

By Invitation Only

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The current issue of *Physiology* again reflects the very broad spectrum encompassed by the contemporary discipline of physiology. Although in itself desirable, this broad range of subjects means that it is not exactly easy for a vascular physiologist to comment on one of the articles that, although very interesting, is not closely related to his own research interests. As it happens, while this editorial was being written, the winners of this year's Nobel Prize for Physiology or Medicine, Drs. Barry Marshall and Robin Warren, were announced. As a result, everyone's attention has been redirected to the discovery of the pivotal role of *Helicobacter pylori* in the pathogenesis of gastritis and peptic ulcers. By pure coincidence, one of the articles in the current issue of *Physiology* focuses on the basic mechanisms of how these bacteria manage to survive and grow in the extremely acidic environment of the stomach.

Many articles acknowledging the Nobel

Prize winners Marshall and Warren and the importance of their findings have emphasized how difficult it was for the future Nobel Laureates to convince their colleagues—and the referees of the papers that they submitted—of the validity of their new concept. The notion that a bacterial infection could set the stage for peptic ulcers, gastritis, and even gastric carcinoma flew in the face of longstanding paradigms and seemingly clear concepts. In fact, the degree and universality of the initial scepticism that greets a new discovery—a discovery that in the end proves to be correct—may be an indication of just how revolutionary the discovery was.

It is interesting to speculate how quickly the work of Marshall and Warren would have triggered an invitation from the editors of *Physiology*—had the journal existed then—to write a review. Would the *H. pylori* hypothesis have been considered too speculative for some time? Would the

editorial board have appreciated the potential mechanistic aspects of the hypothesis, which have since been so nicely demonstrated? Sometimes, it seems, the significance of new work and concepts can only be evaluated at a much later date. Fortunately, it is not the task of our editorial board to identify, early on, future Nobel Prize awardees. Our challenge is to identify new fields that, on the one hand, are exciting and, on the other, are sufficiently mature that we can be sure they are already standing on a solid foundation. By our selection of articles, which are written “by invitation only,” we editors hope to offer the readers a good overview of emerging concepts, new developments, and state-of-the-art reviews in the many fields of physiology. Those authors who are invited have obviously already won some decisive battles with the referees and have attained a high stature in their own fields. Time will tell just how many future Nobel Prize winners our editorial board managed to invite at early stages in the development of their discoveries. ■