

René Tio is a cardiologist with a broad clinical experience. He received his MD degree at the Erasmus University Rotterdam and earned his Ph.D. degree at the Department of Clinical Pharmacology of the University of Groningen (Thesis title: Bradykinin-dependent effects of ACE inhibitors on the heart). The clinical part of this research, carried out under guidance of Prof. Mancina at the hospital of the University of Milan, dealt with the effects of ACE inhibitors on the autonomic regulation of the coronary circulation.

After completing his training as a cardiologist, Dr. Tio was appointed to the staff of the Catheterization laboratory of the Thoraxcenter at the University Hospital Groningen, where he has worked as an interventional cardiologist for more than 10 years. At present he is member of the acute cardiac care team and involved in cardiovascular imaging.

As a clinical Postdoctoral Fellow in the dr. E. Dekker Program of the Netherlands Heart Foundation between 1995 and 1999, Dr. Tio studied the influence of the endothelium on coronary physiology and the relevance of endothelial dysfunction in patients with coronary artery disease. During this period, with support from the Interuniversity Cardiology Institute of the Netherlands, he was trained in molecular cardiology in the Experimental Cardiology Laboratory of Dr. J. Isner at St. Elizabeth Medical Center, Tufts University, Boston. There he studied the basic principles of angiogenic gene therapy in patients with endstage coronary heart disease. After this fellowship he started the first study on myocardial gene therapy for angiogenesis in Europe. His research field within cardiology is vascular function and failure with a focus on imaging.

At present he is active in Medical Education as lecturer as well as chairman of the task group for faculty development, chairman of the joint examination committee of the Medical and Dentistry curriculum and as project leader of a large curriculum renewal project at the King Faisal University at Al Ahsa, Saudi Arabia, and he is board member of the European Board of medical assessors (EBMA). He is former chairman of the Dutch working group on inter-university progress testing, and a former member of the education and training committee of the Acute Cardiac Care Association of the European Society of Cardiology. He was an active member of the project group International Bachelor in Medicine Groningen, which implemented a new completely English taught medical curriculum. In medical education his research interests lie in assessment, (cultural aspects of) curriculum renewal, faculty development and simulation training.

## Research publications, abstracts, workshops, and other activities in the field of medical education:

### Research publications, abstracts, workshops:

#### FULL PAPERS:

- 1: Wouter Kerdijk, Janke Cohen-Schotanus, Florentine (B F) Mulder, Friso L H Muntinghe, René A Tio. Cumulative versus end-of-course assessment: effects on self-study time and test performance. *Med Educ* 2015;49:709-716
- 2: Kerdijk W, Tio RA, Mulder BF, Cohen-Schotanus J. Cumulative assessment: strategic choices to influence students' study effort. *BMC Med Educ*. 2013 Dec 27;13:172. doi: 10.1186/1472-6920-13-172. PubMed PMID: 24370117; PubMed Central PMCID: PMC3880587.
- 3: Mehmood SI, Borleffs JC, Tio RA. Medical students in search of research? *Med Teach*. 2013 Oct;35(10):873-4. doi: 10.3109/0142159X.2013.786816. Epub 2013 Apr 22. PubMed PMID: 23607521.
- 4: Tio RA, Schutte B, Meiboom AA, Greidanus J, Dubois E, Bremers A. The Progress Test of Medicine: the Dutch experience. *Perspect Med Educ*. 2016 Feb;5(1):51-5. doi: 10.1007/s40037-015-0237-1.
- 5: Tio RA. Bindend studieadvies: Leg de lat hoog. *NED TIJDSCHR GENEESKD*. 2015;159: A9038
- 6: R.A. Tio, M.E. Stegmann, J. Koertsc, J. T.W.D.P. van Os, J Cohen-Schotanus. [Weak self-directed learning skills hamper performance in cumulative assessment](#). *Med Teach*. 2016 Jan 28:1-3.
- 7: J Dijkstra, M Latijnhouwers, AF Norbart, RA Tio. Assessing the “I” in group work: evidence, best practices, and recommendations. Accepted for *Medical Teacher*
- 8: Cecilio-Fernandes, D., Kerdijk, W., Jaarsma, D., Tio, R.A. Development of cognitive processes and metacognition: longitudinal analysis of progress test results. Accepted for *Medical Teacher*

#### ABSTRACTS/workshops:

##### NVMO 2016

Workshop: Het toetsen van klinisch redeneren. (A Norbart, M Vos, M Latijnhouwers, L van Bruggen, R Tio)

##### EBMA first annual meeting Exeter oktober 2016

Workshop: Have we made progress with progress testing. Tio, Krommenhoek, Bremers, van der Vleuten.

