



mailbox:///C|/Documents%20and%20Settings/Ann/Application%20...

Subject: Re: Several From: Sharbil J Firsan <sfirsan@sial.com> Date: Tue, 30 Sep 2003 13:35:22 -0500 To: Alfred Bader Fine Arts <baderfa@execpc.com>

Dear Alfred,

Thank you for the two emails of this morning and for the text of your recent Ullyot lecture. I have already read the text, and will save it in case I have to refer to it in the future. I truly appreciate your mentioning of, and continued strong support for, the *Aldrichimica Acta*.

Kindest regards, Sharbil

This message scanned for viruses by Corecomm



From : Dr. Gutman

PHONE No. : 972 4 8343 341



FineTech Ltd.

Quality Fine Chemicals Technico Chy, P.D.Box 3557 Halfa MDT2: recel rel. 1972 e 2253200 ces 1972 e 2353200

Dr: Alfred Buder Lixe 414-277-0709

May 4, 2001

Dent Altred.

Thank you far your firs at April 30 and applopics for not reptying outfor, due to my absence from the office cardies in the week

As you prohably hear fram Marvin the regenations with 157 morness slower than one may house the over all income forward and I believe that we will have an acceptable draft to the nominer if we days. Shareld I forward the densied contract also to our your headil!

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Please ict me neve your travel plans in England in the real two months, as I winne have likely a carely on which you there.

Pre-Arginal Arrenting

Direct Fax Nuc. 1972-4-8343341





Dr. Alfred Bader 924 East Juneau, Suite 622 Milwaukee, Wisconsin 53202 Phone: 414/277-0730 Fax: 414/277-0709

A Chemist Helping Chemists

May 7, 1997

Dr. Merle Fischlowitz 13304 Corte de Chucena San Diego, CA 92128-1573

Dear Dr. Fischlowitz:

The two bright spots in our visit to St. Louis were my meeting you and your son and spending a delightful evening with Renata and Walter Stern the day before.

I wish I'd had a chance to get to know your father. I've heard from many people what a kind and able man he was.

Tom Cori is able, hard-working, arrogant and one of the most materialistic people I know. Ever since Aaron Fisher died, no one has really paid attention to the details of government regulations and the woman who did that very well, Pat Carr, has been shoved aside and has filed a sex discrimination suit against the company.

I wouldn't be at all surprised if Sigma-Aldrich would have to pay very large fines - both for DEA and for OSHA violations.

Motions such as mine yesterday never have a chance with companies where most of the stock is held by institutions. They always vote with management or, if against management, then by selling their stock.



Dr. Merle Fischlowitz May 7, 1997 Page two

....

I do hope to have a chance to chat with you at greater length, perhaps when next you come to Milwaukee or during one of my visits to San Diego.

With all good wishes to you and your son, I remain,

Yours sincerely,

AB/nik

Enclosures

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and the second

Dr. Alfred Bader 2961 North Shepard Avenue Milwaukee, Wisconsin 53211

May 24, 1994

Dr. Dan Fagan Mallinckrodt 675 MacDonnell Blvd. St. Louis, Missouri 63134

Dear Dan,

I am just putting the finishing touches to my autobiography where, of course, I also write about you.

Enclosed please find copies of pages 11 and 12 from that chapter, and I hope that you approve of what I write about you. Ron Wolfe may not approve, but I don't really care about that.

Best wishes.

Sincerely,

Enclosure





Dr. Alfred Bader 924 East Juneau, Suite 622 Milwaukee, Wisconsin 53202 Phone: 414/277-0730 Fax: 414/277-0709

A Chemist Helping Chemists

September 29, 1997

Dr. Dan Fagan Mallinckrodt 675 MacDonnell Boulevard St. Louis, MO 63134

Dear Dan:

Isabel and I spent three delightful days in St. Louis earlier this month, giving three speeches, one of them the "History of Sigma-Aldrich."

I was sorry that we could not get together though I did with other Sigma friends, among them Roma, Dan Broida's widow, Walter and Renate Stern and Pat Carr.

Pat Carr told me about the horrible manner in which she was treated by Sigma. Her employment there ends tomorrow.

You know what a tremendously knowledgeable and able woman she is and I suspect that Sigma being fined \$480,000 last year had a good deal to do with her no longer being involved with controlled substances.

It has occurred to me that Mallinckrodt might have a responsible position for her.

With all good wishes, I remain,

Yours sincerely,

AB/nik

be: Pat Corr





Dan Fagan, Ph.D. General Manager, Peptides Pharmaceutical Specialties Mallinckrodt Inc. 675 McDonnell Boulevard PO Box 5840 St. Louis MO 63134 Phone: 314.654.6022 Fax: 314.654.6109

October 1, 1997

Dr. Alfred Bader 924 East Juneau, Suite 622 Milwaukee, Wisconsin 53202

Dear Alfred:

Sorry I was unable to attend any of your lectures. I'm sure they were informative, as well as, entertaining!

I had already looked into the possibility of employment for Pat Carr. Unfortunately, Mallinckrodt has recently gone through a number of reorganization changes and currently no positions are available.

If you plan to be in St. Louis in the future, please give me a call. I would be happy to meet with you.

Sincerely,

Dan Fagan

DF/dr



Dan Fagan, Ph.D. General Manager, Peptides Pharmaceutical Specialties Mallinckrodt Inc. 675 McDonnell Boulevard PO Box 5840 St. Louis MO 63134 Phone: 314.654.6022 Fax: 314.654.6109 dtfagan@mkg.com www.mallinckrodt.com



Frederick & Company, Inc.

March 29, 1995

Dr. Alfred Bader Alfred Bader Fine Arts 924 E. Juneau Avenue Milwaukee, Wisconsin 53202

Dear Alfred:

Last year you were kind enough to be our translator in communicating with Dr. Barbara Pause on her endeavor at researching phase change material to provide improved insulation for the textile industry.

Her work has progressed from addressing the Techtextil Conference in Frankfort in 1993. She spoke again in 1994 and will once again make a presentation in 1995. By this time, she has become recognized as the world's leading guru, not only for her research of phase change material, but also for innovative instrumentation to measure comparative values.

Meanwhile, we provided funding for Gateway Technologies to continue expanding their operation which has resulted in joint agreements with Ciba Geigy, Shawmut Mills, Wells Lamont, and other leading firms of the textile industry.

Happily, Dr. Pause has recognized the potential of Gateway and is moving to the United States August 1st at which time she will become Technical Director of the Company.

Once again, my friend - I thank you for your help.

As always, .1.11

PAF/j

Paul A. Frederick



MEMBER CHICAGO STOCK EXCHANGE/SIPC

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1000 Rim Drive · Durango, Colorado 81301-3999

December 16, 1997

Dr. and Mrs. Alfred Bader 2961 North Shepard Avenue Milwaukee, WI 53211

Epote by Johane 12/23/97

Dear Dr. and Mrs. Bader:

We have a project that I believe may be of particular interest to you and worthy of your consideration for support. Fort Lewis College is expanding and renovating its natural science facilities with \$10 million from the State of Colorado for the instructional facilities and a goal to raise \$3.5 million of external funds to provide program enhancements, primarily for undergraduate research and minority access. Half of the external funding is in hand and we are seeking the remainder.

Our natural science facilities improvement is being carried out in three phases. Phase I is now near completion, a renovation to create nearly 6,000 sq. ft. of new biochemistry and molecular biology research labs for our undergraduates. The 36,000 sq. ft. Phase II will be an addition to the present building and largely devoted to chemistry and microbiology laboratories. Phase II will almost double the chemistry lab space to approximately 20,000 sq. ft., including nearly 8,000 sq. ft. for undergraduate research. The third phase will renovate the existing structure for geology, physics, engineering and biology. The quality of the project and its justification was demonstrated by the fact that our proposal to NSF for the biochemistry/molecular biology phase ranked 6th of nearly 300 such proposals and generated \$1.5 million.

You may remember that Fort Lewis College is a publicly-supported undergraduate institution without graduate studies. We graduate fifteen chemistry majors annually, with about two-thirds continuing on to chemistry Ph.D. programs or other professional schools. Twenty percent of these graduates are of minority descent, primarily Native American. The Chemistry Department has attracted a number of external recognitions of excellence. For example, Doreen Mehs of our chemistry faculty was honored in 1991 as Colorado's Professor of the Year by the Council for Advancement and Support of Education and the Carnegie Foundation. In 1992 the Chemistry Department was designated a Center of Program Excellence by the Colorado Commission on Higher Education, bringing \$350,000 in special funding. Ron Estler has received an NSF Special Creativity award of \$90,000 for continued research, an award reserved for the top 10% of NSF grantees and the first time a creativity award has gone to an undergraduate department. In recent years Howard Hughes Medical Institute has granted the College a total of \$1.3 million for program development and undergraduate research in chemistry and biology.

Of the 116 public undergraduate colleges reporting to the Council on Undergraduate Research, Fort Lewis College ranks first in the number of chemistry graduates and in the number going on to graduate studies, scaled to institutional enrollment. This record of producing successful graduates in the public college setting has led NSF and Research Corporation to draw national attention to our chemistry program in publications and nationally televised programming. You may remember that our department was one of the seven case studies of "programs that work" in *Revitalizing Undergraduate Science* by Tobias, published in 1992.

Fort Lewis College is listed in Peterson's *Top Colleges in Science*, a listing of the top 13% of colleges and universities for percentage of graduates majoring in natural science, the percentage going on to graduate study, and the productivity of NSF Graduate Fellowships. Fort Lewis is the only public college in the Rocky Mountain states to be listed in *Top Colleges*.

Our building project will provide new chemistry facilities, including instructional laboratories funded by the State of Colorado and several undergraduate research laboratories for which external funding is required. The new facilities will include modern fully-equipped research spaces for synthesis, laser studies, biochemistry and bioanalytical chemistry, along with support spaces for our high-field NMR and other characterization instrumentation. We have been told by external reviewers that Fort Lewis College has an



excellent chemistry program, committed faculty, eager students and a record of achievement with our Native American science students. <u>All we lack are the physical facilities</u> to allow these components to coalesce into a truly outstanding public undergraduate department, the consequence being the very best career preparation for a generation of young chemists and an impact upon the quality and number of Native American chemists in the years to come.

The project will also include a "signature auditorium" with a distinctive Southwest cultural flavor, perhaps modeled after our old Kiva Auditorium lost to the heavy snows of 1993. This 135 seat auditorium will bring a wide range of cultural and intellectual activities into the midst of our science laboratories, thus helping to bridge the unfortunate gap between the sciences and the arts and humanities that tends to permeate most campuses. Like the rest of the new science facility, this auditorium will be located adjacent to the Native American Center and will be attractive to the Native American community for many of their campus events. This auditorium will cost approximately \$450,000 and can carry a donor's name.

Prospective donors logically ask "Why should I support a capital project at a state-supported college?" First, Fort Lewis College is reaching beyond the State of Colorado to emerge on the national scene as a leader among public liberal arts colleges, evidenced by its leadership in the twelve-college Council on Public Liberal Arts Colleges. This is largely driven by the energy and performance of the Fort Lewis faculty in developing programs which compare favorably with those found in many highly selective private colleges, but on a low-cost public budget. Within this context, our Chemistry Department has been compared by Research Corporation to chemistry programs in the "nifty fifty" private colleges (the Oberlins, Carletons, etc.). This program excellence requires external funding in the form of research grants, program development grants, and yes, capital gifts to provide facilities to house this program excellence. Our capital campaign addresses the Chemistry Department's primary need to provide program excellence, namely undergraduate research laboratories.

Three attributes of Fort Lewis College relate in my mind to "the Bader story." First, Fort Lewis College is providing access to excellent liberal education for those students outside the mainstream of elite higher education. Many of these students have plenty of talent, but do not have the family resources or teenage academic record to allow them to enroll at one of the selective private colleges. Once those students are on our campus, they are offered extensive academic and personal support by our faculty, who are selected for their interest in young people in addition to their academic credentials. In this regard, Alfred, I am reminded of your account about the importance of personal interventions in your gaining admission to Queen's University and then as a Queen's student. Fort Lewis has some Norman Miller's on its campus, and these people play a key role in bringing our students through to graduation, and particularly our Native American and Hispano students who need that extra "familial support" in a primarily Anglo institution.

The two of you have demonstrated over the years your interest in assisting minority students with their science education. Fort Lewis holds a unique position in higher education because of its continuing commitment to offer full tuition scholarships to all Native Americans who meet admission requirements. While the 564 enrolled Native American students (12% of the student body) come from all corners of the US, the College maintains particularly close ties with the twenty five tribes and pueblos (and their more than 325,000 residents) in the Four Corners region. The Hispano enrollment is 5%. At recent graduation ceremonies, 23% of the graduating class and 20% of the chemistry and biology graduates were from minority groups, evidence that the College is getting its minority students through to their degrees. Fort Lewis College offers these minority students a special opportunity and a unique linking of science and culture, exemplified by the College's outstanding American Indian Science and Engineering Students (AISES) Chapter, which has more than fifty members and has twice won the Stelvio J. Zanin Distinguished AISES Chapter award. To illustrate individual successes, two Native American graduates have Graduate Fellow appointments at Los Alamos National Labs and another owns his own successful environmental consulting firm. A Native American mother of two recently spent a summer synthesizing anti-viral natural products at Stanford University under sponsorship of Pfizer, Inc. Her project, which she presented at the ACS meeting in Anaheim, was part of a long-term collaboration in natural products research between Fort Lewis and Stanford University. You may remember meeting Ted Bartlett of our faculty, whose education in organic synthesis under Bill Johnson and Gilbert Stork has allowed us to have a strong undergraduate research emphasis in natural products chemistry. Ted's continuing work at Stanford right up to and past Johnson's death has greatly influenced Ted's undergraduate projects at Fort Lewis and a number of our students have gone on to Ph.Ds and successful careers in natural products.

Third in my list connecting your interests and Fort Lewis College is the opportunity we offer our chemistry students to be involved in undergraduate research. Funding from NSF, ACS-PRF, Research Corporation, Department of Energy, Howard Hughes Medical Institute and Dreyfus Foundation supports



undergraduate research projects for five or six faculty and about 20 undergraduates each summer, in topics ranging from natural products synthesis to photochemical detection for capillary electrophoresis and synthesis of molecularly imprinted catalytic polymers. Our undergraduates have their names on 43 refereed publications, posters and talks at ACS and other national meetings over the last five years. Our students have won national research fellowships from such organizations as Council on Undergraduate Research, Pfizer, Inc., and American Institute of Physics along with the national I. M. Kolthoff award. As a teaching tool, undergraduate research blends theory with practice, something we know to be valuable to all students, and particularly to many of our under-represented minority students. Too, studies show that a major factor in producing women science graduates is the opportunity to do an undergraduate research project. Alfred, you had your Art McKay to teach you the joy of laboratory discovery. That is what we try to do at Fort Lewis. We believe that undergraduate research opportunities and the highly personalized learning environment are key reasons that our chemistry students rise from very ordinary high school backgrounds to excel in their scientific careers.

I hope that my description of our circumstance and the opportunities furnished by our building project has piqued your interest and that you would consider a \$250,000 gift directed toward undergraduate research laboratories. We know that you have many worthwhile philanthropic opportunities and will understand if you must give less or none at all. If you can give more, of course we would be pleased. Isabel, keeping in mind Alfred's public declaration of your reticence for publicity, we would make your gift as public or private as you chose. We recognize that our project would likely represent a very different direction for your philanthropy, but we believe it offers an opportunity to benefit a whole new generation of young chemists from very diverse cultural backgrounds, but who we know will use their Fort Lewis College experience to build successful careers.

Now that I have covered the central business of this letter, let me turn to more personal issues. Ike and Trudy remain a vital part of our chemistry community. Ike gives Fort Lewis College many hours of teaching and mentoring for so little pay. While he always tries to stand behind the scene, he is in fact always near the center of our chemistry activities. Ike has been a great blessing for us.

We have fond memories of the Bader visit in 1992. After your many travels hence, I hope both of you can remember the electricity you generated among our students and faculty during your visit. It was the highlight of our department's year. In fact, the Loschmidt talk generated more fascination among chemistry students than I remember seeing in my twenty five years here. The evening talk brought new meaning to both the work of Dutch masters and the Old Testament. It was indeed an enjoyable and a productive day for Fort Lewis College.

President Jones joins the Chemistry Department in an invitation to both of you to once again visit Fort Lewis and the Klundts, at our expense of course. President Jones suggests that your next visit should spread to more of the campus, especially our new art facility and the energized art program it represents. The invitation is, of course, quite separate from your interest in contributing to our project. We have learned that you plan a trip to Arizona State University for February 1-5. Is there any chance that you have room in your schedule to visit Fort Lewis College either on your way to Tempe or on your return? If the Tempe trip does not furnish an opportunity, we would of course want to seek another time. I will be contacting you about this by phone upon your December 18 return to Milwaukee .

In closing, I hope this letter has conveyed the excellence, commitment and vitality of the chemistry program and that you can appreciate the impact of first-rate undergraduate research laboratories on our ability to turn out successful chemistry graduates, including Native American and Hispano students who come to Fort Lewis College for a special opportunity, and that you will consider our request for a gift. We believe it would be a sound investment in chemistry education.

Sincerely,

Jim Mills

James W. Mills Professor of Chemistry 970-247-7272





Chemisty Dept. annual Retreat Note that The is a keyplayer.

TOP FIFTEEN PRODUCERS OF GRADUATE SCHOOL-BOUND BA/BS GRADUATES OUT OF 116 PUBLIC INSTITUTIONS OF MORE THAN 2000 STUDENTS OFFERING BA/BS DEGREES ONLY

CHEMISTRY

1989-93

REF: Directory of Research in Chemistry at Primarily Undergraduate Institutions, 6th Edition (CUR, 1995)

INSTITUTION	STATE	COLLEGE	GRADUATES	ANNUAL	ANNUAL TO	COMPOSITE
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ongwood College	VA	2,986	36	3.01	1.26	3.8
J. Tennessee at Chattenooga	TN	7,024	117	4.16	0.89	3.7
Northeast Missouri State U.	MO	5,766	62	2.69	1.08	2.9
Bemidji State U.	MN	5,100	52	2.55	1.13	2.9
College of Charleston	SC	7,821	87	2.78	0.80	2.2
Pembroke State U.	NC	2,702	3 1	2.87	0.74	2.1
Aississippi U. for Women	MS	2,491	29	2.91	0.60	1.8
Sonoma State U.	CA	6,089	47	1.93	0.86	1.7
J. Wisconsin-Eau Claire	WI	9,933	70	1.76	0.86	1.5
SUNY, College at Potsdam	NY	3,946	31	1.96	0.76	1.5
Rutgers U. of Camden	NJ	4,033	36	2.23	0.62	1.4
lames Madison U.	VA	10,232	76	1.86	0.73	1.4
SUNY, College at Geneseo	NY	5,171	37	1.79	0.68	1.2
Cameron U.	CK	5,803	62	2.67	0.43	1.2



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Dr. Alfred Bader 924 East Juneau, Suite 622 Milwaukee, Wisconsin 53202 Phone: 414/277-0730 Fax: 414/277-0709

A Chemist Helping Chemists

January 17, 1997

Professor John W. Frost Department of Chemistry Michigan State University 320 Chemistry Building East Lansing, MI 48824-1322

Dear John:

I am sorry that a very long trip to Britain has delayed my responding to your delightful letter of November 22nd.

It is great to know that Viridis is doing well. I have long been a stockholder in Cambrex and for many years worked closely with Dr. Peter Pollak at Lonza. He is now quite high up in the company and I believe now located in the United States. You will see him mentioned on page 271 of my autobiography.

Apropos that, you are mentioned only very casually on page 188 but more significantly on page 87.

We would love to come and see you sometime and perhaps even give a few lectures. My 'menu' of lectures is enclosed. However, the winter is not a good time to travel, and next summer you and Karen will have your hands full with the happy addition to your family.

But whenever you do come to Chicago, think about visiting us in Milwaukee also.

With fond regards, I remain,

Yours sincerely,



MICHIGAN STATE

November 22, 1996

Dr. Alfred Bader 924 East Juneau, Suite 622 Milwaukee, Wisconsin 53202

Dear Al,

I was delighted to hear from you!

The article you forwarded made interesting reading. I am well aware of Metabolix. One of the founders, Anthony Sinskey, is a professor in the biology department at MIT. I recently sent one of my better Ph.D.'s to MIT where she is splitting her time between Professor Stubbe's lab in the chemistry department and Tony's lab in biology.

Viridis has been a challenging yet rewarding experience over the last year. We are fortunate to have a single investor (Mr. Gordon Cain) who brings chemical industry experience. He is providing our seed financing and is in a position, based on his discretion, to provide the next round of investment. Our seed funding will take us into 1997, and we are arranging for the next round to be within the next two to three months.

Valuation of Viridis, Inc. is based on our demonstration that we can put into place the technology and business arrangements necessary to manufacture and sell gallic acid at a profit. There is no expectation that gallic acid will be the sole source of Viridis revenue over the long term. However, gallic acid provides an ideal test.

Our plans are to use a wet miller or fermentation house as a toll manufacturer to produce 3-dehydroshikimic acid (DHS). This intermediate will then be shipped to a specialty chemical operation for chemical conversion into gallic acid. We have genetically engineered microbes that are now producing gallic acid at titers of 40 g/L. Some very nice catalytic chemical methodology has been developed at Viridis for the conversion of DHS into gallic acid. The main markets for gallic acid are in the manufacture of propyl gallate, trimethoprim, and bendiocarb.

We are in the process of scaling up the fermentation and negotiating with companies that will make the DHS and companies that can convert DHS into the valueadded products. Any suggestions of specialty chemical companies that you think are good would be *greatly* appreciated. Salsbury Chemicals (a division of Cambrex) and Lonza are two good examples of the chemical companies with whom we are currently negotiating.

On a different front, Karen and I are expecting our second child sometime next August. Our daughter (Emma) is eighteen months old and a bundle of joy and promise. I still work the long hours, while Karen has cut back on her research time. Karen remain as my single most important collaborator.

Karen and I would enjoy visiting you in Milwaukee. We can leave Emma with Karen's parents in Chicago. For Karen and me, December is reasonably open.

The Michigan State University IDEA is Institutional Diversity Excellence in Action

MSU is an affirmative-action, equal-opportunity institution

COLLEGE OF NATURAL SCIENCE

Department of Chemistry

Michigan State University 320 Chemistry Building East Lansing, MI 48824-1322 517 / 355-9715 FAX: 517 / 353-1793



Otherwise, you and Isabel are welcome to come and visit us. As I am chairman of the colloquium committee, I can easily arrange a slot for you to give a departmental seminar in January or February.

Hopefully, it will not be too long before we can enjoy a good dinner together.

Sincerely,

ø .

John W. Frost




FAX FROM

DR. ALFRED BADER'S OFFICE

Suite 622 924 East Juneau Avenue Milwaukee, Wisconsin 53202 Telephone: 414/277-0730 Fax: 414/277-0709

December 9, 1996

TO:	Professor John W. Frost
	Department of Chemistry
FAX:	517/353-1793

Dear Dr. Frost:

Thank you for your letter of November 22nd. Dr. Bader is presently in England through early January and will reply personally upon his return.

