You are excited about how a cardiac catheter can treat a patient's heart during a minimal-invasive approach allowing the patient to recover within the following day? In close collaboration with our industrial and clinical partners, the Swiss Institute for Translational and Entrepreneurial Medicine (sitem-insel) at the University of Bern pursue a new approach for the development of a coronary balloon catheter. We are offering a funded PhD position with the possibility to work at the forefront of biomedical engineering on cutting-edge cardiovascular technologies.

**PhD Position in Biomedical Engineering (100%)**

**Tasks**
Current percutaneous transluminal coronary angioplasty (PTCA) catheters are highly sophisticated tools in the field of cardiovascular technologies. Constantly rising demands on the catheter's quality, reliability, performance and cost-effectiveness is increasingly challenging in the field of catheter development. To tackle these challenges, it is the goal to develop a new catheter design and investigate on new production methods within the next three years. In a scientific approach and in close collaboration with the industrial partner, the candidate will
- conceptualize a catheter design with respect to given requirements
- evaluate suitable manufacturing technologies and materials
- perform in-silico experiments to support the design and manufacturing phase of the catheter
- build physical prototypes
- develop and utilize mock experiments to test the catheter's features, structural integrity and performance

**Requirements**
You have a master's degree in Biomedical Engineering, Mechanical Engineering, Plastics Engineering or Microtechnology. A strong mechanical background will be preferred. You should be enthusiastic for conducting research on cardiovascular technologies and micro mechanical systems. Knowledge in plastic materials and manufacturing methods is an advantage. Interest in analytical and practical experimental work in close collaboration with engineers and physicians is a prerequisite. You are fluent in spoken and written English. German knowledge will be an advantage. You have an independent and self-motivated work style, good communication skills and strong team-working abilities.

**We offer**
A PhD position in an interdisciplinary and dynamic team of engineers and physicians, where creative and innovative work is highly appreciated. The position provides the opportunity for the candidate to be involved in the development of cutting-edge cardiovascular device technology. The PhD candidate will have the opportunity to present results at international conferences and renowned peer-reviewed journals. The position is fully funded for three years. The salary is according to the terms of the Swiss National Science Foundation (www.snf.ch). The position is available immediately; the starting date is negotiable.

**Kontakt**
We are looking forward to receiving your application including cover letter, CV and certificates via e-mail to Dr. Adrian Zurbuchen (University of Bern, Medical Faculty, sitem-insel, Schwarzerstrasse 56, 3007 Bern, adrian.zurbuchen@med.unibe.ch)