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Processing the papers of a Nobel Laureate

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Gertrude Elion

1918 - 1999

- Joined Burroughs Wellcome in 1944, New York
- Moved to RTP in 1970 when business relocated
- Retired in 1983 but remained Researcher Emeritus
- Awarded Nobel Prize for Medicine or Physiology in 1988

Gertrude Elion, 1980s

Gertrude Elion

1988 Nobel Prize ceremony

Gertrude Elion

Elion's office, c.1981

Before

PARASITES--TTEP DRAWER INDEX PAGE
Updated July 24, 1986

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484

+ semi Annual Research Reports 1990-1994 (?)

RTP archives

Before

RTP archives

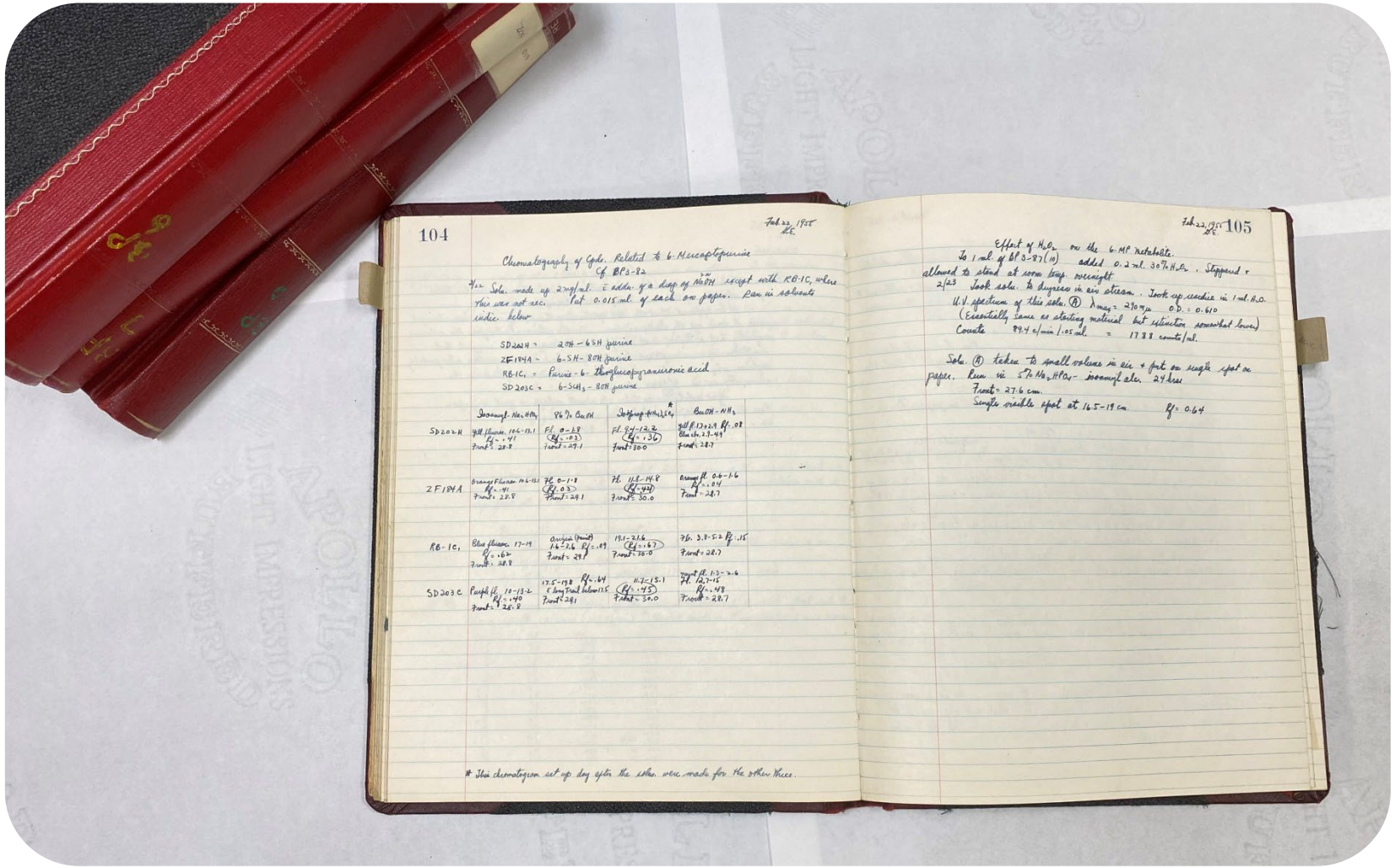
How to sort?

