

CURRICULUM VITAE

Evandro Fei FANG, Ph.D.

Updated 12th April. 2016

OFFICE ADDRESS

Laboratory of Molecular Gerontology, National Institute on Aging, NIH
251 Bayview Boulevard, Suite 100, Room 05B009
Baltimore, Maryland. MD 21224.
Phone: +1-443-931-7313; Fax: +1-410-558-8157
Emails: fange@mail.nih.gov; evandrofeifang@yahoo.com
http://www.researchgate.net/profile/Evandro_Fei_Fang/
<http://www.irp.nia.nih.gov/branches/lmg/e-fang.htm>

PERSONAL STATEMENT

My primary research interest is the mechanisms of mitochondrial dysfunction in human aging and neurodegenerative disease. This is an important research area, because research findings about aging are relevant to medical, social and economic issues and concerns in this globally aging society. Recently, a major contribution by us shows that some DNA repair deficiency premature aging diseases are phenotypically similar to patients suffering from mitochondrial diseases. This is due to defective mitophagy via reduction of the NAD⁺/SIRT1-PGC1 α (NSP) signaling (Fang *et al.*, *Cell* 2014). However, mechanisms of impaired mitophagy and the case in neurons are largely unknown. Three major research interests of my 5-year plan are a) Mechanisms of mitophagy (with a special focus on ataxia telangiectasia mutated/ATM in mitophagy); b) Relationship between compromised mitophagy and Alzheimer's disease; and c) screening of mitophagy-inducing compounds. The long-term goal of my research is to apply pharmacological interventions on individuals with premature aging disorders, and to promote longer and more productive lives for the general aging population.

EDUCATION

09/2000-07/2005 Bachelor of Medicine, Anhui Medical University, China
09/2005-07/2008 Master of Medicine, Sun Yat-sen University, China
01/2009-11/2011 Doctor of Philosophy, The Chinese University of Hong Kong, Hong Kong

CONTINUING EDUCATION

01/2015-06/2015 Completed the course 'Methods in Neuroscience' at the National Institute on Drug Abuse, Intramural research program (NIDA-IRP), NIH.
02/2015 "Elements of Effective Leadership": to develop effective public health and community leadership skills. Johns Hopkins Urban Health Institute, Baltimore, MD.

PROFESSIONAL EXPERIENCE

02/2012-present Postdoctoral Visiting Fellow, Lab of Molecular Gerontology, National Institute on Aging, NIH, USA (Advisor: Dr. Vilhelm Bohr).
08/2013-present Also working in Lab of Neurosciences, National Institute on Aging, NIH, USA (Advisors: Drs. Mark P. Mattson, Mark Wilson).
01/2014-01/2014 Special Visiting Fellow, Dr. James Mitchell's laboratory, Harvard School of Public Health, MA

HONORS AND AWARDS

2009-2011 Ph.D programme scholarship (The Chinese University of Hong Kong)

2011	Finalist, HK Young Scientist Award (Hong Kong Institution of Science)
2014	Travel grant (International symposium on XP and related diseases, Japan)
2014	NIH FARE Award, National Institutes of Health, USA
2015	NIH FARE Award, National Institutes of Health, USA
2016	NIA Butler-Williams Scholar program (candidate)

PROFESSIONAL SERVICE

Grant Application Review

2011-present	Istituto Pasteur, Fondazione Cenci Bolognetti (Italy)
2015	Chief Judge in study section 'Cell Cycle-General, Regulators and Checkpoints, Apoptotic Mechanisms', NIH FARE Award

Editorial Boards

2011-present	Editorial Board member, <i>Medicinal and Aromatic Plants</i>
2013-present	Editorial Board member, <i>European Journal of Medicinal Plants</i>
2013-present	Editorial Board member, <i>Food Science and Technology</i>
2014-present	Editorial Board member, <i>Austin Chromatography</i>
2014	Co-Guest editor, special issue "Lectins" for <i>Molecules</i> http://www.mdpi.com/journal/molecules/special_issues/lectins
2015-present	Editorial Board member, <i>Molecules</i>
2015-present	Editorial Board member, <i>Journal of Gerontology & Geriatric Medicine</i>
2015-present	Editorial Board member, <i>Toxicology: Open Access</i>
2015-present	Review editor: Pharmacology of Anti-Cancer Drugs

Association

2012-present	NIH Mitochondria Interest Group (coordinator: Dr. Steve Zullo)
2012-present	NIH DNA repair interest Group (coordinator: Drs. Bohr and Kraemer)
2015-present	NIH Geroscience Interest Group sharePoint membership (coordinator Tracy M. Cope)
2015-present	Baltimore Worm Club (coordinator: Dr. Andy Golden)
2015~2016	AAAS member

