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**UMCCTS Pilot Project Program Awardees**

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| 2021 Spring PPP |  |  |
| UMass PI and Collaborator (s) |  |  |
| Claudio Punzo, PhD | Associate Professor, Ophthalmology and Visual Sciences | Testing siRNA Therapeutics for the Treatment of Age-Related Macular  Degeneration |
| Mostafa Elfawal, PhDReeta Rao, PhDSivappa Rasapalli, PhD | Instructor, Program in Molecular MedicineAssociate Dean of Grad. Studies, WPIAssociate Professor, Chemistry Department, UMass Dartmouth | Screening and Optimization of Luotonin Based Leads for Anti-Fungal and Anti-Helminths |
| Mehdi Rashighi Firoozabadi, MDJillian Richmond, PhD Megan Orzalli, PhD | Assistant Professor, DermatologyAssistant Professor, DermatologyAssistant Professor, Medicine | Roles of Cutaneous T Peripheral Helper Cells in Photosensitivity of Dermatomyositis |
| Jillian Richmond, PhDMehdi Rashighi Firoozabadi, MD | Assistant Professor, DermatologyAssistant Professor, Dermatology | Examining Factors Governing T Lymphocyte Migration to the Skin During Cutaneous Lupus Erythematosus |
| Kimberly A Fisher, MDKathleen M. Mazor, EdDSybil Crawford, PhD | Associate Professor, MedicineProfessor of MedicineProfessor of Biostatistics, School of Nursing | Understanding Barriers to COVID-19 Vaccine Equity |
| 2018 PPP |  |  |
| UMass PI and Collaborator(s) |  |  |
| Gang Han, PhDYubin Zhou, PhD | Associate Professor, Biochemistry and Molecular PharmacologyAssociate Professor, Institute of Biosciences and Technology, Texas A&M University | Nanoparticle-Instructed Cell Therapy |
| Jomol Mathew, PhDApurv SoniNisha FaheyJeroan Allison, MDLawrence Rhein, MDTiffany Moore Simas, MDNancy Byatt, DO MBA | Chief Research Information Officer, UMMSMD/PhD StudentResident Physician, PediatricsProfessor, PQHSProfessor, PediatricsAssociate Professor, OBGYNAssociate Professor, Psychiatry | Pilot testing a wearable device to improve care and outcomes among mother-neonate dyad exposed to opioids during pregnancy |
| 2017 PPP |  |  |
| UMass PI and Collaborator(s) |  |  |
| Melissa Anderson, PhDKelly Wolf Craig, PhDKathleen Biebel, PhD | Assistant Professor, PsychiatryClinical Psychologist, UMMSAssociate Professor, Psychiatry | Creating the capacity to screen deaf women for perinatal depression |
| Benjamin Chen MD, PhDMichael Brehm, PhDGiles Whalen, MDDale Greiner, PhD | Assistant Professor, PathologyAssociate Professor, Molecular MedicineProfessor, SurgeryProfessor, Molecular Medicine | Investigating the influence of the tumor immune microenvironment of human malignancies on tumor immunotherapy by utilizing humanized mouse models and patient-derived xenografts. |
| Sarah Goff, MDNancy Byatt, DO, MBATina Fioroni, MEdAnnamarie Golden, MSKathleen Szegda, PhD, MPH | Associate Professor, Internal Medicine and Pediatrics, UMMS-BaystateAssociate Professor, PsychiatryBehavioral Health Network, Inc.Perinatal Support Coalition of Hampden CountyPartners for a Healthier Community | Increasing postpartum depression screening and referral in primary care pediatric practices |
| John Haran, MDVanni Bucci, PhD | Assistant Professor, Emergency MedicineAssistant Professor, Biology, UMass Dartmouth | Intestinal microbiome modeling to predict Clostridium difficile colonization in elderly hospitalized patients |
| Katherine Luzuriaga, MDGary Ostroff, PhDEva Szomolanyi-Tsuda, MD | Professor, Molecular MedicineProfessor, Molecular MedicineAssociate Professor, Pathology | An oral, bivalent Epstein-Barr virus vaccine with computationally determined viral glycoprotein epitopes |
| Rene Maehr, PhDShelly Peyton, PhD | Assistant Professor, Molecular MedicineAssociate Professor, Chemical Engineering, UMass Amherst | Combining pluripotent stem cells and organ engineering to develop thymic organoids for treatment and investigation of immune syndromes |
