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Holiday supplement thaws wage freeze

State of university 'better,' Baltimore says; faculty searches make progress

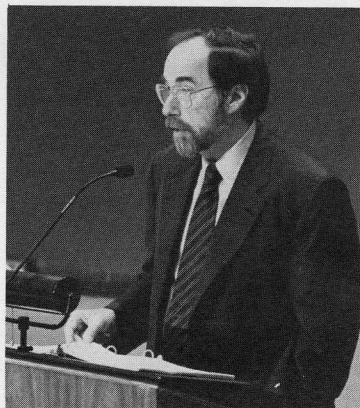
The state of Rockefeller University has improved; faculty and staff affected by the wage freeze will receive a one-time wage supplement; the wage freeze will end in June of next year.

These were among the major points made by President David Baltimore at the State of the University address Monday. Baltimore called the state of the university "better... not fabulous... not terrible," but "going in the right direction." Last year's deficit of \$12.3 million, which could have soared to \$16-\$17 million if business as usual had been accepted, has been scaled back by one third to \$8 million or less in the current year. The university will remain under financial pressure as it seeks to close the remaining budget gap in the years ahead in the face of declining Federal support for scientific research, although the success of this year's fund-raising drive will help finances as pledges are collected over the next five years. (See excerpts, page 3.)

The one-time wage supplement will be distributed in mid-December to full-time and essentially full-time members of the faculty and staff affected by the wage freeze. It will equal two percent of annual base salary, minus withholding. Baltimore called the supplement "a meaningful acknowledgment of the remarkable dedication of the people of this university" and noted that the last year "has been a wrenching experience because such a large part of the problem required financial sacrifice." The wage supplement will offset about half the annual rate of inflation, which is now around 3.7 percent.

In the latter part of his speech, Baltimore described plans to build on Rockefeller's strength in biomedical research. Making resources available for the support of

Robert Reichert



President David Baltimore

graduate students and the seeding of new scientific initiatives are priorities. In addition, attracting strong junior and senior faculty to the university is key to ensuring the institution's future.

To help improve communication and cooperation in the university community, Baltimore announced the creation of a new steering committee, made up of three trustees, three faculty, and three administration members—himself, Fred Bohen (executive vice president and chief operating officer), and Jim Darnell (professor and vice president for academic affairs). The committee will meet monthly.

After his remarks, Baltimore answered questions from the audience. In response to a statement that employees in the lower-wage categories were finding it difficult to meet living costs,

Personnel director saves \$225,000

Virginia Huffman, Director of Personnel, recently convinced Blue Cross/Blue Shield to send Rockefeller a \$225,000 check and to lower future bills to the university.

When reviewing her records, Huffman discovered that an adjustment needed to be made in the rate that the insurer charged. The university is billed under an "experience-rated" plan, based on the average medical services used by the participants. Huffman found that the bill had remained the same although the medical services used by participants had decreased. With the help of Rockefeller's health insurance brokers, she was able to obtain a rebate and a lower rate from the company.

Baltimore said that he recognized the problem, and that the salary supplement was an attempt to ameliorate the situation in a fiscally responsible way. A salary supplement limited to staff earning \$35,000 or less had been seriously considered but set aside in favor of a proportional, across-the-board supplement at the level of two percent.

Baltimore also was asked if the university was serious about recruiting women for tenured faculty positions. He said, "This university is very serious about equal opportunity in positions at all levels, including the tenured faculty. Every search committee has been unequivocally charged with the need to find women...."

Baltimore's speech was preceded by remarks from Bruce McEwen (professor and dean), who described recent activities in the Deans' Office, and Jim Darnell, who spoke about the search committees' work to recruit new faculty. (See excerpts from both remarks, page 3.)

Who gets a supplement?

The wage supplement, equalling two percent of annual base pay minus required withholding for income and social security taxes, will be distributed in a lump sum to individual faculty and staff members in mid-December.

To qualify for the supplement, an individual must meet all the following criteria:

- began work before July 1, 1991;
- did not receive an increase in compensation during the current fiscal year;
- is not a casual temporary employee.

Questions about individual cases should be directed to Personnel, x8300.

RU adventurers thrilled by skydiving

Carol Valli, secretary on the seventh floor of Bronk, and Mercedes Sanchez, postdoc in the Nussenzweig lab, inched their way out of the door of the plane, swung briefly from a bar under the wing, and fell into the vast blue sky.

Valli had wanted to try skydiving for years before making plans recently with her nephew (former Rockefeller employee Mark Pavlicek) and brother-in-law to go to Long Island to jump from a plane. When Sanchez heard of the trip, she decided immediately that she wanted to join them.

After six hours of ground instruction, members of the group put on their gear—jump suit, main parachute, emergency chute, and radio—and boarded the plane. When the plane soared to 3,000 feet, they were ready.

"It was very stressful from the time I left the plane until the parachute opened," said Sanchez. "The wind was much stronger than I imagined."

"It's not like jumping off a building, because you can't see the ground," Valli said. "There is no experience to compare it with that tells you to be afraid. There is also so much to do that it prevents fear from setting in."

