HSS Rheumatology Fellowship

HOSPITAL FOR SPECIAL SURGERY
Mary (Peggy) Crow, MD
Physician-in-Chief, Dept. Medicine

Anne R. Bass
Program Director

Jessica Berman
Associate PD

Alexa B. Adams, MD
Juliet Aizer, MD, MPH
Dalit Ashany, MD
Anne R. Bass, MD
Jessica R. Berman, MD
Vivian P. Bykerk, BSc, MD,
Mary K. Crow, MD *
Stephen J. Di Martino, MD, PhD, RhMSUS
Doruk Erkan, MD, MPH
Theodore R. Fields, MD
Allan Gibofsky, MD
Susan M. Goodman, MD
Jessica K. Gordon, MD
Lionel B. Ivashkiv, MD
Kyriakos A. Kirou, MD, DSc
Lindsay S. Lally, MD
Thomas J.A. Lehman, MD
Alana B. Levine, MD
Michael D. Lockshin, MD
Theresa T. Lu, MD, PhD
Carol A. Mancuso, MD,
C. Ronald MacKenzie, MD
Steven K. Magid, MD
Lisa A. Mandl, MD, MPH
Joseph A. Markenson, MD
Charis F. Meng, MD
Stephen A. Paget, MD,
Nancy Pan, MD
Edward J. Parrish, MD
Linda A. Russell, MD
Jane E. Salmon, MD
Lisa R. Sammaritano, MD
Sergio Schwartzman, MD
Robert F. Spiera, MD
Lisa C. Vasanth, MD, MS
Hendricks H. Whitman III,
Arthur M. F. Yee, MD, PhD
Multiple campuses in a 5 block radius

- Hospital for Special Surgery
- New York Presbyterian Hospital (Cornell)
- Weill Cornell Medical College
- Memorial Sloan Kettering Cancer Center
- Rockefeller University
New York Presbyterian Hospital
Weill Cornell Medical College

- Tertiary care medical center
- 2,262 Beds
- 104,600 admissions
  - Diverse patient population
  - Very complex cases
    - Vasculitis, lupus, myositis etc.

Memorial Sloan Kettering Cancer Center

- 469 bed cancer facility
- 24,597 admissions
  - Paraneoplastic syndromes
  - Complications of chemotherapy and immunotherapy
  - Gout
Orthopedic & Rheumatology Hospital

203 beds
  - 14,000 admissions

All specialists in
  - musculoskeletal medicine
  - Radiology
  - Physiatry
  - Pain management

HSS Rheumatology Centers of excellence

- Lupus & APS
- Inflammatory arthritis
- Scleroderma, vasculitis, myositis
HSS Rheumatology Fellowship: 1st year

Consult Service (2/3 months)

1-5 consults per day
- 1-3/wk at MSKCC

Amazing patient population!
- Complexity of cases
  - Vasculitis
  - Lupus
  - Myositis
  - Gout
  - Paraneoplastic disorders
  - Immunotherapy/chemotherapy reactions
- Diverse patient population

Continuity Clinics

3 continuity clinics per week
- Inflammatory arthritis
  - 5-6 patients per session
- New patient clinic
  - 2-3 new patients per session
- Lupus/CTD
  - 5-6 patients per session
MONDAYS

9-12:
Inflammatory arthritis clinic

12:15-1:15:
inflammatory arthritis conference

Afternoon:
consult service or research

Bykerk  Schwartzman  Gibofsky
Inflammatory Arthritis Center of Excellence

http://www.hss.edu/inflammatory-arthritis-center.asp

Vivian P. Bykerk, MD

Mission

- To establish national and international leadership in innovative and personalized clinical care of patients with inflammatory arthritis
- To create a multi-disciplinary academic and patient-oriented program
- To advance innovative and personalized care of patients with inflammatory arthritis through clinical and translational research

Longitudinal Cohorts
- Early Rheumatoid Arthritis - (n=2500+) (CATCH, CATCH-US)
- Psoriatic Arthritis
- Ankylosing Spondylitis Cohort (HSS-AxSpA)

