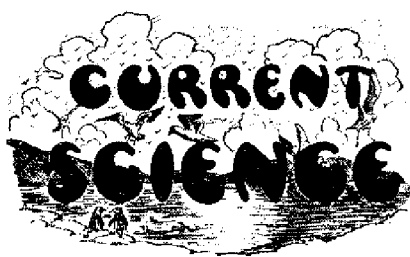


1. Woese, C. R., Kandler, O. and Wheelis, M. L., *Proc. Natl. Acad. Sci. USA*, 1990, **87**, 4576–4579.
2. Belay, N., Johnson, R., Rajagopal, B. S., DeMacario, E. C. and Daniels, L., *Appl. Environ. Microbiol.*, 1988, **54**, 600–603.
3. Savant, D. V., Shouche, Y. S., Prakash, S. and Ranade, D. R., *Int. J. Syst. Evol. Microbiol.*, 2002, **52**, 1081–1087.
4. Woese, C. R. and Fox, G. E., *Proc. Natl. Acad. Sci. USA*, 1977, **74**, 5088–5090.
5. DeLong, E. F., *Proc. Natl. Acad. Sci. USA*, 1992, **89**, 5685–5689.
6. Lin, C. and Miller, T. L., *Arch. Microbiol.*, 1998, **169**, 397–403.
7. Miller, T. L., Wolin, M. J. and Kusel, E., *Syst. Appl. Microbiol.*, 1986, **8**, 234–238.
8. Leadbetter, J. R. and Breznak, J. A., *Appl. Environ. Microbiol.*, 1996, **62**, 3620–3631.
9. Leadbetter, J. R., Crosby, L. D. and Breznak, J. A., *Arch. Microbiol.*, 1998, **169**, 287–292.
10. Miller, T. L. and Lin, C., *Int. J. Syst. Evol. Microbiol.*, 2002, **52**, 819–822.
11. Belay, N., Mukhopadhyay, B., DeMacario, E. C., Galask, R. and Daniels, L., *J. Clin. Microbiol.*, 1990, **28**, 1666–1668.
12. Ferrai, A., Brusa, T., Rutili, A., Canzi, E. and Biavati, B., *Curr. Microbiol.*, 1994, **29**, 7–12.
13. Lepp, P. W., Brinig, M. M., Ouverney, C. C., Palm, K., Armitage, G. C. and Relman, D. A., *Proc. Natl. Acad. Sci. USA*, 2004, **101**, 6176–6181.
14. Dighe, A. S. *et al.*, *BMC Microbiol.*, 2004, **4**, 20.
15. Sprott, G. D., Patel, G. B. and Krishnan, L., *Methods Enzymol.*, 2003, **373**, 155–172.

Kamlesh Jangid, Gurdeep Rastogi, Milind S. Patole and Yogesh S. Shouche*,
Molecular Biology Unit, National Centre
for Cell Science, Pune University Cam-
pus, Ganeshkhind, Pune 411 007, India

*For correspondence.
e-mail: yogesh@nccs.res.in

FROM THE ARCHIVES



Vol. XIII] FEBRUARY 1944 [NO. 2

'Patulin' – A remedy for common cold

Common cold is an ailment costing the nation a heavy price in sickness, un-employment and loss of several man-hours. It often leads to pneumonia, bronchitis and other respiratory complications, and weaken the system and render the body susceptible to other infections. A 100 per cent cure for cold has been sought unsuccessfully for many years and although numerous palliative drugs have been tried from time to time, the results were uniformly disappointing. But of late, we have all read with great interest the announcement of the success of 'Patulin' in the treatment of common cold. If this achievement passes the extensive tests, it will constitute a great contribution.

Prof. Raistrick and his colleagues have isolated a metabolic product of *Penicillium notatum* Bainier and shown its antibacterial properties for both gram-positive and gram-negative organisms. This active inhibitor has now been identified as anhydro-3-hydroxy-methylene-tetrahydro- γ -pyrone-2-carboxylic acid and named 'Patulin'.

The story of 'Patulin' as a remedy for cold is very interesting. An almost accidental observation by Prof. Gye of the Imperial Cancer Research Fund Laboratories suggested that 'Patulin' might be useful in the treatment of common cold. When this new drug was sent to him for study, Prof. Gye had a severe common cold. Knowing its antibacterial properties Prof. Gye tried it on himself. The outcome was encouraging and he repeated the experiment on other members of his staff. Further experiments were conducted by Surgeon-Commander Hopkins at a Naval Establishment in the South East of England. The response to treatment has been encouraging. Hopkins showed that 'Patulin' has no effect in the early period of cold, probably caused by virus infection; but secondary stage which constitutes invasion with gram-positive and gram-negative organism can be entirely prevented. These trials, spread over a period of months, gave good results and a strong balance of evidence in favour of treated group; 57 per cent of treated cases recovering completely within 48 h as compared with only 9.4 per cent of the controls.

The exact mode of action of 'Patulin' in cold is not yet known. The action *in vitro* of 'Patulin' against a number of pathogenic aerobic organisms has been studied; the results show that it possesses bacteriostatic effect; Serum and pus do not interfere. What still lacks is evidence that 'Patulin' has antibacterial activity *in vivo* and this knowledge is necessary for an understanding of the mechanism of its action and its therapeutic scope.

N.N.D.

Science notes and news

Patulin – A Remedy for Common Cold. – Dr N. K. Basu, Pharmacologist, Scientific and Industrial Research, Delhi, writes: *Current Science* in February 1944 has published a short note on the subject. As it might create a wrong impression in the mind of the lay public regarding the wonderful activity of the substance, the following note appearing in the *Industrial Chemist and Chemical Manufacturer*, December 1943, might be placed before them.

'Considerable publicity has been given of recent weeks to this substance Patulin, which the *British Medical Journal* refers to as the antibacterial derivative of *Penicillin patulum* Bairiar, and the controversy has already started. A sample of the preparation had been sent to the laboratories of the Imperial Cancer Research Fund for therapeutic tests in cancer, and W. E. Gye, suffering at the time from a severe cold, tried a solution of it as a nasal douche. Since then a large-scale clinical trial has been carried out at a naval establishment with satisfactory results. But clinical trials at a primary training wing by officers of the R.A.M.C. led them to conclude that Patulin had no demonstrable effect on the 'course of the series of colds that were treated. Here we have one of those perfect instances where experts disagree'. The *British Medical Journal* sums the situation very neatly by suggesting that serious attempts should be set on foot to elucidate the processes involved in the use of a mould preparation to obtain inhibitory action on the growth of viruses; and there possibly the matter can rest until some more work has been carried out. ...