

Alfred Bader Sands

Correspondence - General

B

1995-2006

QUEEN'S UNIVERSITY ARCHIVES	
LOCATOR	5095.5
BOX	6
FILE	40



FAX FROM:

Dr. Alfred Bader
924 East Juneau Avenue
Astor Hotel - Suite 622
Milwaukee, WI 53202
Ph: (414) 277-0730
Fax: (414) 277-0709
www.alfredbader.com
e-mail: alfred@alfredbader.com

A Chemist Helping Chemists

August 14, 2006

TO: Dr. Morris Goldner, Visiting Professor
Brock University

Page 1 of _1_

FAX #: 905-688-6658

Dear Dr. Goldner,

A long trip to England from which we only just returned has delayed my thanking you for your most interesting letter of July 12th.

In a way, you were running into an open door because I know a fair amount about Dr. Roger Stanier, one of the most brilliant microbiologists ever.

We try to help the neediest and the ablest. You point out that Dr. Marianne Fedunkiwi is a brilliant writer and historian. It seems to me that she should write the play and then benefit materially when it is widely produced.

With best wishes I remain

Yours sincerely,

Alfred Bader
AB/az





FAX FROM:

Alfred Bader Fine Arts
924 East Juneau Avenue
Astor Hotel - Suite 622
Milwaukee, WI 53202
Ph: (414) 277-0730
Fax: (414) 277-0709
www.alfredbader.com
e-mail: alfred@alfredbader.com

September 26, 2006

TO: Dr. Thomas O. Hecht, Chairman
BESA

Page 1 of 1

FAX #: 1-514-735-3361

Dear Dr. Hecht,

My sister by adoption, Mrs. Rosetta Elkin, has told me that you would like to talk to me. I tried to telephone you but got very mixed up by your answering machine. Perhaps you would like to call me or send me an e-mail at your convenience.

With best regards I am

Yours sincerely,

Alfred Bader
AB/az



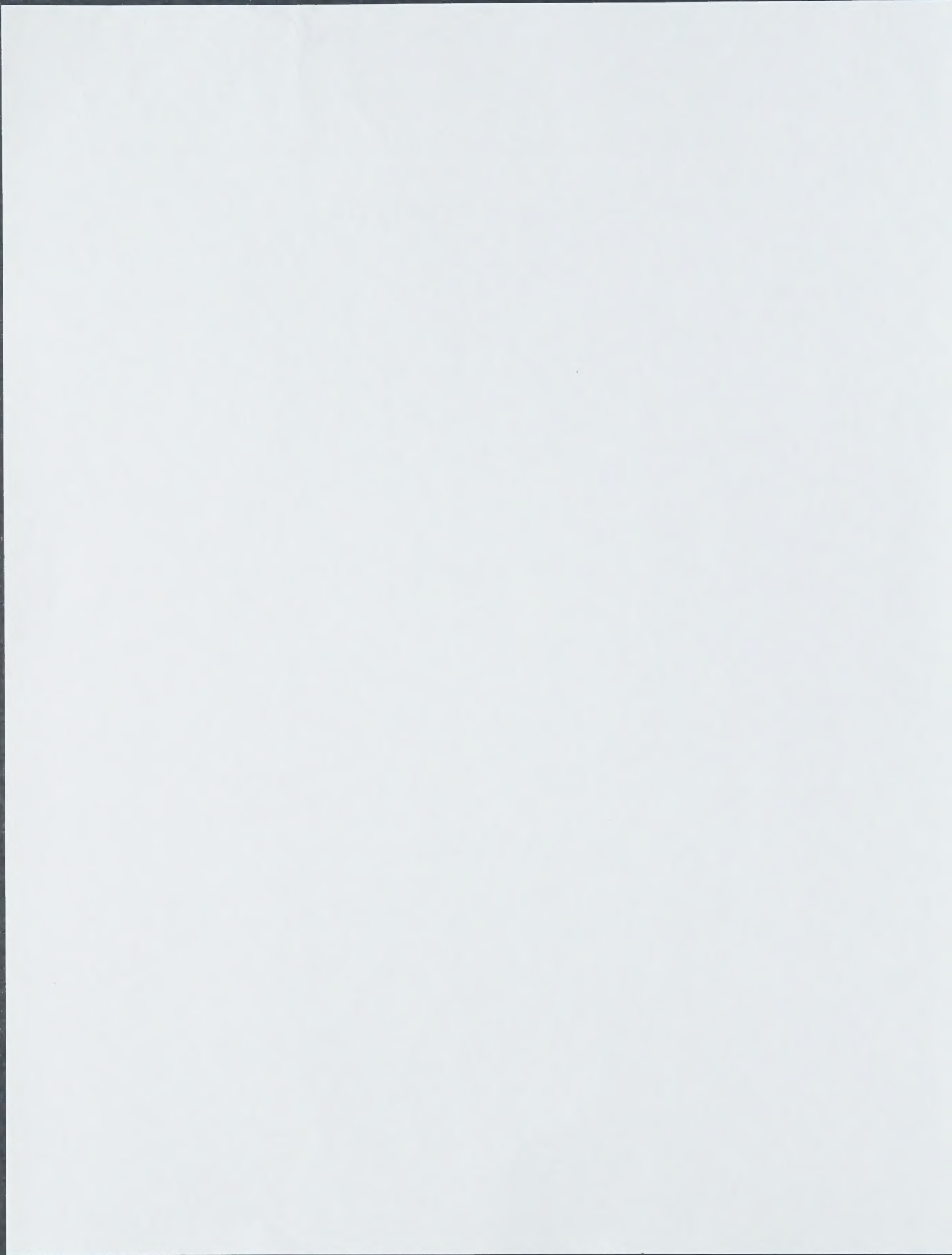
Dear Ms. Blaauw,

My wife, Dr. Isabel Bader, and I accept Dr. Schneider's invitation for lunch on November 8th with great pleasure.

We will be working at the RKD in the morning and then again in the afternoon.

With best regards I remain

Yours sincerely,
Alfred Bader



Beit Chana

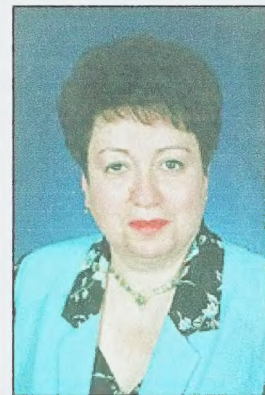
Teaching Seminary for Girls



rabbi Meir Stambler,
president of the college

11, Donetskoye shosse (building for studies)
175-a, Shirokaya str. (dormitory)
Dnepropetrovsk, Ukraine

tel/fax +380 (562) 35-55-73, tel. 35-64-33



**Olshanitskaya
Tamara,**
director

One of the biggest problems affecting Jewish communities in post-Soviet successor states today is the lack of qualified teachers in Jewish studies. In some of the larger cities, teachers are brought into local schools from Israel an arrangement that is very costly and difficult to sustain. Beit Chana Jewish Women's Pedagogical College was established in to address this problem.



The Institute enrolls 150 young women between the ages of 16 to 22 from Ukraine, Russia, and other post-Soviet successor states. It offers a four-year curriculum for students entering after ninth grade and two-year curriculum for girls entering after eleventh grade. It offers study concentrations in pre-school and elementary school education, both in secular and Jewish subjects. Further specialisation is available in music education or special education. Non-teaching majors in paraprofessional social work and office management are recent additions to the curriculum.

Beit Chana students study in a spacious building with 17 classrooms, an auditorium, and a dining room where a dairy breakfast and lunch are served. Dormitory accommodations are in a separate building that includes a kitchen and dining room for dinner, recreational facilities, and a medical suite.

Students attend local theatre performances and participate in a full range of social activities.

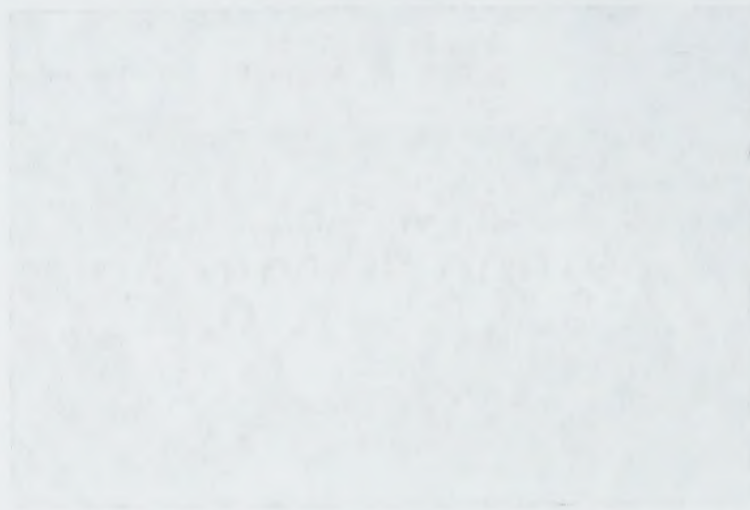
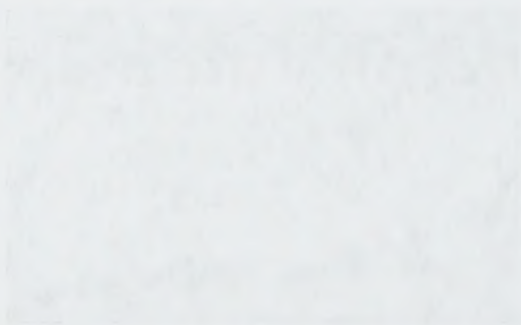


Figure 1

Figure 1 shows the results of the experiment. The data indicates that the system is stable and reliable.



Figure 2



The results of the experiment are shown in Figure 2. The data indicates that the system is stable and reliable.

The results of the experiment are shown in Figure 2. The data indicates that the system is stable and reliable.

The results of the experiment are shown in Figure 2. The data indicates that the system is stable and reliable.

The results of the experiment are shown in Figure 2. The data indicates that the system is stable and reliable.

Girls entering Beit Chana after ninth grade finish their high school programme in two years in a dual curriculum of secular and Jewish studies. Then they move on to the two-year post-secondary track, which includes Jewish studies as well as the secular program selected by the student.

Instructors in secular subjects are highly proficient local educators with extensive experience. Instructors in Jewish studies come to Beit Chana from Israel.



Beit Chana students do practice teaching at Jewish schools under the supervision or qualified teachers. They also work as counsellors in the local Jewish summer camps, and they acquire additional experience in programmes operated by the Joint Distribution Committee, the Jewish Agency. And other organizations.

Young women completing the programme attend a special six week seminar at Machon Gold in Jerusalem during the late spring and summer. Participating students also tour Israel, spend time in religious kibbutzim, and enjoy Shabbat with families in Israel.

Beit Chana graduates receive diplomas and certification from both Ukrainian and Israeli authorities.

Contracts that they sign with Beit Chana commit them to one year of service in the post-Soviet states for each two years of study at Beit Chana. After fulfilling the service obligation many decide to settle in Israel in placements arranged with the assistance of Beit Chana and rabbis supervising their service assignments in the post-Soviet states.

[Events](#)

[Back](#)

Jump to: [Jewish Day School](#) [Ilana](#) [Yeshivah](#) [Cheder "Uforatsto](#) [Jewish People's University](#)



19 DEANSWAY • EAST FINCHLEY • LONDON N2 0NG

② pages copy sent to Milwaukee

Tel: 020 8883 7390
Fax: 020 8444 1524

Dr Alfred Bader,
2a Holmesdale Rd
Bexhill- on-Sea
East Sussex TN 39 3QE

14th Dec 2001

Dear Friend,

I delayed thanking you for your visit until I could say that I had talked with Mr Yechiel Bar Chaim yesterday. He is consulting his US office about transmitting your cheque to us.

The 12th December will now be a special day for me, and my Quaker colleagues. We are very appreciative of the spirit behind your gift, and of the trusting way it was given. It was also a pleasure to meet you and to discover what a unique person you are. I have started reading your audio-biography. You seem able to work through a huge variety of jobs in a day and in a life-time. You were patient in watching all the video, although you knew it all by reading my book.

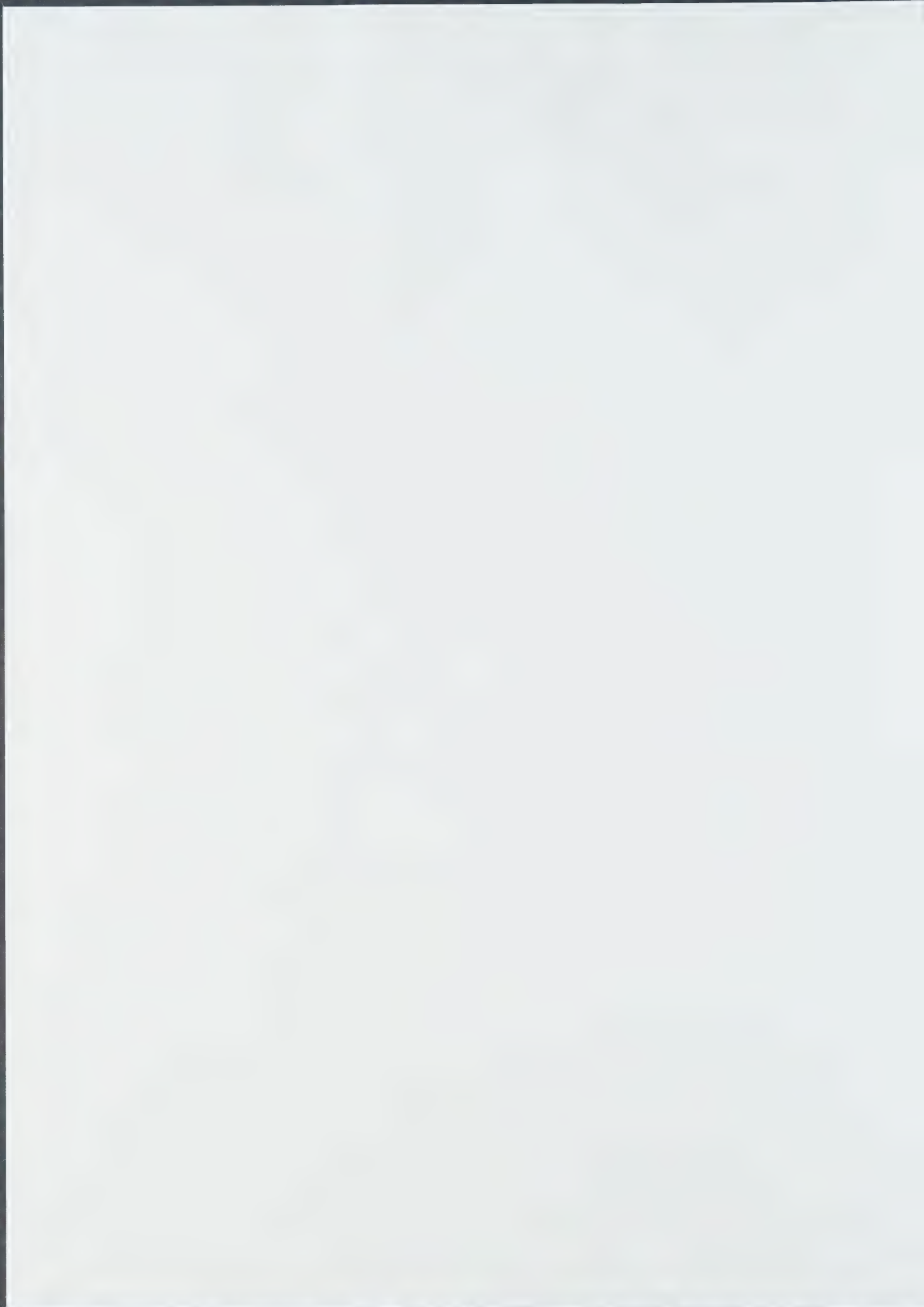
How interesting that from your scientific work you were led to a skill in appreciating the best painters in the world, and in securing them for public appreciation. Preserving art for the future is a real antidote to the increasing grottness of our surroundings.

Your last words about trying to find ways to respond to the need for peace between Israelis and Palestinians, is very close to our hearts. A topic we have been working on for several generations, and yet it is worse than it has been since 1968. The list of organisations you showed me may be very helpful. I am excited about the potential you have given us to carry on with our work for peace and justice in various places.

I will try not to drink your mug of tea next time we meet in June! My son Martin also hopes to meet you then.

Best wishes for a good family time at Hanukah.

Brenda Bailey *Brenda*



Yearly Meeting of the
Religious Society of Friends in Britain

Friends House 173 Euston Road London NW1 2BJ
Tel: 020 7663 1000 Fax: 020 7663 1001
Web: <http://www.quaker.org.uk>
Recording Clerk: Lisa Bader



Mr Yehiel Bar Chaim
A.J.D.C. Paris Office
5 Avenue Matignon
F/75008 PARIS

Quaker Peace & Social Witness
Clerk: Beryl Milner 14 Dec 2001
General Secretary: Linda Fielding

Dear Mr Bar Chaim,

It was good of you to phone me yesterday, and to know that you were exploring the feasibility of transferring money with approval of your New York head office.

When you have let me know where to send the Bader cheque I hold, the following information useful.

Quaker Peace and Service would like to have the money sent straight to their bank account. Christmas is a bad time to send things by mail:

Co-op Bank PLC, 828 Southampton Row, London WC1R 4AR
Britain Yearly Meeting (Quaker Peace & Social Witness)
Sort code- 08 90 61
a/c code 50 234 651

Postal address 62 /64 Southampton Row, London WC1B 4AR

You also asked about the charity details at the end of the Quaker notepaper. They are valid for a non-prosletysing religious body, though they look different from secular organisations.

'The Religious Society of Friends is a charity for the advancement of religion and excepted from registration with the Charity Commission by virtue of a statutory instrument No 180 of 1996, and statutory instrument no 260 of 2001' -)this formal information was dictated to me by our Treasurer).

We are very excited by the opportunities Dr Bader is giving us. Sue Reid has suggested we would be interested to know each other. It would be a pleasure to meet if you happen to be in London sometime.

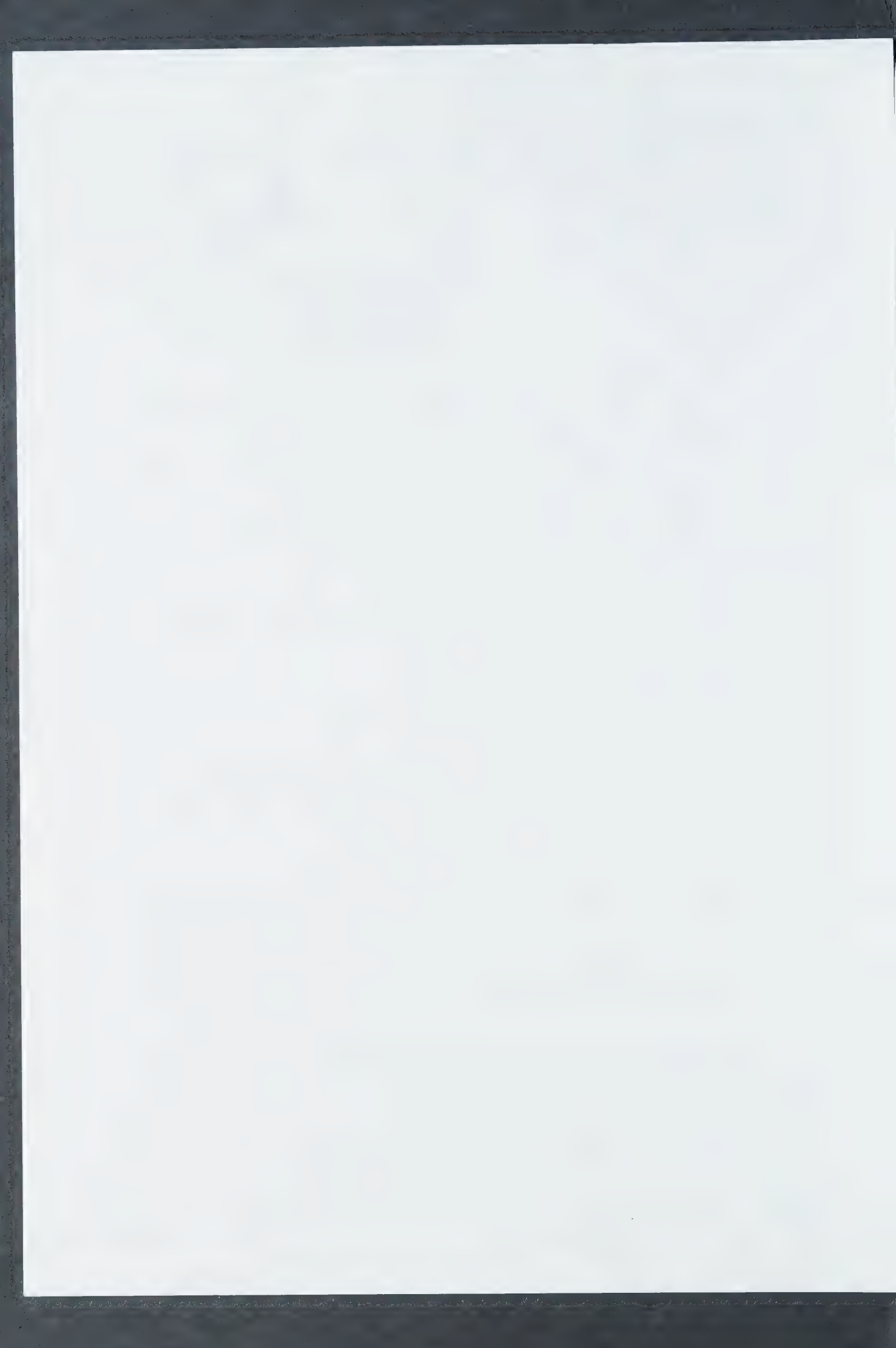
With best wishes in peace and friendship

Brenda Bailey

A religious charity, excepted from registration under SI 1996 No 180 and SI 2001 No 260



cc J Bader



To Steven Bunny

Boys & Girls Club of Greater Milwaukee

Bethel Community Development Corp.

Christian Family Social Services

Day Care Services for Children

→ Hmong Education Advancement ←

Council for the Spanish Speaking

→ Homeboyz Interactive ←

Horizons, Inc.

Indian Council for the Elderly

James Cook Foundation

→ Journey House ←

M & S Clinical Services

Metcalfe Park Resident's Association

Milwaukee Inner City Arts Council

Multicultural Community Services

Neighborhood House

Residential Living Services

Our Space

SOS Center

YMCA (part of operations)

Nativity Jesuit Middle School

Thanks, Steven
Any individuals to
whom to send
checks?

Best wishes
Gerald

31 XII 01



* * * * *

TRANSACTION REPORT

FOR: ALFRED BADER FINE ARTS 4142

SEND

RECEIVER

PAGES

NOSE

REILL PENNER

Tax Exempt Organizations operating in or serving the Inner City

Pregnancy Help Center of Milwaukee, Inc.

Bridging the Gap Learning Center, Inc.

St. Anthony School

Emmaus Lutheran School

St. Martini Lutheran School

Louis Tucker Academy, Inc.

Mary Queen of Martyrs School

Hickman's Academy Preparatory School

St. Philip Neri School

Our Lady of Sorrows School

Beautiful Savior Lutheran School

Victory Preparatory Academy

St. Elizabeth Ann Seton Academy

Siloah Lutheran School

Alex's Academics of Excellence

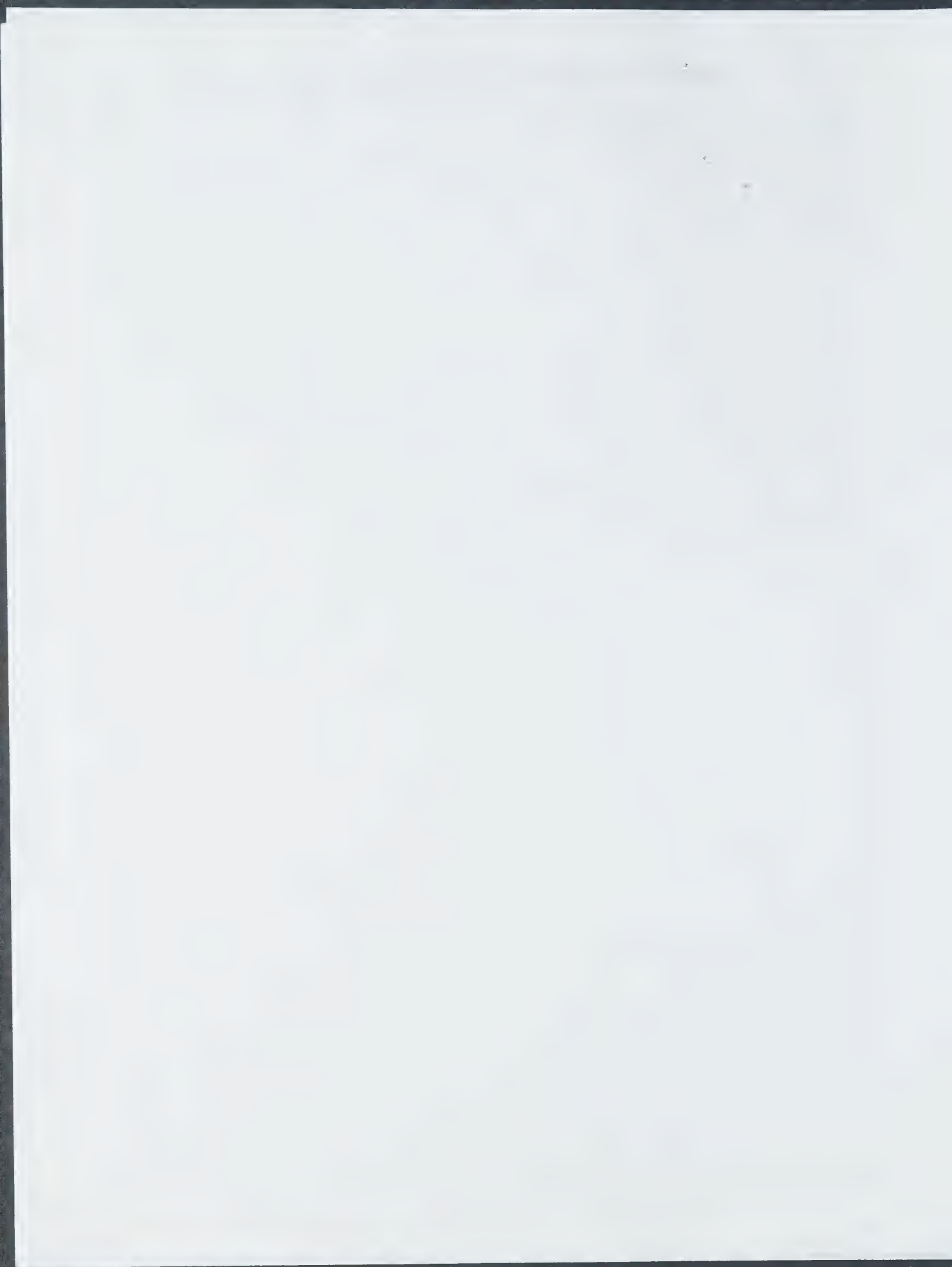
Noah's Ark Preparatory School

Grace Preparatory School

Marva Collins Preparatory School of Wisconsin

Mt. Lebanon Lutheran School

Sherman Park Preschool



To Steven Ramsey

Boys & Girls Club of Greater Milwaukee

Beta Community Development Corp

Universal Family Social Services

Day Care Services for Children

5740 → Inaug Education Advancement

Center for the Spanish Speaking

5056 → Homeboyz Interactive

Horizons, Inc.

Indian Council for the Elderly

James Cook Foundation

4535 → Journey House

M & S Clinical Services

Metcalfe Park Resident's Association

Milwaukee Inner-City Arts Council

Multicultural Community Services

Neighborhood House

Residential Living Services

Our Space

SOS Center

WETA (part of Epw Assoc)

Wauwatosa Second Middle School

62
~~3414~~ Xiong
3414 West Vliet St
Milwa 53205

Father James Holub SS
731 W. Washington St
Milwa 53204

Rodney
John ~~Grice~~

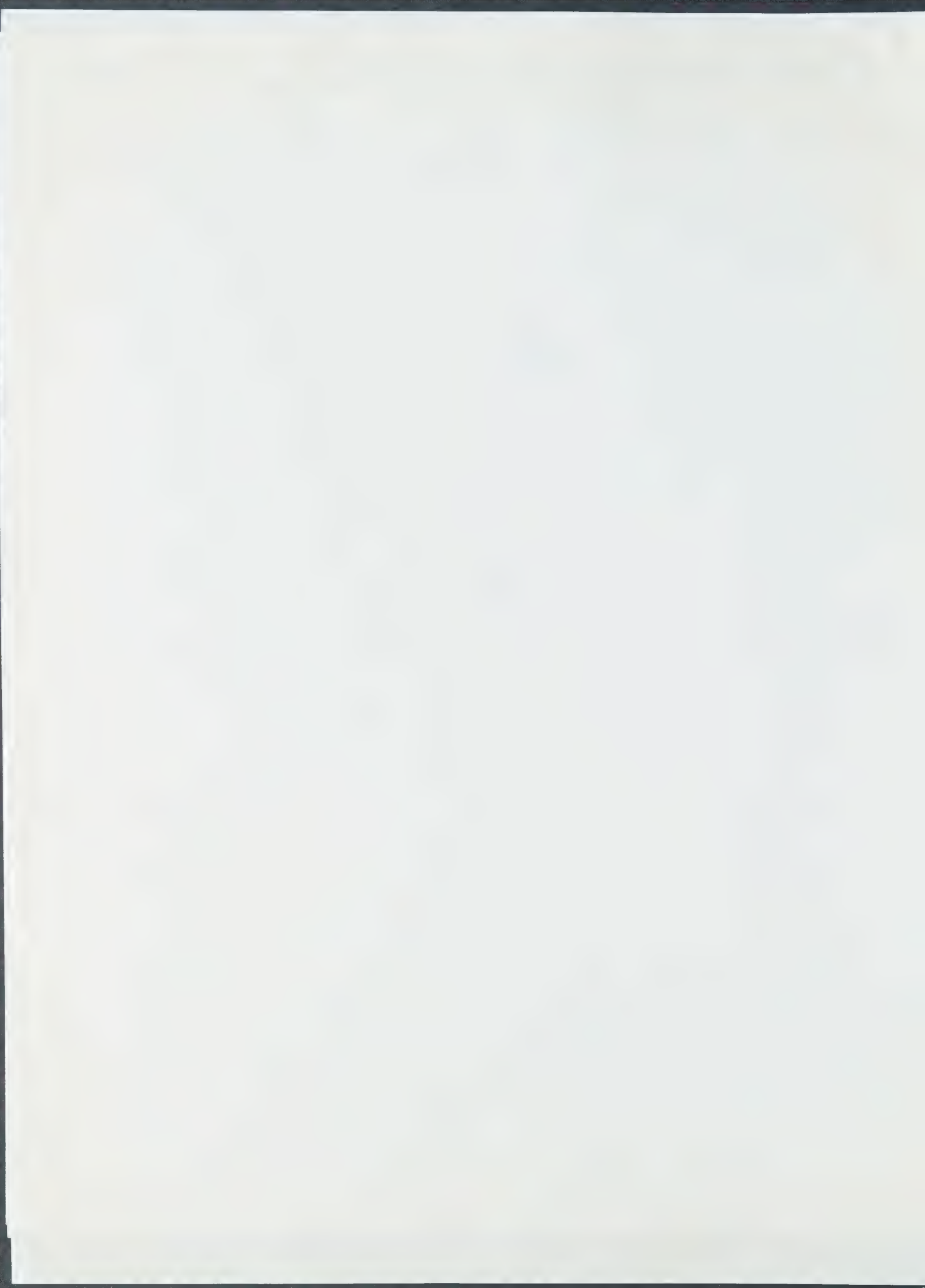
1900 W. Washington St
Milwa 53204

Thank you, Steven
Any individuals to
whom to send
checks?

