



# Granick (Sam) papers

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## Summary Information

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<b>Repository:</b>	Rockefeller Archive Center
<b>Creator - aut:</b>	Granick, Sam
<b>Creator:</b>	Rockefeller Institute for Medical Research
<b>Creator:</b>	Rockefeller University
<b>Title:</b>	Sam Granick papers, Rockefeller University Faculty
<b>ID:</b>	FA232
<b>Date [inclusive]:</b>	1934-1978
<b>Physical Description:</b>	7.48 Cubic Feet Extent is an approximation
<b>Language of the Material:</b>	English

### Preferred Citation

Information regarding the Rockefeller Archive Center's preferred elements and forms of citation can be found at <http://www.rockarch.org/research/citations.php>

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## Biographical/Historical note

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Sam Granick, 1909-1977. Biological chemist and plant pathologist.

Born in New York City on February 16, 1909, Granick received his B.S. degree in 1931, M.S. in 1933, and Ph. D. in 1936 in plant physiology from the University of Michigan, where he was a Newcombe Fellow from 1932 to 1936. He spent the next two years at the University of Michigan as a teaching assistant and then an instructor, before joining the staff of the RIMR as a Visiting Investigator in 1938. In 1939, Granick was appointed a Fellow and worked in the laboratory of Leonor Michaelis. He was made an assistant two years later, became an associate professor in 1951, and a professor in 1964.

For more than thirty years, Granick's research interests were in the areas of chloroplast structure, heme and chlorophyll biosynthesis, and iron metabolism. His separation of chloroplasts from the plant cell was one of the earliest examples of the isolation of a cell organelle and made possible for the first time quantitative determinations of their composition. In 1947, he and Dr. Keith R. Porter took the

first electron microscope pictures of the chloroplast, which revealed their dense grana and disc-like components.

With Dr. Aharon Gibor, Dr. Granick found earliest evidence for the self-replication of DNA in chloroplasts by irradiation of the cytoplasm. He also discovered that the pigments of protoplasm, heme and chlorophyll, were members of the same biosynthetic chain.

Granick's first research interest at the RIMR was the iron-protein, ferritin, which he studied in connection with its magnetic properties. He helped in the discovery of a new protein, apoferritin, which acts as a storage depot in the human body to form hemoglobin, the red color substance in the blood.

Sam Granick died of a heart attack at New York Hospital on April 29, 1977.

Member of National Academy of Sciences, Member; American Chemical Society; American Academy of Arts and Sciences; American Society of Biological Chemists; American Society of Plant Physiologists; Botanical Society of America; Society for Developmental Biology; Harvey Lecturer; Phi Beta Kappa; Sigma Xi; Phi Kappa Phi; Junior Research Club of the University of Michigan.

Served as a referee for various journals and NIH and NSF grant proposals.

Was married to Dr. Elsa Bachman and had two children, Joel Lee and Donna.

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## Scope and Contents

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Types of records include: biographical material, correspondence, notebooks, manuscripts, photographs, and reprints.

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## Arrangement note

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Arranged in alphabetical and chronological order.

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## File Plan note

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Former Classification: I 450 G766

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## Administrative Information

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### Publication Statement

Rockefeller Archive Center

15 Dayton Avenue

Sleepy Hollow 10591

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### Conditions Governing Access note

Access to this collection is restricted pending permission from Rockefeller University.

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## Controlled Access Headings

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- Blood
- Hemoglobin
- DNA
- Proteins
- Life sciences
- Plant cells and tissues
- Biochemistry
- Medical sciences
- Medical technology
- Medical education
- Cell and biomolecular sciences
- Biology -- Research

- Medical research
- Science -- Study and teaching

## Collection Inventory

### Biographical Material, 1950-1977, undated

#### Scope and Contents note

Includes bibliographies, biographies, clippings, curriculum vitae, memos, and obituaries.

#### Arrangement note

Arranged in chronological order.

Title/Description	Instances	
Biographical Material, 1950-1977, undated	box 1	folder 1

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### Correspondence, 1937-1977

Physical Description: 1.4 Cubic Feet

Title/Description	Instances	
Administrative, 1937-1977		
<u>Physical Description</u> : 0.2 Cubic Feet		
<b>Scope and Contents note</b>		
Subjects include the hiring of Granick and the hiring of personnel for Granick's laboratory.		
<b>Arrangement note</b>		
Arranged in chronological order.		
1937-1953	box 1	folder 2
1954-1968	box 1	folder 3
1969-1977	box 1	folder 4

General, 1948-1963 1967-1977

Physical Description: 1.2 Cubic Feet

#### Scope and Contents note

Also includes memos.

