



16-18 January 2023

**UCIBIO/FCT-NOVA
Caparica - Portugal**

**Round-Table Discussion:
The future of
Glycoscience in Europe.**





Amelia Rauter Pilar



Serge Perez



Jesus Jimenez Barbero



Celso Reis



Paula Videira



Hans Peter Wessel



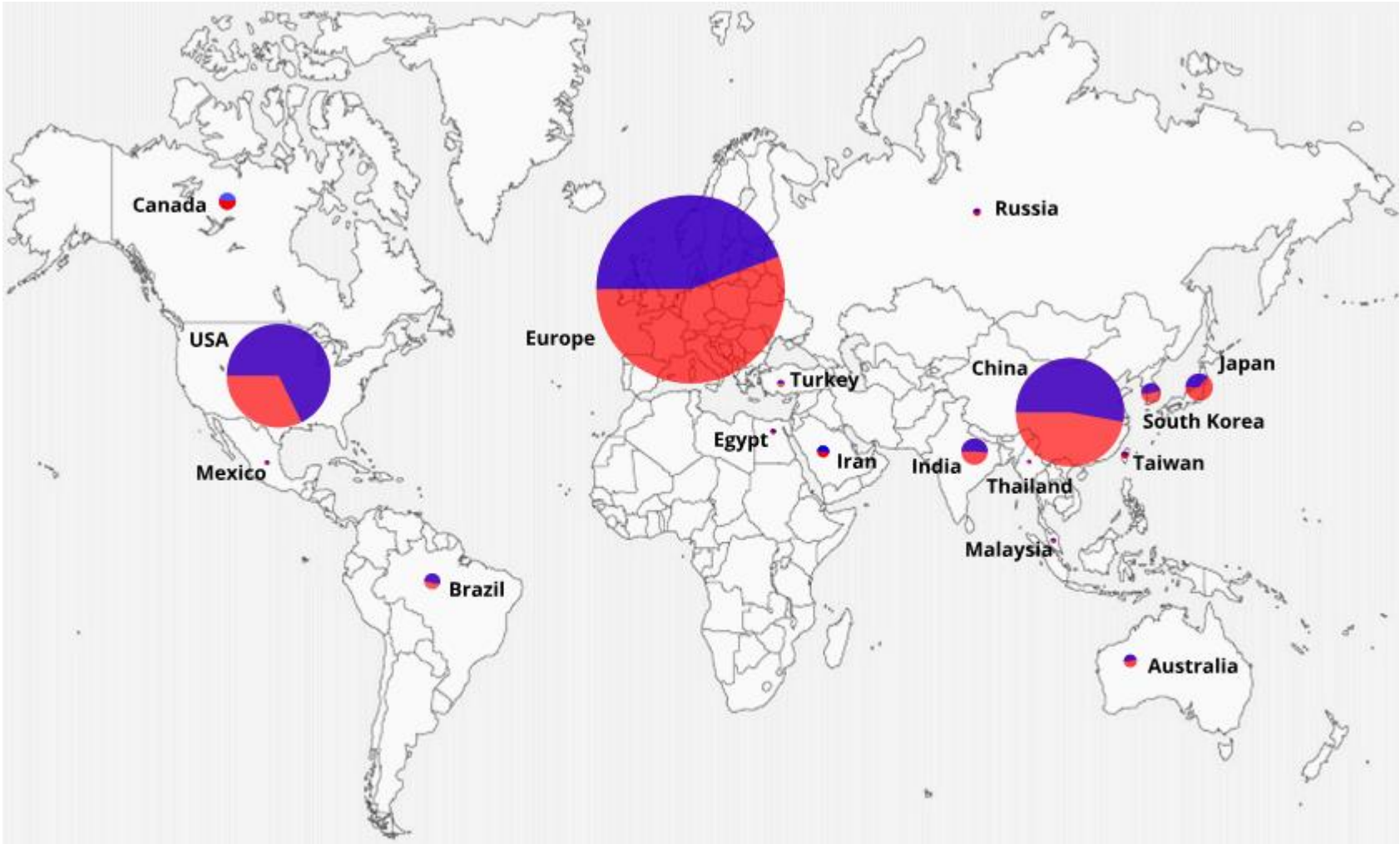
Manfred Wuhrer



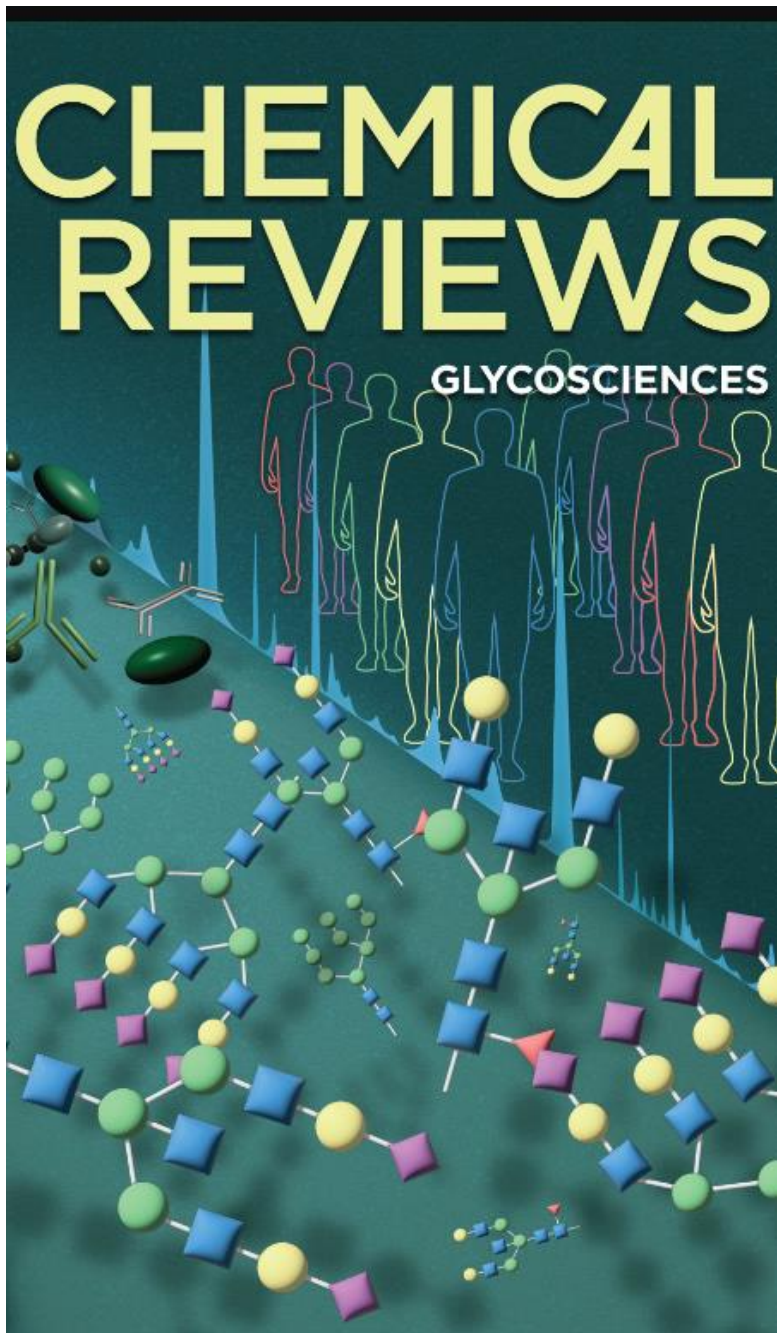
Ten Feizi



Maria João Alegria



This data was produced by crossing research results carried out a Web of Science literature search in September 2019 using the following search terms : Cellulos*, Hemi-cellulos*, Starch, Amylos*, Amylopectin, Pectin*, Galactomannan, *mannan, Glucomannan, cell-wall polysaccharides, xylan, Chitin, Chitosan, Alginate, Carrageenan, Agaros*, Fucan, Fucoidan, Xanthan, Gellan, Dextran, Hyaluronic Acid, Heparin, Heparosan, Chondroitin, Dermatn, *Glyco, *Glyco**Proteom*,*Glycom, *Glyco**Genom during 2014-19 giving a total of 366,300 results. Europe produced (39.5%) of total search versus China (29.5%), which has the 2nd highest output.



- [*The Synthesis and Glycoside Formation of Polyfluorinated Carbohydrates*](#)
- [*Glycoconjugates : Synthesis, Functional studies & Therapeutic Developments*](#)
- [*Synthetic Glycans to Improve Current Glycoconjugate Vaccines and Fight antimicrobial Resistance*](#)
- [*The Astounding World of Glycans from Giant Viruses,*](#)
- [*A Journey from Structure to Function of Bacterial Lipopolysaccharides,*](#)
- [*Demystifying the O-GlcNAc Code : A Systems View*](#)
- [*High-Throughput Glycomic Methods,*](#)
- [*Multifaceted Computational Modeling in Glycoscience*](#)
- [*Glycoinformatics in the Artificial Intelligence Era,*](#)

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CONTRIBUTORS

A complete list of centres of excellence can be found on the CarboMet website: www.carbomet.eu/toolbox

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Compiled by: Dr Syed Ahmed | Design: www.luminous-lab.com



BIPHARMACEUTICALS

ANTIMICROBIAL RESISTANCE & VACCINES

DEEP UNDERSTANDING OF CELL SURFACE GLYCANS
ON MICROBES

GLYCOCONJUGATE AND ADJUVANT DESIGN

LARGE SCALE PRODUCTION OF OLIGO/ CELL SURFACE
POLYSACCHARIDES

NEW BUSINESS AND FUNDING MODELS

GLYCOENGINEERING

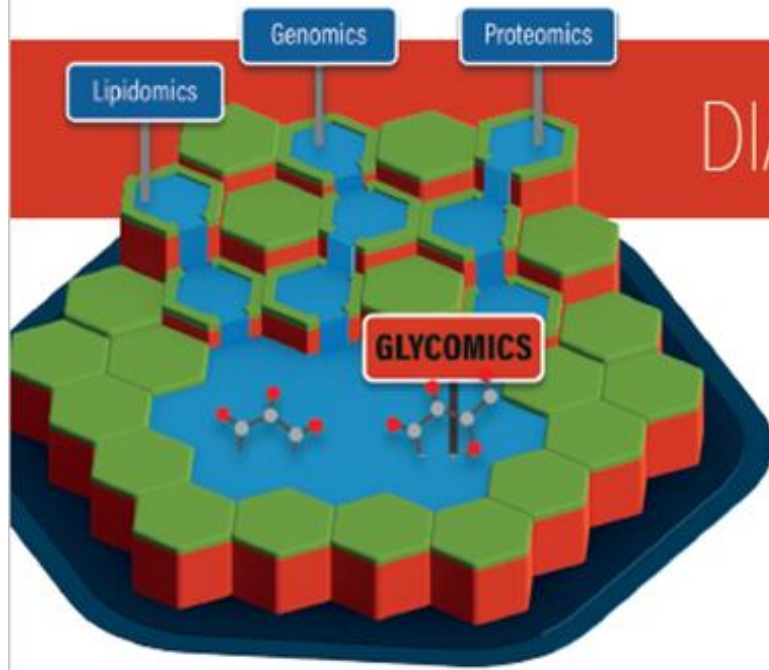
METABOLIC GLYCOENGINEERING

IN VITRO GLYCOENGINEERING

STEM CELLS

Top 10 global best selling drugs. Biologics (highlighted) which are highly glycosylated have dominated the market for the last decade. The introduction of biosimilars is set to continue this trend.

