INTERNATIONAL SYMPOSIUM

MOTILE SYSTEMS OF CELLS

CRACOW, AUGUST 3–8, 1971

(Assembly Hall of Polish Academy of Sciences, 17 Sławkowska Street, Kraków, Poland

PROGRAMME
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TUESDAY, August 3

9.00 a.m. — 9.30 a.m. Opening Remarks.

9.30 a.m. — 1.30 p.m. SESSION I: Molecular Basis of Cell Motility and Ultrastructure of Cell Motor Organelles.

Jarosch R. (Austria) — The participation of rotating fibrils in biological movements. (30 minutes).

Wolfarth-Bottermann K. E., and Stockem W. (GFR) — Comparative studies on acytomyosin thread models of muscles and myxomycete plasmodia, and their significance for the contractile mechanism of primitive motile systems (30 minutes).

Barneshova S. (USSR) — The ultrastructure and ATPase of flagella in Crithidia oncopselti (Strigomonas oncopselti). (15 minutes).

Nachmius V. T. (USA) — Physarum actomyosin as a myosin-poor actomyosin. (10 minutes).

Pollard T. D. (USA) — Studies on motility in cytoplasmic extracts of Amoeba proteus. (40 minutes).


Weihing R. R. (USA) — Isolation and properties of actin from a small amoeba, Acanthamoeba castellani. (40 minutes).

4.30 p.m. — 7.00 p.m. SESSION II: Amoeboid movement.

Allen R. D. (USA) — Extension and retraction of pseudopods in Amoeba. (30 minutes).

Stockem W. (GFR) — Membrane turnover during locomotion of Amoeba proteus (30 minutes).

Haberey M. (GFR) — Cinematography of cell-membrane behaviour in Amoeba proteus. (30 minutes).
**Schmoller H.** (GDR) — Two different movements in Amoeba locomotion. (20 minutes).
**Hrebenda B.** (Poland) — The role of external calcium in motile phenomena of Amoeba proteus. (15 minutes).

7.15 p.m. Cocktail Party for participants of Symposium and accompanying persons in the reception rooms of Polish Academy of Sciences (17 Sławkowska St., 1st floor).

**WEDNESDAY, August 4**

9.00 a.m. — 11.30 a.m. **SESSION III: Motile Systems in Slime Molds.**

**Kamiya N.** (Nippon) — Contractile properties of the slime mold strand (30 minutes).
**Miller D. M.** (USA) — A detailed explanation of the distributed solation hypothesis and its application to slime mold plasmodia. (40 minutes).
**Lissowski A.** (Poland) — Theoretical consideration on migration of myxomycete plasmodium; Dislocations and geometry of plasmodium networks on cylinders and cones. (15 minutes).
**Konijn T. M.** (Holland) — Cyclic AMP and cell aggregation in the cellular slime molds. (40 minutes).

11.30 a.m. — 1.15 p.m. **SESSION IV: Tissue Cells Movements.**

**Harris A. K.** (U.K.) — Ruffling blebbing and membrane flow in fibroblast locomotion. (30 minutes).
**Jones B. M.** (U.K.) — Participation of actomyosin-like protein in cell adhesion and motility (40 minutes).

**Korohoda W.** (Poland) — Coupling of the motile and metabolic activities in chick embryo fibroblast-like cells. (25 minutes).
**Korohoda W.** (Poland) — Motile activities in chick embryo fibroblast-like cells (16 mm movie). (15 minutes).

**4.00 p.m. — 8.00 p.m. SESSION V: Intracellular Movements.**

**Haupt W.** (GFR) — Perception of light direction in oriented displacements of cell contents. (30 minutes).
**Zurzycki J.** (Poland) — Primary reactions in the chloroplast rearrangements. (30 minutes).
**Lechowski Z.** (Poland) — Action spectrum of chloroplast displacements in the leaves of land plants. (15 minutes).
**Schönbohm E.** (GFR) — Experiments on the mechanism of chloroplast movement in light-oriented chloroplasts arrangement. (30 minutes).
**Seitz K.** (GDR) — An ATP gradient as the primary cause of phototactic movement of Chloroplasts. (30 minutes).