Best wishes

[Signature]

12/31/01





Reilly, Penner & Benton LLP

CERTIFIED PUBLIC ACCOUNTANTS
611 NORTH BROADWAY, SUITE 300
MILWAUKEE, WISCONSIN 53202

FACSIMILE TRANSMITTAL

OUR FAX # (414)271-6005
OUR PHONE # (414)271-7800

TO: BUY
ATTN: Alfred
BY: Dgg
DATE: 12-31-01

NUMBER OF PAGES TRANSMITTED: 2
(Including Transmittal Page)

COMMENTS

OUR HISTORY

Founded in 1907, we are a medium-sized certified public accounting firm located in Wisconsin. We are the oldest accounting firm in the state, and have a long tradition of quality service to a wide variety of businesses, individuals and organizations.

OUR GOAL

At Reilly, Penner & Benton LLP our number one goal is to provide you, OUR CLIENT, guidance in today's complex financial world.

OUR SERVICES

We provide a full range of services, from basic accounting services to highly specialized tax and management consulting engagements. Each service is tailored to respond to each client's needs

Here are some of our services:

- ▶ **Financial Reporting**
Audit, Review & Compilation
- ▶ **Tax Planning and Preparation**
Corporate and Personal Taxes
Compensation and Pensions
Estate and Financial Planning
- ▶ **Management Services**
Litigation Support
Business Valuation

TAX TIP

The IRS has recently revised the minimum distribution rules for IRA's. Please check with us before you take any required distributions. Give us a call at (414) 271-7800 or E-Mail us at sbarney@rpblp.com.

Visit our Website at:

<http://www.execpc.com/~rpblp>

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your ad

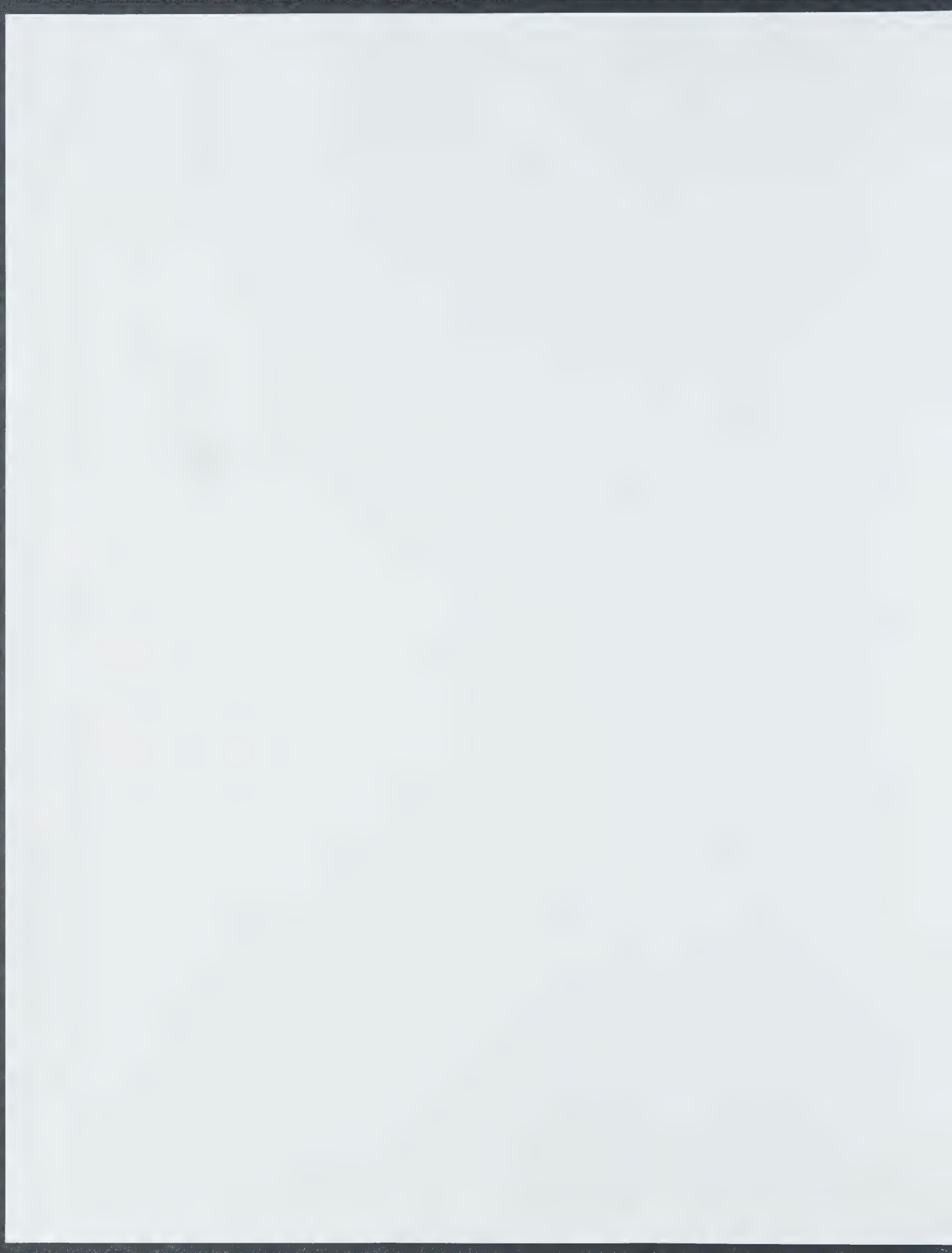
Subject: your ad

Date: Wed, 15 Mar 2000 09:51:54 EST

From: KBelkin@aol.com

To: baderfa@execpc.com

Dear Dr. Bader: thanks for your letter with the correction. Unfortunately, it will be mid-April before you will see the layout, and not mid-March. I think I told you already that I am heavily involved in the Rubens-Holbein Dance of Death exhibition at the Rubenshuis which opens April 7, with me as speaker. I wrote a very large part of the book, translated Volker Manuth's contribution, and edited the whole publication, in Dutch and English. There absolutely is no time for the newsletter. I am doing as much as I can now before the proofs arrive March 20. After that I have another week before flying to Brussels. Sorry about this, but I really had no choice. My designer will come in the second week of April, and there will be a newsletter in May, I promise. With best wishes, Kristin Belkin.





ALFRED BADER FINE ARTS

DR. ALFRED BADER

ESTABLISHED 1961

March 28, 2001

Mgr. Pavel Blattny
Náprstková 8
110 00 Prague 1
CZECH REPUBLIC

Dear Pavel,

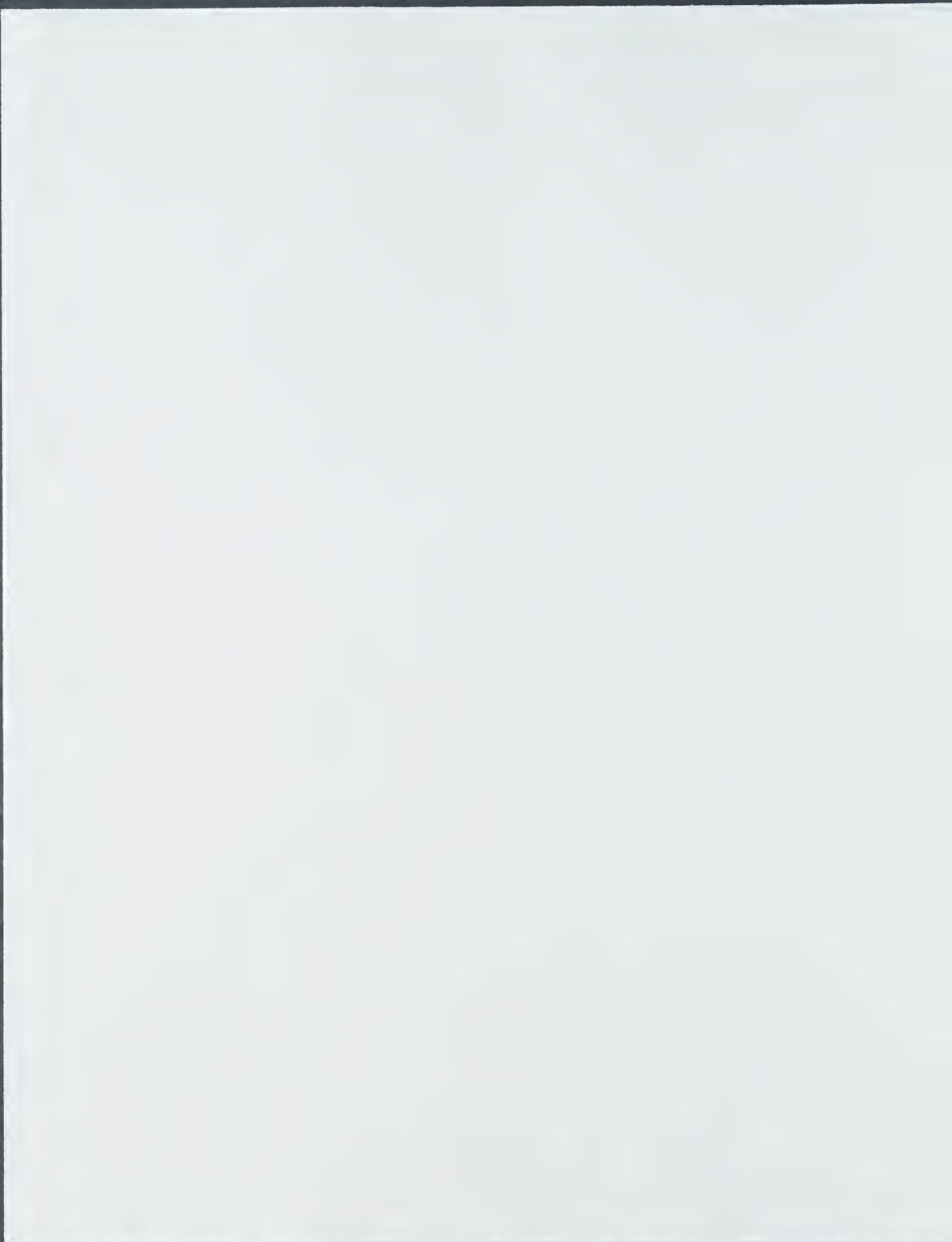
Isabel and I plan to be in Prague from June 17th to the 21st, again staying in the apartment in the house right next to you.

Of course we look forward to seeing you.

Best wishes,

Alfred Bader
AB/az

By Appointment Only
ASTOR HOTEL SUITE 622
924 EAST JUNEAU AVENUE
MILWAUKEE WISCONSIN USA 53202
TEL 414 277-0730 FAX 414 277-0709
E-mail: baderfa@execpc.com



THE BARONESS GREENFIELD, CBE



TEL: 020 7670 2910
FAX: 020 7499 2679

House of Lords

LONDON SW1A 0PW

Dr Alfred Bader, CBE
Astor Hotel Suite 622
924 East Juneau Avenue
Milwaukee
Wisconsin
USA 53202

02 August 2001

Dear Dr Bader

As promised at our St James's Reception on 19th July, I am writing with a proposal in support of our 'Heart of Science' Campaign through the *American Friends of the Ri*. Our *American Friends* organisation has now been fully approved by the U.S. Internal Revenue Service – the registration number is 31-1740781.

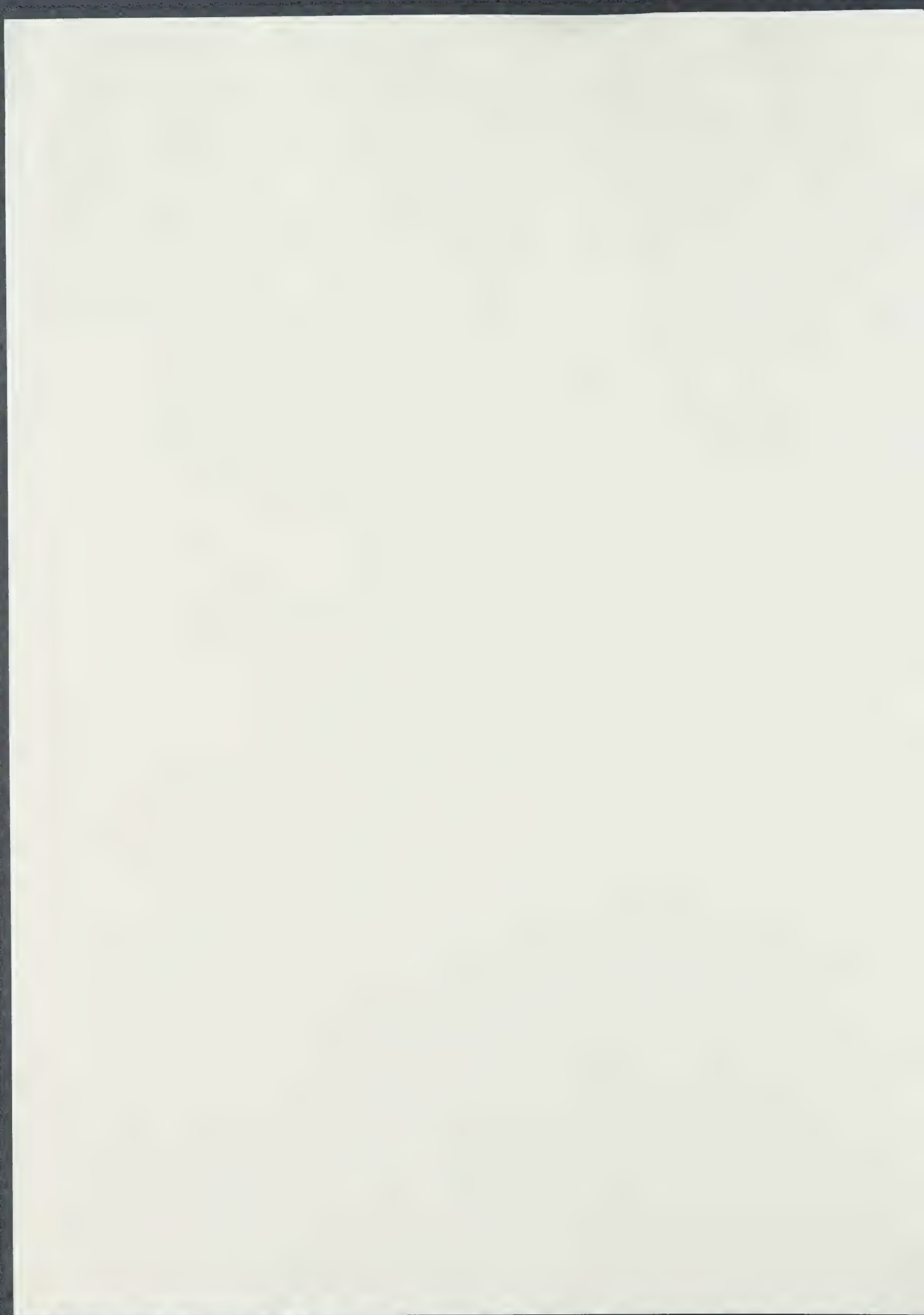
If you would like to discuss any aspect of this proposal, please don't hesitate to get in contact. It was a great pleasure to meet Mrs Bader and yourself. I am sorry we didn't have a greater opportunity to talk, but I look forward to meeting you both again soon.

All best wishes.

Yours sincerely

The Baroness Greenfield, CBE

Email: greenfields@parliament.uk





780 NORTH WATER STREET
MILWAUKEE, WI 53202-3590
TEL 414-273-3500
FAX 414-273-5198
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GODFREY & KAHN, S.C.
MILWAUKEE
APPLETON
GREEN BAY
WAUKESHA

LAFOLLETTE GODFREY & KAHN
MADISON

October 6, 2003

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

Dear Isabel and Alfred:

When asked to accept the Legacy Award, I did so with great reluctance. As I said in my comments, my main motivation was the fact that the Jewish Community Foundation has been a major focus of my community life for the last thirty years. Also, it gave me the opportunity to express my appreciation to the many mentors and supporters I have had through the years. The evening turned out to be quite meaningful to me. I appreciated the comments of the co chairs, Betsy Green and Mark Brickman, and my law partner, Jerry Kahn. And, Stephanie's comments were very moving—she is a show stopper. Finally, I was joined by so many friends who joined in the celebration—including the two of you.

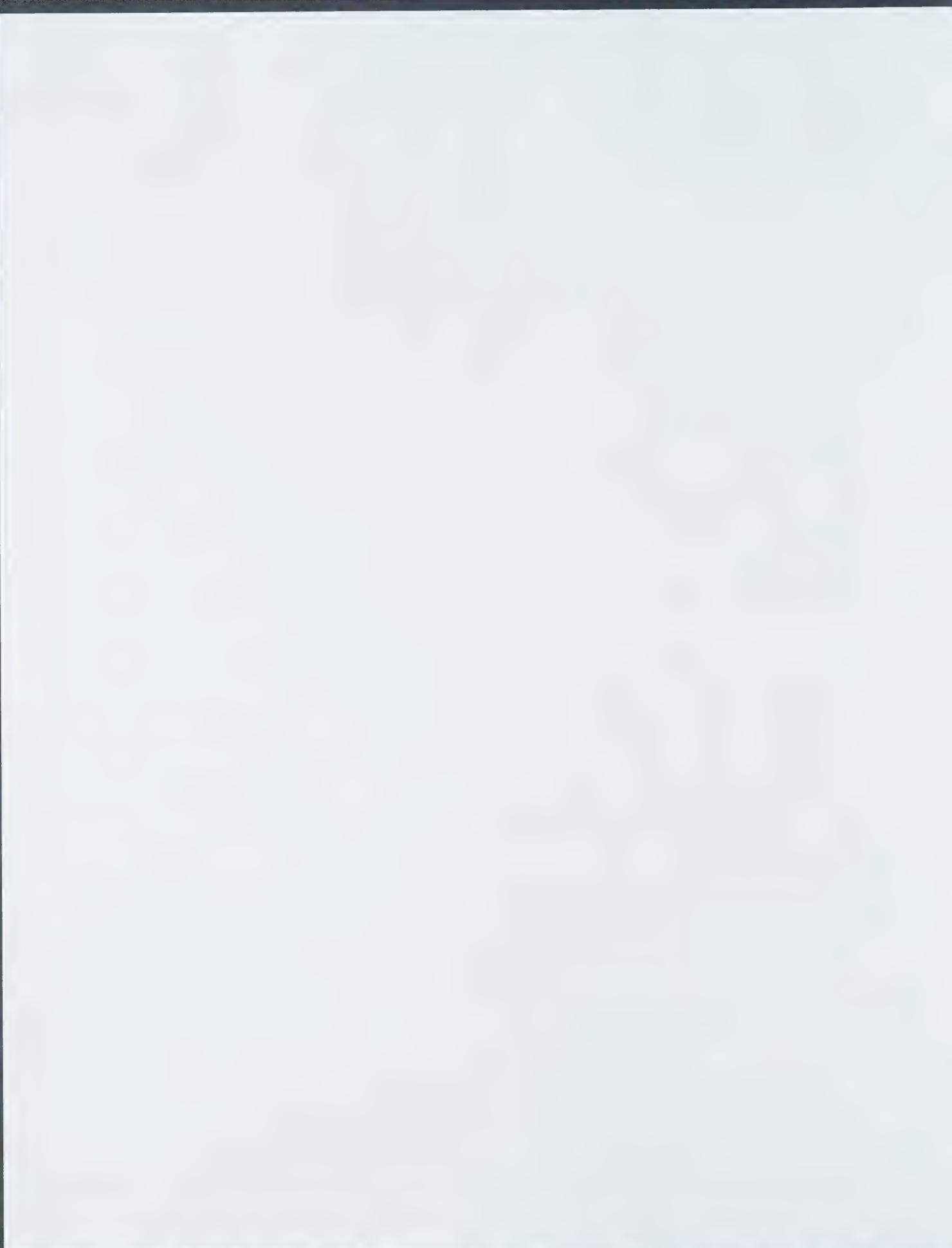
Alfred, thank you for your letter of October 3, 2003, on Bader & Bernstein, Inc., letterhead. I'm pleased that the two of you enjoyed the evening. Audrey and I are going to be in California for two weeks. Our phone number in California is 760-322-4092. My cell phone is 414-640-1221. I look forward to seeing you upon our return and to the continuation of our friendship.

Best wishes for a healthy and fulfilling new year.

Very truly yours,

A handwritten signature in black ink, appearing to be "J. Bernstein", written over a horizontal line.

Joseph M. Bernstein



Re: Shana Tova

Subject: Re: Shana Tova

From: Morry Blumenfeld <morry@meditechadvisors.com>

Date: Thu, 13 Oct 2005 19:43:50 +0300

To: Alfred and Isabel Bader <baderfa@execpc.com>

Thanks. I hope you and Isabel had a great New Year and an easy fast for Yom Kippur. Sorry that I will miss you again, but perhaps I will be able to get together with you on my next trip.

--

S. Morry Blumenfeld

MEDITECH ADVISORS LLC

+1 (646) 209-9899

+972 (54) 729-9318

morry@meditechadvisors.com

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From: Alfred Bader Fine Arts <baderfa@execpc.com>

Date: Wed, 12 Oct 2005 15:34:52 -0500

To: Morry Blumenfeld <morry@meditechadvisors.com>

Subject: Re: Shana Tova

Dear Morry,

Thank you for your e-mail of October 7th which arrived here while we were in Vancouver.

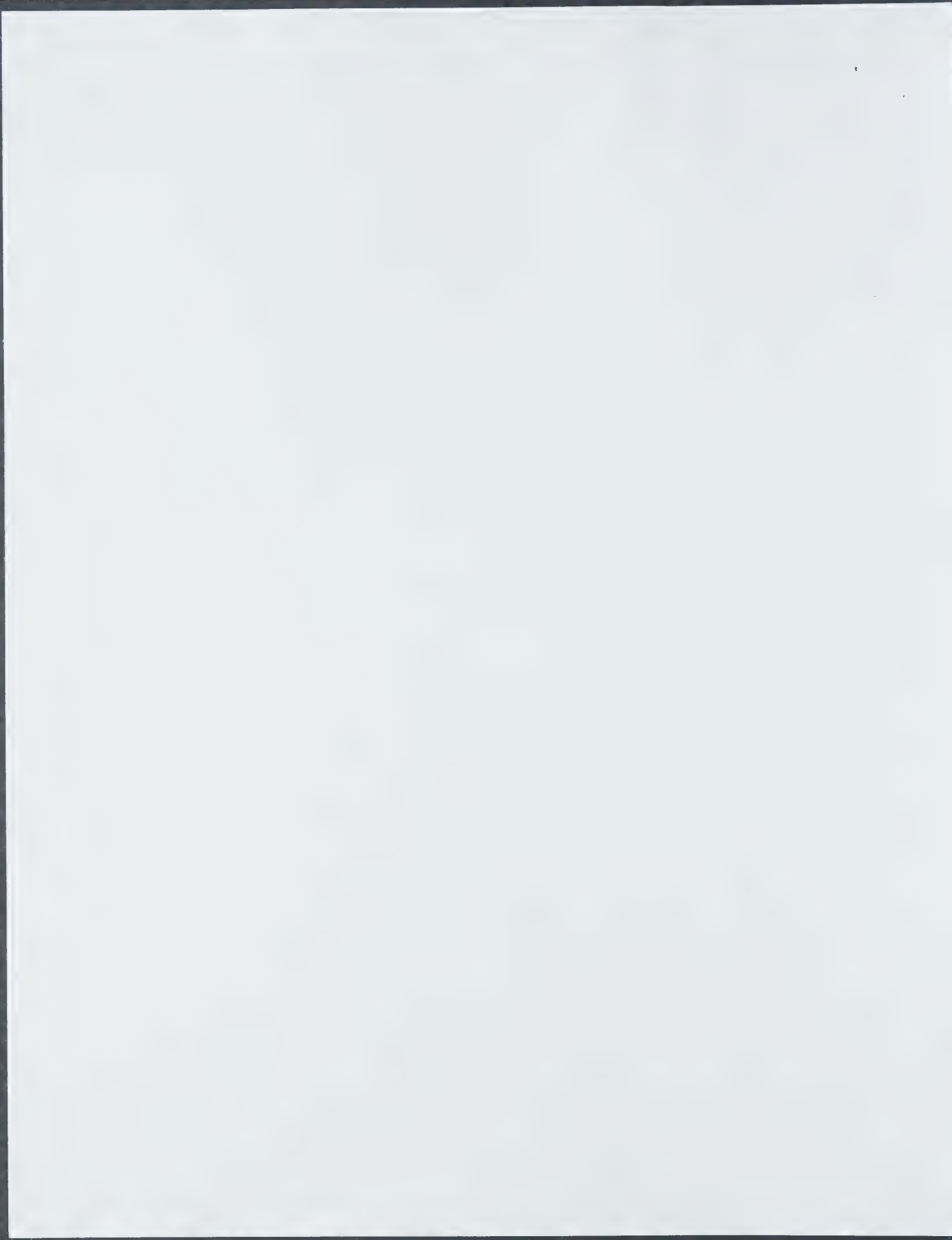
I am sorry that I missed you while you were in Milwaukee and will miss you again when you will be here on November 9th and 10th, because I have been invited to give four lectures in Dresden those two days.

But undoubtedly Daniel will keep me informed.

I have spoken at Yeshiva University and at Stern College several times but now we get to New York very seldom.

I wish you well over the fast and a happy, healthy and, most important, a peaceful New Year.

Best wishes,
Alfred



Re: Shana Tova

Morry Blumenfeld wrote:

Shana Tova Dear Isabel and Alfred
Sorry I missed you when I was in Milwaukee a few weeks ago, however apparently you were away when I was there and I was gone when you were there. However I did get the chance to meet Dan and I believe that meeting went very well. As you have heard from Don Grande, my partners and I are working with Ziegler to develop a \$70MM medical device fund. I look forward to seeing you when I am next in Milwaukee, November 9th and 10th, to tell you more about this and why we think we will be very successful in this endeavour.

Meanwhile Charlotte, Philip and I want to wish you a very happy, healthy and peaceful New Year. I should tell you that Philip basked in a some reflected glory when he told his professor in his Chemistry Lab at Yeshiva University that the picture on the back of the Aldrich Chemical catalogue they were using was a Rembrandt, and, when the professor asked him how he knew he told the professor that he knew you and that this was something that you started when you started Aldrich. I guess the book on Rembrandt you gave him for his bar mitzvah paid off!. He told me to ask you whether you would come to talk to his chemistry class any time when you are in New York and you have some free time.

Again best regards from all of us and best wishes for the new year.

