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The Asian American Network for Cancer Awareness, Research, and Training (AANCART)'s Contributions Towards Reducing Asian American Cancer Health Disparities, 2000–2017

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Abstract

Background—In 2000 and in two subsequent five-year cycles, the National Cancer Institute funded grantees on a regional and national basis to address community needs for cancer awareness, research, and training. The Asian American Network for Cancer Awareness, Research and Training (AANCART) was fortunate to be funded since 2000 to focus on mitigating cancer health disparities facing Asian Americans residing primarily in California and Hawaii. This paper highlights its achievements with respect to the original Specific Aims and unanticipated outcomes in its most recent funded cycle.

Methods—Sources for this paper included reports to the National Cancer Institute and peer-reviewed papers as well as the insights of the three Principal Investigators.

Results—All Aims of the original application (Infrastructure, Outreach, Research, and Training) were attained or exceeded. Most distinctive was the completion and publication of eight randomized controlled trials to address Asian American cancer health disparities and its nurture of 14 new and early stage investigators who have been productive in terms of research career trajectories.

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CONFLICT OF INTEREST DISCLOSURES

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Author contributions: Moon S. Chen Jr.: Conceptualization, methodology, formal analysis, writing, and approval of final manuscript. Edward A. Chow and Tung T. Nguyen: Contributing substantial content and critical revisions and approval of final manuscript with agreement to be accountable to all aspects of the work.

Conclusions—AANCART is contributing to mitigating Asian American cancer health disparities through catalyzing academic and community collaborations that have resulted in linguistically-specific and culturally-tailored educational products, scientifically rigorous interventions addressed at cancer risk factors, and nurturing new and early stage Asian American cancer investigators.

Keywords

Asian American; cancer burden; training; intervention research

INTRODUCTION

In 2000 the National Cancer Institute (NCI) launched the Special Population Networks (SPN) as a Request for Funding Announcement (RFA-05-012) to address community needs for cancer information and NCI's desire to obtain community-based answers to research questions and promote training opportunities for racial/ethnic minority and underserved researchers in populations with an unequal burden of cancer.¹ The Asian American Network for Cancer Awareness, Research, and Training (AANCART) was fortunate to be among the funded networks and represented the first-time that the NCI had funded a national network focused on the Asian American cancer burden.² In 2006–10, the NCI followed with the Community Network Programs and in 2010–2015 with the Community Networks Program Centers (CNPCs) program (RFA-CA-09-032). AANCART's up to 2010 have been previously reported^{3–5} including shaping an understanding of the science of cancer health disparities⁶ and thus will not be repeated here.

The purpose of this paper is to describe AANCART's cumulative contributions to mitigating Asian American cancer health disparities, especially since 2010, with respect to the NCI's expectations in cancer awareness, outreach, research, and training and highlight unanticipated outcomes. NCI's expectations were expressed in terms of the Specific Aims it approved for AANCART for the cycle beginning in 2010. These Aims were as follows:

1. In *Infrastructure*, to establish The National Center for Reducing Asian American Cancer Health Disparities (AANCART) whose purpose is to conduct outreach, research and training by building upon AANCART's preceding nine years as a NCI-funded Community Network Program with its record of leadership, significant accomplishments, earned community trust, and established network of community-academic partnerships.
2. In *Outreach*, to create and increase access to culturally appropriate, linguistically-specific, and evidence-based materials designed to increase knowledge about and use of beneficial procedures to reduce cancer disparities and related co-morbid conditions among Asian Americans.
3. In *Research*, to conduct, foster, and disseminate evidence-based intervention research to reduce the unnecessary cancer burden confronting Asian Americans. [*Since the program project, "Liver Cancer Control Interventions for Asian Americans" (P01CA109091-A1) emerged from AANCART are also cited as*

they contribute to the research mission of the co-funders: NCI and the National Institute on Minority Health and Health Disparities.

4. In *Training*, to nurture and mentor new and early stage investigators (NESIs) in community-based participatory research (CBPR) who will submit peer-reviewed proposals and obtain funding to conduct research to reduce health disparities.