I do know that he and Isabel are planning to spend most of January and February in Milwaukee, though as always, his calendar fills up quickly.

Best wishes,

here

Cheryl Weiss Office Manager





Dr. Alfred Bader 924 East Juneau, Suite 622 Milwaukee, Wisconsin 53202 Phone: 414/277-0730 Fax: 414/277-0709

A Chemist Helping Chemists

August 23, 1996

Mr. Joel Freeman Freeman Industries, Inc. POB 415 Tuckahoe, NY 10707-0415

Dear Joel:

Thank you for your interesting letter of August 7th, which I am responding to only now because you sent it to Aldrich.

Judy Pruss is a very likeable, competent person, but she is probably not the decision-maker when it comes to hiring policies. Hence, I am taking the liberty of sending a copy of your letter to Dr. Clinton Lane, the Executive Vice President who will probably respond to you directly. The problem may not be so much a budgetary one but Mr. Appelle's not wanting to relocate in Milwaukee.

I am probably busier now than I have ever been before, spending 1/3 of my time consulting for and helping chemical companies, 1/3 writing another book, and 1/3 buying and selling about 200 paintings a year. When next you are in Milwaukee, do visit my gallery.

With all good wishes, I remain,

Yours sincerely,

AB/cw

c: Dr. Clinton Lane (w/enclosure)



TELEPHONE (914) 961-2100 CABLE: FREEMAN TUCKAHOENY TELEX. 131646 FREEMAN TUKA FREEMAN INDUSTRIES, INC.

100 MARBLEDALE ROAD . TUCKAHOE, NEW YORK 10707 - 0415 U.S.A

FOR CORRESPONDENCE PLEASE USE POB 415 TUCKAHOE NY 10707-0415 USA

August 7, 1995

Dr. Alfred Bader Sigma Aldrich Chemical Company 1101 West St. Paul Avenue Milwaukee, WI 53233

Dear Dr. Bader:

You will perhaps remember me from the years when we were heavily involved with Bromine Chemistry - from 1966 to 1987. Aldrich was a very good customer of ours in those days.

In 1987, we formed Morre-Tec Industries, Inc. and sold that company to Leonard Glass. He has been very successfully managing it ever since, and Aldrich is a good customer.

I don't imagine you pay much attention to all the new small shareholders of Sigma Aldrich stock, but I have owned a modest amount ever since 'Black Monday' in 1987. Since then, I have bought more shares for both myself and my youngest son - he, being an extremely successful actor in Europe, has most of the money in the family.

And now to the point of this letter. In 1994, we sold our flavor division back to the English manufacturer who gave us the franchise approximately 10 years before. This franchise was for the promotion and sale of their natural fruit essences to the American flavor manufacturing industry. Our sales manager at that time, who took particular pains in this project, was Mr. Leonard Appelle. In 1994, the English company, by the name of Borthwicks, advised us they wished to take our franchise back. A sale was arranged which was quite satisfactory to us and them. Since Mr. Appelle had been a major factor in our success, and since we felt this was a good opportunity for him, he transferred employment to Borthwicks. He likes to say he was sold for money and a player to be named later.

The franchise has not done as well in their hands as it did with us. The reason for this is perhaps, from what I understand, internal corporate problems. Several of the products which sold very well under our regime have now been withdrawn from the market. This has adversely affected Mr. Appelle's position in the company, and he will be made redundant if things do not improve. Since we are good friends, I said I would try to help him.



I have observed the very beautiful flavor and fragrance catalog that was given out at the recent IFT Expo in New Orleans. I contacted Judy Pruss to find out if they are interested in taking on an outstanding salesman. She said it was interesting but that their budget wouldn't allow it. Although you are no longer president of Aldrich, I am sure you have some input. I would like to state that Leonard Appelle knows almost everyone in the flavor manufacturing industry, and he is known favorably by the industry as he covered the whole of the United States for us.

I think that if he were employed by Aldrich Flavors and Fragrances, he would do an outstanding job in bringing your products to the attention of the research and purchasing people in the industry. I think it is logical that you might know more about the overall financial picture than would Ms. Pruss. If this is correct, you might be able to intercede. You might be able to suggest employing Mr. Appelle where Ms. Pruss might not have that freedom. Leonard does not want to relocate to Milwaukee. He feels he can do all the necessary work by traveling from his home here in the East. He would be quite satisfied with the sales position that enables him to utilize his knowledge, experience, and his connections in your behalf.

Mr. Appelle is also quite familiar with many sources of various flavor materials, and he might be helpful in more areas than just selling. I hope you can take advantage of Mr. Appelle's expertise as I am sure he will certainly be an asset to Aldrich Flavors and Fragrances.

Unfortunately, although we think very highly of Leonard, we no longer have a flavor division so we are not able to make use of his skills. Leonard has already been in touch with Ms. Pruss and hopes to see her in Milwaukee on his next visit to the Mid-west.

I hope you and your family are well and that you are enjoying what is probably considered a semi retirement, as I can't believe you have completely retired.

I'm enclosing a N.Y. Times item that will interest you if you've not seen it.

Sincerely yours,

FREEMAN INDUSTRIES, INC.

UTTI Joel Freeman

JF/cm

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Dr. Alfred Bader 924 East Juneau, Suite 622 Milwaukee, Wisconsin 53202 Phone: 414/277-0730 Fax: 414/277-0709

A Chemist Helping Chemists

October 7, 1996

Mr. Joel Freeman Freeman Industries, Inc. POB 415 Tuckahoe, NY 10707-0415

Dear Joel:

Thank you for your thoughtful letter of September 30th.

Read chapter 13 of my autobiography, and you will see that the present chairman and CEO of Sigma-Aldrich, Dr. Tom Cori, is the man who kicked me out. Hundreds of chemists around the world wrote and phoned him in 1992, and nothing helped and nothing would help now. Thank you for your suggestion.

The people at Aldrich, including Dr. Clinton Lane, the executive vice-president, and Dr. Jai Nagarkatti, the president, have remained my good friends, but when talking about the possible employment of Mr. Appelle with either Dr. Cori or Dr. Harvey, be sure not to mention that you even know me.

I look forward to giving a couple of lectures at Yeshiva University on Monday, November 4th, and you might be interested in one of these, *The History of Aldrich and Sigma-Aldrich*. The man arranging for the talks is an old Harvard friend, Dr. Ira Kukin, the chairman of Apollo, whose telephone number is 201/535-1515 and whose fax number is 201/535-8844. If you would like to come to the talks, Ira will tell you when and where.

With all good wishes, I remain,

Yours sincerely,



FREEMAN INDUSTRIES, L.L.C.

TELEPHONE: (914) 961-2100

100 MARBLEDALE ROAD • TUCKAHOE, NEW YORK 10707-0415 U.S.A.

PLEASE USE POB 415 September 30, 1996 TUCKAHOE, NY 10707-0415 USA

FOR CORRESPONDENCE

September 50, 199

Dr. Alfred Bader 924 East Juneau Suite 622 Milwaukee, WI 53202

Dear Alfred:

Thank you very much for your letter of August 23rd enclosing correspondence.

I would also like to thank you for sending a copy of my letter to Dr. Clinton Lane. I can tell you that there already has been an interview with Mr. Appelle and Mr. Lane, and I believe the president or the chairman of the board was also present at that meeting. I hope that something interesting thing will come of this.

I did not know of the very disagreeable way in which you left the Aldrich Board. I am wondering if there is anything I, as a small stock holder and a person very much interested in Aldrich can do about it. I am thinking about the possibility of a letter to the present chairman of the board and president of Aldrich. If I decide that I want to do this, I will send you a draft of the letter first to get your comments and approval or disapproval. I don't want to do anything which would harm you. I only want to do something which might help Aldrich get out of what I consider to have been a very bad step. By the way, when and if I do get to Milwaukee again, I will know about it at least a week or two in advance and I will contact you first. I certainly would like to see the Gallery.

If you ever expect to be in the New York area, please let me know. I would like to meet with you.

Sincerely yours,

FREEMAN INDUSTRIES, L.L.C.

Freeman

JF/cm



August 7, 1996

Mrs. Isa von Hessert c/o Fairmount Chemical Company 117 Blanchard Street Newark, NJ 07105

Dear Mrs. von Hessert:

Thank you so much for your note of May 26th. Unfortunately, you gave no return address, and I hope that Fairmount will forward this letter.

Henry and I did indeed share many interests, but as you commented, we did not get to know each other well. I thoroughly disliked Philip Koch and luckily have not seen him for years.

Just a few years ago, I met Henry's son, a very able chemist working, I believe, with Merck. I really liked him and gave him a fine work done by his grandfather.

I still own a few shares of Fairmount Chemical and note that at last they are no longer losing money. Perhaps they will recover.

I would love to be able to chat with you if you ever come to Milwaukee.

With best wishes, I remain,

Yours sincerely,



May 26 4, 1986

Dear Dr. Bades, just a note to let you know how very interesting I found "Adventures of a themist collecter " - and has much I enjoyed reading it. My own memories I some of the people mentioned in your book may differ romenthat - but just reading about them brought back some happy memories. In retrosped it is a pity that it enry and year never got to know

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and appreciate each other better, for there were many parallels in your lifes. The constant search for new research chemicals and sources was just one of many other interests / hobbies you both shared. It raddened me especially to read has you to were thrown out of the company you had started and built up - but at least yours was not run into bankruptcy !! Reading your book gave me great pleasur for which I thank you! With best wishes yours Isa Von Hener

FAX FROM



DR. ALFRED BADER Suite 622 924 East Juneau Avenue Milwaukee, Wisconsin 53202 Telephone: 414/277-0730 Fax: 414/277-0709

May 23, 1996

TO: Prof. Dr. Helmut Vorbrüggen Institute of Organic Chemistry, Freie Universität

FAX: 49-30-838-5163

Dear Helmut:

I just looked at the new Aldrich catalogue and saw with great pleasure that your article on Woodward is still being offered by Aldrich and still at no charge.

That reminded me that I never replied to your kind postcard of December 14th, in part because I have such a hard time reading some of your handwriting, specifically the street address. Luckily, the fax number is clear, and I hope that it will reach you.

While we will be in Stuttgart and Munich in June, there is no chance of coming to Berlin, but I very much hope that you will be able to visit us in Milwaukee before very long.

With all good wishes, I remain,

Yours sincerely,

AB/cw







14.12.1995 File Alfred, sin muche, dags Di will in letgen Jal wal Helingelowen bir - ich laike une forme derne Antobro -Brapplie van Dis rignieen lanen! Hein Abrilwed von de Flering A-6 und meinen Florenen fesang where when A. Enlanced verland we can be and an genden. The habe from an de Tallit. 3, 14195 Berlin [Tel 0049 30 838 5901 Fax 0049 30 8385163) ... verile, beld for we bee Forlingen auf rebertsen. Table mil sel got - endlich in \mathbf{Y} frere Varm go sein. She be work wil ind service with will this die word wender for low pote programe (lowed + Isos) Ji Comen. Menne beren Drinke for 1996 Ę Wych. hadbighed lefter blocker our persons Averal !

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Photo: Jörg P. Anders · Druck: Brüder Hartmann · Berlin · Printed in Germany

Nr. 263

11 East Ititient, auto 6 Milwaukee, Wisconsin 53202 Phone: 414/277-0730 Fax: 414/277-0709

A Chemist Helping Chemists

May 23, 1996

Prof. Dr. Karlheinz Seeger Festkörperphysik Strudlhofgasse 4 1090 Wien Austria

Dear Professor Dr. Seeger:

Dr. and Mrs. Reinhard Schlögl visited me recently, and we discussed your most interesting letter relating to Loschmidt which you had sent to Dr. Schlögl.

Unfortunately, ignorance about Loschmidt is not confined to people who questioned the need of a Loschmidt stamp.

Some time ago, I gave a lecture about Loschmidt at the Department of Chemistry of the University of Sussex, and my friend, Sir Harry Kroto then inquired of others what they knew about Loschmidt. I enclose a letter written by an eminent scientist, Dr. W. Krätschmer, in Heidelberg, who quoted Professor G. Vogl's opinion about Loschmidt.

I find Professor Vogl's opinion truly astounding. Here this professor sits in the very office which has a beautiful portrait of Loschmidt and then writes that all this information about Loschmidt "may be a hoax, since the people from Vienna like to claim everything for themself (sic)!" Please contrast this with what Boltzmann said about the Viennese, specifically in relation to Loschmidt.

I take it that you are not very far from Professor Vogl, and you might like to show him Professor Krätschmer's letter to Sir Harry Kroto.

I look forward to lecturing on Loschmidt in Vienna on Tuesday afternoon, June 11th, and if I have a chance to visit Professor Vogl, I will say to him that frankly, I didn't know whether to laugh or cry.



Prof. Dr. Karlheinz Seeger May 23, 1996 Page 2

I wonder whether Professor Vogl heard about the Loschmidt Symposium at your University last June.

With all good wishes, I remain,

- Se cirpt

Yours sincerely,

AB/cw

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Enclosures



1 Tel: 31367-0 2 3259

Prof. Dr. Karlheinz Seeger, Festkörperphysik, Strudlhofgasse 4, 1090 Wien

40 L. Bollamanu-luit of Forthe spay hysith 5863408-0

WUV Universitätsverlag z.Hd.v.Herrn Dr. Reinhard Schlögl Berggasse 5 A-1090 Wien

Sehr geehrter Herr Dr. Schlögl,

Ihren Artikel "Wer braucht Loschmidt ?" in UNIVERS Nr. 6/95 habe ich mit großem Interesse gelesen, ebenso wie Ihre Titelgeschichte in Nr. 5/95. Ihre Feststellungen "Die Österreichische Post- und Telegraphendirektion entschloß sich zur Herausgabe einer 20-Schilling-Sondermarke " sowie "Das bislang verwahrloste Grab Loschmidts am Wiener Zentralfriedhof wurde seitens der Stadt Wien auf Hochglanz gebracht" suggerieren dem ahnungslosen Leser, daß die genannten Institutionen an Loschmidt auch nur ein Fünkchen Interesse gezeigt hätten. Weit gefehlt! In beiden Fällen bedurfte es massiver Unterstützung, wie Sie gleich sehen werden.

a) Briefmarke.

An den

Mein jahrzehntelanges Hobby ist eine laufend ergänzte Sammlung von Marken mit Köpfen von Physikern, Chemikern, Mathematikern, Astronomen und Technikern. Als Leiter des einzigen Festkörperphysik-Instituts der Ludwig Boltzmann-Gesellschaft habe ich im Jahre 1981 die Herausgabe einer Boltzmann-Marke anregen können. Die Anregung impliziert, daß man der Post eine Kurzbiographie, in diesem Fall von Boltzmann, im Umfang von drei Druckseiten zum Verkauf an interessierte Abbonnenten zur Verfügung stellen muß. Nach Boltzmann, später Mach, Pauli, Schrödinger und Hess, war für dieses Jahr eine Loschmidt-Sondermarke von mir schon vor langer Zeit angeregt worden. Anlaß kann stets nur ein N-ter Geburtstag oder Todestag sein, wobei N eine durch 25 teilbare ganze Zahl sein muß. Für mich überraschend kam diesmal eine Ablehnung. Erst der Hinweis, daß der 100-ste Todestag durch ein Internationales Symposium unter dem Patronat des Bundespräsidenten veranstaltet würde, und nach Intervention der Fakultät als Veranstalter konnte die Postverwaltung zur Markenausgabe veranlassen. b) Grabpflege.

Wenn ich für die Post eine Kurzbiographie schreibe, so erwähne ich nach Möglichkeit auch, ob ein Grab existiert und wo es zu finden ist. Nicht wenige, vor allem japanische Besucher meines Instituts wollen auf dem Wiener Zentralfriedhof dem Ehrengrab von Boltzmann ebenfalls einen Besuch abstatten. Der Ahnenkult der Japaner ist ja in ihrer Religion tief verwurzelt. Meine Recherchen um das Loschmidt-Grab, von dessen Existenz keiner der hiesigen Physiker und Chemiker etwas wußte, ergaben im vergangenen Jahr, daß es auf dem Wiener Zentralfriedhof in verwahrlostem Zustand existiert und in Kürze aufgelöst werden soll. Mein sofortiges Ansuchen an die Stadt Wien unter Hinweis auf die große Bedeutung von Loschmidt und das Internationale Symposium um Übernahme der Grabpflege durch die Stadtverwaltung wurde brüsk



abgewiesen. Die Wortwahl des Beamten in seinem Ablehnungsbescheid ist beachtenswert. Da Loschmidt einer der fünf Gründer der Chemisch-Physikalischen Gesellschaft in Wien war, habe ich als Mitglied in deren Hauptversammlung auf die bevorstehende Grabeinebnung hingewiesen. Eines der anwesenden Mitglieder mit guten Beziehungen zum Ersten Nationalratspräsidenten veranlasste dann die Stadt Wien zum Einlenken.

Zum Abschluß noch eine Frage, deren Behandlung vielleicht des ORFs würdig wäre: Gehört vielleicht die Ausgabepolitik von Sondermarken nicht durch ein Gremium beraten, in dem auch Wissenschaftler der verschiedensten Sparten mitzubeschließen haben? Warum ist die Medienpräsenz der Post bei der Propagierung ihrer Produkte so katastrophal gering, wie dies im Fall Loschmidt so eklatant zutage trat? Als Besitzer von über 400 verschiedenen Marken der o.g. Auswahl könnte ich zumindest die eine oder andere Statistik über die Ausgabeländer zur Verfügung stellen.

In der Hoffnung, daß Sie Zeit für die Lektüre dieses etwas langen Schreibens gefunden haben, bin ich

mit freundlichen Grüßen

Harling ferps





Dr. Alfred Bader 924 East Juneau, Suite 622 Milwaukee, Wisconsin 53202 Phone: 414/277-0730 Fax: 414/277-0709

A Chemist Helping Chemists

January 17, 1996

Dr. Stuart Fenton 36 Eagle Ridge Road North Oaks, MN 55127

Dear Stuart:

Thank you so much for your letter of January 7th.

I don't think I know enough chemistry to write a competent book on the benzene story. I had special advantages with Loschmidt and Couper. With Loschmidt, I could read the many manuscripts in German, which I was able to acquire, as well, of course, as the 1861 and 1913 books. With Couper, I had the great good fortune of acquiring the entire correspondence between Anschütz and Crum-Brown.

Would you consider writing such a book and allowing me to fill in the Loschmidt-Kekulé-Ladenburg saga?

Milwaukee is much closer to Minneapolis than Baja - wherever that is - and Utah. I do hope that you will come and visit us before long.

Best wishes, as always,



36 Eagle Ridge Road, North Oaks, MN 55127. 7 January, 1996.

Dear Alfred:

in

I trust that the holidays were pleasant for you and Isabel. As we didn't read of any dreadful weather in England during December, I assume that it was pleasant.

.Willie's letter was very interesting. It is most fortunate that neither race not religion can be included in letter of recommendation now. I would bet that McRae did send a very strong letter of recommendation to Shell Oil, but I wouldn't be a bit surprised to learn that he had been described as a Jew. I think that McRae would have considered this as necessary information. I hope that I am wrong, but I think that it would be in character. I feel that he would also have mentioned that an individual was a R.C., if he were aware of it. I think that he felt that matters of this sort were important.

I found you Anschutz, Couper, Loschmidt paper very interesting, and informative. Why don't you consider doing a book on the benzene story. It could be good general reading. One could start off with Faraday's efforts, putting them in perspective with the post-Napoleonic period. I just finished the little Longitude book by Sobel, and found it fascinating. A benzene book could do the same for chemistry.

I was surprised to learn that Woodward was unaware of Loschmidt, his work was mentioned in Nollers text, which was pretty popular at that time.

We are off to harass the whales in Baja, and then on to the ski slopes of Utah. It was delightful having the opportunity of spending some time with you and Isabel. I hope that repetition will not take another five years.



. FAX FROM:

Dr. Alfred Bader 2961 North Shepard Avenue Milwaukee, Wisconsin 53211

A Chemist Helping Chemists

September 5, 1995

TO:	Mr. Peter Whitehead
	Fluorochem Ltd.
FAX:	44-1457-869360

Dear Mr. Whitehead:

I am happy to know from your fax of today that we may meet in Birmingham on the afternoon of November 28th.

My best friend in the Chemistry Department there is Professor Frasler Stoddard, and he will surely be able to tell you a day before just what my schedule will be. In any case, I do hope that you, Isabel and I will have an hour or two just to relax and talk about chemistry.

With all good wishes, I remain,

Yours sincerely,

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FAX MESSAGE

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Aut of Butt

Dr. John Frost requested that I forward a copy of the Viridis "Concept Document" to you John and I prepared this document in anticipation of completing a full Business Plan (we continue to investigate markets for the target products).

Please call either John or melit you have questions.

Stor & Berry

4 -

Paral March 18

Marketing and Business Development in Biotechnology



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MONFIDENTIAL.

PANY OVERVIEW

Vitidis. Inc. combines cutting edge chemistry and transgenic metabolic pathway engineering technologies with termentation of starch-derived glucose to provide a source of new and current chemical products for the food and fragrance, skin protectant pharmaceutical, and plastics industries. Viridis is positioned to extend Biotechnology into the Chemicals Industry to supply end products and intermediates that are cost effective, make new applications commercially feasible, and provide critical marketing structures.

VIRIAL INC.

Viridis will focus early product development efforts on antioxidants for use in foods and plastics. Processes to manufacture two antioxidant product categories are ready for scale up, and products could enter commercial sales within eighteen months. A growing body of evidence indicates that antioxidants play an important role against cancer, heart disease, skin wrinkling, and other aging disorders. This can create excellent market opportunities for viridis antioxidant products should their consumption be accepted as a way to prolong the health and filespan of the population

A family of new, proprietary antioxidants developed by Viridis could potentially reptace BHA and BHT, which have already been banned in other countries (Japan) and have been potitioned for removal in the US. Viridis proprietary antioxidants can be labeled a "Natural." and additional products (Ubiquinol and other microbial cofactors) are under development. Each of these "Natural" antioxidants could provide a lower cost alternative to Vitamin E in specific markets. Simultaneously, new manufacturing processes are being developed for Vitamin E as part of an overall effort to enter existing markets on the basis of improved production economics and product quality. Examples where this strategy has already been reduced to practice include the proprietary Viridis processes for manufacture of Gallic Acid and other Galloid antioxidants.

In addition, Viridis plans to introduce a one-step conversion process to make "Natural" Vanillin at lower cost for the flavor, tragrance, and pharmaceutical industries. Viridis is also developing syntheses of folic acid and inositol (essential animal feed additives), PABA derivatives (for solar protection applications), and galiotannin (itsed in feather tanning). The technology base and biocatalysis expertise built by Viridis through commercializing these products can ultimately be applied to producing larger volume, tine, and commodity chemicals. These products include *p*-hydroxybenzoan sciences, monomers for liquid crystalline polymers) and hydroguinone (a photographic developing solid

Viridis will bursue a business strategy to establish contract R&D funding and corporate relationships on a product-by-product basis, as well as to internally develop the Company slown proprietary processes and products. The company will initially seek collaborations with corporations and research institutes to scale up the technology and toll manufacture specific products. Viridis will obtain revenues from sale of its own products and from its corporate collaborators through subject contracts, shall profits which initially

Viridis technology can open significant markets and create revolutionally manufacturing opportunities for companies in the following industries: chemicals/plastics; flavors fragrances, and tood ingredients; cosmetics; pharmaceubcals; agricultural chemicals; and grain processing/wet mitting



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ridis, Inc.

