

Prof. Ron Milo

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Prof. Ron Milo received his BSc in physics and mathematics from the Hebrew University of Jerusalem and his PhD in biological physics from the Weizmann Institute of Science. Following his term as the first fellow in systems biology at Harvard Medical School, he joined the Department of Plant Sciences at the Weizmann Institute.

Prof. Milo brings the tools of systems biology to bear on the challenges of sustainability. His research aims to understand in quantitative terms the cellular highways of energy and carbon transformations known as central carbon metabolism. His research team employs a combination of computational and experimental synthetic biology tools with a focus on carbon fixation, the biological process which incorporates carbon dioxide (CO₂) into organic compounds. He hopes to understand the fundamentals of its design principles, with the goal of improving the ability of humanity to produce food and fuel more efficiently. He is also developing *BioNumbers*, a collaborative community resource of biological numbers for both researchers and the public.

Prof. Milo's scientific awards include the GE & Science Prize for Young Life Scientists, the John F. Kennedy Prize and the D.N. Chorafas International PhD award. He has published over 40 papers, including more than a dozen in the leading Journals *Science*, *Nature*, *Cell* and *PNAS*. Ron enjoys playing the harmonica and hiking with his family.

Selected publications:

“Network motifs: simple building blocks of complex networks.” *Science* 298(5594): 824–827 (2002).

“Variability and memory of protein levels in human cells.” *Nature* 444(7119): 643–646 (2006).

“A feeling for the numbers in biology.” *PNAS* 106(51): 21465–21471 (2009).

“Design and analysis of synthetic carbon fixation pathways.” *PNAS* 107(19): 8889–8894 (2010).

“Glycolytic strategy as a tradeoff between energy yield and protein cost.” *PNAS* 110(24): 10039–10044 (2013).