

Curriculum Vitae

Yon Rojanasakul, Ph.D.

West Virginia University
 Department of Pharmaceutical Sciences
 West Virginia University Cancer Institute
 P.O. Box 9530, Morgantown, WV 26506, USA
 Email: yrojan@hsc.wvu.edu
<http://directory.hsc.wvu.edu/Individual/Index/33529>

EDUCATION

University of Wisconsin-Madison	Ph.D.	1989	Pharmaceutical Sciences
Massachusetts College of Pharmacy & Health Sciences	M.S.	1984	Industrial Pharmacy
Mahidol University	B.S.	1982	Pharmacy

PROFESSIONAL EXPERIENCE

2000-pres Professor, Department of Pharmaceutical Sciences, West Virginia University

2020-pres Director, Developmental Therapeutics Division, Department of Pharmaceutical Sciences, West Virginia University

2011-pres Program Leader, Sara and James Allen Comprehensive Lung Cancer Program, Mary Babb Randolph Cancer Center, West Virginia University Cancer Institute

2017-pres Adjunct Professor, Department of Chemical and Biomedical Engineering, West Virginia University

1998-pres Guest Scientist, National Institute for Occupational Safety and Health, Morgantown

2012-pres Faculty Member, West Virginia Clinical and Translational Science Institute

2012-pres Faculty Member, Center for Cardiovascular and Respiratory Sciences, West Virginia University

2009-2015 Team Leader, WV NanoSAFE, West Virginia University

2011-2013 Assistant Director, Center for Drug Discovery and Therapeutics, West Virginia University

2009 Acting Chair, Department of Pharmaceutical Sciences, West Virginia University

2002 Visiting Professor, Burnham Institute, La Jolla, CA

1994-2000 Associate Professor, West Virginia University, Department of Pharmaceutical Sciences

1997 Visiting Professor, University of Pittsburgh, Department of Pharmacology

1989-1994 Assistant Professor, West Virginia University, Department of Pharmaceutical Sciences

1985-1989 Research Assistant, University of Wisconsin-Madison, Department of Pharmaceutical Sciences

1984-1985 Teaching Assistant, University of Wisconsin-Madison, Department of Pharmaceutical Sciences

1982-1984 Research Scientist, Pfeiffer Pharmaceuticals, Boston

AWARDS AND HONORS

1994-pres Outstanding Teacher Awards (ten times), West Virginia University, School of Pharmacy

2020 Douglas Glover Endowed Chair, West Virginia University, School of Pharmacy

2020 WVU Mountaineer Value Coin, West Virginia University

2011 Robert C. Byrd Distinguished Professor, West Virginia University

2009 Benedum Distinguished Scholar, West Virginia University

2007, 2014 Outstanding Researcher Awards, West Virginia University, School of Pharmacy

2013 Allen Meritorious Manuscript Award, Mary Babb Randolph Cancer Center

2011 Honorary Professor, Hebei United University, China

2002 Outstanding Alumnus Award, Mahidol University

2001 Fellow, American Association of Pharmaceutical Scientists

2000, 2019 Alice Hamilton Research Awards, NIOSH/CDC

- 1992 Young Investigator Award in Pharmaceutics and Pharmaceutical Technology, American Association of Pharmaceutical Scientists
- 1992 Leonard Gottlieb Award, West Virginia University, School of Pharmacy
- 1991 Research Investigation Award, Parenteral Drug Association
- 1990 Fellow, American Foundation for Pharmaceutical Education
- 1990 New Investigator Award, American Association of College of Pharmacy
- 1989 Outstanding Graduate Research Award in Drug Delivery and Pharmaceutical Technology, American Association of Pharmaceutical Scientists

PROFESSIONAL MEMBERSHIP

- American Association of Pharmaceutical Scientists
- American Association for Cancer Research
- Society of Toxicology
- American Society for Cell Biology
- Rho Chi Honor Society

RESEARCH INTERESTS

- **Biomedical Nanotechnology:** Nanomedicine, nanotoxicology, drug delivery and targeting
- **Cancer Cell Biology and Therapeutics:** Molecular carcinogenesis, cancer chemoresistance, cancer stem cells, tumor microenvironment
- **Free Radical Biology:** Oxidative and nitrosative stress signaling in cancer and fibrosis

PUBLICATIONS (a total of 280 articles in reverse chronological order)

<http://www.ncbi.nlm.nih.gov/sites/myncbi/yon.rojanasakul.1/bibliography/47207421/public/?sort=date&direction=ascending>

1. Lohcharoenkal W, Abbas Z, **Rojanasakul Y**. Advances in nanotechnology-based biosensing of immunoregulatory cytokines. *Biosensors* 11(10):364, 2021.
2. Coyle JP, Johnson C, Jensen J, Farcas M, Derk R, Stueckle TA, Kornberg TG, **Rojanasakul Y**, Rojanasakul LW. Variation in pentose phosphate pathway-associated metabolism dictates cytotoxicity outcomes determined by tetrazolium reduction assays. *Sci Rep*. 2022.
3. Samart P, Luanpitpong S, **Rojanasakul Y**, Issaragrisil S. O-GlcNAcylation homeostasis controlled by calcium influx channels regulates multiple myeloma dissemination. *J Exp Clin Cancer Res*. 40(1):100, 2021.
4. Li B, Tong T, Ren N, Rankin G, **Rojanasakul Y**, Tu Y, Chen YC. Theasaponin E1 inhibits platinum-resistant ovarian cancer cells through activating apoptosis and suppressing angiogenesis. *Molecules* 26(6):1681, 2021.
5. He Z, Liu X, Wu F, Wu S, Rankin G, Martinez I, **Rojanasakul Y**, Chen YC. Gallic acid induces S and G2 phase arrest and apoptosis in human ovarian cancer cells in vitro. *Appl. Sci*. 11(9): 3807, 2021.
6. Voronkova MA, Rojanasakul LW, Kiratipaiboon C, and **Rojanasakul Y**. SOX9-ALDH axis determines resistance to chemotherapy in non-small cell lung cancer. *Mol Cell Biol*. 40(2):e00307-19, 2020.
7. Kiratipaiboon C, Voronkova M, Ghosh R, Rojanasakul LW, Dinu CZ, Chen YC, and **Rojanasakul Y**. SOX2 mediates carbon nanotube-induced fibrogenesis and fibroblast stem cell acquisition. *ACS Biomater Sci Eng*. 6(9):5290-5304, 2020.

8. Heenatigala Palliyage G, Ghosh R, and **Rojanasakul Y**. Cancer chemoresistance and therapeutic strategies targeting tumor microenvironment. *Science Asia* 46: 1-11, 2020. doi: 10.2306/scienceasia1513-1874.2020.092
9. Lohcharoenkal W, Wang L, Stueckle TA, Park J, Tse W, Cerasela-Zoica Dinu CZ, and **Rojanasakul Y**. Role of H-Ras/ERK signaling in carbon nanotube-induced neoplastic-like transformation of human mesothelial cells. In: Przemyslaw Waliszewski, Editor. Prime Archives in Physiology. Hyderabad: Vide Leaf. 2020. doi: 10.37247/PAPhy.1.2020.4
10. Byrne-Hoffman C, Deng W, McGrath O, Wang P, **Rojanasakul Y**, and Klink DJ. Interleukin-12 elicits a non-canonical response in B16 melanoma cells to enhance survival. *Cell Comm Signaling* 18(1):78 2020.
11. Luanpitpong S, Rodboon N, Samart P, Vinayanuwattikun C, Klamkhilai S, Chanvorachote P, **Rojanasakul Y**, and Issaragrisil S. A novel TRPM7/O-GlcNAc axis mediates tumor cell motility and metastasis by stabilizing c-Myc and caveolin-1 in lung carcinoma. *British J Cancer* 123:1289-1301, 2020.
12. Coyle JP, Derk R, Kornberg T, Friend S, Mercer R, Singh D, Stueckle T, Demokritou P, **Rojanasakul Y**, and Rojanasakul LW. Carbon nanotube filler enhances incinerated thermoplastics-induced cytotoxicity and metabolic disruption in vitro. *Particle Fibre Toxicol.* 17:40, 2020.
13. Eldawud R, Wagner A, Dong C, Gupta N, **Rojanasakul Y**, O'Doherty G, Stueckle TA, and Dinu CZ. Potential antitumor activity of digitoxin and user-designed analog administered to human lung cancer cells. *Biochim Biophys Acta* 1864:129683, 2020.
14. Tu Y, Chen L, Ren N, Li B, Wu Y, Rakin G, **Rojanasakul Y**, Wang Y, and Chen YC. Standardized saponin extract from Baiye no.1 tea (*Camellia sinensis*) flowers induced S phase cell cycle arrest and apoptosis via AKT-MDM2-p53 signaling pathway in ovarian cancer cell. *Molecules* 25:3515, 2020.
15. Kiratipaiboon C, Stueckle TA, Ghosh R, Rojanasakul LW, Chen YC, Dinu CZ, and **Rojanasakul Y**. Acquisition of cancer stem cell-like properties in human small airway epithelial cells after a long-term exposure to carbon nanomaterials. *Environ Sci: Nano*, 6:2152-2170, 2019.
16. Stueckle T, White A, Wagner A, Gupta R, **Rojanasakul Y**, and Dinu CZ. Impacts of Organomodified nanoclays and their incinerated byproducts on bronchial cell monolayer integrity. *Chem Res Toxicol.* 32(12):2445-2458, 2019.
17. Kornberg TG, Stueckle TA, Coyle J, Derk R, Demokritou P, **Rojanasakul Y**, and Rojanasakul LW. Iron oxide nanoparticle-induced neoplastic-like cell transformation *in vitro* is reduced with protective amorphous silica coating. *Chem Res Toxicol.* 32(12):2382-2397, 2019.
18. Wang K, Shi L, Linthicum W, Man K, He X, Wen Q, Wang L, **Rojanasakul Y**, and Yang Y. Substrate stiffness-dependent carbon nanotubes-induced lung fibrogenesis. *Nano Lett.* 19(8):5443-5451, 2019.
19. Ghosh R and **Rojanasakul Y**. Evaluating carcinogenic potential of carbon nanomaterials. In: Characterization tools for nanotechnology for environment, health and safety. Springer 10:103-144, 2019.
20. Wagner A, Liu Q, Rose O, Eden A, Vijay A, **Rojanasakul Y**, and Dinu CZ. Toxicity screening of two prevalent metal organic frameworks for therapeutic use in human lung epithelial cells. *Inter J Nanomedicine* 14:7583-7591, 2019.
21. He X, Kiratipaiboon C, Porter DW, Rojanasakul LW, Dinu CZ, Wang K, Yang Y, and **Rojanasakul Y**. Predicting nanotube fibrogenicity through stem cell-mediated fibroblast focus and spheroid formation. *Nano Lett.* 18(10):6500-6508, 2018.

