

Professor Jiri Neuzil – Curriculum Vitae

Present appointment

Professor, School of Medical Science/GIH
Griffith University, Gold Coast Campus, Australia

Since 2005, Prof Neuzil has had a conjoint appointment at the Institute of Biotechnology, Academy of Sciences of the Czech Republic, Prague, heading the Molecular Therapy Group.

Employment history

2009 – present	<u>Professor</u> Griffith University, Australia
2006 – 2008	<u>Associate Professor</u> Griffith University, Australia
2002 –2005	<u>Senior Lecturer</u> Griffith University, Australia
2001 –2002	<u>Senior Visiting Researcher</u> University of Linkoping, Sweden
1998 –2000	<u>Group Leader</u> University of Munich, Germany
1998 –1998	<u>Group Leader</u> German Institute of Human Nutrition, Germany
1994 –1997	<u>Senior Research Officer</u> Heart Research Institute, Sydney, Australia
1991 –1994	<u>Research Officer</u> Heart Research Institute, Sydney, Australia

Qualifications

1987 PhD (Microbiology)
Institute of Microbiology of the Academy of Sciences of the Czech Republic, Prague

Research profile and achievements

Professor Neuzil was the first to show that vitamin E succinate suppresses tumours without secondary toxicity, and has established a world-leading position in this area of research.

He discovered that VE analogues are efficient against thus far fatal mesotheliomas and hard-to-treat HER2-high breast carcinomas. He has found a new target for anti-cancer drugs, epitomised by vitamin E analogues – the coenzyme Q binding site of the mitochondrial complex II. He also designed a brand new class of agents targeting mitochondria by tagging anti-cancer drugs with a lipophilic cation, which are also efficient against cancer stem-like cells.

Professor Neuzil synthesised and tested a novel mitochondrially targeted tamoxifen (MitoTAM), targeting mitochondrial complex I, which efficiently kills HER2-high breast cancer cells. This work was published in *Cancer Cell* (2014).

At present, Professor Neuzil is planning clinical trials using several vitamin E analogues, focusing on non-treatable mesotheliomas and HER2-high breast carcinomas. In 2015, with oncologists from Greenslopes Hospital (represented by Dr Keith Horwood) and funded by the Asbestos-Related Diseases Support Society of Queensland, Professor Neuzil plans to run a clinical trial of mesothelioma patients using transdermal application of α -tocopheryl succinate. This is based on the single case of a 65-year-old female with mesothelioma, who was treated in a similar manner and survived for four years (rather the predicted six months).

Professor Neuzil is an inventor of three internationally recognised patents focused on the mitochondrial targeting of anti-cancer drugs. Since taking up his position at Griffith University, he has attracted well over AUD\$4 million in research funding, including ARC grants (five Discovery grants to date), NHMRC Project grants, Cancer Council Qld grants (five research grants to date), Prostate Cancer Foundation of Australia, National Breast Cancer Foundation, the Dust Diseases Board, the Brain Research Foundation, and the National Heart Foundation.

Recently, Professor Neuzil obtained a large research grant (AUD\$1,000,000 for five years) from the Clem Jones Foundation to work on the biology of brain stem cells. He is a member of the 7th Framework Programme, a European project focusing on nanodiamonds as a potential cancer diagnostic tool.

Professor Neuzil established the ultrasound imaging facility at Griffith University equipped with the Vevo770 instrument, the first of its kind in Australia. He established and leads the Mitochondria, Apoptosis and Cancer (MAC) Research Group within the School of Medical Science and the Griffith Health Institute, with a team comprised of a senior research fellow, two postdoctoral fellows, a research assistant and five PhD students.

The Molecular Therapy Group headed by Professor Neuzil in the Institute of Biotechnology, Prague, comprises three post-doctoral fellows, a research assistant and five PhD students. Each dynamic laboratory has established and optimised several cutting-edge cell and molecular biology methodologies in a cancer research context. Both groups have access to world-class core facilities, and members of each laboratory frequently visit the other facility.

Professor Neuzil has reviewed manuscripts for numerous journals, and presented his work at various scientific meetings. He chaired a number of national and international meetings, and was the main organiser of the Annual Meeting of the Australasian Branch of the Society for Free Radical Research, held at the Gold Coast in December 2005.

In October 2009, Professor Neuzil was the principal organiser of an EMBO Workshop on Mitochondria, Apoptosis and Cancer (MAC'09), Prague. Selected papers from this highly successful meeting were published in a special issue of *Mitochondrion*, and the occasion resulted in subsequent 'MAC' series meetings – MAC'11, held in Singapore in October 2011; and MAC'13 (EMBO Workshop), held in Stockholm, Sweden in October 2013. As founder of the MAC conference series, Professor Neuzil is planning MAC'15 (Frankfurt, Germany), MAC'16 (Lexington, Kentucky, USA), and MAC'17 (Ljubljana, Slovenia) with his colleagues. He is a member of the organisational committee for each of these meetings.

Professor Neuzil was a principal organiser of the Annual Conference of the Society for Free Radical Research. He was a Keynote Speaker at the 9th International conference on Membrane Redox Systems, and the 4th World Congress on Targeting Mitochondria.

He is a member of the Editorial Board of *Molecular Nutrition & Food Research*, *BMC Cancer*, *Oncology Research*, *Recent Patent Reviews Anti-Cancer Drug Discovery*, and *Cell Communication and Adhesion*. He has served as a guest co-editor of special issues of *Molecular Nutrition*, *Molecular Aspects of Medicine*, *Antioxidants & Redox Signalling*, *Current Pharmaceutical Biotechnology*, *Mitochondrion* and others, and is Chief Editor of a Springer book, *Mitochondria: The Anti-Cancer Target for the 3rd Millennium* (2014).

Professor Neuzil has supervised several PhD and Honours/Master's students, and has built a research team currently comprising two senior research fellows, two postdoctoral fellows, a senior research assistant, five PhD students, and one Honours student.

The author of around 160 peer-reviewed papers to date, Professor Neuzil's publications have attracted more than 4,600 citations. His H-index currently stands at 42, and is growing by four per year. He has submitted three patent applications on pro-oxidant compounds as anti-cancer drugs, and is currently planning a clinical trial using vitamin E succinate to treat patients with recurring pleural mesothelioma.

Professor Neuzil's laboratory hosted Professor Emmanuel Akporiaye (USA), who was supported by a Fulbright Fellowship to spend his sabbatical there. He has developed a network of collaborators in over 20 international and national laboratories, and has assessed grants for national and international agencies, including the NHMRC, ARC, Cancer Council, and NHF, as well as agencies of New Zealand, the Netherlands, Slovakia, the Czech Republic, the United Kingdom, Canada, Germany, France and the USA.

Professor Neuzil's international standing is steadily growing, along with the quality and quantity of his output. As the above data shows, he is a world leader in his research area.

