

A globe is centered in the background, overlaid with a complex network of white and blue nodes connected by thin lines, representing social network analysis. The globe shows continents in yellow and green against a blue ocean. The background is a dark, textured blue with some light streaks.

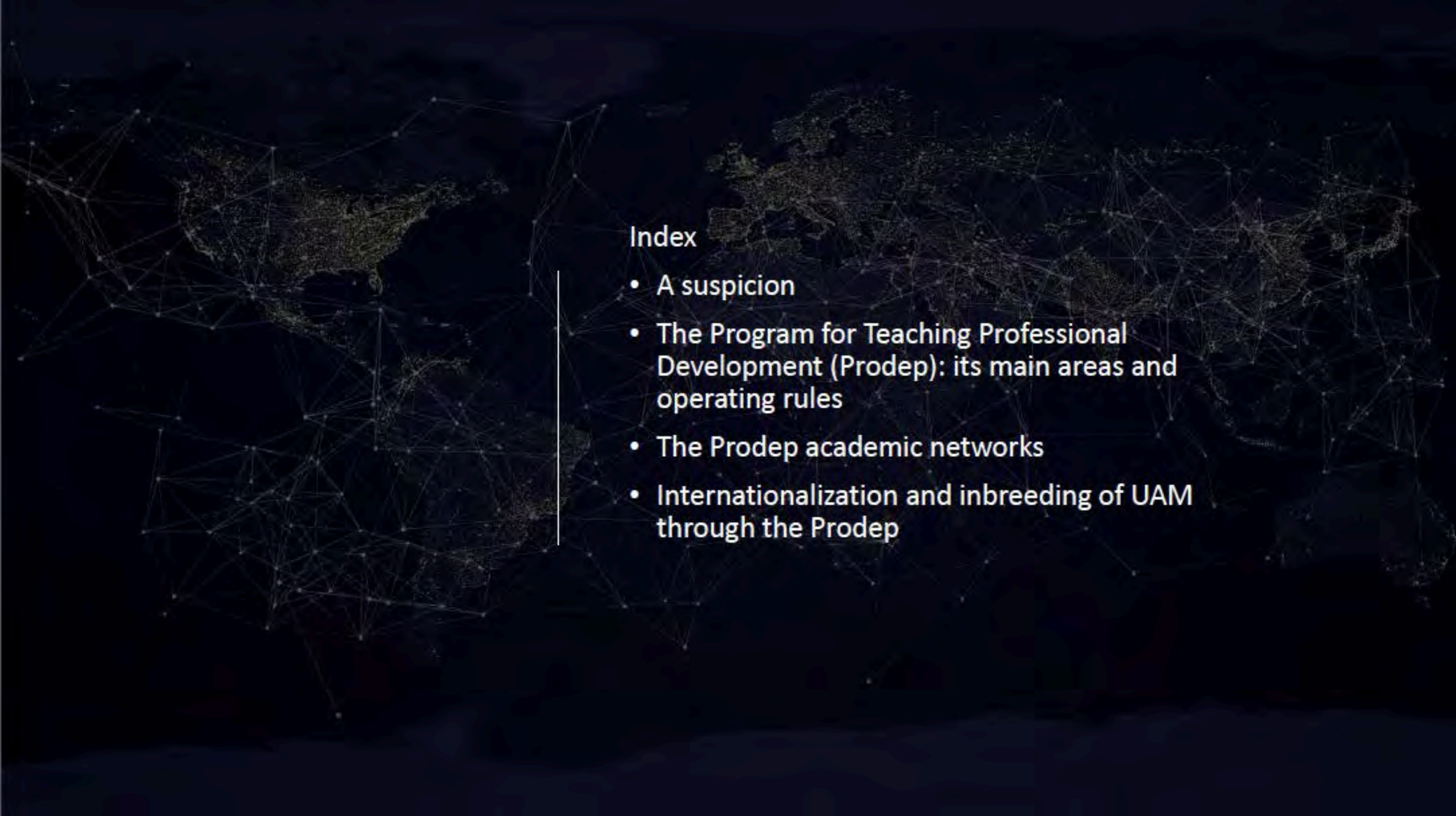
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# Internacionalization and inbreeding at UAM: a look from the Social Network Analysis

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Juan Carlos López García & Daniel Hernández Gutiérrez  
Universidad Autónoma Metropolitana - Lerma





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# A suspicion

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- In 2016, as a part of his Project for the rectory of UAM, Eduardo Peñaloza said:  
“One of the weaknesses in the University is the inbreeding that sometimes perverts the work and that could be the result of the transversal, dialogic structure of this university”

¿How to show the academic inbreeding since a relational perspective?



# The Prodep

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Since academic networks are integrated by different institutions, national and international, they are an important way to show academic inbreeding. Therefore, we address a federal program of scholars' evaluation, the Program for Professional Teacher Development (Prodep), that since 2000 powered academic networks among entities, the Academic Bodies (CA, in Spanish), previously generated by this one.



