

CURRICULUM VITAE

Carmela R. Abraham

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MA 02118. Phone: (617) 638-4308; FAX: (617) 638-5339; e-mail: cabraham@bu.edu
Place of Birth: Bucharest, Romania

Personal

1969 Married to Menachem Abraham (M.A. in Electrical Engineering, summa cum laude)

1972 Daughter, Miri, born (B.A. in Mathematics and Economics magna cum laude, M.A. in Economics at Boston University; MBA New York University)

1973 Son, Dan, born (B.A. in Electrical Engineering, magna cum laude, at Boston University)

2001 Grandson, Adar, born

2004 Grandson, Edan, born

Education

1969 Associate Engineer in Chemical Engineering, Tel Aviv University.

1973 B.Sc. Biology, Tel Aviv University (Majors: Biochemistry and Microbiology).

1989 Ph.D. Neurobiology, Harvard University.

Professional Positions

1999 Professor, Department of Biochemistry

1992 Associate Professor, Departments of Biochemistry and Medicine

1989 Assistant Professor, Departments of Medicine and Biochemistry
Arthritis Center, Boston University School of Medicine.

1989 Teaching Assistant in Neurobiology, Harvard Medical School.

1989 Research Fellow in Neurobiology, Harvard Medical School.

1985-89 Graduate Student in Neurobiology, Harvard Medical School, Boston, MA

1980-85 Research Assistant, Neurology, McLean Hospital and Brigham & Women's
Hospital, The Center for Neurologic Diseases, Boston, MA

1977-80 Research and Teaching Assistant, Biophysics & Physiology, Israel
Institute of Technology (IIT) Medical School, Haifa, Israel.

1975-77 Research and Teaching Assistant, Immunology, Technion, IIT Medical School, Haifa,
Israel.

1970-72 Research Assistant, Phytopathology, Tel Aviv University.

1969-70 Research Assistant, Plant Physiology, Tel Aviv University, Israel.

Memberships

1988- American Academy for the Advancement of Science

1988- Society for Neuroscience

1990- American Association of Neuropathologists
1998 American Society for Neurochemistry
2001 New York Academy of Sciences
2002 International Proteolysis Society

Honors

1987 The First Rappaport Award for the study of Alzheimer's disease at the Center for Neurologic Diseases
1988 The Second Rappaport Award
1987-89 The Freudenberger Scholarship
1987-89 The Albert J. Ryan Fellowship
1990 Weil Honorable Mention for the best paper in experimental neuropathology
1990 The Neuroscience Education and Research Foundation Award for an Outstanding Promise as a Young Alzheimer Investigator.
1994 The Zenith Award, Alzheimer's Association
1995 Weil Honorable Mention for the best paper in experimental neuropathology
1999 The T.L.L. Temple Award, Alzheimer's Association

Committees

1986-88 The Graduate Student Committee, Harvard University
1987 The Committee for Course Evaluation, Harvard University
1991-92 Member, NIH Study Section, Neurology C
1992- Special reviewer, NIH
1993- Member of Medical and Scientific Advisory Board, Alzheimer's Association
1997 Member of Scientific Advisory Board, Harry Stern National Center for Research on Alzheimer's Disease and Related Disorders, Hebrew University, Jerusalem, Israel
1997 Member of Scientific Advisory Board, German-Israeli Foundation for Scientific Research and Development
2000 Member of Scientific Board, Harvard Center for Neurologic Research
2001 Reviewer for the United States-Israel Binational Science Foundation
2001 McLean Hospital National Council
2002 Member of Scientific Board American Federation for Aging Research

Reviews

Reviewer for: Proceedings of the National Academy of Sciences, American Journal of Pathology, Journal of Neurochemistry, Journal of Histochemistry and Cytochemistry, Annals of Neurology, Neuroscience Letters, Neurobiology of Aging, New England Journal of Medicine, Brain Research, Biochemistry, Nature Medicine, Biochimica et Biophysica Acta, Journal of Biological Chemistry, Journal of Neuroscience, Molecular Medicine.