Research Articles

1. M. V. Berridge, L. Dong, and **J. Neuzil**, "Mitochondrial DNA in Tumor Initiation, Progression, and Metastasis: Role of Horizontal mtDNA Transfer," *Cancer Res.*, vol. 75, no. 16, pp. 3203–3208, Aug. 2015.
2. Khera, L.-F. Dong, O. Holland, J. Vanderlelie, E. A. Pasdar, **J. Neuzil**, and A. V. Perkins, "Selenium supplementation induces mitochondrial biogenesis in trophoblasts," *Placenta*, vol. 36, no. 8, pp. 863–869, Aug. 2015.
3. S. Koudelka, P. Turanek Knotigova, J. Masek, L. Prochazka, R. Lukac, A. D. Miller, **J. Neuzil**, and J. Turanek, "Liposomal delivery systems for anti-cancer analogues of vitamin E," *J Control Release*, vol. 207, pp. 59–69, Jun. 2015.
4. J. Truksa, L.-F. Dong, J. Rohlena, J. Stursa, M. Vondrusova, J. Goodwin, M. Nguyen, K. Kluckova, Z. Rychtarcikova, S. Lettlova, J. Spacilova, M. Stapelberg, M. Zoratti, and **J. Neuzil**, "Mitochondrially targeted vitamin e succinate modulates expression of mitochondrial DNA transcripts and mitochondrial biogenesis," *Antioxid. Redox Signal.*, vol. 22, no. 11, pp. 883–900, Apr. 2015.
5. S. Tan, J. W. Baty, L.-F. Dong, A. Bezawork-Geleta, B. Endaya, J. Goodwin, M. Bajzikova, J. Kovarova, M. Peterka, B. Yan, E. A. Pesdar, M. Sobol, A. Filimonenko, S. Stuart, M. Vondrusova, K. Kluckova, K. Sachaphibulkij, J. Rohlena, P. Hozak, J. Truksa, D. Eccles, L. M. Haupt, L. R. Griffiths, **J. Neuzil**, and M. V. Berridge, "Mitochondrial genome acquisition restores respiratory function and tumorigenic potential of cancer cells without mitochondrial DNA," *Cell Metab.*, vol. 21, no. 1, pp. 81–94, Jan. 2015.
6. Yan, M. Stantic, R. Zobalova, A. Bezawork-Geleta, M. Stapelberg, J. Stursa, K. Prokopova, L. Dong, and **J. Neuzil**, "Mitochondrially targeted vitamin E succinate efficiently kills breast tumour-initiating cells in a complex II-dependent manner," *BMC Cancer*, vol. 15, p. 401, 2015.
7. M. Vondrusova, A. Bezawork-Geleta, K. Sachaphibulkij, J. Truksa, and **J. Neuzil**, "The effect of mitochondrially targeted anticancer agents on mitochondrial (super)complexes," *Methods Mol. Biol.*, vol. 1265, pp. 195–208, 2015.
8. M. Tomasetti, L. Santarelli, R. Alleva, L.-F. Dong, and **J. Neuzil**, "Redox-active and redox-silent compounds: synergistic therapeutics in cancer," *Curr. Med. Chem.*, vol. 22, no. 5, pp. 552–568, 2015.
9. E. A. Pasdar, M. Smits, M. Stapelberg, M. Bajzikova, M. Stantic, J. Goodwin, B. Yan, J. Stursa, J. Kovarova, K. Sachaphibulkij, A. Bezawork-Geleta, M. Sobol, A. Filimonenko, M. Tomasetti, R. Zobalova, P. Hozak, L.-F. Dong, and **J. Neuzil**, "Characterisation of mesothelioma-initiating cells and their susceptibility to anti-cancer agents," *PLoS ONE*, vol. 10, no. 5, p. e0119549, 2015.

10. K. Kluckova, L.-F. Dong, M. Bajzikova, J. Rohlena, and **J. Neuzil**, "Evaluation of respiration of mitochondria in cancer cells exposed to mitochondria-targeted agents," *Methods Mol. Biol.*, vol. 1265, pp. 181–194, 2015.
11. K. Kluckova, M. Sticha, J. Cerny, T. Mracek, L. Dong, Z. Drahota, E. Gottlieb, **J. Neuzil**, and J. Rohlena, "Ubiquinone-binding site mutagenesis reveals the role of mitochondrial complex II in cell death initiation," *Cell Death Dis*, vol. 6, p. e1749, 2015.
12. N. Yanamala, A. A. Kapralov, M. Djukic, J. Peterson, G. Mao, J. Klein-Seetharaman, D. A. Stoyanovsky, J. Stursa, **J. Neuzil**, and V. E. Kagan, "Structural re-arrangement and peroxidase activation of cytochrome c by anionic analogues of vitamin E, tocopherol succinate and tocopherol phosphate," *J. Biol. Chem.*, vol. 289, no. 47, pp. 32488–32498, Nov. 2014.
13. M. Tomasetti, L. Nocchi, S. Staffolani, N. Manzella, M. Amati, J. Goodwin, K. Kluckova, M. Nguyen, E. Strafella, M. Bajzikova, M. Peterka, S. Lettlova, J. Truksa, W. Lee, L.-F. Dong, L. Santarelli, and **J. Neuzil**, "MicroRNA-126 suppresses mesothelioma malignancy by targeting IRS1 and interfering with the mitochondrial function," *Antioxid. Redox Signal.*, vol. 21, no. 15, pp. 2109–2125, Nov. 2014.
14. M. Tomasetti, L. Santarelli, **J. Neuzil**, and L. Dong, "MicroRNA regulation of cancer metabolism: role in tumour suppression," *Mitochondrion*, vol. 19 Pt A, pp. 29–38, Nov. 2014.
15. M.-S. Hwang, J. Rohlena, L.-F. Dong, **J. Neuzil**, and S. Grimm, "Powerhouse down: Complex II dissociation in the respiratory chain," *Mitochondrion*, vol. 19 Pt A, pp. 20–28, Nov. 2014.
16. M. Tomasetti, **J. Neuzil**, and L. Dong, "MicroRNAs as regulators of mitochondrial function: role in cancer suppression," *Biochim. Biophys. Acta*, vol. 1840, no. 4, pp. 1441–1453, Apr. 2014.
17. M. Stapelberg, R. Zabalova, M. N. Nguyen, T. Walker, M. Stantic, J. Goodwin, E. A. Pasdar, T. Thai, K. Prokopova, B. Yan, S. Hall, N. de Pennington, S. R. Thomas, G. Grant, J. Stursa, M. Bajzikova, A. C. B. Meedeniya, J. Truksa, S. J. Ralph, O. Ansorge, L.-F. Dong, and **J. Neuzil**, "Indoleamine-2,3-dioxygenase elevated in tumor-initiating cells is suppressed by mitocans," *Free Radic. Biol. Med.*, vol. 67, pp. 41–50, Feb. 2014.
18. J. Kovarova, M. Bajzikova, M. Vondrusova, J. Stursa, J. Goodwin, M. Nguyen, R. Zabalova, E. A. Pasdar, J. Truksa, M. Tomasetti, L.-F. Dong, and **J. Neuzil**, "Mitochondrial targeting of α -tocopheryl succinate enhances its anti-mesothelioma efficacy," *Redox Rep.*, vol. 19, no. 1, pp. 16–25, Jan. 2014.