Ad hoc Reviewer for

BBA-General Subjects; Cell Metabolism; Plos One; Gerontology; Oncotarget; European journal of pharmacology; Mechanisms of Ageing and Development; Mitochondrion; Molecules, Toxicology Letters, International J. of Molecular Sciences, Agricultural Science Research J., Int. Research Journal of Biotechnology, International J. of Biochem. And Biotech., Evidence-Based Comp. and Alt. Medicine, Cellular Oncology, J. of Medicine and Medical Sciences, Protein and Peptide Letters, J. of Cellular Biochemistry, Cancer Letters, International Research J. of Microbiology, Int. J. of Medicine and Medical Sciences, Int. Res. J. of Agri. Science and Soil Science, Tumor Biology, Universal J. of Medicine & Dentistry, BMC Comp. and Alternative Medicine, Molecular Nutrition and Food Research, The J. of Nutritional Biochemistry, Frontiers of Medicine, Songklanakarin J Sci. Technol., American J of Medicinal Plants Research; Marine drugs; Molecular plant pathology; Toxins

Meeting Organization

2013.07	Moderator, The 5 th Annual NIH-Baltimore Fellows Symposium, NIA, MD
2015.07	Moderator, LMG Invited Seminar series (speaker: Dr. Anthony K.L. Leung, Johns Hopkins University)

TEACHING AND MENTORING

Teaching experience

2010-2011 Teaching assistant (biochemistry) for MBBS students, CUHK, HK

Mentoring (co-mentoring)

2010 **Clara Shui Fern Bah**: exchange student, University of Otago, New Zealand (co-mentor with Dr. TB Ng, CUHK)
Research outputs: 5 research articles; one book chapter

2010 **Abdallah Abd Elazeem Hassanien**: exchange student, Zagazig University, Egypt (co-mentor with Dr. TB Ng, CUHK)
Research outputs: 2 research articles

2011 **Ho Him Leung**: summer student, Imperial College London, UK (co-mentor with Dr. TB Ng, CUHK)
Research outputs: 1 book chapter

2011 **Vivian Yeong**: summer student, Harvard University, USA (co-mentor with Dr. TB Ng, CUHK)
Research outputs: none due to short time exchange

2013, 2014 **Emily Zagorski**: summer student, West Virginia School of Osteopathic Medicine (co-mentor with Dr. Morten Scheibye-Knudsen, NIA)

2014 **Florence CC Tan**: 1-year exchange student from University of Copenhagen, Denmark (co-mentor with Prof. Mark Mattson, NIA)
Research outputs: 1 review article

2014~2015 **Lynn Froetscher**: postbaccalaureate, LMG, NIA (co-mentor with Dr. V. Bohr/Morten Scheibye-Knudsen, NIA); *C. elegans* study
Research outputs: 1 review article

2015.05~2015.10 **Dr. Henok Kassahun** (University of Oslo, Norway): 6 months on *C. elegans* work (ATM project) (primary mentor).

2015.06~2015.08 **Bradley Wollman** (Washington College, USA): summer student; *C. elegans* study (ATM/GSK projects) (primary mentor; co-mentor V. Bohr)

2015.10~2016.03 **Marya Morevati**: 6-month exchange student from University of Copenhagen, Denmark (co-mentor with Prof. V. Bohr); *C. elegans* study (ATM and WRN projects)

2015.12~ **Qiping Lu** (PhD candidate, Ohio University): Establishment of mitophagy screening Alzheimer's disease *C. elegans* model. (primary mentor; co-mentor V. Bohr)

2016.02~ **Jesse S. Kerr** (The Evergreen State College): postbaccalaureate, LMG, NIA (primary mentor); AD project.

2016.02~ **Tyler B. Waltz** (Arcadia University): postbaccalaureate, LMG, NIA (primary mentor); Tomatidine project.

CONFERENCES/MEETINGS

Invited Talks

2013. 10 “Defective Mitophagy in Xeroderma Pigmentosum Group A”, The 3rd Regional Translational Research in Mitochondria, Aging, and Disease Symposium, PA, USA. Absence due to government furloughs.

2014. 03 “Mitochondrial dysfunction in XPA”, International symposium on XP and related diseases, Kobe Japan. With travel grant (JPY 120,000). Absence due to VISA issue.

2014. 03 “Defective Mitophagy in XPA via PARP1 activation and NAD⁺/SIRT1-depletion”, The 19th Annual NIA IRP Scientific Retreat, NIH. Baltimore

2014. 05 “Neurodegeneration in DNA repair disorders”, NIH DNA repair video conference, NIH
<http://videocast.nih.gov/summary.asp?Live=14212&bhcp=1>

2014. 10 “Defective Mitophagy in Accelerated Aging disorders via PARP1 hyperactivation and Impairment of the NAD⁺/SIRT1-axis”, The 4th Regional Translational Research in Mitochondria, Aging, and Disease, Pitt, PA, USA.

2014. 11 “Defective Mitophagy in Accelerated Aging disorders via PARP1 hyperactivation and Impairment of the NAD⁺/SIRT1-axis”, The 9th brain research conference: Neuroprotection, Basic mechanisms and translational potential, DC.