## Main areas of Prodep

The Teacher Improvement Program (Promep) is a federal program born in 1996. Although in 2014 it changes to Program for Professional Teacher Development (Prodep), today it maintains its logic (Conditioned Monetary Transfers) and main areas:

### ❖ Individual

- To give grants for full-time professors to accomplish their posgraduate training.
- To recognize the merit and appropriate academic degree through a distinction: the "adequate profile" (Perfil deseable)

### ❖ Collective

- To organize the full-time professors in entities called "Academic Bodies" (CA), based on their common academic interests but only within their institutions of higher education. Three levels of recognition: in training, in consolidation and consolidated
- To generate academic networks among Academic Bodies (CA)

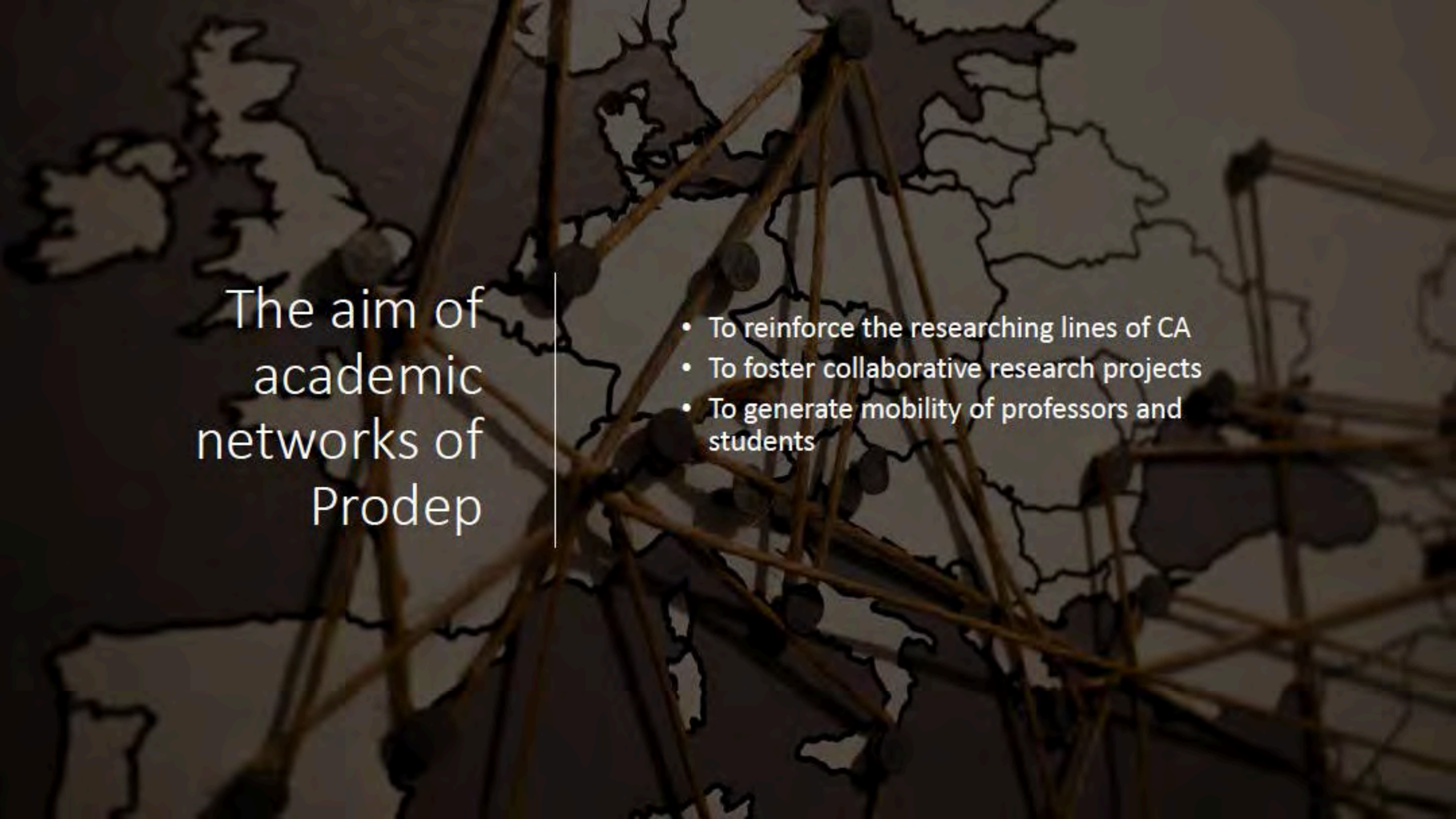


# The academic networks of Prodep

They started in 2000, but until 2004 the rules for its generation were defined:

- Three members as minimum. At least two should be CA and the rest can be external academic groups (GE) but with features of consolidated CA. Initiated networks by consolidated and in consolidation CA are desirable.
- The networks present a Project for a year, naming a CA (the iniciator) as responsable. The Projects are evaluated by peers, if they are good-evaluated, the economic resources are unevenly distributed: historicaly the CA recives the double than the GE.

