

◆海外資料特集

試みとして本号では事務局で入手できた海外資料を特集しました。ご意見お聞かせ下されば幸甚です。尚、集録資料に関するお問合せには事務局として応じかねますので、ご了承下さい。

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## Proposal for an Asian Molecular Biology Organization (AMBO) and Asian Molecular Biology Laboratories (AMBL)

*The statement below was issued after a meeting in Tokyo held on 30 April and 1 May 1980.*

Basic research in biology is of extreme importance for human welfare. Progress in genetic engineering, cloning of functional human cells and use of monoclonal antibodies, for example, will have major impact in medicine, agriculture and industry. Yet the benefits that will accrue in the coming years from the availability of novel hormones, vaccines and antibiotics will prove to be minor compared with the totally unexpected advances that will come from a firmer understanding of the organization and function of genetic material and the molecules involved in cellular interactions.

Research in biological and life sciences has been centered in the U.S.A and Europe. In recent years, however, biological research has increased in Asia, and the sound development of such research in the Asian region will have great significance not only for Asia but also for the rest of the world. Unfortunately, there is as yet no international organization in Asia that serves as a core for promoting the basic biological sciences. We therefore believe that it is desirable to establish a new organization to be called the Asian Molecular Biology Organization (AMBO). Among its functions would be: (1) holding meetings, workshops and courses at frontiers of biology, (2) granting fellowships to encourage interaction between Asian scientists and with scientists from other parts

of the world, (3) training in molecular biology for younger scientists in Asian countries, and (4) conducting research at the forefront of molecular biology.

The key to all these activities will be the construction of international research laboratories at several sites in Asia. We propose that the first of these laboratories should be located in Japan to make use of its already major achievements in biochemistry and molecular biology. These laboratories should be truly international with at least half of the scientific staff coming from outside the host country.

Among the potential areas of research that might be pursued by these laboratories are structural analysis of macromolecules and macromolecular assemblies, molecular genetics and genetic engineering, molecular biology of the nervous system, the immune system, and other multicellular systems, developmental biology, and various aspects of bioenergetics and biomembranes.

AMBO is conceived as a private, non-profit-making organization of Asian and non-Asian scientists. Although governmental support will ultimately be necessary, AMBO will be initiated with financial aid from industry and foundations.

In 1981, AMBO will organize a major symposium and several courses in Japan. In subsequent years AMBO intends to expand this program of courses and work-

shops to other Asian countries. In parallel, plans for a program of fellowships for collaborative research among Asian laboratories and between them and those elsewhere will be developed. Negotiations concerning the site, construction and staffing of the first Asian Molecular Biology Laboratory will be continued.

This program of AMBO international activities was formulated at a preliminary meeting in Tokyo on 30 April and 1 May, 1980. The aims, objectives and financial resources of AMBO will be reviewed during the next year in consultation with a wider body of Asian and other scientists so as to establish a permanent organization, and to expedite the implementation of its objectives.

TOKYO, MAY 1980

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Abstracts of papers presented  
at the meeting on

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# RNA TUMOR VIRUSES

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May 21—May 25, 1980

Arranged by  
William S. Hayward, *Rockefeller University, New York, New York*  
John Taylor, *Institute for Cancer Research, Fox Chase, Pennsylvania*



Cold Spring Harbor Laboratory  
Cold Spring Harbor, New York

## PROGRAM

WEDNESDAY, May 21—8:00 PM

### SESSION 1 *Synthesis and Structure of Viral DNA*

Chairperson: H. VARMUS  
University of California  
San Francisco, California

- J. MAJORS and H. E. VARMUS, Dept. of Microbiology and Immunology, University of California, San Francisco: The structure of integrated mouse mammary tumor virus DNA. 1
- K. SHIMOTOHNO, S. MIZUTANI, and H. M. TEMIN, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison: Nucleotide sequence of the terminal repeat of integrated spleen necrosis virus and the junctions between cellular and viral DNA. 2
- C.-M. WEI,<sup>1</sup> G. L. HAGER,<sup>1</sup> and D. R. LOWY,<sup>2</sup> <sup>1</sup>Tumor Virus Genetics Branch, <sup>2</sup>Dermatology Branch, NCI, National Institutes of Health, Bethesda, Maryland: Molecular cloning of infectious circular DNA intermediate of Moloney murine leukemia virus. 3
- D. R. LOWY and E. H. CHANG, Dermatology Branch, NCI, National Institutes of Health, Bethesda, Maryland: Functional organization of the Harvey murine sarcoma virus genome. 4
- W. L. McCLEMENTS,<sup>1</sup> D. G. BLAIR,<sup>2</sup> M. OSKARSSON,<sup>1</sup> T. G. WOOD,<sup>1</sup> and G. F. VANDE WOUDE,<sup>1</sup> Laboratories of <sup>1</sup>Molecular Virology and <sup>2</sup>Viral Carcinogenesis, NCI, National Institutes of Health, Bethesda, Maryland: Leukemia virus sequences required for transformation by *src/sarc*. 5
- J. G. SUTCLIFFE, T. M. SHINNICK, and R. A. LERNER, Scripps Clinic and Research Foundation, La Jolla, California: Nucleotide sequence of Moloney leukemia virus—The 3' end reveals details of replication, analogy to bacterial transposons, and an unexpected gene. 6
- P. LUCIW, H. OPPERMAN, H. VARMUS, and J. M. BISHOP, Dept. of Microbiology, University of California, San Francisco: Transfection with cloned avian sarcoma virus (ASV) DNA—Integration and gene expression in nonpermissive cells. 7
- L. BOONE and A. M. SKALKA, Roche Institute of Molecular Biology, Nutley, New Jersey: Kinetics of synthesis and structure of proviral DNA made in vitro by the melittin permeabilized RAV-2 virion. 8

- R. P. JUNGHANS, L. BOONE, and A. M. SKALKA, Roche Institute of Molecular Biology, Nutley, New Jersey: Models for reverse transcription and recombination from electron microscope analysis of *in vitro* synthesized products. 9
- R. SWANSTROM, W. DE LORBE, P. HACKETT, J. M. BISHOP, and H. E. VARMUS, Dept. of Microbiology and Immunology, University of California, San Francisco: Functional aspects of nucleotide sequences in the genome of avian sarcoma virus. 10
- G. JU and A. M. SKALKA, Roche Institute of Molecular Biology, Nutley, New Jersey: Size heterogeneity and nucleotide sequence analysis of the direct repeats of avian retroviruses. 11
- A. P. CZERNILOFSKY,<sup>1</sup> E. TISCHER,<sup>2</sup> B. DELORBE,<sup>1</sup> H. VARMUS,<sup>1</sup> R. SWANSTROM,<sup>1</sup> H. GOODMAN,<sup>2</sup> and J. M. BISHOP,<sup>1</sup> <sup>1</sup>Dept. of Microbiology and Immunology, <sup>2</sup>Dept. of Biochemistry and Biophysics, University of California, San Francisco: The *src* gene of ASV—Nucleotide sequence of the gene and its flanking regions in the viral genome. 12
- C. SHOEMAKER, S. GOFF, E. GILBOA, S. MITRA, and D. BALTIMORE, Massachusetts Institute of Technology, Cambridge: Structure of a molecularly cloned Moloney virus circular DNA with an inverted segment—Implications for integration. 13

