BIOGRAPHICAL SKETCH

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NAME: Redda, Kinfe Ken**.**

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

POSITION TITLE: **Professor Emeritus**

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
Haile Selassie I University, Ethiopia	B. Pharm.	07/1970	Pharmacy
University of Alberta, Edmonton, Canada	Ph.D.	06/1978	Med. Chemistry
University of Alberta, Edmonton, Canada	Postdoc.	06/1978-09/1978	Med. Chemistry
Dalhousie University, Halifax, Canada	Postdoc.	09/1978-12/1979	Med. Chemistry

A. Personal Statement

In line with our long-term goal to eliminate cancer health disparities in Florida, California and nationally, the University of Florida (UF), Florida A&M University (FAMU) and University of Southern California (USC) have formed a triad partnership to establish the **Florida-California Cancer Research, Education & Engagement (CaRE^2) Health Equity Center.** My proposed role in this application will be the **FAMU PD/PI** while Dr. R. Renee Reams serves as **FAMU Contact PD/PI** of the triad partnership. I will also be engaged in the FAMU U54 "*Research Education Core (REC)*" Co-Leader while Dr. Bereket Mochona serves the **Project Leader** of the REC triad partnership. My experience and expertise in this area over the past 30 years at FAMU should be an asset to our collaborative effort. I have been actively engaged in the NIMHD/NIH-funded Research Center in Minority Institutions (RCMI) Program at FAMU as the "*Drug Discovery Core*" PI and Group Leader for more than a decade. We are in the process of submitting a continuing proposal application to NIH for funding of the RCMI Program under a reformed U54-RCMI Center mechanism (2019-2024). My new role in the application will be serving as a PI of the U54-RCMI Center, "*Research Infrastructure Core*" (which includes the previous *Drug Discovery Core*). The main goal of the Center is to strengthen the drug discovery and biotechnology-related research activities in addressing national health disparities. My most active and productive research activities in the past has been in the areas of drug design and synthesis, as well as the pharmacological and biochemical investigations of various biologically active entities. I have the expertise, leadership and motivation necessary to successfully carry out these activities for the institution. I have an extensive experience in organic synthesis and synthetic methodology (with special emphasis in the syntheses of nitrogen heterocycles); versatile in analytical spectroscopic instrumentation and separation techniques: e.g. ultraviolet (UV), infrared (IR), nuclear magnetic resonance (NMR), mass spectrum analysis (MS), high pressure liquid chromatography (HPLC), column chromatography (CC) and drug design utilizing structure activity relationships and molecular modeling techniques. I have served as a PI and Program Director of the Minority Biomedical Research Support (MBRS) Program for 17 years (1988-2004). I have also an extensive experience in the administration of institutional research and training grants and **reviewing research grant applications submitted to the NIH.** I served as the Vice President for Research at FAMU for five years (2010-2015). After more than 30 years of service at FAMU, I am currently involved as a *Professor Emeritus* in Drug Discovery research at my institution.
My roles as FAMU U54 PD/PI and FAMU U54 "*Research Education Core (REC)*" Co-Leader will be highly strengthened because of the following leadership roles and experinces:

1. K. Redda, PI and Director of the NIH/NIGMS-funded Minority Biomedical Research Support (MBRS) Program at FAMU. The program involved 6-13 faculty-led funded research projects (SO-6 mechanism) with one administration grant that focused on faculty research development, as well as undergraduate and graduate student research training, development and mentoring activities (on- and off-campus activities). Over 300 undergraduate students, 35 graduate students and about 24 junior faculty members received research training and mentoring continuously for 17 years, funded for **$22.1 Million,** GM – 008111 (1988-2004).

2. K. Redda, PI and Director of the NASA-funded and FAMU-administered Space Life Sciences Training Program (SLSTP). The program was an intensive 8-week summer training program about life sciences and engineering topics of interest to NASA involving "hands on" laboratory work and lectures by astronauts and life science scientists. This was a residential setting in Coco Beach and the training was held at the Kennedy Space Center in Florida (Cape Canaveral). About 700 undergraduate science and engineering students normally apply for participation in the program. Only highly selected 44 students were admitted to SLSTP. Minority participation was encouraged. Over 360 students were trained in NASA facilities over a period of **nine** years, funded for **$4.0 Million**, NASA-Code E (1987-1995).