Jumpers are instructed to count to five after letting go of the plane. If the parachute has not opened, jumpers evaluate whether they need to activate the emergency chute, or whether they can fix the problem by a simple measure such as untangling the parachute's cords.

"If the emergency shoot doesn't open either, it's just not your day," commented Sanchez, smiling.

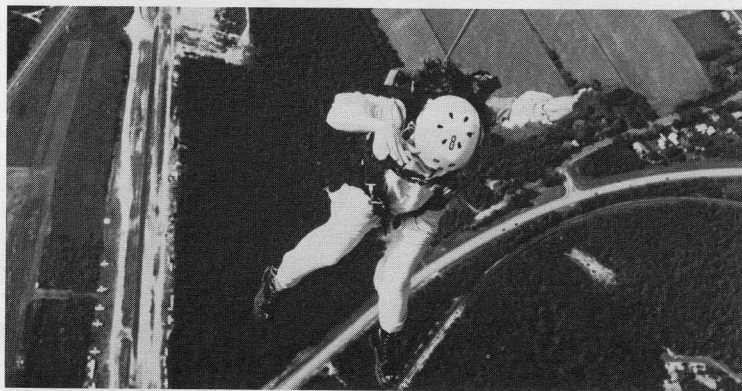
Once the parachutes had opened, thankfully without incident, Valli

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5 MHC molecules teach about self

6 Carpenter Shop masters odd jobs



Mercedes Sanchez makes the jump above Long Island.

New York Scientists make softball league play-offs

by Andrew Plump

The Rockefeller University softball team, the New York Scientists, finished a promising 1991 season in the Yorkville Sports Softball League by winning their first-ever play-off game before losing in the quarter-finals. After finishing with a 7-5 record, third in their division, the Scientists beat their second-place rivals, the KR Alums, 3 to 2 in an exciting extra-inning play-off match.

Having lost 2 to 1 to the KR Alums earlier in the year, the Scientists matched up in a defensive, pitching duel. A rally led by second baseman Mark Forman in the Scientists' final at-bat tied the game at 2 to 2. Forman, who was batting over .500 the second half of the season, lead the bottom of the extra, eighth inning with a double (official softball games are only seven innings). He later scored the winning point when Erik Falk-Pedersen batted him home with a single. The Scientists' victory vaulted the team into the league finals. A win against the tough, first-place Fine Young Cannibals team would have put them into the semi-finals. But it was not to be.

Earlier in the season the Scientists beat the Cannibals, 7 to 5, in a game dominated by the Scientists. In their second meeting in the play-offs, the Scientists were only one run behind in the fifth inning when the Fine Young Cannibals broke the game open and went on to win 11 to 6. The Scientists were severely handicapped in this game. With rain causing scheduling mix-ups, the team was forced to play without several of its key players, including the lead-off, third, and clean-up batters. Captain and first baseman Jeff Friedman had to frantically rearrange his line-up.

"We played within ourselves the whole year," Friedman noted, "especially in that final play-off game when we were really pushed against the wall."

The Scientists filled many holes in 1991 by adding five rookies to their roster. To round out the team, Friedman recruited youngsters Forman and Andrew Plump to anchor a solid infield. These two players in combination with team veterans Friedman and Jimmy Schaeffer continued to gel as the season progressed.

Making up the rest of lineup was catcher Rudy Spangler, all-star

rookie Dennis Rivera in left centerfield, and veteran Fred Jones in right centerfield. Team captain Falk-Pedersen anchored the outfield in left, and rookie Bruce Mayer played in right until suffering a severe medial collateral tear in his right knee while diving to make a catch in mid-season. Non-roster holdout Danny Rosenberg played a good deal in a reserve role. After a rough game at third base, Rosenberg found a niche in the outfield when Mayer suffered his potentially career-ending injury.

"Danny played tough this year," Mayer said, "but I hope to regain my position next year in spring training."

Rookie utilityman Frank Rivera solidified the middle of the batting order while filling in for Spangler as catcher and for Friedman at first. Outfielder Peter Ruiz also added to a strong outfield corps.

The Scientists look forward to next year. All-star Rivera is hopeful: "You look at what this team looks like compared to last year's team and there is no comparison. We had confidence and at times [we] played flawlessly. What we need is to build some chemistry and keep the guys together for another year."

After the first two games of the year in which the Scientists were 2-0, the team was at full strength for only one other game.

"When we are all together, there is a certain strength that we get from one another," Falk-Pedersen said. "We need to make a point next year to not miss as many games as we did this year."

Friedman, too, is optimistic about next year. "I am looking to fill one or two problem areas in the off-season. The big thing is keeping the guys together, though. I think we have shown when we are all healthy and playing we can beat anyone. There is no reason to think we will not be 10-2 or 11-1 next year."

Editor's note: The baseball vocabulary and prognostications in the above story are not the responsibility of management. The following quotations were omitted from the original text in the interest of brevity:

"He scorched that ball. I think that it must have carried 400 feet."

"I just relaxed and let my bat do the talking."

"We wanted to preserve the win so Jeff could share his home run with everyone back home."

"This year I just relaxed and threw the ball."

