State of the School

University of Colorado
School of Medicine
January 27, 2016

John Reilly, Jr., MD
Richard D. Krugman Endowed Chair
Vice Chancellor for Health Affairs and
Dean, School of Medicine
Structure of Address

- Past
- Present
- Near Future
- Longer Term
  - Research Funding Announcements
In Memoriam
2014-2015

Craig Bereznoiff, MD, DO
Associate Clinical Professor,
Department of Family Medicine

Douglas Carter, MD
Professor Emeritus,
Department of Psychiatry

William Goddard, MD
Clinical Professor,
Obstetricals and Gynecology

Gary Martin, MD
Assistant Clinical Professor,
Department of Psychiatry

Paul McCaffrey, DO
Assistant Clinical Professor,
Department of Family Medicine

Kathy Morall, MD
Clinical Instructor,
Department of Psychiatry

E. Chester “Chip” Ridgway, MD, MACP
Professor,
Department of Medicine
Division Head,
Endocrinology, Metabolism, and
Diabetes, 1985-2007
Distinguished Professor,
University of Colorado,
Senior Associate Dean for Academic
Affairs, 1994-July 2014

Karl Pfenninger, MD
Professor,
Department of Pediatrics

G. Barry Pierce, MD
Distinguished Professor,
Professor Emeritus of Pathology

Charles Reiquam, MD
Clinical Professor Emeritus,
Department of Medicine

Mark Solano, MD
Assistant Clinical Professor,
Department of Family Medicine

Patricia Thomas, MD
Visiting Clinical Professor,
Department of Pathology

Carl Zimet, PhD
Professor Emeritus,
Department of Psychiatry

In 2014-2015 we said goodbye to some dear friends and colleagues.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Department</th>
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</thead>
<tbody>
<tr>
<td>Elissa Ball, MD</td>
<td>Senior Instructor</td>
<td>Psychiatry</td>
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<tr>
<td>Thomas Cherry, MD, MS</td>
<td>Senior Instructor</td>
<td>Family Medicine</td>
</tr>
<tr>
<td>James Fitzpatrick, MD</td>
<td>Professor</td>
<td>Dermatology</td>
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<tr>
<td>James Hooker, MD</td>
<td>Senior Instructor</td>
<td>Psychiatry</td>
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<td>Richard B. Johnston, Jr., MD</td>
<td>Associate Dean for Research Development Pediatrics</td>
<td>Pediatrics</td>
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<tr>
<td>Kenneth Locke, MD</td>
<td>Senior Instructor</td>
<td>Psychiatry</td>
</tr>
<tr>
<td>J. Ramsey Mellette, MD</td>
<td>Professor</td>
<td>Dermatology</td>
</tr>
<tr>
<td>Darrell Jones, PhD</td>
<td>Senior Instructor</td>
<td>Surgery</td>
</tr>
<tr>
<td>William Wood, PhD</td>
<td>Associate Professor</td>
<td>Medicine</td>
</tr>
</tbody>
</table>
Building the Escalator on which we all ride:

Richard Krugman, MD, former Dean, School of Medicine, and Vice Chancellor for Health Affairs, and current Professor of Pediatrics

Lilly Marks, Vice President for Health Affairs, University of Colorado
RECENT EVENTS
RECENT APPOINTMENTS

- Peter Buttrick, MD, Senior Associate Dean for Academic Affairs
- Vesna Todorovic, MD, Chair of Anesthesiology
- Brian Kavanagh, MD, Chair of Radiation Oncology
- Kathleen Barnes, PhD, Director of the Center for Biomedical Informatics and Personalized Medicine
- Shanta Zimmer, MD, Associate Dean for Diversity and Inclusion
CLINICAL AFFAIRS

• Strengthening Collaborations
  – Continued emerging role of CLC

• UC Hospital Chief Quality Officer Jeff Glasheen, MD, who will remain Director of the Collaborative Institute for Healthcare Quality, Safety and Efficiency

• Chief Clinical Research Officer and Associate Dean for Clinical Research Tom Flaig, MD
  – Reorganization of Clinical Trials Office
Dean’s Office Updates

Mark Couch, Chief of Staff

Chris Smith, Assistant Dean, Finance and Administration

Office of Student Life moves to Building 500

Hiring Senior Associate Dean for Clinical Affairs
Opened the Gates Biomanufacturing Facility

Opened Biosciences 2
School of Medicine
Financial Update 2015
School of Medicine
Sources of Funds FY 15

