

Dear colleagues,

We are a team of active psychology research labs at the University of Cyprus, composed of the [ACThealthy lab: Clinical Psychology and Behavioral Medicine](#), the [Clinical Psychology and Psychophysiology Lab](#) and with collaborators from the Department of Psychology, the [Center of Applied Neuroscience](#) and Departments at the [University of Cyprus](#) (Computer Science; School of Medicine; School of Economics, Public and Business Administration). We also collaborate with local hospitals and health centers such as the Bank of Cyprus Oncology Centre.

We are looking to be part of a cohort/consortium under the call for proposals:

**IMI2-2020-23-06 Behavioral Model of Factors Affecting Patient Adherence**

The call stresses behavioral predictors of patient adherence and we believe we can offer *substantial expertise and an excellent track record of relevant previous experience* in this domain. Specifically, we are confident that our expertise in emotion regulation, Acceptance and Commitment Therapy, digital health, emotional disorders, and various behaviors/emotions and coping responses that either hinder or enhance valued and goal-based living and predict physical and emotional health will help identify major clusters of predictors of good and poor adherence to treatment regimens.

Please get in touch in case of interest for the expertise we are offering.

Deadline of the call: **29 September 2020**

Contact Points: [mkarekla@ucy.ac.cy](mailto:mkarekla@ucy.ac.cy); [georgiap@ucy.ac.cy](mailto:georgiap@ucy.ac.cy)

## EXAMPLES OF RELEVANT EXPERTISE, PAST AND ONGOING PROJECTS

### 1) Stay On Track digital intervention study



We have developed a prototype of a digital tool that can be used in studies testing multiple behavioral models for medication adherence either for data collection or for proof-of-concept of its impact on patient outcomes. The main objective of the [Stay on Track project](#) is to develop and pilot an interactive, theoretically-informed and evidence-based web platform and app to help patients with chronic conditions adhere to their prescribed medication. The Stay on Track system includes:

1. A user-friendly patient interface that will allow patients to access information about their condition and the medication they are taking and to register information that can be shared with their doctor
2. State-of-the-art short interactive exercises and notifications based on psychological theories to help patients overcome the barriers to adhere to their medication
3. A reminder and calendar system to help those patients who forget to take their medication including real-time notifications and alerts
4. An Ecologically-Momentary Assessment (EMA) of medication adherence behaviors using different methods
5. Personalized and tailored content and interface

### 2) Other digital tools under development

We are also currently running a number of funded projects aiming to develop digital health tools. We have obtained a grant from the Union of International Cancer Control (UICC, SPARC Metastatic Breast Cancer Challenge Grant) aiming to guide metastatic breast cancer women after diagnosis to meet unmet needs using an avatar-based web platform ([GIFTED](#)). Moreover, we are working towards testing and evaluating the collection of Patient Reported Outcomes In

cancer care using innovative approaches developing the ePROM Digital Health Tool (PRICE). This project is funded by a Marie Skłodowska Curie Fellowship.

### 3) Relevant ongoing grants:

- MARIE SKŁODOWSKA-CURIE INNOVATIVE TRAINING NETWORK (ITN), Grant Agreement No. 813546 <http://www.neoprismc.org/>

**Neo-PRISM-C** aims to study neurodevelopmental disorders (NDD), which emerge early in development and result in long-term disability, compromising the quality of life of millions of Europeans. **The purpose of the Neo-PRISM-C ETN** is to train Early Stage Researchers (ESRs) from multiple disciplines (psychology, neuroscience, data science) in applying the Research Domain Criteria approach, a novel framework for understanding psychopathology, to the study of the mechanisms of NDD, in order to inform and begin to test appropriate treatments.

- **PI UCY internal grant *Alexithymia***: The project aims to identify emotion regulation and processing characteristics associated with Alexithymia, Neuroticism and Psychopathy (and their overlap and uniqueness), which are all traits that predict both psychological and physical disorders, pathology and medically unexplained symptoms.
- Tackling anti-vaccination: mapping the social transmission of beliefs and attitudes (SAFEST). Excellence grant (Life Sciences) funded by the Research and Innovation Foundation. May 2020-May 2022
- Guiding metastatic breast cancer women after diagnosis to meet unmet needs: an avatar-based web platform (GIFTED). SPARC Metastatic Breast Cancer Challenge Grant funded by the Union of International Cancer Control (UICC). Oct 2019 – Feb 2021
- Testing and Evaluating the Collection of Patient Reported Outcomes In Cancer CarE Using Innovative Approaches: The ePROM Digital Health Tool (PRICE). Funded as Marie Skłodowska Curie Fellowship Sep 2019 – Sep 2021
- Stay on Track: a web platform to help with adhering to prescribed medication. Social Innovation grant funded by the Research and Innovation Foundation programme RESTART 2016-2020. Dec 2018 – Dec 2020

