

An historical touch: Physics and Molecular Biology at the University of Geneva

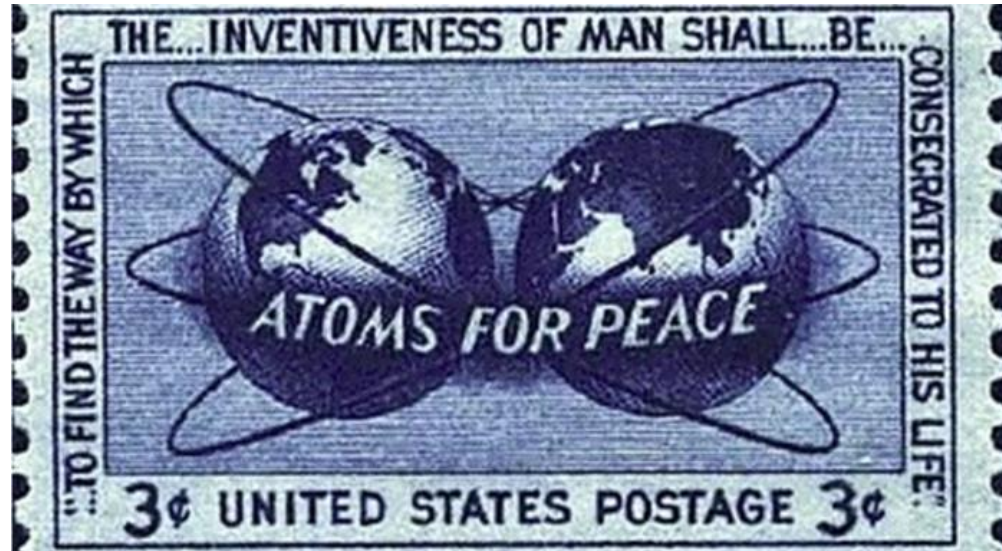


Prof. Sandra CITI

Dept. Cell Biology, University of Geneva, Member of the Equal Opportunity Committee, Faculty of Sciences, University of Geneva

