



# SAN DIEGO'S RESEARCH INSTITUTES

San Diego's research institutes are the backbone of scientific innovation. They are the genesis of groundbreaking scientific advances that yield cures for diseases, algorithms in billions of smartphones worldwide, and state of the art medical devices used for treatment and care. They are also the catalyst of scientific startups and licensed technologies that play a critical role in San Diego's globally recognized scientific research and development (R&D) ecosystem. In total, scientific R&D affects more than 100,000 local jobs and generates more than \$14.4 billion in economic impact – a third of which stems from research institutes.

## HIGHLIGHTS

- » **Breaking records, saving lives:** In 2018, a team from Rady Children's Institute for Genomic Medicine set a new world record when they sequenced a genome in 19.5 hours, using San Diego-based company Illumina's sequencing system. This specific genome sequencing saved the life of a one-year-old baby, who was born with a rare genetic disorder that went undiagnosed for days.<sup>1</sup>
- » **World-wide recognition:** In 2017, The Scripps Research Institute was identified by the Nature Index Innovation supplement as the most influential research institute in the world.<sup>2</sup>
- » **Women scientists:** In 2017, women scientists at UC San Diego surpassed men as leading recipients of the campus' biggest research grants.<sup>3</sup>
- » **The brains:** There are 111 living National Academy of Science members and more than 2,600 postdocs within San Diego's research institutes alone.<sup>4</sup>

## KEY INSTITUTIONS

- » La Jolla Institute for Allergy and Immunology
- » Ludwig Institute for Cancer Research
- » Rady Children's Institute for Genomic Medicine
- » Salk Institute for Biological Studies
- » Sanford Burnham Prebys Medical Discovery Institute
- » San Diego Biomedical Research Institute
- » Scripps Institute of Oceanography
- » The California Institute for Biomedical Research
- » The J. Craig Venter Institute
- » The Sanford Consortium for Regenerative Medicine
- » The Scripps Research Institute
- » Torrey Pines Institute for Molecular Studies
- » University of California San Diego



INNOVATION



MILITARY



TOURISM



LOCAL



INTELLECT

## SPOTLIGHT

### Rady Children's Institute for Genomic Medicine

Housed within Rady Children's Hospital in San Diego, RCI GM has made Rapid Precision Medicine (RPM) a reality. The program is decoding rare childhood diseases using rapid Whole Genome Sequencing to enable early diagnosis and targeted medical treatment of the most fragile young patients. RCI GM's goal is to make genetic screening fast, easy, and routine for diagnosing and managing care of critically-ill babies and children everywhere.



## RESOURCES

### Biocom

Biocom is the largest regional life sciences association in the world and represents more than 825 member companies. [biocom.org](http://biocom.org)

### San Diego Venture Group

SDVG is a nonprofit business association whose mission is to provide an informal atmosphere that fosters ideas on how to form, fund and build new ventures. With more than 800 affiliated members, SDVG is helping San Diego become a significant entrepreneurial and venture center. [sdvg.org](http://sdvg.org)

### JLABS

JLABS provides life sciences entrepreneurs and companies with access to core research facilities hosting specialized capital equipment, educational programs, operational capabilities, and a community of like-minded entrepreneurs. [jlabs.jninnovation.com/locations/san-diego](http://jlabs.jninnovation.com/locations/san-diego)

### UC San Diego Research Centers

Faculty, students, trainees, and staff at UC San Diego work within and across multidisciplinary centers and institutes to translate new discoveries from laboratories to patients. [medschool.ucsd.edu/research/Pages/Centers.aspx](http://medschool.ucsd.edu/research/Pages/Centers.aspx)

## BY THE NUMBERS

### Employment Numbers

As of 2015, independent research institutes and university research centers together supported 18,090 jobs in the San Diego region. When accounting for direct, indirect, and induced employment, the number of regional jobs supported by research institutes grows to 37,260.<sup>4</sup>



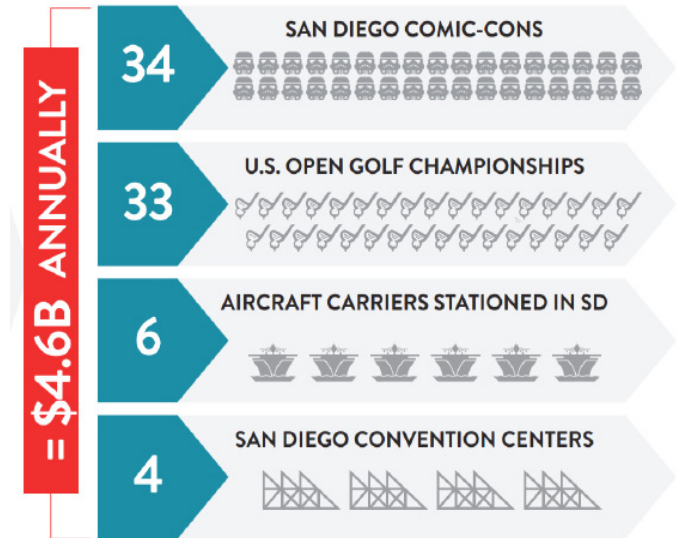
### Economic Impacts of Research Institutes to the San Diego Region

Industry/Impact Type	Employment	Value Added (\$ millions)
<b>Independent Research Institutes</b>		
Direct	5,640	\$1,153
Indirect/Induced	7,950	\$709
Total Impact	23,670	\$2,730
<b>University Research Centers</b>		
Direct	12,450	\$1,742
Indirect/Induced	19,170	\$988
Total Impact	13,590	\$1,863
<b>Research Institutes (University + Independents)</b>		
Direct	18,090	\$2,896
Indirect/Induced	19,170	\$1,696
Total Impact	37,260	\$4,593

### Our Economy

The vitality of San Diego's economy is reliant upon the growth and development of the region's research institutes.

In 2015, the region's economic research institutes had an economic impact of \$4.6 billion<sup>4</sup>, equivalent to the following:



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Last updated: March 2018

Sources: 1. Rady Children's Hospital San Diego, "New Guinness World Records Title Set for Fastest Genetic Diagnosis," 2018. 2. Nature, "Top 100 Institutions by Lens Score", 2017. 3. UC San Diego News Center, "Women Rising," 2017. 4. San Diego Regional EDC and BW Research Partnership, "The Economic Impact of San Diego's Research Institutes", 2015