2008	2013	2020 ^[7]
Lipitor	Humira	Humira
Seretide	Seretide	Keytruda
Plavix	Enbrel	Revlimid
Herceptin	Herceptin	Eliquis
Enbrel	Mabthera	Opdivo
Zyprexa	Remicade	Eylea
Lovenox	Lovenox	Stelara
Glivec	Avastin	Imbruvica
Pantozol	Lucentis	Xarelto
Symbicort	Lyrca	Biktarvy



DIAGNOSTICS & PRECISION MEDICINE

ROLE OF GLYCANS IN THE HUMAN BODY

CASE STUDY: CORONA VIRUS
(GLYCOSYATION, GAGS,.....)

GLYCOMICS A NEW FRONTIER IN DRUG DELIVERY

RESEARCH PRIORITIES

CASE STUDY: CANCER VACCINE
NON INVASIVE DETECTION GAGS

MAPPING OF THE HUMAN GLYCOME

CASE STUDY: CONGENITAL DISORDERS OF
GLYCOSYLATION

GLYCAN TARGETING DRUGS AND GLYCOMIMETICS

CASE STUDY: TAMIFLU MECHANISM OF
ACTION

CLINICIAN ENGAGEMENT

FOOD, NUTRITION & GUT MICROBIOME



ROLE OF CARBOHYDRATES IN THE GUT MICROBIOME AND HEALTH

CASE STUDY: HUMAN MILK OLIGOSACCHARIDES

RESEARCH PRIORITIES

ELUCIDATING THE RELATIONSHIP BETWEEN MICROBIOTA AND THE HUMAN GUT

CARBOHYDRATE PRODUCTION

[SYNTHETIC BIOLOGY; CHEMICAL SYNTHESIS; ENZYMATIC SYNTHESIS]

NEW METROLOGY AND ANALYTICS

NUTRACEUTICAL AND FOOD SUPPLEMENT CASE STUDY: SEAWEED FUNCTIONAL POLYSACCHARIDES

SUSTAINABLE MATERIALS



CARBOHYDRATE BASED MATERIALS

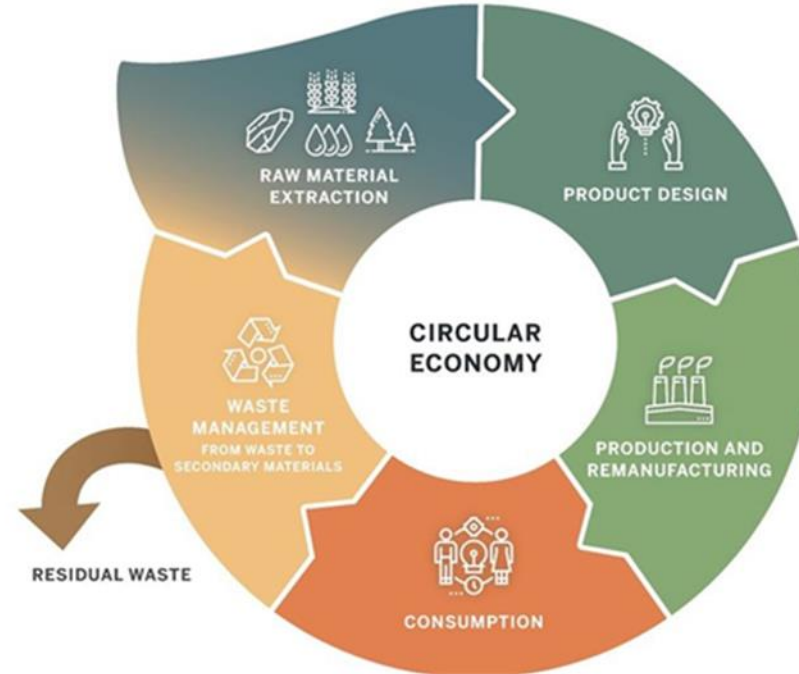
PACKAGING, FILMS AND NEXT
GENERATION DISPLAYS

PROSTHETIC AND REGENERATIVE MEDICINE

CARBOHYDRATES FROM THE OCEAN

FASHION AND TEXTILES

THE CIRCULAR BIOECONOMY



PUBLISHED BRIEFING DOCUMENTS



**BIOPHARMACEUTICALS INCLUDING VACCINES,
ANTIMICROBIALS, ANTIBODIES AND HORMONES**



**DIAGNOSIS OF DISEASES AT A PERSONAL LEVEL FOR
THE DEVELOPMENT OF PRECISION MEDICINES**



**HEALTHY LIFESTYLES FROM GOOD FOOD AND PERSONAL
CARE, INCLUDING FOR HEALTHY AGEING**



**CARBOHYDRATES AS THE SUSTAINABLE MATERIALS
FOR THE FUTURE**



ENABLING GLYCO-TECHNOLOGIES

EDUCATION

SYNTHESIS

SEQUENCING

BIOINFORMATICS TOOLS

DATABASE

- Have a very high number of monomers (substitution...).
- Have many different ways of connecting monomers.
- Have branching points.
- Are difficult to synthesise ... and to crystallize.
- Are not the direct product of a gene (\neq proteins).
- Cannot be amplified by PCR (\neq Nucleic acids).

Some EU INSTRUMENTS,....

Marie Curie Actions in 2023 and 2024

MSCA Doctoral Networks The 2023 and 2024 calls, with €434.8 million and €451.2 million euros respectively, will open in May and close in November each year.

MSCA Postdoctoral Fellowships – Enhance the creative and innovative potential of PhD researchers The 2023 and 2024 calls, with a budget of €260.5 million and €270.8 million euros respectively, will open in April and close in September each year.

MSCA staff exchanges – Enable the development of sustainable international, cross-sectoral, and interdisciplinary collaboration in research and innovation

MSCAs and citizens – This is an action that brings research closer to students, families, and the general public,

COST Actions 70 new **COST Actions** approved in **2022**

TWINNING: European Neighbourhood Policy and Enlargement

Carbohydrates in Portugal

The past, the present and the future....

The Portuguese Chemical Society Carbohydrate Group

Amélia Pilar Rauter

Centro de Química Estrutural, Faculdade
de Ciências, Universidade de Lisboa

17-01-23





**It all started
with a dream....**

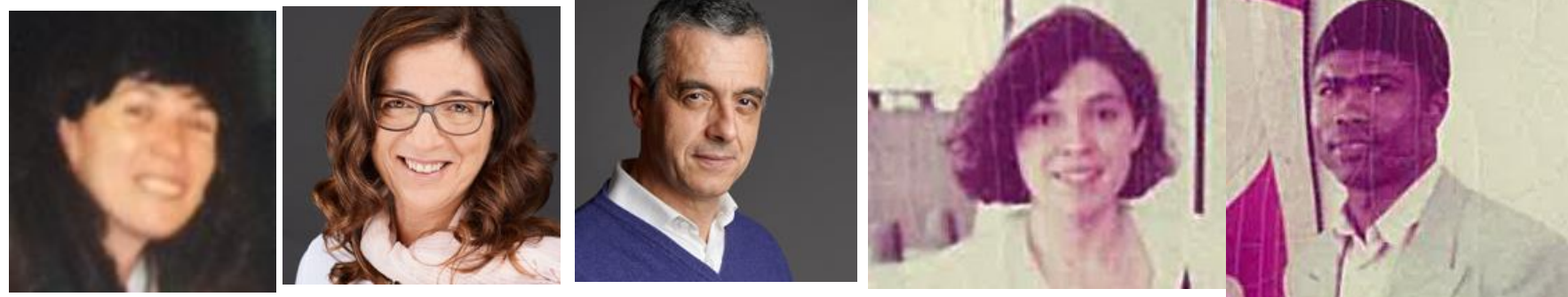
and the dream came truth....