2014.12 “Molecular mechanisms of mitochondrial dysfunction in neurodegeneration of aging”, The Chinese University of Hong Kong, HK.

2014.12 “Molecular mechanisms of mitochondrial dysfunction in neurodegeneration of aging”, SPH, Fudan University, China.

2015.03 “Can self-eating damaged mitochondria keep people smart?”, Ted talk for the 2015 NIA Retreat, Baltimore.

2015.07 “Defective Mitochondrial Autophagy in Premature Aging Disorders”, Biology of Aging, Gordon Research Conference, Newry, ME.

2015.09 “Linking the NAD⁺/SIRT1 signaling to DNA repair”, Young Investigators short talks, DNA repair Interest Group Videoconference.

2015.10 “Linking the NAD⁺/SIRT1 signaling to DNA repair”, NIH FARE awardee’ talks, NIH Postdoctoral Fellows Symposium – October 29th

2016.03 “The NAD⁺ and the Fountain of Youth”, Ted talk for the 2016 NIA Retreat, Baltimore.

2016.03 “Mitophagy upregulation as a therapeutic strategy for Alzheimer’s disease”, with V. Bohr, 2016 NIA Retreat, Baltimore.

2016.03 “Mitophagy and ageing”, University of Oslo, Norway

2016.03 “Nuclear DNA damage signalling to mitochondria in ageing and neurodegeneration”, Center for Healthy Aging, University of Copenhagen, Denmark

2016.04 “DNA repair, NAD⁺ and mitophagy in neurodegeneration and ageing”, WIMM, University of Oxford, UK.

2016.04 “NAD⁺, mitophagy, and the fountain of youth”, Cambridge Institute for Medical Research, University of Cambridge, UK

Other selected conferences/Meeting

2015.03 Biology of Sirtuins (C3). Keystone Symposia. Santa Fe, New Mexico USA
2015.05 NIA Caenorhabditis Intervention testing program. NIH Bethesda, MD USA

RESEARCH SUPPORT

- 2013-2014 NIA Intra-laboratory grant, \$30,000
Sponsor: NIA IRP (NIH)
Title: Effects of NAD⁺ supplementation and PARP inhibition on Ataxia telangiectasia
PI: Evandro F. Fang
PD: Vilhelm Bohr
- 2015-2016 NIA Intra-laboratory grant, \$76,500
Sponsor: NIA IRP (NIH)
Autophagy upregulation as therapeutic strategy for Alzheimer's disease
PI: Evandro F. Fang
PD: Vilhelm Bohr
- 2015-2016 NIA Intra-laboratory grant, \$45,850
Sponsor: NIA IRP (NIH)
Anti-aging effects of tomatidine: a natural compound in green tomato
Key investigator: Evandro F. Fang
PI: Kevin G. Becker
- 2014~ CRADA with GSK (GlaxoSmithKline), LMG, NIA
To investigate anti-aging and other biological activities of novel SIRT1 activators
Key investigator: Evandro F. Fang
PI: Vilhelm Bohr
- 2014~ CRADA with Chromadex, LMG, NIA
Clinical trials of NR for Cockayne syndrome patients.
Key investigator: Evandro F. Fang
PI: Vilhelm Bohr

PUBLICATIONS

Summary (update 22 Jan 2016)

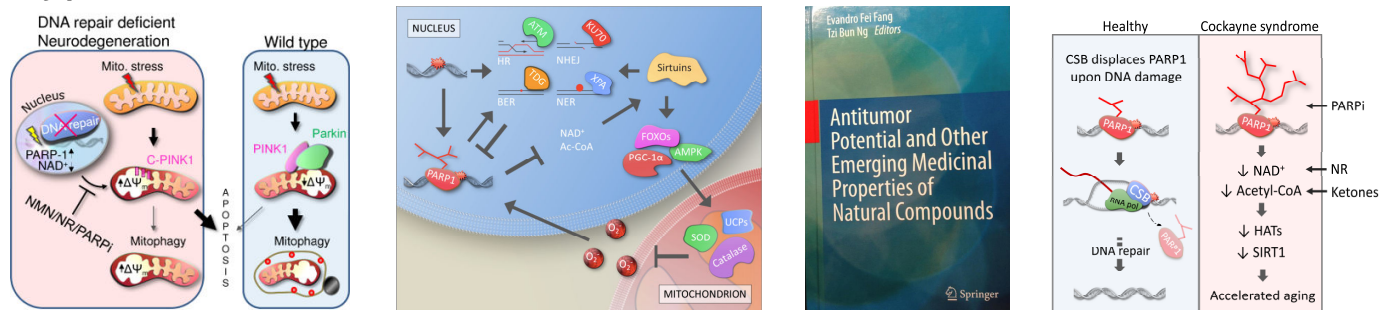
Total **32** peer-reviewed research articles (**17** as first/co-first author)

Total **19** reviews/editorials (**11** as first/co-first/corresponding author)

Total **20** book chapters (**8** as first/co-first/corresponding author)

Total **2** edited books (editor/co-editor)

Key publications



1. **Fang E. F.**, Scheibye-Knudsen M., Brace L., Kassahun H., SenGupta T., Nilsen H., Mitchell J. R., Croteau D. L. & Bohr V. A. (2014). Defective Mitophagy in XPA via PARP1 hyperactivation and NAD⁺/SIRT1 reduction, *Cell*, 157 (4): 882-896.

