gfi Europe

Region deep dive:

European Union

State of the European alternative protein research and innovation ecosystem

Dr David Hunt and Dr Stella Child

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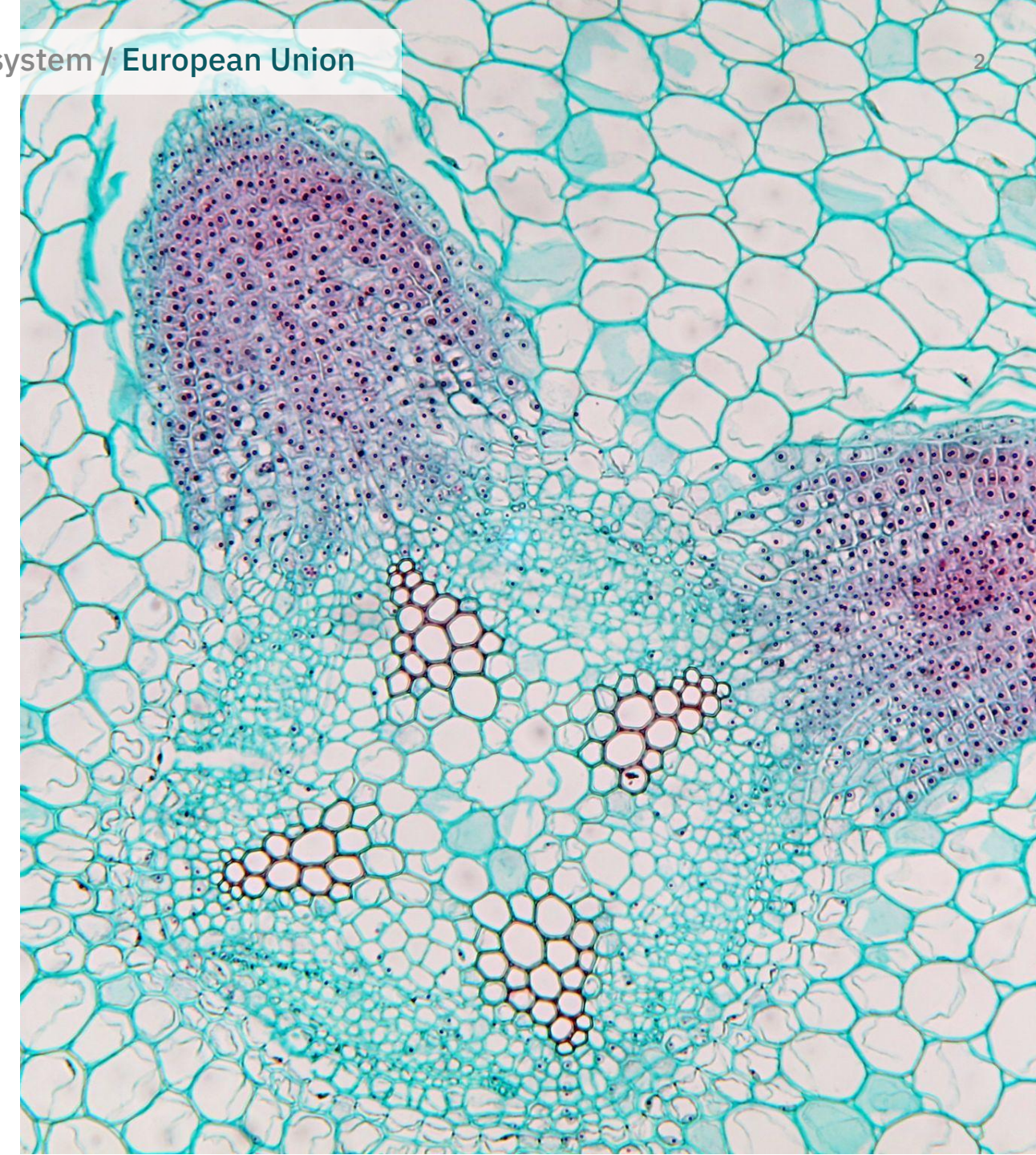


Alternative protein research in the EU

The EU has long led the way in investment in plant-based research, and is increasingly doubling down on fermentation.

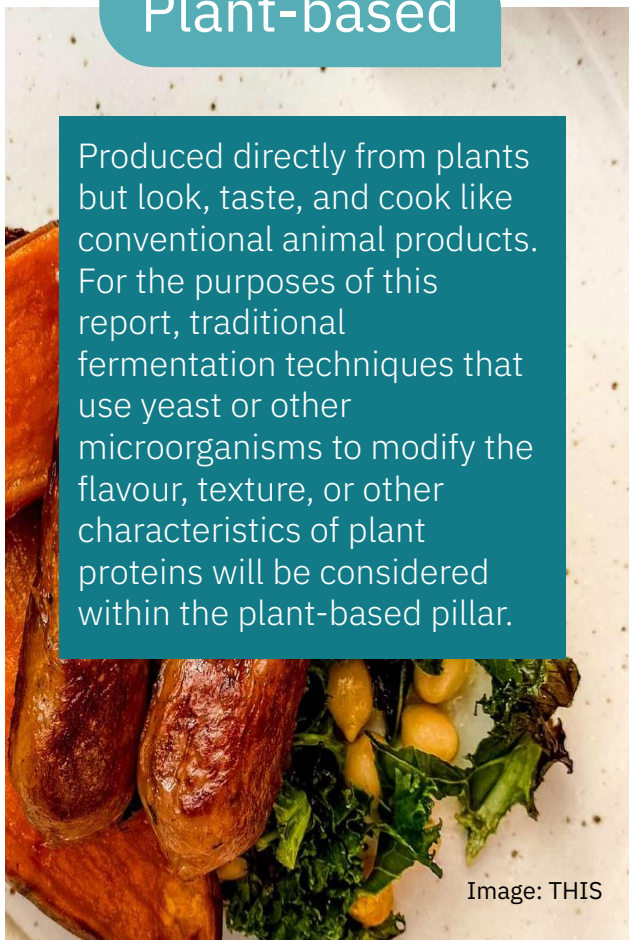
Home to a rapidly growing and diverse alternative protein R&I community, the EU has an opportunity to solidify its position as a global leader in the space.

What do we mean by alternative protein pillars?

The fields of research that are the focus of this report are split into three main 'pillars', described below. In some instances, research projects combine techniques from across these disciplines. These are referred to as 'cross-cutting' throughout the report.

Plant-based

Produced directly from plants but look, taste, and cook like conventional animal products. For the purposes of this report, traditional fermentation techniques that use yeast or other microorganisms to modify the flavour, texture, or other characteristics of plant proteins will be considered within the plant-based pillar.



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Fermentation

Used in two primary ways: ***Biomass fermentation*** leverages the fast growth and high protein content of microorganisms to produce large quantities of protein. ***Precision fermentation*** uses microbes to produce specific functional ingredients important for the manufacture of alternative protein end products.

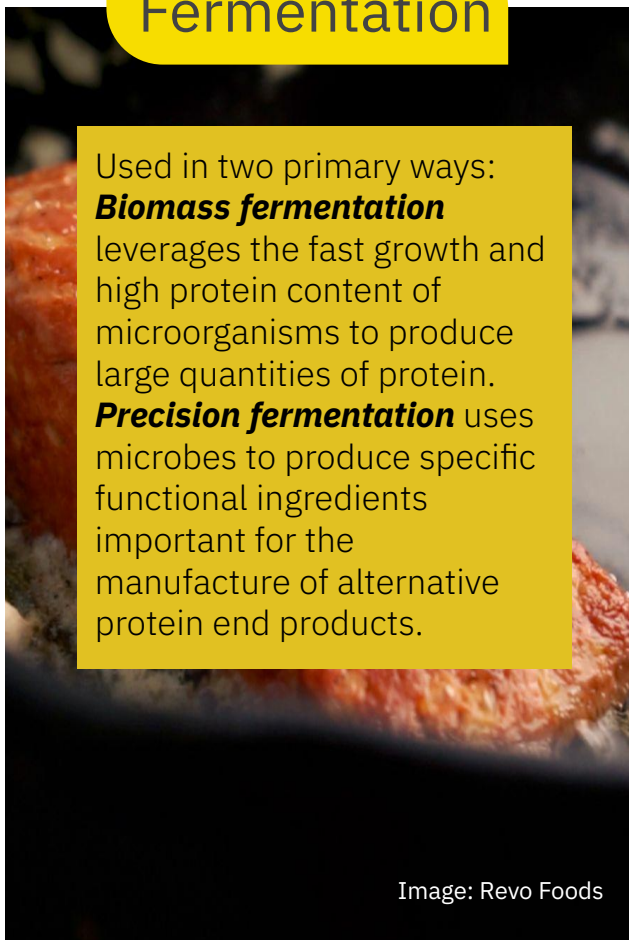


Image: Revo Foods

Cultivated

Foods like chicken, pork, beef, and fish that are produced by cultivating animal cells directly, thus replicating the sensory and nutritional profiles of conventional meat and seafood.

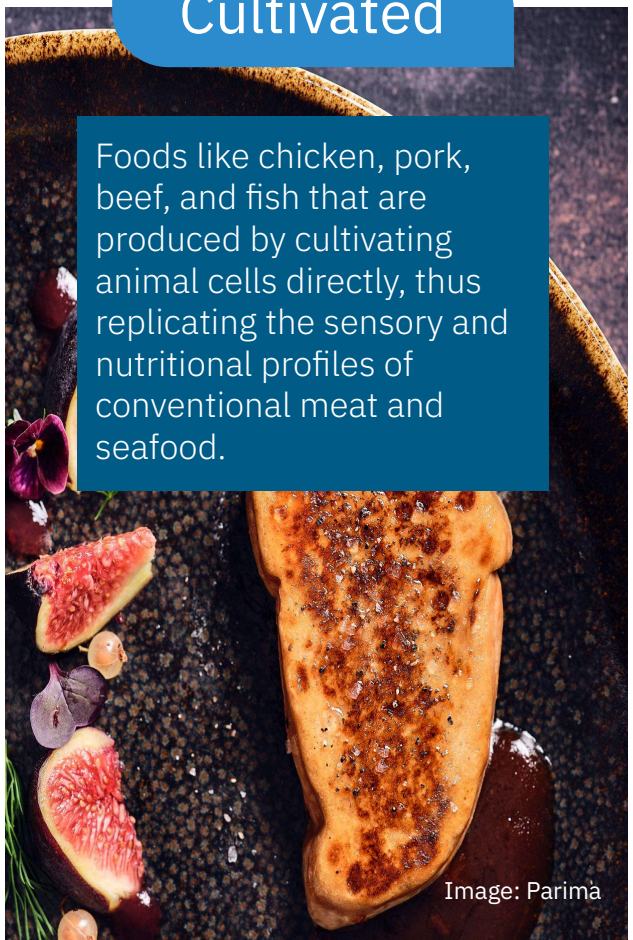
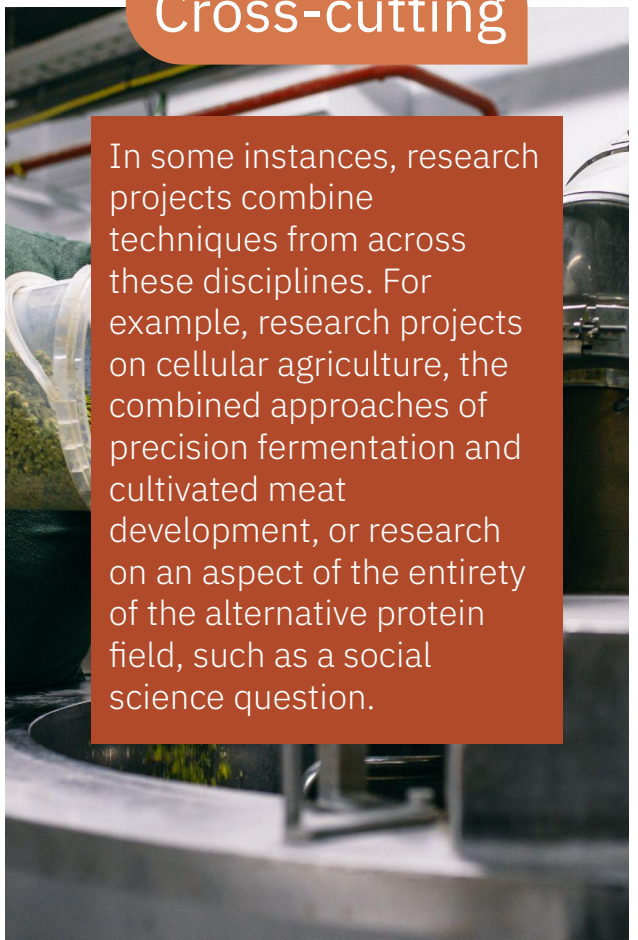


Image: Parima

Cross-cutting

In some instances, research projects combine techniques from across these disciplines. For example, research projects on cellular agriculture, the combined approaches of precision fermentation and cultivated meat development, or research on an aspect of the entirety of the alternative protein field, such as a social science question.



2020-2025 inclusive

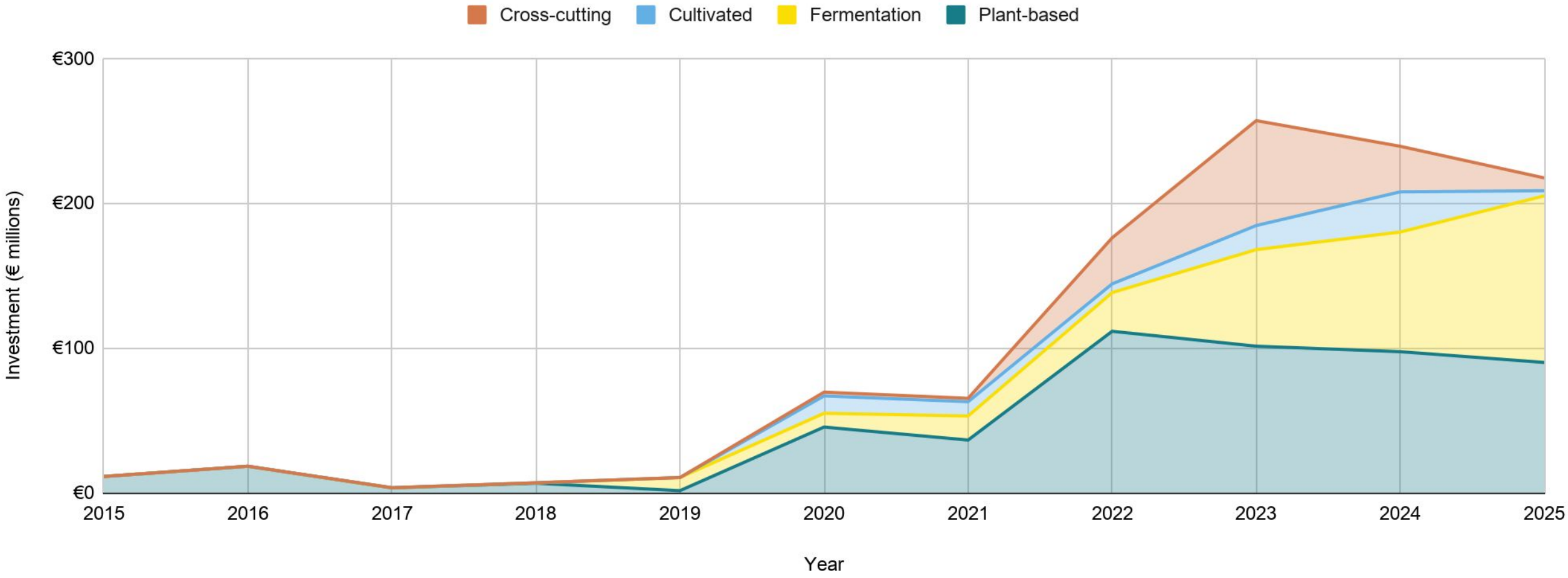
Public funding

As a global research and innovation (R&I) powerhouse accounting for over 20% of global R&I investment, Europe has the potential to be home to a world-leading alternative protein research ecosystem.

Here, we present a thorough overview of the funding landscape for EU alternative protein research, including overall growth, leading countries and funders, and trends in funding allocation.

Funding in the EU has declined slightly over the past two years, but remains high

Funding from the European Commission and EU27 countries, including investment by nonprofit funders, 2020-2025.
Total funding in the EU remained above €200 million annually in 2025, for the third consecutive year.