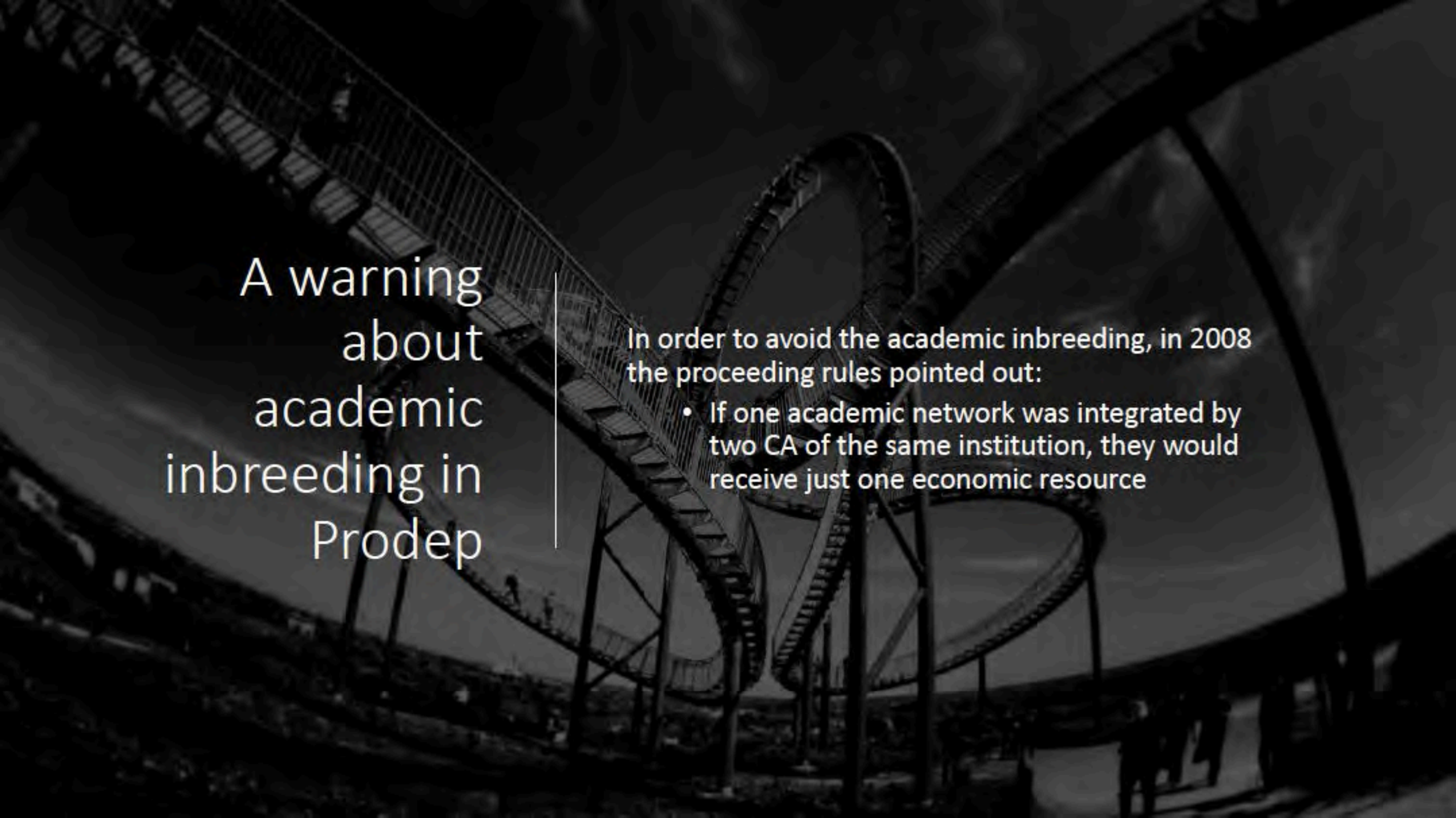




## The aim of academic networks of Prodep

- To reinforce the researching lines of CA
- To foster collaborative research projects
- To generate mobility of professors and students





# A warning about academic inbreeding in Prodep

In order to avoid the academic inbreeding, in 2008 the proceeding rules pointed out:

- If one academic network was integrated by two CA of the same institution, they would receive just one economic resource



# Academic Bodies (CA) of UAM

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It is important to say that UAM is the third institution with most Academic Bodies (CA) recognized by Prodep: 264 until 2017, grouped in five campus.