Journals

Associate-Editor for *Amyloid, The Journal of Protein Folding Disorders*
On Editorial board of *Alzheimer's Report*

On Editorial board of the *American Journal of Alzheimer's Disease Research*

Patents

USSN 07/681,093 "Proteases causing abnormal degradation of amyloid β -protein precursor".

USSN 08/025,321 "Proteases causing degradation of amyloid β -protein precursor".

PUBLICATIONS:

1. **Abraham, C.R.** (1969). Pectic enzymes in lemon peel infected by *Geotrichum candidum*. Associate Engineer thesis.
2. Anikster, J., **Abraham, C.R.**, Greenberger, Y. and Wahl, I. (1971). A contribution to the taxonomy of *Puccinia brown leaf rust of barley in Israel*. *Israel J. Botany*. 20:12.
3. **Abraham, C.R.**, Tal, Y. and Gershon, H. (1977). Reduced in vitro response to concavalin A and lipopolisaccharide in senescent mice: A function of reduced number of responding cells. *Eur. J. Immunol.* 7:301-304.
4. Gershon, H., Merhav, S. and **Abraham, C.R.** (1979). T-cell division and aging. *Mech. Aging Devel.* 9:27-38.
5. Gaffin, S.L., and **Abraham, C.R.** (1979). Uptake of endotoxin by endotoxin-specific membranes. *Israel J. Med. Sci.* 15:622.
6. Gaffin, S.L. and **Abraham, C.** (1980) Uptake of endotoxin by endotoxin-specific membranes. In Seidman S, Chang G (eds.) *Hemoperfusion, Kidney and Liver Supports and Detoxification*. Washington DC, Hemisphere Publ. 1980. pp 379-388.
7. Gaffin, S.L., Grinberg, Z., **Abraham, C.R.**, Birkhan, J. and Shechter, Y. (1981). Protection against hemorrhagic shock in the cat by human plasma containing endotoxin specific antibodies. *J. Sur. Res.* 31:18-21.
8. Selkoe, D.J., Salazar, F.J., **Abraham, C.R.**, and Kosik, K.S. (1982). Huntington's disease: Changes in striatal proteins reflect astrocytic gliosis. *Brain Res.* 245:117-125.
9. Selkoe, D.J., **Abraham, C.R.**, and Ihara, Y. (1982). Brain transglutaminase: In vitro crosslinking of human neurofilaments into insoluble polymers. *Proc. Natl. Acad. Sci. USA.* 79:6070-6074.
10. Selkoe, D.J., Ihara, Y., **Abraham, C.R.**, Rasool, C.G. and McCluskey, A.H. (1983). Biochemical and immunocytochemical studies of Alzheimer paired helical filaments. In: Katzman, R. (ed.) *Biological Aspects of Alzheimer's Disease* (Banbury Report 15). New York: Cold Spring Harbor Laboratory, pp. 125-134.
11. Ihara, Y., **Abraham, C.R.**, and Selkoe, D.J. (1983). Antibodies to paired helical filaments in Alzheimer's disease do not recognize brain proteins. *Nature* 304:727-730.
12. Rasool, C.G., **Abraham, C.R.**, Anderton, B.H., Haugh, M., Kahan, J., and Selkoe, D.J. (1984). Alzheimer's disease: Immunoreactivity of neurofibrillary tangles with anti-neurofilament and anti-paired helical filament antibodies. *Brain Res.* 310:249-260.
13. Kosik, K.S., Ihara, Y., **Abraham, C.R.**, Rasool, C. G., McCluskey, A.H. and Selkoe, D.J. (1984). Neurochemical studies of Alzheimer-type neurofibrillary degeneration and a related experimental

model. In: *Comparative Pathobiology of Major Age-Related Diseases: Current Status and Research Frontiers*. New York: Alan R. Liss, Inc., pp. 373-384.