22. Luanpitpong L, Poohadsuan J, Samart P, Kiratipaiboon C, **Rojanasakul Y**, and Issaragrisil S. Reactive oxygen species mediate cancer stem-like cells and determine bortezomib sensitivity via Mcl-1 and Zeb-1 in mantle cell lymphoma. *Biochim Biophys Acta*, 1864(11):3739-3753, 2018.
23. Wagner A, White AP, Tang MC, Agarwal S, Stueckle TA, **Rojanasakul Y**, Gupta RK, and Dinu CZ. Incineration of nanoclay composites leads to byproducts with reduced cellular reactivity. *Sci Rep*. 8(1):10709, 2018.
24. Luanpitpong S, Chanthra N, Janan M, Poohadsuan J, Samart P, U-Pratya Y, **Rojanasakul Y**, and Issaragrisil S. Inhibition of O-GlcNAcase sensitizes apoptosis and reverses bortezomib resistance in mantle cell lymphoma through modification of truncated Bid. *Mol Cancer Ther*. 17(2):484-496, 2018.
25. Maiuthed A, Bhummaphan N, Luanpitpong S, Mutirangura A, Apornthewan C, Meeprasert A, Rungrotmongkol T, **Rojanasakul Y**, and Chanvorachote P. Nitric oxide promotes cancer cell dedifferentiation by disrupting an Oct4: caveolin-1 complex: A new regulatory mechanism for cancer stem cell formation. *J Biol Chem*. 293(35):13534-13552, 2018.
26. Stueckle TA, Davidson DC, Derk R, Kornberg TG, Battelli L, Friend S, Orandle MS, Wagner A, Dinu CZ, Sierros K, Agarwal S, Gupta R, **Rojanasakul Y**, Porter DW, and Rojanasakul L. Short-term pulmonary toxicity assessment of pre- and post-incinerated organomodified nanoclay in C57BL/6 mice. *ACS Nano*. 12(3):2292-2310, 2018.
27. Pan H, Kim E, Rankin GO, **Rojanasakul Y**, Tu Y, and Chen YC. Theaflavin-3, 3'-digallate inhibits ovarian cancer stem cells via suppressing Wnt/ β -catenin signaling pathway. *J Funct Foods* 50:1-7, 2018.
28. Zhang Y, Chen S, Wei C, Rankin GO, **Rojanasakul Y**, Ren N, Ye X, and Chen YC. Dietary compound proanthocyanidins from Chinese bayberry (*Myrica rubra* Sieb. et Zucc.) leaves inhibit angiogenesis and regulate cell cycle of cisplatin-resistant ovarian cancer cells via targeting Akt pathway. *J Funct Foods* 40: 573-581, 2018.
29. Pan H, Kim E, Rankin GO, **Rojanasakul Y**, Tu Y and Chen YC. Theaflavin-3, 3'-digallate enhances the inhibitory effect of cisplatin via regulating the copper transporter 1 and glutathione in cisplatin resistant ovarian cancer cells. *Intern J Mol Sci*. 19(1):E117, 2018.
30. Pan H, Li J, Rankin GO, **Rojanasakul Y**, Tu Y, and Chen YC. Synergistic effect of black tea polyphenol, theaflavin-3,3'-digallate with cisplatin against cisplatin resistant human ovarian cancer cells. *J Funct Foods* 46:1-11, 2018.
31. Manke A, Rojanasakul L, and **Rojanasakul Y**. Mechanisms underlying the fibrogenic responses of carbon nanotubes. *In: Advances in molecular toxicology*, Fishbein JC and Heilman JM (Eds.), Elsevier, 12:47-68, 2018.
32. Eldawud R, Wagner A, Dong C, Stueckle TA, **Rojanasakul Y**, and Dinu CZ. Carbon nanotubes physicochemical properties direct the overall cellular behavior and fate. *Nano Impact* 9:72-84, 2018.
33. Voronkova MA, Luanpitpong S, Wang L, Castranova V, Dinu CZ, Riedel H, and **Rojanasakul Y**. SOX9 regulates cancer stem-like properties and metastatic potential of single-walled carbon nanotube-exposed cells. *Sci Rep*. 7(1):11653, 2017.
34. He X, Wang L, Riedel H, Wang K, Yang Y, Dinu CZ, and **Rojanasakul Y**. Mesothelin promotes epithelial-to-mesenchymal transition and tumorigenicity of human lung cancer and mesothelioma cells. *Mol Cancer* 16(1):63, 2017.

35. Wang P, Voronkova M, Luanpitpong S, He X, Riedel H, Dinu CZ, Wang L, and **Rojanasakul Y**. Induction of Slug by chronic exposure to single-walled carbon nanotubes promotes tumor formation and metastasis. *Chem Res Toxicol*. 30(7):1396-1405, 2017.
36. Powan P, Luanpitpong S, He X, **Rojanasakul Y**, and Chanvorachote P. Detachment-induced E-cadherin expression promotes 3D tumor spheroid formation but inhibits tumor formation and metastasis of lung cancer cells. *Am J Physiol Cell Physiol*. 313(5):C556-C566, 2017.
37. Stueckle TA, Davidson DC, Derk R, Wang P, Friend S, Schwegler-Berry D, Peng Z, Wu N, Castranova V, **Rojanasakul Y**, and Wang L. Effect of surface functionalizations of multi-walled carbon nanotubes on neoplastic transformation potential in primary human lung epithelial cells. *Nanotoxicology*. 11(5):613-624, 2017.
38. Wagner A, White A, Stueckle TA, Banerjee D, Sierros K, **Rojanasakul Y**, Agarwal S, Gupta RK, and Dinu CZ. Early assessment and correlations of inhalation toxicity with nanoclays physical and chemical properties. *ACS Appl Mat Interf*. 9(37):32323-32335, 2017.
39. Wang K, He X, Linthicum W, Mezan R, Wang L, **Rojanasakul Y**, Wen Q, and Yang Y. Carbon nanotubes induced fibrogenesis on nanostructured substrates. *Environ Sci Nano* 4(3):689-699, 2017.
40. Kornberg TG, Stueckle TA, Antonini JA, **Rojanasakul Y**, Castranova V, Yang Y, and Wang L. Potential toxicity and underlying mechanisms associated with pulmonary exposure to iron oxide nanoparticles: conflicting literature and unclear risk. *Nanomaterials* 7(10): pii: E307, 2017.
41. Pan H, Wang F, Rankin G, **Rojanasakul Y**, Tu Y, and Chen YC. Inhibitory effect of black tea pigments, theaflavin-3/3'-gallate against cisplatin-resistant ovarian cancer cells by inducing apoptosis and G1 cell cycle arrest. *Inter J Oncol*. 51:1508-1520, 2017.
42. Wagner A, Eldawud R, White A, Agarwal S, Stueckle TA, Sierros KA, **Rojanasakul Y**, Gupta RK, and Dinu CZ. Toxicity evaluations of nanoclays and thermally degraded byproducts through spectroscopical and microscopical approaches. *Biochim Biophys Acta* 1861:3406-3415, 2017.
43. Stueckle TA, Davidson DC, Derk R, Kornberg TG, Schwegler-Berry D, Pirella SV, Deloid G, Demokritou P, Luanpitpong S, **Rojanasakul Y**, and Wang L. Evaluation of tumorigenic potential of CeO₂ and Fe₂O₃ engineered nanoparticles by a rapid *in vitro* screening model. *Nano Impact* 6:39-54, 2017.
44. Wang Y, Compton C, Rankin GO, Cutler SJ, **Rojanasakul Y**, Tu Y, and Chen YC. 3-Hydroxyterphenyllin, a natural fungal metabolite, induces apoptosis and S phase arrest in human ovarian carcinoma cells. *Inter J Oncol*. 50:1392-1402, 2017.
45. Wang Y, Ren N, Rankin GO, Li B, **Rojanasakul Y**, Tu Y, and Chen YC. Anti-proliferative effect and cell cycle arrest induced by saponins extracted from tea (*Camellia sinensis*) flower in human ovarian cancer cells. *J Funct Foods* 37:310-321, 2017.
46. Armstead AL, Simoes T, Wang X, Brydson R, Brown AP, Jiang B, **Rojanasakul Y**, and Li B. Toxicity and oxidative stress responses induced by nano- and micro-CoCrMo particles. *J Mater Chem B*, 5:5648-5657, 2017.
47. Kaushik V, Yakisich JS, Azad N, Kulkarni Y, Venkatadri R, Wright C, **Rojanasakul Y**, Iyer AK. Anti-tumor effects of cardiac glycosides on human lung cancer cells and lung tumor spheres. *J Cell Physiol*. 232(9):2497-2507, 2017.
48. Manke A, Luanpitpong S, Wang L, and **Rojanasakul Y**. Role of nitric oxide in cancer stem cell regulation and metastasis. *In: Cancer Sensitizing Agents for Chemotherapy*. Bonavida B (ed.), Academic Press, p.179-190, 2017. ISBN: 978-0-12-811020-1

49. Luanpitpong S, Li J, Manke A, Brundage K, Ellis E, McLaughlin SL, Angsutararux P, Chanthra N, Voronkova M, Chen YC, Wang L, Chanvorachote P, Pei M, Issaragrisil S, and **Rojanasakul Y**. SLUG is required for SOX9 stabilization and functions to promote cancer stem cells and metastasis in human lung carcinoma. *Oncogene* 35(22):2824-2833, 2016.
50. Luanpitpong S, Wang L, Castranova V, Dinu CZ, Issaragrisil S, Chen YC, and **Rojanasakul Y**. Induction of cancer-associated fibroblasts by carbon nanotubes dictates its tumorigenicity. *Sci Rep*. 6:39558, 2016.
51. He X, Despeaux E, Stueckle TA, Chi A, Castranova V, Dinu CZ, Wang L, and **Rojanasakul Y**. Role of mesothelin in carbon nanotube-induced carcinogenic transformation of human bronchial epithelial cells. *Am J Physiol Lung Cell Mol Physiol*. 311(3):L538-549, 2016.
52. Luanpitpong S, Wang L, Davidson DC, Riedel H, and **Rojanasakul Y**. Carcinogenic potential of high aspect ratio carbon nanomaterials. *Environ Sci Nano* 3(3):483-493, 2016.
53. Davidson DC, Derk R, He X, Stueckle TA, Cohen J, Pirela SV, Demokritou P, **Rojanasakul Y**, and Wang L. Direct stimulation of human fibroblasts by nCeO₂ *in vitro* is attenuated with an amorphous silica coating. *Part Fibre Toxicol*. 13(1):23, 2016.
54. Wang K, Bruce A, Mezan R, Kadiyala A, Wang L, Dawson J, **Rojanasakul Y**, and Yang Y. Nanotopographical modulation of cell function through nuclear deformation. *ACS Appl Mater Interf*. 8(8):5082-5092, 2016.
55. Chi A, Wen S, Monga M, Almubarak M, He X, **Rojanasakul Y**, Tse W, and Remick SC. Definitive upfront stereotactic ablative radiotherapy combined with image-guided, intensity modulated radiotherapy (IG-IMRT) or IG-IMRT alone for locally advanced non-small cell lung cancer. *PLoS One* 11(9):e0162453, 2016.
56. He Z, Chen AY, **Rojanasakul Y**, Rankin GO, and Chen YC. Gallic acid, a phenolic compound, exerts anti-angiogenic effects via the PTEN/AKT/HIF-1 α /VEGF signaling pathway in ovarian cancer cells. *Oncol Rep*. 35(1):291-297, 2016.
57. Eldawud R, Reitzig M, Opitz J, **Rojanasakul Y**, Jiang W, Shikha N, and Dinu C. Combinatorial approaches to evaluate nanodiamonds uptake and induced cellular fate. *Nanotechnology* 27:085107, 2016.
58. Kulkarni YM, Kaushik V, Azad N, Wright C, **Rojanasakul Y**, O'Doherty G, and Iyer AK. Autophagy-induced apoptosis in lung cancer cells by a novel digitoxin analog. *J Cell Physiol*. 231(4):817-828, 2016.
59. Wright C, Iyer AK, Wang L, Wu N, Yakisich JS, **Rojanasakul Y**, and Azad N. Effects of titanium dioxide nanoparticles on human keratinocytes. *Drug Chem Toxicol*. 40(1):90-100, 2017.
60. Wang L, Davidson DC, Castranova V, and **Rojanasakul Y**. Pulmonary effects of carbon nanomaterials. *In: Biomedical Applications and Toxicology of Carbon Nanomaterials*. Chen C, Wang H (eds.), Wiley-VCH Publisher, Weinheim, Germany, 2016. doi: 10.1002/9783527692866.ch6
61. Stueckle TA, Sargent L, **Rojanasakul Y**, and Wang L. Genotoxicity and carcinogenic potential of carbon nanomaterials. *In: Biomedical Applications and Toxicology of Carbon nanomaterials*. Chen C, Wang H (eds.), Wiley-VCH Publisher, Weinheim, Germany, 2016, doi: 10.1002/9783527692866.ch10
62. Pongrakhananon V, Luanpitpong S, Stueckle TA, Wang L, Nimmannit U, and **Rojanasakul Y**. Carbon nanotubes induce apoptosis resistance of human lung epithelial cells through FLICE-inhibitory protein. *Toxicol Sci*. 143(2):499-511, 2015.