# UAM Academic Bodies

|    | INSTITUTION  | CA RECOGNIZED | %    |
|----|--|---------------|------|
| 1  | Universidad de Guadalajara (UdeG)                        | 512           | 8.8% |
| 2  | Universidad Veracruzana (UV)                             | 269           | 4.6% |
| 3  | Universidad Autónoma Metropolitana (UAM)                 | 264           | 4.5% |
| 4  | Universidad Autónoma de Nuevo León (UANL)                | 244           | 4.2% |
| 5  | Universidad Autónoma del Estado de México (UAEMex)       | 220           | 3.8% |
| 6  | Universidad Autónoma de Baja California (UABJ)           | 215           | 3.7% |
| 7  | Benemérita Universidad Autónoma de Puebla (BUAP)         | 214           | 3.7% |
| 8  | Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) | 145           | 2.5% |
| 9  | Universidad Autónoma de Tamaulipas (UAT)                 | 113           | 1.9% |
| 10 | Universidad de Guanajuato (UG)                           | 112           | 1.9% |
| 11 | Universidad Autónoma de San Luis Potosí (UASLP)          | 111           | 1.9% |
| 12 | Otras IES  |               |      |



# Academic Networks in each UAM campus, 2009-2018

| Year         | Azcapotzalco | Cuajimalpa | Iztapalapa | Lerma | Xochimilco | Total |
|--------------|--------------|------------|------------|-------|------------|-------|
| 2009         | 1            |            | 6          |       | 1          | 8     |
| 2010         |              |            | 3          |       | 1          | 4     |
| 2011         | 2            |            | 2          |       | 1          | 5     |
| 2012         | 7            | 1          | 8          |       | 2          | 18    |
| 2013         | 3            |            | 6          |       | 1          | 10    |
| 2014         |              |            |            |       | 1          | 1     |
| 2015         | 5            | 1          | 9          |       | 1          | 16    |
| 2016         |              |            |            |       | 1          | 1     |
| 2018         |              |            | 1          | 1     |            | 2     |
| Total campus | 18           | 2          | 35         | 1     | 9          | 65    |



