The Mosaic of Translation: An Analysis of Translational Medicine Publications

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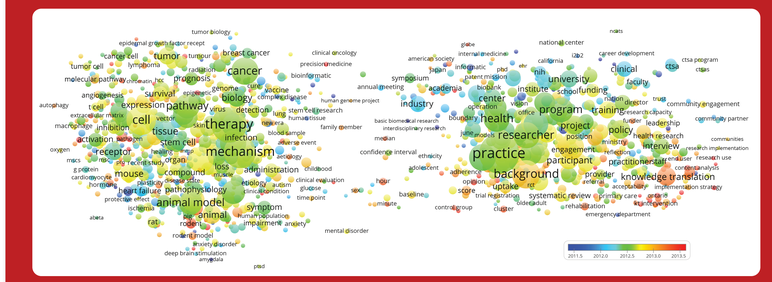
Analysis of indexed literature

for "Translational Medical Research[MeSH]" in PubMed

The term "Translational Medical Research"[Mesh] was introduced in 2012 (2010) and refers to the application of discoveries generated by laboratory research and preclinical studies to the development of clinical trials and studies in humans. A second area of translational research concerns enhancing the adoption of best practices.



Term Co-occurrence Map. This map shows terms extracted from the titles and abstracts of 6,041 PubMed records indexed with the "Translational Medical Research" MeSH term. Coloring is based on term scores which were calculated based on the date of publication for the term. For each of the 2,158 terms identified, a relevance score was calculated. Based on this score, the top 60% (approximately 1,295 terms) most relevant terms were selected for the visualization. The visualization was created in VOSViewer on 3/31/2016.

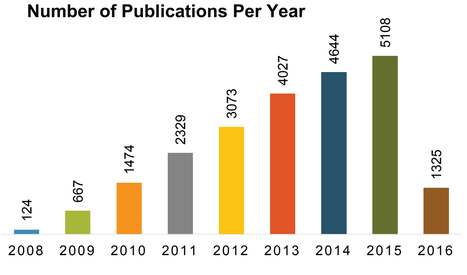
Analysis of Clinical Translational Science Award funded publications, 2008-2015

Proportional Symbol Map. This map shows the top 35 institutions when ranked by number of publications in a search using Web of Science for any publications receiving funding from the Clinical and Translational Science Award program from 2008 to 2016. The circles are sized by number of publications and colored by number of citations. This map was created using Tableau and Adobe Illustrator on 4/27/2016.

Other analyses:

There are 22,771 publications with CTSA funding in Web of Science from 2008 to 2016.

Number of Publications Per Year



Top 35 Research Areas

Research Areas from Web of Science are sized and colored by number of publications

Open Access Publications

Analysis of the timeline of translation

for new treatments in postmenopausal osteoporosis

1994
Food and Drug Administration (FDA) publishes guidelines for evaluation of agents used to treat postmenopausal osteoporosis.
Available at: http://www.fda.gov/OHRMS/DOCKETS/98fr/04d-0035-gdl0001.pdf

1997
Preclinical research in mice show that osteoprotegerin blocks bone resorption.
Simonet WS (et al.) PMID: 9108458
Available at: http://www.ncbi.nlm.nih.gov/pubmed/9108485

2001
FDA approves Amgen Inc. application for an Investigational New Drug called denosumab (Prolia) for treatment of postmenopausal osteoporosis.
Available at: http://www.accessdata.fda.gov/drugsatfda_docs/nda/2010/125320s000SumR.pdf

2004
Amgen Inc. registers at ClinicalTrials.gov for "A study to Evaluate Denosumab in the Treatment of Postmenopausal Osteoporosis".
Available at: https://clinicaltrials.gov/ct2/show/results/NCT00089791?term=20030216&rank=2

2007
Results from Amgen Inc. clinical trial are linked between PubMed and ClinicalTrials.gov
Lewiecki EM (et al.) PMID: 17708711
Available at: https://www.ncbi.nlm.nih.gov/pubmed/17708711

cited pre clinical research in reference list

2008
FDA receives Amgen Inc. Biologic Licensing Application for denosumab (Prolia).
Available at: http://www.fda.gov/OHRMS/DOCKETS/98fr/04d-0035-gdl0001.pdf

2010
FDA approves Denosumab (Prolia) as a drug product for treatment of postmenopausal osteoporosis.
Available at: https://www.accessdata.fda.gov/scripts/cder/drugsatfda/index.cfm?fuseaction=Search.DrugDetails

2011
Denosumab added as treatment option to "Osteoporosis: prevention and treatment" guideline in AHRQ's National Guideline Clearinghouse.
Available at: http://www.guideline.gov/content.aspx?id=35236&search=osteoporosis