14. Kosik, K.S., Duffy, L.K., Dowling, M.M., **Abraham, C.R.**, McCluskey, A.H. and Selkoe, D.J. (1984). Microtubule-associated protein 2: Monoclonal antibodies demonstrate the selective incorporation of certain epitopes into Alzheimer's neurofibrillary tangles. *Proc. Natl. Acad. Sci. USA*. 81:7941-7945.
15. Selkoe, D.J., **Abraham, C.R.**, Rasool, C.G., McCluskey, A.H., Kosik, K.S. and Duffy, L.K. (1985). Paired helical filaments in human neurons: Relationship to neurofilaments. In: E. Wang, et al., (eds.), *Intermediate filaments*. *Ann. N.Y. Acad. Sci.* 455:583-596.
16. Selkoe, D.J., **Abraham, C.R.**, Rasool, C.G., McCluskey, A.H. and Duffy, L.K. (1985). Production and characterization of monoclonal antibodies to Alzheimer paired helical filaments. In: E. Wang, et al. (eds.), *Intermediate Filaments*. *Ann. N.Y. Acad. Sci.* 455:774-778.
17. Kirschner, D.A., **Abraham, C.R.**, and Selkoe, D.J. (1986). X-ray diffraction from intraneuronal paired helical filaments and extraneuronal amyloid fibers in Alzheimer's disease indicates cross- β conformation. *Proc. Natl. Acad. Sci. USA*. 83:503-507.
18. Selkoe, D.J. **Abraham, C.R.**, Podlisny, M.B., and Duffy, L.K. (1986). Isolation of low molecular weight proteins from amyloid plaque fibers in Alzheimer's disease. *J. Neurochem.* 46:1820-1834.
19. Selkoe, D.J., and **Abraham, C.R.** (1986). Isolation of paired helical filaments and amyloid fibers from human brain. In: R. Vallee (ed). *Methods in Enzymology*, Vol. 134. Orlando, FL: Academic press, pp. 388-404.
20. Selkoe, D.J. and **Abraham, C.R.** (1986). Biochemical and structural studies of paired helical filaments and senile plaque amyloid in Alzheimer's disease. In: G.G. Glenner, et al., (eds.) *Amyloidosis*. New York: Plenum Publishing Corp., pp. 709-715.
21. Selkoe, D.J., **Abraham, C.R.** and Rasool, C.G. (1986). Molecular properties of paired helical filaments and senile plaque amyloid fibers in Alzheimer's disease. In: A. Fisher, et al. (eds.) *Alzheimer's and Parkinson's Disease*. New York: Plenum Publishing Corp., pp 37-42.
22. Duffy, L.K., **Abraham, C.R.**, Berman-Podlisny, M., Walsh, R.L. and Selkoe, D.J. (1987). HPLC analysis of proteins from Alzheimer's disease paired helical filaments. *Ann. N.Y. Acad. Sci.* 494:369-372.
23. **Abraham, C.R.**, Selkoe, D.J. and Potter, H. (1988). Immunochemical identification of the serine protease inhibitor α_1 -antichymotrypsin in the brain amyloid deposits of Alzheimer's disease. *Cell* 52:487-501.
24. **Abraham, C.R.**, Selkoe, D.J. and Potter, H. (1988). α_1 -antichymotrypsin, a serine protease inhibitor, is a component of amyloid deposits on Alzheimer's disease brain. In: Amyloid and Amyloidosis. Eds. T. Isobe, S. Araki, S. Kito and E. Tsubura. Plenum press, pp. 543-548.