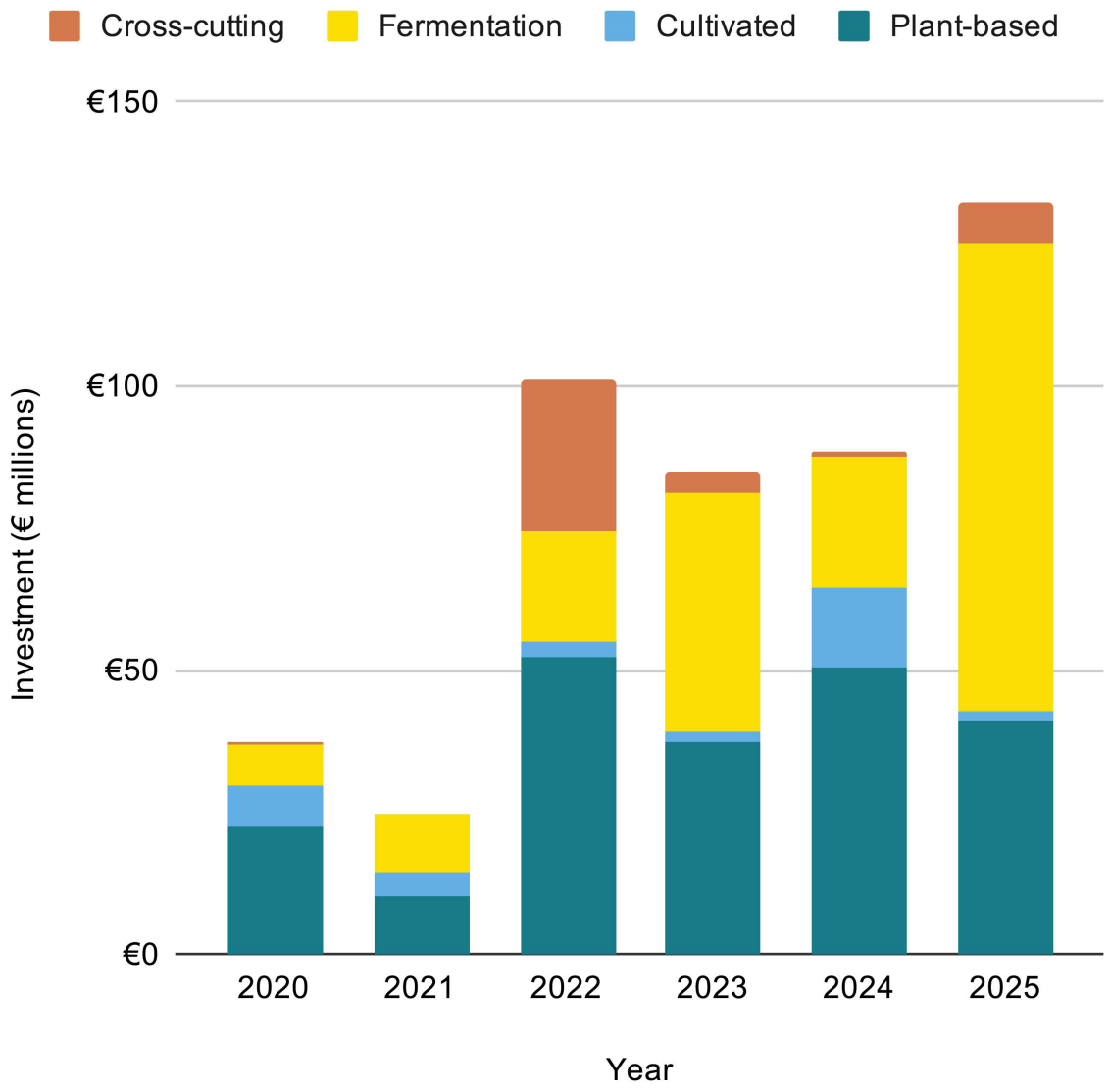
EU total funding

This chart shows investment from the European Commission, broken down by pillar, for the period 2020-2025.

Funding from the Commission was higher than ever in 2025, and was increasingly focused on fermentation.

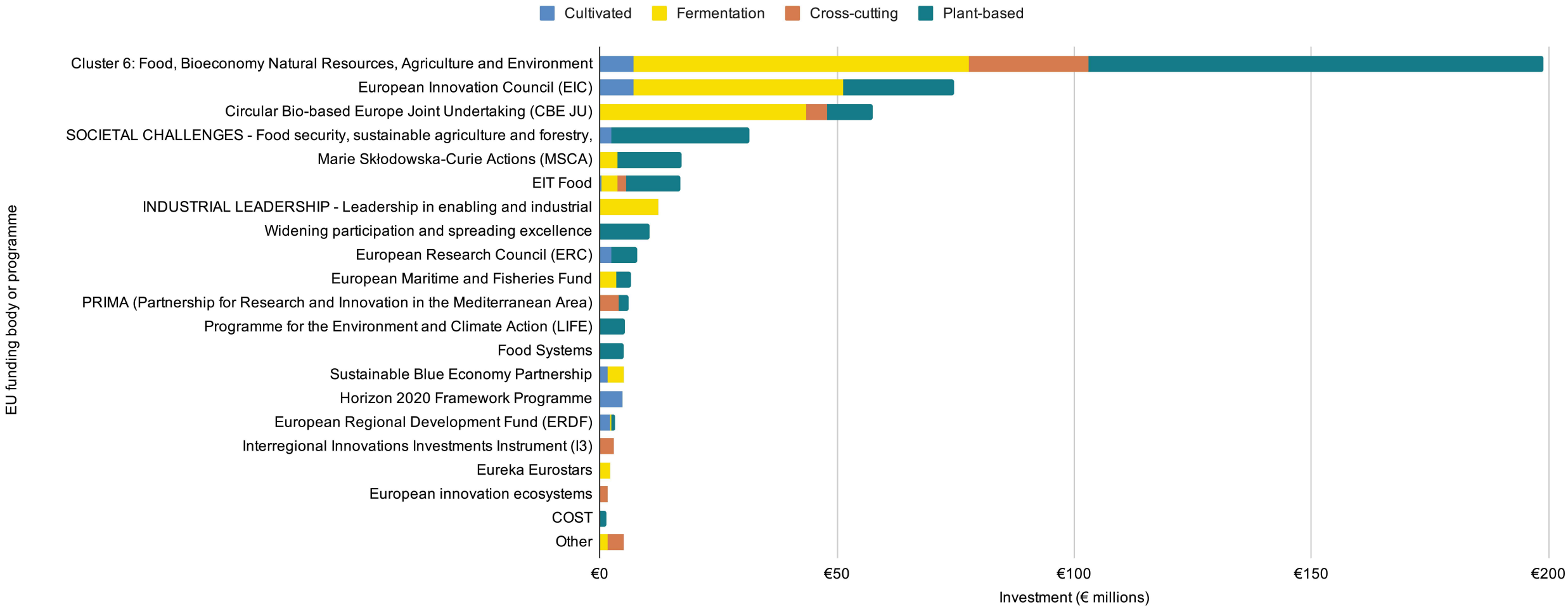
The EU, via the Commission, has allocated almost €470 million to alternative protein R&I over the past five years (2020-2025). Horizon Europe, which began in 2021, kicked off a trend of higher spending in this area compared with Horizon 2020.

Increased funding focus on fermentation may have come somewhat at the expense of plant-based, which declined slightly, to just over €30 million in 2025.



Funding from EU instruments

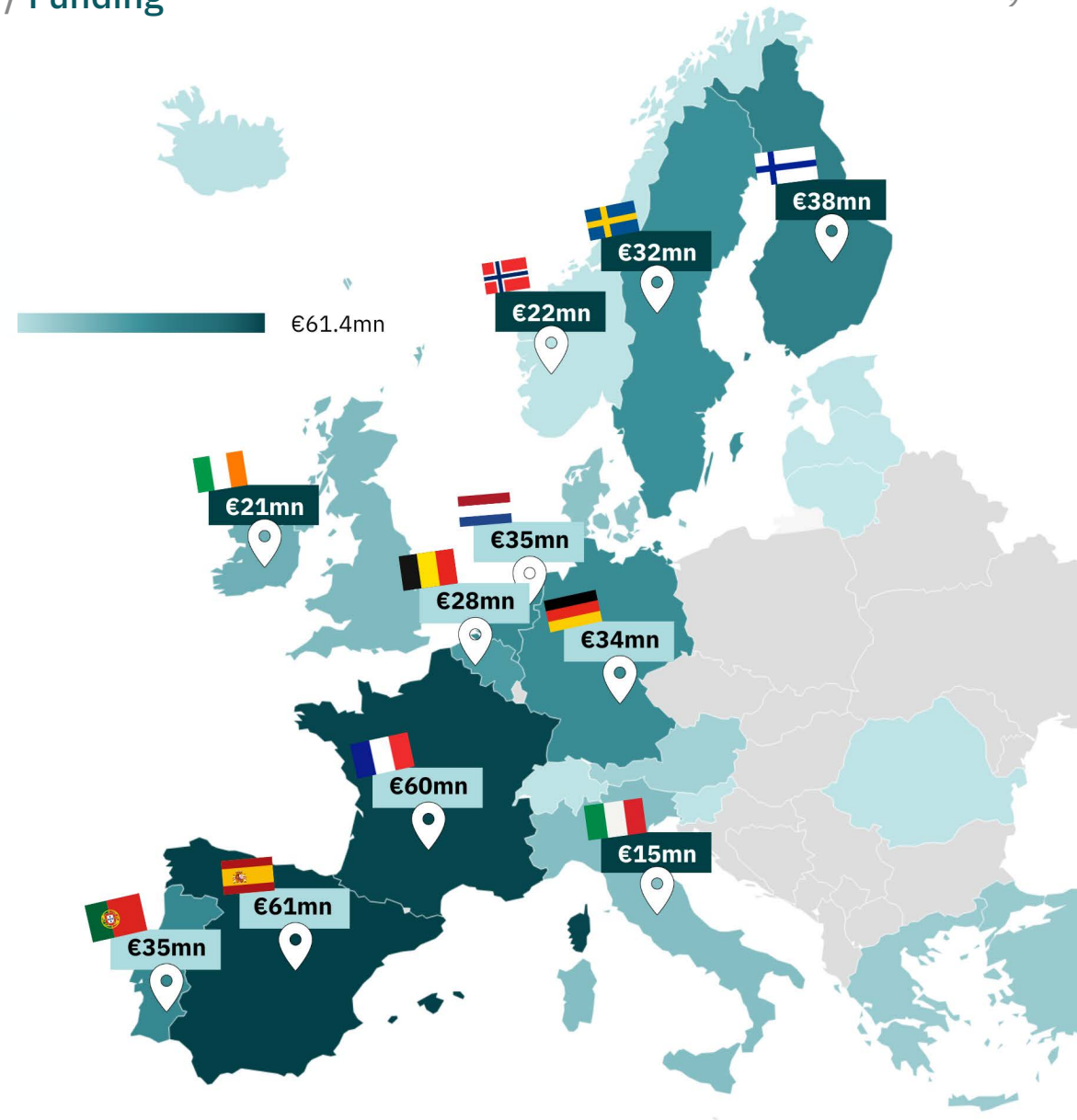
Investment from the European Commission, broken down by funding instrument, 2020-2025. Cluster 6 remains top of the table as the source of the majority of funding from the Commission over the past five years. However, the EIC, CBE JU and Marie Curie instruments all increased their funding substantially in 2024 and 2025.



European funding recipients by country

This map shows European funding allocated by location of primary recipient, over the period 2020-2025.

The EU has driven a lot of the growth in the academic research community across Europe. Countries such as France and Spain have been leading recipients of European funding, which has supplemented or even matched domestic funding sources.



Map created with datawrapper

2020-2025 inclusive

Academic publications

As a global research and innovation powerhouse, Europe has the potential to be home to a world-leading alternative protein research ecosystem.

Here, we present a thorough overview of the EU's alternative protein publication landscape, including overall growth, leading countries and institutions, and trends in collaboration.

Publications: overall trends

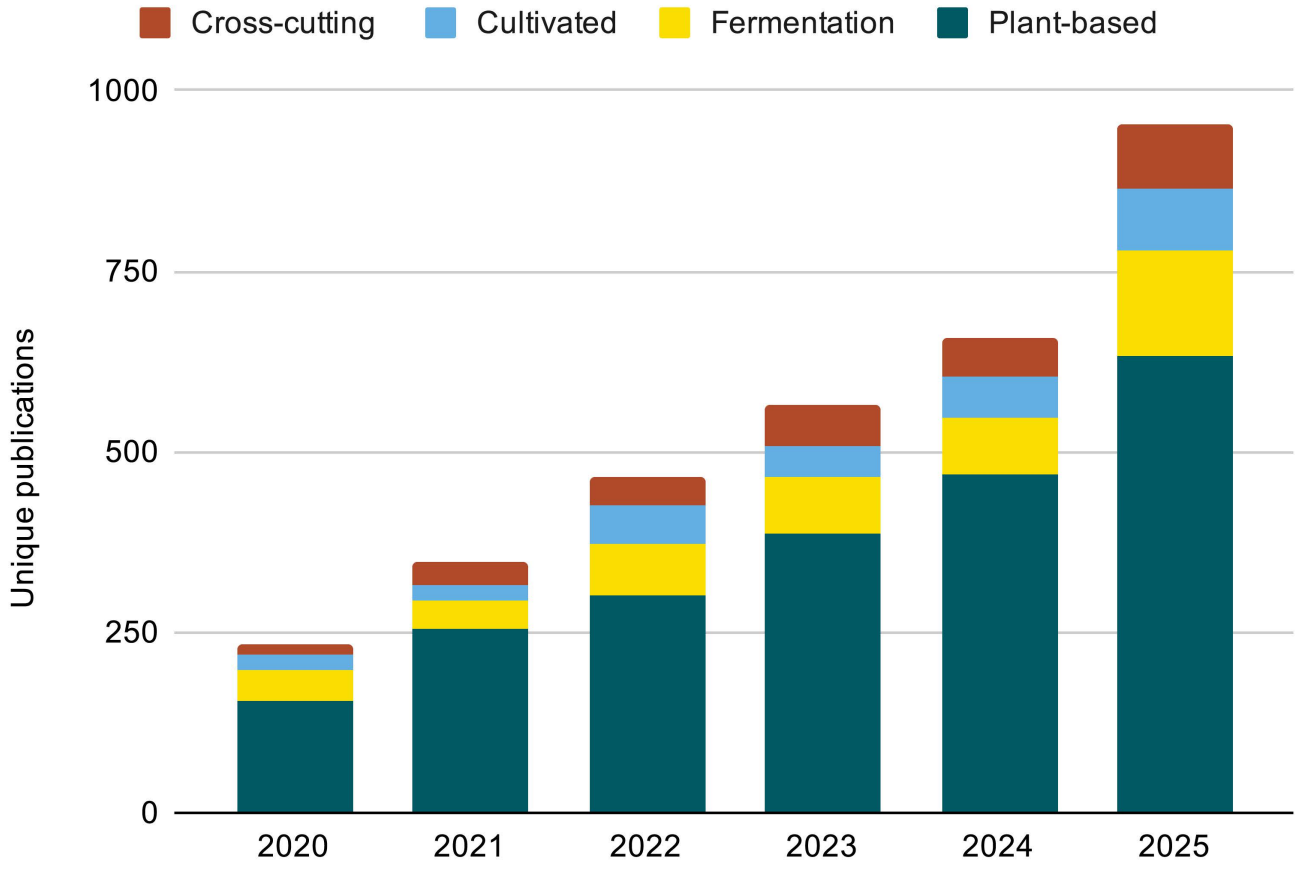
This chart shows the overall trends in academic publications in peer-reviewed journals on topics related to alternative proteins in the period 2020-2025.

There were 3,221 publications on topics related to alternative proteins during this time.

Publication outputs grew by 33% per year on average in that period. There were 954 research publications in 2025 compared with 235 in 2020 – a 306% increase.

Breakdown of publications by alternative protein pillar:

- 68% plant-based proteins
- 14% fermentation-made proteins and ingredients
- 9% on cultivated meat and seafood
- 9% on cross-cutting topics.



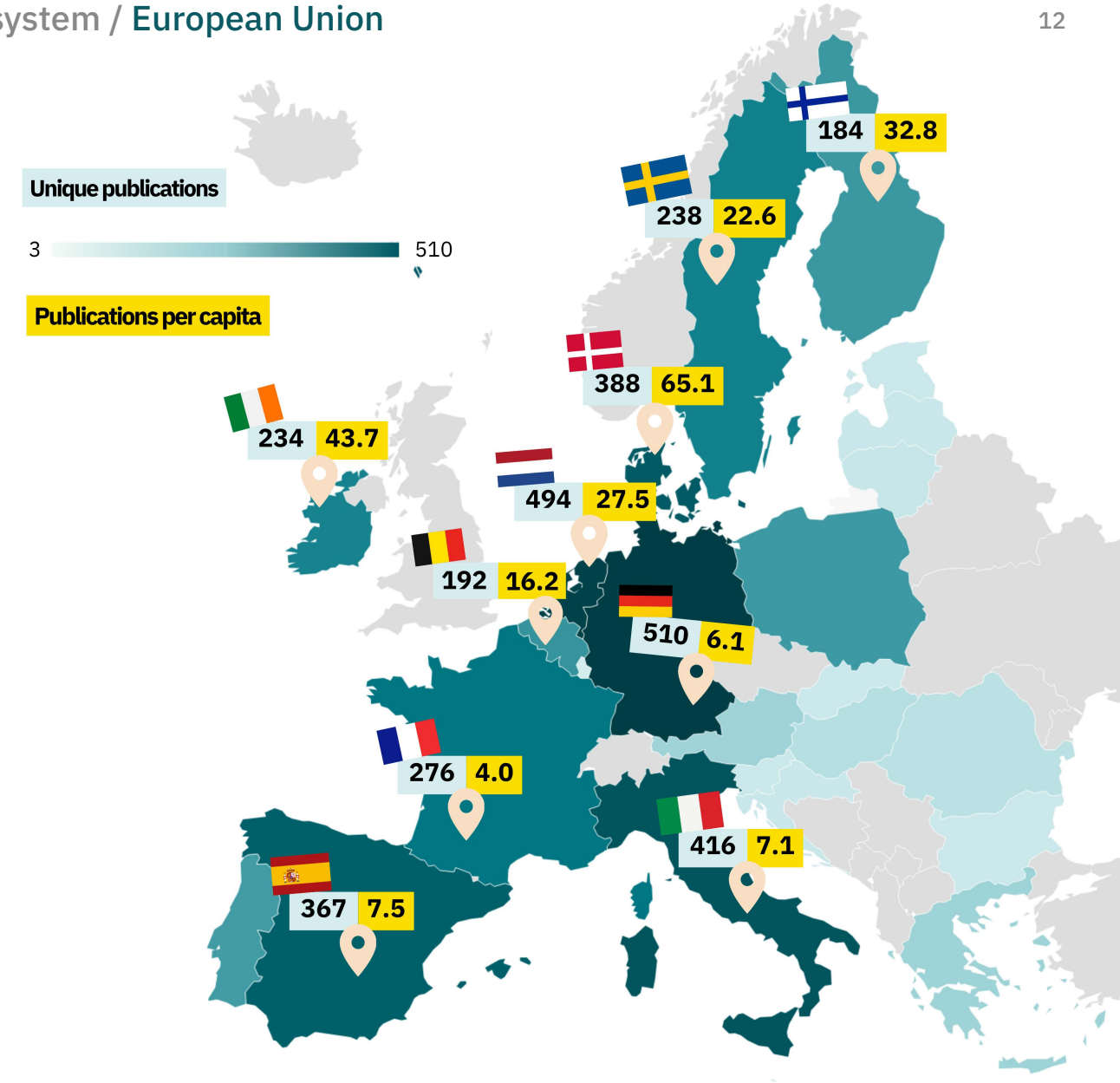
Publications by country

This heat map shows the most productive EU countries in alternative protein research in the years 2020-2025 inclusive, as measured by total unique publications.

