

Book Reviews

Methods in Molecular Biology. Volume 41. Signal Transduction Protocols. Edited by David A. Kendal and Stephen J. Hill. Humana Press, Totowa, NJ. 1995. xi + 305 pp. 17 × 23 cm. ISBN 0-89603-298-1. \$64.50.

When I was a graduate student, I always dreaded that moment when my advisor walked in, grinning mischievously, and said "by the way, why don't we measure this". Usually, "measuring this" meant a week in the bowels of the library gathering methodologies, another week building a chart of "identical" methods that were just so subtly different, at least two weeks searching catalogs for supplies and another month or so of frustration as I teased the assay toward reliability (that was, of course, if I chose not to sleep during this period). As a postdoc, it occurred to me it was much simpler to travel to the other fellow's laboratory to learn the technique firsthand, an approach that often conflicted with funding realities and was of some concern to my advisor. As a scientist, I became aware it was easy still to find a graduate student.

Signal Transduction Protocols squarely addresses the needs of those students. Furthermore, the book would be useful to any investigator engaged in pharmacological, neurochemical, biochemical, or molecular biological research who needs to employ a method or assay that might be slightly beyond their range of expertise or experience.

Each of the 24 up-to-date chapters (43 contributors) is written by a knowledgeable and experienced scientist fully familiar with the details of the particular method. Contributions opens with a brief introduction on the importance of the particular transduction pathway, and this is followed by a concise listing of supplies and equipment necessary for the procedure. The third

section is step-by-step walk through assay methodology. Section four is delightful (entitled "Notes") and includes all those "between the lines" comments you would like to see in a journal description of methodology but never will.

By way of specifics, the book does a very nice job of covering the most frequently studied transduction pathways. Included among the chapters are (1) procedures to measure cAMP, cGMP, receptors (binding, autoradiography and solubilization), and multiple enzymes (GTPase, adenylate cyclase, cAMP and cGMP dependent protein kinases, cyclic nucleotide phosphodiesterase, phospholipase D and A₂, protein kinase C, calcium/calmodulin dependent protein kinase II), (2) several contributions addressing the inositol phosphate and DAG pathways, as well as chapters on (3) Ca²⁺ flux, (4) single cell imaging, (5) nitric oxide, and (6) *in situ* hybridization. The index of 5 pages is small but adequate to the job given the clear scope of each contribution. References number between 10 and 20 per chapter, are presented in full format (again saving trips to the library), and are limited to citations necessary to understand the background of the method.

In short, *Signal Transduction Protocols* would be a useful addition to any laboratory engaged in the study of second messenger systems. If it gets put in the department library, it should be placed close to the copy machine. Otherwise, it will soon be missing, probably to be found on some graduate student's desk.

John Wm. Ferkany

NovaScreen

7170 Standard Drive

Hanover, Maryland 21076-1334

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