19. L.-F. Dong and **J. Neuzil**, "Mitochondria in cancer: why mitochondria are a good target for cancer therapy," *Prog Mol Biol Transl Sci*, vol. 127, pp. 211–227, 2014.
20. **J. Neuzil**, L.-F. Dong, J. Rohlena, J. Truksa, and S. J. Ralph, "Classification of mitocans, anti-cancer drugs acting on mitochondria," *Mitochondrion*, vol. 13, no. 3, pp. 199–208, May 2013.
21. K. Kluckova, A. Bezawork-Geleta, J. Rohlena, L. Dong, and **J. Neuzil**, "Mitochondrial complex II, a novel target for anti-cancer agents," *Biochim. Biophys. Acta*, vol. 1827, no. 5, pp. 552–564, May 2013.
22. L. Prochazka, S. Koudelka, L.-F. Dong, J. Stursa, J. Goodwin, J. Neca, J. Slavik, M. Ciganek, J. Masek, K. Kluckova, M. Nguyen, J. Turanek, and **J. Neuzil**, "Mitochondrial targeting overcomes ABCA1-dependent resistance of lung carcinoma to α -tocopheryl succinate," *Apoptosis*, vol. 18, no. 3, pp. 286–299, Mar. 2013.
23. R. Moreno-Sánchez, L. Hernández-Esquivel, N. A. Rivero-Segura, A. Marín-Hernández, **J. Neuzil**, S. J. Ralph, and S. Rodríguez-Enríquez, "Reactive oxygen species are generated by the respiratory complex II—evidence for lack of contribution of the reverse electron flow in complex I," *FEBS J.*, vol. 280, no. 3, pp. 927–938, Feb. 2013.
24. J. Rohlena, L.-F. Dong, and **J. Neuzil**, "Targeting the mitochondrial electron transport chain complexes for the induction of apoptosis and cancer treatment," *Curr Pharm Biotechnol*, vol. 14, no. 3, pp. 377–389, 2013.
25. **J. Neuzil** and R. Moreno-Sánchez, "The bioenergetics of cancer, the warburg hypothesis and the mitochondrial function," *Curr Pharm Biotechnol*, vol. 14, no. 3, pp. 249–250, 2013.
26. N. Kovářová, T. Mráček, H. Nůsková, E. Holzerová, M. Vrbacký, P. Pecina, K. Hejzlarová, K. Klůčková, J. Rohlena, **J. Neuzil**, and J. Houštěk, "High molecular weight forms of mammalian respiratory chain complex II," *PLoS ONE*, vol. 8, no. 8, p. e71869, 2013.
27. L.-F. Dong, G. Grant, H. Massa, R. Zabalova, E. Akporiaye, and **J. Neuzil**, " α -Tocopheryloxyacetic acid is superior to α -tocopheryl succinate in suppressing HER2-high breast carcinomas due to its higher stability," *Int. J. Cancer*, vol. 131, no. 5, pp. 1052–1058, Sep. 2012.
28. S. Rodríguez-Enríquez, L. Hernández-Esquivel, A. Marín-Hernández, L.-F. Dong, E. T. Akporiaye, **J. Neuzil**, S. J. Ralph, and R. Moreno-Sánchez, "Molecular mechanism for the selective impairment of cancer mitochondrial function by a mitochondrially targeted vitamin E analogue," *Biochim. Biophys. Acta*, vol. 1817, no. 9, pp. 1597–1607, Sep. 2012.

29. M. Tomasetti, S. Staffolani, L. Nocchi, **J. Neuzil**, E. Strafella, N. Manzella, L. Mariotti, M. Bracci, M. Valentino, M. Amati, and L. Santarelli, "Clinical significance of circulating miR-126 quantification in malignant mesothelioma patients," *Clin. Biochem.*, vol. 45, no. 7–8, pp. 575–581, May 2012.
30. R. G. Midwinter, G. J. Maghzal, J. M. Dennis, B. J. Wu, H. Cai, A. A. Kapralov, N. A. Belikova, Y. Y. Tyurina, L.-F. Dong, L. Khachigian, **J. Neuzil**, V. E. Kagan, and R. Stocker, "Succinobucol induces apoptosis in vascular smooth muscle cells," *Free Radic. Biol. Med.*, vol. 52, no. 5, pp. 871–879, Mar. 2012.
31. **J. Neuzil**, J. Rohlena, and L.-F. Dong, "K-Ras and mitochondria: dangerous liaisons," *Cell Res.*, vol. 22, no. 2, pp. 285–287, Feb. 2012.
32. M. Tomasetti, L. Nocchi, **J. Neuzil**, J. Goodwin, M. Nguyen, L. Dong, N. Manzella, S. Staffolani, C. Milanese, B. Garrone, R. Alleva, B. Borghi, L. Santarelli, and R. Guerrieri, "Alpha-tocopheryl succinate inhibits autophagic survival of prostate cancer cells induced by vitamin K3 and ascorbate to trigger cell death," *PLoS ONE*, vol. 7, no. 12, p. e52263, 2012.
33. R. Zabalova, K. Prokopova, M. Stantic, M. Stapelberg, L.-F. Dong, S. J. Ralph, E. Akporiaye, and **J. Neuzil**, "The potential role of CD133 in immune surveillance and apoptosis: a mitochondrial connection?," *Antioxid. Redox Signal.*, vol. 15, no. 12, pp. 2989–3002, Dec. 2011.
34. J. Rohlena, L.-F. Dong, S. J. Ralph, and **J. Neuzil**, "Anticancer drugs targeting the mitochondrial electron transport chain," *Antioxid. Redox Signal.*, vol. 15, no. 12, pp. 2951–2974, Dec. 2011.
35. J. Rohlena, L.-F. Dong, K. Kluckova, R. Zabalova, J. Goodwin, D. Tilly, J. Stursa, A. Pecinova, A. Philimonenko, P. Hozak, J. Banerjee, M. Ledvina, C. K. Sen, J. Houstek, M. J. Coster, and **J. Neuzil**, "Mitochondrially targeted α -tocopheryl succinate is antiangiogenic: potential benefit against tumor angiogenesis but caution against wound healing," *Antioxid. Redox Signal.*, vol. 15, no. 12, pp. 2923–2935, Dec. 2011.
36. S. J. Ralph, R. Moreno-Sánchez, **J. Neuzil**, and S. Rodríguez-Enríquez, "Inhibitors of succinate: quinone reductase/Complex II regulate production of mitochondrial reactive oxygen species and protect normal cells from ischemic damage but induce specific cancer cell death," *Pharm. Res.*, vol. 28, no. 11, pp. 2695–2730, Nov. 2011.
37. **J. Neuzil**, J. Cerny, J. C. Dyason, L.-F. Dong, and S. J. Ralph, "Affinity of vitamin E analogues for the ubiquinone complex II site correlates with their toxicity to cancer cells," *Mol Nutr Food Res*, vol. 55, no. 10, pp. 1543–1551, Oct. 2011.
38. M. Tomasetti, M. Amati, L. Nocchi, F. Saccucci, E. Strafella, S. Staffolani, L. M. Tarquini, D. Carbonari, R. Alleva, B. Borghi, **J. Neuzil**, M. Bracci, and L. Santarelli, "Asbestos exposure affects poly(ADP-ribose) polymerase-1 activity: role in

