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## Cytogenetic studies on *Solanum tuberosum* L. and some of its relatives

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Supposing like ÖSTERGREN does (1949) that the spindle figure is a tactoid, and does not exist of fibres but of particles in dynamic equilibrium, continuously exchanging position with one another as in a liquid, but still preserving their characteristic parallel orientation it is possible to imagine that the working on the nuclear plasm is in such a way that may be by change of viscosity, no orientation of the particles occurs.

An important field of research still lies open: it seems more and more necessary not only to look at the final result, but to study the colchicine action much more in detail as a cytological, and not a purely karyological, process.

### SUMMARY

- 1) Native materials, obtained through the courtesy of Professor Dr A. C. BOERGER, Uruguay, and considered to be *Solanum commersonii*, have a somatic number of chromosomes of  $2n = 24$ . Therefore it seems probable that the plants having a somatic number of  $2n = 36$  as studied by other writers, do not belong to this species.
- 2) On the strength of the results obtained from crosses between different species it was tried to establish a relationship between the genomes.
- 3) The cytological assumption that the basic number of chromosomes in the genus *Solanum* is 6, was strengthened by genetical data.
- 4) It was demonstrated that the action of colchicine is primarily cytological, and secondarily karyological.
- 5) Three new species are mentioned, viz. *Solanum antipophureja* ( $2n = 72$ ), *S. antipochacoense* ( $2n = 72$ ) and *S. demissorosum* ( $2n = 120$ ).

### SAMENVATTING

- 1) In het wild groeiend materiaal, ontvangen van Prof. Dr. A. C. BOERGER, Uruguay, dat door hem als *Solanum commersonii* beschouwd wordt, heeft een somatisch chromosomenaantal van  $2n = 24$ . In verband hiermede lijkt het waarschijnlijk, dat de