3. K. Redda, PI and FAMU Institutional Liaison and Fund Manager of the State-funded, **Florida Education Fund (FEF) (McKnight Doctoral Fellowship).** The program funds African American students who intend to pursue Ph.D. degrees in science and engineering (STEM fields) at Florida universities. Over 28 students were funded by this program over a period of 14 years, received funding of **$420,000** (1990 – 2004).

4. K. Redda, PI and Director of the NIH/NCRR-funded FAMU **High School Minority Research Apprentice Program (RAP).** The program was 10-12 weeks "hands on" summer research training program of high-achieving minority high school students. Over 100 students were trained over a period of nine years; funding received **$254,237.00** (1989-1997).

B. Positions and Honors

Positions and Employment

1979-1984	Assistant Professor, College of Pharmacy, University of Puerto Rico, San Juan, Puerto Rico
1985-1989	Associate Professor of Medicinal Chemistry, College of Pharmacy, Florida A&M University
1985-1989	Member, Initial Review Group, NIH/NIDA, Biomedical Research Review Committee
1987-1995	Program Director and PI, NASA's Space Life Sciences Training Program (SLSTP) at FAMU
1988-2004	MBRS Program Director (NIH Funded) Florida A&M University
1989-Present	Professor of Medicinal Chemistry, College of Pharmacy, Florida A&M University
1997-2001	Member IRG, (NIGMS), MBRS Research Review Subcommittee
2004-2005	Associate Vice President for Research, Florida A&M University
2010-2015	Vice President for Research, Florida A&M University
2015-2016	Retired through the Deferred Retirement Optional Program (DROP), Package Deal, FAMU
2016-Present	Appointed by University to *Professor Emeritus* Status (*Approved by Faculty Senate*), FAMU

Other Experience and Professional Memberships:

1998-Present	Member, American Association for Cancer Research
1983-Present	Member, American Association of the Colleges of Pharmacy
1982-Present	Member, American Chemical Society (Organic and Medicinal Chemistry Divisions); FL Branch
1990-Present	Member, American Pharmaceutical Association (Academy of Pharmaceutical Sciences)
1986-Present	**Charter** Member, American Association of Pharmaceutical Scientists
1987-Present	Member, Kappa Psi Pharmaceutical Fraternity, Inc.
1990-Present	Member, Rho Chi Pharmacy Honor Society
1980-1986	American Association for the Advancement of Science

Honors

1981-1982	Chancellor's Recognition Award: (A merit certificate), University of Puerto Rico as the most outstanding faculty member in the College of Pharmacy at UPR for the academic year

1985-1988	Certificate of Appreciation for Distinguished Service for Biomedical Research Review Committee, given by Dr. Charles R. Schuster, Director, (NIDA)/NIH for a regular service
1994-1995	FAMU's Superior Accomplishment Award (a certificate and $1,000 cash award) in recognition of "outstanding and meritorious service for the academic year
1996	Recipient of the Teacher Incentive Program (TIP), a letter of recognition and a $5,000 cash award (added to the base salary) for outstanding teaching at a Florida State University System (Legislative Act)
1999	Recipient of the Professorial Excellence Program (PEP), a letter of recognition and a $5,000 cash award (added to the base salary) for longevity of service to the University and for demonstrated excellence in teaching, research and service over the years (Legislative Act)
1997-2001	Recipient of a Letter and Certificate of "Service Appreciation", issued by Dr. Marvin Cassman, Director, NIGMS/NIH for contribution as a regular member of the NIGMS Review Subcommittee
2001	Recipient of Presidential "University Service Award" (a letter and a FAMU pin), in recognition of 15 years of service and contributions to the growth and prosperity of the institution
2002	Recipient of "Special Recognition Award", a plaque for "Exceptional Contribution in the area of Grantsmanship" (funded for a total of $27.2 million at FAMU), presented by FAMU President in a ceremony held at FAMU President, Dr. Fred Gainous's Residence
2006, 2008 and 2009	Recipient of the American Association for Cancer Research (AACR) Minority-Serving Institution Faculty Scholar Award in Cancer Research (Travel Awards/Three Years, $6,700)
2008	Recipient of the FAMU-wide "Teacher of the Year" Award, a plaque and a cash award ($2,000)
2010	Recipient of the FAMU-wide "Advanced Teacher of the Year" Award, a plaque and a cash award ($2,000)
2013	Recipient of the "Best Male Faculty Member", 2013 Historically Black Colleges and Universities (HBCU) Awards, a plaque given during a banquet held at Jackson State University, Jackson, MS