- asbestos-induced carcinogenesis," *Mutagenesis*, vol. 26, no. 5, pp. 585–591, Sep. 2011.
39. K. Ito, S. A. Scott, S. Cutler, L.-F. Dong, **J. Neuzil**, H. Blanchard, and S. J. Ralph, "Thiodigalactoside inhibits murine cancers by concurrently blocking effects of galectin-1 on immune dysregulation, angiogenesis and protection against oxidative stress," *Angiogenesis*, vol. 14, no. 3, pp. 293–307, Sep. 2011.
 40. L. Nocchi, M. Tomasetti, M. Amati, **J. Neuzil**, L. Santarelli, and F. Saccucci, "Thrombomodulin is silenced in malignant mesothelioma by a poly(ADP-ribose) polymerase-1-mediated epigenetic mechanism," *J. Biol. Chem.*, vol. 286, no. 22, pp. 19478–19488, Jun. 2011.
 41. L.-F. Dong, V. J. A. Jameson, D. Tilly, L. Prochazka, J. Rohlena, K. Valis, J. Truksa, R. Zobalova, E. Mahdavian, K. Kluckova, M. Stantic, J. Stursa, R. Freeman, P. K. Witting, E. Norberg, J. Goodwin, B. A. Salvatore, J. Novotna, J. Turanek, M. Ledvina, P. Hozak, B. Zhivotovsky, M. J. Coster, S. J. Ralph, R. A. J. Smith, and **J. Neuzil**, "Mitochondrial targeting of α -tocopheryl succinate enhances its pro-apoptotic efficacy: a new paradigm for effective cancer therapy," *Free Radic. Biol. Med.*, vol. 50, no. 11, pp. 1546–1555, Jun. 2011.
 42. M. Kubinyi, O. Kreibich, **J. Neuzil**, and R. Smid, "EMAT noise suppression using information fusion in stationary wavelet packets," *IEEE Trans Ultrason Ferroelectr Freq Control*, vol. 58, no. 5, pp. 1027–1036, May 2011.
 43. L.-F. Dong, V. J. A. Jameson, D. Tilly, J. Cerny, E. Mahdavian, A. Marín-Hernández, L. Hernández-Esquivel, S. Rodríguez-Enríquez, J. Stursa, P. K. Witting, B. Stantic, J. Rohlena, J. Truksa, K. Kluckova, J. C. Dyason, M. Ledvina, B. A. Salvatore, R. Moreno-Sánchez, M. J. Coster, S. J. Ralph, R. A. J. Smith, and **J. Neuzil**, "Mitochondrial targeting of vitamin E succinate enhances its pro-apoptotic and anti-cancer activity via mitochondrial complex II," *J. Biol. Chem.*, vol. 286, no. 5, pp. 3717–3728, Feb. 2011.
 44. K. Valis, L. Prochazka, E. Boura, J. Chladova, T. Obsil, J. Rohlena, J. Truksa, L.-F. Dong, S. J. Ralph, and **J. Neuzil**, "Hippo/Mst1 stimulates transcription of the proapoptotic mediator NOXA in a FoxO1-dependent manner," *Cancer Res.*, vol. 71, no. 3, pp. 946–954, Feb. 2011.
 45. L. Santarelli, E. Strafella, S. Staffolani, M. Amati, M. Emanuelli, D. Sartini, V. Pozzi, D. Carbonari, M. Bracci, E. Pignotti, P. Mazzanti, A. Sabbatini, R. Ranaldi, S. Gasparini, **J. Neuzil**, and M. Tomasetti, "Association of MiR-126 with soluble mesothelin-related peptides, a marker for malignant mesothelioma," *PLoS ONE*, vol. 6, no. 4, p. e18232, 2011.
 46. **J. Neuzil**, L. Andera, and A. Kozubik, "MAC'09, Otto and us...," *Mitochondrion*, vol. 10, no. 6, p. 583, Nov. 2010.

47. L. Biasutto, L.-F. Dong, M. Zoratti, and **J. Neuzil**, "Mitochondrially targeted anti-cancer agents," *Mitochondrion*, vol. 10, no. 6, pp. 670–681, Nov. 2010.
48. L. Prochazka, L.-F. Dong, K. Valis, R. Freeman, S. J. Ralph, J. Turanek, and **J. Neuzil**, "alpha-Tocopheryl succinate causes mitochondrial permeabilization by preferential formation of Bak channels," *Apoptosis*, vol. 15, no. 7, pp. 782–794, Jul. 2010.
49. S. Koudelka, J. Masek, **J. Neuzil**, and J. Turánek, "Lyophilised liposome-based formulations of alpha-tocopheryl succinate: preparation and physico-chemical characterisation," *J Pharm Sci*, vol. 99, no. 5, pp. 2434–2443, May 2010.
50. M. Tomasetti, E. Strafella, S. Staffolani, L. Santarelli, **J. Neuzil**, and R. Guerrieri, "alpha-Tocopheryl succinate promotes selective cell death induced by vitamin K3 in combination with ascorbate," *Br. J. Cancer*, vol. 102, no. 8, pp. 1224–1234, Apr. 2010.
51. S. J. Ralph, S. Rodríguez-Enríquez, **J. Neuzil**, E. Saavedra, and R. Moreno-Sánchez, "The causes of cancer revisited: 'mitochondrial malignancy' and ROS-induced oncogenic transformation - why mitochondria are targets for cancer therapy," *Mol. Aspects Med.*, vol. 31, no. 2, pp. 145–170, Apr. 2010.
52. Y. Zhao, R. Li, W. Xia, **J. Neuzil**, Y. Lu, H. Zhang, X. Zhao, X. Zhang, C. Sun, and K. Wu, "Bid integrates intrinsic and extrinsic signaling in apoptosis induced by alpha-tocopheryl succinate in human gastric carcinoma cells," *Cancer Lett.*, vol. 288, no. 1, pp. 42–49, Feb. 2010.
53. S. J. Ralph, S. Rodríguez-Enríquez, **J. Neuzil**, and R. Moreno-Sánchez, "Bioenergetic pathways in tumor mitochondria as targets for cancer therapy and the importance of the ROS-induced apoptotic trigger," *Mol. Aspects Med.*, vol. 31, no. 1, pp. 29–59, Feb. 2010.
54. J. Turánek, X.-F. Wang, P. Knötigová, S. Koudelka, L.-F. Dong, E. Vrublová, E. Mahdavian, L. Procházka, S. Sangsura, A. Vacek, B. A. Salvatore, and **J. Neuzil**, "Liposomal formulation of alpha-tocopheryl maleamide: in vitro and in vivo toxicological profile and anticancer effect against spontaneous breast carcinomas in mice," *Toxicol. Appl. Pharmacol.*, vol. 237, no. 3, pp. 249–257, Jun. 2009.
55. M. Tomasetti, M. Amati, L. Santarelli, R. Alleva, and **J. Neuzil**, "Malignant mesothelioma: biology, diagnosis and therapeutic approaches," *Curr Mol Pharmacol*, vol. 2, no. 2, pp. 190–206, Jun. 2009.
56. L.-F. Dong, R. Freeman, J. Liu, R. Zabalova, A. Marin-Hernandez, M. Stantic, J. Rohlena, K. Valis, S. Rodriguez-Enriquez, B. Butcher, J. Goodwin, U. T. Brunk, P. K. Witting, R. Moreno-Sanchez, I. E. Scheffler, S. J. Ralph, and **J. Neuzil**, "Suppression of tumor growth in vivo by the mitocan alpha-tocopheryl succinate requires respiratory complex II," *Clin. Cancer Res.*, vol. 15, no. 5, pp. 1593–1600, Mar. 2009.