THURSDAY, May 22—9:00 AM

SESSION 2 *Viral RNA Structure and Expression*

Chairperson: W. HAYWARD  
Rockefeller University  
New York, New York

- T. YAMAMOTO, J. S. TYAGI, J. FAGAN, G. JAY, B. DE CROMBRUGGHE, and I. PASTAN, Laboratory of Molecular Biology, NCI, National Institutes of Health, Bethesda, Maryland: Structural and functional features of the common region of avian sarcoma virus. 14
- G. P. GASIC and W. S. HAYWARD, Rockefeller University, New York, New York: Sequence analysis of the 5' leader of ALV. 15
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- D. SCHWARTZ, R. TIZARD, and W. GILBERT, The Biological Laboratories, Harvard University, Cambridge, Massachusetts: The nucleotide sequence of Rous sarcoma virus determined by analysis of single-stranded cDNA. 17
- C. M. STOLTZFUS, Dept. of Microbiology, University of Iowa, Iowa City: Evidence for a possible role of RNA methylations in the formation of subgenomic avian sarcoma virus RNAs. 18

- D. L. ROBERTSON and H. E. VARMUS, Dept. of Microbiology, University of California, San Francisco: Gene regulation of mouse mammary tumor virus. 19
- D. S. UCKER and K. R. YAMAMOTO, Dept. of Biochemistry and Biophysics, University of California, San Francisco: Analysis of transcription at the integration site of a hormone-responsive MTV provirus. 20
- N. A. JENKINS and G. M. COOPER, Sidney Farber Cancer Institute, Boston, Massachusetts: Integration, expression and infectivity of exogenously-acquired RAV-O DNAs. 21
- J. J. O'REAR, S. MIZUTANI, and H. M. TEMIN, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison: Infectious and noninfectious proviruses of spleen necrosis virus cloned in Charon 4A. 22
- J. I. MULLINS,<sup>1</sup> M. NICHOLSON,<sup>2</sup> J. CASEY,<sup>1</sup> K. BURCK,<sup>1</sup> and N. DAVIDSON,<sup>1</sup> <sup>1</sup>California Institute of Technology, Pasadena; <sup>2</sup>The Childrens Hospital of Los Angeles, California: Sequence arrangement and biological activity of cloned integrated forms of FeLV DNA. 23
- D. JAHNER, H. STUHLMANN, and R. JAENISCH, Heinrich-Pette-Institut für Experimentelle Virologie und Immunologie, Hamburg, Federal Republic of Germany: Germ line integration of Moloney leukemia virus—Characterization of independently derived mouse sublines. 24
- R. MICHALIDES,<sup>1</sup> R. VAN NIE,<sup>1</sup> R. NUSSE,<sup>1</sup> N. HYNES,<sup>2</sup> and B. GRONER,<sup>2</sup> <sup>1</sup>Netherlands Cancer Institute, Amsterdam; <sup>2</sup>Swiss Cancer Institute, Lausanne, Switzerland: Regulation of mouse mammary tumor virus (MMTV) expression in mouse strains GR and GR/Mtv-2. 25

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- T. GILMER, L. RAFIELD, P. HIGHFIELD, T. PUGATSCH, G. GILMARTIN, and J. PARSONS, Dept. of Microbiology, University of Virginia, Charlottesville: Structure and biological activity of cloned avian sarcoma virus DNA. 28
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THURSDAY, May 22—7:30 PM

SESSION 4 *Transforming Proteins*

Chairperson: T. HUNTER  
Salk Institute  
San Diego, California

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S. A. COURTNEIDGE, A. D. LEVINSON, and J. M. BISHOP, Dept. of Microbiology and Immunology, University of California Medical Center, San Francisco: The nature of the association of pp60 <sup>src</sup> and pp60 <sup>proto-src</sup> with the plasma membrane of SR-D transformed and uninfected rat cells.	67
A. R. GOLDBERG, J. G. KRUEGER, E. WANG, and E. A. GARBER, Rockefeller University, New York, New York: The intracellular location of pp60 <sup>src</sup> in RSV-transformed avian and mammalian cells.	68
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F. POIRIER, G. CALOTHY, R. E. KARESS, and H. HANAFUSA, Rockefeller University, New York, New York: Induction of neuro-retinal cell proliferation by Rous sarcoma virus and pp60 <sup>src</sup> kinase activity.	72
T. Y. SHIH, H. LANGBEHEIM, A. PAPAGEORGE, P. STOKES, M. WEEKS, and E. SCOLNICK, Laboratory of Tumor Virus Genetics, NCI, National Institutes of Health, Bethesda, Maryland: The p21 <i>src</i> of Harvey murine sarcoma virus—Characterization and purification.	73

- D. KABAT, M. RUTA, and T. FITTING, School of Medicine, University of Oregon Health Sciences Center, Portland: Genetic analyses of plasma membrane glycoproteins encoded by cloned Rauscher and Friend SFFV's and by MuLV's. 74
- F. H. REYNOLDS, Jr., W. J. M. VAN DE VEN, J. BLOMBERG, and J. R. STEPHENSON, NCI, Frederick Cancer Research Center, Maryland: Abelson murine leukemia transformation-defective mutants with impaired polyprotein associated protein kinase activity. 75
- W. J. M. VAN DE VEN, F. H. REYNOLDS, Jr., and J. R. STEPHENSON, NCI, Frederick Cancer Research Center, Maryland: Polyproteins encoded by independent isolates of feline sarcoma virus possess common sequences within their nonstructural components. 76
- M. BARBACID,<sup>1</sup> K. BEEMON,<sup>2</sup> and S. DEVARE,<sup>1</sup> <sup>1</sup>NCI, National Institutes of Health, Bethesda, Maryland; <sup>2</sup>Tumor Virology Laboratory, Salk Institute, San Diego, California: The major gene product of ST-FeSV is a polyprotein of viral and cellular origin with an associated protein kinase activity that phosphorylates tyrosine residues. 77

