



Migal – Galilee Technology



Profile ID: KHE-IL-02

**Title:**

*Eco-metabolism in mushrooms*

**Description of research:** Mushrooms, especially edible mushrooms, are increasingly studied in regard of their beneficial metabolites, improving human health. In our lab we focus on the interactions between ecological conditions and metabolites production in mushrooms in order to increase the production of the beneficial metabolites. This includes study on relationships between species and ecotypes diversity and metabolite production, in both from wild harvesting or cultured mushroom mycelium. The metabolites under the current study are antioxidant and different enzymes involve in acclimation of fungi to the different habitat such as laccase and cellulase.

**Research collaboration sought:** Collaboration with a group that studies similar aspects in other European mushroom species, to compare European ecotypes with Israeli Ecotypes.

**Contact person:**

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Profile ID: KHE-IL-03

**Title:**

*Search for new antibiotics*

**Description of research:** Increasing resistance is developed in infectious fungi and bacteria to current applied antibiotic lead to a need for new antibiotics or application methods. In our lab we search for new antifungal and antibacterial metabolites from local bacteria and fungi. The study involves isolation of the microorganism, screening bioassay for the antibiotic activity, and then purification and identification of the active compound, and study of the inhibition mechanism. Currently we study antibiotic production from local isolated bacterium.

**Research collaboration sought:** We are looking for collaboration with a group that will contribute in study of the bacterial inhibition mechanism.

**Contact person:**

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Profile ID: KHE-IL-07

**Title:**

*Magnetic cell separation to fight against virus infections*

**Description of research:**

No therapy has yet been found for most viral diseases. We will try to develop an assay for separation viruses from peripheral blood by targeting and removing viruses and virus-infected cells with a specific magnetic-molecule conjugates in magnetic field. This approach can be used in the future as a dialysis-like cure.

**Contact person:**

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Profile ID: KHE-IL-11

**Title:**

*Integration of immigrant families in Germany*

**Description of research:**

Carry out a longitudinal mapping of migrants and investigate how the relationship with the country of origin maintains personal relationship over time and affects the acculturation in the host country. Study factors affecting crisis in women, as members of immigrants groups, in their status in the family and their ability to overcome the crisis of migration. Identify resilience factors such as self-esteem, hope in immigrant members of families (differentiate between genders); Identify vulnerable age groups (i.e. 11-14 years old) in areas of deprived and/or marginalized communities, and investigate their acculturation and integration. Carry out a follow up study in the first and second generation of immigrants in a transnational study, particularly of refugees, based on interviewing the communities involved with focus on loss and gain of resources and resilience mechanisms in adaptation in their country of destination.

**Contact person:**

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Profile ID: KHE-IL-12

**Title:**

*The increasing role of economics in EU competition law and policy*

**Description of research:**

The research pertains to the increasing role of economics in EU competition law and policy. The legal question, whether it is one of abusive conduct by a dominant undertaking, or lessening of competition by merging parties, is essentially an economic question, requiring competition authorities to analyse the market under investigation throughout an economic lens. Moreover, economic expertise is increasingly evident among antitrust officials, particularly following the establishment of the Chief Economist's Office in 2003 and its team of specialised economists. Given the steady growth in economic inputs, manifested, for example, in the promulgation of the 1997 Commission's Market Definition Notice, the 2004 revision of the Merger Regulation and the ongoing review of Article 82, the research intends to focus on the 'more economic approach' to European competition law, and its ramifications to antitrust practice.

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Profile ID: KHE-IL-14

**Title:**

*The Gap between the Real and the Ideal in Teachers' Training and in their Preparation to Absorb Pupils with Special Needs in the Education System*

**Description of research:**

The goal of the study is to examine the teachers' training process and their preparation for absorbing pupils with special needs in the regular education system following the application of the Education Law in Israel, Europe and the USA.

At the present, most of the Western countries enjoy a plethora of programs for mainstreaming pupils with special needs in regular classes as part of the humanitarian containment approach, which stands for providing equal opportunities to pupils with special needs to study and grow in a normative society that is similar to the one they will have to deal with as adults. Vis-à-vis this law, large gaps were found in teachers' training and in their actual preparation to absorb pupils in the classroom.

The present study aims to examine the actual needs of practicing teachers for optimal absorption of these pupils into the education system and suggests settings and programs for teacher development in-service and pre-service as a lever for teacher empowerment and as a basis for developing an optimal absorption process for these pupils in the education system.