63. He X, Wang L, Castranova V, and **Rojanasakul Y**. Single-walled carbon nanotubes: Toxicity and toxicity assessment. *Encyclo Nanosci Nanotech*. doi: 10.1081/E-ENN3-120053545, 2015
64. Luanpitpong S and **Rojanasakul Y**. The emerging role of protein S-nitrosylation in cancer metastasis. *In: Nitric oxide and cancer: Pathogenesis and treatment*. Bonavida B (ed.), Springer, New York, p. 111-125, 2015. ISBN 9783319136103
65. Mishra A, Stueckle TA, Mercer RR, Derk R, **Rojanasakul Y**, Castranova V, and Wang L. Identification of TGF- β receptor-1 as a key regulator of carbon nanotube-induced fibrogenesis. *Am J Physiol Lung Cell Mol Physiol*. 309(8):L821-833, 2015.
66. Iyer AK, Ramesh V, Castro CA, Kaushik V, Kulkarni YM, Wright CA, Venkatadri R, **Rojanasakul Y**, and Azad N. Nitric oxide mediates bleomycin-induced angiogenesis and pulmonary fibrosis via regulation of VEGF. *J Cell Biochem*. 116(11):2484-2493, 2015.
67. Park J, Schleder M, Schreiber M, Ice R, Merkel O, Bilban M, Hofbauer S, Kim S, Addison J, Zou J, Ji C, Bunting S, Wang Z, Shoham M, Huang G, Bago-Horvath Z, Gibson LF, **Rojanasakul Y**, Remick S, Ivanov A, Pugacheva EN, Bunting KD, Moriggl R, Kenner L, and Tse W. AF1q is a novel TCF7 co-factor which activates CD44 and promotes breast cancer metastasis. *Oncotarget* 6(24):20697-20710, 2015.
68. Narayanan KB, Ali M, Barclay BJ, Cheng Q, D'Abronzio L, Dornetshuber-Fleiss R, Ghosh PM, Gonzalez Guzman MJ, Lee TJ, Leung PS, Li L, Luanpitpong S, Ratovitski E, **Rojanasakul Y**, et al. Disruptive environmental chemicals and cellular mechanisms that confer resistance to cell death. *Carcinogenesis* 36(S1):S89-S110, 2015.
69. Eldawud R, Wagner A, Dong C, **Rojanasakul Y**, and Dinu CZ Electronic platform to assess toxicity of carbon nanotubes and the associated cellular behavior in real-time. *Biosensors & Bioelectronics* 71:269-277, 2015.
70. Huang H, Chen AY, **Rojanasakul Y**, Ye X, Rankin GO, and Chen YC. Dietary compounds galangin and myricetin suppress ovarian cancer cell angiogenesis. *J Funct Foods*, 15:464-475, 2015.
71. Chen J, Chen AY, Huang H, Ye X, Rollyson WD, Perry HE, Brown KC, **Rojanasakul Y**, Rankin GO, Dasgupta P, and Chen YC. The flavonoid nobiletin inhibits tumor growth and angiogenesis of ovarian cancers via the Akt pathway. *Int J Oncol*. 46:2629-2638, 2015.
72. Dong C, Eldawud R, Sargent LM, Kashon ML, Lowry D, **Rojanasakul Y**, and Dinu CZ Carbon nanotube uptake changes the biomechanical properties of human lung epithelial cells in a time-dependent manner. *J Mat Chem B Mater Biol Med*, 3:3983-3992, 2015.
73. He Z, LI B, Rankin GO, **Rojanasakul Y**, and Chen YC. Selecting bioactive phenolic compounds as potential agents to inhibit proliferation and VEGF expression in human ovarian cancer cells. *Oncol Lett*. 9:1444-1450, 2015.
74. Yongsanguanchai N, Pongrakhananon V, Mutirangura A, Apornthewan C, **Rojanasakul Y**, and Chanvorachote P. Nitric oxide induces cancer stem cell-like phenotypes in human lung cancer cells. *Am J Physiol*. 308(2):C89-C100, 2015.
75. Zhang H, Lohcharoenkal W, Jianbo S, Wang L, Wu N, **Rojanasakul Y**, and Liu Y. Microfluidic gradient device for studying mesothelial cell migration and the effect of chronic carbon nanotube exposure. *J Micromech. Microeng*. 25(7) pii: 075010, 2015.

76. Huang H, Chen AY, Ye X, Li B, **Rojanasakul Y**, Rankin GO, and Chen YC. Myricetin inhibits proliferation of cisplatin-resistant cancer cells through a p53-dependent apoptotic pathway. *Int J Oncol.* 47:1494-1502, 2015.
77. Derk R, Davidson DC, Manke A, Stueckle TA, Demokritou P, **Rojanasakul Y**, and Wang L. Potential *in vitro* model for testing the effect of exposure to nanoparticles on the lung alveolar epithelial barrier. *Sens Biosensing Res.* 3:38-45, 2015.
78. Chen D, Luanpitpong S, Stueckle T, **Rojanasakul Y**, Lu Y, and Wang L. Gene expression profile of human lung epithelial cells chronically exposed to single walled-carbon nanotubes. *Nano Res Lett.* 10:12, 2015. doi:10.1186/s11671-014-0707-0.
79. Goodson WH, Lowe L, Carpenter DO, Gilbertson M, et al. Assessing the carcinogenic potential of low-dose exposures to chemical mixtures in the environment: the challenge ahead. *Carcinogenesis* 36 (S1):S254-296, 2015.
80. Li B, Rankin GO, **Rojanasakul Y**, Cutler SJ, Tu Y, and Chen YC. Chaetoglobosin K induces apoptosis and G2 cell cycle arrest through p53-dependent pathway in cisplatin-resistant ovarian cancer cells. *Cancer Lett.* 356:418-433, 2015.
81. Luanpitpong S, Wang L, Manke A, Castranova V, Yang Y, Martin K, Ammer A, and **Rojanasakul Y**. Induction of stem-like cells with fibrogenic properties by carbon nanotubes and its role in fibrogenesis. *Nano Lett.* 14(6):3110-3116, 2014. <http://dx.doi.org/10.1021/nl5002026>, 2014.
82. Talbott SJ, Luanpitpong S, Stehlik C, Wang L, Azad N, Iyer AKV, and **Rojanasakul Y**. S-nitrosylation of FLICE inhibitory protein determines its interaction with RIP-1 and activation of NF- κ B. *Cell Cycle.* 13(12):1948-1957, 2014.
83. Wang L, Stueckle TA, Mishra A, Derk R, Meighan T, Castranova V, and **Rojanasakul Y**. Neoplastic-like transformation effect of single-walled and multi-walled carbon nanotubes compared to asbestos on human lung small airway epithelial cells. *Nanotoxicology* 8:485-507, 2014.
84. Luanpitpong S, Wang L, Castranova V, and **Rojanasakul Y**. Induction of stem-like cells with malignant properties by chronic exposure of human lung epithelial cells to single-walled carbon nanotubes. *Part Fibre Toxicol.* 11(1):22, 2014.
85. Lohcharoenkal W, Wang L, Stueckle TA, Park J, Tse W, Dinu CZ, and **Rojanasakul Y**. Role of H-Ras/ERK signaling in carbon nanotube-induced neoplastic transformation of human mesothelial cells. *Front Physiol.* 5:222, 2014.
86. Manke A, Luanpitpong S, Dong C, Wang L, He X, Batteli L, Derk R, Stueckle TA, Porter D, Sager T, Gou H, Dinu CZ, Wu N, Mercer R, and **Rojanasakul Y**. Effect of fiber length on carbon nanotube-induced fibrogenesis. *Int J Mol Sci.* 15:7444-7461, 2014.
87. Luanpitpong S, Wang L, Stueckle TA, Tse W, Chen YC, and **Rojanasakul Y**. Caveolin-1 regulates lung cancer stem-like cell induction and p53 inactivation in carbon nanotube-driven tumorigenesis. *Oncotarget* 5(11):3541-3554, 2014.
88. Luanpitpong S, Chen M, Knuckles T, Wen S, Luo J, Ellis E, Hendryx M, and **Rojanasakul Y**. Appalachian mountaintop mining particulate matter induces neoplastic transformation of human lung epithelial cells and promotes tumor formation. *ACS Environ Sci Tech.* 48(21):12912-12919, 2014.
89. Chi A, Yu J, **Rojanasakul Y**, Monga M, Tse W, and Remick S. Acquired resistance to EGFR inhibition in non-small cell lung cancer. *Minerva Pneumol.* 53:9-14, 2014.

