NIAMS 25th Anniversary Milestones

IMPROVING LIVES THROUGH DISCOVERY

IMPROVING LIVES THROUGH DISCOVERY — 25 YEARS — NIAMS Anniversary

NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES

1986

Lawrence E. Shulman, M.D., Ph.D.

The **NIAMS is established and appoints its first director,** Lawrence E. Shulman, M.D., Ph.D.

The **NIAMS Coalition,** a group of more than 70 professional and voluntary organizations, is founded and continues to serve as a vital liaison to Congress, researchers, patients and the public.

1987

Researchers discover dystrophin **gene defects that cause Duchenne muscular dystrophy,** spurring progress for gene therapy research.

The **NIAMS Information Clearinghouse is launched** and serves as a centralized source of information on arthritis and musculoskeletal and skin diseases for patients and health care providers.

1989

The NIAMS holds its **first NIH Consensus Development Conference** on sunlight, ultraviolet radiation and the skin. Future conferences focused on optimal calcium intake, total hip replacement, total knee replacement and osteoporosis.

1990

Patient and technician with DXA machine.

The NIAMS-funded **Study of Osteoporotic Fractures** helps doctors identify people at high risk for osteoporosis.

HLA-B27 misfolding, which may lead to disease.

Researchers create an **animal model for ankylosing spondylitis** by introducing the human *HLA-B27* gene into rats.

1992

Gene defects are identified that cause inherited skin disorders, including epidermolysis bullosa, leading to more specific diagnostic tests and spurring gene therapy research.

Nanofiber-based engineered cartilage.

Scientists discover **proteins that regulate bone growth and repair,** paving the way for bone grafting and cartilage regeneration advances.

1994

John O'Shea, M.D., NIAMS Scientific Director.

A team of intramural researchers **identify an immune system enzyme, Jak3,** which leads to the discovery of a genetic mutation causing severe combined immunodeficiency and the development of new therapeutic targets.

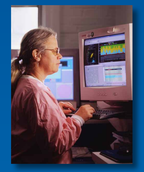
The NIAMS, with other federal and NIH partners, launches the **NIH Osteoporosis and Related Bone Diseases ~ National Resource Center** to increase awareness of these conditions.

1995

Stephen I. Katz, M.D., Ph.D.

Stephen I. Katz, M.D., Ph.D., becomes the **second director of the NIAMS.**

1996



Elaine Remmers, Ph.D., using high-throughput SNP genotyping system.

Major histocompatibility complex gene is identified by intramural researchers and partners as the single most predisposing factor for autoimmune diseases.

1997

A commercial chip used to perform genetic tests.

For the first time, researchers locate a gene on chromosome 1 that predisposes people to systemic lupus erythematosus, ushering in a **new era of lupus genetics research.**

Dan Kastner, M.D., Ph.D.

The gene for **Familial Mediterranean Fever is discovered** by intramural researchers and partners, which leads to their later identification of gene mutations that cause TNF receptor-associated periodic syndromes.

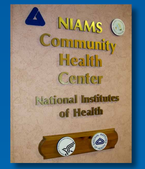
1999

Research funded by the NIAMS and others on the disease processes of rheumatoid arthritis results in an entirely **new class of rheumatic disease treatments,** named biologic response modifiers.

2000

Nicole Plass, R.N., B.S.N., M.P.A., with a patient.

The NIH opens a **pediatric rheumatology clinic** coordinated by the NIAMS at the Warren Grant Magnuson Clinical Center in Bethesda, Md., to diagnose, evaluate and treat children with arthritis and other rheumatic diseases.



The NIAMS and Washington, D.C.-area community representatives open a **new community-based research center** in D.C.'s Cardozo neighborhood to address health disparities in rheumatic diseases.

2001

The NIAMS, NINDS, NICHD and the Muscular Dystrophy Association join forces to fund the **first cooperative research centers for the muscular dystrophies.**

Technician with patient in MRI machine.

A unique public-private partnership, the **Osteoarthritis Initiative, is launched** to speed discovery of biological markers for osteoarthritis.

2003

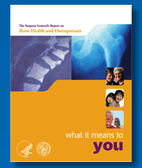
Advances in osteoporosis research highlight that parathyroid hormone and alendronate administered in combination are no better for osteoporosis than either alone.

2004

In a discovery with implications for wound healing and regenerative medicine, researchers define the characteristics of the **hair follicle stem cells that are responsible for their self-renewal,** and the factors in the hair follicle microenvironment that contribute to stem cell pluripotency.

An assay plate used in the genotyping system to determine disease susceptibility.

A gene variant is found that increases susceptibility to **juvenile arthritis.**



The **Surgeon General's Report on Bone Health and Osteoporosis,** a trans-HHS effort led by the NIAMS to draw bone science experts together and make public the known science on bone health, is published.

2006

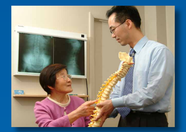
NOMID/DIRA clinical and laboratory teams.

Intramural researchers discover new treatments for the autoinflammatory diseases neonatal-onset multisystem inflammatory disease (NOMID) and deficiency of the interleukin-1 receptor antagonist (DIRA) after finding genetic mutations that cause a protein imbalance.

2007

A study supported by the NIAMS finds the **anticonvulsant medication gabapentin effective for treating fibromyalgia** pain and other symptoms.

2008



Doctor with patient showing model of spine.

Two-year results from NIAMS' **Multicenter Spine Patient Outcomes Research Trial (SPORT)** reveal the effectiveness of surgical versus nonsurgical treatment approaches for three common back conditions.

2009

The NIAMS **Multicultural Outreach Initiative is launched** to bring together partners to address disparities in access to health information across racial, ethnic and underserved populations.

2011

Illustration of muscle layers.

Research partly funded by the NIAMS identifies two genetic variations that start the disease process in **facioscapulohumeral muscular dystrophy,** enabling scientists to design treatment research strategies.

NIAMS
National Institute of Arthritis and Musculoskeletal and Skin Diseases