Correspondents include: William Agosta, Edward H. Ahrens, E.C. Albritton, Robert A. Aldrich, American Chemical Society, E.G. Anderson, Richmond K. Anderson, W.O. Baker, S.I. Beale, Alexander G. Beam, Martin L. Black, Matthew Block, Lawrence Bogorad, James Bonner, Armin C. Braun, Frank Brink, Detlev W. Bronk, Bruce T. Burnham, George E. Cartwright, Britton Chance, Merrill W. Chase, Frank F.H. Cheng, J. Julian Chisholm, Frank A. Clarke, Bayard D. Clarkson, Seymour Cohen, Waldo Cohn, Aristine Coker, H. Bruce Collier, Alsoph H. Corwin, Lyman C. Craig, James F. Crow, Howard J. Curtis, Harrison Davies, Robert A.M.C. DeGroote, F. DeMatteis, Manfred Doss, Lennox Eales, John T. Edsall, A.M. Edwards, Matthew Ellenhorn, W.H. Elliott, Herman T. Epstein, John E. Falk, Myron W. Fisher, Waldo R. Flinn, Karl Folkers, Beverly W. Gabrio, Hans Gaffron, Arthur W. Galston, Martin A. Garstens, Herbert S. Gasser, Martin Gibbs, Aharon Gibor, Theodore Gillman, David M. Greenberg, Alexander B. Gutman, Philip Handler, Pauline M. Harrison, Felix Haurowitz, Sterling B. Hendricks, Harry R. Highkin, Rollin D. Hotchkiss, F.E. Hull, Arthur A. Iodice, Herbert Jaffe, Martin D. Kamen, Attallah Kappas, Joan Keilin, Albert Kelner, Chin Dong Kim, William R. Kinkel, Heinrich Kluver, Moses Kunitz, Henry G. Kunkel, Donald W. Kupke, Daniel N. Lapedes, Earl G. Larsen, June Lascelles, Richard Levere, L.M. Long, Evelyn McCune, S. Fergus MacDonald, William D. McElroy, David Mauzerall, Leonor Michaelis, Alfred Mirsky, Carl V. Moore, Ursula Muller-Eberhard, Ken Nadler, National Academy of Sciences, National Institutes of Health, National Science Foundation, J.B. Neilands, ? Nicholas, Robert Omata, George Palade, S. William Pelletier, Philip Person, John W. Porter, C. Rimington, Thomas Rivers, M.N. Runner, Elizabeth S. Russell, Ruth Sager, Anthony S. San Pietro, Seiyo Sano, Shigeru Sassa, P. Schaeffer, Rudi Schraid, Eugene M. Schryner, Samuel Schwartz, William Seifriz, Frederick Seitz, David Shemin, Peter Sinclair, James H.C. Smith, Fabio Sparatore, Herbert Stern, George S. Strassman, William R. Taylor, William Trager, Bernard F. Trum, William J. Turner, Donald D. Van Slyke, Gilbert J. Vosburgh, Andy Wang, Cecil J. Watson, D.J. Weatherall, A. Weissberger, Diter von Wettstein, Douglas M. Whitaker, David C. White, Torben K. With, and Yoshio Yoshida.

Subjects include comments by Granick on others publications, letters of recommendation, reports on experiments, and routine correspondence, including requests for chemicals.

### Arrangement note

Arranged in alphabetical order by correspondents' last name and then in chronological order.

AP-AZ	box 1	folder 6
B-BOE	box 1	folder 7
BOGORAD, LAWRENCE (1950-1972), 1950-1972	box 1	folder 8
BOL-BZ	box 1	folder 9
C-COR	box 1	folder 10
COT-CZ	box 2	folder 1
D	box 2	folder 2
E	box 2	folder 3
F	box 2	folder 4
G-GL	box 2	folder 5
GO-GZ	box 2	folder 6
H	box 2	folder 7
I	box 2	folder 8
J	box 2	folder 9
K	box 2	folder 10
L	box 2	folder 11
M-MA	box 3	folder 1
ME-MZ	box 3	folder 2
N	box 3	folder 3
O	box 3	folder 4
P	box 3	folder 5
R	box 3	folder 6
S-SCHM	box 3	folder 7
SCHO-SMI	box 3	folder 8
SMO-SZ	box 3	folder 9
T	box 4	folder 1
U	box 4	folder 2
V	box 4	folder 3
W-WH	box 4	folder 4
WI-WZ	box 4	folder 5
X, Y, Z & Unidentified	box 4	folder 6
Permission requests, 1954	box 4	folder 7



**Arrangement note**

Arranged in chronological order.