In this paper, the authors, the three Principal Investigators for AANCART from 2010–17, summarize the accomplishments associated with each of these Aims and highlight achieved outcomes beyond expectations with respect to mitigating the unique, unusual, but unnecessary Asian American cancer health burden. The distinctiveness of this burden will be reviewed first as part of the context for AANCART's accomplishments.

We start by citing the Federal definition of “Asian”. The Federal Office and Management and Budget Directive 15 defines “Asian” as “A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.” Thus, cancer statistics reported for Asian Americans aggregate data from more than 21 million Asian alone or mixed race Asians⁸ which includes people who are both born in the U.S. and born in more than 30 countries of origin, are associated with at least 30 ethnic groups, and who speak more than 200 languages or dialects reflecting the diversity of the world's most populous and diverse continent. The heterogeneity within Asian Americans also spans socio-economic and educational levels with among the highest proportions of income and educational attainment as well as the lowest proportions of income and educational attainment. As a composite category, Asian Americans or its prior designation of “Asian/Pacific Islanders” (that included Native Hawaiians and Pacific Islanders) led the Nation in the percentage of population increase for every Census since 1970. Asian Americans continue to be the fastest growing racial/ethnic population in the U.S.⁹ Currently constituting 6% of the nation's population; Asian Americans are projected to exceed 40 million by 2050 or at least 9% of the U.S. population.¹⁰

With respect to the leading causes of death, the unique characteristic of Asian Americans has been that they are the first U.S. racial population (beginning in 2000)¹¹ to experience cancer as the leading cause of death.¹¹ In 2012, Hispanics/Latinos also reported cancer as their leading cause of death.¹² Thus, from being the only U.S. racial population to experience cancer as the leading cause of death, Asian Americans remain unique as the first group to experience cancer as the leading cause of death.

The cancer burden confronting Asian Americans is unusual in that infectious forms of cancer, e.g., those due to viruses, rather than non-contagious agents, e.g., tobacco use, disproportionately affect them.^{13,14} Among the viruses that disproportionately increase cancer risk for Asian Americans are hepatitis B and its linkage to hepatocellular carcinoma (primary liver cancer);^{15,16} Human Papilloma Virus and its linkage to cervical cancer;¹⁷ higher prevalence of nasopharyngeal cancer;¹⁸ and *Helicobacter pylori* and its linkage to stomach cancer.¹⁴ Using liver cancer as an example, on an aggregate basis, liver cancer is the third leading cause of death for Asian males but does not rank among the top five causes of death for non-Hispanic Whites. The percentage of deaths due to liver cancer among Asian

males (aggregated) is 10.3% which exceeds the percentages of death among non-Hispanic Whites due to prostate cancer (9.2%) and colorectal cancer (9.1%).¹⁹ Liver cancer deaths among Vietnamese males (22.3%) are more than twice the aggregate Asian male percentage.¹⁹

At the same time, migration to the U.S. and its propensity for Asians to be “acculturated” appear to accelerate risks to chronic forms of cancer.²⁰ Unhealthy diets and sedentary living increase risks to colorectal cancer and breast cancer. For example, in comparison with Chinese in China, Chinese Americans in the San Francisco Bay Area experience colorectal cancer incidence rates higher than their counterparts in China but lower than other Americans.²⁰ Even though breast cancer rates in Asia are among the lowest in the world, highly acculturated U.S.-born Japanese American women have breast cancer rates of increase that surpass non-Hispanic White women.²²

However, the cancer burden confronting Asian Americans is also unnecessary in many respects. For instance, tobacco use, just as it is for all Americans, is the most important preventable risk factor for lung cancer. Nevertheless, Asian American men smoke (14%) at least twice the rate of Asian American women (6%); thus the aggregated smoking rate of 10% could be misleading.²³ Earlier detection of cancer through screening for CRC and viral hepatitis-linked liver cancer may result in avoidable cancer deaths. In the case of those who have not been infected with hepatitis B and are not naturally immune, vaccination is a highly effective strategy to prevent the onset of HBV infection.²⁴

MATERIALS AND METHODS

The data for this paper were derived came from multiple sources including annual reports, peer-reviewed published papers, and information requests from trainees. The three multiple PIs who co-authored this paper discussed AANCART’s accomplishments from their respective perspectives.

