Collins Medical Trust

Medical Research and Education in Oregon

2014 Annual Report

Fluorescent Staining of Pancreatic Cancer Tissue

Founded by Truman W. Collins, Sr. in 1956
Purpose and History

“The principal and income of the trust fund shall be used (a) to aid, further, promote, develop, encourage and sponsor research, experiment and work in the cause, cure and treatment of human diseases or in any field of medical research, and (b) to aid, further and promote medical education.”

The Collins Medical Trust was founded by Truman Collins Sr. in the fall of 1956. He was interested in the medical field and wanted to set up a trust that would contribute to medical research and education taking place in Oregon. Contributions were made to the trust over the next ten years or so, and its assets have grown significantly since that time, largely due to the wise investment decisions of the financial adviser, Jim Miller, over the first forty years of the Trust’s existence.

Because the Trust makes relatively small grants—typically in the $15,000 to $30,000 range—our focus for research has primarily been seed funding for projects that, if successful, will go on to apply to the NIH or to other large funders for later-stage funding. We also like to support researchers at a stage where they are gaining their independence in a supportive environment.

Since its inception, the Collins Medical Trust has made grants totaling about $9.2 million.

Trustees and Staff

Nancy Helseth Administrator (1993 – present)
Truman Collins Jr. Trustee (1990 – present)
Dr. Elizabeth Eckstrom Trustee (2003 – present)
Dr. Walter McDonald Trustee (2005 – present)
Timothy Bishop Treasurer (1990 – present)

Financial Statements  (Fiscal year ending September 30, 2014)¹

<table>
<thead>
<tr>
<th>Assets and Liabilities</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$516,000</td>
<td>$431,000</td>
</tr>
<tr>
<td>Stocks</td>
<td>$8,182,000</td>
<td>$7,760,000</td>
</tr>
<tr>
<td>Total assets</td>
<td>$8,668,000</td>
<td>$8,191,000</td>
</tr>
<tr>
<td>Liabilities</td>
<td>($50,000)</td>
<td>($40,000)</td>
</tr>
<tr>
<td>Net Assets</td>
<td>$8,618,000</td>
<td>$8,151,000</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Income and Expenses</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income (interest &amp; dividends)</td>
<td>$229,000</td>
<td>$205,000</td>
</tr>
<tr>
<td>Realized gains</td>
<td>$163,000</td>
<td>$169,000</td>
</tr>
<tr>
<td>Unrealized gains</td>
<td>$583,000</td>
<td>$807,000</td>
</tr>
<tr>
<td>Total income</td>
<td>$975,000</td>
<td>$1,181,000</td>
</tr>
<tr>
<td>Taxes &amp; investment expense</td>
<td>($4,000)</td>
<td>($4,000)</td>
</tr>
<tr>
<td>Net Investment Income</td>
<td>$971,000</td>
<td>$1,177,000</td>
</tr>
<tr>
<td>Grants - net</td>
<td>$503,000</td>
<td>($427,000)</td>
</tr>
<tr>
<td>Net revenue</td>
<td>$468,000</td>
<td>$750,000</td>
</tr>
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¹Rounded to the nearest thousand.
2014 Grants  (October 1, 2013 – September 30, 2014)

Research

Fawzy Elbarbry, Ph.D., R.Ph.  Pacific University  $30,000
Investigating the Antihypertensive Effect of Thymoquinone: Role of Modulating Arachidonic Acid Metabolism versus Anti-oxidant Effect

Daniel J. Ballhorn, Ph.D.  Portland State University  $30,000
Fungal endophytes of Cascade Oregon Grape (Mahonia nervosa) as a novel resource for drug development

Stephanie Krasnow, Ph.D.  OHSU Foundation  $29,110
Role of vasopressin and kisspeptin neurons in inflammation-induced reproductive dysfunction

William Messer, M.D. Ph.D.  OHSU Foundation  $29,474
Two is better than one: in vivo characterization of bivalent dengue viruses

Kristen L. Zuloaga, Ph.D.  OHSU Foundation  $30,000
Generation and Characterization of Endothelial-Specific Aromatase Knockout Mouse

Shawn L. Chavez, Ph.D.  OHSU Foundation  $29,172
Elucidating Clinically-Relevant Mechanisms of Aneuploidy Generation and Resolution in IVF Embryos

