

## Quantified Longevity Guide – Progress Report 2018

The methodology of the Quantified Longevity Guide has been validated on available health databases. The results have been published in several scientific papers and presented at scientific conferences. Research collaboration has been established with the "Shmuel Harofe" Geriatric Medical Center, Beer Yaakov, Israel, to further develop physiological and functional indicators for age-related multimorbidity, frailty and physiological age, in clinical settings. Strategic collaboration has been established between Israeli Longevity Alliance and “Vetek” (Seniority) – the Movement for Longevity and Quality of Life (Israel) for the performance and dissemination of the results of this commitment (<http://www.longevityisrael.org/>).

Currently, additional clinical data are sought to proceed toward clinical applications.

The results were presented in national conferences on Healthy Longevity in Israel in October 2013, March 2014, May 2017 and October 2017, and at the International Conferences on Aging and Disease of the International Society on Aging and Disease in Beijing China in November 2014, Stanford US in October 2016, Nice France in October 2018.

Some of the published reports include:

Blokh D and Stambler I, 2017. The application of information theory for the research of aging and aging-related diseases. *Progress in Neurobiology*, 157, 158-173

<https://www.sciencedirect.com/science/article/pii/S0301008215300599> ;

Blokh D and Stambler I, 2015. Information theoretical analysis of aging as a risk factor for heart disease. *Aging and Disease*, 6, 196-207

<http://www.aginganddisease.org/EN/10.14336/AD.2014.0623> ;

Blokh D and Stambler I, 2017. The use of information theory for the evaluation of biomarkers of aging and physiological age. *Mechanisms of Ageing and Development*, 163, 23-29

<https://www.sciencedirect.com/science/article/pii/S0047637416301567?via%3Dihub> ;

Blokh D, Stambler I, Lubart E, Mizrahi EH, 2017. The application of information theory for the estimation of old-age multimorbidity. *Geroscience*, 39(5-6), 551-556

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5745215/> ;

Stambler I, 2017. Recognizing degenerative aging as a treatable medical condition: methodology and policy. *Aging and Disease*, 8(5), 583-589

<http://www.aginganddisease.org/EN/10.14336/AD.2017.0130> ;

Stambler I, 2015. Stop Aging Disease! ICAD 2014. *Aging and Disease*, 6 (2), 76-94

<http://www.aginganddisease.org/EN/10.14336/AD.2015.0115> ;

Jin K, Simpkins JW, Ji X, Leis M and Stambler I. 2015. The Critical Need to Promote Research of Aging and Aging-related Diseases to Improve Health and Longevity of the Elderly Population. *Aging and Disease*, 6(1), 1-5

<http://www.aginganddisease.org/EN/10.14336/AD.2014.1210>.

During the reported period the commitment has continued to pursue its goals of evaluating the determinants of healthy longevity and predictors of age-related multimorbidity and frailty. The commitment has advocated for the stronger inclusion of biological and physiological markers for the evaluation of frailty, in addition to functional indicators, and for the use of advanced statistical techniques, such as information-theoretical measures, to evaluate weighted and cumulative (synergistic) effects of multiple combined risk factors for age-related frailty, multimorbidity and physiological age.

<http://www.longevityisrael.org/quantified-longevity-guide/>

[https://ec.europa.eu/eip/ageing/commitments-tracker/a3/quantified-longevity-guide-qlg\\_en](https://ec.europa.eu/eip/ageing/commitments-tracker/a3/quantified-longevity-guide-qlg_en)