〔Biochem. J., **287**, 917-924 (1992)〕 [Lab. of Biology]

Mitogen-induced tyrosine phosphorylation of 41 kDa and 43 kDa proteins.

MICHIAKI KOHNO*, YUJI CHATANI, EIKO TANAKA,
AKIRA HATTORI, NAOMI NISHIZAWA

We have examined the possible involvement of pertussis toxin (PT)-sensitive GTP-binding protein and protein kinase C (PKC) in mitogen-induced tyrosine phosphorylation of the 41 kDa and 43 kDa cytosol proteins using PT-pretreated (inactivation of PT-sensitive GTP-binding protein) or phorbol 12-myristate 13-acetate (PMA)-pretreated (depletion of PKC) mouse fibroblasts. The effects of the inactivation of PT-sensitive GTP-binding protein and the depletion of PKC on mitogen-stimulated tyrosine phosphorylation of the proteins were similar and varied significantly and systematically in response to growth factors.

〔Cell Growth Differ., **3**, 355-361 (1992)〕 [Lab. of Biology]

Tissue-specific Expression of Two Isoforms of Chicken Fibroblast Growth Factor Receptor, *bek* and *Cek* 3.

MASAHIRO SATO*, TARO KITAZAWA, ATSUSHI KATSUMATA, MASAFUMI MUKAMOTO,
TOSHIYA OKADA, TATSUO TAKEYA

Chicken *bek* and *Cek* 3 are isoforms of the fibroblast growth factor receptor which consist of primary structures that are identical except for a variation within the last of three immunoglobulin-like repeats in the ligand-binding domain. Northern blot analysis using isoform-specific probes revealed that the *bek* mRNA is expressed exclusively in lung, whereas the *Cek* 3 mRNA is expressed prominently in brain and weakly in lung. We further localized these transcripts in brain and lung by in situ hybridization histochemistry.

〔J. Chem. Soc., Chem. Commun., 1586-1587 (1992)〕 [Lab. of Inst. of Manufacturing Pharmacy]

The First Successful Polar Cycloaddition of 1-Benzothiopyranylium Salts with Conjugated Dienes and Transformation of the Cycloadducts.

HIROSHI SHIMIZU*, SHOJIRO MIYAZAKI, TADASHI KATAOKA, MIKIO HORI

A variety of 3- and/or 4-substituted 1-benzothiopyranylium salts underwent polar cycloaddition with conjugated dienes such as unsubstituted or 2- and/or 3-substituted buta-1,3-dienes to give benzo-fused bicyclic sulfonium salts having sulfur at a bridgehead position in good yields. The cycloaddition proceeded regio- and stereospecifically. The reactions of the cycloadduct bearing a cyano group at γ-position to sulfur with various bases were performed with a view to its ring transformation. Strong and weak bases both caused a similar ring transformation to give a spiro compound and a peroxide, the latter compound as a diastereoisomeric mixture. The radical mechanism for the formation of these two products was proposed.