

University of Groningen

Topography-mediated myofiber formation and endothelial cell sprouting

Almonacid Suarez, A M

DOI:
[10.33612/diss.127414004](https://doi.org/10.33612/diss.127414004)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

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

Publication date:
2020

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
Almonacid Suarez, A. M. (2020). *Topography-mediated myofiber formation and endothelial cell sprouting*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen.
<https://doi.org/10.33612/diss.127414004>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Propositions

1. Alignment and sprouting depend on the size parameters of the underlying directional topography (this thesis).
2. Endothelial cells form migrating aggregates on flat or minimally sized topographies. On larger topographies these aggregates disintegrate into adherent single cells (this thesis).
3. Topography overrules (bio)chemical, durotactic and haptotactic cues of endothelial cells and myotubes (this thesis).
4. Myotubes align to linear directional topographies, irrespective of topography size (this thesis).
5. Topography enhances alignment of cells only above a critical minimal size threshold (this thesis).
6. Myotubes support attachment and alignment of endothelial cells but do not support formation of a vascular network *in vitro* (this thesis).
7. Accessory cells are needed to complete the vascularization process *in vitro* for muscle engineering (this thesis).
8. We need to observe and understand nature to recreate it. Evolution has solved many problems, and we just need to open our eyes to see these solutions.
9. Social distancing is showing us how we as individuals are more part of a society; much in the same way that cell types are part of the body. We do not exist without each other. Relationships are there but are not always visible.
10. Directional topographies are the scientist's way to create social distancing between cells.