"I felt that when I needed an out I could throw the ball right in there and let them hit it because I had confidence in the guys behind me this year."



Carol Valli suffered no serious injuries from her landing.

RU adventurers jump from plane

Continued from page 1

and Sanchez experienced a transcendent sense of serenity.

"It's incredibly peaceful after the parachute has opened," said Valli. "You float down above the landscape for 10 or 15 minutes."

"Oh no, not that long," interjected Sanchez. "It feels like 15 minutes, but it's 5 at the most."

Sanchez landed without problems, but Valli was not so lucky.

"I heard a voice over the radio say 'Carol, turn right, keep turning right,'" she said. "Then I saw the trees coming toward me. What I said at that time cannot be put into print."

Valli fell 15 feet through the branches, but landed uninjured except for a few bruises.

"I learned afterwards that there was a choice between putting me down in the trees, which would break my fall, or the concrete, which could kill me... so they chose the trees," said Valli. "But, despite the landing, I'd do it all again."

"I'd jump again," agreed Sanchez.

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The Rockefeller University is an equal opportunity employer and has an affirmative action program to increase the employment of women and members of protected groups at all job levels.

Corners



The sun warms a bench outside Caspary Auditorium.

October 28, 1991

Excerpts from the State of the University addresses

David Baltimore, president

I can sum up the state of the university in one word, better. It's a measured word—it's not fabulous, it's not terrible; most importantly, I believe that things are going in the right direction.

When I came here 16 months ago, working with many of you in this room, I evolved a two-tiered approach: stringency in the short term and growth in the long term. The tough decisions, once made,

would lay the groundwork for future development.

The last year has been one of solving the short-range problems and laying foundations. This has been a wrenching experience because such a large part of the problem required financial sacrifice. The consolidations, staff reductions, and wage freeze involved sacrifice and in some cases actual hardship. Furthermore, the changes in

academic structure and culture may have challenged some of your views as to how business should be conducted here. These steps were painful but necessary.

What we faced was a deficit of \$12 million that threatened to grow to \$17 million unless we took drastic action.

What we have done has reversed that trend. We project this year to have an \$8 million deficit. This has

come about through a variety of savings, some of which can only be achieved for one year.

Our problems arose over a period of time when all universities have experienced difficult financial circumstances. Federal support has become scarcer, private support has become more difficult to bring in, and costs have continued their

Continued on next page

Jim Darnell, vice president for academic affairs

Five search committees are active at the present time. There are fifteen members from the senior faculty on these committees and an almost equal number of junior faculty heads of laboratories.

Committees and their chairs are:

- Cell and Developmental Biology Committee, David Luck;
- Chemistry and Structural Biology, Bob Roeder;
- Immunology and Microbiology, Emil Gotschlich;
- Medical Sciences, Jan Breslow;
- Neurosciences, Charles Gilbert.

This is by far the largest undertaking of its kind that our university has ever engaged in. It is critically important to the university's future. In addition to some important losses from our senior faculty over the last several years, we'll have a 25 to 30 percent increase in space when the new laboratory building opens next summer. Thus, not only must we search, we must be successful. We've got to find people and we've got to talk them into coming to New York to fill these laboratories. Of course, the central question is: what are our immediate targets? Both senior and junior

faculty are included in these targets, probably in a ratio of three-to-one, junior faculty to senior faculty. The whole question of whom we should try to bring to New York has been discussed a number of times in the Academic Council. We have also sought the advice of a number of outside advisors.

This has led to two or three principles for looking for new people. First of all, it is somewhat like the NBA or the NFL draft: good people are what we're looking for, whatever field they happen to be in. At this point, we think our faculty is depleted in such a way that we should be, first of all, attuned to the opportunity to bring good scientists to New York. The efforts of the summer and the early fall have led two search committees, the Medical Science Committee and the Cell and Developmental Biology Committee, to forward to the Academic Council and to the administration two possible appointments at the senior level just last week. The naming of appointment committees is underway now.

A second characteristic of what is being sought is more pointed.

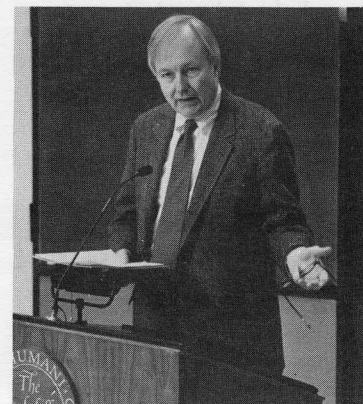
There are some lacks on the campus that have been noted by many of us for a number of years in three areas—immunology, neurobiology, and chemistry. We have discussed with each of the search committees the importance of trying to fill a senior position in those areas.

In the case of the molecular aspects of immunology, while we have good representation in some parts of that area, it's a vast field and we are poorly represented in very important areas. Committees have sought unsuccessfully to fill that vacancy for the past 10 years and we think it is still important to fill that area.

Neurobiology has become an enormous subject. We believe that an important position—cell and molecular—in neurobiology is a good target.

In chemistry, there are several ways to shape the search, and the chemistry committee is entertaining several possibilities.