**Scope and Contents**

Permissions requested by Granick to use others' material in his publications

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**Laboratory Notebooks, 1942-1977**

Physical Description: 4.5 Cubic Feet Extent is an approximation.

**Scope and Contents note**

Includes graphs and notes; also includes articles, charts, correspondence, photographs, reports, and slides.

**Arrangement note**

Arranged in chronological order and then in alphabetical order.

NOTE. All of the folders have maintained their original title, insofar as it was possible to read Granick's handwriting. Also, there appeared to be two groups of lab notebooks - those arranged chronologically (with titles in some cases) and those arranged by title of the experiments being performed. This arrangement has been kept.

Title/Description	Instances	
1942	box 4	folder 8
Globin Prophyryns, 11/1/1944-3/3/1945	box 4	folder 9
Chlorella Chloroplasts, Electron Microscope, I, 12/17/1945-2/27/1947	box 4	folder 10
Chlorella Chloroplasts, Electron Microscope, II, 12/17/1945-2/27/1947	box 4	folder 11
Agglutin Serum in Porphyrins in Tissue, Heme Chrome Toxins, 1945 1948 1949	box 4	folder 12
Chlorella Media Anaerobic Studies, Parainfluenza, Prodigious, I, 1947	box 5	folder 1
Chlorella Media Anaerobic Studies, Parainfluenza, Prodigious, II, 1947	box 5	folder 2
Chlorella, 11/26/1948-7/3/1951	box 5	folder 3
Experiments with Index, 10/1948-1/1951	box 5	folder 4
Horseheart Cytachromes, I, 9/13/1949-2/2/1950	box 5	folder 5
Horseheart Cytachromes, II, 9/13/1949-2/2/1950	box 5	folder 6
Prophyrin A, 1/23/1951-1953	box 5	folder 7

Chlorella, 1951 1953-1956	box 6	folder 1
Radio Fe, I, 9/24/1953-4/22/1954	box 6	folder 2
Radio Fe, II, 9/24/1953-4/22/1954	box 6	folder 3
Radio Tracer Methods & Expts, 10/1950 12/10/1953-3/29/1954	box 6	folder 4
Protoporphyrin Synthesis in RBC, I, 1953-1956	box 6	folder 5
Protoporphyrin Synthesis in RBC, II, 1953-1956	box 6	folder 6
Coproporphyrin from Diphtheria; Starch Electrophoresp of Electrophoresis Convection, I RBC Hemoysates, 2/25/1954-5/8/1956	box 6	folder 7
Coproporphyrin from Diphtheria; Starch Electrophoresp of RBC Hemoysates, Electrophoresis Convection, II, 2/25/1954-5/8/1956	box 7	folder 1
Enzyme, 1954-1956	box 7	folder 2
Euglena Coprogen, 9/24/1956-7/10/1958	box 7	folder 3
Chlorophyll, I, 11/29/1958-4/8/1959	box 7	folder 4
Chlorophyll, II, 11/29/1958-4/8/1959	box 7	folder 5
Barley & Beans, 9/22/1959-10/1960	box 7	folder 6
Microscope Studies, 1/4/1960-10/14/1960	box 7	folder 7
H3, D2, 1/5/1960-9/14/1961	box 8	folder 1
Mg Proto, 3/17/1961-6/14/1961	box 8	folder 2
12/18/1961-5/1/1962	box 8	folder 3
Embryo Chick Liver, Induction dAL Synth, I, 9/1962-4/1963	box 8	folder 4
Embryo Chick Liver, Induction dAL Synth, II, 9/1962-4/1963	box 8	folder 5
11/20/1963-7/1/1964	box 8	folder 6
I12/1963-1/1965	box 9	folder 1
II, 12/1963-1/1965	box 9	folder 2
10/14/1964-1/13/1965	box 9	folder 3
I1/20/1965-6/8/1965	box 9	folder 4
II, 1/20/1965-6/8/1965	box 9	folder 5
1/18/1966-5/24/1966	box 9	folder 6
6/1966-9/1966	box 9	folder 7
9/1966-2/1967	box 10	folder 1
12/1967-6/1969	box 10	folder 2
Muscle, 4/1968-10/1968	box 10	folder 3