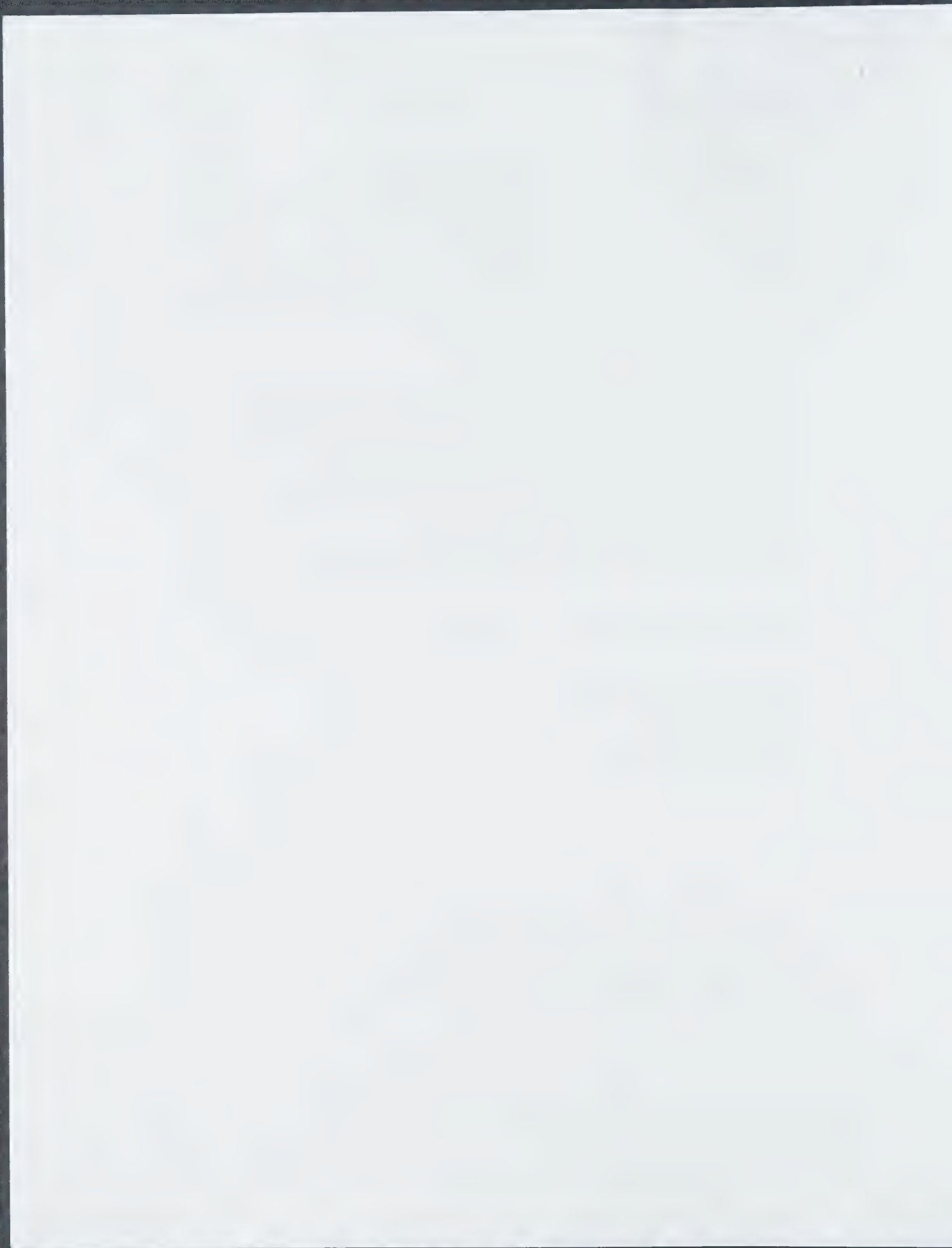
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S. Morry Blumenfeld
MEDITECH ADVISORS LLC
+1 (646) 209-9899
+972 (54) 729-9318
morry@meditechadvisors.com

--

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<<http://www.core.com/>>

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4-27-04

about:blank

Dear Ms. Brehmer,

In response to your e-mail of last Friday I would be happy to show you my gallery; please just make an appointment (414-277-0730).

However, I would not be happy about an article about my collection in *Milwaukee* magazine stressing what a loss the collection going to Canada is for the City. Jim Auer has written about this quite clearly and so have I in my autobiography. Why hurt Milwaukeeans more?

Best wishes,
Alfred Bader



Subject: Fwd: article

From: "abfa" <ordersfa@alfredbader.com>

Date: Fri, 23 Apr 2004 08:09:49 -0400

To: <Baderfa@execpc.com>, "David Bader" <David.theLabPO.theLab@thelab.net>, "Gretchen Dossa" <Gretchen.theLabPO.theLab@thelab.net>, "Harry Horner" <Harry.theLabPO.theLab@thelab.net>

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Subject: article

From: Debrabrehm@aol.com

Date: Fri, 23 Apr 2004 09:14:51 EDT

To: ordersfa@alfredbader.com

Dear Mr. Bader,

I would like to do an article on you and your collection for Milwaukee Magazine. I heard you speak at MIAD recently and was very intrigued by your talk.

I'd also like to emphasize in the article that your collection is going to Canada and not the Milwaukee Art Museum and what an enormous loss this is to the city. I don't think the public realizes this.

Could we get together sometime over the next three weeks? I'd also love to see your gallery.

Sincerely,

Debra Brehmer
332-9930.

Subject: Re: Roma's birthday book
From: Marna Broida <mjbroida@earthlink.net>
Date: Thu, 30 Oct 2003 13:10:08 -0800
To: Alfred Bader Fine Arts <baderfa@execpc.com>

Dearest Alfred,

Many thanks for your kind and heart-felt words. I cannot wait to see my mother's expression when she reads your tribute. Warmly, Marna B.

| And please make a note of my e-mail address shown above.

Alfred Bader

What a pleasure to be able to wish Roma Wittcoff all the very best for her 80th birthday.

I first met Roma before the merger of Sigma with Aldrich in 1975. Roma's husband Dan Broida had built Sigma into a singular company, the ablest in the United States to supply biochemicals.

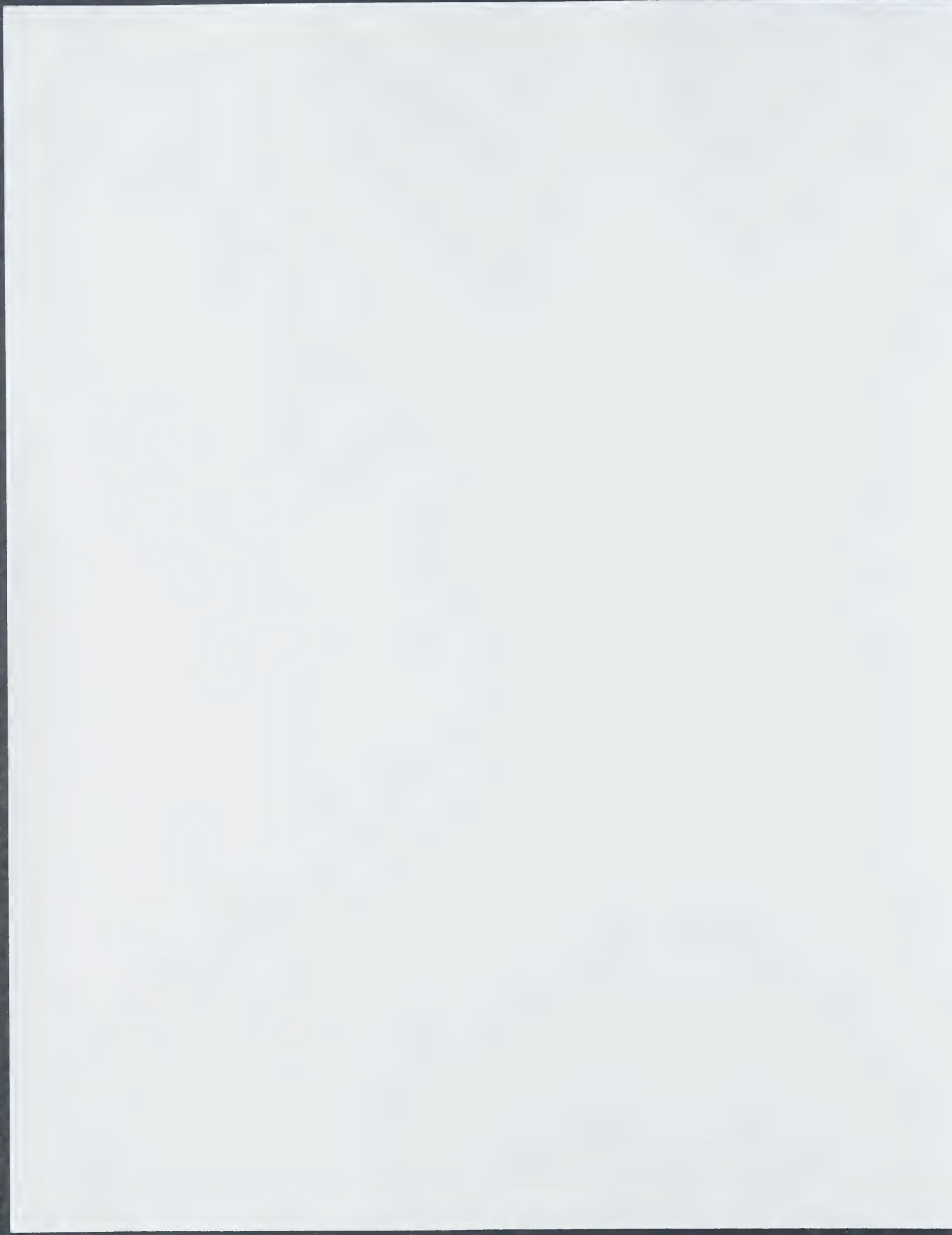
As I wrote in my autobiography, Adventures of a Chemist Collector, "Dan was intelligent, handsome, immensely hard-working, totally honest, opinionated, and disdainful of most PhDs, calling all and sundry "idiots" if they disagreed with him. You could never win an argument with Dan, but the love and care of his well-balanced and charming wife, Roma, made him bearable."

One of the Sigma-Aldrich executives referred to Roma and Dan as "The Beauty and the Beast" and he was right only in the first half of that sentence. Roma was and still is a beautiful woman, caring and intelligent, always a pleasure to be with. Dan was not a beast, though not easy to work with, yet the better I got to know him, the more I appreciated him.

Roma, what can one say to you at 80? Please remember that Moses began his work at 80 and it was said of him at 120 that "his eye was not dim nor his natural strength abated." Roma, so may it be with you.

| Alfred Bader

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FAX FROM:

Dr. Alfred Bader
924 East Juneau Avenue
Astor Hotel - Suite 622
Milwaukee, WI 53202
Ph: (414) 277-0730
Fax: (414) 277-0709
www.alfredbader.com
e-mail: baderfa@execpc.com

A Chemist Helping Chemists

January 5, 2004

TO: Professor Robert G. Burgess
Vice-Chancellor
University of Leicester

Page 1 of _2_

FAX #: 011 44 (0)116 255 8691

Dear Professor Burgess,

I am sorry that traveling around the UK and then returning to Milwaukee just before Christmas has delayed my responding to your kind invitation of November 25th to become an Adrian Fellow of your University.

I accept with pleasure and enclose my CV.

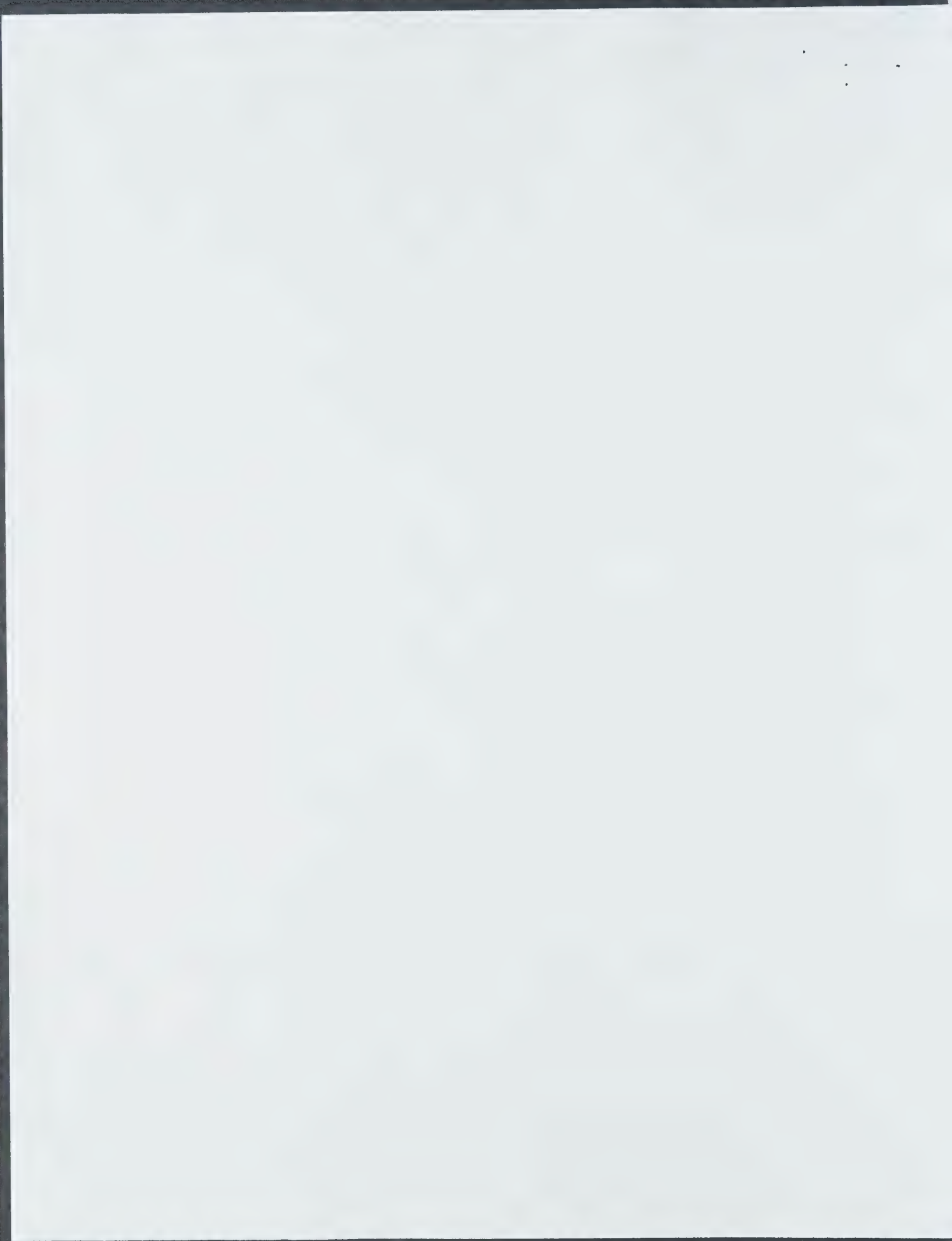
I must caution you, however, that Isabel and I spend only about three months in England, usually several weeks in June, July, November and December. That would of course limit my visits to Leicester.

However, we do know how easy it is to come from London to Leicester and so a 1-2 day visit once or twice a year should certainly be possible.

With all good wishes for a happy and healthy 2004 which I would like to ask you to share with Professor and Mrs. Schwaeble I remain

Yours sincerely,

Alfred Bader
AB/az
Att.



Our Ref: RB/sh/Nov.Bader

25 November 2004

Dr Alfred Bader
2 Holmesdale Road
Bexhill on Sea
TN39 3QE



University of
Leicester

Professor Robert G Burgess
Vice-Chancellor

Fielding Johnson Building
University Road
Leicester LE1 7RH · UK
Tel: +44 (0)116 252 2322
Fax: +44 (0)116 255 8691
Email: vc@le.ac.uk

Dear Dr Bader,

It was good to have the opportunity to welcome you and your wife to the University last week. I know that many of my colleagues and the students enjoyed your lectures very much. Indeed, I found the lecture I attended provided many fascinating insights into the world of business. I do hope we will be able to persuade you to come to the University again to visit some departments as well as to give some lectures.

I was delighted to be able to offer you one of our distinguished Adrian Fellowships which would develop your relationship further with our departments (I enclose a list of Adrian Fellows). I do hope you will accept this Fellowship.

I shall look forward to hearing from you.

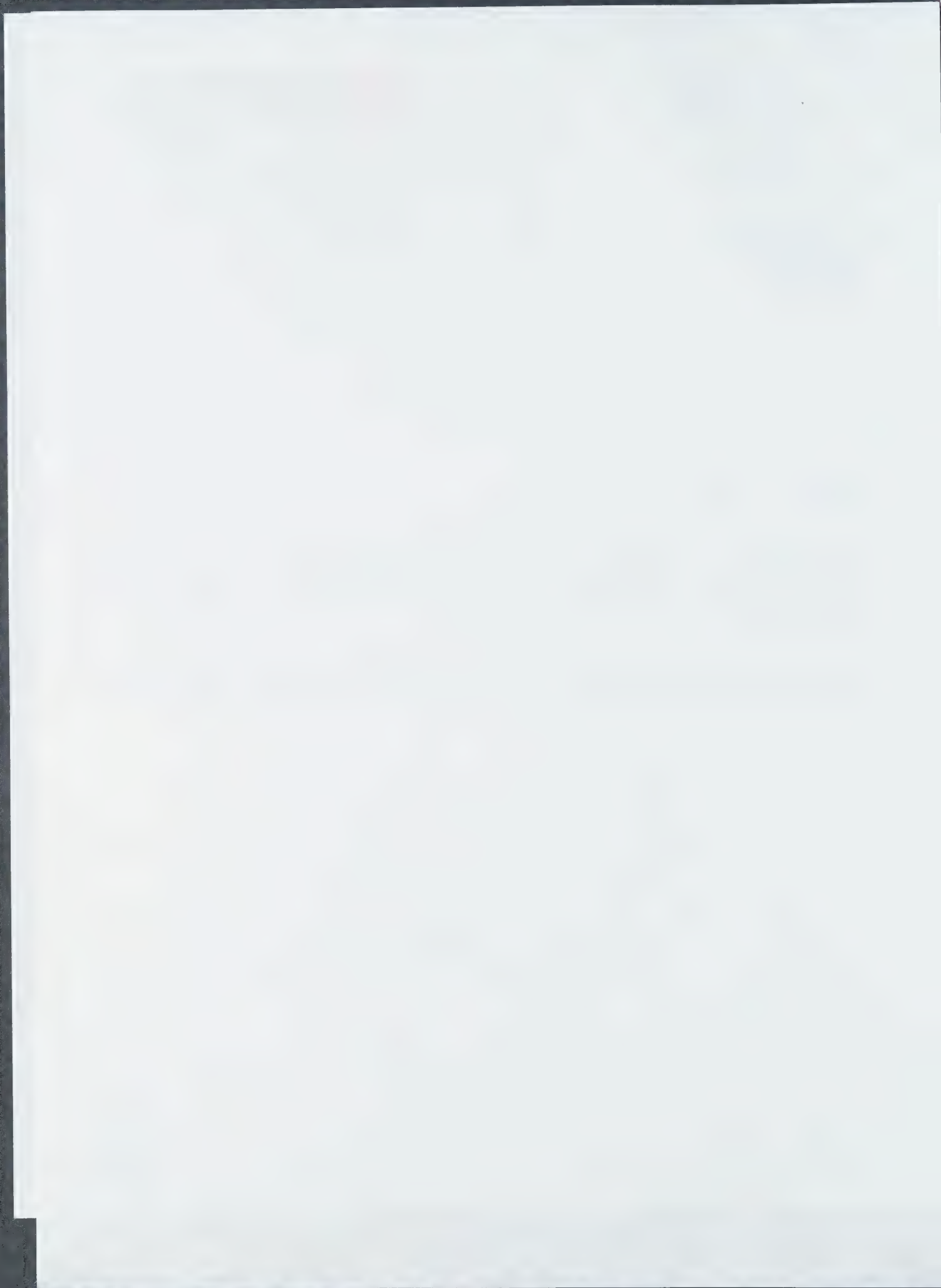
*With best wishes,
Yours sincerely,
Bob Burgess*

ENC: List of Adrian Fellows



THE QUEEN'S
ANNIVERSARY PRIZES

2002





University of Leicester

The University has established a number of Visiting Fellowships, named after the first Chancellor, which are tenable for three years in the first place and are offered to distinguished persons from industry or the public services who are willing to give lectures, take part in seminars, and be associated with specific research projects at the University.'

ADRIAN VISITING FELLOWS

ASTRONOMY

R. Hide, B.Sc. (Manchester), Ph.D., Sc.D. (Cambridge), D.Sc. (Leicester), F.R.S. (Meteorological Office) 1980-83

CHEMISTRY

L. J. Bellamy, B.Sc., Ph.D. (London) (Ministry of Technology) 1967-73

H. A. Coates, B.Sc., Ph.D. (London) (Albright and Wilson Ltd.) 1967-73

H. L. Roberts, B.A., D.Phil. (Oxford) (I.C.I. Ltd.) 1977-80

Professor G. E. Adams, B.Sc. (London), Ph.D., D.Sc. (Manchester) (M.R.C. Radiobiology Unit) 1986-89

R. Baker, B.Sc., Ph.D. (Leicester) (Merck, Sharp and Dohme) 1990-93

Dr J. Beacham, B.Sc. (London), Ph.D. (Liverpool), C.Chem., F.R.S.C. (ICI Chemicals & Polymers Ltd.) 1995-97

ENGINEERING

A. Dyson, M.A. (Cambridge) (Shell Research Ltd.) 1967-73

C. Scruton, B.Sc. (London) (National Physical Laboratory) 1967-70

D. McLean, D.Sc. (Manchester) (National Physical Laboratory) 1970-73

K. G. Winter, B.Sc. (Leeds) (Royal Aircraft Establishment) 1970-73

K. F. Raby, M.A. (Cambridge) (C.E.C. Ltd.) 1975-77

GEOLOGY

Sir Percy Kent, D.Sc., Ph.D. (London), D.Sc. (Leicester), F.R.S (British Petroleum Co. Ltd.) 1967-70

R. H. Cummings, B.Sc., Ph.D. (Robertson Research Co. Ltd.) 1970-72

H. W. Ball, Ph.D., F.G.S. (British Museum) 1972-76

W. Domzalski, B.Sc., Ph.D. 1976-79

P. N. S. O'Brien, B.Sc. (London), A.R.C.S. (British Petroleum Co. Ltd.) 1980-83

Professor Sir George Malcolm Brown, B.Sc. (Durham), M.A. D.Phil. (Oxford) D.Sc. (Leicester), F.R.S., F.R.S.E.

(Institute of Geological Sciences) 1983-86

M. L. Coleman, B.Sc. (London), M.Sc., Ph.D. (Leeds) (British Petroleum Co. p1c) 1986-89

H. R. Bichan, B.Sc. (Aberdeen), Ph.D. (Leeds) (Robertson Research International Ltd.) 1986-89

Professor P. F. Worthington, B.Sc. (Hull), M.Sc. (Durham) D.Sc. (Pretoria), Ph.D. (Birmingham), F.G.S., C.Eng.

(British Petroleum International Ltd.) 1989-92

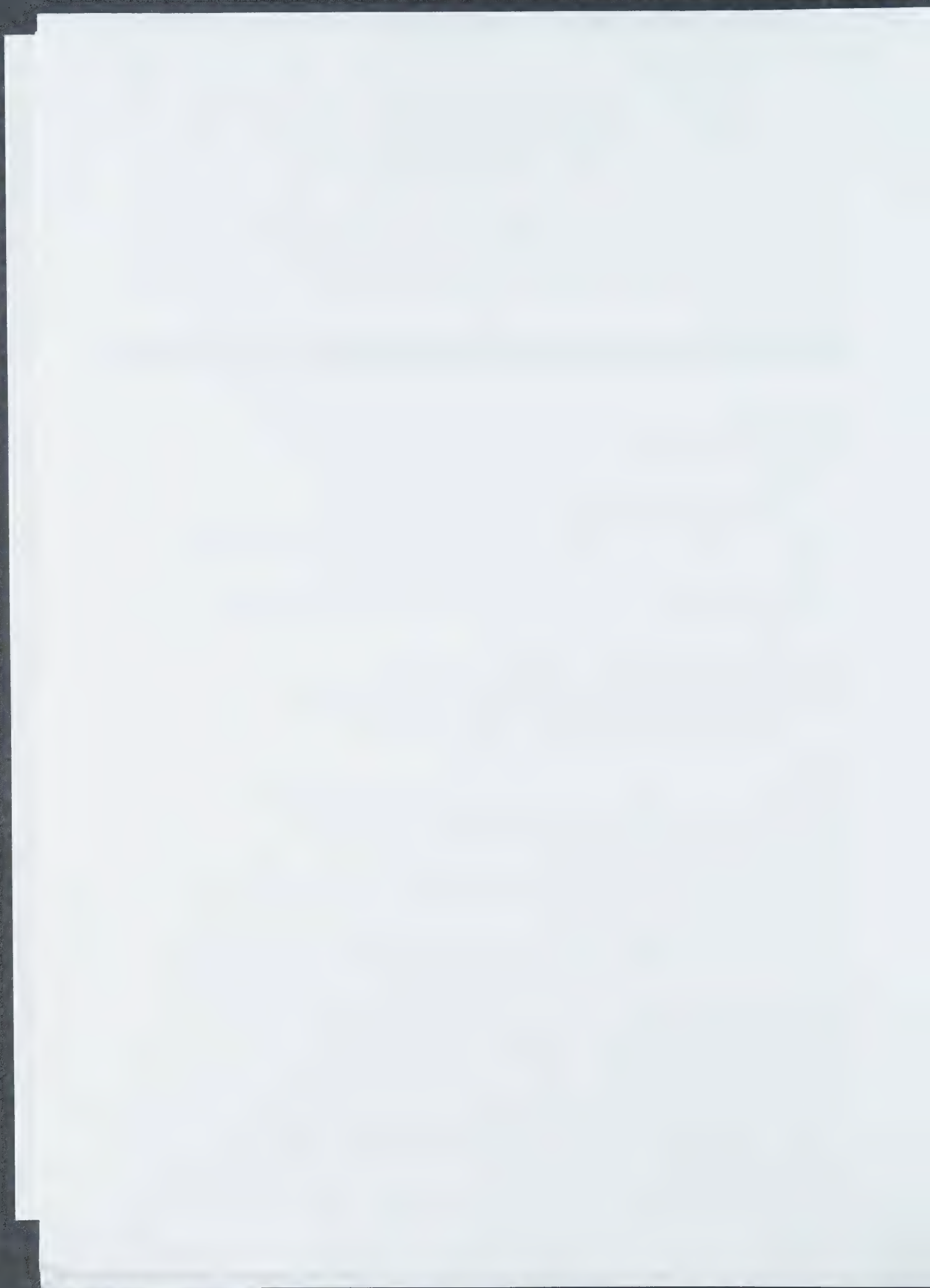
P. J. Cook, B.Sc., D.Sc. (Durham), M.Sc. (ANU, Australia), Ph.D. (Colorado, USA) (British Geological Survey) 1992-97

D. A. Falvey, B.Sc. (Sydney), Ph.D. (New South Wales) (British Geological Survey) 1998-2002

PHYSICS

Sir Nevill F. Mott, M.A. (Cambridge), F.R.S. (Cavendish Laboratory) 1980-86

Sir Bernard Lovell, O.B.E., LL.D., D.Sc. (Leicester), F.R.S. (Nuffield Radio Astronomy Laboratories) 1983-86



Sarah Baylen Brown
1014 Lincoln Trail
West Lafayette IN 47906

14 April 2004

Dear Professor Snieckus:

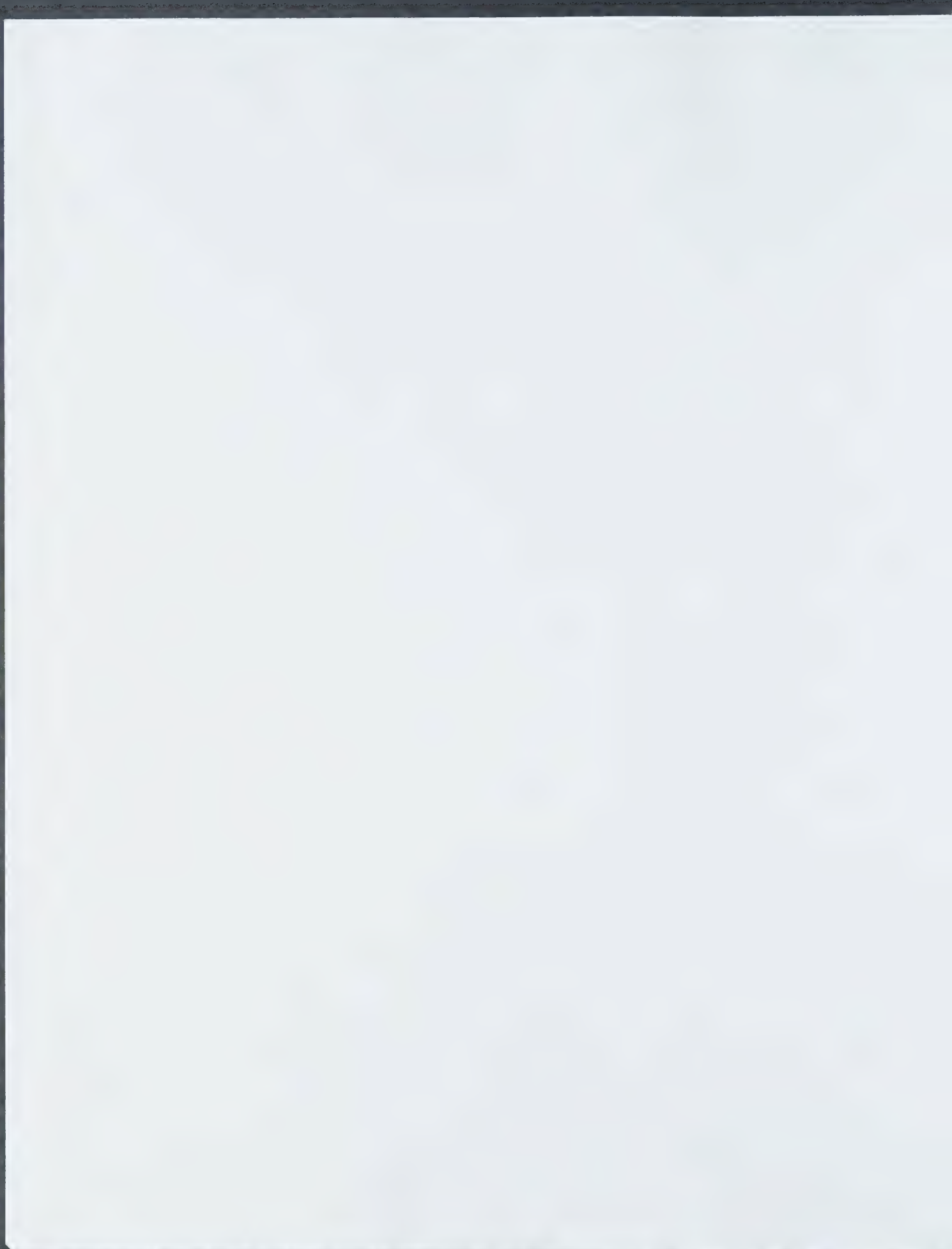
A very belated "Thank you" from
both of us for Isabel Bader's "A Canadian in Love".
Now I understand only a person with the integrity of
Alfred Bader could do the sort of things with honor
and integrity . The same with Isabel.

It was nice seeing you again.
Please excuse the terrible
typing. I am now 88 years old and have slowed
down considerably.

Herb sends regards.

