

BIOGRAPHICAL SKETCH

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NAME Kamer, Angela R.	POSITION TITLE Associate Professor		
eRA COMMONS USER NAME			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Institute of Medicine and Pharmacy, Cluj-Napoca, Romania	Doctor-Medic	1973-1978	Stomatology
SUNY Buffalo	MS	1988-1992	Oral Sciences
SUNY Buffalo	Certificate	1988-1992	Advanced Education Program in Temporomandibular Disorders and Orofacial Pain
SUNY Buffalo	Ph.D.	1991-1997	Pathology
SUNY Buffalo	Certification	1997-2001	Periodontics
New York University, New York	Fellowship	2009-2012	Implant Dentistry

Personal Statement:

The research interest is aimed at investigating the pathogenic mechanism by which peripheral inflammation and dysbiosis can lead to AD pathology in cognitively normal subjects. To this goal, I used periodontal disease as a model of peripheral inflammatory disease with dysbiotic etiology.

1. Ruth F. Itzhaki, Richard Lathe, Brian J. Balin, Melvyn J. Ball, Elaine L. Bearer, Maria J. Bullido, Chris Carter, Mario Clerici, S. Louise Cosby, Hugh Field, Tamas Fulop, Claudio Grassi, W. Sue T. Griffin, Jürgen Haas, Alan P. Hudson, **Angela R. Kamer**, Douglas B. Kell, Federico Licastro, Luc Letenneur, Hugo Lövhelm, Roberta Mancuso, Judith Miklossy, Carola Otth Lagunas, Anna Teresa Palamara, George Perry, Christopher Preston, Ethersia Pretorius, Timo Strandberg, Naji Tabet, Simon D. Taylor-Robinson, Judith A. Whittum-Hudson. Microbes and Alzheimer's disease, Editorial. *Journal of Alzheimer's disease*, 51:979-984, 2016.

2. **Kamer AR**, Janal MN, deLeon M. Letter to the editor regarding: 'Summary of the evidence on modifiable risk factors for cognitive decline and dementia: A population-based perspective'. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*, 1: 385-386, 2015.

3. **Angela R. Kamer**, Juan Fortea O, Sebastià Videla, Angela Mayoral, Malvin Janal, Carmona-Iragui M, Bessy Benejam, Deepak Saxena, Patricia Corby, Lidia Glodzik, Ronald G. Craig, Kumar Raghava Chowdary Annam, Miriam Robbins and Mony J. de Leon. Periodontal disease's contribution to Alzheimer's disease progression in Down syndrome, *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*, 2:49-47.

4. **Angela R. Kamer**, Elizabeth Pirraglia, Wai Tsui, Henry Rusinek, Shankar Vallabhajosula, Lisa Mosconi, Li Yi, Pauline McHugh, Ronald G. Craig, Spencer Svetcov, Ross Linker, Lidia Glodzik, Schantel Williams, Patricia Corby, Deepak Saxena, Mony J. de Leon: Periodontal disease associates with higher brain amyloid load in normal elderly, *Neurobiology of Aging*, 36:627-633, 2015.

5. Angela R. Kamer, Elizabeth Pirraglia, Wai Tsui, Li Yi, Pauline McHugh, Ricardo Osario, Malvin Janal, Spencer Svetcov, Ross Linker, Kumar Annam, Lidia Glodzik, Patricia Corby, Henry Zetterberg, Kaj Blennow, Mony J. de Leon. CSF AD-related biomarkers are higher in subjects with periodontal disease. Alzheimer's Association International Conference, July 22, 2015.