#### **4) Relevant Topics of expertise, theoretical and methodological interest**

- *Clinical and Health Psychology theories of behaviours including medication adherence*
- *Acceptance and Commitment Therapy*
- *Digital Health Intervention development and evaluation*
- *Mixed methods research including evaluation in clinical settings and in labs*
- *Evidence Based Medicine methods such as meta-analyses and systematic reviews*
- *Randomized Clinical Trials for psychological interventions*
- *Theories and psychopathology of illness and health anxiety, somatization and medically unexplained symptoms*
- *Psychophysiology, EEG, fNIRS, eye-tracking and other lab and ambulatory physiological methodologies*
- *Experience sampling*
- *Experimental design in Eprime and SR Experiment Builder*
- *Statistical methods using SPSS, R, AMOS, multilevel modeling, machine learning*

#### **5) Relevant publications:**

##### **Medication Adherence**

- Kassianos, A.P., Georgiou, G., Papaconstantinou, E., Detzortzi, A., Horne, R. (2017). Smartphone Applications for Educating and Helping Non-motivating Patients Adhere to Medication That Treats Mental Health Conditions: Aims and Functioning. *Frontiers in Psychology*, 8, 1769.
- Kassianos, A.P. (2016). Adherence with Prescription Directions. In S. Boslaugh (Ed.) *The SAGE Encyclopedia of Pharmacology and Society*. SAGE Publications Inc.
- Kassianos, A.P. (2016). Behavioural Pharmacology and Substance Abuse. In S. Boslaugh (Ed.) *The SAGE Encyclopedia of Pharmacology and Society*. SAGE Publications Inc.
- Kassianos, A.P., Kasinopoulos, O., Konstantinou, P., Wozniak, G., Karekla, M. (in press). Adherence to medication for chronic conditions in times of the COVID-19 pandemic crisis: Translating lessons from the literature to practical recommendations. *Patient Education and Counselling*.

##### **Alexithymia**

- Panayiotou, G., Leonidou, C., Constantinou, E., Hart, J., Rinehart, K. L., Sy, J. T., & Björgvinsson, T. (2015). Do alexithymic individuals avoid their feelings? Experiential avoidance mediates the association between alexithymia, psychosomatic, and

depressive symptoms in a community and a clinical sample. *Comprehensive psychiatry*, 56, 206-216.

- Panayiotou, G., Panteli, M., & Vlemincx, E. (2018). Processing emotions in alexithymia: A systematic review of physiological markers.
- Panayiotou, G., Panteli, M., & Vlemincx, E. (2019). Adaptive and maladaptive emotion processing and regulation, and the case of alexithymia. *Cognition and Emotion*, 1-12.

### **Illness Anxiety**

- Leonidou, C., Panayiotou, G., Bati, A., & Karekla, M. (2019). Coping with psychosomatic symptoms: The buffering role of psychological flexibility and impact on quality of life. *Journal of health psychology*, 24(2), 175-187.
- Leonidou, C., Pollatos, O., & Panayiotou, G. (2020). Emotional responses to illness imagery in young adults: Effects of attention to somatic sensations and levels of illness anxiety. *Biological Psychology*, 149, 107812.
- Leonidou, C., & Panayiotou, G. (2018). How do illness-anxious individuals process health-threatening information? A systematic review of evidence for the cognitive-behavioral model. *Journal of Psychosomatic Research*, 111, 100-115.
- Leonidou, C., & Panayiotou, G. (2018). Maintaining Mechanisms of Health Anxiety: Current State of Knowledge. In *Somatoform and Other Psychosomatic Disorders* (pp. 1-21). Springer, Cham.

### **Medically Unexplained Symptoms**

- Constantinou, E., Van Den Houte, M., Bogaerts, K., Van Diest, I., & Van den Bergh, O. (2014). Can words heal? Using affect labeling to reduce the effects of unpleasant cues on symptom reporting. *Frontiers in psychology*, 5, 807.
- Constantinou, E., Bogaerts, K., Van Diest, I., & Van den Bergh, O. (2013). Inducing symptoms in high symptom reporters via emotional pictures: The interactive effects of valence and arousal. *Journal of Psychosomatic Research*, 74(3), 191-196.