7,028 researchers representing 882 organisations from all 27 EU member states contributed to this output along with collaborators from 68 external countries.

Germany leads the EU with a contribution to 16% of publications, followed by the Netherlands (15%), and Italy (13%).

Italy has the largest number of researchers (1,028), followed by Germany (828), and Spain (671).



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Leading research-performing organisations

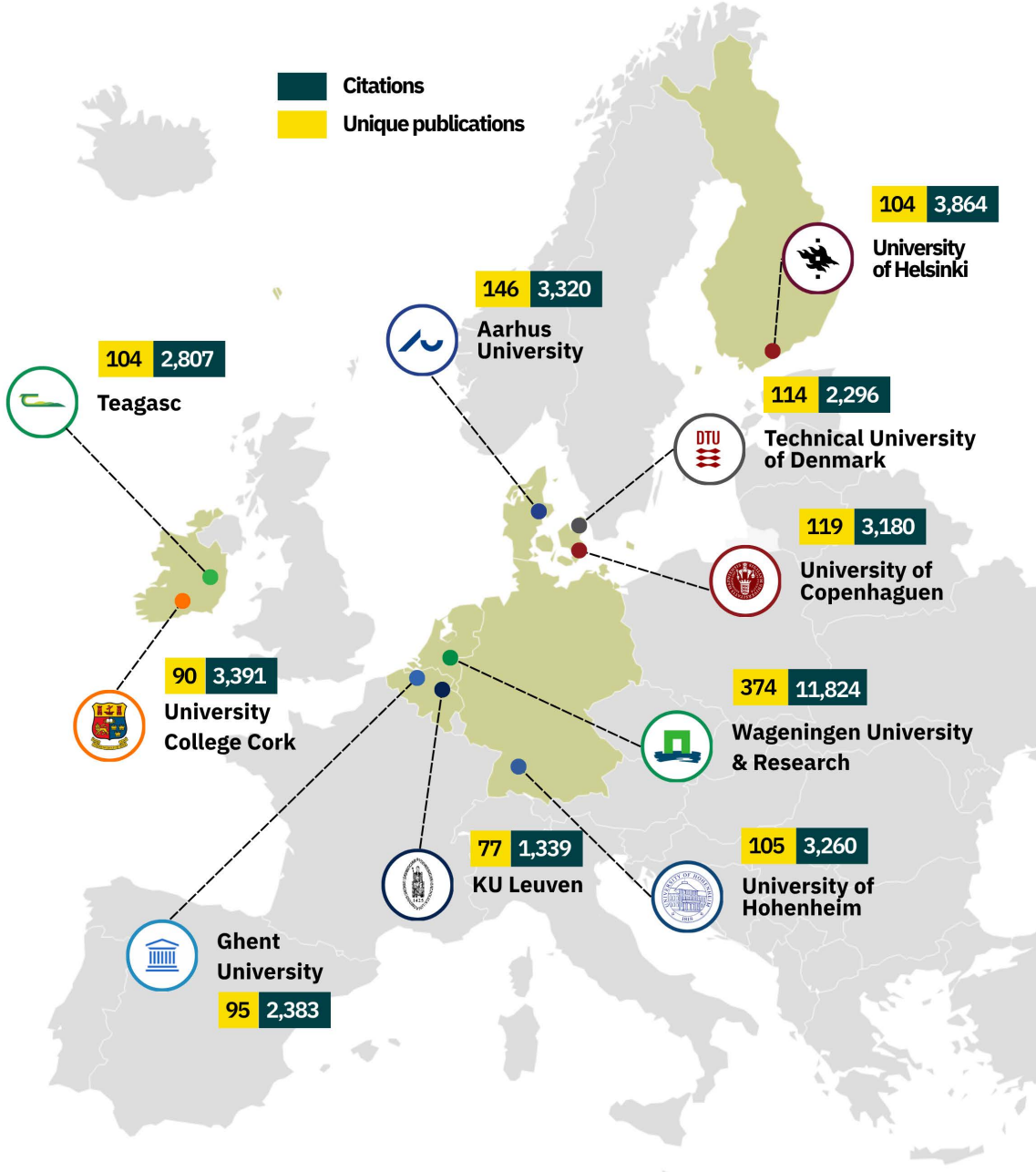
This map shows the leading institutions for alternative protein research in the EU on the basis of unique publications in the period 2020-2025.

83 of the top 100 most-productive European institutions in alternative protein research are in the European Union.

Wageningen University & Research is the dominant institution in terms of total publications (374) and citations (11,824).

Some small countries have 1-2 clear leading institution(s) that contribute a disproportionate amount of the overall output.

Large countries such as Italy, France, and Spain rank highly in Europe on the basis of total output but do not have any individual research organisations in the top 10.



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Key statistics for the EU's top performers

	EU27	Germany	Netherlands	Italy	Denmark	Spain	France
Publications	3,221	510	494	416	388	367	276
Contribution to EU output	n/a	16%	15%	13%	12%	11%	9%
Average growth rate	33%	30%	29%	44%	45%	50%	26%
2020-2025 change	306%	256%	245%	403%	461%	542%	185%
Authors	7,028	828	626	1,028	509	671	506
Research-performing organisations	882	141	45	105	26	96	121
International collaborations	43%	49%	44%	50%	58%	61%	62%
Academic-corporate collaborations	7%	11%	9%	6%	14%	4%	9%

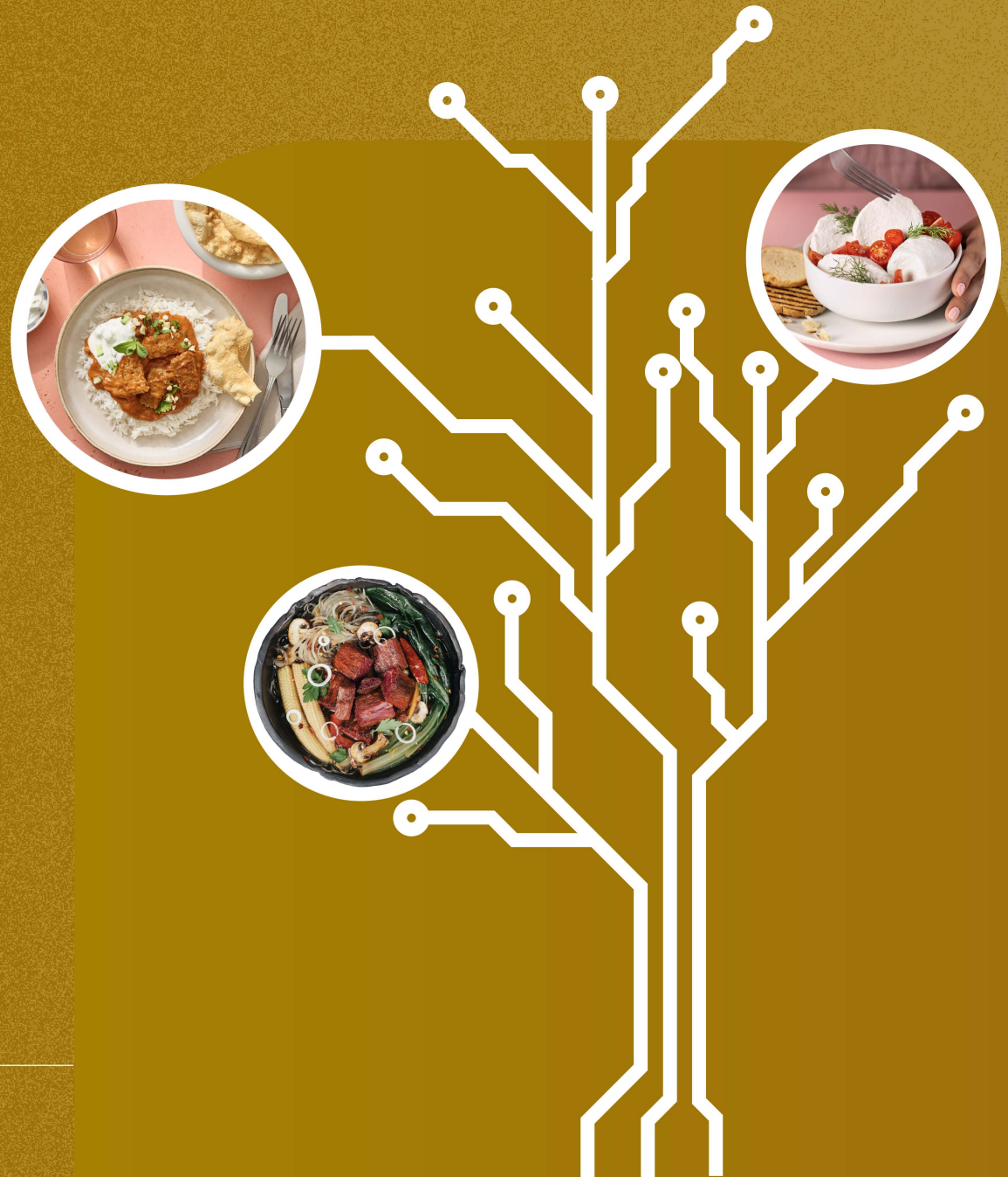
2015-2025 inclusive

Patents

Patent filings are an indication of scientific research translating into real world impact, and show the promising potential of alternative protein science to drive the development of innovative new foods and ingredients.

Here we present a thorough overview of the EU alternative protein patent landscape, including overall growth, key organisations and countries, and specific fields of innovation.

Given there can often be a significant delay between patenting filing, publication, and granting, this section focuses on patenting trends in the European alternative protein sector since 2015. For a glossary of patent terms, see appendix.



Patents: overall trends

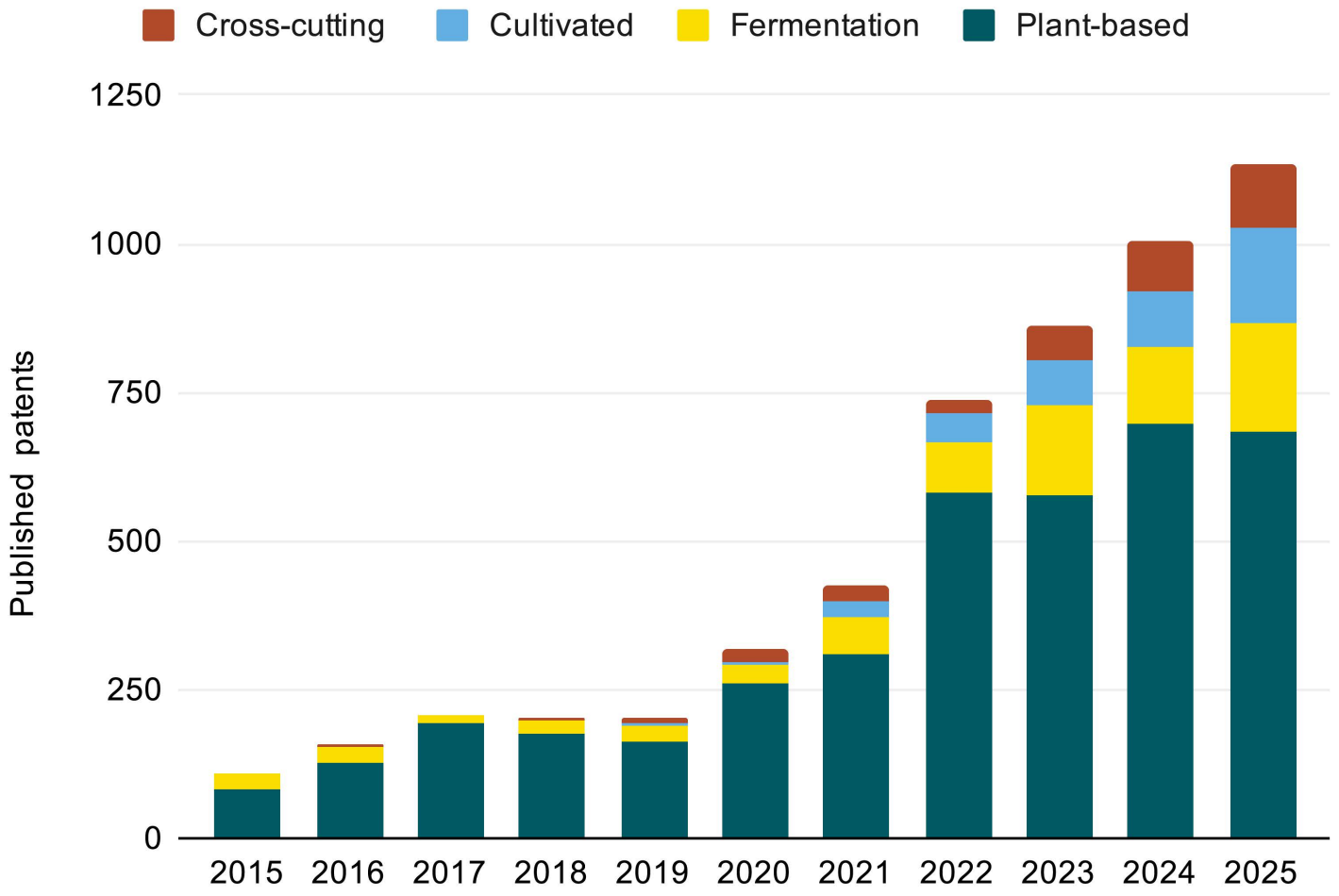
This chart shows the overall number of alternative protein patents published by EU innovators in the years 2015-2025 inclusive, stratified by alternative protein pillar.

The number of patents published has risen each year since 2018, reaching 1,134 in 2025.

There were 5,366 total patents published in the period 2015-2025.

Breakdown of patents by alternative protein pillar:

- 72% plant-based proteins
- 14% fermentation-made proteins and ingredients
- 8% cultivated meat and seafood
- 7% cross-cutting topics



Given there can often be a significant delay between patenting filing, publication, and granting, this section focuses on patenting trends in the European alternative protein sector since 2015. **For glossary of patent terms, see appendix.**

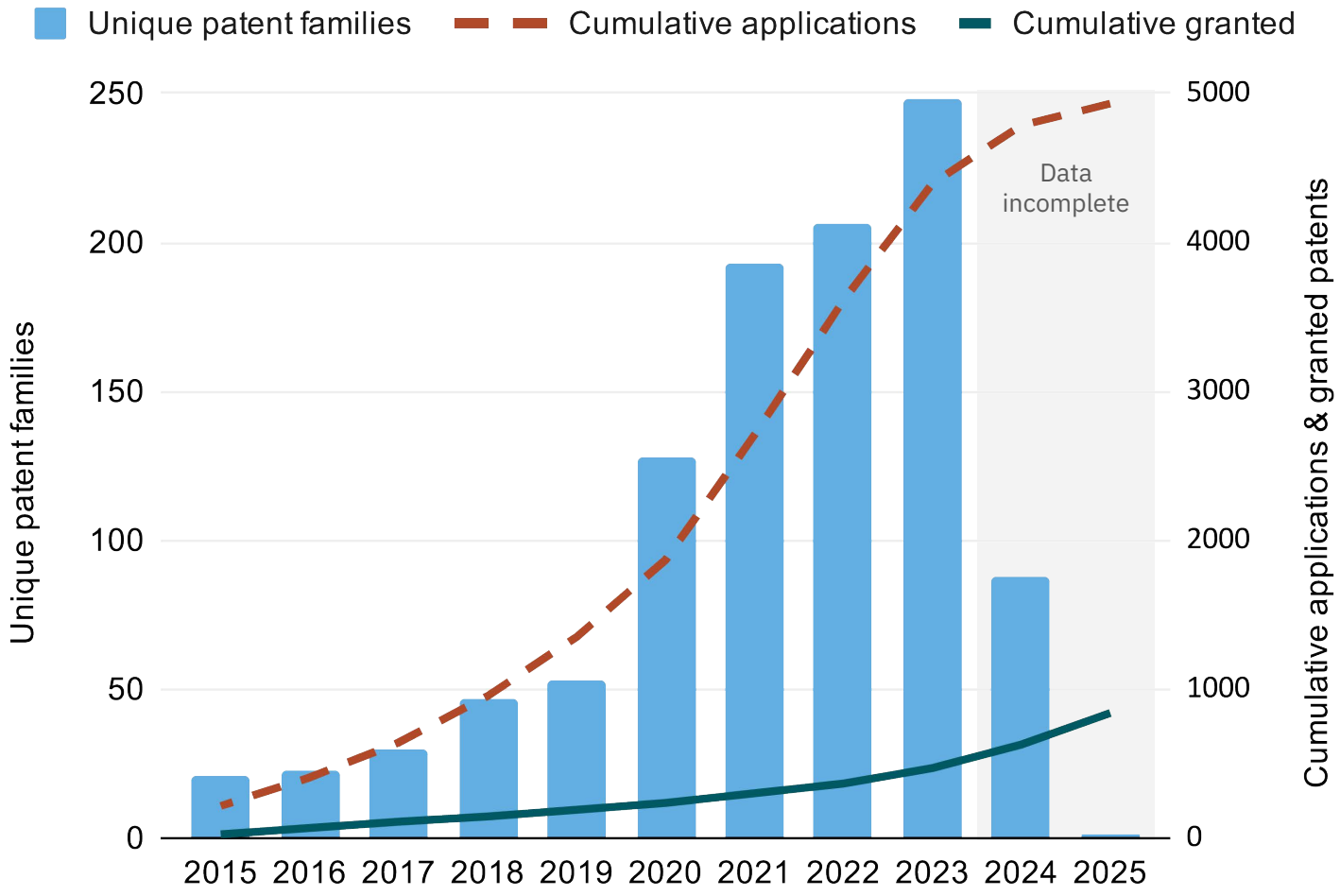
Patents: overall trends

This chart shows trends in unique patent families and cumulative patent filings by EU innovators in the years 2015-2025 inclusive, along with the cumulative number of patents that have been granted.

