Reviewer’s report

Title: Clinical significance of mTOR, ZEB, ROCK1 expression in lung tissues of pulmonary fibrosis

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Reviewer: Edwin Roger Parra

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In this manuscript, Dr Park and colleagues studied 30 cases apparently of pulmonary fibrosis with histologic patterns usual interstitial pneumonia (UIP). In addition, the authors characterized three proteins (mammalian target of rapamycin, mTOR; zinc finger E-box-binding homeobox 1, ZEB1; Rho-associated, coiled-coil containing protein kinase 1, ROCK1) by immunohistochemistry and their correlation with clinical features. This research is interesting, showing an expression of these proteins in UIP cases, but there are some major flaws.

Major Compulsory Revisions

1. The major problem of the study is the population used. In the text the authors mentioned that used 30 cases of pulmonary fibrosis, is necessary that it is explained much better, if used only idiopathic pulmonary fibrosis (IPF) cases or included other type of fibrotic diseases with histologic patter of UIP. In the section “Baseline characteristics of the study” they mentioned that had patients with connective tissue disease. If the author included other type of diseases probably all the clinical statistical analysis will be influenced in function of the type of diseases studied.

2. The criteria used by the authors, American Thoracic Society/European Respiratory Society International Multidisciplinary Consensus Classification of the Idiopathic Interstitial Pneumonias; June 2001, is specific to IPF or the other types of idiopathic diseases and it can’t use if the author included other type of diseases such as vascular lung diseases.

3. How the authors did the analysis of the expression of the different markers including the different areas observed in UIP pattern? It was randomizing?

4. There is not a description of the expression observed in the different areas of UIP (normal areas, fibroblast foci areas, honeycombing areas), Was the expression of the alveolar epithelial cells the same in these different areas?

Minor Essential Revisions

1. In figures D to F there are other type of cells apparently that expressed the different markers studied. Did the authors do the score on these cells expression, too?
2. The authors will can to do a figure panel exemplifying the two principal grades of fibrosis (minimal and severe) studied and the intensity of expression (intermediary and strong) observed with the different markers.

3. The figure 3 needs the P values. For survival analysis, the authors used only the negative and positive groups, it is true?

4. The authors need included in the different tables the type of statistical analysis used.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests