

Principal Component Analysis

Dataset tt

This dataset contains 232 individuals and 3524 variables.

1. Study of the outliers

The analysis of the graphs does not detect any outlier.

2. Inertia distribution

The inertia of the first dimensions shows if there are strong relationships between variables and suggests the number of dimensions that should be studied.

The first two dimensions of analyse express **20.48%** of the total dataset inertia ; that means that 20.48% of the individuals (or variables) cloud total variability is explained by the plane. This is a small percentage and the first plane just represents a part of the data variability. This value is greater than the reference value that equals **1.36%**, the variability explained by this plane is thus significant (the reference value is the 0.95-quantile of the inertia percentages distribution obtained by simulating 101 data tables of equivalent size on the basis of a normal distribution).

From these observations, it is interesting to consider the next dimensions which also express a high percentage of the total inertia.

Decomposition of the total inertia

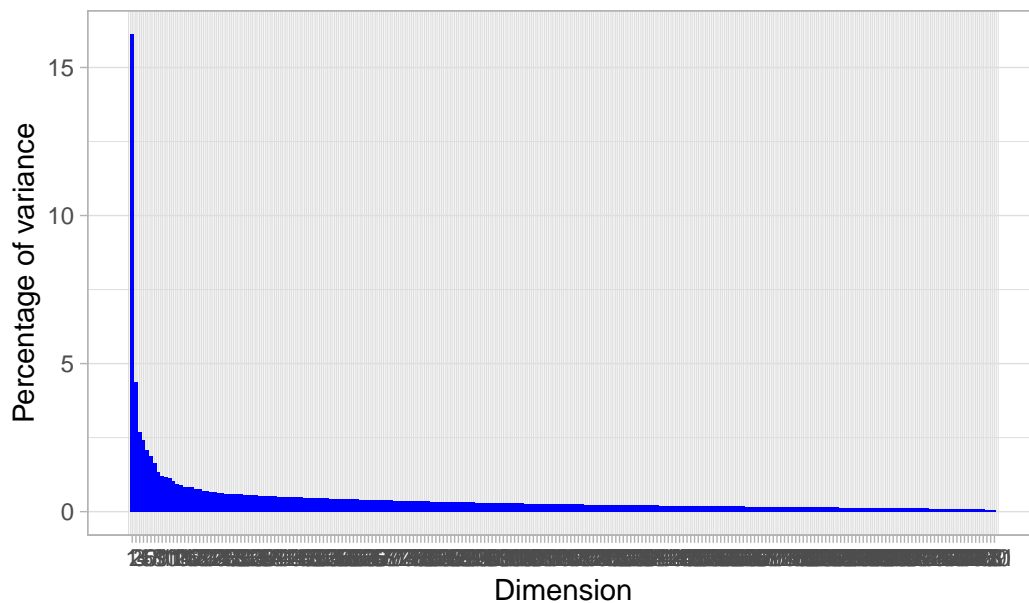


Figure 2 - Decomposition of the total inertia

An estimation of the right number of axis to interpret suggests to restrict the analysis to the description of the first 30 axis. These axis present an amount of inertia greater than those obtained by the 0.95-quantile of random distributions (49.73% against 18.6%). This observation suggests that only these axis are carrying a real information. As a consequence, the description will stand to these axis.

3. Description of the plane 1:2

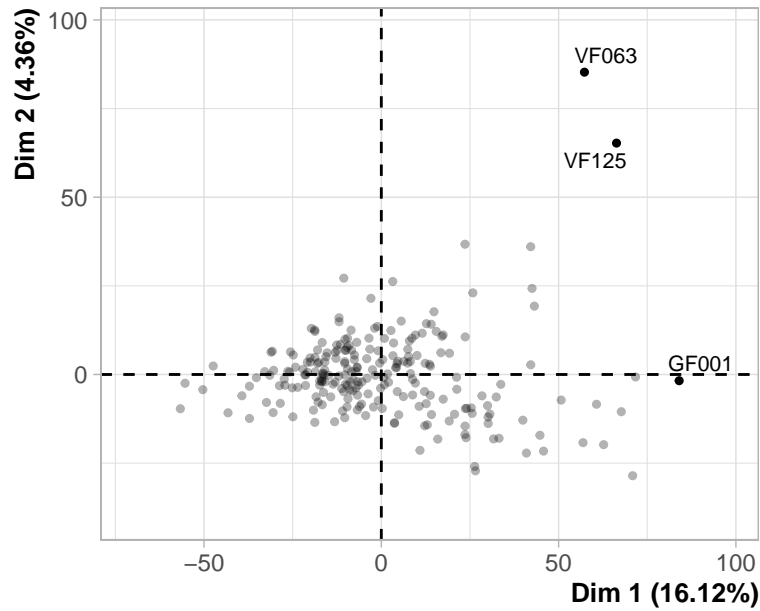


Figure 3.1 - Individuals factor map (PCA) *The labeled individuals are those with the higher contribution to the plane construction.*

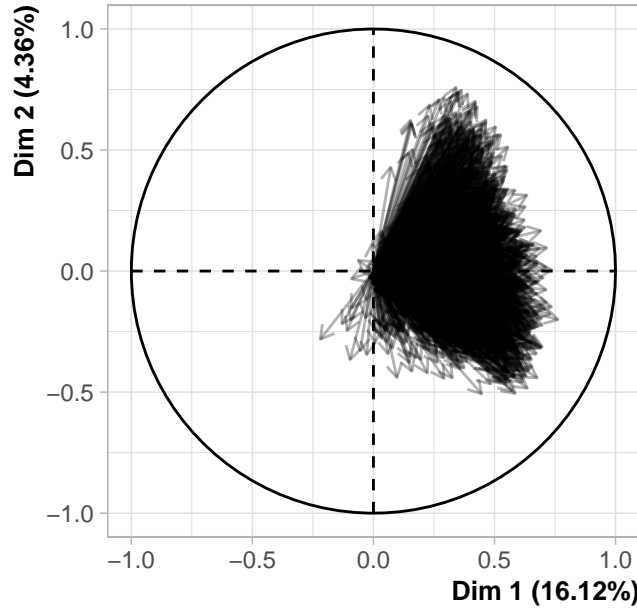


Figure 3.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 1** opposes individuals such as *GF001*, *VF063* and *VF125* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals characterized by a strongly negative coordinate on the axis (to the left of the graph).

The group in which the individual *GF001* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-1305-5p:Novel*, *hsa-miR-3177-5p*, *hsa-miR-4636-3p:Novel*, *hsa-miR-6746-5p*, *hsa-miR-2681-5p*, *hsa-miR-518c-5p*, *hsa-miR-3649*, *hsa-miR-1283*, *hsa-miR-4708-5p* and *hsa-miR-12114-3p:Novel* (variables are sorted from the strongest).

The group in which the individuals *VF063* and *VF125* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-335-3p*, *hsa-miR-200a-5p*, *hsa-miR-28-3p*, *hsa-miR-27b-3p*, *hsa-miR-375-3p*, *hsa-miR-10a-5p*, *hsa-miR-215-5p*, *hsa-miR-30e-3p*, *hsa-miR-374a-3p* and *hsa-miR-103b-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-378h*, *hsa-miR-3138-5p:Novel*, *hsa-miR-657-5p:Novel*, *hsa-miR-378f*, *hsa-miR-147a-5p:Novel*, *hsa-miR-8074-5p:Novel*, *hsa-miR-371a-3p*, *hsa-miR-6738-5p*, *hsa-miR-3622a-5p* and *hsa-miR-5687-5p:Novel* (variables are sorted from the weakest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *hsa-miR-3689d-3p:Novel*, *hsa-miR-657-5p:Novel* and *hsa-miR-6777-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-3612-3p:Novel*, *hsa-miR-5694-3p:Novel*, *hsa-miR-4518-5p:Novel*, *hsa-miR-9903*, *hsa-miR-4323*, *hsa-miR-4635-5p:Novel*, *hsa-miR-4274*, *hsa-miR-2277-5p*, *hsa-miR-3199-3p:Novel* and *hsa-miR-4422* (variables are sorted from the weakest).

The **dimension 2** opposes individuals such as *VF063* and *VF125* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as **** and *GF001* (to the bottom of the graph,

characterized by a strongly negative coordinate on the axis).

The group in which the individuals *VF063* and *VF125* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-335-3p*, *hsa-miR-200a-5p*, *hsa-miR-28-3p*, *hsa-miR-27b-3p*, *hsa-miR-375-3p*, *hsa-miR-10a-5p*, *hsa-miR-215-5p*, *hsa-miR-30e-3p*, *hsa-miR-374a-3p* and *hsa-miR-103b-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-378h*, *hsa-miR-3138-5p:Novel*, *hsa-miR-657-5p:Novel*, *hsa-miR-378f*, *hsa-miR-147a-5p:Novel*, *hsa-miR-8074-5p:Novel*, *hsa-miR-371a-3p*, *hsa-miR-6738-5p*, *hsa-miR-3622a-5p* and *hsa-miR-5687-5p:Novel* (variables are sorted from the weakest).

The group in which the individual *GF001* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-1305-5p:Novel*, *hsa-miR-3177-5p*, *hsa-miR-4636-3p:Novel*, *hsa-miR-6746-5p*, *hsa-miR-2681-5p*, *hsa-miR-518c-5p*, *hsa-miR-3649*, *hsa-miR-1283*, *hsa-miR-4708-5p* and *hsa-miR-12114-3p:Novel* (variables are sorted from the strongest).

4. Description of the plane 3:4

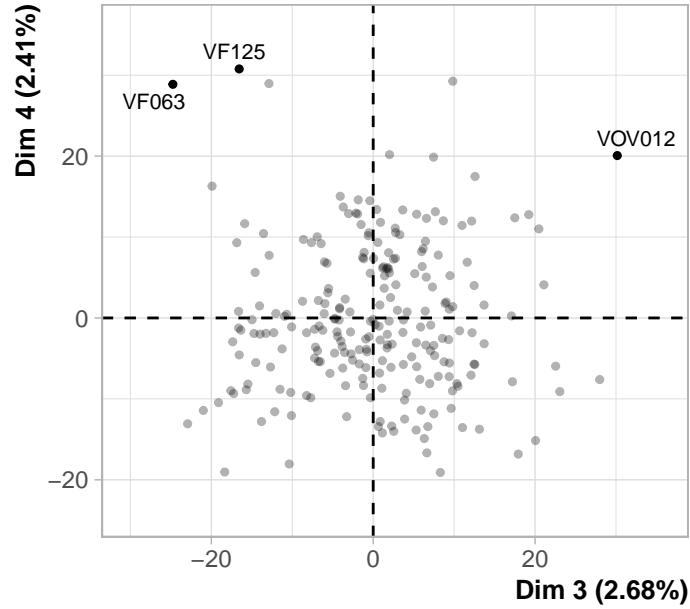


Figure 4.1 - Individuals factor map (PCA) The labeled individuals are those with the higher contribution to the plane construction.

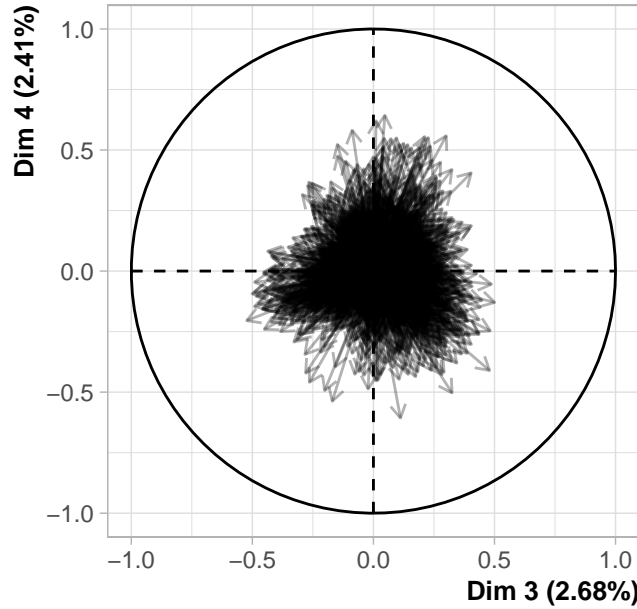


Figure 4.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 3** opposes individuals such as *VOV012*, *VF125* and *VF063* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals characterized by a strongly negative coordinate on the axis (to the left of the graph).

The group in which the individuals *VOV012*, *VF125* and *VF063* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4309-3p:Novel*, *hsa-miR-5189-3p*, *hsa-miR-3170*, *hsa-miR-2113-5p:Novel*, *hsa-miR-4534*, *hsa-miR-134-5p*, *hsa-miR-544b*, *hsa-miR-5193-5p:Novel*, *hsa-miR-4324-5p:Novel* and *hsa-miR-4296* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-2115-3p*, *hsa-miR-6081*, *hsa-miR-4257-5p:Novel*, *hsa-miR-6849-5p*, *hsa-miR-3972-5p:Novel*, *hsa-miR-4422*, *hsa-miR-378i*, *hsa-miR-642a-3p*, *hsa-miR-9899-5p:Novel* and *hsa-miR-4648* (variables are sorted from the weakest).

