

Almanac

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Wistar Research Attacks 'The Big C'

At The Wistar Institute of Anatomy and Biology, in the midst of the University at 36th and Spruce Streets, a relatively young and seemingly promising area of current cancer research is being pursued. Doctors Zenon Steplewski and Hilary Koprowski, Kenneth Mitchell, Peter Fuhrer, Tong Chang, and Meenhard and Dorothee Herlyn are working on a new technique of diagnosing and treating cancer that involves the production and utilization of a hybrid cell or "hybridoma."

Hybridomas are a genetic mixture of cells obtained when spleen cells of mice, immunized with human tumor cells, are fused with mouse myeloma cells (a tumor of blood-producing cells). The spleen cells secrete antibodies (or protective proteins) programmed to attack the type of tumor cells with which they were originally injected. The resulting hybridomas retain the property of producing these antibodies, which react very specifically with the original immunizing tumor. Yet unlike the spleen cells, hybridomas can be grown in the laboratory in large quantities—a possible carry-over trait of the myeloma (cancer) cells present in the hybrid. This allows the scientists to work with a substance uncontaminated by other antibodies (such as the ones that attack measles).



Zenon Steplewski resuspends cells under laminar flow hood in his laboratory at Wistar.

If perfected and then approved, this technique might provide a means of treating cancer. Eventually, humans could be injected with a substance specifically directed against the type of cancer to which they have fallen victim. Dr. Zenon Steplewski foresees its use as a type of "mopping up" after the bulk of a cancerous tumor has been removed by surgery. This mopping up would destroy any cancer cells remaining at the site of the tumor before they metastasized or spread to other parts of the body.

The research sounds promising—a means of ensuring that all cancer cells would be destroyed. Yet as Steplewski repeatedly pointed out, this type of technique is far from ready. For that reason, he cautioned against "inducing hope" in the general public. "You have to be careful not to promise too much (in the way of cancer treatment)," he warned.

People think each new breakthrough in the lab means a cure will be available in hospitals and cancer centers the next day. In fact, many contact scientists at Wistar, hoping to be treated in the near future.

Another possible use of hybridomas in connection with cancer is its promise as a diagnostic tool. In this case, the antibodies produced by hybridomas are used to detect the proteins given off by cancer cells. Even when concentrations of the abnormal cells are extremely low, hybridoma-produced tumor-specific antibodies can detect them—much like a bloodhound tracks its prey.

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Grad Education Task Force Named

Solutions for the many long-standing problems in graduate education at the University may soon be forthcoming with the appointment of a Task Force on Graduate Education by Associate Provost Benjamin Shen.

In a letter announcing the formation of the Task Force last week, Shen asked it to "seek an agreement on a rational solution to the organizational problems of graduate education at Pennsylvania, giving special attention to the perennial controversy over governance, jurisdiction, standards, admissions, certification, evaluation, etc."

The issues facing the Task Force "range from such critical ones as who will set admission standards and who will evaluate

graduate programs, to emotionally charged trivia such as who will sign the diploma and who will present the candidates at Commencement," Shen said. As the urgent issues of fellowship funds, teaching-assistant stipends, and the restructuring of the dissertation fee are settled or near settlement, Shen noted that the Task Force will turn its attention to the pressing organizational problems in the University's Ph.D. programs.

The ten-member Task Force, which will be cochaired by Engineering Dean Joseph Bordogna and FAS Associate Dean Donald Fitts has been given an April 15 deadline for

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Inside

• Professor Richard Estes offers his observations on the crisis in Iran, page 2.

• 'Designs and Dreams' opens at the GSFA gallery, page 8.

Some Observations: The Shah, the Hostages and the U.S.

What would have happened if Hitler had escaped to Brazil with other members of his Nazi regime? mused Professor Richard J. Estes.

How would we have held him accountable for murdering 11 million people? Were he granted asylum in Brazil, how would he have been extradited? Before what tribunal would the crimes he committed have been tried?

While the idea that Hitler would have escaped capture and accountability is hypothetical and perhaps even far-fetched, the present brouhaha over the deposed Shah of Iran is neither of those, he observed.

An associate professor of social work and a Fulbright Senior Lecturer to Iran in 1978-79, Estes shared his observations on the situation in Iran this week as the hostages approached their third month of captivity.

Both the Hitler example and the "Shah reality" point up one of the problems of international relations today:

"We need to determine the ways in which national leaders, now deposed, can be held accountable for crimes during their regimes," he said. "For the most part, accountability lies with the people of the country: they should hold the deposed leader accountable," he observed. "The difficulty

lies with the fact that these ex-rulers frequently flee the country."

Once that happens—as it did with the Shah, with Idi Amin of Uganda and with Emperor Bokassa of the Central African Republic—it becomes an international issue, Estes said.

"When the United States granted the Shah asylum, the Iranians were absolutely outraged. Here was America, the advocate of human rights around the world, giving the Shah—someone whom they viewed as a Hitler—asylum in the United States, regardless of his human rights violations," he observed.

While on a national level a deposed ruler can be brought to trial, once the situation reaches the international arena, there is no means for dealing with it. Thus, "as never before, we're seeing the impotence of the United Nations in taking action," Estes said, both in regards to the problem of deposed leaders and now to the Soviet invasion of Afghanistan.

"We have so systematically deprived the UN of the ability to act with teeth that it can do little more than criticize," he added.

"I'm not criticizing the UN's usefulness as a forum for discussion, but the present

events display the great weaknesses of that body," he said. "I think the functions and powers of the UN need to be reevaluated should [UN Secretary General] Kurt Waldheim be unable to make the UN a viable force as a peace-sustaining organization."

With respect to the Shah and similar deposed leaders, what is needed is an "international court of justice where an individual country could come and lay out the charges against an ex-ruler before an international jury to make a decision," he suggested. "The United Nations should provide a place of safe haven for such deposed leaders to remain in exile while the trial takes place."

Such an arrangement might help smooth international relations and avoid future situations like the hostage-taking in Iran. While at present the question of accountability "is being resolved on an *ad hoc* basis," the establishment of an international court of justice or an international review panel could be the result. "The hitch to this," Estes said, "is the extent to which nation states are willing to invest the United Nations with authority. They've not been willing in the past to do that."

While future hostage-takings may be avoided, the present one is still unresolved. And while throughout the country calls are being made for President Carter to take stronger action against Iran, Estes called for prudence and patience.

