

# Gordon Research Conferences: 1982 Winter Schedule

Alexander M. Cruickshank

The Winter Gordon Research Conferences will be held 11 January to 19 February 1982 at the Holiday Inn of Ventura (On the Beach), Ventura, California.

**Purpose.** The Conferences were established to stimulate research in universities, research foundations, and industrial laboratories. This purpose is achieved by an informal type of meeting consisting of scheduled speakers and discussion groups. This type of meeting is a valuable means of disseminating information and ideas to an extent that could not be achieved through the usual channels of publication and presentation at scientific meetings. Sufficient time is available to stimulate informal discussion among members of each conference. In addition, scientists in related fields become acquainted and valuable associations are formed that often result in collaboration and cooperative efforts among laboratories.

Meetings are held in the morning and in the evening, Monday through Friday, with the exception of Friday evening. The afternoons are available for recreation, reading, or participation in discussion groups as the individual desires.

It is hoped that each Conference will extend the frontiers of science by fostering a free and informal exchange of ideas among persons actively interested in the subject under discussion. The purpose of the program is to bring experts up to date on the latest developments, to analyze the significance of these developments, and to provide suggestions concerning the underlying theories and profitable methods of approach for scientific research. The review of known information is not desired.

In order to protect individual rights and promote discussion, it is an established requirement of each conference that no information presented is to be used without specific authorization of the individual making the contribution,

whether in formal presentation or in discussion. The recording of lectures by tapes and so forth and the photography of slides are prohibited. Scientific publications are not prepared as emanating from the Conferences.

**Registration and reservations.** Attendance at the Conferences is by application. Applications must be submitted in duplicate on the standard application form which may be obtained from the office of the Director. This procedure is important because certain specific information is required in order that a fair and equitable decision on the application may be made. Attendance at each conference is limited to approximately 100 conferees. Only registered conferees are permitted in the meeting room.

The Director will submit the applications of those requesting permission to attend a Conference to the chairperson for that conference. The chairperson will review the applications and select the members in an effort to distribute the attendance as widely as possible among the various institutions and laboratories represented by the applications. A registration card will be mailed to those selected and must be returned to our office 3 weeks prior to the Conference date or the approved application will be voided. *Advance registration by mail for each conference is required and is completed on receipt of the registration card and the full fixed fee which is required in ADVANCE of ALL PARTICIPANTS AND GUESTS.* The advance payment is also required from scientists arriving in the United States from foreign countries and should be payable through a U.S. bank in U.S. dollars. Checks are to be made payable to the Gordon Research Conferences.

The Board of Trustees of the Conferences has established a fixed fee of \$300 for all participants (speakers, discussion leaders, and conferees), covering registration, double room with bath, City of Ventura room tax, meals, and services for five conference nights. It will not provide for telephone, taxi, laundry,

conference photograph, or any other personal expenses. The fixed fee was established to encourage attendance for the entire conference and to increase the Special Fund which is available to each conference chairperson for the purpose of assisting conferees who attend a conference at total or partial personal expense with travel or subsistence expenses or both.

It is to the advantage of all participants to attend a conference for the entire week. The fixed fee will be charged regardless of the time a participant (speakers, discussion leaders, conferees) attends a conference—that is for the period of from 1 to 4½ days. *An additional charge of \$70 per week will be made for a single room which must be paid in advance to confirm single occupancy.*

**Special Fund:** A Special Fund is provided from the registration fee and is made available to the chairperson of each conference for the purpose of increasing the participation of research scientists who could not otherwise attend and participate because of financial limitations. Its use is not limited to speakers and discussion leaders, but may be granted to any registered conferee by the chairperson. The money is to be used as an assistance fund only and may be used to contribute toward conferees' travel expenses, registration fee, and/or subsistence expenses at the conference location. Total travel and subsistence expenses usually will not be provided.

**Cancellation.** (i) Conferees: All but \$40 of the fixed fee will be refunded if an approved application is cancelled not later than 2 weeks prior to the conference. (ii) Guests: The charge for room and meals for guests is \$240 for five conference days. Full refund will be made if cancellation is received 2 weeks prior to the conference, otherwise, \$40 will be forfeited. Guests are not permitted to attend the conference lectures and discussion groups.

