DEFINICION DE LA ESPECIALIDAD

Se entiende por **Alergología** la especialidad medica que comprende el conocimiento, diagnostico y tratamiento de la patología producida por mecanismos inmunológicos, con las técnicas que le son propias.

BOE núm. 241 Lunes 9 octubre 2006

Trasversal

Colaboración multidisciplinar

Nº 2 en publicaciones científicas

Diagnósticos propios

Prevalencia 35% de la población

A cualquier edad

Laboratorio

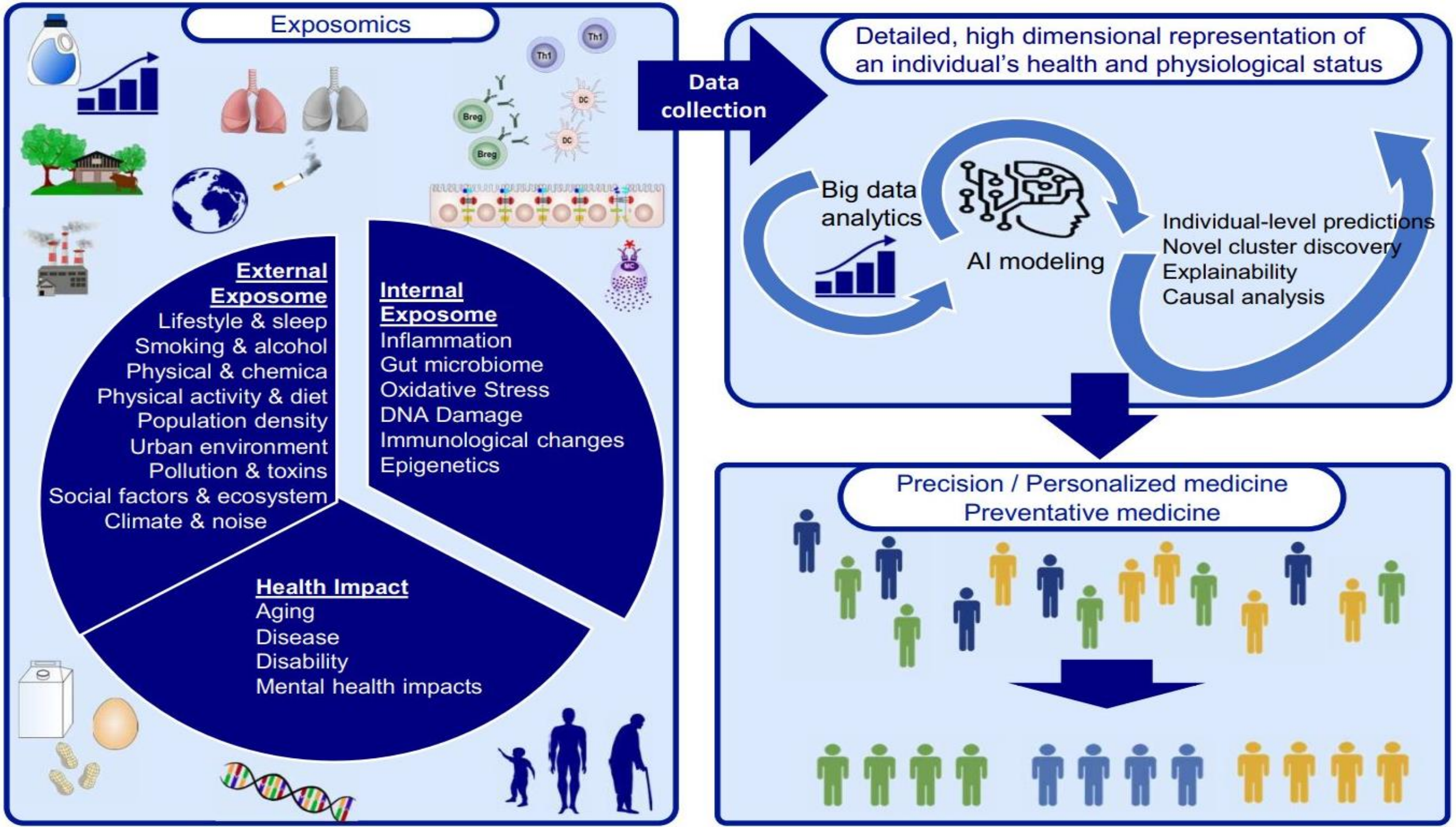
Hospital de día

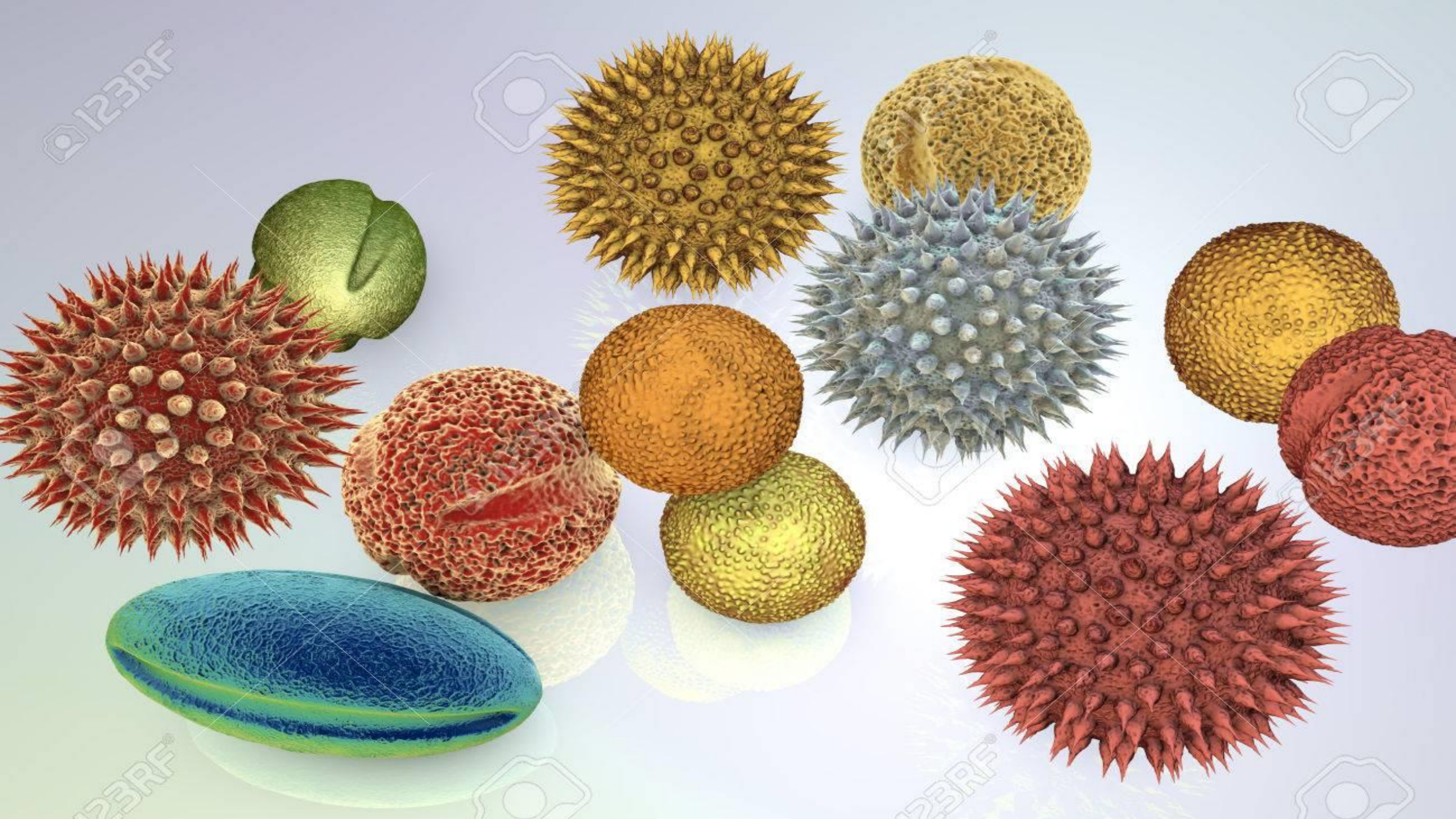
Consultas

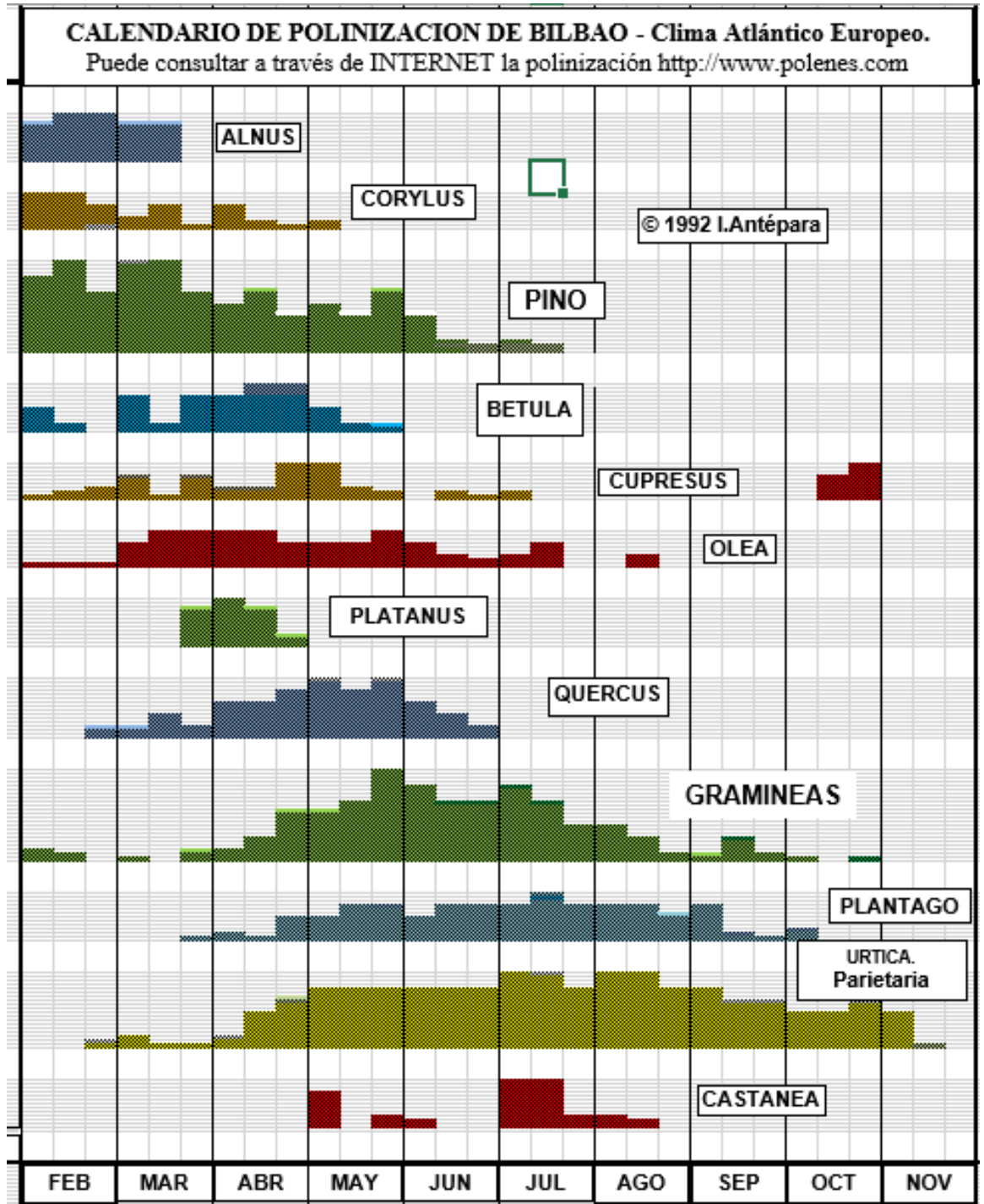
Urgencias

Planta

! Estudiar !