**Institut für Organische Chemie, Technische Universität
Graz Austria, 1978**

The 7th of May 1993



O Dia dos Glúcidos
La Journée des Glucides
Carbohydrates' Day



Meeting for the establishment of the Portuguese Chemical Society

Carbohydrate Chemistry Group with the signature of 40 future members

1994

Synthesis of C-disaccharides, new tools in glycobiology

Prof. Pierre Sinay,

École Normale Supérieure, Paris



1995

**1st International Meeting of the Portuguese
Carbohydrate Chemistry Group (Glupor 1)**

Fundação Calouste Gulbenkian, Lisboa

26 - 30 September

Chaired by Amelia Pilar Rauter





Grupo da Química dos Glúcidos

1st. International Meeting of the Portuguese
Carbohydrate Chemistry Group



Lisbon, Portugal
26-30 September, 1995
Fundação Calouste Gulbenkian



UNIVERSIDADE
DE LISBOA
FACULDADE
DE CIÊNCIAS



SOCIEDADE
PORTUGUESA
DE QUÍMICA

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Campo Grande, 1700 Lisboa, Portugal
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1st International Meeting of the Portuguese Carbohydrate Chemistry Group (Glupor 1)

113 participants

14 Plenary lectures

12 Invited lectures

9 Oral communications

38 Poster presentations

Argentine, Brasil,

Canada, Costa Rica, France,

Germany, Italy, Japan,

Portugal, Spain, Sweden,

Switzerland, The

Netherlands, United Kingdom



1st Iberian Carbohydrate Meeting



Aveiro

September 1999

Chaired by Manuel Coimbra

Juan Carlos Palacios

Amélia Pilar Rauter



1st Iberian Carbohydrate Meeting



Aveiro
September 1999



1999 Glupor 3 and 1st Iberian Carbohydrate Meeting

J. Fuentes

J. Fernandez-Bolaños

M. Martín-Lomas

S. Penadés

Gomez-Guillén

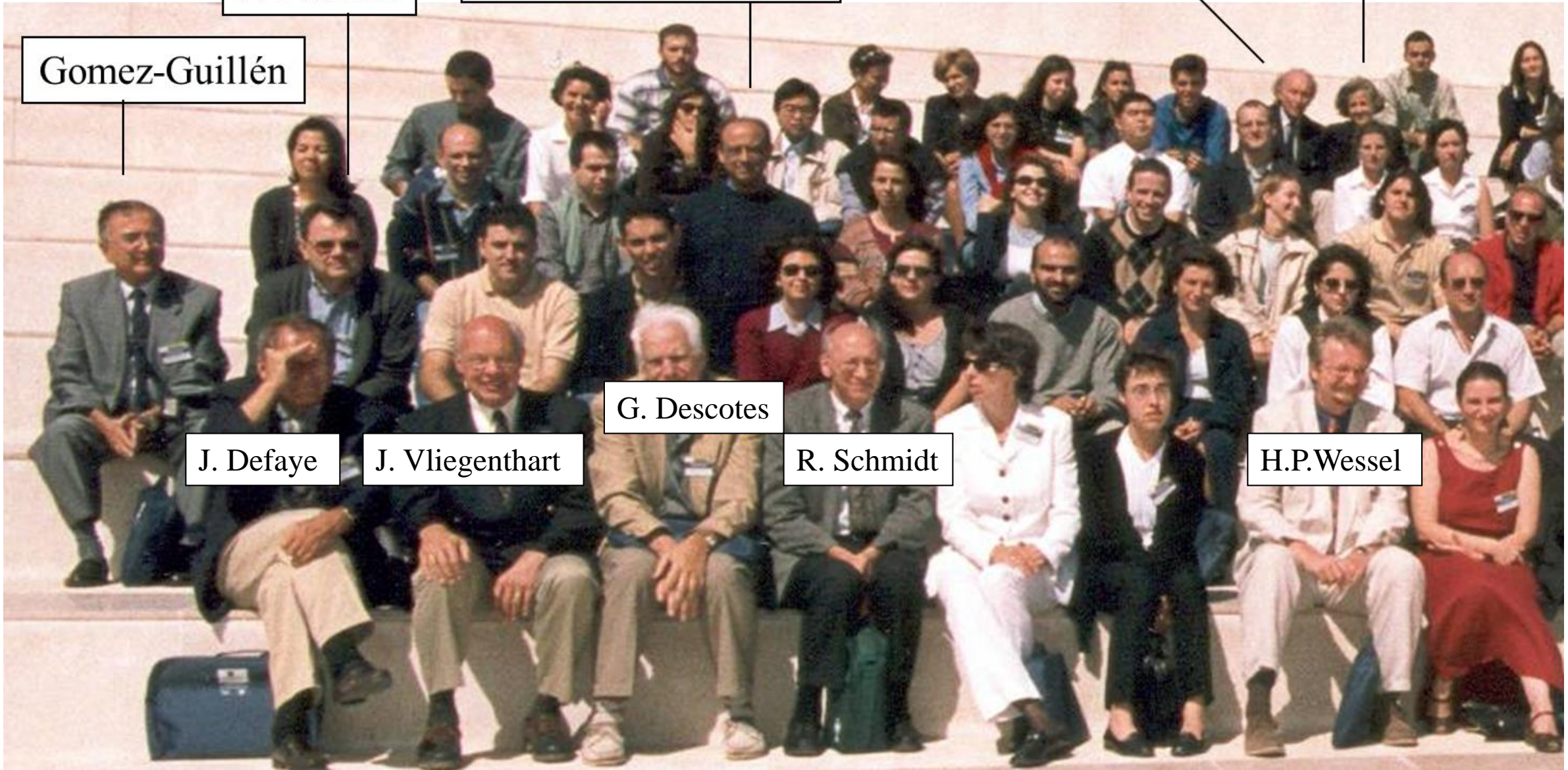
G. Descotes

J. Defaye

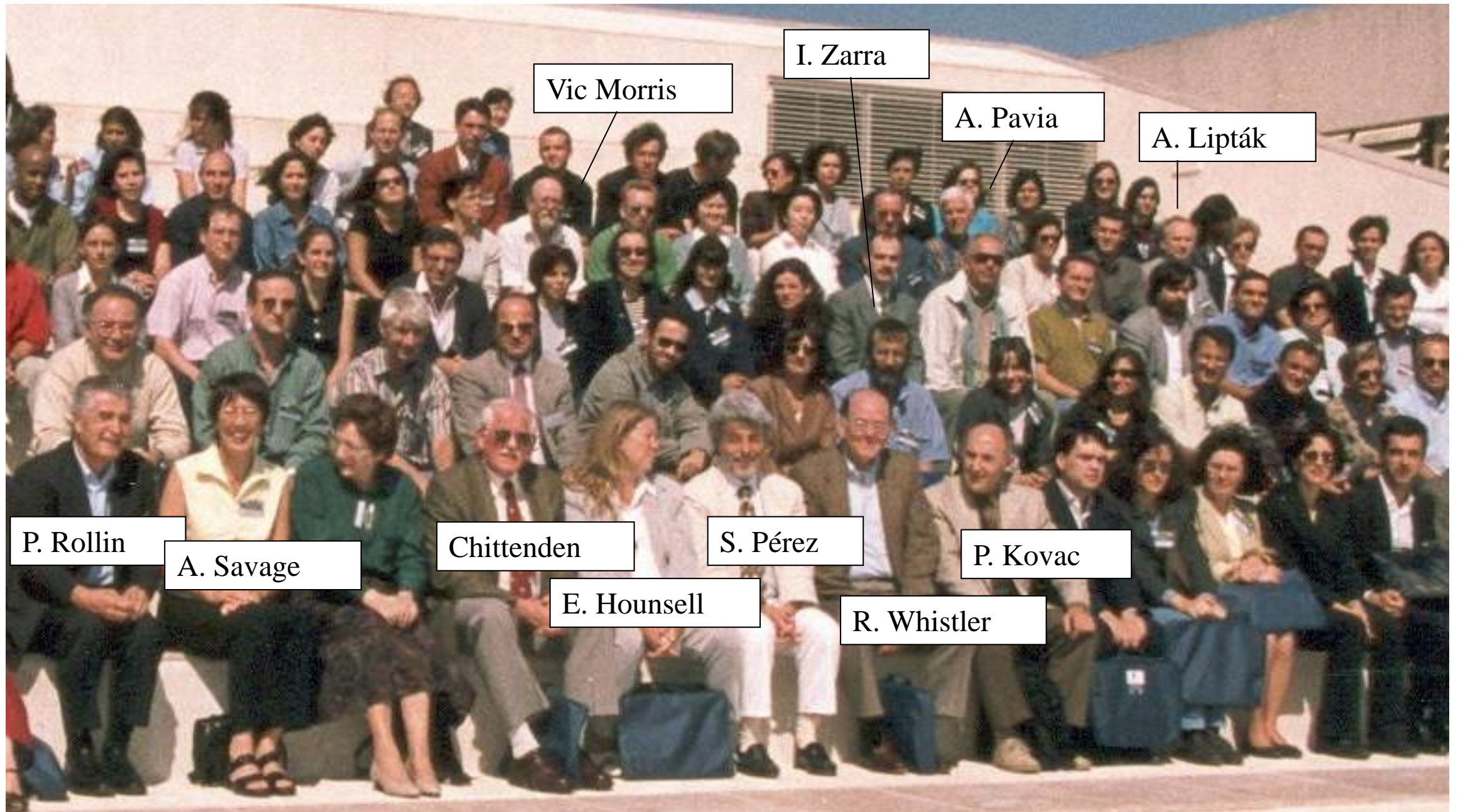
J. Vliegenthart

R. Schmidt

H.P.Wessel



1999 Glupor 3 and 1st Iberian Carbohydrate Meeting



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A. Pavia

J. García Fernández

C. Mellet Ortiz

J. Marco Contelles

A. Vasella

M. Monteiro

M. Mathlouthi

D. Horton

P. Garegg

A. Rauter



11th EUROPEAN CARBOHYDRATE SYMPOSIUM



Faculdade de Ciências da Universidade de Lisboa

Campo Grande | Lisboa | Portugal

September 2 - 7 2001

Topics focused on:

SYNTHESIS AND COMBINATORIAL CHEMISTRY
STRUCTURE AND ANALYSIS
BIOCHEMISTRY, BIOLOGY AND MEDICINAL CHEMISTRY
BIOTECHNOLOGY AND INDUSTRY

VACCINES
IMMUNE INFLAMMATORY RESPONSE
DEVELOPMENT OF THERAPEUTIC SUBSTANCES
FOOD APPLICATIONS
WOOD CHEMISTRY
PAPER AND FIBER BIOTECHNOLOGY

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Scientific Secretariat

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Email: eurocarbxi@fc.ul.pt
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Deadlines:

Early Registration	May 15, 2001
Abstract Submission	May 15, 2001
Accommodation	May 15, 2001
Social Programme	May 15, 2001

Webpage: <http://eurocarbxi.fc.ul.pt>

Additional information and application forms can be downloaded from the Webpage

The SPQ Carbohydrate Chemistry Group
national representation at the
European Carbohydrate Organisation
was achieved in 1996

XIth European Carbohydrate Symposium

(EUROCARB XI) Faculdade de Ciências,

Universidade de Lisboa, 2001

Funded under EU FP5-LIFE QUALITY Program

(Grant agreement ID: QLK3-CT-2001-30035)

617 participants, 13 plenary lectures, 55 invited lectures, 58 oral communications, 301 poster presentations

