NAME: Aggarwal, Anita

eRA COMMONS USER NAME (credential, e.g., agency login): Aggaran

POSITION TITLE: Oncologist/hematologist Attending physician, Associate Professor of Medicine

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
Punjab University, Chandigarh, India	B.Sc.	5/1972	Science
Punjabi University, Patiala,, India	M.Sc.	5/1997	Parasitology
PGIMER, Chandigarh, India	Ph.D.	5/1982	Immunology
UOMHS, Des Moines, IA	DO	6/1995	Medicine
Franklin Square Hospital, MD	Residency	6/1997	Internal Medicine
NHLBI, NIH, Bethesda MD	Residency	6/1998	Internal Medicine
Washington Hospital Center, Washington DC	Fellowship	6/2001	

NOTE: The Biographical Sketch may not exceed five pages. Follow the formats and instructions below.

A. Personal Statement

I have the expertise, leadership, training, and motivation necessary to successfully fulfill the role of PD/ PI and carry out the proposed research project. I have a broad background in oncology and hematology with specific training and expertise in breast cancer. Breast cancer has been close to my heart. As medical director of Breast Cancer Center from 2004 to 2007, Med star Washington Hospital Center, I was the PI of >10 corporate as well as pharma sponsored breast cancer studies. I conducted investigator initiated neo adjuvant chemotherapy trial using Abraxane and xeloda in locally advanced breast cancer which was funded by Roche and ABI pharmaceuticals. Currently, I am working on breast cancer in males and female veterans, a retrospective VINCI data analysis of >7800 breast cancer including 1750 males. This is the largest male breast cancer data available in USA. In addition, I have a collaborative project with Dr. Park, John's Hopkins University, to determine the loss of Y chromosome in male breast cancer which may harbor a potential novel tumor suppressor gene. As a PI of another project "Anexxin-II dependent neo angiogenesis in male breast cancer", we are looking if the over expression of Anx-II correlates with human breast cancer progression and is predictive of poor clinical outcomes. In addition, I have successfully administered the projects (e.g. staffing, research protections, budget), collaborated with other researchers, and produced several peer-reviewed publications from each project.

I have been a member of association of Veterans Affairs Hematologists and Oncologists (AVAHO) since 2011 and now President Elect. This association and leadership has given me an opportunity to develop a breast health group which includes multi-disciplinary members from 7 VA's from different locations. We have a bi-weekly conference call and have developed this proposed pilot study which will be conducted at 4 medical Centers and eventually, hopefully, at all VA's nationwide.
Our female veteran population is growing and more females are seeking medical attention at VA. As a breast oncologist, from my personal experience, the number of younger females with advanced breast cancer is increasing. If we can educate our female veterans about the risk of breast cancer, we may be able to prevent 2 breast cancer in some if not all by providing them with chemoprevention treatment, genetic counseling and tests and this pilot study will help us to obtain our goal.

Before I became an oncologist, I was fortunate to work as scientist with world re-known scientists at most prestigious institutes such as Post Graduate Institute of Medical Education and research, Chandigarh, India (1980-82); Pasteur Institute, Lille, France (1982-84); NIAID and NCI, NIH, USA (1984-1988, 1990-1992); and at WRAIR, Washington DC (1988-1990). Combined together, I have published >50 articles in Journals of national and international repute.

As a result of my previous experiences, I am aware of the importance of frequent communication among project members and of constructing a realistic research plan, timeline, and budget.

1. **Aggarwal A,** Liu M L, Patel N, Evangelista R, Krasnow S. Breast Cancer in Male Veterans: A retrospective chart review. JCO 31, 2013 (suppl;abst e 12531).
2. **Aggarwal A**, Liu M L, Patel N, Evangelista R, Krasnow S. Breast Cancer in Male Veterans: A retrospective chart review. Poster presentation at AVAHO 2013.

B. Positions and Honors

Positions

1977-1979 Research Fellow, Department of Parasitology PGIMER, Chandigarh, India
1979-1982 Research Fellow, PGIMER, Chandigarh, India.
1982-1984 Post-Doctoral Fellow, Institute Pasteur, Lille, France
1984-1988 Research Associate, LPD, NIAID, NIH, Bethesda, MD
1988-1989 Scientist, Walter Reed Army Institute of Research, Washington DC 20307
1990-1992 Senior Scientist, LPD, NCI, NIH, Bethesda MD 20892
2001-2008 Hem/Onc faculty and Breast program director, WHC, Washington DC
2001-2011 Interim Chief and Program Director, Howard University, Washington DC
2011-Present Hematologist/Oncologist, VAMC, Washington DC 20422
2011-present Associate Professor of Medicine, George Washington University, Washington, DC
2002-present Associate Professor of Medicine, Georgetown University, Washington, DC

Honors

1980 PGIMER Excellence research award
1982 French Government Post-doctoral fellowship
1985 Searl's award for research
1988 Fogarty Fellowship, NIH
1990 United States Army Award for Research "Development in Malaria Vaccine"
2007 Honoree "Living in Pink"
2007 Guide to America's "Top Oncologist"
2008 Guide to America's "Top Oncologist"

Other Experience and Professional Memberships

1995- Member, American Medical Association
1998- Member, American Society of oncology
1998- Member, American Society of Hematology
2001- Member, International Society of Thrombosis and Hemolysis
2011- Member, Breast Cancer Task Force, Central Office, DC
2011- Member, Association of Veterans Affairs Hematology oncology Association (AVAHO)
2012-14 Chair, Education Committee, AVAHO
2015- President Elect- AVAHO

