



Winter 2002

# ARIZONA ARTHRITIS CENTER

THE UNIVERSITY OF ARIZONA.

## UPDATE

### *New Arthritis Drug Development Keeps Arizona Arthritis Center Patients on Top*

Designated by the Arizona Board of Regents as one of eight Centers of Excellence at The University of Arizona College of Medicine, the Arizona Arthritis Center is dedicated to biomedical research into the causes and treatments of more than 100 forms of arthritis. Understanding the ways that arthritis and bone and connective tissue diseases start and progress is key to helping individuals with arthritis lead healthier lives.



The Arizona Arthritis Center Update is published regularly.

Correspondence or inquiries should be addressed to:  
**Arizona Arthritis Center**  
P.O. Box 245093  
Tucson, AZ 85724-5093  
(520) 626-7901

**Design/Production**  
John Polle



Arizona Arthritis Center

**Director**

David E. Yocum, M.D.

**Director of Development**

Carol Willson

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Medical breakthroughs are occurring in the battle against arthritis everyday, and the Arizona Arthritis Center is at the forefront of these advancements. Treatments are evolving to include the use of newer medications such as Remicade, Enbrel, Celebrex, Vioxx, and Mobic.

Clinical trials for Remicade were held at the Arizona Arthritis Center prior to its approval by the Food and Drug Administration (FDA). In the lab, the Center was one of the first to identify the target of Remicade, TNF, as being elevated in patients with Rheumatoid Arthritis. Remicade is now available at the Biologic Infusion Center, recently opened by the Section of Rheumatology. The infusions are initiated and monitored by registered nurses specially trained in Remicade infusions.

Clinical trials are required for all medications prior to FDA approval. Some of these clinical trials occur right here at the Arizona Arthritis Center in the Clinical Research Unit (CRU). The Clinical Research Unit offers a great opportunity for patients who wish to partake in clinical research. Patients may benefit from research as well as contribute to the advancement of science.

**How does the process of clinical research occur?**

- First, when a pharmaceutical company is ready to test a new drug, it searches internationally for sites best suited for the tests. The company looks for centers with experienced and qualified staff. After the centers are chosen, the paperwork begins! The University of Arizona Human Subjects Committee reviews all projects to safeguard the interests of the patients.
- Second, the pharmaceutical company

launches the study by putting the staff who will be working on the clinical research project through an intense educational process.



The staff of the Arizona Arthritis Center Clinical Research Unit: Julie Johnson, Elizabeth Ayres, Kristy Ray, Marsha Seipel and Itza Rodriguez

- Third, the drug company comes to the Arthritis Center to initiate the site and ensure that all regulatory procedures are in place and will be implemented properly.
- Finally, when all this has been demonstrated, recruitment for "human subjects"

begins. This can happen in many ways. Rheumatologists from the community or from the Arizona Arthritis Center may refer patients.

**How can you get involved?**

A call to a Clinical Research Coordinator determines a patient's initial eligibility. The patient is then invited to the CRU to learn specifically what the study will entail and what is expected of him or her. A physician explains

the study and questions can be answered prior to the informed consent being signed. After the consent is signed, the patient has the option of withdrawing consent at

anytime during the study.

Early in the development of a new therapy, some patients may receive placebo, or no therapy, to make sure the new treatment really works. Later, the new therapy is compared with the best treatment available and finally there



# Advisory Board

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are usually long-term extensions of one to two years to ensure the long term safety and effectiveness of the new medication. Many patients who enter these trials receive the therapy long before it is released to the general public. These results are then submitted to the FDA for approval. In addition, the Arizona Arthritis Center carries out National Institutes of Health (NIH) funded studies like the "Doxycycline Study in Osteoarthritis" in

which the potential cartilage-saving effects of the antibiotic is being evaluated.

Each study has different ratios of how many people receive the drug under study versus a placebo. All patients participating in a clinical trial will receive close medical monitoring by a Rheumatologist. The Clinical Research Unit is easily accessible behind the University Medical Center and provides convenient parking.

The Clinical Research

Unit at the Arizona Arthritis Center is currently recruiting people who have been diagnosed with Rheumatoid or Osteoarthritis to participate in clinical research studies. If you are interested in learning more about research studies involving Rheumatoid or Osteoarthritis you may contact the Clinical Research Unit and speak with a study coordinator. **Call (520) 626-3718 if you are interested.**

## The gavel passes...

With gratitude from the Arizona Arthritis Center for the work and dedication of the past two years as Advisory Board Chair, **JEFF NORDENSSON** passed his gavel to **LESLIE GALLOWAY**. Jeff guided the final stages of the building of the Arizona Arthritis Center and saw to fruition the endowment of the Colburn and Alana Jones / David and Lura Lovell Chair for Integrative Rheumatology.