Argentina, Australia, Austria, Belgium, Canada, Czech Republic, Cuba, Croatia, Denmark, Egypt, France, Germany, Hungary, Ireland, Japan, Israel, Italy, Korea, Norway, Poland, Russia, Slovakia, Sweden, Taiwan, The Netherlands, Ukraine, United Kingdom, USA, Uzbekistan Republic



Glupor 5

07-10th September 2003 Covilhã



Coimbra

6TH

INTERNATIONAL MEETING
OF THE PORTUGUESE
CARBOHYDRATE GROUP

3RD

IBERIAN
CARBOHYDRATE
MEETING

11-15 SEPTEMBER 2005

HOTEL D. LUIS - COIMBRA - PORTUGAL



IV IBERIAN CARBOHYDRATE MEETING
IX JORNADAS DE CARBOHIDRATOS
10-12 September 2008, Santiago de Compostela, Spain





CORM V
Lisbon - Portugal
FCUL 20-23 JANUARY 2009



Carbohydrates as Organic Raw Materials
Building a Sustainable Future



BOOK OF ABSTRACTS

CORM V 20-23 January 2009
Faculty of Sciences I University of Lisbon
PORTUGAL

356 participants, 32 Invited Lectures, 16 Oral communications, 63 poster presentations

Austria, Belgium, Brasil, Canada, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Norway, Slovakia, Spain, Switzerland, The Netherlands, United kingdom

Südzucker, Dionex (Germany), Fermentec (Brasil), Glycom A/S (Denmark), Hoffmann-La Roche (Switzerland) L'Oréal, Roquette (France)

TOPICS IN CURRENT CHEMISTRY

294

Volume Editors A.P. Rauter • P. Vogel • Y. Queneau

Carbohydrates in Sustainable Development I

Renewable Resources for Chemistry and Biotechnology

Springer

TOPICS IN CURRENT CHEMISTRY

295

Volume Editors A.P. Rauter • P. Vogel • Y. Queneau

Carbohydrates in Sustainable Development II

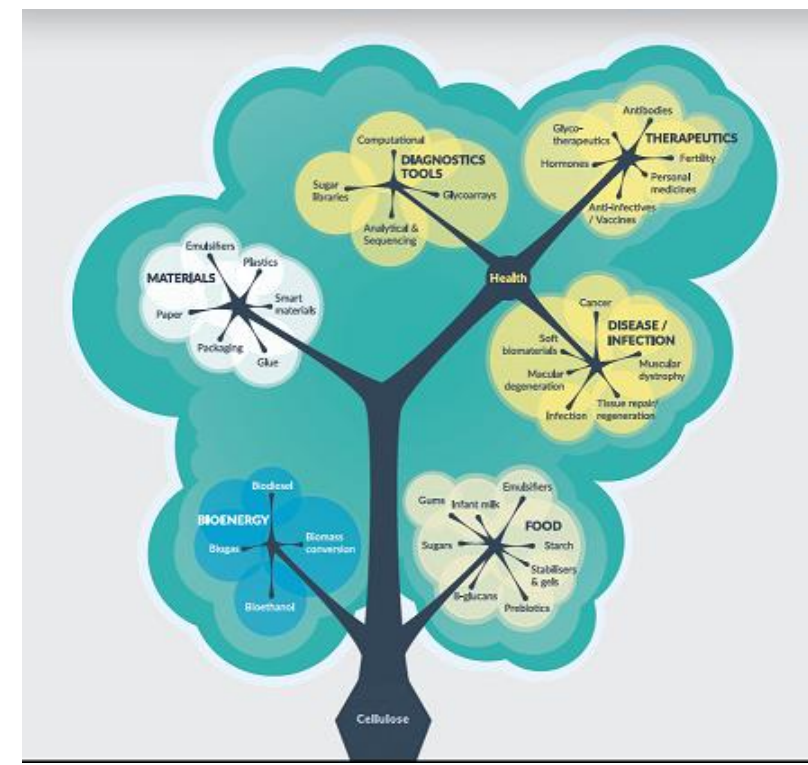
A Mine for Functional Molecules and Materials

Springer



**EGSF Centers of Excellence
from Portugal:
Carbohydrate Chemistry Lab
FCUL – Amelia P. Rauter
Glyciology lab ITQB – Julia
Costa**

- A road map for Glycoscience in Europe (2015)



- Rauter – Steering Committee member and the Executive for the EGSF Interest Group Glycochemistry
- Glycobiology and Glycochemistry course (starting 2015)
- 2nd Euroglycoforum Steering Committee Meeting (22-23 February 2010)
- Glycosciences in the International Year of Chemistry – Applications to human health and disease (8-10 September 2011)



GLYCOBIOLOGY & GLYCOCHEMISTRY INTERNATIONAL E-LEARNING COURSE

Coordination: Paula Videira (NMS/FCM, UNL); Amélia Pilar Rauter (CiênciasULisboa); Irene Tomé (FCSH/UNL)

2015 - 2021

**Post-graduation course in
Glycosciences (20 ECTS)**



PROGRAM

Module 1 - Carbohydrate Structure and Nomenclature

Module 2 - Biosynthesis, Metabolism of Carbohydrates

Module 3 - Glycan-binding Proteins

Module 4 - Glycans in Human Physiological Mechanisms

Module 5 - Glycans in Human Pathology

Module 6 - Methods in Glycosciences

Module 7 - Applications of Glycosciences

Module 8 - Glycochemistry in Medicine

Module 9 - Biosynthesis of disease related carbohydrate antigens

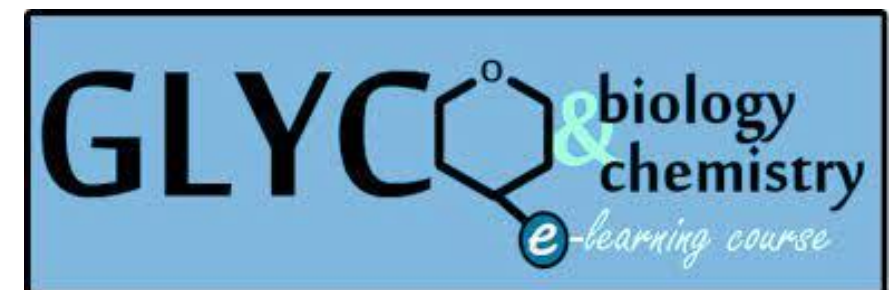
Module 10- Glycomics

FUNDING

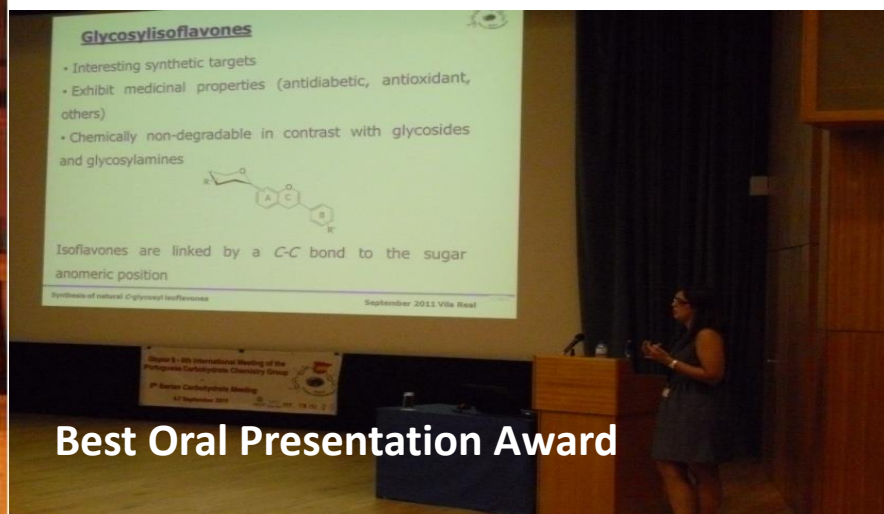
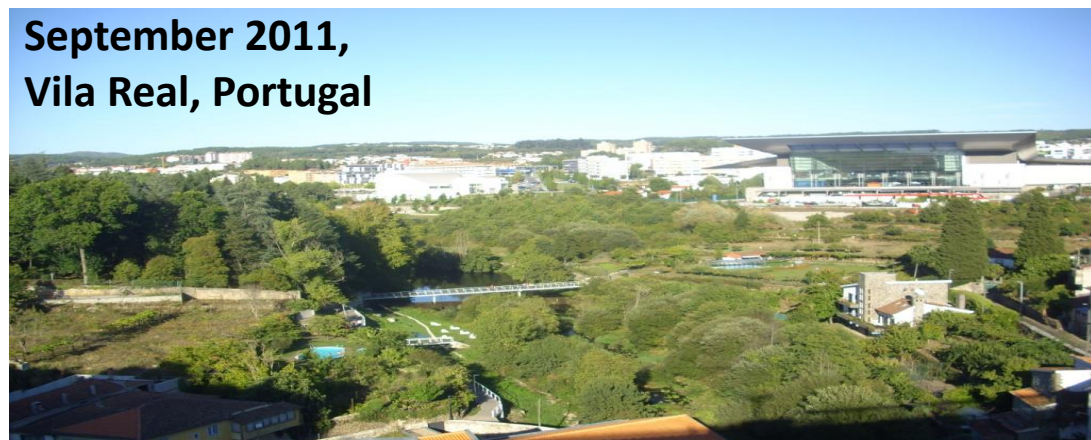
Euroglycoforum

FLAD

French Embassy



September 2011,
Vila Real, Portugal





6TH SPANISH-PORTUGUESE-JAPANESE ORGANIC CHEMISTRY SYMPOSIUM

18-20 July 2012, Ciências ULisboa





EUROCARB 17

17th European Carbohydrate Symposium

Tel-Aviv, Israel, July 7-11, 2013



May 2014



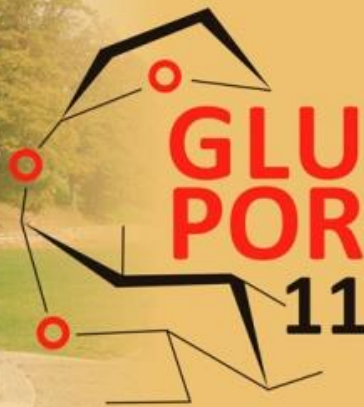
Glycobiology and glycochemistry: Applications to human health and disease

26 – 30 May 2014 | Lisbon, Portugal





6th - 10th SEPTEMBER 2015
VISEU - PORTUGAL



11th International Meeting
of the Portuguese Carbohydrate
Chemistry Group

6th Iberian Carbohydrate Meeting



SOCIEDADE PORTUGUESA DE QUÍMICA



The SPQ Carbohydrate Chemistry Group national representation at the International Carbohydrate Organisation was achieved in [1997](#).

