

Curriculum Vitae

06/10/2018

**Present Address:**

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**Academic Qualification**

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<b>05/14/2018 – Present</b>	Senior Postdoctoral Associate The Jackson Laboratory for Genomic Medicine Farmington, CT, USA. Advisor: Professor Jacques Banchereau
<b>09/02/2015 – 05/13/2018</b>	Visiting Fellow (Postdoctoral) Laboratory of Pathology National Cancer Institute National Institutes of Health, MD, USA. Advisor: Dr. David D. Roberts
<b>11/03/2014 – 09/01/2015</b>	Visiting Fellow (Postdoctoral) Laboratory of Genome Integrity National Cancer Institute National Institutes of Health, MD, USA. Advisor: Dr. Avinash Bhandoola
<b>11/20/2013 – 09/30/2014</b>	PBC Postdoctoral Fellow Dept. of Microbiology, Immunology and Genetics Faculty of Health Sciences Ben Gurion University of the Negev, Israel. Advisors: Prof.s Noah Isakov and Angel Porgador
<b>11/16/2008 – 11/19/2013</b>	Ph.D. (Immunology, Medical Sciences) Dept. of Microbiology, Immunology and Genetics Faculty of Health Sciences Ben Gurion University of the Negev, Israel. Advisor: Professor Noah Isakov
<b>10/22/2006 – 09/24/2008</b>	M.Sc. (AKIS, Biotech. specialized) Ben-Gurion University of the Negev, Israel. Advisors: Dr. Dina Zilberg, Professor Inna-Khozin Goldberg and Professor Zvi Cohen

## Scholarships

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- 2017**      **Scholarship** from The Jackson Laboratory, 26th Annual Short Course on Experimental Models of Human Cancer, Bar Harbor, Maine, USA.
- 2014 –2019**   **Visiting Fellowship** (Postdoctoral) in the NIH Visiting Program, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, USA.
- 2013 – 2016**   **PBC Outstanding Postdoctoral Fellowship**, Planning and Budgeting Committee, Council for Higher Education, Govt. of Israel.
- 2008 – 2013**   **Kreitman Graduate Fellowship**, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel.
- 2006 – 2008**   Full **Master's Degree Fellowship**, Albert Katz International School for Desert Studies, Ben-Gurion University of the Negev, Israel.
- 2006 – 2008**   **Junior Research Fellowship** from Govt. of India through Entrance Examination conducted by Indian Council of Agricultural Research (ICAR) with a full Master's Degree fellowship.
- 2002 – 2006**   Full **Bachelor's Degree Fellowship** from Govt. of India through the Joint Entrance Examination conducted by Tripura Board of Secondary Education, Tripura, India.

## Other recognitions/awards

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1. **Best Oral Presentation Award** at International Conference on Health, Environment and Industrial Biotechnology, BioSangam 2013, Allahabad, India.
2. **EFIS-EJI Fellowship** awarded from the European Federation of Immunological Societies, Germany, to attend the 3<sup>rd</sup> EFIS-EJI Summer School in Clinical Immunology 2013, Paris.
3. **Young Delegate Travel Grant** awarded from the European Federation of Immunological Societies, Germany, to attend the 3<sup>rd</sup> European Congress of Immunology 2012, United Kingdom.
4. **Speakers' Travel Bursary** received from FIMSA, India, to attend the 5<sup>th</sup> Congress of the Federation of Immunological Society of Asia Oceania 2012, India.
5. **Best Poster Award** at 8<sup>th</sup> Symposium on Diseases in Asian Aquaculture, 2011, Mangalore, India.
6. **Ph.D. student Travel Grant** received from Ben-Gurion University, Israel, to attend the Hallmarks and Horizons of Cancer meeting 2011, EPFL, Lausanne Switzerland.
7. **Early Masters Thesis Submission Award** from Jacob Blaustein Institute for Desert Research, BGU, 2008, Israel.

8. **Young Delegate Travel Grant** awarded from the European Aquaculture Society, Belgium, to attend the Aquaculture Europe Conference 2008, Poland.

