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Cracking cell signalling by sharing - not publishing

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LONDON, 13 September. A new international research programme that hopes to solve the riddle of how cells interact with each other is set to test the notion that scientists must publish their findings or risk perishing their chances of receiving future funding grants or promotion. [The Alliance for Cellular Signalling](#) (AFCS) will encourage investigators to share their findings and new discoveries by posting them directly onto a special 'molecule page' that links into the AFCS website. This, says Dr Alfred Gilman, chairman of the AFCS steering committee, will be "equivalent to publishing in a scholarly journal" and will give researchers around the world the chance to comment on the findings, theories and discoveries long before the work would have been published by a journal. Gilman hopes that this novel approach will not only "enable the solution of a major problem in biomedical research" but also "facilitate the next evolutionary stage of integrative biomedical medicine."

The AFCS, launched last week, is being supported by a \$25 million grant from the US National Institute of General Medical Sciences (NIGMS) together with backing from private industry. Fifty investigators from twenty universities in North America and the UK will form the core contingent of the research program together with many of the world's cell signalling community who are invited to join the AFCS program. The research effort in the AFCS's six laboratories will concentrate on examining how modular signal pathways interact with each other. In particular, the researchers will focus on two cells that display interesting and important G-protein related phenomena: the B lymphocyte and the cardiac myocyte. Gilman, who was awarded a Nobel Prize in 1994 for his work with G-proteins, will head the project from the University of Texas Southwestern Medical Center at Dallas. The ultimate result, suggests Gilman, could be the development of a 'virtual cell', a computer program that would mimic the function of a cell. "A virtual cell would be a wonderful way to understand what the optimal point would be to place a drug to achieve a specific goal in a specific patient in a specific kind of disease," says Gilman.

As research from the laboratories is completed and validated by the steering community, new discoveries, findings or theories will be posted onto a 'molecule page' linked to the AFCS website through Internet2 - the new university-based Internet that will allow the rapid transmission of large amounts of information. The AFCS is hoping that researchers will come to see having their results posted on a molecule page as being equivalent to publishing in an academic journal. The investigators and members of AFCS will then communicate through the website, using discussion groups and video conferences to discuss the findings. In posting to the molecule pages, investigators and their universities will instantly relinquish any intellectual property rights they may have for the work. In order to guarantee to researchers that their professional careers will not be damaged by relinquishing the right to publish in a journal, Gilman says that the steering committee will provide documentation to Department Chairs, Deans and Promotion Committees that validates the work of an individual investigator. All of the work published on molecule pages will include the protocols used for each experiment and any interpretation or speculation will be clearly marked as such. Gilman is convinced the cell biology community will be keen to become involved in the AFCS, "Because they are excited about contributing a fraction of their time to a collaborative attempt to answer questions that they do not believe can be answered in conventional ways."

References

1. The Alliance for Cellular Signalling, [<http://afcs.swmed.edu/>]