Exposomics
External Exposome
Lifestyle & sleep
Smoking & alcohol
Physical & chemica
Physical activity & diet
Population density
Urban environment
Pollution & toxins
Social factors & ecosystem
Climate & noise
Internal Exposome
Inflammation
Gut microbiome
Oxidative Stress
DNA Damage
Immunological changes
Epigenetics
Health Impact
Aging
Disease
Disability
Mental health impacts
Th1
Th1
Breg
Breg
DC
DC
Data collection
Detailed, high dimensional representation of an individual's health and physiological status
Big data analytics
AI modeling
Individual-level predictions
Novel cluster discovery
Explainability
Causal analysis
Precision / Personalized medicine
Preventative medicine

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Puede consultar a través de INTERNET la polinización http://www.polenes.com
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PINO
BETULA
CUPRESUS
OLEA
PLATANUS
QUERCUS
GRAMINEAS
PLANTAGO
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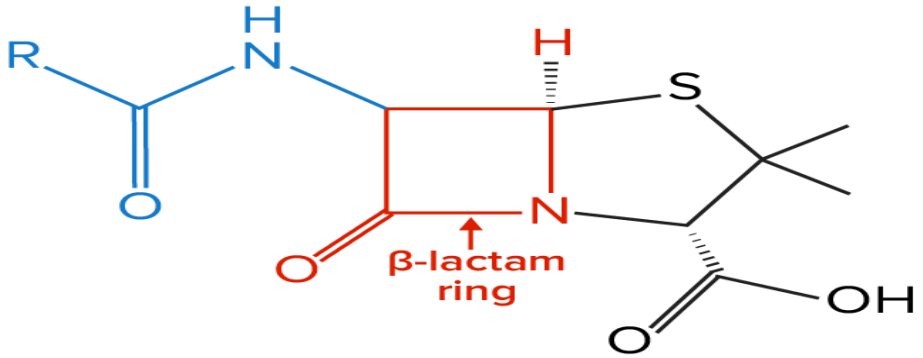
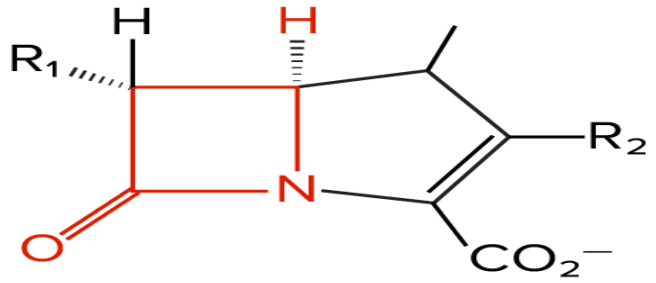
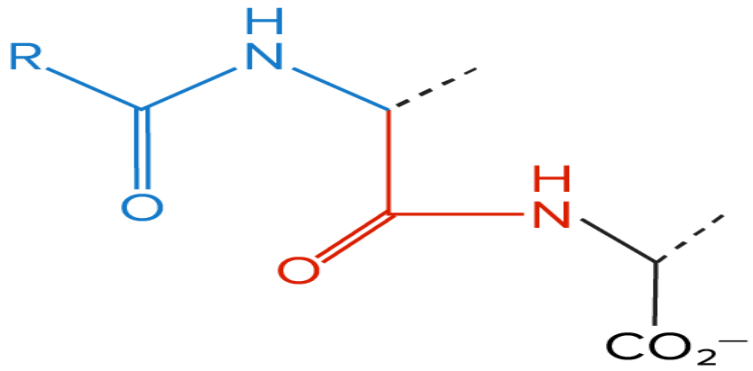


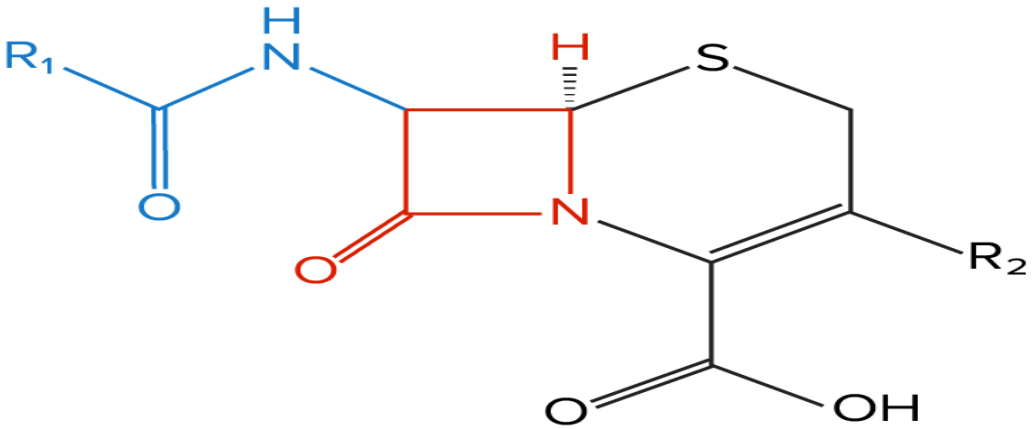
Penicillins



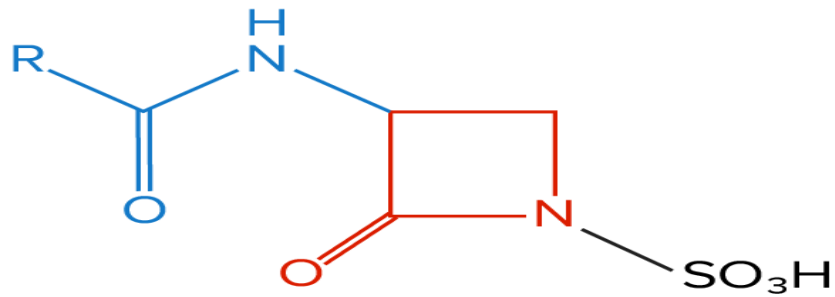
Carbapenems



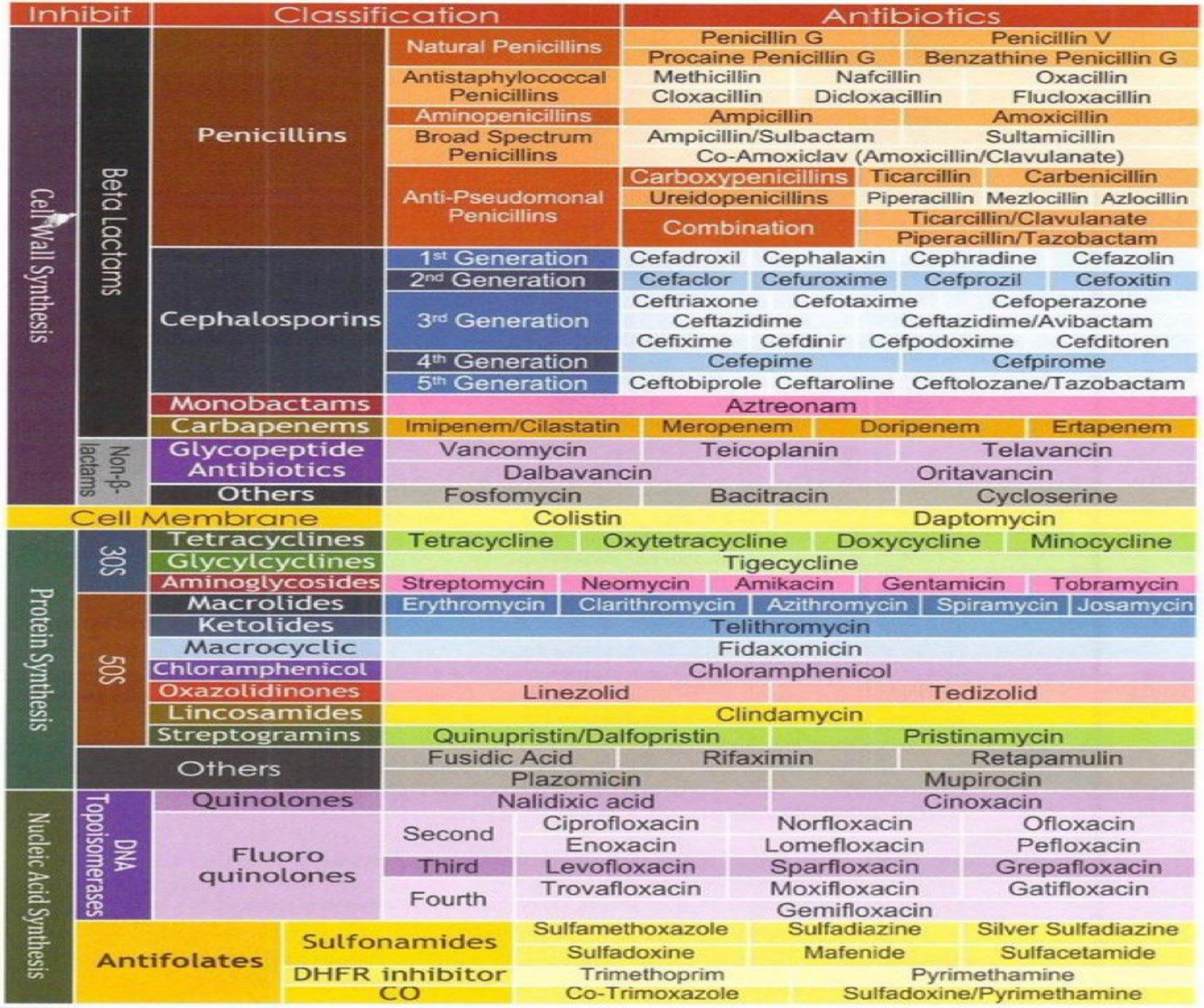
Acyl-D-Ala-D-Ala
(cell wall precursor)