FRIDAY, May 23—9:00 AM

SESSION 5 *Virus Proteins*

- Chairperson: R. EISENMAN  
Fred Hutchinson Research Center  
Seattle, Washington
- D. P. GRANDGENETT,<sup>1</sup> W. MASON,<sup>2</sup> T. CLOPPIN,<sup>3</sup> S. ORASZLAN,<sup>3</sup> M. GOLOMB,<sup>1</sup> and T. MISRA,<sup>1</sup> <sup>1</sup>Institute for Molecular Virology, St. Louis, Missouri; <sup>2</sup>Institute for Cancer Research, Philadelphia, Pennsylvania; <sup>3</sup>Frederick Cancer Research Center, Bethesda, Maryland: Characterization of DNA endonuclease of avian retrovirus p32<sup>pol</sup> and  $\alpha\beta$  DNA polymerase. 78
- R. EISENMAN,<sup>1</sup> P. HEATER,<sup>2</sup> P. TSICHLIS,<sup>2</sup> C. S. BARKER,<sup>2</sup> and J. COFFIN,<sup>2</sup> <sup>1</sup>Fred Hutchinson Cancer Research Center, Seattle, Washington; <sup>2</sup>Tufts University School of Medicine, Boston, Massachusetts: Analysis of an avian retrovirus deletion mutant defective in the processing of its gag polyprotein. 79
- P. TRAKTMAN and D. BALTIMORE, Massachusetts Institute of Technology, Cambridge: Relationship of murine pr180<sup>gag-pol</sup> to virion maturation. 80
- H. P. GHOSH and J. RO, Dept. of Biochemistry, McMaster University, Hamilton, Ontario, Canada: RNA tumor virus maturation and assembly—Defective virus maturation of a temperature sensitive mutant of Rous sarcoma virus with impaired processing of reverse transcriptase precursor. 81
- E. C. MURPHY, Jr., S.-M. MONG, and R. B. ARLINGHAUS, University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, Houston: Suppression of murine retrovirus polypeptide termination—The effect of amber suppressor tRNA on the cell-free translation of R-MuLV, Mo-MuLV, and Mo-MuSV 124 RNA. 82

- R. B. PEPINSKY and V. M. VOGT, Section of Biochemistry, Molecular and Cell Biology, Cornell University, Ithaca, New York: Analysis of gag protein-membrane interaction by cross-linking studies. 83
- S. EDWARDS and H. FAN, Tumor Virology Laboratory, Salk Institute, San Diego, California: Studies of glycosylated M-MuLV gag polyprotein. 84
- A. M. SCHULTZ, T. D. COPELAND, and S. OROSZLAN, Frederick Cancer Research Center, Frederick, Maryland: Structural characterization of Rauscher leukemia virus gag and env polyproteins. 85
- C. J. M. SARIS, H. C. M. van EENBERGEN, R. LISKAMP, and H. P. J. BLOEMERS, Dept. of Biochemistry, University of Nijmegen, The Netherlands: Leader sequence and glycosylation of Mo-MuLV gag-precursor proteins. 86
- H. NIMAN and J. ELDER, Dept. of Cellular and Developmental Immunology, Scripps Clinic and Research Foundation, La Jolla, California: Localization of recombinant-specific domains of murine retrovirus GP70's using monospecific hybridoma antibodies and peptide fingerprinting. 87

FRIDAY, May 23—2:00 PM

SESSION 6 *Poster Session - Transformation*

*Transforming Proteins*

- S. D. TSEN, Y. S. E. CHENG, M. L. WALSH, R. LEE, E. WOLINSKY, and L. B. CHEN, Sidney Farber Cancer Institute, Harvard Medical School, Boston, Massachusetts: Cellular aspects of transformation induced by src gene product. 88
- M. OWADA, P. DONNER, A. SCOTT, T. BUNTE, and K. MOELLING, Max-Planck-Institute for Molecular Genetics, Berlin, Federal Republic of Germany: The transformation-specific protein pp60<sup>src</sup> from avian sarcoma viruses. 89
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FRIDAY, May 23 — 4:00 PM

SESSION 7 *Poster Session*

*Endogenous Viruses*

S. M. ASTRIN<sup>1</sup> and L. B. CRITTENDEN,<sup>2</sup> <sup>1</sup>Institute for Cancer Research, Philadelphia, Pennsylvania; <sup>2</sup>Regional Poultry Research Laboratory, East Lansing, Michigan: Development of a line of chickens lacking endogenous viral genes. 137

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FRIDAY, May 24 — 7:30 PM

SESSION 8 *Endogenous Viruses*

Chairperson: S. ASTRIN  
Institute for Cancer Research  
Philadelphia, Pennsylvania

A. TEREBA,<sup>1</sup> S. ASTRIN,<sup>2</sup> and M. M. C. LAI,<sup>3</sup> <sup>1</sup>Division of Virology, St. Jude Children's Research Hospital, Memphis, Tennessee; <sup>2</sup>Institute for Cancer Research, Fox Chase Cancer Center, Philadelphia, Pennsylvania; <sup>3</sup>Dept. of Microbiology, University of Southern California Medical Center, Los Angeles: Nonrandom chromosomal distribution of endogenous retrovirus loci in white leghorn chickens. 171

F. HISHINUMA,<sup>1</sup> P. J. DEBONA,<sup>1</sup> S. ASTRIN,<sup>2</sup> and A. M. SKALKA,<sup>1</sup> <sup>1</sup>Roche Institute of Molecular Biology, Nutley, New Jersey; <sup>2</sup>Institute for Cancer Research, Fox Chase Cancer Center, Philadelphia, Pennsylvania: Studies on integrated endogenous avian proviruses and their integration sites. 172

S. HUGHES,<sup>1</sup> P. SHANK,<sup>2</sup> J. M. BISHOP,<sup>3</sup> and H. VARMUS,<sup>3</sup> <sup>1</sup>Cold Spring Harbor Laboratory, New York; <sup>2</sup>Division of Biology and Medicine, Brown University, Providence, Rhode Island; <sup>3</sup>Dept. of Microbiology and Immunology, University of California, San Francisco: Organization of the endogenous proviruses of chickens—Implications for origin and expression. 173

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E. KESHET, Y. SHAUL, J. KAMINCHICK, and H. AVIV, Dept. of Virology, Weizmann Institute of Science, Rehovot, Israel: Heterogeneity of "virus-like" genes encoding retrovirus-associated 30S RNA and their organization within the mouse genome. 178

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National Cancer Institute  
National Institutes of Health  
Bethesda, Maryland

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A. OLIFF, D. LINEMEYER, S. RUSCETTI, and E. SCOLNICK, Laboratory of Tumor Virus Genetics, NCI, National Institutes of Health, Bethesda, Maryland: A subgenomic fragment of molecularly cloned Friend murine leukemia virus (F-MuLV) DNA contains the gene(s) responsible for F-MuLV induced proliferation of hematopoietic precursors. 184