C. Contributions to Science

1. I have been involved in the expansion, development and training of undergraduate and graduate students, as well as junior faculty in the field of biomedical sciences at FAMU for over 30 years. As a former Minority Biomedical Research Support (MBRS) Program Director (NIGMS/NIH funded) at my institution for nearly 20 years (1987-2004), over 300 undergraduate students, 25 graduate students (*main advisor* for six Ph.D. students among them) and about 20 junior faculty members have received training and direct mentoring in research activities over these years under my supervision. I have attended national and international meetings as an invited scientific speaker in Africa, Canada, Europe (Russia, U.K., Italy, France, Austria, Switzerland and Germany), United Arab Emirates (UAE) and China. I have served as a Vice President for Research at Florida A&M University for five years (2010-2015) with the mission of promoting research activities of faculty, staff and students in all areas at the institution. I have written one book, published nearly 70 peer-reviewed and indexed scientific work and presented over 110 national and international papers on my research work. I am proud to have obtained four U.S, patents recently due to the rigorous pursuit of biomedical sciences research:

1. Kinfe Redda, Chavonda Janeebra Mills and N. Mateeva, "Synthetic Flavonoids and Pharmaceutical Compositions and Therapeutic Methods of Treatment of HIV Infection and Other Pathologies", U.S. Patent # 8,314,143, issued on November 20, 2012.
2. Kinfe Ken Redda and Madhavi Gangapuram, "N-Aminopyrrolylmethyltetrahydropyridines as Anti-Cancer Agents", U.S. Patent # 8,476,303, issued on July 2, 2013.
3. Kinfe Ken Redda and Madhavi Gangapuram, "N-Aminotetrahydroisoquinolines as Anti-Cancer Agents" U.S. Patent # 8,546,426, issued on October 1, 2013.
4. Kinfe Ken Redda and Madhavi Gangapuram, "N-Substituted Tetrahydroisoquinoline benzamides/benzene Sulfonamides as Anticancer Agents", U.S. Patent # 8,889,713 B1, issued on November 18, 2014.

2. Design, Synthesis and Pharmacological Determinations of Novel Anti-Breast Cancer Agents: Breast cancer is the second most common cause of cancer deaths in women after lung cancer. More than 1.2 million women are diagnosed with breast cancer every year worldwide. According to the American Cancer Society estimation in 2017, about 40,450 women are expected to die from this malignancy. African American women are

more likely to die from Triple Negative Breast Cancer (TNBC) at every age. The estrogen receptors (ERs) remain one of the attractive targets in the treatment of breast cancer. Blocking the estrogen (E2) action (antagonism) on breast tumor cells and thereby stopping the proliferation of cancer cells is a very useful strategy. Tamoxifen is the most widely used Selective Estrogen Receptor Modulator (SERM) that antagonizes the estrogen function by binding to estrogen (E2) and blocks the downstream signaling. Although Tamoxifen has been successfully used in breast cancer treatment, its agonistic effect on the uterus is said to be associated with an increased risk of developing endometrial cancer. To overcome this problem, new anti-breast cancer agents with unique mechanism(s) of action are being studied. The tetrahydroisoquinoline (THIQ) core structure is an important pharmacophore in natural products and small molecules that are used as biologically active drug molecules. This proposed research attempts to design, synthesize and evaluate the *in vitro* and *in vivo* anti-breast cancer activity of THIQs, particularly the substituted *1,2,3,4-THIQ* derivatives. Our earlier *in vitro* studies have indicated that the *N*-substituted THIQs possess strong anti-breast cancer activities.

