

CAS SciFinder Discovery Platform™

# BETWEEN IDEAS AND ANSWERS ARE CONNECTIONS THAT MATTER

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# CAS accelerates breakthroughs

At CAS, our passion is advancing scientific progress. As a leader in scientific information solutions, we curate, connect, and analyze the world's published science to accelerate discovery.

We are proud to partner with innovators and educators across academia, providing the hindsight, insight, and foresight they need to build upon the past and discover a better future.

**BETWEEN IDEAS AND ANSWERS  
ARE CONNECTIONS THAT MATTER**

# CAS connects you to the world's published science for better insights



Over  
**50K**  
scientific journal titles  
worldwide  
over the years

Over  
**250**  
million substances

Over  
**50**  
languages  
translated

**109**  
patent offices  
worldwide

# CAS SciFinder Discovery Platform

Comprehensive bioactivity data to study how molecules interact with biological systems



## Extensive collection

More than 45 million bioactivity measurements and 90,000 defined targets across more than 10 million unique substances relevant to Medicinal Chemists



## Critical information

The data required for running analyses of SAR, ADME, and toxicology to understand the effect of a molecule on a target

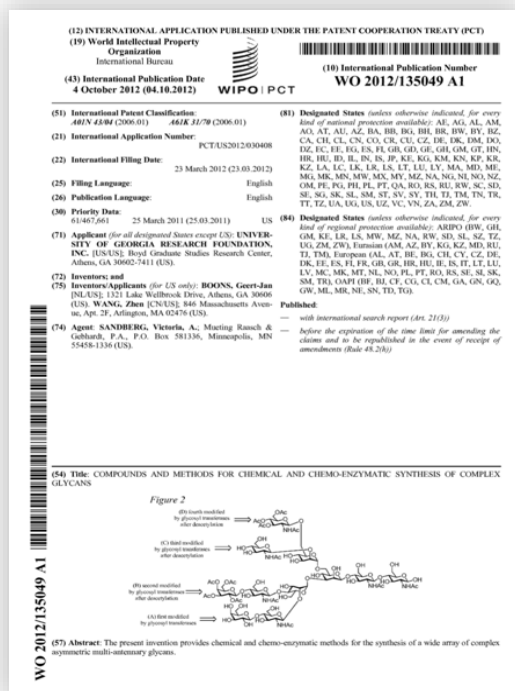


## Intuitive search

Extensive filtering options and a tabular display with overview of ligand structure, pharmacological parameters, and assay details