**Attendance.** Request for applications to the Conferences or for additional information should be addressed to: Dr. Alexander M. Cruickshank, Director, Gordon Research Conferences, Pastore Chemical Laboratory, University of Rhode Island, Kingston, Rhode Island 02881. Telephone: 401-783-4011 or 401-783-3372.

## Biology of Aging

Caleb E. Finch, chairman; Edward J. Masoro, vice chairman.

15 February. Neurophysiology (Floyd Bloom, session chairman); Phillip Land-

The author, director of the Gordon Research Conferences, is professor of chemistry at the University of Rhode Island, Kingston 02881.

field, "Hippocampal neurophysiology in aging rats"; Joseph Rogers, "The senescent cerebellum: morphology, physiology and function"; George Roth, "Aging and salivary gland functions: membrane properties, ion transport and secretions"; Dean Smith, "Changes in motor axon terminal function and architecture during aging." Membranes (Roy Walford, session chairman); Steven Gilman and Joseph Feldman, "Age-related membrane alterations and functional deficits in lymphoid cells"; David Heron, "Reversibility of age changes in brain membrane fluidity"; Perry Molinoff, "Drugs and brain membrane fluidity"; Roy Walford and Farnez Naeim, "Redistribution of lymphocyte membrane receptors in Down's syndrome and in aging."

*16 February.* Basal ganglia receptors (Perry Molinoff, session chairman); James Joseph, "Aging and responses to nigro-striatal lesions"; John Marshall, "Age and plasticity in the nigro-striatal DA projection"; Kenneth Moore, "Age-related changes in dopaminergic systems"; Patrick Randall, "Stability of the nigro-striatal system during aging." Memory and cholinergic functions (Byron Campbell and Zaven Khatchaturian, session chairmen); Ray Bartus, "Cholinergic hypothesis of memory defects"; Donald Jenden, "Cholinergic metabolism in aging rodent brain"; Steven Zornetzer, "Memory decline: evidence for adrenergic involvement." Neuroendocrinology, I (Caleb Finch, session chairman); Steven Gambert, "Age changes in the thyroid-endogenous opioid relationship"; John Porter, "Portal blood neurotransmitters in the aging male rat"; John Sladek, "Magnocellular nuclei and osmoregulation during aging."

*17 February.* Neuroendocrinology, II: the female rodent (Bruce McEwen, session chairman); Caleb Finch, "Ovarian influences on hypothalamic aging"; John Lu, "Relation of ovarian steroids to neuroendocrine function in aging rats"; Joseph Meites, "Neuroendocrine regulation of GH and TSH thyroid secretion during aging in rats"; Sandra Michael, "Effects of neonatal thymectomy on ovarian aging"; Frederick Vom Saal, "Prenatal influences on reproductive aging"; Richard Walker, "Estrogen-induced abnormalities in hypothalamic serotonin metabolism: a mechanism for loss of positive feedback in constant estrous rats"; Phyllis Wise, "Aging and catecholamine metabolism in cycling female rats." Plasticity and regeneration (Carl Cotman, session chairman); Carl Cotman, "Control of neuronal plasticity as a function of age"; Paul Coleman, "Neuron number and dendrites in the

aging brain"; Marian Diamond, "Environmental influences on the aging rat cerebral cortex: enrichment, deprivation and negative air ions"; Ronald Merves, "Lecithin feeding alters neuronal morphology"; Alan Pestronk, "Aging and the neuromuscular system"; George Roth, "Dietary restriction reduces the loss of striatal dopamine receptors."

*18 February.* Viral expression (Edward Schneider, session chairman); Carlton Gajdusek, "Transmissible spongiform encephalopathies"; Michael Getz, "Age-dependent changes in endogenous C-type retrovirus gene expression"; Stanley Prusiner, "Molecular properties of the Scrapie 'prion.'" Banquet speaker, Robert Butler.

*19 February.* Physiology (Edward Maresca, session chairman); Edward Lakatta, "Age-related modification of the cardiovascular response to adrenergic stimulation"; Gerald Reaven, "Effect of aging on insulin secretion and insulin action."

#### Alcohol

Kenneth Blum, chairman; Ernest P. Noble, vice chairman.

