Optofluidics uses light ('opto,' or optics) to analyze and identify specific biomarkers in a fluid ('fluidics') medium. It works through the principles of spectrometry – shining a specific type of light at a sample and analyzing the wavelength of the light that results from the interaction. Different chemicals, substances, and molecules will produce different wavelengths of light in response to a specific light source.

Biotech companies use this idea to create 'lab-on-a-chip' devices – with specialized computer chips. These devices can take in a tiny amount of fluid and analyze the biological materials that are present, and identify specific target substances or biomarkers, such as proteins, antigens, and antibodies.