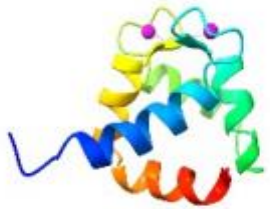
Cephalosporins



Monobactams


Inhibit
Classification
Antibiotics
Cell Wall Synthesis
Beta Lactams
Penicillins
Natural Penicillins
Penicillin G
Penicillin V
Procaine Penicillin G
Benzathine Penicillin G
Antistaphylococcal Penicillins
Methicillin
Nafcillin
Oxacillin
Cloxacillin
Dicloxacillin
Flucloxacillin
Aminopenicillins
Ampicillin
Amoxicillin
Broad Spectrum Penicillins
Ampicillin/Sulbactam
Sultamicillin
Co-Amoxiclav (Amoxicillin/Clavulanate)
Anti-Pseudomonal Penicillins
Carboxypenicillins
Ticarcillin
Carbenicillin
Ureidopenicillins
Piperacillin
Mezlocillin
Azlocillin
Combination
Ticarcillin/Clavulanate
Piperacillin/Tazobactam
Cephalosporins
1st Generation
Cefadroxil
Cephalaxin
Cephradine
Cefazolin
2nd Generation
Cefaclor
Cefuroxime
Cefprozil
Cefoxitin
3rd Generation
Ceftriaxone
Cefotaxime
Cefoperazone
Ceftazidime
Ceftazidime/Avibactam
Cefixime
Cefdinir
Cefpodoxime
Cefditoren
4th Generation
Cefepime
Cefpirome
5th Generation
Ceftobiprole
Ceftaroline
Ceftolozane/Tazobactam
Monobactams
Aztreonam
Carbapenems
Imipenem/Cilastatin
Meropenem
Doripenem
Ertapenem
Non-β-lactams
Glycopeptide Antibiotics
Vancomycin
Teicoplanin
Telavancin
Dalbavancin
Oritavancin
Others
Fosfomycin
Bacitracin
Cycloserine
Cell Membrane
Colistin
Daptomycin
Protein Synthesis
30S
Tetracyclines
Tetracycline
Oxytetracycline
Doxycycline
Minocycline
Glycylcyclines
Tigecycline
Aminoglycosides
Streptomycin
Neomycin
Amikacin
Gentamicin
Tobramycin
50S
Macrolides
Erythromycin
Clarithromycin
Azithromycin
Spiramycin
Josamycin
Ketolides
Telithromycin
Macrocyclic
Fidaxomicin
Chloramphenicol
Chloramphenicol
Oxazolidinones
Linezolid
Tedizolid
Lincosamides
Clindamycin
Streptogramins
Quinupristin/Dalfopristin
Pristinamycin
Others
Fusidic Acid
Rifaximin
Retapamulin
Plazomicin
Mupirocin
Nucleic Acid Synthesis
DNA Topoisomerases
Quinolones
Nalidixic acid
Cinoxacin
Fluoro quinolones
Second
Ciprofloxacin
Norfloxacin
Ofloxacin
Enoxacin
Lomefloxacin
Pefloxacin
Third
Levofloxacin
Sparfloxacin
Grepafloxacin
Fourth
Trovafloxacin
Moxifloxacin
Gatifloxacin
Gemifloxacin
Antifolates
Sulfonamides
Sulfamethoxazole
Sulfadiazine
Silver Sulfadiazine
Sulfadoxine
Mafenide
Sulfacetamide
DHFR inhibitor
Trimethoprim
Pyrimethamine
CO
Co-Trimoxazole
Sulfadoxine/Pyrimethamine

Polcalcins



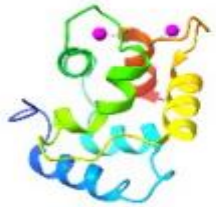
Bet v 4

Grass pollen

Tree pollen

Weed pollen

Parvalbumins



Cyp c 1

Carp Cod Salmon

Sarcoplasmic Ca-binding proteins

Bra 1 SCP

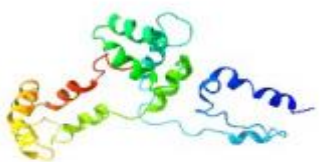
Crustaceans

Insects

Molluscs

Troponin C **Myosin light chain**

Let i TnC

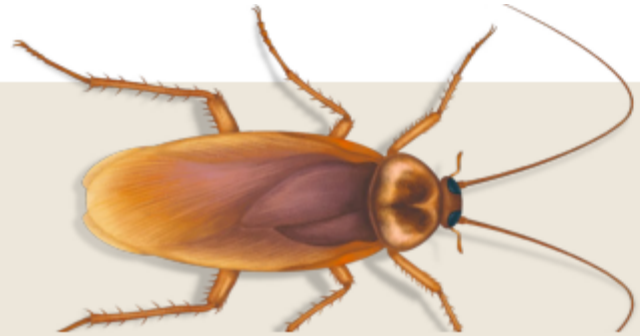


Sch m MLC

Crustaceans

Mites

Cockroaches



Bla g 7 Bla g 9

Ani s 3

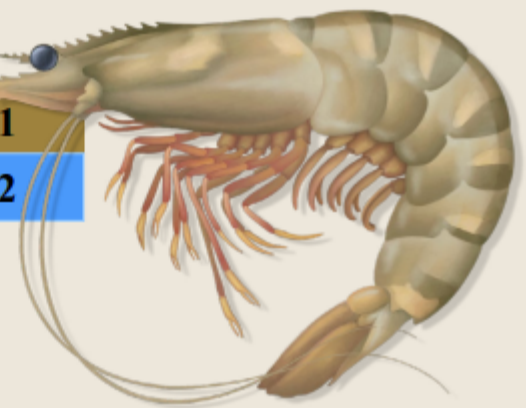
Der p 10

Bomb m 3

Bomb m 1

Pen m 1

Pen m 2



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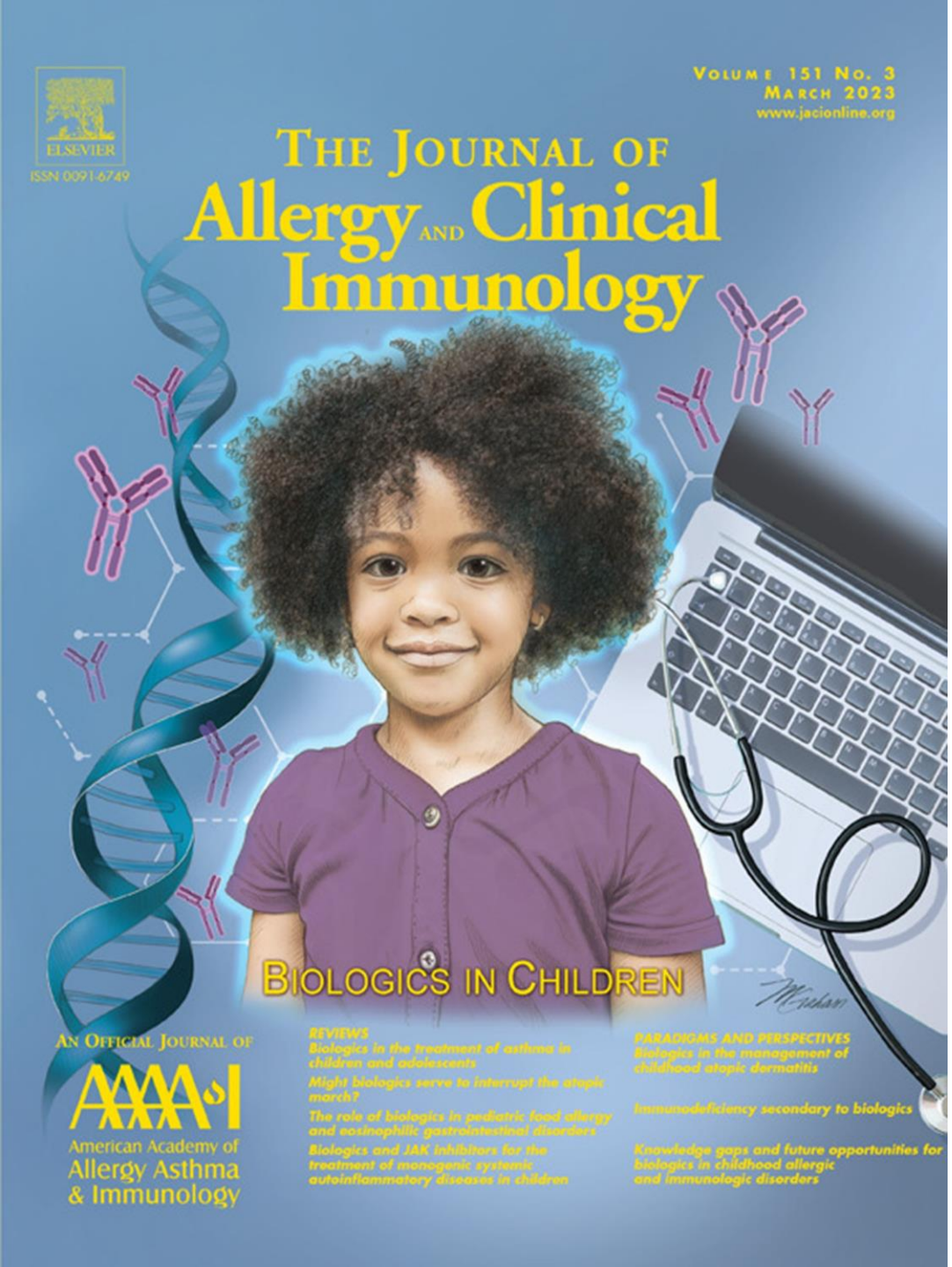
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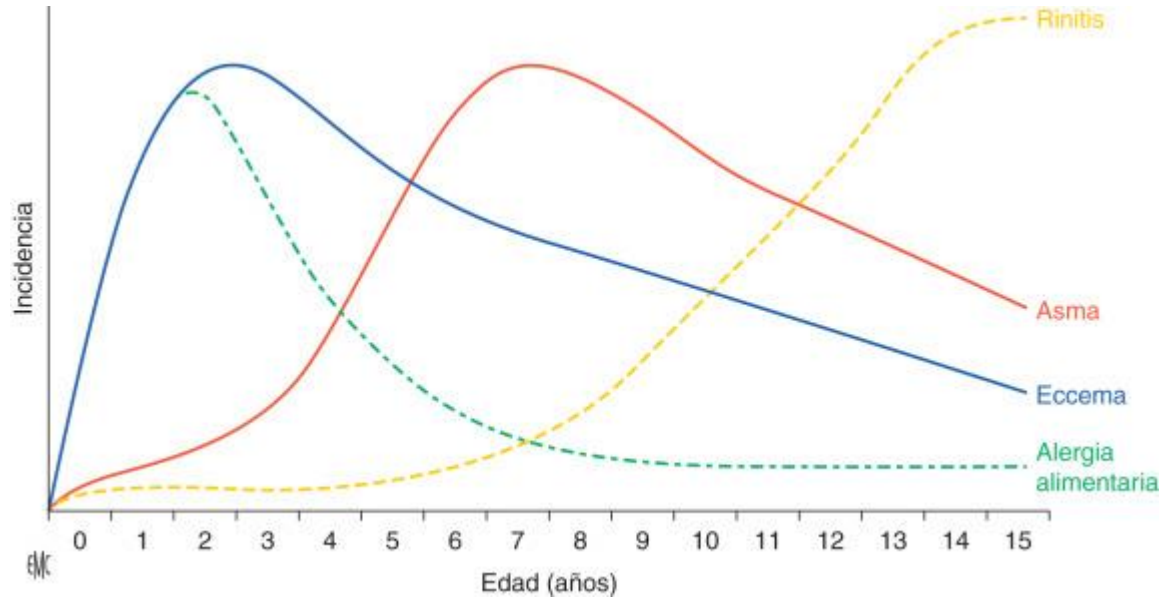
THE JOURNAL OF
Allergy AND Clinical Immunology
BIOLOGICS IN CHILDREN
AN OFFICIAL JOURNAL OF
AAAAI
American Academy of Allergy Asthma & Immunology
REVIEWS
Biologics in the treatment of asthma in children and adolescents
Might biologics serve to interrupt the atopic march?
The role of biologics in pediatric food allergy and eosinophilic gastrointestinal disorders
Biologics and JAK inhibitors for the treatment of monogenic systemic autoinflammatory diseases in children
PARADIGMS AND PERSPECTIVES
Biologics in the management of childhood atopic dermatitis
Immunodeficiency secondary to biologics
Knowledge gaps and future opportunities for biologics in childhood allergic and immunologic disorders