*15-19 February.* Neurochemical and behavioral effects of ethanol on fetal central nervous system (Henry Rosett, chairman); Membrane-receptor permeability coupling mechanisms (Lonnie Ingram, chairman); Actions of ethanol on receptor-effector systems (Perry Molinoff, chairman); Effects of ethanol on modulatory feedback neural control systems (Marco Trabucchi, chairman); Role of neuropeptides in the chronic actions of ethanol (Albert Herz, chairman); Isoquinoline and betacarboline alkaloids: Neurochemistry, neurotoxicity and behavioral actions (Gerald Cohen, chairman); Electrophysiology of ethanol: Mouse to man (Floyd E. Bloom, chairman); Central and peripheral ethanol-induced pathology (David Van Thiel, chairman); Metabolic aspects of ethanol (Richard Dietrich, chairman).

#### Cardiovascular Role of Brain Angiotensin and Other Peptide Hormones

F. Merlin Bumpus, chairman; Joseph Buckley, vice chairman.

*8 February.* Existence of brain renin-angiotensin system (Edgar Haber and Mohinder Sambhi, chairmen); A—Brain renin isolation: Edgar Haber, Introduction; Tadashi Inagami, Robert R. Smeby, Detlov Ganten. B—Brain renin-substrate isolation: Morton P. Printz,

Mohinder Sambhi, Ian Reid. C—Isolation and characterization of brain angiotensin: F. Merlin Bumpus. D—Quantification of angiotensin, vasopressin and catecholamines (Robert R. Smeby and Kevin J. Catt, chairmen); Theodore L. Goodfriend, "Angiotensin I and II"; Leonard Share, "Vasopressin"; Juan Saavedra, "Catecholamines." Localization of brain renin, substrate, ang I and ang II and converting enzyme (Eve E. Slater and Miklos Palkovits, chairmen); Earl Zimmerman, Ian Phillips, Detlov Ganten, Dennis Healey.

*9 February.* Localization of cardiovascular brain hormones other than angiotensin (Virginia Pickel and Walter B. Severs, chairmen); Virginia Pickel, "The validity of immunocytochemical techniques"; Miklos Palkovits, "Peptides"; Thomas Hökfelt, "Catecholamines"; (Walter B. Severs and Terence Williams, discussants). Angiotensin receptors (Michael J. Peach and Wayne Alexander, chairmen); Michael J. Peach, Introduction; Kevin J. Catt, "Isolation and characterization of angiotensin receptors"; Indira Sen, "Isolation and purification of hepatic angiotensin receptor"; (Wen H. Ko, Robert Speth and Walter B. Severs, discussants). (Michael J. Peach and Theodore L. Goodfriend, chairmen); Michael Gimbrone, "Angiotensin II receptor in components of arterial wall, internalization"; Mia Chen, "Angiotensin II receptor mechanisms"; Wayne Alexander, "Vascular smooth muscle receptors"; James Garrison, "Hepatic receptors."

*10 February.* Target tissues and pathways mediating the central actions of angiotensin (C. M. Ferrario and I. Phillips, chairmen); A—Target tissues: J. Simpson, "Sub-fornical organ"; I. Phillips, "Organum vasculosum of lamina terminalis (OVLT) and AV3V region"; C. M. Ferrario, "Area postrema"; (Ian Reid, G. Fink and R. Contreras, discussants). (M. J. Brody and D. J. Ramsay, chairmen); B—Central projections: G. Morgenson, "Pathways mediating thirst"; M. J. Brody, "Pathways mediating pressor response"; F. Ganong, "Pathways mediating release of humoral agents (ACTH, renin, and so forth)"; Discussants: J. Buggy, "Estrogens and central action"; A. N. Epstein, "Sodium appetite"; W. B. Severs, "AII and vasopressin interaction." Role of opioids in mediating central actions of angiotensin II (S. H. Snyder and E. Erdős, chairmen); S. H. Snyder, "Opioid peptides"; W. B. Severs, "Dipsogenic factors and enkephalins"; C. M. Ferrario, "Morphine and area postrema"; H. Unger, subject to be announced.

