



**Cover:** A total internal reflection micrograph taken during mesenchymal stem cell osteogenic differentiation. The picture displays a sequence of frames at set time intervals to record the distribution and size of focal adhesions after the stimulation of osteogenesis using induction medium. Cell spreading is reflected by the different colours with the sequence of light blue, purple, dark blue, yellow, green and red. See article by I-Husan Huang et al. (pp. 4186–4200).

**CELL SCIENCE AT A GLANCE**

4103 Arfs at a Glance

Jackson, C. L. and Bouvet, S.

**COMMENTARY**

4111 The role of mitotic kinases in coupling the centrosome cycle with the assembly of the mitotic spindle

Wang, G., Jiang, Q. and Zhang, C.

**SHORT REPORTS**

4123 Degradation of S-RNase in compatible pollen tubes of *Solanum chacoense* inferred by immunogold labeling

Boivin, N., Morse, D. and Cappadocia, M.

4128 Proteomic analysis of mammalian sperm cells identifies new components of the centrosome

Firat-Karalar, E. N., Sante, J., Elliott, S. and Stearns, T.

**RESEARCH ARTICLES**

4134 PARP1-mediated necrosis is dependent on parallel JNK and Ca<sup>2+</sup>/calpain pathways

Douglas, D. L. and Baines, C. P.

4146 F-BAR domain protein Rga7 collaborates with Cdc15 and Imp2 to ensure proper cytokinesis in fission yeast

Martín-García, R., Coll, P. M. and Pérez, P.

4159 Mechanosensitive ATP release from hemichannels and Ca<sup>2+</sup> influx through TRPC6 accelerate wound closure in keratinocytes

Takada, H., Furuya, K. and Sokabe, M.

4172 A PKA–ezrin–Cx43 signaling complex controls gap junction communication and thereby trophoblast cell fusion

Pidoux, G., Gerbaud, P., Dompierre, J., Lygren, B., Solstad, T., Evain-Brion, D. and Taskén, K.

4186 GEF-H1 controls focal adhesion signaling that regulates mesenchymal stem cell lineage commitment

Huang, I-H., Hsiao, C.-T., Wu, J.-C., Shen, R.-F., Liu, C.-Y., Wang, Y.-K., Chen, Y.-C., Huang, C.-M., del Álamo, J. C., Chang, Z.-F., Tang, M.-J., Khoo, K.-H. and Kuo, J.-C.

4201 Tricellulin regulates junctional tension of epithelial cells at tricellular contacts through Cdc42

Oda, Y., Otani, T., Ikenouchi, J. and Furuse, M.

4213 A crucial role for β2 integrins in podosome formation, dynamics and Toll-like-receptor-signaled disassembly in dendritic cells

Gawden-Bone, C., West, M. A., Morrison, V. L., Edgar, A. J., McMillan, S. J., Dill, B. D., Trost, M., Prescott, A., Fagerholm, S. C. and Watts, C.

4225 STAG2 promotes error correction in mitosis by regulating kinetochore–microtubule attachments

Kleyman, M., Kabeche, L. and Compton, D. A.

4234 Promiscuous methionyl-tRNA synthetase mediates adaptive mistranslation to protect cells against oxidative stress

Lee, J. Y., Kim, D. G., Kim, B.-G., Yang, W. S., Hong, J., Kang, T., Oh, Y. S., Kim, K. R., Han, B. W., Hwang, B. J., Kang, B. S., Kang, M.-S., Kim, M.-H., Kwon, N. H. and Kim, S.

4246 The guanine-exchange factor Ric8a binds to the Ca<sup>2+</sup> sensor NCS-1 to regulate synapse number and neurotransmitter release

Romero-Pozuelo, J., Dason, J. S., Mansilla, A., Baños-Mateos, S., Sardina, J. L., Chaves-Sanjuán, A., Jurado-Gómez, J., Santana, E., Atwood, H. L., Hernández-Hernández, Á, Sánchez-Barrena, M.-J. and Ferrús, A.

4260 Progressive quality control of secretory proteins in the early secretory compartment by ERp44

Sannino, S., Anelli, T., Cortini, M., Masui, S., Degano, M., Fagioli, C., Inaba, K. and Sitia, R.

4270 The Sec62–Sec63 translocon facilitates translocation of the C-terminus of membrane proteins

Jung, S.-j., Kim, J. E. H., Reithinger, J. H. and Kim, H.

4279 Moonlighting cell-surface GAPDH recruits apotransferrin to effect iron egress from mammalian cells

Sheokand, N., Malhotra, H., Kumar, S., Tillu, V. A., Chauhan, A. S., Raje, C. I. and Raje, M.

4292 Coronin-1C and RCC2 guide mesenchymal migration by trafficking Rac1 and controlling GEF exposure

Williamson, R. C., Cowell, C. A. M., Hammond, C. L., Bergen, D. J. M., Roper, J. A., Feng, Y., Rendall, T. C. S., Race, P. R. and Bass, M. D.

4308 Differences in binding to the ILK complex determines kindlin isoform adhesion localization and integrin activation

Huet-Calderwood, C., Brahme, N. N., Kumar, N., Stiegler, A. L., Raghavan, S., Boggon, T. J. and Calderwood, D. A.

4322 Dynamics of the circadian clock protein PERIOD2 in living cells

Öllinger, R., Korge, S., Korte, T., Koller, B., Herrmann, A. and Kramer, A.

**CORRECTION**

4329 NF-κB controls axonal regeneration and degeneration through cell-specific balance of RelA and p50 in the adult CNS

Haenold, R., Weih, F., Herrmann, K.-H., Schmidt, K.-F., Krempler, K., Engelmann, C., Nave, K.-A., Reichenbach, J. R., Löwel, S., Witte, O. W. and Kretz, A.