More than 250 applications have come in from advertisements the university placed in prominent journals last summer. Almost all of those are for assistant professor



Jim Darnell

positions. From the 250, a much smaller number, perhaps in the range of 20 to 25, of those individuals will be visiting the campus, as well as an equal number of potential junior faculty who were found by letters and telephone calls.

One thing that may not be perfectly clear to everyone is that the junior faculty on the campus who are not heads of laboratories are free to apply for these positions. The applications could go straight to the committee heads, or they could come to me.

Bruce McEwen, dean

The Deans' Office now includes two associate deans, Peter Model and Marjorie Russel, who are in charge of curriculum and recruiting admissions, respectively; Ralph Steinman who is in charge of the

Ph.D. program; and of course the very able staff, Susanna Ander, Joanne Cunningham, and Bonnie Platt. We've been joined in the Deans' Office recently by Claude Desplan, who agreed to take over responsibility for junior faculty and post-doctoral seminars, retreats, and the preparation of a guide book for new arrivals to the campus.

There has been a formal agreement concluded with Cornell and Sloan-Kettering merging the M.D.-Ph.D. programs.

We are actively discussing plans for student housing, especially as renovations go forth and we need to find additional units for students who are now in faculty housing.

The Senior Tutors Program has begun. We have 20 new students, two thirds of whom are from abroad. Senior tutors and the Deans' Office

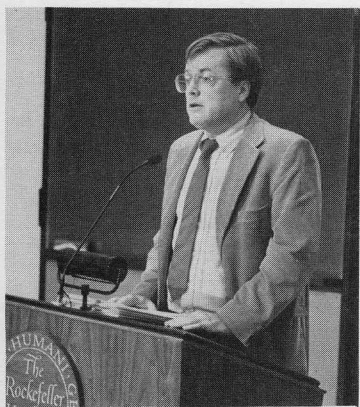
staff continue to be available to students and to faculty about student concerns and problems. Faculty involvement will determine the success of the student program and the broadening of the base of the Deans' Office. We're putting increased dependence on faculty advisory committees, pre-thesis committees, and thesis committees, which are very important for providing guidance to the students and feedback to us. We are really very pleased at the faculty's willingness to be involved in these activities.

We're also gratified by faculty willingness to teach and are trying to encourage tutorials for individual students as well as more actual teaching by faculty members in courses. The response so far has been very good, but we're looking

for even more faculty involvement.

There are two pre-doctoral training grants. One in cell biology has already had a site visit (by the National Institutes of Health), and the neuroscience/pre-doctoral training grant will be visited next Monday.

Finally, I would like to make a point that applies to both the M.D.-Ph.D. and the Ph.D. programs. Recruitment is of the essence for getting the best possible student body. We welcome your assistance in identifying candidates, perhaps from schools who haven't heard of us before, and in recruiting top candidates and urging them to come here. Since the pool of very good students is sought after by many, many good universities, we have to do our best to urge the best candidates to come here.



Bruce McEwen

Excerpts from president's State of the University address

Continued from previous page

inevitable upward trend. The American economy has been weak, and all segments, including the non-profit, have suffered.

Thus, our stringencies over the last year have mirrored activities at campuses around the nation. A compendium I saw recently showed that of 20 major universities, 12 had instituted a complete salary and wage freeze. Averaging all 20, pay increases were 1.8% for staff and 2% for faculty.

Fund-raising

The Rockefeller University—through the dedicated efforts of members of its board of trustees and thanks to our very effective Development Office—has been able to buck one national trend, reduced private giving.

Clearly, one of the most significant events of the last 16 months was the remarkable success of our fund-raising efforts. David Rockefeller's \$20 million gift is the largest in RU history. As important, the \$20 million from a variety of other donors is symbolic of an effective movement away from the university's historic dependence on the Rockefeller family.

As some of you may know, when I first arrived here, I initiated discussion of a plan for a targeted fund-raising campaign. The board, the Development Office, and I believed that the expensive trappings of an announced campaign did not fit well with this university's particular opportunities. We have now established a goal of raising \$250 million by the end of the decade. That is a stretch; by previous standards we could only

have expected perhaps half of that. The \$40 million gives us a terrific start, better than I could have imagined, and leads me to the private hope that we can exceed our goal.

But I must emphasize that money pledged is not money received. The \$40 million will come in over five years. Our short-term perspectives are only slightly improved by these remarkable gifts. That slight improvement, however, gives us an opportunity.

Wage and salary freeze

As part of this year's necessary stringencies, we, like so many other universities, instituted a wage and salary freeze. This was painful because it meant that we would do nothing tangible to recognize the loyalty, commitment, and service of so many of the dedicated people of this university.

When I first became aware of how successful our development effort had been, I decided to utilize this turnaround in our fortunes to provide a salary supplement to those who had been affected by the freeze. Therefore, I am announcing today a one-time supplement to salary of two percent of annual pay—less the required withholding—to continuing full-time and essentially full-time members of the faculty and staff who were affected by the freeze, except for the corporate officers of the university. This one-time supplement will be paid in a single lump sum this December. Given that the country is now experiencing a 3.7 percent annual rate of inflation, I believe that this supplement, while not



Members of the university community file in to hear the speeches.

totally erasing the ravages of even the present low inflation, provides a meaningful acknowledgement of the remarkable dedication of the people of this university.

