by **Dr. Oren Asman** (*Nursing Dept*) and **Prof Yechiel Bar Ilan** (*Medical Education*) it is aimed to become a University Center that will enrich the fields of bioethics and health law through scholarly research, deliberation and professional training. Its vision is to assist Israeli practitioners and biomedical researchers as well

as other stakeholders to adhere to high ethical standards by: (1) Supporting research (empirical, theoretical, legal and policy analysis) and developing new research projects, and (2) Providing education and practical training for Master and PhD students and for healthcare professionals, members of ethics committees, authors of ethics chapters in research proposals and regulators.

HealthIER: Health Professions Interdisciplinary Education & Research Initiative was launched on October 3 2018 by **Prof. Liat Kishon-Rabin** (*Head of School of Health Professions*). The goals are to provide interdisciplinary education, to conduct interdisciplinary research, to bridge academy with the community (social startup), to address inter-professional ethical issues, to develop technological innovations.



The following novel projects-developments are part of this initiative:

"Together ('Yachad')": A novel course for enhancing inter-professional collaboration in the Health Professions and Medicine

Led by **Dr. Michal Avrech Bar** (*Occupational Therapy Dept*); **Prof. Liat Kishon-Rabin** (*Head of School of Health Professions*); **Prof Ami Fishman** (*Vice Dean, Sackler Faculty of Medicine*)

The School of Health Professions and the Sackler School of Medicine developed a new course for improving the preparedness of the graduates from the different disciplines of health professions (Physiotherapy, Occupational Therapy, Communication Disorders and Nursing) and medical doctors inter-professional collaboration. To date, these disciplines were studied separately with no interaction between them. This semestrial course was offered for the first time in Israel to 3rd-4th year students at TAU. Twenty five students (five from each discipline) were divided into 5-member teams

(one member from each discipline) in which case studies relevant to all professions were studied together using Problem Based Learning (PBL) methods. The students, supervised by a tutor, addressed the case-related problems via different resources, which they sought on their own. A previous study among health professions students at Tel Aviv University found that learning in a PBL method is correlated with more positive attitudes towards competency and autonomy in the profession and higher positive perception of actual cooperation with other professions. Students reported great satisfaction from the course and some even state it was their best course in the curriculum. The course is offered again at the 2nd semester for another 25 students. The initiators of the course were awarded financial support from the center of Innovative Teaching at TAU and it was selected for presentation at TAU Innovative Teaching Conference which was held on 7.2.2019. **Dr Michal Avrech Bar** (*Occupational Therapy*) was also awarded an internal grant from the Sackler Faculty of Medicine for assessing the efficacy of the course.

Social Startups: Translational Research in Language Intervention (Prof. **Liat Kishon-Rabin**, *Head of the School of Health Professions & from the Communication Disorders Dept*)

The following programs are based on the notions that: (1) early prevention programs are necessary to reduce later persistent developmental delays that require expensive time-consuming professional care not to mention the social-emotional toll on the child; (2) Researchers at the academia have relevant up-to-date information that is not implemented (or implemented late) in community settings due to bureaucracy and lack of professionals; (3) There is a lack of evidence-based intervention programs; (4) Many of the local and national programs are implemented only in school age children and there is no official way to implement such programs before even though all evidence points to the fact that linguistic exposure and intervention is necessary from birth; (5) It is our role at TAU to disseminate the knowledge we acquire and develop for benefitting our society; and (6) To show our graduates that as professionals, they can also aspire to broader scale changes in addition to individualized treatment in their domain of specialty.

"Reading to all" is a unique program aimed to promote literacy abilities among young children who struggle to read based on up-to-date research, including studies on Hebrew reading acquisition and development of discourse abilities carried out by a group of researchers from the *Communication Disorders Dept* headed by **Dr. Amalia Bar-On** (*Communication Disorders Dept*). The program is aimed to bridge the gap between current research-based understanding and educational practice that has not been leading to the expected outcomes (20% of teenagers do not attain a level of

reading performance that allows them to participate effectively in society, Organization for Economic Cooperation and Development, 2016). The program targets classroom teachers as the primary agents in promoting students' literacy skills and equips them with new knowledge acquired by the researchers in relation to the unique features of Hebrew orthography as well as with technologically based teaching methods for promoting reading skills in children reading difficulties. The program emphasizes learning and use of combined skills, that is, every activity can and should be used for enhancing reading fluency, reading comprehension, linguistic knowledge, conversational skills and writing, and that these skills should not be learned separately as often happens. The program is currently being implemented as a pilot in five grade schools in Bat-Yam with the full cooperation of city municipality and the principals and teachers of the schools. The effectiveness of this novel program is being evaluated by researchers of TAU and will hopefully be expanded to additional schools in the city by next year. Program is funded by Tovanot Bachinuch.

