

Commonwealth Health Research Board [CHRB]

Annual Report for FY 2015/2016
for the period
July 1, 2015 to June 30, 2016



Commonwealth Health Research Board [CHRB] Introduction

- The Commonwealth Health Research Board [CHRB] was created by Virginia Code § 23-278 to provide financial support for research efforts having the potential of maximizing human health benefits for the citizens of the Commonwealth.
- This initiative of the General Assembly and the Governor used the proceeds from the sale of Trigon stock to create the framework and fiscal resources for a research grant program.
- The funds resulted from the stock and cash distribution to the Commonwealth of Virginia pursuant to the conversion of Trigon Blue Cross and Blue Shield from a mutual insurance company to a stock corporation.
- Income from the funds is used to make grant awards.

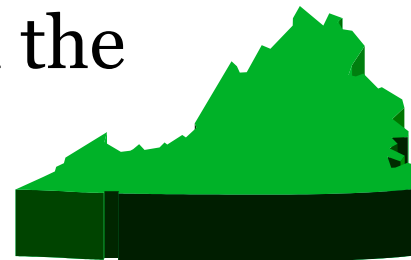




Entities Eligible for CHRB Grant Funding

The following entities may apply for a CHRB grant:

- State-supported Virginia institutions of higher education;
- Agencies of the Commonwealth of Virginia
- Nonprofit organizations exempt from income taxation pursuant to § 501 c (3) of the Internal Revenue Code and located in the Commonwealth of Virginia



CHRB Grant Funding



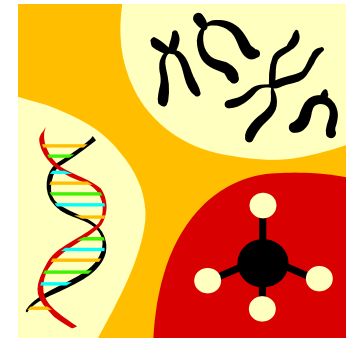
- For the FY 2016/2017 CHRB competition, applicants may request funding to support projects over either a one-year or two-year period.
- The maximum amount of a one-year award is \$100,000. The maximum amount for a two-year award is \$200,000. However, no more than \$100,000 is provided in either the first or second year.
- The number of one-year and two-year awards the CHRB anticipates funding, is dependent upon the funds available, and the number and merit of proposals received and reviewed.



Grant Scientific Review Criteria

Concept Papers and Full Proposals are reviewed in accordance with the following review criteria:

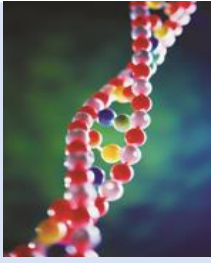
- ✓ Significance
- ✓ Approach
- ✓ Innovation
- ✓ Experience and Qualifications of Research Team
- ✓ Unique Virginia Considerations, Collaborations and Leverage



Grant Awards



- Grants are awarded based upon the Scientific Review criteria and compliance with the CHRB Grant Guidelines and Policies and Procedures.
- In the end, grant awards are chosen based upon those projects that have the most scientific merit and that will maximize human health benefits for the citizens of Virginia.



Commonwealth Health Research Fund [CHRF] Investments and Fiscal Management

- ❑ The authority to invest and manage the assets of the CHRF and maintain a separate accounting for the CHRF assets are provided to the Virginia Retirement System [VRS] in Virginia Code § 51.1-124.36.
- ❑ The estimated value of the CHRF as of December 31, 2015 was \$34 million.
- ❑ Assets of the CHRF are pooled with the \$66.2 billion Virginia VRS Investment fund [as of December 31, 2015] .
- ❑ The current asset allocation for the VRS investment fund reflects 43% public equity, 18% fixed income, 18% credit strategies, 11% real assets, 7% private equity, 1% strategic opportunities and 1% cash.
- ❑ The Department of Accounts serves as the fiscal agent for the Commonwealth Health Research Board through a Memorandum of Understanding.
- ❑ Audits are conducted every two years by the Auditor of Public Accounts. The CHRB has had clean audits since the inception of CHRB.



Commonwealth Health Research Fund Calculation of Grant Funding

Grant funding is calculated by an amount not to exceed six percent of the moving average of the market value of the CHRF calculated over the previous five years or since inception, whichever is shorter, on a one-year delayed basis, net of any administrative fee assess pursuant to subsection E of Virginia Code § 51.1-124.36.

Calendar Year		Market Value as of 12/31/xx
January 31 - December 31, 2009	Year 1	\$25,803,429
January 31 - December 31, 2010	Year 2	\$28,320,007
January 31 - December 31, 2011	Year 3	\$27,511,097.32
January 31 - December 31, 2012	Year 4	\$29,885,251.45
January 31 - December 31, 2013	Year 5	\$33,153,077.91
	Total	\$144,672,862.68
	Average Market Value	\$28,934,572.54
Funds available for 2015 grants based on 4.719% of the average market value	4.719%	\$1,365,422

Source: VRS Finance Division Analysis of CHRF Activity for CY 2011 through December 2011

Source: VRS Finance Division Analysis of CHRF Activity Report through December 2012

Source: VRS Finance Division Activity Report through December 31, 2013



Commonwealth Health Research Fund FY 2015/2016 Final Expenses

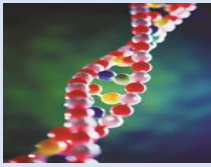
FY 2015/2016	Approved Administrative Budget	FINAL FY 2015/2016 Expenses as of June 30, 2016	Expenses as a % of Approved Budget	Special Notes
Total Administrative Budget	\$ 197,921.97	\$212,465.04	107%	Greatest expenses related to salaries and management services: to include scientific consultants, fiscal services and legal services.
Total Grant Disbursements	\$1,411,904.97	\$1,354,302.10	94%	Majority of funds disbursed in July 2015 for initial grant payments.