## Publications

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### Published in peer reviewed journals:

1. Nath P. R. **2017**. Peptidyl-prolyl isomerase (PPIase): an emerging area in tumor biology. **Cancer Res Front.** 3(1): 126-143. doi: 10.17980/2017.126.
2. Dong G., Kalifa R., Nath P. R., Babichev Y., Gelkop S., Isakov N. **2017**. TCR crosslinking promotes Crk adaptor protein binding to tyrosine-phosphorylated CD3 $\zeta$  chain. **Biochem Biophys Res Commun.** 488 (3, 1): 541-546 (impact factor 2.557).
3. Nath P. R. **2017**. Protein Kinase C-theta (PKC $\theta$ ): a rheostat in T cell signaling and cancer. **J Clin & Exp Immunol.** 1 (2):1-7
4. Pal-Nath D., Didi-Cohen S., Shtaida N., Nath P.R., Samani T., Boussiba S., Khozin-Goldberg I. **2017**. Improved productivity and oxidative stress tolerance under nitrogen starvation is associated with the ablated  $\Delta 5$  desaturation in the green microalga *Lobosphaera incisa*. **Algal Research.** 26: 25-38 (impact factor 5.01)
5. Dong G., Kalifa R., Nath P. R., Babichev Y., Gelkop S., Isakov N. **2017**. Crk adaptor proteins regulate CD3 $\zeta$  chain phosphorylation and TCR/CD3 down-modulation in activated T cells. **Cell Signal.** 36: 117-126 (impact factor 4.243).
6. Arya A.K. and Nath P.R. **2016**. Basic and functional characterisation of cyclophilins in human diseases. **Cell Immunol & Immunotherapeutics.** 2 (1): 1-7.
7. Nath P.R., Dong G., Braiman A. and Isakov N., **2016**. In vivo regulation of human CrkII by cyclophilin A and FK506-binding protein. **Biochem Biophys Res Commun.** 470(2):411-416 (impact factor 2.557).
8. Nath P.R. and Isakov N., **2015**. Insights into peptidyl prolyl *cis-trans* Isomerase structure and functions in immunocytes. **Immunology Letters.** 163:120-131 (impact factor 2.557).
9. Nath P.R. and Isakov N., **2014**. PKC-theta-regulated signaling in health and disease. **Biochemical Society Transactions.** 42(6): 1484-1489 (impact factor 3.267).
10. Nath P.R., Dong G., Braiman A. and Isakov N. **2014**. Immunophilins control T lymphocyte adhesion and migration by regulating CrkII binding to C3G. **J Immunology.** 193(8): 3966-3977 (impact factor 5.52).
11. Sharon G.\*, Nath P.R.\*, Isakov N. and Zilberg D. **2014**. ELISA development for analysis of antibody production against *Tetrahymena* sp. in guppies (*Poecilia reticulata*) and testing antibody levels in differently immunized fish.

(\*Equal contributing authors) ***Veterinary Parasitology***. 205(1-2): 28-37 (impact factor 2.611).

12. Nath P.R. and Isakov N. **2014**. Regulation of Immune cell functions by Pin1. ***Int Trends in Immunity***. 2(1): 22-28.
13. Nath P.R., Dong G., Isakov N. **2012**. Inhibition of peptidyl prolyl *cis-trans* isomerases decreases CrkII association with its functional binding partner in leukemic T cell. ***Immunology***. 137: 375-376 (impact factor 3.705).
14. Nath P.R., Khozin-Goldberg I., Cohen Z., Boussiba S., Zilberg D. **2012**. Dietary supplementation with the microalgae *Parietochloris incisa* increases survival and stress resistance in guppy (*Poecilia reticulata*) fry. ***Aqua Nutrition***. 8: 167-180 (impact factor 1.688).
15. Gelkop S., Weisman B., Nath P.R., Zharhary D., Isakov N. **2012**. Development of unique antibodies directed against each of the six different phosphotyrosine residues within the T cell receptor CD3 $\zeta$  chain. ***J Immunol Methods***. 375: 129-137 (impact factor 2.44).
16. Keselman A., Nath P.R., Moyal K., Isakov N. **2011**. PICOT: A Multidomain Protein with Multiple Functions. ***ISRN Immunology***. Article ID 426095, doi:10.5402/2011/426095.