Timothy Erickson, Ph.D.  OHSU Foundation  $30,000
Towards an understanding of deafness: Activity-dependent gene regulation in hair cells

Raffaella Gesuete, Ph.D.  OHSU Foundation  $29,937
Investigation of the mechanisms of CpG crossing of the blood brain barrier to promote neuroprotection

Elie Traer, M.D., Ph.D.  OHSU Foundation  $30,000
Targeting the Leukemia Microenvironment

Philippa Newell, M.D.  Providence Portland Medical Foundation  $30,000
Augmentation of the Immune Response to Stereotactic Radiation in a Mouse Model of Hepatocellular Carcinoma

Mark Asquith, Ph.D.  OHSU Foundation  $28,819
The Use of MHC Class I Transgenic Rodents to Uncover the Contribution to Dysbiosis to B27-Associated Spondyloarthropathy

Brett Fling, Ph.D.  OHSU Foundation  $30,000
Neural Mechanisms Underlying Freezing of Gait Resulting from Parkinsonism

Kristy Heppner, Ph.D.  OHSU Foundation  $29,936
Targeting Hypothalamic Kisspeptin Neurons in the Brain to Regulate Reproductive Neuroendocrine Function and Energy Metabolism

Amanda Lund, Ph.D.  OHSU Foundation  $30,000
Lymphatic Vessel Control of Lymphocyte Egress from the Skin

Total Research:  $416,448 (83%)
Education

<table>
<thead>
<tr>
<th>School of Nursing</th>
<th>University of Portland</th>
<th>$25,000</th>
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<td>SimJunior Manikin</td>
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<tr>
<th>Linfield School of Nursing</th>
<th>$60,000</th>
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<tr>
<td>Paquet Scholarship Fund, Half for Endowment and Half for Current Scholarships. The fund awarded 47 scholarships this year totaling $67,500.</td>
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Total Education: $85,000 (17%)

Total Grants Approved in 2014: $501,448

Illustrative Prior Grant Recipients (Text Supplied by OHSU)

Diet-Induced Obesity, ApOE and Cognitive Dysfunction
Lance Johnson, Ph.D.
Oregon Health Sciences University
$30,000 awarded in September 2013

The Collins Medical Trust provided funding to Dr. Lance Johnson to study the effects of diabetes and genetics on cognitive function. These studies demonstrated that profound impairments in cognition are caused by obesity and diabetes, and that genetic variations in the Apolipoprotein E (APOE) gene modulate these impairments. Furthermore, the project supported by the Collins Medical Trust has shown that this diabetes-induced cognitive dysfunction is reversible, as mice who undergo significant weight loss demonstrate remarkable gains in learning and memory. These results have great relevance in public health, and Dr. Johnson’s research is now focused on elucidating the biological mechanisms responsible for these cognitive gains.

With funds provided by the Collins Medical Trust, these studies contributed greatly to both the early career of Dr. Johnson and to the broader scientific community. The funding made possible experiments that resulted in two manuscripts currently in preparation, as well as a manuscript currently in press at Neuropsychopharmacology titled “ApoE2 exaggerates PTSD-related behavioral, cognitive and neuroendocrine alterations”. Additionally, the studies funded by the Collins Medical Trust facilitated grant proposals to the American Heart Association (AHA) and the National Science Foundation (NSF). These proposals resulted in continued funding for Dr. Johnson, including a $94,000 Postdoctoral Fellowship from the AHA and a Postdoctoral Fellowship from the NSF which will provide $208,208 over two years.

Synthesis of Small Molecule Fluorophores to Probe Pancreatic Cancer Margins in the Operating Room
Summer L. Gibbs, Ph.D., Assistant Professor, Department of Biomedical Engineering
Oregon Health Sciences University
$29,872 awarded in May 2013

Pancreatic cancer is the fourth leading cause of cancer death in the United States (US). Over 44,000 people were diagnosed with pancreatic cancer in the US in 2012 with an average life expectancy of 5–7 months post-diagnosis. The survival rate for pancreatic cancer has not improved substantially in over 40 years, and incidence rates are currently increasing. Treatment options for pancreatic cancer are limited, with surgical resection required for cure. Cancer cure is directly related to margin status, where the survival benefit of complete resection is well established and incomplete resections are considered palliative at best. Unfortunately, surgical resection is only possible in 10–15% of cases, and complete resection with negative margins is a difficult task as positive margin status is reported in as many as 15–85% of cases.
Currently surgical resections are performed without intraoperative imaging because targeted contrast agents for pancreatic cancer do not exist. Complete resection is assessed visibly and through palpation by the surgeon in the operating room. Regrettably, many patients are left with residual disease and early cancer recurrence following what was thought to be a curative operation.