90. Pongrakhannon V, Stueckle TA, Wang HY, O'Doherty GA, Dinu CZ, Chanvorachote P, and **Rojanasakul Y**. Monosaccharide digitoxin derivatives sensitize human non-small cell lung cancer cells to anoikis through Mcl-1 proteasomal degradation. *Biochem Pharmacol*. 88:23-35, 2014.
91. Lohcharoenkal W, Wang L, Chen YC, and **Rojanasakul Y**. Protein nanoparticles as drug delivery carriers for cancer therapy. *BioMed Res Int*. 2014:180549, 2014.
92. Luanpitpong S, Wang L, and **Rojanasakul Y**. The effects of carbon nanotubes on lung and dermal cellular behaviors. *Nanomedicine* 9(6):895-912, 2014.
93. Lohcharoenkal W, Liu Y, Wang L, Yang Y, and **Rojanasakul Y**. Luciferase reporter cells as a platform to detect SMAD-1 dependent collagen production. *J Biosci Bioeng*. 118(6):732-735, 2014.
94. Manke A, Luanpitpong S, and **Rojanasakul Y**. Potential occupational risks associated with pulmonary toxicity of carbon nanotubes. *Occup Med Health Affairs*, 2(3):1000165, 2014.
95. Dong C, Eldawud R, Sargent LM, Kashon ML, Lowry D, **Rojanasakul Y**, and Dinu CZ. Towards elucidating the effects of purified MWCNTs on human lung epithelial cells, *ES Nano* 1(6):95-603, 2014.
96. Eldawud R, Stueckle TA, Manivannan S, Elbaz H, **Rojanasakul Y**, and Dinu CZ. Real time analysis of the effects of toxic, therapeutic and sub-therapeutic concentrations of digitoxin on lung cancer cells. *Biosens Bioelectron*. 59C:192-199, 2014.
97. Iyer AKV, **Rojanasakul Y**, and Azad N. Nitrosothiol signaling and protein nitrosation in cell death and survival. *Nitric Oxide* 42C: 9-18, 2014.
98. Lohcharoenkal W, Wang L, Stueckle T, Dinu CZ, Castranova V, Liu Y, and **Rojanasakul Y**. Chronic exposure to carbon nanotubes induces invasion of human mesothelial cells through matrix metalloproteinase-2. *ACS Nano*, 7(9):7711-7723, 2013.
99. Luanpitpong S, Chanvorachote P, Stehlik C, Tse W, Callery PS, Wang L, and **Rojanasakul Y**. Regulation of apoptosis by Bcl-2 cysteine oxidation in human lung epithelial cells. *Mol Biol Cell*. 24(6):858-869, 2013.
100. **Rojanasakul Y**. Linking JNK-STAT3-Akt signaling axis to EZH2 phosphorylation: A novel pathway of carcinogenesis. *Cell Cycle* 12(2):202-3, 2013.
101. **Rojanasakul Y**. Carbon nanotube toxicity: A cautionary tale. *Chem Res Toxicol*. 26(11):1600-1, 2013. <http://pubs.acs.org/doi/abs/10.1021/tx4003897>
102. Manke A, Wang L, and **Rojanasakul Y**. Mechanisms of nanoparticle-induced oxidative stress and toxicity. *BioMed Res Int*. 2013:942916 doi:10.1155/2013/942916.
103. Wang L, He X, Szklarz GD, Bi Y, **Rojanasakul Y**, and Ma Q. The aryl hydrocarbon receptor interacts with nuclear factor erythroid 2-related factor 2 to mediate induction of NAD(P)H:quinoneoxido reductase 1 by 2,3,7,8-tetrachlorodibenzo-p-dioxin. *Arch Biochem Biophys*. 537:31-38, 2013.
104. Yuan BZ, Chapman J, Ding M, Wang J, Jiang B, **Rojanasakul Y**, and Reynolds SH. TRAIL and proteasome inhibitors combination induces a robust apoptosis in human malignant pleural mesothelioma cells through Mcl-1 and Akt protein cleavages. *BMC Cancer* 13(1):140, 2013.
105. Li X, Wu N, **Rojanasakul Y**, and Liu Y. Selective stamp bonding of PDMS microfluidic devices to polymer substrates for biological applications. *Sensors Actuators A* 193:186-192, 2013.

106. Manke A, Wang L, and **Rojanasakul Y**. Pulmonary toxicity and fibrogenic response of carbon nanotubes. *Toxicol Mech Methods*. 23(3):196-206, 2013.
107. Dong C, Kashon ML, Lowry D, Dordick JS, Reynolds SH, **Rojanasakul Y**, Sargent LM, and Dinu CZ. Exposure to carbon nanotubes leads to changes in the cellular biomechanics. *Adv Healthcare Mat*. 2(7):945-951, 2013.
108. Dong C, Campella AS, Eldawud R, Perhinschi G, **Rojanasakul Y**, and Dinu CZ. Effects of acid treatment on structure, properties and biocompatibility of carbon nanotubes. *Applied Surface Sci*. 264:261-268, 2013.
109. Azad N, Iyer AKV, Wang L, Liu Y, Lu Y, and **Rojanasakul Y**. Reactive oxygen species mediated p38 MAPK regulates carbon nanotube-induced fibrogenic and angiogenic responses. *Nanotoxicology* 7(2): 157-168, 2013.
110. Luanpitpong S and **Rojanasakul Y**. Transdermal drug delivery. *In: Basic Physical Pharmacy*. Ma JKH and Hadzija B (eds.), Jones & Bartlett Learning, Sudbury, MA, 2013. ISBN: 978-1449653347
111. Iyer AKV, Azad N, and **Rojanasakul Y**. Application of nanoscience in pharmaceuticals. *In: Basic Physical Pharmacy*. Ma JKH and Hadzija B (eds.), Jones & Bartlett Learning, Sudbury, MA, 2013. ISBN: 978-1449653347
112. Luanpitpong S and **Rojanasakul Y**. Delivery of biotechnology drugs. *In: Basic Physical Pharmacy*. Ma JKH and Hadzija B (eds.), Jones & Bartlett Learning, Sudbury, MA, 2013. ISBN: 978-1449653347
113. Luanpitpong S, Chanvorachote P, Nimmannit U, Leonard SS, Stehlik C, Wang L, and **Rojanasakul Y**. Mitochondrial superoxide mediates doxorubicin-induced keratinocyte apoptosis through oxidative modification of ERK and Bcl-2 ubiquitination. *Biochem Pharmacol*. 83:1643-1654, 2012.
114. Luanpitpong S, Iyer AKV, Azad N, Wang L, and **Rojanasakul Y**. Nitrosothiol signaling in anoikis resistance and cancer metastasis. *Forum Immunopathol Dis Thera*. 3:141-154, 2012.
115. Peer CJ, Leonard SS, Gannett PM, Younis IR, Minarchick VC, Kenyon AJ, **Rojanasakul Y**, and Callery PS. Glutathionylation of busulfan produces a hydroxyl radical-trapping dehydroalanine metabolite. *Xenobiotica* 42(12):1170-1177, 2012.
116. Mishra A, **Rojanasakul Y**, Chen BT, Castranova V, Mercer RR, and Wang L. Assessment of pulmonary fibrogenic potential of multi-walled carbon nanotubes in human lung cells. *J Nanomaterials* 2012:930931, 2012.
117. Medan D, Luanpitpong S, Azad N, Wang L, Lu Y, Davis ME, Jiang BH, Barnett JB, Guo L, and **Rojanasakul Y**. Multifunctional role of Bcl-2 in malignant transformation and tumorigenesis of Cr(VI)-transformed lung cells. *PLoS One* 7(5):e37045, 2012.
118. Stueckle TA, Lu Y, Davis ME, Wang L, Jiang BH, Holaskova I, Schafer R, Barnett JB, and **Rojanasakul Y**. Chronic arsenic exposure induces carcinogenic gene signaling networks and neoplastic transformation in lung epithelial cells. *Toxicol App Pharmacol*. 261:204-216, 2012.
119. Khare S, Dorfleutner A, Bryan NB, Yun C, Radian AD, de Almeida L, **Rojanasakul Y**, and Stehlik C. An NLRP7-containing inflammasome mediates recognition of microbial lipopeptides in human macrophages. *Immunity* 36:464-476, 2012.
120. Elbaz HA, Stueckle TA, Tse W, **Rojanasakul Y**, and Dinu CZ. Digitoxin and its analogs as novel cancer therapeutics. *Exp Hematol Oncol*. 1(1):4, 2012.

121. Chunhacha P, Pongrakhananon V, **Rojanasakul Y**, and Chanvorachote P. Caveolin-1 regulates Mcl-1 stability and anoikis in lung carcinoma cells. *Am J Physiol Cell Physiol.* 302:C1284-1292, 2012.
122. Elbaz HA, Stueckle TA, Wang HY, O'Doherty GA, Lowry DT, Sargent LM, Wang L, Dinu CZ, and **Rojanasakul Y**. Digitoxin and a synthetic monosaccharide analog inhibit cell viability in lung cancer cells. *Toxicol Appl Pharmacol.* 258:51-60, 2012.
123. Kaushal N, Elliott M, Robson MJ, Iyer AK, **Rojanasakul Y**, Coop A, and Matsumoto RR. AC927, a sigma ligand, blocks methamphetamine-induced release of dopamine and generation of reactive oxygen species in NG108-15 cells. *Mol Pharmacol.* 81:299-308, 2012.
124. Jing Y, Liu LZ, Jiang Y, Zhu Y, Guo NL, Barnett J, **Rojanasakul Y**, Agani F, and Jiang BH. Cadmium increases HIF-1 and VEGF expression through ROS, ERK and AKT signaling pathways and induces malignant transformation of human bronchial epithelial cells. *Toxicol Sci.* 125:10-19, 2012.
125. Mishra A, **Rojanasakul Y**, and Wang L. Biological Activities of Carbon Nanotubes, *In: Nanoparticles Book 2.* InTech Open Access, 2012. ISBN 979-953-307-859-4.
126. Iyer AKV, Azad N, Wang L, and **Rojanasakul Y**. Nitrosothiol signaling and protein nitrosylation in cell death. *Antioxidant & Redox Signaling J.* 2011.
127. Wang L, Luanpitpong S, Castranova V, Tse W, Lu Y, Pongrakhananon V, and **Rojanasakul Y**. Carbon nanotubes induce malignant transformation and tumorigenesis of human lung epithelial cells. *Nano Lett.* 11:2796-2803, 2011.
128. Iyer AKV, Azad N, Talbott S, Stehlik C, Lu B, Wang L, and **Rojanasakul Y**. Antioxidant c-FLIP inhibits Fas ligand-induced NF- κ B activation in a PI3K/AKT-dependent manner. *J Immunol.* 187:3256-3266, 2011.
129. Luanpitpong S, Chanvorachote P, Leonard SS, Pongrakhananon V, Wang L, Nimmannit U, and **Rojanasakul Y**. Hydroxyl radical mediates cisplatin-induced apoptosis in human hair follicle dermal papilla cells and keratinocytes through Bcl-2-dependent mechanism. *Apoptosis* 16:769-782, 2011.
130. Song Y, Li X, Wang L, **Rojanasakul Y**, Castranova V, Li H, and Ma J. Nanomaterials in humans: identification, characteristics, and potential damage. *Tox Pathol.* 39:841-849, 2011.
131. Rungtabnapa P, Nimmannit U, Halim H, **Rojanasakul Y**, and Chanvorachote P. Hydrogen peroxide inhibits non-small cell lung cancer cell anoikis through the inhibition of caveolin-1 degradation. *Am J Physiol Cell Physiol.* 300:C235-245, 2011.
132. Liu LZ, Jing Y, Jiang LL, Jiang XE, Jiang Y, **Rojanasakul Y**, and Jiang BH. Acacetin inhibits VEGF expression, tumor angiogenesis and growth through AKT/HIF-1 α pathway. *Biochem Biophys Res Commun.* 413:299-305, 2011.
133. Wang HY, **Rojanasakul Y**, and O'Doherty GA. Synthesis and evaluation of α -D-/ α -L-rhamnosyl and amictosyl digitoxigenin oligomers as antitumor agents. *ACS Med Chem Lett.* 2:264-269, 2011.
134. Wang HY, Wu BL, Zhang Q, Kang SW, **Rojanasakul Y**, and O'Doherty GA. C5'-alkyl substitution effects on digitoxigenin α -L-glycoside cancer cytotoxicity. *ACS Med Chem Lett.* 2:259-263, 2011.
135. Wang HY, Xin W, Zhou, M, Stueckle TA, **Rojanasakul Y**, and O'Doherty GA. Stereochemical survey of digitoxin monosaccharides. *ACS Med Chem Lett.* 2:73-78, 2011.
136. Carpenter RL, Jiang Y, Jing Y, He J, **Rojanasakul Y**, Liu LZ, and Jiang BH. Arsenite induces cell transformation by reactive oxygen species, AKT, ERK1/2, and p70S6K1. *Biochem Biophys Res Commun.* 414:533-538, 2011.