### **Oral presentation**

1. Pulak Ranjan Nath, CD47 regulates NK cell homeostasis and function, Invited talk, 11/08/2017, **The Jackson Laboratory for Genomic Medicine**, Farmington, CT, USA.
2. Pulak Ranjan Nath and Noah Isakov, Proline *cis-trans* isomerases regulate the structure and function of signaling adaptor protein CrkII in human T cells, **International Conference on Health, Environment and Industrial Biotechnology, BioSangam 2013**, 11/21/2013 to 11/23/2013, Motilal Nehru National Institute of Technology, Allahabad, India (**Best Oral Presentation Award** received). <http://www.youtube.com/watch?v=A07er8sOw5U>
3. Pulak Ranjan Nath and Noah Isakov, Regulation of the Crk adaptor proteins in the early activation events of T lymphocyte, **11<sup>th</sup> Advanced Graduate Student Seminar Day**, 07/03/2012, Faculty of Health Sciences, Division of Basic Sciences, Ben-Gurion University of the Negev, Israel.
4. Nath Pulak Ranjan, Dong Guangyu, Isakov Noah, Involvement of Crk adaptor proteins in T cell signaling, **5<sup>th</sup> Congress of the Federation of Immunological Society of Asia Oceania**, 03/14/2012 to 03/17/2012. [http://www.youtube.com/watch?v=iIY\\_3XDWNvs](http://www.youtube.com/watch?v=iIY_3XDWNvs)
5. Pulak Ranjan Nath, Guangyu Dong, Alice Givoni and Noah Isakov, Regulation of the CrkII adaptor protein in Jurkat T cells by peptidyl prolyl *cis-trans* isomerases, **1<sup>st</sup> International Conference on Stem Cells and Cancer**, 12/11/2010 to 12/14/2010, IIIT, Pune, India.

6. P. R. Nath, I. Khozin-Goldberg, Z. Cohen, S. Boussiba and D. Zilberg, Dietary supplementation with the arachidonic acid (ARA) rich microalga *Parietochloris incisa* to increase survival and stress-resistance in guppy (*Poecilia reticulata*) fry, **Aquaculture Europe Conference**, 09/15/2008 to 09/18/2008, Krakow, Poland.

**Poster presentation**

1. Pulak Ranjan Nath, Arunakumar Gangaplara, Ethan M. Shevach and David D. Roberts, CD47 regulates NK cell homeostasis and function, **Keystone Symposia Conference, 2018**, Emerging Cellular Therapies: T Cells and Beyond (B6), Keystone, CO, USA, (abstract 2025).
2. Anthony L. Schwartz, Pulak Nath, Elizabeth Lessey-Morillon, Lisa Ridnour, Michael Allgaeuer and David Roberts. **2017**. CTLA4 and CD47 combinational therapy to extend survival in melanoma, **J Clin Oncol** 35, (abstract e21025).
3. Pulak Ranjan Nath, and David D. Roberts, CD47, an untold tale in NK cell homeostasis and fitness, **Immunology Interest Group, 2017**, Leesburg, USA.
4. Anthony L. Schwartz, Pulak Nath, Elizabeth Lessey-Morillon, Lisa Ridnour, Michael Allgaeuer and David Roberts, CTLA4 and CD47 combinational therapy to extend survival in melanoma, **ASCO, 2017**, Chicago, USA.
5. Anthony L. Schwartz, Pulak Nath, Elizabeth C. Lessey-Morillon, Lisa A. Ridnour and David D. Roberts, Combined Blockade of CTLA4 and CD47 with Tumor Irradiation Extends Survival in Melanoma, **SITC, 2016**, Poster 266, National Harbor, MD, USA.
6. Pulak Ranjan Nath, Anthony L. Schwartz, Dragan Maric and David D. Roberts, Elucidating the role of CD47 in innate lymphoid cell-mediated tumor therapy. **SITC, 2016**, Poster 325, National Harbor, MD, USA.
7. Pulak Ranjan Nath, and David D. Roberts, Elucidating the role of CD47 as a target for cancer immunotherapy, **Immunology Interest Group, 2016**, Leesburg, USA.
8. Nath Pulak Ranjan and Avinash Bhandoola, Elucidation of the mechanisms underlying T-cell factor 1-mediated T cell development, **2015 Immunology Interest Group Training Workshop**, Bolger Center 9600 Newbridge Drive Potomac, MD.
9. G. Sharon, P. Ranjan Nath, N. Isakov and D. Zilberg, Vaccination against Tetrahymena Infection in Guppies (*Poecilia reticulata*) and ELISA Development for the Detection of Antibody Production, **16<sup>th</sup> International Conference on Diseases of Fish and Shellfish**, 02/09/2013 to 06/09/2013, Tampere, Finland.
10. Nath Pulak Ranjan, Braiman Alex and Noah Isakov, Regulation of Crk adaptor proteins during the early steps of T lymphocyte activation, **40<sup>th</sup> Annual Meeting of the Israeli Immunological Society**, 14/02/2013 at the BGU, Faculty of Health Sciences, Beer Sheva, Israel.
11. Nath Pulak Ranjan, Dong Guangyu and Isakov Noah, The Effect of Peptidyl-Prolyl *Cis-Trans* Isomerases (PPIases) on the Topology and Function of CrkII in Jurkat T lymphocyte, **5<sup>th</sup> Congress of the Federation of Immunological**