This subject is currently one of the most significant issues troubling the education systems in Western countries. Developing an appropriate instruction and guidance system will provide the right answers to the plights of practicing teachers and future teachers, who will enter the education system, on the one hand, and will provide adequate answers for optimal absorption of these pupils in the education system as a kind of preparation for living in a normative society.

Another aspect I would like to focus on in my study is that of gender – is there a difference in the containment ability of female vs. male teachers in coping with pupils with special needs in the classroom?

This aspect could provide answers to schoolmasters who place pupils in parent classes and help in the teachers' training process.

The study strives to shed new light on teachers' training in the post-modern era in terms of absorbing pupils with special needs in regular classes.

**Contact person:**

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Migal – Galilee Technology



Profile ID: KHE-IL-16

**Title:** *Upgrading the academic skills of students as a means for advancing students in the higher education system / Developing and improving the efficiency of exploration and learning processes in the higher education system*

**Description of research:**

In a society that is characterized by a plethora of information, which is characterized by a rapid pace of renewal and high accessibility, and which is constantly growing and changing, the student's skills at handling new information, rather than just memorizing and accumulating it, are becoming increasingly important (Beyth-Marom et al., 1987).

The transference of learning from the classroom to new situations and/or contexts (for the learner) does not occur spontaneously. In most cases, deliberate teaching interventions are needed in order to increase the probability of such a transference occurring (e.g., Perkins & Salomon, 1998). At present, there are very few studies in higher education dealing with this transference.

Learning in the 21st century requires different skills and abilities from the students in order to keep in pace with the intense information revolution. These goals are drafted in the present study in the form of thinking and learning skills.

The goal of the study: To examine how the teaching of academic skills influences the improvement of the learning processes of the students at the Tel-Hai Academic College and their development as independent learners.

The present study is based on the examination of students' learning processes in order to examine their ability to choose the appropriate combination of information and skills and apply it in problem solving in different situations. According to Pasig's (2006) view, these will be probably the skills required from any person who wishes to function successfully in the 21st century

Thus, the design of the learning environment and the course assignments were applied according to the following principles:

- Providing necessary information
- Emphasizing the performance principles
- Repeated training in different situations
- Practicing in as real situations as possible
- Encouraging learning by doing
- Developing a reflective thinking style

**Research Questions**

1. The influence of the course of learning skills on the individual students' learning and exploration processes and their application in practice in their learning process at the College.
2. Transferring the skills and using them in other learning areas.
3. Redesign & planning the course of learning skills (teaching/learning plan) according to the study findings.





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The Study Population: a group of 88-100 students in their second year at Tel-Hai Academic College.

#### Study Method

The study will be conducted as an action research in several stages. Each stage will examine the following parameters:

1. The contribution of the course on academic skills to the development of the learning and exploration skills of the students
2. The changes that are needed in the course planning according to findings.
3. Improving and upgrading teaching methods in the course according to findings.

#### The Study Hypotheses

Following the learning and experiencing processes, the students will be capable of:

- Transferring and using learning and exploration skills acquired in the course.
- Improving the skills to choose the appropriate combination of information and apply it.

The lecture will present the findings of the first stage of this action research as well as insights and changes that occurred in the course teaching plan.

#### Research collaboration sought:

The results of this research are expected to frame the plane of an academic course that will prepare the students for their academic life.

#### Contact person:

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Migal – Galilee Technology



Profile ID: KHE-IL-20

**Title:** *Think Like a Zebra® - A unique method of enhancing creative and innovative thinking for business and everyday life*

**Description of research:**

One of the USP is: The visualization of the creativity process and the range of products. It's a user friendly method which turns creativity into something accessible.

We have developed:

An original method for developing creative thinking

A series of books Think Like a Zebra™

A kit of Cards - using the Animal coaches™

Workshops and seminars\*

The first book, Think Like A Zebra®, was published in Israel by Am Oved Publishers (it is constantly in fifth place in the Israeli best seller lists, category: Business Books) and has been translated into English; the Italian publisher Mondadori will publish an Italian version in January 2009. Rights have also been sold to Brazil. A Chinese translation of the book was published in Taiwan ([http://www.cite.com.tw/authors\\_search.php?authors\\_id=9452](http://www.cite.com.tw/authors_search.php?authors_id=9452) )

We have conducted workshops in business and private sectors: High-tech companies, educational institutions, private businesses, international conglomerates, mayors, politicians, managers, private individuals and more) and have seen businessmen create new products, improve cooperation in the office, and increase marketing channels. ([www.thinklikeazebra.com](http://www.thinklikeazebra.com))

**THE ZEBRA WORKSHOPS**

Enhancing creative and innovative thinking for business and everyday life using the Think Like a Zebra® method. Based on strategies borrowed from the animal world to direct creative thinking, the method is presented visually in a friendly and accessible manner.

