

**Research Communications**

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| Molecular cloning of a rat $\kappa$ opioid receptor reveals sequence similarities to the $\mu$ and $\delta$ opioid receptors | Y. Chen, A. Mestek, J. Liu and L. Yu   | 625–628 |
| Molecular cloning and expression of a rat $\kappa$ opioid receptor   | S. Li, J. Zhu, C. Chen, Y.-W. Chen, J.K. Deriel, B. Ashby and L.-Y. Liu-Chen | 629–633 |
| Stable correction of maple syrup urine disease in cells from a Mennonite patient by retroviral-mediated gene transfer        | H. Koyata, R.P. Cox and D.T. Chuang  | 635–639 |
| Retinoic acid regulates ornithine decarboxylase gene expression at the transcriptional level                                 | Y. Mao, J.A. Gurr and N.J. Hickok  | 641–644 |

**Research Papers**

**Proteins**

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| Glucosamine-6-phosphate deaminase from <i>Escherichia coli</i> has a trimer of dimers structure with three intersubunit disulphides   | M.M. Altamirano, J.A. Plumbridge, H.A. Barba and M.L. Calcagno                  | 645–648 |
| Post-translational processing of chromogranin A: differential distribution of phosphorylated variants of pancreastatin and fragments 248–313 and 297–313 in bovine pancreas and ileum | A. Watkinson, M. Rogers and G.J. Dockray  | 649–654 |
| Changes in molar volume and heat capacity of actin upon polymerization  | F. Quirion and C. Gicquaud  | 671–672 |
| Purification and biochemical characterization of recombinant human placental growth hormone produced in <i>Escherichia coli</i>   | A. Igout, J. Van Beeumen, F. Frankenne, M.-L. Scippo, B. Devreese and G. Hennen | 719–724 |
| Interaction of thrombospondin with platelet glycoproteins GPI <sub>a</sub> -II <sub>a</sub> and GPII <sub>b</sub> -III <sub>a</sub>   | M.A. Kowalska and G.P. Tuszynski  | 725–730 |
| Structure and biological activity of glucagon and glucagon-like peptide from a primitive bony fish, the bowfin ( <i>Amia calva</i> )  | J.M. Conlon, J.H. Youson and T.P. Mommsen                                       | 857–861 |
| Expression of the glycosylphosphatidylinositol-linked complement-inhibiting protein CD59 antigen in insect cells using a baculovirus vector   | A. Davies and B.P. Morgan   | 889–896 |

**Enzymes**

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| Interactions between active-site-serine $\beta$ -lactamases and mechanism-based inactivators: a kinetic study and an overview                              | A. Matagne, M.-F. Ghuysen and J.-M. Frère                           | 705–711 |
| Met-8 of the $\beta_1$ -bungarotoxin phospholipase A <sub>2</sub> subunit is essential for the phospholipase A <sub>2</sub> -independent neurotoxic effect | S.-T. Chu, C.-C. Chu, C.-C. Tseng and Y.-H. Chen                    | 713–718 |
| Dissociation of the tetrameric phosphoglycerate mutase from yeast by a mutation in the subunit contact region  | M.F. White, L.A. Fothergill-Gilmore, S.M. Kelly and N.C. Price      | 743–748 |
| Structural features responsible for kinetic thermal stability of a carboxypeptidase from the archaeobacterium <i>Sulfolobus solfataricus</i>               | A. Villa, L. Zecca, P. Fusi, S. Colombo, G. Tedeschi and P. Tortora | 827–831 |
| Substrate-induced inactivation of the OXA2 $\beta$ -lactamase  | P. Ledent and J.-M. Frère   | 871–878 |

**Carbohydrates and lipids**

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| Farnesol inhibits phosphatidylcholine biosynthesis in cultured cells by decreasing cholinephosphotransferase activity  | P.A. Voziyan, C.M. Goldner and G. Melnykovych | 757–762 |
| Site-directed removal of N-glycosylation sites in the bovine cation-dependent mannose 6-phosphate receptor: effects on ligand binding, intracellular targeting and association with binding immunoglobulin protein | Y. Zhang and N.M. Dahms                       | 841–848 |

