

## **Prof. Michal Sharon**

### **Biochemistry**

### **The Weizmann Institute of Science**

Michal Sharon received her BSc in Chemistry from the Hebrew University of Jerusalem. Her Ph.D. studies at the Weizmann Institute of Science focused on studying the three-dimensional structure of proteins by NMR. She conducted postdoctoral research in the Department of Chemistry at the University of Cambridge, UK in the lab of Prof. Carol Robinson until 2007, when she joined the faculty of the Weizmann Institute of Science.

Research in the Sharon lab focuses on unraveling the regulatory mechanisms that coordinate the function of large protein complexes. Specifically, the group aims to discover the mechanisms that control the activities of molecular machines involved in the protein degradation pathway. To do so the Sharon group apply and develop novel native mass spectrometry approaches, in conjunction with fluorescence microscopy, biochemical and cell biology methods - generating an integrative mode of analysis combining *in vitro* and *in vivo* findings.

Dr. Sharon, author over 55 articles in international peer-reviewed journals, has received the ICRF Research Career Development award and was granted two consecutive ERC Starting Grants (2008 & 2014). She was the president of the Israeli Mass Spectrometry Society and currently heading the Israeli Biochemical Society and acts as an executive board member of the International Mass Spectrometry Foundation. Dr. Sharon is also a board member of Schwartz/Reisman Science Education Center of both Rehovot and Rishon LeZion. She is married to Alon and a mother of three children – Ori, Naama and Ronni.

#### **Selected Publications:**

1. Ben-Nissan, G., Belov, M. E., Morgenstern, D., Levin, Y., Dym, O., Arkind, G., Lipson, C., Makarov, A. A. and M. Sharon. (2017). Triple-stage mass spectrometry unravels the heterogeneity of endogenous protein complexes. *Anal. Chem.* 89(8):4708-15.
2. Gan, J., Ben-Nissan, G., Otonin, G., Tarnavsky, M., Trudeau, D. Noda-Garcia, L., Tawfik D. S. and **M. Sharon**. (2017). Native protein mass spectrometry of recombinant proteins from crude cell lysates. *Anal. Chem.* 89(8):4398-404.
3. Moscovitz, O., Ben-Nissan, G., Polack, D., Zarook, O. and **M. Sharon**. (2015). The Parkinson's associated protein DJ-1 regulates the 20S proteasome. *Nat. Commun.* 6:6609.

4. Rozen, S., Füzesi-Levi, M. G., Ben-Nissan, G., Mizrachi, L., Gabashvili, A., Levin, Y., Ben-Dor, S., Eisenstein, M. and **M. Sharon**. (2015). CSNAP is a stoichiometric subunit of the COP9 signalosome. *Cell Rep.* 13(3):585-98.
5. Dyachenko, A., Gruber, R., Shimon, L., Horovitz, A., and **M. Sharon**. (2013). Allosteric mechanisms can be distinguished using structural mass spectrometry. *Proc. Natl. Acad. Sci. USA*, 110(18):7235-9.
6. **Sharon, M.** (2013). Structural MS pulls its weight. *Science*, 340(6136):1059-60.