**KAŹNICKI L. Sikora J. and Fabczak S.** (Poland) — Analysis of the course and reversible cessation of cyclosis in Paramecium aurelia. (30 minutes).
**KAŹNICKI L. and Sikora J.** (Poland) — The hypothesis of inverse relation between ciliary activity and cyclosis in Paramecium. (30 minutes).

**THURSDAY, August 5**

9.00 a.m. — 1.00 p.m. **SIGHTSEEING PROGRAMME** (Excursion to royal castle WAWEL and to Collegium Maius).

3.00 p.m. — 5.00 p.m. **SESSION VI: Flagellar Movement.**

**Rikmenspoel R.** (USA) — Contractile mechanisms in flagella. (35 minutes).
**Holwill M. E. J.** (UK) — Mechanochemical aspects of flagellar motion (40 minutes).
**Goldstein S. F.** (USA) — Lasser irradiation studies of flagella (30 minutes).

5.00 p.m. — 5.30 p.m. **Intermission.**
5.30 p.m. — 8.00 p.m. SESSION VII: Ciliary Movement.
Sleigh M. A. (U.K.) — The movements of water by cilia. (30 minutes).
Satin P. (USA) — Sliding microtubules of cilia (35 minutes).
Satin P. and Goldstein S. F. (USA) Neuroi inhibition of cilia. (15 minutes).
Satin B. (USA) — The ciliary necklace in Tetrahymena. (15 minutes).
Dryl S. and Totwen-Nowakowska I. (Poland) — Motile behaviour in two forms of double animals Stylonychia mytilus (illustrated with 16 mm black-white movie). (30 minutes).

FRIDAY, August 6
9.00 a.m. — 13.00 SESSION VIII, part 1: Excitability and Motor Response to External Stimuli.
Kokina N. and Doronin G. K. (USSR) — Motile and contractile activity in connection with excitable process and functional state of cell. (30 minutes).
Mikołajczyk E. (Poland) — Patterns of body movements in Euglena gracilis. (30 minutes).
Diehn B. (USA) — The receptor/effecter system of phototaxis in Euglena (35 minutes).
Korohoda W. (Poland) — Positive chemotactic reactions in Amoeba proteus induced by general anaesthetics. (15 minutes).
Carlile M. J. (U.K.) — Chemotactic reactions to nutrients in Myxomyctetes and other organisms. (30 minutes).
Lairand D. B. and Matveeva N. B. (USSR) — The influence of anaesthetic drugs on the locomotor pressure and bioelectric activity of Plasmodium physarum. (20 minutes).

Korohoda W. and Rzehack K. (Poland) — Local contraction-relaxation processes in Amphibian eggs induced by AC fields (20 minutes).

4.00 p.m. — 7.00 p.m. SESSION VIII, part 2: Excitability and Motor Response to External Stimuli.
Hildebrand E. C. (GFR) — Avoiding reaction and receptor mechanism in protozoa. (15 minutes).
Dryl S. and Bujwid-Ewik K. (Poland) — Effects of detergents on excitability and motor response in protozoa. (30 minutes).
Andrivon C. M. (France) — Inhibition of ciliary movement in Paramecium caudatum by Nickel salts: antagonism between potassium and calcium ions. (20 minutes).
Pado R. (Poland) — Spectral activity of light and phototaxis in Paramecium bursaria. (15 minutes).
Łukowicz M. and Moraw ska M. (Poland) — Contraction and relaxation of Stentor coeruleus in response to mechanical and chemical stimuli. (15 minutes).
Bratkowska M. and Dryl S. (Poland) — Galvanotactic response and food vacuole formation in Tetrahymena pyriformis. (15 minutes).
Franceschi T. C. (Italy) — A note on changes in the movement of Colpoda in relation to treatment with actinomycin. (15 minutes).
Biczók F. (Hungary) — Photoinduced reactions of Tetrahymena pyriformis LG. (20 minutes).

SATURDAY, August 7
9.00 a.m. — 11.00 a.m. CLOSING SESSION: General Discussion.
7.00 p.m. — 9.00 p.m. FAREWELL DINNER.

Chairman of Organising Committee
(—) Prof. dr Stanislaw Dryl