Sincerely

Sarah
Sarah



Subject: ODU et al
From: "david bevan" <d_bevan@isc.queensu.ac.uk>
Date: Mon, 1 Sep 2003 13:58:10 +0100
To: <baderfa@execpc.com>

Dear Alfred,

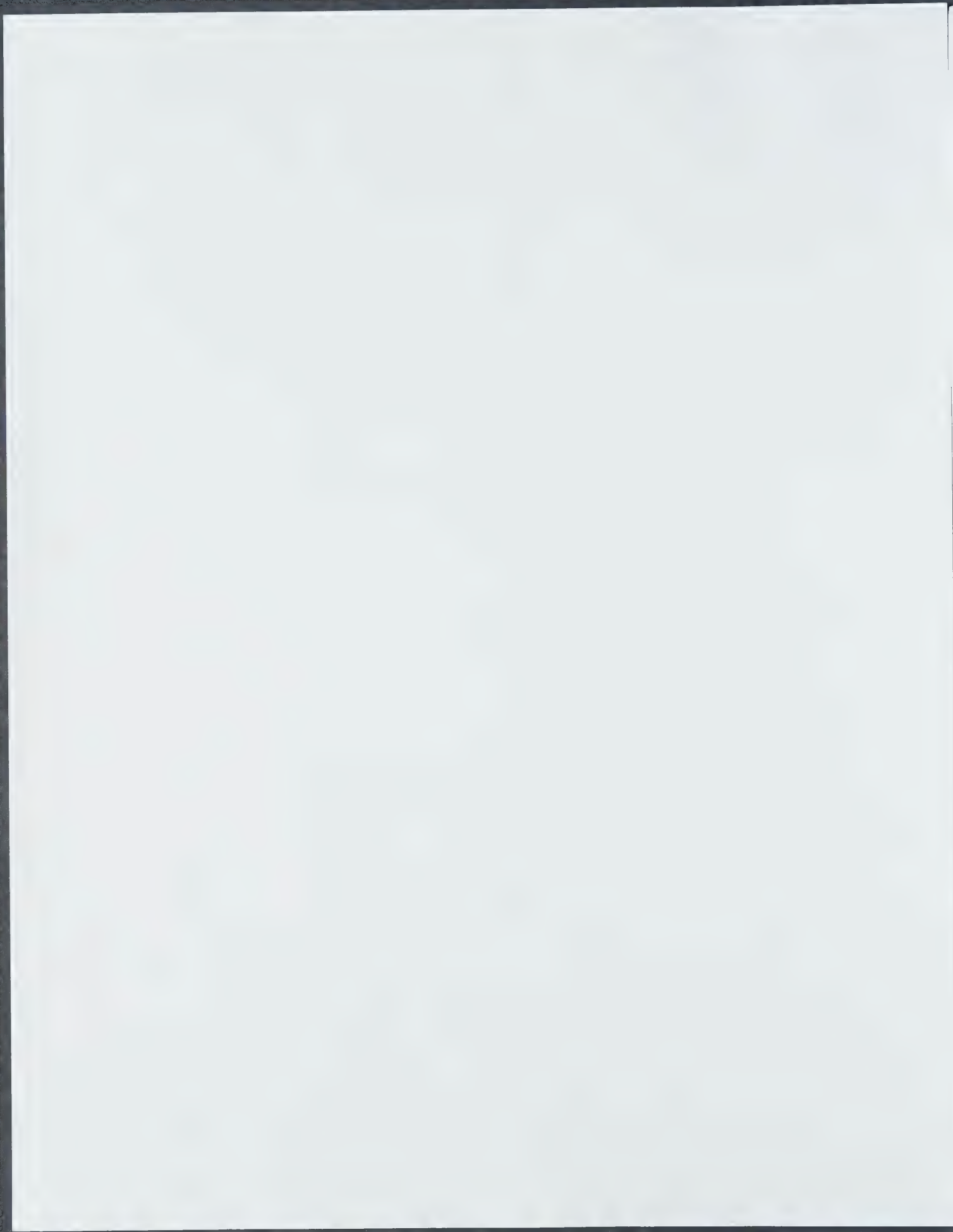
I hope this message finds both Isabel and yourself in the best possible fettle! And many thanks for copying to me the correspondence with Roseann. This ODU link is a good one, I believe, for both parties... and I look forward to discussing it with Roseann in person, probably in January. She really is a special person.

The ISC is beginning to buzz! There is a 'feel' in the place today which signals the imminence of great events, and it is wonderful how positively staff and faculty are looking forward to the arrival of the students - even nearly 200 of them! I am sure you will feel this, perhaps even more than usual, when you are next here.

All good wishes as always,

David

This message scanned for viruses by CoreComm





B'Yachad For a Democratic Jewish Society in Israel

ה' בתשרי תשס"א
4 October 2000

Dr. and Mrs. Alfred Bader
Bader Fine Arts
Astor Hotel, room 622
924 E. Juneau
Milwaukee, WI 53202
U.S.A.

Dear Alfred and Isabelle,

Just a short note to thank you again for your contribution to B'Yachad. To give you a better idea of how your contribution will be used, I'm enclosing the descriptions of a few of the projects that we're working on.

Rosh HaShana was very nice. Each of the families (Betsy's, Steve's, and ours) had a chance to have a meal at the folks', and they (Marvin and Jane) walked down to our neighborhood for lunch and the remainder of the second day.

The happiness of the festival came to an abrupt end after havdalah when we listened to the news of what had been happening around us during the holiday. The radio has been reporting the disturbances non-stop ever since. Betsy's son, Danny, is on active duty in Ramalla—right in the center of some of the worst violence. Betsy spoke to him last night, and he is well. Three of our four married children live on a Kibbutz about 20 minutes south of Jerusalem, and the road to them has been opened and closed intermittently over the last few days. We all pray that things will settle down in the coming few days, and that life will return to normal.

In spite of how it has begun, we hope that the new year will be one of health, prosperity and happiness for you, your family, and all Israel.

בברכת גמר חתימה טובה,

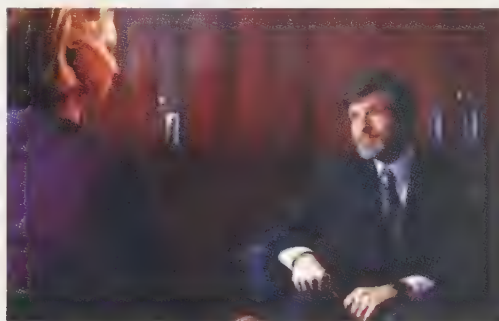


JUDAISM AS SUPPORT NOT BUREAUCRACY

...We have undertaken to establish public support centers to provide professional advice, support, and representation for those intimidated by the religious establishment in Israel

secular mourners. Judaism in Israel, then, is all-too-often perceived as a combination of primitive magic and a Dickens-like bureaucracy, rather than a source of comfort and support in times of need.

B'Yachad feels that something must be done to help individuals confronting the religious establishment. We have undertaken to establish a number of public support centers that will provide professional/legal advice, support, and representation for those intimidated by the religious councils or rabbinical courts. Experienced social workers, attorneys and rabbinical advocates (many of whom have already agreed to volunteer their time to the center), supported by apprentices and a clerical staff, will advise and accompany those who so request through their proceedings with the offices of the religious establishment system. A telephone hotline will make those professionals available to people throughout the country. In order to provide an even more personal counselor, a specially trained hesder yeshiva student and/or young woman doing her National Service will be assigned to each case, and will be available to



make ongoing visits to each family/individual in need, to counsel them, to study with them, and to be with them at all stages of their crisis. **In the B'Yachad support centers, emotionally stunned individuals who are forced to face the intimidating bodies of the religious establishment, will find understanding professionals who will support them, accompany them, and (sometimes literally) hold their hand through what might otherwise prove to be an impossible ordeal.**

Happily, some of today's highest religious officials want to improve the present situation, and have expressed their openness to working with B'Yachad. To date, the organizations providing assistance before rabbinical courts are perceived to be motivated more by political/anti-religious considerations than by humanitarian concerns. B'Yachad's staff, on the other hand, will be headed by well-known professionals with reputations and credentials respected by the officials of the religious system as well. Mostly volunteer, their sincerity and dedication will be beyond repute. **Since most of them are personally observant, it will be clear that they come not to attack Jewish practice, but to explain and enhance it.** Only in those cases where concern for the system and bureaucracy prevails over concern for the values they are supposed to represent, will B'Yachad exert its full force and influence, to defend the rights of every citizen before the offices of the religious establishment.

Israel desperately needs an affordable public legal aid / support center that will be respectful of and sensitive to both the individual confronted by the intimidating offices of the religious establishment, and the religious values that those offices are supposed to represent. B'Yachad has the legal and rabbinical expertise, and the public respect necessary to provide that center.



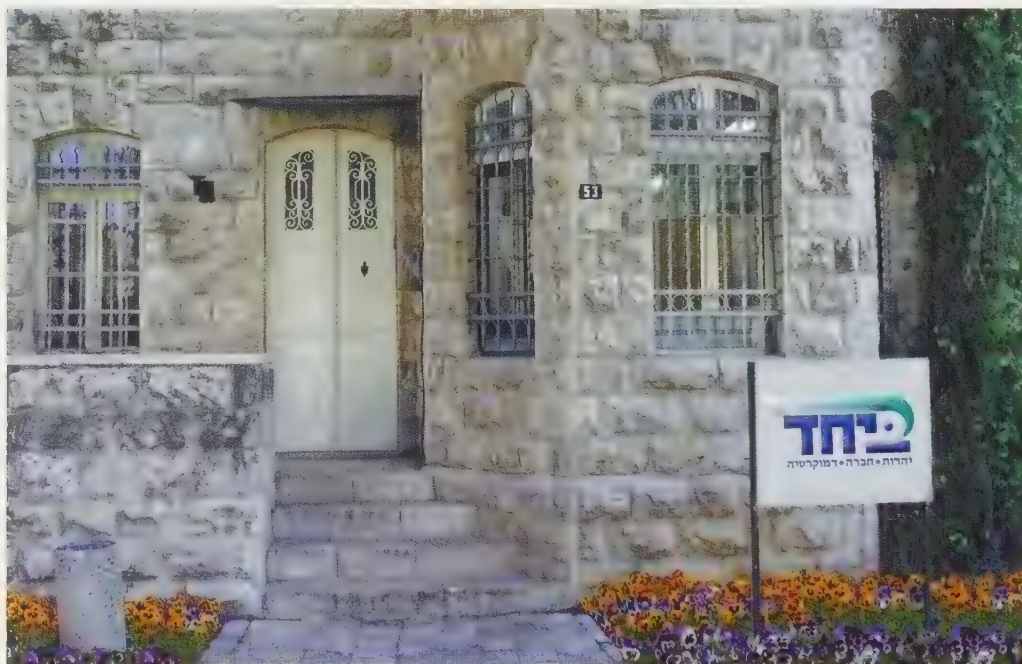
B'Yachad
Beit HaYatsranim, Suite 306
P.O.Box 53413
91533 Jerusalem

JUDAISM AS SUPPORT NOT BUREAUCRACY

A Proposal
to Establish
Jewish
Crisis
Centers in
Israel

Israel, as a Jewish State, is in danger. Not only do we lack peace with our neighbors around us, but the internal split between religious and non-religious citizens threatens to rip Israeli society apart from within. Studies show that more than 47% of the population consider the alienation of secular Jews from Judaism to be the chief long-range danger to the Jewish State – far more than the military dangers that confront us.

Most secular Israelis' personal experiences with Judaism here are their encounters with the religious establishment. Those contacts, unfortunately, rarely help them appreciate the relevance of Judaism to their own lives. **They are forced to confront the religious establishment at the most sensitive periods of their lives.** Since only religious weddings are recognized here, young couples must marry according to the regulations of the regional religious councils. If that couple later wishes to adopt a child, they must have him/her converted in a religious court if he/she is to be listed as "Jewish" on an identity card. Should they decide to divorce, they can do so in a rabbinical court only. If they lose a parent, they have virtually no choice



but to bury him with an ultra-Orthodox burial society. Jewish ritual associated with those "crisis" periods in one's personal life, has been a sublime source of support for generations. Yet, what most (especially non-Orthodox) Israelis encounter when they approach the offices of the religious establishment here, is often alien and alienating. The Religious Councils bureaucratic inefficiency and insensitivity towards secular young couples, for example, makes what are sublime and beautiful Jewish wedding rituals into a source of ridicule or angry frustration. Thousands of women waiting for their bills of divorce from the Rabbinical Courts see Jewish judicial procedures as little more than a tangle of paper-work. The distance between the ultra-Orthodox members of the burial society and newly orphaned children often turns comforting Jewish traditions into misunderstood rites that seem primitive and crude to ▶

B'YACHAD NEIGHBORHOOD CENTERS

Already
observant
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forming the
moral fabric
of the
Jewish State

Shlichut is a term that was well-known and used to be well-respected in Israel. "Shlichut" is perhaps best translated "mission", and shlichim are those who are sent to accomplish the mission. From before the establishment of the Jewish State, shlichim were sent to accomplish what Israel felt were its most important missions. They were sent to smuggle Holocaust survivors out of Europe during and after the "shoah". Later, Ben Gurion would send shlichim on similar missions to North Africa, Iraq, and other Arab countries. More recently, as assimilation threatened to wipe out Jewish Diaspora communities, shlichim were sent all over the world - including on clandestine missions behind the iron curtain - to teach and to strengthen Jewish identity.

B'Yachad feels that Israel's most important mission today is to bring a new kind of Jewish awareness to Jews - not in the Diaspora but in Israel itself. **Already observant Israelis must be made aware of the Jewish importance of democratic values in a modern Israel, and non-observant Israelis must be made aware of the relevance of Jewish values in forming the moral fabric of the Jewish State.** All Israel must come to know that Jewish values and democratic values are compatible, and together form the only viable way for a Jewish Israel to survive in the twenty-first century.

B'Yachad suggests that to best accomplish that mission, a new kind of shaliach must be trained and dispatched. We envision sending those special shlichim not to Los Angeles, Buenos Aires or St. Petersburg, but to Ofra, Haifa, and Yerucham. There, they will establish "B'Yachad Neighborhood Centers", and will live, teach, and interact with the local population.



The Staff

Each local center will be staffed by four to six B'Yachad shlichim. The shlichim will be young men and women (aged 25-35) with a variety of backgrounds - some religiously observant, some not. Each center will have at least two shlichim who will have graduated a hesder yeshiva (for men) or a midrasha (for women), and at least two non-observant university graduates. All shlichim will participate in a special summer-long preparatory seminar. Over the course of the year, shlichim from all over the country will come together for monthly evening training sessions. Both the summer seminar and the monthly training sessions will be taught by top university professors (like Prof. Avi Ravitsky,

Through the
B'Yachad
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Prof. Eliezer Schweid, etc.) and leading rabbinic authorities (Rabbi Yehuda Amitai, Rabbi Aharon Lichtenstein, Chief Rabbi Eliahu Bakshi-Doron).

The Program

The first goal of each of the centers will be to become a recognized part of the community. Just as everyone in town knows how to find the local youth center, sports center, or cultural center, they will now know that there is also a "B'Yachad Center". To gain that recognition, the shlichim will provide a number of programs/services to which everyone in town will be welcome to "drop in". For example:

- Shabbat at the center will be special. The shlichim (religious and non-religious) will prepare shabbat meals where all will feel comfortable. One can imagine "divrei Torah" from the weekly portion and from recent Israeli writers. If there are six shlichim, the table will be set for 30 people - so that members of the community will know that if they want a Jewish shabbat where they can feel comfortable, they will be welcome to just "drop in" to the B'Yachad Center.
- Weekday afternoons the shlichim will be available to help local students with their homework, so that every child in town will know that he/she can go to the B'Yachad Neighborhood Center between 4:00 and 8:00 p.m. to get help with his/her homework in math, English, Bible or Talmud.
- Joint (religious and non-religious) pairs of shlichim will hold sessions for bar mitzva aged children where they will both teach how to read the Torah for their bar mitzva, and run programs in preparation of the children's coping with life as a teenager in Israeli society.
- The shlichim (having finished the army themselves) will run a series of evenings for high school seniors as preparation for their being inducted into the army. The discussions can cover the ethical dilemmas that face a soldier in battle, the difficult halachic situations that field soldiers encounter, the emotional challenges of being in the army, the new experience of working closely with Israelis of different backgrounds, etc.
- And, of course, the B'Yachad Neighborhood Center will be an "open Beit Midrash". Any member of the community will be able to drop in at any time to learn. Shlichim will be available as "havruta" (study partners) for them. There also will be series of shiurim (lecture series) based on study of both classical Jewish texts and the classics of general culture.

Parents who are wary to send their children to activities supported by evangelist "machzirim beTeshuva", will see that non-religious young people are full members of



the B'Yachad staff, and will know that B'Yachad is not out to rifle their child off to some extremist yeshiva.

The B'Yachad Neighborhood Center will thus be a model miniature community to show the entire town (and especially the young people) how a community can be pluralistic, open, warm, alive, welcoming, and very, very Jewish.



After the B'Yachad Neighborhood Center will have become an established part of the local community, the shlichim will begin the more difficult stage of their work. Using B'Yachad's "New Covenant for Issues of State and Religion" as a model, they will try to lower the tension level between the religious and non-religious segments of the local community.

The B'Yachad Neighborhood Center will become an address for individuals (usually non-religious) who face a non-hospitable religious establishment. Given, again, the backing and public clout of the B'Yachad national organization, the shlichim may well be able to effectively promote the causes of individuals who find themselves in situations such as the following:

Couples who want their wedding ceremony to be meaningful, but cannot communicate with the official rabbi appointed by the Ministry of Religious Affairs. Shlichim will study with the couple, help them plan their wedding, and arrange for

one of B'Yachad's rabbis to perform the ceremony.

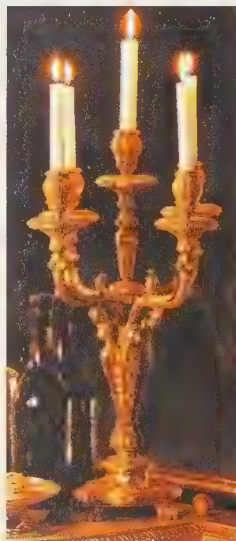
Immigrants from the former Soviet Union who want to convert to Judaism, and need understanding people to prepare them for appearing before the rabbinical conversion court. The shlichim will also attend the (often intimidating) court sessions with the conversion candidate.

Women who are waiting for the bureaucracy of the rabbinical courts to force their husbands to issue a "get" (religious divorce). With the powerful backing of the B'Yachad national organization, shlichim will be able to represent such women from their community and help expedite justice.

To the degree that the local shlichim cannot solve the individual's problem on a local level, they will turn to a network of B'Yachad regional and national figures for assistance. Local residents will thus see their B'Yachad shlichim as a means of enlisting the support of one of Israel's important new national/political movements in their struggles with the (sometimes)-hostile religious establishment. **Through the B'Yachad shlichim, the**

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B'YACHAD NEIGHBORHOOD CENTERS



general population will see that a partnership of religious and non-religious Israelis can lead to solving society's problems, and that true Jewish values can lead to an ethical, caring, enlightened national leadership.

U.S. tax-deductible contributions for B'Yachad social and educational programs can be made via any one of three I.R.S.- recognized channels:

1) **Meimad North America** (IRS identification number 13-4072492)

Please either:

a. make a check payable to **Meimad North America**, and mail it to:

Mr. Steven Koppel
O'Sullivan, Graev, Karabell
24th floor
30 Rockefeller Plaza
New York, NY 10112

or:

b. wire the funds according to the following information:

Bank: **Chase Manhattan Bank**
Address: **57th Street & Sixth Avenue, New York, NY**
Account name: **Meimad North America**
Routing number: **0 2 1 0 0 0 2 1**
Account number: **0 1 3 0 7 3 0 4 5 9 6 5**

2) **The Foundation for the Jewish Community** (IRS identification number 13-3848582)

Please make a check payable to **FJC-B'Yachad Fund**, and mail it to:

The Foundation for the Jewish Community
130 East 59th St.
New York, NY 10022

3) **P.E.F., Israel Endowment Funds** (IRS identification number 13-6104086)

Please make a check payable to **P.E.F. Israel Endowment Funds**, and mail it with a written recommendation that the funds be used for "B'Yachad - for a Jewish Democratic Society" to:

P.E.F. Israel Endowment Funds
317 Madison Avenue, Suite 607
New York, NY 10017



B'Yachad

Beit HaYatsranim, Suite 306

P.O.Box 53413

91533 Jerusalem

Tel: 972-2-672-7580

Fax: 972-2-672-7581

COUNCILS FOR COMMUNITY HARMONY

A campaign to promote a solution based on concern for community harmony and led by an enthusiastic, talented, united-yet-diverse group of the town's brightest young citizens, could do much to balance the divisiveness of pervasive local political machines

Introduction

Most of today's educational efforts are aimed at our youth (high-school through college age). Post-army young adults are usually perceived as being too involved in building their own personal careers to take an interest in community affairs. Solving community conflicts, then, falls to the hands of local politicians, and even issues that could be solved by consensus fall prey to divisive petty partisan politics. **We herein propose a project that will both re-instill a sense of community responsibility in a talented, important part of our population, and remove divisive political considerations from social issues that can best be resolved by communal consensus.**



The Goal

Temurot has undertaken to recruit and train talented, industrious young people (aged 25-35) to become non-partisan community activists. In two or three cities/towns of Israel, these young people - representing all sectors of the community - will form a non-partisan, trans-sectoral *moetsa kehilatit* ("Council for Community Harmony"). They will address the divisive issues of their town, and - free from political considerations - suggest ways of solving problems. Today, crises in the community (like the construction of a yeshiva in a secular neighborhood, or a Friday-night disco

near a religious neighborhood), are exploited by local politicians to build their own political careers. It is in the interest of those politicians to show voters that their neighbors are a villainous threat to their own life styles, and in an effort to win more votes for themselves, they increase divisions and tension within the community.

If, however, bright young secular and religious community activists were to deal with the question within the framework of a non-political *moetsa kehilatit*, they could suggest a solution that would best preserve good relations within the community, and rally support for that solution. A campaign to promote a solution based on a concern for community harmony and led by an enthusiastic, talented, united-yet-diverse group of the town's brightest young citizens, could do much to balance the divisiveness of the pervasive local political machines.

The Participants

The key to the success of the program, of course, is to find the appropriate candidates for the councils, and to recruit them to the training program. The candidates will have to be the brightest, most articulate, creative, industrious, young representatives of the various sectors of the local community. We are talking about promising young men and women in the early years of their careers in business, law, medicine, or public service - the kind of people with the skills to be the "decision makers" of their community. The training program will have to be attractive enough to woo these talented young people, and will have to be scheduled at times that do not conflict with the calendars of busy young professionals.

Project Method of Operation

Temurot will engage the services of human resource experts to interview qualified participants from among the young leaders who submit their candidacy, and Temurot will base its considerations on their recommendations. It is assumed that we shall choose fifteen candidates from each of two towns. After analyzing the populations of each of the towns, we shall choose participants according to the social makeup of the population, including - in approximate proportion to the real population - secular members, religious, and ultra-religious; native Israelis and new immigrants (Russian and Ethiopian); *Sephardim and Ashkenazim*; different socio-economic strata, etc.

After the candidates are chosen, they will participate in four intensive two-day retreats conducted bi-monthly over the course of the year, and a four-day seminar in the summer. The retreats and seminar will consist of lectures and workshops, conducted in attractive surroundings, where the participants will be exposed to the country's leading social scientists, thinkers, public figures, and crisis resolution experts. They will learn of crisis resolution proposals (such as the "New Covenant on Religion and State" developed by Ministers Dr. Yossi Beilin and Rabbi Michael Melchior, MK Prof.



Alex Lubotsky, and Rabbis Yehuda Gilad and Shmuel Reiner), analyze social conflicts that actually occurred in Israel, and role-play scenarios to see how crises that split communities could have been dealt with better.



In addition to participating in the retreats, each participant will be expected to recruit 5-10 members of the sector they represent and/or 10-15 high-schoolers, to staff a social action project within their community, thus developing social awareness among their peers and building a following for the *moetsa kehilatit's* non-political, trans-sectoral approach to crisis resolution. The participants may choose their projects (and team members) individually, or together with one other participant from their town. (Thus, we will spin off a network of approximately 70 of each town's top young leaders being involved in social action, as a very helpful by-product of our program.) At each retreat, every participant will have a chance to report on his/her social action project, and the group (as a whole or in smaller sub-groups) will evaluate the project.

At the end of the training period, the participants will in fact begin to convene regularly in their communities and deal with the actual problems as they arise. They will address local problems, and publish and publicize their non-political suggestions for resolutions. During their first few years the Councils for Community Harmony cannot be expected to expel politics from social issues. The very fact, however, that these young "stars" of the community will be dealing with social issues with an eye toward maintaining neighborly relations among all sectors of the town

will surely attract public attention. It is our hope and expectation that their functioning will demonstrate that our most gifted young people are still community-minded, and that a chief concern of our community leadership must be the general welfare of our society. If so, the project described above will prove to be an important step in removing factional, partisan political considerations from social issues, and thus promote unity and harmony in Israeli society.





COUNCILS FOR COMMUNITY HARMONY



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1) **Meimad North America** (IRS identification number 13-4072492)

Please either:

a. make a check payable to **Meimad North America**, and mail it to:

Mr. Steven Koppel
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24th floor
30 Rockefeller Plaza
New York, NY 10112

or:

b. wire the funds according to the following information:

Bank: **Chase Manhattan Bank**
Address: **57th Street & Sixth Avenue, New York, NY**
Account name: **Meimad North America**
Routing number: **0 2 1 0 0 0 2 1**
Account number: **0 1 3 0 7 3 0 4 5 9 6 5**

2) **The Foundation for the Jewish Community** (IRS identification number 13-3848582)

Please make a check payable to **FJC-Temurot Fund**, and mail it to:

The Foundation for the Jewish Community
130 East 59th St.
New York, NY 10022

3) **P.E.F., Israel Endowment Funds** (IRS identification number 13-6104086)

Please make a check payable to **P.E.F. Israel Endowment Funds**, and mail it with a written recommendation that the funds be used for "Temurot" to:

P.E.F. Israel Endowment Funds
317 Madison Avenue, Suite 607
New York, NY 10017

TEMUROT

The Movement for Religious Zionist

Renewal

(formerly 'Meimad')

non-profit registration 580223733

P.O. Box 53244,

91533 Jerusalem

Tel: 972-2-673-0123

Fax: 972-2-673-0125



B'YACHAD WEEKLY NEWSPAPER FEATURE

Israeli army), B'Yachad must immediately publish and document our position that we religious Jews must fulfill our civic responsibilities alongside our secular brothers. After "post-Zionist" intellectuals advocate fashioning the new Israel on completely secular non-Jewish models, B'Yachad must publish our defense of Jewish values as the best foundation for creating a moral society.

Unfortunately, there are examples of both kinds of extremism almost every day in the Israeli press. If B'Yachad is to become a powerful, influential movement, it must gain access to the masses as can be done only through broad newspaper coverage. Lacking access to free press coverage, B'Yachad has undertaken to publish a weekly spot in Israel's important papers, so that its moderate, alternative voice can be heard by the general Israeli public. We cannot reach that vast public through small conferences or weekend retreats.

B'Yachad's task (to change the mood and attitudes of millions of Israelis) is educational, and we have the educational messages to achieve it. Its challenge is enormous, and must be undertaken on a massive scale. A regular presence in Israel's major weekend papers is a first-step in the huge challenge B'Yachad faces.

U.S. tax-deductible contributions for B'Yachad social and educational programs can be made via any one of three I.R.S.- recognized channels:

1) **Meimad North America** (IRS identification number 13-4072492)

Please either:

a. make a check payable to **Meimad North America**, and mail it to:

Mr. Steven Koppel
O'Sullivan, Graev, Karabell
24th floor
30 Rockefeller Plaza
New York, NY 10112

or:

b. wire the funds according to the following information:

Bank: **Chase Manhattan Bank**
Address: **57th Street & Sixth Avenue, New York, NY**
Account name: **Meimad North America**
Routing number: **0 2 1 0 0 0 2 1**
Account number: **0 1 3 0 7 3 0 4 5 9 6 5**

2) **The Foundation for the Jewish Community** (IRS identification number 13-3848582)

Please make a check payable to **FJC-B'Yachad Fund**, and mail it to:

The Foundation for the Jewish Community
130 East 59th St.
New York, NY 10022

3) **P.E.F., Israel Endowment Funds** (IRS identification number 13-6104086)

Please make a check payable to **P.E.F. Israel Endowment Funds**, and mail it with a written recommendation that the funds be used for "B'Yachad - for a Jewish Democratic Society" to:

P.E.F. Israel Endowment Funds
317 Madison Avenue, Suite 607
New York, NY 10017



יהדות • חברה • דמוקרטיה

B'Yachad

Beit HaYatsranim, Suite 306

P.O.Box 53413

91533 Jerusalem

Tel: 972-2-672-7580

Fax: 972-2-672-7581

B'YACHAD WEEKLY NEWSPAPER FEATURE

Extremist
public
figures
(religious
and secular)
continue to
appear in
the press
and
electronic
media and
fan the
divisive
flames of
fear and
(even) hate.
B'Yachad
must
counter in a
massive,
public way



B'Yachad's chief task is educational - and it is enormous.

We seek to recreate the partnership and mutual respect among the different sectors of Israeli society, that today is threatened by vicious tribalism.

Perhaps the greatest rift we seek to repair is the split between Orthodox and non-Orthodox. The secular majority fears that Orthodox Jews are out to sacrifice democratic rights on the altar of religious fundamentalism, and the ultra-Orthodox think that secularists are unprincipled hedonists who want to rip the Jewish heart out of our people. This narrow sectoralism became undeniably apparent after the last Israeli elections. Both the fundamentalist ultra-Orthodox parties, and the rabid anti-religious secularists, resorted to base, malicious campaign tactics to convince their constituents that the other side is out to utterly destroy their way of life. If one wanted evidence that humanistic, democratic values cannot coexist with a commitment to traditional Jewish values, one had only to listen to the TV election campaign of 1999. And if one wanted evidence that the opinions expressed in those campaigns are shared by more and more Israelis, one need only look at the results of the elections and the dramatic increase in the strength of precisely those parties who resorted to such tactics.