This multiple PI plan was endorsed by the NCI as a means to leverage the strengths of experienced, senior leaders, who while they shared equal responsibility, had differing roles based on their expertise. As the founding AANCART PI, Dr. Moon S. Chen, Jr.’s familiarity with the SPN and CNP organizational patterns and the individuals involved, served as the Lead or Contact PI. However, with the demands of the new CNPC RFA, he recruited two other PIs. Dr. Tung Nguyen was recruited as the Research PI to direct the research core which included a pilot study for an early stage investigator and three community-based randomized, controlled trials. As a community leader and nationally-recognized clinical leader, Dr. Edward A. Chow was recruited as the Community PI, who balanced the two other academics and focused on assuring that AANCART would always serve the community.

Organizationally, AANCART was considered a NCI-funded consortium comprised of a lead organization, University of California, Davis with consortium members being the University of California, San Francisco; Chinese Community Health Resource Center; University of California, Los Angeles; University of Hawaii; University of Washington; and Hmong

Women's Heritage Association. Geographically, these consortium members spanned California and Hawaii. To execute NCI's charge to the CNPCs, AANCART included the Administrative Core (Julie Dang, M.P.H., Director) which functioned to coordinate and administratively support the Steering Committee and consortium; the Research Core (Tung Nguyen, M.D. and Susan Stewart, Ph.D., Co-Directors) which planned and conducted the pilot study and three research studies with representation from all consortium members; the Outreach Core (Angela Sun, Ph.D., M.P.H.) with community outreach directors representing the geographical regions; and the Training Core (Marjorie Kagawa-Singer, Ph.D.; Shin-Ping Tu, M.D., M.P.H.; and Moon Chen, Jr., Ph.D., M.P.H.) which focused on mentees and trainees.

RESULTS

Achieving Specific Aims

Aim 1 was completed with the establishment of the administrative infrastructure for the National Center for Reducing Asian American Cancer Health Disparities. This infrastructure was built upon the prior cycles of AANCART^{4,5} which had instituted monthly conference calls of the Steering Committee comprised of the PIs, NCI Program Director, and Directors of each Core: Administrative, Outreach, Research, and Training as well as the regional or site PIs. The composition of the Steering Committee also assured representation from all geographic regions as well as a balance of members with academic perspectives and community perspectives. These calls provided the bases for priority-setting, decision-making, and follow-up essential to successful coordination.

To achieve Aim 2, the Outreach Core conducted ethnically-specific and regionally-based outreach (cancer awareness) that stemmed from needs assessments and community linkages. Rather than have each region conduct outreach to all Asian American groups in each region, AANCART set up populations of emphasis such that efforts in terms of awareness, screening, and educational events were focused on specific populations within each region while not excluding anyone from its meetings. The population of emphasis for Sacramento was on Hmong; San Francisco on both Chinese and Vietnamese; Los Angeles on Koreans; Seattle on Cambodians, and Hawaii on Filipinos. The decisions to emphasize which population in which region was based on factors such as the relative numbers of that population (e.g., there are more Hmong in Sacramento than the other AANCART regions) as well as the presence of AANCART community members from those regions leading their respective outreach activities. In many cases, AANCART developed the first culturally appropriate, linguistically-specific, and evidence-based materials designed to increase knowledge about and use of beneficial procedures to reduce cancer disparities and related co-morbid conditions for Asian Americans of Chinese, Filipino Hmong, and Korean ancestry. These products are exemplified in Table 1. Print materials, particularly the bilingual flip charts were used as part of the educational interventions to increase colorectal cancer screening (CRC) for Hmong²⁵ and Koreans²⁶ and based on the previously conducted CRC screening intervention of Chinese.²⁷ Not included in Table 1 but produced by AANCART were flip charts and videos to educate Hmong, Korean, and Vietnamese populations on the importance of screening for Hepatitis B and nutrition and physical

activity^{28,29} that were part of the “Liver Cancer Control Interventions for Asian Americans” also funded by the NCI Center to Reduce Cancer Health Disparities. For the greatest efficiency, awareness products supported the CRC intervention studies.