Priority filings – the very first filing on a new invention – began to rise significantly in 2020 and peaked at 248 in 2023.

Overall, a total of 4,932 patents from 1,233 families have been filed since 2015, with 2022 seeing the highest number of filings at 903.

The number of patents granted has also risen, reaching 212 in 2025, with 840 patents granted in total.



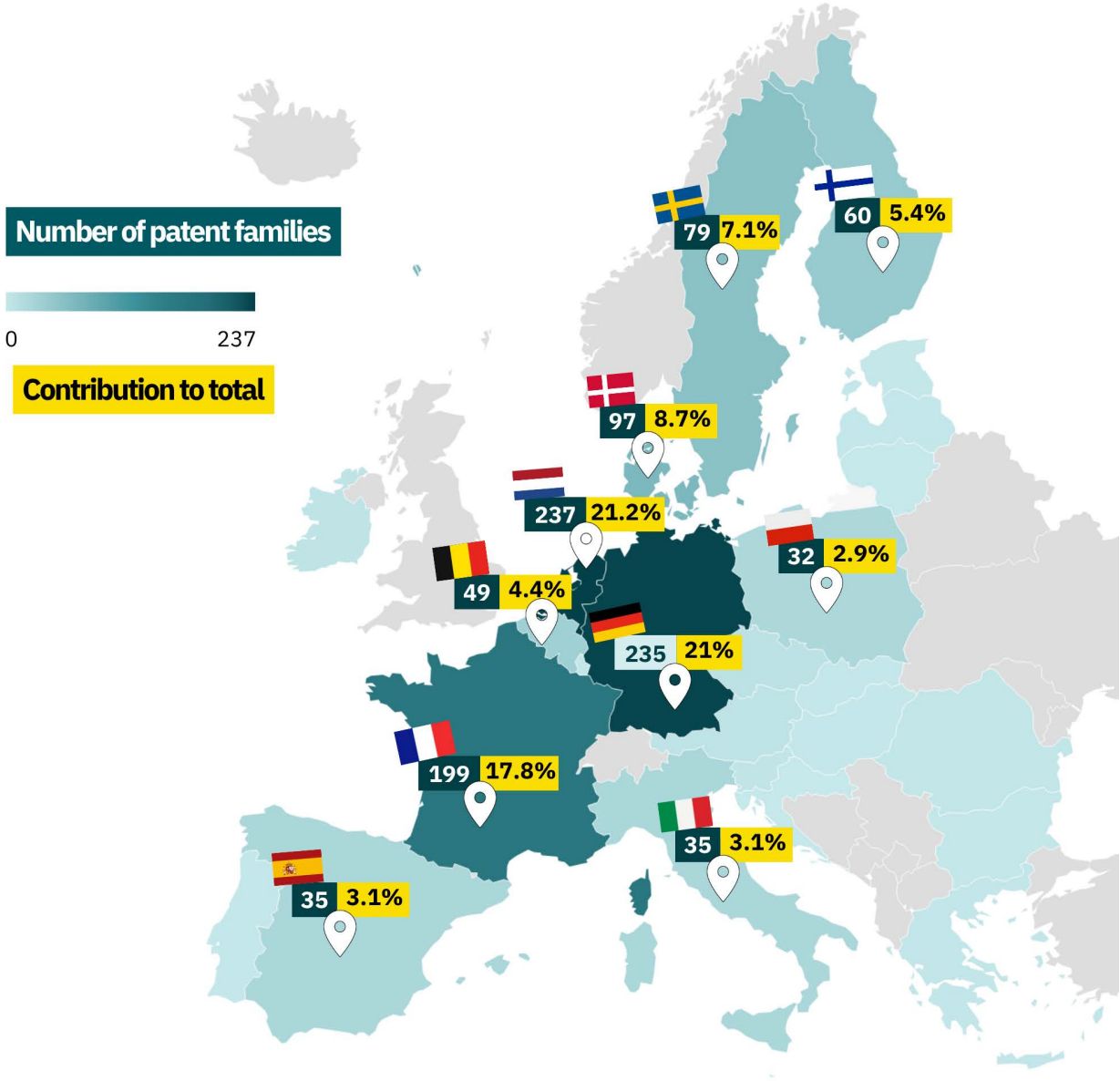
Due to the ~18-month lag between patent filing and publishing, 2024 and 2025 data are incomplete and should be treated with caution. **For glossary of patent terms, see appendix.**

Patent families by country

This heat map shows the number of unique patent families on alternative protein technologies per EU country in the years 2015-2025 inclusive, and their contribution to the overall EU total.

The Netherlands leads with 21.2% of all EU patent families, followed by Germany (21.0%), and France (17.8%).

Germany has the largest number of assignees (106), followed by the Netherlands and France in joint second place (54).



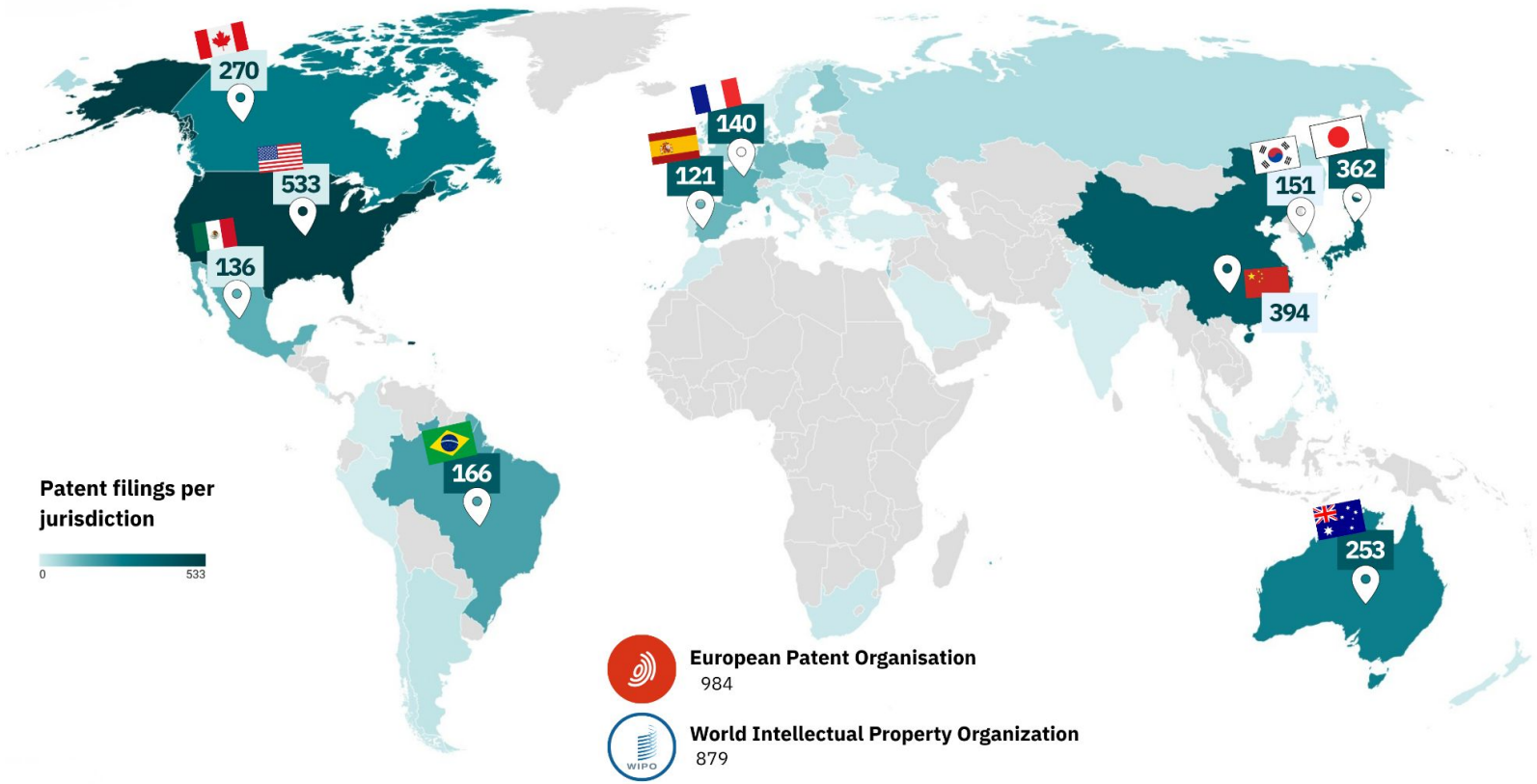
For glossary of patent terms, see appendix.

Patents: filing jurisdictions

This heat map shows the most common jurisdictions where alternative protein patents were filed by EU innovators in the years 2015-2025 inclusive.

The majority of patents in this dataset were filed with either the World Intellectual Property Organization (WIPO) (879 patents) or European Patent Organisation (EPO) (984).

The most popular national jurisdictions for filing patents were the United States (533), China (394), Japan (362), Canada (270), and Australia (253).



Jurisdiction refers to the legal territory in which a patent is sought, for example, France, Spain, etc. Each patent must be filed with a national patent office in the country where protection is sought and there are no global patents. The high number of patent filings with WIPO reflects the abundance of Patent Cooperation Treaty (PCT) filings in this dataset, which is a common route for innovators to take at the early stage of exploring the patentability of a new invention and is administered by WIPO. While PCT filings do not result in a patent being granted, this mechanism provides a single point of entry to receive a quick opinion on the patentability of an invention when assessed against a common set of standards agreed by 158 countries worldwide. The EPO operates a similar one-step process for the filing of patents under common standards across the 39 EPO member countries. The granting of a European patent can then be followed by validation of the patent in selected member countries. Map created with Datawrapper. **For glossary of patent terms, see appendix.**

Patents: end product type

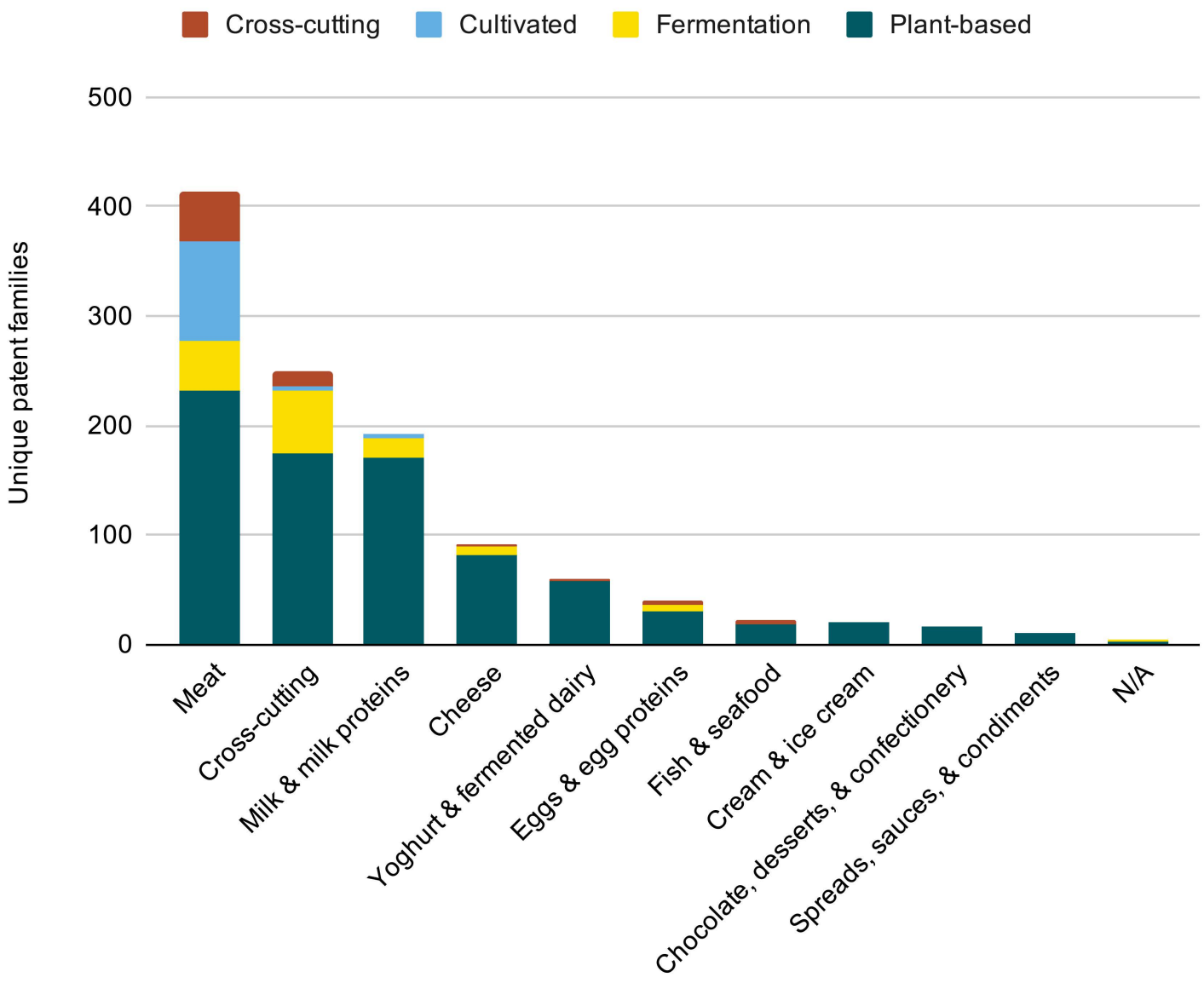
This chart shows a breakdown of EU alternative protein patent families by intended end product in the period 2015-2025.

Meat is by far the most common end product, with 37% of patent families.

Dairy products (combining the ‘milk & milk proteins’, ‘cheese’, ‘yoghurt & fermented dairy’, and ‘cream & ice cream’ categories) account for 32%.

Most end product categories are dominated by plant-based patents.

Only 2% of dedicated families are on innovations specific to fish and seafood analogues. Cheese and egg analogues also remain neglected.



For glossary of patent terms, see appendix.