25. **Abraham, C.R.**, Selkoe, D.J., Potter, H., Price, D.L. and Cork, L.C. (1989). α_1 -antichymotrypsin is present together with the β -protein in monkey brain amyloid deposits. *Neuroscience*, 32:715-720.
26. **Abraham, C.R.** and Potter, H. (1989). Alzheimer's disease: Recent advances in understanding the brain amyloid deposits. *Biotechnology*, 7:147-153.
27. Selkoe, D.J., Duffy, L.K., Nukina, N., Podlisny, M.B., **Abraham, C.R.** and Kosik, K.S. (1989). Molecular pathology of intra- and extraneuronal filaments in brain aging and Alzheimer's disease. In: Blass, et al., (eds.) *Familial Alzheimer's Disease: Molecular Genetics and Clinical Perspectives*. New York: Marcel Dekker, 137-153.
28. **Abraham, C.R.** and Potter, H. (1989). The protease inhibitor, α_1 -antichymotrypsin, is a component of the brain amyloid deposits in normal aging and Alzheimer's disease. *Annals of Medicine*. 21:77-81.
29. Pasternack, J.M., **Abraham, C.R.**, Van Dyke, B., Potter, H. and Younkin, S.G. (1989). Astrocytes in Alzheimer's disease gray matter express α_1 -antichymotrypsin mRNA. *Am. J. Pathol.* 135:827-834.
30. Potter, H. and **Abraham, C.R.** (1989). α_1 -antichymotrypsin: The role of proteases and their inhibitors in the amyloid deposition of Alzheimer's disease and normal brain aging. In: *Proceedings of the International Symposium on Biomedical Advances in Aging*, ed. A.C. Goldstein. Plenum Press. 75-88.
31. **Abraham, C.R.** (1989). Potential roles of protease inhibitors in Alzheimer's disease. *Neurobiol. Aging*, 10:463-465
32. **Abraham, C.R.** and Potter, H. (1989) α_1 -antichymotrypsin in brain aging and disease. *Prog. Clin. Biol. Res.* 317:1037-1048.
33. **Abraham, C.R.**, Potter, H. (1990). The serpin α_1 -antichymotrypsin in brain aging and diseases of the nervous system. In: *Serine Proteases and Their Serpin Inhibitors in the Nervous System*, Editor: B. Festoff. 321-326.
34. **Abraham, C.R.** (1990). A novel calcium-activated protease from brain cleaves β -protein-precursor-related synthetic peptides and is inhibited by α_1 -antichymotrypsin and protease nexin 2. In: *Molecular Biology and Genetics of Alzheimer's Disease*, Editors: Miyatake, T., Selkoe, D.J. Ihara, Y. 159-166.
35. **Abraham, C.R.**, Shirahama, T. and Potter, H. (1990). The protease inhibitor α_1 -antichymotrypsin is associated solely with amyloid deposits containing the β -protein and is localized in specific cells of both normal and diseased brain. *Neurobiol. Aging*, 11:123-129.

36. **Abraham, C.R.**, Ben Meir A. and Tempst, P. (1990). Facile and sensitive assay for monitoring proteolytic activities with defined specificities: Studies on amyloid β -protein processing in Alzheimer's disease. *Peptide Research*, 3:211-215.
37. **Abraham, C.R.**, Driscoll, J, Potter, H., Van Nostrand, W.E., Tempst, P. (1991) A calcium-activated protease from Alzheimer's disease brain cleaves at the N-terminus of the amyloid β -protein. *BBRC*, 174:790-796.
38. Richards, S-J, Waters, J.J., Beyreuther, K., Masters, C.L., Wischik, C.M., Sparkman, D.R., White, C.L, **Abraham, C.R.**, Dunnett, S.B. (1991). Transplants of mouse trisomy 16 hippocampus provide an in vivo model of the neuropathology of Alzheimer's disease. *EMBO J*, 10:297-303.
39. Potter, H., **Abraham, C.R.**, Dressler, D.H. (1991). The Alzheimer amyloid components β 1 antichymotrypsin and β -protein from a stable complex in vitro. *Alzheimer's Disease: Basic Mechanisms, Diagnosis and Therapeutic Strategies*: edited by K. Iqbal, D.R.C. McLachlan, B. Winblad and H. M. Wisniewski. 275-279.
40. Shirahama, T., **Abraham, C.R.**, Ju, S-T., Miura, K., Cohen, A.S., Kisilevsky (1991). Isolation of a 16KD fraction with extremely high AEF activity. In: *Amyloid and Amyloidosis*, edited by Natvig, J. et al. Kluwer Academic Publishers, The Netherlands. 288-291.
41. **Abraham, C.R.**, Razzaboni, B.L., Ben-Meir, A and Papastoitsis, G. (1991). Proteolytic processing of β -amyloid protein-related synthetic peptides and the β -protein precursor by a protease purified from Alzheimer's disease brain. In: *Amyloid and Amyloidosis*, edited by Natvig, J.B. et al. Kluwer Academic Publishers, The Netherlands. 718-721.
42. Koo, E.H., **Abraham, C.R.**, Potter, H., Cork, L.C., Price, D.C. (1991). Developmental expression of β 1 antichymotrypsin in brain may be related to astrogliosis. *Neurobiol. Aging* 12:495-501.
43. **Abraham, C.R.**, Razzaboni, B.L., Sisodia S.S., Koo E.H., Price D.L., Van Nostrand, W.E. and Papastoitsis, G. (1991). Studies on the proteolytic degradation of the β -protein precursor by proteases purified from Alzheimer's disease brain. *Ann. N.Y. Acad. Sci.*640:161-165.
44. Razzaboni, B.L., Papastoitsis, G., Koo, E.H. and **Abraham, C.R.** (1992). A calcium stimulated serine protease from monkey brain degrades the β -amyloid precursor protein *Brain Research* 589:207-216.
45. **Abraham, C.R.** (1992). The role of the acute phase protein β 1 antichymotrypsin in brain dysfunction and injury. *Research in Immunology*, 143:631-636.
46. **Abraham, C.R.**, Razzaboni, B.L., Papastoitsis, G., Picard, E., Kanemaru, K., Meckelein, B. and Mucke, L. (1992). Purification and cloning of brain proteases capable of degrading the β -amyloid precursor protein. *Ann. N.Y. Acad.Sci.* 674:174-179.