**Gene structure and expression**

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| A fibroblast protein binds the 3'-untranslated region of pro- $\alpha$ 1(I) collagen mRNA | A. Määttä and R.P.K. Penttinen | 691–698 |
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| Methylation of the regulatory region of the mitochondrial 3-hydroxy-3-methylglutaryl-CoA synthase gene leads to its transcriptional inactivation                          | J. Ayté, G. Gil-Gómez and F.G. Hegardt  | <b>807–812</b> |
| <b>Regulation of metabolism</b>   |   |                |
| Glucokinase activity in isolated islets from obese <i>fa/fa</i> Zucker rats   | C.B. Chan   | <b>673–677</b> |
| Diurnal patterns of cardiac and hepatic pyruvate dehydrogenase complex activity in gold–thiogluco-obese mice  | J.M. Bryson, G.J. Cooney, V.R. Wensley, S.C. Blair and I.D. Caterson  | <b>731–734</b> |
| Stimulation by paraquat of microsomal and cytochrome P-450-dependent oxidation of glycerol to formaldehyde  | L.A. Clejan and A.I. Cederbaum  | <b>781–786</b> |
| Evidence for allosteric regulation of succinyl-CoA synthetase   | H.-D. Um and C. Klein   | <b>821–826</b> |
| <i>myo</i> -Inositol transport and metabolism in fetal-bovine aortic endothelial cells  | G.T. Berry, R.A. Johanson, J.E. Prantner, B. States and J.R. Yandrasitz   | <b>863–869</b> |
| <b>Membranes and bioenergetics</b>  |   |                |
| CoA and fatty acyl-CoA derivatives mobilize calcium from a liver reticular pool   | R. Fulceri, A. Gamberucci, G. Bellomo, R. Giunti and A. Benedetti   | <b>663–669</b> |
| Spontaneously hypertensive rats and platelet Ca <sup>2+</sup> -ATPases: specific up-regulation of the 97 kDa isoform  | B. Papp, E. Corvazier, C. Magnier, T. Kovács, N. Bourdeau, S. Lévy-Tolédano, R. Bredoux, B. Lévy, P. Poitevin, A.M. Lompré, F. Wuytack and J. Enouf | <b>685–690</b> |
| Dynamics of connexin43 phosphorylation in pp60 <sup>v-src</sup> -transformed cells  | G.S. Goldberg and A.F. Lau  | <b>735–742</b> |
| Regulation of the glutamate transporter by amino acid deprivation and associated effects on the level of EAAC1 mRNA in the renal epithelial cell line NBL-1               | S. Plakidou-Dymock and J.D. McGivan   | <b>749–755</b> |
| F <sub>1</sub> F <sub>0</sub> -ATP synthase from bovine heart mitochondria: development of the purification of a monodisperse oligomycin-sensitive ATPase                 | R. Lutter, M. Saraste, H.S. van Walraven, M.J. Runswick, M. Finel, J.F. Deatherage and J.E. Walker  | <b>799–806</b> |
| <b>Receptors and signal transduction</b>  |   |                |
| Attenuation of G <sub>s</sub> α coupling efficiency in brown-adipose-tissue plasma membranes from cold-acclimated hamsters  | P. Svoboda, L. Unelius, B. Cannon and J. Nedergaard   | <b>655–661</b> |
| Characterization of a complement-fragment-C5a-stimulated calcium-influx mechanism in U937 monocytic cells   | P.N. Monk and L.J. Partridge  | <b>679–684</b> |
| Inositol phospho-oligosaccharides from rat fibroblasts and adipocytes stimulate 3-O-methylglucose transport   | M. Kellerer, F. Machicao, I. Berti, B. Sixt, J. Mushack, E. Seffer, L. Mosthaf, A. Ullrich and H.U. Häring  | <b>699–704</b> |
| Epidermal growth factor and phorbol myristate acetate increase expression of the mRNA for cytosolic phospholipase A <sub>2</sub> in glomerular mesangial cells            | A.P. Maxwell, H.J. Goldberg, A.H.-N. Tay, Z.-G. Li, G.S. Arbus and K.L. Skorecki  | <b>763–766</b> |
| Nerve growth factor activates calcium-insensitive protein kinase C-ε in PC-12 rat pheochromocytoma cells  | M. Ohmichi, G. Zhu and A.R. Saltiel   | <b>767–772</b> |
| The substrate specificity of brain microsomal phospholipase D   | J. Horwitz and L.L. Davis   | <b>793–798</b> |
| A 60 kDa polypeptide of skeletal-muscle sarcoplasmic reticulum is a calmodulin-dependent protein kinase that associates with and phosphorylates several membrane proteins | J.J. Leddy, B.J. Murphy, Qu-Yi, J.-P. Doucet, C. Pratt and B.S. Tuana   | <b>849–856</b> |
| Reactive oxygen species mediate phorbol ester-regulated tyrosine phosphorylation and phospholipase A <sub>2</sub> activation: potentiation by vanadate                    | U. Zor, E. Ferber, P. Gergely, K. Szücs, V. Dombrádi and R. Goldman   | <b>879–888</b> |
| <b>Cell biology and development</b>   |   |                |
| Complement-induced Ca <sup>2+</sup> influx in cultured fibroblasts is decreased by the calcium-channel antagonist nifedipine or by some bivalent inorganic cations        | P. Newsholme, A.A. Adogu, M.A. Soos and C.N. Hales  | <b>773–779</b> |
| The presence and subcellular distribution of sterol carrier protein 2 in embryonic-chick tissues  | M.P. Reinhart, S.J. Avart, T.O. Dobson and T.A. Foglia  | <b>787–792</b> |
| Post-translational processing of progastatin: inhibition of cleavage, phosphorylation and sulphation by brefeldin A   | A. Varro and G.J. Dockray   | <b>813–819</b> |
| Intact transmembrane isoforms of the neural cell adhesion molecule are released from the plasma membrane  | M. Olsen, L. Krog, K. Edvardsen, L.T. Skovgaard and E. Bock   | <b>833–840</b> |