| Jae-Hyuck Shim, PhDEllen Gravallese, MDZheni Starve, MD | Associate Professor, MedicineProfessor, MedicineInstructor, Medicine | Development of a novel small molecule inhibitor as a therapeutic agent for spondyloarthritis |
| 2016 PPP Round 2 |  |  |
| UMass PI and Collaborator(s) |  |  |
| Daryl Bosco, PhD | Associate Professor, Neurology | Novel ‘Nanobodies’ as a Diagnosis and Therapeutic for ALS |
| Silvia Corvera, MDJanice Lalikos, MD | Professor, Molecular MedicineProfessor, Surgery | Leveraging the basic cell biology of human adipose tissue to improve outcomes inwound healing and reconstructive surgery |
| Robert Finberg, MDManuel Garber, PhDAlex Shalek, PhD | Professor, MedicineAssociate Professor, Molecular MedicineAssistant Professor, Chemistry, MIT | Breakthroughs in Treating and Preventing Influenza with Single Cell Sequencing |
| Ellen Gravallese, MDJae-Hyuck Shim, PhDChing Tung, PhD | Professor, MedicineAssistant Professor, MedicineProfessor, Radiology, Weill Cornell Medicine | Development of an innovative treatment strategy for osteoporosis |
| 2016 PPP |  |  |
| UMass PI and Collaborator(s) | **UMMS Worcester & Other UMass Campus Collaborator(s) Title/Dept.** | **Project Title** |
| Sharone Green, MDKate Fitzgerald, PhD | Associate Professor, MedicineProfessor, Medicine | Innate Immunity Recognition of Chikungunya Virus |
| Lawrence Hayward, PhDCharlie Emerson, PhD | Professor, NeurologyProfessor, Neurology | A Humanized in vivo Model of Facioscapulohumeral Muscular Dystrophy |
| Wen-Chieh Lin, PhD | Assistant Professor, Family Medicine and Community Health | Identify Community-Living Elders at High Risk of Falling for Targeted and Tailored Interventions |
| Jeffrey J. Rade, MD | Professor, Department of Medicine | Endothelial-Specific Thromboxane Metabolites as Novel Biomarkers for Cardiovascular Risk |
| Wen Xue, PhD | Assistant Professor, RNA Therapeutics Institute | CRISPR-Based Precision Medicine for Tyrosinemia |
| 2014 PPP |  |  |
| UMass PI and Collaborator(s) | **UMMS Worcester & Other UMass Campus Collaborator(s) Title/Dept.** | **Project Title** |
| Lucio H. Castilla, PhD | Associate Professor, Program in Gene Function and Expression | Study the Efficacy of Novel Targeted Therapy Drug for inv16 Acute Myeloid Leukemia in vivo |
| Nina Deng, Ed.D., MAJohn E. Ware, Jr., PhDJeroan Allison, MD, MSArlene Ash, PhDHua Fang, PhD | Assistant Professor, Department of Quantitative Health SciencesProfessor and Division Chief, Quantitative Health SciencesProfessor and Vice Chair, Department of Quantitative Health SciencesProfessor and Division Chief, Department of Quantitative Health SciencesAssistant Professor, Department of Quantitative Health Sciences | Statistical Significance and Power Analyses for Relative Validity Comparisons among Patient-Reported Outcome Measurement Tools |
| Anastasia Khvorova, PhD | Professor, Department of Molecular Medicine, RNA Therapeutics Institute | Development of Novel Class of Therapeutic Oligonucleotides based on Small Molecule Screening |
| John E. Landers, PhD | Director, Center for ALS Genetics Day Neuromuscular Research LaboratoryAssociate Professor, Department of Neurology | Evaluation of Candidate ALS Genes by AAV9 Transgene Delivery into Mice |
| Beth A. McCormick, PhDGang Han, PhD | Professor, Microbiology and Physiological SystemsAssistant Professor of Biochemistry and Molecular Pharmacology | Semi-Synthetic Nanobug: Mimicking Bacterial Pathogens to Overcome Multidrug Resistance in Tumors |
| Phillip D. Zamore, PhDGuangping Gao, PhD | Gretchen Stone Cook Professor of Biomedical SciencesProfessor, Microbiology & Physiological Systems | Cell Type-specific Gene Silencing by Tethered microRNAs |
| 2013 PPP |  |  |
| UMass PI and Collaborator(s) | **UMMS Worcester & Other UMass Campus Collaborator(s) Title/Dept.** | **Project Title** |
| Jeffrey A. Bailey, MD, PhDAnn M. Moormann, PhD, MPH | Assistant Professor, Division of Transfusion Medicine, Department of MedicineAssociate Professor, Division of Pediatric Immunology & Infectious Diseases, Department of Pediatrics | Endemic Burkitt Lymphoma Transcriptome and Genome Profiles Associated with Clinical Presentation, Treatment Response, Relapse, and Survival |
