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Emerging New Trends in Industry – Research Institution ‘Open’ Collaborations: Don’t get stuck in the past!

Welcoming remarks will begin at
11:55 a.m. Eastern Time.

The formal presentation will begin at Noon Eastern

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Emerging New Trends in Industry – Research Institution ‘Open’ Collaborations: Don’t get stuck in the past!

Moderator:

Craig D. Wegner, *AstraZeneca IMED Biotech Unit*

Speakers:

Anthony Coyle, *Pfizer’s Centers for Therapeutic Innovation*

Elke Dittrich-Wengenroth, *Bayer’s Pharmaceuticals Division, Germany*

Carolyne Zimmermann, *Johnson & Johnson’s Innovation Center*

Sept. 14, 2016



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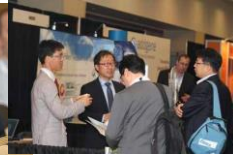
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- AUTM Salary Survey
- AUTM Technology Transfer Practice Manual
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- AUTM Update

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Craig D. Wegner, PhD
AstraZeneca IMED Biotech Unit



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Anthony Coyle,
*Pfizer's Centers for
Therapeutic Innovation*



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Elke Dittrich Wengenroth
*Bayer's Pharmaceuticals
Division*



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Carolyne Zimmermann,
Johnson & Johnson's
Innovation Center



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**Emerging New Trends in Industry – Research Institution
'Open' Collaborations: Don't get stuck in the past!**

AUTM Webinar

Sep 14, 2016

'Pushing the Boundaries of Science' Through 'Open Innovation'

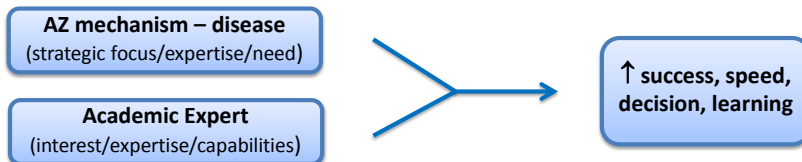
Craig D. Wegner, PhD
Head, Boston Emerging Innovations Unit, Scientific Partnering & Alliances
Innovative Medicines & Early Development (IMED) Biotech Unit
AstraZeneca

Sep 14, 2016

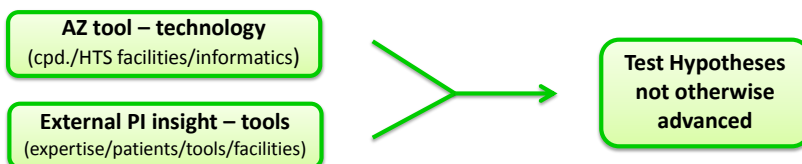
'Pushing the Boundaries of Science' Through 'Open Innovation'

Collaboration Approaches

We find you



You find us



'Pushing the Boundaries of Science' Through 'Open Innovation'

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AstraZeneca's 'Open Innovation' Platform

Clinical Compound Bank

- 26 ISS clinical Ph2a validation studies
- 22 externally funded
- Disease indication agnostic

Preclinical Pharmacology Toolbox

- >150 projects approved

Target Innovation

- 16 projects on-going; ~14 others in disc.

New Molecule Profiling

- ~30,000 natural product cpds. added to AZ's HTS library

R&D Challenges

- 13 challenges run; 2+ 'reduction to practice' collaborations formed

Suggestion Box

Launched in March 2014



AZ Open Innovation Clinical Portfolio

26 completed, on-going or approved:

- 2 – Ph 2a readouts in 2015
- 3 – Ph 2a readouts in 2016
- 8 – Ph 2a readouts in 2017
- **22 – externally funded**
- **AZ support cost**
- **2 – partnered/spinout projects** (3 more pending)

2 more in external funding review

Several others for 'live' oncology cpds

Proposal Sources:

- MRC (UK)
- NIH/NCATS (US)
- NRPB (Taiwan)
- OI web portal (WW)
- Australia
- Singapore NHIC, ...



