

GRN 770-3

Alzheimer's Disease: From Cell to Society

Thursdays, 1-4 PM

239 Sanders-Brown Building

Instructor:

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Overview

As one of the most insidious diseases that may occur in later life, Alzheimer's disease poses a major concern for gerontological researchers, practitioners, and policymakers alike. This course will provide insight into the salient theories, biological underpinnings, assessment strategies, treatment modalities, management approaches, and social implications that guide our understanding of Alzheimer's. By the end of this course, students will have gained critical knowledge of the 'state-of-the-art' concerning Alzheimer's disease and its consequences.

During each weekly meeting, the course will be divided into three 'modules,' or sections: 1) lecture on the topic of the day; 2) class discussion of the lecture as well as the assigned readings; and 3) discussion of each student's selected research project (see below).

Objectives

The three main objectives of the course are:

1. To provide students with an overview of the causes, theories, and biological underpinnings of Alzheimer's disease
2. To familiarize students with the diversity of approaches to assessment, management, and treatment;
3. To assist students in developing an in-depth research project on a topic related to Alzheimer's disease.

Required Readings

This course will include required as well as recommended readings. Students are expected to complete the required readings prior to each class, as they will constitute the major sources of discussion ideas. Recommended readings are available to students who wish to explore a topic more fully, or for beginning readings for the research project.

Attendance Policy

Attendance is both required and necessary, since discussion from each participant is crucial to the class. If an inevitable absence occurs, talk to the instructor, preferably before the scheduled class. Documentation for an illness or similar emergency is required for an excusal. Any unexcused attendance will result in a reduction in the final course grade.

Course Requirements

1. Attendance and active participation: As a seminar course, a considerable amount of class time will be spent discussing and critiquing the readings for the week. Therefore, attendance and active participation is required of all students **(25% of final grade)**
2. Seminar leader assignment: Each students will be required to lead a discussion section on a weekly topics, beginning with the 3rd week's class period. The seminar leader is required to prepare at least two discussion questions for each required article.
 - The seminar leader should submit the discussion questions to the instructor at the beginning of the scheduled class; the questions will be graded. The questions should highlight the main issues with respect to theory, research methods, findings, and future research questions on the topic. Questions should not simply ask for recall or recognition of material, but ask for analysis, comparison/contrast, and evaluation or applications of the main issues **(5% of final grade)**.
 - The seminar leader will also moderate the class discussion of the assigned readings, based on the discussion questions. Begin with some background information on the readings to provide a context for understanding the work. Be sure to cover theory development in the focal topics, research methods used and a critique of them, key findings, and challenges for future research. Employ whatever learning exercises you think may be useful for enhancing comprehension of the material **(10% of final grade)**
3. Research critiques: In addition to leading a class discussion, students will be asked to conduct a research critique of an empirical study related to a weekly topic (the topic is up to the student). The week prior to the critique, students must distribute the article to the rest of the class. The critique must:
 - 1) Identify the purpose of the study;
 - 2) Define the characteristics of the sample and the major measures used;
 - 3) Summarize the major findings of the study;
 - 4) Provide a critique of the study (i.e., the design, sample, measures, conclusions, etc.)**(10% of final grade)**
4. Research project: At the beginning of the 2nd course period, students will select a research topic they are interested in developing over the course of the class. Students will have the option to develop this research questions into one of three different projects:
 - A poster or paper presentation for GSA or similar conference
 - A research proposal

▪ A manuscript ready to submit to a research journal (e.g., critical literature review)
By the 3rd course period, students will present a one-page outline of the research project they plan to develop to the instructor and rest of the class. Feedback will be provided to help prepare the final project. The outline should include:

- a) a topic related to Alzheimer's disease or a related disorder;
- b) a tentative title, no more than 20 words;
- c) a one-paragraph summary of what the current status of knowledge is regarding the topic;
- d) a one-paragraph summary of the major research questions that the proposal will address (which emerge out of the shortcomings and limitations of previous research); and
- e) complete citations (APA or similar style) for five key articles relevant to your research proposal. **(5% of final grade)**

After the presentation of the outline, students will be required to report on the progress of their particular topic to the rest of the class each week to refine the questions of interest, develop an appropriate work plan, and obtain feedback on written output. Students may also meet with the instructor to develop a work plan to complete the project. The final project will be due at the end of the semester **(45% of final grade)**.

SEMINAR 1 (8/23/2001): Classic research, historical perspectives

Required Readings

-Alzheimer, A.; Jarvik, & Greenson, H. translators. (1987). About a peculiar disease of the cerebral cortex. Alzheimer's Disease and Associated Disorders, 1, 7-8.

-Schorer, C. E. (1985). Historical essay: Kraepelin's description of Alzheimer's disease. International Journal of Aging and Human Development, 21, 235-238.

-Beach, T. G. (1987). History of Alzheimer's disease: Three debates. Journal of the History of Medicine and Allied Sciences, 42, 327-349.

-Berrios, G. E. (1990). Alzheimer's disease: A conceptual history. International Journal of Geriatric Psychiatry, 5, 355-365.

-Fox, P. (1989). From senility to Alzheimer's disease: The rise of the Alzheimer's disease movement. Milbank Quarterly, 67, 58-102.