*11 February.* Role of the brain renin

angiotensin system in the pathophysiology of hypertension (J. P. Buckley and I. Reid, chairmen); J. P. Buckley, "Brain angiotensin activity as a factor in hypertension"; D. Ganten, "Brain angiotensin in the pathogenesis of SHR hypertension"; K. B. Brosnihan, "Brain renin and angiotensin in sodium depletion"; N. Basso, "DOCA-salt hypertension and the brain renin angiotensin system"; (I. Reid, W. Ganong and P. Schelling, discussants). Role of peptides in the regulation of blood pressure (J. Reid and W. de Jong, chairmen); J. Reid, "Baroreceptor reflexes"; W. de Jong, subject to be announced; P. Schmid, "Modulation of baroreflexes by angiotensin"; G. Haeusler, "Substance P and baroreceptor reflexes"; (K. L. Barnes, M. J. Brody and D. J. Reis, discussants). (M. Printz, chairman): Floyd Bloom, "Functional role of peptides in brain."

12 February. Neurobiology of vasopressin in relationship to cardiovascular control (D. J. Reis and L. Share, chairmen): D. J. Reis, Introduction; A. K. Johnson, "Pathways mediating vasopressin secretion"; L. Swanson, "Central vasopressin pathways"; H. Gainer, "Molecular biology of vasopressin"; W. Sawyer, "Antagonists to vasopressin"; A. Sved, "Regulation of brain vasopressin"; J. Hayward, "Electrophysiology of reflex control"; C. Sladek, "In vitro studies of control of vasopressin release"; A. Cowley, "Vasopressin and cardiovascular control."

## Composites

R. Judd Diefendorf, chairman; John Kardos, vice chairman.

18 January. Fiber structure and strength.

19 January. Properties of matrices and composites.

20 January. Time dependent failure and fracture of composites.

21 January. The effect of moisture on composites from micro and macro experimental or mechanics approaches.

22 January. Compression and shear fatigue in composites (speakers to be announced).

## Electrochemistry

Theodore Kuwana, chairman; Halina Wroblowa, vice chairman.

18 January. R. J. Madix, "Model reaction studies on single crystal metal surfaces"; A. Hubbard, "Electrochemistry of well-defined surfaces"; H. N. Blount, "Derivative optical methods in spectroelectrochemistry"; R. McCreery, "Dif-

## Applications

Scientists are invited to submit applications for attendance at the Gordon Research Conferences. An application blank is on page 213 and may be submitted to Dr. Alexander M. Cruickshank, Director, Gordon Research Conferences, University of Rhode Island, Kingston, Rhode Island 02881.

fractive spectroelectrochemistry"; R. Van Duyne, "Surface enhanced raman and resonance raman spectroelectrochemistry: What do we know now?"

19 January. T. J. Meyer, "Electron transfer reactions in solutions and on surfaces"; J. K. Kochi, "Inner sphere and outer sphere charge transfer mechanisms." Open session.

20 January. D. T. Sawyer, "Electron transfer reduction of dioxygen"; J. P. Collman, "Molecular engineering and the development of an oxygen cathode"; L. Gestaut, "Use and failure modes of air cathodes in industrial applications"; M. Gratzel, "Redox catalysis, interfacial electron transfer in colloidal semiconductors and water cleavage by visible light."

21 January. H. Gerischer, "Influence of surface reaction kinetics on photocurrents and photovoltages at semiconductor electrodes"; A. Bard, "Polymer coatings on semiconductor electrodes"; E. Laviron, "Application of voltametric methods to the study of electron transfer to or via redox systems bound to the electrode surface"; T. Osa, "Regio-selective electrosynthesis on cyclodextran modified electrodes."

22 January. H. Reiss, "Theoretical study of bipolar membranes"; R. Buck, "Potential-generating processes in thick and thin membranes: (a) General case including trapped charge sites to no charged sites and (b) Some conclusions on charge carriers and current-voltage-time curves."

## Metals in Biology

Harry B. Gray, chairman; Jack Peisach, vice chairman.

8 February. Redox mechanistic fundamentals (Jack Halpern, chairman): Norman Sutin, "Electron and nuclear tunnelling"; John Hopfield, "Electron transfer theory"; John Endicott, "Redox reactions of macrocyclic ligand complexes"; Jack Halpern, "Atom transfer

processes." Iron metabolism (Jack Peisach, chairman): Helmut Beinert, "Aconitase"; R. Burger, "Bleomycin"; Philip Aisen, "Iron metabolism."