To achieve Aim 3, the Research Core supervised the conduct of the pilot research study and the full research study. Both of these studies were randomized controlled community intervention studies. The intervention component of the pilot research study which focused on the effect of the acceptability of donating biospecimens for cancer research among Chinese has been published.³⁰

The full research study was ambitiously comprised of three locality-specific community-based randomized controlled studies (RCTs) that assessed the effectiveness of lay health educators from the respective population of emphasis in increasing CRC screening. The localities and respective populations of emphasis were: Sacramento (Hmong); Los Angeles (Korean); and Honolulu (Filipino). Findings from the Hmong²⁵ and Korean²⁶ studies have been reported. In total, 10 papers attributed to AANCART or P01 funding reported results of RCTs with two additional papers using RCTs in review.

These studies exceeded the requirements of Aim 3 to conduct, foster, and disseminate evidence-based intervention research to reduce the unnecessary cancer burden confronting Asian Americans.

To achieve Aim 4, the Training Core’s objective, nurturing and mentoring NESIs in CBPR who submit peer-reviewed proposals and obtain funding to conduct research to reduce health disparities was attained. All AANCART trainees in the current cycle are Asian American but in prior cycles, non-Asians who focused on cancer disparities in Asian Americans were funded.

After funding, we were pleased to be funded with two additional diversity trainees: Jamie Felicitas and Sheba George, Ph.D. As a demonstration of the community-academic research environment that AANCART created, we had other trainees who initiated research training careers. As these self-initiated mentees emerged, AANCART senior faculty volunteered mentoring to these trainees. They included three Master’s level individuals who matriculated into doctoral programs respectively at University of Phoenix, UC Davis, and UC Berkeley. The other self-initiated trainee, Anne Saw, Ph.D. was appointed as an Assistant Professor at DePaul University. All trainees have multiple first author publications. Aim 4 was exceeded.

Unanticipated Outcomes and Avenues

Beyond meeting or exceeding the four Aims promised to NCI, AANCART colleagues also pursued other unanticipated avenues of outreach and research. Through administrative supplements or leveraged grants, AANCART extended itself to addressing participation of minorities, particularly Asian Americans in cancer clinical trials; extending AANCART’s expertise in addressing Asian American participation in cancer clinical trials to enhancing participation of minorities in clinical trials for HIV-related malignancies; and developing the infrastructure for biospecimen donation for cancer research.

Increasing participation in cancer clinical trials—At the invitation of the NIMHD-funded Enhancing Minority Participation in (cancer) Clinical Trials (EMPaCT), AANCART at UC Davis served as a consortium member that included the University of Minnesota (lead); MD Anderson Cancer Center; Johns Hopkins University; and the University of Alabama at Birmingham. This led to educational products to introduce clinical trials to Chinese, Korean, Hmong, and Vietnamese. Documenting the importance of minority participation in cancer clinical trials was published in 2014³³ and highlighted as one of the 2015 American Society of Clinical Oncology’s advances in clinical cancer care and cancer research.³⁴

Enhancing participation in HIV-linked malignancy trials—At the invitation of the NCI Center to Reduce Cancer Health Disparities, supplemental funds allowed us to conduct focus groups of all racial/ethnic populations with respect to increasing participation of HIV-positive patients in clinical trials for HIV-related malignancies. We collaborated with the University of Puerto Rico in developing a bilingual (Spanish/English) videotape on the advantages of participating in clinical trials for HIV-positive patients.³⁵ A randomized, controlled trial is in process in Puerto Rico to evaluate the effectiveness of this video on increasing patient accrual for HIV-related malignancies trials.