137. Luanpitpong S and **Rojanasakul Y**. Chemotherapy-Induced Alopecia. *In: Advances in Cancer Therapy*. InTech Open Access, 2011, ISBN 979-953-307-208-0.
138. Pongrakhananon V and **Rojanasakul Y**. Anticancer Properties of Curcumin. *In: Advances in Cancer Therapy*. InTech Open Access, 2011, ISBN 979-953-307-208-0.
139. Azad N, Iyer AKV, Vallyathan V, Wang L, Castranova V, Stehlik C, and **Rojanasakul Y**. Role of oxidative/nitrosative stress-mediated Bcl-2 regulation in apoptosis and malignant transformation. *Ann NY Acad Sci*. 1203:1-6, 2010.
140. Azad N, Iyer AKV, Wang L, Lu Y, Medan D, Castranova V, and **Rojanasakul Y**. Nitric oxide-mediated Bcl-2 stabilization potentiates Cr(VI)-induced malignant transformation of human lung epithelial cells. *Am J Respir Cell Mol Biol*. 42:578-585, 2010.
141. Wang L, **Rojanasakul Y**, Castranova V, Qiu A, Lu Y, Scabilloni J, Wu N, and Mercer RR. Direct fibrogenic effects of dispersed single-walled carbon nanotubes on human lung fibroblasts. *J Tox Envir Health A* 73:410-422, 2010.
142. Lu Y, Azad N, Wang L, Iyer AKV, Castranova V, Jiang BH, and **Rojanasakul Y**. Phosphatidylinositol-3-kinase/Akt regulates bleomycin-induced fibroblast proliferation and collagen expression. *Am J Respir Cell Mol Biol*. 42:432-441, 2010.
143. Deeb D, Gao X, Jiang H, Janic B, Arbab AS, **Rojanasakul Y**, Dulchavsky SA, and Gautam SC. Oleanane triterpenoid CDDO-Me inhibits growth and induce apoptosis in prostate cancer cells through a ROS-dependent mechanism. *Biochem Pharmacol*. 79:350-360, 2010.
144. Pongrakhananon V, Nimmannit U, Luanpitpong S, **Rojanasakul Y**, and Chanvorachote P. Curcumin sensitizes non-small cell lung cancer cell anoikis through reactive oxygen species-mediated Bcl-2 downregulation. *Apoptosis* 15:574-585, 2010.
145. Wang L, Mishra A, Castranova V, Schwegler-Berry D, Chen B, Mercer RR, and **Rojanasakul Y**. Dispersion status of single-walled carbon nanotubes is a key determinant of their biological activities. *Toxicologist* 114:1 A797, 2010.
146. Bryan NB, Dorfleutner A, Kramer SJ, Yun C, **Rojanasakul Y**, and Stehlik C. Differential splicing of the apoptosis-associated speck like protein containing a caspase recruitment domain (ASC) regulates inflammasomes. *J Inflammation* 7:23, 2010.
147. Wang L, Castranova V, Mishra A, Chen B, Mercer RR, Schwegler-Berry D, and **Rojanasakul Y**. Dispersion of single-walled carbon nanotubes by a natural lung surfactant for pulmonary *in vitro* and *in vivo* toxicity studies. *Part Fibre Toxicol*. 7:31-41, 2010.
148. Luanpitpong S, Talbott SJ, **Rojanasakul Y**, Nimmannit U, Pongrakhananon V, Wang L, and Chanvorachote P. Regulation of lung cancer cell migration and invasion by reactive oxygen species and caveolin-1. *J Biol Chem*. 285:38832-40, 2010.
149. Iyer AKV, Zhou M, Azad N, Elbaz H, Wang L, Rogalsky DK, **Rojanasakul Y**, O'Doherty GA and Langenhan JM. A direct comparison of the anticancer activities of digitoxin MeON-neoglycosides and O-glycosides: Oligosaccharide chain length-dependent induction of caspase-9-mediated apoptosis. *ACS Med Chem Lett*. 1:326-330, 2010.
150. Chanvorachote P, Nimmannit U, Lu Y, Talbott S, Jiang BH, and **Rojanasakul Y**. Nitric Oxide regulates lung carcinoma cell anoikis through inhibition of ubiquitin-proteasomal degradation of caveolin-1. *J Biol Chem*. 284:28476-28484, 2009.

151. Panyosak A, Manosroi J, **Rojanasakul Y**, and Manosroi A. Safety assessment of azelaic acid and its derivatives entrapped in nanovesicles. *Hum Exp Toxicol.* 6:387-392, 2009.
152. Chanvorachote P, Pongrakhananon V, Wannachaiyasit S, Luanpitpong S, **Rojanasakul Y**, and Nimmannit U. Curcumin sensitizes lung cancer cells to cisplatin-induced apoptosis through superoxide anion mediated Bcl-2 degradation. *Cancer Invest.* 27:624-635, 2009.
153. Azad N, Iyer AKV, and **Rojanasakul Y**. Methods to analyze S-nitrosylation of proteins involved in apoptosis. *Methods Mol Biol.* 559:117-130, 2009.
154. Lu Y, Beezhold K, Chang Q, Zhang Y, **Rojanasakul Y**, Zhao H, Castranova V, Shi X, and Chen F. Lung cancer-associated JmjC domain protein mdig suppresses formation of tri-methyl lysine 9 of histone H3. *Cell Cycle* 8:2101-2109, 2009.
155. Bryan NB, Dorfleutner A, **Rojanasakul Y**, and Stehlik C. Activation of inflammasomes requires intracellular redistribution of the apoptotic speck-like protein containing a caspase recruitment domain. *J Immunol.* 182:3173-3182, 2009.
156. Iyer AKV, Azad N, Wang L, and **Rojanasakul Y**. S-Nitrosylation: How cancer cells say NO to cell death. *In: Nitric Oxide and Cancer, Prognosis, Prevention and Therapy.* Benjamin B (ed.), Springer, New York, p.3-20, 2009.
157. Wang L, Azad N, Kongkanermit L, Lu Y, Chen F, Jiang BH, and **Rojanasakul Y**. The Fas death signaling pathway connecting reactive oxygen species generation and FLICE inhibitory protein downregulation. *J Immunol.* 180:3072-3080, 2008.
158. Iyer AKV, Azad N, Wang L, and **Rojanasakul Y**. Role of S-nitrosylation in apoptosis resistance and carcinogenesis. *Nitric Oxide* 19:146-151, 2008.
159. Azad N, Iyer AKV, Manosroi A, Wang L, and **Rojanasakul Y**. Superoxide-mediated proteasomal degradation of Bcl-2 determines cell susceptibility to Cr(VI)-induced apoptosis. *Carcinogenesis* 29: 1538-1545, 2008.
160. Wang L, Chanvorachote P, Toledo D, Stehlik C, Mercer RR, Castranova V, and **Rojanasakul Y**. Peroxide is a key mediator of Bcl-2 downregulation and apoptosis induction by cisplatin in human lung cancer cells. *Mol Pharmacol.* 73:119-127, 2008.
161. Kongkanermit L, Sarisuta N, Azad N, Lu Y, Iyer AKV, Wang L, and **Rojanasakul Y**. Dependence of reactive oxygen species and FLICE-inhibitory protein on Lipofectamine-induced apoptosis in human lung epithelial cells. *J Pharmacol Exp Ther.* 325:969-977, 2008.
162. Azad N, **Rojanasakul Y**, and Vallyathan V. Inflammation and lung cancer: Roles of reactive oxygen and nitrogen species. *J Tox Envir Health B Crit Rev.* 11:1-15, 2008.
163. Azad N and **Rojanasakul Y**. Macromolecular drug delivery. *In: Biopharmaceutical Drug Development, 2nd Edition.* Wu-Pong S and Rojanasakul Y (eds.), Humana Press, Totawa, NJ, ISBN: 978-1-58829-716-7, 2008.
164. Azad N, Iyer AKV, and **Rojanasakul Y**. DNA microarrays. *In: Biopharmaceutical Drug Development, 2nd Edition.* Wu-Pong S and Rojanasakul Y (eds.), Humana Press, Totawa, NJ, ISBN: 978-1-58829-716-7, 2008.
165. Dorfleutner A, Talbott SJ, Bryan NB, Funya KN, Rellick SL, Reed JC, Shi X, **Rojanasakul Y**, Flynn DC, and Stehlik C. A Shope fibroma virus pyrin-only protein modulates of the host immune response. *Virus Genes* 35:685-694, 2007.

166. Xia C, Meng Q, Liu L, **Rojanasakul Y**, Wang XR, and Jiang BH. Reactive oxygen species regulate angiogenesis and tumor growth through vascular endothelial growth factor. *Cancer Res.* 67:10823-10830, 2007.
167. Dorfleutner A, Bryan NB, Talbott SJ, Funya KN, Rellick SL, Reed JC, Shi X, **Rojanasakul Y**, Flynn DC, and Stehlik C. Cellular pyrin domain-only protein 2 is a candidate regulator of inflammasome activation. *Infect Immun.* 75:1484-1492, 2007.
168. Manosroi A, Panyosak A, **Rojanasakul Y**, and Manosroi J. Characteristics and anti-proliferative activity of azelaic acid and its derivatives entrapped in bilayer vesicles in cancer cell lines. *J Drug Targeting* 15:334-341, 2007.
169. Bhat M, Ma JKH, **Rojanasakul Y**, and Wolff RK. Drug metabolism and enzyme kinetics in the lung. *In: Lung Biology in Health and Disease.* Marcel Dekker, New York, vol. 221, p.147-186, 2007.
170. Azad N, Vallyathan V, Wang L, Tantishaiyakul V, Stehlik C, Leonard SS, and **Rojanasakul Y**. S-nitrosylation of Bcl-2 inhibits its ubiquitin-proteasomal degradation: A novel anti-apoptotic mechanism that suppresses apoptosis. *J Biol Chem.* 281:34124-34134, 2006.
171. Chanvorachote P, Nimmannit U, Stehlik C, Wang L, Jiang, BH, Ongpipatanakul B, and **Rojanasakul Y**. Nitric oxide regulates cell sensitivity to cisplatin-induced apoptosis through S-nitrosylation and inhibition of Bcl-2 ubiquitination. *Cancer Res.* 66:6353-6360, 2006.
172. Mounjaroen J, Nimmannit U, Callery PS, Wang L, Azad N, Lipipun V, Chanvorachote P, and **Rojanasakul Y**. Reactive oxygen species mediate caspase activation and apoptosis induced by lipoic acid in human lung epithelial cancer cells through Bcl-2 downregulation. *J Pharmacol Exp Ther.* 319:1062-1069, 2006.
173. Lu B, Wang L, Stehlik C, Medan D, Huang C, Hu S, Chen F, Shi X, and **Rojanasakul Y**. Phosphatidylinositol-3-kinase/Akt positively regulates Fas (CD95)-mediated apoptosis in epidermal C141 cells. *J Immunol.* 176:6785-6793, 2006.
174. Meng Q, Xia C, Fang J, **Rojanasakul Y**, and Jiang BH. Role of PI3K and AKT specific isoforms in ovarian cancer cell migration, invasion and proliferation through the p70S6K1 pathway. *Cell Signal.* 18:2262-2271, 2006.
175. Wang L, Scabilloni JF, Antonini J, Castranova V, **Rojanasakul Y**, Robert J, Zhang Z, and Mercer RR. Role of lung surfactant in phagocytic clearance of apoptotic cells by macrophages in rats. *Lab Invest.* 86:458-466, 2006.
176. Azad N and **Rojanasakul Y**. Nanobiotechnology in drug delivery. *Am J Drug Deliv.* 4:79-88, 2006.
177. Wang L, Scabilloni J, Antonini J, **Rojanasakul Y**, Castranova V, and Mercer RR. Induction of secondary apoptosis, inflammation and lung fibrosis after intratracheal instillation of apoptotic cells in rats. *Am J Physiol.* 290:L695-L702, 2006.
178. Azad N and **Rojanasakul Y**. Vaccine delivery: Current trends and future. *Curr Drug Deliv.* 3:137-146, 2006.
179. Chanvorachote P, Nimmannit U, Wang L, Stehlik C, Lu B, Azad N, and **Rojanasakul Y**. Nitric oxide negatively regulates Fas (CD95)-induced apoptosis through inhibition of ubiquitin-proteasome mediated degradation of FLIP. *J Biol Chem.* 280:42044-42050, 2005.
180. Medan D, Wang L, Toledo D, Lu B, Stehlik C, Shi X, and **Rojanasakul Y**. Regulation of Fas (CD95/APO-1)-mediated apoptosis and necrosis by reactive oxygen species in macrophages. *J Cell Physiol.* 203:78-84, 2005.