GENEVA GiP DAY, 27 January 2017

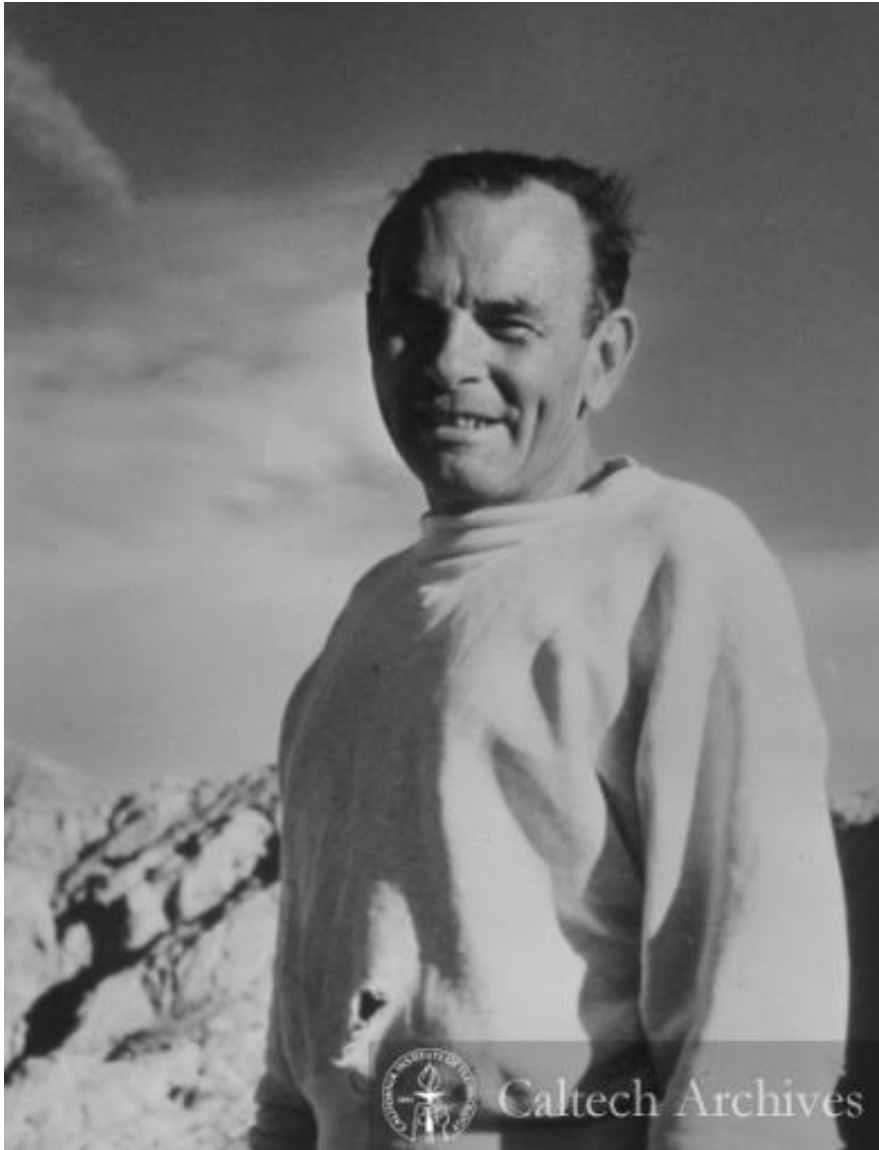
Molecular Biology



Max Delbrück (1906-1981) & Salvador Luria (1912-1991)

Pioneers of bacteriophage genetics

The beginnings of Molecular Biology in Geneva



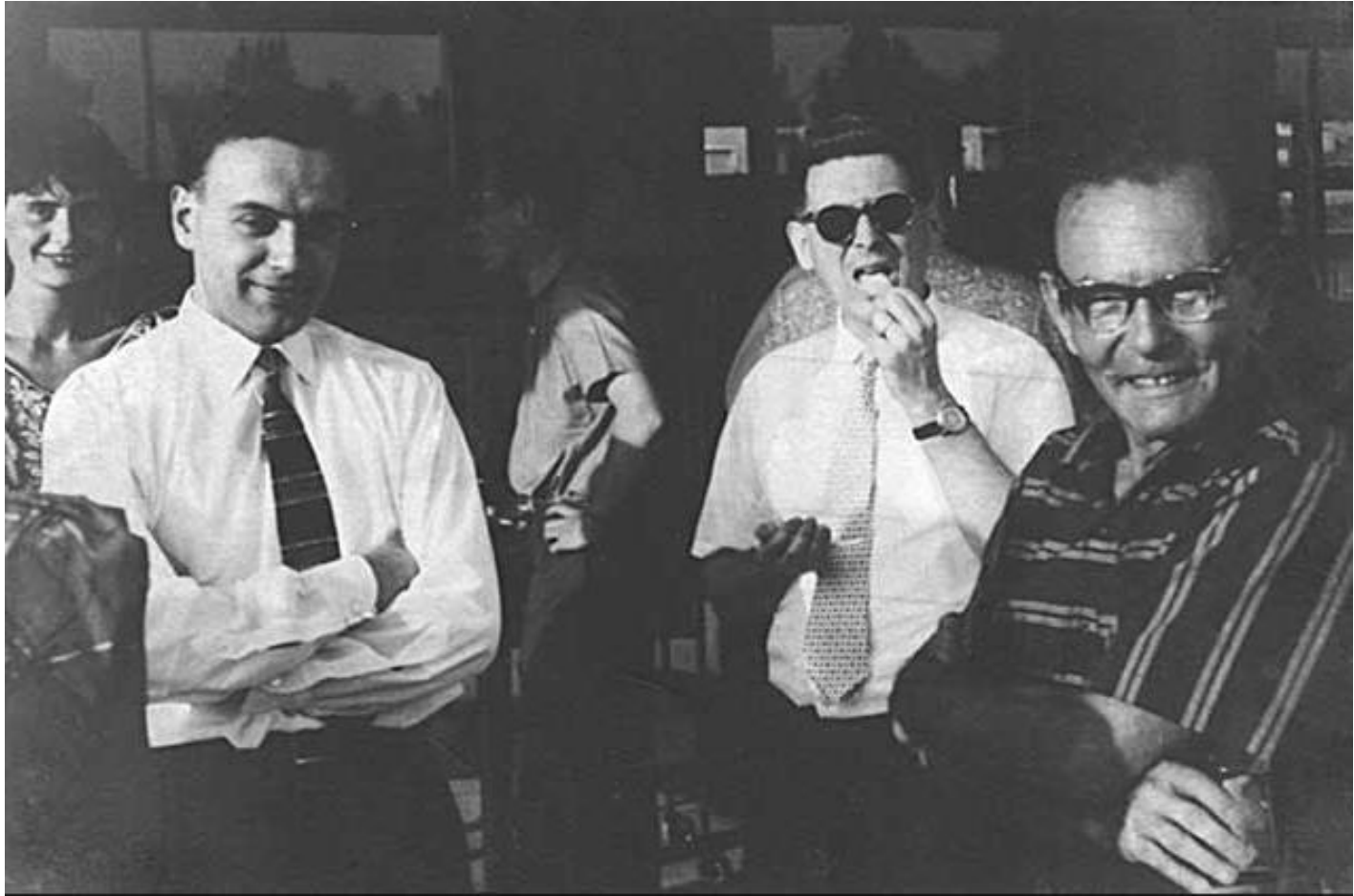
Jean Weigle (1901-1968)