New Chair, Leslie Galloway, who works for CBIZ Gordon, Zucarelli and Handley Business Services, Inc., has set an ambitious agenda for her tenure. It is her goal to see the first phase of

the Pediatric Rheumatology Program endowed, the Chair at \$1.5 million and to work to establish a new event, *The Arts for Arthritis*, for the fall of 2002. This past year, Leslie's projects have been the construction of the donor walls in the Arthritis Center lobby office and the production of an Arthritis Center video.

Leslie's motivation to help is close to her heart. Her daughter, Cameron Dugan, a young and vibrant new mother, is a patient at the Arizona Arthritis Center. It is



*Arizona Arthritis Center Board Chair, Leslie Galloway*

Leslie's hope that with the endowment for Pediatric Rheumatology, the legacy of arthritis can end, and this family disease will not touch her beautiful granddaughter, Rory.

## New Advisory Board Members

**MAURA GROGAN**, owner of Non-Profit Business Strategies, has done a lot of work for Public Television, as well as other non-profits, and will lend her support and expertise to the Arizona Arthritis Center.

**JULIUS LITVACK**, retired businessman, who along with his wife, Elaine, is a valued supporter of the Arizona Arthritis Center.

**ALAN LURIE** is the Executive Vice President of the Southern Arizona Homebuilders Association (SAHBA) which directs the annual Lute Olson Celebrity Auction and Golf Tournament to benefit the Arizona Arthritis Center.

**MARK MITCHELL, CPA**, from Mitchell and Roediger CPA firm, has joined and has offered to help with our business and financial strategies.

**JOHN SZIVEK, Ph.D.**, head of Orthopedic Surgery Research at the Arizona Arthritis Center, represents all of the Orthopedic Surgery Department for Board Member, William Grana, M.D., M.P.H.

**DERRIK WOODBURY, M.D.** is a retired Orthopedic Surgeon, new to Tucson and interested in getting involved in the Arizona Arthritis Center and the community.

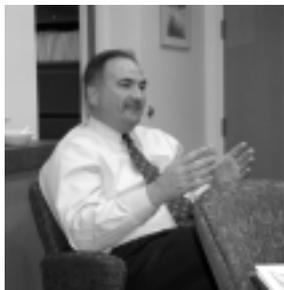
# WHAT'S

# NEWS?

## **REACH - To Serve Tucson's Mexican Americans**

Over the past fifteen years, the Arizona Arthritis Center (AAC) has created an exemplary program of clinical care for all of the Native American tribes in Arizona. This care is given in Indian Health Service facilities. The AAC is sensitive to the Native American Culture and concerned about the high

incidence of arthritis on the Reservations. Following this same model, the Arizona Arthritis Center is endeavoring to bring the finest in arthritis care to our Mexican American residents in Tucson. A Coalition Board of Hispanic leaders is being developed to ensure the success of this program—to find the patients who need the care and to provide this care in neighborhood facilities.



*Fred Orozco, Hispanic Chamber of Commerce President, speaks of the necessity and value of the Hispanic Business community in any REACH plans.*

Building.... *Confianza*  
 Creating.... *Personalismo*  
 Maintaining... *Respeto*

## **CARES Continues to Reach out to Arizonans**

The CARES program, (Collaborative Arthritis Research and Education Services), continues its valuable education for people with Osteoarthritis. There have been two recent health forums from CARES – one at



*Participants from the CARES program at the Atria Campana del Rio enjoy learning how to use exercise bands.*

the Atria Campana del Rio, and the other at Fellowship Square. At the forums, physicians gave informative lectures about current developments in the treatment and management of osteoarthritis as well as interactive demonstrations of good exercises.

When you sign up as a CARES participant you will receive the *Arthritis Basics for Change* book. Call 1-888-703-4319 to learn about the latest CARES activities or to request CARES enrollment materials.



*Amgen Associate Director of Sales for the West Region Rheumatology, Bob Wilburn, presents the Amgen Fellowship award to Jane Power, D.O. with Dr. David Yocum, Director of the Arizona Arthritis Center.*

New Rheumatologist to the Arizona Arthritis Center, DR. JAMES POSEVER, recently was awarded research funding from the Nielsen Trust.

