August 29, 2018

Together with the entire faculty of the Endocrinology, Diabetes & Metabolism Section, I would like to welcome everybody to our 2018 Annual Report. 2018 has been an eventful year for us, with new unique contributions in research, scholarship, clinical care and education. The section has published more than 50 papers, many of them in top journals, and has been the recipient of an unprecedented six NIH R01 grants. We have been active in national and international meetings and organizations and offer daily medical care to the Houston community at the Baylor St. Luke’s Medical Center, the Michael E. DeBakey VA Medical Center, Ben Taub General Hospital, Smith Clinic and the St. Thomas Street Clinic. Our trans-institutional fellowship program with MD Anderson Cancer Center and Texas Children Hospital graduates five outstanding new endocrine fellows every year. As we are about to enter the third decade of the XXI century, our faculty is 100% committed to advance the science and clinical practice of endocrinology, diabetes & metabolism to the next level. Please enjoy and thank you for your interest.

Marco Marcelli M.D.
Ad interim chief
Section of Endocrinology, Diabetes & Metabolism
Section of Endocrinology, Diabetes and Metabolism
Department of Medicine, Baylor College of Medicine
(1 July 2017–30 June 2018)

Faculty
Agarwal, Neeti Ph.D.                          McKay, Siripoom M.D.
Bajaj, Mandeep M.D.                           Mediwala, Sanjay N M.D.
Balasubramanyam, Ashok M.D.                  Mehta, Munira O.D.
Boparai, Jasmine M.D.                        Pietropaolo, Massimo M.D.
Chen, Rui M.D.                                Ram, Nalini M.D.
Dufrane, Nancy Greta Renee                   Samson, Susan Leanne M.D.
Gaba, Ruchi M.D.                              Sekhar, Rajagopal Viswanath M.D.
Garber, Alan J M.D., Ph.D.                   Sun, Zheng Ph.D.
Ha, Ngueyn M.D.                              Vasudevan, Madhuri M.D., M.P.H.
Hartig, Sean Ph.D.                           Villareal, Dennis M.D.
Jiang, Bryan M.D.                            Villareal, Reina M.D.
Marcelli, Marco M.D.                         Zhang, Li Ph.D.

Contents

A. Publications ................................................................. 3
B. Awards and Honors .......................................................... 8
C. Books and Book Chapters ...................................................... 9
D. Professional Organization/Association Offices Held .................. 10
E. Editorial Board Memberships and Editorial Positions ............... 12
F. Grants ............................................................................. 13
A. Publications


8. Birnbaum Y, Ye Y, **Bajaj M**. Type 2 Diabetes and CVD: A Metabolic Overview of Recent Clinical Trials. *J Diabetes Complications* 2017;31:291. PMID: 27780670


11. Chen E, Tsai TH, Li L, Saha P, Chan L, Chang BH. PLIN2 is a Key Regulator of the Unfolded Protein Response and Endoplasmic Reticulum Stress Resolution in Pancreatic β Cells. Scientific Reports. 2017;7:40855. PMID: 28102311

12. Chen Y, Chen H, Birnbaum Y, Nanhwan MK, Bajaj M, Ye Y, Qian J. Aleglitazar, a dual PPARα and PPARγ agonist, protects cardiomyocytes against the adverse effects of hyperglycemia. Diab Vasc Dis Res. 2017;14:152. PMID 28111985


44. Szafran TA, Marcelli M, Mancini MA High content screening of a library of 145 FDA approved drugs for the identification of novel inhibitors of AR and AR variant-7 The *Prostate* 2017;77:82. PMID: 27699828