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B. VENNSTROM, D. SHEINESS, T. GONDA, and J. MICHAEL BISHOP, Dept. of Microbiology, University of California, San Francisco: The cellular progenitor of the oncogene of AEV—Characterization of the DNA locus and its RNA transcripts. 191

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Massachusetts Institute of Technology  
Cambridge, Massachusetts

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P. N. TSICHLIS, C. BARKER, and J. M. COFFIN, Tufts University School of Medicine, Boston, Massachusetts: A genetic region that maps between <i>env</i> and <i>src</i> affects the growth of the transforming avian retroviruses.	195
H. HANAFUSA, L.-H. WANG, S. M. ANDERSON, R. E. KARÉSS, R. FELDMAN, M. SHIBUYA, and T. HANAFUSA, Rockefeller University, New York, New York: A new transforming gene of Fujinami sarcoma virus.	196
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BANQUET

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B. POIESZ, F. RUSCETTI, H. RHO, A. GAZDAR, P. BUNN, J. MINNA, and R. GALLO, NCI, National Institutes of Health, Bethesda, Maryland: Isolation of novel type-C retrovirus particles from cultured and fresh lymphocytes from two patients with cutaneous T-cell lymphomas.		203
F. RUSCETTI, B. POIESZ, M. REITZ, V. KALYANARAMAN, and R. GALLO, NCI, National Institutes of Health, Bethesda, Maryland: Analysis of novel type-C retroviral particles isolated from cultured and fresh lymphocytes from two patients with cutaneous T-cell lymphomas.		204
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S. KAWAI, <sup>1</sup> T. KOYAMA, <sup>1</sup> and F. HARADA, <sup>2</sup> <sup>1</sup> Institute of Medical Science, University of Tokyo; <sup>2</sup> National Cancer Center, Tokyo, Japan: A mutant of Rous sarcoma virus which contains 30-40S RNA instead of 70S RNA in virions.		207
D. W. STACY, <sup>1</sup> B. R. CULLEN, <sup>1</sup> and L.-H. WANG, <sup>2</sup> <sup>1</sup> Roche Institute of Molecular Biology, Nutley, New Jersey; <sup>2</sup> Rockefeller University, New York, New York: Participation of <i>env</i> mRNA in active provirus formation and recombination.		208
L.-H. WANG, M. BECKSON, and H. HANAFUSA, Rockefeller University, New York, New York: Generation of replication-defective sarcoma virus via recombination between viral and cellular sequences.		209

- S. CHEN,<sup>1</sup> F. DURAN-STRUUCK,<sup>2</sup> F. LILLY,<sup>3</sup> and M. DURAN-REYNALS,<sup>2</sup> <sup>1</sup>Dept. of Biological Sciences, Columbia University, New York; Depts. of <sup>2</sup>Pathology and <sup>3</sup>Genetics, Albert Einstein College of Medicine, Bronx, New York: Genetic and nongenetic factors in MuLV expression in the DBA/2 X RF cross. 210
- E. STOCKERT, P. V. O'DONNELL, Y. OBATA, and L. J. OLD, Memorial Sloan-Kettering Cancer Center, New York, New York: Inhibition of AKR leukemogenesis by SMX-1, a dualtropic murine leukemia virus. 211
- R. RISSER, D. J. GRUNWALD, P. JELEN, and J. TIMMINS, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison: The unusual "anti-self H-2" response of hybrid mice to immunization with a semi-syngeneic Abelson virus lymphoma. 212
- J. AZOCAR,<sup>1</sup> M. G. BALDINI,<sup>1</sup> and M. ESSEX,<sup>2</sup> <sup>1</sup>Hematology Research, Memorial Hospital, Pawtucket, Rhode Island; <sup>2</sup>Harvard University School of Public Health, Boston, Massachusetts: Mechanism of incorporation of histocompatibility antigens in the envelope of RNA tumor viruses during virus maturation. 213
- C. A. LONG, A. B. VAIDYA, and U. J. DUMASWALA, Hahnemann Medical College and Hospital, Philadelphia, Pennsylvania: Influence of the major histocompatibility complex on susceptibility to MuMTV's. 214

Abstracts of papers presented at the  
XLV Cold Spring Harbor Symposium  
on Quantitative Biology

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# MOVABLE GENETIC ELEMENTS

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May 28—June 4, 1980

Arranged by  
Ahmad I. Bukhari, *Cold Spring Harbor Laboratory*  
James B. Hicks, *Cold Spring Harbor Laboratory*



Cold Spring Harbor Laboratory  
Cold Spring Harbor, New York

## PROGRAM

WEDNESDAY, May 28 — 7:30 PM

Welcoming Remarks: J. D. WATSON  
Cold Spring Harbor Laboratory

Introduction: "Movable Genetic Elements and Barbara McClintock"  
H. BENTLEY GLASS  
State University of New York  
Stony Brook, New York

Opening Address: A. CAMPBELL  
Stanford University  
Stanford, California

### SESSION 1 *Inversion Elements in Bacteria*

Chairperson: D. BOTSTEIN  
Massachusetts Institute of Technology  
Cambridge, Massachusetts

T. IINO and K. KITSUKAKE, Dept. of Biology, Faculty of Science, University of  
Tokyo, Japan: The *trans*-acting genes of bacteriophages  $\pi$  and  $\mu$  mediating  
inversion of a specific DNA segment involved in flagellar phase variation of  
*Salmonella*. 1

M. SILVERMAN, J. ZIEG, and M. SIMON, Biology Dept., University of California, San  
Diego: The mechanism of phase variation. 2

R. HARSHEY, Cold Spring Harbor Laboratory, New York: Flip-flop control of gene  
expression in bacteriophage  $\mu$ . 3

THURSDAY, May 29 — 9:00 AM

### SESSION 2 *Characterization of Transposable Element Families*

Chairperson: H. SAEDLER  
University of Freiburg  
Federal Republic of Germany

J. GAFNER, H. EIBEL, M. BRENNAN, A. STOTZ, and P. PHILIPPSEN, Dept. of  
Microbiology, Biozentrum, University of Basel, Switzerland: Characterization of  
a mobile element in yeast. 4

