

- P.J. Characteristics and properties of osteocytes in culture. *J. Bone Miner. Res.* 1994; **9**: 1697-1704.
38. Klein-Nulend, J., Van der Plas, A., Semeins, C.M., Ajubi, N.E., Frangos, J.A., Nijweide, P.J., Burger, E.H. Sensitivity of osteocytes to biomechanical stress in vitro. *FASEB J.* 1995; **9**: 441-445.
39. Duncan, R.L., Turner, C.H. Mechanotransduction and functional response of bone mechanical strain. *Calcif. Tissue Int.* 1995; **57**: 344-358.
40. Burger, E.H., Klein-Nulend, J. Mechanotransduction in bone-role of the lacuno-canalicular network. *FASEB J.* 1999; **13**: S101-S112.
41. Weinbaum, S., Cowin, S.C., Zeng, Y. A model for the excitation of osteocytes by mechanical loading-induced bone fluid shear stresses. *J. Biomech.* 1994; **27**: 339-360.
42. Palumbo, C., Palazzini, S., Marotti, G. Morphological study of intercellular junction during osteocyte differentiation. *Bone* 1990; **11**: 401-406.
43. Doty, S.B. Morphological evidence of gap junction between bone cells. *Calcif. Tissue Int.* 1981; **33**: 509-512.
44. Kufahl, R.H., Saha, S. A theoretical model for stress-generated fluid flow in the canaliculi-lacunae network in bone tissue. *J. Biomech.* 1990; **23**: 171-180.
45. Somjen, D., Binderman, I., Berger, E., Harell, A. Bone remodeling induced by physical stress is prostaglandin E₂ mediated. *Biochem. Biophys. Acta* 1980; **627**: 91-100.
46. Yeh, C., Rodan, A. Tensile forces enhance PGE synthesis in osteoblasts grown on collagen ribbon. *Calcif. Tissue Int.* 1986; **36**: S67-S71.
47. Thomas, G.P., El Haj, A.J. Bone marrow stromal cells are load responsive in vitro. *Calcif. Tissue Int.* 1996; **58**: 101-108.
48. Rawlinson, S.C.F., Pitsillides, A.A., Lanyon, L.E. Involvement of different ion channels in osteoblasts' and osteocytes' early responses to mechanical strain. *Bone* 1996; **19**: 609-614.
49. Reich, K.M., Frangos, J.A. Effect of flow prostaglandin E₂ and inositol triphosphate levels in osteoblasts. *Am. J. Physiol.* 1991; **261**: C428-C432.
50. Hung, C.T., Pollack, S.R., Reilly, T.M., Brighton, C.T. Real-time calcium responses of cultured bone cells to fluid flow. *Clin. Orthop. Rel. Res.* 1995; **313**: 256-269.
51. Binderman, I., Zor, U., Kaye, A.M., Shimshoni, Z., Harell, A., Somjen, D. The transduction of mechanical force into biochemical events in bone cells may involve activation of phospholipase A₂. *Calcif. Tissue Int.* 1988; **42**: 261-266.
52. Hung, C.T., Allen, F.D., Pollack, S.R., Brighton, C.T. Intracellular Ca²⁺ stores and extracellular Ca²⁺ are required in the real-time Ca²⁺ response of bone cells experiencing fluid flow. *J. Biomech.* 1996; **29**: 1141-1147.
53. El Haj, A.J., Minter, S.L., Simon, M., Rawlinson, C.F., Suswillo, R., Lanyon, L. Cellular response to mechanical loading in vitro. *J. Bone Min. Res.* 1990; **5**: 223-231.
54. Reich, K.M., Gay, C.V., Frangos, J.A. Fluid shear stress as a mediator of osteoblast cyclic adenosine monophosphate production. *J. Cell. Physiol.* 1990; **143**: 100-104.
55. Bikle, D.D., Harris, J., Halloran, B.P., Roberts, C.T., Leroith, D., Morey-Holton, P. Expression of the gene for insulin-like growth factors and their receptors in bone during skeletal growth. *Am. J. Physiol.* 1994; **267**: E278-E286.
56. Lean, J.M., Jagger, C.J., Chamber, T.J., Chow, J.W.M. Increased insulin-like growth factor I mRNA expression in rat osteocytes in response to mechanical stimulation. *Am. J. Physiol.* 1995; **268**: E318-E327.
57. Hock, J.M., Centralla, M., Canalis, E. Insulin-like growth factor (IGF-I) has independent effects on bone matrix formation and cell replication. *Endocrin.* 1988; **122**: 254-260.
58. Jones, D.B., Bingmann, D. How do osteoblasts respond to mechanical stimulation? *Cell Mater.* 1991; **1**: 329-340.
59. Jones, D.B., Nolte, H., Scholubber, J.G., Turner, E., Veltel, D. Biochemical signal transduction of mechanical strain in osteoblast-like cells. *Biomaterials* 1991; **12**: 101-110.
60. Brighton, C.T., Fisher, J.R.S., Levine, S.E., Corsetti, J.R., Reilly, T., Landsman, A.S., Williams, J.L., Thibault, L.E. The biochemical pathway mediating the proliferative response of bone cells to a mechanical stimulus. *J. Bone Joint Surg.* 1996; **78A**: 1337-1347.
61. Smith, E.L., Gilligan, C. Dose-response relationship between physical loading and mechanical competence of bone. *Bone* 1996; **18**: 45S-50S.
62. Jones, D., Leivseth, G., Tenbosch, J. Mechano-reception in osteoblast-like cells. *Biochem. Cell Biol.* 1995; **73**: 525-534.
63. Berridge, M.J. Inositol triphosphate and diacylglycerol as second messengers. *Biochem. J.* 1984; **220**: 345-360.