9 February. Electron transfer mechanisms (Harry B. Gray, chairman): R. H. Holm, "Redox chemistry of iron-sulfur clusters"; Stephan Isied, "Electron transfer through peptide linkages"; Israel Pecht, "Metalloprotein electron transfer mechanisms." Metal-DNA chemistry (Stephen J. Lippard, chairman): Karen Jennette, "The interaction of carcinogenic chromium with nucleic acids"; Alex Rich, "Metal-DNA and -RNA structures"; Larry Loeb, "Metals and genetic miscoding"; Leslie Orgel, "Metal-ion catalyzed template-directed oligonucleotide synthesis."

10 February. Cytochrome oxidase (Harvey Schugar, chairman): Gerald Babcock, "Coordination geometries of the  $a$  and  $a_3$  hemes"; S. I. Chan, "EPR studies"; Linda Powers, "X-ray absorption studies." Copper metabolism (Joan Valentine, chairman): Daniel Kosman, "Molecular mechanisms"; Konrad Lerch, "Copper-binding proteins."

11 February. Cytochrome oxidase, Part 2 (W. Blumberg, Chairman): Howard Mason, Biochemical aspects"; E. Antonini or M. Brunori, "Biochemical Aspects." (Speaker and subject to be announced.)

12 February. Nitrogenase (Bo Malmström, chairman): I. Redox properties: short presentations by W. Newton, P. Stephens, W. Orme-Johnson, G. Watt. II. Substrate interactions: short presentations by C. McKenna, B. Burgess, D. Thornley, L. Mortensen.

## Orientalational Disorder in Crystals

J. A. Morrison, chairman; C. W. Garland and A. Hüller, co-vice chairmen.

11 January. Modern high resolution experiments (G. Dolling, session chairman): A. Heidemann and Y. Murata. Molecular dynamics and simulation calculations (R. M. Pick, session chairman): M. L. Klein and A. Rahman.

12 January. Translation rotation coupling and phase transitions (J. M. Rowe, session chairman): A. Loidl and W. Press. The glassy state of molecular solids (H. Chihara, session chairman): C. A. Angell and H. Suga.

13 January. Physisorbed molecules including two dimensional phases and cluster phenomena (S. F. O'Shea, session chairman): R. K. Thomas and S. K. Sinha. Molecular solids under extreme conditions (S. M. Stishov, session chairman): J. Eckert and G. Samara.

14 January. Orientalational ordering in

more complex systems (C. W. Garland, session chairman): A. J. Leadbetter and T. Tanaka. Quantum mechanical effects (A. Hüller, session chairman): Horst Meyer and T. Yamamoto.

15 January. Crystal growth—a panel discussion (J. Sherwood, moderator). Discussants: G. J. Sloan, N. Karl, A. R. McGhie, R. Rudman, A. V. Chadwick.

Participants are invited to submit posters for presentation in conjunction with the appropriate session.

### Peptides, Chemistry and Biology of

Richard G. Hiskey and Wylie W. Vale, co-chairmen.

1–5 February. Biologic actions of peptides (Dorothy T. Krieger, discussion leader): Jerry D. Gardner, Lily Jan, Ervin G. Erdos. Post translational processing of peptides (Michael J. Brownstein, discussion leader): Fuaso Hirata, Joel Moss, Daniel E. Koshland, Jr., Elizabeth A. Eipper. Molecular genetics (William J. Rutter, discussion leader): Hugh D. Niall, Joel F. Habener. Characterization of peptides: V. Mutt, Joachim Spiess. Synthesis of polypeptides and polynucleotides (Johannes Meienhofer, discussion leader): Christian Birr, Jack T. Johansen, M. Poonian. Design of biologically active peptide analogs (Garland R. Marshall, discussion leader): Judith C. Hemple, Corwin H. Hansch, Daniel H. Rich. Polypeptide-lipid interactions (Donald M. Small, discussion leader): E. T. Kaiser, Henry J. Pownall, Richard M. Eppard. Peptide and protein conformation (Lila M. Gierasch, discussion leader): Bonnie A. Wallace, George A. Rose, Kurt Wuthrich. One evening session will be devoted to short (10-minute) presentations selected from topics presented at the Poster Session. Conference participants interested in presenting a poster should submit a brief abstract (less than 200 words) to either of the conference co-chairmen by 15 December 1981. The abstract should describe the proposed poster topic. Those conference participants whose poster presentations are selected will be notified in early January 1982.