47. Campistol, J.M., Shirahama, T., **Abraham, C.R.**, Rodgers, O.G., Sole, M., Cohen, A.S. and Skinner, M. (1992). Immunohistochemical and biochemical demonstration of plasma proteinase inhibitors in β_2 -microglobulin amyloid deposits. *Kidney International*, 42: 915-923.
48. Fraser, P.E., Nguyen, J.T., McLachlan, D.R., **Abraham, C.R.** and Kirschner, D.A. (1993) α_1 -Antichymotrypsin binding to synthetic Alzheimer β A4 amyloid peptides is sequence-specific and induces fibril disaggregation in vitro. *J. Neurochemistry*. 61:298-305.
49. Fraser, P.E., Kirschner, D.A., Nguyen, J.T., **Abraham, C.R.** and McLachlan, D.R. (1993) Binding of sulphated proteins and α_1 -antichymotrypsin to Alzheimer β A4: Different actions of amyloid associated proteins. In: Proceedings of the VIIth International Symposium on Amyloidosis (Ed. R. Kisilevsky), 504-506, Parthenon Publishing, Pearl River, NY.
50. Papastoitsis, G., Conn, K-J., Siman, R., Scott, R. and **Abraham, C.R.** (1993) Identification of a metalloprotease from Alzheimer's disease brain able of cleaving the met-asp bond and of degrading human APP. In: Proceedings of the VIIth International Symposium on Amyloidosis (Ed. R. Kisilevsky), 332-334, Parthenon Publishing, Pearl River, NY.
51. Morin, P.J., **Abraham, C.R.**, Amaratunga, A., Johnson, R.J., Huber, G., Sandell, J.H., Fine, R.E. (1993) Amyloid precursor protein is synthesized by retinal ganglion cells and rapidly transported to the optic nerve plasma membrane and nerves terminals. *J. Neurochemistry*, 61:464-473.
52. **Abraham, C.R.** and Razzaboni, B.L. (1993). The molecular biology of neurodegenerative diseases. *Molecular Diagnostics: Research Towards Application*. Blackwell Scientific Publications Ltd, Oxford, England.
53. **Abraham, C.R.**, Kanemaru, K., and Mucke, L. (1993). Expression of cathepsin G-like and α_1 -antichymotrypsin like proteins in reactive astrocytes. *Brain Res.* 621:222-232.
54. Campbell, I.L., **Abraham, C.R.**, Kemper, P., Inglis, J.D., Oldstone, M.B.A. and Mucke, L. (1993) Neurologic disease induced in transgenic mice by the astrocyte-specific expression of the cytokine interleukin-6. *Proc. Natl. Acad. Sci. USA* 90:10061-10065.
55. Razzaboni, B.L., Meckelein, B. and **Abraham, C.R.** (1993). Purification and cloning of monkey proteases involved in the processing of the β -amyloid precursor protein. *Neurobiology of Aging*. 14:667-679.
56. **Abraham, C.R.**, Papastoitsis, G., Razzaboni, B.L., Kanemaru, K., Pietropaolo, M., Conn, K.J., Meckelein, B., (1993) Studies on brain proteases capable of degrading the β amyloid precursor protein. *Proteolysis and Protein Turnover*. p.197-202.
57. Stone, P.J., Campistol, J.M., **Abraham, C.R.**, Rodgers, O., Shirahama, T., and Skinnner, M., (1993) Neutrophil proteases associated with amyloid fibrils. *Biochem. Biophys. Res. Comm.* 197:130-136