CHRB Administrative Final Cash Balance as of June 30, 2016: \$110,304.19



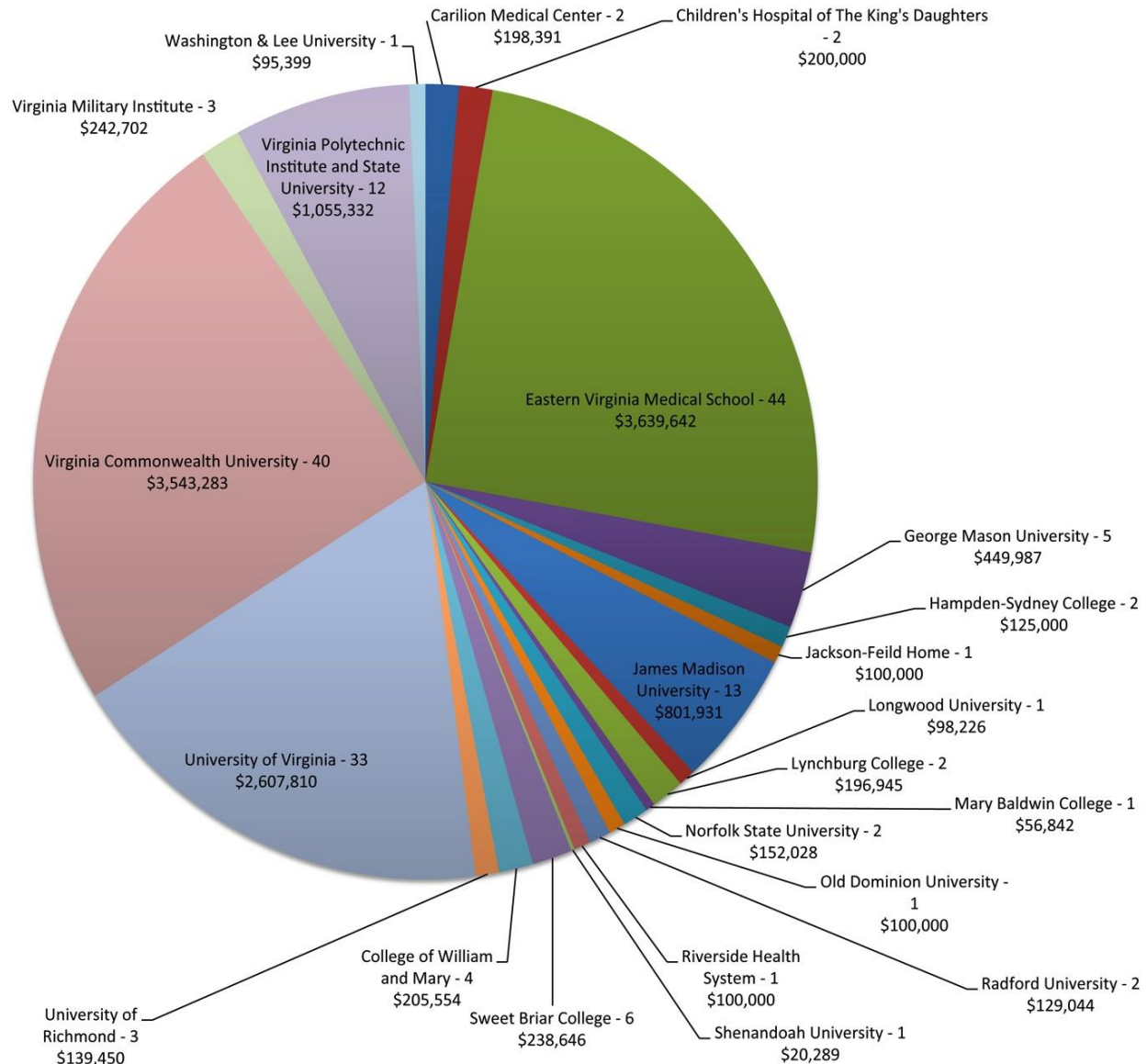
Comparison of Success Rates

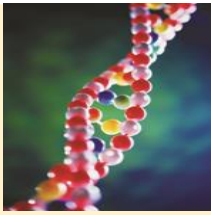
Grants Cycle	Step 1: Concept Papers submitted	Step 2: Full Proposals requested	% success Full Proposals	Step 3: Full Proposals Presented	% success Presentations	New Grant Awards	% success Awards	From Step 1 to Awards
2015/2016	91	24	26%	10	42%	7	70%	8%
2014/2015	82	24	29%	15	63%	6	40%	7%
2013/2014	76	29	38%	12	41%	5	42%	7%
2012/2013	84	28	33%	14	50%	6	43%	7%
2011/2012	76	24	32%	13	54%	5	38%	7%
Cumulative from 2011/2012 to 2015/2016 [Five Year total]	409	129	32%	64	50%	29	45%	7%
Cumulative from 2011/2012 to 2015/2016 [Five Year average]	82	26	32%	13	50%	6	46%	7%



