

BIOGRAPHICAL SKETCH

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NAME Steven K. Grinspoon, M.D.		POSITION TITLE Professor of Medicine, Director MGH Program in Nutritional Metabolism	
eRA COMMONS USER NAME: SKGRINSPOON			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Cornell University, New York	B.A.	1983	Political Science
Univ. of Rochester School of Medicine & Dentistry	M.D.	1988	Medicine

A. Positions and Honors

Professional Positions

1988-1992 Resident and Chief Resident in Medicine, Columbia-Presbyterian Hospital, New York
1992-1995 Clinical and Research Fellow in Medicine, Neuroendocrine Unit, MGH
1995-1996 Instructor in Medicine, Harvard Medical School
1997-2001 Assistant Professor of Medicine, Harvard Medical School
1999- Assistant Director, General Clinical Research Center, Massachusetts Institute of Technology
2001-2007 Associate Professor of Medicine, Harvard Medical School
2002- Director, Program in Nutritional Metabolism, Massachusetts General Hospital
2007- Professor of Medicine, Harvard Medical School

Awards and Other Professional Activities

1999 Co-Chair, Wasting and Weight Loss Working Group, Department of Health and Human Services – Expert Panel on National HIV/AIDS Nutrition Guidelines
2000- 2008 Editorial Board, *Journal of Clinical Endocrinology and Metabolism*
2001- Member, International AIDS Society USA, Expert Panel on Metabolic Complications
2001- Director, Endocrinology and Metabolism Research and Executive Committee, MGH CFAR
2002- Executive Committees, Harvard Center for Nutrition Research and Harvard Div. of Nutrition
2002- 2006 Member, Study Section, NIH NCR Clinical Research Review Committee
2003- 2005 Co-Chair, Research Affairs Committee, Endocrine Society
2003- Member, The American Society for Clinical Investigation
2004- 2006 Member, World Health Organization Technical Advisory Group on Nutrition in HIV Disease
2004 Pfizer Visiting Professorship, University of California at Davis
2005 American Federation of Medical Research Outstanding Investigator Award
2005- Co-Director, Harvard Training Clinical Nutrition Research Center
2005- PI & Director, Harvard Training Grant in Nutritional Metabolism
2006- 2008 Co-Chair, American Heart Association and American Academy of HIV Medicine, State of the Science Conference on CVD in HIV
2011- Member, The Association of American Physicians

B. Selected peer-reviewed publications or manuscripts in press (selected from 171).

1. **Grinspoon SK**, Baum HBA, Peterson S, Klibanski A. Effects of rhIGF-I administration on bone turnover during short-term fasting. *J Clin Invest.* 1995; 96: 900-6.
2. **Grinspoon S**, Corcoran C, Askari H, Schoenfeld D, Wolf L, Burrows B, Walsh M, Hayden D, Parlman K, Anderson E, Basgoz N, Klibanski A. Effects of androgen administration in men with the AIDS wasting syndrome: A randomized, placebo-controlled trial. *Ann Int Med.* 1998; 129:18-26.
3. **Grinspoon S**, Corcoran C, Parlman K, Costello M, Rosenthal D, Anderson E, Stanley T, Schoenfeld D, Burrows B, Hayden D, Basgoz N, Klibanski A. Effects of testosterone and progressive resistance training in eugonadal men with AIDS wasting: A randomized, controlled trial. *Ann Int Med.* 2000;133:348-55.
4. Hadigan C, Corcoran C, Basgoz N, Davis B, Sax P, **Grinspoon S**. Metformin use in the HIV lipodystrophy syndrome: A randomized, controlled trial. *JAMA.* 2000; 284:472-7.
5. Hadigan C, Meigs JB, Rabe J, D'Agostino RB, Wilson PWF, Lipinska I, Tofler GH, **Grinspoon S**. Increased PAI-1 and tPA antigen levels are reduced with Metformin therapy in HIV-infected patients with fat redistribution and insulin resistance. *J Clin Endocrinol Metab.* 2001; 86:939-43 (Rapid Comm).

