

BIOCHEMICAL SOCIETY SYMPOSIA NO. 47

Messenger RNA and Ribosomes in Protein Synthesis

Edited by C. F. PHELPS
and H. R. V. ARNSTEIN

The Biochemical Society's Forty-Seventh Symposium, held in London in December 1981, assembled some of the leading workers in this area of biochemistry. The subjects for discussion were chosen for their timeliness and distinctiveness, and included accounts of ribosome and messenger RNA structure and function, initiation factors, caps and ribonucleoproteins, as well as consideration of the processes leading to the distribution of newly synthesized proteins within the cell. The papers presented are now published in this volume.

List of contents and authors:

Preface. Prokaryotic Ribosome Structure: a Kinetic View by C. G. Kurland. *Structural Aspects of Eukaryotic Ribosomes* by R. A. Cox & J. M. Kelly. *The Secondary Structure of Ribosomal RNA, and its Organization within the Ribosomal Subunits* by R. Brimacombe. *Secondary Structure of Eukaryotic Messenger RNA* by C. P. H. Vary & J. N. Vournakis. *Studies on the Structure and Biogenesis of Yeast Ribosomes* by M. Cannon. *Translation Mechanism in Prokaryotes: Structure and Expression of Escherichia coli Initiation Factor IF3 Gene* by M. Grunberg-Manago, M. Springer, J. A. Plumbridge, S. Blanquet, G. Fayat & C. Sacerdot. *How do Eukaryotic Ribosomes Recognize the Unique AUG Initiator Codon in Messenger RNA?* by M. Kozak. *5'-Terminal Caps, Cap-Binding Proteins and Eukaryotic mRNA Function* by A. J. Shatkin, E. Darzynkiewicz, Y. Furuichi, H. Kroath, M. A. Morgan, S. M. Tahara & M. Yamakawa. *Association of an M_r 50000 Cap Binding Protein with the Cytoskeleton in BHK Cells* by H. Trachsel, A. Zumbé, C. Stähli, M. Hümbelin & N. Sonenberg. *Messenger Ribonucleoprotein Complexes in Gene Expression* by H. R. V. Arnstein. *Mechanism of Protein Translocation Across the Endoplasmic Reticulum* by P. Walter & G. Blobel. *Synthesis and Maturation of the Erythrocyte Anion Transport Protein — an Internal Sequence for Membrane Insertion* by H. F. Lodish & W. A. Braell. *Subject Index.*

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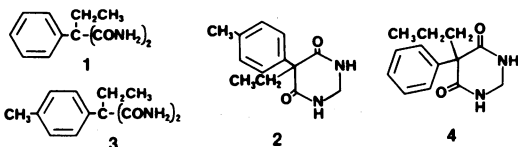
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Anticonvulsant Standards

Primidone

1 (PEMA) is a metabolite; ¹ 2, ^{2,3} 3, and ⁴ 4 are reference standards.

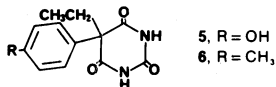


(1) *J. Chromatogr. Sci.* **1978**, *145*, 97. (2) *Therapeutic Drug Monitoring* **1980**, *2*, 397. (3) *Clin. Chem.* **1980**, *26*, 499. (4) Gibbs, E.L., Gibbs Laboratories, Wilmette, IL, personal communication.

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Phenobarbital

5 is a metabolite⁵⁻⁷ and 6 is a reference standard.⁸⁻¹⁰

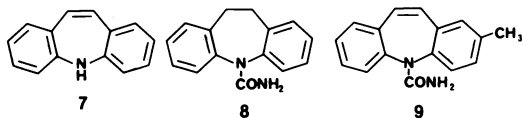


(5) *J. Pharmacol. Exp. Ther.* **1956**, *116*, 326. (6) *Eur. J. Clin. Pharmacol.* **1975**, *9*, 161. (7) *J. Chromatogr. Sci.* **1974**, *12*, 256. (8) *Res. Commun. Chem. Pathol. Pharmacol.* **1976**, *13*, 41. (9) *Clin. Chem.* **1980**, *26*, 1760. (10) *Therapeutic Drug Monitoring* **1980**, *2*, 417.

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Carbamazepine

7 is a minor metabolite;¹¹⁻¹³ 8¹⁴, 13 and 9 (2-methylcarbamazepine)¹⁶ are reference standards.



(11) *Clin. Chim. Acta* **1973**, *43*, 69. (12) *J. Pharm. Pharmacol.* **1973**, *25*, 340. (13) *Anal. Chem.* **1973**, *45*, 1846. (14) *Clin. Pharmacol. Ther.* **1973**, *14*, 827. (15) *J. Chromatogr.* **1978**, *145*, 97. (16) *J. Heterocycl. Chem.* **1979**, *16*, 257.

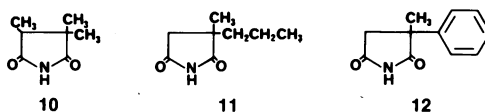
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19,542-1 10,11-Dihydrocarbamazepine (8) 100mg \$9.40
22,042-6 2-Methyl-5*H*-dibenzo[*b,f*]azepine-5-carboxamide (9) 5mg \$31.80

Ethosuximide

10¹⁷⁻²¹ and 11^{21,22} are reference standards.

Methsuximide

12 is a major metabolite.^{23,24}

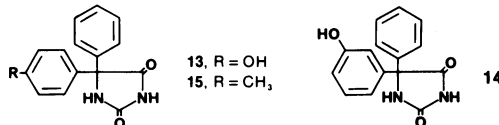


(17) *J. Clin. Pharmacol.* **1969**, *9*, 393. (18) *Clin. Chim. Acta* **1971**, *33*, 87. (19) *Clin. Chem.* **1978**, *24*, 1821. (20) *Ibid.* **1980**, *26*, 1759. (21) *J. Anal. Toxicol.* **1978**, *2*, 39. (22) *Clin. Chem.* **1979**, *25*, 252. (23) *J. Pharm. Sci.* **1973**, *62*, 1820. (24) *Br. J. Pharmacol.* **1972**, *45*, 48.

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5,5-Diphenylhydantoin

13 (HPPH)²⁵⁻²⁸ is a major metabolite; 14²⁵ is a minor metabolite; 15 (MPPH)^{25, 28-30} is a reference standard.

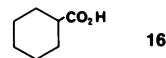


(25) *Therapeutic Drug Monitoring* **1979**, *1*, 11. (26) *J. Chromatogr.* **1973**, *82*, 307. (27) *Clin. Chem.* **1980**, *26*, 835. (28) *Clin. Pharmacol. Ther.* **1973**, *14*, 791. (29) *Clin. Chim. Acta* **1973**, *48*, 135. (30) *Clin. Chem.* **1975**, *21*, 751.

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2-Propylpentanoic acid (di-*n*-propylacetic acid, valproic acid)

16 is a reference standard.³¹



(31) *Pharm. Weekbl.* **1974**, *109*, 1.

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