Abstract: The relation between relevance and psychometric properties. D Cecilio-Fernandes, C Collares, R.A. Tio

Abstract: Equalities and differences in the curricula of the Dutch Progress Test Consortium members.  
C Krommenhoek-van Es, A.J. Bremers, R.A. Tio

Symposium: Competency based education and assessment – pearls, controversies and challenges.; T  
Gale, D Jaarsma, I Curran, RA Tio

#### IAMSE 2016

Focusgroup session on: (Pre)Clinical Reasoning as Method to Activate Knowledge of Basic Sciences  
and to Integrate it with Clinical Science. Wybe Nieuwland, P. Nieboer, H. Dekker, and R.A. Tio

#### AMEE2015:

Medical students' basic and higher-order knowledge Development. D Cecilio-Fernandez, W Kerdijk,  
ADC Jaarsma, RA Tio.

Preliminary psychometric properties of a novel test designed to assess application of medical  
knowledge in European countries.

C Collares, A Freeman, L Southgate, R Tio A Camp, C van der Vleuten

#### AMEE2014:

Are scenario-based items associated with more omitted answers in progress testing?

C.F. Collares, A.M.M. Muijtjens, M.M. Verheggen, D. Cecilio-

Fernandes, R.A. Tio, C.P.M. van der Vleuten.

Computerized adaptive progress testing in the medical domain: A study of students' experiences.  
A.M. M. Muijtjens, J. Leppink, J.P.M. Van Berlo, A.A. Meiboom, R.A. Tio, T.J.H.M. Eggen.

#### Ottawa conference 2014:

The influence of spaced testing on test preparation time: a randomized controlled experiment. R Tio,  
W Kerdijk, J Cohen-Schotanus.

#### IAMSE 2013

Focusgroup session on: Progress testing. R Tio C van der Vleuten

#### NVMO 2013:

Introductie van een internationale bachelor geneeskunde in Groningen. Bos NA, Tio RA, Trigt AM van

### NVMO2012:

Het effect van het doorlopen van een coschap op disciplinespecifieke kennis gemeten met de voortgangstoets. Kerdijk W, Snoek JW, Tio RA, Stewart RE, Muijtjens AMM, Cohen-Schotanus J

De invloed van cumulatieve toetsing op het leren van de student. Kerdijk W, Cohen-Schotanus J, Tio RA, Mulder BF

### Ottawa conference 2012:

Personality traits and susceptibility to feedback during assessment

R.A. Tio, M.E. Stegmann, J. Koerts, J. T.W.D.P. van Os, J Cohen-Schotanus

### NVMO 2011:

De invloed van persoonlijkheidskenmerken op de prestatie in de situatie van cumulatief toetsen.

R.A. Tio, M.E. Stegmann, J. Koerts, J. T.W.D.P. van Os, J Cohen-Schotanus.

### **Book chapters:**

Cardiale ziektebeelden (hoofdstuk 2) P.P. van Geel, R.A. Tio, in Differentiele diagnostiek in de Interne Geneeskunde (5<sup>e</sup> herziene druk) onder redactie van J.W.F. Elte, D. Overbosch, R.O.B. Gans, M.O. van Aken.

Thorax (hoofdstuk 5). T.O.H. de Jongh, J. Iwema, R.A. Tio, G. Vonk Noordegraaf-Roseboom, A. Vonk Noordegraaf en E. de Jong. In Fysische diagnostiek onder redactie van drs. T.O.H. de Jongh, Dr. H.E.M. Daelmans, drs. M.J. Dekker, dr. W.L.M. Kramer, prof. dr. R. Remmen, drs. Ch.P.M. Verhoeff, drs. G.M. Verwijnen

### **Key note lectures**

The Progress Test of Medicine in the Netherlands - a summative test with formative characteristics. Jahrestagung der Gesellschaft für Medizinische Ausbildung (GMA) 26.09. - 28.09.2013, Graz, Österreich

### **Grants/external PhD's and postdocs**

- D. Cecilio-Fernandes PhD student via Science without Borders project (2014-2017)
- A.S. Khan via King Faisal University (2016-2020)
- M.A. Carvalho-Filho via University of Campinas (2017-2019)
- Innovation project 'Teaching for quality and leadership: a community of teachers Een learning community voor docenten' RUG innovatieproject (2016/2017)