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OMPANY BACKGROUND AND TECHNOLOGY OVERVIEW

Viridis, Inc.'s objective is to be the premier source of catalysts for economically competitive synthesis of commodity, fine, and ultrafine chemicals from plant-derived starch and cellulose. Viridis manufacturing processes uniquely intersect the biotechnology, agriculture, and chemicals industries. Catalysts created by Viridis include genetically altered microbes and enzymes that convert D-glucose (from corn wet milling operations) or related carbohydrates into chemicals—many of which are currently made non-oetroleum.

The company's technology base combines organic chemistry with genetic engineering of metabolic pathways, enzymology, and fermentation. Enzymes that metabolize glucose if selected microbes are genetically modified to overproduce specific intermediate or final products. Fermentation of the microbe on inexpensive glucose substrate results in secretion and recovery of the desired product, which in turn can be further modified enzymatically or chemically to produce a family of derivative products.

Exploitation of this approach along the entire metabolic pathway develops numerous "technology platforms," each of which leads to a variety of derivative end products. By analogy, each "platform" can be regarded as the "trunk" of a "product tree," with specific products representing the proliferating "branches."

Currently. Viridis is focused on two primary platforms. One leads to a variety of natural antioxidants, antioxidant derivatives, and flavors. The second platform leads to additional natural antioxidants and chemicals for industrial and skin-protectant applications. Future product expansion will build on existing and additional platforms.

The primary advantages of Viridis manufacturing processes are superior production economics, improved product quality and/or supply, and desirable product attributes. Projected manufacturing economics are in the range of \$1.50 - \$3.50 per kilogram for the target products, making them economically attractive compared to current prices (which can be as high as \$15 - \$60 per kilogram). Starting from a consistent and abundant supply of starch-derived glucose provides a high quality, pure, and consistent supply of products that are presently derived from natural materials (for example, bark or vegetable in the). Certain products made by Viridis will be categorized as "Natural," which is a situcal marketing advantage in the food, beverage, and cosmetics industries.

in addition, Viridis technology is a major advance in "green chemical in contrast of the of it utilizes nonioxic starting materials and water as remained to the optimized of forcing reaction conditions and by-products that are harmful to the environment

Viridis catalysts are regarded favorably by chemical companies because they enable chemical manufacturers to meet government regulations and public environmental expectations in the United States. European Uniton, and Pacific Kimi. Regulatory compliance costs in these regions are an increasing component of chemical manufacturing costs. Nevertheless, commercial success of the fargetice viridis produreasible without receiving a premium price for a Typech product, and economiviability is not contingent on a projected rise in petroleum prices. Nomenewable, imported petroleum can already be cost-effectively replaced as the feedstock for manufacture of selected strategic chemicals using technology pioneered by Viridis. The agricultural feedstocks utilized by Viridis are renewable, inexpensive, and domestically produced by corn wet millers (among other sources). For these reasons, leading chemical manufacturers and corn wet millers have already initiated discussions with the Company



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viridis, Inc.

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EARKETS AND BUSINESS STRATEGY:

its products are targeted to be sold into the antioxidant, food and beverage flavoringskin protectant, pharmaceutical, and chemicals markets. These products can be produced with biocatalysis strategies that are either developed and ready for scale-up, or which are under development. Estimated production costs are \$1.50 to \$3.50 per kilogram. Table One summarizes the current or expected market for targeted Vindis products.

In addition to providing income to Viridis, commercialization of these chemicals will build the technology base and internal expertise to extend Viridis technology to other products and—ultimately—to large volume commodity chemicals

MUNULIUL

Viridis products that can be commercialized immediately are antioxidants for both the tood and plastics industries. Antioxidants for the food industry alone are predicted to grow to \$230 million in US sales by 1996. Substantial industry interest in natural antioxidants indicates a potentially greater profit opportunity to replace the BHA anti-BHT products in widespread current use. These products have already been banned in Japan and are under substantial pressure to be removed from the US market. The food industry is reported to be "desperate" for new antioxidants, particularly ones that have the marketing advantage of being labeled as "natural."

Viridis is introducing a range of antioxidant products, plus antioxidant mixes, to cover the cost/performance spectrum of currently available products. This range includes low cost product mixtures that compete against BHA or BHT/EDTA combinations (which combine free radical scavenging plus metal sequestering properties) to natural products that demonstrate more powerful antioxidant properties than Vitamin E. The Viridis strategy rests on introducing new, proprietary antioxidants in addition to developing superior processes for existing products. To implement this strategy, Viridis will focus on the following

- Scale-up existing processes and continue testing of a prophetary natural antioxidant for the food and plastics markets;
- Scale up existing processes to produce Galloid Organics (Gallic Acid, Pyrogallol, and Gallic Acid esters -- including n-propyl-Gallate);
- Commute developing biosynthesis strategies for Vitamin E. Ubiquinol, and other

A specific objective of Viridis is to reduce production costs of antioxidants - for the objectary antioxidant and Gallie Acid in particular--so that in the commercially feasible for use in plastics. Opening plastics (and other industrial) markets through high volume manufacturing will position Viridis to obtain favorable margins by selling to the rood and other higher value-added industries.

Proprietary Antioxidant:

A proprietary antioxidant is under development by Viridis to provide attractive economics and a "Natural" label. Tests of antioxidant activity demonstrate that this product is more effective than Vitamin E and BHT, and as effective as propyl-Gallate and Gallic Acid. Successful results from continued efficacy and toxicity tests can position this compound to replace BHA and much of BHT in the food market. Substantial plasticapplications are also expected. A mixture of this product with other antioxidants



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N	TARKEL	SUMMARY (OF VIRIDIS PRO	ODUCTS-
_0supoung	Current Prig	e Volume	Total Market	Comments
N 1000003333				
the state	\$15.80/KC	$(2, \mathbb{Z}_{+}^{\frac{1}{2}})$	++ * <u>*</u> }	(with your to St. & a tram.
	\$44.50/r.g	11 = j	₿ [★] ▶.1	- rystalline 50 Koldmins tob
: propVi Galiate	\$16.30/Kg	tors	₹ ¥ ø 4	MURIC KE
rogalle	₩s ⁴	1 y 1	en, 1	
riopnetary Compound	N.A.		ind	
Vitemin I				
a-a locopherol	\$43.60	12x1	the	67% Jac.
d-or locopherol acetat	ie \$58.80	thư	tha	· · · · · · · · · · · · · · · · · · ·
succinate	\$13.30	tod	tibut	LTUMS, CTV 42. The
d-i l'ocopherol acetate	\$34.50	fbd	tbd	USP. 50 Kg drum. >1000 K +
	\$24 - 25	tbd	thd	USP. 50 Ke trum 50%
			3.8	ŵr luch estimat
HAVOR INGREDIE	N'15			
vemilin	\$17.80/Kg	7 - 12K MT		USP deutos toto
	IU-RIAN	· • • • • • • •		
			\$120 200 M	Average price meets in an
Ethyl Vanillin	\$33.00/Kg	IK MT	\$33 M	11 Kg drums >? 30 Kg
n Hydroishenziste	\$4 - 618 0	4000 MT	\$16 24 M	i
p riverov to the term	\$1 - 2/Ka	40.000 MT	\$40 - NO M	1 4 6 5 5 5 5 10 10 10 10 10 10 10 10 10 10 10 10 10
	41 20g	TO TO THE PARTY OF T		, has all a
Ivdroqumone \$4.4	0 - 5.00/Kg	45 - 50K MT	\$200 - 250M	Tech grade to photographic
fannie Aeid - \$10.00	-13.40/Kg	tbd	thd	$x = - e_{2} \left[- F \left[x^{2} + (x^{2}) \right] \right]$
ANIMAL FLEDING	R.DH.NI+			
	* #]		191	
nosvol	\$21/Kg	thd	th	(2.3) Por in
SAN PROTECTA				
PABA	\$18.50/Kg	tbd	thu	C. H. UBRESS & ARCKS
Famelanin	(Dr.)	thu	.1	K HOUSE AND THE ST.
Imagen	\$5 630/K J	34.80300	\$20 - 50 M	

LABUAL & TARKET SUMMARY OF VIRIDIS PRODUCTS

"tbd" = 10 be determined: missing information will be filled in as additional investigations are conjugated.



viridis, Inc.

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 contained by Viridis has the potential to deliver multi-purpose antioxidant functionality in one effective product. Manufacturing processes for this compound and the antioxidant matches and contained on product to the interview.

Calloid (eganies:

Galic Acid, Pyrogaliol, n-propyl Galiate, and other esters of Galic Acid are currently sold as antioxidants for foods. Propyl Galiate is one of the four major synthetic antioxidants used in food products (the others being BHA. BHT, and TBHQ). Additional current or potential applications for some or all of the chemicals within the Galioid family include: pharmaceuticals (anti-inflammatory, skin protection, sting venom treatment); turnigants and pesticides (stabilizer); electronic chemicals (insulating tape component, adhesives, cure accelerators, scale prevention compound); rust removers and inhibitors in boilers; cement additives (superplasticizers); and as antioxidants for iuoricating oils, photographic agents and dye preparations. Lower prices are considered critical to expanding markets for these additional applications.

Gailie Acid is currently produced by enzymic decomposition or chemical hydrolysis of tannin. Purity of the final product is a function of the tannin source, which can be variable. Better quality Gallie Acid is obtained from vegetable (legume) sources that are treated by tannase. Gallie Acid produced from glucose by Viridis is expected to provide the highest and most consistent quality at a competitive price.

Pyrogallol was originally derived from gall nuts grown in the Middle East. Demand is at least several hundred metric tons, and may be much higher.

Viridis has developed processes for producing specific Galloid Organics that are ready for scale up to commercial volumes. A leading wet miller has already indicated its interest as either a toil manufacturer or direct supplier of specific products within this product category. With this level of external interest, Viridis has multiple business development opportunities for entering these markets

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Vitamin E is one of the most widely used natural althoxidants in food, pharmaceutical and as a dietary supplement. Despite its high price, use of Vitamin E as an annoxidal, or current markets is growing. It appears to be making into add into BHA and BH markets and is being investigated for plastics used in food storage. In addition, the health benefits of Vitamin E as a dietary supplement have fueled significant increases in Its demand

Vitamin E is a generic term referring to tocopherols that exhibit the biologue at a total originally observed in a partially characterized material from vegetable oils that was essential to maintaining rat fertility. There are primarily four natural tocopherol is final was alpha, beta, gamnia, deita) and the highest level of activity is exhibited by the alpha form. Alpha-locopherol acetate is the most significant commercial vitamin E product and is sold as a dietary supplement and antioxidant for use in rood fortibeation, vitamin supplements, medicinals, cosmetics, and for poultry, livestock, and domestic animal feed.

Natural tocopherols are obtained during vegetable (primaruly soybean) of proin m deodorized distillate, which is also the input material for producing summaric up. Focopheral acetate (a racenilc mix). Cargill and ADM are the primary US suppliers of distillate, although there are approximately 20 independent refiners of this raw materia



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It milling Wesson Krait, Unitever, and Procter & Gamble). Sovoean oil is considered until the inadequate both with respect to quality and quantity for expected Vitamin F

Company Limited. In 1994 Cargill and Hoffmann LaRoche announced a venture to supply natural Vitamin E (estimated introduction in 1996) and ADM has also announced its intention to supply natural Vitamin E (in 1995). Synthetic Vitamin E is produced in the US by Hoffmann LaRoche and BASF Wyandotte.

World production of both natural and synthetic Vitamin E products was estimated at 5,300 metric tons fifteen years ago (1980), and has grown substantially to the currently reported level of 20,000 metric tons. Roche reports it is increasing synthetic Vitamin E capacity by 5,000 to 7,000 metric tons, and BASF says it is building a new 4,000 metric ton plant in Germany and is expanding its US plant by 1,000 metric tons. Capacity figures for the Cargill/Roche and ADM natural Vitamin E plants have not been announced. 80% of the world market is estimated to be for synthetic Vitamin E

Demand for Vitamin E supplements surged 40% in 1993, while demand for bulk Vitamin E increased 8 to 10%. These increases were caused by reports of health benefits from Vitamin E's antioxidant activity. Approximately 800 publications per year are confirming the protective effects of Vitamin E against cancer, mutagenesis, heart disease and aging disorders. For example, one study reported early in 1993 that ingestion of 20 times the minimum daily requirement of Vitamin E reduced LDL oxidation by 50%

Generally, synthetic Vitamin E sells for \$34 - 36 per Kg, or \$23 - 25 per Kg as a 50% dry powder. Natural Vitamin E sells for \$43,60 per Kg as alpha. Tocopherol, and \$51,00 per Kg as alpha. Tocopherol acetate. A world market estimate for Vitamin E products is \$660 million (\$300 million, US).

Substantial industrial interest exists for biocatalytic syntheses of specific tocopherols. Viridis is favorably positioned to form corporate partnerships to commercialize new processes with dramatically improved economics.

vor Ingredients:

VaniHin -

Viridis is developing a one-step microbial conversion process of glucose to vanifun Vaniflin is the primary component of vanifla flavorings and is preferred over the more expensive vanifla bean extracts for the majority of food, beverage, pharmaceutical (vaniflin is the starting material for methyldopa), and cigarette applications. World production of synthetic vaniflin is approximately 8 million metric tons (range between to 12 million metric tons), for a total market of \$120 to 200 million. In addition, demand for ethyl vaniflin increases the market by 1,000 metric tons, or \$3.3 million.

vanillin is considered the single most important synthetic aroma chemical in terms of quantity and value. It is produced primarily by condensation of gualacol with givoxylic acid followed by air oxidation and decarboxylation of the givoxylic acid intermediate Rhône Poulenc is the largest producer of vanillin by this process, which is replacing d older method of hydrolyzing lignin from wood industry waste suffice biguors

The Viridis market advantage is expected to be a natural vanifin that is premium priced vet considerably less expensive than natural vanifin products currently on the market.

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Numerous publications indicate PHB to have potential as a component of liquid crystal polymers. PHB is currently used as an anti-microbial in food and consumer products, is sold at approximately \$4 - 6 per kilogram, and is reported to have a current market of 4 million kilograms (\$16 - 24 million current market). At a price of approximately \$1 per kilogram the market could expand to polymer applications for demand of 40 millior kilograms or greater (\$40 - 80 million minimum market). PHB represents the tightest economic constraints of any candidate products, but Viridis has nevertheless received significant interest from potential corporate collaborators

5km Protectants:

CABA Eunelanin.

PABA is used for medical and food applications, and is best known as a widely used acuve ingredient for sunscreens. It is currently sold at \$18.50 per kilogram in 1000 kilogram batches. The point of market entry for Viridis is to be a substitute supplier of PABA and UV screening derivatives, based on its ability to provide lower-cost products.

humelantn is of interest as an additional subscreen active ingredient that is reported to nave superior UV absorption capabilities.

CORPORATE PARTNERING PROSPECTS AND AITERNATIVE GRANI

Chemical manufacturers, corn wet millers, or end users of the target products are potential collaborators with Viridis. Developing several technology platforms which prohiterate into numerous end products gives Viridis substantial flexibility to establish corporate collaborations for both manufacturing and product commercialization. These relationships include funded contract research; sales by Viridis under supply agreements, toll manufacturing; joint ventures; co-marketing agreements; dividing markets by applications, products, and/or geography; and licenses.

In general, Viridis will pursue relationships with chemical manufacturers if substantial investigations of new applications for Viridis products are required. These manufacturers include the largest chemical companies (including DuPont, Dow, Exxon, Hoechst substantio, General Electric, and Ciba-Geigy) as well as current suppliers of the specific inducts (lists of current suppliers available upon request).

wet millers will be contacted from the standpoint of providing toll manufacturing inthough biocatalysis is considered by certain of the millers (ADM, Cargill, Staley potentially others such as Roquette, National Starch and Chemical, and Minnesota Corm Processing) to be an area of potential strategic growth. For example, ADM already produces a range of termentation products, and the new President of Cargill is reported to lave a strong interest in chemicals. There may be opportunities to establish produspecific development and manufacturing relationships with committed wet millers.



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ridis intends to manufacture and sell specific products by itself. As part of this process, when an end user is willing to pay a premium price, Viridis will investigate ationships with end users by fields-of users potential on an exclusive basis.

imerous government grants are available to assist Viridis in developing its proprietary chilology. Biocatalysis is considered by several government agencies (including DOE ind EPA) to be the "biggest opportunity in Biotechnology which is yet underserved." These grants include SBIR's, the NIST ATP program, and several "green chemical manufacturing" programs of the DOE, NSF, and EPA.

INTELLECTUAL PROPERTY:

Results of the Frost research program have consistently been protected by patents. Patents related to the target products are owned by Michigan State University, which is in the process of licensing these patents exclusively to Viridis.

As a general rule, Viridis intends to aggressively patent its technology with the objective or building the strongest patent portfolio in the biocatalysis field.

TRA AND:

John W. Frost and Karen M. Draths are co-inventors of a series of processes which allow D-glucose to be converted into value-added chemicals.

Prost is a Professor of Chemistry at Michigan State University, and is recognized as the leading researcher in biocatalysis and "green chemistry" synthetic processes. Dr. Prost's expertise is in organic chemistry synthesis, enzymology, biocatalysis, and environmental chemistry. He has taught and performed research at Stanford and Purdue Universities, and has extensive consulting experience with industry. Dr. Frost has a B.S. Degree from Purdue, a Ph.D. from MIT, and post-Doctoral experience at Harvard COMPACT.

Karen Draths has a Ph.D. in organic chemistry from Stanford University and post-Doctoral experience at the California Institute of Technology. She is a research fellow at Michigan State University in the Frost biocatalysis research program.

Peter Matiock has developed business opportunities based on new applications of agribusiness. He co-founded Applied Phytologics, Inc, which is applying malting technology to recombinant protein expression systems, and has experience at Catgene Ureative BioMolecules, ESCAgenetics, and Lubrizol (Agrigenetics).





FAX BLOCHDI





Dr. Alfred Bader 2961 North Shepard Avenue Milwaukee, Wisconsin 53211

A Chemist Helping Chemists

August 2, 1995

Mr. Peter Whitehead Fluorochem Ltd. Wesley Street Old Glossop, Derbyshire SK13 9RY England

Dear Mr. Whitehead:

Thank you so much for your most interesting fax of July 24th.

I am really surprised that Fluorochem's turnover exceeds £4 million. I would love to meet you to find out just how you have done that.

Unfortunately, I am not likely to get to Manchester this autumn. However, as you will see from the enclosed, I plan to lecture in Birmingham on November 28th and 29th, and I am wondering whether you could find some good business reason to come to Birmingham and also listen to my talk on the history of Aldrich. Mind you, there isn't much in that talk that I haven't already described in my autobiography.

Alternatively, could we meet in Chesterfield, where I plan to visit Coalite, or in Leeds?

With all good wishes, I remain,

Yours sincerely,

AB/cw

bc: Chris Hewitt





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FAX FROM

DR. ALFRED R. BADER 52 Wickham Avenue Bexhill-on-Sea East Sussex TN39 3ER Telephone/Fax: 0424-22-22-23

Date: July 22 1995 Page 1 of ____ Mr. Pere white bead Tenorochem Near Mr. Whitehead. I appreciated your comments more Kan I can tell you, and gut hope that Le comments en pages 129-30 au correct I used to visit Glossop regularly by car, but doing po by train is more diff: wet. Nexe Nedember - i]ecember 1 will be disiting Bismingham (lectures), CiseAn field (Coalite), Leeds (willy Neigh) and Ruston (my pister); would it be possible to meet ? I would have to learn more about you and fluorachen Beit wishes Gund Bady

To: Fax:






Frederick & Company, Inc.

April 19, 1995

Dr. Alfred Bader Alfred Bader Fine Art 924 E. Juneau Avenue Milwaukee, WI 53202

Dear Alfred:

Enclosed is a letter which Ed Payne has forwarded to the investors we put into the first round of financing.

You will note his announcement that Dr. Barbara Pause is joining the company.

Ed will be in Milwaukee from April 27 through 5/2. It might be interesting for you to meet him.

As always,

Paul A. Frederick

PAF:kk

Enclosure



MEMBER CHICAGO STOCK EXCHANGE/SIPC

WHITE MANOR - 1234 EAST JUNEAU AVENUE - MILWAUKEE, WISCONSIN 53202 - 414-271-1500



Gateway Technologies, Inc.

6680 Gunpark Dr. • Suite 200 • Boulder, CO 80301 • Ph (303) 581-0801 • FAX (303) 581-9029

March 31, 1995

Dear Shareholder,

All of us at Gateway are focused on introducing our first thermally-enhanced fabrics to the marketplace and this, our second quarterly newsletter, will bring you up to date on our activities.

Impressive Test Results: We are very excited about the recently received independent laboratory test results on our microPCM coated fabrics. The tests were conducted at the Materials Research and Test Center (MRTC) in Leipzig, Germany, which, until recently, was a part of the Techni-cal University of Leipzig. Barbara Pause, Ph.D. has been MRTC's thermal scientist responsible for developing the new testing methods necessary to effectively evaluate insulation materials made with Gateway's technologies. Dr. Pause recently spent a week with us during which time she presented and explained the test results. A detailed explanation of Dr. Pause's testing is attached to this newsletter, but as a summary to her recently completed tests, Dr. Pause stated, "The test results show clearly that the PCMs create an increase in the thermal insulation of a material. The MicroPCMs cause ... an additional dynamic insulation which enhances the total thermal insulation of the material. The results showed that ... the comparatively thicker Thinsulate[®] could be entirely or partially replaced by the relatively thin MicroPCM Coated Fabrics." To say that we are excited about these test results would be a very big understatement!

During the symposium portion of an upcoming trade show discussed later in this newsletter, Dr. Pause will be making two technical presentations on Gateway's technologies to include a formal introduction of her testing methodologies.

During the two years that we have worked with Dr. Pause, we have been very impressed with her professionalism, technical expertise, enthusiasm, and charisma. Because Dr. Pause is such a recognized thermal insulation expert and asset in Europe, all of us at Gateway feel very honored that Barbara has accepted our invitation to join our management team this Fall.

Trademark Filed: With the assistance of Mitchell/ Paul Advertising and our attorneys, Holland & Hart, we recently selected and filed an application for registration of our trademark. A review of over 200 countries showed no identical marks in the classes in which we first filed in the U.S. All textile materials and end-use products which incorporate our thermally enhancing fibers and fabrics will carry the name "Outlast^{TM"} as the Company's trademark. The actual design and logo are still being developed, and we look forward to reporting the results to you.

Preparing for the Marketplace: Gateway has two parallel tracks which it is pursuing to enter the marketplace. The track on the right side involves direct sales of textile materials by Gateway to enduse product companies. The track on the left side involves licensing some of our same supplier partners and others to create their own sales of textile materials also to end-use product companies.