RTP archives

Range of materials

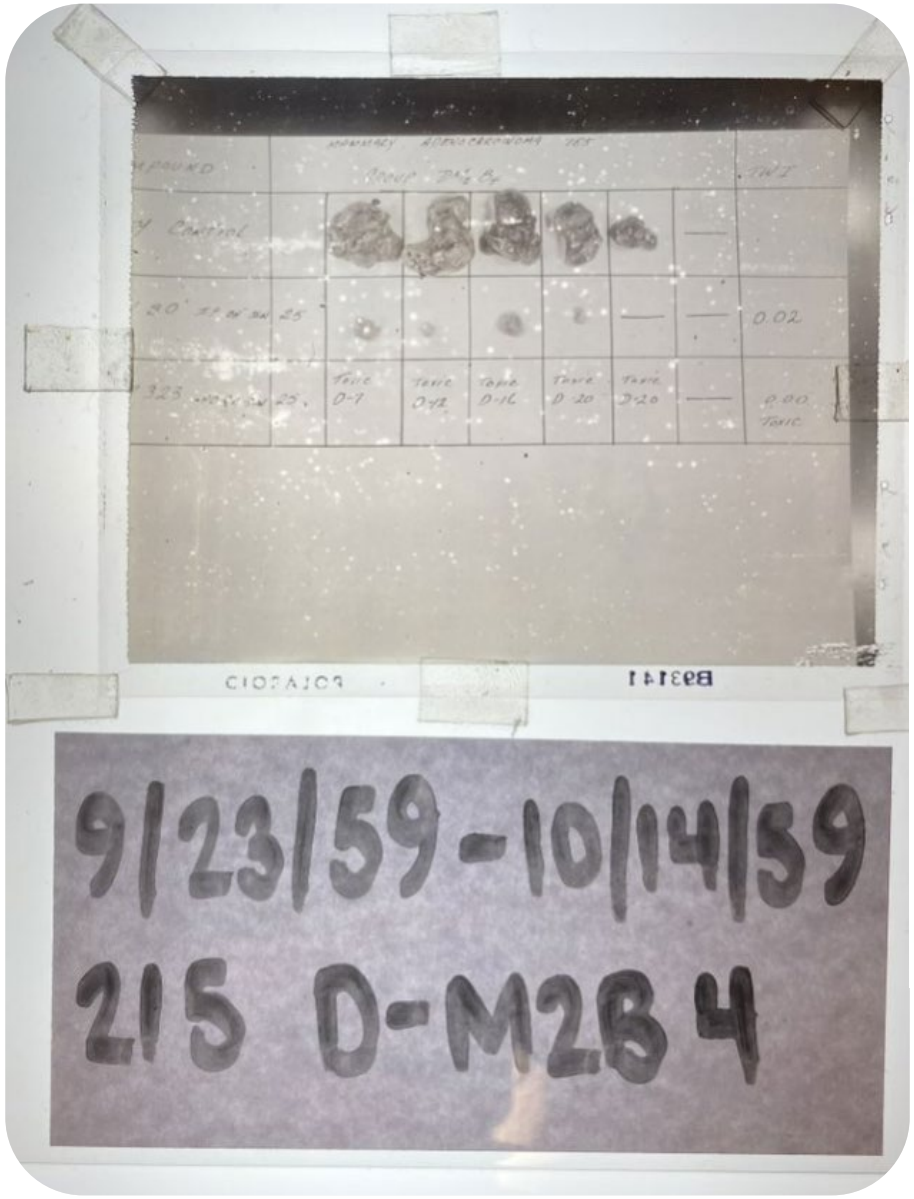
Elion documents

Range of materials



Elion LNB

Range of materials