"As a great and powerful nation, the price we pay is patience. We can go in with troops

Speaking Out

To the Editor:

As dean of the Faculty of Arts and Sciences, I have received many letters from Clifton Cherpak. His letters are always a pleasure to read. Marked by wit, style and sarcasm, a Cherpak letter is sure to brighten the day and lift the spirits. While Professor Cherpak's latest missive (January 24 issue of ALMANAC) is, indeed, Cherpak at his stylistic best, it is also a letter in serious need of correction.

Contrary to Dr. Cherpak's claim, the Faculty of Arts and Sciences Dean's Office, and not individual FAS departments, pays for supplements in ALMANAC. Moreover, *FAS Reports*, as our profiles are called, require a substantial amount of staff time and effort as well as cash resources. We have never asked, nor will we ask, a department to contribute any money to this effort. All we request is that faculty members willingly give of their time to talk about their research and academic interests.


It is also worth noting that thus far only one of our issues has focused on an individual department—the department of physics. Most *FAS Reports* have highlighted interdisciplinary programs that span

departments and even schools within the University. To date, we have produced profiles on the ethnohistory program, East Asian studies, work done at Pennsylvania on the biological basis of behavior, the College of General Studies and the Cognitive Science Group. We have also published a general issue which included articles on the Penn Papers, visiting scholars from the Soviet Union, the Center for the Study of Democratic Politics, and work done by the director of the University Museum, and by members of the departments of religious studies, and history and sociology and science. As this list makes clear, it has not been "only affluent, probably grant-swollen, departments" that have been featured in ALMANAC.

While I sincerely hope that this letter of clarification discourages Professor Cherpak from reading "selected sections of ... [his] dissertation through a bullhorn" during a personal sit-in in my office, I do hope that he continues to write me memos of "coruscating prose." I just enjoy them too much—especially when they are accurate.

Robert H. Dyson, Jr.
Dean, FAS

Almanac



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and blow the place up, but all we'll get in return is dead bodies. I think we have the tolerance to bite our lip and wait it out."

At present, he believes, the US and Iran are working at cross-purposes. "The return of the hostages is our goal in this, but for them, the goal is the return of the Shah. So long as our goals are separate, we will not get the hostages back."

But the goals of the Iranians may have changed with the Soviet invasion of Afghanistan. "Before the invasion, they (Iran) could afford to belittle the United States," Estes said. "We can only hope that in time Iran will realize that the greater threat to its existence is to the east not to the west."

Are the United States and the Soviet Union headed for a showdown—and the start of World War III—in Iran? In Afghanistan?

"Nobody wants war, but it's clear each day the confrontation is growing," he observed.

With the Communists now one step closer to Iran, what happens if a Communist party gains power in Iran? Estes asked. What's to prevent the Soviet Union from putting up their own puppet prime minister, or from sending in troops? he asked. The Afghanistan invasion could be repeated in Iran.

"Iran holds a strategic geographic position," he said. Throughout history, Iran (or Persia as it was called until modern times)

lay at the crossroads between east and west and was important for trade and military purposes. Today the several million barrels of oil pumped from beneath Iran's desert soil add to its importance.

If it comes to an east-west confrontation in Iran, Estes implied that the 50 hostages might be sacrificed. "If pushed to the wall, I fear our national leaders may decide that the 50 hostages are not very many when compared to the 50,000 men sacrificed in Vietnam because civilian and military leaders thought Vietnam had to remain under the control of the west," he said.

The idea that the Communists could gain power in Iran is not without substance. Iran is an extremely heterogeneous society, and the Ayatollah Khomeini does not represent all of its many constituencies. Additionally, his government has been unable to unify the country and meet the socioeconomic needs of the people, Estes said.

"He disenfranchised women ... the country now suffers from a 50 percent inflation rate ... there is 35 percent unemployment ... the machinery of government is not working ... oil exports are down ... the country is a mess," Estes said.

In fact, Estes noted, "until the hostages were taken, the country was well on its way to a second revolution," for except for uniting the commitment to rid the country of the Shah, "the Ayatollah has been unable to unite the people."

At least for the present—and perhaps because of the 50 American hostages—Iran holds some sort of unity. And because of those hostages, we should do nothing but "continue to be patient. If our goal is to get the hostages back safely, it's a matter of patience and quiet diplomacy," Estes said, and later added, "Sometimes I feel dismal about the whole world situation, given the present trend toward increasing militarism and the growing potential for international conflict."
—C.A.V.

During the late summer of 1978, Professor Estes traveled with his family to Iran on a Fulbright Hays Senior Lecturer Award. He remained in Iran during the period of the Iranian revolution and witnessed firsthand the events which resulted in the fall of the Shah.

Estes on the Hostages

The December 4, 1979 Philadelphia Inquirer carried an editorial article by Professor Estes about the crisis in Iran. Here are some of the steps he proposed in that article for freeing the hostages:

...Our goal as a nation is not to retaliate against Iran for its international crimes nor is it to engage in political or rhetorical invectives against Iran and its leaders. Concern for the safety of the hostages must remain our paramount goal and actions which threaten their safety must be rejected...

The United States must continue to work with and through the United Nations in increasing world condemnation of Iranian violations of international law and principles of diplomatic immunity. The world community of nations must make clear that it regards the crisis in Iran as a threat to world peace stability and not merely as a limited conflict between two nation states...

Islamic political and religious leaders must be more forceful in their condemnation of Iran's actions against American diplomatic personnel. In particular, Islamic religious leaders must make clear to Iranians that Ayatollah Khomeini's irresponsible acts of international blackmail and hostage taking are contrary to Islamic law, traditions and principles...

Cancer Research at Wistar (continued from page 1)

With earlier detection like this available, patients stand a better chance of the cancer not recurring after treatment.

Hybridoma-produced tumor specific antibodies might also be used therapeutically by clinicians to guide toxins, drugs, or radioactive isotopes to specific cancer sites in a patient, Steplewski foresees. He and his colleagues have already successfully isolated three antibodies specific for melanoma (an often fatal type of skin cancer) and 20 specific for colorectal cancer (cancer of the colon). Steplewski and his colleagues plan to search for the largest panel of tumor-specific antibodies possible during the next five years. Their next step will be to locate the antigens with which the antibodies react at the tumor site.

The key to hybridoma research is specificity. Steplewski compared it to "searching for flowers in a forest. You don't want to kill all of the useful things," he pointed out.