Recommended

-Pomponi, M., & Marta, M. (1993). "On the suggestion of Dr. Alzheimer I examined the following four cases." Dedicated to Gaetano Perusini. Aging(Milano), 5, 135-139.

-Berchtold, N. C., & Cotman, C. W. (1998). Evolution and conceptualization of dementia and Alzheimer's disease: Greco-Roman period to the 1960s. Neurobiology of Aging, 19, 173-189.

-Boller, F., & Forbes, M. M. (1998). History of dementia and dementia in history: An overview. Journal of the Neurological Sciences, 158, 125-133.

-Lefroy, R. B. (2000). The legacy of Alois Alzheimer: A historical perspective. American Journal of Alzheimer's Disease, 15, 252-255.

-Fox, P. J., Kelly, S. E., & Tobin, S. L. (1999). Defining dementia: Social and historical background of Alzheimer's disease. Genetic Testing, 3, 13-19.

-Alzheimer, A; Forstl, H., & Beatz, B. translators. (1991). A contribution concerning the pathological anatomy of mental disturbances in old age, 1899. Alzheimer's Disease & Associated Disorders, 5, 69-70.

SEMINAR 2 (8/30/2001): Theories of Alzheimer's disease

Guest Lecturer:

Jeff N. Keller, Ph.D.

Assistant Professor, University of Kentucky

Anatomy and Neurobiology, Sanders-Brown Center on Aging

Required Readings

-Selkoe, D. J. (2001). Alzheimer's disease: Genes, proteins, and therapy. Physiological Report, 81, 741-766.

-Drouet, B., Pincon-Raymond, M., & Pillot, T. (2000). Molecular basis of Alzheimer's disease. Cellular and Molecular Life Sciences, 57, 705-715.

-Markesberry, W. R., & Carney, J. M. (1999). Oxidative alterations in Alzheimer's disease. Brain Pathology, 9, 123-146.

** -Khachaturian, Z. S., & Mesulam, M. M. (2000). Alzheimer's disease: A compendium of current theories. Annals of New York Academy of Sciences, 924.

Recommended Readings

-Munoz, D. G., & Feldman, H. (2000). Causes of Alzheimer's disease. CMAJ, 162, 65-72.

-Holscher, C. (1998). Possible causes of Alzheimer's disease: Amyloid fragments, free radicals, and calcium homeostasis. Neurobiology of Disease, 5, 129-141.

-Woodruff-Pak, D. S., & Papka, M. (2000). Theories of neuropsychology and aging. In V. L. Bengtson & K. W. Schaie (Editors). Handbook of theories of aging (pp. 113-132). New York, NY: Springer Publishing.

SEMINAR 3 (9/6/2001): Epidemiology of Alzheimer's disease

Guest Lecturer

David Snowdon, Ph.D.

Associate Professor, University of Kentucky

Sanders-Brown Center on Aging

Director, The Nun Study

Required Readings

-Evans, D. A. et al. (1989). Prevalence of Alzheimer's disease in a community population of older persons: Higher than previously reported. JAMA, 262, 2551-2556.

-Keffover, R. W. (1996). The clinical epidemiology of Alzheimer's disease. Neuroepidemiology, 14, 337-351.

-Kawas, C., Gray, S., Brookmeyer, R., Fozard, J., & Zonderman, A. (2000). Age-specific incidence rates of Alzheimer's disease. Neurology, 54, 2072-2077.

-Launer, L. J., & Hofman, A. (2000). Frequency and impact of neurologic diseases in the elderly of Europe. (Special issue, Neurology, 54).

-Snowdon, D. A. (1997). Aging and Alzheimer's disease: Lessons from the Nun Study. The Gerontologist, 37, 150-156.

-Snowdon, D. A., et al. (1996). Linguistic ability in early life and cognitive function and Alzheimer's disease in late life: Findings from the Nun Study. JAMA, 275, 528-532.

-Snowdon, D. A. et al. (1997). Brain infarction and the clinical expression of Alzheimer's disease: Findings from the Nun Study. JAMA, 277, 813-817.

Recommended Readings

- Snowdon, D. A. (2001). Aging with grace. Bantam: New York.
- Breitner, J. C. S., & Welsh, K. A. (1995). Genes and recent developments in the epidemiology of Alzheimer's disease and related dementia. Epidemiologic Reviews, *17*, 39-47.
- Corrada, M., Brookmeyer, R., & Kawas, C. (1995). Sources of variability in prevalence rates of Alzheimer's disease. International Journal of Epidemiology, *24*, 1000-1005.
- Hebert, L. E., et al. (1995). Age-specific incidence of Alzheimer's disease in a community population. JAMA, *273*, 1254-1359.
- Stern, Y. et al. (1994). Influence of education and occupation on the incidence of Alzheimer's disease. JAMA, *271*, 1004-1010.
- Dartigues, J. F., & Letenneur, L. (2000). Genetic epidemiology of Alzheimer's disease. Current Opinion in Neurology, *13*, 385-389.
- Devanand, D. P. et al. (1996). Depressed mood and incidence of Alzheimer's disease in the elderly living in the community. Archives in General Psychiatry, *53*, 175-182.
- Fratiglioni, L., et al. (1991). Prevalence of Alzheimer's disease and other dementia in an elderly urban population: Relationship with age, sex, and education. Neurology, *41*, 1886-1892.
- Hendrie, H. C. et al. (1995). Prevalence of Alzheimer's disease and dementia in two communities: Nigerian Africans and African Americans. American Journal of Psychiatry, *152*, 1485-1492.
- Shadlen, M-F., Larson, E. B., & Yukawa, M. (2000). The epidemiology of Alzheimer's disease and vascular dementia in Japanese and African-American populations: The search for etiological clues. Neurobiology of Aging, *21*, 171-181.
- Prineas, R. J. et al. (1995). South Florida Program on Aging and Health: Assessing the prevalence of Alzheimer's disease in three ethnic groups. The Journal of the Florida Medical Association, *82*, 805-810.