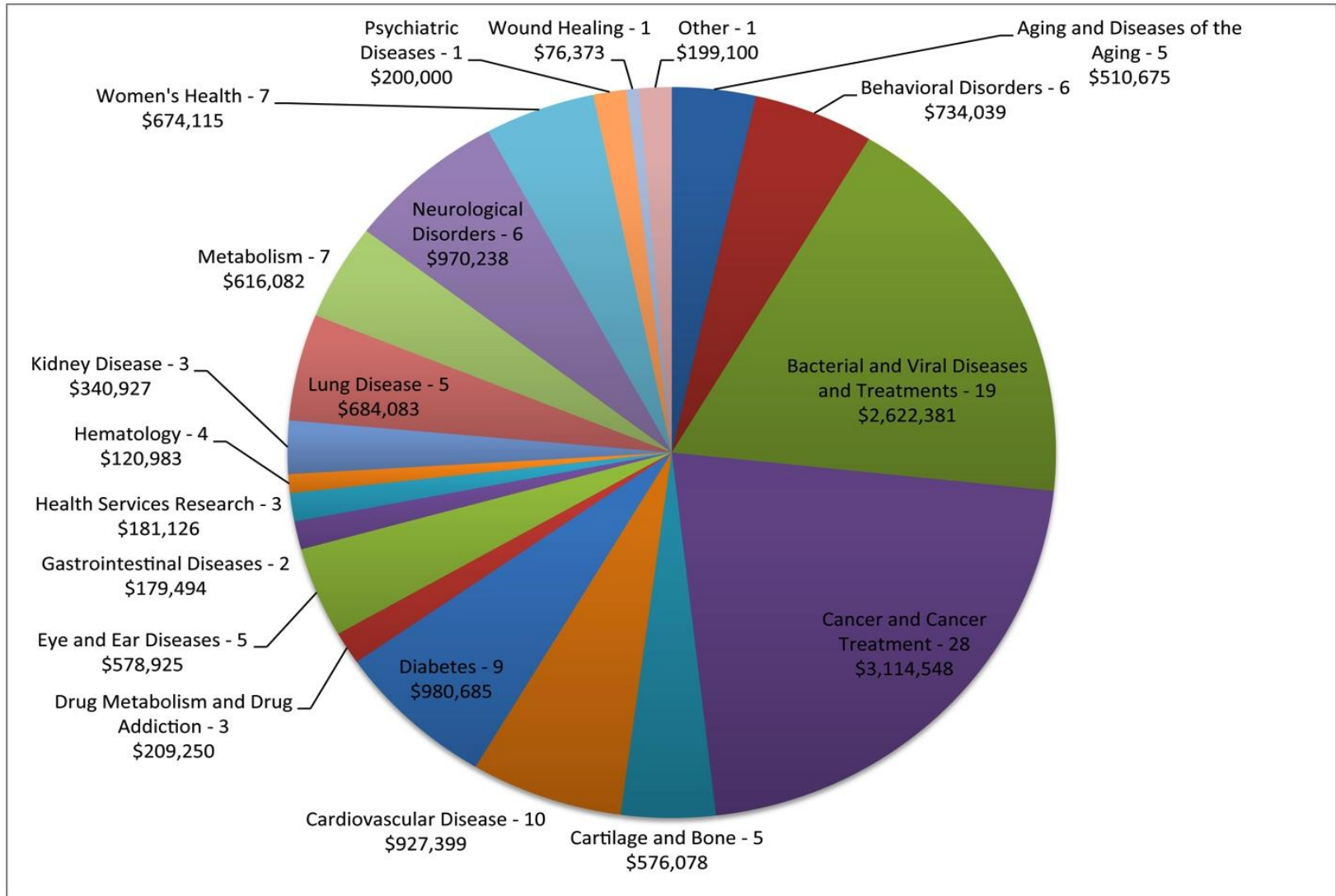
Commonwealth Health Research Fund Grant Awards

Life to Date = **\$14,496,501**





CHRB Grant Awards [Life to Date] Funded Types or Categories of Research





2015/2016 Grant Awards and Project Summaries

[yellow shading representatives Year 2 of a 2-year grant award]

**David Archer, M.D.,
Eastern Virginia Medical School
*Dysfunctional Hemostasis and
Inflammation in Women with Uterine
Myomas and Heavy Menstrual
Bleeding* **\$99,699 Grant Award****

Project Summary: Excessive blood loss during menstruation affects 8 to 15% of women and results in iron deficiency anemia. Excessive menstrual bleeding affects women's quality of life resulting in absenteeism, decreased home and work productivity, avoidance of social and recreational activities, and diminished interest in sexual intercourse. Current medical treatments do not control the excessive blood loss for many women. Hysterectomy cures excessive bleeding, but is associated with complications, death, and for young women, loss of fertility. During normal menstruation blood clots in the broken uterine blood vessels to limit blood loss, however, excessive bleeding occurs when blood clotting becomes abnormal. The purpose of this study is to evaluate the role of local uterine inflammatory factors on the blood clotting system in women with normal and excessive menstrual bleeding. The data from this study will identify new and more effective medical treatments for excessive menstrual bleeding.

**Robert Bruno, Ph.D.,
Old Dominion University
*Chimeric mammary models for
elucidating microenvironment
contributions to tumor suppression
and promotion***

\$100,000 Grant Award

Project Summary: To reach the goal of eradicating breast cancer, we must focus on both treatment and prevention of the disease. Current understanding of tumorigenesis is as a multi-step process, requiring both mutations and non-mutating promotional influences. Current evidence suggests cells capable of making tumors exist within normal adult breast tissue but are suppressed by the normal, healthy microenvironment. Therefore, understanding the mutations that lead to cancer, while important, fails to fully explain why breast tumors develop. This proposal seeks to understand how normal mammary tissues are able to control the tumorigenic potential of mutated cells, and how these cells sometimes overcome this suppression to form breast tumors. Understanding these processes can lead to new diagnostic methods for detecting BC at its earliest stages, as well as new therapeutic strategies aimed at helping the body suppress and/or eliminate these potentially dangerous cells.

**Alan Ealy, Ph.D.,
Virginia Polytechnic Institute and
State University
*Fetal Outcomes from Maternal
Obesity Around the Time of
Conception***

\$68,885 Grant Award

Project Summary: The prevalence and severity of obesity in the United States has caused a severe rise in the incidence of premature death occurring from several obesity-related diseases (*e.g.* diabetes, hypertension). Unfortunately, the adverse health consequences of obesity are being passed on to our children and to their children. Children born from obese mothers have an increased risk for obesity. They also are at a higher risk for diabetes, hypertension, dementia and other diseases as adults regardless of whether they are overweight. Causative factors and potential treatments of these problems are not known. The overall goal of this work is to better define when during early pregnancy these adverse responses to maternal obesity occur. These findings will provide crucial new information that may be used by researchers, clinicians, and dieticians to curve the severity of the developmental problems resulting from intrauterine exposure to obesity.