2. **Fang E.F.**, Scheibye-Knudsen M., Chua K.F., Mattson M.P., Croteau D.L., Bohr V.A. (2016). Nuclear DNA damage signalling to mitochondria in ageing, *Nature Rev Mol Cell Bio*. In press.

3. **Fang E.F.**, Ng T.B. Antitumor potential and other emerging medicinal properties of natural compounds. 1st edition, Springer. The Netherlands, 2013 (edited book).

4. Scheibye-Knudsen M., Mitchell S.J., **Fang E.F.**, Iyama T., Ward T., Wang J., Dunn C.A., Singh N., Veith S., Hasan M., Mangerich A., Wilson M., Bergersen L.H., Cogger V.C., Warren A., Le Couteur D.G., Moaddel R., Wilson D.M. 3rd, Croteau D.L., de Cabo R., Bohr V.A (2014). Ketones and NAD⁺ Rescue Premature Aging in Cockayne Syndrome. *Cell metabolism*, 20 (5): 840-55.

Papers under preparation/review

1. The NAD⁺ precursors extend lifespan in ATM mice.

Research papers

1. **Fang, E. F.**, Wong, J. H. & Ng, T. B. (2010) Thermostable Kunitz trypsin inhibitor with cytokine inducing, antitumor and HIV-1 reverse transcriptase inhibitory activities from Korean large black soybeans, *Journal of bioscience and bioengineering*. 109, 211-7.

2. **Fang, E. F.**, Wong, J. H., Lin, P. & Ng, T. B. (2010) Biochemical and functional properties of a lectin purified from korean large black soybeans--a cultivar of glycine max, *Protein and peptide letters*. 17, 690-8.

3. **Fang, E. F.**, Wong, J. H., Lin, P. & Ng, T. B. (2010) Biochemical characterization of the RNA-hydrolytic activity of a pumpkin 2S albumin, *FEBS letters*. 584, 4089-96.

4. Fang, E. F., Wong, J. H., Bah, C. S., Lin, P., Tsao, S. W. & Ng, T. B. (2010) Bauhinia variegata var. variegata trypsin inhibitor: from isolation to potential medicinal applications, **Biochemical and biophysical research communications**. 396, 806-11.
5. Fang, E. F., Lin, P., Wong, J. H., Tsao, S. W. & Ng, T. B. (2010) A lectin with anti-HIV-1 reverse transcriptase, antitumor, and nitric oxide inducing activities from seeds of Phaseolus vulgaris cv. extralong autumn purple bean, **Journal of agricultural and food chemistry**. 58, 2221-9.
6. Fang, E. F., Hassanien, A. A., Wong, J. H., Bah, C. S., Soliman, S. S. & Ng, T. B. (2010) Purification and modes of antifungal action by Vicia faba cv. Egypt trypsin inhibitor, **Journal of agricultural and food chemistry**. 58, 10729-35.
7. Fang, E. F., Hassanien, A. A., Wong, J. H., Bah, C. S., Soliman, S. S. & Ng, T. B. (2011) Isolation of a new trypsin inhibitor from the Faba bean (Vicia faba cv. Giza 843) with potential medicinal applications, **Protein and peptide letters**. 18, 64-72.
8. Ye, X. J., Ng, T. B., Wu, Z. J., Xie, L. H., Fang, E. F., Wong, J. H., Pan, W. L., Wing, S. S. & Zhang, Y. B. (2011) Protein from red cabbage (Brassica oleracea) seeds with antifungal, antibacterial, and anticancer activities, **Journal of agricultural and food chemistry**. 59, 10232-8.
9. Fang, E. F., Pan, W. L., Wong, J. H., Chan, Y. S., Ye, X. J. & Ng, T. B. (2011) A new Phaseolus vulgaris lectin induces selective toxicity on human liver carcinoma Hep G2 cells, **Archives of toxicology**. 85, 1551-63.
10. Bah, C. S., Fang, E. F., Ng, T. B., Mros, S., McConnell, M. & Bekhit Ael, D. (2011) Purification and characterization of a rhamnose-binding chinook salmon roe lectin with antiproliferative activity toward tumor cells and nitric oxide-inducing activity toward murine macrophages, **Journal of agricultural and food chemistry**. 59, 5720-8.
11. Wong, J. H., Ip, D. C., Ng, T. B., Chan, Y. S., Fang, E. F. & Pan, W. L. (2012) A defensin-like peptide from Phaseolus vulgaris cv. 'King Pole Bean', **Food chemistry**. 135, 408-14.
12. Fang, E. F., Zhang, C. Z., Zhang, L., Wong, J. H., Chan, Y. S., Pan, W. L., Dan, X. L., Yin, C. M., Cho, C. H. & Ng, T. B. (2012) Trichosanthin inhibits breast cancer cell proliferation in both cell lines and nude mice by promotion of apoptosis, **PLoS one**. 7, e41592.
13. Fang, E. F., Zhang, C. Z., Zhang, L., Fong, W. P. & Ng, T. B. (2012) In vitro and in vivo anticarcinogenic effects of RNase MC2, a ribonuclease isolated from dietary bitter melon, toward human liver cancer cells, **The international journal of biochemistry & cell biology**. 44, 1351-60.
14. Fang, E. F., Zhang, C. Z., Wong, J. H., Shen, J. Y., Li, C. H. & Ng, T. B. (2012) The MAP30 protein from bitter melon (Momordica charantia) seeds promotes apoptosis in liver cancer cells in vitro and in vivo, **Cancer letters**. 324, 66-74.
15. Fang, E. F., Zhang, C. Z., Ng, T. B., Wong, J. H., Pan, W. L., Ye, X. J., Chan, Y. S. & Fong, W. P. (2012) Momordica Charantia lectin, a type II ribosome inactivating protein, exhibits antitumor activity toward human nasopharyngeal carcinoma cells in vitro and in vivo, **Cancer prevention research**. 5, 109-21.