The group 2 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6748-3p*, *hsa-miR-4476-5p:Novel*, *hsa-miR-924-3p:Novel*, *hsa-miR-6077*, *hsa-miR-8075*, *hsa-miR-1181*, *hsa-miR-6809-5p*, *hsa-miR-4466-3p:Novel*, *hsa-miR-8075-5p:Novel* and *hsa-miR-4519* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-300*, *hsa-miR-4528-5p:Novel*, *hsa-miR-1203*, *hsa-miR-4309-3p:Novel*, *hsa-miR-611*, *hsa-miR-3138-5p:Novel*, *hsa-miR-5193-5p:Novel*, *hsa-miR-4738-3p*, *hsa-miR-4270-3p:Novel* and *hsa-miR-943-5p:Novel* (variables are sorted from the weakest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4750-3p*, *hsa-miR-2681-5p*, *hsa-miR-4636*, *hsa-let-7g-3p*, *hsa-miR-497-3p*, *hsa-miR-8071-5p:Novel*, *hsa-miR-3920-5p:Novel*, *hsa-miR-6505-5p*, *hsa-miR-548h-2-3p:Novel* and *hsa-miR-12119-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-6788-3p*, *hsa-miR-1286*, *hsa-miR-12118*, *hsa-miR-4505*, *hsa-miR-378c*, *hsa-miR-148a-5p*, *hsa-miR-4283*, *hsa-miR-3169*, *hsa-miR-4534* and *hsa-miR-940* (variables are sorted from the weakest).

The **dimension 4** opposes individuals such as *VOV012*, *VF125* and *VF063* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals characterized by a strongly negative coordinate on the axis (to the bottom of the graph).

The group in which the individuals *VOV012*, *VF125* and *VF063* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4309-3p:Novel*, *hsa-miR-5189-3p*, *hsa-miR-3170*, *hsa-miR-2113-5p:Novel*, *hsa-miR-4534*, *hsa-miR-134-5p*, *hsa-miR-544b*, *hsa-miR-5193-5p:Novel*, *hsa-miR-4324-5p:Novel* and *hsa-miR-4296* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-2115-3p*, *hsa-miR-6081*, *hsa-miR-4257-5p:Novel*, *hsa-miR-6849-5p*, *hsa-miR-3972-5p:Novel*, *hsa-miR-4422*, *hsa-miR-378i*, *hsa-miR-642a-3p*, *hsa-miR-9899-5p:Novel* and *hsa-miR-4648* (variables are sorted from the weakest).

The group 2 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4750-3p*, *hsa-miR-2681-5p*, *hsa-miR-4636*, *hsa-let-7g-3p*, *hsa-miR-497-3p*, *hsa-miR-8071-5p:Novel*, *hsa-miR-3920-5p:Novel*, *hsa-miR-6505-5p*, *hsa-miR-548h-2-3p:Novel* and *hsa-miR-12119-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-6788-3p*, *hsa-miR-1286*, *hsa-miR-12118*, *hsa-miR-4505*, *hsa-miR-378c*, *hsa-miR-148a-5p*, *hsa-miR-4283*, *hsa-miR-3169*, *hsa-miR-4534* and *hsa-miR-940* (variables are sorted from the weakest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6748-3p*, *hsa-miR-4476-5p:Novel*, *hsa-miR-924-3p:Novel*, *hsa-miR-6077*, *hsa-miR-8075*, *hsa-miR-1181*, *hsa-miR-6809-5p*, *hsa-miR-4466-3p:Novel*, *hsa-miR-8075-5p:Novel* and *hsa-miR-4519* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-300*, *hsa-miR-4528-5p:Novel*, *hsa-miR-1203*, *hsa-miR-4309-3p:Novel*, *hsa-miR-611*, *hsa-miR-3138-5p:Novel*, *hsa-miR-5193-5p:Novel*, *hsa-miR-4738-3p*, *hsa-miR-4270-3p:Novel* and *hsa-miR-943-5p:Novel* (variables are sorted from the weakest).

5. Description of the plane 5:6

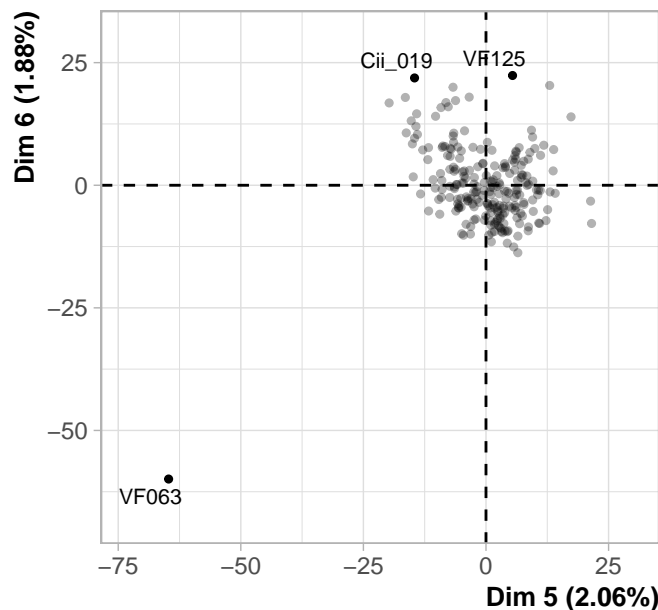


Figure 5.1 - Individuals factor map (PCA) *The labeled individuals are those with the higher contribution to the plane construction.*

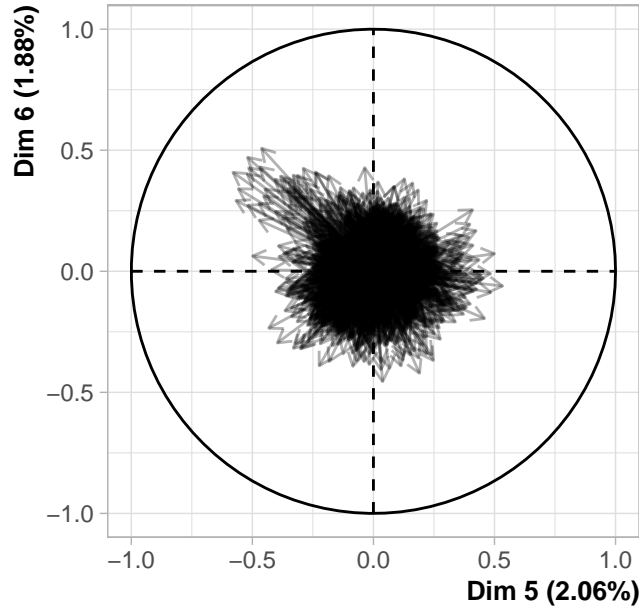


Figure 5.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 5** opposes individuals characterized by a strongly positive coordinate on the axis (to the right of the graph) to individuals such as *VF063Cii_019* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-5189-3p*, *hsa-miR-4667-3p*, *hsa-miR-6074-5p:Novel*, *hsa-miR-4296*, *hsa-miR-6768-5p*, *hsa-miR-598-5p*, *hsa-miR-134-5p*, *hsa-miR-3125*, *hsa-miR-92a-1-5p* and *hsa-miR-588-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-411-5p*, *hsa-miR-4519*, *hsa-miR-4254-5p:Novel*, *hsa-miR-4476-5p:Novel*, *hsa-miR-4687-3p*, *hsa-miR-4327*, *hsa-miR-378b-5p:Novel*, *hsa-miR-429*, *hsa-miR-7852-3p* and *hsa-miR-7852-5p:Novel* (variables are sorted from the weakest).

The group in which the individual *VF063* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-548j-3p*, *hsa-miR-511-5p*, *hsa-miR-1343-3p*, *hsa-miR-340-3p*, *hsa-miR-331-3p*, *hsa-miR-374a-5p*, *hsa-miR-218-1-3p*, *hsa-miR-4999-5p*, *hsa-miR-335-3p* and *hsa-miR-361-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-657-5p:Novel*, *hsa-miR-11399-3p:Novel*, *hsa-miR-371a-5p*, *hsa-miR-6849-5p*, *hsa-miR-655-5p*, *hsa-miR-6084-5p:Novel*, *hsa-miR-6867-5p*, *hsa-miR-4311-3p:Novel*, *hsa-miR-504-5p* and *hsa-miR-2861* (variables are sorted from the weakest).

The group in which the individual *Cii_019* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-411-5p*, *hsa-miR-4519*, *hsa-miR-4476-5p:Novel*, *hsa-miR-378b-5p:Novel*, *hsa-miR-4254-5p:Novel*, *hsa-miR-429*, *hsa-miR-7852-3p*, *hsa-miR-4327*, *hsa-miR-4687-3p* and *hsa-miR-7852-5p:Novel* (variables are sorted from the strongest).

- low values for variables like *hsa-miR-5189-3p*, *hsa-miR-3125*, *hsa-miR-6768-5p*, *hsa-miR-134-5p*, *hsa-miR-3691-3p*, *hsa-miR-6515-5p*, *hsa-miR-4667-3p*, *hsa-miR-6790-5p*, *hsa-miR-5193-5p:Novel* and *hsa-miR-3180-5p* (variables are sorted from the weakest).

The **dimension 6** opposes individuals such as *Cii_019* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *VF063* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *Cii_019* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-411-5p*, *hsa-miR-4519*, *hsa-miR-4476-5p:Novel*, *hsa-miR-378b-5p:Novel*, *hsa-miR-4254-5p:Novel*, *hsa-miR-429*, *hsa-miR-7852-3p*, *hsa-miR-4327*, *hsa-miR-4687-3p* and *hsa-miR-7852-5p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-5189-3p*, *hsa-miR-3125*, *hsa-miR-6768-5p*, *hsa-miR-134-5p*, *hsa-miR-3691-3p*, *hsa-miR-6515-5p*, *hsa-miR-4667-3p*, *hsa-miR-6790-5p*, *hsa-miR-5193-5p:Novel* and *hsa-miR-3180-5p* (variables are sorted from the weakest).

The group in which the individual *VF063* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-548j-3p*, *hsa-miR-511-5p*, *hsa-miR-1343-3p*, *hsa-miR-340-3p*, *hsa-miR-331-3p*, *hsa-miR-374a-5p*, *hsa-miR-218-1-3p*, *hsa-miR-4999-5p*, *hsa-miR-335-3p* and *hsa-miR-361-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-657-5p:Novel*, *hsa-miR-11399-3p:Novel*, *hsa-miR-371a-5p*, *hsa-miR-6849-5p*, *hsa-miR-655-5p*, *hsa-miR-6084-5p:Novel*, *hsa-miR-6867-5p*, *hsa-miR-4311-3p:Novel*, *hsa-miR-504-5p* and *hsa-miR-2861* (variables are sorted from the weakest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-5189-3p*, *hsa-miR-4667-3p*, *hsa-miR-6074-5p:Novel*, *hsa-miR-4296*, *hsa-miR-6768-5p*, *hsa-miR-598-5p*, *hsa-miR-134-5p*, *hsa-miR-3125*, *hsa-miR-92a-1-5p* and *hsa-miR-588-3p:Novel* (variables are sorted from the strongest).
 - low values for variables like *hsa-miR-411-5p*, *hsa-miR-4519*, *hsa-miR-4254-5p:Novel*, *hsa-miR-4476-5p:Novel*, *hsa-miR-4687-3p*, *hsa-miR-4327*, *hsa-miR-378b-5p:Novel*, *hsa-miR-429*, *hsa-miR-7852-3p* and *hsa-miR-7852-5p:Novel* (variables are sorted from the weakest).
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6. Description of the plane 7:8

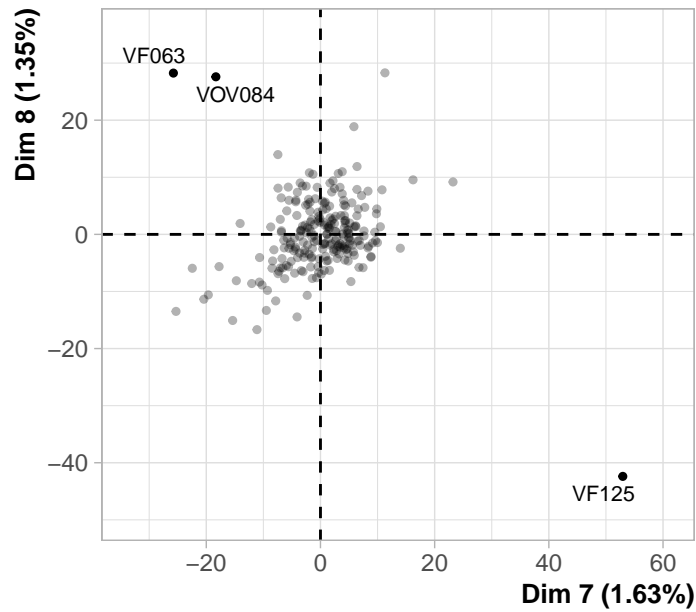


Figure 6.1 - Individuals factor map (PCA) *The labeled individuals are those with the higher contribution to the plane construction.*

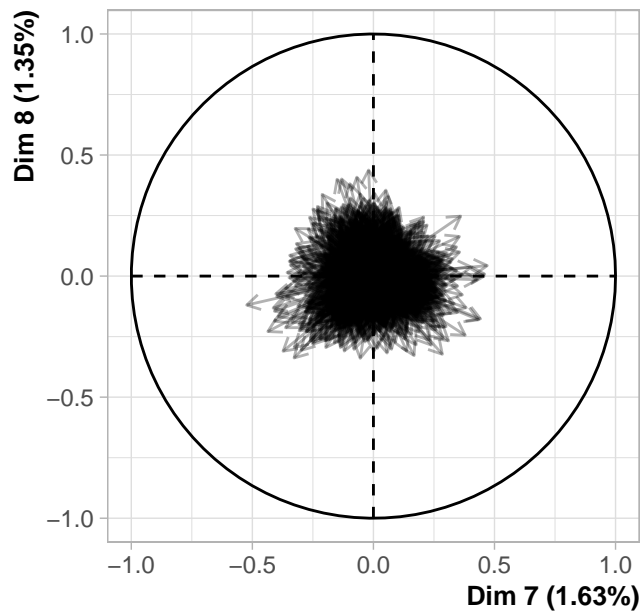


Figure 6.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 7** opposes individuals such as *VF125*, *VOV084* and *VF063* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals characterized by a strongly negative coordinate on the axis (to the left of the graph).

