



## Cholesterol-induced caveolin targeting to lipid droplets in adipocytes: a role for caveolar endocytosis.

Submitted by Soazig Le Lay on Tue, 01/27/2015 - 10:39

|                       |  |
|-----------------------|--|
| Titre                 | Cholesterol-induced caveolin targeting to lipid droplets in adipocytes: a role for caveolar endocytosis.   |
| Type de publication   | Article de revue   |
| Auteur                | Le Lay, Soazig [1], Hajduch, Eric [2], Lindsay, Margaret R [3], Le Liepvre, Xavier [4], Thiele, Christoph [5], Ferré, Pascal [6], Parton, Robert G [7], Kurzchalia, Teymuraz [8], Simons, Kai [9], Dugail, Isabelle [10]   |
| Editeur               | Wiley  |
| Type                  | Article scientifique dans une revue à comité de lecture  |
| Année                 | 2006   |
| Langue                | Anglais  |
| Date                  | 05/2006  |
| Numéro                | 5  |
| Pagination            | 549-61   |
| Volume                | 7  |
| Titre de la revue     | Traffic  |
| ISSN                  | 1398-9219  |
| Mots-clés             | 3T3-L1 Cells [11], Adipocytes [12], Animals [13], Caveolae [14], Caveolin 1 [15], Cholesterol [16], Endocytosis [17], Male [18], Mice [19], Mice, Knockout [20]  |
| Résumé en anglais     | <p>We have investigated the targeting of caveolin to lipid bodies in adipocytes that express high levels of caveolins and contain well-developed lipid droplets. We observed that the lipid droplets isolated from adipocytes of caveolin-1 knock out mice contained dramatically reduced levels of cholesterol, indicating that caveolin is required for maintaining the cholesterol content of this organelle. Analysis of caveolin distribution by cell fractionation and fluorescent light microscopy in 3T3-L1 adipocytes indicated that addition of cholesterol rapidly stimulated translocation of caveolin to lipid droplets. The cholesterol-induced trafficking of caveolins to lipid droplets was shown to be dynamin- and protein kinase C (PKC)-dependent and modulated by src tyrosine kinase activation, suggesting a role for caveolar endocytosis in this novel trafficking pathway. Consistent with this, caveolae budding was stimulated by cholesterol addition. The present data identify lipid droplets as potential target organelles for caveolar endocytosis and demonstrate a role for caveolin-1 in the maintenance of free cholesterol levels in adipocyte lipid droplets.</p> |
| URL de la notice      | <a href="http://okina.univ-angers.fr/publications/ua7126">http://okina.univ-angers.fr/publications/ua7126</a> [21]   |
| DOI                   | 10.1111/j.1600-0854.2006.00406.x [22]  |
| Lien vers le document | <a href="http://dx.doi.org/10.1111/j.1600-0854.2006.00406.x">http://dx.doi.org/10.1111/j.1600-0854.2006.00406.x</a> [22]   |
| Autre titre           | Traffic  |

## Liens

- [1] <http://okina.univ-angers.fr/soazig.lelay/publications>
- [2] [http://okina.univ-angers.fr/publications?f\[author\]=615](http://okina.univ-angers.fr/publications?f[author]=615)
- [3] [http://okina.univ-angers.fr/publications?f\[author\]=10872](http://okina.univ-angers.fr/publications?f[author]=10872)
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=611](http://okina.univ-angers.fr/publications?f[author]=611)
- [5] [http://okina.univ-angers.fr/publications?f\[author\]=10873](http://okina.univ-angers.fr/publications?f[author]=10873)
- [6] [http://okina.univ-angers.fr/publications?f\[author\]=614](http://okina.univ-angers.fr/publications?f[author]=614)
- [7] [http://okina.univ-angers.fr/publications?f\[author\]=10874](http://okina.univ-angers.fr/publications?f[author]=10874)
- [8] [http://okina.univ-angers.fr/publications?f\[author\]=10875](http://okina.univ-angers.fr/publications?f[author]=10875)
- [9] [http://okina.univ-angers.fr/publications?f\[author\]=10858](http://okina.univ-angers.fr/publications?f[author]=10858)
- [10] [http://okina.univ-angers.fr/publications?f\[author\]=23809](http://okina.univ-angers.fr/publications?f[author]=23809)
- [11] [http://okina.univ-angers.fr/publications?f\[keyword\]=6018](http://okina.univ-angers.fr/publications?f[keyword]=6018)
- [12] [http://okina.univ-angers.fr/publications?f\[keyword\]=1124](http://okina.univ-angers.fr/publications?f[keyword]=1124)
- [13] [http://okina.univ-angers.fr/publications?f\[keyword\]=964](http://okina.univ-angers.fr/publications?f[keyword]=964)
- [14] [http://okina.univ-angers.fr/publications?f\[keyword\]=1149](http://okina.univ-angers.fr/publications?f[keyword]=1149)
- [15] [http://okina.univ-angers.fr/publications?f\[keyword\]=6013](http://okina.univ-angers.fr/publications?f[keyword]=6013)
- [16] [http://okina.univ-angers.fr/publications?f\[keyword\]=8385](http://okina.univ-angers.fr/publications?f[keyword]=8385)
- [17] [http://okina.univ-angers.fr/publications?f\[keyword\]=1151](http://okina.univ-angers.fr/publications?f[keyword]=1151)
- [18] [http://okina.univ-angers.fr/publications?f\[keyword\]=968](http://okina.univ-angers.fr/publications?f[keyword]=968)
- [19] [http://okina.univ-angers.fr/publications?f\[keyword\]=1102](http://okina.univ-angers.fr/publications?f[keyword]=1102)
- [20] [http://okina.univ-angers.fr/publications?f\[keyword\]=1147](http://okina.univ-angers.fr/publications?f[keyword]=1147)
- [21] <http://okina.univ-angers.fr/publications/ua7126>
- [22] <http://dx.doi.org/10.1111/j.1600-0854.2006.00406.x>
- [23] <http://www.ncbi.nlm.nih.gov/pubmed/16643278?dopt=Abstract>

Publié sur *Okina* (<http://okina.univ-angers.fr>)