2011
Denosumab identified as "promising novel strategy for breast cancer treatment".
Gonzalez-Suarez E PMID:21493182
Available at: http://www.ncbi.nlm.nih.gov/pubmed/21493182

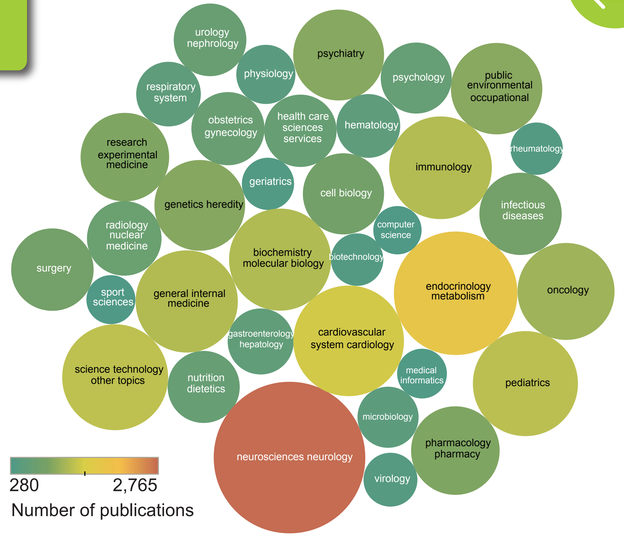
published in a translational journal

2012
Denosumab identified as possible treatment for Crohn's disease.
Sanseau P (et al.) PMID:22491277
Available at: http://www.ncbi.nlm.nih.gov/pubmed/22491277

indexed using MeSH term "Translational Medical Research"

receives CTSA funding

2015
Clinical trial findings suggest denosumab and teriparatide together improve bone quality.
Tsai JN (et al.) PMID: 25043459
Available at: http://www.ncbi.nlm.nih.gov/pubmed/25043459



Notes

Data sources
PubMed
Web of Science
Scopus
UlrichsWeb

Visualization tools
VOSViewer
CitNetExplorer
Microsoft Excel
Adobe Illustrator

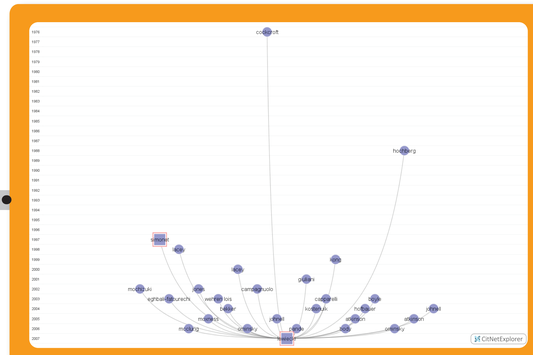
Other:
Icons by Freepik from www.flaticon.com

Search strategies of interest
Web of Science CTSA funding:
FG=(UL1TR*) OR FG=(UL1 TR*)
OR FG=(UL1 RR*) OR FG=(UL1RR*)
OR FG=(TL1TR*) OR FG=(TL1 TR*)
Note: the KL2 award was not included

NLM Catalog translation in title:
translat*[Title] AND serial

PubMed MeSH search:
Translational Medical Research[Mesh]

Analysis using direct citation network



Direct Citation Network. This network shows the cited references of a single article in a chronological layout. The original paper, Lewiecki EM (et al.) PMID: 17708711, is at the bottom of the network and highlighted in red. The pre clinical research by Simonet WS PMID 9108458 is indicated in red as well. The visualization was created in CitNetExplorer on 4/22/2016.