Steplewski hopes this technique will be most successful in diagnosing and treating cancers that do not readily respond to other types of treatment—like chemotherapy or radiation therapy—or that because of their location are difficult to remove surgically, such as melanoma and colorectal, lung, breast and brain tumors. These are the types



Steplewski checks hybridoma cultures under the microscope.

of cancer on which he and his colleagues are at present concentrating; these are the types of cancer that will claim the lives of an estimated 204,700 Americans in 1980.

If hybridoma-based treatments are perfected, are there certain types of cancer on which these treatments will never be effective? Steplewski thinks not.

"As long as each tumor has some proteins

that are different from normal," he said, "it can be reached and treatment this way... As long as you can detect antigens (given off by a cancerous cell), you can use them against the cancer both in diagnosis and in cures."

Will there ever be a cure for cancer? "I hope," Steplewski said, "otherwise I would not be here."

"Cancer is everything ... it's not a single disease," Steplewski hypothesized, and thus he cautioned that one cannot fix on any one explanation of cancer, such as a virus or a genetic defect. "I would guess it's probably a very complex situation," he continued. Steplewski feels cancer may be the result of different combinations of environmental agents, genetic defects, viruses and weaknesses in immunity. "You'd have to have two or more 'hits' (or the existence of two or more factors) to kick a cell out of control," he reasoned.

He evaluates their success with the hybridoma research by observing the attitudes of clinicians toward the project. "Clinicians are becoming more and more interested in helping us," Steplewski said. Some have already become involved in using hybridoma-based techniques in diagnostic situations. "This means it may not be that bad," Steplewski concluded modestly.

—E.E.

On Campus

31, Thursday

Blood Drive: The University Hospital sponsors a blood drive, 1-7 p.m. at McClelland Hall.

Lectures: The South Asia Program features Edwin Gerow of the University of Chicago on *Grammar as a Structure for Indian Aesthetics* at 11 a.m. in Classroom 2, University Museum.

The School of Public and Urban Policy presents Theodore Hershberg on *A Tale of Three Cities: Blacks, Immigrants and Opportunity—Policy Considerations* at 3 p.m., School of Public and Urban Policy.

Movies: The International Cinema Series of International House offers Chabrol's *Violette* at 7:30 and 9:45 p.m. at International House. Admission: \$2.

Sports: Women's badminton plays Chestnut Hill College at 4 p.m. at Chestnut Hill; women's basketball meets Lafayette at 7 p.m. at the Palestra; men's gymnastics meets Glassboro and Trenton at 7 p.m. at Hutchinson Gymnasium.

1, Friday

Concerts: Penn Union Council presents Viktor Friedman, brilliant classical pianist at 8 p.m. at the Annenberg School Theater. Call 5284 for information.

PUC also presents *Sea Level* at 8 p.m. at the University Museum. Tickets are \$5 for Penn students, \$6.50 general public. Call Ext. 5284 for information.

Exhibition: The University Museum opens *The Shadow Catcher: E. S. Curtis*, a collection of Curtis' photographs and artifacts drawn from the Museum's extensive collection. The exhibition runs until July 31.

Movies: The International Cinema Series of International House features Chabrol's *Violette* at 4 and 9:30 p.m. and Schmidt's *1988* at 7:30 p.m. followed by a discussion with the director. Admission is \$2; \$1 for matinees.

The Penn Union Council presents *Wizard of Oz* in Irvine Auditorium at 8 and 11:45 p.m. and *A Man Called Flintstone* at 10 p.m. Admission is \$1.

Sports: Women's squash plays in a Round Robin at noon at the Ringe Courts; men's basketball takes on Cornell at 8 p.m. at the Palestra.

2, Saturday

Movies: Penn Union Council explores science fiction with its presentation of *Dark Star* at 8 and 11:45 p.m. along with *Planet of the Apes* at 10 p.m. Boldly go for only \$1.

Sports: Women's squash plays Dartmouth at 11 a.m. at the Ringe Courts; women's fencing meets Yale at noon at Weightman Hall; women's indoor track competes in the Princeton Relays at Princeton; men's volleyball competes at the New Jersey Institute of Technology Invitational at N.J.I.T.; women's swimming takes on Temple at 1 p.m. at Temple; men's junior varsity basketball plays Columbia junior varsity at 2 p.m. at the Palestra; men's fencing competes against Yale at 2 p.m. at Weightman Hall; women's gymnastics meets F&M, Bryn Mawr, Army and Rhode Island at Hutchinson Gymnasium at 2 p.m.; men's squash plays Cornell and Williams at 2 p.m. at Cornell; men's swimming competes against Yale at 2 p.m. at Sheerr Pool; men's indoor track meets Navy at 2 p.m. at Navy; women's basketball takes on St. Joseph's at 4:30 p.m. at the Palestra; men's basketball meets Columbia at 5:30 p.m. at the Palestra.

3, Sunday

Movies: The University Museum film series offers *Champollion: Egyptian Hieroglyphics Deciphered* at 2:30 p.m. at Harrison Auditorium, University Museum.

Sports: Men's indoor track competes in the Princeton Relays at Princeton.

4, Monday

Lecture: The department of history and sociology of science hosts Dr. Robert W. Seidel of Texas Tech University on *The Science Business in America: The Research Corporation and Accelerated Physics in the 1930s* at 4 p.m. in Smith Hall, Seminar Room 107. Coffee will be served at 3:30 p.m.

Seminar: The Brown Bag Seminar presents Ann Beuf on *Stress and the American Family* in the Harrison-Smith-Penniman Rooms of Houston Hall, 1 p.m.

5, Tuesday

Lectures: The physical therapy department sponsors Dr. Ann Beuf on *Children in Hospitals* at 11 a.m. in Room 212, Nursing Education Building.

The psychiatry department colloquium series features F. Curtis Dohan of the Eastern Pennsylvania Psychiatric Institute on *Genes, Gluten and Schizophrenia* at 11 a.m. in Medical Alumni Hall, University Hospital.

Sports: Women's swimming takes to the pool against Swarthmore at Swarthmore at 4 p.m.; women's badminton plays Swarthmore at Swarthmore at 4 p.m.; women's basketball plays Lehigh at 7 p.m. at the Palestra.

More Penn Periodicals

After running a listing in December of all the periodicals produced here at the University, we continue to uncover new ones. Here are three more:

Journal of Comparative Corporate Law and Securities Regulation

Noyes E. Leech and Robert H. Mundheim, general editors; University of Pennsylvania Law School Center for Study of Financial Institutions.

