

### Masaryk University

<b>Faculty</b>	Faculty of Medicine
<b>Procedure field</b>	Internal Medicine
<b>Applicant</b>	MUDr. Zdeněk Stárek, Ph.D.
<b>Applicant's home unit, institution</b>	I. interní kardiologická klinika FN u sv. Anny v Brně
<b>Habilitation thesis</b>	Three-dimensional X-ray imaging methods in support of catheter ablation of cardiac arrhythmias

### Board members

<b>Chair</b>	prof. MUDr. Jindřich Špinar, CSc. <i>Faculty of Medicine, Masaryk University</i>
<b>Members</b>	doc. MUDr. Petr Pechl, Ph.D. <i>Klinika kardiologie, Institut klinické a experimentální medicíny (IKEM)</i> prof. MUDr. Miroslav Souček, CSc. <i>Faculty of Medicine, Masaryk University</i> doc. MUDr. Dan Wichterle, Ph.D. <i>II. interní klinika - klinika kardiologie a angiologie 1. LF UK a VFN</i> prof. dr hab. Wojciech Wojakowski <i>Śląski Uniwersytet Medyczny w Katowicach</i>

### Evaluation of the applicant's scholarly/artistic qualifications

MUDr. Zdeněk Stárek Ph.D., graduated from the Faculty of Medicine of Masaryk University in Brno, (study program: general medicine) in 1994. After graduation, he started his early career at the 1st Internal Cardio-angiology Clinic of the St Ann's University Hospital in Brno, Faculty of Medicine of Masaryk University Brno, where he still works today. He is head of the Department of Electrophysiology and Catheter Ablations of Arrhythmias of the 1st Internal Cardio-angiology Clinic from 1999 to the present.

His main clinical and research interests include invasive and non-invasive diagnostic and therapy of arrhythmias including the catheter ablations, and catheter ablations of non-arrhythmic cardiac diseases, currently ablations of hypertrophic obstructive cardiomyopathy. In June 2005, he gained his Ph.D. degree at the Faculty of Medicine, Masaryk University; the title of his dissertation thesis was: "Radiofrequency ablation of typical flutter using standard and irrigated catheters, early and medium-term results".

The sum of scholarly journal publications and citations exceeds the recommended habilitation standards of the Faculty of Medicine, Masaryk University. Currently, MUDr. Zdeněk Stárek, Ph.D. is the author of 23 scholarly articles based on international, national, and multidisciplinary collaboration in journals with a Web of Science (WoS) impact factor. In 11 of these publications, he is the first or corresponding author. The summary impact factor is 95. The current sum of citations of MUDr. Stárek's scholarly articles is 131 and the current H-index of the applicant is 7 (both according to WoS).

Currently, dr. Stárek is the recipient of two grants. He is co-recipient/co-investigator in the grant from the Czech Health Research Council of the Ministry of Health of the Czech Republic, and principal recipient/investigator in the grant from the Technology Agency of the Czech Republic. Dr. Stárek is the co-author of the two international patents.

**Conclusion:** The applicant's scholarly/artistic capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Internal Medicine.

### Evaluation of the applicant's pedagogical experience

Since 2012, MUDr. Zdeněk Stárek, Ph.D. participates in regular teaching of pregraduate students of the master's degree program in general medicine and dentistry at the Faculty of Medicine, Masaryk University. He works as an assistant professor and gives lectures in General Medicine: Catheter ablation of cardiac arrhythmias and Invasive diagnostic methods in cardiology (5th year of the master's degree program).

Regarding doctoral studies, MUDr. Stárek is a supervisor of two doctoral students in the field of Internal Medicine at the Faculty of Medicine, Masaryk University. Two doctoral students completed their studies under his supervision in recent years. Dr. Stárek is the author of two chapters in scholarly books.

**Conclusion:** The applicant's pedagogical capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Internal Medicine.

### Habilitation thesis evaluation

The applicant submitted a habilitation thesis entitled "Three-dimensional X-ray imaging methods in support of catheter ablation of cardiac arrhythmias." The habilitation thesis is composed of 11 previously published scholarly articles, of these ten are original articles and one is a review article. The articles are organized into 5 chapters according to aims.

Aim 1. To determine the variability of the anatomy of the atria of the heart and the detailed anatomical relationship between the left atrium and oesophagus.

Aim 2. To determine the effectiveness of using periprocedural three-dimensional rotational angiography (3DRA) imaging of the left atrium and oesophagus during catheter ablation of atrial fibrillation.

Aim 3. To determine the radiation exposure when imaging the left atrium using 3DRA and compare it with other imaging methods.

Aim 4. To determine the effectiveness of using periprocedural 3DRA imaging of the right and left ventricles of the heart during catheter ablation of ventricular arrhythmias.

Aim 5. To determine the variability of the position (mobility) of the oesophagus relative to the left atrium using computer tomography and 3DRA imaging in patients undergoing catheter ablation of atrial fibrillation.

The habilitation thesis was reviewed by three respected experts in the field of catheter ablation of cardiac arrhythmias. All reviewers agreed that the habilitation thesis of Dr. Stárek is written in a clear language, presents new knowledge in the field of nonpharmacological therapy of cardiac arrhythmias, and is of significant scientific value. Based on all of the three reviews, the presented habilitation thesis meets the standard requirements for habilitation theses in the field of Internal Medicine at the Faculty of Medicine, Masaryk University.

**Conclusion:** The applicant's habilitation thesis **meet** the requirements expected of habilitation theses in the field of Internal Medicine.

**Secret vote results**

Voting took place: electronically

Number of board members		5
Number of votes cast		5
of which	in favour	5
	against	0

**Board decision**

Based on the outcome of the secret vote and following an evaluation of the applicant's scholarly or artistic qualifications, pedagogical experience and habilitation thesis, the board hereby submits a proposal to the Scientific Board of the Faculty of Medicine of Masaryk University to **appoint the applicant associate professor** of Internal Medicine.

In Brno on 05.11.2021

prof. MUDr. Jindřich Špinar, CSc.