58. Papastoitsis, G., Siman, R., Scott, R. and **Abraham, C.R.** (1994) Identification of a metalloprotease from Alzheimer's disease brain able to degrade the β -amyloid precursor protein and generate amyloidogenic fragments. *Biochemistry*. 33:192-199.
59. Toggas, S.M., Masliah, E., Rockenstein, E.M., **Abraham, C.R.**, Mucke, L. (1994) Nervous system damage induced in transgenic mice expressing the HIV-1 coat protein gp120. *Nature*. 367:188-194.
60. Mucke, L., Masliah, E., Johnson, W.B., Ruppe, M.D. Alford, M., Rockenstein, E.M., Forss-Petter, S., Pietropaolo, M., Mallory, M., **Abraham, C.R.** (1994) Synaptotrophic effects of human amyloid β protein precursors in the cortex of transgenic mice. *Brain Res*. 666:151-167.
61. Conn, K.J., Papastoitsis, G., Meckelein, B., **Abraham, C.R.** (1994) Identification of full length β -amyloid precursor protein in human neuronal and non-neuronal cell culture supernatant: A possible extracellular source for the generation of A β . *Amyloid*. 1:232-239.
62. Koch, D., **Abraham, C.R.** (1995) Alzheimer's disease and the significance of amyloid β protein in its pathogenesis. *J. Israel Med. Assoc.* 128:156-159.
63. Mucke, L., **Abraham, C.R.**, Ruppe, M.D., Rockenstein, E.M., Toggas, S.M., Alford, A., Masliah, E. (1995) Protection against HIV-1 gp120-induced brain damage by neuronal overexpression of human amyloid precursor protein (hAPP). *J. Exp. Med.* 181:1551-1556.
64. **Abraham, C.R.** (1995) The identification of an Alzheimer's disease gene on chromosome 14 opens new avenues for research. The views of an amyloidologist. *Amyloid* 2:213-216.
65. Farrer, L.A., **Abraham, C.R.**, Volicer, L., Folley, E.J., Kowall, N.W., McKee, A.C., Wells, J.M. (1995) Allele E4 of apolipoprotein E is associated with Pick disease and shows a dose effect on age at onset. *Exp. Neurol.* 136:162-170.
66. Meckelein, B., de Silva, H.A.R., Roses, A.D., Rao, P.N., Pettenati, M.J., Xu, P.-T., Hodge, R., Glucksman, M.J. and **Abraham, C.R.** (1996) Human endopeptidase E.C.3.4.24.15 (THOP 1) is localized on chromosome 19 within the linkage region for late-onset Alzheimer's disease AD2 locus. *Genomics* 31:246-249.
67. Chang, T. and **Abraham, C.R.** (1996) A novel brain cysteine protease forms an SDS stable complex with the β -amyloid precursor protein. *Ann.N.Y. Acad. Sci.* 777:183-188.
68. Wells, J.M., Amaratunga, A., McKenna, D.C., **Abraham, C.R.** and Fine, R.E. (1996) Amyloid β -protein precursor and apolipoprotein E production in cultured cerebral endothelial cells isolated from brains of patients with neurodegenerative diseases at autopsy. *Amyloid* 2:229-233.
69. Conn, K.-J., Pietropaolo, M., Ju, S.-T. and **Abraham, C.R.** (1996) A monoclonal antibody against the human metalloprotease E.C.3.4.24.15 labels neurofibrillary tangles in Alzheimer's disease brain. *J. Neurochem.* 66:2011-2018.

