

Lezione_Seminario

Terni, maggio 2020

UN PERCORSO ACCADEMICO: «*note di viaggio*»



Stefano Coaccioli

stefano.coaccioli@gmail.com

www.stefanocoaccioli.it





THE PURPOSE IN CLINICAL MEDICINE

- *anamnesis*
- *physiopathology*
- *diagnosis*
- *therapy*
- *outcome*
- & *follow up*



★ = purpose

Stefano Coaccioli

Case Report



Coaccioli S., Ponteggia F., Di Cato L., Allegra A., Puxeddu A. (1999). Onset of myasthenia gravis in a patient affected by rheumatoid arthritis never treated with disease-modifying anti-rheumatic drugs. PANMINERVA MEDICA, vol. 41(2), p. 135-137

Coaccioli S., Donati L., Di Cato L., Puxeddu A., Villani C. (1998). Onset of erythema nodosum during pregnancy: a case report. CLINICAL AND EXPERIMENTAL OBSTETRICS AND GYNECOLOGY, vol. 25(1-2), p. 40-41

Agenda

1. Biochimica: RBC & PTL

2. Immunologia e Clinica

- **Diabete Mellito**

- **Malattie Reumatiche**

3. Medicina Narrativa e della Complessità

4. Medicina del Dolore

BIOCHIMICA



Puxeddu A., Scionti L., Coaccioli S., Brunetti P. (1980). **Red blood cell glycolytic intermediates (RBCGI) in G6PD deficient subjects**. In: *1st African and Mediterranean Congress of Clinical Chemistry*. Milano, 11-15/11/1980.

Puxeddu A., Scionti L., Coaccioli S. (1984). **Comportamento degli intermedi fosforilati glicolitici e dei nucleotidi adenosinici eritrocitari nel Favismo ittero-emoglobinurico, nella Sferocitosi ereditaria e nella Anemia emolitica congenita non sferocitica da carenza di piruvico-chinasi**. Annali della Facoltà di Medicina e Chirurgia. Atti dell'Accademia Anatomico-Chirurgica della Facoltà di Medicina dell'Università di Perugia. vol. 75(1):1-13, ISSN: 0365-2270

Corbucci G.G., Montanari G., Bettelli A., Lazzarini T., Gohil K., Jones D., Edwards R.H.T., Scionti L., Coaccioli S., Calafiore R. (1984). **RBC and platelet behaviour related to mitochondrial substrate oxidation and plasma metabolite levels in elite marathon runners**. In: *Current topics in sports medicine: proceedings of the World Congress of Sports Medicine*, Vienna 1982. p.454-465, Urban & Schwarzenberg

Agenda

1. Biochimica: RBC

2. Immunologia e Clinica

- *Diabete Mellito*

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3. Medicina Narrativa e della Complessità

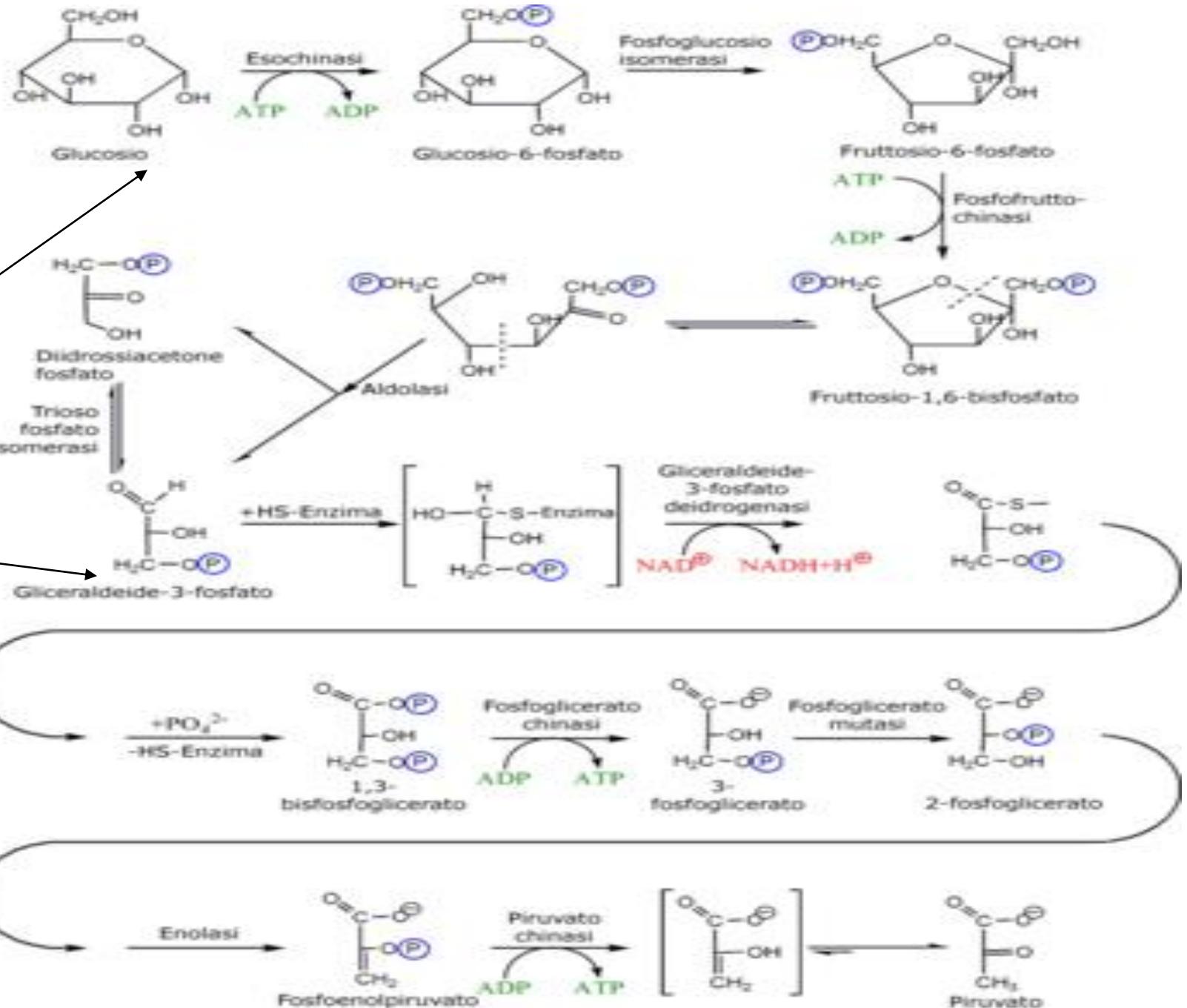
4. Medicina del Dolore

La Glicolisi Anaerobia Eritrocitaria

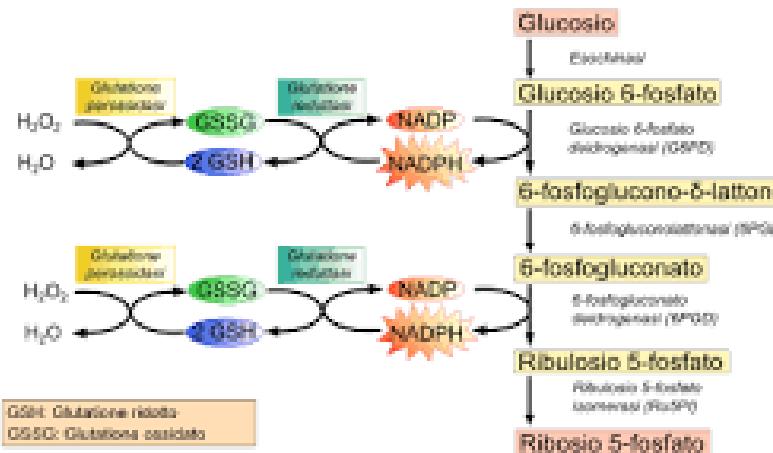
La glicolisi è un processo metabolico anaerobio mediante il quale una molecola di **glucosio** viene scissa in due molecole di **piruvato** al fine di generare molecole a più alta energia (2 molecole di **ATP** e 2 molecole di **NADH** per ogni molecola di glucosio utilizzata). La glicolisi (**via di Embden-Meyerhof**) è il mezzo per ottenere energia più sfruttato in natura. In una prima fase del processo (5 passaggi) viene consumata energia (fase di consumo energetico) per ottenere dal glucosio molecole di un derivato del glucosio a più alta energia (gliceraldeide-3-fosfato) che verranno poi trasformate nella fase successiva (5 passaggi) nelle molecole nettamente meno energetiche di piruvato, con produzione di energia superiore a quella consumata nella prima fase.

Glicolisi Anaerobia Eritrocitaria

Fase di investimento Fase di rendimento



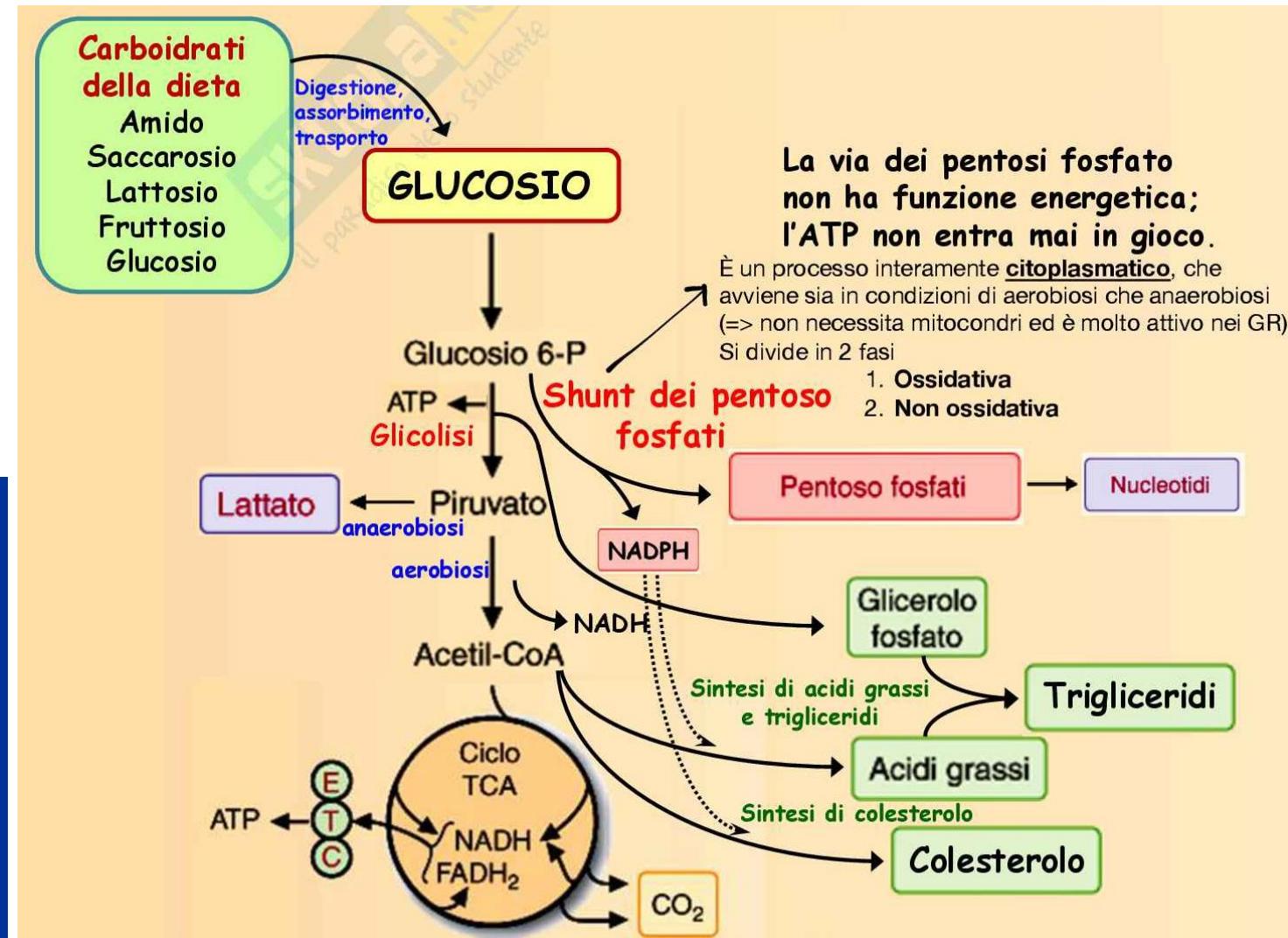
**La via dei pentoso fosfati
e la produzione del glutathione**



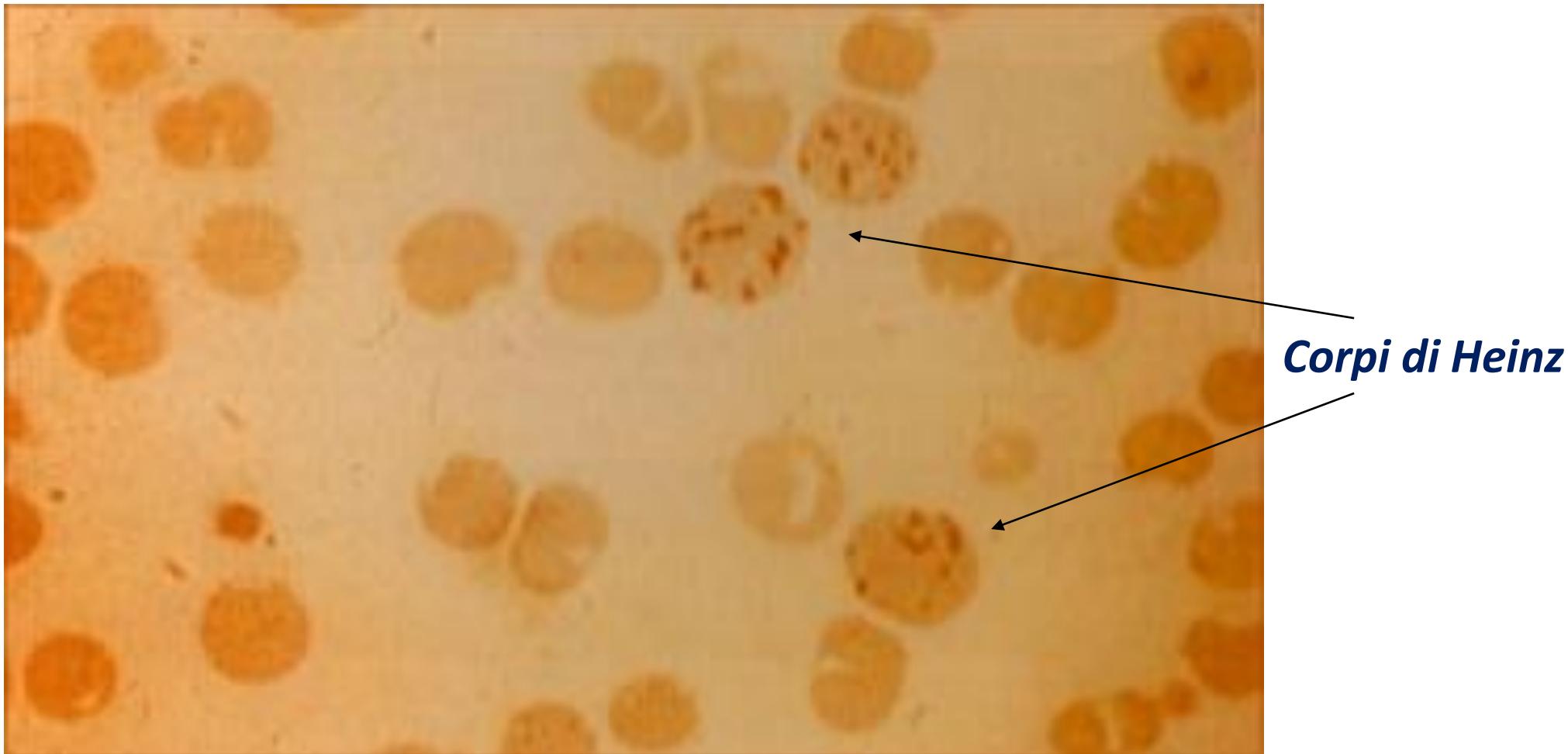
Ritirato da: A. Mehta et al. Baileya's Best Pract Res Clin Hematol 2000;13:21-38.

- Produce NADPH per le biosintesi
- Produce **riboso-5-P**
- E' costituito da due tappe ossidative seguito da 5 tappe non ossidative
- Avviene principalmente nel citoplasma degli epatociti e degli adipociti
- Il NADPH è utilizzato nel citosol per la biosintesi degli acidi grassi

Glicolisi Anaerobia Eritrocitaria: *il ciclo dei pentosofosfati*



Glicolisi Anaerobia Eritrocitaria: *gli Intermedi Fosforilati nella Carenza di G6PD*



Glicolisi Anaerobia Eritrocitaria: gli Intermedi Fosforilati nella Carenza di G6PD

Soggetti emizigoti

	G6P	F6P	FDP	DHAP	GA3P	2,3DPG	3PGA	2PGA	PEP	PIRUVATO	LATTATO	ATP	ADP	AMP
p<	0.01 aumentato	0.5 aumentato	0.05 aumentato	n.s.	n.s.	n.s.	n.s.	0.0125 aumentato	0.5 aumentato	n.s.	n.s.	n.s.	0.0025 aumentato	n.s.