16. Fang, E. F., Zhang, C. Z., Fong, W. P. & Ng, T. B. (2012) RNase MC2: a new *Momordica charantia* ribonuclease that induces apoptosis in breast cancer cells associated with activation of MAPKs and induction of caspase pathways, ***Apoptosis***. 17, 377-87.
17. Fang, E. F., Bah, C. S., Wong, J. H., Pan, W. L., Chan, Y. S., Ye, X. J. & Ng, T. B. (2012) A potential human hepatocellular carcinoma inhibitor from *Bauhinia purpurea* L. seeds: from purification to mechanism exploration, ***Archives of toxicology***. 86, 293-304.
18. Chan, Y. S., Wong, J. H., Fang, E. F., Pan, W. L. & Ng, T. B. (2012) An antifungal peptide from *Phaseolus vulgaris* cv. brown kidney bean, ***Acta biochimica et biophysica Sinica***. 44, 307-15.
19. Chan, Y. S., Wong, J. H., Fang, E. F., Pan, W. & Ng, T. B. (2012) Isolation of a glucosamine binding leguminous lectin with mitogenic activity towards splenocytes and anti-proliferative activity towards tumor cells, ***PloS one***. 7, e38961.
20. Pan, W. L., Wong, J. H., Fang, E. F., Chan, Y. S., Ye, X. J. & Ng, T. B. (2013) Differential inhibitory potencies and mechanisms of the type I ribosome inactivating protein marmorin on estrogen receptor (ER)-positive and ER-negative breast cancer cells, ***Biochimica et biophysica acta***. 1833, 987-96.
21. Chan, Y. S., Wong, J. H., Fang, E. F., Pan, W. & Ng, T. B. (2013) A hemagglutinin from northeast red beans with immunomodulatory activity and anti-proliferative and apoptosis-inducing activities toward tumor cells, ***Protein and peptide letters***. 20, 1159-69.
22. Pan W.L., Wong J.H., Fang E.F., Chan Y.S., Ng T.B., Cheung R.C (2014). Preferential cytotoxicity of the type I ribosome inactivating protein alpha-momorcharin on human nasopharyngeal carcinoma cells under normoxia and hypoxia. ***Biochem Pharmacol***. 89 (3): 329-339.
23. Lu H., Fang E.F., Sykora P., Kulikowicz T., Zhang Y., Becker K., Croteau D., Bohr V.A. (2014). Senescence induced by Recq14 dysfunction contributes to Rothmund-Thomson syndrome features in mice. ***Cell death and disease***, PMID: 24832598.
24. Guan, S. Z., Liu, J. W., Fang, E. F., Ng, T. B., Lian, Y. L. & Ge, H. (2014) Chronic unpredictable mild stress impairs erythrocyte immune function and changes T-lymphocyte subsets in a rat model of stress-induced depression, ***Environmental toxicology and pharmacology***. 37, 414-22.
25. Fang, E. F.*, Scheibye-Knudsen, M.*, Brace, L., Kassahun, H., SenGupta, T., Nilsen, H., Mitchell, J. R., Croteau, D. L. & Bohr, V. A (2014). Defective mitophagy in XPA via PARP1 hyperactivation and NAD⁺/SIRT1 reduction, ***Cell***. 157 (4), 882-96. (*co-first authors)
26. Li X.*, Fang E.F.*, Scheibye-Knudsen M., Cui H., Lu Q., Yang J., Li J., Bohr V.A., Ng T.B., Guo H (2014). Di-(2-ethylhexyl) phthalate inhibits DNA replication leading to hyperPARylation, SIRT1 attenuation, and mitochondrial dysfunction in the testis. (*co-first authors). ***Scientific Reports*** PMID: 25242624.
27. Zhang, C.Z., Fang, E.F., Zhang, H.T., Liu, L.L., Yun, J.P. (2014). *Momordica Charantia* lectin exhibits antitumor activity towards hepatocellular carcinoma, ***Invest New Drugs***.
28. Scheibye-Knudsen M., Mitchell S.J., Fang, E.F., Iyama T., Ward T., Wang J., Dunn C.A., Singh N., Veith S., Hasan M., Mangerich A., Wilson M., Bergersen L.H., Cogger V.C., Warren A., Le