The *Journal of Comparative Corporate Law and Securities Regulation* is a mechanism for the exchange of ideas and information about practices and theories of the structure, operation and regulation of capital formation and capital markets throughout the world. The *Journal* is comparative and inter-disciplinary. Legal perspective is supplied by academicians, practitioners and government officials. Specialists in corporate finance and economics supply critical background. The practices of various national systems are described and compared.

Quarterly subscription rate not available currently.

Subscription inquiries should be directed to: North-Holland Publishing Company, P.O. Box 211, 1000 AE Amsterdam, The Netherlands.

Keystone Folklore

Pennsylvania Folklore Society (Headquarters—U of P Folklore Dept.); Marjorie Hunt, Anne Burson, co-editors

The official publication of the Pennsylvania folklore Society, *Keystone Folklore* carries articles that deal with current topics in the field of folklore and related disciplines, often drawing upon fieldwork done in the Pennsylvania area.

2-3 times per year, \$6 includes membership in society.

Subscription inquiries should be directed to: Tenby Owens, secretary-treasurer, Box 13, Logan Hall.

Health Law Project Library Bulletin

Lotte Gottschlich, editor;
Health Law Project.

The *Library Bulletin* is the only health law journal published specifically for those interested in making the health care system more responsive to its consumers. Each issue features an article on important issues in health law, health care delivery, or health policy; court, agency, and legislative news in the health field; comment on issues particularly relevant to health systems agencies; and an annotated list of the Health Law Project library's recent acquisitions.

Monthly, \$12. Free to those qualifying.

Subscription inquiries should be directed to: HLP, 133 S. 36 St., Rm. 410.

Grad Education Task Force

(continued from page 1)

its preliminary report, with the final report slated by October 1. The committee must disband by the end of October.

The members of the Task Force are drawn exclusively from the three University-wide committees most concerned with graduate education: the Educational Planning Committee; the Graduate Council of the Faculties; and the Council of Graduate Deans. The latter two are chaired by Shen.

The members of the Task Force are:

Frank Bowman (professor of romance languages); Jean Crockett (professor and chair of finances); Jane Dickson (graduate student in Slavic languages and literatures); Robert E. Forster II (Isaac Ott Professor and chairman of physiology); Britton Harris (1907 Professor of transportation planning); Norman Oler (professor of mathematics); Philip Kellman (graduate student in psychology); and Charles R. Wright (professor of communications and sociology).

Peggy B. Gelber of the Associate Provost's Office will serve as liaison with the administration.

Provost Vartan Gregorian has pledged to facilitate the work of the Task Force in every way possible and will address its first meeting in early February.

6, Wednesday

Lecture: The Language in Education colloquium series presents Gerald Prince on *Metanarrative* at 7 p.m. in Room B-21, Stiteler Hall.

Movies: Exploratory Cinema presents two famous biographies—*Margaret Mead: A Portrait by a Friend* and *Roger Corman: Hollywood's Wild Angel*. Discover them in the Annenberg Center Studio Theater at 7 and 9:30 p.m. Admission: \$1 students, \$2 general public.

Sports: Men's volleyball plays East Stroudsburg at East Stroudsburg; men's squash plays Navy at Navy at 4 p.m.; men's swimming competes against Navy at Navy at 4 p.m.; men's and women's gymnastics meet Princeton at Princeton at 7 p.m.

7, Thursday

Lectures: The South Asia program features Pauline Kolenda of the University of Houston on *Marriage Networks and Marriage Alliance: A Comparative View* at 11 a.m. in Classroom 2, University Museum.

The School of Public and Urban Policy presents Lawrence White of New York University on *Managing Health and Safety Regulations: A View from Inside* at 2 p.m., School of Public and Urban Policy.

Seminar: Van Pelt Library sponsors a seminar on bibliographic access for members of the faculty and their assistants, 3-5 p.m. in the first floor Conference Room, Van Pelt Library.

Sports: Women's squash plays Wesleyan and Johns Hopkins at Wesleyan at 3 p.m.; men's volleyball plays Princeton at Ringe Courts at 7 p.m.

8, Friday

Music: The music department presents the Suffolk Owls in *Praise of Elizabethan Music* at 8 p.m. at the Church of St. Martin in the Fields in Chestnut Hill. Call 247-7466 for information.

Sports: Men's wrestling competes against Harvard and Boston College at Harvard at noon; women's badminton plays Albright at Albright at 6 p.m.; men's basketball meets the Big Green at Dartmouth, 7:30 p.m.

9, Saturday

Alumni Event: The General Alumni Society sponsors Family Day at Mask and Wig with lunch at noon and a performance at 1 p.m., Mask and Wig Clubhouse, 310 S. Quince Street.

Music: The music department hosts the Suffolk Owls in *Praise of Elizabethan Music* in the University Museum Auditorium at 8 p.m. Call Ext. 6244 for information and reservations.

Sports: Men's fencing faces Columbia while women's fencing faces Barnard at Columbia at 1 p.m.; men's indoor track runs against Princeton at Princeton at 1 p.m.; men's squash plays Harvard at Harvard at 2 p.m.; men's swimming competes against Army at 2 p.m. at Sheerr Pool; men's gymnastics meets the Big Red at Cornell at 2 p.m.; men's wrestling grapples with Yale at New Haven at 2 p.m.; women's basketball meets Dartmouth at the Palestra at 7 p.m. while men's basketball tips off against Harvard at Harvard at 8 p.m.

New Electronics Lab

Officials from the RCA Corporation and the University last Friday dedicated a new undergraduate electronics laboratory in the University's Moore School of Electrical Engineering.

The laboratory was made possible by a contribution from the RCA Corporation to Pennsylvania's Program for the Eighties.

It includes test-bench set-ups with signal generators, built-in oscilloscopes, power supplies and digital metering equipment.

These are used to introduce undergraduates to the laboratory experience while allowing them to proceed to increasingly sophisticated experiments by adding and adapting equipment as they advance.



Opportunities

The following listings are condensed from the personnel office's bulletin of January 24. Because of the delay occasioned by printing schedules, these listings should not be considered official. Some positions may no longer be available.