Soggetti eterozigoti

	G6P	F6P	FDP	DHAP	GA3P	2,3DPG	3PGA	2PGA	PEP	PIRUVATO	LATTATO	ATP	ADP	AMP
p<	n.s.	0.5 aumentato	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	0.5 aumentato	n.s.	n.s.	n.s.	0.025 aumentato	n.s.

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- **Malattie Reumatiche**

3. Medicina Narrativa e della Complessità

4. Medicina del Dolore

IMMUNOLOGIA DI BASE.1

Fettucciari, Katia, Ponsini, Pamela, Gioe', Davide, Macchioni, Lara, Palumbo, C, Antonelli, E, Coaccioli, Stefano, Villanacci, V, Corazzi, Lanfranco, Marconi, Pierfrancesco, Bassotti, Gabrio (2017). **Enteric glial cells are susceptible to Clostridium difficile toxin B.** CELLULAR AND MOLECULAR LIFE SCIENCES, vol. 74, p. 1527-1551, ISSN: 1420-682X, doi: 10.1007/s00018-016-2426-4

Gunnellini M, Emili R, Coaccioli S, Liberati Am (2012). **The role of autologous stem cell transplantation in the treatment of diffuse large B-cell lymphoma.** ADVANCES IN HEMATOLOGY, vol. 2012, ISSN: 1687-9104, doi: 10.1155/2012/195484

Macchioni L., Davidescu M., Sciaccaluga M., Marchetti M., Migliorati G., Coaccioli S., Roberti R., Corazzi L., Castigli E (2011). **Mitochondrial dysfunction and effect of antiglycolytic bromopyruvic acid in GL15 glioblastoma cells.** JOURNAL OF BIOENERGETICS AND BIOMEMBRANES, vol. 43, p. 507-518, ISSN: 1573-6881, doi: 10.1007/s10863-011-9375-2



ROSATI, Emanuela, SABATINI, Rita, RAMPINO, GIULIANA, TABILIO, Antonio, Di Ianni M., FETTUCCIARI, Katia, BARTOLI, Andrea, COACCIOLI, Stefano, Screpanti I., MARCONI, Pierfrancesco (2009). **Constitutively activated Notch signaling is involved in survival and apoptosis resistance of B-CLL cells.** BLOOD, vol. 113(4), p. 856-865, ISSN: 0006-4971, doi: 10.1182/blood-2008-02-139725

IMMUNOLOGIA DI BASE.2

Capodicasa E., Cornacchione P., Natalini B., Bartoli A., Coaccioli S., Marconi P., Scaringi L. (2008). **Omeprazole induces apoptosis in normal human polymorphonuclear leucocytes.** INTERNATIONAL JOURNAL OF IMMUNOPATHOLOGY AND PHARMACOLOGY, vol. 21(1), p. 73-85, ISSN: 0394-6320

ROSATI, Emanuela, MENCARELLI, Simona, MAGINI, Alessandro, SABATINI, Rita, TASSI, Carmelo, ORLACCHIO, Aldo, COACCIOLI, Stefano, FRENGUELLI, Antonio, MARCONI, Pierfrancesco, EMILIANI, Carla (2007). **Enhancement of lysosomal glycohydrolase activity in human primary B lymphocytes during spontaneous apoptosis.** INTERNATIONAL JOURNAL OF IMMUNOPATHOLOGY AND PHARMACOLOGY, vol. 20(2), p. 279-287, ISSN: 0394-6320, doi: 10.1177/039463200702000208



Bianchini R., NOCENTINI, Giuseppe, Krausz L. T., FETTUCCIARI, Katia, COACCIOLI, Stefano, RONCHETTI, Simona, RICCARDI, Carlo (2006). **Modulation of Pro- and Anti-apoptotic Molecules in Double-Positive (CD4+CD8+) Thymocytes following Dexamethasone Treatment.** JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS, vol. 319/2006, p. 887-897, ISSN: 0022-3565, doi: 10.1124/jpet.106.108480

IMMUNOLOGIA APPLICATA.1

Coaccioli S., Di Cato L., Panaccione A., Crapa M.E., Paladini A., Marinangeli F. (2013). **Circulating anti-nuclear antibodies in uveitis.** LA CLINICA TERAPEUTICA, vol. 164, p. E93-E96, ISSN: 0009-9074, doi: 10.7417/CT.2013.1538

Coaccioli S., Di Cato L., Panaccione A., Crapa M.E., Paladini A., Piroli A., Marinangeli F. (2013). **Hydromorphone does not influence the immune response in patients affected by chronic pain.** LA CLINICA TERAPEUTICA, vol. 164, p. E97-E99, ISSN: 0009-9074, doi: 10.7417/CT.2013.1539

Coaccioli S., Capitò G., Valentini M., Pinoca F., Landucci P., Fatati G., Puxeddu A. (2007). **Intima-media thickness of common carotid as a cardiovascular risk factor in rheumatoid arthritis and (in) metabolic disorders.** LA CLINICA TERAPEUTICA, vol. 158(6), p. 505-508, ISSN: 0009-9074



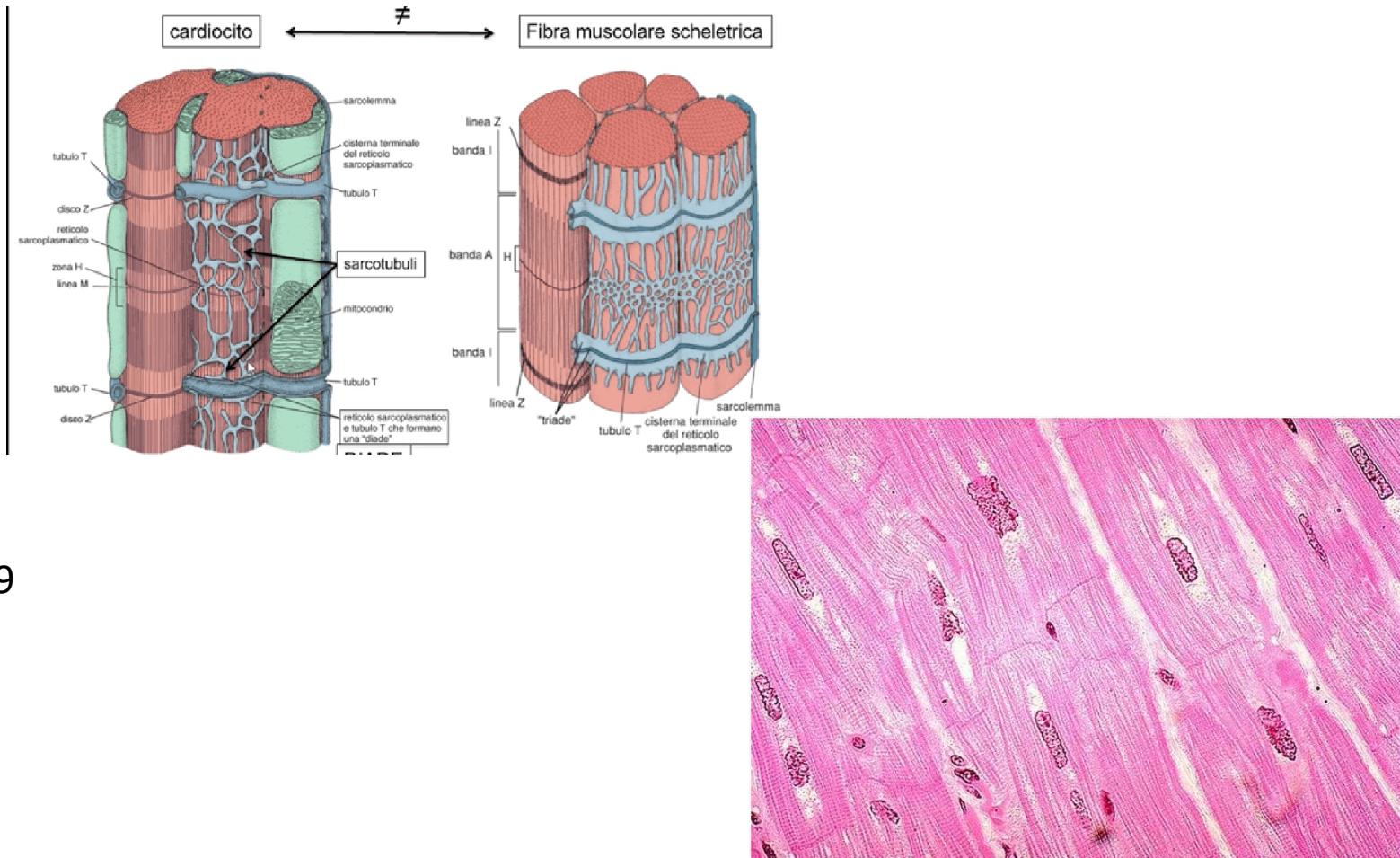
Coaccioli S., Bovelli D., Zumbo F., Di Cato L., Ponteggia M., Puxeddu A. (1998). **Cardiac muscle antibodies in diabetes mellitus and dilated cardiomyopathy: preliminary results.** DIABETES, NUTRITION & METABOLISM, vol. 11(6), p. 347-349, ISSN: 0394-3402

IMMUNOLOGIA APPLICATA.1

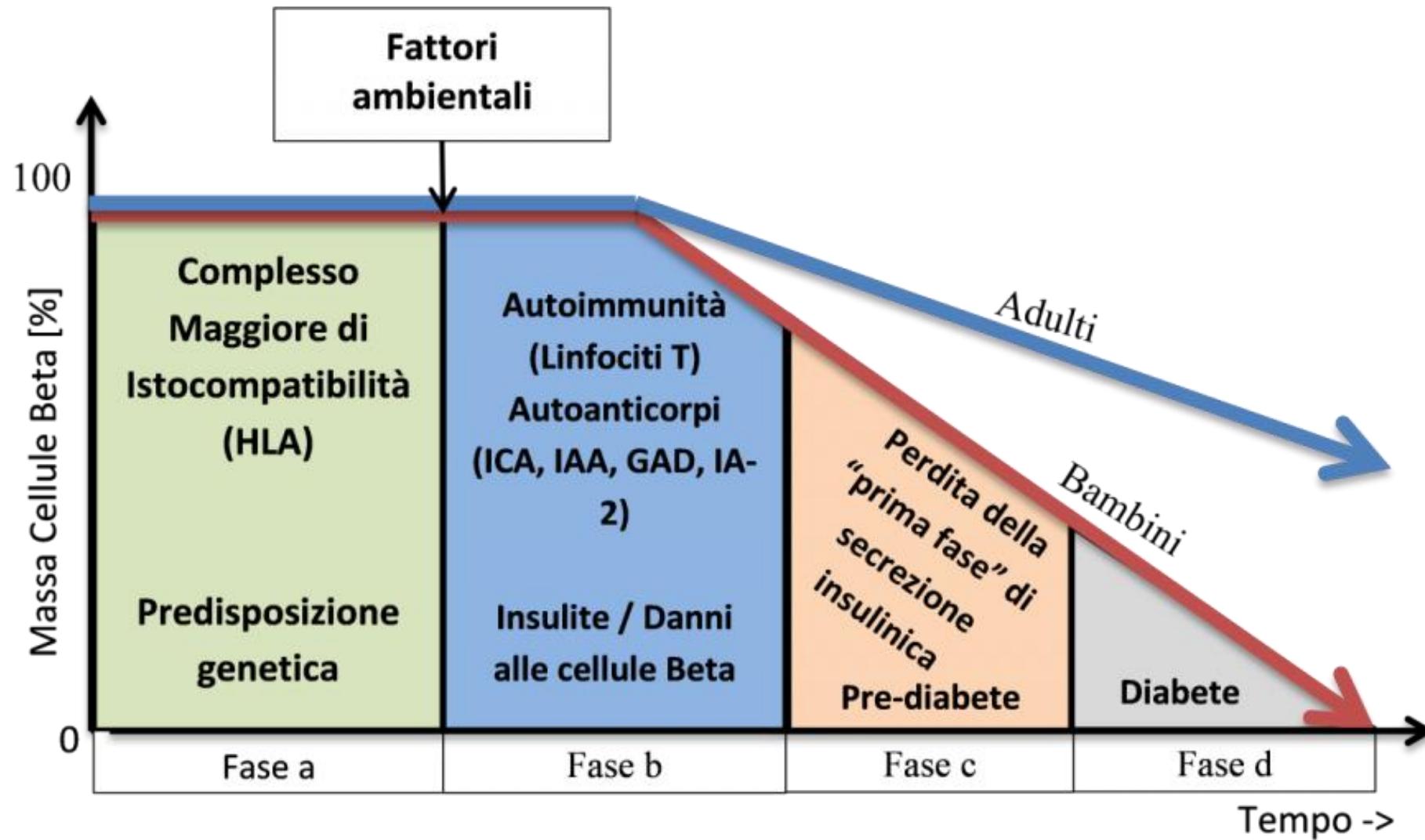
Coaccioli S., Bovelli D., Zumbo F., Di Cato L., Ponteggia M., Puxeddu A. (1998).

Cardiac muscle antibodies in diabetes mellitus and dilated cardiomyopathy

DIABETES, NUTRITION & METABOLISM, vol. 11(6), p. 347-349



Diabete Mellito tipo 1: *storia naturale*



Genetica e Immunologia del Diabete Mellito

Coaccioli S., Fatati G., Travaglini A., Valentini M., Puxeddu A. (1988). **Impiego della timostimolina come agente immunomodulante nel diabete mellito insulino-dipendente all'esordio clinico.** Recenti Progressi in Medicina.. vol. 79(12 suppl.) , p. 263 -264, ISSN: 0034-1193

Coaccioli S., Fatati G., Travaglini A., Valentini M., Puxeddu A. (1988). **Riduzione dell'espressione dell'antigene la nei linfociti totali periferici in corso di terapia immunomodulante in pazienti affetti da diabete mellito insulino-dipendente (tipo 1) all'esordio clinico.** In: Giornale Italiano di Diabetologia.. GIORNALE ITALIANO DI DIABETOLOGIA, vol. 8(2) , ISSN: 0391-7525

Coaccioli S., Romano R., Napoleoni P., Fatati G., Travaglini A., Valentini M., Puxeddu A. (1987). **Riduzione delle frazioni sieriche 3 e 4 del complemento (C3-C4) in pazienti affetti da diabete mellito di tipo 1 all'esordio clinico.** In: VI Congresso Nazionale Associazione Medici Diabetologi. . GIORNALE ITALIANO DI DIABETOLOGIA, vol. 7(2) , ISSN: 0391-7525, Grado , 9-12/04/1987

Coaccioli S., Tazza G., Arzano S., Puxeddu A. (1986). **Aumento della beta-2-microglobulina sierica in pazienti affetti da diabete mellito insulino-dipendente (IDDM) di recente insorgenza.** In: XI Congresso Nazionale della Società Italiana di Diabetologia. . GIORNALE ITALIANO DI DIABETOLOGIA, vol. 6(3) , ISSN: 0391-7525

 Coaccioli S., Fatati G., Valentini M., Travaglini A., Gagliardo S., Puxeddu A. (1986). **Retinopatia diabetica: distribuzione delle sottopolazioni linfocitarie in pazienti insulino-dipendenti.** Giornale Italiano di Diabetologia, vol. 6(1) , p. 133 -134, ISSN: 0391-7525

Genetica e Immunologia del Diabete Mellito

- Coaccioli S., Fabrizio N., Puxeddu A. (1984). **Increased natural killer cells (NK) in insulin-dependent diabetes mellitus (IDDM)**. In: International Symposium on "Monoclonal Antibodies '84: biological and clinical applications". Firenze, 16-19/10/ 1984
- Coaccioli S., Puxeddu A. (1984). **T-lymphocyte subsets studied by monoclonal antibodies (McAb) in insulin-dependent diabetes mellitus (IDDM)**. In: International Symposium on "Monoclonal Antibodies '84: biological and clinical applications". Firenze, 16-19/10/1984.
- Puxeddu A., Gambelunghe C., Macrì M., Calabrese G., Scionti L., Ventura M.M., Coaccioli S., Calafiore R., Falorni A., Benda N., Brunetti P. (1983). **Incidenza degli antigeni di istocompatibilità HLA nel diabete mellito di tipo 1 nella popolazione umbra**. In: IV Congresso Nazionale Associazione Medici Diabetologi. Sorrento, 12-14/05/1983.

