GROEP BIOMEDISCHE WETENSCHAPPEN
DOCTORAL SCHOOL BIOMEDICAL SCIENCES
CAMPUS GASTHUISBERG
O & N2, BUS 700
HERESTRAAT 49
BE-3000 LEUVEN

Evaluation form PhD thesis

Please return by e-mail to peter.hoet@med.kuleuven.be before 17/12/2014

Name PhD student: Filip Bielejec

Title thesis: “Continous-time markov chain models for pathogen phylodynamics: model extension, simulation and visualisation”

Name referee: Geert Molenberghs

Evaluation score: please indicate in the table below your final score

	Decision		Implication
☐	Accepted without revision		Permission for public defense is granted immediately.
X	***Accepted with minor revision***	I **do not want to review** the revised version	Permission for public defense will be granted via e-mail procedure.
☐	Accepted with minor revision	I **want to review** the revised version	
☐	Major revision required		Decisions 4 and 5 need to be confirmed by a formal meeting of the examining committee (external members are exempted from attending, but will be consulted via e-mail)
☐	Not accepted	New version of manuscript has to be submitted	

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Evaluation

General Remarks:

The thesis presents a principled approach to modeling of pathogen phylodynamics. There is a lot of attention for medical and epidemiological background, for model formulation, for inference, and for user-friendly implementation of the methodology. The thesis is very nicely written. The author is a clear communicator. The tutorial style (with definitions, small digressions, pseudo-code, etc.) is very elegant and makes it both a pleasure to read and easy to digest.

It is very clear which parts are original contribution, and what is rather background and introductory material.

Not only the software development, also the tutorials in the appendices are very useful.

The thesis is strongly rooted in knowledge and insight available through the literature.

Major comments:

No major comments

Minor comments:

On page viii, it is suggested that likelihood 'formulates' models; this is slightly inaccurate: likelihood is used to fit models.

In terms of layout, the thesis very well done. However, at several occasions, words or formulae stick out → this should be rectified.

Avoid colloquial English style, such as "Let's" (→ Let us)