The future

First, the wage and salary freeze will not be continued into the next fiscal year.

Second, I want to emphasize that while our budget outlook is better this year than last, we still have a large deficit and no reasonable set of plans will bring the budget even close to balance. Furthermore, we, like all universities, face a decrease of indirect cost recovery from the Federal government. In our case, starting next year, it appears that our rate may fall by 12 percent, causing a further \$1.5 to \$1.7 million financial loss.

Third, while our fund-raising efforts bring great joy to us all, these monies have many purposes and they come in slowly; thus, their impact on the year-to-year budget is modest. Over and above the \$40.4 million reported earlier, we have already identified another \$20 million that should be coming to the university. Much of this latter contribution is a direct consequence of the effective activities of the development group over the years. Marnie Imhoff and her staff deserve our deepest gratitude.

Fourth, the Federal climate for support of research and higher education is stormy. It is not, however, wholly bleak. The NIH budget continues to rise, although by no means at the rate needed to keep the biomedical enterprise at peak effectiveness. New programs are continually initiated providing new opportunities for garnering support. To make sure that we optimize our ability to support our science from outside, the university has recently hired a new and highly experienced person, Penny Cook, as head of the Office of Sponsored Programs.

The foundation-building over the last 16 months has had one goal: to make this a more stable and more effective scientific institution that can attract and

nurture the world's finest scientists.

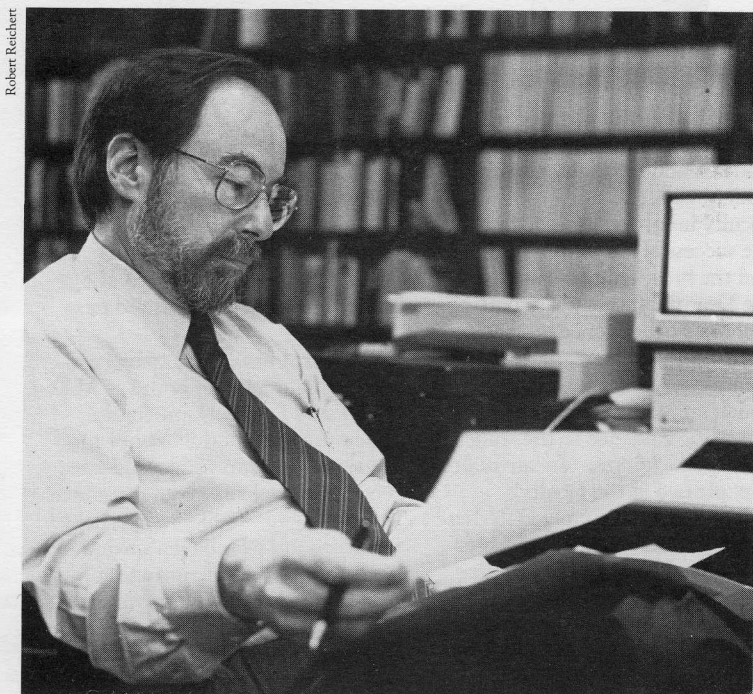
We are one of the world's premier research institutions. In a nutshell, that is the answer to a question you may have wondered about: why would anyone take a job like mine? It is an enormous pleasure to see great science emerge from the myriad of details that encompass a \$100 million enterprise.

Nurturing this strength in biomedical research is one of my key aims. This means finding resources for such needs as the support of graduate students and the seeding of new scientific initiatives.

Attracting new faculty and fund-raising must be our two highest priorities over the next few years. The new research building will be ready to start functioning next summer. At that time, space will not be limiting factor. Let me put our need in a slightly different perspective than I have before: in 15 years only 20 of our existing tenured faculty will be less than 70 years old. Thus, to bring ourselves back to 50 tenured faculty, where we were just a few years ago, requires acquiring or growing 30 new tenured faculty. Two a year for 15 years. A daunting task.

I am very pleased that we now have five search committees beginning to look for new heads of laboratories. The next weeks and months will see many candidates coming through and much effort at one of a university's hardest tasks, evaluation of future potential. Jim Darnell and I will play as large a personal role as we can in the process, but it must be a joint project of all existing heads of laboratories if we are to be successful on the required scale. Much of the new money we have and will raise will be devoted to making RU an attractive place for new and established investigators to set up shop. I have pledged to the search committees that if they can identify strong candidates, I will see that the resources are found to make attractive offers.

(The complete text of President Baltimore's remarks is available from Public Affairs, x8967.)



David Baltimore prepares his remarks in his office.

In search of the self: Geliebter studies MHC molecules

By Susan Blum

"Know thyself," the Delphic oracle enjoined, deftly capturing in a mere two words the major task of human consciousness. But it is not only the mind that struggles with issues of identity; the body, too, must "know" itself to distinguish self from non-self. Such discriminations are crucial for all multicellular creatures, which must be able to destroy diseased or damaged cells while leaving healthy ones intact.