Left track update: One of our developing partners is currently negotiating a license with us to sell their thermally-enhanced fabrics to manufacturers of end-use product such as scuba diving skins, skiwear, activewear, and other specialty sports applications. Another partner is in the process of finalizing the development of microPCM acrylic fiber. We have been invited to meet with this second partner, a major fiber/chemical company in the U.K., in late April to discuss terms for a license which we expect will be both a right and left track relationship. Our gameplan is to license this partner to supply us with microPCM acrylic fiber so that we can sell it in the U.S. (right track) and to license them to sell the same fiber in Europe (left track).

Although we are in the middle of negotiations with a number of intentionally un-named large and small textile companies which have expressed an interest in developing specific portions or our technologies, we thought we'd reveal the name of one of those companies which seems to have a lot of visibility and following at the consumer level: W.L. Gore, makers of Gore-Tex^{\circ}. However, it should be noted that until we actually reach agreement, we cannot give assurances that we will.

<u>Right track update:</u> Until recently one of the Company's primary focuses has been to utilize a variety of strategic partners to sponsor the development of various end-use products incorporating our technology. And, as reported in our last newsletter, all of those development programs are still underway. However, in every case, the Company's close working relationship with Shawmut Mills has resulted in completed development and testing of other microPCM coated fabrics ahead of the progress being made by our end-use product developing-partners.

Because we have a special relationship with all of



these end-use product companies, we just started the process of contacting them for the purposes of revealing our test results and to give them the opportunity to obtain licenses for their specific enduse products ahead of their competition. A representative response after contacting just a few of our developing partners about our test results can be summarized by the comment made by one of them: "Wow!"

Gateway plans to make a major splash this June when we formally kick-off our initial sales efforts. We will introduce our first five Outlast[™] fabrics in Frankfurt, Germany at a major international textile trade show called Techtextil. Gateway has been selected to be one of ten companies sponsored by the U.S. Department of Commerce as a part of the American pavilion.

At Techtextil the stage will be set to announce to the world the birth of a revolutionary new insulation. Gateway is taking the lead role in this introduction and right track strategy by preparing to sell microPCM coated fabrics directly to consuming end-use product companies.

Other Licenses under negotiation: We recently made our first sales contact with a company which has not been involved in any of our development efforts. As a result of these efforts, we are currently negotiating a trademark license with a high-end manufacturer of hunting apparel consisting of pants, jackets, field coats, field vests, vests, overalls, and coveralls. Once the license is completed, Gateway will sell microPCM coated fabric to them.

Publicity: Gateway is coordinating a publicity campaign with Mitchell/Paul Advertising in order for us to obtain optimum exposure at Techtextil. We are also in the process of arranging a really first class introduction of Gateway and Outlast[™] fabrics to the world. A leading international textile magazine has expressed interest to Shawmut Mills, manufacturer of our coated fabrics, to feature Outlast[™] coated fabrics on the cover of the June issue of their magazine. An article has been coordinated between Shawmut and Gateway, and assuming we are so honored, anticipate that it will be available for distribution at Techtextil.

Management Team Additions: Gateway is pleased to announce that Mr. Greg L. Collins has joined the Company as Chief Financial Officer. Before joining Gateway, Greg served on the Company's board of directors and will retain this position. In addition to being responsible for the financial activities of the Company, Greg will also be primarily responsible for developing the Company's technologies in the fields related to building insulation. His 17 years of business experience includes working in public accounting, computer systems design, investment banking, and general management. From 1991 to 1992, Greg was the CEO of Raster Image Processing Systems, a computer software company; and, from 1988 to 1991, he was an investment banker with The Stamford Company, a joint venture partner with Shearson Lehman Hutton. Greg was the President of Digital Controls Corporation, a computer systems integrator from 1981 to 1988; and, upon its sale to Carlisle Companies, Inc. (a Fortune 500 company) in 1984. he became a divisional president. From 1978 to 1981, Greg worked in public accounting with Arthur Andersen & Company. Greg graduated from the University of Colorado in 1976 with a B.S. degree in Finance and received his MBA from the University of Michigan in 1978. Welcome, Greg!

Gateway is also pleased to announce that Barbara Pause, Ph.D. has agreed to join the Company's management team by approximately Fall, 1995. Barbara has seventeen years experience in research and development at a university research center and in the chemical industry. From 1982 to 1985, Barbara was employed in the research department of the largest chemical company in former East Germany, Leuna-Werke, and worked in the field of structure characterization of polymer materials. Since 1985 she has worked as a scientist at the Technical University of Leipzig and works primarily in the field of thermal insulation of textiles and other materials. Barbara has developed new testing methods for thermal insulation properties which are now being introduced as standard testing procedures in Europe. Barbara is also a member of standard working groups for protective clothing and technical insulation materials in Europe. In addition, Barbara has been an assistant professor at the Technical University of Leipzig for more than ten years and has taught Physics, Mathematics, Ergonomics, Safety, and Management. From 1973 to 1978, Barbara studied Mathematics, Experimental Physics and Theoretical Physics at the Technical University of Leipzig and graduated with a Ph.D. in Physics. Willkkommen, Barbara!

Private placement planned: Gateway is preparing for another private placement beginning the end of April in order to raise the funds needed for us to enter the marketplace. If you have an interest in receiving a copy of our Private Placement Memorandum, please let us or our investment bankers, Frederick & Company know.

All aboard: Our train is about to leave the station!

Sincerely, Ed Payne President



Outlast[™] Fabric Insulation

The conventional values "R" and "CLO" measure an insulator's ability to resist heat flow and is primarily dependent on the amount of trapped air contained in a fabric. Generally, and when compared to a fabric of equivalent thickness, the fabric with the greater amount of trapped air has a larger R or CLO value. Outlast[™] fabrics, developed jointly by Shawmut Mills, in West Bridgewater, MA, and Gateway Technologies, in Boulder, CO, contain microencapsulated phase change materials coated onto various substrates. Since Outlast™ insulation is such a dramatic innovation in thermal insulation, a better understanding of R or CLO is required to appreciate this new impact. For reference, Resistance (R) equals .155 CLO, and R = d / λ where d is fabric thickness and λ is thermal conductivity. The Materials Research and Test Center (MRTC), until recently a part of the Technical University of Leipzig in Leipzig, Germany, has designed new testing methods to evaluate insulation materials made from OutlastTM fabrics. Initial tests have recently been completed and the formula R = d / λ can now be better understood to account for observed physical data by adjusting λ based on the energy storage capacity of Outlast[™] fabrics. Mathematically, the factor λ , which is thermal conductivity, has been significantly reduced because of the Outlast[™] fabrics' increased capacity to hold heat. Thus, the values of R or CLO are correspondingly increased. The new R or CLO is called dynamic R or dynamic CLO for an equivalent thickness of a material. The impact of phase change materials contained in four Outlast[™] fabric insulations are shown in the graph below.

Warmth of Various MicroPCM Coated Outlast[™] Fabrics Compared to ...



"The test results show clearly that the PCMs create an increase in the thermal insulation of a material. The MicroPCMs cause, through the process of the phase change, an additional dynamic insulation which enhances the total thermal insulation of the material. The results showed that fabrics coated with MicroPCMs could insulate against the cold as well as the "leading insulation" battings, and the comparatively thicker "leading insulation" could be entirely or partially replaced by the relatively thin MicroPCM Coated Fabrics." Barbara Pause, Ph.D., MRTC



ANNUAL REPORT 1993

Fairmount CHEMICAL CO., INC.



Fairmount Chemical Co., Inc. (herein referred to as the "Company" or the "Registrant") was incorporated in New Jersey on June 18, 1938.

The business of the Company is the manufacture and distribution of chemicals, principal among which are (1) chemical intermediates for the imaging industry, (2) hydrazine and its salts and derivatives, for use in products manufactured by the Company and by various industries, (3) additives used in the manufacture of plastics and (4) other specialty chemicals, primarily pharmaceutical intermediates. The Company sells chemicals directly or through distributors to industrial users and manufactures intermediates for other manufactures.

The Company's major products and their markets include:

Plastic Additives

The Company manufactures and/or sells additives such an antioxidants, metal deactivators and UV-light absorbers which are used in the manufacture of plastics such as polyolefins, PVC, engineering resins and polyester resins. The Company develops its own products which it currently markets commercially to the plastics industry. Among the company's newest additives are BB/100, a UV-light absorber, DBM, an additive for non-cadmium PVC stabilizers and A0-20, an anti-oxidant for plastics.

Imaging Chemicals

The Company custom manufactures chemicals for various imaging customers. In addition, the Company manufactures and sells a wide range of imaging chemicals, including photosensitizers, stabilizers, antihalation dyes and diazo resins. The Company's imaging chemicals are used in the manufacture of photographic film and lithographic printing plates.

Other Specialty Chemicals

In addition to specialty chemicals for the imaging and plastics industries, the Company offers pharmaceutical intermediates and custom manufactured organic chemicals.

Hydrazine Based Products

Hydrazine and its salts and derivatives are used in the manufacture of many chemical products, including corrosion control chemicals for commercial boiler systems.





Certified Public Accountants

New Jersey Headquarters 150 John F. Kennedy Parkway Short Hills, NJ 07078

Independent Auditors' Report

The Board of Directors and Stockholders Fairmount Chemical Co., Inc.:

We have audited the accompanying balance sheets of Fairmount Chemical Co., Inc. as of December 31, 1993 and 1992, and the related statements of operations, stockholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Fairmount Chemical Co.. Inc. as of December 31, 1993 and 1992, and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.

As discussed in notes 1 and 8 to the financial statements, the Company adopted the provisions of the Financial Accounting Standards No. 109, "Accounting for Income Taxes," in 1993.

KPMG Rea Mauvick

March 11, 1994



Balance Sheets

December 31, 1993 and 1992

(Donar amounts rounded to nundreds)		
	<u>1993</u>	<u>1992</u>
Assets		
Current Assets:		
Cash	\$ 765,000	\$ 238,700
Accounts receivable-trade	1,105,200	1,225,800
Inventories (Note 2)	1,272,700	1,323,000
Prepaid expenses	161,400	256,100
Other current assets	17,000	32,900
Total Current Assets	3,321,300	3,076,500
Property, plant and equipment		
less accumulated depreciation of		
\$8,485,100 in 1993 and \$7,713,300 in 1992	5,171,600	5,700,500
Deferred costs and other assets	700	700
Total Assets	\$8,493,600	\$8,777,700
Liabilities and		
Stockholders' Equity		
Current Liabilities:		
Accounts payable	\$ 528,200	\$ 558.600
Accrued compensation	50,400	44.000
Other accrued liabilities	258,800	358.200
Total Current Liabilities	837,400	960,800
Accrued interest to affiliated party (Note 4)	491 600	357 200
Long-term notes navable to affiliated party (Note 4)	700.000	700.000
Accrued pension liability (Note 6)	461 600	155,000
Long-term debt to affiliated party (Note 4)	-	5,603,700
Stockholders' Fauity		
Preferred stock par value \$1 per share		
authorized = 10,000,000 shares: 5,400,000		
shares issued and outstanding (Note 10)	5 400 000	
Common stock, par value \$1 per share	5,400,000	-
authorized - 15 000 000 shares: 8 293 366 shares		
issued and outstanding in 1993 and 1997	8 203 400	8 202 400
Less: Treasury stock (at cost) - 500 shares	(500)	0,293,400
Capital in excess of par value	7 316 000	7 316 000
A computated deficit	(15.027.000)	(14,008,700)
Additional minimum liability (Note 6)	(15,027,900)	(14,998,700)
Auditional minimum haomity (Note 6)	(08,000)	
Total Stockholders' Equity	5,913,000	610,200
Total Liabilities and		
Stockholders' Equity	\$ 8,493,600	\$ 8,777 700

See accompanying Notes to Financial Statements.

Statements of Operations

Years Ended December 31, 1993 and 1992

(Dollar amounts rounded to hundreds, except per share data)

	Year ended De	ecember 31
	<u>1993</u>	<u>1992</u>
Net sales	\$9,831,200	\$ 8,967,800
Cost of goods sold	7,487,200	7,611,100
Gross profit	2,344,000	1,356,700
Research & development	393,000	397,600
Selling, general and administrative expenses	2,054,300	2,198,900
Operating loss	(103,300)	(1,239,800)
Interest expense to affiliate	167,300	495,100
Other expense (income) (Note 7)	(241,400)	1,500
Net loss before income taxes	(29,200)	(1,736,400)
Provision for income taxes	e	79,200
Net loss	\$ (29,200)	\$(1,815,600)
Loss per share	\$ -	\$ (.25)

See accompanying Notes to Financial Statements

Statements of Stockholders' Equity

Years Ended December 31, 1993 and 1992

(Dollar amounts rounded to hundreds)

	Preferred Stock	Comm	on Stock	Additic Treasur	v Stock	Canital in Excess	Accumulated	Minimum	
	Shares Amount	Shares	Amount	Shares	Amount	of par Value	Deficit	Liability	Total
Balance									
December 31, 1991		7,293,366	\$7,293,400	(500)	(\$500)	\$3,353,800	(\$13,183,100)		(\$2,536,400)
Net loss for 1992							(1,815,600)		(1, 815, 600)
Stock issued		1,000,000	1,000,000						1,000,000
Retirement of debt						3,962,200			3,962,200
Balance December 31 1992		995 206 8	8 203 400	(005)	(200)	7 316 000	(002 800 FT)		000 019
		000,000,00	001,077,0	(nnr)	(nnc)	000°01 c°1	(14,220,100)		010,200
Net loss for 1993							(29,200)		(29,200)
Additional minimum iability (Note 6)								(\$68,000)	(68,000)
Stock issued	5,400,000 \$5,400,000								5,400,000
3alance December 31, 1993	5,400,000 \$5,400,000	8,293,366	\$8,293,400	(200)	(\$500)	\$7,316,000	(\$15,027,900)	(\$68,000)	\$5,913,000

See accompanying Notes to Financial Statements

Statements of Cash Flows

Years Ended December 31, 1993 and 1992

(Dollar amounts rounded to hundreds)

		<u>Year Ende</u>	ed December 31
		1993	
Cash Flow From Operating Activities:			
Net Loss	\$	(29, 200)	\$(1,815,600)
Adjustments to reconcile net loss to			
net cash provided by (used) in operating activities:			
Depreciation		848,800	926,000
Increase (decrease) from changes in:			
Restricted cash		-	186,000
Accounts receivable-trade		120,600	(121,700)
Inventories		50,300	300,900
Prepaid expenses		94,700	31,000
Other current assets		15,900	(28,300)
Accounts payable		(30, 400)	(339,200)
Accrued compensation		6,400	(43,100)
Accrued interest to affiliate		134,400	357,200
Other liabilities		(161,600)	182,900
Cash Flow Provided by (Used) in Operating Activities		1.049.900	(363,900)
Cash Flow Used in Investing Activities:			
Capital expenditures		(319,900)	(269.900)
Net Cash Used in Investing Activities		(319,900)	(269,900)
Cash Flow Provided by (Used) in Financing Activities:			
Proceeds from Credit Facility		-	790.000
Repayment of long-term debt to affiliated party (Note 4)		(203.700)	(440,200)
Kepujment of tong term door to arringted party (1.000-1)		<u>, 2005, 1007</u>	
Net Cash Provided by (Used) in			
Financing Activities		(203, 700)	349 800
Increase (Decrease) in Cash		526 300	(284,000)
merease (Decrease) in Cash		520,500	(204,000)
Cash at Beginning of Period		238 700	522 700
		230,700	522,100
Cash at End of Period	\$	765.000	\$ 238 700
	<u>Ψ</u>	100,000	
Supplemental Disclosure of Cash Flow Information:			
Interest paid		\$ <u>82,100</u>	\$ <u>243,300</u>
Income taxes paid		\$ <u>58,300</u>	\$ <u> </u>
Non-cash transactions:			
Reduction of long-term debt to affiliated party (Notes 4A and	4B)		

Additional minimum liability (Note 6)

See accompanying Notes to Financial Statements

Notes to Financial Statements

(Dollar amounts rounded to hundreds, except per share data)

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

ORGANIZATION

Fairmount Chemical Co., Inc. ("Fairmount" or "the Company") is 57.8% owned by the Estate of William E. Leistner at December 31, 1993. On September 19, 1993, Dr. William E. Leistner, who was Chairman of the Board and Chief Executive Officer as well as majority stockholder of Fairmount, died. Fairmount is incorporated in the State of New Jersey and is in the business of manufacturing and distributing specialty chemicals.

RECLASSIFICATIONS

Certain prior year amounts have been reclassified to conform with the 1993 presentations.

REVENUE

Revenue is recognized on the date of invoice to a customer (invoices are prepared on or after the date of shipment).

CASH EQUIVALENTS

Cash equivalents are all highly liquid short-term investments with a maturity of three months or less.

INVENTORIES

Inventories are stated at the lower of cost or market. Cost is determined utilizing the last-in, firstout (LIFO) method and includes direct and indirect manufacturing costs. There are no general and administrative costs allocated to inventory.

PROPERTY, PLANT and EQUIPMENT

Property, plant and equipment are stated at cost and are depreciated using the straight line method over the estimated useful lives of the respective assets. Maintenance and repairs are charged to expense as incurred, and expenditures for renewals and betterments are capitalized. Gains or losses on sales or retirements are recognized in income.

INCOME TAXES

Effective January 1, 1993, the Company adopted the provisions of Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes". Under the asset and liability method of Statement 109, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under Statement 109, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

NOTE 2. INVENTORIES

Inventories at December 31, consisted of:

	1993	1992
Finished goods	\$ 997,400	\$1,128,800
Raw materials and work in process	275,300	194,200
	\$ 1,272,700	\$1,323,000

At December 31, 1993 the FIFO inventory value exceeded the LIFO inventory value by approximately \$76,000 compared to \$102,800 on December 31, 1992. Reserve for obsolete inventory was \$95,100 and \$120,400 at December 31, 1993 and 1992, respectively.

NOTE 3. PROPERTY, PLANT and EQUIPMENT

Property, plant and equipment, by major classification, at December 31, 1993 and 1992 is summarized as follows:

	1993	1992
Land	\$ 259,300	\$ 259,300
Buildings	4,340,700	4,252,400
Machinery and equipment	8,652,700	8,445,800
Vehicles	92,200	154,300
Furniture and fixtures	311,800	302,000
	13,656,700	13,413,800
Less: Accumulated depreciation	8,485,100	7,713,300
	\$ 5,171,600	\$5,700,500

Construction in progress of approximately \$8,900 and \$66,400 at December 31, 1993 and \$1,000 and \$2,200 at December 31, 1992 is included in buildings and machinery and equipment, respectively. During 1993, \$77,000 of fully depreciated assets was written off.

NOTE 4. LONG-TERM PAYABLE TO AFFILIATED PARTY

A. As of January 1, 1993 the Company owed William E. Leistner \$5,603,700 (The "Leistner Loan"). At the Board of Director's Meeting following the Annual Meeting, the board approved the sale of 5,400,000 shares of cumulative convertible Preferred Stock, \$1.00 par value per share, in a private transaction to William E. Leistner, the registrant's principal stockholder, in consideration of retirement of debt owed to Leistner of \$5,400,000 (See Note 10). The balance of the Leistner Loan was paid out of corporate funds of approximately \$203,700 during May, 1993. This transaction retired the principal of the Leistner Loan. The balance of Notes Payable to Affiliated Parties as of December 31, 1993 was \$790,000 which represents borrowings during 1992 under a separate financing, the Credit Facility Loan Agreement ("Credit Facility").

B. As of January 1, 1992, the Company owed Phoenix Partnership in Liquidation \$11,006,200 bearing interest at 5% per annum. In accordance with the Phoenix partnership agreement between Leistner and Knoepke, on March 31, 1992, the Estate of Knoepke transferred to Leistner all of its rights in and to the Company's debt to Phoenix so that all debt previously owed by the Company to Phoenix was now the Leistner Loan. On April 7, 1992, the Company accepted Leistner's offer to cancel 40% (\$4,402,480) of the Company's total indebtedness under the Leistner Loan for \$440,248. In addition, on December 28, 1992, the Company accepted Leistner's offer to purchase 1,000,000 shares of the Company's Common Stock, \$1.00 par value in exchange for the cancellation of \$1,000,000 of the Company's indebtedness under the Leistner Loan. Thus, at December 31, 1992, the balance of the Leistner Loan was \$5,603,700.

C. On March 20, 1992, the Credit Facility was created with monies contributed to a fund (the Fund) by Leistner and the Estate of Olga H. Knoepke (which is now controlled by the co-executors of the Estate of Leistner). At that date, the Fund provided the Company with a \$2,494,000 credit facility under which all borrowings bear interest at the rate of 5% per annum. There were no borrowings from the Credit Facility in 1993.

D. From and after April 1, 1992, the Leistner Loan had an interest rate equal to one percent above the prime rate announced by First Fidelity Bank, Newark, New Jersey Branch from time to time. Accrued interest payable for the Leistner Loan is \$491,600 and \$357,200 for 1993 and 1992, respectively. Repayment of the accrued interest on the Leistner Loan has been extended to July 15, 1995 by the executors of the Estate of Leistner.

Indebtedness to Related Parties - Not Current

(Dollar amounts rounded to hundreds)

	Phoenix Chemical <u>Company</u>	Estate of W.E. Leistner (Leistner Loan)	Fairmount Fund (60% Estate of W.E. Leistner, 40% Estate of O.H. Knoepke)
Balance as of December 31, 1991	\$ 11,006,200	\$ -	\$ -
Additions	-	11,006,200	790,000
Deductions	11,006,200	5,402,500	
Balance as of December 31, 1992		5,603,700	790,000
Additions	-	-	
Deductions		<u>5,603,700</u>	
Balance as of December 31, 1993	\$	\$	\$ <u>790,000</u>

NOTE 5. INCENTIVE STOCK OPTIONS

On April 19, 1983, the stockholders approved an Incentive Stock Option Plan (the "1983 Plan"), which was adopted by the Board of Directors on August 17, 1982. The 1983 Plan provides for granting incentive stock options to key employees to purchase not more than 75,000 shares of common stock of the Company. The option price per share cannot be less than the market price on date of grant. The option is exercisable after the optionee has been in the employ of the Company for at least one year after date of grant (subject to limited exceptions) and may be exercised for a period of 10 years from the date of grant unless an earlier date is stated in the option.

On July 10, 1984, the Board of Directors amended the 1983 Plan, increasing the number of shares in the Plan by 100,000 shares. This amendment was approved by the stockholders on May 15, 1985. On November 29, 1988, the Board of Directors further amended the plan, effective January 1, 1987, to reflect changes made by the Internal Revenue Code of 1986 by modifying the provisions regarding the annual dollar limitation with respect to grants of options and the sequence in which stock options may be exercised. On January 29, 1991, the Board of Directors adopted a new amendment to the Plan, increasing the maximum number of shares for which options can be granted under the Plan from 175,000 shares to 350,000 shares. The stockholders approved such amendment on May 6, 1991. In addition, on March 2, 1993, the Board of Directors adopted a new amendment to the Plan, increasing the maximum number of shares for which options can be granted under the Plan, increasing the maximum number of shares for which options can be granted under the Plan, increasing the maximum number of shares for which options can be granted under the Plan, increasing the maximum number of shares for which options can be granted under the Plan from 350,000 shares to 500,000 shares. The stockholders approved such amendment on May 4, 1993.