G. M. RUBIN, W. J. BROREIN, JR., P. DUNSMUIR, R. LEVIS, E. STROBEL, and E. YOUNG, Dept. of Biological Chemistry, Sidney Farber Cancer Institute, Harvard Medical School, Boston, Massachusetts: "Copia-like" transposable elements in the <i>Drosophila</i> genome.	5
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E. O. LONG and I. B. DAWID, Laboratory of Biochemistry, NCI, National Institutes of Health, Bethesda, Maryland: Structure and expression of type-2 ribosomal DNA insertions in <i>Drosophila melanogaster</i> .	9
J. K. LIM, Biology Dept., University of Wisconsin, Eau Claire: Restrictive modifications of the <i>Drosophila</i> X chromosome.	10
V. A. GVOZDEV, <sup>1</sup> E. S. BELYAEVA, <sup>1</sup> Y. V. ILYIN, <sup>2</sup> and L. Z. KAIDANOV, <sup>3</sup> <sup>1</sup> Institute of Molecular Genetics; <sup>2</sup> Institute of Molecular Biology, Moscow; <sup>3</sup> Biological Institute of the Leningrad State University, USSR: Transposition of mobile dispersed genes revealed by selection in <i>Drosophila melanogaster</i> .	11

THURSDAY, May 29 — 7:30 PM

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W. J. GEHRING <sup>1</sup> and M. M. GREEN, <sup>2</sup> <sup>1</sup> Biozentrum der Universität Basel; <sup>2</sup> Laboratoire de Génétique, University of Geneva, Switzerland: Spontaneous gene mutation and <i>copia</i> transposition in <i>Drosophila melanogaster</i> .		12
G. ISING and K. BLOCK, Institute of Genetics, University of Lund, Sweden: Derivation-dependent distribution of insertion sites for a <i>Drosophila</i> transposon.		13

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M. D. GOLUBOVSKY and I. K. ZAKHAROV, Institute of Cytology and Genetics, Novosibirsk, USSR: Unstable genes in natural <i>Drosophila</i> populations.		15
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G. R. FINK, D. CHALEFF, T. DONAHUE, P. FARABAUGH, S. SILVERMAN, and S. ROEDER, Dept. of Biochemistry, Molecular and Cell Biology, Cornell University, Ithaca, New York: Unusual genetic events associated with a transposable element in yeast.		17
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D. F. GRINDLEY and C. M. CLARKE, Dept. of Molecular Biophysics and Biochemistry, Yale University, New Haven, Connecticut: Structure and function of the transposon, Tn903.		22
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- Chairperson: N. ZINDER  
Rockefeller University  
New York, New York
- S. ROTHSTEIN, R. JØRGENSEN, J. YIN, Z. YONG-DI, R. JOHNSON, and W. REZNIKOFF, Dept. of Biochemistry, University of Wisconsin, Madison: Genetic organization of Tn5—The inverted repeats are different. 24
- E.-A. AUERSWALD and H. SCHALLER, Dept. of Microbiology, University of Heidelberg, Federal Republic of Germany: Structural analysis of transposon Tn5 and of its imprecise excision. 25
- D. E. BERG, C. EGNER, B. J. HIRSCHL, and T. D. TLSTY, Dept. of Microbiology, Washington University Medical School, St. Louis, Missouri: A mobile recombinational switch derived from transposon Tn5 (Km<sup>r</sup>). 26
- D. BIEK and J. R. ROTH, Dept. of Biology, University of Utah, Salt Lake City: Regulation of Tn5 transposition. 27

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- Chairperson: S. COHEN  
Stanford University  
Stanford, California
- N. KLECKNER,<sup>1</sup> S. M. HALLING,<sup>1</sup> and T. J. FOSTER,<sup>2</sup> <sup>1</sup>The Biological Laboratories, Harvard University, Cambridge, Massachusetts; <sup>2</sup>Moyne Institute, Trinity College, Dublin, Ireland: The tetracycline-resistance transposon Tn70. 28
- J. H. MILLER, M. P. CALOS, M. HOFER, and D. GALAS, Dept. of Molecular Biology, University of Geneva, Switzerland: Genetic and sequence analysis of transpositions in the *lac* region of *E. coli*. 29
- H. SAEDLER, J. CULLUM, P. NEVERS, B. SCHUMACHER, and H. SOMMER, Institute für Biologie III, University of Freiburg, Federal Republic of Germany: IS1-induced deletions and inversions. 30
- G. B. SMIRNOV, T. S. ILYINA, Y. M. ROMANOVA, A. P. MARKOV, and E. V. NECHAEVA, Gamaleya Institute for Epidemiology and Microbiology, Moscow, USSR: Mutants of *E. coli* affected in the processes of transposition and genomic rearrangements. 31

- N. DATTA, M. NUGENT, and H. RICHARDS, Bacteriology Dept., Royal Postgraduate Medical School, London, England: Transposons in medically important bacteria. 32
- M. SO, Cold Spring Harbor Laboratory, New York: Studies on the mechanism of dissemination of a pathogenic determinant of enterotoxigenic *E. coli*. 33
- R. NOVICK,<sup>1</sup> E. MURPHY,<sup>1</sup> S. KHAN,<sup>1</sup> and J. KROLEWSKI,<sup>2</sup> <sup>1</sup>Public Health Research Institute; <sup>2</sup>New York University School of Medicine, New York: Hitchhiking transposons and other site-specific recombination systems in *Staphylococcus aureus*. 34
- M. CHANDLER, M. CLERGET, and L. CARO, Dept. of Molecular Biology, University of Geneva, Switzerland: IS1-promoted events associated with drug-resistance plasmids. 35

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- Chairperson: G. FINK  
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Ithaca, New York
- P. A. PETERSON, Agronomy Dept., Iowa State University, Ames: Diverse expression of controlling element components in maize—Test of a model. 36
- H. K. DOONER, Dept. of Genetics, University of Wisconsin, Madison: Effects of the controlling element *Ds* on *Bz*-gene function in maize. 37
- B. BURR and F. A. BURR, Biology Dept., Brookhaven National Laboratory, Upton, New York: Detection of changes in maize DNA at the *Shrunken* locus due to the intervention of *Ds* elements. 38
- F. SALAMINI, Istituto sperimentale per la Cerealicoltura, Sezione di Bergamo, Italy: Controlling elements and insertion mutations at the *opaque-2* locus of maize. 39
- G. R. K. SASTRY, K. M. ASLAM, and V. JEFFRIES, Dept. of Genetics, University of Leeds, England: The role of controlling elements in the instability for flower color in *Antirrhinum majus* and *Impatiens balsamina*. 40
- R. FLAVELL, M. O'DELL, J. R. BEDBROOK, and J. HUTCHINSON, Plant Breeding Institute, Trumpington, Cambridge, England: Evidence for and the role of sequence translocation during the evolution of plant chromosomes. 41