In the exquisitely fine-tuned immune system of mammals, the cells responsible for making such distinctions are the white blood cells called T-cells. T-cells mediate the cell-cell interactions that result in cell destruction. Cytotoxic T-cells directly kill aberrant cells, such as those that are cancerous or infected by a virus, while helper T-cells regulate the response of other immune system cells that participate in the killing.

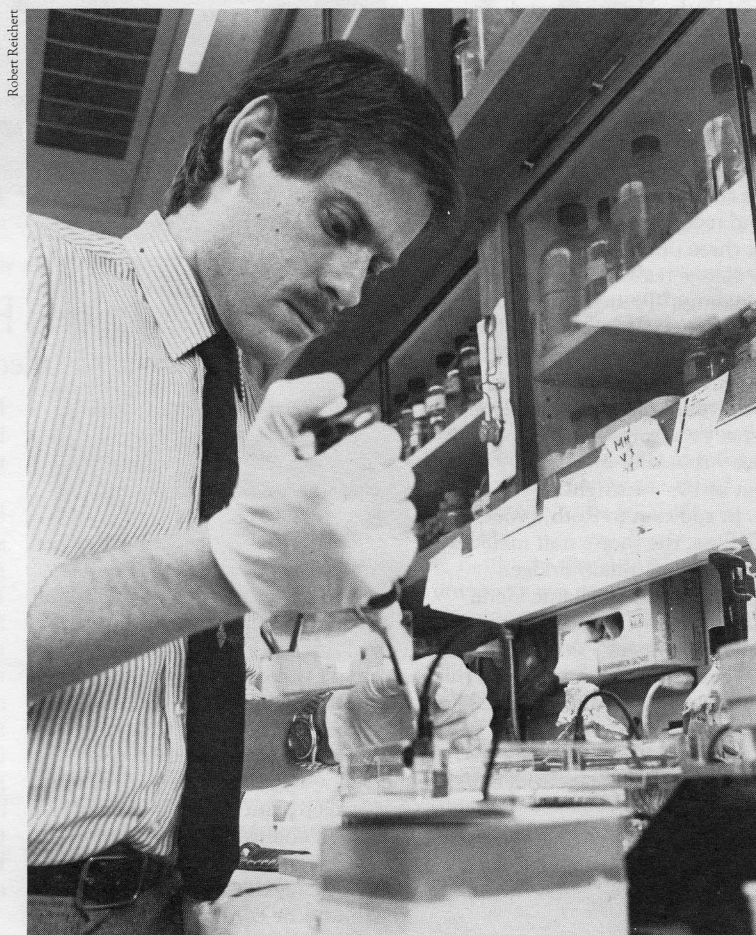
T-cells must go to school

The receptors that stud the surface of T-cells are the "eyes" and "brains" that help them target cells for destruction, explains Rockefeller scientist Jan Geliebter. But when newly created T-cells first develop in the thymus, their receptors are uneducated, he reports. So, before T-cells can start patrolling the blood stream for evidence of invaders, they must "go to school."

Their teachers are the major histocompatibility (MHC) molecules. There are two types of MHC molecules. Type I MHC molecules are present on every cell in the body, and can be recognized by cytotoxic T-cells. Type II MHC molecules are present only on certain cells, such as immune cells known as macrophages and B-cells, and are recognized by helper T-cells.

MHC molecules play a complex role in modulating the immune response. When they are associated with self-proteins, they tell T-cell receptors, "This is me, and I belong to the body." When they are associated with foreign proteins, or antigens, they signal, "This is me, but the cell I'm part of is damaged or diseased in some way." Thus, in a delicate dialectic, they define the relationship between self and non-self. For, as Geliebter explains, "the only way to recognize that something is different from the self is to know what the self is."

In the thymus, MHC molecules teach T-cell receptors to recognize the self in the proper way. It's a tough school, and many T-cells don't make it. Some have receptors that recognize self-MHC molecules too well; they are



Jan Geliebter studies the molecules that teach newly created T-cells to recognize the self.

"deleted," or destroyed, so they will not attack the cells of the body once they start circulating through it. Others recognize the body's MHC molecules too poorly, or not at all. They, too, are rejected, because they will be of no use once in circulation.

But the T-cells that graduate from the thymus have receptors well suited to their task. These T-cells have learned to target for destruction cells whose MHC molecules are complexed with foreign antigen, but to leave in peace cells that display MHC molecules complexed with self-constituents.

Class I genes constitute a family

Geliebter studies Class I MHC molecules, the type recognized by cytotoxic T-cells. These molecules are coded for by a "multigene family" of closely related genes. Humans have three genes that code for antigen-presenting Class I MHC molecules. Because we carry two copies of each gene, six is the maximum possible number of gene variants (alleles) any person may harbor; most people have this maximum number. Within each set of alleles, the DNA sequences are highly diverse, Geliebter reports. Moreover, an extraordinarily high number of alleles—close to 100—are found throughout the population as a whole.