A. Positions and Honors

1977-1978	Externship in Oncology at the Institute of Oncology, Cluj-Napoca, Romania
1981-1982	Fellowship in Oncology, Ploiesti, Romania
1978-1981	General dental residency, Ploiesti, Romania
1982-1987	General Dentistry, Ramat-Gan, Israel
1997-2000	Postdoctoral fellow, SUNY, Buffalo
1991-2000	Research Assistant Professor, Oral Maxillofacial Dept, SUNY, Buffalo
2001-2010	Assistant Professor, NYU College of Dentistry
2010-present	Associate Professor with tenure, NYU College of Dentistry
2010-present	Research Scientist, NYU Center for Brain Health
2014-present	Associate Professor, Department of Psychiatry, NYU School of Medicine

Other Experience and Professional Membership

1978	Graduated with Thesis Honors
1988-1991	Fellowship - Neuromuscular Research in Clinical Dentistry
1992-1997	<u>Physician Scientist Award</u> -Individual
1993	Fellowship "Histopathobiology of Neoplasia: a Workshop"
1994-1996	Member of the AADR Science Information Committee

Honors

1998	Recipient, the W. Feagans Postgraduate Clinical Scholarship, SUNY at Buffalo
1998	<u>ADA Health Foundation New Dentist Scientist Award.</u>
2000	Recipient, the W. Feagans Postgraduate Clinical Scholarship, SUNY at Buffalo
2000	Certification of Excellence for being nominated for Mrs. Gerald M. Kramer Scholarship
2004	Goddard Faculty Fellowship Award

Professional Associations

- Inflammation Research Association
- New York Academy of Science
- Academy of Osseointegration
- American Dental Education Association
- International Society to Advance Alzheimer Research and Treatment (ISTAART)
- Member of the AADR Science Information Committee

National/International Position:

Associate Editor for "*Journal of Alzheimer's disease*" 2008-2009 and 2011-2012

Reviewer for scientific grants:

- Reviewer for "*Medical Research Council*"
- Reviewer for "*Alzheimer's society*" United Kingdom
- Reviewer for "*Alzheimer's Association*" USA

Contribution to science:

1. Cancer research

In addition to my clinical training, I was also trained as a clinician-scientist. The receipt of a prestigious independent "Physician Scientist Award" allowed me to pursue my Ph.D. in Experimental Pathology and begin my scientific career. During this time, I participated in groundbreaking cancer research and publish with my

mentor in prestigious journals. When I arrived at NYUCD as a junior investigator, I elected to continue the line of investigation developed during my Ph.D., i.e., oral cancer. This is a truly exciting area, and I developed a timely, interesting, and original project. I submitted multiple grant proposals in the hope that I would be able to prove my concept, and as a result of my efforts, I received a "University Challenge Fund Award". The award allowed me to conduct some of my studies and mentor my students. During that time, I published several papers and abstracts and presented my data at an international conference (Federation of European Biochemical Societies Meeting). However, lack of start-up funds and further inability to secure outside funding hindered my progress. As quitting was not an option, I opted to focus on projects that would combine my clinical with my basic training. I strongly believe that my knowledge into cancer biology gave me a fresh perspective of the AD pathogenesis.

1. **Angela R. Kamer**, Sacks PG., Vladutiu A., and Liebow, C. EGF mediates multiple signals: dependence on conditions. International Journal of Molecular Medicine, 13(1):143-147, 2004.
2. **Angela R. Kamer**, Hoghooghi, SA, and Liebow, C. Epidermal growth factor downregulates the expression of SH-PTP2. Int.J.Mol.Med., 1:735-739, 1998.
3. **Angela R. Kamer**, Krebs, L., Hoghooghi, SA., and Liebow, C. Proliferative and apoptotic responses in cancers with special reference to oral cancers. Crit.Rev.Oral Biol.Med., 10: 58-78, 1999.
4. D.H. Crean, C. Liebow, M.T. Lee, **Angela R. Kamer** and T.S. Mang. Alterations in growth/antigrowth factor receptors tyrosine kinases/phosphatases during carcinogenesis. Cancer Res. Clinical Oncol. 121: 141-149, 1995.
5. C. Liebow, D.H. Crean, M.T. Lee, **Angela R. Kamer**, T.S. Mang, A.V. Schally. Synergistic effects of Bombasin and Epidermal Growth Factor on cancers. Proc. Natl. Acad. Sci. 91:3804-3808, 1994.
6. C. Liebow, and **Angela R. Kamer**. Use of Somatostatin in the treatment of cancer. The Cancer Journal 5:200-207, 1992.
7. M.T. Lee, **Angela R. Kamer**, C. Liebow and A.V. Schally. Effects of EGF and analogues of LHRH and Somatostatin on phosphorylation and dephosphorylation of tyrosine residues of specific protein substrates. Proc. Natl. Acad. Sci. 88: 1656 - 1660, 1991.
8. Liebow, C., M.T. Lee, **Angela R. Kamer** and A.V. Schally. Regulation of Luteinizing Hormone Releasing Hormone receptor binding by heterologous and autologous receptor stimulated tyrosine phosphorylation. Proc. Natl. Acad. Sci. 88: 2244-2248, 1991.