Stock option transactions under the plans were as follows:

		1993		1992	
	Shares	Price	Shares	Price	
Outstanding at beginning					
of the year	176,375	\$1.00-\$3.625	225,375	\$1.00-\$4.69	
Granted	139,000	\$1.00	5,000	\$1.00	
Canceled or expired	(14,000)	\$1,00-\$3.625	(54,000)	\$1.00-\$4.69	
Outstanding at end					
of the year	301,375	\$1.00-\$3.625	176,375	\$1.00-\$3.625	
Exercisable	162,375	\$1.00-\$3.625	171,375	\$1.00-\$3.625	

NOTE 6. PENSION PLAN

The Company has a defined benefit pension plan covering all of its employees. The benefits are based on years of service and the employees' compensation. The Company's funding policy is to contribute annually the statutory minimum. In 1993, the Company made identical contributions of \$93,100 and \$93,100 for the plan years of 1993 and 1992, respectively. The Company made no contribution in 1992. Assets of the plan are held by an insurance company in guaranteed annuity contracts.

The following table sets forth the plan's funded status and amounts recognized in the Company's balance sheet at December 31, 1993 and 1992.

Actuarial data related to plan obligations: Disclosure of plan obligation:

	<u>1993</u>	<u>1992</u>
Vested benefit obligation	\$ <u>2,959,700</u>	\$ <u>2,594,300</u>
Accumulated benefit obligation	\$ <u>3,050,200</u>	\$ <u>2,680,300</u>
Projected benefit obligation	\$(3,149,000)	\$(2,678,700)
Plan assets, fair value	<u>2,493,600</u>	2,348,300
Funded status	(655,400)	(330,400)
Remaining unrecognized net obligation		
at adoption of SFAS No. 87	88,600	99,700
Unrecognized prior service cost	(121,900)	(134,300)
Unrecognized net loss (gain)	200,100	(183,900)
Additional minimum liability	(68,000)	-
Accrued pension liability	<u>\$ (556,600)</u>	<u>\$ (548,900)</u>
Current portion	\$ 95,000	\$ 93,100
Long-term portion	\$ 461,600	\$ 455,800

If the additional minimum liability recorded exceeds unrecognized prior service cost and the unrecognized net obligation at transition, that difference, an unrecognized net loss, is reported as a separate component of stockholders' equity.

Net pension cost included in operating results for 1993 and 1992 amounted to \$126,000 and \$176,700, respectively, and was comprised of the following:

	<u>1993</u>	<u>1992</u>
Service cost	\$ 90,100	\$ 149,800
Interest cost on projected benefit obligation	223,400	187,300
Return on plan assets	(156,600)	(158,100)
Net amortization and deferral	(30,900)	<u>(2,300)</u>
Total net pension cost	\$ <u>126,000</u>	\$ <u>176,700</u>

The weighted average discount rate and the rate of increase in future compensation levels used in determining the actuarial present value of the projected benefit obligation were 7.5 percent and 5 percent, respectively, as of December 31, 1993 and 8.0 percent and 5 percent, respectively, as of December 31, 1992. The expected long-term rate of return on assets was 8 percent for the measurement period ending on each of those dates.

NOTE 7. SUPPLEMENTARY INCOME STATEMENT INFORMATION

	<u>1993</u>	<u>1992</u>
Maintenance and repairs	\$569,600	\$599,600
Taxes, other than income and payroll taxes	\$141,400	\$148,800
Duty drawback	\$(200,000)	

Duty drawback, included in Other expense (income), was primarily due to the receipt of prior year customs duty refunds. Duty drawback is a refund of customs duty paid on imported raw materials which are converted to finished products and subsequently exported. Exports of finished goods during the period of November 1, 1989 to December 31, 1992 accounted for \$180,000 of amounts received.

NOTE 8. INCOME TAXES (BENEFITS)

The Company has not provided for any federal or state income taxes for the year ended December 31, 1993 due to net operating losses.

Effective January 1, 1993, the Company adopted Statement of Financial Accounting Standards No. 109 (SFAS 109) on a prospective basis. There is no effect on the Company's statement of operations for the year ended December 31, 1993 as a result of the adoption of SFAS 109.

Deferred income taxes as of January 1, 1993 reflect the impact of "temporary differences" between amounts of assets and liabilities for financial reporting purposes and such amounts as measured by tax laws. These temporary differences are determined in accordance with SFAS 109 and are more inclusive in nature than "timing differences" as determined under previously applicable accounting principals.

Income tax expense for the years ended December 31, 1993 and 1992 differed from the amounts computed by applying the U.S. federal income tax rate of 34% to pretax loss as a result of the following:

	<u>1993</u>	<u>1992</u>
Computed "expected" tax benefit	\$(9,928)	\$(590,376)
Gain on retirement of debt	-	1,584,880
Reduction in income tax benefit resulting from		
change in the beginning of the year balance		
of the valuation allowance for deferred tax		
assets allocated to income tax expense	9,056	-
Non-deductible travel and entertainment	872	560
Alternative minimum tax	-	79,200
Net operating loss carryforward utilized		<u>(995,064</u>)
	\$ -0-	\$ 79.200

The temporary differences which give rise to a significant portion of deferred tax assets and liabilities at December 31, 1993 are presented below.

Deferred tax assets:	
Pension	\$222,640
Interest	196,600
Inventory	88,840
Research and development tax credits	434,000
Net operating loss - state	223,700
Net operating loss - federal	4,357,300
Total tax assets	5,523,080
Valuation allowance	(5,334,080)
Net deferred tax assets	189,000
Deferred tax liability:	
Depreciation deferred tax credit	(<u>189,000</u>)
Net deferred tax asset	\$ <u>-0-</u>

The Company has federal net operating loss carryforwards of approximately \$12,815,549 which expire in the year 2006.

In 1993 and 1992, the Company recorded \$0 and \$79,200, respectively, in federal alternative minimum corporate income tax. New Jersey does not have an equivalent tax for tax preference items.

NOTE 9. LOSS PER SHARE

Loss per share is based on the weighted average number of common shares outstanding during each year. The weighted average number of common shares outstanding were 8,292,866 and 7,301,063 in 1993 and 1992, respectively. Stock options and preferred stock are considered common stock equivalents for purposes of calculating loss per share.

NOTE 10. STOCK PURCHASES AND DISTRIBUTIONS

On May 4, 1993, the Company converted \$5,400,000 of amounts due Leistner to equity by issuing Leistner 5,400,000 shares of cumulative convertible preferred stock at \$1.00 per share. This transaction was approved by the Board of Directors. The preferred stock is convertible into common stock on a one-for-one basis. Dividends, as declared and determined by the Board from time to time, are cumulative. There were no dividends declared during 1993. In the event of involuntary liquidation, each preferred shareholder is entitled to cash payment, at par value plus declared but unpaid dividends in preference over the common stockholders. There are no restrictions on retained earnings.

The preferred shareholder may redeem at par value all or any portion of the shares of preferred stock owned and/or convert dollar-for-dollar all or any portion of the shares of preferred stock owned to common stock if there is significant change of ownership or control, sale of the business or reorganization.

On December 28, 1992, the Company converted \$1,000,000 of amounts due under the Leistner Loan to equity by issuing Leistner 1,000,000 shares of common stock at \$1.00 per share. This transaction was approved by the Board of Directors and increased Leistner's holdings from 3,790,200 (52.0%) to 4,790,200 shares (57.8%).

NOTE 11. FOREIGN SALES AND MAJOR CUSTOMERS

The business of the Company is the manufacturing and distribution of chemical products, principally to customers in the domestic market. Export sales in 1993 and 1992 amounted to \$2,747,335 and \$2,898,000, respectively. No single foreign country accounted for more than 10% of the Company's revenues in 1993 or 1992. In 1993 and 1992, one customer individually accounted for approximately 26.7% and 14.1% of sales, respectively.

NOTE 12. COMMITMENTS AND CONTINGENCIES

Liabilities for loss contingencies, including environmental remediation costs, arising from claims, assessments, litigation, fines and penalties, and other sources are recorded when the assessment and/or remediation cost are probable and the amount can be reasonably estimated. The Company has no knowledge of any potential loss contingencies.

Environmental compliance, waste disposal and regulatory fees totaled approximately \$94,000 and \$125,000 in 1993 and 1992, respectively. These costs are included in general and administrative expenses. The Company plans to install an above ground effluent system during 1994 and 1995 for approximately \$100,000 to comply with environmental regulations.

NOTE 13. SUBSEQUENT EVENT

On February 28, 1994, the executors of the Estate of Leistner agreed to extend to July 15, 1995, (1) the maturity of any indebtedness including accrued interest, under the Leistner Loan and (2) any amounts borrowed under the Credit Facility.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

LIQUIDITY AND CAPITAL RESOURCES

In 1993, the Company improved both its short term and long term liquidity position by (1) decreasing its operating loss by \$1,136,500 as a result of increased sales and decreased operating costs, (2) converting long term debt due William E. Leistner ("Leistner") into Preferred Stock and (3) securing the extension of the Credit Facility, (defined below), to finance operations through July 15, 1995, as more fully described below.

The Company's working capital increased by \$368,200 in 1993 resulting in working capital of \$2,439,000 compared to working capital of \$2,115,700 in 1992. The increase in working capital in 1993 was primarily due to an improvement in operating activities which was primarily responsible for the increase in cash balances of \$526,300. Also contributing to the increase in working capital were lower accounts payable - \$30,400, coupled with lower accrued liabilities - \$99,400, mainly due to a lower accrual for income taxes. These increases were partially offset by lower balances of trade receivables due to improved collections - \$120,600 and lower prepaid expenses - \$94,700 mainly due to converting commercial liability insurance payments to a monthly basis.

As of January 1, 1993, the Company owed Leistner \$5,603,700, (the "Leistner Loan"). At the Board of Director's Meeting following the 1993 Annual Meeting, the Board approved the sale of 5,400,000 shares of cumulative convertible Preferred Stock, \$1.00 par value per share, in a private transaction to William E. Leistner, the registrant's principal stockholder, in consideration of retirement of debt to Leistner of \$5,400,000. The balance of the Leistner Loan principal was paid out of corporate funds of approximately \$203,700 during May, 1993. Accrued interest for the Leistner Loan as of December 31, 1993 is \$491,600. On September 19, 1993 Leistner died. The executors of the Estate of Leistner have agreed to extend repayment of the interest until July 15, 1995. The balance of Notes Payable to Affiliated Parties as of December 31, 1993, was \$790,000 which represents borrowings during 1992 under a separate financing, the Credit Facility Loan Agreement ("Credit Facility").

On March 20, 1992, the Credit Facility was created with monies contributed to a fund (the Fund) by Leistner and the Estate of Olga H. Knoepke (which is now controlled by the co-executors of the Estate of Leistner). At that date, the Fund provided the Company with a \$2,494,000 credit facility under which all borrowings bear interest at the rate of 5% per annum. There were no borrowings from the Credit Facility in 1993.

As of January 1, 1992, the Company owed Phoenix Partnership in Liquidation \$11,006,200. Phoenix was a partnership of which Leistner was a 60% partner and Knoepke was a 40% partner; it was liquidated on December 31, 1991 following the death of Knoepke on October 27, 1991. In accordance with the partnership agreement between Leistner and Knoepke, on March 31, 1992 the Estate of Knoepke sold and transferred to Leistner all of its rights in and to the Company's indebtedness to Phoenix so that all debt previously owed by the Company to Phoenix was now owed to Leistner. During 1992 the Company reduced the amount of its indebtedness under the Leistner Loan by \$5,402,480. On April 7, 1992, Leistner offered to cancel 40% (\$4,402,480) of the Company's total indebtedness under the Leistner Loan for \$440,248 and the Company's Board of Directors accepted such offer. On December 28, 1992, Leistner offered to purchase 1,000,000 shares of the Company's common stock, par value of \$1.00 per share, in exchange for the cancellation of \$1,000,000 of indebtedness under the Leistner Loan. This transaction increased the number of common shares outstanding by 13.7%. The Company's Board of Directors accepted the offer. Prior to March 31, 1992, the interest rate on the debt owed to Phoenix was 5% per annum. From and after April 1, 1992, the Leistner Loan had an interest rate equal to one percent above the prime rate announced by First Fidelity Bank, Newark, New Jersey Branch. Accrued interest payable on the Leistner Loan for 1993 and 1992 was \$491,600 and \$357,200, respectively.

Management Discussion and Analysis (Continued)

The Company's capital expenditures of approximately \$319,900 in 1993 were used to purchase and install a production drying system, equipment replacements, laboratory equipment and to comply with the various rules and regulations for environmental and human health.

Financial Accounting Standards No. 109 "Accounting for Income Taxes" adopted in 1993 did not have any material effect on the Company's financial condition or results of operations. Financial Accounting Standards No. 106 "Employers Accounting for Post Retirement Benefits Other Than Pensions" did not have an effect on the Company's financial condition or results of operations in 1993 or 1992.

RESEARCH AND DEVELOPMENT

During the years ended December 31, 1993 and 1992, the Company spent approximately \$393,000 and \$397,600 respectively, in research and development activities. During 1992, the Commercial Development group was disbanded. The Commercial Development Group was a designation given to a group of employees who had the responsibility to operate a pilot plant used to manufacture new products under development for marketing purposes. It was decided that a specific "group" was not needed and that the regular production personnel should operate the pilot plant as needed. The employees within that group were reassigned within the Company and consequently overhead expenses were not affected. The Company expects 1994 Research and Development expenditures to approximate the 1993 level.

ENVIRONMENTAL LAWS AND GOVERNMENT REGULATIONS

The chemical industry, including the Company, is subject to environmental laws and regulations. The Company believes it has the ability in terms of staff and financial resources to comply with the present environmental statutes applicable to its business. The Company has an ongoing program to treat and monitor its waste water effluent for compliance with the requirements of the local laws and regulations. Samples are analyzed for biodegradable oxygen demand. A complete chemical analysis is performed monthly by an outside testing laboratory. All results are forwarded to the New Jersey Department of Environmental Protection.

The Company employs an environmental engineer to monitor the Company's compliance with environmental laws and regulations. The Company engineer inspects pipelines, tank dikes and equipment for leakage and any evidence of potential soil contamination. The Company utilizes a training program which includes instruction on the Company's responsibilities with respect to environmental laws and regulations. The Company's chemical processing operations are carried out at atmospheric pressure or vacuum, thereby mitigating the potential for atmospheric pollution from equipment rupture.

The Company has not received notice of any of its materials having been the source of environmental pollution from off-site dumps. The Company has no knowledge of contamination of soil on the premises. There are no underground storage tanks on the Company's property. The Company is engaged in a program of connecting its internal effluent system to an above ground piping system. The effluent is discharged to the local sewage commission. On March 24, 1994 the Company received and entered into a consent order of final judgement with the local sewage commission covering the period from July 1, 1991 to the date of the consent order. During this period, the Company exceeded discharge limits for toluene on ten separate occasions. The Company will pay a settlement in the amount of \$10,000 and agrees to have toluene emissions under the discharge limit by October 1, 1994. The Company's management is not aware of any other lawsuit or administrative action arising under environmental laws or regulations arising out of or in connection with its business operations or of any pending or threatened action by any environmental regulatory body.

Environmental compliance, waste disposal and regulatory fees totaled approximately \$94,000 and \$125,000 in 1993 and 1992, respectively. These costs are included in general and administrative expenses.

Management Discussion and Analysis (Continued)

RESULTS OF OPERATIONS 1993 - 1992

Net sales for 1993 were \$9,831,200, an increase of \$863,400 or 9.6% as compared to 1992. The increase in net sales was primarily due to increased sales volume of imaging chemicals - \$1,505,600; partially offset by lower volumes of plastic additives and hydrazine chemicals. Sales volumes of other specialty chemicals were slightly higher, partially offset by lower prices due to competitive pressures in pharmaceutical intermediates. Gross profit for 1993 increased \$987,300 versus 1992 primarily due to increased sales volumes of high margin imaging chemicals - \$697,400. Summarized sales information for the last two years is as follows:

	1993	1992
Plastic additives	21%	29%
Imaging chemicals	41%	28%
Hydrazine chemicals	16%	19%
Other specialty chemicals	22%	24%
	100%	100%

The operating loss for 1993 decreased \$1,136,500 compared to 1992. This decreased loss was a result of an increase in sales volumes, coupled with an improved product mix resulting in more favorable margins, lower cost of materials, lower legal expenses and lower selling expenses.

Interest expense for 1993 was \$167,300 compared to \$495,100 in 1992. The decrease in interest expense was primarily due to the conversion of \$5,400,000 of the Leistner Loan into preferred stock during May, 1993.

OUTLOOK

The Company has budgeted approximately \$440,000 for capital expenditures in 1994. Major expenditures will be for the purchases of a boiler for steam generation, material handling equipment, process equipment and the installation of an effluent system to comply with environmental regulations.

The improving trend in operating results experienced in 1993 will depend on maintaining the 1993 level of sales volumes to a major customer. The Company believes these 1994 sales volumes will equal or exceed 1993 volumes. Net income in 1994 also will be favorably impacted by the absence of interest expense on the Leistner Loan that was converted into preferred stock in 1993.

To meet its liquidity requirements, including its capital program, the Company will look primarily to cash generated from operations, its available cash balances, which increased substantially during 1993, and to its Credit Facility. The Company believes these sources to be adequate to meet operating requirements.

PRICE RANGES OF COMMON STOCK

On July 5, 1991, the Company's shares of common stock were deleted from NASDAQ as a result of the Company's failure to meet the capital and surplus requirements as set forth in Section 1(c)(3), Part II of Schedule D of the NASD by-laws. The Company's common stock is now traded over the counter and is not quoted on the automated quotation system of a registered securities association. For each fiscal quarter, the charts below reflect the high and low bid prices for the Common Stock. The bid prices reflect inter-dealer quotations without retail mark-ups, mark-downs or commissions and do not necessarily represent actual transactions. Price Ranges of Common Stock were as follows:

Common Stock Bid Prices

	<u>1</u>	<u>993</u> 1	1	<u>992</u> 1
Quarter	High	Low	High	Low
First	1/20	1/20	1/20	1/20
Second	1/20	1/20	1/20	1/20
Third	1/20	1/20	1/20	1/20
Fourth	1/20	1/20	1/20	1/20

There were approximately 327 stockholders of record at December 31, 1993. The Company did not declare or pay any dividends in 1993 and 1992.

DIRECTORS

WILLIAM SETZLER Chairman of the Board, Chief Executive Officer Fairmount Chemical Co., Inc

LEONARD R. WOOD President, Chief Operating Officer Fairmount Chemical Co., Inc. Director, Auric Corporation, Newark, NJ Director, SACHEM Corp. Austin, TX

SONDRA JACOBY Vice President, Secretary, Treasurer Chief Financial Officer Fairmount Chemical Co., Inc

OFFICERS

WILLIAM SETZLER Chairman of the Board, Chief Executive Officer

LEONARD R. WOOD President, Chief Operating Officer

CHARLES KWIATKOWSKI Executive Vice President

ZAVEN S. ARIYAN, Ph.D Vice President Government Compliance & Technical Services

SEYMON MOSHCHITSKY Vice President Research

JOTI KOCHERLAKOTA Vice President Manufacturing

SONDRA JACOBY Vice President Secretary, Treasurer Chief Financial Officer GENERAL COUNSEL Ober, Kaler, Grimes & Shriver 1345 Avenue of the Americas New York, NY 10105-0010

AUDITOR KPMG Peat Marwick 150 John F. Kennedy Parkway Short Hills, New Jersey 07078

TRANSFER AGENT REGISTRAR Continental Stock Transfer 2 Broadway New York, NY 10004

STOCK TRADING Fairmount Chemical Co., common stock was listed in the NASDAQ system under the symbol FMTC and was traded in the Overthe-Counter market. On July 5, 1991 FMTC was deleted from NASDAQ.

FORM 10-KSB

A copy of the Company's Annual Report on Form 10-KSB for 1993, as filed with the Securities and Exchange Commission, may be obtained by Stockholders upon written request to: Secretary, Fairmount Chemical Co., Inc., 117 Blanchard St., Newark, NJ 07105 ANNUAL MEETING

The Annual Meeting of Stockholders will be held at the Corporate Office of the Company on Tuesday, May 24, 1994, at 10:00 AM.

FAIRMOUNT CHEMICAL CO., INC. 117 Blanchard Street Newark, New Jersey 07105

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

May 24, 1994

To The Stockholders of Fairmount Chemical Co., Inc.

The Annual Meeting of Stockholders of FAIRMOUNT CHEMICAL CO., INC. (the "Company") will be held at the Company's offices, 117 Blanchard Street, Newark, New Jersey, on Tuesday, May 24, 1994, at 10:00 A.M., local time, for the following purposes:

- 1. To elect three directors for the ensuing year.
- 2. To vote on the ratification of the appointment of KPMG Peat Marwick as independent certified public accountants for the Company for 1994.
- 3. To vote on a proposed Restated Certificate of Incorporation, a copy of which is annexed hereto as <u>Exhibit A</u>, which amends and restates the Company's current Restated Certificate of Incorporation.
- 4. To transact such other business as may properly come before the meeting.

This Notice is accompanied by the Company's Annual Report to Stockholders for the year ended December 31, 1993, which shall not be deemed to be soliciting material or incorporated in the annexed Proxy Statement by reference.

The Board of Directors has fixed the close of business on April 27, 1994, as the record date for the determination of stockholders entitled to notice of, and to vote at, the meeting or any adjournment thereof. Whether or not you plan to attend the meeting, you are urged to complete the enclosed proxy card and sign and return it promptly in the enclosed postpaid return envelope. Returning the proxy card will not affect your right to revoke the proxy or to vote in person at the meeting.

By Order of the Board of Directors,

SONDRA M. JACOBY Secretary

Dated:

April 27, 1994 Newark, New Jersey

FAIRMOUNT CHEMICAL CO., INC. 117 Blanchard Street Newark, New Jersey 07105

PROXY STATEMENT

SOLICITATION AND REVOCATION OF PROXIES

The enclosed proxy is solicited by the Board of Directors of Fairmount Chemical Co., Inc. (the "Company") to be voted at the Annual Meeting of Stockholders to be held on Tuesday, May 24, 1994, and at any adjournment thereof (the "Annual Meeting"). The proxy is revocable at any time prior to its exercise either by execution of another proxy or by voting in person at the Annual Meeting.

The stock transfer books of the Company will not be closed, but the Board of Directors has fixed the close of business on April 27, 1994 as the record date for determining the stockholders entitled to notice of and to vote at the Annual Meeting or at any adjournment thereof. On that date, there were 8,292,866 shares of common stock (the "Common Stock") outstanding. Each share is entitled to one vote on each matter properly brought before the meeting.