The group in which the individuals *VOV084* and *VF063* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-378h*, *hsa-miR-3689d-3p:Novel*, *hsa-miR-1267*, *hsa-miR-6509-5p*, *hsa-miR-1295a*, *hsa-miR-6773-5p*, *hsa-miR-4264-3p:Novel*, *hsa-miR-3619-3p*, *hsa-miR-5585-5p* and *hsa-miR-494-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-6871-3p*, *hsa-miR-2110-3p:Novel*, *hsa-miR-650*, *hsa-miR-3621-3p:Novel*, *hsa-miR-10392-5p*, *hsa-miR-6806-3p*, *hsa-miR-1255b-5p*, *hsa-miR-6862-3p*, *hsa-miR-378b-5p:Novel* and *hsa-miR-1587-3p:Novel* (variables are sorted from the weakest).

The group in which the individual *VF125* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-892c-5p*, *hsa-miR-7153-3p*, *hsa-miR-548am-3p*, *hsa-miR-1302-7-5p:Novel*, *hsa-miR-196a-1-3p*, *hsa-miR-1229-3p*, *hsa-miR-4742-3p*, *hsa-miR-877-3p*, *hsa-miR-548ab* and *hsa-miR-5579-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4494*, *hsa-miR-595-5p:Novel*, *hsa-miR-504-5p*, *hsa-miR-1250-5p*, *hsa-miR-12128*, *hsa-miR-5100*, *hsa-miR-6816-3p*, *hsa-miR-4279*, *hsa-miR-5698* and *hsa-miR-635-3p:Novel* (variables are sorted from the weakest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6871-3p*, *hsa-miR-2110-3p:Novel*, *hsa-miR-6806-3p*, *hsa-miR-583-3p:Novel*, *hsa-miR-3621-3p:Novel*, *hsa-miR-378b-5p:Novel*, *hsa-miR-650*, *hsa-miR-10392-5p*, *hsa-miR-4489-3p:Novel* and *hsa-miR-1255b-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-1267*, *hsa-miR-378h*, *hsa-miR-338-3p*, *hsa-miR-494-3p*, *hsa-miR-6081*, *hsa-miR-1208*, *hsa-miR-6773-5p*, *hsa-miR-9986*, *hsa-miR-6895-3p* and *hsa-miR-3689d-3p:Novel* (variables are sorted from the weakest).

The **dimension 8** opposes individuals such as *VOV084* and *VF063* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as ** and *VF125* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *VOV084* and *VF063* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-378h*, *hsa-miR-3689d-3p:Novel*, *hsa-miR-1267*, *hsa-miR-6509-5p*, *hsa-miR-1295a*, *hsa-miR-6773-5p*, *hsa-miR-4264-3p:Novel*, *hsa-miR-3619-3p*, *hsa-miR-5585-5p* and *hsa-miR-494-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-6871-3p*, *hsa-miR-2110-3p:Novel*, *hsa-miR-650*, *hsa-miR-3621-3p:Novel*, *hsa-miR-10392-5p*, *hsa-miR-6806-3p*, *hsa-miR-1255b-5p*, *hsa-miR-6862-3p*, *hsa-miR-378b-5p:Novel* and *hsa-miR-1587-3p:Novel* (variables are sorted from the weakest).

The group 2 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6871-3p*, *hsa-miR-2110-3p:Novel*, *hsa-miR-6806-3p*, *hsa-miR-583-3p:Novel*, *hsa-miR-3621-3p:Novel*, *hsa-miR-378b-5p:Novel*, *hsa-miR-650*, *hsa-miR-10392-5p*, *hsa-miR-4489-3p:Novel* and *hsa-miR-1255b-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-1267*, *hsa-miR-378h*, *hsa-miR-338-3p*, *hsa-miR-494-3p*, *hsa-miR-6081*, *hsa-miR-1208*, *hsa-miR-6773-5p*, *hsa-miR-9986*, *hsa-miR-6895-3p* and *hsa-miR-3689d-3p:Novel* (variables are sorted from the weakest).

The group in which the individual *VF125* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-892c-5p*, *hsa-miR-7153-3p*, *hsa-miR-548am-3p*, *hsa-miR-1302-7-5p:Novel*, *hsa-miR-196a-1-3p*, *hsa-miR-1229-3p*, *hsa-miR-4742-3p*, *hsa-miR-877-3p*, *hsa-miR-548ab* and *hsa-miR-5579-3p* (variables are sorted from the strongest).

- low values for variables like *hsa-miR-4494*, *hsa-miR-595-5p:Novel*, *hsa-miR-504-5p*, *hsa-miR-1250-5p*, *hsa-miR-12128*, *hsa-miR-5100*, *hsa-miR-6816-3p*, *hsa-miR-4279*, *hsa-miR-5698* and *hsa-miR-635-3p:Novel* (variables are sorted from the weakest).

7. Description of the plane 9:10

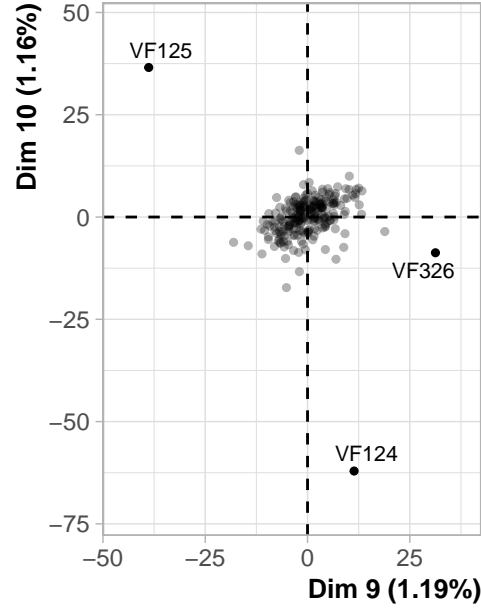


Figure 7.1 - Individuals factor map (PCA) *The labeled individuals are those with the higher contribution to the plane construction.*

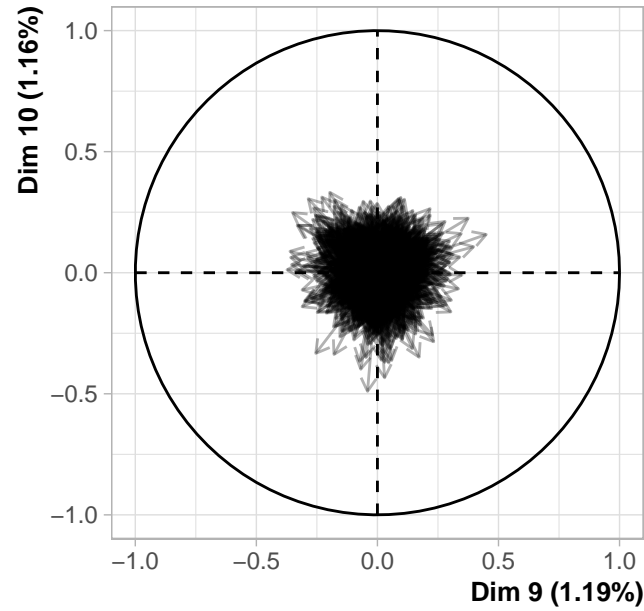


Figure 7.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 9** opposes individuals such as *VF326* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *VF125* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *VF326* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-1281-5p:Novel*, *hsa-miR-655-5p*, *hsa-miR-6846-5p*, *hsa-miR-4496-5p:Novel*, *hsa-miR-3689d-3p:Novel*, *hsa-miR-1276-3p:Novel*, *hsa-miR-3171-3p:Novel*, *hsa-miR-548ag-5p*, *hsa-miR-4492* and *hsa-miR-1306-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-425-3p*, *hsa-miR-3714-3p:Novel*, *hsa-miR-365a-3p*, *hsa-miR-365b-3p*, *hsa-miR-3689a-3p*, *hsa-miR-6846-3p*, *hsa-miR-6080*, *hsa-miR-7106-3p*, *hsa-miR-7856-3p:Novel*, *hsa-miR-6741-3p* and *hsa-miR-941* (variables are sorted from the weakest).

The group in which the individual *VF125* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-196a-1-3p*, *hsa-miR-7153-3p*, *hsa-miR-323a-3p*, *hsa-miR-4423-3p*, *hsa-let-7b-3p*, *hsa-miR-548o-5p:Novel*, *hsa-miR-526b-5p*, *hsa-miR-892c-5p*, *hsa-miR-4742-3p* and *hsa-miR-376a-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4494*, *hsa-miR-6816-3p*, *hsa-miR-504-5p*, *hsa-miR-595-5p:Novel*, *hsa-miR-4489*, *hsa-miR-4279*, *hsa-miR-657-5p:Novel*, *hsa-miR-1250-5p*, *hsa-miR-4738-3p* and *hsa-miR-5698* (variables are sorted from the weakest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6846-3p*, *hsa-miR-3714-3p:Novel*, *hsa-miR-6741-3p*, *hsa-miR-425-3p*, *hsa-miR-550a-3p*, *hsa-miR-6748-3p*, *hsa-miR-7106-3p*, *hsa-miR-6848-3p*, *hsa-miR-5693-5p:Novel* and *hsa-miR-6778-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-655-5p*, *hsa-miR-1281-5p:Novel*, *hsa-miR-4496-5p:Novel*, *hsa-miR-6846-5p*, *hsa-miR-4492*, *hsa-miR-4791*, *hsa-miR-1276-3p:Novel*, *hsa-miR-1-2-5p:Novel*, *hsa-miR-3664-3p* and *hsa-miR-198-3p:Novel* (variables are sorted from the weakest).

The **dimension 10** opposes individuals such as *VF125* and *VF326* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as ** and *VF124* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *VF125* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-196a-1-3p*, *hsa-miR-7153-3p*, *hsa-miR-323a-3p*, *hsa-miR-4423-3p*, *hsa-let-7b-3p*, *hsa-miR-548o-5p:Novel*, *hsa-miR-526b-5p*, *hsa-miR-892c-5p*, *hsa-miR-4742-3p* and *hsa-miR-376a-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4494*, *hsa-miR-6816-3p*, *hsa-miR-504-5p*, *hsa-miR-595-5p:Novel*, *hsa-miR-4489*, *hsa-miR-4279*, *hsa-miR-657-5p:Novel*, *hsa-miR-1250-5p*, *hsa-miR-4738-3p* and *hsa-miR-5698* (variables are sorted from the weakest).

The group in which the individual *VF326* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-1281-5p:Novel*, *hsa-miR-655-5p*, *hsa-miR-6846-5p*, *hsa-miR-4496-5p:Novel*, *hsa-miR-3689d-3p:Novel*, *hsa-miR-1276-3p:Novel*, *hsa-miR-3171-3p:Novel*, *hsa-miR-548ag-5p*, *hsa-miR-4492* and *hsa-miR-1306-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-425-3p*, *hsa-miR-3714-3p:Novel*, *hsa-miR-365a-3p*, *hsa-miR-365b-3p*, *hsa-miR-3689a-3p*, *hsa-miR-6846-3p*, *hsa-miR-6080*, *hsa-miR-7106-3p*, *hsa-miR-7856-3p:Novel*, *hsa-miR-6741-3p* and *hsa-miR-941* (variables are sorted from the weakest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6846-3p*, *hsa-miR-3714-3p:Novel*, *hsa-miR-6741-3p*, *hsa-miR-425-3p*, *hsa-miR-550a-3p*, *hsa-miR-6748-3p*, *hsa-miR-7106-3p*, *hsa-miR-6848-3p*, *hsa-miR-5693-5p:Novel* and *hsa-miR-6778-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-655-5p*, *hsa-miR-1281-5p:Novel*, *hsa-miR-4496-5p:Novel*, *hsa-miR-6846-5p*, *hsa-miR-4492*, *hsa-miR-4791*, *hsa-miR-1276-3p:Novel*, *hsa-miR-1-2-5p:Novel*, *hsa-miR-3664-3p* and *hsa-miR-198-3p:Novel* (variables are sorted from the weakest).

The group in which the individual *VF124* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-450b-5p*, *hsa-miR-6817-3p*, *hsa-miR-4520-2-3p*, *hsa-miR-6737-3p*, *hsa-miR-382-3p*, *hsa-miR-3925-3p*, *hsa-miR-210-5p*, *hsa-miR-216b-3p*, *hsa-miR-3191-5p* and *hsa-miR-449b-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-12118-3p:Novel*, *hsa-miR-6838-5p*, *hsa-miR-3155b*, *hsa-miR-1284*, *hsa-miR-4283*, *hsa-miR-6772-5p*, *hsa-miR-4674*, *hsa-miR-4513-3p:Novel*, *hsa-miR-4674-5p:Novel* and *hsa-miR-378h* (variables are sorted from the weakest).

8. Description of the plane 11:12

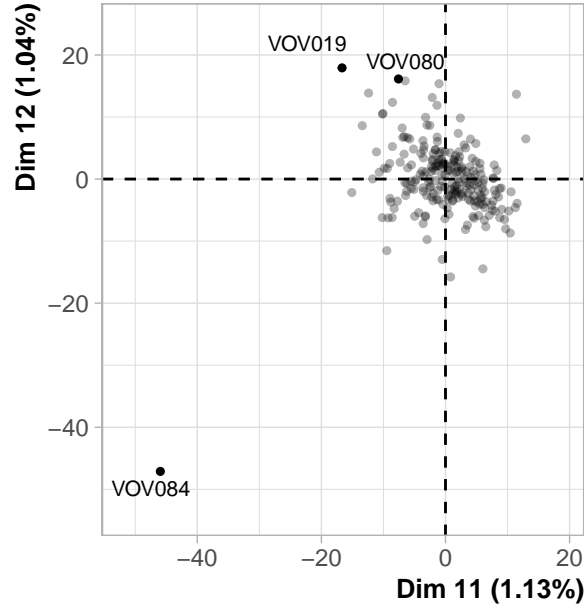


Figure 8.1 - Individuals factor map (PCA) The labeled individuals are those with the higher contribution to the plane construction.