Incidencia
Rinitis
Asma
Eccema
Alergia alimentaria
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Edad (años)

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URTICARIA AND ANGIOEDEMA
Guest Editor: Jonathan Bernstein, MD

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REVIEWS
Chronic spontaneous urticaria guidelines: What is new?
Novel biologics for treatment of chronic spontaneous urticaria
Do regional geography and race influence management of chronic spontaneous urticaria?
An update on anaphylaxis and urticaria

PRACTICE PARAMETER
Drug allergy: A 2022 practice parameter update

PARADIGMS AND PERSPECTIVES
Concise update on the pathogenesis of chronic spontaneous urticaria (CSU)
Differentiating histaminergic and nonhistaminergic angioedema with or without urticaria

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APRIL 2022
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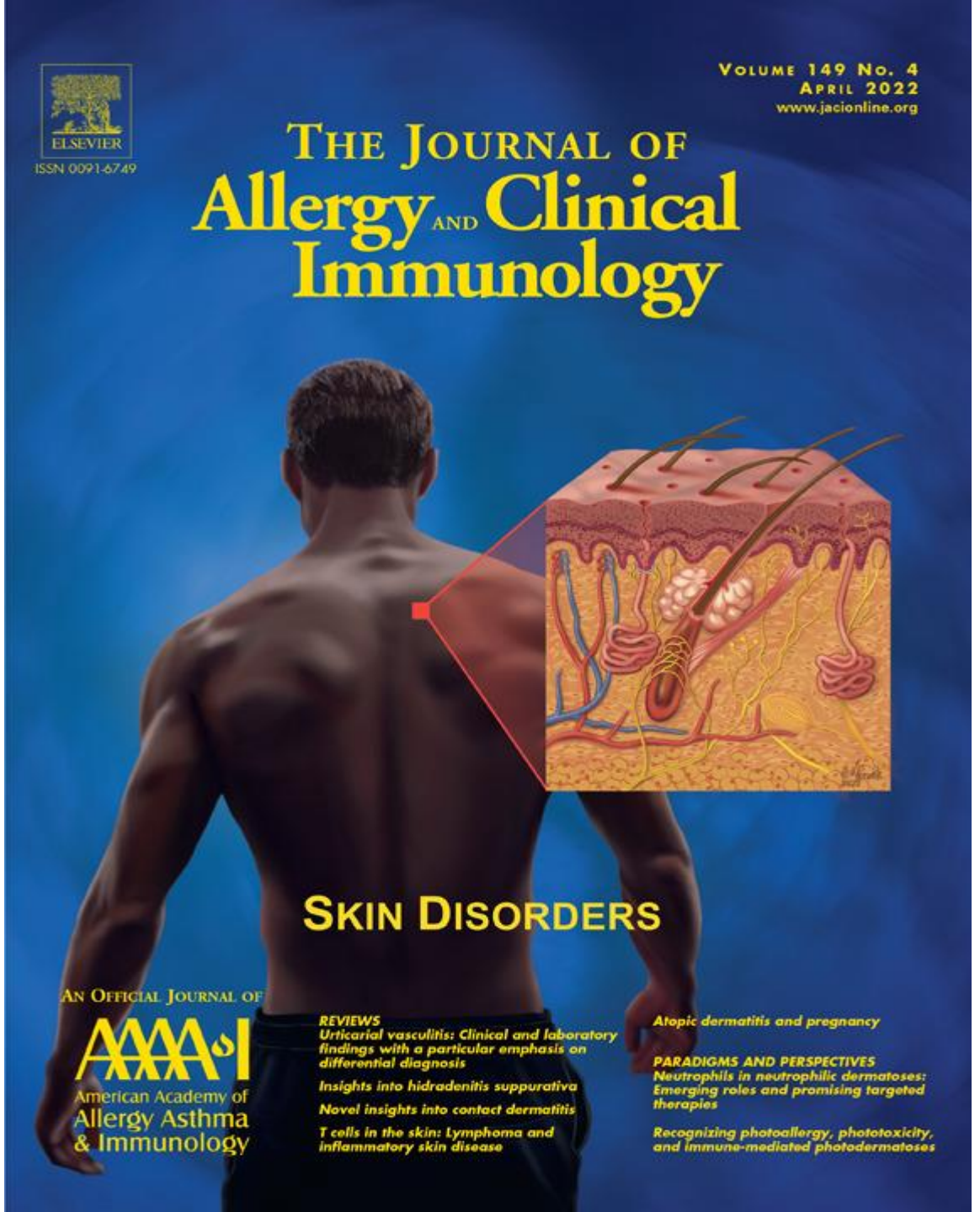

SKIN DISORDERS

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REVIEWS
Urticarial vasculitis: Clinical and laboratory findings with a particular emphasis on differential diagnosis
Insights into hidradenitis suppurativa
Novel insights into contact dermatitis
T cells in the skin: Lymphoma and inflammatory skin disease
Atopic dermatitis and pregnancy

PARADIGMS AND PERSPECTIVES
Neutrophils in neutrophilic dermatoses: Emerging roles and promising targeted therapies
Recognizing photoallergy, phototoxicity, and immune-mediated photodermatoses

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MARCH 2022
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THE JOURNAL OF Allergy AND Clinical Immunology

AEROALLERGEN IMMUNOTHERAPY

Guest Editor: David I. Bernstein, MD.

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REVIEWS
Diverse immune mechanisms of allergen immunotherapy for allergic rhinitis with and without asthma

Allergen immunotherapy for long-term tolerance and prevention

A regulator's view on AIT clinical trials in the United States and Europe: Why successful studies fail to support licensure

ROSTRUM
Which patients with asthma are most likely to benefit from allergen immunotherapy?

PARADIGMS AND PERSPECTIVES
Real-world evidence: Methods for assessing long-term health and effectiveness of allergy immunotherapy

Managing risk of anaphylaxis in patients receiving allergen immunotherapy: Assessing benefit versus risk

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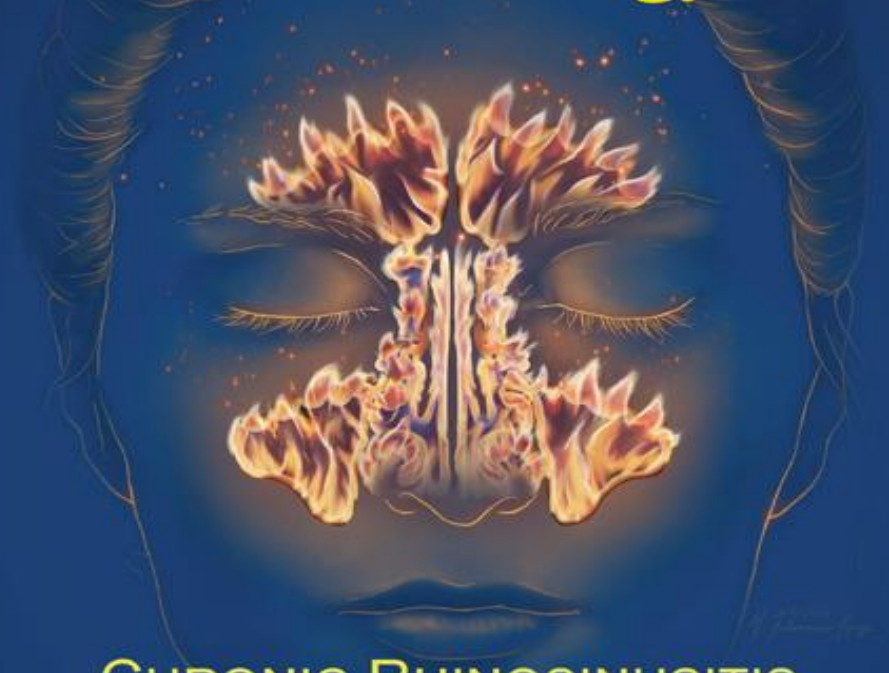

CHRONIC RHINOSINUSITIS

Guest Editors: Anju T. Peters, MD MSCI, Robert C. Kern MD, and Robert P. Schleimer PhD

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REVIEWS
Mechanisms and pathogenesis of chronic rhinosinusitis