**Society of Asia Oceania**, 14/03/2012 to 17/03/2012, Hotel Le Meridien, New Delhi, India.

12. Nath Pulak Ranjan, Dong Guangyu and Isakov Noah, Inhibition of peptidyl-prolyl *cis-trans* isomerases decreases CrkII association with its functional binding partner in leukemic T cell, **3<sup>rd</sup> European Congress of Immunology**, 05/09/2012 to 08/09/2012, Scottish Exhibition and Convention Centre, Glasgow, United Kingdom.
13. Dina Zilberg, Galit Sharon, Pulak Ranjan Nath and Noah Isakov, Infection of guppies by the *Tetrahymena* protozoan: study of the immune response against the parasite and potential immunization strategies, **8<sup>th</sup> Symposium on Diseases in Asian Aquaculture**, 21/11/2011 to 25/11/2011, Mangalore, India (**Best Poster Award** received from Asian Fisheries Society).
14. Pulak Ranjan Nath, Guangyu Dong and Noah Isakov, The effect of peptidyl-prolyl *cis-trans* isomerases on the topology and function of CrkII in Jurkat T lymphocytes, **Signaling In The Immune System** Lymphocyte signaling: translating membrane signals into differentiation programs, 10/09/2011 to 14/09/2011, EMBO Conference Series, Siena, Italy.
15. Pulak Ranjan Nath, Guangyu Dong and Noah Isakov, The effect of peptidyl-prolyl *cis-trans* isomerases on the topology and function of CrkII in Jurkat T lymphocytes, **Hallmarks and Horizons of Cancer**, 07/09/2011 to 10/09/2011, EPFL-ISREC, Lausanne, Switzerland.
16. Pulak Ranjan Nath, Guangyu Dong, Alice Givoni and Noah Isakov, Regulation of the CrkII adaptor protein in Jurkat T cells by peptidyl prolyl *cis-trans* isomerases, **38<sup>th</sup> Annual Meeting of the Israeli Immunological Society**, 04/02/2010 at the Technion, Faculty of Medicine, Bat-Galim, Haifa, Israel.

#### **Selected workshops attended**

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1. **Innovative Therapies based on Immunology**, 2013, 3<sup>rd</sup> EFIS-EJI Summer School in Clinical Immunology, Paris, France.
2. **Hands-On RNA-Seq**: Training Workshop at NIH Campus, 2016, The Foundation for Advanced Education in the Sciences (FAES), NIH, Bethesda.
3. 26th Annual Short Course on **Experimental Models of Human Cancer**, 2017, The Jackson Laboratory, Bar Harbor, ME.
4. **Engineering with CRISPR, TALENs, & ZFNs**: Training Workshop at NIH Campus, 2017, The Foundation for Advanced Education in the Sciences (FAES), NIH, Bethesda.

#### **Mentoring**

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1. Keren Friede, undergrad student, Ben-Gurion University, Israel.
2. Zoya Feldshtein, undergrad student, Ben-Gurion University, Israel.
3. Nithin Bagal, summer intern, NCI/NIH, Bethesda, MD, USA.