**BJ Letters**

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| Application of the principle of microscopic reversibility to the steady-state rate equation for a general mechanism for an enzyme reaction with substrate and modifier | M.J. Selwyn                               | <b>897–898</b> |
| Some classical errors in the kinetic analysis of enzyme reactions  | K. Brocklehurst and C.M. Topham           | <b>898–899</b> |
| Differences in 2-oxoglutarate dehydrogenase regulation in liver and kidney   | J.G. McCormack                            | <b>899–900</b> |
| Differences in 2-oxoglutarate dehydrogenase regulation in liver and kidney: a reply  | K.F. LaNoue, B.C. Smith and J.Y. Cheung   | <b>900–901</b> |
| Bacterial oxidative-stress substance is 2-C-methyl-D-erythritol 2,4-cyclopyrophosphate   | D. Ostrovsky, A. Shashkov and A. Sviridov | <b>901–902</b> |

**Corrections**

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| Molecular-dynamics investigation of molecular flexibility in ligand binding<br>by B. Mao (volume 288, pages 109–116, 1992)   |  | <b>903</b> |
| Biotin binders selected from a random peptide library expressed on phage<br>by I. Saggio and R. Laufer (volume 293, pages 613–616, 1993)   |  | <b>903</b> |
| Differential induction of phosphatidylcholine hydrolysis, diacylglycerol formation and protein kinase C activation by epidermal growth factor and transforming growth factor- $\alpha$ in normal human skin fibroblasts and keratinocytes<br>by N.J. Reynolds, H.S. Talwar, J.J. Baldassare, P.A. Henderson, J.T. Elder, J.J. Voorhees and G.J. Fisher (volume 294, pages 535–544, 1993) |  | <b>903</b> |
| Stereoselectivity of Ins(1,3,4,5) $P_4$ recognition sites: implications for the mechanism of the Ins(1,3,4,5) $P_4$ -induced $Ca^{2+}$ mobilization<br>by R.A. Wilcox, R.A.J. Challiss, G. Baudin, A. Vasella, B.V.L. Potter and S.R. Nahorski (volume 294, pages 191–194, 1993)   |  | <b>904</b> |