

# Identifying Innovation Hot Spots in Nutrigenomics



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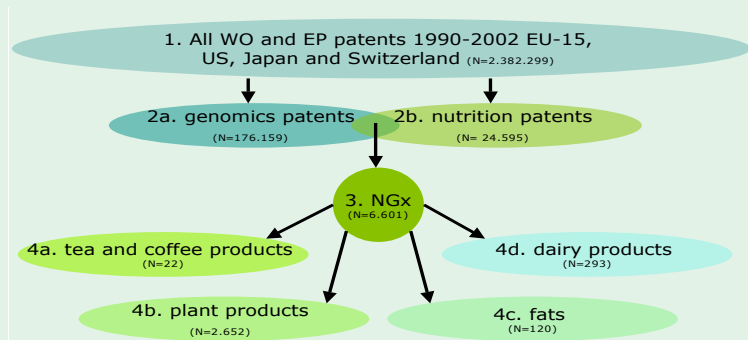
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## Introduction

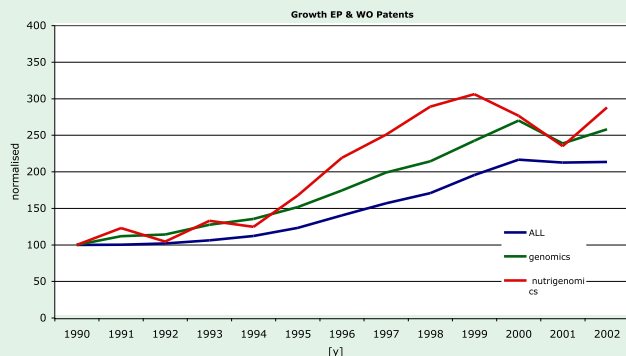
A **hot spot** stands out in its surroundings; it is hotter and brighter than other R&D activities. An extended first-time nutrigenomics patent analysis identifies nutrigenomics innovation hot spots which are used for selecting cases in the context of studying user involvement in nutrigenomics innovation processes<sup>1</sup>.

## Method



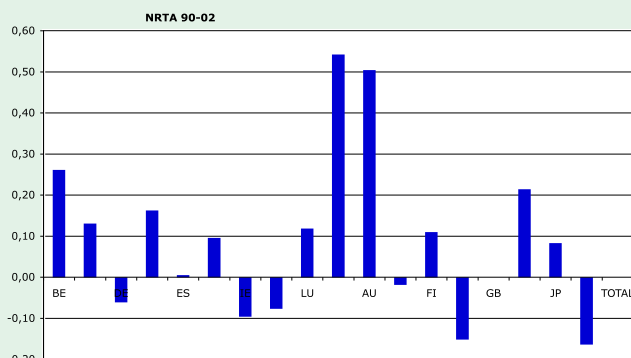
## Results

The period 1990-2000 shows overall relative growth in patents; genomics and nutrigenomics patents have an even steeper growth path. This indicates an increasing R&D interest in nutrigenomics.



## Relative advantage

For each country the *Normalised Revealed Technological Advantage* (NRTA) was calculated, showing the relative advantage in nutrigenomics for the country compared to all other countries ( $1 < \text{NRTA} < 1$ ; 1=highest advantage<sup>2</sup>). Nutrigenomics - as an R&D area - has a clear relative advantage over other patents in **The Netherlands** (0.54) and **Austria** (0.50).

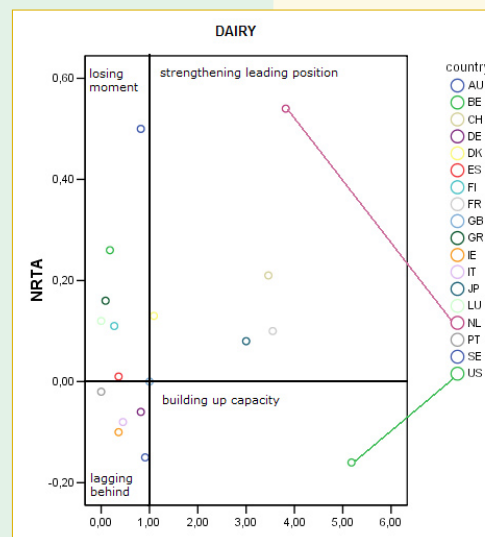


## Specialisation

In the nutrigenomics patents four subfields were identified based on the clustering of similar IPC classes (in which all patents are classified):

1. Tea and coffee products
2. Dairy products
3. Plant products
4. Fats

The *Fast Growing Specialisation Index* (FGSI) shows the momentum of a country in the subfields. The dairy products *Technological map* shows the most divergent picture. The Netherlands is *strengthening its leading position: Dutch dairy R&D as a hot spot*.



## NWO project: User Producer Interaction in Nutrigenomics Innovations

The identified hot spots (e.g. dairy products in The Netherlands) are used for case studies on user-producer interaction in nutrigenomics innovations.

Innovation literature<sup>3</sup> shows the importance of user involvement in innovation processes:

- Innovation success increases
- The enormous creative potential of users is utilized
- Possible societal acceptance issues are tackled

We will study user-producer interactions with a focus on *interactive learning* (i.e. knowledge exchange between producers and users of nutrigenomics innovations) and formulate the following research question:

*How contribute learning mechanisms to network alignment between users and producers, and stakeholders in the institutional landscape in the emerging technology field of nutrigenomics?*

From this research we will derive do's & don'ts for successful interaction and innovation.

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<sup>1</sup> This poster is based on a forthcoming article by Vandenberg and Boon  
<sup>2</sup> For a detailed description of the used scientometric calculation see Nesta & Patel National Patterns of Technology Accumulation. In: Moed, Glänzel and Schmoch (Eds) (2004) Handbook of Quantitative Science and Technology Research  
<sup>3</sup> E.g. Von Hippel (1978) and Luthje (2004)