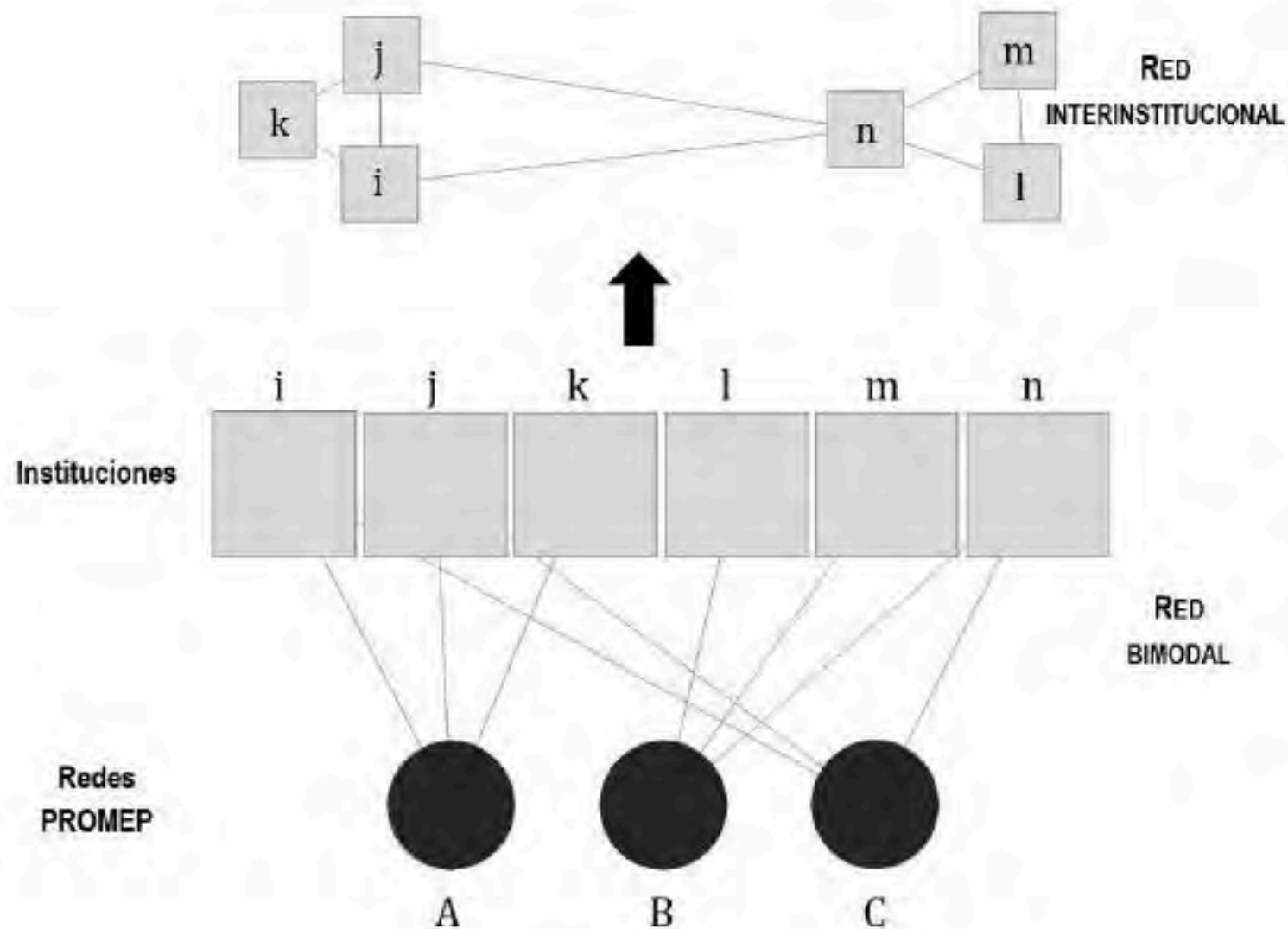
# Academic Networks by range, 2009-2018

| Year         | National Prodep | National external Prodep | International | Total Year | National (%) | International (%) |
|--------------|-----------------|--------------------------|---------------|------------|--------------|-------------------|
| 2009         | 3               | 1                        | 4             | 8          | 50.0         | 50.0              |
| 2010         | 3               |                          | 1             | 4          | 75.0         | 25.0              |
| 2011         | 1               | 1                        | 3             | 5          | 40.0         | 60.0              |
| 2012         | 5               | 7                        | 6             | 18         | 66.7         | 33.3              |
| 2013         | 4               | 2                        | 4             | 10         | 60.0         | 40.0              |
| 2014         | 1               |                          |               | 1          | 100.0        | 0.0               |
| 2015         | 9               | 6                        | 1             | 16         | 93.8         | 6.3               |