57. Y. Zhao, **J. Neuzil**, and K. Wu, "Vitamin E analogues as mitochondria-targeting compounds: from the bench to the bedside?," *Mol Nutr Food Res*, vol. 53, no. 1, pp. 129–139, Jan. 2009.
58. S. J. Ralph and **J. Neuzil**, "Mitochondria as targets for cancer therapy," *Mol Nutr Food Res*, vol. 53, no. 1, pp. 9–28, Jan. 2009.
59. S. J. Ralph and **J. Neuzil**, "Mitocans, a class of emerging anti-cancer drugs," *Mol Nutr Food Res*, vol. 53, no. 1, pp. 7–8, Jan. 2009.
60. B. J. Morrison, L. Andera, B. A. Reynolds, S. J. Ralph, and **J. Neuzil**, "Future use of mitocans against tumour-initiating cells?," *Mol Nutr Food Res*, vol. 53, no. 1, pp. 147–153, Jan. 2009.
61. R. Zobalova, L. McDermott, M. Stantic, K. Prokopova, L.-F. Dong, and **J. Neuzil**, "CD133-positive cells are resistant to TRAIL due to up-regulation of FLIP," *Biochem. Biophys. Res. Commun.*, vol. 373, no. 4, pp. 567–571, Sep. 2008.
62. L.-F. Dong, P. Low, J. C. Dyason, X.-F. Wang, L. Prochazka, P. K. Witting, R. Freeman, E. Swettenham, K. Valis, J. Liu, R. Zobalova, J. Turanek, D. R. Spitz, F. E. Domann, I. E. Scheffler, S. J. Ralph, and **J. Neuzil**, "Alpha-tocopheryl succinate induces apoptosis by targeting ubiquinone-binding sites in mitochondrial respiratory complex II," *Oncogene*, vol. 27, no. 31, pp. 4324–4335, Jul. 2008.
63. R. Alleva, M. Tomasetti, D. Sartini, M. Emanuelli, E. Nasole, F. Di Donato, B. Borghi, L. Santarelli, and **J. Neuzil**, "alpha-Lipoic acid modulates extracellular matrix and angiogenesis gene expression in non-healing wounds treated with hyperbaric oxygen therapy," *Mol. Med.*, vol. 14, no. 3–4, pp. 175–183, Apr. 2008.
64. M. Amati, M. Tomasetti, M. Scartozzi, L. Mariotti, R. Alleva, E. Pignotti, B. Borghi, M. Valentino, M. Governa, **J. Neuzil**, and L. Santarelli, "Profiling tumor-associated markers for early detection of malignant mesothelioma: an epidemiologic study," *Cancer Epidemiol. Biomarkers Prev.*, vol. 17, no. 1, pp. 163–170, Jan. 2008.
65. R. Zobalova, E. Swettenham, J. Chladova, L.-F. Dong, and **J. Neuzil**, "Daxx inhibits stress-induced apoptosis in cardiac myocytes," *Redox Rep.*, vol. 13, no. 6, pp. 263–270, 2008.
66. R. Zobalova, M. Stantic, K. Prokopova, L.-F. Dong, and **J. Neuzil**, "Cancer cells with high expression of CD133 exert FLIP upregulation and resistance to TRAIL-induced apoptosis," *Biofactors*, vol. 34, no. 3, pp. 231–235, 2008.
67. L.-F. Dong, E. Swettenham, J. Eliasson, X.-F. Wang, M. Gold, Y. Medunic, M. Stantic, P. Low, L. Prochazka, P. K. Witting, J. Turanek, E. T. Akporiaye, S. J. Ralph, and **J. Neuzil**, "Vitamin E analogues inhibit angiogenesis by selective induction of apoptosis in proliferating endothelial cells: the role of oxidative stress," *Cancer Res.*, vol. 67, no. 24, pp. 11906–11913, Dec. 2007.

68. **J. Neuzil**, L.-F. Dong, L. Ramanathapuram, T. Hahn, M. Chladova, X.-F. Wang, R. Zobalova, L. Prochazka, M. Gold, R. Freeman, J. Turanek, E. T. Akporiaye, J. C. Dyason, and S. J. Ralph, "Vitamin E analogues as a novel group of mitocans: anti-cancer agents that act by targeting mitochondria," *Mol. Aspects Med.*, vol. 28, no. 5–6, pp. 607–645, Dec. 2007.
69. **J. Neuzil**, E. Swettenham, X.-F. Wang, L.-F. Dong, and M. Stapelberg, "alpha-Tocopheryl succinate inhibits angiogenesis by disrupting paracrine FGF2 signalling," *FEBS Lett.*, vol. 581, no. 24, pp. 4611–4615, Oct. 2007.
70. L. Procházka, J. Turánek, R. Tesarík, P. Knotigová, P. Polásková, Z. Andrysík, A. Kozubík, F. Zák, P. Sova, **J. Neuzil**, and M. Machala, "Apoptosis and inhibition of gap-junctional intercellular communication induced by LA-12, a novel hydrophobic platinum(IV) complex," *Arch. Biochem. Biophys.*, vol. 462, no. 1, pp. 54–61, Jun. 2007.
71. **J. Neuzil**, M. Tomasetti, Y. Zhao, L.-F. Dong, M. Birringer, X.-F. Wang, P. Low, K. Wu, B. A. Salvatore, and S. J. Ralph, "Vitamin E analogs, a novel group of 'mitocans,' as anticancer agents: the importance of being redox-silent," *Mol. Pharmacol.*, vol. 71, no. 5, pp. 1185–1199, May 2007.
72. **J. Neuzil**, M. Stantic, R. Zobalova, J. Chladova, X. Wang, L. Prochazka, L. Dong, L. Andera, and S. J. Ralph, "Tumour-initiating cells vs. cancer 'stem' cells and CD133: what's in the name?," *Biochem. Biophys. Res. Commun.*, vol. 355, no. 4, pp. 855–859, Apr. 2007.
73. X.-F. Wang, M. Birringer, L.-F. Dong, P. Veprek, P. Low, E. Swettenham, M. Stantic, L.-H. Yuan, R. Zobalova, K. Wu, M. Ledvina, S. J. Ralph, and **J. Neuzil**, "A peptide conjugate of vitamin E succinate targets breast cancer cells with high ErbB2 expression," *Cancer Res.*, vol. 67, no. 7, pp. 3337–3344, Apr. 2007.
74. Y. Zhao, X. Zhao, B. Yang, **J. Neuzil**, and K. Wu, "alpha-Tocopheryl succinate-induced apoptosis in human gastric cancer cells is modulated by ERK1/2 and c-Jun N-terminal kinase in a biphasic manner," *Cancer Lett.*, vol. 247, no. 2, pp. 345–352, Mar. 2007.
75. **J. Neuzil**, J. C. Dyason, R. Freeman, L.-F. Dong, L. Prochazka, X.-F. Wang, I. Scheffler, and S. J. Ralph, "Mitocans as anti-cancer agents targeting mitochondria: lessons from studies with vitamin E analogues, inhibitors of complex II," *J. Bioenerg. Biomembr.*, vol. 39, no. 1, pp. 65–72, Feb. 2007.
76. M. Tomasetti and **J. Neuzil**, "Vitamin E analogues and immune response in cancer treatment," *Vitam. Horm.*, vol. 76, pp. 463–491, 2007.
77. **J. Neuzil**, C. Widén, N. Gellert, E. Swettenham, R. Zobalova, L.-F. Dong, X.-F. Wang, C. Lidebjer, H. Dalen, J. P. Headrick, and P. K. Witting, "Mitochondria transmit