6. Hadigan C, Meigs, Wilson PWF, D'Agostino RB, Davis B, Basgoz N, Sax PE, **Grinspoon S**. Prediction of Coronary Heart Disease Risk in HIV-Infected Patients with Fat Redistribution. *Clin Inf Dis*. 2003; 36:909–16.
7. Hadigan C, Yawetz S, Thomas A, Havers F, Sax PE, **Grinspoon S**. Effects of Rosiglitazone on Metabolic Indices and Fat in HIV Lipodystrophy: A Randomized Controlled Trial. *Ann Intern Med*. 2004; 140: 786 - 794.
8. Koutkia P, Canavan B, Breu J, Torriani M, Kissko J, **Grinspoon S**. Growth Hormone Releasing Hormone (GHRH) in HIV-infected Men with Lipodystrophy: A Randomized Controlled Trial. *JAMA*. 2004; 292: 210-218.
9. Hadigan C, Kamin D, Mazza S, Liebau J, Barrow, S, Torriani M, Rubin R, Weise S, Fischman A, **Grinspoon S**. Depot Specific Regulation of Glucose Uptake and Insulin Sensitivity in HIV-Lipodystrophy. *Am J Physiol Endocrinol Metab*. 2006; 290: E289 - E298.
10. Bernstein LE, Berry J, Kim S, Canavan B, **Grinspoon SK**. Effects of Etanercept in the Metabolic Syndrome. *Arch Int Med*. 2006; 166: 902 - 908.
11. Fitch KV, Anderson EJ, Hubbard JL, Carpenter SJ, Waddell WR, Caliendo AM, **Grinspoon SK**. Effects of a Lifestyle Modification Program in HIV-infected Patients with the Metabolic Syndrome. *AIDS*. 2006; 20:1843-1850.
12. Hadigan, C, Liebau J, Torriani M, Andersen R, **Grinspoon S**. Improved Triglycerides and Insulin Sensitivity with 3 Months of Acipimox in HIV-infected Patients with Hypertriglyceridemia. *J Clin Endocrinol Metab*. 2006; 91: 4438-44.
13. Mulligan K, Yang Y, Winer DA, Koletar SL, Parker RA, Alston-Smith BL, Schouten JT, Fielding RA, Basar MT, **Grinspoon S**, for the ACTG 5082 study team. NIAID Adult AIDS Clinical Trials Group, Bethesda, MD. Effects of Metformin and Rosiglitazone in HIV-infected Patients with Hyperinsulinemia and Elevated Waist/Hip Ratio. *AIDS*. 2007;21:47-57.
14. Fleischman A, Johnsen S, Systrom DM, Hrovat M, Farrar CT, Frontera W, Fitch K, Thomas BJ, Torriani M, Côté HCF, **Grinspoon SK**. Effects of a Nucleoside Reverse Transcriptase Inhibitor, Stavudine, on Glucose Disposal and Mitochondrial Function in Muscle of Healthy Adults. *Am J Physiol Endocrinol Metab*. 2007; 292: E1666 - E1673.
15. Lo J, Bernstein LE, Canavan B, Torriani M, Jackson MB, Ahima RS, **Grinspoon S**. Effects of TNF-alpha Neutralization on Adipocytokines and Skeletal Muscle Adiposity in the Metabolic Syndrome. *Am J Physiol Endocrinol Metab*. 2007; 293: E102 - E109.
16. Triant VA, Lee H, Hadigan C, **Grinspoon S**. Increased Acute Myocardial Infarction Rates and Cardiovascular Risk Factors among Patients with HIV Disease. *J Clin Endocrinol Metab*. 2007; 92: 2506–2512.
17. Falutz J, Allas S, Blot K, Potvin D, Kotler D, Somero M, Berger B, Brown S, Richmond G, Fessel J, Turner R, **Grinspoon S**. Metabolic Effects of a Growth Hormone-Releasing Factor in HIV Patients. *N Engl J Med* 2007; 357:2359-70.
18. Lo J, You SM, Canavan B, Liebau J, Beltrani G, Koutkia P, Hemphill L, Lee H, **Grinspoon S**. Low Dose Physiologic Growth Hormone in HIV Patients with Abdominal Fat Accumulation: A Randomized Controlled Trial. *JAMA*. 2008; 300:509-519.
19. Makimura H, Stanley T, Mun D, You SM, **Grinspoon S**. The Effects of Central Adiposity on Growth Hormone Response to GHRH-Arginine Stimulation Testing in Men. *J Clin Endocrinol Metab*. 2008; 93:4254-60. PMID: PMC2582562
20. Triant V, Meigs J, **Grinspoon S**. Association of C-Reactive Protein and HIV Infection with Acute Myocardial Infarction. *JAIDS*. July 2009; 51:268-273. PMID: PMC2763381
21. Makimura H, Stanley T, Mun D, Chen C, Wei J, Connelly JM, Hemphill LC, and **Grinspoon SK**. Reduced Growth Hormone Secretion is Associated with Increased Carotid Intima-Media Thickness in Obesity. *J Clin Endocrinol Metab* 2009; 94:5131-8. PMID: PMC2795664
22. Lo J, Abbara S, Shturman L, Soni A, Wei J, Rocha-Filho JA, Nasir K, **Grinspoon SK**. Increased Prevalence of Subclinical Coronary Atherosclerosis Detected by Coronary Computed CT angiography in HIV- Infected Men. *AIDS* 2010;24:243-53.
23. Falutz J, Mamputu J, Potvin D, Moyle G, Soulban G, Loughrey H, Marsolais C, Turner R, **Grinspoon S**. Effects of Tesamorelin (TH9507), a Growth Hormone-releasing Factor Analogue, in HIV-infected Patients with Excess Abdominal Fat: A Pooled Analysis of 2 Multicenter, Double-blind, Placebo-Controlled Phase 3 Trials with Safety Extension Data. *J Clin Endocrinol Metab* 2010;95:4291-304