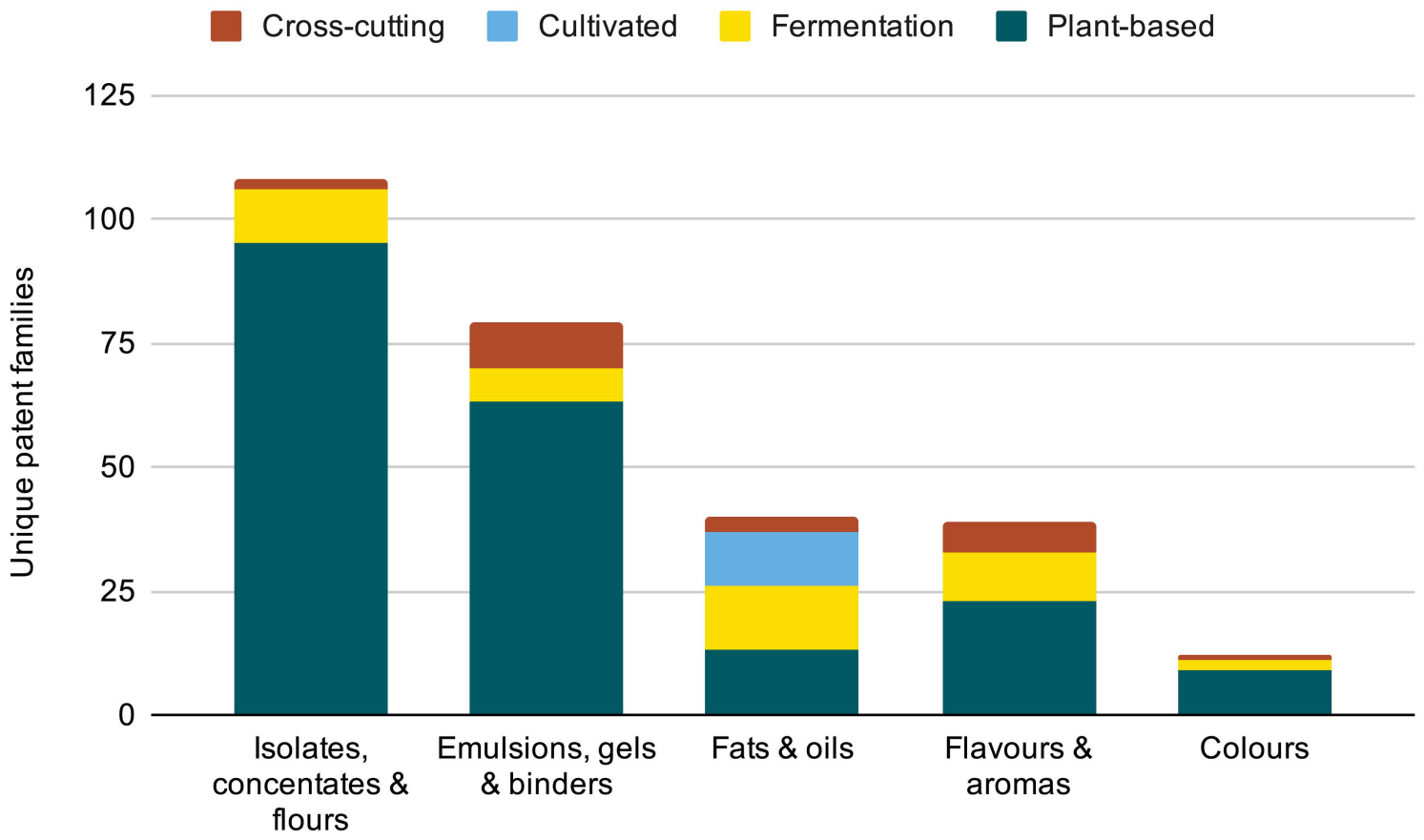
Patents: ingredient type

This chart shows a breakdown of alternative protein patent families on the basis of intended ingredient type in the period 2015-2025.

Protein isolates, concentrates, and flours are the most common ingredients, followed by emulsions, gels, and binders.

Plant-based ingredients are most common, although many patents apply to more than one alternative protein pillar.

Cultivated fats are being developed by several European companies as an ingredient for meat analogues.



For glossary of patent terms, see appendix.

Deep-dive: Plant-based

This section breaks down funding, publications, and patent trends, using research categories to explore strengths and weaknesses in the field of plant-based meat, seafood, eggs and dairy in the EU.

Leading plant-based research-performing organisations

This map shows the leading institutions for plant-based protein research in the EU on the basis of unique publications in the period 2020-2025.

The leading EU countries for plant-based research are the Netherlands (contributing to 16% of 2020-2025 output), Germany (15%), and Denmark (13%).

Wageningen University & Research leads in publications (292) and citations (8,515).

Larger countries such as Italy, France, and Spain rank highly in Europe on the basis of total output but do not have any research organisations in the top 10.

Map created with datawrapper

Research categories:

Plant-based

Crop development

Breeding of crops and increased use of underutilised protein crops for higher protein yields and functionality.

Strain development

Screening and optimisation of novel strains to identify the most efficient pathways for producing targets or modifying substrates.

Texturisation methods

Process innovations, including (but not limited to) novel texturisation methods such as extrusion, electrospinning, 3D printing, and enzymatic processing to match the texture of animal protein.

Ingredient optimisation

Improved protein fractionation and functionalisation for higher-quality ingredients with less processing, and development of novel ingredients to augment nutritional profiles and enhance sensory experience.

End product formulation

Formulation and product design, including fat integration, shelf life, stability, sensory quality, and nutritional assessment and fortification.

Food safety and quality

Toxicological and safety assessments, regulatory improvements, such as assay development or validation.

Health and nutrition

Dietary impacts of alternative proteins including population-wide studies, systematic reviews, and in vitro studies on health impacts such as bioavailability.

Consumer and market research

Consumer behaviour research including nomenclature studies, purchasing intent across retail and food environments, and market scoping and brand development.

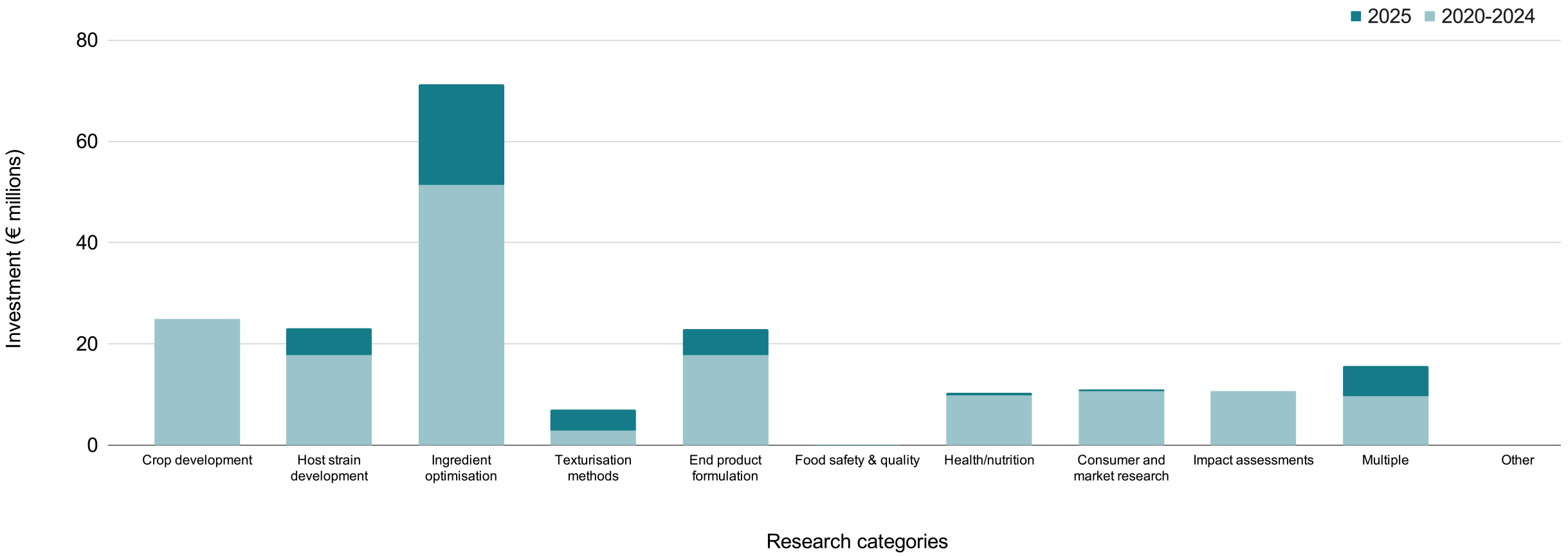
Impact assessments

Includes life cycle, techno-economic, environmental, social, and geopolitical impact analyses.

Plant-based funding: research categories

Investment from the European Commission into plant-based, broken down by research category, 2020-2025.

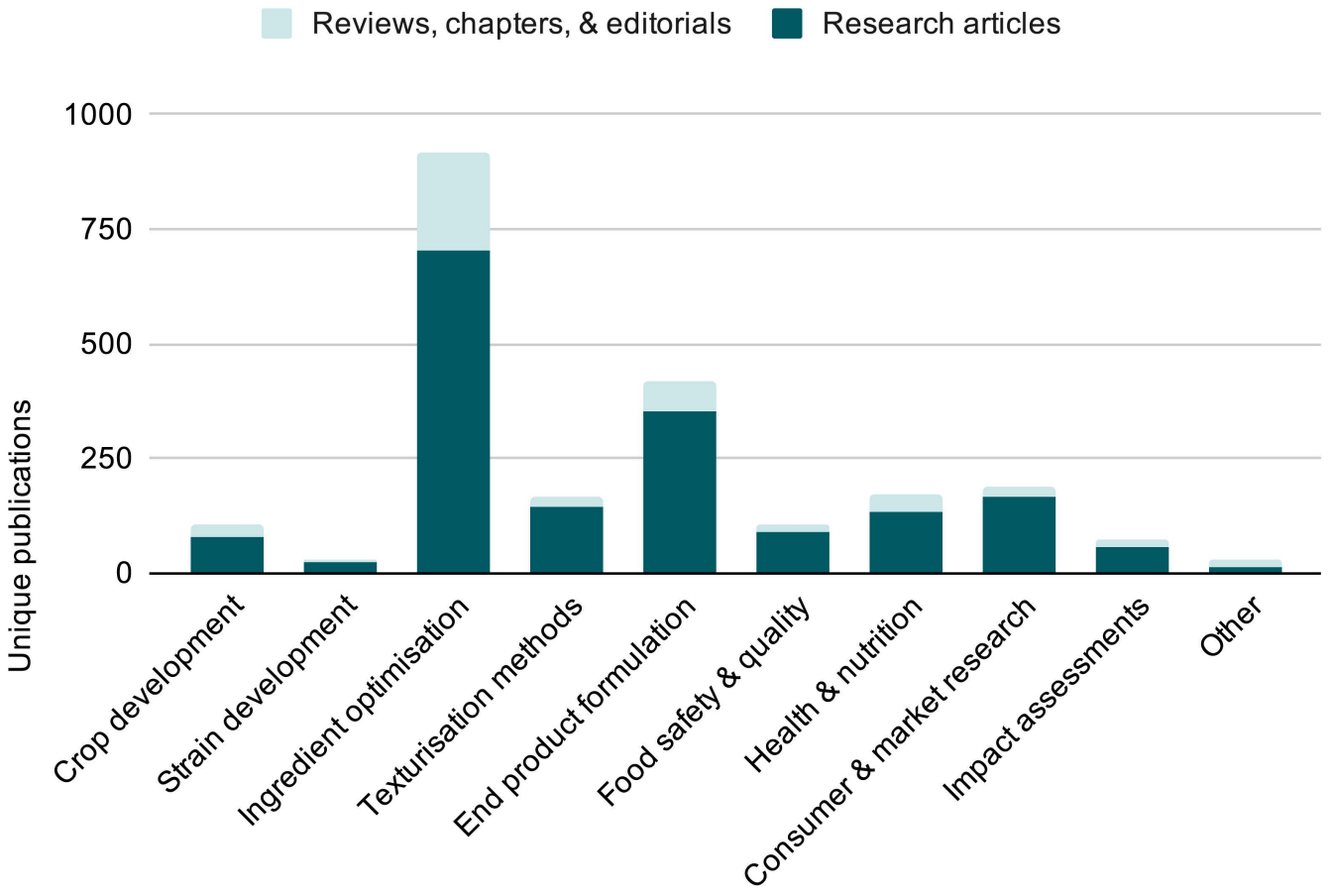
Ingredient optimisation remains dominant. Some investments in food safety & quality (for example, the Giant Leaps project) are not reflected here as they are categorised as cross-cutting.



Plant-based publications: research categories

This chart shows a breakdown by research category of EU academic publications on plant-based proteins in the years 2020-2025 inclusive.

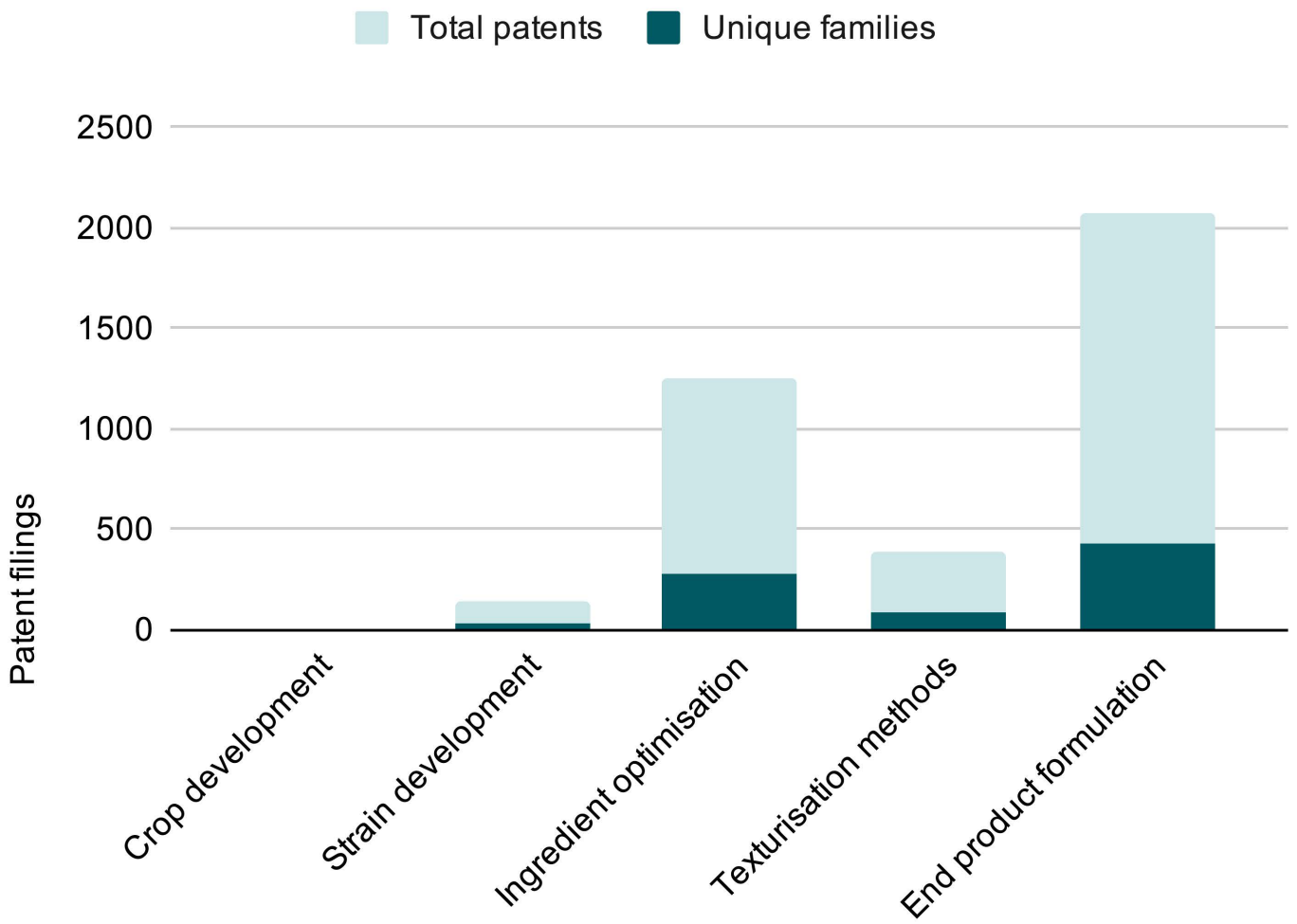
Ingredient optimisation and end product formulation are the most common categories, accounting for 42% and 19% of publications, respectively.



Plant-based patents: research categories

This chart provides a breakdown of patent filings by EU innovators on technology areas related to plant-based proteins in the years 2015-2025 inclusive.

End product formulation and ingredient optimisation are the most common categories, accounting for 54% and 32% of patent filings, respectively.



For glossary of patent terms, see appendix.

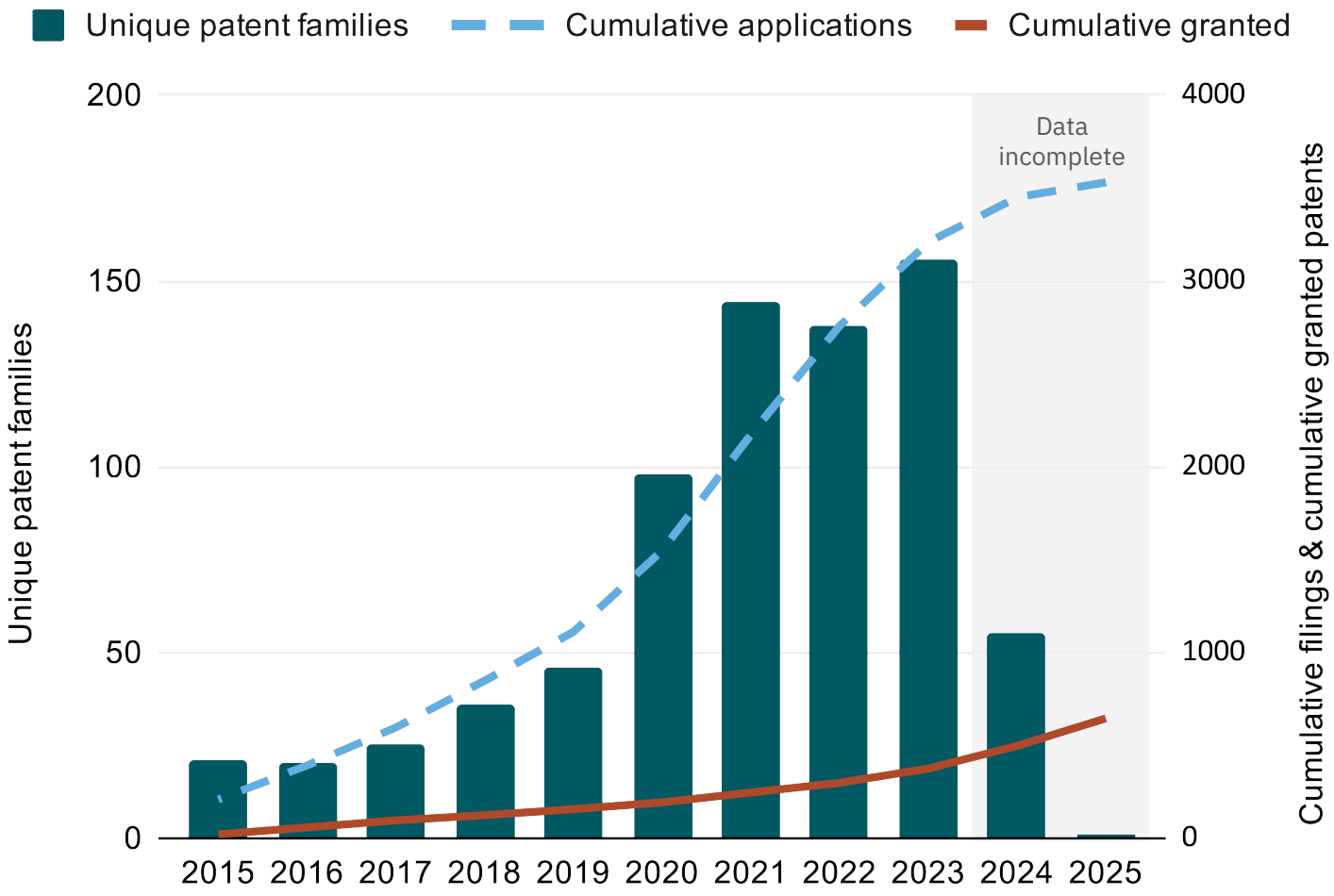
Plant-based patents over time

This chart shows trends in unique plant-based patent families and cumulative patent filings by EU innovators in the years 2015-2025 inclusive, along with the cumulative number of patents that have been granted.