Investigator Initiated (Multisite) Peer Review Funded Studies

- Patients at Risk for RA – International NIH funded clinical trial to prevent RA (HSS a collaborating site (PI Bykerk) (NIH funded U Colorado)
- PROMIS study in RA (HSS a collaborating site, PI Bykerk) (PCORI funded (lead PI Bingham – Hopkins)
- ERA Synovial Biopsy Study (AMP) (HSS lead site, PI Bykerk) (NIH funded)
- RA Flare Study (AMP) (HSS lead site, PI Goodman) (predicting RA flare post arthroplasty surgery) (NIH funded)

IACE Industry Funded RCTs (Phase II-IV)

- SEEM Study (a study of treatment withdrawal in patients in remission on MTX+ etanercept), Phase IV, Amgen sponsored (Bykerk PI, Ashany Co-I)
- study of certolizumab in non-radiographic axial spondyloarthritis (sponsored by UCB)
- study of a novel therapy for Psoriatic Arthritis (sponsored by BIPI)
- Induction and withdrawal study of abatacept (2 studies (AVERT2, biomarker study) (sponsored by BMS)
- Study of an adenosine agonist in RA (PI Goodman)
TUESDAYS

8:30-10am:
CAP conference -- Goodman

10-11am:
Paget rounds

11:30-12:30:
Fellows’ clinical epidemiology journal club
Mandl/Aizer

12:30-1:30pm:
Introductory course (summer)

Afternoon:
consult service or research

Goodman  Paget  Mandl  Aizer
Registries, Clinical Trials

- Legacy arthroplasty registry
- Psoriatic Arthritis is Associated with Heterotopic Ossification after Total Hip Arthroplasty
- Total Knee Replacement Outcomes in Patients With Psoriatic Arthritis, Osteoarthritis With Cutaneous Psoriasis and Osteoarthritis
- Social Networks and Hip Replacement Outcomes in Rheumatoid Arthritis and Osteoarthritis
- Rheumatoid Arthritis Patients Have Similar Excellent Outcomes After Total Knee Replacement Compared with Osteoarthritis Patients
- Revision Arthroplasty in Rheumatoid and Osteoarthritis: Does Methotrexate Decrease Radiographic Lucency in RA Patients?
- Flares Occur Frequently in RA Patients Undergoing Arthroplasty – a Prospective Cohort Study.
- Histologic Scoring of Arthroplasty Synovial Samples May Predict RA Flare
- Clinical prediction rule for diagnosing post-op PE.
- Genetics InFormatics Trial of Warfarin (GIFT) to Prevent DVT
- Post-Operative Statin for Thromboprophylaxis & Cardiovascular Outcomes Protection (POST-OP) Trial

Mandl  Goodman  Bass
Osteoporosis and Metabolic Bone Health Center

- Osteoporosis, Paget’s, and other metabolic disorders, plus orthopedic oncology.
  - Nurse clinicians
  - 2 radiology technicians for DXA

- Metabolic Bone Disease conference (monthly)

Linda Russell  Juliet Aizer
WEDNESDAYS

8-9am:
Grand Rounds

9-10am:
New Patient Clinic Conference (Bass/Berman/Aizer)
  ● Ultrasound curriculum
  ● Case discussions
  ● Outside speakers (orthopedic, PT etc)

10am-1pm:
New patient Clinic

Afternoon:
consult service or research
Non-operative sports medicine clinic (HSS fellow)-
Dr. Kinderknecht
Musculoskeletal Ultrasound

2 year curriculum

Steve DiMartino

Lisa Vasanth
HSS Education Academy

**Mission:**
- To create a stimulating academic environment for educators.
- To define a clear and effective structure for training programs.
- To promote teaching excellence.
- To create a Grant Funding Program for innovative education scholarship at HSS.
- Since inception in 2012: $580,000 given out in 20 grants.