DR. JANE POWER was awarded the Amgen Fellowship from Amgen Pharmaceuticals for the second year in a row.

DR. DAVID WAYNE SMITH was appointed by state senator Ruth Solomon to a two- year position on the Arizona State Legislature Blue Ribbon Committee to study healthcare needs for state employees and retirees. Dr. Smith wrote the first bill in 1988 for a subsidy for retired state employees.

Chair Emeritus, SAUL TOBIN and his wife, SUSAN TOBIN, were honored at the Association of Fundraising Professional's annual National Philanthropy Day Luncheon on November 16, 2001, for their valuable contributions of both time and funding to the Arizona Arthritis Center.

Physicians and researchers of the Arizona Arthritis Center presented four abstracts and results of two clinical trials at the American College of Rheumatology Conference, an international scientific meeting in San Francisco, November 12 – 15<sup>th</sup>.

DR. DAVID YOCUM, Director of the Arthritis Center, also gave the keynote address, *Future Goals of Therapy*, at a symposium presented by Centocor Pharmaceuticals, makers of Remicade, on the future of anti-TNF therapy. He also participated in two "Meet the Professor" presentations, speaking to other rheumatologists on techniques to best treat patients with difficult rheumatoid arthritis.

The Arizona Arthritis Center recently signed a contract to provide clinical care for our Native American neighbors of the GILA RIVER TRIBE.

# Research – The Hallmark of the Arizo

The Arizona Arthritis Center continues in its role to impact the history of arthritis. The University of Arizona has had the finest doctors looking for answers to arthritis causes and cures, treatments and medications for over fifty years — since the days of SCARI, the Southwestern Clinic and Research Institute. And so it continues...

## The Study into the Causes of Inflammation

Although there are over 100 different forms of arthritis, the answers to just a few basic questions regarding the disease could stop many of the problems of living with the disease and managing its destructive progression. One of these questions concern the mechanism(s) within the body that trigger inflammation. Janet Funk, M.D., is studying inflammation in Rheumatoid Arthritis (RA) – its causes and cures.

While joint destruction is the most serious and painfully obvious complication of RA, this inflammatory disease in fact affects the entire body. The event that starts the disease process is not yet known, but the destructive effects of certain hormones and other factors that are produced by the body in increased amounts in people with RA are increasingly understood. This understanding has allowed for the recent development of drugs, such as Enbrel, which effectively treats RA by blocking the action of these destructive factors. Through her research, Dr. Funk has recently discovered a new factor, or hormone, that is produced by the body in increased amounts in people with RA and which appears to mediate destruction in bone as well as in other tissues. Initial experiments are now underway to determine whether blocking the action of this new factor has protective benefits in the treatment of RA.

Additionally, bone disease in rheumatoid arthritis is not only localized to the joints, but also affects the entire skeleton, causing a type of osteoporosis that leaves the bones weakened and subject to easy fracture, an event that further complicates the lives and limits the mobility of people suffering from RA. This generalized bone disease in RA has many similarities to that seen in post-menopausal women with osteoporosis, a bone disease for which many new drugs have and are being developed. Dr. Funk has undertaken a study of several

of these newly approved or investigational drugs to determine whether they might also be effective in protecting against generalized bone loss in RA. Indeed, there is some evidence to suggest that some of these agents may also prevent arthritis and joint destruction in RA. Therefore, these drugs are being studied and assessed for their effectiveness in protecting against both arthritis and generalized bone loss.

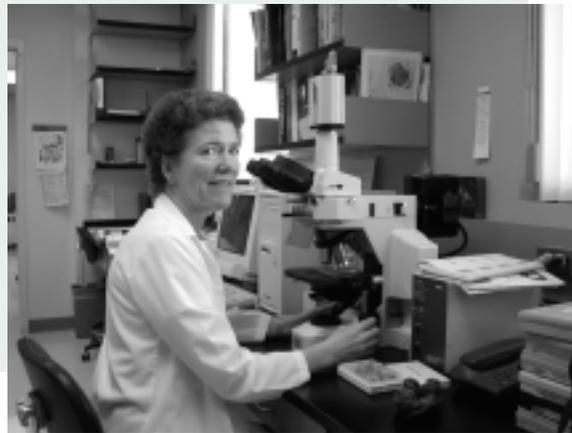
## How Autoimmune Cells May Survive Normal Elimination

Dr. Yocum and his team are working at the most basic cellular level to try to arrest the rheumatoid arthritis immune reaction before it has an opportunity to set up the devastating and destructive cascade of events. He is assisted by doctoral candidate, Xiaolei Tang, and master's candidate, Lili Xin.