Immunologia del Diabete Mellito

Anticorpi anti-insula pancreatică – ICA

The Journal of Immunology

Reprinted from *The Lancet*, Vol. 304, G. F. Bottazzo, A. Florin-Christensen, and D. Doniach, Islet-cell antibodies in diabetes mellitus with autoimmune polyendocrine deficiencies, pp. 1279-1283, Copyright 1974, with permission from Elsevier.

The Lancet · Saturday 30 November 1974

ISLET-CELL ANTIBODIES IN DIABETES MELLITUS WITH AUTOIMMUNE POLYENDOCRINE DEFICIENCIES

GIAN FRANCO BOTTAZZO
ALEJO FLORIN-CHRISTENSEN
DEBORAH DONIACH

Department of Immunology, Middlesex Hospital Medical School, London W1P 9PG

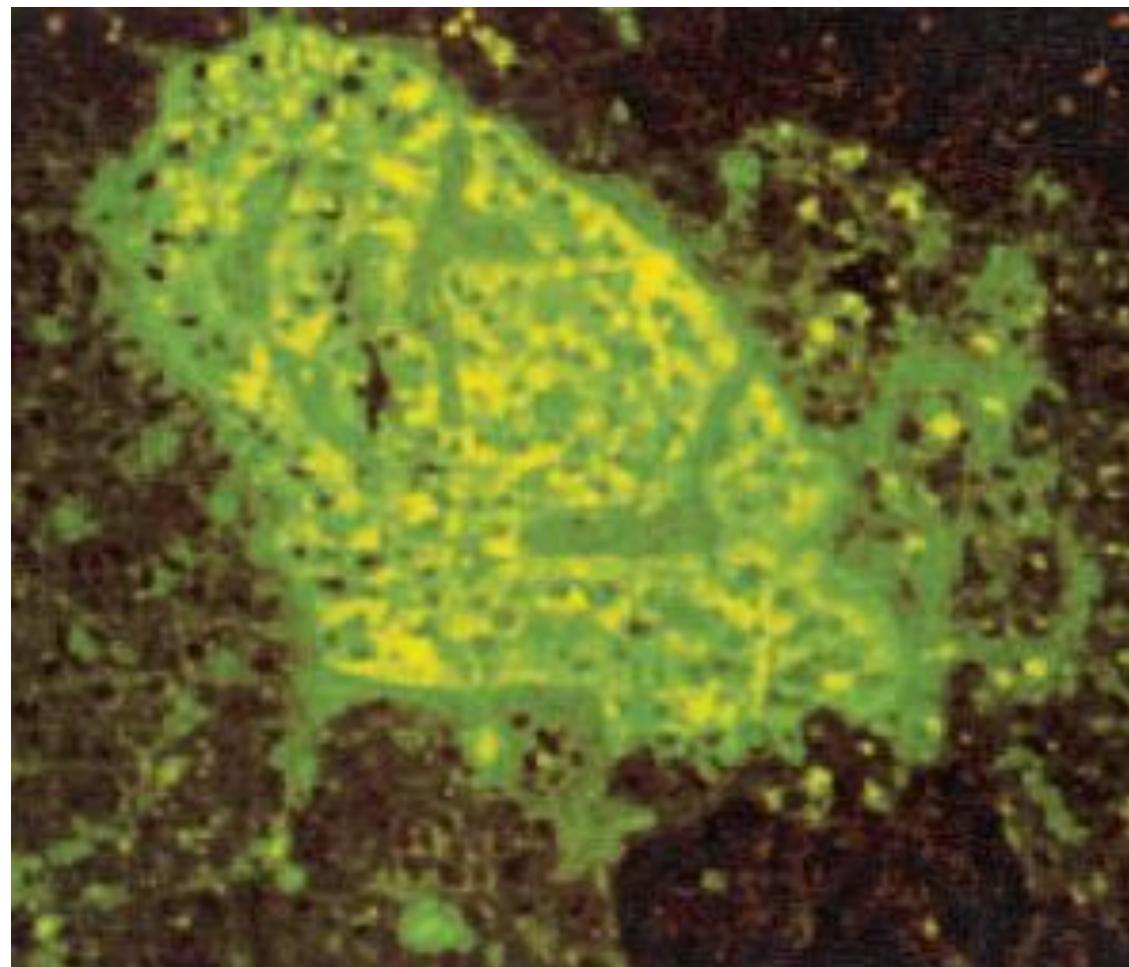
Summary Antibodies to pancreatic islet cells were found by immunofluorescence in the sera of 13 patients with multienocrine deficiencies associated with organ-specific autoimmunity. 10 of these patients were diabetic. The antibodies were complement fixing and of IgG class; titres varied from 1 to 160 and were independent of insulin treatment. The presence of organ-specific pancreatic antibodies supports the hypothesis of an autoimmune form of diabetes mellitus put forward to explain the histological "insulitis" found in selected cases of this disease. This new marker allows the segregation of a homogeneous group of insulin-dependent diabetics who may well prove to have a different metabolic pattern from that in other forms of inherited diabetes mellitus.

families where diabetes coincided with autoimmune thyroiditis, gastritis, adrenalitis with or without hypogonadism, and with idiopathic hypoparathyroidism. Many of these patients had overt T-cell defects with chronic candidiasis as well.¹⁰

Histological "insulitis" has been reported in a number of acute juvenile untreated diabetics,^{11,12} and in occasional old patients with I.D.D. where viral infection was less likely.¹³ Insulitis showing lymphocytes and plasma-cells in the infiltrate was also found in the only diabetic, a boy of 16, within a post-mortem series of 12 cases of Addison's disease.¹⁴

Inflammatory changes in pancreatic islets with impaired glucose tolerance have been obtained in laboratory animals injected with islet-rich homogenates in Freund adjuvant¹⁵ similar to the temporary thyroiditis, gastritis, and adrenalitis induced with the appropriate organ-specific antigens in several species. More direct evidence of pancreatic autoimmunity in human patients was obtained by Nerup et al.¹⁶ and others^{17,18} using the leucocyte migration inhibition test with islet-cell extracts in up to one-third of juvenile diabetics and in occasional older patients with I.D.D.

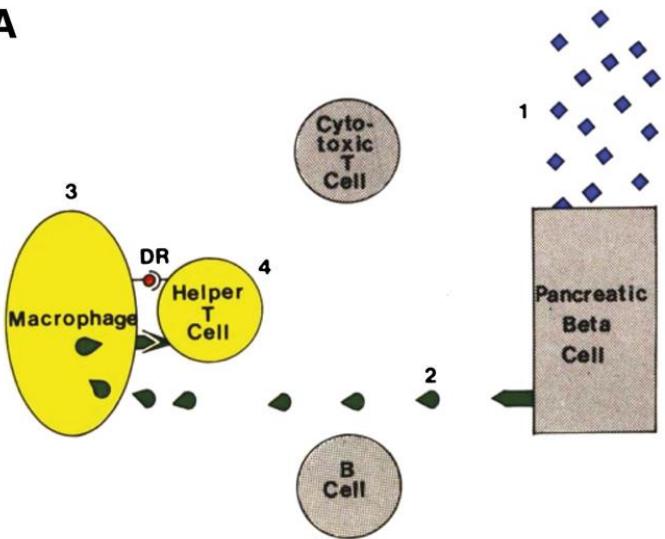
Obviously diabetes mellitus represents a large number of disorders¹⁹ affecting various aspects of metabolism connected with insulin and glucagon.²⁰ Fur-



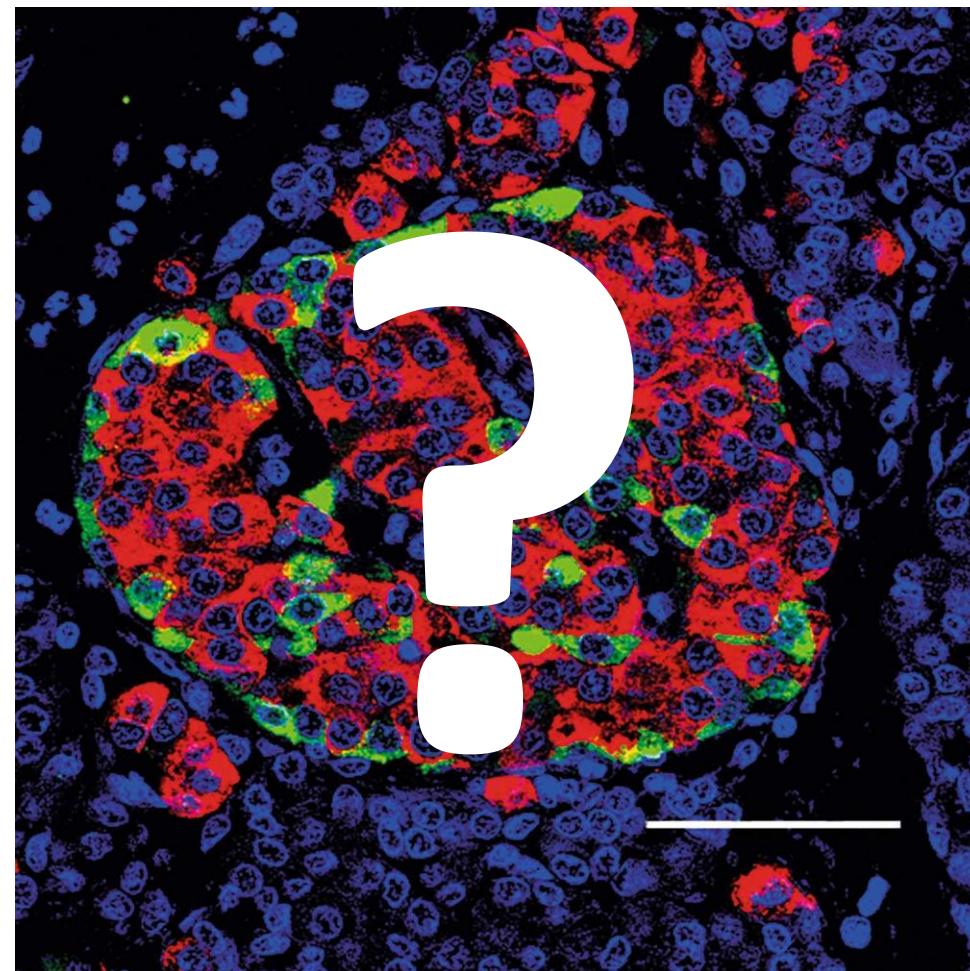
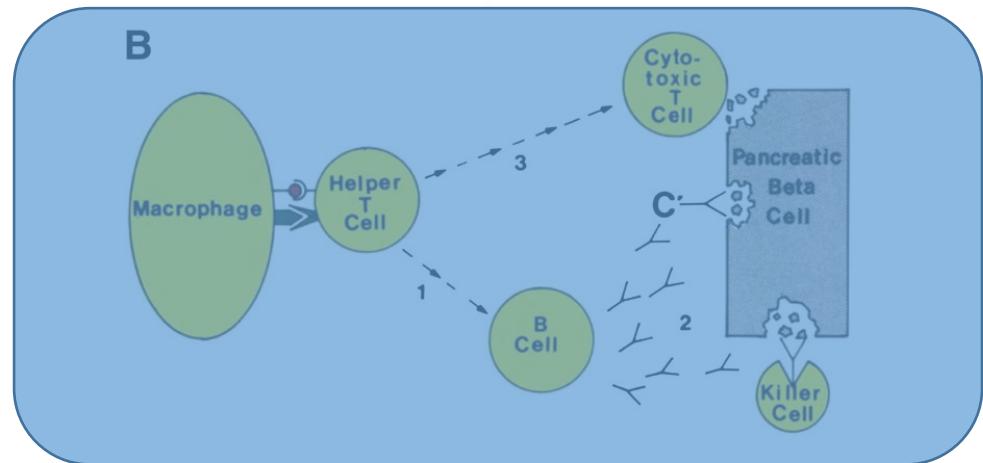
Immunologia del Diabete Mellito