Professor of Physics
And Director of the Institut of Physics, Unige
(1931-1946)

Went to Caltech in 1946, to work with Max
Delbrück

Molecular Biology in Geneva in the 50s and 60s

Ingeborg Hosterey,
secretary



Werner Arber
PhD student 1954-58

E. Kellenberger, PhD Advisor of
Werner Arber

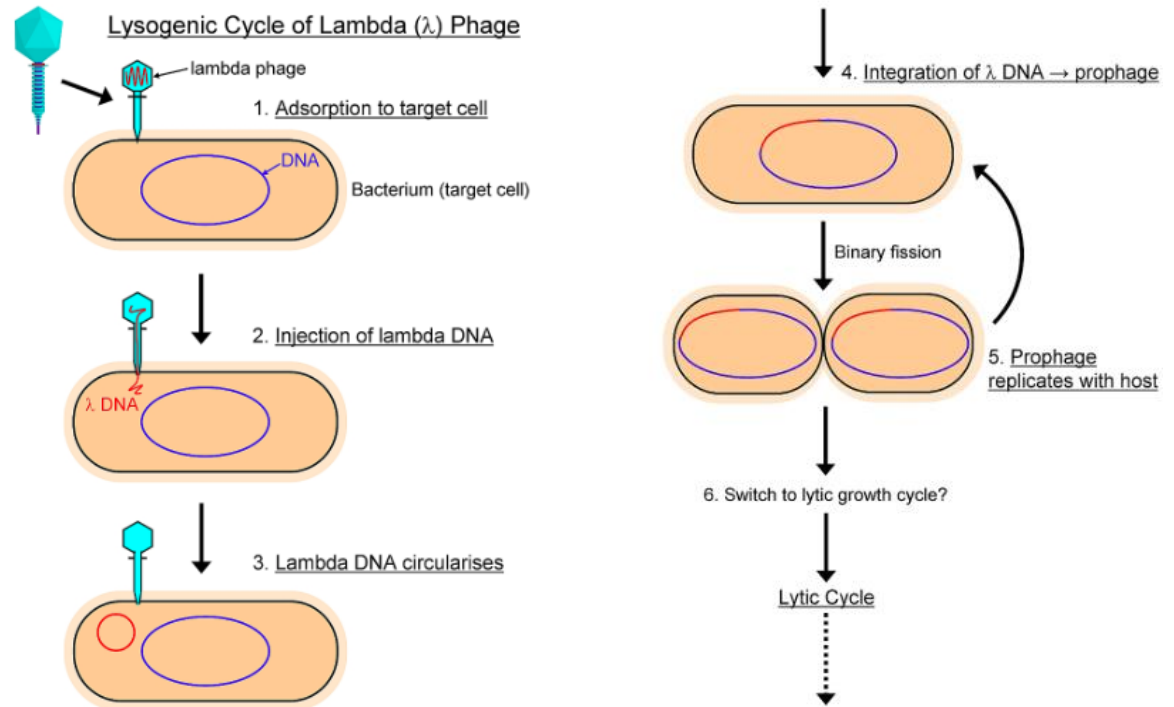
Jean Weigle, PhD Advisor of
Eduard Kellenberger

Pioneering studies 1: electron microscopy to study living material



Bacteriophages (viruses of bacteria)

Pioneering studies 2: phage genetics, recombination involves physical breakage of DNA



Kellenberger, G., Zichichi, M.L., Weigle, J. (1961). Exchange of DNA in the recombination of bacteriophage lambda. PNAS 47: 869-878.