Auxiliary/ Self-Funded
9.52%
$119.3 M

Other Funds
11.31%
$141.7 M

State Funds
1.32%
$16.5 M

Tuition & Fees
2.85%
$35.7 M

Sponsored Projects
18.8%
$235.5 M

Facilities & Administration
.59%
$7.3 M

Practice Plan (UPI)
55.6%
$696.5 M

Total Sources of Funds for FY 2014-15 ¹ = $1,252,590,403

¹ Excludes Facilities and Administration Revenue that does not flow through the School of Medicine and Sponsored Project Funds at Affiliates. Includes VA pay.
² Includes: State Appropriation and Tobacco Settlement Funds

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ANSCHUTZ MEDICAL CAMPUS
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School of Medicine
Academic Enrichment Funds 2015

Total AEF Expenditures: $384,469,206

1 Figures are based on expenditures through June 30, 2015
Strong Growth at University Physicians, Inc.

• Arrival of ICD-10 was a non-event
• What has fueled our growth and stature is the collective willingness of our faculty to invest in research, education and primary care
• Faculty leadership has agreed to invest proceeds in endowed chairs and scholarships for students
First Cohort of 3rd Year Medical Students at Colorado Springs Branch

Colorado Springs Branch Student Cohort
Class of 2018

Cody Brevik  Kim Cabral  Tae Chang  Michael Cookson  Nicholas DeNardin  Jason Hendrickson
Lindsey Herrera  Justin Holmes  Katia Johnston  Nazanin Kalani  John Lee  Halley Flammer
Anirudh Madabhushi  Morgan Meury  Kristen Ohe  Kevin Forey  Eric Ryan  Stephanie Sargent
Yoni Siegel-Richman  Lynelle Smith  Andrew Sprowell  Eric Webster  Chelsea Walter  Thomas Wong

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DAWN CLINIC

• Opened March 1, 2015

• More than 150 patients and 435 patient visits in first 7 months

• Staffed by Anschutz Medical Campus students

• Professional volunteers contributing also
COMMUNITY-CAMPUS PARTNERSHIP

• Robert McGranaghan, MPH, and a team are engaging the community

• Supporting collaborations in education, research, workforce development and service

• Started a Hire Local Program with hospital partners to increase the number of Aurora residents employed on campus
UCD Grants and Contracts - $442 million

- Downtown Campus $20.99 million
- AMC Campus $421.46 million of which......

SCHOOL OF MEDICINE GRANTS¹
Direct + Indirect $359.4 M
SIRC: Strategic Infrastructure for Research Committee

- 73 AEF awards to date
- $13.8M investment
- 6 Additional 2-5 year AEF awards from the 2009 research retreat
- $7.3M investment
- $21M total investment for research infrastructure
Bridge Funding $7.429M to 124 faculty who received a total of 153 awards thru April 2015:

- Follow-up is available from 114 faculty who received $6.6 million thru April 2014, they have received $87.8M in new total research funding, a return on investment in total research dollars of 13.2-fold.

- 62 faculty received 109 major grants >$100,000 (39 RO1 and 12 R21)
### School of Medicine Key Indicator Growth

#### Fiscal Year Growth

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Practice Plan Growth</th>
<th>Grant and Contracts Growth</th>
<th>Regular Faculty Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY10 to FY11</td>
<td>12%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>FY11 to FY12</td>
<td>12%</td>
<td>2%</td>
<td>7%</td>
</tr>
<tr>
<td>FY12 to FY13</td>
<td>16%</td>
<td>1%</td>
<td>5%</td>
</tr>
<tr>
<td>FY13 to FY14</td>
<td>13%</td>
<td>-3%</td>
<td>11%</td>
</tr>
<tr>
<td>FY14 to FY15</td>
<td>13%</td>
<td>-2%</td>
<td>7%</td>
</tr>
</tbody>
</table>

#### Fiscal Year Revenue

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Practice Plan</th>
<th>Grants and Contracts</th>
<th>Regular Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>09-10</td>
<td>$368,192,045</td>
<td>$228,479,330</td>
<td>2,483</td>
</tr>
<tr>
<td>10-11</td>
<td>$413,455,672</td>
<td>$237,052,435</td>
<td>2,637</td>
</tr>
<tr>
<td>11-12</td>
<td>$464,489,706</td>
<td>$242,468,685</td>
<td>2,796</td>
</tr>
<tr>
<td>12-13</td>
<td>$539,419,256</td>
<td>$244,103,371</td>
<td>2,963</td>
</tr>
<tr>
<td>13-14</td>
<td>$609,302,807</td>
<td>$236,924,582</td>
<td>3,244</td>
</tr>
<tr>
<td>14-15</td>
<td>$687,515,612</td>
<td>$232,537,407</td>
<td>3,437</td>
</tr>
</tbody>
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WORKING TOGETHER