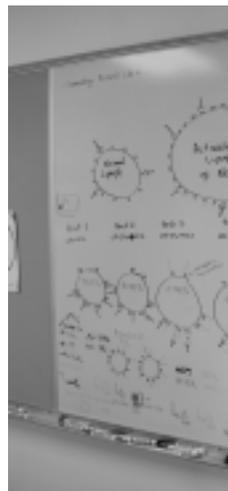
The immune system is important in protecting the body from harmful organisms like bacteria and viruses. The immune system responds to an invading organism (the immune response) by activating the immune

cells, expanding enough numbers of activated immune cells and removing the invading organisms. During this process, harmful immune cells can be produced, that attack the person they should be protecting via mechanisms called gene arrangement and gene mutation. Normally, these harmful cells are removed by a mechanism called apoptosis or programmed cell death. How the immune system regulates this process is still unknown.

These studies suggest that a signal normally produced to help the immune system becomes aberrant. The proposed normal function is (1) maintenance of immune cells to live long enough to perform an effective immune function and (2) maintenance of immune memory, in which the immune system can remember what it encountered before and respond faster when it is facing the same organism at a later time.



Dr. Janet Funk hard at work



Notes on the board in the immunology lab

However, in a genetically susceptible individual, this signal mistakenly inhibits apoptosis (death) of auto-reactive immune cells. Those auto-reactive cells result in autoimmune diseases such as rheumatoid arthritis and systemic lupus. Using active RA patients as study subjects, this research has found that RA patients have hyper-reactive lymphocytes in their immune systems that are resistant to normal cell death. The origins of the cells and their association with rheumatoid arthritis are under investigation.

If this signal can be identified as the cause of the hyperactive immune cell and modified, new therapies could result from the research.

## Orthopedic Surgery Research

From the very beginning, the Arizona Arthritis Center has had a strong relationship with Rheumatology and Orthopedic Surgery. It is not enough to work to find the best treatments or cure for this disease for future generations, but to develop therapies that can improve the quality of life for people who *currently* have severe joint destruction as a result of arthritis. Orthopedic surgery research looks at the replacement of joints that have been destroyed by arthritis and devises ways to strengthen and make joint replacements more resistant to wear once they've been implanted.

John A. Szivek, Ph.D., Professor, Department of Orthopedic Surgery, directs this research.

William A. Grana, M.D., MPH, is the Head of the Department of Orthopedic Surgery. Much of the research they conduct is possible because of an endowment gift from William and Sylvia Rubin.

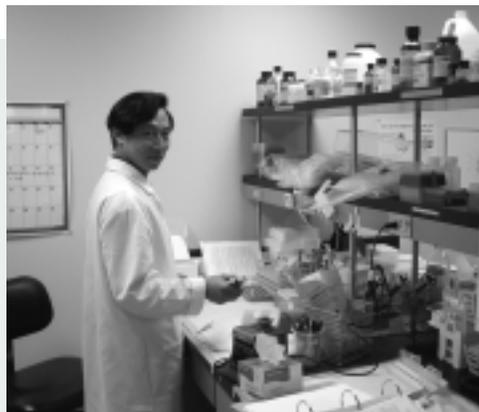
The goal of **biomechanics** research in the orthopedic research laboratory has been to analyze the changes caused by artificial joints (hips, knees, fingers) when a load or weight-bearing activity occurs. The research team is looking into metal-to-bone constructs used to stabilize fractures and unstable natural joints to examine the extent of bone changes near a metal and plastic-carbon fiber composite for joint implants. Measurement of bone deformations near these types of implants using a unique implantable sensor developed in the laboratory allows determination of the best properties for various types of implants. These types of studies also allow examination of various clinical techniques for attaching artificial joints. Recently, calcium-based ceramics attached to artificial joint stems have been examined as a way of chemically attaching the synthetic stems to living bone.

**Biomaterials** studies have also focused on artificial joints. In order to better understand how to reduce the wear and increase the clinical survival of these joints, they are tested on machines simulating body loading

conditions and studied with electron microscope examinations to study the "wear and tear" of particles taken from the knees of patients with artificial joints. This will also allow the definition of the optimum shape for the plastic parts of artificial joints. Monitoring of these wear patterns will ultimately provide a means of deciding when it is

warranted to replace worn plastic parts for artificial joints. Currently, these parts are replaced when they wear through and damage the metal parts of the artificial joints resulting in a much longer more traumatic surgery for the patient.