Couteur D.G., Moaddel R., Wilson D.M. 3rd, Croteau D.L., de Cabo R., Bohr V.A. Ketones and NAD⁺ Rescue Premature Aging in Cockayne Syndrome. *Cell metabolism*. 20 (5), 840-55.

29. Sykora P, Misiak M, Wang Y, Ghosh S, Leandro GS, Liu D, Tian J, Baptiste BA, Cong W, Brenerman BM, Fang E.F., Becker KG, Hamilton RJ, Chigurupati S, Zhang Y, Egan JM, Croteau DL, Wilson DM 3rd, Mattson MP, Bohr VA. DNA polymerase β deficiency leads to neurodegeneration and exacerbates Alzheimer disease phenotypes. *Nucleic acids res*. 2014.

30. Dan Xi, Wong JH, Fang EF, Chan FWC, Ng TB (2015). Purification and characterization of a novel hemagglutinin with inhibitory activity toward osteocarcinoma cells from Northeast China Black Beans. *J Agric Food Chem*, 63(15):3903-14.

31. Fang EF, Ng TB (2015). A trypsin inhibitor from rambutan seeds with antitumor, anti-HIV-1 reverse transcriptase, and nitric oxide-inducing properties. *Appl Biochem Biotechnol*. 175(8):3828-39.

32. Zhang L, Wu WKK, Gallo RL, Fang EF, Wei Hu, Ling TKW, Shen J, Chan RLY, Lu L, Luo XM, Li MX, Chan KM, Yu J, Wong VWS, Ng SC, Wong SH, Chan FKL, Sung JJY, Chan MTV, Cho CH. (2015, in press). Critical role of antimicrobial peptide Cathelicidin for controlling Helicobacter pylori survival and infection. *J Immunol*

REVIEWS/INVITED EDITORIALS

1. Wong, J. H., Ng, T. B., Cheung, R. C., Ye, X. J., Wang, H. X., Lam, S. K., Lin, P., Chan, Y. S., Fang, E. F., Ngai, P. H., Xia, L. X., Ye, X. Y., Jiang, Y. & Liu, F. (2010) Proteins with antifungal properties and other medicinal applications from plants and mushrooms, *Applied microbiology and biotechnology*. 87, 1221-35.

2. Fang, E. F. & Ng, T. B. (2011) Can bitter gourd (Momordica charantia) be a novel therapy for human cancers?, *Medicinal and Aromatic Plants* (Invited Editorial article for the debut issue). 1, 1-2.

3. Fang, E. F. & Ng, T. B. (2011) Bitter gourd (Momordica charantia) is a cornucopia of health: a review of its credited antidiabetic, anti-HIV, and antitumor properties, *Current molecular medicine*. 11, 417-36.

4. Fang, E. F., Scheibye-Knudsen, M., Bohr, V. A. & Ng, T. B. (2012) The anti-aging efficacy of natural Compounds, *Medicinal and Aromatic Plants* (Invited Editorial article for the debut issue). 1, 1-2.

5. Ng, T. B., Ye, X. J., Wong, J. H., Fang, E. F., Chan, Y. S., Pan, W., Ye, X. Y., Sze, S. C., Zhang, K. Y., Liu, F. & Wang, H. X. (2011) Glyceollin, a soybean phytoalexin with medicinal properties, *Applied microbiology and biotechnology*. 90, 59-68.

6. Ng, T. B., Wong, J. H. & Fang, E. F. (2011) Defensins and other biocidal proteins from bean seeds with medicinal activities, *Current medicinal chemistry*. 18, 5644-54.

7. Fang, E. F., Ng, T. B., Shaw, P. C. & Wong, R. N. (2011) Recent progress in medicinal investigations on trichosanthin and other ribosome inactivating proteins from the plant genus Trichosanthes, *Current medicinal chemistry*. 18, 4410-7.