R. J. MANS,<sup>1</sup> B. D. KIM,<sup>1</sup> M. F. CONDE,<sup>2</sup> D. R. PRING,<sup>2</sup> C. S. LEVINGS III,<sup>3</sup>  
S. J. GABAY-LAUGHNAN,<sup>4</sup> and J. R. LAUGHNAN,<sup>4</sup> <sup>1</sup>Dept. of Biochemistry and  
Molecular Biology; <sup>2</sup>Department of Plant Pathology, University of Florida,  
Gainesville; <sup>3</sup>Genetics Department, North Carolina State University, Raleigh;  
<sup>4</sup>Dept. of Genetics and Development, University of Illinois, Urbana:  
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B. DECARIS, F. FRANCOU, A. KOUASSI, C. LEFORT, and G. RIZET, Laboratoire de  
Génétique, Université Paris-Sud, Orsay, France: Genetic instability in  
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PICNIC DINNER

SATURDAY, May 31 — 7:30 PM

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Chairperson: S. BRENNER  
Medical Research Council  
Cambridge, England

G. CHACONAS, R. HARSHEY, N. SARVETNICK, and A. I. BUKHARI, Cold Spring  
Harbor Laboratory, New York: Molecular mechanism of transposition. 44

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University of Sussex, Brighton, England: Transposition studies with phage  
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D. KAMP and R. KAHMANN, Max-Planck-Institut für Biochemie, München,  
Federal Republic of Germany: Two pathways in bacteriophage Mu trans-  
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M. M. HOWE and J. W. SCHUMM, Dept. of Bacteriology, University of Wisconsin,  
Madison: Transposition of bacteriophage Mu—Properties of lambda phages  
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P. VAN DE PUTTE, M. GIPHART-GASSLER, N. GOOSEN, T. GOOSEN, and E. VAN  
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Chairperson: J. CAIRNS  
 Imperial Cancer Research Fund  
 London, England

- J. R. BEDBROOK,<sup>1</sup> J. JONES,<sup>2</sup> and R. FLAVELL,<sup>2</sup> <sup>1</sup>Division of Plant Industry, CSIRO, Canberra, Australia; <sup>2</sup>Plant Breeding Institute, Cambridge, England: Evidence for nonhomology-dependent recombination in the evolution of repeated sequences in *Secale* species. 93
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National Science Foundation  
Washington, D.C.

J. COLLINS, Gesellschaft für Biotechnologische Forschung, Braunschweig-Stöckheim, Federal Republic of Germany: On the instability of palindromic DNA in *E. coli*—Use as a method of super-high-frequency site-specific mutagenesis. 100

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Summary: M. YARMOLINSKY  
Frederick Cancer Research Center  
Frederick, Maryland

Abstracts of papers presented at  
the 1980 Tumor Virus Meeting on

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# SV40, POLYOMA, AND ADENOVIRUSES

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August 13 — August 17, 1980

Arranged by  
Terri Grodzicker, *Cold Spring Harbor Laboratory*  
Michael Botchan, *University of California at Berkeley*



Cold Spring Harbor Laboratory  
Cold Spring Harbor, New York

## PROGRAM

WEDNESDAY, August 13 — 8:00 PM

### SESSION 1 *SV40/Polyoma: Transcription*

Chairperson: R. KAMEN  
Imperial Cancer Research Fund  
London, England

- L. DANDOLO,<sup>1,2</sup> D. BLANGY,<sup>1</sup> and R. KAMEN,<sup>2</sup> <sup>1</sup>Institut de Rescherches Scientifiques sur le Cancer, Villejuif, France; <sup>2</sup>Imperial Cancer Research Fund, London, England: Regulation of polyoma virus transcription in murine teratocarcinoma cells. 1
- C. KAHANA, D. GIDONI, D. CANAANI, and Y. GRONER, Dept. of Virology, Weizmann Institute of Science, Rehovot, Israel: Transcriptional initiation and subsequent capping of SV40 early and late mRNAs occur in vivo and in vitro at multiple nucleotide sequences including pyrimidines. 2
- D. MATHIS, C. BENOIST, and P. CHAMBON, Laboratoire de Génétique Moléculaire des Eucaryotes du CNRS, Unité de Biologie Moléculaire et de Génie Génétique de l'INSERM, Strasbourg, France: Comparison of the in vivo and in vitro expression of the SV40 early region. 3
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- U. HANSEN, H. HANDA, C. CEPKO, D. TENEN, D. LIVINGSTON, J. MANLEY, M. GEFTER, and P. A. SHARP, Center for Cancer Research and Dept. of Biology, Massachusetts Institute of Technology, Cambridge: Transcription in vitro of SV40 DNA. 5
- R. TJIAN, D. RIO, A. ROBBINS, and R. MYERS, Dept. of Biochemistry, University of California, Berkeley: Modulation of SV40 early transcription in vitro by a purified tumor antigen. 6
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- C. DEVERE-TYNDALL and R. KAMEN, Imperial Cancer Research Fund, London, England: Deletion mutants of polyoma virus DNA in the noncoding sequences between the replication origin and the beginning of the late region. 8
- P. GRUSS and G. KHOURY, NCI, National Institutes of Health, Bethesda, Maryland: Use of recombinant DNA molecules to investigate regulatory signals for mRNA biosynthesis. 9
- M. FITZGERALD and T. SHENK, Dept. of Microbiology, University of Connecticut Health Center, Farmington: The hexanucleotide, AAUAAA, forms part of the signal for polyadenylation of SV40 late mRNAs. 10

THURSDAY, August 14 — 9:00 AM

SESSION 2 *Adenoviruses: Transcription*

Chairperson: J. FLINT  
Princeton University  
Princeton, New Jersey

- S.-L. HU<sup>1</sup> and J. L. MANLEY,<sup>2</sup> <sup>1</sup>Cold Spring Harbor Laboratory, New York; <sup>2</sup>Dept. of Biology, Massachusetts Institute of Technology, Cambridge: Identification of major late promoter of Ad2. 11
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- J. C. ALWINE<sup>1</sup> and G. KHOURY,<sup>2</sup> <sup>1</sup>Dept. of Microbiology, University of Pennsylvania School of Medicine, Philadelphia; <sup>2</sup>NCI, National Institutes of Health, Bethesda, Maryland: The SV40-associated small RNA (SAS-RNA)—Mapping on the SV40 genome and characterization of its synthesis. 22
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- M. BASTIN and C. PARENT, Dépt. de Microbiologie, Centre Hospitalier Universitaire de Sherbrooke, Québec, Canada: Tumorigenicity of recombinant plasmids containing defective polyoma virus DNA molecules. 24
- E. A. BAUMANN, D. STEDMAN, A. FUKS, and R. HAND, McGill Cancer Centre, Montreal, Quebec, Canada: Comparison of the immunoreactivity of SV40 large T antigen and D2 hybrid protein. 25
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SESSION 4 *Workshop on DNA Sequences*

Organizer: T. GINGERAS  
Cold Spring Harbor Laboratory  
Cold Spring Harbor, New York