"Early is not early enough" is a unique program of language intervention for preventing and reducing linguistic gaps at ages 0-6 years in day-care centers and kindergartens in a deprived neighborhood of the city Petah Tikva. The program led by **Shira Cohen** (*Communication Disorders Dept*) and **Bonnie Asher** (*Communication Disorders Dept*) was motivated by the fact that children start school with a linguistic gap that is hard to close and which leads to adverse academic and social outcomes. The program which takes into account the ICF (International Classification of Functioning) includes an innovative combination of ecological approaches that provide the caregiver at the day care center with tools to maximum speech and communication with the infant during daily routine activities. The caregivers are provided with incentives to implement the changes, which will hopefully also benefit their own children. Assessment of communication is conducted for identifying infants and children with delayed behavior and providing them with tailored linguistic intervention. The efficiency of the program is evaluated using valid tools developed at the Communication Disorders department and using advanced technology with speech analyzing algorithms. We are hoping that the outcomes will: (1) advance our knowledge in language acquisition in 'real-life' conditions; (2) assist in establishing clinical recommendations for speech and language professionals; (3) show better 'readiness' of children to first grade; (4) allow better allocation of resources because of the immediate impact of early prevention programs and individualized tailored intervention in infants and pre-school children. The project is funded by Final Company and Petah-Tikva Municipality.

Dr. Tammy Bar-Shalita (*Occupational Therapy*) developed a unique graduate course for students in the non-thesis tract where special needs in the practice of current occupational therapy are identified (e.g. device, workshop, software) and are being

implemented in public health services. This is yet another contribution of the academia to the community (<https://med.tau.ac.il/health-professions/yedion/Accu-Project>)

Prof. Navah Ratzon, Dana Kaspi-Tzchor (*Occupational Therapy Dept.*) and **Prof. Gali Cinamon** (*Education School*) have been running a pilot project for the last 4 years, which offers students with disabilities accessible entry into higher education. These students are accepted on a special status and during their first year, they register to only a limited number of courses (1-3), whilst receiving on-going academic and social guidance. If they achieve grades that are similar to the average grades of their peers in the same courses, they enrolled in the university. To date 28 young adults with disabilities took part in the pilot program, of which 16 students have been now fully integrated into the academic studies. They all reported to have gained empowerment and a constructive experience from the program.

Notable Grants

Prof. Yael Henkin (*Communication Disorders Dept*) and **Prof. Andrej Kral** (*Hannover University, Germany*) have received a **DFG** grant (Deutsche Forschungsgemeinschaft, German Research Foundation) of 288,000 Euro for 2018-2021. Project titled: "*Markers of Auditory-Cognitive Aging: Evidence from Normal Hearing Listeners and Cochlear Implant Recipients*".

Dr. Osnat Segal (*Communication Disorders Dept.*) and **Prof. Liat Kishon-Rabin** (*Communication Disorders Dept.*) received an **ISF** grant (Israeli Science Foundation) of 736,000 NIS for 2018-202. Project titled: "*The influence of hearing loss on synchronization and triadic interactions and its association with word learning: Evidence from HI infants with hearing aids and cochlear implants*".

Dr. Angela Rubin (*Nursing Dept*) and **Prof. P Currier** (*Monash U*) received a research award from Australian Friends of Tel Aviv University - Monash University ("AFTAM") for 2019 – 2021. Project titled: "*Spinal cord trauma amelioration by GOT1-mediated glutamate scavenging*".

International Conferences/Symposiums hosted by Departments at the School of Health Professions

The 10th International Symposium on Objective Measures in Auditory Implants (OMAI 2018) (*Communication Disorders Dept*) **Prof. Yael Henkin** as chairman and

Prof. Chava Muchnik as co-chairman (*Communication Disorders Dept*) was held in Tel Aviv on October 9-12, 2018. This symposium brought together over 300 professionals and scientists from 30 countries worldwide. Over 140 presentations (oral or poster) focused on cochlear health, pre-operative and intra-operative assessments, electrocochleography, post-operative measures of programming and monitoring, auditory brainstem implants, bone conduction implants, vestibular function in cochlear implant recipients, post-operative cortical function measured by means of ERPs and fNIRs, cortical function and plasticity, and objective measures of listening effort. The symposium highlighted the pivotal role of objective measures in closing gaps in knowledge that may lead the way to individualized medicine for the rehabilitation of hearing loss.

World Congress on Medical Law and Bioethics in Tel Aviv on September 2-5, 2018. **Dr. Oren Asman** (*Nursing Dept*) served as the **Chair of the Scientific Program**. The conference attracted 350 participants from 37 different countries and was organized in collaboration with the World Association for Medical Law and with the support of the Israeli Ministry of Health. The abstracts were published in a [special issue](#) of the International Journal of Medicine and Law and videos of major lectures are available on the Center's [YouTube channel](#).