B. Awards and Honors

1. **Bajaj**: Prof. Sevim Büyükdevrim Lecture, Turkish Diabetes Association 54th National Diabetes Congress, Antalya, Turkey.
2. **Bajaj**: The Best Doctors in America, Best Doctors 2017-18.
3. **Bajaj**: Top Doctors, Houstonia Magazine 2017
4. **Garber**: Albert Nelson Marquis Lifetime Achievement Award
5. **Garber**: Best Doctors in America
6. **Garber**: Master of the American College of Endocrinology
7. **Garber**: Who’s Who in the World
8. **Hartig**: Baylor College of Medicine Nominee, ADA Pathway to Stop Diabetes Award
9. **Marcelli**: Best Doctors in America
10. **Ram**: Norton Rose Award in Teaching and Evaluation Spring 2018
11. **Ram**: Houston’s Top Physicians 2017 Castle Connolly
12. **Sekhar**: Second Place, Baylor Medicine Research Symposium, April 2018. Optimal glycemic control may not be enough to prevent risk of diabetic complications – novel role of glutathione and oxidative stress
13. **Sekhar**: Second Place, Baylor Medicine Research Symposium, April 2018. Reversing accelerated aging in HIV patients - metabolic and mitochondrial mechanisms
14. **Sekhar**: Star Award For Excellence in Patient Care, Baylor College of Medicine, 2017.
15. **R.Villareal**: Research Award: “Certificate of Excellence”, Director’s Townhall Meeting, November 1, 2017, MEDVAMC.
16. **Wang**: AACR Workshop on Integrative Molecular Epidemiology, Boston, MA
C. Books and Book Chapters


D. Professional Organization/Association Offices Held

1. Garber A: American Association of Clinical Endocrinologists
2. Garber A: American College of Endocrinology
3. Garber A: American Diabetes Association
4. Garber A: American Medical Association
5. Garber A: National Lipid Association
6. Garber A: The Endocrine Society
7. Garber A: AACE/ACE Committees/Task Forces
       o Board of Directors
       o Advisor to the President
       o Lipids Scientific Committee
       o Obesity Scientific Committee
       o Obesity Resource Center
       o Chair, AACE/ACE Task Force to Update the Comprehensive Diabetes
       o Management Algorithm
       o Finance Committee
       o Diabetes Scientific Committee
       o Task Force on Consensus Conference on the Endocrinology of Aging
       o Task Force to Develop AACE’s Position on the Integration of Insulin
         Pumps and Continuous Glucose Monitoring
       o Task Force to Update the Insulin Pump Management Consensus Statement
       o ACE Center for Transcultural Endocrinology Steering Committee
       o Nominating Committee
       o Task Force to Develop the AACE/ACE Lipids Algorithm
       o Chair, AACE Journals Task Force
8. Hartig S: Faculty, The Endocrine Society Career Development Workshop
9. Hartig S: Abstract reviewer, The Endocrine Society’s 100th Annual Meeting,
   Chicago, IL
10. Hartig S: Ad-hoc member, NIH CSR Cellular Aspects of Diabetes and Obesity
     Study Section (CADO)
11. Marcelli M: Abstract reviewer, The Endocrine Society’s 100th Annual Meeting,
    Chicago, IL
12. Marcelli M: The Endocrine Society
13. Marcelli M: Elected member Southern Society of Medical Investigation
14. Pietropaolo M: Reviewer, Special Emphasis Panel (SEP) Study Section
    [ZRG1-EMNR-B (50) M]. PAR-16-121: “Early-Stage Preclinical Validation of
    Therapeutic Leads for Diseases of Interest to the NIDDK (R01)” 3/2017.
15. Pietropaolo M: Reviewer for R01 and R21 grants. Kidney, Nutrition, Obesity and
    Diabetes Study Section (KNOD, NIDDK); 05/2018
16. Pietropaolo M: Chair, Immunology, Immunogenetics, & Transplantation
    Planning Committee for the 2018 National Conference of the American Diabetes
    Association, Orlando, FL.
17. **Samson S**: Elected Member, Board of Directors of the American Association of Clinical Endocrinologists
18. **Samson S**: Member, Board of Trustees, American College of Endocrinology
19. **Samson S**: Elected member, Council of the American Program Directors of Endocrinology and Metabolism (APDEM)
20. **Samson S**: Member, American Board of Internal Medicine, Self-assessment committee
21. **Samson S**: Member, American Board of Internal Medicine, Item-writing Task Force
22. **Samson S**: Chair, American Association of Clinical Endocrinologists National Congress Annual Program Committee Annual Congress, American Association of Clinical Endocrinologists
23. **Samson S**: Vice-Chair, Endocrine University Planning Committee of the American College of Endocrinology
24. **Samson S**: Member, Expert Group on Pituitary Tumors, The Pituitary Society
25. **Samson S**: Member, Committee for Professional Education, The Pituitary Society
26. **Villareal R**: American Society for Bone and Mineral Research
27. **Villareal R**: The Endocrine Society
28. **Villareal R**: American Association of Clinical Endocrinologists
29. **Villareal R**: American College of Physicians
30. **Villareal D**: National Institute on Aging Clinical Trials Advisory Panel (CTAP)
31. **Villareal D**: Task Force on Sarcopenia and Frailty, International Conference on Sarcopenia and Frailty, Miami, FL
32. **Villareal D**: Data and Safety Monitoring Board for the following NIH grant projects
   a. “Maintenance of Skeletal Integrity in Frail Elders” (RO1-AG050302)
   b. “Skeletal Muscle and Insulin Resistance in Aging (RO1-AG021961); Chairperson of the DSMB
   c. “Combining Testosterone Therapy to Improve Function Post Hip Fracture (RO1 AG051647)
33. **Villareal R**: Empowered with Movement to Prevent Obesity & Weight Regain" (RO1AG051624)
E. Editorial Board Memberships and Editorial Positions