2015/2016 Grant Awards and Project Summaries

[yellow shading representatives Year 2 of a 2-year grant award]

**Raymond Enke, Ph.D.,
James Madison University**
*Molecular and bioinformatic
analysis of epigenetic gene
regulation in the normal and
diseased retina: Characterizing
pathways for diagnosing and
treating macular degeneration*
\$100,000 Grant Award

Project Summary: Sight, as interpreted by our visual system, is our most important sense and is critical for deciphering our surrounding environment. Though visual impairment is a significant public health problem in the US and worldwide, fundamental questions concerning dysfunction of the visual system remain unaddressed. We hypothesize that a mechanism of gene regulation largely unexplored in retinal neurons (epigenetic modification of genomic DNA) has a large contribution to the pathogenesis of blinding retinal diseases such as age-related macular degeneration (AMD). To test this hypothesis, our interdisciplinary and multi-institutional research team will characterize molecular mechanisms shaping the onset and progression of AMD in human ocular tissue. This study will advance our understanding of epigenetic gene regulation in the diseased retina and will be applied to develop hypotheses aimed at better understanding, diagnosing, and treating AMD.

**Elizabeth Gilbert, Ph.D.,
Virginia Polytechnic Institute and
State University**
*Using anorexic and obese chickens to
identify targets for appetite
regulation* **\$100,000 Grant Award**

Project Summary: Because 30% of adults in the Commonwealth are considered obese (CDC), Virginia is in considerable need of an effective anti-eating strategy. New perspectives on appetite may come from studying the anorexic and obese concurrently and perhaps even more so from non-mammalian models. The body weight selected lines of chickens, the only model of anorexia and obesity originating from common ancestors, existing only at Virginia Tech, have been selected for either low (LWS) or high (HWS) juvenile body weight for 55 generations and are comprised of anorexic and obese individuals. The objective of this study is to identify differentially expressed proteins between juvenile LWS and HWS in the hypothalamus, a region of the brain involved in appetite regulation. Identified peptides/proteins will be evaluated as potential pharmacological targets for manipulating appetite.

**Kristian Hargadon, Ph.D.,
Hampden-Sydney College**
*The Role of Melanoma-derived
Factors in Suppressing the
Maturation, Activation, and T Cell
Stimulatory Capacity of Dendritic
Cells* **\$50,000 Grant Award**

Project Summary: The studies proposed in this grant application are aimed at understanding melanoma-associated suppression of dendritic cells (DC), innate immune cells that function as critical regulators of anti-tumor immune responses. Gaining mechanistic insight into the basis for melanoma-mediated suppression of DC maturation and activation and understanding the role of melanoma-altered DC in the induction of tumor-associated T cell dysfunction will enhance our understanding of tumor immune escape. Such findings have the potential to identify novel targets for interfering with melanoma-associated DC dysfunction, and they are likely to suggest immunotherapeutic strategies designed to improve the functionality of endogenous tumor-associated DC *in situ*, the efficacy of exogenous DC-based anti-tumor vaccines, and the overall quality of anti-tumor T cell-mediated



2015/2016 Grant Awards and Project Summaries

[yellow shading representatives Year 2 of a 2-year grant award]

Helen T'Anson, Ph.D.,
Washington and Lee University
The role of snacking in early obesity
onset in children

\$95,399 Grant Award

Project Summary: Alarming data on the percentage of overweight and obese youth in Virginia (22%), suggests an urgent need to study appetite regulation in appropriate animal models. Snack foods account for up to 27% of daily caloric intake in children and contribute significantly to excess energy intake and weight gain, however, there are no animal models that study the role of snacking in obesity onset during development. The proposed project will investigate the signals and mechanisms involved in early onset of obesity due to snacking using a newly developed female rat model. Insulin sensitivity, leptin resistance and serum metabolites will be monitored during the study. Tissues associated with development of metabolic abnormalities, such as visceral adipose tissue, liver and the hypothalamus of the brain will be studied for changes in relevant proteins and neuropeptides. Our results will inform clinical studies to develop appropriate interventions during early childhood and prior to obesity onset.

Deborah Kelly, Ph.D.,
Virginia Polytechnic Institute and
State University
BRCA1-directed Transcriptional
Regulation in Hereditary Breast
Cancer

\$100,000 Grant Award

Project Summary: Today, women diagnosed with breast cancer have a higher chance of survival than ever before especially when detected early. However, triple negative breast cancer threatens the lives of many young women in Virginia. This form of breast cancer is extremely aggressive, more likely to recur and presents major challenges for treatment. Treatment options are limited and there is currently no known cure. We will investigate the actions of a prime culprit implicated in causing the disease, the protein factor, BRCA1. We will determine, in 3D, how BRCA1 interacts with other complex proteins poised on DNA to induce cancer. Having a 3D model to understand unique protein-DNA properties will greatly contribute to the design of new drugs that interfere with cancer-causing processes. We expect this will lead to new treatment options aimed at combating triple negative breast cancer and enhancing clinical outcomes.

Dongfeng Pan, Ph.D.,
University of Virginia
Tumor-targeted Delivery of
Farnesylthiosalicylic Acid (FTS)

\$100,000 Grant Award

Project Summary: Objective: Enhancing anti-cancer efficacy of farnesylthiosalicylic acid (FTS) by targeted delivery.

Introduction: FTS is promising candidate drug for breast cancer patients with resistant disease. However, its clinical efficacy is limited due to the poor pharmacokinetics and bioavailability. We have conjugated FTS with a small molecule tumor-targeting carrier. The conjugate exhibited improved inhibition efficacy against endocrine-resistance cancer cells compared to FTS and demonstrated highly targeted uptake into mouse xenografts. In this application we will validate its therapeutic efficacy in a preclinical setting.

Hypothesis: Tumor-targeted delivery would enhance anti-cancer therapeutic efficacy of FTS. **Methods:** The parameters of pharmacokinetics, pharmacodynamics, and toxicity in animal model will be comprehensively studied and validated using live animal imaging and other relevant techniques. **Impact:** If succeeded, it will provide a new effective treatment for patients with relapse breast cancer from primary endocrine therapy. Furthermore, the same mechanism holds the potential for targeted delivery of other chemotherapy drugs.



