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5-ASA - colorectal cancer - cell death : an intriguing threesome

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Citation

Koelink, P. J. (2010, January 14). *5-ASA - colorectal cancer - cell death : an intriguing threesome*. Retrieved from <https://hdl.handle.net/1887/14563>

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5-ASA - Colorectal Cancer - Cell Death
an intriguing threesome

Pim J. Koelink

5-ASA – Colorectal Cancer – Cell Death, *an intriguing threesome*

Pim J. Koelink

Thesis, University of Leiden

ISBN: 978-90-9024813-4

On cover (photograph and design by Pim J. Koelink):

Photomicrograph of a colorectal cancer specimen stained for active caspase-3 (red) and M30 antigen (green). Overlapping expression of these proteins shown in yellow. Nuclear material stained by Dapi (blue). Original magnification 1000 x.

Printed by Gildeprint Drukkerijen BV, Enschede, The Netherlands

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The printing of this thesis was financially supported by the Section Experimental Gastroenterology (SEG) of the Netherlands society of Gastroenterology (NVGE), Ferring Pharmaceuticals, Dr. Falk Pharma, Tramedico BV and Peviva BV.

5-ASA - Colorectal Cancer - Cell Death *an intriguing threesome*

PROEFSCHRIFT

ter verkrijging van de graad van Doctor aan de Universiteit Leiden,

op gezag van Rector Magnificus Prof. mr. P.F. van der Heijden,

volgens besluit van het College voor Promoties

te verdedigen op donderdag 14 januari 2010

klokke 15.00 uur

door

Pim Johan Koelink

geboren te Woerden

in 1976

Promotiecommissie:

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Abbreviations

5-ASA	5-aminosalicylic acid
α -SMA	α -smooth muscle actin
ABC	avidin-biotin complex
ALK-5	activin-receptor-like-kinase-5
APC	adenomatous polyposis coli
BMP	bone morphogenetic protein
BSA	bovine serum albumin
caALK-5	constitutively active ALK-5
CD	Crohn's Disease
COX	cyclooxygenase
CRC	colorectal cancer
DMEM	Dulbecco's Modified Eagle Medium
DMSO	dimethyl sulfoxide;
ECM	extracellular matrix
FAP	familial adenomatous polyposis
FCS	fetal calf serum
GAPDH	glyceraldehyde phosphate dehydrogenase
GSK-3 β	glycogen synthase kinase-3 β
H&E	haematoxylin & eosin
HNPCC	hereditary-non-polyposis-colorectal cancer
HRP	horse-radish peroxidase
IBD	inflammatory bowel disease
MMP	matrix metalloproteinase
MMR	mismatch repair
MIS	microsatellite instability
NSAID	non-steroidal-anti-inflammatory-drugs
PAI-1	plasminogen activator inhibitor-1
PARP	poly (ADP-ribose) polymerase
PBS	phosphate buffered saline
PPAR γ	peroxisome proliferator-activated receptor- γ
RT	room temperature

SDS	sodium dodecyl sulphate
SP	sulphapyridine
TCF-4	T-cell factor-4
TGF- β	Transforming Growth Factor- β
TGF- β R	Transforming Growth Factor- β -Receptor
TUNEL	TdT-mediated dUTP-biotin nick end-labeling
UC	ulcerative colitis