8. Fang, E. F. & Ng, T. B. (2011) Ribonucleases of different origins with a wide spectrum of medicinal applications, *Biochimica et biophysica acta*. 1815, 65-74.
9. Ng T.B., Cheung R.C., Ye X., Fang E.F., etc, Pharmacotherapy approaches to antifungal prophylaxis, *Expert opinion on pharmacotherapy*, 13 (2012) 1695-1705
10. Fang, E. F., Leung, H. H., Fang, Y. & Ng, T. B. (2012) The health benefits of soybeans and Bowman-Birk inhibitor concentrate, *Medicinal and Aromatic Plants* 1.
11. Cheung, R. C., Wong, J. H., Pan, W. L., Chan, Y. S., Yin, C. M., Dan, X. L., Wang, H. X., Fang, E. F., Lam, S. K., Ngai, P. H., Xia, L. X., Liu, F., Ye, X. Y., Zhang, G. Q., Liu, Q. H., Sha, O., Lin, P., Ki, C., Bekhit, A. A., Bekhit, A. E., Wan, D. C., Ye, X. J., Xia, J. & Ng, T. B. (2014) Antifungal and antiviral products of marine organisms, *Applied microbiology and biotechnology*, in press.
12. Scheibye-Knudsen M*, Fang EF*, Croteau DL, & Bohr VA. (2014) Contribution of defective mitophagy to the neurodegeneration phenotypes of DNA repair-deficient disorders. *Autophagy*. (*co-first authors), 10, 1468-9.
13. Tan FCC, Ng TB, Fang EF (2014). The importance of recent advances in liquid chromatography techniques to the biomedical field. *Austin Chromatography*, 1, 1-2. (Invited editorial).
14. Scheibye-Knudsen M, Fang EF, Croteau DL, Wilson DM 3rd, Bohr VA (2014). Protecting the mitochondrial powerhouse. *Trends Cell Biol*. PMID: 25499735.
15. Ng TB, Cheung RCF, Ng WCC, Fang EF, Wong JH (2015). A review of fish lectins. *Curr Protein Pept Sci*. 16(4):337-51.
16. Fang EF, Wollman BN, Kassahun H, Nilsen H, Scheibye-Knudsen M, Bohr VA (2015). Nuclear DNA Repair proteins in mitochondrial health and aging. *Jour of Gerontology and Geriatric Medicine*: 1:001.
17. Fang E.F., Scheibye-Knudsen M., Jahn H., Li J, Ling L, Guo H, Zhu X, Preedy V, Lu H, Bohr V.A., Chan WY, Liu Y, Ng T.B (2015). A research agenda for aging in China in the 21st century. *Ageing Res Rev*.
18. Maynard S., Scheibye-Knudsen M., Fang E.F., Croteau D.L., Bohr V.A. (2015), DNA damage, DNA repair, aging and neurodegeneration. *Cold Spring Harb Perspect Med*, PMID: 26385091.
19. Fang E.F., Scheibye-Knudsen M., Chua K.F., Mattson M.P., Croteau D.L., Bohr V.A. (2016). Nuclear DNA damage signalling to mitochondria in ageing, *Nature Rev Mol Cell Bio*. In press.

EDITED BOOKS/Journal special issues

1. Fang E.F., Ng T.B. Antitumor potential and other emerging medicinal properties of natural compounds. First edition, Springer. The Netherlands, 2013. (Total 27 chapters, and contributed 7 chapters).
2. Co-Guest editor, special issue "Lectins" for *Molecules* (print version in process). http://www.mdpi.com/journal/molecules/special_issues/lectins

BOOK CHAPTERS

1-6. Ng TB, Lam SK, Cheung RCF, Wong JH, Wang HX, Ngai PHK, Ye XJ, Fang EF, Chan YS. Six chapters in: Nuts and seeds in health and disease prevention, 2011. Edited by Victor R. Preedy, Ronald Ross Watson and Vinood B. Patel. First edition. Academic press. Six chapters. a) Chapter 33, p279-284. Therapeutic use of caper (*Capparis spinosa*) seeds. b) Chapter 38, p317-323: Antiproliferative activities of Chinese cabbage (*Brassica parachinensis*) seeds. c) Chapter 41, p345-349: Antifungal and mitogenic activities of cluster pepper (*Capsicum frutescens*) seeds. d) Chapter 102, p865-871: Antifungal protein from passion fruit (*Passiflora edulis*) seeds. e) Chapter 127, p1073-1077: Antifungal and antiproliferative activity of Spotted bean (*Phaseolus vulgaris* cv.) f) Chapter 137, p1159-1163: White cabbage (*Brassica chinensis*) seeds and their health promoting activities.

7. Ng TB, Wong JH, Fang EF, Ye XJ. Effect of fructose on health. In: Fructose: Synthesis, Functions, and Health Implications. 2012. Edited by Nadya Gotsiridze-Columbus. Nova Science Publishers. First edition. (co-corresponding author).

8. Ng TB, Fang EF, et al, Different cultivars of the same species of plant may produce proteins that differ in structure and function. 2012. Edited by Nadya Gotsiridze-Columbus. Nova Science Publishers. First edition.

9. Fang EF, Ng TB. Bitter gourd (*Momordica charantia*) oils. For the Elsevier book 'Essential Oils in Food Production, Preservation, Flavour and Safety' (Editor: Prof Victor R Preedy, King's College London).