- Motivation and Support for Development of a Program for Medical Educators
- NYC Inter-institutional ROSCE Using Inter-Professional Evaluators
- Musculoskeletal Exam Curriculum for Inflammatory Arthritis Clinic
- Multidisciplinary Patient Education and Monitoring Program in Gout
- Change in Pedagogic Techniques in an Established Curriculum (BOD)
- Instrument to Assess Knowledge and Skills in Critical Appraisal of Literature

Jessica Berman

Stephen Paget
Pediatric Rheumatology

- Wednesday pediatric clinic
- Transition clinic 3-4 times/year
- Combined journal club and walk rounds
- Opportunities for research

Tom Lehman  Alexa Adams  Nancy Pan  Theresa Lu
THURSDAYS

8:30-9:30am:
Journal Club

9:30-11am:
Walk Rounds: inpatient case discussion and bedside rounds

Afternoon:
consult service or research

Bass  Berman  Paget  Lockshin
8-9am: 
Radiology Rounds

9am-12pm: 
Lupus/CTD clinic

12-1pm: 
Lupus & Scleroderma clinic conferences

Afternoon: 
consult service or research

Erkan  Kirou  Salmon  Gordon
SLE/APS Center of Excellence

Mission
- To provide individualized, state-of-the-art care, support, and education to patients with SLE and APS
- To advance understanding of the causes of SLE and APS, and to develop novel treatments that improve patients’ lives

Patient Care & Support
- Lupus Fast Track Program
- Lupus Nephritis Program
- Lupus Support programs
- Cardiovascular disease prevention counseling
- Contraceptive and reproductive health counseling

Lupus Investigators
Mary K. Crow, MD
Jane E. Salmon, MD
Franck Barrat, PhD
Alessandra Pernis, MD
Theresa Lu, MD, PhD

Research Portfolio
- Disease susceptibility
- Alterations in immune function
- Mechanisms of target organ damage
- New Therapies

Systemic Lupus Erythematosus – Basic Science
- Signaling Pathways Inducing Type I Interferon (Crow, Olferiev)
- Studies of Immune Deregulation in Patients with SLE (Salmon)
- Role of LINE-1 in Lupus Pathogenesis (Crow, Mavragani, Sagalovskiy)
- Differential Expression of X and Y Chromosome Genes in Male and Female SLE Patients (Olfveriev, Crow)
- Role of Mitochondrial DNA in SLE (Fernandez, Crow)
- IFNs and Epigenetic and Metabolic Regulation in SLE (Ivashkiv)
SLE/APS Center of Excellence

Systemic Lupus Erythematosus – Clinical Trials

● A Phase IIb, Multi-Center, Randomized, Double-Blind, Placebo-Controlled, Multidose, 24-Week Study to Evaluate the Efficacy and Safety of Atacicept in Subjects With Systemic Lupus Erythematosus (SLE) (Erkan)
● A Multicenter, Investigator-Initiated, Phase II, Randomized, Withdrawal Study of Mycophenolate Mofetil (MMF) in Patients with Stable, Quiescent Systemic Lupus Erythematosus (SLE) (Erkan)
● Nelfinavir in Systemic Lupus Erythematosus: A pilot phase IIa clinical trial (Kirou)
● A Phase 3/4, Multi-Center, randomized, Double-Blind, Placebo-Controlled, 52-Week Study to Evaluate the Efficacy and Safety of Belimumab (HGS1006) in Adult Subjects of Black Race with Systematic Lupus Erythematosus (SLE) (Kirou)
● Phase 2 Randomized Double Blind Placebo Controlled Multicenter Trial in Active Biopsy Proven ISN/RPS 2003 Class III or IV Lupus Nephritis (With or Without Class V) Within 3 Months (Kirou)
● A Phase 3 Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Efficacy and Safety of BMS-188667 (Abatacept) or Placebo on a Background of Mycophenolate Mofetil (MMF) and Corticosteroids in the Treatment of Adults with Active Class III of IV Lupus Nephritis (Kirou)