Grete Kellenberger-Gujer



*Salvador Luria (Nobel Prize, 1968): “She is well known and well appreciated for her contributions to molecular genetics and in fact one may say that she has exerted **significant leadership** in this field. Her more important contributions were those related to the analysis of deletion mutants of bacteriophage λ , which lead to one of the proofs of the physical basis of genetic recombination at the molecular level. [...] She was responsible for training in bacteriophage research some of the best European geneticists.”*

Grete Kellenberger-Gujer (1919-2011)

BACTERIOPHAGE
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LIFE IN SCIENCE

 OPEN ACCESS

Grete Kellenberger-Gujer: Molecular biology research pioneer

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Grete Kellenberger-Gujer instructed Werner Arber in phage genetics



Werner
Arber

Eduard
Kellenberger

Grete
Kellenberger

Nobel Prize 1978

Werner Arber was supposed to study the mutagenic effects of X-rays...but Grete got him interested in phage genetics, taught him, and **made key suggestions to him.....**

The professional life and career of Grete Kellenberger: a gender perspective

WHY THE ACHIEVEMENTS, CREATIVITY, IDEAS, OF GRETE KELLENBERGER WERE NOT APPROPRIATELY RECOGNIZED, RESPECTED AND REWARDED AT UNIGE (AS HAPPENED VIRTUALLY AUTOMATICALLY FOR HER MALE COLLEAGUES) WITH AN INDEPENDENT POST AND CORRESPONDING SALARY?

- **Society/culture with very strong patriarchal stereotypes:**
 - **Women in subordinate roles at all levels- no right to vote until the 70s**
 - **Expected to devote herself to family and help husband achieve HIS career goals**
 - **No or little support for career advancement from male colleagues/superiors**
 - **-> low ambition, low expectation**

The professional life and career of Grete Kellenberger: a gender perspective

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- Lack of **ROLE MODELS**
- - Until 1967 only 1 female full professor in the Faculty of Sciences (Kitty Ponse, hired in 1961)
- Only 8 female full professors at the time of Grete's retirement (1980) in the whole University of Geneva
- **Good progression** from 1990 to now:
 - From **1.1%** to **8.5%** FEMALE **FULL PROFESSORS** at **Faculty of Sciences** (from 1% to 14.9% in **total** female Professors)
 - From **4.8%** to **18%** FEMALE **FULL PROFESSORS** at **Unige** (from 5.5% to 25.4% **total** female Professors)
 - but....?



Thanks to:

DOUGLAS BERG, UCSD, Co-author, former colleague of Grete

ELISABETH DI CAPUA, Grete's daughter

EDOUARD BOY DE LA TOUR, MARIA ZICHICHI, DOMINIQUE BELIN, BRUNO STRASSER, UELI LAEMMLI, WERNER ARBER, ANDRE DUSSOIX, JEAN DAVID ROCHAIX, JEANINE SECHAUD, former colleagues,

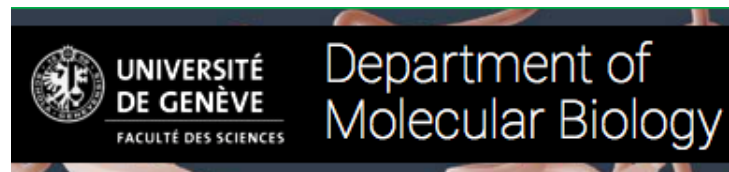
SERVICE EGALITE, DEPT: MOLECULAR BIOLOGY: sponsors of Open Access for article on Grete

SERVICE EGALITE: sponsor of Wikipedia Workshops (Projet de Femmes Suisses)



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