

# **BRACCO FELLOWSHIPS EDUCATION IN RESEARCH ENROLMENT FORM**

**Name of Institution**      Diagnostic and Interventional Radiology, University Hospital  
  
Zurich, University of Zurich

**City and Country of Institution**    Zurich, Switzerland\_\_\_\_\_

## **RESEARCH GROUP**

The fellow will have the opportunity to join an innovative, well-established, successful and interdisciplinary research team specialized in cardiovascular imaging including new technology (photon-counting detector CT). The inherent spectral capabilities of Photon-Counting Detector CT allow for new ways of data processing. Thus, based on contrast-enhanced scans, reconstruction of virtual noncontrast images may obviate the need for true noncontrast scans or virtual noncalcium images, virtually subtracting calcified plaques from the coronaries may enable a more precise stenosis quantification. In addition, the ultra high resolution mode enables imaging of high quality images of the coronary arteries and coronary plaques. The applicant is given the chance to collaborate on research projects to create evidence for the implementation of these techniques into routine clinical practice. Ethics committee approval is available. The ultimate goal of this fellowship is a participation in an original research article as coauthor.

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## **TITLE OF PROPOSED RESEARCH PROJECT**

**Cardiac Imaging with Photon-Counting Detector CT**

## **OBJECTIVES**

- Evaluate images reconstructed with advanced data processing techniques and assess their incremental benefit
  - Optimize patient comfort, valorize contrast material administration, and reduce radiation dose during cardiac scans
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### **APPLICANT'S DUTIES**

- Data acquisition with photon-counting detector CT
- Image reconstruction and analysis
- Clinical correlation
- Data interpretation
- Help in preparing a manuscript

### **APPLICANT'S BENEFITS**

- Participation on scientific outcomes of the project i.e. presentations to congresses or publications of papers.
  - Collaboration in research projects with Photon-Counting Detector CT
  - Joining a well-established research group
  - Structured daily clinical teaching in our institute
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- Project Leader: Prof. Dr. med. H. Alkadhi, MPH, EBCR, FESER
  - Members: PD Dr. med. M. Eberhard, Dr. med. V. Mergen