

BIOLOGICAL CHEMISTRY

*Founded in 1877 by Felix Hoppe-Seyler as
Zeitschrift für Physiologische Chemie*

Felix Hoppe-Seyler (1825–1895) was a pioneer of biochemistry, remembered not only for his discovery of hemoglobin and his contributions to the chemical characterization of many other biological compounds and processes but also for having been the mentor of Friedrich Miescher and Albrecht Kossel. In his preface to the first issue of *Zeitschrift für Physiologische Chemie*, Felix Hoppe-Seyler coined the term *Biochemistry* ('Biochemie') for the then newly emerging discipline.



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ISSN 1431-6730 · e-ISSN 1437-4315 · CODEN BICHF3

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TYPESETTING Compuscript Ltd., Shannon, Ireland

PRINTING Franz X. Stücker Druck und Verlag e.K., Ettenheim
Printed in Germany

COVER ILLUSTRATION

The migratory locust (*Locusta migratoria*), shown on the front cover, is a model animal of hemimetabolous insects, and also a notorious worldwide pest that has historically caused immense damage to agricultural crops. Its behaviors related to locust plagues, such as feeding, aggregation, mating and reproduction, are probably mediated by chemoreception of chemical signals. Understanding the molecular mechanisms underlying these processes will provide the basic knowledge for the exploration of new methods for locust behavioral control as well as the diversity of chemoreception. Previous evidence indicates that chemosensory proteins (CSPs) are involved in insect chemoreception of exogenous chemical signals. In their article on pp. 43–54 in this issue, Zhou et al. have identified 17 CSPs in the female locust reproductive organs, but only one (CSP91) in male organs. The abundance and the number of CSPs in female reproductive organs indicate important roles for these proteins. The presence of a single CSP in male reproductive organs, endowed with selective affinity for some fatty acids and medium-chain alcohols, suggests a function as carrier for semiochemicals.

Image courtesy of Long Zhang, Department of Entomology, China Agricultural University, Beijing, China.



Offenlegung der Inhaber und Beteiligungsverhältnisse gem. § 7a Abs. 1 Ziff. 1, Abs. 2 Ziff. 3 des Berliner Pressegesetzes: Gisela Cram, Rentnerin, Berlin; Dr. Annette Lubasch, Ärztin, Berlin; Elsbeth Cram, Pensionärin, Rosengarten-Alvesen; Margret Cram, Studienrätin i. R., Berlin; Brigitta Duvenbeck, Oberstudienrätin i. R., Bad Homburg; Dr. Georg-Martin Cram, Unternehmens-Systemberater, Stadtbergen; Maike Cram, Berlin; Jens Cram, Mannheim; Renate Tran, Zürich; Gudula Gädeke M.A., Atemtherapeutin/Lehrerin, Tübingen; Martin Gädeke, Einzelunternehmer, Würzburg; John-Walter Siebert, Pfarrer, Oberstenfeld; Dr. Christa Schütz, Ärztin, Mannheim; Sonja Schütz, Berlin; Dorothee Seils, Apothekerin, Stuttgart; Gabriele Seils, Journalistin, Berlin; Ingrid Cram, Betriebsleiterin, Tuxpan / Michoacan (Mexiko); Sabina Cram, Mexico DF (Mexiko); Dr. Clara-Eugenie Seils, Oberstudienrätin i. R., Reppenstedt; Christoph Seils, Journalist, Berlin; Susanne Cram-Gomez, Mexico DF (Mexiko); Silke Cram, Wissenschaftlerin, Mexico DF (Mexiko); Björn Cram, Aachen; Ella Anita Cram, Rentnerin, Berlin; Dr. Sven Fund, geschäftsführender Gesellschafter, Berlin; Walter de Gruyter Stiftung, Berlin.; Berit Cram, Greifswald; Walter Cram-Heydrich, Mexico DF (Mexiko), Juliane Schütz, Berlin; Antje Schütz, Berlin; Valentin Schütz, Berlin

Contents

Reviews

Stefano Fais, Mariantonia Logozzi, Luana Lugini, Cristina Federici, Tommaso Azzarito, Natasa Zarovni and Antonio Chiesi

Exosomes: the ideal nanovectors for biodelivery — 1

Raphaël Trouillon

Biological applications of the electrochemical sensing of nitric oxide: fundamentals and recent developments — 17

Minireview

Bryan T. Richardson, Christopher F. Dibble, Asya L. Borikova and Gary L. Johnson

Cerebral cavernous malformation is a vascular disease associated with activated RhoA signaling — 35

Research Articles/Short Communications

Protein Structure and Function

Xian-Hong Zhou, Li-Ping Ban, Immacolata Iovinella, Li-Jing Zhao, Qian Gao, Antonio Felicioli, Simona Sagona, Giuseppe Pieraccini, Paolo Pelosi, Long Zhang and Francesca Romana Dani

Diversity, abundance, and sex-specific expression of chemosensory proteins in the reproductive organs of the locust *Locusta migratoria manilensis* — 43

Yusuke S. Kato, Fumiaki Yumoto, Hiroyuki Tanaka, Takuya Miyakawa, Yumiko Miyauchi, Daijiro Takeshita, Yoriko Sawano, Takao Ojima, Iwao Ohtsuki and Masaru Tanokura

Structure of the Ca²⁺-saturated C-terminal domain of scallop troponin C in complex with a troponin I fragment — 55

Natacha Zlocowski, Virginia Lorenz, Eric P. Bennett, Henrik Clausen, Gustavo A. Nores and Fernando J. Irazoqui

An acetylation site in lectin domain modulates the biological activity of polypeptide GalNAc-transferase-2 — 69

Ljubica Vojcic, Dragana Despotovic, Karl-Heinz Maurer, Martin Zacharias, Marco Bocola, Ronny Martinez and Ulrich Schwaneberg

Reengineering of subtilisin Carlsberg for oxidative resistance — 79

Mamta Jaiswal, Eyad Kalawy Fansa, Radovan Dvorsky and Mohammad Reza Ahmadian

New insight into the molecular switch mechanism of human Rho family proteins: shifting a paradigm — 89

Cell Biology and Signaling

Markus G. Donner, Stefan A. Topp, Patricia Cebula, Anna Krienen, Thor Gehrmann, Annika Sommerfeld, Roland Reinehr, Arne Macher, Diran Herebian, Ertan Mayatepek, Benedikt H. Pannen, Wolfram T. Knoefel and Dieter Häussinger

HbG200-mediated preinduction of heme oxygenase-1 improves bile flow and ameliorates pericentral downregulation of Bsep and Mrp2 following experimental liver ischemia and reperfusion — 97

Radosław Szmyd, Anna Grazyna Goralczyk, Lukasz Skalniak, Agnieszka Cierniak, Barbara Lipert, Francesca Larese Filon, Matteo Crosera, Julia Borowczyk, Eliza Laczna, Justyna Drukala, Andrzej Klein and Jolanta Jura

Effect of silver nanoparticles on human primary keratinocytes — 113

Rajendra Joshi, Verena Feldmann, Wolfgang Koestner, Claudia Detje, Sven Gottschalk, Hermann A. Mayer, Martin G. Sauer and Jörn Engelmann

Multifunctional silica nanoparticles for optical and magnetic resonance imaging — 125

Proteolysis

Hyesook Yoon, Sachiko I. Blaber, Wu Li, Isobel A. Scarisbrick and Michael Blaber

Activation profiles of human kallikrein-related peptidases by matrix metalloproteinases — 137