The Bylaws of the Company provide that, except as otherwise required by law or by the Company's Restated Certificate of Incorporation, a majority in interest of all the stock issued and outstanding and entitled to vote shall constitute a quorum for the consideration of any question, but a lesser interest may adjourn the meeting from time to time. The affirmative vote of a plurality of the votes cast at the Annual Meeting is required to elect the three nominees for director named on the proxy, and the affirmative vote of a majority of the votes cast is required to ratify the appointment of KPMG Peat Marwick as independent certified public accountants for the Company for 1994, and to approve the proposed Restated Certificate of Incorporation.

To assure adequate representation at the Annual Meeting, stockholders are requested to sign and return the enclosed proxy promptly. The shares represented by the proxy will be voted in accordance with the instructions of the person executing the same. In the absence of instructions to the contrary, proxies will be voted "FOR" the election of the three nominees for director named in the proxy, and "FOR" the ratification of the appointment of KPMG Peat Marwick as independent public accountants for the Company for 1994, and "FOR" the approval of the proposed Restated Certificate of Incorporation.

This Proxy Statement and the enclosed form of Proxy are first being mailed on or about April 27, 1994.

VOTING SECURITIES AND PRINCIPAL HOLDERS THEREOF

Principal Holders of Voting Securities

To management's knowledge, the table set forth below indicates the beneficial ownership (direct unless otherwise indicated) of the Common Stock of the Company as of April 6, 1994 by persons owning more than 5% of such stock and by all officers and directors of the Company as a group.

Name and Address of Beneficial Owner or Designation of Group Class	Amount and Nature of <u>Beneficial</u> <u>Ownership</u>		<u>Percentage</u>
Estate of Olga H. Knoepke c/o Martin Rosen, Esq. Rosen & Reade 757 Third Avenue New York, New York 10017	2,526,134	(1)	30.5%
Estate of William E. Leistner c/o Fairmount Chemical Co., Inc. 117 Blanchard Street Newark, New Jersey 07105	4,790,200	(2)	57.8%
All Officers and Directors as a Group (7) Including Directors Named Below	4,794,200		57.8%

The Estate of William E. Leistner (the "Leistner Estate"), which controls 57.8% of the outstanding shares of the Company, can elect the entire Board of Directors, can ratify the appointment of KPMG Peat Marwick as independent certified public accountants, and approve the proposed Restated Certificate of Incorporation.

As of April 6, 1994, the directors and nominees listed below are the beneficial owners (direct unless otherwise indicated) of the Common Stock of the Company as follows:

Name of Director or Nominee	Amount and Nature of Beneficial Ownership	Percentage
Sondra M. Jacoby	4,790,200 (2)	57.8%
William E. Setzler	4,790,200 (2)	57.8%
Leonard R. Wood		

(1) The 2,526,134 shares were distributed to the Estate of Olga H. Knoepke (the "Knoepke Estate") as the result of the dissolution and winding up of Phoenix Chemical Company ("Phoenix"), a partnership in which Knoepke was a 40% general partner. On October 27, 1991 Knoepke died and the partnership has been dissolved. In accordance with the terms of the partnership agreement between Knoepke and William E. Leistner ("Leistner") (who was a 60% general partner in Phoenix), 60% of the 6,315,334 shares formerly held by Phoenix were distributed to Leistner and 40% of such shares were distributed to the Knoepke Estate.

(2) Leistner died on September 19, 1993. Sondra M. Jacoby ("Jacoby"), the widow of the deceased Leistner, and William E. Setzler ("Setzler") are co-executors of the Leistner Estate. Includes 3,789,200 shares distributed to Leistner as the result of the dissolution and winding up of Phoenix. See Note (1) above. Does not include 4,000 shares owned by Leistner's widow, Jacoby, as to all of which shares beneficial ownership is disclaimed. Jacoby and Setzler disclaim any beneficial ownership of the Leistner Estate's Shares.

ITEM ONE. ELECTION OF DIRECTORS

Nominees

There are three directors to be elected. The Board of Directors recommends a vote "FOR" the election as directors of the following nominees, and unless otherwise directed, proxies received in response to this solicitation will be voted for the election as directors of the following three nominees to serve until the next Annual Meeting and until their successors are elected and qualified. Each nominee is currently a director of the Company. Setzler and Leonard R. Wood were elected at the 1993 Annual Meeting of Stockholders, and Jacoby was elected by the Board of Directors in October, 1993 to fill the vacancy created by the death of Leistner.

If for any reason any of these nominees becomes unable or unwilling to serve at the time of the meeting, it is the intention of the persons named in the proxy to vote the proxies for the remaining nominees and for such substitute nominees as the Board of Directors may designate, or if none are designated, the size of the Board will be reduced. It is not anticipated that any nominee will be unavailable for election.

The following table and text furnishes for each nominee, his or her name, age, principal occupation for the past five years and the year he or she first became a director of the Company.

Name and Age	Principal Occupation
Sondra M. Jacoby, 56 Director since October, 1993	Jacoby was elected a director and Chief Financial Officer of the Company in October, 1993 to fill the vacancies created by the death of Leistner. She was elected a Vice President and Treasurer of the Company at the same time. She is co-executor of the Leistner Estate. Secretary of the Company since May, 1992 and prior to that a director of purchasing for the Company since September, 1984. Jacoby is responsible for all financial operations and purchasing, including chemicals, as well as for maintenance and repairs and all bids for capital improvements. Director of the Company since 1991.
William E. Setzler, 67 Director since 1991	Director of the Company since 1991. Chairman of the Board of Directors and Chief Executive Officer of the Company since October, 1993. Consultant (self-employed) (June 1989-1991). Executive Vice Presi- dent of Witco Corp., a major international specialty chemical manufacturer listed on the New York Stock Exchange (1975 to 1989). Director of Witco Corp. (1975 to April, 1990).
Leonard R. Wood, 71 Director since 1990	Director of the Company since 1990. President and Chief Operating Of- ficer of the Company since July, 1990. Group Vice President of Witco Corp., a major international specialty chemical manufacturer listed on the New York Stock Exchange (until April 1988). Director of SACHEM Corp. in Austin, Texas (since 1988). Director of Fidelity Chemical Corporation in Newark, New Jersey (since 1988).

Prior to 1992, the requirements for funds used in operations and capital expenditures were primarily funded by loans from Phoenix Chemical Company ("Phoenix"). Phoenix was a

partnership of which William E. Leistner ("Leistner") was a 60% partner and Olga H. Knoepke ("Knoepke") was a 40% partner; it was liquidated on December 31, 1991 following the death of Knoepke on October 27, 1991. Leistner, who died on September 19, 1993, was a director, Chairman of the Board, Chief Executive Officer and Chief Financial Officer of the Company. Knoepke was a director of the Company from 1982 until October 27, 1991.

In accordance with the partnership agreement between Leistner and Knoepke, on March 31, 1992 the Knoepke Estate sold and transferred to Leistner all of its rights in and to the Company's indebtedness to Phoenix so that all debt previously owed by the Company to Phoenix was thenceforth owed to Leistner (such debt hereinafter referred to as the "Leistner Loan"). On April 7, 1992, 40% (\$4,402,480) of the Company's total indebtedness under the Leistner Loan was cancelled for \$440,248. On December 28, 1992 Leistner purchased 1,000,000 shares of the Company's common stock, par value, \$1.00 per share, in exchange for the cancellation of \$1,000,000 of indebtedness under the Leistner Loan. The balance of the Leistner Loan was \$5,603,700 as of December 31, 1992. Prior to March 31, 1992, the interest rate on the Leistner Loan was 5% per annum. From and after April 1, 1992, the Leistner Loan bears interest at a rate equal to one percent above the prime rate announced by First Fidelity Bank, Newark, New Jersey Branch, from time to time. In May 1993, Leistner purchased 5,400,000 shares of the Company's Convertible Cumulative Preferred Stock, par value \$1.00 per share (the "Preferred Stock"), in exchange for the cancellation of \$5,400,000 of indebtedness under the Leistner Loan. The Company authorized the Preferred Stock in its Restated Certificate of Incorporation, which was filed with the Secretary of State of New Jersey on May 13, 1993. Holders of Preferred Stock are entitled to convert each of their shares of Preferred Stock into an equal number of Common Stock. Shares of Preferred Stock are redeemable under certain circumstances. All interest on the balance of the Leistner Loan continues to be accrued, and will be paid on or before the due date of such Loan. The due date for repayment of the indebtedness under the Leistner Loan was extended by the co-executors of the Estate of Leistner to July 15, 1995. As of January 1, 1994, the balance due under the Leistner Loan was \$491,600.00.

Pursuant to the Phoenix partnership agreement, the Knoepke Estate transferred \$800,000, and Leistner transferred \$1,200,000 to a special fund to be used, as and to the extent Leistner, in his sole discretion, deemed advisable, for the Company (the "Fund"). As reported on the Company's Form 10-K for the year ended December 31, 1991, on March 20, 1992, pursuant to a 1992 Credit Facility Loan Agreement ("1992 Credit Facility") between the Fund, as lender and the Company, as borrower, and Leistner, the Fund provided the Company with a credit facility (which is now controlled by the co-executors of the Estate of Leistner), under which it may borrow \$2,494,000. As of December 31, 1993, the
Company had borrowed \$790,000 under the 1992 Credit Facility. As of April 2, 1994, the Company has not borrowed any additional amounts under the Credit Facility. On February 23, 1994, the coexecutors of the Estate of Leistner agreed to extend the maturity of any amounts borrowed under the Credit Facility until July 15, 1995.

The Leistner and the Knoepke Estates may be deemed to be "control persons" of the Company as such term is defined in Exchange Act Rule 12b-2.

Executive Officers of the Company

The name, age and all positions and offices with the Company of each executive officer is set forth below:

Name and Age		<u>Position and Offices</u>
Dr. Zaven S. Ariyan, 60	• •	Vice President, Government Compliance and Technical Service
Sondra M. Jacoby, 56	• •	Director, Vice President; Chief Financial Officer; Secretary; Treasurer
Paramjyoti Kocherlakota, 59 .	• •	Vice President, Manufacturing
Charles T. Kwiatkowski, 42 .	• •	Executive Vice President
Dr. Semyon Moshchitsky, 61 .	• •	Vice President, Research and Development
William E. Setzler, 67	• •	Director, Chairman of the Board; Chief Executive Officer
Leonard R. Wood, 71	• •	Director, President, Chief Operating Officer

The principal occupations for the past five years and stock ownership of Sondra M. Jacoby, William E. Setzler and Leonard R. Wood are described under the sub-caption "Nominees" above.

Dr. Zaven S. Ariyan was elected Vice President, Research and Development, from November, 1981 to March, 1990, and was a Director of Research and Development from 1979 to 1981. In March 1990, Dr. Ariyan was elected Vice President of the Company, Government Compliance and Technical Service. Dr. Ariyan is involved in customer relations at the technical level and the registration of chemicals, both domestically and internationally. Paramjyoti Kocherlakota has been Vice President, Manufacturing since May, 1993. Prior thereto, he was appointed Plant Manager in April, 1990 responsible for supervising all manufacturing, maintenance and operational activities at the Company's plant.

Charles T. Kwiatkowski was elected Vice President, Manufacturing of the Company in August, 1992 and was then appointed Executive Vice President of the Company in June, 1993. From February, 1992 until June, 1992, Mr. Kwiatkowski was a consultant to the Company responsible for reviewing the Company's manufacturing operations. From August, 1986 until December, 1991, Mr. Kwiatkowski was President and Chairman of the Board of Columbia Organic Chemical Co., Inc. ("Columbia Organic"), a small South Carolina specialty chemical manufacturer. Mr. Kwiatkowski's responsibilities at Columbia Organic included supervision of manufacturing, sales and accounting aspects of the business.

Dr. Semyon Moshchitsky was elected Vice President, Research and Development of the Company in August, 1992. Prior to that Dr. Moshchitsky had been manager of the Company's Research and Development Department for over five years, and a Senior Research Chemist at the Company starting in 1982.

Company executive officers are elected by the Board of Directors to hold office until the first meeting of the Board following the next Annual Meeting of Stockholders and until their respective successors are elected. All officers are subject to removal, with or without cause, by the Board of Directors at any time.

Meetings of the Board of Directors and Audit Committee

During 1993, the Board of Directors held five meetings, each of which was attended by all incumbent directors. Prior to the 1993 Annual Meeting of Stockholders the Audit Committee consisted of three members. During 1993, the Audit Committee held one formal meeting (at which two of the then three incumbent members of the Audit Committee were present) and met informally at the directors' meeting and reviewed the results of the 1992 audit, the Company's internal accounting controls, interim financial statements, and the proposed scope of the 1993 audit. Following the 1993 Annual Meeting, the size of the Audit Committee was reduced from three members to one, and William E. Setzler was appointed to serve on such Committee. The Company does not have a nominating or compensation committee.

COMPENSATION OF DIRECTORS AND EXECUTIVE OFFICERS

Compensation of Directors

In 1993, directors who were not also officers of the Company were paid an annual retainer of \$2,000 plus \$250 for each Board meeting attended and each Audit Committee meeting attended not held in conjunction with a Board meeting; directors who were also officers were not compensated for being directors.

Executive Compensation

Information with respect to the Chief Executive Officer and each individual serving as an executive officer of the Company on December 31, 1993 whose aggregate remuneration exceeded \$100,000 during 1993 is set forth in tabular form below with respect to each of the Company's last three fiscal years:

Name and Position	<u>Fiscal</u> <u>Year</u>	Salary
William E. Setzler	1993 1992 1991	\$ 1,731 N/A N/A
Leonard R. Wood	1993 1992 1991	\$ 87,377 \$104,722 \$103,195

During the past three fiscal years, no compensation was awarded to, earned by or paid to any of the named executives (in the form of salary, bonus, stock appreciation rights, stock options or any other form of cash or non-cash consideration) other than as set forth in the chart above and as set forth below in the summary regarding grants under the Company Incentive Stock Option Plan. Leonard R. Wood and Sondra M. Jacoby were granted the use of a leased company car in 1993.

Pension Plan

The Company maintains a defined benefit pension plan for its employees. Pension benefits to be paid from, and contributions to, the plan are of a unit benefit type related to basic salary including a base wage, overtime payments and shift premiums, but excluding bonuses, commissions and other special additional compensation, and are not subject to any deduction for Social Security benefits. The following table sets forth the estimated benefits payable as a life annuity:

		rear	S OI Serv	TCE		
Final Average <u>Annual Pay</u>	10	15	20	25	30	35
\$15,000	\$ 1,800	\$ 2,700	\$ 3,600	\$ 4,500	\$ 5,400	\$ 6,300
30,000	4,068	6,102	8,136	10,170	12,204	14,238
45,000	6,843	10,265	13,686	17,108	20,529	23,951
60,000	9,618	14,427	19,236	25,045	28,854	33,663
75,000	12,393	18,590	24,786	30,983	37,179	43,376

Estimated annual benefits upon retirement for all officers as a group are \$41,548.

Incentive Stock Option Plan

The following table shows, as to the two officers named in the section entitled "Executive Compensation", the number of options granted by the Company during the last fiscal year and the average option price per share of such options. No shares have been acquired through the exercise of options during such period.

		Options	Options Granted		
<u>Name of Individual</u>	Number of <u>Shares</u>	Average Option Price <u>Per Share</u>	% Of Total Options Granted to <u>Employees</u>	Expiration Date	
William E. Setzler	0	N/A	N/A	N/A	
Leonard R. Wood	15,000	\$1.00	10.8%	May 3, 2003	

During 1993, options to purchase 124,000 shares were granted to other employees of the Company under the Plan at an average option price per Share of \$1.00, expiring May 3, 2003. No shares have been acquired through the exercise of such options.

Other than as described in this Proxy Statement and provisions under a union contract, the Company does not have, and within the past five years has not had, any other bonus plan, profit-sharing, pension, retirement, stock option, stock purchase, deferred compensation or other remuneration or incentive plan for its directors, officers and employees. The Company paid a holiday bonus at the end of 1993 to employees in the aggregate amount of \$44,350, of which \$36,000 was awarded to officers of the Company. The Company's securities are not traded on any exchange. There has been no over-the-counter market activity with respect to the Common Stock since the last quarter of 1991, at which time the highest per share asked and bid prices of such shares were, respectively, \$0.05 and \$0.05.

As of April 5, 1994, options for 290,375 shares are outstanding under the Plan held by 27 persons, including six executive officers who hold options to purchase 167,375 shares. As of April 5, 1994, the average per share exercise price of all options under the Amended Plan is \$1.24.

ITEM TWO. RATIFICATION OF APPOINTMENT OF AUDITORS

Subject to stockholder ratification, the Board of Directors, upon the recommendation of the Audit Committee, has reappointed the firm of KPMG Peat Marwick as independent certified public accountants to audit the financial statements of the Company for 1994, a service which such firm has furnished to the Company since 1982. If the appointment is not ratified by the stockholders, the Board of Directors may reconsider its appointment. One or more members of this firm are expected to be present at the Annual Meeting, will have an opportunity to make a statement, and will be available to respond to appropriate questions.

The Board of Directors recommends a vote "FOR" the ratification of the appointment of KPMG Peat Marwick as independent certified public accountants to audit the financial statements of the Company for 1994.

ITEM THREE. APPROVAL OF THE PROPOSED RESTATED CERTIFICATE OF INCORPORATION

Paragraph Third - 6 of the Restated Certificate of Incorporation of the Company sets forth certain circumstances (each defined therein as an "Organic Change") which trigger the right of holders of the Company's Preferred Stock, \$1.00 par value per share ("Preferred Stock"), to require the Company to redeem its Preferred Stock, or to convert its Preferred Stock into Common Stock under the terms more specifically set forth therein. An Organic Change includes generally, among other things, any sale of substantially all the assets of the Company and mergers to which the Company is a party. The current Restated Certificate of Incorporation also defines Organic Change to include material changes in the nature of the Company's business ("Material Changes").

Subject to stockholder ratification, the Company shall file with the Secretary of State of New Jersey a proposed Restated Certificate of Incorporation, a copy of which is annexed hereto as Exhibit A, which shall amend and restate the Company's current Restated Certificate of Incorporation to eliminate Material Changes from the definition of Organic Change (<u>i.e.</u>, deleting Paragraph Third-6(e) thereof). That is, if the proposed Restated Certificate of Incorporation is approved by the Stockholders, material changes in the nature of the Company's business will no longer trigger the right of the holders of the Company's Preferred Stock to the redemption of its Preferred Stock, or conversion of its Preferred Stock into Common Stock. The Board of Directors approved the proposed Restated Certificate of Incorporation on March 29, 1994.

The Board of Directors recommends a vote "FOR" the approval of the proposed Restated Certificate of Incorporation.

SUBMISSION OF STOCKHOLDER PROPOSALS

Proposals of stockholders intended to be submitted at the next Annual Meeting of Stockholders scheduled to be held May 9, 1995 must be received by the Company on or before December 8, 1994 to be eligible for inclusion in the Company's proxy statement and accompanying proxy for such meeting.

EXPENSES OF SOLICITATION

Solicitation of proxies is being made by management on behalf of the Board of Directors of the Company through the mail, in person and telephone through its regular employees who will not be additionally compensated. The cost of soliciting proxies will be borne by the Company. The Company will also reimburse brokerage houses and others for forwarding proxy material to beneficial owners of the shares.

OTHER MATTERS

The Company's Annual Report to Stockholders for the fiscal year ended December 31, 1993, a copy of which accompanies this Proxy Statement, is hereby incorporated by reference.

At the date of this Proxy Statement, the Company knew of no other matters which might be presented for shareholder action at the meeting. If any matter not described herein arises, the persons appointed by the enclosed proxy intend to vote the shares represented by them in accordance with their best judgment.

Dated: April 27, 1994

By Order of the Board of Directors,

SONDRA M. JACOBY Secretary

EXHIBIT A

RESTATED CERTIFICATE OF INCORPORATION

OF

FAIRMOUNT CHEMICAL CO., INC.

To: The Secretary of State State of New Jersey

Pursuant to the provisions of Section 14A:9-5, Corporations, General, of the New Jersey Statutes (the "Corporations Law"), the undersigned corporation hereby executes the following Restated Certificate of Incorporation:

FIRST: The name of the corporation is Fairmount Chemical Co., Inc. (the "Corporation").

SECOND: The purpose of the Corporation is to engage in any activity within the purposes for which corporations may be organized under the Corporations Law.

THIRD: The aggregate number of shares which the Corporation shall have authority to issue is 25,000,000, itemized by classes, par value of shares, shares without par value, and series, if any, within a class, is:

Class	Series <u>(if any)</u>	Number of Shares	Par Value Per Share or Statement that <u>Without Par Value</u>
Common Stock	N/A	15,000,000	\$1.00
Preferred Stock	N/A	10,000,000	\$1.00

The relative rights, preferences and limitations of the shares of each class are as follows:

1. <u>Dividends</u>. Each issued and outstanding share of Preferred Stock shall entitle the holder of record thereof to receive out of funds legally available therefor, when and as declared by the Board of Directors (the "Board"), cash dividends in such amount as is determined by the Board from time to time, such dividends to be payable on such date or date[s] as the Board of Directors shall deem advisable, and which shall be declared and set apart or paid before dividends of any kind may be declared upon the shares of Common Stock and before distributions of any kind may be made upon the issued and outstanding shares of Common Stock. Upon

declaration of said dividends upon the issued and outstanding shares of Preferred Stock, such dividends shall be cumulative and shall be deemed to accrue from and after the date said dividends shall have been declared. Whenever full dividends declared upon the issued and outstanding shares of Preferred Stock as aforesaid shall have been paid, or a sum sufficient for the payment thereof set aside in full, without interest, the Board of Directors may, but shall in no event be obligated to, declare, set aside, or pay additional cash dividends and/or may make share distributions of the authorized but unissued shares of Common Stock of the Corporation and/or its treasury shares of Common Stock, if any, and/or may make distributions of bonds or property of the Corporation, including the shares or bonds of other corporations. The holders of record of the issued and outstanding shares of Common Stock shall be entitled in respect of said Common shares exclusively to receive any such additional cash dividends which may be declared and/or any such distributions which may be made, each issued and outstanding share of Common Stock entitling the holder of record thereof to receive an equal proportion of said dividends and/or distributions. Any reference to "distributions" in this contained shall not be deemed to include paragraph any distributions made in connection with any liquidation, dissolution, or winding up of the Corporation, whether voluntary or involuntary; nor shall any such reference to "distributions" in relation to issued and outstanding shares be deemed to limit, curtail, or divest the authority of the Board of Directors to make any proper distributions, including distributions of authorized but unissued shares of Common Stock, in relation to its treasury shares of Common Stock, if any.

Redemption. The Corporation may, through its Board 2. of Directors and in conformity with the provisions of the Corporations Law, at any time or from time to time, redeem all or any part of the issued and outstanding Preferred Stock by paying the holders of record thereof, out of funds legally available therefor, One Dollar (\$1.00) for each such share to be redeemed plus an amount equivalent to all declared but unpaid dividends. which have accrued to the date fixed for redemption ("Redemption Date"). In the event of such redemption, a notice fixing the time and place of redemption shall be mailed not less than thirty days prior to the date so fixed to each holder of record of the Preferred Stock to be redeemed at his address as it appears on the record of shareholders. In the event that less than all of the issued and outstanding shares of Preferred Stock are to be redeemed, the shares to be redeemed shall be chosen by lot, pro rata, or by such equitable method as the Board of Directors may determine. On and after the date fixed for such redemption, the holders of the shares so called for redemption shall not be entitled to any dividends and shall not have any rights or interests as holders of said shares except to receive the payment or payments herein designated, without interest thereon, upon presentation and surrender of their certificates therefor.