• School of Medicine and Colorado Health Medical Group

• Increasing capacity for teleconferencing

• Dashboard for quality care

• Compensation and productivity
LOOKING AHEAD 2016-17

School of Medicine
UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

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Preparing for the Liaison Committee for Medical Education

- Accreditation body visits in 2017
- School has launched 18-month self-study
- Committees are meeting to review compliance with LCME standards
- Independent student survey response exceeded requirements; await their analysis
- Issues identified on Graduating Student Questionnaire being addressed
Value-Based Reimbursement and Population Health Transition

![Diagram showing the transition between Revenue Transition Period and the impact on Revenue Mix, Fee for Service, Value-Based Reimbursement, and the IHI Triple Aim: Improve Population Health, Improve Patient Satisfaction, Decrease Cost.]

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Our Partners on Campus:

• CHCO has newly adopted strategic plan
  – Development of a Clinically Integrated Network
• UCHS is also preparing for population health
  – Development of a Clinically Integrated Network
• Both will involve our partnership
  – Will require new capabilities at UPI
• We are running out of clinical space
2016: Time to Look West
Other Major Activities in Near Future

• Research Space Reallocation
  – Model developed
• Recruiting Chairs of Medicine and Surgery at Denver Health
• Light Rail comes to Campus
• Relocation of the VA Medical Center
STATE BUDGET

- Governor’s proposal cuts $20 million from Higher Education
- Translates to $1.5 million to $2 million from the School of Medicine
- Proposed Medicaid Changes would reduce reimbursement by $14 million
  - Disproportionate effect on Child Health Services
- Legislative efforts to reclassify the Hospital Provider Fee
- Making the fee an enterprise would reduce pressure to cut higher education and Medicaid
Impact of Proposed Medicaid Cuts

• Proposed Medicaid cuts would shift patients to our physicians and partner hospitals
• Our physicians and partner hospitals already meet or exceed state averages for number of Medicaid patients
• Developing ways to provide greater access to specialty care for Medicaid patients, including more faculty physicians in places other than the Anschutz Medical Campus
Interdisciplinary Building

School of Medicine

UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS

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Transformational Research Funding Announcement
Transformational Research Funding Will Promote

- **Innovative Scholarship** that makes significant contributions to knowledge and science
- **Multidisciplinary collaboration** that positions CU as a national leader in these selected areas
- **Faculty teamwork** across career stages to provide mentorship, support professional advancement, and position CU faculty as leaders in key fields
- **Training opportunities** in cutting-edge interdisciplinary or multidisciplinary research
• Transformational Research Funding provides between $10 million and $20 million for selected projects
• No state-appropriated funding, no student tuition and fees and no funds redirected from other programs
• Funding is provided by
  ➢ Our faculty (Academic Enrichment Funds from UPI)
  ➢ Annual academic support from the partnership with UC Health (% of EBITDA)
  ➢ Philanthropy
    ➢ Anschutz Foundation commitment of $15M
Process

- Letters of Intent: 64 received
- 39 Applications received
- External Review Panel Meeting
Review Panel

- T. Cech, Ph.D. (Chair)
  - Biofrontiers Institute, HHMI, Nobel Prize
- R. Harrington, M.D.
  - Chair, DOM Stanford, DCRI, CLTR NHLBI
- B. Pitt, Ph.D.
  - Chair, DEOH, Pitt SPH; NIH study sections etc.
- J. Seidman, Ph.D.
  - Professor Harvard Genetics, HHMI
- S. Shapiro, MD
  - Chief Medical & Scientific Officer UPMC, NIH Advisory Council
Funded Projects (in no particular order)

Patient-Integrated Value and Organizational Transformation and Data Sciences for Health (PIVOT/DASH)

• Kutner/Ho/Schilling/Kahn
• Ambitious synergistic programs to help build the infrastructure, develop the methods and establish implementation pathways to prepare us for population health.
Funded Projects (in no particular order)

GI and Hepatic Innate Immune Research Program

- Colgan/Sokol/Rosen
- Encompasses entire age spectrum
- Multiple components
  - Inflammation and Cancer
  - Microbiome
  - Innate Immunity
  - Animal Models
Center for Human Immune Innovation

- Cambier/Fontenot/Theodorescu
- Cancer and Autoimmunity
- Program includes:
  - Center for Human Immune Monitoring
  - Preclinical Models/Translational Networking
  - Novel Immunotherapeutics
  - Clinical Grade Immunotherapy Rx production
Funded Projects (in no particular order)