10. Ng TB, Bekhit A.E.A., Fang EF, Wong J.H. Grape (*Vitis vinifera*) oils. For the Elsevier book 'Essential Oils in Food Production, Preservation, Flavour and Safety' (Editor: Prof Victor R Preedy, King's College London). (co-corresponding author).

11. Ng TB, Bekhit A.E.A., Fang EF, Li X., Lu Q., Guo H., Wong J.H. Grapefruit (*Citrus paradisi*) oils. For the Elsevier book 'Essential Oils in Food Production, Preservation, Flavour and Safety' (Editor: Victor R Preedy, King's College London).

12. Ng TB, Fang EF, Li X., Lu Q., Wong J.H., Guo H. Carrot (*Daucus carota*) essential oils. For the Elsevier book 'Essential Oils in Food Production, Preservation, Flavour and Safety' (Editor: Victor R Preedy, King's College London). (co-corresponding author).

13. Ng TB, Fang EF, Bekhit A.E.A., Wong J.H. Methods for the characterization, authentication and adulteration of essential oils. For the Elsevier book 'Essential Oils in Food Production, Preservation, Flavour and Safety' (Editor: Victor R Preedy, King's College London). (co-corresponding author).

14. Leung HH, Fang EF*, Ng TB*. A landscape of the health benefits of different natural protease inhibitors. Chapter 14 in Antitumor potential and other emerging medicinal properties of natural compounds. First edition, Springer. The Netherlands, 2013. *co-corresponding author

15. Ng Tb, Wong JH, Fang EF. Recent research on pharmacological activities of the medicinal fungus *Cordyceps sinensis*. Chapter 20 in in Antitumor potential and other emerging medicinal properties of natural compounds. First edition, Springer. The Netherlands, 2013

16. Fang EF, Ng TB. The bitter fruit with sweet health benefits: a comprehensive synopsis of recent research progress on medicinal properties of *Momordica charantia*. Chapter 21 in in Antitumor

potential and other emerging medicinal properties of natural compounds. First edition, Springer. The Netherlands, 2013.

17. Xia L, Ng TB, Fang EF, Wong JH. Bioactive constituents of the silk worm *Bombyx mori*. Chapter 22 in in Antitumor potential and other emerging medicinal properties of natural compounds. First edition, Springer. The Netherlands, 2013.

18. Ng TB, Fang EF, Wong JH. Proteins with anticancer and antimicrobial activities from mammals, submammalian vertebrates and invertebrates. Chapter 23 in in Antitumor potential and other emerging medicinal properties of natural compounds. First edition, Springer. The Netherlands, 2013.

19. Wong JH, Ng TB, Fang EF, Wang HX. Defense proteins with antiproliferative and antimicrobial activities from fungi and bacteria. Chapter 24 in in Antitumor potential and other emerging medicinal properties of natural compounds. First edition, Springer. The Netherlands, 2013.

20. Fang EF, Ng TB. Achievements, questions arising and future outlook on the path to discover new medicinal compounds. Chapter 27 in in Antitumor potential and other emerging medicinal properties of natural compounds. First edition, Springer. The Netherlands, 2013.

REFEREES

1. Prof. Vilhelm Bohr (postdoc mentor)

Laboratory of Molecular Gerontology, NIA, NIH
Biomedical Research Center, room 06B133A
251 Bayview Boulevard, Suite 100, Baltimore, MD 21224-6825
Phone 410-558-8162; Fax 410-558-8157
E-mail: vbohr@nih.gov

2. Prof. Tzi Bun NG (PhD mentor)

Chair Prof. of Biochemistry
School of Biomedical Sciences, Faculty of Medicine, The Chinese University of Hong Kong, HK
Tel: (852)39436872 (Office); (852)39438031 (Lab)
Fax: (852)26035123
E-mail: b021770@mailserv.cuhk.edu.hk

3. Prof. Mark P. Mattson

Laboratory of Neurosciences, Biomedical Research Center, 05C214
251 Bayview Boulevard, Suite 100
Baltimore, MD 21224-6825
Phone: 410-558-8463
Fax: 410-558-8465
E mail mattsonm@grc.nia.nih.gov

4. Prof. Hilde Nilsen

The Biotechnology Center, University of Oslo, Oslo 0317, Norway
Phone +47-22840511+47-22840500; Fax +47-22840501
E-mail: hilde.nilsen@medisin.uio.no

5. Prof. Michael Seidman, Ph.D., Senior Investigator

Chief, Section on Gene Targeting
Laboratory of Molecular Gerontology, NIA, NIH, USA
Phone: 410-558-8565; Fax: 410-558-8157
E-mail: seidmanm@mail.nih.gov

6. Prof. David A. Sinclair

Harvard Medical School, Department of Genetics
77 Avenue Louis Pasteur, Boston MA 02115 USA
Telephone: (617) 432-3931; Fax: (617) 432-6225
Email: david_sinclair@hms.harvard.edu

7. Prof. David Rubinsztein

Cambridge Institute for Medical Research, The University of Cambridge, UK
E-mail: dcr1000@hermes.cam.ac.uk