Anticorpi anti-insula pancreatica – ICA

A

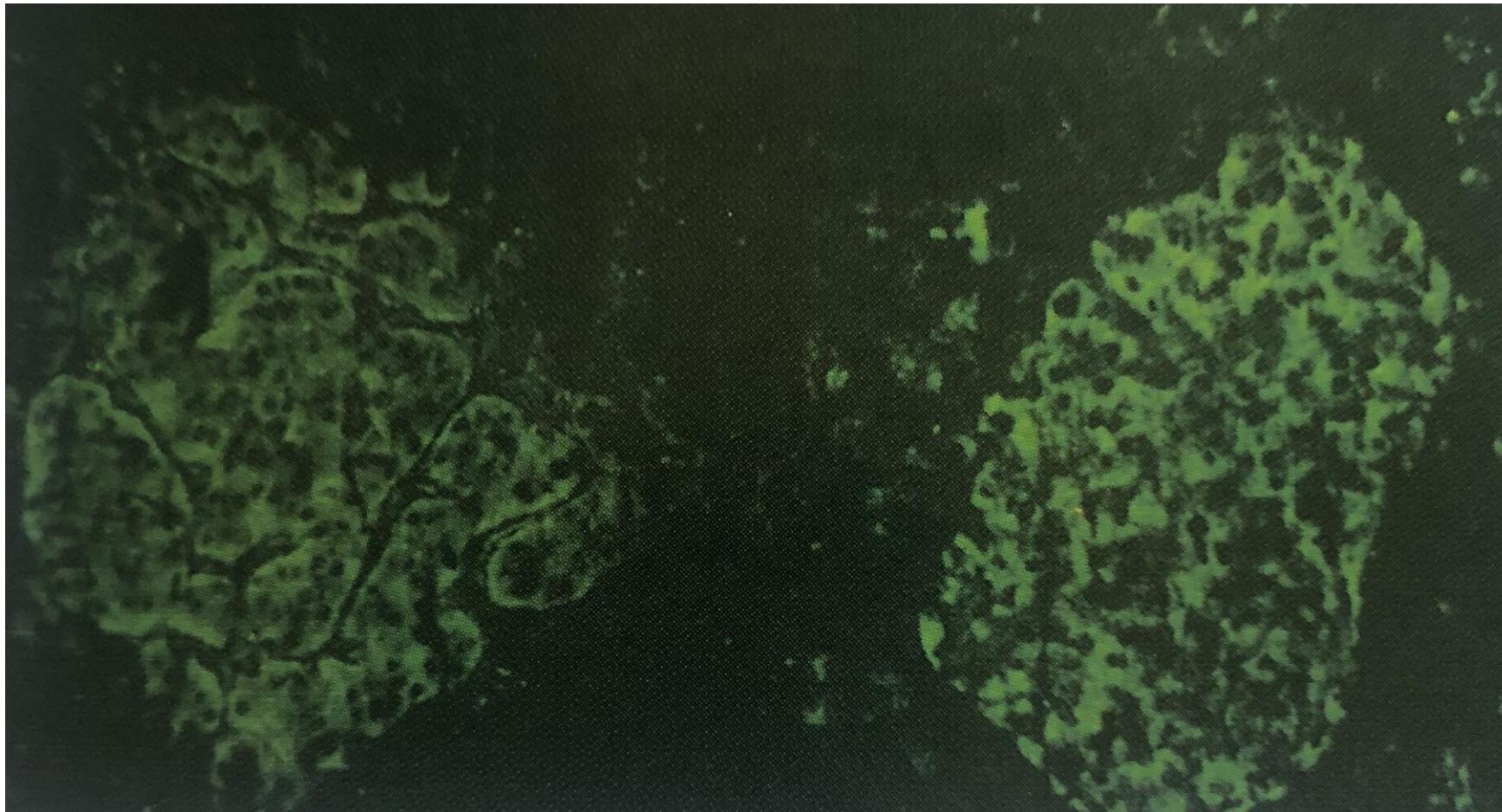


B



Immunologia del Diabete Mellito

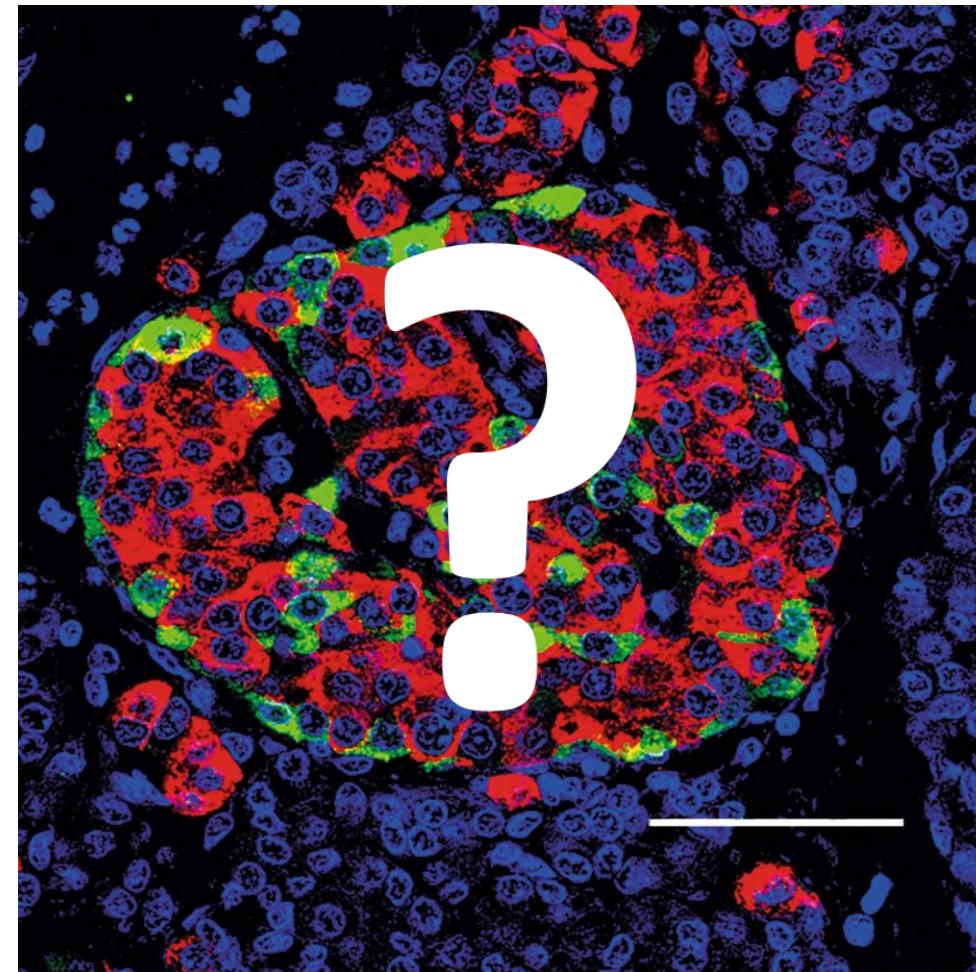
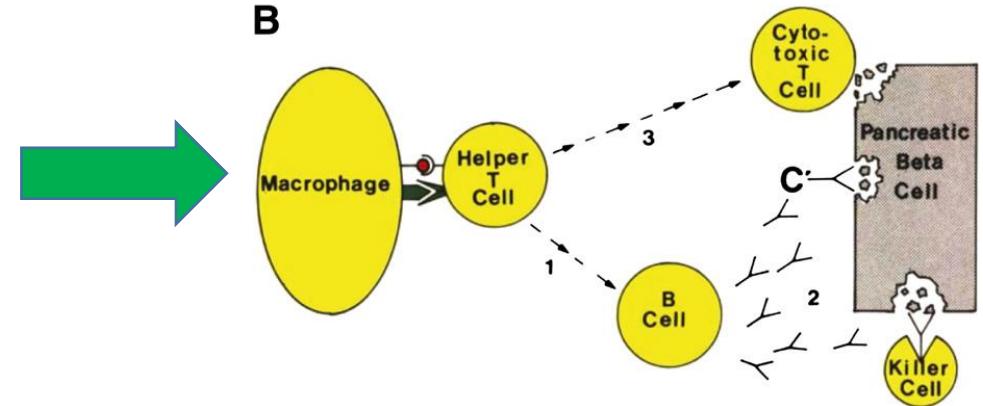
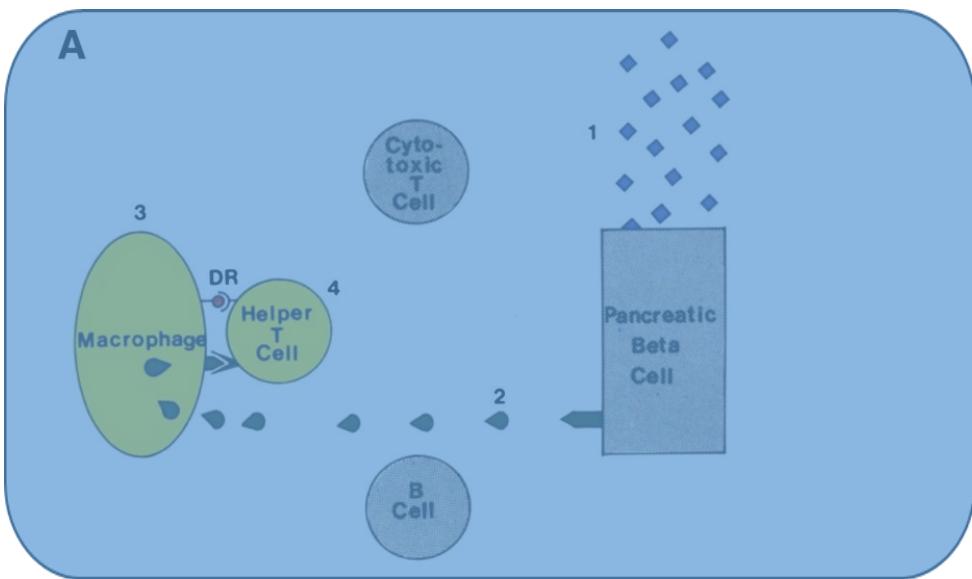
Anticorpi anti-insula – restricted (CF) ICA



Lernmark, A et al.
NEJM 1978

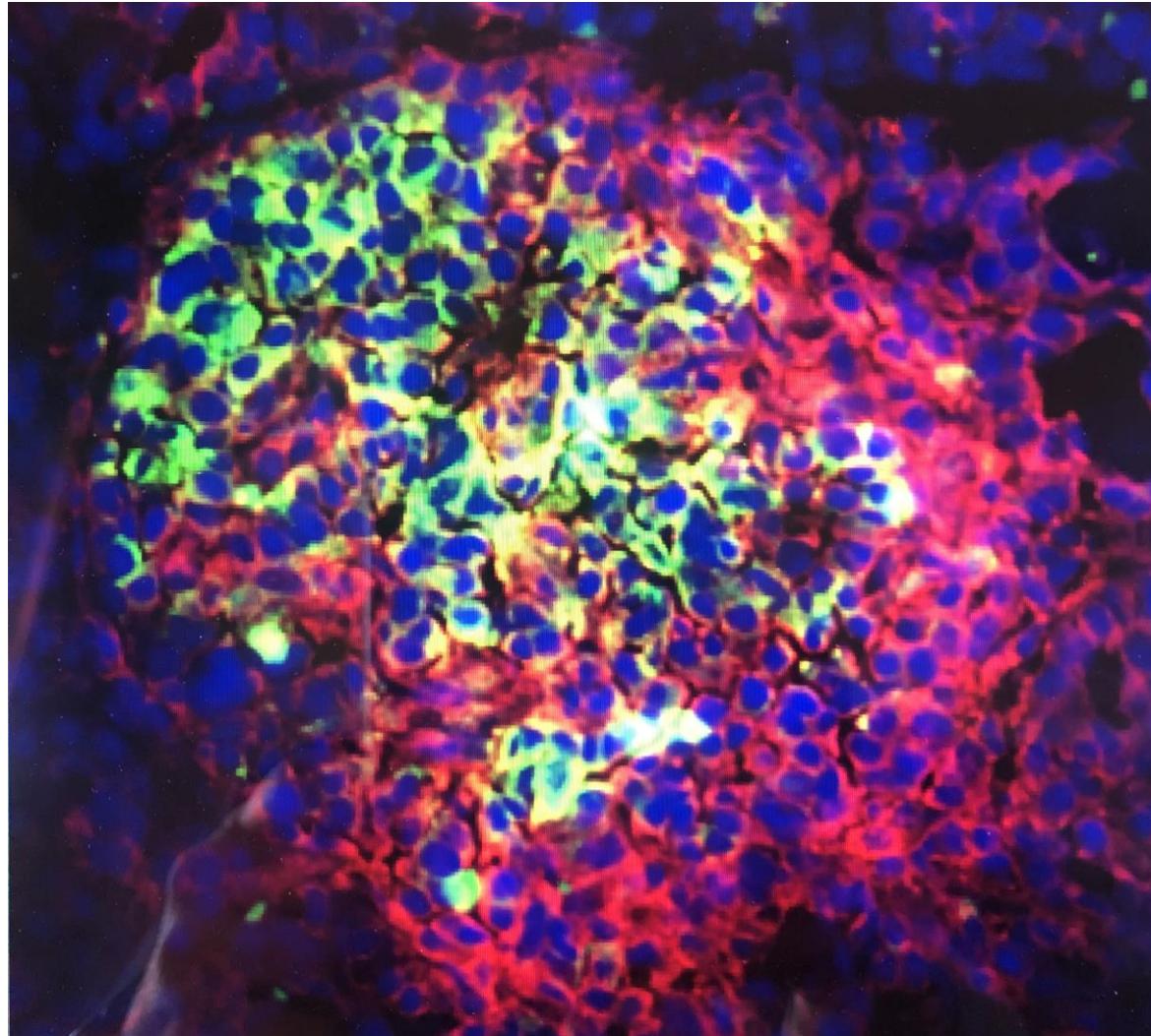
Immunologia del Diabete Mellito

Anticorpi anti-insula pancreatica – ICA



Immunologia del Diabete Mellito

Morte di una β cellula: «omicidio» o «suicidio» ?



Bottazzo, GF et al.
Lancet 1978

dal Diabete Mellito *alla* Reumatologia

Coaccioli S. (1991).

Sindrome da Limitata Mobilità Articolare (SLMA) nel diabete mellito insulino-(IDDM) e non insulino-(NIDDM) dipendente.

In: Giornale Italiano di Diabetologia vol. 11(2)