Portugal has participated in all meetings since then and has given the following major contributions:

- Proposed the creation of the **ICO Young Researcher Award**, which started in 2014 (27th International Carbohydrate Symposium, India) and continued since then.

Ceremony to award
Dr Daniel Kracher with the
ICO Young Researcher Award 2020



- Organized the 29th International Carbohydrate Symposium in 2018.

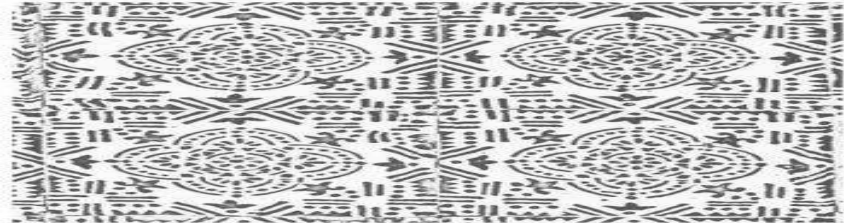


Amélia P. Rauter*, Nikolay Nifantiev and Francesco Nicotra

ICS-29: The 29th International Carbohydrate Symposium

<https://doi.org/10.1515/pac-2019-0815>

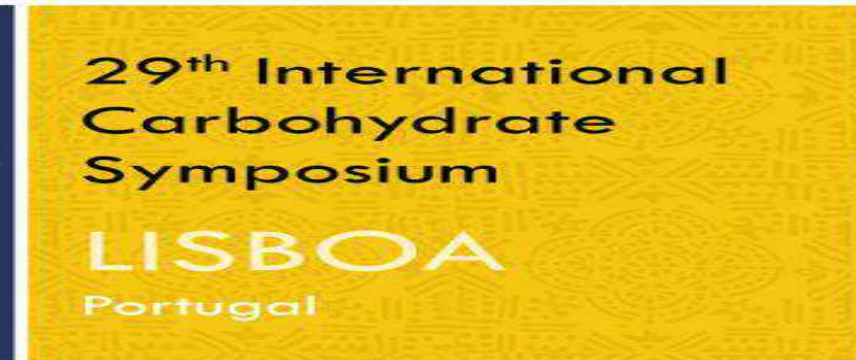
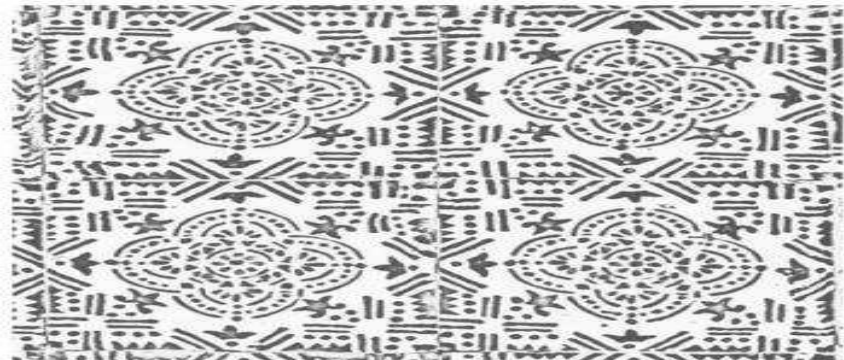
The carbohydrate community met at the Universidade de Lisboa and at its Faculdade de Ciências, in Portugal, for the 29th International Carbohydrate Symposium, held from the 15th to the 19th of July 2019, an event under the auspices of the International Carbohydrate Organisation. **In issues 7 and 9 of Pure and Applied Chemistry volume 91 (2019), papers covering glycoscience topics discussed in this meeting are presented.**



ICS 2018

29th International Carbohydrate Symposium
LISBOA
Portugal





ICS Iberian Day – 13 Invited lectures; 6 Oral communications; 17 Flash communications

ICS Young Researcher Workshop – 2 Plenary lectures; 25 Flash communications

International Carbohydrate Symposium – Plenary session + 9 parallel sessions covering:

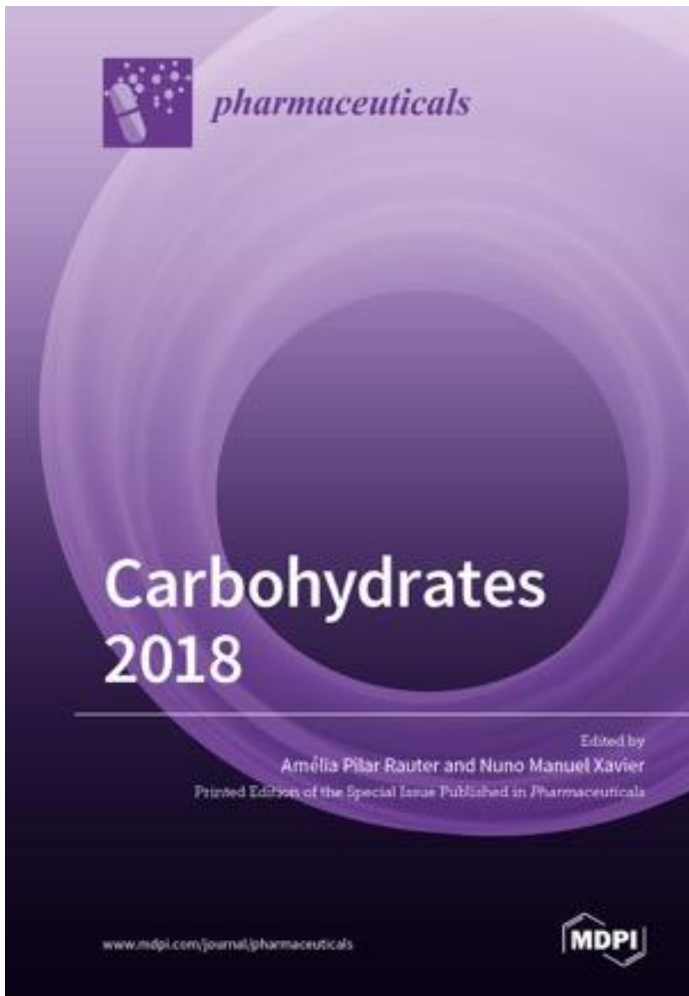
21 Plenary lectures including the 2 Award lectures;

61 Invited Lectures; 134 Oral communications; 31 Flash communications; 338 Posters

850 Participants

Poster Awards	Oral Communications Awards	Flash Presentation Awards
Pharmaceuticals Poster Prize	Tokyo Chemical Industry Oral Communication Prize	Tokyo Chemical Industry Flash Presentation Prize
Carbohydrate Polymers Poster Prize	J. Pereira da Cruz Innovation Award	Megazyme Prize for the Best Flash Presentation
	CarboSynth Oral Communication Prize	2 World Scientific Flash Presentation Prizes

Edition of Books in carbohydrate topics

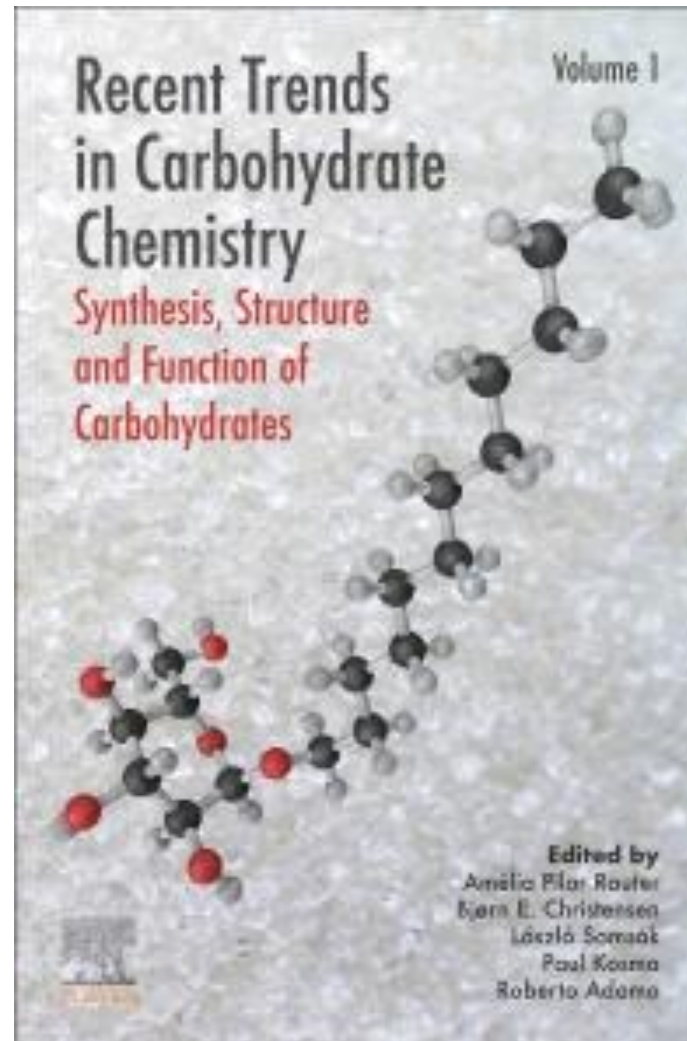


Open Access

ISBN 978-3-03928-316-3 (Pbk);

ISBN 978-3-03928-317-0 (PDF)