SEMINAR 4 (9/13/2001): Pathology and symptoms of Alzheimer's

Guest Lecturer

William Markesbery, M.D.

Director, Sander-Brown Center on Aging

University of Kentucky

Required Readings

- Selkoe, D. J. (2000). The genetics and molecular pathology of Alzheimer's disease. Dementia, *18*, 903-921.
- Chung, J. A., & Cummings, J. L. (2000). Neurobehavioral and neuropsychiatric symptoms of Alzheimer's disease. Dementia, *18*, 829-846.
- Carr, D. B., Goate, A., Phil, D., & Morris, J. C. (1997). Current concepts in the pathogenesis of Alzheimer's disease. American Journal of Medicine, *22*, 3S-10S.
- Dickson, D. W. (2001). Neuropathology of Alzheimer's disease and other dementia. Clinical Geriatric Medicine, *17*, 209-228.
- Galasko, D. (2001). New approaches to diagnose and treat Alzheimer's disease: A glimpse of the future. Clinical Geriatric Medicine, *17*, 393-410.
- Morris, J. C. (1999). Clinical presentations and course of Alzheimer's disease. In Alzheimer's disease, 2nd ed. (pp. 11-24). Terry, R., Katzman, R., Bick, K., and Sosodia, S. (eds). Lippincott, Williams, and Wilkens: Philadelphia.

- Reisberg, B., Franssen, E., Selan, S. G., Kluger, A., & Ferris, S. H. (1989). Stage specific incidence of potentially remediable behavioral symptoms in aging and Alzheimer's disease: A study of 120 patients using the BEHAVE-AD. Bulletin of Clinical Neuroscience, 54, 95-112.
- Weiner, M. F., Edland, S. D., & Luszczynska, H. (1994). Prevalence and incidence of major depression in Alzheimer's disease. American Journal of Psychiatry, 151, 1006-1009.

Recommended Readings

- Arvanitakis, Z., & Hachinski, V. (1999). Vascular cognitive impairment: What else do we need to learn? In Alzheimer's disease, 2nd edition (pp. 157-160). Terry, R., Katzman, R., Bick, K., and Sosodia, S. (eds.), Lippincott, Williams, and Wilkens: Philadelphia.
- de la Torre, J. C. (1997). Cerebrovascular pathology in Alzheimer's disease compared to normal aging. Gerontology, 43, 26-43.
- Nitsch, R. M. (1996). From acetylcholine to amyloid: Neurotransmitters and the pathology of Alzheimer's disease. Neurodegeneration, 5, 477-482.
- Spillatini, M. G., Crowther, M. A., & Goedert, M. (1996). Comparison of the neurofibrillary pathology in Alzheimer's disease and familial presenile dementia with tangles. Acta Neuropathology, 92, 42-48.
- Rubin, E., Morris, J., & Berg, L. (1987). The progression of personality changes in senile dementia of the Alzheimer's type. Journal of the American Geriatrics Society, 35, 721-725.
- Lykestos, C. G., Steele, C., Baker, L., Galik, E., Kopunek, S., Steinberg, M., & Warren, A. (1997). Major and minor depression in Alzheimer's disease: Prevalence and impact. Journal of Neuropsychiatry and Clinical Neurosciences, 9, 556-561.

SEMINAR 5 (9/20/2001): Biological processes of Alzheimer's disease: Neurofibrillary tangles

Guest Lecturer

James Geddes, Ph.D.

Associate Professor

Sanders-Brown Center on Aging, University of Kentucky

Required Readings

- Terry, R.D. The fine structure of neurofibrillary tangles in Alzheimer's disease. Journal of Neuropathology and Experimental Neurology (1963), v.22(3), pp.629-642.
- Braak, H., & Braak, E. (1995). Staging of Alzheimer's disease-related neurofibrillary changes. Neurobiology of Aging, 16, 271-284.
- St George-Hyslop, P.H., Piecing together Alzheimer's. Scientific American, 2000. 283: 76-83.
- van Slegtenhorst, M., J. Lewis, and M. Hutton, The molecular genetics of the tauopathies. Experimental Gerontology, 2000. 35: 461-471.
- Additional papers may be assigned prior to class, or discussed during class

Recommended Readings

- Delacourte, A. et al. (1999). The biochemical pathway of neurofibrillary degeneration in aging and Alzheimer's disease. Neurology, 52, 1158-1165.
- Goedert, M. (1995). Tau protein and the neurofibrillary pathology of Alzheimer's disease. Annals of the New York Academy of Sciences, 121-131.