Why should MHC molecules be so varied? Though the range of antigens each MHC molecule can present to a T-cell receptor is extensive, it is not infinite, so "a population that has diversity in its MHC molecules will be able to respond to a wider range of pathogens and has a greater overall chance of survival," says Geliebter. The perils of insufficient MHC diversity can be seen in the cheetah. "Every cheetah tested so far has the same MHC alleles, and the cheetah is sick," says Geliebter. He explains that these wild cats experienced breeding bottlenecks that reduced their genetic variability; as a result, the population as a whole is less able to meet immunologic challenges.

Geliebter is investigating how MHC diversity is generated in the mouse, an animal that has two or three genes that code for antigen-presenting Class I MHC molecules, depending on the strain. As in humans, the mouse MHC allelic repertoire is extremely varied. Geliebter and his colleagues have found that this diversity results from "microrecombination" events that reshuffle genetic material among the Class I genes.

Microrecombination creates great genetic variety

Nature employs many different kinds of recombinations to create

genetic diversity in each generation (and over the course of evolution), but the microrecombination events studied by Geliebter occur with unusual frequency and generate unusual variety.

Previously, scientists could only track these events indirectly. In performing skin-graft experiments to test for genetic purity among mouse strains, researchers observed that mice would sometimes reject a skin graft from another mouse with a supposedly identical genetic makeup—an indication that MHC class I molecules had changed enough to induce an immune reaction. (The rejection phenomenon also occurs among humans—who rarely have exactly the same MHC alleles—and explains why successful organ transplantation is so difficult to achieve.)

"Rejection shows up in one out of 3,000 mice, which in itself is pretty frequent, but it may be only the tip of the iceberg," says Geliebter. To learn more about the phenomenon, he and his colleagues are using the new technology of polymerase chain reaction (PCR) to generate vast quantities of the DNA regions where the microrecombination events occur so they can be studied in more detail.

They are also pursuing another intriguing question. "Since diversity confers a benefit, you'd think that if a little is good, more is better," says Geliebter. "Yet no species has more than three genes that code for antigen-presenting Class I MHC molecules. Why? The reason is not known, but there are some hypotheses."

'Education' may yield answers

One hypothesis holds that the answer may lie in the education process that occurs in the thymus. "Remember that MHC molecules shape the T-cell repertoire," says Geliebter. "The thought is that if there were 20 different MHC genes, there would be a lot of 'self' molecules for the T-cells to recognize, and it would be necessary to delete many different T-cells to prevent them from attacking the self. In fact, there might be so much T-cell deletion that a hole would develop in the T-cell repertoire."

To test this hypothesis, Geliebter and his colleagues are creating a strain of transgenic mice that possess twelve genes that code for antigen-presenting Class I MHC molecules, instead of the normal two or three. By studying the T-cell repertoire of these animals, and assessing their ability to meet immunologic challenges, the researchers hope to learn more about the self-knowledge so crucial to all complex creatures.

Carpenter Shop masters odd jobs

The Carpenter Shop takes care of many odd jobs that keep Rockefeller's other departments functioning smoothly. The Hospital called when it needed safety guards for the windows. The Personnel Office called when it needed to renovate its offices. The shop took the initiative to rebuild the handicap ramp near the tennis courts.

"We do the little things that keep the place going day to day," said Gene Roth, supervisor of the Carpenter Shop. "Maintenance handles the plumbing and electrical work. The Paint Shop handles the painting. All the other jobs come to us—repairing doors, replacing locks, building tables...."

"When Lab Safety goes around to labs and says 'get it off the floor' the problem comes to us," said Carpenter Allan "Jeff" Prout. Carpenter Andrew Gallina added, "We always get calls for shelves, closets, countertops, and cabinets in the labs."

"With the storage problem as it is, we try to do as much as we can to salvage what's already been used,"

said Roth. "In other words, we recycle the furniture as much as possible."

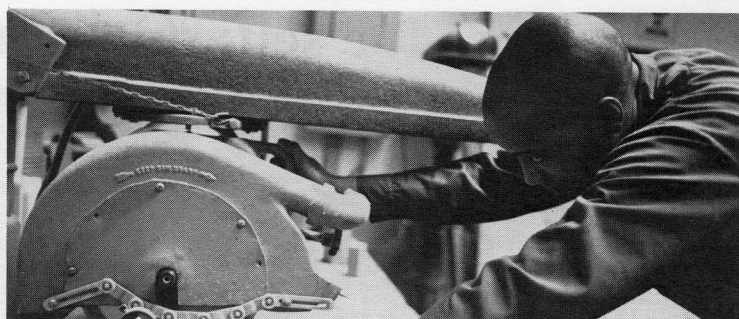
Roth calls himself "one of the last of the old-timers," having spent 37 years at Rockefeller. "The rest of the guys here, they're just babies," he commented. "I've taken apart and rebuilt each one of the labs two or three times."

"Gene really does know the buildings," Prout said. "We'll be going out on a job, and he'll say, 'you'd better bring tools to work on sheet rock.' At first I couldn't believe that he would remember what every single wall is made of, but 9 times out of 10—no 9.9 times out of 10—he's right."