Priority filings – the very first filing on a new invention – began to rise significantly in 2020 and peaked at 156 in 2023.

Overall, a total of 3,531 patents have been filed since 2015, with 2021 seeing the highest number of filings at 624.

The number of patents granted has also risen, reaching 148 in 2025, with 645 patents granted in total.



Due to the ~18-month lag between patent filing and publishing, 2024 and 2025 data are incomplete and should be treated with caution. **For glossary of patent terms, see appendix.**

Deep-dive: Fermentation

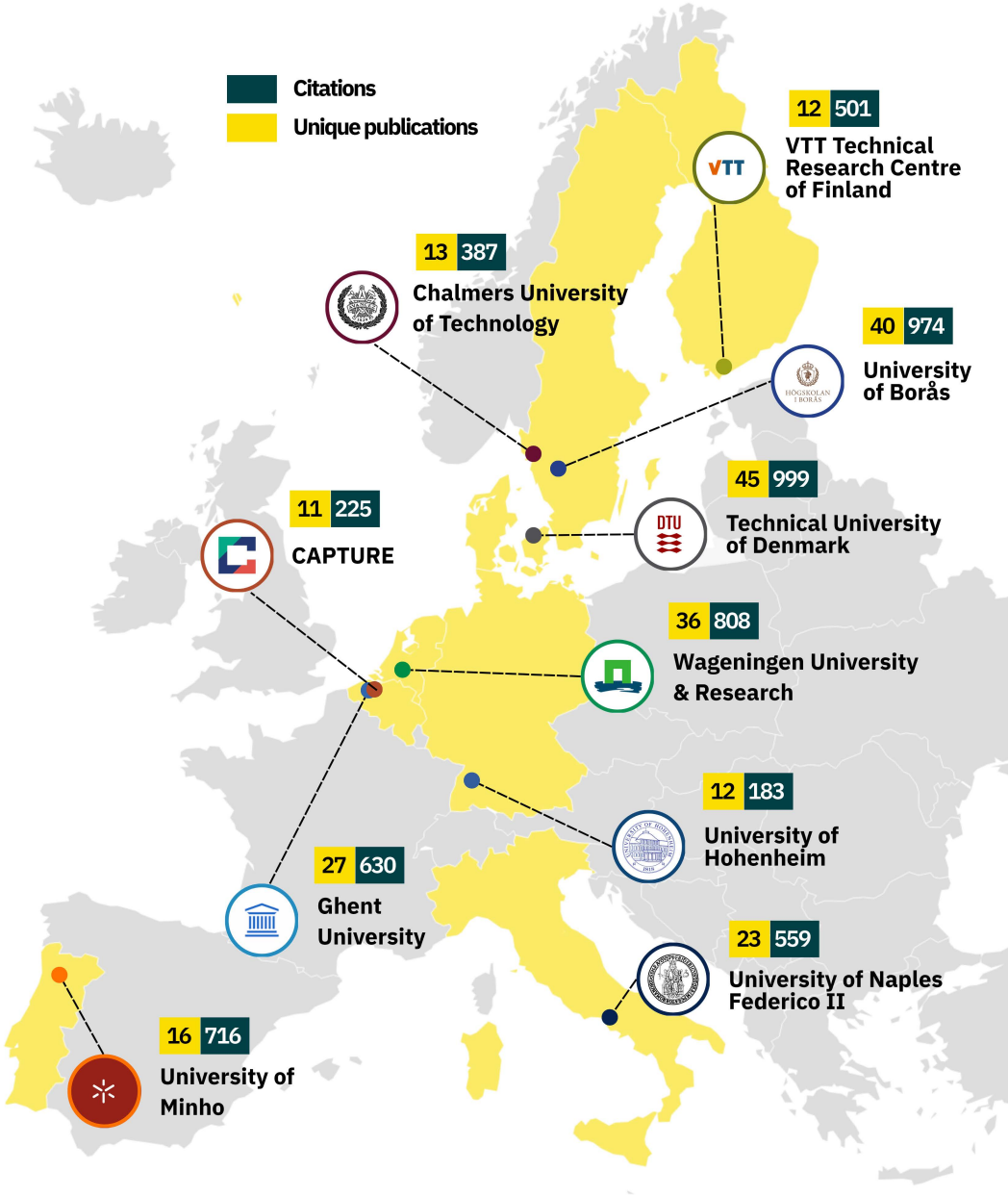
This section breaks down funding, publications, and patent trends, using research categories to explore strengths and weaknesses in the field of fermentation-enabled alternative proteins in the EU.

Leading fermentation research performing organisations

This map shows the leading institutions for fermentation-made protein and ingredients research in the EU on the basis of unique publications in the period 2020-2025.

The leading EU countries for fermentation research are Germany (contributing to 16% of 2020-2025 output), Italy (13.4%), Spain (13.2%), and Denmark (13.2%).

Technical University of Denmark leads in publications (45) and citations (999).



Map created with datawrapper

Research categories:

Fermentation

Target molecule selection

Target identification and validation to broaden the scope of food ingredients produced by precision fermentation.

Strain development

Screening and optimisation of novel strains to identify the most efficient pathways for producing targets or modifying substrates.

Ingredient optimisation

Improved protein fractionation and functionalisation for higher-quality ingredients with less processing, and development of novel ingredients to augment nutritional profiles and enhance sensory experience.

End product formulation

Formulation and product design, including fat integration, shelf life, stability, sensory quality, and nutritional assessment and fortification.

Health and nutrition

Dietary impacts of alternative proteins including population-wide studies, systematic reviews, and in vitro studies on health impacts such as bioavailability.

Impact assessments

Includes life cycle, techno-economic, environmental, social, and geopolitical impact analyses.

Feedstocks

Media composition and feedstock utilisation strategies (including alternative feedstocks) to improve efficiency, scale and cost.

Bioprocess design

Innovations in bioreactor design and upstream/downstream processes to improve efficiency, monitoring, and control.

Texturisation methods

Developing techniques such as extrusion technology to replicate the fibrous, chewy textures of conventional meat and dairy.

Food and safety quality

Toxicological and safety assessments, regulatory improvements, such as assay development or validation.

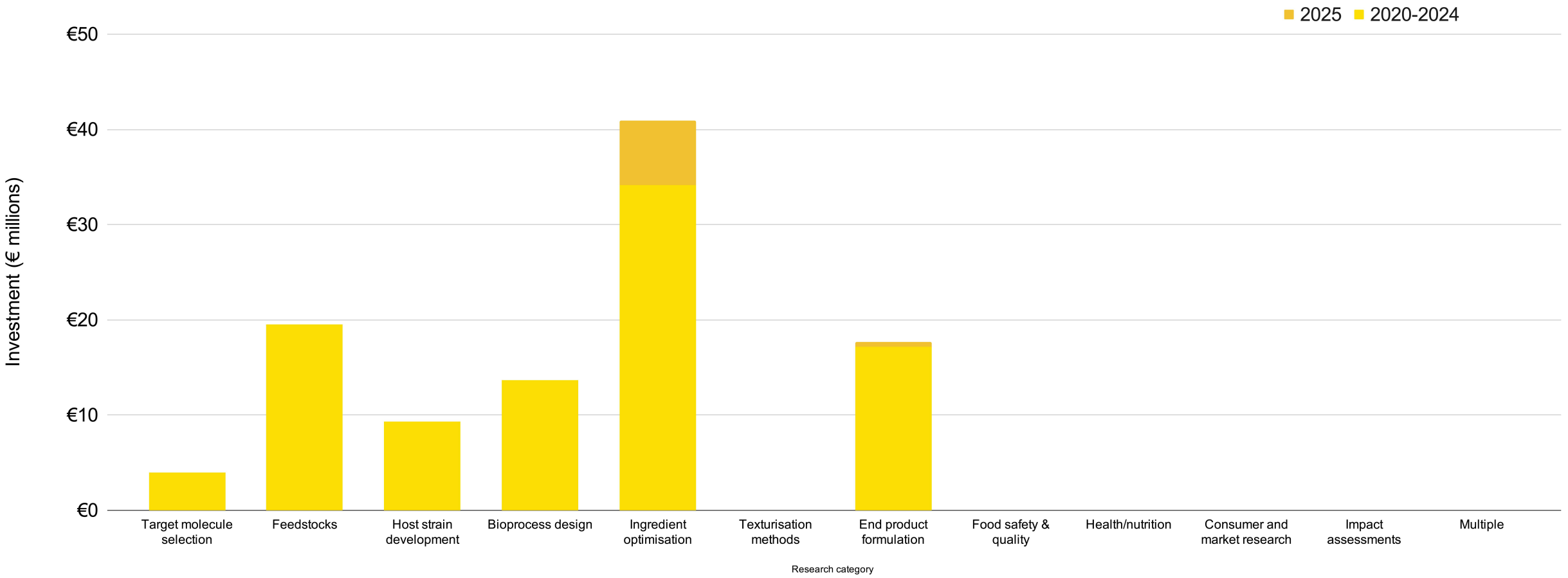
Consumer market and research

Consumer behaviour research including nomenclature studies, purchasing intent across retail and food environments, and market scoping and brand development.

EU fermentation deep dive: research categories

Investment from the European Commission into fermentation, broken down by research category, 2020-2025.

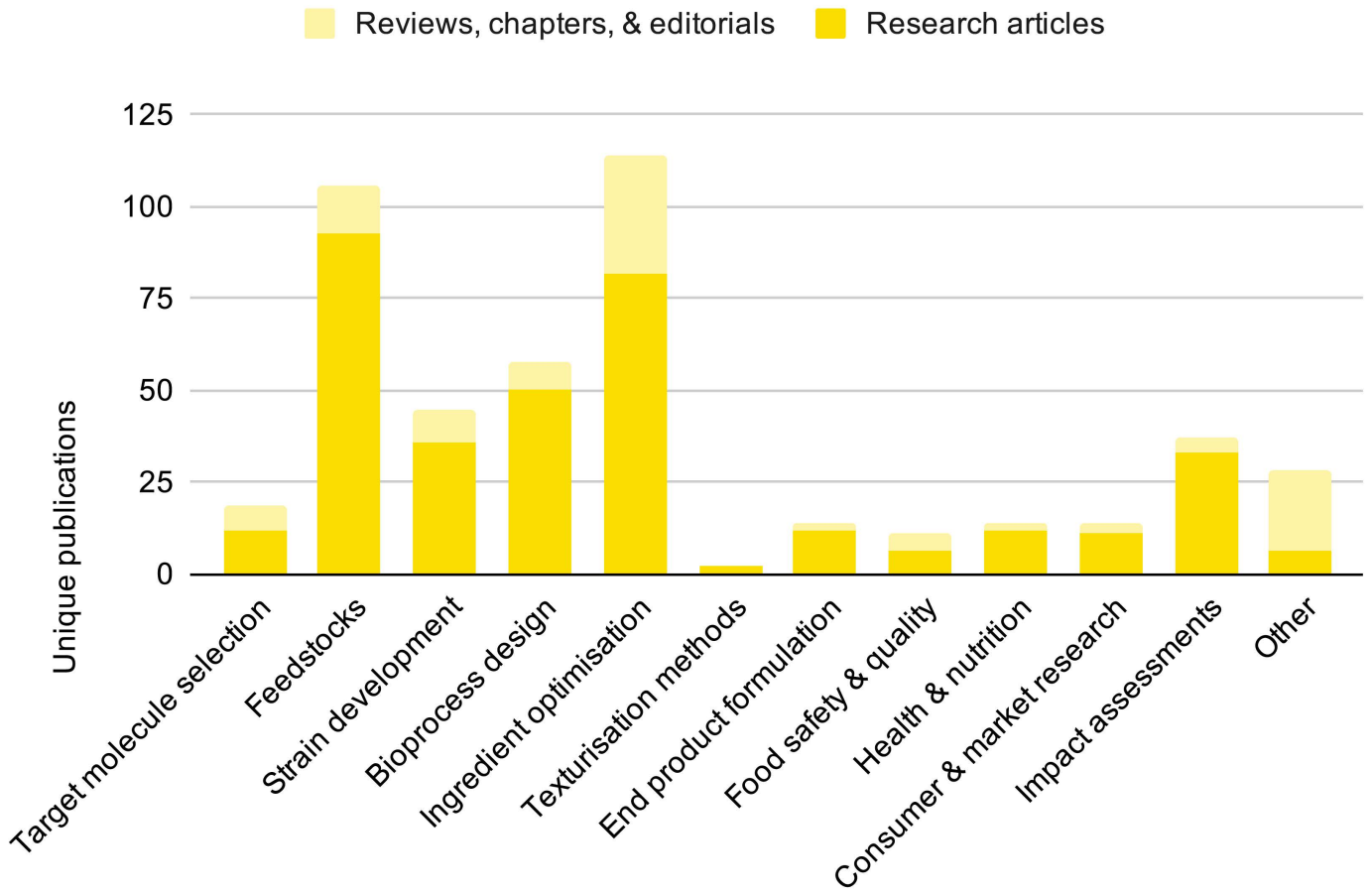
Some European Commission investments into downstream parts of the technology, such as food safety & quality (eg, Giant Leaps), are not reflected here as they are categorised as cross-cutting.



Fermentation publications: research categories

This chart shows a breakdown by research category of EU academic publications on fermentation-made proteins and ingredients in the years 2020-2025 inclusive.

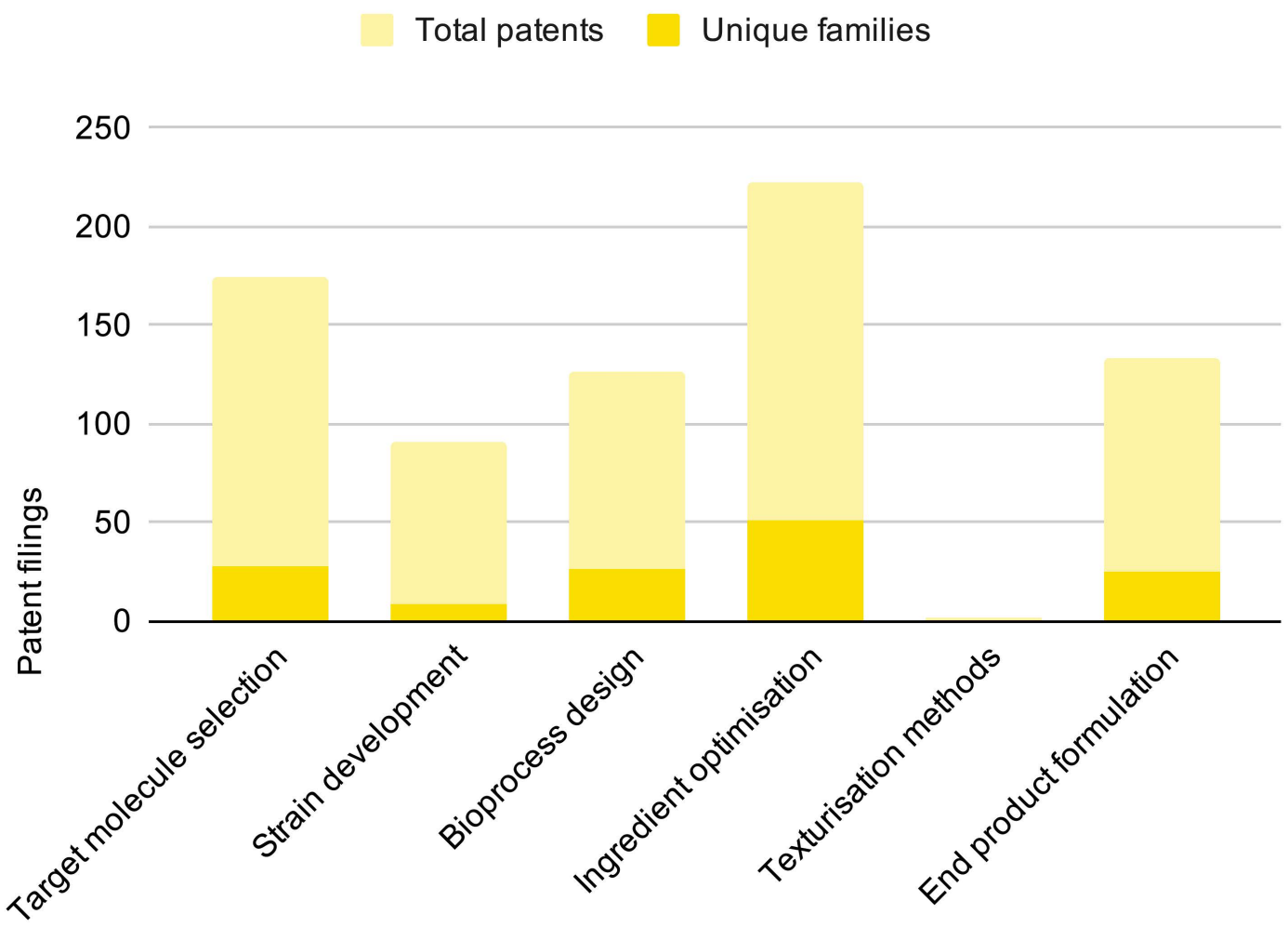
Ingredient optimisation and feedstocks are the most common categories, accounting for 25% and 23% of publications, respectively.