1. **Bajaj**: Editorial Board, The Journal of Clinical Endocrinology and Metabolism
2. **Bajaj**: Associate Editor, British Medical Journal Open Diabetes Research and Care
3. **Garber**: Editor, Endocrine Today
4. **Garber**: Editor (Emeritus), Diabetes, Obesity and Metabolism
5. **Marcelli**: Associate Editor: Journal of Investigative Medicine
6. **Pietropaolo**: Associate Editor, Diabetes
7. **Pietropaolo**: Associate Editor, PLoS ONE
8. **Pietropaolo**: Editorial Board, American Journal of Clinical and Experimental Immunology
9. **Pietropaolo**: Editorial Board, Autoimmunity Highlights
10. **Sun**: Editor, Research Topic: Type 2 Diabetes Management: A Focus on Metabolic Defects. Frontiers in Physiology. 2018
11. **Villareal R**: Associate Editor, Frontiers in Endocrinology
12. **Villareal D**: Associate Editor, Journal of Nutrition in Geriatrics and Gerontology
13. **Villareal D**: Academic Editor, Current Developments in Nutrition
14. **Villareal D**: Associate Editor, Journal of Gerontology – Medical Science
15. **Villareal D**: Section Editor: Obesity and Aging, Journal of Nutrition in Health and Aging
### E. Grants

#### MEDICINE – ENDOCRINOLOGY

<table>
<thead>
<tr>
<th></th>
<th>NIH</th>
<th>Other Federal</th>
<th>Non-Federal</th>
<th>Cash</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDICINE: ENDOCRINOLOGY</td>
<td>$3,649,028.00</td>
<td>$0.00</td>
<td>$1,388,236.10</td>
<td>$67,906.80</td>
<td>$5,105,170.90</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>$3,649,028.00</td>
<td>$0.00</td>
<td>$1,388,236.10</td>
<td>$67,906.80</td>
<td>$5,105,170.90</td>
</tr>
</tbody>
</table>