In the work funded by the Collins Medical Trust, fluorescently labeled small molecule therapeutics specific for the molecular changes in pancreatic cancer were synthesized and characterized for their ability to highlight pancreatic cancer. A plethora of pancreatic cancer small molecule therapeutics have been developed, which largely do not result in lasting tumor response, but can be fluorescently labeled and do bind specifically to pancreatic cancer cells, creating detectable fluorescence signal for image-guided margin assessment. Fluorescent derivatives of the epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors (TKIs) Erlotinib and an Erlotinib derivative (PD168393) were synthesized and characterized for their ability to highlight pancreatic cancer with varied levels of EGFR expression. The Collins Medical Trust funding has enabled synthesis of eight novel EGFR TKI fluorescent probes as well as proof of concept imaging studies in pancreatic cancer cell lines with varied EGFR expression level. Our lab has been funded by the V Foundation for Cancer Research to continue to develop these novel pancreatic cancer-specific probes and translate this work into the operating room.

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**Policies and Procedures**

The Collins Medical Trust was established in 1956 by Truman W. Collins as a tax-exempt charitable trust under the laws of the State of Oregon. It is recognized by the Internal Revenue Service as tax-exempt under Section 501(c)(3) of the Internal Revenue Code and has been classified as a private foundation under Section 509(a) of the Code. The Trust is directed by a Board of Trustees.

**Policies**

The Original Trust document states that monies from the Trust shall be used:

“To aid, further, promote, develop, encourage and sponsor research, experiment and work in the cause, cure and treatment of human disease or in any field of medical research, and

To aid, further and promote medical education.”

With this statement as a guide, and having knowledge of the desires and concerns of the Trustor, Mr. Collins, and applicable laws, the Trustees over the ensuing years have established the following general guidelines under which grant requests are considered:

1. Disbursements are made only to organizations which have established their tax-exempt status with the U.S. Treasury Department and are operated exclusively for scientific and/or educational purposes.

2. Preference is given to projects and programs conducted by qualified organizations within the State of Oregon.

3. Funds cannot be paid directly to or for the benefit of any specific individual. This does not preclude grants to qualified institutions for organized scholarship programs. Education is generally geared toward the education of health care professionals.

4. Grants for annual operating budgets or for deficit financing are not favored.

5. Disbursements are normally not made to “Private Foundations”, as defined in the Internal Revenue Code.

6. The Trust will not support efforts to influence legislation or other political action.

7. In considering projects or programs involving substantial funds, the Trust prefers to participate with other donors and expects the applicant to seek additional support.

Preference is given to projects or proposals where the researcher/investigator is newly embarking on their research career and is clearly supported by their respective mentor(s).

**Submission Procedures**

Requests for information and applications for grants from the Collins Medical Trust should be presented
Applications need not be formal and should include an Executive Summary suitably brief to present the necessary facts about the applying organization and the project for which the grant is being sought, supported by sufficient technical detail to present a clear picture of the project and expected outcomes. Project outcomes should be clearly articulated, along with an evaluation plan that will determine how successful the project was in attaining its objectives.

The application should include (If the Trustees believe further information is required, they may request an interview with a principal of the applicant and/or a visit to the applicant’s facility):

1. The exact name of the organization or agency making application, and the specific date when requested funds will be required.

2. A copy of the letter from the Treasury Department of the United States which grants tax exempt status; also a statement that the applicant is classified as "Not a Private Foundation", as defined in the Internal Revenue Code.

3. The nature of the project for which funds are requested. Projects seeking funding for symposia, seminars or conferences should contain details regarding course evaluations.

4. Curriculum vitae of the investigator(s). NIH format is preferred.

5. Junior investigators should identify and provide evidence of an established mentor relationship as well as submit a letter of support from their primary mentor(s).