24. Fleischman A*, Makimura H*, Stanley T, McCarthy M, Kron M, Sun N, Chuzi S, Hrovat M, Systrom D, **Grinspoon S**. Skeletal Muscle Phosphocreatine Recovery After Submaximal Exercise in Children, Young and Middle Age Adults. *J Clin Endocrinol Metab* 2010;9:E69-74. PMID: PMC2936068
25. Lo J, You SM, Liebau J, Lee H, **Grinspoon S**. Effects of Low Dose Growth Hormone Withdrawal in Patients with HIV. *JAMA* 2010; 304:272-4
26. Triant V, Regan S, Lee H, Sax PE, Meigs JB, **Grinspoon SK**. Association of Immunological and Virological Factors with MI Rates in a U.S. Health Care System. *JAIDS* 2010;55:615-9.
27. Stanley T, Chen CY, Branch KL, Makimura H, **Grinspoon S**. Effects of a Growth Hormone Releasing Hormone Analogue on Endogenous GH Pulsativity and Insulin Sensitivity in Healthy Men. *J Clin Endocrinol Metab.* 2011;96:150-8 PMID: PMC3038486
28. Stanley T, Zanni M, Johnsen S, Rasheed S, Makimura H, Lee H, Khor V, Ahima R, **Grinspoon S**. TNF- α Antagonism with Etanercept Decreases Glucose and Increases the Proportion of High Molecular Weight Adiponectin in Obese Subjects with Features of the Metabolic Syndrome. *J Clin Endocrinol Metab.* 2011;96:E146-50. PMID: PMC3038481
29. Makimura H, Stanley, T, Sun N, Connelly JM, Hemphill LH, Hrovat M, Systrom D, **Grinspoon SK**. Increased Skeletal Muscle Phosphocreatine Recovery after Sub-maximal Exercise is Associated with Increased Carotid Intima Media Thickness. *Atherosclerosis.* 2011;215:214-7
30. Makimura H, Stanley, T, Sun N, Hrovat MI, Systrom DM, **Grinspoon SK**. The Association of Growth Hormone Parameters with Skeletal Muscle Phosphocreatine Recovery in Adult Men. *J Clin Endocrinol Metab.* 2011;96:817-23 PMID: PMC3047233.
31. Fitch K*, Stanley T*, Looby SE, Rope A, **Grinspoon SK**. Relationship Between Neck Circumference and Cardiometabolic Parameters in HIV-infected and non HIV-infected Adults. *Diabetes Care.* 2011 ;34:1026-31. PMID: PMC3064017
32. Ahima RS*, Stanley TL*, Khor V, Zanni M, **Grinspoon SK**. Estrogen Sulfotransferase is Expressed in Subcutaneous Adipose Tissue of Obese Humans in Association with TNF-alpha and SOCS3. *J Clin Endocrinol Metab.* 2011;96:E1153-8. PMID: PMC3135195
33. Stanley TL, Falutz J, Mamputu JC, Soulban G, Potvin D, **Grinspoon SK**. The Effects of Tesamorelin on Inflammatory Markers in HIV Patients with Excess Abdominal Fat: Relationship with Visceral Adipose Tissue. *AIDS.* 2011;25:1281-8.
34. Burdo TH*, Lo J*, Abbara S, Wei J, DeLelys M, Preffer F, Rosenberg ES, William KC, **Grinspoon S**. Soluble CD163, A Novel Marker of Activated Macrophages, is Increased and Associated with Noncalcified Coronary Plaque in HIV Patients. *J Infect Dis.* 2011;204:1227-36.
35. Stanley TL, Falutz J, Marsolais C, Morin J, Soulban G, Mamputu JC, Assad H, Turner RR, **Grinspoon SK**. Reduction in Visceral Adiposity is Associated with Improved Metabolic Profile in HIV-infected Patients Receiving Tesamorelin. *Clin Inf Dis.* 2012 (In Press).