Liquidation Rights. 3. In the event of any liquidation, dissolution, or winding up of the affairs of the Corporation, whether voluntary or involuntary, each issued and outstanding share of Preferred Stock shall entitle the holder of record thereof to payment at the rate of One Dollar (\$1.00) plus an amount equal to all declared but unpaid dividends, without interest, whether or not earned or declared, which have accrued thereon to the date of payment before any payment or distribution of the net assets of the Corporation (whether stated capital or surplus) shall be made to or set apart for the holders of record of the issued and outstanding Shares of Common Stock in respect of said Common Stock. After setting apart or paying in full the preferential amounts aforesaid to the holders of record of the issued and outstanding Preferred Stock, each issued and outstanding share of Common Stock shall entitle the holder of record thereof to receive an equal proportion of said remaining net assets. If the net assets of the Corporation shall be insufficient to pay in full the preferential amounts among the holders of the Preferred Stock as aforesaid, then each issued and outstanding share of Preferred Stock shall entitle the holder of record thereof to an equal proportion of said net assets, and the holders of the Common Stock shall in no event be entitled to participate in the distribution of said net assets in respect of their Common Stock. Without excluding any other proceeding which does not in fact effect a liquidation, dissolution, or winding up of the Corporation, a merger or consolidation of the Corporation into or with any other corporation, a merger of any other corporation into the Corporation, participation by the Corporation in a plan for share exchanges with another corporation, or a sale, lease, mortgage, pledge, exchange, transfer, or other disposition by the Corporation of all or substantially all of its assets shall not be deemed, for the purposes of this paragraph, to be a liquidation, dissolution, or winding up of the Corporation.

4. <u>Voting Rights</u>. Each issued and outstanding share of Common Stock shall entitle the holder thereof to full voting power. Except as provided in this Certificate or as any provision of law may otherwise require, no Preferred Stock shall entitle the holder thereof to any voting power, to participate in any meeting of shareholders, or to have notice of any meeting of shareholders.

5. <u>Conversion Rights</u>. Subject to any conditions herein contained, any or all of the shares of Preferred Stock of the Corporation shall be convertible at any time, and from time to time, at the option of any one or more of the holders of record thereof into fully paid and nonassessable shares of Common Stock of the Corporation upon surrender to the Corporation or its designee of the certificate or certificates representing the Preferred Stock to be converted, together with a written notice of election to convert; and, upon receipt by the Corporation or its designee of such notice and of such surrendered certificate or certificates with any appropriate endorsement thereon, as may be prescribed by

the Board of Directors, any such holder shall be entitled to receive a certificate or certificates representing the number of shares of Common Stock into which such Preferred Stock is convertible, and any such holder shall be deemed to be a holder of record of said Common Stock as of the time of said receipt by the Corporation or its designee. The basis for such conversion shall be one share of Common Stock for each share of Preferred Stock which is converted (the "Conversion Rate"). In connection with effecting any transfer to the Corporation for cancellation of any Preferred Stock upon conversion of the same into Common Stock, the Corporation may, but shall not be obliged to, issue a certificate or certificates for fractions of a share of Common Stock. Any shares of Preferred Stock which have been converted shall be cancelled and shall not be reissued. Except as such requirement may otherwise be dispensed with by law, the Board of Directors of the Corporation shall at all times reserve a sufficient number of authorized but unissued shares of Common Stock, which shall be issued only in satisfaction of the conversion rights and privileges aforesaid. Whenever the Corporation shall determine to redeem any or all of the outstanding Preferred Stock, the notice of redemption in that connection shall include a statement to the effect that the rights and privileges of each holder of said Preferred Stock to convert the same will cease at the close of business on the day prior to the date of redemption specified in the notice of redemption. Whenever the Corporation shall issue any shares (other than shares of the Preferred Stock aforesaid), bonds, securities, or obligations which are convertible into or exchangeable for Common Stock, shall issue any warrants, options, or similar rights which entitle the holders thereof to subscribe for, purchase, or otherwise acquire Common Stock, shall subdivide, combine, or otherwise change its Common Stock or shall take or permit to be taken any other action which will result in the dilution of the conversion rights and privileges of the Preferred Stock, the Board of Directors of the Corporation shall forthwith cause to be made any such adjustment on the basis of conversion as it shall determine to be necessary to preserve to said holders of the Preferred Stock those rights and privileges which are substantially proportionate to the rights and privileges of the Preferred Stock existing prior to said event or events. In the event of a judicial or non-judicial dissolution of the Corporation, the conversion rights and privileges of the holders of the Preferred Stock shall terminate on a date, as fixed by the Board of Directors of the Corporation, not more than ninety (90) days and not less than ten (10) days before the date of such dissolution. The reference to Common Stock herein shall be deemed to include shares of any class into which said Common Stock may be changed. Notwithstanding any provision of this certificate of incorporation or of law, by reason of which limited or unlimited preemptive rights are otherwise conferred upon the holders of any class of shares of the Corporation, no preemptive right shall accrue solely by reason of the issuance by the Corporation of shares in satisfaction of the

conversion rights and privileges of the holders of the Preferred Stock as set forth herein.

Organic Change. Notwithstanding any provision to 6. the contrary herein, in the event any Organic Change (as defined below) is to occur, any holder of shares of Preferred Stock may require that the Corporation, immediately upon notice from such holder, and prior to the consummation of such Organic Charge, (i) redeem at the Redemption Price all or any portion of the shares of Preferred Stock owned by such holder; and/or (ii) convert at the Conversion Rate all or any portion of the shares of Preferred Stock owned by such holder to Common Stock. Written notice of any impending Organic Change, and the substance and intended date of consummation thereof, shall be mailed by certified or registered mail, return receipt requested, not more than sixty (60) nor less than thirty (30) days prior to the date of consummation thereof, to each record holder of shares of Preferred Stock at the address for such record holder shown on the Corporation's records. Each such holder shall have fifteen (15) days from the date of receipt of such notice to require (by written notice to the Corporation) redemption and/or conversion of all or any portion of the shares owned by such holder. The Corporation shall redeem at the Redemption Price, and/or convert at the Conversion Rate all shares of Preferred Stock as to which requests under this Section have been made immediately prior to the consummation of such Organic The term "Organic Change" means (A) any sale, lease, Change. mortgage, pledge, transfer, or exchange or other disposition of (i) a majority of the Common Stock then outstanding, or (ii) all or substantially all of the property and assets of the Corporation taken as a whole, whether or not in the ordinary course of business and whether by a single transaction or a series of transactions, related or not, (B) any reorganization, merger or consolidation to which the Corporation is a party, or (C) any public offering of any securities of the Corporation or any of its subsidiaries, or (D) any other change in control of the Corporation or any of its subsidiaries.

After any Organic Change, in the event and to the extent any holder of Preferred Stock has not elected to have its shares redeemed, such holder of the Preferred Stock shall thereafter be entitled to receive, upon conversion, the kind and amount of shares or other securities or property which they would have been entitled to receive had they converted such Preferred Stock into Common Corporation as of the record date for the Stock of the determination of Common Stockholders entitled to cast their votes for or against or to express any dissent to such Organic Change; and, after the happening of one or more of the aforesaid events, if any, the rights of such holders of the Preferred Stock with respect to the adjustment of the Conversion Rate (the basis of conversion) shall be appropriately continued and be preserved in order to afford, as nearly as possible, protection against dilution of the

conversion rights and privileges comparable to those conferred herein.

FOURTH: The address of the Corporation's current registered office is 117 Blanchard Street, Newark, New Jersey 07105, and the name of its current registered agent at such address is William E. Setzler.

FIFTH: The period of existence of the Corporation is unlimited.

SIXTH: The directors of the Corporation are hereby given the power to fix and determine from time to time and to vary the sum to be reserved, over and above its capital stock paid in, as working capital, before declaring any dividends among its stockholders, and to fix the time of declaring and paying any dividend, and the amount of any dividend shall be determined by the directors, unless otherwise provided by the by-laws of the Corporation, and to direct and determine the use and disposition of any surplus or net profits or earnings over and above the capital stock paid in.

All sums so reserved may be applied from time to time to the acquisition of property as the directors shall from time to time determine, and neither the property so acquired nor any of its capital stock held by the Corporation, shall be regarded as accumulated profits, for the purpose of declaration or payment of dividends, unless otherwise determined by the directors.

SEVENTH: The number of directors constituting the current board of directors is three.

The names and address of the directors are as follows:

Names	Addresses (including zip code)
Sondra M. Jacoby	117 Blanchard Street Newark, New Jersey 07105
William E. Setzler	117 Blanchard Street Newark, New Jersey 07105
Leonard R. Wood	117 Blanchard Street Newark, New Jersey 07105

EIGHTH: The personal liability of the directors and officers of the Corporation is hereby limited to the fullest extent permitted by Corporations Law, as the same may be amended and supplemented from time to time.

NINTH: The Corporation shall, to the fullest extent permitted by Section 14A:3-5 of the Corporations Law, as the same may be amended and supplemented, indemnify any and all persons whom it shall have power to indemnify under said section from and against any and all of the expenses, liabilities, or other matters referred to in or covered by said section, and the indemnification provided for herein shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any By-law, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of such a person.

TENTH: Except as otherwise provided herein with respect to the Preferred Stock, no stockholder shall be entitled as a matter of right to subscribe for, purchase or receive any shares of the capital stock or any rights or options of the Corporation which it may issue or sell, whether out of the number of shares authorized by the certificate of incorporation or by amendment thereof, or other proceedings, or out of the shares of the capital stock of the corporation acquired by it after the issuance thereof, nor shall any stockholder be entitled as a matter of right to purchase or subscribe for or receive any bonds, debentures or other obligations which the Corporation may issue or sell that shall be convertible into or exchangeable for capital stock or to which shall be attached or appertain any warrant or warrants or other instrument or instruments that shall confer upon the holder or owner of such obligation the right to subscribe for or purchase from the Corporation any shares of its capital stock. All such additional issues of capital stock, rights, options, or of bonds, debentures or other obligations convertible into or exchangeable for capital stock or to which warrants shall be attached or appertain or which shall confer upon the holder the right to subscribe for or purchase any shares of capital stock, may be issued and disposed of by the board of directors to such persons, firms, associations and corporations and upon such terms, subject to any provisions of law in regard thereto, as in their absolute discretion they may deem advisable.

ELEVENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of New Jersey, the board of directors is expressly authorized and empowered, without the

assent or vote of the stockholders, to make, alter, or repeal the by-laws of the Corporation.

TWELFTH: In furtherance and not in limitation of the powers conferred by the laws of the State of New Jersey, the board of directors is expressly authorized and empowered, without the assent or vote of the stockholders, to issue, grant or sell warrants, options or other instruments evidencing rights to subscribe for, purchase or otherwise acquire shares of capital stock of the Corporation.

Dated this ____ day of May, 1994

FAIRMOUNT CHEMICAL CO., INC.

By:_

William E. Setzler, Chairman of the Board





117 Blanchard Street, Newark, N.J. 07105 • (201) 344-5790

Frederick & Company, Inc.

March 18, 1994

Dr. Alfred Bader Alfred Bader Fine Arts 924 East Juneau Avenue Milwaukee, WI 53202

Dear Alfred:

Thank you for your memo and the reminders of a long standing relationship that has been meaningful to both of us.

God willing, that relationship will go on for many years yet to come.

Sincerely,

Put

Paul A. Frederick

PAF:kk



MEMBER CHICAGO STOCK EXCHANGE/SIPC

WHITE MANOR - 1234 EAST JUNEAU AVENUE - MILWAUKEE, WISCONSIN 53202 - 414-271-1500



Dr. Alfred Bader 2961 North Shepard Avenue Milwaukee, Wisconsin 53211

February 28, 1994

BY HAND

Mr. Paul Frederick Frederick & Company, Inc. 1234 East Juneau Avenue Milwaukee, Wisconsin 53202

Dear Paul:

Thank you for the time spent with Bert van Deun and me to discuss Clarion, last Friday.

As you know, Bert van Deun is very familiar with the industry, and after long discussion we agreed that this really too speculative an investment for us. Bert will contact Dr. Pruss to send him the information promised.

All good wishes.

Sincerely,

Enclosure c: Mr. Bert van Deun



United States Patent [19]

Bryant et al.

[54] FIBER WITH REVERSIBLE ENHANCED THERMAL STORAGE PROPERTIES AND FABRICS MADE THEREFROM

- [75] Inventors: Yvonne G. Bryant; David P. Colvin, both of Raleigh, N.C.
- [73] Assignce: Triangle Research and Development Corporation, Raleigh, N.C.
- [21] Appl. No.: 91,550 919 781 8148
- [22] Filed: Aug. 31, 1987
- [51] Int. Cl.⁴ B32B 3/10; D02G 8/04

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File! Faul Federick

[11] Patent Number: 4,756,958

[45] Date of Patent: Jul. 12, 1988

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Primary Examiner-James C. Cannon

Attorney, Agent, or Firm-Robert G. Rosenthal

[57] ABSTRACT

A fiber with integral microspheres filled with phase change material or plastic crystals has enhanced thermal properties at predetermined temperatures. The fibers may be woven to form a fabric having the enhanced thermal storage properties and articles of manufacture may be formed therefrom.

15 Claims, No Drawings



FIBER WITH REVERSIBLE ENHANCED THERMAL STORAGE PROPERTIES AND FABRICS MADE THEREFROM

This invention was made with Government support under contract No. F33657-87-C-2138 awarded by the United States Air Force. The Government has certain rights in this invention.

FIELD OF THE INVENTION

This invention relates generally to the field of synthetic fibers impregnated with microcapsules and more particularly to fibers containing leak resistant microcapsules which are filled with energy absorbing phase 15 change material or a plastic crystal material which enables articles of manufacture made therefrom to exhibit extended or enhanced heat retention or storage properties.

BACKGROUND OF THE INVENTION

The treatment of textiles and/or fibers with various substances in order to change the properties thereof is well known. For example, it is known that textiles may be waterproofed by coating them with natural or syn-25 thetic rubber. Substances have been developed which when sprayed onto fabrics introduce the property of stain resistance. In addition, it is known that fragrance delivery systems can be incorporated into fabrics. One such fragrance delivery system uses breakable fra-30 grance filled microcapsules which are attached to the surface of a fabric or fiber and upon the introduction of an external force, the microcapsules break releasing the fragrance over an extended time period.

Fabrics have been given enhanced thermal properties 35 by coating the fibers and the interstitial spaces between fibers with phase change materials and with plastic crystals (see Fabrics given enhanced thermal properties, Oct. 20, 1986; Chemical and Engineering News, Pages 15 and 16). The thermal properties of fabric are en- 40 hanced as it is impregnated with these microcapsules. More specifically, materials such as water, undergo phase changes from solid to liquid to gas at well known temperatures. Similarly, other materials such as paraffin wax undergo phase change from a solid to a liquid (fu- 45 sion). At the phase change temperature, a characteristic of the material during the heating cycle is to absorb and hold a large quantity of thermal energy at a constant temperature before changing to the next phase. Thus, the material can be used as an absorber to protect an 50 object from additional heat as a quantity of thermal energy will be absorbed by the phase change material before its temperature can rise. The phase change material may also be preheated and used as a barrier to cold, as a larger quantity of heat must be removed from the 55 phase change material before its temperature can begin to dron.

However, the aforementioned surface mounted phase change materials are not without their deficiencies. For example, it was found that while somewhat effective, 60 the phase change material was not durably bound to the fibers and laundering removed most of the material. Thus, the fabric lacked repeatability of thermal response as each laundering removed a portion of the phase change material, thus causing the fabric to exhibit 65 a corresponding change in thermal properties which limited its usefulness. As a result, further work was undertaken to perfect a series of process steps for binding the phase change material to the fabric in order to extend the useful life of the enhanced thermal properties. Furthermore, as far as is known to the inventors, the usefulness of these fibers and fabrics has been applied to a broader temperature range which limits the

thermal absorption or release at a specific temperature range.

It is, therefore, an object of the present invention to provide a fiber with enhanced thermal retention proper-10 ties.

It is another object of the present invention to provide a fiber which will maintain its enhanced thermal properties over an extended period of time.

It is a further object of the invention to provide a fiber having enhanced thermal properties which can be produced with a minimum of process steps.

It is a still further object of the invention to provide a fiber having enhanced thermal properties which can be woven into a fabric from which articles of clothing and the like can be manufactured.

It is a still further object of the present invention to provide a fiber which displays enhanced thermal properties over a specified temperature range.

SUMMARY OF THE INVENTION

The foregoing objects are accomplished by providing a fiber with reversible thermal storage properties comprising a base material and a plurality of microcapsules. The microcapsules are integral with and are dispersed throughout the base material and contain a temperature stabilizing means such as a phase change material or plastic crystals. The fiber exhibits enhanced thermal stability when subjected to heat or cold. The microcapsules are resistant to leakage or rupture and may be subjected to repeated external mechanical stresses with minimum changes in the thermal characteristics of the fiber. Additionally, the fiber may also include microcapsules containing different preselected phase change materials which increase the range of temperature stability of the fiber. The fiber may also be woven into a temperature adaptable fabric.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

While the present invention will be described more fully hereinafter, it is to be understood at the outset that persons of skill in the art may modify the invention herein described while still achieving the favorable results of this invention. Accordingly, the description which follows is to be understood as being a broad teaching disclosure directed to persons of skill in the appropriate arts, and not as limiting upon the present invention.

The fiber with reversible thermal storage properties comprises a base material and a plurality of microcapsules dispersed throughout the base material. The base material is preferably a synthetic polymer such as polyester, nylon, acrylic or modacrylic and the like.

The microcapsules can range in size from about one to about 10 microns and are formed according to the methods described in any one of the following texts to which the reader is referred for an explanation on how to fabricate microcapsules:

Books on Microencapsulation:

 Vandergaer, J. E., Ed: Microencapsulation: Processes and Applications. Plenum Press, New York, 1974.



- 2. Gutcho, M. H.: Microcapsules and Microencapsulation Techniques. Noyes Data Corp., Park Ridge, N.J., 1976.
- 3. Ranney, M. W.: Microencapsulation Technology, Noyes Development Corp., Park Ridge, N.J., 1969.
- 4. Kondo, A.: Microcapsule Processing and Technology. Marcel Dekker, Inc., New York, 1979
- 5. Nixon, J. R.: Microencapsulation. Marcel Dekker, Inc., New York, 1976. Articles on Microencapsulation:
- 1. Sparks, R. E.: "Microencapsulation", Kirk-Othmer Encyclopedia of Chemical Technology, Vol. 15, 3rd Edition, John Wiley and Sons, Inc., 1981.
- 2. Thies, C.: "Physicochemical Aspects of Microencap-sulation," Polym. Plast. Technol. Eng., Vol. 5, 7¹⁵ (1975).
- Thies, C.: "Microencapsulation", McGraw-Hill 3 Yearbook of Science and Technology, 1979, pp. 13-21
- 4. Herbig, J. A.: "Microencapsulation", Encyclopedia 20 of Polymer Science and Technology, Vol. 8, 719 (1968).

The microcapsules contain a temperature stabilizing means or phase change material such as eicosane. Addi-25 tionally, plastic crystals such as 2,2-dimethyl-1,3propanediol (DMP) and 2-hydroxymethyl-2-methyl-1,3-propanediol (HMP) and the like may be used as the temperature stabilizing means. When plastic crystals absorb thermal energy, the molecular structure is tem- 30 porarily modified without changing the phase of the material. In another aspect of the invention, the composition of the phase change material may be modified to obtain optimum thermal properties for a given temperature range. For example, the melting point of a homolo- 35 gous series of paraffinic hydrocarbons is directly related to the number of carbon atoms as shown in the following table:

Compound Name	Number of Carbon Atoms	Melting Point Degrees Centigrade	- 4(
n-Octacosane	28	61.4	
n-Heptacosane	27	59.0	
n-Hexacosane	26	56.4	
n-Pentacosane	25	53.7	4
n-Tetracosane	24	50.9	ч.
n-Tricosane	23	47.6	
n-Docosane	22	44.4	
n-Heneicosane	21	40.5	
n-Eicosane	20	36.8	
n-Nonadecane	19	32.1	\$1
n-Octadecane	18	28.2)(
n-Heptadecane	17	22.0	
n-Hexadecane	16	18.2	
n-Pentadecane	15	10.0	
n-Tetradecane	14	5.9	
n-Tridecane	13	- 5.5	_ 54

Each of the above materials can be separately encapsulated and is most effective near the melting point indicated. It will be seen from the foregoing that the effective temperature range of the fiber can, therefore, 60 be tailored to a specific environment by selecting the phase change materials required for the corresponding temperature and adding microcapsules containing the material to the fiber.

In addition, the fiber can be designed to have en- 65 hanced thermal characteristics over a wide range of temperature or at discrete temperature ranges through proper selection of phase change material.

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In fabricating the fiber, the desired microencapsulated phase change materials are added to the liquid polymer, polymer solution, or base material and the fiber is then expanded according to conventional methods such as dry or wet spinning of polymer solutions and extrusion of polymer melts. Embedding the microcapsules directly within the fiber adds durability as the phase change material is protected by a dual wall, the first being the wall of the microcapsule and the second 10 being the surrounding fiber itself. Thus, the phase change material is less likely to leak from the fiber during its liquid phase, thus enhancing its life and repeatability of thermal response.

In another important aspect of the invention, a fabric can be formed from the fibers described above by conventional weaving, knitting or nonwoven methods. For example, in a woven fabric any combination of the warp and weft with or without microcapsules can be used in order to obtain the desired texture and durability. This fabric may then be used to fabricate temperature adaptable clothing and other thermal barriers. For example, protective gloves can be made from the fabric. By choosing an appropriate phase change material, the gloves can be adapted for cold weather use. The gloves can be placed in a heating chamber prior to use to liquify the phase change material. When it is desired to use the gloves, they are removed from the chamber and they will remain warm for an extended period of time. Substantial cooling will not occur until the liquid phase change material has solidified. Conversely, by selecting the appropriate phase change material, the gloves can be used to handle hot objects. In this situation the glooves are cooled and a phase change material is solidified. When the gloves are exposed to a hot surface, the user will remain comfortable as he will perceive that they are remaining cool. This continues until the phase change material has liquified. The reader will note that this concept can be applied to numerous applications including items of clothing such as shoes, environmental suits as well as other applications which require shielding of individuals or machinery from the hot and cold.

The foregoing embodiments and examples are to be considered illustrative, rather than restrictive of the

invention, and those modifications which come within the meaning and range of equivalence of the claims are to be included therein.

That which is claimed is:

1. A fiber with reversible thermal storage properties) comprising:

a base material, and

a plurality of microcapsules integral with and dispersed throughout said base material, said microcapsules containing a temperature stabilizing means whereby the fiber exhibits enhanced thermal stability when subjected to heat or cold.

