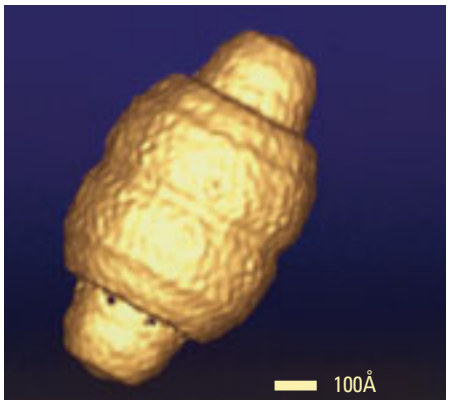
PEOPLE



Cryoelectron microscope image of a vault. (Adapted with permission. Copyright 1999 Elsevier.)

Using electrospray and GEMMA, the researchers also analyzed vaults—14 MDa ribonucleoprotein complexes discovered by Leonard Rome at UCLA and so named because of their structure (*Structure* **1999**, *7*, 371–379). Vaults are composed of the proteins MVP, VPARP, and TEP1, but their cellular functions are unknown. By studying MVP-only vaults and vaults from mice with a knockout of TEP1, Loo and colleagues are beginning to determine the stoichiometry of the complex. The GEMMA diameter measurements were similar to predictions they made from cryoelectron microscope images. The next steps, according to Loo, are to look at vaults from a mouse with a VPARP gene knockout and to develop methods to see if vaults are hollow structures or if anything is inside their large protein shells.

The researchers' ultimate goal is to engineer vaults with special properties and use them as nanodevices, but the biomolecules tend to break in half along the "waist" where the N-termini of the MVP proteins reside. To improve vault stability, Rome's group tagged the N-termini with cysteine bridges. Loo and colleagues used GEMMA to verify that the MVP proteins were cross-linked. After the complexes were subjected to denaturing conditions, approximately 13 cross-links were missing. Loo says, "That means we're retaining about 70 out of 96 proteins in the vault, which isn't too bad."

Swan song for the spectrochemical award?

Nominations are now being accepted for the Division of Analytical Chemistry's (DAC's) Award in Spectrochemical Analysis, though it may become a moot point. A lack of sponsorship means the award is in danger of disappearing.

The DAC sponsored the 2003 award after PerkinElmer decided not to back it financially this year. Because the division's bylaws prevent sponsorship of any of the six division awards for two consecutive years, the $5000 award will be discontinued unless another sponsor can be found for 2004.

Traditionally, a representative of the sponsor presents the award at the ACS fall national meeting. "The researcher gets recognized among his peers for his work, while the company gets to highlight and promote itself by backing the award," says David Pinkston, current DAC chair.

Researchers believe several factors could incline an industry sponsor to terminate its long-standing support of a DAC award: economic woes, a possible change in focus by the sponsoring company, or perhaps the perception that the company isn't adequately recognized for the financial support it provides.

The award is important to chemists in the field; one researcher even ranks the award as third-tier from receiving the Nobel laureate. The original award was presented for work done in atomic spectroscopy and has since covered various disciplines. Unlike some DAC awards that cater more specifically to academics, the spectrochemical award may be given to members of the industrial community.

Norman Dovichi, the 2003 recipient, points out that in looking at the history of all the ACS awards, the organic and physical chemists have had a slew of awards available and have been well supported by the industrial community. "But for some reason, the analytical community has not received that same level of support," he says.

Dovichi admits he had mixed emotions about receiving this year's award, knowing that he could be the last awardee. He wonders if it might be better to present the analytical awards at meetings such as Pittcon, where attendance of analytical chemists is higher. He also suggests the possibility of changing the spectrochemical award to an award in bioanalytical chemistry, to reflect a growing shift in the spectrochemical field and, perhaps, target new sponsors. "But the problem is, how do you get a sponsor for [a new] award when companies won't even sponsor [existing] awards?" says Dovichi.

Even if the award is dissolved, neither Pinkston nor Dovichi believes it will deter chemists in the field. "[The award] is certainly a great way to be recognized by your peers, but will [its] termination affect the drive of a researcher? No, I don't think so," says Pinkston.

The cutoff date for obtaining a sponsor is August 1, 2004. Pinkston says he is not worried yet. "We go through this every year with at least one of the [six] awards," he observes. "Right now we are sweating, but it is a normal sweat." ■

—Wilder D. Smith

2004 DAC officers

John Callahan of the U.S. Food and Drug Administration is the new chair-elect of ACS's Division of Analytical Chemistry (DAC). Steven Petrovic of Southern Oregon University will replace John Richardson as division secretary. The division has retained Carolyn Ribes of the Dow Chemical Co. as treasurer. M. Bonner Denton of the University of Arizona is the 2003–2004 chair.

Michelle Buchanan of the Oak Ridge National Laboratory, Sally Stafford of Hewlett Packard Co., Roland Hirsh of the Department of Energy, and Alanah Fitch of Loyola University will serve as councillors; Karen B. Sentell of Ciba Vision, Henry Blount of the National Science Foundation, Charles Wilkins of the University of Arkansas–Fayettville, and James Mitchell of Lucent Technologies of Bell Labs Innovations will serve as alternate councillors. David Pinkston of Procter & Gamble is the past chair.