**Title:** Function of the Arp2/3 complex and cofilin in the leading edge.

Depict:

i) the molecular regulators that impinge on the Arp2/3 complex and cofilin and

ii) their respective functions to address the question, *why are both activities needed to extend a leading edge.*

*RK Comments*

*A legend for abbreviations is missing e.g. GAP..*

*Now to the parts of the task:*

1. Is in principle done; but react to comments..
2. Open is still: why are both activities needed to extend a leading edge. What is your answer?

Hints:

* 1. I added the following comment in your scheme: “*think: what kind of product do you get if it severs actin filaments in e.g. 2 pieces? how do these fragments support the "extension of the leading edge"?*
  2. Non-phosporylated ADF/cofilin is enzymatically **activ**e (thus where ADF is active there is ROCK,PAK or LIM kinase **inactive**, correct? ) make this clear in your scheme, spatially in the cell, i.e. with relation to the leading edge! (??? Could there be a spatial gradient of activities from the leading edge for these kinases): it has 2 activities:
     1. Pointed end de-polymerisation…this generates what?
     2. Severing of actin filaments ….this generates what?

WHY are both products supporting actin polymerization in the leading edge?