RNA Biology and Biomedicine

• Bentley/Davis

• Foci:
  – Regulatory RNA: Bentley
  – RNA Technology: Hesselberth
  – RNA and Disease: Poeschla/van Dyk
  – RNA Diagnostics and Therapeutics: Jordan
Funded Projects (in no particular order)

Fibrosis Research Program

• McKinsey/Weiser-Evans
• Crosses organs:
  – Hepatic Pulmonary
  – CV Renal
• Organ Regeneration
• Tissue Mechanics
• Inflammation and Epigenetics
In conclusion:

• The ‘state of the school’ is very good.
• Able to make investments in research with an eye to the future
  – Includes faculty at VA, NJH, Boulder, DH
  – Spans spectrum from basic to implementation
  – Trains the next generation
• Aligning with CHCO & UCHS for population health
• Continued growth with its attendant challenges
Lawrence Hunter, PhD, Professor of Pharmacology, received the 2015 Outstanding Contributions to the ISCB Award from the International Society for Computational Biology.

Jody Tanabe, MD, Professor and Vice Chair of Research in the Department of Radiology, received the 2014 Distinguished Investigator Award from the Academy of Radiology Research.
Donald Bross, JD, PhD, Professor of Pediatrics, was named a 2015 faculty winner of the Thomas Jefferson Award, one of the highest honors bestowed by the University of Colorado System.

Dan Theodorescu, MD, PhD, Director of the University of Colorado Cancer Center and Professor of Urology and Pharmacology, was awarded the Barringer Medal from the American Association of Genitourinary Surgeons for his distinguished contributions to urology.
POINTS OF PRIDE AND AWARDS 2015

Carol Rumack, MD, Professor of Radiology and Associate Dean for Graduate Medical Education, was presented the Elizabeth D. Gee Memorial Lectureship Award at the CU Women’s Succeeding Symposium. Dr. Rumack also received the Colorado Radiological Society’s Gold Medal for distinguished service to radiology and the Spanish Society of Ultrasound’s Gold Medal.

Stephen Daniels, MD, PhD, Chair of Pediatrics, on receiving the American Heart Association’s Gold Heart award, which is the group’s highest volunteer honor.
The American Thoracic Society (ATS) International Conference recognized **Marvin Schwarz, MD**, the James C. Campbell Professor of Pulmonary Medicine in the Department of Medicine, with its Breathing for Life Award.

**Fred Hirsch, MD, PhD**, Professor of Medicine, received the 2015 [Addario Lectureship Award](#) from the Bonnie J. Addario Lung Cancer Foundation (ALCF) at the 16th International Lung Cancer Congress meeting.
Jennifer Wiler, MD, MBA, Vice Chair and Associate Professor of Emergency Medicine, was a panelist at a Brookings Institution MEDtalk event, “Reimagining emergency medicine: How to integrate care for the acutely ill and injured.”

Richard Zane, MD, Chair of Emergency Medicine, was elected president of the Association of Academic Chairs in Emergency Medicine and will become president this year. The American Association of Women Emergency Physicians also named Dr. Zane its ED Director Award winner, recognizing his commitment to promote mentoring and professional development for women emergency physicians.
Brian Kavanagh, MD, MPH, Professor and Interim Chair of the Department of Radiation Oncology, was elected President of the American Society for Radiation Oncology.

Gerald Dodd III, MD, Chairman of Radiology, has been named a Distinguished Investigator of the Academy of Radiology Research, which recognizes imaging researchers for significant contributions to scientific progress and medical innovation.
Dennis Matthews, MD, Chair of Physical Medicine and Rehabilitation, received the 2014 Gabriella E. Molnar, MD, Pediatric Physical Medicine & Rehabilitation Lifetime Achievement Award from the American Academy of Physical Medicine and Rehabilitation.

Jean Kutner, MD, MPH, Professor of Medicine, Associate Dean of Clinical Affairs and Chief Medical Officer at University of Colorado Hospital, received the 2015 Aspire Award.
Perry Dickinson, MD, Professor of Family Medicine, and colleagues were awarded a three-year, $14.8 million grant from the Agency for Healthcare Research and Quality to establish EvidenceNOW Southwest, to recruit and engage 260 small, independent primary care practices to use the latest medical evidence to improve the heart health of people throughout Colorado and New Mexico.