In addition to Roth, Prout, and Gallina, the shop's staff includes Carpenter William Bridges, Maintenance Mechanic Gene Keveny, and Carpenter Sam Rivera (the department's shop man).

"Personnel is everything in this business," Roth said. "I'm lucky to have these good people."

The Carpenter Shop, located in Hospital B-8, is open from 8:00 a.m. to 4:00 p.m.



William Bridges is one of the six staff in the Carpenter Shop.

Paint Shop keeps RU looking good *Supervisor understands theory and practice*

In the 35 years he has spent at Rockefeller, Charles Baird, supervisor of the Paint Shop, has learned a lot about painting.

"If you use the wrong type of paint, it may look beautiful one day and fall off in six months," said Baird. "It's important to understand the theory behind the paint. You can't just put the paint down. If it doesn't work, you have to look into it and find out why so it doesn't happen again."

Water, chemicals, heat, and mildew are some of the factors that can keep paint from adhering or make it change its shade.

One of Baird's innovations is to use a heavy-duty, tile-like epoxy paint in the corridors of many of the buildings. "That paint is like putting porcelain on the walls. Before we tried it, we were repainting the halls every two years. Now, it's been seven or eight years and we've only had to wash it down and retouch it. It's not something you can use everywhere because the smell is terrible when it goes on, but in areas that take a beating it does nicely."

Baird has seen a lot of changes at

Rockefeller over the last three and a half decades, including the technology of his trade.

"In the old days, we mixed paint by hand and judged colors by eye," said Baird. "Now we have a whole mechanical system in place."

Pointing to a large stainless steel machine holding a ring of cartridges, he continued, "This machine measures exactly the right amount of different paints to get the right shade—the same equipment that you would find in the best paint store in the city. We have other machines that shake the paint to mix it. And we have reference books that give the mixture for almost any color you can imagine."

"Paint jobs get worn down over time by normal use and by damage from leaks, stains, and collisions," said Baird. "Our job is to keep the university's public areas looking good."

Other staff in the Paint Shop are: Edward Deas, Emanuele Domicolo, Oliver Farley, and Cyrus Hall. The Paint Shop, located in Room 113 in the tunnel between the Hospital and Bronk, is open from 8:00 a.m. to 4:00 p.m.



Charles Baird (left) consults with Oliver Farley about a paint job.

Potpourri

Retirement

Pedro Veiga, assistant chef, retired on Oct. 24 after 28 years of service.

Leukemia Society award

David Baltimore has been selected by the Leukemia Society of America as the recipient of the 1991 de Villiers Award for outstanding contribution to leukemia research. The award will be presented in St. Louis, Missouri on Nov. 2.

Appointments

Guest Investigator: Akira Akabayashi, McEwen lab
Postdoctoral Associate: Cedrick S. Wesley, M. Young lab

Departures

Research Assistant: Yi-An Lu, Merrifield lab

Guest Investigators: Kent Sepkowitz, Jerapan Krungkrai, Martina Kirstein, Kevin Tracey, Stanley B. Martin, Neil W. Schluger, Cerami lab

Members of Adjunct Faculty: Peter C. Ulrich, Elliot J. Rayfield, Cerami lab

Postdoctoral Associate: Wolin Huang, Merrifield lab

Anniversary and Retirement Recognition Day

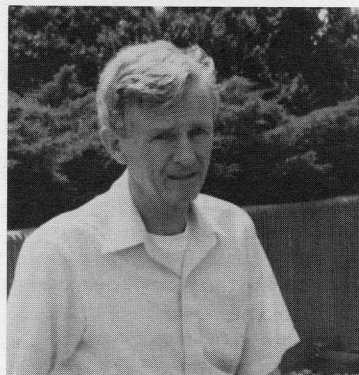
The Anniversary and Retirement Day to honor employees and faculty who have given 10 or more years of service to the university will take place on Tues., Nov. 12.

Over 100 members of the community who have reached their tenth, twentieth, twenty-fifth, fortieth, and fiftieth anniversaries and those who retired after 10 or more years of service as of July 1, 1991, will be honored at an awards luncheon.

All members of the community who have given over 10 years of service have been invited to join the honorees at a reception in the Abby Aldrich Rockefeller Lounge at 2:00 p.m.

Move abroad

Michael McCarney, resident custodian of the Rockefeller University Archive Center, retired for health reasons this summer and will move to Clones, Ireland, with his wife Kathleen Nov. 3. The husband and wife, who will celebrate their 35th anniversary this coming February, were both born and raised in the Irish town.



Michael McCarney

Noon recital

Soviet pianist Mikhail Yanovitsky will perform works by Beethoven, Schubert, and Scriabin at noon today in Caspary Auditorium. Yanovitsky has performed with such major orchestras as the Moscow Philharmonic, the St. Petersburg Philharmonic, and the St. Petersburg Chamber Orchestra. He is the winner of the 1991 Young Concert Artists International Auditions competition and the 1991 Bruce Hungerford Memorial Prize, among other honors. Admission is free.

Classified

A laboratory in LARC has ground glass columns, attachments, adaptors, rheostats, various lab ware, and small appliances available to the Rockefeller community. Those interested should contact Julia Clayton, x8594.