# CAS curation extracts knowledge

## Current patent example



7 concepts

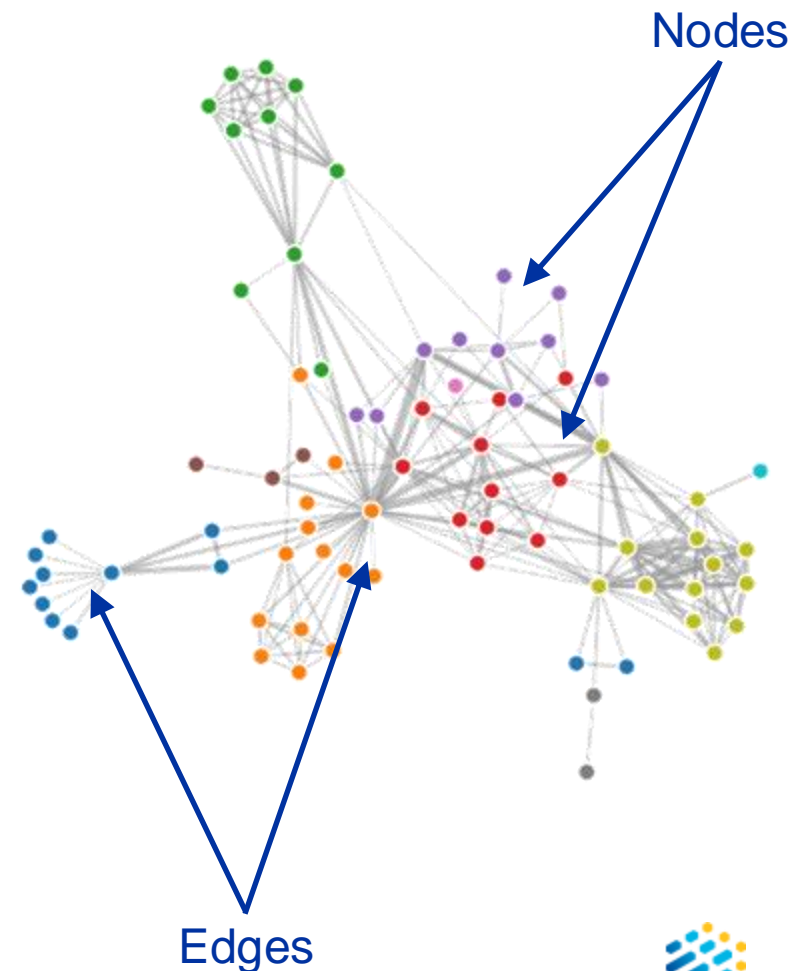


138 substances

4,614 reactions

4 patent family members

3 cited documents



Click document to view on CAS SciFinder<sup>®</sup>

**WO 2012135049**

Compounds and methods for chemical and chemo-enzymatic synthesis of complex glycans

# CAS SciFinder Discovery Platform

Informing and enhancing the foundational scientific pursuits in Academia



**CAS SciFinder Discovery Platform** is designed to support multiple stages and types of scientific research and combines task-specific information solutions, including **CAS SciFinder<sup>®</sup>**, **CAS Formulus<sup>®</sup>**, and **CAS Analytical Methods<sup>™</sup>** with **ChemZent<sup>®</sup>** and the **CAS Content Collection<sup>™</sup>**, the most complete source of scientific information in the world.

# CAS SciFinder Discovery Platform

Speed up your science and learning with the leader in scientific intelligence

## Unmatched content

Directly access to the most comprehensive collection of chemical reactions, substances, patents, and scientific literature.

## Specialized technology

Tap into the smartest, most powerful science-aware search engine.

## Human expertise

Our scientists work in tandem with technology to identify concepts and relationships beyond keywords.

The screenshot shows the CAS SciFinder Discovery Platform interface. At the top, the CAS SciFinder logo is visible on the left, and a user profile for Tetiana M. Khristova is on the right. Below the header, a navigation bar includes links for All, Substances, Reactions, References (which is highlighted), and Suppliers. A large search bar is present, with a placeholder text: "Search by Keyword, Substance Name, CAS RN, Patent Number, PubMed ID, AN, CAN, and/or DOI." Below the search bar, there is a dropdown menu for "Author Name" with a text input field "Enter last name, first name middle name." and an "Example: Schubert, J A" below it. A button labeled "+ Add Advanced Search Field" is also visible. At the bottom, there are three featured search options: "Retrosynthetic Analysis" (Make reaction plans with conditions, yields, catalysts, and experimental procedures), "Search CAS Lexicon" (Build powerful searches using CAS concepts, chemical classes, and taxonomy), and "Search CAS Sequences" (Query BLAST, CDR, and Motif algorithms for nucleotide and protein based sequences).