New Indications being explored:

- Acute Myeloid Leukemia (AML)
- Alcohol Abuse
- Alzheimer's Disease (AD)
- Autism
- Bronchiolitis Obliterans Syndrome (BOS)
- Cancer Bone Pain
- Chronic Cough
- Chronic Idiopathic Urticaria (CIU)
- Chronic Sinusitis
- Diabetic Wound Healing
- Dystonia
- Glioblastoma
- High Risk Atherosclerosis
- Hot Flushes
- Iatrogenic Cushing's Syndrome
- Idiopathic Intracranial Hypertension (IIH)
- Lymphangioliomyomatosis (LAM)
- Non-alcoholic Steatohepatitis (NASH)
- Neuropathy
- Osteopenia
- Peripheral Artery Disease (PAD)
- Post Traumatic Stress Disorder
- Psychosis
- Renal Scleroderma
- Refractory GERD
- Type 2 Diabetes (T2D)



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Culture is Key

'Open' Collaboration – mutual objectives & benefits

- Advance science and treatments for patients
- Publications; notoriety; professional development

Standard, Consistent, Fair Agreement Terms

Flexible – 'Fit-for-Purpose' – Partnerships

Path Forward, if successful (unencumbering if not)

'Pushing the Boundaries of Science' Through 'Open Innovation'

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Nurturing the Global Innovation Ecosystem through Regional 'Innovation Centers'

Carolyne Zimmermann
Senior Director Transactions
Johnson & Johnson Innovation Center – California
Sept/14/2016



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Our Pharmaceutical R&D Strategy:

Focus on Transformational Innovation that Solves Unmet Medical Needs

- Focus on 5 therapeutic areas with defined Disease Area Strongholds (“DAS”)
- Build deep internal scientific, medical and commercial expertise
- Select the best science regardless of its origin (i.e., internal vs. external)
- Drive excellence in global execution and speed to market



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Johnson & Johnson Innovation

Accessing the best science wherever it may be...

Johnson & Johnson Innovation Centers

- 4 Innovation Centers across 3 continents: London, California, Boston, Shanghai
- +3800 opportunities explored since 2013
- More than 200 alliances in last 2 years

JLABS

- 6 incubators across North America
- Over 130 companies in residence

JJDC

- 40+ years of VC investing
- \$1B+ invested since inception
- 43 investments and ~\$200M invested in 2014

Janssen Business Development

- Global licensing and M&A, focus on late-stage opportunities.
- Deals generate over 80% of pharmaceuticals sales

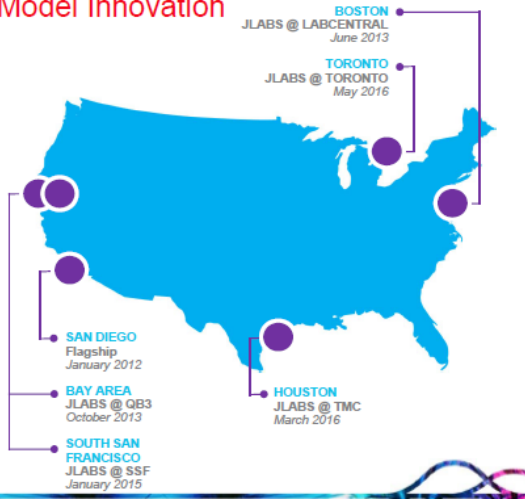




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JLABS: Unique Business Model Innovation

- **Flexible, capital-efficient environment** | to cut the time and cost of getting innovations to patients
- **Resource-rich environment** | with business programs, funding partners, experts and a network of life science innovation
- **Cost Effective Operations** | Revenue offsets from companies largely pay for operational budget and headcount
- **Exponential Growth** | From 40 companies to 200 companies in 4 years with a 10% selection rate



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What are our Priorities
Delivering Clinical PoC Candidates

- Conviction in science & target
- Ability to establish pre-clinical & clinical POC
- Time/cost to pre-clinical & clinical POC
- Strategic fit for J&J
- IP strength
- Collaboration capability of partner
- Patient and societal impact
- Transformative potential at time of launch
- Cost of access (deal terms)



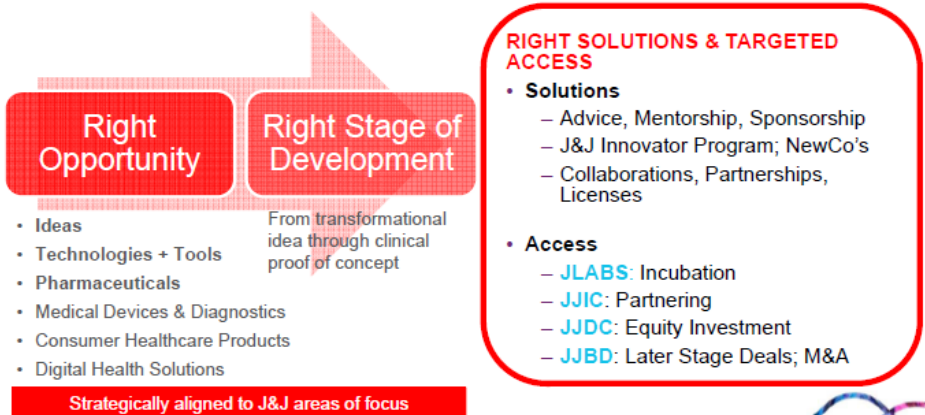


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How We Work:

Flexible Business Solutions for Innovators

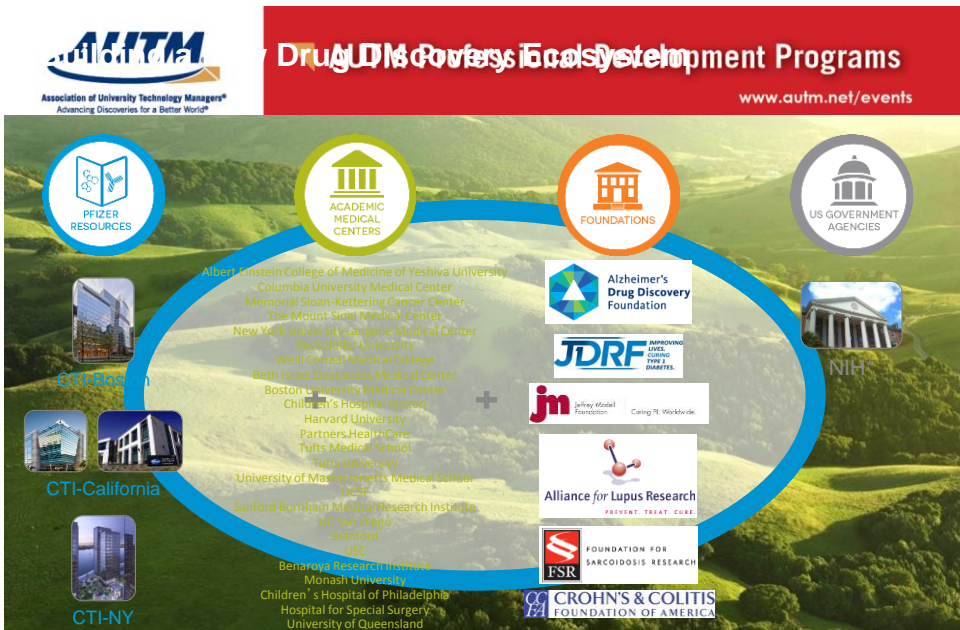


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CTI: Accelerating Translation of Basic Academic Science to the Clinic

Dr. Tony Coyle, CSO, CTI



* Photo source: National Institutes of Health (NIH) and National Eye Institute (NEI), from <https://imagebank.nih.gov/>

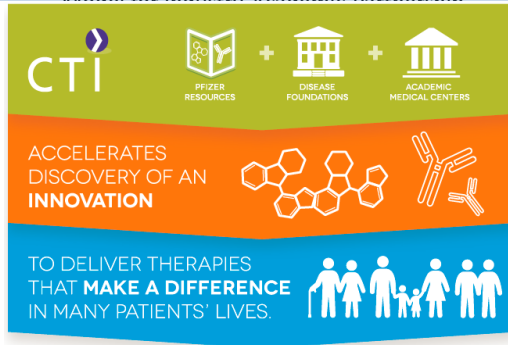


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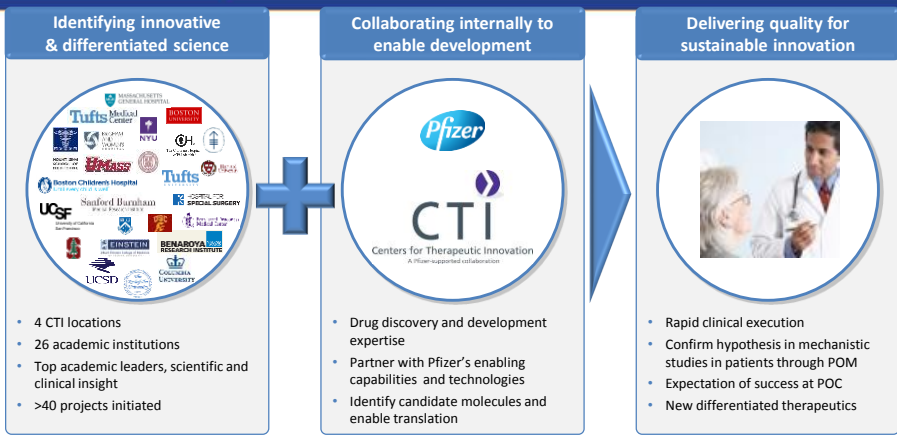
What is CTI