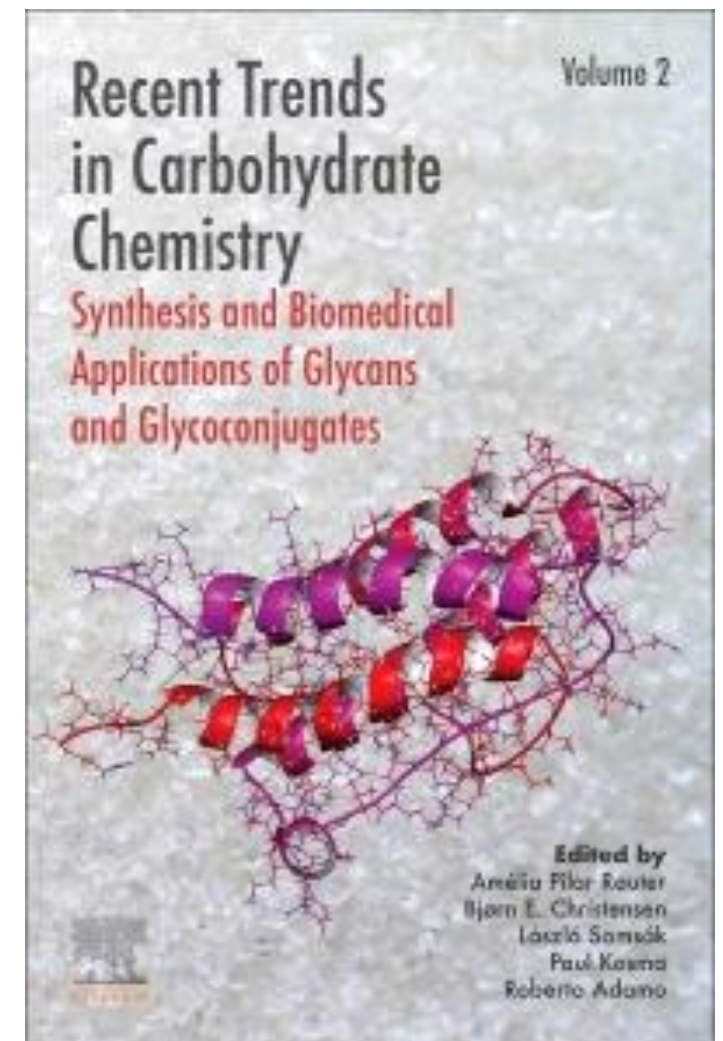
MDPI 2020



eBook ISBN: 9780128174685

Paperback ISBN: 9780128174678

Elsevier 2020



eBook ISBN: 9780128209554

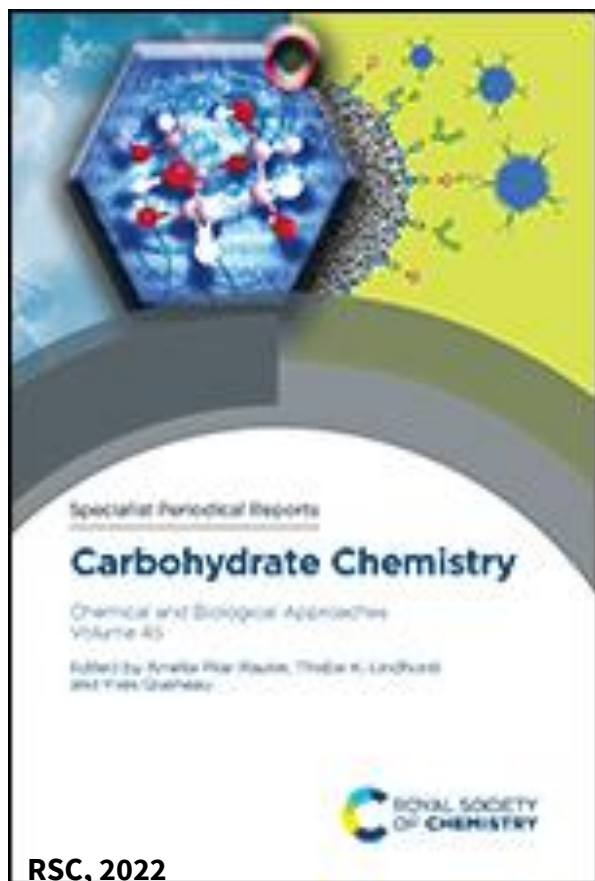
Paperback ISBN: 9780128209547

Elsevier 2020

Edition of Books in Carbohydrate topics

The Book Series entitled:

Carbohydrate Chemistry - Chemical and Biological Approaches
(relaunched in 2008 with this new title)



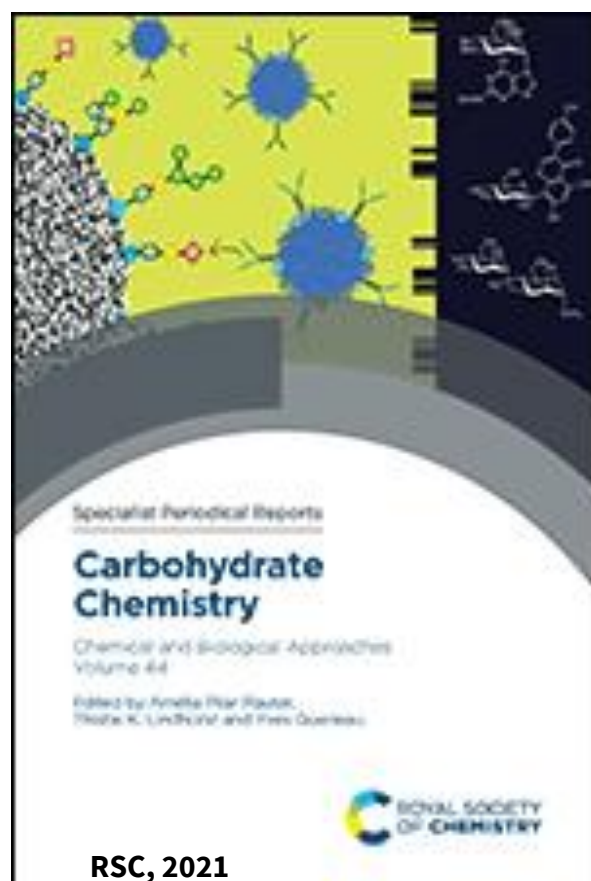
RSC, 2022

PDF eISBN

978-1-83916-453-8

ePub eISBN

978-1-83916-454-5



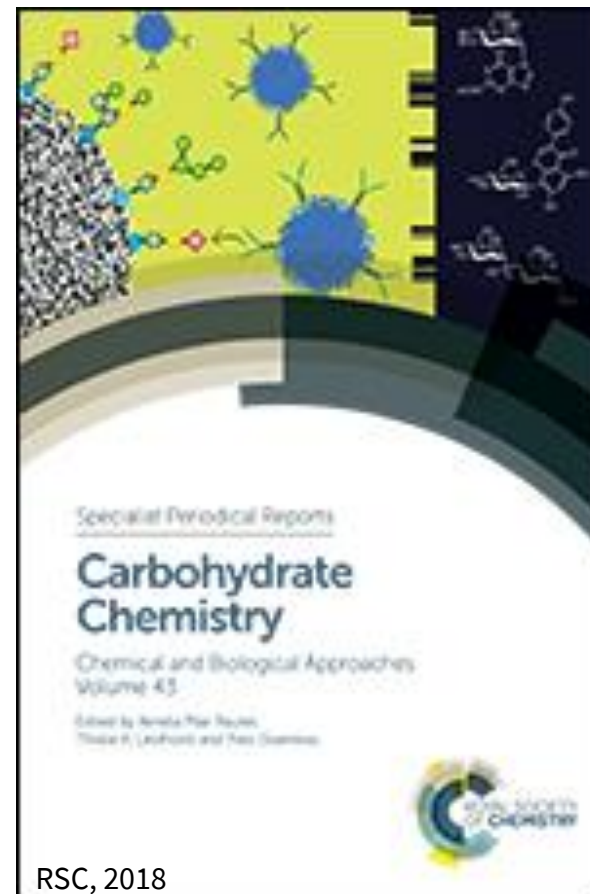
RSC, 2021

PDF eISBN

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ePub eISBN

978-1-78801-924-8



RSC, 2018

PDF eISBN

978-1-78801-064-1

EPUB eISBN

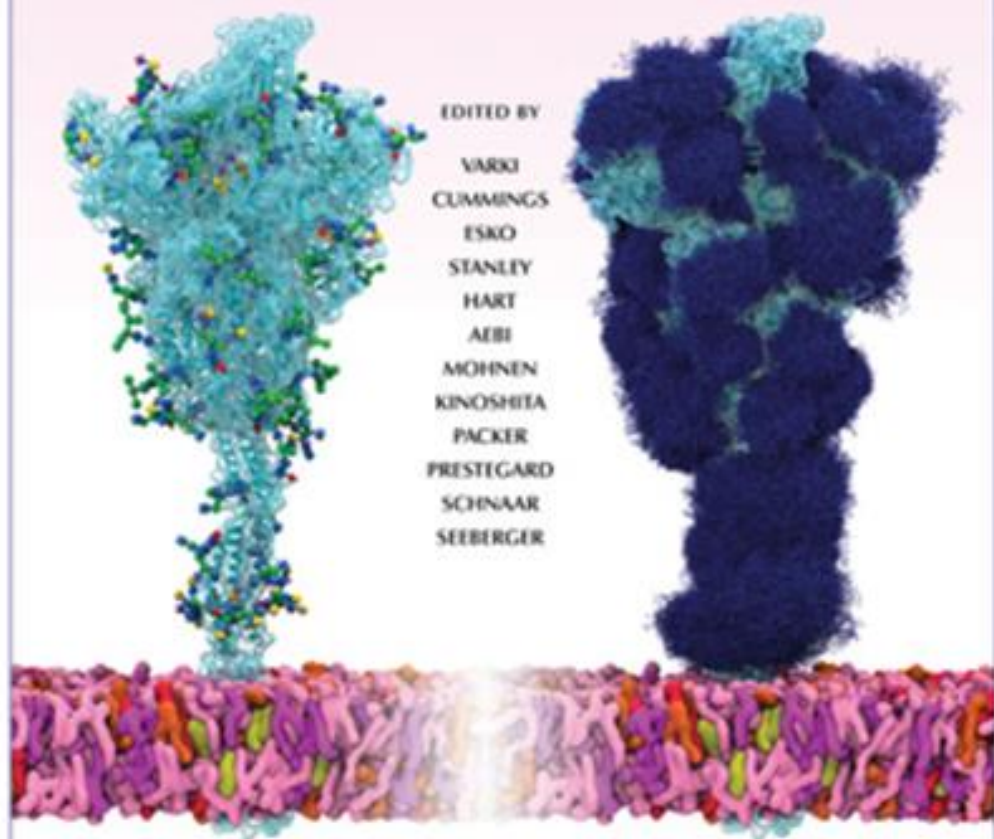
978-1-78801-409-0

Essentials of Glycobiology

FOURTH EDITION

EDITED BY

VARKI
CUMMINGS
ESKO
STANLEY
HART
AEBI
MOHLEN
KINOSHITA
PACKER
PRESTEGARD
SCHNAAR
SEEBERGER



47

Glycosylation Changes in Cancer

Susan L. Bellis, Celso A. Reis, Ajit Varki, Reiji Kannagi,
and Pamela Stanley

HISTORICAL BACKGROUND, 431
GLYCOSYLATION CHANGES IN CANCER ARE NONRANDOM, 432
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Altered glycosylation is a universal feature of cancer cells, and certain glycans are well-known markers of tumor progression. This chapter discusses glycan biosynthetic pathways that are altered in cancer cells; correlations between altered glycosylation, diagnosis, and clinical prognosis; the genetic bases of some of these changes; and the functional role of glycans in cancer biology and pathogenesis.