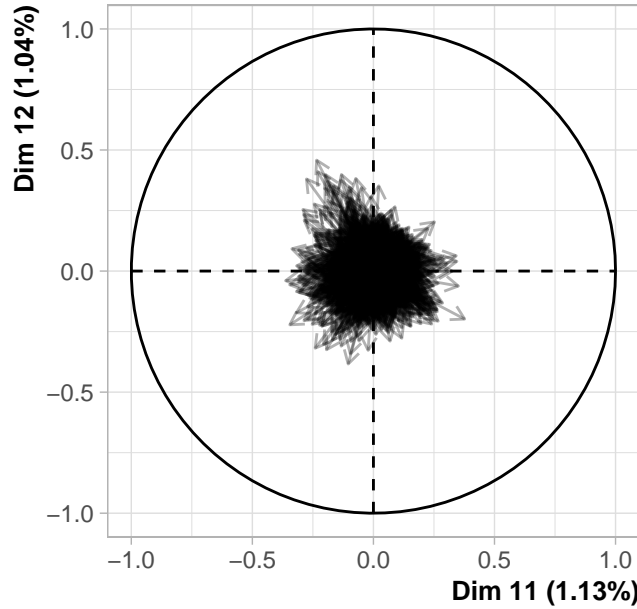


Figure 8.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 11** opposes individuals characterized by a strongly positive coordinate on the axis (to the right of the graph) to individuals such as *VOV084**VOV019**VOV080* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-3164-3p:Novel*, *hsa-miR-4519*, *hsa-miR-429*, *hsa-miR-1282-3p:Novel*, *hsa-miR-940-5p:Novel*, *hsa-miR-1286*, *hsa-miR-378b-5p:Novel*, *hsa-miR-4537-3p:Novel*, *hsa-miR-1324-5p:Novel* and *hsa-miR-4327* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-302c-5p*, *hsa-miR-6780a-5p*, *hsa-miR-4771-5p:Novel*, *hsa-miR-137-5p*, *hsa-miR-3911-3p:Novel*, *hsa-miR-4660-3p:Novel*, *hsa-miR-647*, *hsa-miR-5008-5p*, *hsa-miR-8059-3p:Novel* and *hsa-miR-8075-5p:Novel* (variables are sorted from the weakest).

The group in which the individual *VOV084* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4481*, *hsa-miR-7109-3p*, *hsa-miR-520c-3p*, *hsa-miR-6769b-3p*, *hsa-miR-520b-3p*, *hsa-miR-548f-5p*, *hsa-miR-548k*, *hsa-miR-6883-3p*, *hsa-miR-122b-3p* and *hsa-miR-664a-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-3138-5p:Novel*, *hsa-miR-646-5p:Novel*, *hsa-miR-5093*, *hsa-miR-550b-2-5p*, *hsa-miR-4431*, *hsa-miR-4534*, *hsa-miR-4283-3p:Novel*, *hsa-miR-124-3p*, *hsa-miR-3976-3p:Novel* and *hsa-miR-3155a* (variables are sorted from the weakest).

The group in which the individuals *VOV019* and *VOV080* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-302c-5p*, *hsa-miR-6780a-5p*, *hsa-miR-137-5p*, *hsa-miR-4771-5p:Novel*, *hsa-miR-3911-3p:Novel*, *hsa-miR-5008-5p*, *hsa-miR-4660-3p:Novel*, *hsa-miR-647*, *hsa-miR-8059-3p:Novel* and *hsa-miR-6846-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-3164-3p:Novel*, *hsa-miR-1282-3p:Novel*, *hsa-miR-4519*, *hsa-miR-429*, *hsa-miR-940-5p:Novel*, *hsa-miR-1286*, *hsa-miR-7158-3p*, *hsa-miR-4327*, *hsa-miR-935-5p:Novel* and *hsa-miR-622-5p:Novel* (variables are sorted from the weakest).

The **dimension 12** opposes individuals such as *VOV019* and *VOV080* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as **** and *VOV084* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *VOV019* and *VOV080* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-302c-5p*, *hsa-miR-6780a-5p*, *hsa-miR-137-5p*, *hsa-miR-4771-5p:Novel*, *hsa-miR-3911-3p:Novel*, *hsa-miR-5008-5p*, *hsa-miR-4660-3p:Novel*, *hsa-miR-647*, *hsa-miR-8059-3p:Novel* and *hsa-miR-6846-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-3164-3p:Novel*, *hsa-miR-1282-3p:Novel*, *hsa-miR-4519*, *hsa-miR-429*, *hsa-miR-940-5p:Novel*, *hsa-miR-1286*, *hsa-miR-7158-3p*, *hsa-miR-4327*, *hsa-miR-935-5p:Novel* and *hsa-miR-622-5p:Novel* (variables are sorted from the weakest).

The group in which the individual *VOV084* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4481*, *hsa-miR-7109-3p*, *hsa-miR-520c-3p*, *hsa-miR-6769b-3p*, *hsa-miR-520b-3p*, *hsa-miR-548f-5p*, *hsa-miR-548k*, *hsa-miR-6883-3p*, *hsa-miR-122b-3p* and *hsa-miR-664a-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-3138-5p:Novel*, *hsa-miR-646-5p:Novel*, *hsa-miR-5093*, *hsa-miR-550b-2-5p*, *hsa-miR-4431*, *hsa-miR-4534*, *hsa-miR-4283-3p:Novel*, *hsa-miR-124-3p*, *hsa-miR-3976-3p:Novel* and *hsa-miR-3155a* (variables are sorted from the weakest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-3164-3p:Novel*, *hsa-miR-4519*, *hsa-miR-429*, *hsa-miR-1282-3p:Novel*, *hsa-miR-940-5p:Novel*, *hsa-miR-1286*, *hsa-miR-378b-5p:Novel*, *hsa-miR-4537-3p:Novel*, *hsa-miR-1324-5p:Novel* and *hsa-miR-4327* (variables are sorted from the strongest).
 - low values for variables like *hsa-miR-302c-5p*, *hsa-miR-6780a-5p*, *hsa-miR-4771-5p:Novel*, *hsa-miR-137-5p*, *hsa-miR-3911-3p:Novel*, *hsa-miR-4660-3p:Novel*, *hsa-miR-647*, *hsa-miR-5008-5p*, *hsa-miR-8059-3p:Novel* and *hsa-miR-8075-5p:Novel* (variables are sorted from the weakest).
-

9. Description of the plane 13:14

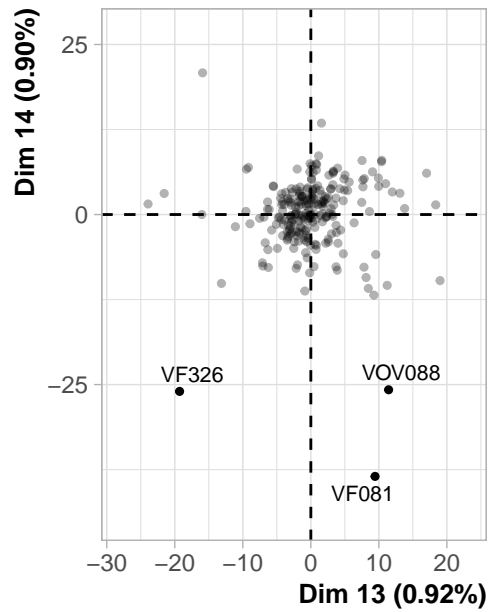


Figure 9.1 - Individuals factor map (PCA) *The labeled individuals are those with the higher contribution to the plane construction.*

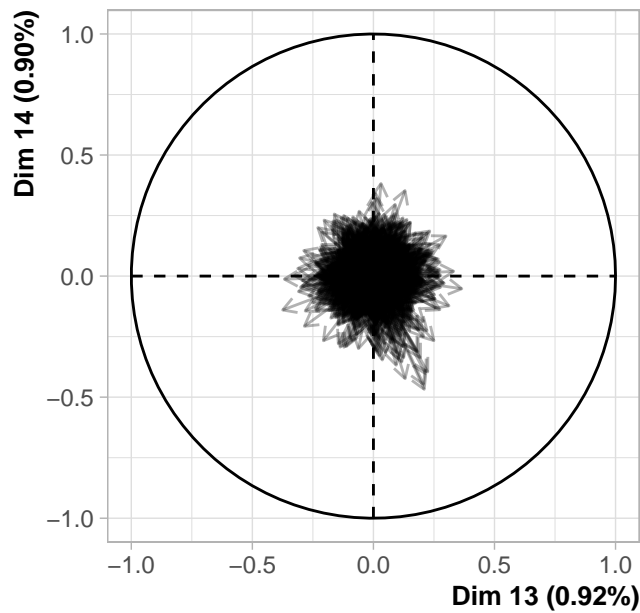


Figure 9.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 13** opposes individuals such as *VF081* and *VOV088* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as **** and *VF326* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-195-3p*, *hsa-miR-3972*, *hsa-miR-297-3p:Novel*, *hsa-miR-9898*, *hsa-miR-622-5p:Novel*, *hsa-miR-3198-5p:Novel*, *hsa-miR-4422*, *hsa-miR-6732-5p*, *hsa-miR-4468-5p:Novel* and *hsa-miR-657-5p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-648-3p:Novel*, *hsa-miR-665*, *hsa-miR-3158-5p*, *hsa-miR-6873-3p*, *hsa-miR-6875-5p*, *hsa-miR-455-3p*, *hsa-miR-6508-3p*, *hsa-miR-6733-5p*, *hsa-miR-10397-5p* and *hsa-miR-15a-3p* (variables are sorted from the weakest).

The group in which the individuals *VF081* and *VOV088* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-941*, *hsa-miR-648-3p:Novel*, *hsa-miR-518d-3p*, *hsa-miR-1843*, *hsa-miR-4787-3p*, *hsa-miR-130b-5p*, *hsa-miR-628-3p*, *hsa-miR-612*, *hsa-miR-1249-3p* and *hsa-miR-3154* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-7113-5p*, *hsa-miR-9898*, *hsa-miR-10395-5p*, *hsa-miR-4327-3p:Novel*, *hsa-miR-654-5p*, *hsa-miR-4710-3p:Novel*, *hsa-miR-4675-5p:Novel*, *hsa-miR-6124*, *hsa-miR-8077-5p:Novel* and *hsa-miR-3690-3p:Novel* (variables are sorted from the weakest).

The group in which the individual *VF326* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-193b-3p*, *hsa-miR-2278-3p:Novel*, *hsa-miR-665*, *hsa-miR-6715a-5p:Novel*, *hsa-miR-3201-3p:Novel*, *hsa-miR-6715b-5p*, *hsa-miR-4725-3p*, *hsa-miR-5195-3p*, *hsa-miR-11181-5p* and *hsa-miR-3123-5p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-1200*, *hsa-miR-4269*, *hsa-miR-1290-5p:Novel*, *hsa-miR-1246-3p:Novel*, *hsa-miR-2117-5p:Novel*, *hsa-miR-5706-3p:Novel*, *hsa-miR-6835-5p*, *hsa-miR-378b*, *hsa-miR-4486-3p:Novel* and *hsa-miR-12120-3p:Novel* (variables are sorted from the weakest).

The **dimension 14** opposes individuals characterized by a strongly positive coordinate on the axis (to the top of the graph) to individuals such as *VF081**VOV088* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-195-3p*, *hsa-miR-3972*, *hsa-miR-297-3p:Novel*, *hsa-miR-9898*, *hsa-miR-622-5p:Novel*, *hsa-miR-3198-5p:Novel*, *hsa-miR-4422*, *hsa-miR-6732-5p*, *hsa-miR-4468-5p:Novel* and *hsa-miR-657-5p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-648-3p:Novel*, *hsa-miR-665*, *hsa-miR-3158-5p*, *hsa-miR-6873-3p*, *hsa-miR-6875-5p*, *hsa-miR-455-3p*, *hsa-miR-6508-3p*, *hsa-miR-6733-5p*, *hsa-miR-10397-5p* and *hsa-miR-15a-3p* (variables are sorted from the weakest).

