

# **Overview of MAC-AIChE College Scholarships for Underrepresented Minorities in Chemical Engineering**

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## **Abstract**

Since the inception of the Minority Affairs Committee (MAC) of AIChE (American Institute of Chemical Engineers) college scholarship program in 1994 for underrepresented minorities in chemical engineering a total of about 240 scholarships have been awarded to African-American, Hispanic and Native American students who have excellent academic records and are also in financial needs. This paper will discuss the success of the scholarship program and give some insights into a similar program by ACS (American Chemical Society) that was initiated about the same time in 1994. We shall also examine the impact of the mentoring program for the scholars that supplement the MAC-AIChE scholarship program. The funding issue and sources to sustain the program will also be discussed.

## **Introduction**

It is an interesting coincidence that in 1994 both ACS and AIChE established scholarship program for underrepresented minorities. While the AIChE scholarship program was understandably focused for chemical engineering students, ACS scholarship program covers students majoring in chemistry, chemical engineering, biochemistry, chemical technology (2 year program), environmental/natural sciences, industrial chemistry and materials science. However, as at August 1, 2006, more than 36% of the ACS scholarships were awarded to students majoring in chemical engineering representing first place with about 35% majoring in chemistry representing second place. One of the main objectives of the AIChE scholarship program administer through the Minority Affairs Committee (MAC) is to increase the representation of minorities in chemical engineering and by extension increase the membership of underrepresented minorities in the Institute.

Dr. Emmanuel Dada serves as the chair of the MAC-AIChE students award from 1999 to date and before him, Mr. Eugene Alsandor served as the chair. There are two categories of the scholarship awards: one for incoming freshmen awarded to high school students who have interest in science and engineering with preference to eventually major in chemical engineering and the second is for college students who major in chemical engineering. Applicants must be members of a minority group (i.e. African-American, Hispanic, Native American, or Alaskan Native) that is underrepresented in chemical engineering. For the college students' awards, selections of recipients were based on the applicant's academic record, participation in AIChE student and professional activities, career objectives, and financial need. While for the incoming college students, selections of recipients were based on the applicant's academic record, participation in high school and work activities, reason for choosing science or engineering, and financial need. The Outstanding Scholastic Achievement Award was introduced in 1996 to recognize the outstanding achievements of a chemical engineering student who serves as a role

model for minority students. It was awarded to C. M. Jaramillo in 1996, P. Mensah in 1997, Sharon Stevenson of Prairie View A & M university in 1999, Sonia Stewart of Widener University in 2000, Jamaica Lynn Prince of University of Florida in 2002, and honorable mention of Yamaira I. Gonzalez of University of Delaware in 2002. The Outstanding Scholastic Achievement Award has not been awarded again since 2002.

### Progress and Challenges

The scholarship program that modestly awarded a combined 7 (5 incoming freshmen and 2 college students) scholarship when it started in 1994, peaked in 2001 with a combined 30 scholarship awarded in 2001 and this Centennial year awarded combined 27 (16 incoming freshmen and 11 college students) scholarships. From 1994 to 2008, a total of 244 scholarships have been awarded. The details of the scholar awarded since 1994 is given in the below table. Each awardee receives a \$1,000.00. ACS is a much larger organization than AIChE with more funding at its disposal that ACS scholarship has awarded a total 1,725 scholarship from its inception in 1994 to 2006. The size of ACS award per recipient is about three times the size of AIChE.

MAC-AIChE SCHOLARHIP AWARDS FROM 1994 TO 2008

YEAR	COLLEGE STUDENTS	INCOMING FRESHMEN COLLEGE STUDENTS	TOTAL RECIPIENTS
2008	11	16	27
2007	8	8	16
2006	14	9	23
2005	8	10	18
2004	6	6	12
2003	4	10	14
2002	16	14	30
2001	14	16	30
2000	5	9	14
1999	8	7	15
1998	5	5	10
1997	7	4	11
1996	0	11	11
1995	6	2	8
1994	2	5	7
TOTAL	112	132	244

A mentoring program was introduced in 2000 to match the scholars with professionals to serve as mentors to the scholarship recipients. The mentors' pool is open to all AIChE members and the scholarship program has been very fortunate to find a one-on-one mentor for all the scholarship recipients since its debut in 2000 to date. Towards increasing the awareness and participation of AIChE members in the mentoring program, MAC and WIC cosponsored a panel discussion on, "Effective Mentoring for Minorities in Chemical Engineering", at the Reno, Nevada AIChE National Conference on Sunday, November 4, 2001. The panel discussion was co-chaired by Dr. Emmanuel Dada, a member of MAC and by Dr. Surita Bhatia, a member of WIC. The panel discussion event was well attended. Over the years, both mentors and mentees have commended this program as a symbiotic professional relationship and some of the mentors and mentees have continued the relationship beyond the formal MAC-AIChE scholarship mentoring program.

The funding of the AIChE-MAC scholarship is majorly from the voluntary check-off dues from the Institute membership that steadily supported the program over the years. This was supported for many years by corporate financial contributions from FMC Corporation and FMC continues to support the program. Attempts were made to source funding unsuccessfully from NSF. And there was a one-time financial contribution from Marathon Company. However, in 2008 the AIChE Foundation gave a \$10,000.00 donations, the Women Initiative Committee (WIC) of AIChE also supported the program with \$3,000.00, and the Management Division of AIChE gave a \$1,000.00. Individuals like Dr. Emmanuel Dada, Dr. Mike Harris, Dr. Thomas Marrero, Dr. Arnold Stancell, and Mr. Henry Brown have given substantial financial support to the scholarship program when the funding was not enough to give scholarship to many deserving students. The challenge is for the AIChE-MAC scholarship program to have viable financial support to maintain at least the level of scholarship awarded in the early 2000s. Efforts will continue to solicit for funding from corporations, from government and from not-for-profit organizations to support this worthy program.

The MAC scholarship program has been very successful because of the tremendous support from AIChE membership that have served as mentors, evaluators (reviewers of the scholarship applications), and financial contributors through their voluntary check-off dues over the years. During this Centennial panel discussion to celebrate more than a decade of the MAC-AIChE scholarship and at the MAC reception following the panel discussion, the efforts and financial contributions of these individuals, AIChE Staff (Mr. Gordon Ellis and Ms. Felicia Guglielmi), FMC Corporation and others will be appreciated and recognized.