

# Towards the complete picture

## Citation for published version (APA):

Bohler, A. (2017). Towards the complete picture: combining modelling and experimental data in a systems biology approach. Maastricht: Proefschriftmaken.nl || Uitgeverij BOXPress. https://doi.org/10.26481/dis.20170216abd

Document status and date: Published: 01/01/2017

DOI: 10.26481/dis.20170216abd

**Document Version:** Publisher's PDF, also known as Version of record

## Please check the document version of this publication:

 A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.

• The final author version and the galley proof are versions of the publication after peer review.

 The final published version features the final layout of the paper including the volume, issue and page numbers.

Link to publication

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these riahts.

• Users may download and print one copy of any publication from the public portal for the purpose of private study or research.

You may not further distribute the material or use it for any profit-making activity or commercial gain
You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

#### Take down policy

If you believe that this document breaches copyright please contact us at: repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

- 1. Annotated interactions make pathway diagrams richer as repositories of information, and better tools for data analysis and visualization [chapter 2].
- 2. Automation increases reproducibility and makes tasks less error-prone and timeconsuming for the user [chapter 3].
- 3. Visualizing mathematical models, that describe biological processes, as pathway diagrams, can help to understand and improve them [chapter 5].
- 4. Combining transcriptomics and fluxomics data in pathway analysis helps to understand their relations [chapter 6].
- 5. For better communication and understanding, biologists and mathematicians should reconcile their models.
- 6. To allow the sum to be bigger than the parts you first need to see all the parts.
- 7. We should learn from video games how to teach users through example because manuals are rarely read.
- 8. The developed approaches will help biomedical researchers to better understand and visualize their data through integrating it with existing knowledge, and thereby develop better strategies to improve health. (valorization)
- 9. Wider adoption of open approaches will accelerate scientific advancement.
- 10. There are times in life when people must know when not to let go. Balloons are designed to teach small children this. (Terry Pratchett)