| 2016         | 1               |                          |               | 1          | 100.0        | 0.0               |
| 2018         | 2               |                          |               | 2          | 100.0        | 0.0               |
| <b>Total</b> | <b>29</b>       | <b>17</b>                | <b>19</b>     | <b>65</b>  | <b>70.8</b>  | <b>29.2</b>       |



# Generating interinstitutional networks based on affiliation data of members of Prodep's academic networks

Based on the Breiger's thesis: "if individuals relate to each other based on their common affiliation with the groups, the latter, the groups, are also related when they have common affiliates"





# Hypothesis

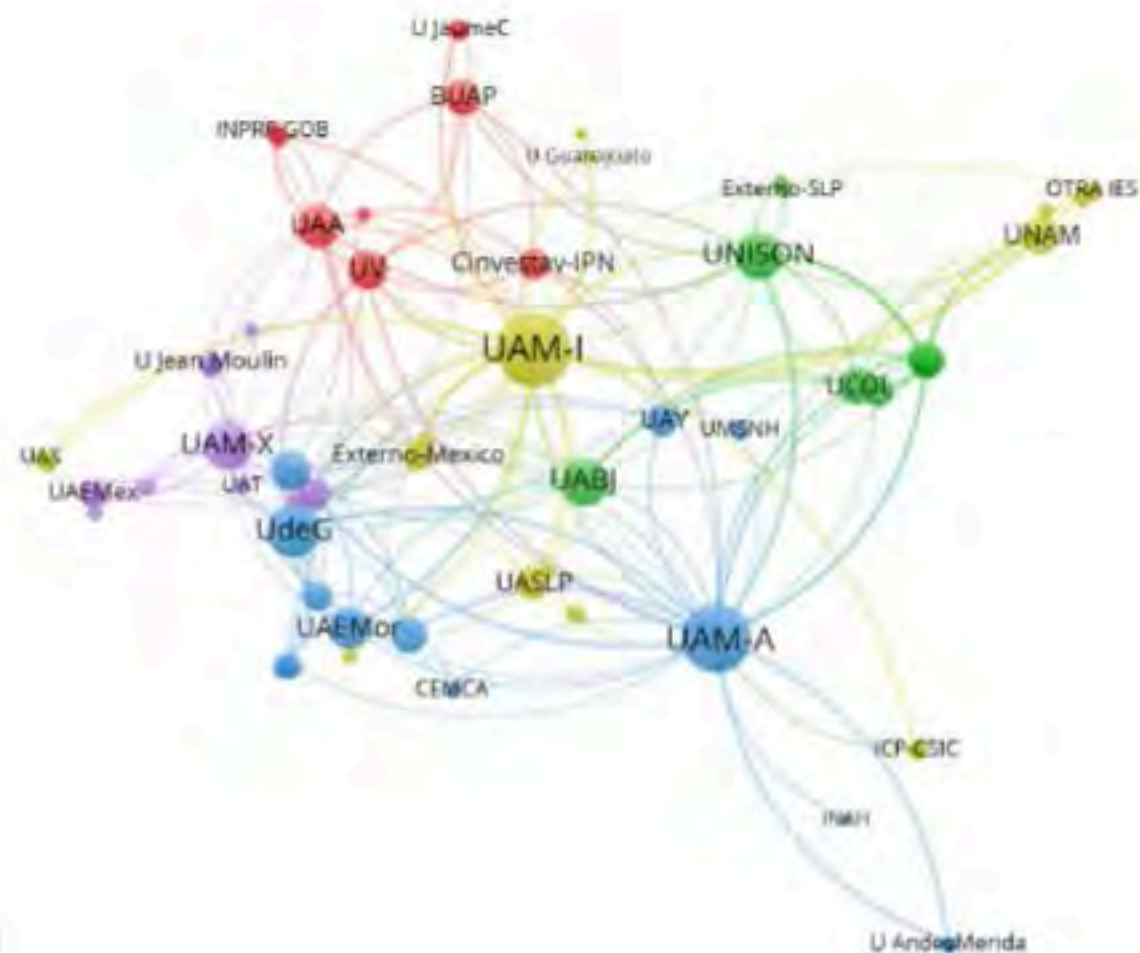
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Using a technique of Social Network Analysis for identifying communities based on number and strength of ties among the affiliations' institutions of CA that integrate the Prodep networks, it is possible to show a kind of academic inbreeding. A high degree means UAM nodes in the same cluster: closer and grouped with the same color.



