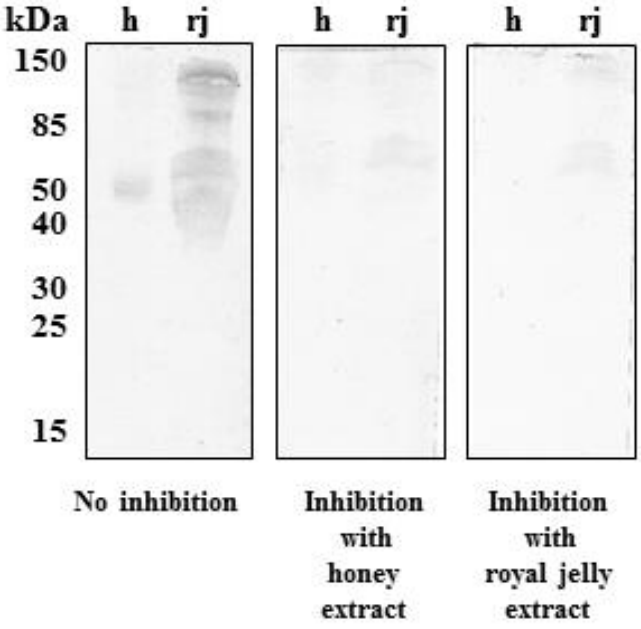
SUPPLEMENTARY MATERIAL

Figure 1. Comparison of the sequences of four *Apis mellifera* proteins belonging to the major royal jelly protein (MRJP) family. The peptides identified by RP-LC-MS/MS from 50-kDa allergen detected by seven honey allergic patients are highlighted in grey. Sequences are ordered based on its homology with MRJP1, the higher sequence coverage (78%) obtained. "*" positions which have a single, fully conserved residue; ":" conservation between groups of strongly similar properties; "." conservation between groups of weakly similar properties.

```
sp|O18330|MRJP1 -MTRLFMLVCLGIVCQGTTGNILR-----GESLNKSLPILHEWKFFDYDFGSDERRQDAI 54
sp|O97432|MRJP5 MTTWLLLVVCLGIACQGITSVTV--RENSPRKLANSMNVIHEWKYLDYDFGSDERRQAAM 58
sp|O77061|MRJP2 MTRWLFMVACLGIACQGAIVR-----ENSPRNLEKSLNVIHEWKYFDYDFGSEERRQAAI 55
sp|Q17060|MRJP3 MTKWLLLVVCLGIACQDVTSAAVNHQRKSANNLAHSMKVIYEWKHIDFDFGSDERRDAAI 60
                    *:::.****.**.             ..* :*: :::***.:*:****:***: *:

sp|O18330|MRJP1 LSGEYDYKNNYPSDIDQWHDKIFVTMLRYNGVPSSLNVISKKVGDGGPLLQPYPDWSFAK 114
sp|O97432|MRJP5 QSGEYDHTKNYPFDVDQWRGMTFVTVPRYKGVPSSLNVISEKIGNGGRLLQPYPDWSWAN 118
sp|O77061|MRJP2 QSGEYDHTKNYPFDVDQWRDKTFVTILRYDGVPSTLNVISGKTGKGGRLLKPYPDWSFAE 115
sp|Q17060|MRJP3 KSGEFDHTKNYPFDVDRWRDKTFVTIERNNGVPSSLNVVTNKKGKGGPLLRPYPDWSFAK 120
                 ***:*:.:*** *:*:*:.  ***: * .****:***:: * *.** **:******:*:

sp|O18330|MRJP1 YDDCSGIVSASKLAIDKCDRLWVLDSGLVNNTQPMCSPKLLTFDLTTSQLLKQVEIPHDV 174
sp|O97432|MRJP5 YKDCSGIVSAYKIAIDKFDRLWILDSGIINNTQPMCSPKLHVFDLNTSHQLKQVVMPHDI 178
sp|O77061|MRJP2 FKDCSKIVSAFKIAIDKFDRLWVLDSGLVNRTVPVCAPKLHVFDLKTSNHLKQIEIPHDI 175
sp|Q17060|MRJP3 YEDCSGIVSAFKIAVDKFDRLWVLDSGLVNNNQPMCSPKLLTFDLKTSKLVKQVEIPHNI 180
                :.*** **** *:*:** ****:****::*.. *:*:*** .***.**: :**: :**::

sp|O18330|MRJP1 AVNATTGKGRLSSLAVQSLDCNTNSDTMVYIADEKGEGLIVYHNSDDSFHRLTSNTFDYD 234
sp|O97432|MRJP5 AVNASTGNGGLVSLVVQAMDP---VNTIVYMADDKGDALIVYQNSDESFHRLTSNTFDYD 235
sp|O77061|MRJP2 AVNATTGKGGLVSLAVQAIDL---ANTLVYMADHKGDALIVYQNADDSFHRLTSNTFDYD 232
sp|Q17060|MRJP3 AVNATTGMGELVSLAVQAIDR---TNTMVYIADEKGEGLIMYQNSDDSFHRLTSNTFDYD 237
                ****:** * * **.**::*     :*:**:**.**:.**:*:*:*:*************

sp|O18330|MRJP1 PKFTKMTIDGESYTAQDGISGMALSPMTNNLYYSPVASTSLYYVNTEQFRTSDYQQNDIH 294
sp|O97432|MRJP5 PKYIKMMDAGESFTAQDGIFGMALSPMTNNLYYSPLSSRSLYYVNTKPFMKSEYGANNVQ 295
sp|O77061|MRJP2 PRYAKMTIDGESFTLKNGICGMALSPVTNNLYYSPLASHGLYYVNTAPFMKSQFGENNVQ 292
sp|Q17060|MRJP3 PRYTKLTVAGESFTVKNGIYGIALSPVTNNLYYSPLLSHGLYYVDTEQFSNPQYEENNVQ 297
                *:: *:   ***:* ::** *:****:********: * .****:*  * . ::  *:::

sp|O18330|MRJP1 YEGVQNILDTQSSAKVVSKSGVLFFGLVGDSALGCWNEHRTLERHNIRTVAQSDETLQMI 354