- Gomez-Isla, T. et al. (1997). Neuronal loss correlates with but exceeds neurofibrillary tangles in Alzheimer's disease. Annals of Neurology, 41, 17-24.
- Farber, N. B. et al. (2000). Increased neocortical neurofibrillary tangle density in subjects with Alzheimer's disease and psychosis.
- McKenzie, J. E., Roberts, G. W., & Royston, M. C. (1996). Comparative investigation of neurofibrillary damage in the temporal lobe in Alzheimer's disease, Down's syndrome, and dementia pugilistica. Neurodegeneration, 5, 259-264.
- Goedert, M. (1998). Neurofibrillary pathology of Alzheimer's disease and other tauopathies. Progress in Brain Research, 117, 287-306.
- Delacourte, A. (1999). Biochemical and molecular characterization of neurofibrillary degeneration in frontotemporal dementias. Dementia and Geriatric Cognitive Disorders, Supp.1, 75-59.
- Tolnay, M., & Probst, A. (1999). Review: Tau protein pathology in Alzheimer's disease and related disorders. Neuropathology and Applied Neurobiology, 25, 171-187.
- Iqbal, K., Alonso, A. C., Gong, C. X., Khatoon, S., Pei, J. J., Wang, J. Z., & Grundke-Ibal, I. (1998). Mechanisms of neurofibrillary degeneration and the formation of neurofibrillary tangles. Journal of Neural Transmission, 53 Supp., 169-180.

SEMINAR 6 (9/27/2001): Biological processes of Alzheimer's disease: Amyloid plaques

Guest Lecturer

Steve Estus, Ph.D.

Professor

Sanders-Brown Center on Aging

University of Kentucky

Required Readings

- Khachaturian, Z. S. (1985). Diagnosis of Alzheimer's disease. Archives of Neurology, 42, 1097-1105. (need)
- Armstrong, R. A. (1998). B-Amyloid plaques: Stages in life history or independent origin? Dementia and Geriatric Cognitive Disorders, 9, 227-238.
- Games et al. (1995). Alzheimer-type neuropathology in transgenic mice overexpressing V717F β -amyloid precursor protein. Nature, 373, 523-527.
- Chen et al. (2000). A learning deficit related to age and β -amyloid plaques in a mouse model of Alzheimer's disease. Nature, 408, 975-979.

Recommended Readings

- Braak, H., Braak, E., Bohl, J., & Lang, W. (1989). Alzheimer's disease: Amyloid plaques in the cerebellum. Journal of the Neurological Sciences, 93, 277-287.
- Cummings, B. J., & Cotman, C. W. (1995). Image analysis of beta-amyloid load in Alzheimer's disease and relation to dementia severity. Lancet, 346, 1524-1528. (need).
- Cole, G., Williams, P., Alldryck, D., & Singharo, S. (1989). Amyloid plaques in the cerebellum in Alzheimer's disease. Clinical Neuropathology, 8, 188-191.
- Masters, C. L., & Bayreuther, K. (1991). Amyloid: Cause or effect in Alzheimer's disease. In Neurodegenerative disorders: Mechanisms and prospects for therapy (pp. 75-86). D. L. Price, H. Thoenen, & A. J. Aguayo (eds.). John Wiley and Sons: West Sussex.

- Selkoe, D. J. (1994). Alzheimer's disease: A central role for amyloid. Journal of Neuropathology and Experimental Neurology, 53, 438-447.
- Cole, G., Neal, J. W., Singhrao, S. B., & Newman, G. R. (1993). The distribution of amyloid plaques in the cerebellum and brain stem in Down's syndrome and Alzheimer's disease: A light microscopical analysis. Acta Neuropathologica, 85, 542-552.
- Chen, G. et al. (2000). A learning deficit related to age and B-amyloid plaques in a mouse model of Alzheimer's disease. Letters of Nature, 408, 975-979.
- Miranda, S., et al. (2000). The role of oxidative stress in the toxicity induced by amyloid B-peptide in Alzheimer's disease. Progress in Neurobiology, 62, 633-648.

SEMINAR 7 (10/4/2001): Assessment of Alzheimer's disease

Guest Lecturer

Fred Schmitt, Ph.D.

Associate Professor

Neurology/Sanders-Brown Center on Aging

University of Kentucky

Required Readings

- Wisniewski, H. M., & Silverman, W. (1997). Diagnostic criteria for the neuropathological assessment of Alzheimer's disease: Current status and major issues. Neurobiology of Aging, 18, S42-S50.
- The National Institute on Aging and Reagan Institute Working Group on Diagnostic Criteria for the Neuropathological Assessment of Alzheimer's Disease. (1997). Consensus recommendations for the postmortem diagnosis of Alzheimer's disease. Neurobiology of Aging, 18, S1-S2.
- Schmitt, F. A., et al. (2000). 'Preclinical' AD revisited: Neuropathology of cognitively normal older adults. Neurology, 55, 370-376.
- Schmitt, F. A., Shih, W.-J., & DeKosky, S. T. (1992). Neuropsychological correlates of single photon emission computed tomography (SPECT) in Alzheimer's disease. Neuropsychology, 6, 159-171.
- Schmitt, F. A., Ranseen, J. D., & DeKosky, S. T. (1989). Cognitive mental status examinations. Clinics in Geriatric Medicine, 5, 545-564.