# CAS SciFinder Discovery Platform

Improved information to accelerate drug discovery research with CAS Scifinder

The screenshot displays the CAS SciFinder Discovery Platform interface. At the top, the CAS SciFinder logo is visible on the left, and a user profile for Tetiana M. Khristova is on the right. A search bar at the top center prompts users to search by Keyword, Substance Name, CAS RN, Patent Number, PubMed ID, AN, CAN, and/or DOI. Below the search bar, a dropdown menu is open, showing various search filters: Author Name (with a text input field and an example: Schubert, J A), Add, Publication Name, Organization, Title, Abstract/Keywords, Concept, Substances, Life Science Data (with a sub-menu open showing Target, Ligand, and Disease), Publication Year, Document Identifier, Patent Identifier, and Publisher. To the right of the search bar, there are buttons for 'Draw' and a search icon. Below the search bar, there are two main search options: 'Search CAS Lexicon' (Build powerful searches using CAS concepts, chemical classes, and taxonomy) and 'Search CAS Sequences' (Query BLAST, CDR, and Motif algorithms for nucleotide and protein based sequences). At the bottom left, there is a 'Recent Searches' section. At the bottom right, there is a 'View All Search History' link.

## Searching for SAR Data

Content that specifically targets a ligand, target, and/or disease can be searched through advanced search.

Content answers can be highlighted in detail records.



# CAS SciFinder Discovery Platform

A single-source discovery platform for in-depth, multi-disciplinary scientific methods

The screenshot displays the CAS SciFinder interface. On the left is a navigation sidebar with categories: Analyte (Carcinoembryonic antigen, Prostate-specific antigen, α-Fetoproteins, MicroRNA, DNA), Matrix (Blood serum, Urine, Blood plasma, Blood, Animal tissue), Method Category, Technique, and Year. The main area shows search results for 'Analysis of Dehydroepiandrosterone in Blood plasma by Solid phase extraction' (CAS MN: 2-111-CAS-270275). The result details include: Analyte (Estradiol, 7α-Hydroxy-DHEA, Dehydroepiandrosterone, Dihydrotestosterone, Testosterone, Androstenediol, Estrone, Dehydroepiandrosterone sulfate, Androstenedione), Matrix (Blood plasma), Other Materials (Reagent: Dithioerythritol; Ethyl acetate; Ammonium iodide; Methanol; N-Methyl-N-(trimethylsilyl)trifluoroacetamide; Buffers; Material: C18 sorbent: HP-ULTRA1 capillary column (17 m × 0.2 mm i.d., 0.11 μm film)), Method Category (Biomarker, Medicine Assay), Technique (Electron ionization mass spectrometry; Quadrupole tandem mass spectrometry; Gas chromatography; Solid phase extraction), Equipment Used (Microwave oven; GC system; Triple quadrupole mass spectrometer), and Source (Profiling of steroid metabolic pathways in human plasma by GC-MS/MS combined with microwave-assisted derivatization for diagnosis of gastric disorders; Lee, Wonwoong; Lee, Hyunjung; Kim, You Lee; Lee, Yong Chan; Chung, Bong Chul; Hong, Jongki; International Journal of Molecular Sciences (2021), 22 (4), -. MDPI AG). A 'Full Text' button is visible at the bottom of the result entry.

## Integrated

Seamlessly integrated into CAS SciFinder

## Comprehensive

Hundreds of thousands of methods across multiple fields of study, including organic compound, bioassay, and water analysis

## Focused

Designed with analytical chemistry processes in mind as a single source for searching and comparing published scientific methods and techniques

# CAS SciFinder Discovery Platform

Learn how industry develops safe and effective products with the world's leading collection of formulations

Pharmaceutical Solutions for Delivering Drug to Lung: Drug Delivery Systems or Respiratory System Agents, Etc.

Location: Example 2, Table 2

Purpose: Antiasthmatics, Drug delivery systems, Respiratory system agents

Target: Asthma, Drugs, Homo sapiens, Respiratory system disease

Delivery Route: Inhalation drug delivery systems

Physical Form: Solutions

[Add to Compare](#)

Component	Function	Amount Reported
Salbutamol	hygroscopic agents	0.1 %
Sodium chloride	pharmaceutical excipients	0.1 %
Group: ethanol/water		
Ethanol	cosolvents	50 % v/v
Water	-	50 % v/v

[View Formulation Detail](#)

8 Similar Formulations - [View All](#) (opens in a new window)

**PATENT**

Delivery of submicrometer and nanometer aerosols to the lungs using hygroscopic excipients or dual stream nasal delivery

Assignee : Virginia Commonwealth University  
US20120251594  
Language: English

[Patent PDF](#) [View in CAS SciFinder®](#)

## Chemistry beyond synthesis

Understand a formulation's origin and effectiveness with access to the best information for active ingredients and excipients.