2. Bone research

After completing my Ph.D. I pursued my clinical specialty in Periodontics at SUNY at Buffalo. During my periodontal, clinical training, I continued my basic science research by investigating bone metabolism using human osteoblastic cells as a model. I acquired new techniques and published.

1. **Angela R. Kamer**, El-Ghorab, N., Marzek, N., Margarone, JEIII., Dziak, R. Nicotine Induced proliferation and Cytokine Release in Osteoblastic Cells. International Journal of Molecular Medicine, 1:121-126, 2006.
2. Lampasso JD. **Angela R. Kamer**, Margarone J 3rd. Dziak R. Sphingosine-1-phosphate effects on PKC isoform expression in human osteoblastic cells. Prostaglandins Leukotrienes & Essential Fatty Acids. 65(3):139-46, 2001.
3. Carpio, L., Stephan, G., **Angela R. Kamer**, and Dziak, R. Sphingolipids stimulate cell growth and MAP kinase activation in osteoblastic cells. Leukotrienes, Prostaglandins and Essential Fatty Acids. 61:267-273, 1999.

3. Alzheimer's disease

Considering my background in basic and clinical studies, and my capacity to synthesize the literature findings, I developed a mechanistic hypothesis associating periodontal disease with Alzheimer's disease that we published in *Alzheimer's and Dementia* and *Journal of Alzheimer's disease*. My contribution to this area of research is illustrated in the recognition of this work (citations). Based on this hypothesis, I have developed research projects leading to significant interests among my peers, established close collaborations with world-renowned investigators, and published peer-reviewed manuscripts. The current application is an extension of my initial findings in cognitively normal individuals and draw upon my clinical and research expertise.

1. **Angela R. Kamer**, Morse DE, Holm-Pedersen P, Mortensen EL, Avlund K: Periodontal Inflammation in Relation to Cognitive Function in an Older Adult Danish Population. J Alzheimers Dis 28:613-24, 2012. This paper was proposed by the Journal of Alzheimer's Disease for press release.

2. **Angela R. Kamer**, Samvel M. Galoyan, Michael Haile, Richard Kline, Allal Boutajangout, Yong-Sheng Li, Alex Bekker. Meloxicam improves object recognition memory and modulates glial activation after splenectomy: animal study. European Journal of Anesthesia 29:332-337, 2012.

3. **Angela R. Kamer**. Correspondence Re: Systemic inflammation and disease progression in Alzheimer disease. Neurology, 73:768-769, 2009.

4. **Angela R. Kamer**, Ronald G. Craig, Elizabeth Pirraglia, Ananda P. Dasanayake, Robert G. Norman, Robert J. Boylan, Andrea Nehorayoff, Lidia Glodzik, Mirosław Brys, Mony J. de Leon. TNF-alpha antibodies to periodontal bacteria discriminate between Alzheimer's disease patients and normal subjects. Journal of Neuroimmunology, 30:216:92-97, 2009.

5. Bekker A, Haile M, Li Y-S, Galoyan S, Garcia E, Quartermain D, **Angela R. Kamer**, Blanck T. Nimodipine Prevents Memory Impairment Caused by Nitroglycerine Induced Hypotension. Anesthesia & Analgesia, 109(6):1943-1948, 2009.

6. **Angela R. Kamer**, Ronald G. Craig, Ananda P Dasanayake, Mirosław Brys, Lidia Sobranska, Mony J de Leon. Inflammation and Alzheimer's disease: Possible role of periodontal diseases. Alzheimer's & Dementia, 4:242-250, 2008.