Encouraging biospecimen donations for risk factor assessment and cancer research—With supplemental funds from NCI we conducted pioneering research on the perceptions of the Chinese, Hmong, and Vietnamese lay public towards biospecimens. We collaborated with other CNPCs in publishing our findings with others who researched perceptions of Whites and Hispanics.³⁶ We also applied our experience in collecting blood biospecimens to characterize various risk factors for hepatocellular carcinoma^{37,38} and diabetes.³⁹ and more recently are analyzing the potential of the genetic propensity towards liver cancer from the Hmong blood biospecimens we collected.

DISCUSSION

The purpose of this paper was to describe AANCART’s cumulative contributions to mitigating Asian American cancer health disparities with respect to the NCI’s expectations and highlight unanticipated outcomes. Our achievements demonstrate that tailoring their language and culture by ethnicity improves approaches to mitigate cancer burden. Our achievements also exemplify the effectiveness of academic and community collaborations including bringing new researchers from the community to partner with academia. See Table 3. AANCART concluded that liver cancer is the most important cancer health disparity confronting Asian Americans^{15,16,40} but other disparities also exist.^{13,14} To properly address these disparities, AANCART colleagues developed linguistically-specific, culturally competent educational materials with community guidance specifically for hepatitis B screening and CRC screening (Table 1). With CBPR as its foundation, AANCART colleagues implemented community-centered RCTs, the first of their kind for its respective populations of emphasis (Table 2). In so doing, we were the first to complete rigorously designed, community-informed interventions. Statistically significant findings have been detected for all of the RCTs, demonstrating the effectiveness of customized interventions achieving cancer-reducing behaviors. These are all novel findings. However, even 17 years is

inadequate to demonstrate declines in cancer mortality for either liver cancer or CRC. Nevertheless through our rigorously implemented interventions, cancer risk factors (e.g. through increased screening versus control) have been reduced. Positive CRC results have been referred to care and through screening for hepatitis B with referral to vaccination if warranted, we believe that lives have been potentially saved.

Another legacy is exemplified by the numbers of NESIs, both originally named in our proposal and self-initiated trainees. We believe that these self-initiated trainees would not have considered research careers were it not for the AANCART “research” culture where they received mentoring from senior AANCART faculty. Based on their current trajectories, we anticipate that these trainees will be among the next generation of Asian American health disparities researchers.

We catalyzed national recognition for the importance of participation of minorities in cancer clinical trials;³³ we contributed to an educational intervention that appears to facilitate the participation of Puerto Rican HIV positive, Spanish-speaking patients to join AIDS malignancy trials;³⁵ and through our research in biospecimen collection, we have significantly increased the numbers of biospecimens used to assessing risk for cancer and co-morbid conditions in community settings.³⁶ Beyond using blood biospecimens for diagnostic purposes, we completed a pilot study using whole-exome sequencing that suggests a potential genetic explanation for the propensity of liver cancer in Hmong adults.

In summary, we believe AANCART could be a model for other programs focused on vulnerable populations. Lessons learned for being an effective model included being collaborative among Asian ethnicities and academe and community; tailoring evidence-based interventions based on language and culture; and having a supportive, highly committed but expanding cadre that contributes to nurturing of NESIs.

Despite these developments, we recognize at least three limitations. First, time is a limitation. Even 17 years is insufficient to detect a decline in cancer mortality; however, we have demonstrated surrogate markers of risk reduction, e.g., increased serological testing for HBV and CRC screening through community-based RCTs. Second, while the achievements by the trainees are already impressive, another decade may be needed before a more complete impact of AANCART’s “research culture” may be manifested. One challenge for this next generation of cancer researchers may be to validate more precise markers of cancer prevention, rather than using declines in mortality rates. Diminishing disparities to precision cancer prevention should be a goal. Third, space does not permit a more thorough presentation of both achievement of the Specific Aims and the unanticipated outcomes. Nevertheless, we believe what we have presented is a snapshot of a very healthy return on investment for the NCI’s Center to Reduce Cancer Health Disparities.