### Polymers

William MacKnight, chairman; Dale Meier, vice chairman.

11 January. Electrical properties of polymers (F. E. Karasz, session chairman): A. S. MacDiarmid, "The electrochemistry of polyacetylene"; B. Street, "Other highly conducting polymers."

(G. Ver Strate, session chairman): S. L. Hsu, "Polymer electron resists"; Aimee De Reggi, "Measurement of charge distribution in polymer films."

12 January. Organic chemistry of polymers (session chairman to be announced): A. S. Hay, "Aromatic polyethers and formals"; V. T. Stannet, "Polymerization of vinyl monomers by free cations." (W. Zimmt, session chairman): N. Ogata, "Synthesis of new functional condensation polymers"; J. E. Anderson, "Polyamino acids as model polymer systems."

13 January. Blends and multiphase systems (R. S. Porter, session chairman): E. Martuscelli, "Crystallization from binary polymer blends: morphology kinetics and melting behavior"; J. S. Higgins, "Partially compatible polymer blends—information obtained from scattering experiments." (D. Ulrich, session chairman): M. Shaw, Investigation of polymer-polymer systems of limited miscibility"; R. D. Lundberg, "Properties of ionomers."

14 January. Polymer theory (W. Stockmayer, session chairman): B. Zimm, "Ion distribution in polyelectrolytes"; W. W. Graessley, "Molecular aspects of polymer rheology." (S. L. Cooper, session chairman): P. Weiss, "Engineering polymers in transportation." Poster session.

15 January. (D. J. Meier, session chairman): J. J. Aklonis, "The damped Debye lattice model in the primary transition region"; J. Michael Schurr, "Deformational Brownian motions of a filamentous macromolecule, DNA."

### Sensory Transduction in Microorganisms

Winslow R. Briggs, chairman; Robert MacNab, vice chairman.

1 February. From stimulus to response in *Dictyostelium* (James Spudich, discussion leader): K. Poff, "Thermotaxis and phototaxis mutants in *Dictyostelium*"; Keith Williams, "Slug turning factor"; P. N. Devreotes, "Cyclic AMP waves in *Dictyostelium*"; G. Gerisch, "Cyclic AMP receptors, effects on myosin phosphorylation"; James Spudich, "Effects of myosin phosphorylation on myosin assembly"; Margaret Clarke, "Calmodulin-calcium control of myosin function."

2 February. Light regulation of chloroplast movement in algae (W. Haupt, discussion leader): R. Williamson, "Cytoplasmic streaming in characean algae"; M. Blatt, "Light-dependent chloroplast movement in *Vaucheria*: transduction and mechanics"; M. Weisenseel,

"Light-dependent chloroplast movement in *Mougeotia*: transduction"; G. Wagner, "Light-dependent chloroplast movement in *Mougeotia*: role of actomyosin"; S. Britz, "Dissection of *Ulva* chloroplast movement with inhibitors." Ions and photomovement in motile algae (M. E. Feinleib, discussion leader): M. Doughty, "Role of ions in photomovement in *Euglena*"; W. Nultsch, "Role of calcium in photomovement in *Chlamydomonas*"; F. Lenci, "Light-induced potentials in the stigma of *Haematococcus*"; D. Häder, "Ionic gradients and photomovement in blue green algae."

3 February. Bacterial chemotaxis—a review (R. Macnab, discussion leader): J. Adler, "General review"; J. S. Parkinson, "Genetic analysis of bacterial chemotaxis in *Escherichia coli*"; D. E. Koshland, "Biochemistry of signal transduction in bacterial chemotaxis"; M. Simon, "Sequence analysis of chemotaxis genes"; S. W. Dahlquist, "Multiple modifications of the signal transduction protein of bacterial chemotaxis"; H. C. Berg, "Energetics of the bacterial flagellar motor"; Y. Imae, "Mechanism of energy transduction for bacterial motility"; John Spudich, "Phototaxis in *Halobacterium halobium*"; G. W. Ordal, "The role of demethylation in adaptation of a gram-positive bacterium *B. subtilis*."