7. **Angela R. Kamer**, Ananda Dasanayeke, Ronald G. Craig, Lidia Glodzik-Sobanska, Mirosław Bry, Mony J. de Leon. Alzheimer's disease and peripheral infections: The possible contribution from periodontal infections, model and hypothesis. Journal of Alzheimer's Disease, 13:437-449, 2008.

Other publications:

Congiusta, Marie A; Koo, Donghyun; Nanda, Veena; **Kamer, Angela**. "Papillon -Lefevre Syndrome : A Case Report" International Journal of Experimental Dental Science, 2:66-69, 2013.

Ronald G. Craig, Peter Kotanko, **Angela R. Kamer** and Nathan W. Levin. Periodontal diseases: A modifiable source of systemic inflammation for the end stage renal disease patient on hemodialysis therapy? Nephrology, Dialysis and Transplantation, 22:312-315, 2007.

Fotadar, U., **Angela R. Kamer**, Zelig, J. and Terracio, L. A modified bacterial method for the generation of recombinant adenoviruses via super-heat-shock. Technical Tips Online, 2003.

Oberdoerster, J., **Angela R. Kamer**, and Rabin, RA. Differential effect of ethanol on PC12 cells death. J.Pharmacol.Exp.Therapeutics, 287:359-365, 1998.

Ohrbach, R., Crow, H., and **Angela R. Kamer**. Examiner expectancy effects in the measurement of pressure pain threshold. Pain 74:163-170, 1998.

Invited papers:

1. Ryan M.E., Carnu O., **Angela R. Kamer**. The Influence of Diabetes on the Periodontal Tissues. JADA, 134:34S-2003.

Book chapters:

1. **Angela R. Kamer**, Sirois D., Huhmaan M. Bidirectional Impact of oral health and general health. In: Nutrition and Oral Medicine. Eds: R. Touger-Decker, D. Sirois, C. Mobley. Humana Press, Inc. Totowa, New Jersey, 2005.

2. MJ de Leon, L Glodzik, L Mosconi, R Osorio, M Shulman, Y Li, W Tsui, T Butler, and H Rusinek, **AR Kamer**, DeSanti, N Okamura. Imaging Alzheimer's Disease: The Evolution of Biomarkers in the book Brain Mapping: An encyclopedic reference, editor in Chief: Arthur W. Toga. Published, 2015.

Principal Investigator/Program Director (Last, First, Middle): Kamer, Angela R.

3. **Angela R. Kamer**, Momy J. De Leon and Martin J Sadowski. Psychiatric disorders in old age. Implications for the dental practitioner. Chapter 9, Textbook of geriatric dentistry, 3rd ed, August, 2015. Wiley Blackwell.

4. **Angela R. Kamer**, Ronald G. Craig and Momy J. De Leon. Peripheral inflammation and Alzheimer's disease: Periodontal Disease. Chapter 8. *A Clinician's Guide to Systemic Effects of Periodontal Diseases*, Springer Publishing, 2016. In the process of being published.

5. Ronald G. Craig and **Angela R. Kamer**. Introduction and Overview of the Systemic Effects of Periodontal Diseases. Chapter 1. *A Clinician's Guide to Systemic Effects of Periodontal Diseases*, Springer Publishing, 2016. Submitted.

6. **Angela R. Kamer** and Ronald G. Craig. Summary and Possible Future Directions. Chapter 10. *A Clinician's Guide to Systemic Effects of Periodontal Diseases*, Springer Publishing, 2016. Submitted.

Editor for books/journals:

A Clinician's Guide to Systemic Effects of Periodontal Diseases, Springer Publishing, 2016. Editors: Ronald G. Craig and **Angela R Kamer**.

International Journal of Dentistry, special issue: Implants in the Anterior Maxilla: Aesthetic Challenges. Co-editors: Sang-Choon Cho, Stuart J. Froum, **Angela R. Kamer**, Peter M. Loomer, Georgios Romanos, and Burak Demiralp. 2015

Date:
22.07.2021

