



IU Trainee Manager Database (IUTMD) by the Melvin and Bren Simon Comprehensive Cancer Center

Presented by: Harikrishna Nakshatri, BVSc., PhD

Principal Developers: Joshua Nichols and Steven
Verhagen



Database Purposes and Intentions

- Track efficacy of trainings and mentorships
- Track academic and career outcomes
- Auto-fill grant submission tables
- Store reporting totals
- Generate contact/mailing lists
- Help PIs stay in contact with trainees
- Assist in creating/updating CVs
- Data driven decision making by CRTEC
- Inform research programs and strategic plan



Database Strategies

- Multi-level access (administrator, PI, trainee)
- Administrator designation tool
- Data requests straight from web client
- Investigator “state” variables
- Publication and grant retrieval APIs
- Data validation tool for administrators
- Version Tracking
- Stale data flagging



Data Sources

- Mentor CV
- Trainee CV
- T32 applications
- Institutional CTSI
- Departmental Human Resources
- Graduate and Post-doc offices
- National Student Clearing House
- PubMed
- ORCID
- LinkedIn
- Direct trainee contacts
- NIH Reporter

Biggest challenge: The university is very cagey about us having access to helpful data.
The Cancer Center is not considered “academic unit”.



Four View Layer Approach

- General Administrator Layer
 - Access to all trainees of all investigators
- Specific Administrator Layer
 - Access to all trainees for those investigators for whom they have access
 - Access can be granted by General Administrators or by Investigators
- Investigator Layer
 - Access to records of their own trainees
- Trainee Layer
 - Trainees can “log in” to update data.
 - Administrators must validate all trainee data updates

Security and confidentiality: Requires IU login credentials and Duo Authentication to access IUTMD



Dashboard

266
Current Trainees

747
Former Trainees

3129
Publications

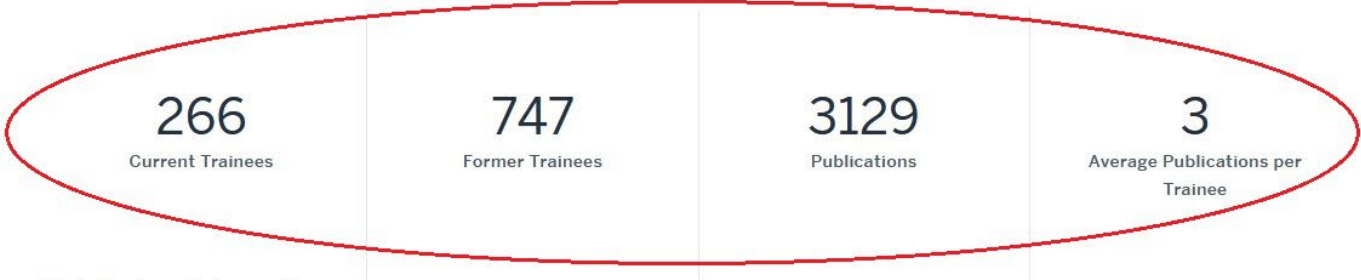
3
Average Publications per
Trainee

Stale Trainee Information

PI	Trainee	Last Modified
Harris, Victor M.	Reginald Pearson	10/28/2022
Jankovic, Aleksandra	Karla Pinos	11/14/2022
JANKOVIC, ALEKSANDRA	Oliver Smith	11/14/2022
Teresa Z. Jones	Jamillah McDaniel	11/14/2022
Jankovic, Aleksandra	Alison Landauer	11/14/2022
Jankovic, Aleksandra	Ashley Ann Rose	11/14/2022
Jankovic, Aleksandra	Christina Ann McDaniel	11/14/2022
Jankovic, Aleksandra	Christina Ann	11/14/2022
Jankovic, Aleksandra	Marissa Ann	11/14/2022
Jankovic, Aleksandra	Amber Howard	11/14/2022
Miller, Christopher	James Campbell	11/14/2022



Dashboard Quick Metrics



266 Current Trainees	747 Former Trainees	3129 Publications	3 Average Publications per Trainee
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Stale Trainee Information