2015/2016 Grant Awards and Project Summaries

[yellow shading representatives Year 2 of a 2-year grant award]

**Tushar Shah, M.D., M.P.H.,
Eastern Virginia Medical School**
***Role of Novel Complement inhibitor
in improving neurological outcomes
in an animal model of Neonatal
Hypoxic Ischemic Encephalopathy***
\$100,000 Grant Award

Project Summary: Hypoxic-ischemic encephalopathy (HIE) is a condition in which brain damage is caused due to birth asphyxia or oxygen deprivation around the time of birth. HIE is a major contributor to the infant mortality rate in Virginia. The complement system, a critical part of inflammatory tissue damage, plays a major role in HIE. Several clinical trials have shown that reducing body temperature (hypothermia) improves survival and neurological outcomes in infants with HIE. Our bench-top experiments suggest that hypothermia increases complement activation, likely attenuating the benefits of hypothermia. Our lab has developed a compound (Peptide inhibitor of C1, PIC1) that blocks the complement system and potentially reduces brain damage due to complement activation. Our experiments aim to test PIC1 in newborn rats and demonstrate decreased brain damage. Our long-term goal is to develop PIC1 as an intervention to decrease mortality and improve neurological outcomes in infants with HIE.

**Dong Sun, M.D., Ph.D., Virginia
Commonwealth University**
***Targeting NLRP3 inflammasomes to
treat traumatic brain injury with a
novel pharmacological inhibitor***
\$100,000 Grant Award

Project Summary: Traumatic brain injury (TBI) is a major health problem. Currently, there is no effective treatment. Following TBI neuroinflammation is a prominent event that significantly exacerbates brain tissue damage causing functional deficits, thus targeting neuroinflammation is a promising treatment for TBI. Recent studies have found that NLRP3 inflammasome is associated to exacerbation of tissue damage following TBI. Therefore, molecules that inhibit formation of NLRP3 inflammasome represent a novel strategy for TBI treatment. Recently, we have developed NLRP3 inflammasome inhibitor, 16673-34-0. Our preliminary data have demonstrated that 16673-34-0 can reduce cortical brain tissue damage and neuronal cell loss in a TBI animal model suggesting its therapeutic potential. In this proposal, we will investigate the efficacy of 16673-34-0 and its molecular mechanisms for TBI. We hypothesize that NLRP3 inflammasome plays an important role in the progression of brain tissue damage following TBI; targeting NLRP3 inflammasome with 16673-34-0 will have therapeutic effect.

**David Taylor-Fishwick, Ph.D., Eastern
Virginia Medical School**
New Drug Target for Diabetes
\$100,000 Grant Award

Project Summary: In Virginia, 9% of the adult population has diagnosed diabetes. Diabetes care consumes over \$5,000,000,000 per year. A further 6% of Virginians have undiagnosed pre-diabetes. There is no cure for diabetes and available treatments are largely palliative. An urgent need exists for therapies that will halt or reverse diabetes progression. Dysfunction of insulin-producing beta cells is central to the development of diabetes. Cellular stress in response to inflammation drives beta cell dysfunction. Our recent studies have pioneered identification of a cellular enzyme in beta cells that mediates dysfunction. Applying a selective inhibitor of this enzyme in pilot studies protects beta cell function. The development and validation experiments proposed in this application are expected to generate the data to leverage significant federal funding to maximize the therapeutic potential from this discovery. The resulting successful progression to a diabetes therapy would have significant health benefits to citizens of Virginia.



2015/2016 Grant Awards and Project Summaries

[yellow shading representatives Year 2 of a 2-year grant award]

Judith Voynow, M.D., Virginia Commonwealth University
Inhaled 2-O, 3-O desulfated heparin is a multifunctional anti-inflammatory therapy for cystic fibrosis lung disease **\$100,000 Grant Award**

Project Summary: Cystic fibrosis (CF) is an inherited disease that causes abnormal airway mucus and recurrent bronchitis resulting in lung failure and death. A major cause of lung injury in CF is the high concentration in the airways of neutrophil elastase (NE), a product of white blood cells that degrades proteins. There are currently no effective anti-NE therapies to prevent the relentless progression of CF lung disease. Although heparin is an effective anti-NE and anti-inflammatory drug, it cannot be used in CF due to the risk of lung bleeding. A modified heparin, 2-O,3-O- desulfated heparin (ODSH), does not cause increased bleeding, yet maintains robust anti-NE and anti-inflammatory properties. **Therefore, we propose that ODSH will be an effective inhaled therapy to prevent progression of CF lung disease.** The CHRB proposal will generate critical preliminary data to test this hypothesis and to support preclinical toxicology for an FDA investigational New Drug application.



Appendices:



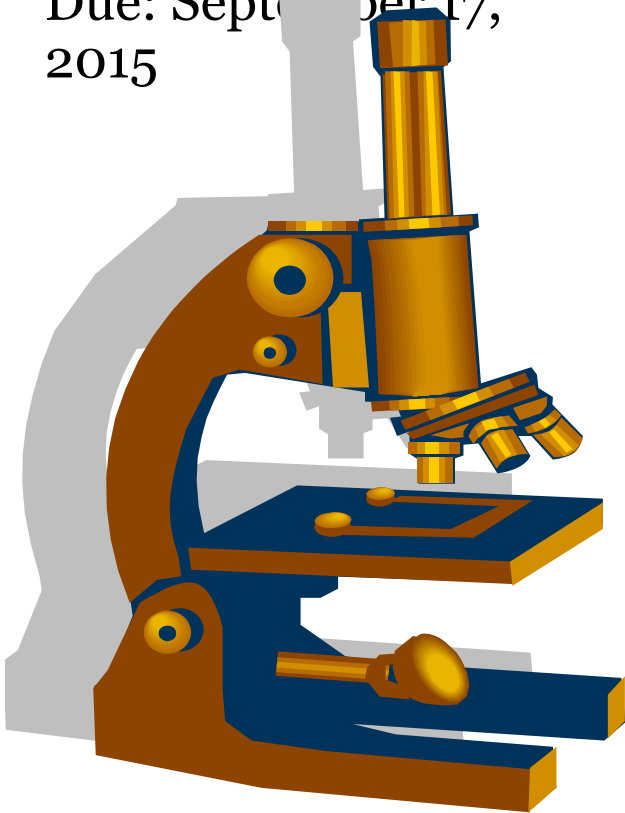
Calendar of Key Dates for Grant Applicants