4 February. Sensory physiology of *Phycomyces* (W. Shropshire, Jr., discussion leader): V. E. A. Russo, "Current status of *Phycomyces* sensory physiology"; R. Cohen, "Adenylate cyclase from *Phycomyces*"; E. Cerdá-Olmeda, "Genetics of the sensory pathway"; I. Gamow, "Growth patterns and avoidance responses—mechanical analysis"; R. Sutter, "Sex pheromones in *Phycomyces*." Photoreceptors: some recent advances (W. Briggs, discussion leader): W. Schmidt, "Blue light photoreception: a review"; J. Palletta, "*Neurospora* mutant studies—both flavin and nitrate reductase deficient"; T.-Y. Leong, "Evidence for participation of a flavin-cytochrome complex in blue light photoreception in phototropism in oats"; B. Wallace, "Structure and properties of bacteriorhodopsin"; M. Bitensky, "Events following rhodopsin excitation in retinal rod outer segments."

5 February. Sensory physiology of ciliates (C. Kung, discussion leader): J. Schultz, "Recent developments in the biochemistry of *Paramecium* excitable membranes"; D. Nelson, "Biochemical properties of *Paramecium* excitable membranes"; J. W. Deitmer, "Mechanoreception in *Stylonychia*."

# GORDON RESEARCH CONFERENCES

## "FRONTIERS OF SCIENCE"

### APPLICATION

Please complete this application and mail (in duplicate)  
to the Director.

#### Office Use Only:

Received: \_\_\_\_\_  
Sent to Chairman: \_\_\_\_\_  
Waiting List Letter: \_\_\_\_\_  
Registration Mailed: \_\_\_\_\_  
Registration Returned: \_\_\_\_\_

Conference on \_\_\_\_\_ Date: \_\_\_\_\_

(Name of Conference — Please Print)

Name: (Please Print) \_\_\_\_\_ Location \_\_\_\_\_

Organization: \_\_\_\_\_

Accommodations  
(Room & Meals) For:

Business Address: \_\_\_\_\_

(inc. dept., street & no.) \_\_\_\_\_

City and State: \_\_\_\_\_

Zip Code \_\_\_\_\_

Applicant \_\_\_\_\_

Spouse \_\_\_\_\_

Child(ren) \_\_\_\_\_

Total \_\_\_\_\_

#### IMPORTANT

Indicate your particular activities which justify favorable consideration of you as a participant in and contributor to this Conference. (Not required of speakers.) Applications are referred to the Conference Committee for review in accordance with the established regulations, and this information is essential.

#### FIXED CONFERENCE FEES — Winter, 1982 — CALIFORNIA

##### \*FIXED FEES:

Conferee (double occupancy) \$300

Conferee (single occupancy) \$370

Guest (double occupancy) \$240

Guest (single occupancy) \$310

1. Full fixed fee charged regardless of time conferee attends Conference. Please note fees.

2.\*Fixed fee cannot be prorated or reduced for anyone (speakers, discussion leaders, conferees).

3. Refunds - See General Information under cancellations.

##### PAYMENT:

The full fixed fee will be required IN ADVANCE of ALL PARTICIPANTS AND GUESTS. Attendance and/or accommodations will NOT be reserved unless this fee is paid 3 weeks prior to the Conference. Foreign participants will also be required to pay Gordon Research Conferences in advance in U.S. dollars payable through a U.S. bank. The full fixed fee is charged to all regardless of length of stay at a Conference.

The recording of lectures by tapes, etc. and the photography of slide material are prohibited. Printed reference to Gordon Research Conference papers and discussion is not permitted. Authors are requested to omit references to the Conference in any publication. Guests are not permitted to attend the conference lectures and discussion sessions. Each member of the Conference agrees to these regulations when registration is accepted.

Signature \_\_\_\_\_

Please return to:

Dr. Alexander M. Cruickshank, Director  
Gordon Research Conferences  
Pastore Chemical Laboratory  
University of Rhode Island  
Kingston, Rhode Island 02881 Tel: (401) 783-4011

Date \_\_\_\_\_

Telephone: Business \_\_\_\_\_

Home \_\_\_\_\_

RECEIPT OF THIS APPLICATION WILL NOT BE ACKNOWLEDGED