C. Research Support

Ongoing Research Support

5R01DK049302-16 (Grinspoon) 09/21/2011-08/31/2016

NIH/NIDDK

Aldosterone Effects and Targeted Inhibition on Metabolic Indices in HIV-Infection

The major goals of this project are to investigate the physiological regulation of the renin-angiotensin-aldosterone axis in relationship to excess visceral adiposity in HIV patients, and to test the efficacy of a selective mineralocorticoid blocker, eplerenone to improve insulin sensitivity and CV risk in HIV patients with impaired glucose tolerance and increased visceral adiposity.

5 R01 HL095123-04 (Grinspoon) 08/15/2009-06/30/2014

NIH/NHLBI

RFA-HL-08-003

Inflammatory Mechanisms and Treatment Strategies for Atherosclerosis in HIV

The major goals of this project are to determine whether activation of monocyte subsets and chemokine production during viral infection contributes to early atherosclerotic disease and whether antiretroviral therapy and statin use will decrease proinflammatory monocyte subsets, transendothelial migration and atherosclerotic plaque inflammation.

5 R01 DK063639-09 (Grinspoon) 08/25/2008-07/31/2013
NIH/NIDDK
Metabolic, and Cardiovascular Effects of GHRH in HIV Infected Patients
The major goals of this project are to determine the significance and durability of the effects of GHRH on endogenous GH pulse dynamics, long term cardiovascular and body composition endpoints among HIV-infected patients with central fat accumulation.

5 K24 DK064545-10 (Grinspoon) 03/01/2008-02/28/2013
NIH/NIDDK
Strategies to Improve CAD Risk in HIV Disease
The major goals of this project are to investigate the utility of lifestyle modification to improve CAD risk in HIV infected patients and to support the professional development of the PI as a clinical investigator and successful mentor to junior faculty and fellows in patient-oriented research.

2P30DK040561-16A1 (Walker) 08/01/2012-07/31/2017
NIH/NIDDK
Harvard Clinical Nutrition Research Center
The goal of this Center are to provide research in basic areas of biology relevant to problems in clinical nutrition, to promote the study of clinical nutrition and application of knowledge derived there from within the HMS, MGH and HSHP community, to promote interactions among scientists and clinical investigators to show relevance to advancing the science of clinical nutrition; and to attract "basic" investigators into the domain of clinical nutrition to promote an environment and mechanism to develop new investigator-initiated research.