Key Dates	Due Dates
Concept Paper Submissions	September 17, 2015
Full Proposal Submissions	February 4, 2016
Presentations to CHRB	May 12, 2016
Grant Awards	July 1, 2016



Step One: Concept Paper Submission

Due: September 17,
2015



- All applicants seeking CHRB grant support must submit a Concept Paper.
- The CHRB reviews only Concept Papers submitted in compliance with the CHRB's Grant Guidelines and Policies and Procedures.
- For institutions of higher education, all Concept Papers must be submitted to the Applicant Institution's Office of Sponsored Programs or Office of Grants Research for institutional review and approval, prior to being submitted to the CHRB.
- For organizations other than institutions of higher education, all Concept Papers must be submitted to the Applicant Organization's Office of Sponsored Programs or Office of Research for internal review and approval, prior to being submitted to the CHRB.

Step Two: Full Proposal Submission



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- Applicants, whose Concept Papers appear to meet CHRB purposes and goals and which are judged to merit further consideration, are asked to submit Full Proposals.
- Applicants whom the Board has invited to develop a Full Proposal may submit a Full Proposal to the Board.
- An invitation to submit a Full Proposal or make a presentation [Step Three] does not guarantee grant funding.

Step Three: Full Proposal Presentation to the CHRB

Date: May 12, 2016



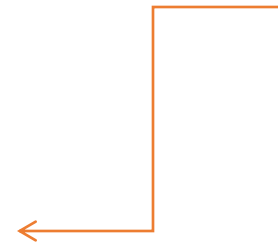
The CHRB invites finalists, from among individuals who submitted a Full Proposal, and are judged to be most competitive, and to merit further consideration, to make a presentation to the Board.

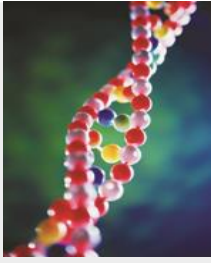
The PI submitting the proposal must make the oral presentation to the CHRB and address questions on the date set forth by the CHRB.

Presentations, including questions from the Board members, and responses are restricted to 15 minutes. The presentation should elaborate on the information contained in the Full Proposal. The Principal Investigator [PI] should briefly discuss success of past research relevant to the pending proposal.

No alternate dates or presenter substitutions are permitted. Co-Investigators are not allowed to make the presentation in place of the PI. However, Co-Investigators may accompany the PI to the presentation and respond to questions during the question and answer period.

The CHRB makes final determinations concerning which of the presenters will receive a CHRB award after the application and review processes are completed.



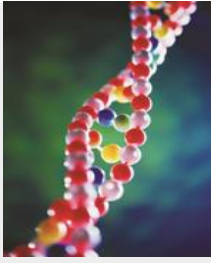


Grant Scientific Review Criteria

Significance:

- ❖ Does the research address an important problem?
- ❖ If the aims of the application are achieved, how will scientific or other knowledge be advanced?
- ❖ What will be the impact of this research on the concepts, methods, or practices in the related field?



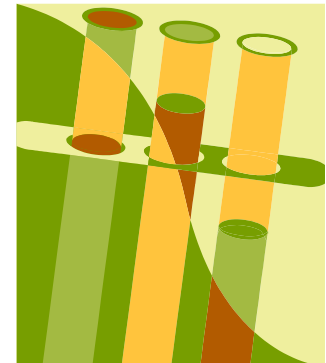


Grant Scientific Review Criteria

[continued]

Approach:

- ❖ Are the conceptual framework, design, methods and analyses adequately developed, well integrated, and appropriate to the aims of the project?
- ❖ The Board supports both new research efforts and the expansion or continuation of existing research efforts.





Grant Scientific Review Criteria

[continued]

Innovation:

- ❖ Does the project employ novel concepts, approaches or methods?
- ❖ Are the aims original and innovative?
- ❖ Does the project challenge existing paradigms or develop new methodologies or technologies?





Grant Scientific Review Criteria

[continued]

Experience and Qualifications of Research Team:

- ❖ Does the Principal Investigator have the proper training, experience and appropriate percentage of time designated to direct and manage the project?
- ❖ Has the Principal Investigator conducted research related to the project?
- ❖ What will each project participant contribute to the project?
- ❖ Is the research team qualified through training and experience to conduct this research?
- ❖ Has the Principal Investigator published any successfully-completed or ongoing research which relates to this proposal?



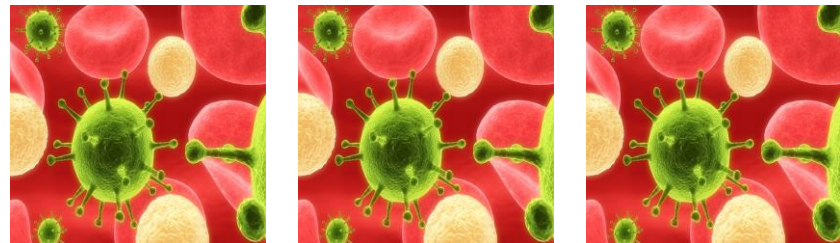


Grant Scientific Review Criteria

[continued]

Unique Virginia Considerations, Collaborations and Leverage:

- ❖ What is the potential of maximizing human health benefits for Virginia citizens?
- ❖ Are there unique Virginia research resources or facilities to be utilized?
- ❖ Will the initiative employ useful collaborative arrangements among two or more institutions of higher education or other research organizations?
- ❖ How will funding provided by the CHRB be used to leverage additional support from other federal or private organizations? The Board gives priority to those research efforts for which CHRB support can be leveraged to foster contributions from federal agencies or other entities.
- ❖ Will there be opportunities for undergraduate students at small colleges to participate in the research?