A new model for academic-industry partnership, designed to deliver on the promise of innovative discoveries to treat diseases of high unmet medical need with differentiated medicines



CTI Leverages the Best External Science with Internal Expertise

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CTI integrates external innovation and internal drug discovery expertise to rapidly translate breaking science to data rich meaningful mechanistic studies in the clinic



Master Agreement

Core Elements of the CTI Model

- One negotiated partnership term
- Equitable IP and publication from Funding Agencies, VC, Other Pharma
- Success-based **funding/financial incentives** (milestone & royalty payments)
- Equitable decision making in the form of a **joint AMC-CTI steering committee**


Close Collaboration with Scientific Partners

- **Joint project teams:** leverage complementary expertise, efficient and flexible funding
- PIs **co-lead project team:** sustained involvement from discovery to clinic
- **Co-location** near academic laboratory: access to Pfizer scientists, technology, and drug development expertise
- **Collaborative use** of Pfizer's proprietary drug discovery tools and technologies

Enable Translational Medicine

- Accelerating innovative discoveries from target to proof of mechanism
- Understand patient heterogeneity and **stratification**
- Support for **IND- & clinical-enabling functions** (e.g., toxicology, regulatory, etc.)

<https://www.pfizercti.com/>



CTI Centers for Therapeutic Innovation

INNOVATE

IT ONLY TAKES
1 INNOVATION
TO MAKE A
DIFFERENCE
IN MANY
PATIENTS' LIVES

The image shows a grid of human icons, with a central icon of a beaker containing a molecular structure, symbolizing the impact of innovation on many patients.



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Bring Great Ideas to Life – CrowdSourcing & Co-Working „CoLaborators“

Elke Dittrich-Wengenroth, PhD, VP & Head External Innovation Therapeutics,
Pharmaceuticals Division, Bayer
Sep 14, 2016

CrowdSourcing & Co-Working „CoLaborators“



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Partnerships are an important pillar to complement
and strengthen our R&D portfolio

Partnerships

Access to **novel targets**

Access to **early assets** complementing our in-house pipeline

Access to **novel disease models** and **disease biology know-how**

Enabling **biomarker technologies** and ways to generate value out of **(big) data**

New ways to investigate mechanisms of **drug tolerance / resistance**

Access to targets previously deemed **intractable or undruggable**

Novel **small chemical and biological molecules**

Innovative approaches to a **new mechanism of action**

Inducible tumor models reflecting the etiology of human disease

State-of-the-art predictive **in-vitro, in-vivo and ex-vivo models**

Reverse translation of clinical findings into preclinical research

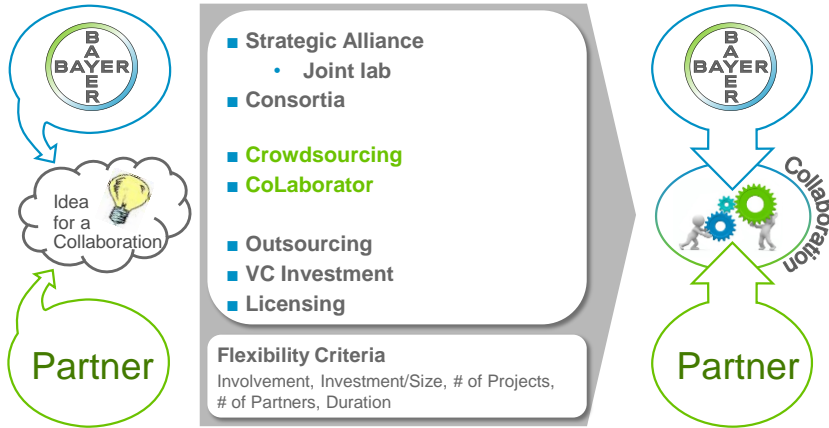
Longitudinal information on samples, including **genetic analysis**

CrowdSourcing & Co-Working „CoLaborators“



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Flexible Partnering Strategy
 Adapting to the need of internal and external partners



CrowdSourcing & Co-Working "CoLaborators"



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Open Innovation @ Bayer
 CrowdSourcing initiatives complement our innovation strategy

- Grants4Targets*** Bayer allocates grants for the exploration of attractive, novel drug targets and biomarkers.

- Grants4Leads** Bayer offers financial support to assess and to promote the exploration of small-molecule leads.

- Grants4Apps** Bayer funds projects for novel software, hardware or technologies contributing to improve health outcomes or pharmaceutical processes. In addition, the "Grants4Apps Accelerator" in Berlin supports 5 digital health startups each year.