It is up to B'Yachad to stem the tides toward fanatic extremism in both directions. B'Yachad has already presented itself to the Israeli public as the movement that treasures both traditional Judaism and the values of modern democracy. Lead by such well-known figures as Rabbi Michael Melchior (until his election to the Knesset and Cabinet), Rabbi Yehuda Amital, and Professor Avi Ravitsky, B'Yachad has long been admired as embodying the values that will make Israel a model, democratic and Jewish State.

In the face of frightening extremism in the Israeli public debate, B'Yachad moderation must grow. Extremist public figures (religious and secular) continue to appear in the press and electronic media and fan the divisive flames of fear and (even) hate. **B'Yachad must counter in a massive, public way.** After stories of religious leaders' anti-democratic positions (such as Yeshiva Heads calling for soldiers to disobey commands in the



SHOEBOX GREETINGS
 (A tiny little division of Hallmark)



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JAN 1981

Dear Alfred,

I hope you are enjoying your
summer, wherever you may be.
In a couple of days I am
off to Europe to explore the
culture lands. Thank you
very much for the letter of
recommendation you sent to
Queen's a few months back.
Presently I have not received
my response. However, whether
I am rejected or accepted,
I thank you for everything
you have done. The accompanying
article you sent was fascinating!
I would enjoy meeting you
as well as Isobel in the near
future.

Sincerely,
James Earl A. Bassman

Thanks for going
out of your way...!

Ms Jane Kalin
School of Graduate Studies and Research
Queen's University
Kingston, Ontario
K7L 3N6

Amsterdam, 17 September 1998.

File:
Bikker

Dear Ms Kalin,

I would like to inform you of my decision to leave the PhD programme at Queen's. I have accepted an offer from Utrecht University to complete my dissertation there. My reasons for quitting the programme will be set out in a letter to the Department of Art. I trust, however, that tuition for the Fall/1998 term will not be deducted from my account. Should you need to write to me concerning this matter, please use the address at the bottom of this letter; as I have informed you before, it is difficult to find longer-term housing in Amsterdam, and I have had to move a number of times. If you send correspondence to these old addresses, or do not write my new address correctly I will not receive your letters in a timely manner.

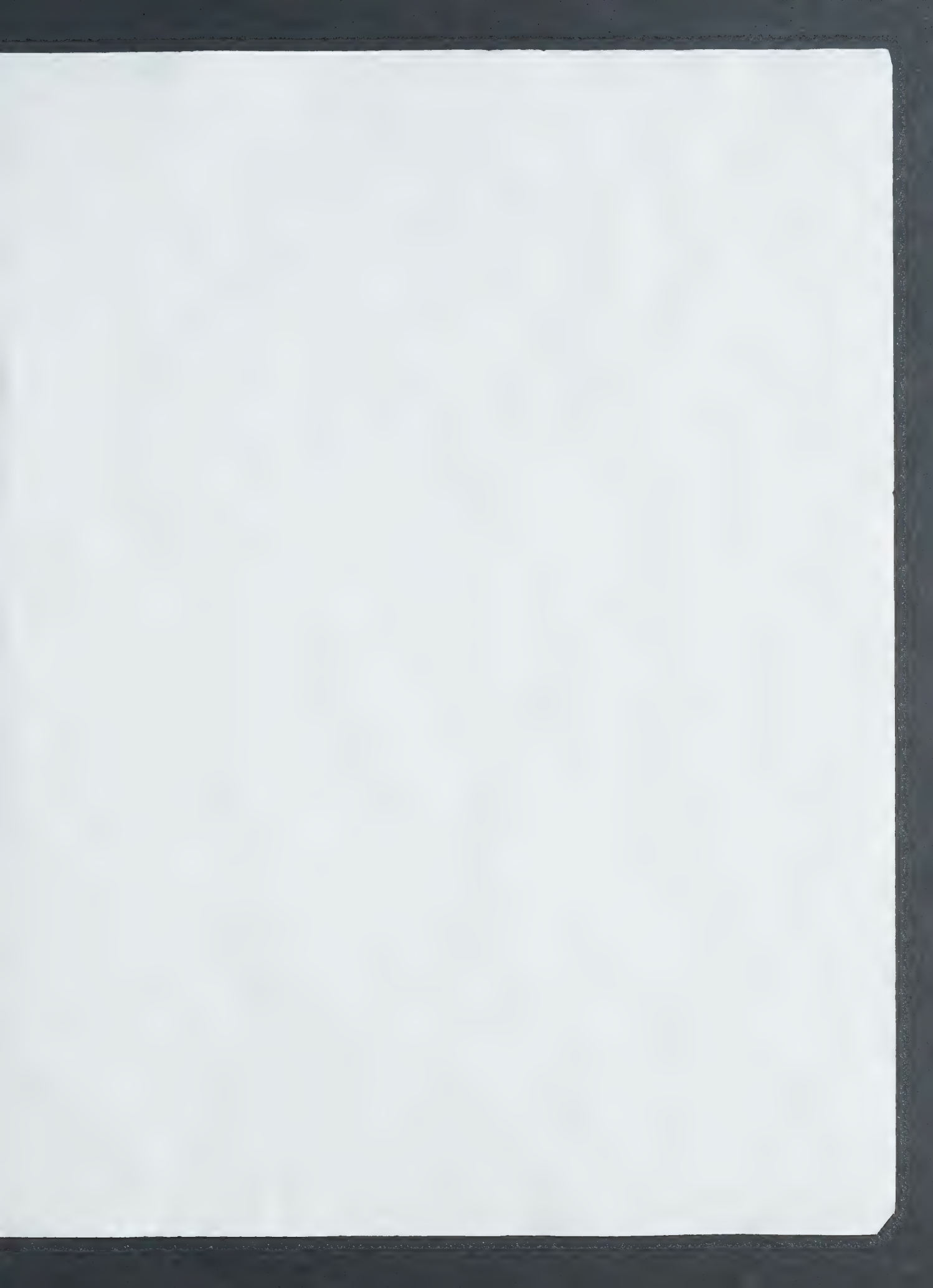
Yours sincerely,

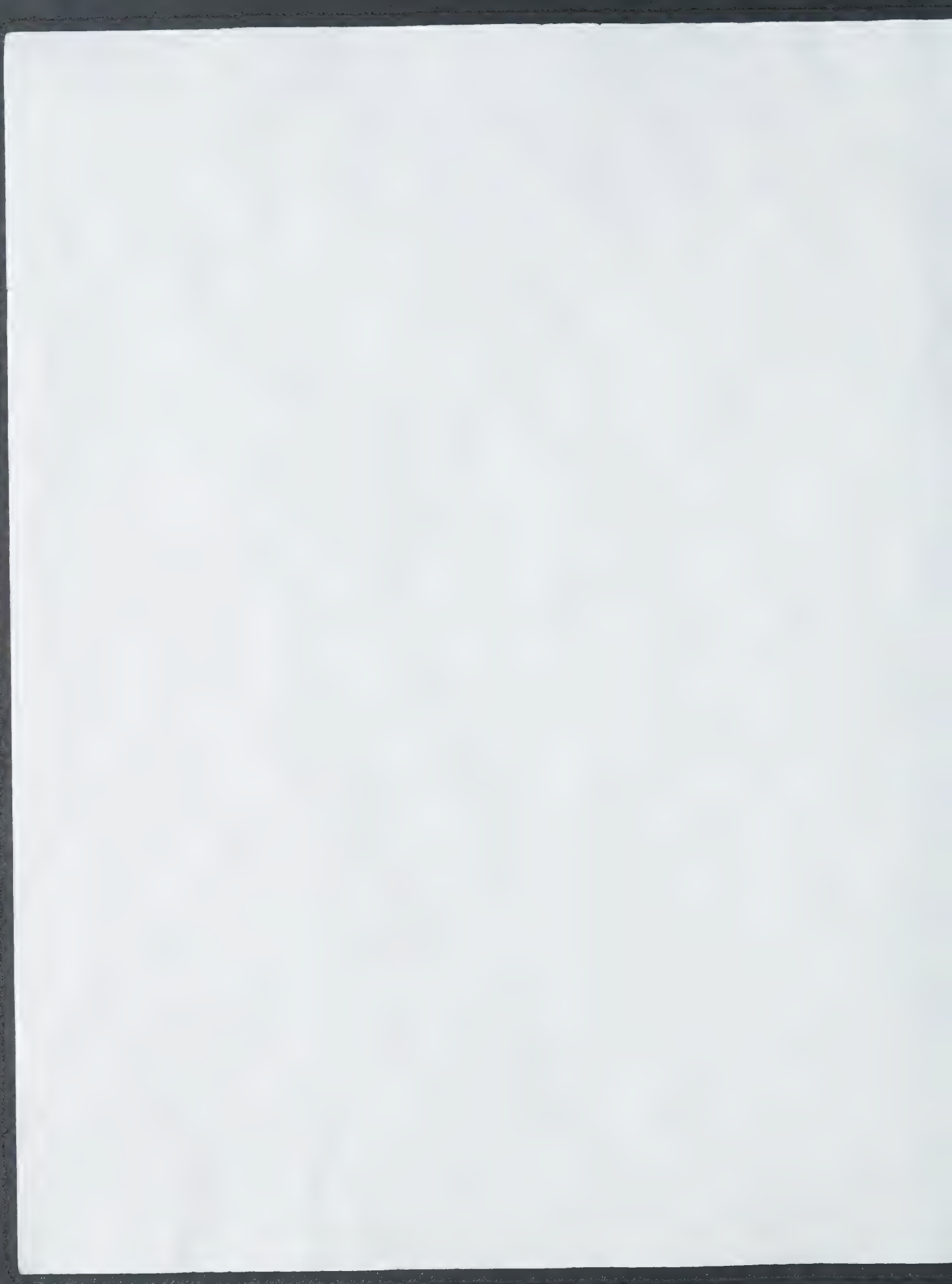
Jonathan Bikker (Student no.329-6679)
Van Spilbergenstraat 161-III
1057 RE Amsterdam
The Netherlands

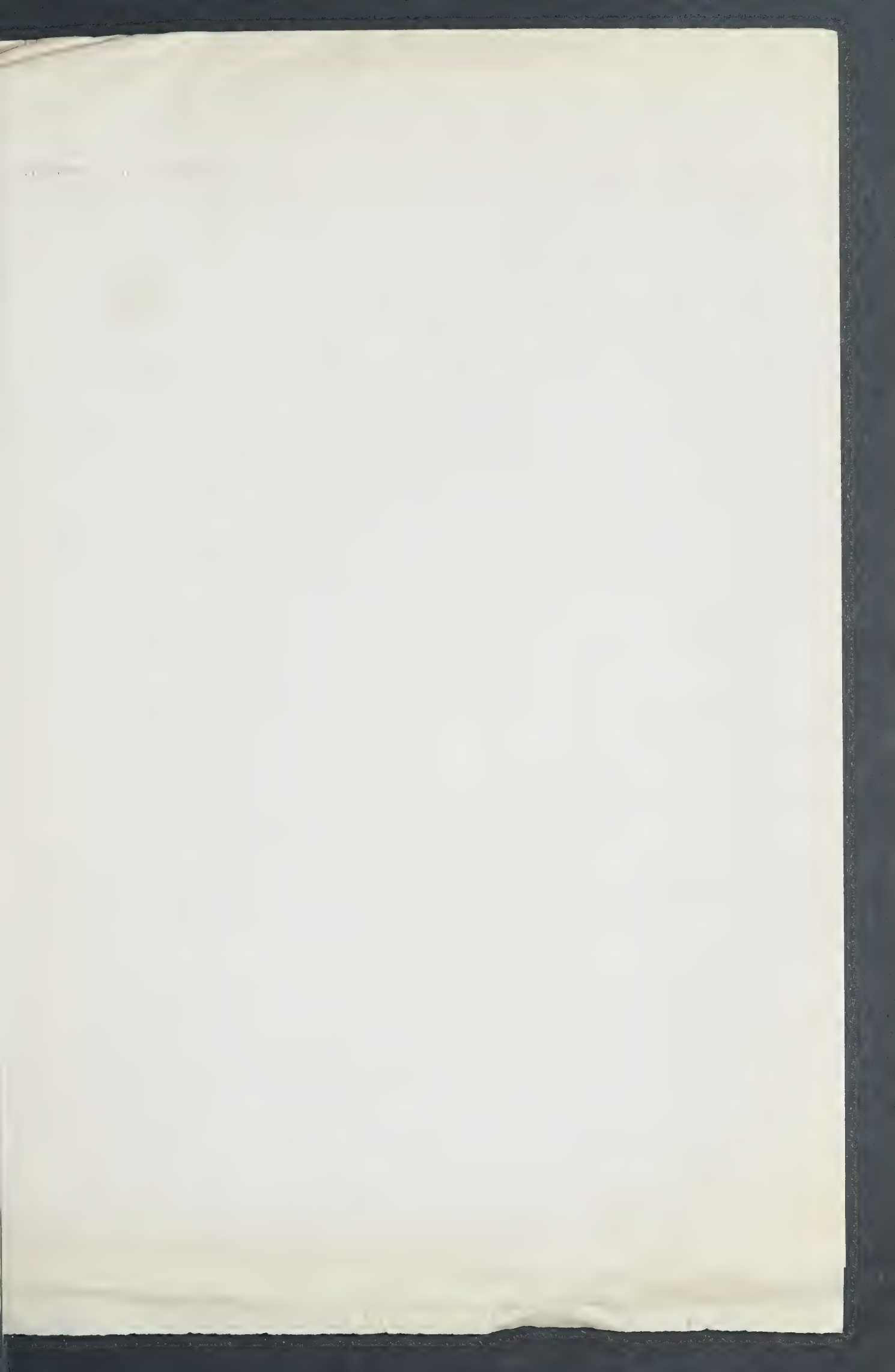


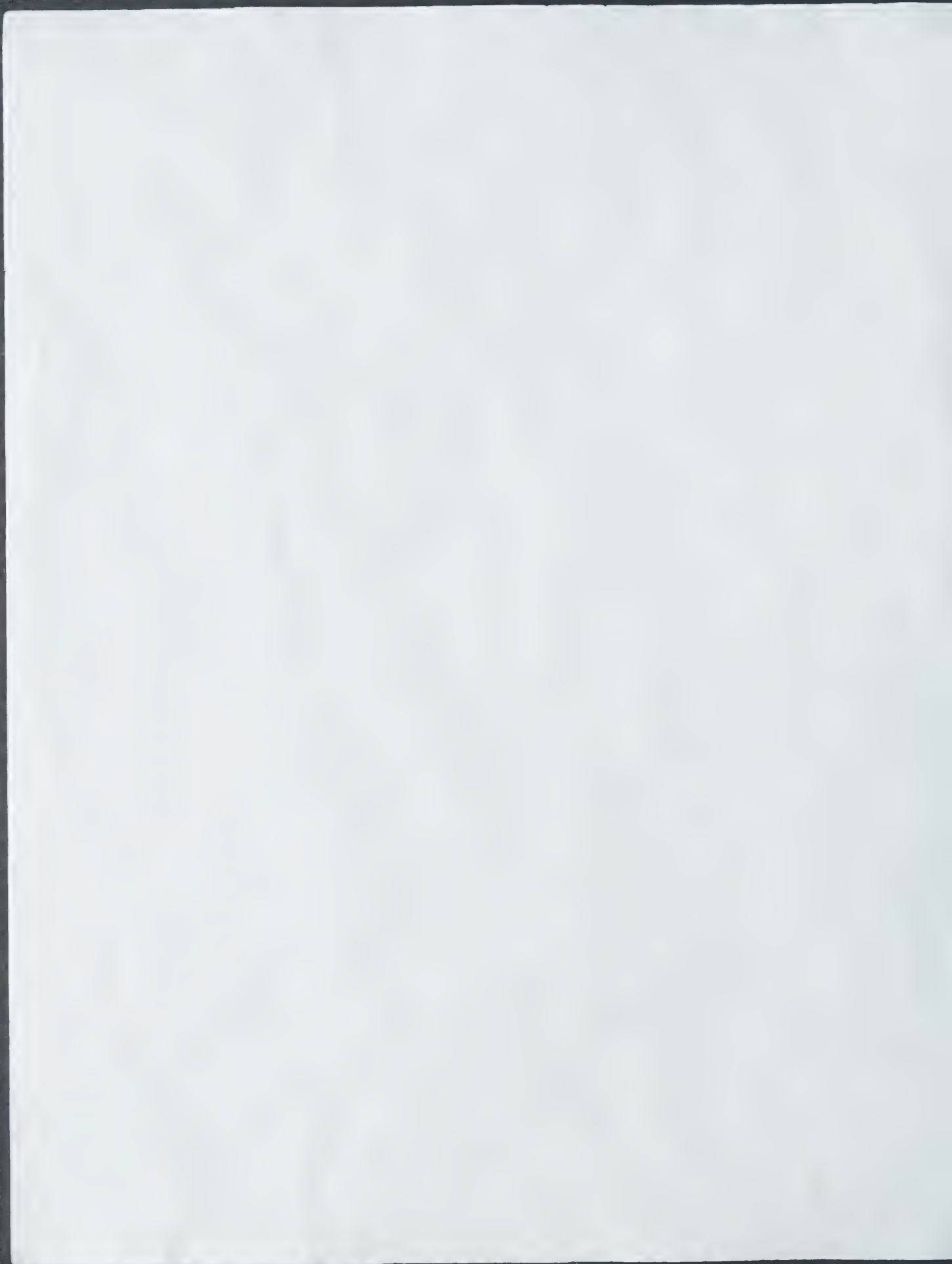
QUEEN'S

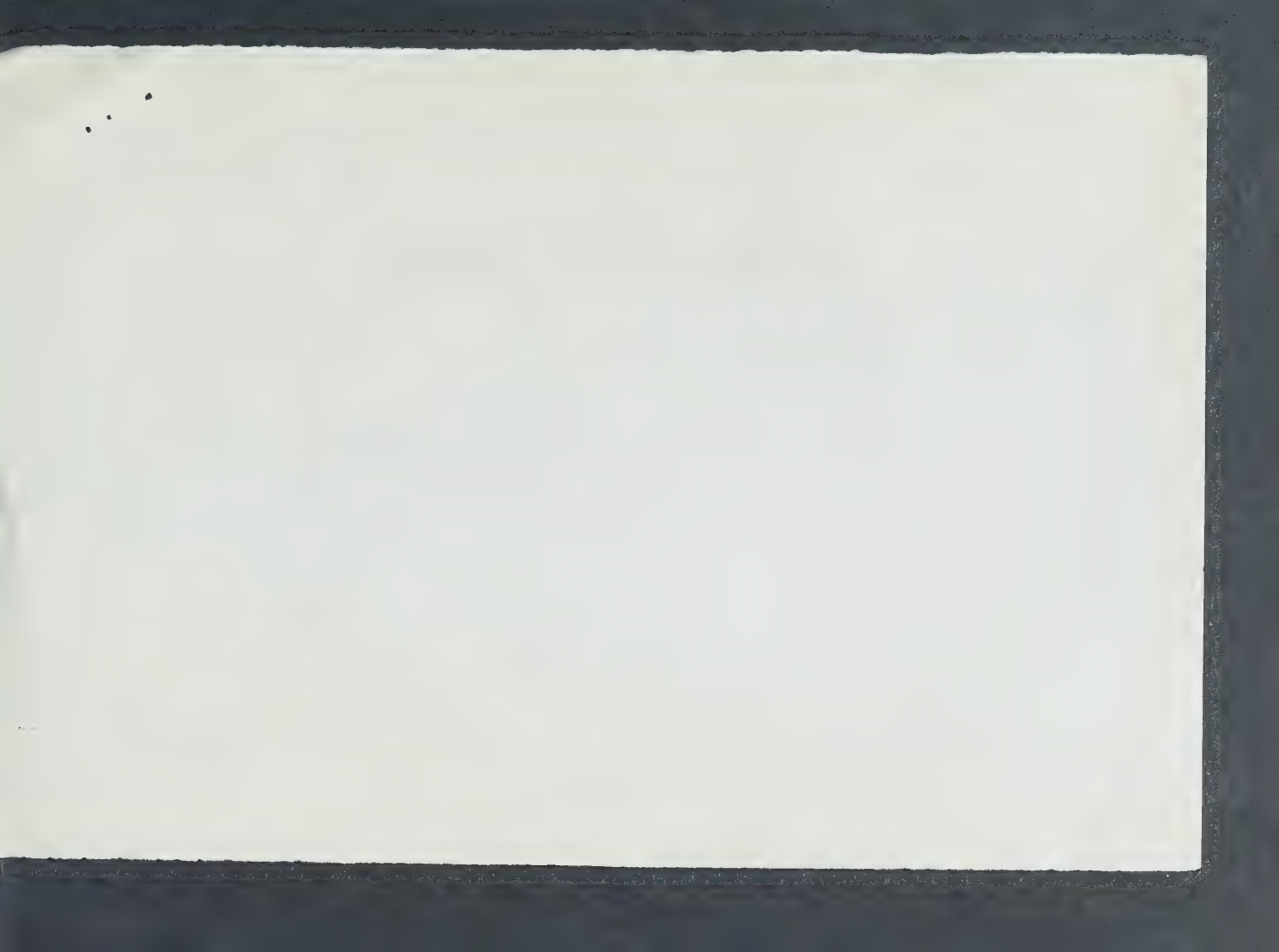


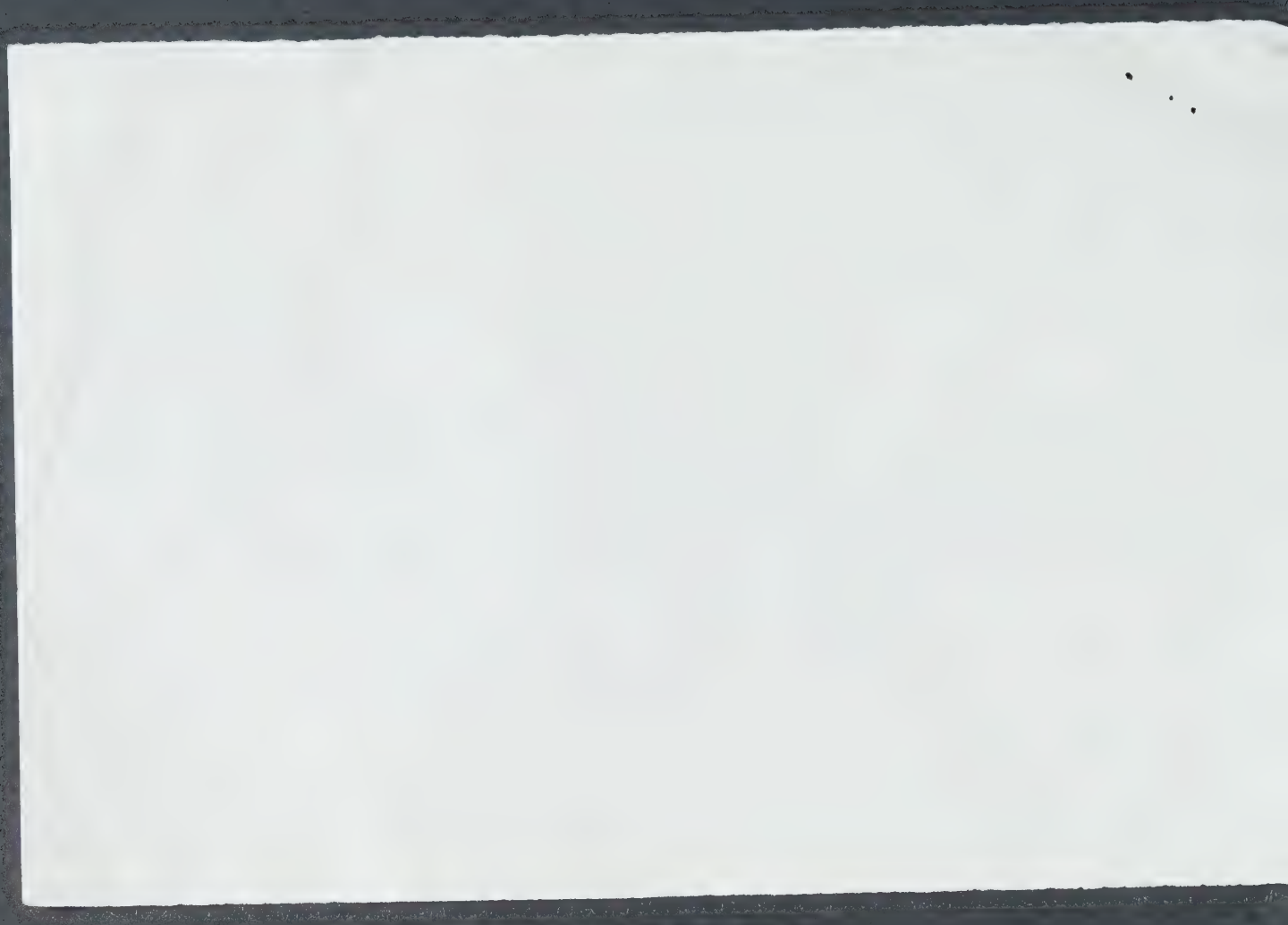












To PROF. C. HOENIGER
Nov. 27 00
0016135336891



To Volker:
What do you make
of this?

I will call to discuss

Anna Radu

9.30 pm Nov 24

157. Kaituma Street
P.O. Box 219, Camp
Curtain, KONA, I.
Hawaii
March 17, 1955

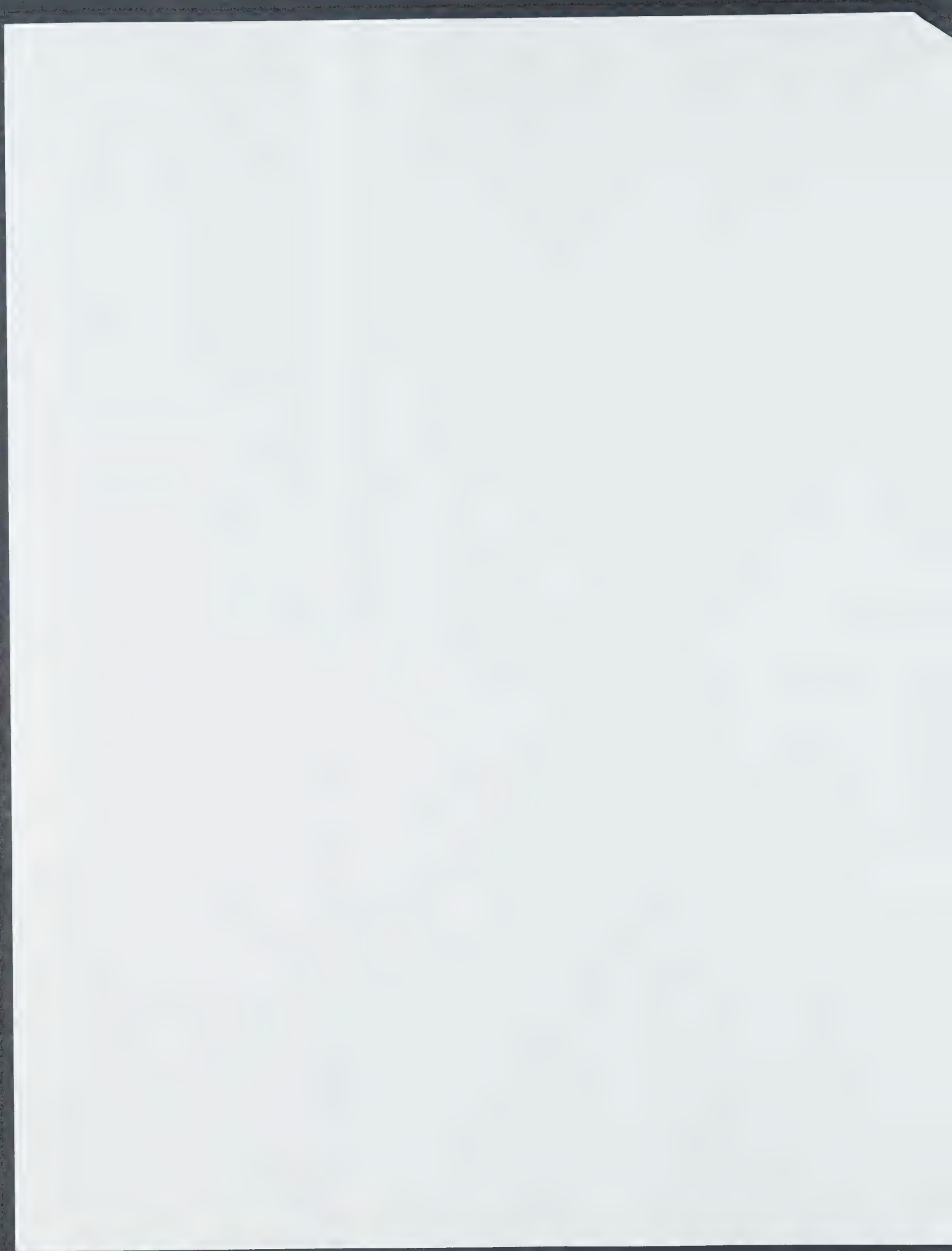
Dear Mr. [unclear]

I am not involved in the arrangements
for the South Hawaiian in September.

I was not at the time of the Hawaii
last year and did not see the heading
of the large photograph to which you refer.
I think you should contact George
to see what the year's arrangements
in Hawaii that year.
With best wishes

Yours truly,
[unclear]

[unclear]





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

A Chemist Helping Chemists

September 15, 1997

His Honour, Judge Barrington Black
62 Redington Road
London NW 37 RP
ENGLAND

Sir:

Occasionally I read bits and pieces of the London Jewish Chronicle and was astounded recently to see your letter offering your kingdom for a congregation.

I was astounded not because of what you wrote, but because of the address. Why, I said to myself, this is the address of my best friend in England, Ralph Emanuel.

I enclose a couple of pages from my autobiography describing my friendship with Ralph.