Fermentation patents: research categories

This chart provides a breakdown patent filings by EU innovators on technology areas related to fermentation-made proteins and ingredients in the years 2015-2025 inclusive.

Ingredient optimisation, target molecule selection, and end product development are the most common categories, on 30%, 23%, and 18% of publications, respectively.



For glossary of patent terms, see appendix.

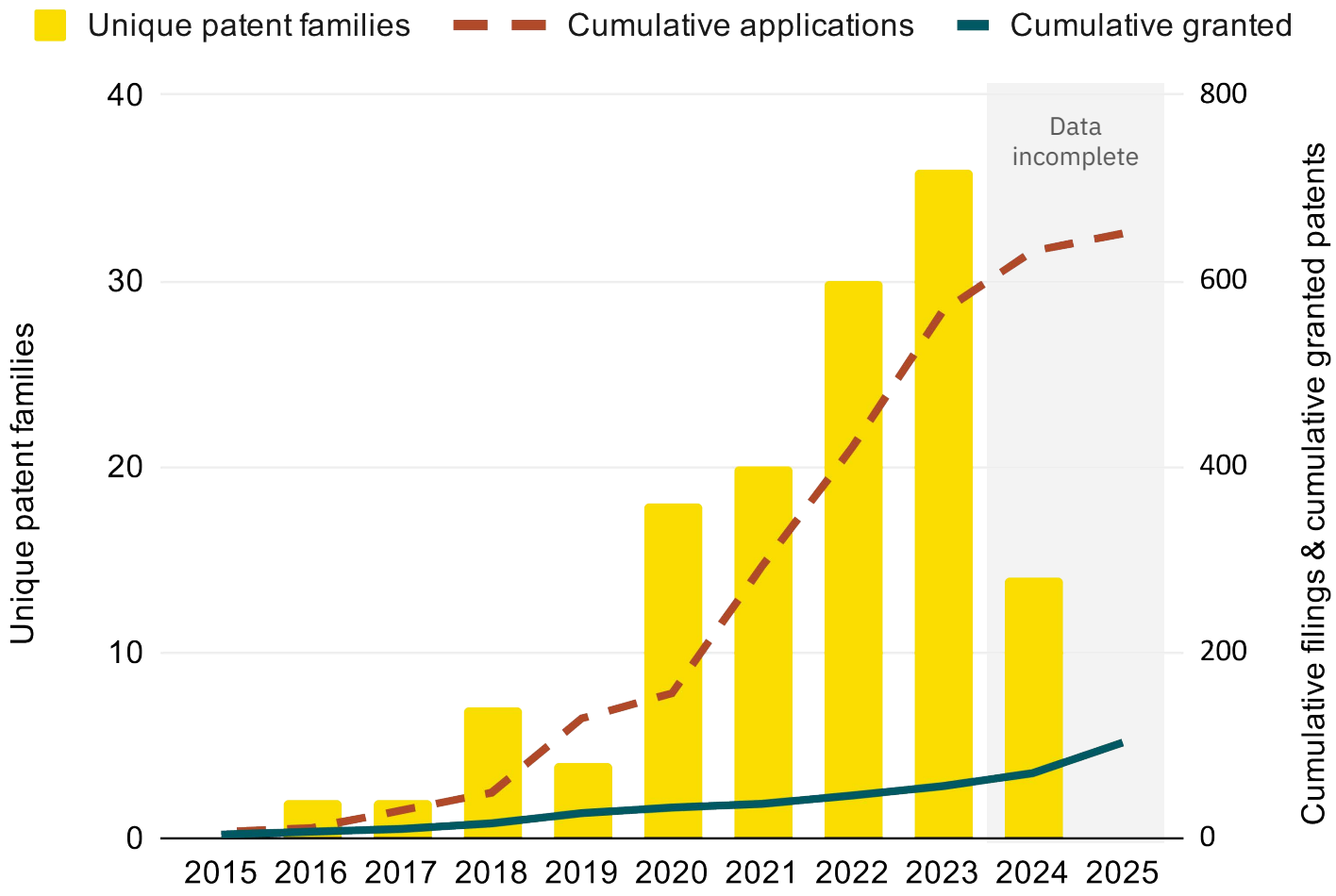
Fermentation patents over time

This chart shows trends in unique fermentation patent families and cumulative patent filings by European innovators in the years 2015-2025 inclusive, along with the cumulative number of patents that have been granted.

Priority filings – the very first filing on a new invention – began to rise significantly in 2020 and peaked at 36 in 2023.

Overall, a total of 651 patents have been filed since 2015, with 2023 seeing the highest number of filings at 146.

The number of patents granted has also risen, reaching 33 in 2025, with 103 patents granted in total.

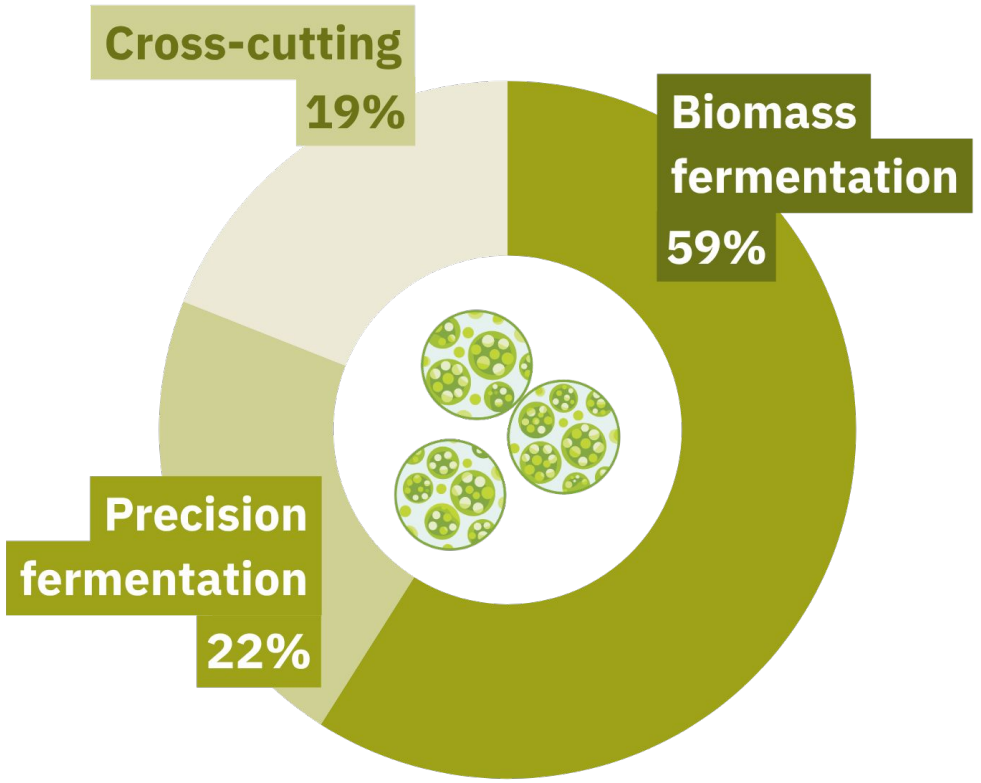


Due to the ~18-month lag between patent filing and publishing, 2024 and 2025 data are incomplete and should be treated with caution. **For glossary of patent terms, see appendix.**

Fermentation patents: biomass vs precision fermentation

This chart shows a breakdown of unique fermentation patent families from EU innovators in the years 2015-2025 inclusive, on the basis of whether the technology is intended for use in biomass or precision fermentation applications.

A majority of patent filings (59%) focus on biomass fermentation rather than precision fermentation (22%), with the remainder cutting across both fermentation types.



For glossary of patent terms, see appendix.

Deep-dive: cultivated

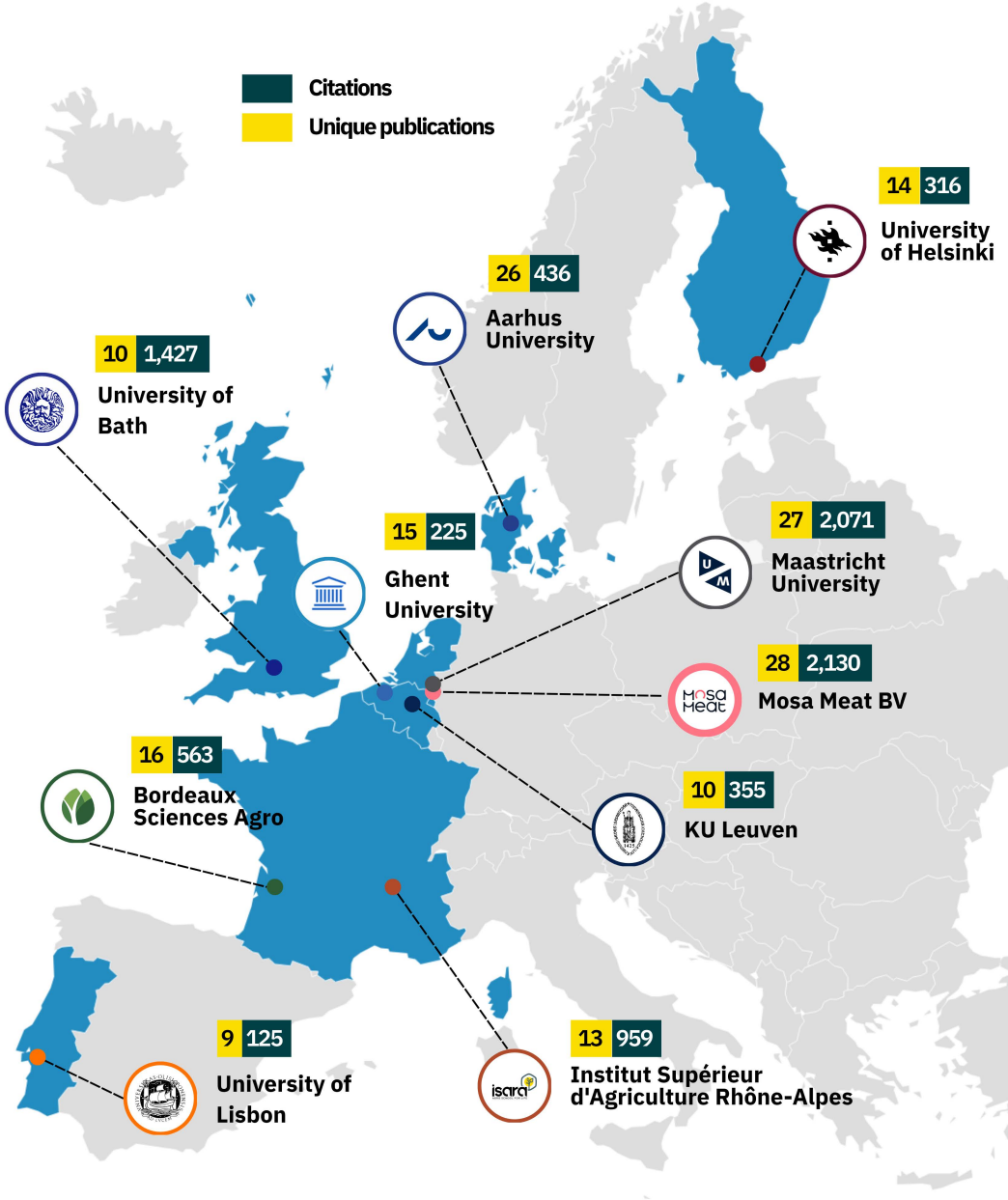
This section breaks down funding, publications, and patent trends, using research categories to explore strengths and weaknesses in the field of cultivated meat and seafood in the EU.

Leading cultivated research-performing organisations

This map shows the leading institutions and companies for cultivated meat and seafood research in the EU on the basis of unique publications in the period 2020-2025.

The leading EU countries for cultivated meat and seafood research are Germany (contributing to 19% of 2020-2025 output), Italy (18%), and the Netherlands (17%).

Mosa Meat, a private company, leads in publications (28) and citations (2,130).



Map created with datawrapper

Research categories:

Cultivated

Cell line development

Sourcing, optimising, and banking new and existing cell lines to achieve faster growth, greater stability and stress tolerance, improved performance (including adherence and differentiation), and higher density across terrestrial and aquatic cell lines.

Cell culture media

Reducing cell culture media costs and increasing their availability by characterising and validating novel sources of growth factors, amino acids, and other media components.

Scaffolding

Improved scaffolding biomaterials that support cell adherence and differentiation to allow the replication of complex animal meat structures.

Bioprocess design

Innovations in bioreactor design and upstream/downstream processes to improve efficiency, monitoring, and control.

Texturisation methods

Developing techniques such as extrusion technology to replicate the fibrous, chewy textures of conventional meat and dairy.

End product formulation

Formulation and product design, including fat integration, shelf life, stability, sensory quality, and nutritional assessment and fortification.

Health and nutrition

Dietary impacts of alternative proteins including population-wide studies, systematic reviews, and in vitro studies on health impacts such as bioavailability.

Food safety and quality

Toxicological and safety assessments, regulatory improvements, such as assay development or validation.

Consumer market and research

Consumer behaviour research including nomenclature studies, purchasing intent across retail and food environments, and market scoping and brand development.

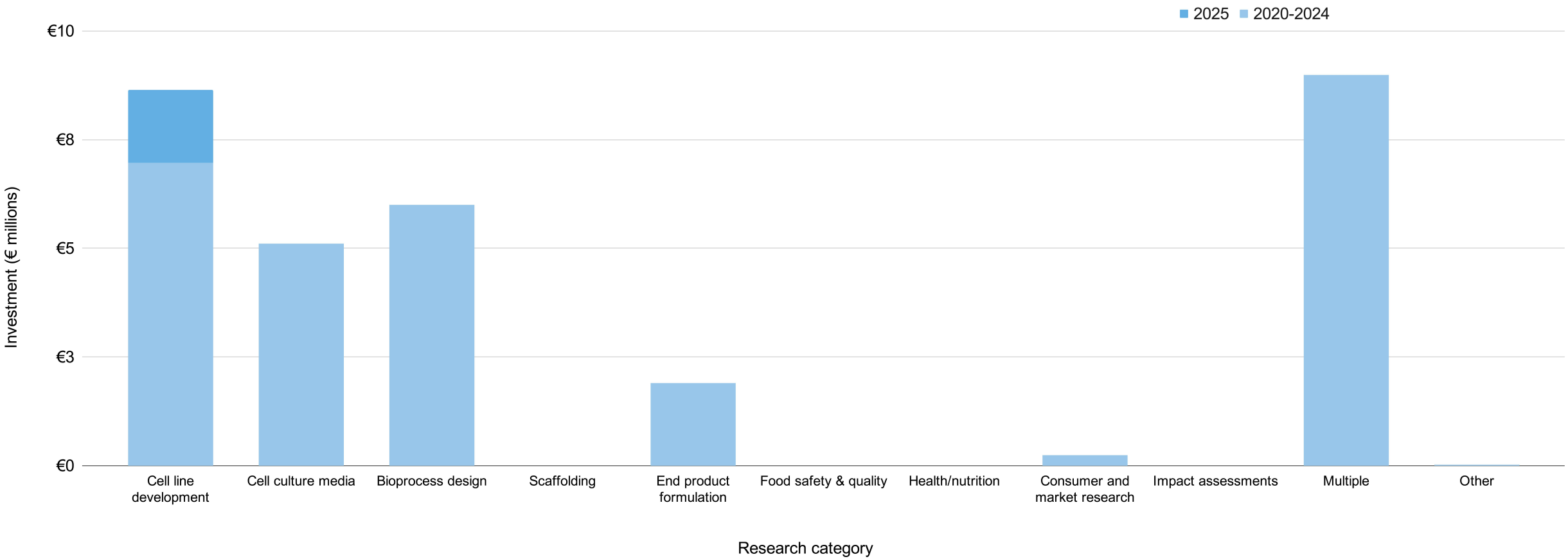
Impact assessments

Includes life cycle, techno-economic, environmental, social, and geopolitical impact analyses.