Analysis of journal coverage

serials with "translation" in title

Serial Title with "Translation"	JIF	NLM Catalog	UlrichsWeb	Indexed in MEDLINE	Scopus	Web of Science
Alzheimer's & Dementia: Translational Research & Clinical Interventions		■	■		■	■
American Journal of Translational Research	3.40	■	■		■	■
AMIA Joint Summits on Translational Science proceedings AMIA Summit on Translational Science		■	■		■	■
Annals of Clinical and Translational Neurology		■	■		■	■
Annals of Translational Medicine		■			■	■
Annals of Translational Medicine & Epidemiology		■	■		■	■
Applied and Translational Genomics		■	■		■	■
Cancer Translational Medicine		■	■		■	■
Chronic Diseases and Translational Medicine		■	■		■	■
Clinical and Translational Allergy		■	■		■	■
Clinical and Translational Gastroenterology		■	■		■	■
Clinical and Translational Imaging		■	■		■	■
Clinical and Translational Immunology		■	■		■	■
Clinical and Translational Medicine		■	■		■	■
Clinical and Translational Oncology	2.08	■	■		■	■
Clinical and Translational Science	1.43	■	■		■	■
Current Chemical Genomics and Translational Medicine		■	■		■	■
Current Research in Translational Medicine		■	■		■	■
Current Translational Geriatrics and Experimental Gerontology Reports		■	■		■	■
Drug Delivery and Translational Research		■	■		■	■
European Journal of Translational Myology		■	■		■	■
Experimental & Translational Stroke Medicine		■	■		■	■
IEEE Journal of Translational Engineering in Health and Medicine		■	■		■	■
International Archives of Translational Medicine		■	■		■	■
International Journal of Translation and Community Medicine		■	■		■	■
JACC: Basic to Translational Science		■	■		■	■
Journal of Cardiovascular Translational Research	3.02	■	■		■	■
Journal of Clinical and Translational Endocrinology		■	■		■	■
Journal of Clinical and Translational Endocrinology Case Reports		■	■		■	■
Journal of Clinical and Translational Hepatology		■	■		■	■
Journal of Clinical and Translational Research		■	■		■	■
Journal of Collaborative Healthcare and Translational Medicine		■	■		■	■
Journal of Experimental Stroke and Translational Medicine		■	■		■	■
Journal of International Translational Medicine		■	■		■	■
Journal of Neurology and Translational Neuroscience		■	■		■	■
Journal of Orthopaedic Translation		■	■		■	■
Journal of Pathology and Translational Medicine		■	■		■	■
Journal of Translational Internal Medicine		■	■		■	■
Journal of Translational Medicine	3.93	■	■		■	■
Journal of Translational Medicine & Epidemiology		■	■		■	■
Journal of Translational Medicine and Research		■	■		■	■
Journal of Translational Science		■	■		■	■
Multiple Sclerosis Journal - experimental, translational and clinical		■	■		■	■
New Horizons in Translational Medicine		■	■		■	■
Oncology and Translational Medicine		■	■		■	■
Open Translational Medicine Journal		■	■		■	■
Progress in Molecular Biology and Translational Science	3.49	■	■		■	■
Regenerative Engineering and Translational Medicine		■	■		■	■
Revista de Investigacion Clinica Clinical and Translational Investigation		■	■		■	■
Science Translational Medicine	15.84	■	■		■	■
Stem Cell and Translational Investigation		■	■		■	■
Stem Cells Translational Medicine	5.71	■	■		■	■
Summit on Translational Bioinformatics		■	■		■	■
Translational and Clinical Pharmacology		■	■		■	■
Translational Andrology and Urology		■	■		■	■
Translational Behavioral Medicine		■	■		■	■
Translational Bioinformatics		■	■		■	■
Translational Biomedicine		■	■		■	■
Translational Cancer Research		■	■		■	■
Translational Developmental Psychiatry		■	■		■	■
Translational Endocrinology & Metabolism		■	■		■	■
Translational Epigenomics		■	■		■	■
Translational Gastrointestinal Cancer		■	■		■	■
Translational Issues in Psychological Science		■	■		■	■
Translational Journal of the American College of Sports Medicine		■	■		■	■
Translational Lung Cancer Research		■	■		■	■
Translational Medicine		■	■		■	■
Translational Medicine at UNISA		■	■		■	■
Translational Medicine Research		■	■		■	■
Translational Neurodegeneration		■	■		■	■
Translational Neuroscience	1.32	■	■		■	■
Translational Oncogenomics		■	■		■	■
Translational Oncology	2.88	■	■		■	■
Translational Pediatrics		■	■		■	■
Translational Perioperative and Pain Medicine		■	■		■	■
Translational Proteomics		■	■		■	■
Translational Psychiatry	5.62	■	■		■	■
Translational Research (formerly Journal of Laboratory and Clinical Medicine)	5.03	■	■		■	■
Translational Research in Anatomy		■	■		■	■
Translational Research in Biomedicine		■	■		■	■
Translational Research in Endocrinology & Metabolism		■	■		■	■
Translational Research in Oral Oncology		■	■		■	■
Translational Respiratory Medicine		■	■		■	■
Translational Science for Rare Diseases		■	■		■	■
Translational Stroke Research	2.44	■	■		■	■
Translational Vision Science & Technology		■	■		■	■
Translyatsionnaya Meditsina		■	■		■	■
World Journal of Translational Medicine		■	■		■	■
TOTAL (88):		**75**	**69**	**12**	**34**	**25**

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NUCATS Clinical and Translational Sciences Institute
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