Muscle, 10/1968-11/3/1969	box 10	folder 4
Proto Chlorophyllide-Light Reactions, I, 1/17/1969-2/3/1969	box 10	folder 5
Proto Chlorophyllide-Light Reactions, II, 1/17/1969-2/3/1969	box 10	folder 6
8/1969-6/1970	box 11	folder 1
8/1970-5/17/1971	box 11	folder 2
2/1971-9/1971	box 11	folder 3
5/20/1971-7/26/1971	box 11	folder 4
ALA Method, I, 1971	box 11	folder 5
ALA Method, II, 1971	box 11	folder 6
7/1971-12/23/1972	box 12	folder 1
ALA-S, 8/1972	box 12	folder 2
Antibody Synth, ALA-Pyrrole, 8/1972	box 12	folder 3
Porphyrins in Blood - Lead Poisoning, 1972	box 12	folder 4
12/27/1972-4/18/1973	box 12	folder 5
Insulin, I, 4/23/1973-6/30/1973	box 12	folder 6
Insulin, II, 4/23/1973-6/30/1973	box 12	folder 7
7/9/1973-2/12/1974	box 13	folder 1
I5/1/1974	box 13	folder 2
LI, 5/1/1974	box 13	folder 3
Mice, 6/4/1975	box 13	folder 4
I11/10/1976-2/9/1977	box 13	folder 5
II, 11/10/1976-2/9/1977	box 13	folder 6
2/17/1977	box 13	folder 7
Lab. Methods, 1973-1974	box 14	folder 1
Literature Analyses. Heme. Porphyrins. Bile Pigments, 1940s	box 14	folder 2
Memos & Notes I, 1976-1977	box 14	folder 3
Memos & Notes II, 1966	box 14	folder 4
Memos & Notes III, undated	box 14	folder 5
Memos Notes IV, undated	box 14	folder 6
Memos & Notes V, 1977	box 14	folder 7
Memos & Notes VI, 1977	box 14	folder 8
NaBH <sub>4</sub> . Glutaldehyde..., I, 1960	box 14	folder 9

NaBH <sub>4</sub> . Glutaldehyde..., II, 1960	box 14	folder 10
Pyrroles. Bile Pigment Methods. Test Literature, 1940s	box 15	folder 1
TLC, Fe Proto Prep & Expts, 2/10/1977	box 15	folder 2

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## Manuscripts, 1957-1958

### Scope and Contents note

Notes and reports.

Subjects include Granick's annual report - handwritten and typed - for 1957-1958.

### Arrangement note

Arranged in chronological order.

Title/Description	Instances	
Manuscripts, 1957-1958	box 15	folder 3

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## Photographs, 1939-1973, undated

### Scope and Contents note

Includes electron micrographs, laboratory shots, and portraits.

Subjects include Granick and tobacco chloroplasts.

### Arrangement note

Arranged in chronological and in alphabetical order.

Title/Description	Instances	
Electron Micrographs, 1952	box 15	folder 5
Electron Micrographs, Record Sheets, 1952 1957	box 15	folder 6
Electron Micrographs, RCA 1A, 5/30/1957	box 15	folder 7
Electron Micrographs, RCA 1B, 5/30/1957	box 15	folder 8
Electron Micrographs, RCA 3B, 5/30/1957	box 15	folder 9
Electron Micrographs, RCA 4B, 5/30/1957	box 15	folder 10
Electron Micrographs, RCA 5A, 5/30/1957	box 15	folder 11
Electron Micrographs, Siemens 5, 5/30/1957	box 15	folder 12

Electron Micrographs, Siemens 6, 5/30/1957	box 15	folder 13
Electron Micrographs, Siemens 7, 5/30/1957	box 15	folder 14
Electron Micrographs, Tobacco Chloroplast, 1952	box 15	folder 15
Glass Negatives, 1957 May 30	box 16	
Mounted Prints - Chromonas, 1952 May 12	package 1	
Mounted Prints - Siemens 6, 7, 1957 May 30	package 1	

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## Reprints, 1934-1978

### Scope and Contents note

Includes reprints; also includes a booklet and reports by Granick on papers by others.

### Arrangement note

Arranged in chronological order.

### Processing Information note:

### Processing Information note

Reprint Volumes were separated to RAC library 8/9/1988.

Title/Description	Instances	
Reprints (#157-159), 1977-1978	box 15	folder 16
Reprints - NAS Biographical Memoir of L. Michaelis, 1958	box 15	folder 17
Reprints - Reports by SG on Papers by Others, 1950-1951	box 15	folder 18

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