ISSN: 0391-7525



Agenda

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2. Immunologia e Clinica

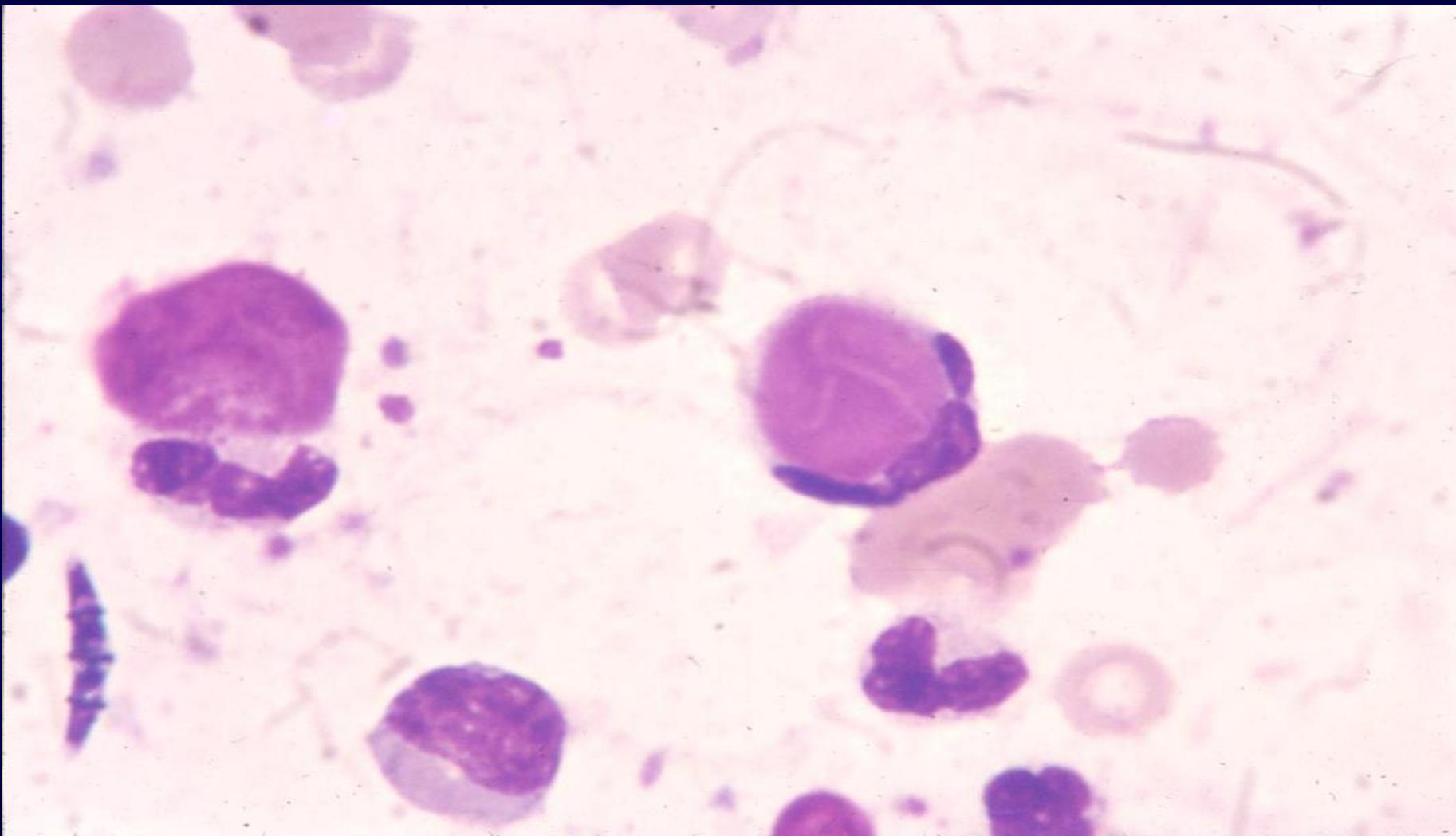
- *Diabete Mellito*

- *Malattie Reumatiche*

3. Medicina Narrativa e della Complessità

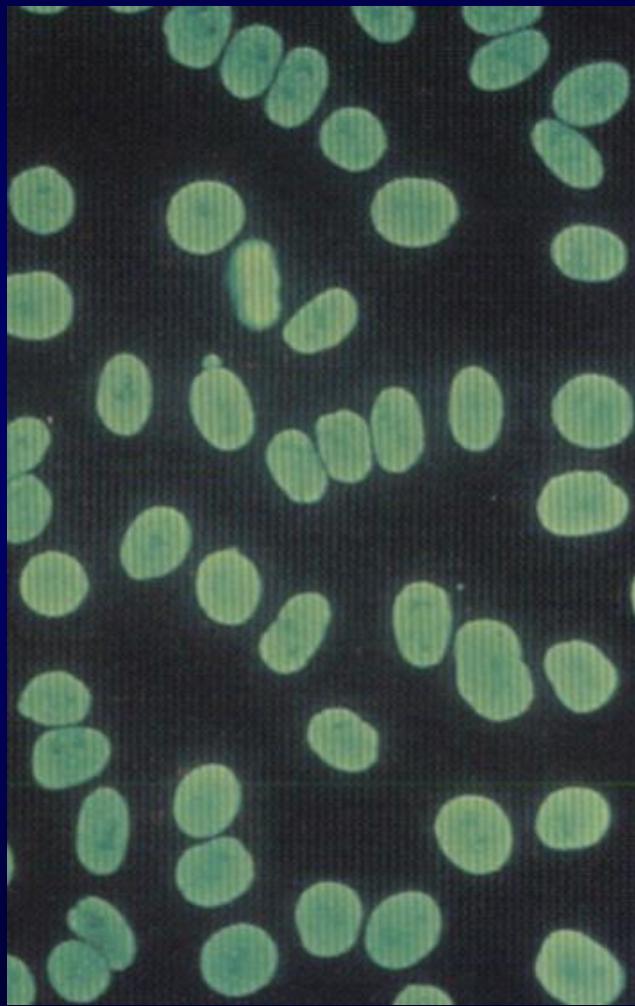
4. Medicina del Dolore

Cellula LE

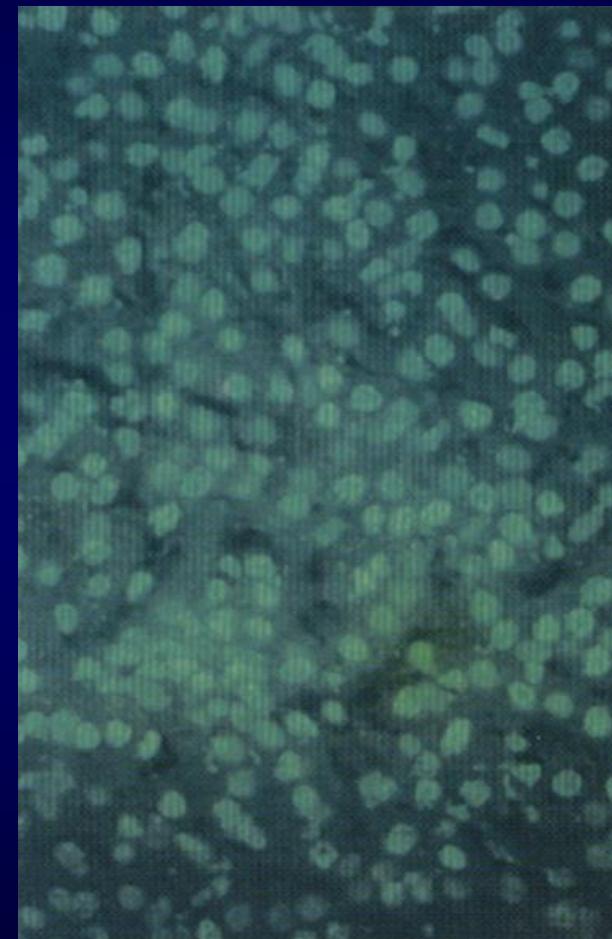


ANA pattern omogeneo

Hep-2

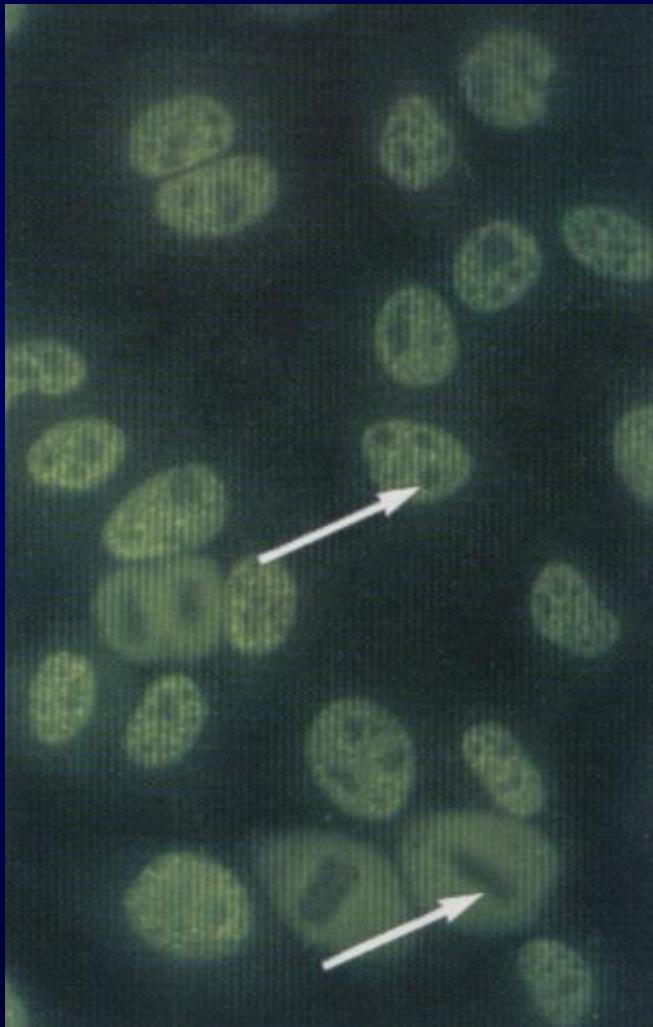


fegato di ratto

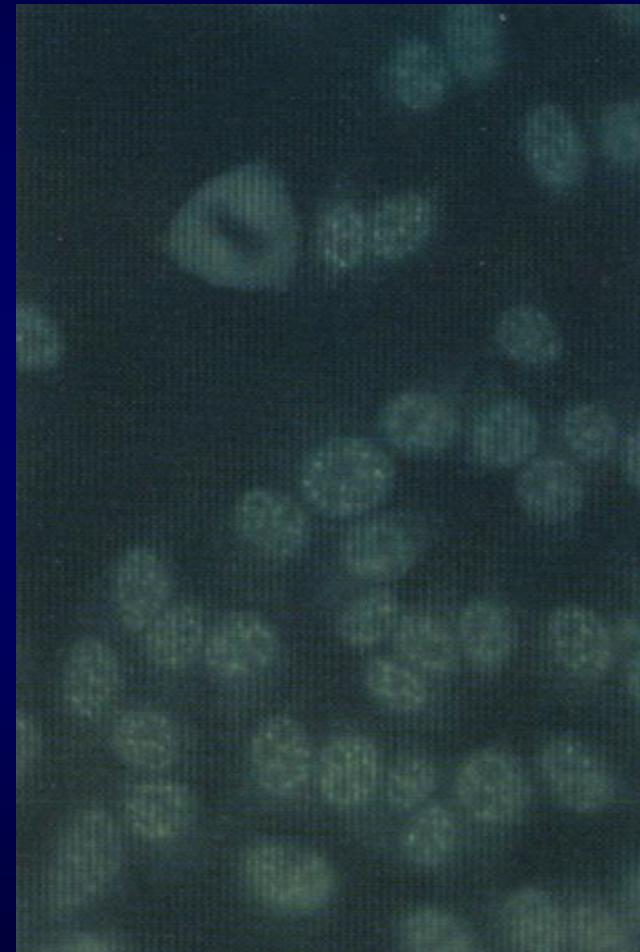


ANA pattern speckled (Hep-2)

fine speckled

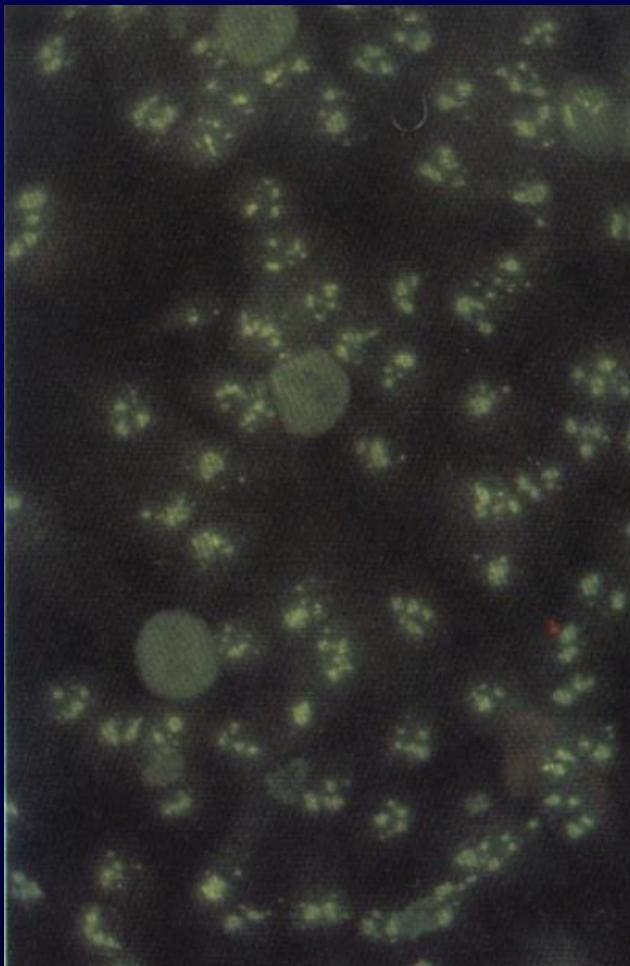


coarse speckled

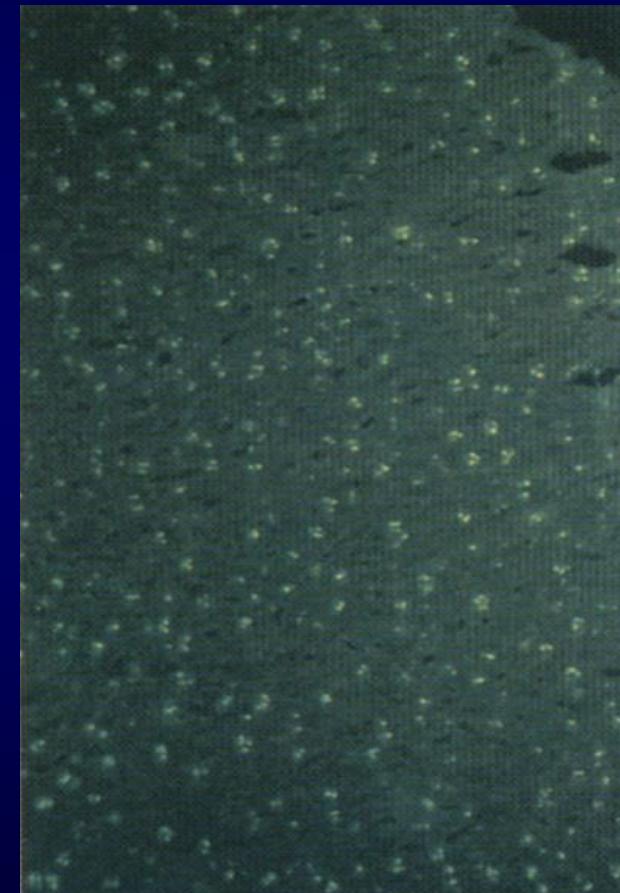


ANA pattern nucleolare

Hep-2

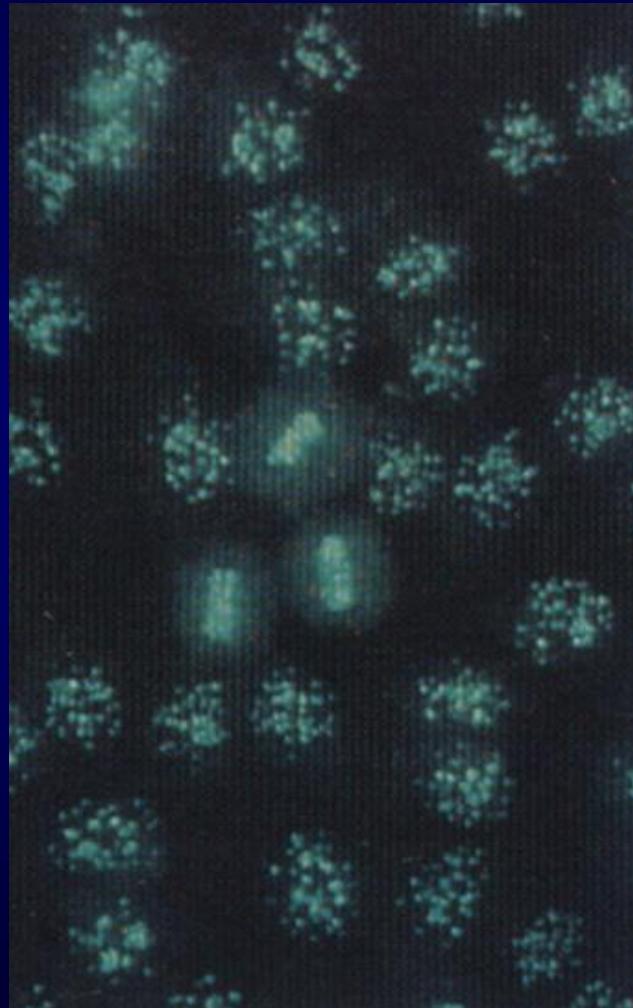


fegato di ratto



ANA (Hep-2)

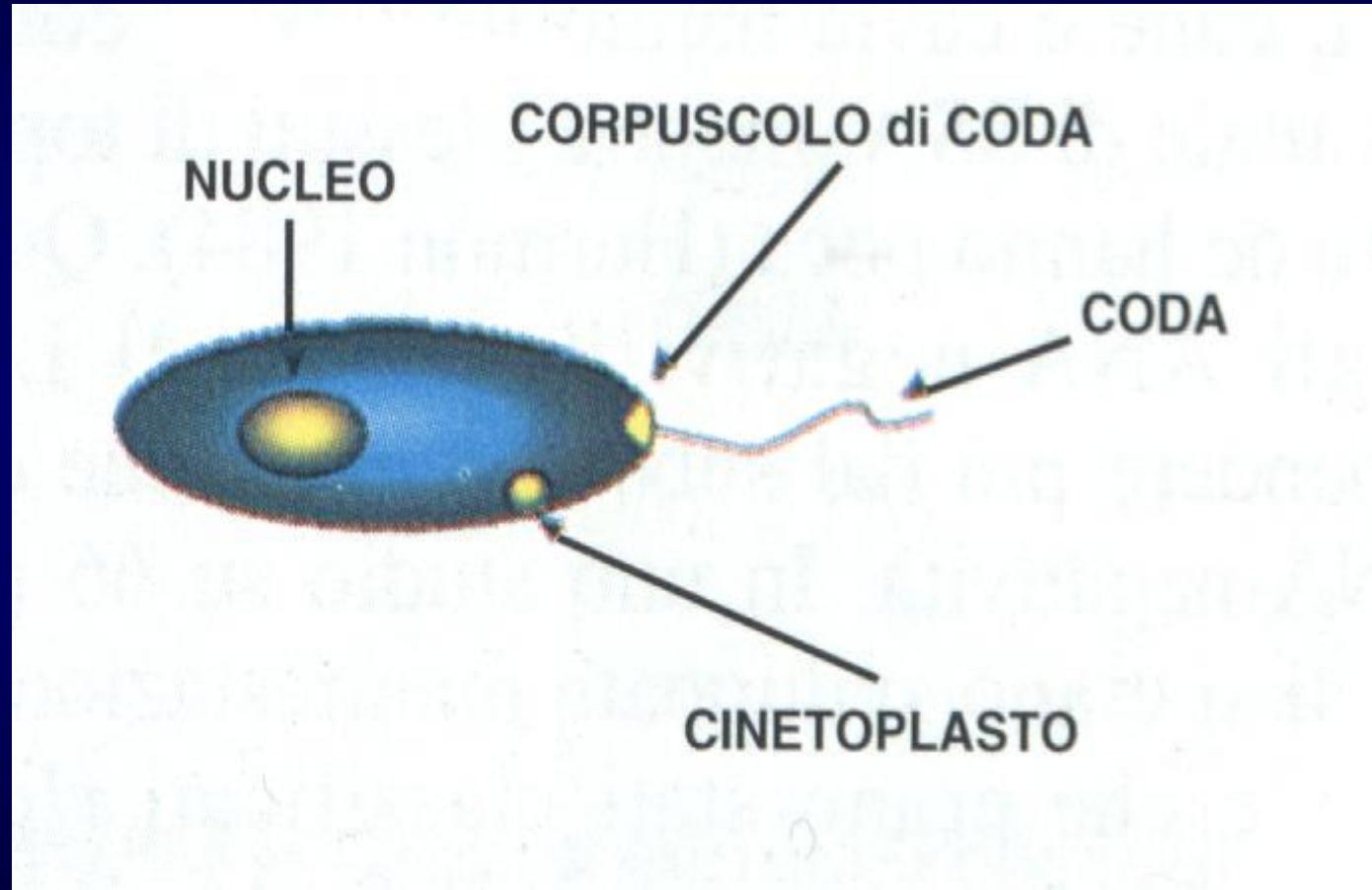
pattern anticentromero



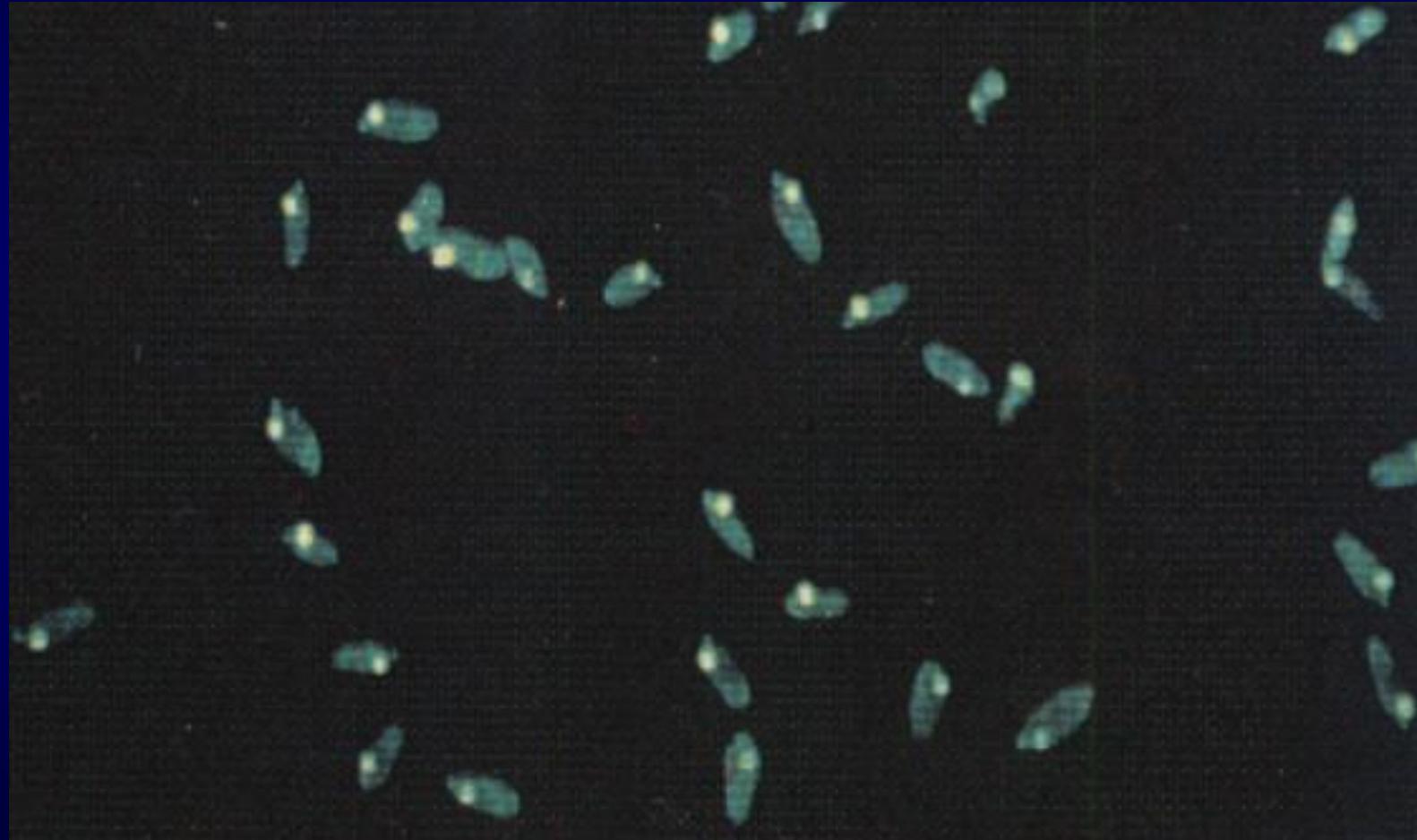
pattern antipseudocentromero



Rappresentazione schematica
della struttura della *Crithidia Luciliae*



Anti-n.DNA (*Crithidia Luciliae*)



ADERENZA

The NEW ENGLAND JOURNAL of MEDICINE

REVIEW ARTICLE

DRUG THERAPY

Adherence to Medication

Lars Osterberg, M.D., and Terrence Blaschke, M.D.