#### Grants and Contracts Awarded

**07/01/2017 - 06/30/2018**

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Sponsor</th>
<th>Grant Number</th>
<th>Project Title</th>
<th>Budget Period</th>
<th>Project Period</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BALASUBRAMANY AM, ASHOK</td>
<td>NATIONAL INSTITUTE OF HEALTH (NIH)</td>
<td>U01-DK098246-06</td>
<td>YEAR 6: THE GLYCEMIA REDUCTION APPROACHES IN DIABETES: A COMPARATIVE EFFECTIVENESS STUDY (GRADE)</td>
<td>9/6/2017 - 7/31/2018</td>
<td>9/25/2012 - 7/31/2022</td>
<td>$569,332.00</td>
</tr>
<tr>
<td>BALASUBRAMANY AM, ASHOK</td>
<td>NATIONAL INSTITUTE OF HEALTH (NIH)</td>
<td>R33-AI116208-03 Amd 3</td>
<td>YR 4: ADIPOSE TISSUE IS A SIGNIFICANT RESERVOIR FOR HIV</td>
<td>9/1/2017 - 8/31/2018</td>
<td>9/1/2014 – 8/31/2019</td>
<td>$111,012.00</td>
</tr>
<tr>
<td>Principal Investigator</td>
<td>Sponsor</td>
<td>Grant Number</td>
<td>Project Title</td>
<td>Budget Period</td>
<td>Project Period</td>
<td>Total</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>--------------</td>
<td>---------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>BALASUBRAMANY AM, ASHOK</td>
<td>NATIONAL INSTITUTE OF HEALTH (NIH)</td>
<td>R01-DK104832-03</td>
<td>(MPI) YEAR 3: ROLE OF ISLET INJURY AND AUTOIMMUNITY IN T2D BETA CELL DYSFUNCTION</td>
<td>9/1/2017 - 8/31/2018</td>
<td>9/16/2015 – 8/31/2020</td>
<td>$353,493.00</td>
</tr>
<tr>
<td>GARBER, ALAN J</td>
<td>NOVO NORDISK, INC</td>
<td>023350 NCE</td>
<td>16TH ANNUAL SYMPOSIUM ON ADVANCED METABOLIC DISEASE MANAGEMENT FOR ENDOCRINE FELLOWS</td>
<td>6/1/2018 - 6/30/2018</td>
<td>----</td>
<td>$0.00</td>
</tr>
<tr>
<td>GARBER, ALAN J</td>
<td>NOVO NORDISK, INC</td>
<td>MED-DIA-24942</td>
<td>17TH ANNUAL SYMPOSIUM ON ADVANCED DIABETES MANAGEMENT FOR ENDOCRINE FELLOWS</td>
<td>6/21/2018 - 6/20/2019</td>
<td>----</td>
<td>$345,000.00</td>
</tr>
<tr>
<td>MARCELLI, MARCO</td>
<td>SHIRE HUMAN GENETIC THERAPIES, INC.</td>
<td>IME-USA-17539</td>
<td>ENDOCRINE GRAND ROUNDS</td>
<td>10/4/2017 - 10/3/2018</td>
<td>----</td>
<td>$3,750.00</td>
</tr>
<tr>
<td>MARCELLI MARCO</td>
<td>DEPARTMENT OF DEFENSE</td>
<td>W81XWH-17-1-0368 (Jorge R., PI)</td>
<td>PERSISTENT HORMONAL CHANGES IN VETERANS WITH GULF WAR ILLNESS</td>
<td>9/2017-9/2020</td>
<td>----</td>
<td>$615,171.00</td>
</tr>
<tr>
<td>Principal Investigator</td>
<td>Sponsor</td>
<td>Grant Number</td>
<td>Project Title</td>
<td>Budget Period</td>
<td>Project Period</td>
<td>Total</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>--------------</td>
<td>---------------</td>
<td>---------------</td>
<td>----------------</td>
<td>-------</td>
</tr>
<tr>
<td>PIETROPAOLO, MASSIMO</td>
<td>CENTER FOR MEDICARE &amp; MEDICAID INNOVATION (DHHS)</td>
<td>UC4-DK101108-01 Amd 4</td>
<td>YR 3/4: PERL - A MULTICENTER CLINICAL TRIAL OF ALLOPURINOL TO PREVENT GFR LOSS IN T1D.</td>