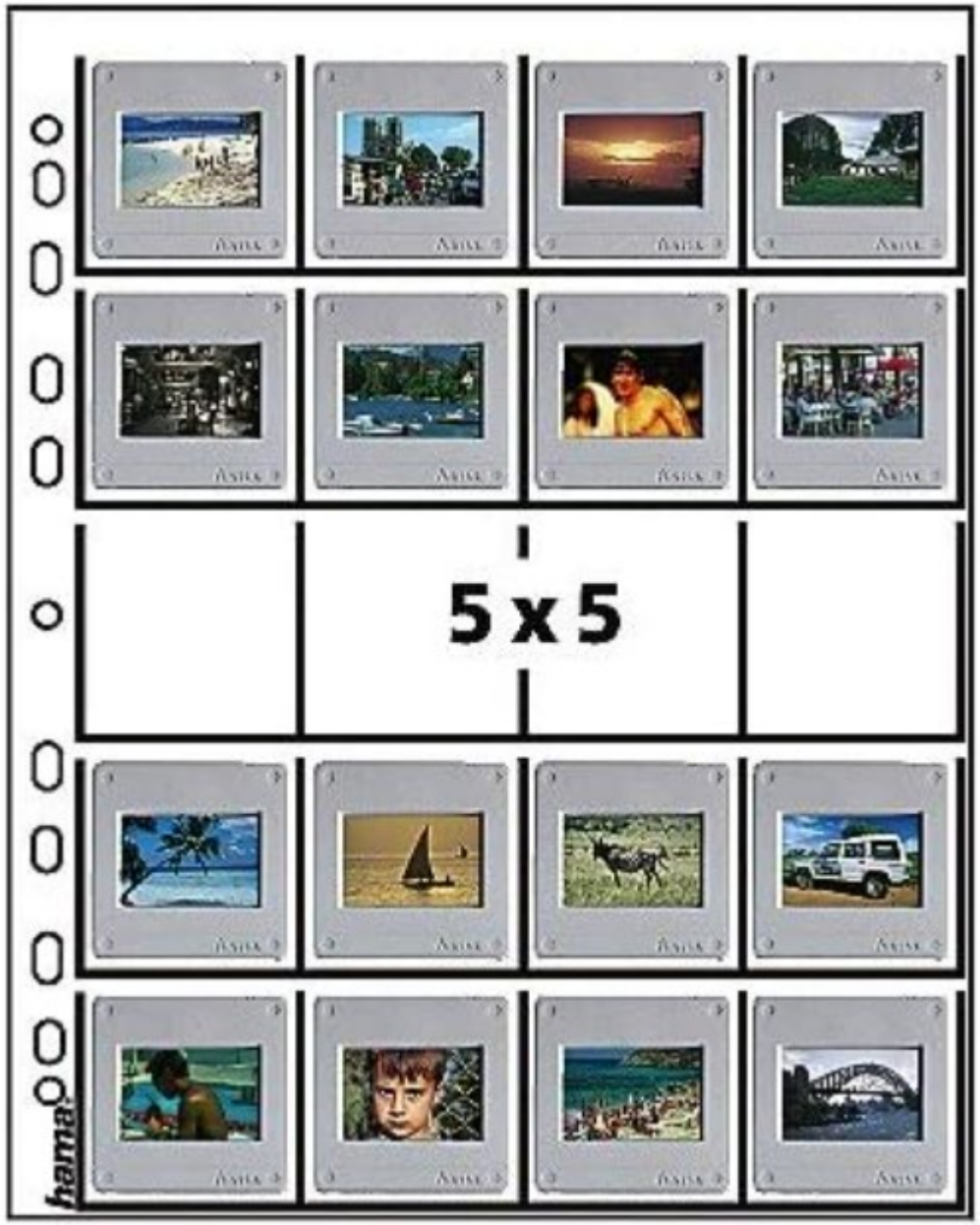


Elion transparencies

Transparencies

If used, please credit GSK Heritage Archives.