Systemic Lupus Erythematosus & APS – Cohorts/Biobanks

● Autoimmune Disease Registry and Repository (Salmon)
● Immune System Regulation in Autoimmune and Inflammatory Disease (Kirou)
● Longitudinal Analysis of Gene Expression in Lupus (Olferieiev, Crow, Kirou)
● Biomarkers Predictive of Lupus Nephritis Flare (Olferieiev, Crow, Kirou)
● Lupus Clinical Trials Consortium Hospital for Special Surgery Clinical Lupus Registry-An International SLE Registry for Collaborative Clinical Trials (Erkan)
● Lupus Nephritis Cohort of the Autoimmune Disease Registry and Repository (Kirou)
● APS ACTION: Antiphospholipid Syndrome Alliance for Clinical Trials and International Networking (“APS ACTION”) International Clinical Database and Repository (Erkan)
Antiphospholipid Syndrome – Basic and Clinical Studies and Clinical Trials

- Comparison of Gut Commensal Bacteria between Persistently Anti-β2 Glycoprotein-I Positive Patients and aPL Negative Patients (Erkan)
- Effect of Hydroxychloroquine on the Annexin A5 Resistance Assay in aPL Patients with and without SLE (Erkan)
- Genetics of Thrombotic Storm - National Database & Repository for Thrombotic Storm Patients (Erkan)
- Mammalian Target of Rapamycin (mTOR) Pathway in Antiphospholipid Antibody Positive Patients with Skin Involvement (Erkan)
- Arterial Study in aPL-positive and/or Lupus Patients. Markers of Vascular Remodeling and Thrombosis Risk in Antiphospholipid Antibody-Positive Patients (Erkan)
- Development of Antiphospholipid Syndrome iBook (Erkan)
- An Open-Label Proof of Concept Phase IIa Trial of ALXN1007 for the Treatment of Non-criteria Manifestations of Antiphospholipid Syndrome (Erkan)
- APS ACTION: A Multicenter International Perspective, Randomized Controlled Trial of Hydroxychloroquine in the Primary Thrombosis Prophylaxis of
Scleroderma Center of Excellence

http://www.hss.edu/scleroderma-vasculitis-center.asp

- Scleroderma Patient Registries
- Research into mechanisms of disease.
- Clinical trials of candidate therapeutic agents.
- Resources for scleroderma patients
  - Scleroderma Support Group
  - Newsblasts
  - Rheum to Heal”, the First Narrative Medicine Journal in Rheumatology

Registries

Scleroderma
- HSS Scleroderma Registry
- Prospective Registry of Early Systemic Sclerosis
- Undifferentiated Connective Tissue Disease Registry
- Genome Research in African American Scleroderma Patients (GRASP Study)
- The Natural History and Outcome of Scleroderma Patients at High Risk or with Early Pulmonary Hypertension

Myositis Registry

Scleroderma: clinical trials at HSS
- Scleroderma Treatment with Celution Processed Adipose Derived Regenerative Cells (STAR): A Randomized, Double-Blind, Placebo-Controlled Trial with Incomplete Crossover
- Safety, Tolerability, Efficacy, and Pharmacokinetics of JBT-101 in Systemic Sclerosis
- A Randomized, Double Blind, Placebo Controlled Trial of Topical C-82 in Systemic Sclerosis: A Phase I/II Biomarker and Safety Trial
- Randomized, Double-Blind, Placebo-Controlled Trial of IL1-Trap, Rilonacept, in Systemic Sclerosis-A Phase I/II Biomarker Trial
- A phase II study to evaluate subcutaneous abatacept vs. placebo in diffuse cutaneous systemic sclerosis—a double-blind, placebo-controlled, randomized controlled trial
- Randomized, Double-blind, Placebo-Controlled, Phase II Multicenter Trial of a Monoclonal Antibody to CD20 (Rituximab) for the Treatment of Systemic Sclerosis-Associated Pulmonary Arterial Hypertension (SSc-PAH):
- Belimumab for the Treatment of Diffuse Cutaneous Systemic Sclerosis
- The LOTUSS Trial: An Open-Label, Randomized, Phase 2 Study of the Safety and Tolerability of Pirfenidone when Administered to Patients with Systemic Sclerosis Related Interstitial Lung Disease
Scleroderma Center of Excellence