## Identifying communities in Academic Networks

Is not possible to say that there is a high grade of academic inbreeding among campus of UAM. Leading three of the five clusters identified we can see UAM Iztapalapa, Xochimilco and Azcapotzalco.

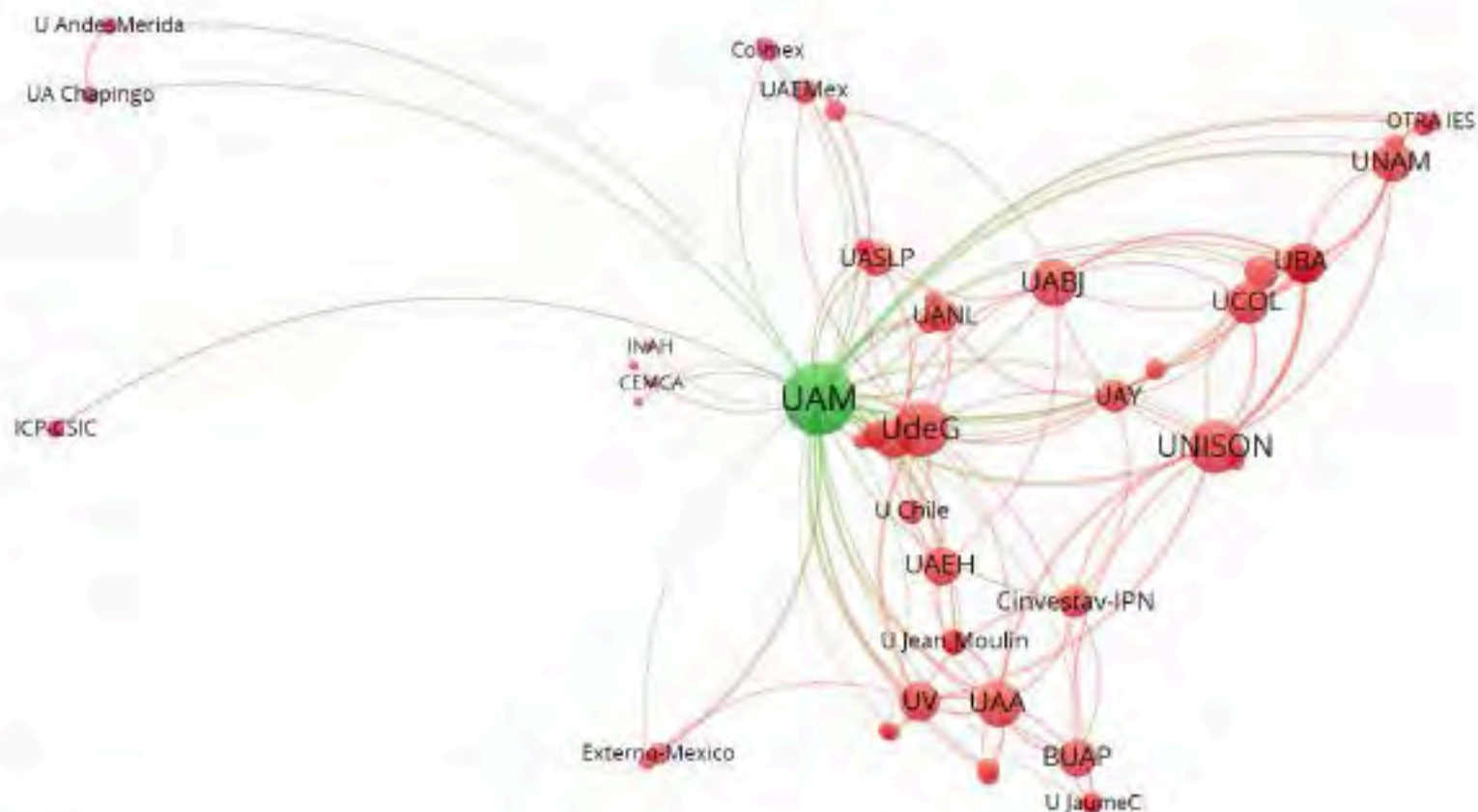




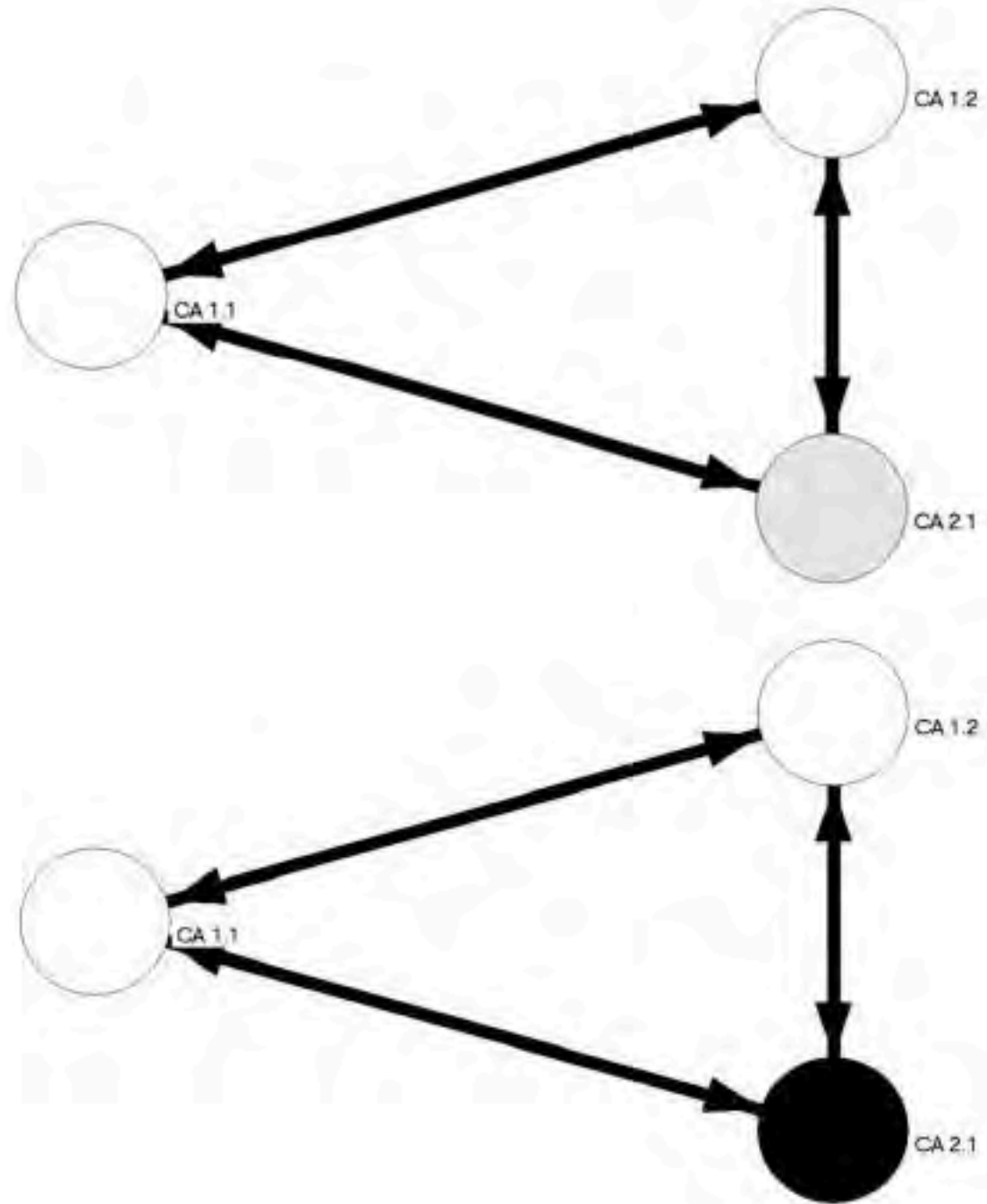


## Egocentric network of UAM

Considered as a single institution, the UAM generates two types of links: with alteri (institutions) interrelated and with institutions only linked to the UAM.