35mm slides



Webstore image

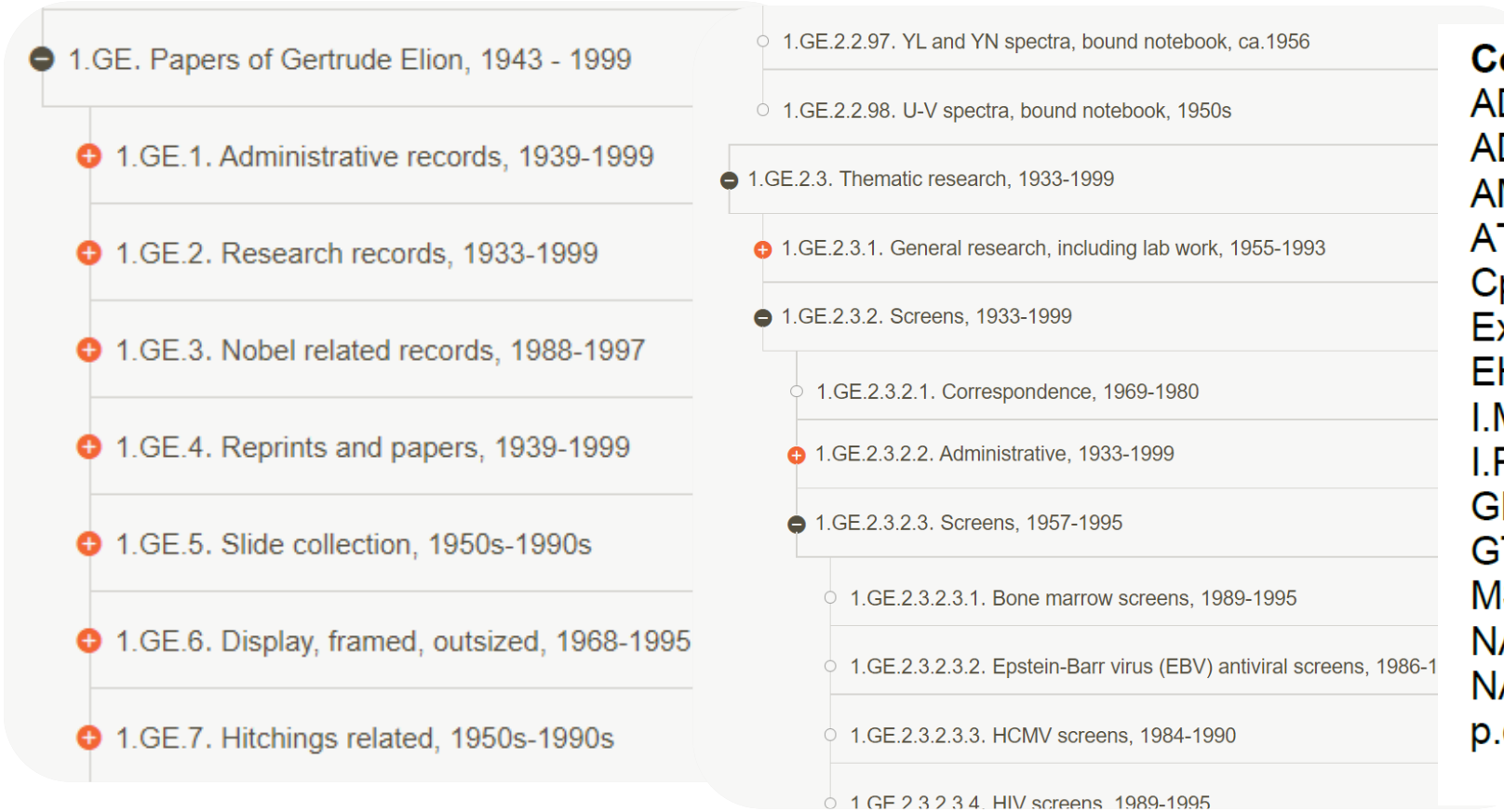
3D material

Webstore image

After

RTP archives

Intellectual arrangement



Common Abbreviations:

ADA – adenosine deaminase
ADP – adenosine diphosphate
AMP – adenosine 5'-monophosphate
ATP – adenosine triphosphate
Cpds. – compounds
Expts. /exp. – Experiments or experiment
EHNA – a form of leukemia
I.M. – intramuscular injections
I.P. – intraperitoneal injections
GDP – guanosine 5'-diphosphate
GTP – guanosine 5'-triphosphate
MSS – manuscript
NAD – nicotinamide adenine dinucleotide
NADP – nicotinamide adenine dinucleotide phospha
p.o. – "per os" medical term for oral delivery