R. CHANDA, <sup>1</sup> E. LIFSON, <sup>1</sup> E. LEE, <sup>1</sup> M. YABLONSKI, <sup>1</sup> N. STOW, <sup>2</sup> and S. ZAIN, <sup>1</sup> <sup>1</sup> Dept. of Microbiology and Cancer Center, University of Rochester, New York; <sup>2</sup> Cold Spring Harbor Laboratory, New York: Studies on early gene block III region in Ad2.	88
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Chairperson: C. BASILICO  
New York University School of Medicine  
New York, New York

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University of California  
Berkeley, California

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D. SPECTOR, D. HALBERT, and H. RASKAS, Dept. of Pathology, Washington University School of Medicine, St. Louis, Missouri: Expression of integrated viral sequences in adenovirus transformed 293 cells infected with deletion mutants. 148

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J. S. SUSSENBACH, M. G. KUIJK, W. KRUIJER, and A. W. M. RIJNDERS, Laboratory for Physiological Chemistry, State University of Utrecht, The Netherlands: Characterization of viral proteins involved in adenovirus DNA replication. 150

C. TIBBETTS, C. GREEN, S. SHARNICK, and L. KOSTURKO, Dept. of Microbiology, University of Connecticut School of Medicine, Farmington: Cloning, manipulation, and analysis of left-end DNA from Ad3. 151

M. TIGGES and H. J. RASKAS, Dept. of Pathology, Washington University School of Medicine, St. Louis, Missouri: Analysis of Ad2 early region 4 RNAs and their polypeptide products. 152

G. A. ZORN and C. W. ANDERSON, Biology Dept., Brookhaven National Laboratory, Upton, New York: Expression of fiber in Ad2-infected monkey-human cell hybrids and reconstructed cells. 153

FRIDAY, August 15 — 7:30 PM

SESSION 8 *SV40 and Adenoviruses: Replication*

Chairperson: M. HORWITZ  
Albert Einstein School of Medicine  
Bronx, New York

R. M. MYERS,<sup>1</sup> R. C. WILLIAMS,<sup>2</sup> and R. TJIAN,<sup>1</sup> Depts. of <sup>1</sup>Biochemistry and <sup>2</sup>Molecular Biology, University of California, Berkeley: Construction and analysis of SV40 origin mutants defective in T-antigen binding and DNA replication. 154

R. MCKAY<sup>1</sup> and D. DI MAIO,<sup>2</sup> <sup>1</sup>Cold Spring Harbor Laboratory, New York; <sup>2</sup>Dept. of Microbiology, Johns Hopkins University School of Medicine, Baltimore, Maryland: SV40 T-antigen binding to the DNA of regulatory mutants of SV40. 155

C. SUMIDA-YASUMOTO and G. KHOURY, NCI, National Institutes of Health, Bethesda, Maryland: In vitro replication of SV40 DNA—SV40 T-antigen and form-I DNA replication with initiation. 156

R. T. HAY and M. L. DEPAMPHILIS, Dept. of Biological Chemistry, Harvard Medical School, Boston, Massachusetts: Preferred sequences that initiate Okazaki fragments on SV40 DNA. 157

N. D. STOW, Cold Spring Harbor Laboratory, New York: The effect of additional DNA sequences linked to the left-hand end of the adenovirus genome on DNA replication. 158

- S. V. DESIDERIO, M. D. CHALLBERG, and T. J. KELLY, Jr., Dept. of Microbiology, Johns Hopkins University School of Medicine, Baltimore, Maryland: Adenovirus terminal protein—Structure of the linkage to DNA and characterization of a novel form bound to nascent DNA strands. 159
- M. LONGIARU,<sup>1</sup> H. ARIGA,<sup>1</sup> B. FRIEFELD,<sup>1</sup> M. HORWITZ,<sup>1</sup> J.-E. IKEDA,<sup>2</sup> J. LICHY,<sup>2</sup> T. ENOMOTO,<sup>2</sup> and J. HURWITZ,<sup>2</sup> Depts. of <sup>1</sup>Microbiology-Immunology and <sup>2</sup>Developmental Biology and Cancer, Albert Einstein College of Medicine, Bronx, New York: Adenovirus DNA synthesis—Evidence for multiple rounds of initiation in vitro. 160
- M. T. HSU and D. J. WOLGEMUTH, Dept. of Molecular Cell Biology, Rockefeller University, New York, New York: Electron microscope analyses of Ad2 transcription, replication, and recombination intermediates isolated from Ad2-infected HeLa cells. 161
- R. L. FATT, H. EZOE, and S. MAK, Dept. of Biology, McMaster University, Hamilton, Ontario, Canada: DNA degradation by mutants of adenoviruses. 162
- L. BURG and E. DANIELL, Dept. of Molecular Biology, University of California, Berkeley: Core proteins from Ad5 induce superhelical turns in closed circular DNA. 163

SATURDAY, August 16 — 9:00 AM

- SESSION 9 *Adenoviruses: Expression of Integrated Genomes*
- Chairperson: J. SAMBROOK  
Cold Spring Harbor Laboratory  
Cold Spring Harbor, New York
- D. F. KLESSIG and T. GRODZICKER, Cold Spring Harbor Laboratory, New York: Expression of adenovirus genes in human cells cotransformed with the HSV-1 tk gene and Ad2 DNA. 164
- L. VARDIMON and W. DOERFLER, Institute of Genetics, University of Cologne, Federal Republic of Germany: Integration and methylation patterns of Ad2 DNA in transformed hamster cells. 165
- W. WOLD, M. GREEN, K. BRACKMANN, and M. CARTAS, Institute for Molecular Virology, St. Louis University Medical Center, Missouri: Integration and expression of Ad2 early genes. 166
- M. W. VAN MAARSCHALKERWEERD, L. VISSER, A. M. C. B. REEMST, A. D. C. WASSENAAR, J. S. SUSSENBACH, and T. H. ROZIJN, Laboratory for Physiological Chemistry, State University of Utrecht, The Netherlands: Arrangements and expression of integrated sequences of Ad5 DNA in transformed cells. 167