## Discover industry insights

Get insights beyond literature and interact with formulations data curated from patents, journals, and product inserts.

## Comprehensive information

Evaluate ingredients and manufacturing processes while exploring regulatory requirements in one easy interface.

# CAS SciFinder Discovery Platform

Access essential historical chemistry insights with ChemZent®

References search for "Palade, G E" Author Name

Substances Reactions Citing Knowledge Graph

Filter Behavior: Filter by Exclude

Search Within Results

Document Type: Journal (13)

Language: German (13)

Publication Year

Filtering: Database: CHEMZENT

13 Results

Sort: Relevance View: Partial Abstract

1

**Inactivating 'of adenosine triphosphatase and cerium rupture of the cell membranes of red blood body surfaces by trypsin, protective effect of adenosine triphosphate**

By: Marchesi, V. T.; **Palade, G. E.**

Chemisches Zentralblatt (1968), 139(43), 159-159 | Language: German, Database: CHEMZENT

**Machine Translated:** The membranes of the red blood body surfaces, from the sea, pig, blood by treatment with trypsin into small fragments of broken. At the same time, a deactivation of the adenosine triphosphatase instead. Both phenomena can be from Cuba, with ATP and Mg<sup>2+</sup> be prevented, as elektronenmkr. Investigation show not previously described thread on the membranes occur. Other Nucleosid-u. -triphosphate exhibit said protective effect not.

ChemZent Full Text

Substances (0) Reactions (0) Citing (0) Citation Map

## Comprehensive foundational chemistry

English language translations of German abstracted publications from 1830-1969 with >800K documents and 3+ million abstracts