Reporting Requirements for CHRB Grant Awards

One-Year Grant Awards

Each Grantee Institution or Organization is required to submit:

- An interim scientific and fiscal progress report by January 31 [6-month report]
- A final scientific and fiscal progress report by August 31 [final 12-month report]

Two-Year Grant Awards

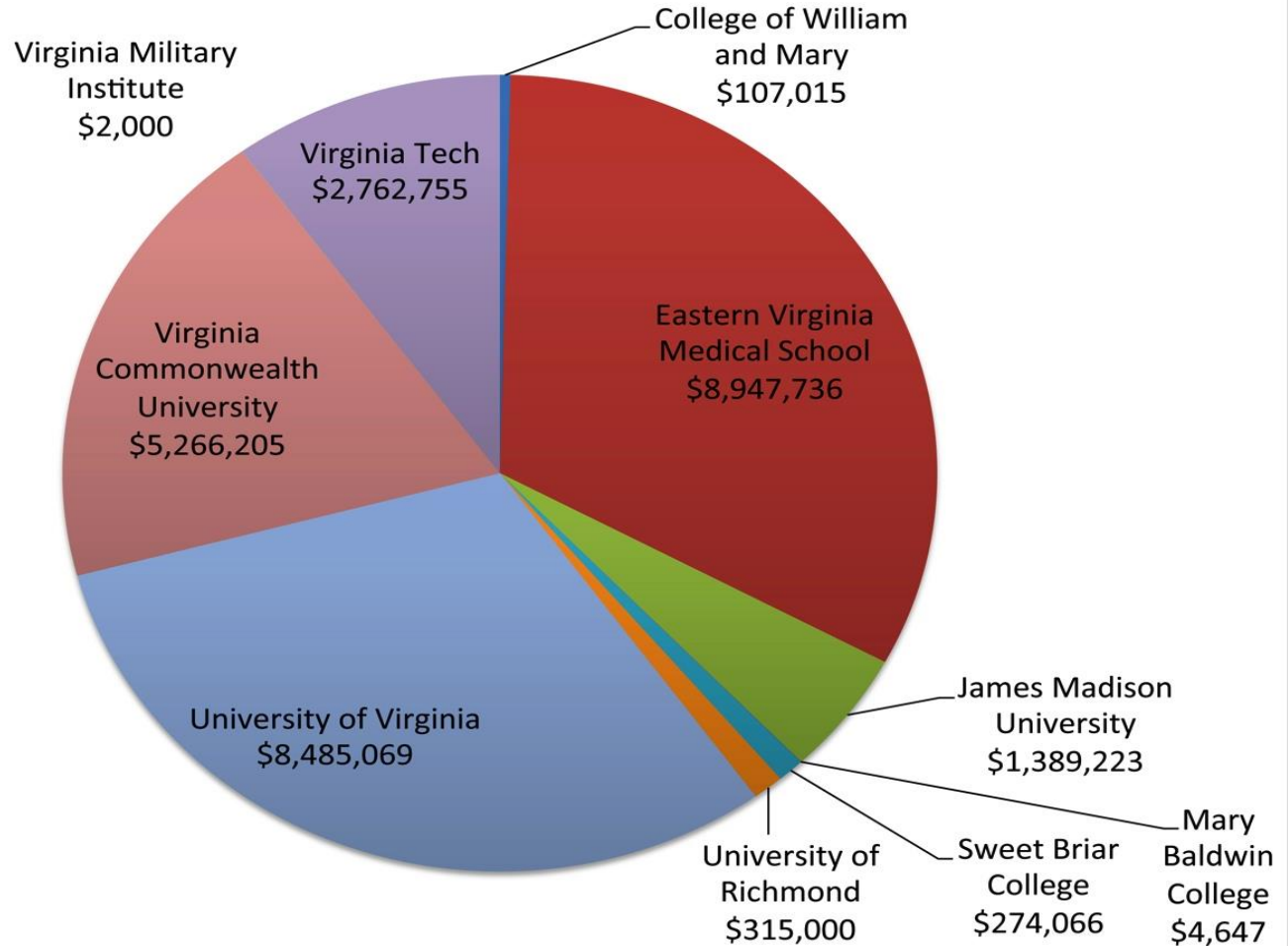
Each Grantee Institution or Organization is required to submit:

- An interim scientific and fiscal progress report by March 31 [9-month report]
- An interim scientific and fiscal progress report by January 31 [18-month report]
- A final scientific and fiscal progress report by August 31 [final 24-month report]

Funding of the second year of a two-year award is not automatic, but is contingent upon demonstration of satisfactory progress and compliance with reporting requirements and the term and conditions of the Grant Agreement during the first year.



Leveraged Funding as a result of CHRB Grant Awards = \$27,553,716





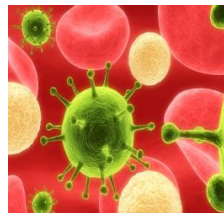
Comments from CHRB Grant Recipients and additional funds leveraged

John Hossack, Ph.D.

2008 UVA Grant Recipient
“CHRB funding was very useful in allowing us to collect preliminary data for NIH funding. NIH funding is now extremely competitive. Since grant application reviewers are famously conservative and wanting to see proof of feasibility, viable preliminary data is essential. CHRB’s emphasis on multi-institutional collaboration (primarily within Virginia) caused us to explore new research partnerships across external institutions – VT and VCU in our instance.”
As a result of the CHRB Grant Award, Dr. Hossack leveraged \$1,250,000 in additional grant funds from NIH.

Diane Duffy, Ph.D.

2006 EVMS Grant Recipient
“I continue to be grateful for the support provided by CHRB. This funding allowed my laboratory to develop technologies and generate key preliminary data that yielded several publications and significantly strengthened grant applications which were ultimately funded by the NIH and CONRAD.”
As a result of the CHRB Grant Award, Dr. Duffy leveraged \$1,401,278 in additional grant funds from NIH and \$308,894 from CONRAD [Contraceptive Research and Development].