- apoptosis signalling in cardiomyocyte-like cells and isolated hearts exposed to experimental ischemia-reperfusion injury," *Redox Rep.*, vol. 12, no. 3, pp. 148–162, 2007.
78. S. J. Ralph, P. Low, L. Dong, A. Lawen, and **J. Neuzil**, "Mitocans: mitochondrial targeted anti-cancer drugs as improved therapies and related patent documents," *Recent Pat Anticancer Drug Discov*, vol. 1, no. 3, pp. 327–346, Nov. 2006.
 79. **J. Neuzil**, X.-F. Wang, L.-F. Dong, P. Low, and S. J. Ralph, "Molecular mechanism of 'mitocan'-induced apoptosis in cancer cells epitomizes the multiple roles of reactive oxygen species and Bcl-2 family proteins," *FEBS Lett.*, vol. 580, no. 22, pp. 5125–5129, Oct. 2006.
 80. P. K. Witting, W.-Q. Liao, null Matthew J Harris, and **J. Neuzil**, "Expression of human myoglobin in H9c2 cells enhances toxicity to added hydrogen peroxide," *Biochem. Biophys. Res. Commun.*, vol. 348, no. 2, pp. 485–493, Sep. 2006.
 81. X.-F. Wang, L. Dong, Y. Zhao, M. Tomasetti, K. Wu, and **J. Neuzil**, "Vitamin E analogues as anticancer agents: lessons from studies with alpha-tocopheryl succinate," *Mol Nutr Food Res*, vol. 50, no. 8, pp. 675–685, Aug. 2006.
 82. **J. Neuzil**, L.-F. Dong, X.-F. Wang, and J.-M. Zingg, "Tocopherol-associated protein-1 accelerates apoptosis induced by alpha-tocopheryl succinate in mesothelioma cells," *Biochem. Biophys. Res. Commun.*, vol. 343, no. 4, pp. 1113–1117, May 2006.
 83. R. E. Freeman and **J. Neuzil**, "Role of thioredoxin-1 in apoptosis induction by alpha-tocopheryl succinate and TNF-related apoptosis-inducing ligand in mesothelioma cells," *FEBS Lett.*, vol. 580, no. 11, pp. 2671–2676, May 2006.
 84. M. Tomasetti, L. Andera, R. Alleva, B. Borghi, **J. Neuzil**, and A. Procopio, "Alpha-tocopheryl succinate induces DR4 and DR5 expression by a p53-dependent route: implication for sensitisation of resistant cancer cells to TRAIL apoptosis," *FEBS Lett.*, vol. 580, no. 8, pp. 1925–1931, Apr. 2006.
 85. R. Alleva, M. S. Benassi, L. Pazzaglia, M. Tomasetti, N. Gellert, B. Borghi, **J. Neuzil**, and P. Picci, "Alpha-tocopheryl succinate alters cell cycle distribution sensitising human osteosarcoma cells to methotrexate-induced apoptosis," *Cancer Lett.*, vol. 232, no. 2, pp. 226–235, Feb. 2006.
 86. Tomic-Vatic, J. Eytina, J. Chapman, E. Mahdavian, **J. Neuzil**, and B. A. Salvatore, "Vitamin E amides, a new class of vitamin E analogues with enhanced proapoptotic activity," *Int. J. Cancer*, vol. 117, no. 2, pp. 188–193, Nov. 2005.
 87. E. Swettenham, P. K. Witting, B. A. Salvatore, and **J. Neuzil**, "Alpha-tocopheryl succinate selectively induces apoptosis in neuroblastoma cells: potential therapy of malignancies of the nervous system?," *J. Neurochem.*, vol. 94, no. 5, pp. 1448–1456, Sep. 2005.

88. R. Alleva, E. Nasole, F. Di Donato, B. Borghi, **J. Neuzil**, and M. Tomasetti, "alpha-Lipoic acid supplementation inhibits oxidative damage, accelerating chronic wound healing in patients undergoing hyperbaric oxygen therapy," *Biochem. Biophys. Res. Commun.*, vol. 333, no. 2, pp. 404–410, Jul. 2005.
89. M. Stapelberg, N. Gellert, E. Swettenham, M. Tomasetti, P. K. Witting, A. Procopio, and **J. Neuzil**, "Alpha-tocopheryl succinate inhibits malignant mesothelioma by disrupting the fibroblast growth factor autocrine loop: mechanism and the role of oxidative stress," *J. Biol. Chem.*, vol. 280, no. 27, pp. 25369–25376, Jul. 2005.
90. R. Alleva, M. S. Benassi, M. Tomasetti, N. Gellert, F. Ponticelli, B. Borghi, P. Picci, and **J. Neuzil**, "Alpha-tocopheryl succinate induces cytostasis and apoptosis in osteosarcoma cells: the role of E2F1," *Biochem. Biophys. Res. Commun.*, vol. 331, no. 4, pp. 1515–1521, Jun. 2005.
91. **J. Neuzil** and H. Massa, "Hepatic processing determines dual activity of alpha-tocopheryl succinate: a novel paradigm for a shift in biological activity due to pro-vitamin-to-vitamin conversion," *Biochem. Biophys. Res. Commun.*, vol. 327, no. 4, pp. 1024–1027, Feb. 2005.
92. X.-F. Wang, P. K. Witting, B. A. Salvatore, and **J. Neuzil**, "Vitamin E analogs trigger apoptosis in HER2/erbB2-overexpressing breast cancer cells by signaling via the mitochondrial pathway," *Biochem. Biophys. Res. Commun.*, vol. 326, no. 2, pp. 282–289, Jan. 2005.
93. **J. Neuzil**, B. S. Rayner, H. C. Lowe, and P. K. Witting, "Oxidative stress in myocardial ischaemia reperfusion injury: a renewed focus on a long-standing area of heart research," *Redox Rep.*, vol. 10, no. 4, pp. 187–197, 2005.
94. M. Stapelberg, M. Tomasetti, R. Alleva, N. Gellert, A. Procopio, and **J. Neuzil**, "alpha-Tocopheryl succinate inhibits proliferation of mesothelioma cells by selective down-regulation of fibroblast growth factor receptors," *Biochem. Biophys. Res. Commun.*, vol. 318, no. 3, pp. 636–641, Jun. 2004.
95. Terman, H. Dalen, J. W. Eaton, **J. Neuzil**, and U. T. Brunk, "Aging of cardiac myocytes in culture: oxidative stress, lipofuscin accumulation, and mitochondrial turnover," *Ann. N. Y. Acad. Sci.*, vol. 1019, pp. 70–77, Jun. 2004.
96. **J. Neuzil**, M. Tomasetti, A. S. Mellick, R. Alleva, B. A. Salvatore, M. Birringer, and M. W. Fariss, "Vitamin E analogues: a new class of inducers of apoptosis with selective anti-cancer effects," *Curr Cancer Drug Targets*, vol. 4, no. 4, pp. 355–372, Jun. 2004.
97. M. Tomasetti, N. Gellert, A. Procopio, and **J. Neuzil**, "A vitamin E analogue suppresses malignant mesothelioma in a preclinical model: a future drug against a fatal neoplastic disease?," *Int. J. Cancer*, vol. 109, no. 5, pp. 641–642, May 2004.

98. M. Tomasetti, M. R. Rippon, R. Alleva, S. Moretti, L. Andera, **J. Neuzil**, and A. Procopio, "Alpha-tocopheryl succinate and TRAIL selectively synergise in induction of apoptosis in human malignant mesothelioma cells," *Br. J. Cancer*, vol. 90, no. 8, pp. 1644–1653, Apr. 2004.
99. K. Jostarndt, T. Rubic, H. Kuhn, M. W. Anthosen, L. Andera, N. Gellert, M. Trottmann, C. Weber, B. Johansen, N. Hrboticky, and **J. Neuzil**, "Enzymatically modified low-density lipoprotein upregulates CD36 in low-differentiated monocytic cells in a peroxisome proliferator-activated receptor-gamma-dependent way," *Biochem. Pharmacol.*, vol. 67, no. 5, pp. 841–854, Mar. 2004.
100. **J. Neuzil**, E. Swettenham, and N. Gellert, "Sensitization of mesothelioma to TRAIL apoptosis by inhibition of histone deacetylase: role of Bcl-xL down-regulation," *Biochem. Biophys. Res. Commun.*, vol. 314, no. 1, pp. 186–191, Jan. 2004.
101. J. L. Buss, **J. Neuzil**, and P. Ponka, "Oxidative stress mediates toxicity of pyridoxal isonicotinoyl hydrazone analogs," *Arch. Biochem. Biophys.*, vol. 421, no. 1, pp. 1–9, Jan. 2004.
102. W. Erl, C. Weber, A. Zerneck, **J. Neuzil**, C. A. Vosseler, H. J. Kim, and P. C. Weber, "Cyclopentenone prostaglandins induce endothelial cell apoptosis independent of the peroxisome proliferator-activated receptor-gamma," *Eur. J. Immunol.*, vol. 34, no. 1, pp. 241–250, Jan. 2004.
103. **J. Neuzil**, "Vitamin E succinate and cancer treatment: a vitamin E prototype for selective antitumour activity," *Br. J. Cancer*, vol. 89, no. 10, pp. 1822–1826, Nov. 2003.
104. Terman, H. Dalen, J. W. Eaton, **J. Neuzil**, and U. T. Brunk, "Mitochondrial recycling and aging of cardiac myocytes: the role of autophagocytosis," *Exp. Gerontol.*, vol. 38, no. 8, pp. 863–876, Aug. 2003.
105. M. Birringer, J. H. EyTina, B. A. Salvatore, and **J. Neuzil**, "Vitamin E analogues as inducers of apoptosis: structure-function relation," *Br. J. Cancer*, vol. 88, no. 12, pp. 1948–1955, Jun. 2003.
106. T. Weber, H. Dalen, L. Andera, A. Nègre-Salvayre, N. Augé, M. Sticha, A. Lloret, A. Terman, P. K. Witting, M. Higuchi, M. Plasilova, J. Zivny, N. Gellert, C. Weber, and **J. Neuzil**, "Mitochondria play a central role in apoptosis induced by alpha-tocopheryl succinate, an agent with antineoplastic activity: comparison with receptor-mediated pro-apoptotic signaling," *Biochemistry*, vol. 42, no. 14, pp. 4277–4291, Apr. 2003.
107. J. L. Buss, **J. Neuzil**, N. Gellert, C. Weber, and P. Ponka, "Pyridoxal isonicotinoyl hydrazone analogs induce apoptosis in hematopoietic cells due to their iron-chelating properties," *Biochem. Pharmacol.*, vol. 65, no. 2, pp. 161–172, Jan. 2003.