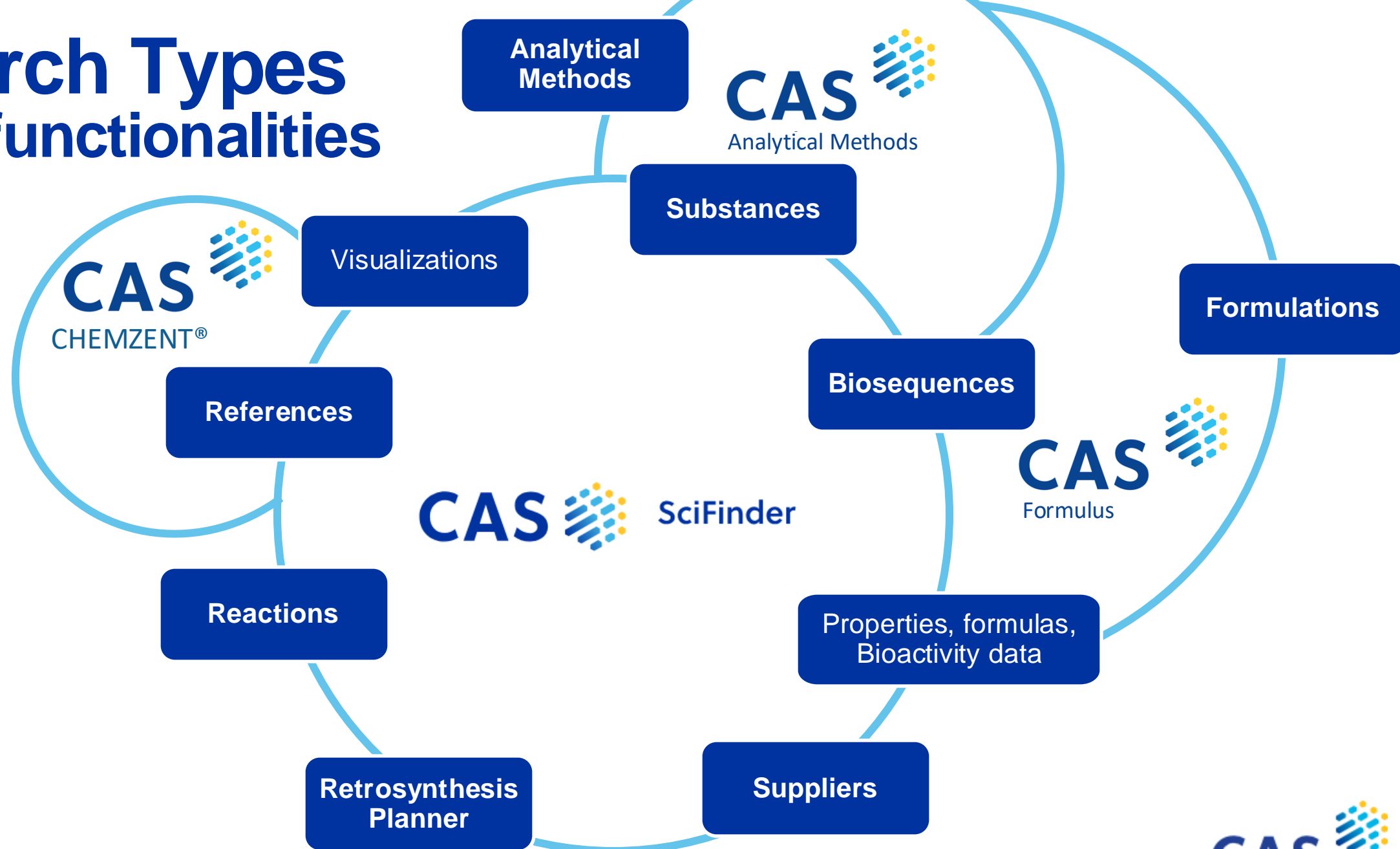
## Exclusive online access

Only online source of Chemisches Zentralblatt with machine translated English abstracts and access to original German versions.

## Completely Integrated

Indexed to fit seamlessly into CAS SciFinder<sup>®</sup> workflows with CAS-controlled vocabulary

# Search Types and functionalities



# Search for the organization of your interest ...

The image displays two screenshots of the CAS SciFinder web interface. Both screenshots show a user profile for Tetiana M. Khristova and a navigation menu with options: All, Substances, Reactions, and References. The left screenshot shows the search filter 'Organization' set to 'Antibiotice S.A.', with a dropdown menu listing several related organizations. The right screenshot shows the search filter 'Organization' set to 'Gedeon', with a dropdown menu listing various Gedeon-related entities. Both screenshots include a search bar with the text 'Search by Keyword, Substance Name, CAS RN, Patent Number' and a 'Retrosynthetic Analysis' section at the bottom.

**Left Screenshot:**

- Organization: Antibiotice S.A.
- Search Filter: Organization
- Dropdown List:
  - Antibiotice S.A.
  - S.C. Antibiotice S.A., Iasi
  - Center for Drug Evaluation,
  - Centrul de Cercetari Pentru
  - S.C. Antibiotice S.A.
  - S.C. Centrul De Cercetari Pe
  - Antibiotice S. A.

**Right Screenshot:**

- Organization: Gedeon
- Search Filter: Organization
- Dropdown List:
  - Gedeon Richter Ltd.
  - Gedeon Richter Plc.
  - Gedeon Richter Plc
  - Gedeon Richter, Ltd.
  - Gedeon Richter Ltd
  - Gedeon Richter Pharmaceutical Works
  - Gedeon Richter Vegyeszeti Gyar R. T.