Michael Leopold, Ph.D.

2006 UR Grant Recipient
“In today’s ultra-competitive funding environment, federal agencies like NSF and NIH are placing a premium on the principal investigators establishing the viability of proposed research projects. Funding opportunities like CHRB allow principal investigators to accomplish this task by providing funds for significant preliminary results and/or considerable fundamental development that is necessary for larger, long-term research goals and initiatives.”
As a result of the CHRB Grant Award, Dr. Leopold leveraged \$255,000 in additional grant funds from NSF.

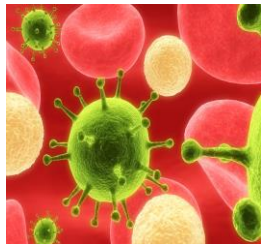


Comments from CHRB Grant Recipients and additional funds leveraged

Woong-Ki Kim, Ph.D.

2009 EVMS Grant Recipient
“My efforts to obtain federal funding have finally paid off and initial funding from the CHRB was instrumental in this. CHRB grant also helped me get through the difficult funding situation in the U.S. I am very grateful and indebted to the CHRB for its support.”

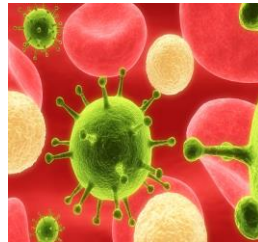
As a result of the CHRB Grant Award, Dr. Kim leveraged \$4,622,564 in additional grant funds from NIH.



Molly Hughes, M.D., Ph.D.

2008 UVA Grant Recipient
“The support I have received from the CHRB is greatly appreciated. It made all the difference in terms of being able to gather data to then successfully compete for NIH grant funds. Thank you to the CHRB.”

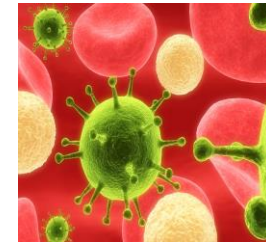
As a result of the CHRB Grant Award, Dr. Hughes leveraged \$1,161,300, in additional grant funds from NIH.



Jennifer Stewart, Ph.D.

2010 VCU Grant Recipient
“The work accomplished with CHRB funding has helped many investigators to leverage research funding, and it also helped me to leverage funding of an educational grant from NIH.”

As a result of the CHRB Grant Award, Dr. Stewart leveraged \$1,469,630 in additional grant funds from NIH.





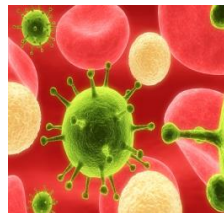
Comments from CHRB Grant Recipients and additional funds leveraged

John Hossack, Ph.D.

2008 UVA Grant Recipient
“CHRB funding was very useful in allowing us to collect preliminary data for NIH funding. NIH funding is now extremely competitive. Since grant application reviewers are famously conservative and wanting to see proof of feasibility, viable preliminary data is essential. CHRB’s emphasis on multi-institutional collaboration (primarily within Virginia) caused us to explore new research partnerships across external institutions – VT and VCU in our instance.”
As a result of the CHRB Grant Award, Dr. Hossack leveraged \$1,250,000 in additional grant funds from NIH.

Diane Duffy, Ph.D.

2006 EVMS Grant Recipient
“I continue to be grateful for the support provided by CHRB. This funding allowed my laboratory to develop technologies and generate key preliminary data that yielded several publications and significantly strengthened grant applications which were ultimately funded by the NIH and CONRAD.”
As a result of the CHRB Grant Award, Dr. Duffy leveraged \$1,401,278 in additional grant funds from NIH and \$308,894 from CONRAD [Contraceptive Research and Development].



Michael Leopold, Ph.D.

2006 UR Grant Recipient
“In today’s ultra-competitive funding environment, federal agencies like NSF and NIH are placing a premium on the principal investigators establishing the viability of proposed research projects. Funding opportunities like CHRB allow principal investigators to accomplish this task by providing funds for significant preliminary results and/or considerable fundamental development that is necessary for larger, long-term research goals and initiatives.”
As a result of the CHRB Grant Award, Dr. Leopold leveraged \$255,000 in additional grant funds from NSF.



CHRB Annual Report Evaluation Report

Additional Reporting Requirements and Acknowledgement of Support

Evaluation Report and Additional Reporting Requirements

As part of the CHRB's ongoing evaluation efforts, each Principal Investigator [PI] and Grantee Institution or Organization is required to complete a CHRB Annual Evaluation Report for a period of five years after the conclusion of the Grant due by December 31st of each year.

This provision also requires:

- Two reprints of any publication resulting from the funded research sent to the CHRB as soon as they are available.
- Notification of future grant awards received as a result of research funded with grant funds from the CHRB.
- All licenses, copyrights, patents, inventions, or income-producing processes, discovered or arising from research funded, at least in part, by the CHRB, which begin to produce income.

Acknowledgement of Support

The CHRB requires all published journal articles, monographs, or other special reports based on grant-supported projects to carry a standard footnote of acknowledgement as follows: *“This research was supported by grant funding from Virginia’s Commonwealth Health Research Board.”*

Commonwealth Health Research Board Members

Cynda A. Johnson, M.D., M.B.A., Chair, Roanoke, Virginia

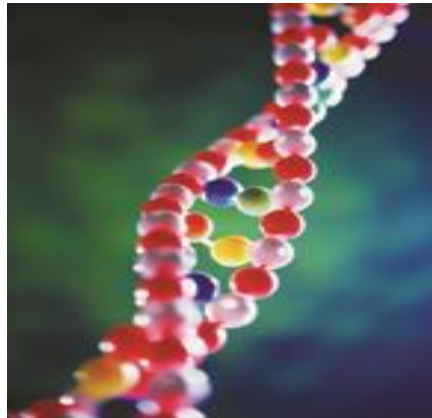
L. Matthew Frank, M.D., Vice Chair, Norfolk, Virginia

Kenji M. Cunnion, M.D., M.P.H., Norfolk, Virginia

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