

Dear Ms. Schindler

I would like to express my deepest gratitude to you and to the Foundation's Board for the grant you offered me in order to pursue a Master thesis research in EPFL, Lausanne, Switzerland. I'm humbled by your generosity and I do hope to be up to your confidence and expectations.

The research will focus on engineering an innovative system for realizing portable, rapid, and cost effective nucleic acid-based diagnostics. A protocol for rolling circle amplification will be established in minimally buffered conditions, to be employed in a semiconductor-based (digital) Polymerase Chain Reaction platform. Our aim is to achieve a quick strategy for isothermal amplification of nucleic acids with super high efficiency and outstanding specificity, working at close to room temperature to generate pH shifts upon amplification to be analyzed by silicon nanowire-based Ion Sensitive Field Effect Transistors. This could pave the way for numerous future applications that would allow the actual realization of Point Of Care diagnostics.

Thank you for supporting the Bio-engineering field which would help humanity worldwide and help me take a tiny step forward towards making the world a better place.

Sincerely,

Loulia Kasem