Recommended Readings

- Zarit, S. H., & Zarit, J. M. (1998). Mental disorders in older adults (Chapter 5). New York: Guilford Press.
- Langley, L. (2000). Cognitive assessment of older adults. In R. L. Kane & R. A. Kane (Eds.), Assessing older persons: Measures, meanings, and practical application (pp. 65-128). Oxford University Press: New York.
- Loewenstein, D. A. et al. (2001). An evaluation of the NINCDS-ADRDA neuropsychological criteria for the assessment of Alzheimer's disease: A confirmatory factor analysis of single versus multi-factor models. Journal of Clinical and Experimental Neuropsychology, 23, 274-284.
- Powers, J. M. (1997). Diagnostic criteria for the neuropathologic assessment of Alzheimer's disease. Neurobiology of Aging, 18, S53-S54.

- Kluger, A., & Ferris, S. H. (1991). Scales for the assessment of Alzheimer's disease. The Psychiatric Clinics of North America, 14, 309-325.
- Souder, E., Saykin, A. J., & Alavia, A. (1995). Multi-modal assessment in Alzheimer's disease: ADL in relation to PET, MRI, and neuropsychology. Journal of Gerontological Nursing, 21, 7-13.
- Morris, J. C., et al. (1989). The Consortium to Establish a Registry for Alzheimer's Disease (CERAD), Part I: Clinical and neuropsychological assessment of Alzheimer's disease. Neurology, 39, 1159-1165.
- Mirra, S. S., et al. (1991). The Consortium to Establish a Registry for Alzheimer's Disease (CERAD) Part II: Standardization of the neuropathologic assessment of Alzheimer's disease. Neurology, 41, 479-486.
- Morris, J. C. (1997). Clinical assessment of Alzheimer's disease. Neurology, 49, S7-S10.
- Mohs, R. C. (1996). The Alzheimer's Disease Assessment Scale. International Psychogeriatrics, 8, 195-203.
- Weyer, G., Erzigkeit, H., Kanowski, S., Ihl, R., & Hadler, D. (1997). The Alzheimer's Disease Assessment Scale: Reliability and validity in a multicenter clinical trial. International Psychogeriatrics, 9, 123-138.
- Monteiro, I. M. et al. (1998). Reliability of routine clinical instruments for the assessment of Alzheimer's disease administered by telephone. Journal of Geriatric Psychiatry and Neurology, 11, 18-24.
- Braak, H., & Braak, E. (1997). Diagnostic criteria for neuropathologic assessment of Alzheimer's disease. Neurobiology of Aging, 18, S85-S88.

SEMINAR 8 (10/11/2001): Treating Alzheimer's disease: Neurotransmitter approaches

Guest Lecturer

Greg Cooper, M.D.

Assistant Professor

Sanders-Brown Center on Aging

University of Kentucky

Required Readings

- Davis, K.L., Mohs, R.C., Marin, D., Purohit, D.P., Perl, D.P., Lantz, M., Austin, G., and Haroutunian, V. (1999). Cholinergic markers in elderly patients with early signs of Alzheimer disease. JAMA, 281:1401-1406.
- Evans, M., Ellis, A., Watson, D., & Chowdhury, T. (2000). Sustained cognitive improvement following treatment of Alzheimer's disease with donepezil. International Journal of Geriatric Psychiatry, 15, 50-53.
- Francis, P.T., Palmer, A.M., Snape, M., and Wilcock, G. (1999). The cholinergic hypothesis of Alzheimer's disease: A review of progress. J. Neurol. Neurosurg. Psychiatry, 66:137-147.
- Grutzendler, J. and Morris, J.C. (2001). Cholinesterase inhibitors for Alzheimer's disease. Drugs, 61(1):41-52.
- Nordberg, A. (2001). Nicotinic receptor abnormalities of Alzheimer's disease: Therapeutic implications. Biol. Psychiatry, 49: 200-210.
- Rogers, S. L., Doody, R. S., Pratt, R. D., & Ieni, J. R. (2000). Long-term efficacy and safety of donepezil in the treatment of Alzheimer's disease: Final analysis of U.S. multicentre open-label study. European Neuropsychopharmacology, 10, 195-203.

- Rosler, M. (1999). Efficacy and safety of Rivastigmine in patients with Alzheimer's disease: International randomised controlled trial. British Medical Journal, March 6, 1999.
- Tariot, P.N., Solomon, P.R., Morris, J.C., Kershaw, P., Lilienfeld, S., Ding, C. and the Galantamine USA-Study Group. (2000). A 5-Month, randomized, placebo-controlled trial of Galantamine in AD. Neurology, 54:2269-2276.