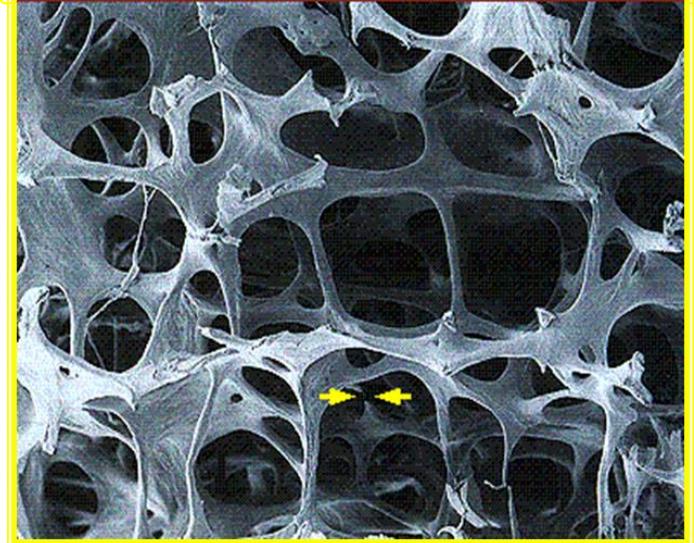
Drugs don't work in patients who don't take them.

—C. Everett Koop, M.D.

REUMATOLOGIA: *OSTEOPOROSI e DISH*

- Coaccioli S., Celi G., Crapa M.E., Masia F., Brandi M.L. (2014). **Alendronate soluble solution: a higher adherence rate in the treatment of osteoporosis.** CLINICAL CASES IN MINERAL AND BONE METABOLISM, vol. 11, p. 123-125
- Coaccioli S., Ponteggia M., Ponteggia F., Panaccione A., Crapa E. M., Di Cato L. (2013). **Ultrasound evaluation of bone in sport: the role of physical activity in young volleyball females players.** LA CLINICA TERAPEUTICA, vol. 164, p. e183-e185
- Coaccioli S., Del Giorno R., Crapa G., Sabatini C., Panaccione A., Di Cato L., Lavagna A., Fatati G., Paladini A., Frongillo R., Puxeddu A. (2009). **Study of bone metabolism in patients with chronic HIV infection.** LA CLINICA TERAPEUTICA, vol. 160(6), p. 451-456
- Coaccioli S., Ponteggia M., Ponteggia F., Fatati G., Di Gianvito A., Puxeddu A. (2006). **Osteoporosis prevention: a reasoned examination of food habits and physical activities in a schoolchildren population in central Italy.** LA CLINICA TERAPEUTICA, vol. 157(6), p. 489-494
- Coaccioli S., Fatati G., Di Cato L., Marioli D., Patucchi E., Pizzuti C., Ponteggia M., Puxeddu A. (2000). **Diffuse idiopathic skeletal hyperostosis in diabetes mellitus, impaired glucose tolerance and obesity.** PANMINERVA MEDICA, vol. 42(4), p. 247-251, ISSN: 0031-0808

REUMATOLOGIA: *OSTEOPOROSI e DISH*



REUMATOLOGIA: *clinimetria e clinica*

→ Coaccioli S., Bruno A.A., Celi G., Crapa M.E., Ferri V.R., Masia F., Papini M. (2014). **Validation of an original questionnaire for patients with psoriatic arthritis: the psoriatic arthritis impact profile (PAIP)**. LA CLINICA TERAPEUTICA, vol. 165, p. e100-e108

Coaccioli S., Valeri D., Cassetti F., Del Giorno R., Di Felice F., Natili M., Trastulli E., Giammartino C., Paladini A., Puxeddu A. (2009). **Functional assessment of patients with systemic sclerosis by the use of 'Six-minutes-walking-test'**. LA CLINICA TERAPEUTICA, vol. 160(6), p. 461-466

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→ Coaccioli S., Pinoca F., Puxeddu A. (2006). **Proposal of a questionnaire to evaluate the foot in the rheumatic diseases**. LA CLINICA TERAPEUTICA, vol. 157(3), p. 199-205

S. Coaccioli, E. Patucchi, G. Fatati, G. Capitò, A. Puxeddu (2002). **Fibromyalgia in diabetes mellitus and obesity: a simple questionnaire as a tool to recognize fibromyalgia in metabolic disorders**. JOURNAL OF FUNCTIONAL SYNDROMES, vol. 2(2), p. 123-126

REUMATOLOGIA: *clinimetria e clinica*

Coaccioli S., Pinoca F., Giuliani M.,
Landucci P., Sabatini C., Puxeddu
A. (2007).

**Definition of adult-onset
rheumatoid arthritis from
elderly-onset rheumatoid
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T-lymphocyte
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soluble receptors and
soluble receptor of
interleukin-2.**

LA CLINICA TERAPEUTICA, vol.
158(4), p. 303-306

rheumatoid arthritis

JRA ≠ AoRA vs EoRA ~ PMR *

[* due to = T-lymph. IL-2r. CD4r/CD8r. Tp]

Agenda

1. Biochimica: RBC & PTL

2. Immunologia e Clinica

- *Diabete Mellito*

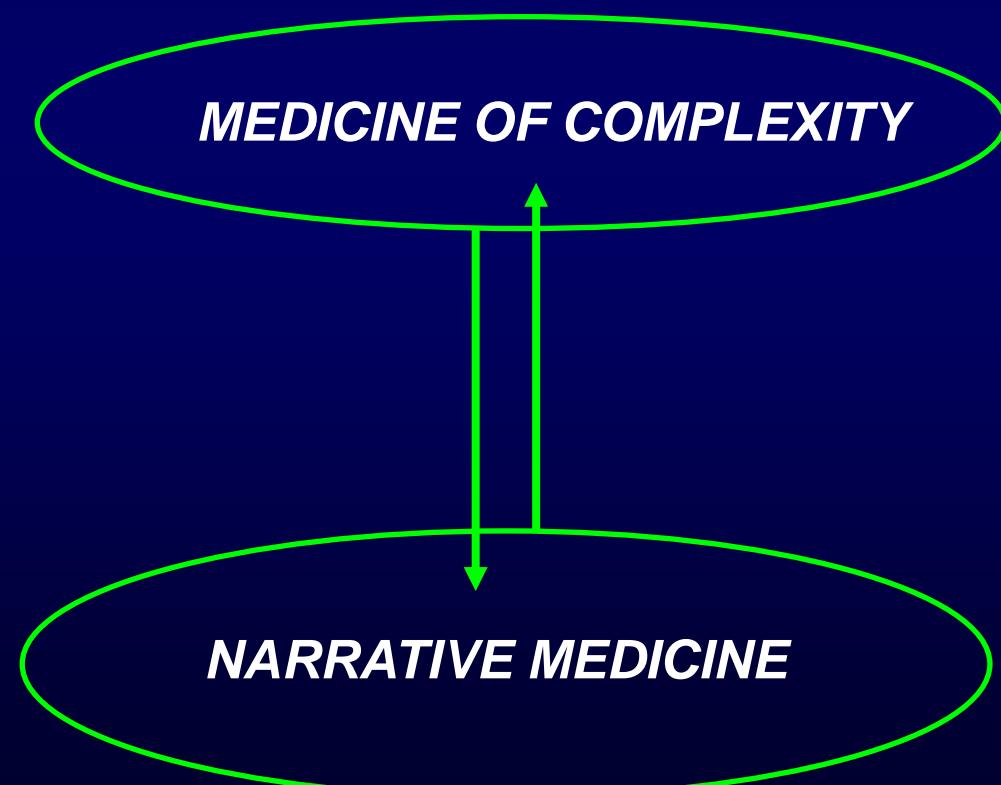
- *Malattie Reumatiche*

3. Medicina Narrativa e della Complessità

4. Medicina del Dolore

The current Medicine

Stefano Coaccioli – unipg.it 



LA COMUNICAZIONE MEDICO-PAZIENTE

Nella Medicina moderna, dove la Complessità è l’ambito all’interno del quale si realizza l’Alleanza fra Medico e Paziente, la capacità di comunicare si leva a rappresentare una vera e propria metodologia operativa che si compendia nella Medicina Narrativa, a sua volta esito e cifra delle Medical Humanities.



***The Narrative Medicine: modern communication
between Patient and Doctor***

Clin Ter 2011;162(1)

In the Modern Medicine the ability to communicate represents a true and unique operative methodology which is the basis of Narrative Medicine.

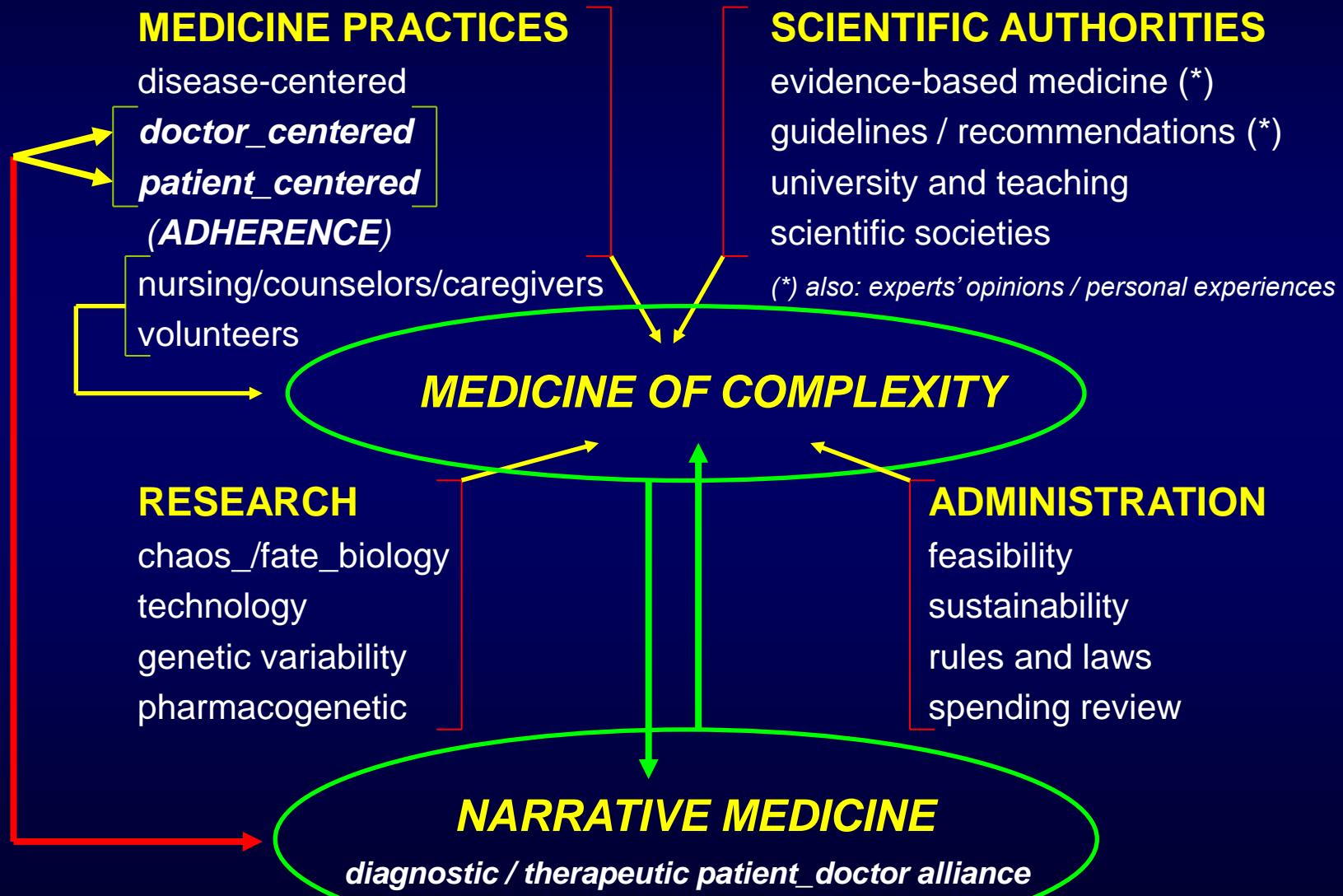
This type of approach does not represent an alternative to the traditional model, but rather expands its boundaries while preserving its scientific base: where the feelings, expectations, and desires of the Patients and his interpretation of the disease, more or less obvious, are read in the broad context in which the Patient himself exhibits.

The Modern Narrative Medicine is a holistic approach to the complexity of the method known as the most effective and most efficient – not only in the patient-centred medicine, but also in the improvement of services rendered to the human being as well as the society at large.

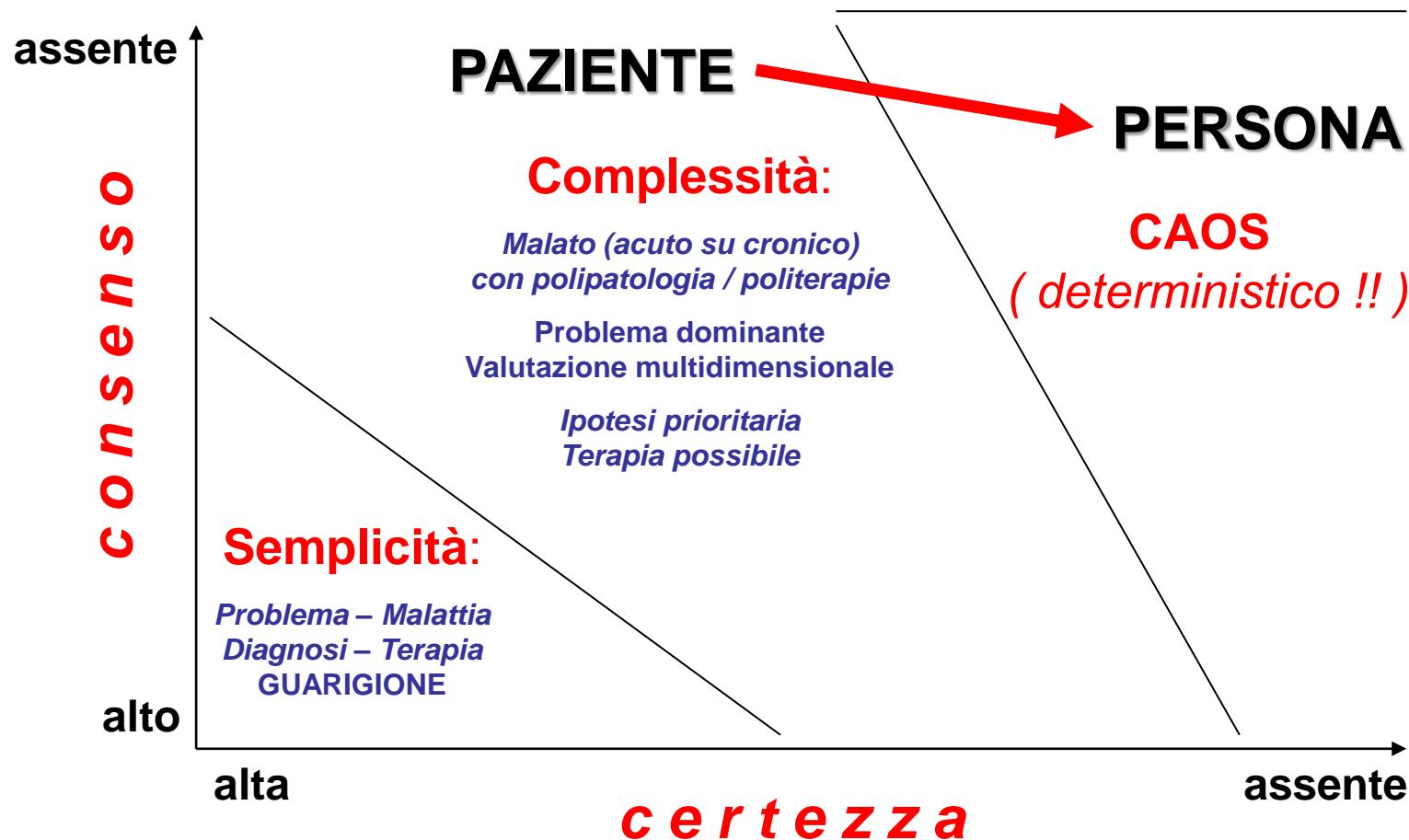


The current Medicine

Stefano Coaccioli – unipg.it



La Complessità in Medicina Interna



Complexity bears its methodological and doctrinal contribution to the general health and medical assistance management, as well as to the clinical context and medical training.