The first book in the Think Like a Zebra® series, published by Am Oved, is now available. It has already been translated into English and Chinese, and an Italian translation is currently being prepared.

**OBJECTIVES:**

To introduce and provide practice in creative thinking tools that can be called on whenever ideas, brainstorming, or "thinking out of the box" are required.

**AIMS:**

- To expand each participant's personal capacity for creative thinking
- To enable regular use of easily applicable thinking tools to solve problems, produce ideas, develop initiatives, and determine strategies in all areas of life and business

**ACTIVITIES:**

- Hands-on practice in using the Think Like a Zebra® tools, including: Thinking Grounds™, Animal Coaches™, and Creativity Calculator™. The exercises offer the participants an opportunity to deal with real-life problems in a manner that is fun, effective, and unexpected.
- Identification of each participant's personal creative style.





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**Research collaboration sought:**

We would like to examine an increase of creativity in a certain population (better done in the industry field) after the use of the Zebra method. It could be interesting to compare different industries (such as high-tech vs. low tech industry). Maybe the insights of such a study could contribute to the development of these fields and others.

**Contact person:**

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Federal Ministry  
of Education  
and Research



Israel Ministry of  
Science, Culture  
& Sport (MOST)



Migal – Galilee Technology



Profile ID: KHE-IL-21

**Title:**

*The problem of Locality for Ecology*

**Description of research:**

What is a locality of an animal, which one returns to? Anyone interested in tracking organisms and species distribution faces this question. Ecologists who use species distribution models (SDMs) typically assume that the environment is exogeneous of the organisms inhabiting it, while those using niche construction models typically assume a dynamic interaction between the biotic and abiotic element of an environment. Such an endogenous perspective on an organism's environment, which views the animal's locality as a dynamic changing entity, faces the question of tracking a locality and returning to "the same" locality as a theoretical, not only practical, problem. This research will compare the practice of biologists who employ different theoretical models while they seem to be doing the same thing: tracking animal locality in the field and in the lab. I will explore whether and how do biologists with different theoretical perspectives revisit an organism's locality and produce interoperable data and metadata. In short, whether and how do biologists enter the same river twice?

**Contact person:**

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Profile ID: KHE-IL-27

**Title:**

*Nonalcoholic fatty liver disease (NAFLD) and the unfolded protein response (UPR)*

**Description of research:**

NAFLD is one of the most common liver diseases which is characterized by the accumulation of triglycerides. The molecular mechanism underlying the disease is poorly understood. The endoplasmic reticulum (ER) plays a central role in the synthesis, folding, and trafficking of proteins. ER dysfunction is characterized by accumulation of unfolded proteins within the ER, which triggers the unfolded protein response (UPR). In the present study we investigate the involvement of the UPR pathway in NAFLD disease.

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Migal – Galilee Technology



Profile ID: KHE-IL-28

**Title:**

*Comparative study of measures to recruit, support and promote women in academic studies, and professions, in particular those considered non traditional*

**Description of research:**

The implementation of various measures to recruit women, and later to support them during their formative years as academic professionals, mainly, but not only in non traditional professions, is now the practice in many countries, including Germany and Israel.

The importance of ensuring a female friendly, safe and supportive environment is the basis for various measures taken in different communities and institutes.

An international, cross cultural study can expose different concepts that lead to varied action plans, and compare the rationale, the projects, and the outcomes, all in the context of such diverse social and economic powers, cultural differences, and social constructs, that influence and form them.

A comparative study of initiatives to support and promote women in non traditional fields of study and professional work requires in-depth reading of the cultural discourse of each of the societies examined, and an investigation of local institutional constraints and expectations. Likewise, the evaluation of their effects requires the development of culturally sensitive measurements.

The outcome of such programmes, support systems and interventions, can be studied using both quantitative and qualitative methods. Quantitative tools can provide numbers of females at entrance to and graduation from academic studies, their employment rates and routes of promotion in profession. Qualitative tools can be used to assess impact on decision making, career plans, satisfaction and wellbeing, motivation and ambition, and on work life balance.

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