108. H. Dalen and **J. Neuzil**, "Alpha-tocopheryl succinate sensitises a T lymphoma cell line to TRAIL-induced apoptosis by suppressing NF-kappaB activation," *Br. J. Cancer*, vol. 88, no. 1, pp. 153–158, Jan. 2003.
109. R. Brigelius-Flohé, F. J. Kelly, J. T. Salonen, **J. Neuzil**, J.-M. Zingg, and A. Azzi, "The European perspective on vitamin E: current knowledge and future research," *Am. J. Clin. Nutr.*, vol. 76, no. 4, pp. 703–716, Oct. 2002.
110. J. L. Buss, **J. Neuzil**, and P. Ponka, "The role of oxidative stress in the toxicity of pyridoxal isonicotinoyl hydrazone (PIH) analogues," *Biochem. Soc. Trans.*, vol. 30, no. 4, pp. 755–757, Aug. 2002.
111. **J. Neuzil**, "Alpha-tocopheryl succinate epitomizes a compound with a shift in biological activity due to pro-vitamin-to-vitamin conversion," *Biochem. Biophys. Res. Commun.*, vol. 293, no. 5, pp. 1309–1313, May 2002.
112. **J. Neuzil**, K. Kågedal, L. Andera, C. Weber, and U. T. Brunk, "Vitamin E analogs: a new class of multiple action agents with anti-neoplastic and anti-atherogenic activity," *Apoptosis*, vol. 7, no. 2, pp. 179–187, Apr. 2002.
113. **J. Neuzil**, M. Zhao, G. Ostermann, M. Sticha, N. Gellert, C. Weber, J. W. Eaton, and U. T. Brunk, "Alpha-tocopheryl succinate, an agent with in vivo anti-tumour activity, induces apoptosis by causing lysosomal instability," *Biochem. J.*, vol. 362, no. Pt 3, pp. 709–715, Mar. 2002.
114. Terman, **J. Neuzil**, K. Kågedal, K. Ollinger, and U. T. Brunk, "Decreased apoptotic response of inclusion-cell disease fibroblasts: a consequence of lysosomal enzyme missorting?," *Exp. Cell Res.*, vol. 274, no. 1, pp. 9–15, Mar. 2002.
115. T. Weber, M. Lu, L. Andera, H. Lahm, N. Gellert, M. W. Fariss, V. Korinek, W. Sattler, D. S. Ucker, A. Terman, A. Schröder, W. Erl, U. T. Brunk, R. J. Coffey, C. Weber, and **J. Neuzil**, "Vitamin E succinate is a potent novel antineoplastic agent with high selectivity and cooperativity with tumor necrosis factor-related apoptosis-inducing ligand (Apo2 ligand) in vivo," *Clin. Cancer Res.*, vol. 8, no. 3, pp. 863–869, Mar. 2002.
116. K. Jostarndt, N. Gellert, T. Rubic, C. Weber, H. Kühn, B. Johansen, N. Hrboticky, and **J. Neuzil**, "Dissociation of apoptosis induction and CD36 upregulation by enzymatically modified low-density lipoprotein in monocytic cells," *Biochem. Biophys. Res. Commun.*, vol. 290, no. 3, pp. 988–993, Jan. 2002.
117. R. Alleva, M. Tomasetti, L. Andera, N. Gellert, B. Borghi, C. Weber, M. P. Murphy, and **J. Neuzil**, "Coenzyme Q blocks biochemical but not receptor-mediated apoptosis by increasing mitochondrial antioxidant protection," *FEBS Lett.*, vol. 503, no. 1, pp. 46–50, Aug. 2001.

118. **J. Neuzil**, C. Weber, and A. Kontush, "The role of vitamin E in atherogenesis: linking the chemical, biological and clinical aspects of the disease," *Atherosclerosis*, vol. 157, no. 2, pp. 257–283, Aug. 2001.
119. **J. Neuzil**, A. Schröder, P. von Hundelshausen, A. Zerneck, T. Weber, N. Gellert, and C. Weber, "Inhibition of inflammatory endothelial responses by a pathway involving caspase activation and p65 cleavage," *Biochemistry*, vol. 40, no. 15, pp. 4686–4692, Apr. 2001.
120. **J. Neuzil**, T. Weber, A. Schröder, M. Lu, G. Ostermann, N. Gellert, G. C. Mayne, B. Olejnicka, A. Nègre-Salvayre, M. Stícha, R. J. Coffey, and C. Weber, "Induction of cancer cell apoptosis by alpha-tocopheryl succinate: molecular pathways and structural requirements," *FASEB J.*, vol. 15, no. 2, pp. 403–415, Feb. 2001.
121. **J. Neuzil**, T. Weber, N. Gellert, and C. Weber, "Selective cancer cell killing by alpha-tocopheryl succinate," *Br. J. Cancer*, vol. 84, no. 1, pp. 87–89, Jan. 2001.
122. **J. Neuzil**, T. Weber, A. Terman, C. Weber, and U. T. Brunk, "Vitamin E analogues as inducers of apoptosis: implications for their potential antineoplastic role," *Redox Rep.*, vol. 6, no. 3, pp. 143–151, 2001.
123. U. T. Brunk, **J. Neuzil**, and J. W. Eaton, "Lysosomal involvement in apoptosis," *Redox Rep.*, vol. 6, no. 2, pp. 91–97, 2001.
124. **J. Neuzil**, I. Svensson, T. Weber, C. Weber, and U. T. Brunk, "alpha-tocopheryl succinate-induced apoptosis in Jurkat T cells involves caspase-3 activation, and both lysosomal and mitochondrial destabilisation," *FEBS Lett.*, vol. 445, no. 2–3, pp. 295–300, Feb. 1999.
125. **J. Neuzil** and A. Baoutina, "alpha-Tocopherol in atherogenesis: do we know its real role?," *Cardiovasc Drugs Ther.*, vol. 12, no. 5, pp. 421–423, Oct. 1998.
126. **J. Neuzil**, J. M. Upston, P. K. Witting, K. F. Scott, and R. Stocker, "Secretory phospholipase A2 and lipoprotein lipase enhance 15-lipoxygenase-induced enzymic and nonenzymic lipid peroxidation in low-density lipoproteins," *Biochemistry*, vol. 37, no. 25, pp. 9203–9210, Jun. 1998.
127. **J. Neuzil**, J. K. Christison, E. Iheanacho, J. C. Fragonas, V. Zammit, N. H. Hunt, and R. Stocker, "Radical-induced lipoprotein and plasma lipid oxidation in normal and apolipoprotein E gene knockout (apoE^{-/-}) mice: apoE^{-/-} mouse as a model for testing the role of tocopherol-mediated peroxidation in atherogenesis," *J. Lipid Res.*, vol. 39, no. 2, pp. 354–368, Feb. 1998.
128. J. M. Upston, **J. Neuzil**, P. K. Witting, R. Alleva, and R. Stocker, "Oxidation of free fatty acids in low density lipoprotein by 15-lipoxygenase stimulates nonenzymic, alpha-tocopherol-mediated peroxidation of cholesteryl esters," *J. Biol. Chem.*, vol. 272, no. 48, pp. 30067–30074, Nov. 1997.