| Michael R. Green, MD, PhDSanchita Bhatnagar, PhD | Professor, Program in Molecular Medicine; Director, Program in Gene Function and ExpressionInstructor, Program in Gene Function and Expression | Reactivation of the Inactive X-Linked *MECP2 Gene* as a Therapeutic Strategy for Rett Syndrome |
| Andrei A. Korostelev, PhD | Assistant Professor, RNA Therapeutics Institute and Department of Biology & Molecular Pharmacology | Novel Therapeutic Routes against Premature-Termination Diseases |
| Wenjun Li, PhDRobert Goldberg, PhDJoel M. Gore, MD | Associate Professor, Division of Preventive and Behavioral Medicine, Department of MedicineProfessor, Quantitative Health SciencesProfessor, Division of Cardiovascular Medicine, Department of Medicine | Health Care Reform and Accessibility, Quality and Outcomes of AMI-Related Care |
| Joel D. Richter, PhDJean A. Frazier, MDJean A. King, PhDFutai Kensuke, PhD | Professor, Program in Molecular MedicineRobert M. and Shirley S. Siff Endowed Chair in Autism; Professor, Departments of Psychiatry and PediatricsProfessor, Department of Psychiatry;Assistant Professor, Department of Psychiatry, Neuropsychiatric Research Institute | Amelioration of the Fragile X Syndrome by Targeting the Translational Apparatus |
| David M. McManus, MD, ScM, FACC, FHRSJane S. Saczynski, PhDCatarina Kiefe, PhD, MDRobert Goldberg, PhDJohn F. Keaney, Jr., MDKevin Floyd, MD | Assistant Professor, Departments of Medicine and Quantitative Health SciencesAssistant Professor, Departments of Medicine and Quantitative Health SciencesProfessor and Chair, Department of Quantitative Health Sciences; Inaugural Melvin S. and Sandra L. Cutler Chair in Biomedical ResearchProfessor, Departments of Medicine Quantitative Health SciencesChief, Division of Cardiovascular Medicine; Professor, Department of MedicineAssistant Professor, Department of Medicine | Cognitive and Psychosocial Characteristics in Patients Undergoing Treatment for Atrial Fibrillation: Relation to 6-month Clinical Outcomes |
| Molly E. Waring, PhDTiffany Moore Simas, MDSherry L. Pagoto, PhDBarbara Olendzki, RD, MPH, LDN | Assistant Professor, Quantitative Health SciencesAssociate Professor, Departments of Obstetrics & Gynecology and Pediatrics; Associate Professor, Division of Preventive and Behavioral Medicine, Department of MedicineClinical & Research Nutritionist and Nutrition Program Director, Center for Applied Nutrition; Assistant Professor, Division of Preventive and Behavioral Medicine, Department of Medicine | Impulsivity and Weight Gain During Pregnancy: The Roles of Excess Energy Intake, Food Reward Sensitivity, and the Food Environment |
| 2012 PPP |  |  |
| UMass PI and Collaborator(s) | **UMMS Worcester & Other UMass Campus Collaborator(s) Title/Dept.** | **Project Title** |
| Hua (Julia) Fang, PhDJoseph DiFranza, MDAnn Moormann, PhDYunsheng Ma, MD, PhDSun S. Kim, PhD, RNThomas Houston, MD, MPHBruce A. Barton, PhDJeroan Allison, MD, MScArlene S. Ash, PhD | Assistant Professor, Division of Biostatistics and Health Services, Department of Quantitative Health Sciences (QHS)Professor, Department of Family Medicine & Community HealthAssociate Professor, Pediatric Immunology & Infectious Diseases, Dept. of PediatricsAssociate Professor, Division of Preventive & Behavioral Medicine, Department of MedicineAssistant Professor, Department of PsychiatryProfessor, Quantitative Health SciencesProfessor, Quantitative Health SciencesProfessor & Vice Chair, Department of Quantitative Health SciencesProfessor, Quantitative Health Sciences | A New Tool for Studying Heterogeneity of Treatment Effects in Longitudinal Translational Research |
| Brian C. Lewis, PhDVenu Bathini, MD | Associate Professor, Program in Gene Function and ExpressionAssistant Professor, Department of Medicine, Division of Hematology and Oncology | Combined Inhibition of MEK and IGF1R as an Effective Therapeutic Strategy for Pancreatic Ductal Adenocarcinoma |