CONCLUSIONS

Funding from the National Cancer Institute’s Center to Reduce Cancer Health Disparities and the National Center on Minority Health and Health Disparities (predecessor to the National Institute on Minority Health and Health Disparities) enabled AANCART’s

contributions to mitigating the cancer burden confronting Asian Americans. We present documentation based on published papers on exceeding the Specific Aims. This was achieved through reaching Asian Americans in their languages of origin and through culturally concordant approaches. We accomplished initiatives that were not originally proposed. In particular, we introduced the collection of blood biospecimens for cancer research as part of community screenings that were subsequently applied in ascertaining the potential of genetic determinants on liver cancer disparities. In the words of a Chinese proverb, “A journey of a thousand miles begins with a single step.” Many steps have been taken on this exciting journey.

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Condensed abstract

Seventeen years of AANCART's contributions to mitigate the unique, unusual, and unnecessary cancer burden facing Asian Americans are documented. Achievements in cancer awareness, training, outreach, and research are described both in reference to stated objectives and unanticipated outcomes.

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Table 1

Examples of AANCART cancer awareness/educational products produced

Topics	Products
Colorectal Cancer Screening	Flip Charts and videos in Chinese, Filipino dialects (Ilocano, Tagalog), Hmong, Korean, and Vietnamese Print materials in Chinese and English
Nutrition & Physical Activity	Flip Charts in Chinese, Ilocano, Tagalog, Hmong, Korean, and Vietnamese
Biospecimen donations for cancer research	YouTube videos in Chinese (Mandarin, Cantonese), Ilocano, Tagalog, Hmong, Korean, Vietnamese
Participating in Cancer Clinical Trials	YouTube videos and pamphlets in Chinese, English, Hmong, Korean, Vietnamese, Ilokano, Tagalog; CME

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Table 2

Randomized controlled trials conducted by AANCART

Risk factor	Population	Intervention	Findings
HBV screening	Hmong Sacramento	Bilingual/bicultural LHWs education and navigation	HBV education > control ²⁸
HBV screening	Chinese & Vietnamese Sacramento	Electronic messaging with primary care providers	EMR alert > usual care ³¹
HBV screening	Korean Los Angeles	Small group education in churches	CRC education > control ²⁹
CRC screening	Hmong Sacramento	Bilingual/bicultural LHWs	CRC education > control ²⁵
CRC screening	Koreans Los Angeles	Bilingual/bicultural LHWs	CRC education > control ²⁶
CRC screening	Chinese San Francisco	Bilingual/bicultural LHWs	LHW + print > print ²⁷
CRC screening	Vietnamese and Latinos Santa Clara County, CA	Brochure, Telephone counseling	Brochure + FOBT + telephone > brochure + FOBT > usual care ⁴¹
Breast cancer screening	Vietnamese Santa Clara County, CA	Bilingual/bicultural LHWs	LHWs > control ⁴²
Biospecimen collection	Chinese San Francisco	Biospecimen education	Biospecimen education > Cancer 101 ³⁰
Healthy nutrition and physical activity	Chinese San Francisco	Lectures + print	Lectures + print > print ³²