Elion structure

Finding aid

Gertrude B. Elion's scientific research papers

A finding aid to the collection in GSK Heritage Archives

Collection Summary

Title: Papers of Gertrude Elion, 1943-1999
Span Dates: 1943-1999
ID No. 1.GE
Creator: Gertrude B. Elion
Extent: 1,800 files and oversized materials
Extent: 197 containers
Extent: 94.2 cubic feet
Extent: 91.13 linear feet
Language: English
Summary: Nobel laureate, biochemist, pharmacologist, and science advocate. Correspondence, raw data, administrative files, laboratory notebooks, thematic research, committee meetings and notes, product files, manuscripts and published papers, transparencies and 35mm slides, index card catalog, speeches, and miscellaneous other materials documenting Elion's groundbreaking twentieth century scientific research in the fie of rational drug design and science advocacy and partnership with various scientific institutes and organizations, primarily originating from her life-long career at GSK.

Biographical Note

1918 Gertrude Belle Elion is born on 23 January in New York.
1933 Elion's maternal grandfather dies of stomach cancer, inspiring her to become a scientist.
1937 Elion graduates summa cum laude from Hunter College in New York with a degree in chemistry, but can find paid work in her field due to gender discrimination.
1941 Elion receives a master's in science (M.S.) degree from New York University.
1942 World War II causes work shortages, enabling Elion to begin working as a food chemistry analyst, althou she still dreams of becoming a researcher.
1944 Dr. George H. Hitchings hires Elion on June 14 to begin working at Wellcome Research Laboratories in Tuckahoe, New York.
1950 The "Golden Age of Nucleic Acid Biochemistry" begins, and Elion first synthesizes 6-mercaptopurine (**Purinethol**).
1953 The FDA approves 6-mercaptopurine for the treatment of childhood leukemia.
1959 Elion develops an immunosuppressant, azathioprine, which is used in organ transplants.
1963 Azathioprine (**Imuran**) is first used in a kidney transplant in humans.
1966 Allopurinol, used to treat gout, is launched in the UK.
1967 Elion is named Head of the Department of Experimental Therapy.
1969 Elion receives an honorary doctorate from George Washington University, the first of 25

Additional Information

Elion's research uses extensive scientific terminology in its file titles. To aid in accessing this collection, key terms frequently found in her work have been selected and defined below.

6-mercaptopurine – Developed by Elion to treat leukemia. Also referred to as: **Purinethol**, 6-MP, and 6MP.
Acyclovir – Developed by Elion as the first antiviral drug, used to treat viral herpes in humans. Also referred to as: **Zovirax**, ACV, 248U/248/248U74. Spelled "aciclovir" in the UK. Previously called acycloguanosine during development.
Allopurinol – Developed by Elion as a xanthine oxidase inhibitor, used to treat gout. Also referred to as: **Zyloprim**, HPP, 56-158. Note: DHPP is shorthand for alloxanthine, a related compound.
Burroughs Wellcome Compounds – all BW compounds have a centrally assigned identification number (ex: 248U74 for acyclovir) and these are commonly used in various forms as shorthand for the compound or product.
Daraprim – Used to treat malaria. Also referred to as: pyrimethamine.
Heterocyclic Compounds – These are compounds or ring structures which have at least two different elements, and Elion's research was based on manipulating these compounds. Some key heterocyclic compounds include purines, pyrimidines, pteridines, imidazole, pyrazole.
Imuran – Developed by Elion as a slow-release form of 6-MP and which works as a form of immunosuppression, used for organ transplants and to treat auto-immune disorders. Also referred to as: Azathioprine, 57-323.
L. casei – Bacterial strain commonly found in the gut and fermented foods, used to test if a compound could substitute for or antagonize a purine, thymine, or folic acid.
Melphalan – Used to treat cancer. Also referred to as: **Alkeran**.
Nelarabine – Used to treat cancer. Also referred to as: 506U.
Retrovir – The first antiviral treatment for HIV, based on the research conducted by Elion for the creation of acyclovir. Also referred to as: AZT, BW509U, azidothymidine, Zidovudine.
Septra – Used to treat bacterial infections. Also referred to as: trimethoprim.
Reports – Many reports feature a document code which indicates the location of the lab producing the report, the department producing the report, the year the report was issued, and it's chronological listing. For example, TEIS/67/001 indicates that the document originated from Tuckahoe's Enzymology and Immunology department, that the document was created in 1967, and that is was the first report produced that year for this department. The