I am sure that judges in England have better things to do than to respond to letters from foreigners, but I would urge you to take counsel with Ralph. Occasionally he has taken me to an Orthodox synagogue on Finchly Road, not far from your home. It is friendly and without most of the disadvantages to which you refer.

When next I see Ralph, in November, I will ask him where I can find Chaim Berman's column and what the fish wire is all about.

I wish you a Happy New Year with or without a synagogue to go to.

Sincerely,

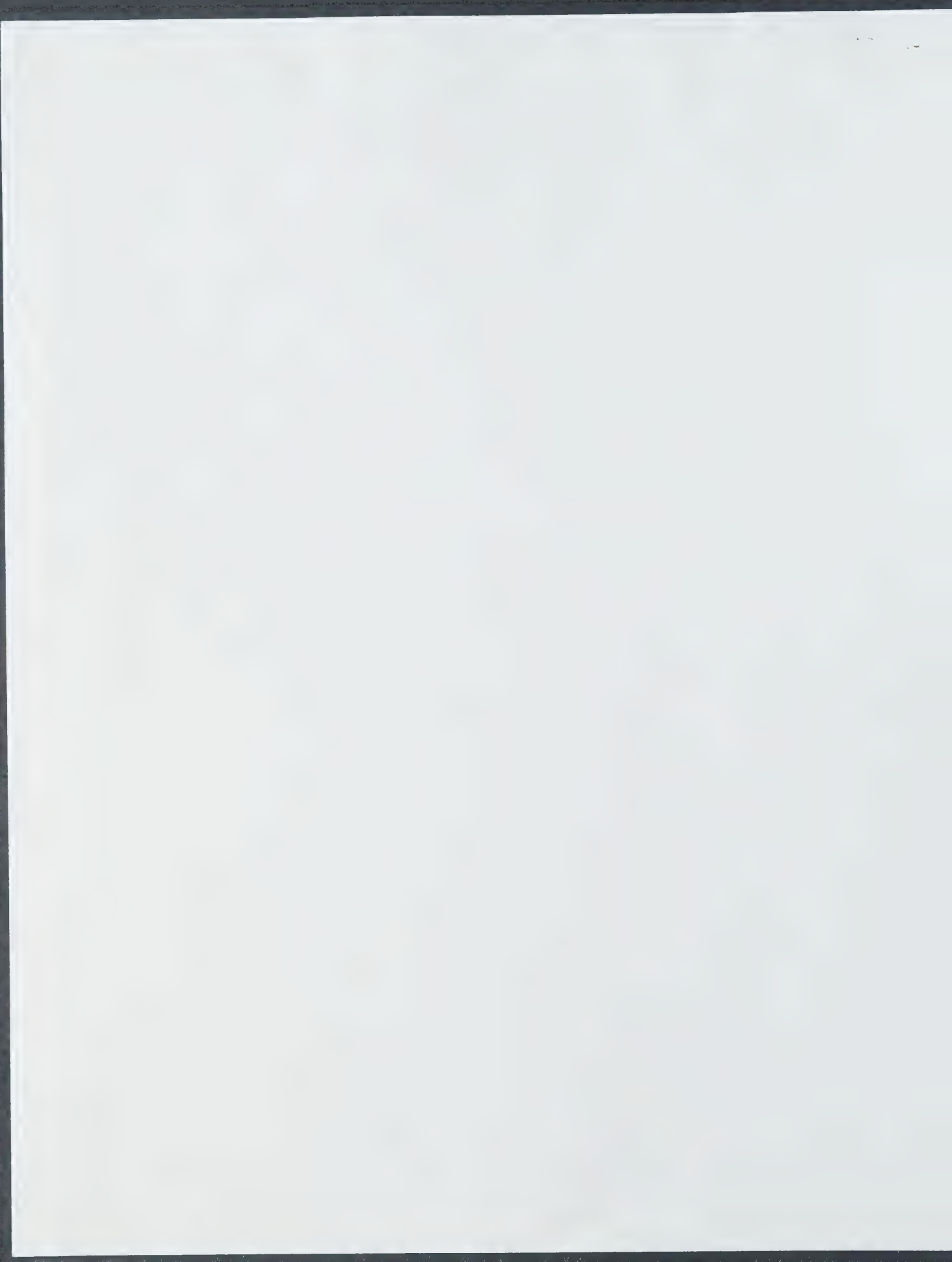
AB/nik

Enclosure

cc: Ralph Emanuel

... but sincere & friendly.

R



My kingdom for a congregation

I am in a quandary. I have not renewed my London synagogue membership, and the High Holy-Days approach. I do have a long-stop, in that I am still a country member of a country congregation, but, alas, spend less time in the country. Happily that also provides me with respectability for wedding and funeral purposes.

My reason for non-renewal is simple. I had hoped I might be offered a modern approach to a traditional ceremonial, but unfortunately I have become more dejected over the years. I shall not name the place, but men and women do sit apart, however; there is far too much repetition; the sermon is over-long and highly disjointed; the cantor warbles repetitiously over many words; the choir is often discordant and the service is interminably long.

Can anyone recommend my ideal congregation? The service would be short but to the point, one hour of concentrated thought is said to be enough for the most effect. The ser-

Letters to the Editor

mon should last no longer than it takes to read Chaim Bermant's column (in fact the actual public reading of Chaim Bermant's column would suffice). If cantor there must be, then let him have a soft and sonorous voice.

I don't need to sit next to my wife, but at least let me be able to see her, and let there be a corner around which I can safely park.

Nor do I need the theatre of anything akin to St Paul's or Westminster, which, alas, I have had cause to visit during the past year more frequently than synagogue.

I suppose I am more of a Jew by association and tradition rather than belief, and surely there must be others like me.

So, can anyone help? Does such a haven of piety exist within striking distance of Hampstead? And can I reach it without ducking under fish wire?

Judge Barrington Black,
62 Redington Road,
London NW3.



3rd September 1997

Dear Barry,

As one who loves his neighbour (not to mention his wife) almost as much as himself, I feel impelled to reply to your letter to the JC. I fear that I see little chance of your finding a congregation to fulfil your spiritual requirements. You might, however, consider sitting yourself at your dining room table with an alarm clock and Dinnia in full view. In your erudite manner you can give a service without repetition or even warbling, limit the length of your own sermon and not be distracted by a choir. If you still need 'atmosphere' you could cater yourself, perhaps at, say, the Abbey or if this is too un-Jewish pass by a certain house in Hamilton Terrace.

I am reminded of the response of that wit Rev. Ephraim Levine to his embarrassed congregant who announced his defection from the New West End to the liberal Synagogue "What do I care which Synagogue you don't go to!"

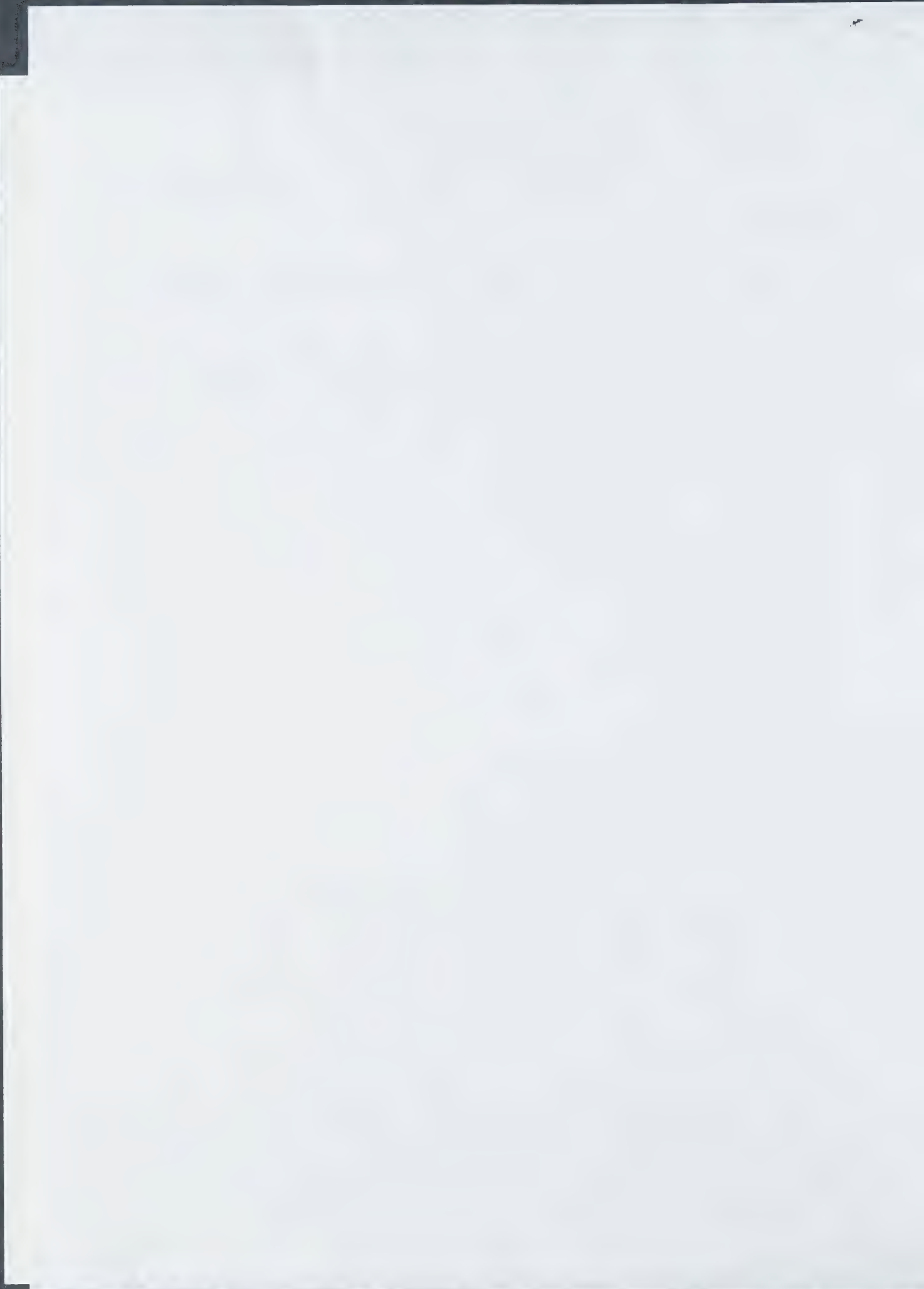
I take the opportunity to wish you a Happy New Year and the disposal of any untidily sins in a most convenient manner.

Yr Sincerely

R

P.S. You might try the Shomeri Hadom in Fenby Road joining them on a Shabat at about 10 am: for excellent Reading of the Law and getting away about 11³⁰ (except once a month when there is a sermon) - Short, sharp & to the point: orthodox but sincere & friendly. R

Home of
Chief Rabbi
Sacks





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

A Chemist Helping Chemists

June 2, 1997

Mr. Sidney Blumenthal
c/o *The New Yorker*
20 West 43rd Street
New York, N.Y. 10036

Dear Mr. Blumenthal:

In your fascinating article on Whittaker Chambers, in the March 17 *New Yorker*, you wrote that on the question whether Hiss was a communist and a spy "... the room for reasonable doubt continues to shrink."

Could you please help me by telling me whether you believe that Hiss was a spy.

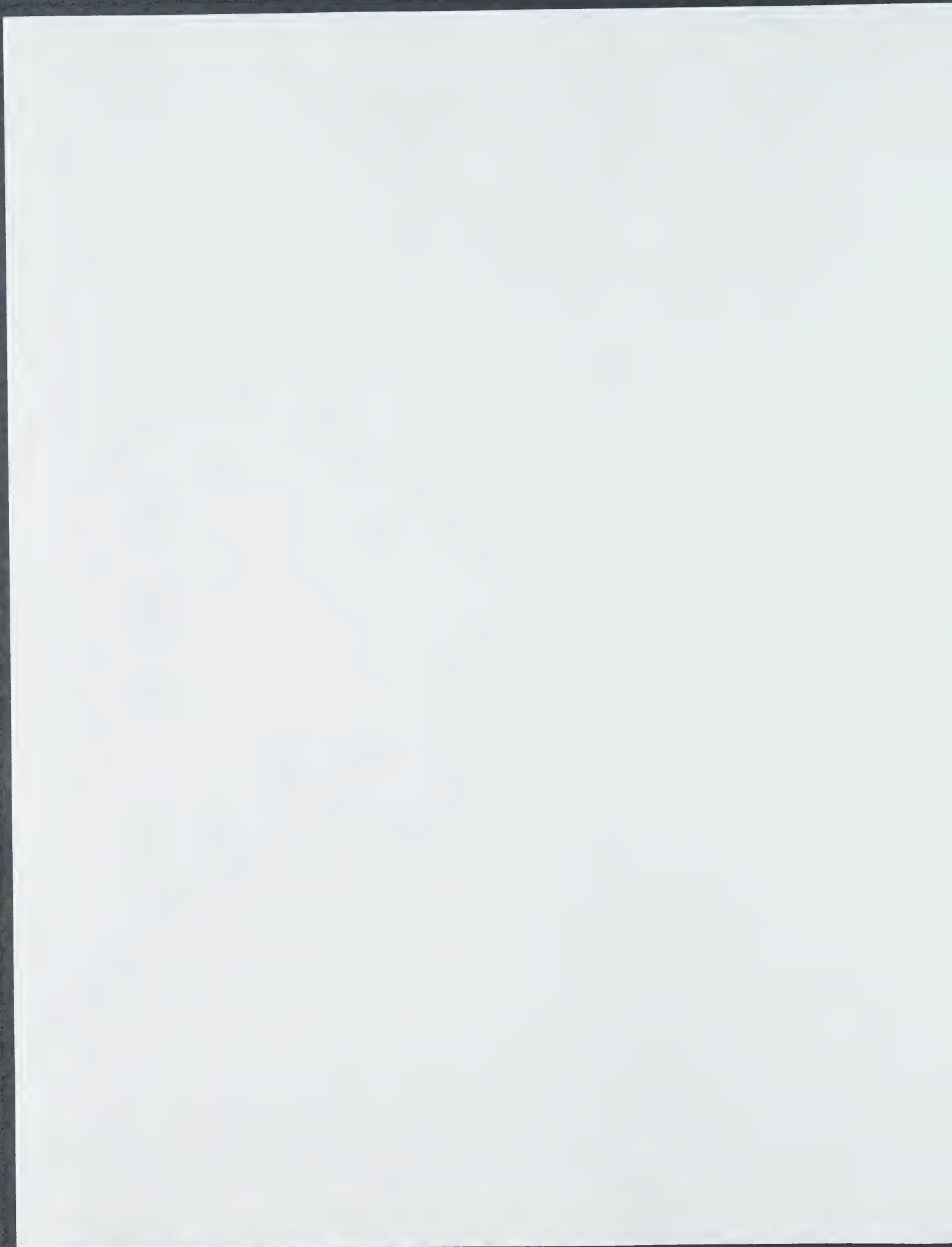
Lest you think that I am some kooky character, I enclose my *c.v.* and also a self-addressed stamped envelope.

With many thanks for your help, I remain,

Yours sincerely,

AB/nik

Enclosure



FAX FROM



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

A Chemist Helping Chemists

October 17, 1996

To: Dr. Carlton Breithwaite

Fax: 613-748-0135

Dear Dr. Breithwaite,

Queen's has forwarded your Fax of today.

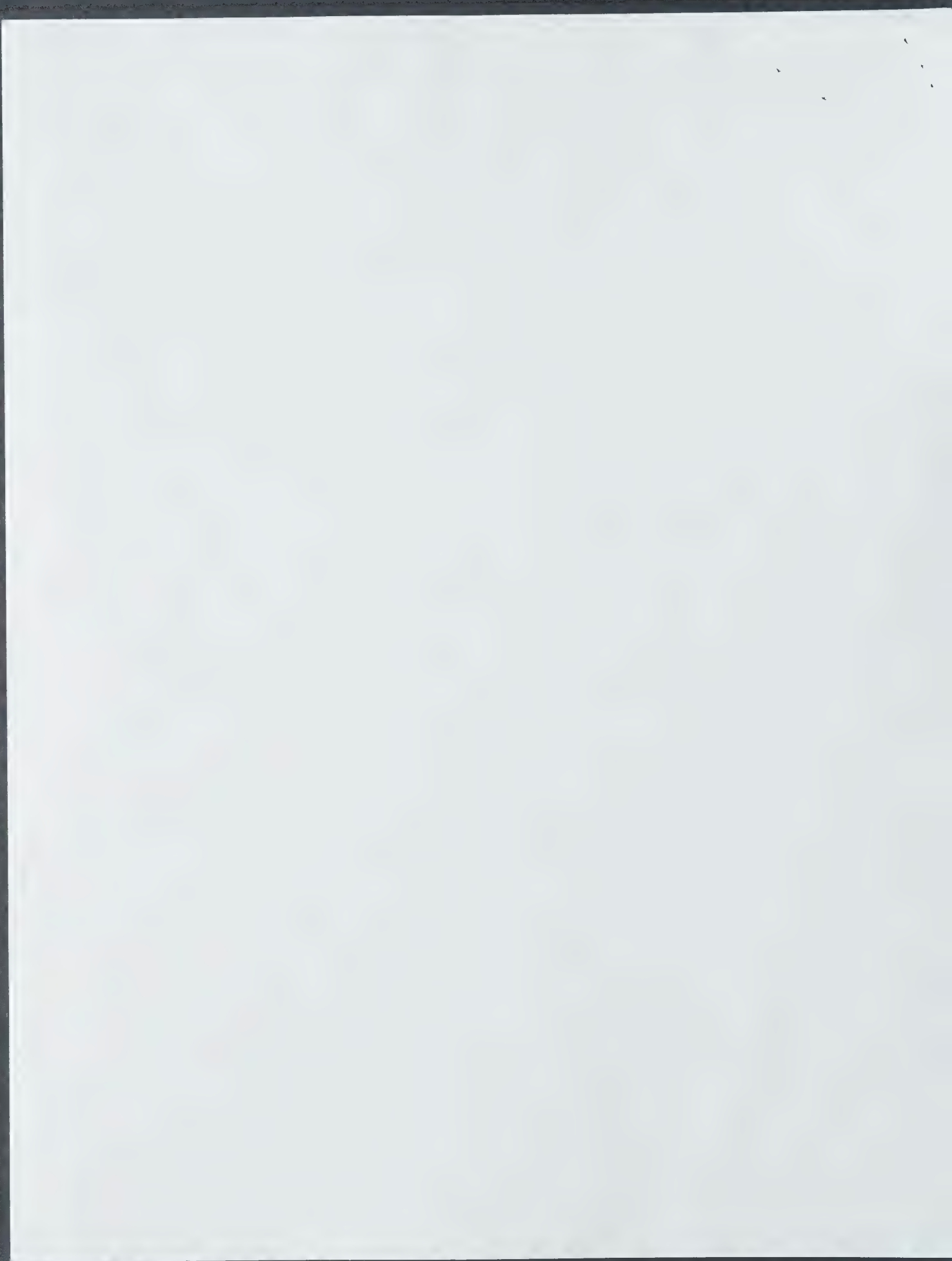
I was educated at Queens' in the 1940's and so watch my pennies. Phone calls are cheaper after 6 o'clock and if you wish you can call Isabel and me at home this evening at around 8pm your time. Our home telephone number is 414-962-5169.

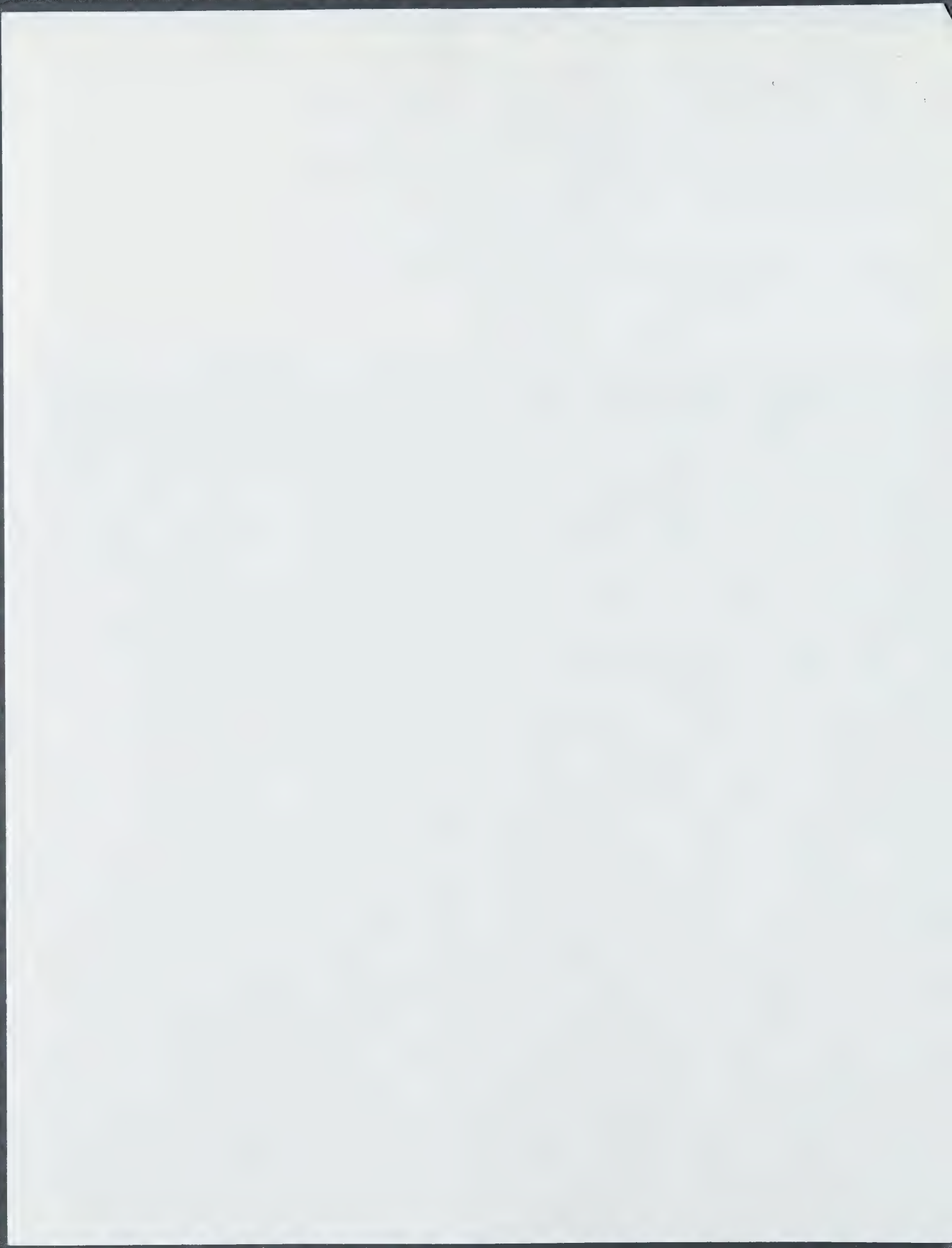
I must caution you however that I could not be interested in business ventures unless they relate to fields of my expertise. These are in organic chemistry and in Old Master paintings.

Best regards.

Sincerely,

AB/lh





Dear

Friend

as the ... of the ...
... ..
... ..

I am

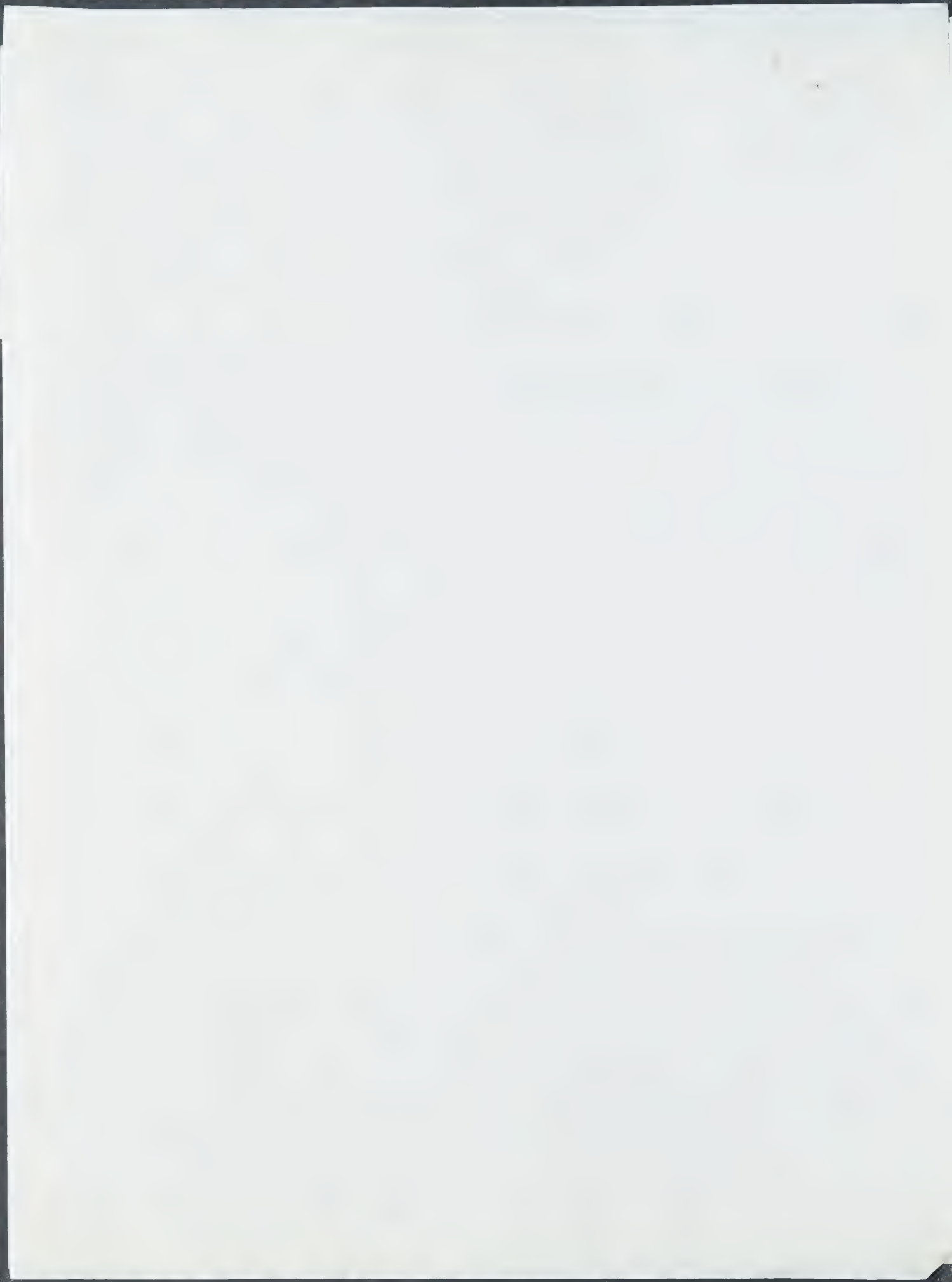
... ..

Yours

... ..

... ..

... ..





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

A Chemist Helping Chemists

October 11, 1996

Dr. Mira P. Brichto
President
R'fa-aye-nu Society
1018 Avondale Avenue
Cincinnati, OH 45229

Dear Dr. Brichto:

Thank you so much for your letter of September 22nd and that interesting article about your work in *The New York Times* of August 8th. I remember reading that article and saying to myself, 'Dr. Brichto is the person Margit Serenyi had talked to me about.'

There is no question in my mind that the work you are doing is useful, colorful and interesting. But to me, such work is frosting on the cake, and there are a great many people in the world who do not have cake nor even bread.

Some details of our most recent involvement in trying to help people are enclosed. Memonides said that the highest form of charity is to give people work, and I hope that the new effort in Sarajevo will help just that. Trying to help traumatized thousands in Bosnia must also be a priority. I hope you will understand.

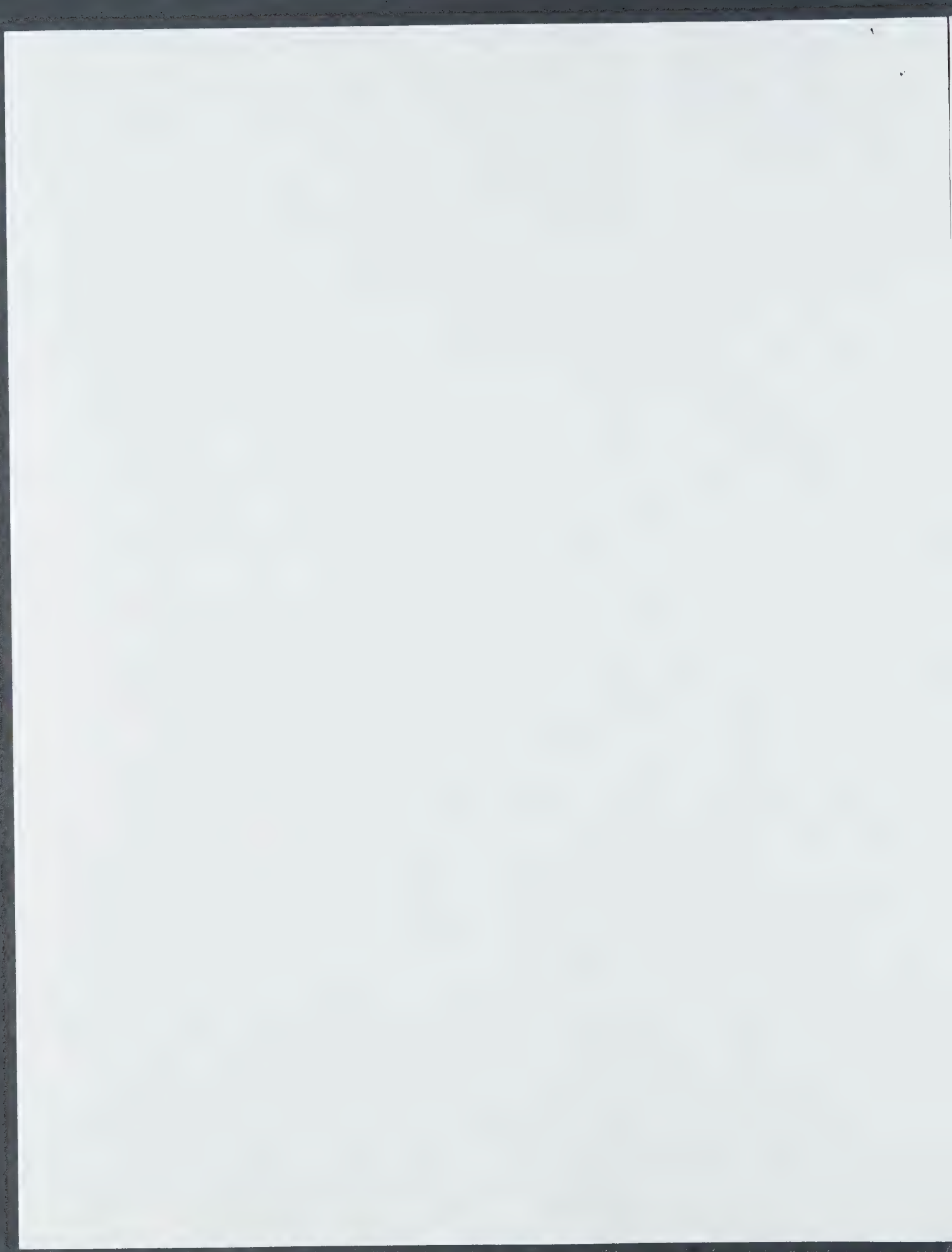
With all good wishes, I remain,

Yours sincerely,

AB/cw

Enclosures

bc: Daniel Bader (w/encls)
Margit Serenyi (w/encls)



R'FA-AYE-NU SOCIETY

Honorary Chairman
Cardinal Joseph Bernardin

Founder and President
Mira P. Brichto, Ph.D

Officers

Vice President
Rabbi Jonathan Magidovitch

Secretary
Rabbi Avrom Landesman

Sister Ann Rene McConn
SND de N., Ph.D.

