University of Groningen

Salivary lubrication and xerostomia

Vinke, Jeroen

DOI:
[10.33612/diss.133408765](https://doi.org/10.33612/diss.133408765)

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):
Vinke, J. (2020). *Salivary lubrication and xerostomia*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.133408765>

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.

Salivary Lubrication and Xerostomia

Jeroen Vinke

This thesis was directly funded by the Graduate School of Medical Sciences (GSMS) of the University Medical Centre Groningen

Salivary Lubrication and Xerostomia

University Medical Center Groningen, University of Groningen
Groningen, The Netherlands

Copyright © 2020 by Jeroen Vinke
Cover Design: Robin Vinke
Print: Ridderprint | www.ridderprint.nl

**rijksuniversiteit
 groningen**

Salivary Lubrication and Xerostomia

Proefschrift

ter verkrijging van de graad van doctor aan de
Rijksuniversiteit Groningen
op gezag van de
rector magnificus prof. dr. C. Wijmenga
en volgens besluit van het College voor Promoties.

De openbare verdediging zal plaatsvinden op

woensdag 7 oktober 2020 om 11:00 uur

door

Jeroen Vinke

geboren op 10 september 1990
te Emmen

Promotors:

Prof. dr. H.C. van der Mei

Prof. dr. A. Vissink

Copromotor:

Dr. P.K. Sharma

Beoordelingscommissie:

Prof. dr. E.C.I. Veerman

Prof. dr. F.K.L. Spijkervet

Prof. dr. J. Chen

Paranimfen:

Hongping Wan

Felipe Orozco Gutiérrez

Table of Contents

Chapter 1	General introduction	9
Chapter 2	An <i>ex vivo</i> salivary lubrication system to mimic xerostomic conditions and to predict the lubricating properties of xerostomia relieving agents Jeroen Vinke, Hans J. Kaper, Arjan Vissink, Prashant K. Sharma Sci Rep. 2018 Jun 14;8(1):9087. doi: 10.1038/s41598-018-27380-7	21
Chapter 3	Lubricating properties of saliva from patients suffering from xerostomia Jeroen Vinke, Marijn Oude Elberink, Monique A. Stokman, Frans G.M. Kroese, Kamran Nazmi, Floris J. Bikker, Henny C. van der Mei, Arjan Vissink, Prashant K. Sharma Submitted	39
Chapter 4	Dry mouth: saliva substitutes which adsorb and modify existing salivary condition films improve oral lubrication Jeroen Vinke, Hans J. Kaper, Arjan Vissink, Prashant K. Sharma Clin Oral Investig. 2020 Apr 17. doi: 10.1007/s00784-020-03272-x. Online ahead of print	57
Chapter 5	Next generation salivary lubrication enhancer derived from recombinant supercharged polypeptides for xerostomia Hongping Wan, Chao Ma, Jeroen Vinke, Arjan Vissink, Andreas Hermann, Prashant K. Sharma ACS Applied Materials & Interfaces, 2020 May 28. doi: 10.1021/acsami.0c06159 Online ahead of print	75
Chapter 6	General discussion	103
	Summary	113
	Samenvatting	116
	Acknowledgements	121