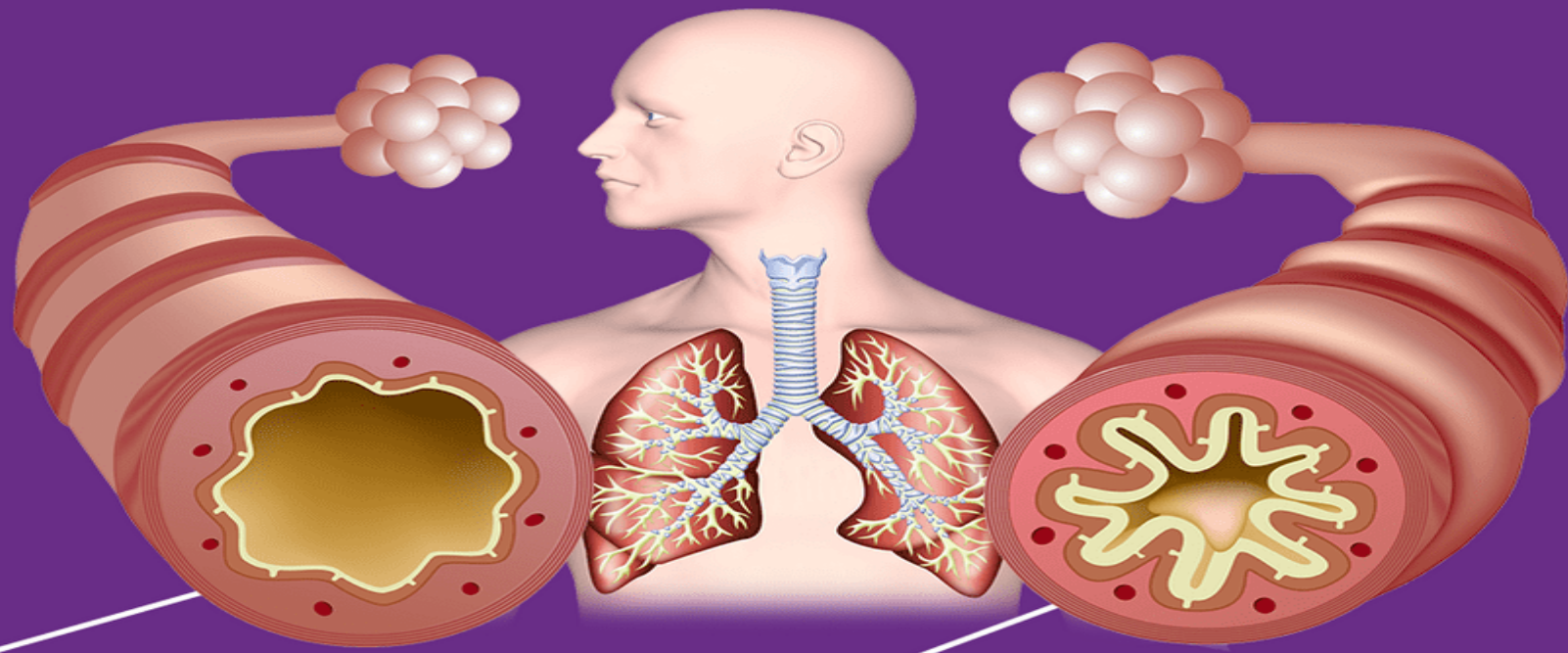
Is there a role for antibiotics in the treatment of chronic rhinosinusitis?

ROSTRA
Unraveling the role of the microbiome in chronic rhinosinusitis

The climate change hypothesis for the allergy epidemic

AAAAI WORK GROUP REPORT
Practical guidance for the diagnosis and management of secondary hypogammaglobulinemia: A Work Group Report of the AAAAI Primary Immunodeficiency and Altered Immune Response Committees

What happens to your lungs when you have asthma



LUNG WITHOUT ASTHMA

- Muscles relaxed
- Normal airways
- Normal amount of mucus

LUNG WITH ASTHMA

- Muscles tighten
- Airways swell
- Mucus clogs the airways
- Lungs have difficulty moving air in and out

aafa Asthma and Allergy Foundation of America

aafa.org

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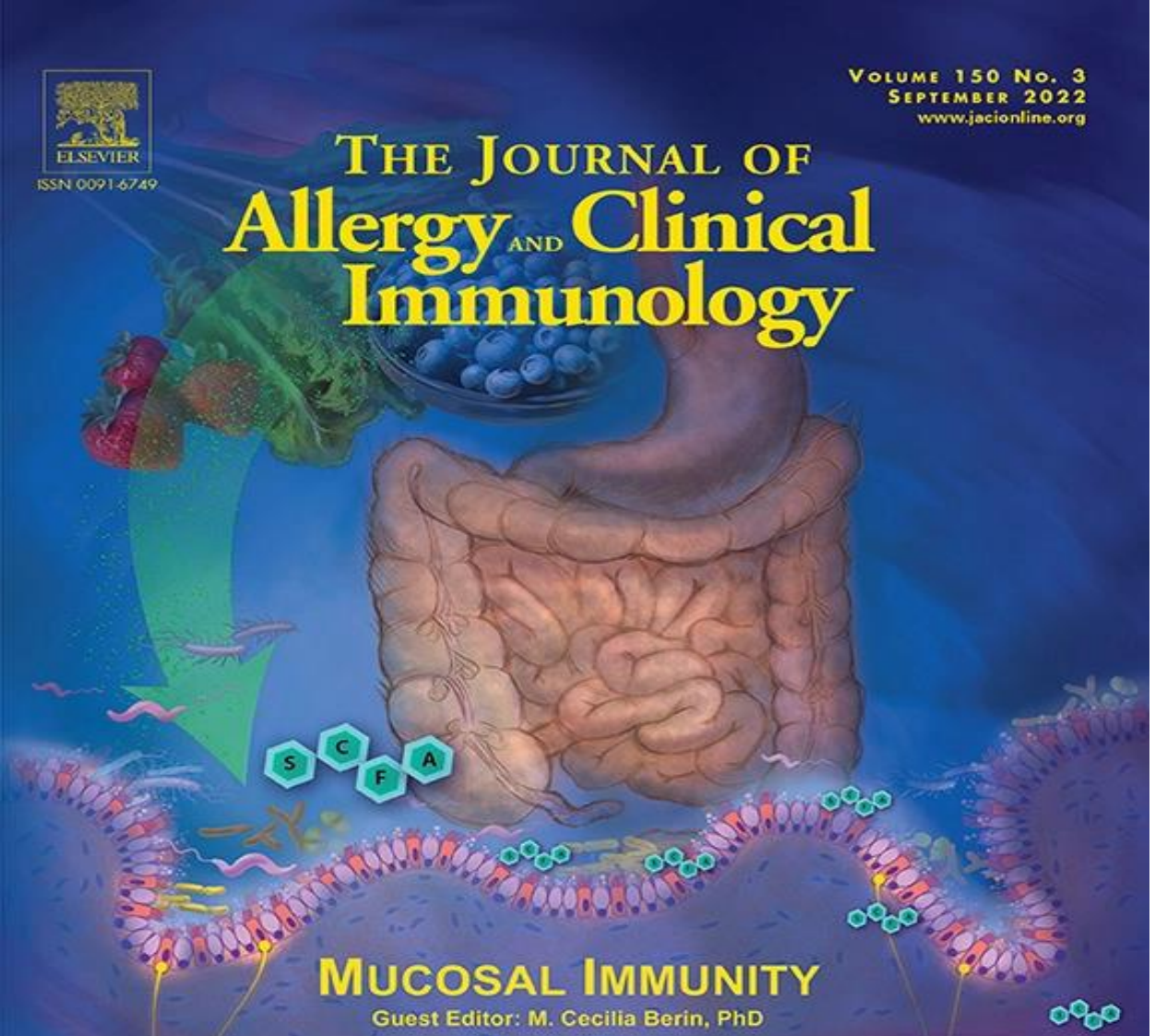

MUCOSAL IMMUNITY

Guest Editor: M. Cecilia Berin, PhD

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REVIEWS
Epithelial barrier regulation, antigen sampling, and food allergy
Impact of the mucosal milieu on antibody responses to allergens
Enteric nervous system and intestinal epithelial regulation of the gut-brain axis
Gut microbiome and breast-feeding: Implications for early immune development

PARADIGMS AND PERSPECTIVES
Environmental sensing mechanisms in intestinal homeostasis
Succinate and tuft cells: How does this sensory process interface with food allergy?

EDITORIAL
"Where are they now?" Catching up with the 2017 AAAAI Faculty Development Awardees

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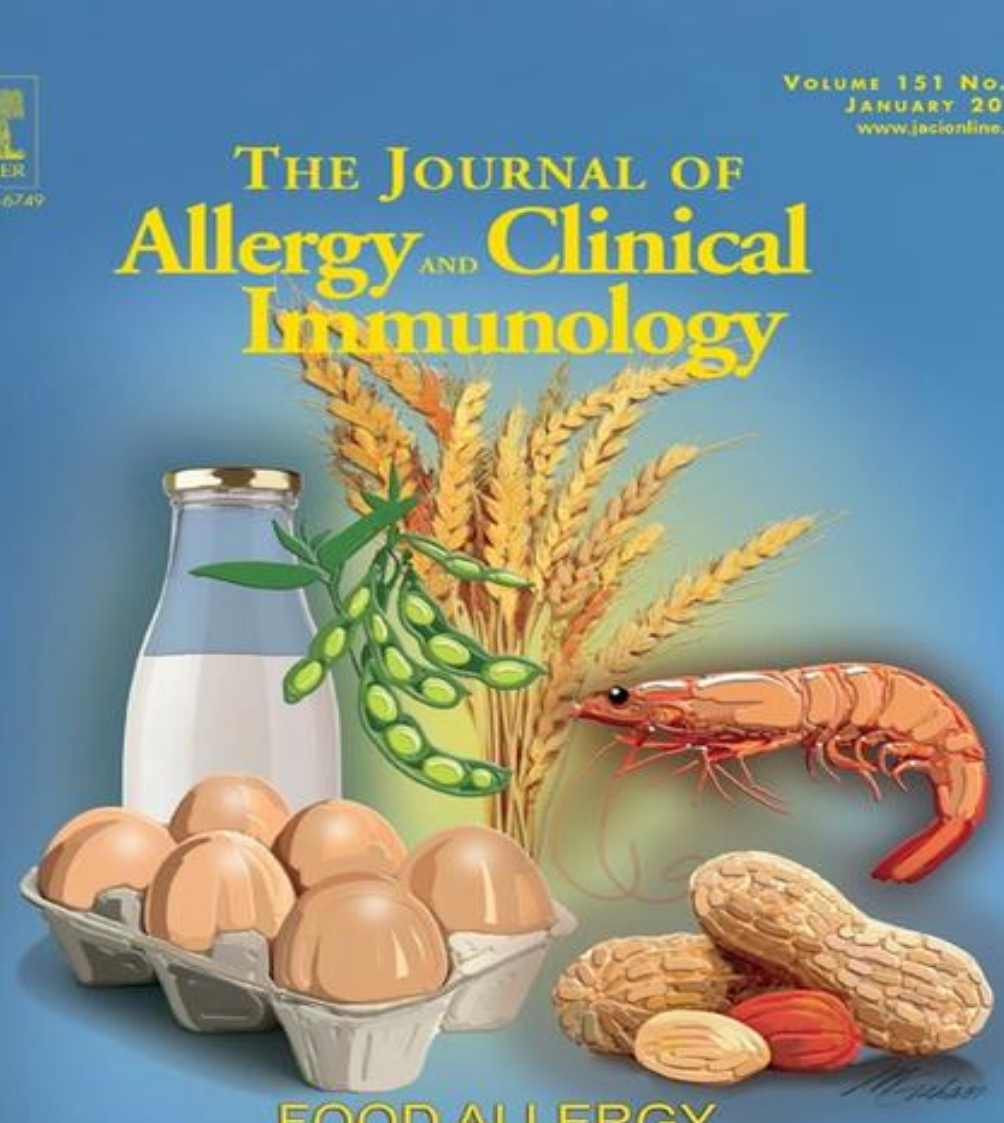