September 22, 1996

Mr. Alfred Bader
Suite 622
924 East Juneau Ave.
Milwaukee, Wisconsin

Dear Mr. Bader:

The enclosed article describes better than I can various aspects of our work. My own feelings about the write-up are ambivalent. Although the publicity serves to validate the enterprise, I can hear my mother's voice admonishing me:

good girls do not get their names in the newspapers.

There are several aspects of our work which were not mentioned in the article and I think they would be of interest to you.

I travel to Chicago frequently and would, on many counts, be grateful for the opportunity to meet with you. Please let me know if I may do so.

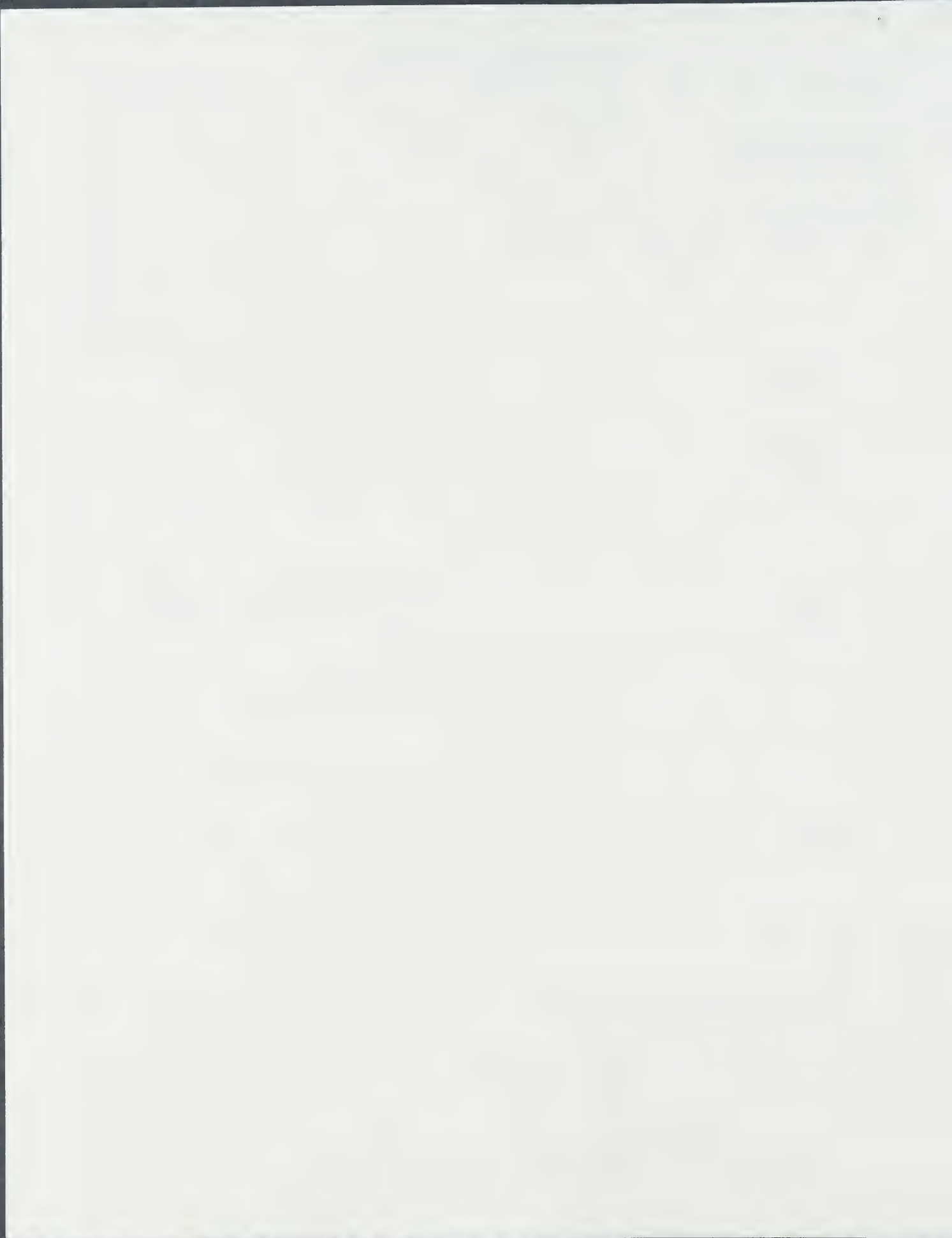
Sincerely,

Mira P. Brichto

M. P. Brichto

P.S. Perhaps I should remind you - it was Margit Serenyi who just suggested I call you. I am also the naive who brought the blue and not true Rembrandt portrait to your attention.

1018 Avondale Avenue • Cincinnati, Ohio 45229
FAX (513) 281-5780 • Tel (513) 281-3783



Reprint Series
10 June 1994, Volume 264, pp. 1551-1557

SCIENCE

*To Alfred
with best wishes,
Alan*

**How Nature Builds the Pigments of Life:
The Conquest of Vitamin B₁₂**

Alan R. Battersby

How Nature Builds the Pigments of Life: The Conquest of Vitamin B₁₂

Alan R. Battersby

In part because humans cannot synthesize vitamin B₁₂ and must obtain it from organisms that produce it and because B₁₂ deficiency leads to pernicious anemia, it has been important to understand how microorganisms build this quite complex substance. As shown here, an interdisciplinary attack was needed, which combined the strengths of genetics, molecular biology, enzymology, chemistry, and spectroscopy. This allowed the step-by-step synthetic pathway of B₁₂ to be elucidated, and this approach has acted as a model for future research on the synthesis of substances in living organisms. One practical outcome of such an approach has been the improved availability of B₁₂ for animal feedstuffs and human health.

There are those wonderful times in scientific research when a formidable problem is solved: Discoveries are made that not only fit new pieces into the difficult puzzles we study but, by so doing, transform our view of entire areas of research. The past few years have witnessed a dramatic surge in knowledge of how a complex vitamin, B₁₂, is constructed by living systems. This vitamin (1) is a cobalt complex that in its coenzyme form is required by enzymes catalyzing several metabolically essential rearrangement reactions. Deficiency in B₁₂ leads to pernicious anemia, a serious problem for those afflicted but easily remedied by treatment with B₁₂. Now, the detailed biosynthetic pathway to vitamin B₁₂ can be drawn, showing the structures of essentially all of its intermediates, from its simple starting materials all the way through to the complex molecular assembly that is vitamin B₁₂. My aim here is to describe the sometimes dramatic developments that led to discovery of its biosynthetic pathway; it is a remarkable detective story.

The Pigments of Life

Evolution has provided living organisms with a family of brightly colored and important organometallic systems that are derived by often extensive structural modification from one parent molecule called uroporphyrinogen III (Fig. 1). By allowing a fine-tuning of their properties, these modifications have led to a group of substances able to carry out a variety of tasks. The lovely colors of these molecules and the vital roles they play in living organisms have led to their being known as the pigments of life. For example, oxygen transport in blood is dependent on the iron complex heme (2), whereas plants

use the closely related chlorophyll a (3), a complex with magnesium, to achieve photosynthesis. Other similar complexes act to shuttle electrons; yet more are cofactors for the reduction of nitrite and sulfite, whereas a nickel complex mediates the natural production of methane (marsh gas). Finally, there is vitamin B₁₂.

Biosynthesis of B₁₂: The First Phase

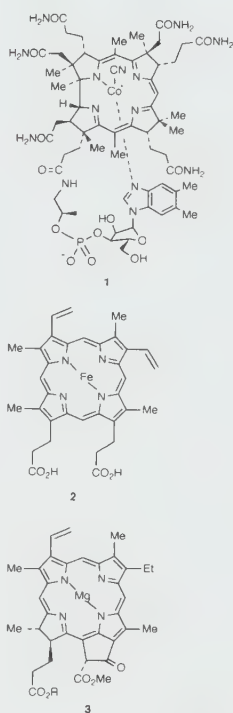
As mentioned above, all the pigments of life, including vitamin B₁₂, are derived biosynthetically from uroporphyrinogen III. Uroporphyrinogen III is built from eight molecules of 5-aminolevulinic acid (ALA), which pair two-by-two to yield four mole-

cules of porphobilinogen (PBG) (Fig. 1). These porphobilinogen molecules are assembled through several enzyme-controlled steps to generate uroporphyrinogen III (1). When one compares this structure (6) with that of heme (2) and that of vitamin B₁₂ (1), two major differences stand out for B₁₂. First, the macrocycle of B₁₂ is smaller because of the direct link between rings A and D. Second, there is heavy methylation of carbons around the periphery of the molecule, which sets up many chiral centers. This series of methylations, the ring contraction, cobalt insertion, and several other steps could be carried out in an enormous number of possible sequences. The problem was to discover the sequence of steps used naturally and to elucidate the structures of all the intermediates on the pathway; it was truly the Everest of biosynthetic problems.

Before the availability of the radioactive isotopes ¹⁴C and ³H, chemists could only speculate about the natural biosynthetic pathways for the construction of steroids, alkaloids, or porphyrins. But when substances labeled with ¹⁴C and ³H were in hand during the 1950s and 1960s, many biosynthetic problems could be solved by enzymatic incorporation into the natural substance of postulated precursors, labeled, for example, with ¹⁴C. Then, controlled degradations of the radioactive product had to be devised to pick out individual carbon atoms for radioassay. In this way, the labeling patterns were laboriously worked out, although the chemistry involved was fun.

Major progress in elucidating the biosynthetic pathway of B₁₂ started in the late 1960s as nuclear magnetic resonance (NMR) spectrometers capable of observing ¹³C nuclei were becoming available. It was then possible to study simultaneously many labeled sites in a complex molecule. Labeling with ¹⁴C and ³H still contributed important information, but it was ¹³C that opened the door to substantial progress.

Most of the research on B₁₂ until the mid-1980s was carried out with *Propionibacterium shermanii* (2-4). This bacterium is normally grown on a cobalt-containing medium, and its cells can be broken to yield a cell-free preparation of soluble enzymes that, with the appropriate cofactors, will synthesize cobyrinic acid (10) from simpler precursors (Fig. 1). Cobyrinic acid has the corrin macrocycle of vitamin B₁₂ fully built and is a late intermediate for B₁₂ itself. However,



The author is in the University Chemical Laboratory, Lensfield Road, Cambridge CB2 1EW, UK.

when the cells were grown with strict exclusion of cobalt, they no longer synthesized cobyrinic acid but instead produced three new pigments. These turned out to be dehydrogenated forms (by aerial oxidation) of the intermediates, namely precorrin-1 (7), precorrin-2 (8), and precorrin-3 (9) (5). The biosynthetic conversion of 7, 8, and 9 into cobyrinic acid was demonstrated by decisive labeling experiments.

The extensive structural work on these new pigments and on the precorrins 7, 8, and 9 depended heavily on ^1H and ^{13}C NMR together with ^{14}C labeling. Importantly, this structural information revealed that the first three steps beyond uroporphyrinogen III on the pathway to B_{12} all involve C methylation, first at C-2, then at C-7, and as the forerunner of many surprises, third at C-20 (Fig. 1). Clearly it was methylation that distinguished the pathway to B_{12} (1) from those to heme (2) and chlorophyll a (3). The methyl groups are transferred from the methylating agent (S)-adenosylmethionine (SAM).

An intense effort was made in several laboratories over many years to isolate new precorrins lying beyond precorrin-3. Before 1990, none was found. It had to be accept-

ed that further progress by this approach was unlikely; happily, other methods gave important results.

One study focused on the fate of C-20 and its attached methyl group present in precorrin-3; these are lost somewhere along the pathway before cobyrinic acid (10) is formed with its direct ring A-ring D link. It was shown by multiple labeling experiments (6, 7) that these two carbon atoms are ejected as acetic acid, with C-20 providing the carboxyl group with the methyl group passing through unchanged. Success depended on radioactive labels because about $9\ \mu\text{g}$ of acetic acid in a substantial volume of aqueous buffer was sought.

The second study used pulse labeling (8), a method designed to reveal the order of sequential events. For cobyrinic acid and B_{12} , researchers were interested in pinning down the order of attachment of the remaining five C methyl groups added after precorrin-3. Experiments based on ^{13}C -labeled methyl groups (9) proved that C-17 is the fourth methylation site. The method was then extended (8, 10, 11) to show that C-12 α is the fifth site followed by C-1, with C-5 and C-15 being last. The 12 β -methyl of cobyrinic acid (10) is not SAM-derived; it is formed by decarboxylation of the 12-

acetate residue still present in precorrin-3 (9).

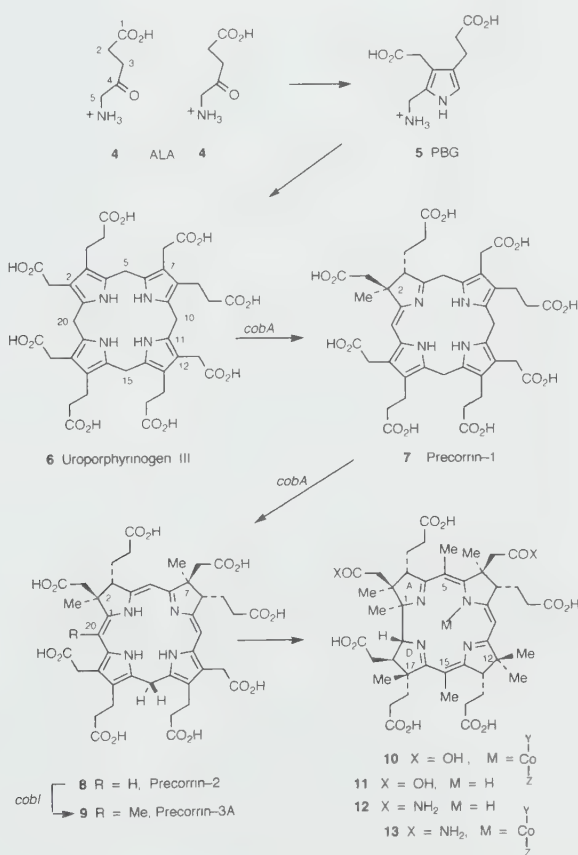
During this first phase of the research on B_{12} biosynthesis, several key facts (12) were established: (i) the pathway from ALA (4) to uroporphyrinogen III (6) is the same for heme (2), chlorophyll a (3), and vitamin B_{12} (1); (ii) the B_{12} pathway then branches away, with methylation at C-2 of 6 that initiates the switch; (iii) the precorrin-1 (7) thereby formed is followed by precorrin-2 (8) and precorrin-3 (9) and the last five methyl groups are added in the following order: C-17, C-12 α , C-1, and C-5 and C-15; and (iv) the steps that make the direct ring A-ring D connection, thereby contracting the macrocycle, eliminate C-20 of 9 and its attached methyl group as acetic acid.

Biosynthesis of B_{12} : Recent Progress

The great progress made during the first phase of identifying the B_{12} biosynthetic pathway depended heavily on ^{13}C NMR. But researchers simply could not get their hands on the intermediates beyond precorrin-3 (9) with the methods in use at that time. Something new was needed, and genetics and molecular biology have subsequently opened up research on B_{12} . Chemists now have access to the individual enzymes catalyzing the conversion of one intermediate into the next. In addition, the genes encoding these enzymes can be over-expressed to produce large amounts of enzyme. This in turn allows production of biosynthetic intermediates in quantities sufficient for structural study by multiple isotopic labeling and ^{13}C NMR with the use of a full range of modern NMR techniques. These allow exploration of the molecule both at and around the ^{13}C -labeled sites. However, in reality it is not nearly as simple as this outline might suggest. Initially, the scientists knew of 20 or so genes involved in B_{12} biosynthesis, but for only a few genes were the functions of the corresponding enzymes established reasonably quickly. In the unraveling of this puzzle that follows, I will bring out the often startling structures of the missing intermediates that at last could be elucidated with the newer techniques.

Almost all these latest advances have been made in two centers involving teams at Rhône-Poulenc-Rorer in France in genetics and biochemistry (led, respectively, by J. Crouzet and F. Blanche) and another team, more chemically inclined, being my group in Cambridge, England. (Where others have contributed, this will be clearly referenced.) Essentially all the outstanding work on genetics, molecular biology, and enzymology was done independently in France, some of the chemistry was carried out independently in Cambridge, and most, but not all, of the

Fig. 1. Early part of the B_{12} biosynthetic pathway. Me, methyl group.



structural work and chemistry described here has been carried out jointly. The genetics and molecular biology of the B₁₂ pathway in *Pseudomonas denitrificans* were worked out first in a massive effort over many years (13–16), and this provided the launching pad for subsequent advances not only for the Paris and Cambridge groups but also for those who followed. I will describe initially what chemistry the various enzymes catalyze and control and then correlate each enzyme with its gene (17).

The Great Surprise

The B₁₂ story has been full of surprises, starting even in the early days of its structure determination (for example, with the discovery that it was a cobalt complex with a contracted macrocycle) and carrying on through to the first phase of research on its biosynthesis [with the discovery that precorrin-3 (9) carries a methyl group at C-20 that is subsequently thrown away]. But other events caused the greatest surprise of all. The start was the French team's development of a genetically engineered strain of *P. denitrificans* in which eight of the genes required for biosynthesis of the late B₁₂ precursor hydrogenobyric acid (11) (15) from precorrin-2 (8) were overexpressed. The former is the cobalt-free form of cobyrinic acid (10), referred to earlier as a product of *P. shermanii*; their difference arises simply because cobalt insertion occurs at different points on the pathways in the two organisms. However, the complex organic macrocycles of 10 and 11 are identical in every respect.

The soluble protein preparation from this engineered bacterial strain contained large amounts of the enzymes encoded by the eight overexpressed genes. This cell-free system could convert precorrin-3 (9) into hydrogenobyric acid (11) in high yield provided that the necessary cofactors, including SAM and reduced nicotinamide adenine dinucleotide phosphate (NADPH) (14), were added. When this incubation was run without added NADPH, no hydrogenobyric acid was formed, although a yellow pigment was produced in its place. This yellow pigment was converted in high yield into 11 by incubation with the complete enzyme system including NADPH, and thus a new intermediate was in hand (18). Double-labeling experiments showed that formation of the new intermediate involved the addition of three SAM-derived methyl groups to precorrin-3 (9); its name is therefore (5) precorrin-6A. By preparing precorrin-6A from precorrin-3 so that the three added methyl groups were ¹³C-labeled and then converting this sample enzymatically into hydrogenobyric acid, researchers found by NMR that

the C-methyl groups that appear in 11 at C-17, C-12 α , and C-1 were the three new ones in precorrin-6A.

Further labeling and mass spectrometric work on the structure of precorrin-6A revealed features that were totally unexpected (18). First, the macrocycle was already contracted and C-20 with its attached methyl group [see precorrin-3 (9)] had been extruded. Second, precorrin-6A retained the acetate residue at C-12 and had seven double bonds, whereas the final corrin macrocycle (for example, that of 11) had six. Thus, it was found that reduction is needed to produce vitamin B₁₂, which fits perfectly with the formation of precorrin-6A only when NADPH is omitted.

The great importance of precorrin-6A was now clear, and its structure was elucidated by a joint Paris-Cambridge effort. The plan was to synthesize precorrin-6A from the simple starting material ALA (4) by using a combination of the necessary overproduced enzymes. By starting with three forms of ALA (4) carrying ¹³C at different sites (isotopomers), it was possible to synthesize three samples of precorrin-6A, each having ¹³C atoms at known positions that together labeled every carbon of the macrocycle. Then NMR led us to the striking structure (20) for precorrin-6A (19–21).

Why did this structure cause such a stir? Largely because it revealed that B₁₂ biosynthesis follows an entirely unexpected route. The methylation at C-11 (and not at C-12) of precorrin-6A (20) was the greatest surprise to be added to those already mentioned. Because this methyl group is undoubtedly at C-12 by the time the biosynthesis reaches hydrogenobyric acid (11), methyl migration (C-11 \rightarrow C-12) has to occur at some later stage as 20 is converted into 11.

Multi-Enzyme Synthesis

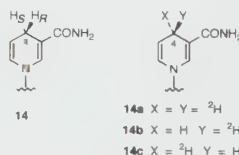
Before the main story is continued here, a message of general importance in these experiments deserves to be highlighted: precorrin-6A (20), a complex molecule having seven chiral centers, was synthesized in homochiral form from readily available ALA (4) by the combined action of nine enzymes produced by overexpression of their corresponding genes. This synthesis (18) and several others described here and using even larger numbers of overproduced enzymes are early examples of preparative multi-enzyme synthesis by a cocktail of enzymes (six or more), like many that are now regularly done. Enzymatic synthesis has enormous potential, and the product can be further manipulated by nonenzymatic methods. When enzymes are available, the actual preparation takes a few hours or perhaps a few days. Otherwise, years of work by a large team

would be needed to synthesize precorrin-6A (20) nonenzymatically (22).

The Reduction Step

The enzyme that reduces precorrin-6A (20) was then purified: It is encoded by the *cobK* gene and is a reductase specifically dependent on NADPH (14). When the enzyme was incubated with precorrin-6A and NADPH as the only cofactor, the next biosynthetic intermediate in the sequence, precorrin-6B, could be isolated. Its status was confirmed when it was converted with high yield into hydrogenobyric acid (11) by incubation with the complete enzyme system and all its cofactors (23). In this way, researchers were suddenly able to jump from one intermediate to the next by testing one after another of the palette of enzymes until the right one was found. Biosynthetic research had entered a new era.

Rapid progress was now possible in the elucidation of the B₁₂ biosynthetic pathway. The structure of precorrin-6B was proven (24) to be structure 21 by the same multiple ¹³C labeling method used for precorrin-6A (20); thus, it was found that it is the double bond between C-18 and C-19 of 20 that is reduced. Also, the deuteride equivalent from [4-²H₂]NADPH (14a) was found (25) to be transferred to C-19 of precorrin-6A; the chemistry makes sense if it is the C-18-protonated form of precorrin-6A that is reduced. At that point, attention focused on the cofactor, and by preparing [4R-²H]NADPH (14b) and [4S-²H]NADPH (14c), researchers were able to show that the reductase stereospecifically transfers H_R of the cofactor 14 (26). Thus, these experiments, which examined all three components in the process (substrate, cofactor, and product), left no doubt that reduction is a necessary step for B₁₂ synthesis in the aerobic bacterium *P. denitrificans*.



Taking into account the elimination of acetic acid, comparison of the oxidation levels of precorrin-3 (9) with that of hydrogenobyric acid (11) shows that there is no overall redox change. Because reduction is needed at precorrin-6A (20), it followed that there has to be an oxidation step at some stage between precorrin-3 (9) and precorrin-6A (20). It was satisfying to demonstrate (27) that an equivalent reduction step is necessary for B₁₂ biosynthesis in *P. shermanii*, an organism grown essentially anaerobically and useful for the early research.

The Pathway Beyond Precorrin-6B

With precorrin-6B (21) set firmly in place in the biosynthetic pathway (Fig. 2), we can take a forward look to hydrogenobyrynic acid (11) to see what still has to be done. The required steps are as follows, though not necessarily in this order: (i) decarboxylation of the acetate residue at C-12; (ii) rearrangement of the C-11 methyl group to C-12; and (iii) methylation at C-5 and C-15. Precorrin-6B (21) was tested as a potential substrate for the various remaining enzymes known to be involved in B₁₂ biosynthesis. Of course, a suitable assay was needed. Success came from assaying for methyltransferase activity, and the enzyme thus identified transformed precorrin-6B (21) by addition of two methyl groups presumably at C-5 and C-15, as these are the only two needed. The purified enzyme, encoded by the *cobL* gene, also catalyzed the decarboxylation of the 12-acetate group (28, 29). The product of this enzymatic conversion was isolated and named precorrin-8x. Its standing as another new intermediate on the B₁₂ pathway was established by a demonstration of its efficient enzymatic conversion into hydrogenobyrynic acid without significant change in the ratio of the two isotopes (³H and ¹⁴C) used for labeling (30).

Of the seven structure determinations carried out by the Paris and Cambridge teams during recent research on B₁₂ intermediates, the work on precorrin-8x was the most frustrating. Its heptamethyl ester was very unstable (30), and even after gentle isolation the heptacarboxylic acid changed in aqueous solution to give a mixture of at least five closely related forms, resulting in complex NMR spectra. Work on B₁₂ was never dull. When finally it was possible to hold on to precorrin-8x long enough for NMR studies, the structure 24 was deduced (31). Multiple ¹³C labeling was carried out as earlier, but here an additional experiment, based on [2,3-¹³C₂]ALA [see (4)] as starting material, allowed the carbon attached to C-12 of 24 and C-12 itself to be labeled with ¹³C. Proof was provided in this way that it is a methyl group that is attached to C-12 and that C-12 is an sp² center. Thus, the methylene system, which is presumably formed as an intermediate (23) during decarboxylation (22 → 23), underwent tautomerization to 24 (Fig. 2). Structure 24 for precorrin-8x at present still lacks some stereochemical detail, but the main features are clear. All the C-methyl groups for B₁₂ are now attached, and only rearrangement of the 11-methyl to C-12 is needed to form hydrogenobyrynic acid (11).

The methyl migration from C-11 in 24 to C-12 in 11 is illustrated as a suprafacial

1,5-sigmatropic rearrangement and is catalyzed by a relatively small enzyme (relative molecular mass of 22,000) encoded by the *cobH* gene (30). How the enzyme achieves the methyl shift is an interesting problem for the future. This shift allows the double bonds to move into conjugation, thus setting up the characteristic corrin chromophore of hydrogenobyrynic acid.

Filling the Last Remaining Gap

At this stage, the structures were known of all the intermediates on the biosynthetic pathway to hydrogenobyrynic acid (en route to vitamin B₁₂), from ALA (4) through to precorrin-3 (9). There was a gap, however, before precorrin-6A (20) could be reached. But the various precursors on the pathway

running forward from precorrin-6A were known and structurally characterized all the way through to hydrogenobyrynic acid (11). Moreover, much was known about the genes and enzymes required to convert 11 into 13 and to add the adenosyl residue and the nucleotide loop, which are needed to complete the construction of the vitamin B₁₂ coenzyme (16).