<td>8/1/2017 - 9/30/2017</td>
<td>8/1/2014 – 9/30/2017</td>
<td>$5,939.00</td>
</tr>
<tr>
<td>PIETROPAOLO, MASSIMO</td>
<td>NATIONAL INSTITUTE OF HEALTH (NIH)</td>
<td>R01-DK053456-15A1</td>
<td>YEAR 15: ENHANCEMENT OF BIOMARKERS FOR TYPE 1 DIABETES</td>
<td>7/1/2017 - 6/30/2018</td>
<td>5/1/1999 – 6/30/2022</td>
<td>$668,366.00</td>
</tr>
<tr>
<td>PIETROPAOLO, MASSIMO</td>
<td>NATIONAL INSTITUTE OF HEALTH (NIH)</td>
<td>UC4-DK101108-02</td>
<td>PERL-YR1(SPINO): A MULTICENTER CLINICAL TRIAL OF ALLOPURINOL TO PREVENT GFR LOSS IN T1D</td>
<td>9/1/2017 - 8/31/2018</td>
<td>9/30/2013 – 6/30/2019</td>
<td>$30,669.00</td>
</tr>
<tr>
<td>SAMSON, SUSAN LEANNE</td>
<td>NOVARTIS PHARMACEUTICALS CORP</td>
<td>NCE</td>
<td>THE EFFECT OF PASIREOTIDE AND COMBINATION WITH A GLUCAGON-LIKE PEPTIDE 1 RECEPTOR AGONIST ON ISLET FUNCTION AND STRUCTURE</td>
<td>12/30/2017 - 6/1/2020</td>
<td>12/30/2017 – 6/1/2020</td>
<td>$0.00</td>
</tr>
<tr>
<td>Principal Investigator</td>
<td>Sponsor</td>
<td>Grant Number</td>
<td>Project Title</td>
<td>Budget Period</td>
<td>Project Period</td>
<td>Total</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>--------------</td>
<td>---------------</td>
<td>---------------</td>
<td>----------------</td>
<td>-------</td>
</tr>
<tr>
<td>SUN, ZHENG</td>
<td>AMERICAN HEART ASSOCIATION INC</td>
<td>16GRNT309700 64 Yr2</td>
<td>OBESITY-EPGENOME INTERACTION IN HEART FAILURE</td>
<td>7/1/2017 - 6/30/2018</td>
<td>7/1/2016 – 6/30/2018</td>
<td>$77,000.00</td>
</tr>
<tr>
<td>SUN, ZHENG</td>
<td>NATIONAL INSTITUTE S OF HEALTH (NIH)</td>
<td>R21-CA215591-01</td>
<td>DE FACTO TARGET OF HISTONE DEACETYLASE INHIBITORS</td>
<td>9/1/2017 - 8/31/2018</td>
<td>9/1/2017 – 8/31/2019</td>
<td>$172,369.00</td>
</tr>
<tr>
<td>VILLAREAL, REINA</td>
<td>NATIONAL INSTITUTE S OF HEALTH (NIH)</td>
<td>R01-HD093047-01</td>
<td>AROMATASE INHIBITORS AND WEIGHT LOSS IN SEVERELY OBESE MEN WITH HYPOGONADISM</td>
<td>8/7/2017 - 5/31/2018</td>
<td>8/7/2017 – 5/31/2022</td>
<td>$387,081.00</td>
</tr>
<tr>
<td>Principal Investigator</td>
<td>Sponsor</td>
<td>Grant Number</td>
<td>Project Title</td>
<td>Budget Period</td>
<td>Project Period</td>
<td>Total</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>---------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>--------------------</td>
<td>---------</td>
</tr>
<tr>
<td>VILLAREAL, DENNIS</td>
<td>VA MERIT REVIEW</td>
<td>1101 CX000906-01</td>
<td>TESTOSTERONE REPLACEMENT TO AUGMENT LIFESTYLE THERAPY IN OBESE OLDER VETERANS</td>
<td>01/1/15-12/31/18</td>
<td>01/1/15-12/31/18</td>
<td>$483,794.00</td>
</tr>
<tr>
<td>ZHANG, LI</td>
<td>JUVENILE DIABETES RESEARCH FOUNDATION</td>
<td>2-SRA-2016-238-S-B Yr2</td>
<td>EVALUATION OF MONOCLONAL ANTIBODIES SPECIFICALLY TARGETING PATHOGENIC INSULIN/MHC II COMPLEXES FOR THE TREATMENT/PREVENTION OF TYPE 1 DIABETES</td>
<td>7/1/2017-6/30/2018</td>
