

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/32849> holds various files of this Leiden University dissertation

**Author:** Kocatürk, Begüm

**Title:** Tissue factor isoforms in cancer and blood coagulation

**Issue Date:** 2015-04-29

# **TISSUE FACTOR ISOFORMS IN CANCER AND BLOOD COAGULATION**



# **Tissue Factor Isoforms in Cancer and Coagulation**

Proefschrift

ter verkrijging van

de graad van Doctor aan de Universiteit Leiden,

op gezag van Rector Magnificus prof.mr. C.J.J.M. Stolker,

volgens besluit van het College voor Promoties

te verdedigen op woensdag 29 april 2015

klokke 15:00 uur

door

**Begüm Kocatürk**

geboren te Ankara, Turkije

in 1986

## Promotiecommissie

Promoters: Prof. dr. P.H.Reitsma

Copromotor: Dr. H.H. Versteeg

Overige leden: Prof. dr. M.J. Goumans

Prof. dr. H. ten Cate (Maastricht Universiteit)

Dr. P.J.K. Kuppen

The research described in this thesis was financially supported by the Dutch Organisation for Scientific Research (NWO grant #17.106.329). The research was performed at Experimental Vascular Medicine, Department of Thrombosis and Hemostasis, Leiden University Medical Center, Leiden, The Netherlands.

Cover: Pelin Matbaa

©2015 by B. Kocatürk

ISBN: 978-94-6295-127-3

Published by: Uitgeverij BOXPress, 's-Hertogenbosch

For mom and dad



## **Table of Contents**

<b>Chapter 1 - General Introduction and Outline of the thesis</b>	9
<b>Chapter 2 -Tissue factor isoforms in cancer and coagulation: may the best isoform win</b>	29
<b>Chapter 3 - Complete abolition of coagulant activity in monomeric disulfide-deficient tissue factor</b>	51
<b>Chapter 4 - Tissue factor-integrin interactions in cancer and thrombosis: every Jack has his Jill</b>	57
<b>Chapter 5 - Alternatively spliced tissue factor promotes breast cancer growth in a <math>\beta 1</math> integrin-dependent manner.</b>	79
<b>Chapter 6 - Dual targeting of cancer cell-derived TF isoforms: a new approach to block breast cancer progression</b>	115
<b>Chapter 7 - Alternatively spliced Tissue Factor synergizes with estrogen receptor pathway to stimulate breast cancer progression</b>	129
<b>Chapter 8 - Orthotopic Injection of breast cancer cells into the mammary fat pad of mice to study tumor growth</b>	151
<b>Chapter 9 – General Discussion and Summary</b>	169
Nederlandse discussie en samenvatting	183
Publications	195
Dankwoord	197
Curriculum Vitae	199

