

Inventor: **Noa Kaynan**

Supervisor: Prof. Ofer Mandelboim

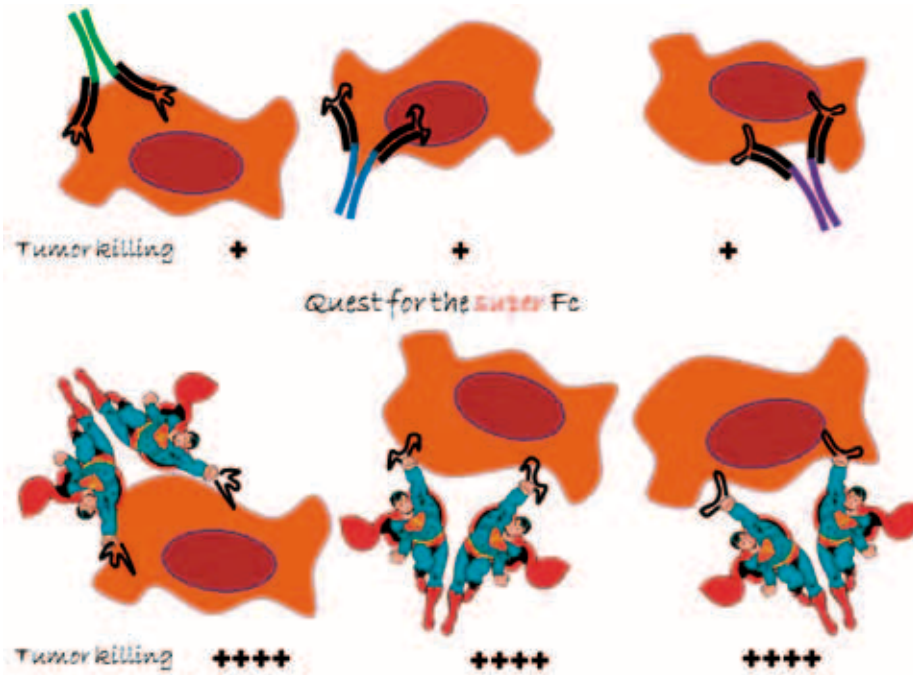
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After completing her army service, serving as an instructor in the C4I Corps, Noa Staniestky (now Kaynan), started her academic carrier as a biology student at the Hebrew University. She continued her M.Sc. and then her Ph.D. studies in immunology, under the supervision of Prof. Ofer Mandelboim at the Hebrew University-Hadassah Medical School. Noa is a recipient of the Clore Fellowship. She is married to Barak, who holds a D.M.D. from the Hebrew University, and is mother to Yuval.

STUDENT

Generation of 'Super' Fc Antibody for Improving Medical Treatments



Antibodies are currently used in the clinic for the treatment of various diseases. Their major advantage is their strong binding capacity and high specificity which is achieved through their variable region, named Fv. Antibody therapy is used today particularly for treating cancer patients where therapy is challenged by the need to differentiate tumor cells from healthy cells to prevent intolerable toxicity. The constant, Fc region of a given antibody also actively participates in controlling tumor growth through the activation of immune cells that carry receptors that interact with the antibodies' Fc fragments.

Surprisingly, we still don't understand the rules controlling the recognition of the Fc by the various immune cells. Our invention is based on the generation of various tools that will enable us to select the best ("super") Fc that would most efficiently activate immune cells. The invention, which is based on functional assays, can be used as platform for testing the activity of various therapeutic anti-cancer antibodies that are currently available and for selecting the best Fc for cancer immunotherapy.