The group in which the individuals *VF081* and *VOV088* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-941*, *hsa-miR-648-3p:Novel*, *hsa-miR-518d-3p*, *hsa-miR-1843*, *hsa-miR-4787-3p*, *hsa-miR-130b-5p*, *hsa-miR-628-3p*, *hsa-miR-612*, *hsa-miR-1249-3p* and *hsa-miR-3154* (variables are sorted from the strongest).
 - low values for variables like *hsa-miR-7113-5p*, *hsa-miR-9898*, *hsa-miR-10395-5p*, *hsa-miR-4327-3p:Novel*, *hsa-miR-654-5p*, *hsa-miR-4710-3p:Novel*, *hsa-miR-4675-5p:Novel*, *hsa-miR-6124*, *hsa-miR-8077-5p:Novel* and *hsa-miR-3690-3p:Novel* (variables are sorted from the weakest).
-

10. Description of the plane 15:16

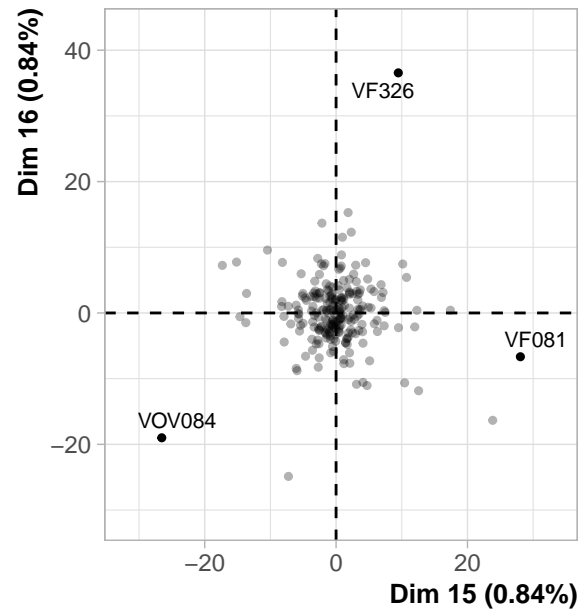


Figure 10.1 - Individuals factor map (PCA) *The labeled individuals are those with the higher contribution to the plane construction.*

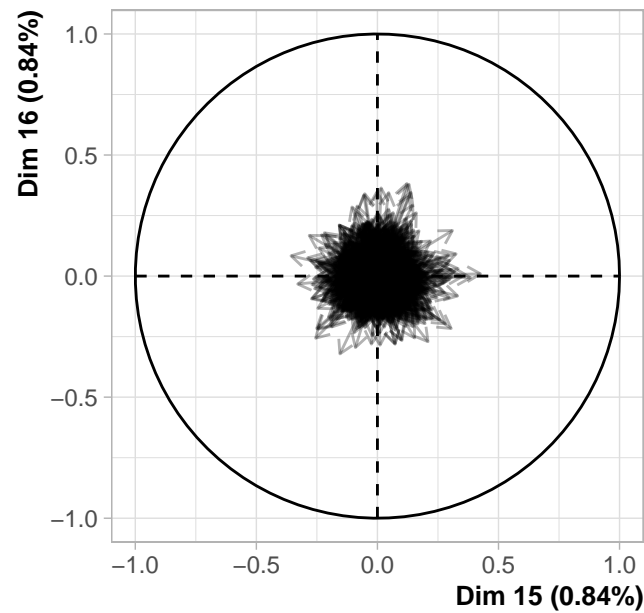


Figure 10.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 15** opposes individuals such as *VF081* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *VOV084* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6736-5p*, *hsa-miR-3185-3p:Novel*, *hsa-miR-6134-5p:Novel*, *hsa-miR-33b-3p*, *hsa-miR-6746-5p*, *hsa-miR-614*, *hsa-miR-11399*, *hsa-miR-892c-5p*, *hsa-miR-483-5p* and *hsa-miR-548ao-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-5094*, *hsa-miR-4508-3p:Novel*, *hsa-miR-8086*, *hsa-miR-8072-3p:Novel*, *hsa-miR-4488-3p:Novel*, *hsa-miR-4800-3p*, *hsa-miR-10400-5p*, *hsa-miR-6131-5p:Novel*, *hsa-miR-647-3p:Novel* and *hsa-miR-668-3p* (variables are sorted from the weakest).

The group in which the individual *VF081* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-624-5p*, *hsa-miR-216b-3p*, *hsa-miR-4718*, *hsa-miR-1914-5p*, *hsa-miR-1323*, *hsa-miR-6888-3p*, *hsa-miR-548s*, *hsa-miR-493-3p*, *hsa-miR-6791-3p* and *hsa-miR-647-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-1233-5p*, *hsa-miR-1260b*, *hsa-miR-147a-5p:Novel*, *hsa-miR-378h*, *hsa-miR-6867-5p*, *hsa-miR-3652-3p:Novel*, *hsa-miR-4513-3p:Novel*, *hsa-miR-138-5p*, *hsa-miR-219b-3p* and *hsa-miR-3155b* (variables are sorted from the weakest).

The group in which the individual *VOV084* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4481*, *hsa-miR-6769b-3p*, *hsa-miR-122b-3p*, *hsa-miR-619-3p*, *hsa-miR-4637*, *hsa-miR-2355-5p*, *hsa-miR-520e-3p*, *hsa-miR-520b-3p*, *hsa-miR-1255b-1-3p:Novel* and *hsa-miR-374c-3p* (variables are sorted from the strongest).
- low values for the variables *hsa-miR-3181*, *hsa-miR-30c-2-3p*, *hsa-miR-3138-5p:Novel* and *hsa-miR-3155a* (variables are sorted from the weakest).

The group 4 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-320a-5p*, *hsa-miR-1273c*, *hsa-miR-425-5p*, *hsa-miR-4441-5p:Novel*, *hsa-miR-4492-5p:Novel*, *hsa-miR-7110-3p*, *hsa-miR-1256*, *hsa-miR-6790-3p*, *hsa-miR-145-5p* and *hsa-miR-4634-5p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-7703*, *hsa-miR-606*, *hsa-miR-483-5p*, *hsa-miR-23c*, *hsa-miR-4737-3p:Novel*, *hsa-miR-4523-3p:Novel*, *hsa-miR-3146*, *hsa-miR-4533-3p:Novel*, *hsa-miR-3943-3p:Novel* and *hsa-miR-4654-3p:Novel* (variables are sorted from the weakest).

The **dimension 16** opposes individuals such as *VF326* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *VF081VOV084* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6771-3p*, *hsa-miR-5006-3p*, *hsa-miR-6840-5p*, *hsa-miR-6722-5p*, *hsa-miR-4252-5p:Novel*, *hsa-miR-5693-5p:Novel*, *hsa-miR-4433a-5p*, *hsa-miR-1199-5p*, *hsa-miR-4802-3p* and *hsa-miR-19b-3p* (variables are sorted from the strongest).
- low values for the variables *hsa-miR-1290-5p:Novel*, *hsa-miR-149-3p*, *hsa-miR-1246-3p:Novel*, *hsa-miR-219a-5p*, *hsa-miR-11399-3p:Novel*, *hsa-miR-4693-3p*, *hsa-miR-4494-5p:Novel* and *hsa-miR-4256* (variables are sorted from the weakest).

The group in which the individual *VF326* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-2053-5p:Novel*, *hsa-miR-891b-3p:Novel*, *hsa-miR-4775*, *hsa-miR-664b-3p*, *hsa-miR-302f-5p:Novel*, *hsa-miR-1229-3p*, *hsa-miR-5689-3p:Novel*, *hsa-miR-6799-3p*, *hsa-miR-6775-3p* and *hsa-miR-5591-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-1288-5p*, *hsa-miR-1293*, *hsa-miR-4494*, *hsa-miR-323a-5p*, *hsa-miR-504-5p*, *hsa-miR-378h*, *hsa-miR-3137-3p:Novel*, *hsa-miR-12123*, *hsa-miR-4690-5p* and *hsa-miR-3972*

(variables are sorted from the weakest).

The group in which the individual *VOV084* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4481*, *hsa-miR-6769b-3p*, *hsa-miR-122b-3p*, *hsa-miR-619-3p*, *hsa-miR-4637*, *hsa-miR-2355-5p*, *hsa-miR-520e-3p*, *hsa-miR-520b-3p*, *hsa-miR-1255b-1-3p:Novel* and *hsa-miR-374c-3p* (variables are sorted from the strongest).
- low values for the variables *hsa-miR-3181*, *hsa-miR-30c-2-3p*, *hsa-miR-3138-5p:Novel* and *hsa-miR-3155a* (variables are sorted from the weakest).

The group 4 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4431*, *hsa-miR-4301-3p:Novel*, *hsa-miR-670-5p*, *hsa-miR-554-3p:Novel*, *hsa-miR-3137-3p:Novel*, *hsa-miR-4645-3p*, *hsa-miR-7157-3p*, *hsa-miR-367-3p*, *hsa-miR-3149* and *hsa-miR-6884-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4479*, *hsa-miR-3064-5p*, *hsa-miR-5680-5p:Novel*, *hsa-miR-4468-5p:Novel*, *hsa-miR-4644-5p:Novel*, *hsa-miR-194-1-3p:Novel*, *hsa-miR-6760-5p*, *hsa-miR-766-3p*, *hsa-miR-448-5p:Novel* and *hsa-miR-194-3p* (variables are sorted from the weakest).

The group in which the individual *VF081* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-624-5p*, *hsa-miR-216b-3p*, *hsa-miR-4718*, *hsa-miR-1914-5p*, *hsa-miR-1323*, *hsa-miR-6888-3p*, *hsa-miR-548s*, *hsa-miR-493-3p*, *hsa-miR-6791-3p* and *hsa-miR-647-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-1233-5p*, *hsa-miR-1260b*, *hsa-miR-147a-5p:Novel*, *hsa-miR-378h*, *hsa-miR-6867-5p*, *hsa-miR-3652-3p:Novel*, *hsa-miR-4513-3p:Novel*, *hsa-miR-138-5p*, *hsa-miR-219b-3p* and *hsa-miR-3155b* (variables are sorted from the weakest).

11. Description of the plane 17:18

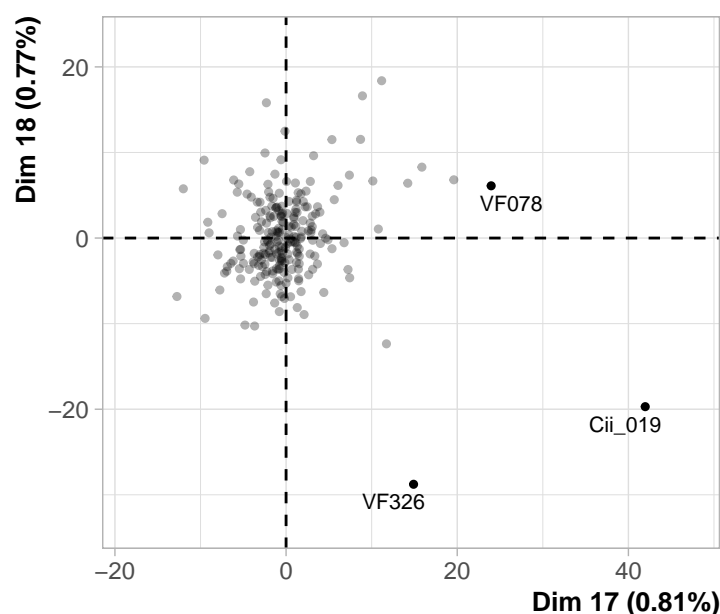


Figure 11.1 - Individuals factor map (PCA) The labeled individuals are those with the higher contribution to the plane construction.

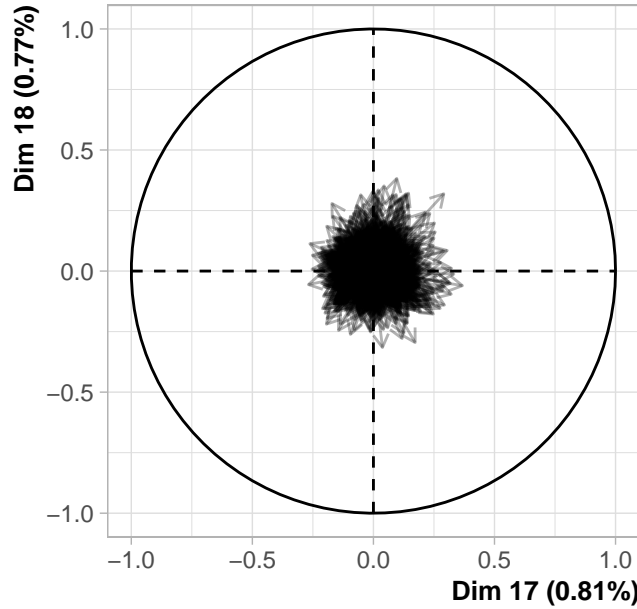


Figure 11.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 17** opposes individuals such as *Cii_019*, *VF326* and *VF078* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals characterized by a strongly negative coordinate on the axis (to the left of the graph).

The group in which the individual *VF078* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6875-5p*, *hsa-miR-2278-3p:Novel*, *hsa-miR-1293*, *hsa-miR-4255-3p:Novel*, *hsa-miR-378h-3p:Novel*, *hsa-miR-518c-3p*, *hsa-miR-4462-5p:Novel*, *hsa-miR-3945-3p:Novel*, *hsa-miR-6125* and *hsa-miR-4327-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-5186*, *hsa-miR-3649-5p:Novel*, *hsa-miR-4478*, *hsa-miR-548k-3p:Novel*, *hsa-miR-1539*, *hsa-miR-146b-3p*, *hsa-miR-548a-2-5p:Novel*, *hsa-miR-1246-3p:Novel*, *hsa-miR-4261-5p:Novel* and *hsa-miR-617* (variables are sorted from the weakest).

The group in which the individuals *Cii_019* and *VF326* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-510-5p*, *hsa-miR-1296-5p*, *hsa-miR-4713-5p*, *hsa-miR-891b-3p:Novel*, *hsa-miR-375-5p*, *hsa-miR-5591-3p*, *hsa-miR-4699-5p*, *hsa-miR-4662a-3p*, *hsa-miR-548s-5p:Novel* and *hsa-miR-619-3p* (variables are sorted from the strongest).
- low values for the variable *hsa-miR-5698*.

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-5186*, *hsa-miR-4478*, *hsa-miR-3649-5p:Novel*, *hsa-miR-548a-2-5p:Novel*, *hsa-miR-1539*, *hsa-miR-6809-3p*, *hsa-miR-504-5p*, *hsa-miR-1246-3p:Novel*, *hsa-miR-617* and *hsa-miR-944* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4462-5p:Novel*, *hsa-miR-2278-3p:Novel*, *hsa-miR-1293*, *hsa-miR-4255-3p:Novel*, *hsa-miR-6875-5p*, *hsa-miR-6125*, *hsa-miR-3945-3p:Novel*, *hsa-miR-591*, *hsa-miR-518c-3p* and *hsa-miR-1283-1-3p:Novel* (variables are sorted from the weakest).