70. Amaratunga, A., **Abraham, C.R.**, Ross, E.B., Sandell, J.H., Schreiber, B.M., Fine, R.E. (1996) Apolipoprotein E is synthesized in the retina by Muller glial cells, secreted into the vitreous, and rapidly transported into the optic nerve by retinal ganglion cells. *J. Biol. Chem.* 271:5628-5632.
71. Liang, J.-S., Fine, R.E., **Abraham, C.R.** and Sipe, J.D. (1996) The amyloid beta precursor protein (A β PP) contains lipid binding site (s) outside the β -amyloid (A β 1-40) region. *Biochem. Biophys. Res. Comm.* 219:962-967.
72. Kanemaru, K., Meckelein, B, Marshall, D.C.L., Sipe, J.D. and **Abraham, C.R.** (1996) Synthesis and secretion of active β 1-antichymotrypsin by murine primary astrocytes. *Neurobiol. Aging* 17:767-771.
73. Peters, A., Rosene, D.L., Moss, M.B., Kemper, T.L., **Abraham, C.R.**, Tigges, J. and Albert, M.S. (1996) Neurobiological bases of age related cognitive decline in the rhesus monkey. *J. Neuropath. Exp. Neurol.* 55:861-874.
74. Liang, J.-S., Sloane, J.A., Wells, J., **Abraham, C.R.**, Fine, R.E. and Sipe, J.D. (1997) Local production of the acute phase response apolipoprotein serum amyloid A in Alzheimer's disease brain. *Neurosci. Letters* 225:1-4.
75. Masliah, E., Westland, C.E., **Abraham, C.R.**, Mallory, M., Veinberg, I., Rockenstein, E.M. and Mucke, L. (1997) Amyloid precursor proteins protect neurons of transgenic mice against acute and chronic excitotoxic injuries in vivo. *Neuroscience* 78:135-146.
76. Aleshkov, S., **Abraham, C.R.** and Zannis, V. (1997) Interaction of nascent ApoE2, apoE3, and apoE4 isoforms expressed in mammalian cells with amyloid peptide (1-40). Relevance to Alzheimer's disease. *Biochemistry* 43:10571-10580.
77. Sloane, J.A., Pietropaolo, M.F., Rosene, D.L., Moss, M.B., Peters, A., Kemper, T. and **Abraham, C.R.** (1997) Lack of correlation between plaque burden and cognition in the aged monkey. *Acta Neuropath.* 94:471-478.
78. Fine, R.E. and **Abraham, C.R.** (1997) β amyloid precursor protein is a key sorting and targetting receptor for neuropeptidases. *Amyloid* 4:233-239.
79. Meckelein, B., Conn, K.-J., Pietropaolo, M., Van Nostrand, W.E. and **Abraham, C.R.** (1998) Identification of a novel serine protease-like molecule in human brain. *Mol. Br. Res.* 55:181-197.
80. Marshall, D.C.L., Wyss-Coray, T. and **Abraham, C.R.** (1998) Induction of matrix metalloprotease-2 in HIV-1 gp120 transgenic mouse brains: further characterization of the amyloid precursor protein's neuroprotective role in APP/gp120 bigenic mouse brains. *Neurosci. Lett.* 254:1-4.
81. Farrer, L.A., **Abraham, C.R.**, Haines, J.L., Rogaeva, E.A., McGraw, W.T., Brindle, N., Premkumar, S., Scott, W.K., Yamaoka, L.H., Saunders, A.M., Roses, A.D. Auerbach, S.A., Sorbi, S., Duara, R., Pericak-Vance, M.A. and St. George-Hyslop, P.H. (1998) Association between bleomycin hydrolase and Alzheimer's disease in caucasians. *Ann. Neurol.* 44:808-811.

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83. Slot, F., Olsen, A.L., Rao, N. and **Abraham, C.R.** (1998) Localization of human endopeptidase E.C.3.4.24.15 (THOPI) at 19p13.3 *Alzheimer's reports* 1:327-331.
84. **Abraham, C.R.**, Marshall, D.C.L., Tibbles, H.E., Sgro, K., Otto, K., Long, H.J., Billingslea, A.M., Fine, E.R., Levesque, C.A., Smith, S.J., Simons, E.R. and Davies, T.A. (1999) Platelets and DAMI megakaryocytes possess β secretase activity. *J. Lab. Clin. Med.* 133:507-515.
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