| Zuoshang Xu, PhDGuangping Gao, PhDRobert Brown, Jr., MD, PhD | Professor, Department of Biochemistry and Molecular PharmacologyProfessor, Microbiology and Physiological SystemsProfessor and Chair, Department of Neurology | Deliver RNAi for Treatment of Amyotrophic Lateral Sclerosis (ALS) Using AAV |
| 2010 PPP |  |  |
| UMass PI and Collaborator(s) | **UMMS Worcester & Other UMass Campus Collaborator(s) Title/Dept.** | **Project Title** |
| Kristina Deligiannidis, MD Anthony J. Rothschild, MDPeter J. Schmidt, MDNeil Aronin, MD Scott Shaffer, PhD Julia V. Johnson, MD Bruce Barton, PhD  | Assistant Professor of Psychiatry & Obstetrics & GynecologyIrving S. & Betty Brudnick Endowed Chair & Professor of PsychiatryChief, Section on Behavioral Endocrinology at NIH/NIMHChief, Division of Endocrinology & Metabolism; Professor of Medicine; Cell Biology; PhysiologyResearch Professor of Biochemistry & Molecular PharmacologyProfessor & Chair of the Department of Obstetrics & GynecologyResearch Professor of Quantitative Health Sciences | A Neuroendocrine and Neurochemical Biosignature in Late Pregnancy and its Association with the Development of Post-Partum Depression in Women |
| John E. Harris, MD, PhD Bruce Barton, PhD | Assistant Professor of Medicine, Division of DermatologyResearch Professor of Quantitative Health Sciences | Testing the Safety of Simvastatin as a New Treatment for Vitiligo |
| John E. Landers, PhDStefano Goldwurm, PhD  | Associate Professor of Neurology, Director, Center for ALS Genetics, Day Neuromuscular Research Laboratory Director of the “Parkinson Institute Biobank” at the Parkinson Institute in Milan, Italy  | Identification of Recessive Genes Causative for Parkinson’s Disease Using Exome Sequencing |
| Phillip D. Zamore, PhDGuangping Gao, PhD | Gretchen Stone Cook Professor of Biomedical Sciences, Professor of Biochemistry & Molecular PharmacologyProfessor, Microbiology and Physiological Systems | Understanding the Consequences of Recombinant Adeno-Associated Virus-Mediated, Long-Term Inhibition of Mir-122 and Mir-33 in Mice |
| Milagros C. Rosal, PhDTiffany A. Moore Simas, MD, MPH, MedSilvia Corvera, MDSarwat Hussain, MDBarbara Olendzki, RD, MPH, LDN | Associate Professor of Medicine, Division of Preventive & Behavioral MedicineAssistant Professor, Obstetrics & Gynecology & PediatricsProfessor of Molecular MedicineProfessor and Vice Chair of RadiologyDivision of Preventive & Behavioral Medicine | Percent Dietary Saturated Fat Composition in Pregnancy and Postpartum Weight Loss |
| Kristin Schneider, PhDStephenie Lemon, PhD Jessica Oleski MA Deirdra Murphy, DPT Cynthia Ferrara, PhD  | Assistant Professor of MedicineAssociate Professor of Medicine, Director of the Worcester County Prevention Research CenterProject DirectorAssistant Professor of Physical Therapy, UMass Lowell Associate Professor of Physical Therapy, UMass Lowell | A Community-Based Social Networking Intervention to Increase Walking in Dog Owners |
| 2009 PPP |
| UMass PI and Collaborator(s) | **UMMS Worcester & Other UMass Campus Collaborator(s) Title/Dept.** | **Project Title** |
| David Guertin, PhD  | Assistant Professor, Molecular Medicine | The Role of mTOR in Tumor Progression, and Fostering the Development of Novel mTOR Inhibitors for Use in Oncology |
| Jennifer Tseng, MD, MPHVictor Ambros, PhDBrian Lewis, PhD | Associate Professor, SurgeryProfessor, Molecular MedicineAssociate Professor, Gene Function & Expression | Proteomic and MicroRNA Biomarkers for Malignancy in Cystic Pancreatic Lesions |
| Leslie Berg, PhDJoonsoo Kang, PhD | Professor, PathologyAssociate Professor, Pathology | Inhibition of the Tec Kinase ITK as a Novel Treatment for Human Autoimmune Diseases |
| Jan Cerny, MD, PhD Shaoguang Li, MD, PhD Alan G. Rosmarin, MD | Assistant Professor, MedicineAssociate Professor, Medicine, Hematology/OncologyAssociate Professor, Medicine, Hematology/Oncology | Targeting of Stem Cells in Chronic Myeloid Leukemia Patients |