CRC=colorectal cancer

EMR=electronic medical records

HBV=Hepatitis B Virus

LHW=lay health workers

Table 3

Summary of Accomplishments by AANCART Trainees

Names	Role with AANCART	Current roles	Accomplishments
<i>Original trainees</i>			
John Choe, M.D., M.P.H.	hepatitis B among Korean Americans. Mentor: Shin-Ping Tu, M.D., M.P.H.	Associate Program Director, Curriculum and Evidence-based Medicine training, University of Washington Internal Medicine Residency Program	<ul style="list-style-type: none"> PI, R03 CA130726 CDC mentored research scientist Robert Wood Johnson Faculty Scholar
Michael Ong, M.D., Ph.D.	Mentor: Marjorie Kagawa-Singer, Ph.D.	Associate Professor, Internal Medicine, UCLA David Geffen School of Medicine	<ul style="list-style-type: none"> PI, "Variations in Care: Comparing Heart Failure Care Transition Intervention Effects," Agency for Healthcare Research and Quality (R01 HS019311)
Angela Jo, M.D., M.P.H.	Mentor: Roshan Bastani, Ph.D., Annette Maxwell, Dr.P.H.	Clinician, University of New Mexico	<ul style="list-style-type: none"> ACS Career Development Award
Angela Sun, Ph.D., M.P.H.	Outreach Core Director. Mentor: Tung Nguyen, M.D.	Executive Director, Chinese Community Health Resource Center, San Francisco, CA Adjunct Faculty, CSU East Bay; Affiliated Faculty, UCSF	<ul style="list-style-type: none"> AANCART inspired her to earn Ph.D. PI," 1R21 MD006024
Angela Sy, Dr.P.H.	Hawaii AANCART Research Director, Mentor: Susan Stewart Ph.D.	Research Assistant Professor; Adjunct Research Assistant Professor, Cancer Center, University of Hawaii	<ul style="list-style-type: none"> Visiting Scholar Fellows, University of Nevada-Las Vegas President, Asian and Pacific Islander Caucus (APIC), American Public Health Association (APHA)
Elisa Tong, M.D., M.A.	AANCART pilot study leader & Sacramento AANCART Research Director. Mentor: Moon Chen Jr. Ph.D., M.P.H.	Associate Professor, Internal Medicine, UC Davis	<ul style="list-style-type: none"> PI, ACS Research Scholar Grant Best Published Paper, APIC, APHA, 2016
<i>Prior cycle diversity trainees</i>			
Neetu Chawla, Ph.D., M.P.H.	Earned Ph.D. Mentor: Roshan Bastani Ph.D.	Research Scientist, Division of Research, Kaiser Permanente, Northern California, Oakland, CA	<ul style="list-style-type: none"> NCI Cancer Prevention Fellowship Program PI, extramural grants
Arnab Mukherjea, Dr. P.H. M.P.H.	Earned Dr.P.H. Mentor: Elisa Tong. M.D.	Assistant Professor, Health Sciences, CSU East Bay	<ul style="list-style-type: none"> PI, Post-doctoral Fellowship, Tobacco Related Disease Research Program, University of California President, APIC, APHA Best Published Paper, APIC, APHA, 2014
<i>Current cycle diversity trainees</i>			
Jamie Felicitas, M.P.H.	Earned M.P.H. Mentors: Reginald Ho, M.D., Charlene Cuaresma, M.P.H.	Ph.D. student, Claremont Graduate School	<ul style="list-style-type: none"> Multiple publications

Names	Role with AANCART	Current roles	Accomplishments
Sheba George, Ph.D.	Mentor: Marjorie Kagawa Singer Ph.D.	Assistant Professor, Charles R. Drew University of Medicine and Science	<ul style="list-style-type: none"> Multiple publications
<i>Self - initiated trainees</i>			
Julie Dang, M.P.H., C.H.E.S.	AANCART Administrative Core Director; NCI-funded National Outreach Network Community Health Educator. Mentor: Moon S. Chen, Jr., Ph.D., M.P.H.	Director of Community Engagement and Outreach, University of California, Davis Comprehensive Cancer Center, Sacramento, CA	<ul style="list-style-type: none"> UC Berkeley Health Policy Program Ph.D.(c) Recipient, University of California Dissertation Fellowship
Dao Fang, D.H.A, M.S.W.	Research Director, Hmong Women's Heritage Association, Sacramento, CA	Cultural and Linguistic Consultant, Health Net Inc., Sacramento, CA	<ul style="list-style-type: none"> Earned M.S.W. Earned Doctor of Health Care Administration, University of Phoenix
May Ying Ly, M.S.W	Executive Director, Hmong Women's Heritage Association, Sacramento, CA	Ph.D.(c), Betty Irene Moore School of Nursing, UC Davis, Sacramento, CA	<ul style="list-style-type: none"> Earned M.S.W.
Anne Saw, Ph.D.	Mentor: Elisa Tong, M.D.	Assistant Professor, Department of Psychology, DePaul University, Chicago, IL	<ul style="list-style-type: none"> Her doctoral student won APIC Best Student Abstract Award