PI	Trainee	Last Modified
Harris, Victor M.D.	Reginald Pearson	10/28/2022
Jankovic, Jelena	Karla Pinos	11/14/2022
Jankovic, Jelena	Clara Smith	11/14/2022
Jankovic, Jelena	Jamala McFarland	11/14/2022
Jankovic, Jelena	Alison Landauer	11/14/2022
Jankovic, Jelena	Antonina Rose	11/14/2022
Jankovic, Jelena	Christina Rose	11/14/2022
Jankovic, Jelena	Christina Rose	11/14/2022
Jankovic, Jelena	Christina Rose	11/14/2022
Jankovic, Jelena	Christina Rose	11/14/2022
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Jankovic, Jelena	Christina Rose	11/14/2022



Dashboard Stale Data

266
Current Trainees

747
Former Trainees

3129
Publications

3
Average Publications per
Trainee

Stale Trainee Information

PI	Trainee	Last Modified
Harris, Victor M. MD, PhD	Reginald Pearson	10/28/2022
Jankovic, Jelena	Karla Pinos	11/14/2022
JANKOVIC, JELENA	Clara Smith	11/14/2022
Teresa Z. Jones	Jamalah McDaniel	11/14/2022
JONES, TERESA	Allison Landrum	11/14/2022
Jankovic, Jelena	Annmarie Rose	11/14/2022
JANKOVIC, JELENA	Christina Carroll (McDaniel)	11/14/2022
JONES, TERESA	Christine Carter	11/14/2022
JANKOVIC, JELENA	Maritza Smith	11/14/2022
JANKOVIC, JELENA	Wendy Williams	11/14/2022
JANKOVIC, JELENA	Michelle Brown (Lee)	11/14/2022
JANKOVIC, JELENA	Amika Howell	11/14/2022
Walter Cunningham	James Campbell	11/14/2022



Dashboard Export

266

Current Trainees

747

Former Trainees

3129

Publications

3

Average Publications per
Trainee

Stale Trainee Information

PI	Trainee	Last Modified
Karyn Marie Malsbenden	Reginald Pearson	10/28/2022
Julia Anna Holmberg	Karla Pinos	11/14/2022
JENNIFER WILSON	Claire Smith	11/14/2022
Teresa Williams	Jamelle McDaniel	11/14/2022
James R. Lee	Allison Landrum	11/14/2022
A. J. Padmanabhan	Annamaria Poma	11/14/2022
Jesse L. Moore	Christina Ferris (aka Ferriss)	11/14/2022
Sharon A. Lee	Christine Lee	11/14/2022
Theresa Lee	Karolina Smith	11/14/2022
JILL ANDERSON	Leanne Anderson	11/14/2022
Joseph Kim	Michelle Anderson	11/14/2022
NIGEL WHITE	Amika Howell	11/14/2022
Walter Cunningham	James Cunningham	11/14/2022



Dashboard Reports

266
Current Trainees

747
Former Trainees

3
Publications

3
Average Publications per
Trainee

CCSG Metrics Chart

NCI Grant Table 5A

NCI Grant Table 8C

Stale Trainee Information

PI	Trainee	Last Modified
Her Krishna Nakshatri	Her Krishna Nakshatri	10/28/2022
Her Krishna Nakshatri	Her Krishna Nakshatri	11/14/2022
Shirley Sheng	Shirley Sheng	11/14/2022
Teresa Zimmer	Teresa Zimmer	11/14/2022
Chien-Chi Lin	Chien-Chi Lin	11/14/2022
Ulrich Bauer	Ulrich Bauer	11/14/2022
Uma Sankar	Uma Sankar	11/14/2022
Susanne Zimm	Susanne Zimm	11/14/2022
Tara Jenle	Tara Jenle	11/14/2022
Elliot Anagnosty	Elliot Anagnosty	11/14/2022
Deborah Kim	Deborah Kim	11/14/2022
Fletcher White	Fletcher White	11/14/2022
Michele Gervasio	Michele Gervasio	11/14/2022



Dashboard Manage Trainees

266

Current Trainees

747

Former Trainees

3129

Publications

3

Average Publications per
Trainee

Stale Trainee Information

PI	Trainee	Last Modified
Helen A. Weisberg	Rupali Kulkarni	10/28/2022
Johanna M. Johnson	Karla Pines	11/14/2022
JENNIFER J. HARRIS	Clara Smith	11/14/2022
Thomas Zimmels	Jamillah McFarland	11/14/2022
James G. Lee	Alison Landrum	11/14/2022
Jill Pedersen	Zoe Harrison	11/14/2022
James G. Lee	Christina Smith	11/14/2022
Sharon A. Lee	Christina Smith	11/14/2022
T. J. Lee	Christina Smith	11/14/2022
JENNIFER J. HARRIS	Christina Smith	11/14/2022
James G. Lee	Christina Smith	11/14/2022
JENNIFER J. HARRIS	Christina Smith	11/14/2022
Walter C. Lee	Christina Smith	11/14/2022