| Elliot Androphy, MDStephen Miller, PhD  | Professor, MedicineAssistant Professor, Medicine | Development of an E6 Inhibitor Medication  |
| 2008 PPP |
| UMass PI and Collaborator(s) | **UMMS Worcester & Other UMass Campus Collaborator(s) Title/Dept.** | **Project Title** |
| Ellen Gravallese, MDGary Ostroff, PhDNicole C. Walsh, PhDAlfonso Mora, DVM | Professor, Medicine & Cell BiologyProfessor, Molecular MedicineInstructor, Rheumatology/Medicine Instructor, Molecular Medicine | [Orally Delivered siRNA Targeting MAP4K4 for the Treatment of Arthritis](http://www.umassmed.edu/Content.aspx?id=57610) |
| Michael Green, PhD, MDNarendra Wajapeyee, PhD  | Professor, Molecular MedicineDirector, Gene Function & ExpressionPost Doc Associate,Gene Function & Expression | [Role of IGFBP7 and IGFBP7 Pathway Components in the Development, Diagnosis and Treatment of Cancers Involving Oncogenic BRAF](http://www.umassmed.edu/Content.aspx?id=57616) |
| Timothy Kowalik, PhD  Laura Gibson, MDNicholas Renzette, PhD Bornali Bhattacharjee, PhDJeffrey Jensen, PhD | Associate Professor, Molecular Genetics & Microbiology/Vice Chair, Immunology & Virology ProgramAssistant Professor, Pediatrics & Medicine, Divisions of Infectious Diseases & ImmunologyPost Doc Fellow**,** Molecular Genetics & MicrobiologyPost Doc Fellow, Molecular Genetics & MicrobiologyAssistant Professor**,** Molecular Medicine | [CMV-Specific Cellular Immunity and Genomic Variation](http://www.umassmed.edu/Content.aspx?id=57618) |
| Michel Albert, PhDJ. Mark Madison, MD  | Professor, RadiologyDirector, MRI Research Medicine & PhysiologyProfessor, Molecular Medicine & Physiology Chief, Pulmonary, Allergy & Critical Care Medicine | [New Technique for Understanding/Diagnosis of COPD: Hyperpolarized 3He MR Imaging](http://www.umassmed.edu/Content.aspx?id=57620) |
| Tiffany A. Moore-Simas, MD, MPHJanet Hardy, PhD, MS, MPHSybil L. Crawford, PhD Sharon Maynard, MD | Assistant Professor, Obstetrics & Gynecology & PediatricsInstructor, Medicine, Preventive  & Behavioral Medicine Associate Professor, Medicine, Preventive  & Behavioral Medicine George Washington University | [Angiogenic Biomarkers for the Prediction of Preeclampsia](http://www.umassmed.edu/Content.aspx?id=57622) |
| 2007 PPP |  |  |
| UMass PI and Collaborator(s) | **UMMS Worcester & Other UMass Campus Collaborator(s) Title/Dept.** | **Project Title** |
| Silvia Corvera, MDRichard Perugini, MDMichael Thompson, MD | Professor, Molecular MedicineAssistant Professor, Surgery Assistant Professor,Medicine | [Thiazolidione family of insulin sensitizers in humans](http://www.umassmed.edu/Content.aspx?id=57112) |
| Sherry Pagoto, PhDJamie Bodenlos, PhDAnthony Rothschild, PhDRoger Davis, PhDYunsheng Ma, PhD | Assistant Professor, Preventive & Behavioral MedicinePost Doc Fellow, Preventive & Behavioral MedicineProfessor, PsychiatryProfessor, Molecular MedicineAssistant Professor, Preventive & Behavioral Medicine | [Effective acute vagus nerve stimulation of eating behavior and appetite regulation](http://www.umassmed.edu/Content.aspx?id=57138) |
| David Paydarfar, MDElisabeth Block Salisbury, PhD Premananda Indic, PhDFrancis J. Bednarek, MD | Professor, Neurology & PhysiologyAssistant Professor, Neurology & PediatricsInstructor, NeurologyChief, Neonatology, Professor, Pediatrics/OB/GYN | [Pathological disturbances in respiratory rhythm](http://www.umassmed.edu/Content.aspx?id=57110) |
| Richard Perugini, MD Michael P. Czech, PhD | Assistant Professor, SurgeryProfessor & Chair, Program in Molecular Medicine | [Molecular mechanisms of insulin in obese patients](http://www.umassmed.edu/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=57140) |
| Jie Song, PhDDavid Ayers, MD | Assistant Professor, Cell Biology, Orthopedics, & Physical RehabilitationProfessor & Chair, Orthopedics | [New therapeutics strategy for the treatment of osteoporotic bony lesions](http://www.umassmed.edu/Content.aspx?id=57144) |