FOOD ALLERGY

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REVIEWS
Treatment for food allergy: Current status and unmet needs
T-cell epitope discovery and single-cell technologies to advance food allergy research
Mast cells in food allergy: Inducing immediate reactions and shaping long-term immunity
Endotypes of atopic dermatitis and food allergy
Psychosocial functioning in pediatric food allergies: A scoping review
Social disparities in early childhood prevention and management of food allergy
Recent trends in food protein–induced enterocolitis syndrome (FPIES)

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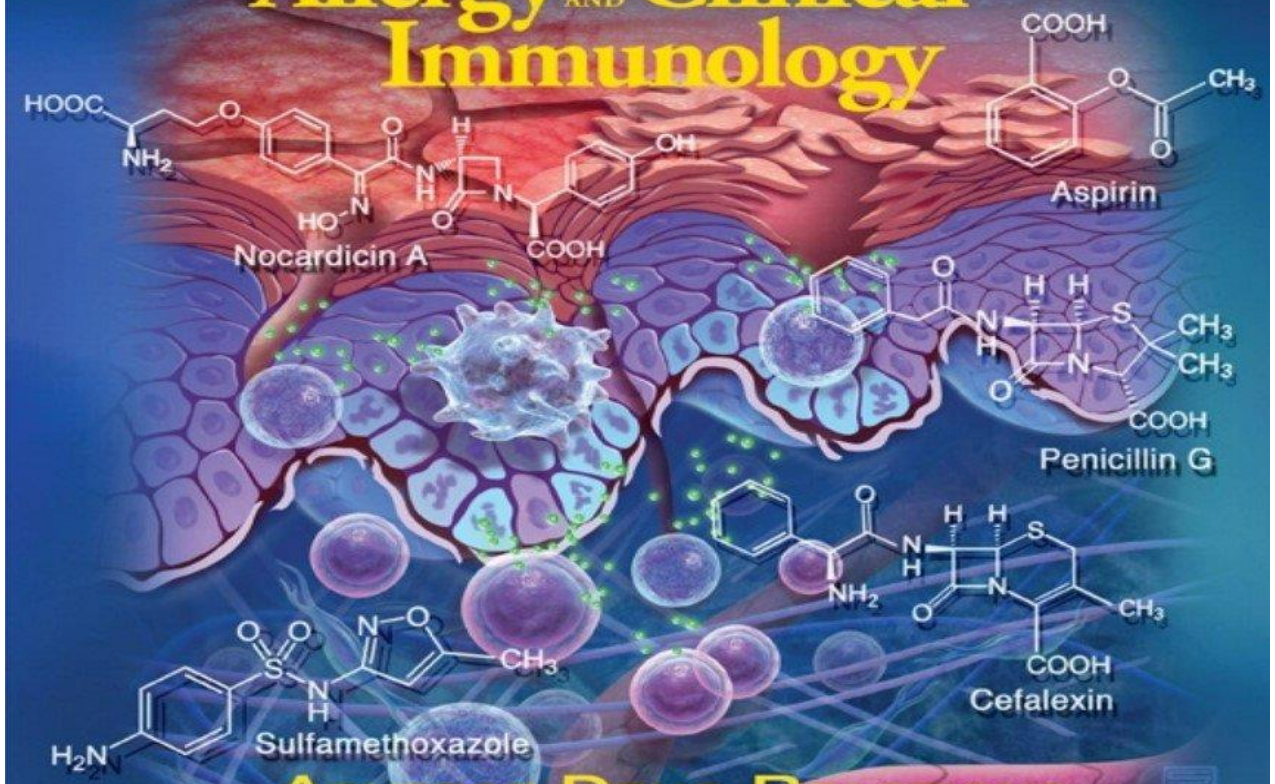

ADVERSE DRUG REACTIONS

Guest Editor: David A. Khan, MD

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REVIEWS
Updates on the immunopathology and genomics of severe cutaneous adverse drug reactions

Updates on immune mechanisms in aspirin-exacerbated respiratory disease

FUNDAMENTALS OF ALLERGY AND IMMUNOLOGY
Human natural killer cells: Form, function, and development

PRACTICE PARAMETER
The Joint Task Force on Practice Parameters GRADE guidelines for the medical management of chronic rhinosinusitis with nasal polyposis

PARADIGMS AND PERSPECTIVES
Dermatologic immune-related adverse events to checkpoint inhibitors in cancer

MRGPRX2 in drug allergy: What we know and what we do not know

Management of patients with immediate reactions to COVID-19 vaccines

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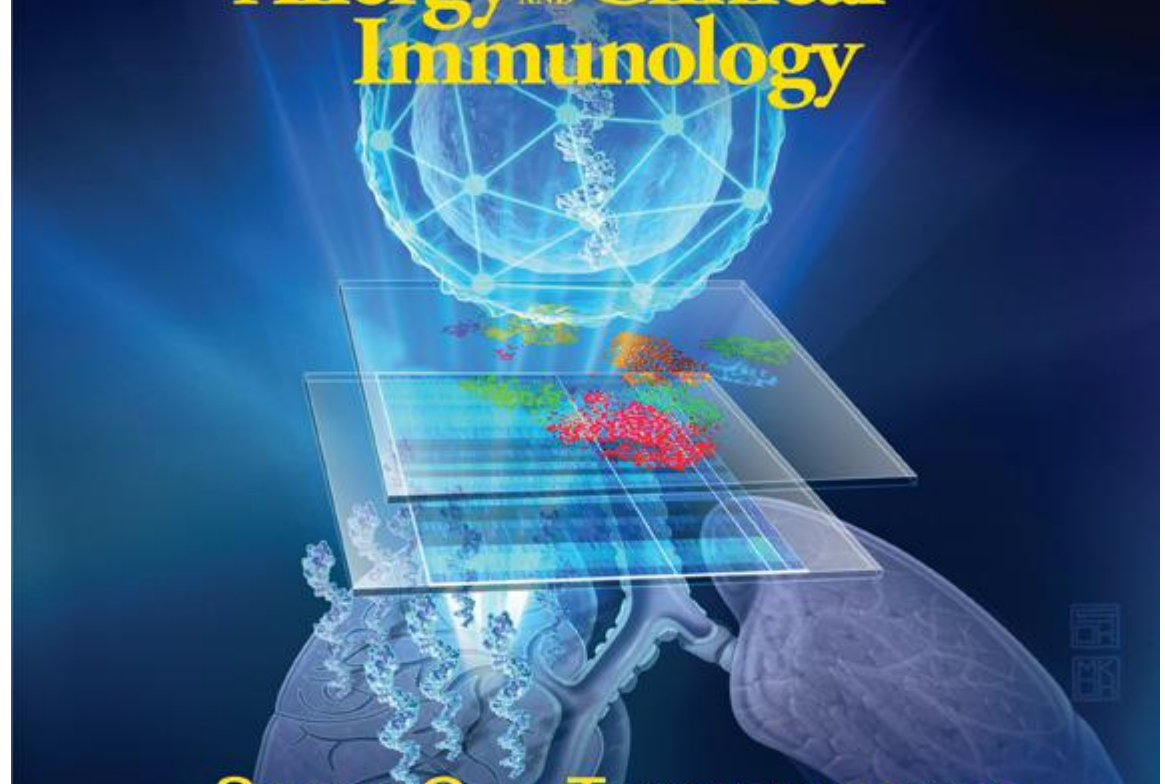

SINGLE-CELL TRANSCRIPTOMICS

Guest Editor: Simon Hogan, PhD

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REVIEWS
Defining mast cell differentiation and heterogeneity through single-cell transcriptomics analysis

Revealing the heterogeneity of CD4+ T cells through single-cell transcriptomics

Biologics for allergic and immunologic diseases

ROSTRUM
Possibilities and promise: Leveraging advances in transcriptomics for clinical decision making in allergic diseases

PARADIGMS AND PERSPECTIVES
Charting hematopoiesis in the single-cell omics era

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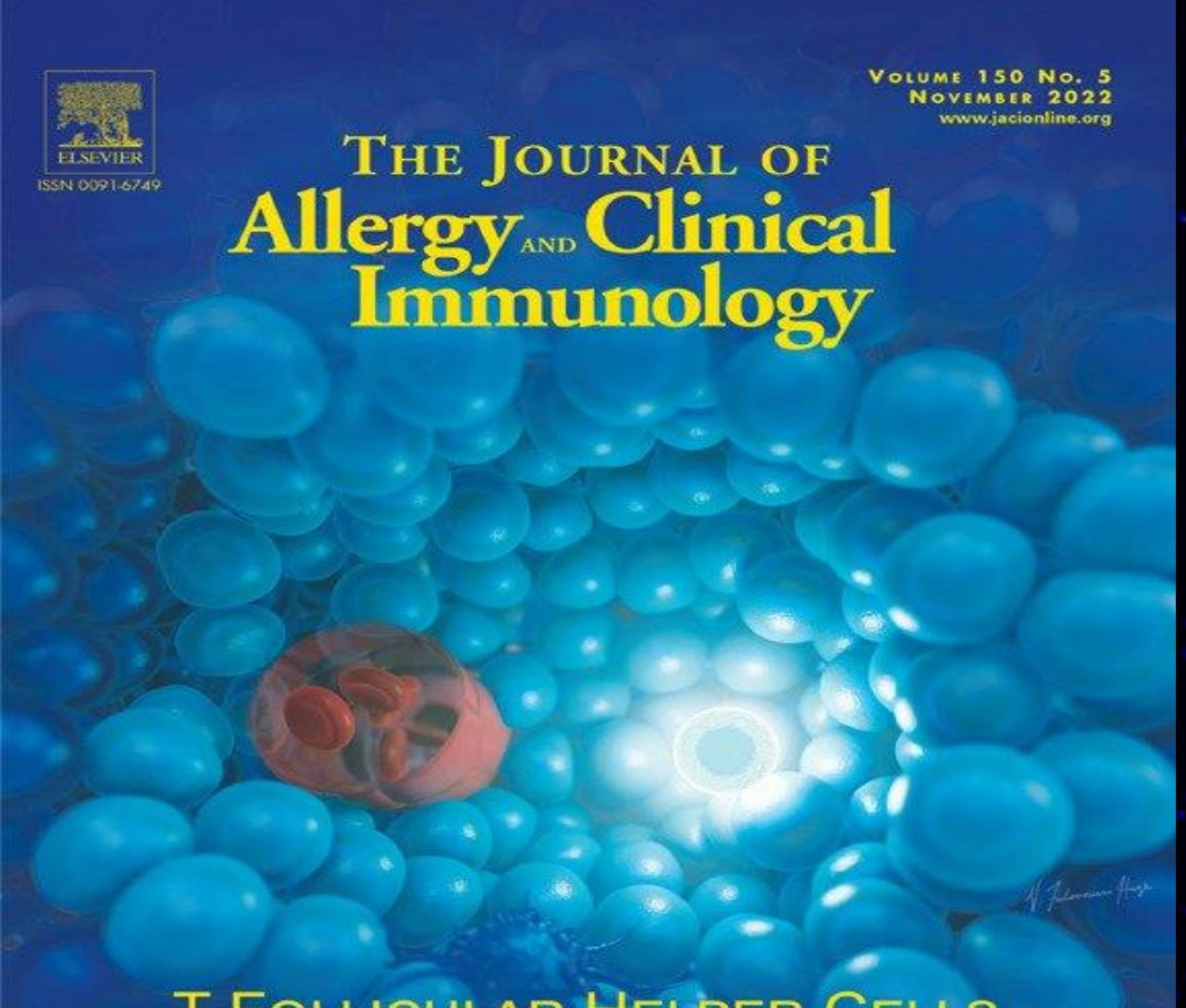