Bulletin boards at several campus locations list full job descriptions. New listings are posted every Thursday. Bulletin board locations are: Franklin Building: outside personnel office, Room 130; Towne Building: mezzanine lobby; Veterinary School: first floor, next to directory; Leidy Labs: first floor, outside Room 102; Anatomy-Chemistry Building: near Room 358; Rittenhouse Lab: east staircase, second floor; LRSM: first floor, opposite elevator; Johnson Pavilion: first floor, next to directory; Logan Hall: first floor, near Room 117; Social Work/Caster Building: first floor; Richards Building: first floor, near mailroom; Law School: Room 28, basement; Dietrich Hall: first floor, outside E-108.

For further information, call personnel services, Ext. 7285. The University is an equal opportunity employer. Where qualifications include formal education or training, significant experience in the field may be substituted. The two figures in salary listings show minimum starting salary and maximum starting salary (midpoint). An asterisk (*) before a job title indicates that the department is considering promoting from within. Openings listed without salaries are those in which salary is yet to be determined.

Beginning this week, only new positions listed in Opportunities will receive a full job description.

Administrative/Professional

Accountant I (2694) \$10,375-\$14,375.
Administration Officer (B135) \$12,900-\$17,850.
Assistant to the Chairman (2795) \$10,375-\$14,375.
Assistant Comptroller (2744).
Assistant Director (2569).
Assistant Director II (B84) \$14,850-\$20,550.
Assistant Director for Utilities (2789) \$18,625-\$26,250.
Associate Development Officer III (2 positions) \$14,850-\$20,550.
Associate Director (B113) \$14,850-\$20,550.
Associate Director of Athletics (2710) \$21,450-\$30,225.
Assistant Director for Staff Compensation (2786) manages the University's job classification, wage and salary administration program for non-academic personnel; conducts surveys, studies, cost analysis of pay and benefit plans; recommends policies and adjustments; designs and implements procedures (solid background in principles of compensation and applicable Federal and local laws; 5-10 years' general personnel administration experience; substantial compensation experience) \$18,625-\$26,250.
Business Administrator II (2768) \$11,250-\$15,850.
Career Counselor (2631) \$12,900-\$17,850.
Clinic Director (B41) \$28,325-\$39,950.
Coordinator of Summer Sessions and Institutes (B112) \$10,375-\$14,375.
Deputy Director (02651).
Director (B134) \$21,450-\$30,225.
Director (A992).
Director of Admissions and Financial Aid (2798) \$16,125-\$22,725.
Director of Communications (2724) \$28,325-\$39,950.
Director, Residence Unit (2630) \$10,375-\$14,375.
Director of Student Services (2799) \$12,900-\$17,850.
Director, Upperclass Admissions (2752) \$12,900-\$17,850.
Executive Assistant for Development and University Relations (2772) \$24,650-\$34,750.
Fiscal EDP Coordinator (2415) \$12,900-\$17,850.
Fiscal Coordinator (2742) \$10,375-\$14,375.
Fresh Rowing Coach (2713).
Foreman, Repair and Utility (2689) \$12,900-\$17,850.
Group Practice Administrator (B137).
Heating/Ventilating Instrumentation Control Foreman (2790) \$12,900-\$17,850.
Histology Technician II (B141) \$10,900-\$13,800.

Job Analyst (2625) \$10,375-\$14,375.
Junior Research Specialist (7 positions) \$10,375-\$14,375.
Librarian I (2767) \$11,250-\$15,850.
Nurse Practitioner I (2755) \$12,900-\$17,850.
Operations Accountant (2668) \$16,125-\$22,725.
Placement Counselor advises students in planning career goals, developing job hunting techniques; assists students in writing resumes, developing interviewing skills, locating resources; evaluates employers' needs (M.A./M.S.; prior experience in student services or personnel; ability to communicate with students, administrators, employers) \$12,900-\$17,850.
Programmer Analyst I (5 positions) \$12,900-\$17,850.
Programmer Analyst II (3 positions) \$14,850-\$20,550.
Project Manager (2433) \$16,125-\$22,725.
Public Information Officer (B54).
Regional Director of Admissions (2592) \$14,850-\$20,550.
Research Coordinator (B110) \$12,900-\$17,850.
Research Specialist I (4 positions) \$11,250-\$15,850.
Research Specialist II (3 positions) \$12,900-\$17,850.
Research Specialist III (2 positions) \$14,850-\$20,550.
Senior Systems Analyst (4 positions) \$16,125-\$22,725.
Special Assistant to the Director of the Office of the President (2707) \$18,625-\$26,250.
Staff Writer II (2679) \$12,900-\$17,850.
Staff Nurse (B142) \$10,375-\$14,375.
Superintendent of Construction and Repairs (2690) \$14,850-\$20,550.
Supervisor, Mechanical Systems (2791) \$14,100-\$17,850.
Supervisor, Scientific Glassware (B176) \$7,575-\$9,600.
Systems Analyst (B184) provides technical advice and programming support for interdisciplinary social science research project; responsible for overseeing team of programmers as well as development of software for file manipulation, reformatting and maintenance (senior-level programmer with excellent command of Fortran; familiarity with operating systems and previous managerial experience; knowledge of PL/I, social science applications, mini-computers (IBM series I) \$16,125-\$22,725.

Part-Time Positions in Administrative/Professional

Assistant Dean (2780) provides academic advising for undergraduates in the liberal arts and sciences; administrative responsibilities (teaching, advising and/or administrative experience in the arts and sciences; Ph.D. preferred).
Associate Editor (2774) screens and evaluates manuscripts; edits; responsible for design and production of publication (10 years' scholarly editing experience; advanced degree work in Anthropology; research experience) Hourly wages.
Extra Person (B164) coordinates the production of audio-visual products on an instructional grant; photography; supervises photography, audio and video recording; assists in recruitment, training of patient simulators (A.V. equipment operation; teacher of acting or simulation; knowledge of area audio-visual resources; writing scripts and scenarios; audio-visual production and direction experience) Hourly wages.
Research Specialist II (2727) provides high level assistance to the undergraduate chairman of physics department for the development, evaluation and maintenance of experiments and associated apparatus (B.S. in physics or engineering; 3 years' experience in experimental physics) Hourly wages.
Research Specialist (B115) assists with research related to higher education finance; performs data search, compilation, statistical/financial analysis; prepares project proposals, reports; writes technical and research monographs.
Staff Writer II (2784) composes letters for signature of president acknowledging major gifts to University; consults with development officers and faculty (demonstrated writing ability; B.A. in English or journalism or equivalent experience; 3 years' experience in editorial work or promotional writing; familiarity with fund raising) Hourly wages.