C. Contribution to Science

1. My early work and publications (1977-1982) directly addressed the fact that the Giardia lamblia, a human parasite has different virulence in mouse and humans, develops resistance to treatments and have antigenic variation which is cysteine rich.

a. **Aggarwal A**, Bhatia A, Naik SR, Vinayak VK. Immunosupressive effect of antilymphocytic serum on experimental giardiasis. Indian J. of Med. Res. 1981;74: 840-844.

b. Vinayak VK, **Aggarwal A,** Bhatia A, Naik SR. Adoptive transfer of immunity in giardiasis. Ann. of Trop. Med. Parasitol. 1982;74: 265-267.

c. **Aggarwal A, Bhatia** A, Naik SR, Vinayak VK. Variable virulence of Giardia lamblia in mice. Ann. of Trop. Med. Parasitol. 1983;77: 163-167.

d. Vinayak VK, Bhatia A, **Aggarwal A.** Protective effect of immunodepression on experimental malaria infection. Indian J. of Med. Res. 1981;73: 67-72.

2. From 1984-88, I worked with Dr. Nash, NIAID, NIH and was able to isolate this cysteine rich 29.4 kd structural protein which is present on the ventral disc of G.lamblia. This protein was laterused as a target to transfer humoral and cellular immunity in animal and human clinical trials.

a. **Aggarwal A**, Nash, TE. RNA translation products of Giardia lamblia. Exp. Parasitol. 1987;64: 336-341.

b. **Aggarwal A,** Nash TE. Antigenic variation of Giardia lamblia in vivo. Inf. and Immun. 1988;56: 1420-1423.

c. **Aggarwal A**, Merritt JW Jr, Nash TE. Antigenic variation in Giardia isolates: Variant proteins are cysteine-rich. Mol. Biochem. Parasitol. 1989;32: 39-48.

d. **Aggarwal A,** Adam RD, Nash TE. Characterization of 29.4 kd structural protein in Giardia lamblia on the ventral disc. Inf. and Immun. 1989;57: 1305-1310.

3. In 1982-84, I worked with Prof. Capron at Pasteur Inst. France and was able to produce a monoclonal antibody against Brugia malayi, a filarial. This antibody is used in humans to protect them from this infection.

a. **Aggarwal A,** Washington C, Haque A, Dissous C, Capron, A. Resistance against Brugia malayi microfilariae induced by a monoclonal antibody that promotes killing by macrophages and recognizes surface antigen(s). Immunol. 1985; 54: 655-663.

4. In mid 1980's, acquired immunodeficiency syndrome killed many people infected with HIV. Vaccine production against this virus was the goal of many at that time. Since I had produced an oral attenuated Salmonella vaccine for malaria at Walter reed Army Institute of Research that gave me an opportunity to work with Dr. Gallo, NCI, NIH, Bethesda. My goal was to make an oral vaccine using a salmonella as vector for HIV DNA to transfer immunity in Rhesus Monkeys against HIV virus. My initial work showed that such vaccine was able to produce CTCL but not humoral response. At that point I left bench work to go to the clinical side.

a. Sadoff JC, Ballou WR, Baron LS, Hou HS, **Aggarwal A.** Oral Salmonella typhimurium circumsporozoite recombinant vaccine protects against malaria. Vaccine. 1989;1-4.

b. **Aggarwal A**, Kumar S, Jaffe R, Hone D, Gross M, Sadoff J. Salmonella: Malaria circumsporozoite recombinants induce specific CD8 positive cytotoxic T-cells. J. Exp. Med. 1990;172:1083-1090.

c. **Aggarwal A**, Kumar S, Hone D, Gross M, Sadoff J. Oral salmonella-Malaria CS recombinant vaccine induces CTLs. Vaccine, 1991.

d. Franchini G, Robert-Guroff M, Tartaglia J, **Aggarwal A,** Abimiku A, Benson J, Markham P, Limbach K, Herteau G, Fullen J, Aldrich K, Miller N, Sadoff J, Paoletti E, Gallo RC. Highly attenuated HIV type 2 recombinant Poxviruses, but not HIV-2 recombinant Salmonella vaccines, induce long-lasting protection in Rhesus Macaques. AIDS Res. and Human Retro. 1995;11:909-920.

5. In addition to the contributions described above, for the last 15 years, I have been mainly concentrating on breast cancer. Since I have joined the VA in 2011, I have worked on different aspect coagulation and thrombosis in cancer patients and have published 7 articles in collaboration. Currently, I am working on breast cancer in males and female veterans, a retrospective VINCI data analysis of >7800 breast cancer including 1750 males. This is the largest male breast cancer data available in USA. The data was presented at ASO 2015 as poster. In addition, I have collaborative project with Dr. Park, John's Hopkins University, to determine the loss of Y chromosome in male breast cancer which may harbor a potential novel tumor suppressor gene. As a PI of another project "Anexxin-II dependent neo angiogenesis in male breast cancer", we are looking if the over expression of Anx-II correlates with human breast cancer progression and is predictive of poor clinical outcome.

a. **Aggarwal A**, Liu M L, Krasnow S. Breast cancer in male veteran

Complete List of Published Work in MyBibliography:
http://scholar.google.com/citations?user=qmY7M5AAAAAJ&hl=en&cstart=40&pagesize=20