2. A fiber with reversible thermal storage properties according to claim 1 wherein said microcapsules are leak resistant, whereby the fiber may be subjected to repeated external mechanical stresses with minimum changes in the thermal characteristics of the fiber.

3. A fiber with reversible thermal storage properties according to claim 1 wherein said temperature stabilizing means comprises a phase change material.

4. A fiber with reversible thermal storage properties according to claim 1 wherein said temperature stabilizing means comprises a material selected from the group of paraffinic hydrocarbons.



5. A fiber with reversible thermal storage properties according to claim 1 wherein said temperature stabilizing means comprises a plastic crystal.

6. A fiber with reversible thermal storage properties according to claim 1 wherein said microcapsules range in diameter from about 1.0 micron to about 10 microns.

7. A fiber with reversible thermal storage properties according to claim 1 wherein the fiber includes at least two types of separately encapsulated temperature stabi- 10 bilizing means comprises a phase change material. lizing means.

8. A fiber with reversible thermal storage properties comprising:

a synthetic polymer base material, and a plurality of 15 leak resistant microcapsules integral with and dispersed throughout said synthetic polymer base material, said microcapsules containing a paraffinic hydrocarbon and ranging in diameter from about 1.0 micron to 10.0 microns.

9. A fabric with reversible thermal storage properties comprising:

a plurality of fibers and a plurality of microcapsules integral with and dispersed throughout the base 25 material forming at least some of said fibers, said microcapsules containing a temperature stabilizing means, whereby the fibers form a fabric that exhibits enhanced thermal stability when subjected to heat or cold.

10. A fabric with reversible thermal storage properties according to claim 9 wherein said microcapsules are 5 leak resistant, whereby the fabric may be subjected to repeated external mechanical stresses with minimum changes in the thermal characteristics of the fabric.

11. A fabric with reversible thermal storage properties according to claim 9 wherein said temperature sta-

12. A fabric with reversible thermal storage properties according to claim 9 wherein said temperature stabilizing means comprises a material selected from the group of paraffinic hydrocarbons.

13. A fabric with reversible thermal storage properties according to claim 9 wherein said microcapsules range in diameter from about 1.0 microns to about 10 microns.

14. A fabric with reversible thermal storage proper-20 ties according to claim 9 wherein said fibers include at least two types of separately encapsulated temperature stabilizing means whereby the fabric exhibits enhanced thermal properties over a predetermined temperature range.

15. A fabric with reversible thermal storage properties according to claim 9 wherein said temperature stabilizing means comprises a plastic crystal material.

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Dr. Alfred Bader 2961 North Shepard Avenue Milwaukee, Wisconsin 53211

September 7, 1993

Dr. Arthur M. Felix Hoffmann-La Roche 350 Kingsland Street Nutley, New Jersey 07110

Dear Arthur:

May I ask you for your help in the following. A good friend of mine, Dr. Stanislav Radl from Prague, worked with you for the last two years, but is now back in Prague.

I have mislaid his Prague address. Could you please send it to me?

Many thanks for your help.

Sincerely,



Dr. Alfred Bader 2961 North Shepard Avenue Milwaukee, Wisconsin 53211

October 19, 1992

Dr. Arthur M. Felix Program Committee Member Sigma Xi, The Scientific Research Society Roche Research Chapter 340 Kingsland Street Nutley, New Jersey 07110

Dear Arthur:

Isabel and I really enjoyed our afternoon and evening last week, and I want to thank you most sincerely for all the care you took of us.

If I had flown from Milwaukee to Newark and back during the week, the airfare would have been about \$500, but we also relaxed in New York, and so-as you will see from the enclosed, it was only \$260 for each of us. Of course, our expenses in New York are being covered by us.

Hence, my total travel expenses as itemized on the enclosed were \$308. I do not know what Sigma Xi's policy is about covering the flight expenses of a spouse; Isabel's airline ticket cost the same as mine, \$260.

Best regards, and again many thanks,

Enclosures



Expense Report for Dr. Alfred R. Bader October 14, 1992 Roche Research Section of Sigma Xi

Airline ticket	\$	260.00
Buses to and from Nutley		7.50
Meals		17.00
Taxis in New York City		11.50
Parking		7.00
Miscellaneous		
TC	TAL \$	308.00



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BARRY: Could you plan to visit with us that day and perhaps the day before and the day after?

Dr. Alfred Bader Chairman Emeritus

Alfred



November 4, 1991

Dr. Arthur M. Felix Program Committee Member Sigma Xi, The Scientific Research Society Roche Research Chapter 340 Kingsland Street Nutley, New Jersey 07110

Dear Arthur:

Thank you for your kind letter of October 30.

Isabel and I look forward to being with you on October 14, 1992, and we plan to arrive earlier to be able to visit some of our good friends at Roche during the day.

Short abstract, biographical sketch and recent photograph are enclosed.

I will require two projectors and either one large screen or two smaller ones, to show two slides simultaneously. A pointer would also be useful.

Best personal regards.

Sincerely,

Alfred Bader Enclosures c: Mr. Barry Young

SIGMA-ALDRICH

P.O. Box 355 Milwaukee Wisconsin 53201 USA Telephone (414) 273-3850 Cable Aldrichem TWX 910-262-3052 Telex 26-843



FAX TRANSMITTAL SHEET

FROM:	DM: DR. ALFRED BADER		
	2961 North Shepard Milwaukee, Wisconsin 53211		
	PHONE:	(414) 962-5169	
	FAX:	(414) 962-8322	
TO:	NAME: COMPANY:	Dr. Arthur Felix Roppmann ha Roche	Pepfide Research
	PHONE:		4
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PLEASE CALL 962-5169 IF YOU DID NOT RECEIVE THE CORRECT NUMBER OF PAGES, OR IF YOU ARE UNABLE TO READ ANY PART OF THE FAX.			







November 16, 1992

Dr. Alfred Bader 2961 North Shepard Milwaukee, WI 53211

Dear Dr. Bader,

Thank you very much for the time you spent with us at Fort Lewis College. We hope that you and your wife enjoyed your visit. Your talks were extremely interesting and inspiring. Many students and faculty expressed their interest and fascination in the topics discussed. I sincerely respect you for the contributions you have made in both chemistry and painting restoration. The entire Fort Lewis College campus benefitted immensely from your knowledge and experience in both areas. Talking with you at lunch, I could sense the importance and fulfillment of having a hobby outside one's career. I feel that the students as well as the faculty could relate to your stories, interests, and concerns shared in the lecture and in conversation at lunch. We hope that you will keep in contact with us in the upcoming year and consider another visit to our campus. Again, thank you for taking time away from your busy schedule to visit.

Sincerely,

Andrea Langer Chemistry Club President Fort Lewis College



FORT LEWIS COLLEGE CONSULTING AGREEMENT

This agreement for the services of individual consultant(s) described below made this 4th day of November, 1992, by and between the Colorado State Board of Agriculture for Fort Lewis College hereinafter referred to as the College and Alfred Bader hereinafter referred to as the Consultant.

The parties hereby agree as follows:

The Consultant shall perform the following services under the following conditions:

Visiting Lecturer to Chemistry Department

Payment agreed upon for services: \$200 reimbursement toward roundtrip air travel from Milwaukee to Durango (amount and terms of payment)

Additional terms and/or conditions:

- 1. Financial obligations of the College are contingent upon funds being appropriated, budgeted or otherwise made available.
- 2. The laws of the State of Colorado and the rules and regulations issued pursuant thereto shall be applied in the interpretation, execution and enforcement of this contract.
- 3. The signatories hereto aver that they are familiar with CRS 1973,18-8-301, et seq. (Bribery and corrupt Influence and 18-8-401 et seq., (Abuse of Public Office) as amended, and that no violation of such provisions is present.
- 4. The signatories aver that to their knowledge, no College employee has any personal or beneficial interest whatsoever in the service or property described herein.
- 5. The Consultant agrees as a part of this contract that it will comply with all applicable laws regarding discrimination on the basis of race, creed, color, sex, or handicap including but no limited to Executive Order 11246 as amended or as may be further amended hereafter.
- 6. In any event that the performance of any covenant(s) of this Agreement shall be prevented by an act of God, physical disability, civil tumult, war, epidemic, interruption of transportation, or any other proven cause beyond their control, the College and the Consultant shall respectively be relieved of their obligations stated in this contract.



Fort Lewis College Consulting Agreement Page 2

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- 7. It is further agreed and understood by the College and the Consultant that the consultant shall carry sufficient insurance to cover any and all liabilities which may occur during his or her stay or performance for/at the College.
- 8. <u>Indemnification.</u> To the extent authorized by law, the Consultant shall indemnify, save and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees incurred as a result of any act or omission by the consultant or its employees, agents, subcontractors, or assignees pursuant to the terms of this agreement.
- 9. W-9 Form must be on file or provided herein.

FORT LEWIS COLLEGE

Requested by: Dr. Irwin Klundt

Date: November 4, 1992 CONSULTANT

Printed Name: Alfred Bader

Address: 2961 N Shepand M./WAUKee WI 53211

.

Social Security Number: 398-28-8764

Date: 1/4/92

Signature: Curjual Aura

COLORADO STATE BOARD OF AGRICULTURE FOR USE AND BENEFIT OF FORT LEWIS COLLEGE

WCY

Approved by: William C. Langworthy

Title: Vice President for Academic Affairs

Date: November 4, 1992



Dr. Alfred Bader Chairman Emeritus



September 17, 1991

Prof. Michael Kasha Institute of Molecular Biophysics Florida State University Tallahassee, Florida 32306 3015

Dear Prof. Kasha:

Thank you for your gracious letter of September 9th.

Isabel and I look forward to being with you on January 17th and hope that Gainesville might also welcome us, the day before.

Also, I very much hope that you will ask me to give more than one lecture.

We plan to fly to Orlando and stay with good friends for a few days holdiay in Cocoa Beach. I hope that you will think it reasonable that we ask for reimbursement of our travel expenses, not flying to Florida, but renting a car in Cocoa Beach and driving to Tallahassee and Gainesville.

Many thanks for sending me those interesting papers on musical instruments.

Best personal regards.

Sincerely,

Alfred Bader AB:mmh

SIGMA-ALDRICH

P.O. Box 355 Milwaukee Wisconsin 53201 USA Telephone (414) 273-3850 Cable Aldrichem TWX 910-262-3052 Telex 26-843





Institute of Molecular Biophysics • Tallahassee, Florida 32306-3015 B-165 FAX NO: (904) 561-1406

September 9, 1991

Dr. Alfred Bader, President Aldrich Chemical Company, Inc. 1001 West Saint Paul Avenue Milwaukee, Wisconsin 53233

Dear Dr. Bader:

We have reserved January 17 for your Department of Chemistry Seminar (3:30 p.m., Friday):

LOSCHMIDT - THE FATHER OF MOLECULAR MODELLING.

The other lecture arrangements will be completed after I return from Australia (October 21). On September 9, before I leave, I will have contacted Michael Zerner (Chairman) and Kalritsky at Gainesville about their seminars.

It was a great pleasure to meet you and your wife in New York and to hear your warmly humanistic and inspired talk.

I am enclosing some background information on my work (to show I am a chemist too!).

Regards,

nichoel Kasha

Michael Kasha

MK:dl

Enclosures





Florida Department of Law Enforcement

James T. "Tim" Moore Commissioner Division of Local Law Enforcement Assistance Orlando Regional Crime Laboratory 500 West Robinson Street Orlando, Florida 32801-1771 (407) 245-0888 SunCom: 344-0888 FAX: (407) 245-0889

February 20, 1997

Dr. Alfred Bader Suite 622 924 East Juneau Avenue Milwaukee, WI 53202

Dear Dr. Bader:

Again, thank you very much for the excellent talks. We all enjoyed them, and we would love to have you back for your other talks.

I hope you and your wife enjoyed your stay in Orlando and had a good tour to the other ACS locations in Florida.

Dr. Landman sent us a check for your book (obtained at the "chemistry" talk). I am enclosing our check (#151) in the amount of \$ 12.50.

Best regards,

Jalii Mays Gabi Mayer

Chair, ACS Orlando Section



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LE SUITER

May 26, 1978

Dr. Alfred R. Bader Aldrich Chemical Company, Inc. 940 West St. Paul Avenue Milwaukee, Wisconsin 53233

Dear Alfred:

Many thanks for your letter of May 22. We, too, are pleased that all the necessary business arrangements have been made between Data Packaging and Aldrich as well as between Data Packaging and Allyn and Bacon. We have signed the enclosed purchase order to indicate our approval.

We would hope that the kits would also include a few inexpensive colored plastic caps (two caps of each of four colors, e.g., blue, yellow, red, and white). These caps are to be used by students as labels for two mirror image tetrahedral carbon atoms. They need only be 1/4-1/2'' long and of such a diameter that they can be slipped over the end of either the plastic or aluminum bonds. Louis Fieser's original set also included a small tube of glue for repair of the models. Is it advisable to continue this? Finally, we shall prepare a short set of directions to be included with each kit so that students can quickly learn to use the models.

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Sincerely yours,

E. J. Corey

E. J. Corey Professor of Chemistry

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Mary Fieser

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Enclosure



HARVARD UNIVERSITY

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May 15, 1978 RECEIVED MAY 10:073 ALEND GALANDER 10, 20,

Dr. Alfred R. Bader Aldrich Chemical Company, Inc. 940 West St. Paul Avenue Milwaukee, Wisconsin 53233

Dear Alfred:

Thank you for your letter of May 12 which just arrived this morning. I am pleased that all the problems connected with the marketing of Fieser models now seem to have been solved. Mr. Morningstar called me this morning also to tell me about the arrangements.

I am enclosing a purchase order number made out to Aldrich for an initial order of Fieser models for the Harvard Chemistry Department. We will take them as soon as you can get them to us.

Mary Fieser is completely agreeable to the arrangements outlined in your letter of May 12 and, in fact, last Thursday we composed and signed the letter which is enclosed. I hope this is adequate for you to go ahead.

Mary is feeling much better about the whole thing. I am sorry that she became so upset and in doing so caused you considerable personal discomfort and embarrassment.

With best personal regards,

Sincerely yours,

E. J. Corey Professor of Chemistry

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Enclosures

HARVARD UNIVERSITY DEPARTMENT OF CHEMISTRY

12 Oxford Street Cambridge, Massachusetts 02138 U.S.A.

May 11, 1978

Dr. Alfred R. Bader Aldrich Chemical Company, Inc. 940 West St. Paul Avenue Milwaukee, Wisconsin 53233

Dear Alfred:

This letter is with regard to arrangements for distributing and marketing Fieser models in reply to your letter of May 8.

We understand your concern with regard to possible competition from other chemical suppliers and, therefore, would be in favor of an arrangement between Aldrich and Data Packaging making Aldrich the only chemical supply house to handle Fieser models. It was also our understanding that neither you nor Mr. Morningstar have any objections to separate agreements between Data Packaging and publishers of organic undergraduate textbooks (e.g., Allyn and Bacon). Therefore, we would suggest that you make a definitive statement of agreement in this regard.

We found the last paragraph of page 1 of your letter of May 8 to be unclear with regard to the details for three-way arrangements with publishers, but even if this were not the case we can only give our agreement to the two-way arrangements outlined in the preceding paragraphs.

The proposals which you made for Aldrich's marketing of the Fieser models are acceptable, and we hope to give you a go ahead signal as soon as we have a binding response to the proposals in this letter.

Since the Fieser models are officially the property of Harvard University for which we serve as agents in this case for obvious reasons we shall continue to follow only that course of action which maximizes the availability to students and research workers of Fieser models. We hope you will understand our concern to avoid future complications and misunderstandings.

Mary Fieser Mary Fieser

Sincerely yours,

E. J. Corey Professor of Chemistry

Mrs. Louis F. Fieser 27 Pinehurst Road Belmont 78, Massachusetts

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and the second second

Queq 25, 1978

Dear alfred-The cats arrived safely. This time I unpacked it my self and I now understand that wrapping prictures is an art not to be left to a receiving room. his very happy to have them with me again. They are now in place in a room off my study that Quere as very sitting worm. your ad is fire - but is it marray to say " the late " for my hur band. after all you don't say

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heary tem

Dr. Alfred R. Bader President



August 28, 1978

Mrs. Mary Fieser 27 Pinehurst Rd. Belmont, MA 02178

Dear Mrs. Fieser:

I am just delighted to note from your letter of August 25 that the painting arrived safely and that you approve of our advertsiement for the Fieser Models. Of course we will delete the word "late" wherever we can and I believe that this will be possible in all of the advertisements and in our Aldrichimica Acta, which was sent to the printer last week. It will unfortunately not be possible in our new catalog which has already been printed and of which I will send you two copies posthaste later this week.

We aren't going to lose any money on the Fieser Models nor make any either but it will be a most valuable service for hundreds of chemists. Otto Morningstar called me this morning to say that he will certainly make deliveries in September.

Best personal regards.

Nerv sincerely,

Alfred Bader

AB/1sm

Aldrich Chemical Company, Inc.

940 West St. Paul Ave Milwaukee Wisconsin 53233 USA Telephone (414) 273-3850 Cable Aldrichem TWX 910-262-3052 Telex 26-843



Dr. Alfred R. Bader President



May 22, 1978

Mrs. Mary Fieser Professor E. J. Corey Department of Chemistry Harvard University Cambridge, MA 02138

Dear Mrs. Fieser and E. J.:

Thank you so much for your kind letters of May 11 and May 15, which I appreciate more than I can tell you.

In the meantime, Mr. Otto Morningstar has told me of his arrangement with Allyn and Bacon which is of course entirely satisfactory to us. Also he has told me that he will accept our order for the Fieser Models and that he hopes to be able to deliver in August. I am happy that now none of us see any objections to Allyn and Bacon offering a smaller set with organic undergraduate textbooks, and our offering the larger sets, meant mainly for the graduate students and the research chemists.

Also I have asked Mr. Morningstar to quote to us on the much larger quantities of individual models which we plan to offer to chemistry departments, for sale by the departments individually to their students. As soon as I have Mr. Morningstar's quotation, we will place an order and will then be able to fill that first order from the Harvard Chemistry Department.

Referring to the fourth paragraph of your letter of May 11, please find enclosed a copy of our purchase contract #151898 to Data Packaging. For the sake of good order, could you please just return one copy, indicating your approval.

I hope that you will say, as I am saying that all is well that ends well, and as soon as we have received the shipment from Data Packaging we will do our very best to inform the entire chemical community of the availability of this important research tool.

Best personal regards.

cc: Otto Morningstar AB/lsm

Sincerely, Alfred Bader

Aldrich Chemical Company, Inc.

940 West St. Paul Ave Milwaukee Wisconsin 53233 USA Telephone (414) 273-3850 Cable Aldrichem TWX 910-262-3052 Telex 26-843



Mrs. Louis F. Fieser 27 Pinehurst Road Belmont 78. Massachusetts

May 3, 1978

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Dear Dr. Bader-

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I have just harned that you reptided an exclusive on the models. Of coverne the models cannot be used for your order, ninco the use is contrary to the aim. Of come you cannot call them the trine header. I am writing to willy to say that you cannot see Reagents any longer. And of course you can have the triangle. I shall relate the pirture as goon as I can arrang I have

it wrapped mitably. Sie curly



Dr. Alfred R. Bader President



May 8, 1978

Mrs. Louis F. Fieser 27 Pinehurst Rd. Belmont, MA 02178

Dear Mrs. Fieser:

I must have hurt your feelings very much for you to have written so strong a letter, and I want to assure you first of all that I did not intend to hurt you and want to apologize for the inadvertent.

It had seemed to me from our conversation with Professor Corey that you wanted to accomplish three things:

- 1. that a substantial set of Fieser models be made available at as low a price as as possible,
- 2. that chemistry departments be able to buy large numbers of individual atom models, to be able to sell to students singly, as needed, and
- 3. that if a publisher wants to offer a smaller kit for sale in conjunction with a textbook to undergraduates, that should be possible.

I had tried to explain to you that it is important to Aldrich that we have an exclusive among chemical suppliers simply because we have to guarantee the purchase of 2,000 sets initially and 3,000 sets annually thereafter, to get Data Packaging interested in making the models. I believe that no company could be interested in spending over \$20,000.00 to start with, and over \$30,000.00 annually thereafter, if a competitor could come in and buy just a small number to compete.

In my discussions with Mr. Morningstar on April 19, I explained very carefully that it is important to you that a publisher who might be interested in selling smaller sets should be able to do so, and we agreed that Date Packaging and Aldrich would meet with any publisher interested to work out the details. Please accept my assurance that I mean this sincerely.

Aldrich Chemical Company, Inc.

940 West St. Paul Ave Milwaukee Wisconsin 53233 USA Telephone (414) 273-3850 Cable Aldrichem TWX 910-262-3052 Telex 26-843



We propose to sell sets of 30 C atoms, 6 double bonds, 5 O's and 2 N's at \$18.00. The sets, purchased in lots of 2,000 cost us \$11.75 each, and we arrived at the \$18.00 as the lowest price at which we could sell them without involving us in a loss, as we sell to our distributors at discounts. If selling models were our main business, we could not possibly sell these at such a low mark-up, but we try very hard to be chemists helping chemists, and I feel there is a great need for the Fieser models.

I have asked Data Packaging to quote on lots of 1,000 carbon atoms, 500 O's and 200 each of double bonds and N's, and we propose to offer these to chemistry departments at a minimal mark-up.

We do not want to sell the Fieser models without your permission. Our catalog comes out only once every two years, with a circulation, world-wide, of over 200,000. The next edition must go to the printer later this month, and we had planned to include the listing of the Fieser models with a full page advertisement. Please decide not later than next week whether we may go ahead.

Before deciding, do consider this: you and Professor Fieser had wanted to do your very best to have the models sold very cheaply, and of course that is fine, unless you push the manufacturer and distributor so hard that they give up because they are losing money. That is what happened. If you now decide that we cannot sell the models, then you won't hurt Aldrich, simply because it isn't a business proposition, but a service to chemists - but you will hurt the hundreds of chemists who would benefit from the Fieser models.

Best personal regards.

Sincerely,

hud.

Alfred Bader

AB/lsm

cc: Professor E. J. Corey Mr. Otto Morningstar October 6, 1977

Mrs. Mary Fieser Converse Laboratories Department of Chemistry Harvard University 12 Oxford St. Cambridge, MA 02138

Dear Mrs. Fieser:

I am happy to be able to tell you that I have finally found a fine painting of three cats by the noted French artist Alfred-Arthur Brunel De Neuville. I enclose a description of the artist taken from Benezit, the standard dictionary of artists. Brunel De Neuville exhibited in Paris between 1879 and 1907; I have seen a number of his paintings in various French museums.

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I am sorry that it has taken so long to keep my promise. As I have explained to you, I have been looking for a good painting of cats in many parts of the world for some two years, it is just so much more difficult to find a good painting of cats than of other animals such as dogs.

I very much hope that you will like this.

Best personal regards.

1.7. 2.

Sincerely,

Alfred Bader

AB/lsm

Enc.

Aldrich Chemical Company, Inc.

940 West St. Paul Avenue Milwaukee Wisconsin 53233 USA Telephone (414) 273-3850 Cable Aldrichem TWX 910-262-3052

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