Recommended Readings

- Burback, D., Molnar, F. J., St. John, P., & Man-Son-Hing, M. (1999). Key methodological features of randomized controlled trials of Alzheimer's disease therapy. Dementia and Geriatric Cognitive Disorders, 10, 534-540.
- Davies, P. (1999). Challenging the cholinergic hypothesis in Alzheimer disease. JAMA, 281:1433-1434.
- Geula, C. and Mesulam, M.M. (1999). Cholinergic systems in Alzheimer disease. In Alzheimer Disease, 2nd edition (ed. By R.D. Terry, R. Katzman, K.L. Bick and S.S. Sisodia), Lippincott Williams and Wilkins, Philadelphia, pp 269-292.
- Grundman, M., Corey-Bloom, J., & Thal, L. J. (1998). Perspectives in clinical Alzheimer's disease research and the development of antidementia drugs. Journal of Neural Transmission, (Supp.), 53255-53275.
- Maelicke, A., Samochocki, M., Jostock, R., Fehrenbacher, A., Ludwig, J., Albuquerque, E., and Zerlin, M. (2001). Allosteric sensitization of nicotinic receptors by Galantamine, a new treatment strategy for Alzheimer's disease. Biol. Psychiatry, 49:279-288.
- Martin, J.B. (1999). Alzheimer disease: Neurochemical aspects. In Alzheimer disease, 2nd edition (ed. By R.D. Terry, R. Katzman, K.L. Bick and S.S. Sisodia), Lippincott Williams and Wilkins, Philadelphia, pp 263-267.
- Raskind, M.A., Peskind, E.R., Wessel, T., Yuan, W. and the Galantamine USA-Study Group. (2000). Galantamine in AD: A 6-month randomized, placebo-controlled trial with a 6-month extension. Neurology, 54:2261-2268.
- Rivas-Vazquez, R. A., Carrazana, E. J., Rey, G. J., Blais, M. A., & Racher, D. A. (2000). Alzheimer's disease: Pharmacological treatment and management. The Clinical Neuropsychologist, 14, 93-109.

SEMINAR 9 (10/18/2001): Treating Alzheimer's disease: Regenerative and replacement options

Guest Lecturer

Mark Kindy, Ph.D.
Associate Professor
Biochemistry
University of Kentucky

Required Readings

- Monk, D., & Brodaty, H. (2000). Use of estrogens for the prevention and treatment of Alzheimer's disease. Dementia and Geriatric Cognitive Disorders, 11, 1-10.
- Baldereschi, M. et al. (1998). Estrogen replacement therapy and Alzheimer's disease in the Italian Longitudinal Study on Aging. Neurology, 50, 996-1002. (need)
- Henderson, V. W., et al. (2000). Estrogen for Alzheimer's disease in women: Randomized, double-blind, placebo-controlled trial. Neurology, 54, 295-301. (need)

- Waring, S. C. et al. (1999). Postmenopausal estrogen replacement therapy and risk of AD. Neurology, 52, 965.
- Eriksdotter, J. M. et al. (1998). Intracerebroventricular infusion of nerve growth factor in three patients with Alzheimer's disease. Dementia and Geriatric Cognitive Disorders, 9, 246-257. (need)
- Scott, S. A., & Cruchter, K. A. (1994). Nerve growth factor and Alzheimer's disease. Reviews in the Neurosciences, 5, 179-211.
- Jonhagen, M. E. (2000). Nerve growth factor treatment in dementia. Alzheimer's Disease and Associated Disorders, 14, S32-S38.

Recommended Readings

- Birge, S. J. (1997). The role of estrogen in the treatment of Alzheimer's disease. Neurology, 48, S36-S41.
- Phelps, C. H. et al. (1989). Potential use of nerve growth factor to treat Alzheimer's disease. Neurobiology of Aging, 10, 205-207. (need)
- Yankner, B. A. (1989). NGF and Alzheimer's disease: Considerations and caveats. Neurobiology of Aging, 10, 546-553. (need)
- Genazzani, A. R., & Gambacciani, M. (1999). Hormone replacement therapy: The perspectives for the 21st century. Maturitas, 32, 11-17.
- Henderson, V. W. (1997). The epidemiology of estrogen replacement therapy in Alzheimer's disease. Neurology 5 Suppl 7, S27-S35.
- Gustillo, M. C., et al. (1999). Evidence that nerve growth factor influences recent memory through structural changes in septohippocampal cholinergic neurons. The Journal of Comparative Neurology, 405, 491-507.

SEMINAR 10 (10/25/2001): Treating Alzheimer's disease: Anti-amyloid strategies

Guest Lecturer

Steve Estus, Ph.D.

Professor

Sanders-Brown Center on Aging

University of Kentucky

Required Readings

- Poirer, J. (1999). Apolipoprotein E: A pharmacogenetic target for the treatment of Alzheimer's disease. Molecular Diagnosis, 4, 335-341.
- Golde, T. E., & Younkin, S. G. (2001). Presenilins as therapeutic targets for the treatment of Alzheimer's disease. Trends in Molecular Medicine, 7, 264-269.
- Schenk, D. et al. (1999). Immunization with amyloid-B attenuates Alzheimer's disease like pathology in the PDAPP mouse. Nature, 400, 173-177. (need)
- Younkin, S. G. (2001). Amyloid beta vaccination: Reduced plaques and improved cognition. Natural Medicine, 7, 18-19. (need)
- Cooper, N. R., Kalara, R. N., McGeer, P. L., & Rogers, J. (2000). Key issues in Alzheimer's disease inflammation. Neurobiology of Aging, 21, 451-453.