The biosynthetic pathway from uroporphyrinogen III (6) to hydrogenobyrynic acid (11) in *P. denitrificans* (13, 15) requires the enzymes encoded by nine *cob* genes (*cobA*, *F*, *G*, *H*, *I*, *J*, *K*, *L*, *M*). The results already outlined established the functions of three of the enzymes, encoded by *cobK*, *cobL*, and *cobH*. Also, the enzymes encoded by *cobA* and *cobI* were shown to act in the part of the pathway that goes from 6 to 9. Though

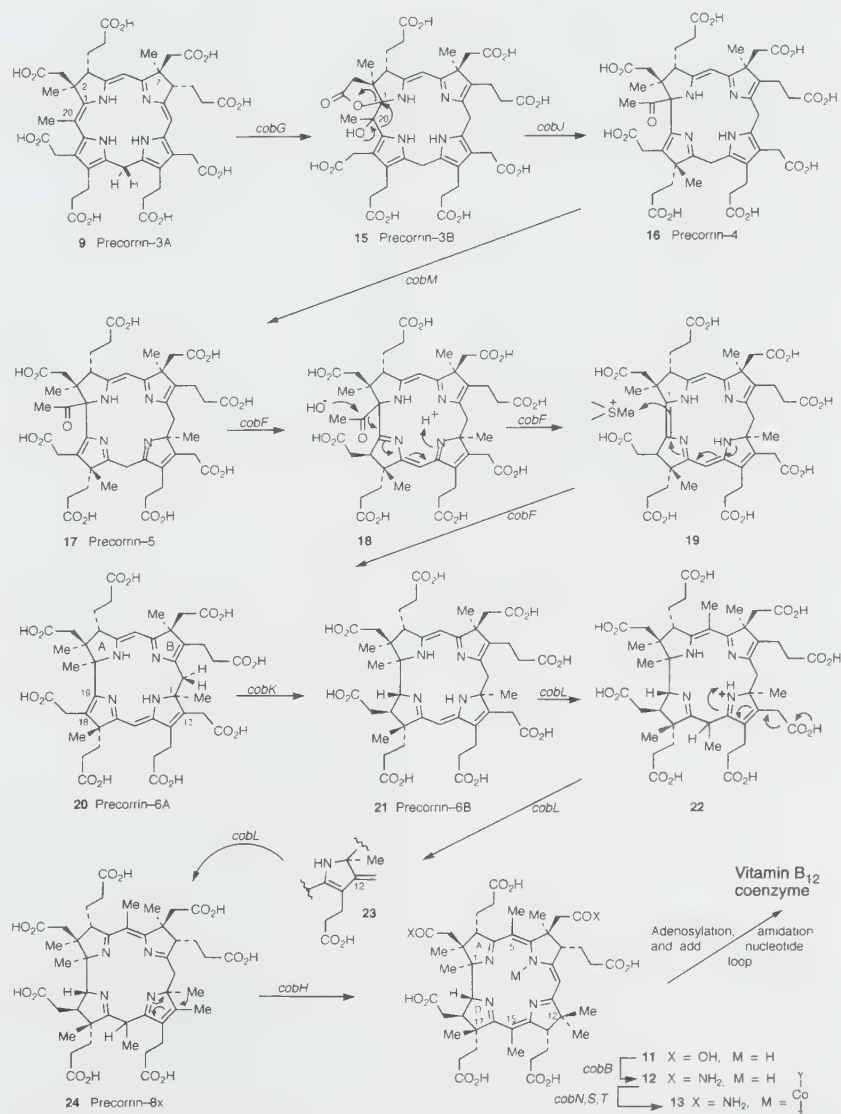
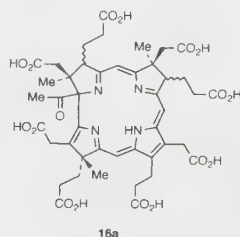


Fig. 2. B₁₂ biosynthetic pathway from precorrin-3A through to the corrin macrocycle.

a full discussion of these enzymes is outside the scope of this article, it is nevertheless essential to explain that *cobA* encodes the methyltransferase that sets in place the C-methyl groups at C-2 and C-7 of precorrin-2 (8) (32, 33), whereas *cobI* encodes the enzyme responsible for the methylation at C-20, which generates precorrin-3 (9) (34). The four genes, *cobG*, *cobF*, *cobJ*, and *cobM*, must therefore code for the enzymes needed for conversion of precorrin-3 (9) into precorrin-6A (20). Also, the enzymes from *cobF*, *cobJ*, and *cobM* were known to be methyltransferases because of substantial sequence homology between these genes and the *cobA* and *cobI* genes (15). Thus, the three C-methylations needed (with other chemistry as well) to convert precorrin-3 (9) into precorrin-6A (20) were well matched with the three methyltransferases available. Now, the remaining puzzle was this: What does the protein encoded by *cobG* do and where and in what order do the methylases from *cobF*, *cobJ*, and *cobM* carry out their task? The relatively easy part of setting these last few puzzle pieces in place depended entirely on having the rest of the picture established.

With only these four genes to study, a logical approach could be used that involved both gene deletion and gene overexpression. The first step forward came from a strain of *P. denitrificans* in which the *cobM* gene had been deleted. This strain afforded a protein extract that converted precorrin-3 into a new intermediate that proved to be tetramethylated and hence was named precorrin-4. This was isolated in pure form as a reasonably stable dihydroderivative called factor IV (35). Factor IV was reduced back to precorrin-4 when it was incubated with the complete enzyme system from *P. denitrificans* together with NADH, and precorrin-4 was further transformed into precorrin-6x (20), a known precursor of vitamin B₁₂ (35). This firmly set precorrin-4 on the biosynthetic pathway to the vitamin. Once again, multiple ¹³C labeling and NMR revealed the structure of factor IV as 16a, and the structure of precorrin-4 to be 16 or possibly a tautomer (35).



The structure of precorrin-4 held more surprises as well. Ring contraction had already occurred at this early stage, and the location of the acetyl group was unexpected. The chemistry for ring contraction had

pointed to the concomitant formation of an acetyl group (36) that could later be extruded as acetic acid, the established elimination product. But everyone's speculations before this work on precorrin-4 placed the acetyl group at C-19 rather than at C-1. Its location at C-1 was confirmed (37) by synthesizing precorrin-3 (9) with ¹³C labels at both C-1 and C-20, followed by enzymic conversion into precorrin-4 (16). NMR analysis of the derived factor IV 16a demonstrated that the two ¹³C labels were still directly bonded. Comparison of the structures of precorrin-3 (9) and precorrin-4 (16) shows that, to reach precorrin-4, both C-17 methylation and oxidation (adding one oxygen atom overall) had occurred. Things were locking neatly into place because an oxidative step must precede the formation of precorrin-6x (20).

That the fourth methyl group to be attached to the macrocycle appears at C-17 (35, 37) in precorrin-4 (16) was in full agreement with early pulse-labeling studies (9). The later pulse-labeling work showed that the 12 α -methyl group of cobyrinic acid (10) (10, 11) and of hydrogenobyric acid (11) (38) is the fifth methyl to be added, though it is placed initially at C-11 (19, 20) [see precorrin-6A (20)]. As this fifth methylation does not occur when *cobM* is deleted, it follows that *cobM* encodes the 11-methyltransferase of *P. denitrificans*.

The enzyme encoded by *cobG* afforded yet another surprise. It was found that this enzyme alone transforms precorrin-3 (9) and carries out an oxidative step without methylation (39, 40). The new biosynthetic intermediate carries the same number of methyl groups as the starting material, previously called precorrin-3; this name thus had to be modified (8) to precorrin-3A. The oxidation product is precorrin-3B. Biotransformation of precorrin-3B into precorrin-4 (16) proved that it really is an intermediate in the biosynthesis of B₁₂ (40). Pure samples of precorrin-3B were prepared in multiply labeled forms that allowed the structure (15) for precorrin-3B (41) to be deduced (39, 40). The conclusion was that the oxidative step does not cause the ring contraction; rather, it lays the foundation for contraction to be catalyzed by the next enzyme, the C-17 methyltransferase encoded by *cobJ*, which generates precorrin-4 (16). Remarkably, the purified oxidative enzyme does not use heme as a cofactor but has properties supporting the presence of iron-sulfur clusters (40). Some of the ¹³C NMR signals corresponding to the published structure of precorrin-3B (16) have been observed (42) directly from the species produced by incubating ¹³C-labeled precorrin-3A (9) and the *cobG* enzyme. This experiment was run in the presence of air, which was an important

change because it allowed the enzyme, obtained by overexpression in *Escherichia coli*, to carry out more than one cycle (43). The sum of all the above evidence showed that the *cobG* enzyme is the initial oxidase and that the enzyme from *cobJ* methylates C-17 with ring contraction, whereas the *cobM* protein methylates C-11. This leaves the methyltransferase encoded by *cobF* to do the remaining necessary methylation at C-1.

When this C-1 methylation was blocked by omitting the protein encoded by the *cobF* gene from the cocktail of enzymes, a pentamethylated intermediate was produced, which is precorrin-5. It could be biosynthesized either from precorrin-3A, by using the *cobG*, *cobJ*, and *cobM* enzymes (40), or from precorrin-4, when just the *cobM* enzyme was needed (44). Multiply ¹³C-labeled forms of precorrin-5 were generated by the latter approach to allow the structure 17 to be deduced by NMR (44). There are indications that the C-1 acetyl group, which must be enzymatically removed to allow C-1 methylation, is intrinsically labile. This acetyl group can be slowly lost nonenzymatically (40, 44), and the product of this loss has been isolated as its dihydro derivative, factor V (40).

The Genes and Their Enzymes, Including Cobalt Insertion

I have concentrated here on the biosynthesis of hydrogenobyric acid (11) from uroporphyrinogen III (6) in *P. denitrificans* because it is in this part of the pathway that all the excitement of a rapidly unraveling puzzle has been generated. In Table 1, I have also included information on four genes and their enzymes from another part of the B₁₂ pathway. The enzyme encoded

Table 1. The genes and enzymes for corrin biosynthesis in *P. denitrificans*.

Gene	Enzyme function
<i>cobA</i>	Methylation at C-2 and C-7 of uroporphyrinogen III (6)
<i>cobI</i>	Methylation at C-20 of precorrin-2 (8)
<i>cobG</i>	Oxidation of precorrin-3A (9)
<i>cobJ</i>	Ring contraction and C-17 methylation of precorrin-3B (15)
<i>cobM</i>	C-11 methylation of precorrin-4 (16)
<i>cobF</i>	C-1 methylation (and deacetylation?) of precorrin-5 (17)
<i>cobK</i>	Reduction of precorrin-6x (20)
<i>cobL</i>	Methylation at C-5 and C-15 of precorrin-6y (21) and decarboxylation of C-12 acetate
<i>cobH</i>	Rearrangement of precorrin-8x (24) to hydrogenobyric acid (11)
<i>cobB</i>	<i>a,c</i> -Amidation of hydrogenobyric acid to give 12
<i>cobN</i>	Cobaltochelatase to give 13
<i>cobS</i>	
<i>cobT</i>	

by *cobB* converts hydrogenobyric acid **11** into its *a,c*-diamide (**12**) (**45**) ready for cobalt insertion that is catalyzed by an enzyme complex encoded by three genes, *cobN*, *cobS*, and *cobT* (**46**). This latter step yields cobyrinic acid *a,c*-diamide (**13**). It was cobyrinic acid (**10**) that was used in early studies of B₁₂ biosynthesis. The pathways in *P. denitrificans* and *P. shermanii* merge at this stage; the earlier parts of the two pathways differ at least in the timing of cobalt insertion (**47**, **48**). The various transformations that have been surveyed here evidently take place in *P. shermanii* on cobalt-containing macrocycles (**49**).

Viewing the Complete Picture

Now we can view the entire pathway of B₁₂ synthesis from beginning to end, with the chemistry for each transformation at the critical stages preparing the ground for the next one—or perhaps more accurately, with the available intrinsic reactivity at a given stage predetermining the nature of the next step (**36**) as the biosynthetic pathway of B₁₂ evolved.

Figure 1 shows how uroporphyrinogen III (**6**), the parent of the pigments of life, is channeled toward vitamin B₁₂ by methylation at C-2 to produce precorrin-1 (**7**), the first intermediate, with further methylation at C-7 to generate precorrin-2 (**8**). The *cobI* enzyme then places a third methyl group at C-20, producing precorrin-3A (**9**). The biosynthetic steps downstream from precorrin-3A in *P. denitrificans* have been my main theme here (Fig. 2) (**50**). The *cobG* enzyme catalyzes the oxidative formation of precorrin-3B (**15**) from precorrin-3A (**9**). This enzyme does not bring about the ring contraction but instead simply sets the stage for this step, which is carried out by the *cobJ* enzyme together with methylation at C-17. The contraction process is illustrated as a pinacol-type rearrangement (**36**) on the γ -lactone, but it is possible that this step actually involves the δ -lactone (to C-20). These γ - and δ -lactones probably interconvert readily. The precorrin-4 (**16**) so formed then undergoes methylation at C-11 leading to precorrin-5 (**17**), which is converted into precorrin-6A (**20**). Satisfying mechanistic interpretations can be given of the deacetylation and C-methylation processes required for this last transformation and are illustrated in Fig. 2 by structures **18** and **19**. Only a simple prototropic shift is needed for **17** to yield the more conjugated system **18**, which is ideally constituted to allow hydrolytic extrusion of the C-1 acetyl group by providing the necessary electron sink (**51**). Moreover, its product **19** is an extended enamine, thus providing reactivity for methylation at C-1 (**52**). In this way is generated precorrin-6A (**20**), the inter-

mediate that set rolling the surge of experimentation leading to the discovery of B₁₂'s biosynthetic pathway.

It is at this point that the oxidation level is adjusted by NADPH-dependent enzymic reduction of the C-18-protonated form of precorrin-6A (**20**) (hydride delivery to C-19) to give precorrin-6B (**21**). Next comes the transformation by an enzyme that displays two activities, transmethylation and decarboxylation, perhaps as a result of ancestral gene fusion. Methylation is carried out at C-5 and C-15, setting in place the last of the eight required methyl groups, and it is the acetate at C-12 that is decarboxylated. The product is precorrin-8x (**24**). The order of the methylations and decarboxylation is not known, but a reasonable sequence is shown as methylation to give **22** and then forward to **23** followed by **24**. Before 1990, those who studied B₁₂ had been puzzled about how the C-12 acetate was specifically decarboxylated. Because we know now that prior methylation occurs at C-11, a reasonable mechanism for decarboxylation is available. Precorrin-8x (**24**) is isomeric with hydrogenobyric acid (**11**); it carries the correct number of both methyl groups and double bonds. All that is needed is the 1,5-methyl shift from C-11 to C-12—rather like flicking a switch—to allow the characteristic conjugated system of the corrin macrocycle of hydrogenobyric acid to be generated. Amidation of the *a* and *c* acetic side chains then provides the substrate **12** for the complex cobaltochelate, which slips in the cobalt ion to form cobyrinic acid *a,c*-diamide (**13**). More steps of amidation and others (outside the scope of this article) are needed to add the adenosyl residue and the nucleotide loop to generate the vitamin B₁₂ coenzyme. As all of these steps are now understood, the elucidation of vitamin B₁₂ biosynthesis is complete, marking the end of an epoch that started 39 years ago, when the structure of B₁₂ was first solved (**53**) and chemists first wondered how this vitamin was built by living organisms.

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 55. I wish especially to thank F. Blanche, B. Cameron, J. Crouzet, L. Debussche, D. Thibaut, and their colleagues at Rhône-Poulenc-Rorer, Paris, for the marvellous collaboration we in Cambridge have enjoyed with them. I am also most grateful to my senior colleagues F. J. Leeper, N. P. J. Stamford, and C. Abell for their invaluable help and counsel and to all other members of our Cambridge group named in the references for their many important contributions. Finally, I thank Zeneca, Hoffmann-La Roche, Roche Products, the Leverhulme Trust, and the Science and Engineering Research Council for financial support.

FAX FROM

DR. ALFRED R. BADER
Suite 622
924 East Juneau Avenue
Milwaukee, Wisconsin 53202
Telephone 414-277-0730
Fax No. 414-277-0709

May 15, 1995

To: Mr. Mark Bernstein
Fax: 204/488-0768

Dear Mark:

Thank you for your fax.

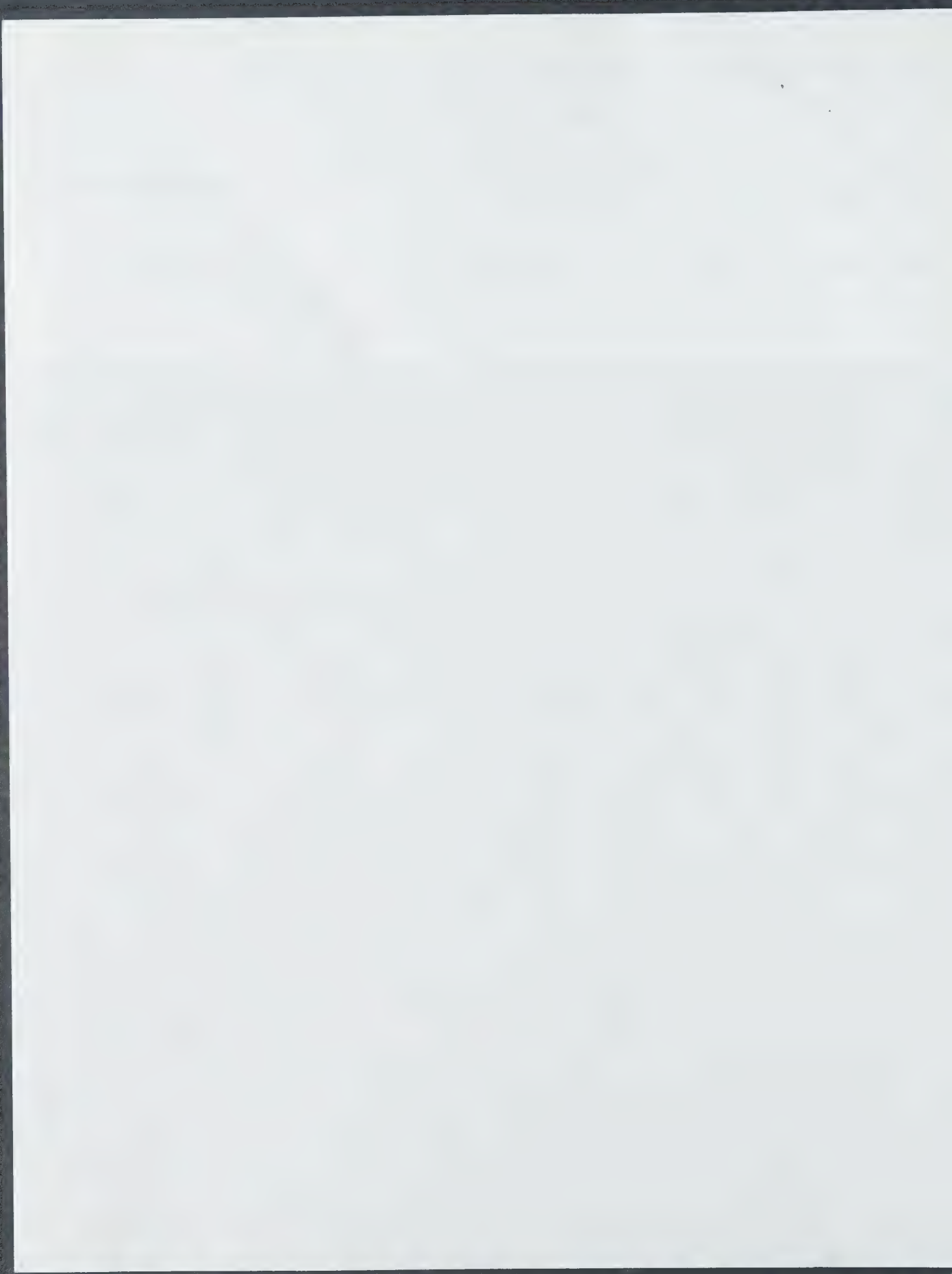
I will not be able to attend the Grant Hall Society dinner, but Isabel and I will come to the Sc.'45 reunion at the end of October.

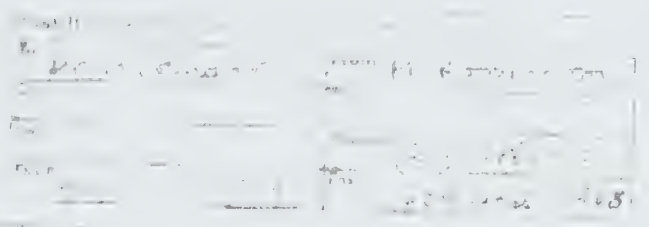
I think that you will enjoy seeing Herstmonceux Castle, and I hope that before that you will have had a chance to read the last chapter in my autobiography. That chapter describes the details of how we found that castle for Queen's.

Best wishes, as always,



AB/cw





218 Oxford St.
Winnipeg, MB.

May 13 1995

Dear Al:

It was with a great deal of delight that I read the chapter of your autobiography which was published in the Queen's Journal which arrived a few days ago. It brought back many memories and names which had remained buried in my memory for all these years.

The picture of the students at the Hillel house brought back to mind the faces of Willi Low, Kurt Rothschild and Arno Cahn as well as some of the other friends made at that time. I think that the picture was taken the year before I got there but it was nice to see the picture of the rabbi and rebbelein of whom I have fond memories. It also reminded me of the elderly gentleman who cooked the kosher meals as well as the meals themselves and the company. I also noticed my cousin in the picture who was at Queen's a year ahead of me.

So much for the memories. My daughter who lives in Toronto and is also a graduate of Queen's sent me the announcement of your lecture there on the 17th. Unfortunately she has a conflict that evening and may not make your talk. However, I did contact the Winnipeg Art gallery a few weeks ago to see if a visit to Winnipeg could be arranged. The person in charge of programs knew all about you and informed me that at one time an exhibit of your collection had been contemplated but was impossible for budgetary reasons. In any case I sent her the notice and can only hope that a visit here can be arranged, not in the winter of course!

As to myself, my life will become a little simpler since my term as chairman of the Canadian Paint Association has come to an end. It was of course very interesting and since the industry is becoming more global in nature, as are the related environmental concerns, I had the opportunity to meet a great many interesting people both in our industry and related ones. My own company continues and thankfully does reasonably well and I do enjoy the new product development work in which I am still involved.

I am hoping to get to "THE CASTLE" this fall when we make our almost annual pilgrimage to London to get a fill of theatre music and galleries. I will tie it into a conference in Brussels about the middle of November which is run by the Paint Research Association in Terlinghen.

This is the 50th anniversary of your graduation. Are you planning to be at the Grant Hall Society dinner at the end of September?

Best regards,
Mark Benfield



*Wishing you all the joys
of the season and much
happiness throughout the new year*

Alfred,

All the best to you
and Isabel in the new
year. Its a pleasure
to work with you. Thanks
for all your help this past
year.

Dave Boulton

SHOWING A PREFERENCE
Charles-Edouard Boutibonne (1816-1897)
A Private Collection
Fine Art Images, Inc., N.Y.

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NEW YORK ZÜRICH
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January 16, 1995.

218 Oxford St.
Winnipeg, MB. R3M 3J6
Canada.

Dear Dr. Bader,

For the last few years I have been reading with more than passing interest about your generous contributions to Queen's. In the various articles a few of the unasked questions of forty eight years ago were answered for me. You were a graduate student and I think I was going into third year of Engineering Chemistry when we briefly occupied adjoining space in a lab at the top of Gordon Hall. Liqueurs were a concern to me at the time and you were kind enough to assist me.

In the interview in Saturday Night you were quoted as having the feeling that Canadians were on the whole parochial and the purpose of the castle was to give us an opportunity to be exposed to a broader environment. I would agree generally, with the caveat that people from western Canada are I believe, much more outward looking than those from southern Ontario. I personally have waged a decades long good natured battle with my peers about this narrowness of view.

At the moment, I am chairman of the Canadian Paint and Coatings Association and the historic parochialism of the domestic industry is testing my patience. I have my own small manufacturing company in Winnipeg. I am even old enough to remember Murphy Paint since we distributed a few of their products when I worked during the summer months before I became associated permanently with my present company.

More recently we have seen pictures of "the castle" on TV and to me personally it looks like a wonderful place to study the history of art, if and when I retire.

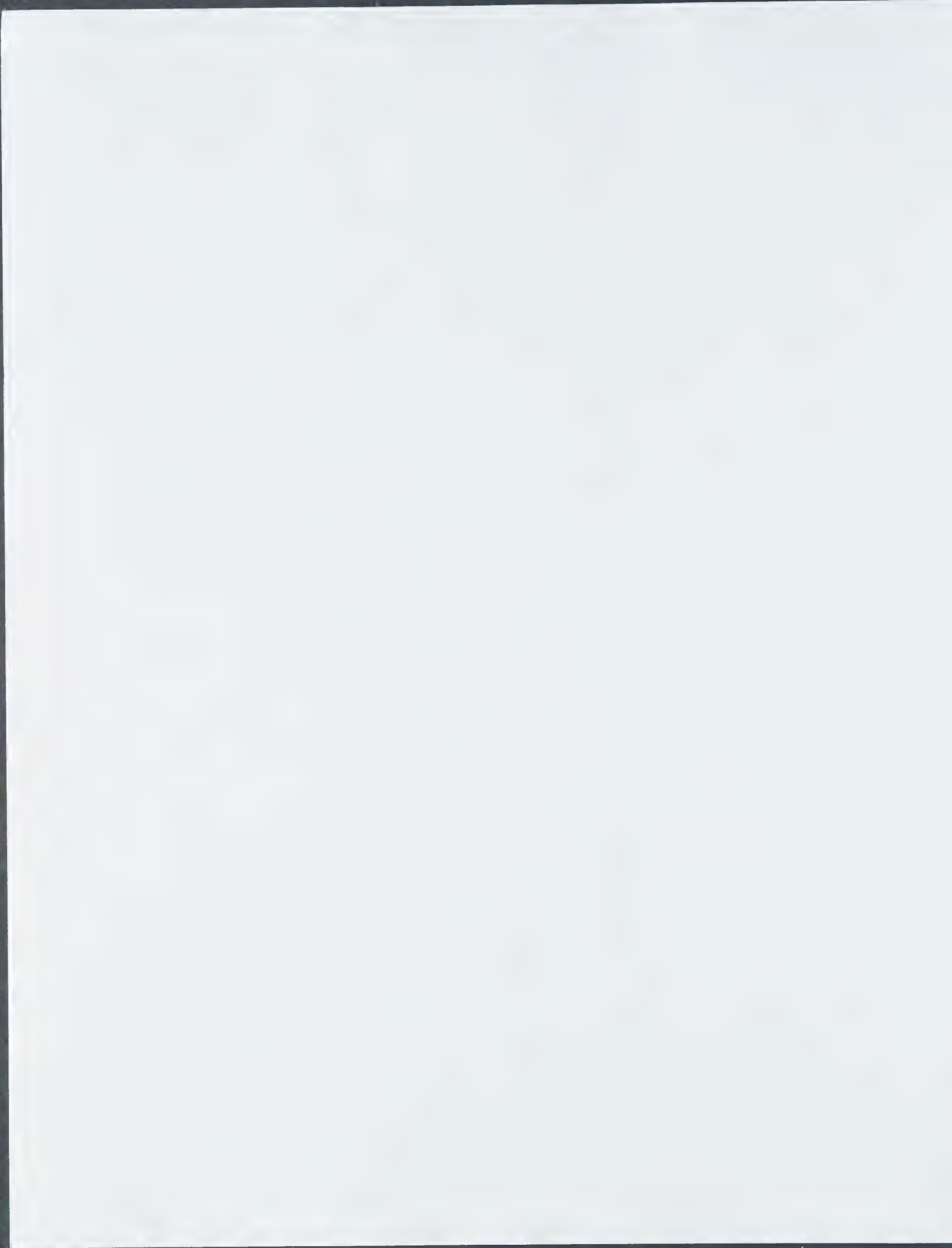
In any case, this is a somewhat rambling letter, but I did want to congratulate you on your success, your generosity and the fact that you have obviously made a positive contribution to the world in which you lived and worked. You are part of that group of very talented people who emerged from the internment camps to make large contributions in the arts and science of our community.

Thank you.

Yours truly,



Mark Bernstein. Sc. '48



Budget

Dr. Alfred Bader
Po Box 355
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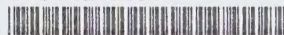
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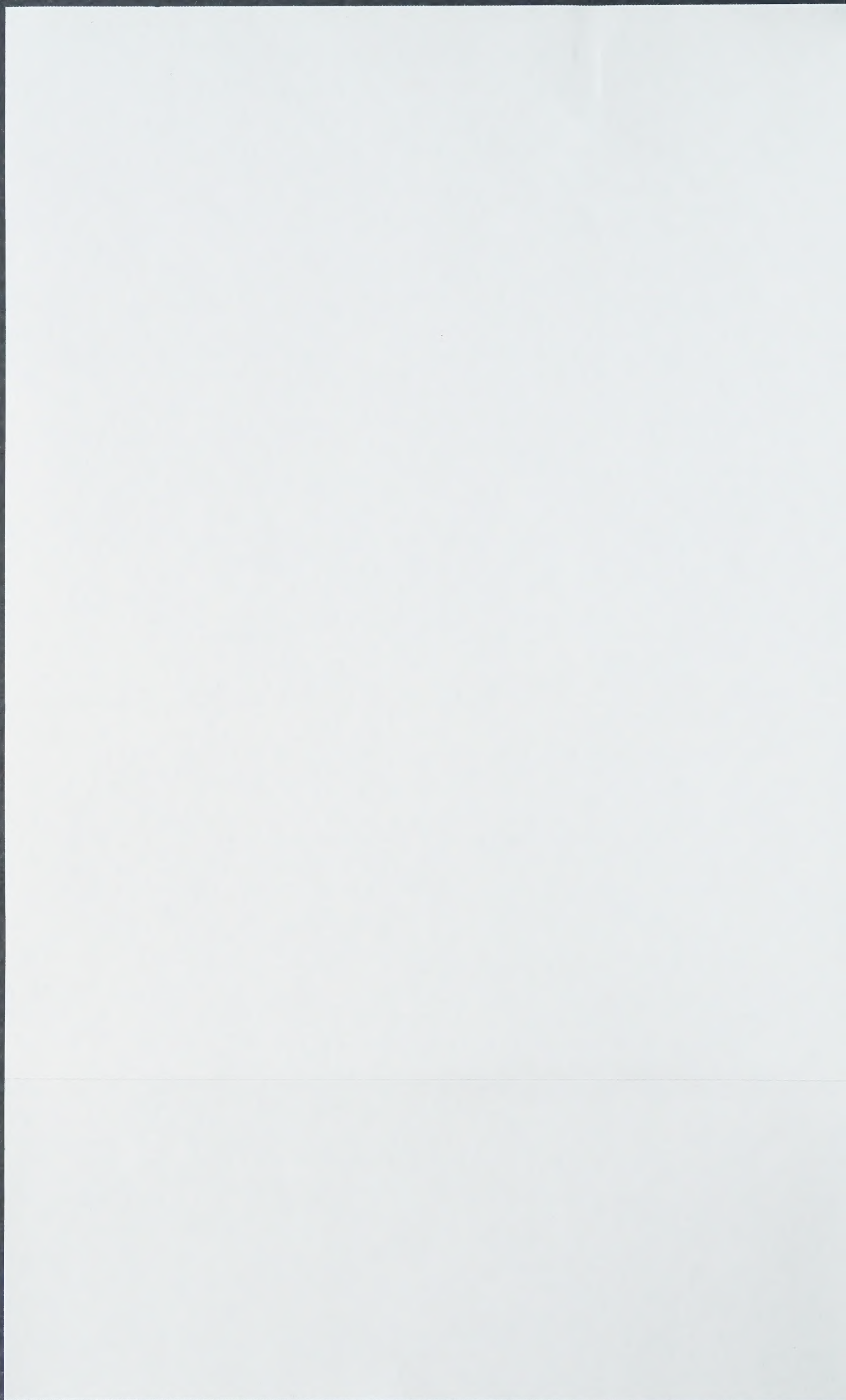
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