An overall research goal of the laboratory is the development of sensors that can be used in artificial joints or simply attached to bone surfaces. These sensors, coupled with sub-microminiature radio transmitters, will allow physicians to monitor the progress of the artificial joints of patients or to monitor the condition of their bones. This technology will benefit rehabilitation and bone maintenance for patients with artificial joints or diseases like osteoporosis.



*Doctoral Candidate, Xiaolei Tang, conducts research in the immunology lab*

This critical research is funded through many sources. Private endowments and gifts are the most special, reconfirming the personal need to solve the problems that make life so difficult for people who must live every day with the pain and disability from arthritis.

**Support for research is also support for Campaign Arizona.**

Campaign **ARIZONA**<sup>®</sup>  
FOR A PREMIER UNIVERSITY EXPERIENCE

## Charles and Sophie McKenzie Leave a Legacy to End a Legacy

The Arizona Arthritis Center is proud to announce that it has recently received a gift from Sophie and Charles McKenzie to fund the *McKenzie Pediatric Rheumatology Chair*.

Sophie's sister has lived most of her life with serious rheumatoid arthritis, and Sophie wants to help to ensure that others will not be so afflicted in the future. She realizes she can make a difference and together she and her husband "Mac" have made this gift to the Arizona Arthritis Center to fund a Pediatric Rheumatologist.

"Mac," now retired from the U.S. Navy, is a Pearl Harbor survivor. When asked if he and Sophie went to see the recent movie about Pearl Harbor, he smiled and said, "No, I don't need to see the movie. I was there..."

After retiring from the Navy, Mac and Sophie moved to Illinois where Mac was instrumental in building Abbott Park for Abbott Laboratories and Sophie also worked for Abbott Labs. At their second retirement, they visited Tucson, twenty-one years ago and "forgot to leave," according to Mac.

Mac and Sophie, have been married more than sixty years. They have no children of their own, but have now "adopted" more than 300,000 children with juvenile arthritis in the United States who will benefit from the research that can now be funded.

Thank you, Mac and Sophie. The generosity of your legacy gift will surely help to end the legacy of arthritis.

A portion of the McKenzie's gift was made through a gift annuity. They owned some stock that was returning a fraction in annual dividends compared with what they could earn in payments from this annuity.

This is how a gift annuity works: A gift is made to the Arizona Arthritis Center through the University of Arizona Foundation. It is a lifetime binding contract between the UA Foundation and the donor that guarantees a negotiated percentage return in monthly, quarterly or annual payments. When the donor is no longer living, the assets are transferred to the Arizona Arthritis Center.

The donors get a tax deduction during the year that they made the gift, have an opportunity to minimize capital gains if the gift is funded with appreciated assets and they no longer have to fret over personal investment decisions – all-in-all, a great deal!



Charles and Sophie McKenzie

If you would like to learn more about a gift annuity and how you can take advantage of this tax-saving opportunity, please call Ken Dildine or John Woods at the UA Foundation office at 621-1993 or development director Carol Willson at 626-7902.

The future of care for people with arthritis is brighter than ever because of the quiet plans of ordinary people, and we are very grateful to them and to all who value the work of the Arizona Arthritis Center.

As you consider making a gift to the Arizona Arthritis Center, please be reminded of two things:

1. How appreciative the Arizona Arthritis Center is of the support that is given.
2. That the Arizona Arthritis Center follows the practices of the Association of Fund Raising Professionals *Donor Bill of Rights*.

### Donor Bill of Rights

**I** – To be informed of the organization's mission, of the way the organization intends to use donated resources, and of its capacity to use donations effectively for their intended purposes.

**II** – To be informed of the identity of those serving on the organization's governing board, and to expect the board to exercise prudent judgement in its stewardship responsibilities.

**III** – To have access to the organization's most recent financial statements.

**IV** – To be assured their gifts will be used for the purposes for which they were given.

**V** – To receive appropriate acknowledgment and recognition.

**VI** – To be assured that information about their donations is handled with respect and with confidentiality to the extent provided by law.

**VII** – To expect that all relationships with individuals representing organizations of interest to the donor will be professional in nature.

**VIII** – To be informed whether those seeking donations are volunteers, employees of the organization or hired solicitors.