The **dimension 18** opposes individuals such as *VF078* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *Cii_019* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *VF078* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6875-5p*, *hsa-miR-2278-3p:Novel*, *hsa-miR-1293*, *hsa-miR-4255-3p:Novel*, *hsa-miR-378h-3p:Novel*, *hsa-miR-518c-3p*, *hsa-miR-4462-5p:Novel*, *hsa-miR-3945-3p:Novel*, *hsa-miR-6125* and *hsa-miR-4327-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-5186*, *hsa-miR-3649-5p:Novel*, *hsa-miR-4478*, *hsa-miR-548k-3p:Novel*, *hsa-miR-1539*, *hsa-miR-146b-3p*, *hsa-miR-548a-2-5p:Novel*, *hsa-miR-1246-3p:Novel*, *hsa-miR-4261-5p:Novel* and *hsa-miR-617* (variables are sorted from the weakest).

The group 2 (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-5186*, *hsa-miR-4478*, *hsa-miR-3649-5p:Novel*, *hsa-miR-548a-2-5p:Novel*, *hsa-miR-1539*, *hsa-miR-6809-3p*, *hsa-miR-504-5p*, *hsa-miR-1246-3p:Novel*, *hsa-miR-617* and *hsa-miR-944* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4462-5p:Novel*, *hsa-miR-2278-3p:Novel*, *hsa-miR-1293*, *hsa-miR-4255-3p:Novel*, *hsa-miR-6875-5p*, *hsa-miR-6125*, *hsa-miR-3945-3p:Novel*, *hsa-miR-591*, *hsa-miR-518c-3p* and *hsa-miR-1283-1-3p:Novel* (variables are sorted from the weakest).

The group in which the individuals *Cii_019* and *VF326* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-510-5p*, *hsa-miR-1296-5p*, *hsa-miR-4713-5p*, *hsa-miR-891b-3p:Novel*, *hsa-miR-375-5p*, *hsa-miR-5591-3p*, *hsa-miR-4699-5p*, *hsa-miR-4662a-3p*, *hsa-miR-548s-5p:Novel* and *hsa-miR-619-3p* (variables are sorted from the strongest).
- low values for the variable *hsa-miR-5698*.

12. Description of the plane 19:20

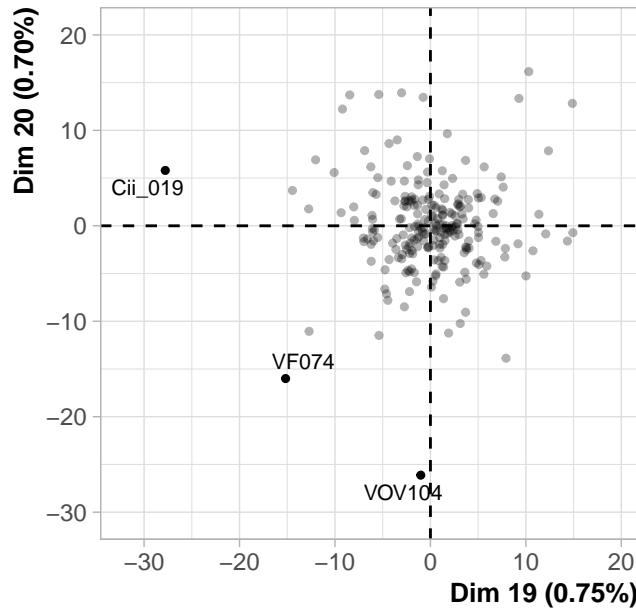


Figure 12.1 - Individuals factor map (PCA) The labeled individuals are those with the higher contribution to the plane construction.

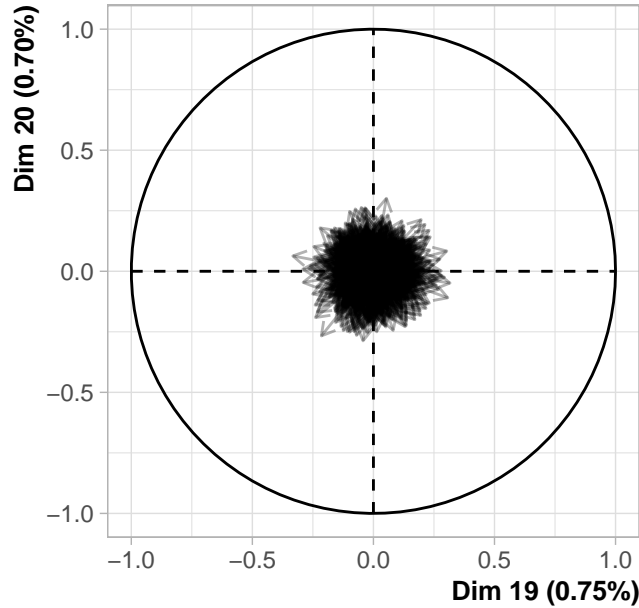


Figure 12.2 - Variables factor map (PCA) The labeled variables are those the best shown on the plane.

The **dimension 19** opposes individuals characterized by a strongly positive coordinate on the axis (to the right of the graph) to individuals such as *Cii_019* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-1324-5p:Novel*, *hsa-miR-27b-5p*, *hsa-miR-548u-5p:Novel*, *hsa-miR-4654*, *hsa-miR-7974*, *hsa-miR-3609*, *hsa-miR-653-5p*, *hsa-miR-15a-3p*, *hsa-miR-378i* and *hsa-miR-548al-5p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-12125*, *hsa-miR-1912-5p*, *hsa-miR-3130-5p*, *hsa-miR-4671-5p*, *hsa-miR-6741-3p*, *hsa-miR-6748-3p*, *hsa-miR-944-5p:Novel*, *hsa-miR-6816-3p*, *hsa-miR-4276-3p:Novel* and *hsa-miR-3085-5p* (variables are sorted from the weakest).

The group in which the individual *Cii_019* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6075*, *hsa-miR-550b-2-5p*, *hsa-miR-6846-5p*, *hsa-miR-3189-5p*, *hsa-miR-6077*, *hsa-miR-4432*, *hsa-miR-4478*, *hsa-miR-6790-5p*, *hsa-miR-195-3p* and *hsa-miR-155-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4654*, *hsa-miR-1273c-3p:Novel*, *hsa-miR-26a-2-3p*, *hsa-miR-1291-3p:Novel*, *hsa-miR-3977-3p:Novel*, *hsa-miR-8060-5p:Novel*, *hsa-miR-3666-3p:Novel*, *hsa-miR-193b-3p*, *hsa-miR-3166* and *hsa-miR-12126-5p:Novel* (variables are sorted from the weakest).

The **dimension 20** opposes individuals such as *Cii_019* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *VOV104VF074* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *Cii_019* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6075*, *hsa-miR-550b-2-5p*, *hsa-miR-6846-5p*, *hsa-miR-3189-5p*, *hsa-miR-6077*, *hsa-miR-4432*, *hsa-miR-4478*, *hsa-miR-6790-5p*, *hsa-miR-195-3p* and *hsa-miR-155-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4654*, *hsa-miR-1273c-3p:Novel*, *hsa-miR-26a-2-3p*, *hsa-miR-1291-3p:Novel*, *hsa-miR-3977-3p:Novel*, *hsa-miR-8060-5p:Novel*, *hsa-miR-3666-3p:Novel*, *hsa-miR-193b-3p*, *hsa-miR-3166* and *hsa-miR-12126-5p:Novel* (variables are sorted from the weakest).

The group in which the individuals *VOV104* and *VF074* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-12125*, *hsa-miR-4297-3p:Novel*, *hsa-miR-548j-3p*, *hsa-miR-4454*, *hsa-miR-98-3p*, *hsa-miR-6841-3p*, *hsa-miR-518e-3p*, *hsa-miR-1287-3p*, *hsa-miR-4745-3p* and *hsa-miR-24-2-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-6075*, *hsa-miR-486-3p*, *hsa-miR-6846-5p*, *hsa-miR-4259-5p:Novel*, *hsa-miR-6750-5p*, *hsa-miR-4527-3p:Novel*, *hsa-miR-4654-3p:Novel*, *hsa-miR-548a-3p*, *hsa-miR-181c-3p* and *hsa-miR-6873-5p* (variables are sorted from the weakest).

13. Description of the plane 21:22

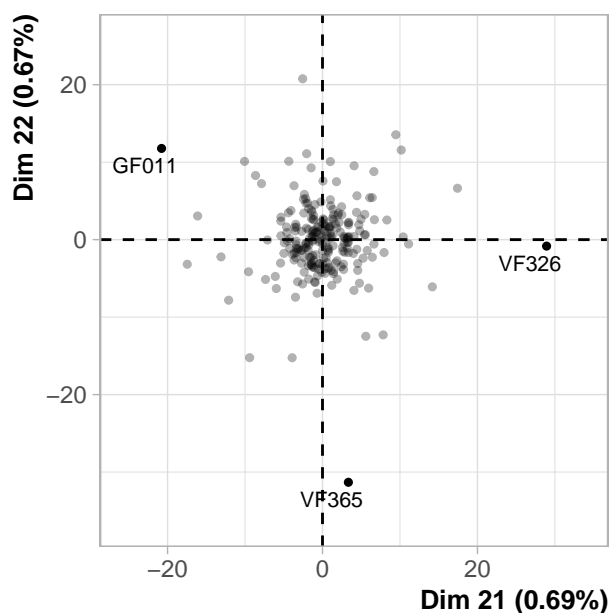


Figure 13.1 - Individuals factor map (PCA) The labeled individuals are those with the higher contribution to the plane construction.

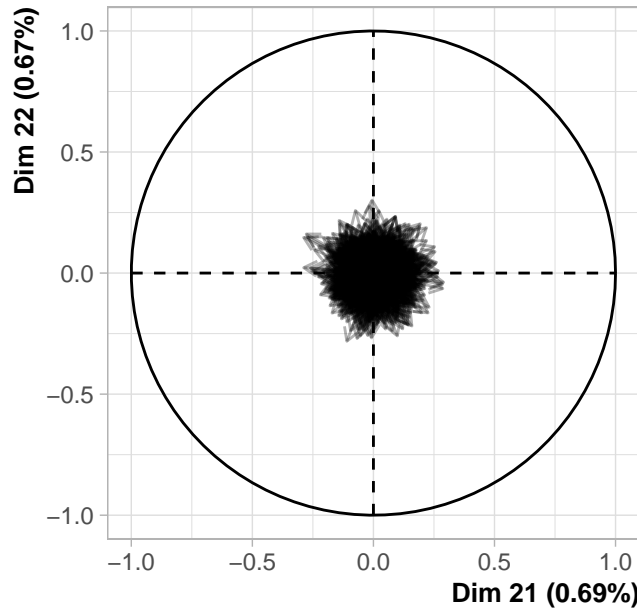


Figure 13.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 21** opposes individuals such as *VF326* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *GF011* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *VF326* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6866-3p*, *hsa-miR-642b-3p*, *hsa-miR-608*, *hsa-miR-3149*, *hsa-miR-558-5p:Novel*, *hsa-miR-944-5p:Novel*, *hsa-miR-1272*, *hsa-miR-550a-3-5p*, *hsa-miR-550b-3p* and *hsa-miR-153-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-10398-3p*, *hsa-miR-3960-5p:Novel*, *hsa-miR-5091-3p:Novel*, *hsa-miR-1915-3p*, *hsa-miR-1285-3p*, *hsa-miR-4800-3p*, *hsa-miR-4497*, *hsa-miR-4449*, *hsa-miR-219a-5p* and *hsa-miR-432-5p* (variables are sorted from the weakest).

The group in which the individual *GF011* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-3682-5p*, *hsa-miR-4310-5p:Novel*, *hsa-miR-3064-3p*, *hsa-miR-32-3p*, *hsa-miR-384*, *hsa-miR-1206-3p:Novel*, *hsa-miR-505-3p*, *hsa-miR-3689f*, *hsa-miR-5091-3p:Novel* and *hsa-miR-5690-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-5680-5p:Novel*, *hsa-miR-2114-5p*, *hsa-miR-555*, *hsa-miR-146b-3p*, *hsa-miR-6871-3p*, *hsa-miR-11399*, *hsa-miR-5707-3p:Novel*, *hsa-miR-4506*, *hsa-miR-99b-3p* and *hsa-miR-138-5p* (variables are sorted from the weakest).

The **dimension 22** opposes individuals such as *GF011* and *VF326* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as **** and *VF365* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *GF011* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-3682-5p*, *hsa-miR-4310-5p:Novel*, *hsa-miR-3064-3p*, *hsa-miR-32-3p*, *hsa-miR-384*, *hsa-miR-1206-3p:Novel*, *hsa-miR-505-3p*, *hsa-miR-3689f*, *hsa-miR-5091-3p:Novel* and *hsa-miR-5690-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-5680-5p:Novel*, *hsa-miR-2114-5p*, *hsa-miR-555*, *hsa-miR-146b-3p*, *hsa-miR-6871-3p*, *hsa-miR-11399*, *hsa-miR-5707-3p:Novel*, *hsa-miR-4506*, *hsa-miR-99b-3p* and *hsa-miR-138-5p* (variables are sorted from the weakest).

