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**Pharmaceutical Development Executive Summary**

**Fighting COVID-19 on the Frontlines**

**Faculty Experts:**

Tali Konry, Assistant Professor, Department of Pharmaceutical Sciences, Faculty, School of Pharmacy

Seth Cooper, Assistant Professor, Playable Innovative Technologies Lab

Sidi Bencherif, Assistant Professor, Chemical Engineering Department, Laboratory for Advanced and Multifunctional Polymeric Biomaterials

**Fundraising Contact:** Rob Silk, Associate Vice President, Corporate and Foundation Relations

The COVID-19 pandemic is overwhelming healthcare systems worldwide—and the pharmaceutical sciences play a critical, frontline role in stopping the spread of the virus by improving testing and developing treatments. Gifts to support scientific pharmaceutical research at Northeastern University during this unprecedented crisis will enable faculty members to shift their research efforts to address the issues we are currently facing because of the novel coronavirus:

Professor Sidi Bencherif has developed a biomaterial-based platform that could be leveraged for COVID-19 vaccine development. Bencherif’s strategy is based on an injectable biomaterial that is able to slowly release SARS-CoV-2 antigens and adjuvants, which are substances that enhance the body’s immune response to antigens. This technology has potential both to prevent and treat infections.

Professor Tali Konry and her colleagues are working to adapt ScanDrop, a microchip-based technology developed at Northeastern, to detect the novel coronavirus in a manner that will be cheaper, faster, and easier to use than anything currently available.

Professor Seth Cooper has developed Foldit, an online puzzle game that is helping him to crowdsource ideas for the folding of proteins. This virtual research on proteins can be used in COVID-related work to identify the right structure for a vaccine.

Northeastern’s pharmaceutical scientists are becoming increasingly recognized as frontrunners in developing reliable and robust testing, as well as in the design and delivery of innovative and effective treatments. By investing in our faculty researchers—and the discoveries that originate in their labs—we can support critical work during a challenging and pivotal time and change the course of this pandemic and future pandemics.