The science of complexity has suggested as alternative model in which the disease as well as the patient's general well-being are the result of a complex interaction between various elements of the entire system, dynamic and unique, of the individual.



Agenda

1. Biochimica: RBC & PTL

2. Immunologia e Clinica

- **Diabete Mellito**

- **Malattie Reumatiche**

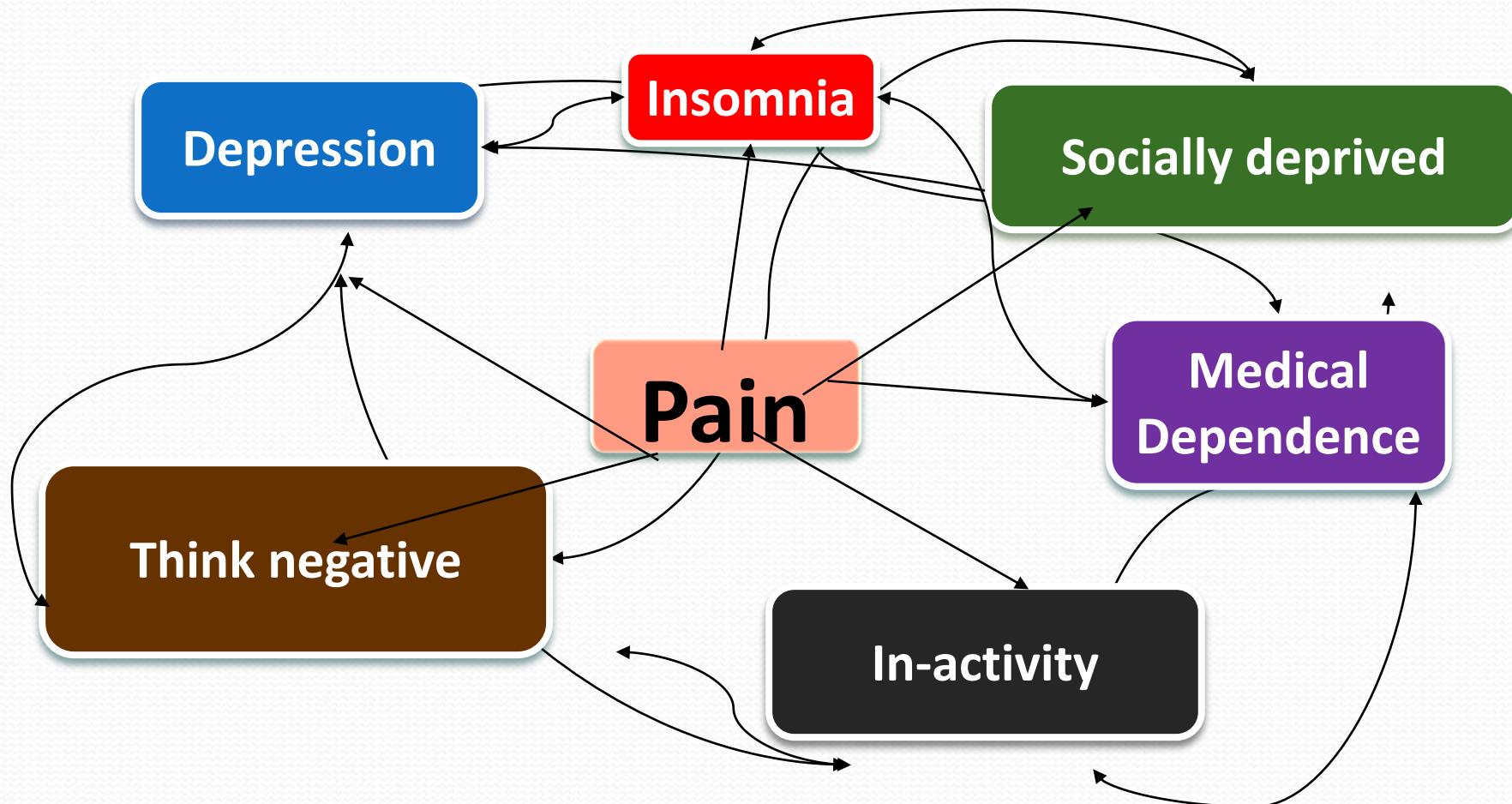
3. Medicina Narrativa e della Complessità

4. Medicina del Dolore

from: Pain as a Disease ...

... of silence

to: Pain as a Disease with its own rights



Physiologic Consequences of Unrelieved Pain



- *Prolonged stress response triggered by unrelieved pain has negative effects!*
 - Cardiac
 - Respiratory
 - GI
 - Musculoskeletal
 - Future Pain
 - Personal

LEGGE 38 del 15 marzo 2010

Art. 2 Definizioni

Cure Palliative

L'insieme degli **interventi** [...] rivolti sia **alla persona malata sia al suo nucleo familiare**, [in presenza di una] malattia di base, caratterizzata da un'inarrestabile evoluzione e da una **prognosi infausta**, non risponde più a trattamenti specifici.

Terapia del Dolore

L'insieme degli **interventi** [per] applicare [...] appropriate terapie [...] allo scopo di elaborare idonei **percorsi diagnostico-terapeutici per la soppressione e il controllo del dolore**.

Persona Malata

[...] Affetta da una **patologia ad andamento cronico ed evolutivo** [...], nonché la persona affetta da una **patologia dolorosa cronica da moderata a severa**;

Legge 38 del 15.3.2010 - Art. 7



**Il dolore come parametro vitale:
Rilevazione costante in cartella clinica**

Società Scientifiche



European Pain Federation
- Italy Advisor (2010-2016)

European League Against Pain
- Founding Member (2014) & Vice-President



Associazione Italiana per lo Studio del Dolore
- Presidente (2018-2020)

Epidemiologia

Latina, Roberto, Coaccioli, Stefano, et al. (2019). **Epidemiology of Chronic Pain in the Latium Region, Italy: A Cross-Sectional Study on the Clinical Characteristics of Patients Attending Pain Clinics.** PAIN MANAGEMENT NURSING, vol. 20, p. 373-381



Del Giorno R, Frumento P, Varrassi G, Paladini A, Coaccioli S. (2017). **Assessment of chronic pain and access to pain therapy: a cross-sectional population-based study.** JOURNAL OF PAIN RESEARCH, vol. 10, p. 2577-2584, ISSN: 1178-7090, doi: 10.2147/JPR.S136292

Kress Hans-Georg, Coaccioli Stefano et al., (2015). **A holistic approach to chronic pain management that involves all stakeholders: Change is needed.** CURRENT MEDICAL RESEARCH AND OPINION, vol. 31, p. 1743-1754, ISSN: 0300-7995, doi: 10.1185/03007995.2015.1072088

Varrassi Giustino, Fusco Mariella, Coaccioli Stefano, Paladini Antonella (2015). **Chronic pain and neurodegenerative processes in elderly people.** PAIN PRACTICE, vol. 15, p. 1-3

 Open Access Full Text Article

ORIGINAL RESEARCH

Assessment of chronic pain and access to pain therapy: a cross-sectional population-based study

Rosaria Del Giorno¹

Paolo Frumento²

Giustino Varrassi³

Antonella Paladini³

Stefano Coaccioli^{1,4}

¹Department of Internal Medicine, Rheumatology and Medical Pain Therapy, "Santa Maria" General Hospital, Terni, Italy; ²Unit of Biostatistics, Institute of Environmental Medicine (IMM), Karolinska Institute, Stockholm, Sweden; ³Department of MESVA, University of L'Aquila, L'Aquila, Italy; ⁴Department of Internal Medicine, Perugia University School of Medicine, Perugia, Italy

Assessment of chronic pain and access to pain therapy: a cross-sectional population-based study

Risultati

- **Prevalenza del dolore cronico (DC): 28.4 %** (uomini 21%; donne 34.1%)
- **Severità del DC:**

lieve	4.4 %
moderata	42.8 %
severa	51.5 %
non risponde	1.4 %



ORIGINAL RESEARCH

Assessment of chronic pain and access to pain therapy: a cross-sectional population-based study

Conclusioni

- Il Dolore cronico (DC) si è confermato essere un problema di sanità pubblica
- La prevalenza del DC è pari ad oltre il 25% della popolazione con età > 18 anni
- Sono interessate da DC soprattutto le donne
- Conoscenza della Legge 38 che garantisce l'accesso alla terapia del DC < 40%

La quota di risposte nello studio
a Narni: **15.9 %** (1369 su 8140)

Prevalenza
del Dolore Cronico: **28.4 %**

- Uomini **21.0 %**

- Donne **34.1 %**

Popolazione studiata (1)

Genere , n. (%)	
maschile	544 (42.1)
femminile	739 (57.2)
n.r.	10 (0.8)
Età , anni	
media (SD)	55.8 (18.4)
mediana (IQR)	58 (43.70)
n.r.	49 (3.6)
Gruppi di età , anni, n. (%)	
< 43	326 (25.2)
43 - 57	313 (24.2)
58 - 70	213 (24.2)
> 70	294 (22.7)
n.r.	47 (3.6)
Stato civile , n. (%)	
con un partner	872 (67.4)
single	391 (30.2)
n.r.	30 (2.3)
Area di residenza , n. (%)	
urbana	685 (53)
rurale	608 (47)

Popolazione studiata (2)

DOLORE CRONICO, n. (%)	
uomini	367 (28.4)
donne	252 (34.1)
DOLORE CRONICO PER GRUPPI DI ETA' (anni), n. (%)	
età < 43	31 (9.5)
età 43 - 57	67 (21.4)
età 58 - 70	105 (33.5)
età > 70	150 (51)
DOLORE CRONICO vs STATO CIVILE, n. (%)	
con un partner	243 (27.9)
single	117 (29.9)
DOLORE CRONICO vs AREA DI RESIDENZA, n. (%)	
urbana	192 (52.3)
rurale	175 (47.7)

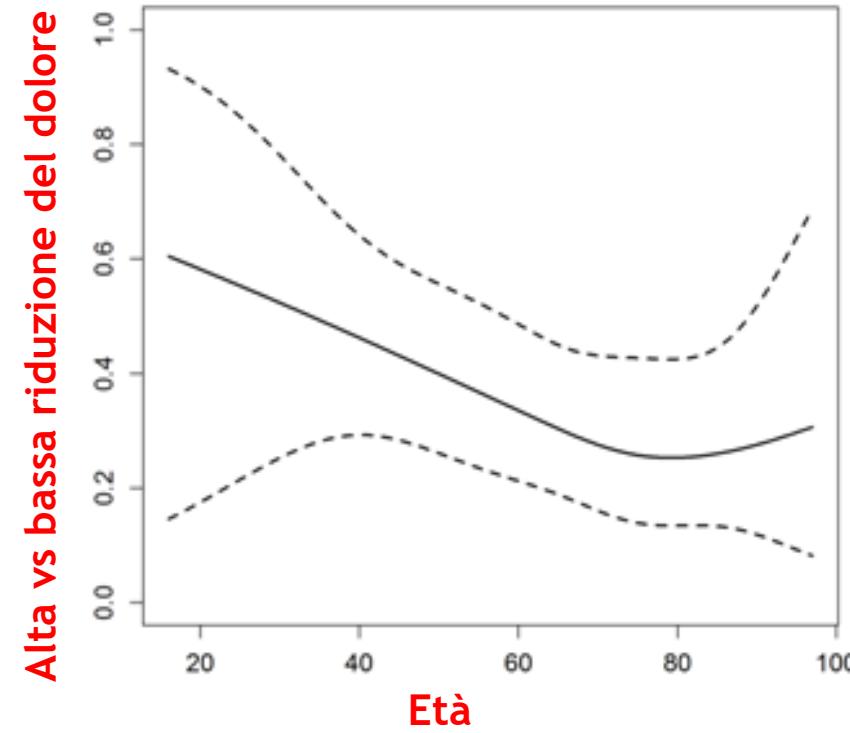
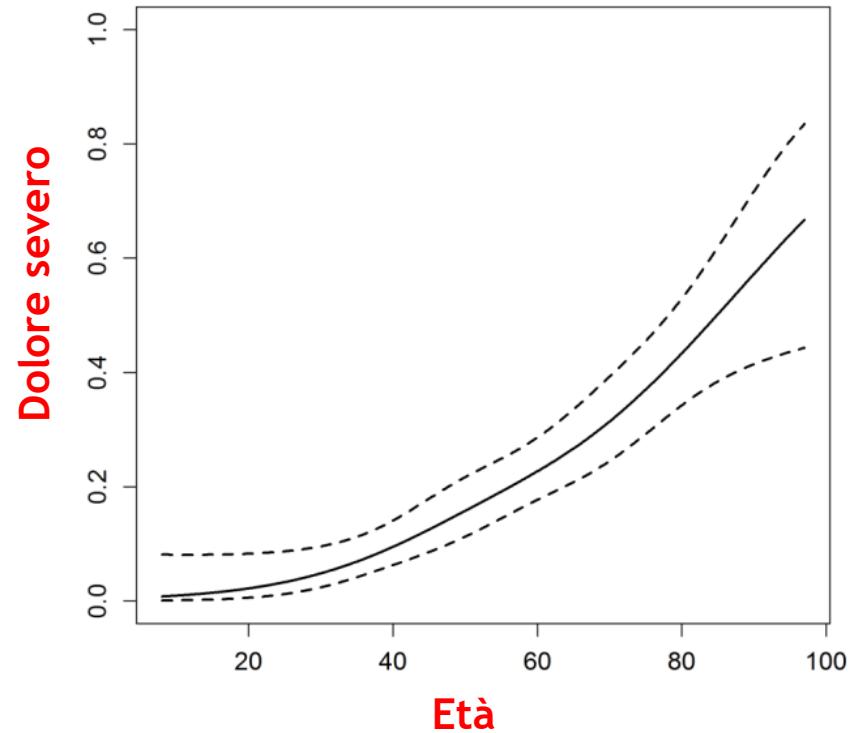
Popolazione studiata (3)

Severità del dolore cronico, n. (%):	
lieve	16 (4.4)
moderata	157 (42.8)
severa	189 (51.5)
n.r.	5 (1.4)
Severità del dolore cronico vs gruppi di età, n. (%) *	
età < 43	15 (48)
età 43 - 57	30 (45)
età 58 - 70	53 (51)
età > 70	87 (60)

