Nancy Williams Volunteers as a Judge at the New Haven Science Fair
May 10-11, 2011

As described on their web page, the New Haven Science Fair Program was started in 1995 with seven test schools. By 2012 over 8,000 New Haven students and 43 schools participated, utilizing more than 160 volunteers for mentoring and judging. The program is dedicated to improving the quality of education, particularly science and math education, in the New Haven Public Schools Grades Pre-K through 12. Nancy Williams, from the Protein Chemistry Resource in the Keck Laboratory served as a judge in the 2011 Fair. The following provides a brief account of her experiences.

May 10, 2011: 4:45 PM – 7:00 PM

Arrived at Yale Commons and carried out preliminary judging of 6 science projects submitted by 3rd graders from the New Haven Public Schools.

May 11, 2011: 9:15 AM – 1:45 PM

Returned to Yale Commons and completed final judging of the same 6 science projects that had been assigned to Ms. Williams. During the judging session Ms. Williams met with the students, asked questions, and made suggestions. Ms. Williams then met with the other 5 judges in her group and together they assigned first, second and third prizes among the 12 projects that had been assigned to them. The judges wrote out comment cards for all 12 projects that highlighted the good points about each project and that also suggested ways to improve each project.

Figure 1: Nancy Williams discussing the "Road Salt Rampage" project with New Haven 3rd graders.

Summary of Six Projects Judged by Nancy Williams:

"To Be Or Not To Be Green": Ferns were grown in water containing either Dawn regular dishwashing liquid or Pure & Clear environmentally friendly dishwashing liquid to determine their relative impact on the plants. One driving force for this study is that soapy water makes its way into the ground via septic tanks and leaking or broken water pipes.

"Freaky French Fries": Comparison of the relative growth of mold on McDonald's, Burger King's and Wendy's French Fries. The underlying assumption is that "healthier" French Fries might promote the growth of mold more than "unhealthy" French Fries which might contain larger amounts of preservatives and have been cooked in less healthy oils.

"Which Side Is Up?": Investigated the best way to plant corn kernels in soil, i.e. up, down, or horizontally.

"Road Salt Rampage": Compared the growth of ferns in commercial rock salt solution versus in water. The importance of this study derives from the common practice of putting rock salt down on icy roads during the winter which might then affect plants growing alongside the roads (Fig. 1).

"Flowers": Studied whether daisies are preserved better at room temperature or in the cold.

"Ready Set Grow": Studied the impact of different amounts and kinds of light on plant growth. The conditions tested included growth on the window sill, under and artificial grow light and in no light (in a cabinet).

The six judges discussed the projects and awarded First Prize to: "Which Side is Up", Second prize to "Road Salt Rampage", and Third Prize to: "Ready Set Grow". It was exciting to see the students' enthusiasm about their science projects. In some cases the students could have benefitted from more guidance from their teachers and from "outside" mentors who often are from Yale University.