# ...search for a specific author...

Good Evening, Tetiana M

All Substances Reactions **References** Suppliers

For You **NEW**

Search by Keyword, Substance Name, CAS RN, Patent Number, PubMed ID, AN, CAN, and/or DOI.

Draw



Author Name

Ripan, R

Ripan, Raluca

Ripan, R.

Ripan, Rony Chowdhury

Ripan, Ruca

Ripan, R

Ripan, Rain ca

Ripan, Rala



Retrosynthetic Analysis

Make reaction plans with conditions, yields, catalysts, and experimental procedures.

Sequences

DR, and Motif nucleotide and sequences.

# ...or look for a topic of your interest to find the organizations that are working in the same area ...

The screenshot displays the CAS SciFinder search interface. At the top, the search query is "(skin or derm\* or transderm\*) and permeability". The main search results area shows 49,333 results. A prominent result is titled "Mathematical models of skin permeability" by Mitragotri, Samir; Anissimov, Yulia B.; Lane, Majella E.; Roberts, Michael J., published in the International Journal of Pharmaceutics. The abstract snippet reads: "A review. Math. models of skin permeability delivery and assessment of dermal delivery decades to yield predictions of skin permeability such as quant. structure-permeability relationships. In addition, structure-based models. In addition..."

An "Organization" filter overlay is active, showing a list of institutions with their respective result counts. The list is sorted by "Top Count".

Organization	Count
University of California	215
Chinese Academy of Sciences	174
Zhejiang University	139
Sichuan University	134
Shenyang Pharmaceutical University	128
Univ. California	118
National University of	
Tsinghua University	52
Washington Univ.	52
University of Utah	48
National Tsing Hua University	47
Nitto Denko Corporation	47
Panjab University	47
Bridgestone Corp.	46

# ...and search for an organization in the country of interest.

### Organization

Top Count   Alphanumeric   **Search**

Organization Name

Select All on Page

<input type="checkbox"/> 1University of Zagreb Faculty of Pharmacy and Biochemistry, Department of Food Chemistry 10000 Zagreb, Croatia. (1)	<input type="checkbox"/> Departmente General H Zabok, Cro sanja.drca
<input type="checkbox"/> Agency for Medicinal Products and Medical Devices of Croatia (1)	<input type="checkbox"/> Departme Faculty of Biochemis Zagreb, A. Zagreb, Ci izepic@ph
<input type="checkbox"/> Agency for Medicinal Products and Medical Devices of Croatia, Ksaverska cesta 4,	<input type="checkbox"/> Departme

### Organization

Top Count   Alphanumeric   **Search**

Organization Name

Select All on Page

<input type="checkbox"/> 1Clermont Université, Université d'Auvergne, EPIE, EA 4843, Clermont-Ferrand, France 2CHU Clermont-Ferrand, Service de Virologie, Clermont-Ferrand, France. (1)	<input type="checkbox"/> Centre de Résonance Magnétique des Systèmes Biologiques, Centre National de la Recherche Scientifique Unité Mixte de Recherche 5536, Université Bordeaux Segalen, 33076 Bordeaux, France; (1)	<input type="checkbox"/> Clinique Dermatologique Faculté de Médecine, Université de Strasbourg Hôpitaux, Universitaires c Strasbourg, 1, place de l'Hôpital, 67091 Strasbourg France. bernard.cribier@strasbourg.fr (1)
<input type="checkbox"/> 1CNRS UMR 8003, SSPIN Saints-Pères Neurosciences Institute, Paris University, Saint-Germain Campus, 45 rue des Saints-Pères, 75006 Paris, France (1)	<input type="checkbox"/> Centre des brûlés, centre hospitalier Saint-Joseph et Saint-Luc, 20, quai Claude-Bernard, 69007 Lyon, France	<input type="checkbox"/> Clinique dermatologique, faculté de médecine, université de Strasbourg, hôpitaux universitaires de

← Prev 1 2 3 4 5 Next →



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