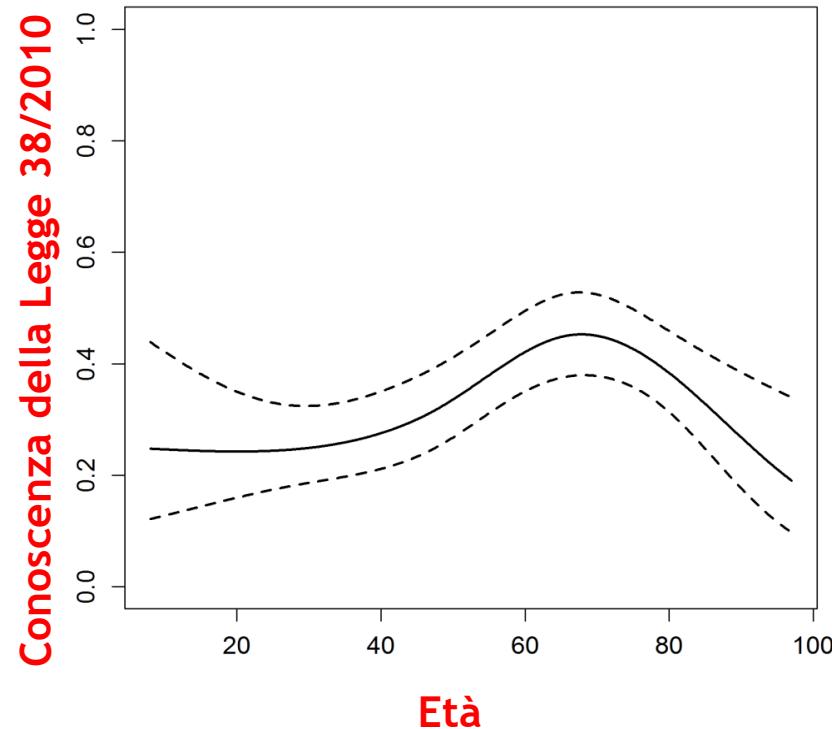
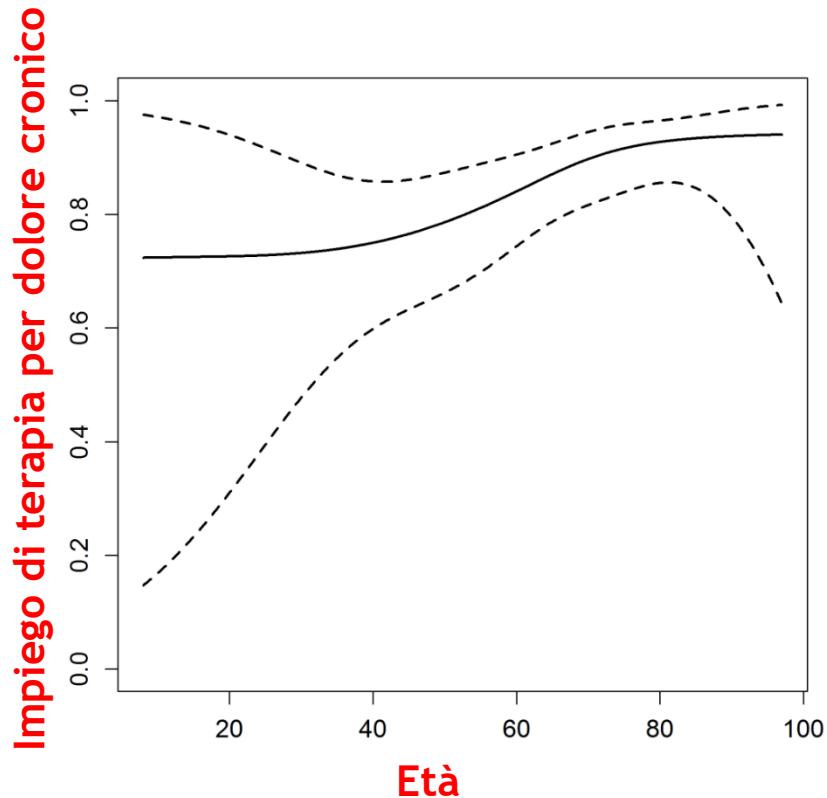
* % calcolata fra gli individui con dolore

Individui con malattie associate, n. (%):	
con malattie associate	446 (34.5)
senza malattie associate	847 (65.5)
Terapie per il dolore cronico, n. (%) *	286 (77.9)
* % calcolata fra gli individui con dolore	
Terapie per malattie associate, n. (%)	288 (22.3)
Conoscenza della Legge 38/2010	495 (38.1)

Effetti stimati dell'età su differenti risultati (1)



Effetti stimati dell'età su differenti risultati (2)



Clinica

→ Panella L., Rinonapoli G., Coaccioli S. (2019). **Where should analgesia lead to? Quality of life and functional recovery with tapentadol.** JOURNAL OF PAIN RESEARCH, vol. 12, p. 1561-1567

Varrassi G, Fusco M, Skaper SD, Battelli D, Zis P, Coaccioli S, Pace MC, Paladini A. (2018). **A pharmacological rationale to reduce the Incidence of opioid Induced tolerance and hyperalgesia: A review.** PAIN AND THERAPY, vol. 7, p. 59-75, ISSN: 2193-8237

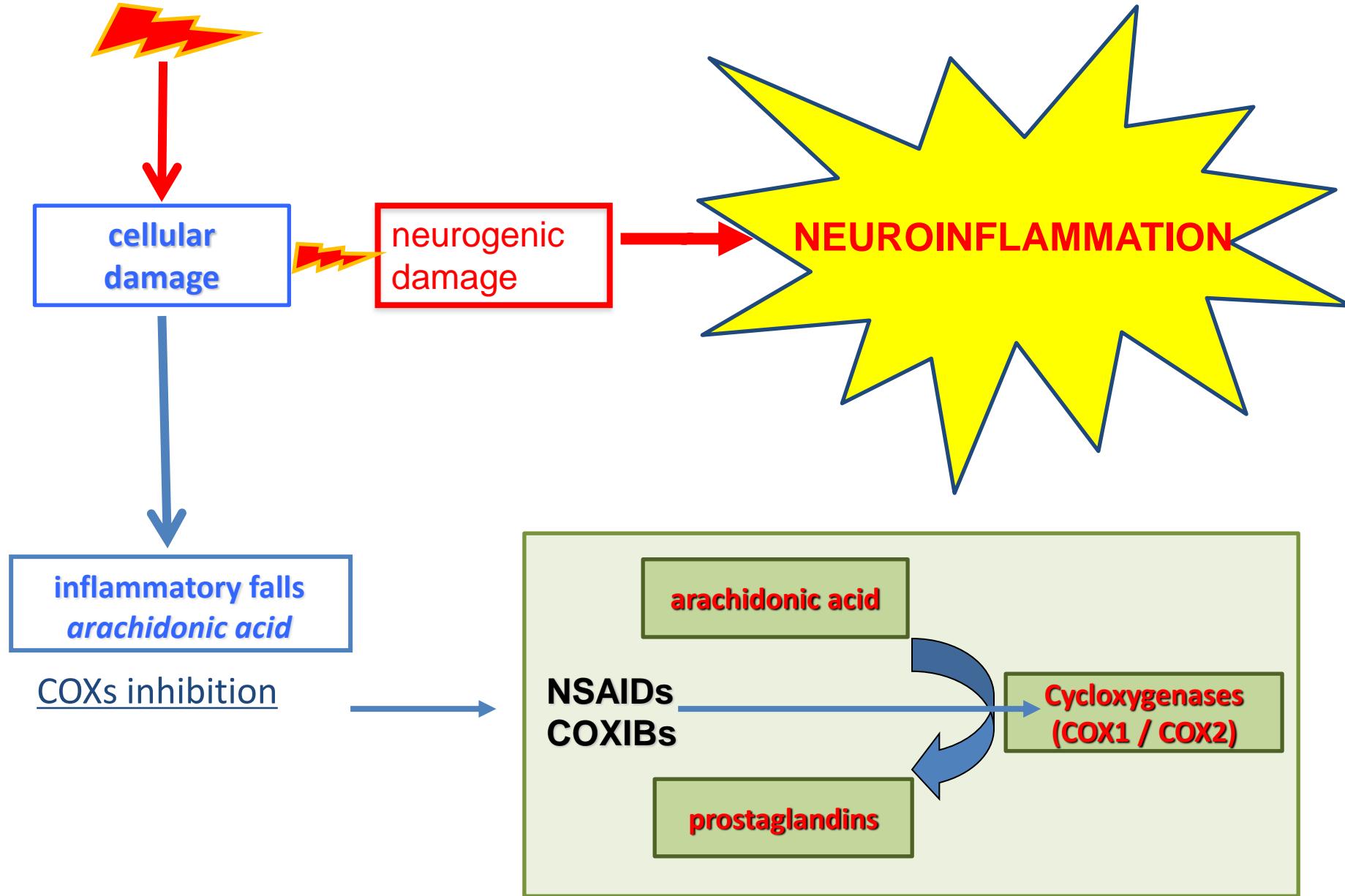
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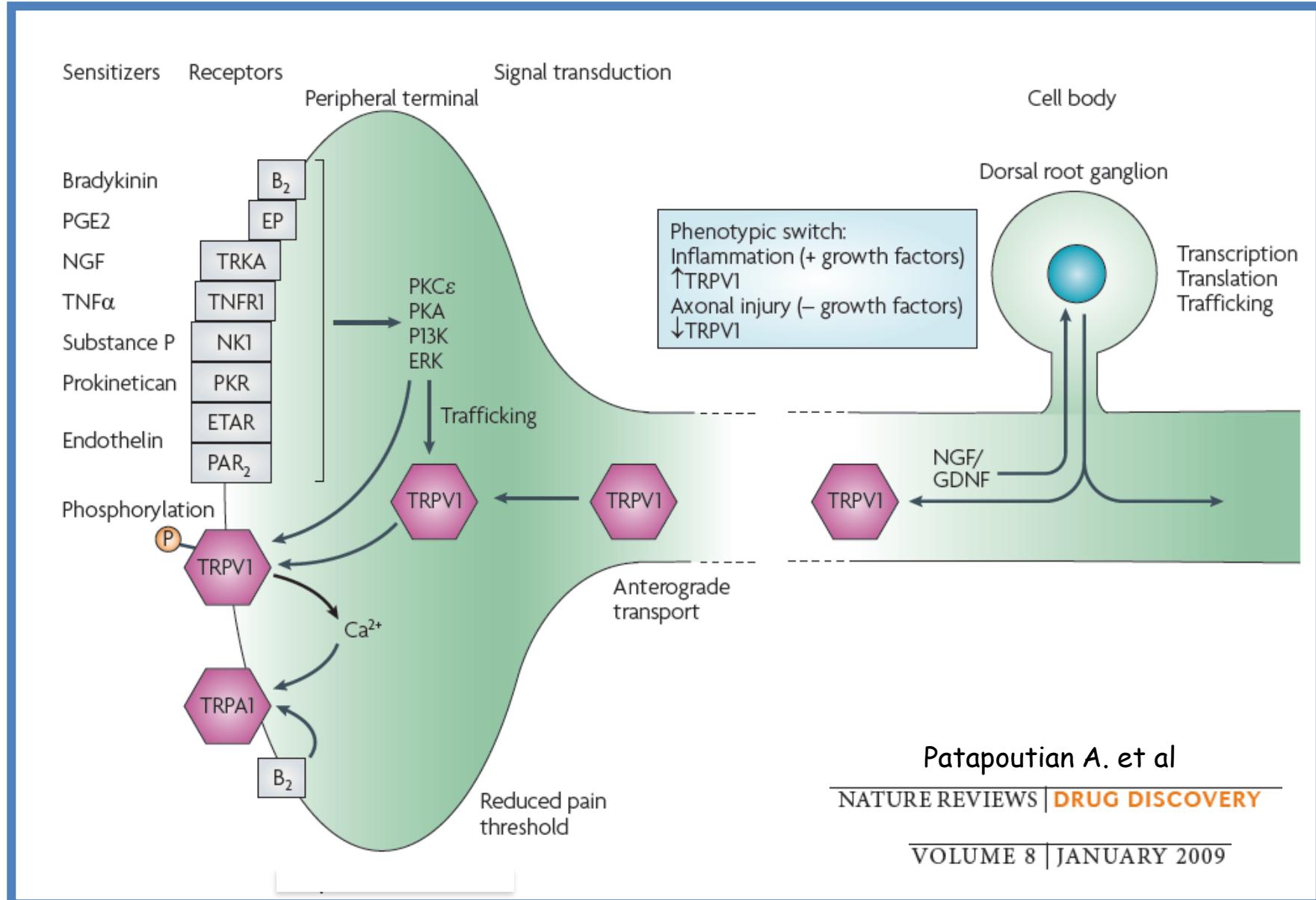
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Pain. Methodology of Investigation: *Quality of Life*



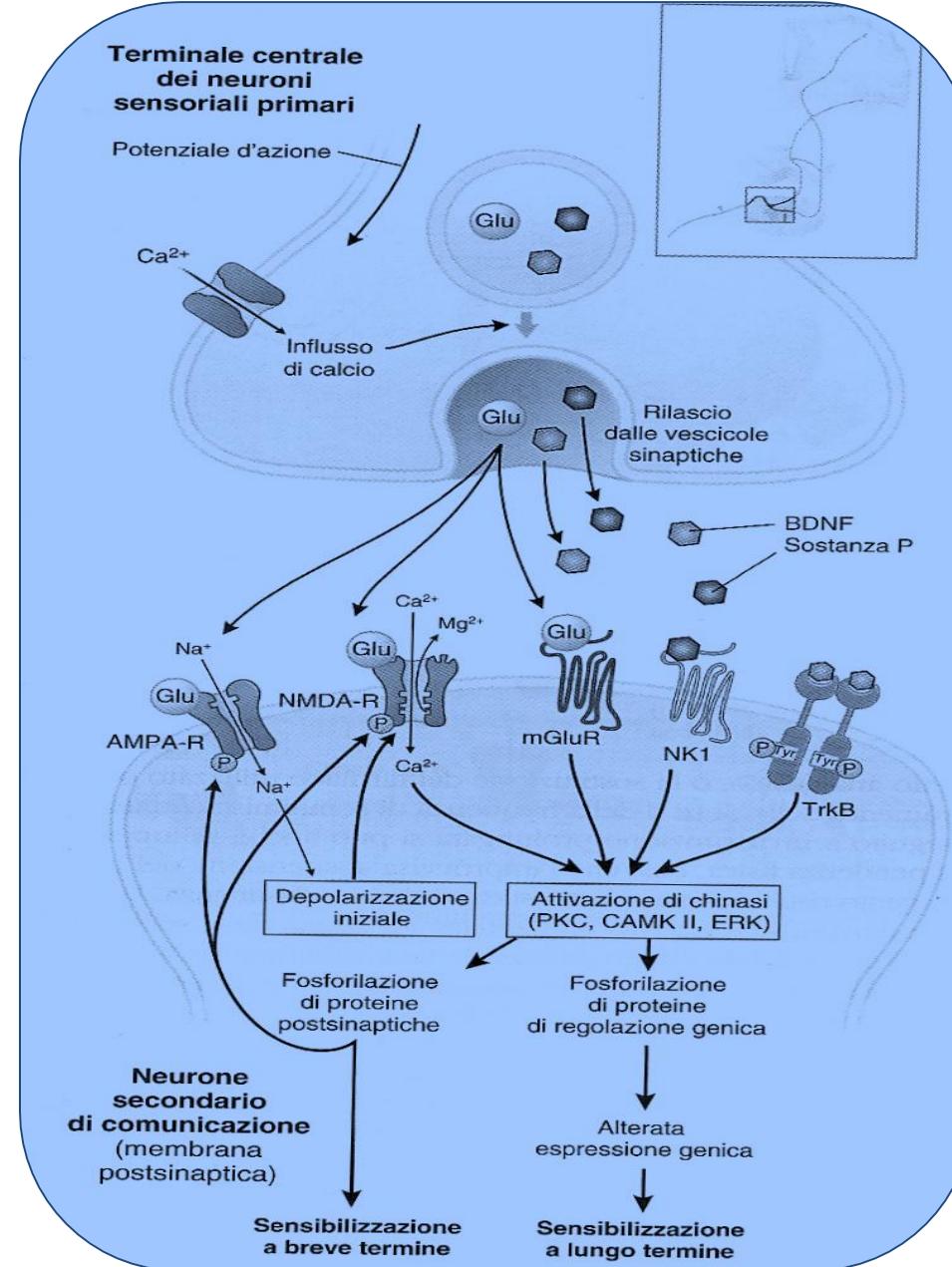
Noxa





Peripheral sensitization mechanisms

Central sensitization mechanisms



Terapia

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Del Giorno, Rosaria, Skaper, Stephen, Paladini, Antonella, Varrassi, Giustino, Coaccioli, Stefano (2015). **Palmitoylethanolamide in Fibromyalgia: Results from Prospective and Retrospective Observational Studies**. PAIN AND THERAPY, vol. 4, p. 169-178

Coaccioli S. (2011). **Ketoprofen 2.5% gel: a clinical overview**. EUROPEAN REVIEW FOR MEDICAL AND PHARMACOLOGICAL SCIENCES, vol. 15, p. 943-949

Marinangeli F., Ciccozzi A., Aloisio L., Colangeli A., Paladini A., Bajocco C., Coaccioli S., Varrassi G. (2007). **Improved cancer pain treatment using combined Fentanyl-TTS and Tramadol**. PAIN PRACTICE, vol. 7(4), p. 307-312

Terapia: *consensus papers & guidelines*

Varrassi G., Coaccioli S., De-Andres J., Hanna M., Macheras G., Montero A., Perrot S., Piras V., Scarpignato C. (2019). **Expert Consensus on Clinical Use of an Orally Administered Dexketoprofen Plus Tramadol Fixed-Dose Combination in Moderate-To-Severe Acute Pain: A Delphi Study.** ADVANCES IN THERAPY, vol. 36, p. 3174-3185

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Dolore in Rh.: Vantaggi della Diagnosi Precoce





Ethics Code for Pain

Coaccioli S. *et al.* Eur J Pain, 2012