UK-Israel Symposium on 'Brain Plasticity in Cochlear Implants: Improving Speech Perception in Noise Following Training' (*Communication Disorders Dept*). **PIs: Prof. Liat Kishon-Rabin** (*Communication Disorders Dept*) and **Dr. Debi Vickers** (*UCL*) held at TAU on May 29-30, 2018. The symposium funded by the British Council (BIRAX) was selected from many other applications based on its innovation and its potential to "materialize and strengthen the scientific and academic relations between the UK and Israel in priority areas". For three days, a multi-disciplinary group of 25 senior investigators from the UK and Israel with expertise covering neuroscience, electrophysiology, speech perception, psychophysics, skill learning, computer-based training, CI and imaging discussed novel for improving speech perception in challenging conditions following cochlear implantation (CI), with emphasis on challenging the plasticity of the brain following training.

Honorable Citations

Prof. Sivia Barnoy (*Nursing Dept*) received the *Founder Award for Research* from the International Society of Nurses in Genetics at their 2018 annual meeting.

Dr. Michal Katz-Leurer (*Physiotherapy Dept*) received the *2018 Excellence award* from the Israeli Physiotherapy Society.

Prof. Ruth Defrin (*Physiotherapy Dept*) received a special award from the Israeli Pain Society for her research in advancing knowledge in the area of pain.

Dr. Luba Zak (*Alumni, Physiotherapy Dept*) received the 2018 Life Time Achievement Award at the Knesset for her contribution for developing diagnostic and treatment protocols for the pediatric population.

Notable Appointments

Prof. Silvia Koton (*Nursing Dept*) was appointed Adjunct Associate Professor at the School of Nursing, Johns Hopkins University (JHU) in December 2018 which adds onto the Adjunct Associate Professor she has in Epidemiology, from the Bloomberg School of Public Health, JHU, since 2015.

Expansion of the Activities of the Sackler BioEthics and Law Initiative

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Bi weekly Bioethics Seminar with International Participants

The bi-weekly [Bioethics Seminar](#) of Prof. Y. Michael Barilan (TAU Medical School) with participation of PhD students, faculty, health care professionals, jurists and others. During the academic year of 2018-2019 the seminar focuses on conscience in medicine. Some meetings are dedicated to presentations of PhD students, while others host visiting scholars, including members of the [International Advisory Board](#) of the Initiative and international senior faculty and directors of research academic centers in the field.

Nursing training and involvement with durable medical power of attorney

In collaboration with the Ministry of Justice Legal Aid Department for Legal Competence and Representation of The Elderly, the Initiative held the [first training for nurses on the topic of durable medical power of attorney](#), led by Adi Liberty, RN, MA, LLB (TAU Nursing Department). The Initiative collaborates with the Legal Aid Department to initiate a pilot program for the provision of a practicum experience - Registered Nurses will assist the elderly by gradually providing them with medical power of attorney services. This will complement the work of the legal aid lawyers. This inter-disciplinary, community-oriented project is a fulfillment of some of the Center's vision.

International Study-day/workshop

A full day academic study day with international scholars focusing on personalized medicine, big data and genetics is planned May 12, 2019. The presentations are intended to be gathered as an academic collection to be published in A special theme issue of a peer reviewed journal.

Collaboration with Leading Centers for Bioethics and Health Law

Goal: Collaboration with leading Centers for Bioethics and Health Law for capacity building for TAU as it develops from the Bioethics and Law Initiative into the leading Center for bioethics academic scholarship, research, and policy development in Israel. Major points:

1. [Joint workshop on Informed Consent and clinical bioethics at TAU](#) – completed 11-2018 with Prof. R. Brendel (HMS), Prof. Barilan (TAU), Dr. Asman (TAU), Dr. Shlomit Zuckerman and Dr. Margherita Bursa.
2. During the 2018-2019 Academic year several guests will give talks at the Faculty: Prof. S. Hoffman, co-director of the Law-Medicine Center at Case Western Reserve University; Prof. M. Stein, Executive Director of the Harvard Law School Project on Disabilities and Prof. Eric Juengst, Director of the University of Northern California Center for Bioethics, Prof. Vardit Ravitsky, Director in the Center for Research in Ethics, School of Public Health, University of Montreal
2. Sending TAU scholars for brief time periods to Harvard Medical School (HMS) Bioethics Center and Johns Hopkins Center for Bioethics to establish collaboration in research interests beginning in 2019.
3. Secure philanthropic funding (donations) to cover the costs of TAU affiliates from medicine, nursing, related health professions and law to attend a full year tailored program centered around either the Master of Bioethics or Fellowship in Bioethics in Harvard and possibly in other Centers. The first student/ fellow is planned to be enrolled by fall of 2021.
4. Joint conference in 2020 hosting HMS faculty in TAU for a joint two-day program in bioethics
5. Consider potential future shared research and academic collaboration