

Congratulations to Professors Jacques Dubochet, Joachim Frank and Richard Henderson awarded the Nobel Prize in Chemistry 2017

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JMES Editors and Members present all wishes and Congratulations to Professors Jacques Dubochet, Joachim Frank and Richard Henderson awarded the Nobel Prize in Chemistry 2017 "for developing cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution".

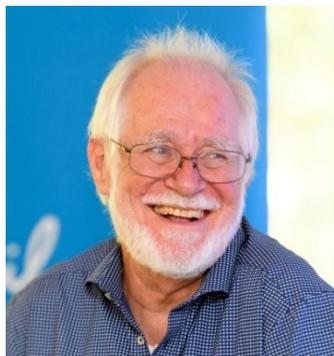
The 2017 Nobel Prize in Chemistry winners are :

Professor Jacques Dubochet, Ph.D., born 1942 in Aigle, Switzerland. Ph.D. 1973, University of Geneva and University of Basel, Switzerland. Honorary Professor of Biophysics, University of Lausanne, Switzerland.

www.unil.ch/dee/en/home/menuinst/people/honorary-professors/prof-jacques-dubochet.html

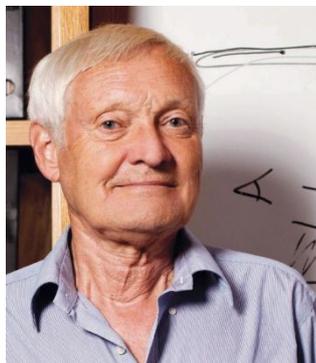


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Joachim Frank, Ph.D., born 1940 in Siegen, Germany. Ph.D. 1970, Technical University of Munich, Germany. Professor of Biochemistry and Molecular Biophysics and of Biological Sciences, Columbia University, New York, USA.

<http://franklab.cpmc.columbia.edu/franklab/>



and **Professor Richard Henderson**, Ph.D., born 1945 in Edinburgh, Scotland. Ph.D. 1969, Cambridge University, UK. Programme Leader, MRC Laboratory of Molecular Biology, Cambridge, UK.

www2.mrc-lmb.cam.ac.uk/groups/rh15/



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for their pioneering achievements on developing new methods of visualising biomolecules, such as those in the Zika virus.cryo-electron microscopy (cryo-EM).

According the Royal Swedish Academy of Sciences at :

https://www.nobelprize.org/nobel_prizes/chemistry/laureates/2017/press.html, said, “This method has moved biochemistry into a new era.”

Knowing the structure of a molecule reveals important information about how it functions and can provide insight into potential drug targets for fighting disease. Cryo-EM is a method used to image frozen biological molecules without the use of structure-altering dyes or fixatives or the need to coax the molecules into crystalline form, providing a simpler way to generate pictures of the molecules in their normal states and greater understanding of biological function. With cryo-EM, researchers can advance understanding of life’s chemistry and develop pharmaceuticals.

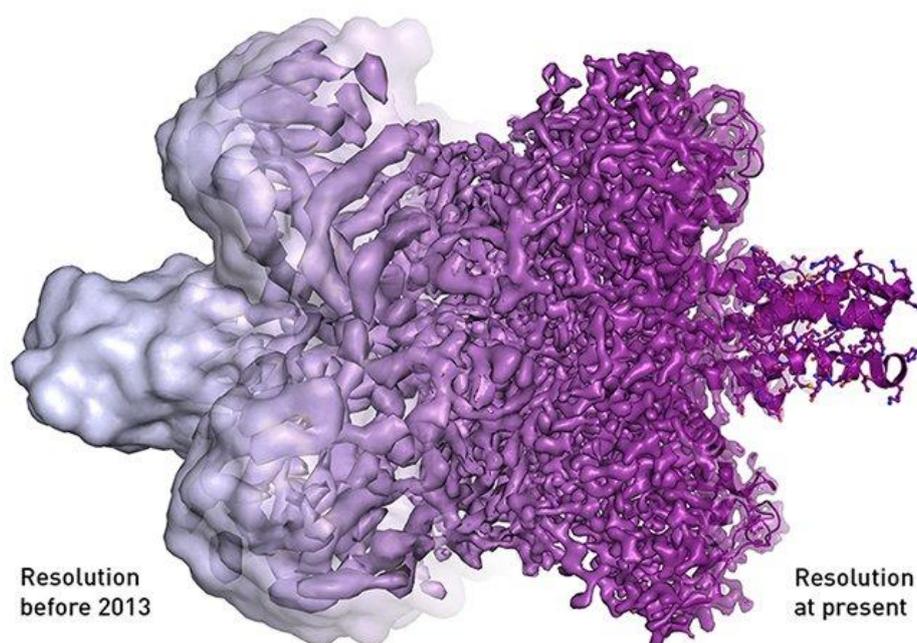


Illustration: ©Martin Högborn/The Royal Swedish Academy of Sciences

from : www.nobelprize.org/

“The work of these Nobel laureates has been game-changing in our understanding of life’s processes and identifying molecular targets for drug development,” said NIH Director Francis S. Collins, M.D., Ph.D. “NIH is investing heavily in the further development of this technology through the NIH Common Funds’ Transformative High Resolution cryo-EM Program, which aims to improve access for researchers through the creation of national service centers, continued advancement of the technology, and developing the skills that researchers need to use this technology. NIH is proud to have supported this groundbreaking research.”

Dr. Frank has received continuous funding from NIH’s National Institute of General Medical Sciences (NIGMS) since 1978, having received more than \$25 million in funding to date.

Ref. www.nobelprize.org/

(2018) ; <http://www.jmaterenvironsci.com>