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# Program.

1. Sex
2. Auxanography
3. Mutant method
4. UV- + time delay
5. *Schizosaccharomyces versatilis* - mutation & genetics.  
Use small colony technique?
6. *Leucine* inhibitor
7. *Uromyces* auxanography.
8. " mutant production
9. " selection after u.v.
10. Heterozygous transformation
11. Genetic stocks.
12. Sp. absorption

## Neurospora —

Variation in genetic composition of hyphal tips - isolate from a heterocony to complete and test on minimal.

Cytoplasmic inheritance in heterocony. Transformation.

Nuclear mutations by irradiation of cytoplasm.

Adaptation not on genetic basis must be studied.

Alleles of 33757 - adaptability + selectivity.

CO<sub>2</sub> on 299.

Interspecific heterocony.

Growth of *E. coli* mutants in terms of sp. factors + their interactions:

Exchange reactions. Compositeness of organisms. Availability vs. synthesis

Mutator reactions: temperature analysis.

Reverse mutations. Correlations in mutations at different loci in various cultures. Technical considerations selective phenomena, and inhibition of colony formation. Coincidental recessions. Association  $\bar{c}$  forward mutations. Influence of age, temperature, radiation, chemical agents.

Induction of mutations with radioactive isotopes.  $^3\text{H}$  particularly.

Isolation of enzyme systems from prototroph blocked in mutants. Supplement mutants with enzymatic fractions? Transformation? Immunologic analysis.

Microorganisms as agents in isotope work.

Selection phenomena mutants vs. wild type. Use a natural karyotype + compare with adapted forms.

Induction of mutations with anti-sera.

Reversion in yeast  $\bar{c}$  rudimentary genetic analysis.