“Point of care (POC) diagnostics allow clinicians, pharmacists or patients to carry out tests near or at the site of patient care or in a home setting. POC tests first revolutionized home testing for pregnancy 40 years ago, and have forever changed the way some chronic diseases like diabetes are managed. Near patient testing and/or monitoring can drive down costs by eliminating return appointments, enabling informed treatment decisions and empowering patients to seek care earlier in the course of disease. The POC can be a home, primary care office, clinic, or other location, provided that the technology enables a task to shift from a more to a less sophisticated setting.

Dr. Klapperich is a Professor of Biomedical Engineering and the Founding Director of the Precision Diagnostics Center (PDC) at Boston University. The Klapperich Laboratory has been engaged in the engineering of disposable microfluidic diagnostic devices that incorporate on-board sample preparation and on the deployment of these technologies in the field for 16 years. Ongoing work includes several applications in POC testing for sexually transmitted infections. Newer work includes cell free biochemical sensing using microbial molecular parts. Her lab is working with collaborators at the BU PDC to incorporate these biosensors into wearable devices to enable real time continuous sampling.