HISTORICAL BACKGROUND

The earliest evidence of altered glycosylation as a hallmark of cancer was that some plant lectins show enhanced binding and agglutination of tumor cells. Next, it was found that transformation of cultured cells is frequently accompanied by a general increase in the size of glycopeptides of cell-surface glycoproteins. With the advent of monoclonal antibody technology, many "tumor-

Some european projects....



D3I4AD (Diagnostic and Drug Discovery Initiative for Alzheimer's Disease, Industry-Academia Partnerships and Pathways (IAPP), FP7-PEOPLE-2013-IAPP, grant agreement 612347 2014-2018



*Diagnostic
and
Drug Discovery
Initiative
for
Alzheimer's Disease*

PERSSILAA (Personalised ICT Supported Service for Independent Living and Active Ageing, FP7-ICT-2013-10, grant agreement 610359 2013-2016



Synthèse de molécules biologiquement importantes á partir de glucides, [FP2-SCIENCE - Programme](#) plan (EEC) to stimulate the international cooperation and interchange needed by European research scientists (SCIENCE), Grant agreement ID: SC1*0723 1992-1994

Carbohydrates in Portugal in the near future....



ECIUSMART-ER
university



BrownBin - Household food waste new life under sustainable cities: a feasibility study (2022-2023)

SMART-ER Seed Projects, The European Consortium of Innovative Universities (ECIU)

Coordination – Manuel A. Coimbra, University of Aveiro, Portugal

Other participants: Kaunas University of Technology (KTU), Lithuania; Universitat Autònoma de Barcelona (UAB), Spain; University of Trento (UNITN), Italy.

Carbohydrates in Portugal in the near future....



INOVFARMER
Better fruit from smart business



Improving Mediterranean supply chain through innovative agro-food business models to strengthen small-scale farmers competitiveness, using prickly pear and fig as case study

Leader: Dulcineia Ferreira Wessel, Polytechnic Institute of Viseu



INOVFARMER.MED
Grant Agreement No:1733

Starting of the project 1st May 2022

Duration foreseen 36 months

Overall budget 892 543 €

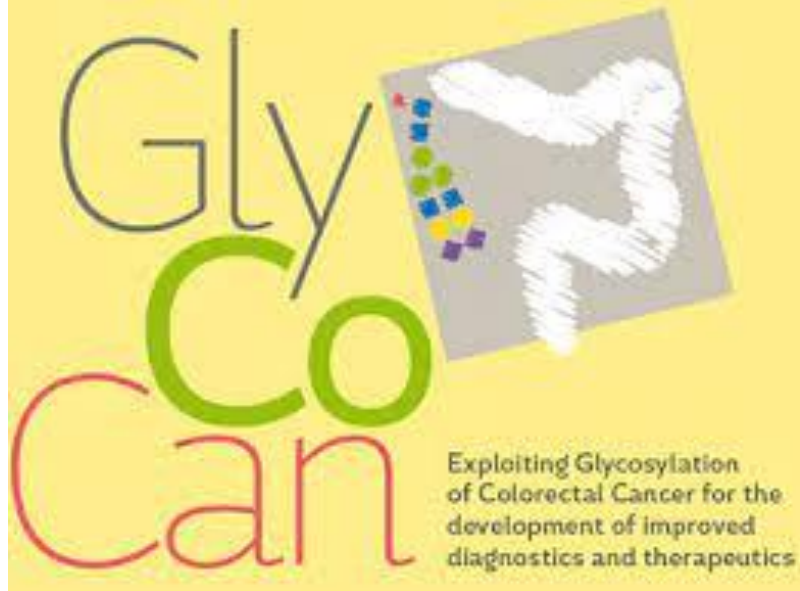
1 IPV (Leader)	Dulcineia Wessel	Instituto Politécnico de Viseu	Portugal
2 UA	Manuel A. Coimbra	Universidade de Aveiro	Portugal
3 Chatron	Carlos Brandão	Chatron Lda	Portugal
4 F4S	Ricardo Chagas	Food4Sustainability	Portugal
5 ENSV	Ben-Mahdi Meriem Hind	Ecole Nationale Supérieure Vétérinaire	Algeria
6 INRAE	Carine Le Bourvellec	Institut National de la Recherche Agronomique - Centre de recherche Provence Alpes Côte d'Azur	France
7 ACICT	Essam Abdel-Mawla	Arab Company for Information and Communication Technology (ACICT)	Egypt
8 TA	Pedro Costa	Pais da Costa & Esteves Pereira – Consultoria Lda	Portugal
9 UIZ	Aissam El Finiti	Universidade de Ibnou Zoh	Morocco



INOVFARMER

Better fruit from smart business

**9 Partners
5 Countries**



Marie Curie International Training Network

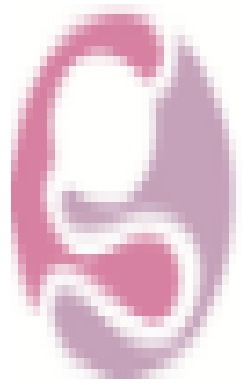
GLYCOMICS A NEW FRONTIER IN DRUG DELIVERY



European joint program on rare diseases



Paula Videira, FCT-UNL



Gastric Glyco Explorer

Towards a systems biology approach to gastric cancer



ITN – Towards a system biology approach to gastric cancer

December 2022 to November 2025

GLYCOTwinning

Twinning Action: Building NETworks to Excel in Glycoscience



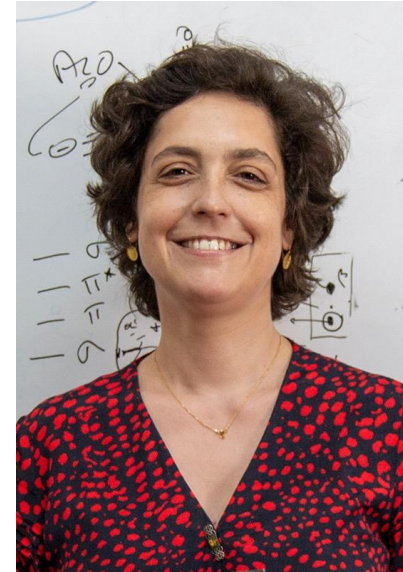
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 101079417 (GLYCOTwinning)

Innogly Cost Action

Biocatalytic synthesis of oligoarabinosides for the study of drug targets and development of novel anti-tuberculosis drugs - **FCT Project**
PTDC/BIA-BQM/4056/2020, 2021-2024

FCT

Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR



Rita Ventura, ITQB



Nuno Manuel Xavier
Centro de Química Estrutural,
Faculdade de Ciências, Universidade de Lisboa

Awarded a grant within and **Individual Call to Scientific Employment Stimulus** by the Portuguese Foundation for Science and Technology

Nucleos(t)ide and Carbohydrate Medicinal Chemistry, development of novel molecules of therapeutic interest towards **cancer** or **bacterial infections**.

R&D Exploratory project funded and focussed on the development of **novel antibacterial agents** based on **nucleoside and nucleotide analogs**.

FCT

Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR

One of our Young Researchers' project....

Development of antibiotic prodrugs towards membrane disruption in multidrug-resistant Gram-negative bacteria

CEEC Estimulo ao Emprego Cientifico Individual
2022-2028

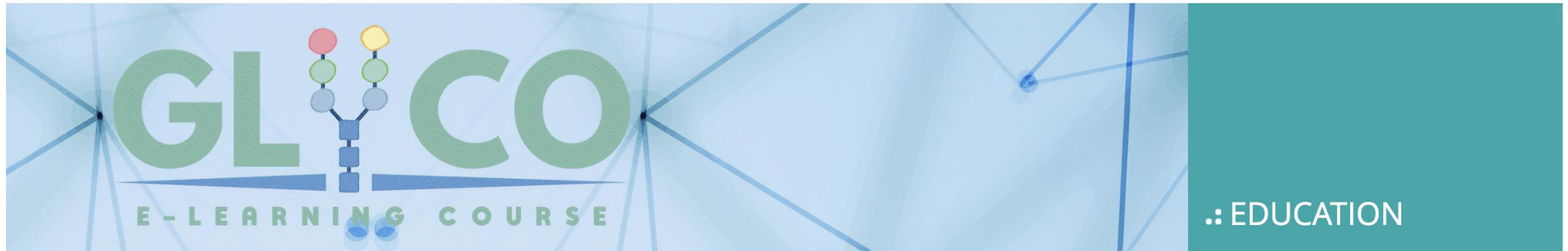
Ana Marta Matos
Centro de Quimica Estrutural, Faculdade de Ciências, Universidade de Lisboa

ANTIMICROBIAL RESISTANCE



2023

GLYCO e-learning course: From basic to applied Glycobiology



» [Home](#) » [Ensino](#)

Postgraduate Programme in Glyco e-learning course: From basic to applied Glycobiology

GLYCOMICS A NEW FRONTIER IN DRUG DELIVERY

2012



CDG & Allies – PPAIN
CDG & Allies - Professionals and Patient
Associations International Network

Creation of Congenital Disorders of Glycosylation Patient and Professional Association International Network

- **Clinicians, Researchers and
Patients/Caregivers worldwide**

World Conference on CDG – July 21-23, 2023, Caparica





GLYCO
NANO
PROBES

FUNCTIONAL GLYCONANOMATERIALS FOR THE
DEVELOPMENT OF DIAGNOSTICS AND TARGETED
THERAPEUTIC PROBES

1ST MEETING
COST ACTION CA18132
CAPARICA
18-20TH Nov.



