

Contents

Part I General Overview

- 1 Nitric Oxide and Cancer: An Overview 3**
Robert Cheng, Lisa A. Ridnour, Sharon A. Glynn,
Christopher H. Switzer, Wilmarie Flores-Santana, Perwez
Hussain, Douglas D. Thomas, Stefan Ambs, Curtis C. Harris,
and David A. Wink

Part II Nitric Oxide and the Pathogenesis of Cancer

- 2 A Role for eNOS in Oncogenic Ras-Driven Cancer 23**
David F. Kashatus and Christopher M. Counter
- 3 Dual Role of Nitric Oxide in Cancer Biology 39**
Shehla Pervin, Rajan Singh, Suvajit Sen,
and Gautam Chaudhuri
- 4 Nitric Oxide Expression in Cancer 59**
Emanuela Masini, Fabio Cianchi, Rosanna Mastroianni,
and Salvatore Cuzzocrea

Part III Dual Roles of Nitric Oxide in Protecting or Inducing Cell Death

- 5 S-Nitrosylation – How Cancer Cells Say *NO* to Cell Death 85**
Anand Krishnan V. Iyer, Neelam Azad, Liying Wang,
and Yon Rojanasakul
- 6 Cytotoxic and Protective Activity of Nitric Oxide in Cancers 103**
Gen-Ichiro Soma, Chie Kohchi, and Hiroyuki Inagawa
- 7 Cytotoxic/Protective Activity of Nitric Oxide in Cancer 133**
Eun-Kyeong Jo, Hyun-Ock Pae, Yong Chul Lee,
and Hun-Taeg Chung
- 8 Nitric Oxide and Life or Death of Human Leukemia Cells 147**
J. Brice Weinberg

9	Inhibition of Apoptosis by Endogenous Nitric Oxide in Chronic Lymphocytic Leukaemia	169
	Christian Billard, Claire Quiney, and Jean-Pierre Kolb	
 Part IV Role of Nitric Oxide in Metastasis		
10	Nitric Oxide: A Rate-Limiting Factor for Metastases Development	189
	Angel Ortega, Salvador Mena, and José M. Estrela	
11	Nitric Oxide Inhibits Tumor Cell Metastasis via Dysregulation of the NF-κB/Snail/RKIP Loop	209
	Stavroula Baritaki and Benjamin Bonavida	
 Part V Nitric Oxide as a Sensitizing Agent for Chem-Radio-Immunotherapy		
12	Sensitizing Effect of Nitric Oxide to Cytotoxic Stimuli	237
	Peter Siesjö	
13	Nitric Oxide Is a Promising Enhancer for Cancer Therapy	253
	Marion Cortier, Lissbeth Leon, Néjia Sassi, Catherine Paul, Jean-François Jeannin, and Ali Bettaieb	
14	Role of Nitric Oxide for Modulation of Cancer Therapy Resistance	265
	Thomas Efferth	
15	Breaking Resistance: Role of Nitric Oxide in the Sensitization of Cancer Cells to Chemo- and immunotherapy	283
	Hermes J. Garbán	
 Part VI Prognostic Significance of NOS and NO		
16	Prognostic Significance of iNOS in Human Melanoma	293
	Suhendan Ekmekcioglu and Elizabeth A. Grimm	
17	Prognostic Significance of iNOS in Hepatocellular Carcinoma	309
	Rosa M. Pascale, M. Frau, and Francesco Feo	
18	Prognostic Significance of iNOS in Esophageal Cancer	329
	Manabu Matsumoto, Yuji Ohtsuki, and Mutsuo Furihata	
19	Prognostic Significance of Nitrative DNA Damage in Infection- and Inflammation-Related Carcinogenesis	341
	Yusuke Hiraku and Shosuke Kawanishi	

Part VII Therapeutic Applications of Nitric Oxide

20 Nitric Oxide-Releasing Molecules for Cancer Therapy and Chemoprevention	361
S. Anand and Gregory R.J. Thatcher	
21 Nitric Oxide: Monotherapy or Sensitiser to Conventional Cancer Treatments?	387
David G. Hirst and Tracy Robson	
22 Therapeutic Applications of Nitric Oxide for Malignant Tumor in Animal Models and Human Studies	419
Hiroyasu Yasuda, Kazuhiro Yanagihara, Katsutoshi Nakayama, Tadashi Mio, Takahiko Sasaki, Masanori Asada, Mutsuo Yamaya, and Masanori Fukushima	
23 (S,R)-3-Phenyl-4,5-dihydro-5-isoxazole acetic acid–Nitric Oxide (GIT-27NO) – New Dress for Nitric Oxide Mission	443
Sanja Mijatovic, Danijela Maksimovic-Ivanic, Marco Donia, Stanislava Stosic-Grujicic, Gianni Garotta, Yousef Al-Abed, and Ferdinando Nicoletti	
24 Nitric Oxide Donors Are a New Class of Anti-cancer Therapeutics for the Reversal of Resistance and Inhibition of Metastasis	459
Benjamin Bonavida, Stavroula Baritaki, Sara Huerta-Yepez, Mario I. Vega, Ali R. Jazirehi, and James Berenson	
25 Role of Inducible Nitric Oxide Synthase (iNOS) in Regulation of Nitric Oxide (NO) Production and Stabilization of HIF-1α: Potential Role of Se-Methylselenocysteine (MSC), an Antioxidant Multi-targeted Small Molecule	479
Sreenivasulu Chintala, Shousong Cao, and Youcef M. Rustum	
Subject Index	489



<http://www.springer.com/978-1-4419-1431-6>

Nitric Oxide (NO) and Cancer
Prognosis, Prevention, and Therapy
Bonavida, B. (Ed.)
2010, X, 250 p., Hardcover
ISBN: 978-1-4419-1431-6
A product of Humana Press