The group in which the individual *VF326* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-6866-3p*, *hsa-miR-642b-3p*, *hsa-miR-608*, *hsa-miR-3149*, *hsa-miR-558-5p:Novel*, *hsa-miR-944-5p:Novel*, *hsa-miR-1272*, *hsa-miR-550a-3-5p*, *hsa-miR-550b-3p* and *hsa-miR-153-3p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-10398-3p*, *hsa-miR-3960-5p:Novel*, *hsa-miR-5091-3p:Novel*, *hsa-miR-1915-3p*, *hsa-miR-1285-3p*, *hsa-miR-4800-3p*, *hsa-miR-4497*, *hsa-miR-4449*, *hsa-miR-219a-5p* and *hsa-miR-432-5p* (variables are sorted from the weakest).

The group in which the individual *VF365* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-548bb-3p*, *hsa-miR-3168-3p:Novel*, *hsa-miR-4802-5p*, *hsa-miR-11399*, *hsa-miR-4324-5p:Novel*, *hsa-miR-1260a-3p:Novel*, *hsa-miR-4497*, *hsa-miR-4728-3p*, *hsa-miR-4467* and *hsa-miR-6768-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4698-5p:Novel*, *hsa-miR-4501-3p:Novel*, *hsa-miR-3149*, *hsa-miR-4677-3p*, *hsa-miR-581*, *hsa-miR-4665-5p*, *hsa-miR-11400-3p:Novel*, *hsa-miR-181b-5p*, *hsa-miR-4429-3p:Novel* and *hsa-miR-30c-2-3p* (variables are sorted from the weakest).

14. Description of the plane 23:24

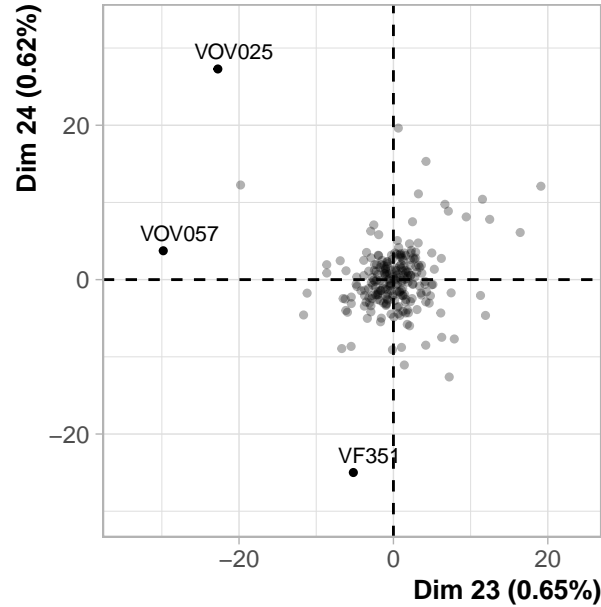


Figure 14.1 - Individuals factor map (PCA) The labeled individuals are those with the higher contribution to the plane construction.

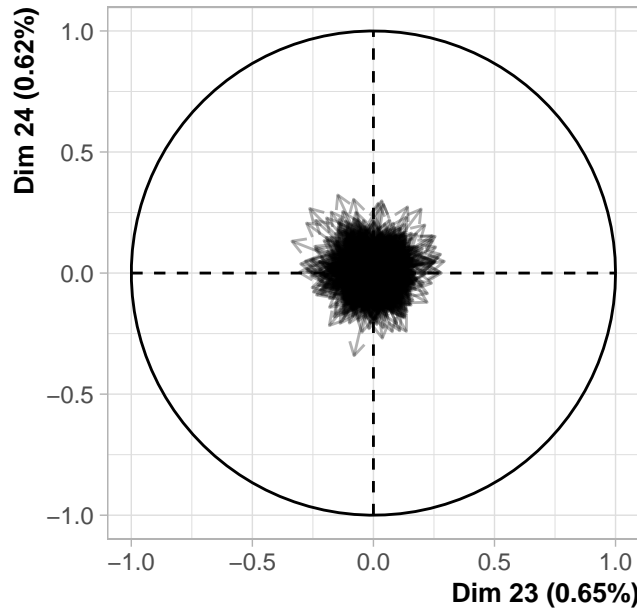


Figure 14.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 23** opposes individuals characterized by a strongly positive coordinate on the axis (to the right of the graph) to individuals such as *VOV025* and *VOV057* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4456-3p:Novel*, *hsa-miR-2116-3p*, *hsa-miR-4530-5p:Novel*, *hsa-miR-147a*, *hsa-miR-12121*, *hsa-miR-6893-5p*, *hsa-miR-4715-5p*, *hsa-miR-5090-3p:Novel*, *hsa-miR-636-5p:Novel* and *hsa-miR-3660-5p:Novel* (variables are sorted from the strongest).
- low values for the variables *hsa-miR-4717-5p*, *hsa-miR-3183*, *hsa-miR-630-5p:Novel*, *hsa-miR-4802-3p*, *hsa-miR-455-5p*, *hsa-miR-10397-3p* and *hsa-miR-4666b-3p:Novel* (variables are sorted from the weakest).

The group in which the individuals *VOV025* and *VOV057* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-7160-5p*, *hsa-miR-548am-3p*, *hsa-miR-10394-5p*, *hsa-miR-1299*, *hsa-miR-302d-3p*, *hsa-miR-1245b-3p*, *hsa-miR-3186-3p*, *hsa-miR-1258*, *hsa-miR-711* and *hsa-miR-4752-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-8083-3p:Novel*, *hsa-miR-3916-3p:Novel*, *hsa-miR-1587-3p:Novel*, *hsa-miR-654-5p*, *hsa-miR-3180*, *hsa-miR-3976-3p:Novel*, *hsa-miR-5572*, *hsa-miR-2114-5p*, *hsa-miR-1231-3p:Novel* and *hsa-miR-4656-3p:Novel* (variables are sorted from the weakest).

The **dimension 24** opposes individuals such as *VOV025* and *VOV057* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as **** and *VF351* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *VOV025* and *VOV057* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-7160-5p*, *hsa-miR-548am-3p*, *hsa-miR-10394-5p*, *hsa-miR-1299*,

hsa-miR-302d-3p, *hsa-miR-1245b-3p*, *hsa-miR-3186-3p*, *hsa-miR-1258*, *hsa-miR-711* and *hsa-miR-4752-3p:Novel* (variables are sorted from the strongest).

- low values for variables like *hsa-miR-8083-3p:Novel*, *hsa-miR-3916-3p:Novel*, *hsa-miR-1587-3p:Novel*, *hsa-miR-654-5p*, *hsa-miR-3180*, *hsa-miR-3976-3p:Novel*, *hsa-miR-5572*, *hsa-miR-2114-5p*, *hsa-miR-1231-3p:Novel* and *hsa-miR-4656-3p:Novel* (variables are sorted from the weakest).

The group 2 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4456-3p:Novel*, *hsa-miR-2116-3p*, *hsa-miR-4530-5p:Novel*, *hsa-miR-147a*, *hsa-miR-12121*, *hsa-miR-6893-5p*, *hsa-miR-4715-5p*, *hsa-miR-5090-3p:Novel*, *hsa-miR-636-5p:Novel* and *hsa-miR-3660-5p:Novel* (variables are sorted from the strongest).
- low values for the variables *hsa-miR-4717-5p*, *hsa-miR-3183*, *hsa-miR-630-5p:Novel*, *hsa-miR-4802-3p*, *hsa-miR-455-5p*, *hsa-miR-10397-3p* and *hsa-miR-4666b-3p:Novel* (variables are sorted from the weakest).

The group in which the individual *VF351* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4717-5p*, *hsa-miR-630-5p:Novel*, *hsa-miR-4683*, *hsa-miR-3916-3p:Novel*, *hsa-miR-4802-3p*, *hsa-miR-5580-5p*, *hsa-miR-1244*, *hsa-miR-600-5p:Novel*, *hsa-miR-4496* and *hsa-miR-4428* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-718-5p:Novel*, *hsa-miR-5694*, *hsa-miR-2116-3p*, *hsa-miR-4481-3p:Novel*, *hsa-miR-454-3p*, *hsa-miR-4774-5p*, *hsa-miR-4456-3p:Novel*, *hsa-miR-4648-3p:Novel*, *hsa-miR-12121* and *hsa-miR-665* (variables are sorted from the weakest).

15. Description of the plane 25:26

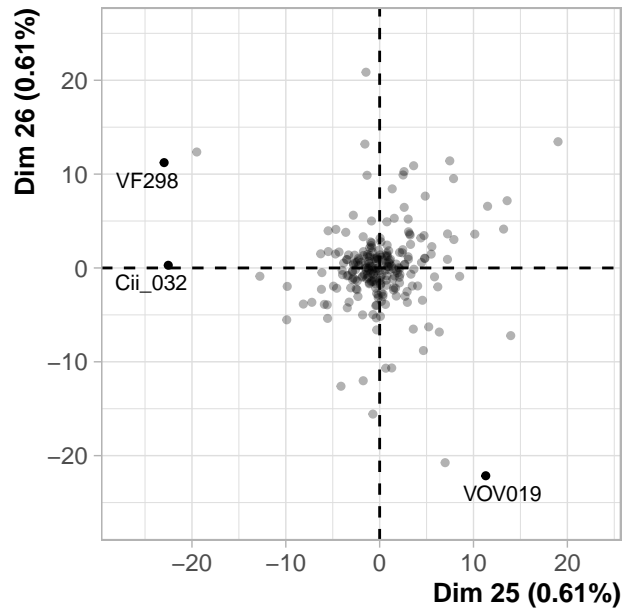


Figure 15.1 - Individuals factor map (PCA) The labeled individuals are those with the higher contribution to the plane construction.

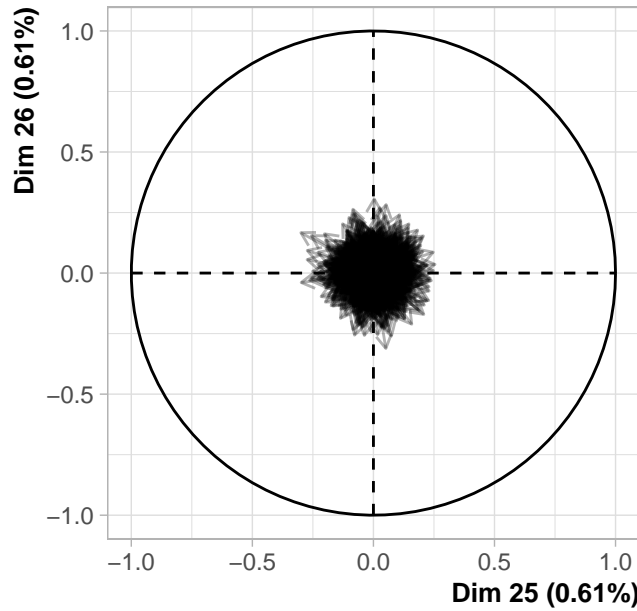


Figure 15.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 25** opposes individuals characterized by a strongly positive coordinate on the axis (to the right of the graph) to individuals such as *VF298Cii_032* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4728-3p*, *hsa-miR-4490-5p:Novel*, *hsa-miR-4802-3p*, *hsa-miR-7852-3p*, *hsa-miR-3663-5p*, *hsa-miR-219b-3p*, *hsa-miR-12131-5p:Novel*, *hsa-miR-4717-5p*, *hsa-miR-3168* and *hsa-miR-548aa-5p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-8057*, *hsa-miR-1827*, *hsa-miR-1470-3p:Novel*, *hsa-miR-5703-5p:Novel*, *hsa-miR-6515-5p*, *hsa-miR-300-5p:Novel*, *hsa-miR-4534-5p:Novel*, *hsa-miR-4769-5p*, *hsa-miR-12122-3p:Novel* and *hsa-miR-4428-5p:Novel* (variables are sorted from the weakest).

The group in which the individuals *VF298* and *Cii_032* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4744*, *hsa-miR-4769-5p*, *hsa-miR-342-3p*, *hsa-miR-1825-5p:Novel*, *hsa-miR-378j-3p:Novel*, *hsa-miR-4649-3p*, *hsa-miR-1244-5p:Novel*, *hsa-miR-625-5p*, *hsa-miR-3170-3p:Novel* and *hsa-miR-4802-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-4728-3p*, *hsa-miR-6077*, *hsa-miR-320e-5p:Novel*, *hsa-miR-1469-3p:Novel*, *hsa-miR-137-3p*, *hsa-miR-4739-3p:Novel*, *hsa-miR-4698*, *hsa-miR-199a-3p*, *hsa-miR-199b-3p*, *hsa-miR-940* and *hsa-miR-4687-3p* (variables are sorted from the weakest).

The **dimension 26** opposes individuals characterized by a strongly positive coordinate on the axis (to the top of the graph) to individuals such as *VOV019* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4728-3p*, *hsa-miR-4490-5p:Novel*, *hsa-miR-4802-3p*, *hsa-miR-7852-3p*, *hsa-miR-3663-5p*, *hsa-miR-219b-3p*, *hsa-miR-12131-5p:Novel*, *hsa-miR-4717-5p*, *hsa-miR-3168*

and *hsa-miR-548aa-5p:Novel* (variables are sorted from the strongest).

- low values for variables like *hsa-miR-8057*, *hsa-miR-1827*, *hsa-miR-1470-3p:Novel*, *hsa-miR-5703-5p:Novel*, *hsa-miR-6515-5p*, *hsa-miR-300-5p:Novel*, *hsa-miR-4534-5p:Novel*, *hsa-miR-4769-5p*, *hsa-miR-12122-3p:Novel* and *hsa-miR-4428-5p:Novel* (variables are sorted from the weakest).