2019-2023



Celso Reis, IPATIMUP

Cancer glycobiology

WG 1 - Glycan-based correlations in developmental and cancer biology.

Discussion and exchange of knowledge and know-how between INNOGLY participants will be focused on the concept that cell behaviour and processes that are indispensable for embryonic development are also essential for cancer progression.

- ▶ Investigate correlations between the glycosylation pattern changes in cancer and embryonic development.
- ▶ Promote the development of novel and improved biosensors for detection and characterization of glycan biomarkers, and identification of new targets of protein glycosylation.
- ▶ Promote the development of smart tools and innovative techniques for tracking glycosylation pathways.

WG Leader

Prof Celso REIS
celsor@ipatimup.pt
+351225570753

Ipatimup – Institute of Molecular
Pathology and Immunology of
the University of Porto
Rua Júlio Amaral de Carvalho 45
Porto
Portugal
Porto

PACKAGING, FILMS AND NEXT GENERATION DISPLAYS



RETHINKING

PACKAGING FOR CIRCULAR AND SUSTAINABLE FOOD SUPPLY CHAINS OF
THE FUTURE
www.circul-a-bility.org



Cláudia Nunes
Management Committee Member
(2020-2024)

Organization at University of Aveiro
of a Training school - Life Cycle Assessment applied to food
packaging

October 24-27th October 2022

Next meetings...

XXIX PORTO CANCER MEETING

GLYCOSYLATION IN TUMOUR BIOLOGY AND ITS CLINICAL IMPLICATIONS: THE CANCER BITTERSWEET PORTRAIT



11 MAY 2023

9:00 – 9:20 Welcome Session

Manuel Sobrinho-Simões, Claudio Sunkel and Celso Reis

SESSION 1: GLYCOSYLATION IN CANCER

Chairs: Fátima Carneiro (CHSJ/FMUP/i3S) & Henrique Duarte (i3S)

9:20 – 9:50 **Celso Reis**, IPATIMUP/i3S University of Porto, Portugal

KEYNOTE TALK

9:50 – 10:30 **Susan Bellis**, Comprehensive Cancer Center, University of Alabama, USA

10h30-11h00 Coffee break

KEYNOTE TALK

Chairs: Catarina Gomes (i3S)

11:00 – 11:40 **Sofie Groux-Degroote**, Unité de Glycobiologie Structurale et Fonctionnelle, University of Lille, France

11:40 – 12:10 SELECTED TALKS

12:10 – 12:40 SPEED TALKS

12:40 – 14:15 Lunch break

SESSION 2: GLYCANS IN CANCER MOLECULAR AND CELL BIOLOGY

Chairs: Rui Henrique (IPO, ICBAS) & Ana Magalhães (ICBAS/i3S)

KEYNOTE TALK

14:15 – 14:55 **Robert Haltiwanger**, Complex Carbohydrate Research Center, USA

14:55 – 15H25 – SELECTED TALK

15:25 – 15H55 – SELECTED TALK

16:00 – 16h30 Coffee break

SPECIAL SESSION

Chair: Celso A Reis (i3S)

16h30 – 17:20 **Gabriel Rabinovich**, Instituto de Biología y Medicina Experimental, CONICET and University of Buenos Aires, Argentina

20:00 Meeting Dinner

12 MAY 2023

SESSION 3: GLYCOSYLATION IN TUMOR MICROENVIRONMENT AND IMMUNE MODULATION

Chairs: Maria Oliveira (i3S) & Joana Gomes (i3S)

KEYNOTE TALK

9:00 – 9:40 **Nikos Karamanos**, Department of Chemistry, University of Patras, Greece

KEYNOTE TALK

9:40 – 10:30 **Heinz Läubli**, University Hospital Basel, Switzerland

10:30 – 11:00 Coffee break

11:00 – 11:30 SELECTED TALK

11:30 – 12:00 SELECTED TALK

12:00 – 12:30 SPEED TALKS

12:40 – 14:15 Lunch break

SESSION 4: TRANSLATIONAL RESEARCH AND GLYCAN-BASED CLINICAL APPLICATIONS

Chairs: Salomé Pinho (i3S) & Júlio Oliveira (IPOP)

KEYNOTE TALK

14:15 – 14:55 **Paula Videira**, Glycoimmunology Group, Nova University Lisbon, Portugal & CellmAbs Biopharmaceuticals

14:55- 15:25 SELECTED TALK

KEYNOTE TALK

15:25 – 16:05 **Mattias Belting**, Department of Clinical Sciences of Lund University, Sweden

16:05 – 16:15 Closing session

Chair: Celso A Reis & André Albergaria (i3S)

Porto Cancer Meeting 2023
Glycosylation in tumour biology
and its clinical implications: The
cancer bittersweet portrait
11-12 May 2023 | i3S, Porto

Registration and more information at

<https://portocancermeeting.i3s.up.pt/>

15th Jenner Glycobiology and Medicine Symposium

14-16 June 2023 | Porto,
Portugal



Confirmed speakers:

Robert Sackstein

Herbert Wertheim College of Medicine, Florida
International University, USA

Sandra van Vliet

Amsterdam UMC , Universitair Medische
Centra, Netherlands

Max Crispin

Molecular and Cellular Biosciences, University
of Southampton, United Kingdom

Katrine T Schjoldager

Department of Cellular and Molecular
Medicine, University of Copenhagen, Denmark

Lucy Crouch

Institute for Cell and Molecular Biosciences,
Newcastle University, United Kingdom

Romain Vivès

Institut de Biologie Structurale, Université
Grenoble Alpes, France

Christian Bull

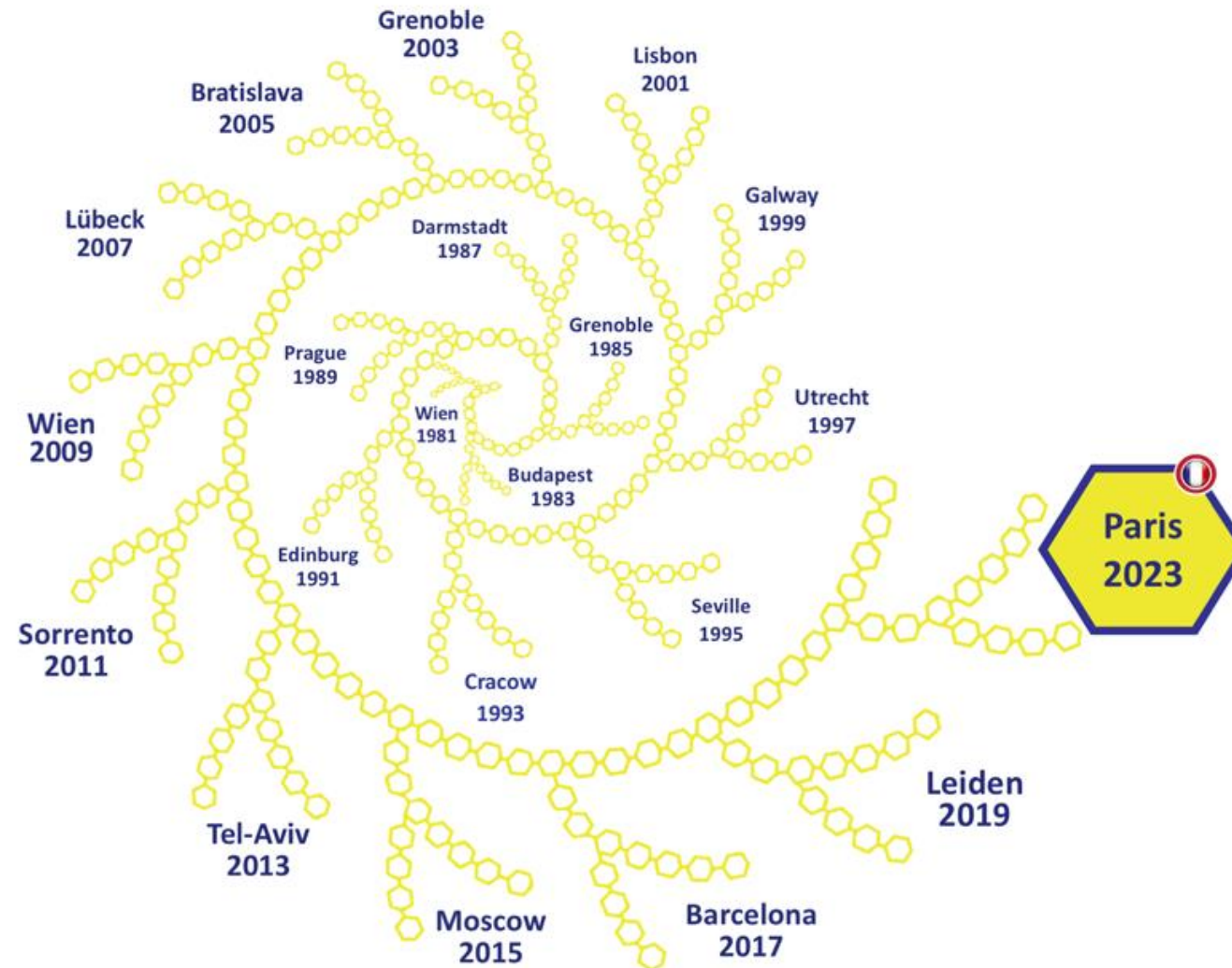
Institute for Molecules and Materials, Radboud
University, Netherlands

Professor Sir Roy Anderson

Faculty of Medicine, School of Public Health,
Imperial College, London, United Kingdom

jennerglyco2023.i3s.up.pt

The 21st European Carbohydrate Symposium in Paris from 9 to 13th July 2023!



Shanghai: Classical and Modern

Yu Garden



Chinese Pavilion



Zhujiailao



Nanjing Road



Água mole em pedra dura, tanto bate até que fura...

Never give up....

Love what you do.....and do what you love....

Be happy and you will succeed!