129. **J. Neuzil**, P. K. Witting, and R. Stocker, "Alpha-tocopheryl hydroquinone is an efficient multifunctional inhibitor of radical-initiated oxidation of low density lipoprotein lipids," *Proc. Natl. Acad. Sci. U.S.A.*, vol. 94, no. 15, pp. 7885–7890, Jul. 1997.
130. S. R. Thomas, **J. Neuzil**, and R. Stocker, "Inhibition of LDL oxidation by ubiquinol-10. A protective mechanism for coenzyme Q in atherogenesis?," *Mol. Aspects Med.*, vol. 18 Suppl, pp. S85–103, 1997.
131. **J. Neuzil**, S. R. Thomas, and R. Stocker, "Requirement for, promotion, or inhibition by alpha-tocopherol of radical-induced initiation of plasma lipoprotein lipid peroxidation," *Free Radic. Biol. Med.*, vol. 22, no. 1–2, pp. 57–71, 1997.
132. J. M. Upston, **J. Neuzil**, and R. Stocker, "Oxidation of LDL by recombinant human 15-lipoxygenase: evidence for alpha-tocopherol-dependent oxidation of esterified core and surface lipids," *J. Lipid Res.*, vol. 37, no. 12, pp. 2650–2661, Dec. 1996.
133. S. R. Thomas, **J. Neuzil**, and R. Stocker, "Cosupplementation with coenzyme Q prevents the prooxidant effect of alpha-tocopherol and increases the resistance of LDL to transition metal-dependent oxidation initiation," *Arterioscler. Thromb. Vasc. Biol.*, vol. 16, no. 5, pp. 687–696, May 1996.
134. S. R. Thomas, **J. Neuzil**, D. Mohr, and R. Stocker, "Coantioxidants make alpha-tocopherol an efficient antioxidant for low-density lipoprotein," *Am. J. Clin. Nutr.*, vol. 62, no. 6 Suppl, p. 1357S–1364S, Dec. 1995.
135. **J. Neuzil**, B. A. Darlow, T. E. Inder, K. B. Sluis, C. C. Winterbourn, and R. Stocker, "Oxidation of parenteral lipid emulsion by ambient and phototherapy lights: potential toxicity of routine parenteral feeding," *J. Pediatr.*, vol. 126, no. 5 Pt 1, pp. 785–790, May 1995.
136. **J. Neuzil** and R. Stocker, "Free and albumin-bound bilirubin are efficient co-antioxidants for alpha-tocopherol, inhibiting plasma and low density lipoprotein lipid peroxidation," *J. Biol. Chem.*, vol. 269, no. 24, pp. 16712–16719, Jun. 1994.
137. **J. Neuzil** and R. Stocker, "Bilirubin attenuates radical-mediated damage to serum albumin," *FEBS Lett.*, vol. 331, no. 3, pp. 281–284, Oct. 1993.
138. **J. Neuzil**, J. M. Gebicki, and R. Stocker, "Radical-induced chain oxidation of proteins and its inhibition by chain-breaking antioxidants," *Biochem. J.*, vol. 293 (Pt 3), pp. 601–606, Aug. 1993.
139. **J. Neuzil**, H. Danielson, G. R. Welch, and J. Ovádi, "Cooperative effect of fructose bisphosphate and glyceraldehyde-3-phosphate dehydrogenase on aldolase action," *Biochim. Biophys. Acta*, vol. 1037, no. 3, pp. 307–312, Mar. 1990.

140. Vancurová, A. Vancura, J. Volc, J. Kopecký, **J. Neuzil**, G. Basarová, and V. Běhal, "Purification and properties of NADP-dependent glutamate dehydrogenase from *Streptomyces fradiae*," *J. Gen. Microbiol.*, vol. 135, no. 12, pp. 3311–3318, Dec. 1989.
141. **Neuzil**, J. Novotná, I. Vancurová, V. Běhal, and Z. Hostálek, "A direct-injection reversed-phase liquid chromatographic micromethod for studying the kinetics of terminal reactions of tetracycline biosynthesis," *Anal. Biochem.*, vol. 181, no. 1, pp. 125–129, Aug. 1989.
142. Vancurová, A. Vancura, J. Volc, **J. Neuzil**, and V. Běhal, "A further characterization of alanine dehydrogenase from *Streptomyces aureofaciens*," *J. Basic Microbiol.*, vol. 29, no. 3, pp. 185–189, 1989.
143. Vancura, I. Vancurová, J. Volc, S. P. Fussey, M. Flieger, **J. Neuzil**, J. Marsálek, and V. Běhal, "Valine dehydrogenase from *Streptomyces fradiae*: purification and properties," *J. Gen. Microbiol.*, vol. 134, no. 12, pp. 3213–3219, Dec. 1988.
144. Vancurová, A. Vancura, J. Volc, **J. Neuzil**, M. Flieger, G. Basarová, and V. Běhal, "Isolation and characterization of valine dehydrogenase from *Streptomyces aureofaciens*," *J. Bacteriol.*, vol. 170, no. 11, pp. 5192–5196, Nov. 1988.
145. Vancurová, J. Volc, M. Flieger, **J. Neuzil**, J. Novotná, J. Vlach, and V. Běhal, "Isolation of pure anhydrotetracycline oxygenase from *Streptomyces aureofaciens*," *Biochem. J.*, vol. 253, no. 1, pp. 263–267, Jul. 1988.
146. **Neuzil**, J. Novotná, V. Erban, V. Běhal, and Z. Hostálek, "Glucose-6-phosphate dehydrogenase from a tetracycline producing strain of *Streptomyces aureofaciens*: some properties and regulatory aspects of the enzyme," *Biochem. Int.*, vol. 17, no. 1, pp. 187–196, Jul. 1988.
147. **Neuzil**, V. Kristůfek, and M. Blumauerová, "Enzymic degradation of bromoxynil by cell-free extracts of *Streptomyces felleus*," *Folia Microbiol. (Praha)*, vol. 33, no. 5, pp. 349–354, 1988.
148. Vancurová, M. Flieger, J. Volc, M. J. Benes, J. Novotná, **J. Neuzil**, and V. Běhal, "Partial purification and characterization of anhydrotetracycline oxygenase of *Streptomyces aureofaciens*," *J. Basic Microbiol.*, vol. 27, no. 9, pp. 529–533, 1987.
149. **Neuzil**, J. Novotná, V. Běhal, and Z. Hostálek, "Inhibition studies of glucose-6-phosphate dehydrogenase from tetracycline-producing *Streptomyces aureofaciens*," *Biotechnol. Appl. Biochem.*, vol. 8, no. 5, pp. 375–378, Oct. 1986.