



Cover: Fluorescence microscopy images for integrin binding (green) to fibronectin (red) adhesive clusters with different geometrical configurations. Nanopatterning of fibronectin islands reveals a nanoscale area threshold below which no stable integrin–fibronectin clusters are formed. Nanoisland area, and not the number of nanoislands or total adhesive area, controlled integrin–fibronectin clustering and force generation. See article by S. R. Coyer et al. (pp. 5110–5123).

Volume 125 (21) November 1, 2012

Cell Science at a Glance

4945 **Nuclear actin and myosins at a glance.** de Lanerolle, P.

Commentaries

4951 **Centrosome positioning in vertebrate development.** Tang, N. and Marshall, W. F.

4963 **PGC1 α and mitochondrial metabolism – emerging concepts and relevance in ageing and neurodegenerative disorders.** Austin, S. and St-Pierre, J.

Short Reports

4973 **The SH2-domain-containing inositol 5-phosphatase (SHIP) limits the motility of neutrophils and their recruitment to wounds in zebrafish.** Lam, P.-y., Yoo, S. K., Green, J. M. and Huttenlocher, A.

4979 **Karyopherin-independent spontaneous transport of amphiphilic proteins through the nuclear pore.** Kumeta, M., Yamaguchi, H., Yoshimura, S. H. and Takeyasu, K.

4985 **Visualization of the moment of mouse sperm–egg fusion and dynamic localization of IZUMO1.** Satouh, Y., Inoue, N., Ikawa, M. and Okabe, M.

4991 **Anoctamins are a family of Ca²⁺-activated Cl[−] channels.** Tian, Y., Schreiber, R. and Kunzelmann, K.

4999 **Filopodium retraction is controlled by adhesion to its tip.** Romero, S., Quatela, A., Bornschlög, T., Guadagnini, S., Bassereau, P. and Tran Van Nhieu, G.

Research Articles

5005 **Cingulin is dispensable for epithelial barrier function and tight junction structure, and plays a role in the control of claudin-2 expression and response to duodenal mucosa injury.** Guillemot, L., Schneider, Y., Brun, P., Castagliuolo, I., Pizzuti, D., Martines, D., Jond, L., Bongiovanni, M. and Citi, S.

5015 **SDF and GABA interact to regulate axophilic migration of GnRH neurons.** Casoni, F., Ian Hutchins, B., Donohue, D., Fornaro, M., Condie, B. G. and Wray, S.

5026 **Optineurin mediates a negative regulation of Rab8 by the GTPase-activating protein TBC1D17.** Vaibhava, V., Nagabhushana, A., Chalasani, M. L. S., Sudhakar, C., Kumari, A. and Swarup, G.

5040 **GTF2IRD2 from the Williams–Beuren critical region encodes a mobile-element-derived fusion protein that antagonizes the action of its related family members.** Palmer, S. J., Taylor, K. M., Santucci, N., Widagdo, J., Chan, Y.-K. A., Yeo, J.-L., Adams, M., Gunning, P. W. and Hardeman, E. C.

5051 **Autocrine regulation of TGF- β 1-induced cell migration by exocytosis of ATP and activation of P2 receptors in human lung cancer cells.** Takai, E., Tsukimoto, M., Harada, H., Sawada, K., Moriyama, Y. and Kojima, S.

5061 **Polo-like kinase is required for synaptonemal complex disassembly and phosphorylation in mouse spermatocytes.** Jordan, P. W., Karppinen, J. and Handel, M. A.

5073 **Arsenite interferes with protein folding and triggers formation of protein aggregates in yeast.** Jacobson, T., Navarrete, C., Sharma, S. K., Sideri, T. C., Ibstedt, S., Priya, S., Grant, C. M., Christen, P., Goloubinoff, P. and Tamás, M. J.

5084 **Role of phosphodiesterases in the shaping of sub-plasma-membrane cAMP oscillations and pulsatile insulin secretion.** Tian, G., Sâgetorp, J., Xu, Y., Shuai, H., Degerman, E. and Tengholm, A.

5096 **WD40-repeat protein 62 is a JNK-phosphorylated spindle pole protein required for spindle maintenance and timely mitotic progression.** Bogoyevitch, M. A., Yeap, Y. Y. C., Qu, Z., Ngoei, K. R., Yip, Y. Y., Zhao, T. T., Heng, J. I. and Ng, D. C. H.

5110 **Nanopatterning reveals an ECM area threshold for focal adhesion assembly and force transmission that is regulated by integrin activation and cytoskeleton tension.** Coyer, S. R., Singh, A., Dumbauld, D. W., Calderwood, D. A., Craig, S. W., Delamarche, E. and Garcia, A. J.

5124 **Deregulated Cdk5 triggers aberrant activation of cell cycle kinases and phosphatases inducing neuronal death.** Chang, K.-H., Vincent, F. and Shah, K.

5138 **Modeling the self-organized phosphatidylinositol lipid signaling system in chemotactic cells using quantitative image analysis.** Shibata, T., Nishikawa, M., Matsuoka, S. and Ueda, M.

5151 **ATP inhibits Ins(1,4,5)P₃-evoked Ca²⁺ release in smooth muscle via P2Y₁ receptors.** MacMillan, D., Kennedy, C. and McCarron, J. G.

5159 **‘In parallel’ interconnectivity of the dorsal longitudinal anastomotic vessels requires both VEGF signaling and circulatory flow.** Zygmunt, T., Trzaska, S., Edelstein, L., Walls, J., Rajamani, S., Gale, N., Daroles, L., Ramírez, C., Ulrich, F. and Torres-Vázquez, J.

5168 **Oxygen sensing by the prolyl-4-hydroxylase PHD2 within the nuclear compartment and the influence of compartmentalisation on HIF-1 signalling.** Pientka, F. K., Hu, J., Schindler, S. G., Brix, B., Thiel, A., Jöhren, O., Fandrey, J., Berchner-Pfannschmidt, U. and Depping, R.

5177 **Functional involvement of Rab1A in microtubule-dependent anterograde melanosome transport in melanocytes.** Ishida, M., Ohbayashi, N., Maruta, Y., Ebata, Y. and Fukuda, M.

5188 **Syndecan-1 controls cell migration by activating Rap1 to regulate focal adhesion disassembly.** Altmeier, W. A., Schlesinger, S. Y., Buell, C. A., Parks, W. C. and Chen, P.

5196 **AtTPR7 is a chaperone-docking protein of the Sec translocon in Arabidopsis.** Schweiger, R., Müller, N. C., Schmitt, M. J., Soll, J. and Schwenkert, S.

5208 **Class E compartments form in response to ESCRT dysfunction in yeast due to hyperactivity of the Vps21 Rab GTPase.** Russell, M. R. G., Shideler, T., Nickerson, D. P., West, M. and Odorizzi, G.

5221 **PKA isoforms coordinate mRNA fate during nutrient starvation.** Tudisca, V., Simpson, C., Castelli, L., Lui, J., Hoyle, N., Moreno, S., Ashe, M. and Portela, P.

5233 **PINCH-1 promotes Bcl-2-dependent survival signalling and inhibits JNK-mediated apoptosis in the primitive endoderm.** Montanez, E., Karaköse, E., Tischner, D., Villunger, A. and Fässler, R.

5241 **Impact of a selfish B chromosome on chromatin dynamics and nuclear organization in Nasonia.** Swim, M. M., Kaeding, K. E. and Ferree, P. M.