

Reply to:

PTX-3 release is increased by monocytes from patients with primary fibromyalgia without major depression

J.J. García *et al.*

Sirs,

Fibromyalgia (FM) and depression are closely related diseases. Both are very common diseases, may appear in the same patient and may have overlapping symptoms (1). It is estimated that depression is found in almost 40% of FM patients (2) while a study in a depressed population showed a prevalence of FM in more than 1/3 of them (1).

There is some evidence that inflammatory response may be important in some cases of depression (3, 4). Meta-analysis studies carried out by Dowlati *et al.* (3) and by Valkanova *et al.* (4) demonstrated higher levels of TNF- α , IL-6 and C-reactive protein in depressive patients than in the normal population. So, it is not surprising that García *et al.* suggested that we examine whether the high PTX3 levels found in FM patients from our previous study (5) are not due to associated depression. They based their hypothesis on a study that shows a high expression of PTX 3 genes in fibroblasts in a subtype of depressive patients (melancholic subtype). It is important to understand that, although very interesting and instigating, *in vitro* studies do not always reflect *in vivo* findings.

In our previous study, we applied the Beck Depression Inventory (6) and found a prevalence of 52.1% depression in our FM sample. The value of PTX3 in the de-

pressed FM patients ranged from 0.30–5.64 ng/mL with a median value of 0.66 ng/mL (0.57–1.2) and in those without depression from 0.33–5.64 ng/mL with median value of 0.60 ng/mL (0.50–0.78); $p=0.12$ (Mann Whitney U-test). This result allow us to state that, in the studied FM sample, depression did not affect PTX3 levels. Therefore, the high PTX3 serum levels we found may be due to FM itself. Such a result is in agreement with the described *in vitro* findings of García *et al.* showing that monocytes from FM patients released more PTX3 when activated by LPS. However, it must be taken into account that in our study we did not classify subtypes of depression. Another observation that must be made is that some anti-depressants used to treat FM may affect cytokine levels including IL-1 β , IL-6 and TNF- α , in a pattern that differs according to the pharmacological class they belong to (7). This may have caused interference in the results we found. So, our findings need further replication in studies with a higher number of participants and with a closer look into depression subtypes to be confirmed.

Although the question raised by García *et al.* cannot be answered definitively, our findings suggest that the high PTX3 levels found in FM patients are due to FM itself and not to associated depression. Nevertheless, their question did show us that it is necessary to better study the fascinating relationship of pain, depression and inflammation.

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