Manage Trainees

IU Simon Comprehensive Cancer Center
Trainee Management

Dashboard Manage Trainees Manage Assistants Reports Export Trainee List SV stverhag Log out

Cancer Center Member: Kaplan, Mark

Name/Email	Training/Mentorship				Degree Earned	Initial Position	Current Position	Gender	Ethnicity	Publications
	Training	Program	Funding Mechanism	Dates						
 michael@iu.edu michael@iu.edu	PhD student training	Mentorship		2021 - 2022	Masters (2016)					 1 Request Update
 michael@iu.edu michael@iu.edu	PhD student training	Mentorship		2021 - Present	(2020)		M			 3 Request Update
 michael@iu.edu michael@iu.edu	MD/PhD dual degree student training	Mentorship		2018 - Present			F	Asian		 4 Request Update

Edit details

Add trainees

Change investigator

View/edit co-publications

Send data request email

Functions are easily parsed and accessed, allowing a new user to contribute within minutes



Click this button to add additional training experiences

Trainees can have any number of experiences

Current experiences:

- High School (summer)
- Undergrad (summer and internship)
- Post-Bac
- Masters
- Predoctoral (MD, PhD, MD/PhD, PharmD)
- Resident/Fellow
- Postdoc
- Junior Faculty
- other

Add/Edit Trainee ✕

Trainee First Name: Trainee Last Name:

IU Email: Alternate Email:

Trainee Phone:

Address:

City: State: Zip:

Nature of Training/Mentorship: ▼

Specify Program: Training Start (Year): Training End (Year): Present

Funding Mechanism:

Add Training

Awards/Honors:

Click this button to delete training experiences ✕



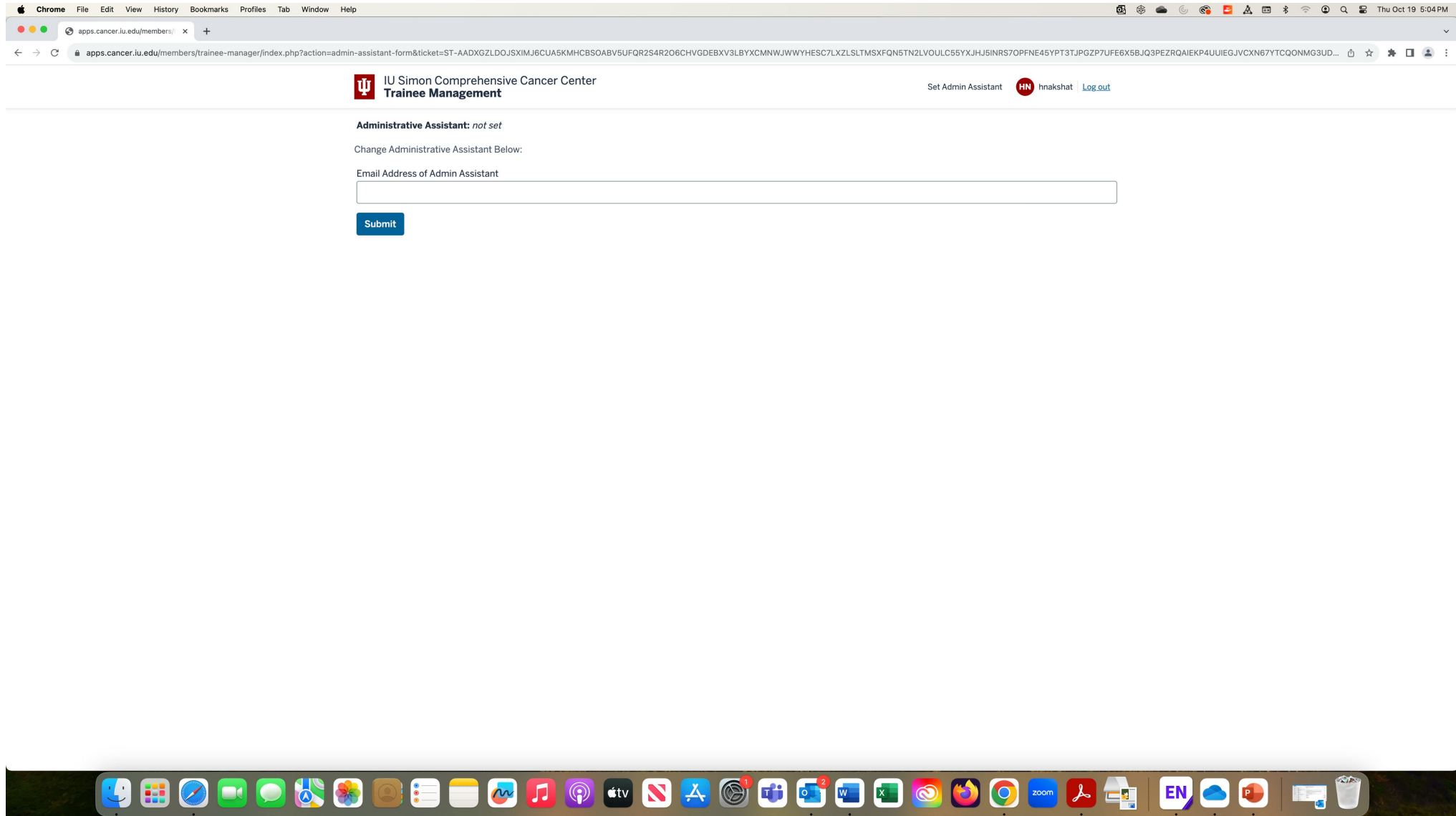
List of Trainees

 Phi Young INDIAN UNIVERSITY	<table border="1"> <thead> <tr> <th>Training</th> <th>Program</th> <th>Funding Mechanism</th> <th>Dates</th> </tr> </thead> <tbody> <tr> <td>PhD student training</td> <td>Mentorship</td> <td></td> <td>2020 - Present</td> </tr> </tbody> </table>	Training	Program	Funding Mechanism	Dates	PhD student training	Mentorship		2020 - Present	F	 0				
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Trainee Publications



Delegating to administrative assistant



Trainee View

apps.cancer.iu.edu/members/trainee-manager/7action=first-login&ac=2fbef79427b2bb991364...

Ψ IU Simon Comprehensive Cancer Center Trainee Management

Please enter your email address for verification

Email Address

Log in

Ψ IU Simon Comprehensive Cancer Center Trainee Management

Please enter your information below.

Trainee First Name: Trainee Last Name:

IU Email: Alternate Email:

Trainee Phone:

Address:

City: State: Zip:

Nature of Training/Mentorship: X

Specify Program: Training Start (Year): Training End (Year): Present

Funding Mechanism:

Add Training

Awards/Honors:

ORCID:

Year Graduated: Degree Earned: Awarding University:

*Trainees will receive an email asking them to confirm by entering their email address, they will then be asked to fill in a blank information sheet.



Planned Features

- NIH Reporter API that automatically fetches grant data
- “Data feed” portal that allows administrators to approve new data submitted by trainees or retrieved from NIH Reporter/PubMed
- Custom report builder
- “CV Builder” export function



Example of data generated from IUTMD

IUTMD Metrics for 2019-2023 cycle (n = 130 investigators)	
	Average # of Co-Publications*
High School	N/A
Undergraduate	2
Masters	2.23
Medical	1.91
PhD	3.60
Medical/PhD	2.00
Post-Doc/ Junior Faculty	6.18
Resident/ Fellow	4.61
* Among trainees who co-published with mentor	

Data related to employment status of former trainees are currently being entered to the database and report similar to above



How does IUTMD compares to existing resources?

RedCAP Flight Tracker is the closest

Flight Tracker is good at getting publications and grant information

Customizable

Suitable for getting information from those who received grants, particularly K g

Barrier to data entry is bit higher

Hard to get PIs to use it.

Not organized with Investigators as the highest "level" of organization

Trainee can exist in the database with no mentors or multiple mentors

Much harder to prevent "double dipping" for reporting numbers





INDIANA UNIVERSITY

MELVIN AND BREN SIMON COMPREHENSIVE CANCER CENTER

cancer.iu.edu

NCI

**Comprehensive
Cancer Center**

A Cancer Center Designated by the
National Cancer Institute



National
Comprehensive
Cancer
Network®

Member Institution