## Rhamnolipid Biosurfactants Produced by Renibacterium salmoninarum 27BN **During Growth on** *n***-Hexadecane**

Nelly Christova<sup>a,\*</sup>, Borjana Tuleva<sup>a</sup>, Zdravko Lalchev<sup>b</sup>, Albena Jordanova<sup>c</sup>, and Boiidar Jordanov<sup>d</sup>

- <sup>a</sup> Institute of Microbiology, Bulgarian Academy of Sciences, Acad. G. Bonchev str, bl 26,
- 1113 Sofia, Bulgaria. E-mail: nhrist@yahoo.com Biological Faculty, St. Kliment Ohridski University, 8 Dragan Tsankov str., 1164 Sofia, Bulgaria
- <sup>c</sup> Institute of Biophysics, Bulgarian Academy of Sciences, 1113 Sofia, Bulgaria d Institute of Organic Chemistry, Acad. G. Bonchev str, bl 9, 1113 Sofia, Bulgaria
- \* Author for correspondence and reprint requests

Z. Naturforsch. **59 c**, 70–74 (2004); received April 10/May 28, 2003 A new strain Renibacterium salmoninarum 27BN was isolated for its capacity to utilize nhexadecane as sole substrate. Growth on n-hexadecane was accompanied with the production of glycolipid surface active substances detected by surface pressure lowering and emulsifying activity. Glycolipid detection by thin layer chromatography and infrared spectra analyses showed for the first time that Renibacterium salmoninarum 27BN secretes the two rhamnolipids RLL and RRLL typical for Pseudomonas aeruginosa. Growth of Renibacterium salmoninarum 27BN on n-hexadecane depended on the bioavailability of the substrate and the secreted rhamnolipids appeared to be efficient in increasing hexadecane availability for the

Key words: Renibacterium salmoninarum, Biosurfactants, Rhamnolipids

cells.