<td>7/1/2016-6/30/2018</td>
<td>$250,067.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Totals:</strong></td>
<td></td>
<td></td>
<td>$5,037,264.10</td>
</tr>
<tr>
<td>Principal Investigator</td>
<td>Sponsor</td>
<td>Project Title</td>
<td>Fiscal Year</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>-----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAJAJ, MANDEEP</td>
<td>AMYLIN PHARMACEUTICALS</td>
<td>EXSCEL (EXENATIDE STUDY OF CARDIOVASCULAR EVENT LOWERING TRIAL)- A RANDOMIZED, PLACEBO CONTROLLED CLINICAL TRIAL TO EVALUATE CARDIOVASCULAR OUTCOMES AFTER TREATMENT WITH EXENATIDE ONCE WEEKLY IN PATIENTS WITH TYPE 2 DIABETES MELLITUS.</td>
<td>2018</td>
<td>$3,692.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAJAJ, MANDEEP</td>
<td>ASTRAZENCA</td>
<td>THE EFFECT OF DAPAGLIFLOZIN ON INFLAMMATION AND ENDOTHELIAL DYSFUNCTION</td>
<td>2018</td>
<td>$32,461.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMSON, SUSAN LEANNE</td>
<td>CHIASMA, INC.</td>
<td>AMENDMENT-A PHASE 3, RANDOMIZED, OPEN-LABEL, ACTIVE CONTROLLED, MULTICENTER STUDY TO EVALUATE MAINTENANCE OF RESPONSE, SAFETY AND PATIENT REPORTED OUTCOMES IN ACRIMEGALY PATIENTS TREATED WITH OCTREOTIDE CAPSULES, AND IN PATIENTS TREATED WITH STANDARD OF CARE PARENTERAL SOMATOSTATIN RECEPTOR LIGANDS WHO PREVIOUSLY TOLERATED AND DEMONSTRATED A BIOCHEMICAL CONTROL ON BOTH TREATMENTS</td>
<td>2018</td>
<td>$12,277.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMSON, SUSAN LEANNE</td>
<td>CHIASMA, INC.</td>
<td>A PHASE 3, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED, MULTICENTER STUDY TO EVALUATE SAFETY AND EFFICACY OF OCTREOTIDE CAPSULES IN PATIENTS WHO PREVIOUSLY TOLERATED AND DEMONSTRATED BIOCHEMICAL CONTROL ON INJECTABLE SOMATOSTATIN RECEPTOR LIGANDS (SRL) TREATMENT PROTOCOL OOC-ACM-303</td>
<td>2018</td>
<td>$8,500.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BALASUBRAMANYAM, ASHOK</td>
<td>NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES (NIDDK)</td>
<td>CLINICAL CENTER # 3 - EMOTIONAL DISTRESS IN A COMPARATIVE EFFECTIVENESS TRIAL OF DIABETES TREATMENTS (EDS) -SUB-STUDY OF GRADE</td>
<td>2018</td>
<td>$8,378.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAJAJ, MANDEEP</td>
<td>NOVO NORDISK PHARMACEUTICALS</td>
<td>EFFECT OF LIRAGLUTIDE TREATMENT ON GUT MICROBIOTA AND ADIPOSE TISSUE INFLAMMATION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS</td>
<td>2018</td>
<td>($1,230.77)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMSON, SUSAN LEANNE</td>
<td>PROLOR BIOTECH, LTD</td>
<td>A PHASE 3, MULTICENTER STUDY DESIGNED TO EVALUATE THE EFFICACY AND SAFETY OF A LONG A C TING HGH PRODUCT (MOD-4023) IN ADULT SUBJECTS WITH GROWTH HORMONE DEFICIENCY (PROTOCOL NUMBER: CP-4-005)</td>
<td>2018</td>
<td>$4,827.09</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grand Totals:** $67,906.80

**Grand Totals:** $5,105,170.90