- Grants4Indications** Bayer promotes the exploration of new indications for Bayer compounds and offers grants and further financial support for promising proposals.

- PartnerYour Antibodies** Bayer offers financial support to evaluate antibodies or derivatives and to promote its exploration for a potential new drug development.

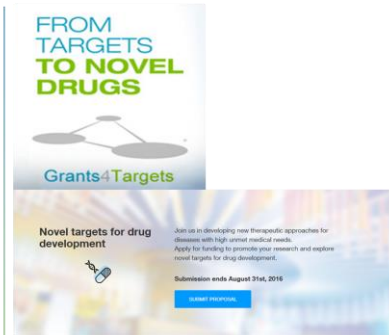
- CoLaborator*** Bayer offers attractive laboratory and office spaces for young life-sciences companies at its premises in Berlin and San Francisco.
<https://innovate.bayer.com/>

CrowdSourcing & Co-Working "CoLaborators"

Grants4Targets™

A successful crowdsourcing initiative aimed at new targets

- Bayer allocates grants for the exploration of attractive, novel drug targets in the fields of: Cardiology, Oncology, Gynecology
 - Support by one year grant, during which IP rights remain completely with the applicant
-
- Initiative started May 2009
 - 15 rounds of applications completed so far: >1600 applications
-
- World-wide reach
 - More than half of the target proposals were novel to Bayer



CrowdSourcing & Co-Working "CoLaborators"

CoLaborators – Lab space close to Bayer Pharma sites

- An attractive incubator space for innovative start-up companies in life sciences, with ideas related to the Bayer Pharma R&D strategy
- Promotion of interaction between innovative start-up companies and industry by providing assistance with access to funding, lab space and drug discovery technologies
- Companies can rent ready-to-use laboratories and offices according to their needs
- Companies remain independent but have an option to use the Bayer infrastructure and scientific network
- Co-located with Bayer Pharma sites, currently in the US (San Francisco, CA, USA) and Europe (Berlin, Germany)

More information @ www.colaborator.bayer.com



CrowdSourcing & Co-Working "CoLaborators"



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Questions? Comments?



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Basics of Technology Transfer for Licensing Professionals
 Basic Patenting 101
 Copyright Law and Content/Software Licensing
 Equity Based License Agreements
 Financial Conflicts of Interest
 Marketing: Whether By Traditional or Social Media, the Value
 Need to Know Basics of Technology Transfer for Support Staff
 Negotiation of License Agreements
 Nuts and Bolts for Compliance Under Federal Funding Awards
 The Basics of Open Source Licensing
 Tips for Managing MTAs
 Triage
 Valuation of Inventions and Patents
 (More Added Monthly)

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- **Running Effective Internship Programs – Clear Expectations**
- Thursday, October 20
- **Valuation Pre-course Series**
- October 27, November 10, 17 and December 1
- **European Patent Practice – The Good, The Bad and The Ugly**
- November 16



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AUTM Region Meetings



AUTM Eastern Region Meeting

Sept. 29-30
The Westin Philadelphia
Philadelphia, PA



AUTM Western Region Meeting

Nov. 1-4
Waikiki Beach Marriott Resort
Honolulu, HI

Registration Now Open!



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- ****NEW** AUTM Compliance Course**
- **AUTM Essentials of Academic Technology Transfer Course**
- **Technology Operations and Organization Licensing Skills Course (TOOLS)**
- **AUTM Successful Practices in Small Technology Transfer Offices**

Register Today!

Oct. 3 - 5
The Hyatt Regency Baltimore Inner Harbor
Baltimore, MD USA



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AUTM Partnering Forums

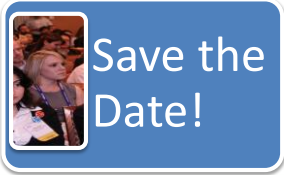
Crop Productivity and Food Processing Technologies

Hosted by University of Saskatchewan
September 28 - 29, 2016
Radisson Hotel Saskatoon
Saskatoon, Saskatchewan, Canada



Smart Power & Energy Storage Solutions

Hosted by Case Western Reserve University
October 26 - 27, 2016
Tinkham Veale University Center
Cleveland, OH USA



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AUTM 2017 Annual Meeting

**March 12-15
Hollywood, FL USA**





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Get Involved

We need your help. The Online Professional Development Committee is seeking professionals interested in joining their committee.



Interested? Please contact
Melinda Briggs – mbriggs@autm.net