EU cultivated deep dive: research categories

Investment from the European Commission into cultivated meat and seafood, broken down by research category, 2020-2025.

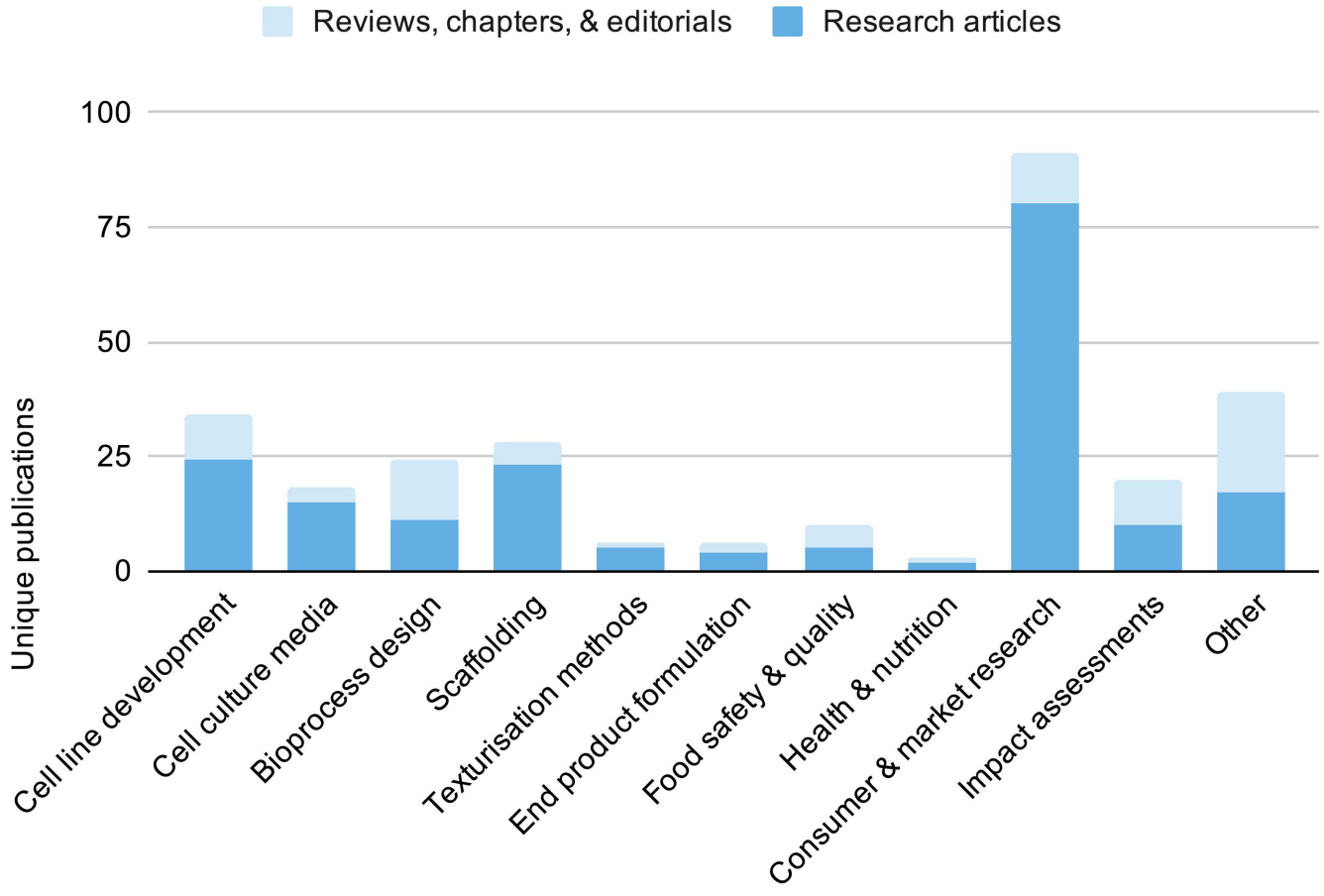
Cultivated meat and seafood investment by the European Commission has largely been upstream, similar to the investment pattern from European funders as a whole.



Cultivated publications: research categories

This chart shows a breakdown by research category of academic publications in the EU on cultivated meat and seafood in the years 2020-2025 inclusive.

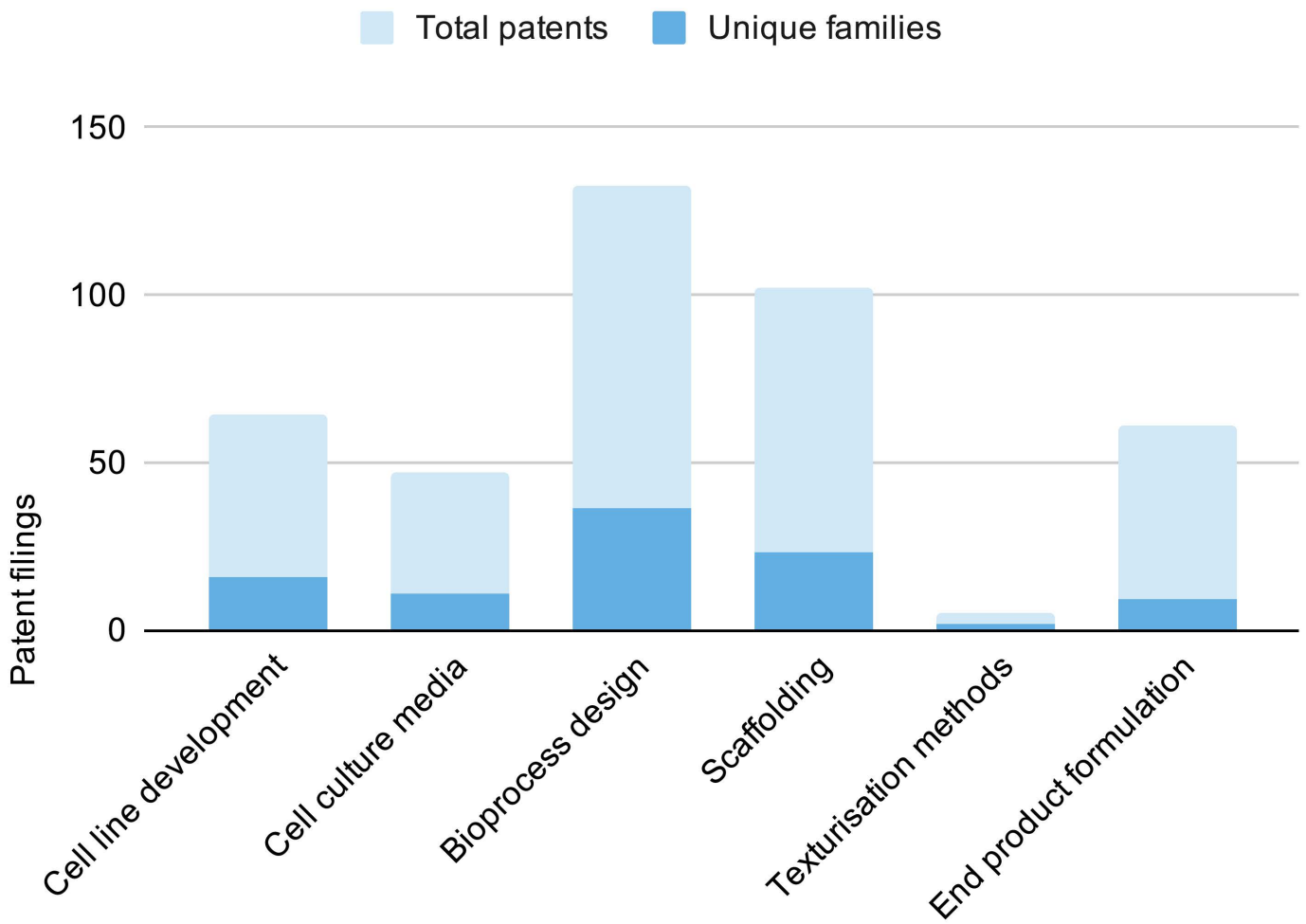
A third of cultivated meat and seafood publications were assigned to the consumer & market research category, while a further 14% were not assigned to any category.



Cultivated patents: research categories

This chart provides a breakdown patent filings by European innovators on technology areas related to cultivated meat and seafood in the years 2015-2025 inclusive.

Bioprocess design and scaffolding are the most common categories, accounting for 32% and 25% of patent filings, respectively.



For glossary of patent terms, see appendix.

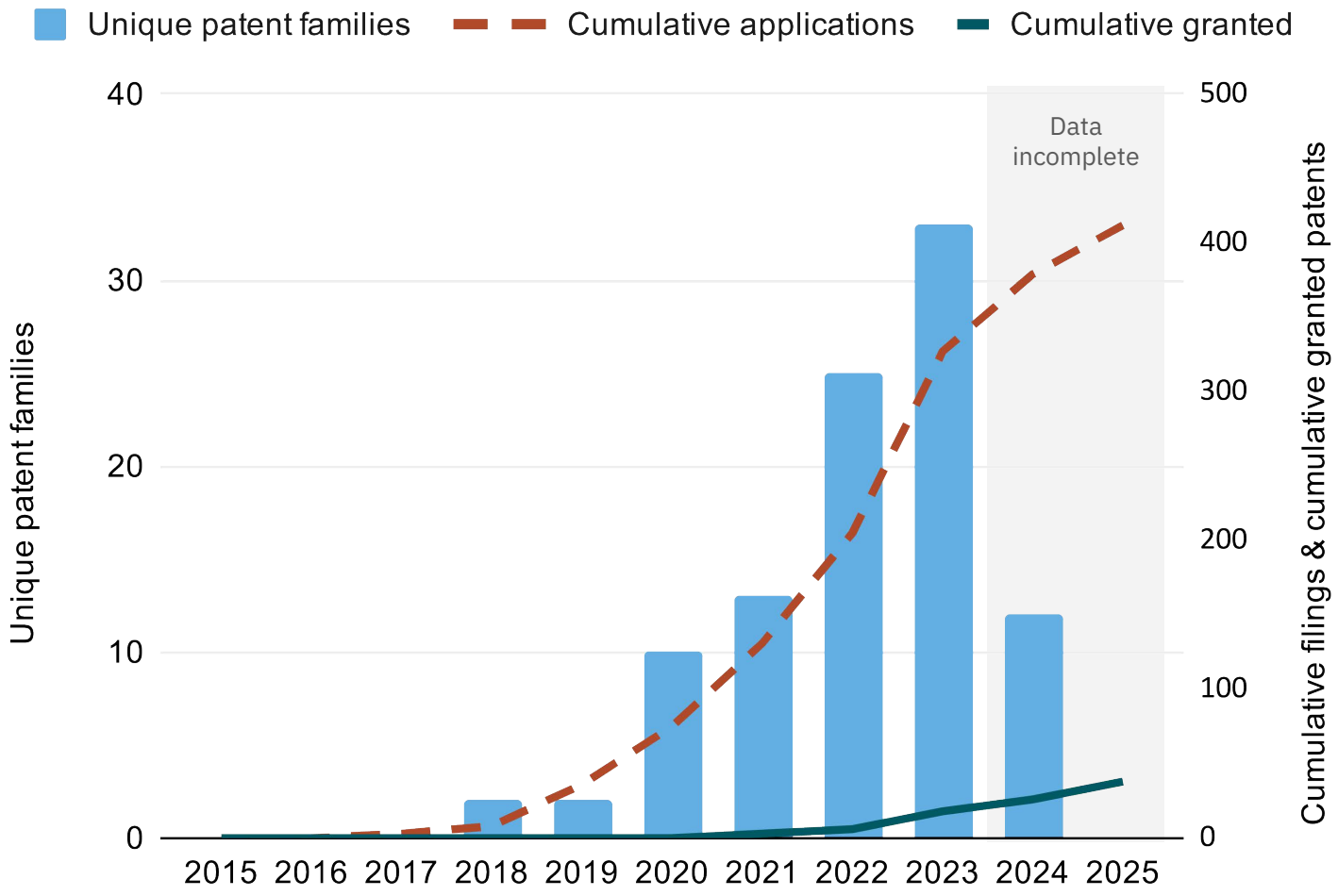
Cultivated patents over time

This chart shows trends in unique cultivated patent families and cumulative patent filings by European innovators in the years 2015-2025 inclusive, along with the cumulative number of patents that have been granted.

Priority filings – the very first filing on a new invention – began to rise significantly in 2020 and peaked at 33 in 2023.

Overall, a total of 412 patents have been filed since 2015, with 2023 seeing the highest number of filings at 122.

The number of patents granted has also risen, reaching 12 in both 2023 and 2025, but with only 38 patents granted in total.



Due to the ~18-month lag between patent filing and publishing, 2024 and 2025 data are incomplete and should be treated with caution. **For glossary of patent terms, see appendix.**

Appendix and methods

Methodology

For full methods including search terms, inclusion and exclusion criteria and other technical details, please see the full technical appendix **here.**

Funding

Data
Data sourced from GFI's publicly available global research funding database, the GFI Research Grants Tracker, which houses information published by funders and research conductors globally. Kernel Science contributed to data retrieval. Funding information was also retrieved from Dimensions.ai.

Time period
2010-2025. Data retrieved in February 2026.

Country focus
EU27 + Norway + Switzerland + UK.

Search strategy
A list of search terms was developed and Dimensions.ai results screened against predefined inclusion/exclusion criteria to identify those in scope for the study.

Grants focusing plant-based, fermentation-made, or cultivated proteins and ingredients meeting these criteria were analysed by title, recipient, funder country, pillar categorisation, end product and research sub-category.

Publications

Data
Data sourced from Dimensions, an interlinked research information system provided by Digital Science (https://www.dimensions.ai).

Time period
2020-2025. Data retrieved January 2026.

Country focus
EU27 + Norway + Switzerland + UK.

Search strategy
Complex search terms were devised that allowed us to trigger numerous publications that may be relevant to our analysis.

Search returns were screened against predefined inclusion/exclusion criteria to identify those in scope for the study.

Publications relevant to plant-based, fermentation-made, or cultivated proteins and ingredients meeting these criteria were analysed in the Dimensions Landscape & Discovery application and in spreadsheet format.

Patents

Data
Data sourced from Dimensions, an interlinked research information system provided by Digital Science (https://www.dimensions.ai).

Time period
2015-2025. Data retrieved February 2026.

Country focus
EU27 + Norway + Switzerland + UK.

Search strategy
Complex search terms were devised that allowed us to trigger numerous patents that may be relevant to our analysis.

Search returns were screened against predefined inclusion/exclusion criteria to identify those in scope for the study.

Patents relevant to plant-based, fermentation-made, or cultivated proteins and ingredients meeting these criteria were analysed in the Dimensions Landscape & Discovery application and in spreadsheet format.

Key terminology: patents

Patent	An exclusive right granted for an invention that excludes others from making, using, offering for sale, or selling the invention. Patents benefit inventors by providing them with legal protection for their inventions. To receive this protection, they must publicly disclose details of the invention.
Patent family	A collection of patents covering the same or similar technical content disclosed by a common inventor(s) and patented in more than one country.
Priority date	Sometimes called the “effective filing date”, this is the first filing date in a family of patent applications and is used to establish the novelty and/or obviousness of a particular invention relative to other art. Each patent family will only have one priority date.
Filing date	The date when a patent application is first filed in the respective patent office. As there are no global patents, there may be numerous patent filings in different jurisdictions from the same patent family, each with its own filing date.
Publication date	The date on which the patent application is published (ie, the information is available to the public). This normally occurs approximately 18 months after the filing date.
Assignee	Organisation(s) and individual(s) that have an ownership interest in the legal rights a patent offers. An assignee is often the organisation employing the inventor of the technology. An assignee can also change at a later date.
Jurisdiction	The legal territory in which a patent is sought, for example, France, Spain, etc. Each patent must be filed with a national patent office in the country where protection is sought and there are no global patents.
Patent legal status	The current legal status of the patents, eg. ‘Granted’, ‘Active’, ‘Abandoned’, etc.

The patenting process

There are differences between patent offices in how a patent application is processed once it has been filed, but a general overview of the process is described in the table below.

For a more detailed explanation, please refer to this resource from the World Intellectual Property Organization. A detailed description of the European patent application process can be found here.

1.	**Formal examination**	The application is examined to ensure it complies with the administrative requirements set by the patent office.
2.	**Prior art search**	A search is conducted to identify prior art that will be relevant in determining the patentability of the claimed invention.
3.	**Substantive examination**	A more detailed examination is carried out to ensure the claimed invention satisfies the main criteria for patentability (patentable subject matter, novelty, inventive step, industrial applicability and sufficiency of disclosure).
4.	**Notification**	Results of the examination are sent to the applicant or their legal representative and they are given an opportunity to respond to any objections raised.
5.	**Publication of patent application**	The patent application is usually published approximately 18 months after the filing date.
6.	**Granting of patent**	If the outcome of the examination is positive, the patent office grants the patent.
7.	**Publication of granted patent**	The granted patent is published and the invention is disclosed to the public.
8.	**Pre-grant and/or post-grant opposition**	Patent offices offer others the opportunity to oppose the grant of a patent, for example, if they believe the claimed invention is not new. Opposition proceedings can be held before or after the patent is granted.

About this report

Authors
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Child S., Hunt D., State of the alternative protein research and innovation ecosystem in the European Union, 2020-2025 (2026). *GFI Europe.* DOI: 10.5281/zenodo.20124084.

About GFI Europe
The Good Food Institute Europe is a nonprofit think tank helping to build a more sustainable, secure and just food system by diversifying protein production.