Temporary Assistant to Vice Provost five-month position writing University's summary letters for students applying to health schools subject to review by Health Professions Advisory Board; works with faculty chairman of Board and health professions advisor to review materials submitted; may interview students (superb writing skills; familiarity with University and student activities) Hourly wages.

Support Staff

Accounting Clerk \$6,875-\$8,750.
Administrative Assistant I (6 positions) \$7,975-\$10,150.
Administrative Assistant II (B124) \$8,625-\$10,950.
Bookstore Clerk I (2766) \$5,500-\$7,000.
Clerk II (2738) \$6,375-\$8,100.
Data Entry Operator (2807) \$7,425-\$9,450.
Electron Microscope Technician (2 positions) \$9,650-\$12,225.
Electronic Technician I (B144) \$8,575-\$10,850.
Executive Secretary to the Vice President (2782) \$10,000-\$12,725.
Repairs Expeditor (2776) \$7,975-\$10,150.
Head Laboratory Assistant (B0189) responsible for carrying out instructions for preparation and execution of biological experiments; cares for lab animals (lab experience; physically able to move about actively; willingness to work varied schedules) \$6,700-\$8,450.
Herdman I (B90) \$5,500-\$7,025.
Laboratory Assistant (2 positions) \$7,575-\$9,600.
Library Clerk (2817) discharges library materials to readers; maintains circulation of files; provides directional and procedural information. Union wages.
Medical Receptionist (B159) \$6,875-\$8,750.
MCST Operator (2482) \$7,425-\$9,450.
Office Automation Operator \$6,875-\$8,750.
Project Budget Assistant (2678) \$7,975-\$10,150.
Psychology Technician I (A942) \$9,650-\$12,225.
Receptionist (2 positions) \$5,900-\$7,525.
Recorder (2688) \$7,425-\$9,450.
Registration Assistant I (2758) \$7,975-\$10,150.
Research Bibliographer II (B194) collects and analyzes medical records in accordance with previously formulated questions; telephone interviews patients and doctors; edits and types manuscripts (capable of working independently, learning word processor; excellent typing; B.A./B.S. or equivalent experience in medical librarianship) \$8,625-\$10,950.
Research Laboratory Technician I (A971) \$7,575-\$9,600.
Research Laboratory Technician II (2 positions) \$8,575-\$10,850.
Research Laboratory Technician III (8 positions) \$9,650-\$12,225.
Research Machinist I (B28) \$9,525-\$12,200.
Secretary II (14 positions) \$6,875-\$8,750.
Secretary III (17 positions) \$7,425-\$9,450.
Secretary Medical/Technical (7 positions) \$7,975-\$10,150.
Technician, Physical Laboratory II (B-0169) \$8,575-\$10,850.
Technician I (B92) \$7,575-\$9,600.
Air Conditioning and Refrigeration Mechanic (4 positions) Union wages.
Electrician I (2794) Union wages.
Pipefitter (4 positions) Union wages.
Stack Attendant (2826) responsible for physical arrangement and order of material in the library collections; shelves/stores library materials; substitutes for circulation desk clerks and exit attendants; provides directional assistance in locating materials. Union wages.

Sixteen part-time support staff positions are listed on campus bulletin boards.

Appointments

Following are Appointments approved by the trustees between June 14, 1979 and July 26, 1979. They are based on actions taken by the Provost's Staff Conference. A bullet (•) before a standing faculty name indicates that the faculty member achieved tenure. Under the listings for secondary appointments, the primary appointment appears within parentheses. For a description of the structure of the academic staff and definitions of standing and associated faculty, refer to ALMANAC supplement, April 19, 1977, pp. IV-V ("Draft Revision of Basic Documents on Academic Governance at the University of Pennsylvania").

School of Allied Medical Professions

Secondary Appointments

- Dr. William J. Bank, associate professor of neurology.
- Dr. Erling E. Boe, associate professor of education.
- Dr. Hans G. Borei, professor of biology.
- Dr. John R. Brobeck, Herbert C. Rorer professor in medical science.
- Dr. Robert E. DeRevere, professor of operative dentistry.
- Dr. William J. Erdman, professor of physical medicine and rehabilitation.
- Dr. Richard J. Estes, associate professor of social work.
- Dr. Michael Harty, professor of anatomy and orthopaedic surgery.
- Dr. Malcolm G. Laws, professor of English.
- Dr. Daniel J. O'Kane, professor of microbiology.
- Dr. Ronald Rosillo, assistant professor of physical medicine and rehabilitation.
- Dr. David T. Rowlands, Jr., professor of pathology.
- Dr. Leslie M. Shaw, associate professor of pathology at the Hospital of the University of Pennsylvania.
- Dr. Matthew Stephens, associate professor of accounting.
- Ms. Irene Woodall, assistant professor of dental hygiene.

Faculty of Arts and Sciences

Standing Faculty

- Dr. Mark G. Bradley, assistant professor of chemistry.
- Dr. Thomas Fogarty, assistant professor of regional studies.
- Dr. William F. Ganong, assistant professor of psychology.
- Dr. Gregory M. Guild, assistant professor of biology.
- Dr. Spyros E. Iakovidis, professor of classical archaeology.
- Dr. Dalia Judovitz, assistant professor of Romance languages.
- Dr. William Kristol, assistant professor of political science.
- Dr. Marc N. Levine, assistant professor of mathematics.
- Dr. Judith Moffett, assistant professor of English.
- Dr. Wei-Ming Ni, assistant professor of mathematics.
- Dr. Harriet Oster, assistant professor of psychology.
- Dr. Myrna F. Schwartz, assistant professor of psychology.
- Dr. Robert D. Springborg, assistant professor of political science.
- Dr. Eric S. Weinberg, associate professor of biology.
- Dr. Arthur H. Weldon, assistant professor of physics.
- Dr. C. Jane Wilkinson, assistant professor of music.
- Dr. Irene Winter, designated Esther K. and N. Mark Watkins assistant professor of art history.
- Dr. Wolfgang Ziller, assistant professor of mathematics.

School of Medicine

Standing Faculty

- Dr. Jai B. Agarwal, assistant professor of medicine.
- Dr. Endla K. Anday, assistant professor of pediatrics.
- Dr. Barbara B. Turner Blake, assistant professor of anesthesia.
- Dr. John W. Burch, assistant professor of pathology.
- Dr. Douglas B. Cines, assistant professor of medicine.
- Dr. Carolyn S. Crawford, assistant professor of pediatrics.