Erik Wallace, MD, Associate Dean for School of Medicine branch in Colorado Springs, received the John A. Benson Jr., MD Professionalism Article Prize from the ABIM Foundation, a nonprofit arm of the American Board of Internal Medicine.
Steven Anderson, PhD, James C. Todd Professor of Experimental Pathology and Vice Chair of Research, Department of Pathology, received the Distinguished Educator Award from the Endocrine Society.

Bette “BK” DeMasters, MD, Professor of Pathology, received the Meritorious Contributions to Neuropathology Award from the American Association of Neuropathologists.
V. Michael Holers, MD, Professor of Medicine and Head of the Division of Rheumatology, who was named to the advisory council of the National Institute of Arthritis and Musculoskeletal and Skin Diseases, part of the National Institutes of Health.

Nanette Santoro, MD, Professor and E. Stewart Taylor Chair of the Department of Obstetrics and Gynecology, received the Journal of Women’s Health Award for Outstanding Achievement in Women’s Health Research.
Robert Friesen, MD, Professor of Anesthesiology and Vice Chair of the section of pediatric anesthesiology, who was awarded an honorary membership of the Association of Pediatric Anaesthetists of Great Britain.

Paul Mintken, PT, DPT, was honored by the American Physical Therapy Association conference, receiving the Dorothy E. Baethke-Eleanor J. Carlin Award for Excellence in Academic Teaching.
Jeffrey Glasheen, MD, Professor of Medicine and Director of the Institute for Healthcare Quality, Safety and Efficiency (IHQSE), and a team from the Anschutz Medical Campus received the top prize in the Innovations Competition at the Society of Hospital Medicine meeting in Washington, D.C.

Malik Kahook, MD, Professor of Ophthalmology, and Kaweh Mansouri, MD, MPH, adjunct associate professor, were listed among the Top 40 Under 40 as ranked by the Ophthalmologist magazine.
Benzi Kluger, MD, Associate Professor of Neurology, was approved for a $2 million funding grant from the Patient-Centered Outcomes Research Institute (PCORI) for a study of palliative care for patients with Parkinson’s disease.

Robert Freedman, MD, chair of psychiatry, received the Lieber Prize for Outstanding Achievement in Schizophrenia Research from the Brain & Behavior Research Foundation.

Distinguished Professor Paul Bunn, Jr., MD, the James Dudley Chair in Lung Cancer Research, was honored by the Oncology Live website for a lifetime of achievement.
School of Medicine alumnus Kjell Lindgren, MD ’02, walked in space last Wednesday while stationed aboard the International Space Station on a 141 day mission.

Tomas Berl, MD, professor in the Department of Medicine’s Division of Renal Diseases and Hypertension, was named a University of Colorado Distinguished Professor.
Charles Anthony Dinarello, MD, professor in the Department of Medicine’s Division of Infectious Diseases, was named a University of Colorado Distinguished Professor. Since establishing the honor in 1977, the University has named only 83 Distinguished Professors.

Naresh Mandava, MD, chair of ophthalmology, performed the first bionic eye transplant in Colorado, giving patient Jamie Carley sight for the first time in 15 years.
POINTS OF PRIDE AND AWARDS
2015

JFK Partners celebrated its 50th anniversary of advancing care and treatment for children and adults with development disabilities through training, education, clinical services, research, policy and advocacy.

The DAWN Clinic, which is student-run and provides free medical, physical therapy and dental services to uninsured adults in Aurora, opened.

The Helen K. and Arthur E. Johnson Foundation provided a $10 million grant to the Depression Center and in recognition of the gift, the CU Board of Regents renamed the center the Helen and Arthur E. Johnson Depression Center.
Jayne Aiken and Tanya Brown, two students in the graduate program on the CU Anschutz Medical Campus, were awarded prestigious Graduate Research Fellowships from the National Science Foundation. Aiken is a first-year graduate student in the Biomedical Sciences Program Brown is a second-year graduate student in the cell, stem cells and development graduate program.

Anthony Mangan, a PhD candidate, received one of 30 Gilliam Fellowships for Advanced Study from the Howard Hughes Medical Institute.

The School of Medicine in partnership with Boulder Community Health opened the CU Sports Medicine and Performance Center in Boulder.
University Physicians, Inc., won a Silver Leaf Award from the Colorado Healthcare Communicators during the 2015 Gold Leaf Awards ceremony for an advertisement it produced for publication in 5280 magazine.

The Department of Ophthalmology was awarded a $300,000 grant from Research to Prevent Blindness to support development of vision research programs.

The Doris Duke Charitable Foundation awarded $540,000 to the University of Colorado School of Medicine provide for stronger institutional support and supplemental funds for early-career physician scientists.