Stephen DiMartino
Jessica Gordon
Robert Spiera
Vasculitis: clinical trials at HSS

- A Randomized, Double-Blind, Placebo-Controlled, Dose Assessment Phase 2 Study to Evaluate the Safety and Efficacy of CCX168 in Subjects with Anti-Neutrophil Cytoplasmic Antibody (ANCA)-Associated Vasculitis: Currently Open to Enrollment

- A Phase III, Multicenter, Randomized, Double-Blind Placebo-Controlled Study to Assess the Efficacy and Safety of Tocilizumab (Actemra®) in Subjects with Giant Cell Arteritis: Fully Enrolled

- A Phase 3, Multi-Center, Multinational, Randomized, Double-Blind, Study to Evaluate the Efficacy and Safety of Belimumab (Benlysta®) in Combination with Azathioprine for the Maintenance of Remission in Wegener’s Granulomatosis and Microscopic Polyangiitis

- An international, open label, randomized controlled trial comparing rituximab with azathioprine as maintenance therapy in relapsing ANCA-associated vasculitis (RITAZAREM):

- Phase Ila Trial of Tocilizumab (Actemra®) in the Treatment of Polymyalgia Rheumatica

- Rho-kinase activity in Large Vessel Vasculitis
HSS Rheumatology Fellowship

- **3 year fellowship**
  - 9 fellows in total

- **1st year: intensive clinical experience**
  - Consult service 2/3 months (2 fellows)
  - HSS service 1/3 months (1 fellow)

- **2/3rd year:**
  - 60% dedicated research time
  - Clinical or bench research
  - Continuity clinics & didactics continue

Research

- **Clinical research**
  - Masters in Clinical & Translational Investigation
    - Weill Cornell Clinical and Translational Science Center
  - Masters in Clinical Epidemiology and Health Services Research
    - Weill Cornell Medical College

- **Basic research**
  - Autoimmunity & Inflammation
  - Arthritis & Tissue Degeneration
  - David Z Rosensweig Genomics Research Center

- **Winter 1st year**
  - Apply to CTSC masters program

- **Spring 1st year**
  - Identify research mentor and topic
  - Research mentorship advisory group – June

- **Summer 2nd year**
  - Cornell stats/epi summer intensive
Research

- **Fall 2nd year**
  - ACR meeting
  - Research mentorship advisory group -- December

- **Spring 2nd year**
  - Research in progress presentation
  - Submit poster to ACR
  - Grant application to ACR RRF

- **Fall 3rd year**
  - Job search begins
  - ACR meeting
  - Research mentorship advisory group – December

- **Spring 3rd year**
  - Research in progress presentation
  - Submit poster to ACR
  - Submit manuscript for publication

Call schedule

**No in house call**

- First year fellows are on call about 1/3 weekends
- 2nd year 3 calls/year
- 3rd year 1 call/year
- Middle of the night calls are rare
Life - outside of work

Housing
- Subsidized housing
- Upper east side of Manhattan
- Near the hospital.

Salary
- F1 $75,092/yr
- F2 $77,885/yr
- F3 $81,229/yr

New York City!!
Some of our graduates

Timothy Niewold, MD 
Associate Professor
Mayo Clinic
Genetic basis of lupus 
Fellow graduate 2007

Carla Scanzello, MD PhD 
Assistant Professor
Univ. Pennsylvania 
Inflammation in OA 
Fellow graduate 2008

Soumay Chakravarty, MD, PhD 
Assistant Professor
Drexel University
Fellow graduate 2013

Sonali Narain, MBBS, MPH 
Assistant Professor
North Shore LIJ, Hofstra 
Director of Epidemiology, Outcomes and Patient-Oriented Research 
Fellow graduate 2015

Lindsay Forbess, MD, MSc 
Staff physician
Cedars Sinai 
Vasculitis 
Fellow graduate 2012