- Dr. Allan M. Greenspan, assistant professor of medicine.
- Dr. Jerry C. Johnson, assistant professor of medicine.
- Dr. Albert A. Keshgegian, assistant professor of pathology.
- Dr. Robert G. Kettrick, assistant professor of anesthesia.
- Dr. Billy W. Long, assistant professor of medicine.
- Dr. Charles E. Riva, associate professor of research ophthalmology.
- Dr. John L. Rombeau, assistant professor of surgery.
- Dr. Thomas F. Scanlin, assistant professor of pediatrics.
- Dr. William W. Schlaepfer, professor of pathology.
- Dr. Stuart L. Silverman, assistant professor of medicine.
- Dr. Scott R. Spielman, assistant professor of medicine.

Associated Faculty

- Dr. Gregory M. Acland, research assistant professor of ophthalmology.
- Dr. David M. Adkins, assistant professor of psychology in psychiatry at the Hospital of the University of Pennsylvania.
- Dr. Candace Bryan, adjunct professor of pharmacy in pediatrics.
- Dr. Arnold Feldman, clinical assistant professor of psychiatry.
- Dr. Shira Kramer, research assistant professor of epidemiology in research medicine.
- Dr. Thomas H. Kreulen, associate professor of medicine at Graduate Hospital in the clinician-educator track.
- Dr. Gary M. Lattin, clinical assistant professor of medicine.
- Dr. Theodore Lawrence, adjunct associate professor of medicine.
- Dr. George B. McClellan, research assistant professor of physiology.
- Dr. John D. Rodwell, research assistant professor of microbiology.
- Dr. Isaiah A. Share, clinical professor of psychiatry.
- Dr. Bonnie F. Sloane, research assistant professor of physiology.
- Dr. Laurence H. Snow, clinical associate professor of psychiatry.
- Dr. Herman D. Staples, clinical assistant professor of psychiatry.
- Dr. Rose Lou Tse, clinical associate professor of medicine.
- Dr. Yoshihiro Wakayama, research assistant professor of neurology.
- Dr. John Watkins, associate professor of pediatrics at the Children's Hospital of Philadelphia in the clinician-educator track.

Secondary Appointments

- Dr. John W. Burch, assistant professor of pathology in medicine.
- Dr. Carolyn S. Crawford, assistant professor of pediatrics in obstetrics and gynecology.
- Dr. Aron B. Fisher, associate professor of medicine.
- Dr. Paul J. Honig, assistant professor of pediatrics in dermatology at Children's Hospital.
- Dr. Jerry C. Johnson, Jr., assistant professor of medicine.
- Dr. Shira Kramer, research assistant professor of epidemiology in psychiatry.
- Dr. Larry L. Laster, associate professor of biostatistics in research medicine.
- Dr. Charles E. Riva, associate professor of biochemistry and biophysics.
- Dr. Joseph F. Spear, associate professor of physiology in medicine.
- Dr. Joseph F. Spear, professor of physiology in medicine.
- Dr. Harold A. Wurzel, professor of pathology in medicine.

School of Social Work

Standing Faculty

- Dr. John Morrison, assistant professor.

School of Veterinary Medicine

Standing Faculty

- Dr. Alan M. Beck, associate professor of animal ecology in the department of clinical studies.

Wharton School

Secondary Appointment

- Dr. Nira Herrmann, assistant professor of statistics.

College of Engineering and Applied Sciences

• Standing Faculty

- Professor Joseph Bordogna, designated Alfred Fittler Moore professor of engineering.

Promotions

The following Promotions were approved by the trustees between June 14, 1979 and July 26, 1979. They are based on actions taken by the Provost's Staff Conference. A bullet (•) before a standing faculty name indicates that the faculty member received tenure. Under the listings for promotions in secondary appointments, primary appointments appear within parentheses. For a description of the structure of the academic staff and definitions of standing and associated faculty, refer to ALMANAC supplement, April 19, 1977, pp. IV-V ("Draft Revision of Basic Documents on Academic Governance at the University of Pennsylvania").

Faculty of Arts and Sciences

Standing Faculty

- Dr. Mark Adams to associate professor of history and sociology of science.
- Dr. Robert E. Kohler, Jr. to associate professor of history and sociology of science.
- Dr. Elaine M. Scarry to associate professor of English.

School of Medicine

Standing Faculty

- Dr. Robert L. Goodman to professor of radiation therapy at the Hospital of the University of Pennsylvania.
- Dr. Roland G. Kallen to professor of biochemistry and biophysics.
- Dr. William J. Snape to associate professor of medicine.
- Dr. Derek A. Bruce to associate professor of neurosurgery, department of surgery.

Associated Faculty

- Dr. Elias Abrutyn to adjunct professor of medicine.
- Dr. Harry C. Bishop to professor of pediatric surgery at Children's Hospital of Philadelphia.
- Dr. Barrie R. Cassileth to research assistant professor of medicine.
- Dr. Philip J. Donovan to clinical assistant professor of radiology.
- Dr. John H. Glick to associate professor of medicine at the Hospital of the University of Pennsylvania.
- Dr. Ernesto B. Go to clinical assistant professor of radiology.
- Dr. E. Berry Hey, Jr. to clinical associate professor of medicine.
- Dr. Gordon R. Hodas to clinical assistant professor of psychiatry.
- Dr. James W. Husted to clinical assistant professor of radiology.
- Dr. David M. Kozard to associate professor of ophthalmology at Presbyterian-University of Pennsylvania Medical Center.
- Dr. Terry Langer to associate professor of medicine at the Hospital of the University of Pennsylvania.
- Dr. Elaine Pierson to clinical associate professor of obstetrics and gynecology.
- Dr. Nicholas Scharff to clinical assistant professor of medicine.
- Dr. Satish P. Shah to clinical assistant professor of radiology.
- Dr. Melville Q. Wyche to associate professor of anesthesia at the Hospital of the University of Pennsylvania.

Wharton School

Standing Faculty

- Dr. Howard L. Morgan to professor of decision sciences.

Designs and Dreams: of Blueprints, Pennants, Gargoyles and Benches

A brace of wooden sea horses which once adorned the billiards room of Houston Hall, plans of the grotesques on the Quadrangle Dorms for the stone masons' use, "chairs" given as bequests to the University, and a glass picture featuring "Pomp" Wilson, the legendary steward of College Hall, are among the treasures illustrating the University's rich architectural heritage.