SEMINAR 11 (11/1/2001): Families: Caregiving and its theoretical background

Guest Lecturer (tentative)

Caregiver

Lexington, KY

Required Readings

- Montgomery, R. J. V., & Williams, K. N. (2001). Implications of differential impacts of caregiving for future research on Alzheimer's care. *Aging and Mental Health*, 5, S23-S35.
- Pearlin, L. I., Pioli, M. F., & McLaughlin, A. E. (2001). Caregiving by adult children: Involvement, role disruption, and health. In R. H. Binstock & L. K. George (eds.), *Handbook of aging and the social sciences* (5th ed.) (pp. 238-254).
- Dilworth-Anderson, P. (2001). Family issues and the care of persons with Alzheimer's disease. *Aging and Mental Health*, 5, S49-S51.
- Zarit, S. H., & Leitsch, S. A. (2001). Developing and evaluating community-based intervention programs for Alzheimer's patients and their caregivers. *Aging and Mental Health*, 5, S84-S98.
- Schulz, R. (2001). Some critical issues in caregiver intervention research. *Aging and Mental Health*, 5, S112-S115.
- Aranda, M. P. (2001). Racial and ethnic factors in dementia caregiving research in the U. S. *Aging and Mental Health*, 5, S116-S123.

Recommended

- Connell, C. M., & Gibson, G. D. (1997). Racial, ethnic, and cultural differences in dementia caregiving: Review and analysis. *The Gerontologist*, 37, 355-364. (need)
- Gaugler, J. E., & Zarit, S. H. (2001). The effectiveness of adult day services for disabled older people. *Journal of Aging and Social Policy*,
- Gaugler, J. E., Kane, R. L., & Kane, R. A. (in press). Family care for older adults with disabilities: Towards more targeted and interpretable research. *International Journal of Aging and Human Development*.
- Loukissa, D., Farran, C. J., & Graham, K. L. (1999). Caregiving for a relative with Alzheimer's disease: The experience of African-American and Caucasian caregivers. *American Journal of Alzheimer's Disease*, 14, 207-216. (need)
- Mintzer, J. E., Rubert, M. P., & Herman, K. C. (1994). Caregiving for Hispanic Alzheimer's disease patients: Understanding the problem. *American Journal of Geriatric Psychiatry*, 2, 32-38.

SEMINAR 12 (11/8/2001): Non-pharmacological treatment of Alzheimer's disease

Guest Lecturer

Virginia Bell, M.S.

Founder, *Helping Hands* Program

Lexington, Kentucky

Required Readings

- Day, K., Carreon, D., & Stump, C. (2000). The therapeutic design of environment for people with dementia: A review of the empirical research. The Gerontologist, 40, 397-416.
- Orsulic-Jeras, S., Judge, K. S., & Camp, C. J. (2000). Montessori-based activities for long-term care residents with advanced dementia: Effects on engagement and affect. The Gerontologist, 40, 107-111.
- Camp, C. J., Foss, J. W., O'Hanlon, A. M., & Stevens, A. B. (1996). Memory interventions for persons with dementia. Applied Cognitive Psychology, 10, 193-210.
- Romero, B., & Wenz, M. (2001). Self-maintenance therapy in Alzheimer's disease. Neuropsychological Rehabilitation, 11, 333-355.
- Trabert, M. L. (1996). Living in the moment: Support in the early stages of Alzheimer's disease. Activities, Adaptation, & Aging, 20, 1-20.
- Aldridge, D. (1995). Music therapy and the treatment of Alzheimer's disease. Clinical Gerontologist, 16, 41-57.
- Renz, C. A. (1995). Reminiscence: A supportive intervention for the person with Alzheimer's disease. Journal of Psychosocial Nursing, 33, 15-20.
- Bonner, A. P., & O'Brien-Cousins, S. (1996). Exercise and Alzheimer's disease: Benefits and barriers. Activities, Adaptation, & Aging, 20, 21-34.

Recommended Readings

- Bell, V. (2001). The best friends staff: Building a culture of care in Alzheimer's programs. Baltimore: Health Professions Press.
- Camp, C. J. (2001). From efficacy to effectiveness to diffusion: Making the transitions in dementia intervention research. Neuropsychological Rehabilitation, 11, 495-517.
- Gitlin, L. N., Corcoran, M., Winter, L., Boyce, A., & Hauck, W. W. (2001). A randomized, controlled trial of a home environmental intervention: Effect on efficacy and upset in caregivers and on daily function of persons with dementia. The Gerontologist, 41, 4-14.
- Judge, K. S., Camp, C. J., & Orsulic-Jeras, S. (2000). Use of Montessori-based activities for clients with dementia in adult day care: Effects on engagement. American Journal of Alzheimer's Disease, 15, 42-46.
- Zanetti, O., Zanieri, G., Di Giovanni, G., Peitre De Vreese, L., Pezzini, A., Metitieri, T., & Trabucchi, M. (2001). Effectiveness of procedural memory stimulation in mild Alzheimer's disease patients: A controlled study. Neuropsychological Rehabilitation, 11, 263-272.
- Teresi, J. A., Holmes, D., & Ory, M. G. (2000). The therapeutic design of environments for people with dementia: Further reflections and recent findings from the National Institute on Aging collaborative studies of dementia special care units. 263-272.
- Teresi, J. A., Holmes, D., & Ory, M. G. (2000). The therapeutic design of environments for people with dementia: Further reflections and recent findings from the National Institute on Aging collaborative studies of dementia special care units. The Gerontologist, 40, 417-421.