**IX** – To have the opportunity for their names to be deleted from mailing lists that an organization may intend to share.

**X** – To feel free to ask questions when making a donation and to receive prompt, truthful and forthright answers.



The Arizona Arthritis Center is proud to announce that the Section of Rheumatology was listed as one of the country's top 50 centers in the July 23, 2001 U.S. NEWS & WORLD REPORT ranking.



**Save the Dates:**

**April 11<sup>th</sup>, 2002**

**Lute Olson Celebrity Auction**  
 Jewish Community Center  
 6:00 – 9:00 p.m.  
 \$25 per person

**April 13<sup>th</sup>, 2002**

**Lute Olson Celebrity Golf Tournament**  
 Sheraton El Conquistador Country Club  
 7:30 a.m. shotgun start  
 \$200 per person (tee & foursome packages available)  
 Call Carol Willson at 626-7902 for information.

**I**t is with gratitude that the Arizona Arthritis Center acknowledges the tenure of Vice President for Health Sciences and Dean of the College of Medicine, James Dalen, M.D., M.P.H., and congratulates him on his retirement.

The Arizona Arthritis Center welcomes new Vice President for Health Sciences, Raymond Woosley, M.D., Ph.D. and William Dalton, M.D., Ph.D., new Dean for the College of Medicine.

**Friends Continue Their Support**

The Arizona Arthritis Center Friends continue with their busy schedule and support for the Center. The group held a wonderful membership recruitment tea, *Tea and Friends*, in November at Tucson Country Club, hosted by Friend's member Ann Volz. New Rheumatologist, Dr. Jim Posever was introduced. Chair of the Arthritis Center Board, Leslie Galloway, spoke about her daughter, Cammie, who has battled juvenile arthritis for nearly fifteen years, and Friends member, Caryl Taylor was awarded her President's Club plaque for her support of the Pediatric Rheumatology Endowment.



**Look for these upcoming Arizona Arthritis Center Friends events:**

- ♥ **Conversations and Lunch**  
Arizona Inn, February 14th
- ♥ **Living Healthy with Arthritis**  
DuVal Auditorium at UMC,  
March 9<sup>th</sup>

Call Carol Willson at 626-7902 for more information about the Friends or their educational events.



Special thanks go to Arizona Arthritis Center Friend and supporter, Irene Lasater. Irene taught another *Enhance Healing by Writing* class this past fall. Research shows that both arthritis and asthma have improved health outcomes by writing about stressful life experiences. Irene, an educator for 45 years before retiring to Green Valley was California's "Outstanding Educator" in 1983. We appreciate her willingness to share her talents with the Arizona Arthritis Center and her writing classes. If you are interested in participating in the next class, please call Michelle Cornett at 626-5040.

## *James Posever, M.D.*

Dr. Posever brings extensive experience in basic and clinical research of osteoarthritis to the University of Arizona where he recently joined the faculty as an Assistant Professor of Medicine within the Section of Rheumatology. His training includes a clinical fellowship in rheumatology at Stanford University and research fellowships in cartilage biology at the University of Chicago and in immunology also at Stanford University. In addition, he has participated in over twenty clinical trials of biologic agents used for treatment of rheumatic disease, including work as a sub-investigator on therapeutic studies of IGF-1 for osteoarthritis. His current position is a balance of clinical and research duties, including basic and clinical science.

At the University of Chicago, Dr. Posever studied the effects of growth factors on human osteoarthritic cartilage. His work resulted in the

development of a model of osteoarthritis that allowed comparison of anabolic responses of tissue varying in disease stage. This work identified a factor capable of stimulating matrix synthesis in human osteoarthritic cartilage. While he has only recently joined the University of Arizona, he has plans to continue this line of research emphasizing bench work that can be translated to bedside applications.

A second research interest of Dr. Posever is further understanding of common rheumatic diseases through analysis of patients who vary in clinical presentation, or have different biologic markers and therapeutic responses. He has been awarded a research grant by the Nielsen Trust to explore T cell reactivity to autoantigens in patients with rheumatoid arthritis. A second component of this grant calls for exploring the use of CD4+/CD25+ T cells for therapy of rheumatoid

arthritis when patients display T cell dysregulation. The goal of this work is to develop therapies targeted to determine what goes wrong with the body and the mechanisms that lead



*James Posever, M.D.*



Arizona Arthritis Center  
PO Box 245093  
Tucson, AZ 85724-5093