181. Zhang Y, Lu Y, Yuan BZ, Castranova V, **Rojanasakul Y**, Shi X, Stauffer JL, Demers LM, and Chen F. The human mineral dust-induced gene, mdig, is a cell growth regulating gene associated with lung cancer. *Oncogene* 24:4873-4882, 2005.
182. Wiwattanawongsa K, Tantishaiyakul V, Lomlim L, **Rojanasakul Y**, Pinsuwan S, and Keawnopparat S. Experimental and computational studies of epithelial transport of mefenamic acid ester prodrugs. *Pharm Res.* 22:721-727, 2005.
183. Wang L, Bowman L, Lu Y, **Rojanasakul Y**, Mercer R, Castranova V, and Ding M. Essential role of p53 in silica-induced apoptosis. *Am J Physiol.* 288:L488-496, 2005.
184. Tantishaiyakul V, Phadoongsombut N, Wongpuwarak W, Thungtiwachgul J, Faroongsarng D, Wiwattanawongsa K, and **Rojanasakul Y**. ATR-FTIR characterization of transport properties of benzoic acid ion-pairs in silicone membranes. *Int J Pharm.* 283:111-116, 2004.
185. **Rojanasakul Y** and Malanga CJ. Parenteral drug administration. *In: Theory and Practice of Contemporary Pharmaceutics.* Ghosh T and Jasti B (eds), Taylor & Francis, London, 2004.
186. Dokka S and **Rojanasakul Y**. Cellular uptake and trafficking. *In: Polymeric Gene Delivery: Principles and Applications.* Amiji M (ed.), CRC Press, Boca Raton, FL, 2004.
187. Ye J, Wang L, Zhang X, Tantishaiyakul V, and **Rojanasakul Y**. Inhibition of TNF- α gene expression and bioactivity by site-specific transcription factor binding oligonucleotides. *Am J Physiol.* 284:L386-394, 2003.
188. Wang L, Medan D, Mercer R, Overmiller D, Leonard S, Castranova V, Shi X, Ding M, Huang C, and **Rojanasakul Y**. Vanadium-induced apoptosis and pulmonary inflammation in mice: Role of reactive oxygen species. *J Cell Physiol.* 195:99-107, 2003.
189. Wang L, Antonini JM, **Rojanasakul Y**, Castranova V, Scabilloni JF, and Mercer RR. Potential role of apoptotic macrophages in pulmonary inflammation and fibrosis. *J Cell Physiol.* 194:215-224, 2003.
190. Medan D, Wang L, Yang X, Dokka S, Castranova V, and **Rojanasakul Y**. Induction of neutrophil apoptosis and secondary necrosis during endotoxin-induced pulmonary inflammation in mice. *J Cell Physiol.* 191:320-326, 2002.
191. Lu B, Wang L, Medan D, Toledo D, Huang C, Chen F, Shi X, and **Rojanasakul Y**. Regulation of Fas (CD95)-induced apoptosis by nuclear factor- κ B and tumor necrosis factor- α in macrophages. *Am J Physiol.* 283:C831-C838, 2002.
192. Wang L, Medan D, Mercer R, Shi X, Huang C, Castranova V, Ding M, and **Rojanasakul Y**. Role of neutrophil apoptosis in vanadium-induced pulmonary inflammation in mice. *J Envir Pathol Toxicol Oncol.* 21:343-350, 2002.
193. Tantishaiyakul V, Wiwattanawongsa K, Pinsuwan S, Kasiwong S, Phadoongsombut N, Kaewnopparat S, Kaewnopparat N, and **Rojanasakul Y**. Characterization of mefenamic acid-guaiacol ester: Stability and transport across Caco-2 cell monolayers. *Pharm Res.* 19:1013-1018, 2002.
194. Chen F, Bower J, Leonard S, Ding M, Lu Y, **Rojanasakul Y**, Kung H, Vallyathan V, Castranova V, and Shi X. Protective roles of NF- κ B for chromium (VI)-induced cytotoxicity is revealed by expression of I κ B kinase- β mutant. *J Biol Chem.* 277:3342-3349, 2002.
195. Manosroi J, Manosroi A, and **Rojanasakul Y**. Gene Therapy. University Press, Chiangmai, Thailand, ISBN: 974-657-481-7, 2002.

196. Dokka S, Shi X, Leonard S, Wang L, Castranova V, and **Rojanasakul Y**. Interleukin-10-mediated inhibition of free radical generation in macrophages. *Am J Physiol*. 280:L1196-L1202, 2001.
197. Zhang X, Ye J, Wang L, Manosroi J, Shi X, and **Rojanasakul Y**. Rapid and sensitive assay of tumor necrosis factor- α gene transcription. *Pharm Res*. 18:408-411, 2001.
198. Swaroop N, Chen F, Wang L, Dokka S, Toledo D, and **Rojanasakul Y**. Inhibition of nuclear factor- κ B by I κ B kinase peptide inhibitor. *Pharm Res*. 18:1631-1633, 2001.
199. Shao J, DeHaven J, Lamm D, Weissman DN, Runyan K, Malanga CJ, **Rojanasakul Y**, and Ma JHK. A cell-based drug delivery system for lung targeting: I. Preparation and pharmacokinetics. *Drug Delivery* 8:61-69, 2001.
200. Shao J, DeHaven J, Lamm D, Weissman DN, Malanga CJ, **Rojanasakul Y**, and Ma JKH. A cell-based drug delivery system for lung targeting: II. Therapeutic activities on B16-F10 melanoma in mouse lungs. *Drug Delivery* 8:71-76, 2001.
201. Huang C, Ding M, Li J, Leonard S, **Rojanasakul Y**, Castranova V, Vallyathan V, Ju G, and Shi X. Vanadium-induced nuclear factor of activated T cells activation through hydrogen peroxide. *J Biol Chem*. 276:22397-22403, 2001.
202. Weissman D, Hubbs A, Huang S, Stanley C, **Rojanasakul Y**, and Ma JKH. IgG subclass responses to experimental silicosis. *J Env Pathol Toxicol Oncol*. 20:67-74, 2001.
203. Shi X, Ding M, Chen F, Wang L, **Rojanasakul Y**, Vallyathan V, and Castranova V. Reactive oxygen species and molecular mechanism of silica-induced lung injury. *J Env Pathol Toxicol Oncol*. 20:85-93, 2001.
204. Medan D, Wang L, and **Rojanasakul Y**. Secondary necrosis of apoptotic neutrophils contributes to inflammatory lung injury. *Sci World (Nature Biotech)* 1:57-58SR, 2001.
205. Huang SH, Hubbs AF, Stanley CF, Vallyathan V, Schnabel PC, **Rojanasakul Y**, Ma JKH, Banks DE, and Weissman DN. Immunoglobulin responses to experimental silicosis. *Toxicol Sci*. 59:108-117, 2001.
206. Dokka S, Malanga CJ, Shi X, Chen F, Castranova V, and **Rojanasakul Y**. Inhibition of endotoxin-induced lung inflammation by interleukin-10 gene transfer in mice. *Am J Physiol*. 279:872-877, 2000.
207. Dokka S, Toledo D, Wang L, Shi X, Huang C, Leonard SS, and **Rojanasakul Y**. Free radical-mediated transgene inactivation of macrophages by endotoxin. *Am J Physiol*. 279:878-883, 2000.
208. Dokka S, Toledo D, Ye J, Shi X, and **Rojanasakul Y**. High efficiency gene transfection of macrophages by lipoplexes. *Int J Pharm*. 206, 97-104, 2000.
209. Dokka S and **Rojanasakul Y**. Novel non-endocytic delivery of antisense oligonucleotides. *Adv Drug Del Rev*. 44:3-21, 2000.
210. Yang X, Ma JKH, Malanga CJ, and **Rojanasakul Y**. Characterization of proteolytic activities of alveolar epithelium. *Int J Pharm* 195:93-101, 2000.
211. **Rojanasakul Y**, Luo Q, Ye J, Dokka S, and Shi X. Molecular targeting of nuclear transcriptional regulators. *Am Chem Soc Series* 752:193-200, 2000.
212. Dokka S, Toledo D, Castranova V, Shi X, and **Rojanasakul Y**. Oxygen radical-mediated pulmonary toxicity induced by cationic liposomes. *Pharm Res*. 17:521-525, 2000.