All can be viewed in *Two Centuries and Beyond: Designs and Dreams for the University of Pennsylvania's Campus*, the exhibit now showing at the gallery of the Graduate School of Fine Arts. The exhibit not only represents the architectural history of the University, but a diligent search for material by its designers, Chris Matheu, Anthony Cohn, and Chris Evers, all alumni of the Graduate School of Fine Arts.

The exhibit, which features architect's plans and drawings interlaced with yellowed photographs, furniture, vivid red and blue class pennants and other artifacts, is part of the University's ongoing bicentenary celebration and will be displayed through February 29.

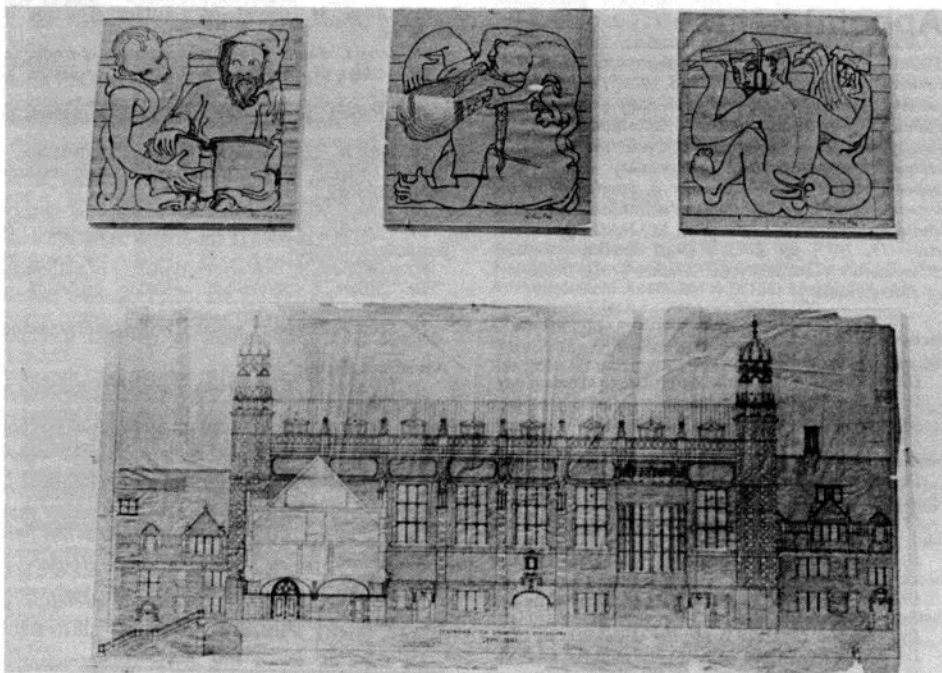
Matheu, Cohn and Evers, along with Dilys Winegrad, special projects assistant to the President, rummaged through the University's archives, the buildings and grounds department files and architects' offices to ferret out the 150 objects in the exhibit. Many of the architectural plans they discovered are the signed works of major local and national architects, such as Frank Furness and Louis I. Kahn, and have an aesthetic and educational value apart from their illustration of the University's history.

The ink-on-linen building plans discovered in a drawer at the buildings and grounds department are complete sets, Evers said, and would make valuable teaching tools in architecture classes. Modern plans are blue line drawings and lack the beauty of the older drawings, which chronicle building on campus from the 1890s through 1926. The designs for the Quadrangle dorms, Bennett Hall, and Irvine Auditorium are examples of these fine drawings in the exhibit.

Winegrad and Evers hope that the exhibit will underscore the need for a centralized architectural archive at the University. A great interest already exists, Winegrad said, but it is "just a matter of space and funding." Not only would a central repository preserve existing plans on campus, Winegrad suggested, but would also attract collections from outside sources.

The University has the foundation for a fine architectural archive, Winegrad pointed out, as it holds the Furness, Kahn, and Paul Philippe Cret collections.

The exhibit's immediate goal is to remove "a lack of awareness of the built environment," Evers said. The designers decided to



Above, plans for the Quad's grotesques leer above ink-on-linen drawings of the dorm. Below, Benjamin Franklin guards a chair from the colonial campus.

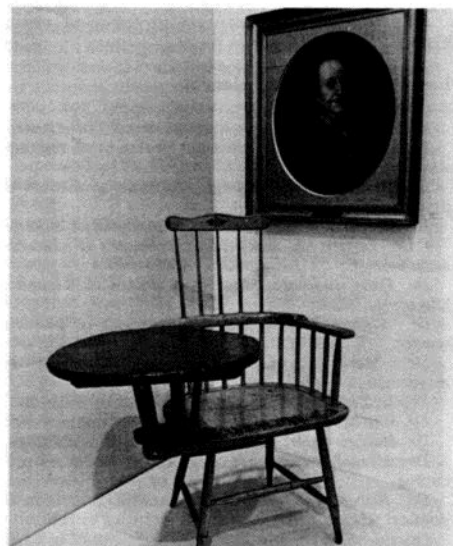
focus on plans and drawings of the campus rather than photographs of the buildings. This was done to highlight both the quality of the work discovered in the search and the various conceptions held at different times of what the campus should be.

Rejected ideas are featured as well as plans for erected buildings. One such scheme projected the demolition of both the Furness Building and College Hall to provide better access to the campus. Another series of plans reveals the changes which took place in the siting and design of Van Pelt Library.

Evers personally felt that one of the finer points of the exhibit is the collection of artifacts lent by the Mask and Wig Club. Watercolor sketches of the clubhouse's facade and interior, Maxfield Parrish posters, photographs and the club's wooden masks of tragedy and comedy combine to give a sense of the clubhouse and its purpose.

Other highlights include restored William Strickland plans from the old Center City campus, a rejected plan for a Segal sculpture in the plaza of the Annenberg Center, and the only known contemporary watercolor of the Nurse's Home, which once stood at 34th and Hamilton Walk.

Winegrad and Evers were gratefully amazed at the cooperation they received during the search. "People were marvelous!" Winegrad exclaimed, noting that as word of the search spread, people informed her and the designers of hidden caches of drawings and plans on campus.



The exhibit opened on the heels of the announcement that part of Penn's campus had been declared a National Historic District because of the historic and architectural value of such buildings as College Hall and the Furness Building.

The exhibit is sponsored by the office of University President Martin Meyerson. Gallery hours are Tuesday, 10 a.m.-7:30 p.m., Wednesday through Friday 10 a.m.-5 p.m., and Saturday and Sunday noon-5 p.m. Admission is free.

—S.S.