NO CLASS (11/15/2001): 2001 Gerontological Society of America Meeting

NO CLASS (11/22/2001): Thanksgiving

SEMINAR 13 (11/29/2001) Alzheimer's disease and long-term care

Guest Lecturer(s) (tentative)

Rosalie A. Kane, Ph.D.

Professor

School of Public Health

University of Minnesota

Robert L. Kane, M.D.

Professor

Division of Health Services Research and Policy

University of Minnesota

Required Readings

-Lacey, D. (1999). The evolution of care: A 100-year history of institutionalization of people with Alzheimer's disease. Journal of Gerontological Social Work, 31, 101-132.

-Grant, L. A. (1998). Beyond the dichotomy: An empirical typology of Alzheimer's care in nursing homes. Research on Aging, 20, 569.

-Johnston Davis, K. et al. (2000). Specialized dementia programs in residential care settings. The Gerontologist, 40, 32-42.

-Beck, C. (2001). Identification and assessment of effective services and interventions: The nursing home perspective. Aging and Mental Health, 5, S99-S111.

-Phillips, C. D. et al. (1997). Effects of residence in Alzheimer's disease special care units on functional outcomes. JAMA, 278, 1340-1344.

-Sidell, N. L. (1998). The politics of Alzheimer's special care units: Lessons to be learned from the demented? Journal of Health and Social Policy, 9, 29-43.

Recommended Readings

-Sloane, P. et al. (1998). Environmental correlates of resident agitation in Alzheimer's disease special care units. Journal of American Geriatrics Society, 46, 862-869.

-Phillips, C. D. et al. (2000). Use of physical restraints and psychotropic medications in Alzheimer special care units in nursing homes. American Journal of Public Health, 90, 92-96.

-Maslow, K. (1994). Current knowledge about special care units: Findings of a study by the U.S. Office of Technology Assessment. Alzheimer's Disease and Associated Disorders, 8, S14-S40.

-Kovach, C. R., & Jochemsen, H. (1996). Alzheimer's disease: Long-term care issues. Issues in Law & Medicine, 12, 47.

-Lawton, M. P., et al. (2000). Professional environmental assessment procedure for special care units for elders with dementing illness and its relationship to the therapeutic environment screening schedule. Alzheimer's Disease and Associated Disorders, 14, 28-38.

-Maslow, K. (1994). Guidelines for special care units. Alzheimer's Disease and Associated Disorders, 8, S368-S372.

- Grant, L. A. (1994). Conceptualizing and measuring social and physical environments in special care units. Alzheimer's Disease and Associated Disorders, 8, S321-S327.
- Phillips, C. D. (1994). Public policy toward special dementia care units. Alzheimer's Disease and Associated Disorders, 8, S405-S407.
- Grant, L. A., Kane, R. A., Potthoff, S. J., & Ryden, M. (1996). Staff training and turnover in Alzheimer special care units: Comparisons with non-special care units. Geriatric Nursing, 17, 278-282.
- Wagner, A. W., Teri, L., & Orr-Rainey, N. (1995). Behavior problems of residents with dementia in special care units. Alzheimer's Disease and Associated Disorders, 9, 121-127.
- Flood, D. (1995). Innovations in dementia care. International Journal of Nursing Practice, 1, 59-62.
- Maas, M., Swanson, E., & Buckwalter, K. C. (1994). Alzheimer's special care units. Nursing Clinics of North America, 29, 173-194.

SEMINAR 14 (12/6/2001): Alzheimer's disease and public policy: The rise of nationwide advocacy efforts

Required Readings

- Newcomer, R. J., Fox, P. J., & Harrington, C. A. (2001). Health and long-term care for people with Alzheimer's disease and related dementias: Policy research issues. Aging and Mental Health, 5, S124-137.
- Riggs, J. A. (2001). The health and long-term care policy challenges of Alzheimer's disease. Aging & Mental Health, 5, S138-S145.
- Leon, J., Cheng, C-K., & Neumann, P. J. (1998). Alzheimer's disease care: Costs and potential savings. Health Affairs, 17, 206-216.
- Keane, W. L. (1994). The patient's perspective: The Alzheimer's Association. Alzheimer's Disease and Associated Disorders, 8, S151-S155.
- Albisu, K. (1999). Alzheimer's Association. Nursing Homes: Long Term Care Management, 48, 98-103.
- Alzheimer's Association (2001). Alzheimer's Association key milestones. Available at <http://www.alz.org/media/understanding/fact/milestones.htm>.

Recommended Readings

- Rice, D. P. et al. (1993). The economic burden of Alzheimer's disease care. Health Affairs,
- Ernst, R. L., & Hay, J. W. (1994). The U.S. economic and social costs of Alzheimer's disease revisited. American Journal of Public Health, 84, 1261-1264.
- Hay, J. W., & Ernst, R. L. (1987). The economic costs of Alzheimer's disease. American Journal of Public Health, 77, 1169-1175.
- Souetre, E., Thwaites, R. M. A., & Yearley, H. L. (1999). Economic impact of Alzheimer's disease in the United Kingdom, British Journal of Psychiatry, 174, 51-55.