6. MD’s should substantiate 'protected' time for research.

7. Bibliography supporting the project.

8. In research projects involving human subjects, the status of IRB approval should be included.

9. A budget for the proposed project.

10. Estimated total of funds required for the proposed project and the amount sought from the Collins Medical Trust.

11. Anticipated source of balance required in excess of funds requested from the Collins Medical Trust.

12. Other sources being approached for financial assistance for the project.

Electronic submission (preferred): via email to nhelseth@collinsmedicaltrust.org (.pdf format preferred).

Hard copy submission: Submit the original and 1 photocopy of the proposal (including any supporting documentation). Mail to:

Nancy L. Helseth, Administrator
Collins Medical Trust
29100 S.W. Town Center Loop, Suite 300
Wilsonville, OR 97070
(503) 826-5223
nhelseth@collinsmedicaltrust.org
http://www.collinsmedicaltrust.org/

Replies to Applications
The Trustees meet three times a year, in January, May and September. Requests should be submitted by the last business day of the month preceding these months to receive timely consideration. It is not possible to react to emergency requests for crash programs. When an application has finally been acted upon by the Trustees, it will be accepted or rejected in writing sent to the mailing address of the applicant by the first week in the following month.

Reports
The organization receiving a grant from the Collins Medical Trust has a responsibility to report on the use of the funds granted. Unless otherwise indicated at the time disbursement is made, reports are requested to be made annually until the entire grant has been expended and the full impact of the grant is realized. These reports should cover not only progress, but also evaluate the results being achieved. Additionally, throughout the duration of the project, any substantial changes in scope, personnel, or funds that are re-directed from the original purpose, should be reported to the Administrator of the Collins Medical Trust for approval by the Trustees at their next regularly scheduled meeting. Lastly, the Collins Medical Trust appreciates acknowledgment, primarily in scientific publications, for their contribution in support of the project.
Trustee Biographies

Elizabeth Eckstrom, M.D., M.P.H.
Elizabeth is a geriatrician who specializes in promoting a healthy lifestyle in older adults and in educating all health professionals to be competent in the care of older adults. She is Director of Geriatrics at Oregon Health & Science University in Portland, Oregon, and Associate Professor of Medicine. She Co-Directs OHSU’s Healthy Aging Alliance, and is Principle Investigator of the Oregon Geriatric Education Center.

Her research has focused on interprofessional education, tai chi to improve health in older adults, and falls prevention. She also studies the effectiveness of training primary care faculty in geriatrics, and speaks regionally and nationally on strategies to optimally care for older patients in primary care practice.

Personal interests include travel, windsurfing, telemark skiing, gardening, and reading.

In 1995 he became the CEO of the American College of Physicians. In 2002 he assumed the role of CEO of the Council of Medical Specialty Societies, a position he held until 2008.

Walter is the vice president for QHC Advisory, a consulting firm based in New York.

He is a member of Alpha Omega Alpha and has been elected as a Master of the ACP. He has been recognized by Oregon Health Sciences University as Alumnus of the Year (1998) and has been recognized by a number of organizations for both his teaching and leadership skills.

His primary interests include quality improvement, continuing and graduate medical education, and professionalism.

Truman W. Collins, Jr.
Truman is the son of the founder of the Collins Medical Trust (Truman W. Collins, Sr.), and has been a trustee since 1990. Truman earned his undergraduate degree from Willamette University in 1986 and his Master's degree in Computer Science from Stanford University in 1987.

In addition to serving as Trustee of the Collins Medical Trust, Truman is the President of The Collins Foundation, and a board member of The Collins Companies. He serves as a trustee of the OHSU Foundation, a trustee of Willamette University, and is a board member of Foundations for Better Oregon.

Walter J. McDonald, M.D., M.A.C.P.
Walter received his undergraduate education at Williams College and his MD degree at the University of Michigan. Following a residency in internal medicine at Oregon Health Sciences University, he returned to Michigan for training in Endocrinology. He is certified in both internal medicine and endocrinology.

Walter was the Chief of Medicine at the Portland Oregon VA Medical Center for 12 years beginning in 1979. He then assumed the role of Associate Dean for Education at the Oregon Health Sciences University.

Cover photo: Shown here are three images resulting from fluorescent staining of pancreatic cancer tissue with different novel probes. These were taken in Dr. Summer Gibbs laboratory at OHSU.

Photos courtesy of OHSU.

Design and typesetting: Truman W. Collins Jr.
Layout advice: Martha Gannett