213. **Rojanasakul Y**, Luo L, Ye J, Antonini J, and Toledo D. Cellular delivery of functional peptides to inhibit cytokine gene expression. *J Cont Rel.* 65:13-17, 2000.
214. Dokka S, Shi X, Wang L, Castranova V, and **Rojanasakul Y**. Interleukin-10 signaling inhibits free radical-mediated nuclear factor κ B activation. *Am J Physiol.* 280:L1196-1202, 2000.
215. Huang C, Zhang Z, Ding M, Li J, Ye J, Leonard S, Shen H, Butterworth L, Lu Y, Costa M, **Rojanasakul Y**, Castranova V, Vallyathan V, and Shi X. Vanadate induces p53 transactivation through hydrogen peroxide and causes apoptosis. *J Biol Chem.* 275:32516-32522, 2000.
216. Shi X, Ye J, Leonard SS, Ding M, Vallyathan V, Castranova V, **Rojanasakul Y**, and Dong Z. Antioxidant properties of (-)-epicatechin-3-gallate and its inhibition of Cr(VI)-induced DNA damage and Cr(IV)- or TPA-stimulated NF- κ B activation. *Mol Cell Biochem.* 206:125-132, 2000.
217. Shi X, Leonard SS, Wang S, Ding M, and **Rojanasakul Y**. Antioxidant properties of pyrroline dithiocarbamate and its protection against Cr(VI)-induced DNA damage. *Ann Clin Lab Sci.* 30:209-216, 2000.
218. Ye J, Ding M, Zhang X, **Rojanasakul Y**, and Shi X. On the role of hydroxyl radical and effect of tetrandrine on nuclear factor- κ B activation by phorbol myristate acetate. *Ann Clin Lab Sci.* 30:65-71, 2000.
219. **Rojanasakul Y**, Ye J, Chen F, Wang L, Cheng N, Castranova V, Vallyathan V, and Shi X. Dependence of nuclear transcription (NF)- κ B activation and free radical generation on TNF- α production in macrophages. *Mol Cell Biochem.* 200:119-125, 1999.
220. Ye J, Wang S, Leonard SS, Sun Y, Butterworth L, Antonini J, Ding M, **Rojanasakul Y**, Vallyathan V, Castranova V, and Shi X. Role of reactive oxygen species and p53 in chromium(VI)-induced apoptosis. *J Biol Chem.* 274:34974-34980, 1999.
221. Cheng N, Shi X, Ye J, Castranova V, Chen F, Leonard SS, Vallyathan V, and **Rojanasakul Y**. Role of transcription factor NF- κ B in asbestos-induced TNF- α response from macrophages. *Exp Mol Pathol.* 66:201-210, 1999.
222. Ye J, Ding M, Zhang X, **Rojanasakul Y**, Nedospasov S, Vallyathan V, Castranova V, and Shi X. Induction of TNF- α in macrophages by vanadate is dependent on activation of transcription factor NF- κ B and generation of free radicals. *Mol Cell Biochem.* 198:193-200, 1999.
223. Chen F, Lu Y, Castranova V, **Rojanasakul Y**, Vallyathan V, Shi X, and Demers LM. Nitric oxide inhibits HIV Tat-induced NF- κ B activation. *Am J Pathol.* 155:275-284, 1999.
224. Ye J, Shi X, Jones W, **Rojanasakul Y**, Cheng N, Schwegler-Berry D, Baron P, Deye G, Li C, and Castranova V. Critical role of glass fiber length in TNF- α production and transcription factor activation in macrophages. *Am J Physiol.* 276:L426-L434, 1999.
225. **Rojanasakul Y**. Basic Elements of Molecular Biology. *In: Biopharmaceutical Drug Design and Development.* Wu-Pong S and Rojanasakul Y (eds), Humana Press, Totowa, NJ, p.21-35, 1999.
226. **Rojanasakul Y** and Dokka S. Tools for Molecular Analysis. *In: Biopharmaceutical Drug Design and Development.* Wu-Pong S and Rojanasakul Y (eds), Humana Press, Totowa, NJ, p.37-49, 1999.
227. Yang X, **Rojanasakul Y**, Wang L, Ma JYC, and Ma JKH. Enzymatic degradation of luteinizing hormone releasing hormone (LHRH)/[D-Ala⁶]-LHRH in lung pneumocytes. *Pharm Res.* 15:1480-1484, 1998.

228. Leonard SS, Gannett PM, **Rojanasakul Y**, Schwegler-Berry D, Castranova V, Vallyathan V, and Shi X. Cobalt-mediated generation of reactive oxygen species and its possible mechanism. *J Inorg Biochem.* 70:239-244, 1998.
229. Shi X, Leonard SS, Liu KJ, Zang L, Gannett PM, **Rojanasakul Y**, Castranova V, and Vallyathan V. Cr(III)-mediated hydroxyl radical generation via Haber-Weiss cycle. *J Inorg Biochem.* 69:263-268, 1998.
230. Chen F, Lu Y, Demers LM, **Rojanasakul Y**, Shi X, Vallyathan V, and Castranova V. Role of hydroxyl radical in silica-induced NF- κ B activation in macrophages. *Ann Clin Lab Sci.* 28:1-13, 1998.
231. Liao W, DeHaven J, **Rojanasakul Y**, Lamm DL, and Ma JKH. Liposomal delivery of α -interferon to a murine bladder tumor via transferrin receptor-mediated endocytosis. *Drug Deliv.* 5:111-118, 1998.
232. **Rojanasakul Y**, Weissman DN, Shi X, Castranova V, Ma JKH, and Liang W. Antisense inhibition of silica-induced tumor necrosis factor in alveolar macrophages. *J Biol Chem.* 272:3910-3914, 1997.
233. Dokka S, Toledo D, Shi X, Wang L, and **Rojanasakul Y**. Cellular delivery of oligonucleotides by synthetic import peptide carrier. *Pharm Res.* 14:1759-1764, 1997.
234. Chen F, Ye J, Zhang X, **Rojanasakul Y**, Castranova V, and Shi H. One-electron reduction of chromium (VI) by α -lipoic acid and related hydroxyl radical generation, dG hydroxylation and nuclear transcription factor- κ B activation. *Arch Biochem Biophys.* 338:165-167, 1997.
235. **Rojanasakul Y**, Shi X, Deshpande D, Liang W, and Wang L. Protection against oxidative injury and permeability alterations in cultured alveolar epithelium by transferrin-catalase conjugate. *Biochim Biophys Acta* 1315:21-28, 1996.
236. **Rojanasakul Y**. Antisense oligonucleotide therapeutics: Drug delivery and targeting. *Adv Drug Deliv Rev.* 18:115-131, 1996.
237. Deshpande D, Toledo-Velasquez D, Thakkar D, Liang W, and **Rojanasakul Y**. Enhanced cellular uptake of oligonucleotides by EGF receptor-mediated endocytosis in A549 cells. *Pharm Res.* 13:57-61, 1996.
238. Deshpande D and **Rojanasakul Y**. Antisense oligonucleotide therapeutics: A class of its own. *Pharm. News* 3:15-18, 1996.
239. Deshpande D, Thakkar D, Liang W, and **Rojanasakul Y**. EGF Receptor-mediated endocytic uptake of antisense oligonucleotides in cancer cells. *Pharm Res.* 13:1361-1366, 1996.
240. Liang WW, Shi X, Deshpande D, Malanga CJ, and **Rojanasakul Y**. Oligonucleotide targeting to alveolar macrophages by mannose receptor-mediated endocytosis. *Biochim Biophys Acta* 1279:227-234, 1996.
241. Weissman DN, Ma JKH, **Rojanasakul Y**, and Hubbs AF. Immune dysfunction in silicosis. *App Occup Envir Hyg.* 11:962-965, 1996.
242. Chao D, Ma JYC, Malanga CJ, Banks D, Hubbs A, **Rojanasakul Y**, Castranova V, and Ma JKH. Multiple Emulsion-mediated enhancement of the therapeutic effect of tetrandrine against silicosis. *Appl Occup Environ Hyg.* 11:1008-1018, 1996.
243. El-Samaligy MS, **Rojanasakul Y**, Charlton J, Weinstein G, and Lim JK. Ocular disposition of nano-encapsulated ganciclovir via intravitreal injection in rabbit's eye. *Drug Deliv.* 3:93-97, 1996.

244. Chao D, Peng X, **Rojanasakul Y**, Castranova V, and Ma JKH. Evaluation of a multiple emulsion system for parenteral delivery of tetrandrine to the lungs I: Formation stability, drug release, and cellular activity. *Pharm Res*. 1996.
245. Chen J, **Rojanasakul Y**, Malanga CJ, Shiu GK, and Ma JKH. A chromatographic method for the studies of enzyme degradation and permeability of [D-Ala²] Met-enkephalinamide across rabbit cornea. *J Chrom*. 1996.
246. **Rojanasakul Y**, Liang W, and Ma JKH. Targeted delivery of antisense oligonucleotides for selective inhibition of pulmonary fibrotic cytokines. *In: Respiratory Drug Delivery V*. Byron P, Dalby R, and Farr S. (eds), Interpharm Press, Chicago, IL, p.55-62, 1996.
247. **Rojanasakul Y**. Design of therapeutically effective oligonucleotides. *In: Antisense Oligonucleotides: Fundamentals and Pharmaceutical Challenges*. Kompella U and Rojanasakul Y (eds), Technomic Publishing, Lancaster, PA, 1996.
248. **Rojanasakul Y**. Transport barriers to oligonucleotide delivery. *In: Antisense Oligonucleotides: Fundamentals and Pharmaceutical Challenges*. Kompella U and Rojanasakul Y (eds), Technomic Publishing, Lancaster, PA, 1996.
249. **Rojanasakul Y**. Physicochemical properties of oligonucleotides. *In: Antisense Oligonucleotides: Fundamentals and Pharmaceutical Challenges*. Kompella U and Rojanasakul Y (eds), Technomic Publishing, Lancaster, PA, 1996.
250. **Rojanasakul Y**. Enzymatic stability and chemical modifications of oligonucleotides. *In: Antisense Oligonucleotides: Fundamentals and Pharmaceutical Challenges*. Kompella U and Rojanasakul Y (eds), Technomic Publishing, Lancaster, PA, 1996.
251. **Rojanasakul Y**. Analysis of oligonucleotides. *In: Antisense Oligonucleotides: Fundamentals and Pharmaceutical Challenges*. Kompella U and Rojanasakul Y (eds), Technomic Publishing, Lancaster, PA, 1996.
252. Ma JKH, Bhat M, and **Rojanasakul Y**. Drug metabolism and enzyme kinetics in the lung. *In: Inhalation Aerosol Handbook: Lung Biology in Health and Disease Series*. Hickey AJ (ed.), Marcel Dekker, New York, pp.155-195, 1996.
253. Shi X, **Rojanasakul Y**, Gannett P, Liu K, Mao Y, and Saffiotti U. Generation of thiyl and ascorbyl radicals in the reaction of peroxynitrite and thiols and ascorbate at physiological pH. *J Inorg Biochem*. 56:77-86, 1995.
254. Shi X, Mao Y, Saffiotti U, Wang L, **Rojanasakul Y**, Leonard SS, and Vallyathan V. Antioxidant activity of tetrandrine and its inhibition of quartz-induced lipid peroxidation. *J Toxicol Environ Health* 46:101-116, 1995.
255. **Rojanasakul Y**, Castranova V, Banks D, and Ma JKH. Calcium-mediated silica cytotoxicity. *In: Silica and Silica-Induced Lung Diseases: Current Concepts*. Castranova V, Vallyathan V, Wallace W (eds), CRC Press, Boca Raton, FL, p.151-161, 1995.
256. **Rojanasakul Y**, Wang L, Malanga CJ, Ma JKH, and Liaw J. Targeted gene delivery to alveolar macrophages by Fc receptor-mediated endocytosis. *Pharm Res*. 11:1731-1736, 1994.
257. Deshpande D, Toledo D, Wang L, Malanga CJ, Ma JKH, and **Rojanasakul Y**. Receptor-mediated peptide delivery in pulmonary epithelial monolayers. *Pharm Res*. 11:1121-1126, 1994.