sp|O97432|MRJP5 YQGVQDIFNTESIAKIMSKNGVLFFGLMNNSAIGCWNEHQPLQRENMDMVAQNEETLQTV 355
sp|O77061|MRJP2 YQGSEDILNTQSLAKAVSKNGVLFVGLVGNSAVGCWNEHQSLQRQNLEMVAQNDRTLQMI 352
sp|Q17060|MRJP3 YEGSQDILNTQSFGKVVSKNGVLFLGLVGNSGIACVNEHQVLQRESFDVVAQNEETLQMI 357
                *:* ::*::*:* .* :**.****.**:.:*.:.* ***: *:*..:  ***.:.*** :

sp|O18330|MRJP1 ASMKIKEALPHVPIFDR-------------------------------------------- 371
sp|O97432|MRJP5 VAMKMMHL-PQSNKMNRMHRMNRVNRVNRMDRMDRIDRMDRMDRMDTMDTMDRIDRMDRM 414
sp|O77061|MRJP2 AGMKIKEELPHFVG---------------------------------------------- 366
sp|Q17060|MRJP3 VSMKIMENLPQSGR-------------------------------------------- 371
                ..**: .  *:

sp|O18330|MRJP1 ------------------------------------------------------------ 371
sp|O97432|MRJP5 DRIDRIDRMHTMDTMDTMDRTDKMSSMDRMDRMDRVDRMDTMDRTDKMSSMDRMDRMDRV 474
sp|O77061|MRJP2 ------------------------------------------------------------ 366
sp|Q17060|MRJP3 ------------------------------------------------------------ 371


sp|O18330|MRJP1 ------------------------------------------------------------ 371
sp|O97432|MRJP5 DTMDTMDTMDRMDRMDRMDRMDRMDRMDTMDRTDKMSRIDRMDKIDRMDRMDRTNRMDRM 534
sp|O77061|MRJP2 ------------------------------------------------------------ 366
sp|Q17060|MRJP3 ------------------------------------------------------------ 371


sp|O18330|MRJP1 ----YINREYILVLSNKMQKMVNNDFNFDDVNFRIMNANVNELILNTRCENPDNDRTPFK 427
sp|O97432|MRJP5 NRMNRQMNEYMMALSMKLQKFINNDYNFNEVNFRILGANVNDLIMNTRCANSDNQNNNQN 594
sp|O77061|MRJP2 -SNKPVKDEYMLVLSNRMQKIVNDDFNFDDVNFRILGANVKELIRNTHCVNNNQNDNI-- 423
sp|Q17060|MRJP3 -INDPEGNEYMLALSNRMQKIINNDFNFNDVNFRILGANVDDLMRNTRCGRYHNQNAGNQ 430
                        **::.** ::**::*:*:**::*****:.***.:*: **:* . .::

sp|O18330|MRJP1 ISIHL------------------------------------------------------ 432
sp|O97432|MRJP5 KHNN------------------------------------------------------- 598
sp|O77061|MRJP2 ------------------------------------------------------------ 423
sp|Q17060|MRJP3 NADNQNADNQNANNQNADNQNANKQNGNRQNDNRQNDNKQNGNRQNDNKQNGNRQNDNKQ 490


sp|O18330|MRJP1 ------------------------------------------------------       432
sp|O97432|MRJP5 ------------------------------------------------------       598
sp|O77061|MRJP2 ------------------------------------------------------       423
sp|Q17060|MRJP3 NGNRQNGNKQNDNKQNGNRQNDNKRNGNRQNDNQNNQNDNNRNDNQVHHSSKLH       544
```

 © 2022 Esmon Publicidad
doi: 10.18176/jiaci.0799

Figure 2. IgE-immunoblotting-inhibition assay performed with a pool of sera from the patients studied. Lanes: h) honey extract; rj) royal jelly extract.



 © 2022 Esmon Publicidad
doi: 10.18176/jiaci.0799