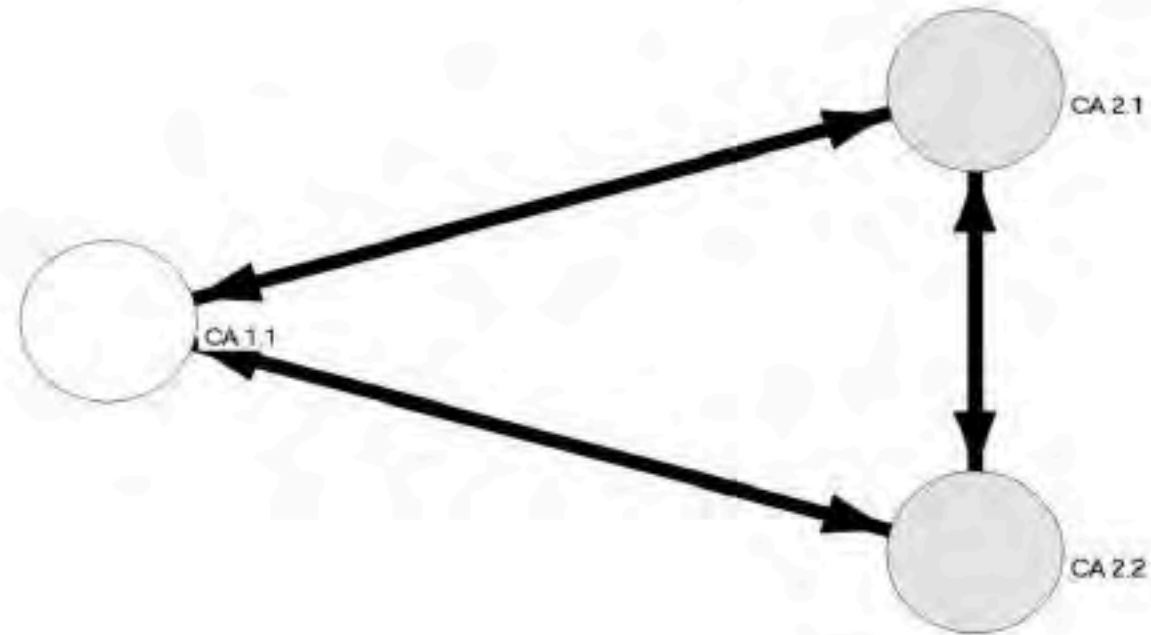
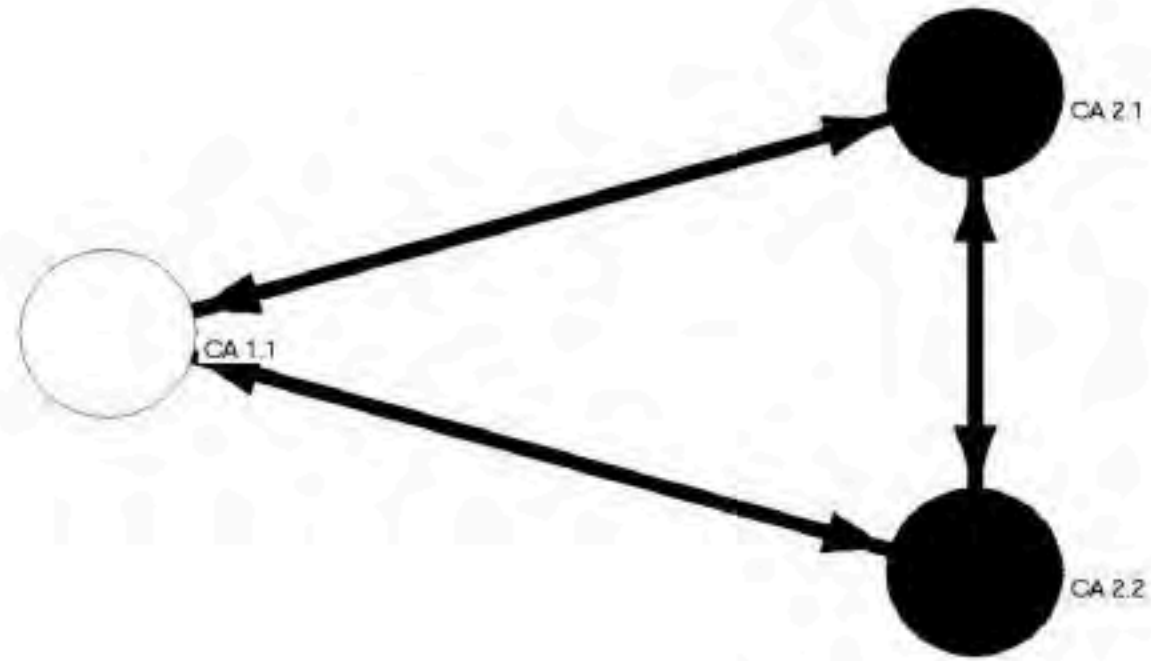


Types of academic  
inbreeding given  
the rules of  
procedure of  
Prodep: type 1





Types of academic  
inbreeding given  
the rules of  
procedure of  
Prodep: type 2



# Academic inbreeding in UAM: type 1

| <b>Año</b>           | <b>Azcapotzalco</b> | <b>Iztapalapa</b> | <b>Xochimilco</b> | <b>Total general</b> |
|----------------------|---------------------|-------------------|-------------------|----------------------|
| 2009                 |                     | 1                 |                   | 1                    |
| 2012                 | 2                   |                   |                   | 2                    |
| 2013                 | 1                   | 1                 |                   | 2                    |
| 2015                 |                     | 2                 | 1                 | 3                    |
| <b>Total general</b> | 3                   | 4                 | 1                 | 8                    |



# Conclusions:

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- It is not possible to affirm that there is a high degree of academic inbreeding in UAM. At least viewed from the perspective of academic networks of Prodep.
- Nevertheless, it is necessary to advance in development of metrics about academic inbreeding, but not only the Prodep's networks.
- About Networks of Prodep, it is necessary to advance in the explanation of the relational patterns of the program. And most important, we need to answer a main question about this program, associated since the beginning with Conditioned Monetary Transfers: networks what for?





# Thanks

Juan Carlos López-García / [j.lopezg@correo.ler.uam.mx](mailto:j.lopezg@correo.ler.uam.mx)

Daniel Hernández-Gutiérrez / [d.hernandez@correo.ler.uam.mx](mailto:d.hernandez@correo.ler.uam.mx)