- K. FUJINAGA, Y. SAWADA, and T. KIMURA, Cancer Research Institute, Sapporo Medical College, Japan: Detailed mappings of Ad12 mRNAs transcribed from the transforming region in infected cells and in transformed cells. 168
- C. PARASKEVA,<sup>1</sup> P. H. GALLIMORE,<sup>1</sup> and A. R. DUNN,<sup>2</sup> <sup>1</sup>Dept. of Cancer Studies, University of Birmingham Medical School, England; <sup>2</sup>European Molecular Biology Laboratory, Heidelberg, Federal Republic of Germany: Properties of a cloned rat liver epithelial cell strain and its adenovirus-transformed derivatives. 169
- B. LENK, T. STORCH, and J. MAIZEL, NICHD, National Institutes of Health, Bethesda, Maryland: Association of early adenovirus proteins with the cytoskeleton of HeLa cells. 170
- J. B. LEWIS,<sup>1</sup> H. ESCHE,<sup>2</sup> and M. B. MATHEWS,<sup>1</sup> <sup>1</sup>Cold Spring Harbor Laboratory, New York; <sup>2</sup>Genetics Dept., University of Cologne, Federal Republic of Germany: Regulation of adenovirus early gene expression. 171
- R. RICCIARDI,<sup>1</sup> R. JONES,<sup>1</sup> C. CEPKO,<sup>2</sup> P. SHARP,<sup>2</sup> and B. ROBERTS,<sup>1</sup> <sup>1</sup>Dept. of Biological Chemistry, Harvard Medical School, Boston, Massachusetts; <sup>2</sup>Center for Cancer Research, Massachusetts Institute of Technology, Cambridge: An acidic protein encoded within the E1A region of Ad5 DNA is required for the expression of adjacent genes. 172

SATURDAY, August 16 — 2:00 PM

- SESSION 10 *SV40 and Polyoma: T-Antigen-Associated Cellular Proteins*
- Chairperson: A. LEVINE  
State University of New York Medical School  
Stony Brook, New York
- D. P. LANE, Dept. of Zoology and Cancer Research Campaign Unit of Eukaryotic Molecular Genetics, Imperial College, London, England: A cellular protein that shares an antigenic determinant with SV40 large T detected by a monoclonal antibody. 173
- P. TEGTMEYER, State University of New York, Stony Brook: Identification of a cellular protein with antigenic and structural similarities to SV40 T antigen. 174
- E. HARLOW and L. CRAWFORD, Imperial Cancer Research Fund, London, England: The complex of SV40 large T antigen with a host 53K protein in monkey cells. 175
- W. MALTZMAN, D. I. H. LINZER, M. OREN, N. REICH, and A. J. LEVINE, Dept. of Microbiology, State University of New York, Stony Brook: Characterization of 54K murine nonviral tumor antigens seen in SV40 transformants and other murine cells. 176

- F. McCORMICK,<sup>1</sup> R. CLARKE,<sup>2</sup> and R. TJIAN,<sup>2</sup> <sup>1</sup>Translation Laboratory, Imperial Cancer Research Fund, London, England; <sup>2</sup>Dept. of Biochemistry, University of California, Berkeley: Binding of purified SV40 large T antigen to a cellular 53K protein in vitro. 177
- D. S. GREENSPAN and R. B. CARROLL, Dept. of Pathology, New York University School of Medicine, New York: Effects of differential phosphorylation of SV40 T antigen on 48K host tumor antigen and DNA binding. 178
- W. A. SCOTT and J. P. HARTMANN, Dept. of Biochemistry, University of Miami School of Medicine, Florida: Endonuclease-sensitive sites in various SV40 nucleoprotein structures. 179
- G. W. ROBINSON<sup>1</sup> and L. M. HALLICK,<sup>2</sup> Depts. of <sup>1</sup>Biochemistry and <sup>2</sup>Microbiology, University of Oregon Health Sciences Center, Portland: Detection of a nucleosome-free replication origin in SV40 minichromatin by the technique of radioactive-psoralen labeling. 180
- S. SARAGOSTI, G. MOYNE, and M. YANIV, Dépt. de Biologie Moléculaire, Institut Pasteur, Paris, France: Absence of nucleosomes in a fraction of SV40 chromatin between the origin of replication and the region coding for the late leader RNA. 181
- O. SUNDIN and A. VARSHAVSKY, Dept. of Biology, Massachusetts Institute of Technology, Cambridge: Terminal stages of SV40 DNA replication proceed via multiply intertwined catenated dimers attached to the nuclear matrix. 182

SATURDAY, August 16

BANQUET

Cocktails 6:00 PM Dinner 7:00 PM

SUNDAY, August 16 — 9:00 AM

SESSION 11 *SV40 and Polyoma: T Antigens*

Chairperson: P. TEGTMEYER  
State University of New York Medical School  
Stony Brook, New York

- W. ECKHART, M. A. HUTCHINSON, and T. HUNTER, Tumor Virology Laboratory, Salk Institute, San Diego, California: Tyrosine phosphorylation in polyoma T antigens and transformed cells. 183
- B. SCHAFFHAUSEN and T. BENJAMIN, Dept. of Pathology, Harvard Medical School, Boston, Massachusetts: Studies on middle T antigens of polyoma virus. 184

- P. GAUDRAY, M. CENTER, P. CLERTANT, and F. CUZIN, Centre de Biochimie du CNRS, Nice, France: ATPase activity and binding to chromatin of a polyoma virus early protein. 185
- S. E. LIGHT,<sup>1</sup> F. HIRATA,<sup>2</sup> and Y. ITO,<sup>1</sup> <sup>1</sup>NIAID, <sup>2</sup>NIMH, National Institutes of Health, Bethesda, Maryland: Characterization of middle T antigen in the plasma membrane of polyoma-virus-transformed mouse cells. 186
- R. HENNING, J. LANGE-MUTSCHLER, and W. DEPPERT, Dept. of Biochemistry, University of Ulm, Federal Republic of Germany: Serological demonstration of SV40 T-antigen-related cell-surface antigens on SV40-transformed cells. 187
- H. R. SOULE and J. S. BUTEL, Dept. of Virology and Epidemiology, Baylor College of Medicine, Houston, Texas: Detection and characterization of SV40 surface-associated tumor antigen by enzyme-catalyzed cell-surface iodination. 188
- M. BRADLEY, J. GRIFFIN, and D. LIVINGSTON, Sidney Farber Cancer Institute, Harvard Medical School, Boston, Massachusetts: Structural and functional heterogeneity of the large SV40 T antigen. 189
- D. GIDONI,<sup>1</sup> B. BARNET,<sup>2</sup> and C. PRIVES,<sup>2</sup> <sup>1</sup>Dept. of Virology, Weizmann Institute of Science, Israel; <sup>2</sup>Dept. of Biological Sciences, Columbia University, New York, New York: Properties of different sedimenting forms of SV40 T antigen. 190
- E. FANNING, C. BURGER, and B. NOWAK, Fakultät für Biologie, Universität Konstanz, Federal Republic of Germany: Detection and characterization of multiple forms of SV40 large T antigen. 191
- E. GURNEY and R. HARRISON, Dept. of Biology, University of Utah, Salt Lake City: A collection of monoclonal antibodies against SV40 T antigens. 192