T FOLLICULAR HELPER CELLS

Guest Editor: Hirohito Kita, MD

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REVIEW
Adapting to the world: The determination and plasticity of T follicular helper cells

ROSTRUM
Heterogeneity, subsets, and plasticity of T follicular helper cells in allergy

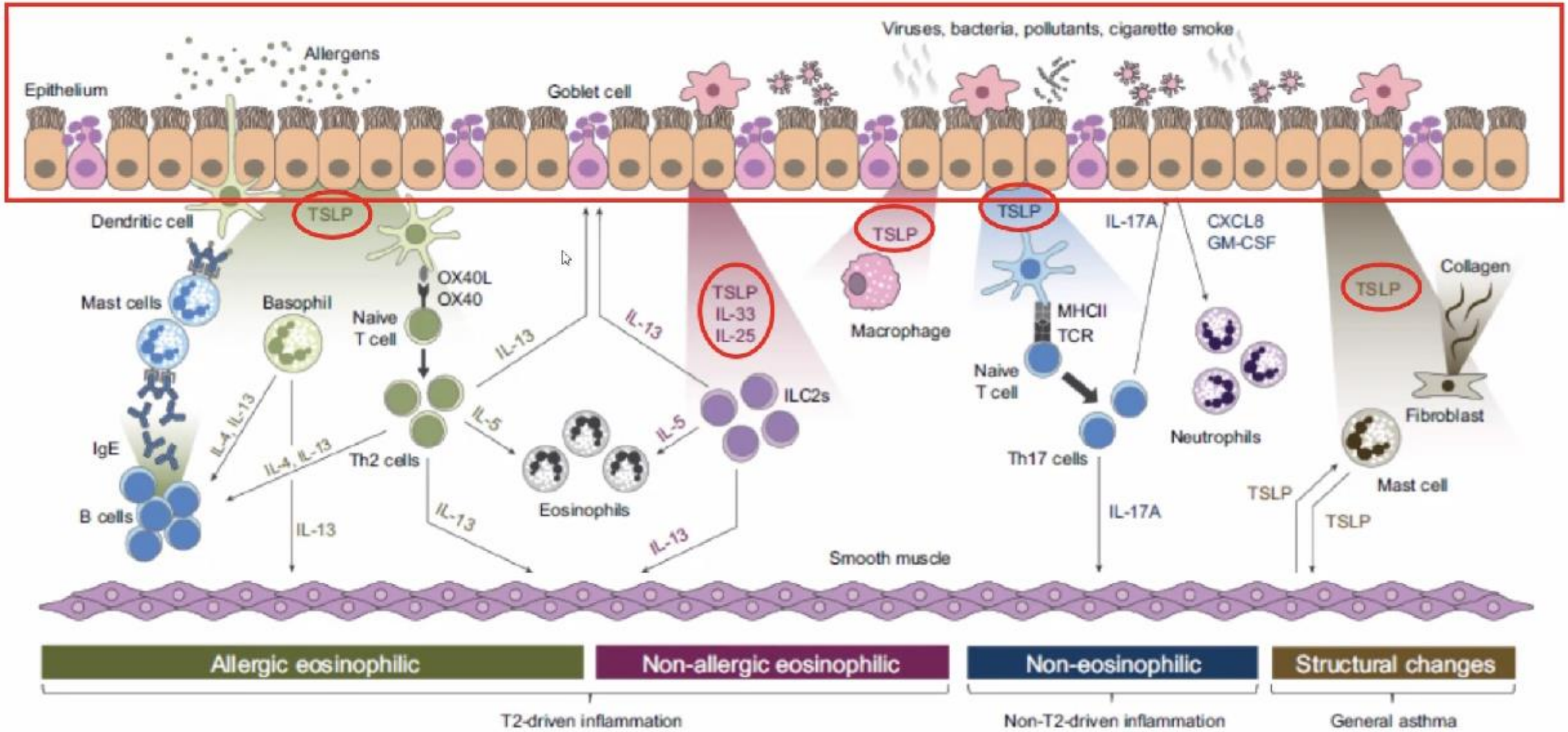
PARADIGMS AND PERSPECTIVES
T_{FH} cells regulate antibody affinity and determine the outcomes of anaphylaxis

T follicular helper cells mediate local production of allergen-specific IgE and IgG4

Regulation of the IgE response by T follicular regulatory cells

Common and distinct roles for T_H2 and T_{FH} cells in shaping the spectrum of allergic diseases

Complex, heterogeneous and coexisting mechanisms in severe asthma



Gauvreau et al. Expert Opinion on Therapeutic Targets 2020

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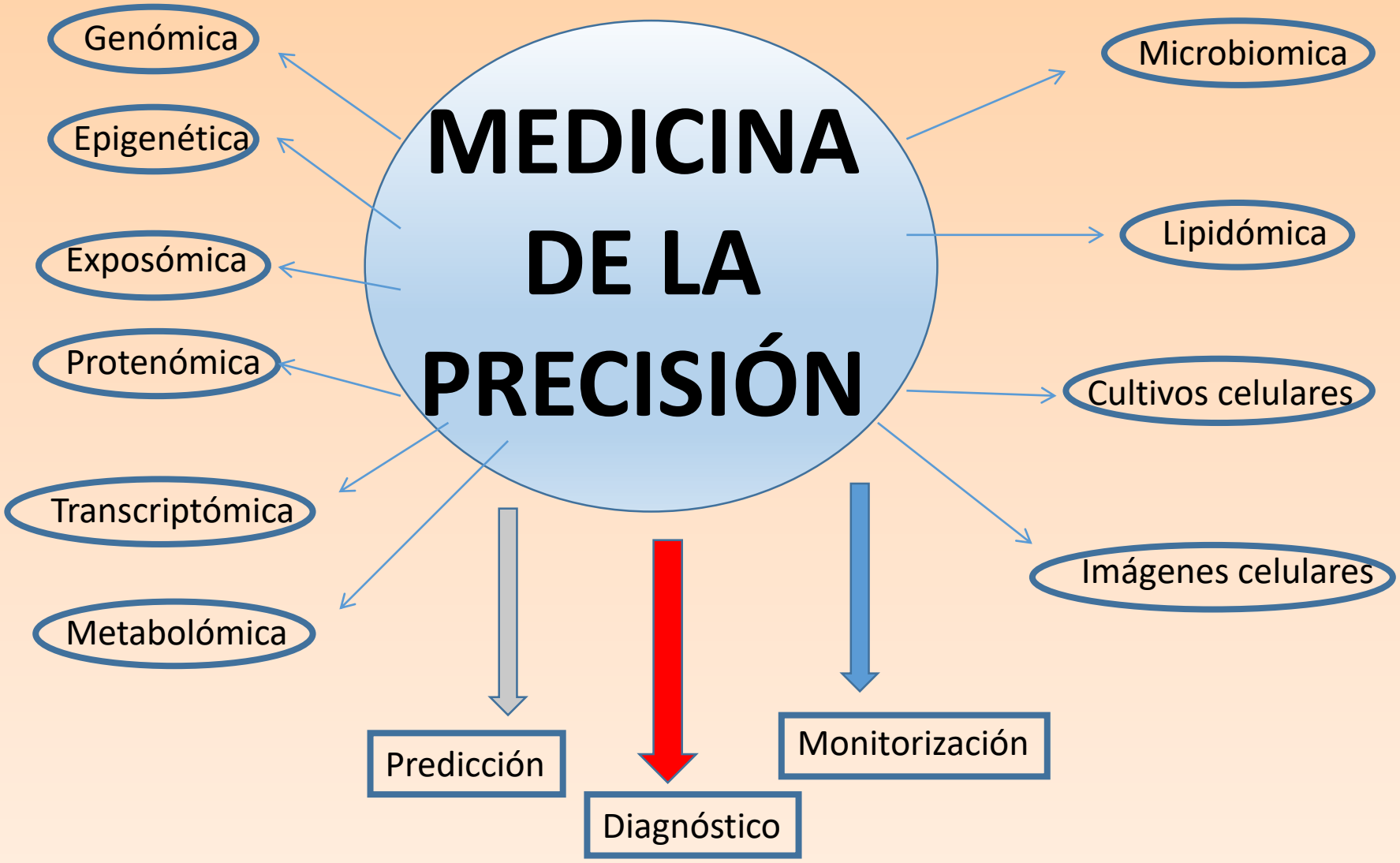
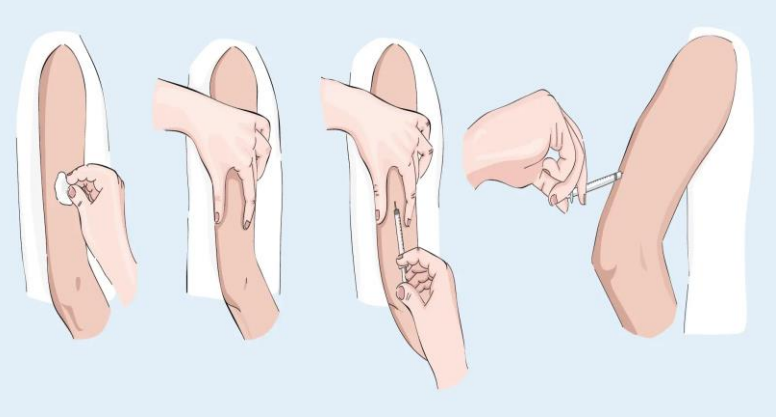