Theratechnologies, Inc 09/10/2010-09/09/2013
2007A052264
Physiologic Effects of Long-term GHRH1-44 in Abdominal Obesity
The major goals of this project are to determine the long-term effects of GHRH1-44 in obese, relatively GH deficient patients, on visceral adipose tissue, metabolic indices, including mitochondrial function assessed by P31 spectroscopy, and cardiovascular indices, including cIMT.

Bristol-Myers Squibb Company (Grinspoon) 12/01/2010-11/30/2013
AI424-462
Subclinical Coronary Atherosclerosis in HIV-Infected Women
The major goals of this project are to investigate the prevalence of early subclinical coronary atherosclerosis in HIV-infected women without previously known cardiovascular disease in a cross-sectional observational study. We also propose to study the potential metabolic, inflammatory, and immune factors that may contribute to atherosclerosis in HIV-infected women.

Immunex Corporation (Grinspoon) 12/22/2011-12/21/2014
Protocol No. 20109893
Monitoring and Modifying Atherosclerotic Plaque Inflammation in Psoriasis Study (MMAPPS)
The major goals of this project are to better understand why patients with moderate-to-severe psoriasis have an increased risk of myocardial infarction, independent of traditional cardiovascular risk factors. This study compares atherosclerotic plaque inflammation in psoriasis patients versus matched control subjects using FDG-PET. The study also evaluates the effects of etanercept therapy in psoriasis patients to decrease atherosclerotic plaque inflammation and systemic inflammatory risk markers.

Gilead Sciences, Inc (Grinspoon) 07/31/2012-07/30/2015
Study # IN-US-236-0133
Effects of Newly-Initiated Quad Therapy on Aortic/Coronary Inflammation in HIV-Infected Patients
The major goals of this project are to investigate ways in which systemic immune dysregulation may mediate CVD risk in HIV-infected patients and the potential of newly-initiated ARV therapy to actually reduce such risk.

2T32HD052961-06A1 (Grinspoon) 04/01/2012-03/31/2017
NIH/NICHD

Training Program in Nutrition and Metabolism

The major goal of this project is to train fellows and postdoctoral trainees in the techniques of nutrition and metabolism research.

Completed Research Support

5 R01 HL085268-04 (Grinspoon)

09/25/2007-03/31/2012

NIH/NHLBI

Consequences and Treatment of Growth Hormone Deficiency in the Metabolic Syndrome

The major goals of this project are to determine the prevalence of GH deficiency in the metabolic syndrome, and the contribution of GH deficiency to increased IMT and endothelial dysfunction, markers of cardiovascular disease.

Amgen (Grinspoon)

10/1/2006-08/31/2010

2006A013227/2

Effects of Etanercept in Metabolic Syndrome

The major goals of this project are to determine the effects of Etanercept on metabolic indices and patients with obesity and Metabolic Syndrome.

Bristol-Myers Squibb Company (Grinspoon) 03/17/2006-3/31/2010

BMSV CSV-457

Subclinical Atherosclerosis as Measured by EBCT in HIV-infected Men

The major goals of this project are to investigate the prevalence of coronary artery calcifications and coronary plaque lesion in men with HIV disease and to evaluate the metabolic and inflammatory factors associated with coronary artery disease in HIV-infected individuals.

Bristol Meyers Squibb Company (Grinspoon) 01/13/2006 -06/30/2009

BMSV #317

Metabolic Effects of Switching Kaletra to Boosted Reyataz

The goal of this study is to use PET imaging techniques to assess whole body and tissue-specific glucose utilization in HIV infected patients treated with Kaletra in comparison to Reyataz.

Theratechnologies, Inc.

04/4/2007-04/3/2009

TH9507-CTR-1011

A Multicenter, Double-blind, Randomized, Placebo-controlled Study of a 2 mg Dose of TH9507, a Growth Hormone Releasing Factor Analogue, in HIV Patients with Excess Abdominal Fat Accumulation.

The major goals of this project are to determine the effects of a growth hormone releasing factor analogue on fat distribution and metabolic parameters in HIV infected patients.