1. Nag, A., Mateeva, N., Redda, K., Ononuju, U., Hansberry, T.D., Aikens, C. (2016), Functional evaluation of synthetic flavonoids and chalcones for potential antiviral and anticancer properties, *Bioorganic and Medicinal Chemistry Letters, Volume 27 (Issue 11*), Pages 2350–2356 (2017).

2. Suresh V. K. Eyunni, Madhavi Gangapuram, Bereket Mochona, Nelly Mateeva and Kinfe K. Redda*, "Synthesis and Biological Evaluations of Ring Substituted Tetrahydroisoquinolines (THIQs) as Anti-Breast Cancer Agents", *Journal of Cancer Science & Therapy, Volume 9 (7)* 528-540 (2017).

3. Elizabeth D Henderson, Madhavi Gangapuram, Suresh Kumar VK Eyunni, Kinfe K Redda and Tiffany Wilson-Ardley*, "Design, Synthesis and Evaluation of Novel N-Substituted-[Benzoylamino]-3-Ethyl-1,2,3,6-Tetrahdropyridines As Potential Anti-Cancer Agents", Madridge J Pharm Res. Vol 3 (1), 52-59 (2019).

4. Najla O. Zarmouh, Nelly Mateeva[1], Madhavi Gangapuram, Kacy Flowers, Suresh V. K. Eyunni, Samia S. Messeha, Wang Zhang, Kinfe K. Redda*, Karam F.A. Soliman*, "Substituted Chalcones and Flavones as Monoamine Oxidase Inhibitors with Anti-cancer Effects on Prostate Cancer Cell Models", submitted (2019).

Provided below is a URL to a major published work are found on NCBI:
https://www.ncbi.nlm.nih.gov/pubmed/?term=Redda%2C%20Kinfe%20K%5BFull%20Author%20Name%5D&cmd=DetailsSearch

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

1. **NIH/NCI - U54CA233396**

   Reams, R.R., Redda, K., Carpten, J., Stern, M., Odedina, F., & Wilkie, D.J. (MPIs). Florida-California Cancer Research, Education and Engagement (CaRE^2) Health Equity Center. Submitted to the National Institutes of Health, National Cancer Institute on 09/19/2018 – 09/19/2023; U54CA233396

2. U54 MD007582-34 Soliman (PI) 08/01/2019 - 05/31/2024
   NIH/NIMHD/RCMI
   Title: U54 RCMI Center
   The overall goal of establishing a Drug Discovery Core facility at the institution is to strengthen the research infrastructure for drug discovery at Florida A&M University through research collaboration in a focused and coordinated effort.
   Role: Research Infrastructure Core Leader

Completed Research Support

G12 MD007582-29 Soliman (PI) 08/01/13-05/31/18
NIH/RCMI
Title: Drug Discovery Core

The overall goal of establishing a Drug Discovery Core facility at the institution is to strengthen the research infrastructure for drug discovery at Florida A&M University through research collaboration in a focused and coordinated effort.
Role: Drug Discovery Core Leader

G12RR03020 Lewis, III (PI) 06/01/03-05/31/13
NCRR/RCMI
Title: Drug Discovery Core
The goal was to manage the Core and perform the “Synthesis of N-aminotetrahydropyridines as Anticancer Agents” in the research laboratory
Role: Drug Discovery Core Leader and PI on a project

GM – 008111 Redda (PI/PD) 06/1987-08/2004
NIH/NIGMS
Title: MBRS Program at Florida A&M University
The goal was to strengthen and promote biomedical and behavioral sciences at Florida A&M University; train and develop graduate and undergraduate students in the STEM fields on campus.
Role: PI/PD