MEDICINA DE LA PRECISIÓN
Genómica
Epigenética
Exposómica
Protenómica
Transcriptómica
Metabolómica
Microbiomica
Lipidómica
Cultivos celulares
Imágenes celulares
Predicción
Diagnóstico
Monitorización



↓Células efectoras
↓Liberación de MQ
↓Citocinas inflamatorias

Basófilos Eosinófilos Mastocitos

Células dendríticas

↓Presentación de AG (IgE)

Inmunoterapia

=

↑Producción de IL-10

Monocito

B-cell

↓IgE específica α Ag
↑IgG1, IgG4, IgA α Ag

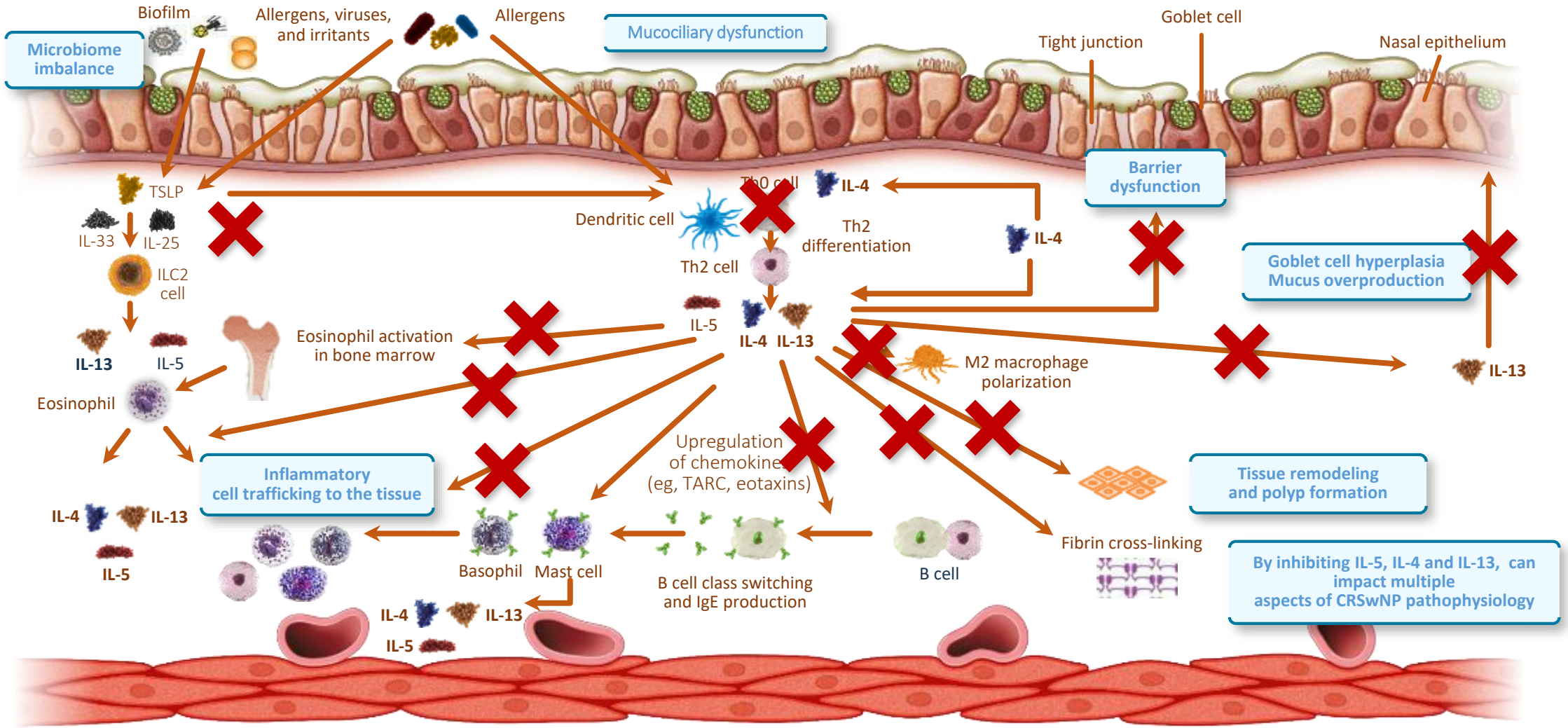
Respuesta clínica

↓Síntomas clínicos
↓Respuesta al reto con AG
↓Reactividad de PC
↑Calidad de vida
↓Sensibilización a nuevos Ag

T-cell

↓Linfocitos T en respuesta tardía
↓Citocinas Th_2 (IL-4, IL-13, IL-5
↓Linfocitos T específicos α Ag
↑Citocinas Th_1 (IL-2, IFN-γ)
↑Linfocitos T_{reg} (IL-10, TGF-β)

Actividad de los biológicos en la inflamación T2



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Agentes biológicos dirigidos contra el tipo 2 en desarrollo para el tratamiento de la RSCcPN grave

Clase	Anti-IgE	Anti-IL-5		Anti-IL-4/IL-13	Anti-TSLP	Anti-Siglec-8	Anti-IL-33	Anti-IL-33
Agente	**Omalizumab[1-5]**	**Mepolizumab[6-8]**	**Benralizumab[9-11]**	**Dupilumab*[12-15]**	**Tezepelumab[20]**	**AK-001[16,17]**	**Anti-ST2 (AMG 282)[18]**	**Etokimab[19]**
Indicaciones aprobadas	*RSCcPN grave no controlada con CEI;* Asma alérgica de moderada a grave; Urticaria crónica espontánea	Asma eosinofílica grave	Asma eosinofílica grave	*RSCcPN grave no controlada con CES y/o cirugía;* Asma eosinofílica/de tipo 2 /dependiente de CES; Dermatitis atópica de moderada a grave*	--	—	—	—
Estudios clínicos finalizados en RSCcPN	**Fase III:** PN bilateral grave recurrente (POLYP); **Fase II:** RSCcPN con asma concomitante	**Fase II**: PN bilateral grave recurrente **Fase III:** PN bilateral grave recurrente con cirugía previa (SYNAPSE)	**Fase II:** PN bilateral eosinofílica[a]	**Fase II:** **PN bilateral sintomática** **Fase III:** PN bilateral grave recurrente con/sin cirugía previa (SINUS);	--	**Fase II:** PN de moderada a grave; **Fase I:** Seguridad, tolerabilidad y FC/FD en la enfermedad atópica	**Fase I:** PN bilateral	—
Estudios en curso sobre la RSCcPN	**ELP:** RSCcPN sintomática		**Fase III:** PN bilateral grave recurrente (OSTRO)	—	**Fase III:** PN bilateral grave recurrente (WAYPOINT)	—	—	**Fase II:** RSCcPN

[a]Estudio en Japón; CEI: corticosteroides intranasales; CES: corticosteroides sistémicos; CEIN: cirugía endoscópica nasosinusal; ELP, extensión a largo plazo; ND, no disponible; PN, poliposis nasal; FD, farmacodinamia; FC, farmacocinética; UCI, urticaria crónica idiopática

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Dado que la Alergología es una especialidad multidisciplinaria, las fases de formación comprenden las siguientes rotaciones:

- **Área genérica: Medicina Interna, Urgencias y Pediatría. 12 meses.**

- **Área propia:** (Alergología) Alergia Clínica (inc. Laboratorio in vivo): 24 meses, y Laboratorio in vitro, 3 meses.

- **Áreas complementarias:** Neumología, Dermatología, ORL, rotaciones opcionales: 9 meses

- **Guardias en Medicina:** Las correspondientes a los residentes del área médica, durante los 4 años (R1 a R4). Durante los periodos de rotaciones en los Servicios de Pediatría y ORL, se complementarán las guardias médicas con guardias específicas de dichos Servicios.

Los objetivos docentes y de investigación a cubrir al final del período de formación serán el conocimiento de los métodos de investigación clínica, comunicación y publicaciones médicas, mediante:

- **la participación en ensayos clínicos y otras actividades de investigación de la unidad, la participación en las publicaciones del Servicio.**

- *EudraCT: 2020-003612-28 Protocol Title: A 52-week, randomised, double-blind, double-dummy, parallel group,multi-centre, non-inferiority study assessing exacerbation rate, additional measures of asthma control and safety in adult and adolescent severe asthmatic participants with an eosinophilic phenotype. GlaxoSmithKline Research & Development Limited. Investigador Principal: Dr. Antépara*

- **el desarrollo de habilidades de comunicación y presentaciones en congresos y reuniones de la especialidad.**

- COMUNICACIONES REGIONALES : "Allergy to Beer and Wine Caused by Saccharomyces cerevisiae in a Patient Sensitized to Fungi". J Investig Allergol Clin Immunol. 2022 Jul 22;32(4):311-313. doi: 10.18176/jiaci.0755. Epub 2021 Oct 18. German-Sanchez A, Alonso-Llamazares A, Garcia-Gonzalez F, Matala-Ahmed B, Bartolome-Zavala B, Antepara-Ercoreca I

- PUBLICACIONES: Journal in Asthma (in press). Consenso de expertos sobre los patient reported outcomes y sus instrumentos de recogida para el seguimiento del paciente con asma grave. Ignacio Antepara Ercoreca1, Eva Martínez Moragón2, María Muñoz García3, Carla Prego de la Iglesia4, Laura Benedito-Palos5 1Servicio de Alergología, Hospital Universitario de Basurto; 2Servicio de Neumología, Hospital Universitario Doctor Peset; 3Servicio de Farmacia, Hospital Universitario Ramón y Cajal;

- PONENCIAS NACIONALES: 28 octubre Ponencia Congreso SEAIC. EVALUANDO EL CONTROL EN TODOS LOS ESCALONES DE LA GUÍA GEMA (Asma Grave). Dr. Ignacio Antepara

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- Conclusion

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TESIS DOCTORAL

Presencia de alergia a alfa-gal en el área de Bilbao asociada a la garrapata Ixodes ricinus

Memoria de tesis doctoral

Doctorando
Adrián Germán Sánchez

Director
Ignacio Antepara Ercoreca

Figura 16. Disección de garrapatas *Ixodes ricinus*

A: garrapata *Ixodes ricinus* sobre placa de Petri; B: garrapata *Ixodes ricinus* sobre Placa de petri; C: disección dorsal del exoesqueleto de garrapata *Ixodes ricinus* ; D: garrapata

UAG H.U.Basurto

(Biomarcadores en asma, Normalización de Olfatometria)

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Es en la segunda mitad del Siglo XIX donde aparece una importante figura de la Medicina Clínica: **Sir William Osler**, que marca el comienzo de importantes conocimientos y aportes en la Clínica Médica y **revoluciona la enseñanza de la medicina.** **Conocido desde entonces como el padre de la medicina moderna.**