The group in which the individual *VOV019* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-8067*, *hsa-miR-4664-3p*, *hsa-miR-4439*, *hsa-miR-1279-3p:Novel*, *hsa-miR-4763-3p*, *hsa-miR-940*, *hsa-miR-762*, *hsa-miR-9985*, *hsa-miR-6828-3p* and *hsa-miR-571-5p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-373-3p*, *hsa-miR-12117-3p:Novel*, *hsa-miR-1843*, *hsa-miR-4666b-3p:Novel*, *hsa-miR-569-5p:Novel*, *hsa-miR-4690-5p*, *hsa-miR-6738-5p*, *hsa-miR-129-5p*, *hsa-miR-342-3p* and *hsa-miR-4507* (variables are sorted from the weakest).

16. Description of the plane 27:28

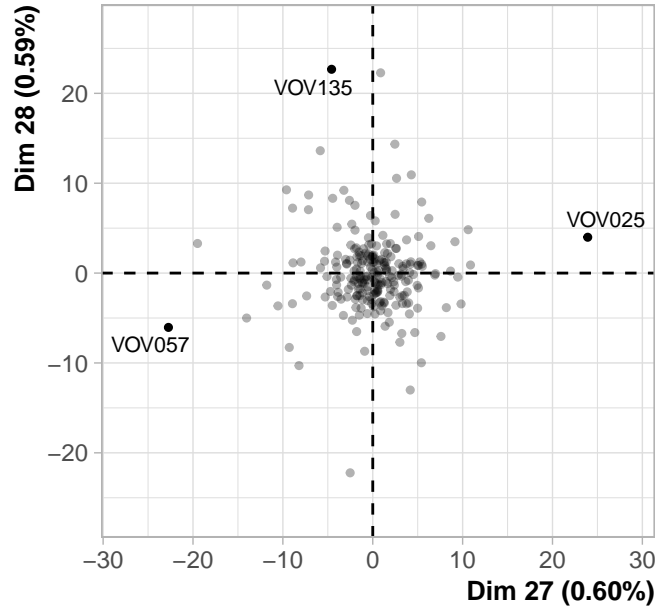


Figure 16.1 - Individuals factor map (PCA) *The labeled individuals are those with the higher contribution to the plane construction.*

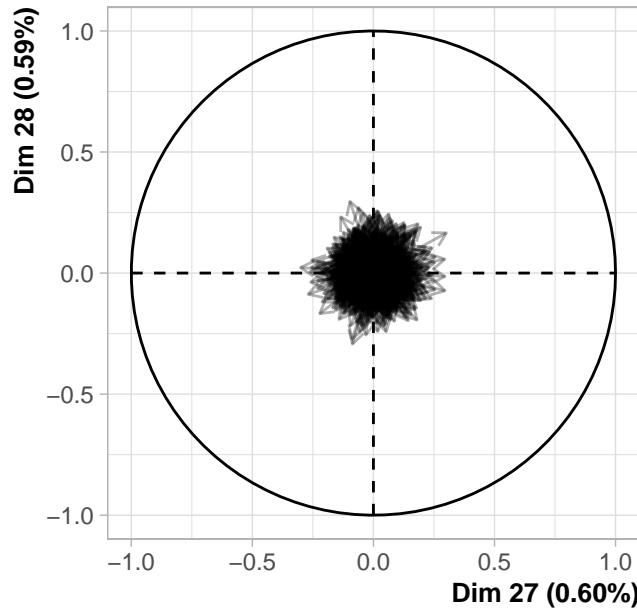


Figure 16.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 27** opposes individuals such as *VOV025* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *VOV057* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *VOV025* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-1323-3p:Novel*, *hsa-miR-764-3p:Novel*, *hsa-miR-371b-5p*, *hsa-miR-764*, *hsa-miR-8063*, *hsa-miR-4763-3p*, *hsa-miR-4322-5p:Novel*, *hsa-miR-6774-5p*, *hsa-miR-3926-3p:Novel* and *hsa-miR-3529-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-572*, *hsa-miR-3064-5p*, *hsa-miR-4717-5p*, *hsa-miR-4266*, *hsa-miR-10392-3p*, *hsa-miR-6849-3p*, *hsa-miR-4497*, *hsa-miR-4445-3p*, *hsa-miR-7150-3p:Novel* and *hsa-miR-4306* (variables are sorted from the weakest).

The group in which the individual *VOV057* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4306*, *hsa-miR-4317*, *hsa-miR-6807-3p*, *hsa-miR-1277-3p*, *hsa-miR-7108-3p*, *hsa-miR-622*, *hsa-miR-6851-5p*, *hsa-miR-4682-3p:Novel*, *hsa-miR-3162-5p* and *hsa-miR-5004-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-320d*, *hsa-miR-762*, *hsa-miR-3657-5p:Novel*, *hsa-miR-764-3p:Novel*, *hsa-miR-7844-3p:Novel*, *hsa-miR-3085-3p*, *hsa-miR-4322-5p:Novel*, *hsa-miR-29b-2-5p*, *hsa-miR-4467-3p:Novel* and *hsa-miR-3163* (variables are sorted from the weakest).

The **dimension 28** opposes individuals such as *VOV135* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *VOV057**VOV025* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *VOV135* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-3064-5p*, *hsa-miR-548h-5-3p:Novel*, *hsa-miR-3714-3p:Novel*, *hsa-miR-325*, *hsa-miR-4508*, *hsa-miR-103a-2-5p*, *hsa-miR-501-3p*, *hsa-miR-10392-5p*, *hsa-miR-4737* and *hsa-miR-4741* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-6834-5p*, *hsa-miR-4431-3p:Novel*, *hsa-miR-4793-5p*, *hsa-miR-3130-5p*, *hsa-miR-12119*, *hsa-miR-218-5p*, *hsa-miR-3920*, *hsa-miR-6125*, *hsa-miR-5704* and *hsa-miR-12129* (variables are sorted from the weakest).

The group in which the individual *VOV057* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-4306*, *hsa-miR-4317*, *hsa-miR-6807-3p*, *hsa-miR-1277-3p*, *hsa-miR-7108-3p*, *hsa-miR-622*, *hsa-miR-6851-5p*, *hsa-miR-4682-3p:Novel*, *hsa-miR-3162-5p* and *hsa-miR-5004-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-320d*, *hsa-miR-762*, *hsa-miR-3657-5p:Novel*, *hsa-miR-764-3p:Novel*, *hsa-miR-7844-3p:Novel*, *hsa-miR-3085-3p*, *hsa-miR-4322-5p:Novel*, *hsa-miR-29b-2-5p*, *hsa-miR-4467-3p:Novel* and *hsa-miR-3163* (variables are sorted from the weakest).

The group in which the individual *VOV025* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-1323-3p:Novel*, *hsa-miR-764-3p:Novel*, *hsa-miR-371b-5p*, *hsa-miR-764*, *hsa-miR-8063*, *hsa-miR-4763-3p*, *hsa-miR-4322-5p:Novel*, *hsa-miR-6774-5p*, *hsa-miR-3926-3p:Novel* and *hsa-miR-3529-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-572*, *hsa-miR-3064-5p*, *hsa-miR-4717-5p*, *hsa-miR-4266*, *hsa-miR-10392-3p*, *hsa-miR-6849-3p*, *hsa-miR-4497*, *hsa-miR-4445-3p*, *hsa-miR-7150-3p:Novel* and *hsa-miR-4306* (variables are sorted from the weakest).

17. Description of the plane 29:30

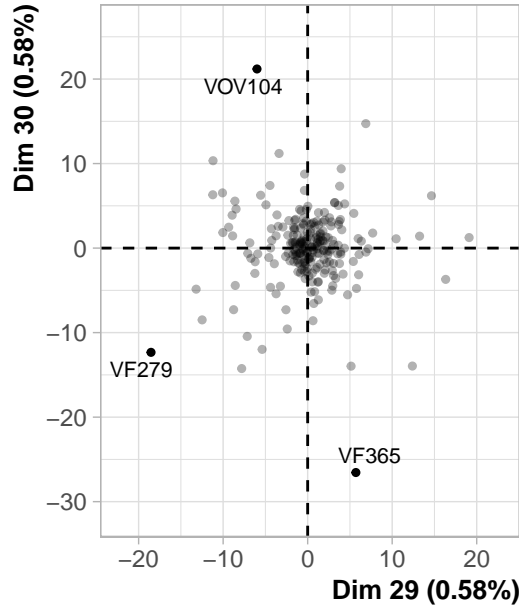


Figure 17.1 - Individuals factor map (PCA) The labeled individuals are those with the higher contribution to the plane construction.

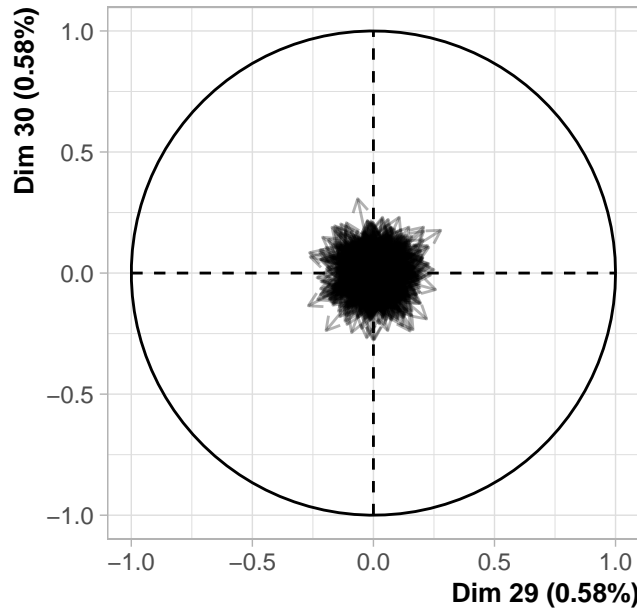


Figure 17.2 - Variables factor map (PCA) *The labeled variables are those the best shown on the plane.*

The **dimension 29** opposes individuals characterized by a strongly positive coordinate on the axis (to the right of the graph) to individuals such as *VF365VF279VOV104* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-7159-5p*, *hsa-miR-6799-3p*, *hsa-miR-200c-5p*, *hsa-miR-670-5p*, *hsa-miR-8089*, *hsa-miR-10398-5p*, *hsa-miR-3667-3p*, *hsa-miR-3977-3p:Novel*, *hsa-miR-4733-3p* and *hsa-miR-548as-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-550b-2-5p*, *hsa-miR-4290-5p:Novel*, *hsa-miR-4264-3p:Novel*, *hsa-miR-148a-3p*, *hsa-miR-1272-3p:Novel*, *hsa-miR-6840-5p*, *hsa-miR-550a-5p*, *hsa-miR-215-5p*, *hsa-miR-1267* and *hsa-miR-155-5p* (variables are sorted from the weakest).

The group in which the individual *VOV104* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-655-3p*, *hsa-miR-3609-5p:Novel*, *hsa-miR-1539*, *hsa-miR-3945-3p:Novel*, *hsa-miR-6873-3p*, *hsa-miR-412-3p*, *hsa-miR-155-5p*, *hsa-miR-4299*, *hsa-miR-6840-5p* and *hsa-miR-4435-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-498-3p*, *hsa-miR-512-3p*, *hsa-miR-670-5p*, *hsa-miR-3977-3p:Novel*, *hsa-miR-499a-5p*, *hsa-miR-6742-5p*, *hsa-miR-378g*, *hsa-miR-101-3p*, *hsa-miR-1292-5p* and *hsa-miR-1-2-5p:Novel* (variables are sorted from the weakest).

The group in which the individuals *VF365* and *VF279* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-605-3p*, *hsa-miR-1267*, *hsa-miR-7152-3p*, *hsa-miR-1537-5p*, *hsa-miR-367-5p*, *hsa-miR-485-3p*, *hsa-miR-1292-5p*, *hsa-miR-5694*, *hsa-miR-1468-3p* and *hsa-miR-668-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-7845-5p*, *hsa-miR-4687-5p*, *hsa-miR-3622a-5p*, *hsa-miR-9902-3p:Novel*, *hsa-miR-4298-3p:Novel*, *hsa-miR-507*, *hsa-miR-3140-5p*, *hsa-miR-1266-3p*, *hsa-miR-564-3p:Novel* and *hsa-miR-626* (variables are sorted from the weakest).

The **dimension 30** opposes individuals such as *VOV104* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *VF365VF279* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *VOV104* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-655-3p*, *hsa-miR-3609-5p:Novel*, *hsa-miR-1539*, *hsa-miR-3945-3p:Novel*, *hsa-miR-6873-3p*, *hsa-miR-412-3p*, *hsa-miR-155-5p*, *hsa-miR-4299*, *hsa-miR-6840-5p* and *hsa-miR-4435-3p:Novel* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-498-3p*, *hsa-miR-512-3p*, *hsa-miR-670-5p*, *hsa-miR-3977-3p:Novel*, *hsa-miR-499a-5p*, *hsa-miR-6742-5p*, *hsa-miR-378g*, *hsa-miR-101-3p*, *hsa-miR-1292-5p* and *hsa-miR-1-2-5p:Novel* (variables are sorted from the weakest).

The group in which the individuals *VF365* and *VF279* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *hsa-miR-605-3p*, *hsa-miR-1267*, *hsa-miR-7152-3p*, *hsa-miR-1537-5p*, *hsa-miR-367-5p*, *hsa-miR-485-3p*, *hsa-miR-1292-5p*, *hsa-miR-5694*, *hsa-miR-1468-3p* and *hsa-miR-668-5p* (variables are sorted from the strongest).
- low values for variables like *hsa-miR-7845-5p*, *hsa-miR-4687-5p*, *hsa-miR-3622a-5p*, *hsa-miR-9902-3p:Novel*, *hsa-miR-4298-3p:Novel*, *hsa-miR-507*, *hsa-miR-3140-5p*, *hsa-miR-1266-3p*, *hsa-miR-564-3p:Novel* and *hsa-miR-626* (variables are sorted from the weakest).

18. Classification

The dataset is too large to perform the classification.

Annexes