### **Digital Health**

- Van Daele, T., Karekla, M., Kassianos, A. P., Compare, A., Haddouk, L., Salgado, J., ... & De Witte, N. A. (2020). Recommendations for policy and practice of telepsychotherapy and e-mental health in Europe and beyond. *Journal of Psychotherapy Integration*, 30(2), 160.
- Mareva, Silvana, David Thomson, Pietro Marenco, Víctor Estal Muñoz, Caroline V. Ott, Barbara Schmidt, Tobias Wingen, and Angelos P. Kassianos. "Study protocol on

ecological momentary assessment of health-related quality of life using a smartphone application." *Frontiers in Psychology* 7 (2016): 1086.

- Kassianos, A., Plackett, R., Schartau, P., Valerio, C., Hopwood, J., Kay, N., & Sheringham, J. (2020). eCREST: a novel online patient simulation resource to aid better diagnosis through developing clinical reasoning. *BMJ Simulation and Technology Enhanced Learning*, 6(4).
- Karekla, M., Savvides, S.N., & Gloster, A. (2020). An Avatar-led Intervention Promotes Smoking Cessation in Young Adults: A Pilot Randomized Clinical Trial. *Annals of Behavioral Medicine*, 1-14. doi: 10.1093/abm/kaaa013.

### Evidence-Based Medicine

- Usher-Smith, J. A., Emery, J., Kassianos, A. P., & Walter, F. M. (2014). Risk prediction models for melanoma: a systematic review. *Cancer Epidemiology and Prevention Biomarkers*, 23(8), 1450-1463.
- Kassianos, A. P., Ioannou, M., Koutsantoni, M., & Charalambous, H. (2018). The impact of specialized palliative care on cancer patients' health-related quality of life: a systematic review and meta-analysis. *Supportive Care in Cancer*, 26(1), 61-79.

### ACT

- Vasiliou, V.S., Karademas, E.C., Christou, Y., Papacostas, S., & Karekla, M. (in press). Acceptance and Commitment Therapy for primary headache sufferers: A randomized controlled trial of efficacy. *Journal of Pain*.
- Karekla, M. & Savvides, S.N. (2019). Feasibility and Acceptability of an Avatar-led Acceptance and Commitment Therapy Digital Intervention for Smoking Cessation in Young Adults. *Translation Behavioral Medicine*. doi: 10.1093/tbm/ibz128.
- Karekla, M., Konstantinou, P., Ioannou, M., Kareklas, I. & Gloster, A. (2019). The phenomenon of treatment dropout, reasons and moderators in Acceptance and Commitment Therapy and other active treatments: A meta-analytic review. *Clinical Psychology in Europe*, 1(3), Article e33058. DOI: 10.32872/cpe.v1i3.33058.
- Karekla, M., & Charilaou, M. (2005). The practicality of a practical guide to Acceptance and Commitment Therapy. *PsycCRITIQUES- Contemporary Psychology: APA Review of Books*, 50 (52).

## 6) About the University of Cyprus

With around 7.000 students, 113 laboratories and 800 faculty and staff members, the University of Cyprus (UCY) is a young and rapidly expanding university (established in 1989). There are 22 departments and 14 research units / centres, covering a broad spectrum within the life, social, natural and engineering sciences. UCY is the biggest employer in Cyprus for young graduates and researchers. It currently employs about 750 young scientists using external research funds. We are seeking and attracting new qualified scientists and researchers because our constant aim is to be the largest employers' organization for young researchers in Cyprus.

UCY is considered the leading university and the most active research institution in Cyprus (ranked #401-500th in World University Rankings 2020, and 67th in Young University Rankings 2019- Times Higher Education <https://www.timeshighereducation.com/world-university-rankings/university-cyprus>). UCY implemented a large number of research projects funded by the European Commission, the national Research and Innovation Foundation and several public and private Research Organizations. In 2019, research funding from external sources reached €22 million. UCY is currently participating in 328 projects. 137 are EU-funded projects under Horizon 2020, Erasmus+, Justice, Life, Cost Action, and Interreg.

UCY is one of the eight young universities within “The Young Universities for the Future of Europe (YUFE)”. YUFE’s mission is to create one of the very first 'European Universities' that will bring a radical change in European Higher Education by establishing itself as the leading model of a young, student centred, non-elitist, open and inclusive European University. A unique ecosystem linking universities to communities, YUFE will be based on cooperation between higher education institutions, the public and private sector and citizens across Europe.