Future accessions

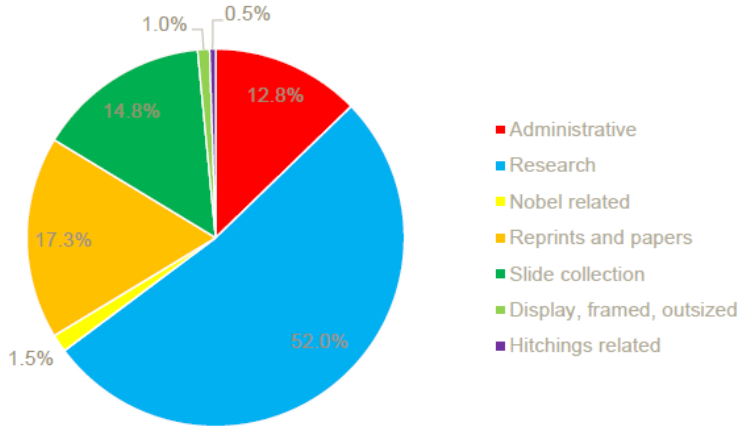
Approaching the Collection

Elion's Collection

Gertrude Elion was a scientist who worked for GSK from the 1940s until her death in 1999. She created a number of groundbreaking products used to treat cancer, viral infections, HIV, and other ailments, many of which are still in use today. She was awarded a Nobel Prize for her work in 1988 alongside Dr. George Hitchings and was incredibly involved in the scientific community. After her death, the items from her office were transferred to GSK's Heritage Archives. Elion's research collection occupies 94.2 cubic feet (or 91.13 linear feet) of space and is housed in 197 containers and over 1,800 folders. The collection includes graphs, charts, laboratory notebooks, research reports, meeting agendas, conference proceedings, 35mm slides, transparencies, an index card catalog, news clippings, awards, patents, personal records, publications, reprinted articles, notes, photographs, digital scans of analog documents and images, VHS recordings, and other ephemera resulting from Elion's research and career.

Collection Composition

The organizational scheme devised to structure this collection was derived from Elion's own indexir index lists referenced from 1989 and 1991 to create general groupings of her research. Changes w original order of individual files when deemed necessary, typically to increase accessibility for resea composition of Elion's research papers consists of 12.8% administrative records, 27.8% research re records related to Elion receiving a Nobel Prize, 12.8% reprints and papers, 12.2% materials relate collection, 1.0% display and outsized materials, and 0.5% records related to Dr. George Hitchings.



Materials to select:

Laboratory Notebooks (LNB) – When authored by the scientist whose work is being entered in the archive, LNBs are an excellent item to include. LNB entries provide accounts of the research conducted by a scientist, including results, methods, data, and are often dated and clearly labeled. LNBs provide insight into the methods of research conducted during a certain period and can display the iterative process of product development. LNBs are often referenced by researchers and display nicely, making them a great way to showcase a scientist's work. *Note*: it is not necessarily relevant to retain all notebooks produced by a scientist. Selecting a few notebooks which reference key products or discoveries can be sufficient, as these are the items most likely to be referenced or which have the greatest historical value. LNBs which are used to monitor quality control of instruments, animal weights or lab conditions, and other administrative duties can typically be excluded from selection.

Reports – Research and progress reports produced by departments or scientists regarding ongoing projects, product development, and compounds provide authoritative accounts of the ongoings of a scientist's research. They provide succinct summaries of research and development during a specific period of company history.

Staff meetings and minutes – Agendas and meeting minutes from departmental meetings provide official accounts of the ongoings of individual departments at given times in company history. They can showcase ongoing projects, new hires and promotions, departmental departures, shifts in structuring, and other important information. *Note*: Ensure that the staff meetings being retained are not duplicates of files currently in the archives before selecting them for inclusion.

Publications by the author – If a research publication or manuscript is authored by the scientist being archived, it should be selected.

Awards and prestige – Items which showcase prestige given to a scientist should be selected when reasonable. These can include medals, plaques, posters, certificates, patents, prizes, and copies of these items when the original is not available.

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