

**Royal Irish Academy Medal Lecture**

**Molecular Mechanisms  
Underlying the Actions of the  
Proinflammatory Cytokine  
Interleukin 1**

L. A. J. O'NEILL

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**Who needs lectures? What are the alternatives? Is problem-based learning the answer?**

Problem-based biochemistry seminars complement, but do not replace, lectures L. JERVIS AND L. M. JERVIS **IS**

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