258. Harrison J, Shi X, Wang L, Ma JKH, and **Rojanasakul Y**. Novel delivery of antioxidant enzyme catalase to alveolar macrophages by Fc receptor-mediated endocytosis. *Pharm Res.* 11:1110-1114, 1994.
259. Wang L, Ma JKH, Toledo D, Malanga CJ, and **Rojanasakul Y**. Alveolar permeability enhancement by oleic acid and related fatty acids: Evidence for a calcium-dependent mechanism. *Pharm Res.* 11:513-517, 1994.
260. Bhat M, **Rojanasakul Y**, Weber S, Ma JYC, Castranova V, Banks D, and Ma JKH. Fluoromicroscopic studies of bleomycin-induced intracellular oxidation in alveolar macrophages and its inhibition by taurine. *Envir Health Pers.* 102:91-96, 1994.
261. Ding M, Gannett PM, **Rojanasakul Y**, Kejian L, and Shi X. One-electron reduction of vanadate by ascorbate and related free radical generation at physiological pH. *J Inorg Biochem.* 55:101-112, 1994.
262. Shi X, Mao Y, Knapton AD, **Rojanasakul Y**, Gannett PM, Dalal N, and Liu K. Reaction of Cr(VI) with ascorbate and hydrogen peroxide generates hydroxyl radicals and causes DNA damage: Role of Cr(IV)-mediated Fenton-like reaction. *Carcinogenesis* 15:2475-2478, 1994.
263. **Rojanasakul Y**. Mechanism of ocular peptide absorption and its enhancement. *In: Drug Permeation Enhancement: Theory and Application.* Hsieh DS (ed), Marcel Dekker, New York, p. 397-410, 1994.
264. **Rojanasakul Y**, Wang L, Hoffman AH, Shi X, Dalal NS, Banks DE, and Ma JKH. Mechanisms of hydroxyl free radical-induced cellular injury and calcium overloading in alveolar macrophages. *Am J Respir Cell Mol Biol.* 8:377-383, 1993.
265. Wang L, Toledo D, Malanga CJ, Ma JKH, and **Rojanasakul Y**. Transport and hydrolysis of enkephalins in cultured alveolar epithelial monolayers. *Pharm Res.* 10:1662-1667, 1993.
266. **Rojanasakul Y**, Wang L, Malanga CJ, Ma JYC, Banks DE, and Ma JKH. Altered calcium homeostasis and cellular injury in silica-exposed alveolar macrophages. *J Cell Physiol.* 154:310-316, 1993.
267. Bhat M, Wang L, Malanga CJ, Toledo D, Ma JKH, and **Rojanasakul Y**. Regulation of tight junction permeability by calcium mediators and cell cytoskeleton in rabbit tracheal epithelium. *Pharm Res.* 10:991-997, 1993.
268. Reist RH, Dey RD, Durham JP, **Rojanasakul Y**, and Castranova V. Inhibition of proliferative activity of pulmonary fibroblasts by tetrandrine. *Tox Appl Pharmacol.* 122:70-76, 1993.
269. **Rojanasakul Y**, Wang L, Bhat M, Glover DD, Malanga CJ, and Ma JKH. Transport barrier of epithelia: A comparative study on permeability and charge selectivity. *Pharm Res.* 9:1033-1038, 1992.
270. Kang JH, Lewis DM, Castranova V, **Rojanasakul Y**, Banks DE, Ma JY, and Ma JK. Inhibitory action of tetrandrine on macrophage production of interleukin-1-like activity and thymocyte proliferation. *Exp Lung Res.* 18:715-729, 1992.
271. Liaw J, **Rojanasakul Y**, and Robinson JR. The effects of drug charge type and charge density on corneal transport. *Int J Pharm.* 88:111-124, 1992.
272. **Rojanasakul Y** and Robinson JR. The cytoskeleton of the cornea and its role in tight junction permeability. *Int J Pharm.* 68:135-149, 1991.

273. **Rojanasakul Y** and Robinson JR. Electrophysiological and ultrastructural characterization of the cornea during *in vitro* perfusion. *Int J Pharm.* 63:1-16, 1990.
274. **Rojanasakul Y**, Liaw J, and Robinson JR. Mechanisms of action of some penetration enhancers in the cornea: Laser scanning confocal microscopic and electrophysiology studies. *Int J Pharm.* 66:131-142, 1990.
275. **Rojanasakul Y**, Paddock SW, and Robinson JR. Confocal laser scanning microscopic examination of transport pathways and barriers of peptides across the cornea. *Int J Pharm.* 66:163-172, 1990.
276. **Rojanasakul Y** and Robinson JR. Transport mechanisms of the cornea: Characterization of barrier permselectivity. *Int J Pharm* 55:237-246, 1989.
277. **Rojanasakul Y** Mechanistic studies of ocular peptide absorption and its enhancement by various penetration enhancers. Ph.D. Thesis. University of Wisconsin-Madison, 1989. OSTI: 5527081
278. **Rojanasakul Y** and Robinson JR. Immunohistochemical detection of steroid binding in rabbit cornea. *J Ocular Pharmacol.* 4:51-60, 1988.
279. Jambhekar SS, Breen PJ, and **Rojanasakul Y**. Influence of formulation and other factors on the release of chlorpheniramine maleate from polymer coated beads. *Drug Dev Ind Pharm.* 13:2789-2810, 1987.
280. Bhargava HN, Oza BJ, and **Rojanasakul Y**. Transdermal drug delivery system. *Drug Cos Ind.* 13:52-60, 1984.

RESEARCH SUPPORT (last 10 years)

As Principal Investigator or Co-Principal Investigator

NIH: R01-ES022968

Induction of Neoplastic Transformation and Cancer Stem Cells by Carbon Nanotubes

Role: PI

NIH: R01-EB018857

Nanoparticle Fibrogenicity and Fibroblast Stem-Like Cells

Role: PI

NSF: CBET-1434503

Carbon Nanomaterial-Induced Malignant Transformation and Lung Carcinogenesis

Role: PI

NIH: R01-HL095579

Prediction and Mechanism of Carbon Nanotube-Induced Fibrosis

Role: PI

NIH: R01-HL076340

Regulation of Fas-Mediated Lung Cell Apoptosis

Role: PI

NIH: T32-GM133369

Cell and Molecular Biology Training Program at West Virginia University

Role: Co-PI

NSF: no assignment #

Electric Cell Impedance Sensing to Quantify Cytotoxicity of Nanomaterials to Human Epithelial Cells

Role: Co-PI

As Co-Investigator

NIH: R01-CA232587

Mechanism of Lung Cancer Resistance to Tyrosine Kinase Inhibitor and Radiation Treatments

PI: Jiang

NIH: R01-CA193473

Integrative Systems Approach to Identify Local Oncogenic Modulation of the IL12 Axis

PI: Klinke

NIH: R01-CA213996

Targeting SHP2 as a Precision Medicine for Anti-HER2 Therapy Resistant Breast Cancer

PI: Agazie

NIH: P20-GM121322

Tumor Microenvironment CoBRE

PI: Lockman

NIOSH: NTRCFY19

3D Air-Liquid Interface as a Relevant In Vitro Lung Model to Evaluate Specific Nanotoxicity

PI: Rojanasakul

NIH: R25 training grant

The Hampton University Summer Pharmacy Experiences in Academic Research Program

PI: Iyer

NIH: MBRS SCORE SC1

Targeting Lipogenic and Angiogenic Mediators in Pulmonary Fibrosis

PI: Azad

NIH: R15-GM122953

Biomimetic Alveolar Microenvironment to Investigate Nanomaterials-induced Fibrogenesis

PI: Yang

NIH: P20-GM103434

WV IDeA Network of Research Excellence (INBRE)

PI: Rankin

NIOSH: NTRC-FY19

3D Air-Liquid Interface as a Relevant In Vitro Lung Model to Evaluate Specific Nanotoxicity

PI: Rojanasakul L

NIH: SC1GM096895

Anti-Tumorigenic Potential of Novel Digitoxin Analogues

PI: Iyer

NIH: SC1HL112630

Impact of Oxidative Stress-Regulated Angiogenesis in Pulmonary Fibrosis

PI: Azad

NORA: no assignment #

Nano-Metal Oxide Property Affecting Fibrogenesis or Carcinogenesis

PI: Rojanasakul L

NSF: EPS-1003907
Bionanotechnology for Public Security and Environmental Safety
PI: Hill

NORA: no assignment #
Assessment of Specific Carbon Nanotube-Induced Lung Carcinogenesis
PI: Rojanasakul L

NIH: P20-RR01677
WV IDeA Network of Research Excellence (INBRE)
PI: Rankin

NSF: no assignment #
Nanotopographical Effect of Substrates on Cellular Responses to Nanomaterials
PI: Yang

NORA: no assignment #
Nanoparticle Properties and Mechanisms Causing Lung Fibrosis
PI: Rojanasakul L

TEACHING RESPONSIBILITIES

PharmD Courses Taught

PHAR 801 "Drug Delivery" (5 Cr), 2015-present
PHAR 812 "Drug Chemistry and Biotechnology" (3 Cr), 2016-present
PHAR 814 "Drug Delivery Systems" (3 Cr), 2021-present
PHAR 749 "Pharmaceutical Investigation" (3 Cr), 2000-present
PHAR 709 "Immunology and Biotechnology" (2 Cr), 2001-2015
PHAR 701 "Pharmaceutical Care Lab I", 2001-2014
PHAR 712 "Pharmaceutical Care Lab II", 2003-2015
PHAR 702 "Pharmaceutics 1" (3 Cr), 2010-2014
PHAR 708 "Pharmaceutics" (3 Cr), 2001-2010
PHAR 791 "Research Elective" (3 Cr), 1991-1998, 2001, 2003, 2007-2000, 2014
PHAR 792 "Introduction to Research", 2008-2011
PHAR 303 "Pharmaceutical Care Lab I", 1998, 1999, 2000
PHAR 354 "Concepts in Pharmaceutics II", 1999, 2000
PHAR 356 "Immunology, Biotechnology, and Anti-infectives", 1999, 2000
PHAR 200A "Introduction to Pharmaceutical Systems", 1990-1997
PHAR 200B "Pharmaceutical Calculations", 1990-1997
PHAR 202 "Concepts in Pharmaceutics II", 1990-1998
PHAR 205 "Pharmaceutical Aspects of Pharmacy", 1990-1999
PHAR 289 "Pharmaceutical Investigation", 1990-1998

Graduate Courses Taught

BMS 793A "Pharmaceutical and Pharmacological Sciences" (1 Cr), 2021-present
PHAR 806 "Pharmaceutical Biotechnology" (1 Cr), 2020-present
PHAR 779 "Drug Discovery" (3 Cr), 2006-present
CCB 730 "Introduction to Cancer Cell Biology" (3 Cr), 2016-present
PHAR 783 "Pharmaceutical Cell Biology Seminar" (1 Cr), 2010-present
CCB 705 "Cancer Cell Biology Journal Club" (1 Cr), 2010-present
PHAR 749 "Pharmaceutical Investigation", 2017-present
PHAR 796 "Graduate Seminar", 2010-present
PHAR 797 "Research" 2017-present

CCB 797 "Research" 2014-present
CCMD 797 "Laboratory Rotations", 2004-present
PHAR 793B "Biotechnology" (1 Cr), 2018-2019
PHAR 794J "Seminar in Nanoscience", 2010, 2011
ENGR 493 "Junior Nanotech Seminar", 2009
PCOL 745 "Advanced Pharmacology", 2009
CCB 700 "Basic and Clinical Aspects of Cancer", 2009
CCMD793M "Introduction to Cancer Cell Biology", 2006, 2007
PCOL 793 "Advanced Pharmacology", 2007-2010
PHAR 793 "Pharmaceutical Sciences from Bench to Shelf", 2001-2002
PHAR 390 "Pharmaceutical Sciences from Bench to Shelf", 1998-2000
PHAR 791 "Special Seminar in Advanced Pharmaceutics", 2000-2007
PHAR 491 "Special Seminar in Advanced Pharmaceutics", 1993-1999
PHAR 302 "Advanced Pharmaceutics" (3 Cr), 1990, 1996
PHAR 390 "Techniques and Instrumentation", 1992
PHAR 390 "Biotechnology and Drug Delivery", 1994